

# MINNESOTA DEPARTMENT OF TRANSPORTATION

## CONSTRUCTION PLAN FOR MILL AND OVERLAY, STORM SEWER AND CHANNELIZATION

LOCATED ON TH 49 (RICE ST.) FROM HOYT AVE. TO DEMONT AVE.

STATE PROJ. NO. 6214-66 (TH 49 = 126)  
 MINN. PROJ. NO.  
 (1) GROSS LENGTH 10508.35 FEET 1.99 MILES  
 BRIDGES-LENGTH FEET MI %  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 10508.35 FEET 1.99 MILES  
 REF. POINT Q14+00.020 TO REF. POINT Q15+01.005

FED. PROJ. NO. H.E.S. 5418 (17)

### GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE JANUARY 2, 1991 SUPPLEMENTAL SPECIFICATION SHALL GOVERN.

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE
2 - 3	ESTIMATED QUANTITIES
4	STD. PLATES, CONST. NOTES, CHART INDEX
5 - 7	PUBLIC UTILITIES
8 - 15	TYPICAL SECTIONS
16 - 17	SPECIAL DETAILS
18 - 20	INTERSECTION DETAILS
21 - 23	TABULATIONS
24	STORM SEWER TABULATIONS
25	MISC. DRAINAGE TABULATIONS
26 - 29	DRAINAGE PROFILES
30 - 37	TRAFFIC CONTROL
38	ALIGNMENT
39 - 46	INPLACE TOPOGRAPHY AND PLAN
47 - 58	CROSS SECTIONS

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

DATE 2/4/92 REG. NO. 7541 ENGR. *Gerald Vialter*  
 DESIGN SQUAD B. LIBBY

Recommended for approval \_\_\_\_\_ 19\_\_\_\_  
 Right of Way Approval *[Signature]* 2-18-92  
 Recommended for approval *[Signature]* 2-4-1992  
 Recommended for approval \_\_\_\_\_ 19\_\_\_\_  
 Recommended for approval *[Signature]* 2-18-1992  
 Recommended for approval *[Signature]* 2-18-1992  
 Approved 2/19 1992 *[Signature]*

DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 APPROVED  
 DIVISION ADMINISTRATOR DATE

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 1-8-92 REG. NO. 9220

(1) LENGTHS AND DESCRIPTIONS BASED ON THE LT. EDGE OF THE NEW N.B. THRU LANE.

EQUATION :  $\frac{TH\ 49\ PI\ 18+96.90}{LARPENTEUR\ PI\ 500+00.00}$



END S.A.P. 160-010-02  
 STA. 71+00

BEGIN S.A.P. 160-010-02  
 STA. 38+00

DESIGN DESIGNATION  
 S.P. 62-630-40  
 LARPEUR AVE.

ADT (CURRENT YEAR) 90-91 - 13,600  
 ADT (FUTURE YEAR) 2012 - 20,400  
 N 20 YEAR - 2,383,235  
 DESIGN SPEED - 40  
 FUNCTIONAL CLASSIFICATION -  
 ARTERIAL (HIGH DENSITY)  
 NO. OF TRAFFIC LANES - 4  
 NO. OF PARKING LANES - 0

DESIGN DESIGNATION  
 S.A.P. 138-020-17  
 ROSELAWN AVE.

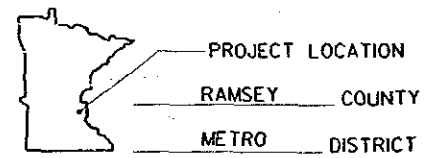
ADT (CURRENT YEAR) 1989 - 3100  
 ADT (FUTURE YEAR) 2009 - 5000  
 N 20 YEAR - 325,000  
 DESIGN SPEED - 40  
 FUNCTIONAL CLASSIFICATION-COLLECTOR (HIGH DENSITY)  
 NO. OF TRAFFIC LANES - 2  
 NO. OF PARKING LANES - 0

SCALE

INDEX MAP 2000'  
 PLAN 50'

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

DESIGN DESIGNATION  
 ADT (Current Year) = 18,400 Design Speed 40 MPH  
 ADT (Future Year) = 23,000 Based on STOPPING Sight Distance  
 DHV (Design Hr. Vol) = 2500 Ht. of eye 3.5 Ht. of object 0.5  
 D (Directional Distr.) = 65-35% Design Speed not achieved at:  
 T (Heavy Commercial) = 3.0% STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH  
 STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH

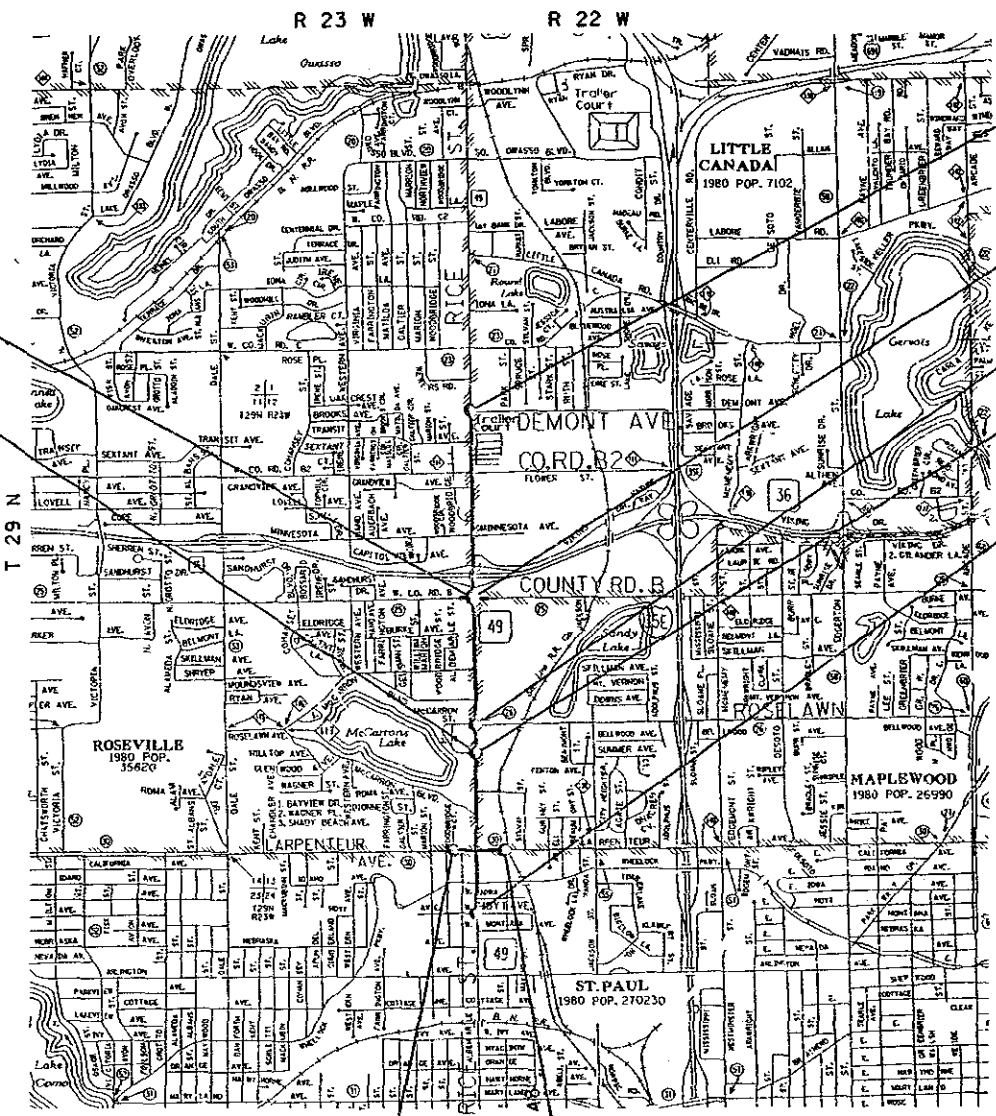


FOR PLANS & UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO.	AREA	JOB
6214-66		

STATE PROJ. NO. 6214-66 (TH 49 = 126)  
 S P 62-630-40  
 S A P 138-010-07  
 S A P 138-020-17  
 S A P 160-010-02

SHEET NO. 1 OF 58 SHEETS (F)



END SP 6214-66 (TH 49=126)  
 STA. 111+05.21

END S.A.P. 138-010-07  
 STA. 71+00

S.A.P. 138-020-17  
 STA. 45+26.15

BEGIN S.A.P. 138-010-07  
 STA. 38+00

BEGIN SP 6214-66 (TH 49=126)  
 STA. 5+96.86

Recommended for approval *[Signature]* 2/4 1992  
 CITY ENGINEER (MAPLEWOOD)

Recommended for approval *[Signature]* 2/4 1992  
 CITY ENGINEER (ROSEVILLE)

Recommended for approval *[Signature]* 2/5 1992  
 COUNTY ENGINEER

Recommended for approval *[Signature]* 2/5 1992  
 STATE AID ENGINEER

Recommended for approval *[Signature]* 2/13 1992  
 STATE AID PLANS AND SPECS ENGINEER

Approved 2/13 1992 *[Signature]*  
 STATE AID ENGINEER

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROFILM SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURES FOR THE DOCUMENT SERIES.

STATEMENT OF ESTIMATED QUANTITIES										
CHART NO.	ITEM NO.	ITEM	UNIT	S.P. 6214-66	STORM SEWER (5)	RAMSEY CO S. P. 62-630-40 (16)	ROSEVILLE S.A.P. 160-010-02	MAPLEWOOD S.A.P. 138-010-07	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUAN.
	0015.601-00010	COMPUTER EQUIPMENT (1)	LUMP SUM	.45	.27	.10	.14	.04	1	1
	2021.501-00001	MOBILIZATION	LUMP SUM	.45	.27	.10	.14	.04	1	1
	2031.501-00040	FIELD OFFICE TYPE D	EACH	.45	.27	.10	.14	.04	1	1
	2051.501-00001	MAINT & RESTORATION OF HAUL ROADS	LUMP SUM	.45	.27	.10	.14	.04	1	0
D	2102.502-00010	PAVEMENT MARKING REMOVAL	LIN FT	4580					4580	4540
N	2104.501-00010	REMOVE PIPE CULVERTS	LIN FT	421					421	269
	2104.501-00013	REMOVE WATERMAIN *	LIN FT				60		60	0
M	2104.501-00018	REMOVE PIPE SEWERS	LIN FT		1648				1648	1515
C	2104.501-00022	REMOVE CURB AND GUTTER	LIN FT	1323		1378		298	2999	2088
C	2104.501-00023	REMOVE BITUMINOUS CURB	LIN FT	20		497	216	300	1033	2076
C	2104.501-00024	REMOVE CONCRETE CURB	LIN FT	350			1253	823	2424	3317
C	2104.503-00020	REMOVE CONCRETE SIDEWALK	SQ FT	1010		1898			2908	4031
C	2104.505-00013	REMOVE CONCRETE MEDIAN	SQ YD	204					204	202
C	2104.505-00014	REMOVE BITUMINOUS MEDIAN	SQ YD	718					718	637
C	2104.505-00100	REMOVE PAVEMENT	SQ YD	10	3091				3091	4075
C	2104.505-00108	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	568		386	362	72	1388	1542
C	2104.505-00120	REMOVE BITUMINOUS PAVEMENT	SQ YD	35		496			531	912
C	2104.505-00124	REMOVE BITUMINOUS ISLAND	SQ YD			38			38	38
C	2104.505-00130	REMOVE TRENCH PAVEMENT	SQ YD	71	368				439	546
M,N	2104.509-00011	REMOVE CONCRETE APRON	EACH		6				6	5
M,N	2104.509-00012	REMOVE METAL APRON	EACH	17					17	0
M	2104.509-00101	REMOVE MANHOLE	EACH		5				5	5
N	2104.509-00102	REMOVE CATCH BASIN	EACH		16				16	16
	2104.509-00108	REMOVE VALVE AND BOX *	EACH				4		4	4
D	2104.511-00010	SAWING CONCRETE PAVEMENT (17)	LIN FT		931				931	0
D	2104.511-00011	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	48			75		123	95
D	2104.513-00011	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	243	4713	467			5423	2583
M	2104.521-00101	SALVAGE CONC PIPE CULVERT	LIN FT		15				15	15
M	2104.523-00004	SALVAGE CASTING	EACH		1				1	1
	2104.523-00019	SALVAGE HYDRANT *	EACH				4		4	4
M	2104.523-00100	SALVAGE CONCRETE APRON	EACH		1				1	1
(6)	2105.501-00010	COMMON EXCAVATION (P)	CU YD	2470		902			3372	3372
(6)	2105.507-00010	SUBGRADE EXCAVATION (P)	CU YD	5530		983			6513	7279
L, (6)	2105.522-00030	SELECT GRANULAR BORROW (CV) (P)	CU YD	7742	780	1376			9898	11,624
(6)	2105.525-00010	TOPSOIL BORROW (LV)	CU YD	85		164	257	227	733	1475
J	2211.503-00050	AGGREGATE BASE PLACED CLASS 5 (P)	CU YD	364		133	426		923	1,507
E	2232.501-00125	MILL BITUMINOUS SURFACE (2.5")	SQ YD	53894	6073				59967	61855
E	2232.501-00140	MILL BITUMINOUS SURFACE (4")	SQ YD	409					409	525
H	2301.503-00750	CONCRETE PAVEMENT IRREGULAR WIDTH 7.5" (8)	SQ YD		392				392	546

STATEMENT OF ESTIMATED QUANTITIES										
CHART NO.	ITEM NO.	ITEM	UNIT	S.P. 6214-66	STORM SEWER (5)	RAMSEY CO S. P. 62-630-40 (16)	ROSEVILLE S.A.P. 160-010-02	MAPLEWOOD S.A.P. 138-010-07	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUAN.
J	2331.508-00030	TYPE 31 WEARING COURSE MIXTURE	TON				237		237	366
J	2331.508-00060	TYPE 61 WEARING COURSE MIXTURE	TON	3285		461			3746	4485
J	2331.510-00040	TYPE 41 BINDER COURSE MIXTURE	TON	285		130			415	419
J	2331.512-00040	TYPE 41 LEVELING COURSE MIXTURE	TON	4657		561			5218	5945
J	2331.514-00030	TYPE 31 BASE COURSE MIXTURE	TON	291	1206	130			1627	2557
J	2357.502-90010	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	5714	88	775			6577	7356
L	2501.515-90150	15" RC PIPE APRON	EACH		1				1	2
L	2501.515-90300	30" RC PIPE APRON	EACH		2				2	2
L	2501.515-90360	36" RC PIPE APRON	EACH		1				1	1
N	2501.567-02180	18" CE SAFETY APRON & GRATE DES 3128	EACH	1					1	1
L	2501.569-04036	SAFETY GRATE FOR 36" RC APRON	EACH		1				1	1
L	2501.573-00012	INSTALL CONCRETE APRON	EACH		1				1	1
L	2503.541-90122	12" RC PIPE SEWER DESIGN 3006	LIN FT			581			581	639
L	2503.541-90152	15" RC PIPE SEWER DESIGN 3006	LIN FT			149			149	206
L	2503.541-90182	18" RC PIPE SEWER DESIGN 3006	LIN FT			131			131	112
L	2503.541-90212	21" RC PIPE SEWER DESIGN 3006	LIN FT			214			214	214
L	2503.541-90242	24" RC PIPE SEWER DESIGN 3006	LIN FT			303			303	300
L	2503.541-90272	27" RC PIPE SEWER DESIGN 3006	LIN FT			653			653	656
L	2503.541-90302	30" RC PIPE SEWER DESIGN 3006	LIN FT			523			523	514
L	2503.541-90332	33" RC PIPE SEWER DESIGN 3006	LIN FT			173			173	173
L	2503.541-90362	36" RC PIPE SEWER DESIGN 3006	LIN FT			360			360	362
L	2503.571-00014	INSTALL PIPE SEWER	LIN FT			15			15	0
	0504.602-00001	CONNECT TO EXISTING WATERMAIN *	EACH				3		3	0
	0504.602-00007	RECONNECT WATER SERVICE *	EACH				8		8	0
A	0504.602-00017	RELOCATE HYDRANT	EACH				1		1	1
	0504.602-00020	HYDRANT *	EACH				4		4	0
A	0504.602-00025	ADJUST GATE VALVE	EACH	14			3	2	19	24
	0504.602-00410	1" CORPORATION STOP *	EACH				7		7	0
	0504.602-00420	2" CORPORATION STOP *	EACH				1		1	1
	0504.602-00803	6" GATE VALVE & BOX *	EACH				4		4	0
	0504.602-00804	8" GATE VALVE & BOX *	EACH				4		4	0
	0504.602-03100	1" CURB STOP & BOX *	EACH				7		7	0
	0504.602-03200	2" CURB STOP & BOX *	EACH				1		1	1
	0504.603-00710	1" TYPE K COPPER PIPE *	LIN FT				175		175	0
	0504.603-00720	2" TYPE K COPPER PIPE *	LIN FT				90		90	87
	0504.603-01065	6" WATER MAIN DUCT IRON CL 52 *	LIN FT				100		100	0
	0504.603-01085	8" WATER MAIN DUCT IRON CL 52 *	LIN FT				2205		2205	0
	0504.620-00005	PIPE FITTINGS *	POUND				820		820	0

\* NON-STATE AID PARTICIPATING

STATEMENT OF ESTIMATED QUANTITIES										
CHART NO.	ITEM NO.	ITEM	UNIT	S.P. 6214-66	STORM SEWER (5)	RAMSEY CO S.P. 62-630-40 (16)	ROSEVILLE S.A.P. 160-010-02	MAPLEWOOD S.A.P. 138-010-07	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUAN.
L	2506.501-00012	CONST DRAINAGE STRUCT DESIGN A OR F	LIN FT		27				27	37.20
L	2506.501-00032	CONST DRAINAGE STRUCT DESIGN C OR G	LIN FT		94				94	135.30
L	2506.501-02720	CONST DRAINAGE STRUCT DESIGN 54-4020	LIN FT		23				23	
L	2506.501-00033	CONST DRAINAGE STRUCT DESIGN C G OR H	LIN FT		12				12	16.90
L	2506.501-00060	CONST DRAINAGE STRUCT DESIGN F	LIN FT		12				12	11.50
L	2506.501-03020	CONST DRAINAGE STRUCT DESIGN 60-4020	LIN FT		6				6	6.50
L	2506.501-03920	CONST DRAINAGE STRUCT DESIGN 78-4020	LIN FT		8				8	7.70
Q	2506.516-00010	CASTING ASSEMBLY	EACH		39				39	52.00
L	2506.521-00010	INSTALL CASTING	EACH		1				1	1
A,L	2506.522-00011	ADJUST FRAME & RING CASTING	EACH	13				3 (7)	16	8
L,N	2511.501-00013	RANDOM RIPRAP CLASS III (11)	CU YD	4	8				12	18
L	2511.501-00014	RANDOM RIPRAP CLASS IV (11)	CU YD		13				13	13
F	2521.501-00040	4" CONCRETE WALK	SQ FT	5676		1957			7633	6578
F	2531.501-02310	CONCRETE CURB & GUTTER DESIGN B612	LIN FT			1800			1800	1723
F	2531.501-02320	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	2021			1990	2800	6811	6562
F	2531.501-02321	CONCRETE CURB & GUTTER DESIGN B624 (MOD)	LIN FT				1220		1220	1350
F	2531.501-04120	CONCRETE CURB & GUTTER DESIGN D424	LIN FT					419	419	408
F	2531.507-00006	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD				258	76	334	185
F	2531.507-00008	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	618		322	543	260	1743	1347
L,P	2554.509-00020	GUIDE POST TYPE B	EACH	12	2				14	2
Q	0563.601-00010	TRAFFIC CONTROL	LUMP SUM	.45	.27	.10	.14	.04	1	1
Q	0563.603-00002	RAISED PAVEMENT MARKERS TEMPORARY	EACH		540				540	449
I	0564.602-05100	PAVT MESSAGE (ONLY) POLY PREFORM	EACH		1				1	1
I	0564.602-05101	PAVT MESSAGE (LT ARROW) POLY PREFORM	EACH		54	2			56	59
I	0564.602	INSTALL PAVEMENT MESSAGE (4)	EACH		39				39	42
I	0564.603-01101	4" SOLID LINE WHITE-POLY PREFORMED	LIN FT	10678		780			11458	9585
I	0564.603-01102	8" SOLID LINE WHITE-POLY PREFORMED	LIN FT	41					41	0
I	0564.603-01108	24" SOLID LINE WHITE-POLY PREFORMED	LIN FT	(9) 1653					1653	1082
I	0564.603-01111	4" BROKEN LINE WHITE-POLY PREFORMED	LIN FT	250		480			730	590
I	0564.603-01211	4" BROKEN LINE YELLOW-POLY PREFORMED	LIN FT	2049					2049	1919
I	0564.603	INSTALL MARKING TAPE (4)	LIN FT	25807		3263			29070	28869
	2573.501-00001	BALE CHECK (2)	EACH	70	30				100	0
	2573.502-00002	SILT FENCE, HEAVY DUTY (3)	LIN FT		50				50	0
P,K	2575.505-00030	SODDING TYPE LAWN	SQ YD	(10) 1235		1037	2335	2056	6643	11664
K	2575.532-05105	COMMERCIAL FERT ANALYSIS 10-20-20	POUND	82		79	169	147	473	0
Q	2581.501-00010	REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	6640					6640	8177

STATEMENT OF ESTIMATED QUANTITIES										
CHART NO.	ITEM NO.	ITEM	UNIT	S.P. 6214-66	STORM SEWER (5)	RAMSEY CO S.P. 62-630-40 (16)	ROSEVILLE S.A.P. 160-010-02	MAPLEWOOD S.A.P. 138-010-07	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUAN.
	ALT AA-1									
P	2501.511-02150	15" CS PIPE CULVERT	LIN FT	159					159	0
P	2501.515-02150	15" GS PIPE APRON	EACH	6					6	0
P	2501.567-02150	15" CS SAFETY APRON & GRATE DES 3129	EACH	6					6	0
	ALT AA-2									
P	2501.511-05150	15" CP PIPE CULVERT	LIN FT	159					159	0
P	2501.515-01150	15" GS PIPE APRON	EACH	6					6	0
P	2501.567-02150	15" CS SAFETY APRON & GRATE DES 3129	EACH	6					6	0
	ALT BB-1									
L	2503.541-90122	12" RC PIPE SEWER DESIGN 3006	LIN FT			261			261	0
L	2503.541-90152	15" RC PIPE SEWER DESIGN 3006	LIN FT			811			811	0
L	2503.541-90182	18" RC PIPE SEWER DESIGN 3006	LIN FT			322			322	0
	ALT BB-2									
L	2503.511-01120	12" CP PIPE SEWER (12,15,18)	LIN FT			261			261	261
L	2503.511-01150	15" CP PIPE SEWER (13,15,18)	LIN FT			811			811	771
L	2503.511-01180	18" CP PIPE SEWER (14,15,18)	LIN FT			322			322	364

(F) PLAN QUANTITY

- (1) TO INCLUDE 1 COMPUTER AND 1 LASER JET PRINTER (GROUP B)
- (2) TO BE USED FOR EROSION CONTROL AS DIRECTED BY THE ENGINEER
- (3) TO BE USED AT INLET END OF McCARRONS LAKE
- (4) INSTALL ONLY, THE MATERIAL WILL BE FURNISHED BY MN/DOT
- (5) TO BE DIVIDED BY THE FOLLOWING PERCENTAGES:  
MN/DOT 39%  
RAMSEY CO. 5%  
ROSEVILLE SAP 160-010-02 40%  
MAPLEWOOD SAP 138-010-07 14%  
MAPLEWOOD SAP 138-020-17 2%
- (6) SEE SHEETS 48 & 58
- (7) 9 SANITARY, 4 STORM MANHOLES AND 3 CATCH BASINS
- (8) STRUCTURAL CONCRETE MIX NO. 3842 IS INCIDENTAL TO THIS ITEM

(9) INCLUDES 1632 LIN. FT. FOR CROSSWALK MARKING

- (10) INCLUDES 96 SQ. YDS. EROSION SOD
- (11) THE NECESSARY FILTER SHALL BE CONSIDERED INCIDENTAL FOR WHICH NO DIRECT PAYMENT WILL BE MADE.
- (12) REQUIRES APPROX. .28 CU. YD./LIN. FT. EMBEDMENT MATERIAL WHICH SHALL BE CONSIDERED INCIDENTAL.
- (13) REQUIRES APPROX. .32 CU. YD./LIN. FT. EMBEDMENT MATERIAL WHICH SHALL BE CONSIDERED INCIDENTAL.
- (14) REQUIRES APPROX. .36 CU. YD./LIN. FT. EMBEDMENT MATERIAL WHICH SHALL BE CONSIDERED INCIDENTAL.
- (15) SEE SHEET 16 FOR INSTALLATION REQUIREMENTS
- (16) THIS COLUMN TO BE FUNDED WITH H.E.S. 5419(17) FUNDS
- (17) 4 1/2" DEPTH
- (18) SEALED JOINTS REQUIRED.

### CONSTRUCTION NOTES

EXTREME CAUTION IS TO BE TAKEN WHILE CONSTRUCTING STORM SEWER, BECAUSE OF MAJOR PUBLIC UTILITIES PARALLELING T.H. 49 (RICE ST.). N.S.P. HAS A 20" HIGH PRESSURE GAS MAIN ON THE WEST SIDE, AND U.S. WEST HAS AN 8" HOLE TELEPHONE CONDUIT ON THE EAST SIDE. THE CONTRACTOR AND THE ENGINEER ARE TO WORK CLOSELY WITH THE UTILITY CREWS, SO AS TO PREVENT ANY OUTAGES OR ACCIDENTS. SEE NOTES (3) AND (4) ON PUBLIC UTILITY SHEET NUMBER 7.

DEPRESSIONS WHICH RESULT AFTER MILLING OPERATIONS, WHICH ARE GREATER THAN TWO INCHES IN DEPTH AND FOUR INCHES IN WIDTH AND CRACKS THAT ARE 1-1/2" IN WIDTH SHALL BE AIR BLASTED WITH HIGH PRESSURE (100+ PSI), SWEEPED AND PATCHED WITH SPEC. 2341 LEVELING COURSE MIXTURE OR SPEC. 2231 PATCHING MIXTURE AS DIRECTED BY THE ENGINEER. PATCHING OF THESE AREAS SHALL BE DONE AHEAD OF THE PAVING OPERATION AND ROLLED WITH A PNEUMATIC TIRED ROLLER.

STRIP SOIL AND TOPSOIL FROM AREAS TO BE DISTURBED BY CONSTRUCTION AND, IF PRACTICAL, STOCKPILE FOR REUSE AS SLOPE DRESSING.

TOP OF "GRADING GRADE" IS HEREBY DEFINED AS THE TOP OF THE GRADING MATERIAL OR THE BOTTOM OF THE AGGREGATE BASE.

UNSUITABLE MATERIALS ARE TOPSOILS, OTHER ORGANIC SOILS, SILTY SOILS, CLAY LOAMS, AND DEBRIS.

SUITABLE MATERIALS SHALL BE ALL OTHER MINERAL SOILS ENCOUNTERED ON THE PROJECT OR FROM BORROW, NOT PREVIOUSLY DEFINED AS BEING UNSUITABLE EXCEPT THE MATERIAL IN THE UPPER 2.0 FEET OF THE TURN LANE AND WIDENING CONSTRUCTION.

PROVIDE FOR A 2.0 FOOT SUBCUT FOR UNIFORMITY AND COMPACTION FOR ALL NEW TURN LANE AND WIDENING CONSTRUCTION. THE EXCAVATION SHOULD BE VERTICAL FROM THE EDGE OF THE INPLACE SURFACING TO THE BOTTOM OF THE SUBCUT AND THEN OUTWARD TO THE SHOULDER P.1. OR 1.0' BEHIND THE BACK OF THE CURB, THEN UPWARD AND OUTWARD AT A 1/2 TO 1 SLOPE TO THE SURFACE. THE BOTTOM OF THE EXCAVATION SHALL BE COMPACTED WITH FOUR PASSES OF AN APPROVED ROLLER, AS DIRECTED BY THE ENGINEER. BACKFILL WITH SELECT GRANULAR MATERIAL MEETING THE REQUIREMENTS OF SPECIFICATION 3149.2B.

WHERE AN AREA OF GRANULAR SUBGRADE ADJOINS AN AREA OF PLASTIC SUBGRADE, A 20:1 TAPER SHALL BE CONSTRUCTED SO AS TO PREVENT ABRUPT SOILS DIFFERENTIALS. THE TAPERS SHALL BE CONSTRUCTED WITH THE GRANULAR SOILS OVER THE PLASTIC SOILS.

WHERE A PROPOSED ROADWAY MATCHES AN EXISTING ROADWAY, PROVIDE A VERTICAL NOTCH TO THE BOTTOM OF THE AGGREGATE BASE AND A 10 TO 1 TAPER TO THE BOTTOM OF THE SUBCUT. IF TRAFFIC IS TO BE MAINTAINED ON THE ROADWAY DURING CONSTRUCTION, IT SHOULD, AS A PRECAUTIONARY MEASURE, BE NO CLOSER THAN AN IMAGINARY 2 TO 1 LINE DRAWN FROM THE BOTTOM OF ANY SUBCUT OR SEWER EXCAVATION TO THE TRAVELED SURFACE.

ANY EXCESS EARTHWORK SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT OF WAY.

BITUMINOUS AND CONCRETE MATERIAL REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE PROJECT LIMITS IN ACCORDANCE WITH MN/DOT SPECIFICATION 2104.

COMPACTION OF ALL GRADING, BASE, AND BITUMINOUS COURSES SHALL BE BY THE METHOD OF "ORDINARY COMPACTION".

MN/DOT HAS ACCUMULATED A STOCK OF POLY PREFORMED TRAFFIC MARKING TAPE, AND WISHES TO USE IT ON THIS PROJECT. THE CONTRACTOR IS TO PICK IT UP AT THE TRAFFIC OFFICE OF THE METRO EAST OFFICE, 3485 HADLEY AVENUE, BAKDALE. SEE THE STRIPING CHART.

THE SURVEY MONUMENTS, LOCATED IN THE STREET, AT LARSENTEUR, ROSELAWN, COUNTY ROAD B, AND COUNTY ROAD B2 ARE NOT TO BE DISTURBED.

The following standard plates, approved by the Federal Highway Administration, shall apply on this project.

STANDARD PLATES		
PLATE NO.	DESCRIPTION	NOTES
0005A	SPECIFICATION REFERENCE TO STANDARD PLATES, 1988	
3000L	REINFORCED CONCRETE PIPE	
3040F	CORRUGATED METAL PIPE CULVERT	
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE	
3123J	METAL APRON FOR C.S. PIPE	
3124B	METAL APRON CONNECTION	
3128D	SAFETY APRON	
3129A	METAL APR FOR CORR POLY PIPE (USE AT ENT AND DRIVEWAYS)	
3133B	RIPRAP AT RCP OUTLETS	
3145E	CONCRETE PIPE TIES	
3221C	CORRUGATED STL PIPE COUPLING BAND	
4000I	MANHOLE OR CATCH BASIN (DESIGN A)	
4002E	MANHOLE OR CATCH BASIN (DESIGN C)	
4005K	MANHOLE OR CATCH BASIN (DESIGN F)	
4006K	MANHOLE OR CATCH BASIN (DESIGN G & H)	
4011D	PRECAST CONCRETE BASE	
4020E	MANHOLE OR CATCH BASIN (FOR USE UNDER TRAFFIC LOADS)	
4101C	RING CASTING FOR MANHOLE OR CATCH BASIN	
4108F	MANHOLE ADJUSTING RINGS (STEEL)	
4110E	COVER CASTING FOR MANHOLE	
4129F	CATCH BASIN FRAME CASTING (FOR SQUARE GRATE)	
4132E	CATCH BASIN FRAME CASTING (FOR SQ GRATE & TYPE D C & B)	
4143D	STOOD GRATE & CONCRETE FRAME (MEDIAN DRAINS)	
4154B	CATCH BASIN GRATE CASTING	
4160D	CURB BOX CASTING FOR CATCH BASIN	
4180H	MANHOLE OR CATCH BASIN STEP	
7035J	CONCRETE WALK & CURB RETURNS AT ENTRANCES	
7036D	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED	
7102F	CONCRETE CURB AND GUTTERS (DESIGN B & V)	
7102H	CONCRETE CURB AND GUTTER (DESIGN D, & S)	
7110E	CURB & GUTTER CONSTRUCTION AT CATCH BASIN	
7111G	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS	
8000I	STANDARD BARRICADES	
9102D	TURF ESTABLISHMENT AREAS	

### CHART INDEX

CHART I.D.	CHART NAME	SHEET NO.
A	PUBLIC UTILITIES	5-7
B	DRIVEWAYS	21
C	MISCELLANEOUS REMOVALS	21
D	SAWING PAVEMENT	21
E	MILLING TABULATIONS	22
F	CONCRETE DRIVEWAYS, WALK, & CURB & GUTTER	22
H	CONCRETE BASE SUMMARY	22
I	STRIPING CHART	23
J	AGGREGATE AND BITUMINOUS SUMMARY	23
K	TURF ESTABLISHMENT	23
L	STORM SEWER TABULATIONS	24
M	STORM SEWER REMOVALS	25
N	INPLACE CULVERTS	25
O	CASTING ASSEMBLIES	25
P	PORTABLE CULVERTS	29
Q	TRAFFIC CONTROL ESTIMATED QUANTITIES	32

PUBLIC UTILITIES					A
STATION TO STATION	LOCATION	ITEM IN PLACE	REMARKS	OWNERSHIP	
LARPEN TEUR AVE.					
493+50 - 496+55	RT. AND LT.	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
493+50 - 498+00	LT.	4" WATER	LEAVE AS IS	ST. PAUL WATER	
493+50 - 498+00	RT.	30" WATER	LEAVE AS IS	ST. PAUL WATER	
493+50 - 499+60	LT.	20" GAS	LEAVE AS IS	N.S.P.	
493+76	45' RT.	HYDRANT	LEAVE AS IS	ST. PAUL WATER	
493+85	41' LT.	PEDESTAL	LEAVE AS IS	U.S. WEST	
494+13	41' LT.	MANHOLE	LEAVE AS IS	U.S. WEST	
494+90	45' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
495+00	50' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
495+10	50' LT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
495+44	36' LT.	GAS VALVE	ADJUST	N.S.P.	
495+75	32' LT.	GAS VALVE	ADJUST	N.S.P.	
496+06	31' LT.	GAS VALVE	ADJUST	N.S.P.	
496+38	41' RT.	HAND HOLE	SALVAGE (5)	MN/DOT	
496+38 - 499+55	41' RT.	BURIED POWER	SALVAGE (5)	MN/DOT	
496+55	CROSSING	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
496+55 - 500+00	LT.	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
496+58	25' LT.	MANHOLE	ADJUST	U.S. WEST	
496+74	31' LT.	GAS VALVE	ADJUST	N.S.P.	
496+95	41' LT.	PEDESTAL	ADJUST	U.S. WEST	
497+87	48' LT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
498+00	40' LT.	HYDRANT	RELOCATE	ROSEVILLE WATER	
498+00 - 500+20	RT.	30" WATER	LEAVE AS IS	ROSEVILLE WATER	
498+03	41' RT.	HAND HOLE	SALVAGE (5)	MN/DOT	
498+16	47' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
498+62	42' LT.	POWER POLE	RELOCATE	N.S.P.	
499+42	31' LT.	GAS VALVE	ADJUST	N.S.P.	
499+44	28' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
499+50	CROSSING	BURIED POWER	SALVAGE (5)	MN/DOT	
499+55	47' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
499+55	35' LT.	TRAFFIC SIGNAL	SALVAGE (5)	MN/DOT	
499+62	47' RT.	TRAFFIC SIGNAL	SALVAGE (5)	MN/DOT	
499+62 - 500+25	50' LT.	BURIED POWER	SALVAGE (5)	MN/DOT	
499+77 - 500+96	61' RT - 21' LT.	6" C.I.P. SANITARY	LEAVE AS IS	ROSEVILLE	
499+78	43' RT.	GATE VALVE	ADJUST	ST. PAUL WATER	
500+00 - 503+90	RT. AND LT.	BURIED TELEPHONE	RELOCATE	U.S. WEST	
500+20 - 505+43	LT.	42" WATER	LEAVE AS IS	MAPLEWOOD WATER	
500+20 - 505+43	RT.	36" WATER	LEAVE AS IS	ST. PAUL WATER	
500+23	35' RT.	HAND HOLE	SALVAGE (5)	MN/DOT	
500+25	50' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
500+25	39' LT.	TRAFFIC SIGNAL	SALVAGE (5)	MN/DOT	
500+25 - 503+29	50' LT. - 29' LT.	BURIED POWER	SALVAGE (5)	MN/DOT	
500+32	36' LT.	MANHOLE	ADJUST	U.S. WEST	
500+33	25' RT.	TRAFFIC SIGNAL	SALVAGE (5)	MN/DOT	
500+33	CL	GATE VALVE	ADJUST	ST. PAUL WATER	
500+45	14' LT.	GATE VALVE	ADJUST	MAPLEWOOD WATER	
500+76	25' RT.	POWER POLE	RELOCATE	N.S.P.	
500+84	CROSSING	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
500+94	30' LT.	POWER POLE	RELOCATE	N.S.P.	
500+96	21' LT.	SANITARY MANHOLE	ADJUST	ST. PAUL	
500+96 - 505+42	21' LT.	6" C.I.P. SANITARY	LEAVE AS IS	ST. PAUL	
501+57	20' LT.	SANITARY MANHOLE	ADJUST	ST. PAUL	
501+57 - 505+42	20' LT.	SANITARY SEWER	LEAVE AS IS	ST. PAUL	
501+60	30' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
501+80 - 505+45	RT.	4" GAS	RELOCATE	N.S.P.	
502+31	39' RT.	PEDESTAL	LEAVE AS IS	U.S. WEST	
502+34	27' RT.	POWER POLE	RELOCATE	N.S.P.	
502+64	25' RT.	GATE VALVE	ADJUST	ST. PAUL WATER	
503+29	29' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
503+37	27' RT.	POWER POLE	RELOCATE	N.S.P.	
503+90 - 505+43	RT.	BURIED TELEPHONE	RELOCATE	U.S. WEST	
504+26	31' LT.	GATE VALVE	ADJUST	MAPLEWOOD WATER	
504+38	18' LT.	SANITARY MANHOLE	ADJUST	ST. PAUL	
504+42	29' RT.	POWER POLE	RELOCATE	N.S.P.	
504+55	27' LT.	LIGHT POLE	RELOCATE	PRIVATE	
505+08	26' RT.	VALVE	ADJUST	N.S.P.	

