

# MINNESOTA DEPARTMENT OF TRANSPORTATION

## ANOKA COUNTY HIGHWAY DEPARTMENT

### CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, CURB & GUTTER, STORM DRAIN AND SIGNAL SYSTEM

LOCATED ON CSAH 18 BETWEEN 1860' WEST OF TH 65 NB AND 1540' EAST OF TH 65 NB  
 LOCATED ON TH 65 BETWEEN 600' SOUTH OF CSAH 18 AND 579' NORTH OF CSAH 18

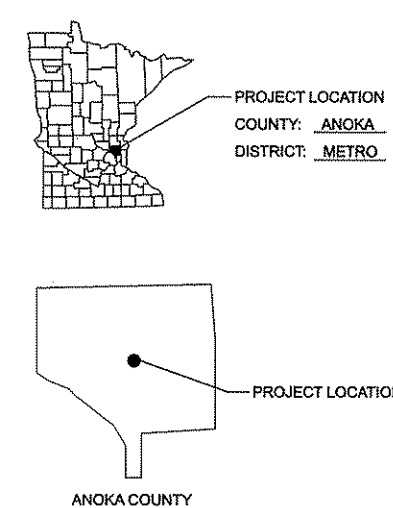
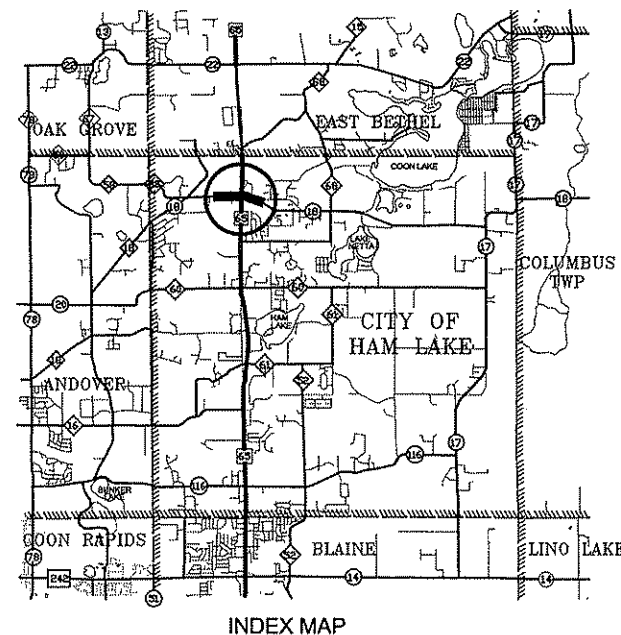
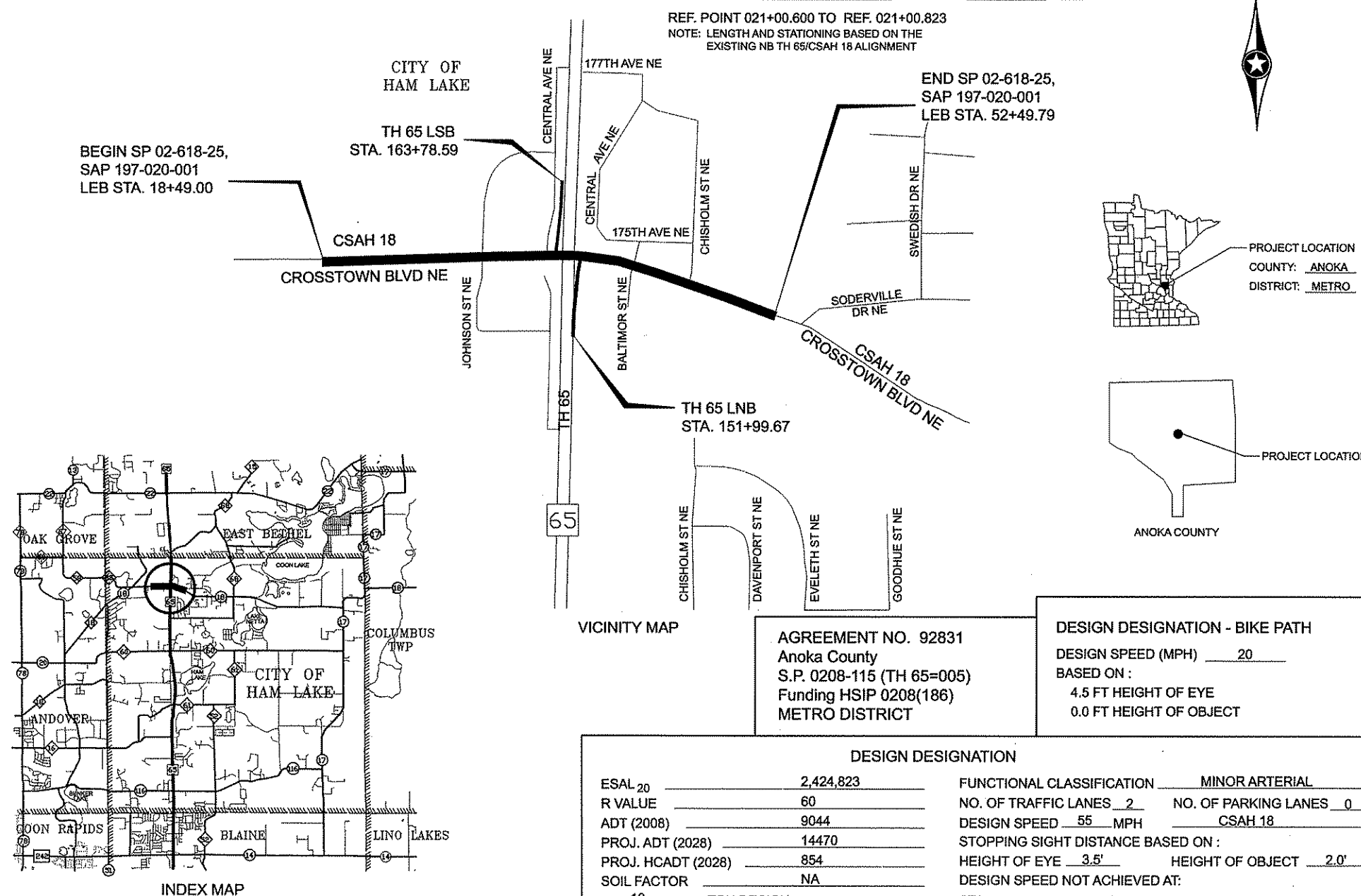
S.P. 02-618-25  
 CSAH 18 (CROSSTOWN BLVD.)

S.P. 0208-115  
 TH 65

GROSS LENGTH	3400.79 FEET	0.644 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	59.23 FEET	0.011 MILES
NET LENGTH	3341.56 FEET	0.633 MILES

GROSS LENGTH	1178.92 FEET	0.223 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	1178.92 FEET	0.223 MILES

REF. POINT 021+00.600 TO REF. 021+00.823  
 NOTE: LENGTH AND STATIONING BASED ON THE EXISTING NB TH 65/CSAH 18 ALIGNMENT



AGREEMENT NO. 92831  
 Anoka County  
 S.P. 0208-115 (TH 65=005)  
 Funding HSIP 0208(186)  
 METRO DISTRICT

DESIGN DESIGNATION - BIKE PATH  
 DESIGN SPEED (MPH) 20  
 BASED ON:  
 4.5 FT HEIGHT OF EYE  
 0.0 FT HEIGHT OF OBJECT

DESIGN DESIGNATION		FUNCTIONAL CLASSIFICATION	
ESAL <sub>20</sub>	2,424,823	MINOR ARTERIAL	
R VALUE	60	NO. OF TRAFFIC LANES <u>2</u>	NO. OF PARKING LANES <u>0</u>
ADT (2008)	9044	DESIGN SPEED <u>55</u> MPH	CSAH 18
PROJ. ADT (2028)	14470	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. HCADT (2028)	854	HEIGHT OF EYE <u>3.5'</u>	HEIGHT OF OBJECT <u>2.0'</u>
SOIL FACTOR	NA	DESIGN SPEED NOT ACHIEVED AT:	
10	TON DESIGN	STA. _____	TO STA. _____ MPH _____

#### GOVERNING SPECIFICATIONS

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

UTILITY NOTE:  
 THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CHASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

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THIS PLAN CONTAINS 117 SHEETS

Approved: *[Signature]* 4/3/08  
 ANOKA COUNTY ENGINEER

Approved: *[Signature]* 6/13/08  
 CITY OF HAM LAKE ENGINEER

Recommended for Approval: *[Signature]* 10/20/08  
 DISTRICT TRANSPORTATION ENGINEER

Recommended for Approval: *[Signature]* 6/18/08  
 DISTRICT MATERIALS ENGINEER

Recommended for Approval: *[Signature]* 10-15/08  
 DISTRICT WATER RESOURCES/CITY DRAINAGE ENGINEER

Recommended for Approval: *[Signature]* 9/24/08  
 DISTRICT TRAFFIC ENGINEER

Recommended for Approval: *[Signature]* 12/22/08  
 STATE PRE-LETTING ENGINEER

Office of Land Management Approval: *[Signature]* 1/8/09  
 DIRECTOR, LAND MANAGEMENT

Approved: *[Signature]* Jan 09, 2009  
 STATE DESIGN ENGINEER

*[Signature]* 9/18/08  
 DISTRICT STATE AID ENGINEER, REVIEWED FOR COMPLIANCE WITH STATE AND FEDERAL AID RULES/POLICY

*[Signature]* 9/22/08  
 STATE AID ENGINEER, APPROVED FOR STATE AID AND FEDERAL AID FUNDING

#### PLAN SYMBOLS

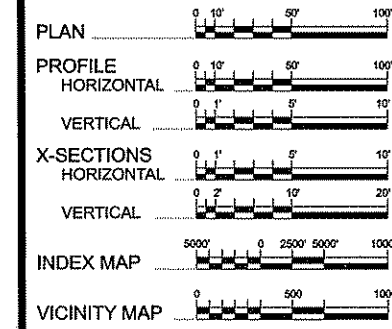
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SLOPE EASEMENT
- EXISTING RIGHT OF WAY
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY
- RIVER OR CREEK
- DRAINAGE DITCH
- CULVERT
- DROP INLET
-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

- LOWLAND
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATTLE GUARD
- CYCLERPASS (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
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE & POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (Cable Terminal)
- GAS MAIN
- WATERMAIN
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- AERIAL TELEPHONE CABLE
- SEWER (Sanitary or Storm)
- SEWER MANHOLE

#### SCALES



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:02-618-25/PLAN/0261825\_TSH.dgn 06/02/2008 10:37:58 AM

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *[Signature]*  
 DATE: 6-3-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65=005)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

TITLE SHEET  
 Sheet 1 of 116 Sheets

**STATEMENT OF ESTIMATED QUANTITIES**

TAB. NO.	NOTE	ITEM NO.	ITEM	UNIT	TOTAL QUANTITY		ANOKA COUNTY SP 02-618-25		ANOKA COUNTY NON- PARTICIPATING		MNDOT SP 0208-115 (TH 65)		CITY OF HAM LAKE SAP 197-020-001		CITY OF HAM LAKE NON-PARTICIPATING		STORM SEWER SP 02- 618-25	
					EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
		2021.501	MOBILIZATION	LUMP SUM	1		0.95							0.05				
	(1)	2031.501	FIELD OFFICE TYPE D	EACH	1		0.95							0.05				
A	(1),(2)	2101.501	CLEARING	ACRE	1.2		1.2											
A	(1)	2101.502	CLEARING	TREE	1		1											
A	(1),(2)	2101.506	GRUBBING	ACRE	1.2		1.2											
A	(1)	2101.507	GRUBBING	TREE	1		1											
W	(1)	2102.502	PAVEMENT MARKING REMOVAL	LIN FT	16124		16124											
B	(3),(4),(37)	2104.501	REMOVE PIPE CULVERTS	LIN FT	713		606						107					
C	(3)	2104.501	REMOVE CURB AND GUTTER	LIN FT	362		362											
D	(3)	2104.501	REMOVE BITUMINOUS CURB	LIN FT	570		570											
E	(3)	2104.501	REMOVE WOOD FENCE	LIN FT	111		111											
F	(3),(5)	2104.501	REMOVE GUARD RAIL-PLATE BEAM	LIN FT	37		37											
G	(3),(6)	2104.503	REMOVE RETAINING WALL	SQ FT	362		362											
J	(3)	2104.503	REMOVE CONCRETE SLAB	SQ FT	1438		1438											
I	(3)	2104.503	REMOVE CONCRETE MEDIAN	SQ FT	468		468											
H	(3)	2104.503	REMOVE BITUMINOUS MEDIAN	SQ FT	422		422											
L	(3)	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	41		41											
L	(3),(7),(37)	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	772		464						308					
M	(1),(3),(8),(37),(38)	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	13765		10771				780		2214					
K	(3)	2104.507	REMOVE CONCRETE FLUME	CU YD	8		8											
B	(3)	2104.509	REMOVE PIPE APRON	EACH	3		3											
B	(3)	2104.509	REMOVE CATCH BASIN	EACH	1		1											
L	(3)	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	12		12											
L,M,N,V	(10),(37),(38)	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	7583		6577				707		299					
B	(11)	2104.523	SALVAGE CONCRETE APRON	EACH	1		1											
AA	(1),(11)	2104.523	SALVAGE SIGN TYPE C	EACH	74		74											
AA	(1),(11)	2104.523	SALVAGE SIGN TYPE D	EACH	4		4											
AA	(1),(11)	2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	3		3											
O	(1),(11),(37)	2104.523	SALVAGE MAIL BOX	EACH	8		7						1					
	(1)	2104.601	HAUL SALVAGED MATERIAL	LUMP SUM	1				1									
N	(1),(3)	2104.607	REMOVE TEMPORARY WIDENING (LV)	CU YD	74		74											
M,N,V,AF	(3),(9),(14),(37),(38)	2105.501	COMMON EXCAVATION	(P) CU YD	18657		14391				543		3723					
AF	(1),(37),(38)	2105.505	MUCK EXCAVATION	CU YD	29134		28657				477							
AG	(15),(37),(38)	2105.522	SELECT GRANULAR BORROW (LV)	CU YD	30014		28957				1057							
AG	(1)	2105.607	EXCAVATION SPECIAL	CU YD	4030												4030	
	(1),(16)	2123.509	DOZER	hour	25		25											
	(1),(16)	2123.610	TRACTOR MOUNTED BACKHOE	hour	25		25											
	(1)	2130.501	WATER	M GALLON	100		100											
Q	(1),(13),(37),(38)	2211.503	AGGREGATE BASE (CV) CLASS 5	(P) CU YD	8888		7208				404		1276					
L	(1),(37)	2211.604	AGGREGATE BASE SPECIAL	SQ YD	887		850						37					
L,N	(1),(19),(37)	2350.503	TYPE LV 3 WEARING COURSE MIXTURE (B) 2.5" THICK	SQ YD	5181		4946						235					
V	(1),(19),(37)	2350.503	TYPE LV 3 WEARING COURSE MIXTURE (B) 4.0" THICK	SQ YD	511		364						147					
Q	(19),(37),(38)	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	2755		2291				136		328					
Q	(1),(19),(37),(38)	2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,E)	TON	6984		5779				345		860					
Q	(1),(19),(37),(38)	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (4,B)	TON	3492		2885				173		434					
T	(1),(20)	2411.604	MODULAR BLOCK RETAINING WALL	SQ YD	45		45											
B	(1),(37)	2501.511	15" CS PIPE CULVERT	LIN FT	173		147						26					
B	(1)	2501.511	18" RC PIPE CULVERT CLASS III	LIN FT	68		68											
B	(37)	2501.515	15" GS PIPE APRON	EACH	10		8						2					
S		2501.515	15" RC PIPE APRON	EACH	7												7	
B		2501.515	18" RC PIPE APRON	EACH	2		2											
S		2501.515	21" RC PIPE APRON	EACH	1												1	
S		2501.515	27" RC PIPE APRON	EACH	1												1	
S		2501.515	30" RC PIPE APRON	EACH	1												1	
B	(1)	2501.521	28" SPAN RC PIPE-ARCH CULV CL IIA	LIN FT	110		110											
B		2501.525	28" SPAN RC PIPE-ARCH APRON	EACH	2		2											
S		2501.573	INSTALL CONCRETE APRON	EACH	1													1
S	(1),(37)	2503.541	15" RC PIPE SEWER DES 3006 CL III	LIN FT	1383								173					1210
S	(1)	2503.541	18" RC PIPE SEWER DES 3006 CL III	LIN FT	591													591
S	(1)	2503.541	21" RC PIPE SEWER DES 3006 CL III	LIN FT	545													545

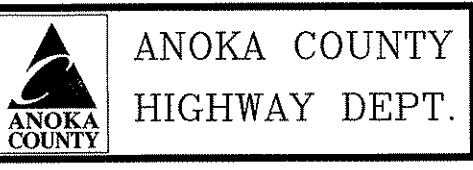
- NOTES:
- DEFINED IN SPECIAL PROVISIONS.
  - LIMITS OF CLEARING AND GRUBBING SHALL BE STAKED IN FIELD BY THE ENGINEER.
  - SEE REMOVAL PLAN.
  - ALL REMOVAL ITEMS, INCLUDING CONCRETE AND BITUMINOUS MATERIALS, SHALL BE DISPOSED OFF-SITE, NO DISPOSAL SHALL BE ALLOWED WITHIN THE ROADWAY RIGHT-OF-WAY OR EASEMENTS.
  - REMOVAL INCLUDES ALL TYPES OF PIPES AND CMP APRONS. LENGTH INCLUDES END TREATMENTS AND ANCHORAGE ASSEMBLIES.
  - MODULAR BLOCK RETAINING WALL.
  - 1" TO 3" OF BITUMINOUS DRIVEWAY REMOVAL DEPTH.
  - 6" TO 7.5" OF BITUMINOUS PAVEMENT REMOVAL DEPTH.
  - INCLUDES REMOVAL OF BITUMINOUS PAVEMENT LESS THAN 6" THICK AND 2.5" OF TEMPORARY PAVEMENT.
  - PAYMENT FOR SAWCUT BITUMINOUS WILL ONLY BE PAID WHEN THE CUT IS MADE WITH A SAW. NO PAYMENT SHALL BE MADE FOR CUTS MADE BY A MILLING MACHINE OR RECLAIMER.
  - SALVAGE TO: ANOKA COUNTY HIGHWAY DEPT, 1440 BUNKER LAKES BLVD NW, ANDOVER, MN.
  - NOTE NOT USED.
  - NOTE NOT USED.
  - INCLUDES INPLACE TOPSOIL AND 1' SUBGRADE EXCAVATION.
  - INCLUDES QUANTITY OF 71 CU YD SELECT GRANULAR BEDDING AROUND .28" SPAN RC PIPE-ARCH CULVERT AT STATION 47+70.
  - FOR MISCELLANEOUS WORK AS DIRECTED BY THE ENGINEER.
  - NOTE NOT USED.
  - NOTE NOT USED.
  - SEE SHEET 5 FOR 'BASIS OF QUANTITIES'.
  - SEE SHEET 13 FOR WALL DETAILS.
  - SEE SHEETS 38-39 FOR DETAILS.
  - NOTE NOT USED.
  - INCLUDES TH 65 AT-GRADE CONCRETE MEDIAN AND PEDESTRIAN CURB RAMP DESIGN 7036.
  - CONCRETE EXPANSION JOINT SPACING IN MEDIAN SHALL BE 20 FT.
  - NOTE NOT USED.
  - NOTE NOT USED.
  - THE CONTRACTOR SHALL INSTALL SALVAGED MAIL BOXES IN MAIL BOX SUPPORT PROVIDED BY ANOKA COUNTY, INCIDENTAL.
  - TYPE 1.
  - F & I SIGN POST SHALL BE INCIDENTAL.
  - COLOR YELLOW.
  - TEMPORARILY, TYPE SPECIAL- CITY OF HAM LAKE STREET NAME SIGNS.
  - NOTE NOT USED.
  - DEPTH OF 0 TO 5 FT.
  - INCLUDES REMOVING SEDIMENT BUILD-UP AND REPAIRING, REPLACING OR SUPPLEMENTING WHEN NON-FUNCTIONING.
  - ANALYSIS 10-10-10.
  - NOTE NOT USED.
  - QUANTITY FOR CITY OF HAM LAKE CONTRIBUTING AREA, STATION 24+21 TO STATION 29+81.40 INCLUDED UNDER SAP 197-020-001 (HAM LAKE REQUESTED PROJECT EXTENSION).
  - 50% OF QUANTITIES FOR TH 65 RIGHT TURN LANE CONSTRUCTION INCLUDED UNDER SP 0208-115 (TH 65) (MNDOT REQUESTED SECTION).
- (P) PLAN QUANTITY

1	06/17/2008	EJ	MN	CK	ADDED CITY OF HAM LAKE NON-PARTICIPATING COLUMN AND QUANTITIES.
2	06/15/2008	EJ	MN	CK	REVISED SEQ AS PER MNDOT REVIEW COMMENTS DATED JULY 28, 2008.
3	09/02/2008	EJ	MN	CK	UPDATED QUANTITIES FOR REVISED SHOULDER WIDTH AT LWB STATION 42+00 TO 43+35.
4	11/13/2008	EJ	MN	CK	UPDATED QUANTITIES RELEVANT TO POND #2 MODIFICATION AND BIT. PATH DELETION.
5	11/26/2008	EJ	MN	CK	REVISED SEQ AS PER MNDOT REVIEW COMMENTS.
NO	DATE	BY	CHKD	APPR	REVISION
					12/12/2008 2:22:18 PM

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 12-15-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08



STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

**STATEMENT OF ESTIMATED QUANTITIES**

TAB. NO.	NOTE	ITEM NO.	ITEM	UNIT	TOTAL QUANTITY		ANOKA COUNTY SP 02-618-25		ANOKA COUNTY NON-PARTICIPATING		MNDOT SP 0208-115 (TH 65)		CITY OF HAM LAKE SAP 197-020-001		CITY OF HAM LAKE NON-PARTICIPATING		STORM SEWER SP 02- 618-25	
					EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
S	(1)	2503.541	24" RC PIPE SEWER DES 3006 CL III	LIN FT	382													382
S	(1)	2503.541	27" RC PIPE SEWER DES 3006 CL III	LIN FT	445													445
S	(1)	2503.541	30" RC PIPE SEWER DES 3006 CL III	LIN FT	120													120
S	(1),(37)	2506.501	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	100.6								17.8					82.8
S	(1),(21)	2506.501	CONST DRAINAGE STRUCTURE DESIGN SPECIAL	LIN FT	10.9													10.9
S	(1),(37)	2506.501	CONST DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	139.7								31.0					108.7
S	(1),(37)	2506.501	CONST DRAINAGE STRUCTURE DESIGN 54-4020	LIN FT	15.2								6.7					8.5
S	(1)	2506.501	CONST DRAINAGE STRUCTURE DESIGN 60-4020	LIN FT	11.4													11.4
S	(1)	2506.501	CONST DRAINAGE STRUCTURE DESIGN 66-4020	LIN FT	8.9													8.9
S	(1)	2506.501	CONST DRAINAGE STRUCTURE DESIGN 84-4020	LIN FT	4.6													4.6
S	(1),(37)	2506.516	CASTING ASSEMBLY	EACH	65								11					54
B,S	(1)	2511.501	RANDOM RIPRAP CL II	CU YD	88		15											73
S	(1)	2511.515	GEOTEXTILE FILTER TYPE IV	SQ YD	220													220
P	(1),(23),(37),(38)	2521.501	6" CONCRETE WALK	SQ FT	1386		1083				90		213					
P	(1),(37)	2531.501	CONCRETE CURB & GUTTER DESIGN B418	LIN FT	3697		2579						1118					
P	(1),(37),(38)	2531.501	CONCRETE CURB & GUTTER DESIGN B424	LIN FT	4849		1918				144		2787					
P	(1)	2531.501	CONCRETE CURB & GUTTER DESIGN B612	LIN FT	24		24											
P	(1)	2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	36		36											
P	(24),(37),(38)	2531.503	CONCRETE MEDIAN	SQ YD	1439		1014				59		366					
L		2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	44		44											
P	(1),(37),(38)	2531.618	TRUNCATED DOMES	SQ FT	56						16		40					
O	(1),(27)	2540.602	INSTALL MAIL BOX SUPPORT	EACH	6		6											
	(1)	2563.601	TRAFFIC CONTROL	LUMP SUM	1		0.95						0.05					
X	(1),(28)	2563.602	RAISED PAVEMENT MARKER TEMPORARY	EACH	456		433						23					
	(1)	2563.610	POLICE OFFICER	HOURL	30		28						2					
Z	(1),(29)	2564.531	SIGN PANELS TYPE C	SQ FT	311		305				6							
AA	(1),(29)	2564.537	INSTALL SIGN TYPE SPECIAL	EACH	3								3					
S	(30)	2564.550	DELINEATOR TYPE X4-7	EACH	11													11
AA	(1),(31)	2564.602	RELOCATE SIGN	EACH	3								3					
	(1)	2565.511	TRAFFIC CONTROL SIGNAL SYSTEM	SIG SYS	1		0.25				0.50		0.25					
	(1)	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1								1					
	(1)	2565.616	TEMPORARY SIGNAL SYSTEM	SYS	1		0.75						0.25					
U	(38)	2573.502	SILT FENCE, TYPE MACHINE SLICED	LIN FT	4132		4029				103							
U	(33)	2573.505	FLOTATION SILT CURTAIN TYPE STILL WATER	LIN FT	135		135											
S	(34)	2573.530	STORM DRAIN INLET PROTECTION	EACH	46													46
	(1)	2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	1		1											
U	(4),(38)	2575.501	SEEDING	ACRE	6.0		4.8				0.6		0.6					
U	(19)	2575.502	SEED MIXTURE 310	POUND	32		32											
U	(19),(37),(38)	2575.502	SEED MIXTURE 350	POUND	521		417				53		51					
B,S,U	(37)	2575.505	SODDING TYPE SALT RESISTANT	SQ YD	1913		1782						16					115
U	(19),(37),(38)	2575.511	MULCH MATERIAL TYPE 1	TON	10		7				3		1					
U	(37),(38)	2575.519	DISK ANCHORING	ACRE	5.1		3.8				0.6		0.6					
U		2575.523	EROSION CONTROL BLANKETS CATEGORY 3	SQ YD	2177		2177											
U	(19),(35),(37),(38)	2575.532	FERTILIZER TYPE 3	POUND	602		478				63		62					
U	(1),(19)	2575.571	RAPID STABILIZATION METHOD 3	M GALLON	3		3											
X,Y	(1)	2581.501	REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	5456		5456											
Z	(1)	2582.501	PAVT MESSAGE (LT ARROW) POLY PREFORM	EACH	8		8											
Z	(1)	2582.501	PAVT MESSAGE (RT ARROW) POLY PREFORM	EACH	6		5				1							
X	(1)	2582.502	4" SOLID LINE WHITE-PAINT	LIN FT	16449		16449											
X	(1)	2582.502	24" SOLID LINE WHITE-PAINT	LIN FT	136		136											
Z	(1)	2582.502	24" SOLID LINE YELLOW-PAINT	LIN FT	873		873											
X	(1)	2582.502	4" DOUBLE SOLID LINE YELLOW-PAINT	LIN FT	8722		8722											
Z	(1)	2582.502	24" SOLID LINE WHITE-POLY PREFORM	LIN FT	82		82											
Z	(1)	2582.502	4" SOLID LINE WHITE-EPOXY	LIN FT	9760		8510				1250							
Z	(1)	2582.502	4" SOLID LINE YELLOW-EPOXY	LIN FT	4580		4580											
Z	(1)	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY	LIN FT	2510		2510											
Z	(1)	2582.503	CROSSWALK MARKING-POLY PREFORM	SQ FT	576		576											


- NOTES:
- (1) DEFINED IN SPECIAL PROVISIONS.
  - (2) LIMITS OF CLEARING AND GRUBBING SHALL BE STAKED IN FIELD BY THE ENGINEER.
  - (3) SEE REMOVAL PLAN. ALL REMOVAL ITEMS, INCLUDING CONCRETE AND BITUMINOUS MATERIALS, SHALL BE DISPOSED OFF-SITE, NO DISPOSAL SHALL BE ALLOWED WITHIN THE ROADWAY RIGHT-OF-WAY OR EASEMENTS.
  - (4) REMOVAL INCLUDES ALL TYPES OF PIPES AND CMP APRONS.
  - (5) LENGTH INCLUDES END TREATMENTS AND ANCHORAGE ASSEMBLIES.
  - (6) MODULAR BLOCK RETAINING WALL.
  - (7) 1" TO 3" OF BITUMINOUS DRIVEWAY REMOVAL DEPTH.
  - (8) 6" TO 7.5" OF BITUMINOUS PAVEMENT REMOVAL DEPTH.
  - (9) INCLUDES REMOVAL OF BITUMINOUS PAVEMENT LESS THAN 6" THICK AND 2.5" OF TEMPORARY PAVEMENT.
  - (10) PAYMENT FOR SAWCUT BITUMINOUS WILL ONLY BE PAID WHEN THE CUT IS MADE WITH A SAW. NO PAYMENT SHALL BE MADE FOR CUTS MADE BY A MILLING MACHINE OR RECLAIMER.
  - (11) SALVAGE TO: ANOKA COUNTY HIGHWAY DEPT, 1440 BUNKER LAKES BLVD NW, ANDOVER, MN.
  - (12) NOTE NOT USED.
  - (13) NOTE NOT USED.
  - (14) INCLUDES INPLACE TOPSOIL AND 1' SUBGRADE EXCAVATION.
  - (15) INCLUDES QUANTITY OF 71 CU YD SELECT GRANULAR BEDDING AROUND 28" SPAN RC PIPE-ARCH CULVERT AT STATION 47+70.
  - (16) FOR MISCELLANEOUS WORK AS DIRECTED BY THE ENGINEER.
  - (17) NOTE NOT USED.
  - (18) NOTE NOT USED.
  - (19) SEE SHEET 5 FOR 'BASIS OF QUANTITIES'.
  - (20) SEE SHEET 13 FOR WALL DETAILS.
  - (21) SEE SHEETS 38-39 FOR DETAILS.
  - (22) NOTE NOT USED.
  - (23) INCLUDES TH 65 AT-GRADE CONCRETE MEDIAN AND PEDESTRIAN CURB RAMP DESIGN 7036.
  - (24) CONCRETE EXPANSION JOINT SPACING IN MEDIAN SHALL BE 20 FT.
  - (25) NOTE NOT USED.
  - (26) NOTE NOT USED.
  - (27) THE CONTRACTOR SHALL INSTALL SALVAGED MAIL BOXES IN MAIL BOX SUPPORT PROVIDED BY ANOKA COUNTY, INCIDENTAL.
  - (28) TYPE 1.
  - (29) F & I SIGN POST SHALL BE INCIDENTAL.
  - (30) COLOR YELLOW.
  - (31) TEMPORARILY, TYPE SPECIAL- CITY OF HAM LAKE STREET NAME SIGNS.
  - (32) NOTE NOT USED.
  - (33) DEPTH OF 0 TO 5 FT.
  - (34) INCLUDES REMOVING SEDIMENT BUILD-UP AND REPAIRING, REPLACING OR SUPPLEMENTING WHEN NON-FUNCTIONING.
  - (35) ANALYSIS 10-10-10.
  - (36) NOTE NOT USED.
  - (37) QUANTITY FOR CITY OF HAM LAKE CONTRIBUTING AREA, STATION 24+21 TO STATION 29+81.40 INCLUDED UNDER SAP 197-020-001 (HAM LAKE REQUESTED PROJECT EXTENSION).
  - (38) 50% OF QUANTITIES FOR TH 65 RIGHT TURN LANE CONSTRUCTION INCLUDED UNDER SP 0208-115 (TH 65) (MNDOT REQUESTED SECTION).
  - (P) PLAN QUANTITY

<table border="1"> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> <tr> <td>1</td> <td>06/17/2008</td> <td>EJ</td> <td>MN</td> <td>CK</td> <td>ADDED CITY OF HAM LAKE NON-PARTICIPATING COLUMN AND QUANTITIES.</td> </tr> <tr> <td>2</td> <td>06/19/2008</td> <td>EJ</td> <td>MN</td> <td>CK</td> <td>REVISED SEQ AS PER MNDOT REVIEW COMMENTS DATED JULY 29, 2008.</td> </tr> <tr> <td>3</td> <td>09/03/2008</td> <td>EJ</td> <td>MN</td> <td>CK</td> <td>UPDATED QUANTITIES FOR REVISED SHOULDER WIDTH AT LWB STATION 42+00 TO 43+35.</td> </tr> <tr> <td>4</td> <td>11/13/2008</td> <td>EJ</td> <td>MN</td> <td>CK</td> <td>UPDATED QUANTITIES RELEVANT TO POND #2 MODIFICATION AND BATH DELETION.</td> </tr> <tr> <td>5</td> <td>11/26/2008</td> <td>EJ</td> <td>MN</td> <td>CK</td> <td>REVISED SEQ AS PER MNDOT REVIEW COMMENTS.</td> </tr> </table>	NO	DATE	BY	CHKD	APPR	REVISION	1	06/17/2008	EJ	MN	CK	ADDED CITY OF HAM LAKE NON-PARTICIPATING COLUMN AND QUANTITIES.	2	06/19/2008	EJ	MN	CK	REVISED SEQ AS PER MNDOT REVIEW COMMENTS DATED JULY 29, 2008.	3	09/03/2008	EJ	MN	CK	UPDATED QUANTITIES FOR REVISED SHOULDER WIDTH AT LWB STATION 42+00 TO 43+35.	4	11/13/2008	EJ	MN	CK	UPDATED QUANTITIES RELEVANT TO POND #2 MODIFICATION AND BATH DELETION.	5	11/26/2008	EJ	MN	CK	REVISED SEQ AS PER MNDOT REVIEW COMMENTS.	<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>PRINT NAME: <u>CURT A. KOBIARCNIK</u></p> <p>SIGNATURE: <i>Curt A. Kobilarcnik</i></p> <p>DATE: <u>12-15-08</u> LICENSE NO. <u>24756</u></p>	<p>DRAWN BY <u>EJ</u> DATE <u>04/22/08</u></p> <p>DESIGN BY <u>MN</u> DATE <u>02/12/08</u></p> <p>CHECKED BY <u>MN</u> DATE <u>05/05/08</u></p>	<p align="center"><b>ANOKA COUNTY HIGHWAY DEPT.</b></p>	<p>STATE PROJECT NO. <u>0208-115 (TH 65)</u></p> <p>STATE PROJECT NO. <u>02-618-25</u></p> <p>STATE AID PROJECT NO. <u>197-020-001</u></p> <p>STATE PROJECT NO. _____</p>	<p align="center"><b>STATEMENT OF ESTIMATED QUANTITIES</b></p> <p>Sheet <u>3</u> of <u>116</u> Sheets</p>
NO	DATE	BY	CHKD	APPR	REVISION																																				
1	06/17/2008	EJ	MN	CK	ADDED CITY OF HAM LAKE NON-PARTICIPATING COLUMN AND QUANTITIES.																																				
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SOILS AND CONSTRUCTION NOTES:

1. TOP OF THE GRADING SUBGRADE (GRADING GRADE) SHALL BE DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE LAYER.
2. BOTTOM OF SUBBASE GRADE SHALL BE DEFINED AS THE BOTTOM OF THE SELECT GRANULAR LAYER (BOTTOM OF FROST FREE ZONE).
3. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL GRANULAR AND FINER GRAINED SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, PEAT, MUCK AND ORGANIC OR OTHER UNSTABLE MATERIAL.
4. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B2.
5. COMMON BORROW - SELECT GRANULAR MATERIAL SHALL BE USED TO BACK FILL THE EMBANKMENT UNDER THE NEW ROADWAY CORE, UP TO THE TOP OF THE GRADING SUBGRADE.
6. MUCK EXCAVATION FILL - SELECT GRANULAR MATERIAL SHALL BE USED TO BACK FILL THE MUCK EXCAVATION.
7. TOPSOIL SHALL BE DEFINED AS EXISTING SOILS WHICH MEET MN/DOT SPECIFICATION 3877 THAT WOULD BE SUITABLE FOR REUSE.
8. UNSUITABLE SOILS ARE DEFINED AS SOILS WHICH DO NOT MEET OR ARE NOT MANUFACTURED TO MEET ANY OF THE ABOVE DEFINED CATEGORIES, AND ARE THEREFORE NOT REUSABLE AS STRUCTURAL BACKFILL OR EMBANKMENT WITHIN THE ROADWAY CORE.
9. REGULAR EMBANKMENT SHALL BE DEFINED AS ALL GRADING MATERIALS THAT ARE APPROPRIATE FOR REUSE ON THE PROJECT BUT THAT MAY NOT MEET THE REQUIREMENTS OF SUITABLE GRADING MATERIALS. REGULAR EMBANKMENT MAY CONSIST OF GRADING SOILS NOT MEETING GRANULAR SPECIFICATIONS AND THEREFORE NOT SUITABLE FOR REUSE UNDER ROAD CORE. REGULAR EMBANKMENT MAY CONSIST OF TOPSOIL AND ORGANIC SOILS, UNLESS THE ENGINEER DETERMINES THESE SOILS ARE NOT REUSABLE, IN WHICH CASE THE CONTRACTOR SHALL REMOVE THEM FROM THE PROJECT LIMITS. REGULAR EMBANKMENT SHALL NOT CONSIST OF DEBRIS.
10. AGGREGATE SHOULDERING MATERIAL FOR THIS PROJECT SHALL BE CLASS 5 IN ACCORDANCE WITH MNDOT 2221 AND 3138.
11. MUCK DISPOSAL QUANTITY SHOWN ON THE EARTHWORK TABULATION CONSISTS OF UNSUITABLE MUCK MATERIAL TO BE USED OUTSIDE THE ROADWAY CORE TO BACK FILL. THE MUCK EXCAVATION AS ILLUSTRATED IN THE 'URBAN MUCK DETAIL' ON SHEET 15.
12. UNLESS OTHERWISE REQUIRED, IN ANY NEW ROADWAY CORE EMBANKMENT CONSTRUCTION, THE UPPER 48" OF THE SUBGRADE SHALL BE CONSTRUCTED WITH SELECT GRANULAR MATERIAL AS SPECIFIED IN THE PLANS. THE REMAINDER OF THE SUBGRADE SHALL BE CONSTRUCTED WITH SUITABLE GRADING MATERIAL. EXCEPTIONS INCLUDE FILLING IN SENSITIVE BOTTOM OR STANDING WATER CONDITIONS.
13. UNLESS OTHERWISE SPECIFICALLY ALLOWED OR REQUIRED BY THE CONTRACT, BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE RECYCLED TO THE EXTENT ALLOWED IN BASE AND SURFACING ITEMS OR DISPOSED OF OUTSIDE THE RIGHT-OF-WAY IN ACCORDANCE WITH SPEC. 2104.3C3.
14. OBTAIN COMPACTION ON THE GRADING PORTIONS OF PERMANENT CONSTRUCTION, INCLUDING SELECT GRANULAR, IN ACCORDANCE WITH THE "SPECIFIED DENSITY METHOD" REQUIREMENTS, MN/DOT SPECIFICATION 2105.3FI.
15. COMPACTION OF THE AGGREGATE BASE LAYER SHALL BE OBTAINED IN ACCORDANCE WITH THE "SPECIFIED DENSITY METHOD".
16. OBTAIN COMPACTION ON GRADING PORTIONS OF TEMPORARY CONSTRUCTION IN ACCORDANCE WITH THE "QUALITY COMPACTION METHOD" REQUIREMENTS. TEMPORARY GRADING AND AGGREGATE BASE PORTIONS PLACED BY THE "QUALITY COMPACTION METHOD" SHOULD BE REMOVED AFTER CONSTRUCTION IS COMPLETE.
17. NOTE NOT USED.
18. NOTE NOT USED.
19. UNLESS OTHERWISE REQUIRED, IN ALL TREATMENTS, THE CONTRACTOR SHOULD STRIVE TO SUBSTANTIALLY MATCH THE SOILS INPLACE IN THE UPPER 5.0 FEET OF THE ROADWAY, RELATIVE TO TEXTURAL CLASSIFICATION, DENSITY AND MOISTURE CONTENT.
20. UNLESS OTHERWISE REQUIRED, ADD 1:20 TAPERS TO THE FULL DEPTH STATION LIMITS OF ALL SUBGRADE EXCAVATIONS. PROVIDE 1:20 TRANSITION TAPERS BETWEEN CHANGES IN SUBGRADE EXCAVATION DEPTHS LONGITUDINALLY. THE 1:20 TAPER SHALL BE CONSTRUCTED SO THAT THE GRANULAR BACKFILL MATERIAL OVERLAYS THE ADJACENT PLASTIC SOIL BACKFILL.
21. WHERE CONNECTING NEW SURFACING ADJACENT TO ANY INPLACE PAVEMENTS TO BE WIDENED, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A MINIMUM 1:4 SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
22. WHERE CONNECTING TO THE INPLACE ROADWAYS AT THE TERMINI OF PROPOSED NEW CONSTRUCTION, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:20 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.

23. WHERE MATCHING INTO INPLACE CROSSROADS, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:4 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
24. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON THE EXISTING PAVEMENT. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.03 TO 0.05 GALLONS/SQ. YD. BETWEEN BITUMINOUS LAYERS AND 0.07 TO 0.10 GALLONS/SQ. YD. ON MILLED BITUMINOUS SURFACES PRIOR TO BEING OVERLAID. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY) OR MC AND RC LIQUID ASPHALTS. THE ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPECIFICATION 2357.
25. THE BITUMINOUS MIXTURE SHALL MEET THE MOST CURRENT REQUIREMENTS OF MNDOT SPECIFICATION 2360.
26. STRIP ALL TOPSOIL AND INPLACE SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. APPROXIMATE DIMENSIONS ENCOUNTERED ARE 0.5 FEET MINIMUM TO 2.0 FEET MAXIMUM.
27. EMBANKMENT QUANTITIES SHOWN ON THE EARTHWORK TABULATION REPRESENT ALL EARTHWORK QUANTITIES BELOW THE PROPOSED GRADING GRADE OF ALL PERMANENT ROADWAYS. QUANTITIES REQUIRED ABOVE THE GRADING GRADE OR FOR TEMPORARY CONSTRUCTION ARE PROVIDED IN DETAIL ON THE AGGREGATE AND BITUMINOUS SUMMARY TABS.
28. FOR ALL ROADWAYS, UNLESS OTHERWISE REQUIRED, PROVIDE FOR A 12" SUBCUT BELOW THE TOP OF THE GRADING GRADE TO ASSURE UNIFORMITY AND COMPACTION. THE BOTTOM OF THE SUBCUT SHALL BE SHAPED AND COMPACTED BY THE QUALITY COMPACTION METHOD WITH A MINIMUM OF 4 PASSES OF AN APPROVED ROLLER. REPLACEMENT FILL SHALL BE SELECT GRANULAR MATERIAL.
29. EXISTING UNPAVED AREAS SHALL BE CORRECTED. CORRECTION SHALL INCLUDE SUBCUTTING OF VEGETATION, SOILS CONTAINING SOD/ROOTS AND SIGNIFICANTLY ORGANIC SOILS WHEN CONSTRUCTING AN EMBANKMENT. ON GRADING SLOPES STEEPER THAN 1:4, CONSTRUCT STEPS IN SLOPE PER MN/DOT SPECIFICATION 2105.3B WHEN CONSTRUCTING AN EMBANKMENT.
30. AS A PRECAUTIONARY MEASURE FROM A SOILS STANDPOINT, TRAFFIC LANES TO BE USED DURING CONSTRUCTION MUST BE DELINEATED TO KEEP VEHICLES A SAFE DISTANCE AWAY FROM THE ADJACENT EXCAVATION. THE DELINEATION SHOULD COINCIDE WITH POINTS ESTABLISHED BY PROJECTING 1:2 OR GREATER (FLATTER) SLOPE BETWEEN THE EDGE OF THE TRAFFIC SURFACE AND THE BOTTOM OF THE EXCAVATION. WHERE THESE SLOPES ARE NOT POSSIBLE, CHEMICAL STABILIZATION OF THE SOILS OR A TEMPORARY RETAINING WALL WILL LIKELY BE NEEDED.
31. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE AND THE EXISTING GROUND LINE AS DEPICTED ON THE CROSS SECTIONS. THE CONSTRUCTION LIMITS DO NOT INCLUDE AREAS REQUIRED FOR SLOPE ROUNDING.
32. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
33. DISTURBED SOILS BELOW THE GROUNDWATER TABLE IN UTILITY TRENCHES WILL LIKELY BE UNSUITABLE FOR SUPPORT OF THE UTILITY PIPES. IN THESE AREAS THE BOTTOM OF THE UTILITY TRENCH SHALL BE SUBCUT 1 TO 2 FEET AND THE DISTURBED SOIL REPLACED BY SELECT GRANULAR BOROW AND TRENCH ROCK AS DIRECTED BY THE ENGINEER.
34. UNSUITABLE SOILS NOT USED ON PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH MN/DOT SPECIFICATIONS.
35. PIPE SEWERS CONNECTING MANHOLES AND CATCH BASINS SHALL BE IN ACCORDANCE WITH SPECIFICATION 2503. BEDDING AND BACKFILL SHALL CONSIST OF UNIFORM SUITABLE GRADING MATERIAL MATCHING ADJACENT SOILS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
36. DISPOSITION OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SPECIFICATION 2105.3D.
37. NOTE NOT USED.
38. SWAMP EXCAVATION - SWAMP DEPOSITS SHALL BE REMOVED FROM BENEATH THE PROPOSED ROADWAY CORE AND TRAIL, INCLUDING LATERAL OVERSIZING, AS SHOWN IN THE TYPICAL SECTIONS AND IN ACCORDANCE WITH SECTION 5-2.02.01 OF THE MNDOT GEOTECHNICAL AND PAVEMENT MANUAL. IN SWAMP AREAS, EXCAVATION DEWATERING SHALL BE PERFORMED TO ALLOW COMPLETE OBSERVATION OF THE SOILS EXPOSED IN THE EXCAVATION BOTTOM. DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 5-2.04 OF THE MNDOT GEOTECHNICAL AND PAVEMENT MANUAL.
39. INPLACE BITUMINOUS PAVEMENT RANGES FROM 2" TO 7.5" THICK. CONTRACTOR SHALL VERIFY BEFORE SUBMITTING BID.
40. WHERE FILL MUST BE PLACED INTO WATER OR ONTO WET SUBGRADE SOILS, FILL SHALL CONSIST OF SELECT GRANULAR BORROW.
41. SURFICIAL ORGANIC TOPSOIL, SILT, CLAY OR SILT SAND LOCATED LESS THAN FOUR FEET BELOW THE TOP OF THE PAVEMENT SHALL BE REMOVED IN NEW EMBANKMENT AREAS, PRIOR TO EMBANKMENT CONSTRUCTION, - AND SHALL BE REPLACED WITH SELECT GRANULAR MATERIAL.
42. NOTE NOT USED.

1	08/15/2008	EJ	MH	CK	REVISED AS PER MNDOT REVIEW COMMENTS DATED JULY 29, 2008.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CURT A. KOBILARCSIK SIGNATURE: <i>Curt Kobilarsik</i> DATE: 9-9-08 LICENSE NO. 24756	DRAWN BY: EJ DATE: 04/22/08	 ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. 0208-115 (TH 65)	SOILS AND CONSTRUCTION NOTES
							DESIGN BY: MN DATE: 02/12/08		STATE PROJECT NO. 02-618-25	
							CHECKED BY: MN DATE: 05/05/08	STATE AID PROJECT NO. 197-020-001		
NO DATE BY CKD APPR REVISION NAME: P:\02-618-25\PLAN\0261825_eq11.dgn 08/19/2008 6:17:42 AM								STATE PROJECT NO. _____	Sheet 4 of 116 Sheets	



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

STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3007D	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123J	METAL APRON FOR C.S. PIPE
3124B	METAL APRON CONNECTION
3133C	RIPRAP AT RCP OUTLETS
3145F	CONCRETE PIPE TIES
3221C	CORRUGATED STEEL PIPE COUPLING BAND
4006L	MANHOLE OR CATCH BASIN PRECAST - DESIGNS G AND H
4010H	CONCRETE SHORT CONE & ADJUSTING RING (SECTIONAL CONCRETE)
4011E	PRECAST CONCRETE BASE
4018A	MANHOLE OR CATCH BASIN COVER DESIGN D
4020J	MANHOLE OR CATCH BASIN FOR USE WITH OR WITHOUT TRAFFIC LOADS
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4110F	COVER CASTING FOR MAHNOLE - CASTING NO. 715 AND 716
4125D	CATCH BASIN FRAME CASTING - CASTING NO. 806
4134A	CURB BOX CASTING FOR CATCH BASIN - CASTING NO. 825
4140D	SPECIAL GRATE CASTING FOR CATCH BASIN - CASTING NO. 720 AND 721
4154B	CATCH BASIN GRATE CASTING - CASTING NO. 816
4180J	MANHOLE OR CATCH BASIN STEP
7035M	CONCRETE WALK AND CURB RETURNS AT ENTRANCES
7036F	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7109C	MEDIAN NOSE AND ISLAND
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES
8150C	INSTALLATION OF CULVERT MARKERS
9102D	TURF ESTABLISHMENT AREA ( AT PIPE CULVERT ENDS )
9350A	MAILBOX SUPPORT

NOTE: FOR ADDITIONAL STANDARD PLATES SEE SHEET 68.

BASIS OF QUANTITIES		
SPEC NO	DESCRIPTION	RATE
2350	TYPE LV3 WEARING COURSE MIXTURE	110 LBS / SQ YD / IN
2357	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD / LIFT
2360	TYPE SP12.5 WEARING COURSE MIXTURE	113 LBS / SQ YD / IN
2360	TYPE SP12.5 NON-WEARING COURSE MIXTURE	113 LBS / SQ YD / IN
2575	SEED MIXTURE 310	82 LBS / ACRE
2575	SEED MIXTURE 350	84.5 LBS / ACRE
2575	MULCH MATERIAL TYPE 1	2 TONS / ACRE
2575	COMMERCIAL FERTILIZER 10-10-10	100 LBS / ACRE
2575	RAPID STABILIZATION METHOD 3	6000 GALS / ACRE

INDEX OF TABULATIONS		
TAB NO.	SHEET	DESCRIPTION
A	6	CLEAR AND GRUB
B	6	CULVERT TABULATIONS
C	6	REMOVE CURB AND GUTTER
D	6	REMOVE BITUMINOUS CURB
E	6	REMOVE/SALVAGE FENCE
F	6	REMOVE/SALVAGE GUARD RAIL
G	6	REMOVE RETAINING WALL
H	6	REMOVE BITUMINOUS MEDIAN
I	6	REMOVE CONCRETE MEDIAN
J	6	REMOVE CONCRETE SLAB
K	6	REMOVE CONCRETE FLUME
L	7	DRIVEWAY REMOVAL AND CONSTRUCTION
M	7	REMOVE BITUMINOUS PAVEMENT
N	8	TEMPORARY PAVEMENT
O	7	MAILBOX SUPPORT
P	7	CONCRETE CURB AND GUTTER, CONCRETE MEDIAN
Q	8	BASE AND BITUMINOUS QUANTITIES
S	30	DRAINAGE TABULATION
T	8	CONSTRUCT RETAINING WALL
U	8	TURF ESTABLISHMENT AND EROSION CONTROL
V	8	TRENCH RESTORATION
W	9	PAVEMENT MARKING REMOVAL
X	9	TEMPORARY PAVEMENT MARKING
Y	9	REMOVABLE PREFORMED PLASTIC MARKING
Z	9	PERMANENT STRIPING
AA	10	INPLACE TRAFFIC
AB	10	GAS - CENTERPOINT ENERGY / NORTHERN NATURAL GAS COMPANY
AC	10	POWER - CONNEXUS ENERGY AND GREAT RIVER ENERGY
AD	10	TELEPHONE - QWEST CORPORATION
AE	10	CABLE TV - COMCAST CABLE COMMUNICATIONS
AF	11 - 12	EARTHWORK TABULATION
AG	12	EARTHWORK SUMMARY

NO	DATE	BY	CHKD	APPR	REVISION
1	07/15/2008	EJ	MN	CK	CORRECTED A SPELLING ERROR.
2	11/13/2008	EJ	MN	CK	UPDATED THE INDEX OF TABULATIONS.
3	11/28/2008	EJ	MN	CK	REVISED STANDARD PLATES CHART AS PER MNDOT REVIEW COMMENTS.

NAME: P:\02-618-25\PLAN\0261825\_TAB\_1.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.

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY MS DATE 04/22/08  
 DESIGN BY MN DATE 02/12/08  
 CHECKED BY MN DATE 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

STANDARD PLATES, NOTES AND TABULATION INDEX  
 Sheet 5 of 116 Sheets

CLEAR & GRUB								A	
STATION		LOCATION				CLEAR		GRUB	
START	END	START	END	TREE	ACRE	TREE	ACRE		
20+93.18	24+51.42	41 124	RT LEB	52 128	RT LEB		0.50		0.50
30+81.04	31+45.61	19 42	RT LEB	18 42	RT LEB		0.05		0.05
33+26.06	34+39.40	18 42	RT LEB	19 43	RT LEB		0.05		0.05
33+46.29		4	LT LWB			1		1	
46+21.29	47+52.57	60 225	RT LEB	54 320	RT LEB		0.60		0.60
TOTAL						1	1.20	1	1.20

REMOVE CURB AND GUTTER						C	
STATION TO STATION		LOCATION		DESCRIPTION		CONCRETE	
						LIN FT	
105+59.43	105+95.40	27 29	RT Johnson	Johnson St NE		36	
106+17.92	106+30.23	30 32	RT Johnson	Johnson St NE		12	
106+18.00	106+28.99	28 24	LT Johnson	Johnson St NE		11	
40+91.96	41+19.76	70 80	RT LEB	Baltimore St NE		30	
41+66.13	41+70.81	1 128	LT LWB	Median		258	
50+06.23	50+06.27	25 33	RT LEB	Drive Radius		8	
50+20.13	50+20.43	32 25	RT LEB	Drive Radius		7	
TOTAL						362	

REMOVE BITUMINOUS CURB						D	
STATION TO STATION		LOCATION		DESCRIPTION		REMOVE BITUMINOUS CURB	
						LIN FT	
31+25.56	31+54.15	10 RT	10 RT	LWB	Shoulder	29	
31+54.15	31+71.02	10 RT	10 LT	LWB	Drive Radius	29	
31+90.63	32+05.83	11 LT	10 RT	LWB	Drive Radius	28	
32+05.83	32+20.06	10 RT	10 RT	LWB	Shoulder	14	
32+20.06	32+37.10	10 RT	9 LT	LWB	Drive Radius	28	
33+43.91	34+28.78	10 RT	11 RT	LWB	Shoulder	85	
34+28.78	34+37.28	11 RT	1 RT	LWB	Drive Radius	17	
34+93.91	35+01.86	20 LT	60 LT	LWB	Median	85	
39+01.08	39+15.27	3 LT	32 RT	LEB	Median	89	
41+04.07	41+40.93	145 LT	3 LT	LWB	Baltimore St	166	
TOTALS						570	

REMOVE FENCE						E	
ADDRESS	STATION TO STATION		LANE	LOCATION	DESCRIPTION	REMOVE	
						LIN FT	
#1320	30+79.52	TO 31+45.66	LEB	42 TO 19 RT	4' WOOD FENCE	66	
#1320	31+70.47	TO 32+00.53	LEB	42 TO 19 RT	4' WOOD FENCE	30	
#1320	32+24.94		LEB	22 TO 37 RT	4' WOOD FENCE	15	
TOTAL						111	

REMOVE GUARD RAIL						F	
ADDRESS	STATION TO STATION		LANE	LOCATION	DESCRIPTION	REMOVE	
						LIN FT	
#1442	39+31.05	TO 39+38.54	LEB	33 TO 3 RT	PLATE BEAM	37	
TOTAL						37	

REMOVE RETAINING WALL						G	
STATION TO STATION		LOCATION	DESCRIPTION	LENGTH	HEIGHT	BLOCK	
				FT	FT	SQ FT	
42+09.57	TO 43+41.68	39 TO 41 LT LWB	BLOCK	181	2	362	
TOTAL						362	

CULVERT TABULATION															B			
STATION	OFFSET	ALIGNMENT	REMOVE			SALVAGE	FURNISH AND INSTALL					RIPRAP CL II	SODDING					
			PIPE APRON	CULVERT	CATCH BASIN		RCP APRON	15" CS PIPE	15" GS APRON	18" RCP CL III	18" RCP APRON			28" RCP - ARCH	28" RCP - ARCH APRON			
FROM	TO	FROM	TO		EACH	LIN FT	EACH	EACH	LIN FT	EACH	LIN FT	EACH	LIN FT	EACH	CU YD	SQ YD		
02-618-25																		
20+39.25	20+77.41	24	LT	24	LT	LWB		37			38	2					16	
21+98.47	22+31.40	23	LT	23	LT	LWB		33			33	2					16	
23+17.68	23+76.21	106	LT	115	LT	LWB												
31+25.29	32+66.57	5	LT	6	LT	LWB		141										
34+90	35+40	7	LT	53	LT	LWB	1	69	1									
41+27.04	41+67.54	40	RT	43	RT	LEB		40										
43+12.95	43+54.47	44	RT	44	RT	LEB		41										
45+38.60	46+30.10	55	LT	55	LT	LWB					68	2				4		
45+64.63	46+25.18	3	RT	1	RT	LWB		61										
45+68.72	46+15.72	47	RT	47	RT	LEB		40										
46+34.75	46+38.13	35	LT	33	RT	LEB	2	68										
47+69.27	47+71.09	47	RT	87	LT	LEB							110	2		11		
49+84.48	50+26.87	45	RT	30	RT	LEB		39			45	2					16	
50+07.40	50+38.33	26	LT	26	LT	LWB		37			31	2					16	
SUBTOTAL						3	606	1			147	8	68	2	110	2	15	64
TH 65 RIGHT TURN LANES																		
156+68.61	29	RT			TH 65 NB					1								
SUBTOTAL										1								
197-020-001																		
25+31.53	25+63.70	10	LT	10	LT	LWB		32										
28+10.63	28+57.57	15	RT	14	RT	LEB		47										
28+17.87	28+43.92	15	LT	15	LT	LWB		28			26	2						16
SUBTOTAL							107				26	2						16
TOTAL						3	713	1	1		173	10	68	2	110	2	15	80


REMOVE BITUMINOUS MEDIAN						H	
STATION TO STATION		LOCATION				SQ FT	
34+93.91	35+01.86	20 LT	60 LT	LWB		211	
39+01.08	39+15.27	3 LT	32 RT	LEB		211	
TOTAL						422	

REMOVE CONCRETE MEDIAN						I	
STATION TO STATION		LOCATION				SQ FT	
41+66.13	41+70.81	1	128	LT LWB		468	
TOTAL						468	

REMOVE CONCRETE SLAB						J	
STATION TO STATION		LOCATION				REMOVE SQ FT	
34+36.86	34+69.99	7	TO	50	LT LWB	1438	
TOTAL						1438	

REMOVE CONCRETE FLUME						K	
STATION TO STATION		LOCATION				REMOVE(1) CU YD	
38+72.26	38+85.19	0	TO	29	RT LEB	4	
41+21.88	41+22.80	45	TO	80	RT LEB	4	
TOTAL						8	

(1) AVERAGE DEPTH 8".

<table border="1"> <tr> <td>1</td> <td>11/25/2008</td> <td>EJ</td> <td>MR</td> <td>CK</td> <td>REVISED TAB CHART E AS PER MNDOT REVIEW COMMENTS.</td> </tr> <tr> <td>NO</td> <td>DATE</td> <td>BY</td> <td>CKD</td> <td>APPR</td> <td>REVISION</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>12/02/2008</td> </tr> </table>	1	11/25/2008	EJ	MR	CK	REVISED TAB CHART E AS PER MNDOT REVIEW COMMENTS.	NO	DATE	BY	CKD	APPR	REVISION						12/02/2008	<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>PRINT NAME: CURT A. KOBJLARCSIK          SIGNATURE: <i>Curt A. Kobjarcsik</i>          DATE: 12-4-08 LICENSE NO. 24756</p>	<p>DRAWN BY: EJ DATE: 04/22/08          DESIGN BY: MN DATE: 02/12/08          CHECKED BY: MN DATE: 05/05/08</p>	 <p>ANOKA COUNTY HIGHWAY DEPT.</p>	<p>STATE PROJECT NO. 0208-115 (TH 65)          STATE PROJECT NO. 02-618-25          STATE AID PROJECT NO. 197-020-001          STATE PROJECT NO.</p>	<p>TABULATIONS</p> <p>Sheet 6 of 116 Sheets</p>
1	11/25/2008	EJ	MR	CK	REVISED TAB CHART E AS PER MNDOT REVIEW COMMENTS.																		
NO	DATE	BY	CKD	APPR	REVISION																		
					12/02/2008																		

DRIVEWAY REMOVAL AND CONSTRUCTION														L		
STATION	LOCATION	ADDRESS/ DESCRIPTION (NOTES)	SAWCUT		REMOVAL				CONSTRUCTION							
			BIT	CONC	LENGTH	WIDTH	BIT	CONC	CL 5	LENGTH	WIDTH	BIT (1)	6" CONC	SPECIAL (2)		
			LIN FT	LIN FT	LIN FT	LIN FT	SQ YD	SQ YD	SQ YD	LIN FT	LIN FT	SQ YD	SQ YD	SQ YD		
<b>02-618-25</b>																
19+58.27	7 LT 28 LT LWB	Bit Resid. Ent	12		21	12		44				20	16	40		
20+52.72	9 RT 28 RT LEB	Conc Resid. Ent		12	19	12						22	16		44	
20+57.80	7 LT 28 LT LWB	Gravel Resid. Ent										46	20	16	38	
22+15.09	3 LT 26 LT LWB	Gravel Resid. Ent										37	18	16	35	
31+80.99	10 RT 11 LT LWB	Bit Comm. Ent			21	19		63								
32+24.21	2 RT 21 RT LEB	Bit Resid. Ent			19	29		83								
32+47.04	10 RT 9 LT LWB	Bit Comm. Ent			19	20		59				12				
33+20.10	10 RT 3 RT LWB	Bit Resid. Ent			7	15		20				35	22	16	41	
39+03.96	8 RT 26 RT LEB	Bit Comm. Ent										18	18	36		
45+89.11	14 RT 347 RT LEB	Bit/Gravel Resid.			21	16		70				26	18	54	596	
50+13.20	12 RT 32 RT LEB	Bit Comm. Ent	14		20	14		47								
50+23.11	2 RT 40 LT LWB	Bit Resid. Ent	14		42	14		78				30	16	58		
105+77.69	28 48 RT Johnson	Bit Comm. Ent	41									20	16	37		
107+90.11	16 90 RT Johnson	Bit/Gravel Comm.										74	24	53	140	
SUBTOTAL			81	12	189	151		464	41	137		270	172	278	44	850
<b>197-020-001</b>																
25+55.73	7 RT 26 RT LEB	Bit Comm. Ent			19	16		51				18	18	38		
27+46.48	5 RT 38 RT LEB	Bit Comm. Ent	25		33	25		92				25	24	69		
28+31.30	5 RT 30 LT LWB	Gravel Resid. Ent								68		20	16		37	
28+36.40	5 RT 31 RT LEB	Bit Comm. Ent			26	24		91								
29+12.57	6 RT 28 LT LWB	Bit Resid. Ent	16		40	14		74								
107+76.01	37 93 LT Johnson	Bit Comm. Ent										56	16	128		
SUBTOTAL			41		118	79		308		68		119	74	235		37
TOTAL			122	12	307	230		772	41	205		389	246	513	44	887

- (1) TYPE LV3 WEAR (LVWE35030B), 2.5" THICK.  
(2) 4" CL 5 FOR GRAVEL DRIVEWAY CONSTRUCTION, PAID FOR AS AGGREGATE BASE SPECIAL

CONCRETE CURB AND GUTTER, CONCRETE MEDIAN											P	
STATION TO STATION	LOCATION	DESCRIPTION	CONCRETE CURB & GUTTER DESIGN B-418	CONCRETE CURB & GUTTER DESIGN B-424	CONCRETE CURB & GUTTER DESIGN B-612	CONCRETE CURB & GUTTER DESIGN B-618	PEDESTRIAN CURB RAMP (4)	TRUNCATED DOME	6" CONCRETE WALK	CONCRETE MEDIAN	CONCRETE MEDIAN NOSE DES 7113 (4)	
			LIN FT	LIN FT	LIN FT	LIN FT	SQ FT	SQ FT	SQ FT	SQ YD	SQ FT	
			<b>02-618-25</b>									
29+74.18	30+04.17	RT LEB	SHOULDER		57							
30+61.92	30+92.32	RT LEB	SHOULDER		53							
30+92.32	35+49.79	RT LEB	SHOULDER		457			32	8			
35+49.79	36+00.93	RT LEB	SHOULDER		78							
36+42.40	36+84.12	RT LEB	MEDIAN WALK						482			
37+58.40	38+63.95	RT LEB	SHOULDER		145			32	8			
38+63.95	41+01.24	RT LEB	SHOULDER		236							
41+01.24	40+91.96	RT LEB	SHOULDER		81							
41+64.45	41+94.67	RT LEB	SHOULDER		69							
41+94.67	50+07.80	RT LEB	SHOULDER		825							
40+91.96	41+16.48	RT LEB	HOLIDAY GAS STN			24						
29+70.66	30+13.09	LT LWB	SHOULDER		65							
30+54.08	30+83.75	LT LWB	SHOULDER		51							
30+83.75	34+86.73	LT LWB	SHOULDER		404							
34+86.73	35+84.42	LT LWB	SHOULDER		134			32	8			
36+58.09	36+95.14	LT LWB	MEDIAN WALK						468			
37+34.45	37+84.22	LT LWB	SHOULDER		89							
37+84.22	45+70.73	LT LWB	SHOULDER		806							
30+86.58	35+86.64	LT LEB	MEDIAN	1021						407	51	
37+67.15	45+34.38	LT LEB	MEDIAN	1558						548	55	
105+59.4	105+95.4	27 28 RT JOHNSON	JOHNSON ST NE				36					
SUBTOTAL				2579	3550	24	36	96	24	950	955	106
<b>TH 65 RIGHT TURN LANES</b>												
156+78.95	157+41.63	RT LNB	TH 65 ISLAND		145			63	16		62	27
158+36.61	158+98.59	LT LSB	TH 65 ISLAND		142			63	16		56	27
SUBTOTAL				287				126	32		118	54
<b>197-020-001</b>												
24+66.44	29+74.18	RT LEB	SHOULDER		508							
24+25.29	29+77.80	LT LEB	MEDIAN	1118							366	54
24+66.58	29+70.66	LT LWB	SHOULDER		504							
SUBTOTAL				1118	1012						366	54
TOTAL				3697	4849	24	36	222	56	950	1439	214

(4) PAID FOR AS 6" CONCRETE WALK.

REMOVE BITUMINOUS PAVEMENT										M
STATION TO STATION	LOCATION	DESCRIPTION	REMOVE BITUMINOUS PAVEMENT		SAWING BITUMINOUS PAVEMENT					
			6.0" - 7.5"	< 6.0" (3)						
			SQ YD	CU YD		LIN FT				
<b>02-618-25</b>										
18+49.00	24+21.40	12	LEB & LWB	Main	1541		24			
29+81.40	36+03.61	12	LEB & LWB	Main	1672		24			
29+81.40	36+03.61	12	LEB RTL	Main	1062		84			
34+68.31	36+03.61		LWB RTL	Main	263		19			
18+49.00	24+61.57	8	RT LEB	Shoulder		44	8			
18+49.00	24+21.40	8	LT LWB	Shoulder		44	8			
29+81.40	36+03.61	8	LT LWB	Shoulder		36				
37+30.07	52+49.79	12	LEB & LWB	Main	4074		48			
37+30.07	38+22.39		LEB RTL	Main	110		12			
37+30.07	42+17.27		LWB RTL	Main	675		76			
38+22.39	52+49.79	11	RT LEB	Shoulder		141	11			
42+17.27	52+49.79	10	LT LWB	Shoulder		96	10			
30+36.16	7 RT 49 RT LEB		Johnson St NE			28	53			
34+90.84	52 LT 115 LT LEB		Service Rd			42	82			
39+03.96	8 RT 32 RT LEB		Holiday Gas Stn			15	45			
41+48.07	66 RT 66 RT LEB		Baltimore St			18	98			
41+54.09	29 LT 216 LT LEB		Baltimore St			79	138			
45+73.43	26 LT 91 LT LEB		Chisholm St NE			41	104			
151+99.67	155+00.28	12 LT 26 LT TH 65 LNB	LT Turn Lane		222		319			
157+12.38	158+66.52	14 LT 69 LT TH 65 LNB	Median Strip		372		253			
18+49.00	52+49.79	SAWCUT DURING STAGE 2					3342			
SUBTOTAL					9991	584	4758			
<b>TH 65 RIGHT TURN LANES</b>										
151+99.67	157+81.65	12 RT 73 RT TH 65 LNB	RT Turn Lane		849		712			
158+23.25	163+78.59	13 RT 50 RT TH 65 LSB	RT Turn Lane		711		701			
SUBTOTAL					1560		1413			
<b>197-020-001</b>										
24+21.40	29+81.40	12	LEB & LWB	Main	1505					
24+61.57	29+81.40	12	LEB RTL	Main	709					
24+21.40	29+81.40	8	LT LWB	Shoulder		40				
SUBTOTAL					2214	40				
TOTAL					13765	624	6171			

(3) PAID FOR AS COMMON EXCAVATION.

MAILBOX SUPPORT					O
STATION	LOCATION	ADDRESS	SALVAGE MAILBOX	INSTALL MAIL BOX SUPPORT	
			EACH	EACH	
<b>02-618-25</b>					
19+34.00	38 LT LEB	1135	1	1	
20+77.00	6 RT LEB	1120	1	1	
20+85.28	36 LT LEB	1153	1	1	
31+87.16	2 RT LEB	1320	1		
32+63.86	3 RT LEB	1330	1		
46+08.24	22 RT LEB	1536	1	1	
50+40.52	40 LT LEB	1613	1	1	
107+93.90	41 LT JOHNSON	1305	1	1	
SUBTOTAL			7	6	
<b>197-020-001</b>					
28+87.63	44 LT LEB	1305	1		
SUBTOTAL			1		
TOTAL			8	6	

1	08/12/2008	EJ	AN	OK	REVISED TAB CHARTS M & P AS PER MNDOT REVIEW COMMENTS DATED JULY 29, 2008
2	08/15/2008	EJ	AN	OK	IN TAB CHART M, ADDED QUANTITY FOR SAWCUT DURING STAGE 2 OF CONSTRUCTION.
3	08/20/2008	EJ	AN	OK	IN TAB CHART L, ADDED QUANTITY FOR BIT DRIVEWAY AT STATION 39+03.96.
4	11/26/2008	EJ	AN	OK	REVISED TAB CHART L AND P AS PER MNDOT REVIEW COMMENTS.
NO	DATE	BY	CHKD	APPR	REVISION
					12/02/2008 10:52:07 AM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

TABULATIONS  
Sheet 7 of 116 Sheets

TURF ESTABLISHMENT AND EROSION CONTROL											U
LOCATION	SILT FENCE	FLOTATION SILT CURTAIN	SEEDING	SEED MIXTURE		SODDING	MULCH MATERIAL TYPE 1	DISK ANCHOR	EROSION CONTROL BLANKET (STRAW 2S)	FERTILIZER TYPE 3, 10-10-10 (100 lb/acre)	RAPID STABILIZATION METHOD 3
				310	350	TYPE SALT RESISTANT					
STA. TO STA.	LIN FT	LIN FT	ACRE	POUND	POUND	SQ YD	TON	ACRE	SQ YD	POUND	M GAL
<b>02-618-25</b>											
18+49.00 TO 20+44.75			0.06		5		0.12	0.06		6	
20+60.62 TO 25+46.42			0.70		59		0.87	0.70		70	
20+70.48 TO 24+54.09	991										
23+07.91 TO 24+27.89	287		0.13	11					1059	13	
30+62.25 TO 36+00.39			0.37		31		0.74	0.37		37	
30+82.76 TO 31+80.05	77						0.04	0.02		2	
36+48.85 TO 36+83.19			0.02		2						1
37+50 TO 41+10											
37+58.42 TO 41+31.70			0.57		48						
38+12.77 TO 41+18.83						844					
41+64.48 TO 45+80.15			0.36		30		0.72	0.36		36	
41+81.93 TO 45+86.95	467										
45+98.07 TO 50+05.80			0.77		65		1.35	0.77		77	
46+20.01 TO 47+47.81	371		0.25	21					1118	25	1
46+61.80 TO 49+95.05	780									6	1
50+21.89 TO 52+49.79			0.06		5		0.12	0.06		3	
18+49.00 TO 19+49.82			0.03		3		0.06	0.03		3	
19+65.87 TO 20+49.64			0.04		3		0.08	0.04		4	
20+65.77 TO 22+07.03			0.06		5		0.12	0.06		6	
30+54.12 TO 36+01.63			0.47		40		0.94	0.47		47	
36+57.27 TO 36+95.03			0.02		2		0.04	0.02		2	
37+34.45 TO 41+94.51			0.42		35		0.84	0.42		42	
37+48.32 TO 41+34.54	545										
41+94.51 TO 45+70.73						874					
44+07.03 TO 45+59.43		135									
45+87.13 TO 50+14.77			0.19		16		0.38	0.19		19	
46+27.51 TO 50+04.89	408										
50+30.34 TO 52+70.99			0.06		5		0.12	0.06		6	
107+83.96 TO 107+89.20			0.01		1		0.02	0.01		1	
105+58.77 TO 105+69.46			0.01		1		0.02	0.01		1	
105+85.48 TO 106+01.60			0.01		1		0.02	0.01		1	
108+02.11 TO 108+12.21			0.02		2		0.04	0.02		2	
151+99.67 TO 155+00.28			0.06		5		0.12	0.06		6	
<b>SUBTOTAL</b>	<b>3,926</b>	<b>135</b>	<b>4.7</b>	<b>32</b>	<b>364</b>	<b>1,718</b>	<b>7</b>	<b>3.7</b>	<b>2,177</b>	<b>415</b>	<b>3</b>
<b>TH 65 RIGHT TURN LANES</b>											
151+99.67 TO 157+15.86			0.94		79		1.88	0.94		94	
155+68.24 TO 157+10.98	206										
158+61.06 TO 163+78.51			0.31		26		0.62	0.31		31	
<b>SUBTOTAL</b>	<b>206</b>		<b>1.3</b>		<b>106</b>		<b>3</b>	<b>1.3</b>		<b>125</b>	
<b>197-020-001</b>											
24+21.40 TO 25+46.42			0.06		5		0.11	0.06		6	
25+64.44 TO 27+34.94			0.10		8		0.19	0.10		10	
27+58.94 TO 30+03.86			0.13		11		0.26	0.13		13	
22+23.01 TO 28+23.21			0.22		18		0.43	0.22		22	
28+39.28 TO 30+00.99			0.11		9		0.21	0.11		11	
<b>SUBTOTAL</b>			<b>0.6</b>		<b>51</b>		<b>1</b>	<b>0.6</b>		<b>62</b>	
<b>TOTAL</b>	<b>4,132</b>	<b>135</b>	<b>6.6</b>	<b>32</b>	<b>521</b>	<b>1,718</b>	<b>11</b>	<b>5.6</b>	<b>2,177</b>	<b>602</b>	<b>3</b>

**NOTES:**

- 310 - Application Rate 82.0 lb/acre. Native mix for wetter areas. Infiltration ponds, dry ponds, wet ditches. Tall height.
- 350 - Application Rate 84.5lb/acre. Native mix for general roadside areas.
- MULCH MATERIAL TYPE 1 - Application rate 2 tons per acre
- EROSION CONTROL BLANKET (STRAW 2S) to be placed on all pond seeding areas.
- FERTILIZER TYPE 3, 10-10-10: Application rate 100 lb per acre.
- Rapid Stabilization Method 3: Application rate 6000 gal per acre.
- Quantities are based on 110% of the computed area.
- Flotation silt curtain depth - 5 FT

BASE AND BITUMINOUS QUANTITIES										Q
STATION TO STATION	LOCATION	DESCRIPTION	BITUMINOUS SURFACE	TYPE SP 12.5 WEAR (SPWEB44 0E)*	TYPE SP 12.5 WEAR (SPWEB44 0E)*	TYPE SP 12.5 NON WEAR (SPNWB43 0B)*	TACK COAT	AGGREGATE SURFACE	CLASS 5 AGGREGATE (1)	
				SQ YD	TON	TON				TON
<b>02-618-25</b>										
18+49.00	24+21.40	E.B. C.S.A.H. 18	TO JOHNSON ST	1692	215	215	215	169	2200	531
29+80.40	36+04.28	E.B. C.S.A.H. 18	TO T.H. 65	2491	317	317	317	249	3916	870
37+32.15	52+49.79	E.B. C.S.A.H. 18	FROM T.H. 65	5368	682	682	682	537	8163	1836
18+49.00	24+21.40	W.B. CSAH 18	TO JOHNSON ST	1497	190	190	190	150	1946	474
29+83.83	36+07.63	W.B. CSAH 18	TO T.H. 65	2499	318	318	318	250	3515	781
37+35.25	52+70.93	W.B. CSAH 18	FROM T.H. 65	5895	752	752	752	597	8069	1866
29+74.18	30+92.32	JOHNSON ST.	S. OF C.S.A.H. 18	249	32	32	32	25	324	72
36+40.87	36+86.81	T.H. 65 @ CLEB 18	MEDIAN OF T.H. 65	575	73	73	73	58	748	166
36+96.60	37+09.22	T.H. 65 @ CLEB 18	LTL S OF CSAH 18	411	52	52	52	41	534	119
41+02.28	41+93.62	BALITMORE ST.	S. OF C.S.A.H. 18	277	35	35	35	28	360	80
49+85.07	50+30.41	PARK ENTRANCE	S. OF C.S.A.H. 18	55	7	7	7	6	72	16
45+40.84	46+40.44	CHISHOLM ST.	N. OF C.S.A.H. 18	395	50	50	50	40	514	114
29+70.66	30+83.75	JOHNSON ST.	N. OF C.S.A.H. 18	196	25	25	25	20	255	57
<b>SUBTOTAL</b>				<b>21600</b>	<b>2748</b>	<b>2748</b>	<b>2748</b>	<b>2170</b>	<b>30616</b>	<b>6982</b>
<b>TH 65 RIGHT TURN LANES</b>										
35+49.79	37+89.32	T.H. 65	S. OF C.S.A.H. 18	1398	178	178	178	140	1877	417
35+52.71	37+84.22	T.H. 65	N. OF C.S.A.H. 18	1310	167	167	167	131	1761	391
<b>SUBTOTAL</b>				<b>2708</b>	<b>345</b>	<b>345</b>	<b>345</b>	<b>271</b>	<b>3638</b>	<b>808</b>
<b>197-020-001</b>										
24+21.40	29+81.40	E.B. C.S.A.H. 18	S. OF C.S.A.H. 18	1879	239	239	239	188	3104	690
		W.B. C.S.A.H. 18	N. OF C.S.A.H. 18	1256	160	160	160	126	1838	408
<b>SUBTOTAL</b>				<b>3135</b>	<b>399</b>	<b>399</b>	<b>399</b>	<b>314</b>	<b>4942</b>	<b>1098</b>
<b>TOTAL</b>				<b>27443</b>	<b>3492</b>	<b>3492</b>	<b>3492</b>	<b>2755</b>	<b>39196</b>	<b>8888</b>

\* INCLUDES QUANTITY FOR ADDITIONAL 1/4 INCH TO DESIGN PAVEMENT THICKNESS.

(1) INCLUDES QUANTITY FOR AGGREGATE SHOULDERING

CONSTRUCT RETAINING WALL							T
STATION TO STATION	LOCATION	LENGTH	HEIGHT	INSTALL	COMMENTS		
					LIN FT	SQ YD	
42+09.00	43+25.00	13	LT LwB	142	1.5 - 3.0	45	CONCRETE BLOCK
				<b>TOTAL:</b>	<b>45</b>		

TRENCH RESTORATION				V
STATION	BIT SAWCUT	BIT REMOVAL	TYPE LV 3 WEAR CRS 4.0" THICK	
			LIN FT	SQ YD
<b>02-618-25</b>				
30+87 TO 31+00	103	5	64	
32+86 TO 32+99	91	5	55	
35+23 TO 35+34	110	5	61	
38+87 TO 39+05	98	5	64	
43+25 TO 43+37	94	4	52	
45+18 TO 45+29	90	4	50	
47+46 TO 47+64	36	2	18	
<b>SUBTOTAL</b>	<b>622</b>	<b>30</b>	<b>364</b>	
<b>197-020-001</b>				
25+03 TO 25+17	74	4	45	
27+69 TO 27+83	88	4	44	
29+67 TO 29+80	96	5	58	
<b>SUBTOTAL</b>	<b>258</b>	<b>13</b>	<b>147</b>	
<b>TOTAL</b>	<b>880</b>	<b>43</b>	<b>511</b>	

TEMPORARY PAVEMENT							N
STA. TO STA.	LOCATION	2350 TYPE LV 3 WEAR (LVWE35030B) 2.5" THICK	SAWCUT	REMOVE PAVEMENT	REMOVE TEMP. WIDENING		
					SQ YD	CU YD	
LEB 16+10	34+38	LT	2404	238	167	42	
LEB 39+05	41+25	LT	257		18		
LEB 41+82	45+55	LT	973		68		
LEB 46+98	54+20	LT	1034	172	72	32	
<b>TOTAL</b>			<b>4668</b>	<b>410</b>	<b>325</b>	<b>74</b>	

1	05/12/2008	EJ	MN	CK	REVISED TAB CHARTS Q, U & V AS PER MNDOT REVIEW COMMENTS DATED JULY 28, 2008
2	09/03/2008	EJ	MN	CK	UPDATED TAB CHARTS Q & U FOR REVISED SHOULDER WIDTH BY LWB STATION 42+90
3	11/26/2008	EJ	MN	CK	DELETED BIT, PAVT TAB CHART R, UPDATED TAB CHART U & MOVED TAB N FROM SHEET 13
NO	DATE	BY	CKO	APPR	REVISION
					12/03/2008 8:00:46 AM

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

TABULATIONS  
 Sheet 8 of 116 Sheets



PAVEMENT MARKING REMOVAL						W
ALIGN	STATION TO	STATION	LOCATION	LENGTH	INPLACE	REMOVAL QUANTITY (LIN FT)
<b>STAGE 2 TRAFFIC CONTROL</b>						
LWB	1369	1849	C/L	480	SOLID LINE YELLOW	480
LWB	1369	1849	C/L	480	BROKEN LINE YELLOW	100
LWB	1369	1849	EDGE LINE	480	SOLID LINE WHITE	480
LWB	5250	5610	C/L	360	DOUBLE SOLID LINE YELLOW	720
LWB	5250	5610	EDGE LINE	360	SOLID LINE WHITE	360
SUBTOTAL:						2140
<b>STAGE 3 TRAFFIC CONTROL</b>						
LEB	1609	1849	EDGE LINE	240	SOLID LINE WHITE	240
LWB	3585		STOP BAR	12	24" SOLID LINE WHITE	72
LWB	3775		STOP BAR	12	24" SOLID LINE WHITE	72
LEB	5250	5610	EDGE LINE	360	SOLID LINE WHITE	360
SUBTOTAL:						744
<b>STAGE 4 TRAFFIC CONTROL</b>						
LEB	1849	3603	C/L	1754	DOUBLE SOLID LINE YELLOW	3508
LEB	1849	3603	EDGE LINE	1754	SOLID LINE WHITE	1754
LEB	1849	3603	EDGE LINE	1754	SOLID LINE WHITE	1754
LEB	3730	5250	C/L	1520	DOUBLE SOLID LINE YELLOW	3040
LEB	3730	5250	EDGE LINE	1520	SOLID LINE WHITE	1520
LEB	3730	5250	EDGE LINE	1520	SOLID LINE WHITE	1520
LEB	3585		STOP BAR	12	24" SOLID LINE WHITE	72
LEB	3775		STOP BAR	12	24" SOLID LINE WHITE	72
SUBTOTAL:						13240
TOTAL LIN FT TRAFFIC PAINT REMOVAL:						16124

TEMPORARY PAVEMENT MARKING								X	
ALIGNMENT	STATION TO STATION	PAINT			REMOVABLE		RAISED PAVEMENT MARKER TEMP		
		4" SOLID WHITE PAINT (LIN FT)	24" SOLID WHITE PAINT (LIN FT)	4" DBLE SOLID YELLOW PAINT (LIN FT)	4" SOLID WHITE TAPE (LIN FT)	4" SOLID YELLOW TAPE (LIN FT)	WHITE (EACH)	YELLOW (EACH)	
<b>STAGE 2 TRAFFIC ON NORTH SIDE</b>									
LWB	1369	1849				960	480	98	49
LWB	1849	3585	3472		1736				
LWB	3585			12					
LWB	3775			12					
LWB	3775	5250	2950		1475				
LWB	5250	5650				800	400	82	41
<b>STAGE 3 TRAFFIC ON SOUTH SIDE</b>									
LEB	1609	1849				480	240	50	25
LEB	1849	3585	3472		1736				
LEB	3585			12					
LEB	3775			12					
LEB	3775	5250	2950		1475				
LEB	5250	5610				720	360	74	37
<b>STAGE 4 TRAFFIC ON BOTH SIDES</b>									
LEB	GORE AREA AT EAST END				600				
LEB	LT TURN INTO JOHNSON ST			300					
LEB	RT TURN INTO JOHNSON ST			275					
LEB	LT TURN ONTO TH 65			300					
LEB	RT TURN ONTO TH 65			300					
LEB	STOP BAR AT TH 65				40				
LEB	RT TURN INTO BALTIMORE ST			70					
LEB	LT TURN INTO CHISHOLM ST			300					
LEB	RT TURN INTO BALL PARK			300					
LEB	GORE AT WEST END				550				
LWB	GORE AT WEST END				550				
LWB	RT TURN INTO CHISHOLM ST			300					
LWB	RT TURN ONTO TH 65			300					
LWB	LT TURN ONTO TH 65			340					
LWB	LT TURN ONTO TH 65			340					
LWB	STOP BAR AT TH 65				48				
LWB	LT TURN INTO JOHNSON ST			300					
LWB	RT TURN INTO JOHNSON ST			180					
LWB	GORE AREA AT EAST END				600				
<b>TOTAL</b>		<b>16449</b>	<b>136</b>	<b>8722</b>	<b>2960</b>	<b>1480</b>	<b>304</b>	<b>152</b>	

REMOVABLE PREFORMED PLASTIC MARKING					Y	
LOCATION	LANE LENGTH	4'STRIPS	WHITE TAPE	YELLOW TAPE		
	LIN FT	EACH	LIN FT	LIN FT		
<b>LANE EASTBOUND</b>						
Left Turn Lane into Future Johnson Street	300	13	52			
Right Turn Lane into Johnson Street	275	12	48			
Left Turn Lane onto TH 65	300	13	52			
Right Turn Lane onto TH 65	300	13	52			
Right Turn Lane into Baltimore Street	70	4	16			
Left Turn Lane into Chisholm Street	300	13	52			
Right Turn Lane into Ball Park	300	13	52			
<b>LANE WESTBOUND</b>						
Right Turn Lane into Chisholm Street	300	13	52			
Right Turn Lane onto TH 65	300	13	52			
Left Turn Lane onto TH 65	340	15	60			
Left Turn Lane onto TH 65	340	15	60			
Left Turn Lane into Johnson Street	300	13	52			
Right Turn Lane into Johnson Street	180	8	32			
<b>GORE AREA AT BEGINNING OF PROJECT</b>						
GORE AREA AT BEGINNING OF PROJECT	600	25		200		
<b>GORE AREA AT END OF PROJECT</b>						
GORE AREA AT END OF PROJECT	550	23		184		
<b>TOTAL</b>					<b>632</b>	<b>384</b>

PERMANENT SIGNING & STRIPING					Z
ITEM	LOCATION	EACH	LIN FT	SQ FT	
<b>02-618-25</b>					
F & I SIGN PANELS TYPE C	CSAH 18			300	
LT ARROW POLY PREFORM	CSAH 18	8			
RT ARROW POLY PREFORM	CSAH 18	4			
24" SOLID LINE WHITE - POLY PREFORM	CSAH 18		82		
24" SOLID LINE YELLOW - PAINT	CSAH 18		873		
4" SOLID LINE WHITE - EPOXY	CSAH 18		7260		
4" SOLID LINE YELLOW - EPOXY	CSAH 18		4580		
4" DOUBLE SOLID LINE YELLOW - EPOXY	CSAH 18		2510		
CROSSWALK MARKING-POLY PREFORM	CSAH 18			576	
<b>0208-115 RIGHT TURN LANES</b>					
F & I SIGN PANELS TYPE C	TH 65			11	
RT ARROW POLY PREFORM	TH 65	2			
4" SOLID LINE WHITE - EPOXY	TH 65		2500		

1	06/05/2008	EJ	MN	OK	REVISED TAB Z AS PER MNDOT REVIEW COMMENTS DATED JULY 28, 2008
2	11/29/2008	EJ	MN	OK	REVISED TAB Y AS PER MNDOT REVIEW COMMENTS.
NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-618-25\plan\0261825_TAB_1.dgn					11/29/2008 5:11:01 AM

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

PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

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STATE PROJECT NO.

TABULATIONS  
Sheet 9 of 116 Sheets

INPLACE TRAFFIC							AA
STATION (LEB)	ADDRESS / DESCRIPTION (NOTES)	SALVAGE SIGN TYPE C	SALVAGE SIGN TYPE D	SALVAGE SIGN TYPE SPECIAL	TEMPORARY SIGN TYPE SPECIAL RELOCATE	SIGN NUMBER	NOTES
		EACH	EACH	EACH	EACH		
25+10		1				R3-X1	
27+15		1				W3-3	
27+80	FRONTAGE ROAD (RT ARROW)		1				
28+75		1				M2-1A	
28+75		1				M1-5A	
28+75		1				W14-3	
28+75		1				R2-1	
29+80	JOHNSON ST			1	1	STREET SIGN	
30+80		1				R1-1	
31+10		1				X4-5	
31+70		1				W8-2	
31+70		1				W13-1	
32+10		1				X4-4R	
32+75	FRONTAGE ROAD (LT ARROW)		1				
32+80		1				R3-X1	
33+70		1				M3-4A	
33+70		1				M1-6	
34+25		1				X4-4R	
35+00		23				X4-13	
35+00		1				R1-1	
35+00		1				X4-4L	
37+90		1				M1-5A	
37+90		1				M6-4A	
38+10		1				M3-2A	
38+10		1				M1-6	
38+60		1				X4-13	
39+35		1				R1-1	
39+35		1				R3-2	
39+45		1				R3-X1	
40+00		1				R3-X1	
40+50		1				I-8	
40+50		1				M7-1	
41+00	ANOKA COUNTY LICENSE CENTER		1				
41+15		1				R1-1	
41+15		1				X4-13	
41+50		1				R4-7	
41+50		1				X4-2	
41+75		1				R1-1	
41+75		1				X4-13	
41+95		1				R2-1	
41+95	BALTIMORE ST			1	1	STREET SIGN	
42+05	ANOKA COUNTY LICENSE CENTER		1				
42+05		1				I-8	
42+05		1				M7-1	
42+85		1				M2-1A	
42+85		1				M1-5A	
43+95		1				W8-2	
43+95		1				W13-1	
44+20		1				W1-2R	
44+65		1				R3-X1	
45+15		1				W14-3	
45+15		1				W14-3	
45+15		1				W3-3	
45+50		1				R1-1	
45+50		1				X4-13	
45+90	CHISHOLM ST			1	1	STREET SIGN	
47+15		1				W15-1	
49+00		1				R3-X1	
49+90	ENTER ONLY	1					
TOTAL		74	4	3	3		

CONSTRUCTION NOTES:

1. FOR RELOCATING TRAFFIC SIGNS DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER. RELOCATION INCIDENTAL.

NOTE:  
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

GAS - CENTERPOINT ENERGY/ NORTHERN NATURAL GAS COMPANY				AB
STATION	OFFSET FROM LEB	SIZE & ITEM	REMARKS	
CENTERPOINT ENERGY				
18+49.00	TO 26+17.75	37 RT 33 RT	8" STEEL	LEAVE AS IS
18+49.01	TO 25+23.95	57 LT 55 LT	8" STEEL	RELOCATE
25+23.95	TO 25+48.52	55 LT 36 RT	8" STEEL	RELOCATE
26+17.75	TO 35+46.23	33 RT 18 RT	8" STEEL	RELOCATE
34+42.24	TO 34+43.54	20 RT 171 RT	8" STEEL	LEAVE AS IS
35+46.18	TO 35+45.47	22 RT 181 LT	8" STEEL	RELOCATE
35+45.47	TO 45+38.16	181 LT 313 LT	8" STEEL	LEAVE AS IS
41+21.02	TO 42+02.56	48 RT 51 RT	8" STEEL	LEAVE AS IS
41+77.34	TO 42+02.56	211 LT 51 RT	8" STEEL	RELOCATE
45+38.16	TO 46+02.40	- LT 54 LT	8" STEEL	RELOCATE
46+02.40	TO 53+63.48	54 LT 50 LT	8" STEEL	RELOCATE
NORTHERN NATURAL GAS COMPANY				
21+39.37	TO 24+63.74	257 RT 151 RT	4" STEEL	LEAVE AS IS

NOTE: RELOCATE TO BE DONE BY OTHERS.

POWER - CONNEXUS ENERGY AND GREAT RIVER ENERGY				AC
STATION	OFFSET	INPLACE ITEM	REMARKS	
17+92.36	55 LT	LEB	POWER POLE	LEAVE AS IS
20+37.64	55 LT	LEB	POWER POLE	LEAVE AS IS
20+39.42	33 RT	LEB	POWER POLE	LEAVE AS IS
22+57.62	56 LT	LEB	POWER POLE	RELOCATE
24+58.51	58 LT	LEB	POWER POLE	RELOCATE
25+19.06 TO 25+83.37	23 RT 20 RT	LEB	P-BUR	RELOCATE
25+83.37 TO 25+89.99	20 RT 66 LT	LEB	P-BUR CROSSING	RELOCATE
25+89.99 TO 32+28.54	66 LT 45 LT	LEB	P-BUR	RELOCATE
26+83.67	61 LT	LEB	POWER POLE	RELOCATE
28+05.88	25 RT	LEB	POWER POLE	RELOCATE
28+05.88 TO 30+05.38	25 RT 48 RT	LEB	P-BUR	RELOCATE
28+63.51	86 LT	LEB	POWER POLE	RELOCATE
29+89.74	30 RT	LEB	LIGHT	RELOCATE
30+72.94	64 LT	LEB	POWER POLE	RELOCATE
31+45.05	82 LT	LEB	POWER POLE	RELOCATED
31+57.45	81 LT	LEB	POWER POLE	RELOCATED
31+99.76 TO 32+25.17	2 RT 1RT	LEB	P-BUR	RELOCATE
32+25.17 TO 32+28.54	1 RT 45 LT	LEB	P-BUR CROSSING	RELOCATE
32+08.62	62 LT	LEB	POWER POLE	RELOCATE
32+20.63	62 LT	LEB	POWER POLE	RELOCATE
32+25.17 TO 32+28.54	1RT 46 LT	LEB	P-BUR	RELOCATE
33+28.79	10 RT	LEB	POWER POLE	RELOCATE
33+72.07	62 LT	LEB	POWER POLE	RELOCATE
35+88.20	20 RT	LEB	POWER POLE	RELOCATE
36+67.13	17 RT	LEB	POWER POLE	RELOCATE
37+86.58 TO 37+98.74	106 LT 2 LT	LEB	P-BUR CROSSING	RELOCATE
37+98.74 TO 50+33.65	2 LT 20 RT	LEB	P-BUR	RELOCATE
37+98.77	91 LT	LEB	POWER POLE	LEAVE AS IS
38+05.24	2 RT	LEB	POWER POLE	RELOCATE
38+05.93	17 RT	LEB	POWER POLE	RELOCATE
38+27.30	3 RT	LEB	POWER POLE	RELOCATE
38+83.77	26 RT	LEB	POWER POLE	RELOCATE
38+85.57 TO 50+33.65	16 RT 20 RT	LEB	P-BUR	RELOCATE
41+76.72	60 RT	LEB	SPLICE BOX ELECTRIC	LEAVE AS IS
44+89.53	51 RT	LEB	SPLICE BOX ELECTRIC	LEAVE AS IS
44+89.53 TO 45+80.78	51 RT 50 RT	LEB	P-BUR	LEAVE AS IS
45+53.73	46 RT	LEB	SPLICE BOX ELECTRIC	LEAVE AS IS
45+40.09 TO 45+53.73	71 LT 46 RT	LEB	P-BUR CROSSING	RELOCATE
45+80.78 TO 45+80.78	50 RT 128 RT	LEB	P-BUR	LEAVE AS IS
41+00.52	111 RT	LEB	LIGHT	LEAVE AS IS
41+54.49	73 LT	LEB	LIGHT	RELOCATE
41+48.44	165 LT	LEB	LIGHT	RELOCATE
49+32.92	63 RT	LEB	SPLICE BOX ELECTRIC	LEAVE AS IS
49+32.92 TO 49+49.70	63 RT 51 LT	LEB	P-BUR CROSSING	RELOCATE
50+25.36	70 LT	LEB	LIGHT	LEAVE AS IS

NOTE: RELOCATE TO BE DONE BY OTHERS.

