

# MINNESOTA DEPARTMENT OF TRANSPORTATION THE CITY OF COON RAPIDS ANOKA COUNTY CONSTRUCTION PLAN FOR TEMPORARY TRAFFIC SIGNAL & STREET IMPROVEMENTS

LOCATED ON: MAIN STREET (C.S.A.H. 14) BETWEEN REISLING BOULEVARD / ROUND LAKE BOULEVARD AND POPPY STREET N.W. (Geographic Description)

CITY IMPROVEMENT PROJ. NO. 95-29C

MINN. PROJ. NO. \_\_\_\_\_  
MINN. PROJ. NO. \_\_\_\_\_

### GOVERNING SPECIFICATIONS

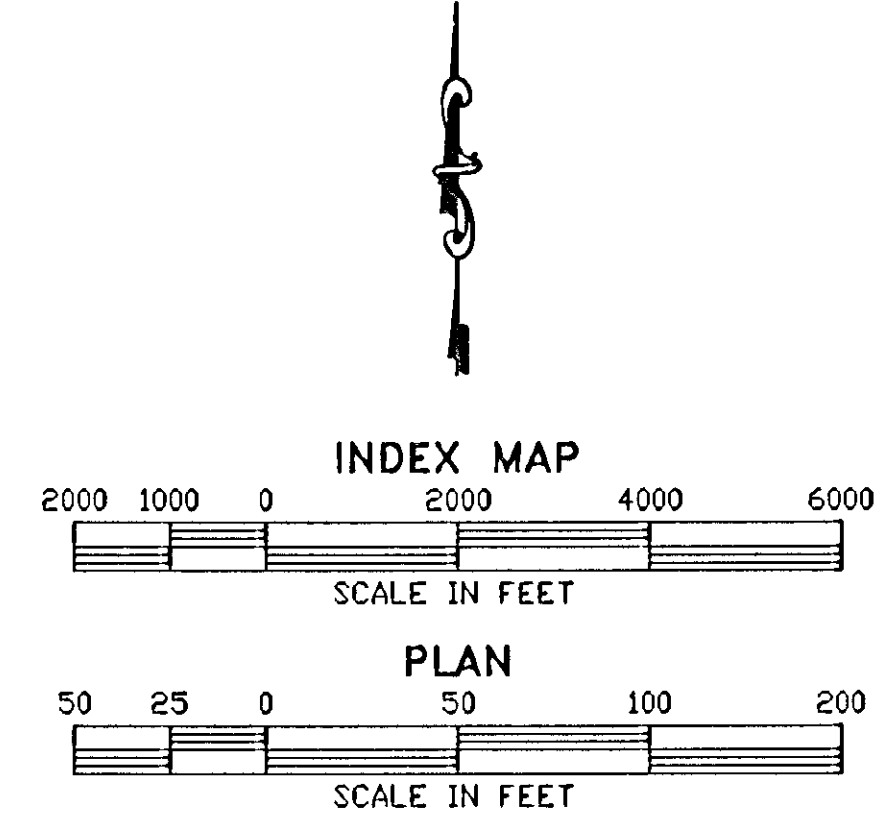
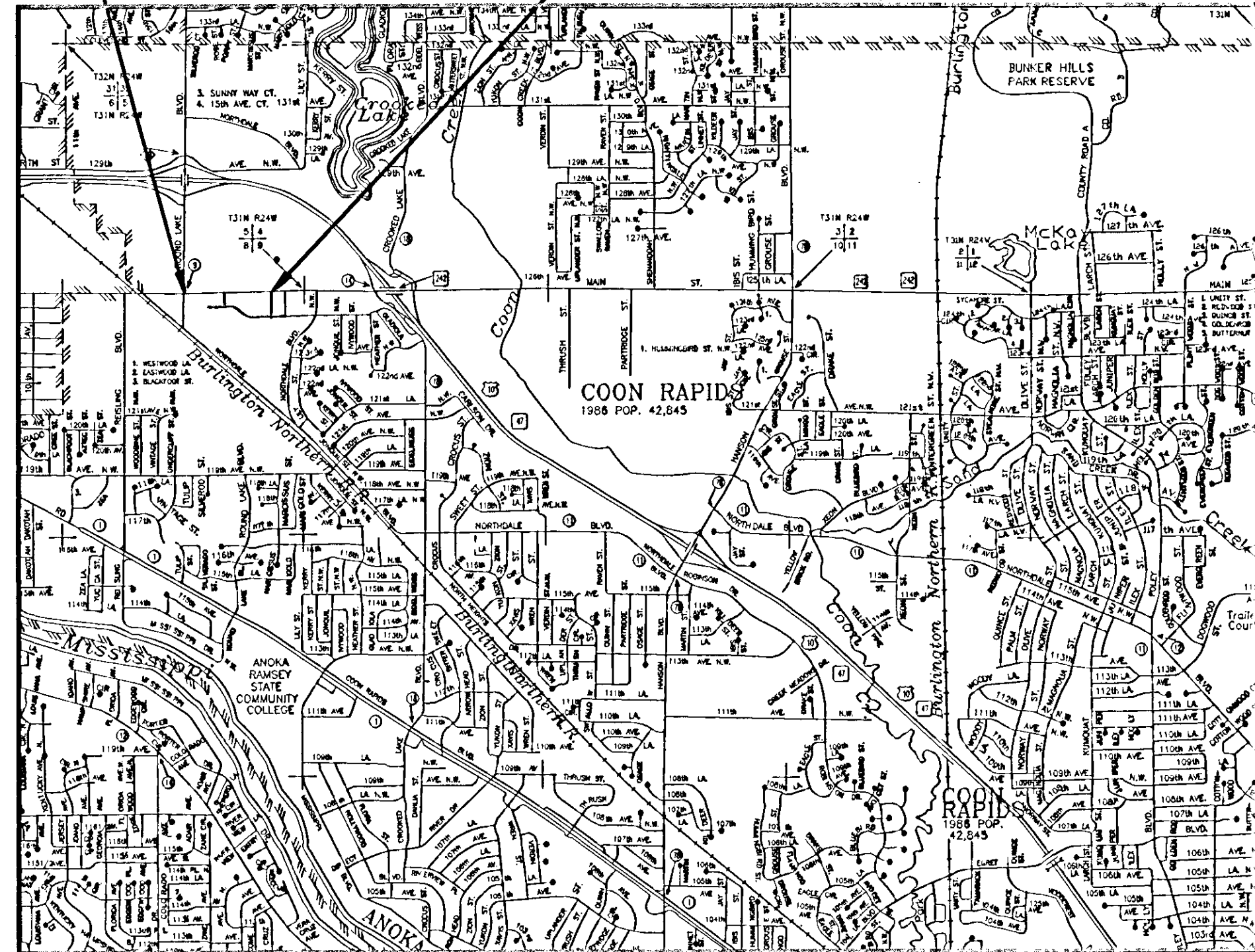
THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND "SUPPLEMENTAL SPECIFICATIONS TO THE 1988 STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED MAY 2, 1994, SHALL GOVERN. ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO THE MUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - APRIL 1995".

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	QUANTITIES & DETAILS
3	REMOVALS
4	PLANNED CONSTRUCTION
5	SIGNING & STRIPING
6-13	SIGNAL PLAN

MAIN STREET (C.S.A.H. 14)  
BEGIN PROJECT  
STA. 67+21

MAIN STREET (C.S.A.H. 14)  
END PROJECT  
STA 86+39

- LEGEND**
- GV EXISTING GATE VALVE
  - HYD. EXISTING HYDRANT
  - CS EXISTING CURB BOX
  - SAN MH / STM MH EXISTING MANHOLE, FOR STORM AND SANITARY SEWER
  - CB EXISTING CATCH BASIN
  - P.P. EXISTING POWER POLE
  - EXISTING SANITARY SEWER
  - EXISTING STORM SEWER
  - EXISTING WATERMAIN
  - EXISTING CURB AND GUTTER
  - G EXISTING UNDERGROUND GAS MAIN
  - T EXISTING UNDERGROUND TELEPHONE LINE
  - EXISTING UNDERGROUND POWER
  - EXISTING OVERHEAD POWER
  - EXISTING FENCE
  - EXISTING TREE
  - EXISTING TREE LINE
  - EXISTING STREET SIGN



THIS PLAN SET CONTAINS 10 SHEETS



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

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

BRW, INC.  
DATE \_\_\_\_\_ REG. NO. 23197  
ENGINEER \_\_\_\_\_  
3193A10

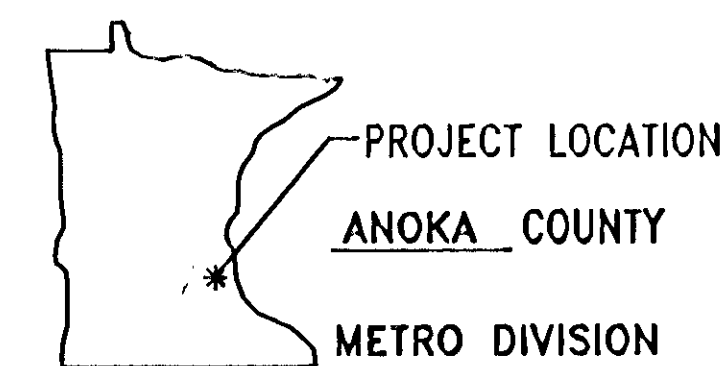
Design Squad J. MALONEY, B. GREEN, L. BATTEY, J. SHARBONO

