

MINNESOTA DEPARTMENT OF TRANSPORTATION

CITY OF FRIDLEY
ANOKA COUNTY

COUNTY ROAD 102 (57TH AVENUE N.E.)

CITY PROJECT NO. ST-1997-4
COUNTY PROJECT NO. 97-11-102

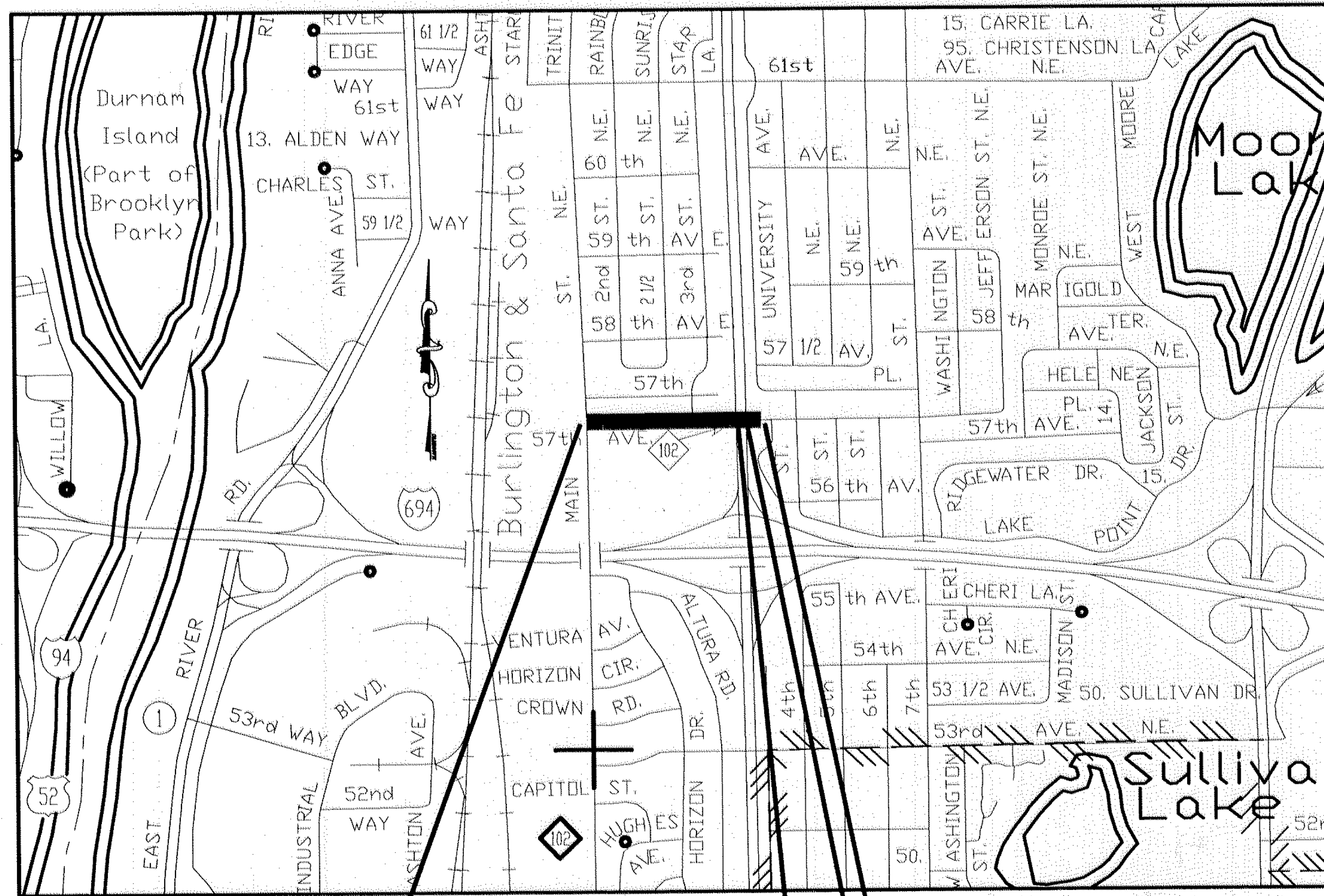
CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, CONCRETE CURB AND GUTTER, CONCRETE SIDEWALK, LANDSCAPING, BITUMINOUS SURFACING, UTILITY IMPROVEMENTS AND SIGNAL SYSTEMS

LOCATED ON: COUNTY ROAD 102 BETWEEN MAIN STREET N.E. AND UNIVERSITY AVENUE N.E. (Geographic Description)
S 1/2 OF SECTION 23, S 1/2 OF SECTION 23,
TOWNSHIP 30, RANGE 24 TOWNSHIP 30, RANGE 24

STATE AID PROJ. NO. 127-301-04
GROSS-LENGTH 146.390 METERS
BRIDGE-LENGTH 0 METERS
EXCEPTIONS-LENGTH 0 METERS
NET-LENGTH 146.390 METERS

LEGEND

- GV EXISTING GATE VALVE
- HYD. EXISTING HYDRANT
- CS EXISTING CURB BOX
- SAN-STM MH EXISTING MANHOLE, FOR STORM AND SANITARY SEWER
- CB EXISTING CATCH BASIN
- P.P. EXISTING POWER POLE
- SS EXISTING SANITARY SEWER
- SS EXISTING STORM SEWER
- WM EXISTING WATERMAIN
- CG EXISTING CURB AND GUTTER
- GAS EXISTING UNDERGROUND GAS MAIN
- TEL. EXISTING UNDERGROUND TELEPHONE LINE
- UGP EXISTING UNDERGROUND POWER
- OHP EXISTING OVERHEAD POWER
- F EXISTING FENCE
- T EXISTING TREE
- TL EXISTING TREE LINE
- 900 EXISTING CONTOUR
- 900 PROPOSED CONTOUR
- 23-30-26-11-0070 PIN NUMBER
- REDUCER PROPOSED REDUCER
- TEE PROPOSED TEE
- GV PROPOSED GATE VALVE
- HYD. PROPOSED HYDRANT
- MH PROPOSED MANHOLE, FOR STORM AND SANITARY SEWER
- CB PROPOSED CATCH BASIN
- WM PROPOSED WATERMAIN
- SS PROPOSED SANITARY SEWER
- SS PROPOSED STORM SEWER
- CG PROPOSED CURB AND GUTTER



C.P. 97-11-102
STA. 1+000.000

C.P. 97-11-102
S.A.P. 127-301-04
STA. 1+358.610

S.A.P. 127-301-04
STA. 1+505.000

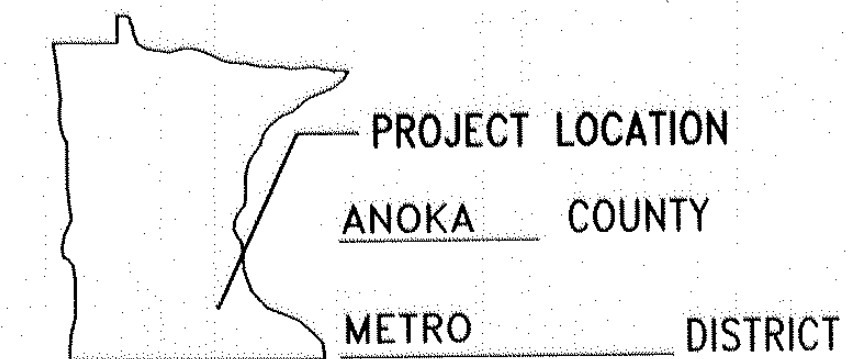
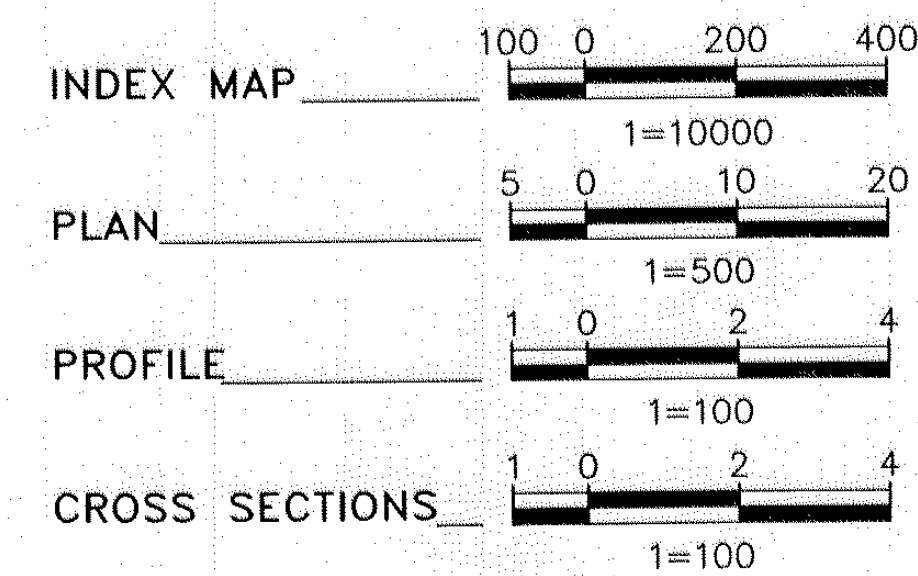
S.A.P. 127-010-15
(SIGNAL ONLY)

DESIGN DESIGNATION: CO RD 102

Functional Classification: ARTERIAL-HIGH DENSITY
No. of Traffic Lanes: 4
ADT (Current Year) 1998: 16,000
ADT (Future Year) 2018: 21,400
DHV (Design Hr. Vol.): N.A.
D (Directional Distr.): 50%
T (Heavy Commercial): N.A.
R-Value: 60

No. of Parking Lanes: 0
Design Speed: 60 km/h
Based on STOPPING Sight Distance:
Height of eye: 1070 mm
Height of Object: 150 mm
Design Speed not achieved at: N.A.
% STA. N.A. TO STA. N.A. km/h N.A.
20 YR ESALS: 3,949,000
Design Load: 9.1 metric ton

SCALES IN METERS



MINN. PROJ. NO. _____
MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS AS AMENDED

THE 1995 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION". ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED APRIL 1995.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	STATEMENT OF ESTIMATED QUANTITIES
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24-26	LIGHTING PLANS
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38-45	CROSS SECTIONS

THIS PLAN SET CONTAINS 45 SHEETS



B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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.

BRW, INC.
DATE _____ REG. NO. 23197
ENGINEER _____

Approved _____ 19
CITY ENGINEER

Approved _____ 19
ANOKA COUNTY ENGINEER

Approved _____ 19
METRO- ASSISTANT DIVISION ENGINEER STATE AID;
REVIEWED FOR COMPLIANCE WITH STATE-AID RULES/POLICY

Approved _____ 19
APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 1-26-99 REG. NO. 23197

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY
10/13/98	AS-BUILT	




ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

COUNTY PROJ. NO. C.P. 97-11-102
STATE AID PROJ. NO. S.A.P. 127-010-15, S.A.P. 127-301-04 SHEET NO. 1 OF 45 SHEETS

DISK FILE NAME: (14.01) R:\356889\35689002\PLAN_SHT\57THB03.DWG PLOT DATE: Nov 09, 1998 1:13pm

ESTIMATED QUANTITIES								
NOTE NO.	MNDOT SPEC NO.	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES	S.A.P. 127-010-15	S.A.P. 127-301-04	C.P. 97-11-102	ST-1997-4
					T.H. 47	57TH AVENUE	CO RD 102 NON-PARTICIPATING	CO RD 102 NON-PARTICIPATING
					ESTIMATED QUANTITIES	ESTIMATED QUANTITIES	ESTIMATED QUANTITIES	ESTIMATED QUANTITIES
	2021.501	MOBILIZATION	LUMP SUM	1	0.032	0.042	0.529	0.397
	2031.501	FIELD OFFICE	EACH	1			0.57	0.43
	2101.501	CLEARING	ha	0.56			0.56	
	2101.502	CLEARING	TREE	43			43	
	2101.506	GRUBBING	ha	0.56			0.56	
	2101.507	GRUBBING	TREE	43			43	
	2102.501	PAVEMENT MARKING REMOVAL	m2	46			46	
	2102.502	PAVEMENT MARKING REMOVAL	m	390			390	
	2104.501	REMOVE WATER MAIN	m	36				36
	2104.501	REMOVE SEWER PIPE (STORM)	m	101			101	
	2104.501	REMOVE CURB AND GUTTER	m	1228		94	783	351
	2104.501	REMOVE FENCE	m	12			12	
	2104.501	REMOVE CONCRETE VALLEY GUTTER	m	85			85	
	2104.503	REMOVE CONCRETE WALK	m2	120			120	
	2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT	m2	115.4			115.4	
	2104.503	REMOVE BITUMINOUS PAVEMENT	m2	8822.7		360	6879.6	1583.1
	2104.503	REMOVE CONCRETE MEDIAN	m2	287		87	200	
	2104.509	REMOVE VALVE & BOX	EACH	4				4
	2104.509	REMOVE HYDRANT	EACH	4				4
	2104.509	REMOVE CATCHBASIN	EACH	6			6	
	2104.509	REMOVE CONCRETE FLUME	EACH	1			1	
	2104.509	REMOVE SIGN TYPE C	EACH	12		1	11	
	2104.509	REMOVE LIGHT BASE	EACH	4				4
	2104.509	REMOVE SIGN BASE (LARGE)	EACH	2				2
	2104.509	REMOVE SIGN BASE (SMALL)	EACH	4				4
	2104.513	SAWING BIT PAVEMENT (FULL DEPTH)	m	526		160	366	
	2104.523	SALVAGE LIGHT STANDARD & LUMINAIRE	EACH	4				4
	2104.523	SALVAGE SIGN TYPE C	EACH	55		4	51	
	2104.602	RELOCATE BENCH	EACH	1				1
	2104.602	REMOVE SHED	EACH	1				1
	2105.501	COMMON EXCAVATION (P)	m3	4497			4497	
	2105.507	SUBGRADE EXCAVATION	m3	4266			4266	
	2105.521	GRANULAR BORROW (LV)	m3	5698			5698	
	2105.535	SALVAGED TOPSOIL (LV)	m3	568			568	
	2105.541	STABILIZING AGGREGATE	m3	10			10	
	2130.501	WATER	m3	100			100	
	2211.503	AGGREGATE BASE (CV) CLASS 5A (P)	m3	1820.6		68.0	1557.2	195.4
	2340.508	TYPE 41 WEARING COURSE MIXTURE	t	1136.1		42.43	971.75	121.92
	2340.510	TYPE 41 BINDER COURSE MIXTURE	t	1136.1		42.43	971.75	121.92
	2340.514	TYPE 31 BASE COURSE MIXTURE	t	1704.1		63.64	1457.57	182.89
	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	L	4187.41		156.4	3581.59	449.42
	2412.603	LANDSCAPE EDGER, VINYL	m	460				460
	2503.541	300 mm RC PIPE SEWER DESIGN 3006 CL V	m	83.9			83.9	
	2503.541	375 mm RC PIPE SEWER DESIGN 3006 CL V	m	129.8			129.8	
	2503.541	450 mm RC PIPE SEWER DESIGN 3006 CL V	m	184.9			184.9	
	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	2			2	
	2504.602	CONNECT TO EXISTING WATER MAIN	EACH	4				4
	2504.602	ADJUST VALVE BOX	EACH	2				2
	2504.602	150 mm PIPE BEND 90 DEGREE	EACH	1				1
	2504.602	150 mm PIPE BEND 45 DEGREE	EACH	1				1
	2504.602	HYDRANT	EACH	4				4
	2504.602	150 mm GATE VALVE AND BOX	EACH	4				4
	2504.603	150 mm WATER MAIN - DUCTILE IRON CL 52	m	41				41
	2504.605	IRRIGATION SYSTEM, REPAIR & REPLACE	m2	3530				3530
	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN F	m	28.3			28.3	
	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	EACH	4			4	
	2506.516	CASTING ASSEMBLY	EACH	18			18	
	2506.522	ADJUST FRAME & RING CASTING	EACH	5			5	
	2506.602	CONNECT INTO EXISTING CATCH BASIN	EACH	1			1	

REV. NO.	BY	DATE	REVISIONS DESCRIPTION	DESIGN FILE: 35689-002-0101	XREF DRAWINGS	 B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16. DATE: _____ MINN. REG. NO. 23197	COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. ESTIMATED QUANTITIES	CITY PROJECT ST-1997-4	SHEET NO.
									COUNTY PROJECT 97-11-102	2
									S.A.P. 127-010-15	
									S.A.P. 127-301-04	
										45




ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57HTB04.DWG PLOT DATE: Nov 09, 1998 1:14pm

ESTIMATED QUANTITIES								
NOTE NO.	MNDOT SPEC NO.	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES	S.A.P. 127-010-15	S.A.P. 127-301-04	C.P. 97-11-102	ST-1997-4
					T.H. 47	57TH AVENUE	CO RD 102 NON-PARTICIPATING	CO RD 102 NON-PARTICIPATING
					ESTIMATED QUANTITIES	ESTIMATED QUANTITIES	ESTIMATED QUANTITIES	ESTIMATED QUANTITIES
	2521.501	100 mm CONCRETE WALK	m2	832.2		16	120	696.2
	2531.501	CONCRETE CURB & GUTTER DESIGN B624	m	18.7		18.7		
	2531.501	CONCRETE CURB & GUTTER DESIGN B624 (MODIFIED)	m	37		37		
1	2531.501	CONCRETE CURB & GUTTER DESIGN B618	m	103.2				103.2
	2531.501	CONCRETE CURB & GUTTER DESIGN B618 (MODIFIED)	m	1121.8		86.1	882.5	153.2
	2531.502	CONCRETE CURB DESIGN B6	m	14				14
	2531.602	CONCRETE ENTRANCE NOSE DESIGN M71113	EACH	3		2	1	
2	2531.604	100 mm CONCRETE WALK SPECIAL	m2	755.3		49.8		705.5
	2545.501	ELECTRIC LIGHT SYSTEM	LUMP SUM	1				1
	2545.602	INSTALL SALVAGED LIGHTS	EACH	1				1
	2557.602	BRICK PILASTER 0.6 m SQ. 1.2 m HIGH W/PRECAST CONC. CAP	EACH	36				36
	2557.603	ALUMINIUM FENCE 0.9 m HT	m	120				120
	2563.601	TRAFFIC CONTROL	LUMP SUM	1	0.032	0.042	.529	.397
	2563.603	RAISED PAVEMENT MARKERS TEMPORARY	EACH	60			60	
	2564.531	F&I SIGN PANEL TYPE C	m2	17.55		1.33	16.22	
	2564.602	PAVEMENT MESSAGE TYPE 1 (LT ARROW) PAINT	EACH	13			13	
	2564.602	PAVEMENT MESSAGE TYPE 1 (RT ARROW) PAINT	EACH	3			3	
	2564.602	PAVEMENT MESSAGE TYPE 1 (LT ARROW) POLY PREFORM	EACH	17		4	13	
	2564.602	PAVEMENT MESSAGE TYPE 1 (RT ARROW) POLY PREFORM	EACH	5		2	3	
	2564.602	PAVEMENT MESSAGE TYPE 1 (ONLY) POLY PREFORM	EACH	11		3	8	
	2564.602	INSTALL SIGN TYPE C	EACH	53		6	47	
	2564.603	100 mm SOLID LINE WHITE - PAINT	m	1873		160	1713	
	2564.603	100 mm BROKEN LINE WHITE - PAINT	m	244			244	
	2564.603	600 mm SOLID LINE WHITE - PAINT	m	72			72	
	2564.603	100 mm DOUBLE SOLID LINE YELLOW - PAINT	m	772		137	635	
	2564.603	100 mm SOLID LINE YELLOW - PAINT	m	730			730	
	2564.603	600 mm SOLID LINE YELLOW - PAINT	m	70		70		
	2564.604	CROSSWALK MARKING - PAINT	m2	104		32	72	
	2565.616	REVISE SIGNAL SYSTEM	SYSTEM	1	0.5	0.25	0.125	0.125
	2571.502	DECIDUOUS TREE 65 mm CAL B&B (OVERSTORY)	TREE	32				32
	2571.503	DECIDUOUS TREE 2.4 m HT B&B (ORNAMENTAL)	TREE	10				10
	2571.505	DECIDUOUS SHRUB 460 mm HT CONT	SHRUB	386				386
	2571.505	DECIDUOUS SHRUB 760 mm HT CONT	SHRUB	102				102
	2571.507	PERENNIAL 115 mm CONT	PLANT	800				800
	2571.541	TRANSPLANT TREE	TREE	6				6
	2573.501	BALE CHECK	EACH	112			112	
	2573.502	SILT FENCE, TYPE HEAVY DUTY	m	750			750	
	2575.505	SODDING, TYPE LAWN	m2	2175.9		10	2165.9	
	2580.501	TEMPORARY LANE MARKING	m	180			180	
	2581.501	REM PREF. PLASTIC MARKING	m	180			180	

1. THE FIRST 783 m OF CURB IS PAID 100% BY THE COUNTY. THE REMAINING 199 m IS SPLIT 50% COUNTY AND 50% CITY
2. FOR THE BASIS OF THE ESTIMATED QUANTITIES WE ASSUMED THAT 80% OF THE COST OF THE CONCRETE WALK SPECIAL WITHIN THE MEDIAN IS PAID FOR BY THE COUNTY WITH THE REMAINING 20 % TO BE PAID FOR BY THE CITY

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									COUNTY PROJECT	97-11-102	
									S.A.P.	127-010-15	
									S.A.P.	127-301-04	



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DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THB01.DWG PLOT DATE: Nov 09, 1998 12:56pm

ALL CONTRACTORS MUST CONTACT
GOPHER STATE
CALL ONE
MN. TOLL FREE 1-800-252-1166
BEFORE CONSTRUCTION BEGINS
TWIN CITY AREA 454-0002

CONSTRUCTION NOTES

THE TOP OF THE GRADING GRADE ON THIS PROJECT IS DEFINED AS THE TOP OF GRADING MATERIAL OR THE BOTTOM OF THE AGGREGATE BASE.

UNSUITABLE GRADING MATERIALS ARE TOPSOILS, OTHER ORGANIC SOILS, SILT LOAM, SILTY CLAY LOAM, SILTY CLAY, CONCRETE, BITUMINOUS, ROCK DEBRIS, AND OTHER RUBBLE.

TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO BE DISTURBED BY CONSTRUCTION FOR REPLACEMENT AS SLOPE DRESSING.

TOPSOIL AND OTHER UNSUITABLE MATERIALS SHALL BE ELIMINATED FROM THE UPPERMOST 0.6 m BELOW THE GRADING LINE.

PROVIDE A 1000 mm SUBGRADE TREATMENT/CORRECTION BELOW THE TOP OF THE GRADING GRADE IN AREAS BETWEEN THE EXIST CURB LINE AND THE PROPOSED CURB LINE, BACKFILLING WITH GRANULAR MATERIAL FOR UNIFORMITY AND COMPACTION OF MATERIALS.

PROVIDE A 0.35 M SUBCUT UNDER EXISTING ROAD.

REMOVALS: BITUMINOUS, DRAINAGE STRUCTURES, PIPE AND OTHER MISCELLANEOUS OBJECTS TO BE REMOVED UNDER THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND EITHER RECYCLED OR DISPOSED OF OUTSIDE OF THE PROJECT LIMITS IN ACCORDANCE WITH MnDOT 2104.3C.

COMPACTION OF GRADING ITEMS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH MnDOT SPEC 2105.3F2 "SPECIFIED DENSITY METHOD".

STABILIZING AGGREGATE SHALL BE APPLIED IF NECESSARY TO ACHIEVE SATISFACTORY SURFACE STABILITY AS DETERMINED BY THE ENGINEER. THE MATERIAL SHALL SATISFY THE REQUIREMENTS OF MnDOT SPEC 3149.2C AND BE APPLIED IN ACCORDANCE WITH MnDOT SPEC 2105.3G.

COMPACTION OF GRANULAR SUBBASE AND AGGREGATE BASE SHALL BE ACCOMPLISHED IN ACCORDANCE WITH MnDOT SPEC 2105.3F2 "SPECIFIED DENSITY METHOD".

PROVIDE A UNIFORM BITUMINOUS TACK COAT BETWEEN ALL LIFTS OF BITUMINOUS MATERIAL. COMPACTION OF ALL BITUMINOUS MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE "MODIFIED SPECIFIED METHOD".

ANY DEWATERING AND OR ANY USE OF TRENCH BOX, SHEETING, SHORING OR OTHER METHODS OR MEANS NECESSARY TO COMPLETE CONSTRUCTION WITHIN THE CONSTRUCTION LIMITS OR SLOPE EASEMENTS SHOWN WILL BE CONSIDERED TO BE INCIDENTAL AND NO DIRECT COMPENSATION WILL BE MADE UNLESS SPECIFICALLY STATED OTHERWISE IN THE SPECIFICATIONS AND AN APPROPRIATE PAY ITEM IS INCLUDED IN THE BID PROPOSAL FORM.

SODDING QUANTITIES ALONG ROADWAY BOULEVARDS AND SIDE SLOPES ARE BASED ON SODDING ALL DISTURBED AREAS WITHIN PRIVATE PROPERTIES AND ADJACENT RIGHT OF WAY.

UNDERGROUND AND OVERHEAD UTILITIES EXIST WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO STARTING CONSTRUCTION AND COORDINATE THE WORK SCHEDULE WITH UTILITY COMPANY CREWS PERFORMING RELOCATION WORK.

CONTRACTOR SHALL NOTIFY PROPERTY OWNERS 72 HOURS IN ADVANCE OF ANY DISRUPTION TO WATER MAIN SERVICES. THE CONTRACTOR SHALL MINIMIZE INTERRUPTION OF SERVICE TO ADJACENT PROPERTIES. ANY PROPERTY OUT OF SERVICE LONGER THAN 8 HOURS MUST BE PROVIDED WITH TEMPORARY SERVICE.

WATER, GAS, ELECTRIC, TELEPHONE, SEWER, AND CABLE TV LINES, MANHOLES AND BOXES SHOWN ON THE DRAWINGS ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION. THE UTILITIES SHOWN MAY NOT REFLECT ACTUAL LOCATIONS OR ELEVATIONS. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE OWNERS OF ALL KNOWN UTILITIES BEFORE STARTING ANY OPERATIONS AFFECTING THOSE UTILITIES, OR BEGINNING EXCAVATION IN THE VICINITY OF THOSE UTILITIES. THE CONTRACTORS ATTENTION IS DIRECTED TO MnDOT SPEC 1507.

THE CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF 300 mm BETWEEN CROSSING OF MINOR WATER LINES AND PROPOSED STORM SEWER LINES. WHERE CONFLICT OCCURS, THE WATER LINE SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. METHOD OF COMPENSATION IS COVERED UNDER THE SPECIAL PROVISIONS.

ALL USES OF THE WORD "INCIDENTAL" IN THESE CONSTRUCTION DOCUMENTS SHALL BE CONSTRUED TO MEAN INCIDENTAL WORK FOR WHICH NO DIRECT COMPENSATION SHALL BE MADE.

UTILITIES

A	MINNEGASCO
	ATTN: JIM CAREY/RICK PILON
	(612) 321-5158 / (612) 321-5426
	P.O. BOX 1165
	MINNEAPOLIS, MN 55440-1165
B	U.S. WEST COMMUNICATIONS
	ATTN: LEROY DAHLBERG
	(612) 569-2439
	6244 CEDAR AVENUE SOUTH
	RICHFIELD, MN 55423
C	NSP
	ATTN: MICHAEL P. DUNHAM
	(612) 630-4542
	1518 CHESTNUT AVENUE N.
	MINNEAPOLIS, MN 55403
D	PARAGON CABLE
	ATTN: MICHAEL LAUGHLIN
	(612) 287-3632
	801 PLYMOUTH AVENUE N.
	MINNEAPOLIS, MN 55411

CASTING ASSEMBLY

KEY	MNDOT STANDARD PLATE NO.
A	M4101D RING CASTING NO. 700-7
	M4110F COVER CASTING NO 715
B	M4126 GRATE FRAME CASTING NO. 801
	M4149 GRATE CASTING NO. 810
	M4161 CURB BOX CASTING NO. 821B

STANDARD PLATE DETAILS

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

PLATE NO.	DESCRIPTION
M3000L	REINFORCED CONCRETE PIPE
M3006G	GASKET JOINT FOR RC PIPE
M4005L	MANHOLE OR CATCH BASIN DESIGN F
M4006L	MANHOLE OR CATCH BASIN DESIGN H
M4010H	CONCRETE SHORT CONE AND ADJUSTING RING
M4011E	PRECAST CONCRETE BASE
M4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
M4110F	COVER CASTING FOR MANHOLE- CASTING NO. 715
M4129G	CATCH BASIN FRAME CASTING
M4154B	CATCH BASIN GRATE CASTING
M4160D	CURB BOX CASTING FOR CATCH BASIN
M4180J	MANHOLE OR CATCH BASIN STEP
M7020J	CONCRETE CURB
M7035K	CONCRETE WALK & CURB RETURNS AT ENTRANCES
M7100G	CONCRETE CURB & GUTTER
M7111J	INSTALLATION OF CATCH BASIN CASTINGS
M8110D	TRAFFIC SIGNAL BRACKETING
M8112C	PEDESTAL FOUNDATION
M8114A	PVC HANDHOLE/PULLBOX
M8121D	TRANSFORMER BASE AND POLE BASE PLATE
M8126F	POLE FOUNDATION (PA90 m AND PA100 m)
M8130D	SAW CUT LOOP DETECTORS

BASIS FOR ESTIMATED QUANTITIES

AGGREGATE BASE - 80 kg PER CUBIC METER
BITUMINOUS MIXTURES - 62.4 kg PER SQUARE METER PER 25 mm THICKNESS
BITUMINOUS MATERIAL FOR TACK COAT - 0.23 L PER SQUARE METER OF APPLICATION

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: PMJ	DESIGN BY: JML
CHKED. BY: PBD	DWG. NAME: 57THB01
DATE: FEBRUARY 6, 1998	


XREF DRAWINGS

B R W
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.

DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
TYPICAL SECTIONS



ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
4
45

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57HTB02.DWG PLOT DATE: Nov 09, 1998 1:12pm

PERMANENT SIGNING TABULATION

STD. SIGN NUMBER	POST TYPE	NOTES	POST LENGTH m	MOUNTING HEIGHT m	SIZE mm X mm	SIGN AREA m2	NUMBER OF INSTALLATIONS EACH	TOTAL AREA m2	PANEL CODE	LEGEND	POSSIBLE SALVAGE EACH
TYPE C SIGNS											
C-1	2U	1	4.3	2.2	762 X 762	0.581	5	2.905	R1-1	STOP	5
C-2	2U	1	4.6	2.2	762 X 762	0.581	1	0.581	R1-1	STOP	1
C-3	2U	1	4.6	2.2	457 X 152	0.069	1	0.069	R1-4	ALL WAY	1
C-4	2U	1	4.6	2.2	762 X 762	0.581	1	0.581	R1-1	STOP	1
C-5	2U	1	4.6	2.2	762 X 762	0.581	1	0.581	R1-1	STOP	1
C-6	2U	1	4.9	2.2	914 X 305	0.279	2	0.558	R6-1R	ONE WAY	2
C-7	2U	1	4.9	2.2	610 X 762	0.465	2	0.930	SPECIAL	STREET SIGN	2
C-8	2U	1	4.3	2.2	457 X 457	0.209	5	1.045	R4-7	KEEP RIGHT	3
C-9	2U	1	4.9	2.2	762 X 762	0.581	4	2.324	X4-2	HAZARD MARKER	3
C-10	2U	1	4.3	2.2	762 X 762	0.581	1	0.581	R3-X2	LEFT TURN LANE	1
C-11	2U	1	4.3	2.2	762 X 762	0.581	1	0.581	R3-X2	LEFT TURN LANE	1
C-12	2U	1	4.6	2.2	762 X 914	0.696	1	0.696	X4-2	HAZARD MARKER	1
C-13	2U	1	4.3	2.2	914 X 762	0.696	1	0.696	R3-4	NO U TURN	1
C-14	2U	1	4.3	2.2	914 X 762	0.696	1	0.696	R3-X1	RIGHT TURN LANE	1
C-15	2U	1	4.3	2.2	762 X 762	0.581	2	1.162	R3-7R	RIGHT TURN MUST TURN RIGHT	1
C-16	1U	1	4.3	2.2	914 X 305	0.279	1	0.279	R4-XB	YIELD TO BUSES	1
C-17	2U	1	4.3	2.2	610 X 762	0.465	1	0.465	R3-8F	DOUBLE LEFT TURN	1
C-18	2U	1	4.6	2.2	610 X 762	0.465	1	0.465	R3-MOD	LEFT TURN ONLY/ THRU RIGHT	1
C-19	1U	1	4.3	2.2	305 X 457	0.139	1	0.139	R5-1	DO NOT ENTER	1
C-20	1U	1	4.3	2.2	305 X 457	0.139	2	0.279	R6-1R	ONE WAY	1
C-21	2U	1	4.9	2.2	914 X 914	0.835	1	0.835	R2-1	SPEED LIMIT 35 MPH	1
C-22	2U	1	4.6	2.2	610 X 610	0.372	1	0.372	R7-1A	NO PARKING ANY TIME	1
C-23	2U	1	4.6	2.2	610 X 610	0.372	1	0.372	R7-1A	NO PARKING ANY TIME	1
C-24	2U	1	4.6	2.2	610 X 610	0.372	1	0.372	R7-8A	HANDICAPPED PARKING	3
C-25	2U	1	4.6	2.2	533 X 381	0.203	1	0.203	W3-1	STOP AHEAD	1
C-26	1U	1	1.8	1.8	610 X 610	0.372	1	0.372	R7-1A	NO PARKING ANY TIME	1
C-27	1U	1	1.8	1.8	610 X 610	0.372	1	0.372	R7-1A	NO PARKING ANY TIME	1
C-28	1U	1	1.8	1.8	610 X 610	0.372	1	0.372	R7-8A	HANDICAPPED PARKING	3
C-29	1U	1	1.8	1.8	610 X 610	0.372	1	0.372	M3-3A	SOUTH	1
C-30	1U	1	4.3	2.2	914 X 305	0.279	1	0.279	M1-6	ANOKA COUNTY 102	1
C-31	2U-1A	1	4.9	2.2	914 X 914	0.835	1	0.835	R7-1A	NO PARKING ANY TIME	1
C-32	2U-1A	1	4.9	2.2	914 X 914	0.835	1	0.835	R7-1A	NO PARKING ANY TIME	1
C-33	2U-1A	1	4.3	2.2	1372 X 762	1.045	1	1.045	M3-3A	SOUTH	1
C-34	2U	1	4.6	2.2	762 X 762	0.581	1	0.581	M6-1A	ARROW - LEFT/RIGHT	1
					457 X 152	0.069	1	0.069	M1-5A	STATE HWY 47	1
					610 X 610	0.372	1	0.372	M2-1A	JCT	1
					610 X 305	0.186	1	0.186	M1-5A	STATE HWY 47	1
									M6-4A	ARROW - BOTH	1
									M1-6	ANOKA COUNTY 102	1
									M4-6A	END	1
									SPECIAL	CART SIGN	3
									SPECIAL	TOWING SIGN	1
									X4-4	CLEARANCE MARKER	1
									X4-4	CLEARANCE MARKER	1
									X4-4	CLEARANCE MARKER	1
									R6-1R	ONE WAY	1
									R6-1L	ONE WAY	1
									W9-1R	RIGHT LANE ENDS	1
									W20-100P	600 FEET	1
									W9-1L	LEFT LANE ENDS	1
									W20-100P	300 FEET	1
									R3-8H	LEFT TURN/THRU/RIGHT ONLY	1
									R1-1	STOP	1
									R1-4	ALL WAY	1
									M1-6	ANOKA COUNTY 102	1
									M3-1A	NORTH	1
TOTAL TYPE C SIGN AREA							93	34.896			53

1 INSTALL SALVAGED SIGN

EARTHWORK SUMMARY

EXCAVATION:

COMMON	4,497 m ³ (EV)	TOPSOIL STRIPPING	568 m ³
		REGULAR	3,929 m ³
SUBGRADE	4,266 m ³ (EV)	SUBGRADE	3,135 m ³
		SUBCUT	1,131 m ³
MUCK	0 m ³ (EV)	MUCK EXCAVATION	0 m ³

EMBANKMENT

TOPSOIL	380 m ³ (CV) x 1.3 =	494 m ³ (LV)
COMMON (REGULAR EMBANKMENT)	54 m ³ (CV) x 1.2 =	64 m ³ (LV)
GRANULAR MATERIAL	4,748 m ³ (CV) x 1.2 =	5,698 m ³ (LV)

BALANCE

TOPSOIL:	568 m ³ - 494 m ³ =	74 m ³ (EV) EXCESS
COMMON:	3,929 m ³ - 64 m ³ =	3,865 m ³ (EV) EXCESS
GRANULAR MATERIAL:		5,698 m ³ (LV) BORROW
MUCK:		0 m ³ (EV) EXCESS

* ASSUMED COMPACTION FACTOR OF 20% OR 30%.
ACTUAL COMPACTION FACTOR WILL VARY.

PROPOSED DRAINAGE TABULATION

NOTES	STRUCTURE NO.	LOCATION STATION/OFFSET	DESIGN	F & I CASTING ASSEMBLY TYPE	STRUCTURE TOP OF CASTING/ INLET ELEVATION	STRUCT. OUTLET ELEVATION	PAY HEIGHT	DRAINS TO			F & I PIPE SEWER /CULVERT DESIGN 3006			CONNECT TO EXIST. STORM SEWER EACH	CONNECT TO EXIST. CB EACH
								STRUCT. NO	%	INLET ELEV	300 mm RCP CL V	375 mm RCP CL V	450 mm RCP CL V		
											m	m	m		
	MH 2	1+300.000, 4.460 m RT	F	A	256.138	254.397	1.7	EX. MH 1	0.8	254.200					
	CBMH 3	1+300.000, 13.936 m RT	F	B	256.940	254.468	1.5	MH 2	0.8	254.397			1		
	CBMH 4	1+249.622, 13.837 m RT	F	B	256.190	254.720	1.5	CBMH 23	0.5	254.480					
	MH 5	1+170.830, 9.716 m RT	F	A	257.249	255.115	2.1	CBMH 4	0.5	254.720					
	CBMH 6	1+148.663, 9.2477 m RT	F	B	257.580	255.225	2.4	MH 5	0.5	255.115					
	CBMH 7	1+075.132, 9.000 m RT	F	B	259.080	255.655	3.4	CBMH 6	0.5	255.285					
	CB 8	1+075.955, 9.000 m LT	F	B	259.020	255.739	3.3	CBMH 7	0.5	255.655		73.88			
	STUB 9	1+075.651, 13.000 m LT				255.822		CB 8	0.5	255.799	4.56				
	CBMH 10	1+148.913, 9.744 m LT	F	B	257.580	256.183	1.4	CBMH 6	2.0	255.845	16.90				
	EX CB 11	1+152.199, 14.381 m LT				256.799		CBMH 10	2.0	256.683	5.80			1	
	CBMH 12	1+170.830, 10.232 m LT	F	B	257.127	255.771	1.4	MH 5	0.5	255.674		19.39			
	CB 13	1+170.284, 14.432 m LT	H	B	257.330	255.858		CBMH 12	0.5	255.831	5.29				
	CBMH 14	1+251.748, 0.238 m LT	F	B	256.170	254.846	1.3	CBMH 4	0.5	254.780		13.26			
	CBMH 15	1+251.727, 4.530 m LT	F	B	256.230	254.933	1.3	CBMH 14	0.5	254.906		5.44			
	CB 16	1+251.775, 12.033 m LT	H	B	256.110	254.965		CBMH 15	0.5	254.933		6.40			
	CB 17	1+225.045, 0.636 m LT	F	B	256.380	255.040	1.3	CBMH 14	0.5	254.906	26.80				
	CBMH 18	1+300.000, 0.164 m LT	F	B	255.950	254.477	1.5	MH 2	0.5	254.457		4.06			
	CBMH 19	1+300.000, 1.364 m LT	F	B	255.950	254.489	1.5	CBMH 18	0.5	254.477		2.32			
	CBMH 20	1+300.000, 12.164 m LT	F	B	255.880	254.597	1.3	CBMH 18	0.5	254.549	9.68				
	CB 21	1+252.644, 24.096 m RT	H	B	256.534	255.311		EX. MH (PRIVATE)	0.5					1	
	CB 22	1+297.000, 12.164 m LT	H	B	255.960	254.612		CBMH 20	0.5	254.597	3.00				
	CBMH 23	1+297.000, 13.936 m RT	F	B	255.950	254.480	1.5	CBMH 3	0.5	254.468			3.00		

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	XREF DRAWINGS
DRAWN BY: PMJ	DESIGN BY: JML
CHKD. BY: PBD	DWG. NAME: 57HTB02
DATE: FEB 6, 1998	

BRW
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.
DATE: _____ MINN. REG. NO. 23197

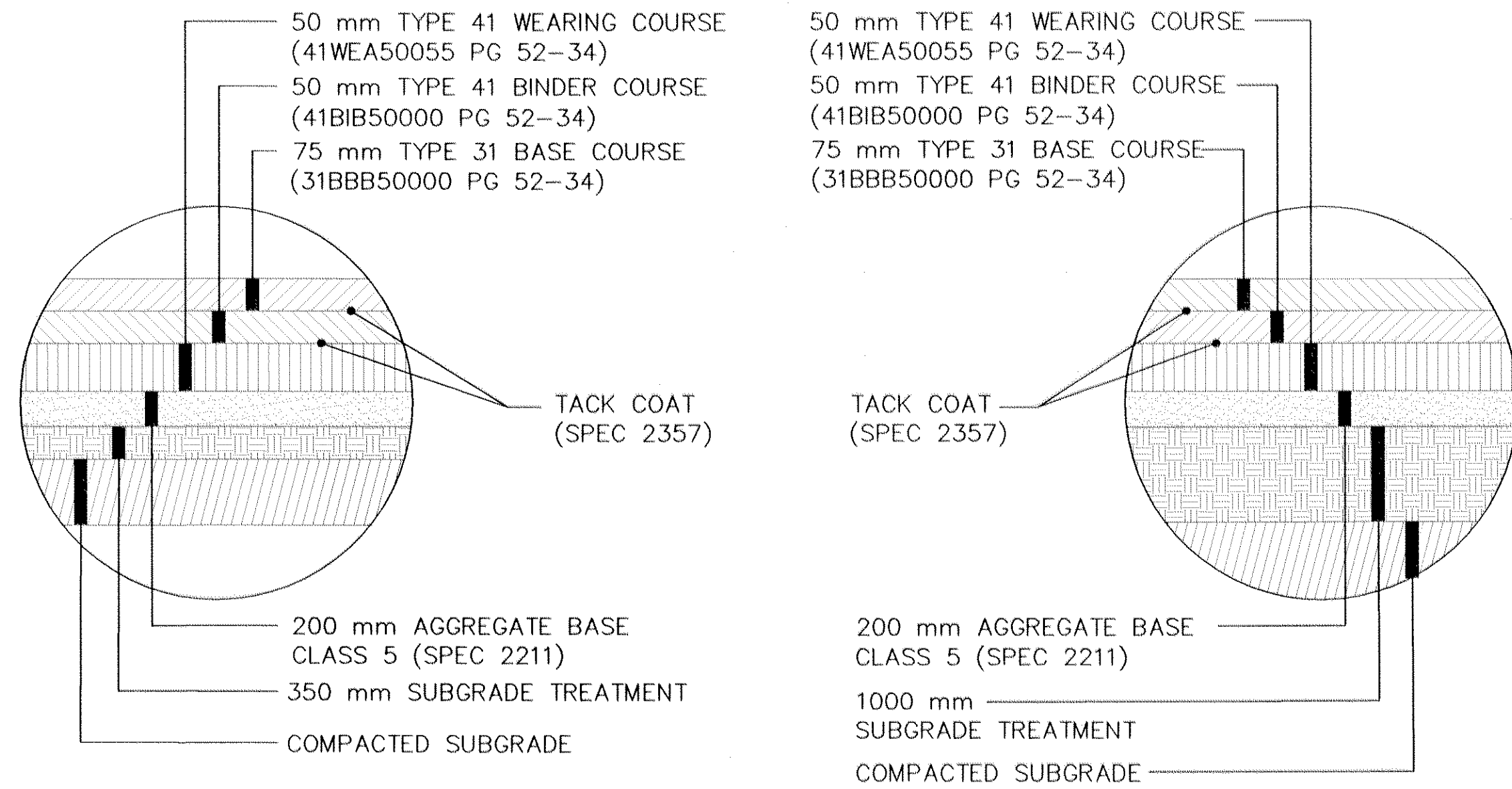
COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
TABULATED QUANTITIES