TELEPHONE - QWEST CORPORATION			AD
STATION	OFFSET FROM LEB	INPLACE ITEM	REMARKS
18+40.04	67 LT	SPLICE BOX TELEPHONE	LEAVE AS IS
18+40.04 TO 35+33.79	46 LT 86 LT	T-BUR - 3 CABLES	RELOCATE
18+40.04 TO 35+33.79	67 LT 86 LT	F/O	RELOCATE
20+22.94	69 LT	SPLICE BOX TELEPHONE	LEAVE AS IS
22+21.72	36 RT	SPLICE BOX FIBER OPTIC	RELOCATE
24+47.55	72 LT	SPLICE BOX TELEPHONE	LEAVE AS IS
28+62.85	76 LT	SPLICE BOX TELEPHONE	LEAVE AS IS
28+74.49	71 LT	SPLICE BOX TELEPHONE	RELOCATE
28+82.48	58 LT	SPLICE BOX FIBER OPTIC	RELOCATE
33+26.72	10 RT	SPLICE BOX FIBER OPTIC	RELOCATE
33+29.28	9 RT	SPLICE BOX TELEPHONE	RELOCATE
35+33.79	86 LT	MH - 10'X9'X7'	LEAVE AS IS
35+33.79		T-BUR CROSSING - 21 CONDUITS	LEAVE AS IS
35+33.79 TO 38+05.32	86 LT 87 LT	T-BUR - 3 CABLES	LEAVE AS IS
38+05.32	87 LT	SPLICE BOX TELEPHONE	LEAVE AS IS
38+05.32 TO 42+73.34	87 LT 59 LT	T-BUR	RELOCATE
38+05.32 TO 52+49.79	87 LT 61 LT	T-BUR - 3 CABLES	RELOCATE
38+31.26	84 LT	SPLICE BOX FIBER OPTIC	RELOCATE
39+79.20 TO 41+24.97	39 RT 123 RT	T-BUR	LEAVE AS IS
41+11.22 TO 42+17.07	113 RT 61 LT	T-BUR CROSSING	RELOCATE
41+73.83 TO 42+17.58	69 RT 55 RT	T-BUR	LEAVE AS IS
42+73.34	59 LT	SPLICE BOX TELEPHONE	RELOCATE
44+97.95	46 LT	SPLICE BOX FIBER OPTIC	RELOCATE
49+59.59	67 LT	SPLICE BOX TELEPHONE	LEAVE AS IS

NOTE: RELOCATE TO BE DONE BY OTHERS.

CABLE TV - COMCAST CABLE COMMUNICATIONS			AE
STATION	OFFSET FROM LEB	DESCRIPTION/SIZE	REMARKS
18+43.55 TO 32+76.71	62 LT 87 LT	TV-BUR - 2 CABLES	RELOCATE
22+22.53	39 RT 10 RT	SPLICE BOX TELEVISION	RELOCATE
22+22.53 TO 32+28.79	39 RT 10 RT	TV-BUR	RELOCATE
25+99.08 TO 28+03.45	54 RT 23 RT	TV-BUR	LEAVE AS IS
28+07.86	23 RT	SPLICE BOX TELEVISION	RELOCATE
37+99.84	93 LT	SPLICE BOX TELEVISION	RELOCATE
38+02.57 TO 38+15.68	2 RT 38 RT	TV-BUR	RELOCATE
38+15.68 TO 38+57.99	38 RT 438 RT	TV-BUR	LEAVE AS IS
37+99.84 TO 52+49.79	93 LT 67 LT	TV-BUR - 2 CABLES	RELOCATE
41+74.86	62 RT	SPLICE BOX TELEVISION	RELOCATE
46+00.61	67 LT	SPLICE BOX TELEVISION	RELOCATE
4+78.19 TO 46+00.61	59 LT 146 LT	TV-BUR	RELOCATE

NOTE: RELOCATE TO BE DONE BY OTHERS.

PRIVATE UTILITY OWNER INFORMATION

Mr. Tom Collins  
City of Ham Lake  
15544 Central Avenue NE  
Ham Lake, MN 55304  
763-862-8000

Mr. Dale Aulke  
Great River Energy  
P.O. Box 800  
Elk River, MN 55330  
763-241-2221

Mr. Dale Anderson  
CenterPoint Energy  
700 West Linden Avenue  
Minneapolis, MN 55403  
612-321-5055

Mr. Mark Peterson  
Northern Natural Gas Company  
6579 420th Street  
Harris, MN 55032  
612-270-8509

Mr. Doug Zahn  
Comcast Cable Communications  
3050 Echo Lake Avenue  
Mantomedi, MN 55115  
651-493-5316

Mr. George Rotz  
Qwest Corporation  
425 Monroe Street  
Anoka, MN 55303  
763-712-5017

Ms. Karyn Peters  
Connexus Energy  
14601 Ramsey Blvd.  
Ramsey, MN 55303  
763-323-4268

1	11/22/2008	EJ	MN	OK	ADDED NOTE TO TAB CHARTS AB, AC, AD AND AE AS PER MINDOT REVIEW COMMENTS.
NO	DATE	BY	CHKD	APPR	REVISION
					12/02/2008 2:17:37 PM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY EJ DATE 04/22/08  
DESIGN BY MN DATE 02/12/08  
CHECKED BY MN DATE 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

TABULATIONS  
Sheet 10 of 116 Sheets

EARTHWORK TABULATION (CSAH 18)							AF
STATION	EXCAVATION TOTALS			EMBANKMENT TOTALS (CV)			
	COMMON		MUCK	TOPSOIL	SUITABLE	MUCK DISPOSAL	MUCK EXC BACKFILL
	TOPSOIL	SUITABLE					
18+49.00/1							
19+00.00/1	23	148		11	83		
19+50.00/1	14	138		18	86		
20+00.00/1	15	125		20	92		
20+50.00/1	18	117		22	97		
20+57.50/1	3	17		3	15		
21+00.00/1	16	93		16	89		
21+50.00/1	16	104		17	115		
22+00.00/1	15	108		16	117		
22+15.00/1	5	37		6	34		
22+50.00/1	12	97		13	79		
23+00.00/1	18	170		15	110		
23+50.00/1	19	208		14	108		
24+00.00/1	17	247		13	111		
24+21.00/1	9	117		7	48		
24+50.00/1	11	157		9	65		
25+00.00/1	13	261		7	107		
25+21.40/1	21	391		3	152		
25+50.00/1	16	295		3	105		
26+00.00/1	16	302		6	108		
26+50.00/1	14	284		8	117		
27+00.00/1	16	314		9	130		
27+50.00/1	26	357		20	133		
28+00.00/1	29	343		24	134		
28+30.00/1	11	197		9	82		
28+50.00/1	6	129		4	55		
29+00.00/1	16	300		9	146		
29+50.00/1	21	283		11	163		
29+75.00/1	13	129		8	100		
29+82.00/1	4	35		3	32		
30+00.00/1	11	96		4	101		
30+25.00/1	14	155		1	169		
30+50.00/1	13	164			174		
30+75.00/1	14	133		5	164		
30+82.62/1	5	32		4	52		
31+00.00/1	13	66		9	129		
31+50.00/1	35	218		20	289		
32+00.00/1	31	332		14	183		
32+50.00/1	27	382		14	157		
33+00.00/1	26	348		11	163		
33+50.00/1	29	379		9	167		
34+00.00/1	30	453		10	166		
34+50.00/1	32	498		10	161		
35+00.00/1	25	504		29	157		
35+50.00/1	30	444		35	209		
35+75.00/1	22	208		8	128		
<b>SUBTOTAL</b>	<b>790</b>	<b>9915</b>		<b>507</b>	<b>5382</b>		

EARTHWORK TABULATION (CSAH 18)							AF
STATION	EXCAVATION TOTALS			EMBANKMENT TOTALS (CV)			
	COMMON		MUCK	TOPSOIL	SUITABLE	MUCK DISPOSAL	MUCK EXC BACKFILL
	TOPSOIL	SUITABLE					
35+90.53/1	15	168		2	95		
36+03.76/1	7	183			106		
36+66.12/1	19	657		2	418		
37+32.73/1	20	888		2	441		
37+50.00/1		205	325	2	138	11	286
37+63.16/1		37	450	4	93	23	391
37+75.00/1		26	332	5	76	26	281
38+00.00/1	1	55	621	10	154	56	512
38+50.00/1		105	1200	19	281	93	963
39+00.00/1		197	854	20	213	93	644
39+50.00/1	1	206	684	21	195	98	491
40+00.00/1	3	121	835	20	242	83	645
40+50.00/1	2	110	821	19	266	75	663
41+00.00/1	1	85	802	18	241	69	546
41+25.00/1	5	64	198	8	109	22	107
41+50.00/1	4	51		5	121	5	
41+75.00/1		33	40	6	117	8	31
42+00.00/1		37	93	10	104	38	77
42+50.00/1		45	211	23	209	76	187
43+00.00/1		48	217	24	207	32	194
43+28.59/1		30	379	12	116	31	297
43+50.00/1		24	445	7	85	29	358
44+00.00/1	4	58	857	22	257	90	751
44+50.00/1	7	67	999	28	313	130	905
45+00.00/1	3	82	1554	26	241	159	1392
45+25.00/1		47	990	13	99	98	874
45+38.51/1		27	598	7	64	62	526
45+50.00/1		24	591	6	55	59	512
45+75.00/1		60	1420	9	150	73	1228
45+90.00/1		41	884	2	97	4	373
46+00.00/1		28	517	3	45	25	167
46+25.00/1		63	1051	13	97	117	857
46+50.00/1		55	1048	13	98	102	887
47+00.00/1		112	2135	26	179	192	1794
47+50.00/1		110	1878	25	165	171	1548
48+00.00/1		102	1638	25	168	164	1335
48+50.00/1		94	1474	24	182	146	1205
49+00.00/1		88	1093	22	195	92	900
49+50.00/1	1	82	702	20	195	54	564
50+00.00/1	7	139	244	13	169	19	186
50+15.00/1	3	67		2	45		
50+50.00/1	7	144		6	99		
51+00.00/1	12	166		12	119		
51+50.00/1	9	162		11	105		
52+00.00/1	7	162		8	95		
52+49.79/1	6	168		6	92		
<b>SUBTOTAL</b>	<b>144</b>	<b>5523</b>	<b>28180</b>	<b>581</b>	<b>7351</b>	<b>2625</b>	<b>22677</b>

1	09/17/2008	EJ	MN	CK	REVISED TAB CHART AF PER MNDOT REVIEW COMMENTS DATED JULY 28, 2008.
2	09/13/2008	EJ	MN	CK	UPDATED MUCK EXCAVATION QUANTITY BETWEEN CSAH 18 LWS STATIONS 42+00 & 43+00.
3	11/26/2008	EJ	MN	CK	REVISED EARTHWORK TAB CHART AF PER MNDOT REVIEW COMMENTS.
NO	DATE	BY	CKD	APPR	REVISION
					11/29/2008

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

PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: MS DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08



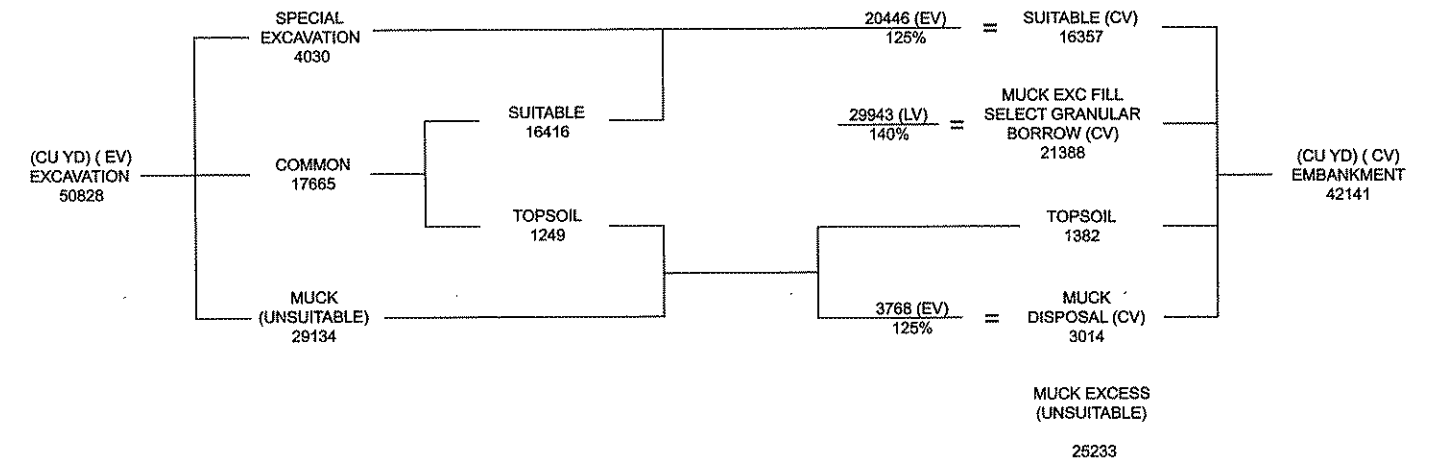
ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

EARTHWORK TABULATIONS AND SUMMARY  
Sheet 11 of 116 Sheets

EARTHWORK TABULATION (TH 65)							AF
STATION	EXCAVATION TOTALS			EMBANKMENT TOTALS (CV)			
	COMMON		MUCK	TOPSOIL	SUITABLE	MUCK DISPOSAL	MUCK EXC BACKFILL
	TOPSOIL	SUITABLE					
CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	
152+00.00/1							
152+50.00/1	22	48		25	54	37	
153+00.00/1	23	49		25	52	32	
153+50.00/1	22	49		28	57	37	
154+00.00/1	19	49		30	52	33	
154+50.00/1	14	52		26	53	29	
155+00.00/1	11	57		22	61	34	
155+50.00/1	11	48		20	63	36	
156+00.00/1	12	36	223	17	68	47	208
156+50.00/1	14	35	459	16	93	59	429
156+67.00/1	6	13	154	7	45	23	146
157+00.00/1	12	20	117	7	85	22	113
158+50.00/1	55	149		4	294		
159+00.00/1	16	62		5	77		
159+50.00/1	13	48		6	70		
160+00.00/1	10	43		6	56		
160+50.00/1	9	40		6	51		
161+00.00/1	7	35		6	44		
161+20.50/1	3	13		2	16		
161+50.00/1	4	17		4	19		
162+00.00/1	6	26		7	26		
162+50.00/1	7	25		7	25		
163+00.00/1	8	25		7	29		
163+50.00/1	7	25		7	32		
163+78.50/1	4	14		4	17		
<b>SUBTOTAL</b>	<b>315</b>	<b>978</b>	<b>953</b>	<b>294</b>	<b>1439</b>	<b>389</b>	<b>896</b>
<b>TOTAL</b>	<b>1249</b>	<b>16416</b>	<b>29133</b>	<b>1382</b>	<b>14172</b>	<b>3014</b>	<b>23573</b>

EARTHWORK SUMMARY									AG
	EXCAVATION TOTALS				EMBANKMENT TOTALS (CV)				SELECT GRANULAR BORROW
	COMMON		MUCK	SPECIAL EXCAVATION POND 1 & 2	TOPSOIL	SUITABLE	MUCK DISPOSAL	MUCK EXC BACKFILL	
	TOPSOIL	SUITABLE							
CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	
02-618-25	687	12222	28180	4030	762	10348	2726	22677	27830
SP 0208-115 (TH 65)	260	826	953		216	1275	288	896	2113
197-020-001	302	3368			404	2549			
<b>TOTAL</b>	<b>1249</b>	<b>16416</b>	<b>29134</b>	<b>4030</b>	<b>1382</b>	<b>14172</b>	<b>3014</b>	<b>23573</b>	<b>29943</b>



**EARTHWORK BALANCE NOTES:**

EXCAVATION, 50828 CU YD (EV) = SPECIAL EXCAVATION, 4030 CU YD (EV) + COMMON, 17665 CU YD (EV) + MUCK, 29133 CU YD (EV).

COMMON, 17665 CU YD (EV) = SUITABLE, 16416 CU YD (EV) + TOPSOIL, 1249 CU YD (EV).

SUITABLE, 16357 CU YD (CV) = (SPECIAL EXCAVATION, 4030 CU YD (EV) + SUITABLE, 16416 CU YD (EV)) / 125%

SELECT GRANULAR BORROW, 29943 CU YD (LV) = (MUCK EXC BACKFILL, 23573 CU YD (CV) MINUS (SUITABLE(AVAILABLE), 16357 CU YD (CV) MINUS SUITABLE(NEEDED), 14172 CU YD (CV))) \* 140%.

MUCK EXCESS, 25233 CU YD (EV) = (MUCK, 29134 CU YD (EV) + TOPSOIL, 1249 CU YD (EV)) MINUS (TOPSOIL, 1382 CU YD (EV) + MUCK DISPOSAL, 3014 CU YD (CV)\*125%)

1' SUBGRADE TREATMENT EXCAVATION INCLUDED IN 16416 CU YD SUITABLE, SHALL BE PAID FOR AS COMMON EXCAVATION. THIS SAME MATERIAL TO BE USED TO BACKFILL THE 1' SUBGRADE TREATMENT AND SHALL BE CONSIDERED INCIDENTAL.

NO DIRECT COMPENSATION WILL BE MADE FOR TOPSOIL BORROW. THE CONTRACTOR SHALL USE MUCK EXCESS FROM THE PROJECT.

125% SHRINKAGE FACTOR USED FROM EXCAVATED VOLUME (EV) TO COMPACTED VOLUME (CV).  
 140% SHRINKAGE FACTOR USED FROM LOOSE VOLUME (LV) TO COMPACTED VOLUME (CV).  
 SHRINKAGE FACTORS ARE ASSUMED VALUES, USED ONLY FOR THE PURPOSE OF ESTIMATED QUANTITIES. IT SHALL BE UNDERSTOOD THAT NO WARRANTY IS MADE OR IMPLIED AS TO THE ACCURACY, SUFFICIENCY, OR RELIABILITY OF SHRINKAGE FACTORS. SHRINKAGE FACTORS DO NOT APPLY TO TOPSOIL.

**GENERAL NOTES:**

SEE SOILS AND CONSTRUCTION NOTES FOR MATERIAL DEFINITIONS AND ADDITIONAL INFORMATION.

ALL MATERIAL NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT LIMITS WITH NO DIRECT PAYMENT THEREFORE. THE MATERIAL QUANTITY IS BASED ON ESTIMATED QUANTITIES. DISPOSAL SHALL BE IN ACCORDANCE WITH SPEC. 2105

THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER BEFORE HAULING MATERIAL OFF SITE.

1	02/01/2008	EJ	MN	CK	REVISED TAB CHARTS AF & AG PER MNDOT REVIEW COMMENTS DATED JULY 26, 2008.
2	09/03/2008	EJ	MN	CK	UPDATED MUCK EXCAVATION QUANTITY BETWEEN CSAH 18 LWB STATIONS 43+00.6 & 43+00.
3	11/13/2008	EJ	MN	CK	UPDATED MUCK AND SELECT GRANULAR BORROW QUANTITIES IN TAB CHART AG.
4	11/20/2008	EJ	MN	CK	REVISED CHARTS AF & AG AND EARTHWORK BALANCE NOTES PER MNDOT REVIEW COMMENTS.
5	12/11/2008	EJ	MN	CK	REVISED EARTHWORK BALANCE NOTES.
NO	DATE	BY	CKD	APPR	REVISION
					12/12/2008 2:22:31 PM

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 12-15-08 LICENSE NO. 24756

DRAWN BY MS DATE 04/22/08  
 DESIGN BY MN DATE 02/12/08  
 CHECKED BY MN DATE 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

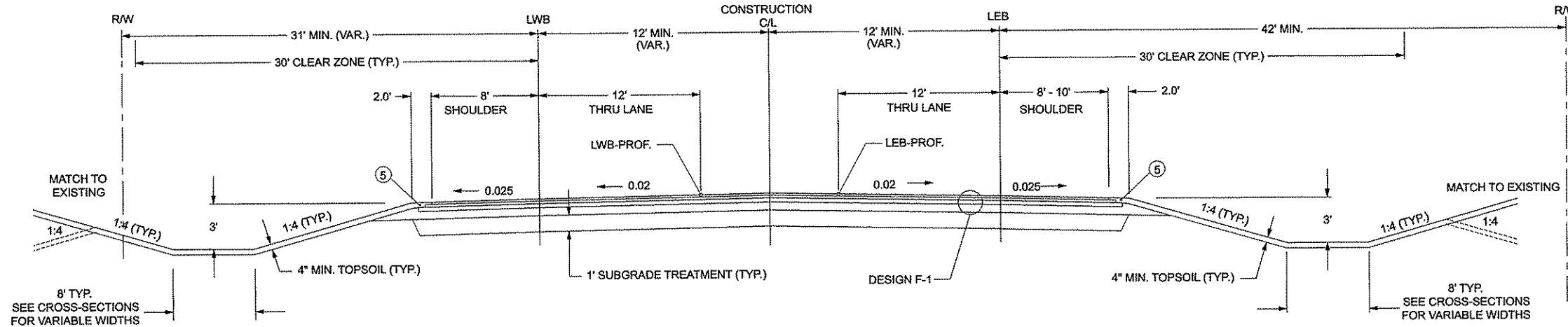
STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

EARTHWORK TABULATIONS AND SUMMARY  
 Sheet 12 of 116 Sheets



**CROSTOWN BLVD. (CSAH 18)**

(LEB STA. 18+49.00 TO STA. 24+21.40) & (LEB STA. 50+20.41 TO STA. 52+49.79)



**TURN LANE LOCATIONS**

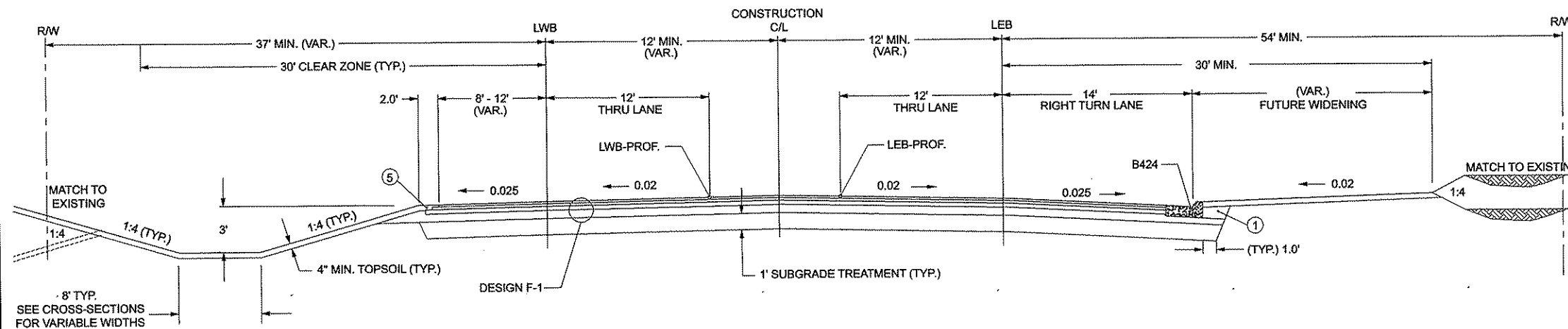
STA. TO STA.	LOCATION	DESCRIPTION
LEB. 25+16.40 29+81.40	LT.	LEFT TURN LANE 1:15 TAPER
LEB. 26+19.10 30+04.20	RT.	RIGHT TURN LANE 1:15 TAPER
LEB. 30+62.40 36+02.90	RT.	RIGHT TURN LANE - -
LEB. 31+23.00 35+90.60	LT.	LEFT TURN LANE 1:15 TAPER
LEB. 37+40.70 41+31.70	RT.	RIGHT TURN LANE - -
LEB. 41+03.10 45+38.30	LT.	LEFT TURN LANE 1:10 TAPER
LEB. 46+31.60 50+04.30	RT.	RIGHT TURN LANE - -
LWB. 30+54.00 35+52.90	LT.	RIGHT TURN LANE - -
LWB. 30+82.40 35+50.00	RT.	LEFT TURN LANE 1:15 TAPER
LWB. 37+33.40 41+35.00	LT.	RIGHT TURN LANE 1:15 TAPER
LWB. 37+70.60 43+47.20	RT.	LEFT TURN LANE 1:10 TAPER
LWB. 46+12.80 50+41.20	LT.	RIGHT TURN LANE - -
LNB. 151+99.67 156+67.83	RT.	RIGHT TURN LANE 1:15 TAPER
LNB. 151+99.67 155+00.28	LT.	LEFT TURN LANE - -
LSB. 158+03.26 163+78.59	LT.	RIGHT TURN LANE 1:15 TAPER
LSB. 161+20.53 163+78.59	RT.	LEFT TURN LANE - -

**NOTES**

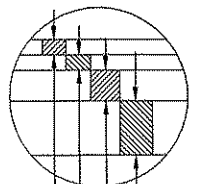
- ① BACKFILL WITH SUITABLE MATERIAL.
  - ② SEE CHART FOR 14' RT. TURN LANE LOCATIONS.
  - ③ SEE CHART FOR 13' LT. TURN LANE LOCATIONS.
  - ④ BACKFILL WITH SELECT GRANULAR MATERIAL.
  - ⑤ AGGREGATE SHOULDERING ACCOUNTED FOR IN THE PLAN QUANTITY FOR AGGREGATE BASE, CLASS 5.
  - ⑥ APPROXIMATE LOCATION OF EXISTING UTILITIES TO BE ABANDONED/REMOVED FROM ROADWAY RIGHT OF WAY.
- ALL CROSS SLOPES EXPRESSED IN FT/FT.

**CROSTOWN BLVD. (CSAH 18)**

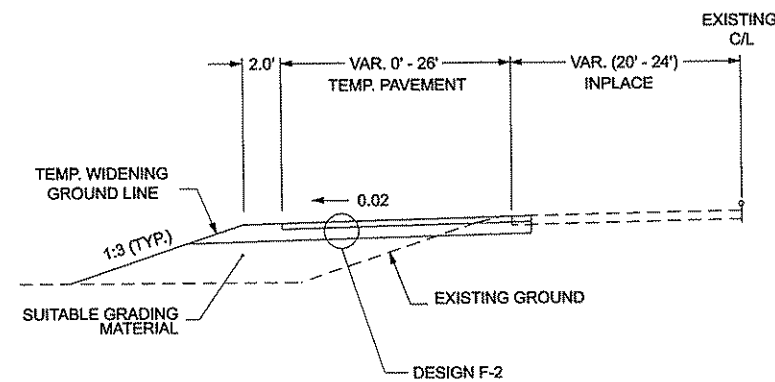
(LEB STA. 45+94.87 TO STA. 50+04.90)



DESIGN F-1

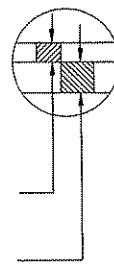


**TEMPORARY PAVEMENT (CSAH 18)**



DESIGN F-2

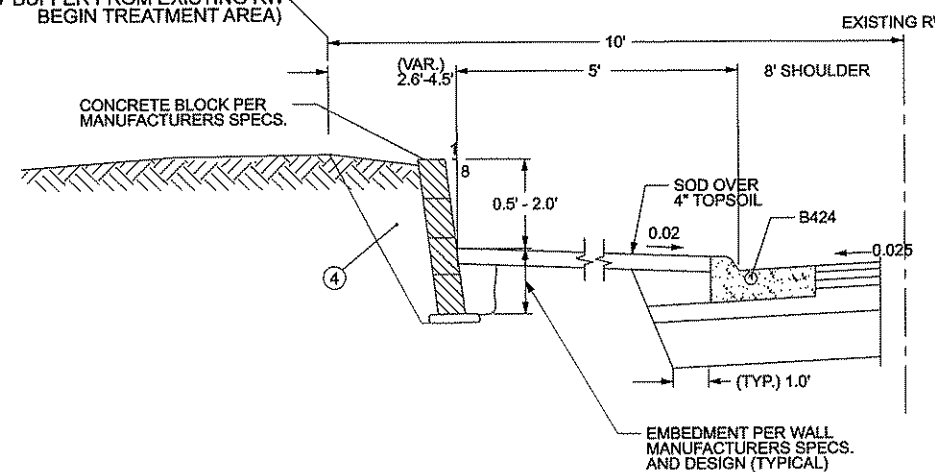
2.5" TYPE LV3 WEARING COURSE MIXTURE LWWE35030B (MNDOT SPEC. 2350)  
4" AGGREGATE BASE, CLASS 5 (MNDOT SPEC. 2211)



**BLOCK RETAINING WALL DETAILS**

(LEB STA. 41+92.00 TO STA. 43+25.00)

CAUTION: DO NOT DISTURB SEPTIC SYSTEM (10' BUFFER FROM EXISTING RW BEGIN TREATMENT AREA)



2.0" TYPE SP 12.5 WEARING COURSE MIXTURE (4,E) SPWEB440E  
2.0" TYPE SP 12.5 WEARING COURSE MIXTURE (4,E) SPWEB440E  
2.0" TYPE SP 12.5 NON-WEARING COURSE MIXTURE (4,B) SPNWB430B  
8.0" AGGREGATE BASE, CLASS 5 (MNDOT SPEC. 2211)

NO	DATE	BY	CHKD	APPR	REVISION
1	09/01/2008	EJ	MN	CK	REVISED TAB CHART HAS PER MNDOT REVIEW COMMENTS DATED JULY 29, 2008.
2	09/03/2008	EJ	MN	CK	UPDATED BLOCK RETAINING WALL DETAILS AND TURN LANE LOCATIONS CHART.
3	11/13/2008	EJ	MN	CK	DELETED BIFURCATED BIKE PATH DETAILS AND MOVED TAB N TO SHEET A.
4	11/22/2008	EJ	MN	CK	REVISED TYPICAL SECTIONS, DETAILS AND NOTES AS PER MNDOT REVIEW COMMENTS.
5	12/11/2008	EJ	MN	CK	REVISED NOTES.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarscik*  
DATE: 12-15-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08



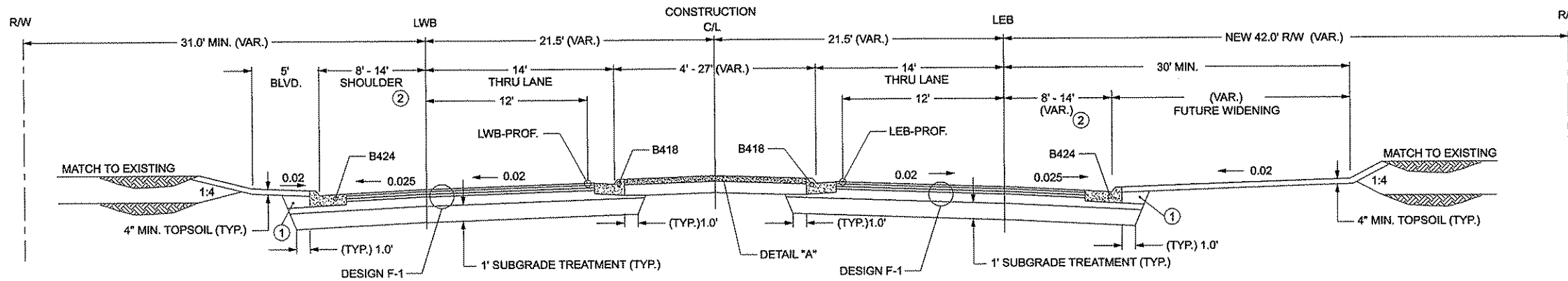
**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

TYPICAL SECTIONS  
Sheet 13 of 116 Sheets

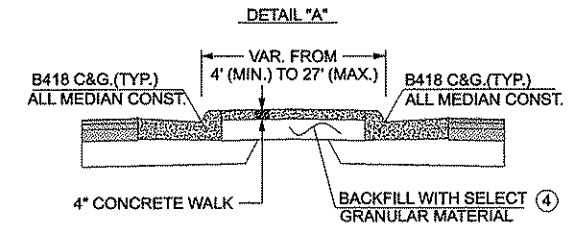
**CROSTOWN BLVD. (CSAH 18) TYPICAL SECTION**

(LEB STA. 24+66.40 TO STA. 29+81.40) (LEB STA. 41+31.70 TO STA. 45+38.30)  
EXCLUDING THE BIT. PATH SECTION



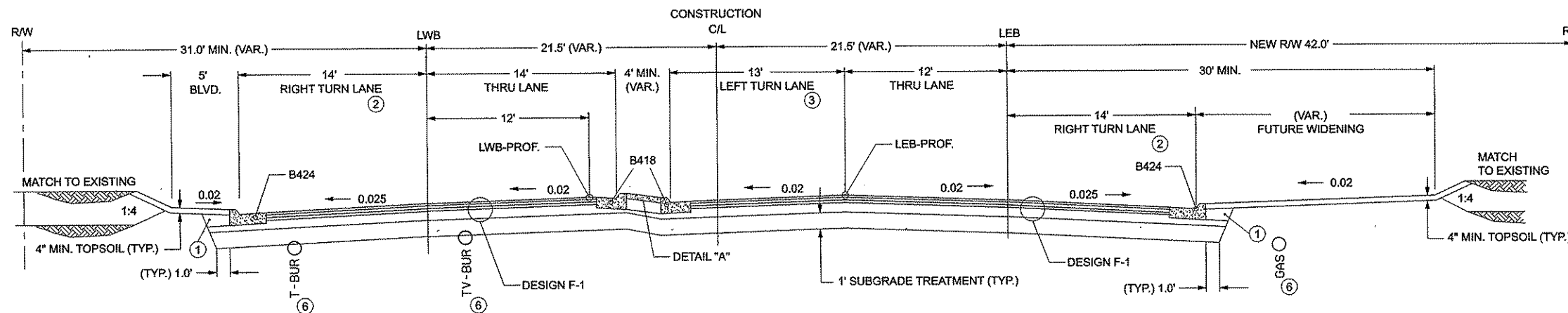
**NOTES**

- ① BACKFILL WITH SUITABLE MATERIAL.
  - ② SEE CHART FOR 14' RT. TURN LANE LOCATIONS.
  - ③ SEE CHART FOR 13' LT. TURN LANE LOCATIONS.
  - ④ BACKFILL WITH SELECT GRANULAR MATERIAL.
  - ⑤ AGGREGATE SHOULDERING ACCOUNTED FOR IN THE PLAN QUANTITY FOR AGGREGATE BASE, CLASS 5.
  - ⑥ APPROXIMATE LOCATION OF EXISTING UTILITIES, TO BE ABANDONED/REMOVED FROM ROADWAY RIGHT OF WAY.
- ALL CROSS SLOPES EXPRESSED IN FT/FT.



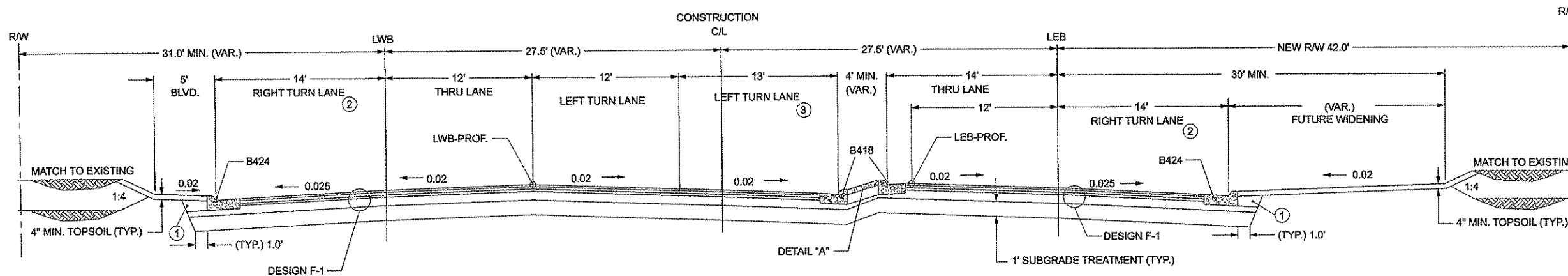
**CROSTOWN BLVD. (CSAH 18) LEFT TURN LANE**

(LEB STA. 30+82.70 TO STA. 35+90.60)



**CROSTOWN BLVD. (CSAH 18) DOUBLE LEFT TURN LANE**

(LEB STA. 37+70.60 TO STA. 41+31.70)

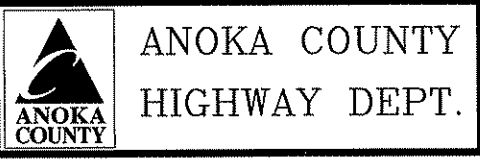


1	11/13/2008	EJ	MN	CK	DELETED BITUMINOUS BIKE PATH DETAILS.
2	11/26/2008	EJ	MN	CK	REVISED TYPICAL SECTIONS AND NOTES AS PER MNDOT REVIEW COMMENTS.
3	12/11/2008	EJ	MN	CK	REVISED NOTES.
NO	DATE	BY	CKD	APPR	REVISION
					12/12/2008

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

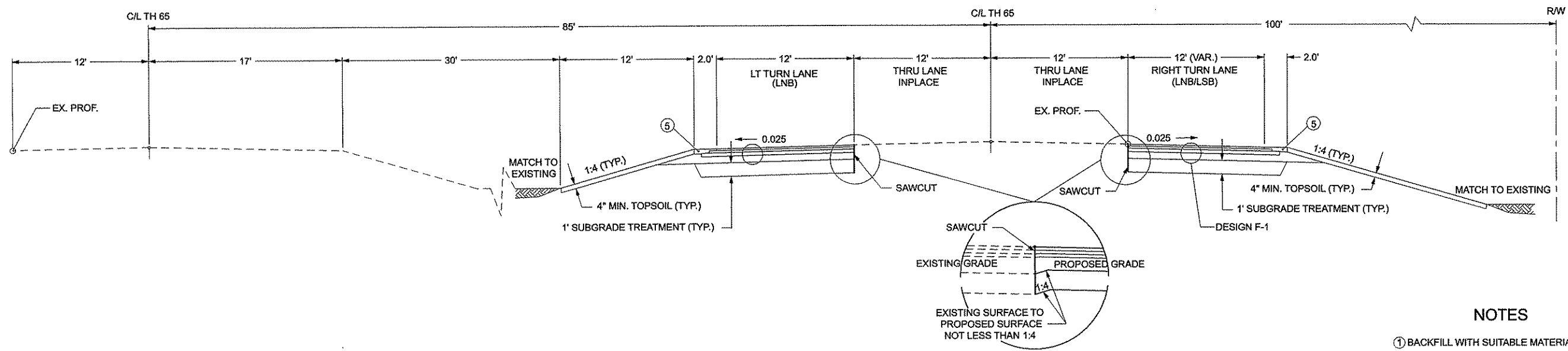
PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt A. Kobilarsik*  
DATE: 12-15-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08

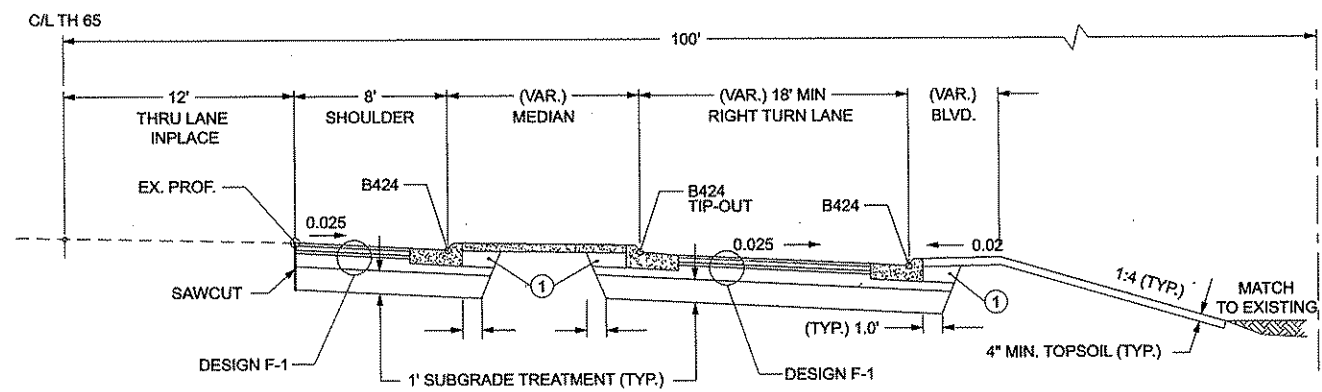


STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

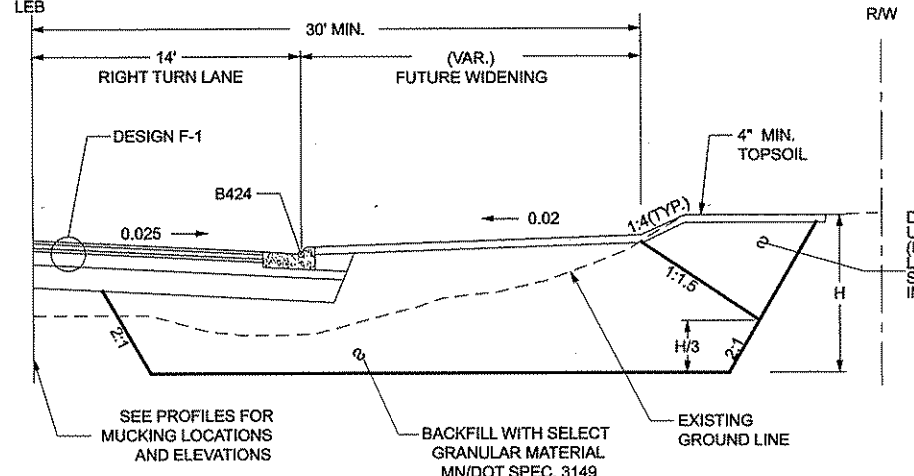
**TH 65 TYPICAL SECTION**  
(LNB STA. 151+99.67 TO STA. 155+00.28) & (LSB STA. 158+98.60 TO STA. 163+78.59)



**TH 65 TYPICAL SECTION**  
(LNB STA. 156+79.77 TO STA. 157+41.63) & (LSB STA. 158+36.61 TO STA. 158+98.59)



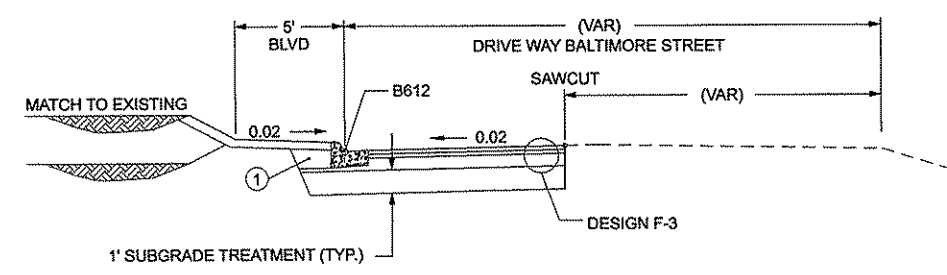
**URBAN MUCK DETAIL**



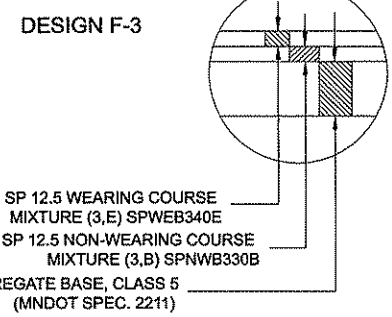
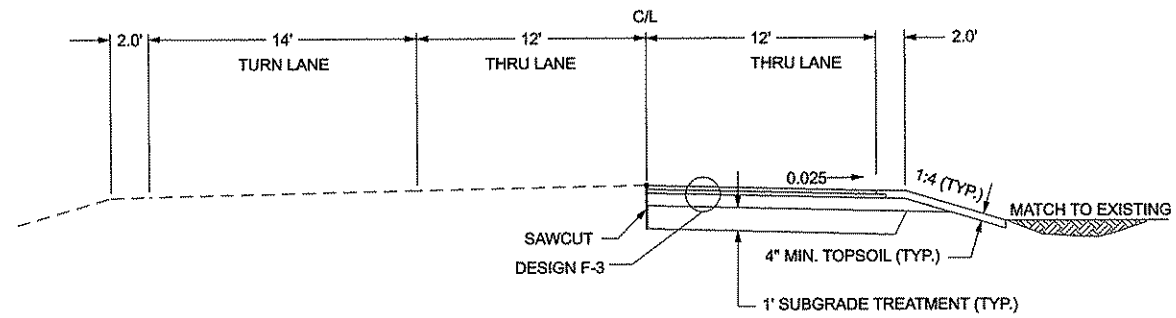
- NOTES**
- ① BACKFILL WITH SUITABLE MATERIAL.
  - ② SEE CHART FOR 14' RT. TURN LANE LOCATIONS.
  - ③ SEE CHART FOR 13' LT. TURN LANE LOCATIONS.
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  - ⑤ AGGREGATE SHOULDERING ACCOUNTED FOR IN THE PLAN QUANTITY FOR AGGREGATE BASE, CLASS 5.
  - ⑥ APPROXIMATE LOCATION OF EXISTING UTILITIES, TO BE ABANDONED/REMOVED FROM ROADWAY RIGHT OF WAY.
- ALL CROSS SLOPES EXPRESSED IN FT/FT.

**TYPICAL CITY OF HAM LAKE STREET SECTION**

**BALTIMORE ST.**



**CHISHOLM ST.**

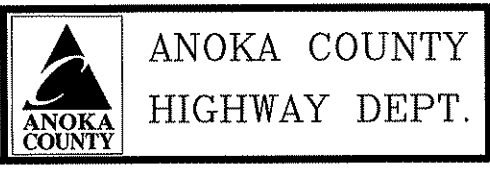


1	11/19/2006	EJ	MN	CK	DELETED BITUMINOUS BIKE PATH DETAILS.
2	11/29/2006	EJ	MN	CK	REVISED TYPICAL SECTIONS AND NOTES AS PER MNDOT REVIEW COMMENTS.
3	12/11/2006	EJ	MN	CK	REVISED NOTES.
NO	DATE	BY	CKD	APPR	REVISION
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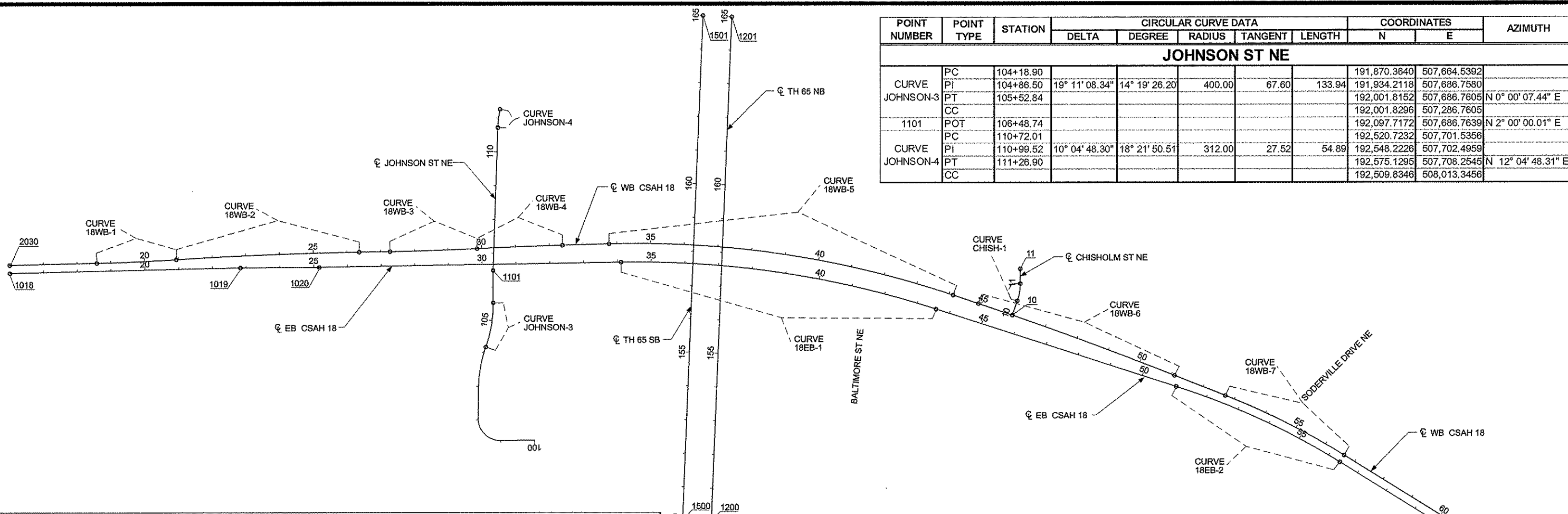
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 12-15-08 LICENSE NO. 24756

DRAWN BY: MS DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08



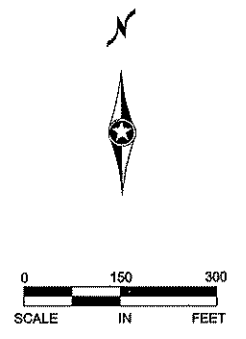
STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.



POINT NUMBER	POINT TYPE	STATION	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	N	E	
<b>JOHNSON ST NE</b>										
CURVE JOHNSON-3	PC	104+18.90						191,870.3640	507,664.5392	
	PI	104+86.50	19° 11' 08.34"	14° 19' 26.20"	400.00	67.60	133.94	191,934.2118	507,686.7580	
	PT	105+52.84						192,001.8152	507,686.7605	N 0° 00' 07.44" E
1101	CC							192,001.8296	507,286.7605	
	POT	106+48.74						192,097.7172	507,686.7639	N 2° 00' 00.01" E
	PC	110+72.01						192,520.7232	507,701.5356	
CURVE JOHNSON-4	PI	110+99.52	10° 04' 48.30"	18° 21' 50.51"	312.00	27.52	54.89	192,548.2226	507,702.4959	
	PT	111+26.90						192,575.1295	507,708.2545	N 12° 04' 48.31" E
	CC							192,509.8346	508,013.3456	

ALIGNMENT TABULATION										
POINT NUMBER	POINT TYPE	STATION	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	N	E	
<b>CSAH 18 EB</b>										
1018	POT	16+00.00						192,090.5092	506,254.0846	N 88° 41' 08.13" E
1019	POT	22+82.92						192,106.1747	506,936.8291	N 89° 41' 08.13" E
1020	POT	25+16.52						192,107.4565	507,170.4173	N 89° 03' 26.62" E
CURVE 18EB-1	PC	34+10.68						192,122.1662	508,064.4594	
	PI	38+88.96	18° 57' 17.79"	1° 59' 59.47"	2,865.00	478.28	947.82	192,130.0343	508,542.6732	
	PT	43+58.50						191,982.1402	508,997.5113	S 71° 59' 15.60" E
	CC							189,257.5539	508,111.5911	
CURVE 18EB-2	PC	51+04.86						191,751.3471	509,707.2996	
	PI	53+73.08	13° 54' 07.18"	2° 36' 15.67"	2,200.00	268.22	533.80	191,668.4088	509,962.3706	
	PT	56+38.66						191,526.6161	510,190.0432	S 58° 05' 08.42" E
	CC							189,659.1691	509,027.0118	
1021	POT	63+41.78					191,154.9129	510,786.8765		
<b>CSAH 18 WB</b>										
2030	POT	16+00						192,114.5029	506,253.5340	N 88° 41' 08.13" E
CURVE 18WB-1	PC	18+58.75						192,120.4382	506,512.2112	
	PI	19+75.99	2° 20' 40.09"	0° 59' 59.73"	5,730.00	117.25	234.46	192,123.1278	506,629.4288	
	PT	20+93.21						192,130.6101	506,746.4384	N 86° 20' 28.04" E
	CC							197,848.9305	506,380.7722	
CURVE 18WB-2	PC	20+93.21						192,130.6101	506,746.4384	
	PI	23+64.88	2° 42' 58.58"	0° 30' 00.02"	11,459.00	271.67	543.25	192,147.9473	507,017.5589	
	PT	26+36.46						192,152.4166	507,289.1965	N 89° 03' 26.62" E
	CC							180,694.9672	507,477.7068	
CURVE 18WB-3	PC	27+27.54						192,153.9150	507,380.2722	
	PI	28+56.98	1° 56' 29.20"	0° 45' 00.15"	7,639.00	129.43	258.84	192,156.0443	507,509.6893	
	PT	29+86.39						192,162.5568	507,638.9600	N 87° 06' 57.42" E
	CC							199,791.8813	507,254.6042	
CURVE 18WB-4	PC	29+86.39						192,162.5568	507,638.9600	
	PI	31+12.46	1° 15' 38.50"	0° 30' 00.02"	11,459.00	126.07	252.14	192,168.9002	507,764.8730	
	PT	32+38.52						192,172.4717	507,890.8951	N 88° 22' 35.91" E
	CC							180,718.0708	508,215.5187	

POINT NUMBER	POINT TYPE	STATION	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	N	E	
<b>18WB-5</b>										
CURVE 18WB-5	PC	33+76.55						192,176.3820	508,028.8700	
	PI	38+99.74	20° 18' 57.49"	1° 57' 43.86"	2,920.00	523.18	1035.38	192,191.2032	508,551.8406	
	PT	44+11.93						192,023.5286	509,047.4243	S 71° 18' 26.60" E
	CC							189,257.5539	508,111.5911	
<b>18WB-6</b>										
CURVE 18WB-6	PC	44+90.51						191,998.3435	509,121.8621	
	PI	48+00.00	3° 05' 38.99"	0° 30' 00.02"	11,459.00	309.49	618.82	191,899.1557	509,414.0246	
	PT	51+09.34						191,784.2883	509,702.4058	S 68° 12' 47.61" E
	CC							181,143.7873	505,449.3577	
<b>18WB-7</b>										
CURVE 18WB-7	PC	52+70.93						191,724.3122	509,852.4572	
	PI	54+68.00	10° 07' 39.19"	2° 34' 34.50"	2,224.00	197.07	393.11	191,651.1691	510,035.4504	
	PT	56+64.04						191,546.9882	510,202.7308	S 58° 05' 08.42" E
	CC							189,659.1691	509,027.0118	
2031	POT	63+67.16					191,175.2851	510,799.5641		
<b>TH 65 NB</b>										
1200	POT	150+00.00						191,351.4462	508,330.5694	N 2° 26' 02.43" E
1201	POT	165+00.00						192,850.0929	508,394.2725	
<b>TH 65 SB</b>										
1500	POT	150+00.00						191,355.0561	508,245.6461	N 2° 26' 02.43" E
1501	POT	165+00.00						192,853.7028	508,309.3492	
<b>CHISHOLM ST</b>										
10	POT	10+00.00						191,963.8859	509,222.1745	N 19° 17' 34.62" E
CURVE CHISH-1	PC	10+45.07						192,006.4244	509,237.0654	
	PI	10+71.30	19° 20' 03.04"	37° 12' 18.19"	154.00	26.23	51.97	192,031.1838	509,245.7326	
	PT	10+97.04						192,057.4165	509,245.7137	N 0° 02' 28.43" W
	CC							192,057.3057	509,091.7138	
11	POT	11+40.85						509,245.6822		



NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-618-25\plan\0261825\_ALI\_PLAN.dgn      05/29/2008      10:27:26 AM

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

PRINT NAME: **CURT A. KOBIKOWSKI**

SIGNATURE: *Curt A. Kobikowski*

DATE: **6-3-08**      LICENSE NO. **24756**

DRAWN BY: **EJ**      DATE: **04/22/08**

DESIGN BY: **MN**      DATE: **02/12/08**

CHECKED BY: **MN**      DATE: **05/05/08**



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

STATE PROJECT NO. **0208-115 (TH 65)**

STATE AID PROJECT NO. **02-618-25**

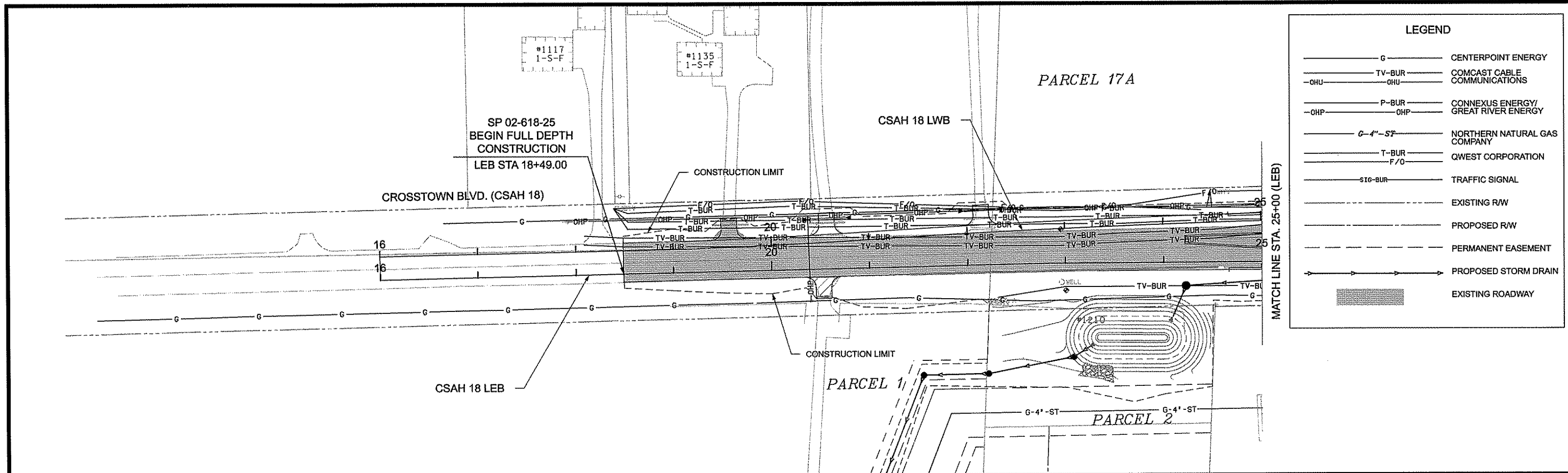
STATE PROJECT NO. **197-020-001**

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

ALIGNMENT PLAN

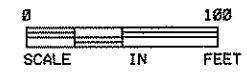
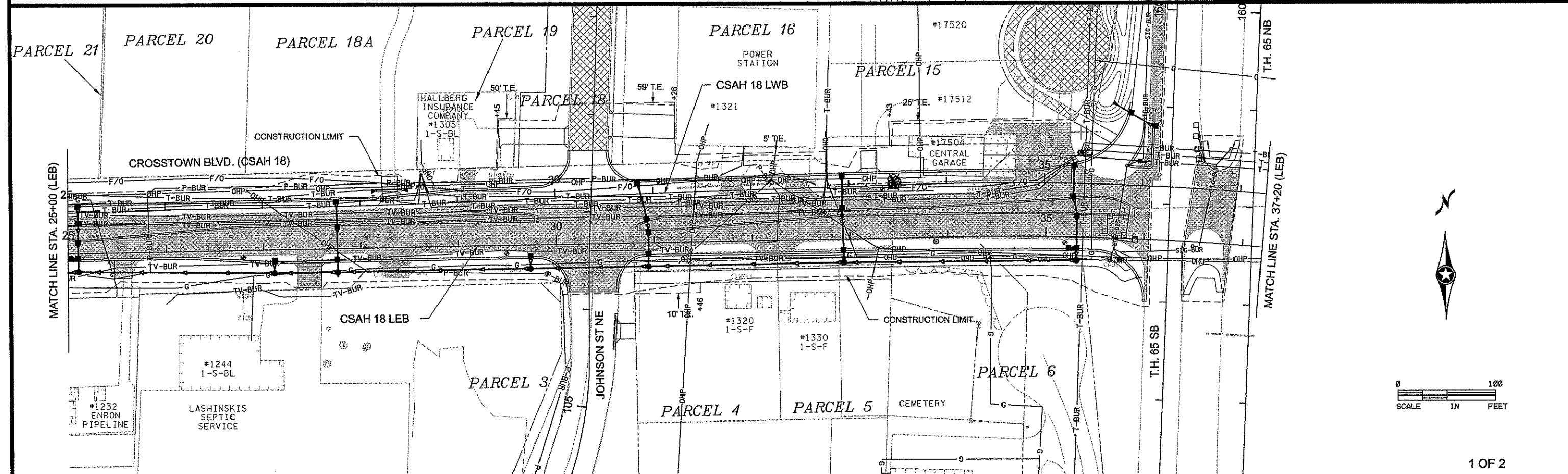
Sheet **16** of **116** Sheets





**LEGEND**

	G	CENTERPOINT ENERGY
	TV-BUR	COMCAST CABLE COMMUNICATIONS
	P-BUR	CONNEXUS ENERGY/ GREAT RIVER ENERGY
	G-4"-ST	NORTHERN NATURAL GAS COMPANY
	T-BUR	QWEST CORPORATION
	STG-BUR	TRAFFIC SIGNAL
	---	EXISTING RW
	---	PROPOSED RW
	---	PERMANENT EASEMENT
	---	PROPOSED STORM DRAIN
	---	EXISTING ROADWAY



1 OF 2

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-618-25\PLAN\0261825\_UTIL1.dgn      09/03/2008      10:15:01 AM

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

PRINT NAME: CURT A. KOBILARCSIK


SIGNATURE: *Curt Kobilarcsik*

DATE: 9-9-08      LICENSE NO. 24756

DRAWN BY EJ      DATE 04/22/08

DESIGN BY MN      DATE 02/12/08

CHECKED BY MN      DATE 05/05/08



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

STATE PROJECT NO. 0208-115 (TH 65)

STATE PROJECT NO. 02-618-25

STATE AID PROJECT NO. 197-020-001

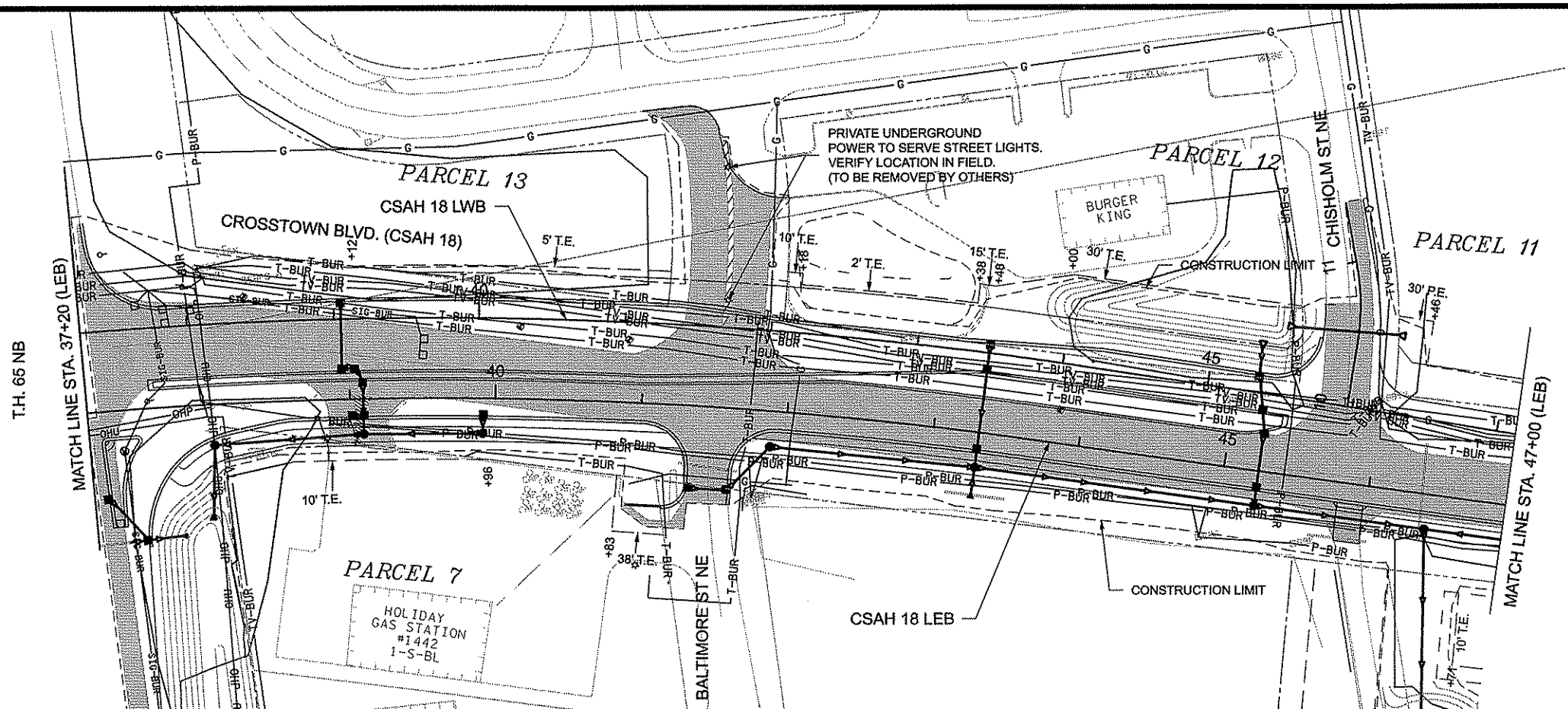
STATE PROJECT NO. \_\_\_\_\_

**EXISTING UTILITY PLAN**

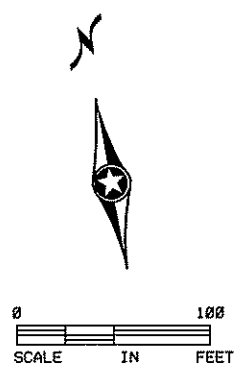
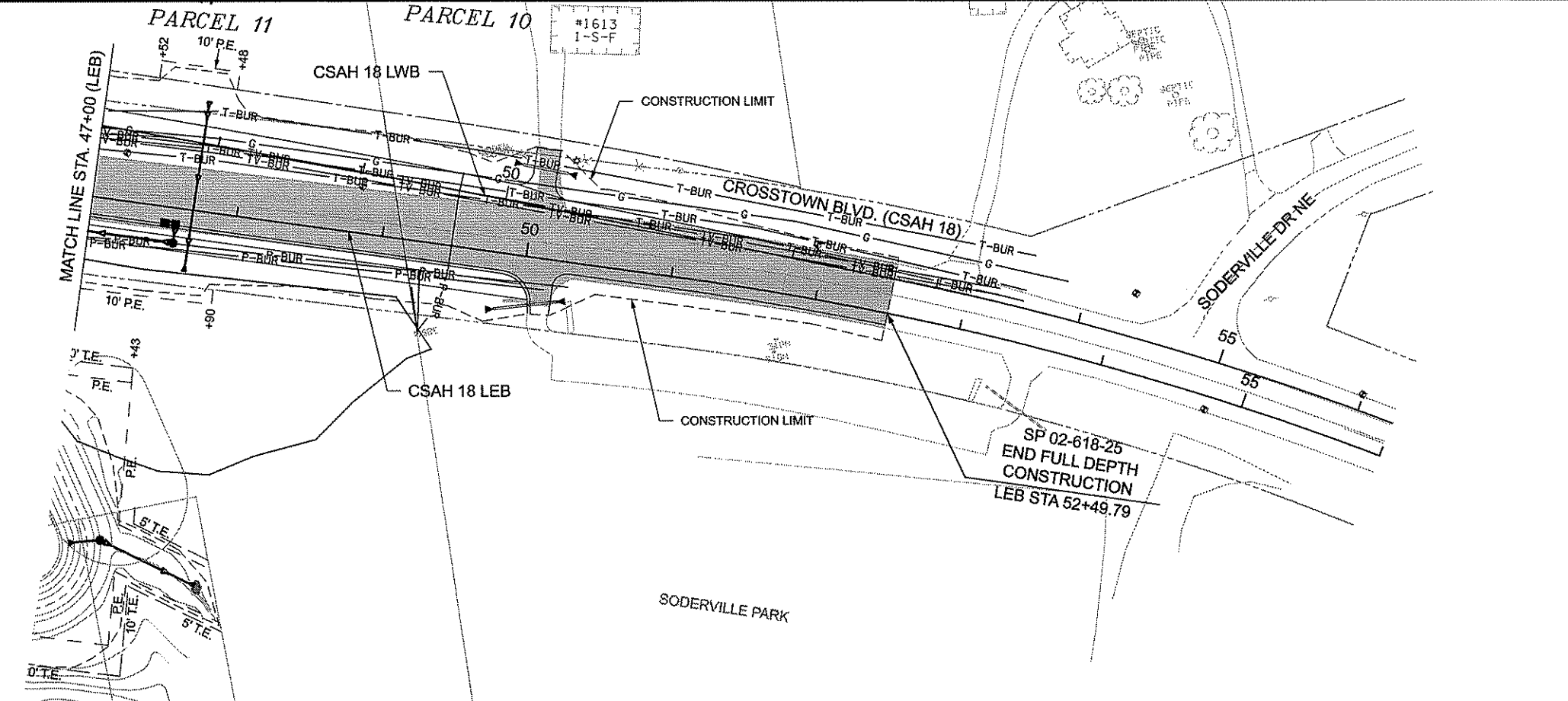
CSAH 18

STA 18+49.00 TO 37+20.00

Sheet 17 of 116 Sheets



LEGEND	
— G —	CENTERPOINT ENERGY
— TV-BUR — — OHU —	COMCAST CABLE COMMUNICATIONS
— P-BUR — — OHP —	CONNEXUS ENERGY/ GREAT RIVER ENERGY
— G-4\"-S\" —	NORTHERN NATURAL GAS COMPANY
— T-BUR — — F/O —	QWEST CORPORATION
— SIG-BUR —	TRAFFIC SIGNAL
---	EXISTING RW
---	PROPOSED RW
→	PROPOSED STORM DRAIN
▨	EXISTING ROADWAY



2 OF 2

1	06/17/2008	EJ	AK	CK	ADDED NOTE FOR PRIVATE UNDERGROUND POWER ON NORTHERLY BALTIMORE STREET.
NO	DATE	BY	CKD	APPR	REVISION
					09/03/2008 10:16:32 AM

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

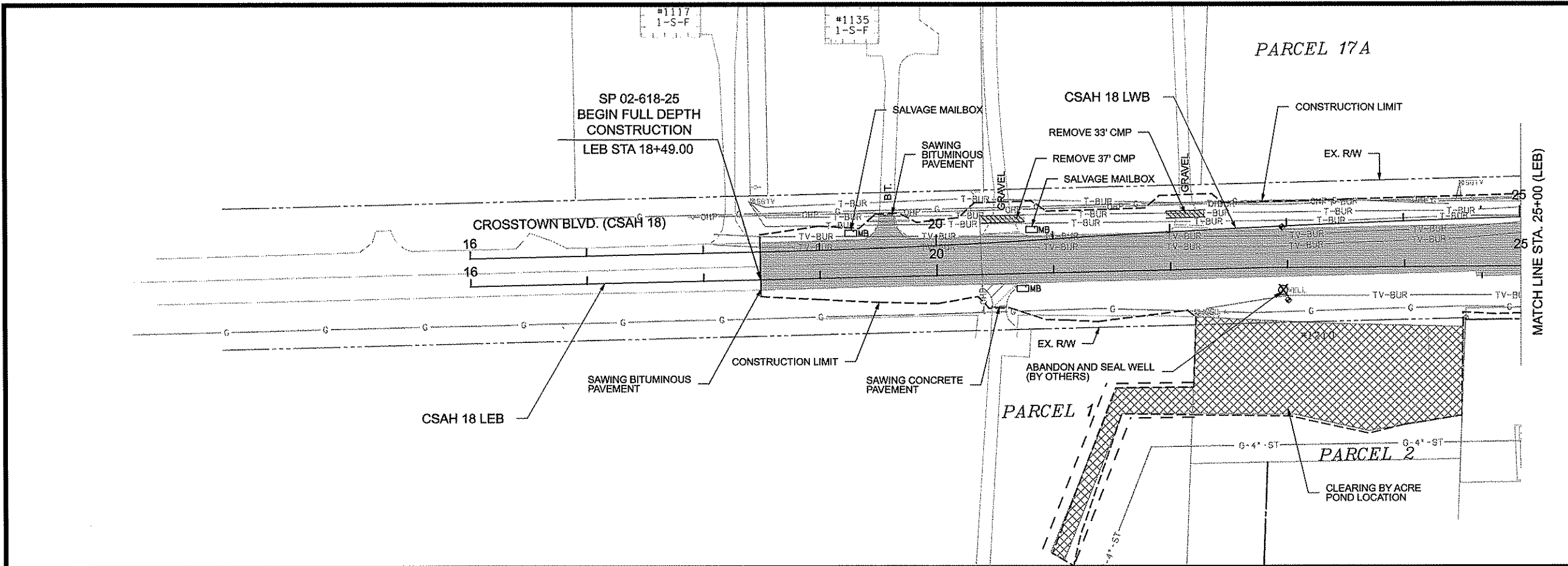
PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 9-9-08 LICENSE NO. 24756

DRAWN BY EJ DATE 04/22/08  
 DESIGN BY MN DATE 02/12/08  
 CHECKED BY MN DATE 05/05/08

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

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 STATE PROJECT NO. 02-618-25  
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 STATE PROJECT NO.

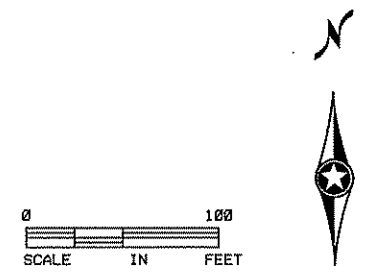
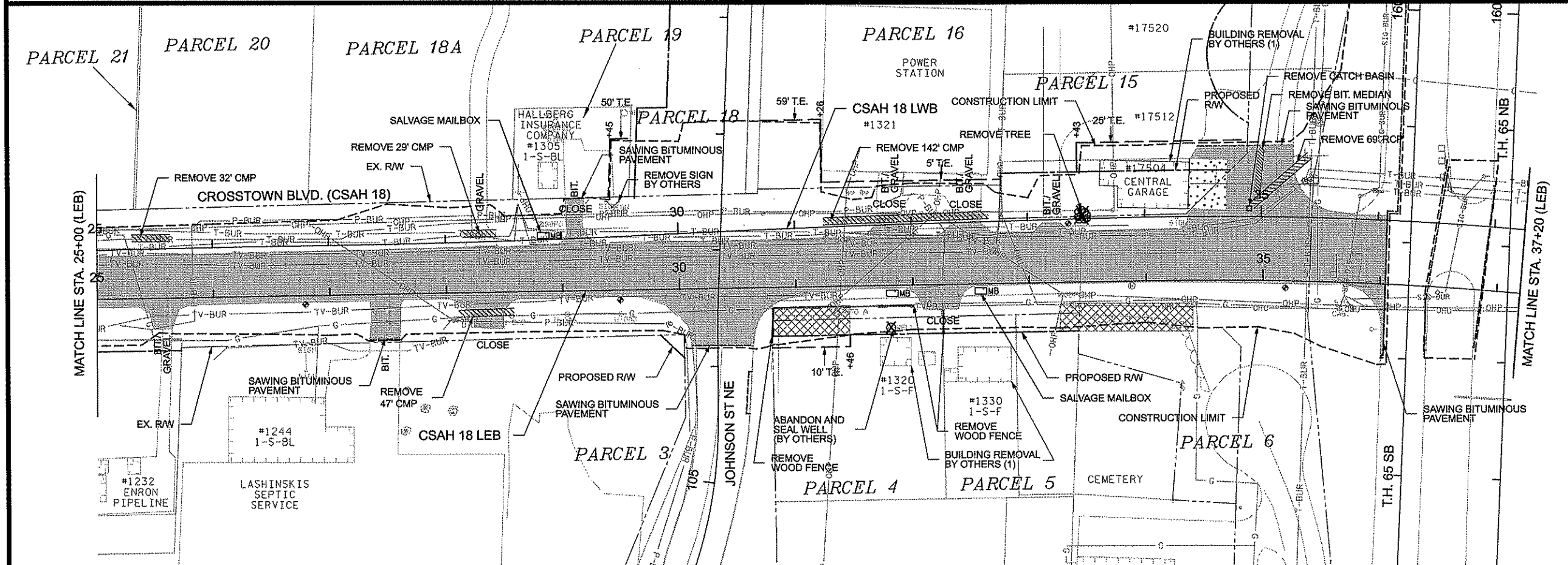
EXISTING UTILITY PLAN  
 CSAH 18  
 STA 37+20.00 TO 52+49.79  
 Sheet 18 of 116 Sheets



**LEGEND**

- REMOVE BITUMINOUS PAVEMENT & DRIVEWAY
- REMOVE CONCRETE DRIVEWAY PAVEMENT
- REMOVE BITUMINOUS MEDIAN
- CONCRETE REMOVAL
- CLEARING BY ACRE
- REMOVE WOOD FENCE
- TREE REMOVAL BY EACH
- ABANDON AND SEAL WELL
- EXISTING CATCH BASIN
- SALVAGE MAILBOX
- REMOVE PIPE CULVERTS
- SAWING BITUMINOUS PAVEMENT
- CONSTRUCTION LIMIT
- PERMANENT EASEMENT
- SOIL BORING

NOTE: SEE SHEET 21 FOR TH 65 REMOVAL PLAN



(1) BUILDING TO BE REMOVED PRIOR TO ROADWAY CONSTRUCTION UNDER SEPARATE CONTRACT.

NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\02-618-25\PLAN\0261825_rem1.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.  
 PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 6-3-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08

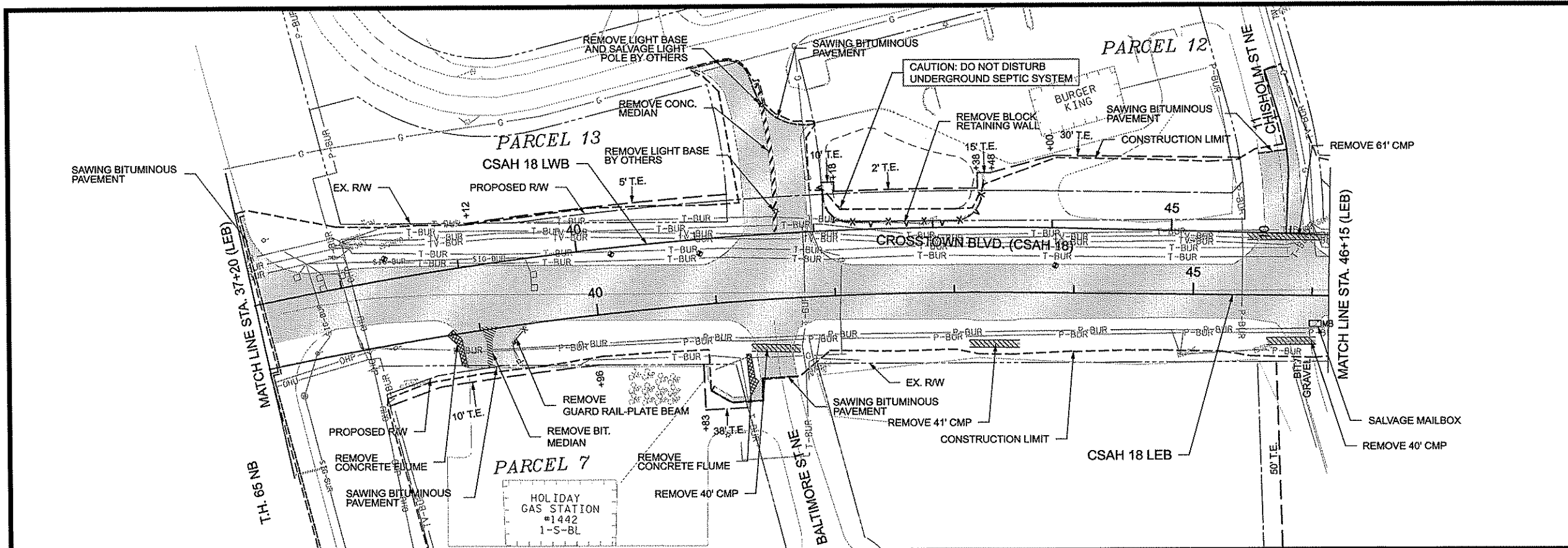


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

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 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

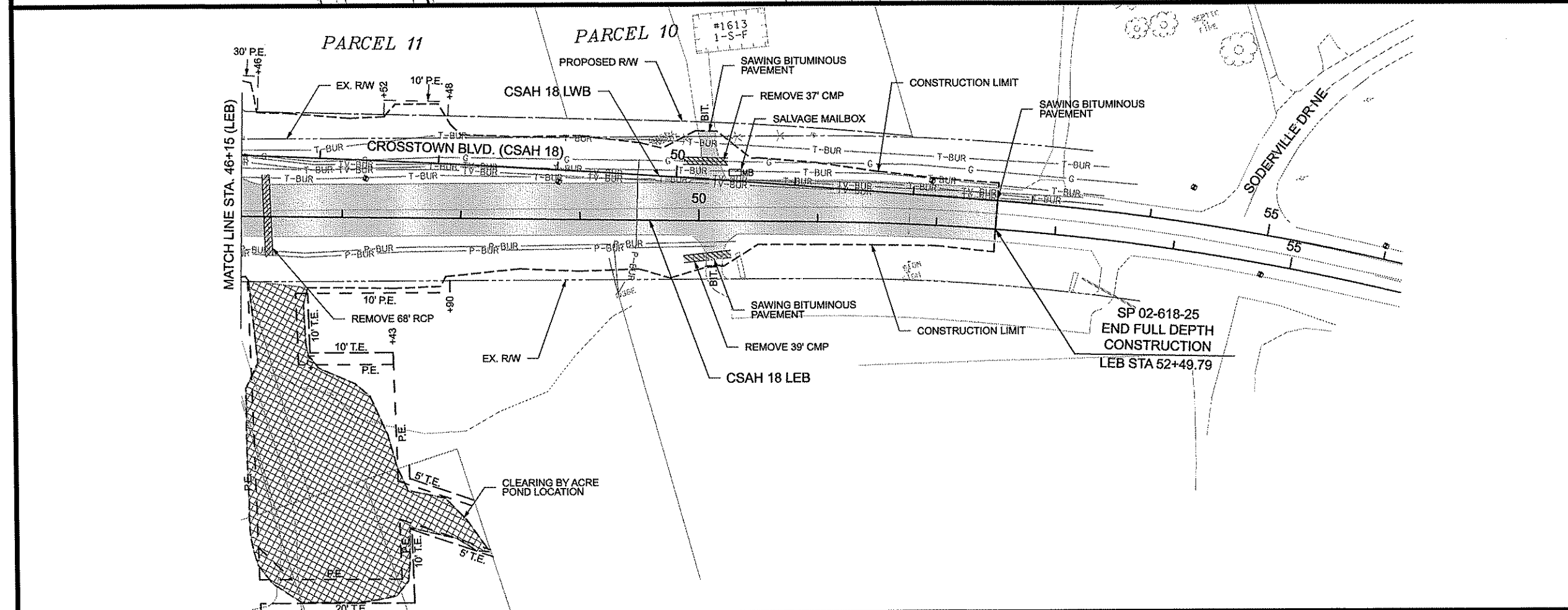
REMOVAL PLAN  
 CSAH 18  
 STA 18+49.00 TO 37+20.00  
 Sheet 19 of 116 Sheets





**LEGEND**

- REMOVE BITUMINOUS PAVEMENT & DRIVEWAY
- REMOVE BITUMINOUS MEDIAN
- REMOVE CONCRETE MEDIAN
- REMOVE CONCRETE FLUME
- CLEARING BY ACRE
- REMOVE GUARD RAIL-PLATE BEAM
- REMOVE RETAINING WALL
- REMOVE PIPE CULVERTS
- SALVAGE MAILBOX
- SAWING BITUMINOUS PAVEMENT
- CONSTRUCTION LIMITS
- PERMANENT EASEMENT
- SOIL BORING



NOTE: SEE SHEET 21 FOR TH 65 REMOVAL PLAN

NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-618-25\plan\0261825_rem2.dgn					11:02:06 AM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 12.4.08 LICENSE NO. 24756

DRAWN BY EJ DATE 04/22/08  
 DESIGN BY MN DATE 02/12/08  
 CHECKED BY MN DATE 05/05/08







**ANOKA COUNTY  
 HIGHWAY DEPT.**

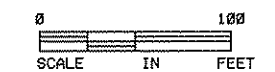
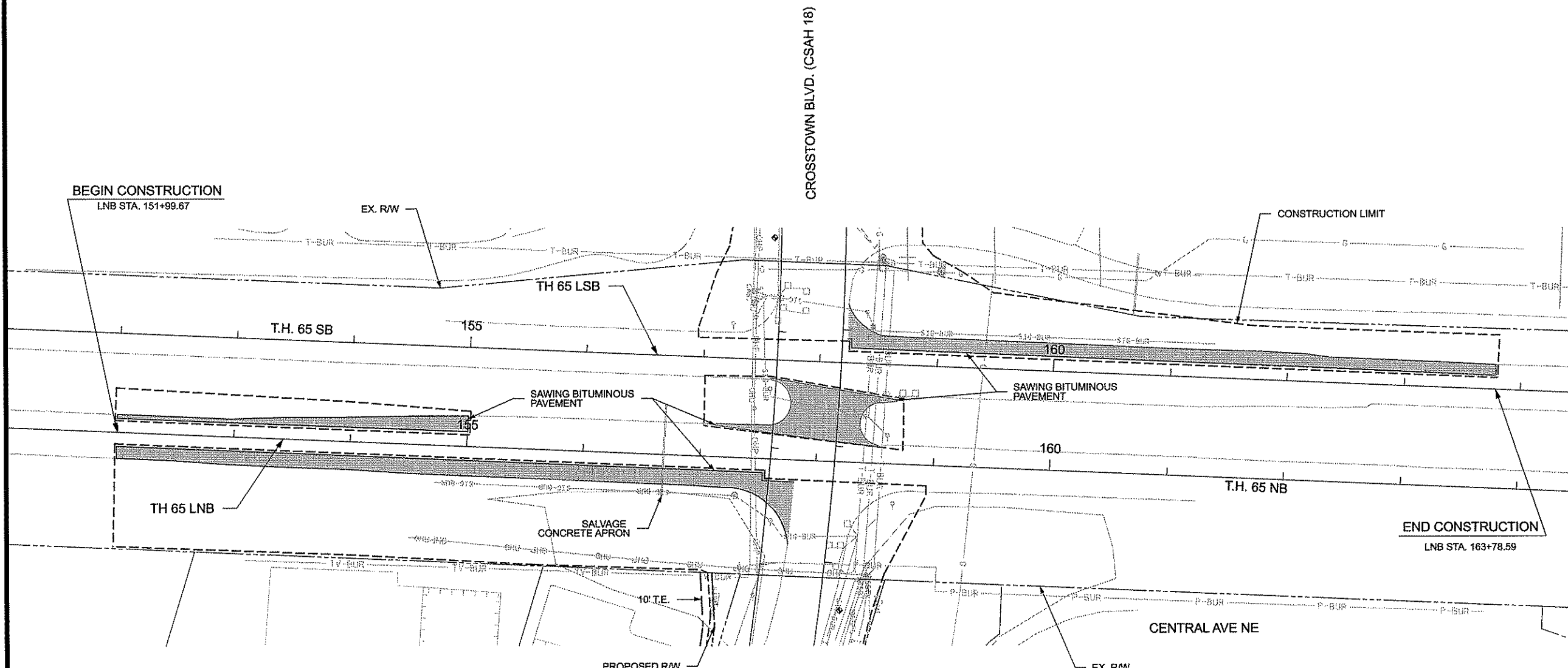
STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

**REMOVAL PLAN  
 CSAH 18  
 STA 37+20.00 TO 52+49.79  
 Sheet 20 of 116 Sheets**



**LEGEND**

-  REMOVE BITUMINOUS PAVEMENT
-  SAWING BITUMINOUS PAVEMENT
-  CONSTRUCTION LIMIT
-  SOIL BORING



3 OF 3

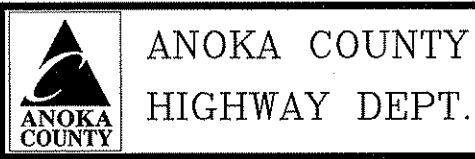
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

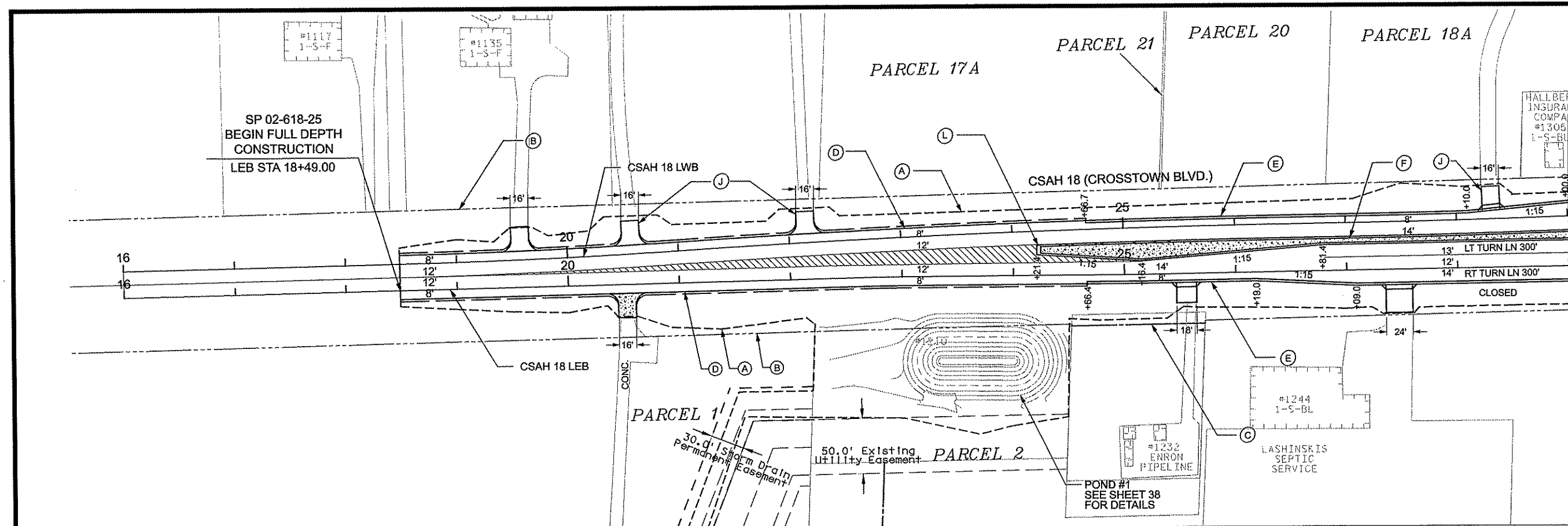
PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 6-3-08      LICENSE NO. 24756

DRAWN BY EJ      DATE 04/22/08  
 DESIGN BY MN      DATE 02/12/08  
 CHECKED BY MN      DATE 05/05/08

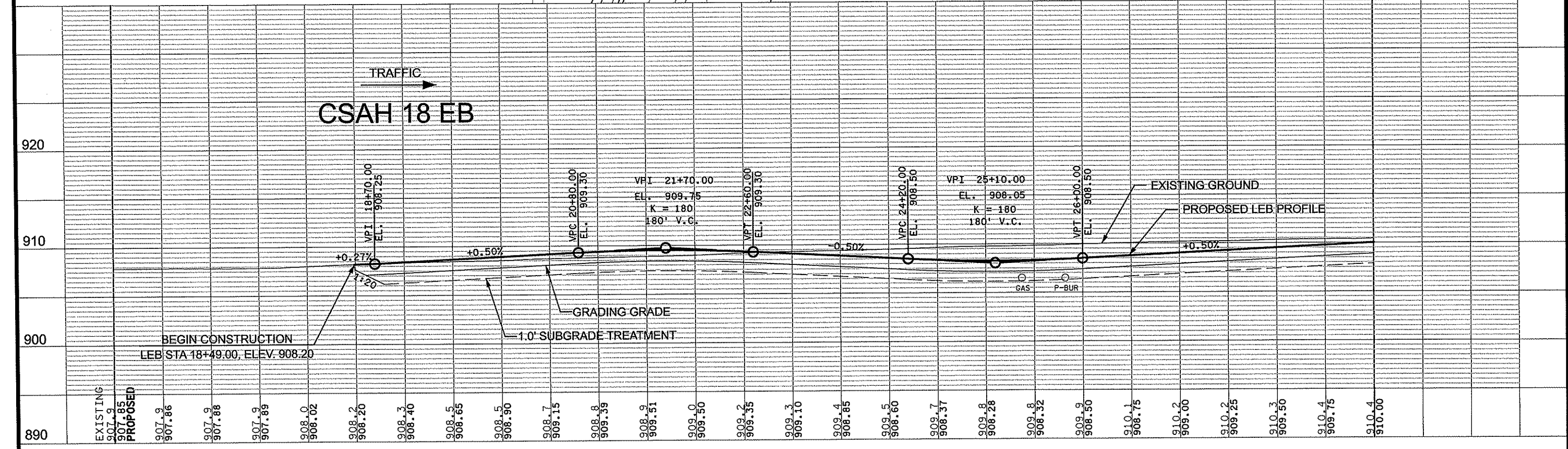
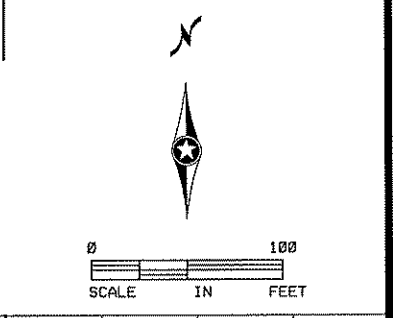


STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO. \_\_\_\_\_

REMOVAL PLAN  
 TH 65  
 STA 151+99.67 TO 163+78.59  
 Sheet 21 of 116 Sheets



- CONSTRUCTION NOTES:**
- (A) CONSTRUCTION LIMITS
  - (B) EXISTING RW
  - (C) PROPOSED RW
  - (D) 2' UNPAVED SHOULDER
  - (E) B424 CURB & GUTTER
  - (F) B418 CURB & GUTTER
  - (J) GRAVEL DRIVEWAY
  - (L) CONCRETE NOSE, STANDARD PLATE 7113
  - ☐ CONCRETE MEDIAN
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL PRIVATE ENTRANCE RADII 10 FT, UNLESS OTHERWISE NOTED.



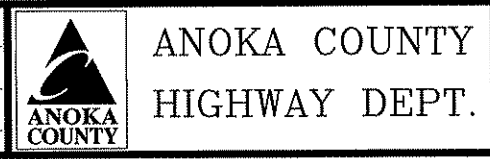
NO	DATE	BY	CKD	APPR	REVISION
1	08/12/08	EL	MN	CK	ADDED NOTE L FOR CONCRETE APPROACH NOSE DES 7113 AS PER MNDOT REVIEW COMMENTS.