Approved \_\_\_\_\_ 19\_\_\_\_\_  
CITY ENGINEER

Approved \_\_\_\_\_ 19\_\_\_\_\_  
ANOKA COUNTY ENGINEER

Recommended For Approval \_\_\_\_\_ 19\_\_\_\_\_  
Recommended For Approval \_\_\_\_\_ 19\_\_\_\_\_

Approved \_\_\_\_\_ 19\_\_\_\_\_



**DESIGN DESIGNATION:** MAIN STREET (C.S.A.H. 14)

**Functional Classification:** 4-LANE ARTERIAL (HIGH DENSITY)

**No. of Traffic Lanes:** 4 **No. of Parking Lanes:** 0

**ADT (Current Year) 1995:** 18,600 **Design Speed:** 55 MPH

**ADT (Future Year) 2015:** 48,000 **Based on STOPPING Sight Distance**

**DHV (Design Hr. Vol.):** N/A **Height of eye:** 3.5' **Height of Object:** 0.5'

**D (Directional Distr.):** 50 % **Design Speed not achieved at:** N/A

**T (Heavy Commercial):** 3.6 % **STA.:** N/A **TO STA.:** N/A

**R-Value:** 70 **N18 Factor:** 3,066,400 **Design Load:** 9 TON

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY
12/30/98	AS-BUILT	

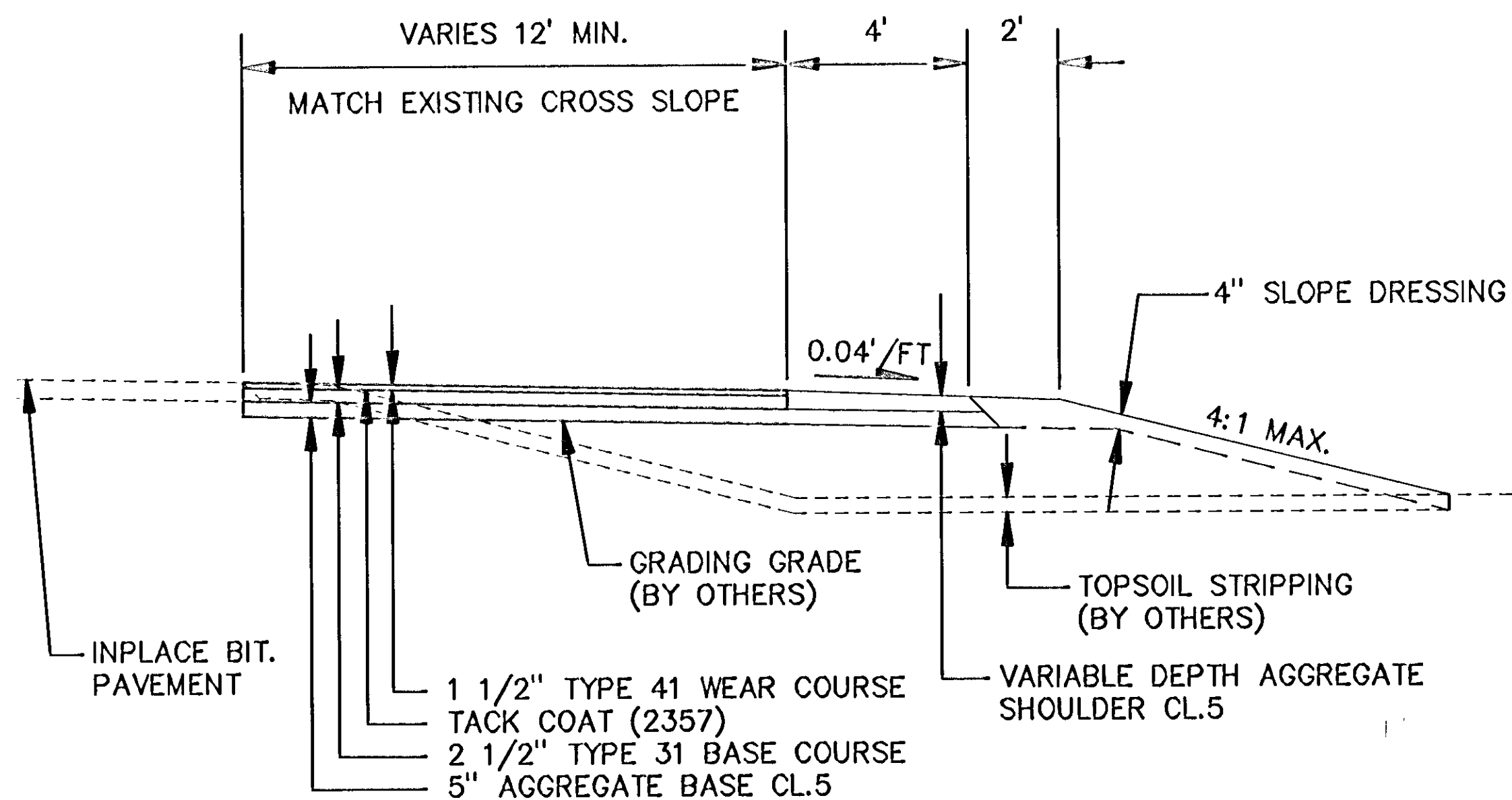
I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
*Paul A. ...*  
DATE 3-3-97 REG. NO. 23197