CITY PROJECT	ST-1997-4	SHEET NO.
COUNTY PROJECT	97-11-102	5
S.A.P.	127-010-15	
S.A.P.	127-301-04	

45

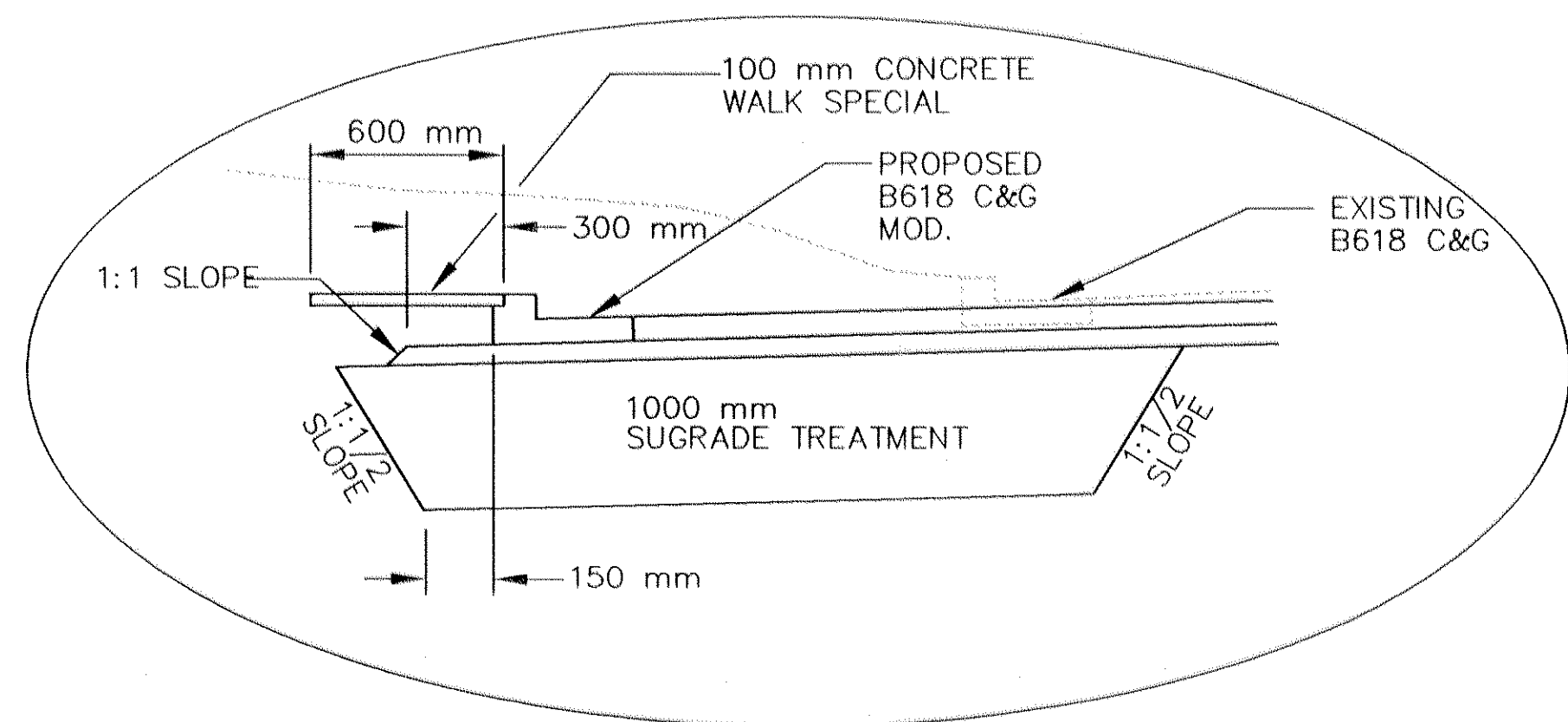


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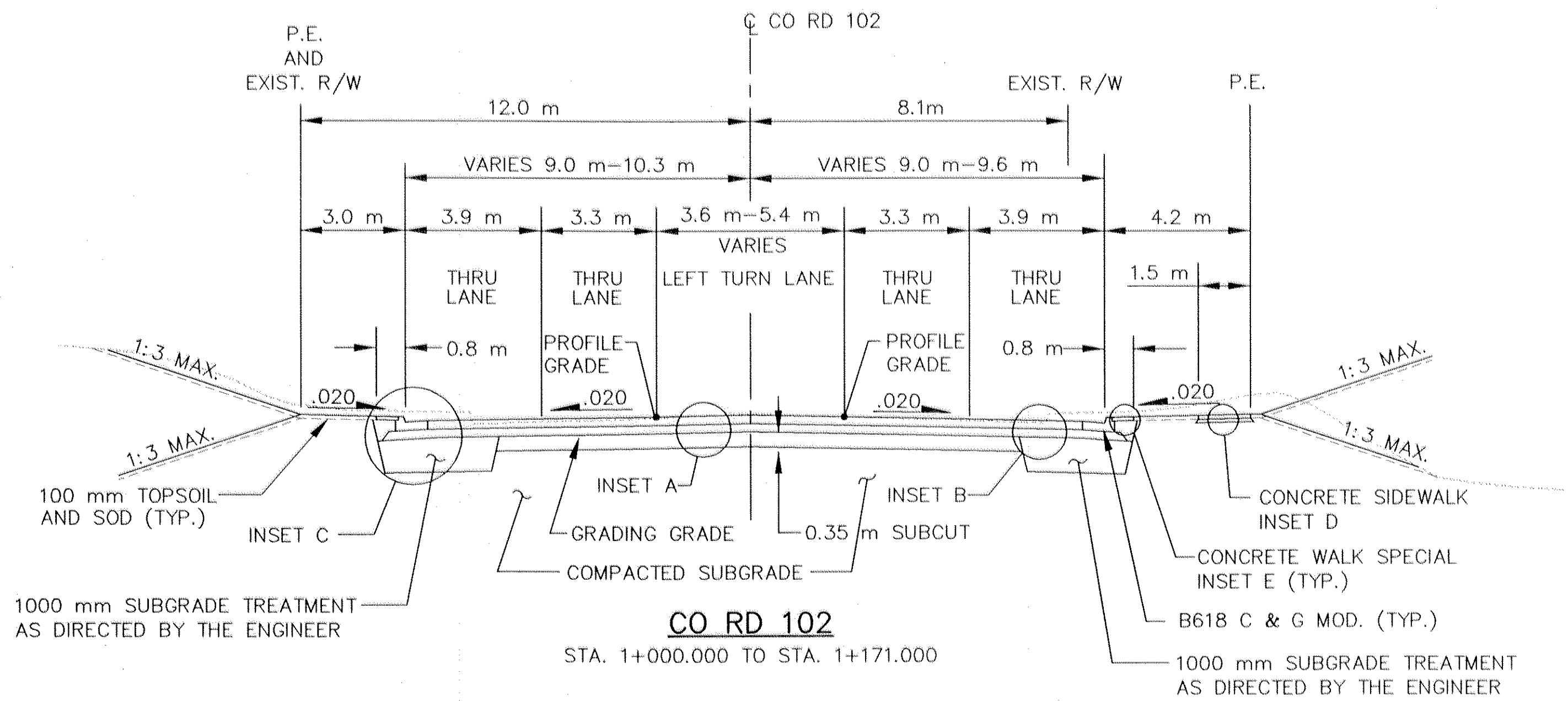


INSET A

INSET B

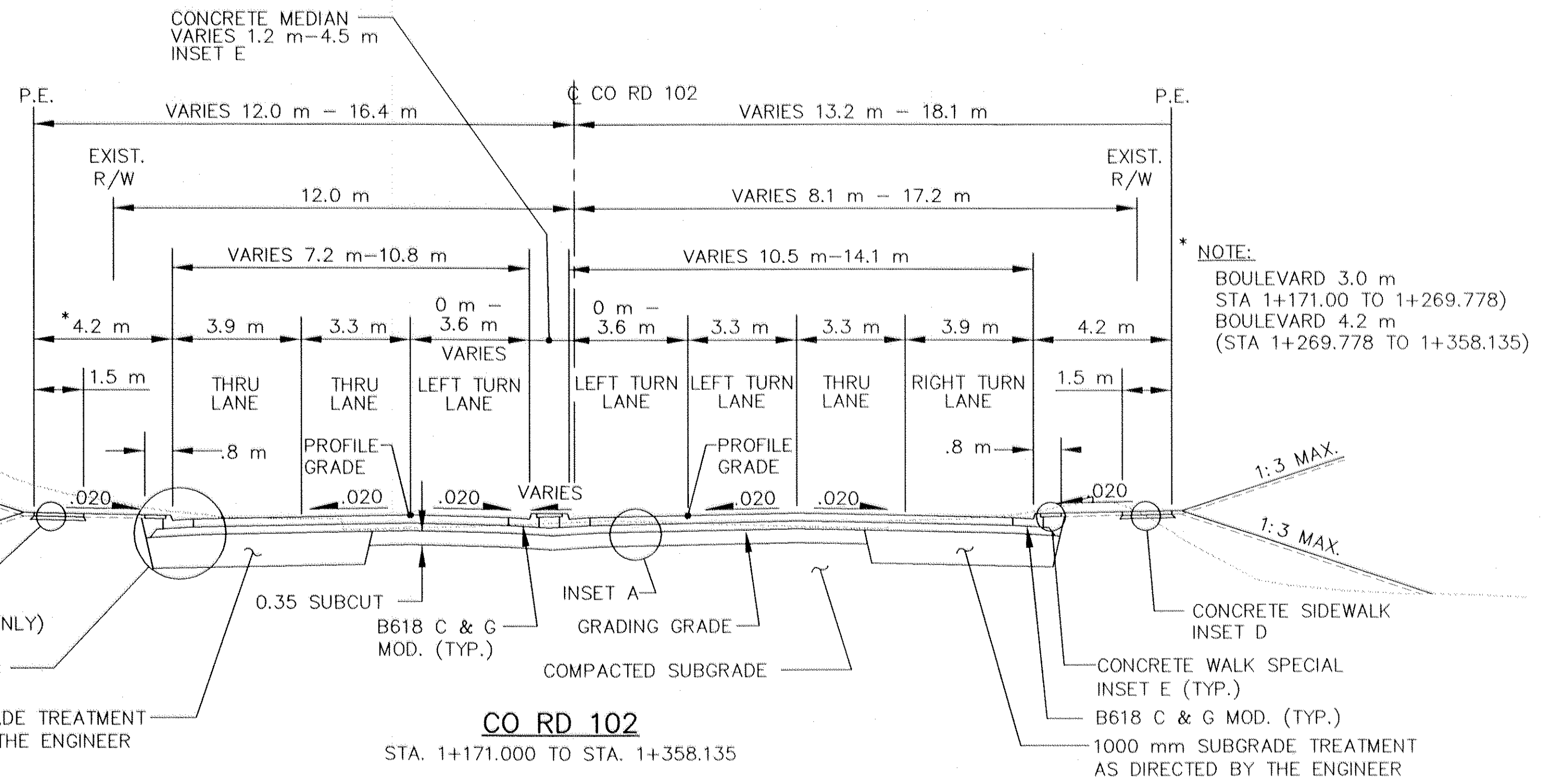


INSET C



CO RD 102

STA. 1+000.000 TO STA. 1+171.000



CO RD 102

STA. 1+171.000 TO STA. 1+358.135

* NOTE:
BOULEVARD 3.0 m
STA 1+171.00 TO 1+269.778)
BOULEVARD 4.2 m
(STA 1+269.778 TO 1+358.135)

NOTES:

1. CONTRACTOR SHALL BACKFILL ALL 1.8 m WIDE MEDIAN ISLANDS TO BOTTOM OF CONCRETE WALK WITH GRANULAR BORROW MATERIAL.
2. MAINTAIN 0.5 m MINIMUM CLEAR ZONE FROM EDGE OF TRAVEL LANE AS REQUIRED BY STATE-AID STANDARDS FOR 60 KPH DESIGN SPEEDS.
3. BACKFILL SUBGRADE TREATMENT WITH SELECT GRADING MATERIAL OR GRANULAR BORROW AS DIRECTED BY THE ENGINEER.

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: PMJ	DESIGN BY: JML
CHKD. BY: PBD	DWG. NAME: 57THYP1
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS

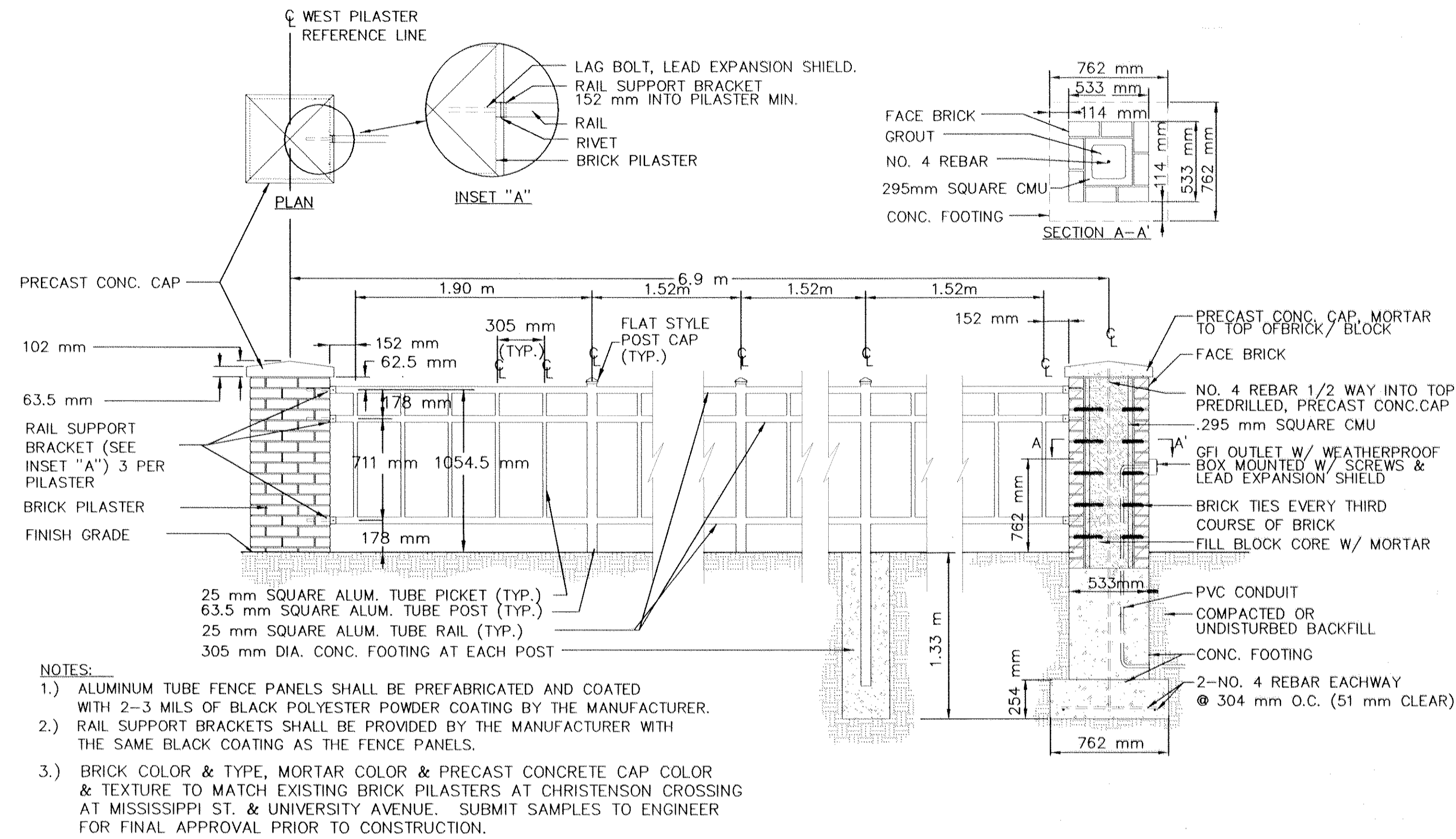
B R W
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.
DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
TYPICAL SECTIONS

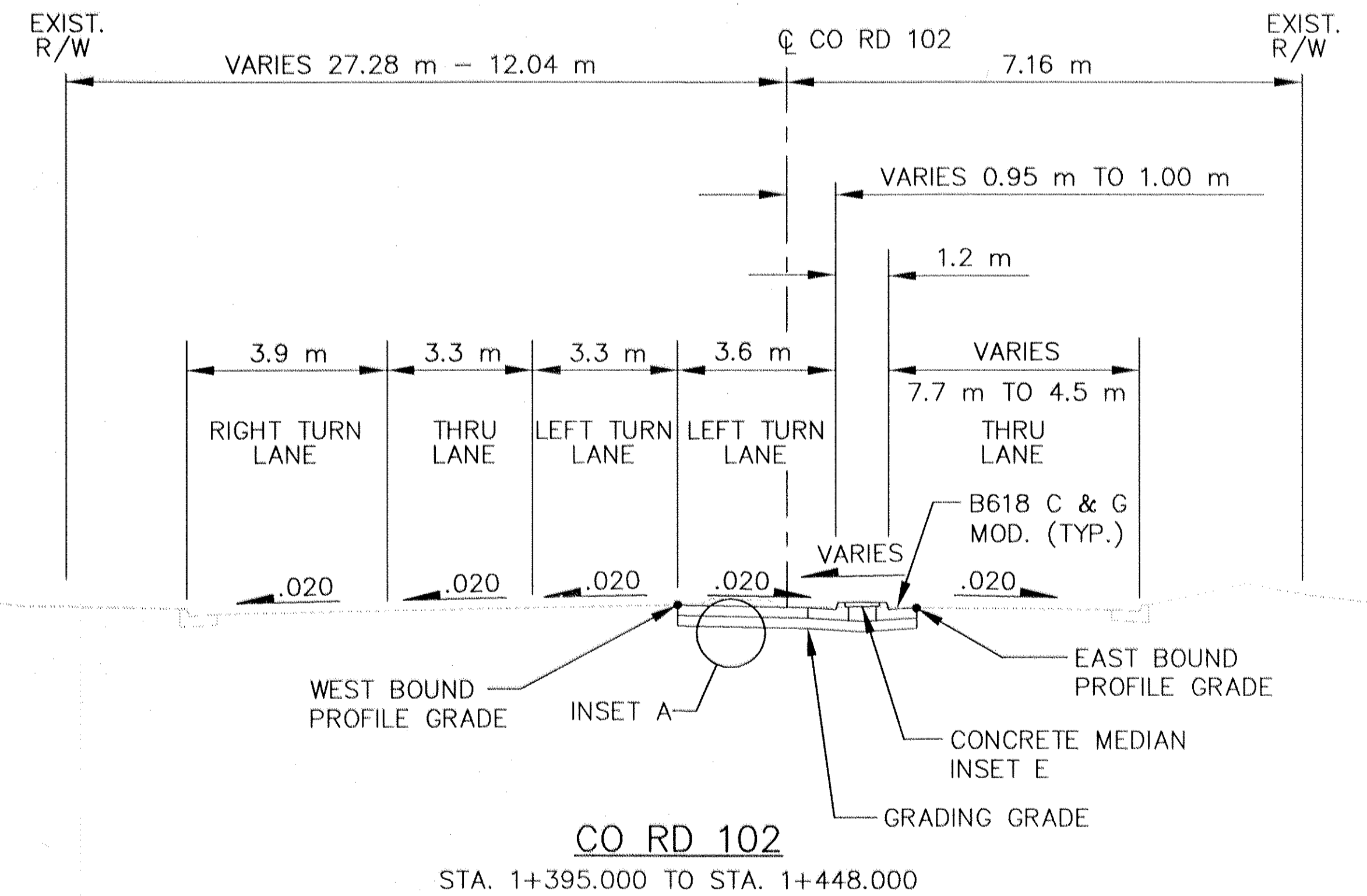
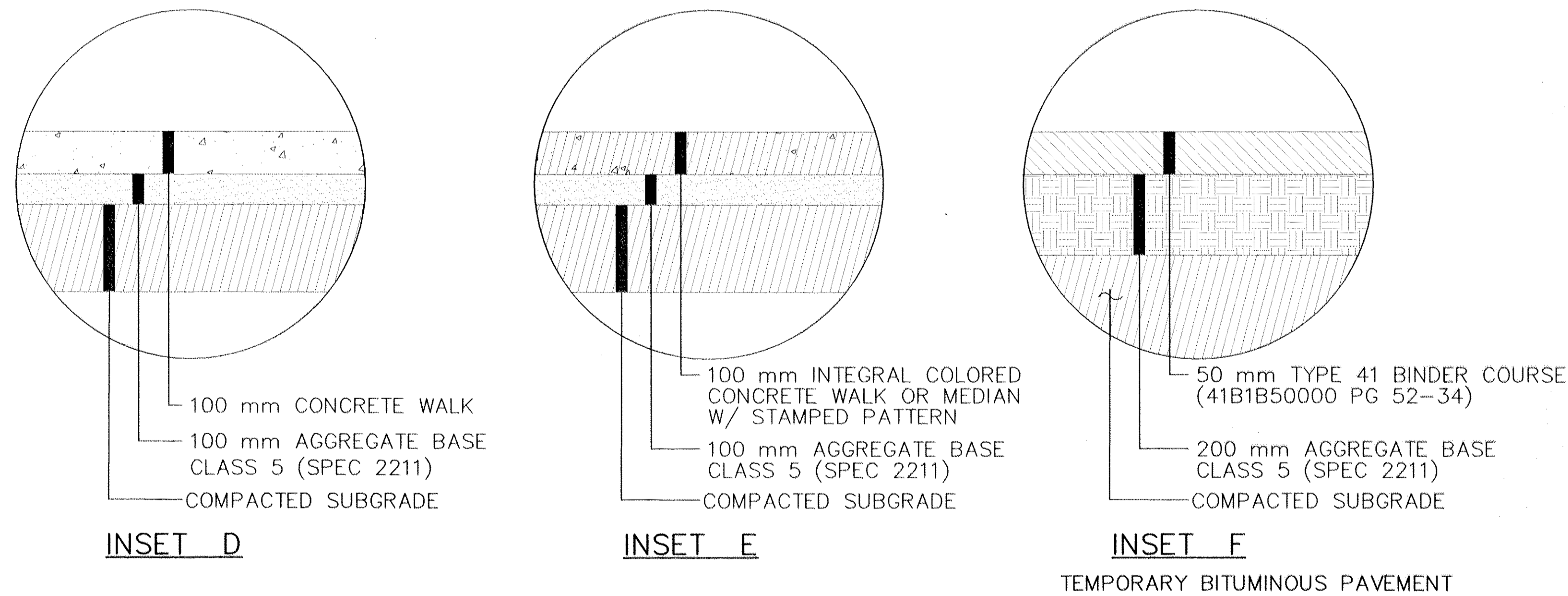
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
6
45



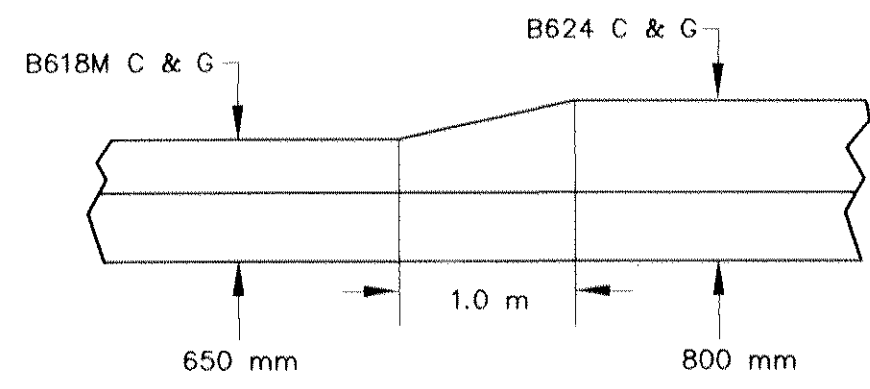
STATIONS OF CENTER OF WEST PILASTER		
STATION	OFFSET	NOTES
1+011.73	11.73 m LT	CORNER PILASTER
1+011.76	18.31 m LT	CORNER PILASTER
1+013.87	13.62 m RT	CORNER PILASTER
1+013.87	20.39 m RT	CORNER PILASTER
1+018.50	11.77 m LT	CORNER PILASTER
1+020.50	13.62 m RT	CORNER PILASTER
1+058.38	11.76 m LT	
1+058.38	13.74 m RT	
1+099.37	13.73 m RT	
1+099.38	11.77 m LT	
1+142.36	12.37 m LT	
1+142.37	13.93 m RT	
1+186.38	13.33 m LT	
1+186.38	17.78 m RT	
1+236.33	18.40 m RT	
1+236.37	14.45 m LT	
1+286.37	16.67 m LT	
1+286.37	18.68 m RT	
1+340.70	18.66 m RT	CORNER PILASTER
1+346.70	18.66 m RT	CORNER PILASTER
1+346.78	25.44 m RT	CORNER PILASTER
1+343.01	16.89 m LT	CORNER PILASTER
1+349.79	16.89 m LT	CORNER PILASTER
1+349.79	23.66 m LT	CORNER PILASTER

BRICK PILASTER/ALUMINUM FENCE DETAIL
NOT TO SCALE



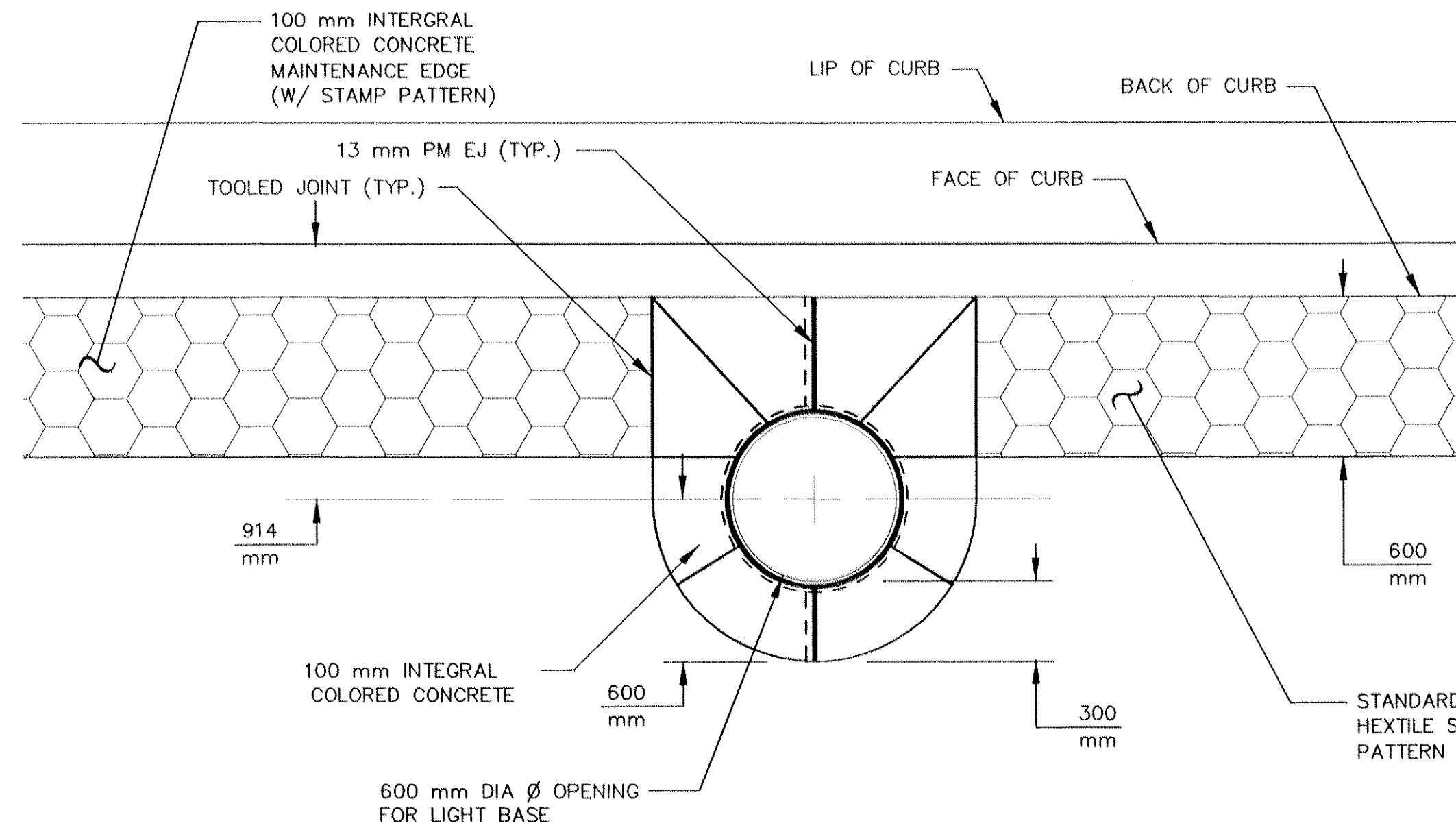
DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57HTYP2.DWG PLOT DATE: Nov 09, 1998 1:42pm

REV. NO.	BY	DATE	REVISIONS DESCRIPTION	DESIGN FILE: 35689-002-0101	XREF DRAWINGS	 B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16. DATE: _____ MINN. REG. NO. 23197	C.S.A.H. 102 RECONSTRUCTION C.S.A.H. 102/57TH AVENUE N.E. TYPICAL SECTIONS	CITY PROJECT	ST-1997-4	SHEET NO. 7
				DRAWN BY: PMJ	DESIGN BY: JML				COUNTY PROJECT	97-11-102	
				CHKD. BY: PBD	DWG. NAME: 57HTYP2				S.A.P.	127-010-15	
				DATE: FEBRUARY 6, 1998					S.A.P.	127-301-04	

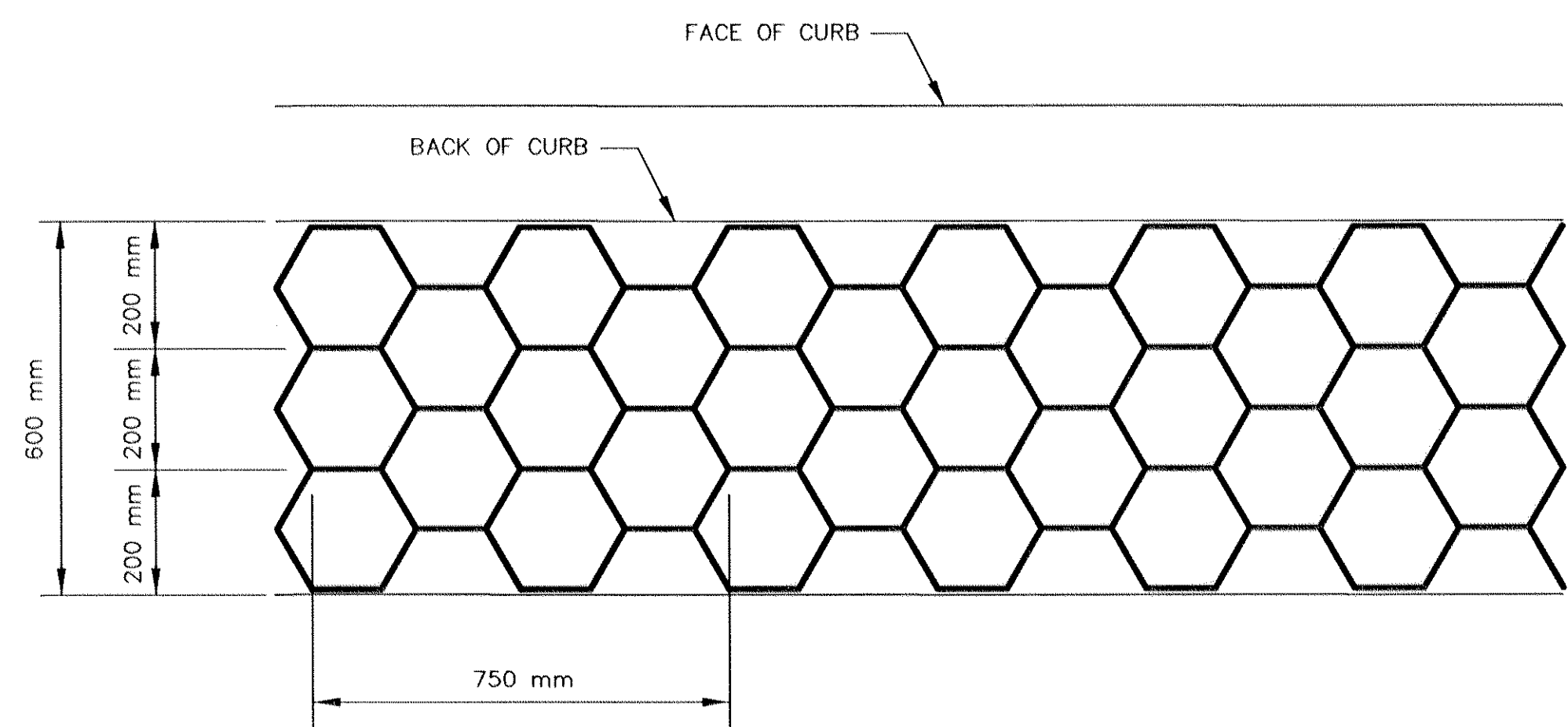


NOTE: CURB TAPER TO BE CONSTRUCTED AT ENDS OF ALL CURB AND GUTTER THAT DO NOT CONNECT TO INPLACE CURBS. CONSTRUCT TAPERS BEYOND END OF CURB RETURN RADIUS AT STREET INTERSECTIONS. COST OF TAPER TO BE INCIDENTAL TO THE UNIT PRICE BID FOR B624 CURB AND GUTTER.

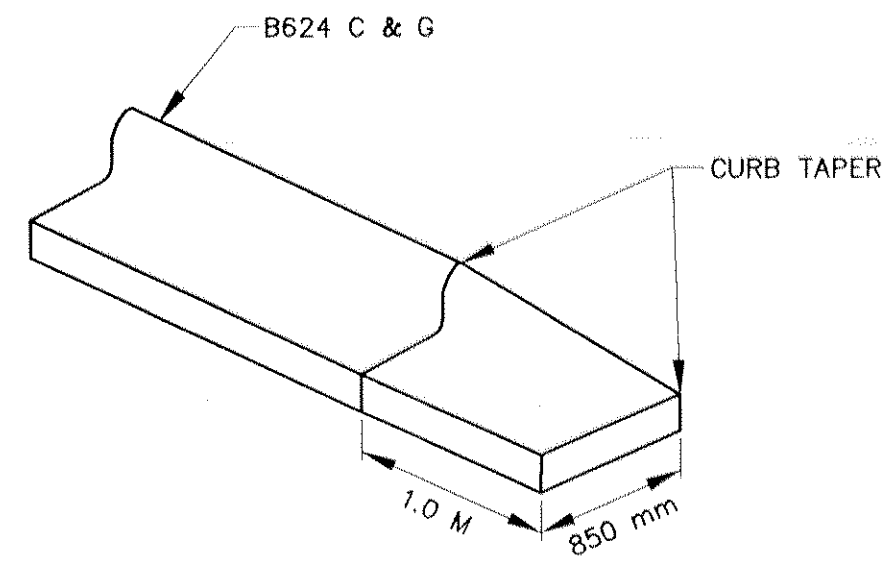
CURB TRANSITION



MAINTENANCE EDGE AT LIGHT POLE DETAIL

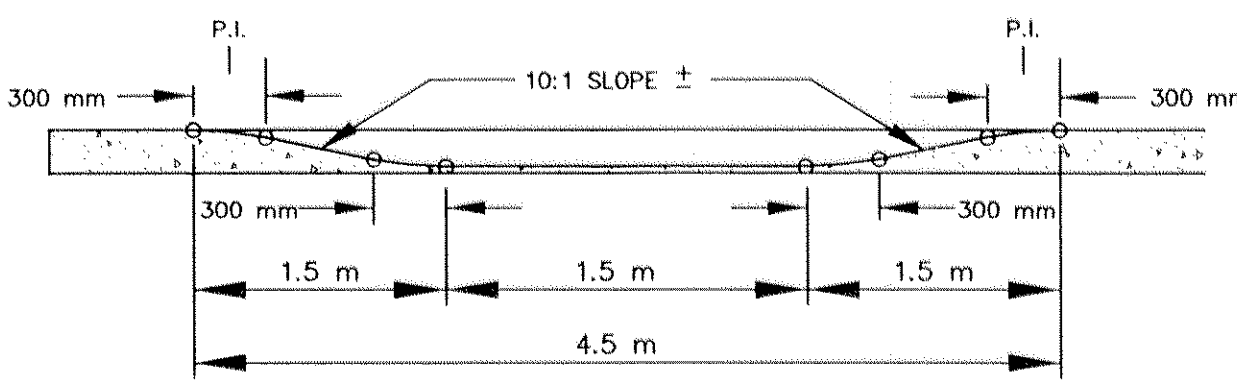
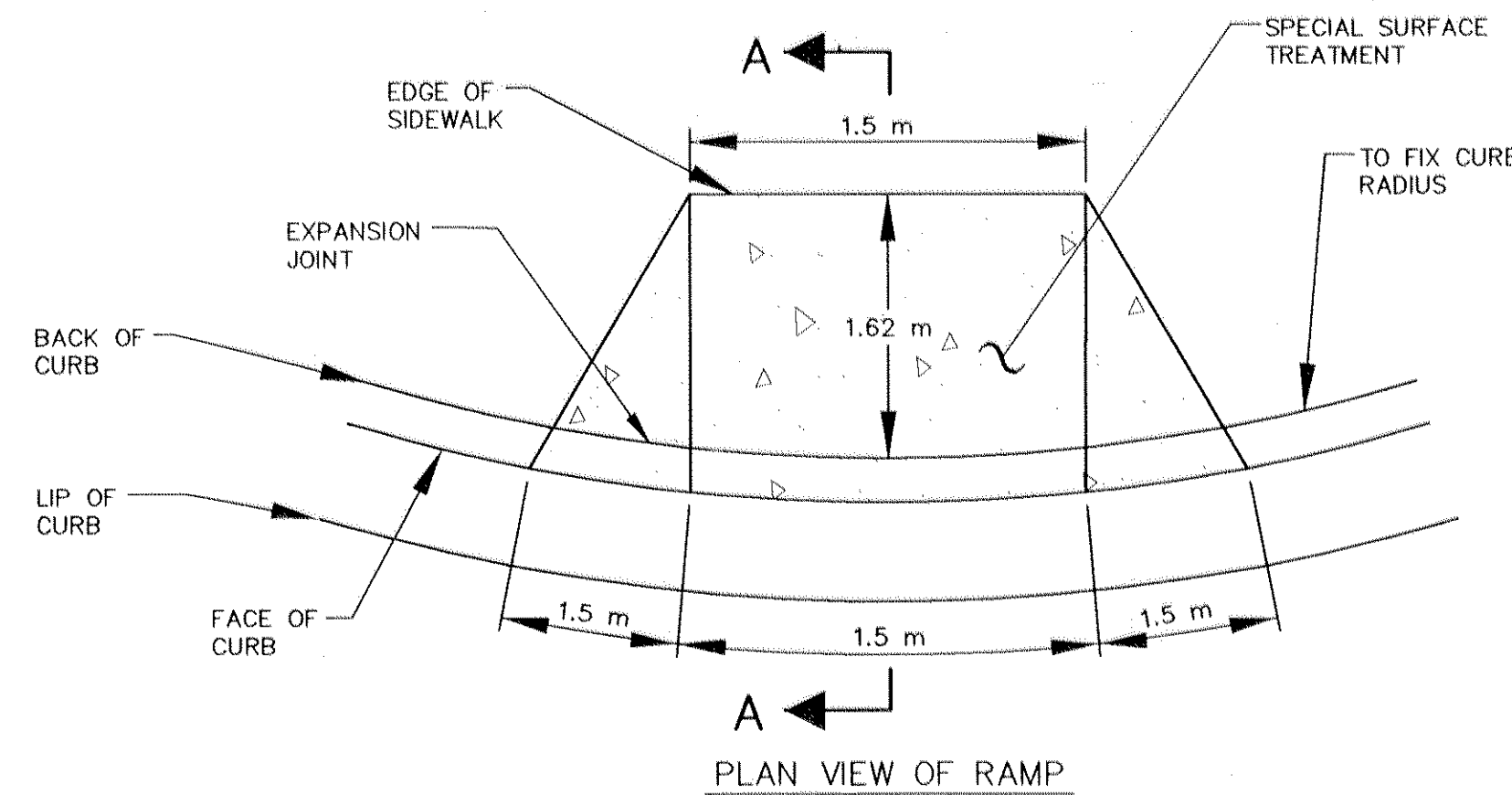


200 mm HEXTILE STAMP PATTERN

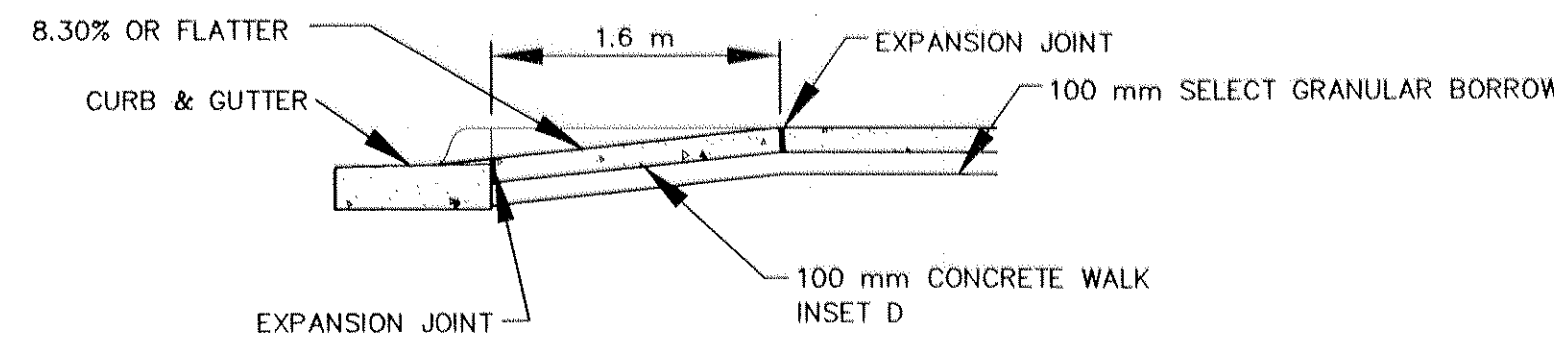


NOTE: CURB TAPER TO BE CONSTRUCTED AT ENDS OF ALL CURB AND GUTTER THAT DO NOT CONNECT TO INPLACE CURBS. CONSTRUCT TAPERS BEYOND END OF CURB RETURN RADIUS AT STREET INTERSECTIONS. COST OF TAPER TO BE INCIDENTAL TO THE UNIT PRICE BID FOR B624 CURB AND GUTTER.

CURB TAPER



ELEVATION OF RAMP

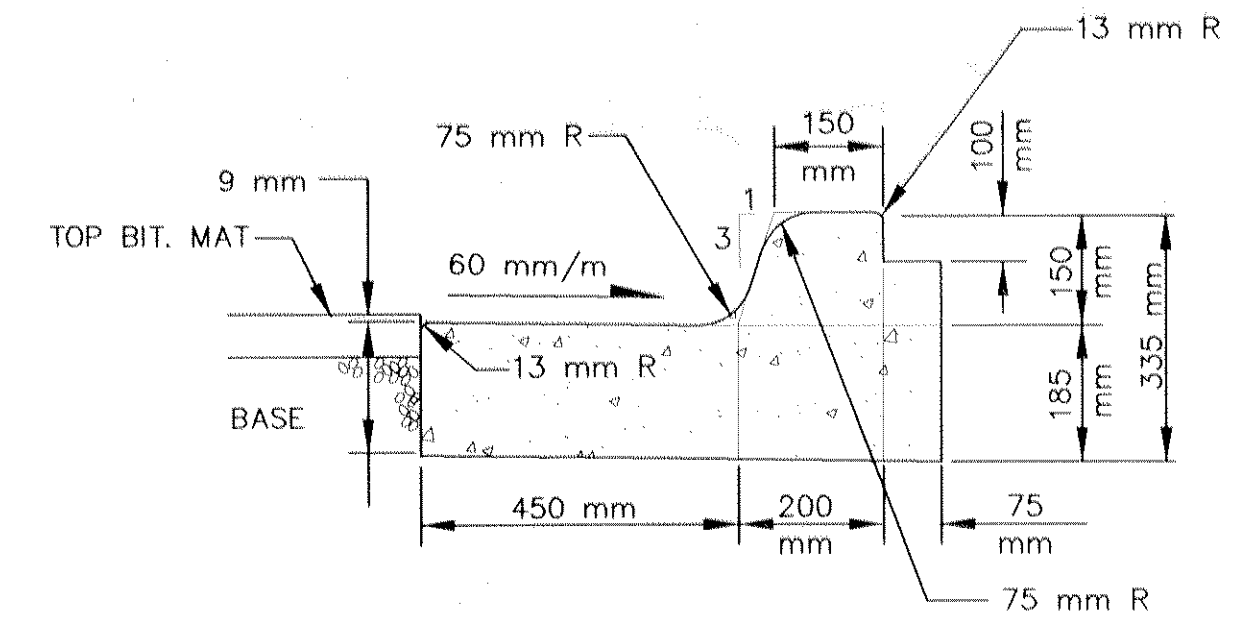


SECTION A-A

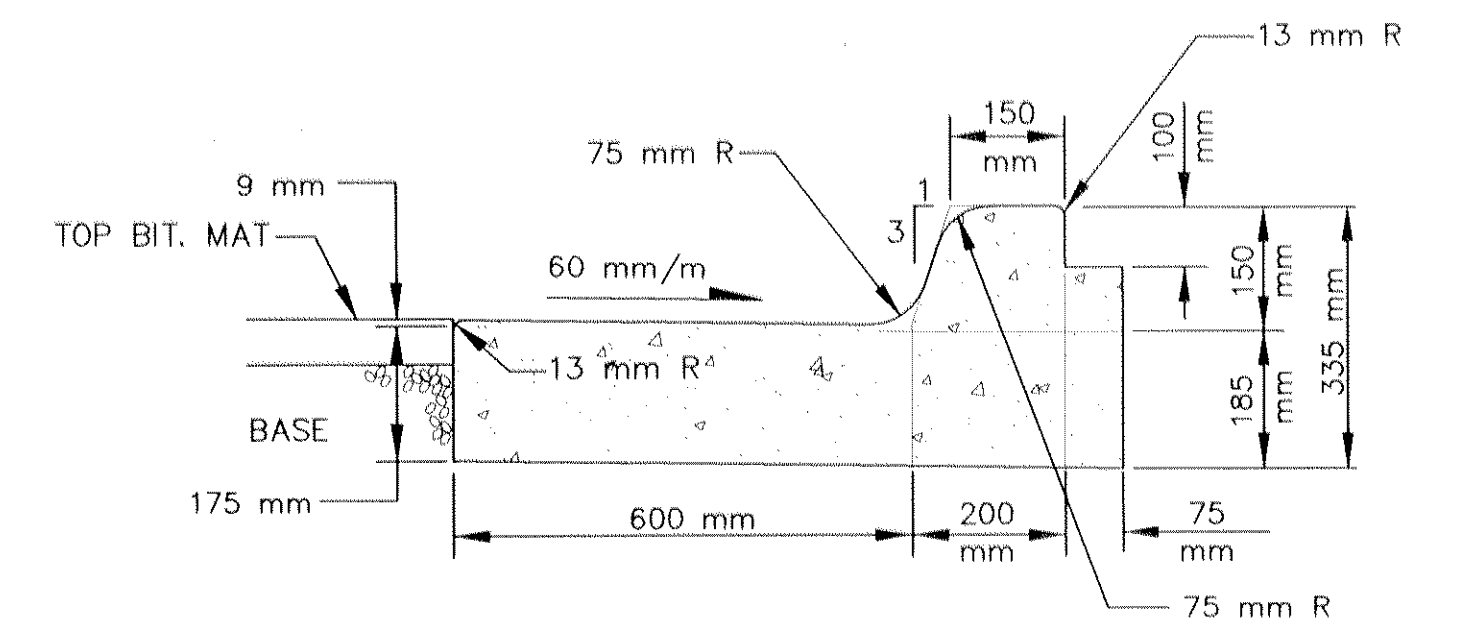
NOTE:
1. SPECIAL SURFACE TREATMENT SHALL BE EXPOSED AGGREGATE.
2. CONCRETE MIX SHALL BE STANDARD.

PEDESTRIAN CURB RAMP-TYPE A

- NOTES:
- 1) SAWCUT CONTRACTION JOINTS EVERY 3 m.
 - 2) PLACE 13 mm EXPANSION JOINT EVERY 15 m.
 - 3) PLACE 13 mm EXPANSION JOINT BETWEEN BACK OF CURB AND INTEGRALLY COLORED CONCRETE WALK AT MEDIAN LOCATIONS ONLY.