EXISTING	907.9	907.85	907.86	907.9	907.88	907.9	907.89	908.0	908.02	908.2	908.3	908.4	908.5	908.65	908.5	908.90	908.7	909.15	908.8	909.39	908.9	909.51	909.0	909.50	909.2	909.35	909.3	909.10	909.4	908.85	909.5	908.60	909.7	908.37	909.8	908.28	909.8	908.32	909.9	908.50	910.1	908.75	910.2	909.00	910.2	909.25	910.3	909.50	910.4	909.75	910.4	910.00
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: MS DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08

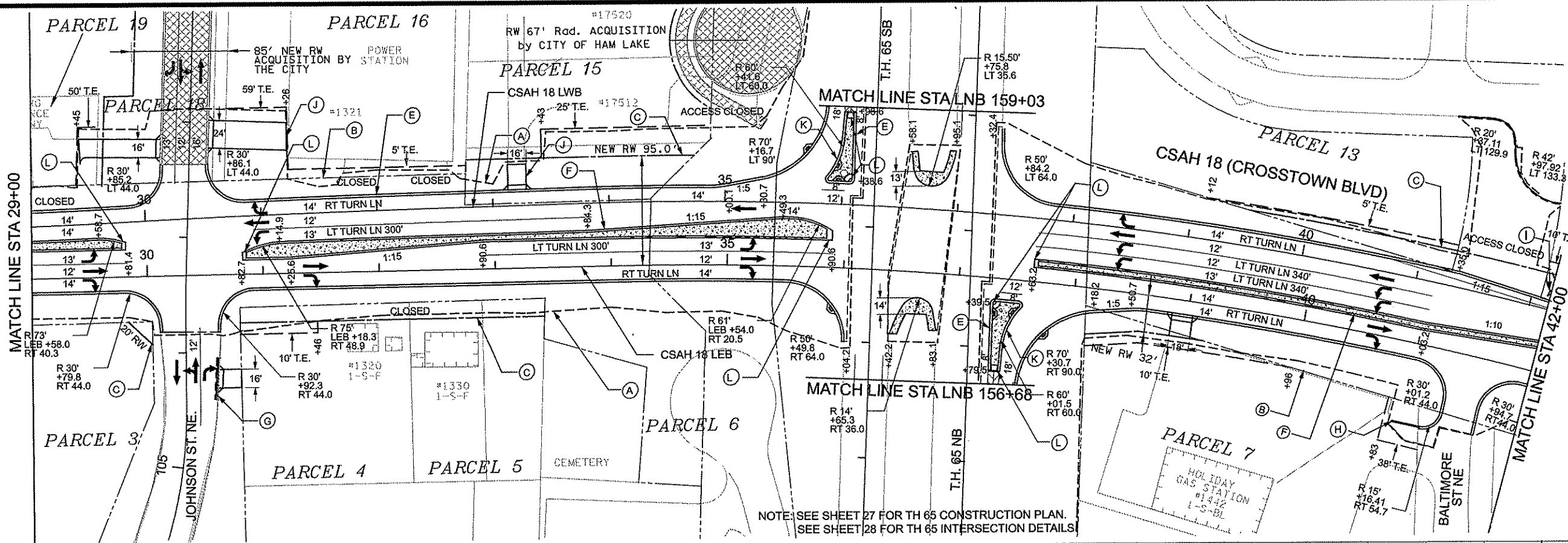
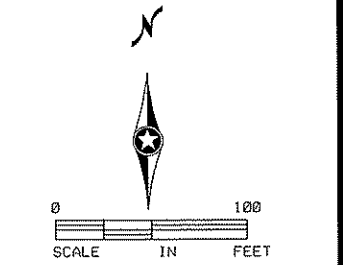


STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

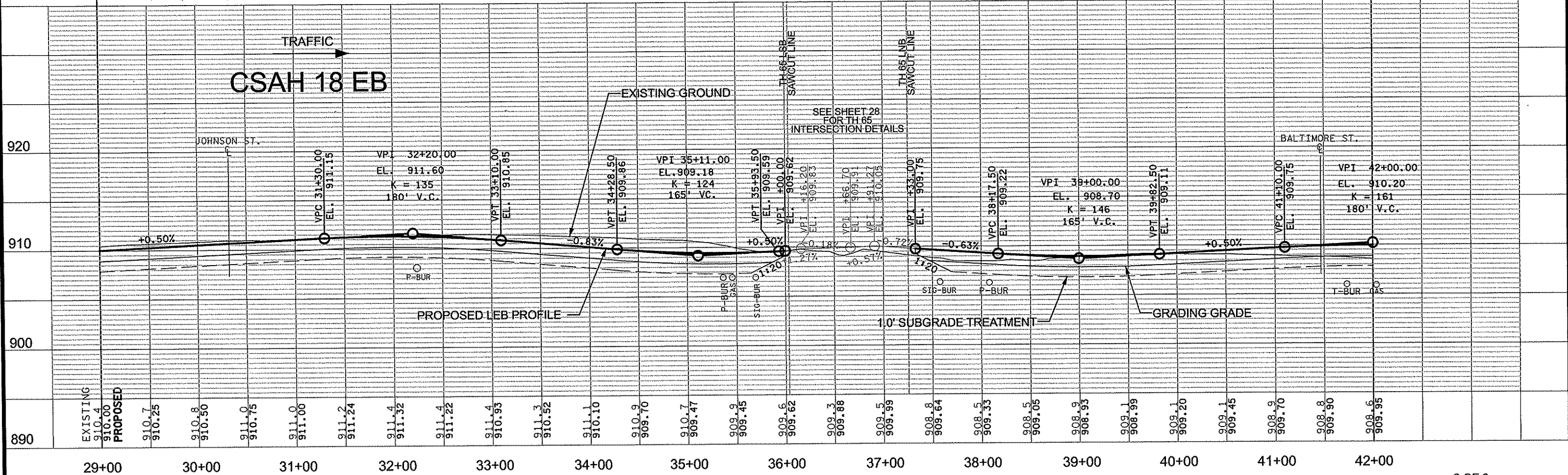
CONSTRUCTION PLAN AND PROFILE  
 STA 18+49.00 TO 29+00.00  
 Sheet 22 of 116 Sheets

**CONSTRUCTION NOTES:**

- (A) CONSTRUCTION LIMITS
  - (B) EXISTING RW
  - (C) PROPOSED RW
  - (E) B424 CURB & GUTTER
  - (F) B418 CURB & GUTTER
  - (G) B618 CURB & GUTTER
  - (H) B612 CURB & GUTTER
  - (I) BLOCK RETAINING WALL
  - (J) GRAVEL DRIVEWAY
  - (K) B424 C&G TIP-OUT
  - (L) CONCRETE NOSE, STANDARD PLATE 7113
  - TEMPORARY EASEMENT
  - ▭ PEDESTRIAN RAMP
  - ▭ CONCRETE MEDIAN
  - ▭ CONSTRUCTION BY OTHERS
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL PRIVATE ENTRANCE RADIUS 10 FT, UNLESS OTHERWISE NOTED.



NOTE: SEE SHEET 27 FOR TH 65 CONSTRUCTION PLAN.  
SEE SHEET 28 FOR TH 65 INTERSECTION DETAILS.

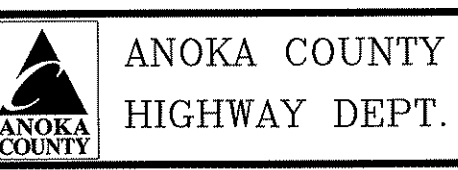


NO	DATE	BY	CKD	APPR	REVISION
1	08/29/2008	AM	MN	CK	OPENED WESTERLY DRIVEWAY ACCESS FOR HOLIDAY GAS STATION.
2	11/13/2008	MN	MN	CK	DELETED BITUMINOUS BIKE PATH FROM THE DESIGN.
3	11/28/2008	EJ	MN	CK	ADDED NOTE L FOR CONCRETE APPROACH NOSE DES 7113 AS PER MNDOT REVIEW COMMENTS.

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

PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarcsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: MS DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08

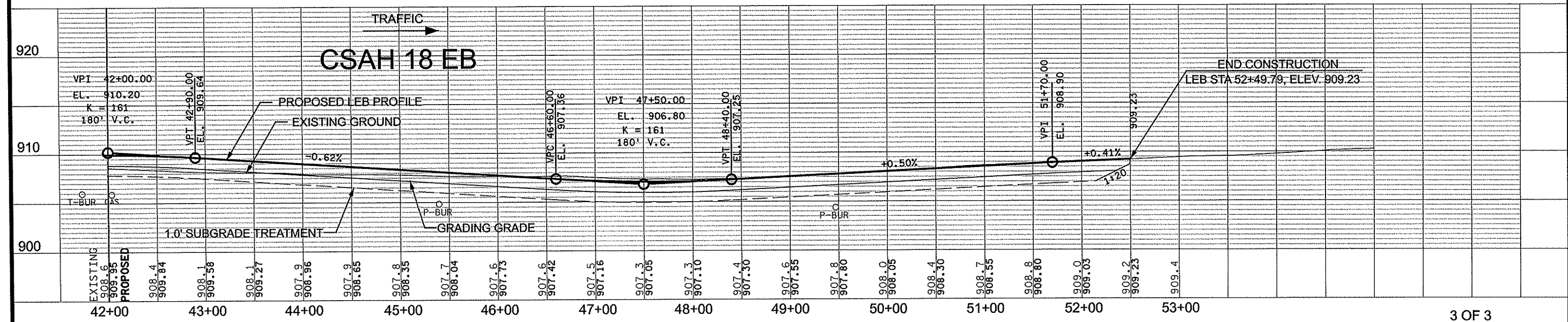
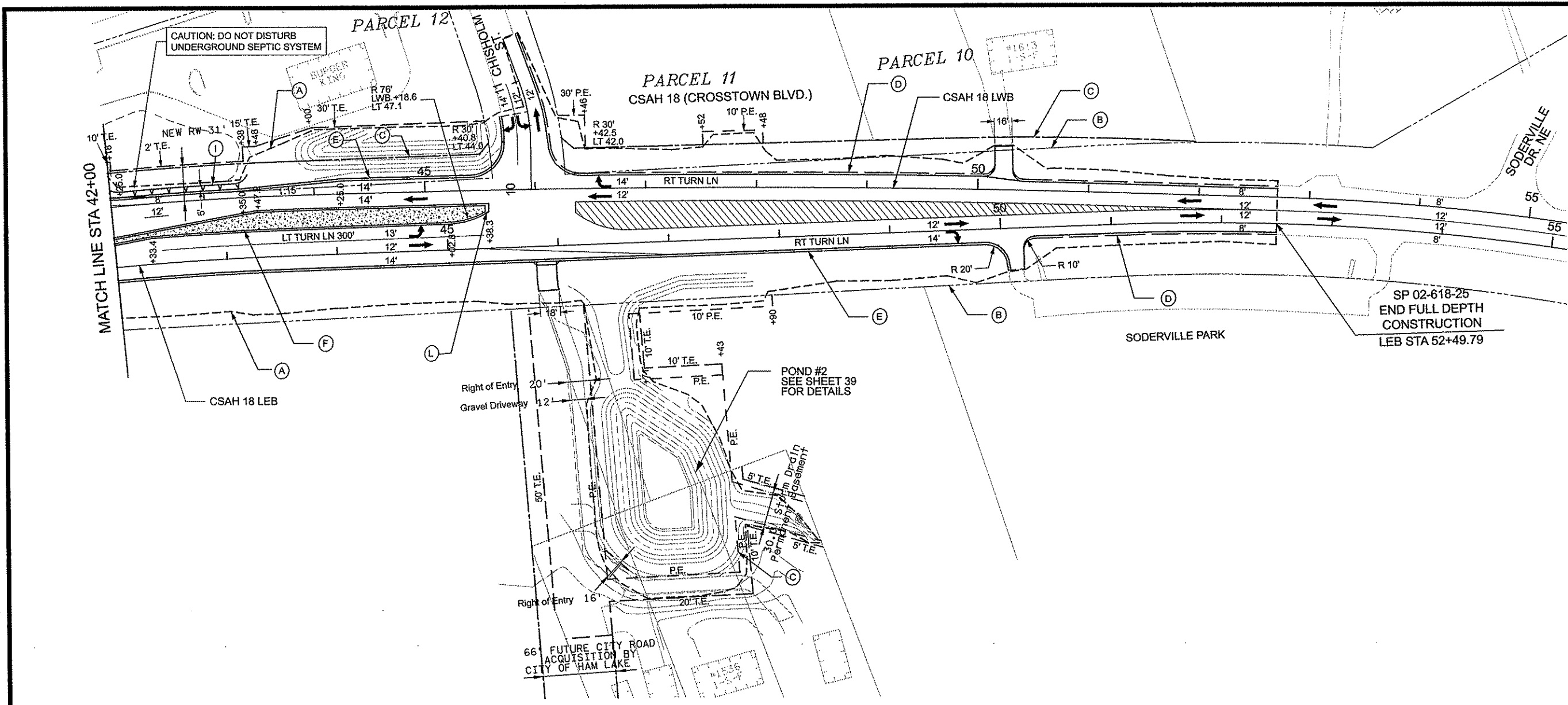
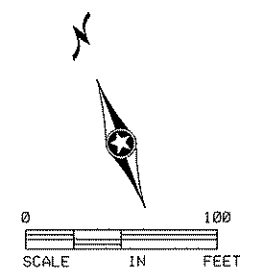


STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

CONSTRUCTION PLAN AND PROFILE  
STA 29+00 TO 42+00  
Sheet 23 of 116 Sheets



- CONSTRUCTION NOTES:**
- (A) CONSTRUCTION LIMITS
  - (B) EXISTING RW
  - (C) PROPOSED RW
  - (D) 2' UNPAVED SHOULDER
  - (E) B424 CURB & GUTTER
  - (F) B418 CURB & GUTTER
  - (I) BLOCK RETAINING WALL
  - (L) CONCRETE NOSE, STANDARD PLATE 7113
  - - - TEMPORARY EASEMENT
  - PEDESTRIAN RAMP
  - CONCRETE MEDIAN
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL PRIVATE ENTRANCE RADII 10 FT, UNLESS OTHERWISE NOTED.



NO	DATE	BY	CKD	APPR	REVISION
1	05/17/2008	MN	MN	CK	UPDATED CONTOURS BY POND #2.
2	09/23/2008	MN	MN	CK	REVISED SHOULDER WIDTH ON CSAH 18 WEST BOUND LANE.
3	11/19/2008	MN	MN	CK	DELETED BITUMINOUS BIKE PATH FROM THE DESIGN.
4	11/28/2008	EL	MN	CK	ADDED NOTE L FOR CONCRETE APPROACH NOSE DES 7113 AS PER MNDOT REVIEW COMMENTS.

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

PRINT NAME: CURT A. KOBILARCSIK

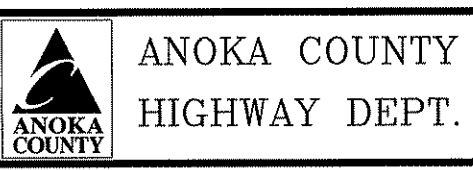
SIGNATURE: *Curt Kobilarsik*

DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY MS DATE 04/22/08

DESIGN BY MN DATE 02/12/08

CHECKED BY MN DATE 05/05/08



STATE PROJECT NO. 0208-115 (TH 65)

STATE PROJECT NO. 02-618-25

STATE AID PROJECT NO. 197-020-001

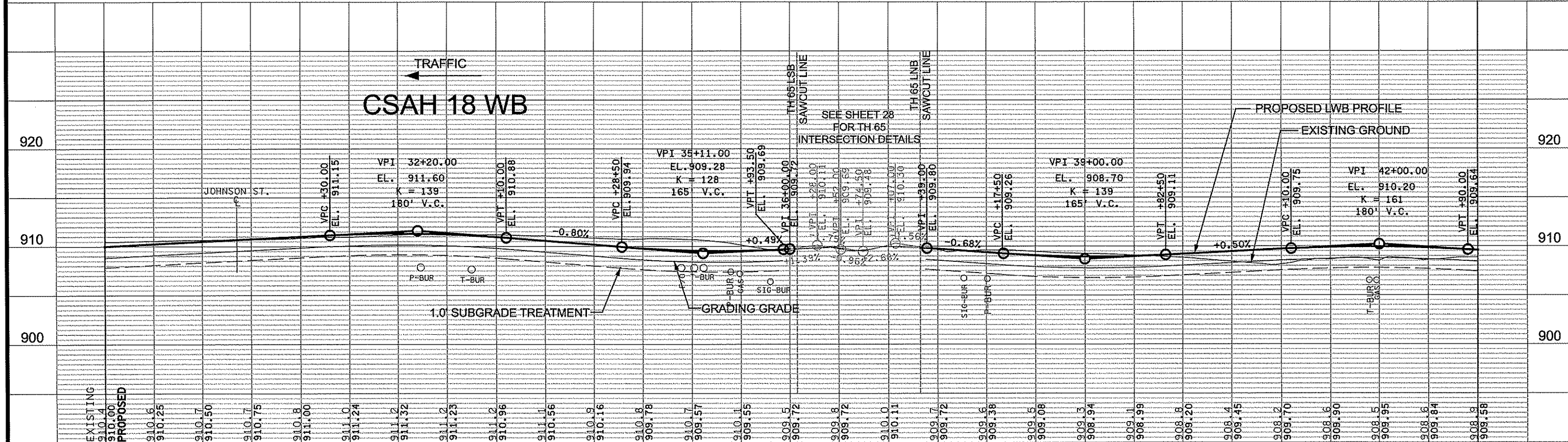
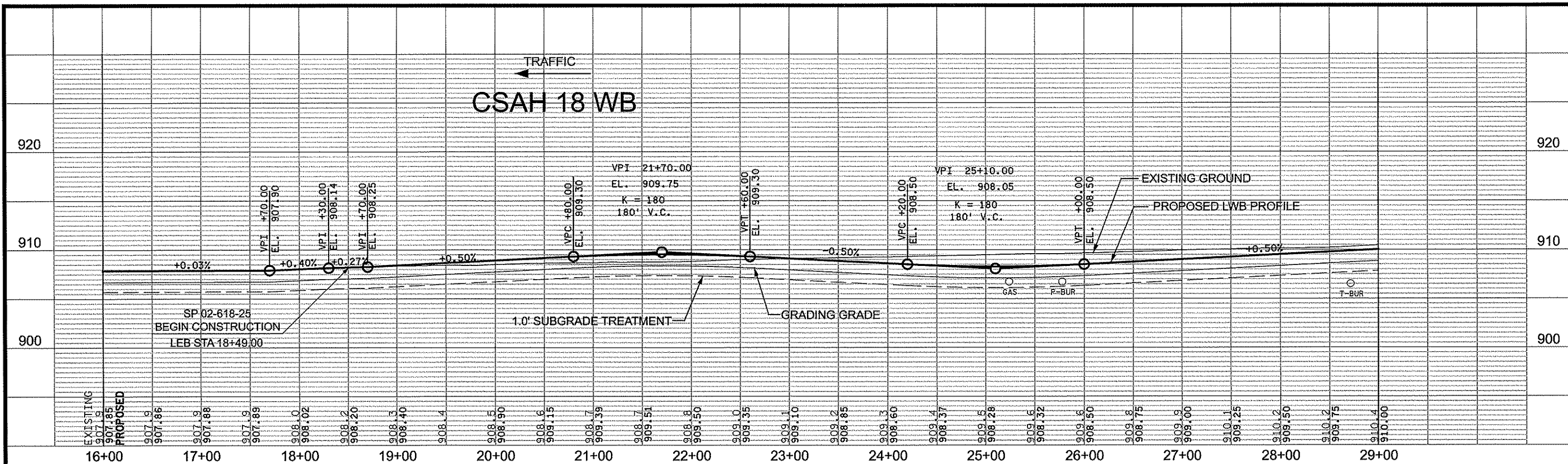
STATE PROJECT NO.

CONSTRUCTION PLAN AND PROFILE

STA 42+00 TO 52+49.79

Sheet 24 of 116 Sheets





1 OF 2

NO	DATE	BY	CHKD	APPR	REVISION
NAME: p102-618-25plan0261825_FP4.dgn					05/14/2008

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarscik*  
 DATE: 6-3-08 LICENSE NO. 24756

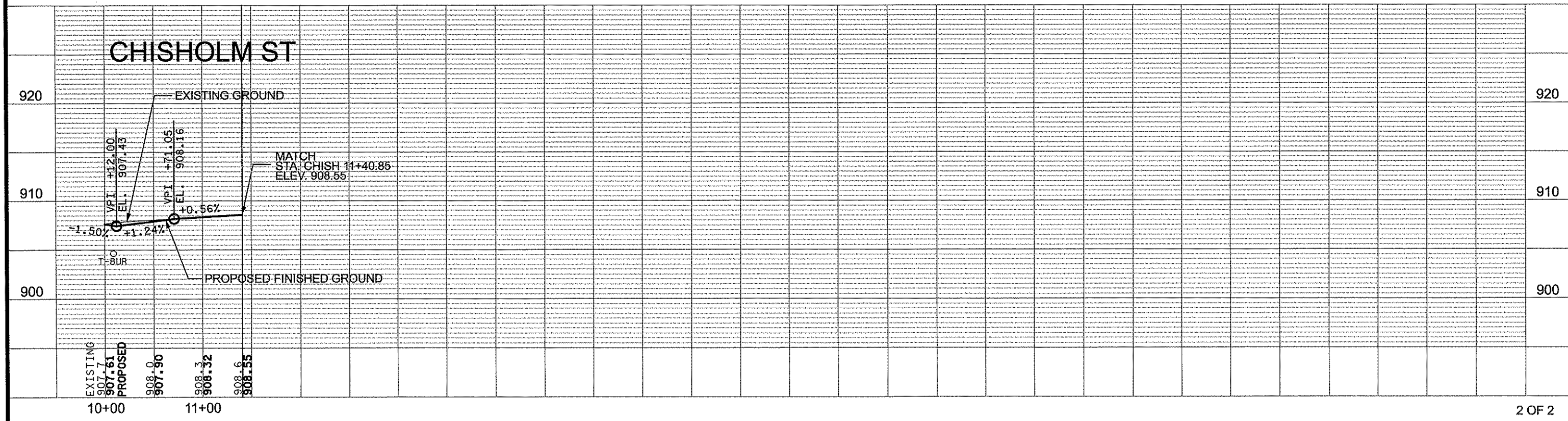
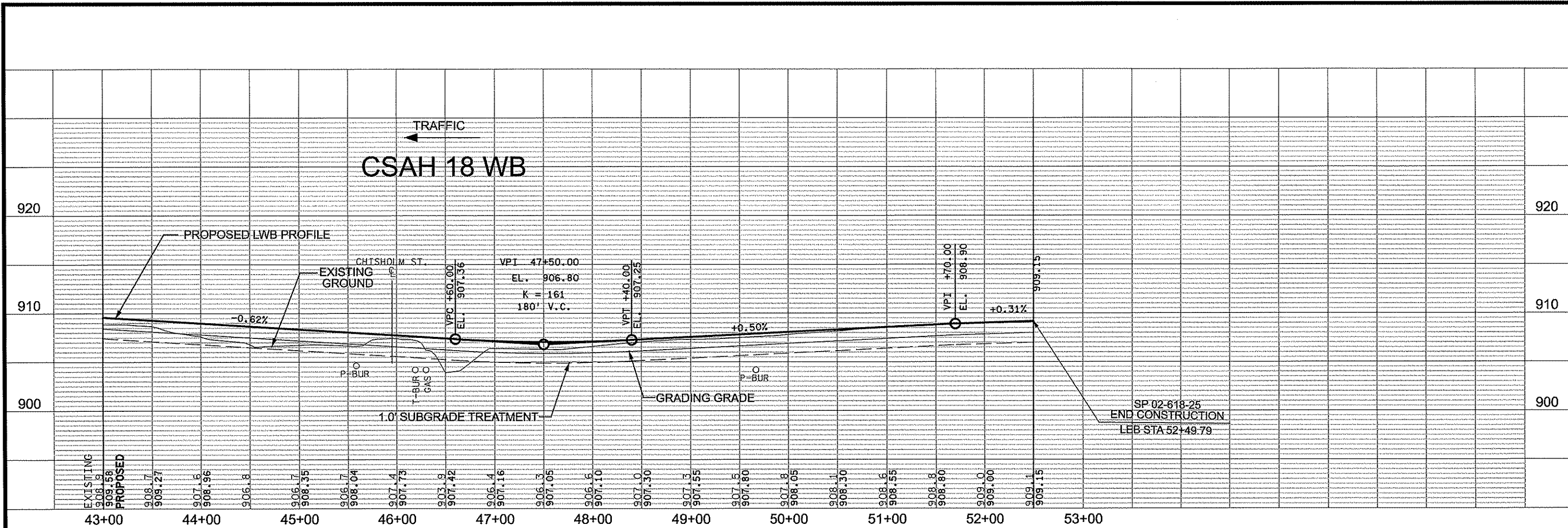
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 DESIGN BY MN DATE 02/12/08  
 CHECKED BY MN DATE 05/05/08




ANOKA COUNTY  
 HIGHWAY DEPT.

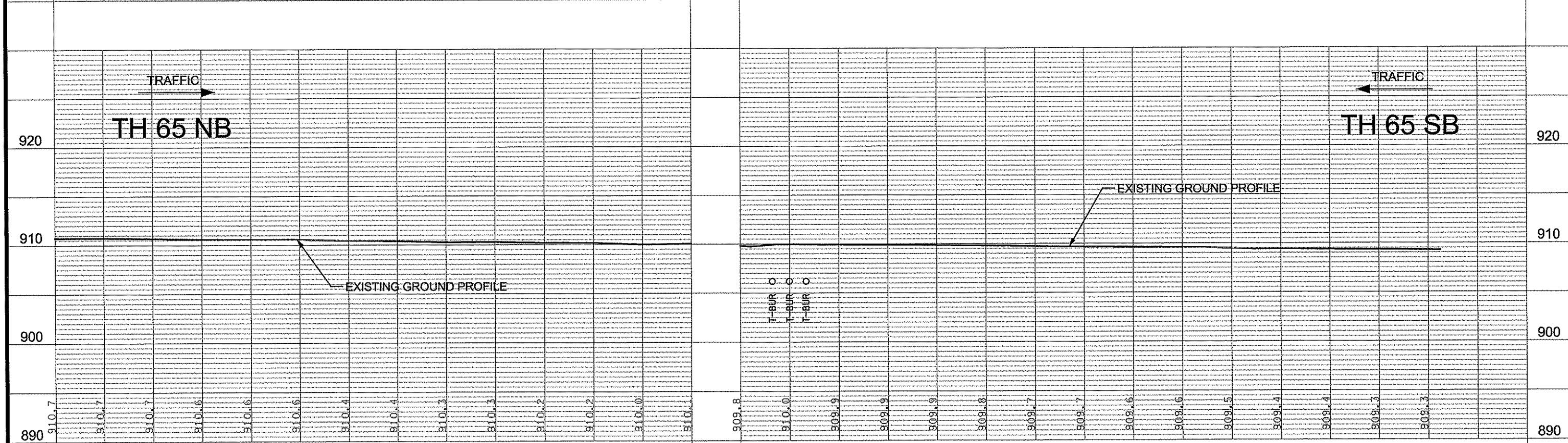
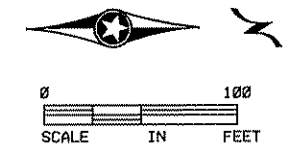
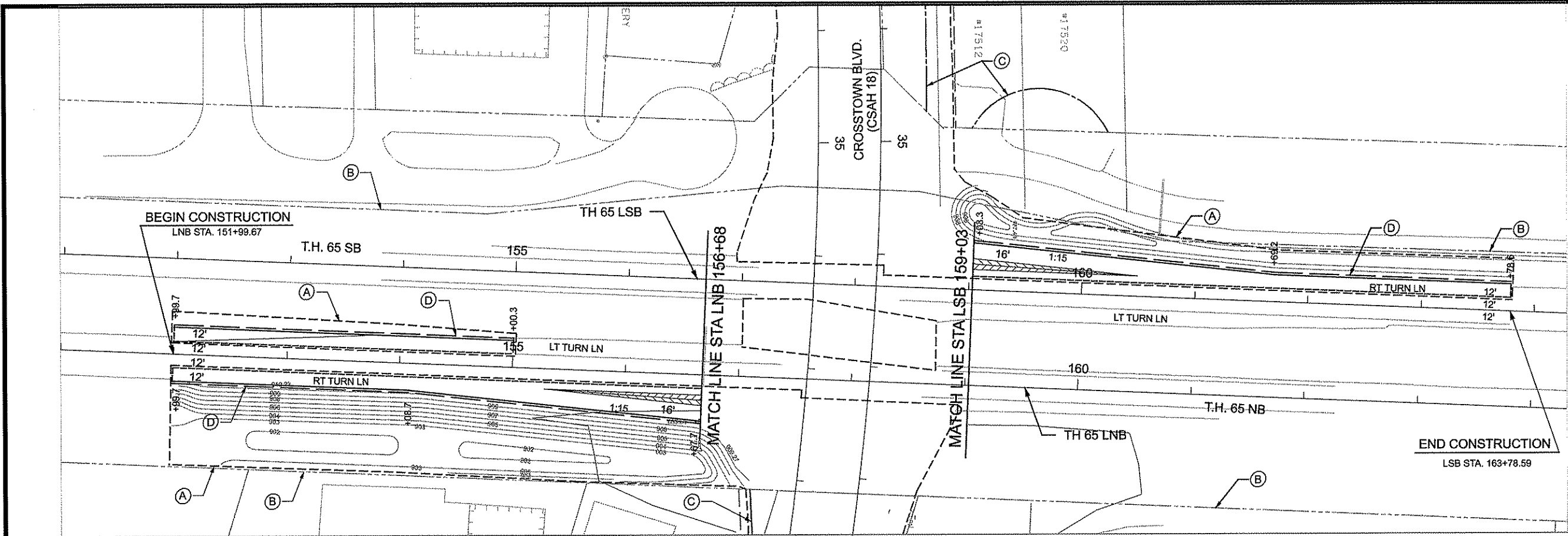
STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO. \_\_\_\_\_

PROFILE  
 CSAH 18 LWB  
 STA 18+49.00 TO 43+00.00  
 Sheet 25 of 116 Sheets



<p>NO DATE BY CKD APPR REVISION</p> <p>NAME: p:02-618-25\plan\0261825_PP4.dgn 05/14/2008 2:14:05 PM</p>	<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>PRINT NAME: CURT A. KOBILARCSIK</p> <p>SIGNATURE: <i>Curt Kobilarsik</i></p> <p>DATE: 6-3-08 LICENSE NO. 24756</p>	<p>DRAWN BY MS DATE 04/22/08</p> <p>DESIGN BY MN DATE 02/12/08</p> <p>CHECKED BY MN DATE 05/05/08</p>	 <p><b>ANOKA COUNTY</b> HIGHWAY DEPT.</p>	<p>STATE PROJECT NO. 0208-115 (TH 65)</p> <p>STATE PROJECT NO. 02-618-25</p> <p>STATE AID PROJECT NO. 197-020-001</p> <p>STATE PROJECT NO.</p>	<p>PROFILE</p> <p>CSAH 18 LWB, CHISHOLM ST</p> <p>STA 43+00.00 TO 52+49.79</p> <p>Sheet 26 of 116 Sheets</p>
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- CONSTRUCTION NOTES:**
- (A) CONSTRUCTION LIMITS
  - (B) EXISTING RW
  - (C) PROPOSED RW
  - (D) 2' TOPSOIL



151+00	152+00	153+00	154+00	155+00	156+00	157+00	158+00	159+00	160+00	161+00	162+00	163+00	164+00	165+00	1 OF 1
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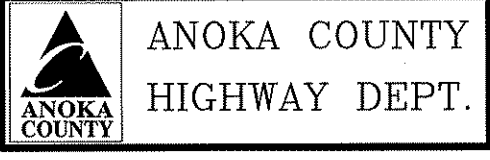
NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-618-25\plan\0261825\_PP5.dgn      05/29/2008      10:07:33 AM

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 6-3-08      LICENSE NO. 24756

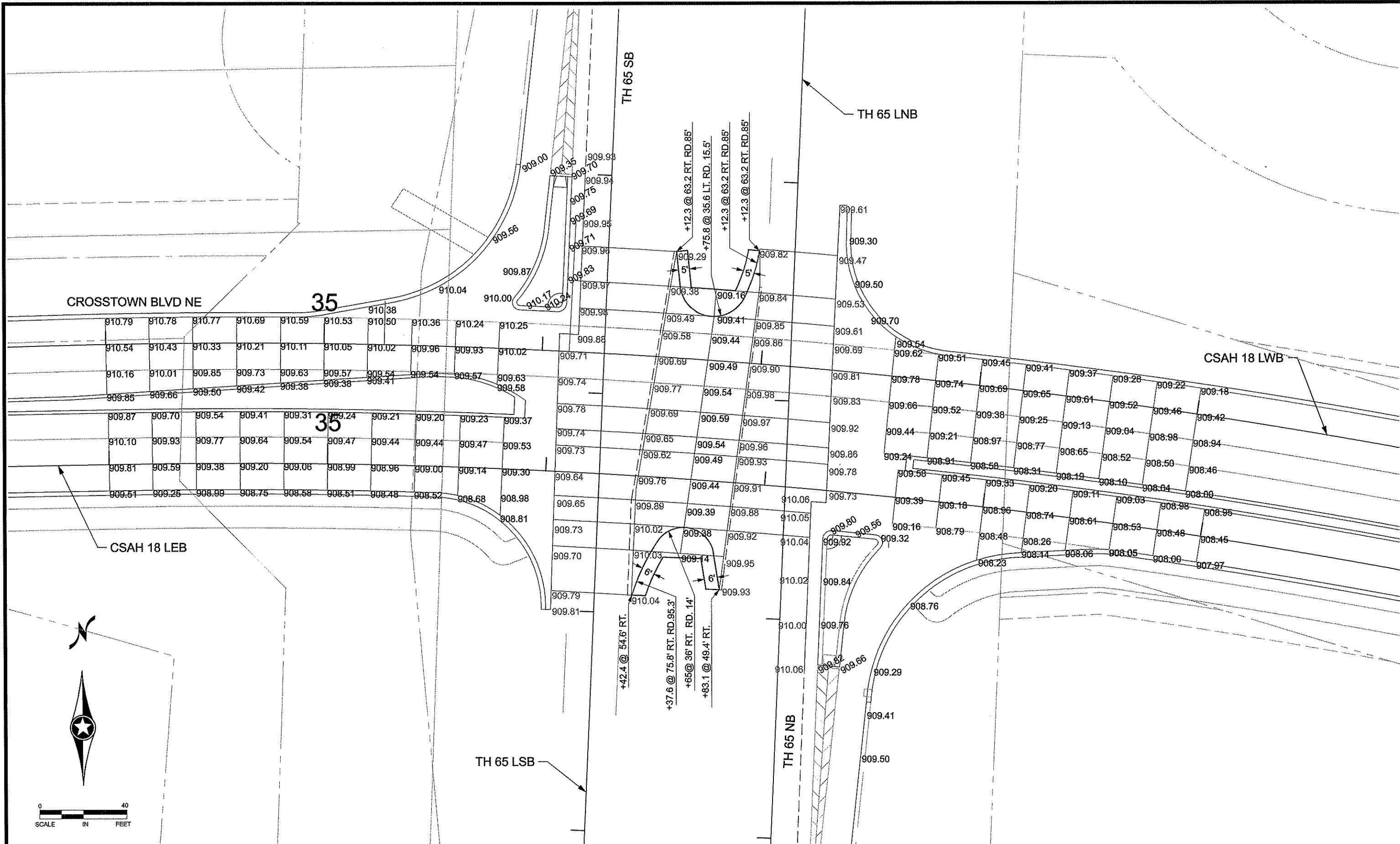
DRAWN BY: EJ      DATE: 04/22/08  
 DESIGN BY: MN      DATE: 02/12/08  
 CHECKED BY: MN      DATE: 05/05/08



STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO. \_\_\_\_\_

CONSTRUCTION PLAN AND PROFILE  
 TH 65  
 STA 151+99.67 TO 163+78.59  
 Sheet 27 of 116 Sheets





NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-618-25\PLAN\0261825_IN1.dgn					
DATE: 05/29/2008					
2:55:57 PM					

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

PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt Kobilarsik*


DATE: 6-3-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08

DESIGN BY: MN DATE: 02/12/08

CHECKED BY: MN DATE: 05/05/08

**ANOKA COUNTY**  
HIGHWAY DEPT.



STATE PROJECT NO. 0208-115 (TH 65)

STATE PROJECT NO. 02-618-25

STATE AID PROJECT NO. 197-020-001

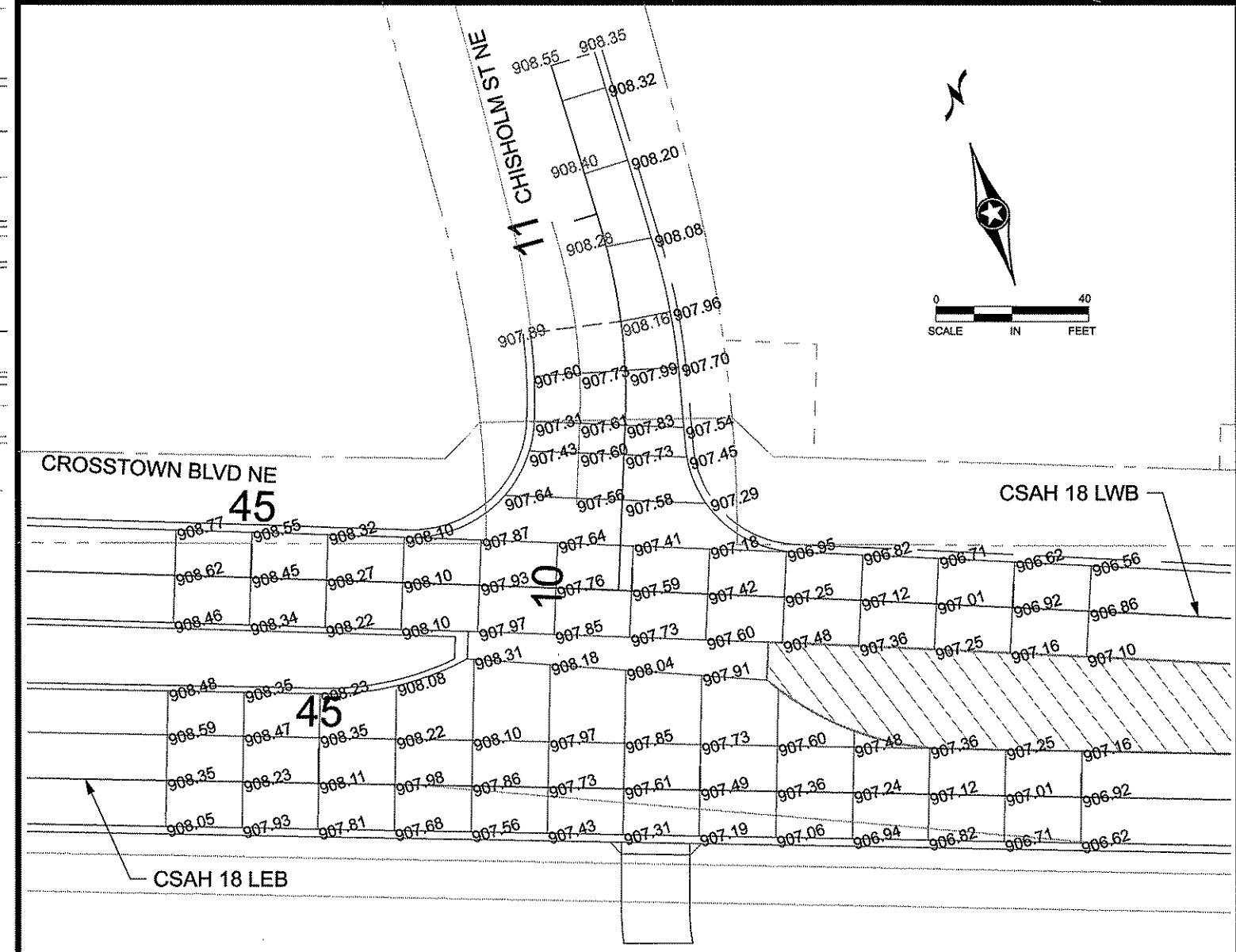
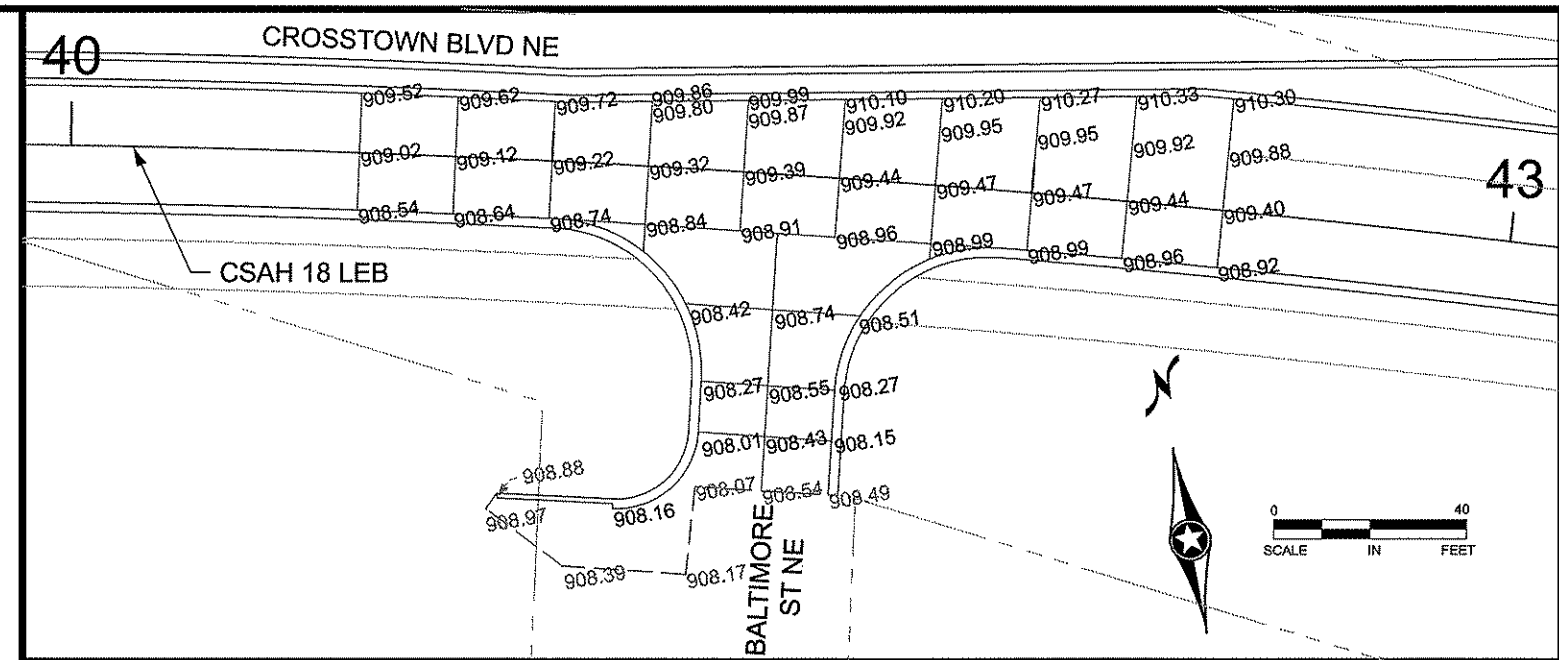
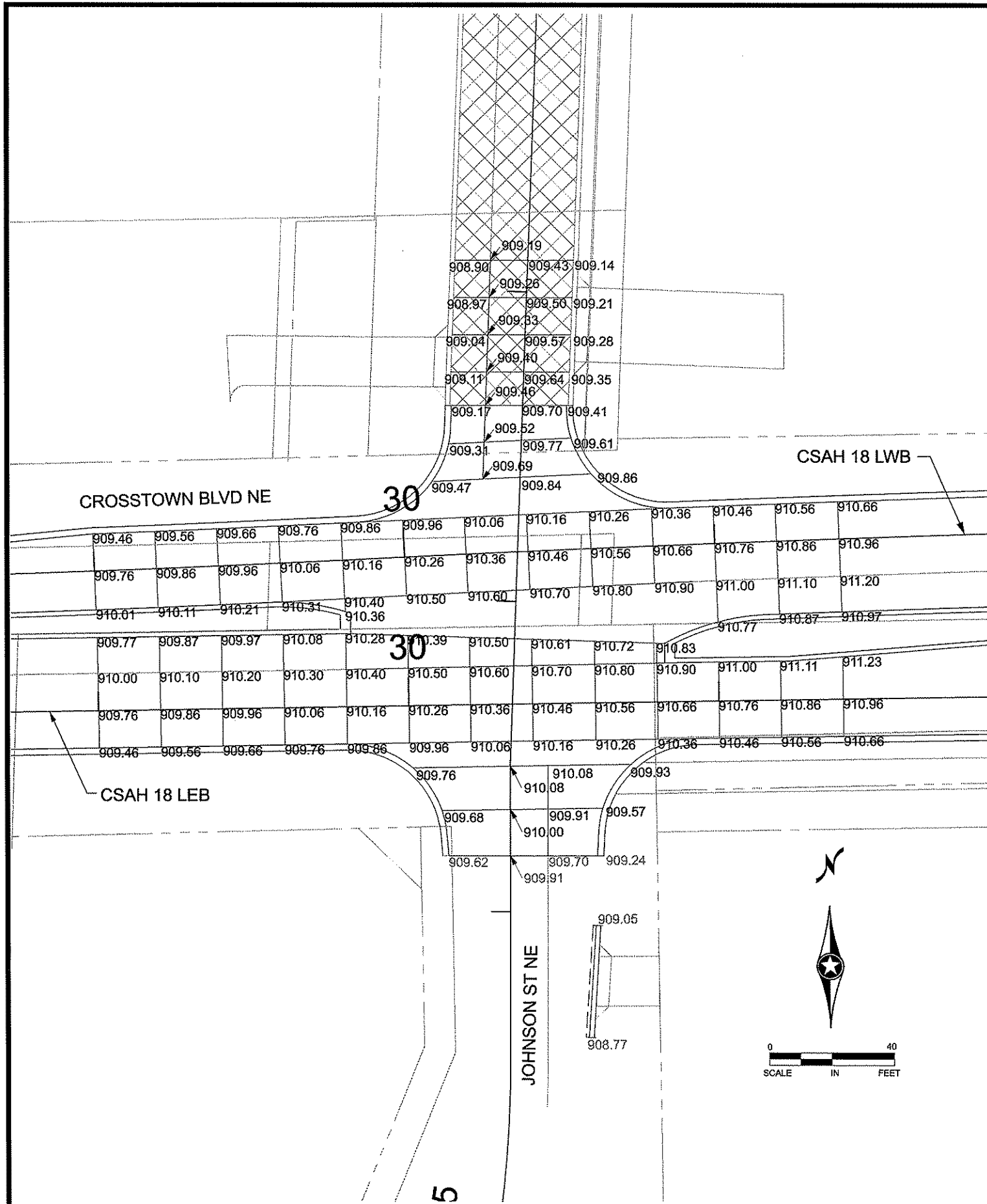
STATE PROJECT NO.

INTERSECTION DETAILS  
CSAH 18 AND TH 65

STA 34+00.00 TO 39+00.00

Sheet 28 of 116 Sheets





NO	DATE	BY	CKD	APPR	REVISION


NAME: p:102-618-25\plan\0261825\_IN2.dgn  
05/14/2008 2:14:57 PM

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

PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt A. Kobilarsik*  
DATE: 6-3-08 LICENSE NO. 24756

DRAWN BY: MS DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08

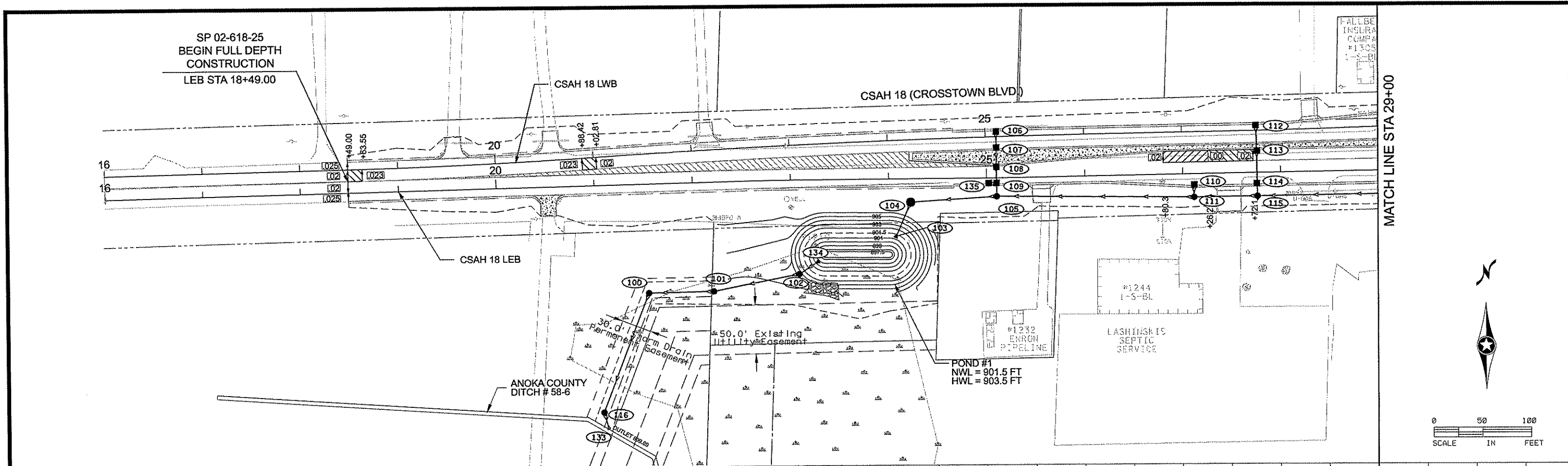
**ANOKA COUNTY**  
**HIGHWAY DEPT.**



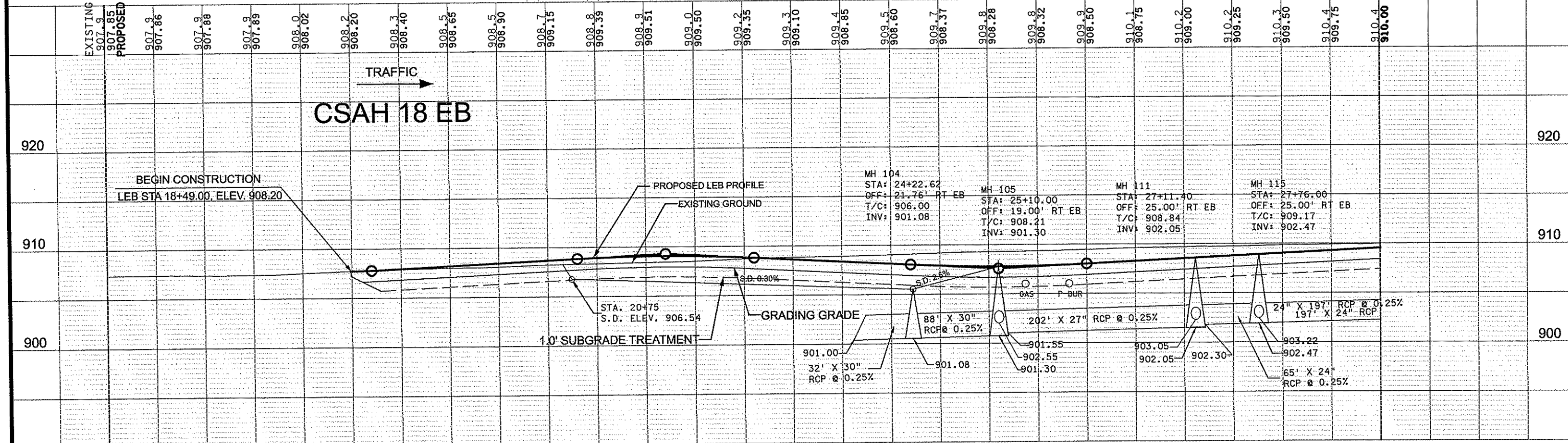
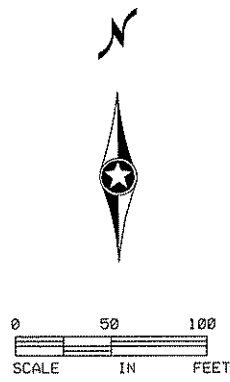
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STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

INTERSECTION DETAILS  
CSAH 18 AND  
JOHNSON, BALTIMORE, CHISHOLM ST  
Sheet 29 of 116 Sheets





MATCH LINE STA 29+00



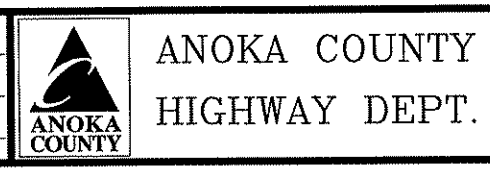
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NO	DATE	BY	CKD	APPR	REVISION

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.

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 12.4.08 LICENSE NO. 24756

DRAWN BY: BV DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08

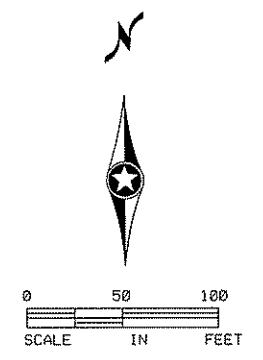
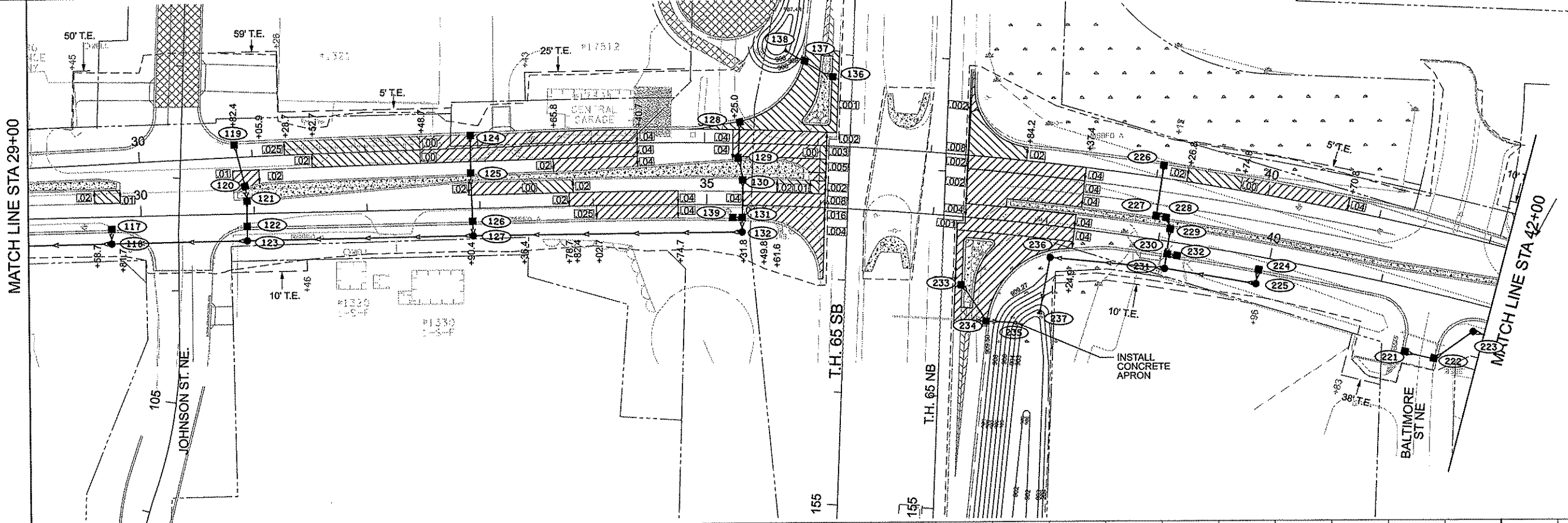


STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

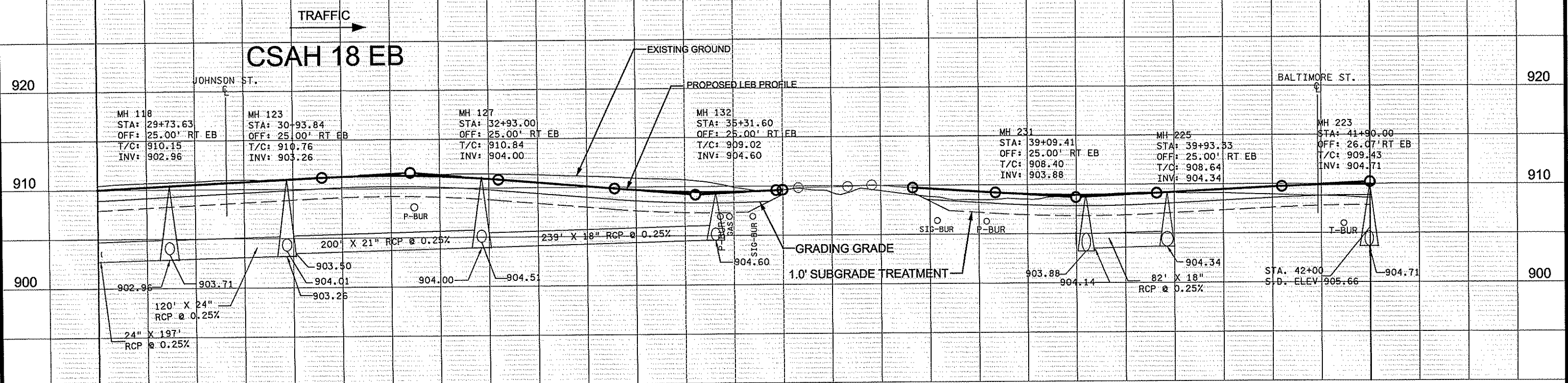
SUPERELEVATION AND DRAINAGE PLAN & PROFILE  
 STA 18+49.00 TO 29+00.00  
 Sheet 31 of 116 Sheets

MATCH LINE STA 29+00

MATCH LINE STA 42+00



EXISTING	910.4	910.7	910.8	911.0	911.2	911.4	911.4	911.4	911.3	911.1	910.9	910.7	909.9	909.6	909.3	909.5	908.8	908.5	908.9	909.1	909.1	909.4	908.9	908.8	908.6
PROPOSED	910.00	910.25	910.50	911.00	911.24	911.32	911.22	911.4	910.52	910.10	909.70	909.47	909.45	909.62	909.88	909.99	909.88	909.05	908.93	908.99	909.20	909.45	909.70	909.90	909.95



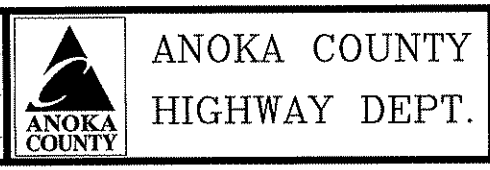
29+00	30+00	31+00	32+00	33+00	34+00	35+00	36+00	37+00	38+00	39+00	40+00	41+00	42+00	2 OF 3
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1	04/17/2008	BY	MN	OK	TURNED ON MH 236 SYMBOL
NO	DATE	BY	CKD	APPR	REVISION
					11/13/2008
NAME: p:\02-618-25\plan\0261825_DR2.dgn					3:30:59 PM

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 12-9-08 LICENSE NO. 24756

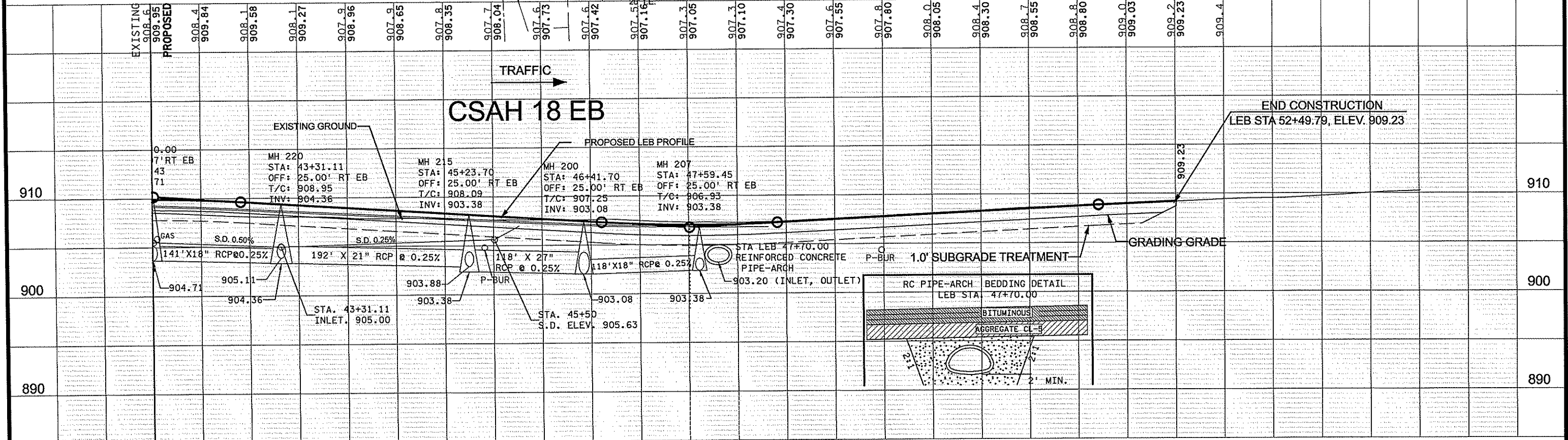
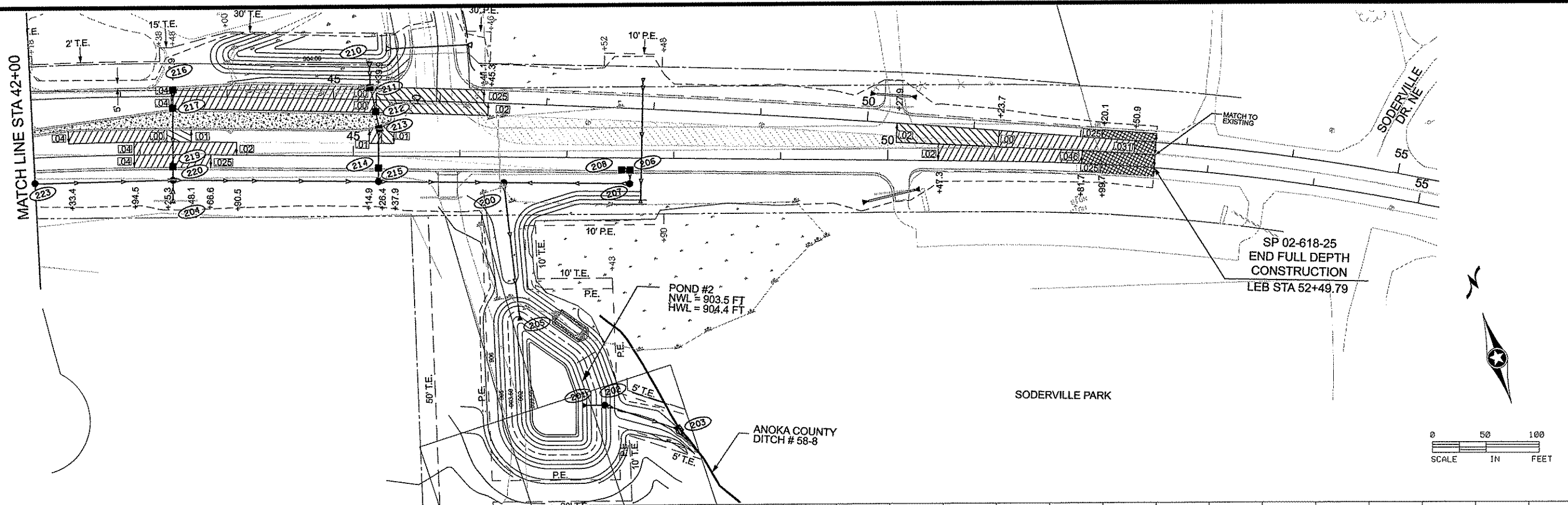
DRAWN BY: BV DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08



STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

SUPERELEVATION AND DRAINAGE PLAN & PROFILE  
 STA 29+00.00 TO 42+00.00  
 Sheet 32 of 116 Sheets





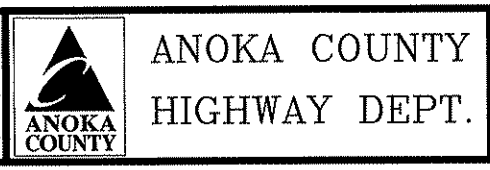
42+00    43+00    44+00    45+00    46+00    47+00    48+00    49+00    50+00    51+00    52+00    53+00

1	06/17/2008	MN	MS	CK	UPDATED CONTOURS BY POND #2.
2	11/13/2008	MN	SN	CK	MODIFIED POND #2 TO ALLOW 10' WIDE ACCESS TO OUTLET STRUCTURE.
NO	DATE	BY	CKD	APPR	REVISION
					11/13/2008    3:31:06 PM

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

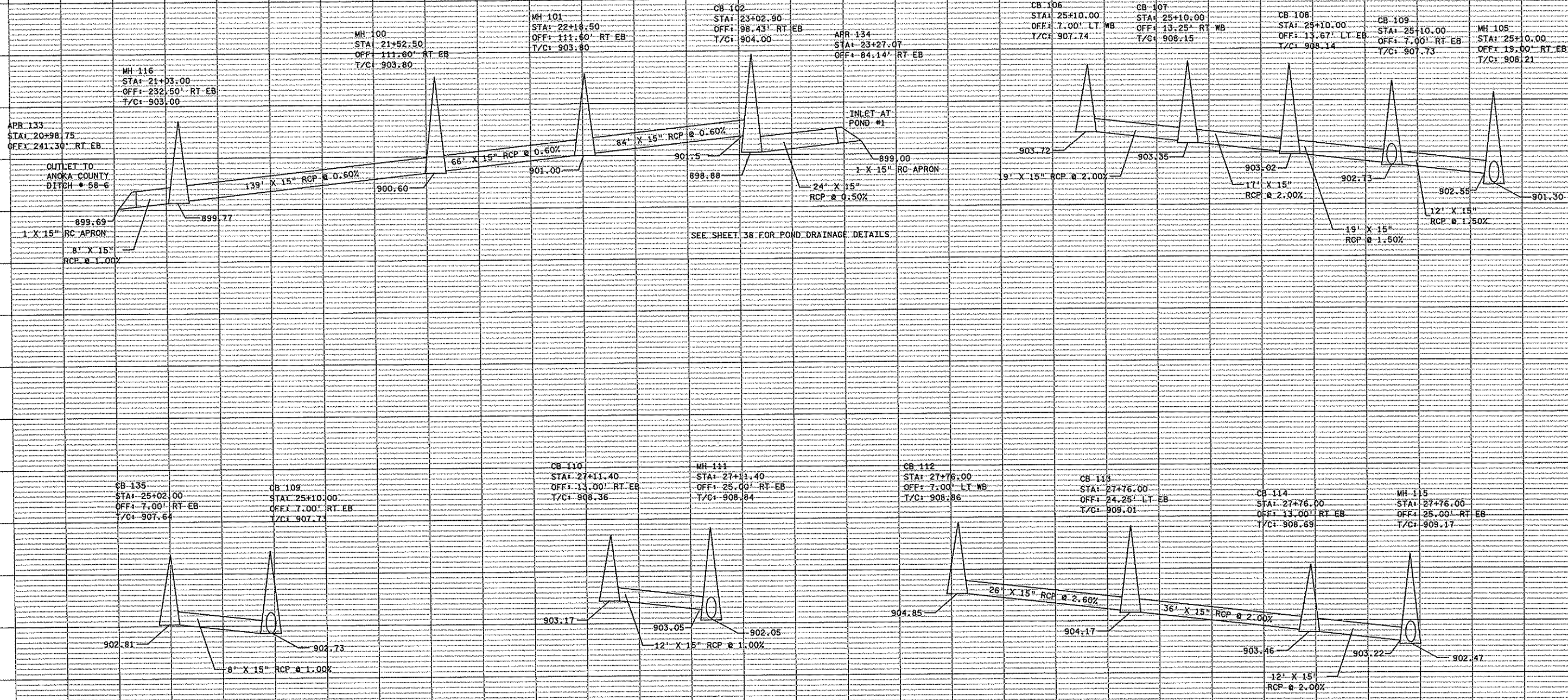
PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 12-4-08    LICENSE NO. 24756

DRAWN BY: BV    DATE: 04/22/08  
 DESIGN BY: MN    DATE: 02/12/08  
 CHECKED BY: MN    DATE: 05/05/08



STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

SUPERELEVATION AND DRAINAGE PLAN & PROFILE  
 STA 42+00.00 TO 52+49.79  
 Sheet 33 of 116 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-618-25\plant\0261825\_DR4.dgn 11/13/2008 3:31:15 PM

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

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 12.4.08 LICENSE NO. 24756

DRAWN BY: BV DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

DRAINAGE LEADS  
 STA 20+98.75 TO 27+76.00  
 Sheet 34 of 116 Sheets



CB 117  
STA: 29+73.63  
OFF: 13.00' RT EB  
T/C: 909.67

MH 118  
STA: 29+73.63  
OFF: 25.00' RT EB  
T/C: 910.15

CB 119  
STA: 30+84.82  
OFF: 13.00' LT WB  
T/C: 910.28

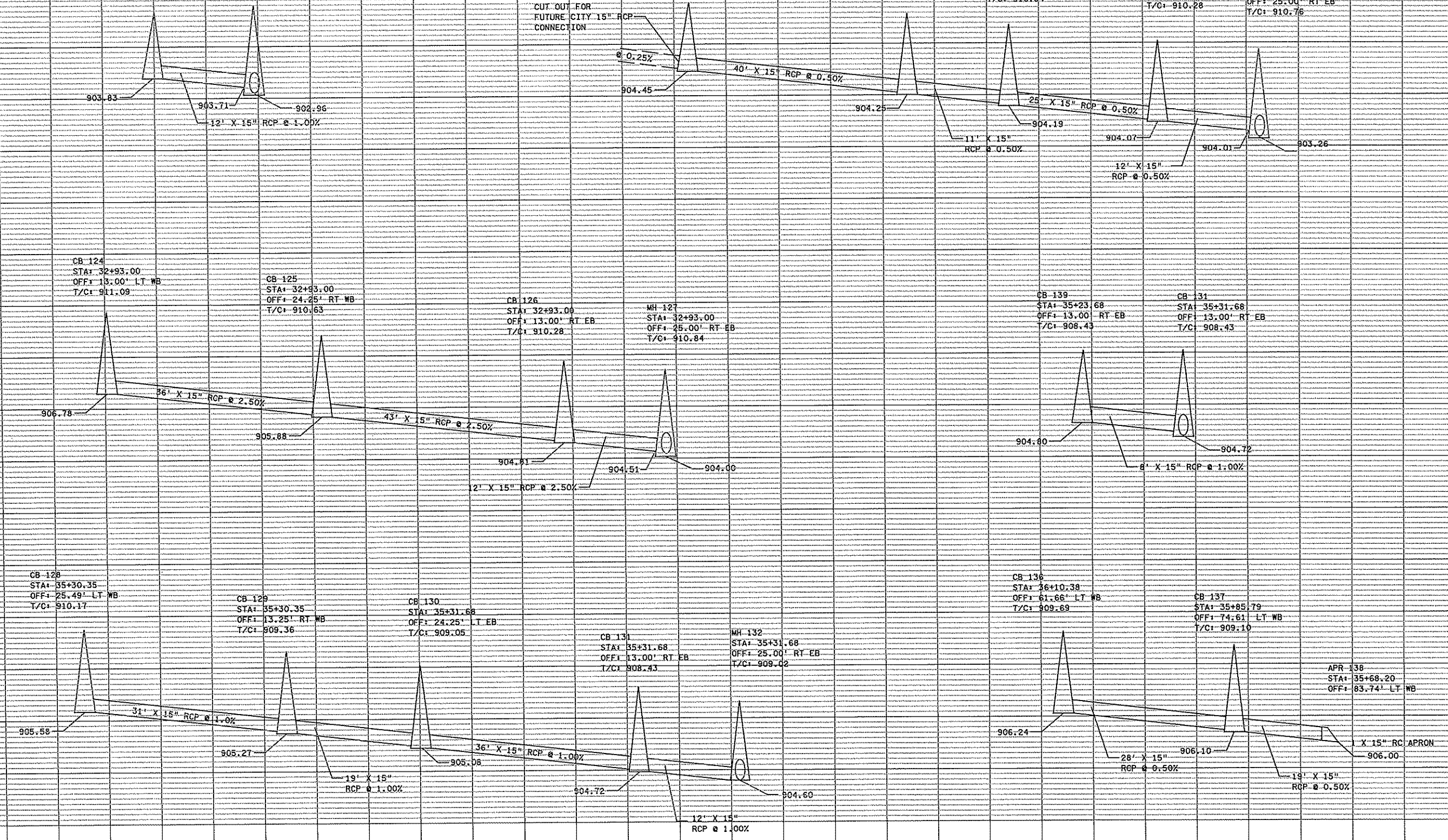
CB 120  
STA: 30+93.73  
OFF: 27.95' RT WB  
T/C: 910.52

CB 121  
STA: 30+93.84  
OFF: 13.25' LT EB  
T/C: 910.84

CB 122  
STA: 30+93.84  
OFF: 13.00' RT EB  
T/C: 910.28

MH 123  
STA: 30+93.84  
OFF: 25.00' RT EB  
T/C: 910.76

CUT OUT FOR  
FUTURE CITY 15" RCP  
CONNECTION



CB 124  
STA: 32+93.00  
OFF: 13.00' LT WB  
T/C: 911.09

CB 125  
STA: 32+93.00  
OFF: 24.25' RT WB  
T/C: 910.63

CB 126  
STA: 32+93.00  
OFF: 13.00' RT EB  
T/C: 910.28

MH 127  
STA: 32+93.00  
OFF: 25.00' RT EB  
T/C: 910.84

CB 139  
STA: 35+23.68  
OFF: 13.00' RT EB  
T/C: 908.43

CB 31  
STA: 35+31.68  
OFF: 13.00' RT EB  
T/C: 908.43

CB 128  
STA: 35+30.35  
OFF: 25.49' LT WB  
T/C: 910.17

CB 129  
STA: 35+30.35  
OFF: 13.25' RT WB  
T/C: 909.36

CB 130  
STA: 35+31.68  
OFF: 24.25' LT EB  
T/C: 909.05

CB 131  
STA: 35+31.68  
OFF: 13.00' RT EB  
T/C: 908.43

MH 132  
STA: 35+31.68  
OFF: 25.00' RT EB  
T/C: 909.02

CB 136  
STA: 36+10.38  
OFF: 61.66' LT WB  
T/C: 909.69

CB 137  
STA: 35+85.79  
OFF: 74.61' LT WB  
T/C: 909.10

APR 138  
STA: 35+68.20  
OFF: 83.74' LT WB

1	02/17/2008	BV	MN	CK	UPDATED NOTE FOR 15" RCP CONNECTION AT CB 110.
NO	DATE	BY	CKD	APPR	REVISION
					11/13/2008 3:31:13 PM

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

PRINT NAME: CURT A. KOBIJARCSIK  
SIGNATURE: *Curt A. Kobilarcsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: BV DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

DRAINAGE LEADS  
STA 29+73.63 TO 35+68.20  
Sheet 35 of 116 Sheets

CB 233  
STA: 37+31.71  
OFF: 60.33' RT EB  
T/C: 909.76

CB 234  
STA: 37+57.45  
OFF: 90.91' RT EB  
T/C: 909.38

CB 226  
STA: 39+04.78  
OFF: 13.00' LT WB  
T/C: 909.01

CB 227  
STA: 39+04.78  
OFF: 36.25' RT WB  
T/C: 907.84

CB 227  
STA: 39+04.78  
OFF: 36.25' RT WB  
T/C: 907.84

CB 228  
STA: 39+12.78  
OFF: 36.25' RT WB  
T/C: 907.84

APR 235  
STA: 37+90.46  
OFF: 90.41' RT EB

905.65  
904.85  
40' X 15" RCP @ 2.00%  
25' X 15" RCP @ 2.00%  
904.36

904.39  
48' X 15" RCP @ 0.50%  
904.15

904.15  
8' X 15" RCP @ 0.50%  
904.11

CB 228  
STA: 39+12.78  
OFF: 36.25' RT WB  
T/C: 907.84

CB 229  
STA: 39+09.41  
OFF: 13.25' LT EB  
T/C: 908.80

CB 230  
STA: 39+09.41  
OFF: 13.00' RT EB  
T/C: 907.82

MH 231  
STA: 39+09.41  
OFF: 25.00' RT EB  
T/C: 908.40

CB 230  
STA: 39+09.41  
OFF: 13.00' RT EB  
T/C: 907.82

CB 232  
STA: 39+17.41  
OFF: 13.00' RT  
T/C: 907.82

904.11  
9' X 15" RCP @ 0.50%  
904.07

25' X 15" RCP @ 0.50%

903.94  
12' X 15" RCP @ 0.50%  
903.88

903.94  
8' X 15" RCP @ 1.00%  
904.02

CB 224  
STA: 39+93.33  
OFF: 13.00' RT EB  
T/C: 908.04

MH 225  
STA: 39+93.33  
OFF: 25.00' RT EB  
T/C: 908.64

CB 221  
STA: 41+34.47  
OFF: 56.54' RT EB  
T/C: 907.84

CB 222  
STA: 41+61.47  
OFF: 56.54' RT EB  
T/C: 907.84

MH 223  
STA: 41+90.00  
OFF: 26.07' RT EB  
T/C: 909.43

INLET 204  
STA: 43+31.11  
OFF: 47.00' RT EB  
INLET 904.78

MH 220  
STA: 43+31.11  
OFF: 25.00' RT EB  
T/C: 908.95

904.46  
12' X 15" RCP @ 1.00%  
904.34

905.06  
28' X 15" RCP @ 0.50%  
904.92

42' X 15" RCP @ 0.50%  
904.92  
904.71

904.78  
1' X 15" RC APRON  
16' X 15" RCP @ 2.00%  
904.46  
904.36

NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-618-25\plant\0261825_DR4.dgn					
11/13/2008 3:31:13 PM					

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

PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt A. Kobilarsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: BV DATE: 04/22/08  
DESIGN BY: MN DATE: 02/12/08  
CHECKED BY: MN DATE: 05/05/08

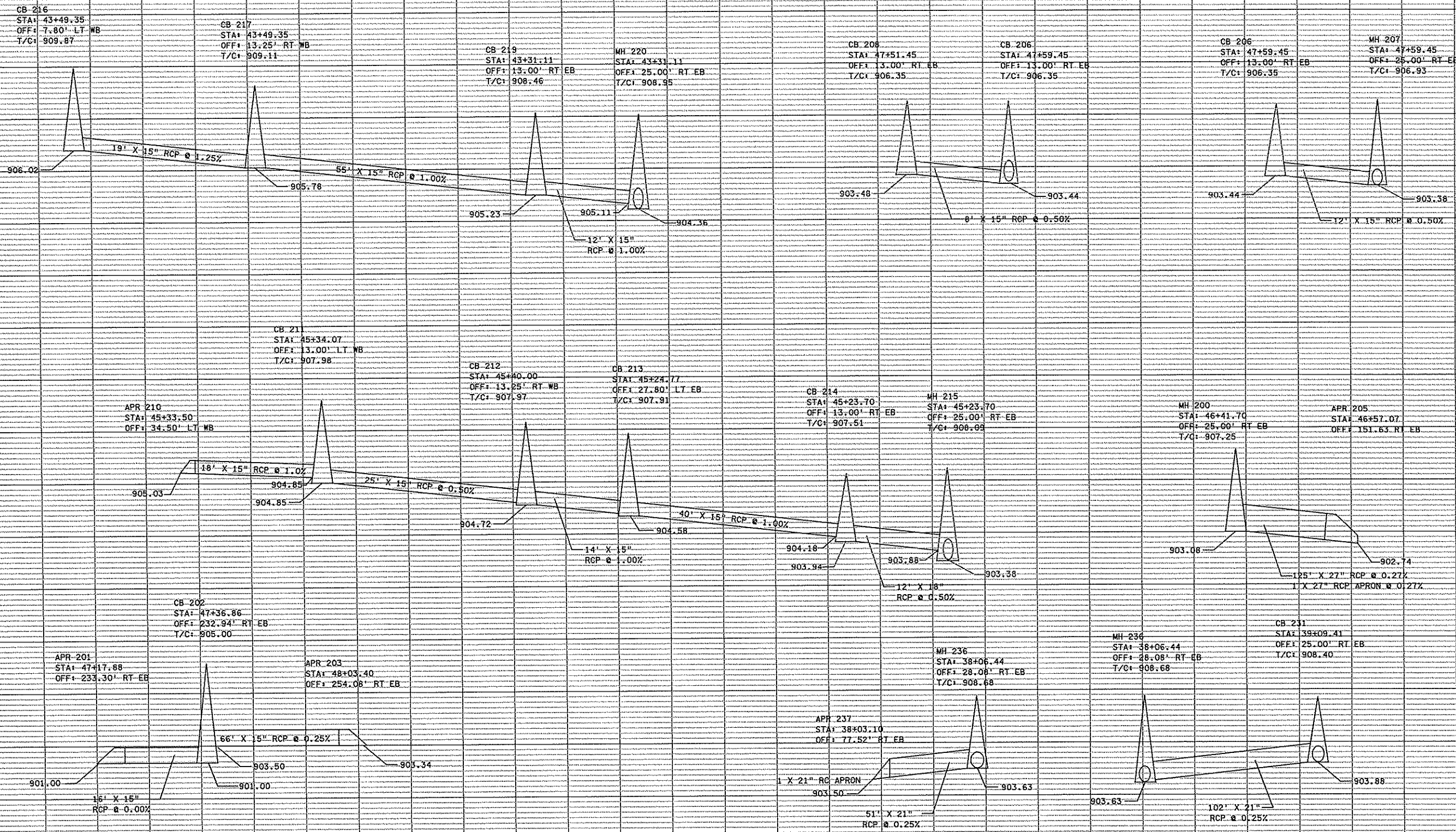


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

DRAINAGE LEADS  
STA 37+31.71 TO 43+31.11  
Sheet 36 of 116 Sheets





1	06/17/2008	BY	MN	CK	ADDED DRAINAGE LEADS FOR MH 236.
NO	DATE	BY	CKD	APPR	REVISION
					11/13/2008
NAME: p:\02-618-25\plant\0261825_DR4.dgn					3:31:14 PM

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

PRINT NAME: CURT A. KOBIJARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 12.4.08 LICENSE NO. 24756

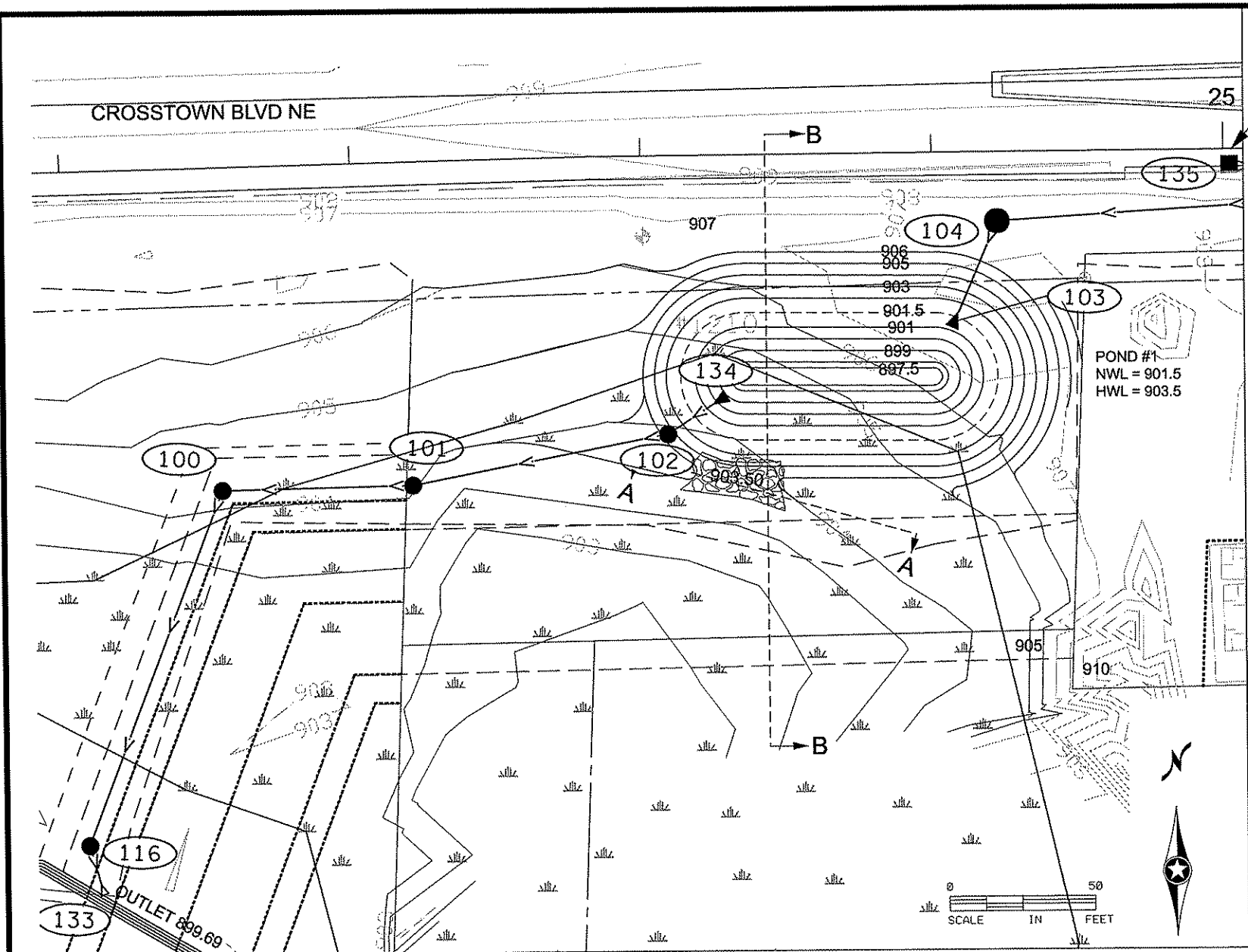
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 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08



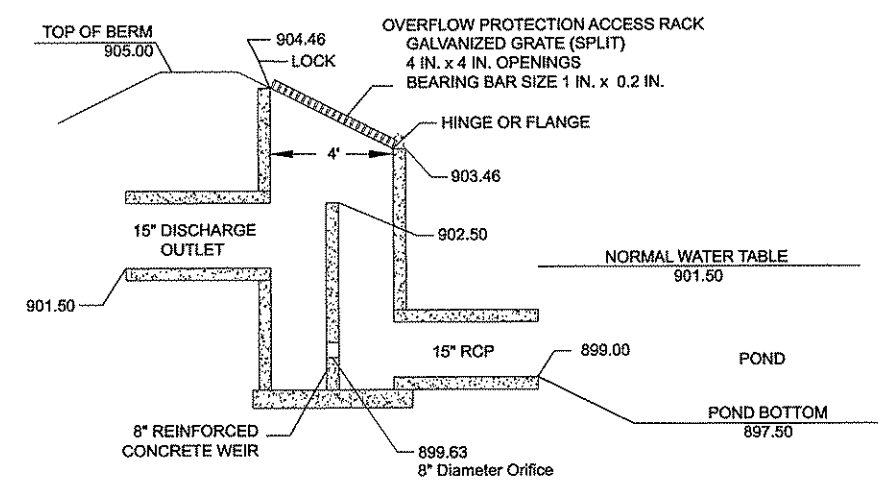
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

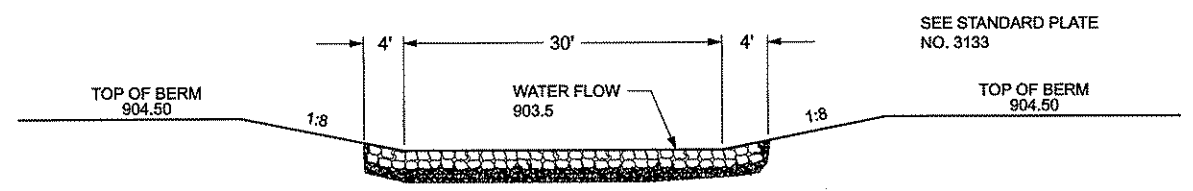
DRAINAGE LEADS  
 STA 43+49.35 TO 47+59.45  
 Sheet 37 of 116 Sheets



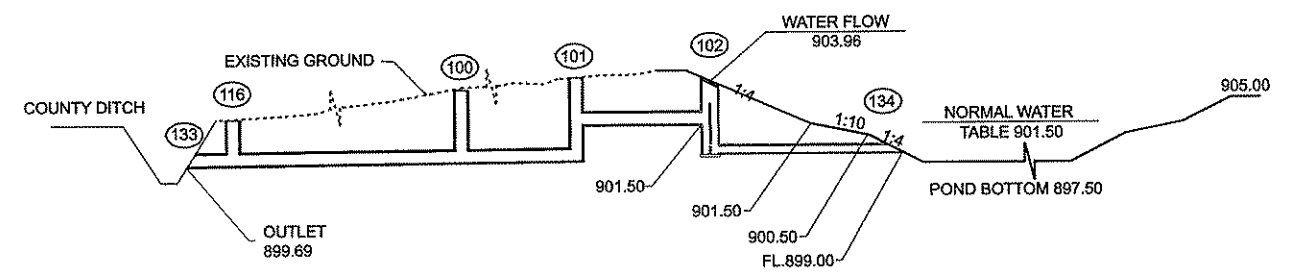
DETAIL : POND OVERFLOW STRUCTURE #102  
DRAINAGE STRUCTURE DESIGN SPECIAL



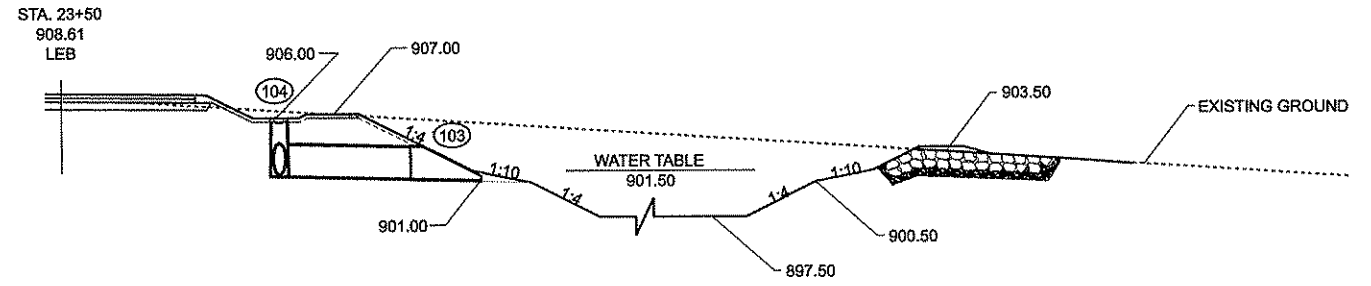
POND #1 OVERFLOW TO INPLACE WETLAND  
(SECTION A-A)



POND #1 DRAINAGE TO ANOKA COUNTY DITCH # 58-6



POND #1 (STA. 23+50.00)  
(SECTION B-B)



LEB STA.	OFFSET	TOP CASTING
101	22+18.50 111.60' RT.	903.80
100	21+52.50 111.60' RT.	903.80
116	21+03.00 232.50' RT.	903.00

1	09/17/2008	MN	MN	CK	UPDATED STRUCTURE #102 DETAILS.
2	08/26/2008	MN	MN	CK	UPDATED PLAN SHEET AS PER MNDOT REVIEW COMMENTS DATED JULY 29, 2008.
3	10/15/2008	EJ	MN	CK	EDITED TEXT TO ELIMINATE A DISCREPANCY.
NO	DATE	BY	CKD	APPR	REVISION
					11/13/2008 3:31:22 PM

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

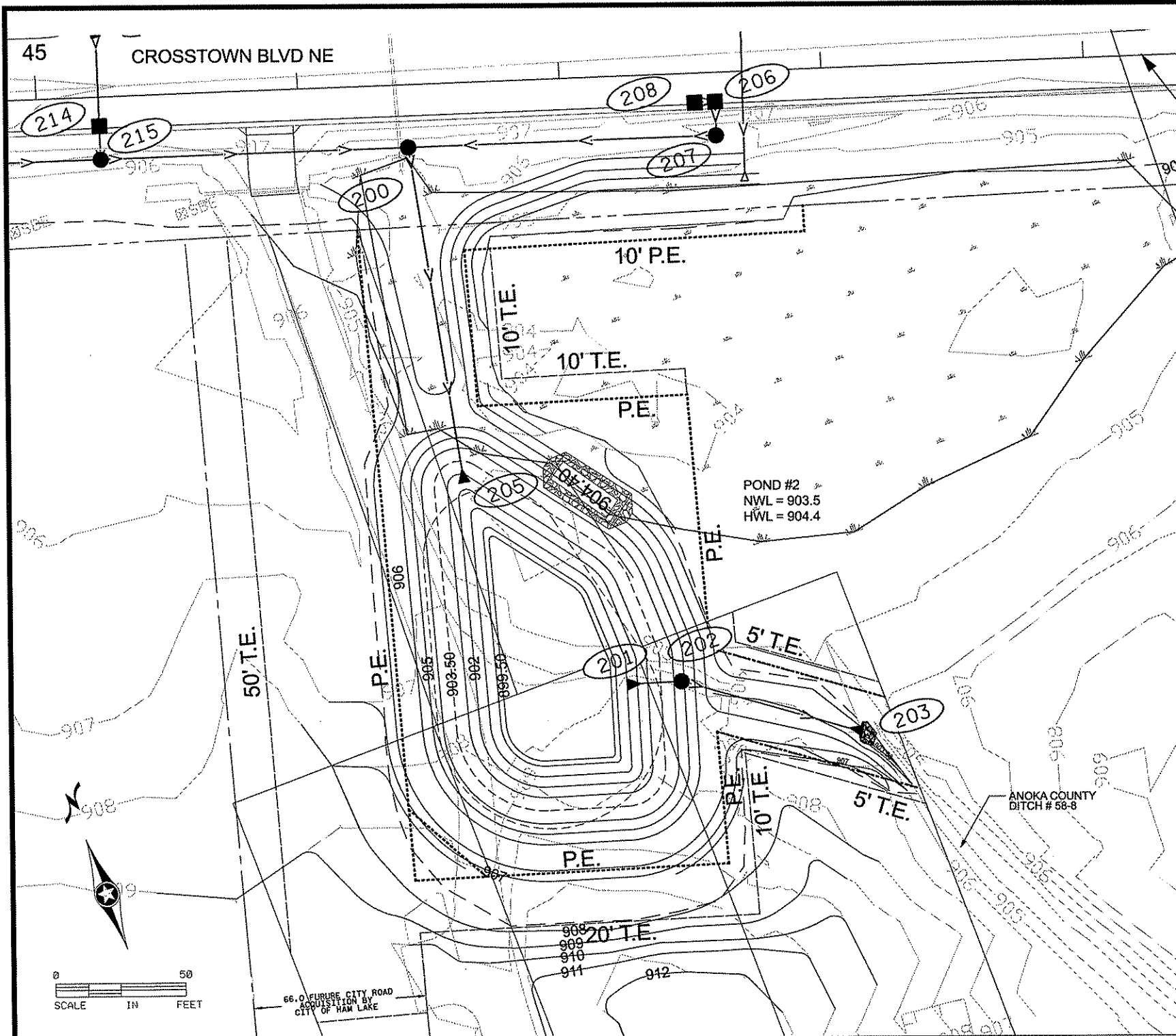
PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarcsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY MN DATE 04/22/08  
DESIGN BY MN DATE 02/12/08  
CHECKED BY MN DATE 05/05/08

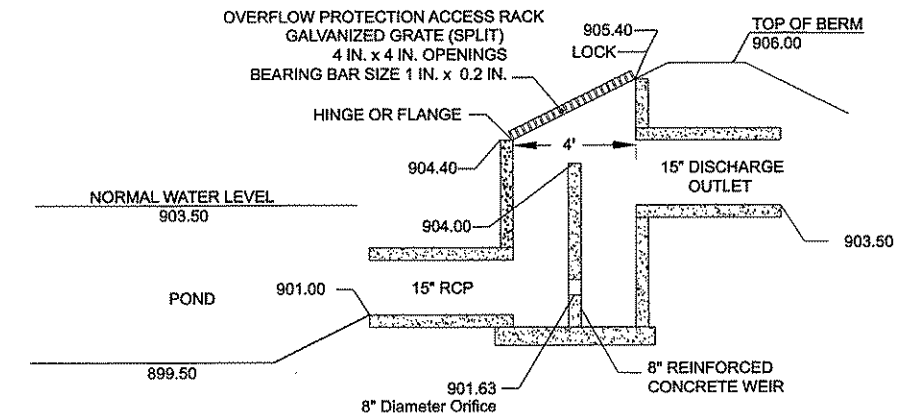
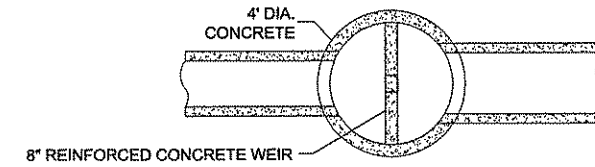
**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

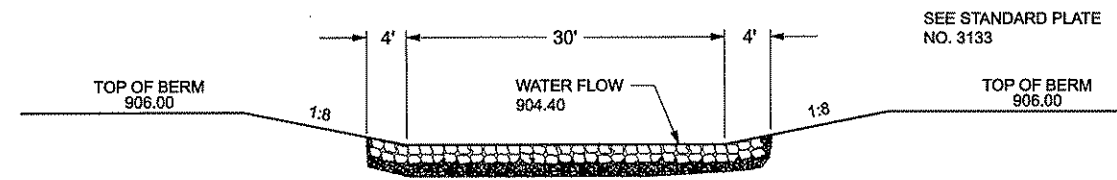
POND GRADING PLAN  
POND #1  
STA 21+00.00 TO 24+50.00  
Sheet 38 of 116 Sheets



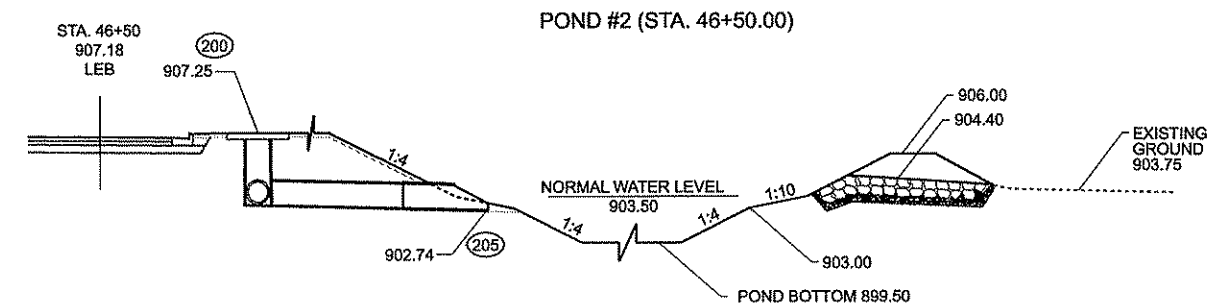
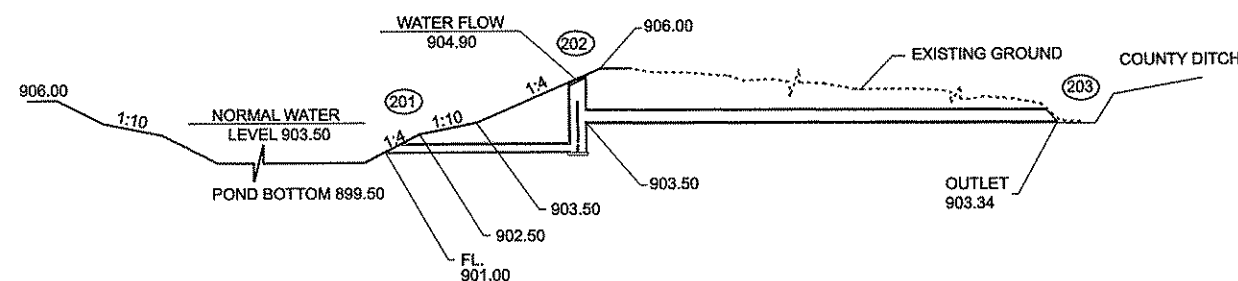
DETAIL : POND OVERFLOW STRUCTURE #202  
DRAINAGE STRUCTURE DESIGN SPECIAL



POND #2 OVERFLOW TO INPLACE WETLAND  
(SECTION A-A)



POND #2 DRAINAGE TO ANOKA COUNTY DITCH # 58-8



NOT TO SCALE

2 OF 2

1	06/17/2006	MN	MN	CK	UPDATED POND #2 CONTOURS AND STRUCTURE #202 DETAILS.
2	06/05/2008	MN	MN	CK	UPDATED PLAN SHEET AS PER MNDOT REVIEW COMMENTS DATED JULY 22, 2008.
3	10/16/2008	EJ	MN	CK	EDITED TEXT TO ELIMINATE A DISCREPANCY.
NO	DATE	BY	CKD	APPR	REVISION
					11/13/2008 3:31:19 PM

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

PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarcsik*  
DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY \_\_\_\_\_ MN DATE 04/22/08  
DESIGN BY \_\_\_\_\_ MN DATE 02/12/08  
CHECKED BY \_\_\_\_\_ MN DATE 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO. \_\_\_\_\_

POND GRADING PLAN  
POND #2  
STA 46+20.00 TO 47+53.00  
Sheet 39 of 116 Sheets

# STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

**Project Description**

SP 02-618-25 consists of grading, aggregate base, bituminous surfacing, curb and gutter, raised median and storm drain in the City of Ham Lake in Anoka County. Construction activities include excavation and grading for realignment of C.S.A.H. 18. The receiving waters for storm water from this project include two proposed ponding sites which treat runoff before discharging into creeks. The Coon Creek is the ultimate receiving body for the runoff, however it is not directly impacted due to the construction.