STATE AID PROJ. NO. \_\_\_\_\_  
STATE PROJ. NO. \_\_\_\_\_ SHEET NO. 1 OF 13 SHEETS

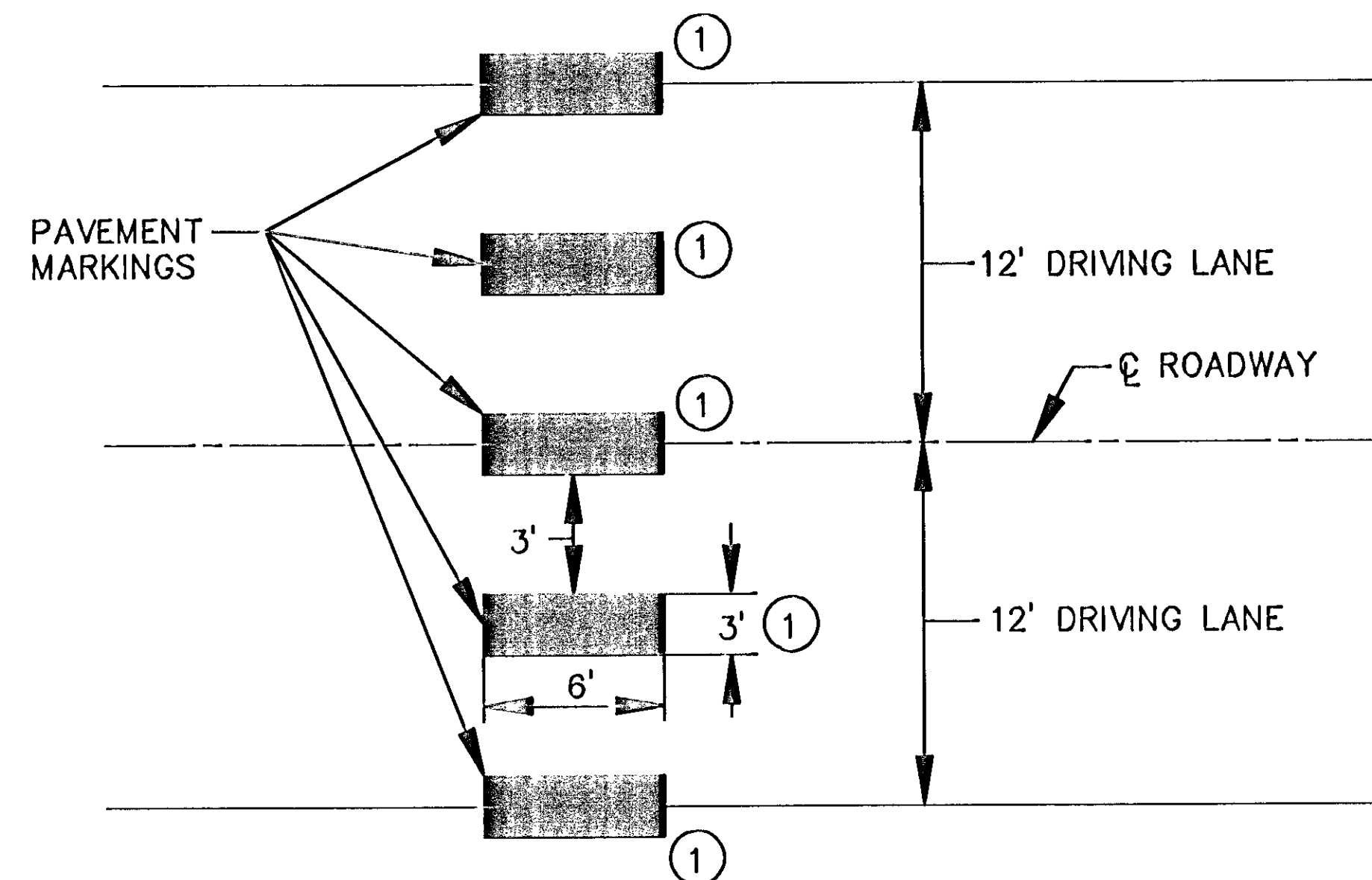
STATEMENT OF ESTIMATED QUANTITIES

NOTES	ITEM NO.	ITEM	PLAN QUANTITY	UNIT	TOTAL QUANTITIES	
					EST.	FINAL
	2021.501	MOBILIZATION		LUMP SUM	1.00	
	2102.501	PAVEMENT MARKING REMOVAL		SQ FT	74.00	
	2102.502	PAVEMENT MARKING REMOVAL		LIN FT	6079.00	
	2104.505	REMOVE BITUMINOUS PAVEMENT		SQ YD	833.00	
	2104.509	REMOVE SIGN		EACH	1.00	
	2104.513	SAWING BITUMINOUS PAVEMENT		LIN FT	1221.00	
	2104.523	SALVAGE SIGN		EACH	2.00	
	2112.501	SUBGRADE PREPARATION	P	ROAD STA	23.10	
	2130.501	WATER		M GAL	10.00	
	2211.503	AGGREGATE BASE (CV), CLASS 5	P	CU YD	651.00	
	2221.503	AGGREGATE SHOULDERING (CV), CLASS 5	P	CU YD	94.00	
	2340.508	TYPE 41 WEARING COURSE MIXTURE		TON	295.00	
	2340.514	TYPE 31 BASE COURSE MIXTURE		TON	492.00	
	2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GAL	178.00	
(1)	0563.601	TRAFFIC CONTROL		LUMP SUM	1.00	
	2564.531	F & I SIGN PANELS TYPE C		SQ FT	63.75	
	0564.602	INSTALL SIGN TYPE C		EACH	2.00	
	0564.602	PAVEMENT MESSAGE (LEFT ARROW) - PAINT		EACH	4.00	
	0564.602	PAVEMENT MESSAGE (RIGHT ARROW) - PAINT		EACH	2.00	
	0564.602	PAVEMENT MESSAGE (ONLY) - PAINT		EACH	4.00	
	0564.603	4" SOLID LINE WHITE - PAINT		LIN FT	3475.00	
	0564.603	4" BROKEN LINE WHITE - PAINT		LIN FT	490.00	
	0564.603	4" SOLID DOUBLE LINE YELLOW - PAINT		LIN FT	5412.00	
	0564.604	CROSSWALK MARKING - PAINT		SQ FT	756.00	
	0564.603	24" SOLID LINE WHITE - PAINT		LIN FT	121.00	
	0564.603	24" SOLID LINE YELLOW - PAINT		LIN FT	740.00	
	2565.511	FULL-TRAFFIC-ACTUATED TRAFFIC CONTROL SIGNAL SYSTEM		SIG SYSTEM	1.00	
	0565.601	TRAFFIC CONTROL INTERCONNECTION		LUMP SUM	1.00	
	2575.555	TURF ESTABLISHMENT		LUMP SUM	1.00	

(1) THIS ITEM DOES NOT INCLUDE ANY ITEMS NEEDED FOR THE GRADING CONSTRUCTION.



TEMPORARY PAVEMENT SECTION



NOTES:

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

PEDESTRIAN CROSSWALK MARKING

DISK FILE NAME: 3193-DET.DWG  
PLOT DATE: Apr 03, 1998 12:13pm

DESIGN FILE	3193A10
DESIGNED BY	LE
CHECKED BY	PBD
DATE	12/30/96
REV. NO.	1
DESCRIPTION	AS-BUILT
DESIGN BY	JRM
DWG. NAME	3193-DET

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

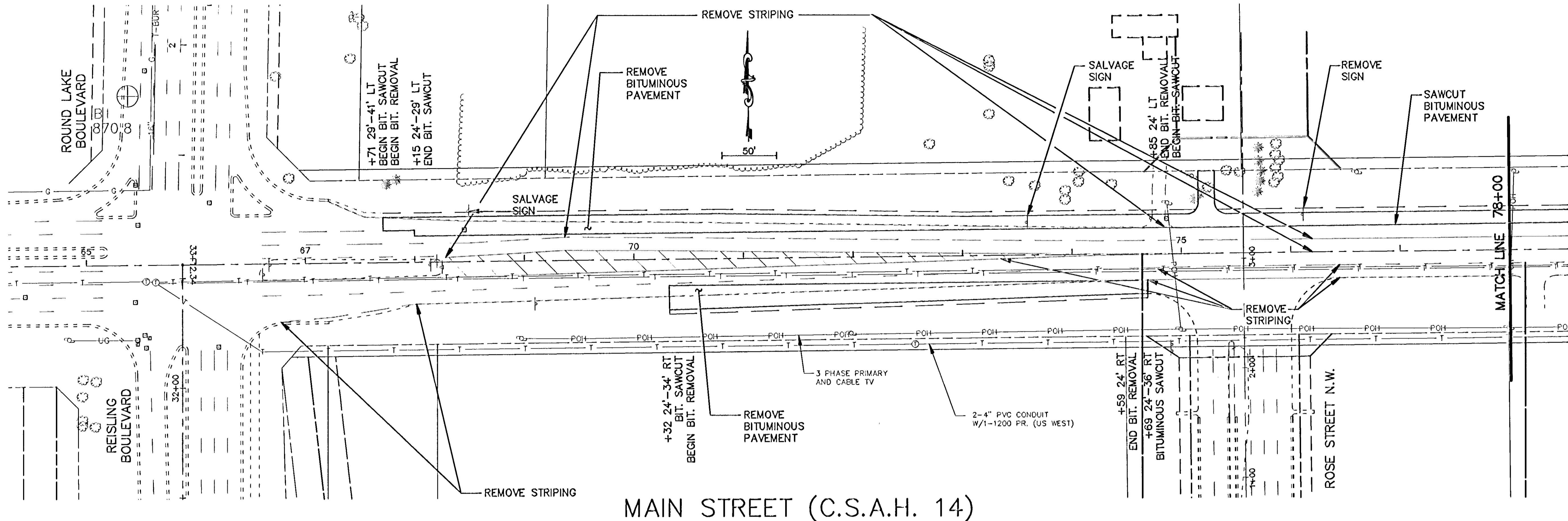
DATE: 2/3/97  
MINN. REG. NO. 23197

**B R W INC.**  
Threshers Square, 700 Third Street So.  
Minneapolis, MN 55415, Phone 612/570-0700, Fax 612/570-1378

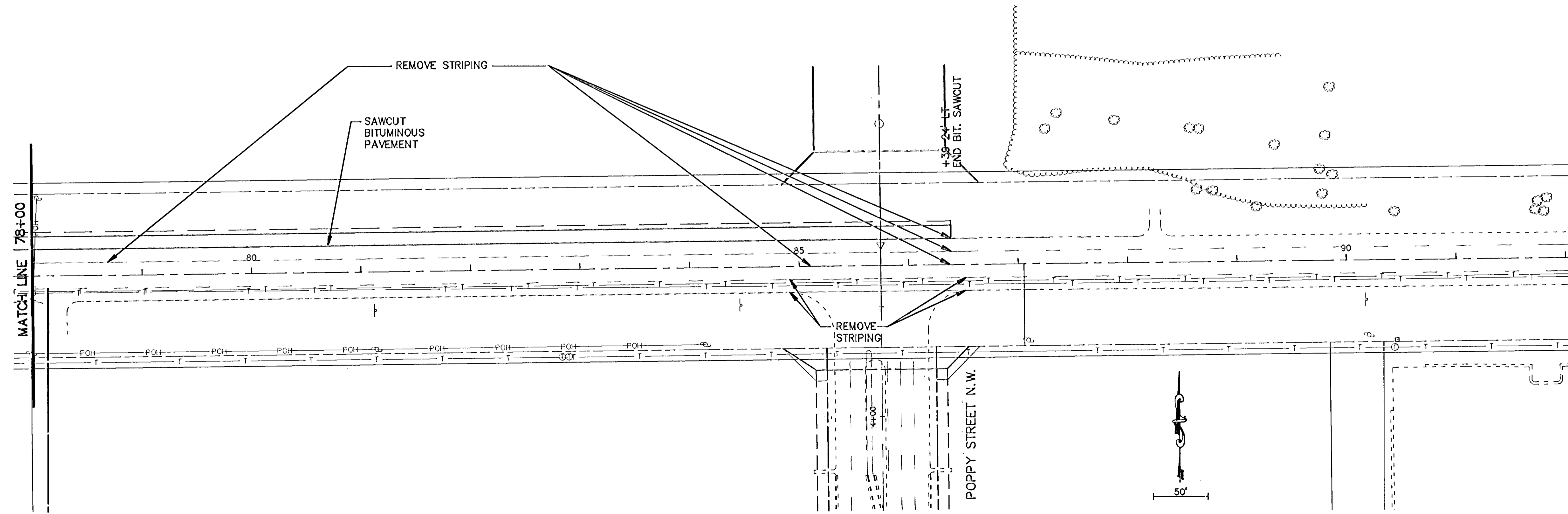
**CITY OF COON RAPIDS**  
TEMPORARY SIGNAL / STREET IMPROVEMENTS  
CITY PROJECT 95-29C  
QUANTITIES & DETAILS