PUBLIC UTILITIES					A
STATION TO STATION	LOCATION	ITEM IN PLACE	REMARKS	OWNERSHIP	
T.H. 49					
5+96 - 9+10	LT.	42" WATER	LEAVE AS IS	ST. PAUL WATER	
5+97	27' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
5+97 - 18+55	3' RT.	STORM SEWER	LEAVE AS IS	ST. PAUL	
6+02	25' LT.	STORM MANHOLE	LEAVE AS IS	ST. PAUL	
6+04	22' RT.	CATCH BASIN	LEAVE AS IS	ST. PAUL	
6+07	22' LT.	CATCH BASIN	LEAVE AS IS	ST. PAUL	
6+09	26' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
7+18	30' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
7+75	22' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
8+24	21' LT.	GATE VALVE	LEAVE AS IS	ST. PAUL	
8+64	33' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
8+70 - 17+32	25' RT.	BURIED POWER	RELOCATE	N.S.P.	
8+75 - 9+10	30' RT. - 25' RT.	2" GAS	LEAVE AS IS	N.S.P.	
8+94	2' LT.	STORM MANHOLE	ADJUST	MN/DOT	
9+09	28' LT.	CATCH BASIN	LEAVE AS IS	ST. PAUL	
9+10	15' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
9+10 - 10+00	RT. AND LT.	6" WATER	LEAVE AS IS	ST. PAUL WATER	
9+12	28' RT.	GATE VALVE	LEAVE AS IS	ST. PAUL WATER	
9+18	31' RT.	HYDRANT	LEAVE AS IS	ST. PAUL WATER	
9+22	20' RT.	STORM MANHOLE	LEAVE AS IS	ST. PAUL	
9+31	17' RT.	CATCH BASIN	LEAVE AS IS	ST. PAUL	
9+36	23' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
10+00	30' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
10+00 - 12+35	LT.	42" WATER	LEAVE AS IS	ST. PAUL WATER	
10+86	20' RT.	LIGHT POLE	LEAVE AS IS	N.S.P.	
11+27	23' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
11+37	30' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
11+63	41' LT.	SIGNAL	SALVAGE (5)	MN/DOT	
11+66	28' RT.	SIGNAL	SALVAGE (5)	MN/DOT	
11+71	44' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
11+71 - 12+28	44' LT.	BURIED POWER	SALVAGE (5)	MN/DOT	
11+73	37' RT.	SIGNAL	SALVAGE (5)	MN/DOT	
11+73	33' RT.	HAND HOLE	SALVAGE (5)	MN/DOT	
12+22	CROSSING	3" GAS	LEAVE AS IS	N.S.P.	
12+28	50' LT.	HYDRANT	LEAVE AS IS	ST. PAUL WATER	
12+28	43' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
12+35	21' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
12+35	CROSSING	BURIED POWER	SALVAGE (5)	MN/DOT	
12+35	41' LT.	SIGNAL	SALVAGE (5)	MN/DOT	
12+35	12' RT.	GATE VALVE	ADJUST	ST. PAUL WATER	
12+35 - 14+23	RT.	6" WATER	LEAVE AS IS	ST. PAUL WATER	
12+35 - 18+75	LT.	42" WATER	LEAVE AS IS	ST. PAUL WATER	
12+37	31' RT.	SIGNAL	SALVAGE (5)	MN/DOT	
12+40	39' LT.	SIGNAL	SALVAGE (5)	MN/DOT	
12+40	23' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
12+44	CL	STORM MANHOLE	ADJUST	MN/DOT	
12+47	23' RT.	SIGNAL	SALVAGE (5)	MN/DOT	
12+53	28' LT.	CATCH BASIN	ADJUST	MN/DOT	
12+58	17' RT.	CATCH BASIN	ADJUST	MN/DOT	
12+62	30' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
14+16	20' RT.	LIGHT POLE	LEAVE AS IS	ST. PAUL	
14+23	13' RT.	GATE VALVE	ADJUST	ST. PAUL WATER	
15+30	30' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
15+55	CL	STORM MANHOLE	ADJUST	MN/DOT	
15+72	9' LT. & 20' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
15+90	23' RT.	LIGHT POLE	RELOCATE	N.S.P.	
16+65	28' LT.	POWER POLE	RELOCATE	N.S.P.	
17+13	8' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
17+31	24' RT.	LIGHT POLE	RELOCATE	N.S.P.	
17+55 - 18+35	20' LT.	SANITARY SEWER	LEAVE AS IS	ST. PAUL	
17+63	20' LT.	SANITARY MANHOLE	ADJUST	ST. PAUL	

PUBLIC UTILITIES					A
STATION TO STATION	LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP	
T.H. 49					
17+73	27' LT.	POWER POLE	RELOCATE	N.S.P.	
18+27	11' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
18+33	27' LT.	POWER POLE	RELOCATE	N.S.P.	
18+35	20' LT.	SANITARY MANHOLE	ADJUST	ST. PAUL	
18+39	20' LT.	GATE VALVE	ADJUST	ST. PAUL WATER	
18+45	20' LT.	SANITARY MANHOLE	ADJUST	ST. PAUL	
18+53	21' RT.	CATCH BASIN	RECONSTRUCT (1)	ST. PAUL	
18+53	3' RT.	SANITARY MANHOLE	LEAVE AS IS (2)	ST. PAUL	
18+56	25' LT.	STORM MANHOLE	ADJUST	ST. PAUL	
18+59	41' LT.	CATCH BASIN	REMOVE	ST. PAUL	
18+60	47' LT.	CATCH BASIN	ADJUST	ST. PAUL	
19+23	CROSSING	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
19+23 - 71+77	30' RT. - 20' RT.	BURIED TELEPHONE		U.S. WEST	(3)
19+47	CROSSING	BURIED POWER	LEAVE AS IS	ST. PAUL	
19+47 - 21+86	42' LT.	BURIED POWER	LEAVE AS IS	ST. PAUL	
19+50 - 70+94	27' LT. - 67' LT.	20" GAS		N.S.P.	(4)
20+72	37' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
20+72 - 25+71	37' RT.	SANITARY SEWER	LEAVE AS IS	MAPLEWOOD	
20+75	52' LT.	LIGHT POLE	RELOCATE	PRIVATE	
20+80	47' LT.	POWER POLE	RELOCATE	N.S.P.	
21+05	54' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
21+05 - 25+01	65' LT.	6" WATER	LEAVE AS IS	ROSEVILLE WATER	
21+80	42' LT.	HAND HOLE	SALVAGE (5)	MN/DOT	
22+28	46' LT.	POWER POLE	RELOCATE	N.S.P.	
22+40	37' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
23+93	47' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
24+70	54' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
24+77	65' LT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
24+95	37' RT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
25+01	CROSSING	6" WATER	LEAVE AS IS	ROSEVILLE WATER	
25+01	36' RT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
25+27	49' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
25+71	37' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
26+84	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
26+97	25' RT.	MANHOLE	LEAVE AS IS	U.S. WEST	
27+55 - 28+37	50' RT. - 37' RT.	BURIED POWER	LEAVE AS IS	N.S.P.	
28+35	35' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
28+37	37' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
29+86	51' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
31+30	43' RT.	GAS VALVE	LEAVE AS IS	N.S.P.	
31+30 - 34+20	43' RT. - 30' RT.	1" GAS	LEAVE AS IS	N.S.P.	
32+36	51' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
32+70	22' RT.	MANHOLE	LEAVE AS IS	U.S. WEST	
33+09	38' RT.	GAS VENT	LEAVE AS IS	N.S.P.	
33+09	CROSSING	4" GAS	LEAVE AS IS	N.S.P.	
33+09	33' LT.	GAS VALVE	ADJUST	N.S.P.	
33+71	51' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
35+00	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
36+20	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
37+45	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
38+61	33' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
38+74 - 50+50	40' LT.	8" WATER	LEAVE AS IS	ROSEVILLE WATER	
38+85	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
38+92	63' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
39+09	21' RT.	MANHOLE	ADJUST	U.S. WEST	
39+85	53' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
42+12	49' LT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
42+12	51' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
42+18	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
43+35	78' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
43+84	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
44+78	CROSSING	3" GAS	LEAVE AS IS	N.S.P.	

PUBLIC UTILITIES					A
STATION TO STATION	LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP	
T.H. 49					
44+78 - 45+38	32' RT.	3" GAS	LEAVE AS IS	N.S.P.	
44+87	21' RT.	MANHOLE	ADJUST	U.S. WEST	
44+95	165' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
44+97	51' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
44+98	32' RT.	POWER POLE	RELOCATE	N.S.P.	
45+03	152' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
45+25	38' RT.	SANITARY MANHOLE	ADJUST	MAPLEWOOD	
45+25	161' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
45+38	RT.	6" GAS	LEAVE AS IS	N.S.P.	
45+38 - 56+70	23' RT. - 30' RT.	6" GAS	LEAVE AS IS	N.S.P.	
45+49	143' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
45+49	51' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
45+57	66' LT.	LIGHT POLE	LEAVE AS IS	PRIVATE	
45+87	57' LT.	LIGHT POLE	LEAVE AS IS	PRIVATE	
46+20	53' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
47+69	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
50+53	57' LT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
50+57	59' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
50+77	20' RT.	MANHOLE	LEAVE AS IS	U.S. WEST	
51+80	51' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
52+98	44' LT. & 52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
54+30	50' LT.	HYDRANT	RELOCATE	ROSEVILLE WATER	
54+30 - 56+80	35' LT.	6" WATER	LEAVE AS IS	ROSEVILLE WATER	
54+87	38' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
55+36	51' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
55+84	28' RT.	GAS VALVE	LEAVE AS IS	N.S.P.	
55+84	28' RT.	MANHOLE	LEAVE AS IS	N.S.P.	
56+38	36' LT.	MANHOLE & GAS VALVE	ADJUST	N.S.P.	
56+38 - 64+02	36' LT. - 55' LT.	3" GAS	LEAVE AS IS	N.S.P.	
56+47	CROSSING	4" GAS	ADJUST	N.S.P.	
56+54	29' RT.	MANHOLE	LEAVE AS IS	N.S.P.	
56+55	53' LT.	PEDESTAL	LEAVE AS IS	U.S. WEST	
56+55	37' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
56+55 - 57+10	53' LT. - 23' LT.	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
56+63	50' LT.	GAS VALVE	LEAVE AS IS	N.S.P.	
56+68	58' LT.	VENT	ADJUST	N.S.P.	
56+70	31' RT.	MANHOLE & VENT	LEAVE AS IS	N.S.P.	
56+70	CROSSING	6" GAS	ADJUST	N.S.P.	
56+70	LT.	6" GAS	LEAVE AS IS	N.S.P.	
56+80	56' LT.	GATE VALVE	ADJUST	ROSEVILLE WATER	
56+80 - 70+85	28' LT.	6" WATER	ABANDON	ROSEVILLE WATER	
56+89	20' RT.	MANHOLE	ADJUST	U.S. WEST	
57+04	57' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
57+10	CROSSING	BURIED TELEPHONE	ADJUST	U.S. WEST	
58+01	51' LT.	POWER POLE	RELOCATE	N.S.P.	
58+49	26' RT.	POWER POLE	RELOCATE	N.S.P.	
59+45	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
60+63	50' LT.	HYDRANT	RELOCATE	ROSEVILLE WATER	
60+90	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
61+12	33' RT. & 155' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
61+12 - 71+00	33' RT. - 40' RT.	SANITARY SEWER	LEAVE AS IS	MAPLEWOOD	
61+40	22' RT.	MANHOLE	ADJUST	U.S. WEST	
61+62	19' RT.	MANHOLE	ADJUST	U.S. WEST	
62+52	52' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
62+78	23' RT.	GAS VALVE	LEAVE AS IS	N.S.P.	
62+78 - 65+30	23' RT. - 72' RT.	2" GAS	LEAVE AS IS	N.S.P.	
63+80	50' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
64+15	34' LT.	GATE VALVE	ADJUST	ROSEVILLE WATER	
64+15	47' LT.	HYDRANT	RELOCATE	ROSEVILLE WATER	
65+10	47' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
65+30	CROSSING	2" GAS	ADJUST	N.S.P.	

PUBLIC UTILITIES (F)

State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 6 of 58 Sheets

PUBLIC UTILITIES					A
STATION TO STATION	LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP	
T.H. 49					
65+51	37' RT.	SANITARY MANHOLE	ADJUST	MAPLEWOOD	
66+80	47' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
67+35	50' LT.	HYDRANT	RELOCATE	ROSEVILLE WATER	
68+25	47' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
68+50	38' RT.	SANITARY MANHOLE	ADJUST	MAPLEWOOD	
69+72	47' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
70+53	42' LT.	MANHOLE	ADJUST	N.S.P.	
70+76	23' RT.	MANHOLE	LEAVE AS IS	U.S. WEST	
70+78	38' LT.	MANHOLE	ADJUST	N.S.P.	
70+82	63' LT.	SANITARY MANHOLE	LEAVE AS IS	ROSEVILLE	
70+85 - 71+40	28' LT.	6" WATER	LEAVE AS IS	ROSEVILLE WATER	
70+92	48' LT.	GAS VALVE	LEAVE AS IS	N.S.P.	
70+94	CROSSING	20" GAS	LEAVE AS IS	N.S.P.	
70+94 - 71+40	RT.	20" GAS	LEAVE AS IS	N.S.P.	
70+94 - 72+50	40' LT. - 57' LT.	6" GAS	LEAVE AS IS	N.S.P.	
70+95	CROSSING	SANITARY SEWER	LEAVE AS IS	ROSEVILLE	
71+00	40' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
71+17	50' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
71+00 - 71+48	40' RT. - 76' RT.	SANITARY SEWER	LEAVE AS IS	MAPLEWOOD	
71+05	40' RT.	PEDESTAL	LEAVE AS IS	U.S. WEST	
71+16 - 71+33	LT.	3" GAS	LEAVE AS IS	N.S.P.	
71+18	63' RT.	LIGHT POLE	LEAVE AS IS	PRIVATE	
71+19	50' LT.	PEDESTAL	LEAVE AS IS	U.S. WEST	
71+22	CROSSING	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
71+23	39' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
71+48	76' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
71+65	56' LT.	GAS VALVE	LEAVE AS IS	N.S.P.	
71+65	56' LT.	MANHOLE	LEAVE AS IS	N.S.P.	
71+77 - 79+41	30' RT. - 67' RT.	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
72+14	42' LT.	MANHOLE	LEAVE AS IS	N.S.P.	
72+19	65' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
72+50	42' LT.	MANHOLE	LEAVE AS IS	N.S.P.	
72+50 - 79+06	36' LT. - 67' LT.	12" GAS	LEAVE AS IS	N.S.P.	
72+54	45' LT.	GAS VALVE	LEAVE AS IS	N.S.P.	
72+97	65' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
74+75	80' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
77+80	80' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
78+86	72' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
78+90	82' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
79+06 - 111+05	30' LT.	6" GAS	LEAVE AS IS	N.S.P.	
79+20	83' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
79+28	29' RT.	MANHOLE	LEAVE AS IS	U.S. WEST	
79+35	29' RT.	MANHOLE	LEAVE AS IS	U.S. WEST	
79+41	3' RT.	MANHOLE	ADJUST	U.S. WEST	
79+41 - 111+05	9' RT. - 3' LT.	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
79+76	42' LT.	POWER POLE	RELOCATE	N.S.P.	
82+70	37' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	
82+70 - 84+70	37' RT.	SANITARY SEWER	LEAVE AS IS	MAPLEWOOD	
82+75	41' LT.	POWER POLE	RELOCATE	N.S.P.	
83+24 - 85+23	25' RT. - 40' RT.	2" GAS	RELOCATE	N.S.P.	
84+42	52' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
84+45	44' LT. & 90' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
84+47	80' RT.	HYDRANT	LEAVE AS IS	LITTLE CANADA WATER	
84+50	53' LT.	PEDESTAL	LEAVE AS IS	U.S. WEST	
84+50	100' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
84+50 - 84+90	53' LT.	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
84+50 - 84+90	CROSSING	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
84+60	49' RT.	GATE VALVE	ADJUST	LITTLE CANADA WATER	
84+60	LT.	2" GAS	LEAVE AS IS	N.S.P.	
84+63	CROSSING	8" WATER	LEAVE AS IS	LITTLE CANADA WATER	
84+65	38' LT.	GATE VALVE	ADJUST	ROSEVILLE WATER	
84+70	RT.	SANITARY SEWER	LEAVE AS IS	MAPLEWOOD	
84+70	37' RT.	SANITARY MANHOLE	LEAVE AS IS	MAPLEWOOD	

PUBLIC UTILITIES					A
STATION TO STATION	LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP	
T.H. 49					
84+87	3' LT.	MANHOLE	ADJUST	U.S. WEST	
85+00	RT.	3" GAS	LEAVE AS IS	N.S.P.	
85+22	CROSSING	3" GAS	LEAVE AS IS	N.S.P.	
85+93	44' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
87+17	46' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
89+00	45' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
90+46	45' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
90+90	39' LT.	MANHOLE	LEAVE AS IS	ROSEVILLE	
90+90 - 92+35	39' LT.	8" WATER	LEAVE AS IS	ROSEVILLE WATER	
91+40	54' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
91+90	43' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
92+35	39' LT.	MANHOLE	LEAVE AS IS	ROSEVILLE	
93+55	43' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
94+85	52' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
94+90	43' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
96+20	43' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
97+06	36' LT.	SANITARY MANHOLE	LEAVE AS IS	ROSEVILLE	
97+06 - 98+06	36' LT. - 118' LT.	SANITARY SEWER	LEAVE AS IS	ROSEVILLE	
97+36	73' RT.	HYDRANT	LEAVE AS IS	LITTLE CANADA WATER	
97+40	55' LT.	SANITARY MANHOLE	LEAVE AS IS	ROSEVILLE	
97+41	CROSSING	SANITARY SEWER	LEAVE AS IS	ROSEVILLE	
97+42	21' RT.	SANITARY MANHOLE	LEAVE AS IS	ROSEVILLE	
97+43	67' RT.	GATE VALVE	LEAVE AS IS	LITTLE CANADA WATER	
97+45	49' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
97+47	48' LT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
97+50	62' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
97+55	70' RT.	POWER POLE	LEAVE AS IS	N.S.P.	
97+55	178' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
97+70	46' LT.	GAS VALVE	LEAVE AS IS	N.S.P.	
97+70 - 98+16	LT.	4" GAS	LEAVE AS IS	N.S.P.	
98+06	188' LT.	SANITARY MANHOLE	LEAVE AS IS	ROSEVILLE	
98+08	CL	MANHOLE	LEAVE AS IS	U.S. WEST	
98+08	CROSSING	BURIED TELEPHONE	LEAVE AS IS	U.S. WEST	
98+16	CROSSING	3" GAS	LEAVE AS IS	N.S.P.	
98+16	RT.	3" GAS	LEAVE AS IS	N.S.P.	
98+17	38' RT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
98+22	41' RT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
98+25	51' LT.	HYDRANT	LEAVE AS IS	ROSEVILLE WATER	
98+25	48' LT.	GATE VALVE	LEAVE AS IS	ROSEVILLE WATER	
98+25 - 111+05	48' LT.	8" WATER	LEAVE AS IS	ROSEVILLE WATER	
98+74	42' LT.	POWER POLE	LEAVE AS IS	N.S.P.	
100+13 - 111+05	46' LT. - 55' LT.	8" SANITARY SEWER	LEAVE AS IS	ROSEVILLE	
108+50 - 111+05	14' RT.	8" SANITARY SEWER	LEAVE AS IS	LITTLE CANADA	

- (1) SEWER SEPARATION - RECONNECT TO STORM M.H. AS PER DRAINAGE PLAN
- (2) PLUG LEAD TO STORM C.O.
- (3) THE STORM SEWER WORK IS VERY CLOSE TO THIS 8 HOLE TELEPHONE CONDUIT AND CABLE. GENE McLEOD (PHONE # 221-5611) IS TO BE CONTACTED WHENEVER THIS WORK IS TO BE DONE. HE WILL WORK CLOSELY WITH THE CONTRACTOR AND THE ENGINEER TO PREVENT ANY SERIOUS PROBLEMS.
- (4) THE STORM SEWER LATERALS ARE VERY CLOSE TO THIS MAJOR HIGH PRESSURE GAS LINE. GLEN OPPENHEIMER (PHONE # 229-2489) IS TO BE CONTACTED WHENEVER THIS WORK IS TO BE DONE. HE WILL WORK CLOSELY WITH THE CONTRACTOR AND THE ENGINEER TO PREVENT ANY SERIOUS PROBLEMS.
- (5) SALVAGED AS PART OF SYSTEM B, SP 6214-63.

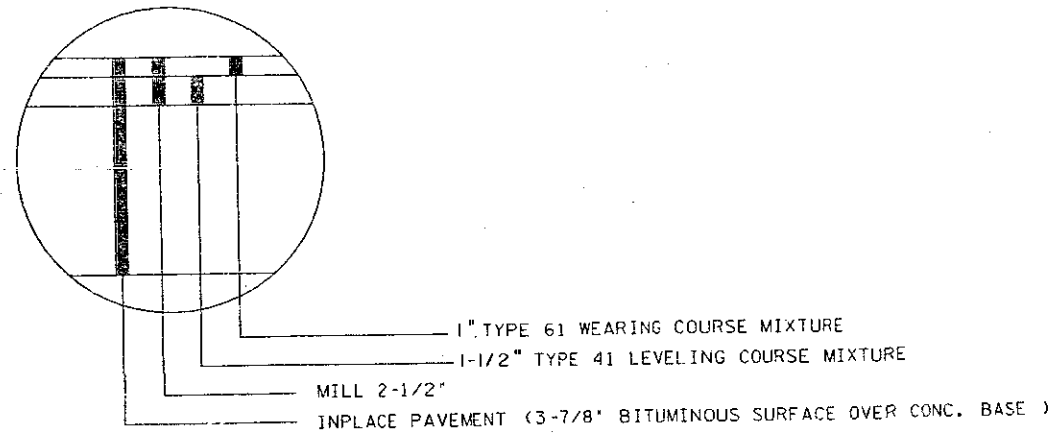
NOTES:

- (A) CABLE TV MAY BE LOCATED ON SOME POWER/TELEPHONE POLES.
- (B) THE STATE CONTRACTOR WILL ADJUST ANY CITY UTILITIES LOCATED IN THE TRAVELED ROADWAY.
- (C) ALL UNDERGROUND UTILITIES ARE APPROXIMATE (NOT LOCATED IN THE FIELD). THERE MAY BE UNDERGROUND UTILITIES THAT COULD BE AFFECTED BY CONSTRUCTION.
- (D) UNLESS OTHERWISE NOTED IN THE PLAN, ALL PUBLIC UTILITY TABULATIONS WHICH INDICATE RELOCATE OR ADJUST SHALL BE DONE BY OTHERS.

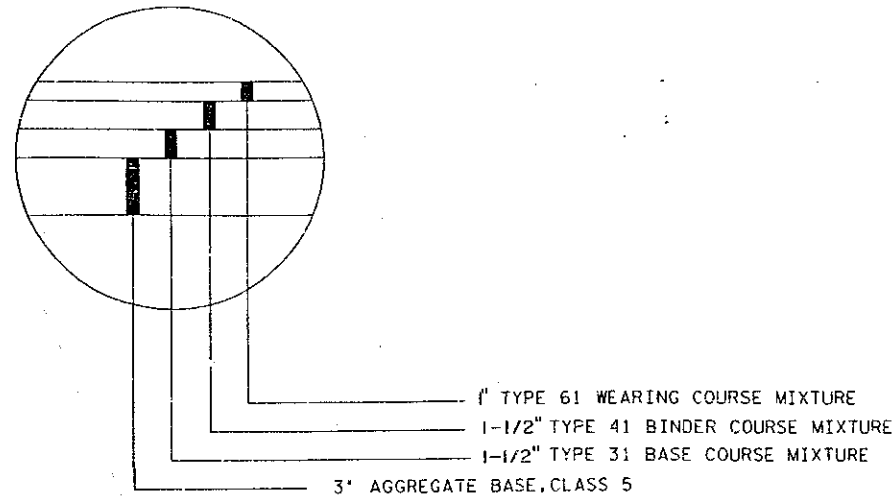
(F)

PUBLIC UTILITIES

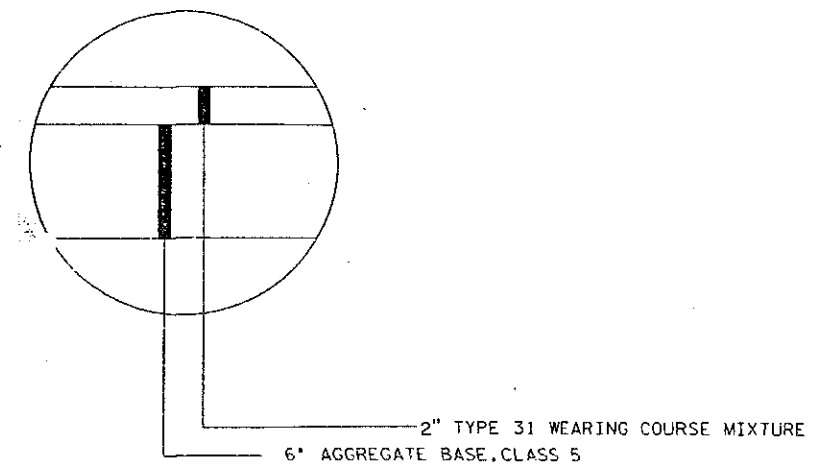
INSET A



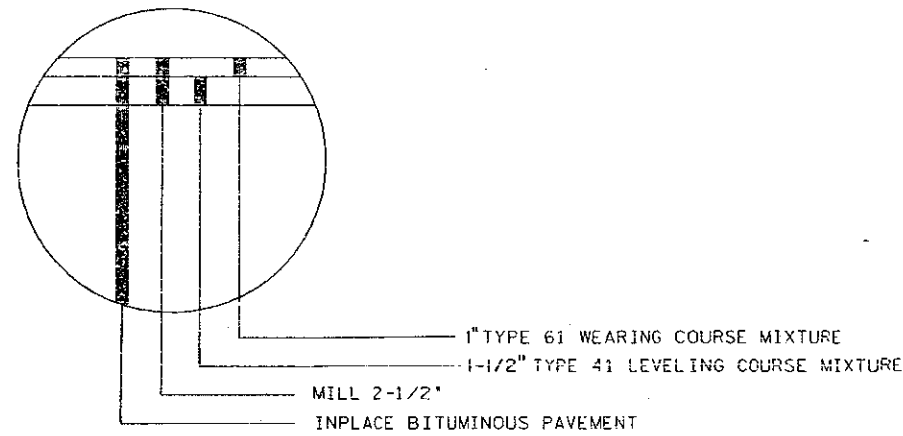
INSET B



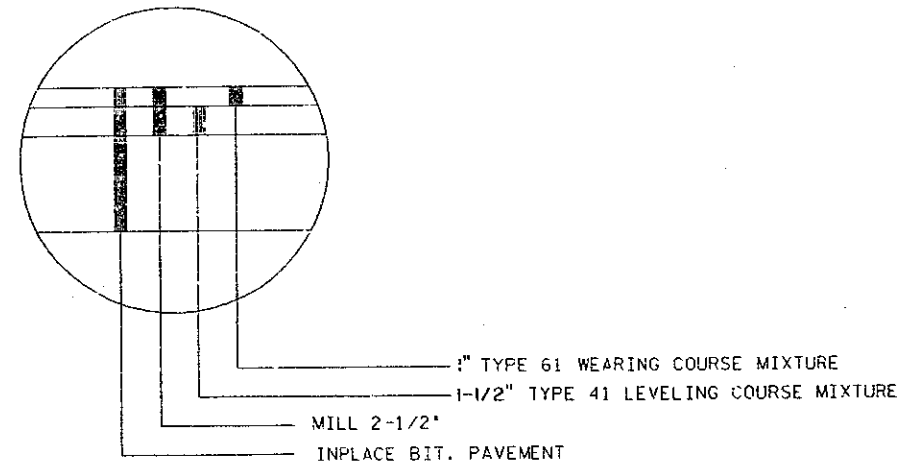
INSET C



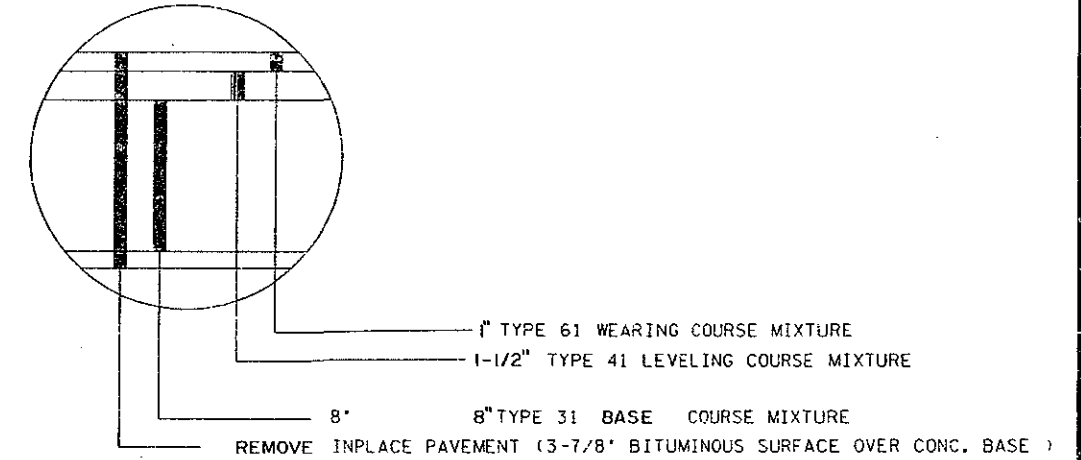
INSET D



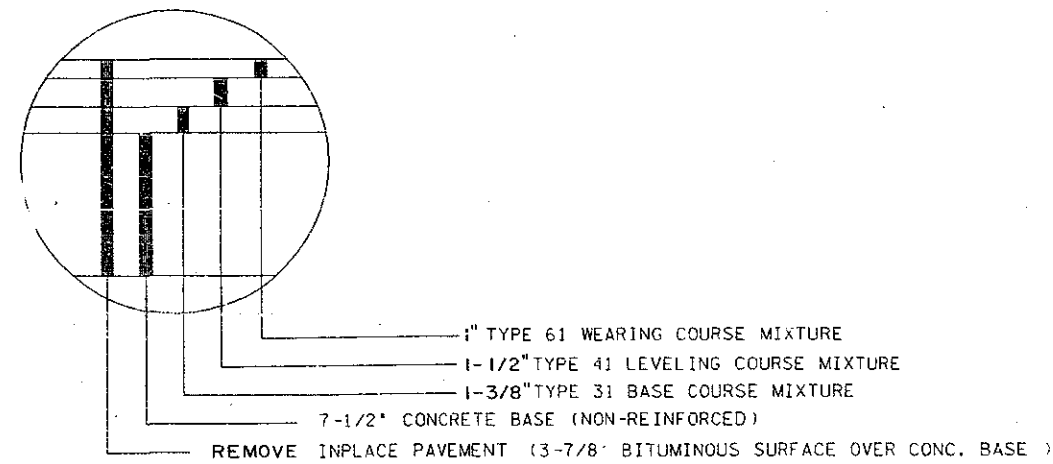
INSET E



INSET F



INSET G



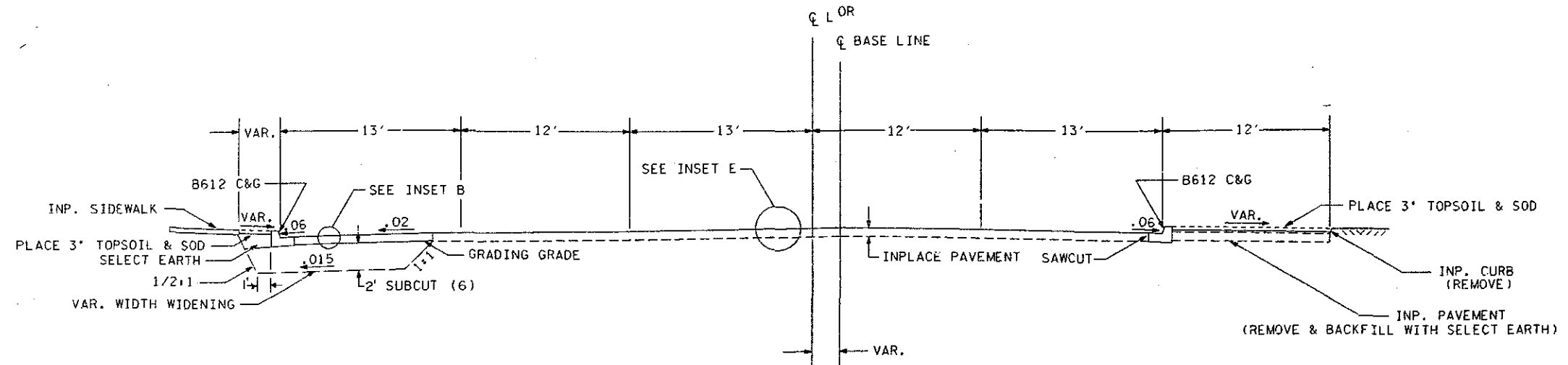
(F) TYPICAL SECTIONS

State Proj. No. 6214-66 (T.H. 49 = 126)