**Site Maps**

In addition to what is located within this plan, existing and proposed site maps have been created and kept on file with the Anoka County Highway Department. The site maps are roll maps that show the project limits, alignment, soil types, existing and proposed contours, drainage areas, storm sewer locations, flow arrows and impervious surface. If applicable, impaired waters and wetlands are also shown.

**Environmentally Sensitive Areas**

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

**Outstanding Resource Value Waters**

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

**Calcareous Fens**

There are no calcareous fens within the project limits.

**TMDL Implementation Plans Containing Storm Water Requirements**

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

**Land Feature Changes**

Total Project Area Disturbed: 10.66 Acres  
 Total Existing Impervious Surface: 5.07 Acres  
 Total Existing Pervious Surface: 5.59 Acres  
 Total Proposed Impervious Surface: 6.32 Acres  
 Total Proposed Pervious Surface: 4.34 Acres

**Timing of BMP Installation**

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

**Drainage Calculations**

Computations are kept on file with the Anoka County Highway Department. Changes in the field should be discussed with the project manager and noted in the Contractor's log.

**Project Contacts**

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


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

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

**Construction Notes**

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

Description	Plan Sheet Title	Location
Temporary Erosion Control	Erosion Control and Turf Establishment Plan	Sheet No. 42 - 44
Permanent Erosion Control	Erosion Control and Turf Establishment Plan	Sheet No. 42 - 44
Direction of Flow	Drainage Plan	Sheet No. 31 - 33
Final Stabilization	Erosion Control and Turf Establishment Plan	Sheet No. 42 - 44
Pond Location	Drainage Plan	Sheet No. 31 - 33
Pond Contours	Pond Grading Plan	Sheet No. 38 - 39
Drainage Structures	Drainage Plan	Sheet No. 31 - 33
Drainage Tabulation	Drainage Tabulation	Sheet No. 30
Drainage Profile Sheets	Drainage Plan / Leads	Sheet No. 31 - 37
Erosion Control Details	Erosion Control Standard Plans	Sheet No. 45 - 49
Turf Establishment / Erosion Control Tabulation	Tabulation Charts	Sheet No. 8

<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> <p>NAME: p:02-618-25\plan10261825_SWPPP1.dgn 05/14/2008 2:22:05 PM</p>	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>PRINT NAME: <u>CURT A. KOBIARSKIK</u></p> <p>SIGNATURE: <u><i>Curt Kobiarzik</i></u></p> <p>DATE: <u>6-3-08</u> LICENSE NO. <u>24756</u></p>	<p>DRAWN BY: <u>EJ</u> DATE: <u>04/22/08</u></p> <p>DESIGN BY: <u>MN</u> DATE: <u>02/12/08</u></p> <p>CHECKED BY: <u>MN</u> DATE: <u>05/05/08</u></p>	 <p><b>ANOKA COUNTY HIGHWAY DEPT.</b></p>	<p>STATE PROJECT NO. <u>0208-115 (TH 65)</u></p> <p>STATE AID PROJECT NO. <u>02-618-25</u></p> <p>STATE PROJECT NO. <u>197-020-001</u></p> <p>STATE PROJECT NO. _____</p>	<p><b>STORM WATER POLLUTION PREVENTION PLAN</b></p> <p>Sheet <u>40</u> of <u>116</u> Sheets</p>
NO	DATE	BY	CHKD	APPR	REVISION												



# STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Amending the SWPPP

The SWPPP must be amended to record changes or modifications to permanent BMP's or other storm water treatment systems and removals of temporary BMP's. Changes to temporary BMP's may be recorded on this sheet. Include a brief description of the problem, location, nature of alteration, and comments. This record is to be retained for three years after project completion.

Date Reported	Staff	Plan Location (sheet)	Project Location (station)	Problem, solution, and notes

NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-618-25\plan\0261825_SWPPP1.dgn					05/14/2008 2:22:06 PM

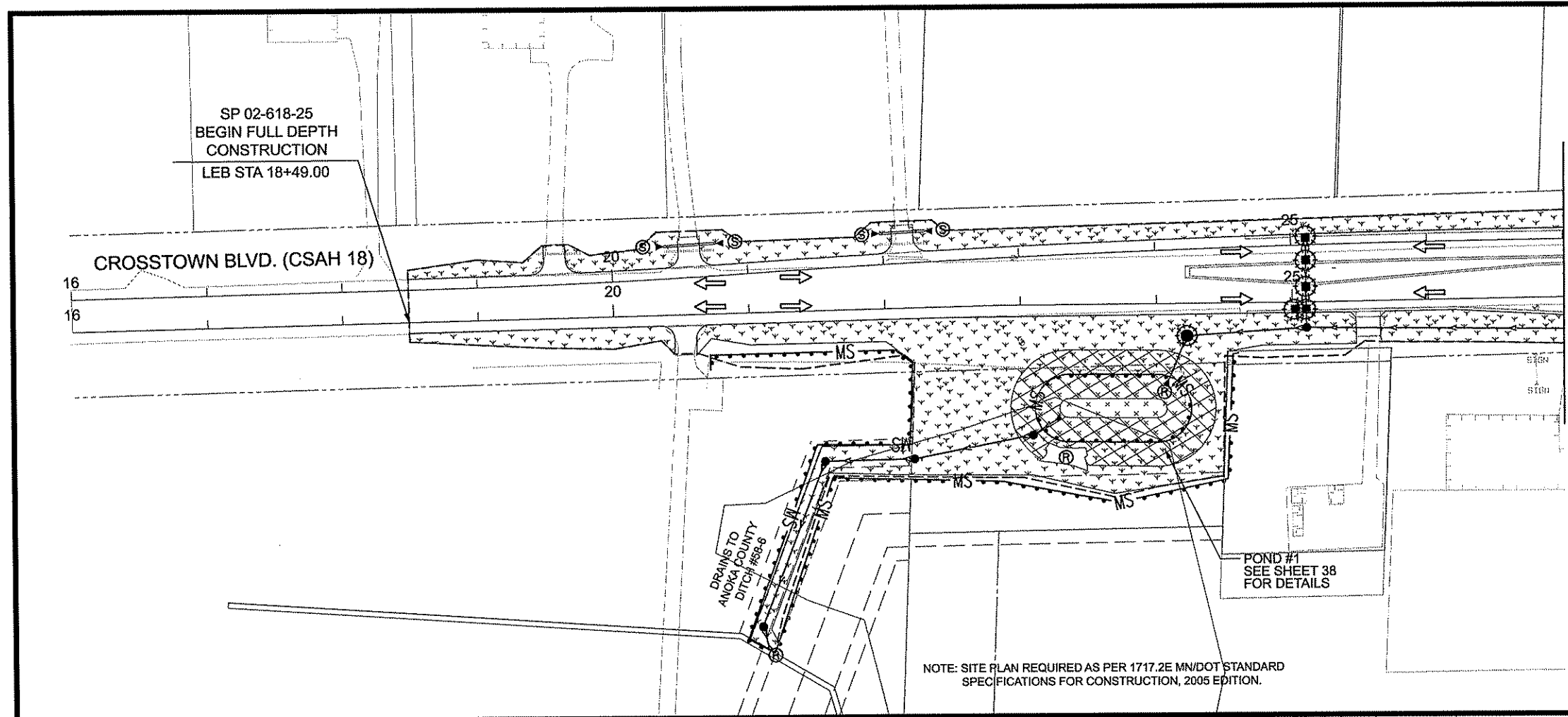
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A. KUBIARZSIK  
 SIGNATURE: *Curt Kubiarzsiik*  
 DATE: 6-3-08 LICENSE NO. 24756

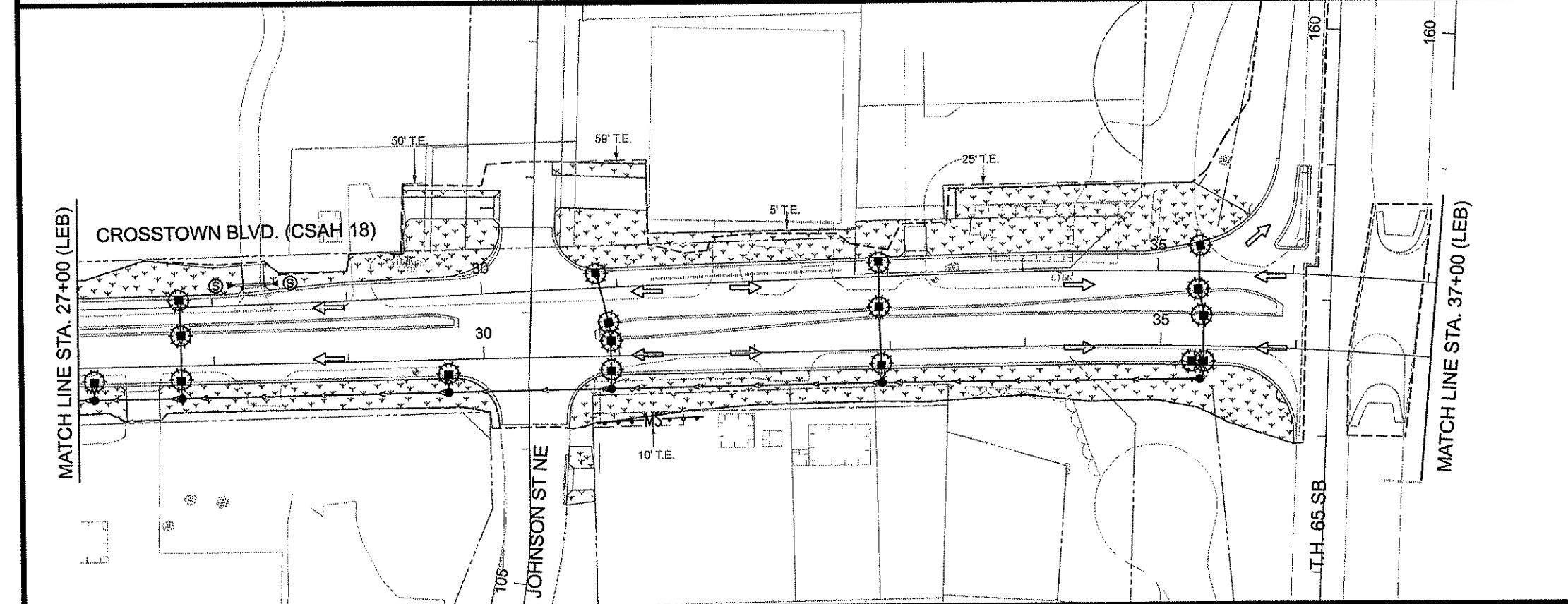
DRAWN BY EJ DATE 04/22/08  
 DESIGN BY MN DATE 02/12/08  
 CHECKED BY MN DATE 05/05/08

**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE AID PROJECT NO. 02-618-25  
 STATE PROJECT NO. 197-020-001  
 STATE PROJECT NO. \_\_\_\_\_



- LEGEND**
- PROPOSED CATCH BASIN
  - INPLACE CATCH BASIN
  - PROPOSED MANHOLE
  - INPLACE MANHOLE
  - ▲ PROPOSED APRON
  - ▷ INPLACE APRON
  - PROPOSED STORM SEWER
  - INPLACE CULVERT/STORM SEWER
  - PROPOSED CULVERT
  - MS— SILT FENCE, TYPE MACHINE SLICED
  - FLOTATION SILT CURTAIN
  - Ⓡ RIPRAP (CLASS II UNLESS OTHERWISE NOTED)
  - Ⓢ SOD APRON INLET OR OUTLET
  - SURFACE FLOW ARROW
  - ⊗ INLET PROTECTION
  - WETLAND BOUNDARIES
  - ⊗ SEEDING MIXTURE 310
  - ⊗ SEEDING MIXTURE 350
  - ▨ SODDING
  - ▨ EROSION CONTROL BLANKET



- NOTES**
- 1.) THE CONTRACTOR SHALL CONSTRUCT WASHED GRAVEL ENTRANCES AT POINTS OF EXIT FROM THE WORK AREA ONTO EXISTING BITUMINOUS PAVEMENT AS DIRECTED BY THE ENGINEER.
  - 2.) SILT FENCE SHALL FOLLOW AS CLOSE AS POSSIBLE A SINGLE CONTOUR
  - 3.) SILT FENCE SHALL BE CLEANED OUT OR REPLACED WHEN SEDIMENT REACHES 8" OR  $\frac{1}{3}$  OF SILT FENCE HEIGHT.
  - 4.) WHEN SEDIMENT DEPOSITS IN WATERS OF THE STATE, THE MATERIAL MUST BE REMOVED WITHIN 7 DAYS.
  - 5.) IF SILT DEPOSITS IN THE ANOKA COUNTY RIGHT-OF-WAY, THE CONTRACTOR IS RESPONSIBLE FOR ITS REMOVAL.
  - 6.) ALL GRADED AREAS ARE TO BE REVEGETATED WITHIN 14 DAYS OF THE COMPLETION OF GRADING.
  - 7.) SEE CHART U ON SHEET 8 FOR SILT FENCE LOCATIONS.
  - 8.) SEE SHEET 44 FOR EROSION CONTROL PLAN FOR TH 65.

1	11/12/2008	EJ	MN	CK	UPDATED SEEDING/SODDING AFTER DELETION OF BITUMINOUS BIKE PATH
NO	DATE	BY	CKD	APPR	REVISION
					11/14/2008

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

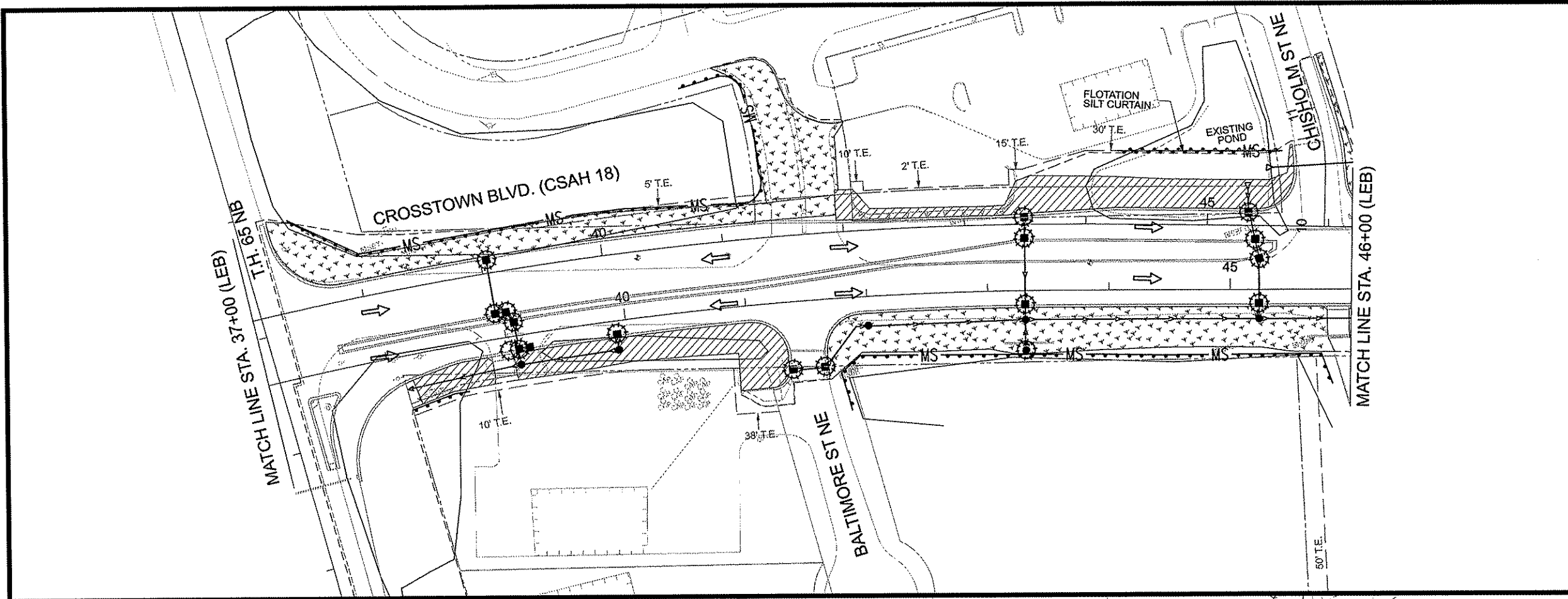
PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: MS DATE: 04/22/08  
 DESIGN BY: MN DATE: 02/12/08  
 CHECKED BY: MN DATE: 05/05/08

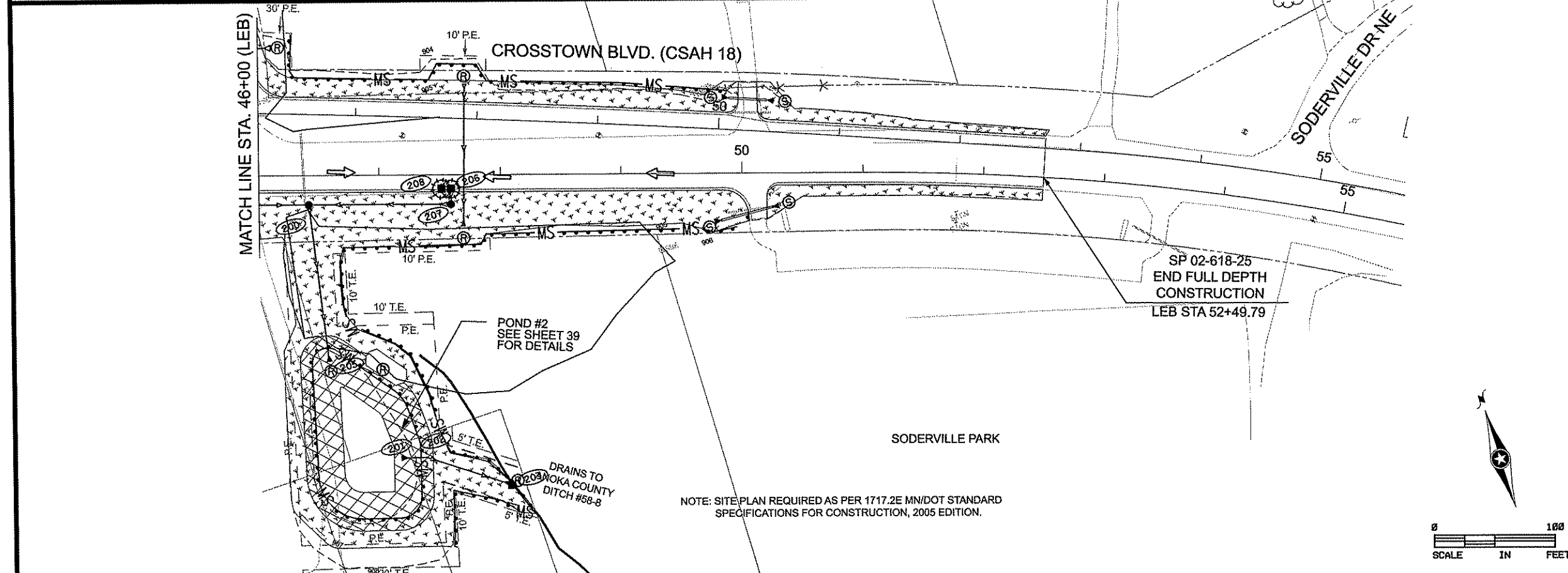
**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

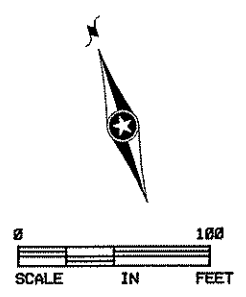
**EROSION CONTROL AND TURF ESTABLISHMENT PLAN**  
 STA 18+49.00 TO 37+00.00  
 Sheet 42 of 116 Sheets



- LEGEND**
- PROPOSED CATCH BASIN
  - INPLACE CATCH BASIN
  - PROPOSED MANHOLE
  - INPLACE MANHOLE
  - ▲ PROPOSED APRON
  - ▽ INPLACE APRON
  - PROPOSED STORM SEWER
  - INPLACE CULVERT/STORM SEWER
  - PROPOSED CULVERT
  - MS— SILT FENCE, TYPE MACHINE SLICED
  - FLOTATION SILT CURTAIN
  - Ⓡ RIPRAP (CLASS II UNLESS OTHERWISE NOTED)
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  - SURFACE FLOW ARROW
  - ⊙ INLET PROTECTION
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  - SEEDING MIXTURE 310
  - SEEDING MIXTURE 350
  - SODDING
  - EROSION CONTROL BLANKET



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  - 7.) SEE CHART U ON SHEET 8 FOR SILT FENCE LOCATIONS.
  - 8.) SEE SHEET 44 FOR EROSION CONTROL PLAN FOR TH 65.



1	09/03/2005	MN	MN	CK	UPDATED SODDING AREA BY LWS STATION 42+00 TO 43+00.
2	11/13/2008	EJ	MN	CK	UPDATED SEEDING/SODDING AFTER DELETION OF BITUMINOUS BIKE PATH.
NO	DATE	BY	CKD	APPR	REVISION
					11/14/2008

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

PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt Kobilarcsik*

DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY: MS DATE: 04/22/08

DESIGN BY: MN DATE: 02/12/08

CHECKED BY: MN DATE: 05/05/08

**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)

STATE PROJECT NO. 02-618-25

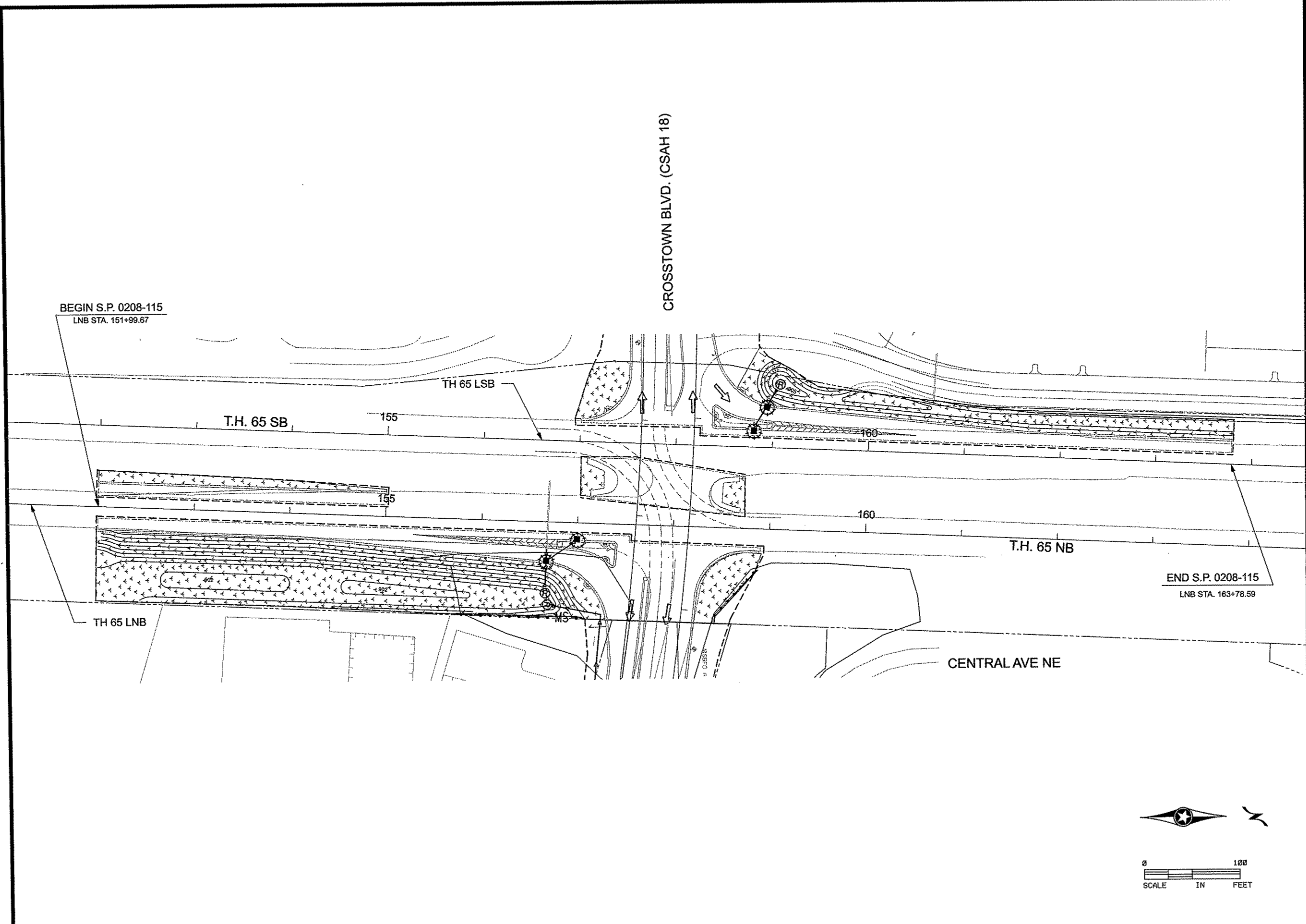
STATE AID PROJECT NO. 197-020-001

STATE PROJECT NO.

**EROSION CONTROL AND TURF ESTABLISHMENT PLAN**

STA 37+00.00 TO 52+49.79

Sheet 43 of 116 Sheets

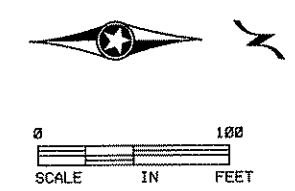


**LEGEND**

- PROPOSED CATCH BASIN
- INPLACE CATCH BASIN
- PROPOSED MANHOLE
- INPLACE MANHOLE
- ▶ PROPOSED APRON
- ▷ INPLACE APRON
- PROPOSED STORM SEWER
- INPLACE CULVERT/STORM SEWER
- ==== PROPOSED CULVERT
- MS— SILT FENCE
- ~ FLOTATION SILT CURTAIN
- Ⓡ RIPRAP (CLASS II UNLESS OTHERWISE NOTED)
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- ➔ SURFACE FLOW ARROW
- ⊗ INLET PROTECTION
- WETLAND BOUNDARIES
- ⊗ SEEDING MIXTURE 310
- ⊙ SEEDING MIXTURE 360
- ▨ SODDING

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- 7.) SEE CHART U ON SHEET 8 FOR SILT FENCE LOCATIONS.



1	11/14/2008	EJ	MN	CK	ADDED CONTOURS TO DITCH AREA.
NO	DATE	BY	CKD	APPR	REVISION
					12/04/2008 10:08:42 AM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: CHRISTOPHER A. KOBIARCSIK  
 SIGNATURE: [Signature]  
 DATE: 12-4-08 LICENSE NO. 24756

DRAWN BY EJ DATE 04/22/08  
 DESIGN BY MN DATE 02/12/08  
 CHECKED BY MN DATE 05/05/08

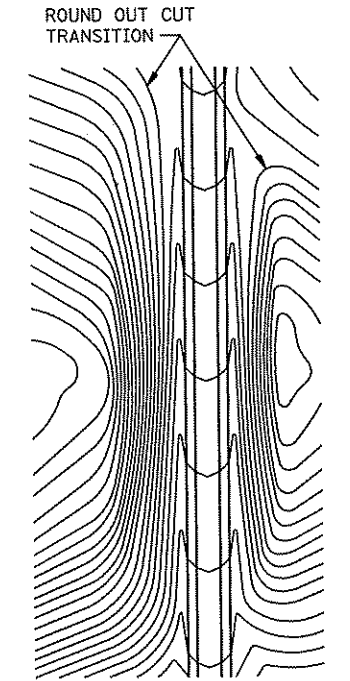
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE AID PROJECT NO. 02-618-25  
 STATE PROJECT NO. 197-020-001  
 STATE PROJECT NO. \_\_\_\_\_

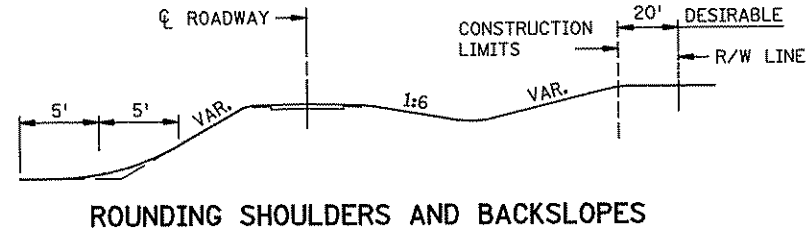
**EROSION CONTROL AND TURF ESTABLISHMENT PLAN**  
 TH 65  
 STA 151+99.67 TO 163+78.59  
 Sheet 44 of 116 Sheets



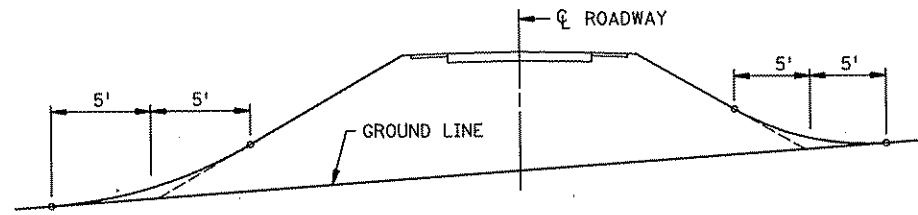
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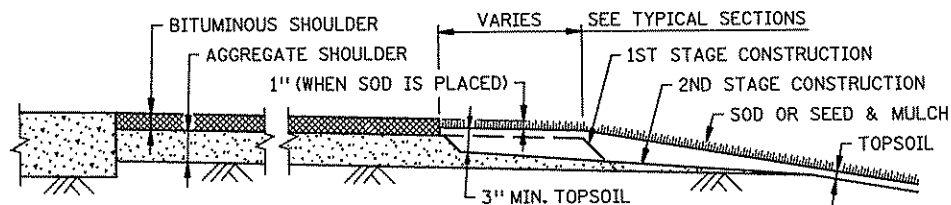
CONTOURING ROAD CUTS



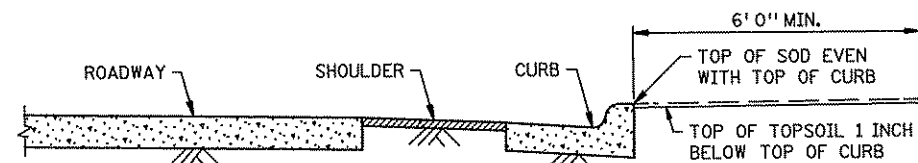
ROUNDING SHOULDERS AND BACKSLOPES



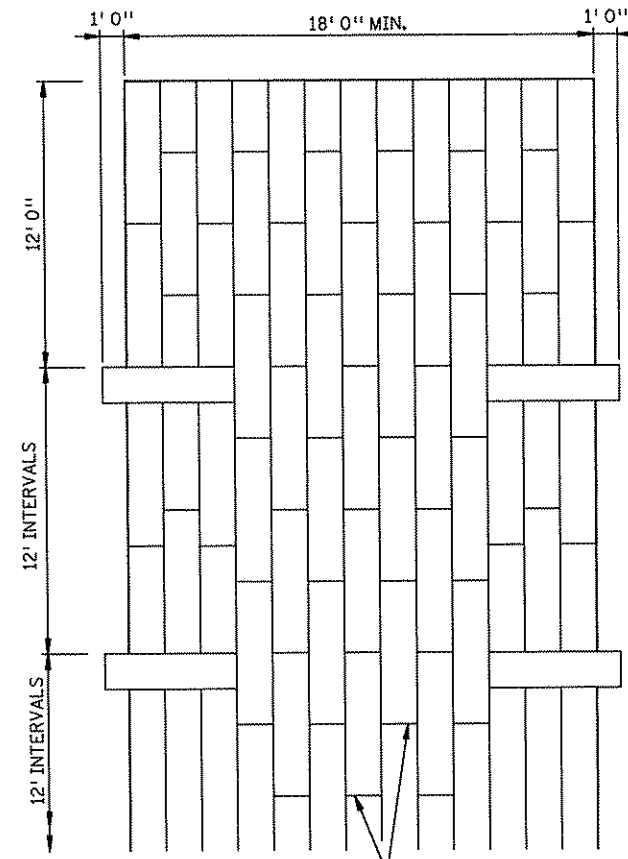
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



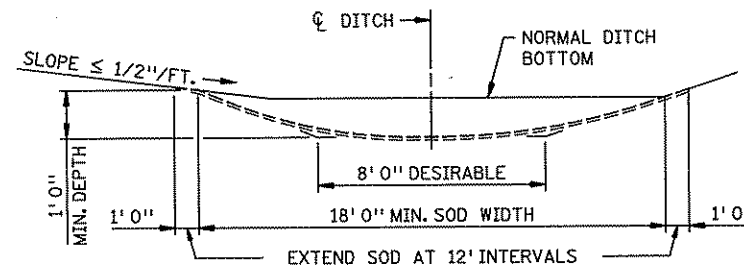
SHAPING AND TOPSOILING INSLOPES



SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED

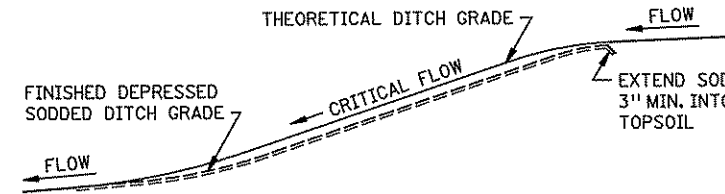


PLAN VIEW

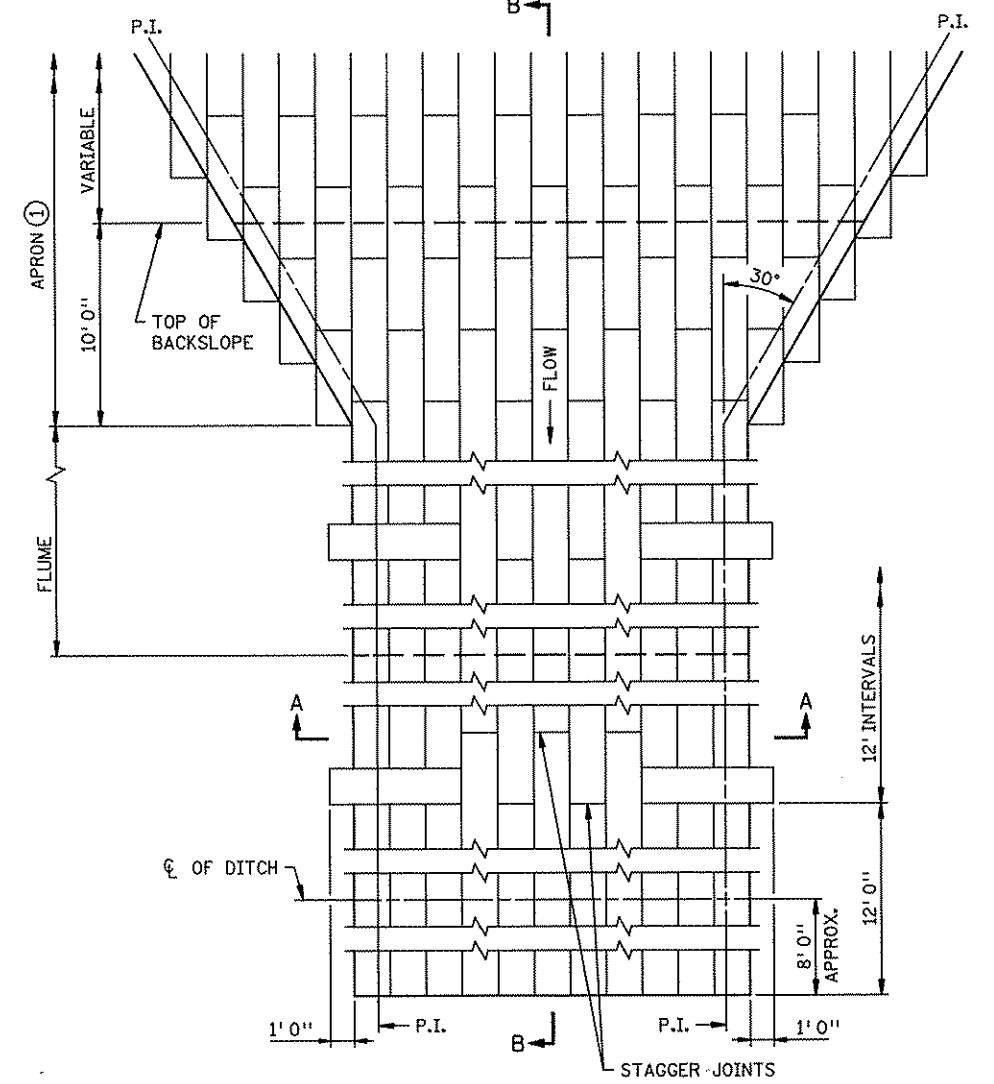


SODDED DITCH CROSS SECTION

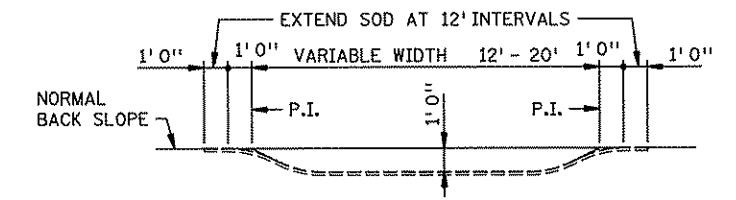
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



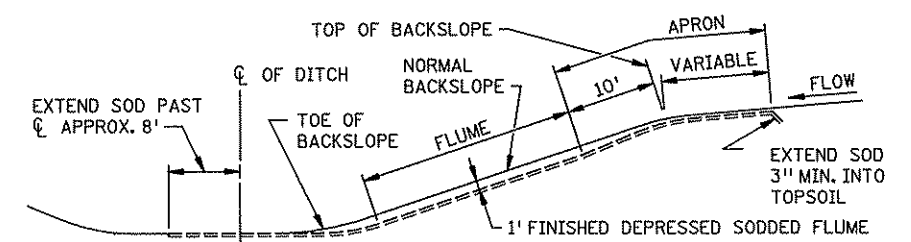
DITCH PROFILE  
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B

SODDED FLUME DETAILS

NOTES:

- SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
- ① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO. 5-297.404

STANDARD APPROVED: NOVEMBER 20, 2002

S.P. NO. 0208-115 (TH 65)  
S.P. NO. 02-618-25, S.A.P. NO. 197-020-001

TITLE:

PERMANENT EROSION CONTROL  
ALONG ROADWAYS, DITCHES AND FLUMES

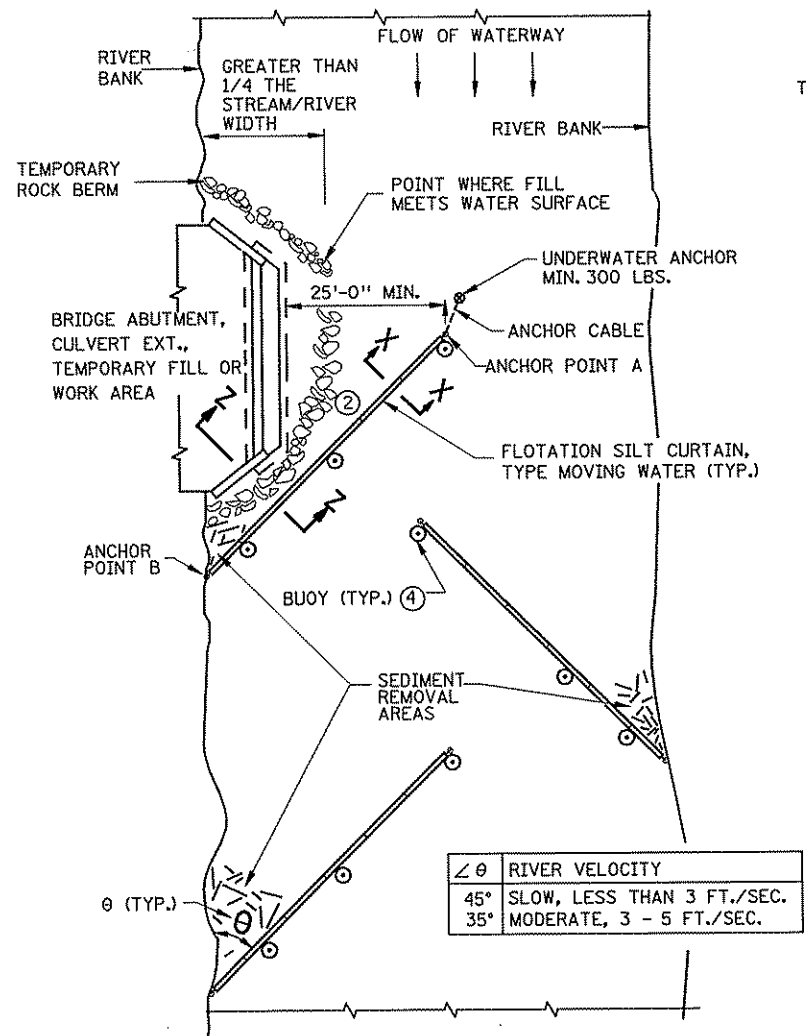
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USER NAME: \$\$\$@USER\$NAME@\$\$  
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$

FILE NAME:  
@FILENAME@

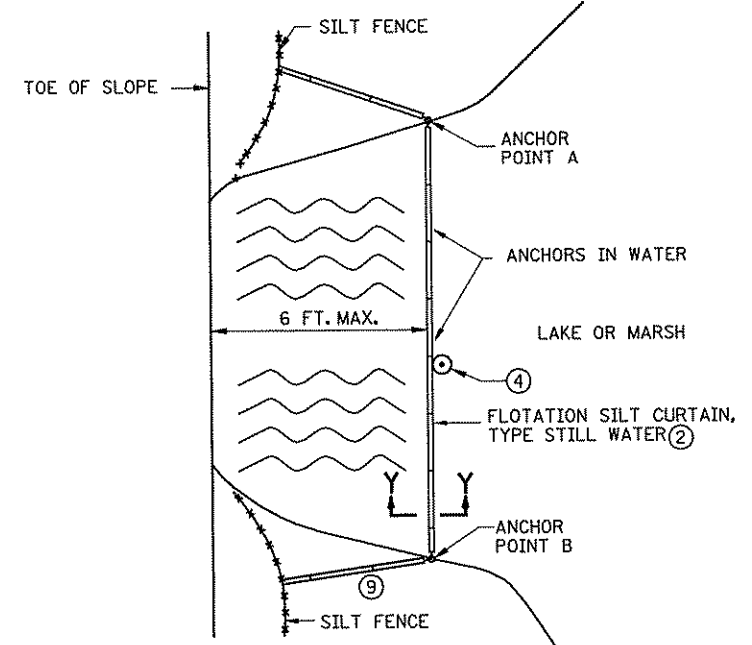
PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: \$\$\$@DISTRICT@\$\$  
 USER NAME: \$\$\$@USER@NAME@\$\$\$  
 PATH & FILENAME: \$\$\$@PATH@FILENAME@\$\$\$

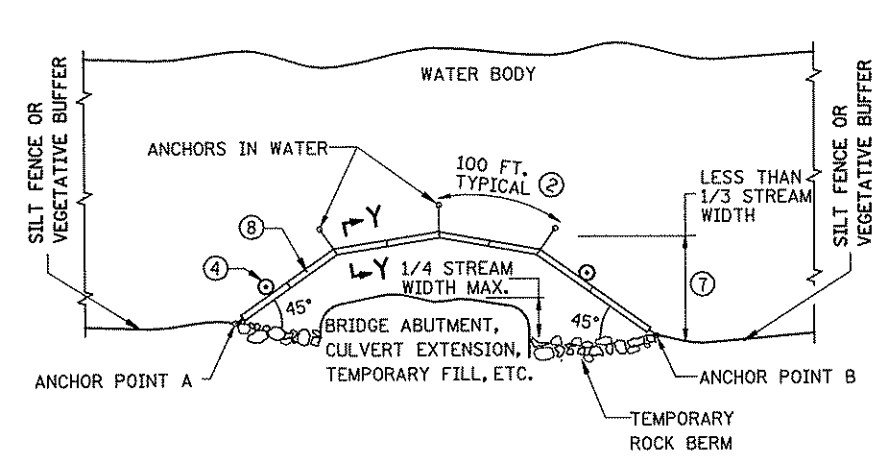
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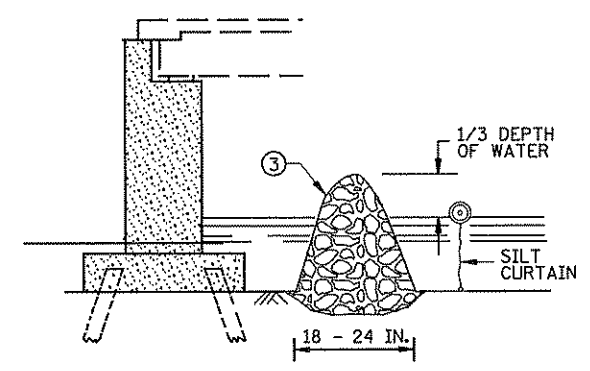
PLAN VIEW (TYPE: MOVING WATER)



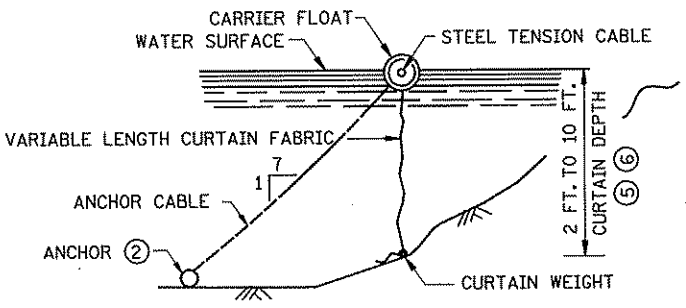
PLAN VIEW (TYPE: STILL WATER)



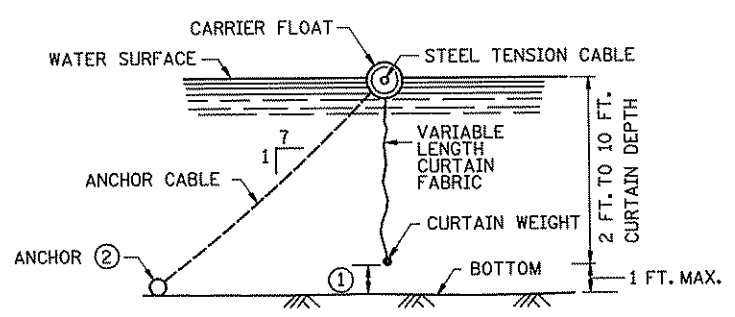
PLAN VIEW (TYPE: WORK AREA)



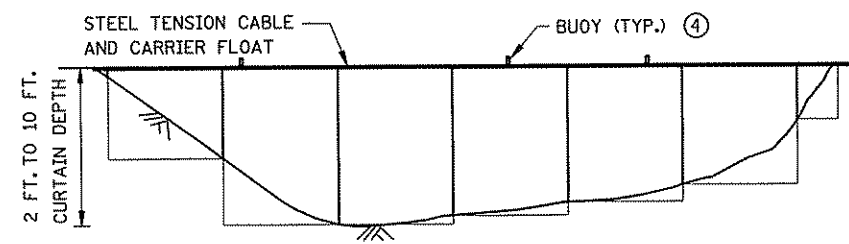
SECTION Z-Z TEMPORARY ROCK BERM FOR SEDIMENT CONTROL



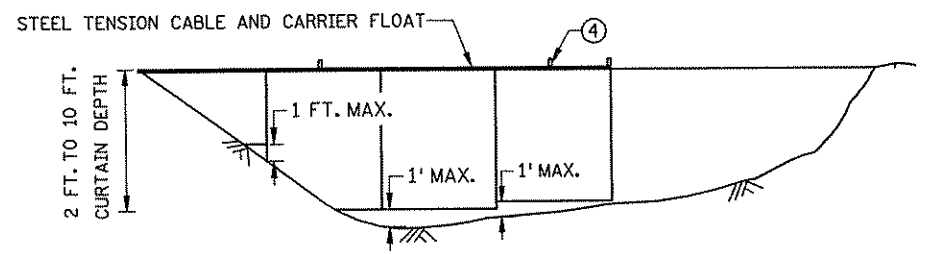
SECTION Y-Y



SECTION X-X



FLOTATION SILT CURTAIN - TYPE: WORK AREA AND STILL WATER ⑤  
 FOR CONTAINING OVERFLOWS FROM WEIRS, STANDPIPES, SETTLING PONDS



FLOTATION SILT CURTAIN - TYPE: MOVING WATER ⑤  
 USE FOR SMALLER RIVERS WITH SLOW AND MODERATE VELOCITIES

**DESIGN GUIDELINES: MOVING WATER**  
 WHEN TEMPORARY FILL ENCLOSES MORE THAN 1/4 BUT LESS THAN 1/3 WIDTH OF THE STREAM.  
 MINIMUM WATER DEPTH: 3 FT.  
 MAXIMUM WATER DEPTH: 11 FT.  
 MAXIMUM WATER VELOCITY: 5 FT./SEC. ① ⑥

**DESIGN GUIDELINES: WORK AREA**  
 WHEN TEMPORARY FILL ENCLOSES LESS THAN 1/4 OF THE WIDTH OF STREAM.  
 MINIMUM WATER DEPTH: 10 FT.  
 MAXIMUM WATER VELOCITY: 5 FT./SEC.

**DESIGN GUIDELINES: STILL WATER** ⑥  
 MINIMUM WATER DEPTH: 0 FT.  
 MAXIMUM WATER DEPTH: 10 FT.

**NOTES:**

- SEE SPECS. 2573 & 3887.
- ① CURTAIN EXTENDS TO 1 FT. MAXIMUM FROM BOTTOM OF WATER BODY.
- ② FOR ANCHOR AND WEIGHT REQUIREMENTS, SEE SPEC. 2573.
- ③ IN AREAS WHERE THE PLAN CALLS FOR RIPRAP AT THE BRIDGE, A TEMPORARY ROCK BERM WILL BE USED TO PROVIDE ADDITIONAL PROTECTION. THE TEMPORARY ROCK BERM IS INCIDENTAL FOR WHICH NO DIRECT PAYMENT WILL BE MADE.
- ④ ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.
- ⑤ WATER DEPTH CAN BE 0 TO 10 FEET, 0 TO 11 FEET FOR TYPE MOVING WATER.
- ⑥ SILT CURTAIN HEIGHT INCLUDES MAXIMUM WAVE HEIGHT FOR WATER BODY.
- ⑦ KEEP AS CLOSE TO WORK AREA AS POSSIBLE.
- ⑧ SILT CURTAIN, ROCK BERM OR SHEET PILE AS REQUIRED TO CONTROL THE INFILTRATION OF SILT.
- ⑨ IF 6 INCHES OR LESS OF WATER, USE BALE BARRIERS, SEE SHEET 2.

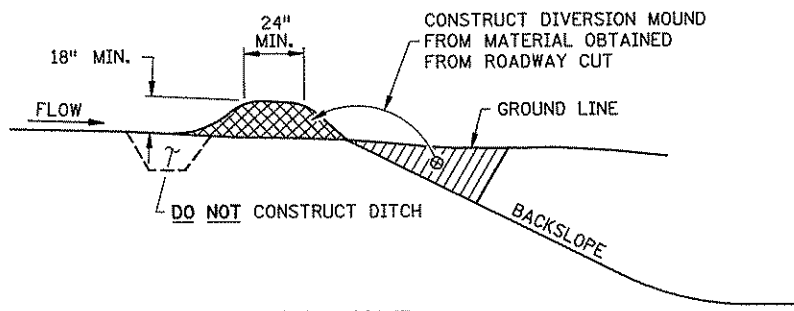
STANDARD SHEET NO.  
 5-297.405 (1 OF 4)  
 STANDARD APPROVED:  
 SEPTEMBER 27, 2006

TITLE:  
 TEMPORARY SEDIMENT CONTROL  
 SILT CURTAIN

S.P. NO. 0208-115 (TH 65)  
 S.P. NO. 02-618-25, S.A.P. NO. 197-020-001

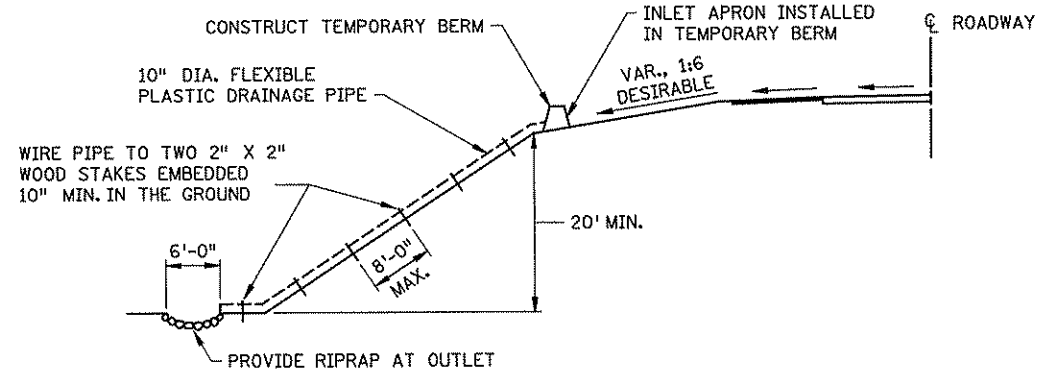
SHEET NO. 46 OF 116 SHEETS

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



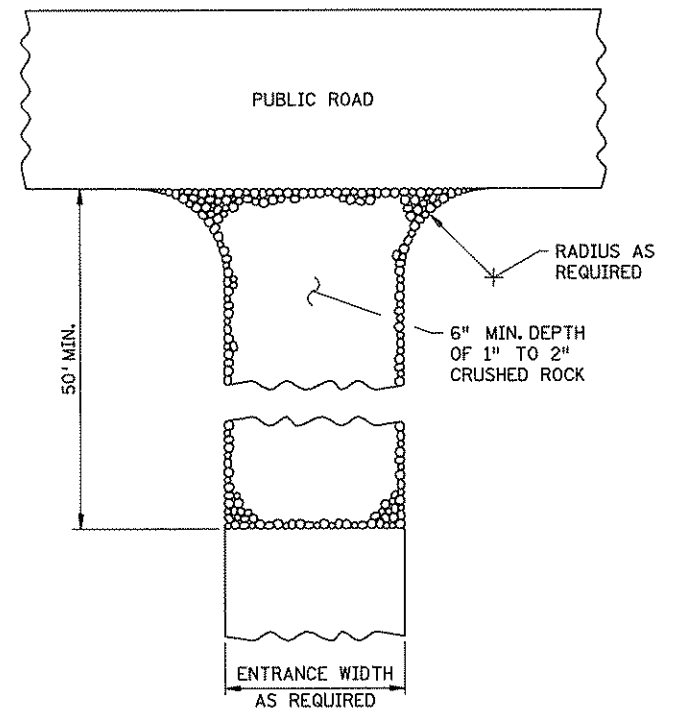
**DIVERSION MOUND**

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

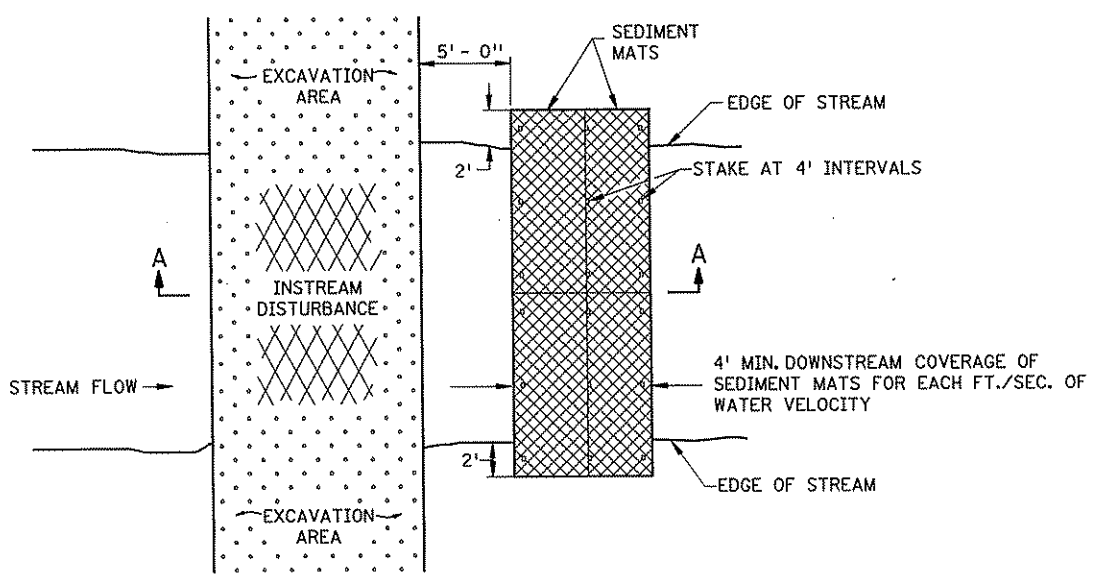


**TEMPORARY DOWN DRAIN ON FILL SLOPE**

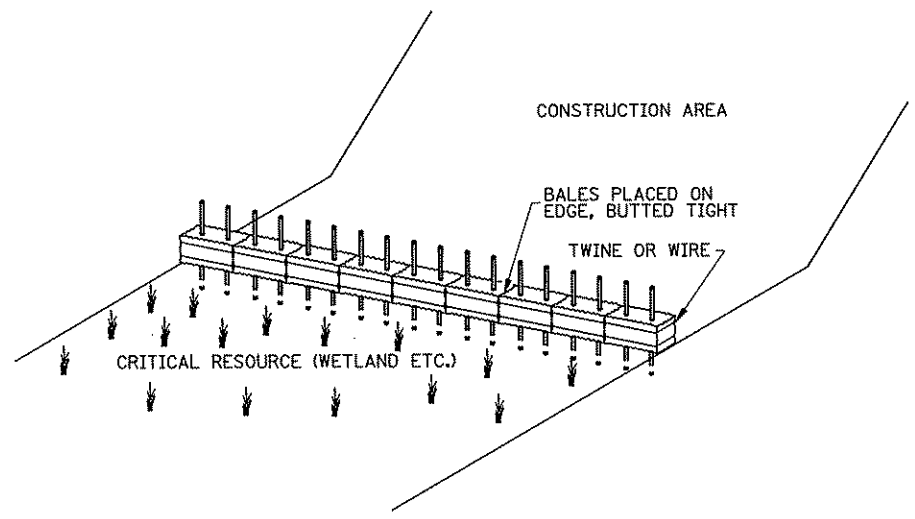
**DESIGN GUIDELINES:**  
 STORM FREQUENCY: 2 YEAR - 24 HOUR  
 MAXIMUM DRAINAGE AREA: 3 ACRES



**ROCK CONSTRUCTION ENTRANCE ①**

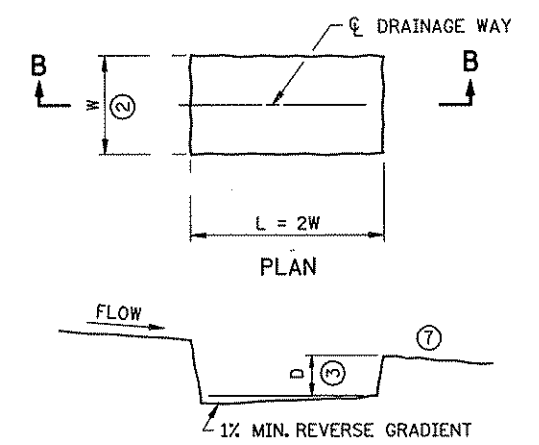


**PLAN VIEW**

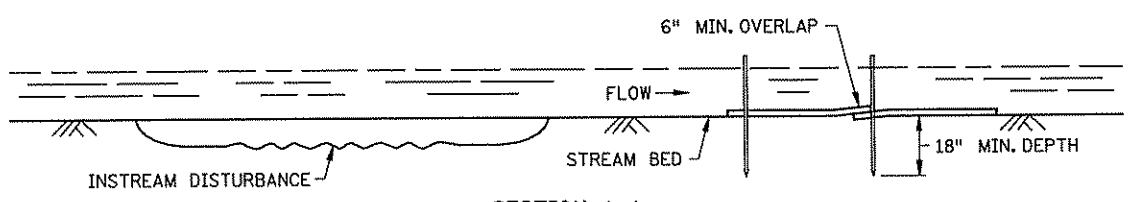


**BALE BARRIERS**

TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS



**SECTION B-B  
 SEDIMENT TRAP DETAIL**

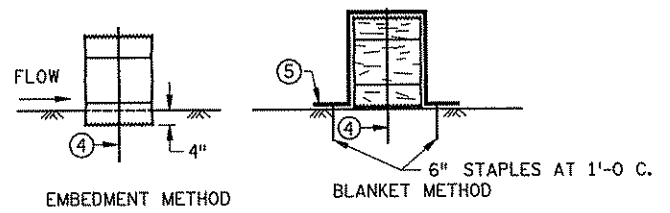


**SECTION A-A**

**SEDIMENT MAT ⑥**

TYPICAL STREAM BED INSTALLATION

**DESIGN GUIDELINES:**  
 MAXIMUM FLOW VELOCITY: 5 FT./SEC.  
 MAXIMUM FLOW DEPTH: 2 FT.



**BALE BARRIER DETAIL**

APPROX. BALE SIZE: 14" X 18" X 36" LONG

**NOTES:**

- SEE SPECS. 2573, 3892, & 3894.
- ① ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE TRUCKS ENTER MAIN ROAD. KEEPING MUD OFF THE ROAD WILL PREVENT AUTO DAMAGE AND KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS. GEOTEXTILE MAY BE PLACED UNDER THE ROCK TO KEEP ROCKS SEPARATE FROM SOIL.
- ② W = 10 FT. MIN., 20 FT. MAX.
- ③ D = 2 FT.
- ④ TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE EMBEDDED 10 INCHES MINIMUM IN THE GROUND.
- ⑤ PLACE A CATEGORY 3 EROSION CONTROL BLANKET, 6 FT. WIDE MINIMUM, OVER THE BALE INSTEAD OF TRENCHING.
- ⑥ THIS DETAIL MAY NOT BE ACCEPTABLE FOR WORK ON PUBLIC WATERS, SEE GENERAL PUBLIC WATERS PERMIT (GP) 2004-0001.
- ⑦ LOCATION OF DOWNSTREAM TEMPORARY SEDIMENT CONTROL DEVICE.

STANDARD SHEET NO. 5-297.405 (2 of 4)	TITLE:
STANDARD APPROVED: SEPTEMBER 27, 2006	
S.P. NO. 0208-115 (TH 65) S.P. NO. 02-618-25, S.A.P. NO. 197-020-001	

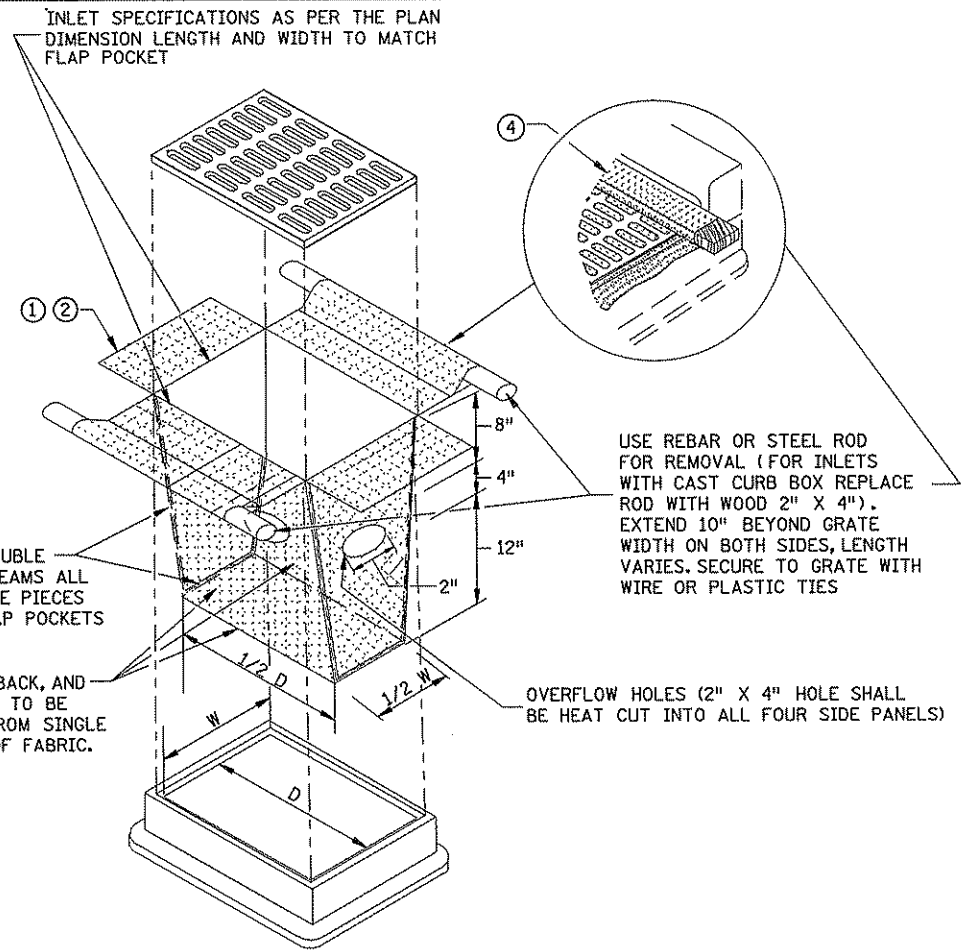
**TEMPORARY SEDIMENT CONTROL  
 MISCELLANEOUS DETAILS**

DISTRICT #: \$\$\$@DISTRICT@\$\$  
 USER NAME: \$\$\$@USER@NAME@\$\$\$  
 PATH & FILENAME: \$\$\$@PATH@FILENAME@\$\$\$  
 FILE NAME: \$\$\$@FILENAME@\$\$\$

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

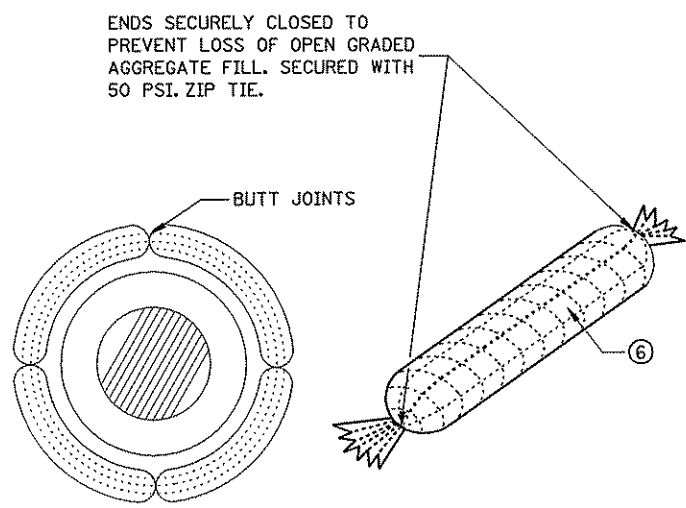
DISTRICT #: \$\$\$@DISTRICT\$\$\$  
 USER NAME: \$\$\$@USER\$NAME\$\$\$  
 PATH & FILENAME: \$\$\$@PATH\$FILENAME\$\$\$\$

FILE NAME: \$\$\$@FILE\$NAME\$\$\$

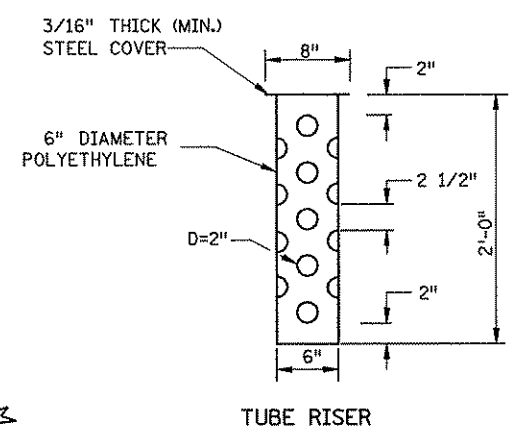


**FILTER BAG INSERT ③**

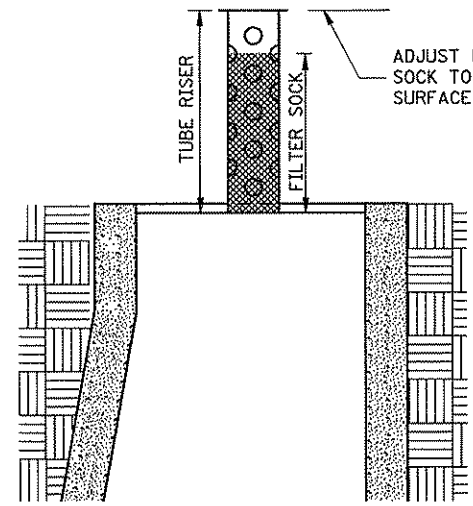
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)



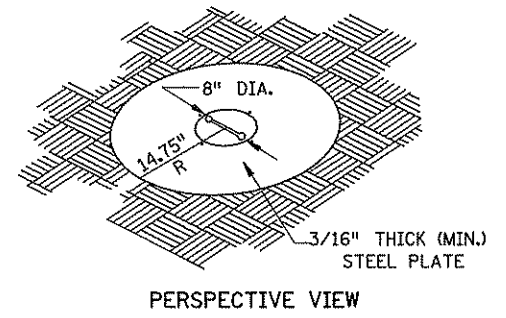
**ROCK LOG/COMPOST LOG**



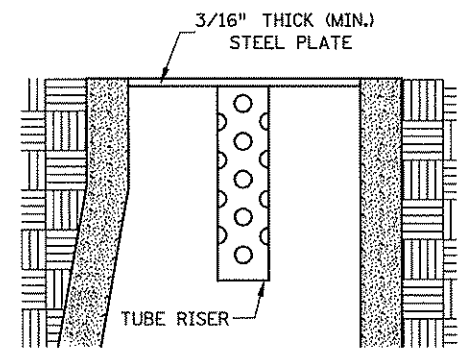
**TUBE RISER**



**SECTION (UP POSITION)**

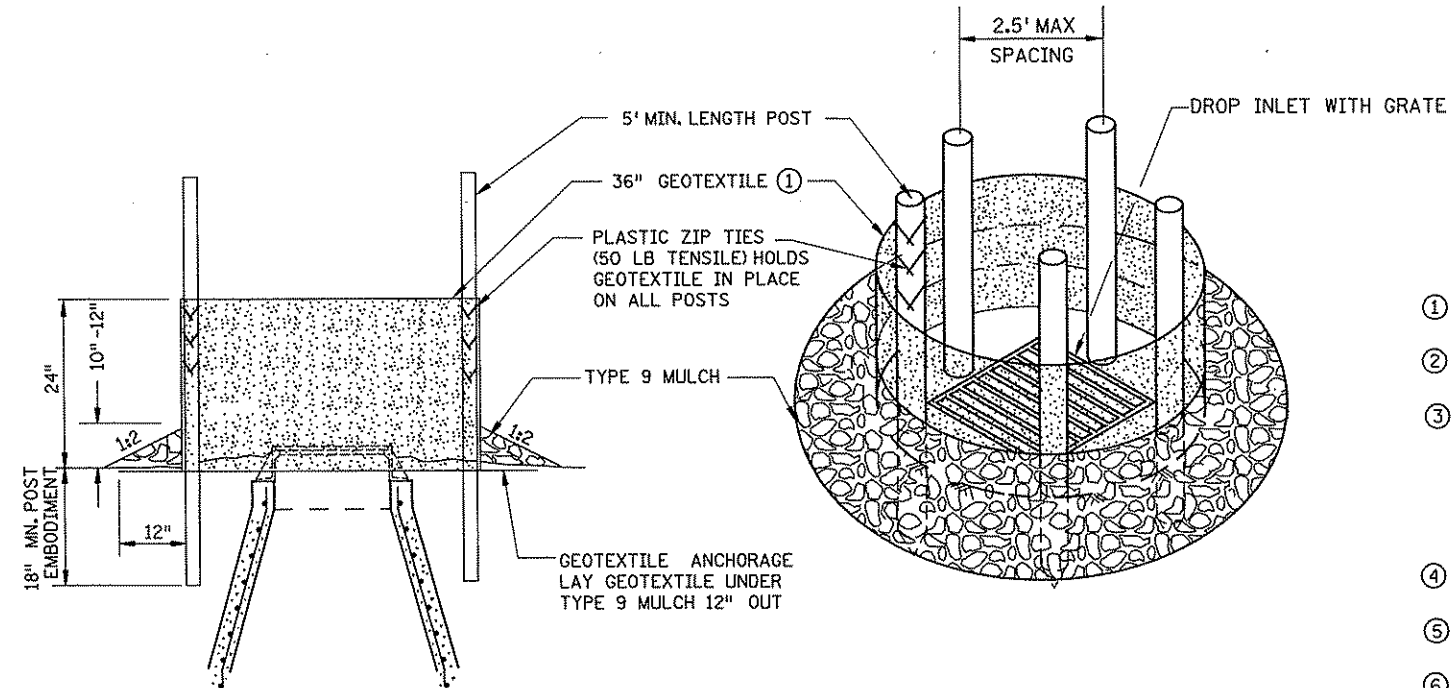


**PERSPECTIVE VIEW**



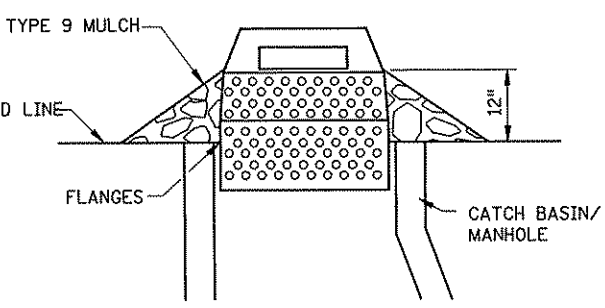
**SECTION (DOWN POSITION)**

**POP-UP HEAD**



**SILT FENCE RING AND ROCK FILTER BERM**

USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 OR LESS



**SEDIMENT CONTROL INLET HAT**

NOTE: THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.

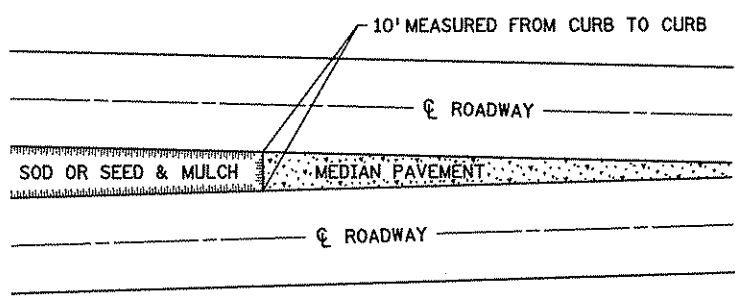
**NOTES:**

- SEE SPECS. 2573, 3137, 3886 & 3891.
- MANUFACTURED ALTERNATIVES LISTED ON Mn/DOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED.
- ① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
- ② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ③ INSTALLATION NOTES:  
DO NOT INSTALL FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
- ④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.
- ⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
- ⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1; CA-3 GRADATION.

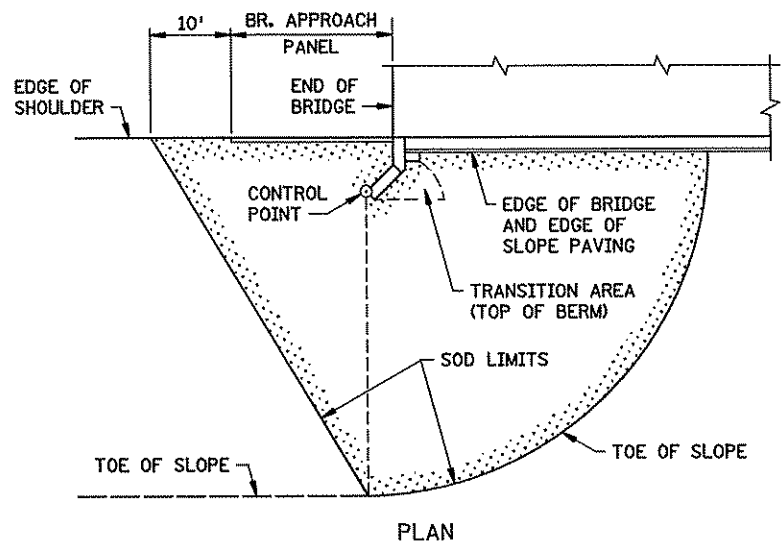
STANDARD SHEET NO. 297,405 (4 OF 4)	TITLE: <b>TEMPORARY SEDIMENT CONTROL STORM DRAIN INLET PROTECTION</b>
STANDARD APPROVED: SEPTEMBER 27, 2006	
S.P. NO. 0208-115 (TH 65) S.P. NO. 02-618-25, S.A.P. NO. 197-020-001	SHEET NO. 48 OF 116 SHEETS



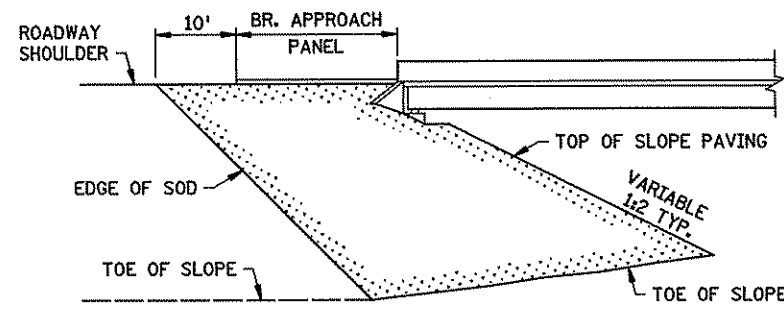
PLOTTED/REVISED: \$\$\$@DATE\$\$\$



SODDING LIMITS AT GORE AREA

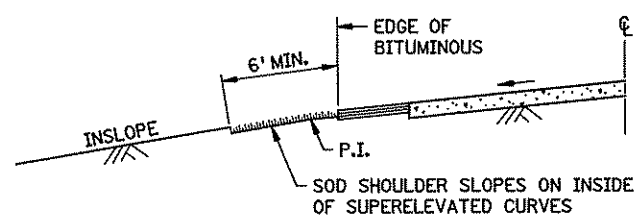


PLAN

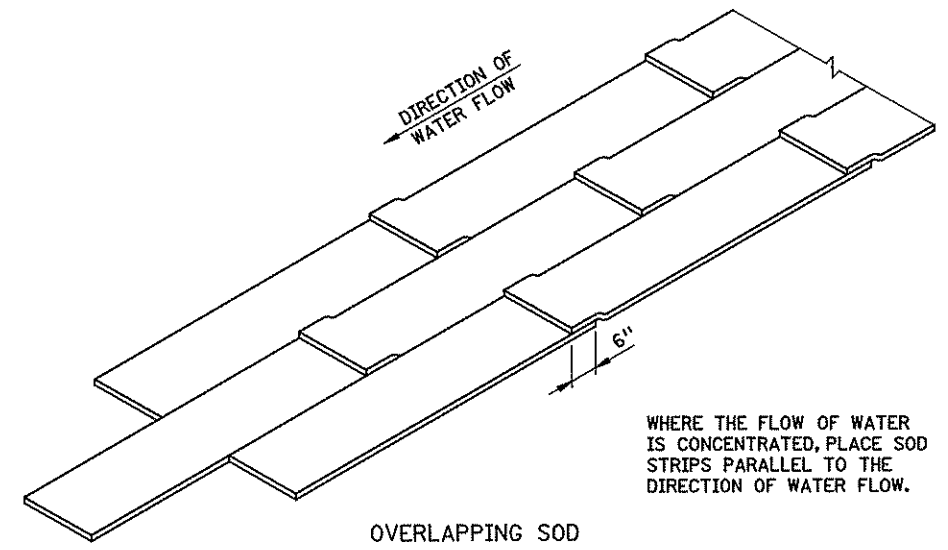


ELEVATION

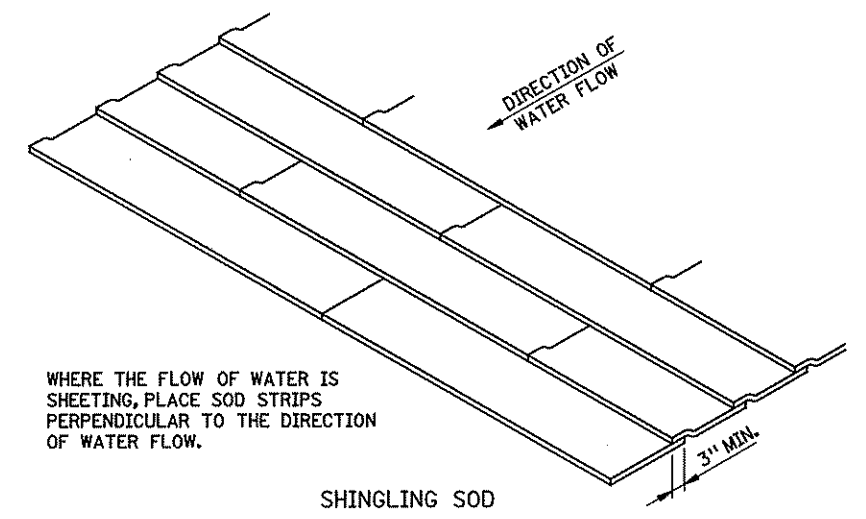
SODDING LIMITS AT BRIDGE APPROACH FILLS



SODDING INSLOPES OF SUPERELEVATED CURVES

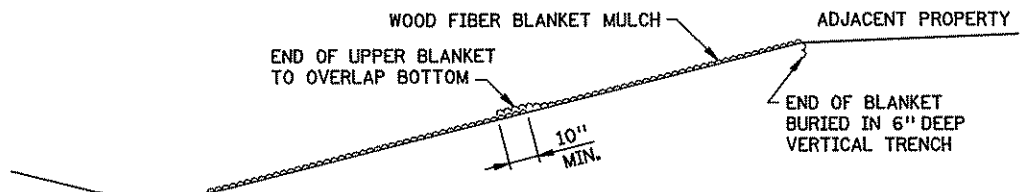


OVERLAPPING SOD

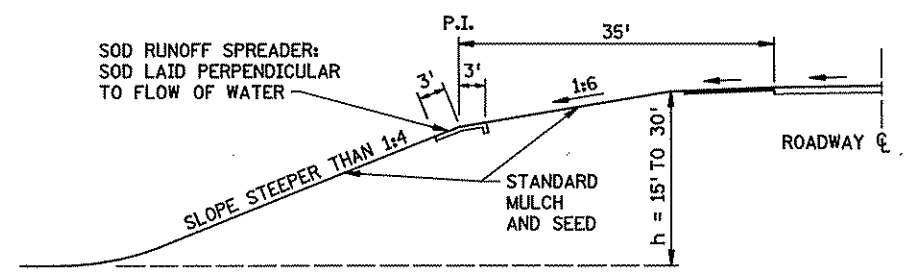


SHINGLING SOD

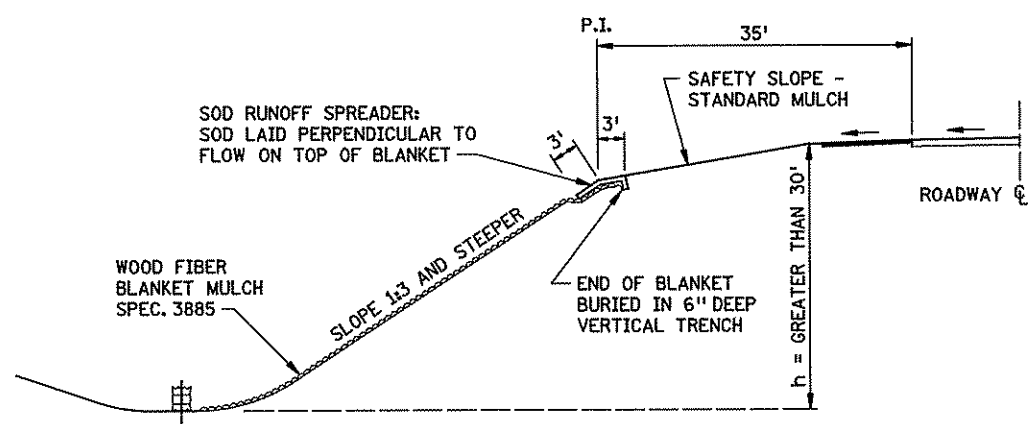
SPECIAL SOD PLACEMENT TECHNIQUES



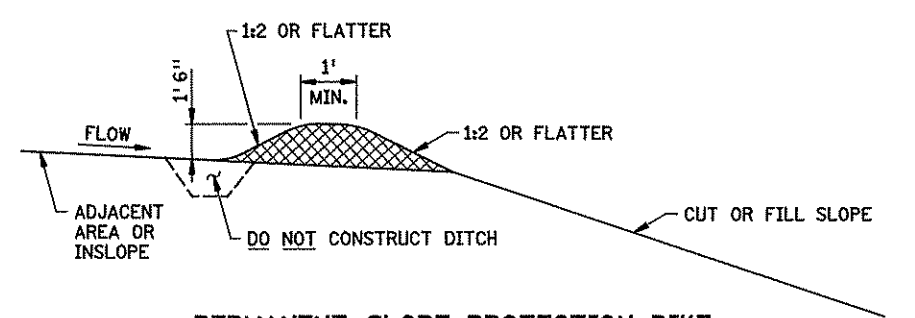
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)



PERMANENT SLOPE PROTECTION DIKE

DISTRICT #: \$\$\$@DISTRICT\$\$\$  
USER NAME: \$\$\$@USER\$\$\$  
PATH & FILENAME: \$\$\$@PATH\$\$\$

STANDARD SHEET NO. 5-297.406	TITLE
STANDARD APPROVED: JANUARY 31, 1985	PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS

REVISION DATE  
10-26-2000

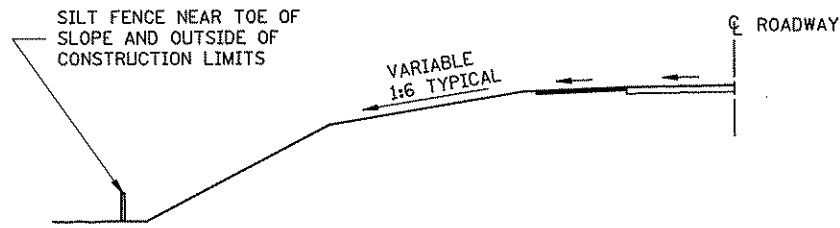
S.P. NO. 0208-115 (TH 65)  
S.P. NO. 02-618-25 . S.A.P. NO. 197-020-001

SHEET NO. 49 OF 116 SHEETS

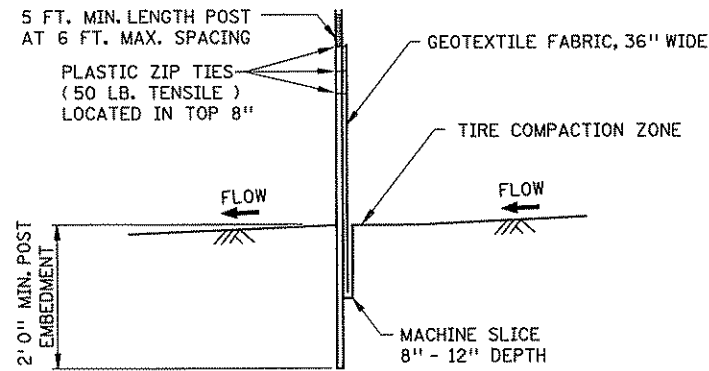
PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: \$\$\$@DISTRICT@\$\$  
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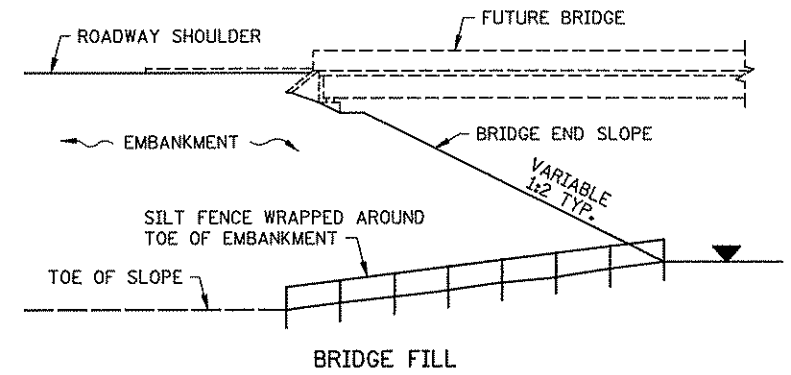


LOCATION OF SILT FENCE AT TOE OF ROADWAY EMBANKMENT

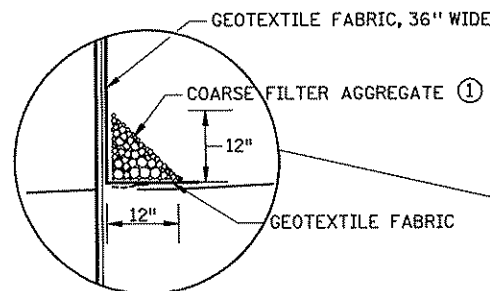


**SILT FENCE, MACHINE SLICED**

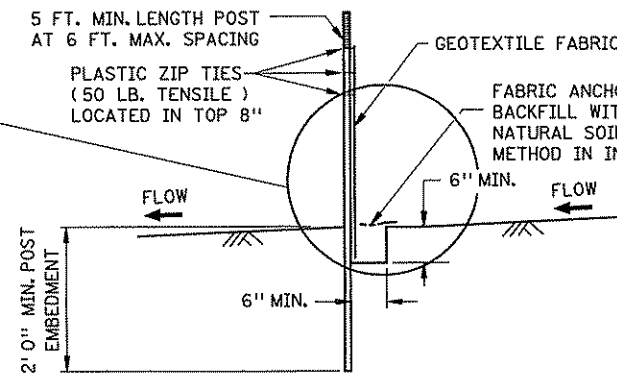
DESIGN GUIDELINES:  
TO PROTECT AREAS FROM SHEET FLOW.  
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



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

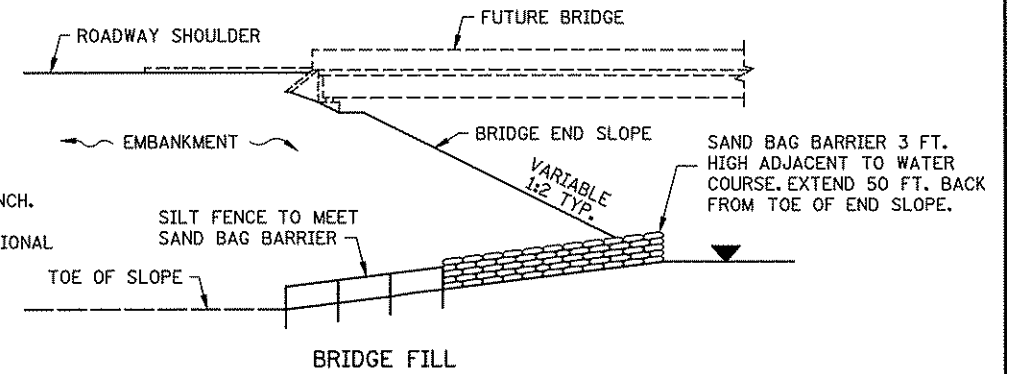


OPTIONAL METHOD FOR SILT FENCE, HEAVY DUTY

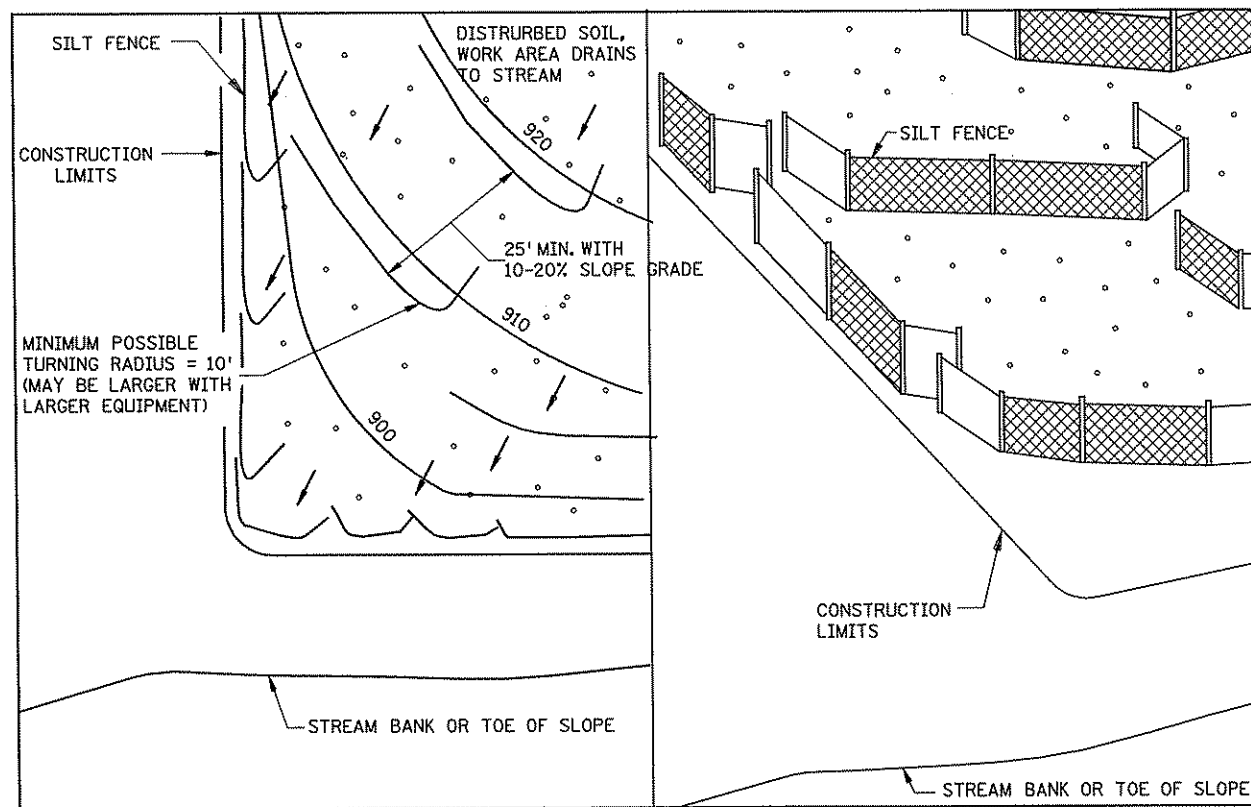


**SILT FENCE, HEAVY DUTY (HAND INSTALLED)**

DESIGN GUIDELINES:  
TO PROTECT AREAS FROM SHEET FLOW.  
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



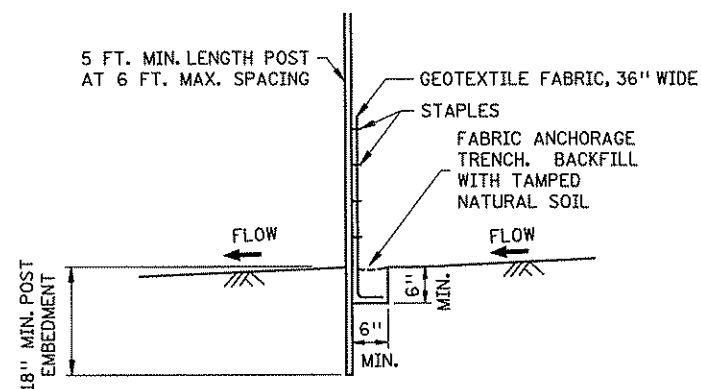
DESIGN GUIDELINES:  
WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC.  
CONTRIBUTING SLOPE AREA: 1 ACRE



PLAN VIEW

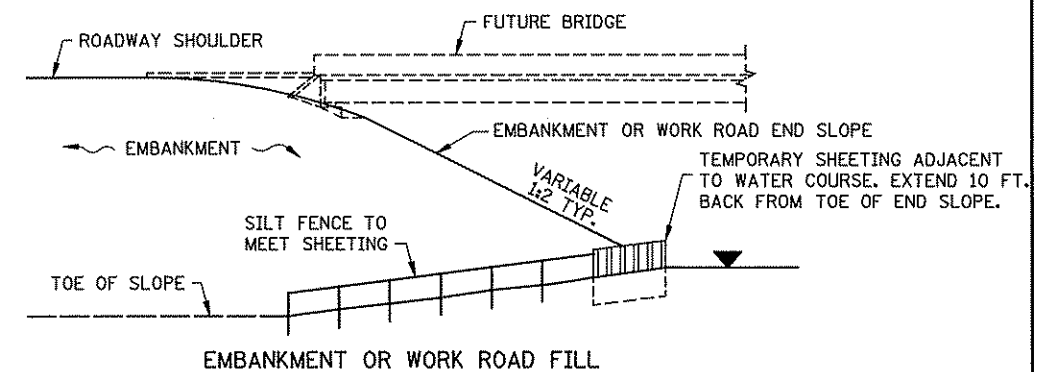
SIDE VIEW

**SILT FENCE, J-HOOK INSTALLATION**



**SILT FENCE, PREASSEMBLED**

DESIGN GUIDELINES:  
TO PROTECT AREAS FROM SHEET FLOW.  
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



DESIGN GUIDELINES:  
WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC.  
CONTRIBUTING SLOPE AREA: 3 ACRES

**SILT FENCE AT BRIDGE EMBANKMENT ADJACENT TO WATER**

**NOTES:**

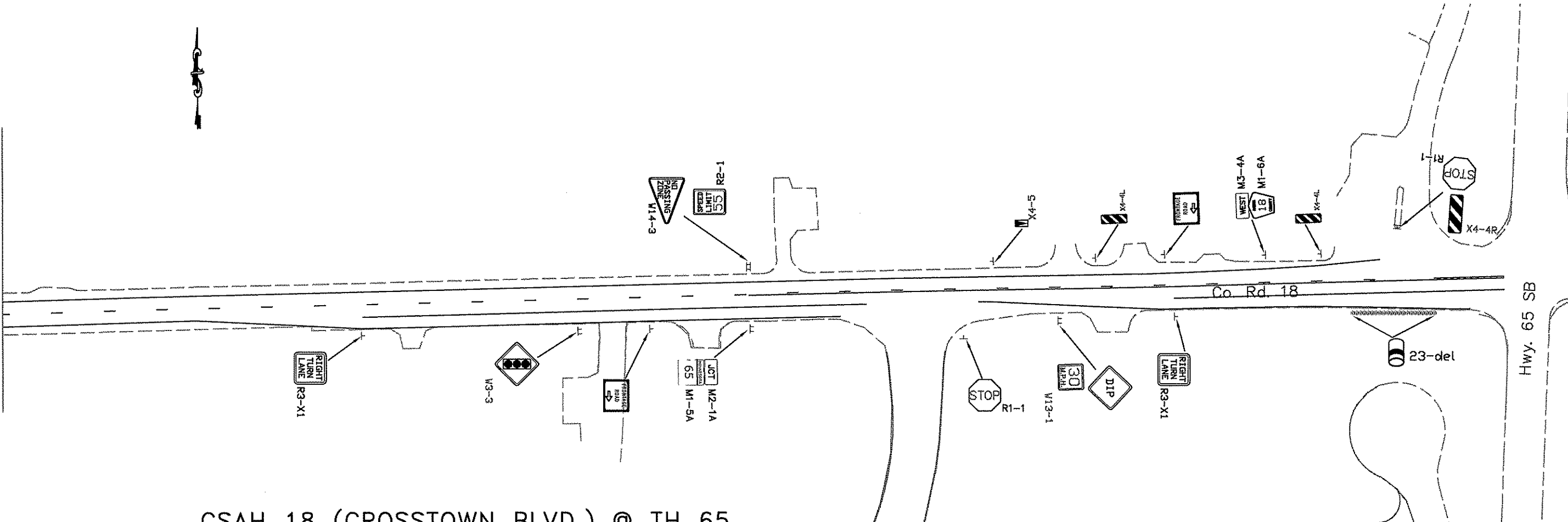
SEE SPECS. 2573, 3149 & 3886.  
① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.