3193-REM



MAIN STREET (C.S.A.H. 14)



MAIN STREET (C.S.A.H. 14)

DISK FILE NAME: 3193-REM.DWG  
 PLOT DATE: Apr 03, 1996 11:19am

DESIGN FILE:	3193A10
DESIGN BY:	JRM
DRAWN BY:	LB
CHECKED BY:	PBD
DWG. NAME:	3193-REM
DATE:	12/30/96
REV. NO.:	1
DESCRIPTION:	AS-BUILT

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

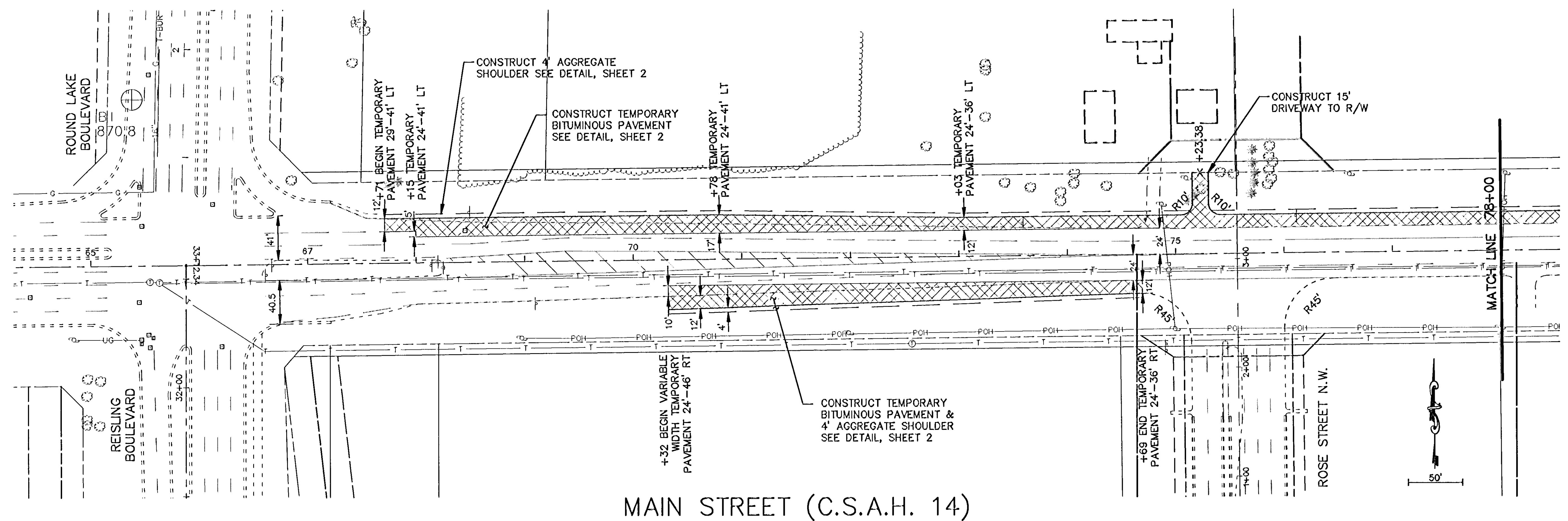
DATE: \_\_\_\_\_ MINN. REG. NO. 23197

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

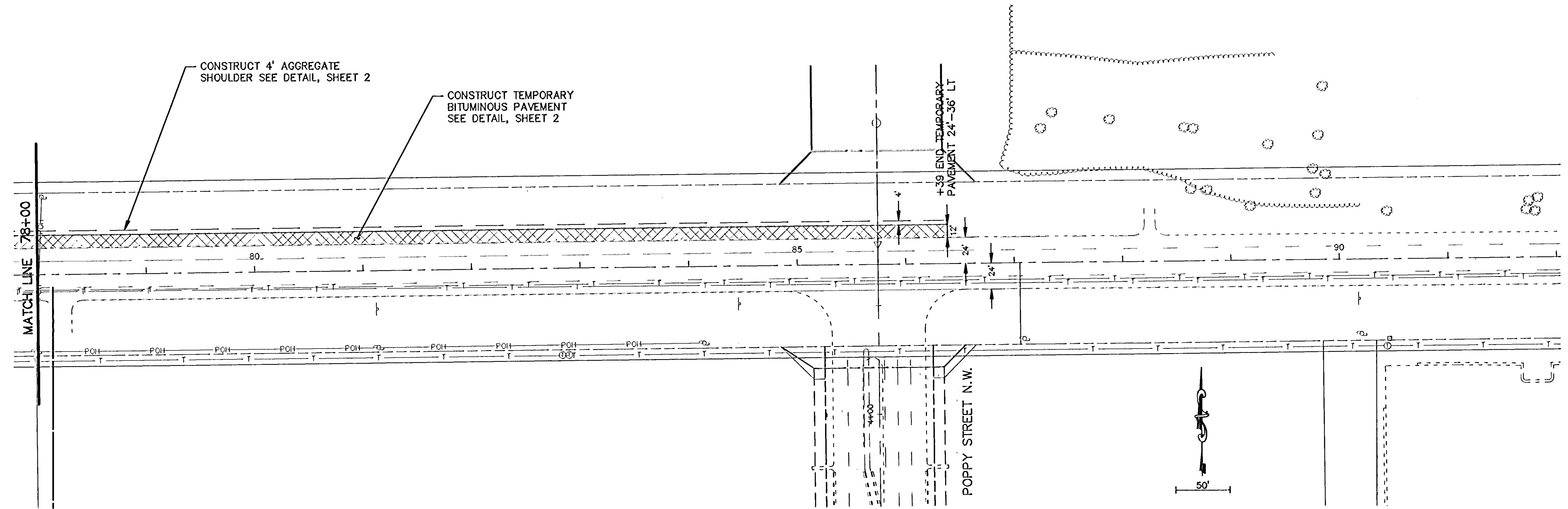
CITY OF COON RAPIDS  
 TEMPORARY SIGNAL / STREET IMPROVEMENTS  
 CITY PROJECT 95-29C  
 REMOVALS

SHEET NO. **3** OF **13**

3193-PRD.DWG



MAIN STREET (C.S.A.H. 14)

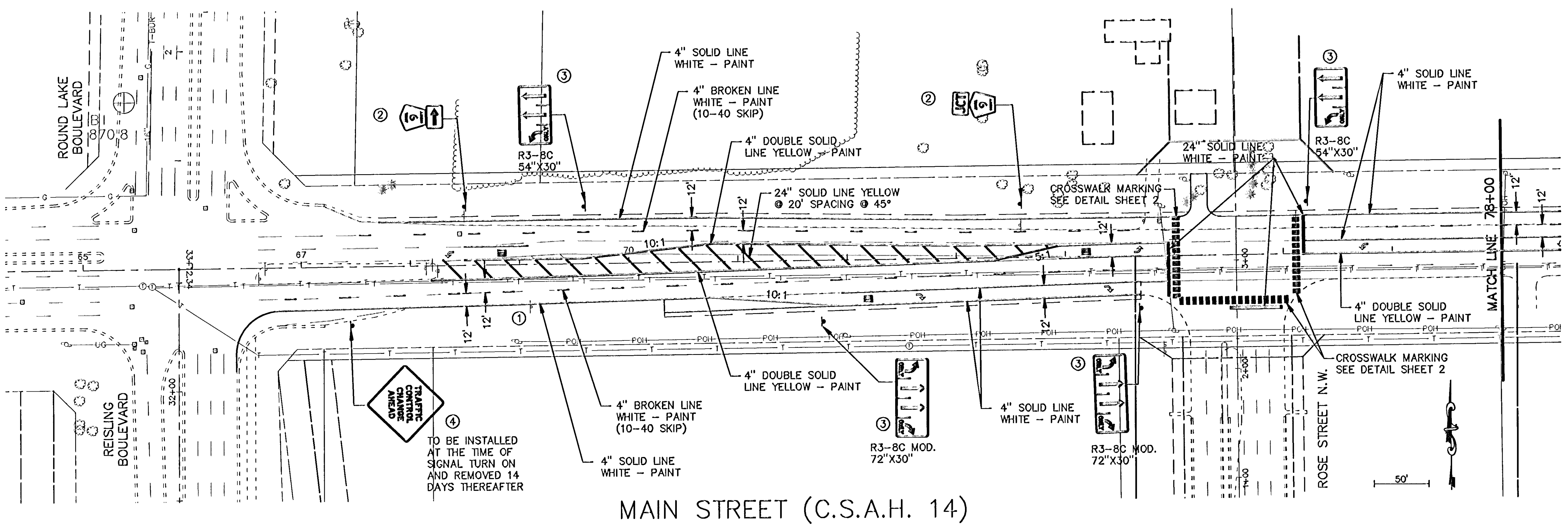


MAIN STREET (C.S.A.H. 14)