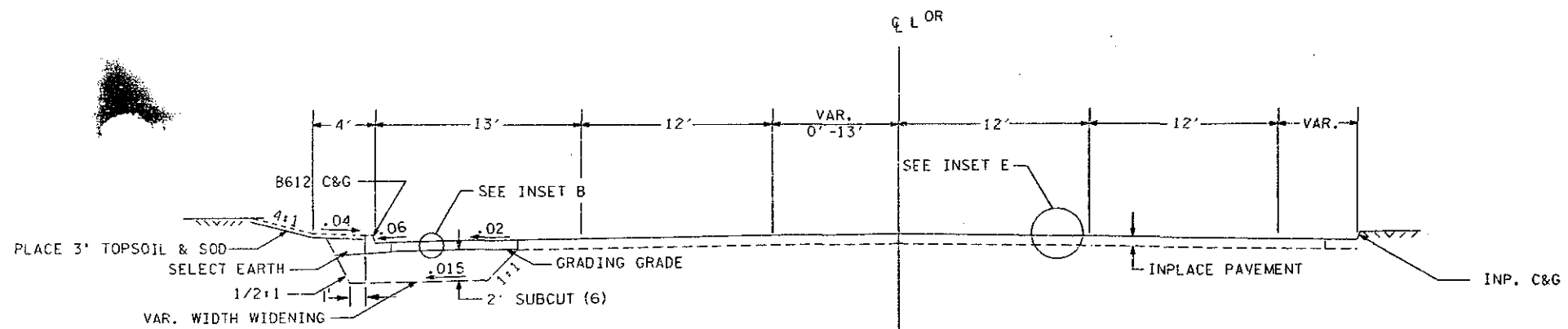
Sheet No. 8 of 58 Sheets



ALBEMARLE ST. TO RICE ST.  
STA. 497+00 - 500+00

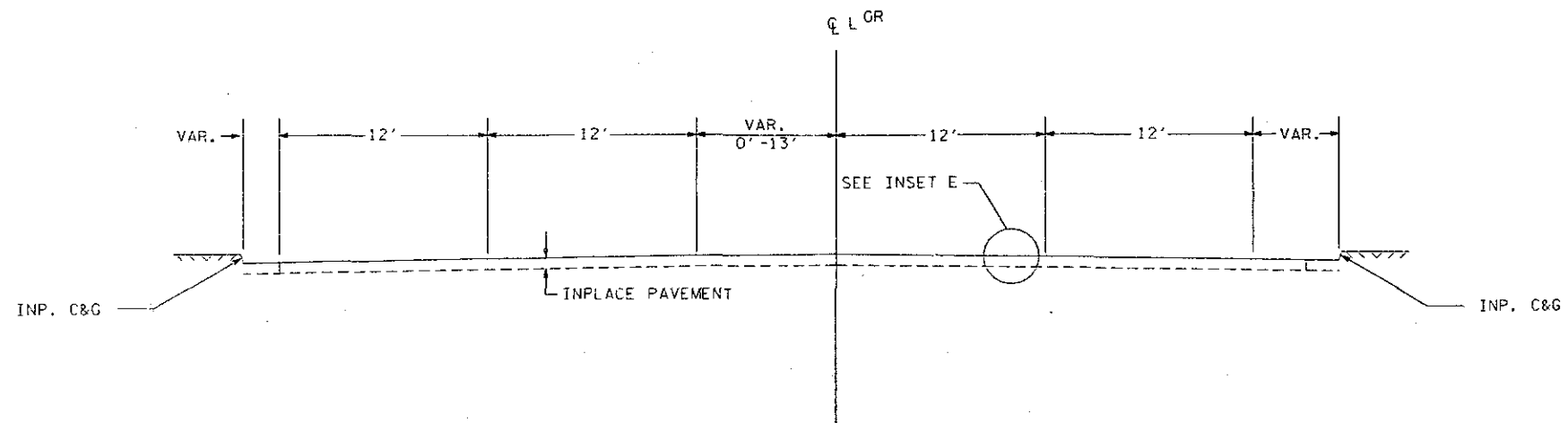


WOODBRIAGE CT. TO ALBEMARLE ST.  
STA. 495+00 - 497+00



(6) BACKFILL WITH SELECT GRANULAR

WOODBRIAGE ST. TO WOODBRIDGE CT.  
STA. 493+50 - 495+00

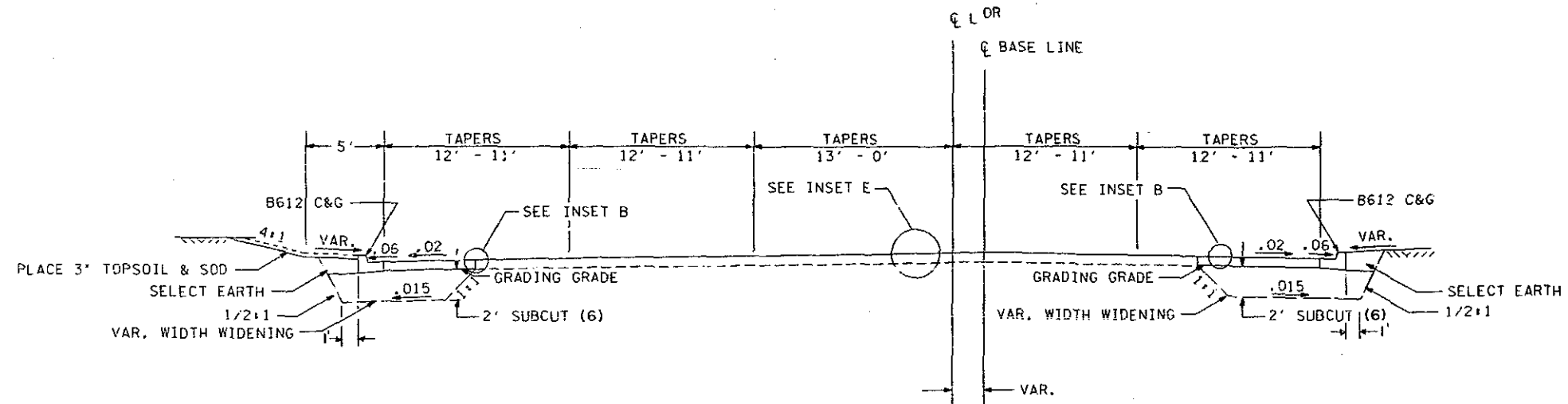


(F)  
LARPEN TEUR AVE. TYPICAL SECTIONS

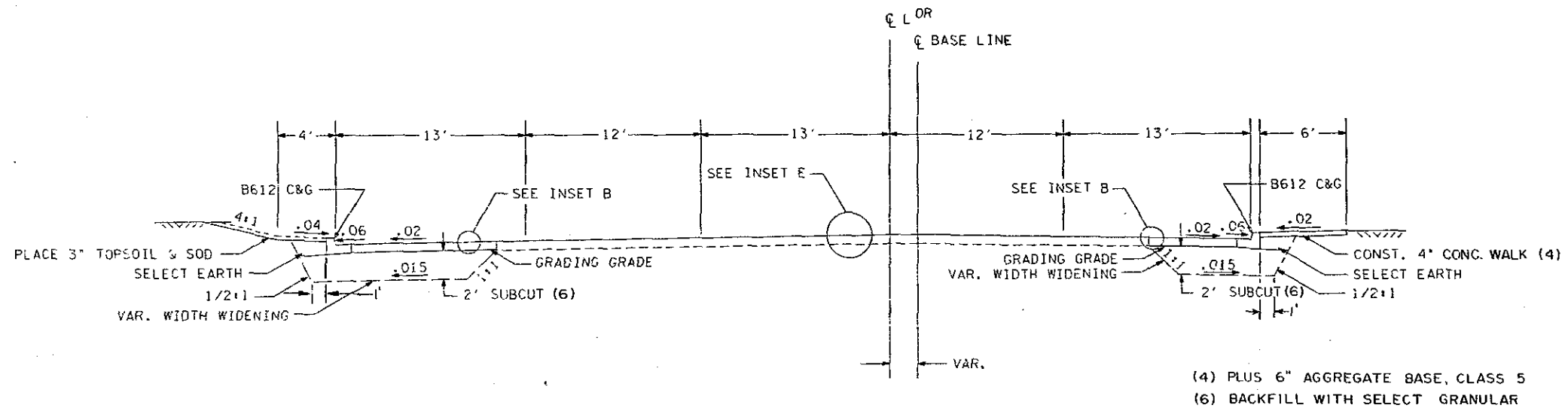
State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 9 of 58 Sheets

350' EAST OF RICE ST. TO STA. 505+42.48  
 STA. 503+50 - 505+42.48



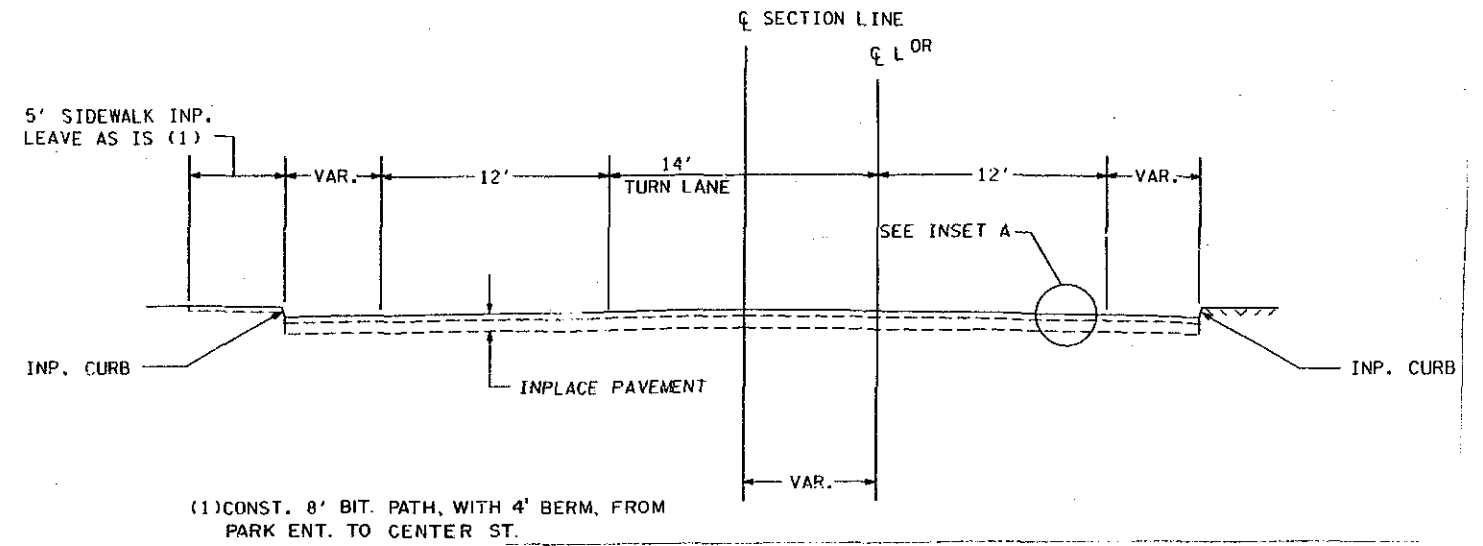
RICE ST. TO 350' EAST  
 STA. 500+00 - 503+50



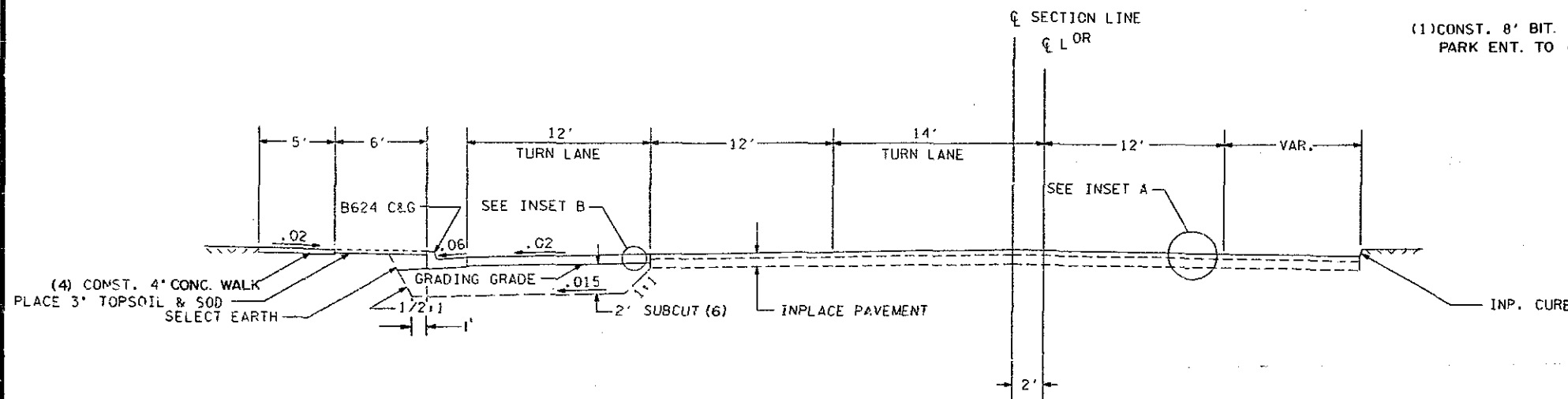
- (4) PLUS 6" AGGREGATE BASE, CLASS 5
- (6) BACKFILL WITH SELECT GRANULAR

(F)

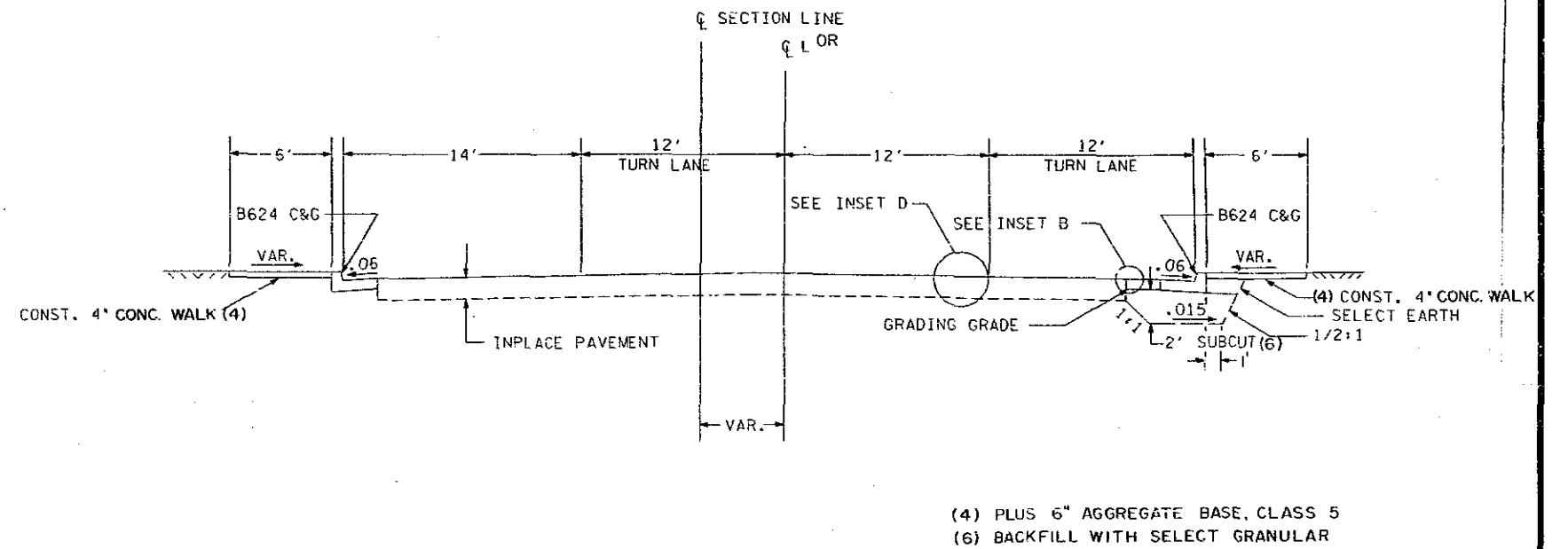
500' NORTH OF LARPEN TEUR TO CENTER ST.  
STA 24+00 - 39+00



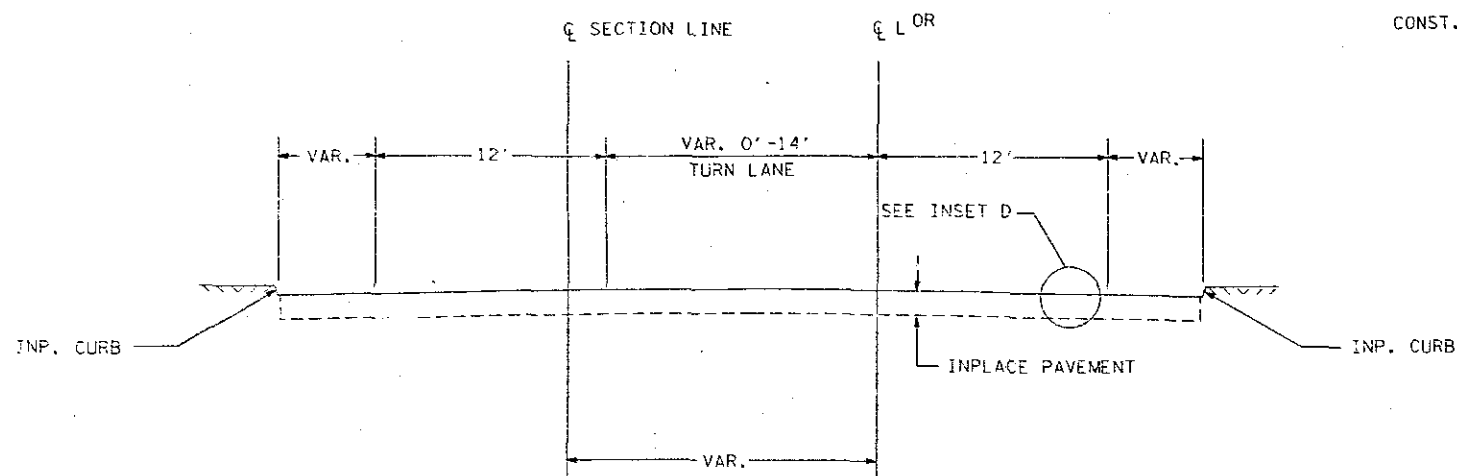
LARPEN TEUR TO 500' NORTH  
STA. 19+00 - 24+00



CALIFORNIA TO LARPEN TEUR  
STA. 15+00 - 19+00



HOYT TO CALIFORNIA  
STA. 5+96 - 15+00



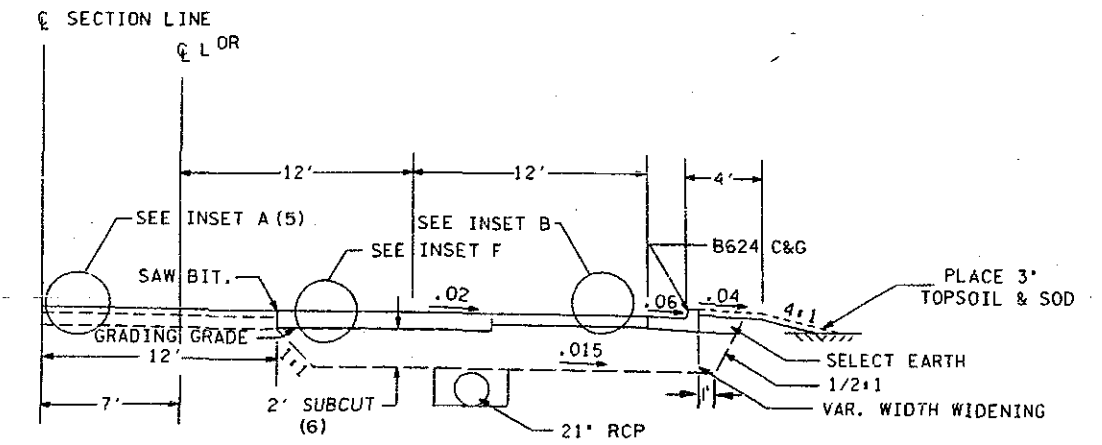
(4) PLUS 6" AGGREGATE BASE, CLASS 5  
(6) BACKFILL WITH SELECT GRANULAR

T.H. 49 TYPICAL SECTIONS (F)

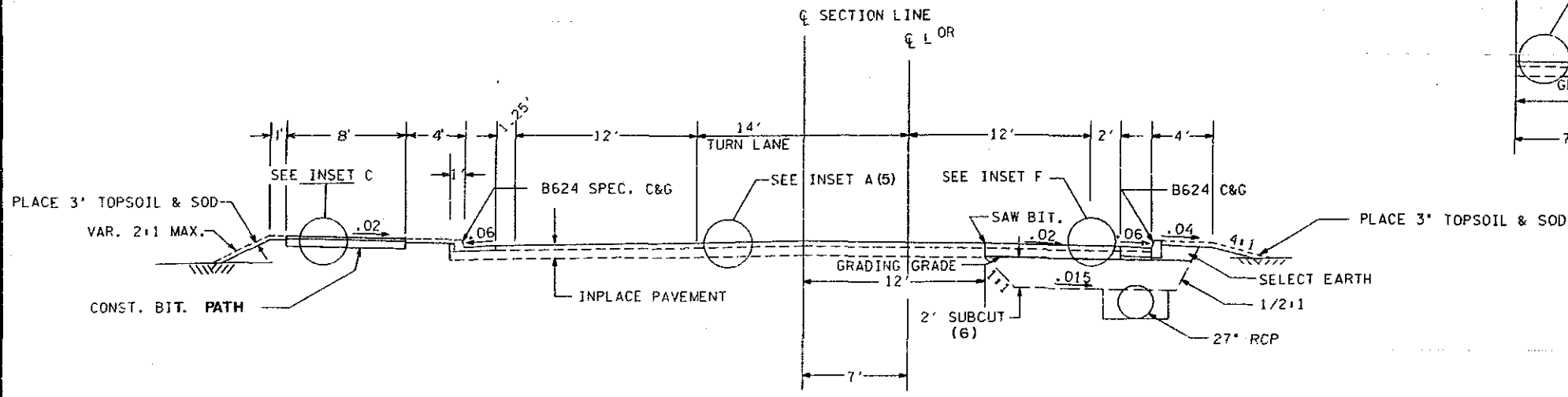
State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 11 of 58 Sheets

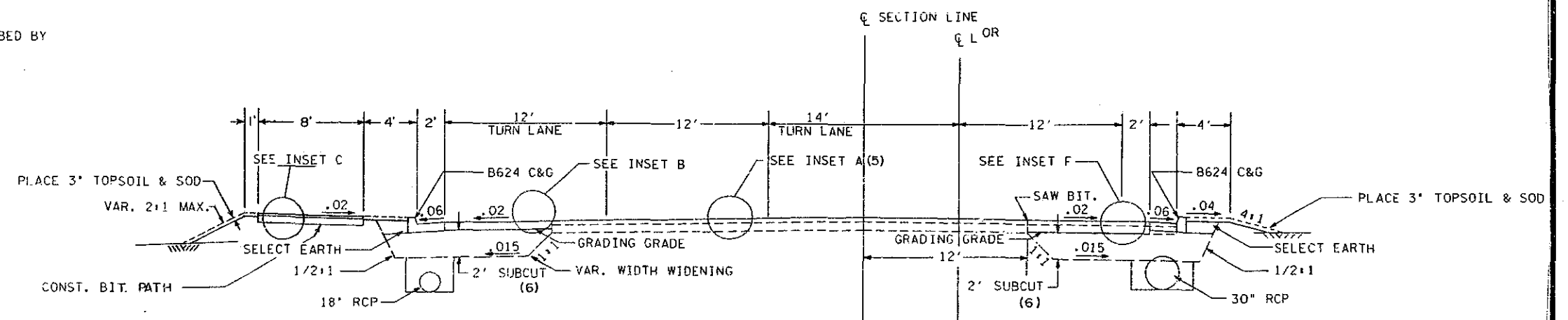
STA. 56+78 - 60+00



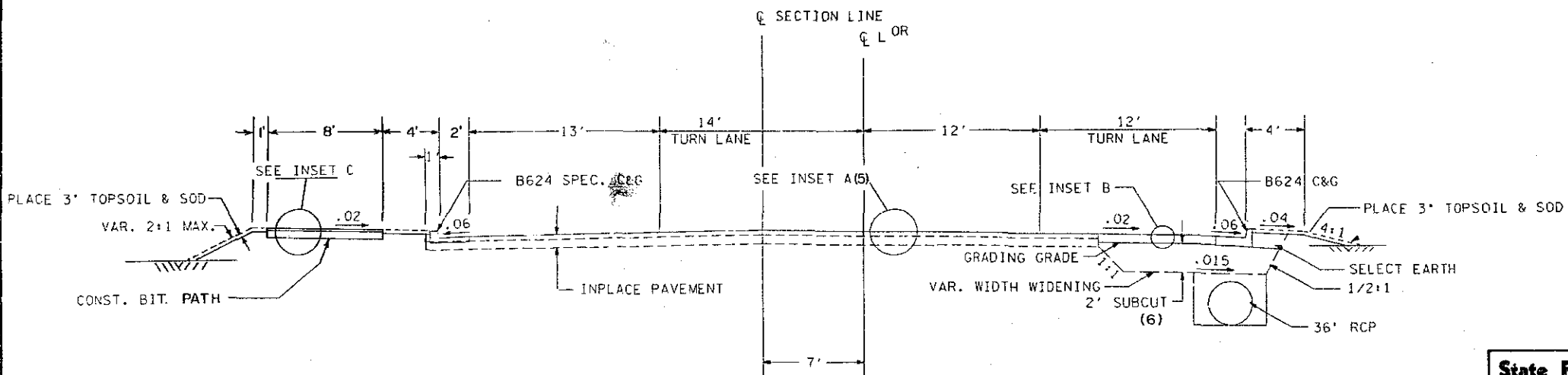
400' NORTH OF ROSELAWN TO ELMER ST.  
STA. 49+00 - 57+00



ROSELAWN TO 400' NORTH  
STA. 45+00 - 49+00



CENTER ST. TO ROSELAWN  
STA. 39+00 - 45+00

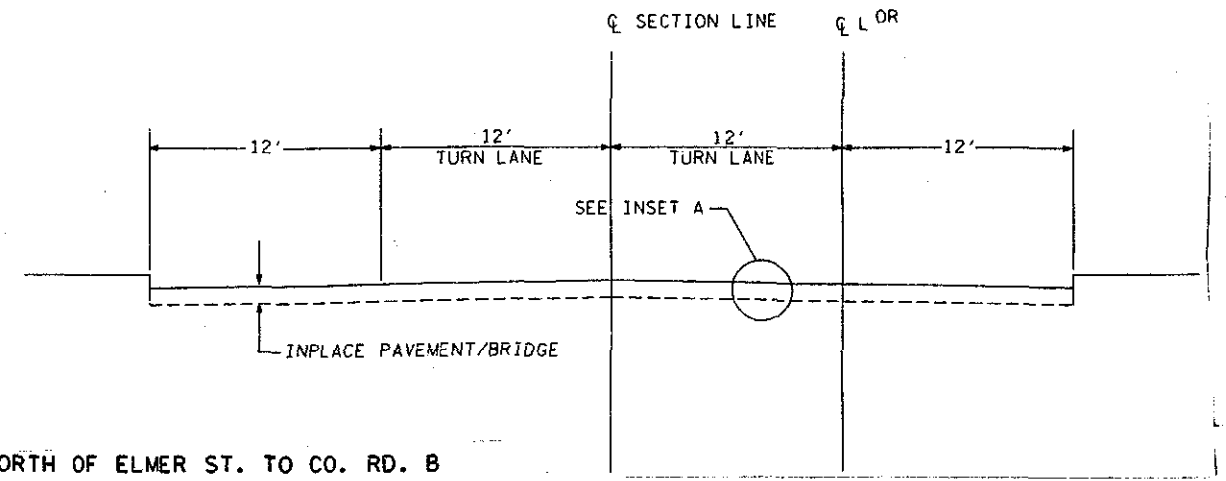
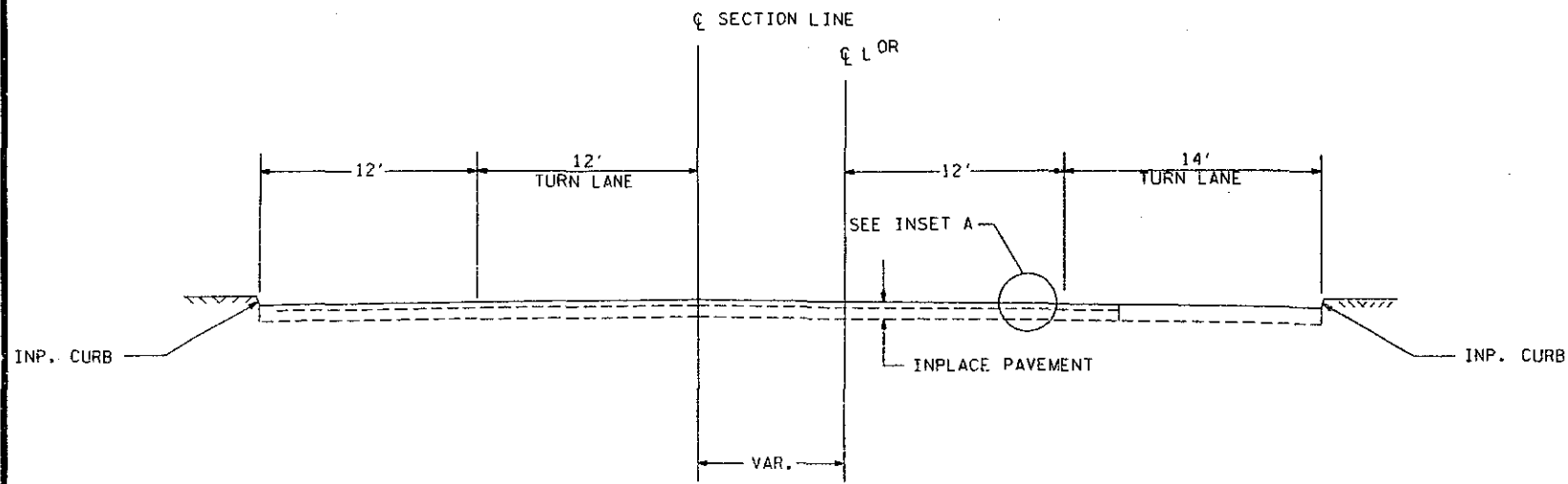


- (5) USE INSET G TO RESTORE AREAS DISTURBED BY LATERAL STORM SEWER CONSTRUCTION
- (6) BACKFILL WITH SELECT GRANULAR

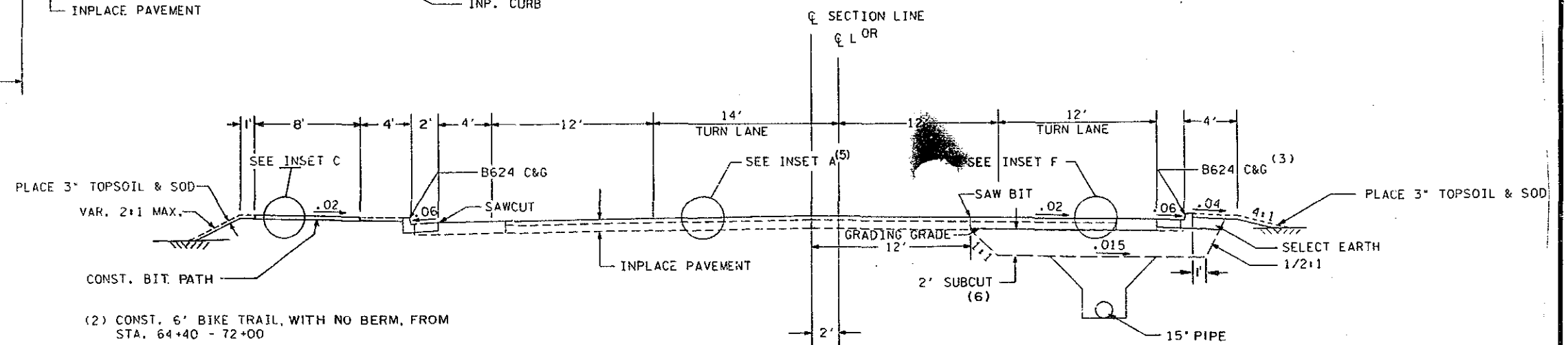
(F)  
T.H. 49 TYPICAL SECTIONS

SOUTH RAMPS TO NORTH RAMPS  
STA. 74+00 - 78+00

CO. RD. B TO SOUTH RAMPS  
STA. 72+00 - 74+00

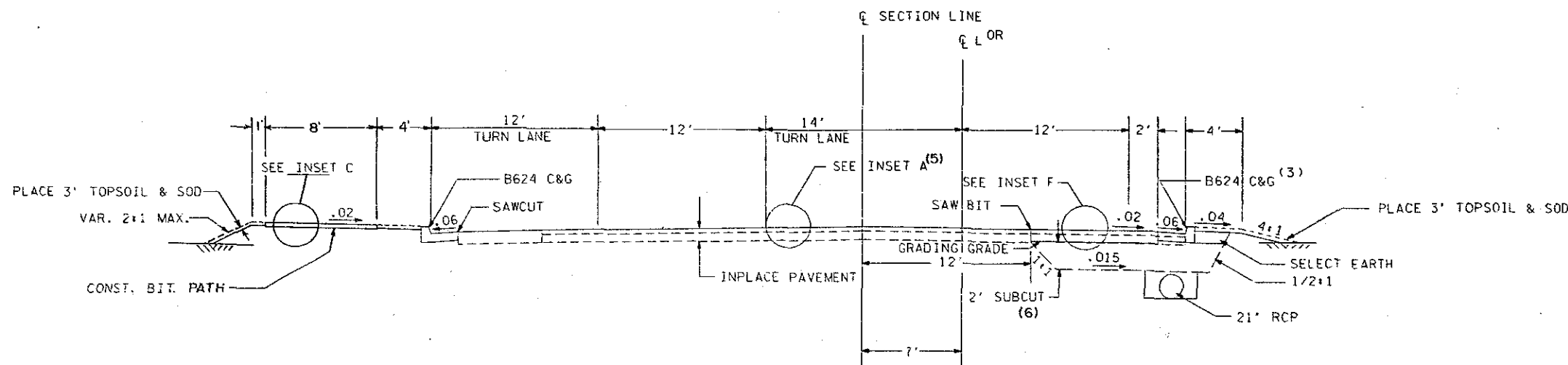


600' NORTH OF ELMER ST. TO CO. RD. B  
STA. 63+00 - 72+00



(2) CONST. 6' BIKE TRAIL, WITH NO BERM, FROM  
STA. 64+40 - 72+00

ELMER ST. TO 600' NORTH  
STA. 57+00 - 63+00



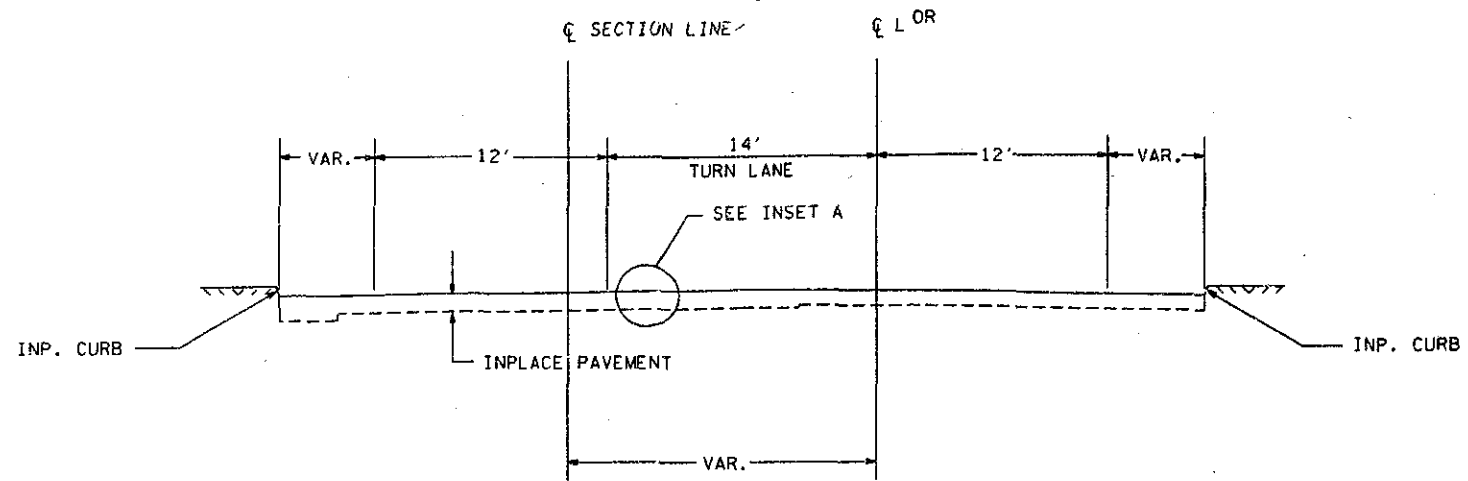
- (3) D424 C&G FROM 61+55 TO 65+35
- (5) USE INSET G TO RESTORE AREAS DISTURBED BY LATERAL STORM SEWER CONSTRUCTION.
- (6) BACKFILL WITH SELECT GRANULAR

(F)  
T.H. 49 TYPICAL SECTIONS

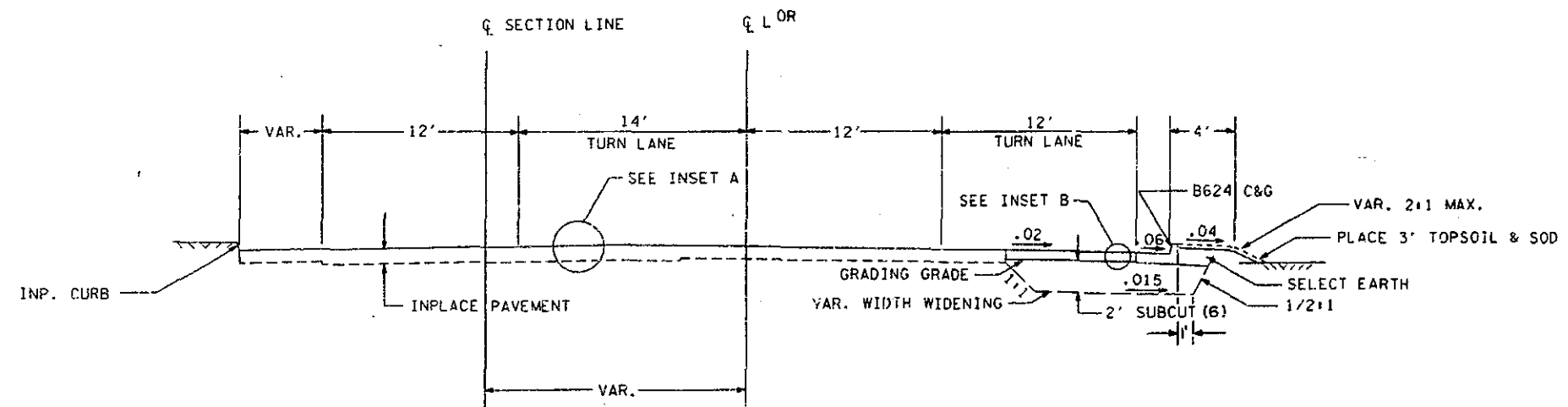
State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 13 of 58 Sheets

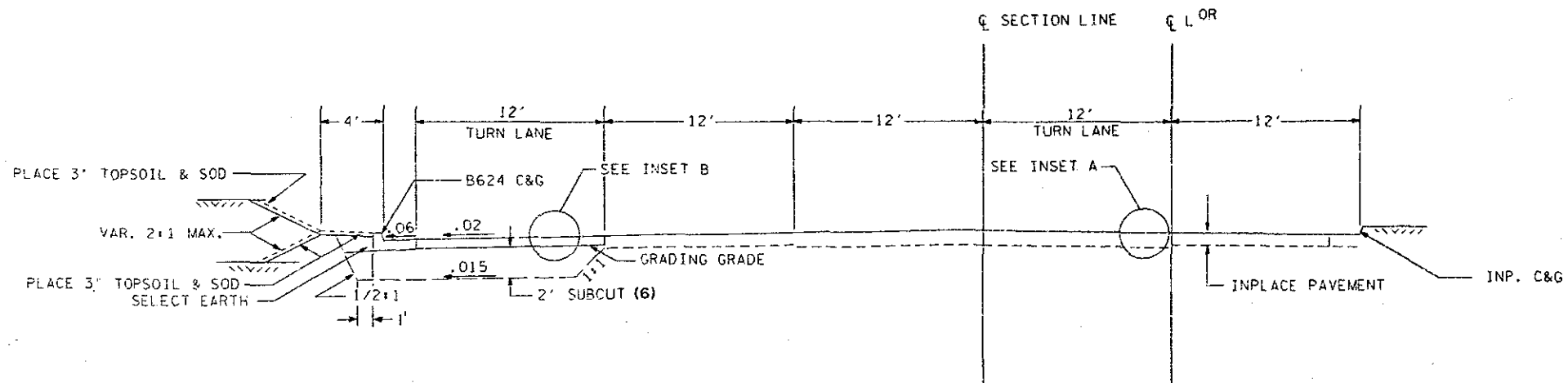
MINNESOTA TO GRANDVIEW  
 STA. 84+50 - 94+50



400' NORTH OF NORTH RAMPS TO MINNESOTA  
 STA. 82+00 - 84+50



NORTH RAMPS TO 400' NORTH  
 STA. 78+00 - 82+00



(6) BACKFILL WITH SELECT GRANULAR

T.H. 49 TYPICAL SECTIONS

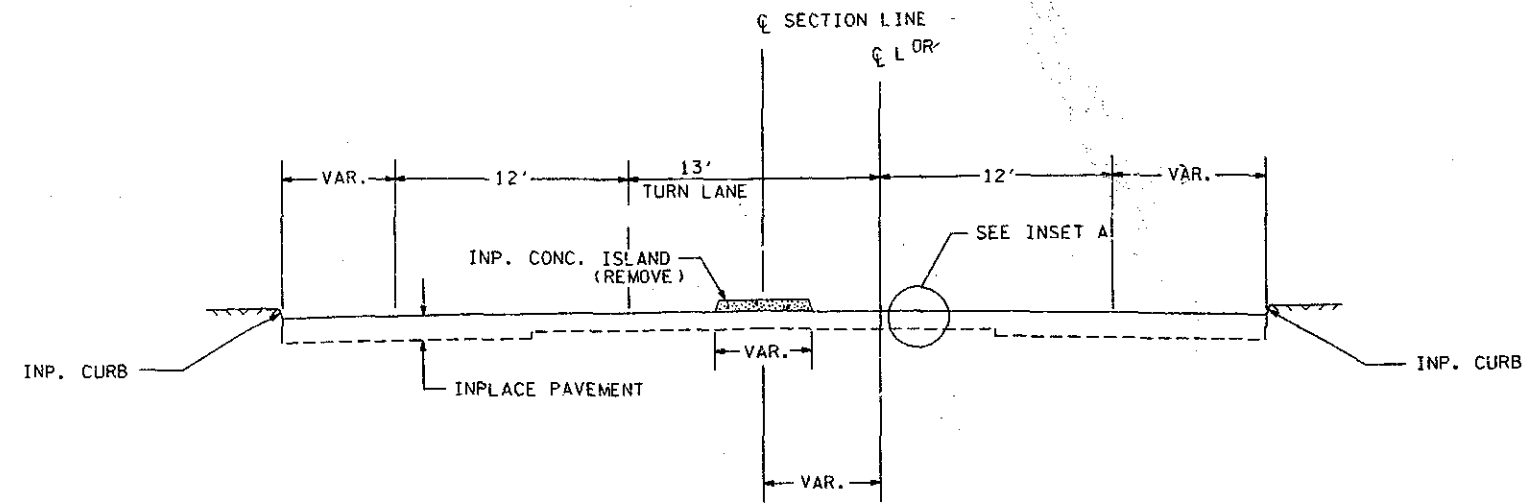
State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 14 of 58 Sheets

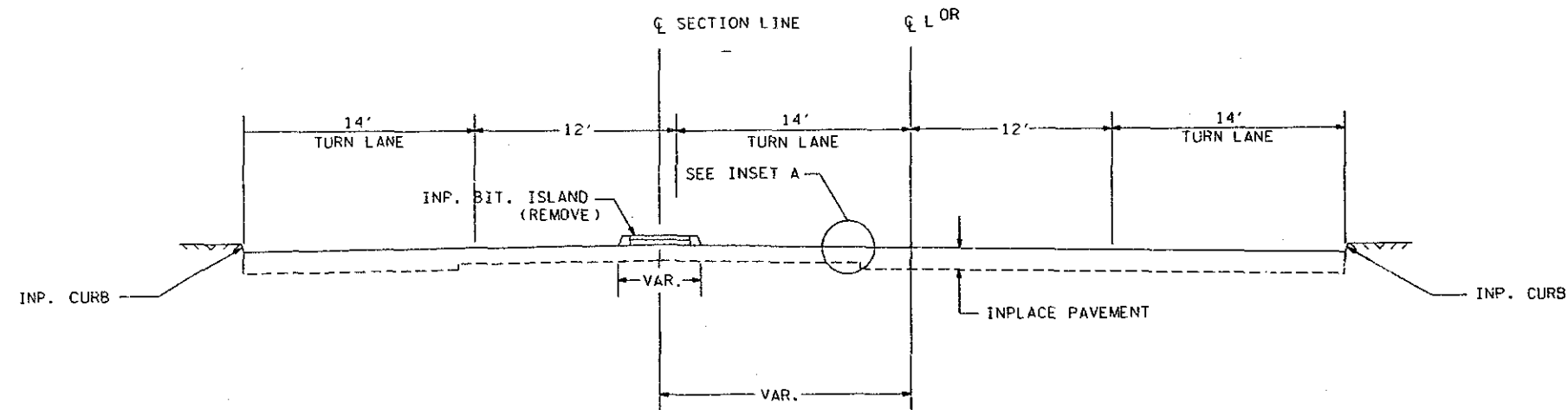
(F)

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW. DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO REQUIREMENTS FOR THE DOCUMENT SERVICE.