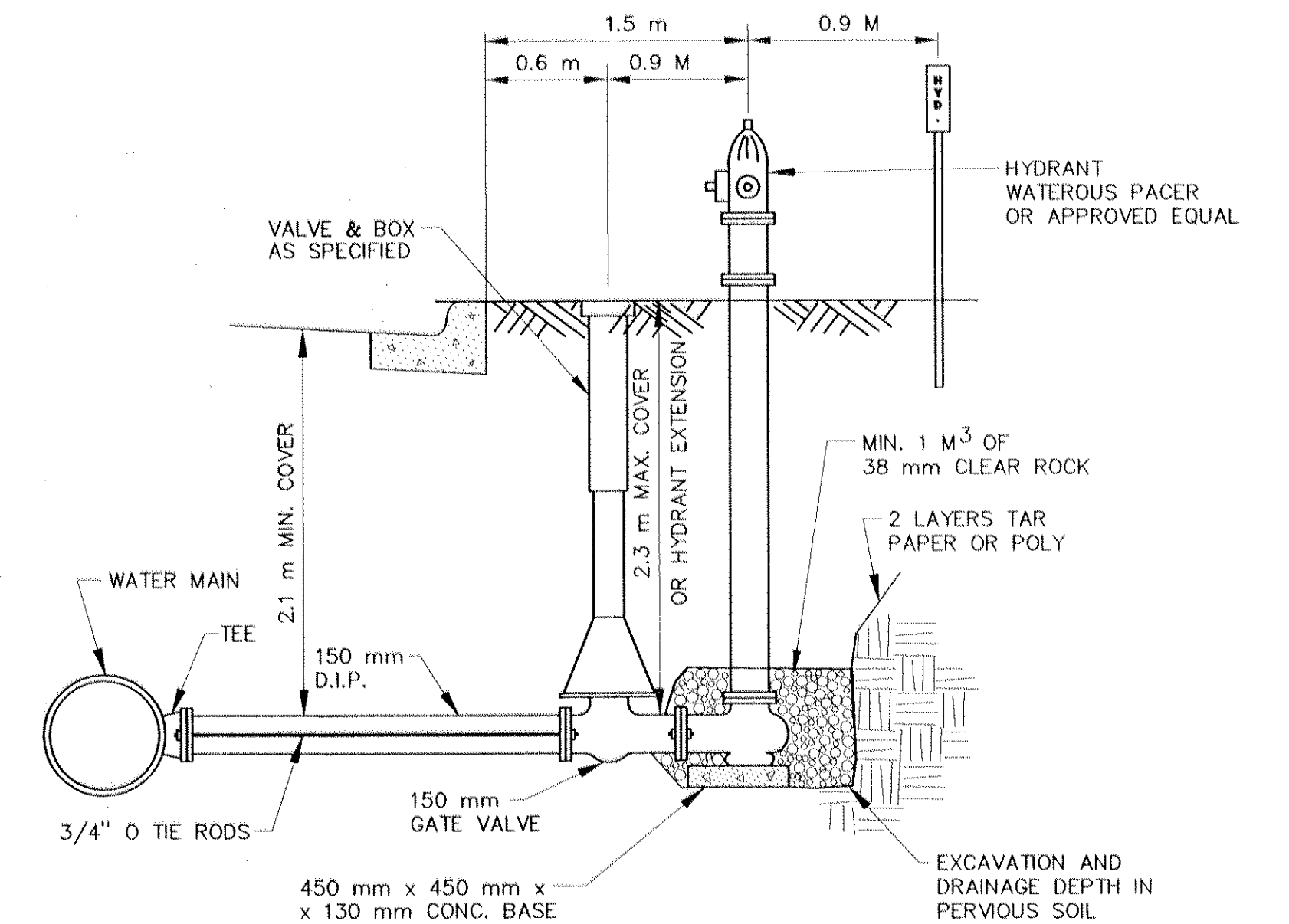


B618 MODIFIED CURB AND GUTTER



B624 MODIFIED CURB AND GUTTER

ALL HYDRANTS TO BE PLUMB TO VERTICAL AXIS
MAXIMUM ALLOWABLE DEVIATION TO BE 250 mm PER
METER OF HYDRANT.



- NOTES:
- 1) ALL HYDRANTS SHALL HAVE WEEPHOLES
 - 2) JOINTS SHALL BE TIED TO TEE ON MAINLINE WITH 2 - 20 mm Ø TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINER GLANDS MAY BE USED WHERE APPROVED BY ENGINEER. IF VALVE IS LOCATED MORE THAN 10 m AWAY FROM MAIN, VALVE SHALL BE TIED TO THE FIRST 2 PIPE JOINTS.
 - 3) HYDRANTS SHALL BE REPAINTED AFTER INSTALLATION.

TYPICAL HYDRANT INSTALLATION

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: PMJ	DESIGN BY: JML
CHKD. BY: PBD	DWG. NAME: 57THDT02
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS

B R W
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

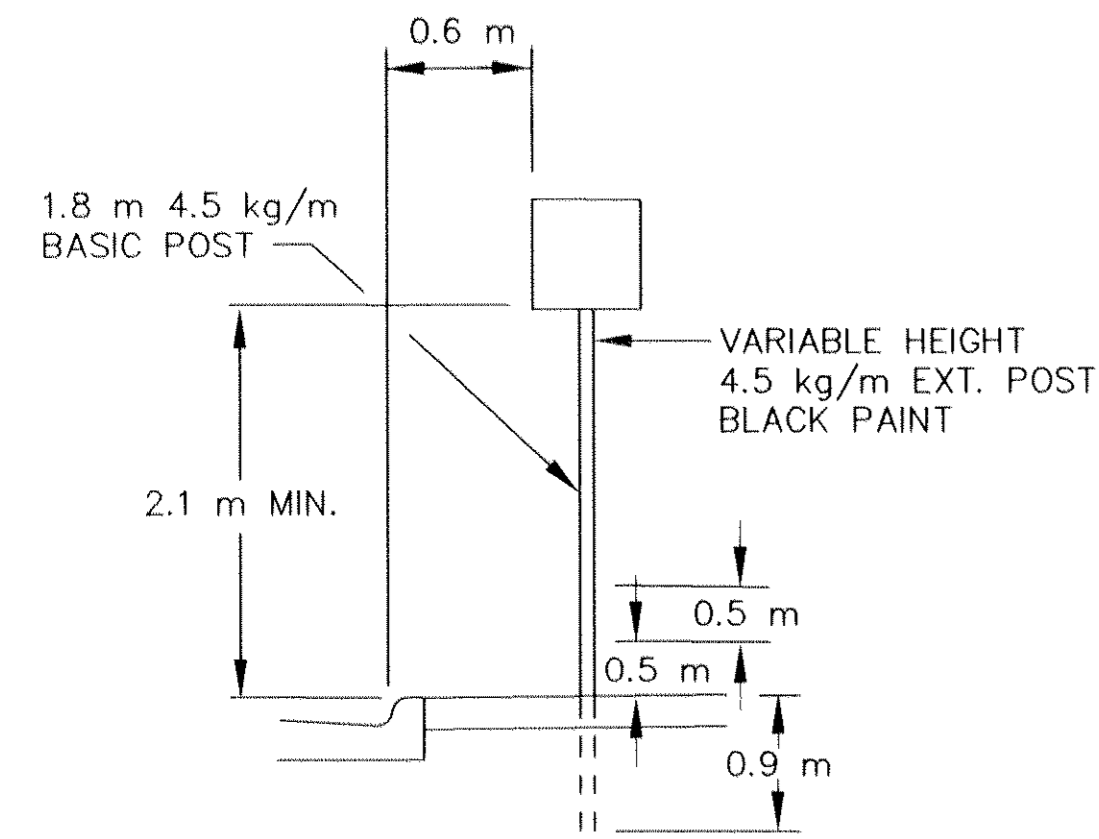
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.
DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
DETAILS

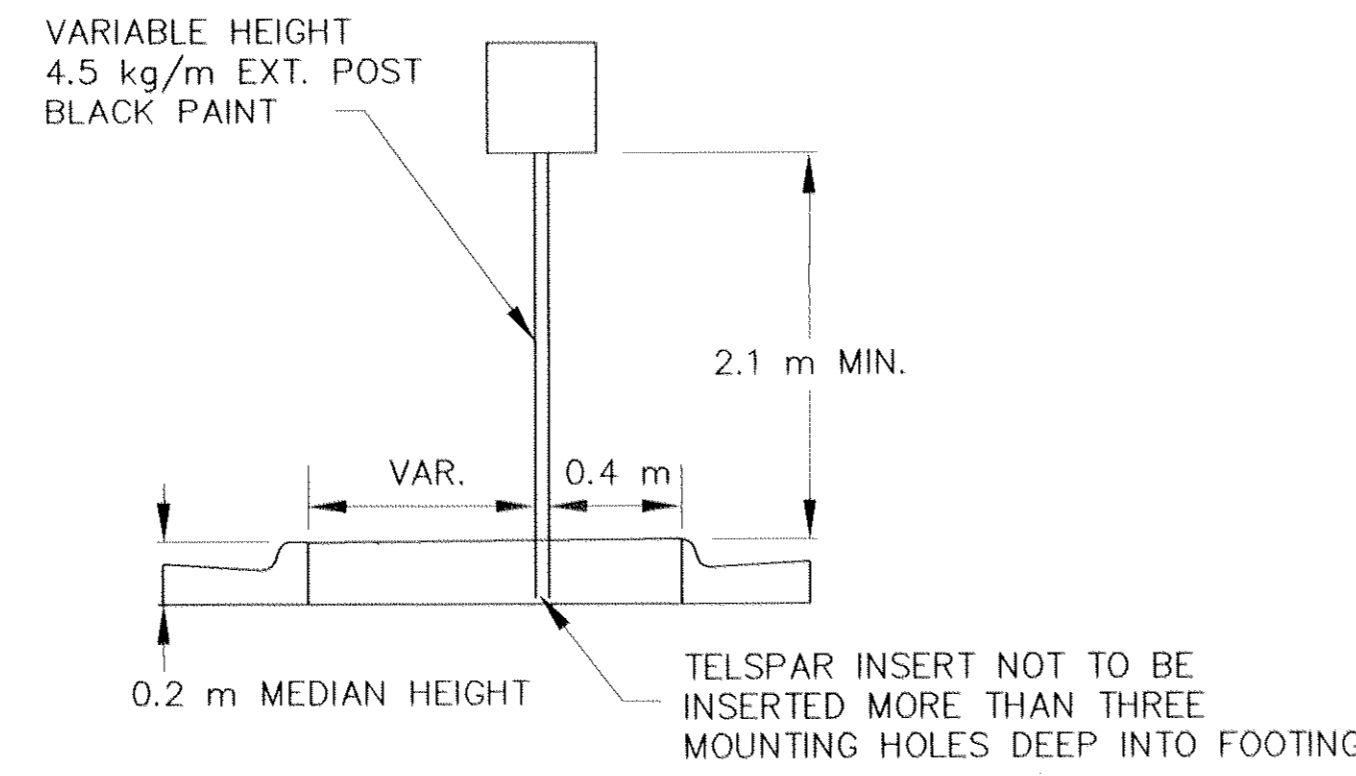
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO. 8
45

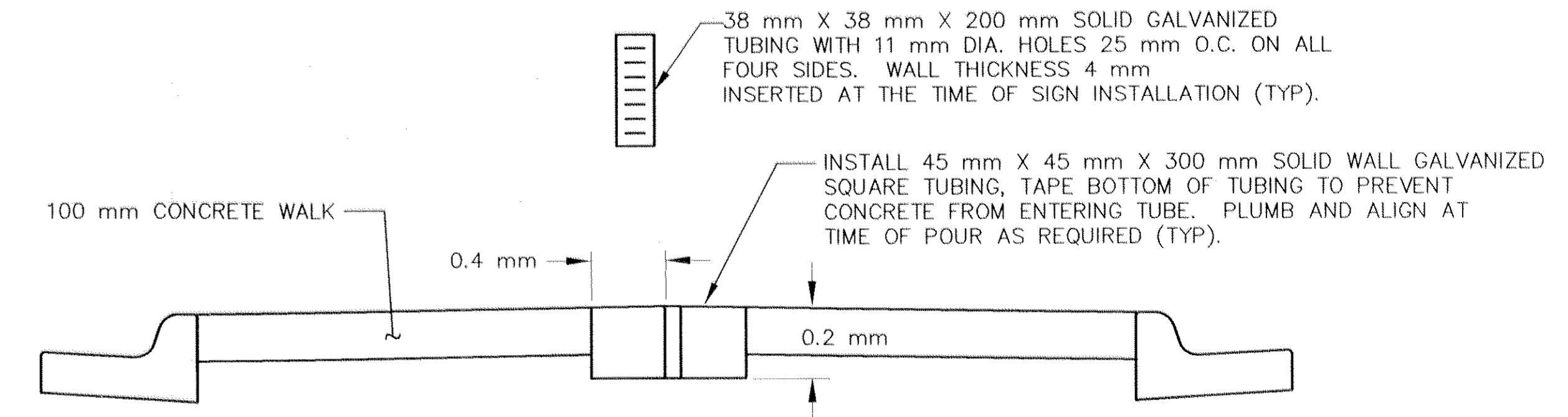
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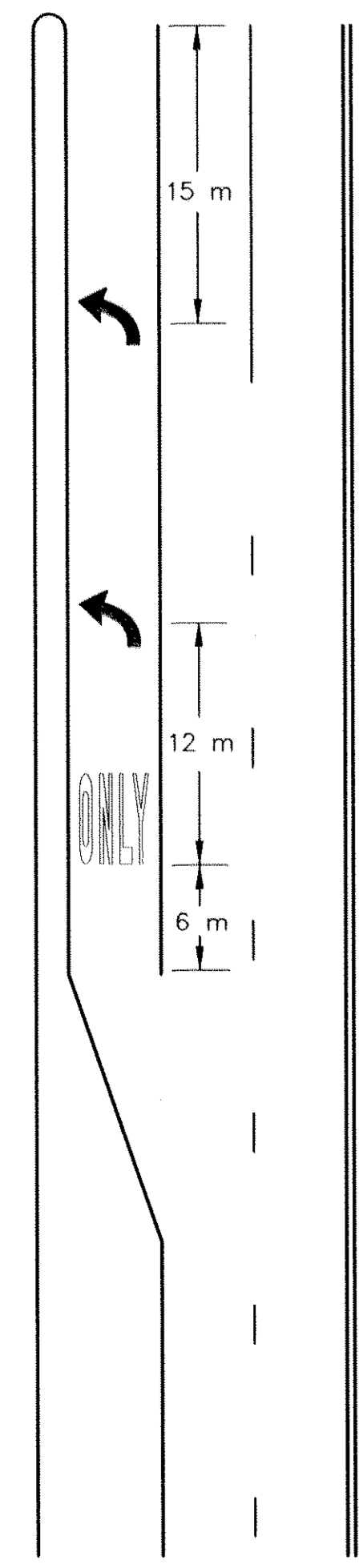
GROUND POST MOUNT SIGN
INSTALLATION TYPICAL



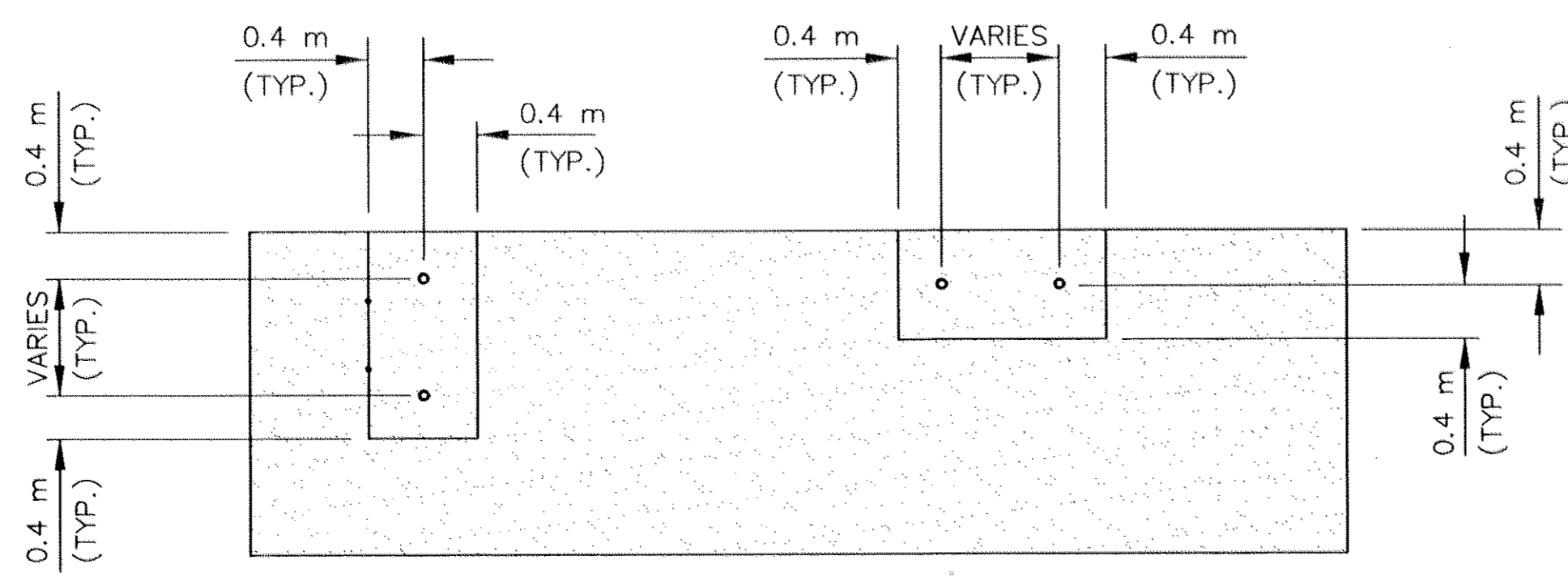
ISLAND MOUNT BREAK-AWAY SIGN
POST INSTALLATION TYPICAL



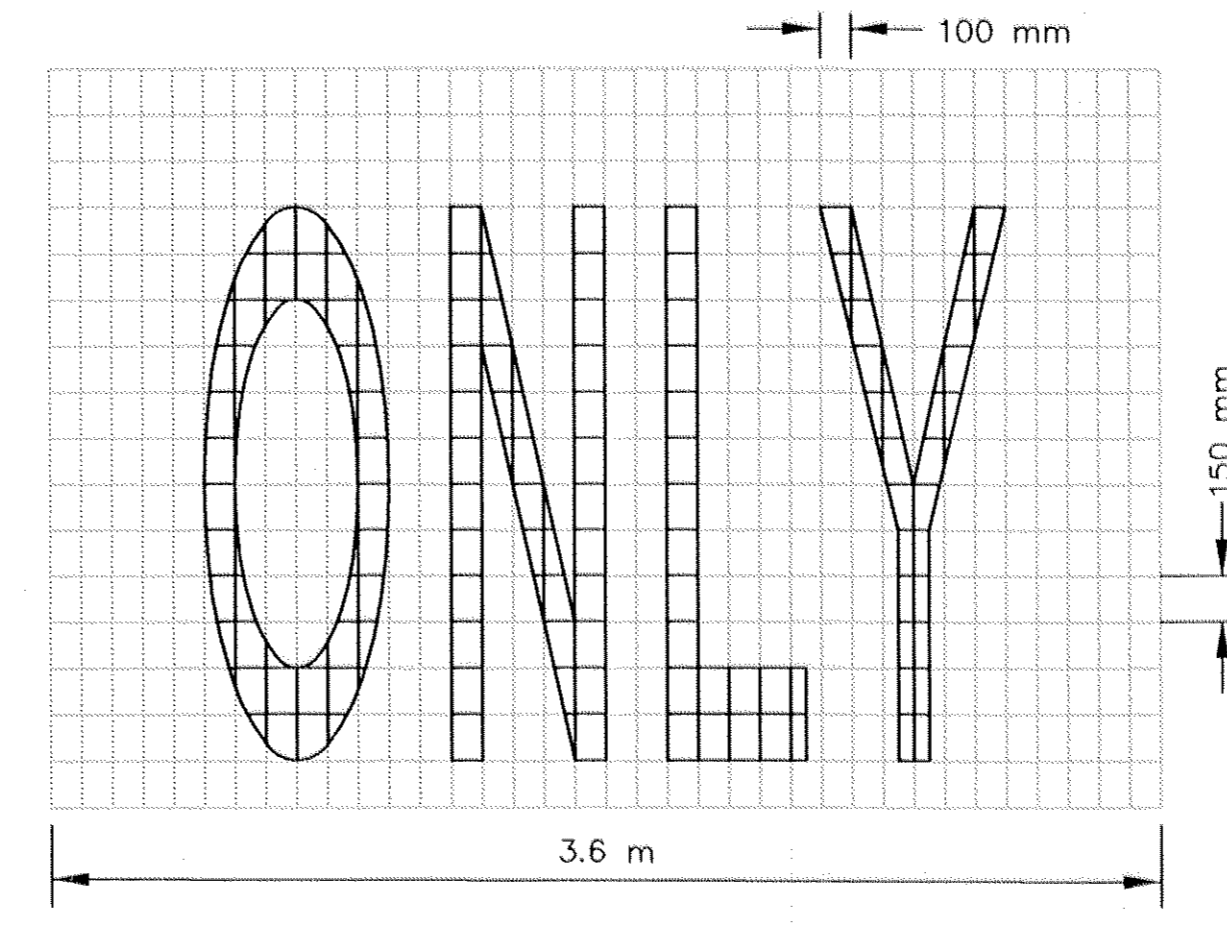
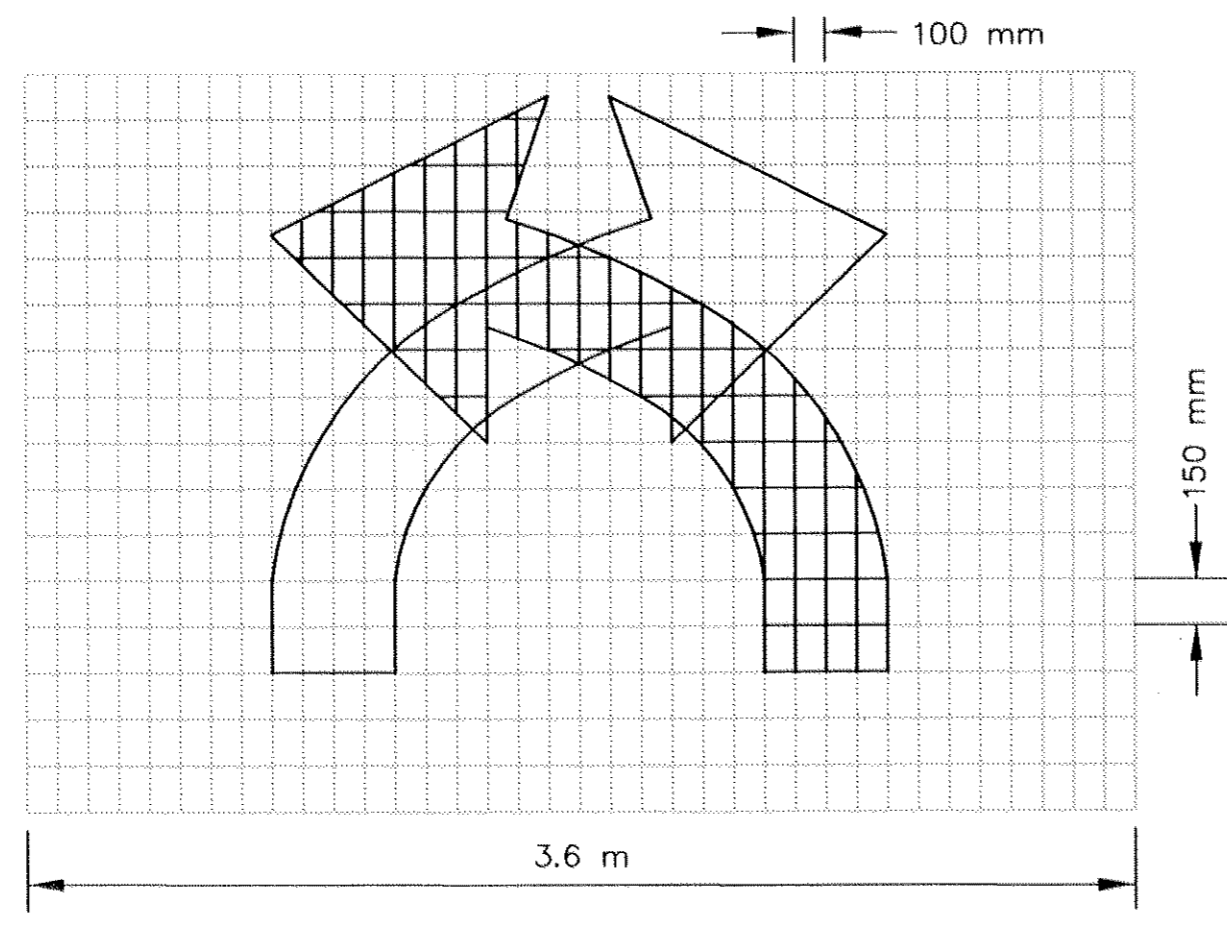
SIGN POST INSTALLATION FOR PAVED MEDIAN



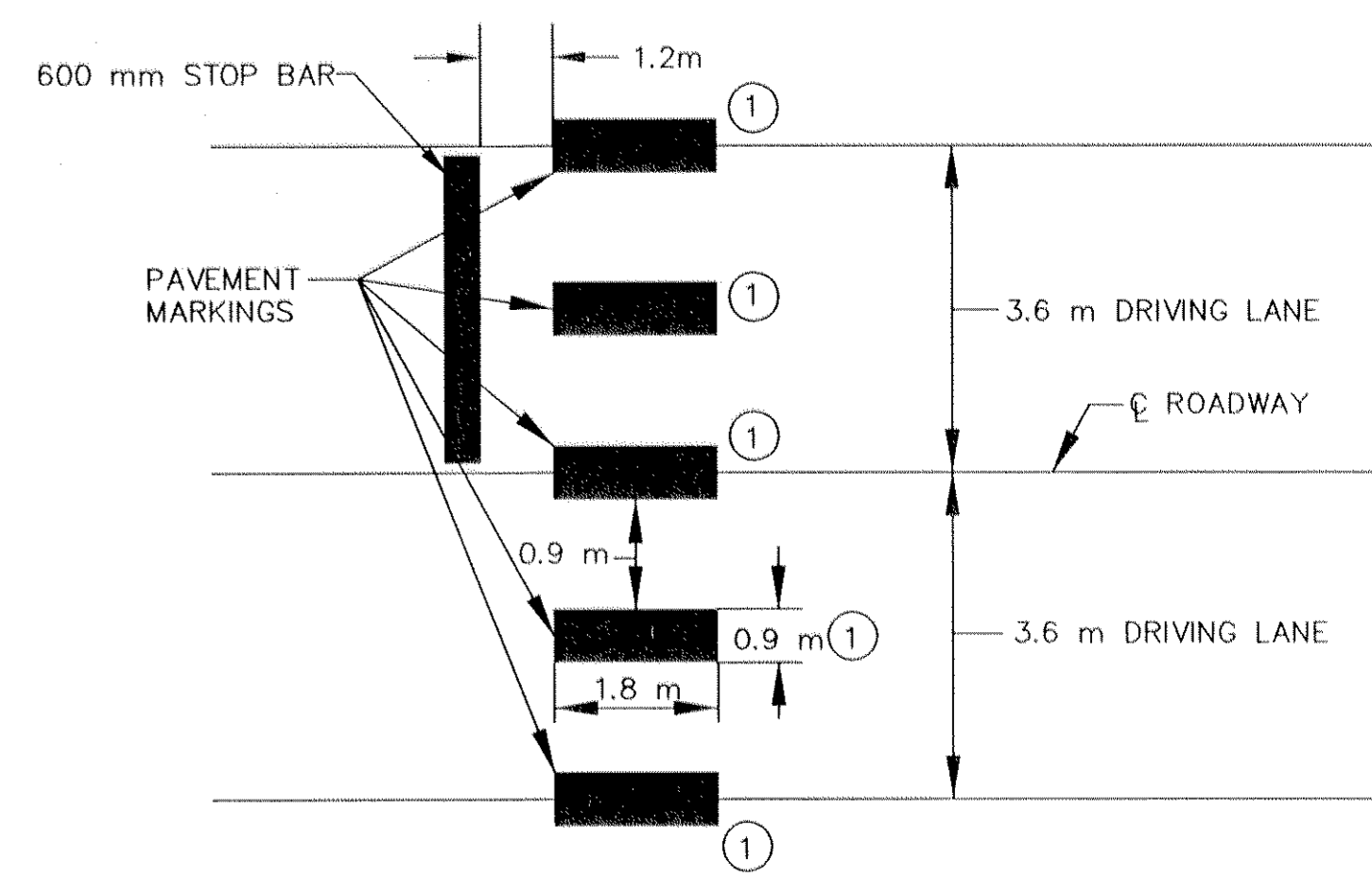
TYPICAL MESSAGE PLACEMENT
FOR TURN LANES



ISLAND MOUNT BREAK-AWAY DOUBLE POST FOOTINGS



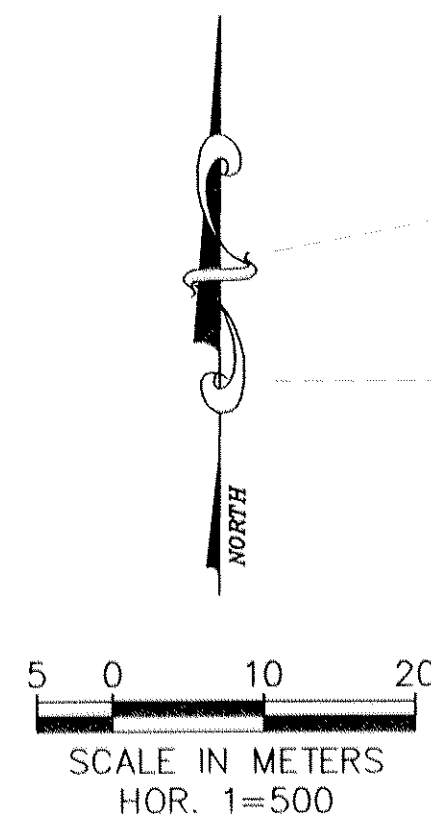
PAVEMENT MESSAGE TYPE I
MARKING SHALL BE WHITE



- NOTES:
- ① WHITE TRAFFIC PAINT/EPOXY IN AREAS AS SHOWN.
 - ② CONTRACTOR TO PROVIDE A SAMPLE PANEL FOR APPROVAL

PEDESTRIAN CROSSWALK MARKING

REV. NO.	BY	DATE	REVISIONS DESCRIPTION	DESIGN FILE: 35689-002-0101	XREF DRAWINGS	 B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16. DATE: _____ MINN. REG. NO. 23197	COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. DETAILS	CITY PROJECT ST-1997-4	SHEET NO. 9	
				DRAWN BY: PMJ					DESIGN BY: JML		COUNTY PROJECT 97-11-102
				CHKD. BY: PBD					DWG. NAME: 57THD01		S.A.P. 127-010-15
				DATE: FEBRUARY 6, 1998							S.A.P. 127-301-04



MAIN STREET N.E.

57TH AVENUE N.E.

3RD STREET N.E.

1+000 1+040 1+080 1+120 1+160 1+200 1+240 1+280 1+320

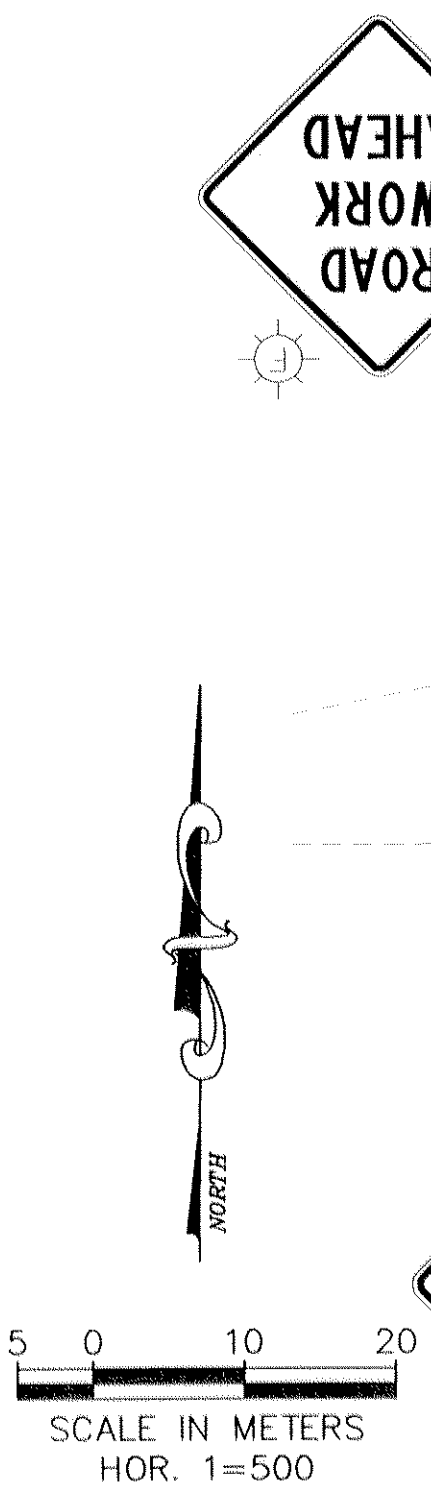
MATCH LINE 1+320

 TEMPORARY (SEE SHEET 7, INSET F)

 PERMANENT

① IN PLACE, USE INPLACE

REMOVE CONFLICTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.



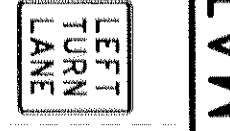
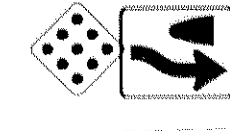
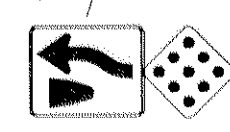
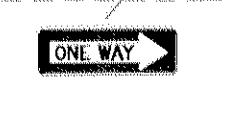
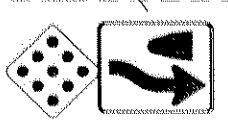
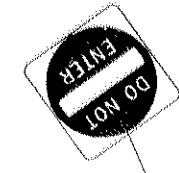
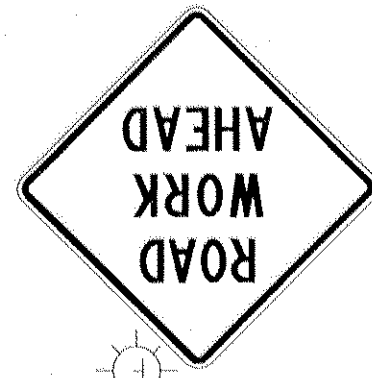
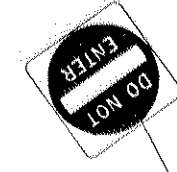
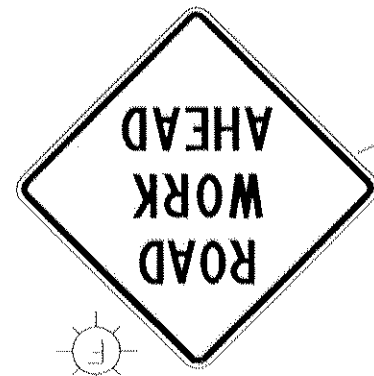
MAIN STREET N.E.

57TH AVENUE N.E.

3RD STREET N.E.

1+000 1+040 1+080 1+120 1+160 1+200 1+240 1+280 1+320

MATCH LINE 1+320



REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: OMR	DESIGN BY: JRM
CHKD. BY: PBD	DWG. NAME: 57THTR00
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS


B R W

B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
CONSTRUCTION STAGING/TRAFFIC CONTROL

 ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

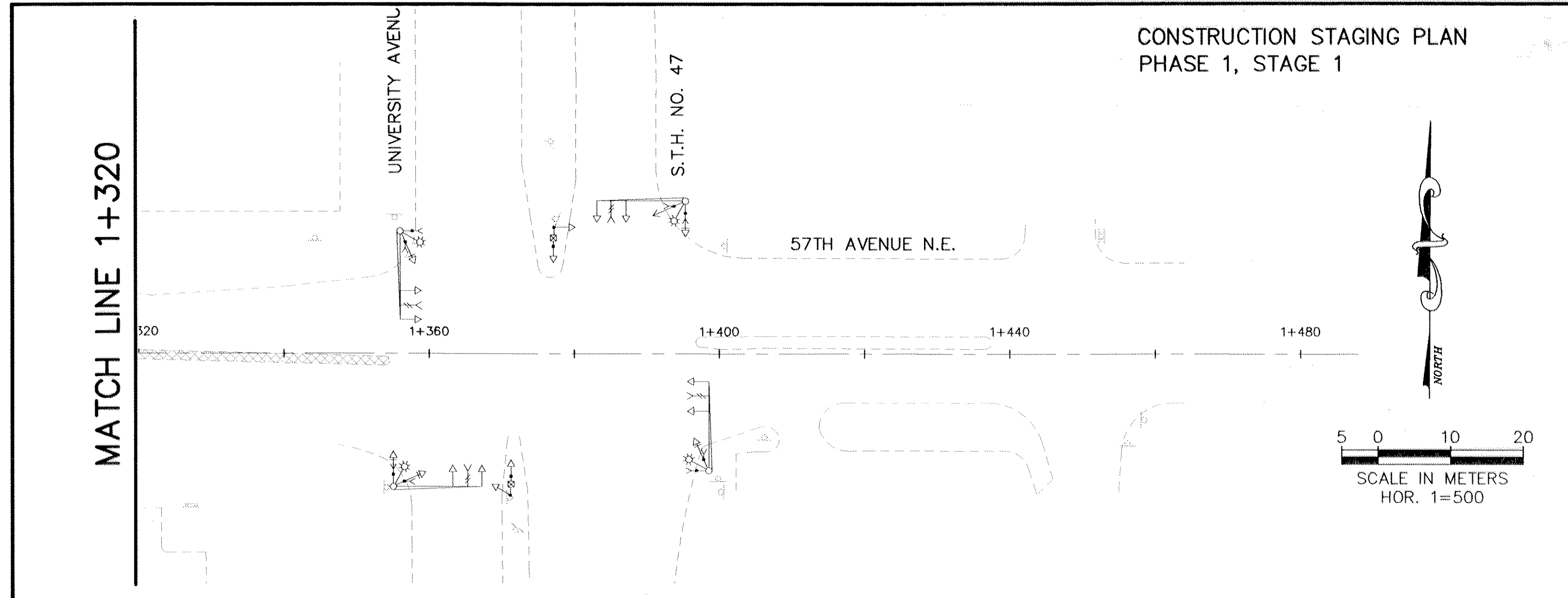
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
10
45

DISK FILE NAME: (14-01) R:\35689\35689002\PLAN_SHT\57THTR00.DWG PLOT DATE: Nov 09, 1998 1:15pm

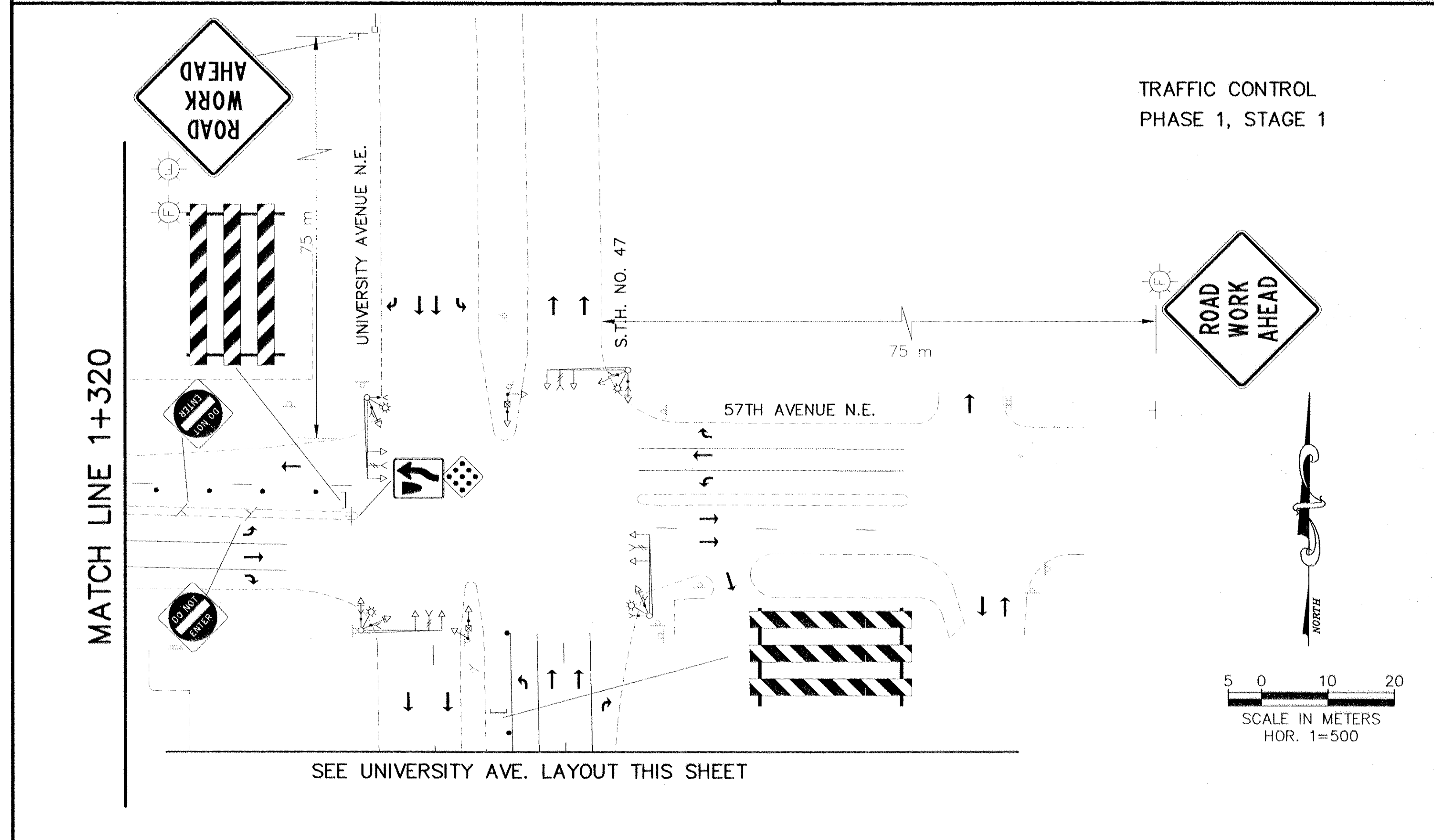
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**CONSTRUCTION STAGING PLAN
PHASE 1, STAGE 1**

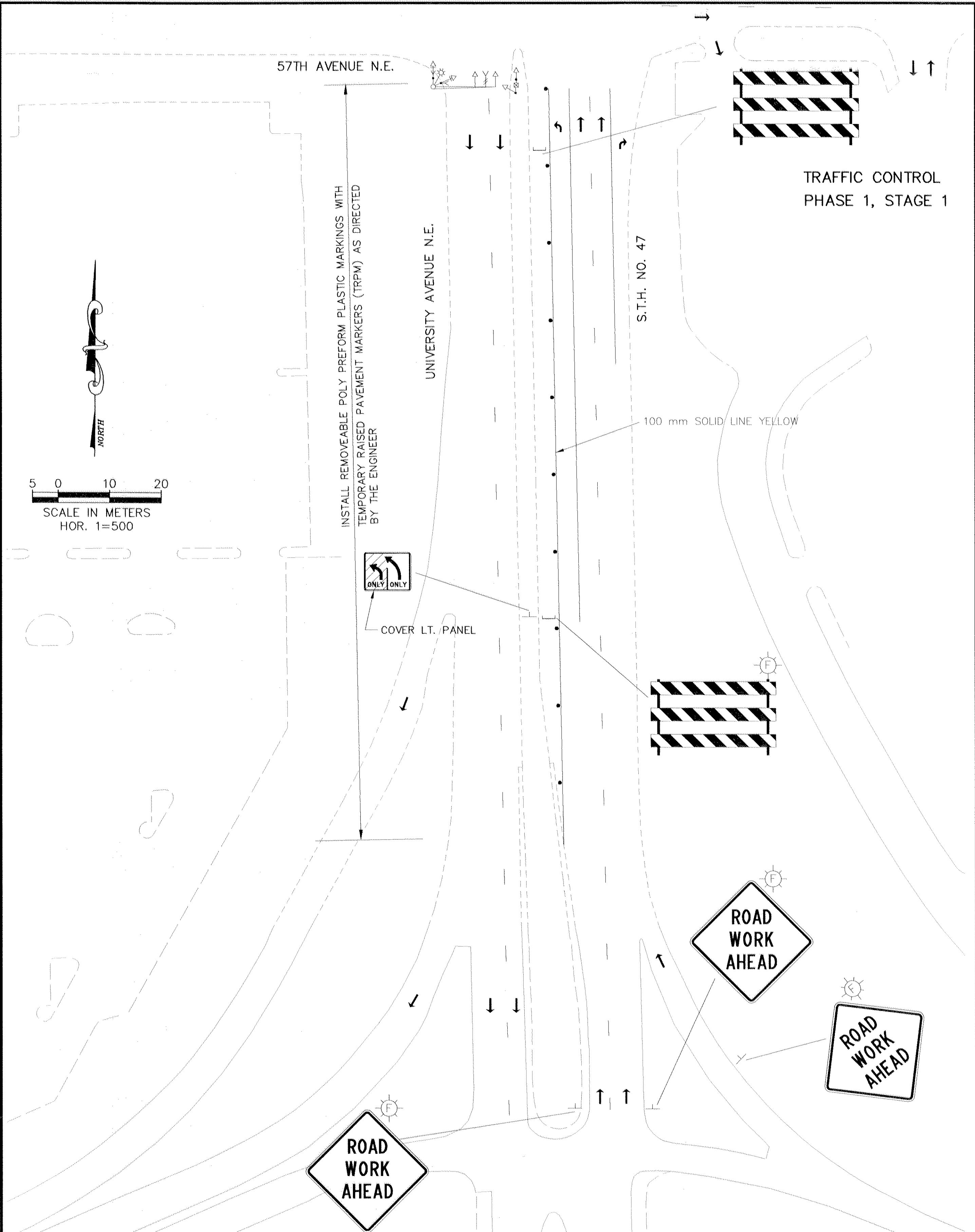


	TEMPORARY (SEE SHEET 7, INSET F)
	PERMANENT
	IN PLACE, USE INPLACE

REMOVE CONFLICTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.



57TH AVENUE N.E.



**TRAFFIC CONTROL
PHASE 1, STAGE 1**

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: OMR	DESIGN BY: JRM
CHKD. BY: PBD	DWG. NAME: 57THTR01
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS

B R W
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
CONSTRUCTION STAGING/TRAFFIC CONTROL

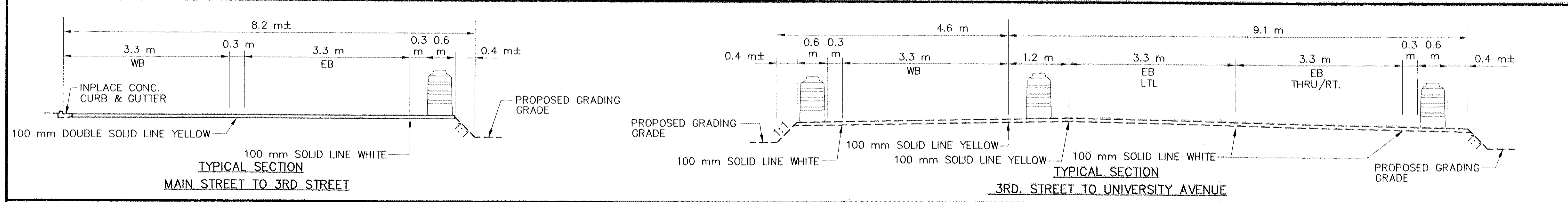
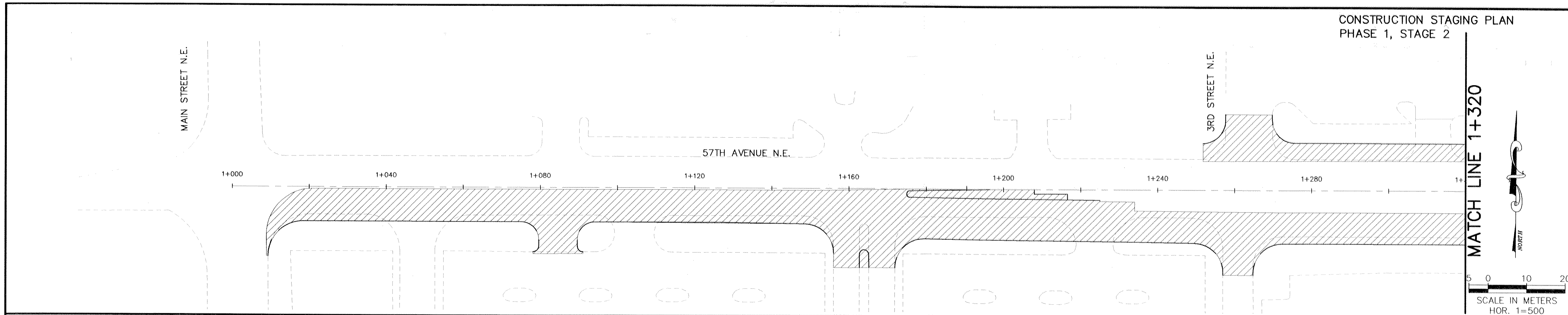
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
11
45



ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

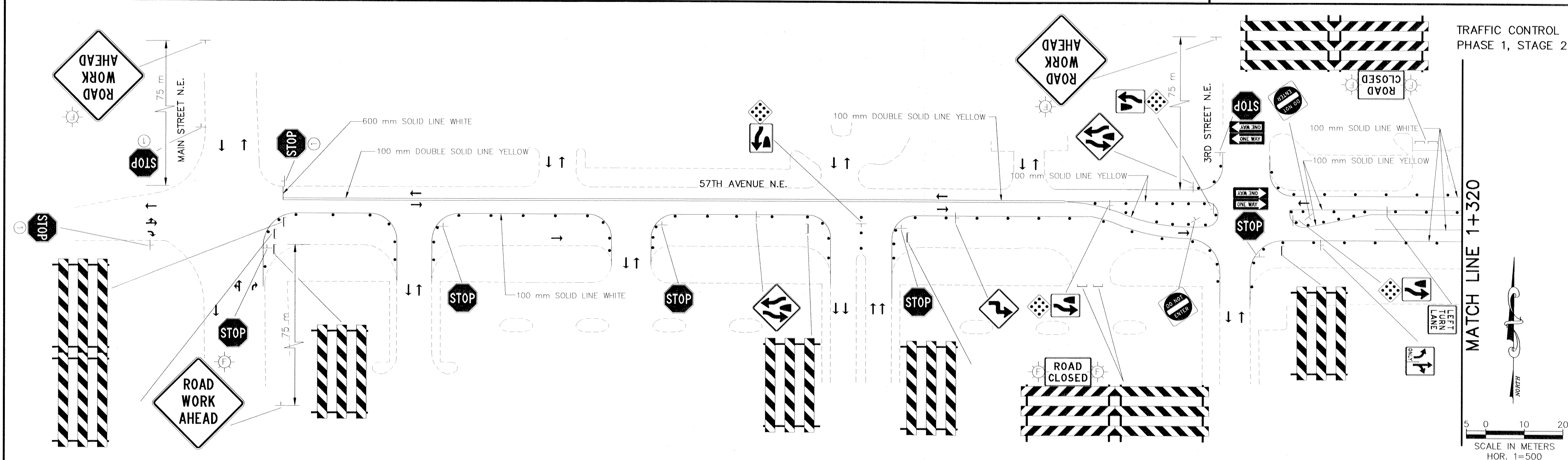
CONSTRUCTION STAGING PLAN
PHASE 1, STAGE 2



PERMANENT
 IN PLACE, USE INPLACE

REMOVE CONFLICTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.