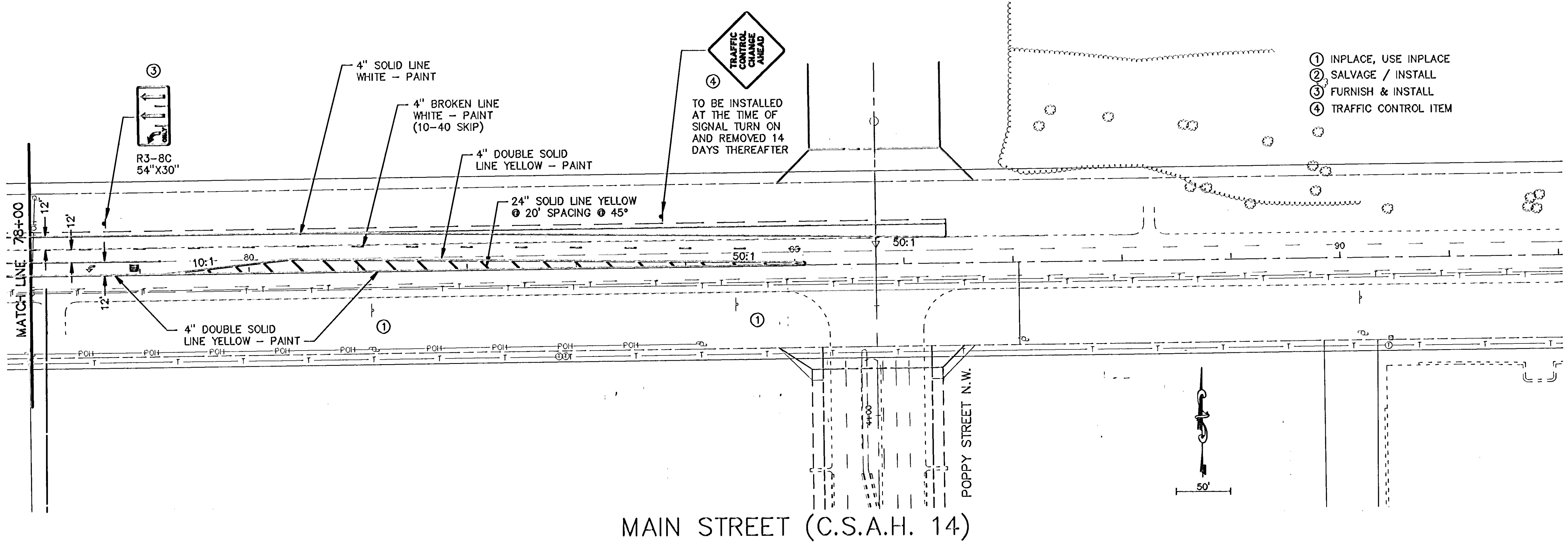
DISK FILE NAME: 3193-PRD.DWG  
 PLOT DATE: Apr 03, 1996 11:21am

DESIGN FILE: 3193A10	DESIGN BY: LJM	DWG. NAME: 3193-PRD
REVISION: 1	DATE: 12/30/96	AS-BUILT
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.		
DATE: 12/30/96	MINN. REG. NO. 23197	
CITY OF COON RAPIDS TEMPORARY SIGNAL / STREET IMPROVEMENTS CITY PROJECT 95-29C PLANNED CONSTRUCTION		
B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378		
SHEET NO. 4 / 13		





MAIN STREET (C.S.A.H. 14)



MAIN STREET (C.S.A.H. 14)

DISK FILE NAME: 3193-SST.DWG  
 PLOT DATE: Apr 03, 1996 11:56am

REV. NO.	DATE	DESCRIPTION
1	12/20/96	AS-BUILT

DESIGN FILE: 3193A10  
 DESIGN BY: JRM  
 DRAWN BY: JRM  
 CHECKED BY: JRM  
 DWG. NAME: 3193-SST  
 PBD DATE: 12/20/96

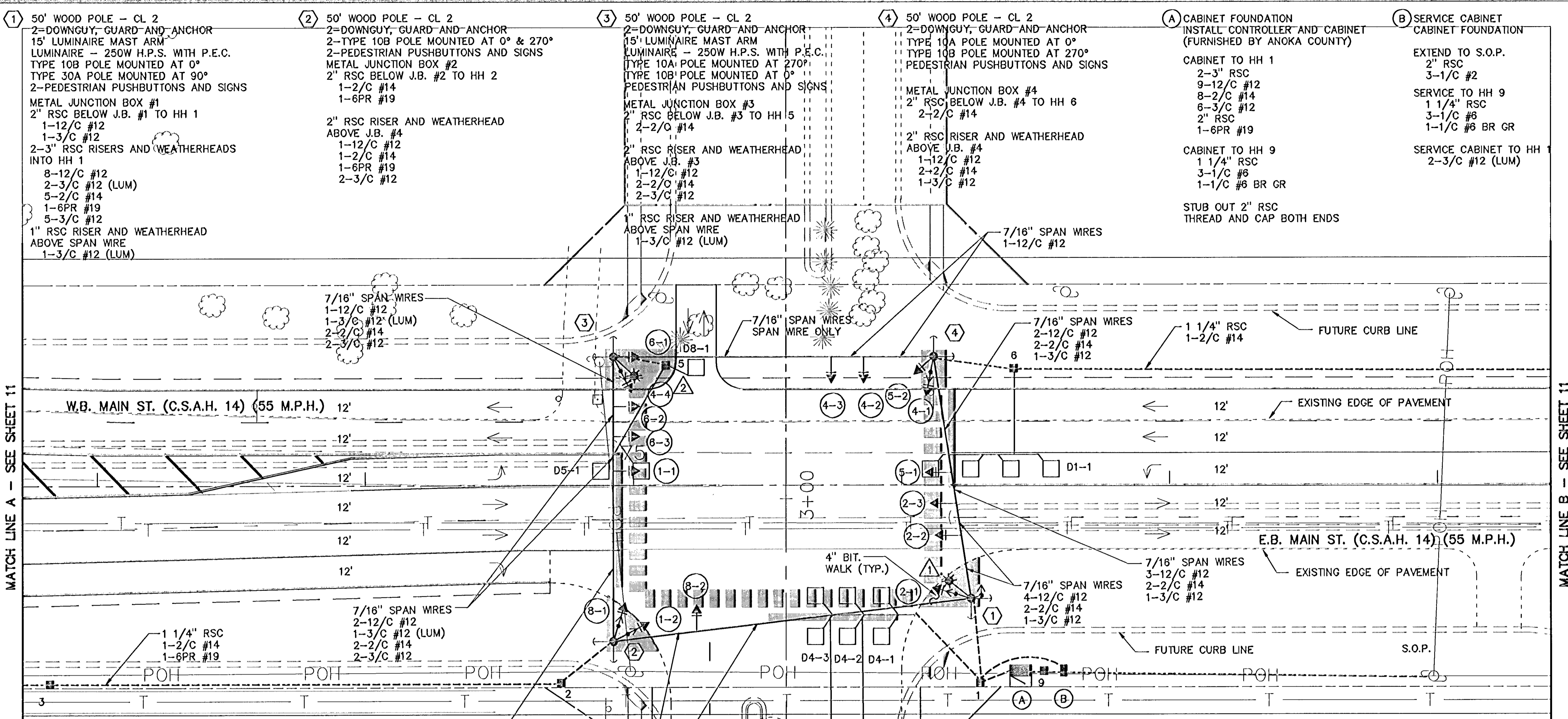
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.