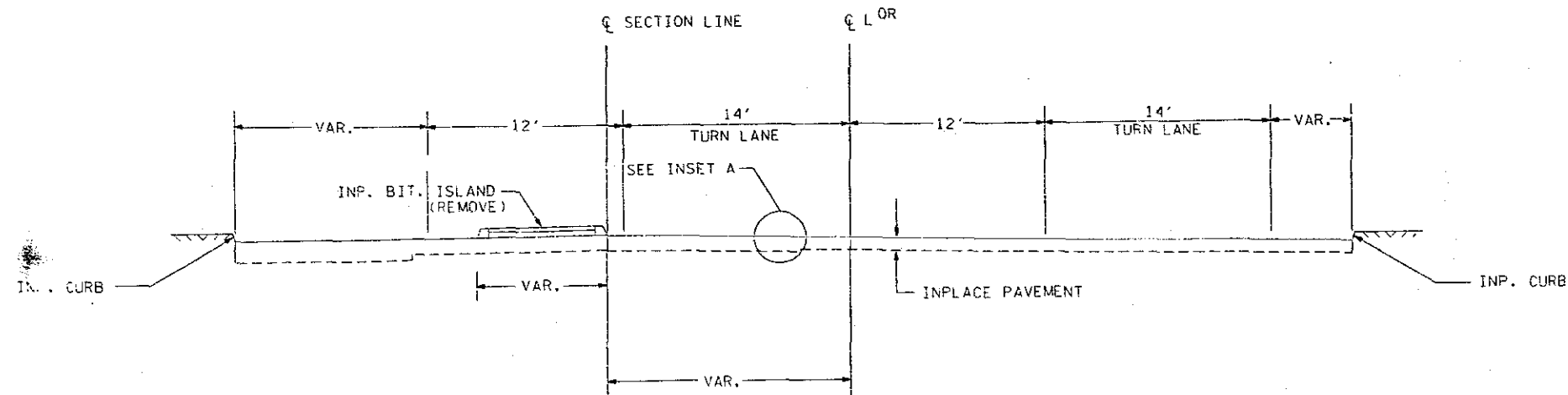
400' NORTH OF CO. RD. B2 TO DEMONT  
 STA. 102+00 - 111+05



CO. RD. B2 TO 400' NORTH  
 STA. 98+00 - 102+00



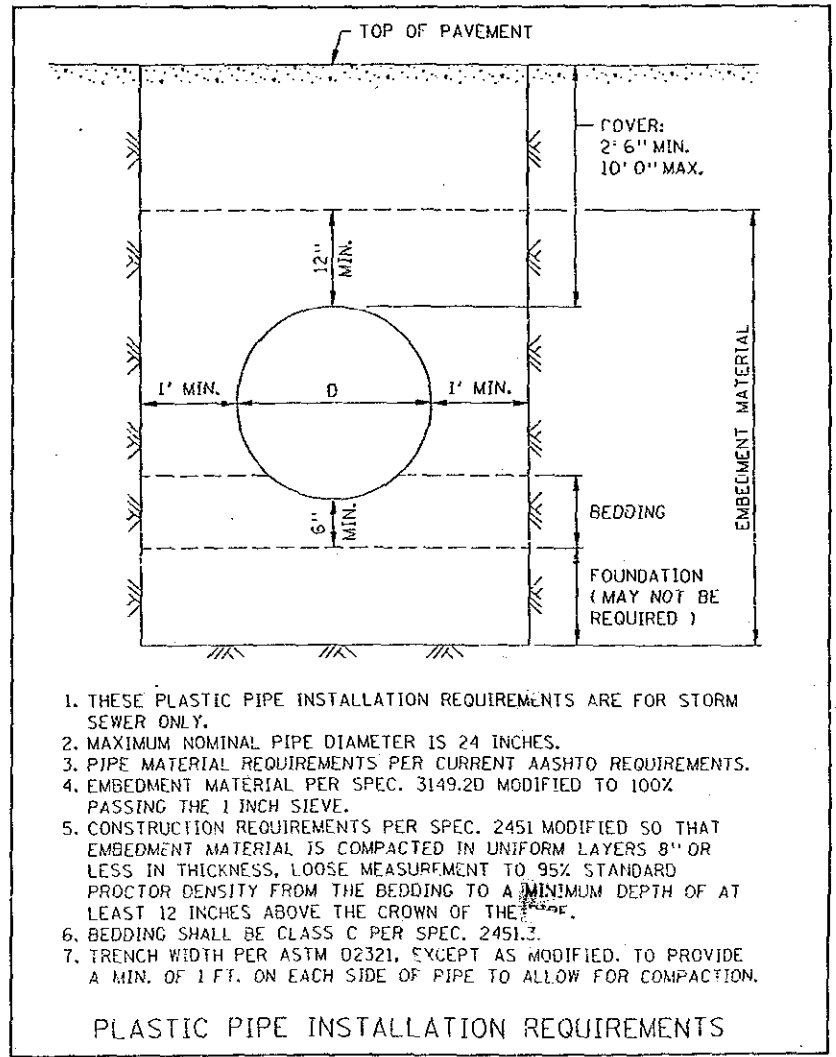
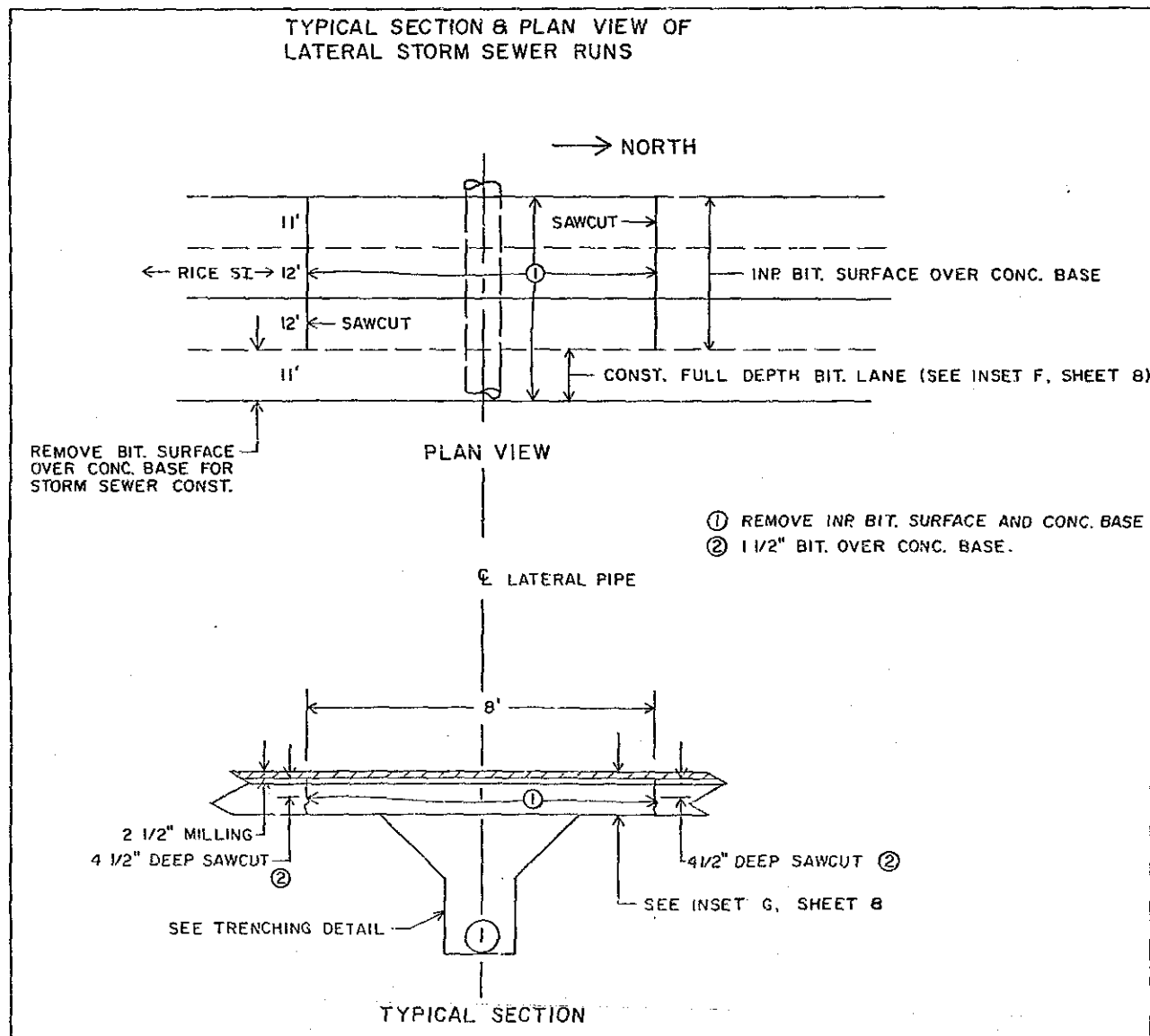
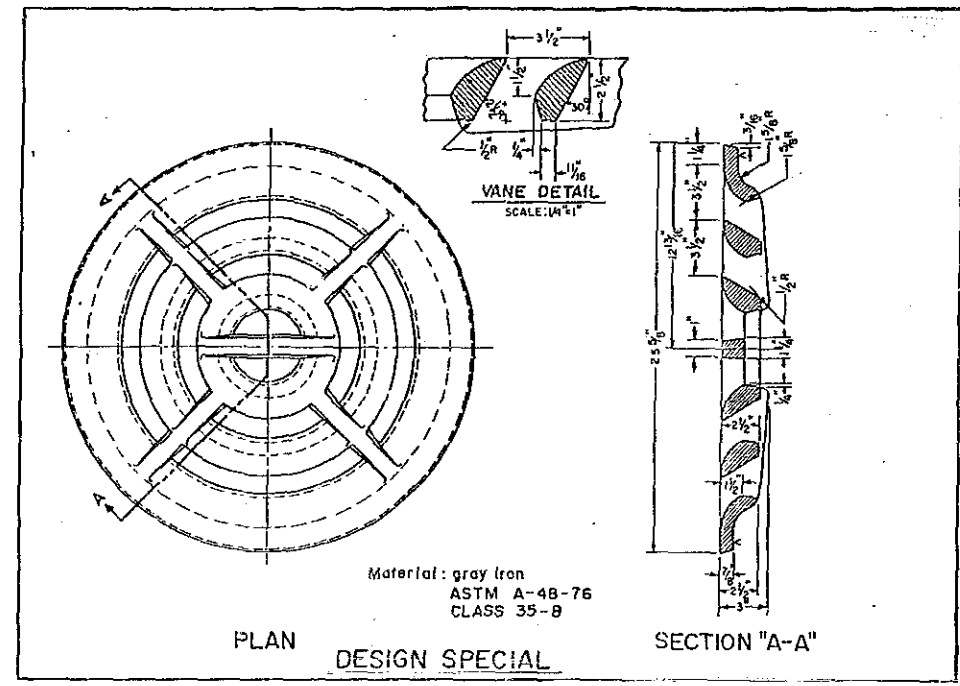
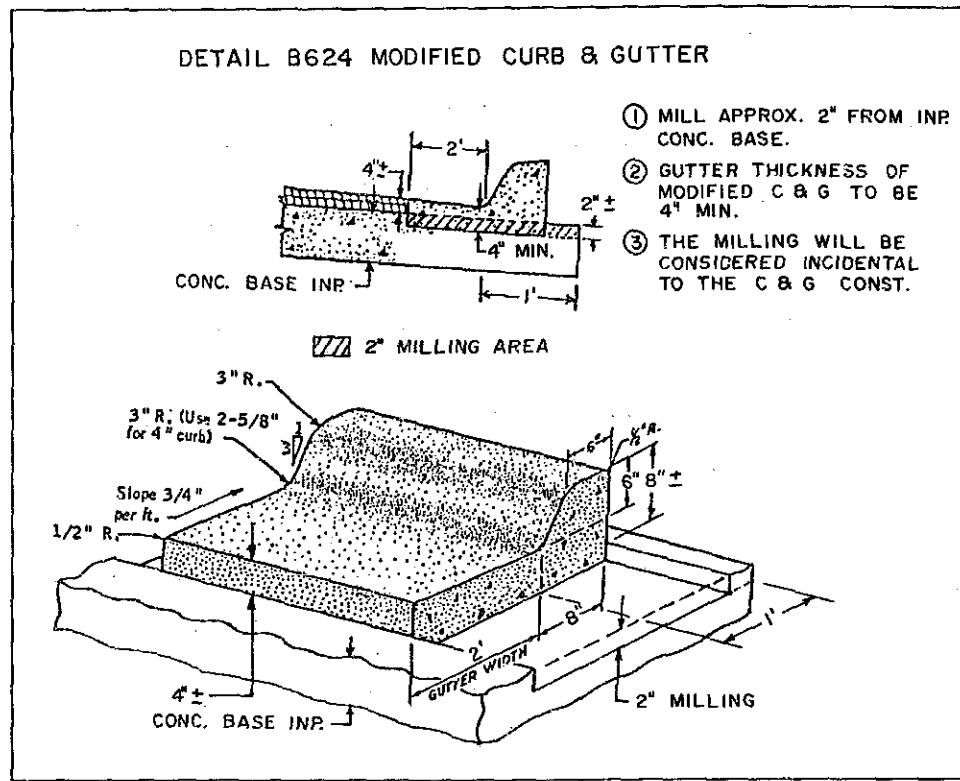
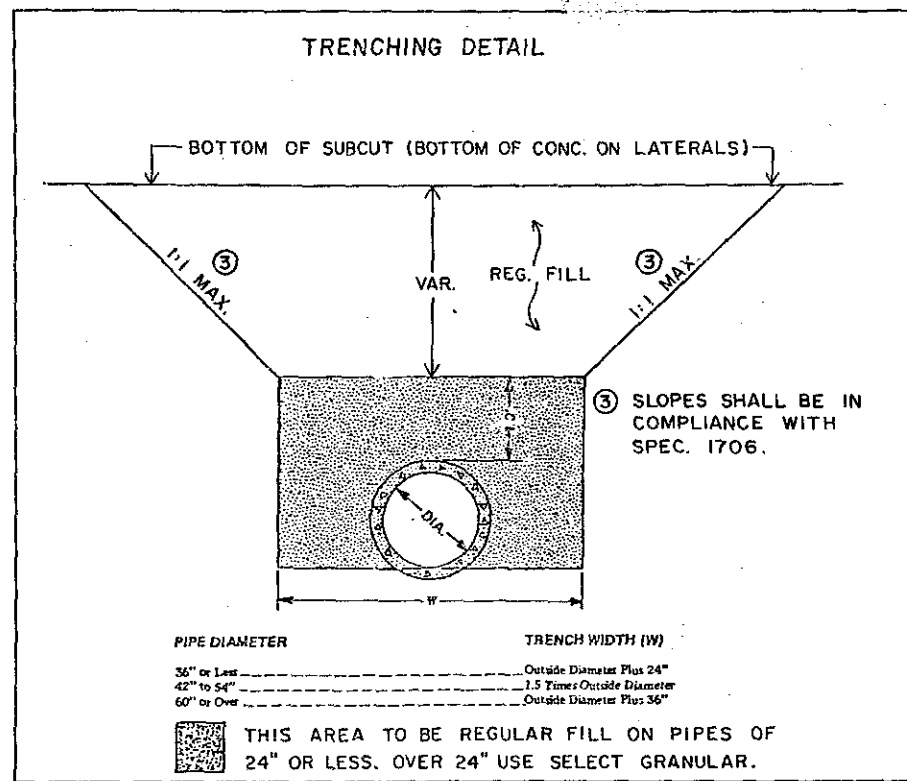
GRANDVIEW TO CO. RD. B2  
 STA. 94+50 - 98+00



(F)  
 T.H. 49 TYPICAL SECTIONS

State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 15 of 58 Sheets

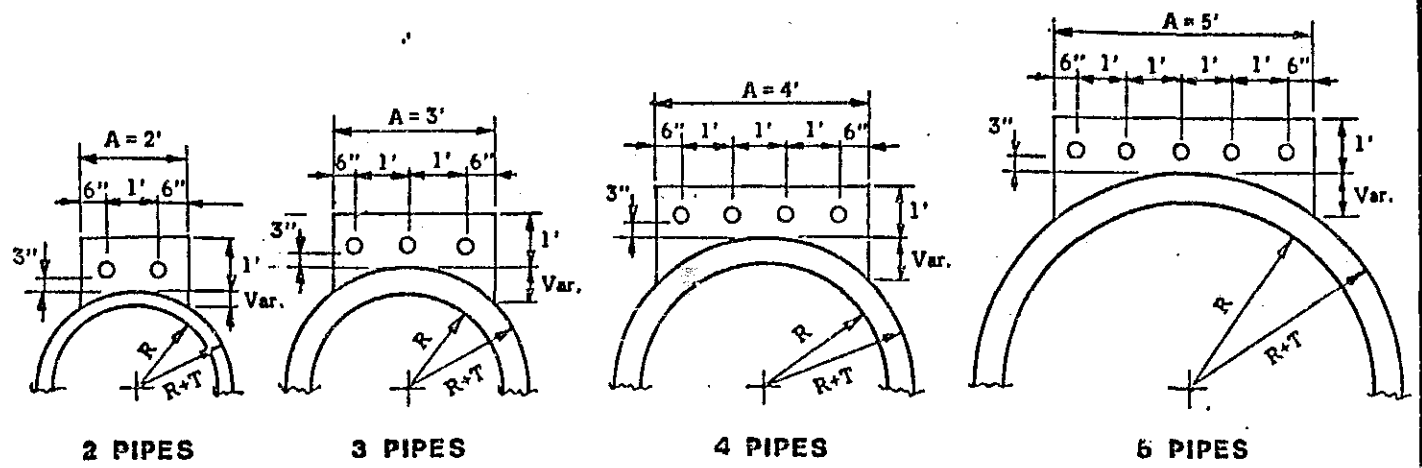


State Proj. No. 6214-66 (T.H. 49)

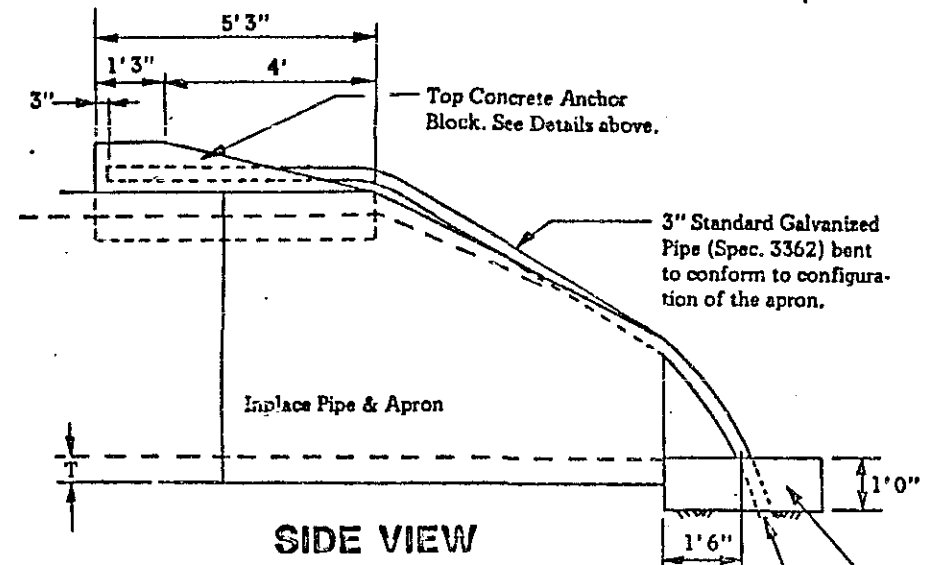
SPECIAL DETAILS (F)  
Sheet No. 16 of 58 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURES FOR THE DOCUMENT SERIES.

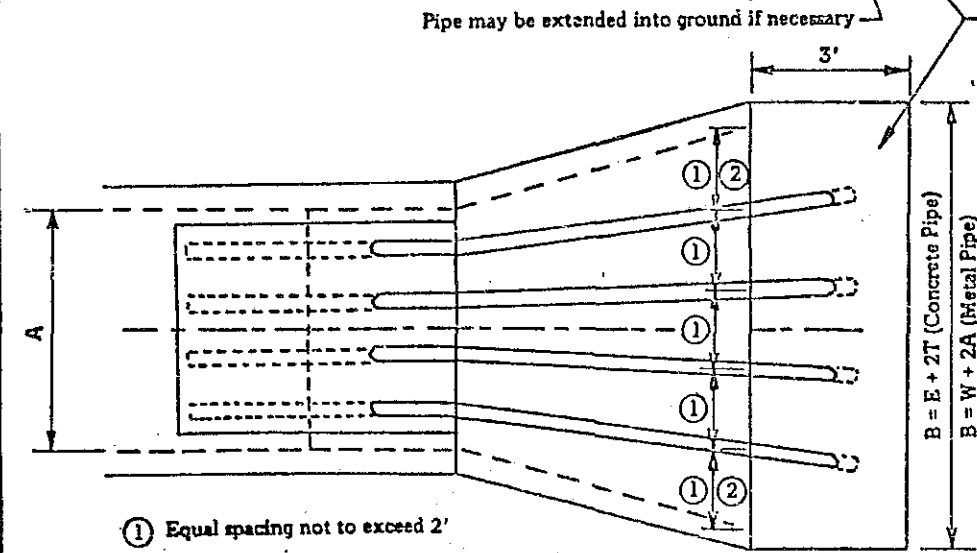




END VIEW OF TOP CONCRETE ANCHOR BLOCK



SIDE VIEW



- ① Equal spacing not to exceed 2'
- ② For metal pipe = "A"

TOP VIEW  
(Concrete Pipe Shown)

**NOTES:**  
 Excavation required for top and bottom anchor blocks shall be incidental and no direct compensation will be made.  
 Where soil is stable as determined by the Engineer, forms shall not be required for top and bottom anchor.  
 If safety grate is used on an outlet of structure, a similar safety grate should be placed on the inlet to prevent plugging of the pipe.  
 Anchor blocks shall be Structure Concrete (3Y32)  
 For quantities and pipe dimensions, see Sheet 2 of 2.  
 See Standard Plates 3122, 3123, 3100 for apron details.

STATE OF MINNESOTA  
 DEPARTMENT OF TRANSPORTATION  
**VEHICLE SAFETY GRATES  
 FOR CENTERLINE CULVERTS**  
 DETAILS

SPECIFICATION  
 REFERENCE  
 2501

Sheet 1 of 2

SAFETY GRATE FOR R.C. PIPE, R.C. PIPE-ARCH, C.M. PIPE, & C.M. PIPE-ARCH ①

TYPE of APRON	3" STEEL PIPE ②		CONCRETE ANCHORS		DIMENSIONS	
	NO. REQD.	LIN. FT.	TOP ③	BOTTOM	A	D
			CU. FT.	CU. FT.		
36" RCP	2	28.0	7.5	20.0	2' 0"	6' 8"
42" RCP	3	45.0	12.8	21.8	3' 0"	7' 3"
48" RCP	3	48.0	12.4	23.5	3' 0"	7' 10"
54" RCP	4	60.0	16.8	25.3	4' 0"	8' 5"
60" RCP	4	64.0	18.0	26.5	4' 0"	8' 10"
66" RCP	4	66.0	17.5	28.3	4' 0"	9' 5"
72" RCP	4	70.0	17.1	30.0	4' 0"	10' 0"
78" RCP	4	74.0	18.7	31.8	4' 0"	10' 7"
84" RCP	5	92.5	23.2	33.3	5' 0"	11' 1"
90" RCP	5	95.0	22.7	36.3	5' 0"	12' 1"
44" RCP-A	2	28.0	7.3	20.3	2' 0"	6' 9"
51" RCP-A	3	42.0	12.2	21.8	3' 0"	7' 3"
58" RCP-A	3	43.5	11.9	23.5	3' 0"	7' 10"
65" RCP-A	3	45.0	11.7	25.3	3' 0"	8' 5"
73" RCP-A	3	46.5	11.4	27.0	3' 0"	9' 0"
88" RCP-A	4	62.0	16.4	33.5	4' 0"	11' 2"
102" RCP-A	5	87.5	22.0	40.0	5' 0"	13' 4"
36" CMP	2	28.0	7.8	25.0	2' 0"	8' 4"
42" CMP	3	45.0	13.7	29.0	3' 0"	9' 8"
48" CMP	3	48.0	13.0	31.5	3' 0"	10' 6"
54" CMP	4	68.0	20.3	34.5	4' 0"	11' 6"
60" CMP	4	70.0	19.3	37.5	4' 0"	12' 6"
66" CMP	4	72.0	18.6	39.0	4' 0"	13' 0"
72" CMP	5	87.5	26.7	40.5	5' 0"	13' 5"
78" CMP	5	90.0	25.6	42.0	5' 0"	14' 0"
84" CMP	5	92.5	24.8	43.5	5' 0"	14' 6"
42" CMP-A	3	39.0	13.6	24.8	3' 0"	8' 3"
49" CMP-A	3	40.5	12.9	27.8	3' 0"	9' 3"
57" CMP-A	3	43.5	12.5	31.5	3' 0"	10' 6"
64" CMP-A	4	62.0	18.8	34.5	4' 0"	11' 6"
71" CMP-A	4	64.0	18.1	37.5	4' 0"	12' 6"
77" CMP-A	5	80.0	25.5	40.5	5' 0"	13' 6"
83" CMP-A	5	82.5	24.7	43.5	5' 0"	14' 6"

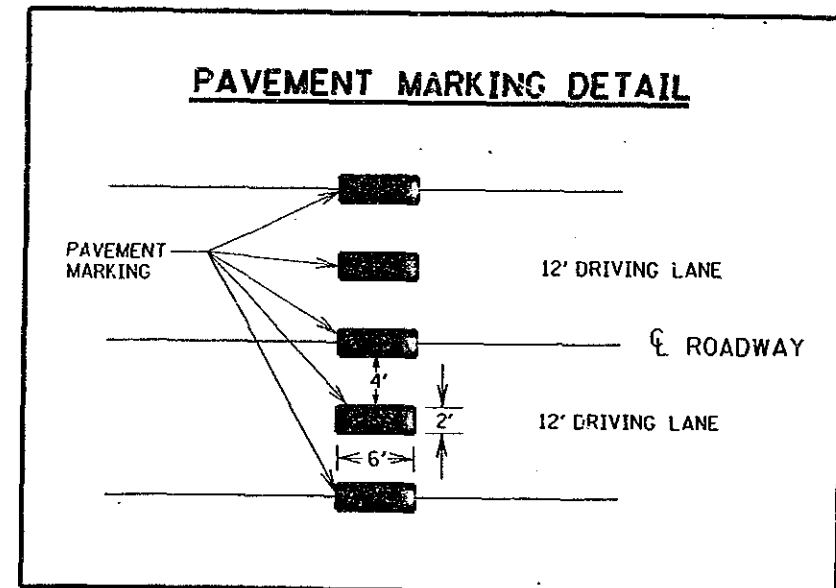
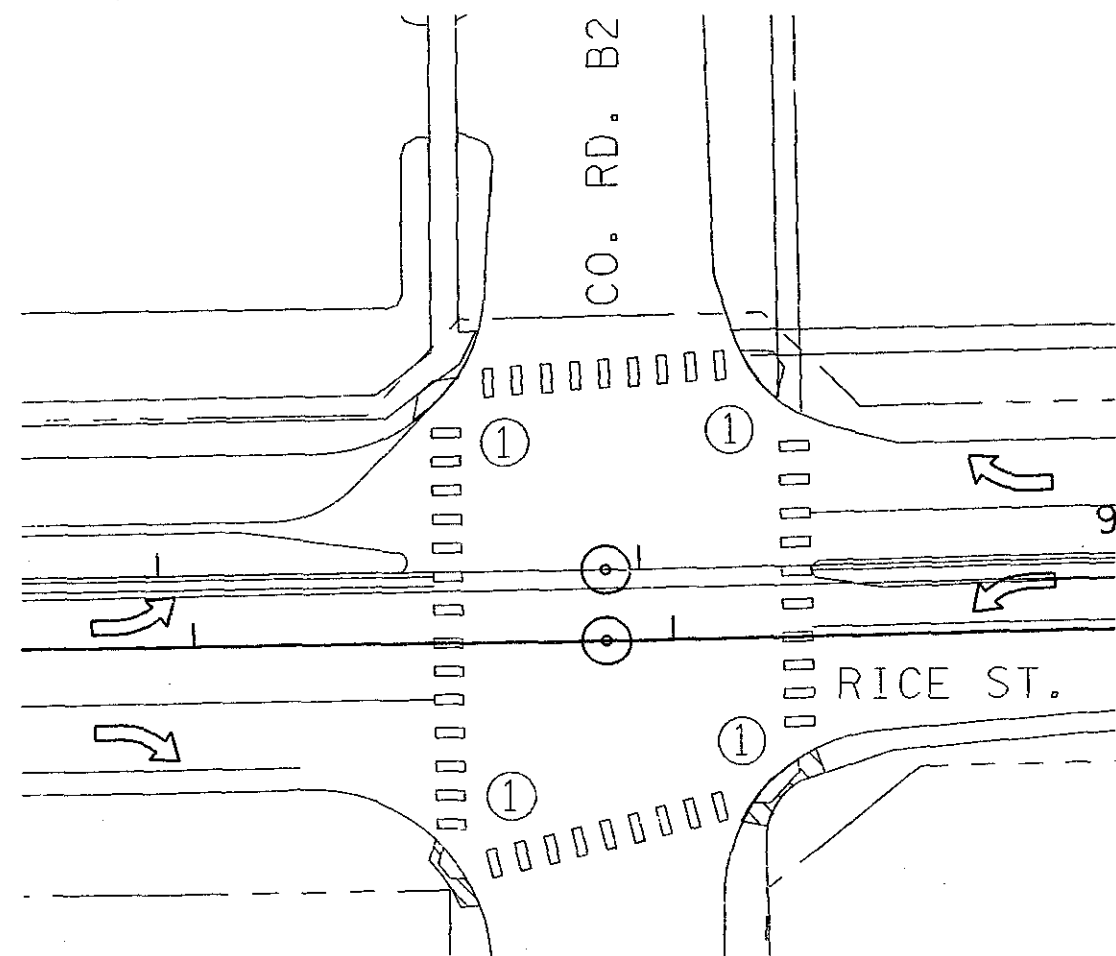
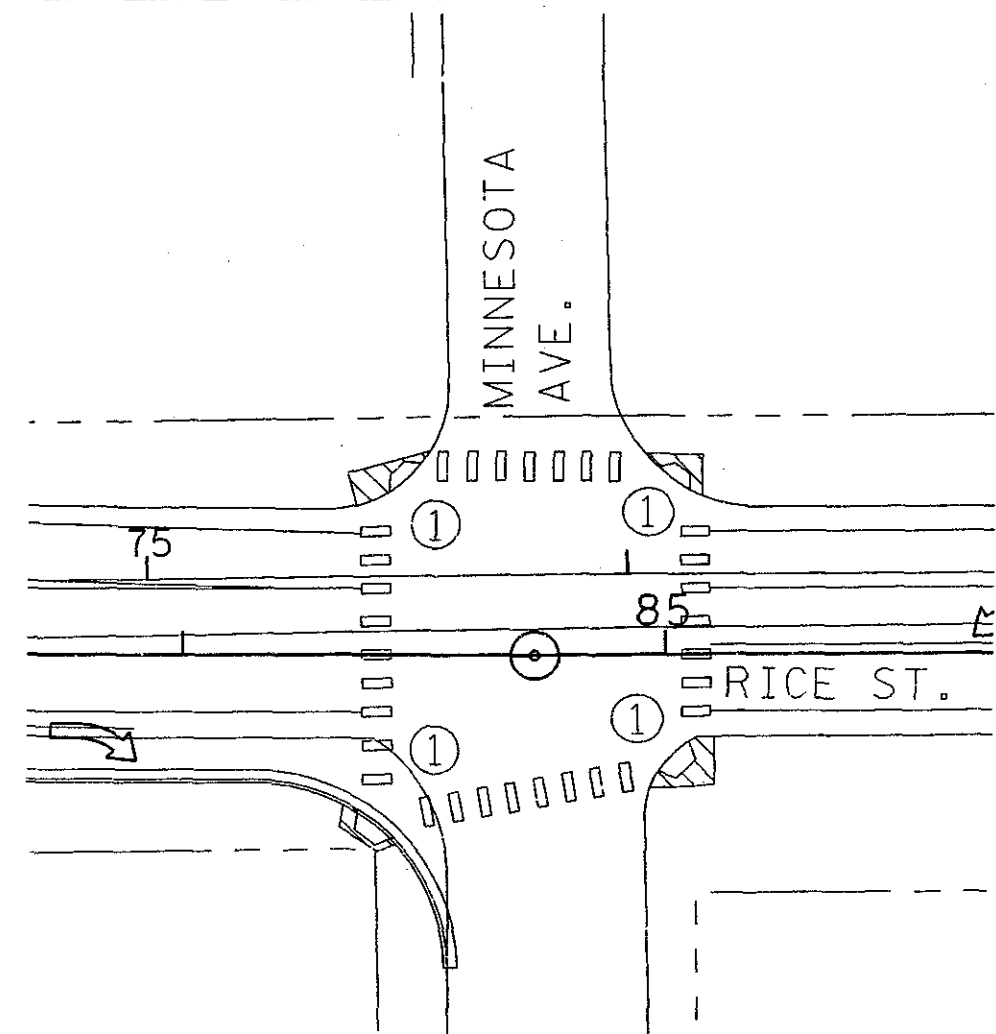
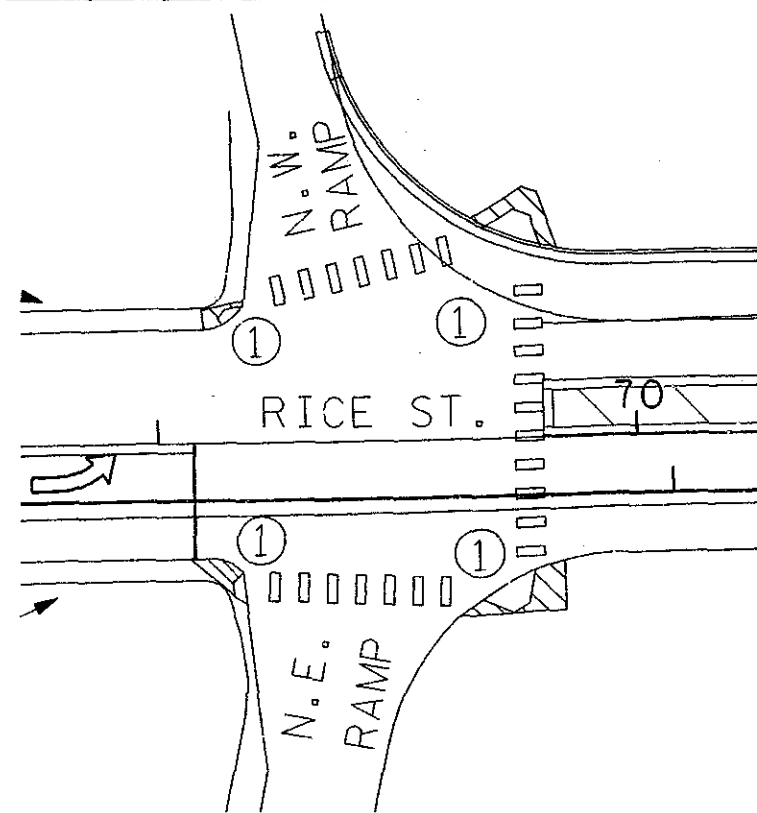
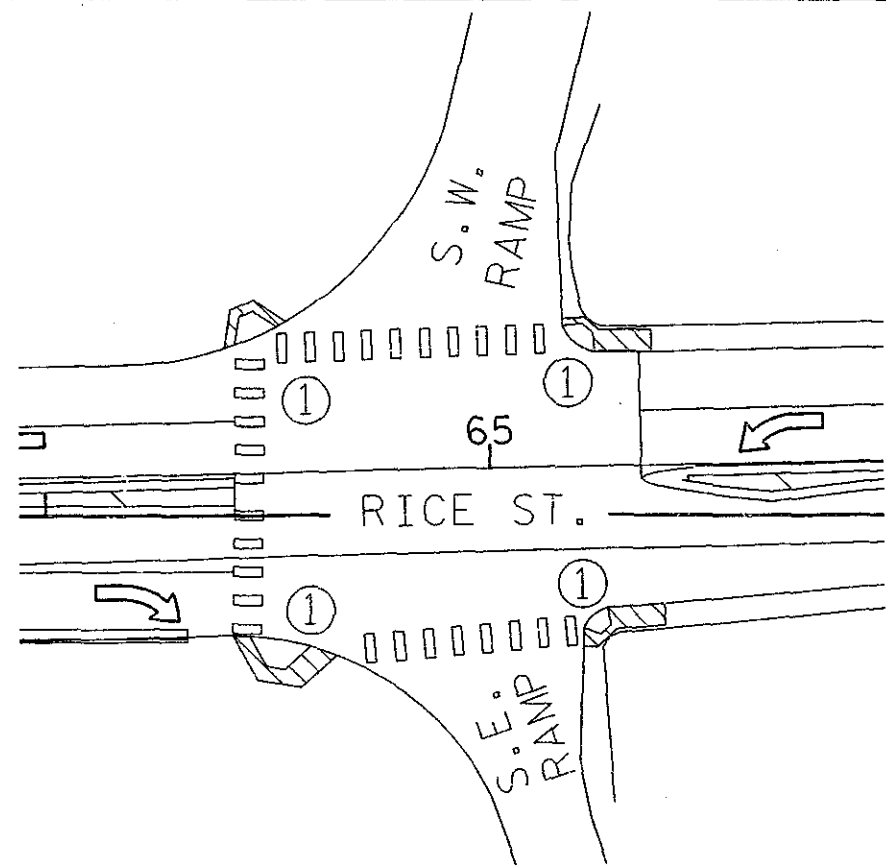
- ① Quantities shown are for each assembly
- ② 3" Steel Pipe quantities have been rounded up to the nearest half foot.
- ③ CMP-A quantities for top concrete anchors are for 2-2/3" x 1/2" corrugation and may vary slightly for 3" x 1" corrugation and older 2-2/3" x 1/2" corrugated pipes.