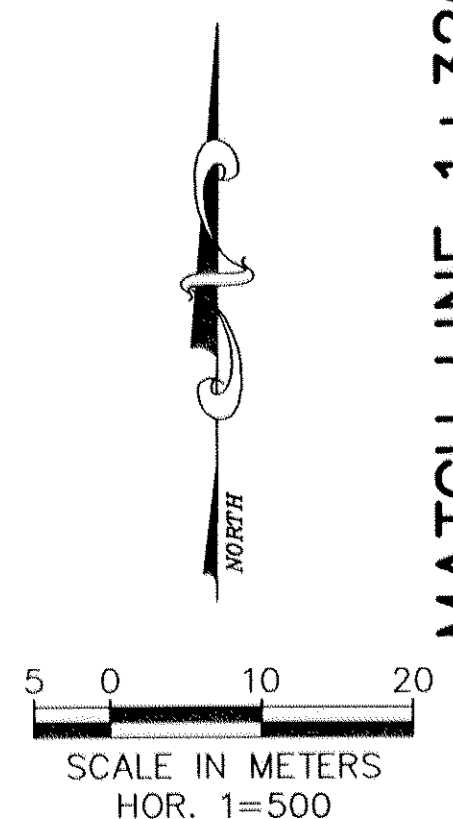
INSTALL TRPMS ON CENTER LINE MARKINGS



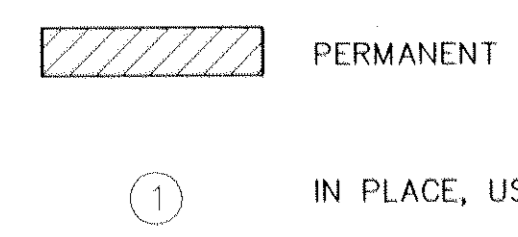
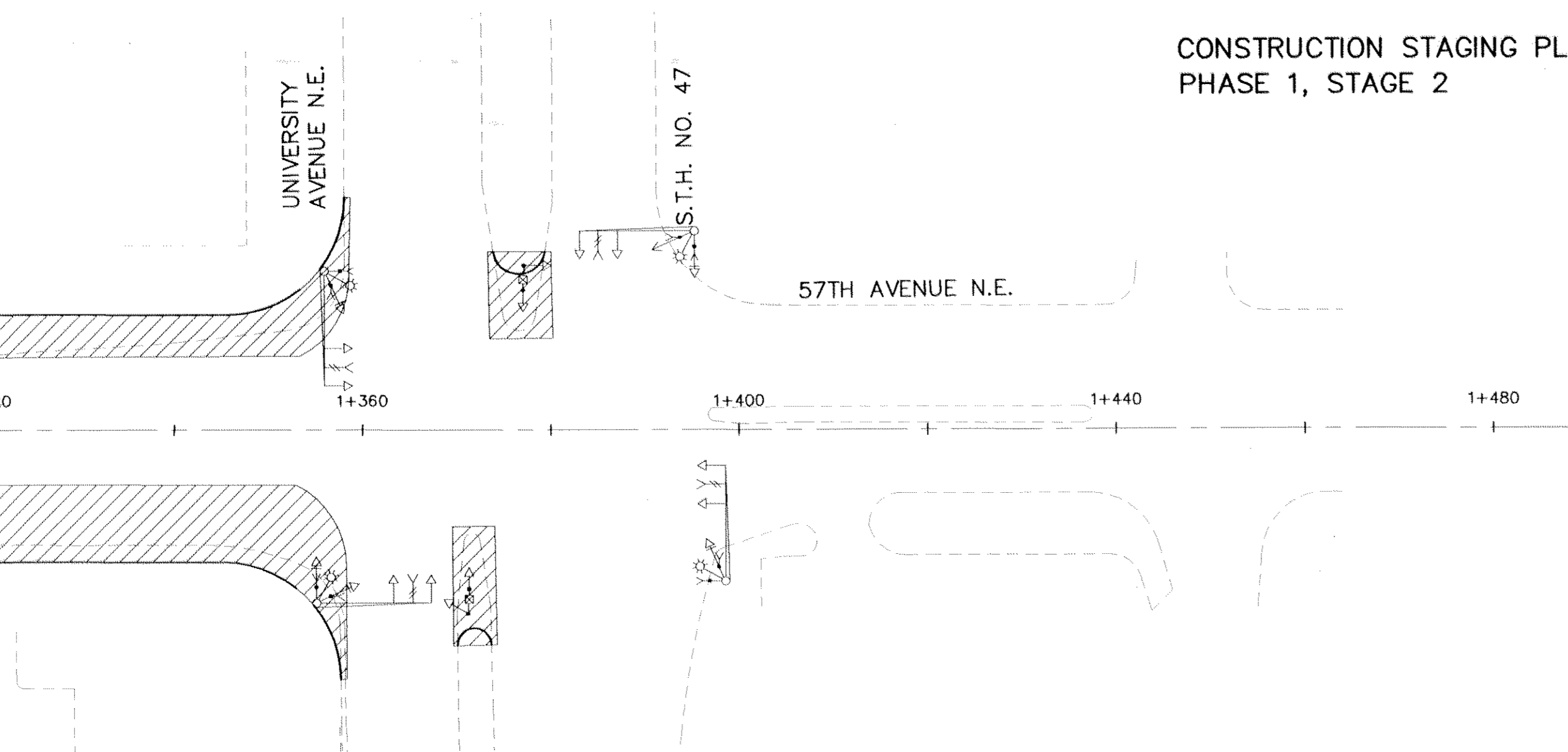
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REV. NO.	BY	DATE	REVISIONS DESCRIPTION	DESIGN FILE: 35689-002-0101	XREF DRAWINGS	 B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16. DATE: _____ MINN. REG. NO. 23197	COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. CONSTRUCTION STAGING/TRAFFIC CONTROL	CITY PROJECT	ST-1997-4	SHEET NO. 12
					COUNTY PROJECT				97-11-102		
					S.A.P.				127-010-15	ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.	
					S.A.P.				127-301-04		45

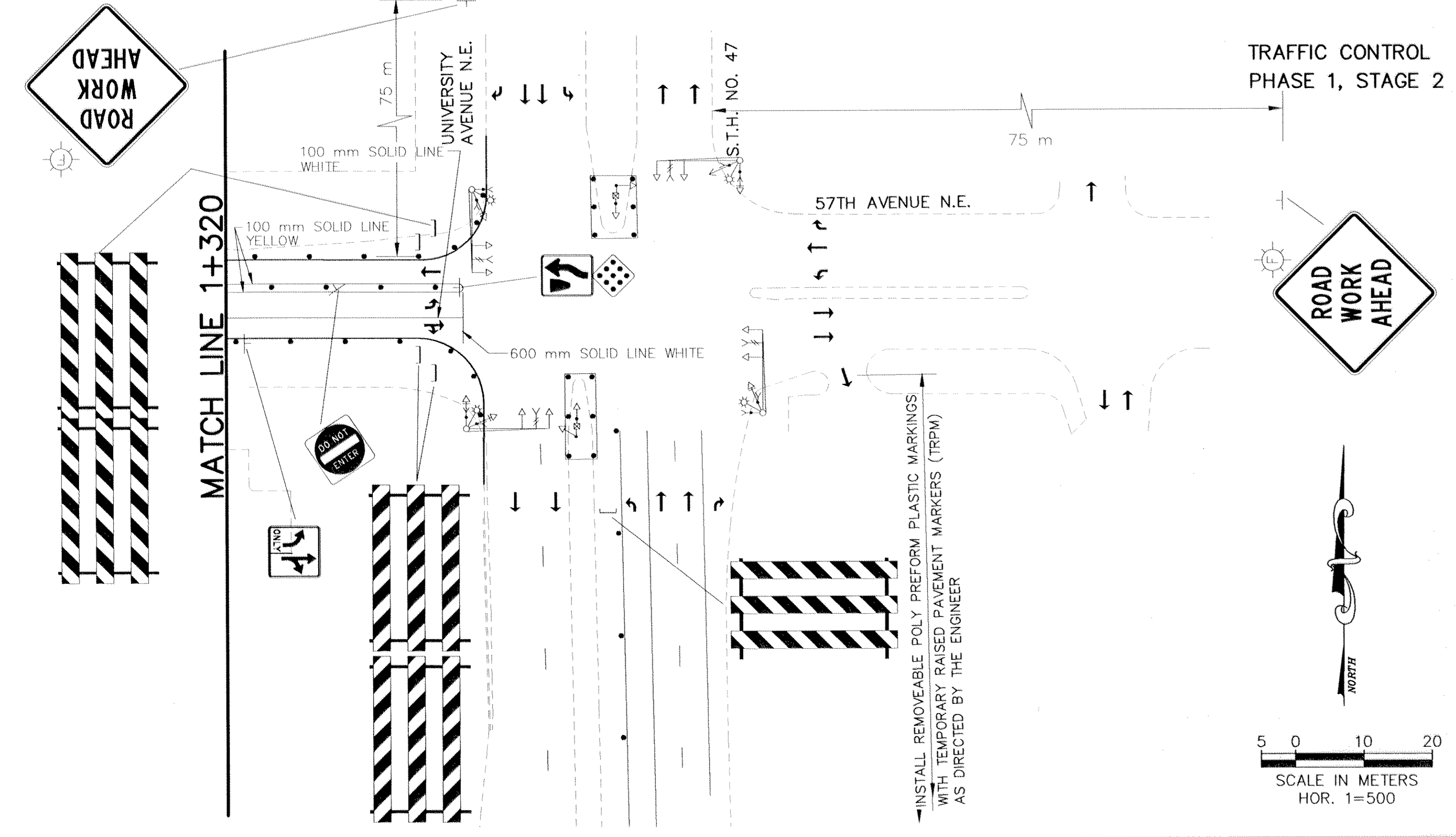
CONSTRUCTION STAGING PLAN
PHASE 1, STAGE 2



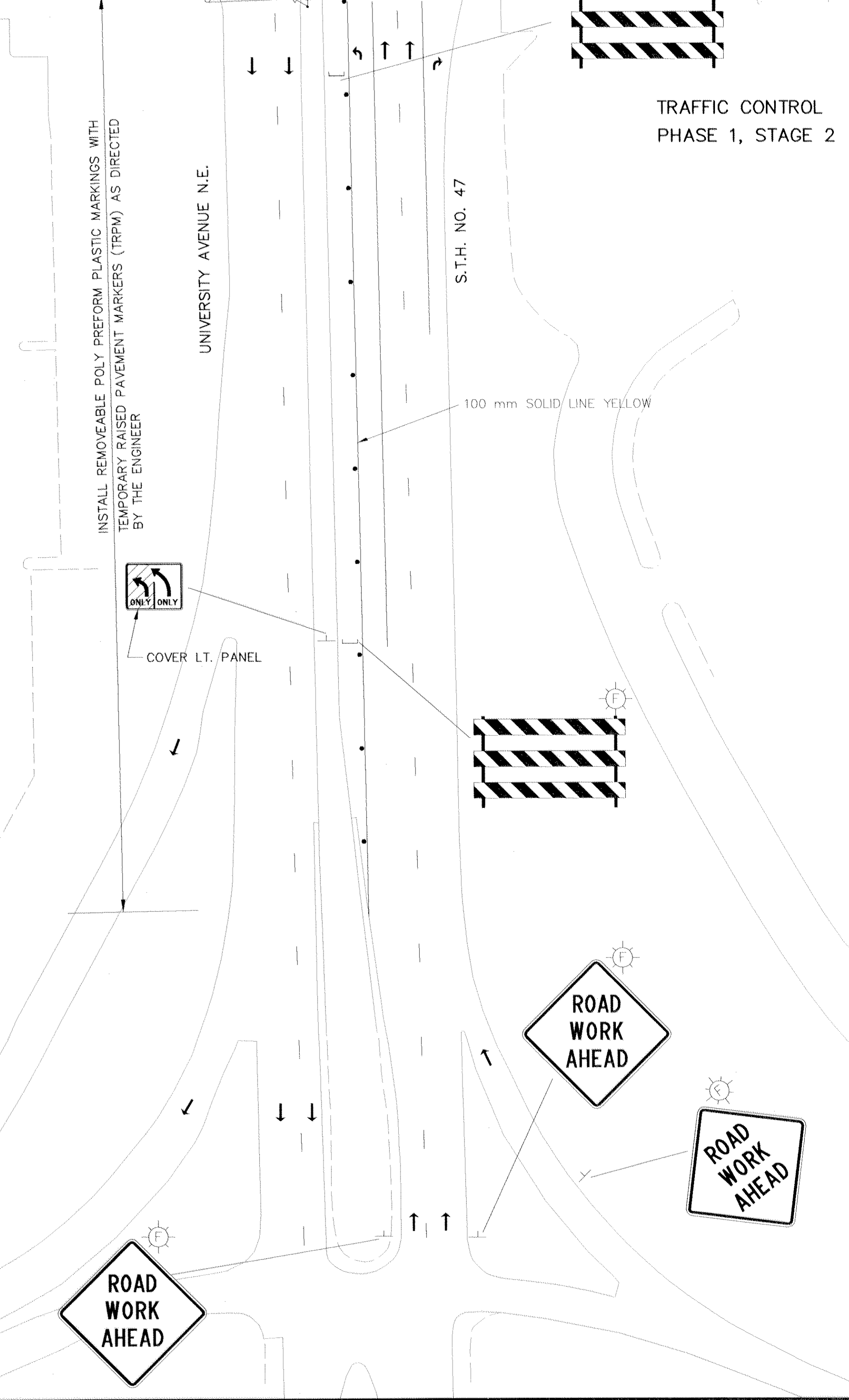
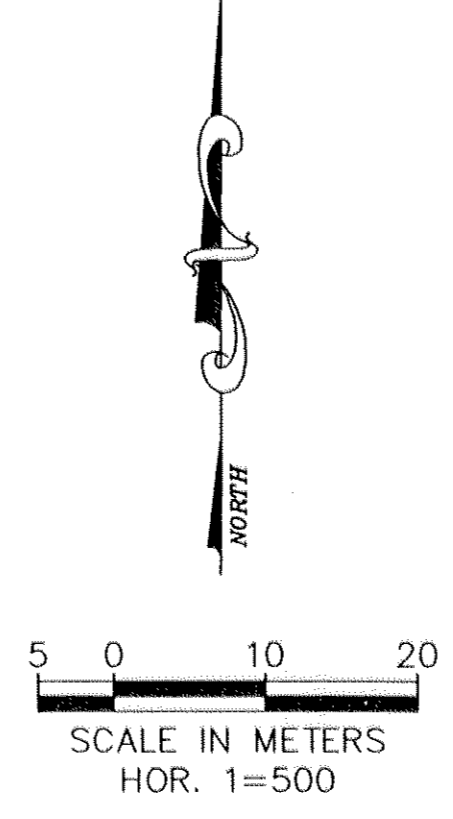
MATCH LINE 1+320



REMOVE CONFLICTING TRAFFIC CONTROL
SIGNS AND PAVEMENT MARKINGS AS
DIRECETED BY THE ENGINEER.



57TH AVENUE N.E.



TRAFFIC CONTROL
PHASE 1, STAGE 2

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THTR03.DWG PLOT DATE: Nov 09, 1998 1:36pm

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: OMR	DESIGN BY: JRM
CHKD. BY: PBD	DWG. NAME: 57THTR03
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS


B R W

B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 23197

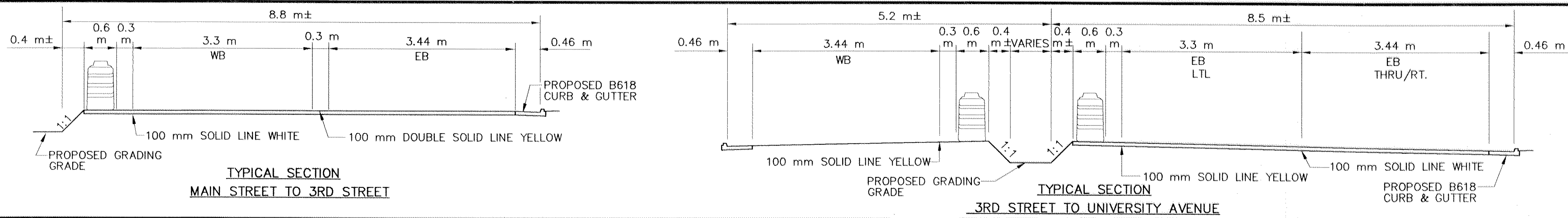
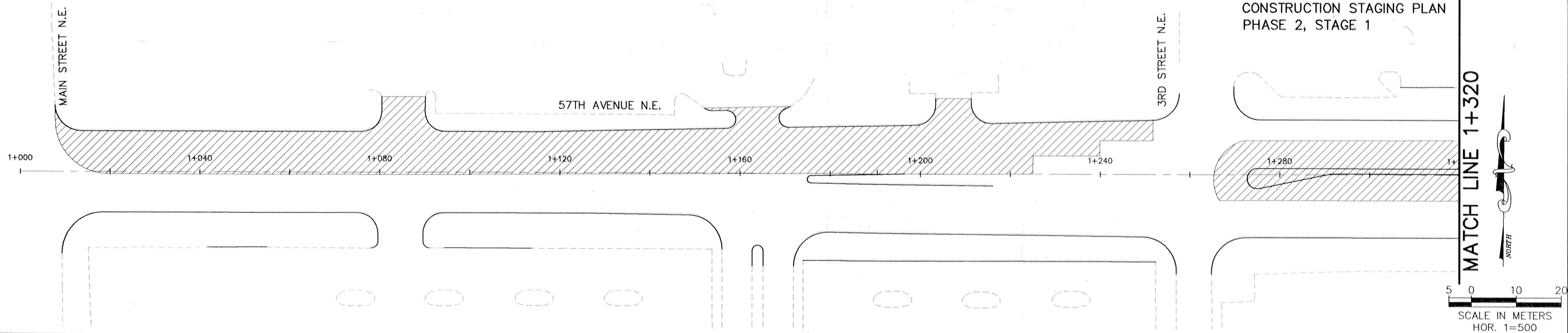
COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
CONSTRUCTION STAGING/TRAFFIC CONTROL

 ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

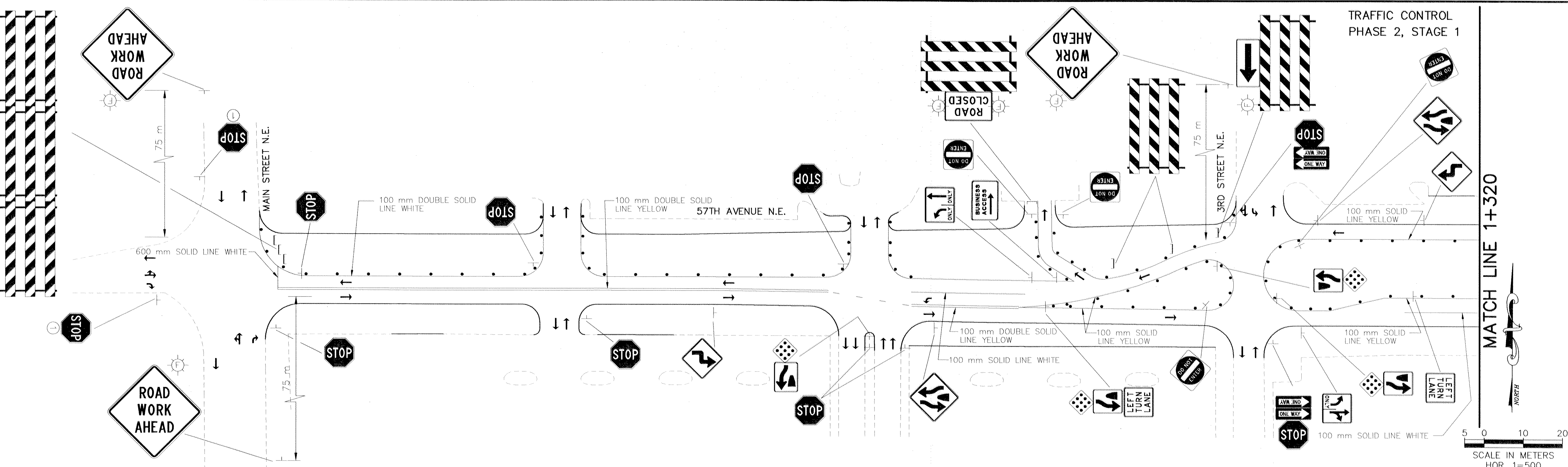
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
13
45

CONSTRUCTION STAGING PLAN
PHASE 2, STAGE 1



PERMANENT
IN PLACE, USE INPLACE
REMOVE CONFLICTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
INSTALL TRPMS ON ALL MARKINGS



REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: OMR	DESIGN BY: JRM
CHKD. BY: PBD	DWG. NAME: 57THTR04
DATE: FEBRUARY 6, 1998	

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B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
CONSTRUCTION STAGING/TRAFFIC CONTROL

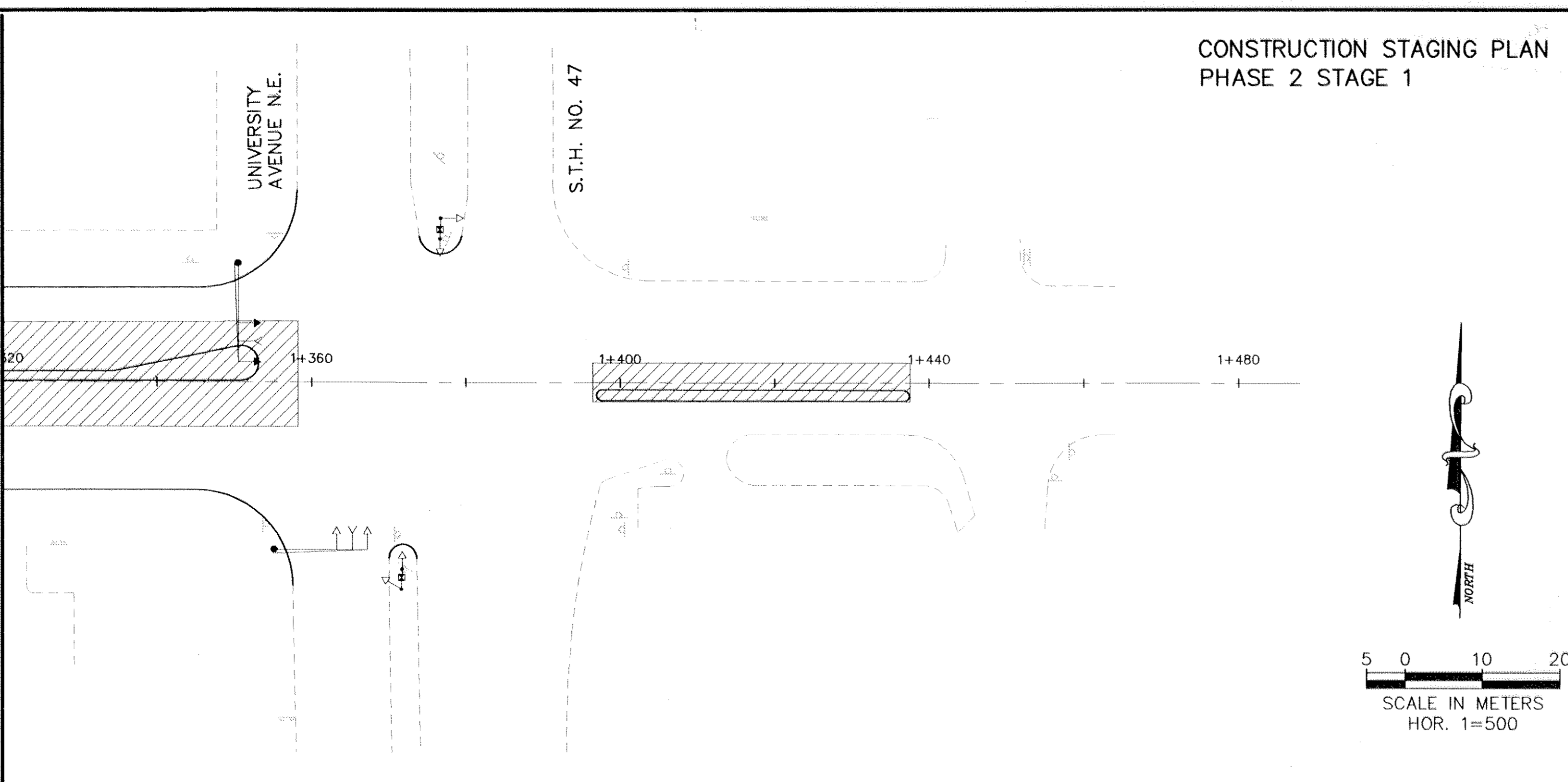
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
14
45

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THTR05.DWG PLOT DATE: Nov 09, 1998 1:37pm

CONSTRUCTION STAGING PLAN
PHASE 2 STAGE 1

MATCH LINE 1+320

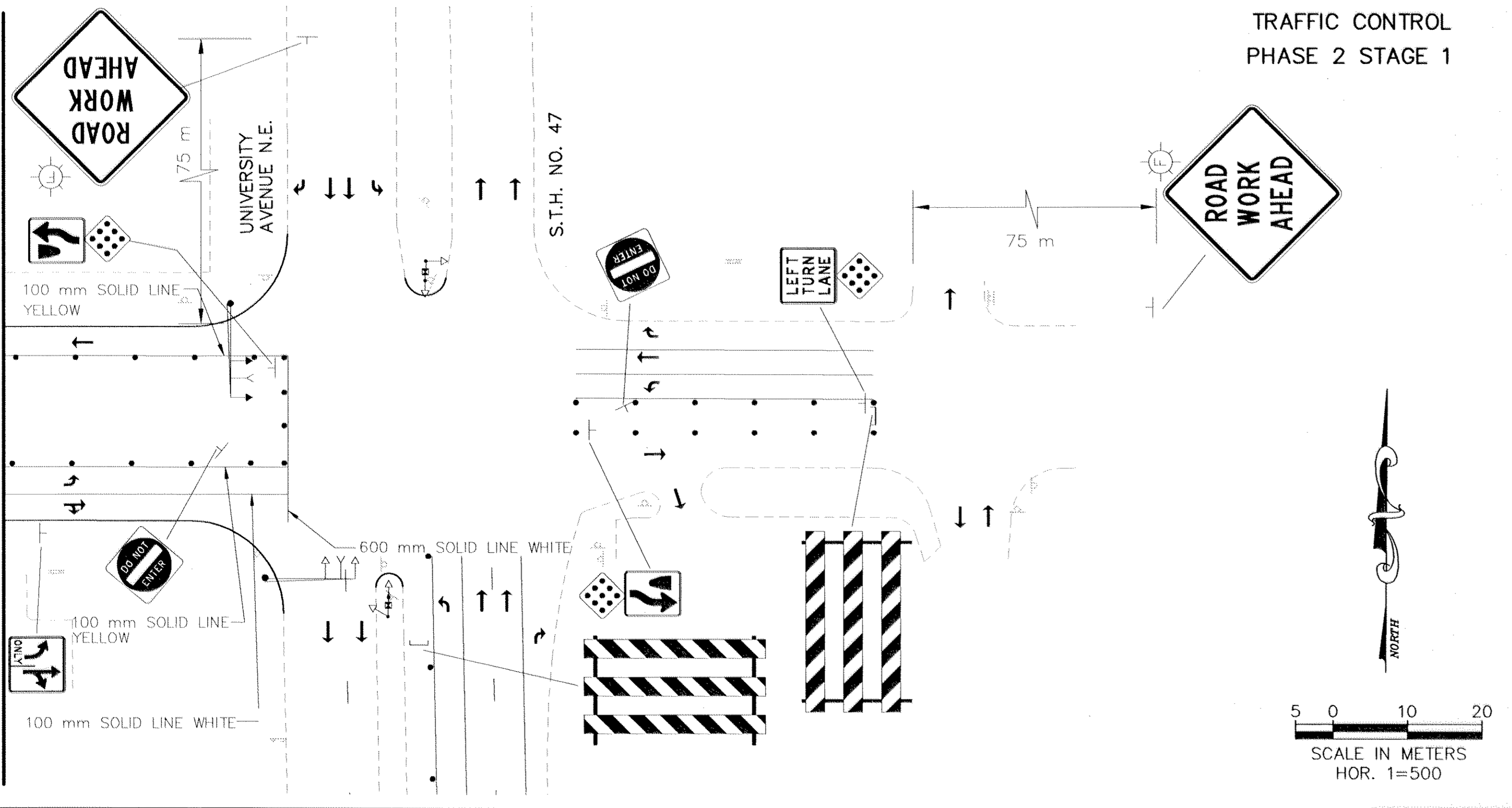


- PERMANENT
- IN PLACE, USE INPLACE

REMOVE CONFLICTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.

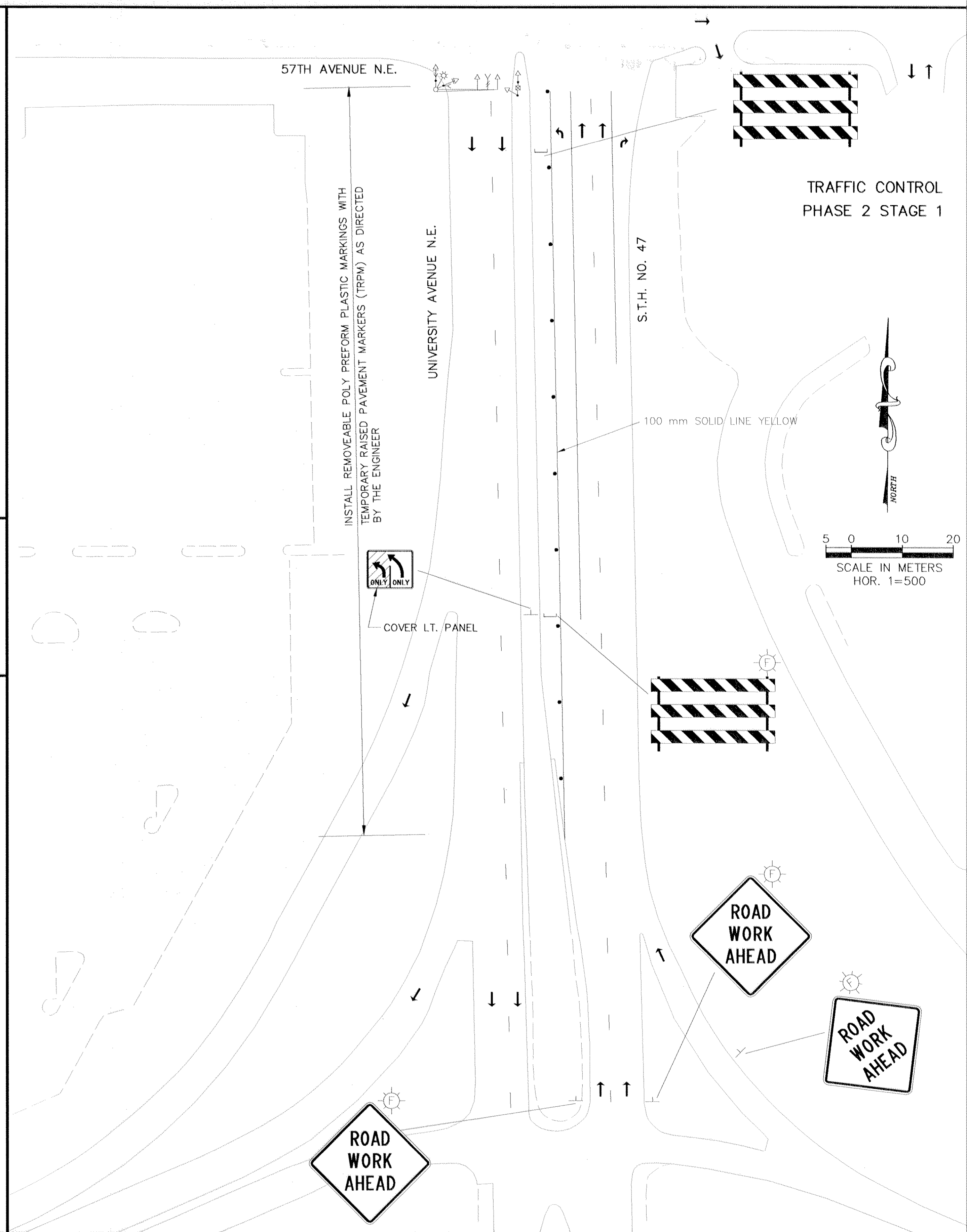
TRAFFIC CONTROL
PHASE 2 STAGE 1

MATCH LINE 1+320



INSTALL REMOVABLE POLY PREFORM PLASTIC MARKINGS WITH TEMPORARY RAISED PAVEMENT MARKERS (TRPM) AS DIRECTED BY THE ENGINEER

TRAFFIC CONTROL
PHASE 2 STAGE 1



REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101	
DRAWN BY: OMR	DESIGN BY: JRM
CHKD. BY: PBD	DWG. NAME: 57THTR05
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS

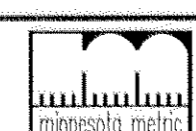
BRW
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.
DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
CONSTRUCTION STAGING/TRAFFIC CONTROL

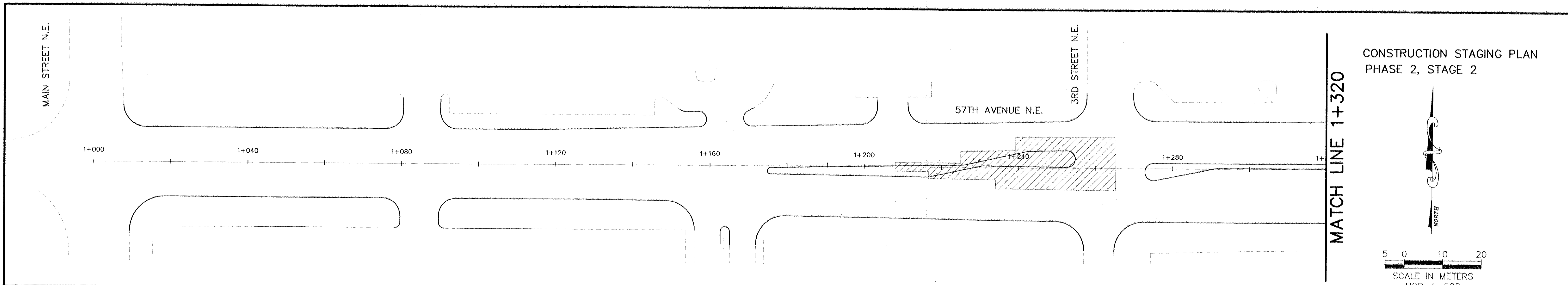
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
15
45

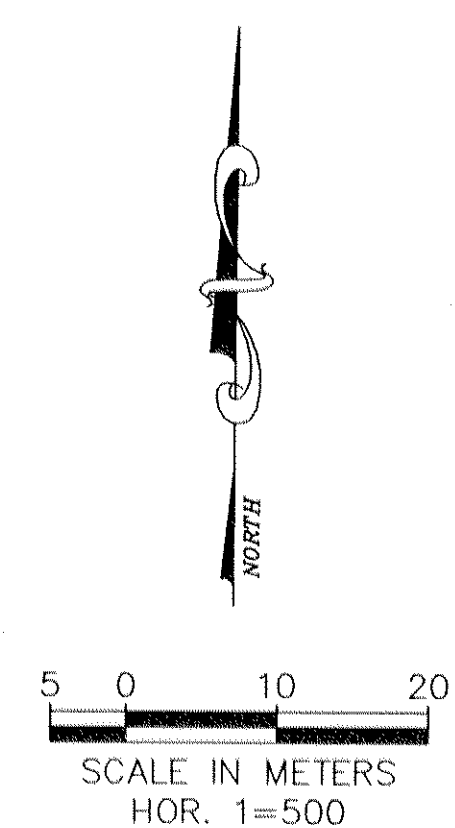


ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

DISK FILE NAME: (14.01) R:\356889\35689002\PLAN_SHT\57THTR06.DWG PLOT DATE: Nov 09, 1998 1:39pm

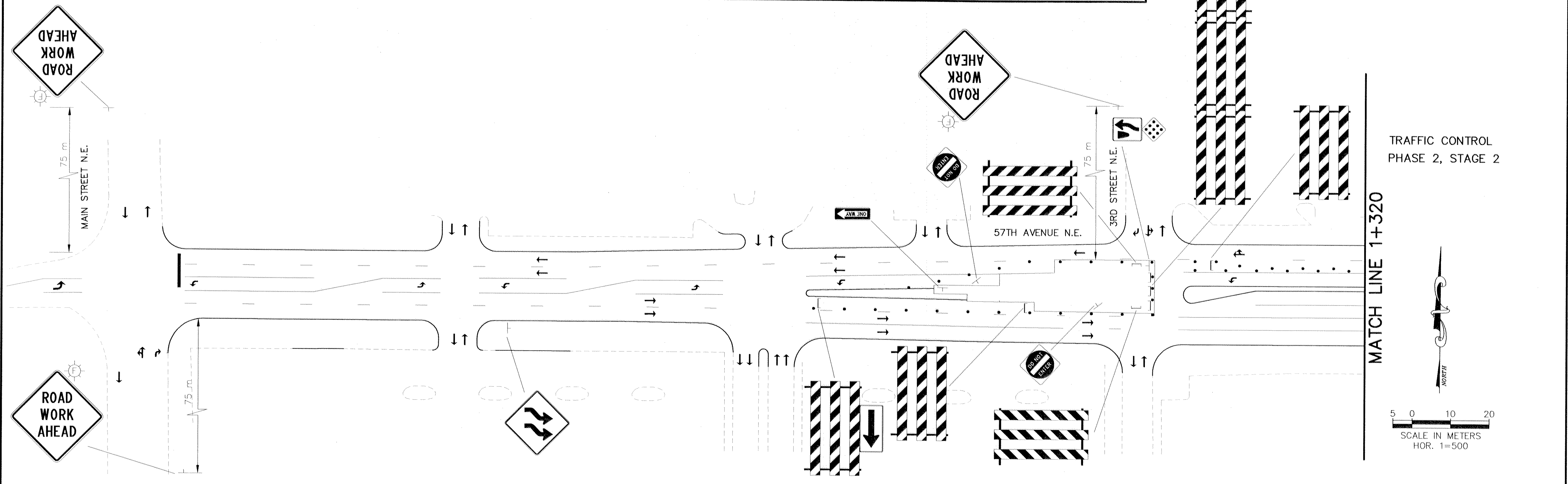


CONSTRUCTION STAGING PLAN
PHASE 2, STAGE 2

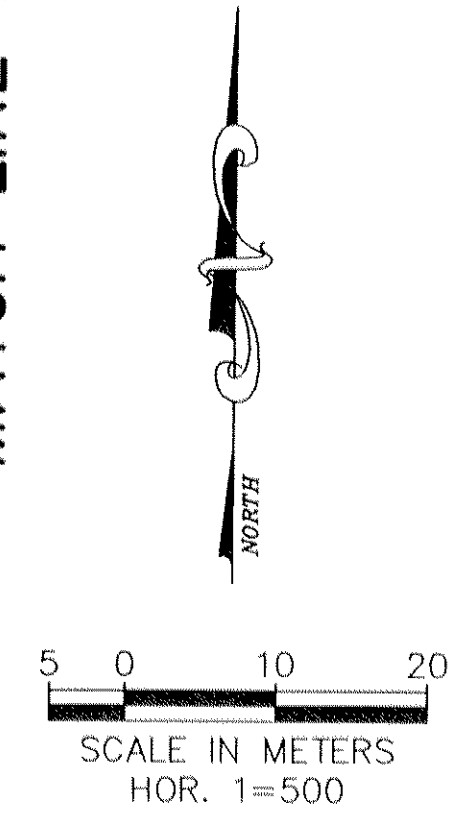


PERMANENT
 IN PLACE, USE INPLACE

REMOVE CONFLICTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.