STANDARD SHEET NO. 5-297.408 (1 OF 2)	TITLE: <b>TEMPORARY SEDIMENT CONTROL SILT FENCE</b>
STANDARD APPROVED: SEPTEMBER 27, 2006	
S.P. NO. 0208-115 (TH 65) S.P. NO. 02-618-25 , S.A.P. NO. 197-020-001	<b>SHEET NO.49A OF 116 SHEETS</b>

MATCHLINE 'A' SEE ABOVE RIGHT

MATCHLINE 'A' SEE BELOW LEFT

MATCHLINE 'B' SEE SHEET 51 OF 116



### CSAH 18 (CROSTOWN BLVD.) @ TH 65

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 6-3-08 REG. NO. 24756

DRAWN BY: ST DATE 09/21/07  
 DESIGN BY: MN DATE 09/18/07  
 CHECKED BY: RB DATE 09/27/07



ANOKA COUNTY  
 HIGHWAY DEPT.

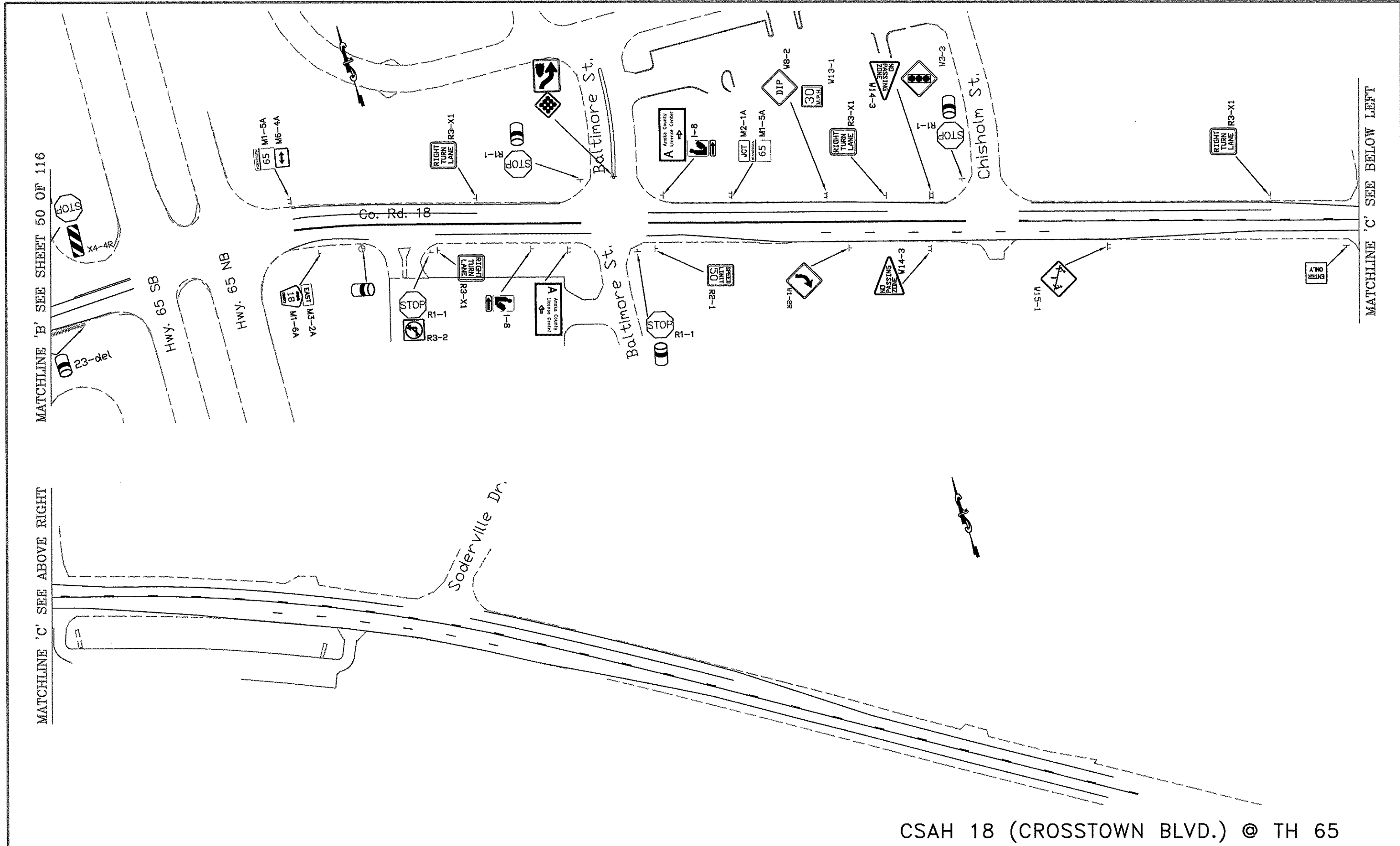
STATE PROJECT NO. 0208-115(TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

INPLACE SIGNING AND STRIPING  
 Sheet 50 of 116 Sheets

MATCHLINE 'B' SEE SHEET 50 OF 116

MATCHLINE 'C' SEE ABOVE RIGHT

MATCHLINE 'C' SEE BELOW LEFT



### CSAH 18 (CROSSTOWN BLVD.) @ TH 65

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: CURT A. KOBILARCSIK

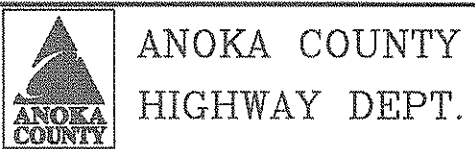
SIGNATURE: *Curt Kobilarsik*

DATE: 6-3-08 REG. NO. 24756

DRAWN BY ST DATE 08/21/07

DESIGN BY MN DATE 08/18/07

CHECKED BY RR DATE 08/27/07



STATE PROJECT NO. 0208-115(TH 65)

STATE PROJECT NO. 02-618-25

STATE AID PROJECT NO. 197-020-001

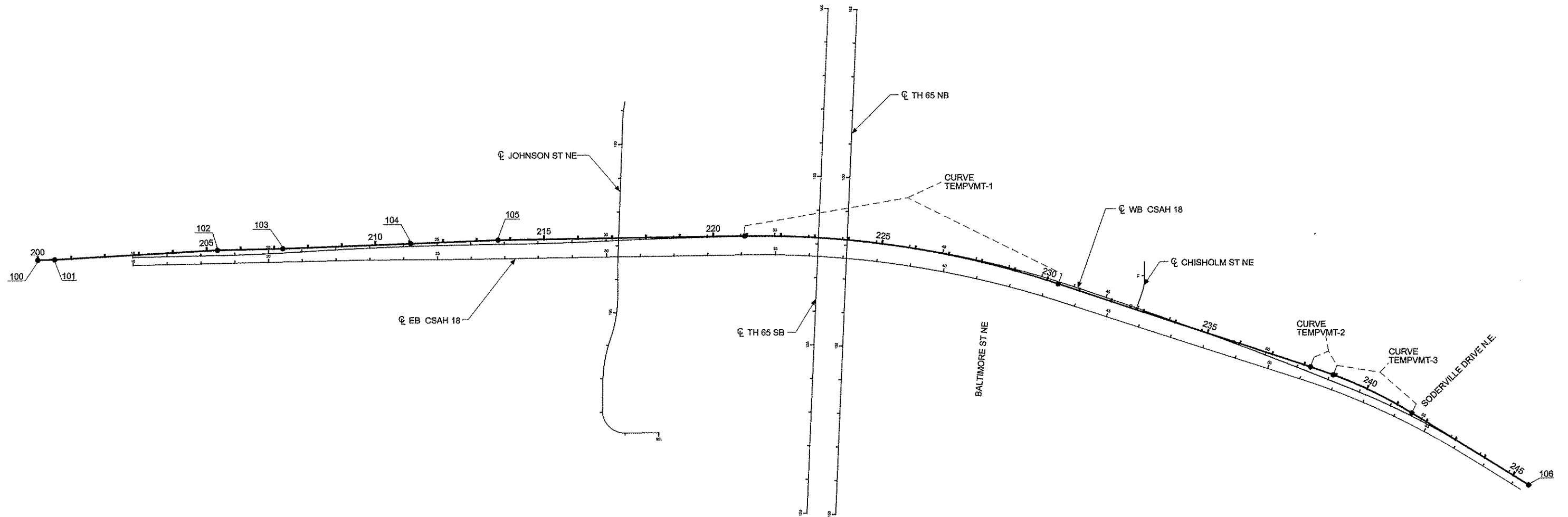
STATE PROJECT NO. \_\_\_\_\_

INPLACE SIGNING AND STRIPING

Sheet 51 of 116 Sheets

NAME: P:\02-618-25\BASE\AutoCAD\inplacesign&strips.dwg, 05/14/2008 4:35:22 PM





### TEMPORARY WIDENING ALIGNMENT TABULATION

POINT NUMBER	POINT TYPE	STATION	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	N	E	
100	POT	200+00.00						192,106.7864	505,971.7002	N 88° 39' 14.41" E
101	POT	200+50.00						192,107.9609	506,021.6864	N 86° 38' 05.02" E
102	POT	205+31.24						192,136.2104	506,502.0967	N 88° 41' 08.13" E
103	POT	207+75.20						192,140.6595	506,696.0031	N 87° 50' 28.68" E
104	POT	211+04.10						192,154.9316	507,074.6394	N 87° 31' 18.48" E
105	POT	213+63.66						192,166.1548	507,333.9578	N 89° 03' 26.62" E
CURVE TEMPVMT-1	PC	220+93.34						192,178.1586	508,063.5382	
	PI	225+68.57	19° 19' 10.29"	2° 03' 07.71"	2,792.00	475.23	941.43	192,185.9765	508,538.7014	
	PT	230+34.77						192,036.1531	508,989.6937	S 71° 37' 23.10" E
CURVE TEMPVMT-2	CC							189,386.5365	508,109.4689	
	PC	238+19.57						191,788.7321	509,734.4704	
	PI	238+55.52	1° 50' 07.19"	2° 33' 11.84"	2,244.00	35.94	71.88	191,777.4003	509,768.5810	
CURVE TEMPVMT-3	PT	238+91.45						191,764.9818	509,802.3111	S 69° 47' 15.91" E
	CC							189,659.1691	509,027.0118	
	PC	238+91.45						191,764.9818	509,802.3111	
CURVE TEMPVMT-3	PI	240+21.31	11° 38' 56.66"	4° 30' 03.05"	1273.00	129.86	258.82	191,720.1162	509,924.1718	
	PT	241+50.27						191,651.5690	510,034.4634	S 58° 08' 19.25" E
	CC							190,570.3742	509,362.4911	
106	POT	245+54.13						191,438.3884	510,377.4683	



NO	DATE	BY	CHKD	APPR	REVISION
NAME: p:\02-618-25\PLAN\0261825_AL1_TEMP.V.dgn					05/14/2008
					2:22:51 PM

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

PRINT NAME: CURT A. KUBIARCSIK

SIGNATURE: [Signature]

DATE: 6-3-08 LICENSE NO. 24756

DRAWN BY: EJ DATE: 04/22/08

DESIGN BY: MN DATE: 02/12/08

CHECKED BY: MN DATE: 05/05/08



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)

STATE AID PROJECT NO. 02-618-25

STATE PROJECT NO. 197-020-001

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

TEMPORARY WIDENING  
ALIGNMENT PLAN

Sheet 52 of 116 Sheets

STAGE 1 CONSTRUCTION:

- 1) CLEAR AND GRUB
- 2) MUCK NORTH SIDE OF ROADWAY
- 3) BACKFILL MUCK EXCAVATION
- 4) BACKFILL/GRADING FOR TEMP WIDENING
- 5) MUCK SOUTH SIDE OF ROADWAY
- 6) BACKFILL MUCK EXCAVATION FOR STORM SEWER
- 7) PLACE CLASS 5 FOR TEMP WIDENING
- 8) PAVE TEMPORARY WIDENING
- 9) CONSTRUCT CHISHOLM ST.
- 10) GRADE/PLACE TOPSOIL, TEMP WIDEN INSLOPE
- 11) SEED INSLOPE TEMP WIDENING
- 12) INSTALL STORM SEWER TRUNK LINE
- 13) INSTALL STORM LEADS ACROSS AS NEEDED
- 14) PATCH ALL STORM SEWER CROSSINGS
- 15) COMPLETE INSTALLATION OF TEMPORARY SIGNAL

TRAFFIC CONTROL NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TRANSITION AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

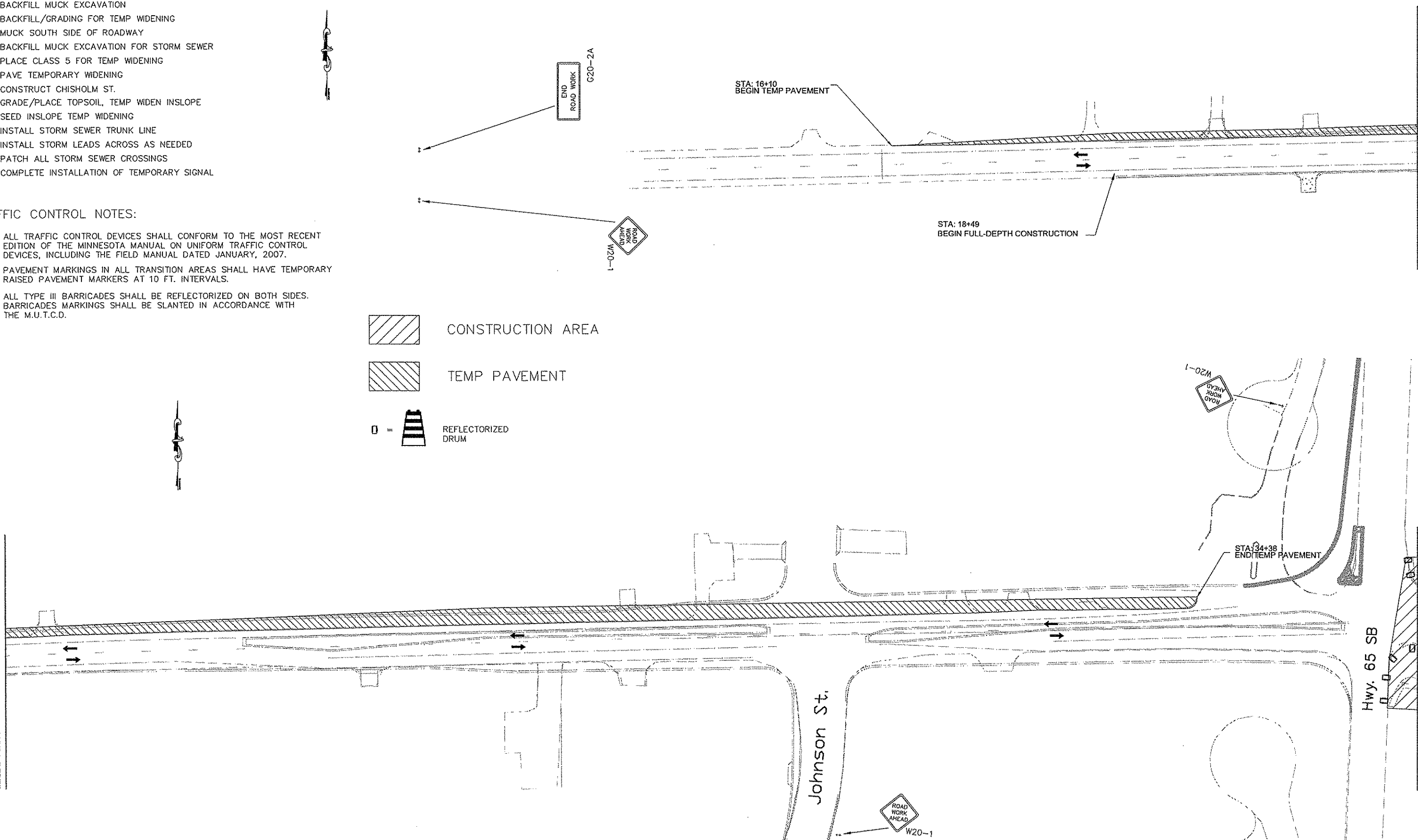
 CONSTRUCTION AREA

 TEMP PAVEMENT

 REFLECTORIZED DRUM



MATCHLINE 'A' SEE ABOVE RIGHT



MATCHLINE 'A' SEE BELOW LEFT

MATCHLINE 'B' SEE SHEET 54 OF 116

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 9-9-08 REG. NO. 24756

DRAWN BY: ST DATE 09/21/07  
 DESIGN BY: MN DATE 09/18/07  
 CHECKED BY: RB DATE 09/27/07



ANOKA COUNTY  
 HIGHWAY DEPT.

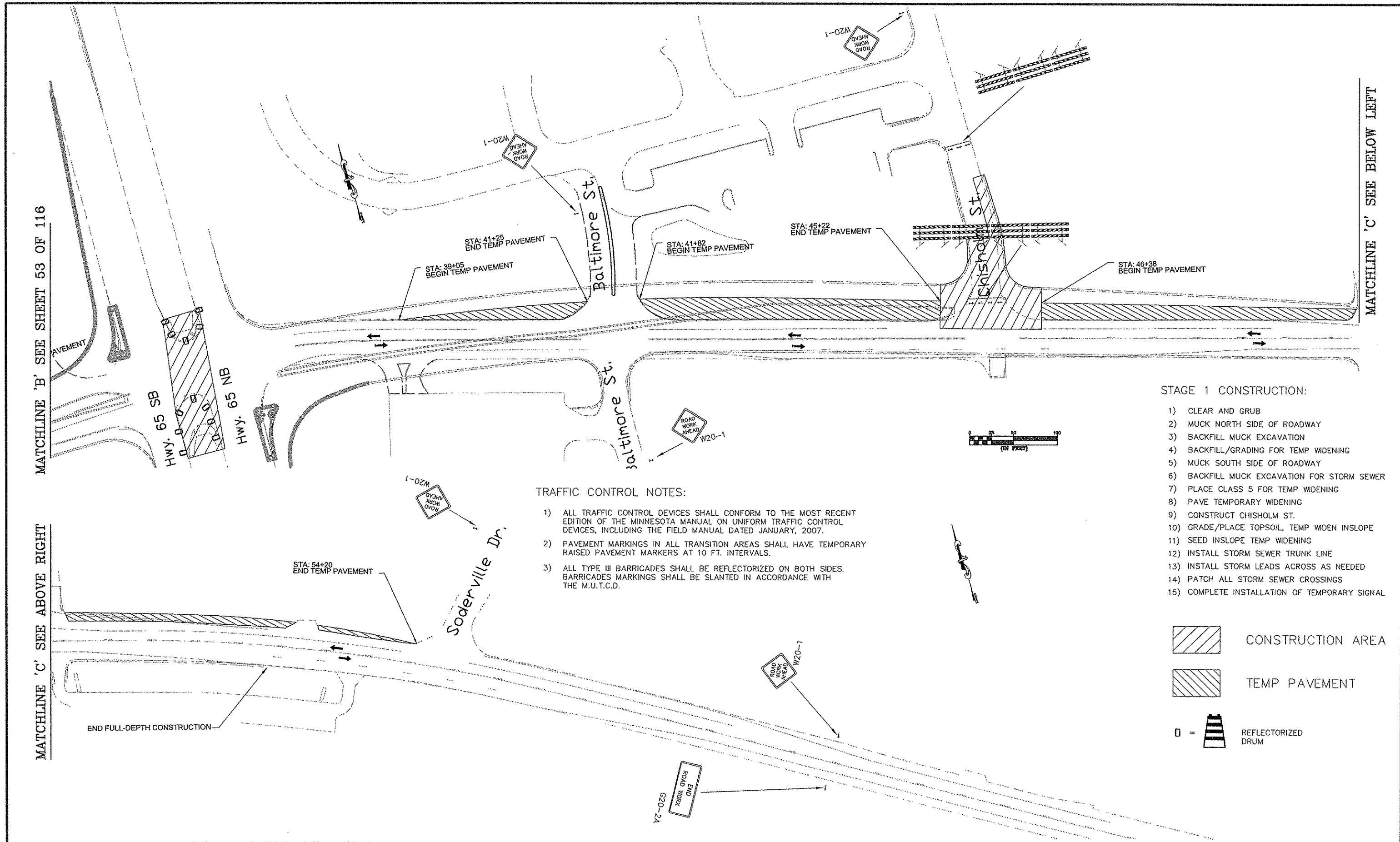
STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

STAGE I  
 CONSTRUCTION STAGING  
 AND TRAFFIC CONTROL  
 Sheet 53 of 116 Sheets

MATCHLINE 'B' SEE SHEET 53 OF 116

MATCHLINE 'C' SEE ABOVE RIGHT

MATCHLINE 'C' SEE BELOW LEFT






TRAFFIC CONTROL NOTES:

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- 2) PAVEMENT MARKINGS IN ALL TRANSITION AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

STAGE 1 CONSTRUCTION:

- 1) CLEAR AND GRUB
- 2) MUCK NORTH SIDE OF ROADWAY
- 3) BACKFILL MUCK EXCAVATION
- 4) BACKFILL/GRADING FOR TEMP WIDENING
- 5) MUCK SOUTH SIDE OF ROADWAY
- 6) BACKFILL MUCK EXCAVATION FOR STORM SEWER
- 7) PLACE CLASS 5 FOR TEMP WIDENING
- 8) PAVE TEMPORARY WIDENING
- 9) CONSTRUCT CHISHOLM ST.
- 10) GRADE/PLACE TOPSOIL, TEMP WIDEN INSLOPE
- 11) SEED INSLOPE TEMP WIDENING
- 12) INSTALL STORM SEWER TRUNK LINE
- 13) INSTALL STORM LEADS ACROSS AS NEEDED
- 14) PATCH ALL STORM SEWER CROSSINGS
- 15) COMPLETE INSTALLATION OF TEMPORARY SIGNAL

 CONSTRUCTION AREA  
 TEMP PAVEMENT  
 REFLECTORIZED DRUM

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 9-9-08 REG. NO. 24756

DRAWN BY: ST DATE 09/21/07  
 DESIGN BY: MN DATE 09/18/07  
 CHECKED BY: RB DATE 09/27/07



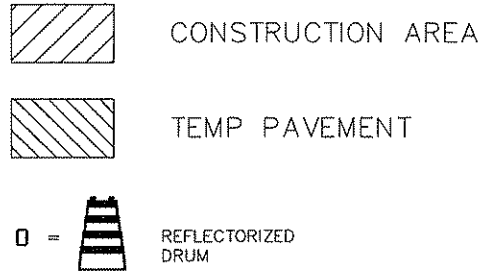
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

STAGE I  
 CONSTRUCTION STAGING  
 AND TRAFFIC CONTROL  
 Sheet 54 of 116 Sheets

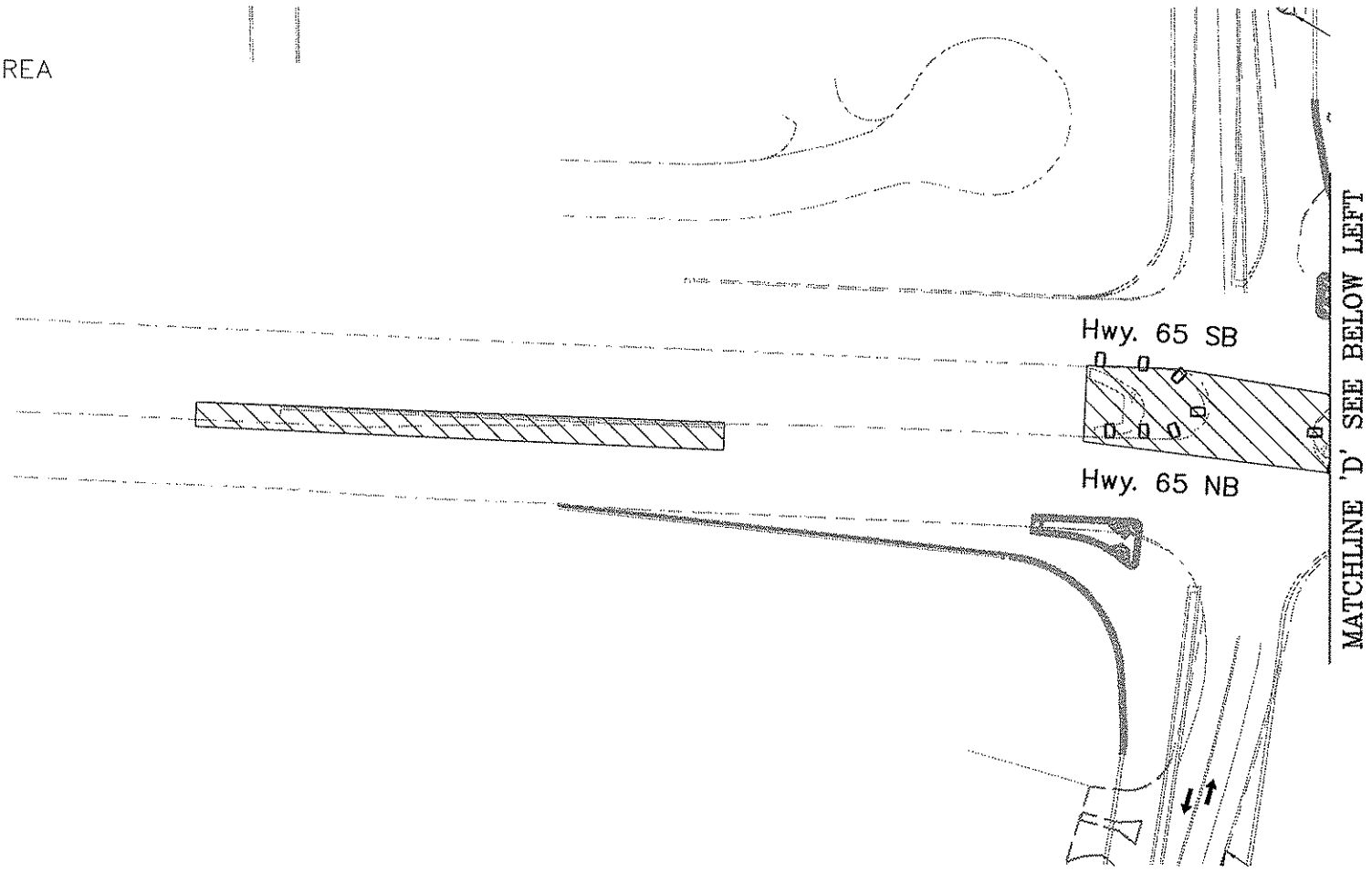
TRAFFIC CONTROL NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TRANSITION AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.



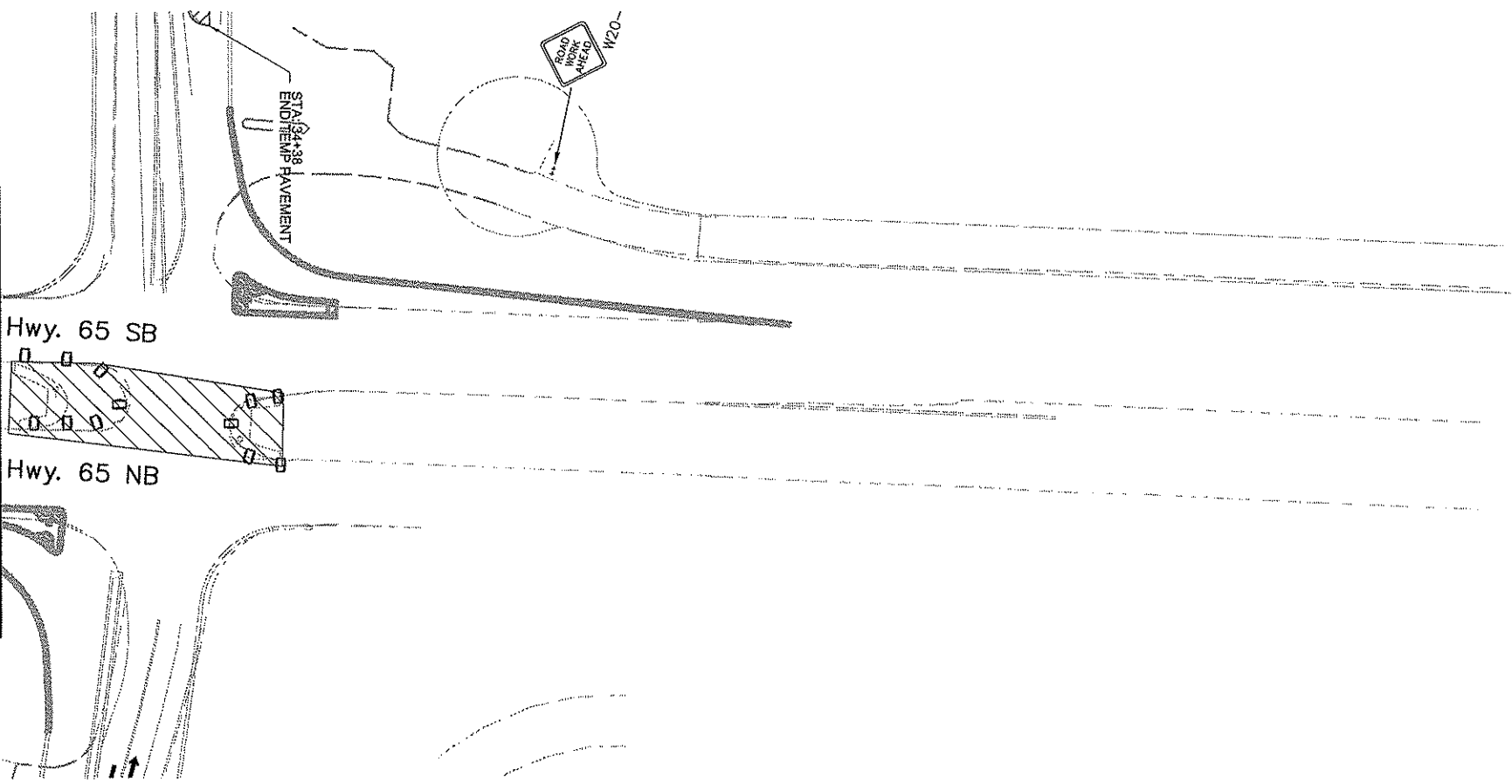
STAGE 1 CONSTRUCTION:

- 1) CLEAR AND GRUB
- 2) MUCK NORTH SIDE OF ROADWAY
- 3) BACKFILL MUCK EXCAVATION
- 4) BACKFILL/GRADING FOR TEMP WIDENING
- 5) MUCK SOUTH SIDE OF ROADWAY
- 6) BACKFILL MUCK EXCAVATION FOR STORM SEWER
- 7) PLACE CLASS 5 FOR TEMP WIDENING
- 8) PAVE TEMPORARY WIDENING
- 9) CONSTRUCT CHISHOLM ST.
- 10) GRADE/PLACE TOPSOIL, TEMP WIDEN INSLOPE
- 11) SEED INSLOPE TEMP WIDENING
- 12) INSTALL STORM SEWER TRUNK LINE
- 13) INSTALL STORM LEADS ACROSS AS NEEDED
- 14) PATCH ALL STORM SEWER CROSSINGS
- 15) COMPLETE INSTALLATION OF TEMPORARY SIGNAL



MATCHLINE 'D' SEE BELOW LEFT

MATCHLINE 'D' SEE ABOVE RIGHT



LEFT TURN LANE CONSTRUCTION ON TH 65 (NB ONLY)

Anticipated Construction Sequence:

- Strip topsoil outside of in-place bituminous
- Place granular borrow outside of bituminous as needed
- Remove bituminous for left turn lane
- Tolerance subgrade
- Place Class 5 and tolerance
- Place bituminous base, binder, and wear courses
- Place topsoil up against bituminous
- Place seed and fertilizer

Lane closures will not be allowed on NB TH 65 between the hours of 2:00 PM and 7:00 PM, Monday through Friday. The contractor shall be subject to a fine of \$500 each hour, or portion of an hour, that a lane closure is not removed before the time specified. Contact Doug Boxwell, MnDOT Permits, 651-234-7913, 24 hours in advance of any lane closures on TH 65.

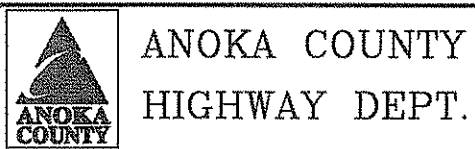
The contractor shall provide for left turn lane movements onto CSAH 18 during lane closures or, prohibit left turn movements with Type III barricades and provide a detour route for left turn movements during lane closures. The contractor shall provide the engineer and MnDOT Metro Traffic Engineering copies of their proposed plan for controlling left turn movements onto CSAH 18, one week in advance of the proposed left turn lane construction. No lane closures on TH 65 will be allowed until these plans have been approved by both the engineer and the MnDOT Metro Traffic Engineering Department.

The final bituminous wear course surface shall be provided for NB left turn lane traffic at the end of the day's construction. The left turn lane construction shall be completed (including seed and fertilizer) at the end of the day upon which it was started. The contractor shall be subject to a \$1,000 day fine for each day, or portion of a day, that the NB left turn lane construction was started and not completed.

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: CURT A. KOBILARCSIK  
 SIGNATURE: *[Signature]*  
 DATE: 9-9-08 REG. NO. 24756

DRAWN BY: ST DATE 08/21/07  
 DESIGN BY: MN DATE 08/18/07  
 CHECKED BY: RB DATE 08/27/07



STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO. \_\_\_\_\_

STAGE I  
 CONSTRUCTION STAGING  
 AND TRAFFIC CONTROL  
 Sheet 55 of 116 Sheets

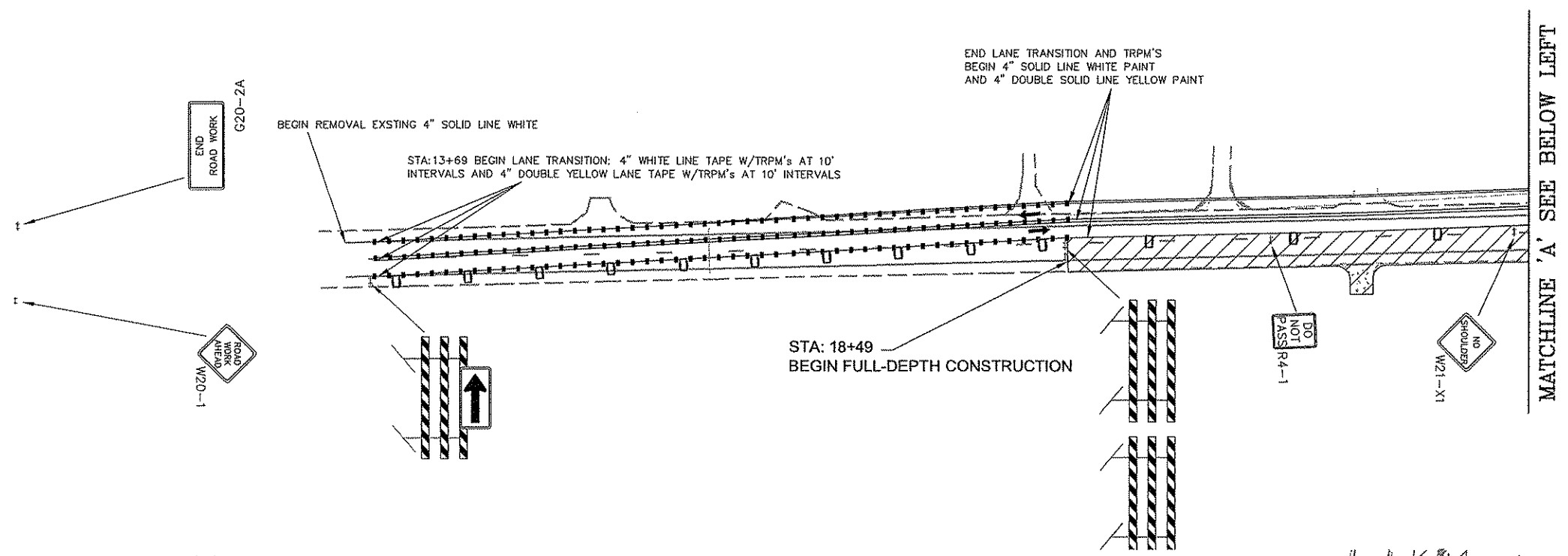


STAGE 2 CONSTRUCTION:

- 1) SWITCH ALL TRAFFIC TO NORTH SIDE OF ROADWAY
- 2) REMOVE (RECLAIM) SOUTH SIDE BIT
- 3) STRIP SOUTH SIDE TOPSOIL
- 4) EARTHWORK SOUTH SIDE OF ROADWAY
- 5) COMPLETE WORK ON NORTHBOUND TH 65
- 6) PLACE & TOLERANCE CLASS 5 FOR CURB
- 7) INSTALL SIGNAL LOOPS
- 8) PLACE CURB
- 9) TOLERANCE CLASS 5 FOR BIT PAVING
- 10) PAVE BIT BASE & BINDER, SOUTH SIDE
- 11) PLACE LATEX PAINT FOR TRAFFIC SWITCH

TRAFFIC CONTROL NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TRANSITION AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.



CONSTRUCTION AREA

REFLECTORIZED DRUM

MATCHLINE 'A' SEE ABOVE RIGHT

CSAH 18 (CROSSTOWN BLVD.)

Johnson St.

MATCHLINE 'B' SEE SHEET 57 OF 116

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-618-25\BASE\AutoCAD\Stage 2\_sign&stripe.dwg, 08/18/2008 9:34:15 AM

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: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 9-9-08 REG. NO. 24756

DRAWN BY: ST DATE 08/21/07

DESIGN BY: MN DATE 08/18/07

CHECKED BY: RB DATE 08/27/07



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)

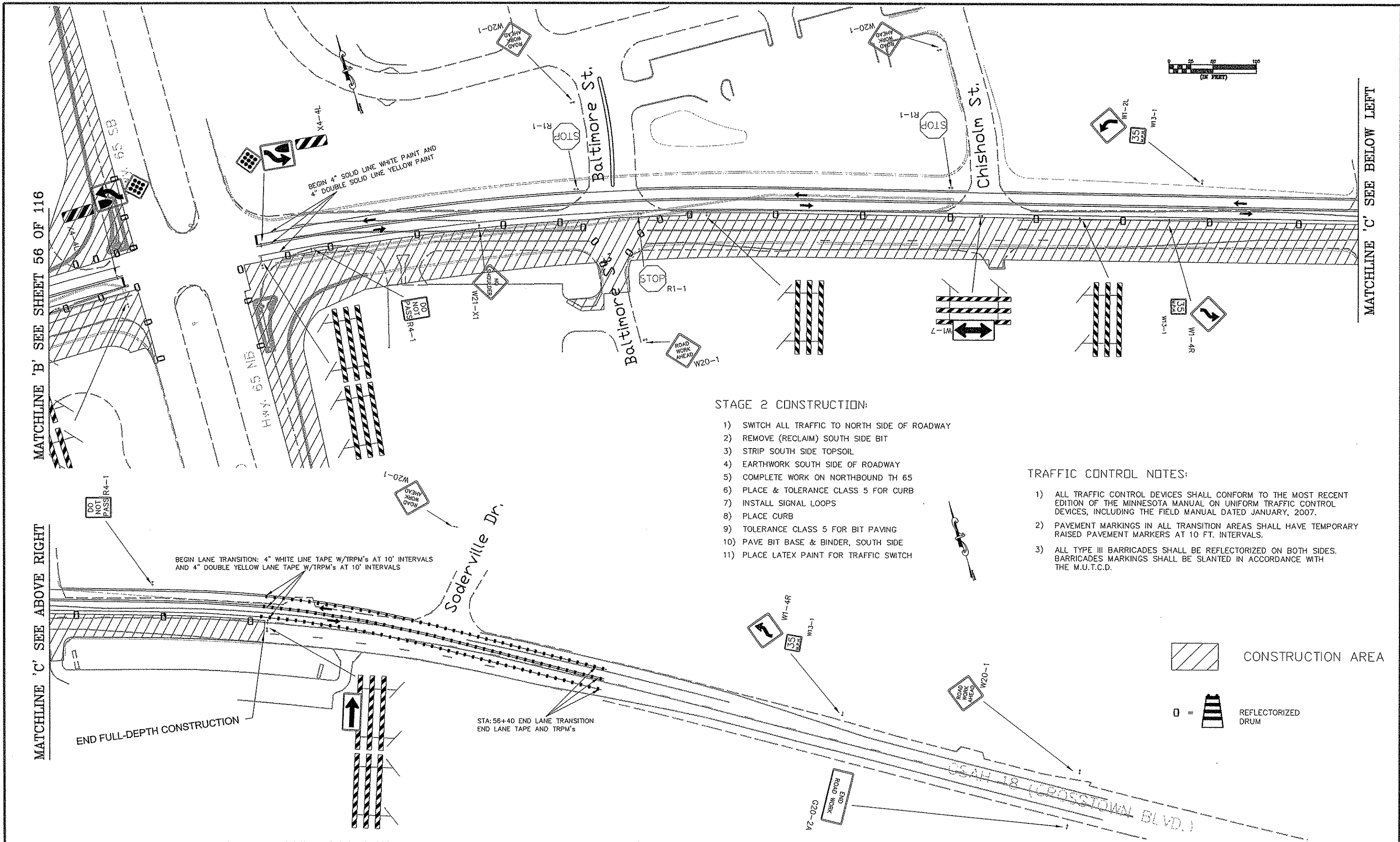
STATE PROJECT NO. 02-618-25

STATE AID PROJECT NO. 197-020-001

STATE PROJECT NO.

STAGE II  
CONSTRUCTION STAGING  
AND TRAFFIC CONTROL

Sheet 56 of 116 Sheets



**STAGE 2 CONSTRUCTION:**

- 1) SWITCH ALL TRAFFIC TO NORTH SIDE OF ROADWAY
- 2) REMOVE (RECLAIM) SOUTH SIDE BIT
- 3) STRIP SOUTH SIDE TOPSOIL
- 4) EARTHWORK SOUTH SIDE OF ROADWAY
- 5) COMPLETE WORK ON NORTHBOUND TH 65
- 6) PLACE & TOLERANCE CLASS 5 FOR CURB
- 7) INSTALL SIGNAL LOOPS
- 8) PLACE CURB
- 9) TOLERANCE CLASS 5 FOR BIT PAVING
- 10) PAVE BIT BASE & BINDER, SOUTH SIDE
- 11) PLACE LATEX PAINT FOR TRAFFIC SWITCH

**TRAFFIC CONTROL NOTES:**

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
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- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

CONSTRUCTION AREA

REFLECTORIZED DRUM

NO	DATE	BY	CHKD	APPR	REVISION

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**ANOKA COUNTY  
 HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO. \_\_\_\_\_

**STAGE II  
 CONSTRUCTION STAGING  
 AND TRAFFIC CONTROL**  
 Sheet 57 of 116 Sheets

NAME: P:\02-618-25\BASE\AutoCAD\Stage 2\_sign&stripe.dwg, 08/18/2008 9:34:23 AM

**TRAFFIC CONTROL NOTES:**

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TRANSITION AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

**STAGE 2 CONSTRUCTION:**

- 1) SWITCH ALL TRAFFIC TO NORTH SIDE OF ROADWAY
- 2) REMOVE (RECLAIM) SOUTH SIDE BIT
- 3) STRIP SOUTH SIDE TOPSOIL
- 4) EARTHWORK SOUTH SIDE OF ROADWAY
- 5) COMPLETE WORK ON NORTHBOUND TH 65
- 6) PLACE & TOLERANCE CLASS 5 FOR CURB
- 7) INSTALL SIGNAL LOOPS
- 8) PLACE CURB
- 9) TOLERANCE CLASS 5 FOR BIT PAVING
- 10) PAVE BIT BASE & BINDER, SOUTH SIDE
- 11) PLACE LATEX PAINT FOR TRAFFIC SWITCH

**FREE-RIGHT TURN LANE CONSTRUCTION ON NB TH 65**

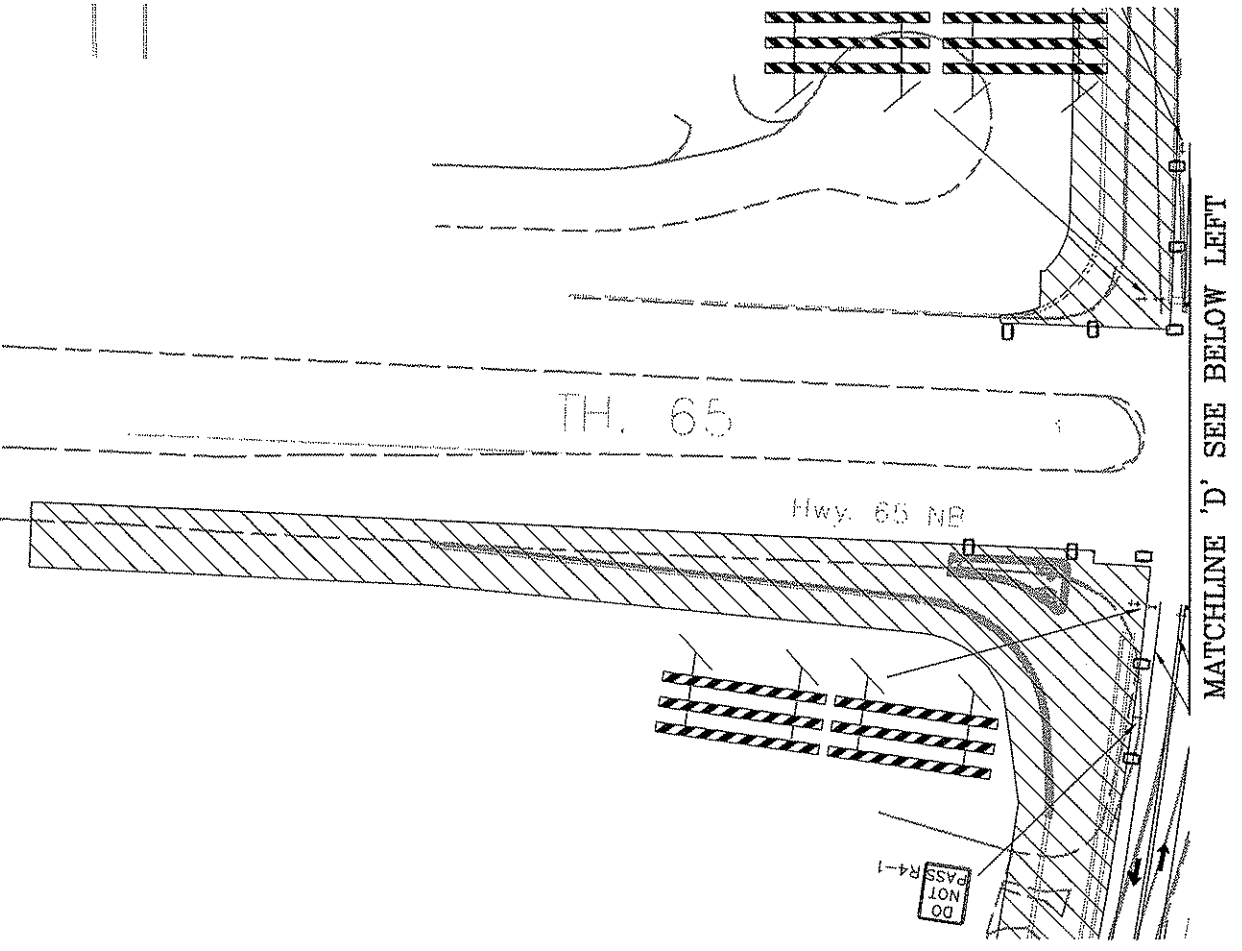
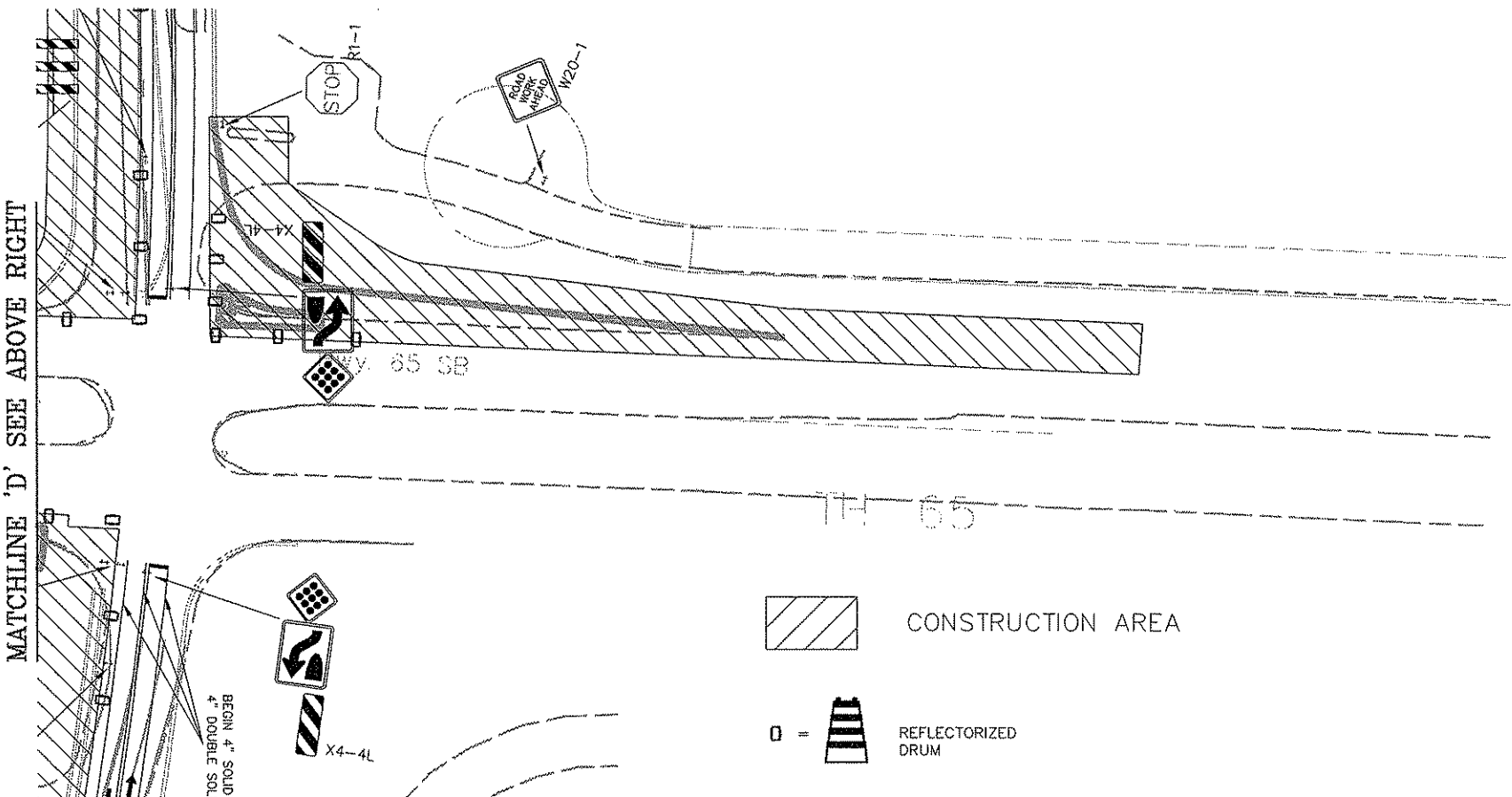
**Anticipated Construction Sequence:**

Strip topsoil outside of inplace bituminous  
 Excavate muck and backfill with granular borrow  
 Place granular borrow outside of bituminous as needed  
 Remove bituminous for free-right turn lane  
 Tolerance subgrade  
 Place Class 5 and tolerance  
 Place bituminous base course  
 Ramp bituminous edge drop at a minimum 1:10 slope  
 Free-right island not constructed in this phase to allow right turn traffic to pass around median (shorten CSAH 18 median island construction to allow for semi-trailers).  
 Install temporary traffic signal system  
 Remove old traffic signal system and bases

Lane closures will not be allowed on NB TH 65 between the hours of 2:00 PM and 7:00 PM, Monday through Friday. The contractor shall be subject to a fine of \$500 each hour, or portion of an hour, that a lane closure is not removed before the time specified. Contact Doug Boxwell, MnDOT Permits, 651-234-7913, 24 hours in advance of any lane closures on TH 65.

The contractor shall provide for right turn lane movements onto CSAH 18 during lane closures or, prohibit right turn movements with Type III barricades and provide a detour route for right turn movements during lane closures. The contractor shall provide the engineer and MnDOT Metro Traffic Engineering copies of their proposed plan for controlling right turn movements onto CSAH 18, one week in advance of the proposed right turn lane construction. No lane closures on TH 65 will be allowed until these plans have been approved by both the engineer and the MnDOT Metro Traffic Engineering Department.

A bituminous surface shall be provided for NB right turn lane traffic at the end of each day's construction. The contractor shall be subject to a \$1,000 day fine for each day, or portion of a day, that a bituminous surface is not provided for NB right turn lane traffic.



**FREE-RIGHT TURN LANE CONSTRUCTION ON SB TH 65**

**Anticipated Construction Sequence:**

Strip topsoil outside of inplace bituminous  
 Place granular borrow outside of bituminous as needed  
 Remove bituminous for free-right turn lane  
 Tolerance subgrade  
 Place Class 5 and tolerance  
 Place bituminous base course  
 Ramp bituminous edge drop at a minimum 1:10 slope  
 Free-right island not constructed in this phase to allow right turn traffic to pass around median (shorten CSAH 18 median island construction to allow for semi-trailers).

Lane closures will not be allowed on SB TH 65 between the hours of 5:30 AM and 9:30 AM, Monday through Friday. The contractor shall be subject to a fine of \$500 each hour, or portion of an hour, that a lane closure is not removed before the time specified. Contact Doug Boxwell, MnDOT Permits, 651-234-7913, 24 hours in advance of any lane closures on TH 65.

The contractor shall provide for right turn lane movements onto CSAH 18 during lane closures or, prohibit right turn movements with Type III barricades and provide a detour route for right turn movements during lane closures. The contractor shall provide the engineer and MnDOT Metro Traffic Engineering copies of their proposed plan for controlling right turn movements onto CSAH 18, one week in advance of the proposed right turn lane construction. No lane closures on TH 65 will be allowed until these plans have been approved by both the engineer and the MnDOT Metro Traffic Engineering Department.

A bituminous surface shall be provided for SB right turn lane traffic at the end of each day's construction. The contractor shall be subject to a \$1,000 day fine for each day, or portion of a day, that a bituminous surface is not provided for SB right turn lane traffic.

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 9-9-08 REG. NO. 24756

DRAWN BY: ST DATE 09/21/07  
 DESIGN BY: MN DATE 09/18/07  
 CHECKED BY: RB DATE 09/27/07

**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

**STAGE II CONSTRUCTION STAGING AND TRAFFIC CONTROL**  
 Sheet 58 of 116 Sheets

STAGE 3 CONSTRUCTION:

- 1) SWITCH ALL TRAFFIC TO SOUTH SIDE OF ROADWAY
- 2) REMOVE (RECLAIM) NORTH SIDE BIT
- 3) STRIP NORTH SIDE TOPSOIL
- 4) EARTHWORK NORTH SIDE OF ROADWAY
- 5) REMOVE EXCESS TEMP WIDENING & SHAPE INSLOPES
- 6) COMPLETE STORM SEWER ON NORTH SIDE AS NEEDED
- 7) COMPLETE WORK ON SOUTHBOUND TH 65
- 8) PLACE & TOLERANCE CLASS 5 FOR CURB
- 9) INSTALL SIGNAL LOOPS
- 10) PLACE CURB/CONCRETE MEDIAN
- 11) TOLERANCE CLASS 5 FOR BIT PAVING
- 12) PAVE BIT BASE & BINDER, NORTH SIDE
- 13) COMPLETE NEW TRAFFIC SIGNAL CONSTRUCTION
- 14) PLACE LATEX PAINT FOR TRAFFIC SWITCH
- 15) INSTALL REGULATORY & WARNING SIGNS

TRAFFIC CONTROL NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

STAGE 4 CONSTRUCTION:

STAGE 4 CONSTRUCTION WILL TAKE PLACE UNDER TRAFFIC AND ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE FIELD MANUAL DATED JANUARY, 2007.



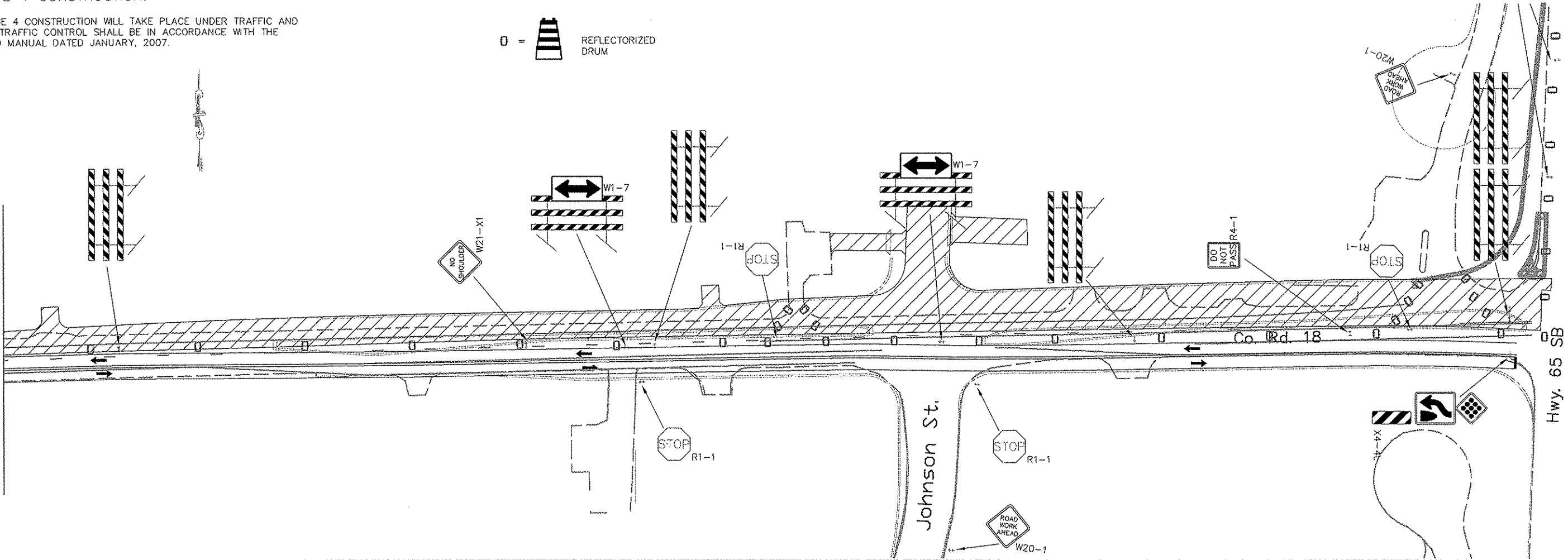
BEGIN LANE TRANSITION: 4" WHITE LINE TAPE W/TRPM'S AT 10' INTERVALS AND 4" DOUBLE YELLOW LANE TAPE W/TRPM'S AT 10' INTERVALS

END LANE TRANSITION AND TRPM'S BEGIN 4" SOLID LINE WHITE PAINT AND 4" DOUBLE SOLID LINE YELLOW PAINT

STA: 18+49 BEGIN FULL-DEPTH CONSTRUCTION



MATCHLINE 'A' SEE ABOVE RIGHT



MATCHLINE 'A' SEE BELOW LEFT

MATCHLINE 'B' SEE SHEET 60 OF 116

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: CURT A. KOBILAROSIK  
 SIGNATURE: *Curt A. Kobilarosik*  
 DATE: 6-3-08 REG. NO. 24756

DRAWN BY: ST DATE 08/21/07  
 DESIGN BY: MN DATE 08/18/07  
 CHECKED BY: RB DATE 08/27/07

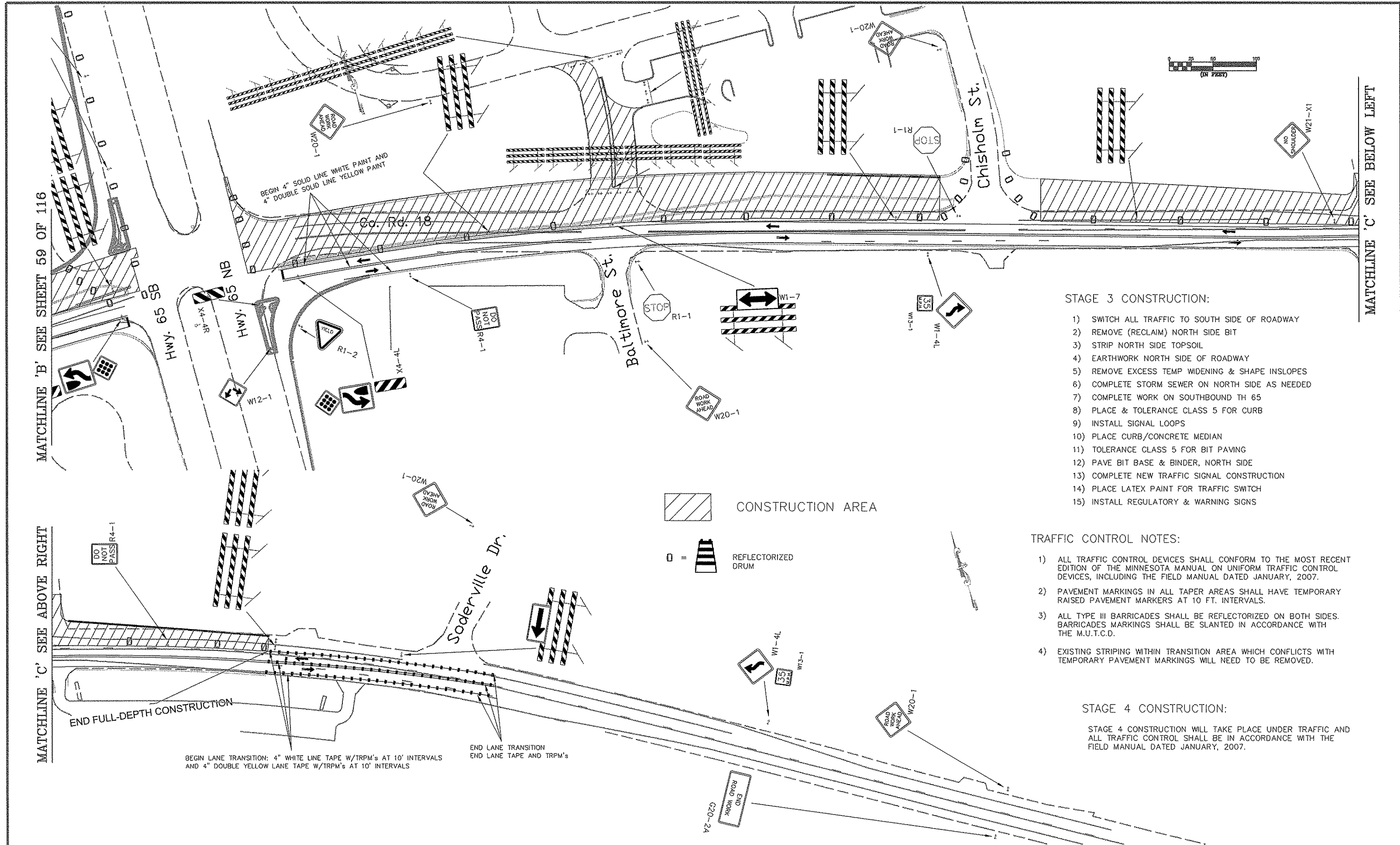


ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

STAGE III  
 CONSTRUCTION STAGING  
 AND TRAFFIC CONTROL  
 Sheet 59 of 116 Sheets





MATCHLINE 'B' SEE SHEET 59 OF 116

MATCHLINE 'C' SEE ABOVE RIGHT

MATCHLINE 'C' SEE BELOW LEFT

STAGE 3 CONSTRUCTION:

- 1) SWITCH ALL TRAFFIC TO SOUTH SIDE OF ROADWAY
- 2) REMOVE (RECLAIM) NORTH SIDE BIT
- 3) STRIP NORTH SIDE TOPSOIL
- 4) EARTHWORK NORTH SIDE OF ROADWAY
- 5) REMOVE EXCESS TEMP WIDENING & SHAPE INSLOPES
- 6) COMPLETE STORM SEWER ON NORTH SIDE AS NEEDED
- 7) COMPLETE WORK ON SOUTHBOUND TH 65
- 8) PLACE & TOLERANCE CLASS 5 FOR CURB
- 9) INSTALL SIGNAL LOOPS
- 10) PLACE CURB/CONCRETE MEDIAN
- 11) TOLERANCE CLASS 5 FOR BIT PAVING
- 12) PAVE BIT BASE & BINDER, NORTH SIDE
- 13) COMPLETE NEW TRAFFIC SIGNAL CONSTRUCTION
- 14) PLACE LATEX PAINT FOR TRAFFIC SWITCH
- 15) INSTALL REGULATORY & WARNING SIGNS

TRAFFIC CONTROL NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.
- 4) EXISTING STRIPING WITHIN TRANSITION AREA WHICH CONFLICTS WITH TEMPORARY PAVEMENT MARKINGS WILL NEED TO BE REMOVED.

STAGE 4 CONSTRUCTION:

STAGE 4 CONSTRUCTION WILL TAKE PLACE UNDER TRAFFIC AND ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE FIELD MANUAL DATED JANUARY, 2007.

END FULL-DEPTH CONSTRUCTION

BEGIN LANE TRANSITION: 4" WHITE LINE TAPE W/TRPM'S AT 10' INTERVALS AND 4" DOUBLE YELLOW LANE TAPE W/TRPM'S AT 10' INTERVALS

END LANE TRANSITION  
END LANE TAPE AND TRPM'S

CONSTRUCTION AREA

REFLECTORIZED DRUM

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-618-25\BASE\AutoCAD\Stage 3\_sign&stripe.dwg, 05/14/2008 2:00:52 PM

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: CURT A. KOSILARCSIK  
 SIGNATURE: *Curt Kosilarcsik*  
 DATE: 6-3-08 REG. NO. 24756

DRAWN BY: ST DATE 08/21/07  
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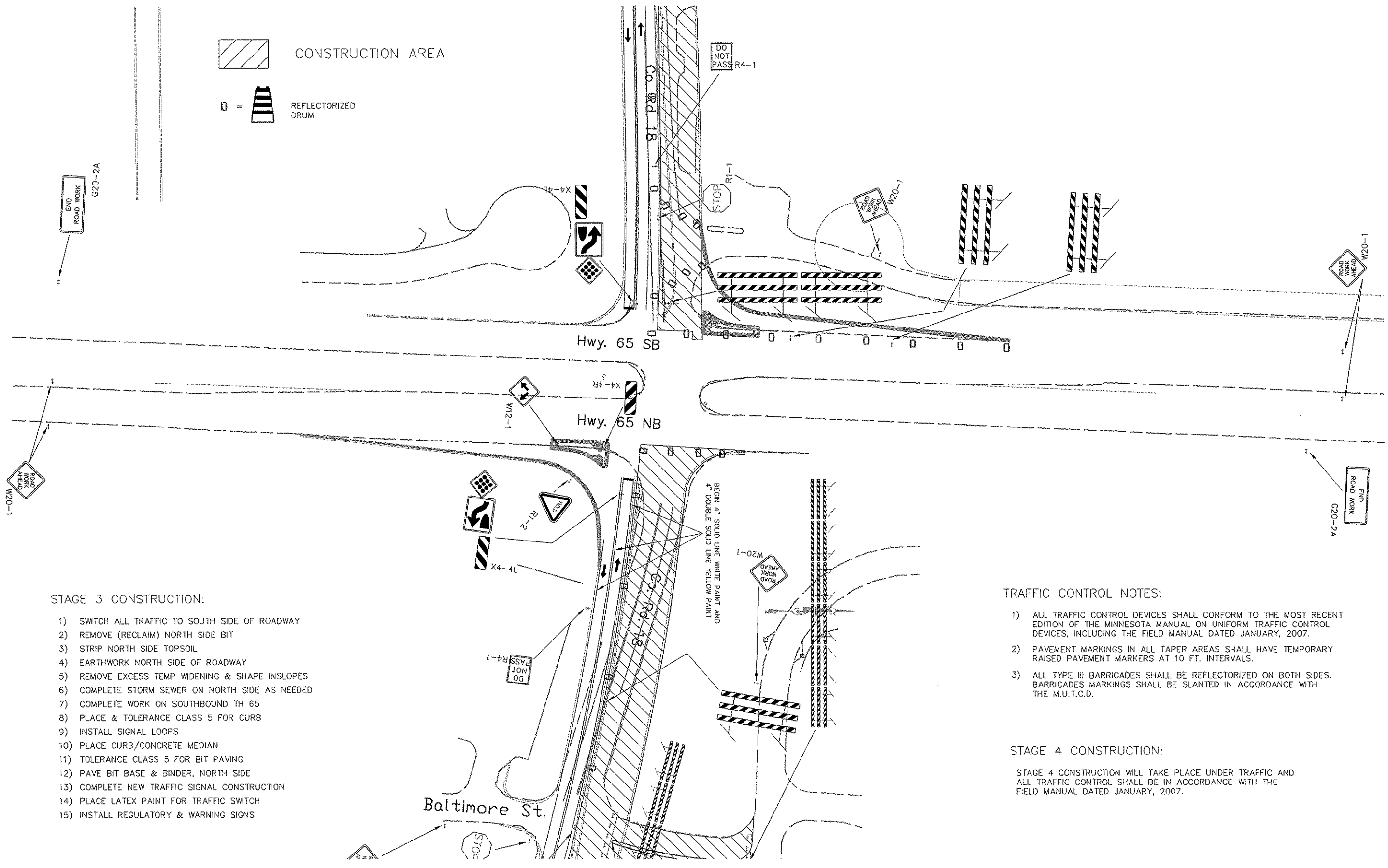
ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
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 STATE PROJECT NO.

STAGE III  
CONSTRUCTION STAGING  
AND TRAFFIC CONTROL  
Sheet 60 of 116 Sheets

 CONSTRUCTION AREA

 REFLECTORIZED DRUM



STAGE 3 CONSTRUCTION:

- 1) SWITCH ALL TRAFFIC TO SOUTH SIDE OF ROADWAY
- 2) REMOVE (RECLAIM) NORTH SIDE BIT
- 3) STRIP NORTH SIDE TOPSOIL
- 4) EARTHWORK NORTH SIDE OF ROADWAY
- 5) REMOVE EXCESS TEMP WIDENING & SHAPE INSLOPES
- 6) COMPLETE STORM SEWER ON NORTH SIDE AS NEEDED
- 7) COMPLETE WORK ON SOUTHBOUND TH 65
- 8) PLACE & TOLERANCE CLASS 5 FOR CURB
- 9) INSTALL SIGNAL LOOPS
- 10) PLACE CURB/CONCRETE MEDIAN
- 11) TOLERANCE CLASS 5 FOR BIT PAVING
- 12) PAVE BIT BASE & BINDER, NORTH SIDE
- 13) COMPLETE NEW TRAFFIC SIGNAL CONSTRUCTION
- 14) PLACE LATEX PAINT FOR TRAFFIC SWITCH
- 15) INSTALL REGULATORY & WARNING SIGNS

TRAFFIC CONTROL NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

STAGE 4 CONSTRUCTION:

STAGE 4 CONSTRUCTION WILL TAKE PLACE UNDER TRAFFIC AND ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE FIELD MANUAL DATED JANUARY, 2007.

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.  
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ANOKA COUNTY  
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STAGE III  
 CONSTRUCTION STAGING  
 AND TRAFFIC CONTROL  
 Sheet 61 of 116 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3
R1-1	48" x 48"	STOP	0	7	6
R1-2	36"x36"x36"	YIELD	0	0	1
R4-1	24" x 30"	DO NOT PASS	0	4	3
R4-7	24" x 30"		0	2	2
X4-11	18" x 18"		0	2	2
W1-2R	48" x 48"		0	1	0
W1-2L	48" x 48"		0	1	0
W1-4R	48" x 48"		0	2	0
W1-4L	48" x 48"		0	0	2
W12-1	24" x 24"		0	0	1

M. U. T. C. D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3
W13-1	24" x 24"		0	4	2
W20-1	48" x 48"		8	8	12
W21-XI	48" x 48"		0	2	2
X4-4L	12" x 36"		0	2	2
X4-4R	12" x 36"		0	0	1
W1-7	48" x 24"		0	3	3
TYPE III	8 FOOT				
W1-6	48" x 24"		0	1	1
TYPE III	8 FOOT				
W1-6	48" x 24"		0	1	0
TYPE III	8 FOOT				
TYPE III	8 FOOT		3	8	20
TYPE III	8 FOOT		4	3	7

M. U. T. C. D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3
G20-2a	48" x 24"		2	2	4
REFLECTORIZED REBOUNDABLE DRUM			12	73	66

TRAFFIC CONTROL DEVICE & SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	REFLECTORIZED REBOUNDABLE DRUM
	SOLID LINE PAVEMENT MARKING WITH TRPM's SPACED AT 10' INTERVALS (TEMPORARY RAISED PAVEMENT MARKERS)

TRAFFIC CONTROL NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- 2) PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT. INTERVALS.
- 3) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M. U. T. C. D.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-618-25\BASE\AutoCAD\STGQTY.dwg, 08/15/2008 4:26:19 PM

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 9-9-08 REG. NO. 24756

DRAWN BY: ST DATE 09/21/07  
 DESIGN BY: MN DATE 09/18/07  
 CHECKED BY: RB DATE 09/27/07



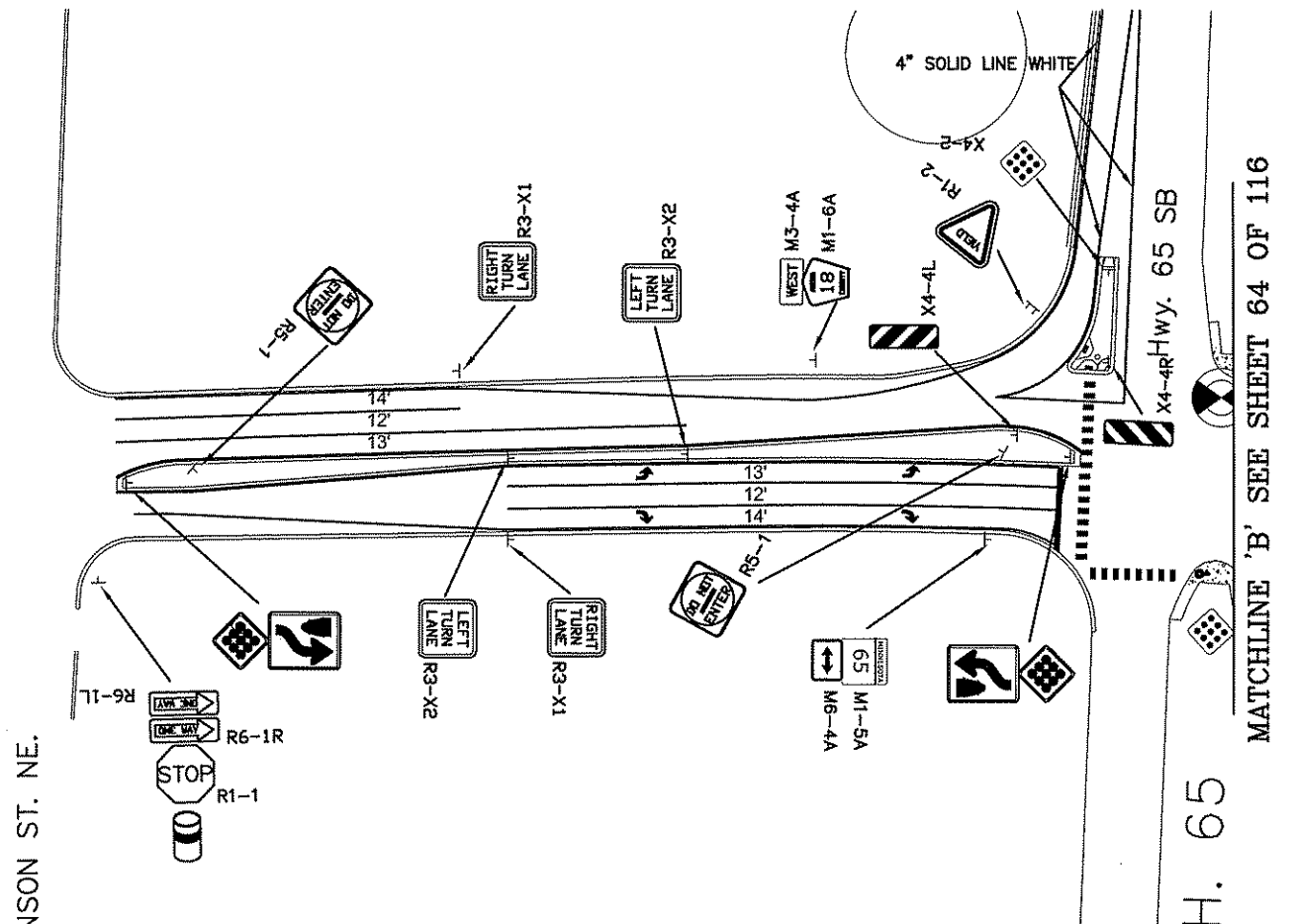
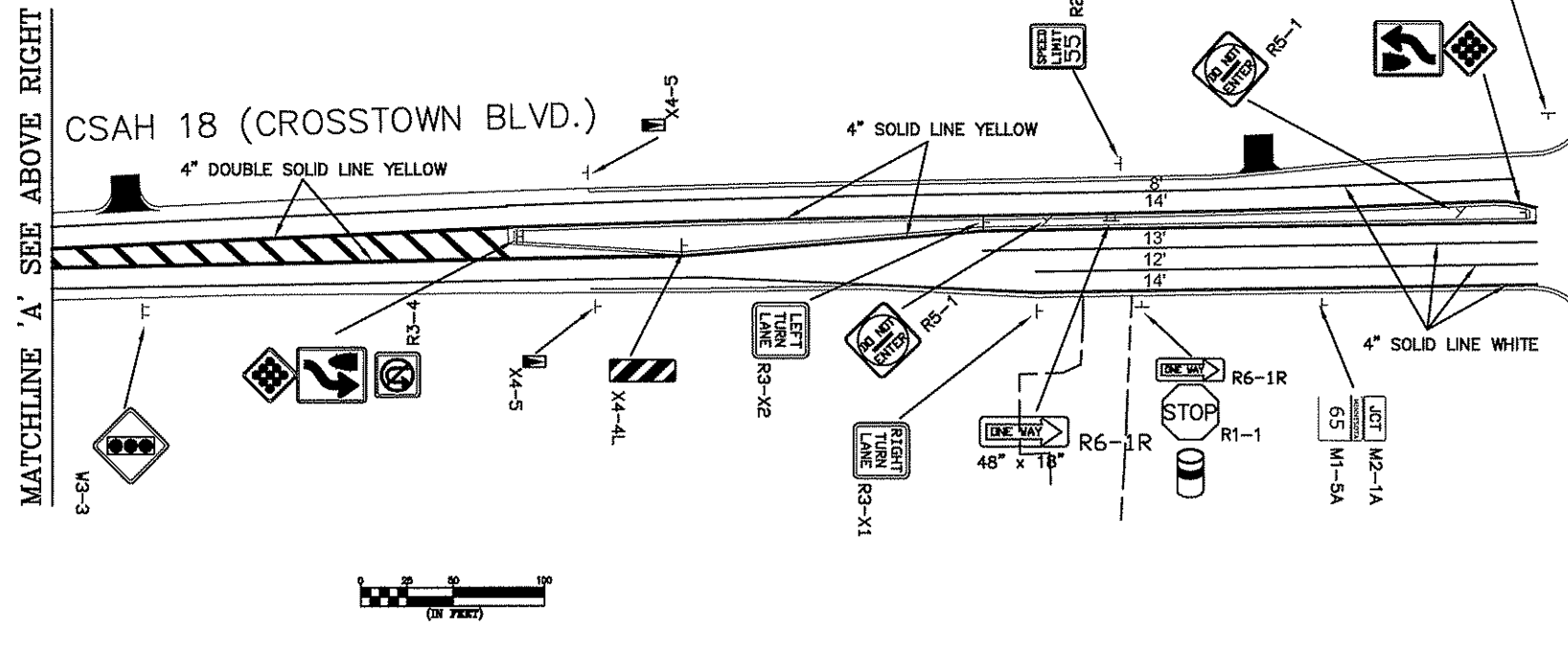
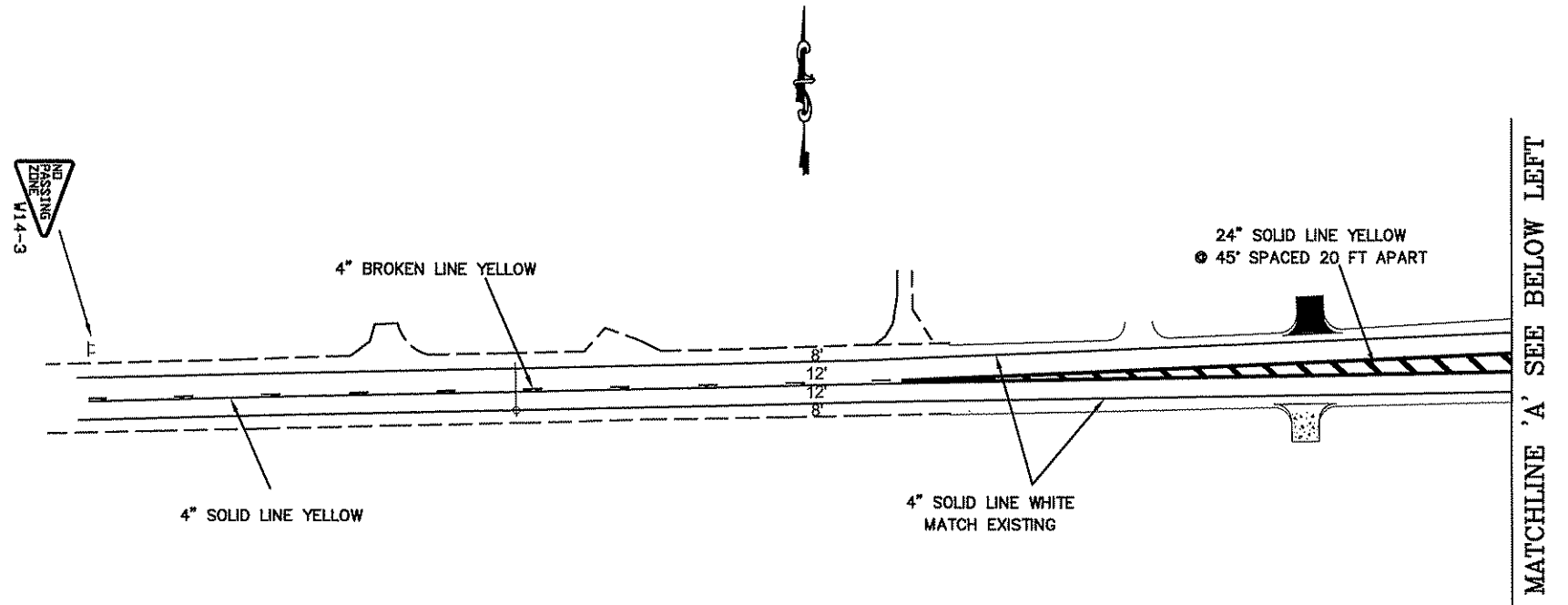
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115(IH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

STAGING  
 SIGN QUANTITIES

NOTES:

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM WITH THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 2007.



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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 6-3-08 REG. NO. 24756

DRAWN BY: ST DATE 08/13/07  
 DESIGN BY: MN DATE 08/08/07  
 CHECKED BY: RR DATE 08/27/07



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

PERMANENT  
 SIGNING/STRIPING  
 Sheet 63 of 116 Sheets

MATCHLINE 'A' SEE ABOVE RIGHT

MATCHLINE 'B' SEE SHEET 64 OF 116

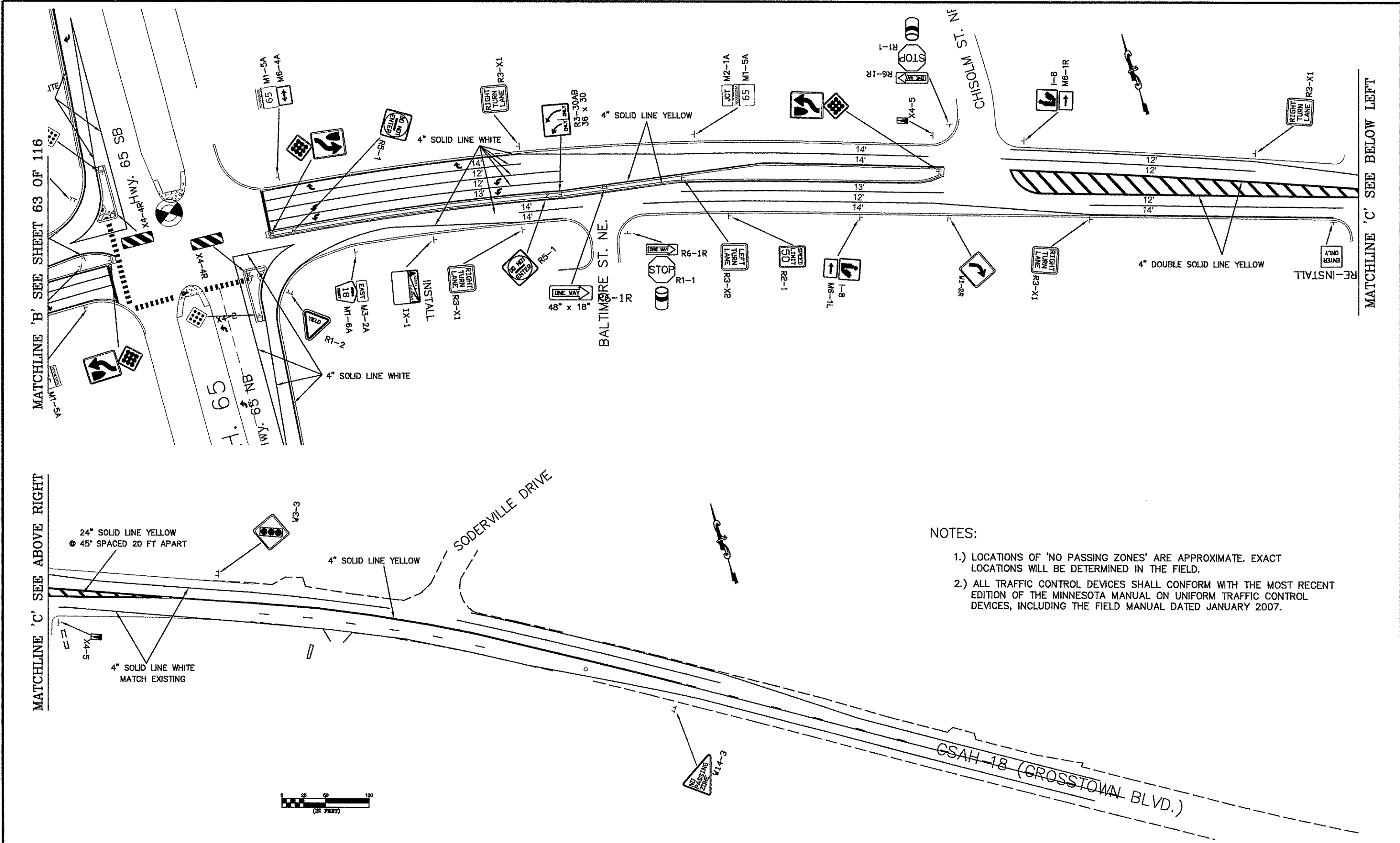
MATCHLINE 'A' SEE BELOW LEFT

H. 65

X4-4R Hwy. 65 SB

ISON ST. NE.