STATE OF MINNESOTA  
 DEPARTMENT OF TRANSPORTATION  
**VEHICLE SAFETY GRATES  
 FOR CENTERLINE CULVERTS**  
 QUANTITIES AND DIMENSIONS

SPECIFICATION  
 REFERENCE  
 2501

Sheet 2 of 2

SPECIAL DETAILS

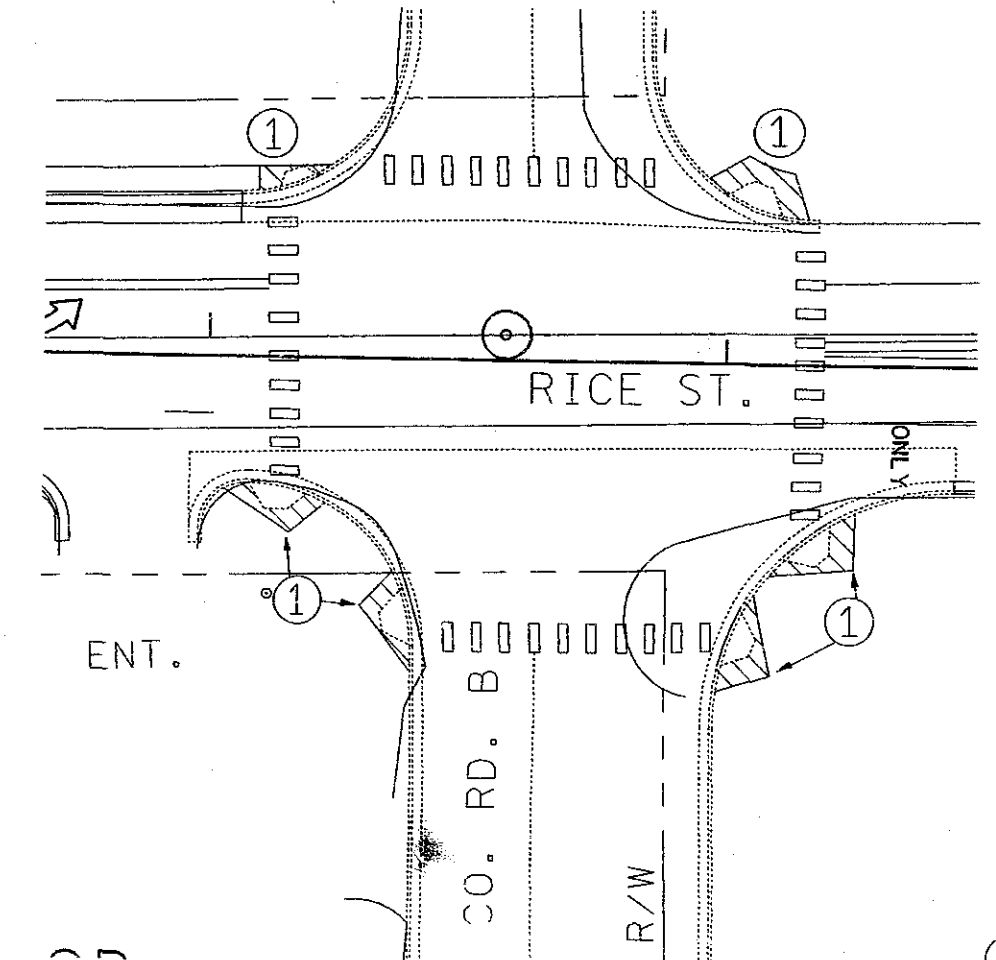
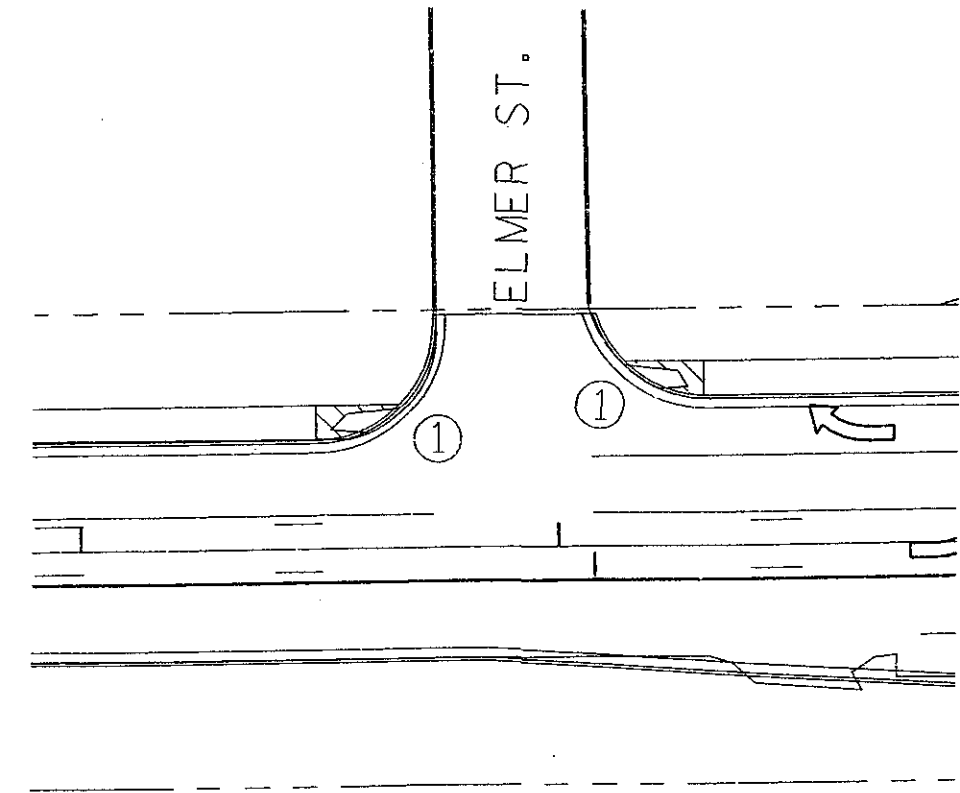
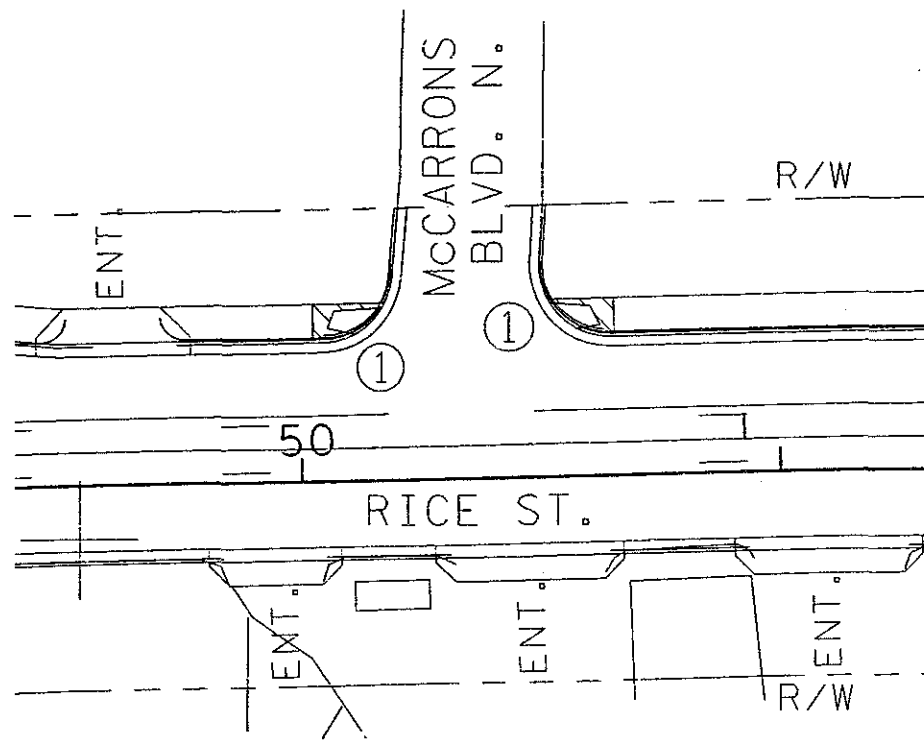
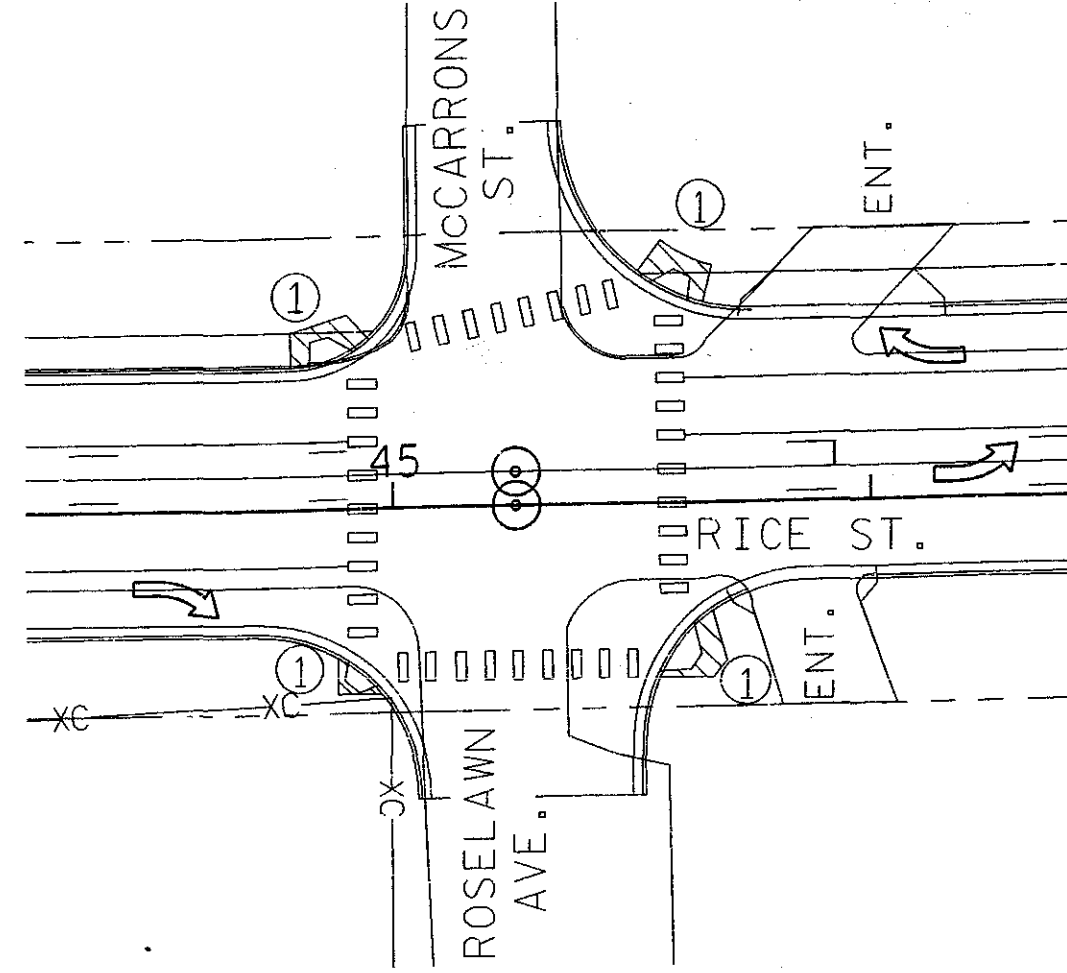
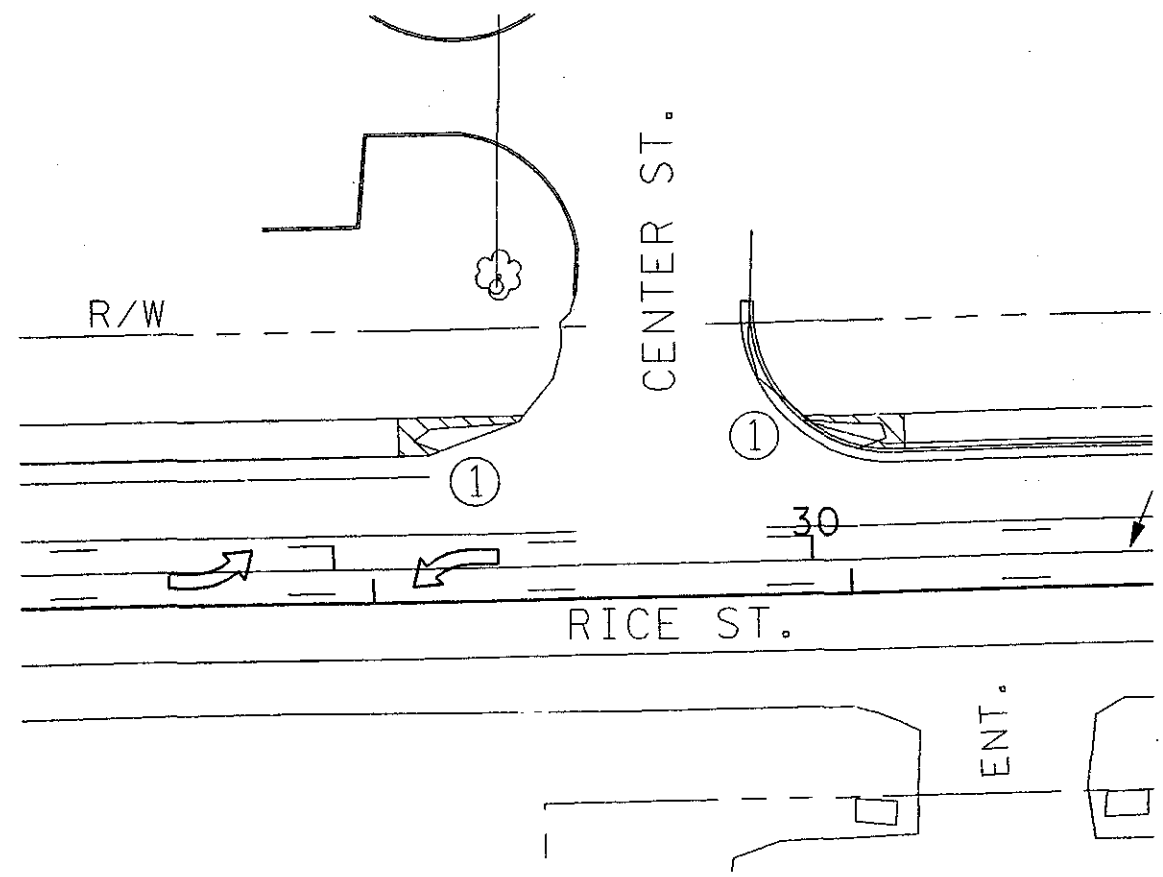


- 4" SIDEWALK CONSTRUCTION
- ① CONSTRUCT PEDESTRIAN CURB RAMP

State Proj. No. 6214-66 (T.H. 49 = 126)

(F)  
INTERSECTION DETAILS  
Sheet No. 18 of 58 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURES FOR THE DOCUMENT SERIES.

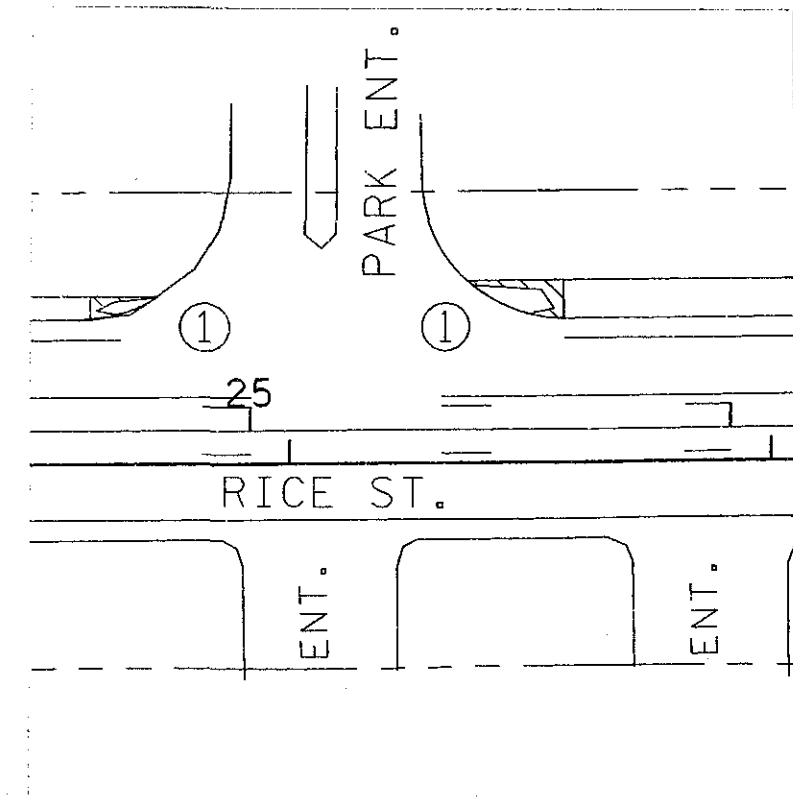
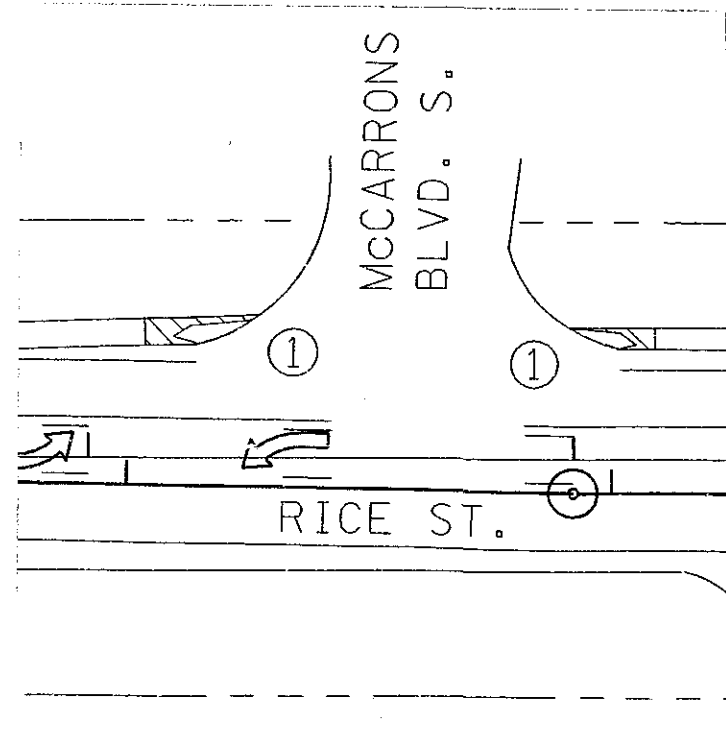
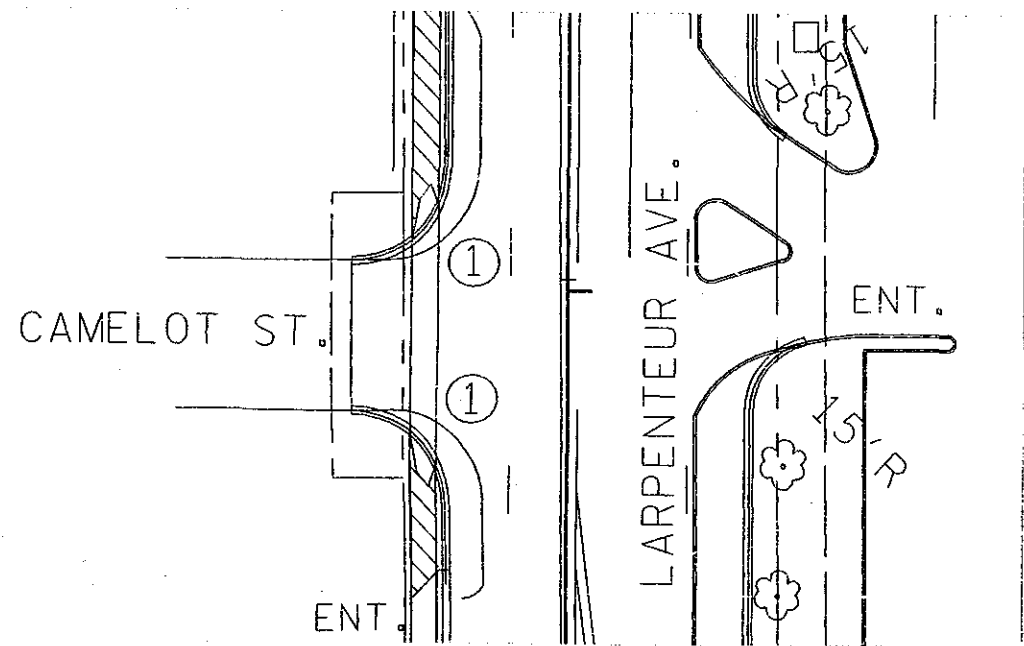
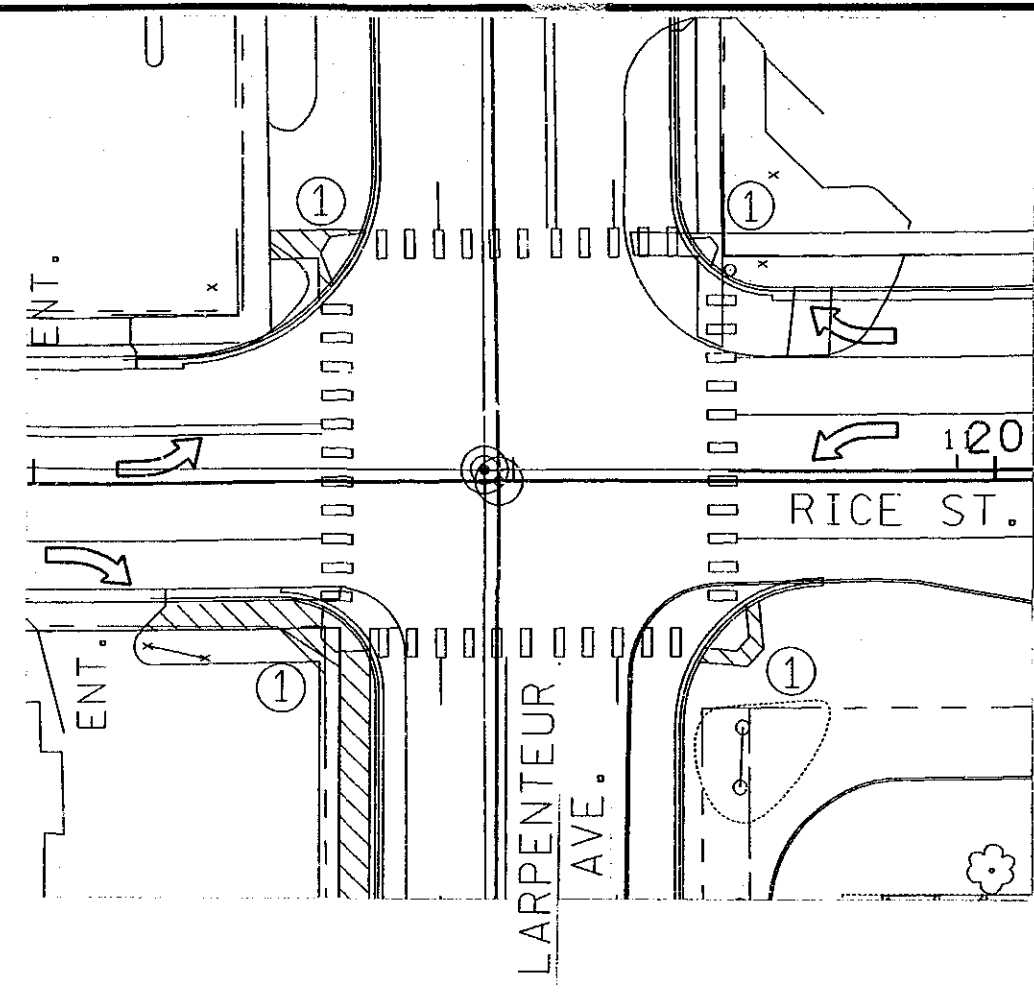
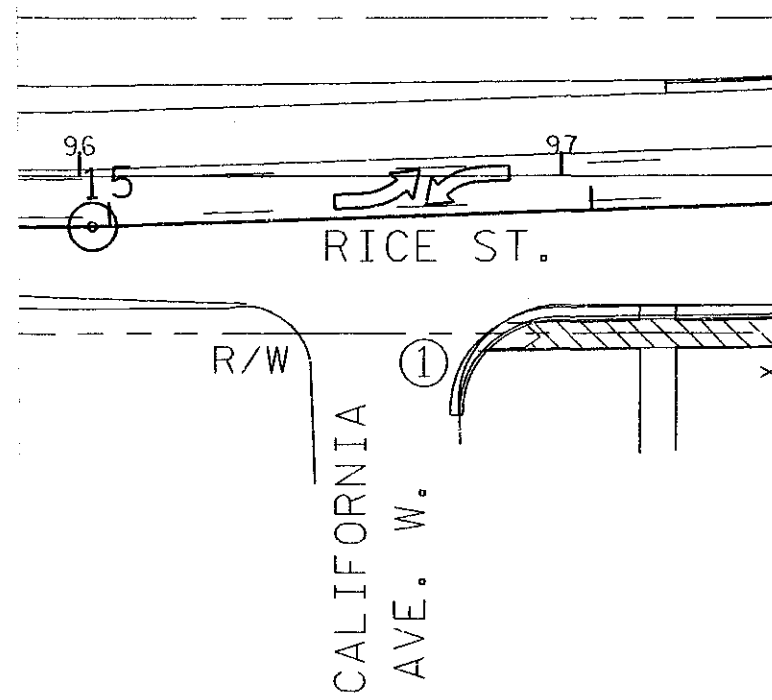
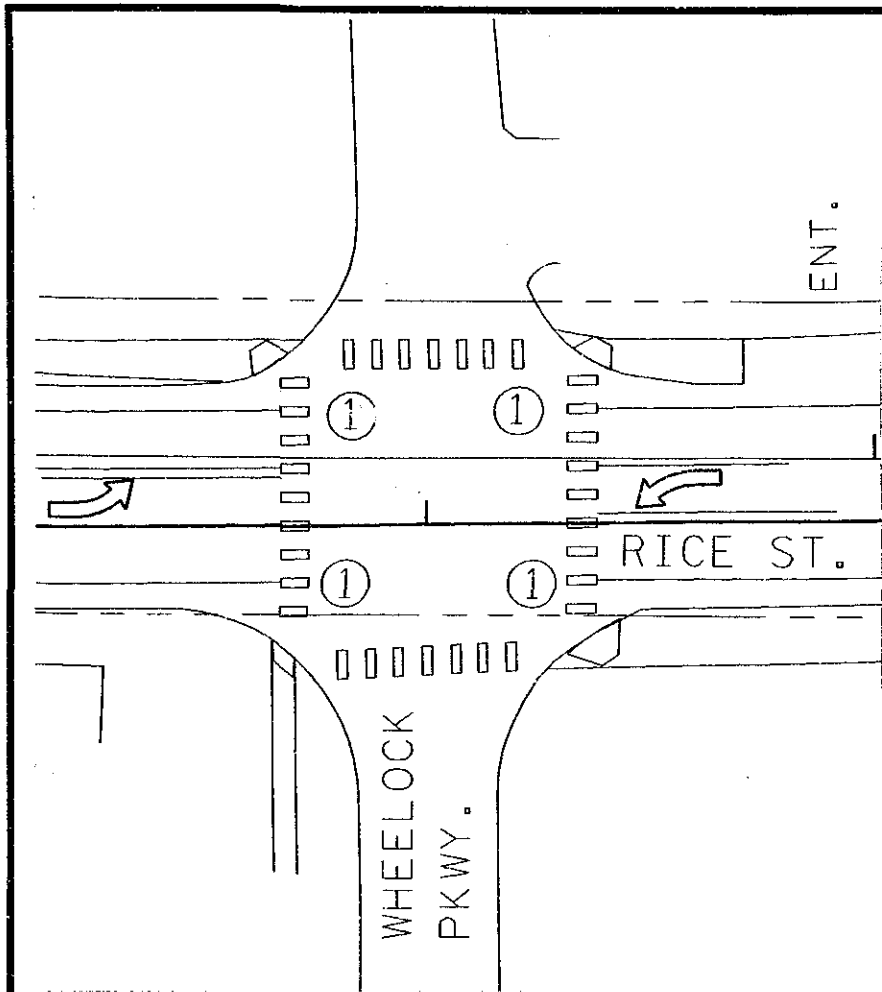


 4" CONG. WALK CONSTRUCTION  
 CONSTRUCT PEDESTRIAN CURB RAMP

State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 19 of 58 Sheets

INTERSECTION DETAILS (F)



-  4" CONC. WALK CONSTRUCTION
- ① CONSTRUCT PEDESTRIAN CURB RAMP

INTERSECTION DETAILS (F)

State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 20 of 58 Sheets

DRIVEWAYS				B
STATION	LOCATION	WIDTH FEET	PAVEMENT DEPTH INCHES	REMARKS
LARPEN TEUR AVE.				
497+08	LT.	24'	8"	
497+21	RT.	29'	8"	
497+68	LT.	42'	8"	
498+26	LT.	33'	8"	
498+60	RT.	30'	8"	
498+91	LT.	31'	8"	
499+37	RT.	35'		CLOSE
501+21	RT.	39'	8"	
502+70	RT.	22'	6"	
503+88	RT.	52'	6"	
T.H. 49				
16+56	RT.	35'	8"	
17+08	LT.	27'	8"	
17+41	LT.	25'	8"	
17+49	RT.	30'	8"	
18+06	LT.	31'	8"	
18+10	RT.	32'	8"	
19+94	LT.	30'		CLOSE
20+58	LT.	50'	8"	
21+30	LT.	40'	8"	
24+31	LT.	45'	8"	
40+66	LT.	42'	8"	
42+32	LT.	47'	8"	
43+38	RT.	48'	6"	
43+56	LT.	35'	8"	
45+86	RT.	32'	8"	
45+96	LT.	43'	8"	
46+62	RT.	30'	8"	
46+67	LT.	42'	8"	
47+10	RT.	29'	6"	
47+45	LT.	58'	8"	
48+05	LT.	41'	8"	
48+22	RT.	39'	8"	
49+18	LT.	37'	8"	
49+61	LT.	32'	8"	
49+94	RT.	27'	8"	
50+48	RT.	40'	8"	
51+10	RT.	40'	8"	
51+95	RT.	31'	6"	
53+15	LT.	38'	8"	
54+78	RT.	28'	6"	
57+43	RT.	30'		CLOSE
59+72	LT.	50'	8"	
61+67	LT.	46'	6"	
62+26	RT.	40'		CLOSE
62+95	LT.	46'	6"	
63+50	RT.	26'		CLOSE
64+36	LT.	30'	6"	
65+58	LT.	27'	6"	
65+94	LT.	28'	6"	
66+65	LT.	30'	6"	
67+92	LT.	32'	6"	
68+87	LT.	30'	6"	
79+98	LT.	20'		CLOSE
80+50	LT.	50'	8"	
82+42	RT.	50'	8"	
83+12	RT.	45'	8"	