DATE: 2/3/97  
 MINN. REG. NO. 23197

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

CITY OF COON RAPIDS  
 TEMPORARY SIGNAL / STREET IMPROVEMENTS  
 CITY PROJECT 95-28C  
 SIGNING AND STRIPING

SHEET NO. 5  
 13

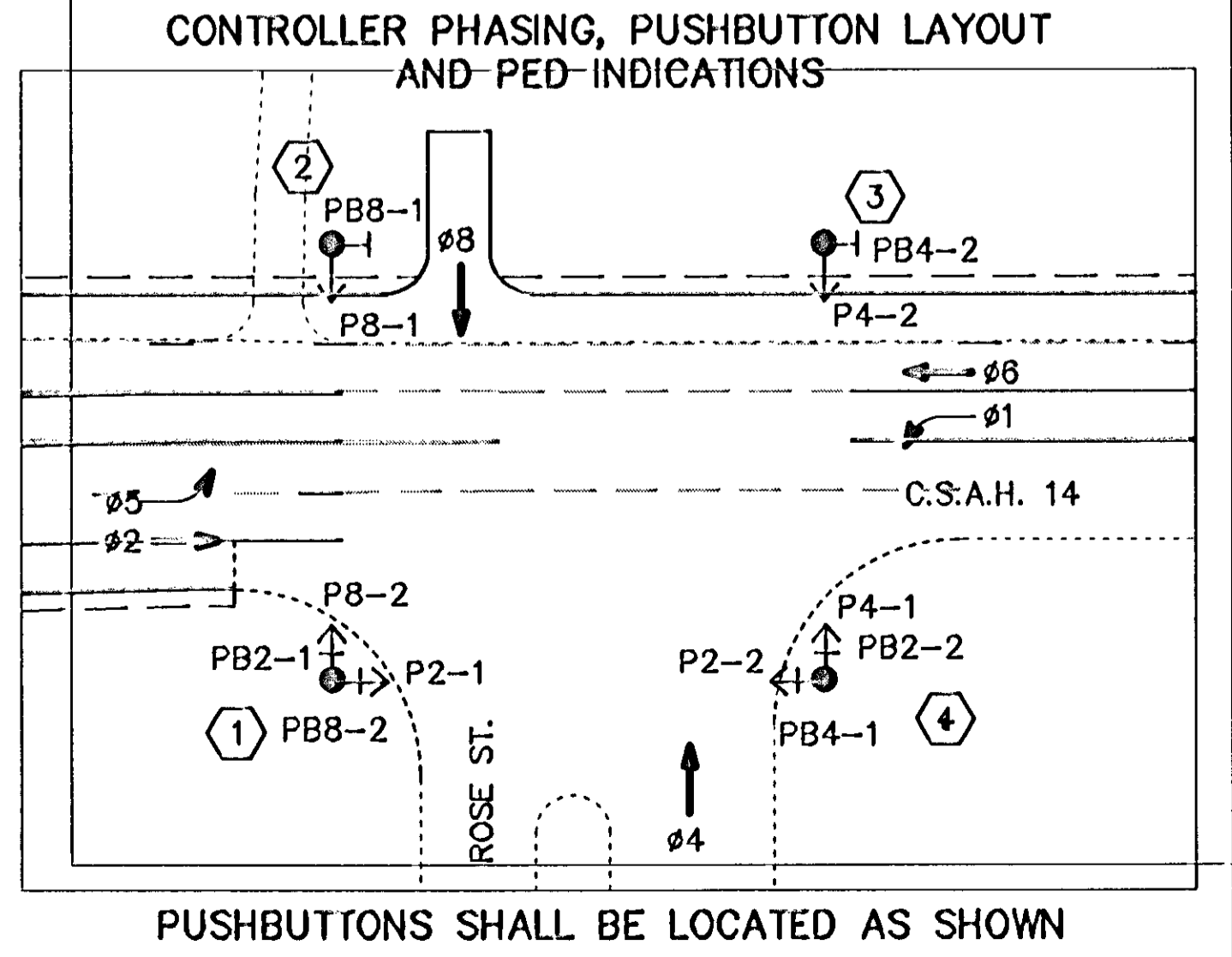


MATCH LINE A - SEE SHEET 11

MATCH LINE B - SEE SHEET 11

**SIGNAL SYSTEM OPERATION**

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASE.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.



**SIGNAL FACES**

ALL INDICATIONS SHALL BE 12"

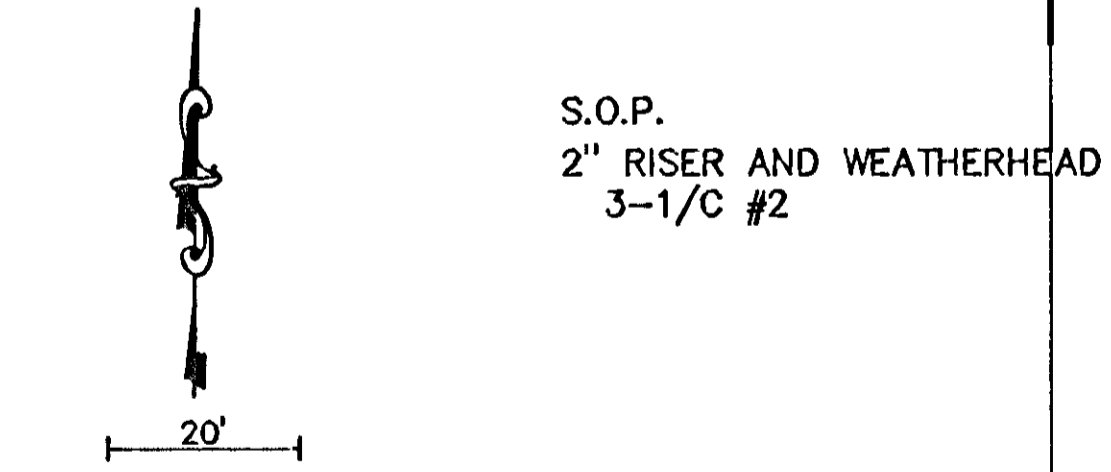
SIGNAL FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	←	←	←
4-1, 4-2, 4-3, 4-4	←	←	←
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	←	←	←
8-1, 8-2	←	←	←

**LOOP DETECTORS**

NUMBER	SIZE (FT)	FUNCTION*	LOCATION**
D1-1	4-6x6	1	AS SHOWN
D2-1	2-6x6	1	400
D4-1	2-6x6	7	AS SHOWN
D4-2	2-6x6	1	AS SHOWN
D4-3	2-6x6	1	AS SHOWN
D5-1	2-6x6	1	AS SHOWN
D6-1	2-6x6	1	400
D8-1	6x6	7	AS SHOWN

\* LOOP DETECTOR FUNCTIONS  
 1) CALL & EXTEND  
 3) EXTEND ONLY  
 7) DELAY CALL/IMMEDIATE EXTEND

\*\* LOCATION = DISTANCE IN FEET FROM CROSSWALK OR STOP BAR TO FRONT OF LOOP DETECTOR



- NOTES:**
- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
  - EXACT LOCATION OF HANDHOLES, POLES, LOOP DETECTORS AND CABINET SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
  - ALL SIGNAL INDICATIONS SHALL HAVE GLASS LENSES.
  - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
  - HANDHOLES SHALL BE CONCRETE.
  - LOOP DETECTORS SHALL BE INSTALLED IN NMC. SEE SPECIAL PROVISIONS.
  - PEDESTRIAN INDICATIONS SHALL BE 12" BY 12". SIGNS SHALL BE PROVIDED BY ANOKA COUNTY. SEE SPECIAL PROVISIONS.

DESIGN FILE: 3193410

DATE: 4-16-96

REV. NO. 1

DATE: 4-16-96

REV. NO. 2

DATE: 7/28/96

DESIGN BY: JAS

DRAWN BY: JAS

CHECKED BY: RUG

DATE:

DESIGN BY: JAS

DRAWN BY: JAS

CHECKED BY: RUG

DATE:

DESIGN BY: JAS

DRAWN BY: JAS

CHECKED BY: RUG

DATE:

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

MINNESOTA PROFESSIONAL ENGINEER

DATE: 4-16-96

MINN. REG. NO. 22793

THRESEAR SQUARE, 700 THIRD STREET S.E.