NOTES:

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM WITH THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 2007.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-618-25\BASE\AutoCAD\0261825\_permsign&stripe.dwg, 05/14/2008 4:31:49 PM

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: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 6-3-08 REG. NO. 24756

DRAWN BY: ST DATE 08/13/07

DESIGN BY: MN DATE 08/08/07

CHECKED BY: RR DATE 08/27/07



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)

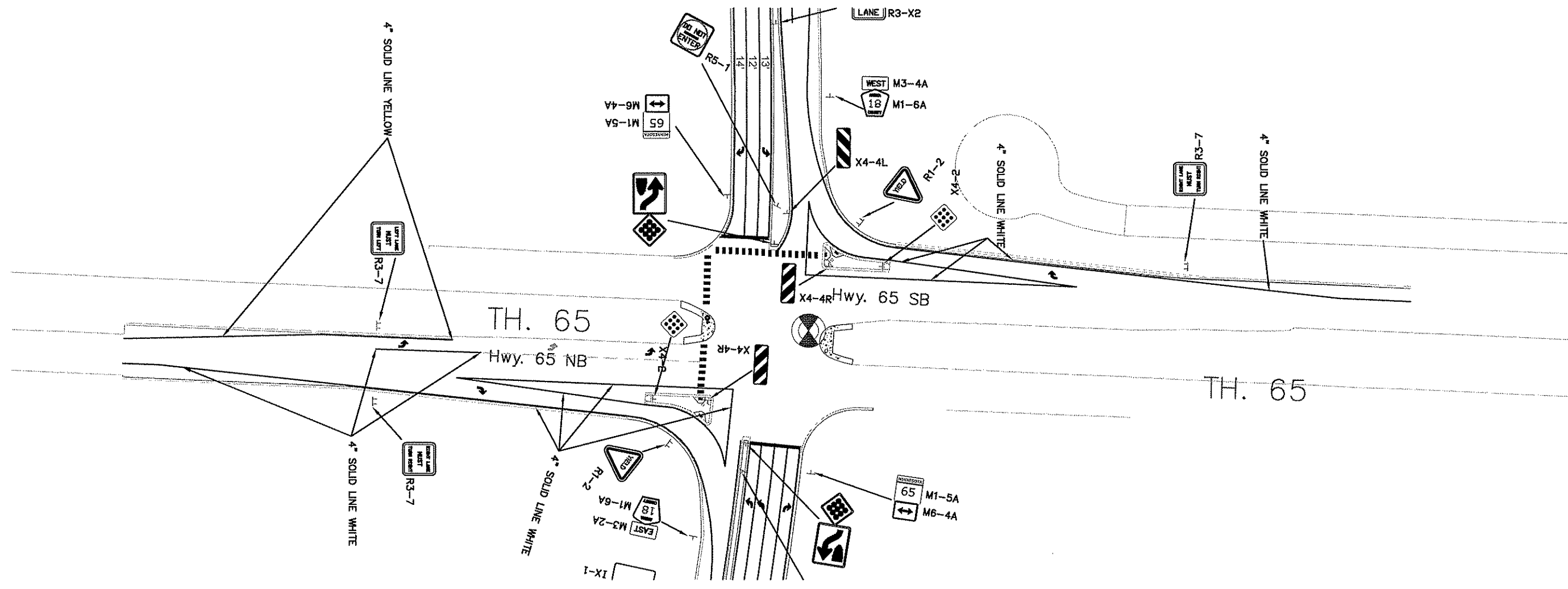
STATE PROJECT NO. 02-618-25

STATE AID PROJECT NO. 197-020-001

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

PERMANENT  
SIGNING/STRIPING

Sheet 64 of 116 Sheets



- NOTES:
- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
  - 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM WITH THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 2007.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-618-25\BASE\AutoCAD\0261825\_permisign&stripe.dwg, 08/14/2008 4:32:21 PM

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: CURT A. KOBILARCSIK

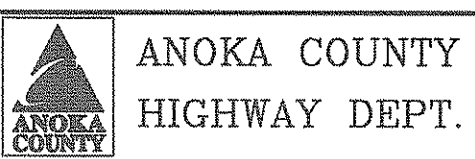
SIGNATURE: *Curt A. Kobilarsik*

DATE: 9-9-08 REG. NO. 24756

DRAWN BY: ST DATE 08/13/07

DESIGN BY: MN DATE 08/06/07

CHECKED BY: RR DATE 08/27/07



STATE PROJECT NO. 0208-115 (TH 65)

STATE PROJECT NO. 02-618-25

STATE AID PROJECT NO. 197-020-001

STATE PROJECT NO.

PERMANENT SIGNING/STRIPING

Sheet 65 of 116 Sheets

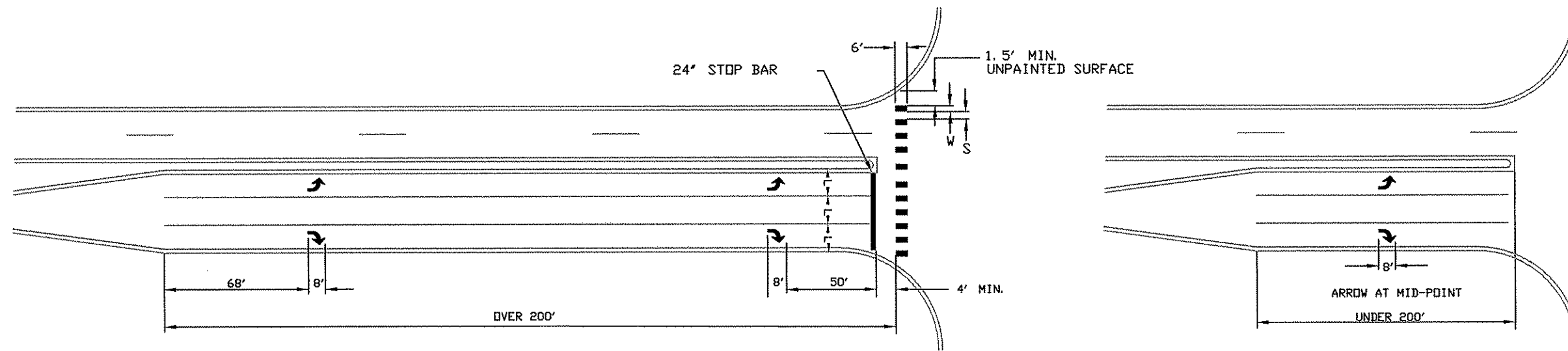
M. U. T. C. D. CODE	SIZE	PANEL AREA FT. <sup>2</sup>	INSERT	No. of ISLAND MOUNT INSTALL	No. GROUND POST MOUNT INSTALL	No. POST	MOUNTING HEIGHT FT.	M. U. T. C. D. CODE	SIZE	PANEL AREA FT. <sup>2</sup>	INSERT	No. of ISLAND MOUNT INSTALL	No. GROUND POST MOUNT INSTALL	No. POST	MOUNTING HEIGHT FT.	M. U. T. C. D. CODE	SIZE	PANEL AREA FT. <sup>2</sup>	INSERT	No. of ISLAND MOUNT INSTALL	No. GROUND POST MOUNT INSTALL	No. POST	MOUNTING HEIGHT FT.
R1-1	30' x 30'	6.25	STOP	0	5	1	7.0'	R5-1	30' x 30'	6.25	DO NOT ENTER	6	0	1	7.0'	M3-2A	24' x 12'	2.00	EAST	1	#5		
R1-2	36' x 36' x 36'	3.90	YIELD	0	2	2	7.0'	R6-1R	36' x 12'	3.00	ONE WAY	0	5	*2	7.0'	M3-4A	24' x 12'	2.00	WEST	1	#5		
R2-1	24' x 30'	5.00	SPEED LIMIT 55	0	1	1	7.0'	R6-1L	36' x 12'	3.00	ONE WAY	0	2	*2	7.0'	M1-6A	24' x 24'	4.00	ANOKA 18 COUNTY	0	2	1	7.0'
R2-1	24' x 30'	5.00	SPEED LIMIT 50	0	1	1	7.0'	R6-1R	48' x 18'	4.00	ONE WAY	2	0	2	7.0'	M2-1A	21' x 15'	2.18	JCT	2	#6		
R3-4	24' x 24'	4.00	NO LEFT TURN	1	0	*1		W1-2R	30' x 30'	6.25	RIGHT TURN	0	1	1	7.0'	M1-5A	24' x 24'	4.00	MINNESOTA 65	0	4	1	7.0'
R3-X1	30' x 30'	6.25	RIGHT TURN LANE	0	7	1	7.0'	W3-3	36' x 36'	9.00	TRAFFIC LIGHT	0	2	2	7.0'	M6-4A	21' x 15'	2.18	MINNESOTA 65	2	#7		
R3-X2	30' x 30'	6.25	LEFT TURN LANE	4	0	1	7.0'	W14-3	36' x 48' x 48'	6.00	NO PASSING ZONE	0	2	2	7.0'	I1-8	24' x 24'	4.00	MINNESOTA 65	0	2	1	7.0'
R3-7	30' x 30'	6.25	RIGHT LANE MUST TURN RIGHT	0	2	2	7.0'	X4-2	18' x 18'	2.25	DIAMOND	8	0	*3	4.0'	M6-1R	21' x 15'	2.18	MINNESOTA 65	1	#8		
R3-7	30' x 30'	6.25	LEFT LANE MUST TURN LEFT	0	1	2	7.0'	X4-4L	12' x 36'	3.00	DIAMOND	2	0	1	4.0'	M6-1L	21' x 15'	2.18	MINNESOTA 65	1	#8		
R3-30AB	36' x 30'	7.50	ONLY ONLY	1	0	1	7.0'	X4-4R	12' x 36'	3.00	DIAMOND	2	0	1	4.0'								
R4-7	24' x 30'	5.00	RIGHT TURN	6	0	1	7.0'	X4-5	6' x 12'	0.50	DIAMOND	0	2	1	4.0'								
								X4-5	6' x 12'	0.50	DIAMOND	0	2	1	4.0'								
								DELINEATOR	4" DIA x 15'	1.31	DELINEATOR	0	5	*4	4.0'								

- \*1 MOUNTED BACK TO BACK w/R4-7
- \*2 MOUNTED ABOVE R1-1
- \*3 MOUNTED BELOW R4-7
- \*4 MOUNTED BELOW R1-1
- \*5 MOUNTED ABOVE M1-6A
- \*6 MOUNTED ABOVE M1-5A
- \*7 MOUNTED BELOW M1-5A
- \*8 MOUNTED BELOW I1-8
- \*9 MOUNTED BACK TO BACK w/R6-1R

NOTES:

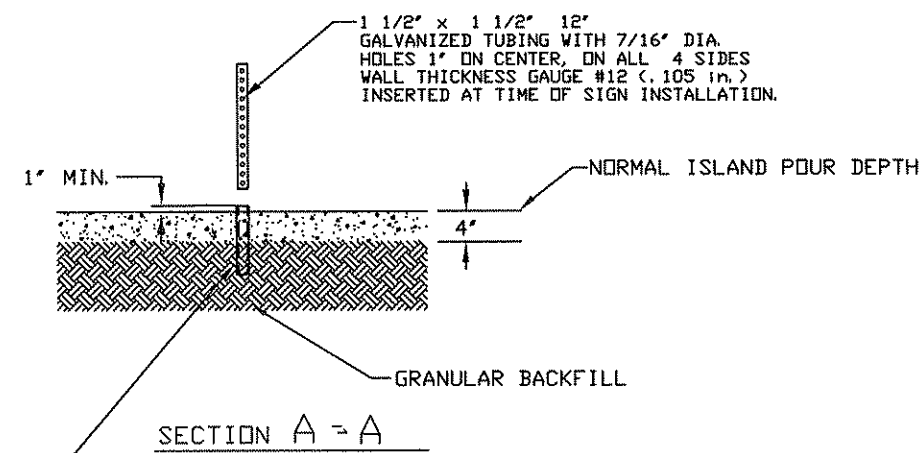
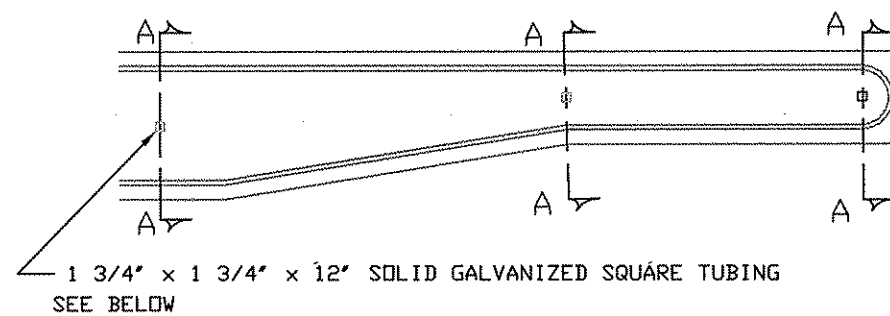
- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM WITH THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 2007.

REFER TO THE FOLLOWING LINK FOR OBJECT MARKER PLACEMENT DETAIL SHEETS  
<http://www.dot.state.mn.us/trafficeng/standards/signingplansheets.html>



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

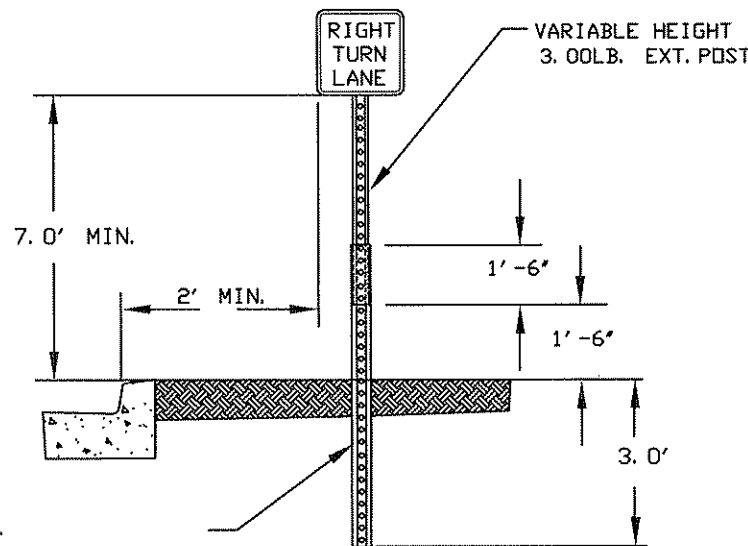
- NOTES: CROSSWALKS:
- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
  - 2.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE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



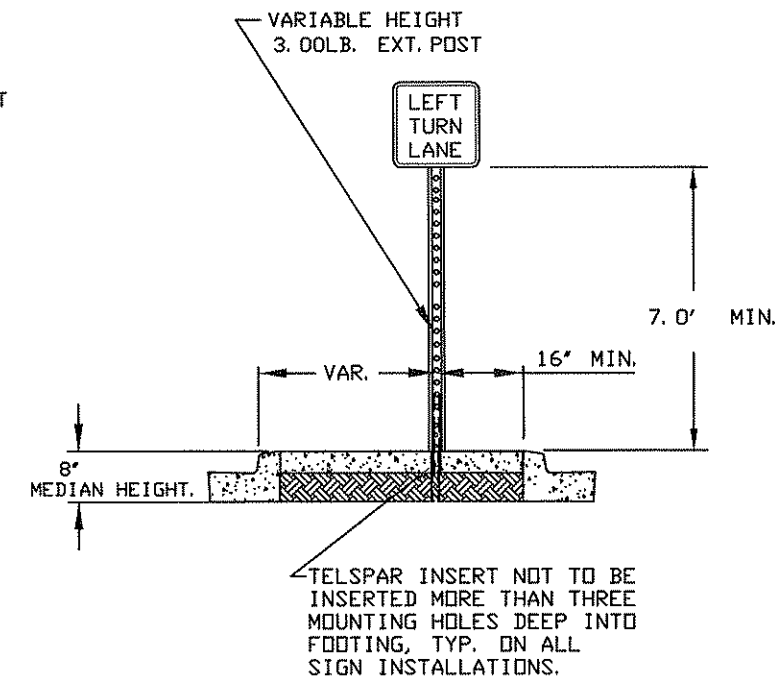
INSTALL 1 3/4" x 1 3/4" x 12" SOLID WALL GALVANIZED SQUARE TUBING BEFORE CONCRETE POUR. HAMMER INTO GROUND SO THAT 1" OF TUBE IS ABOVE GROUND. RE-PLUMB AT TIME OF POUR.

6'-0" 3.00 LB. BASE POST.

GROUND POST MOUNT SIGN INSTALLATION TYPICAL



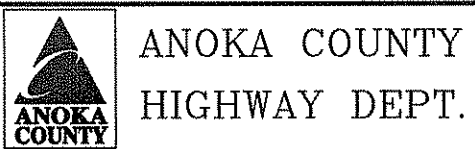
ISLAND MOUNT BREAK-AWAY SIGN INSTALLATION TYPICAL



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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 12-4-08 REG. NO. 24756

DRAWN BY: ST DATE 09/21/07  
 DESIGN BY: MN DATE 09/18/07  
 CHECKED BY: RB DATE 09/27/07

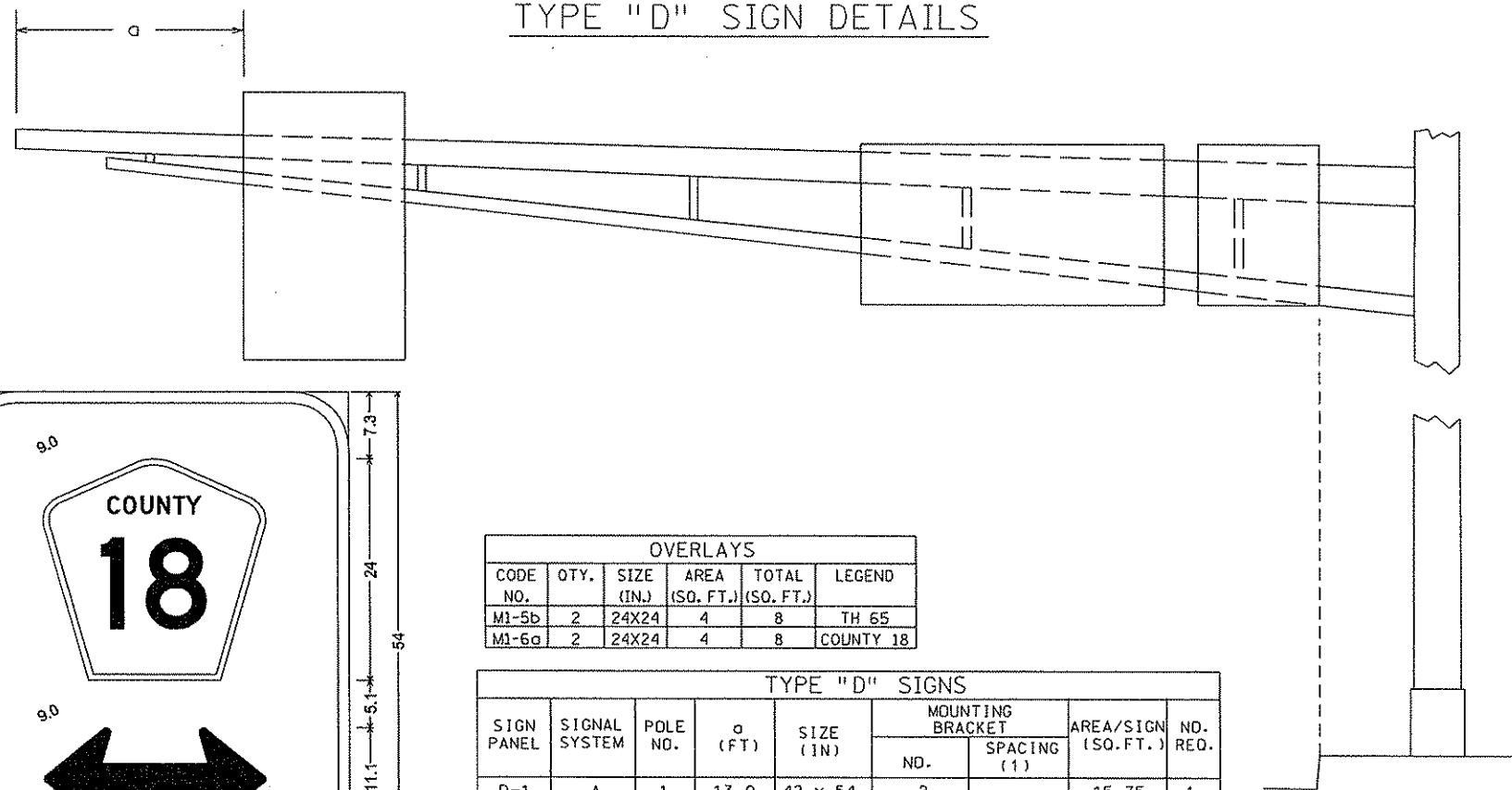


STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

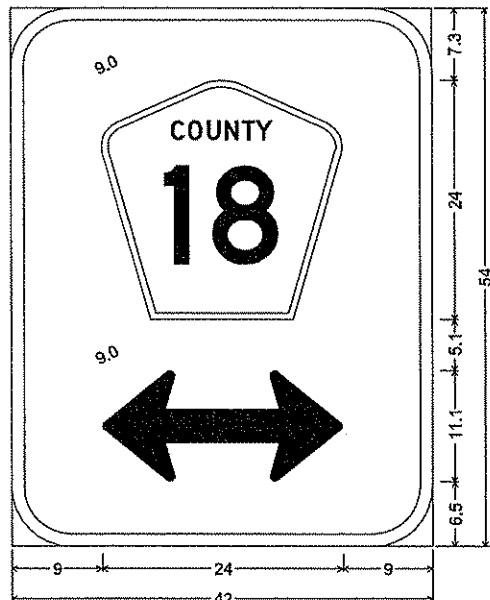
SIGNING/  
 STRIPING DETAILS  
 Sheet 67 of 116 Sheets



TYPE "D" SIGN DETAILS



D-1

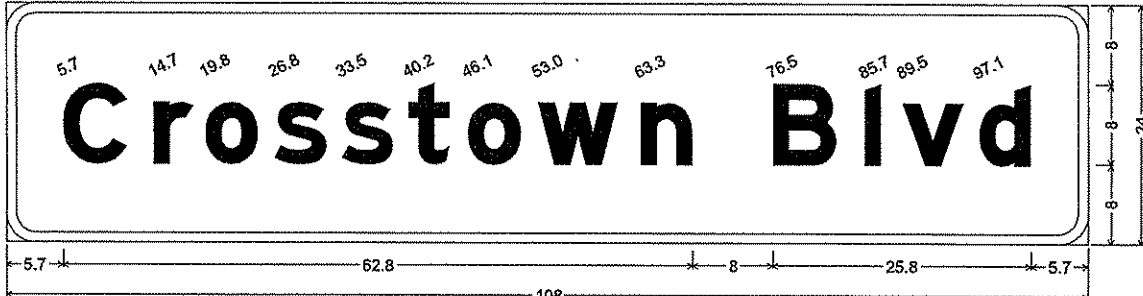


D-1; 6.0" Radius, 1.3" Border, White on Green; Double Headed Arrow 5 - 24.0" 0";

OVERLAYS					
CODE NO.	QTY.	SIZE (IN.)	AREA (SQ. FT.)	TOTAL (SQ. FT.)	LEGEND
M1-5b	2	24X24	4	8	TH 65
M1-6a	2	24X24	4	8	COUNTY 18

TYPE "D" SIGNS								
SIGN PANEL	SIGNAL SYSTEM	POLE NO.	ø (FT)	SIZE (IN)	MOUNTING BRACKET		AREA/SIGN (SQ. FT.)	NO. REQ.
					NO.	SPACING (1)		
D-1	A	1	13.0	42 x 54	2		15.75	1
D-1	A	4	13.0	42 x 54	2		15.75	1
D-2	A	2	14.75	42 x 54	2		15.75	1
D-2	A	5	13.0	42 x 54	2		15.75	1
D-3	A	1	18.0	108 x 18	3		18.00	1
D-3	A	4	18.0	108 x 18	3		18.00	1

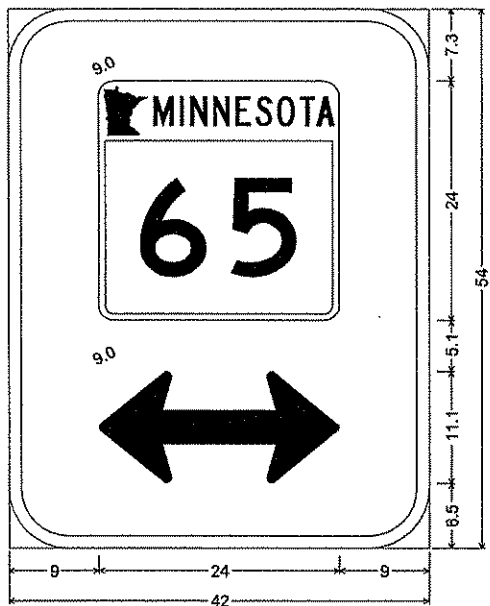
D-3



D-3; 3.0" Radius, 1.0" Border, White on Green; [Crosstown Blvd] E Mod;

- NOTES:
- (1) SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE 6/1/07) FOR BRACKET SPACING REQUIREMENTS.
  - (2) CORNERS OF STANDARD SIGN PANELS WITH MARGINS SHALL BE TRIMMED.
  - (3) TYPE D SIGN PANELS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
  - (4) FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS SEE STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE 6/1/07).
  - (5) FOR TYPE "D" STRINGER AND PANEL JOINT DETAILS, SEE STANDARD SIGNS MANUAL, PAGE 105.
  - (6) THE MAST ARM MOUNTED SIGNS ARE INCIDENTAL.
  - (7) POLE 1 AND 4 SHALL HAVE SWING AWAY HINGES.

D-2



D-2; 6.0" Radius, 1.3" Border, White on Green; Double Headed Arrow 5 - 24.0" 0";

STANDARD PLATES - SIGNAL SYSTEMS

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

PLATE NO.	DESCRIPTION
▷ 7036 F	PEDESTRIAN CURB RAMP
▶ 8105 B	EQUIPMENT PAD A
▶ 8106 B	EQUIPMENT PAD B
▶ 8110 D	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
▶ 8111 D	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
▶ 8112 D	PEDESTAL FOUNDATION
▶ 8114 A	P.V.C. HANDHOLE / PULLBOX
▶ 8115 E	PEDESTRIAN PUSH BUTTON INSTALLATION
▷ 8117 F	PRECAST CONCRETE HANDHOLE (OR PULLBOX)
▶ 8118 D	SERVICE EQUIPMENT AND POLE
▶ 8119 C	GROUND MOUNTED CABINET FOUNDATION
▷ 8120 L	POLE FOUNDATION (PA-85)
▶ 8121 E	TRANSFORMER BASE AND POLE BASE PLATE
▶ 8122 D	PEDESTAL AND PEDESTAL BASE
▶ 8123 E	POLE AND MAST ARM
▶ 8124 E	MAST ARM SIGNAL HEAD MOUNTS
▶ 8126 H	POLE FOUNDATION (PA90 AND PA100)
▷ 8127 B	LIGHT BASE - DESIGN E
▷ 8128 B	LIGHT BASE - DESIGN H
▷ 8130 D	SAW CUT LOOP DETECTORS
▷ 8140 B	ROADWAY LIGHTING SERVICE CABINET (PAD MOUNTED)

▶ STANDARD PLATES APPLICABLE TO THIS PROJECT

ABBREVIATIONS

APS	ACCESSIBLE PEDESTRIAN SIGNAL
BL	BLUE
BL/BLK	BLUE WITH BLACK TRACER
BLK	BLACK
BLK/WH	BLACK WITH WHITE TRACER
CH. SW.	CHECK SWITCH
CLR	CLEAR
DZ-1 (e.g.)	DETECTOR (PHASE 2, NO. 1)
DWK	DON'T WALK
EO.G	EQUIPMENT GROUND
EVP	EMERGENCY VEHICLE PREEMPTION
F&I	FURNISH AND INSTALL
FL	FLASH/FLASHING
G	GREEN
G/BLK	GREEN WITH BLACK TRACER
GLTA	GREEN LEFT TURN ARROW
GRN	GREEN
GR. RD.	GROUND ROD
GRTA	GREEN RIGHT TURN ARROW
GTHA	GREEN THRU ARROW
HH	HANDHOLE
HPS	HIGH PRESSURE SODIUM
IMC	INTERMEDIATE METAL CONDUIT
INS. GR.	INSULATED GROUND
JB	JUNCTION BOX
LED	LIGHT EMITTING DIODE
LHT	LIGHT
LT	LEFT
LUM	LUMINAIRE
NEU	NEUTRAL
NMC	NONMETALLIC CONDUIT
O	ORANGE
O/BLK	ORANGE WITH BLACK TRACER
P2-1 (e.g.)	PEDESTRIAN INDICATION (PHASE 2, NO. 1)
PB	PUSH BUTTON
PB2-1 (e.g.)	PUSH BUTTON (PHASE 2, NO. 1)
PEC	PHOTOELECTRIC CELL
PED	PEDESTRIAN
R	RED
R&S	REMOVE AND SALVAGE
R/BLK	RED WITH BLACK TRACER
RLTA	RED LEFT TURN ARROW
RSC	RIGID STEEL CONDUIT
RT	RIGHT
SOP	SOURCE OF POWER
SPR	SPARE
ST LHT	STREET LIGHT
STA	STATION
SW	SWITCH
SWD	SWITCHED
TDW	TELEPHONE DROP WIRE
WH	WHITE
WH/BLK	WHITE WITH BLACK TRACER
WLK	WALK
YEL	YELLOW
YLTA	YELLOW LEFT TURN ARROW
YRTA	YELLOW RIGHT TURN ARROW

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO.'s	Ⓐ
SIGNAL BASE NO.	Ⓡ
SIGNAL FACE NO.	Ⓜ
LUMINAIRE NO.	Ⓛ
CONTROLLER AND CABINET	Ⓢ
CONTROLLER AND CABINET - IN PLACE	Ⓢ
HANDHOLE	□
HANDHOLE - IN PLACE	■
RIGID STEEL CONDUIT (RSC)	▬▬▬
RIGID STEEL CONDUIT (RSC) - IN PLACE	▬▬▬
SIGNAL FACE WITH BACKGROUND SHIELD	▬▬▬
SIGNAL FACE W/O BACKGROUND SHIELD	▬▬▬
SIGNAL FACE - IN PLACE	▬▬▬
PEDESTRIAN INDICATORS	⤴
PEDESTRIAN INDICATORS - IN PLACE	⤴
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	Ⓢ
PEDESTRIAN PUSH BUTTON STATION	Ⓢ
TRAFFIC SIGNAL PEDESTAL	Ⓢ
TRAFFIC SIGNAL PEDESTAL - INPLACE	Ⓢ
TRAFFIC SIGNAL POLE AND MAST ARM	Ⓢ
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	Ⓢ
STREET LIGHT POLE AND LUMINAIRE	Ⓢ
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	Ⓢ
MAST ARM AND LUMINAIRE	Ⓢ
MAST ARM AND LUMINAIRE - INPLACE	Ⓢ
WOOD POLE	●
WOOD POLE - IN PLACE	●
SOURCE OF POWER	Ⓢ
RAILROAD SIGNAL - IN PLACE	Ⓢ
RIGHT OF WAY LINE	▬▬▬
CENTERLINE	▬▬▬
EDGE OF ROADWAY	▬▬▬
SHOULDERLINE	▬▬▬
CURB LINE	▬▬▬
STOP BAR	▬▬▬
EMERGENCY VEHICLE PREEMPTION DETECTOR	Ⓢ
EO.G CONNECTION	Ⓢ
SPLICE	Ⓢ
MICROWAVE DETECTION	Ⓢ
SONIC DETECTION	Ⓢ

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Design By: MAS  
 Plan By: AJW  
 Checked By: AJW  
 Approved By: AJW

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

CERTIFIED BY: *Anthony J. Winicki*  
 LICENSED PROFESSIONAL ENGINEER - ANTHONY J. WINICKI, P.E.  
 DATE: 05/13/08 L.C. NO: 23128

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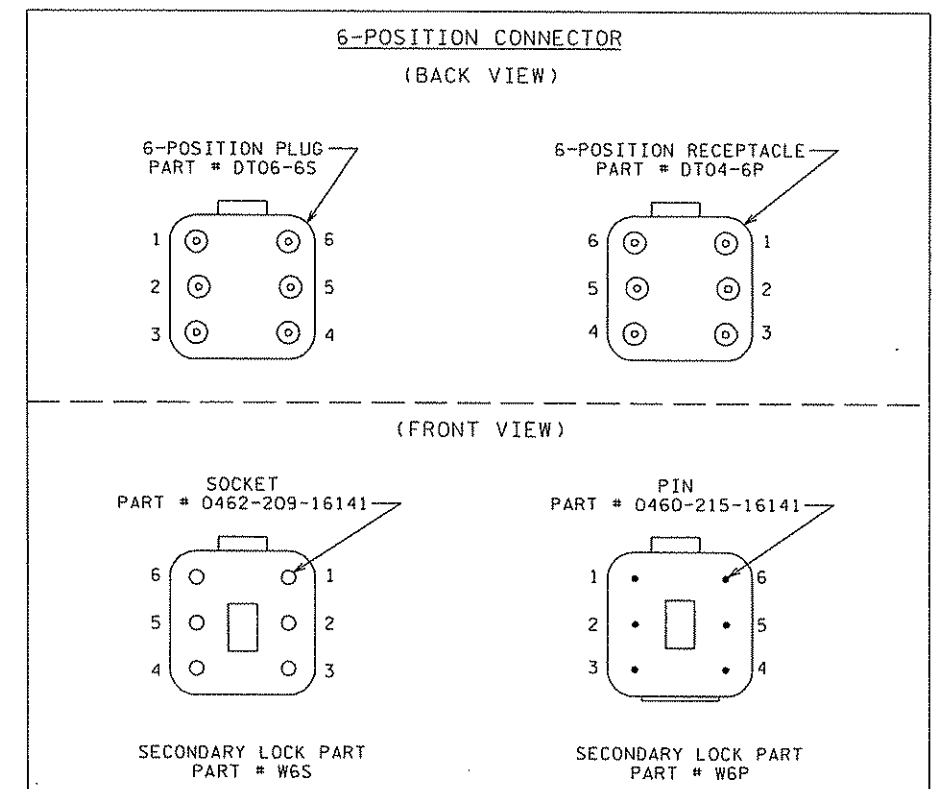
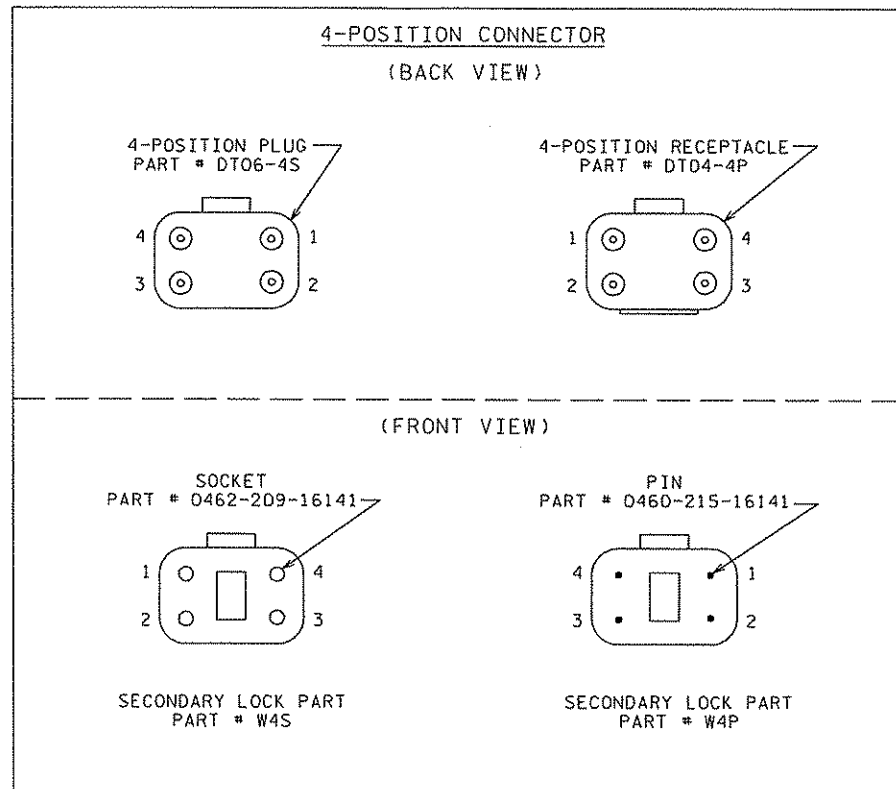
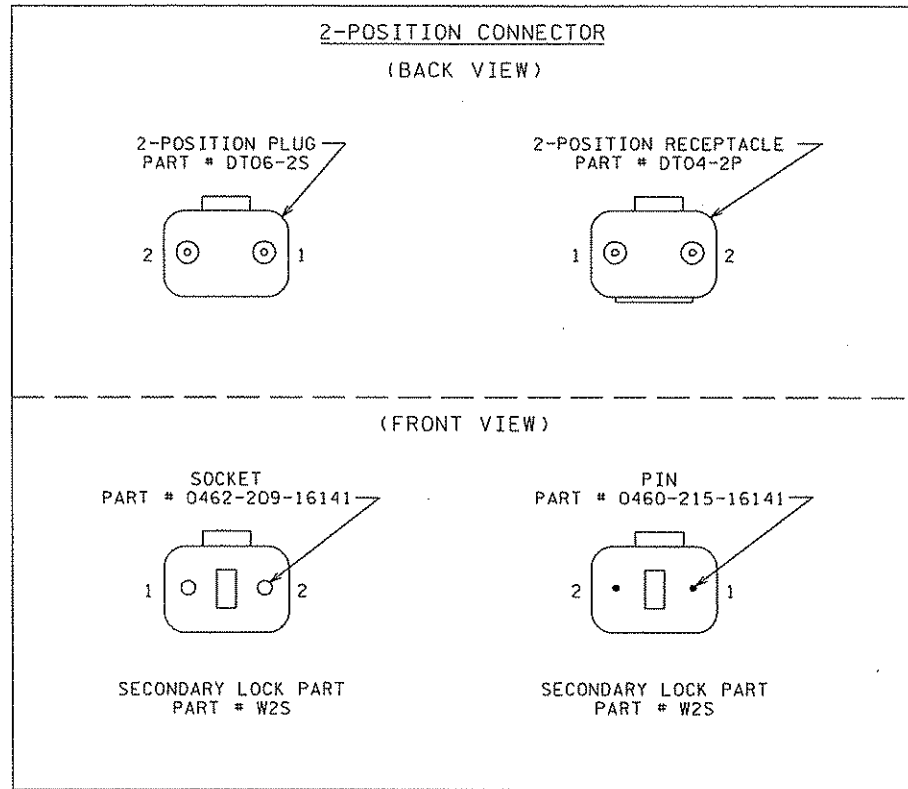
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**Anoka County, Minnesota**

**ANOKA COUNTY HIGHWAY DEPARTMENT**

MAST ARM SIGN DETAILS  
**SIGNAL PLAN**  
 S.P. 0208-115, S.P 02-618-25, S.A.P. 197-020-001



**TABLE 1 2 Position DT Connector**

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
BLK	1	BLK	PB (If Required)
WH or CL	2	WH or CL	NEU

**TABLE 2a 4 Position DT Connector (3 Section Head/DWK/WLK)**

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R or R/BLK or BLK	1	R	RED or DWK
O or O/BLK or BLK/WH or BLK	2	BLK/R	YEL or WLK
BL or BL/BLK or BLK/R or BLK	3	BLK	GRN or SPR
WH or WH/BLK or WH/R	4	WH	NEU

**TABLE 3 6 Position DT Connector (4 and 5 Section Heads)**

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R	1	R	RED
O	2	O	YEL
BL	3	BL	GRN
WH	4	WH	NEU
O/BLK	5	BLK/R	YLTA
BL/BLK	6	BLK	GLTA

**CONDUCTOR COLOR CODE (14 GAUGE)**

TO SIGNAL CABINET		TO DEVICE	
1/C#6 G	R	R	RED
6PR#19	O	O	YEL
	BL	BL	4 & 5 SECTION
	WH	WH	GRN
3-1/C#2	BLK/R	BLK/R	NEU
	BLK	BLK	YLTA
		BLK	GLTA
3-1/C#6	BLK	R	RED/DWK
	WH	BLK/R	YEL/WLK
	G	BLK	3 SECTION & PED
		WH	GRN/SIGNAL
		BLK	INDICATION
		WH	NEU
12/C#14	R/BLK	BLK	EVP LIGHT
	O/BLK	G	LUM/FLASHER
	BL/BLK	BLK	
	WH/BLK	WH OR CLR	
	BLK/WH		
	BLK/R	R OR O	PED PUSH BUTTON
	WH/R	WH OR YEL	(If Required)
		BLK OR BL	

NOTE: ALL POLE CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

**TABLE 2b 4 Position DT Connector (EVP LHT/LUM/Flasher)**  
(Used with 3 Conductor Cable Only)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
BLK	1	BLK	EVP LHT or LUM or RED or YEL
(Not Used)	2	(Not Used)	(Not Used) (See Note #8)
G	3	G	ED.G
WH	4	WH	NEU

**NOTES:**

- DT04-P RECEPTACLE SHALL BE TERMINATED TO THE WIRING HARNESS RUNNING FROM THE BASE/JUNCTION BOX OF THE POLE TO SIGNAL INDICATIONS.
- DT06-S PLUG SHALL BE TERMINATED TO THE CABLES RUNNING FROM THE TRAFFIC SIGNAL CABINET TO THE BASE/JUNCTION BOX OF THE POLE.
- THERE SHALL BE A MINIMUM OF 24 INCHES OF SLACK ON EACH CABLE IN EVERY POLE BASE /JUNCTION BOX.
- STRIP A MAXIMUM OF 6 INCHES OF THE OUTER JACKET OF EACH SIGNAL CABLE.
- STRIP .250 INCHES OF INSULATION FROM EACH INDIVIDUAL CONDUCTOR.
- CRIMP PINS OR SOCKETS USING RATCHETING TYPE CRIMPING TOOL HDT-48-00. NO OTHER CRIMPING TOOL WILL BE ALLOWED.
- WIRES MUST BE TERMINATED AS DETAILED IN TABLES 1 THRU 3 DEPENDING ON WIRE COUNT.
- ANY UNUSED PIN MUST HAVE A SEALING PLUG INSTALLED IN BOTH THE PLUG & RECEPTACLE (PART # 114017).
- LABEL EACH HALF OF THE CONNECTOR (PLUG AND RECEPTACLE) WITH THE DEVICE DESIGNATION (AS INDICATED IN THE WIRING DIAGRAM) USING A PERMANENT BLACK MARKER.

**Wire Color Code Key**

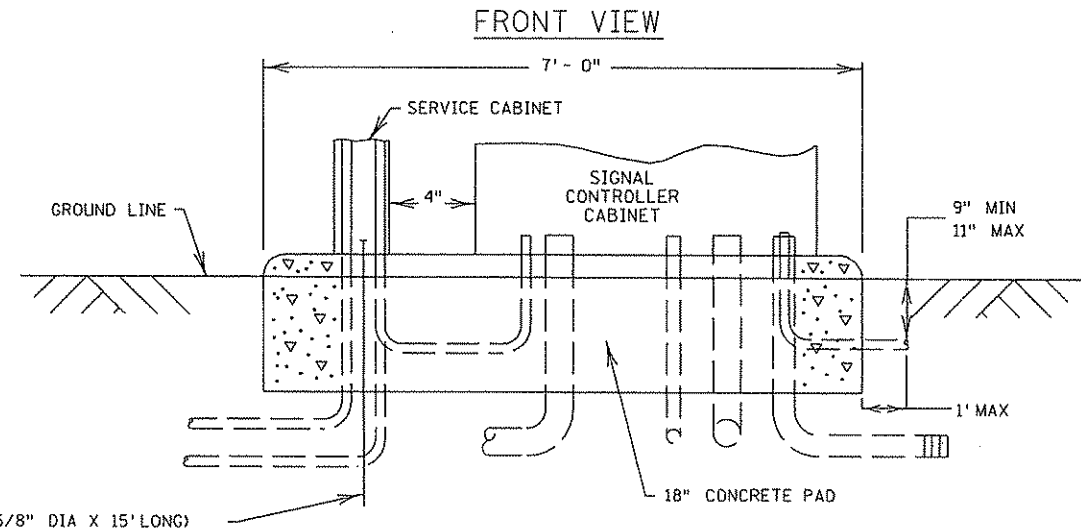
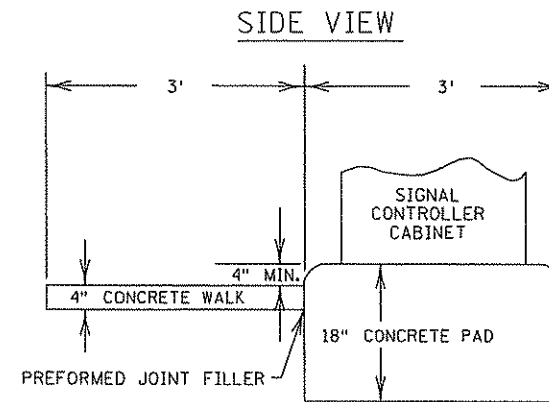
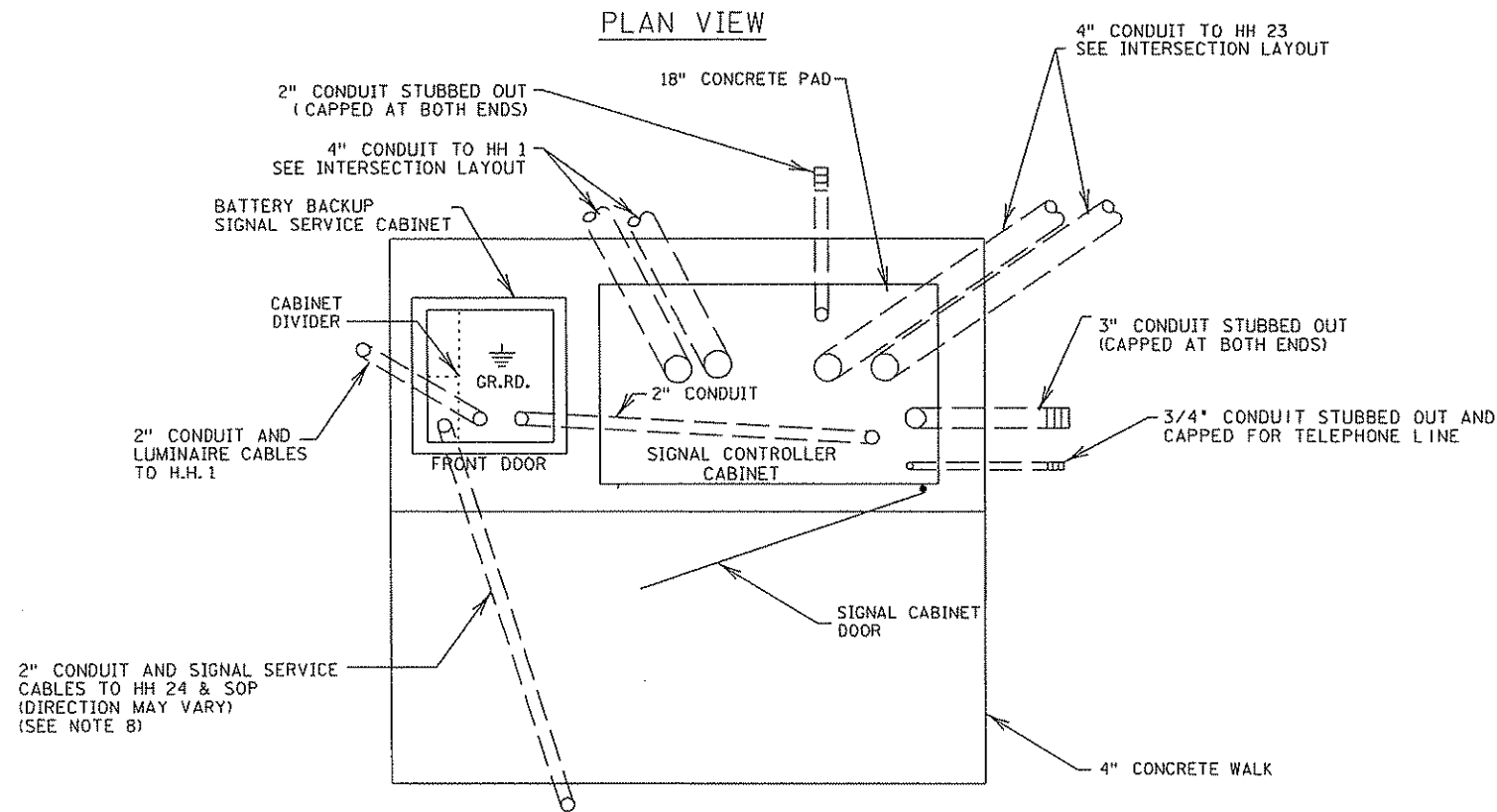
R	Red
O	Orange
BL	Blue
WH	White
BLK	Black
BRN	Brown
CL	Clear
G	Green
R/BLK	Red with Black Stripe
O/BLK	Orange with Black Stripe
BL/BLK	Blue with Black Stripe
WH/BLK	White with Black Stripe
WH/R	White with Red Stripe
BLK/WH	Black with White Stripe
BLK/R	Black with Red Stripe

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BY	DATE	REVISIONS	SYSTEM ID #	MASTER ID #	T.E. #	TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL (MN/DOT DETAIL)	S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001 SHEET NO. 69 OF 116 SHEETS
			21186	21183	4610		

# TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET

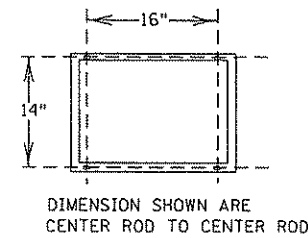
SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)



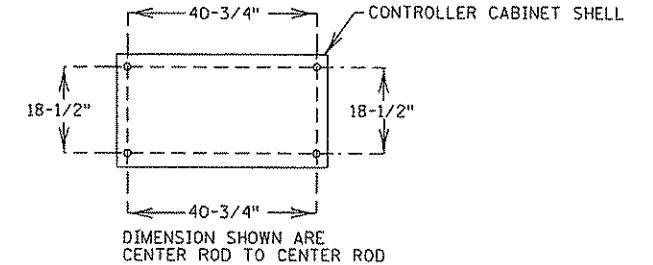
## NOTES:

1. THE ANCHOR RODS, NUTS AND WASHERS FOR THE CONTROLLER CABINET SHALL BE FURNISHED BY MNDOT.
2. THE UPPER PART OF THE EQUIPMENT PAD SHALL BE BEVELLED OR CHAMFERED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER.
3. THE TOP OF THE CONDUITS SHALL BE THREADED AND CAPPED AFTER INSTALLATION (UNTIL CABLES ARE INSTALLED).
4. CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE CONCRETE AND SHALL BE LOCATED INSIDE THE CABINET WHERE DIRECTED BY THE ENGINEER, BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).
5. CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR THE EQUIPMENT PAD AND SIDEWALK.
6. CONDUITS WITH BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
7. THE EXACT LOCATION OF CONDUITS WITHIN THE PAD SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
8. PLACEMENT OF THIS CONDUIT IN PROPER LOCATION IS CRITICAL.
9. ANCHOR RODS SHALL PROJECT A MINIMUM OF 3" ABOVE THE CONCRETE BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).

B.B. SERVICE CABINET BOLT PATTERN



CONTROLLER CABINET TYPE "P" & "R" BOLT PATTERN



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 Plan By: AJW  
 Checked By: AJW  
 Approved By: AJW

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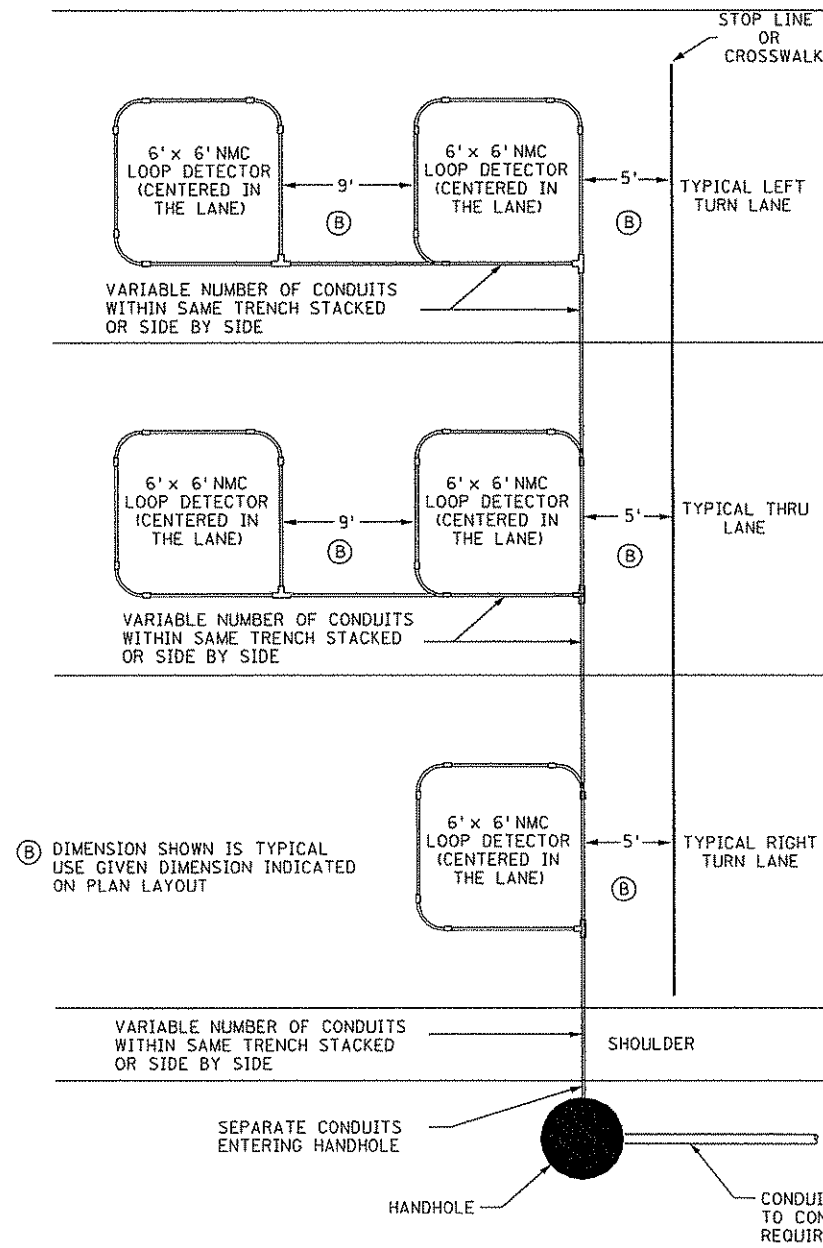
CONTROLLER AND SERVICE CABINET DETAILS

**SIGNAL PLAN**

S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001

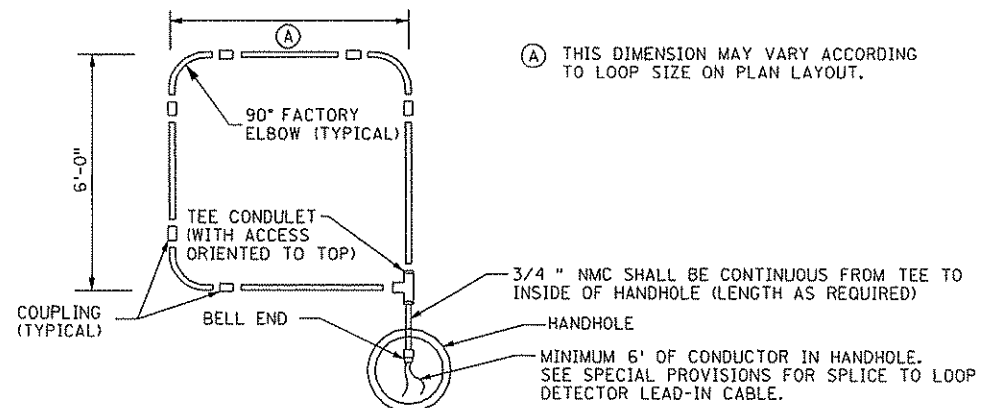
SHEET  
 70  
 OF  
 116  
 SHEETS

TYPICAL CROSS STREET NMC LOOP DETECTOR LAYOUT



(B) DIMENSION SHOWN IS TYPICAL USE GIVEN DIMENSION INDICATED ON PLAN LAYOUT

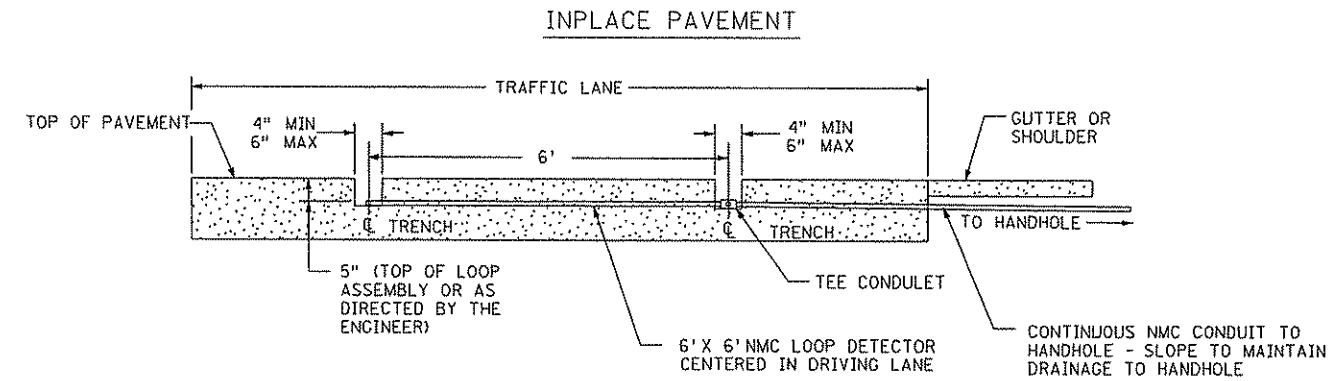
TYPICAL NMC LOOP DETECTOR DETAIL



NOTES:

- ROADWAY LOOP DETECTOR CONDUCTORS AND LOOP DETECTOR LEAD IN CABLES SHALL BE IN ACCORDANCE WITH MN/DOT SPEC 3815.
- THE 3/4" NON-METALLIC CONDUIT (NMC) AND FITTINGS SHALL BE SCHEDULE 40 HEAVY WALL RIGID POLYVINYL CHLORIDE (PVC). SEE SPEC. 3803.
- THREE CORNERS OF EACH LOOP DETECTOR SHALL BE A 90° FACTORY ELBOW (6" RADIUS). THE FOURTH SHALL BE AN NMC TEE CONDULET.
- APPROVED PVC PRIMER AND CEMENT SHALL BE USED FOR THE PVC JOINTS.
- ALL SLACK MUST BE REMOVED FROM LOOP DETECTOR CONDUCTORS WITHIN THE NMC.
- THE ROADWAY LOOP DETECTOR CONDUCTORS (1/C#14) SHALL BE TWISTED THREE TURNS PER FOOT FROM THE NMC TEE CONDULET TO THE HANDHOLE.
- ATTACH A FERROUS METAL ITEM IN OR ADJACENT TO THE TEE CONDULET COVER OR AS DIRECTED BY THE ENGINEER.
- EACH LOOP DETECTOR CONDUIT TO THE HANDHOLE SHALL BE SLOPED TOWARDS THE HANDHOLE.
- LOOP DETECTOR CONDUITS TO THE HANDHOLE MAY BE PLACED WITHIN THE SAME TRENCH.
- THE LOOP DETECTOR ROADWAY CONDUCTORS SHALL EXTEND 6' TO 10' INTO THE HAND HOLE FOR SPLICING.
- NO SPLICES ALLOWED IN CONDUIT.
- THE LOOP DETECTOR ROADWAY CONDUCTORS AND THE LOOP DETECTOR LEAD-IN CABLE CONDUCTORS SHALL BE PROPERLY PREPARED AND CLEANED BEFORE SPLICING.
- SPLICE KITS SHALL BE INSTALLED IN HANDHOLES IN SUCH A MANNER AS TO ENSURE THAT EACH SPLICE KIT IS SUSPENDED AND/OR SECURED NEAR THE TOP OF THE HANDHOLE TO THE SATISFACTION OF THE ENGINEER. (PLACING SPLICE KITS ON TOP OF THE ELECTRICAL CABLES AND CONDUCTORS IS NOT ACCEPTABLE).
- TYPICAL SIZE OF LOOP DETECTORS ARE 6' x 6' AND 6' x 10'. REFER TO INTERSECTION LAYOUT FOR SPECIFIC LOOP DETECTORS TO BE PLACED.
- ALL LOOP DETECTORS SHALL HAVE 4 TURNS OF CONDUCTORS.
- SEE SPECIAL PROVISIONS FOR APPROVED SPLICE KITS.
- PRIOR TO INSTALLING THE APPROVED SPLICE KIT, THE CONTRACTOR SHALL SOLDER THE ENDS OF THE LOOP DETECTOR LEAD IN CONDUCTOR AND SHALL FURNISH AND INSTALL AN APPROPRIATE SIZED WIRE NUT TO THE SOLDERED ENDS PRIOR TO THE INSTALLATION OF THE SPLICE KITS.
- IF BENDING OF THE NMC LOOP LEAD-IN CONDUIT IS REQUIRED, AN APPROPRIATE HEATING BLANKET OR DEVICE APPROVED BY THE ENGINEER SHALL BE USED. EXPOSED FLAME OR TORCHES ARE NOT ALLOWED.

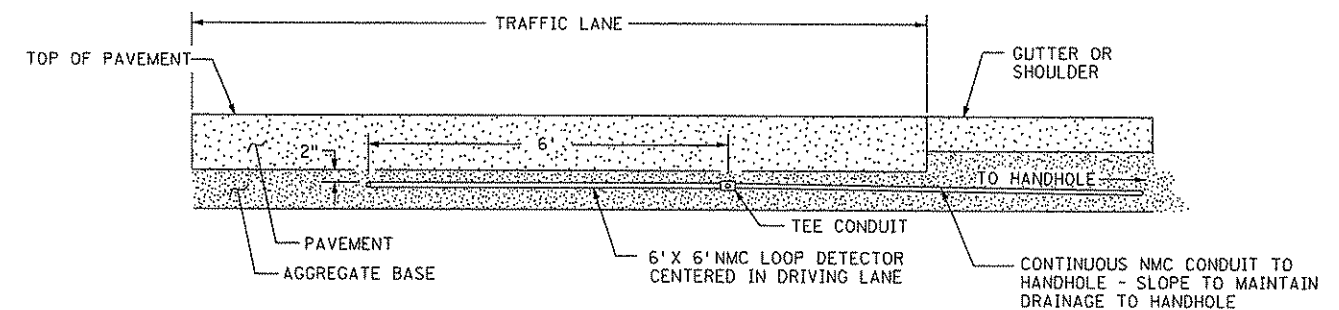
TYPICAL NMC LOOP DETECTOR INSTALLATION



NOTES:

- USE THE LOOP DETECTOR TO BE INSTALLED FOR THE PURPOSE OF MARKING THE PAVEMENT LOCATION FOR THE MILLING OPERATION.
- TO ACHIEVE FULL TRENCH DEPTH FOR CONDUIT PLACEMENT, MILL BEYOND THE DESIRED PAVEMENT MARKING.
- PROVIDE A MINIMUM 5" CLEARANCE, MEASURED FROM THE TOP OF THE FINISHED PAVEMENT TO HIGHEST POINT OF LOOP ASSEMBLY (INCLUDING CONDUIT).
- AN AIR COMPRESSOR UNIT (50 HP) IS REQUIRED FOR REMOVING ALL LOOSE MATERIAL FROM TRENCH PRIOR TO TACK COAT APPLICATION.
- APPLY A TACK COAT AT A UNIFORM RATE TO THE BOTTOM AND EDGES OF THE MILLED AREA. USE AN EMULSIFIED ASPHALT PER SPEC. 2357.2A
- MIXTURE USED TO FILL THE RETROFIT LOOP DETECTOR TRENCHES SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATION 2360. AGGREGATE SIZE A OR B WILL BE ALLOWED WHEN 2360 IS UTILIZED. OTHER WEARING COURSE MIXTURE TYPES ARE ALLOWED WHEN APPROVED BY THE ENGINEER.
- COMPACTION SHALL BE OBTAINED BY THE ORDINARY COMPACTION METHOD. BACKFILL THE TRENCH WITH A MINIMUM OF TWO LIFTS AND COMPACT EACH LIFT. BEFORE COMPACTING THE FIRST LIFT ENSURE THAT THERE IS ADEQUATE MIXTURE ON EACH SIDE AND ABOVE THE CONDUIT SO THAT THE CONDUIT IS NOT DAMAGED DURING COMPACTION OPERATIONS.
- THE COMPACTED MIXTURE IN THE TRENCH SHOULD BE LEFT 1/4" TO 1/2" ABOVE THE ADJACENT PAVEMENT SURFACE TO PROVIDE FOR ADDITIONAL COMPACTION BY TRAFFIC.
- WHEN LOOP DETECTORS ARE MILLED INTO CONCRETE SURFACES, REMOVE RUBBLE, SANDBLAST AND AIR BLAST THE TRENCH TO REMOVE DEBRIS. FILL THE TRENCH WITH AN APPROVED MATERIAL LISTED ON THE MN/DOT CONCRETE UNIT'S WEBSITE FOR: "PACKAGED DRY RAPID HARDENING CEMENTITIOUS MATERIALS FOR CONCRETE REPAIRS". WWW.MRR.DOT.STATE.MN.US/PAVEMENT/CONCRETE/PRODUCTS/CONCRETEREPAIRMATL.PDF
- MILLING IS REQUIRED FOR ALL NMC LOOP INSTALLATIONS. WHEN LOOPS ARE MILLED INTO EXISTING MILLED SURFACE THAT WILL BE OVERLAYED WITH BITUMINOUS, THE MINIMUM TRENCH DEPTH SHALL BE NO LESS THAN THE HIGHEST LOOP ASSEMBLY IN THE TRENCH.
- WHEN MILLING INTO EXISTING BITUMINOUS SURFACE, BE ADVISED THAT CONCRETE MAY BE ENCOUNTERED UNDER THE BITUMINOUS SURFACE.

NEW PAVEMENT



NOTES:

- OBTAIN THE REQUIRED COMPACTION OF THE AGGREGATE BASE AFTER PLACEMENT OF LOOP DETECTOR AND LEAD-IN CONDUIT.
- THE DEPTH OF THE LOOP MEASURED FROM THE TOP OF THE AGGREGATE BASE TO THE TOP OF THE CONDUIT SHALL NOT EXCEED 2".

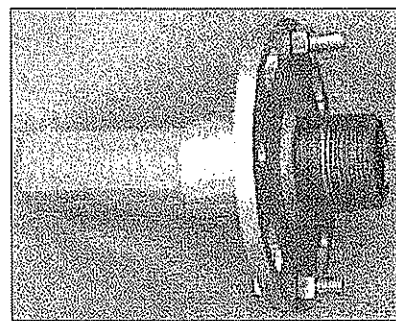
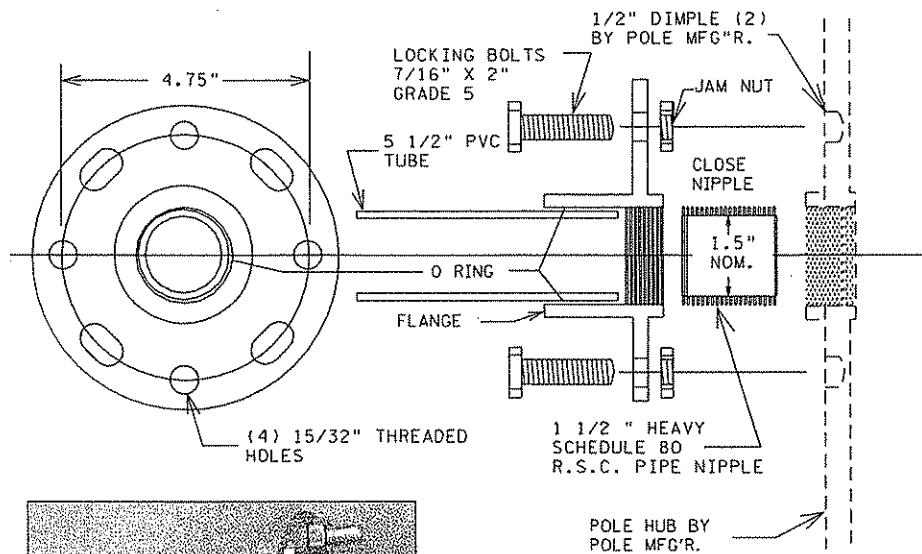
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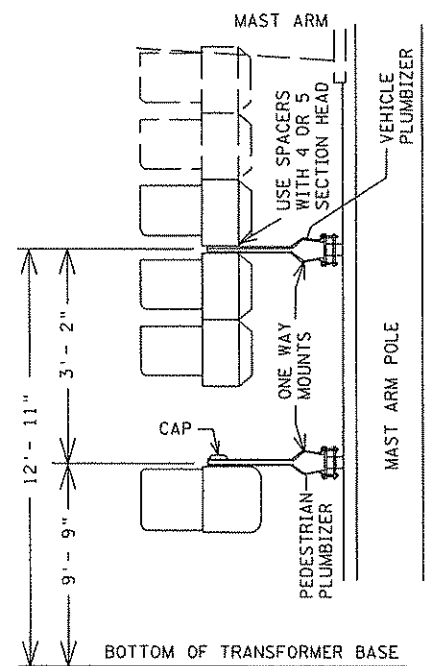
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MASTER ID #: 21183  
T.E. # 4610

PREFORMED NON-METALLIC CONDUIT (NMC) LOOP DETECTOR DETAILS (MN/DOT DETAIL)

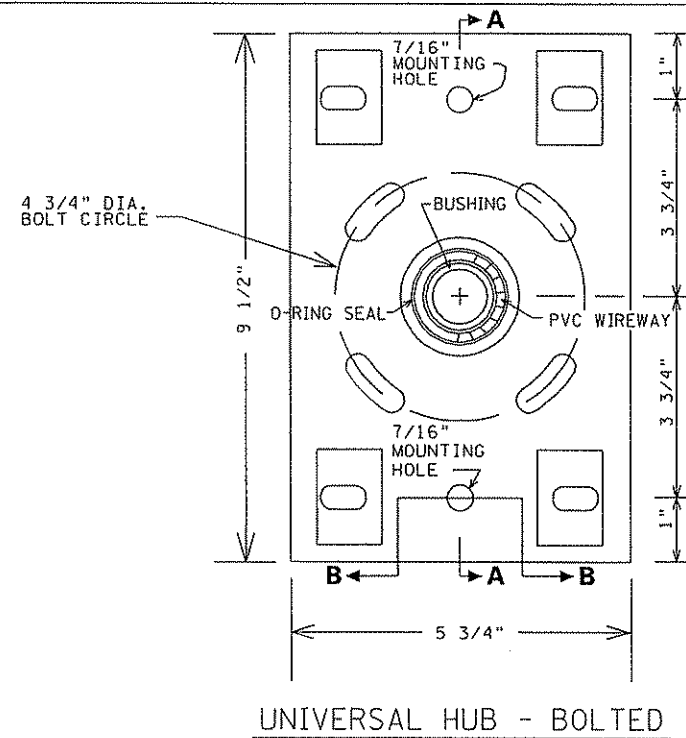




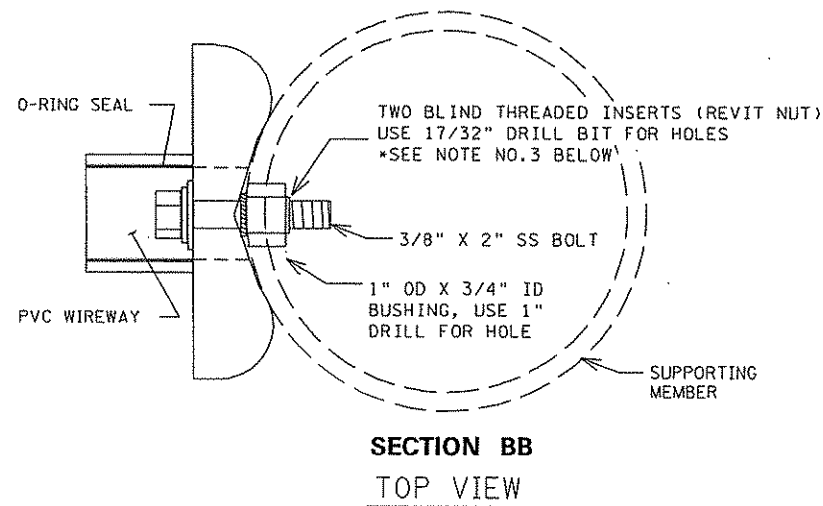
MACHINE HUB & NIPPLE



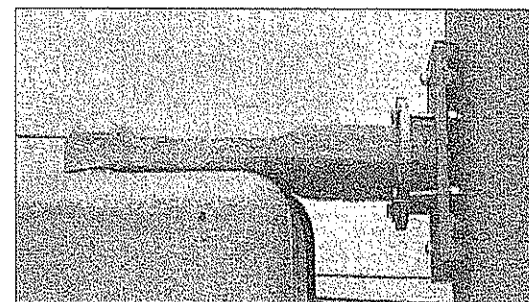
TYPICAL SIGNAL POLE MOUNTING



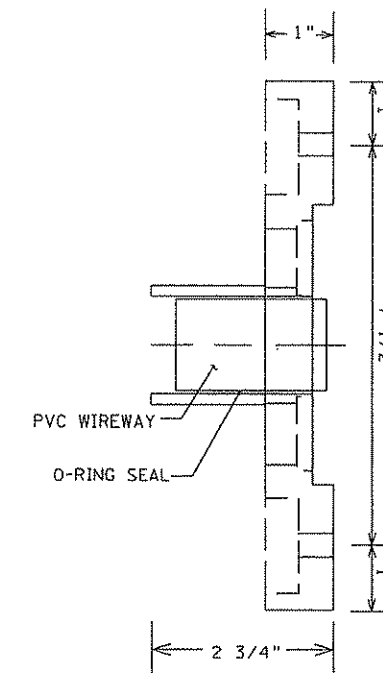
UNIVERSAL HUB - BOLTED



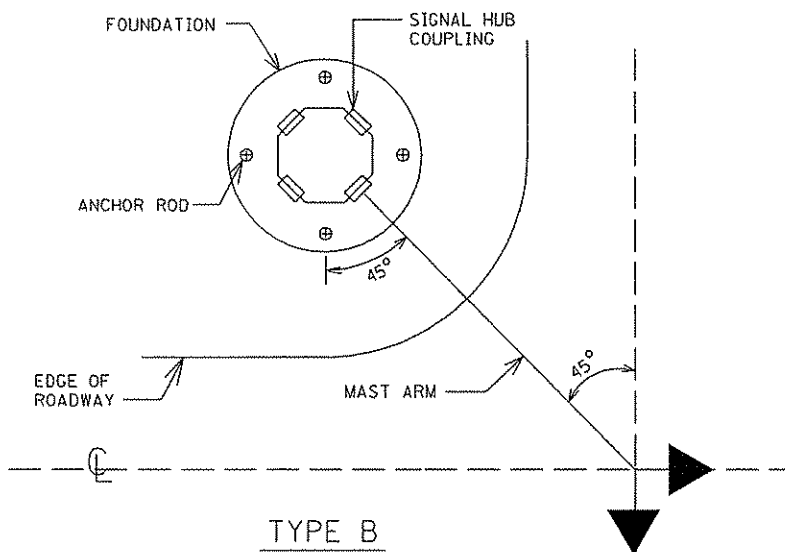
SECTION BB  
TOP VIEW



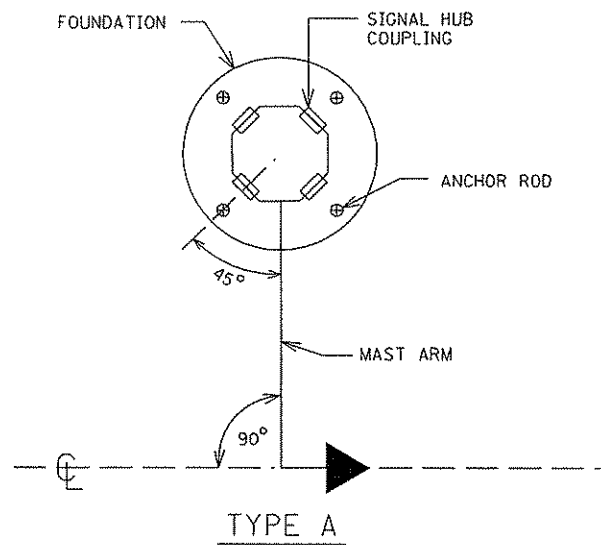
- NOTE:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
  2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 & 5 SECTION POLY HEADS.
  3. BLIND THREADED INSERTS (RIVET NUT) MUST BE INSTALLED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.



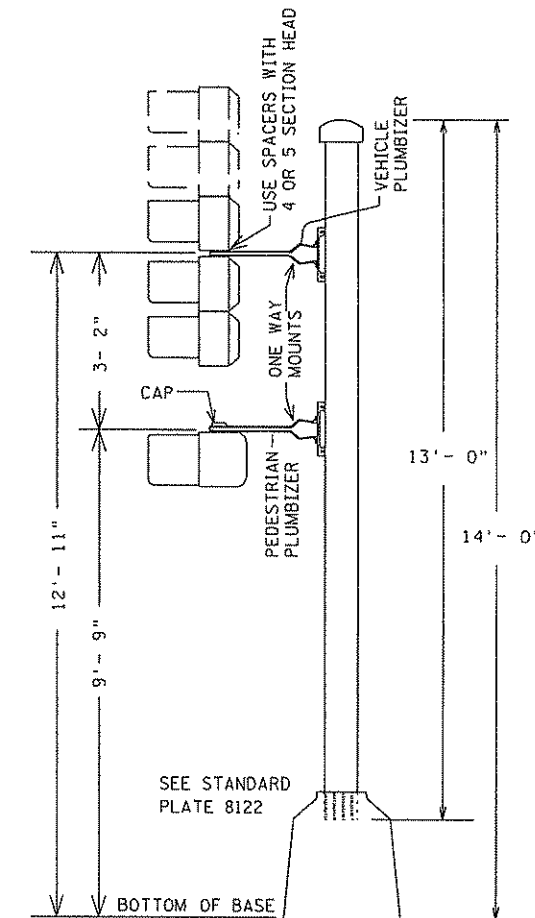
SECTION AA  
SIDE VIEW



TYPE B  
ANCHOR ROD PLACEMENT,  
MAST ARM ORIENTATION  
AND SIGNAL HUB LOCATIONS



TYPE A  
ANCHOR ROD PLACEMENT,  
MAST ARM ORIENTATION  
AND SIGNAL HUB LOCATIONS



TYPICAL PEDESTAL MOUNTING

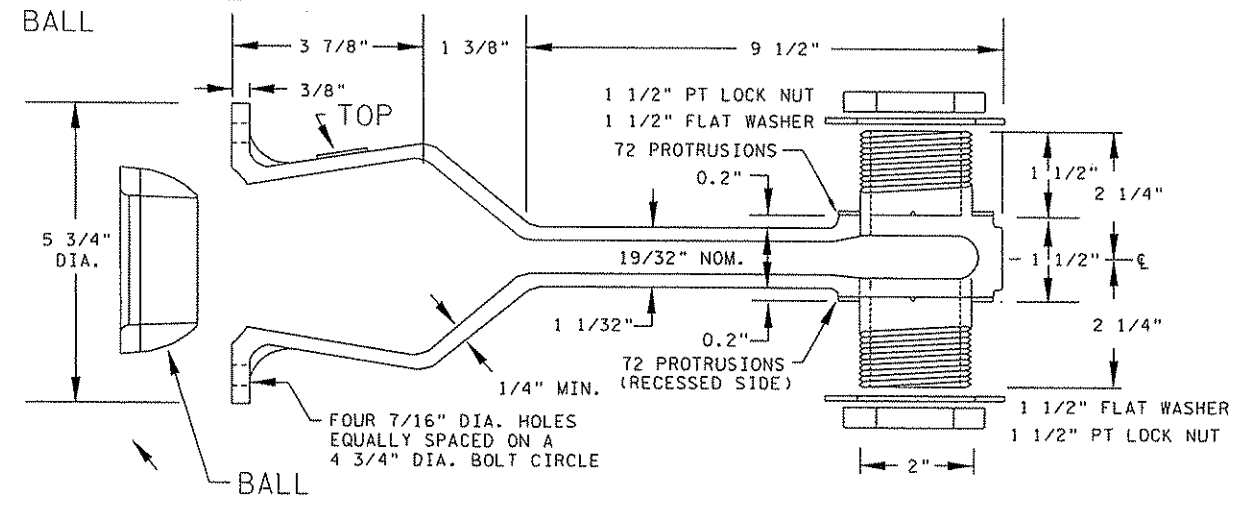
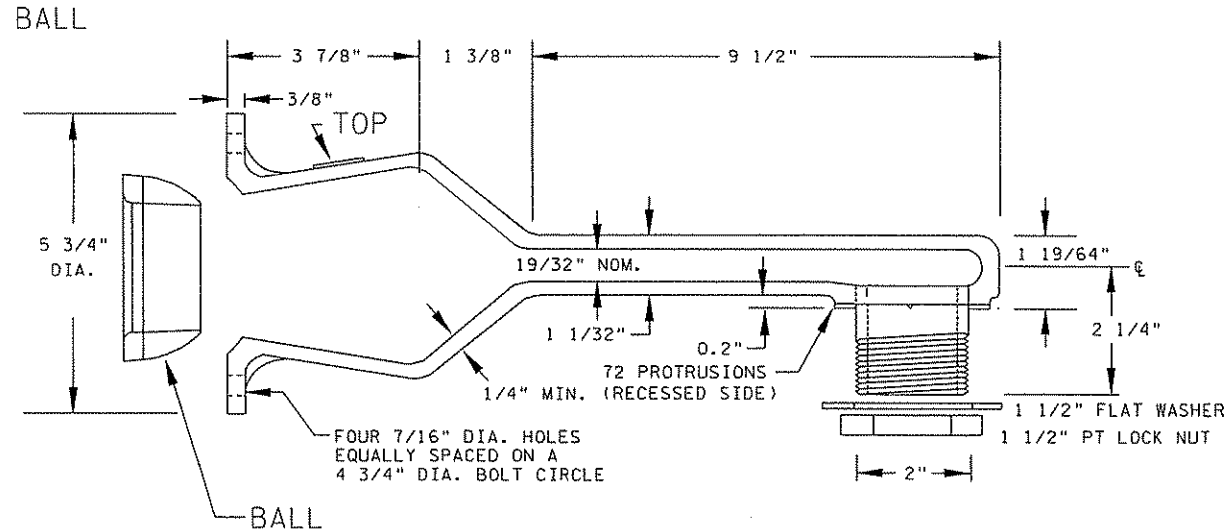
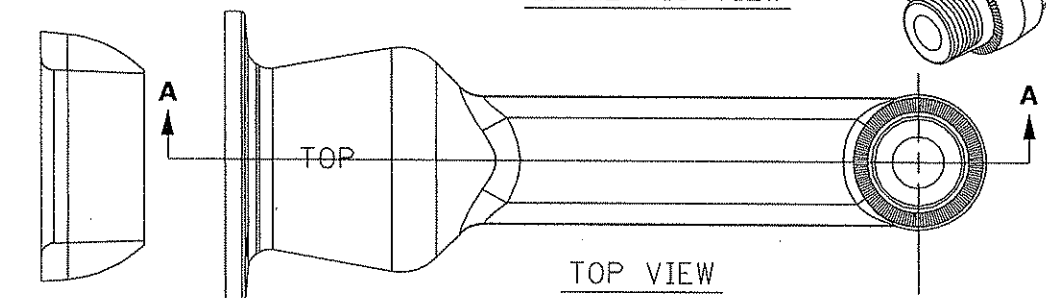
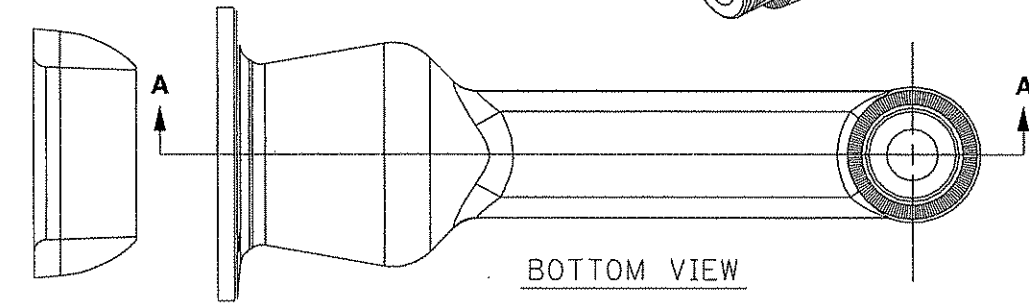
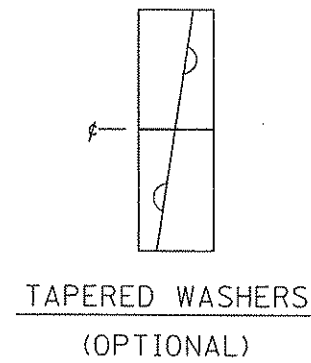
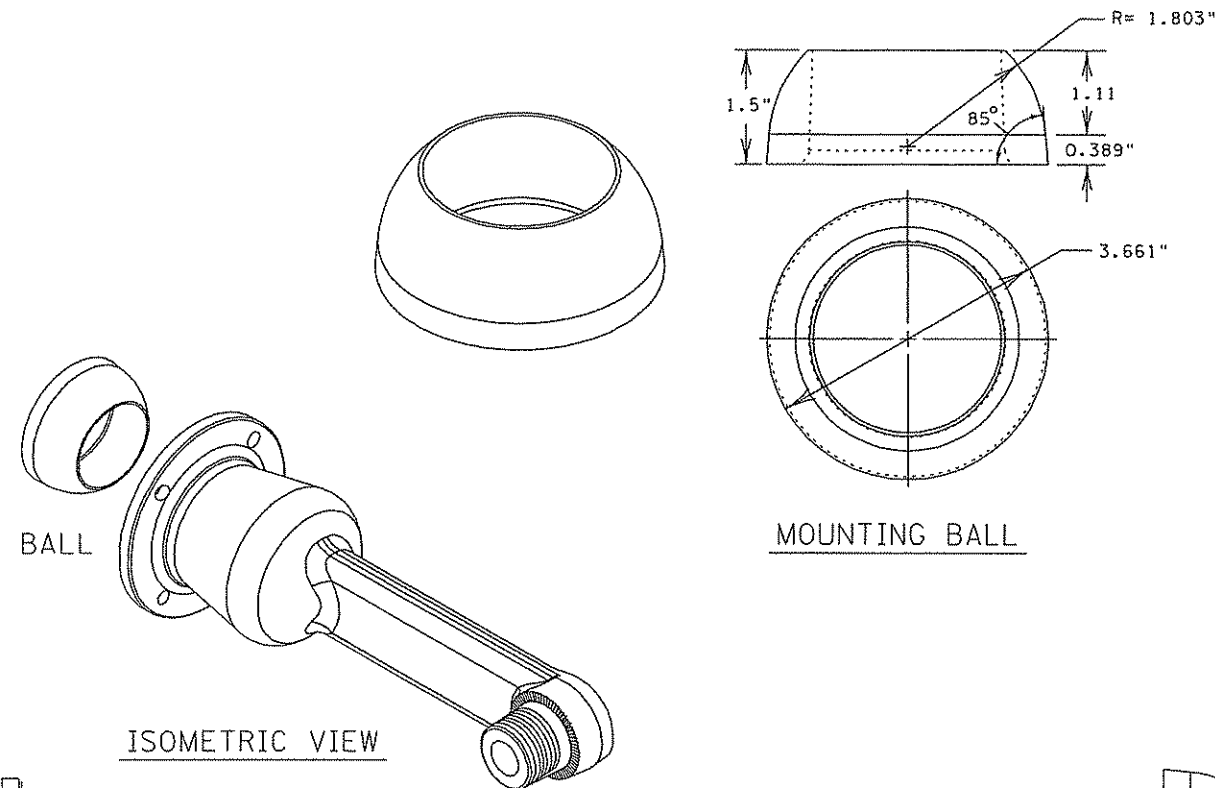
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T.E. # 4610

POLE & PEDESTAL MOUNTED ONE-WAY SIGNAL  
AND PEDESTRIAN INDICATION DETAILS  
(MN/DOT DETAIL)

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**SECTION AA**  
 ONE-WAY MOUNT - PEDESTRIAN PLUMBIZER

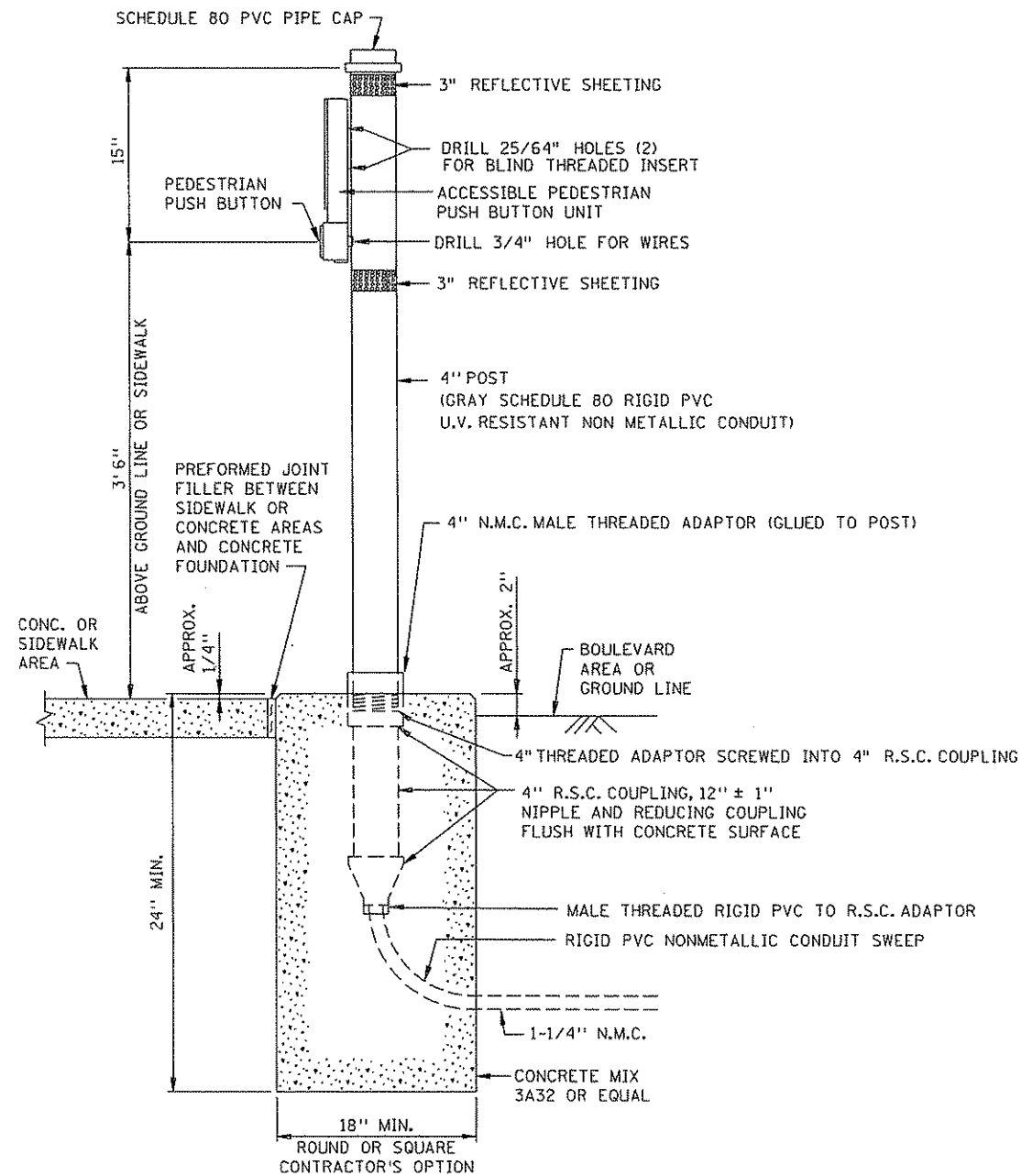
**SECTION AA**  
 ONE-WAY MOUNT - ELEVATOR PLUMBIZER

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ONE-WAY SIGNAL AND PEDESTRIAN  
 INDICATION MOUNT DETAILS  
 (MN/DOT DETAIL)

**ACCESSIBLE PUSH BUTTON STATION  
SEPARATE MOUNTING**  
(NOT TO SCALE)



**NOTES:**

1. PLACEMENT OF THE PUSH BUTTON IS CRITICAL. THE BUTTON ARROW DIRECTION MUST POINT TO THE DIRECTION OF THE APPROPRIATE CROSSING. SCREW IN POST TO A TIGHTENED POSITION BEFORE MOUNTING ACCESSIBLE PEDESTRIAN PUSH BUTTON UNIT TO THE POST.
2. BLIND THREADED INSERTS (RIVET NUT) MUST BE INSTALLED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
3. BLIND THREADED INSERTS SHALL BE ZINC PLATED STEEL WITH 1/4 - 20 UNC THREADS. INSERT SHALL BE SUITABLE FOR USE ON A MOUNTING SURFACE WALL THICKNESS OF .337". APPROVED BLIND THREADED INSERTS CAN BE FOUND ON THE MN/DOT QUALIFIED PRODUCTS LIST.
4. THE PUSH BUTTON MUST NOT BE INSTALLED ABOVE 42" FROM THE SIDEWALK AREA.
5. MOUNTING BOLTS SHALL BE 1/4 - 20 STAINLESS STEEL. APPLY BRUSH ON ANTI SEIZE COMPOUND TO BOLTS PRIOR TO ASSEMBLY.
6. APPLY A BEAD OF 100% SILICONE SEALANT AROUND THE TOP HALF OF THE PUSH BUTTON STATION WHERE THE PUSH BUTTON STATION COMES IN CONTACT WITH THE 4" POST.
7. THE REFLECTIVE SHEETING SHALL BE WHITE AT INTERSECTION CORNERS AND SHALL BE YELLOW WHEN USED IN CENTER MEDIANS. SEE MN/DOT SIGNING OPL FOR APPROVED SIGN SHEETING.