MISCELLANEOUS REMOVALS													C
STATION TO STATION	LOCATION	CONCRETE DRIVEWAY PAVEMENT SQ. YD.	BITUMINOUS PAVEMENT SQ. YD.	CURB & GUTTER LIN. FT.	CONCRETE SIDEWALK SQ. FT.	REMOVE TRENCH PAVEMENT SQ. YD.	6" CONCRETE MEDIAN SQ. YD.	BITUMINOUS MEDIAN SQ. YD.	BITUMINOUS CURB LIN. FT.	CONCRETE CURB LIN. FT.	BITUMINOUS ISLAND SQ. YD.	REMOVE PAVEMENT (1) SQ. YD.	
LARPEN TEUR AVE.													
495+38 - 500+00	LEFT	200		271	215								
496+83 - 500+00	RIGHT	124	390	201									
500+00 - 505+42	RIGHT	62	106	430	1683								
500+00 - 505+42	LEFT			476					497		38		
T.H. 49													
11+63 - 18+62	LEFT	74		149		12							
11+67 - 19+19	RIGHT	64		250	1010	59							
18+60 - 19+48	RIGHT			24									
18+62 - 34+51	LEFT	183		46					20	350		10	
38+05 - 71+32	LEFT	362				285			216	1293			
40+20 - 74+15	RIGHT	72		298		63			300	821		3081	
73+40 - 83+05	LEFT	63		517									
78+05 - 85+05	RIGHT	184		292									
93+40 - 104+06	LEFT			24				718					
97+50 - 98+25	RIGHT			21									
104+92 - 108+02	LEFT						204						
TOTAL		1368	496	2999	2908	439	204	718	1033	2424	38	3091	

(1) 3-7/8" BITUMINOUS OVER CONC. BASE

SAWING PAVEMENT					D
STATION TO STATION	LOCATION	SAWING BIT. PAVEMENT (FULL DEPTH) LIN. FT.	SAWING CONC. PAVEMENT (FULL DEPTH) LIN. FT.	SAWING CONC. PAVEMENT (4 1/2") LIN. FT.	
LARPEN TEUR AVE.					
496+83 - 500+00	RIGHT	297			
501+78 - 502+38	RIGHT	170			
T.H. 49					
11+67 - 19+19	RIGHT	132			
11+63 - 18+62	LEFT	28			
19+55 - 24+20	LEFT	48	48		
38+25 - 71+32	LEFT	1439	75		738
38+25 - 71+37	RIGHT	3274			193
78+27 - 83+07	LEFT	35			
TOTALS:		5423	123		931

(F)  
TABULATIONS

MILLING TABULATIONS				E
STATION TO STATION	WIDTH FEET	SPEC. 2232	SPEC. 2232	
		MILL BIT SURFACE 2 1/2"	MILL BIT SURFACE 4"	
		SQUARE YARDS	SQUARE YARDS	
LARPEN TEUR AVE.				
493+50 - 496+85	56'	2084		
496+85 - 499+75	50'	1611		
499+75 - 500+20	124'	731		
500+20 - 505+42	41'	2378		
T.H. 49				
05+97 - 18+31	43'	5896		
19+55 - 23+78	44'	2068		
23+78 - 27+68	47'	2037		
27+68 - 31+30	55'	2112		
31+30 - 36+89	47'	2919		
36+89 - 38+96	54'	1143		
38+96 - 40+26	52'	751		39
40+26 - 56+65	42'	5927		370
56+65 - 62+71	50'	2745		
62+71 - 65+90	47' - 54'	1370		
65+90 - 70+85	54'	2473		
70+85 - 70+97	52'	69		
70+97 - 72+19	48'	651		
72+19 - 72+47	46'	143		
72+47 - 73+45	57'	621		
73+45 - 75+0	58' - 48'	954		
75+07 - 80+00	48'	2629		
80+00 - 84+55	48' - 44'	2326		
84+55 - 89+65	48'	2720		
89+65 - 93+53	48' - 55'	2220		
93+53 - 94+70	55' - 69'	806		
94+70 - 95+53	69' - 71'	646		
95+53 - 98+10	71'	2027		
98+10 - 99+72	71' - 52'	1107		
99+72 - 107+10	52'	4264		
107+10 - 108+24	52' - 58'	697		
108+24 - 111+05	58' - 60'	1842		
TOTALS:		59967		409

CONCRETE DRIVEWAYS, WALK AND CURB & GUTTER								F
STATION TO STATION	LOCATION	B624	B624 SPEC.	B612	D424	4" CONC.	6" CONC.	8" CONC.
		C & G (LIN. FT.)	C & G (LIN. FT.)	C & G (LIN. FT.)	C & G (LIN. FT.)	WALK (1) (SQ. FT.)	DRIVEWAY (SQ. YD.)	DRIVEWAY (SQ. YD.)
LARPEN TEUR AVE.								
496+83 - 500+00	RT.			328		143		222
495+38 - 500+00	LT.			432		32		100
500+00 - 505+42	RT.			511		1698		
500+00 - 505+42	LT.			929		84		
T.H. 49								
15+70 - 18+51	RT.	311				1212		65
16+16 - 18+31	LT.	233						76
19+55 - 34+57	LT.	518				1980		235
38+05 - 74+25	LT.	1990	1220			972	258	543
40+20 - 74+30	RT.	2800			419	749	76	260
78+00 - 85+10	LT.	527				254		67
78+00 - 85+10	RT.	387				285		175
97+43 - 98+25	LT.	24				85		
97+43 - 98+30	RT.	21				139		
TOTALS:		6811	1220	1800	419	7633	334	1743

(1) INCLUDES PED. RAMPS

CONCRETE BASE SUMMARY						H
STATION TO STATION	LOCATION	IRREGULAR WIDTH CONCRETE BASE				
		DEPTH	WIDTH	TOTAL AREA	STRUCT. CONC.	
				SQ YD	CU YD	
38+24 - 38+40.5	30' LT - 16' RT	7.5"	46'	84	18	
41+99.5 - 42+07.5	30' LT - 16' RT	7.5"	46'	41	9	
42+07.5 - 42+15.5	30' LT - 24' RT	7.5"	6'	5	1	
43+71 - 43+79	30' LT - 5' RT	7.5"	35'	31	6	
43+79 - 43+89	30' LT - 24' RT	7.5"	6'	7	1	
46+29 - 46+37	30' LT - 5' RT	7.5"	35'	31	6	
50+62.5 - 50+72.5	30' LT - 24' RT	7.5"	6'	7	1	
50+72.5 - 50+80.5	30' LT - 5' RT	7.5"	35'	31	6	
52+78 - 52+86	30' LT - 5' RT	7.5"	35'	31	6	
55+82 - 55+90	30' LT - 5' RT	7.5"	35'	31	6	
57+96 - 58+04	30' LT - 5' RT	7.5"	35'	31	6	
63+21.5 - 63+29.5	29' LT - 6' RT	7.5"	35'	31	6	
67+68.5 - 67+76.5	25' LT - 10' RT	7.5"	35'	31	6	
TOTAL:				392	78	

(F)  
TABULATIONS

State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 22 of 58 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW. DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURE FOR THE DOCUMENT SERIES.

STRIPING CHART											I
STATION TO STATION	4" SOLID LINE - WHITE POLY PREFORM	8" SOLID LINE - WHITE POLY PREFORM	24" SOLID LINE - WHITE POLY PREFORM	24" SOLID LINE - WHITE POLY PREFORM (X-WALK)	4" BROKEN LINE - WHITE POLY PREFORM	4" SOLID LINE - YELLOW POLY PREFORM	24" SOLID LINE - YELLOW POLY PREFORM	4" BROKEN LINE - YELLOW POLY PREFORM	PAVT. MESSAGE 'LT. ARROW' POLY PREFORM	PAVT. MESSAGE 'RT. ARROW' POLY PREFORM	PAVT. MESSAGE 'ONLY' POLY PREFORM
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH
LARPEUR AVE.											
493+50 - 505+42	780			264	480	3105	158		2		
T.H. 49											
5+97 - 18+60	1930			192	60	2472	12	260	12	1	
19+45 - 35+60	3007					3070		500	11	2	
35+60 - 51+00	1338			222		2796		580	11	4	
51+00 - 66+50	950				60	3032		600	11	2	
66+50 - 82+10	2706	41	48	516	90	3251	121	50	11	3	1
82+10 - 98+20	3422			378		2976		290	10	4	
98+20 - 111+08	2325			60		2439		380	8	3	
TOTAL	16458 (1)	41	48 (2)	1632	690	23141 (3)	291 (4)	2660 (5)	76 (6)	19 (7)	1

- (1) 5000 LINEAR FEET TO BE FURNISHED BY MN/DOT. CONTRACTOR MUST PICK-UP AT METRO EAST HEADQUARTERS (DAKDALE)  
(2) 27 LINEAR FEET TO BE FURNISHED BY MN/DOT. CONTRACTOR MUST PICK-UP AT METRO EAST HEADQUARTERS (DAKDALE)  
(3) TO BE FURNISHED BY MN/DOT. CONTRACTOR MUST PICK-UP AT METRO EAST HEADQUARTERS (DAKDALE)  
(4) TO BE FURNISHED BY MN/DOT. CONTRACTOR MUST PICK-UP AT METRO EAST HEADQUARTERS (DAKDALE)  
(5) 611 LINEAR FEET TO BE FURNISHED BY MN/DOT. CONTRACTOR MUST PICK-UP AT METRO EAST HEADQUARTERS (DAKDALE)  
(6) TO EACH TO BE FURNISHED BY MN/DOT. CONTRACTOR MUST PICK-UP AT METRO EAST HEADQUARTERS (DAKDALE)  
(7) TO BE FURNISHED BY MN/DOT. CONTRACTOR MUST PICK-UP AT METRO EAST HEADQUARTERS (DAKDALE)

AGGREGATE AND BITUMINOUS SUMMARY								J
STATION TO STATION	LOCATION	SPEC. 2211 AGG. BASE CLASS 5	TYPE 31 BASE	TYPE 31 WEAR	TYPE 41 LEVELING	TYPE 41 BINDER	TYPE 41 WEAR	SPEC. 2357 BITUMINOUS TACK COAT
		CU. YD.	TON	TON	TON	TON	TON	GAL.
LARPEUR AVE.								
493+50 - 505+42	LT. & RT.	133	130		561	130	461	775
T.H. 49								
05+97 - 15+70	LT. & RT.				384		256	463
15+70 - 18+31	LT. & RT.	5	5		103	5	72	128
18+31 - 23+78	LT. & RT.	9	76		171	43	144	240
23+78 - 38+96	LT. & RT.	(9) 59	9	34	688		458	832
38+96 - 56+65	LT. & RT.	(9) 439	716	118	677	113	527	867
56+65 - 52+71	LT. & RT.	(9) 124	315	44	278	47	216	364
62+71 - 65+90	LT. & RT.	(9) 32	172	17	146		98	173
65+90 - 71+20	LT. & RT.	(9) 47	129	24	262		175	315
71+20 - 73+45	LT. & RT.				118		78	142
73+45 - 75+07	LT. & RT.				79		52	95
75+07 - 80+00	LT. & RT.	16	16		217	16	145	275
80+00 - 84+55	LT. & RT.	59	59		189	59	145	272
84+55 - 89+65	LT. & RT.				224		150	272
89+65 - 93+53	LT. & RT.				183		122	222
93+53 - 94+70	LT. & RT.				66		44	81
94+70 - 95+53	LT. & RT.				53		36	65
95+53 - 98+10	LT. & RT.				167		112	203
98+10 - 99+72	LT. & RT.				91		61	111
99+72 - 107+10	LT. & RT.				352		235	426
107+10 - 108+24	LT. & RT.				57		38	70
108+24 - 111+05	LT. & RT.				152		101	184
TOTAL		923	1627	237	5218	415	3746	6577

(9) INCLUDES 426 CU.YDS. FOR BIKE TRAIL CONST.

TURF ESTABLISHMENT				K
STATION TO STATION	LOCATION	SODDING	FERTILIZER 10-20-20 (8)	
		SQ. YD.	POUND	
LARPEUR AVE.				
496+83 - 505+42	RIGHT	533	39	
495+38 - 505+42	LEFT	504	36	
T.H. 49				
16+16 - 18+31	LEFT	29	2	
19+55 - 24+20	LEFT	418	30	
34+45 - 71+32	LEFT	2335	169	
38+20 - 71+37	RIGHT	2036	147	
78+27 - 83+07	LEFT	539	39	
81+37 - 84+57	RIGHT	153	11	
TOTAL		6547	473	

(8) APPLIED AT A RATE OF 350 POUNDS/ACRE

(F) TABULATIONS

State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 23 of 58 Sheets





STATION	LOCATION	INPLACE	RESPONSIBILITY	REMARKS	REMOVE			SALVAGE				
					PIPE SEWER	C.B.	M.H.	AFRON	PIPE SEWER	CASTING	AFRON	
					LIN. FT.	EACH	EACH	EACH	LIN. FT.	EACH	EACH	
T.H. 49												
18+54	3' RT. - E.	15" R.C.P.	(A)	(5)								
18+59	41' LT.	C.B.	(A)	T.O.C. 864.85 F.L. 862.00		1						
18+59	51' LT. - E.	15" R.C.P.	(A)	(4)								
18+59	41' LT. - E.	15" R.C.P.	(A)	(4)								
38+31	238' LT. - E.	30" C.M.P.	(B)									
38+33	196' LT.	C.B.	(B)	T.O.C. 839.23 F.L. 834.33		1						
38+33	196' LT. - E.	30" C.M.P.	(B)									
38+37	109' LT.	C.B.	(B)	T.O.C. 839.79 F.L. 833.70		1						
38+37	109' LT. - E.	30" C.M.P.	(B)									
38+41	56' LT.	C.B.	(A)	T.O.C. 841.07 F.L. 832.90		1						
38+41	56' LT. - N.	15" C.M.P.	(A)	(6)								
38+41	56' LT. - E.	30" C.M.P.	(A)									
41+65	50' LT. - N.	18" R.C.P.	(C)									
42+90	46' LT.	M.H.	(C)	T.O.C. 853.24 F.L. 847.70			1					
42+90	41' LT.	C.B.	(C)	T.O.C. 852.78 F.L. 849.50			1					
42+90	41' LT. - W.	12" R.C.P.	(C)									
42+90	45' LT. - N.	18" R.C.P.	(C)									
43+65	15' RT.	C.B.	(D)	T.O.C. 835.14 F.L.			1					
43+65	15' RT. - E.	18" C.M.P.	(D)									
45+50	29' LT.	C.B.	(C)	T.O.C. 862.62 F.L. 858.10 (3)			1					
45+50	15' RT.	C.B.	(D)	T.O.C. 862.65 F.L. 859.00			1					
45+50	15' RT. - W.	12" R.C.P.	(D)	(2)								
45+50	35' LT.	M.H.	(C)	T.O.C. 863.11 F.L. 857.50				1				
45+50	35' LT. - E.	12" R.C.P.	(C)	(2)								
45+50	38' LT. - N.	18" R.C.P.	(C)									
47+74	29' LT.	C.B.	(C)	T.O.C. 869.09 F.L. 863.44 (3)			1					
47+74	34' LT.	M.H.	(C)	T.O.C. 869.06 F.L. 861.10				1				
47+74	34' LT. - E.	12" R.C.P.	(C)	(2)								
47+74	34' LT. - N.	15" R.C.P.	(C)									
47+74	15' RT.	C.B.	(D)	T.O.C. 869.20 F.L. 865.20			1					
47+74	15' RT. - W.	12" R.C.P.	(D)	(2)								
50+65	35' LT.	M.H.	(C)	T.O.C. 878.42 F.L. 873.10				1				
50+65	29' LT.	C.B.	(C)	T.O.C. 878.69 F.L. 874.64 (3)			1					
50+65	35' LT. - E.	12" R.C.P.	(C)	(2)								
50+71	15' RT.	C.B.	(D)	T.O.C. 878.72 F.L. 875.60			1					
50+71	15' RT. - W.	12" R.C.P.	(D)	(2)								
50+71	42' LT.	C.B.	(C)	T.O.C. 877.72 F.L. 874.10			1				1	
50+71	42' LT. - S.	15" R.C.P.	(C)									
50+71	42' LT. - E.	12" R.C.P.	(C)	(2)								
52+95	41' LT. - N.	15" C.M.P.	(C)									
53+44	33' LT.	M.H.	(C)	T.O.C. 887.60 F.L. 884.70				1				
53+44	29' LT.	C.B.	(C)	T.O.C. 887.41 F.L. 884.60 (3)			1					
53+44	16' RT.	C.B.	(D)	T.O.C. 887.25 F.L. 884.65			1					
53+44	16' RT. - W.	12" R.C.P.	(D)	(2)								
53+82	56' LT.	12" R.C.P.	(C)									
55+86	56' LT.	12" R.C.P.	(C)									
56+55	90' LT. - N.	12" R.C.P.	(C)	(4)								
58+64	54' LT. - N.	15" R.C.P.	(C)	(1)								
62+98	16' RT. - S.	12" C.M.P.	(D)	(2)								
62+98	16' RT.	C.B.	(D)	T.O.C. 913.45 F.L. 910.60			1					
63+53	30' RT. - N.	18" C.M.P.	(D)	(5)								
65+80	35' RT. - S.	12" X 22" CMP-A	(D)	(5)								
TOTAL						1648	16	5	6	15	1	1

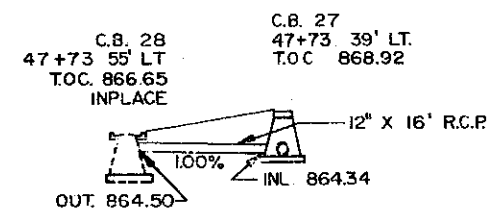
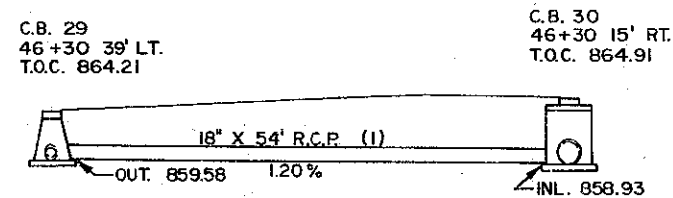
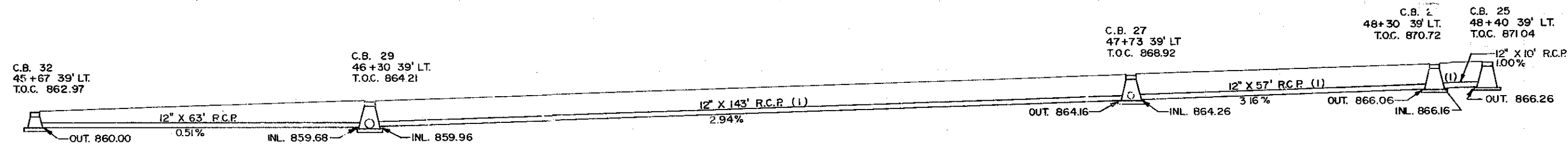
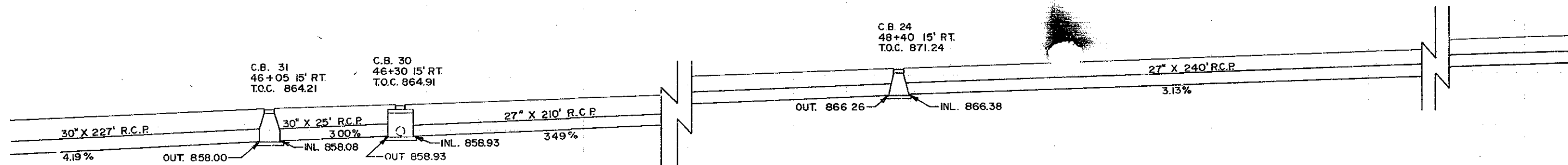
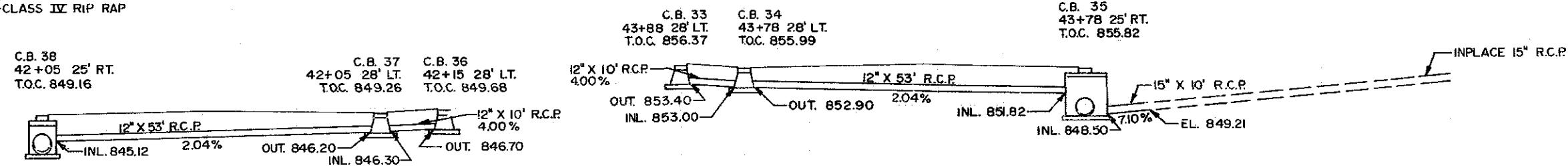
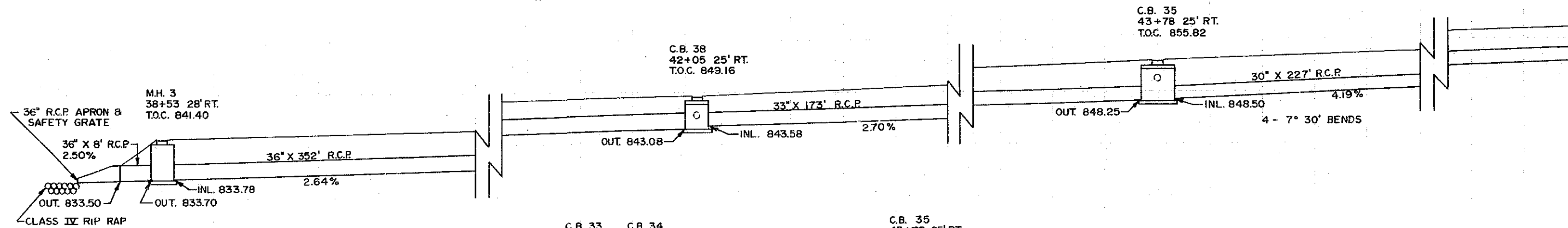
- (1) SALVAGE 15' OF 15" R.C.P. & APRON, TO BE PLACED AS DIRECTED BY THE ENGINEER  
(2) PLUG & ABANDON REMAINDER OF PIPE, INCIDENTAL TO REMOVAL  
(3) PLUG & ABANDON 12" R.C.P. TO THE EAST, INCIDENTAL TO REMOVAL  
(4) PLUG OUTLET IN C.B., INCIDENTAL TO REMOVAL  
(5) LEAVE AS IS, PLUG PIPE ENDS  
(6) LEAVE AS IS, CONNECT TO M.H. #39
- (A) MN/DOIT  
(B) RANGELY COUNTY  
(C) ROSEVILLE  
(D) MAPLEWOOD

INPLACE CULVERTS							N
STATION	LOCATION	TYPE OF PIPE	SIZE OF PIPE	LENGTH OF PIPE	NUMBER OF APRONS EACH	REMARKS	
			SIZE	LENGTH			
T.H. 49							
38 + 65	RIGHT	C.M.P.	18"	40	1	LEAVE AS IS (7)	
39 + 32	RIGHT	C.M.P.	18"	42	2	LEAVE AS IS	
40 + 07	RIGHT	C.M.P.	18"	38	2	LEAVE AS IS	
40 + 62	LEFT	C.M.P.	18"	40	2	REMOVE	
53 + 15	LEFT	C.M.P.	15"	25	2	REMOVE	
56 + 80	LEFT	R.C.P.	18"	50		REMOVE	
59 + 70	LEFT	R.C.P.	12"	78	2	REMOVE	
64 + 35	LEFT	C.M.P.	15"	25	1	REMOVE	
65 + 40	RIGHT	C.M.P.-A	12" X 22"	69		REMOVE	
65 + 55	LEFT	C.M.P.	15"	28	2	REMOVE	
65 + 94	LEFT	C.M.P.	15"	28	2	REMOVE	
66 + 65	LEFT	C.M.P.	12"	26	2	REMOVE	
67 + 91	LEFT	C.M.P.	12"	26	2	REMOVE	
68 + 88	LEFT	C.M.P.	12"	26	2	REMOVE	
69 + 00	RIGHT	C.M.P.-A	25"	92	2	LEAVE AS IS	
69 + 90	RIGHT	C.M.P.	18"	40	2	LEAVE AS IS	
70 + 81	RIGHT	C.M.P.	18"	42	2	LEAVE AS IS	
TOTALS:				730	28		

(7) FURNISH & INSTALL 1 - 6-S. SAFETY APRON, PLACE 3-B CU. YDS. CLASS III RIPRAP & 1.9 CU. YDS. GRANULAR FILTER AT THE OUTLET. THE FILTER BLANKET IS CONSIDERED INCIDENTAL FOR WHICH NO DIRECT PAYMENT WILL BE MADE.

CASTING ASSEMBLIES					0
ITEM	ASSEMBLY	CASTINGS #	STD. PLATE	QUANTITY	
A-90	RING CASTING	700-9	4101	3	
	COVER CASTING	712	4110		
B-5	FRAME CASTING	802	4129	33	
	GRATE CASTING	816	4154		
M-11	CURB BOX CASTING	823	4160	1	
	FRAME CASTING	731	4143		
D-5	FRAME CASTING	731	4143	1	
	GRATE CASTING	805	4132		
SPECIAL	FRAME CASTING	700-7	4101	2	
	DESIGN SPECIAL	(8)			

(8) SEE DETAIL ON SHEET 16



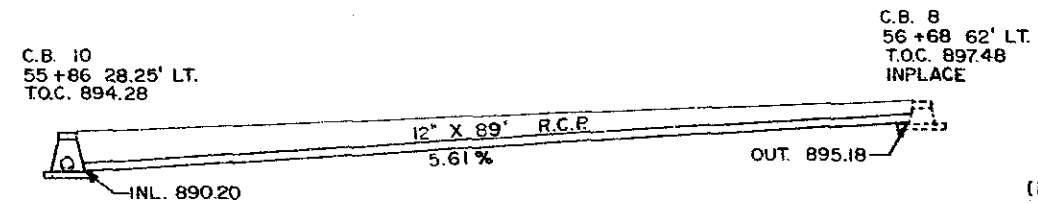
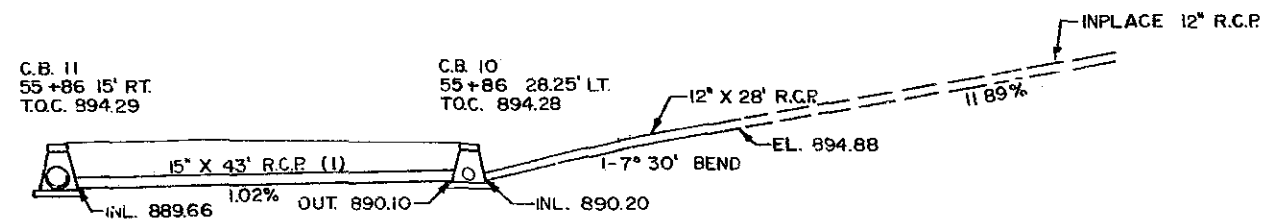
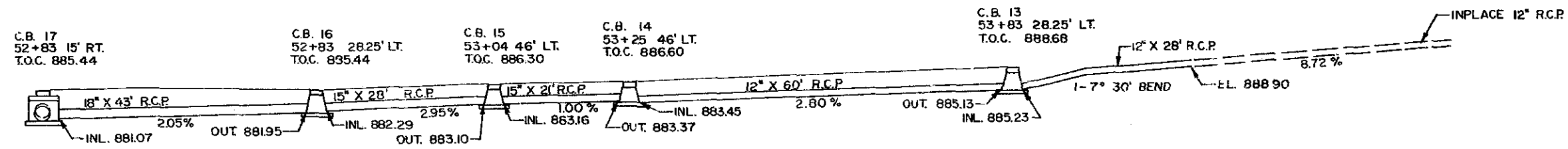
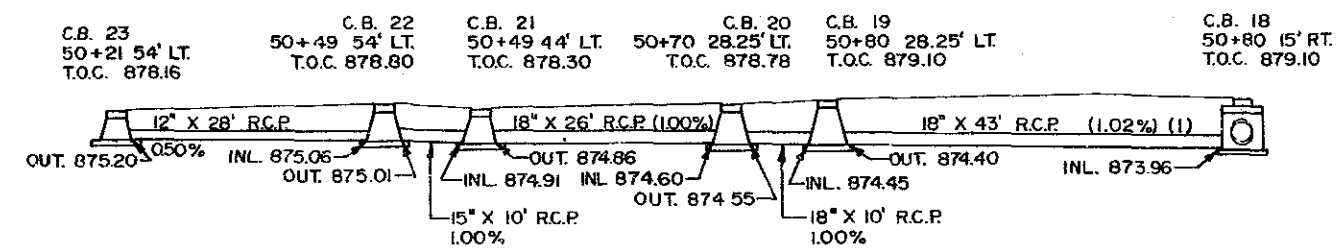
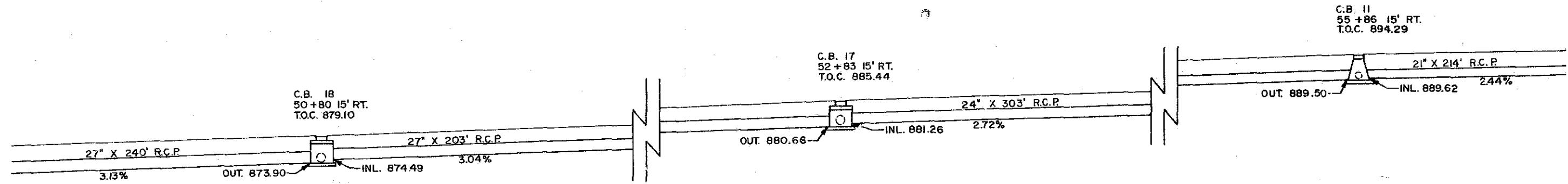
(1) C.R. PIPE MAY BE USED

DRAINAGE PROFILES

DATE PLO. No. 6214-66 (TH 49 = 126)

Sheet No. 26 of 58 Sheets

F

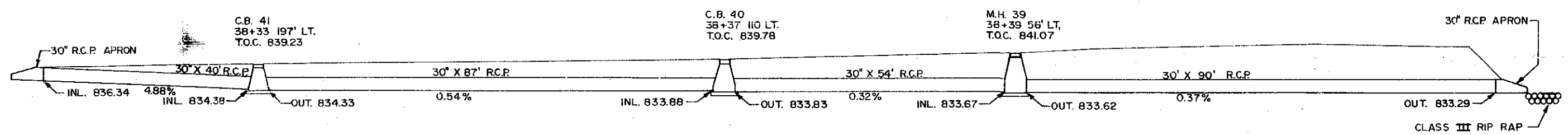
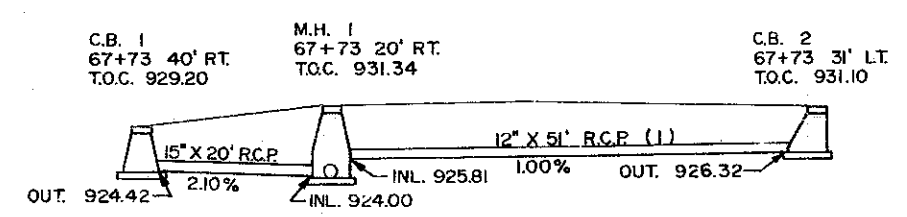
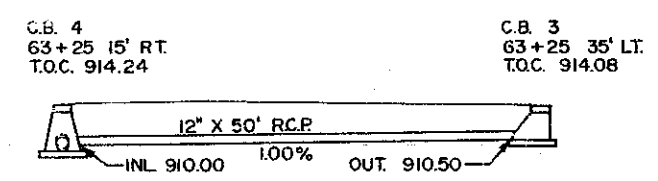
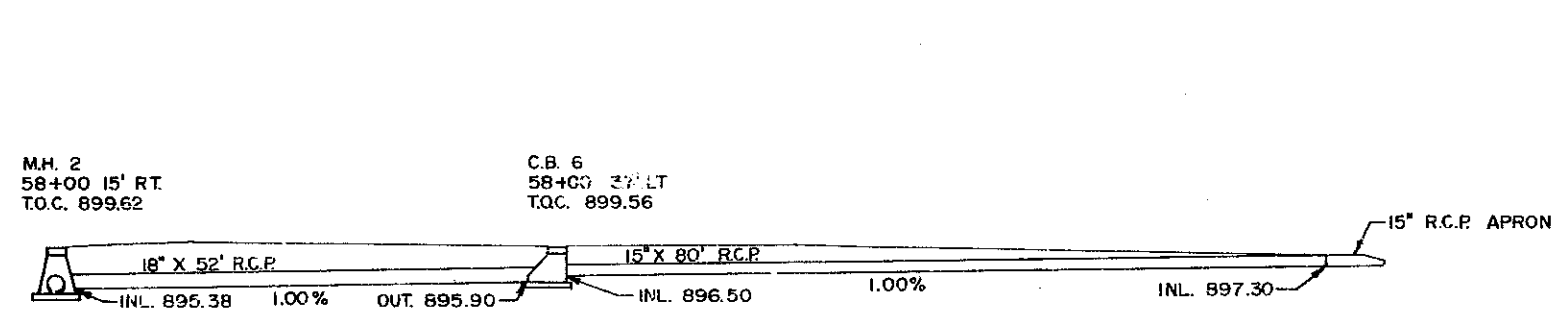
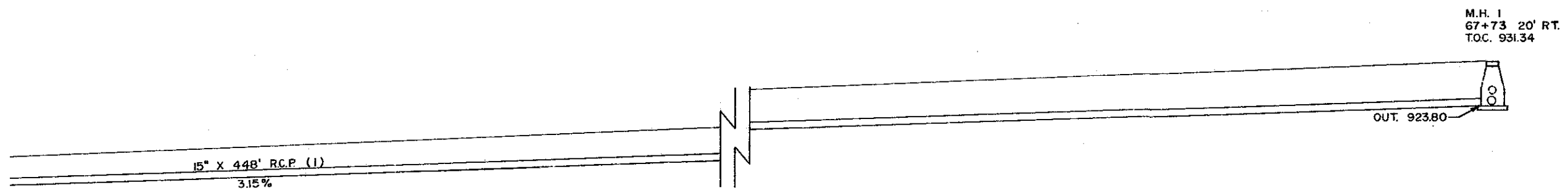
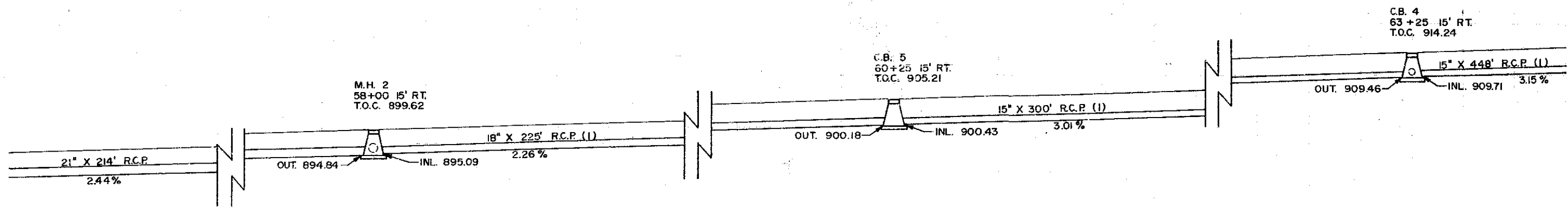


(1) C.P. PIPE MAY BE USED

DRAINAGE PROFILES

6214 -66 (T.H. 49 = 126)

27 of 58



CLASS III RIP RAP

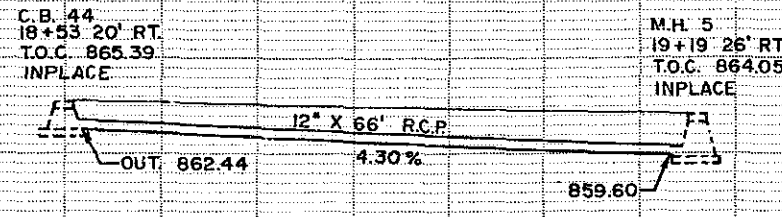
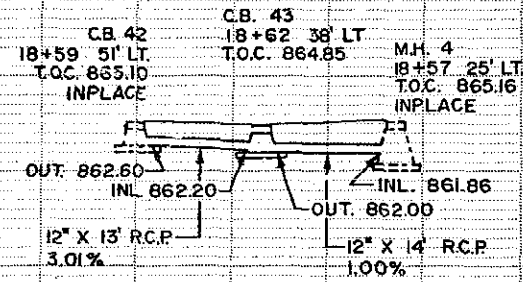
(1) C.P. PIPE MAY BE USED

DRAINAGE PROFILES

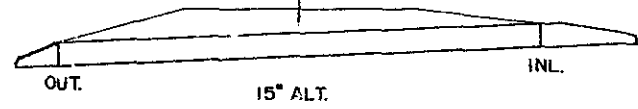
State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 28 of 58 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW. DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURE FOR THE DOCUMENT SERIES.



ENT. (T.H. 49 LEFT)



STATION	INLET	OUTLET
64+35	916.58	911.78
65+55	921.96	920.99
65+94	923.55	922.52
66+65	926.27	925.20
67+91	929.66	928.91
68+88	932.07	931.40

PORTABLE CULVERTS

P

STATION	LOCATION	PORTABLE CULVERTS WITH ALTERNATES			GAUGE	SODDING	GUIDE POST TYPE B	NOTES
		15" CSP	15" CPP	APRON				
		LIN. FT.	LIN. FT.	EACH				
64 + 35	LEFT (1)	25	25	2	16	16	2	1 SAFETY APRON
65 + 55	LEFT (1)	28	28	2	16	16	2	1 SAFETY APRON
65 + 94	LEFT (1)	28	28	2	16	16	2	1 SAFETY APRON
66 + 65	LEFT (1)	26	26	2	16	16	2	1 SAFETY APRON
67 + 91	LEFT (1)	26	26	2	16	16	2	1 SAFETY APRON
68 + 88	LEFT (1)	26	26	2	16	16	2	1 SAFETY APRON
		159	159	12		96	12	

(1) TO BE PLACED IN CENTER OF DITCH AS DIRECTED BY THE ENGINEER.