MINNEAPOLIS, MN 55415, PHONE 612/370-0700, FAX 612/370-1378

CITY OF COON RAPIDS

TEMPORARY SIGNAL / STREET IMPROVEMENTS

CITY PROJECT 95-29C

C.S.A.H. / ROSE STREET INTERSECTION LAYOUT

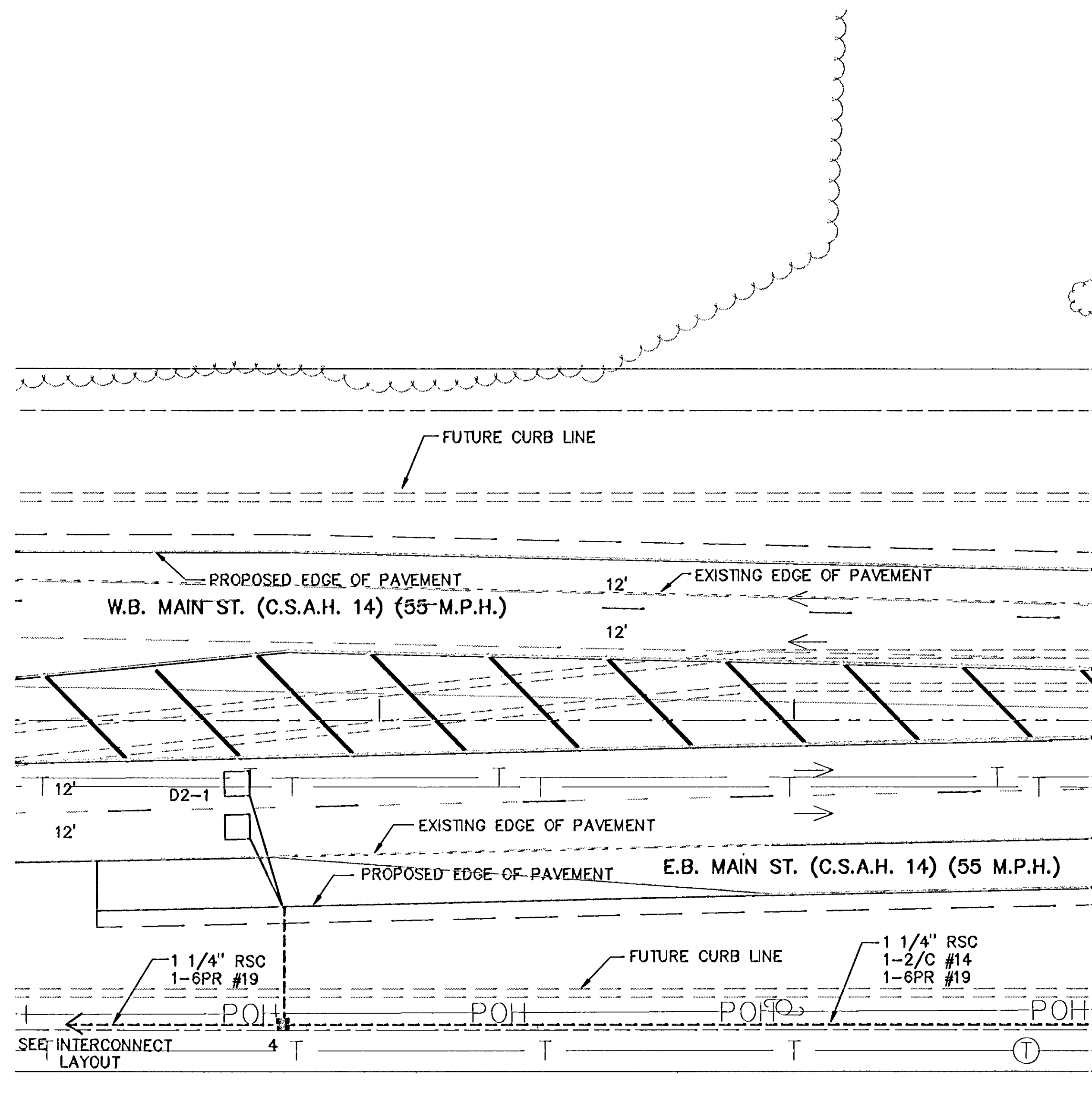
SHEET NO. 6

13

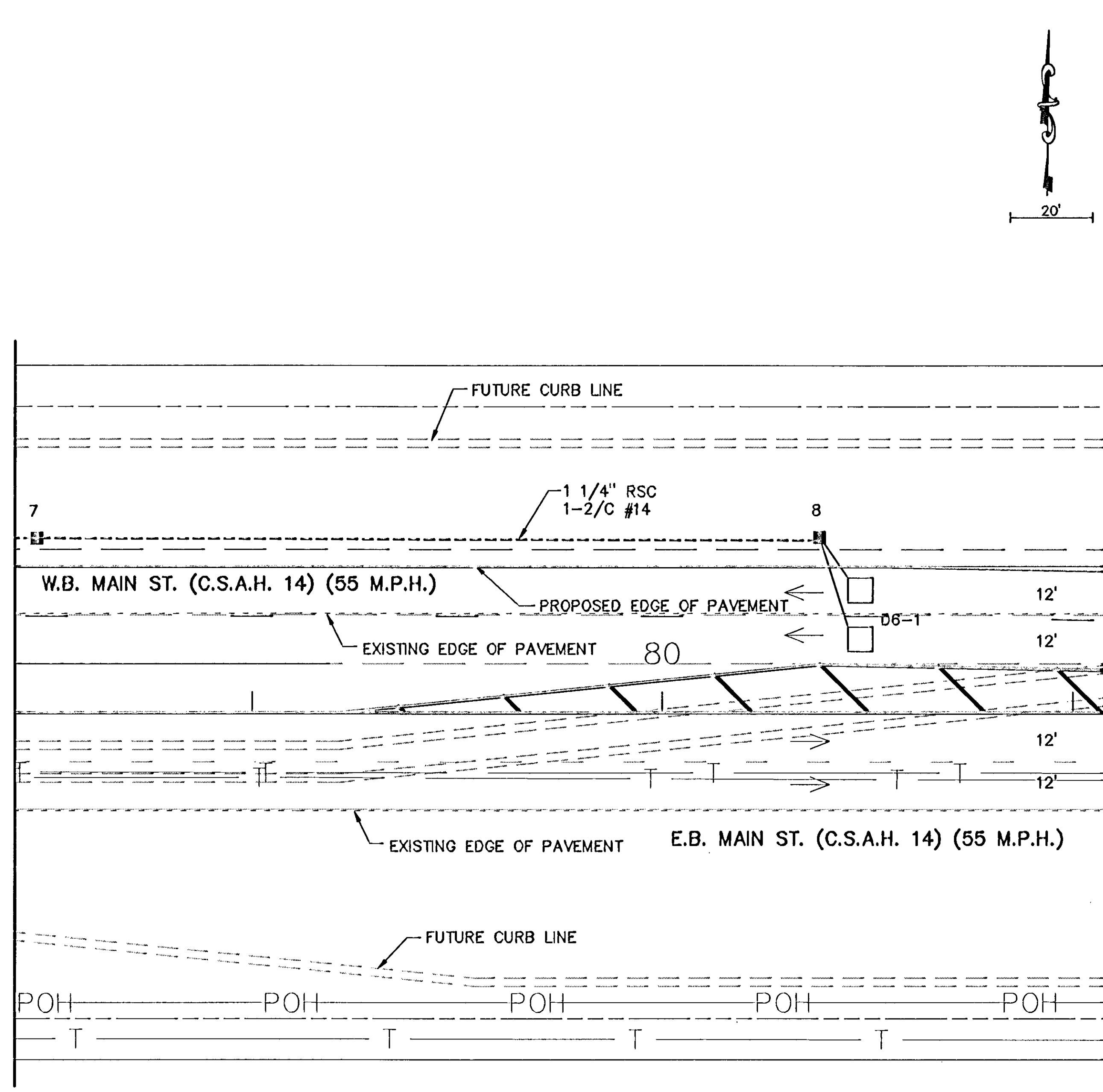


DATE:

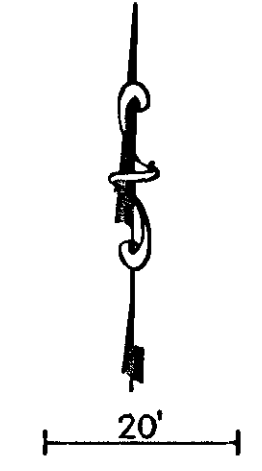
DRAWING NAME: LAYOUT2.DWG PLOT DATE:



MATCH LINE A - SEE SHEET 10



MATCH LINE B - SEE SHEET 10



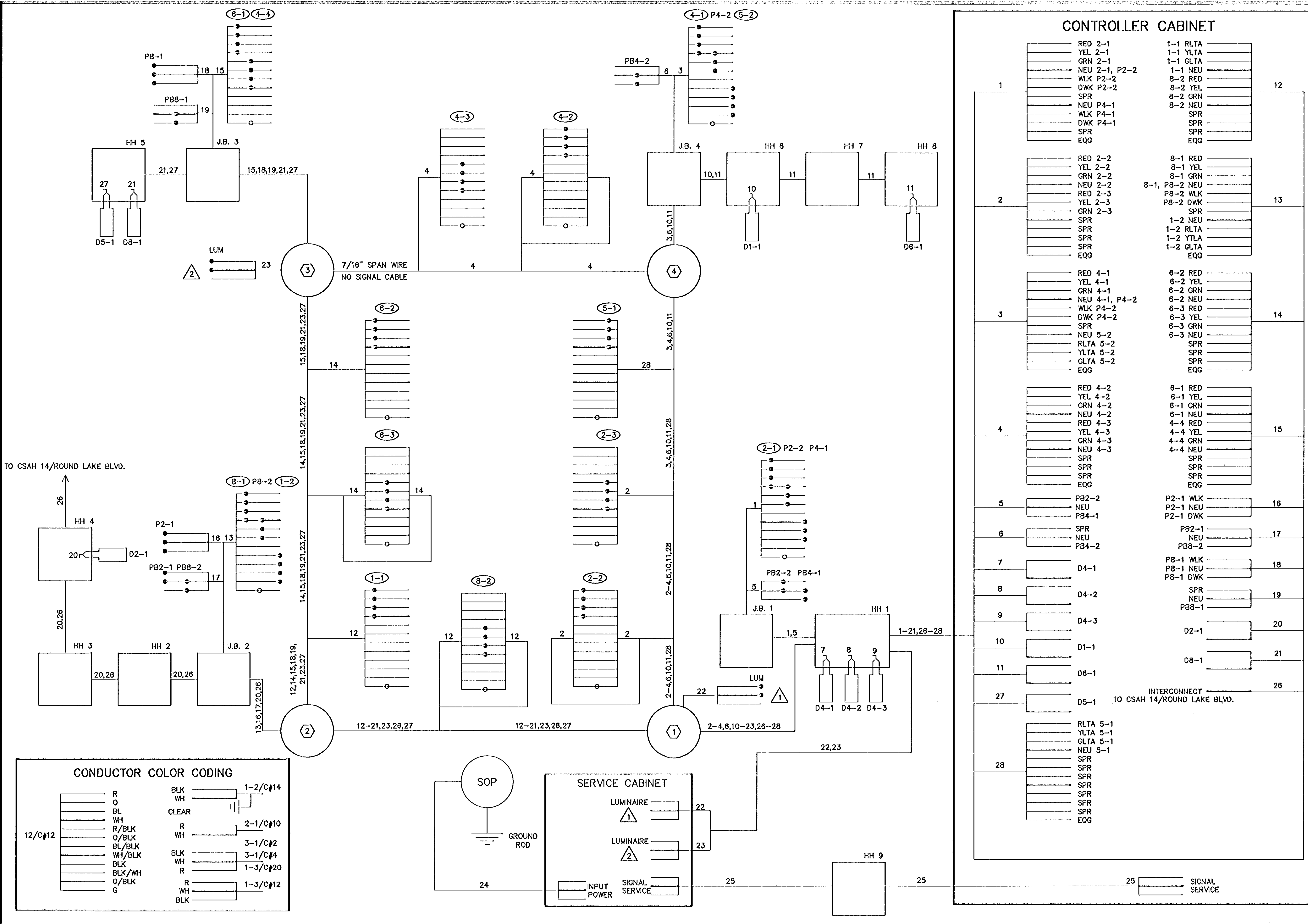
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16. DATE: 4-16-98 MINN. REG. NO. 22793	DESIGN FILE: ST93A10	REV. NO. 1 2	DATE 4-16-98 12/20/96	DESCRIPTION PER ANOKA COUNTY COMMENTS AS-#1117
	DRAWN BY: RJC	DESIGN BY: RJC	CHKD. BY: RJC	DWG. NAME: LAYOUT2