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Checked By: AJW  
Approved By: AJW

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*Anthony J. Winiecki*  
CERTIFIED BY: ANTHONY J. WINIECKI, P.E.  
DATE: 05/13/08 LIC. NO: 23128

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**ANOKA COUNTY**

**CSAH 18 AT T.H. 65**

**Anoka County, Minnesota**

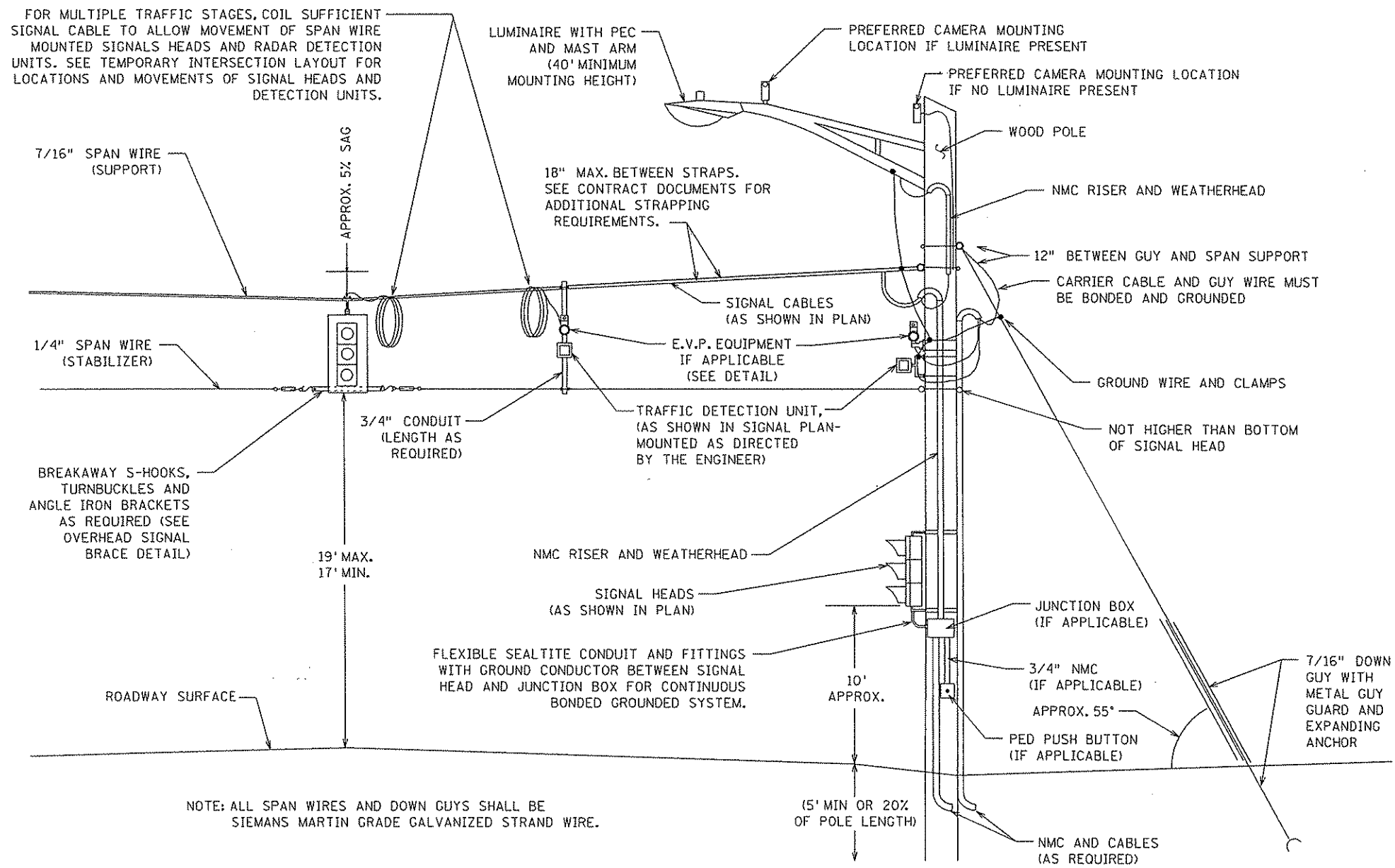
**ANOKA COUNTY HIGHWAY DEPARTMENT**

ACCESSIBLE PEDESTRIAN SIGNAL (APS)  
PUSH BUTTON STATION  
S.P. 0208-115, S.P 02-618-25, S.A.P. 197-020-001

SHEET  
74  
OF  
116  
SHEETS

### TYPICAL WOOD POLE AND SPAN WIRE MOUNTED TRAFFIC SIGNALS

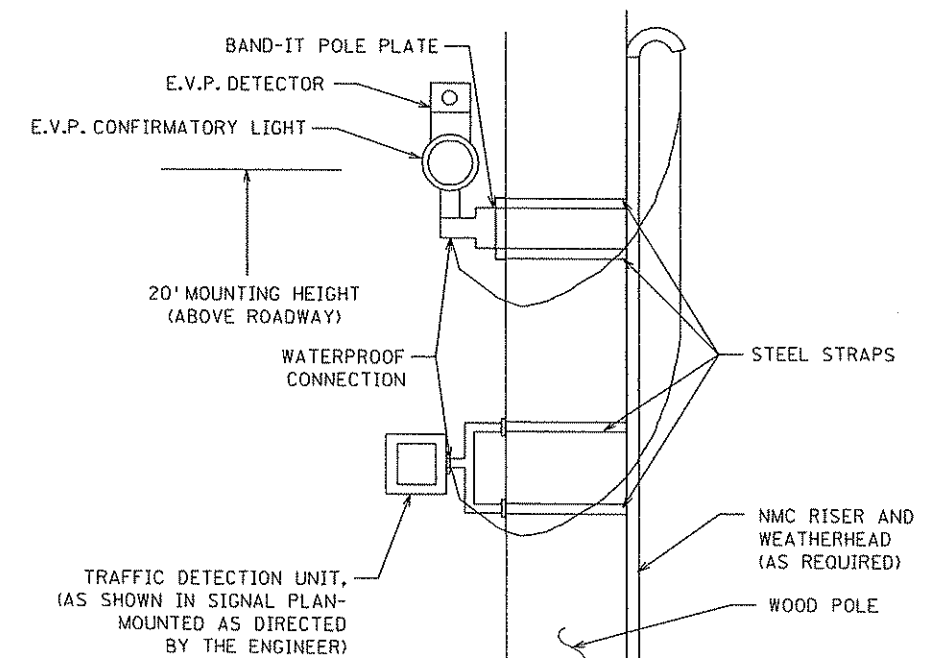
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NOTE: ALL SPAN WIRES AND DOWN GUYS SHALL BE SIEMANS MARTIN GRADE GALVANIZED STRAND WIRE.

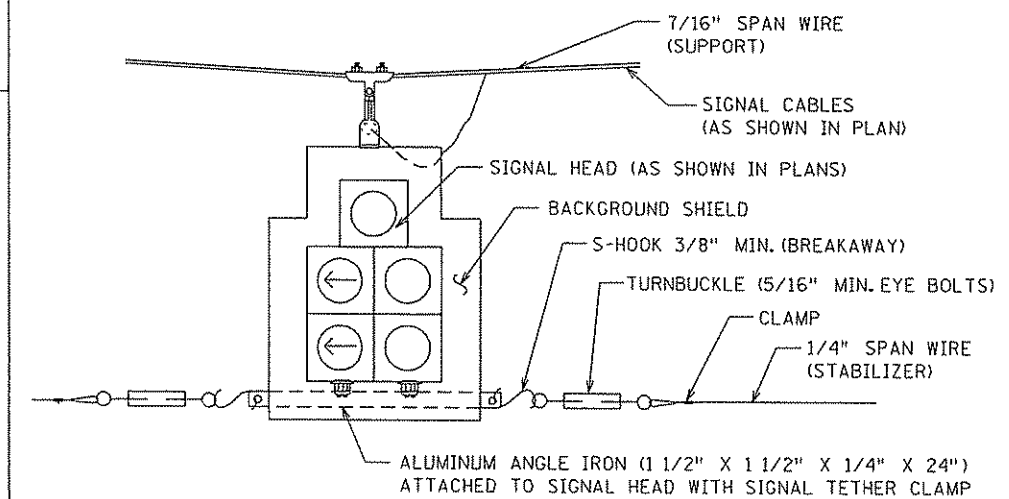
### E.V.P. OR TRAFFIC DETECTOR WOOD POLE MOUNT

(NOT TO SCALE)



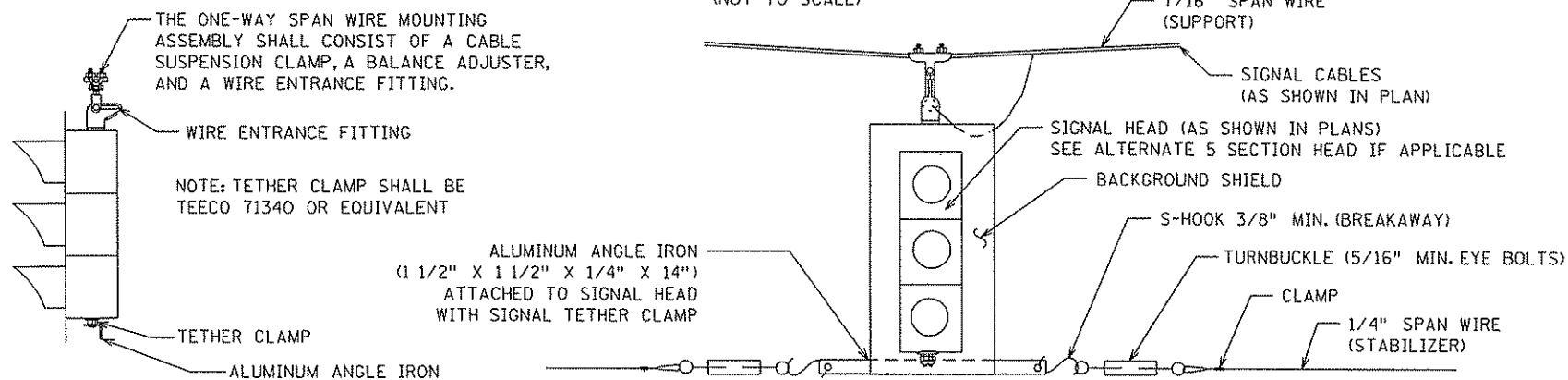
### 5 SECTION HEAD OVERHEAD SIGNAL BRACE DETAIL

(NOT TO SCALE)



### OVERHEAD SIGNAL BRACE DETAIL

(NOT TO SCALE)



THE ONE-WAY SPAN WIRE MOUNTING ASSEMBLY SHALL CONSIST OF A CABLE SUSPENSION CLAMP, A BALANCE ADJUSTER, AND A WIRE ENTRANCE FITTING.

WIRE ENTRANCE FITTING

NOTE: TETHER CLAMP SHALL BE TEECO 71340 OR EQUIVALENT

TETHER CLAMP

ALUMINUM ANGLE IRON

ALUMINUM ANGLE IRON (1 1/2" X 1 1/2" X 1/4" X 14") ATTACHED TO SIGNAL HEAD WITH SIGNAL TETHER CLAMP

Date Printed: 12/11/2008 WSB Filename: k:\01666-07\cad\plan\1666sp09.dgn

BY	DATE	REVISIONS

SYSTEM ID #: 21186  
 MASTER ID #: 21183  
 T.E. # 4610

TYPICAL WOOD POLE/SPAN WIRE  
 SIGNAL SYSTEM DETAIL WITH  
 LOWER BREAKAWAY STABILIZER WIRE  
 (MN/DOT DETAIL)



- NOTES:
1. LOCATION OF POLES, HANDHOLES AND CONTROLLER CABINET SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
  2. HANDHOLES SHALL BE A PVC HANDHOLE WITH METAL FRAM AND COVER.
  3. SEE DETAILS FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS.
  4. ALL TRAFFIC SIGNAL MATERIALS AND ELECTRICAL EQUIPMENT TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR THE TEMPORARY SIGNAL SYSTEM SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION AT THE INTERSECTION. SEE SPECIAL PROVISIONS.
  5. EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
  6. CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL FACE.
  7. FOR SPAN WIRE MOUNTED SIGNAL HEADS USE 4/C#14 CABLES AS SHOWN.
  8. MOVEMENT OF HEADS AND DETECTORS SHALL BE CONSIDERED INCIDENTAL.
  9. CONTRACTOR SHALL COIL SUFFICIENT LENGTH CABLES OVERHEAD FOR MOVEMENT OF VEHICLE SIGNAL INDICATIONS, VEHICLE DETECTORS, EVP DETECTORS AND INDICATOR LIGHTS, BETWEEN STAGES AS SHOWN.

③ STA. 35+58 43' LT  
 50' WOOD POLE-CLASS 2  
 2-DOWN GUYS, GUARDS AND EXPANDING ANCHORS  
 15' LUMINAIRE (250 W HPS) WITH PEC  
 2 TYPE 10A WOOD POLE MOUNTED  
 2-R9-3a SIGNS (NO PEDS) FACING POLES 1 & 5  
 METAL JUNCTION BOX WITH TERMINAL BLOCK  
 2' NMC RISER & WEATHERHEAD ABOVE JUNCTION BOX  
 2-4/C#14  
 1' NMC RISER ABOVE SPAN WIRE  
 1-3/C#14 (LUM)

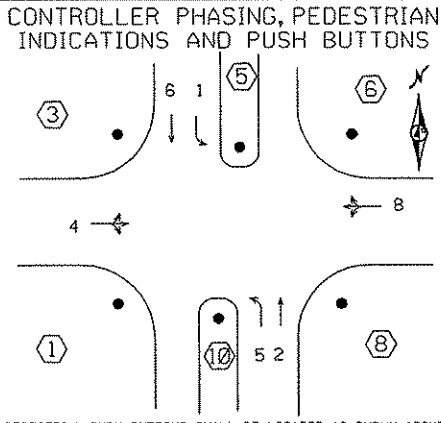
② WOOD POLE (S.O.P.) (COORDINATE WITH CONNEXUS ENERGY)  
 METER AND DISCONNECT - WOOD POLE MOUNTED  
 2' RSC RISER ABOVE METER:  
 3-1/C#2  
 EXTEND BELOW DISCONNECT TO HH 2:  
 2' NMC  
 3-1/C#6  
 4-3/C#14  
 HH 2 TO HH 1:  
 4-3/C#14

① STA. 35+79 58' RT  
 50' WOOD POLE-CLASS 2  
 2-DOWN GUYS, GUARDS AND EXPANDING ANCHORS  
 15' LUMINAIRE (250 W HPS) WITH PEC  
 2-TYPE 10A WOOD POLE MOUNTED  
 2-R9-3a SIGNS (NO PEDS) FACING POLES 3 & 10  
 METAL JUNCTION BOX WITH TERMINAL BLOCK  
 EXTEND INTO HH 1:  
 2' NMC BELOW JUNCTION BOX:  
 1-4/C#14, 1-4/C#14 (STAGE 2)  
 EXTEND INTO HH 1:  
 4' NMC  
 9-4/C#14  
 1-3/C#14  
 3-3/C#14 (LUM)  
 6-4/C#18  
 5-4/C#18  
 1-3/C#20  
 3-3/C#20

1' NMC RISER ABOVE SPAN WIRE  
 1-3/C#14

**SIGNAL SYSTEM OPERATION**

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE. WITH PHASES 1 AND 5 BEING A PROTECTED LEFT TURN PHASE.



NO.	DATE	BY	CHK	REVISIONS

Design By: MAS  
 Plan By: AJW  
 Checked By: AJW  
 Approved By: AJW

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 LICENSED PROFESSIONAL ENGINEER - ANTHONY J. WINIECKI, P.E.  
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 Anoka County, Minnesota

**ANOKA COUNTY HIGHWAY DEPARTMENT**  
 T.H. 65 & CSAH 18 SIGNAL SYSTEM "A"  
 SIGNAL PLANS - TEMPORARY INTERSECTION LAYOUT  
 S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001

SHEET 76 OF 116 SHEETS

**F & I MICROWAVE/SONIC DETECTORS**

NUMBER	TYPE	MOUNTING	LOCATION
M1-1	TC 26	SPAN WIRE	①
S1-1	TC 30 (SONIC)	SPAN WIRE	①
M2-1	TC 26	WOOD POLE 9	①
M4-1	TC 26	WOOD POLE 2	①
M4-2	TC 26	SPAN WIRE	①
S4-3	TC 30 (SONIC)	SPAN WIRE	①
M5-1	TC 26	SPAN WIRE	①
S5-1	TC 30 (SONIC)	SPAN WIRE	①
M6-1	TC 26	WOOD POLE 4	①
M8-1	TC 26	WOOD POLE 7	①
M8-2	TC 26	SPAN WIRE	①
S8-3	TC 30 (SONIC)	SPAN WIRE	①

① = EXACT PLACEMENT TO BE DETERMINED IN THE FIELD BY THE ENGINEER. TC 30 UNITS MUST BE PLACED DIRECTLY OVER THE TRAFFIC LANE.

LOCATION = DISTANCE IN FEET FROM STOP LINE TO REQUIRED DETECTION AREA.

MOUNTING = SPAN WIRE MOUNTED SEE SPAN WIRE DETAIL SHEET.

**SIGNAL FACES**

FACE	R	Y	G
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	●	●	●

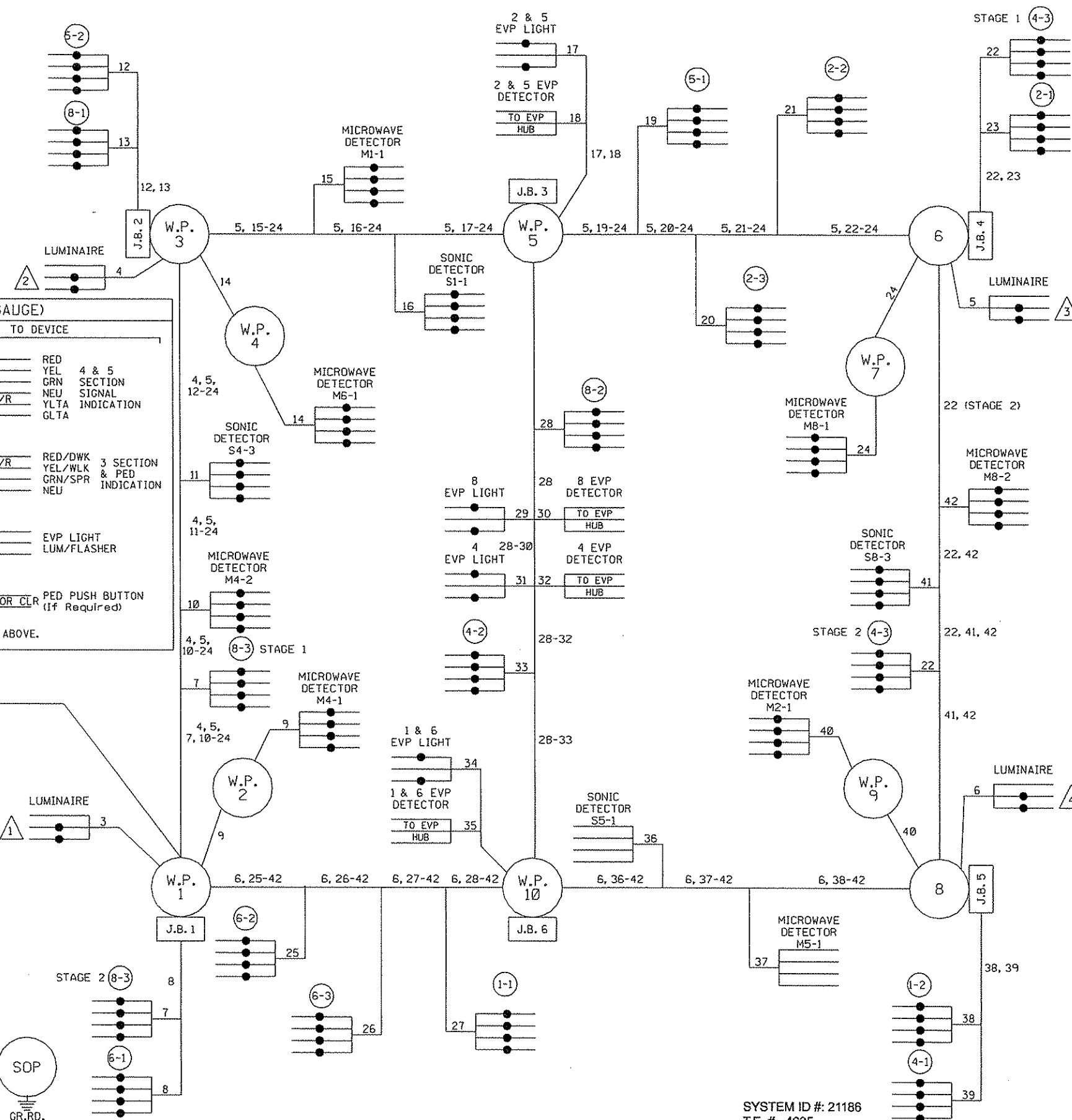
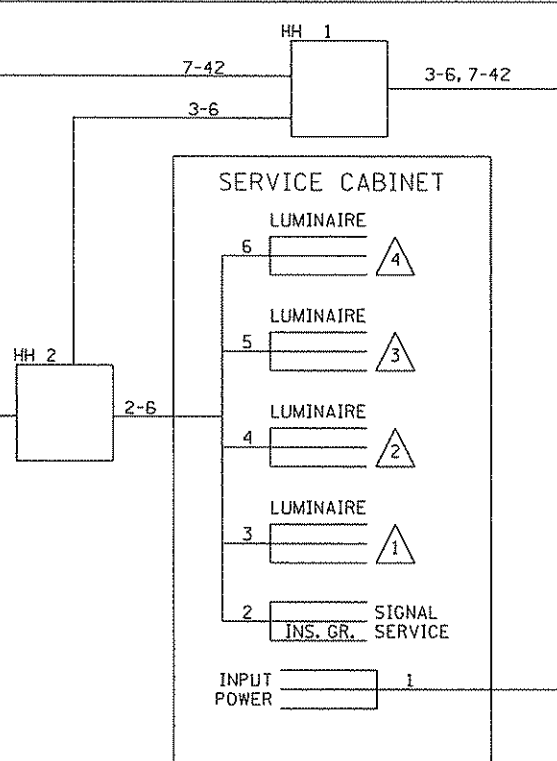
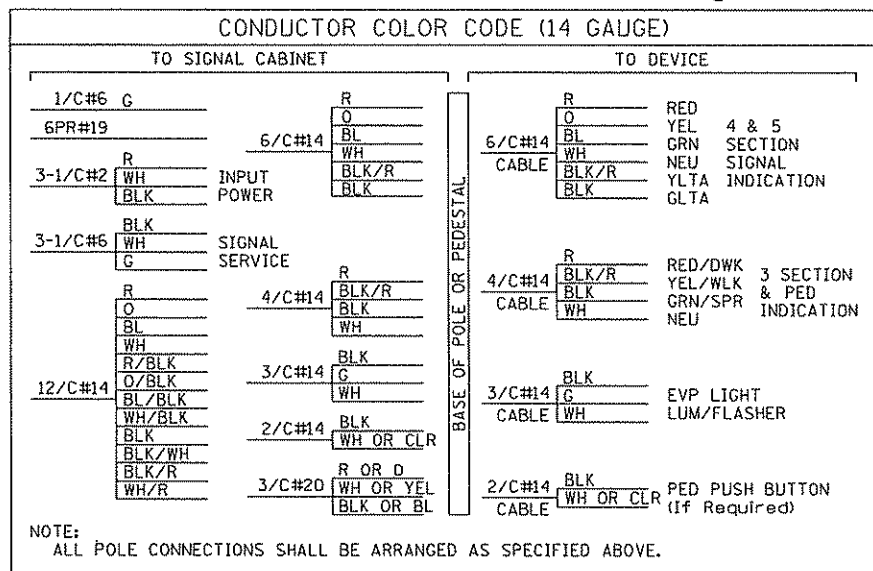
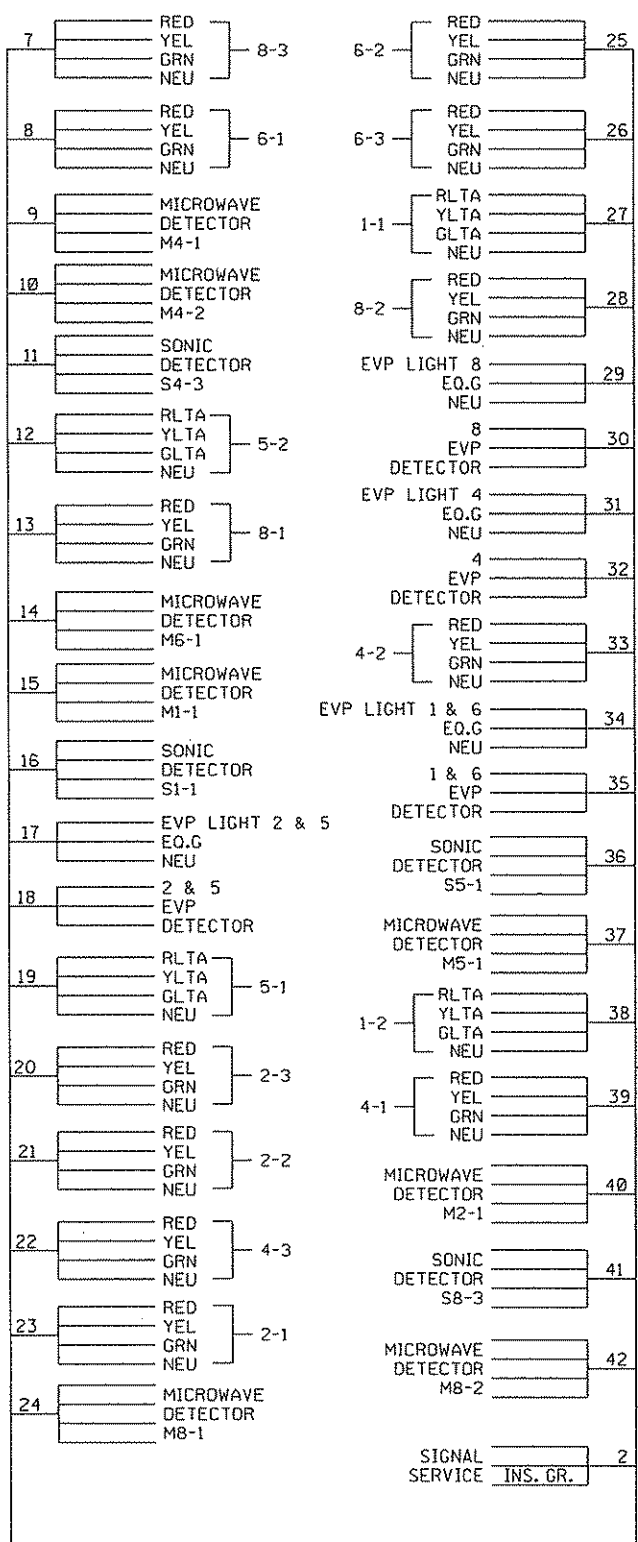
④ F & I: TEMPORARY SIGNAL CABINET BASE  
 INSTALL: TEMP CABINET WITH CONTROLLER CONTROLLER CABINET TO HH 1:  
 4' NMC  
 4' NMC  
 7-4/C#14  
 11-4/C#14  
 3-3/C#14  
 1-3/C#14  
 3-3/C#20  
 1-2/C#20  
 5-4/C#18  
 6-4/C#18

SYSTEM ID #: 21186  
 T.E. # 4635

CONTROLLER CABINET TO HH 2  
 2' NMC  
 3-1/C#6

Date Printed: 12/1/2008  
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### CONTROLLER CABINET



SYSTEM ID #: 21186  
T.E. # 4635

Date Printed: 12/1/2008  
File Name: K:\01666-07\cad\plan\1666spt1.dgn

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ANOKA COUNTY  
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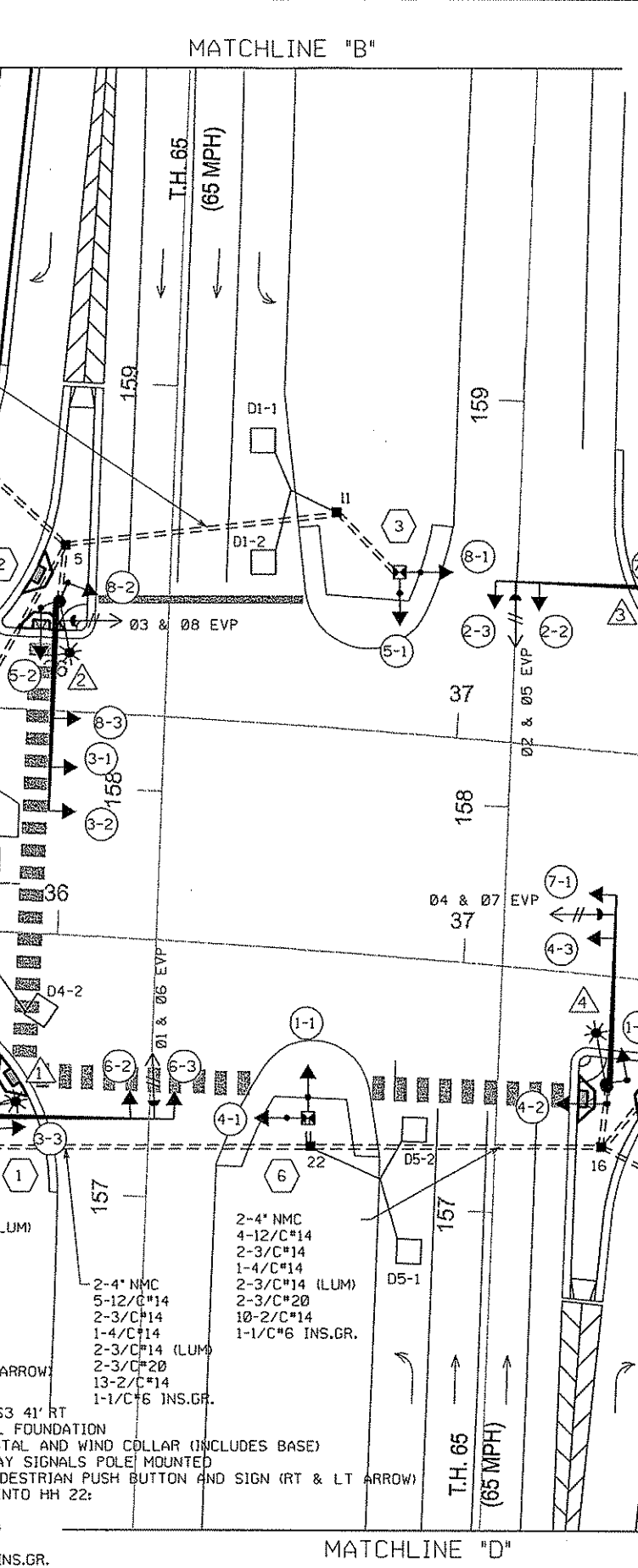
ANOKA COUNTY HIGHWAY DEPARTMENT  
T.H. 65 & CSAH 18 SIGNAL-SYSTEM "A"  
SIGNAL PLANS - TEMPORARY WIRING LAYOUT  
S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001

SHEET 77 OF 116 SHEETS

- (A) SIGNAL SERVICE CABINET**  
 CABINET FOUNDATION  
 EXTEND INTO HH 24:  
 METERED SIGNAL SERVICE  
 2" RSC  
 3-1/C\*6  
 UNMETERED STREET LIGHT SERVICE  
 4-3/C\*12 (LUM)  
 STUB OUT 2" RSC FROM  
 SERVICE CABINET TO NORTH (FOR  
 SERVICE BY CONNEXUS)  
 INSTALL EQUIPMENT PAD (SEE DETAIL SHEET)  
 SERVICE CABINET  
 CONTROLLER AND CABINET (STATE FURNISHED)  
 METERED SIGNAL SERVICE  
 EXTEND INTO HH 1:  
 2-4" NMC  
 5-12/C\*14  
 2-3/C\*14  
 2-4/C\*14  
 9-2/C\*14  
 2-3/C\*20  
 1-1/C\*6 INS. GR.  
 EXTEND INTO HH 23:  
 2-4" NMC  
 5-12/C\*14  
 2-3/C\*14  
 1-4/C\*14  
 2-3/C\*20  
 13-2/C\*14  
 1-1/C\*6 INS. GR.  
 STUB OUT 2-3" NMC (THREAD AND CAP BOTH ENDS)  
 STUB OUT 1" NMC (THREAD AND CAP BOTH ENDS)  
 SERVICE CABINET TO CONTROLLER CABINET:  
 2" NMC  
 2-1/C\*6  
 1-1/C\*6 INS. GR.  
 SERVICE CABINET TO HH 24:  
 2" NMC  
 3-1/C\*2  
 SERVICE CABINET TO HH 1:  
 (UNMETERED LIGHTING)  
 2" NMC  
 4-3/C\*14 (LUM)

- (2) STA. 36+01 25' LT**  
 PA100 POLE FOUNDATION  
 TYPE PA100-A-50-D40-9 (DAVIT AT 350")  
 3-ONE WAY SIGNALS OVERHEAD  
 (0' & 11' FROM END OF MAST ARM)  
 2-ONE WAY SIGNAL-POLE MOUNTED AT 45° & 225°  
 ONE WAY EVP DETECTOR AND CONFIRMATORY  
 LIGHT (PHASE 3 & 8)  
 LUMINAIRE-250W HPS  
 1-COUNTDOWN PEDESTRIAN INDICATIONS POLE  
 MOUNTED AT 45°  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (LT ARROW PB6-1)  
 1-R9-3a SIGN (NO PEDS) FACING POLE 3  
 1-TYPE D SIGN PANEL-OVERHEAD (D-2)  
 1-SIGN (R6-1L) POLE MOUNTED AT 0°  
 1-SIGN (R6-1R) POLE MOUNTED AT 180°  
 EXTEND INTO HH 5:  
 3" NMC  
 2-12/C\*14  
 1-3/C\*14  
 1-4/C\*14  
 1-3/C\*14 (LUM)  
 1-2/C\*14  
 1-3/C\*20  
 1-1/C\*6 INS. GR.

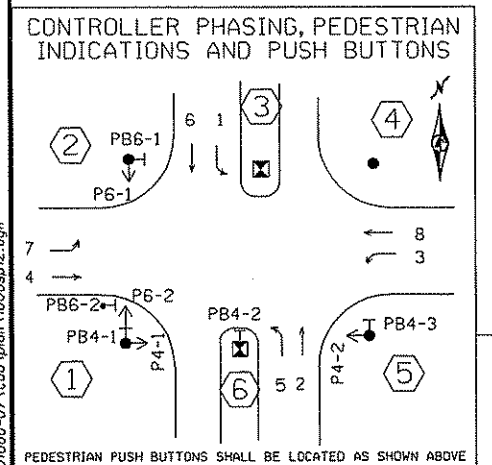
- (B) SOURCE OF POWER (BY OTHERS)**  
 EXTEND INTO HH 24:  
 2" NMC RISER AND WEATHERHEAD  
 3-1/C\*2  
 4" NMC  
 3-12/C\*14  
 1-3/C\*14  
 1-4/C\*14  
 1-3/C\*14 (LUM)  
 1-3/C\*20  
 5-2/C\*14  
 1-1/C\*6 INS. GR.



- (3) STA. 36+82 39' LT**  
 PEDESTAL FOUNDATION  
 14" PEDESTAL AND WIND COLLAR (INCLUDES BASE)  
 2-ONE WAY SIGNALS POLE MOUNTED  
 2-R9-3a SIGNS (NO PEDS) FACING POLES 2 AND 4  
 EXTEND INTO HH 11:  
 3" NMC  
 1-12/C\*14  
 1-1/C\*6 INS. GR.
- (4) STA. 37+58 41' LT**  
 PA100 POLE FOUNDATION  
 TYPE PA100-A-50-D40-9 (DAVIT AT 350")  
 2-ONE WAY SIGNALS OVERHEAD  
 (0' & 11' FROM END OF MAST ARM)  
 2-SWING AWAY HINGES  
 2-ONE WAY SIGNAL-POLE MOUNTED AT 45° & 225°  
 ONE WAY EVP DETECTOR AND CONFIRMATORY  
 LIGHT (PHASE 2 & 5)  
 LUMINAIRE-250W HPS  
 2-R9-3a SIGNS (NO PEDS) FACING POLES 3 & 5  
 2-TYPE D SIGN PANEL-OVERHEAD (D-1 & D-3)  
 1-SIGN (R6-1L) POLE MOUNTED AT 0°  
 1-SIGN (R6-1R) POLE MOUNTED AT 180°  
 EXTEND INTO HH 12:  
 3" NMC  
 2-12/C\*14  
 1-3/C\*14  
 1-3/C\*14 (LUM)  
 1-3/C\*20  
 1-1/C\*6 INS. GR.

SIGNAL FACES			
FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	●	●	●
3-1, 3-2, 3-3	←	←	←
4-1, 4-2, 4-3	●	●	●
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	●	●	●
7-1, 7-2	←	←	←
8-1, 8-2, 8-3	●	●	●

-ALL SIGNAL INDICATIONS SHALL BE 12"  
 -ALL SIGNAL INDICATIONS SHALL BE LED  
 -ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD  
 -ALL SIGNAL INDICATIONS SHALL BE BLACK POLYCARBONITE.



- (1) STA. 36+00 45' RT**  
 PA100 POLE FOUNDATION  
 TYPE PA100-A-50-D40-9 (DAVIT AT 350")  
 2-ONE WAY SIGNALS OVERHEAD  
 (0' & 11' FROM END OF MAST ARM)  
 2-ONE WAY SIGNAL-POLE MOUNTED AT 45° & 225°  
 2-SWING AWAY HINGES  
 ONE WAY EVP DETECTOR AND CONFIRMATORY  
 LIGHT (PHASE 1 & 6)  
 LUMINAIRE-250W HPS  
 2-COUNTDOWN PEDESTRIAN INDICATIONS POLE  
 MOUNTED AT 45° AND 225°  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (LT ARROW PB4-1)  
 2-TYPE D SIGN PANEL-OVERHEAD (D-1 & D-3)  
 1-SIGN (R6-1L) POLE MOUNTED AT 0°  
 1-SIGN (R6-1R) POLE MOUNTED AT 180°  
 EXTEND INTO HH 1:  
 3" NMC  
 2-12/C\*14  
 1-3/C\*14  
 1-4/C\*14  
 1-3/C\*14 (LUM)  
 1-2/C\*14  
 1-3/C\*20  
 1-1/C\*6 INS. GR.
- (5) STA. 37+37 27' RT**  
 PA100 POLE FOUNDATION  
 TYPE PA100-A-45-D40-9 (DAVIT AT 350")  
 2-ONE WAY SIGNALS OVERHEAD  
 (0' & 11' FROM END OF MAST ARM)  
 2-ONE WAY SIGNAL-POLE MOUNTED AT 45° & 225°  
 ONE WAY EVP DETECTOR AND CONFIRMATORY  
 LIGHT (PHASE 4 & 7)  
 LUMINAIRE-250W HPS  
 1-COUNTDOWN PEDESTRIAN INDICATIONS POLE  
 MOUNTED AT 225°  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (RT ARROW PB4-3)  
 1-R9-3a SIGN (NO PEDS) FACING POLE 4  
 1-TYPE D SIGN PANEL-OVERHEAD (D-2)  
 1-SIGN (R6-1L) POLE MOUNTED AT 0°  
 1-SIGN (R6-1R) POLE MOUNTED AT 180°  
 EXTEND INTO HH 16:  
 3" NMC  
 2-12/C\*14  
 1-3/C\*14  
 1-4/C\*14  
 1-3/C\*14 (LUM)  
 1-2/C\*14  
 1-3/C\*20  
 1-1/C\*6 INS. GR.

**SIGNAL SYSTEM OPERATION**

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.
- PHASES 1, 3, 5, AND 7 SHALL BE PROTECTED LEFT TURNS.

- (6) STA. 36+63 41' RT**  
 PEDESTAL FOUNDATION  
 14" PEDESTAL AND WIND COLLAR (INCLUDES BASE)  
 2-ONE WAY SIGNALS POLE MOUNTED  
 1-APS PEDESTRIAN PUSH BUTTON AND SIGN (RT & LT ARROW)  
 EXTEND INTO HH 22:  
 3" NMC  
 1-12/C\*14  
 1-2/C\*14  
 1-1/C\*6 INS. GR.

NO.	DATE	BY	CHK	REVISIONS

Design By: MAS  
 Plan By: AJW  
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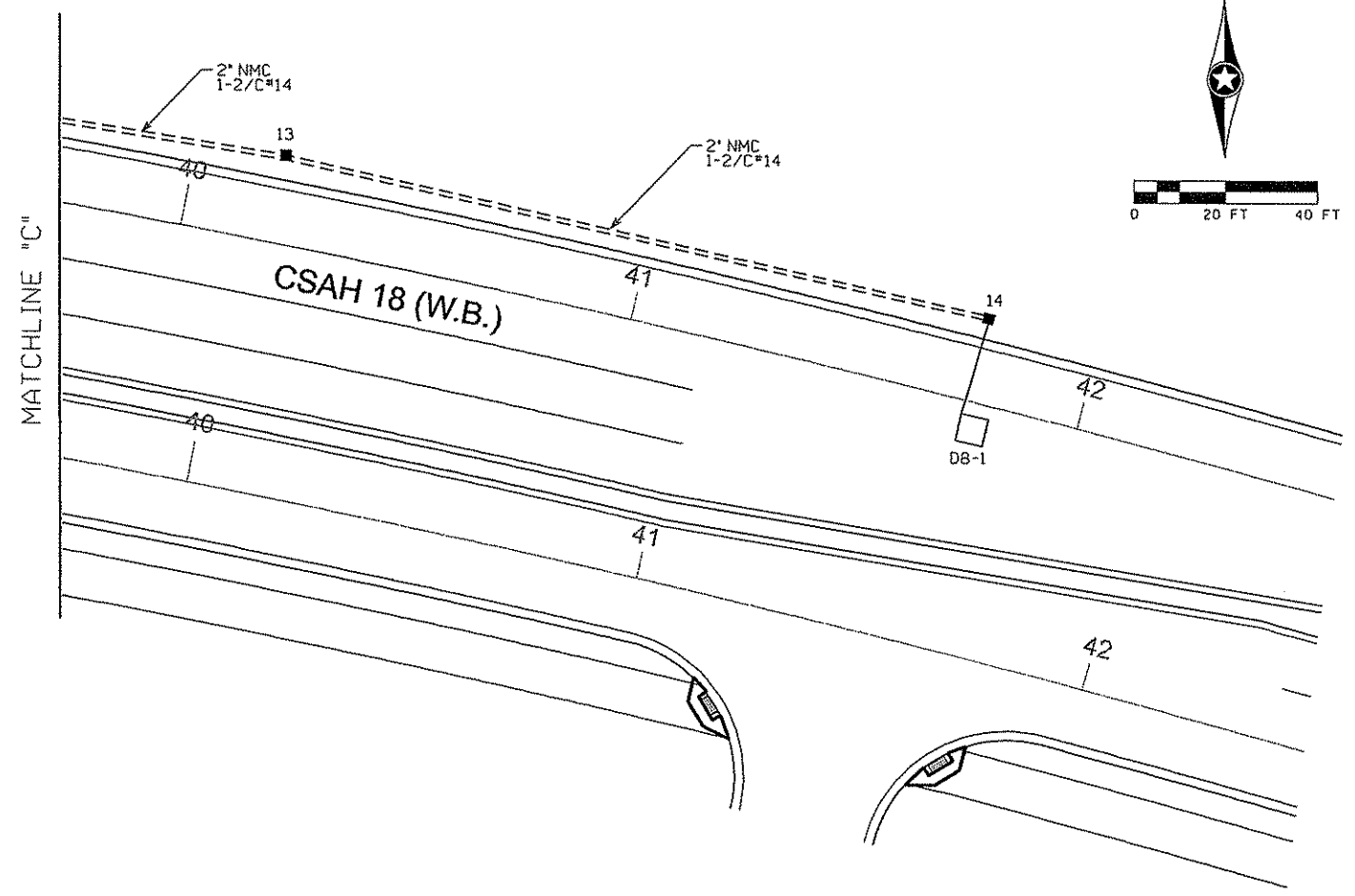
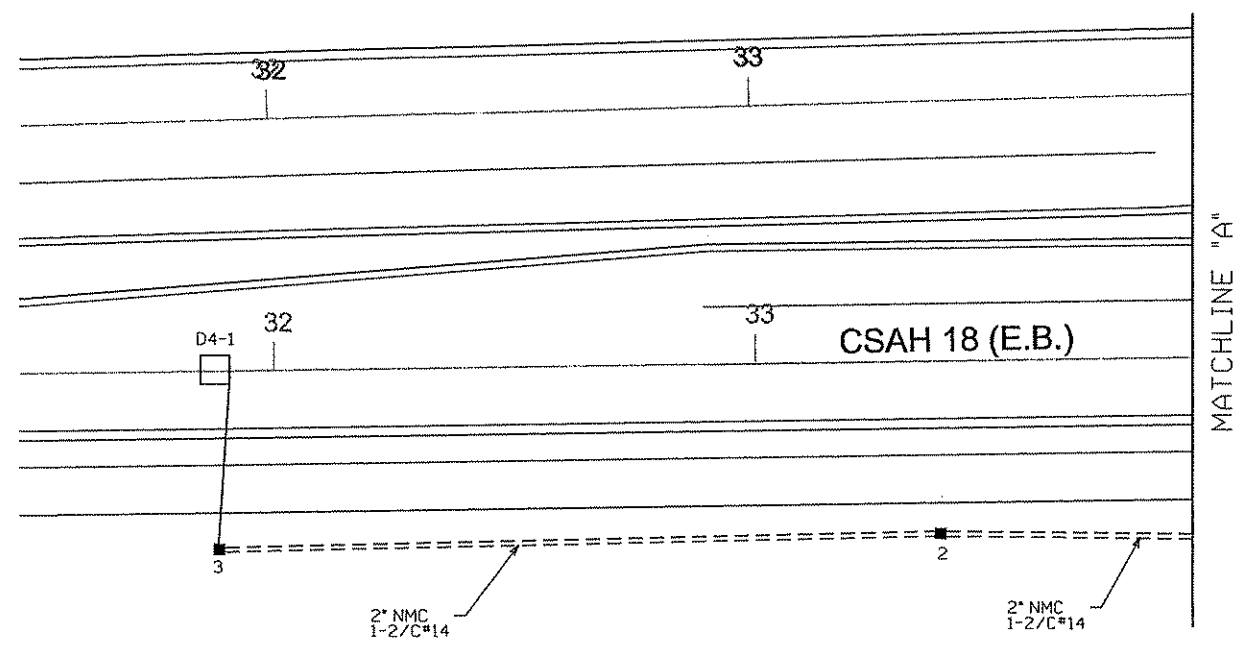
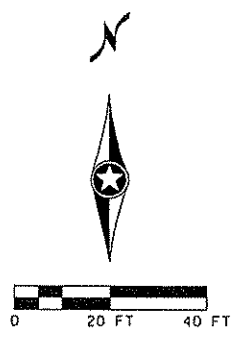
**ANOKA COUNTY HIGHWAY DEPARTMENT**

T.H. 65 & CSAH 18 SIGNAL-SYSTEM "A"  
**SIGNAL PLANS - INTERSECTION LAYOUT**  
 S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001

SYSTEM ID #: 21186  
 MASTER ID #: 21183  
 T.E. # 4610

SHEET 78 OF 116 SHEETS

Date Printed: 12/11/2008  
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NMC LOOP DETECTORS			
NUMBER	SIZE	LOCATION	FUNCTION
D1-1	2-6'X6'	35'	1
D1-2	2-6'X6'	5'	1
D2-1	2-6'X6'	625'	1
D2-2	2-6'X6'	315'	1
D3-1, D3-3	2-6'X6'	35'	1
D3-2, D3-4	2-6'X6'	5'	1
D4-1	6'X6'	400'	3
D4-2	2-6'X6'	-5' & 5'	7
D4-3	2-6'X6'	5' & 20'	7
D5-1	6'X6'	35'	1
D5-2	6'X6'	5'	1
D6-1	2-6'X6'	625'	1
D6-2	2-6'X6'	315'	1
D7-1	6'X6'	35'	1
D7-2	6'X6'	5'	1
D8-1	6'X6'	400'	3
D8-2	2-6'X6'	-5' & 5'	7
D8-3	2-6'X6'	5' & 20'	7

LOCATION: DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

- NOTES:
- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS, COUNTDOWN PEDESTRIAN INDICATIONS, LED VEHICLE INDICATIONS.
  - EXACT LOCATION OF HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD SHALL BE DETERMINED IN THE FIELD BY AGENCY PERSONNEL.
  - FOR TYPE 'D' SIGNS SEE DETAIL SHEET. TYPE 'D' SIGNS AND ONE WAY SIGNS SHALL BE INCIDENTAL.
  - R9-3b AND R10-4b POLE MOUNTED SIGNS SHALL BE INCIDENTAL.
  - LOOP DETECTORS SHALL BE PERFORMED NMC LOOP DETECTORS. FOR LOOP DETECTORS REQUIRING MILLING OPERATIONS, ALL WORK INCLUDING PAVEMENT REPLACEMENT SHALL BE INCIDENTAL.
  - PAVEMENT MATERIAL SHALL BE PREAPPROVED BY THE ENGINEER. A 3/4" HALF COUPLING, 3/4" NIPPLE, AND CONDUIT OUTLET BODY FOR EVP DETECTOR AND CONFIRMATORY LIGHT SHALL BE FURNISHED AND INSTALLED 6 FEET FROM THE END OF EACH MAST ARM, EXCEPT AT POLE 2 WHICH SHALL BE 6 FEET FROM THE SIGNAL POLE.
  - CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR POWER CONNECTION.
  - CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
  - ALL NEW CONDUIT SHALL BE NMC SCHEDULE 80 OR HDPE SCHEDULE 80 AND CARRY 1-1/2" X 6" INSULATED GROUNDING CONDUCTOR AS SHOWN IN THE PLAN, EXCEPT FOR BACK DETECTOR CONDUITS.
  - REMOVAL OF THE INPLACE SIGNAL SYSTEM IS INCIDENTAL.
  - CONTRACTOR SHALL COORDINATE ALL SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION WORK TO BE COMPLETED BY OTHERS AS PART OF THE PROJECT.

SYSTEM ID #: 21186  
 MASTER ID #: 21183  
 T.E. # 4610

Date Printed: 12/11/2008  
 WSB Filename: k:\01666-07\cad\plan\1666sp13.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: MAS  
 Plan By: AJW  
 Checked By: AJW  
 Approved By: AJW

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

*Anthony J. Winicki*  
 CERTIFIED BY: ANTHONY J. WINICKI, P.E.  
 LICENSED PROFESSIONAL ENGINEER - ANTHONY J. WINICKI, P.E.  
 DATE: 05/13/08 LIC. NO: 23128

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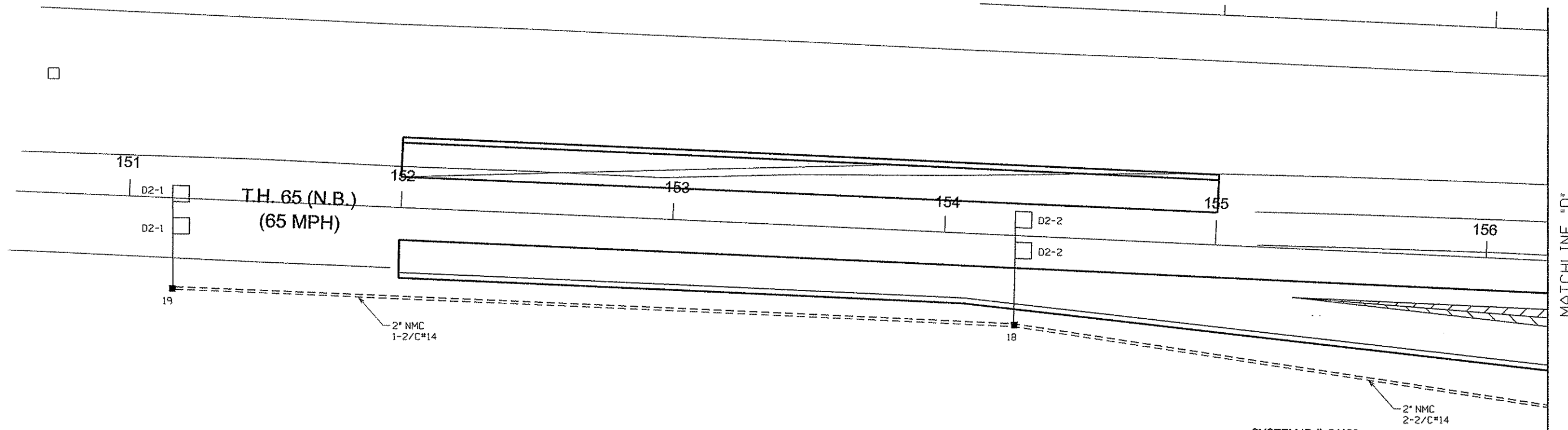
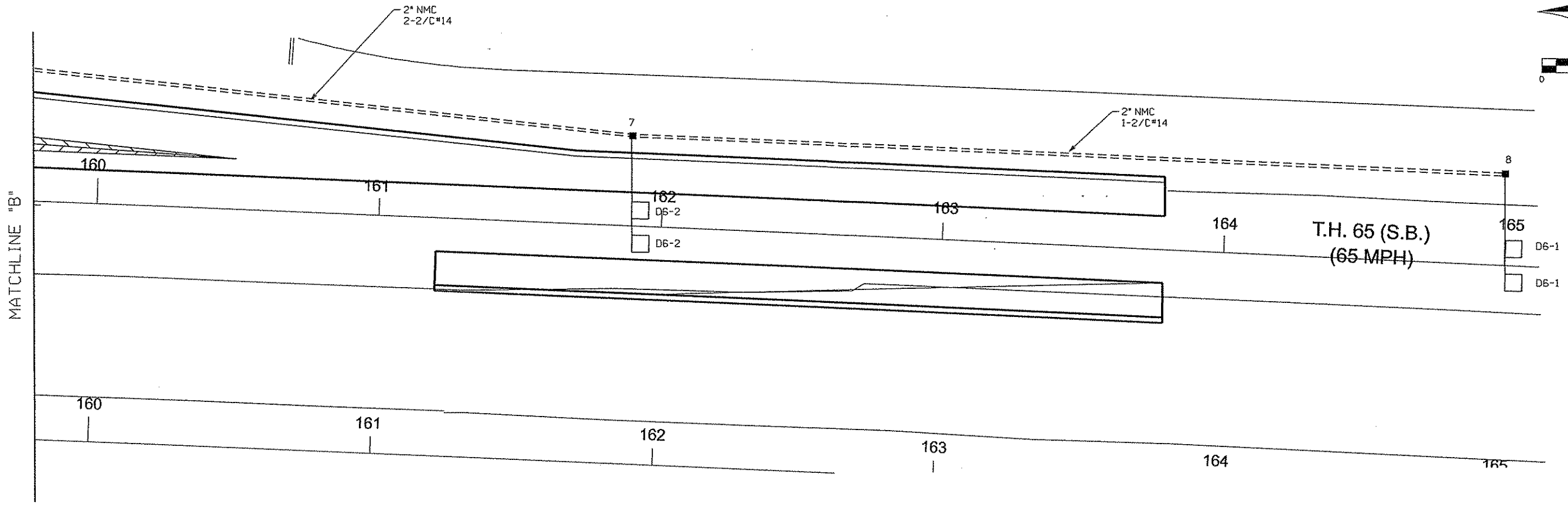
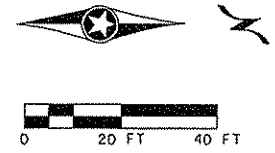
**CSAH 18 AT T.H. 65**

**Anoka County, Minnesota**

**ANOKA COUNTY HIGHWAY DEPARTMENT**

T.H. 65 & CSAH 18 SIGNAL-SYSTEM "A"  
**SIGNAL PLANS - INTERSECTION LAYOUT**  
 S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001

SHEET  
 79  
 OF  
 116  
 SHEETS



SYSTEM ID #: 21186  
 MASTER ID #: 21183  
 T.E. # 4610

Date Printed: 12/14/2008  
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NO.	DATE	BY	CHK	REVISIONS

Design By: MAS  
 Plan By: AJW  
 Checked By: AJW  
 Approved By: AJW

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

CERTIFIED BY: *Anthony J. Winiecki*  
 LICENSED PROFESSIONAL ENGINEER - ANTHONY J. WINIECKI, P.E.  
 DATE: 05/13/08 LIC. NO: 23128

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**ANOKA COUNTY**

**CSAH 18 AT T.H. 65**

Anoka County, Minnesota

ANOKA COUNTY HIGHWAY DEPARTMENT

T.H. 65 & CSAH 18 SIGNAL-SYSTEM "A"

**SIGNAL PLANS - INTERSECTION LAYOUT**

S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001

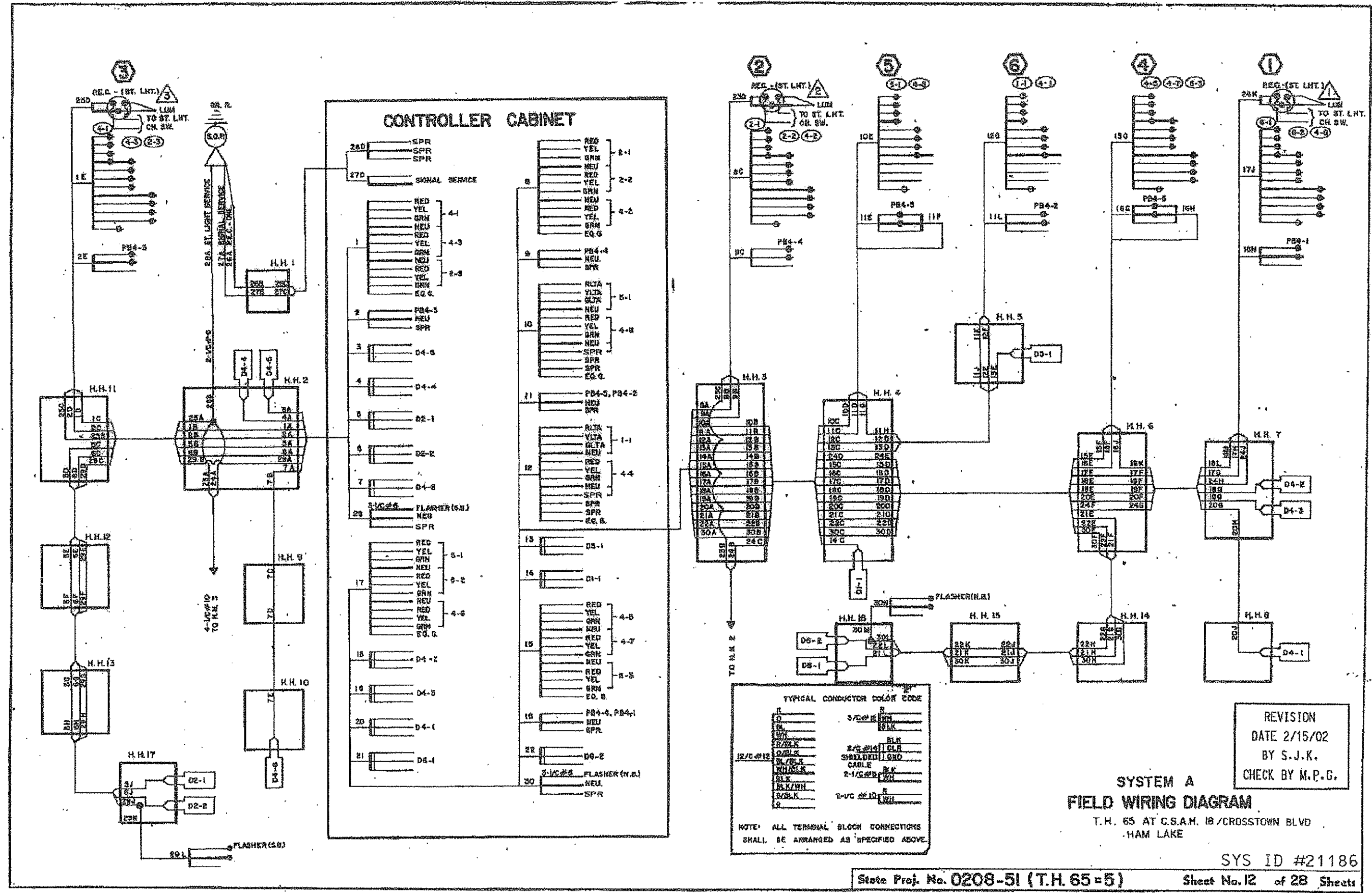
SHEET  
 80  
 OF  
 116  
 SHEETS







FOR INFORMATION ONLY



12/1/2008  
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NO.	DATE	BY	CHK	REVISIONS

Design By: MAS  
 Plan By: AJW  
 Checked By: AJW  
 Approved By: AJW

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

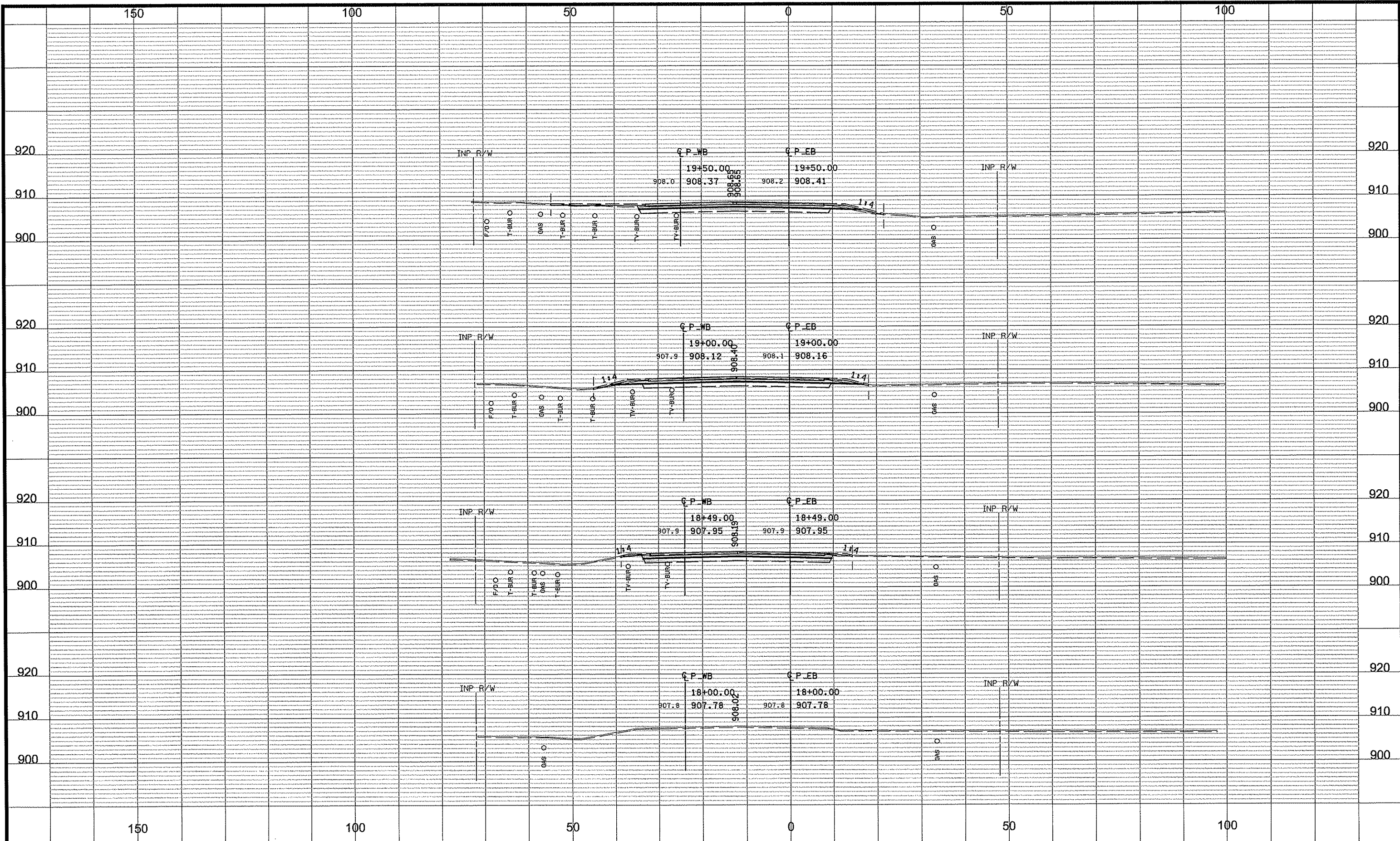
ANTHONY J. WINECKI, P.E.  
 LICENSED PROFESSIONAL ENGINEER  
 DATE: 05/13/08 LIC. NO: 23128

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 Anoka County, Minnesota

ANOKA COUNTY HIGHWAY DEPARTMENT  
 T.H. 65 & CSAH 18 SIGNAL-FOR INFORMATION ONLY  
**SIGNAL PLANS - WIRING LAYOUT**  
 S.P. 0208-115, S.P. 02-618-25, S.A.P. 197-020-001

SHEET 83 OF 116 SHEETS



NO	DATE	BY	CKD	APPR	REVISION

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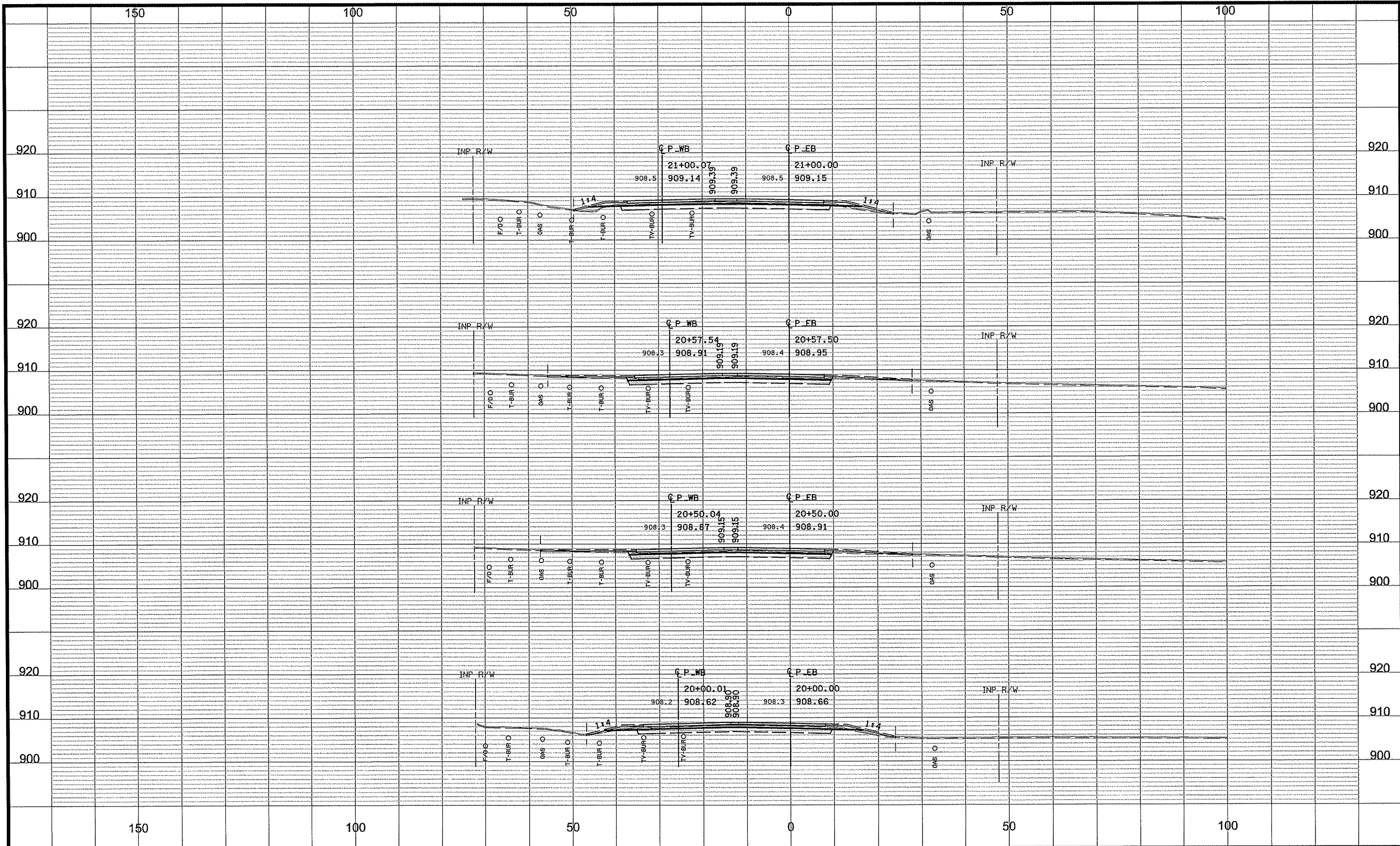


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 18+00.00 TO 19+50.00  
 Sheet 84 of 116 Sheets





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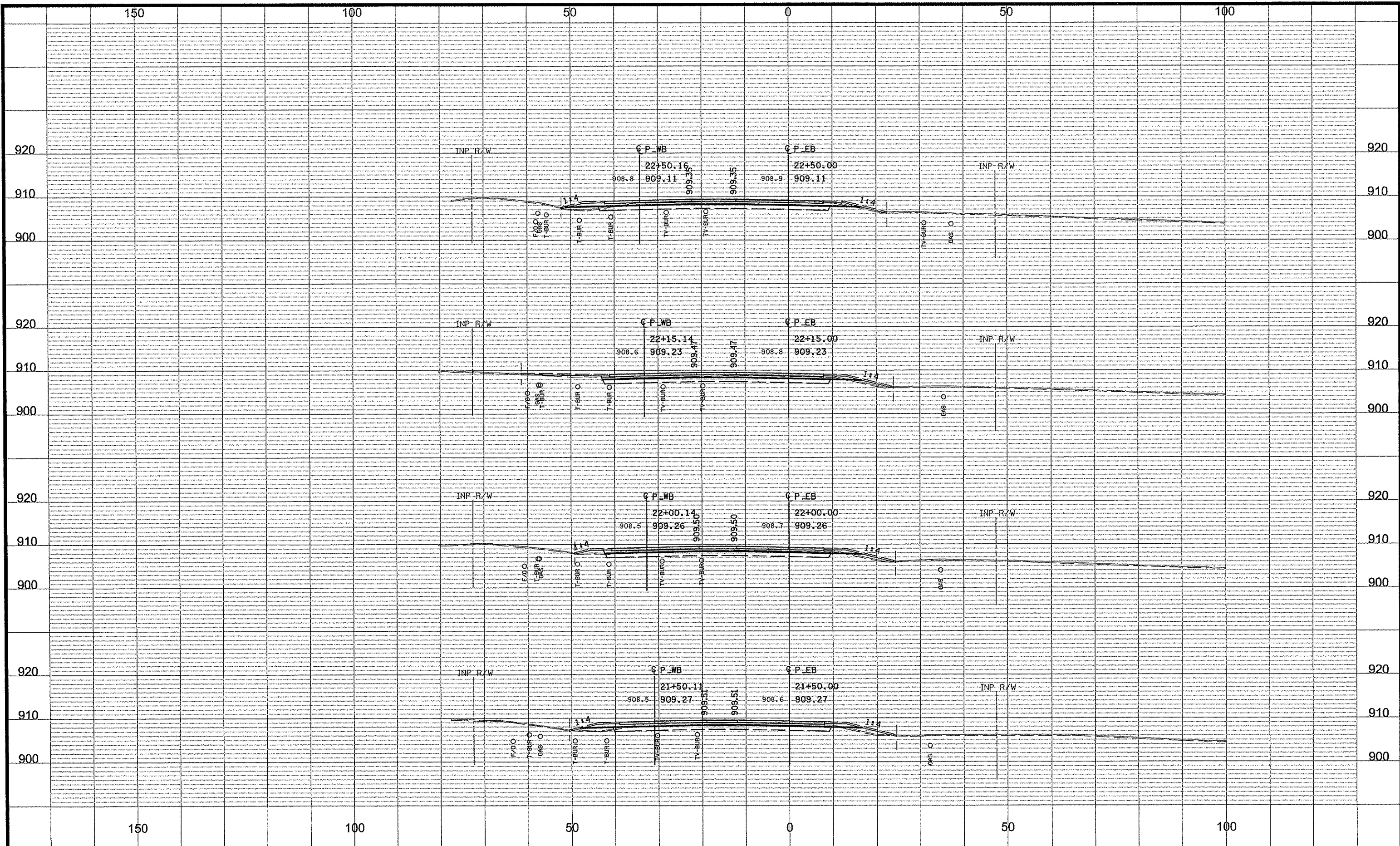
ANOKA COUNTY  
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STATE PROJECT NO. 0208-115 (TH 65)  
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 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 20+00.00 TO 21+00.00  
 Sheet 85 of 116 Sheets

NO	DATE	BY	CKD	APPR	REVISION





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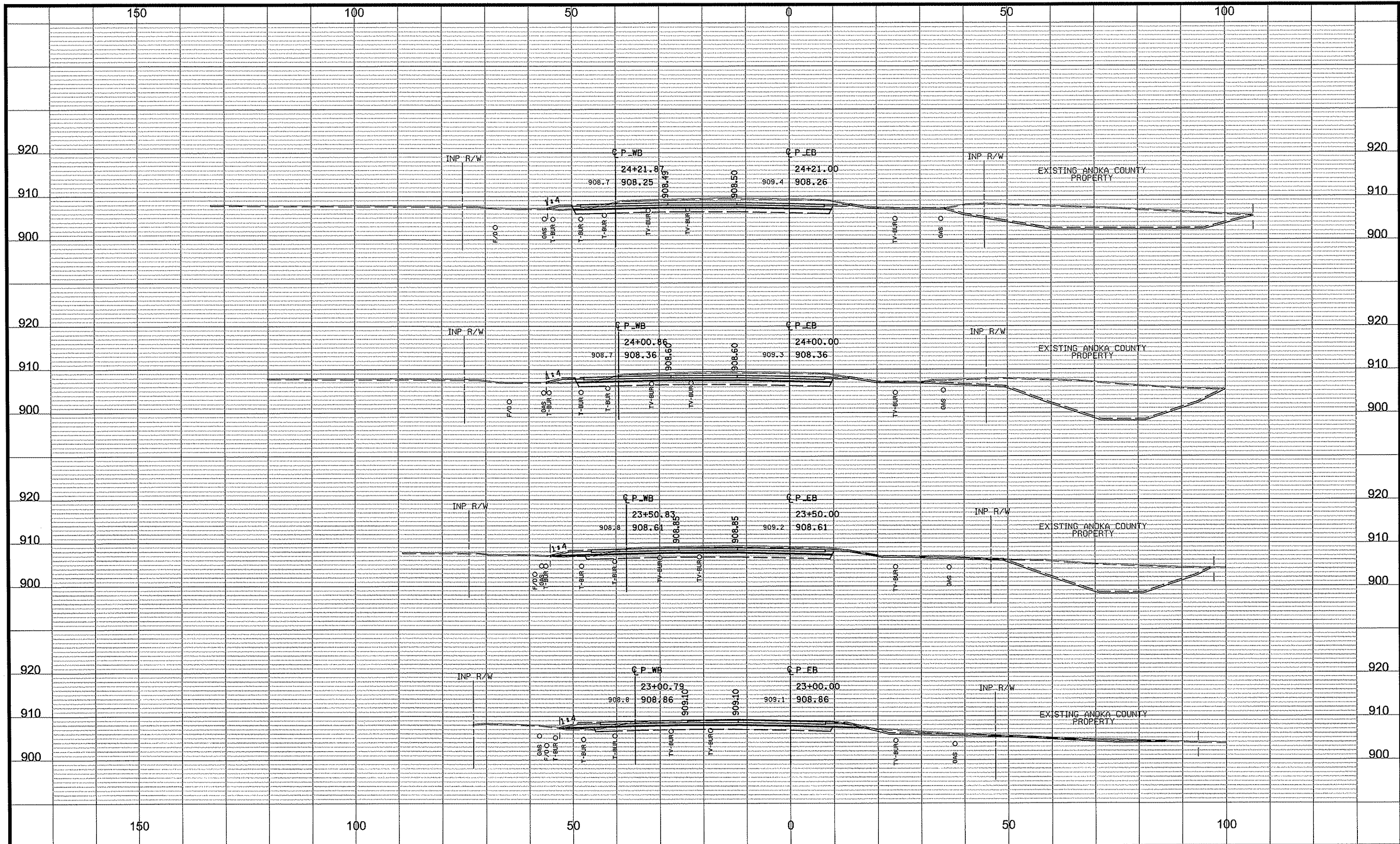
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ANOKA COUNTY  
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STATE PROJECT NO. 0208-115 (TH 65)  
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 STATE PROJECT NO.

CROSS SECTIONS  
 STA 21+50.00 TO 22+50.00  
 Sheet 86 of 116 Sheets



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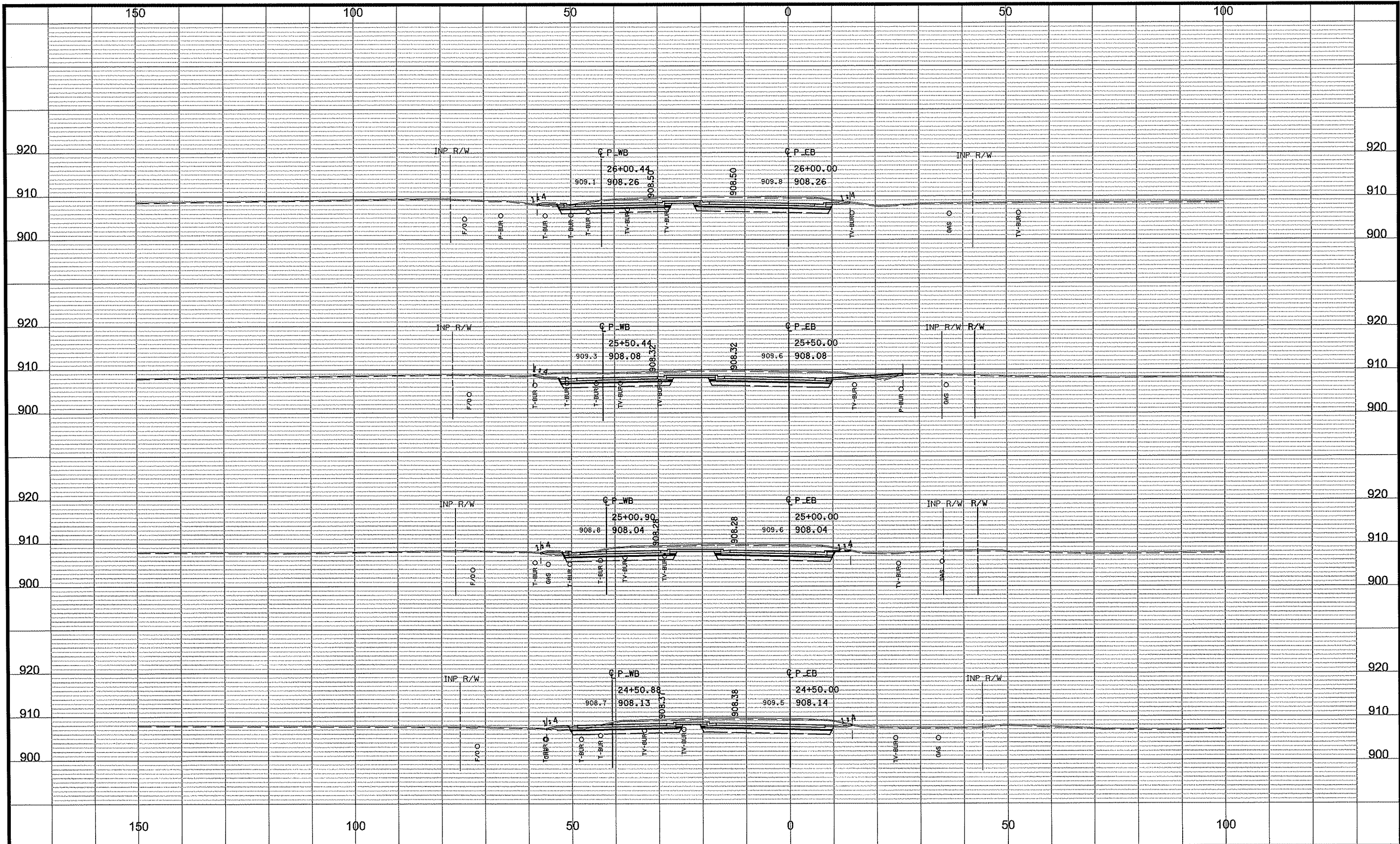


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STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO. \_\_\_\_\_

CROSS SECTIONS  
STA 23+00.00 TO 24+21.00  
Sheet 87 of 116 Sheets





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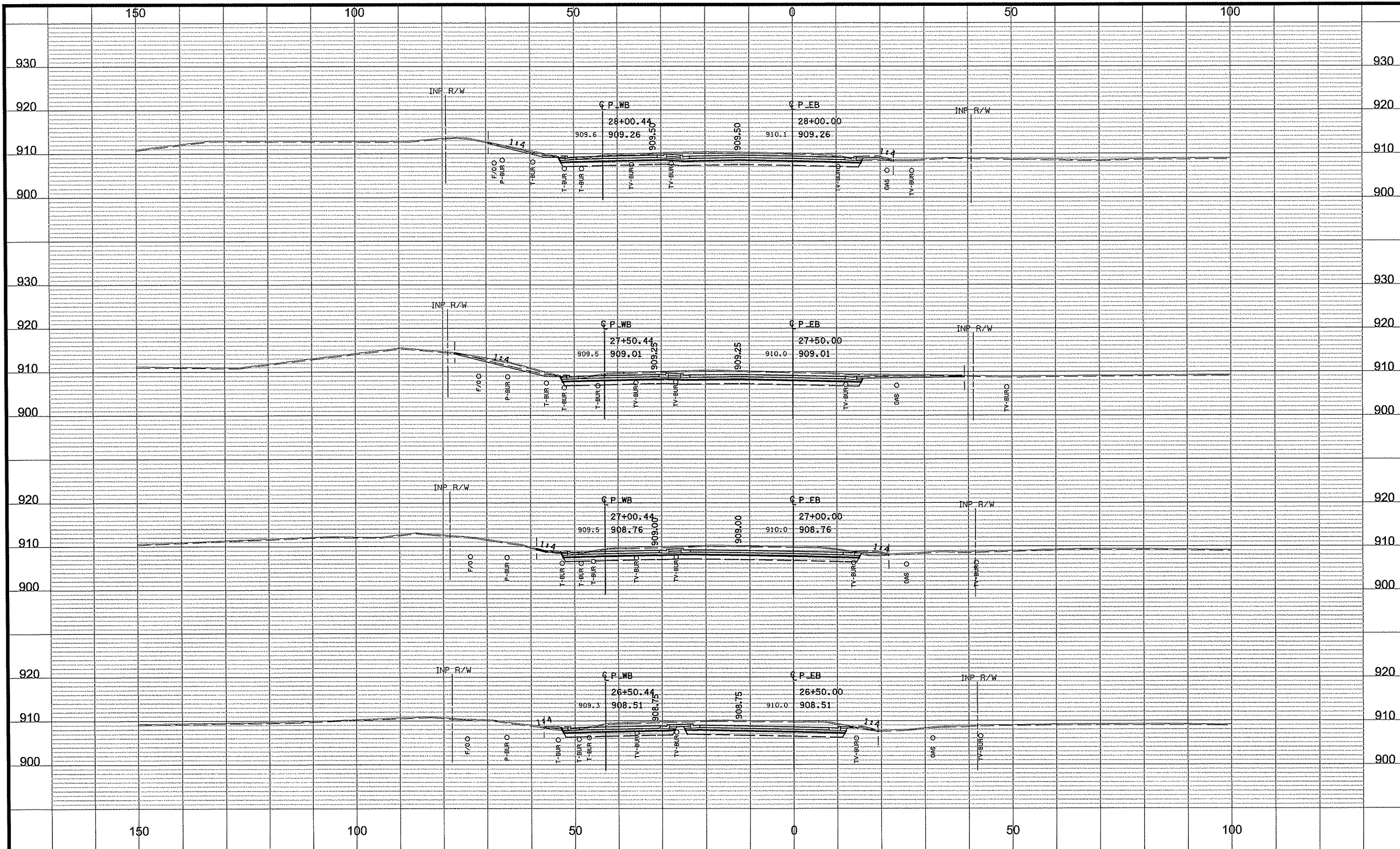


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STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
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CROSS SECTIONS  
 STA 24+50.00 TO 26+00.00  
 Sheet 88 of 116 Sheets

NO	DATE	BY	CKD	APPR	REVISION



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

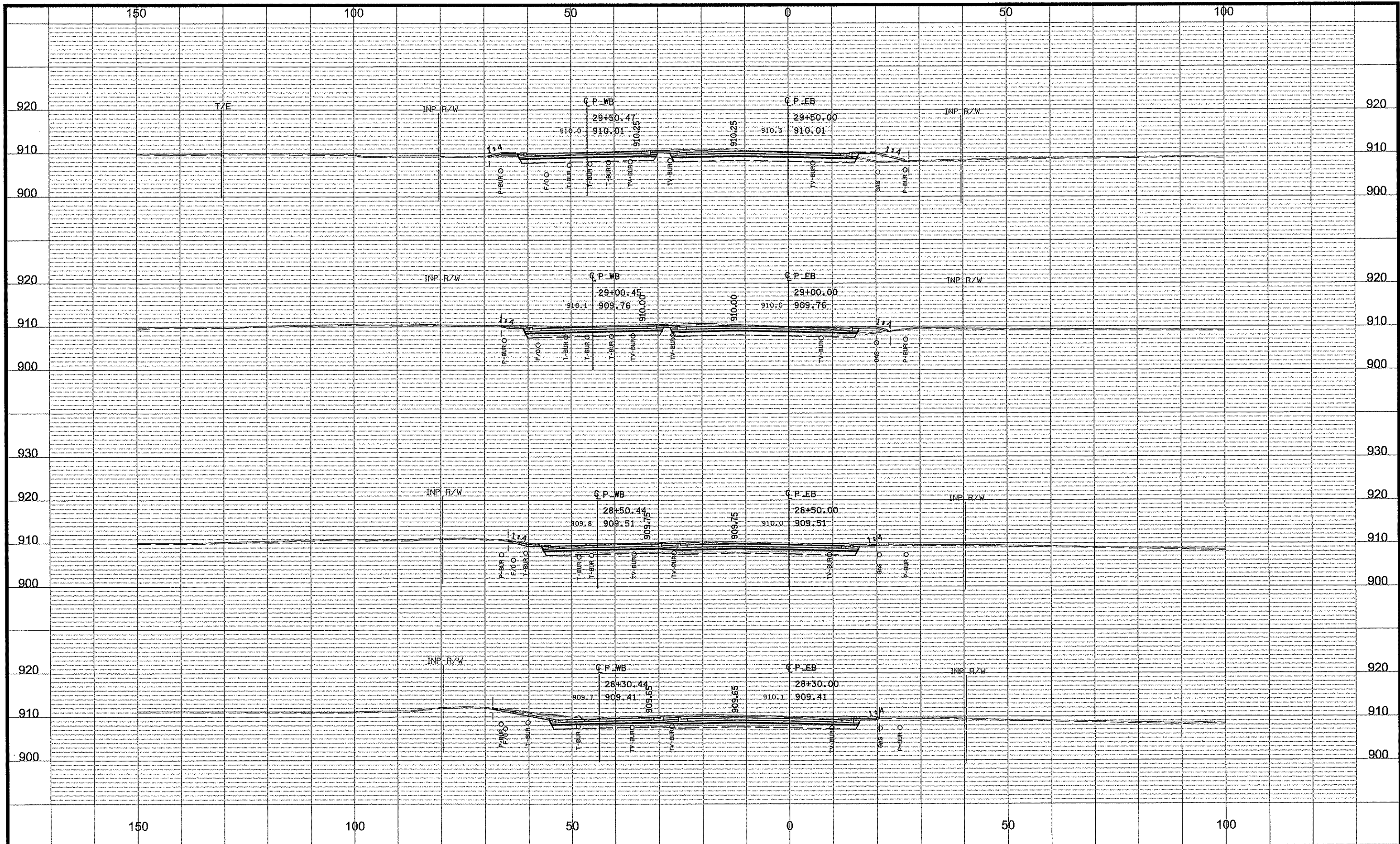
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 STATE PROJECT NO.

**CROSS SECTIONS**  
 STA 26+50.00 TO 28+00.00  
 Sheet 89 of 116 Sheets

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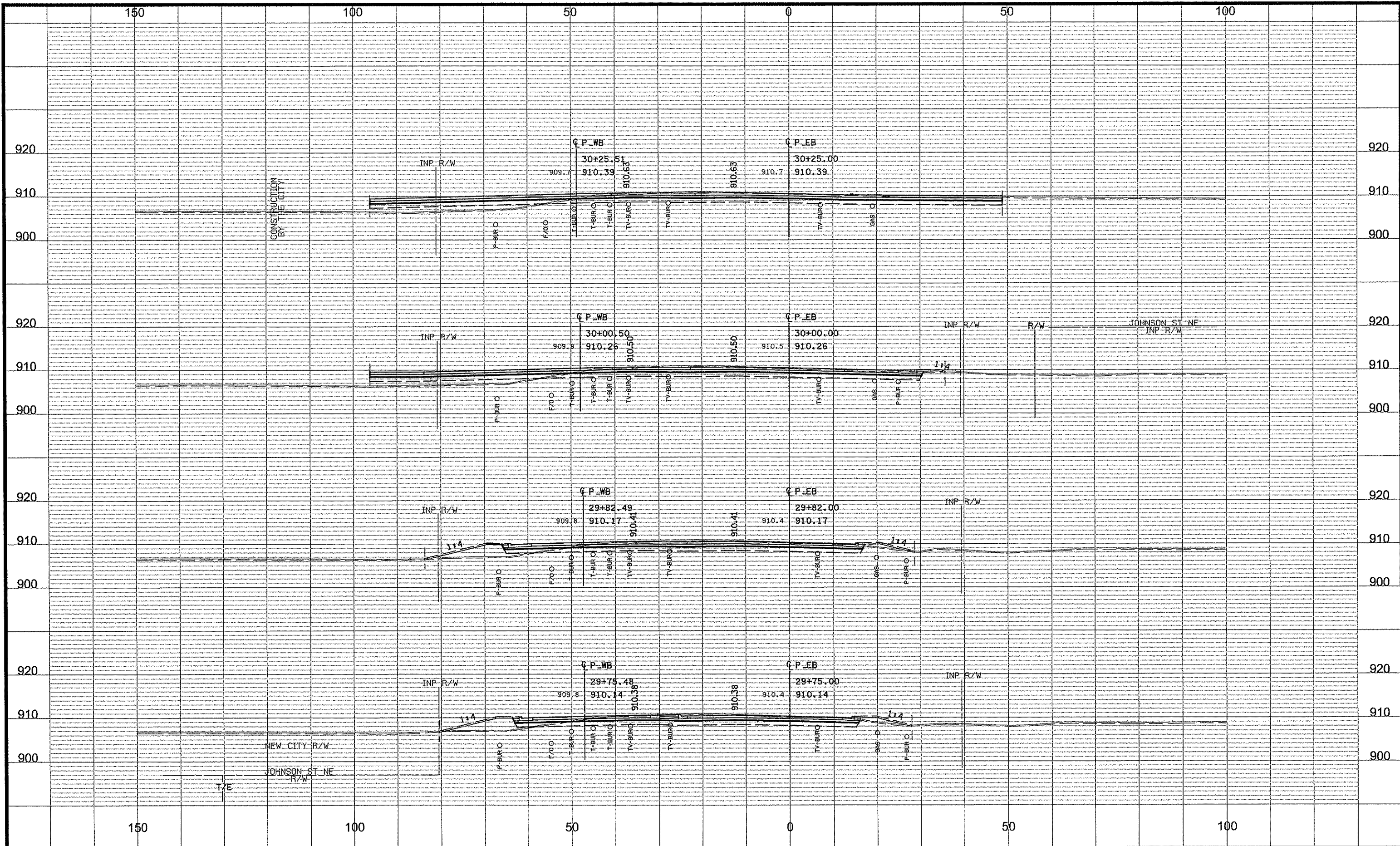
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ANOKA COUNTY  
HIGHWAY DEPT.

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 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

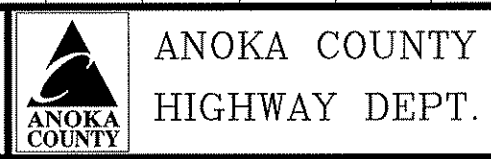
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 STA 28+30.00 TO 29+50.00  
 Sheet 90 of 116 Sheets



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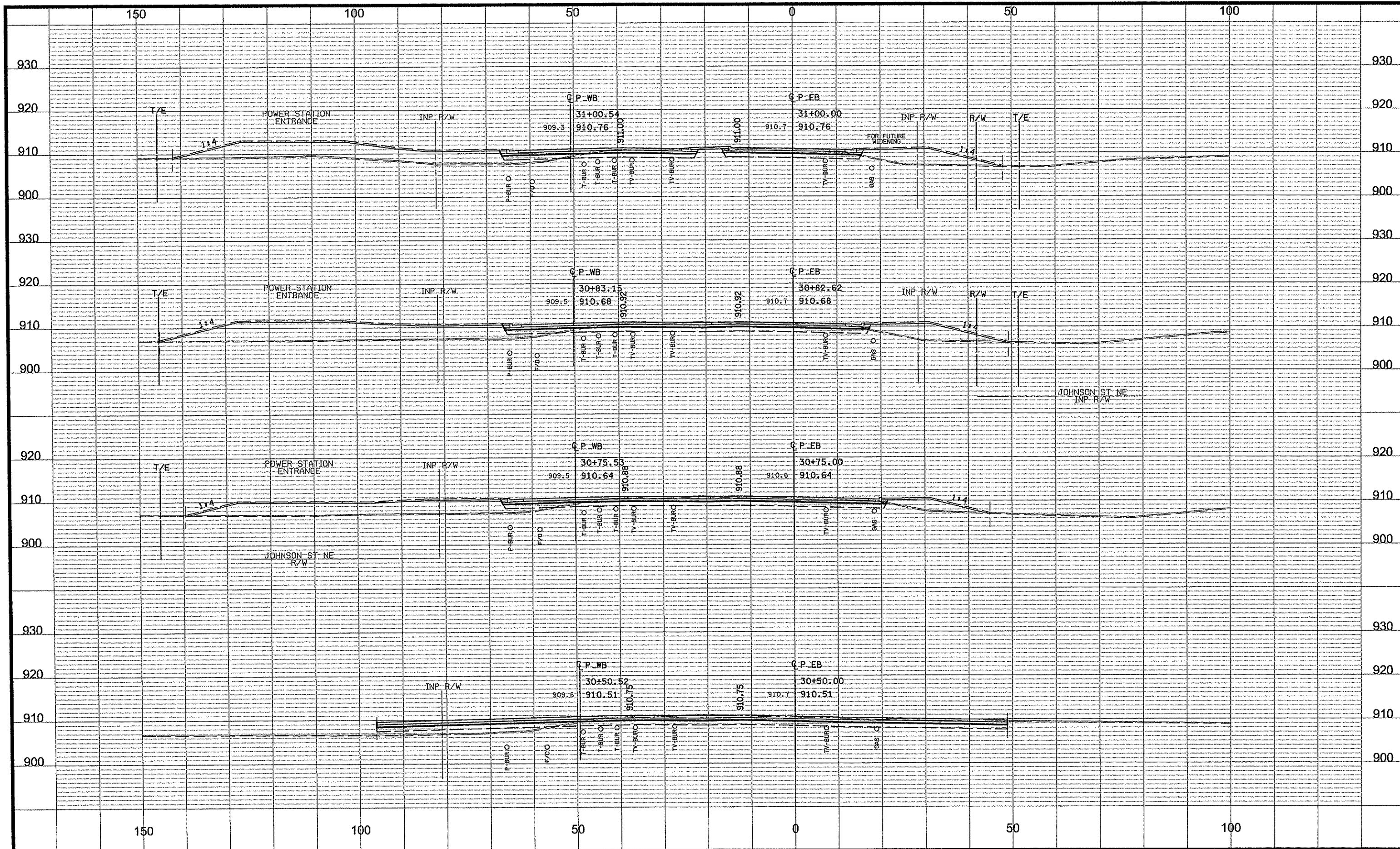
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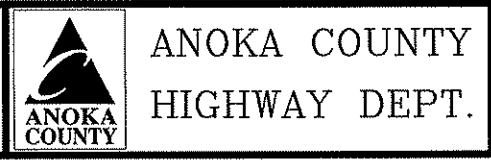
CROSS SECTIONS  
 STA 29+75.00 TO 30+25.00  
 Sheet 91 of 116 Sheets





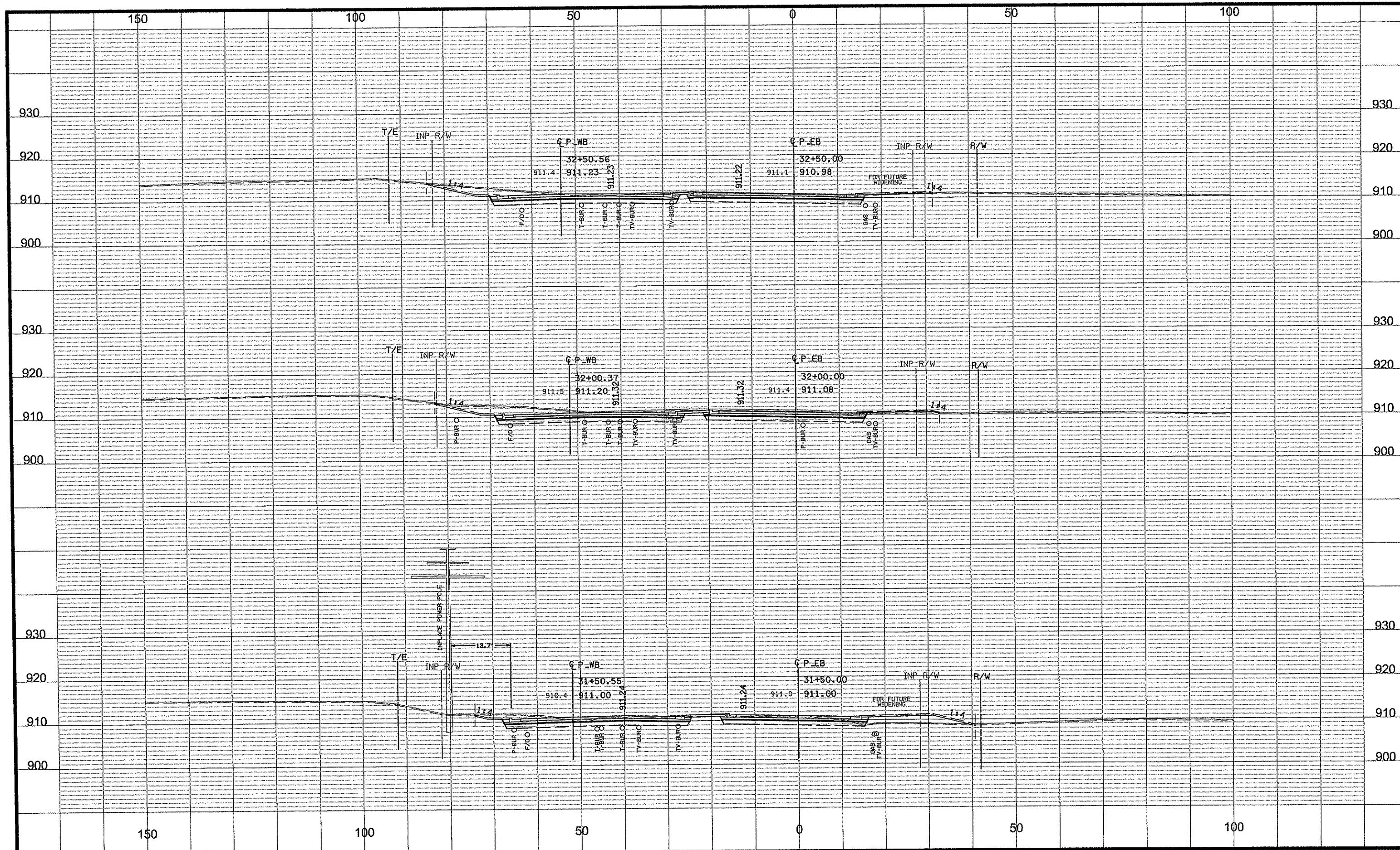
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CHECKED BY	MN	DATE	05/05/08



STATE PROJECT NO.	0208-115 (TH 65)
STATE PROJECT NO.	02-618-25
STATE AID PROJECT NO.	197-020-001
STATE PROJECT NO.	