TRAFFIC CONTROL
PHASE 2, STAGE 2



REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE: 35689-002-0101		XREF DRAWINGS	
DRAWN BY: OMR	DESIGN BY: JRM	B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	
CHKD. BY: PBD	DWG. NAME: 57THTR06		
DATE: FEBRUARY 6, 1998			

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DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
 CO RD 102/57TH AVENUE N.E.
 CONSTRUCTION STAGING/TRAFFIC CONTROL

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
16

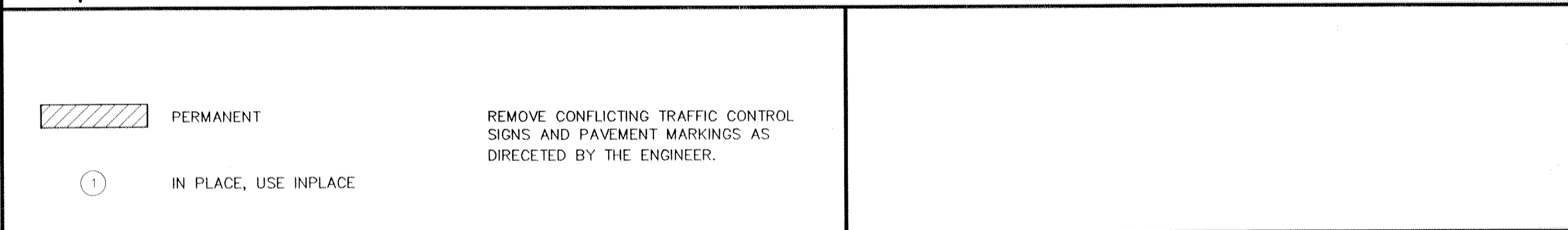
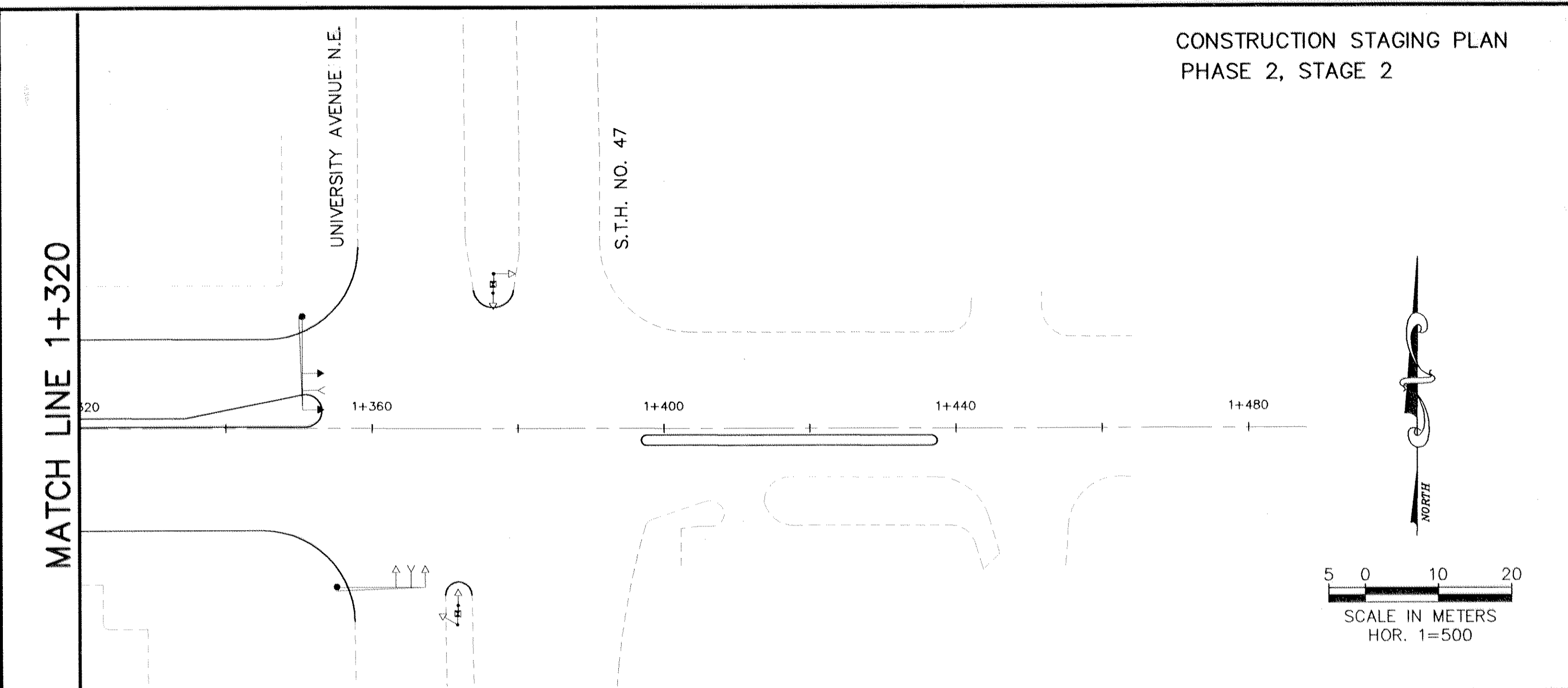
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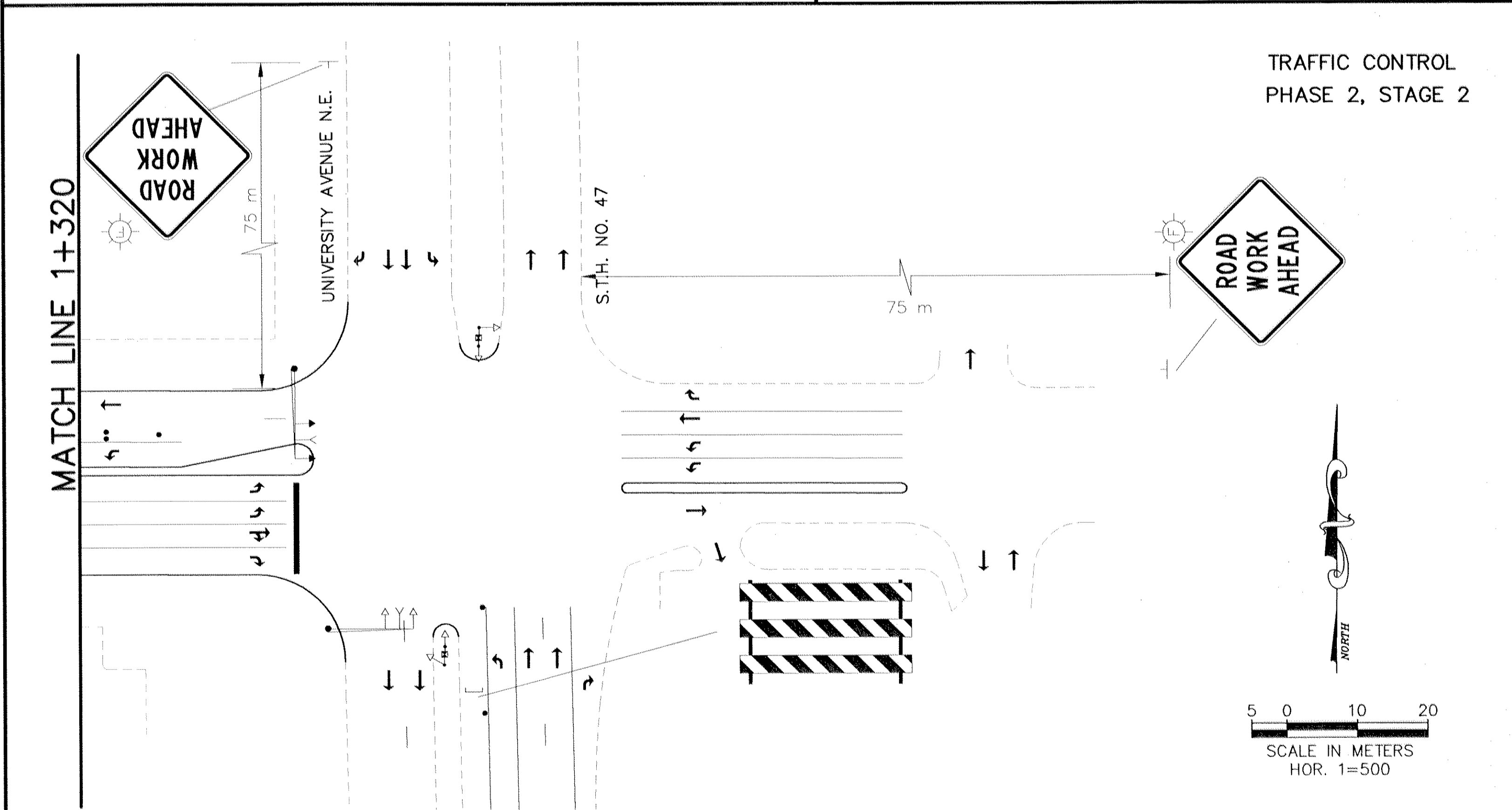
ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THTR07.DWG PLOT DATE: Nov 09, 1998 1:40pm

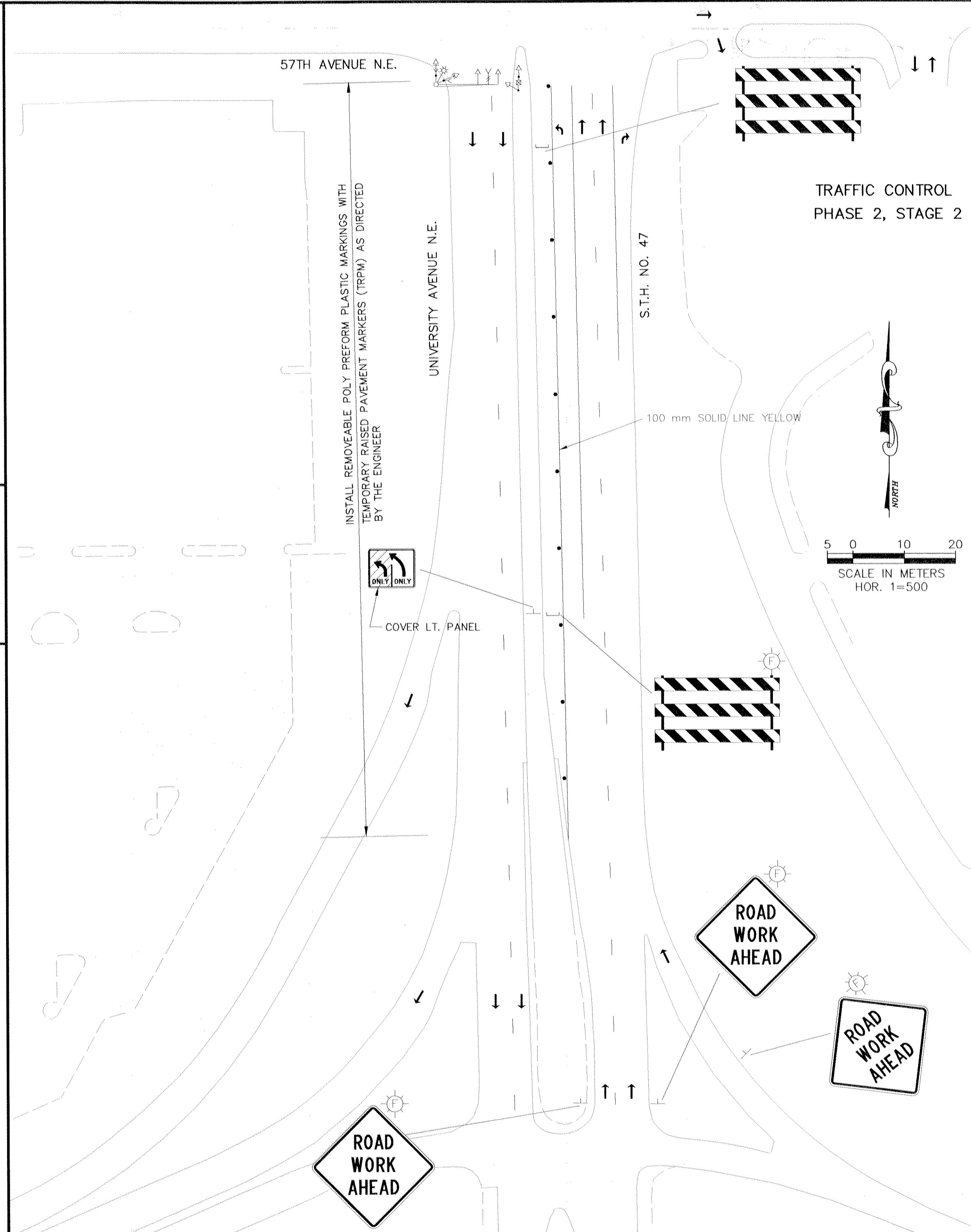
CONSTRUCTION STAGING PLAN
PHASE 2, STAGE 2



TRAFFIC CONTROL
PHASE 2, STAGE 2



57TH AVENUE N.E.



REV. NO.	BY	DATE	REVISIONS DESCRIPTION

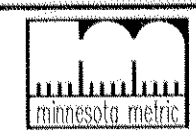
DESIGN FILE: 35689-002-0101	
DRAWN BY: OMR	DESIGN BY: JRM
CHKD. BY: PBD	DWG. NAME: 57THTR07
DATE: FEBRUARY 6, 1998	

B R W
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.
DATE: _____ MINN. REG. NO. 23197

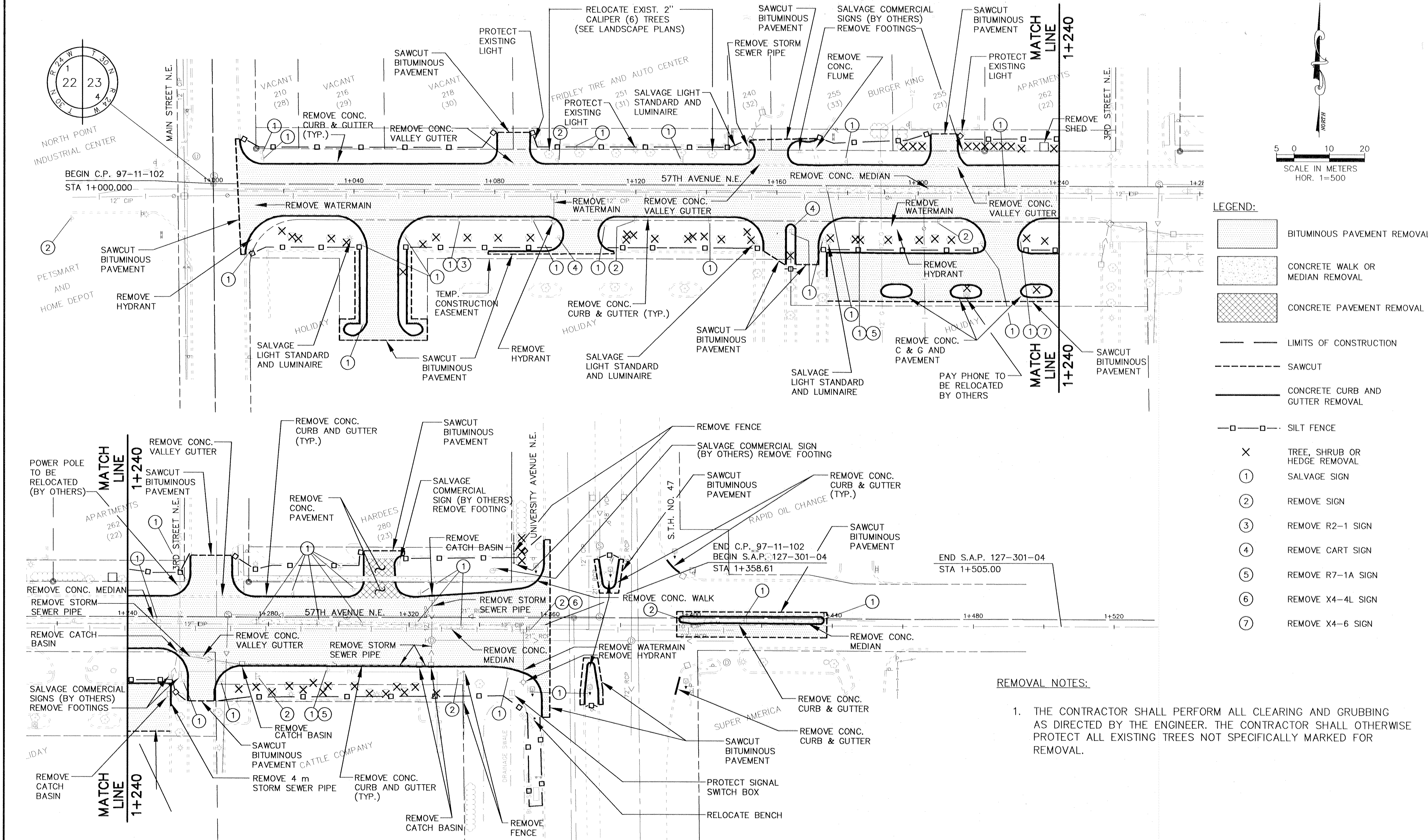
COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
CONSTRUCTION STAGING/TRAFFIC CONTROL

CITY PROJECT	ST-1997-4	SHEET NO. 17
COUNTY PROJECT	97-11-102	
S.A.P.	127-010-15	45
S.A.P.	127-301-04	



ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

DISK FILE NAME: (14.01) R:\356889\356889002\PLAN_SHT\57THRETO1.DWG.PLOT DATE: Nov 09, 1998 9:44am



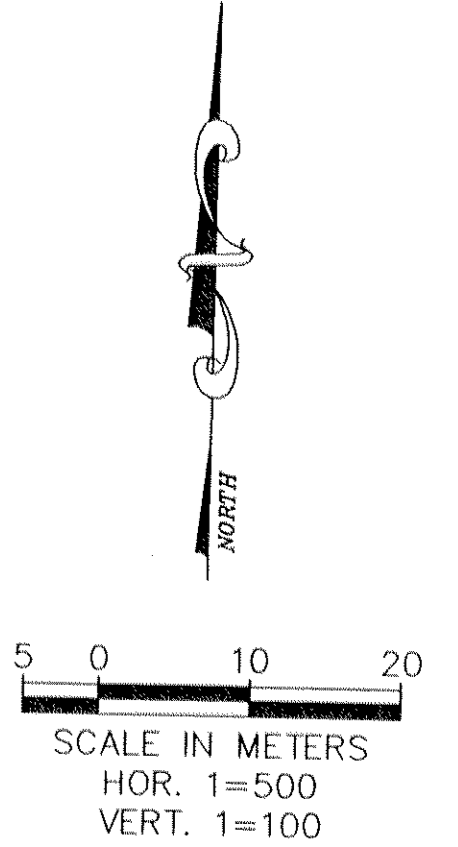
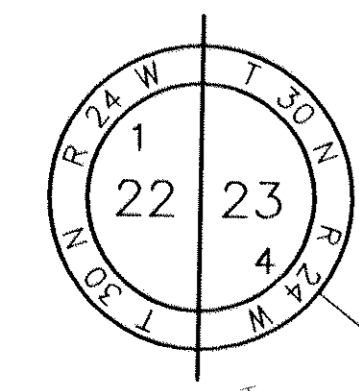
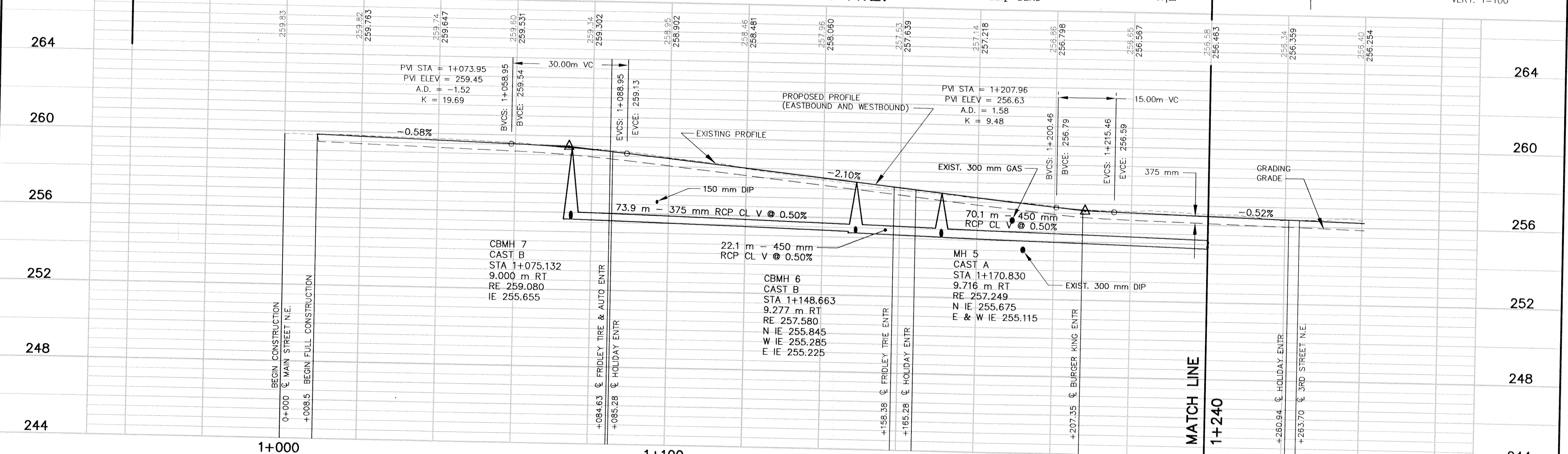
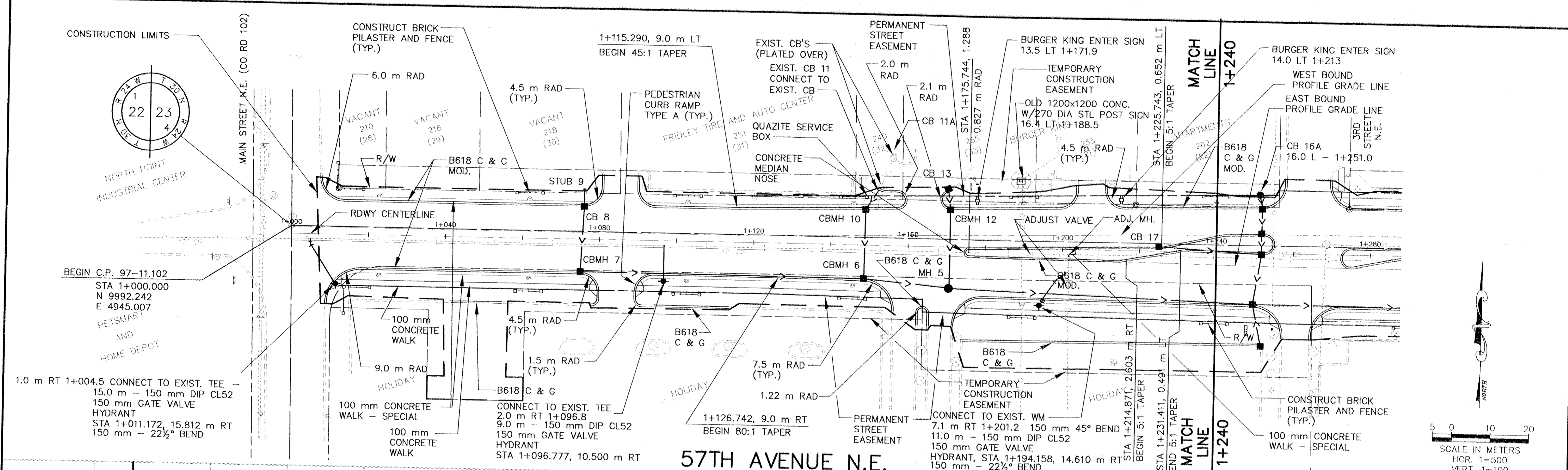
- LEGEND:**
- BITUMINOUS PAVEMENT REMOVAL
 - CONCRETE WALK OR MEDIAN REMOVAL
 - CONCRETE PAVEMENT REMOVAL
 - LIMITS OF CONSTRUCTION
 - SAWCUT
 - CONCRETE CURB AND GUTTER REMOVAL
 - SILT FENCE
 - TREE, SHRUB OR HEDGE REMOVAL
 - SALVAGE SIGN
 - REMOVE SIGN
 - REMOVE R2-1 SIGN
 - REMOVE CART SIGN
 - REMOVE R7-1A SIGN
 - REMOVE X4-4L SIGN
 - REMOVE X4-6 SIGN

REMOVAL NOTES:

- THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL OTHERWISE PROTECT ALL EXISTING TREES NOT SPECIFICALLY MARKED FOR REMOVAL.

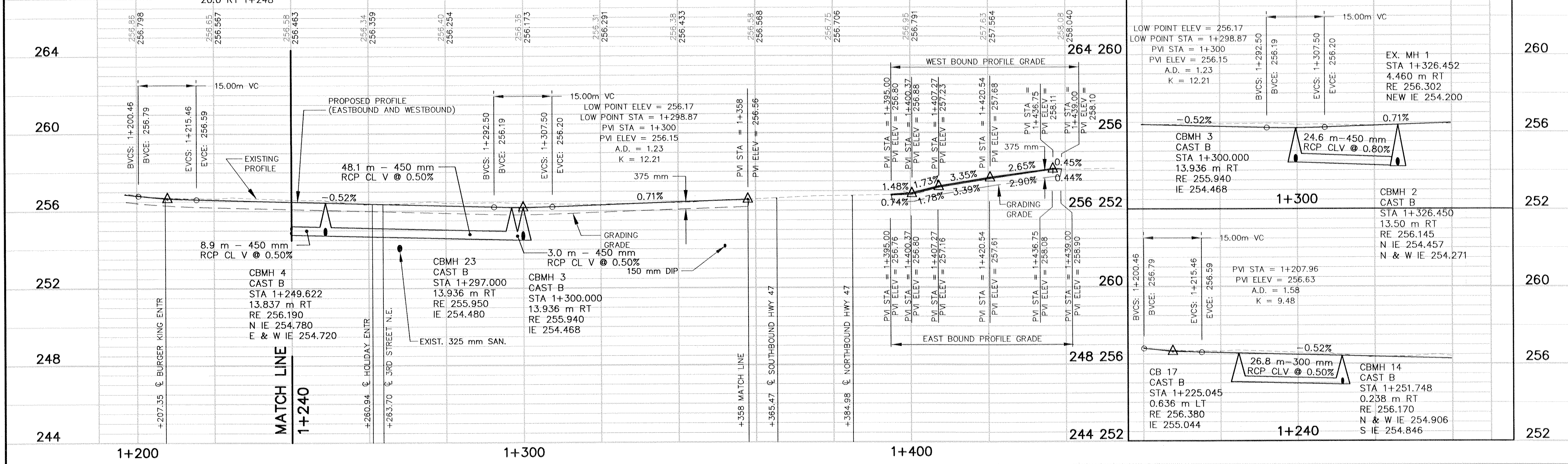
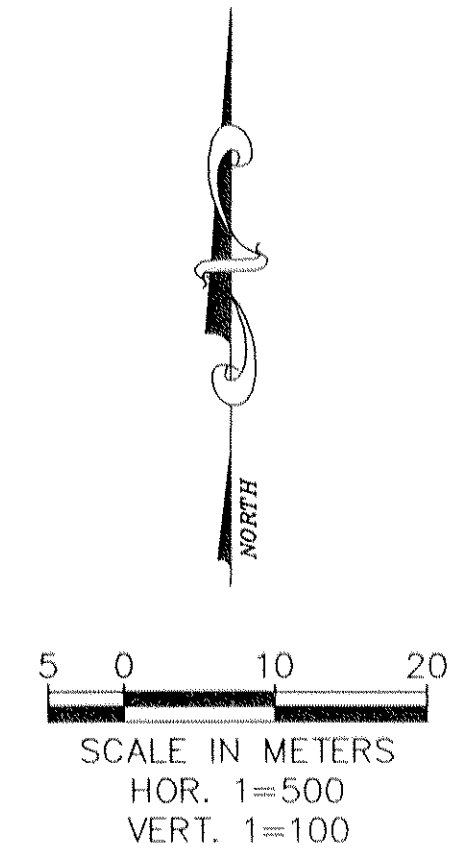
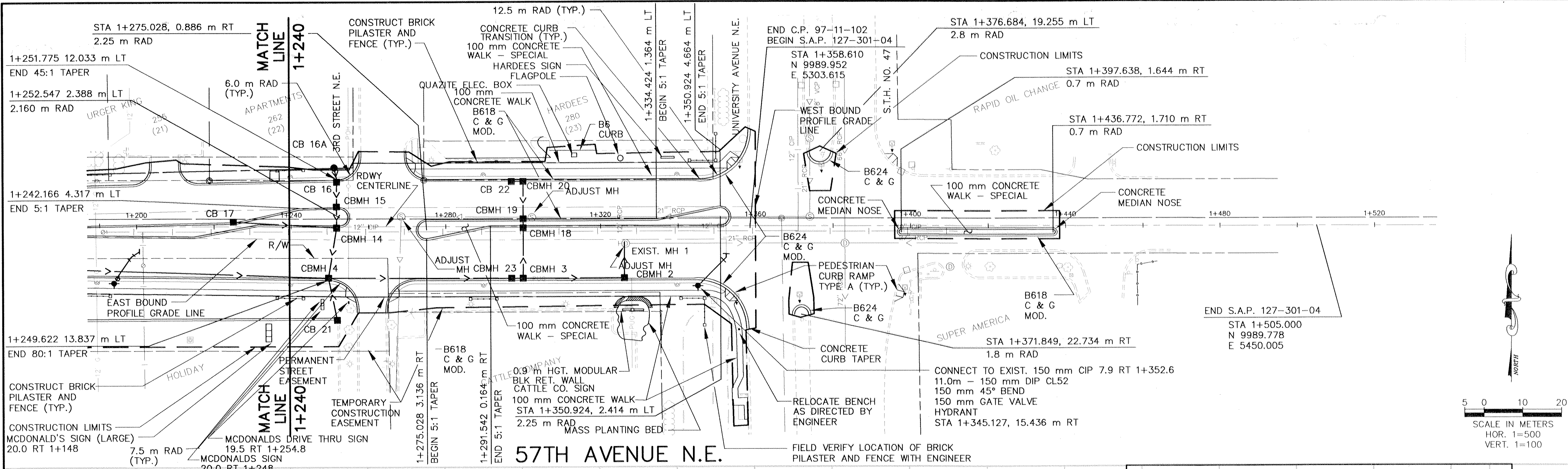
REV. NO.	BY	DATE	REVISIONS DESCRIPTION	DESIGN FILE: 356889-002-0101	XREF DRAWINGS	 B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16. DATE: _____ MINN. REG. NO. 23197	COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. EROSION CONTROL/REMOVALS STA. 1+000 TO STA 1+450	CITY PROJECT ST-1997-4	SHEET NO.
1	KC	10/13/98	ASBUILTS	DRAWN BY: PMJ	57THRPD 57THREUT 57THRETO		18			
				CHKD. BY: PBD	DESIGN BY: JML		45			
				DATE: FEBRUARY 6, 1998	DWG. NAME: 57THRE01					
									CITY PROJECT 97-11-102	
									S.A.P. 127-010-15	
									S.A.P. 127-301-04	

DISK FILE NAME: (14-01) R:\35689\35689002\PLAN_SHT\57THPP01.DWG PLOT DATE: Nov 18, 1998 5:01pm



REV. NO.	BY	DATE	REVISIONS DESCRIPTION	DESIGN FILE: 35689-002-0101	XREF DRAWINGS	BRW INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16. DATE: _____ MINN. REG. NO. 23197	COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. PLANNED CONSTRUCTION STA. 1+000 TO STA. 1+240	CITY PROJECT	ST-1997-4	SHEET NO. 19
1	KC	11/13/98	ASBULTS	DRAWN BY: PMJ DESIGN BY: JML CHKD. BY: PBD DWG. NAME: 57THPP01 DATE: FEBRUARY 6, 1998	57THRPLP 57THRPUT 57THRPRF 57THRPRD 57THREUT 57THRETO				CITY PROJECT ST-1997-4 COUNTY PROJECT 97-11-102 S.A.P. 127-010-15 S.A.P. 127-301-04		
									<small>ALL QUANTITIES AND DIMENSIONS ON PLAN ARE IN METRIC UNITS.</small>	45	


DISK FILE NAME: (14-01) R:\35689\35689002\PLAN_SHT\57THPP02.DWG PLOT DATE: Nov 17, 1998 5:59pm



REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	KC	11/13/98	ASBUILTS

DESIGN FILE: 35689-002-0101	
DRAWN BY: PMJ	DESIGN BY: JML
CHKD. BY: PBD	DWG. NAME: 57THPP02
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS
57THRPLP 57THRPUT 57THRPRF 57THRPRD 57THREUT 57THRETO


BRW INC.
 Thresher Square, 700 Third Street So.
 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
 CO RD 102/57TH AVENUE N.E.
 PLANNED CONSTRUCTION
 STA. 1+240 TO STA. 1+450

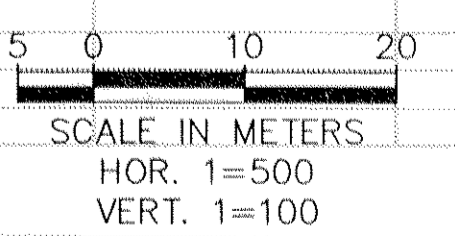
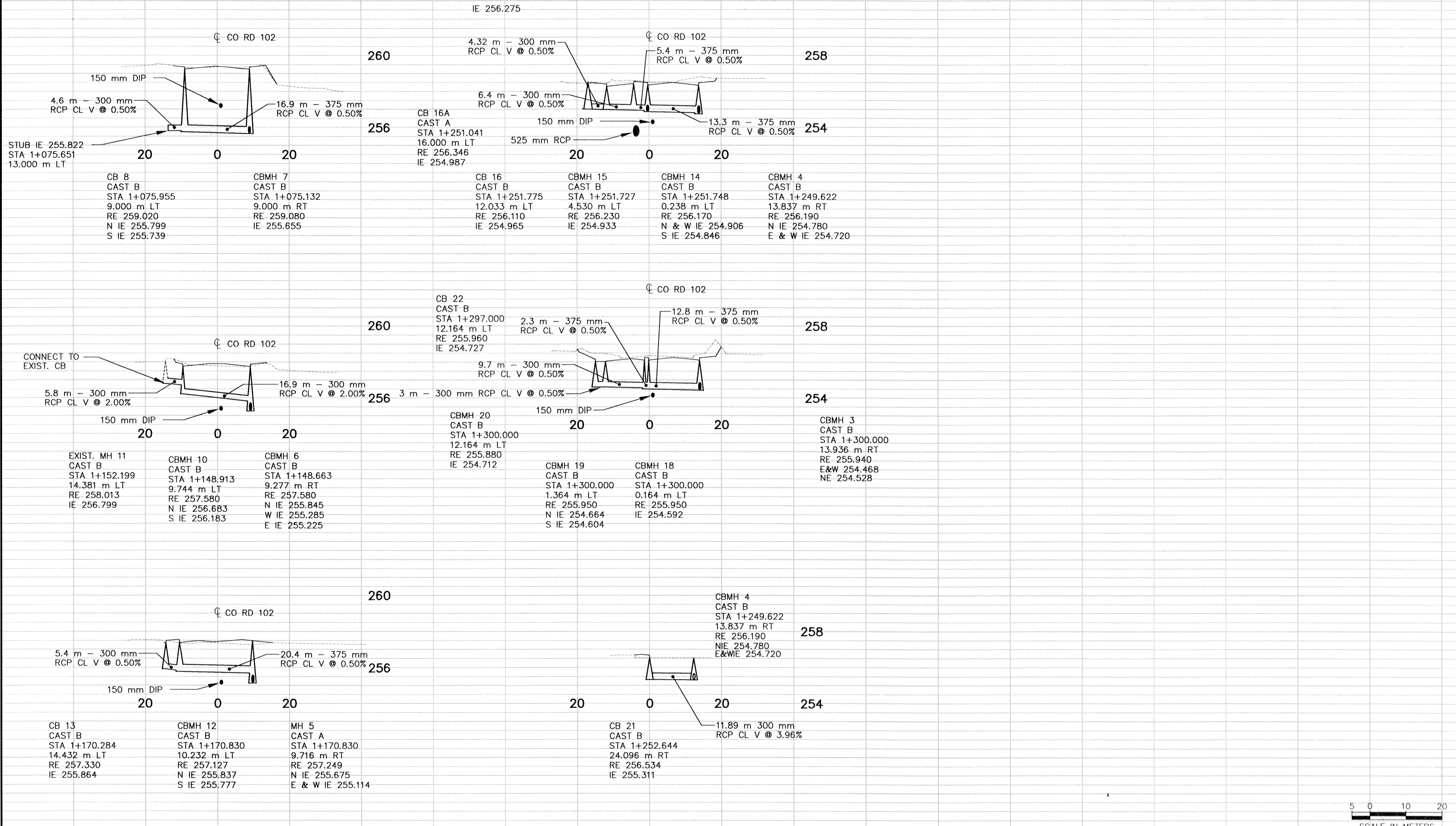
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO. **20**

45

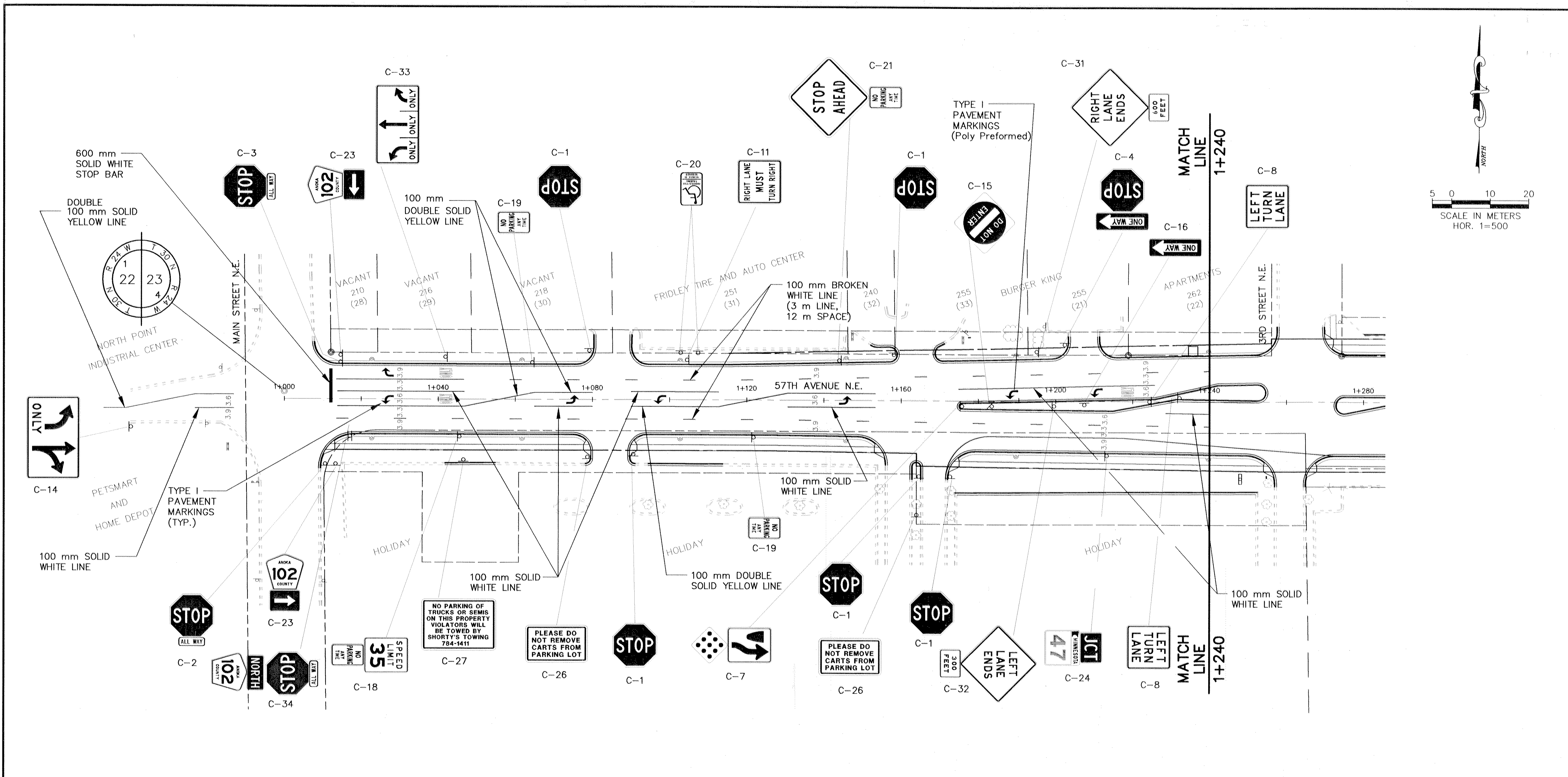
ALL QUANTITIES AND DIMENSIONS ON PLAN ARE IN METRIC UNITS.

DISK FILE NAME: (14-01) R:\35689\35689002\PLAN_SHT\57THST01.DWG PLOT DATE: Nov 16, 1998 1:35pm



REV. NO.	BY	DATE	REVISIONS DESCRIPTION	DESIGN FILE:	XREF DRAWINGS	 BRW INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16. DATE: _____ MINN. REG. NO. 23197	COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. STORM SEWER PROFILES	CITY PROJECT	ST-1997-4	SHEET NO.
				COUNTY PROJECT					97-11-102	21	
									S.A.P.	127-010-15	45
									S.A.P.	127-301-04	

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THSG01.DWG PLOT DATE: Nov 10, 1998 3:44pm




NOTES:

1. ALL PERMANENT STRIPING APPLIED TO PAVEMENT SHALL BE LATEX PAINT AND ALL TYPE I PAVEMENT MARKINGS SHALL BE EPOXY UNLESS OTHERWISE SPECIFIED.

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	KC	10/13/98	ASBUILTS

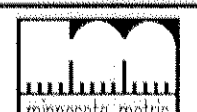
DESIGN FILE: 35689-002-0101		XREF DRAWINGS	
DRAWN BY: PMJ	DESIGN BY: JML	57THRPD 57THRETO	
CHKD. BY: PBD	DWG. NAME: 57THSG01		
DATE: FEBRUARY 6, 1998			


B R W INC.
 Thresher Square, 700 Third Street So.
 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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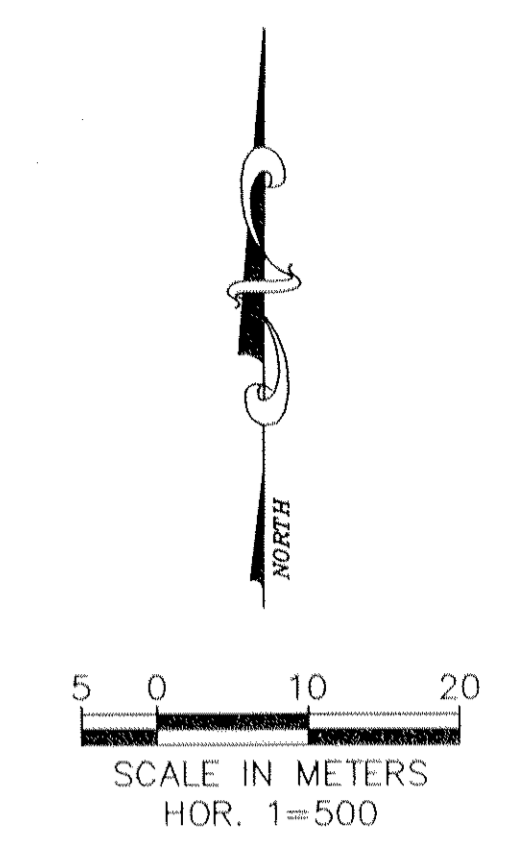
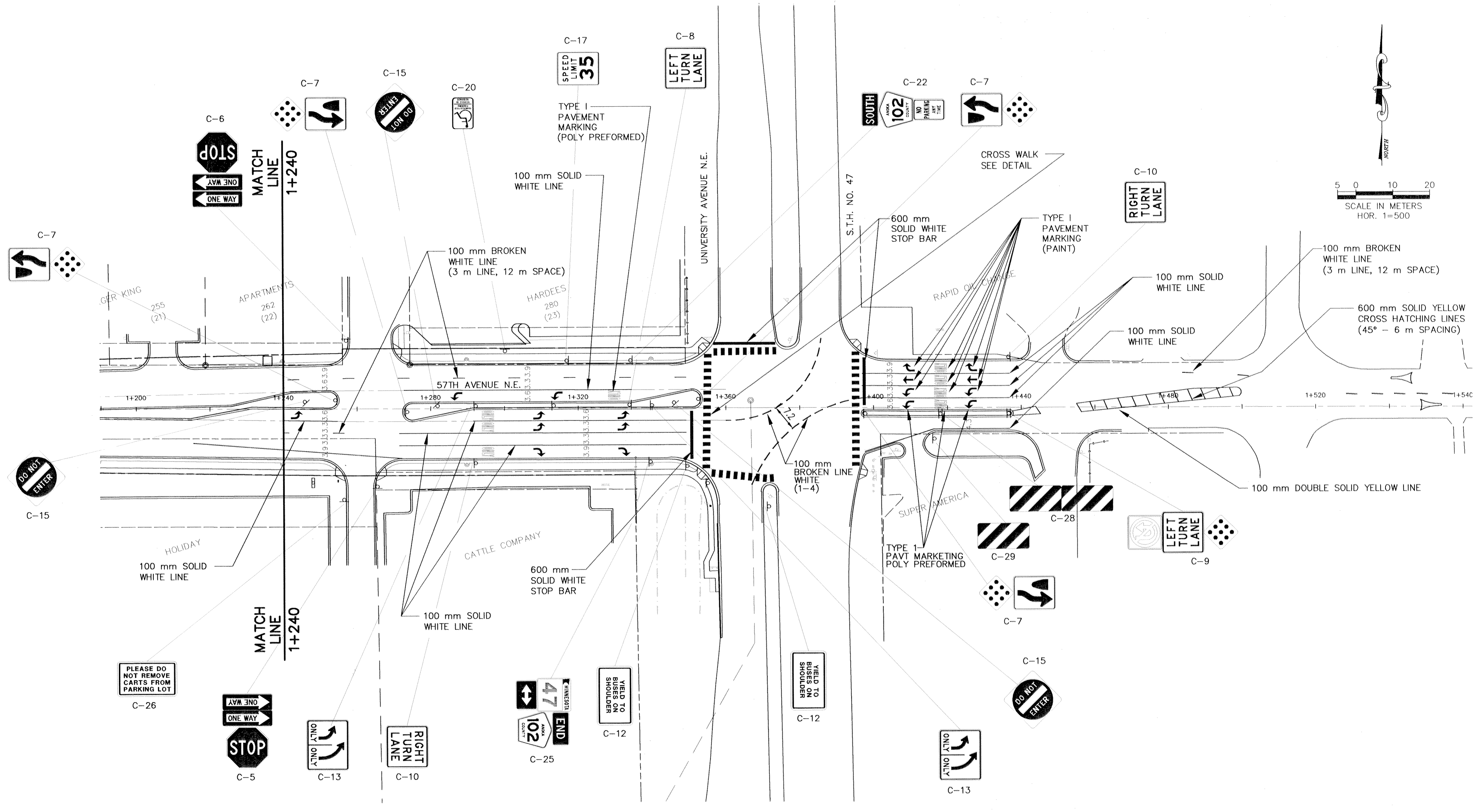
DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
 CO RD 102/57TH AVENUE N.E.
 SIGNAGE AND STRIPING PLAN
 STA. 1+000 TO STA 1+240

 ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4	SHEET NO.	
COUNTY PROJECT	97-11-102		22
S.A.P.	127-010-15		
S.A.P.	127-301-04		45

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THSG02.DWG PLOT DATE: Nov 10, 1998 3:45pm



NOTES:

1. ALL PERMANENT STRIPING APPLIED TO PAVEMENT SHALL BE LATEX PAINT AND ALL TYPE I PAVEMENT MARKINGS SHALL BE EPOXY UNLESS OTHERWISE SPECIFIED.