PORTABLE CULVERTS & DRAINAGE PROFILES

(F)

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE
	R2-1	BLACK ON WHITE	24X30
	R2-X1	BLACK ON WHITE	24X12
	R3-1	BLACK RED WHITE	24X24
	R3-2	BLACK RED WHITE	24X24
	R3-8	BLACK ON WHITE	48X48
	R3-9B	BLACK ON WHITE	24X36
	R9-3A	BLACK RED WHITE	18X18
	R11-2	BLACK ON WHITE	48X30
	R11-4	BLACK ON WHITE	60X30

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE
	W1-6	BLACK ON ORANGE	48X24
	W4-2	BLACK ON ORANGE	48X48
	W11-2	BLACK ON ORANGE	48X48
	W11-2A	BLACK ON ORANGE	48X48
	W14-X7	BLACK ON ORANGE	24X24
	W20-1	BLACK ON ORANGE	48X48
	W20-100P	BLACK ON ORANGE	24X18
	W21-X5	BLACK ON ORANGE	48X48

TRAFFIC CONTROL DEVICES LEGEND

- SYMBOL
- TRAFFIC CONTROL SIGN
  - CHANNELIZER SYMBOL
  - TYPE III BARRICADE
  - TYPE I OR II BARRICADE
  - DRUM-LIKE CHANNELIZER
  - VERTICAL PANEL - ONE SIDED
  - VERTICAL PANEL - TWO SIDED
  - CENTERLINE DELINEATOR
  - TYPE A OR B FLASHING WARNING LIGHT (SPECIFY HIGH INTENSITY)
  - TYPE C STEADY BURN WARNING LIGHT
  - RED FLASHING LIGHT
  - FLASHING ARROWBOARD (SPECIFY TYPE A, B, OR C)
  - SOLID LINE PAVEMENT MARKING (PAINT OR TAPE)
  - SOLID LINE PAVEMENT MARKING PLUS TEMPORARY RAISED PAVEMENT MARKERS (TRPMS) (10' SPACING)
  - REMOVE CONFLICTING PAVEMENT MARKINGS
  - INSTALL REMOVABLE PAVEMENT MARKINGS

TEMPORARY RAISED PAVEMENT MARKERS  
GENERAL GUIDELINES

All long term (more than 7 days) pavement edge and centerline markings through transition and alignment change areas shall be provided by solid lines and shall be supplemented with TRPM's (temporary raised pavement markers). All long term lane line markings through transition and alignment change areas shall be provided by broken or solid lines supplemented by TRPM's. The broken lane and centerline markings may be replaced by 8 inch wide broken or solid lines in areas that have highway lighting. Transition and alignment change areas include: lane closures tapers, sharp curves, exits shifts onto temporary roadways or bypasses.

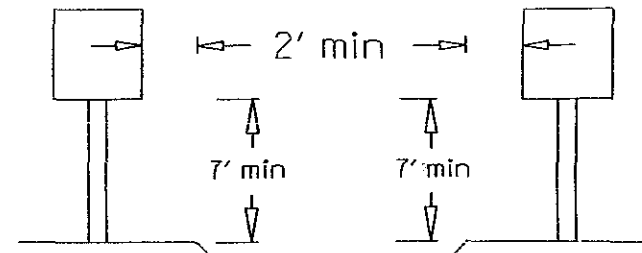
If the edge lines, centerlines, or lane lines are supplemented by TRPM's which are removed by snowplowing operations the TRPM's should be reinstalled as soon as practical after the snowplowing season.

I HEREBY CERTIFY THAT SHEETS 30 THROUGH 37 OF THIS PLAN WERE 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.

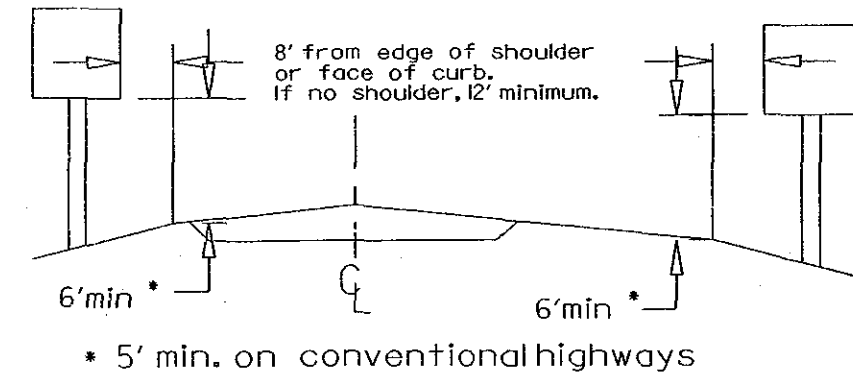
*Mary L. Bieringer*  
DATE 10-29-71 REG. NO. 15451  
DESIGN SQUAD M. ENGH

ALL TRAFFIC CONTROL SIGNING & DEVICES SHALL CONFORM TO THE MUTCD, INCLUDING APPENDIX B, DATED 3/80.

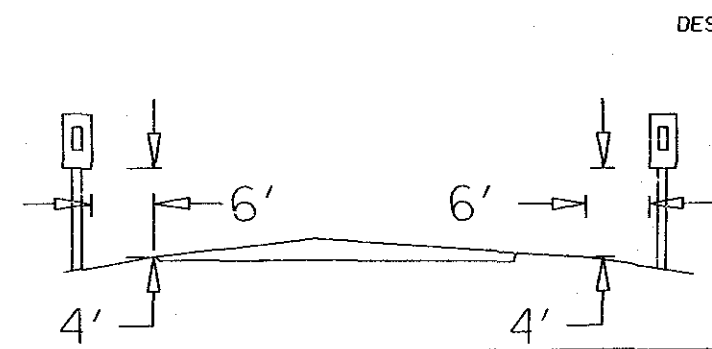
URBAN SIGN PLACEMENT



RURAL SIGN PLACEMENT



DELINEATOR PLACEMENT



TRAFFIC CONTROL DEVICES DETAILS

State Proj. No. 6214-66 (TH 49-126) Sheet No. 30 of 58 Sheets

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE
	M4-6	BLACK ON WHITE	24X12
	G20-1A	BLACK ON ORANGE	60X36
	G20-2	BLACK ON ORANGE	60X24
	G20-XI	BLACK ON ORANGE	60X48
	TYPE III	WHITE ON ORANGE	8'
	DRUM	WHITE ON ORANGE	18X36 MIN

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE

SIZE DIMENSION	12 x 6
RADIUS	1
MARGIN	.25 (1/4)
BORDER	.25 (1/4)
a	3.8
b	11
c	1
d	1.8
e	4
f	2.5
g	1.5
h	1
i	.5
j	.35
k	1.1
l	1
m	.5
n	1.5
o	
p	
q	
r	
s	
t	
u	
v	
w	
x	
y	
z	IE

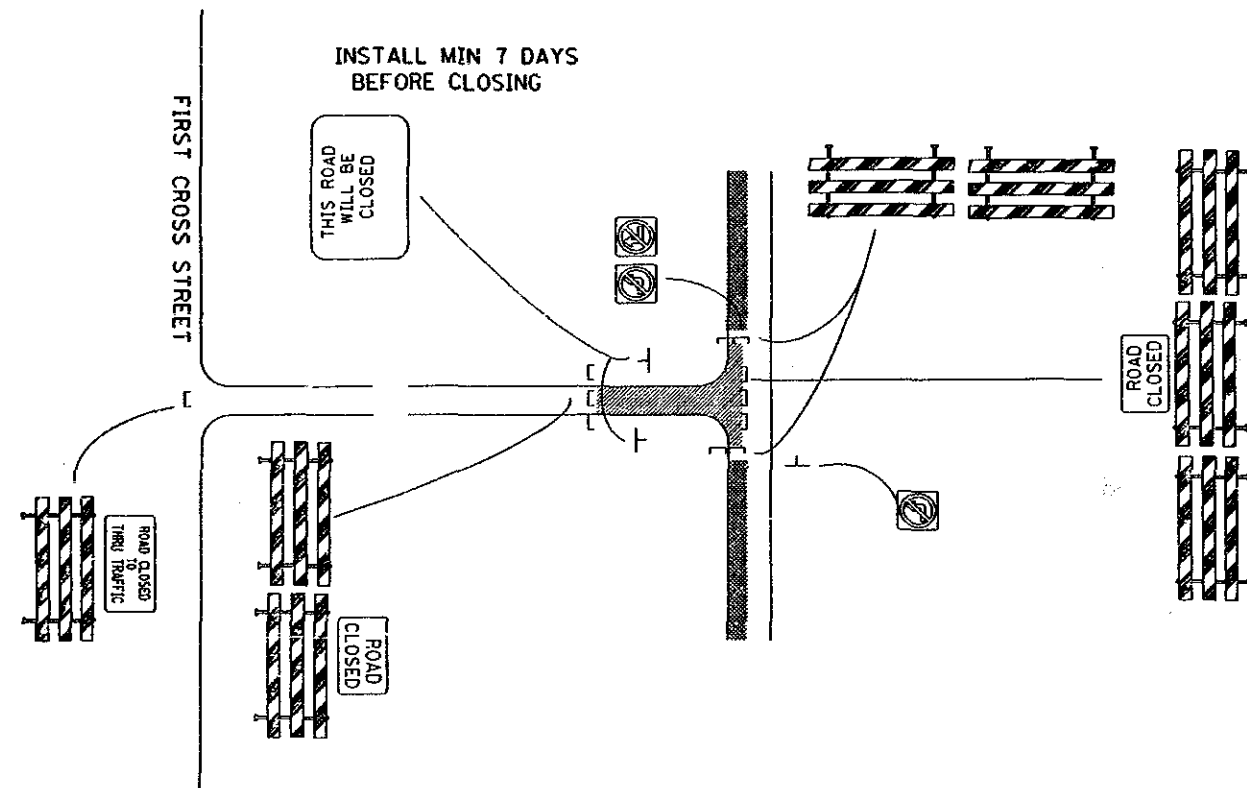
NOTES: 1) All dimensions are in inches.  
 2) Color - Black legend, arrow and border on white reflectorized background.  
 3) Arrow to be designated right (R) or left (L).

(F)

TRAFFIC CONTROL DEVICES DETAILS

State Proj. No. 6214-66 (TH 49=126) Sheet No. 31 of 58 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW. DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURES FOR THE DOCUMENT SERIES.



TYPICAL CLOSURE

ALL BARRICADES REQUIRE FLASHING LIGHTS DURING DARKNESS.  
 DETOUR REQUIRED IF CLOSURE IS LONGER THAN ONE WORK SHIFT.  
 CONTACT TRAFFIC ENGINEERING OFFICE FOR REQUIRED DETOUR SIGNING.

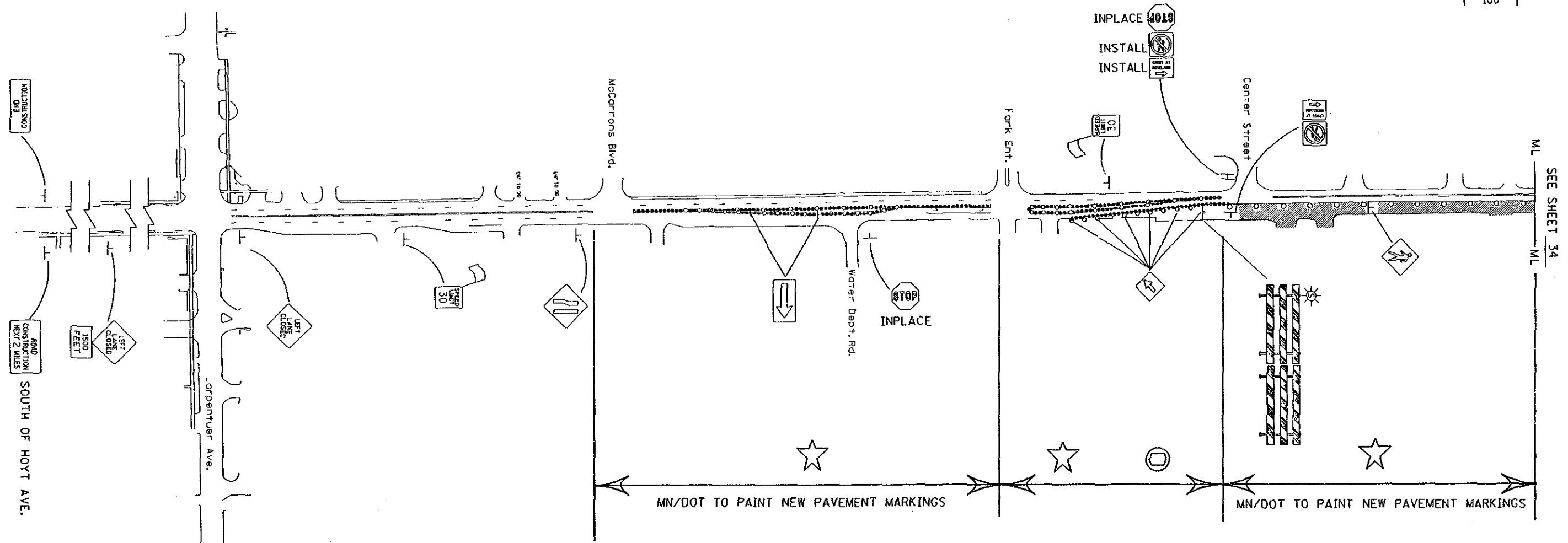
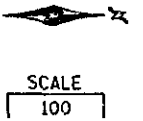
TRAFFIC CONTROL - ESTIMATED QUANTITIES				Q
ITEM	STAGE 1	STAGE 2	UNIT	TOTAL QUANTITY
PAVEMENT MARKING REMOVAL (1)	4580	---	LIN FT	4580
4" YELLOW REM POLY PREFORM	2660	2300	LIN FT	4960
4" WHITE REM POLY PREFORM (2)	780	900	LIN FT	1680
WHITE RAISED PAVT MARKERS (TEMP)	32	50	EACH	82
YELLOW RAISED PAVT MARKERS (TEMP)	243	115	EACH	458

(1) BASED ON 4" WIDTH  
 (2) USE FOR WIDER LINES ( i.e 8" line = 2 - 4" lines )

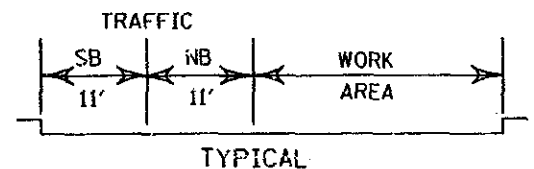
(F)

TRAFFIC CONTROL





SAND CONSTRUCTION NEXT 2 MILES SOUTH OF HOYT AVE.

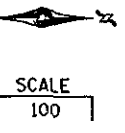


INPLACE MN/DOT SIGNS WILL BE REMOVED OR RELOCATED AS NEEDED BY MN/DOT (UNLESS NOTED OTHERWISE)

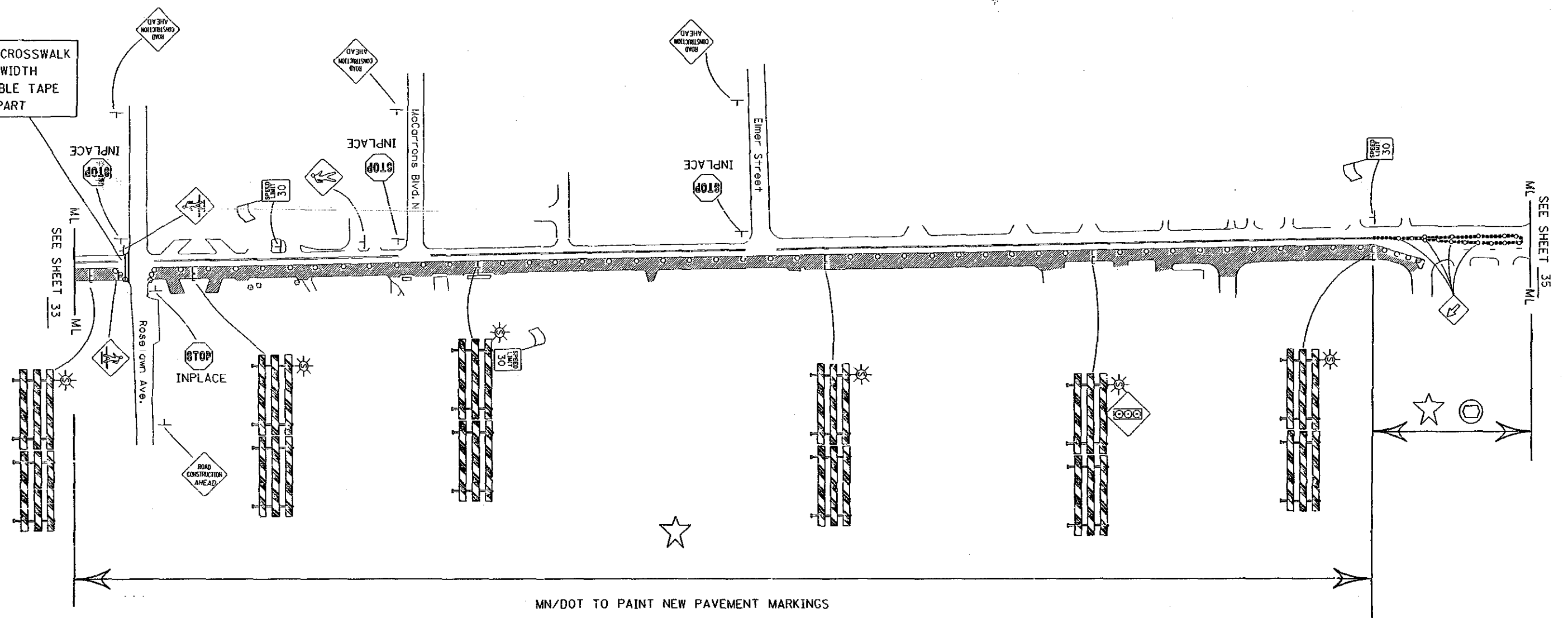
- NOTES:
- CONTRACTOR SHALL FURNISH AND INSTALL ALL DEVICES SHOWN UNLESS NOTED OTHERWISE.
  - ..... = TEMPORARY RAISED PAVEMENT MARKERS (TRPM)
  - [Hatched Box] = CLOSED TO TRAFFIC
  - EXACT LOCATION OF TRAFFIC CONTROL DEVICES TO BE DETERMINED BY THE ENGINEER.

STAGE 1  
TH. 49  
TRAFFIC CONTROL

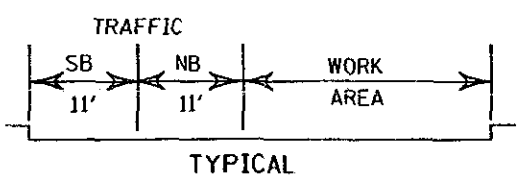
State Proj. No. 6214-66 (TH. 49=126) Sheet No. 33 of 58 Sheets



INSTALL CROSSWALK WITH 12' WIDTH REMOVEABLE TAPE MIN 6' APART



MN/DOT TO PAINT NEW PAVEMENT MARKINGS



INPLACE MN/DOT SIGNS WILL BE REMOVED OR RELOCATED AS NEEDED BY MN/DOT (UNLESS NOTED OTHERWISE)

- NOTES:
- CONTRACTOR SHALL FURNISH AND INSTALL ALL DEVICES SHOWN UNLESS NOTED OTHERWISE.
  - = TEMPORARY RAISED PAVEMENT MARKERS (TRPM)
  - ▨ = CLOSED TO TRAFFIC
  - EXACT LOCATION OF TRAFFIC CONTROL DEVICES TO BE DETERMINED BY THE ENGINEER.

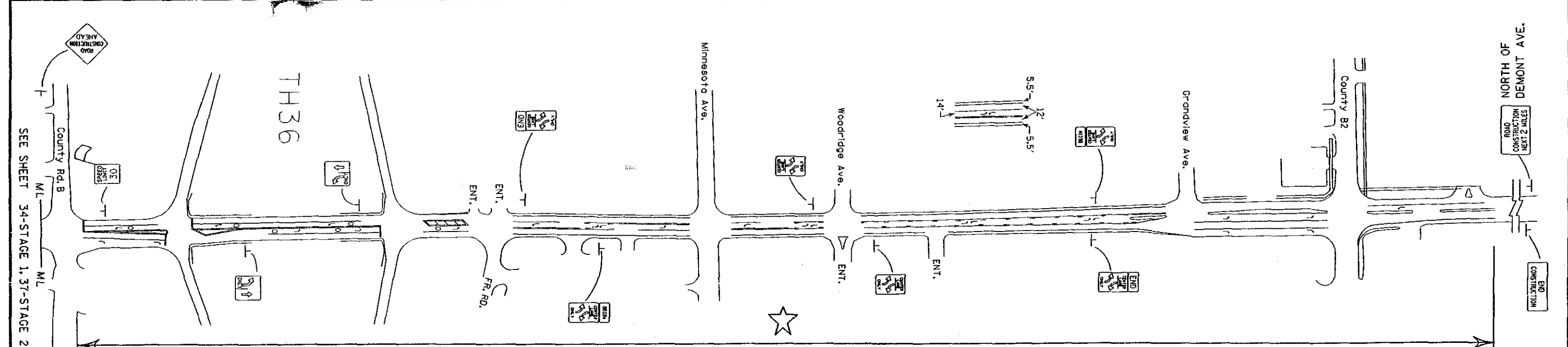
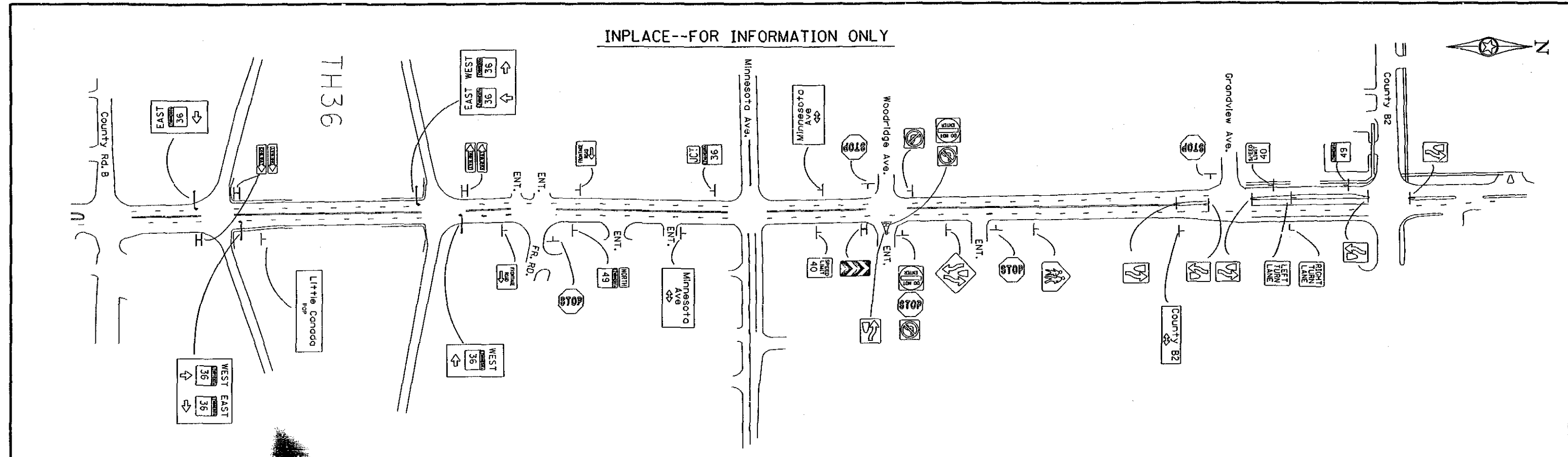
STAGE 1  
TH. 49  
TRAFFIC CONTROL

State Proj. No. 6214-66 (TH. 49-126) Sheet No. 34 of 58 Sheets



ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW. DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURES FOR THE DOCUMENT SERIES.

INPLACE--FOR INFORMATION ONLY



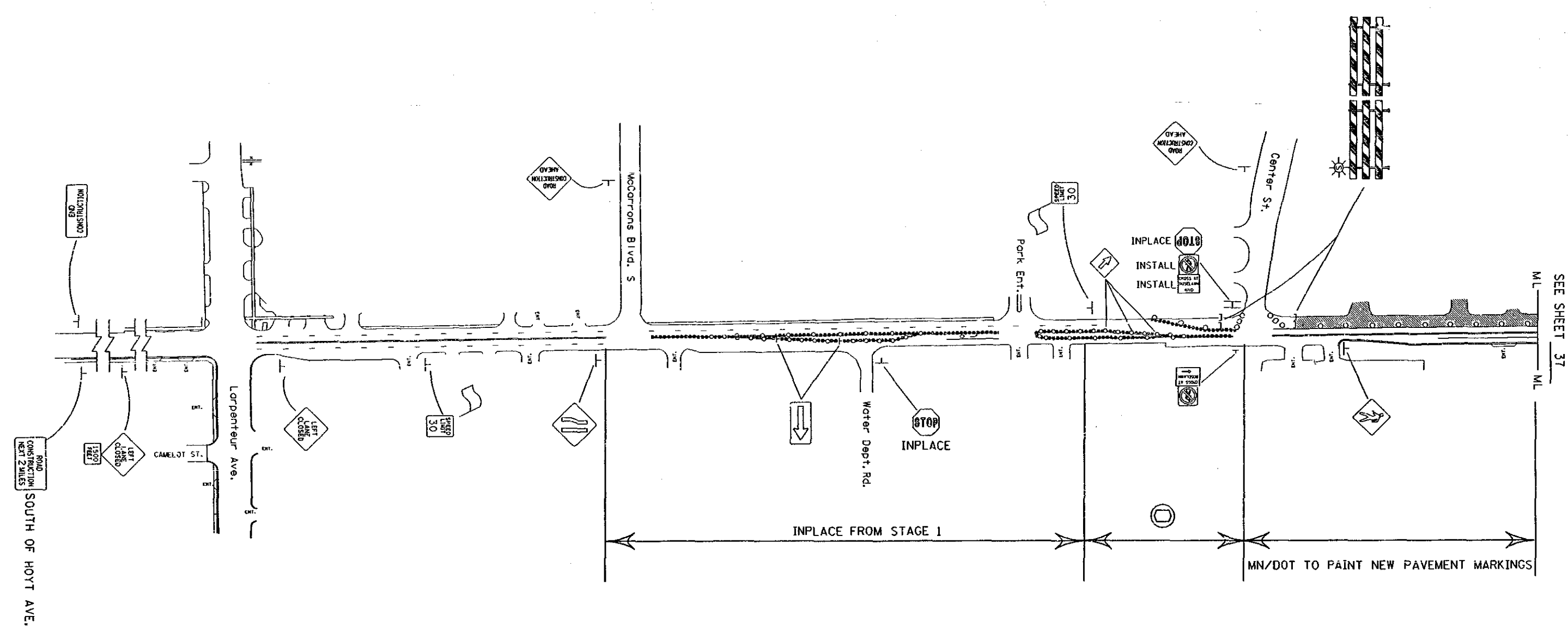
MN/DOT TO PAINT NEW PAVEMENT MARKINGS

INPLACE MN/DOT SIGNS WILL BE REMOVED OR RELOCATED AS NEEDED BY MN/DOT (UNLESS NOTED OTHERWISE)

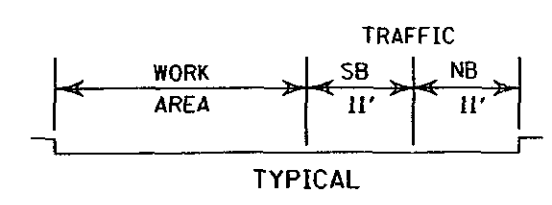
NOTES:

- CONTRACTOR SHALL FURNISH AND INSTALL ALL DEVICES SHOWN UNLESS NOTED OTHERWISE.
- EXACT LOCATION OF TRAFFIC CONTROL DEVICES TO BE DETERMINED BY THE ENGINEER.

STAGE 1,2  
TH. 49  
TRAFFIC CONTROL



ROAD CONSTRUCTION SOUTH OF HOYT AVE.  
NEXT 2 MILES



INPLACE MN/DOT SIGNS WILL BE REMOVED OR RELOCATED AS NEEDED BY MN/DOT (UNLESS NOTED OTHERWISE)

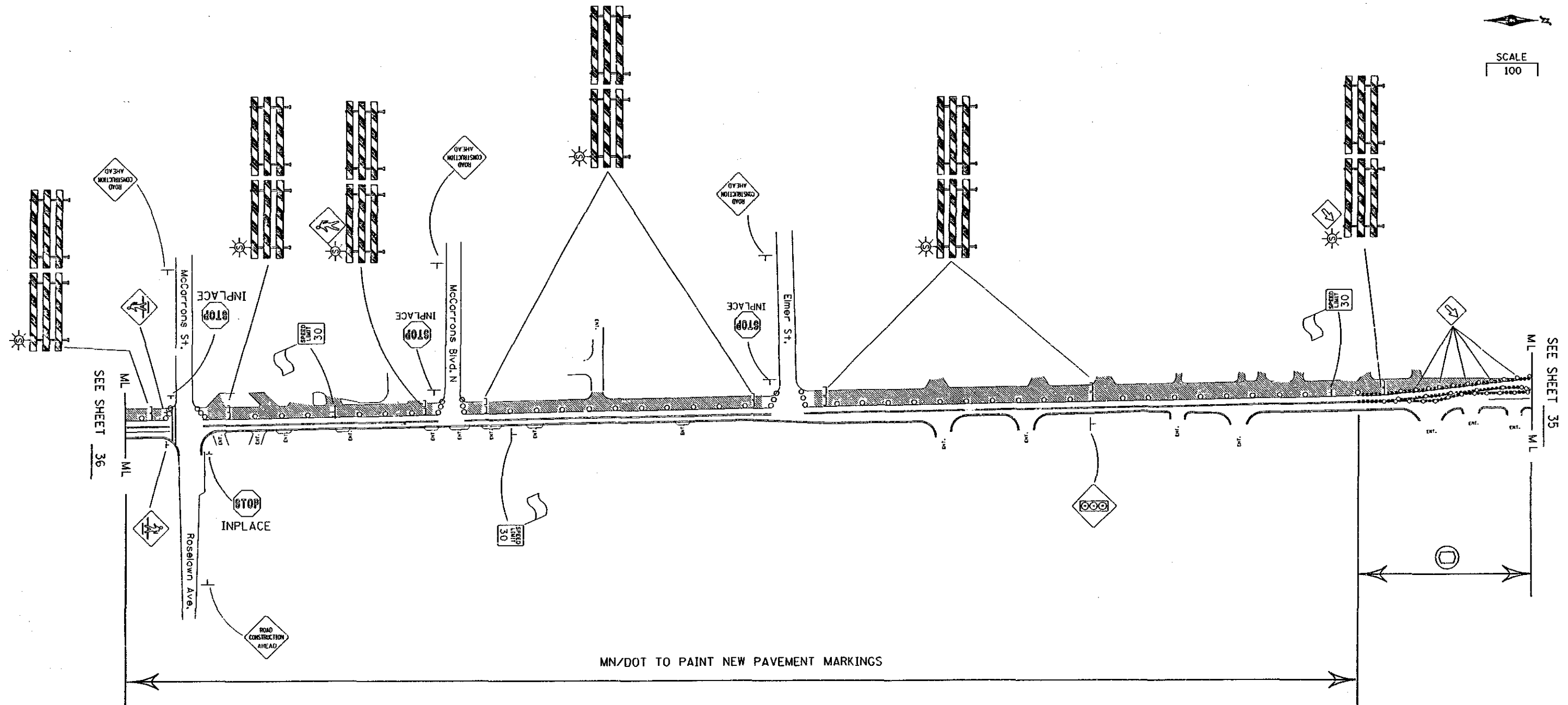
- NOTES:
- CONTRACTOR SHALL FURNISH AND INSTALL ALL DEVICES SHOWN UNLESS NOTED OTHERWISE.
  - ..... = TEMPORARY RAISED PAVEMENT MARKERS (TRPM)
  - = CLOSED TO TRAFFIC
  - EXACT LOCATION OF TRAFFIC CONTROL DEVICES TO BE DETERMINED BY THE ENGINEER.

STAGE 2  
TH. 49  
TRAFFIC CONTROL

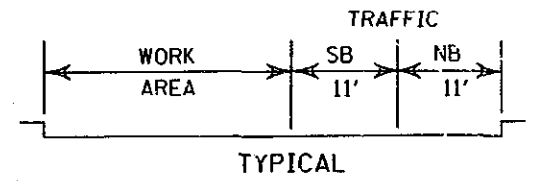
ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW. DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO PROCEDURES FOR THE DOCUMENT SERIES.



SCALE  
100



INPLACE MN/DOT SIGNS WILL BE REMOVED  
OR RELOCATED AS NEEDED BY MN/DOT  
(UNLESS NOTED OTHERWISE)



- NOTES:
- CONTRACTOR SHALL FURNISH AND INSTALL ALL DEVICES SHOWN UNLESS NOTED OTHERWISE.
  - ..... = TEMPORARY RAISED PAVEMENT MARKERS (TRPM)
  - [Hatched Area] = CLOSED TO TRAFFIC
  - EXACT LOCATION OF TRAFFIC CONTROL DEVICES TO BE DETERMINED BY THE ENGINEER.