CROSS SECTIONS	
STA	30+50.00 TO 31+00.00
Sheet	92 of 116 Sheets



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NO	DATE	BY	CKD	APPR	REVISION

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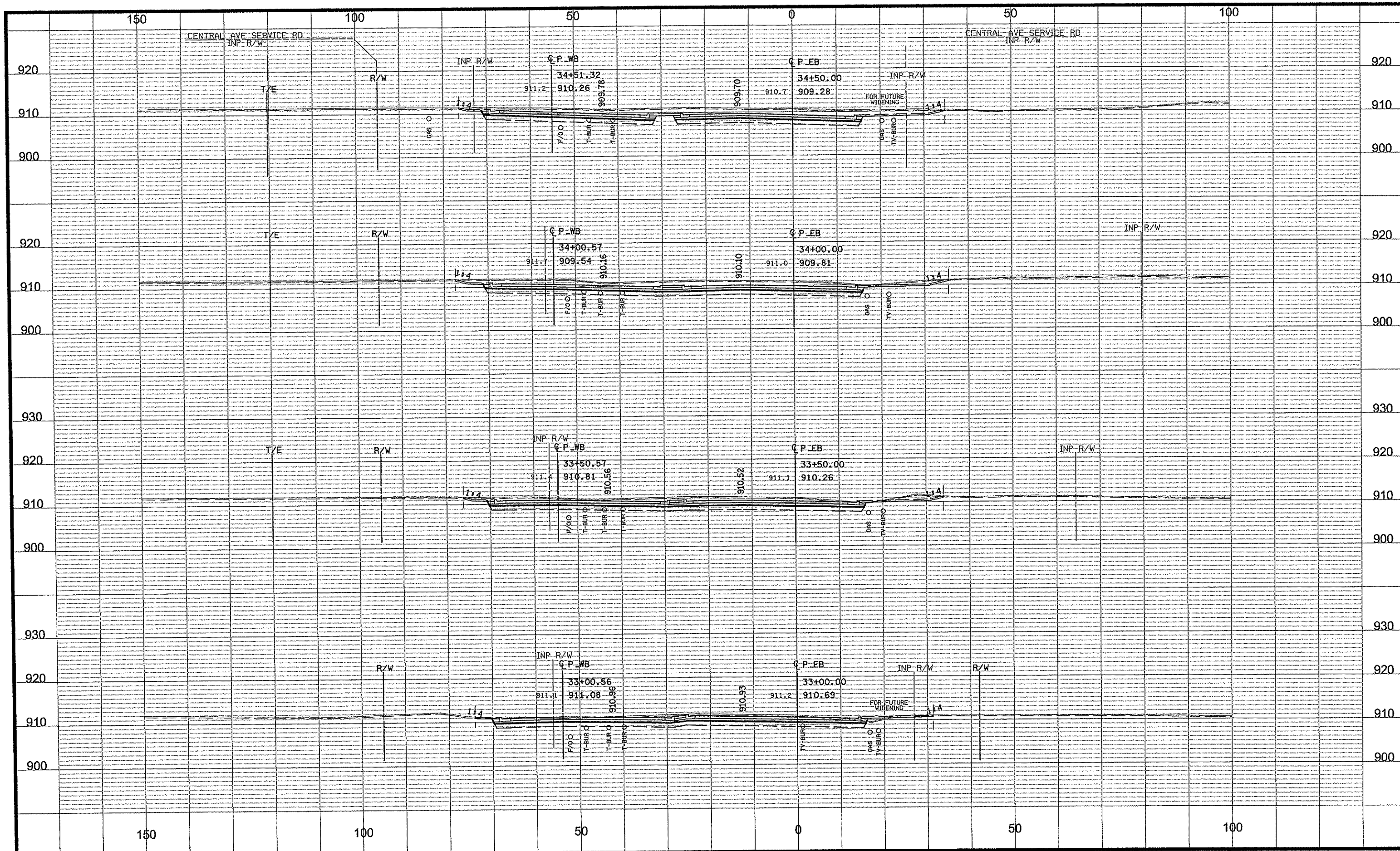


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 31+50.00 TO 32+50.00  
 Sheet 93 of 116 Sheets





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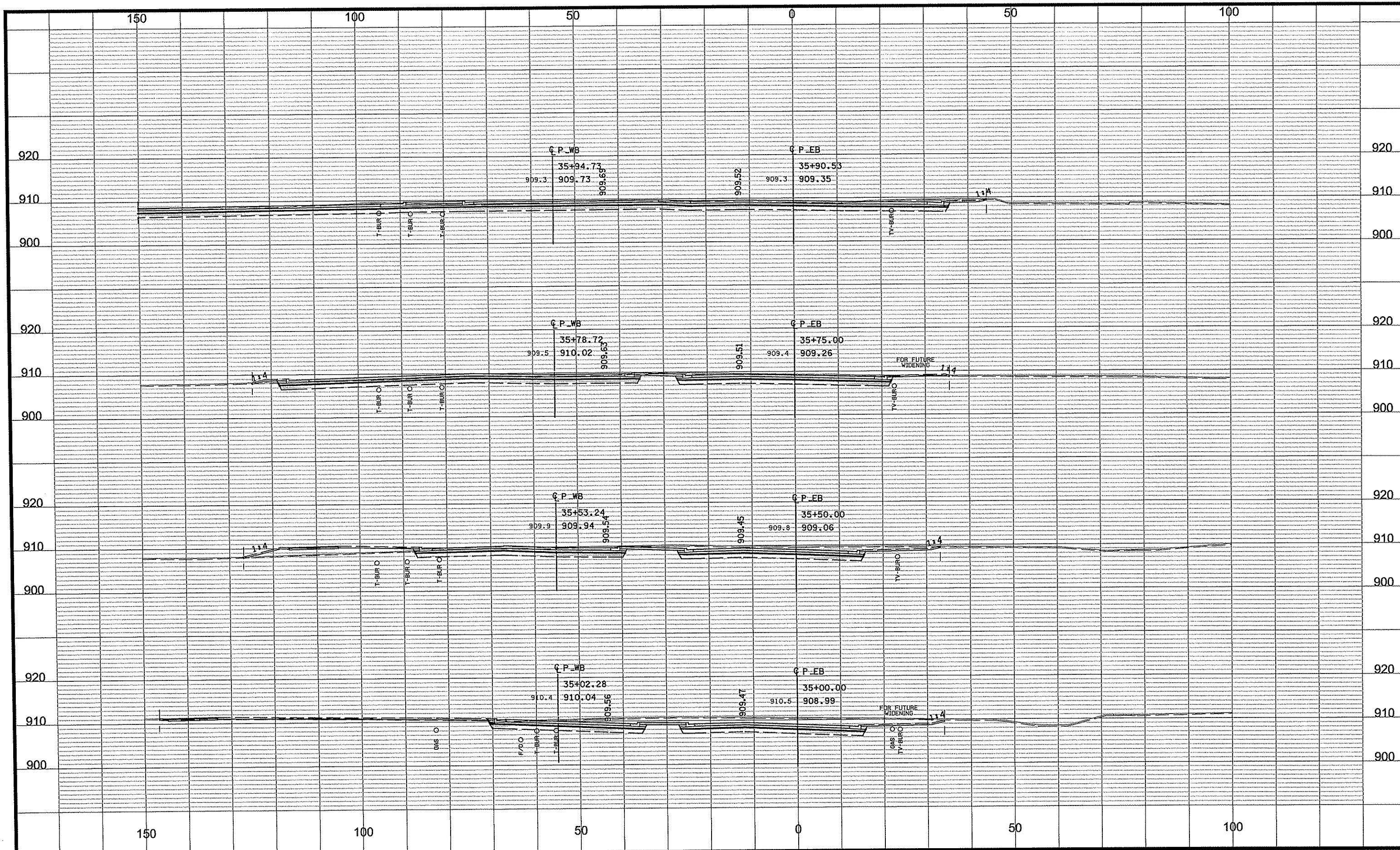
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**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
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**CROSS SECTIONS**  
 STA 33+00.00 TO 34+50.00  
 Sheet 94 of 116 Sheets



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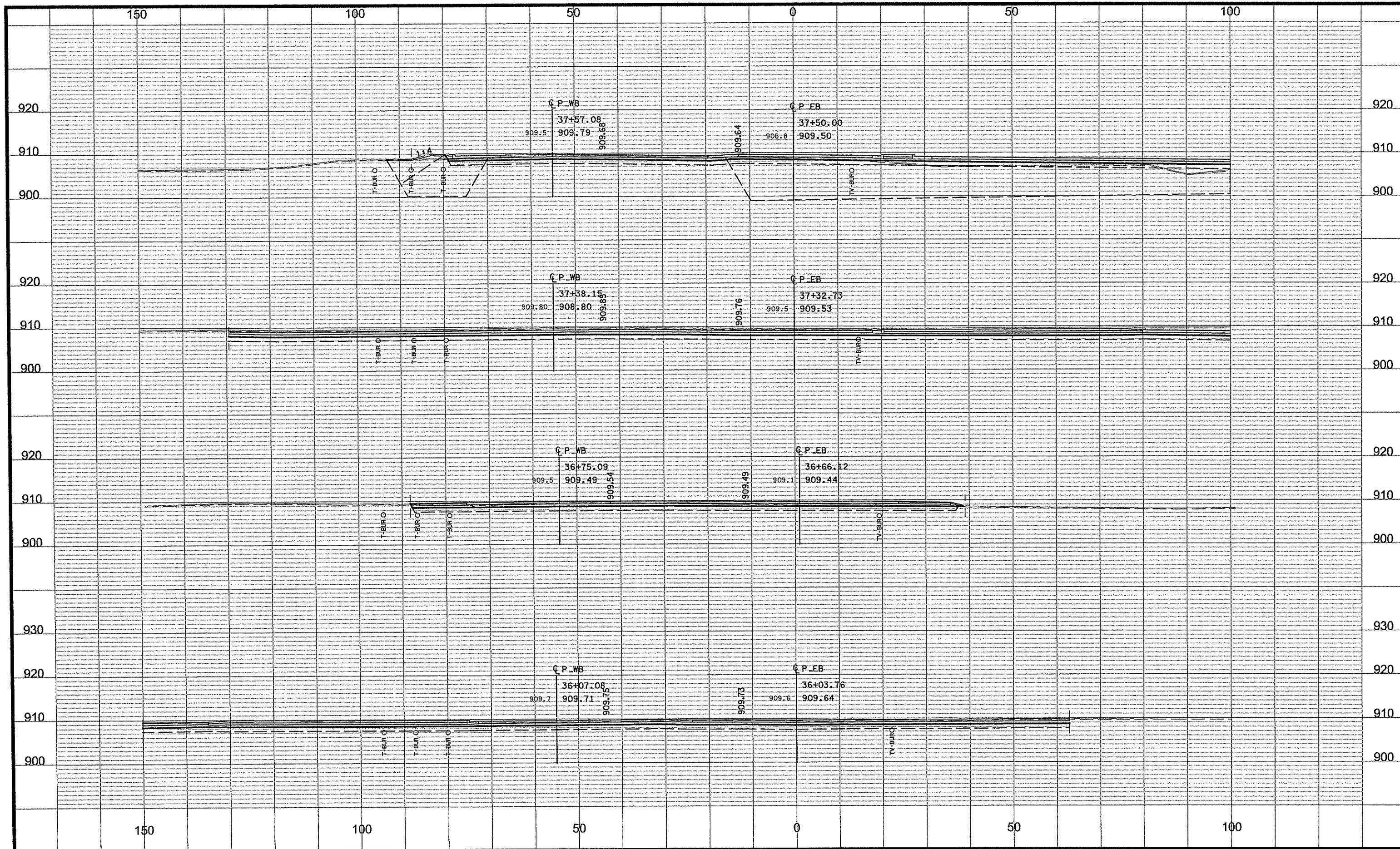


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
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 STATE PROJECT NO.

**CROSS SECTIONS**  
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 Sheet 95 of 116 Sheets

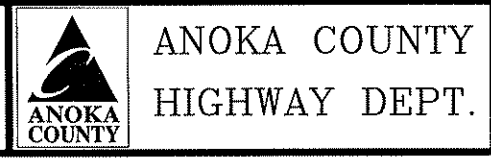




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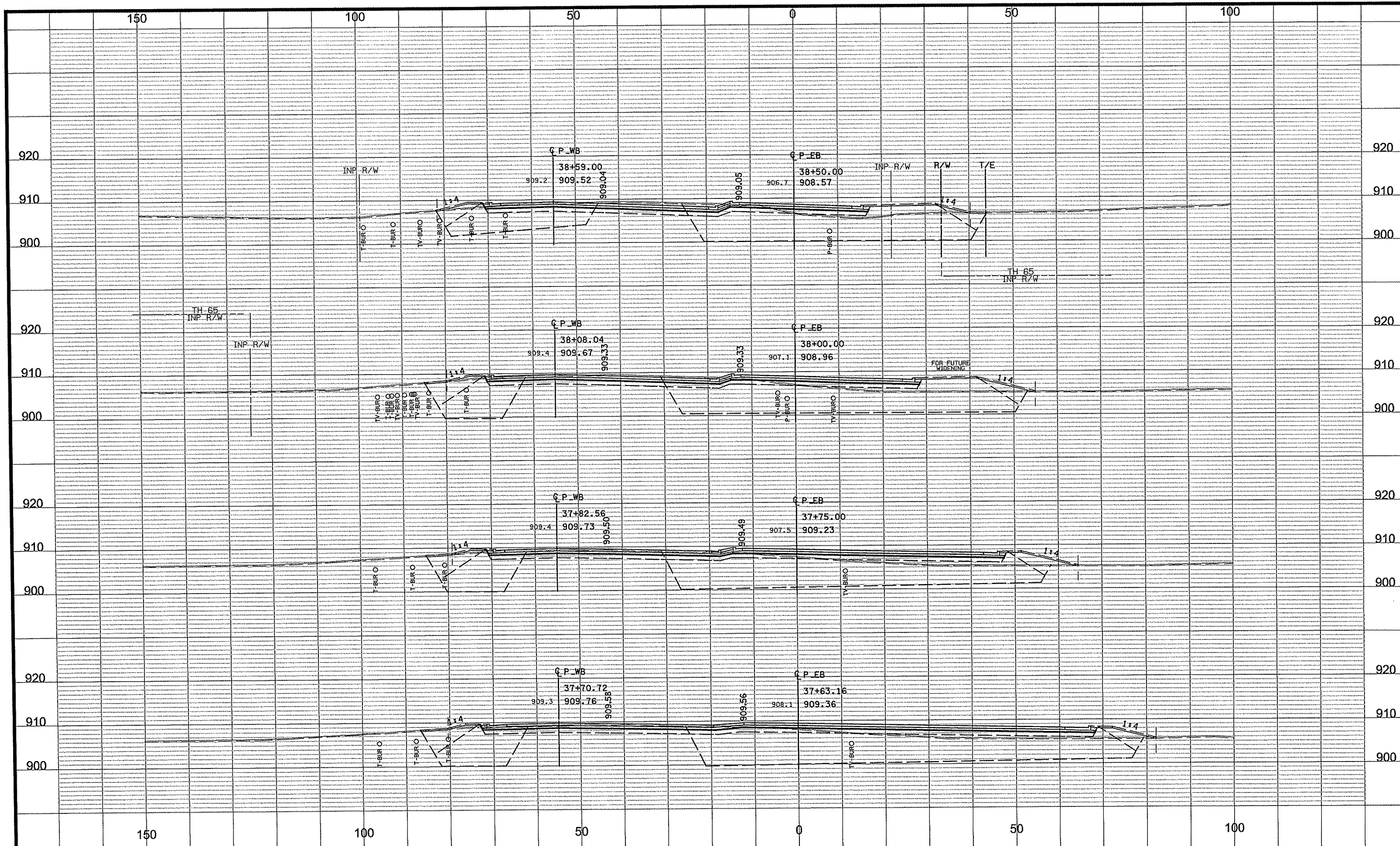
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STATE PROJECT NO. 0208-115 (TH 65)  
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 STATE PROJECT NO.

CROSS SECTIONS  
 STA 36+03.76 TO 37+50.00  
 Sheet 96 of 116 Sheets



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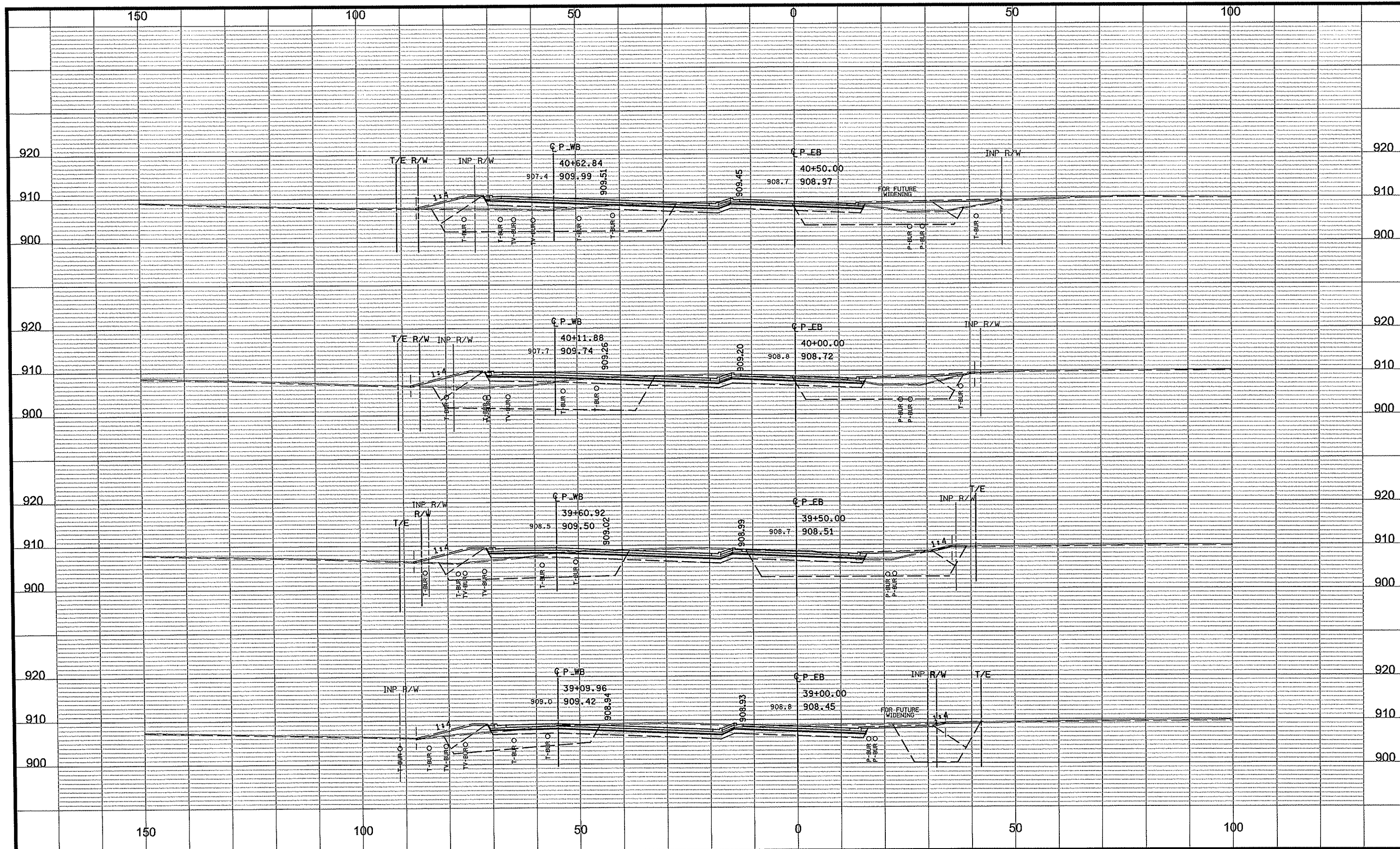
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 STATE PROJECT NO.

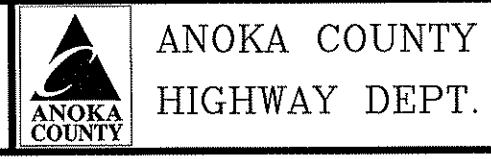
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 Sheet 97 of 116 Sheets





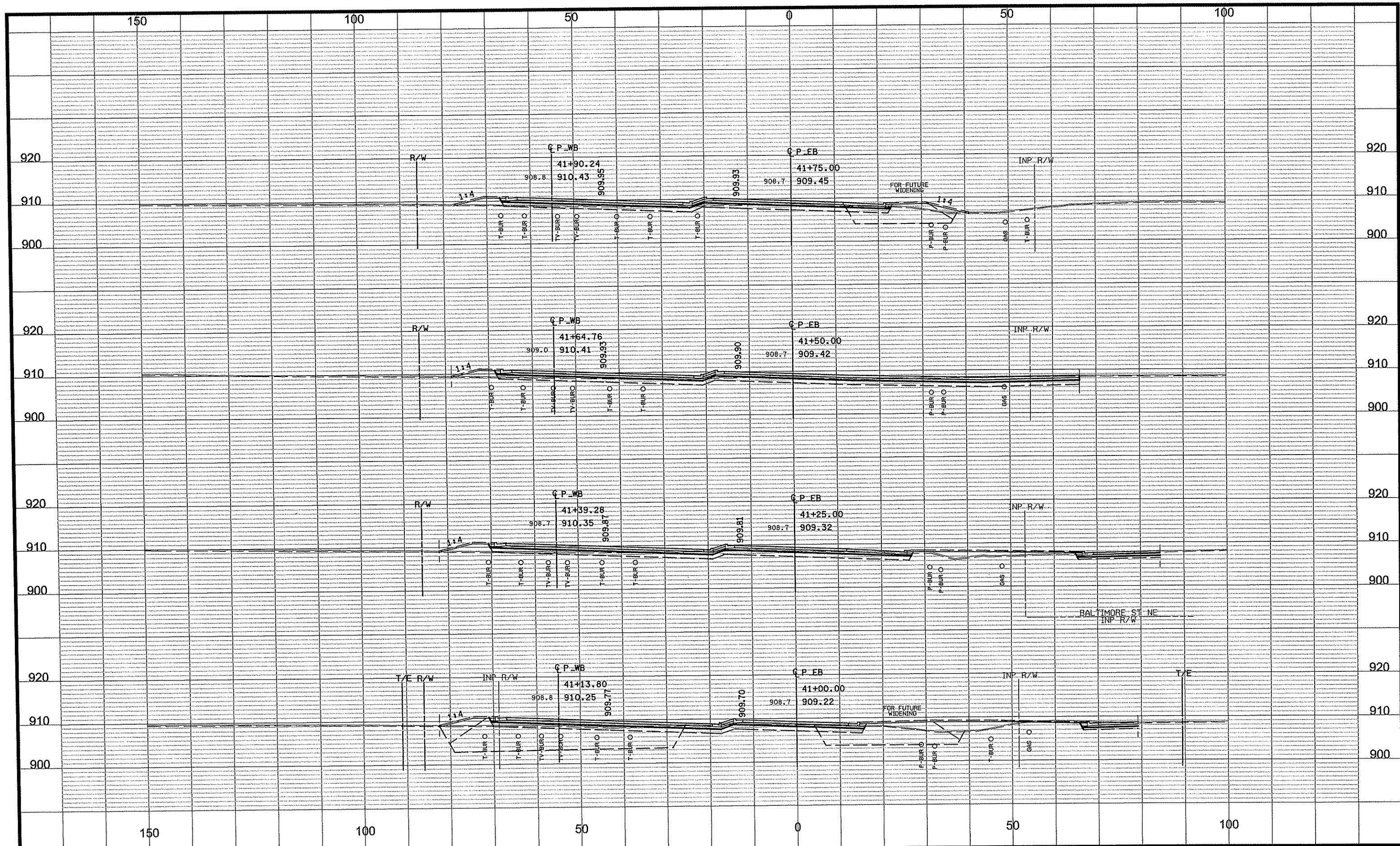
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STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 39+00.00 TO 40+50.00  
 Sheet 98 of 116 Sheets



1	09/22/08	EJ	MN	CK	UPDATED CROSS SECTIONS FOR REVISED SHOULDER WIDTH AT CSAH 48 WEST BOUND LANE.
2	11/19/2008	EJ	MN	CK	DELETED BITUMINOUS BIKE PATH FROM CROSS SECTIONS.
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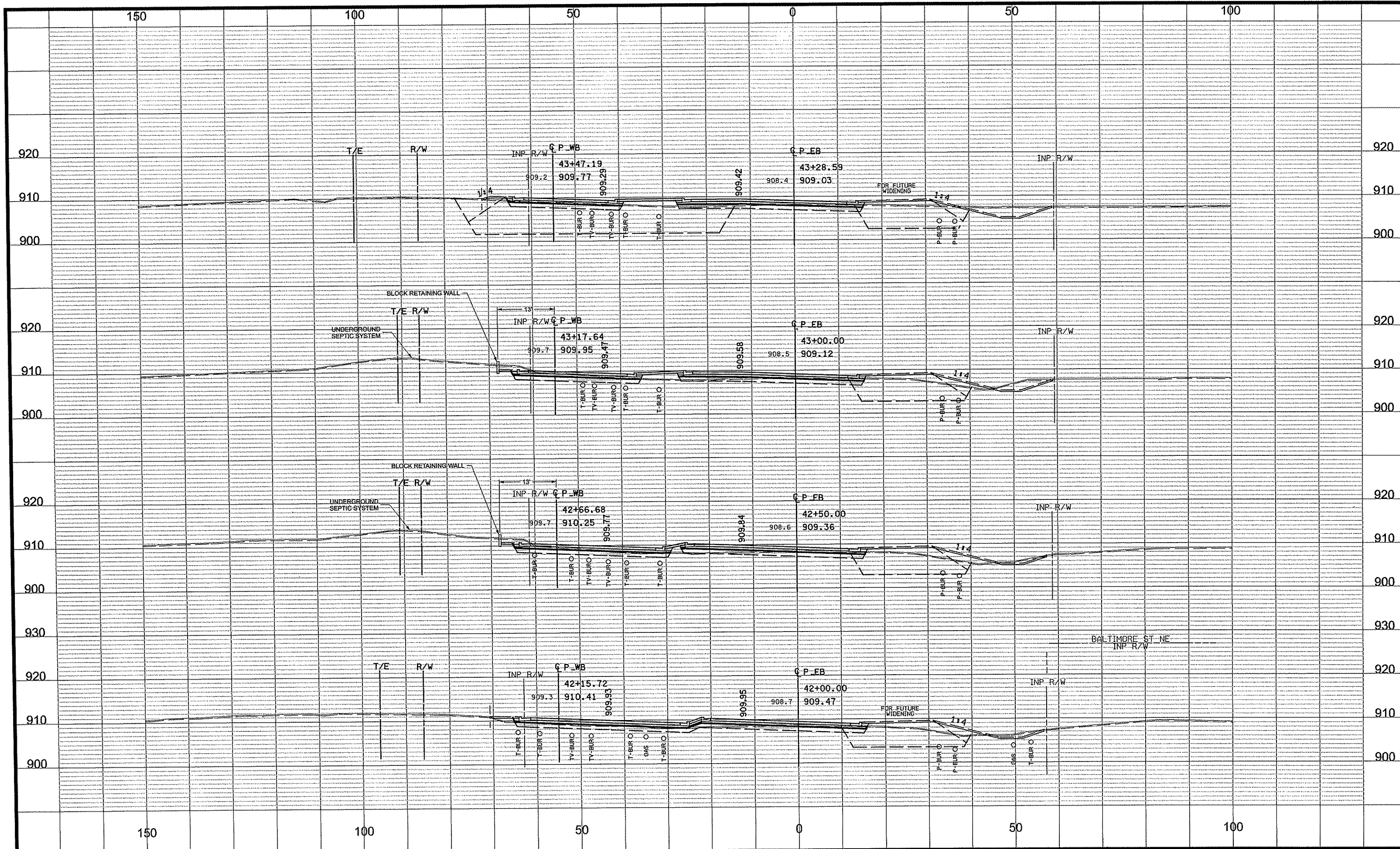


ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 41+00.00 TO 41+75.00  
 Sheet 99 of 116 Sheets





1	05/03/2008	EJ	MN	CK	UPDATED CROSS SECTIONS FOR REVISED SHOULDER WIDTH AT CSAH 18 WEST BOUND LANE.
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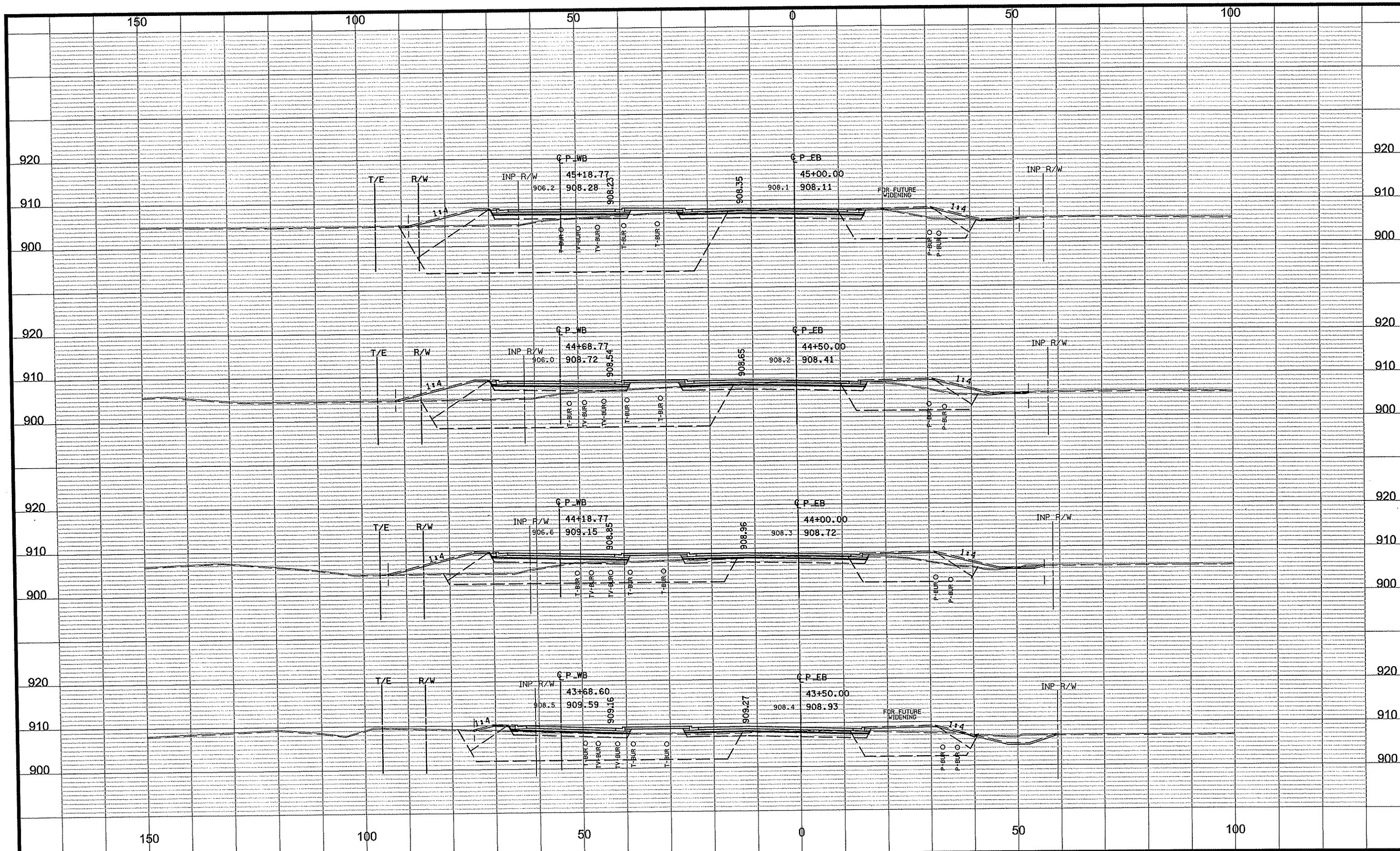
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ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 42+00.00 TO 43+28.59  
 Sheet 100 of 116 Sheets



1	09/02/2008	EJ	MN	CK	UPDATED CROSS SECTIONS FOR REVISED SHOULDER WIDTH AT CSAH 18 WEST BOUND LANE.
2	11/10/2008	EJ	MN	CK	DELETED BRUMHOUSS BIKE PATH FROM CROSS SECTIONS.
NO	DATE	BY	CKD	APPR	REVISION

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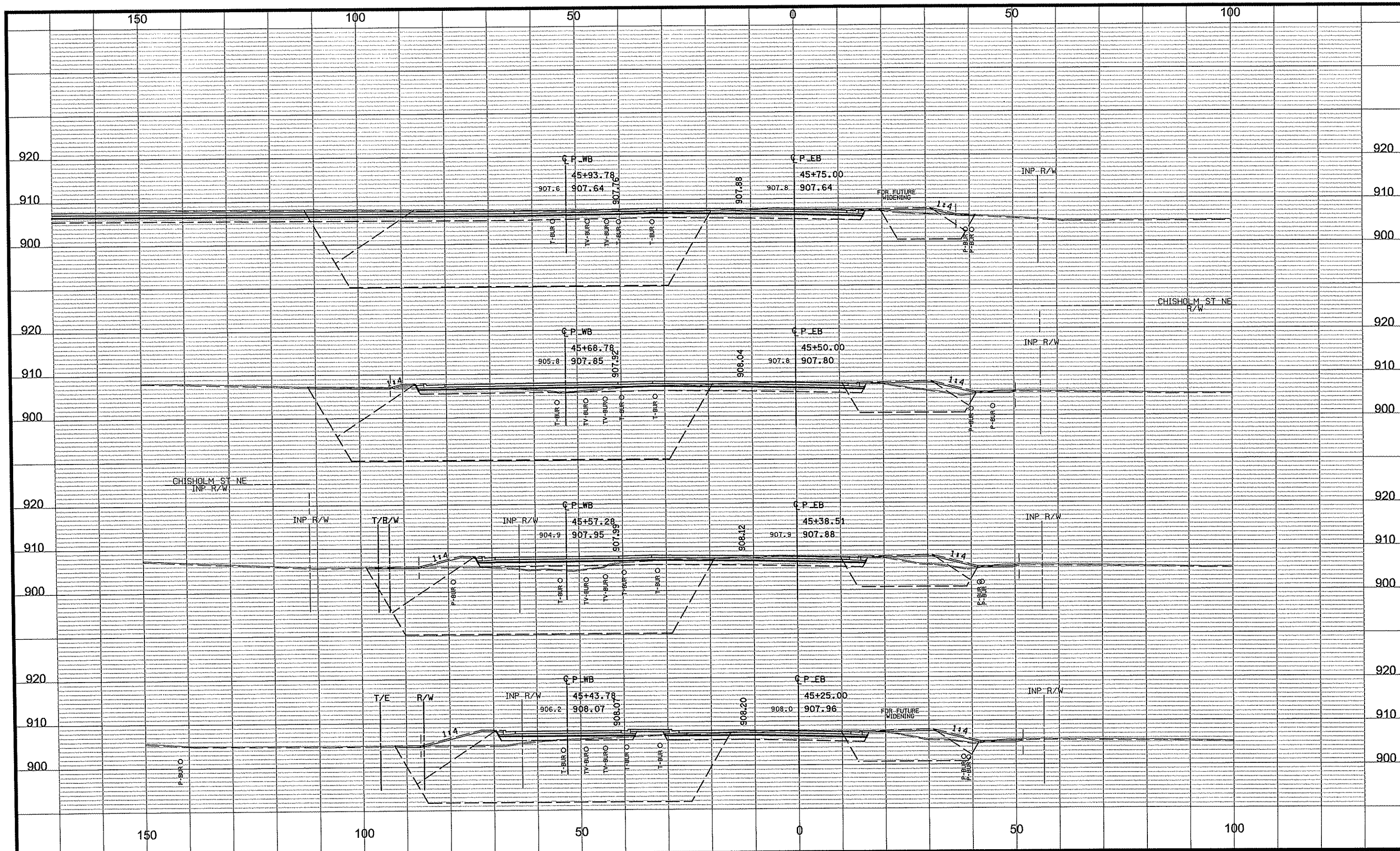


ANOKA COUNTY  
 HIGHWAY DEPT.

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 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

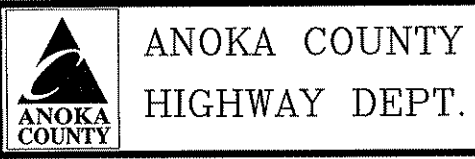
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 STA 43+50.00 TO 45+00.00  
 Sheet 101 of 116 Sheets





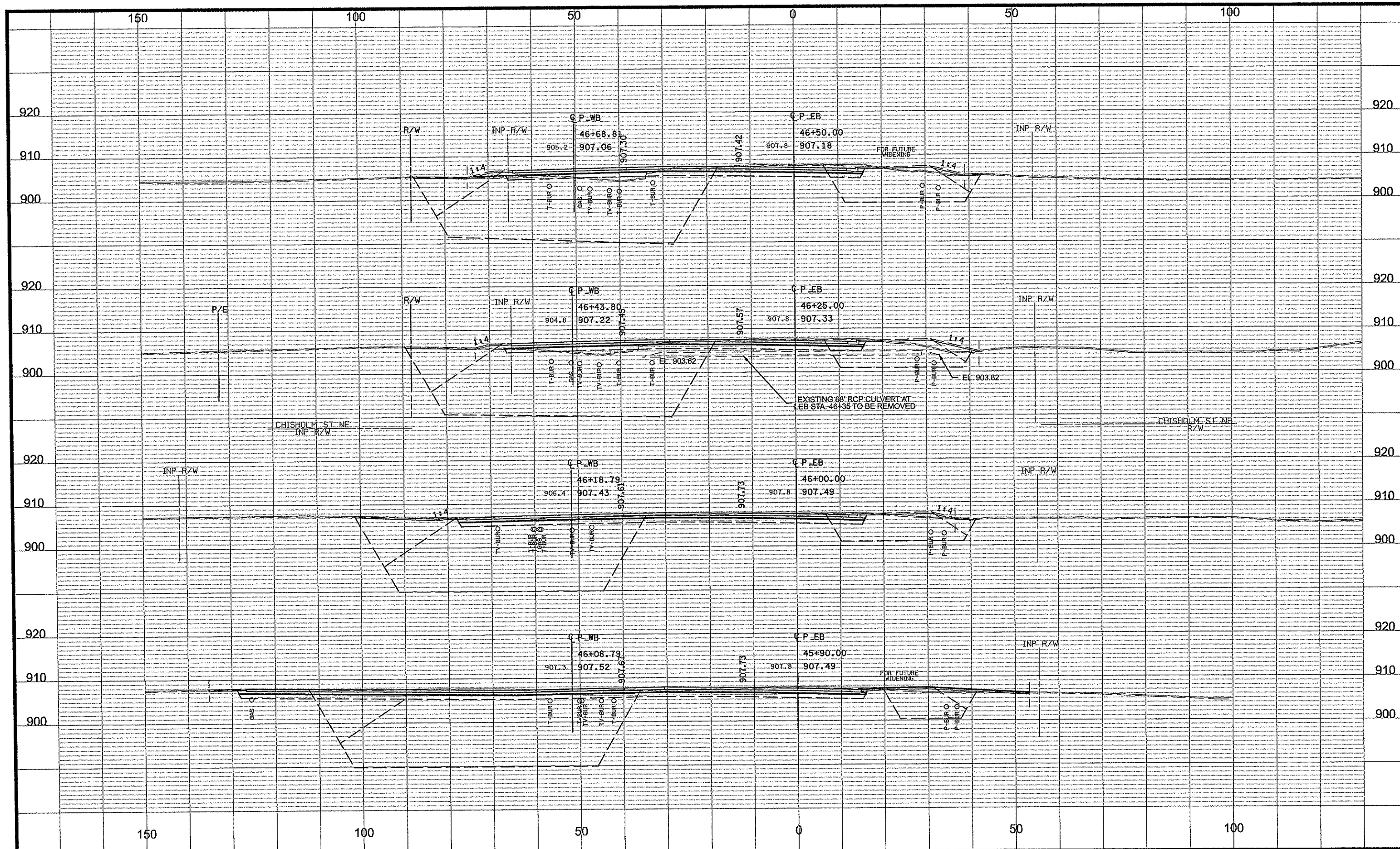
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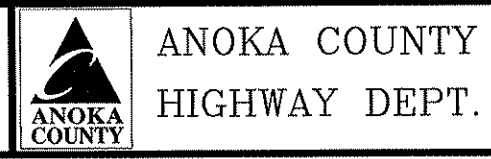
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 STATE PROJECT NO.

CROSS SECTIONS  
 STA 45+25.00 TO 45+75.00  
 Sheet 102 of 116 Sheets



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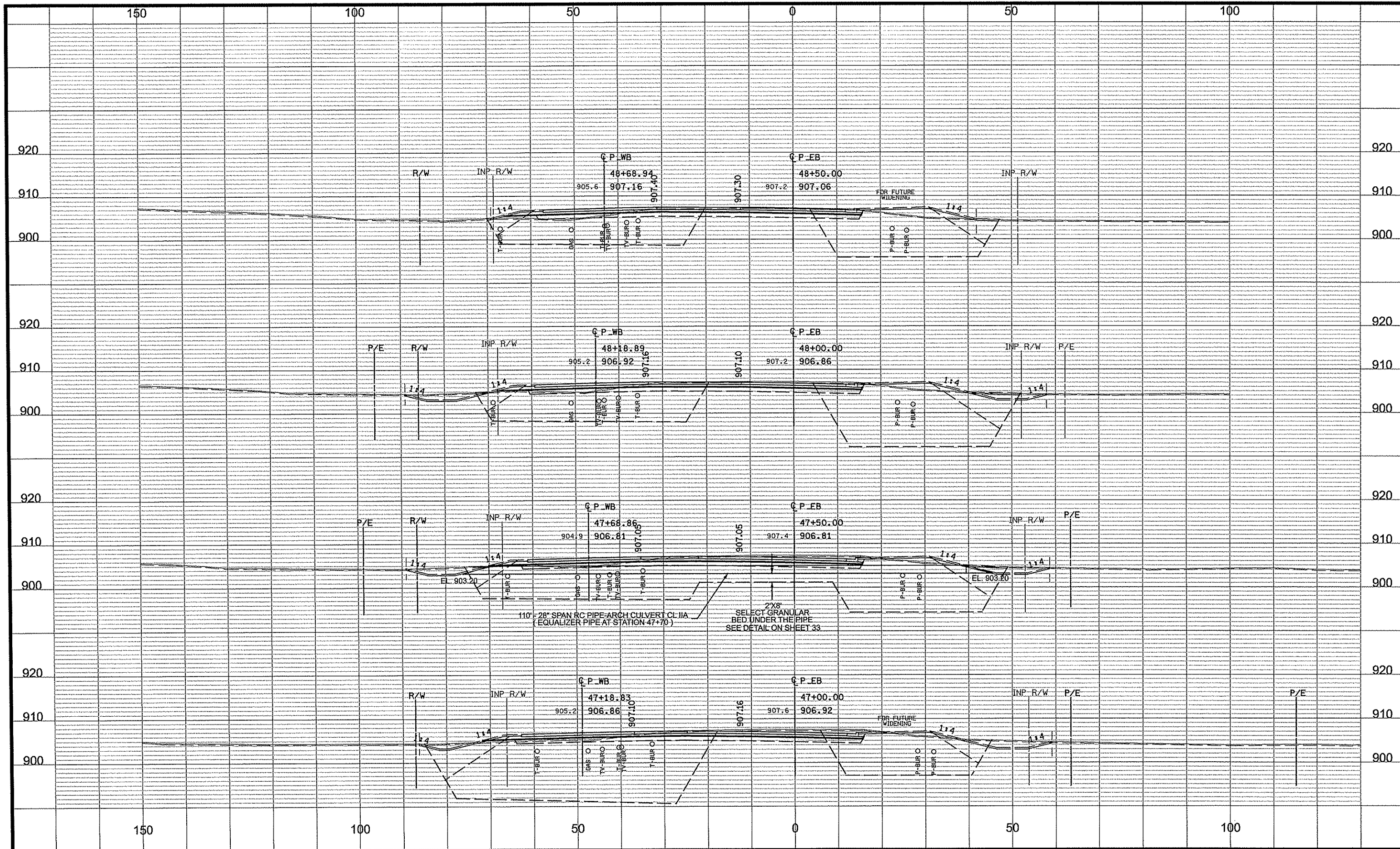
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STATE PROJECT NO. 0208-115 (TH 65)  
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 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

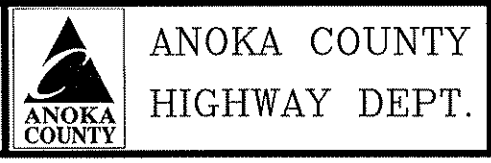
CROSS SECTIONS  
 STA 45+90.00 TO 46+50.00  
 Sheet 103 of 116 Sheets





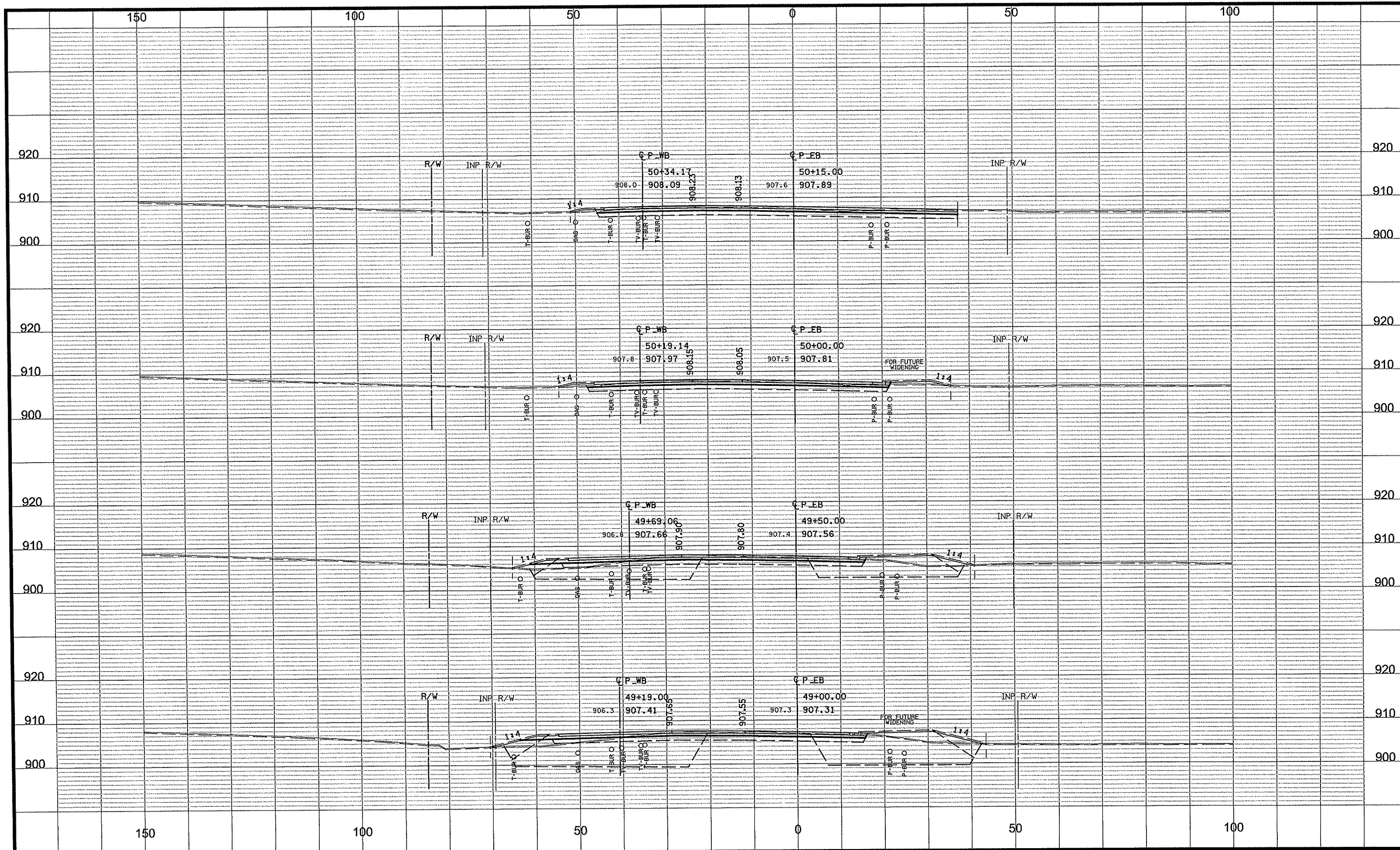
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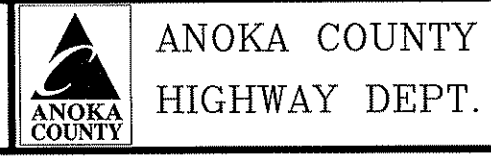
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 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 47+00.00 TO 48+00.00  
 Sheet 104 of 116 Sheets



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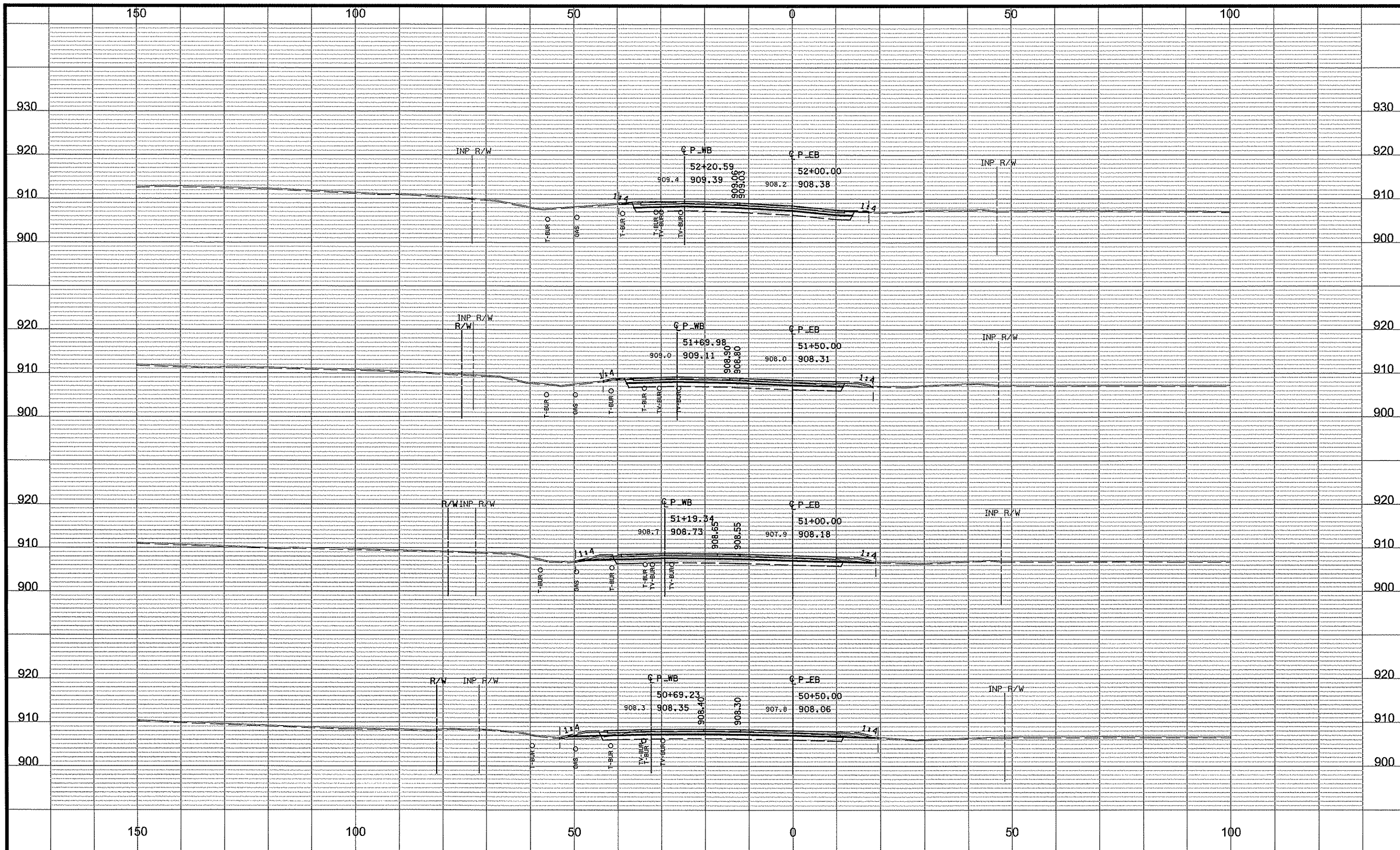
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STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 49+00.00 TO 50+15.00  
 Sheet 105 of 116 Sheets





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 CHECKED BY MN DATE 05/05/08



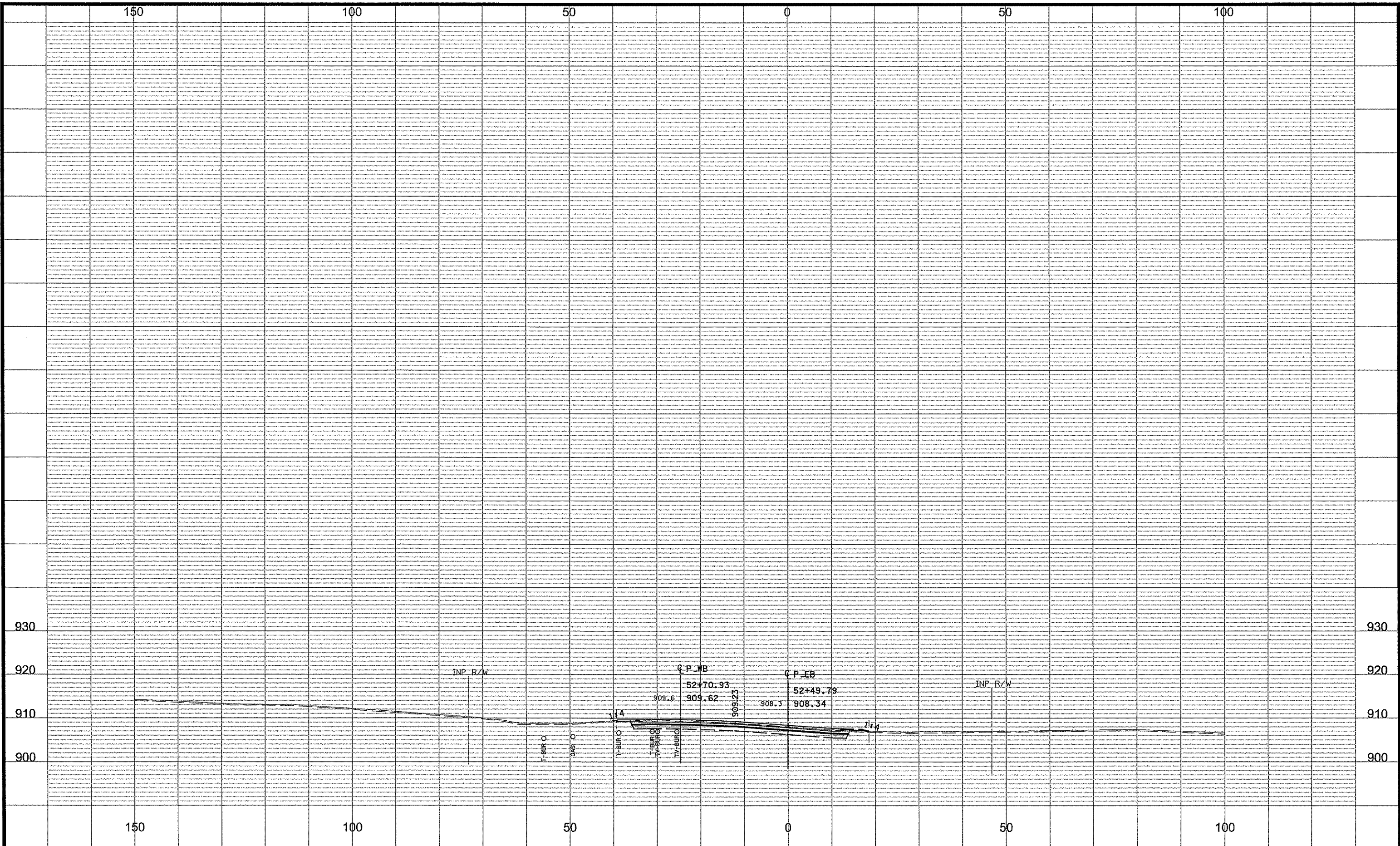
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 50+50.00 TO 52+00.00  
 Sheet 106 of 116 Sheets

NO	DATE	BY	CKD	APPR	REVISION

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930  
920  
910  
900

150 100 50 0 50 100

INP R/W CP\_WB CP\_EB INP R/W

52+70.93 52+49.79

909.6 909.62 908.3 908.34

HA

11.4

150 100 50 0 50 100

NO	DATE	BY	CKD	APPR	REVISION

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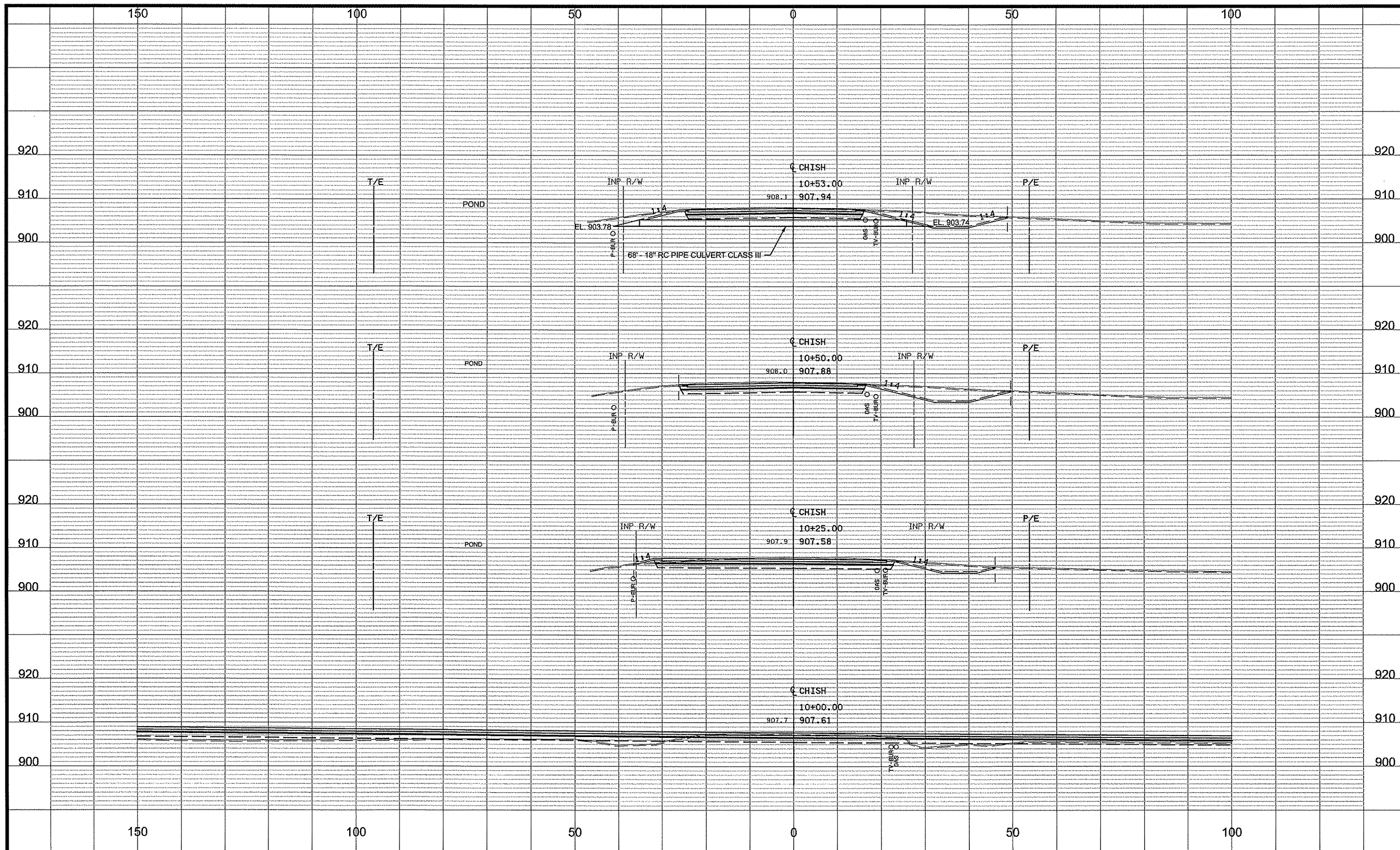
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**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 STA 52+49.79 TO XX+XX.XX  
 Sheet 107 of 116 Sheets



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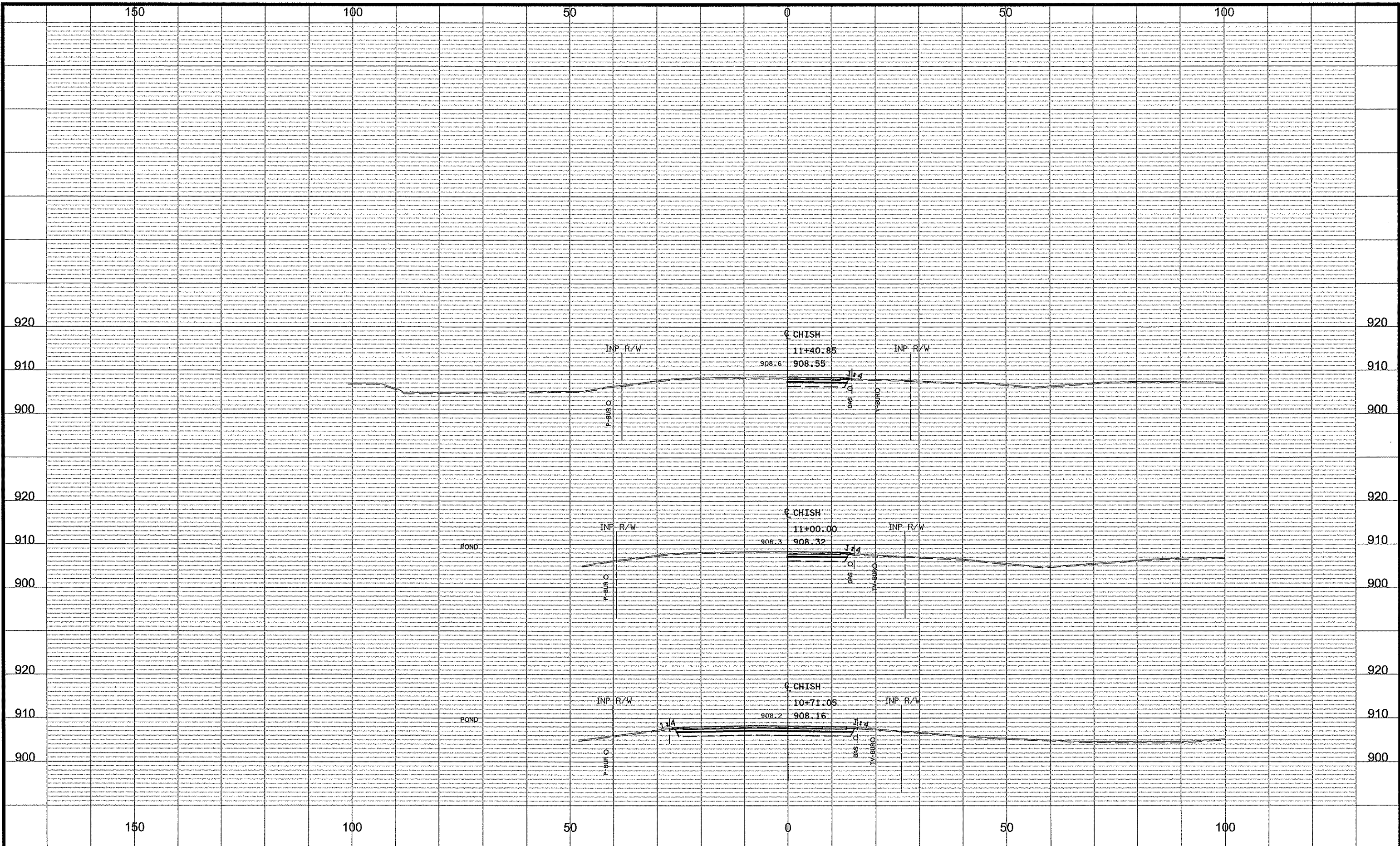
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 CHISHOLM ST  
 STA 10+00.00 TO 10+53.00  
 Sheet 108 of 116 Sheets

NO	DATE	BY	CKD	APPR	REVISION
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NO	DATE	BY	CKD	APPR	REVISION

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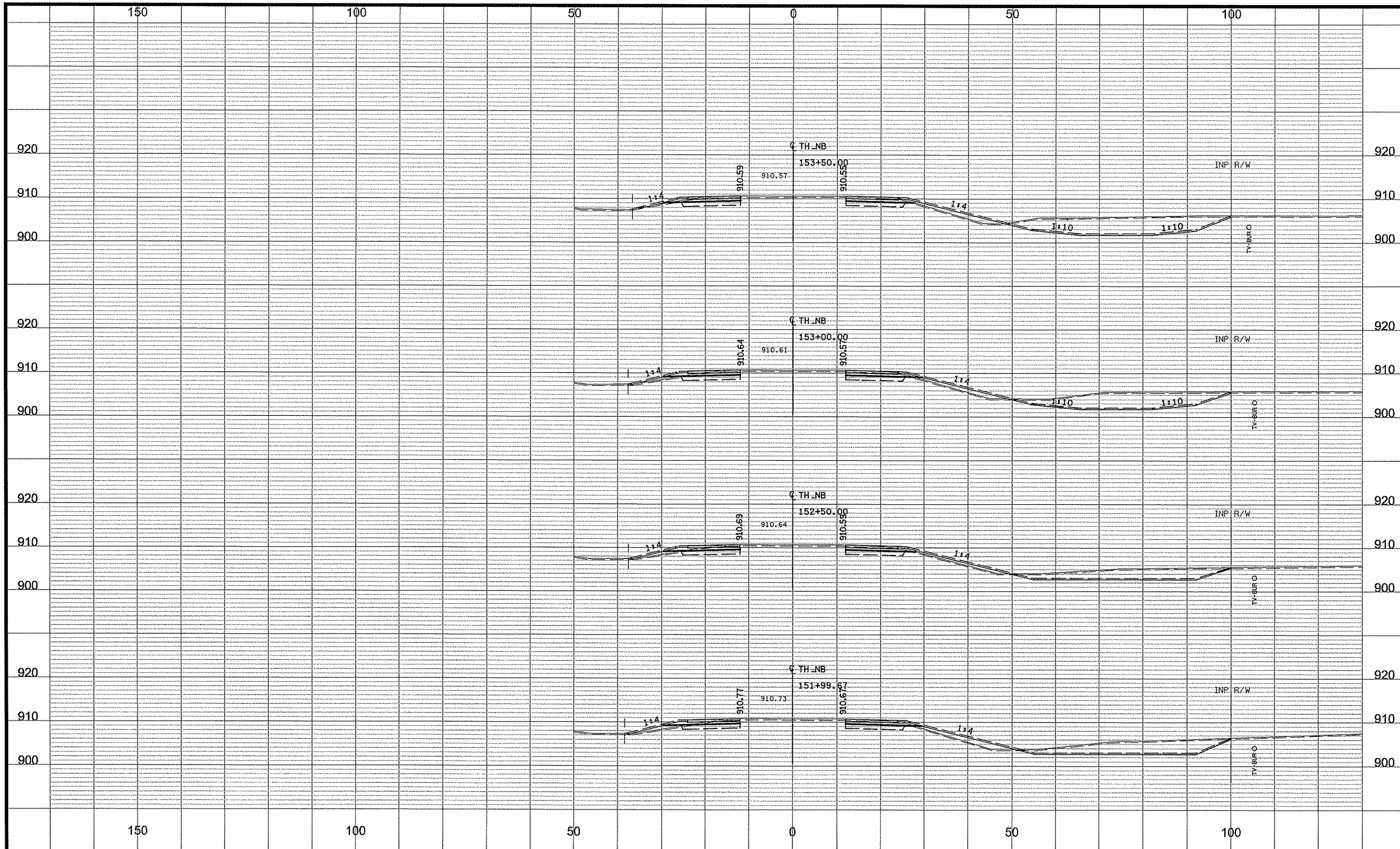


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

**CROSS SECTIONS**  
**CHISHOLM ST**  
 STA 10+71.05 TO 11+40.85  
 Sheet 109 of 116 Sheets





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 CHECKED BY MN DATE 05/05/08



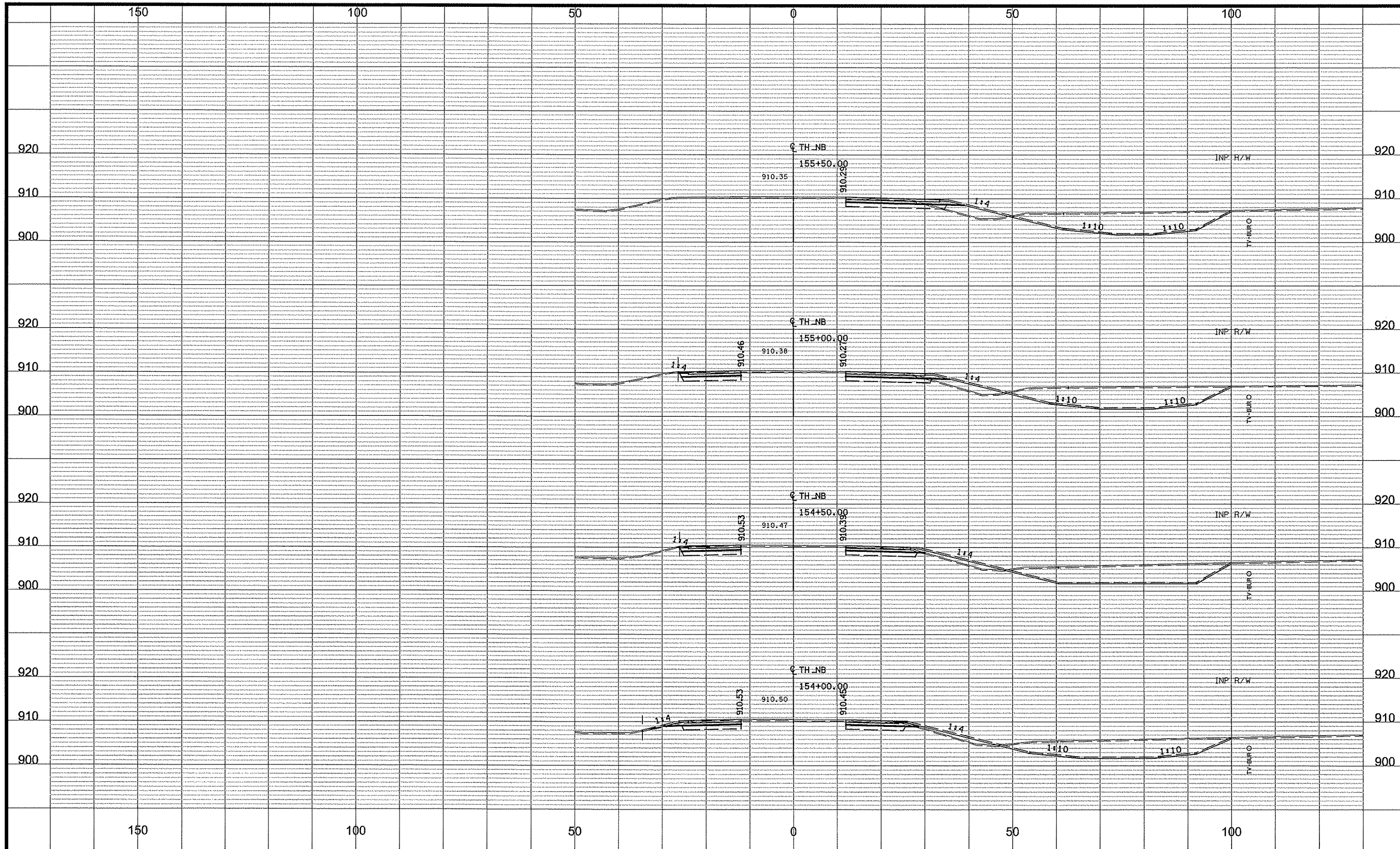
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 TH 65 NB  
 STA 151+99.67 TO 153+50.00  
 Sheet 110 of 116 Sheets

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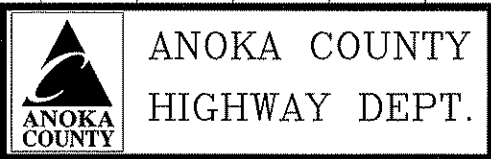
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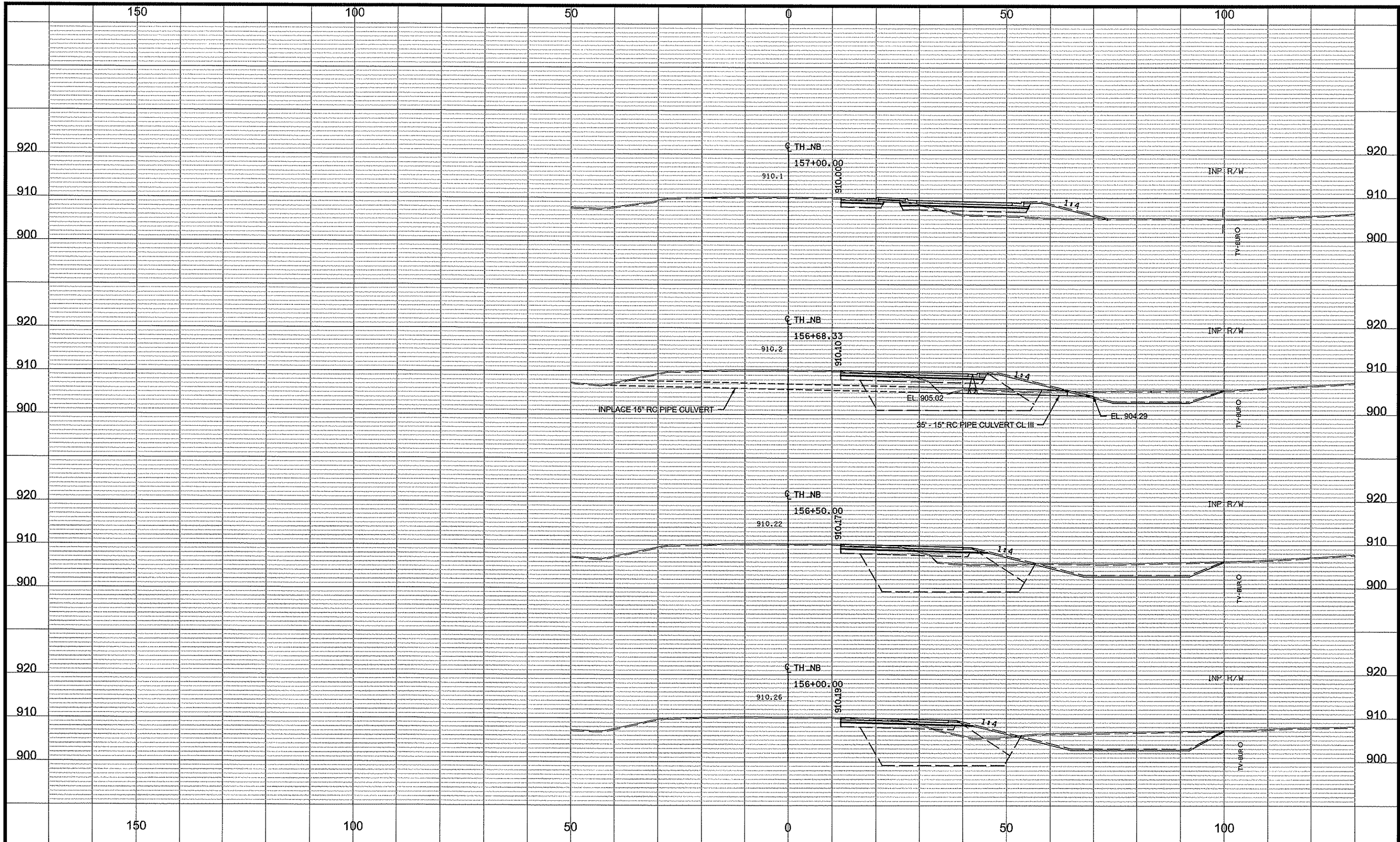
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STATE PROJECT NO. 0208-115 (TH 65)  
STATE PROJECT NO. 02-618-25  
STATE AID PROJECT NO. 197-020-001  
STATE PROJECT NO.

CROSS SECTIONS  
TH 65 NB  
STA 154+00.00 TO 155+00.00  
Sheet 111 of 116 Sheets





NO	DATE	BY	CKD	APPR	REVISION

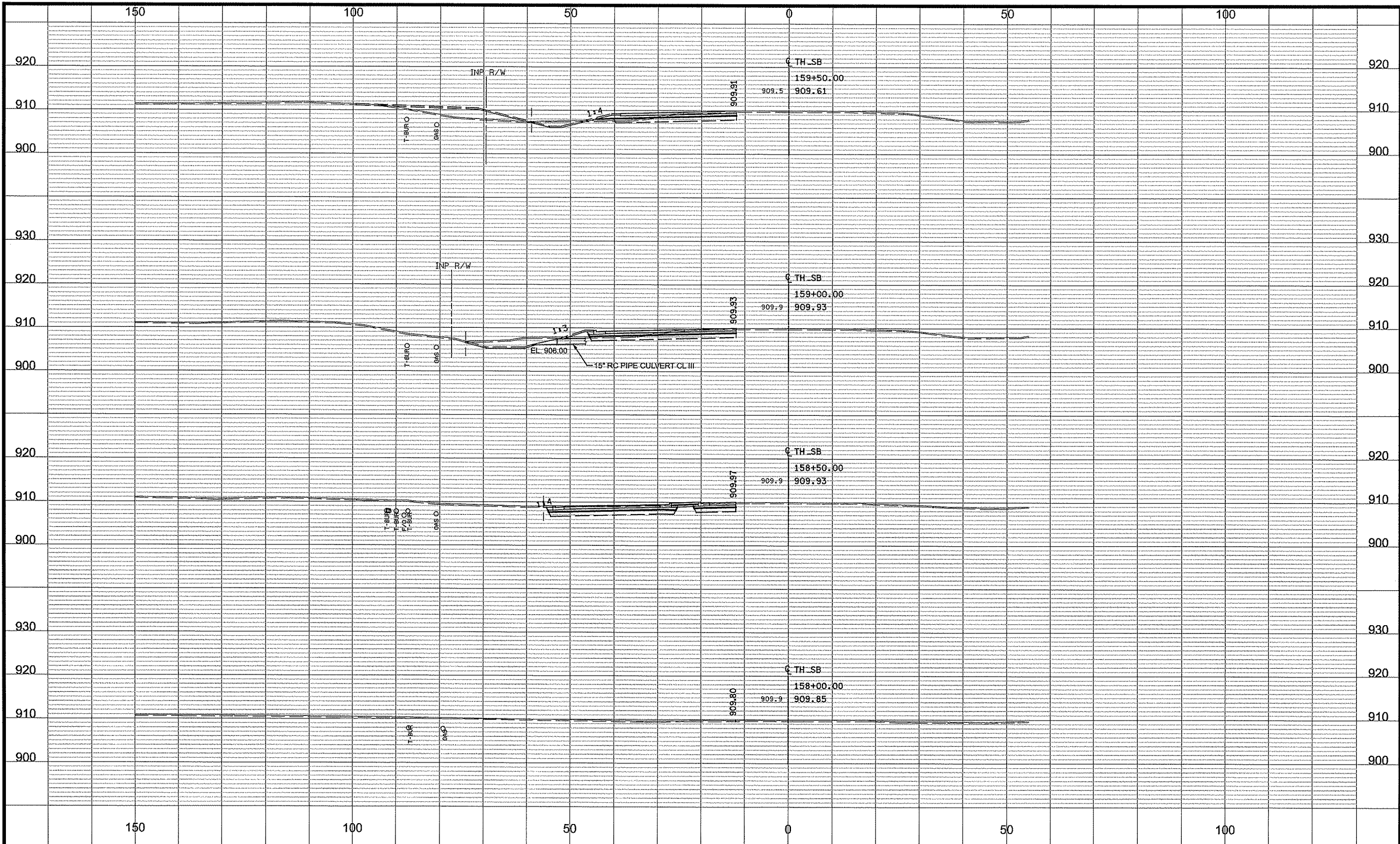
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**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 TH 65 NB  
 STA 156+00.00 TO 157+00.00  
 Sheet 112 of 116 Sheets



NO	DATE	BY	CKD	APPR	REVISION

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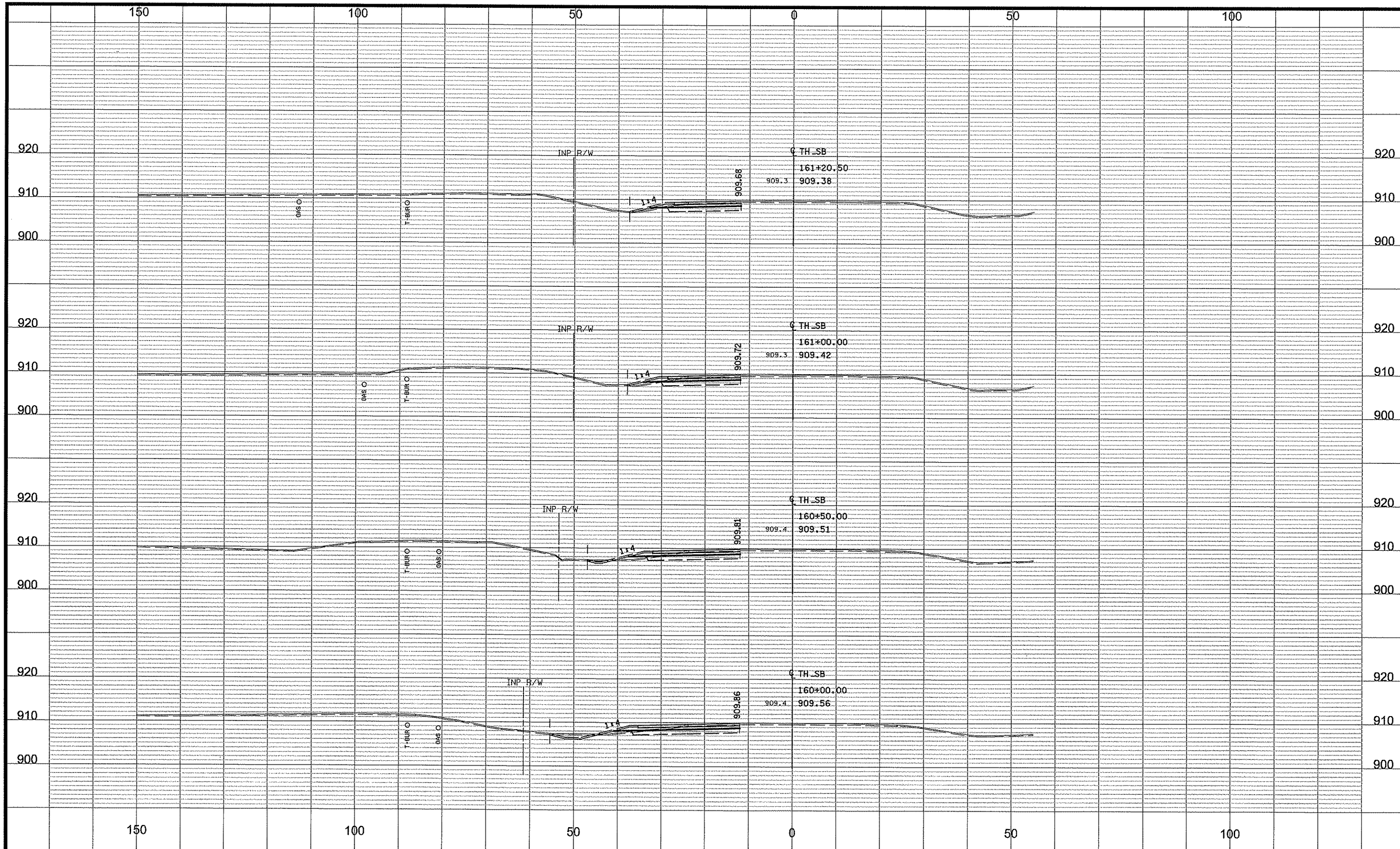


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
TH 65 SB  
 STA 158+00.00 TO 159+50.00  
 Sheet 113 of 116 Sheets





NO	DATE	BY	CKD	APPR	REVISION

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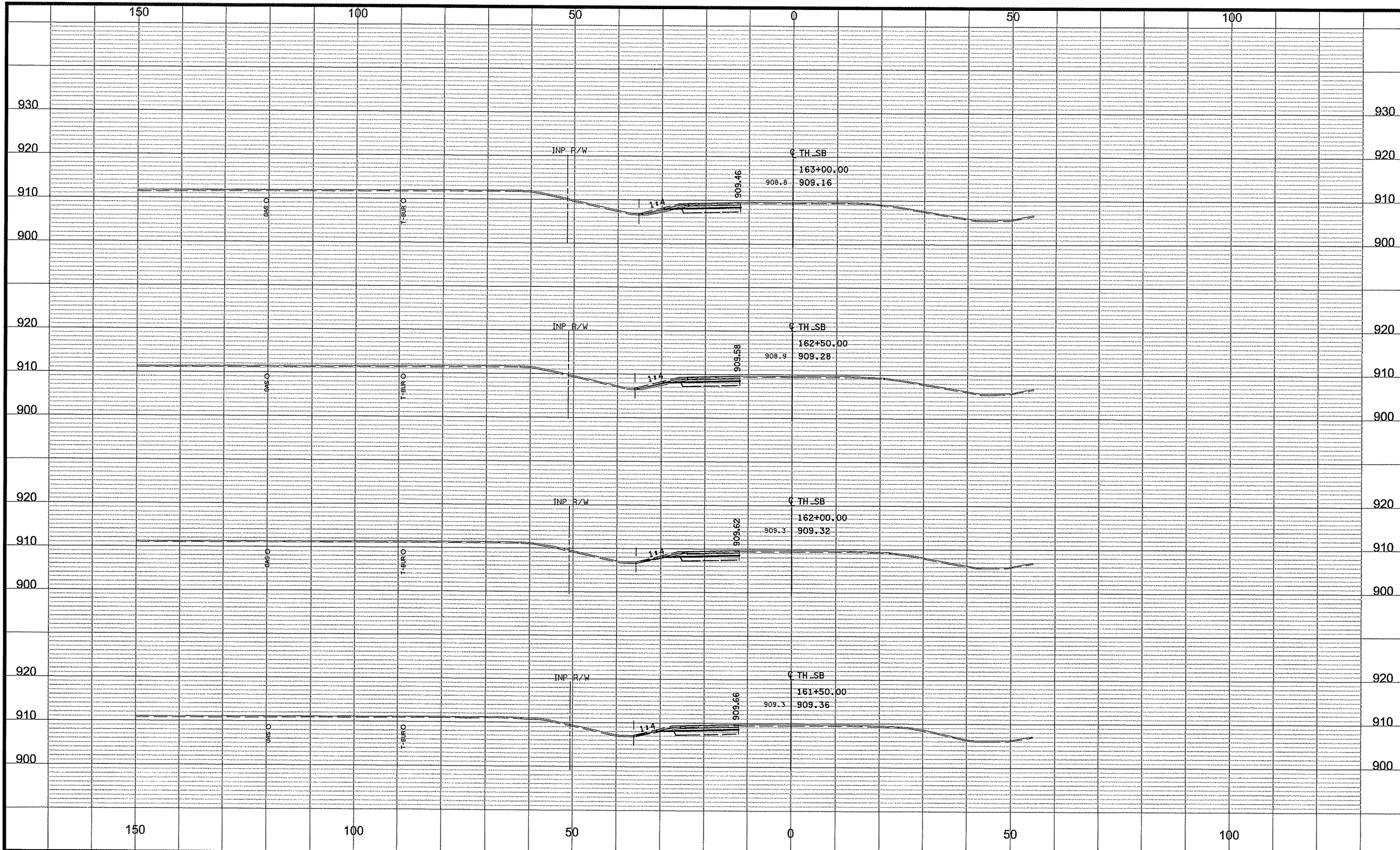
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ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 TH 65 SB  
 STA 160+00.00 TO 161+20.50  
 Sheet 114 of 116 Sheets



NO	DATE	BY	CKD	APPR	REVISION

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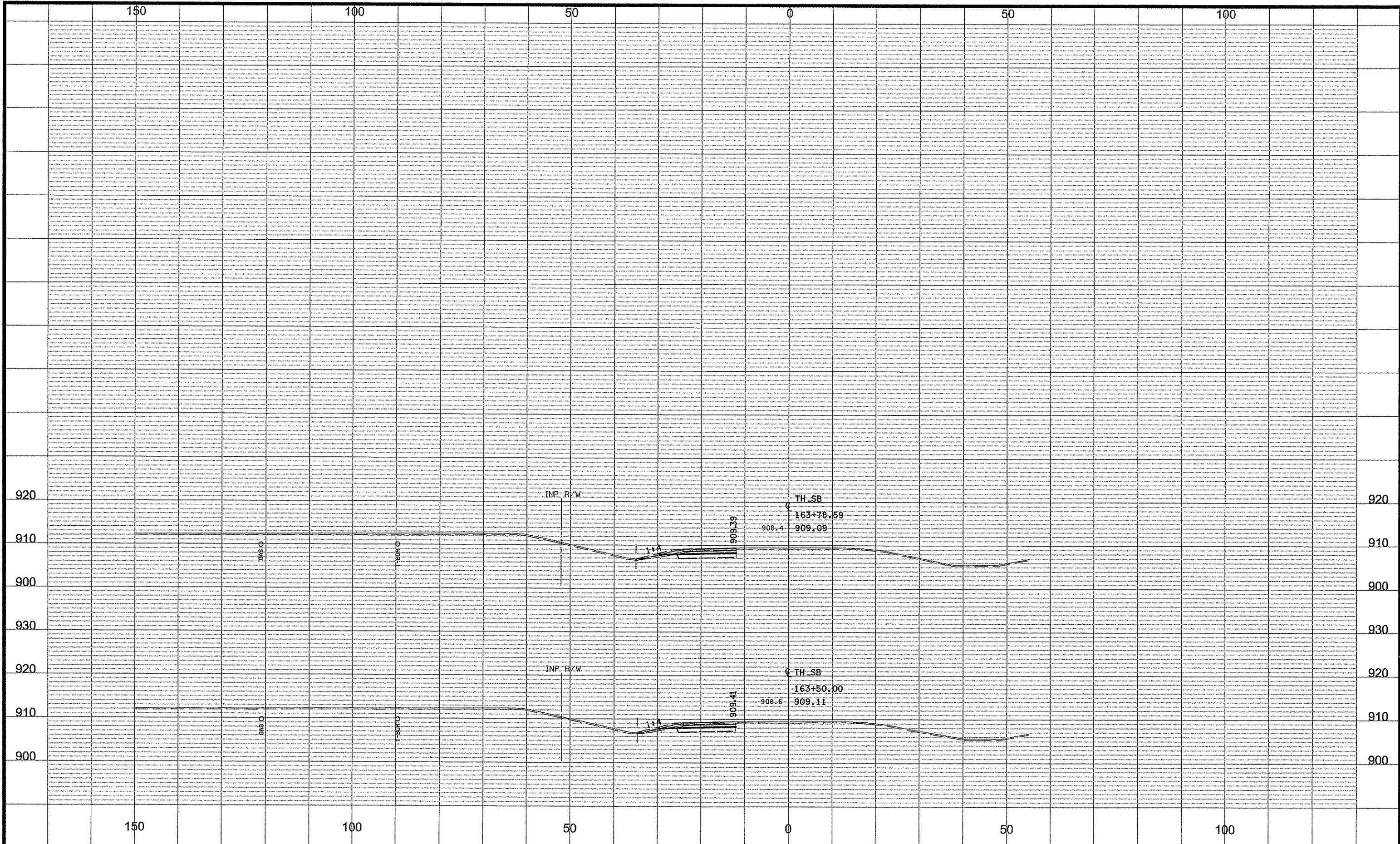


ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

CROSS SECTIONS  
 TH 65 SB  
 STA 161+50.00 TO 163+00.00  
 Sheet 115 of 116 Sheets





NO	DATE	BY	CKD	APPR	REVISION

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

STATE PROJECT NO. 0208-115 (TH 65)  
 STATE PROJECT NO. 02-618-25  
 STATE AID PROJECT NO. 197-020-001  
 STATE PROJECT NO.

**CROSS SECTIONS**  
**TH 65 SB**  
 STA 163+50.00 TO 163+78.50  
 Sheet 116 of 116 Sheets