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	KC	10/13/98	ASBUILTS

DESIGN FILE: 35689-002-0101	
DRAWN BY: PMJ	DESIGN BY: JML
CHKD. BY: PBD	DWG. NAME: 57THSG02
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS
57THRPRD 57THRETO

B R W

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Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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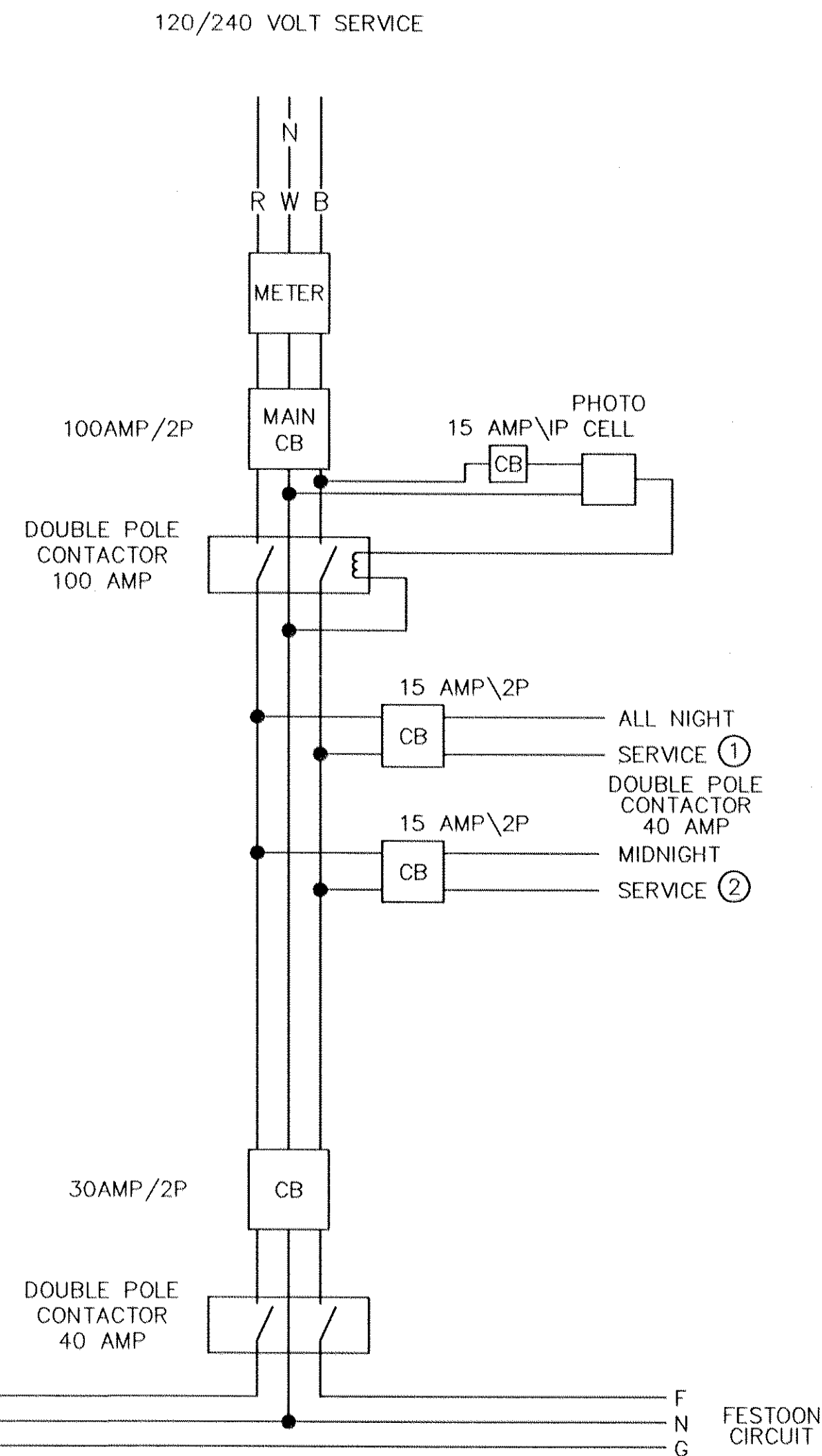
DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
SIGNAGE AND STRIPING PLAN
STA. 1+240 TO STA 1+470

ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

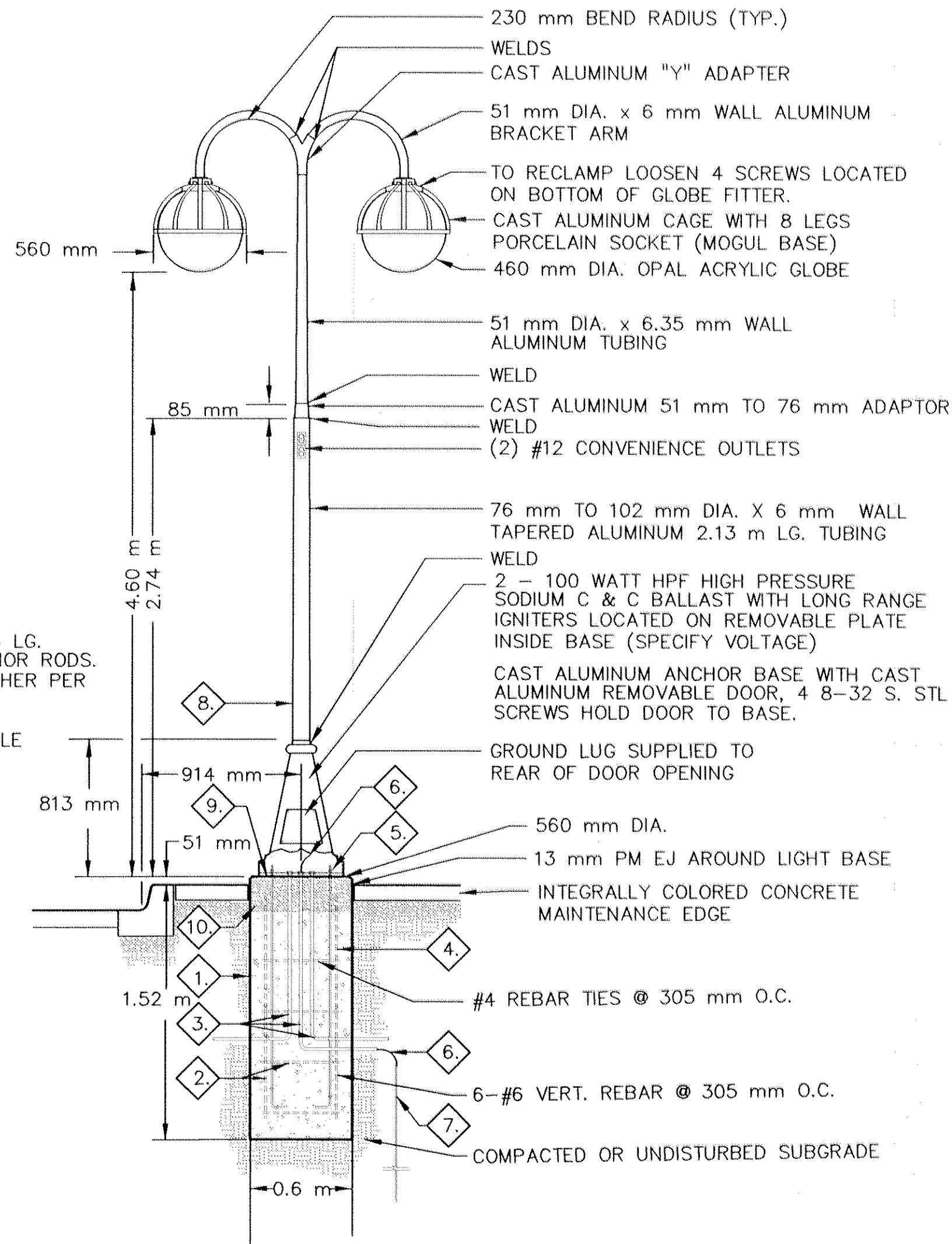
CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
23
45



TYPICAL CIRCUIT DIAGRAM

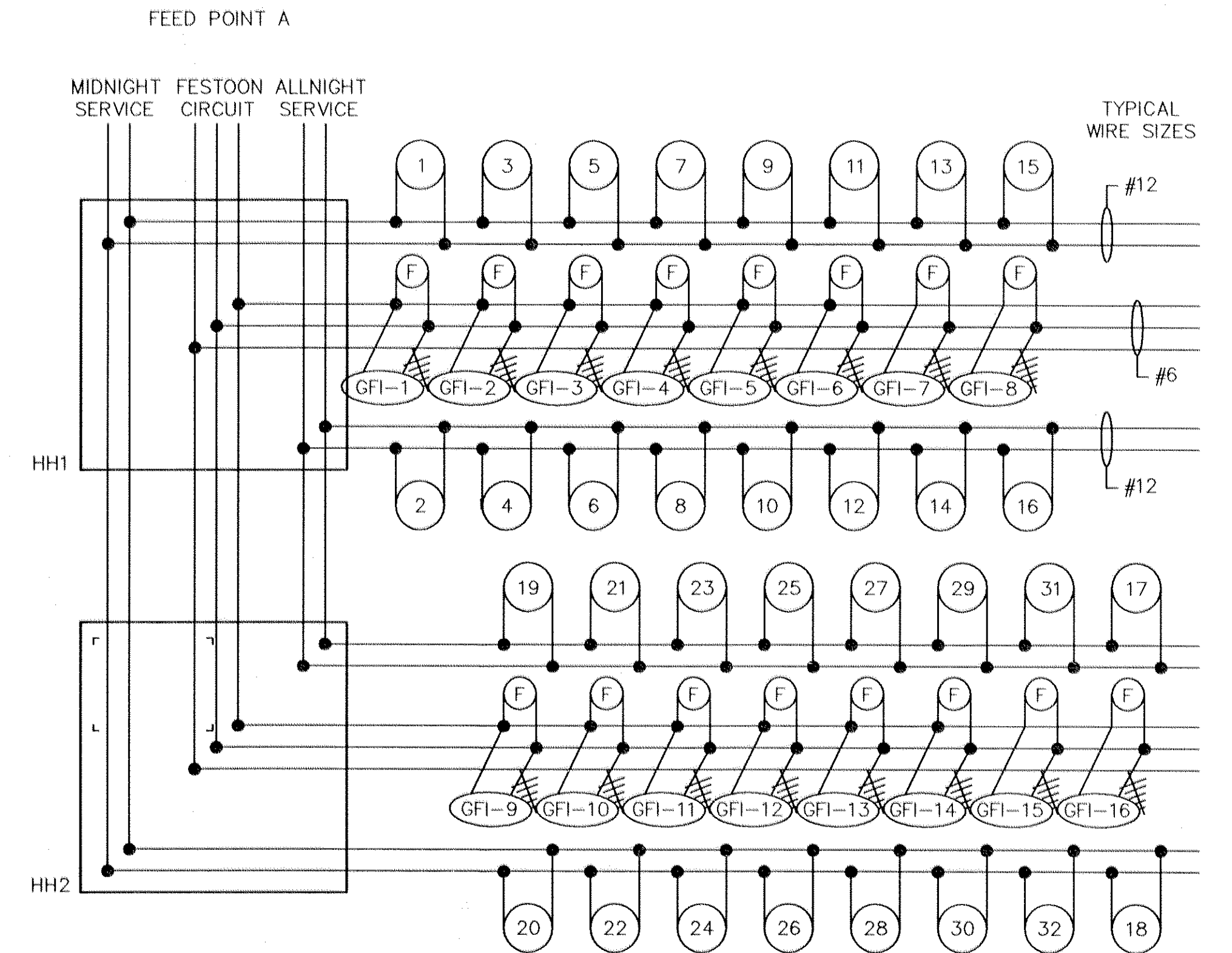
- ① ALL NIGHT SERVICE CIRCUIT SHALL OPERATE STREET SIDE LUMINAIRES ONLY.
- ② MIDNIGHT SERVICE CIRCUIT SHALL OPERATE HOUSE SIDE LUMINAIRES ONLY.



- NOTES:
1. REINFORCED ROUND CONCRETE FOUNDATION BASE. CONCRETE 5-7% AIR ENTRAINED 4000 PSI. FINISH ALL CONCRETE ABOVE GRADE LEVEL AND BEVEL EDGE 45°. ALL POLE BASES PROVIDED BY ELECTRICAL CONTRACTOR.
 2. PROVIDE 76 mm MINIMUM COVER ON BARS AND TIES. FOOTINGS SHALL BE FORMED WHERE SOIL CONDITIONS REQUIRE.
 3. PROVIDE BUSHED RIGID CONDUITS SIZED AS REQUIRED FOR FEEDERS AND GROUNDING CONDUCTOR. PROVIDE CONDUIT CAP ON CONDUITS RESERVED FOR FUTURE USE.
 4. ANCHOR BOLT ASSEMBLY TO BE PROVIDED BY POLE MFG. INSTALL ACCORDING TO MFG. TEMPLATE
 5. PROVIDE DOUBLE ANCHOR BOLT NUTS ABOVE AND BELOW POLE BASE. ADJUST TO PLUMB POLE.
 6. #2 COPPER GROUNDING CONDUCTOR. CONNECT TO POLE GROUNDING LUG AND DRIVEN GROUNDING ROD.
 7. 16 mm X 3.05 m COPPER WELD GROUND ROD. TOP OF ROD 13 mm MINIMUM BELOW GRADE.
 8. LIGHTING UNIT: 2 LIGHT H.I.D. MULTIPLE POST LANTERN BY HANOVER LANTERN. DWG. NO. L53131 OR APPROVED EQUAL. POLE AND FITTINGS TO BE ALUMINUM WITH DARK BRONZE FINISH COLOR
 9. DO NOT GROUT BETWEEN BASE PLATE AND FOUNDATION ON H & T BASE. USE SHRINKPROOF GROUT ON BASE. FURNISH BASE COVER FOR POLE ON A BASE POLES.
 10. EXPOSED PORTION TO 13 mm BELOW GRADE TO BE AN INTEGRALLY COLORED CONCRETE POURED ON TOP OF WET STD. CONCRETE BASE.

TYPICAL LIGHTING UNIT
NO SCALE

NOTE:
CONDUIT AND WIRES BETWEEN LIGHTS AND OTHER FIXTURES SHALL BE NO MORE THAN 300mm BEHIND BACK OF CONCRETE EDGE.



PLOT DATE: Jan. 12, 1999 8:29am DISK FILE NAME: DET-2.DWG

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	JAS	1-26-99	AS-BUILT

DESIGN FILE: 35689-002-0101	XREF DRAWINGS
DRAWN BY: JMB	DESIGN BY: RJC
CHKD. BY: RGJ	DWG. NAME: DET-2.DWG
DATE: FEBRUARY 6, 1998	

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B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 22793

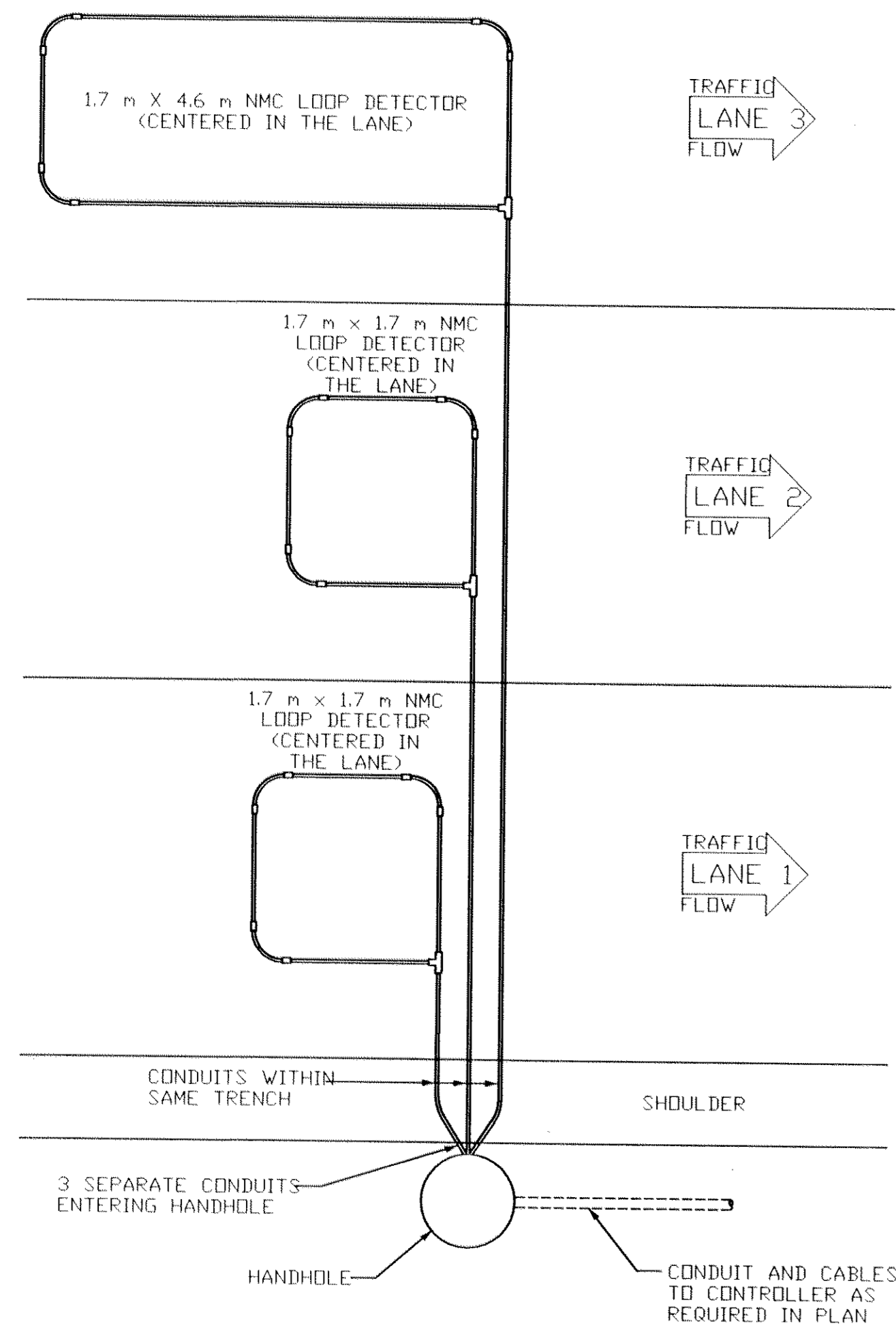
COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
TYPICAL LIGHTING UNIT & CIRCUIT

CITY PROJECT	ST-1997-4	SHEET NO.	25
COUNTY PROJECT	97-11-102		
S.A.P.	127-010-15		45
S.A.P.	127-301-04		



ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

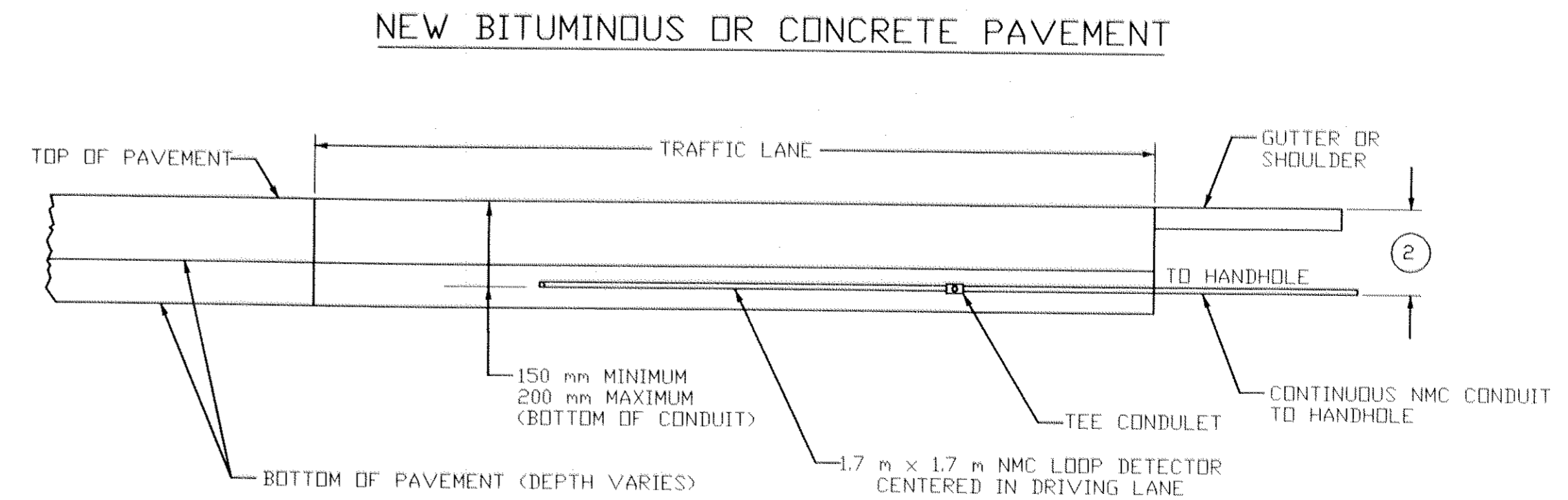
TYPICAL NMC LOOP DETECTOR LAYOUT



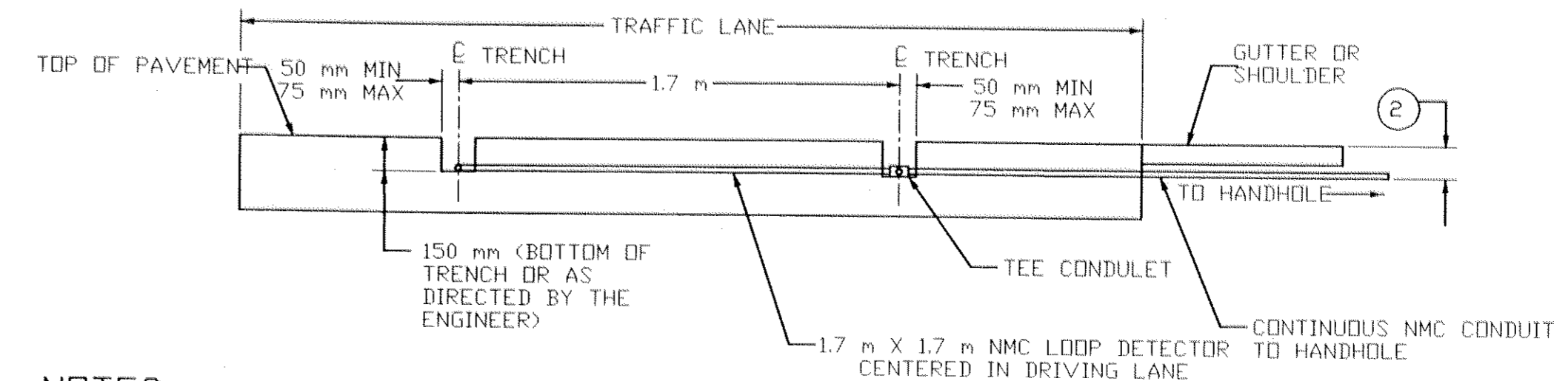
GENERAL NOTES:

- SEE SPECIAL PROVISIONS FOR REQUIRED LOOP DETECTOR CONDUCTORS AND SPLICE KITS.
- THE 21 mm 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 (150 mm RADIUS). THE FOURTH SHALL BE A 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 LOOP DETECTOR ROADWAY CONDUCTORS (1/CH14) SHALL BE TWISTED NINE TURNS PER METER FROM THE NMC TEE CONDULET TO THE HANDHOLE.
- ATTACH A FERROUS METAL ITEM TO THE INTERIOR OF THE TEE CONDULET COVER.
- 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 END IN THE HANDHOLE.
- NO SPLICES ALLOWED IN CONDUIT TO TEE 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 1.7 m x 1.7 m, 1.7 m x 3.0 m, 1.7 m x 4.6 m AND 1.7 m x 6.1 m. REFER TO INTERSECTION LAYOUT FOR SPECIFIC LOOP DETECTORS TO BE PLACED.
- ALL LOOP DETECTORS SHALL HAVE 4 TURNS OF CONDUCTORS.

TYPICAL NMC LOOP DETECTOR INSTALLATION



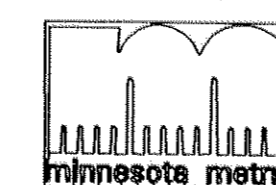
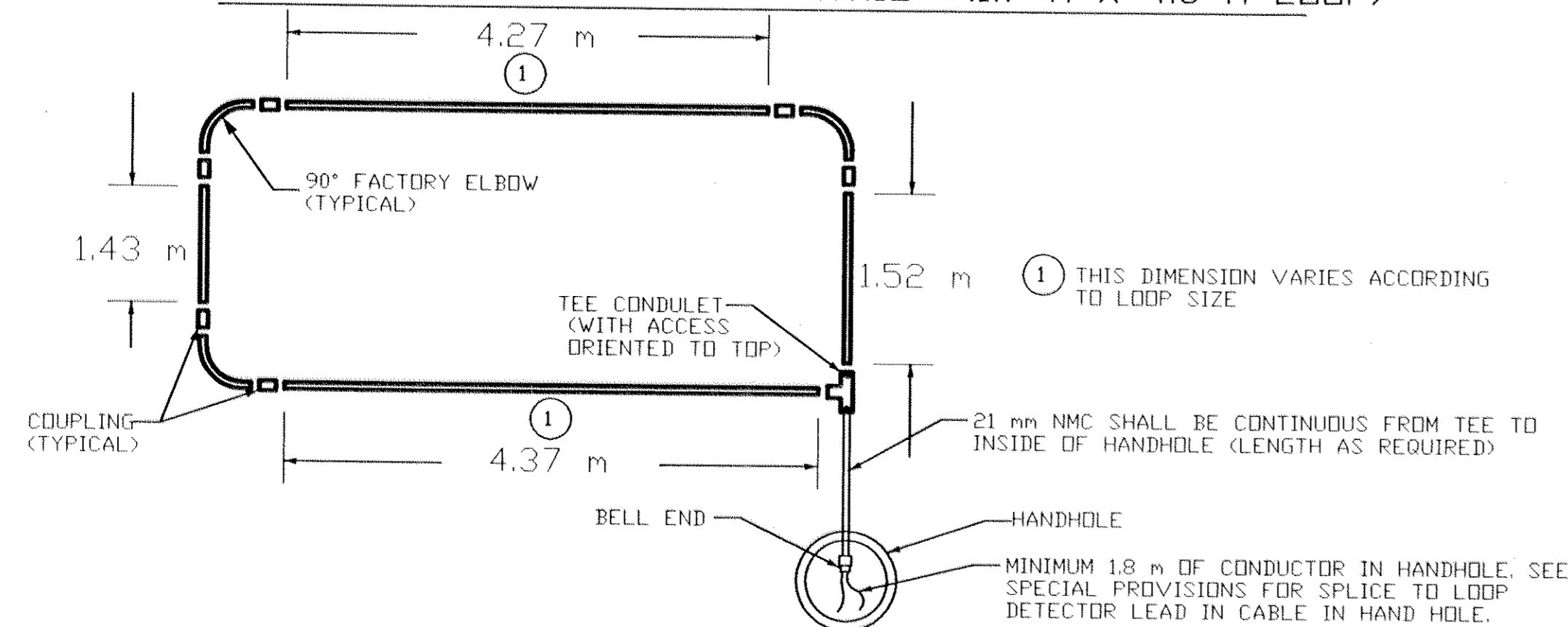
INPLACE BITUMINOUS PAVEMENT



NOTES:

- USE THE ACTUAL LOOP DETECTOR TO BE PLACED FOR MARKING THE PAVEMENT FOR MILLING LOCATION.
- MILL PAST THE CENTER OF THE CONDUIT TO BE PLACED.
- ACHIEVE A MINIMUM 50 mm VERTICAL EDGE ON ALL CUTS.
- 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 A EMULSIFIED ASPHALT PER SPEC. 2357.2A
- USE MIXTURE TYPE 41 WEARING COURSE (TYPE 41WEA50055) TO BACKFILL THE TRENCH. OTHER WEARING COURSE MIXTURE TYPES ARE ALLOWED WHEN APPROVED BY ENGINEER. (AGGREGATE SIZE "A" IS REQUIRED).
- THE USE OF PETROLEUM DISTILLATES AS AN ANTI-ADHESIVE AGENT IS NOT ALLOWED. REFER TO MN/DOT TECH. MEMO NO. 94-16-MRE-05 DATED 3/10/94 FOR ADDITIONAL INFORMATION.
- 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 6 mm TO 12 mm ABOVE THE ADJACENT PAVEMENT SURFACE TO PROVIDE FOR ADDITIONAL COMPACTION BY TRAFFIC.
- APPLY A BITUMINOUS FDG SEAL ON THE NEWLY COMPACTED MIXTURE TO PROVIDE AN ADDITIONAL SURFACE SEAL (EMULSIFIED ASPHALT 2355.2A). DRY SAND SHALL BE SPREAD ON THE FDG SEAL TO PREVENT MATERIAL PICKUP AND TRACKING.

TYPICAL NMC LOOP DETECTOR DETAIL- (1.7 m X 4.6 m LOOP)



PLOT DATE: 3-30-98

DISK FILE NAME: NMCLOOP.DWG

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	JAS	1-26-99	AS-BUILT

DESIGN FILE: 35689		XREF DRAWINGS	
DRAWN BY: JMB/JAS	DESIGN BY: RJG		
CHKD. BY: RJG	DWG. NAME: LAYOUT		
DATE: JAN. XX, 1998			

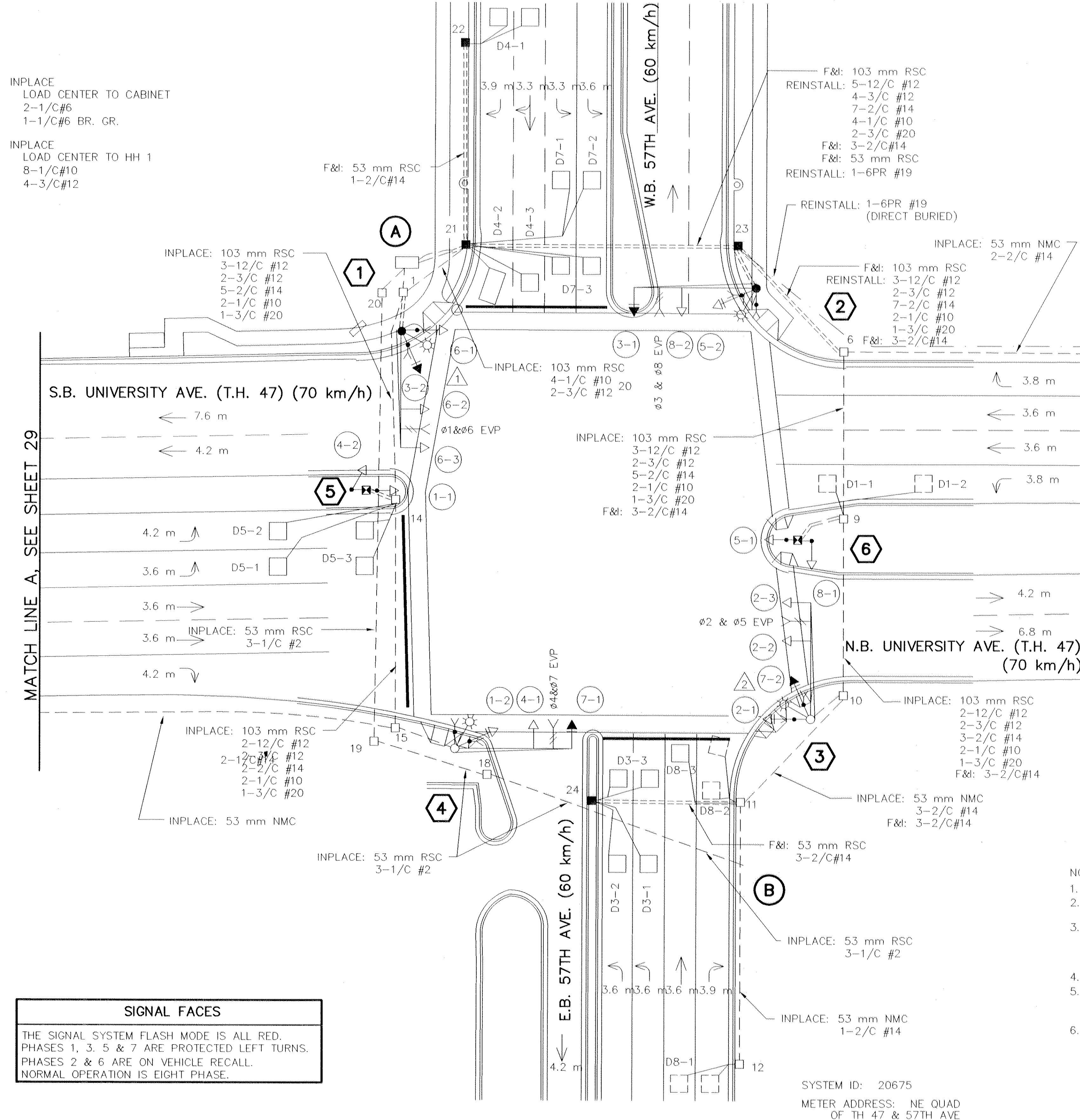
B R W
B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 22793

COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. SIGNAL DETAILS		CITY PROJECT	ST-1997-4	SHEET NO. 27
		COUNTY PROJECT	97-11-102	
		S.P.	127-010-15	45
		S.A.P.	127-301-04	

- (A)** INPLACE
EQUIPMENT PAD
CONTROLLER CABINET AND CONTROLLER
SERVICE EQUIPMENT (PAD MOUNTED)
- INPLACE
CABINET TO HH 1
103 mm RSC
5-12/C#12
2-3/C#12
5-2/C#14
2-3/C#20
- INPLACE
CABINET TO HH 2
103 mm RSC
5-12/C#12
2-3/C#12
10-2/C#14
2-3/C#20
- F & I
103 mm RSC TO HH 21
9-2/C#14
SALVAGE TO HH 6
5-12/C#12
2-3/C#12
7-2/C#14
2-3/C#20
INSTALL FROM HH 6
5-12/C#12
2-3/C#12
7-2/C#14
2-3/C#20
REMOVE
3-2/C#14

- (B)** SOP - INPLACE WOOD POLE (NSP)
INPLACE: 53 mm RISER AND WEATHERHEAD
WITH 3-1/C #2
- EXTEND INTO HH 18:
INPLACE: 53 mm RSC
3-1/C #2

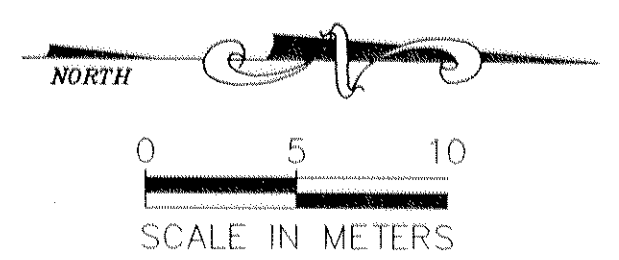


DETECTOR CHART		
DESIGNATION	SIZE (m)	DIST. TO STOP BAR (m)
D1-1, D1-2	1.7 x 1.7	1.5 x 10.7
D2-1, D2-2	1.7 x 1.7	97.5
* D3-3	2-1.7 x 1.7	3
* D3-1, D3-2	1.7 x 1.7	12
* D4-1	2-1.7 x 1.7	37
* D4-2	1.7 x 3.4	1.5
D4-3	1.7 x 1.7	1.5
* D5-1, D5-2	1.7 x 1.7	12
* D5-3	2-1.7 x 1.7	3
D6-1, D6-2	1.7 x 1.7	97.5
* D7-1, D7-2	1.7 x 1.7	12
* D7-3	2-1.7 x 1.7	3
D8-1 **	2-1.7 x 1.7	37
* D8-2	2-1.7 x 1.7	1.5 x 11
* D8-3	1.7 x 1.7	1.5

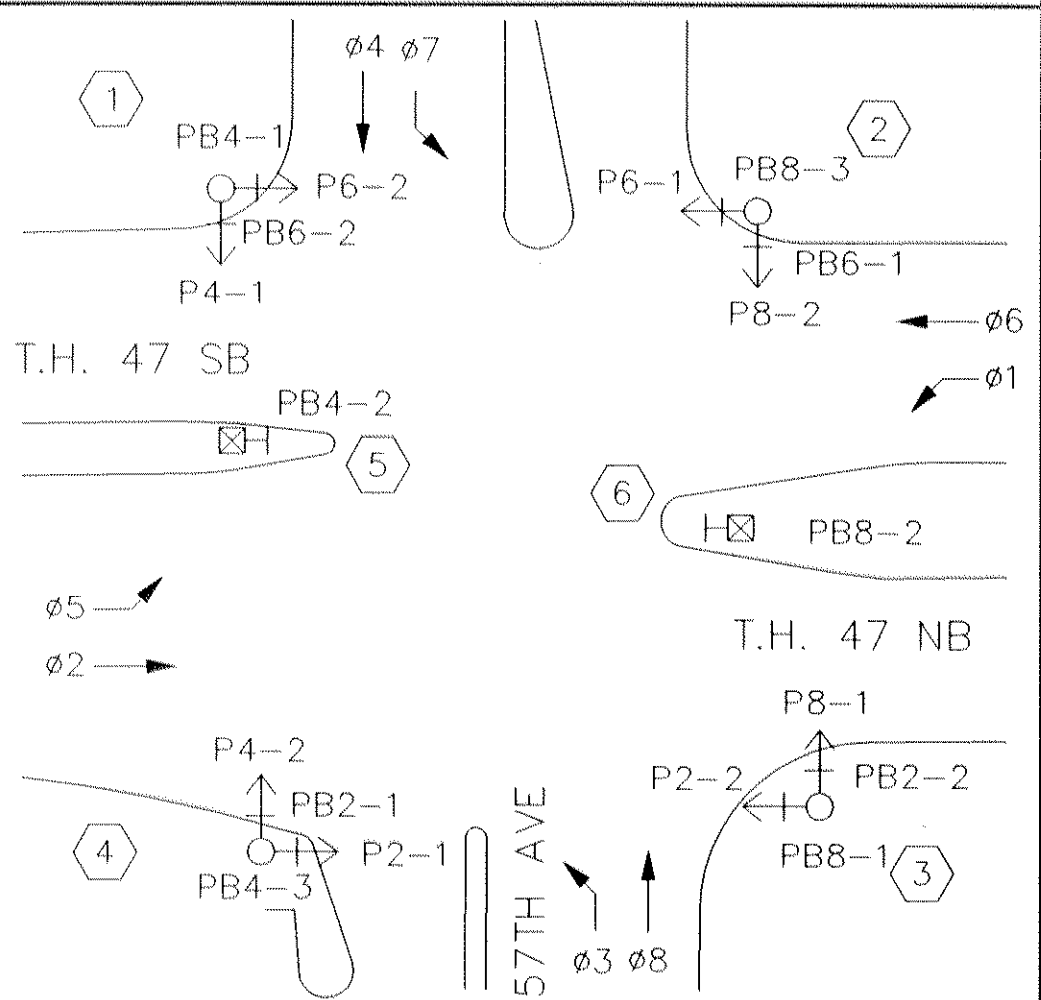
* ALL NEW LOOPS SHALL BE NMC.

SIGNAL FACES					
ALL INDICATIONS SHALL BE 300 mm					
NEW	INPLACE	R	Y	G	
1-1, 1-2	1-1, 1-2	←	←	←	
2-1, 2-2, 2-3	2-1, 2-2, 2-3	←	○	○	
3-1 ***	3-2, 3-3	←	○	○	
4-1	4-1	○	○	○	
4-2	4-4	○	○	○	
5-1, 5-2	5-1, 5-2	←	←	←	
6-1, 6-2, 6-3	6-1, 6-2, 6-3	○	○	○	
7-1 *	4-2 **	←	←	←	
7-2 ***	4-3	←	←	←	
8-1, 8-2	3-4, 3-1	○	○	○	

* F & I
** SALVAGE
*** REPLACE RED ARROW LENS WITH LED RED.



CONTROLLER PHASING, PEDESTRIAN INDICATIONS & PUSHBUTTON LAYOUT



SIGNAL FACES	
THE SIGNAL SYSTEM FLASH MODE IS ALL RED.	
PHASES 1, 3, 5 & 7 ARE PROTECTED LEFT TURNS.	
PHASES 2 & 6 ARE ON VEHICLE RECALL.	
NORMAL OPERATION IS EIGHT PHASE.	

- NOTES:
- EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS (SEE STD. PLATE M8114A).
 - PULL WIRES FROM CABINET, THROUGH HANDHOLES 2, 4 & 5, TO HANDHOLE 6. REINSTALL WIRING IN NEW CONDUIT FROM HANDHOLE 23 TO HANDHOLE 21 AND MAKE CONNECTIONS IN CABINET.
 - NEW INDICATIONS SHALL HAVE LED RED INDICATIONS.
 - PULL BACK INTERCONNECT CABLE FROM CABINET TO NORTH SIDE OF INTERSECTION (VICINITY OF HH 6). REINSTALL IN NEW CONDUIT. SEE SPECIAL PROVISIONS.
 - THE INTERCONNECT SYSTEM WORK SHALL BE CONSIDERED INCIDENTAL AND SHALL BE PAID FOR UNDER 2565.616 "REVISE SIGNAL SYSTEM".

SYSTEM ID: 20675
METER ADDRESS: NE QUAD
OF TH 47 & 57TH AVE

PLOT DATE: 12/13/98

DISK FILE NAME: LAYOUT.DWG

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	JAS	6-30-98	Mn/DOT REVIEW
			- REDUCE TO 4 LOOPS IN E-W LEFT TURN LANES
			- REDUCE D4-3 TO ONE LOOP
			- CHANGE D4-2 TO 1.7x3.4 LOOP
			- REDUCE TO ONE NEW HEAD
			- REPLACE 3 LENSES WITH LED RED ARROWS
	JAS	1-26-99	AS-BUILT

DESIGN FILE: 35689	XREF DRAWINGS 57THPRD 57THREUT 57THRETO
DRAWN BY: JAS	DESIGN BY: RJG
CHKD. BY: RJG	DWG. NAME: LAYOUT
DATE: JUNE 30, 1998	

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B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 22793

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
INTERSECTION LAYOUT
TH 47 (UNIVERSITY AVENUE) AND 57TH AVENUE

CITY PROJECT	ST-1997-4	SHEET NO.	28
COUNTY PROJECT	97-11-102		
S.P.	127-010-15		
S.A.P.	127-301-04		45

PLOT DATE: 6-30-98

DISK FILE NAME: LAYOUT2.DWG

- 1** INPLACE
 P100 POLE FOUNDATION
 TYPE P100-A-12.2-D12.2-2.7 (DAVIT AT 350°)
 2-ONE WAY SIGNALS OVERHEAD
 (0 m AND 3.4 m FROM END OF MAST ARM)
 TYPE 10B AT 0°
 TYPE 10B AT 270°
 LUMINAIRE-200W HPS WITH PEC AND CH. SW.
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
 TYPE "D" SIGN (INTERNALLY ILLUMINATED WITH PEC
 AND SIGN SWITCH ON POLE)
 2-ONE WAY SIGNS (R6-1L AND R6-1R)
 78 mm RSC TO HH 1
 2-12/C#12
 2-3/C#12
 2-1/C#10
 1-3/C#20
 F & I
 PA100 POLE FOUNDATION
 78 mm RSC TO HH 1
 SALVAGE AND INSTALL
 TYPE P100-A-12.2-D12.2-2.7 (DAVIT AT 350°)
 2-ONE WAY SIGNALS OVERHEAD
 (0 m AND 3.4 m FROM END OF MAST ARM)
 TYPE 10B AT 0°
 TYPE 10B AT 270°
 LUMINAIRE-200W HPS WITH PEC AND CH. SW.
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
 TYPE "D" SIGN (INTERNALLY ILLUMINATED WITH PEC
 AND SIGN SWITCH ON POLE)
 2-ONE WAY SIGNS (R6-1L AND R6-1R)
 2-12/C#12
 2-3/C#12
 2-1/C#10
 1-3/C#20
 REMOVE
 POLE FOUNDATION
 78 mm RSC TO HH 1

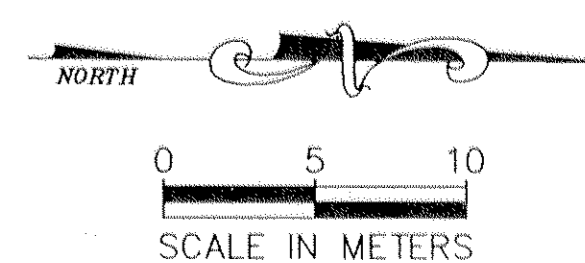
- 2** INPLACE
 P100 POLE FOUNDATION
 TYPE P100-A-12.2-D12.2-2.7 (DAVIT AT 350°)
 2-ONE WAY SIGNALS OVERHEAD
 (0 m AND 3.4 m FROM END OF MAST ARM)
 TYPE 10B AT 0°
 TYPE 10B AT 270°
 LUMINAIRE-200W HPS WITH PEC AND CH. SW.
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
 TYPE "D" SIGN (INTERNALLY ILLUMINATED WITH PEC
 AND SIGN SWITCH ON POLE)
 78 mm RSC TO HH 5
 2-12/C#12
 2-3/C#12
 2-1/C#10
 1-3/C#20
 F & I
 PA100 POLE FOUNDATION
 78 mm RSC TO HH 23
 SALVAGE AND INSTALL
 TYPE P100-A-12.2-D12.2-2.7 (DAVIT AT 350°)
 2-ONE WAY SIGNALS OVERHEAD
 (0 m AND 3.4 m FROM END OF MAST ARM)
 TYPE 10B AT 0°
 TYPE 10B AT 270°
 LUMINAIRE-200W HPS WITH PEC AND CH. SW.
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
 TYPE "D" SIGN (INTERNALLY ILLUMINATED WITH PEC
 AND SIGN SWITCH ON POLE)
 2-12/C#12
 2-3/C#12
 2-1/C#10
 1-3/C#20
 REMOVE
 POLE FOUNDATION
 78 mm RSC

- 3** INPLACE
 P100 POLE FOUNDATION
 TYPE P100-A-12.2-D12.2-2.7 (DAVIT AT 350°)
 2-ONE WAY SIGNALS OVERHEAD
 (0 m AND 3.4 m FROM END OF MAST ARM)
 TYPE 10B AT 0°
 TYPE 10B AT 270°
 LUMINAIRE-200W HPS WITH PEC AND CH. SW.
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
 TYPE "D" SIGN (INTERNALLY ILLUMINATED WITH PEC
 AND SIGN SWITCH ON POLE)
 2-ONE WAY SIGNS (R6-1L AND R6-1R)
 78 mm RSC TO HH 10
 2-12/C#12
 2-3/C#12
 2-1/C#10
 1-3/C#20

- 4** INPLACE
 P100 POLE FOUNDATION
 TYPE P100-A-12.2-D12.2-2.7 (DAVIT AT 350°)
 2-ONE WAY SIGNALS OVERHEAD
 (0 m AND 3.4 m FROM END OF MAST ARM)
 TYPE 10B AT 0°
 TYPE 30A AT 270°
 LUMINAIRE-200W HPS WITH PEC AND CH. SW.
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
 TYPE "D" SIGN (INTERNALLY ILLUMINATED WITH PEC
 AND SIGN SWITCH ON POLE)
 78 mm RSC TO HH 15
 2-12/C#12
 2-3/C#12
 2-1/C#10
 1-3/C#20
 F & I
 ONE WAY SIGNAL OVERHEAD
 (0 m FROM END OF MAST ARM)
 SALVAGE
 ONE WAY SIGNAL OVERHEAD
 (0 m FROM END OF MAST ARM)

- 5** INPLACE
 PEDESTAL FOUNDATION
 3 m PEDESTAL POLE AND BASE
 TYPE 2A
 PEDESTRIAN PUSH BUTTON AND SIGN
 78 mm RSC TO HH 14
 1-12/C#12
 2-3/C#12
 F & I
 PEDESTAL FOUNDATION
 78 mm RSC TO HH 14
 SALVAGE AND INSTALL
 3 m PEDESTAL POLE AND BASE
 TYPE 2A
 PEDESTRIAN PUSH BUTTON AND SIGN
 1-12/C#12
 2-3/C#12
 REMOVE
 PEDESTAL FOUNDATION
 78 mm RSC

- 6** INPLACE
 PEDESTAL FOUNDATION
 3 m PEDESTAL POLE AND BASE
 TYPE 2A
 PEDESTRIAN PUSH BUTTON AND SIGN
 78 mm RSC TO HH 9
 1-12/C#12
 2-3/C#12
 F & I
 PEDESTAL FOUNDATION
 78 mm RSC TO HH 9
 SALVAGE AND INSTALL
 3 m PEDESTAL POLE AND BASE
 TYPE 2A
 PEDESTRIAN PUSH BUTTON AND SIGN
 1-12/C#12
 2-3/C#12
 REMOVE
 PEDESTAL FOUNDATION
 78 mm RSC



REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	JAS	1-26-99	AS-BUILT

DESIGN FILE: 35689	XREF DRAWINGS
DRAWN BY: JAS	57THRPD 57THREUT 57THRETO
DESIGN BY: RJK	
CHKD. BY: RJK	DWG. NAME: LAYOUT
DATE: JUNE 30, 1998	

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B R W INC.
 Thresher Square, 700 Third Street So.
 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 22793

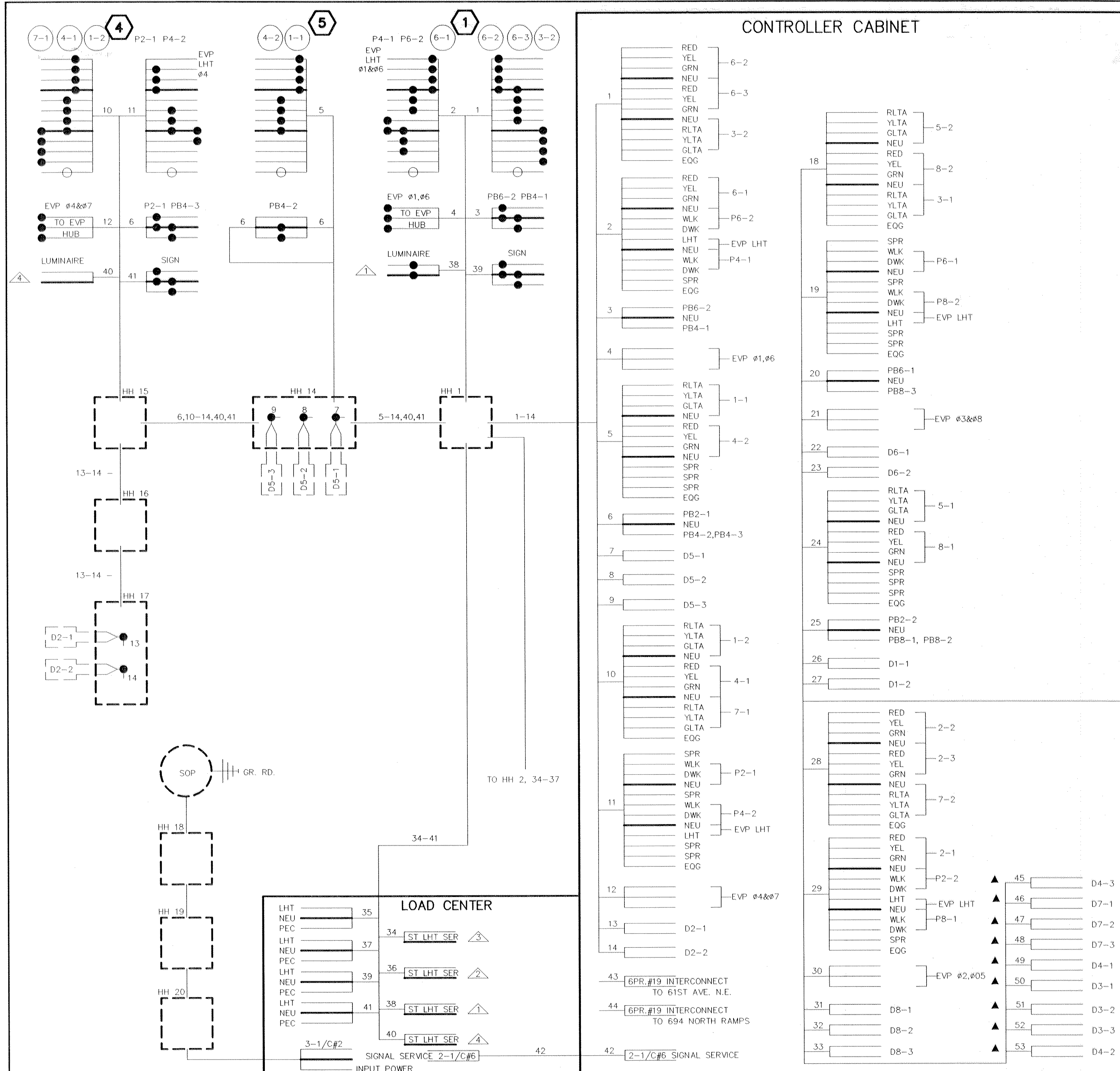
COUNTY ROAD 102 RECONSTRUCTION
 CO RD 102/57TH AVENUE N.E.
 INTERSECTION LAYOUT MATCHLINES
 UNIVERSITY AVENUE AND 57TH AVENUE

CITY PROJECT	ST-1997-4	SHEET NO.	29
COUNTY PROJECT	97-11-102		
S.P.	127-010-15		
S.A.P.	127-301-04		

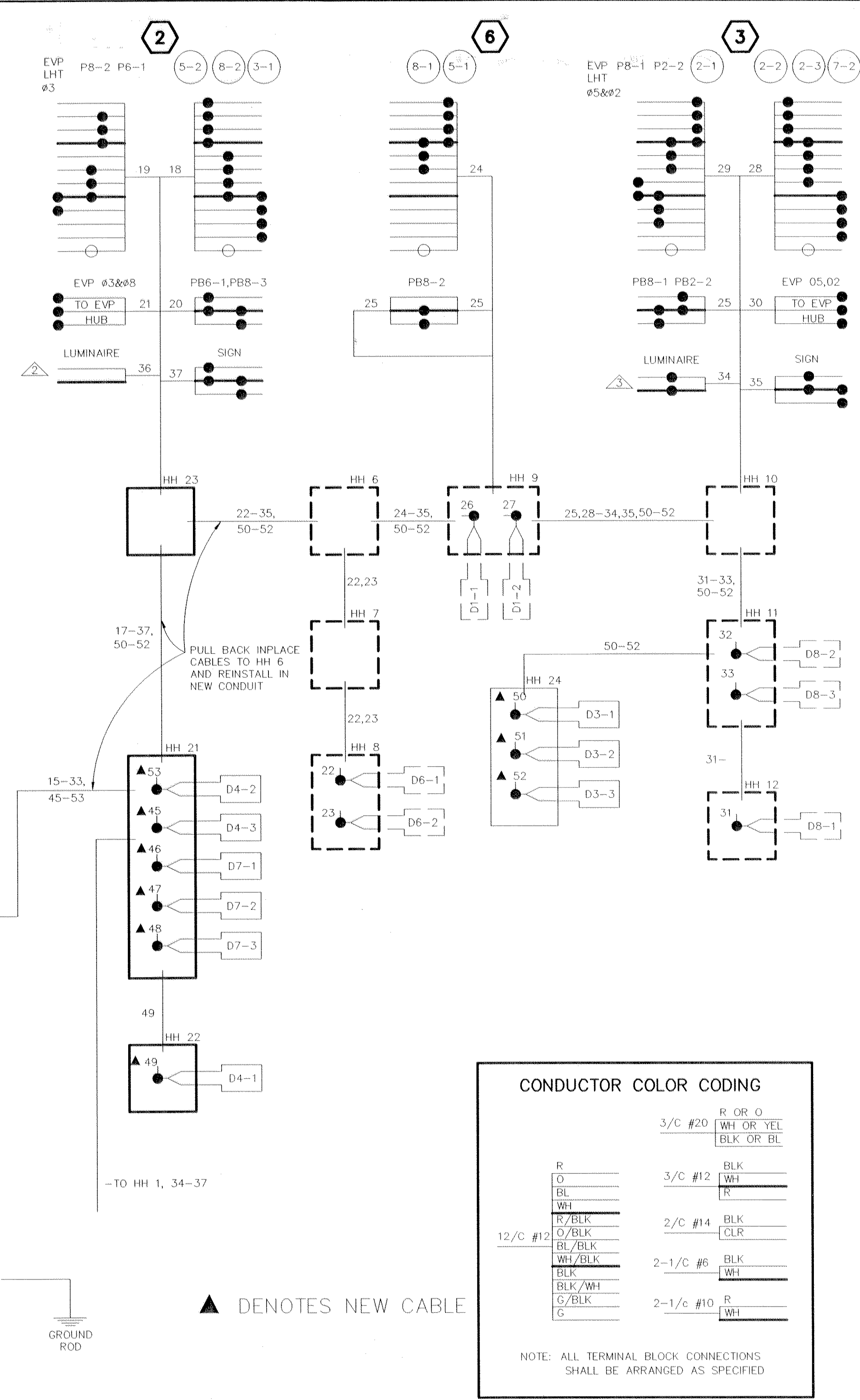
45

PLOT DATE: 6-30-98

DISK FILE NAME: WIRING.DWG



CONTROLLER CABINET



CONDUCTOR COLOR CODING	
R	3/C #20 R OR O
O	WH OR YEL
BL	BLK OR BL
WH	BLK
R/BLK	3/C #12 WH
O/BLK	R
BL/BLK	2/C #14 BLK
WH/BLK	CLR
BLK	2-1/C #6 BLK
BLK/WH	WH
G/BLK	2-1/c #10 R
G	WH

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	JAS	6-30-98	Mn/DOT REVIEW

DESIGN FILE: 35689	
DRAWN BY: JMB/JAS	DESIGN BY: RJG
CHKD. BY: RJG	DWG. NAME: LAYOUT
DATE: JUNE 30, 1998	

XREF DRAWINGS	
57THRPD	
57THREUT	
57THRETO	

B R W

B R W INC.