**STAGE 2**  
**TH. 49**  
**TRAFFIC CONTROL**

10/26/91

NO.	LOCATION/DESCRIPTION	X COORDINATE	Y COORDINATE	AZIMUTH
T.H. 49 ALIGNMENT				
10	P.I. 5 + 96.86	931536.062	17144.175	0° 39' 7.37"
11	P.I. 8 + 56.70	931539.019	17403.997	359° 17' 36.07"
12	P.I. 14 + 96.49	931531.128	18043.736	358° 4' 1.00"
13	P.I. 16 + 76.90	931525.043	18224.045	359° 20' 16.55"
14	P.I. 18 + 96.90 = LARP. P.I. 500 + 00.00	931522.501	18444.030	359° 20' 16.55"
15	P.I. 23 + 92.48	931516.774	18939.576	0° 13' 13.75"
16	P.I. 26 + 92.51	931517.929	19239.608	359° 20' 16.56"
17	P.I. 45 + 26.15	931496.740	21073.130	358° 54' 5.31"
18	P.I. 62 + 67.58	931463.354	22814.240	357° 45' 20.56"
19	P.I. 65 + 17.61	931453.562	23064.080	358° 54' 5.31"
20	P.I. 70 + 22.61	931443.881	23568.988	0° 20' 2.64"
21	P.I. 75 + 02.69	931444.680	24049.056	359° 13' 50.59"
22	P.I. 81 + 02.69	931438.624	24649.002	0° 0' 13.75"
23	P.I. 84 + 73.35	931438.649	25019.657	359° 13' 50.59"
24	P.I. 91 + 62.73	931429.392	25708.473	358° 28' 1.46"
25	P.I. 93 + 12.74	931425.379	25858.934	359° 13' 50.59"
26	P.I. 97 + 86.13	931419.023	26332.281	358° 48' 29.53"
27	P.I. 101 + 23.26	931412.012	26669.334	357° 22' 33.31"
28	P.I. 104 + 63.37	931396.441	27009.083	358° 48' 29.53"
29	P.I. 111 + 05.21	931383.092	27650.780	

NO.	LOCATION/DESCRIPTION	X COORDINATE	Y COORDINATE	AZIMUTH
SECTION LINE				
100	P.I. 73 + 45.44	931522.792	15786.451	359° 56' 35.18"
101	P.I. 100 + 00.00 = 10 + 01.43	931520.156	18441.011	359° 20' 16.56"
102	P.I. 36 + 33.62	931489.741	21073.028	358° 54' 5.31"
103	P.I. 62 + 61.50	931439.360	23700.426	359° 13' 50.59"
104	P.I. 88 + 93.78 = 88 + 93.15	931404.024	26332.079	358° 48' 29.53"
105	P.I. 115 + 31.27 = 115 + 30.62	931349.153	28969.625	

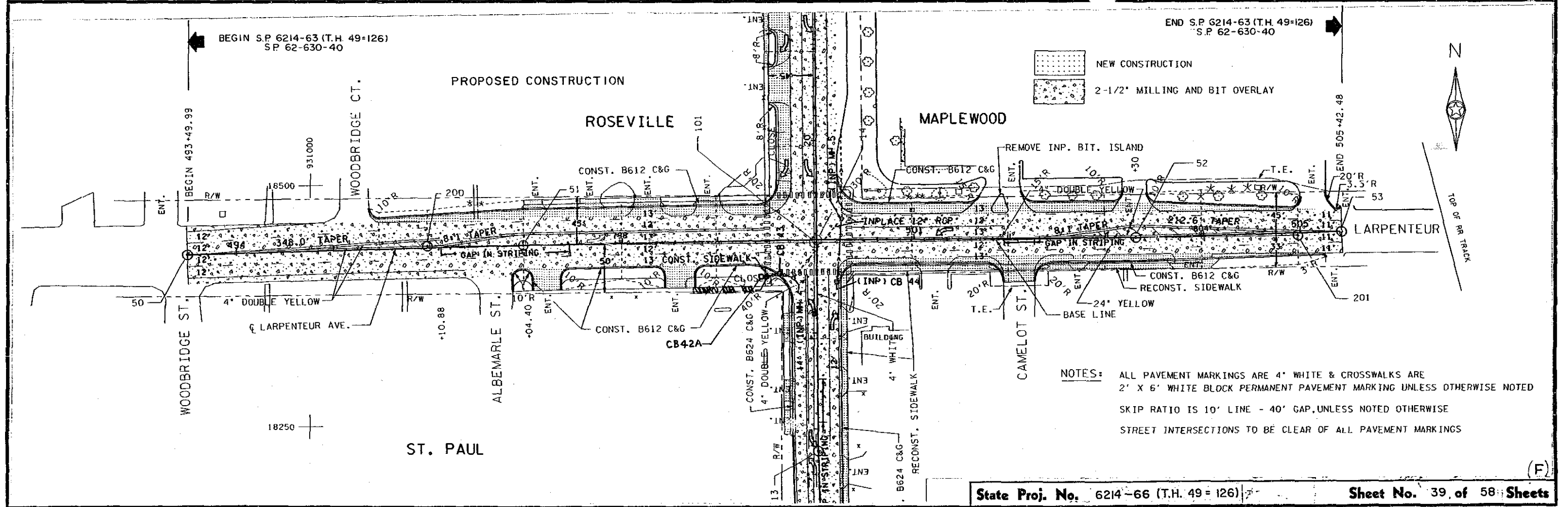
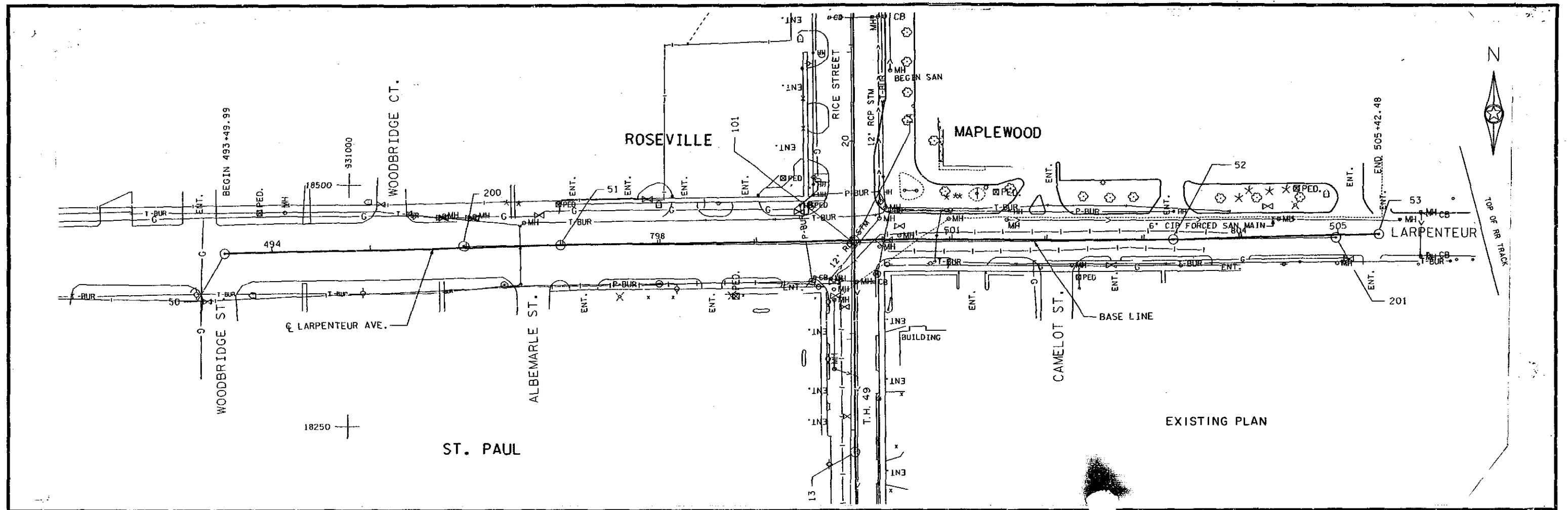
NO.	LOCATION/DESCRIPTION	X COORDINATE	Y COORDINATE	AZIMUTH
LARPEN TEUR AVE. BASELINE				
200	P.I. 796 + 00.00	931120.174	18437.162	89° 26' 55.19"
101	P.I. 800 + 00.00	931520.156	18441.011	89° 7' 58.68"
201	P.I. 805 + 00.00	932020.099	18448.577	

NO.	LOCATION/DESCRIPTION	X COORDINATE	Y COORDINATE	AZIMUTH
LARPEN TEUR AVE. ALIGNMENT				
50	P.I. 493 + 49.99	930872.689	18428.157	88° 21' 25.02"
51	P.I. 496 + 97.61	931220.170	18438.124	88° 52' 51.37"
14	P.I. 500 + 00.00 = T.H. 49 P.I. 18 + 96.90	931522.501	18444.030	89° 34' 43.62"
52	P.I. 503 + 30.90	931852.492	18446.456	88° 21' 30.33"
53	P.I. 505 + 42.48	932064.888	18452.543	

(F)  
ALIGNMENT

State Proj. No. 6214-66 (T.H. 49 = 126)

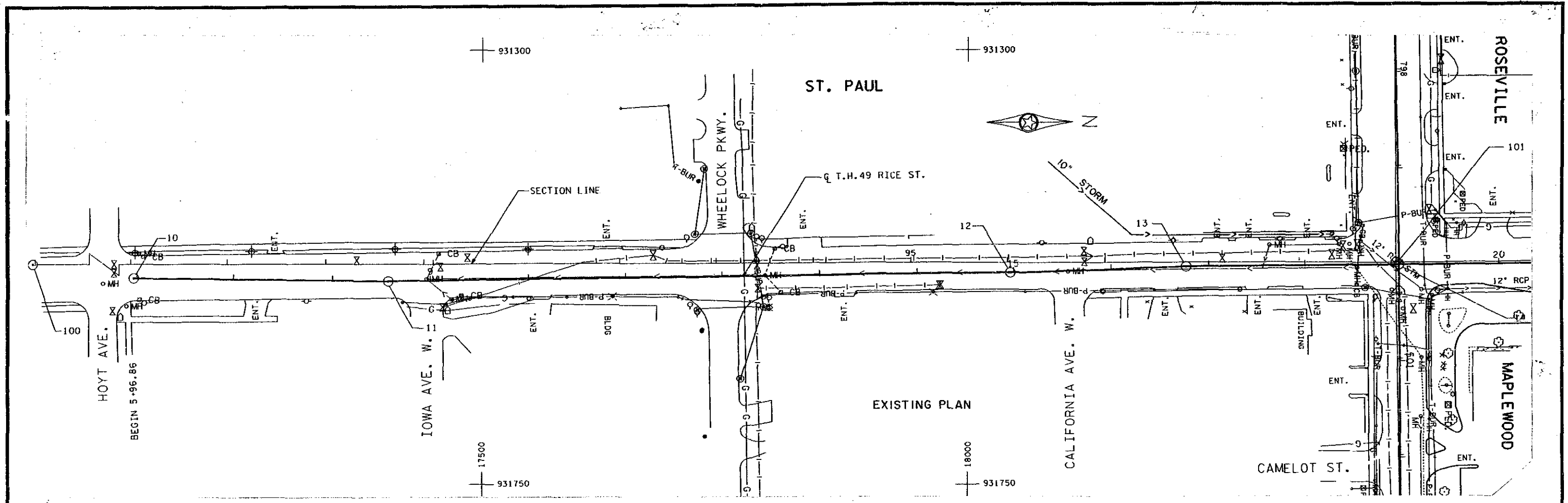
Sheet No. 38 of 58 Sheets



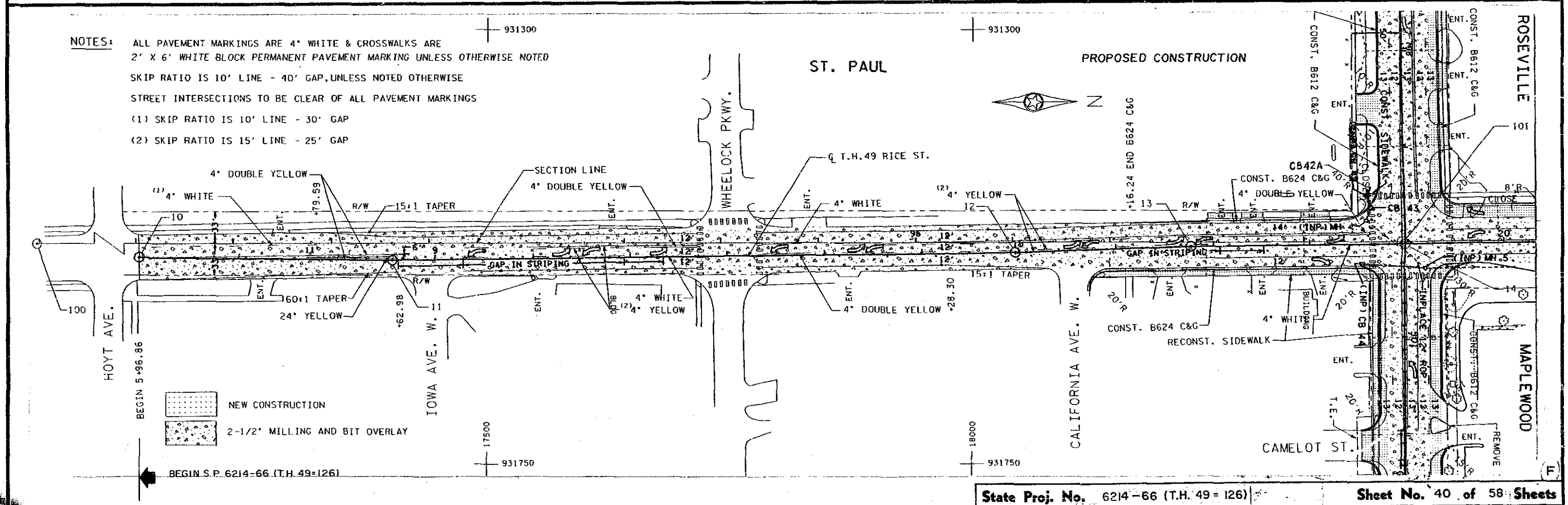
State Proj. No. 6214-66 (T.H. 49 = 126)

Sheet No. 39 of 58 Sheets

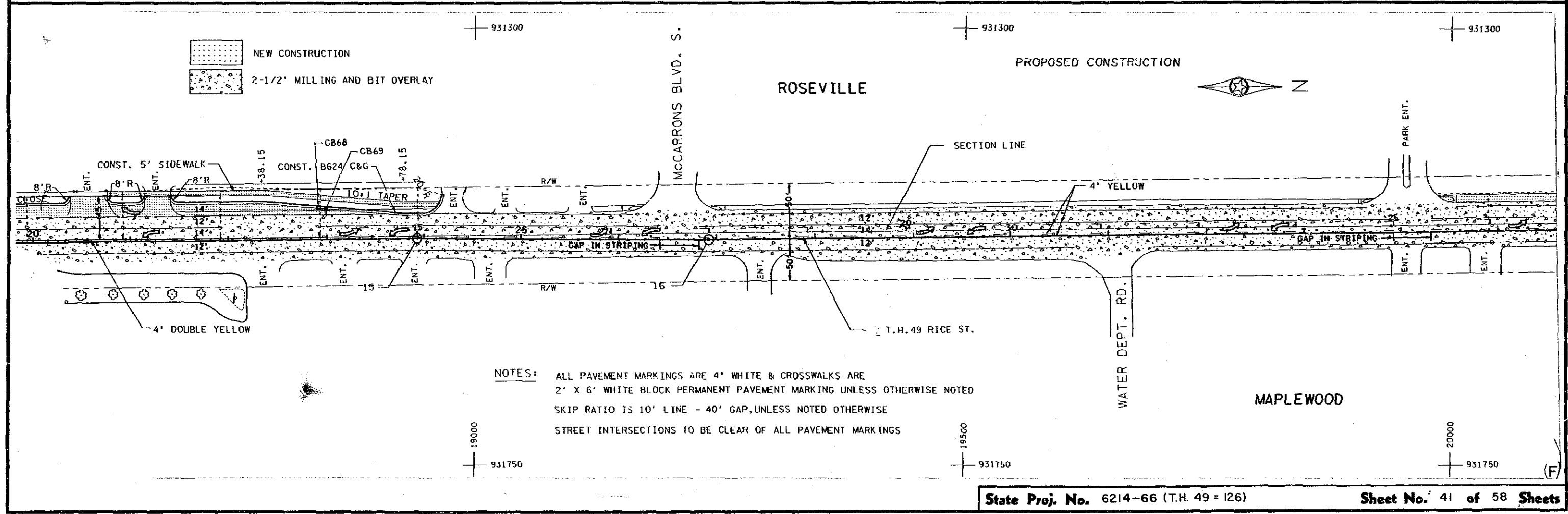
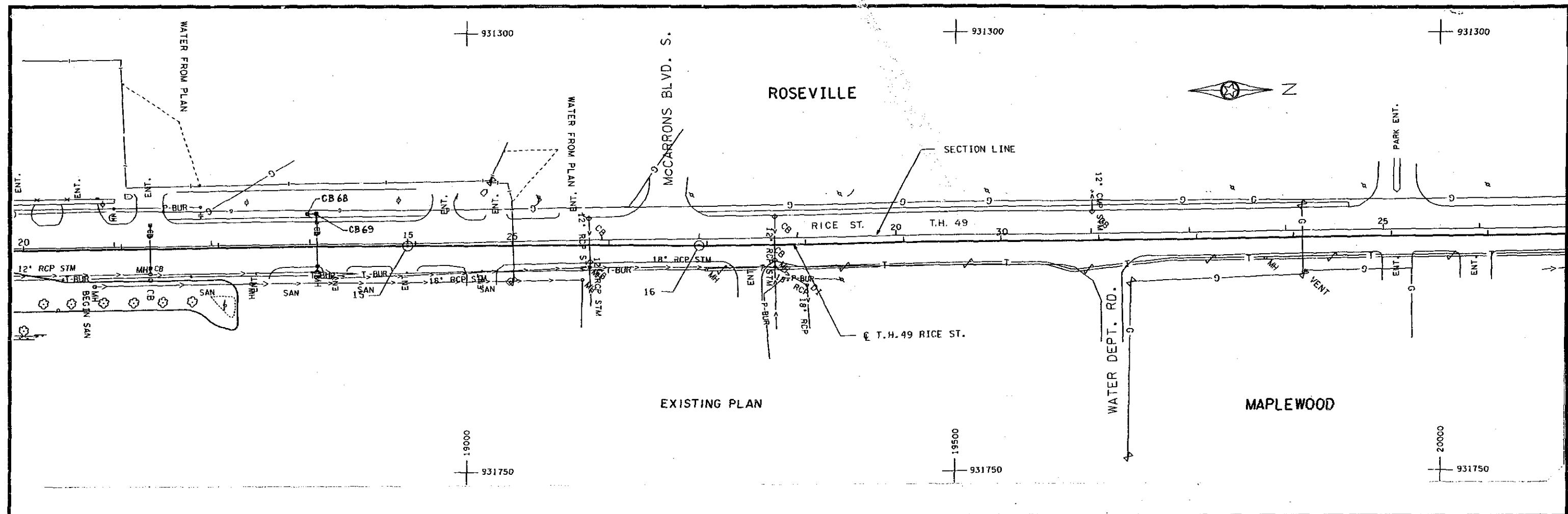
(F)



- NOTES:**
- ALL PAVEMENT MARKINGS ARE 4" WHITE & CROSSWALKS ARE 2' X 6' WHITE BLOCK PERMANENT PAVEMENT MARKING UNLESS OTHERWISE NOTED
  - SKIP RATIO IS 10' LINE - 40' GAP, UNLESS NOTED OTHERWISE
  - STREET INTERSECTIONS TO BE CLEAR OF ALL PAVEMENT MARKINGS
  - (1) SKIP RATIO IS 10' LINE - 30' GAP
  - (2) SKIP RATIO IS 15' LINE - 25' GAP

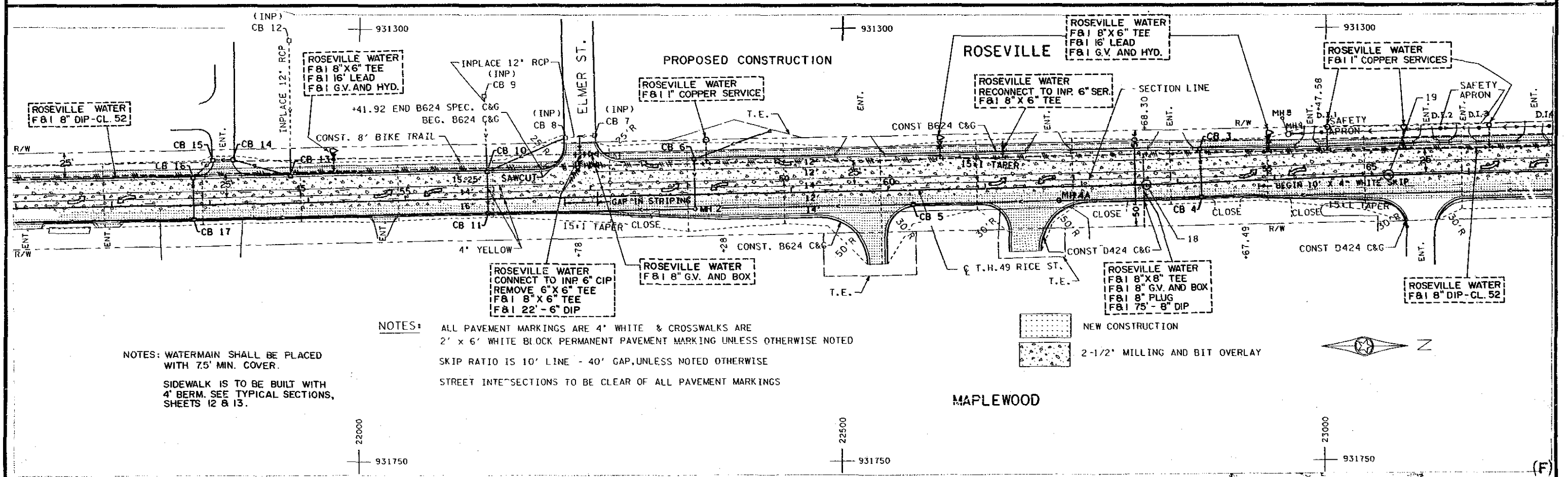
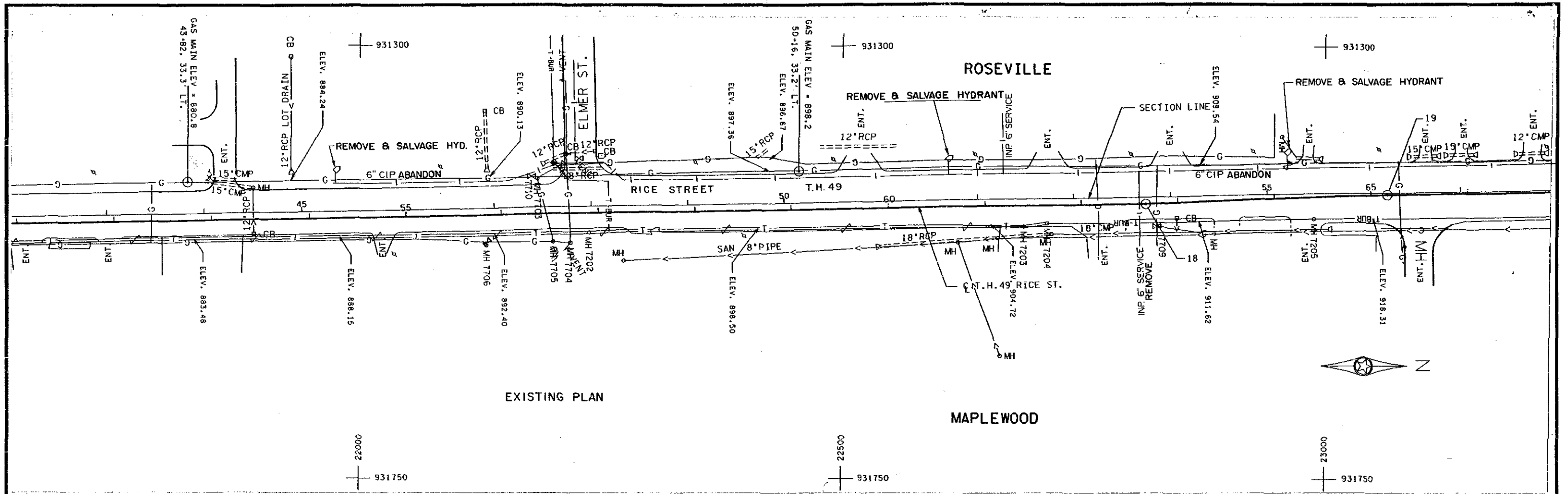






NOTES:  
 ALL PAVEMENT MARKINGS ARE 4" WHITE & CROSSWALKS ARE 2' X 6' WHITE BLOCK PERMANENT PAVEMENT MARKING UNLESS OTHERWISE NOTED  
 SKIP RATIO IS 10' LINE - 40' GAP, UNLESS NOTED OTHERWISE  
 STREET INTERSECTIONS TO BE CLEAR OF ALL PAVEMENT MARKINGS

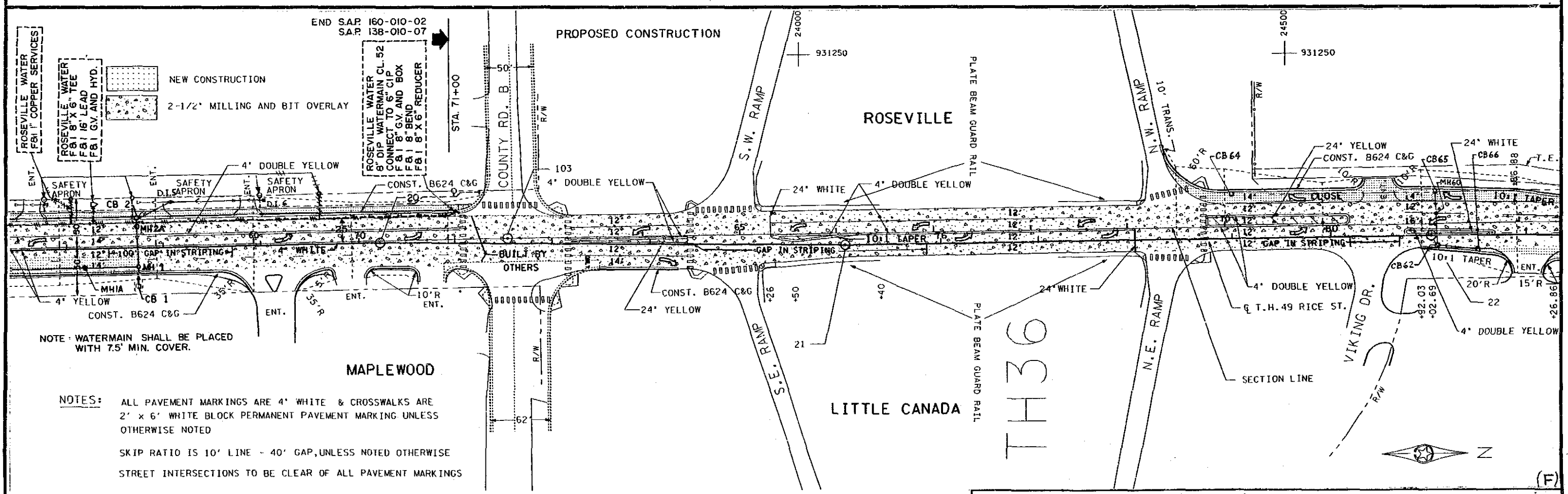
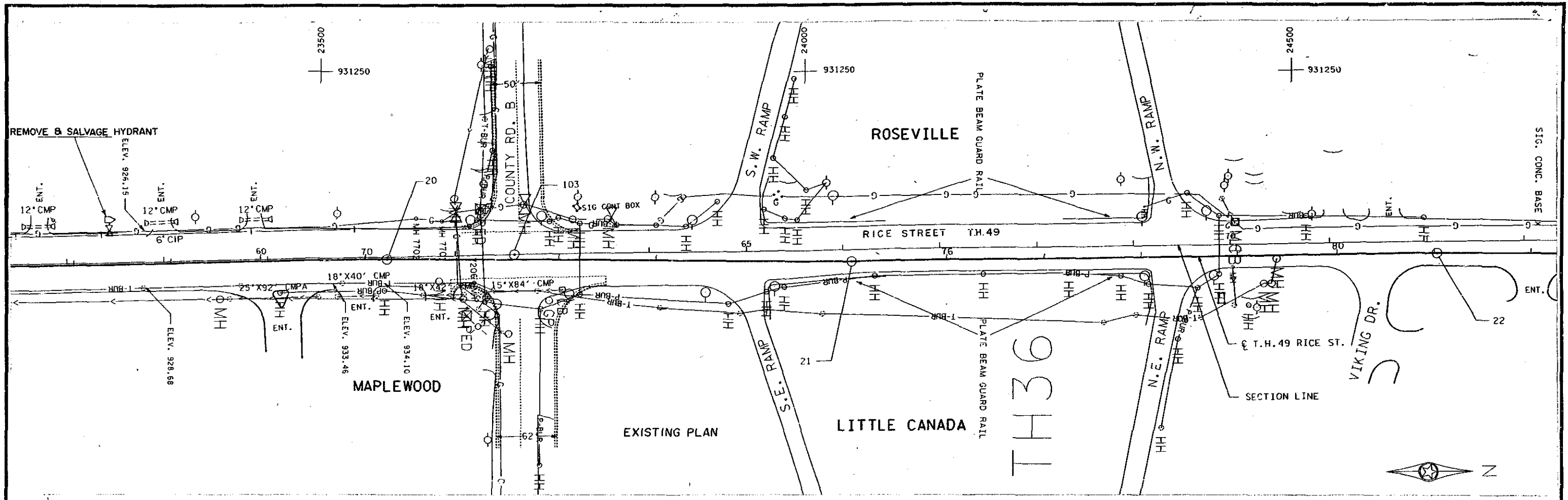


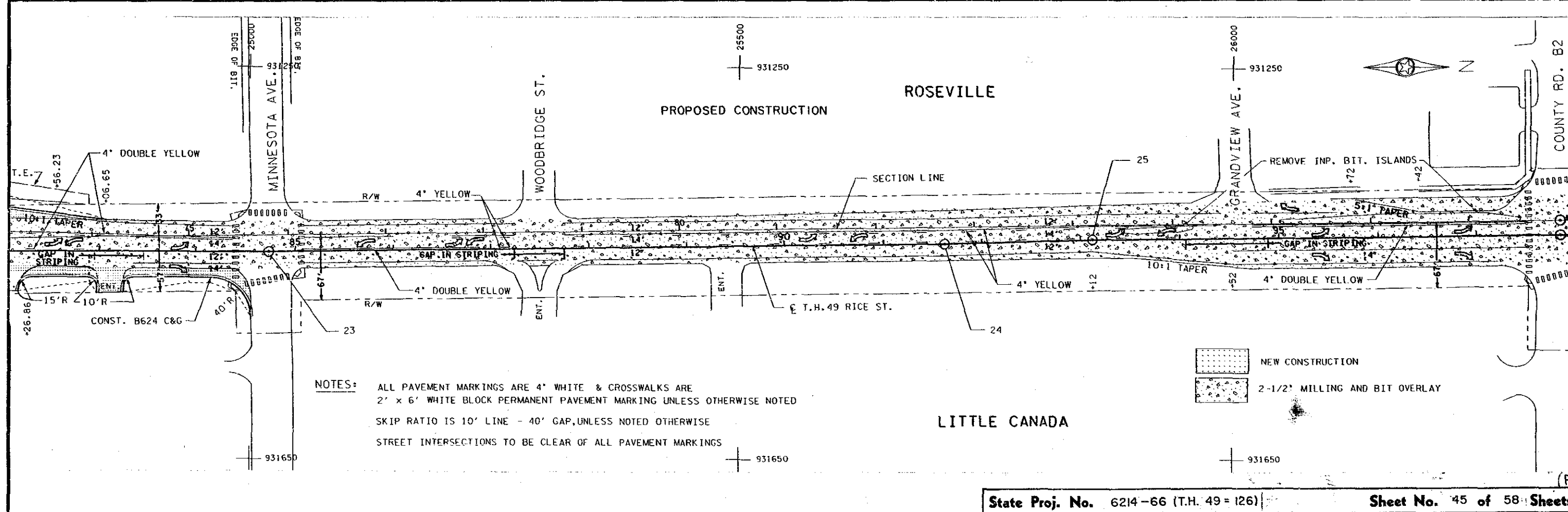
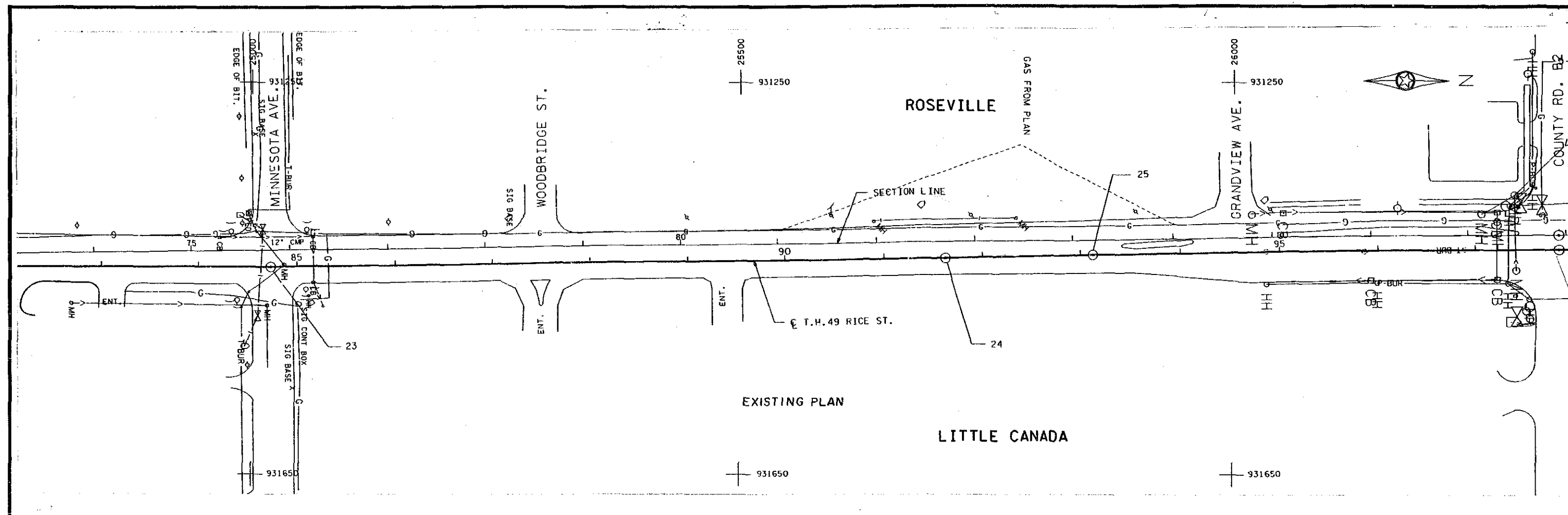


NOTES: WATERMAIN SHALL BE PLACED WITH 7.5' MIN. COVER.  
SIDEWALK IS TO BE BUILT WITH 4' BERM. SEE TYPICAL SECTIONS, SHEETS 12 & 13.

NOTES: ALL PAVEMENT MARKINGS ARE 4' WHITE & CROSSWALKS ARE 2' x 6' WHITE BLOCK PERMANENT PAVEMENT MARKING UNLESS OTHERWISE NOTED  
SKIP RATIO IS 10' LINE - 40' GAP, UNLESS NOTED OTHERWISE  
STREET INTERSECTIONS TO BE CLEAR OF ALL PAVEMENT MARKINGS

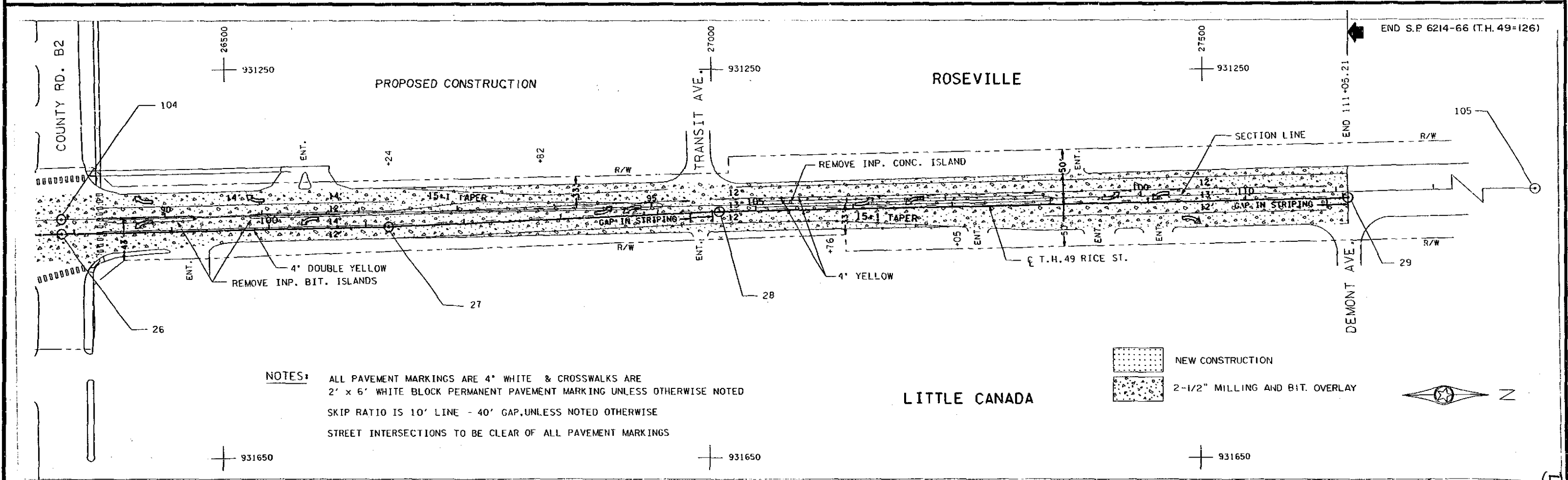
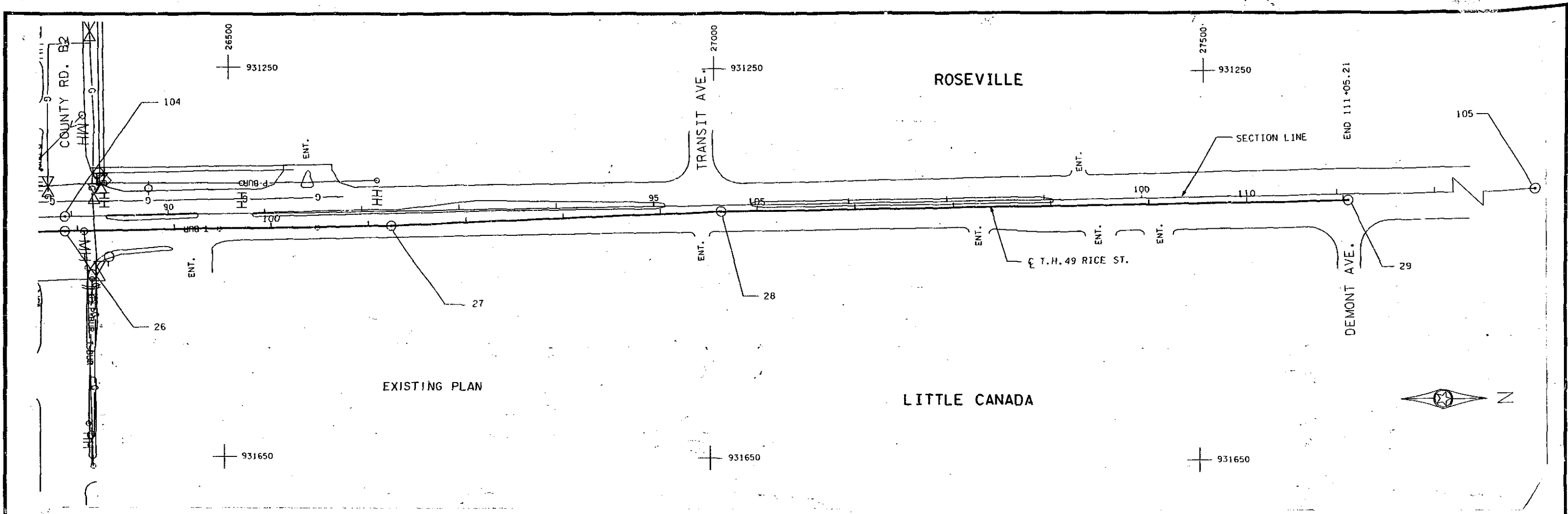
NEW CONSTRUCTION  
2-1/2" MILLING AND BIT OVERLAY



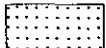



NOTES: ALL PAVEMENT MARKINGS ARE 4" WHITE & CROSSWALKS ARE 2' x 6' WHITE BLOCK PERMANENT PAVEMENT MARKING UNLESS OTHERWISE NOTED  
 SKIP RATIO IS 10' LINE - 40' GAP, UNLESS NOTED OTHERWISE  
 STREET INTERSECTIONS TO BE CLEAR OF ALL PAVEMENT MARKINGS

NEW CONSTRUCTION  
 2-1/2" MILLING AND BIT OVERLAY



**NOTES:**  
 ALL PAVEMENT MARKINGS ARE 4" WHITE & CROSSWALKS ARE  
 2' x 6' WHITE BLOCK PERMANENT PAVEMENT MARKING UNLESS OTHERWISE NOTED  
 SKIP RATIO IS 10' LINE - 40' GAP, UNLESS NOTED OTHERWISE  
 STREET INTERSECTIONS TO BE CLEAR OF ALL PAVEMENT MARKINGS

 NEW CONSTRUCTION  
 2-1/2" MILLING AND BIT. OVERLAY