Thresher Square, 700 Third Street So.

Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. 22793

COUNTY ROAD 102 RECONSTRUCTION

CO RD 102/57TH AVENUE N.E.

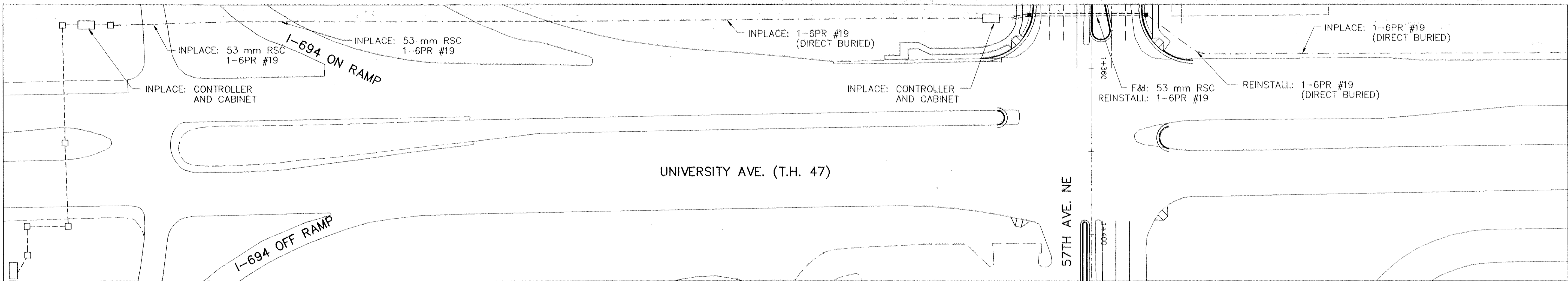
FIELD WIRING DIAGRAM

UNIVERSITY AVENUE AND 57TH AVENUE

CITY PROJECT	ST-1997-4	SHEET NO. 30
COUNTY PROJECT	97-11-102	
S.P.	127-010-15	
S.A.P.	127-301-04	

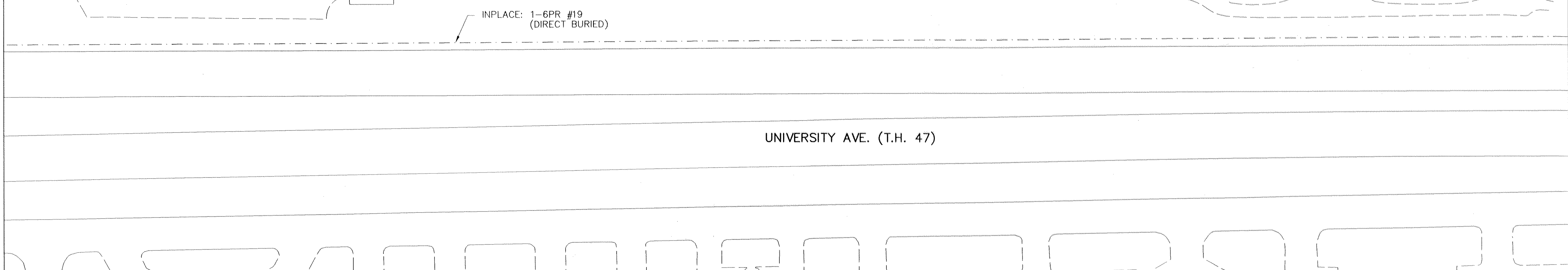
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DISK FILE NAME: INTERC.DWG PLOT DATE: 3-30-98



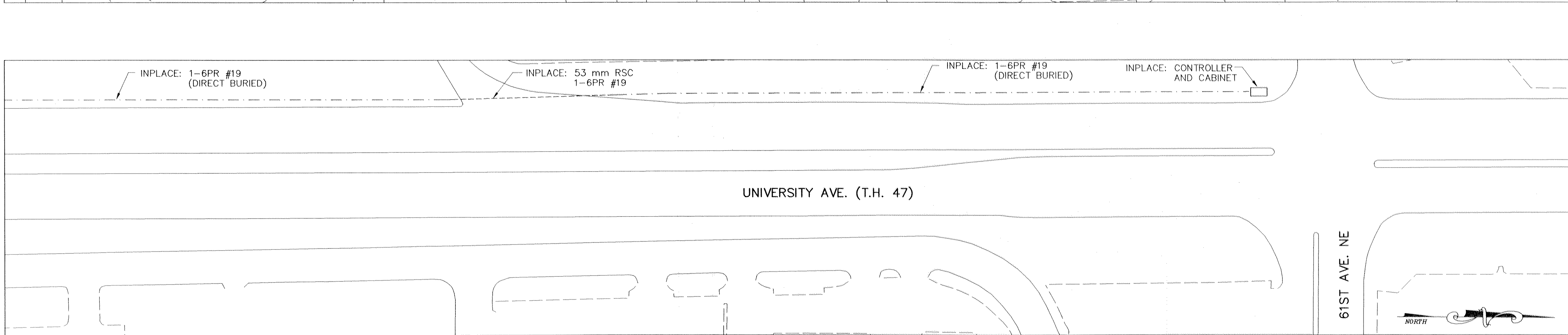
MATCH LINE A

NOTES:
 1.) PULL BACK INTERCONNECT CABLE FROM CABINET TO EAST SIDE OF INTERSECTION (VICINITY OF HH 6). REINSTALL IN NEW CONDUIT. SEE SPECIAL PROVISIONS.
 2.) THE INTERCONNECT SYSTEM WORK SHALL BE CONSIDERED INCIDENTAL AND SHALL BE PAID FOR UNDER 2565.516 "REVISE SIGNAL SYSTEM".



MATCH LINE A

MATCH LINE B



MATCH LINE B

61ST AVE. NE

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	JAS	1-26-99	AS-BUILT

DESIGN FILE: 35689	
DRAWN BY: JAS	DESIGN BY: RJG
CHKD. BY: RJG	DWG. NAME: LAYOUT
DATE: JAN. XX, 1998	

XREF DRAWINGS
57THRPD 57THREUT 57THRETO

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 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

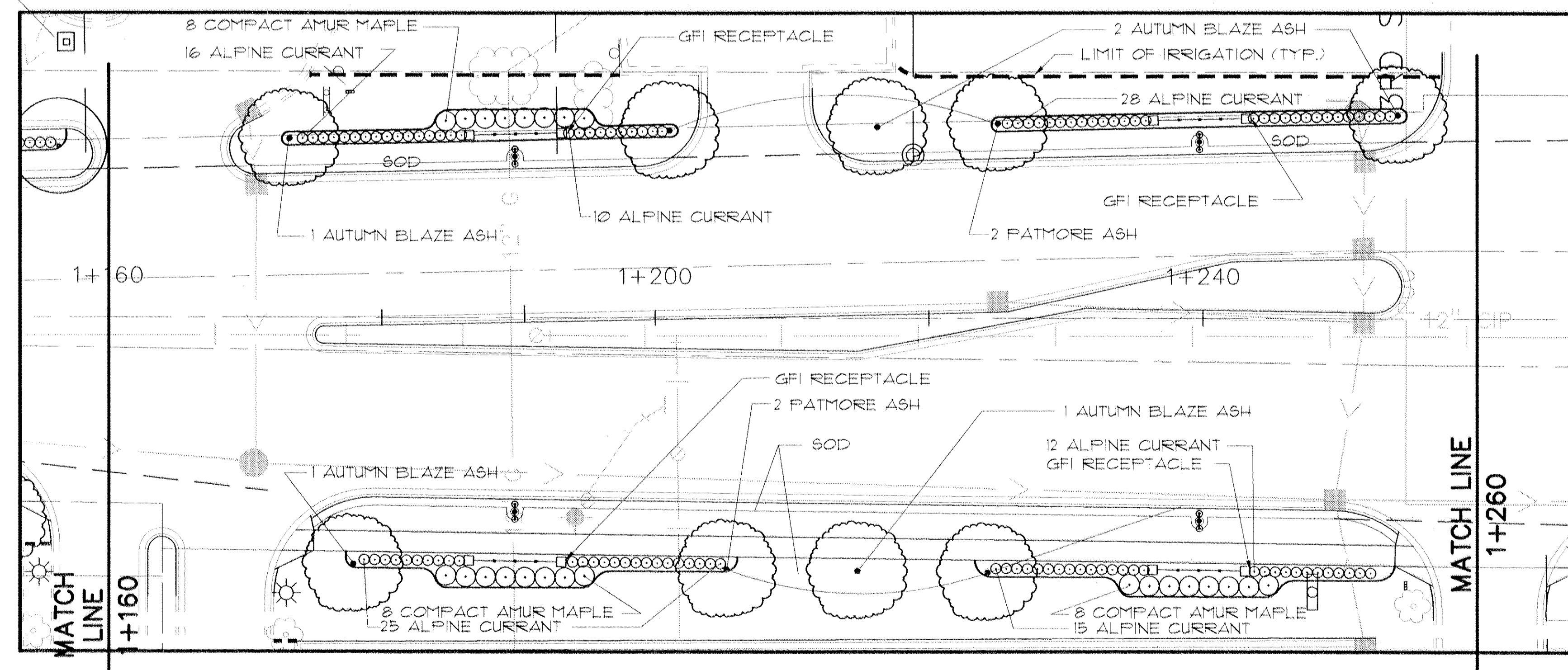
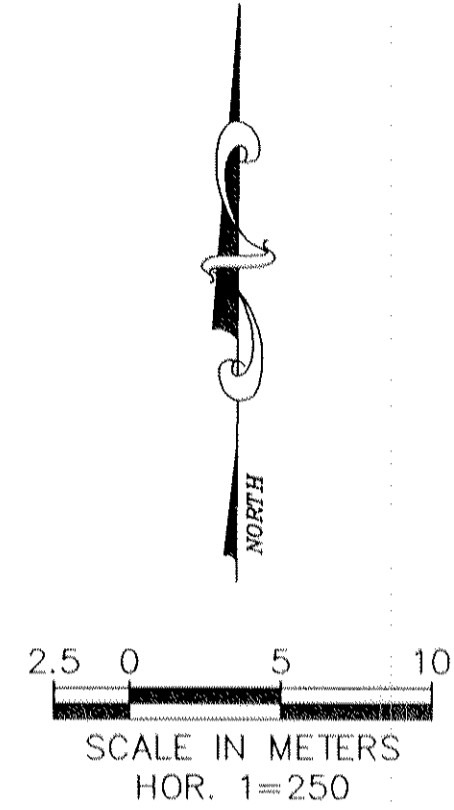
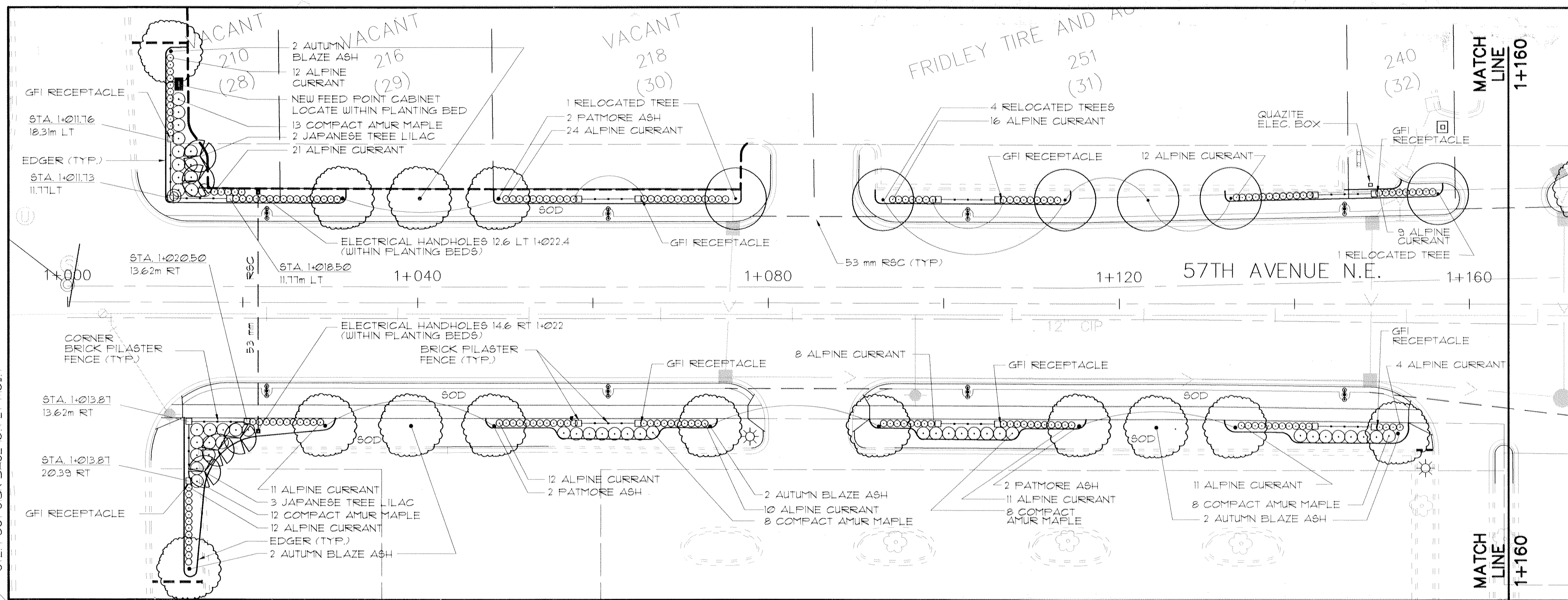
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 DATE: _____ MINN. REG. NO. 22793

COUNTY ROAD 102 RECONSTRUCTION
 CO RD 102/57TH AVENUE N.E.
 INTERCONNECT LAYOUT

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
33
 45

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THLP01.DWG PLOT DATE: Nov 10, 1998 8:33am



NOTES:

- 1.) THE POINTS GIVEN FOR THE CORNER PILASTER FENCES ARE AT THE CENTER OF THE BRICK PILASTER, SEE TYPICAL BOULEVARD PLANTING DETAILS FOR LOCATIONS OF OTHER PILASTERS & FENCE SECTIONS.
- 2.) REPRESENTS LOCATION OF TRANSPLANTED TREE AS IDENTIFIED IN THE REMOVALS PLANS (6 TOTAL).
- 3.) IRRIGATE ALL LAWN AREAS & PLANTING BEDS BETWEEN STREET & PARKING LOT CURBS TO LIMITS DEFINED BY . THERE SHALL BE APPROXIMATELY 7 SEPARATE SYSTEMS, WITH CONNECTIONS MADE TO THE EXISTING PRIVATE SYSTEMS, INCLUDING ANY NECESSARY REPAIRS AS A RESULT OF ROADWAY CONSTRUCTION.
- 4.) TREES SHALL BE PLANTED NO CLOSER THAN .90m TO THE SIDEWALK AND 1.50m TO ANY CURB.

REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	KC	10/13/98	ASBULTS

DESIGN FILE: 35689-002-0101	XREF DRAWINGS
DRAWN BY: SNH	57THRPLP
DESIGN BY: TH	57THRLIT
CHKD. BY: TH	57THRPUT
DWG. NAME: 57THLP01	57THRPRD
DATE: FEBRUARY 6, 1998	57THREUT
	57THRETO

B R W

B R W INC.

Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. _____

COUNTY ROAD 102 RECONSTRUCTION

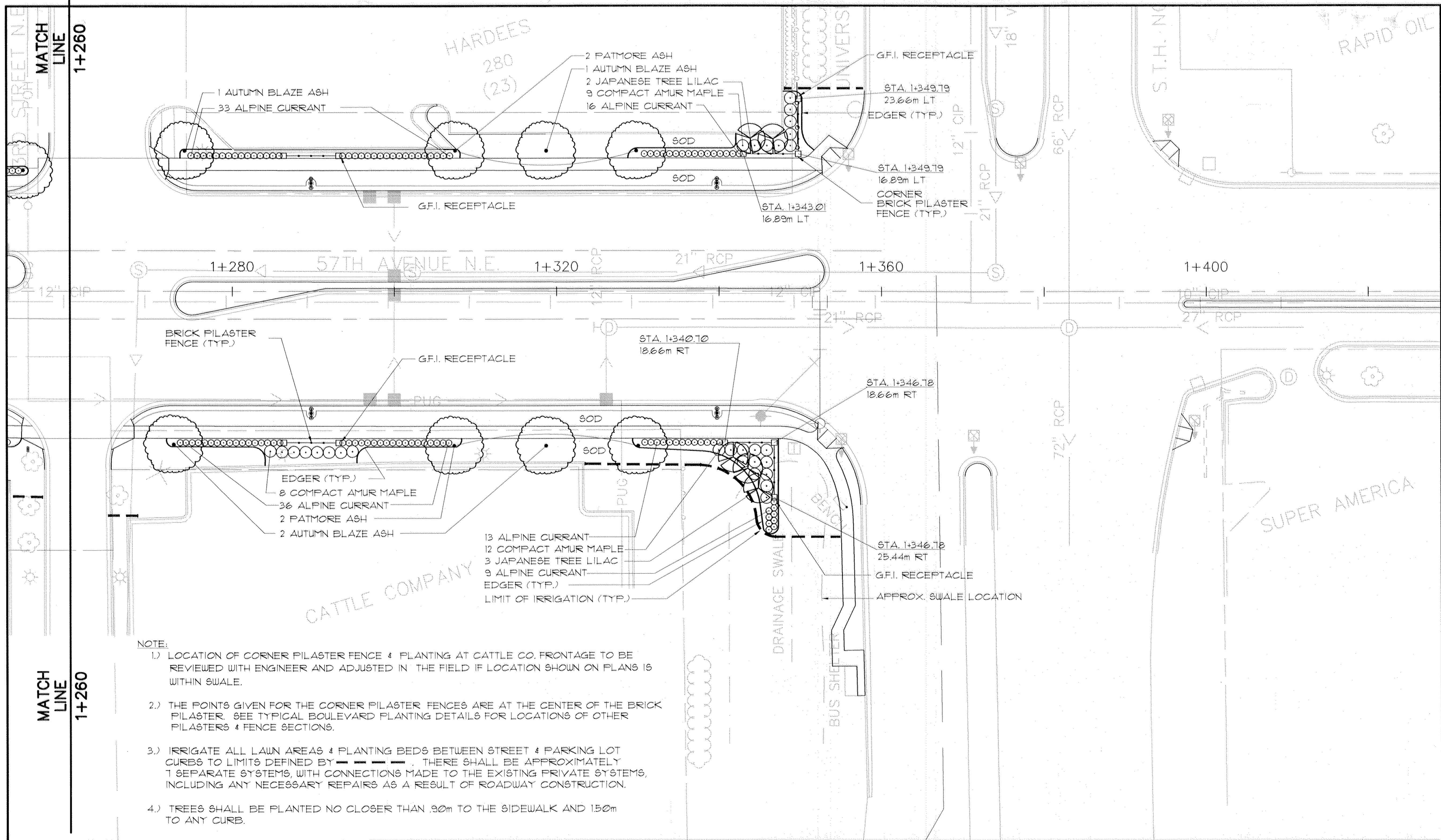
CO RD 102/57TH AVENUE N.E.

LANDSCAPE PLAN
STA. 0+960 TO STA. 1+260

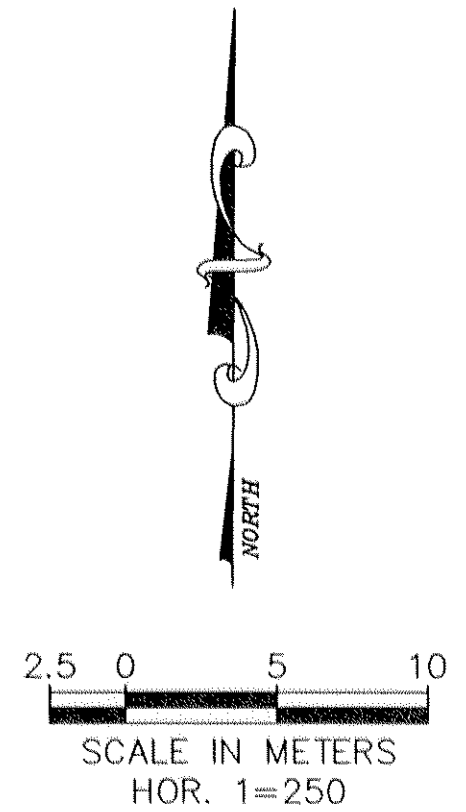
ALL QUANTITIES AND DIMENSIONS ON PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4	SHEET NO.
COUNTY PROJECT	97-11-102	34
S.A.P.	127-010-15	35
S.A.P.	127-301-04	

DISK FILE NAME: (14.01) R:\35689\35689002\PLAN_SHT\57THLP02.DWG.DWGLOT DATE: Nov 09, 1998 9:33am



- NOTE:**
- 1.) LOCATION OF CORNER PILASTER FENCE & PLANTING AT CATTLE CO. FRONTAGE TO BE REVIEWED WITH ENGINEER AND ADJUSTED IN THE FIELD IF LOCATION SHOWN ON PLANS IS WITHIN SWALE.
 - 2.) THE POINTS GIVEN FOR THE CORNER PILASTER FENCES ARE AT THE CENTER OF THE BRICK PILASTER. SEE TYPICAL BOULEVARD PLANTING DETAILS FOR LOCATIONS OF OTHER PILASTERS & FENCE SECTIONS.
 - 3.) IRRIGATE ALL LAWN AREAS & PLANTING BEDS BETWEEN STREET & PARKING LOT CURBS TO LIMITS DEFINED BY ---. THERE SHALL BE APPROXIMATELY 7 SEPARATE SYSTEMS, WITH CONNECTIONS MADE TO THE EXISTING PRIVATE SYSTEMS, INCLUDING ANY NECESSARY REPAIRS AS A RESULT OF ROADWAY CONSTRUCTION.
 - 4.) TREES SHALL BE PLANTED NO CLOSER THAN .90m TO THE SIDEWALK AND 1.50m TO ANY CURB.



REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	KC	10/13/98	ASBUILTS

DESIGN FILE: 35689-002-0101	
DRAWN BY: SNH	DESIGN BY: TH
CHKD. BY: TH	DWG. NAME: 57THLP02
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS
57THRLP
57THRLIT
57THRPUT
57THRPRD
57THREUT
57THRETO

BRW

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Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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DATE: _____ MINN. REG. NO. _____

COUNTY ROAD 102 RECONSTRUCTION

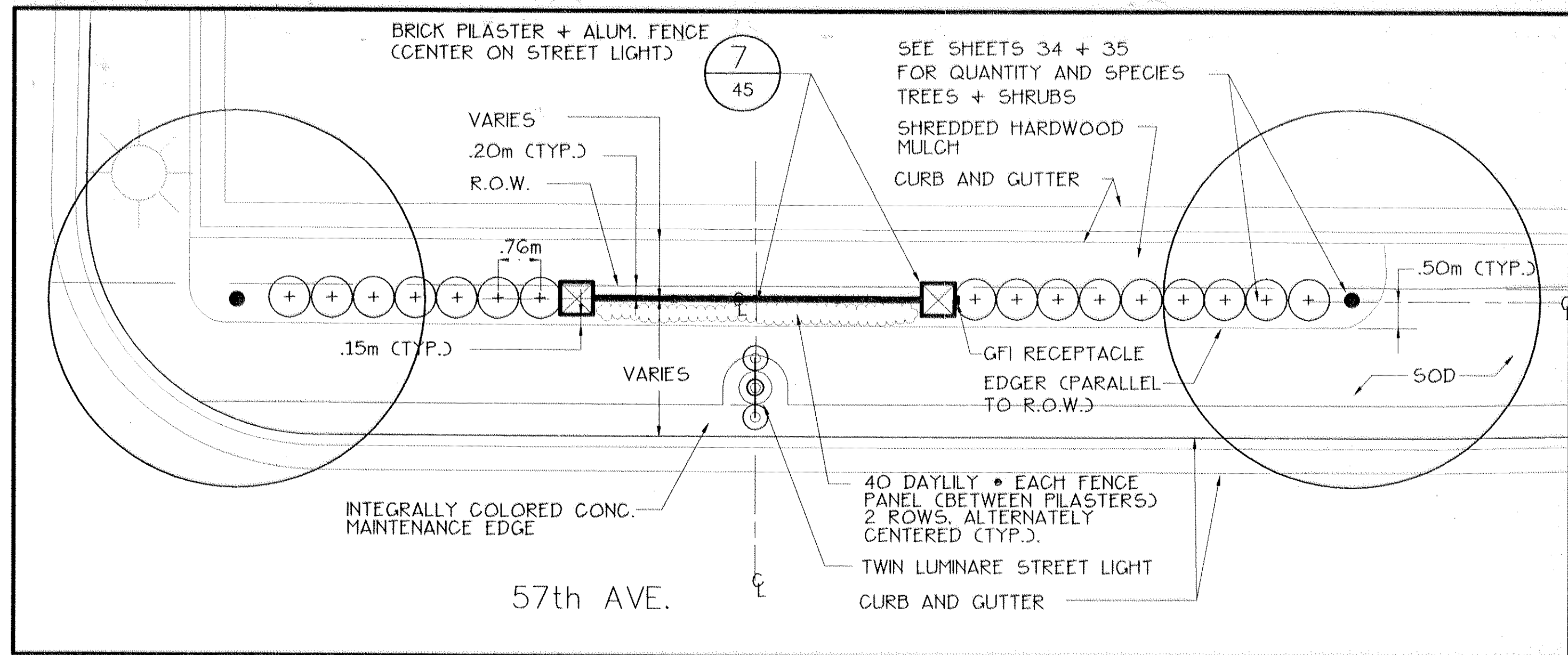
CO RD 102/57TH AVENUE N.E.
LANDSCAPE PLAN
STA. 1+260 TO STA. 1+360

ALL QUANTITIES AND DIMENSIONS ON PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

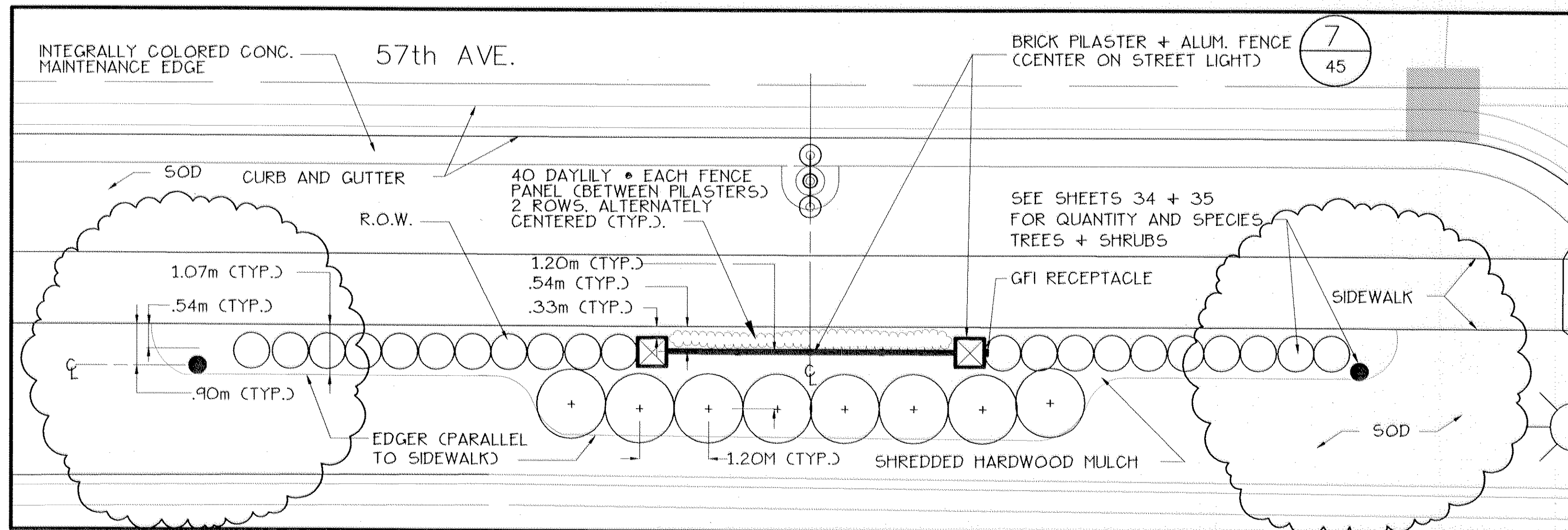
SHEET NO. **35**

45



TYPICAL BOULEVARD PLANTING AREA

HOR. 1=75



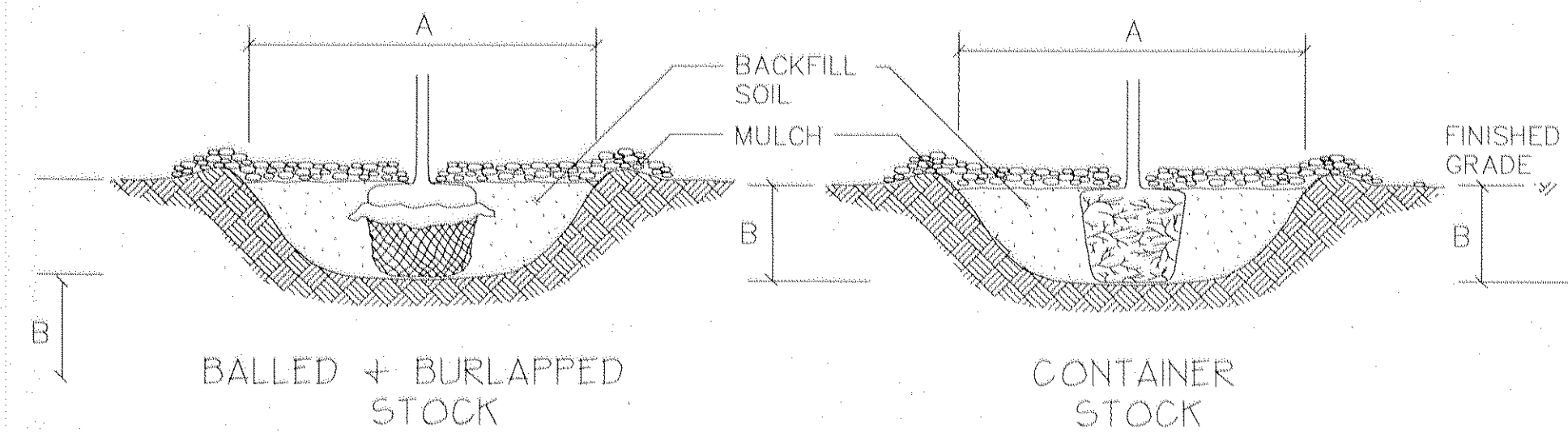
TYPICAL BOULEVARD PLANTING AREA WITH SECOND ROW OF SHRUBS

HOR. 1=75

PLANTING HOLE DIMENSIONS (MINIMUM WIDTH DOES NOT APPLY IN MASS PLANTING BEDS)			
PLANT TYPE	PLANT SIZE (UP TO AND INCLUDING)	MINIMUM APPROXIMATE HOLE WIDTH HOLE DEPTH (MILLIMETERS)(MILLIMETERS)	
		A	B
SHADE & FLOWERING TREES	50 mm B.B.	1830	400
	63 mm B.B.	2130	480
	75 mm B.B.	2440	510
	90 mm B.B.	2890	580
	100 mm B.B.	3200	630

PLANT SCHEDULE

QTY.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	REMARKS
14	PATMORE ASH	FRAXINUS PENN. LANCEOLATA 'PATMORE'	G4mm	B+B	MATCHING + 1.5m BRANCH HT.
18	AUTUMN BLAZE ASH	FRAXINUS AMERICANA 'AUTUMN BLAZE'	G4mm	B+B	MATCHING + 1.5m BRANCH HT.
10	JAPANESE TREE LILAC	SYRINGA RETICULATA 'IVORY SILK'	2.4m HT.	B+B	4-5 STEM CLUMP
386	ALPINE CURRANT	RIBES ALPINUM	4G0mm	#5	760mm O.C.
102	COMPACT AMUR MAPLE	ACER GINNALA 'BAILY COMPACT'	760mm	#5	1.2m O.C.
800	DAYLILY (20 FENCE PANELSx40 = 800)	HEMEROCALIS 'STELLA DE ORO'	2 YR.	115mm POT	457mm O.C.



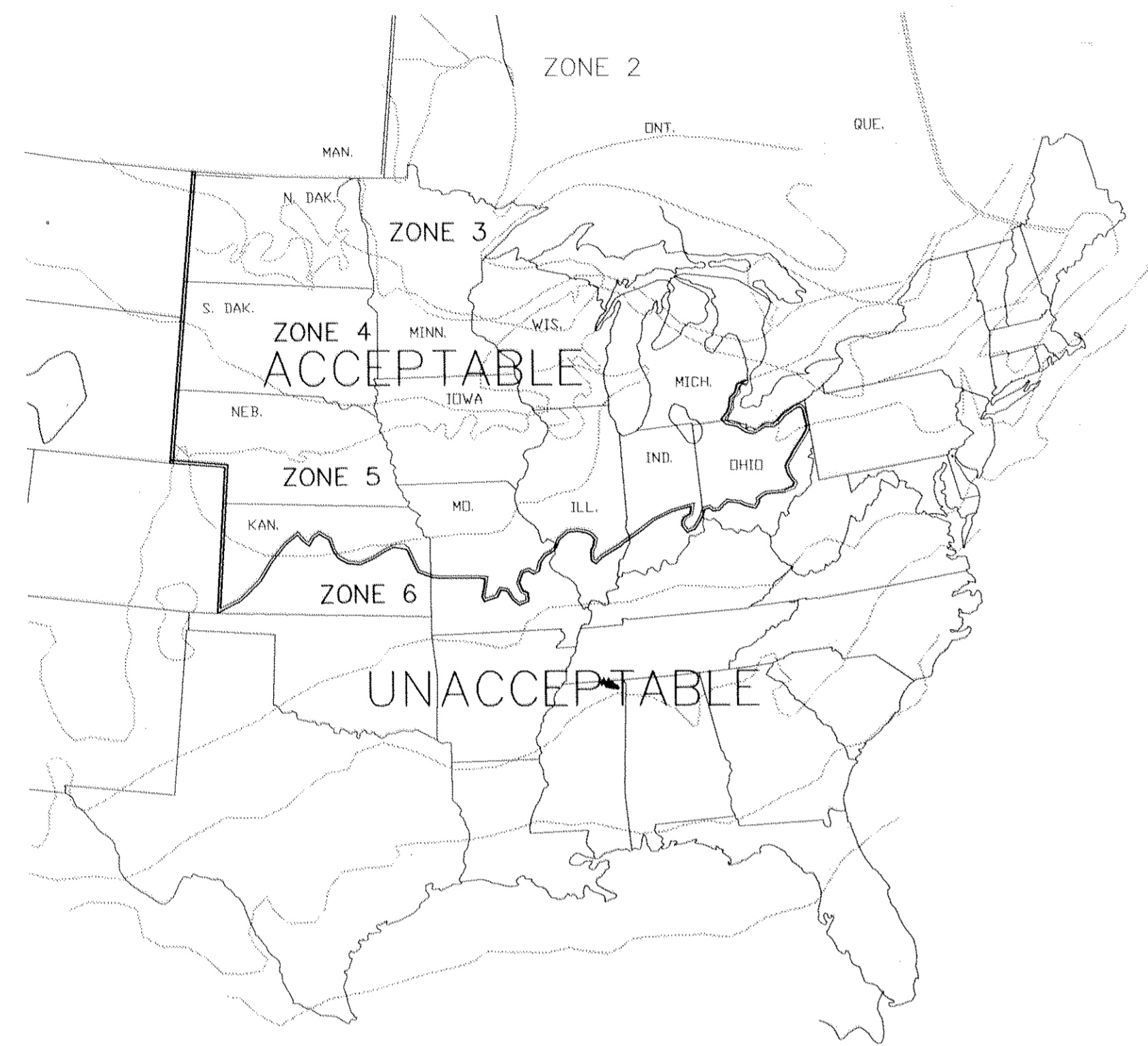
- SCARIFY SIDES AND BOTTOM OF HOLE.
- PROCEED WITH CORRECTIVE PRUNING AS DIRECTED BY ENGINEER.
- SET PLANT ON UNDISTURBED NATIVE SOIL OR THOROUGHLY COMPACTED BACKFILL SOIL AT THE SAME DEPTH (IF PROPER) AS IT WAS GROWN IN THE NURSERY.
- PLANT SHALL BE PLACED IN PLANTING HOLE WITH BURLAP AND WIRE BASKET, IF USED, INTACT. ONCE IN PLACE, THE PLANT SHALL BE BACKFILLED TO WITHIN 300mm OF THE TOP OF THE ROOTBALL AND WATERED. THE TOP LOOPS OF THE WIRE BASKETS SHALL BE REMOVED AND THE BURLAP SHALL BE FOLDED OR CUT BACK.
- PLUMB AND BACKFILL WITH THE BACKFILL SOIL SPECIFIED.
- APPLY WATER TO SETTLE PLANTS AND FILL VOIDS THEN CONSTRUCT 75 mm DEPTH WATERING BASIN.
- WATER THOROUGHLY WITHIN 2 HOURS.
- PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.
- BIODEGRADABLE TWINE MAY BE LEFT ON AS SUPPORT BETWEEN THE ROOT BALL AND ROOT COLLAR UNTIL THE END OF THE PLANT ESTABLISHMENT PERIOD AT WHICH TIME IT MUST BE CUT AND TOTALLY REMOVED FROM THE ROOT COLLAR. THE TWINE MUST BE TIED OR RETIED TO MID-LEVEL LOOPS OR POINTS ON THE BASKET. USE OF NONBIODEGRADABLE TWINE SHALL NOT BE PERMITTED.

NOTES:

- THE PLANTING DETAILS REPRESENT ADEQUATELY DRAINED SOIL CONDITIONS. THE CONTRACTOR SHOULD EXERCISE DISCRETION IN SETTING PLANTS 25 mm-75 mm HIGHER IN POORLY DRAINED SOILS.
- ON 1:2 SLOPES OR GREATER, DO NOT CONSTRUCT THE UPHILL HALF OF THE WATERING BASIN.
- ON WET, POORLY DRAINED SOILS, DO NOT CONSTRUCT WATERING BASIN.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE DRAINAGE IN HEAVY POORLY DRAINED OR IMPERVIOUS SOILS.
- PLANTS SHOULD BE SET AT THE PROPER DEPTH WHEREBY THE BEGINNING TAPER OF THE ROOT FLARE IS AT THE SAME ELEVATION AS THE FINISHED FINISHED SOIL GRADE. THIS SHOULD BE THE SAME DEPTH AS THE PLANTS WERE GROWN AT IN THE NURSERY. NOTE THAT THE ROOTS OF BALLED AND BURLAPPED PLANTS ARE UNACCEPTABLE WHEN THEY ARE COVERED BY MORE THAN 100mm OF SOIL IN THE TOP OF THE BALL.
- DELAY MULCH PLACEMENT IF NECESSARY TO ALLOW MORE TIME FOR EXCESS SOIL MOISTURE TO EVAPORATE FROM PLANTING AREAS BEFORE PLACING MULCH.

PLANTING DETAILS FOR ISOLATED PLANTING LOCATIONS

REV. NO. 1	BY KC	DATE 10/13/98	ASBUILTS	DESIGN FILE: 35689-002-0101	XREF DRAWINGS: 57THRLIT, 57THRPUP, 57THRPLP, 57THRPRD, 57THREUT, 57THRETO	<p>BRW INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378</p>	<p>I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.</p> <p>DATE: _____ MINN. REG. NO. _____</p>	<p>COUNTY ROAD 102 RECONSTRUCTION CO RD 102/57TH AVENUE N.E. LANDSCAPE DETAILS</p>	CITY PROJECT ST-1997-4	SHEET NO. 36
				<p>DRAWN BY: SNH DESIGN BY: TH</p> <p>CHKD. BY: TH DWG. NAME: 57THLP03</p> <p>DATE: FEBRUARY 6, 1998</p>	<p>ALL QUANTITIES AND DIMENSIONS ON PLAN ARE IN METRIC UNITS.</p>				COUNTY PROJECT 97-11-102	36
								S.A.P. 127-010-15		45
								S.A.P. 127-301-04		



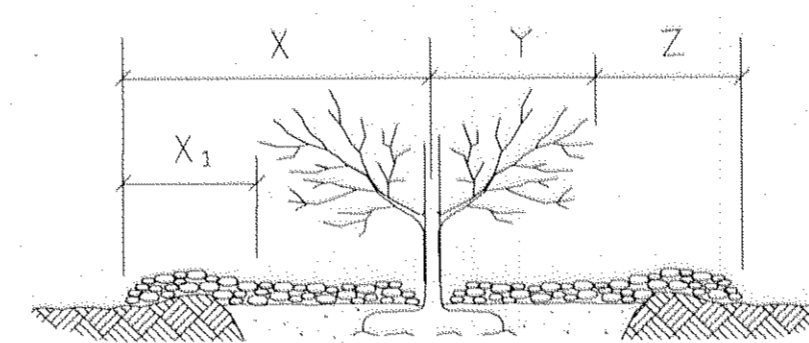
- ZONE 1 BELOW -45° C
- ZONE 2 -45° to -40°
- ZONE 3 -40° to -35°
- ZONE 4 -35° to -30°

STATE INSPECTED PLANTS GROWN WITHIN ZONES 1-4 AND THE ACCEPTABLE GROWING RANGE FOR A MINIMUM OF 2 YEARS MAY BE USED ON ALL PROJECTS UNLESS OTHERWISE SPECIFIED.

- ZONE 5 -30° to -25° C

STATE INSPECTED PLANTS GROWN WITHIN ZONE 5 AND THE ACCEPTABLE GROWING RANGE FOR A MINIMUM OF 2 YEARS ARE ALLOWED ONLY ON PROJECTS WITHIN ZONE 4 IN MINNESOTA, UNLESS CERTIFIED AS MINNESOTA ZONE HARDY IN ZONES 3 AND 2.

PLANT STOCK NOT GROWN WITHIN THE ACCEPTABLE ZONES AND GROWING RANGE FOR A MINIMUM OF 2 YEARS MAY BE ACCEPTED IF THE SEED SOURCE OR ROOT AND GRAFT STOCK IS CERTIFIED AND DOCUMENTED AS MIDWEST AND NORTHERN GROWN AND MINNESOTA ZONE HARDY.



SUBSIDENCE OR DETERIORATION OF MULCH THROUGHOUT THE CONTRACT IS ACCEPTABLE TO THE EXTENT THAT THE MULCH DEPTH IS MAINTAINED AT A MINIMUM DEPTH OF 75 mm AT ALL TIMES AND UPON FINAL ACCEPTANCE. REPLACEMENT MULCH SHALL BE REQUIRED TO PROVIDE THE MINIMUM MULCH DEPTH SPECIFIED WHEN SUBSIDENCE OR LOSS IS EXCESSIVE OR WHEN THE CONTRACTOR'S OPERATIONS HAVE CONTAMINATED THE MULCH WITH SOIL.

TYPE OF PLANT	X CENTER OF PLANT TO MULCH LINE	X ₁ EDGE OF BRANCHING TO MULCH LINE	DEPTH OF MULCH (Cmm) MIN. MAX.	DEPTH OF MULCH (Cmm) MIN. MAX.
EVERGREEN TREES	VARIABLES	0.9 m MIN.	100 150	100 150
DECIDUOUS TREES	0.9 m MIN.	N/A	100 150	100 150
EVERGREEN SHRUBS	VARIABLES	0.9 m MIN.	75 100	100 150
DECIDUOUS SHRUBS	0.9 m MIN.	N/A	100 150	100 150
VINES	0.6 m MIN.	N/A	100 150	100 150
GROUNDCOVERS	VARIABLES	0.6 m MIN.	75 100	75 100
MACHINE-TRANSPLANTED TREES	300 mm FROM EDGE OF HOLE		100 150	100 150

NOTE:
REMOVE MULCH PLACED TO A DEPTH GREATER THAN THAT SPECIFIED WHEN DIRECTED BY THE ENGINEER.

ACCEPTABLE GROWING RANGE FOR MIDWEST AND NORTHERN GROWN PLANT STOCK

SOURCE: U.S.D.A. PLANT HARDINESS ZONE MAP

MULCH PLACEMENT DETAIL

GENERAL NOTES - SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS

PLANTING HOLE AND BED CULTIVATION: ALL ISOLATED TREE PLANTING LOCATIONS AND PLANTING BEDS SHALL BE CULTIVATED BY TILLING TO A MINIMUM DEPTH OF 250 mm. SOIL AMENDMENTS SHALL BE APPLIED DURING CULTIVATION.

BACKFILL SOIL: USE CULTIVATED AND AMENDED SOIL EXCAVATED FROM PLANTING HOLES. REMOVE ALL DEBRIS INCLUDING ROCKS LARGER THAN 75mm DIA.

FERTILIZER: NONE
X MN/DOT 3881

COMPOST: NONE
X Mn/DOT 3890

MULCH MATERIAL: Mn/DOT 3882 TYPE 6. UNLESS OTHERWISE SPECIFIED.

TREE STAKING: TREE STAKING (ALL SIZES) WILL NOT BE REQUIRED UNLESS SPECIFIED OR NECESSARY TO MAINTAIN TREES IN A PLUMB CONDITION WHERE VANDALISM, SOIL OR WIND CONDITIONS ARE A PROBLEM OR AS REQUESTED BY THE ENGINEER.

TREE PROTECTION: 102mm WIDE TREE WRAP AS APPROVED BY ENGINEER

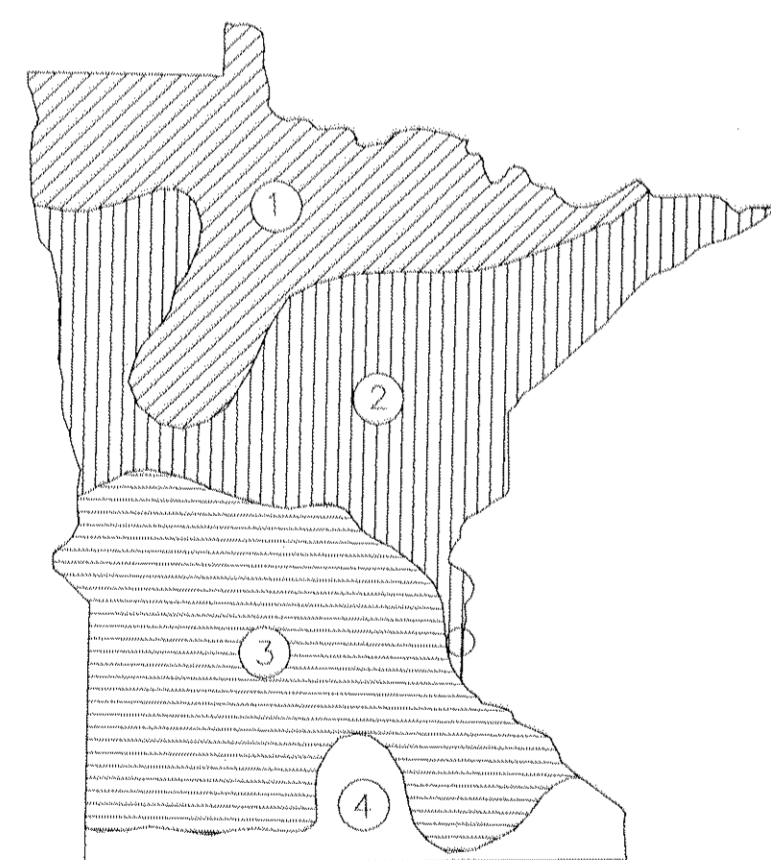
MASS PLANTINGS: CULTIVATE BY TILLING. PLANT IN STAGGERED ROWS ON THE PERIMETER FIRST, THEN UNIFORMLY FILL IN WITH REMAINING QUANTITY USING TRIANGULAR SPACING, UNLESS SPECIFIED OTHERWISE. PROVIDE 1.5 m RADIUS CLEAR OF SHRUBS AROUND EACH DECIDUOUS TREE AND 2.4 m RADIUS AROUND EACH EVERGREEN TREE. THIS RADIUS (CLEARANCE) SHALL BE MEASURED FROM THE CENTER OF THE TREE TO THE CENTER OF THE SHRUB. NOTIFY ENGINEER OF GROSS PLANT QUANTITY SURPLUS OR DEFICIENCY IMMEDIATELY. PLANT SPACINGS OF 4.3 m OR LESS SHALL BE MASS MULCHED.

PLANTING PLAN: RESPECT STATED DIMENSIONS BEFORE SCALING FROM PLAN.

PLANT TYPE	AVERAGE AMOUNT OF WATER PER APPLICATION (LITERS)
MACHINE TRANSPLANTED TREES (75 mm CALIPER+)	190-380
BALLED + BURLAPPED TREES	75±
BARE ROOT TREES	55±
BALLED + BURLAPPED SHRUBS	40±
BARE ROOT OR CONTAINER SHRUBS	25±
WOODY SEEDLINGS	15±
HERBACEOUS GROUNDCOVERS AND VINES	10±

1) THE WATERING GUIDELINES ASSUME A SOIL CONDITION WITH ADEQUATE BUT NOT EXCESSIVE OR POOR DRAINAGE. WATERING INTERVALS AND AMOUNT OF APPLICATION MUST BE VARIED CONSIDERING PREVAILING SOIL MOISTURE AND WEATHER CONDITIONS THROUGHOUT THE GROWING SEASON. ADEQUATE BUT NOT EXCESSIVE SOIL MOISTURE IN THE ROOT ZONE OF NEW PLANTINGS MUST BE MAINTAINED AT ALL TIMES THROUGHOUT THE GROWING SEASON FOR THE FIRST TWO YEARS FOLLOWING PLANTING. WATERING MAY BE REQUIRED WEEKLY OR INFREQUENTLY. THIS DETERMINATION SHALL BE MADE BY THE CONTRACTOR.

2) THE CONTRACTOR IS ADVISED THAT THE WATERING GUIDELINES ARE NOT REQUIREMENTS OF THE CONTRACT ALTHOUGH FAILURE TO CORRECT WATER DEFICITS BY SUPPLEMENTAL WATERING OR FAILURE TO COMPENSATE FOR EXCESSIVE SOIL MOISTURE AND DRAINAGE PROBLEMS MAY RESULT IN UNACCEPTABLE PLANTS LEADING TO REDUCED OR NO PAYMENT.

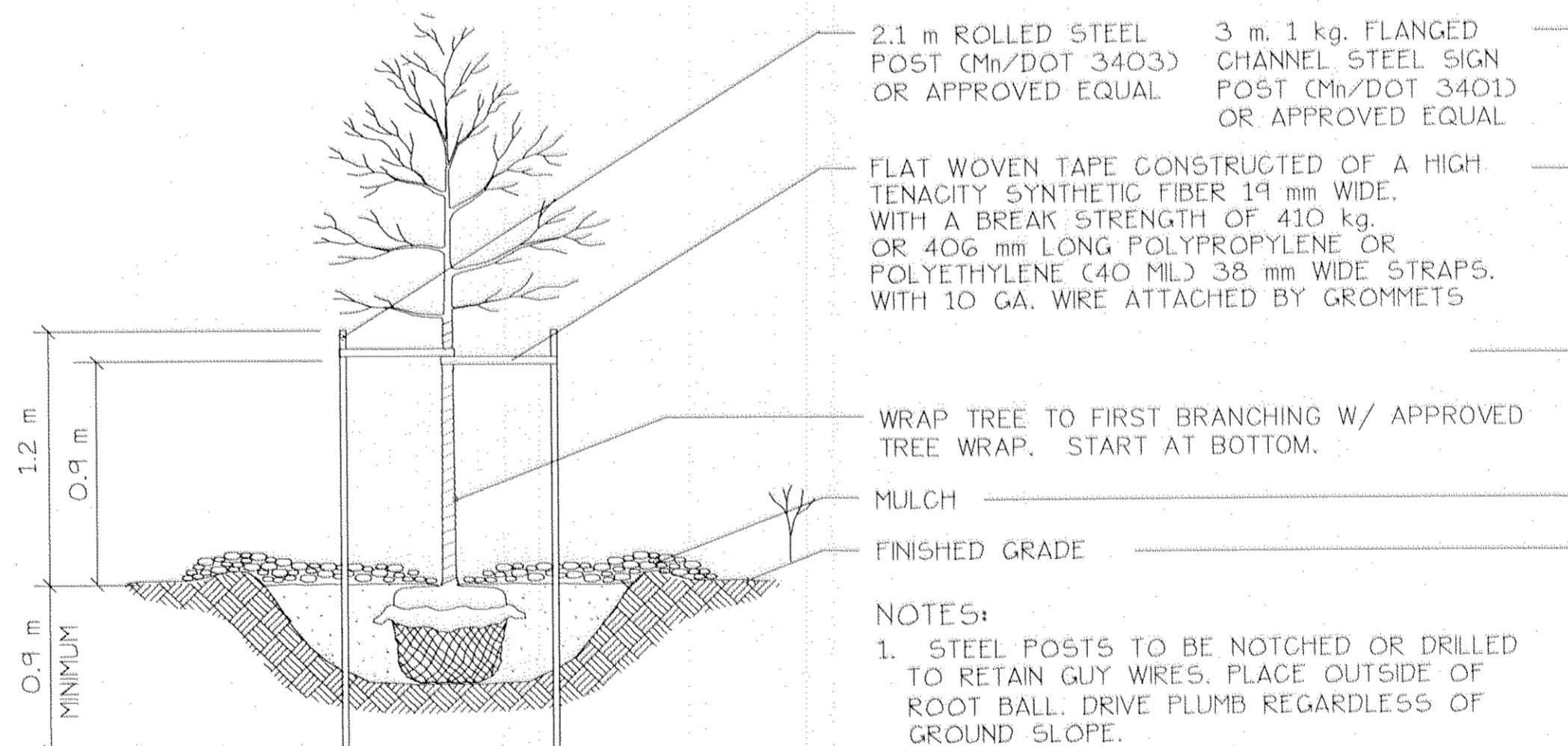


	SPRING			FALL	
	SEEDLING	DECIDUOUS	EVERGREEN	DECIDUOUS	EVERGREEN
1	APRIL 15 TO MAY 15	APRIL 21 TO JUNE 1	APRIL 21 TO JUNE 1	OCT. 1 TO NOV. 1	AUG. 25 TO SEPT. 15
2	APRIL 7 TO MAY 15	APRIL 14 TO JUNE 1	APRIL 14 TO MAY 24	OCT. 1 TO NOV. 6	AUG. 25 TO SEPT. 15
3	APRIL 1 TO MAY 15	APRIL 7 TO JUNE 1	APRIL 7 TO MAY 17	OCT. 10 TO NOV. 15	AUG. 25 TO SEPT. 15
4	APRIL 1 TO MAY 15	APRIL 1 TO MAY 25	APRIL 1 TO MAY 15	OCT. 15 TO NOV. 20	SEPT. 5 TO OCT. 1

NOTES:
1. SEEDLING INCLUDES DECIDUOUS AND EVERGREEN STOCK.
2. ACTUAL DATES MAY CHANGE DEPENDING UPON SEASONAL CONDITIONS AS DETERMINED BY THE ENGINEER.
3. FALL PLANTING MAY NOT BE RECOMMENDED OR ALLOWED. SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS. THE FOLLOWING PLANTS ARE NOT RECOMMENDED FOR FALL INSTALLATION. HAWTHORNE, RUSSIAN OLIVE, DOGWOOD, POPLAR, HACKBERRY, LINDEN, IRONWOOD, HONEYLOCUST, BIRCH, MOUNTAIN ASH, MAPLE, WILLOW, CRABAPPLE, PLUM/CHERRY, OAKS, SUMAC.

O - INDICATES PROJECT LOCATION

OPTIMUM PLANTING DATE ZONES IN MINNESOTA



NOTES:
1. STEEL POSTS TO BE NOTCHED OR DRILLED TO RETAIN GUY WIRES. PLACE OUTSIDE OF ROOT BALL. DRIVE PLUMB REGARDLESS OF GROUND SLOPE.
2. REQUESTS TO SUBSTITUTE RUBBER HOSE AND WIRE GUYING SYSTEMS WILL NOT BE APPROVED.
3. USE EITHER STRAPPING TAPE OR WIRE WITH POLYPROPYLENE STRAPS.
4. STAKING/GUYING IS NOT ANTICIPATED TO BE REQUIRED, NOR IS IT DESIRED. BUT IF STAKING/GUYING BECOMES NECESSARY, AS DETERMINED BY THE ENGINEER, THE STAKING/GUYING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD TREE STAKING/GUYING DETAIL.

STANDARD TREE STAKING / GUYING AND PROTECTION DETAIL

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REV. NO.	BY	DATE	REVISIONS DESCRIPTION
1	KC	10/13/98	ASBUILTS

DESIGN FILE: 35689-002-0101	
DRAWN BY: SNH	DESIGN BY: TH
CHKD. BY: TH	DWG. NAME: 57THLP05
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS

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B R W INC.
Thresher Square, 700 Third Street So.
Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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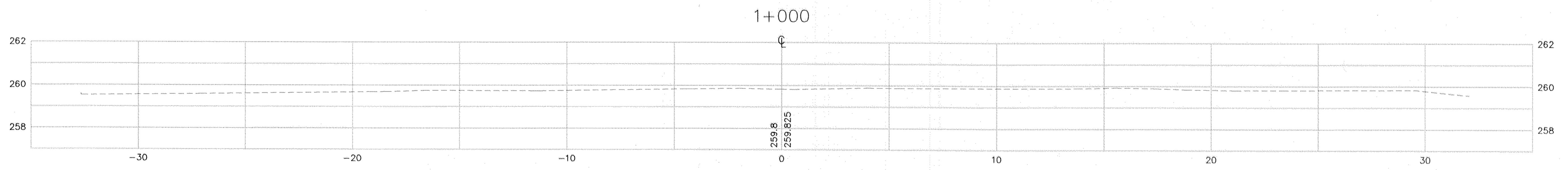
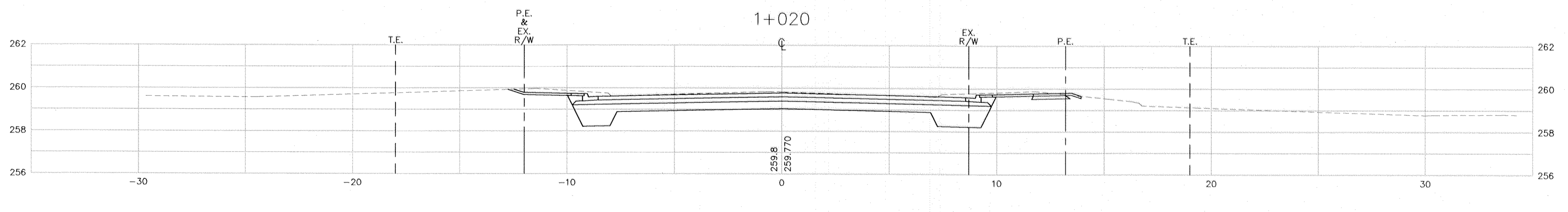
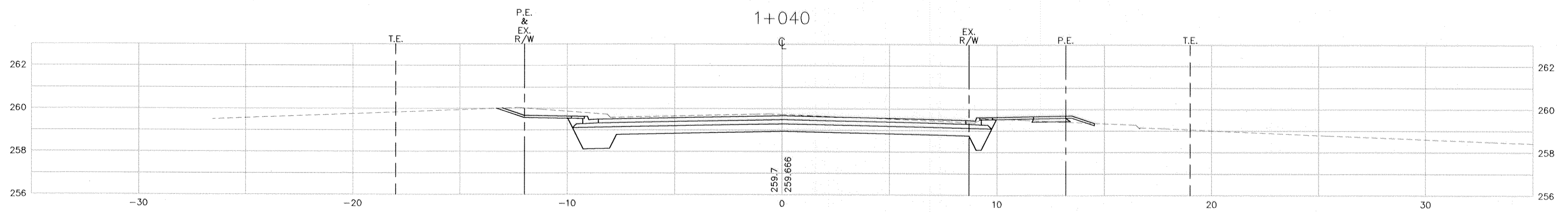
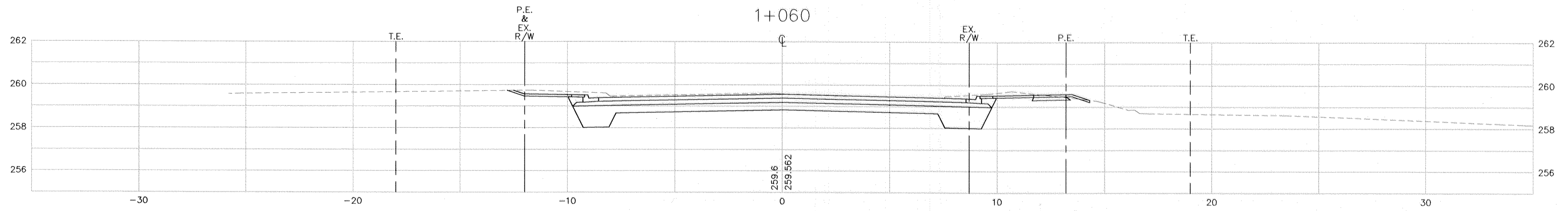
DATE: _____ MINN. REG. NO. _____

COUNTY ROAD 102 RECONSTRUCTION
CO RD 102/57TH AVENUE N.E.
LANDSCAPE DETAILS

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
37
45

0 2.5 5.0
 SCALE IN METERS
 HOR. 1=100
 VERT. 1=100



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DRAWN BY: PMJ	DESIGN BY: JML
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DATE: FEBRUARY 6, 1998	

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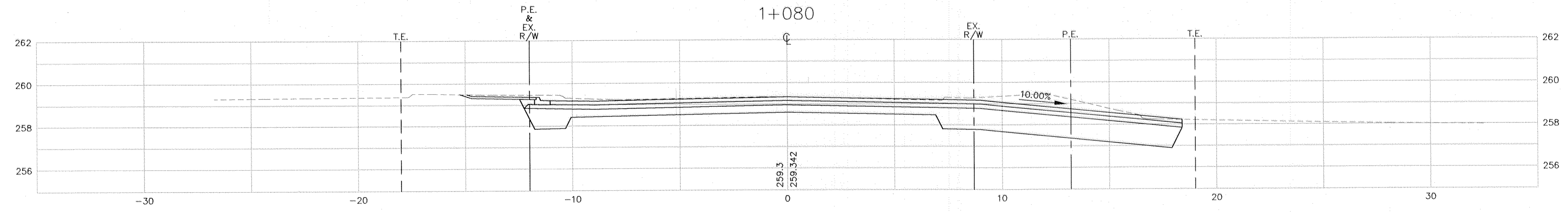
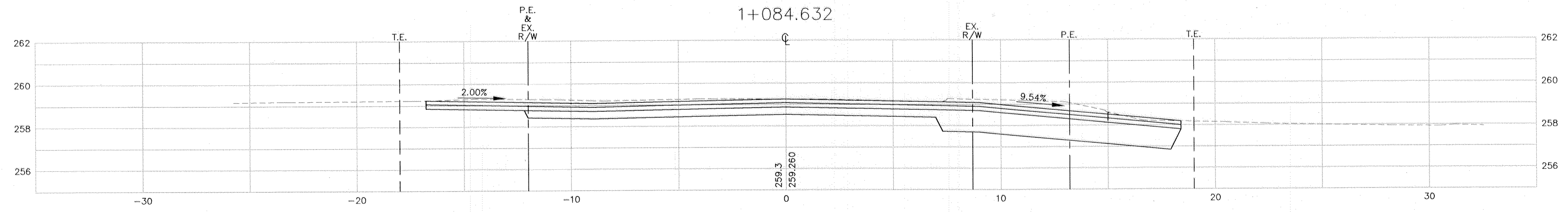
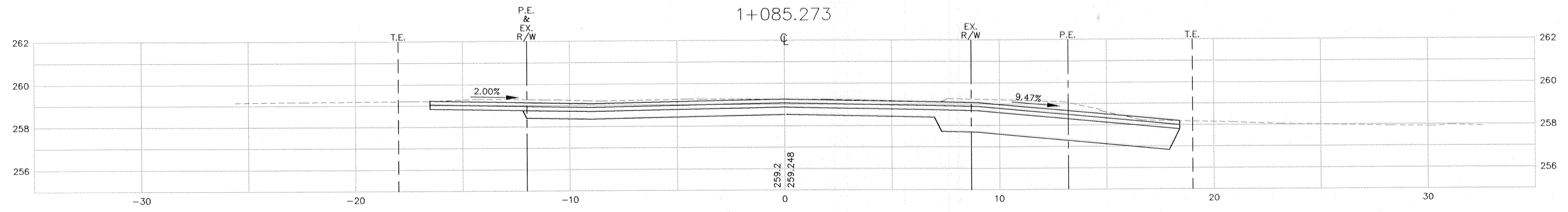
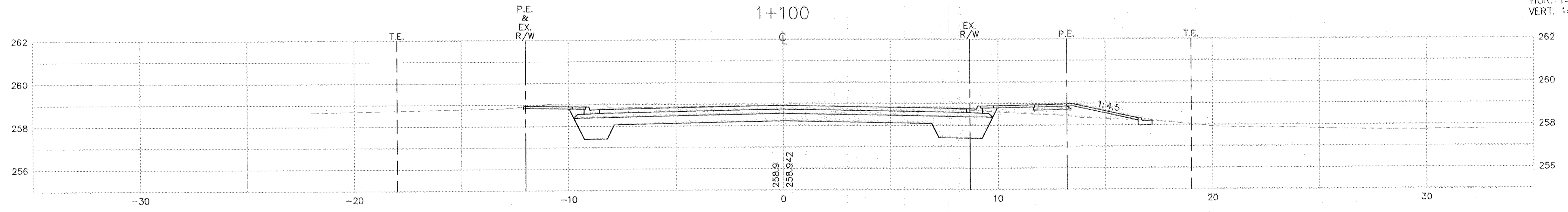
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CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
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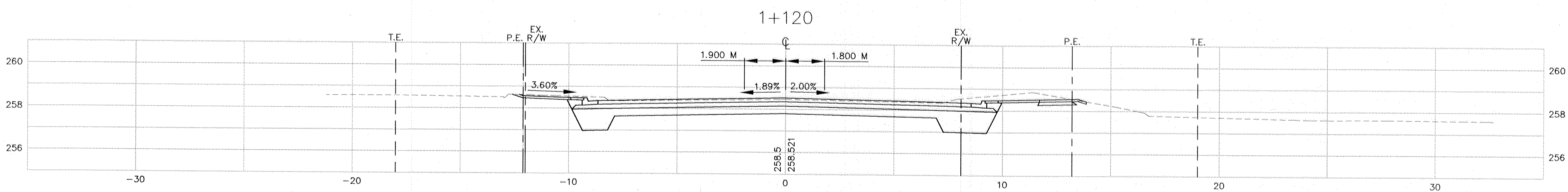
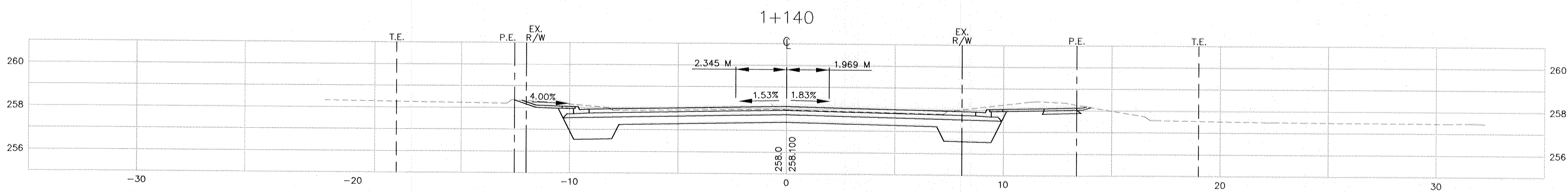
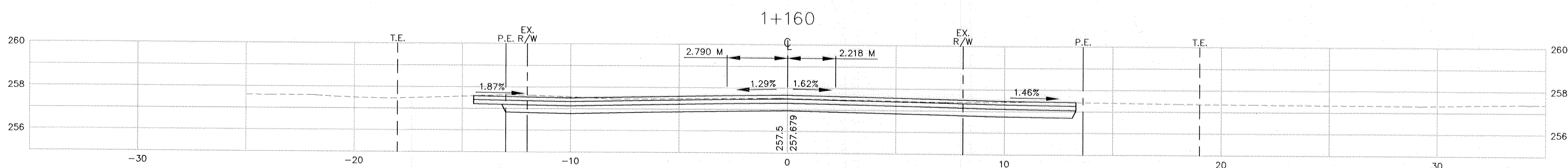
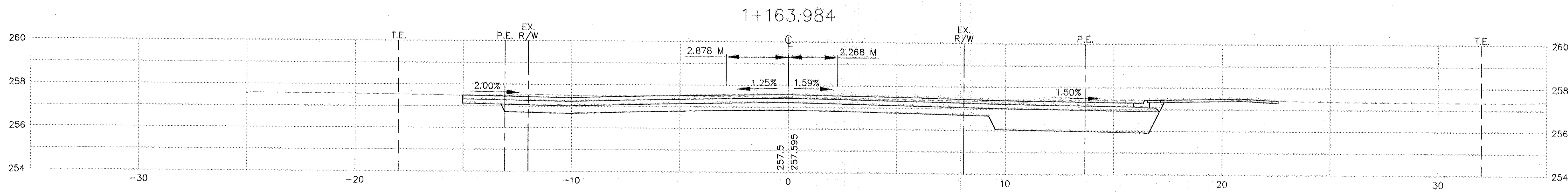
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CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

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DATE: FEBRUARY 6, 1998	

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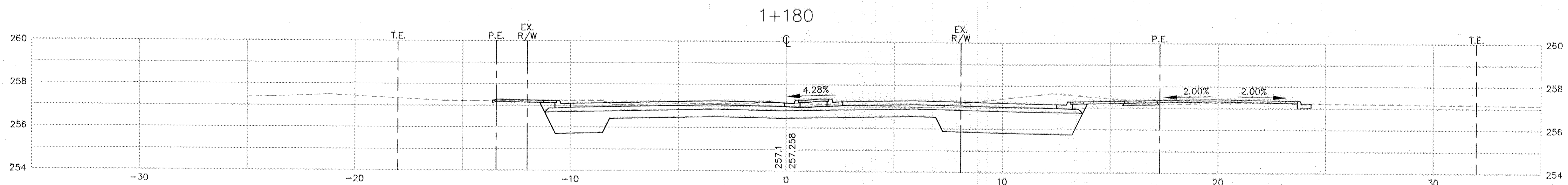
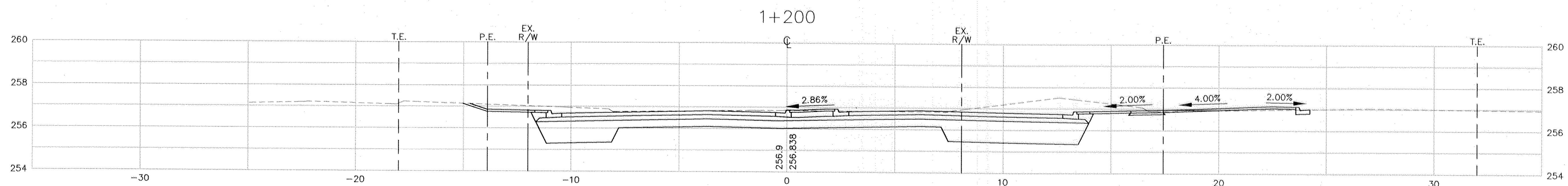
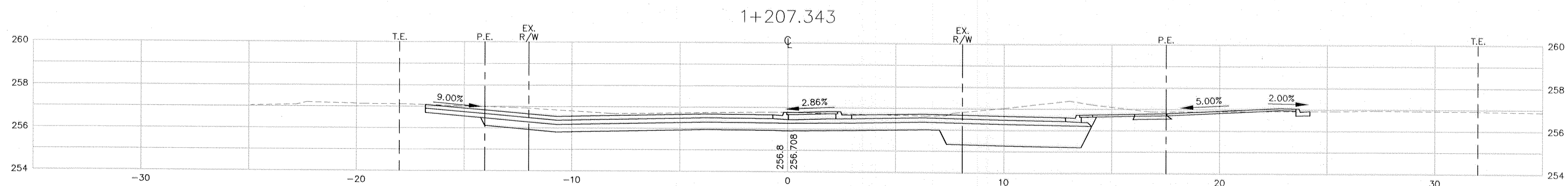
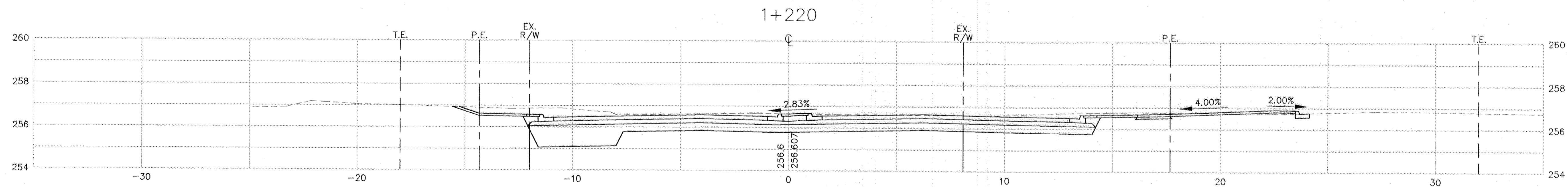
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 CO RD 102/57TH AVENUE N.E.
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CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
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0 2.5 5.0
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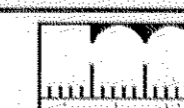
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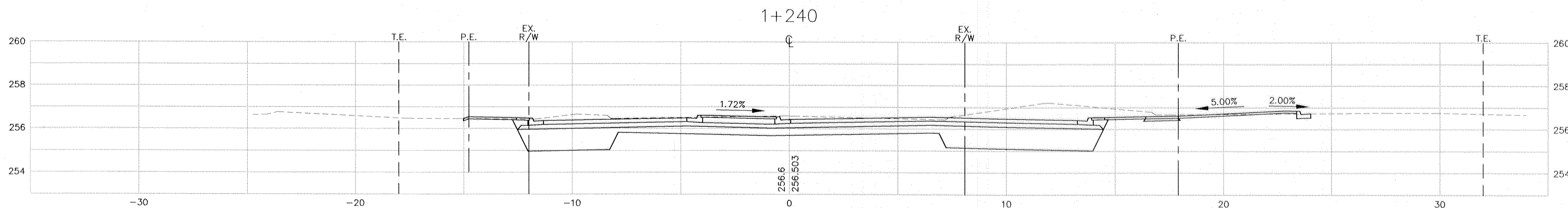
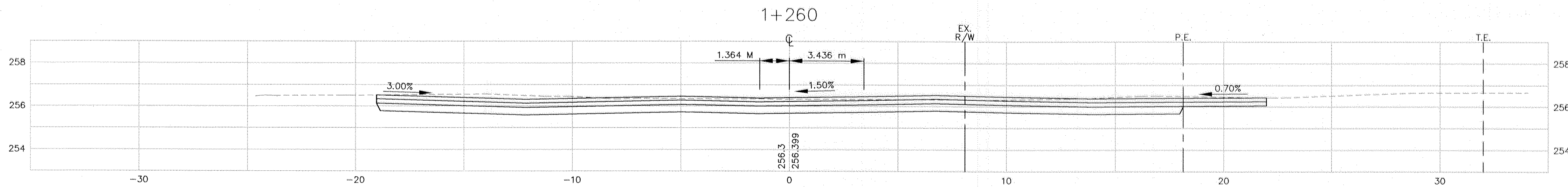
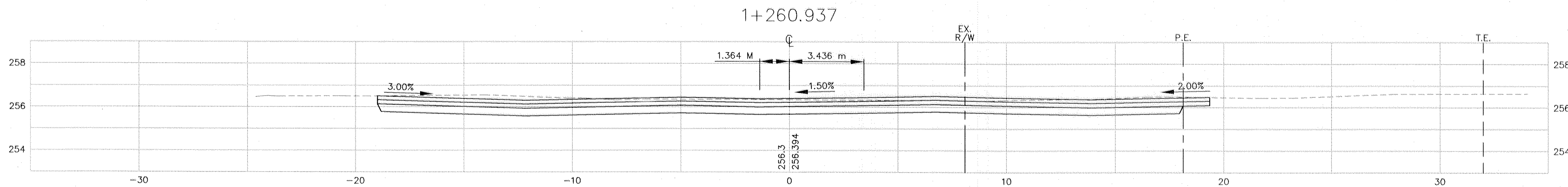
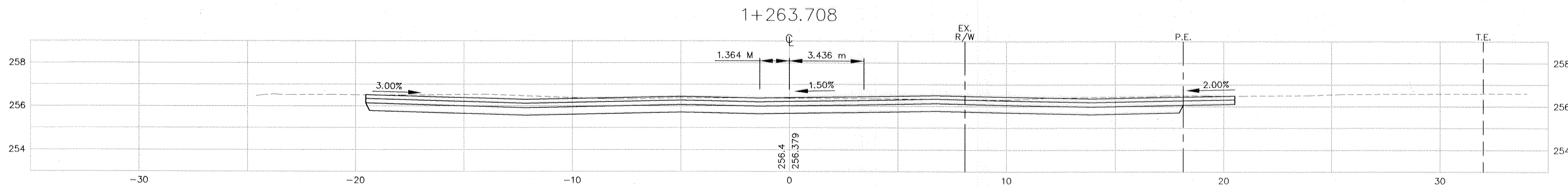
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CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
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0 2.5 5.0
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 VERT. 1=100



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DESIGN FILE:
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CHKD. BY: PBD DWG. NAME: 57THCS05

DATE:
FEBRUARY 6, 1998

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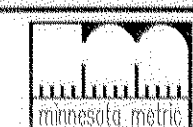
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COUNTY ROAD 102 RECONSTRUCTION
 CO RD 102/57TH AVENUE N.E.
 CROSS SECTIONS
 STA. 1+240 TO STA 1+263.708

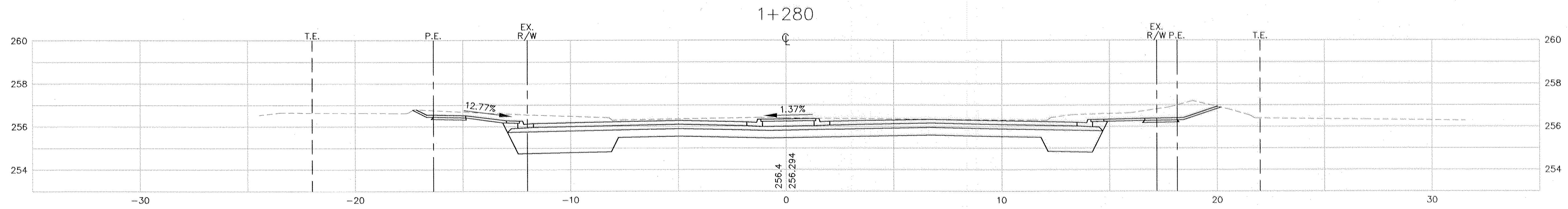
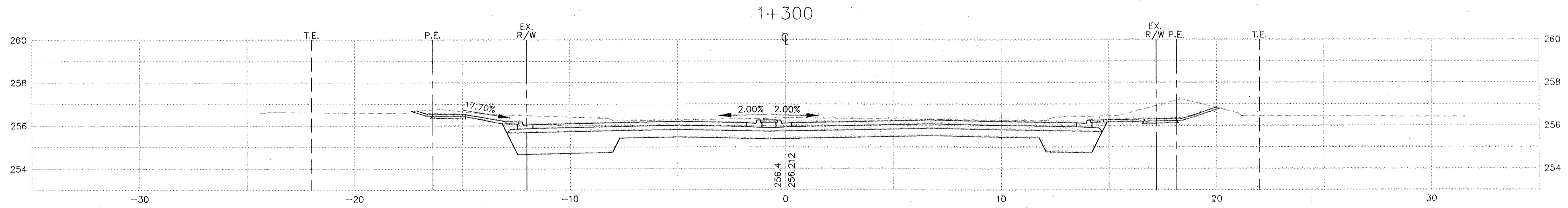
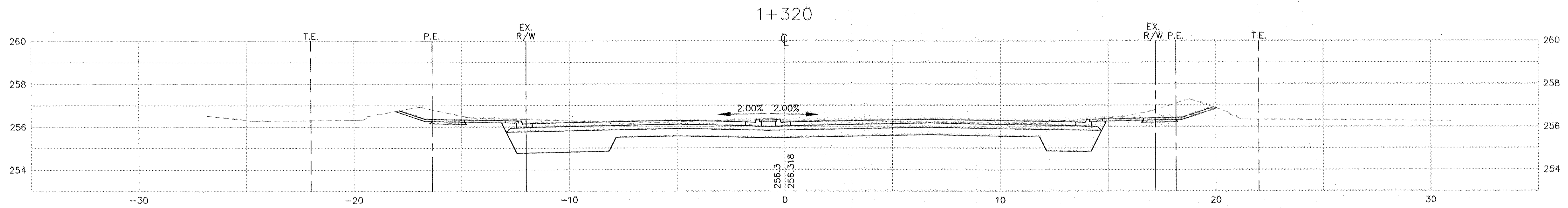
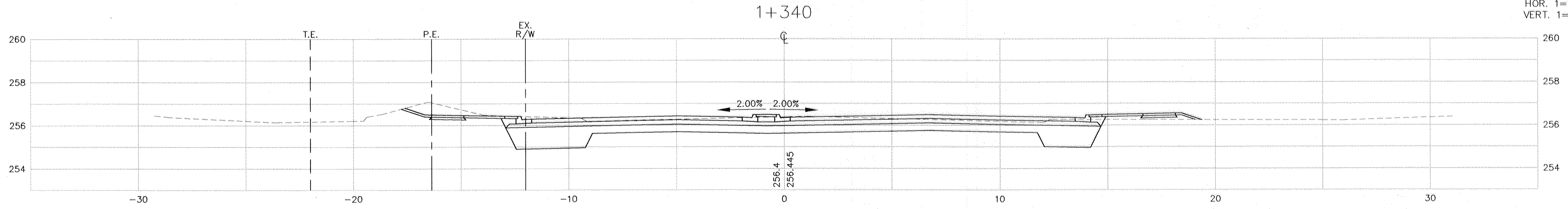
 ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
42

45

0 2.5 5.0
 SCALE IN METERS
 HOR. 1=100
 VERT. 1=100



DISK FILE NAME: (13_c4) R:\35689\35689002\PLAN_SHT\57THCS06.DWG PLOT DATE: Mar 30, 1998 7:32am

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

DESIGN FILE:
35689-002-0101

DRAWN BY: PMJ DESIGN BY: JML

CHKD. BY: PBD DWG. NAME: 57THCS06

DATE:
FEBRUARY 6, 1998

XREF DRAWINGS

57THRSEC

BRW

B R W INC.

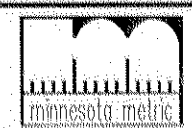
Thresher Square, 700 Third Street So.
 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINN. STATUTES SECTION 326.02 TO 326.16.

DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION

CO RD 102/57TH AVENUE N.E.
 CROSS SECTIONS
 STA. 1+280 TO STA 1+340

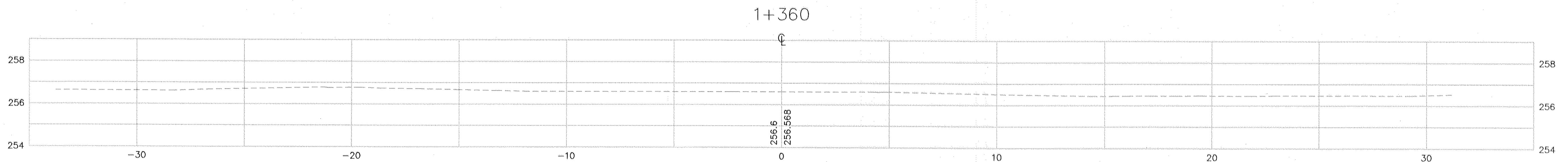
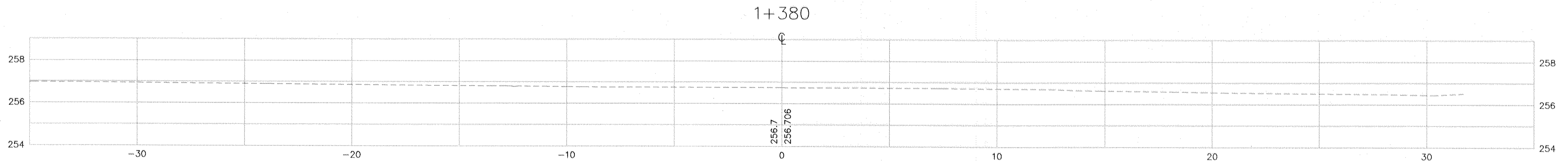
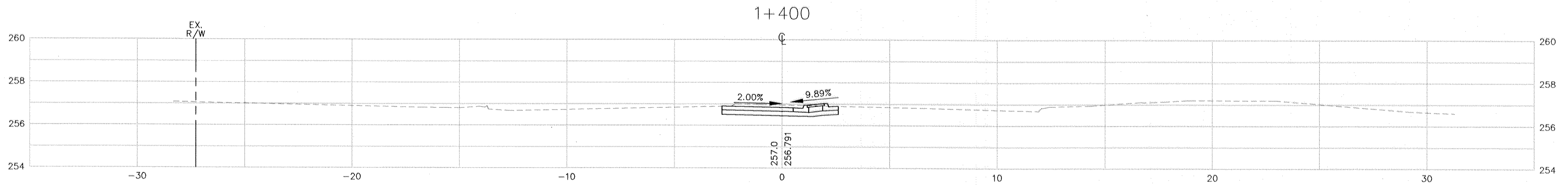
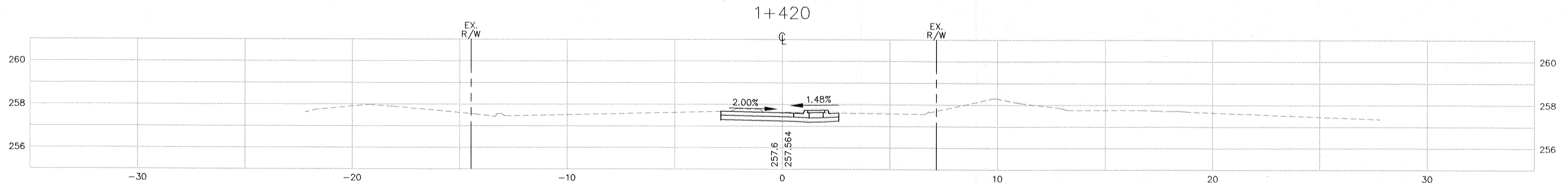
 ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO. **43**

45

0 2.5 5.0
 SCALE IN METERS
 HOR. 1=100
 VERT. 1=100



DISK FILE NAME: (13_c4) R:\35689\35689002\PLAN_SHT\57THCS07.DWG PLOT DATE: Mar 30, 1998 7:33am

REV. NO.	BY	DATE	REVISIONS DESCRIPTION

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DRAWN BY: PMJ	DESIGN BY: JML
CHKD. BY: PBD	DWG. NAME: 57THCS07
DATE: FEBRUARY 6, 1998	

XREF DRAWINGS
57THRSEC

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 Thresher Square, 700 Third Street So.
 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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 DATE: _____ MINN. REG. NO. 23197

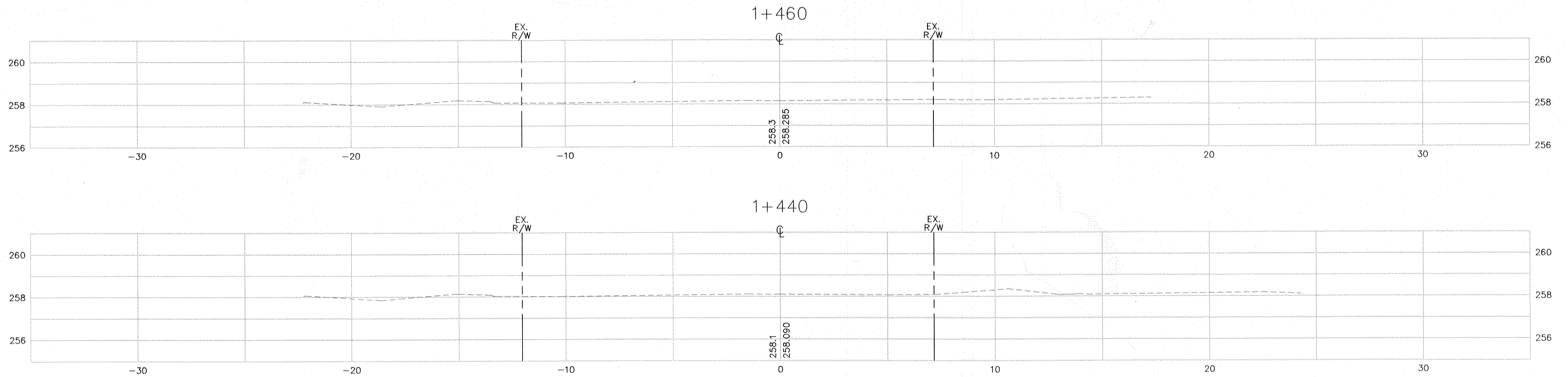
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 CO RD 102/57TH AVENUE N.E.
 CROSS SECTIONS
 STA. 1+360 TO STA 1+420

ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
 44
 45

0 2.5 5.0
 SCALE IN METERS
 HOR. 1=100
 VERT. 1=100



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REV. NO.	BY	DATE	REVISIONS DESCRIPTION

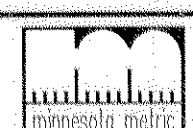
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DRAWN BY: PMJ	DESIGN BY: JML
CHKD. BY: PBD	DWG. NAME: 57THCS08
DATE: FEBRUARY 6, 1998	

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57THRSEC

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B R W INC.
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 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

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 DATE: _____ MINN. REG. NO. 23197

COUNTY ROAD 102 RECONSTRUCTION
 CO RD 102/57TH AVENUE N.E.
 CROSS SECTIONS
 STA. 1+440 TO STA 1+460



ALL QUANTITIES AND DIMENSIONS ON THIS PLAN ARE IN METRIC UNITS.

CITY PROJECT	ST-1997-4
COUNTY PROJECT	97-11-102
S.A.P.	127-010-15
S.A.P.	127-301-04

SHEET NO.
 45
 45