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

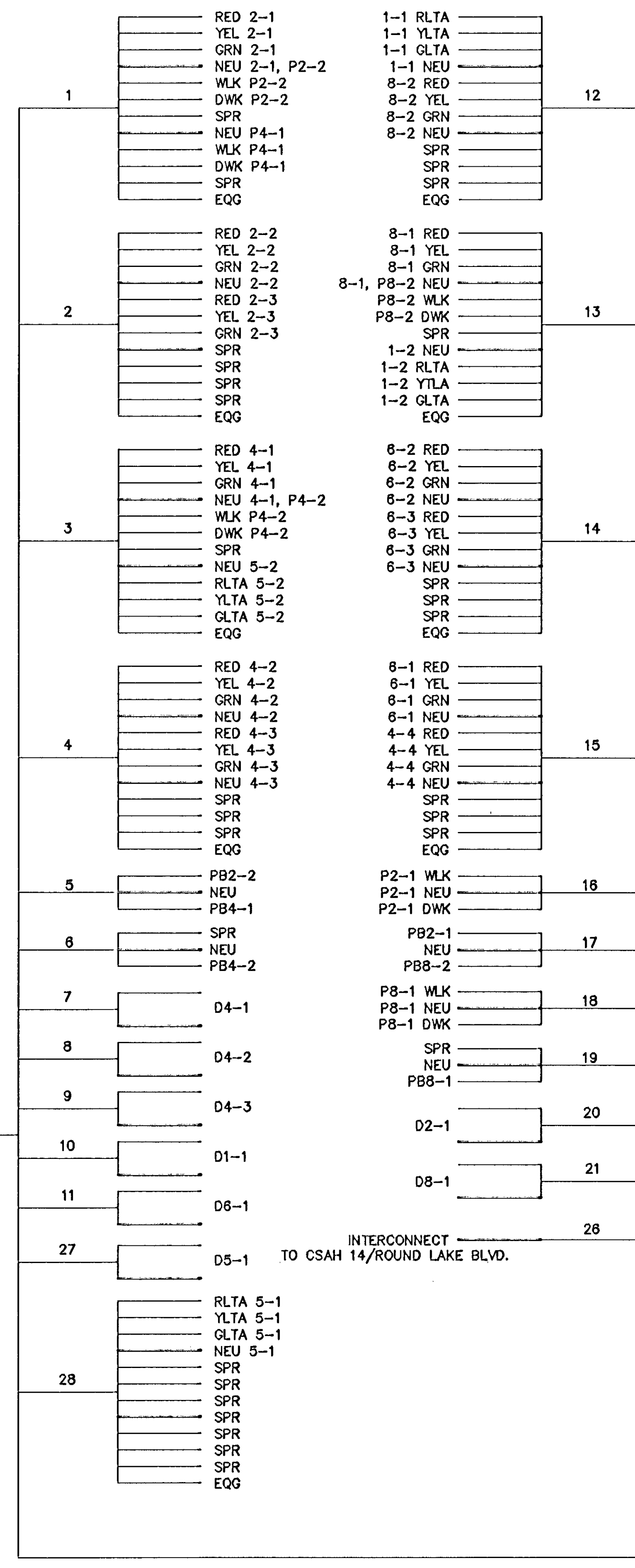
CITY OF COON RAPIDS  
 TEMPORARY SIGNAL / STREET IMPROVEMENTS  
 CITY PROJECT 95-29C  
 C.S.A.H. 14 / ROSE STREET  
 INTERSECTION LAYOUT

SHEET NO.  
 7 / 13

DRAWING NAME: WRELDWG PLOT DATE: 04-16-96



**CONTROLLER CABINET**



**CITY OF COON RAPIDS**  
 TEMPORARY SIGNAL / STREET IMPROVEMENTS  
 CITY PROJECT 95-29C  
 C.S.A.H. 14 / ROSE STREET  
 FIELD WIRING DIAGRAM

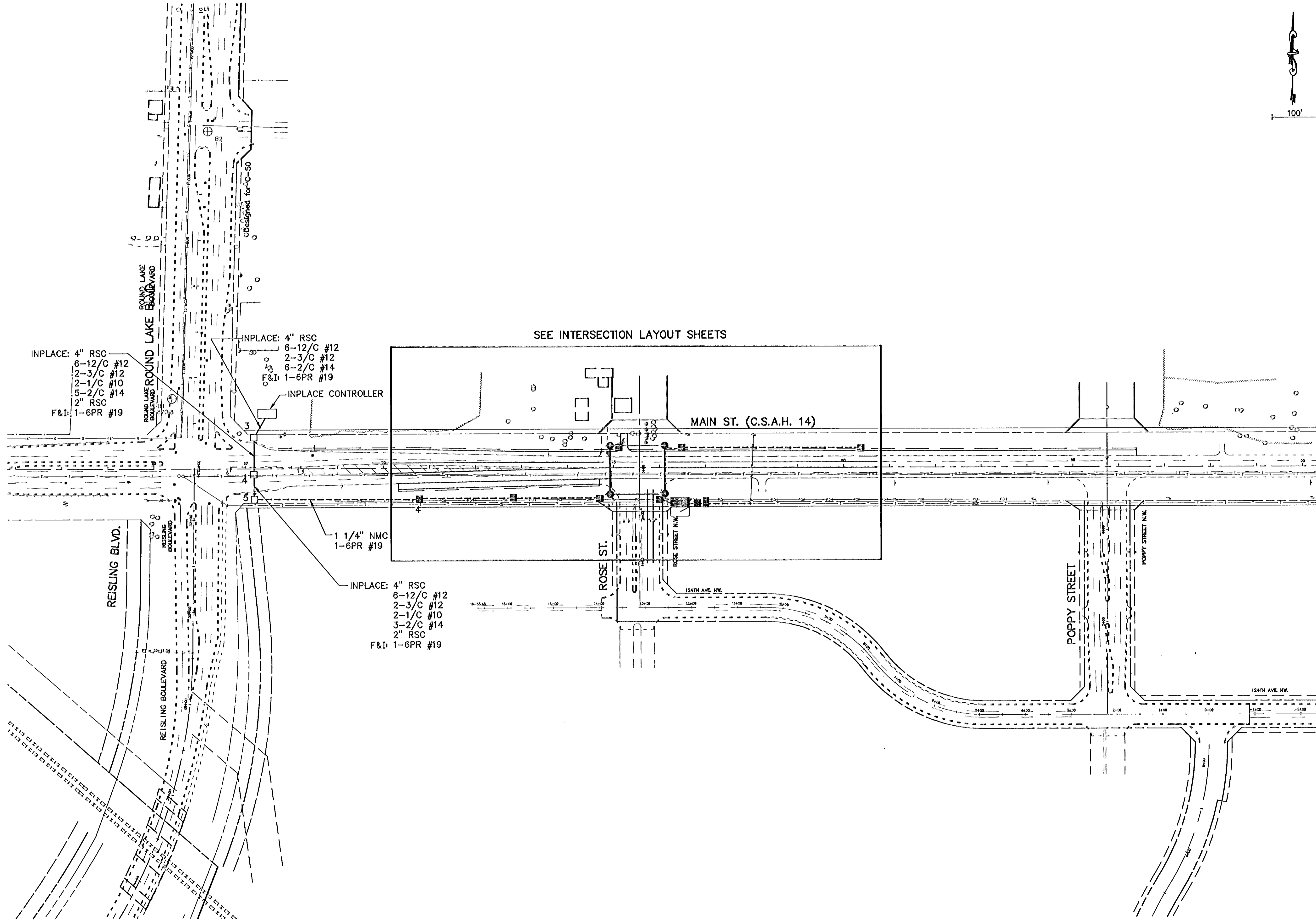
**DESIGNER:** JAS  
**DATE:** 4-16-96  
**REV. NO.:** 1  
**PER ANOKA COUNTY COMMENTS:** AS-BUILT

**DESIGN FILE:** 3193A10  
**DESIGNED BY:** JAS  
**DRAWN BY:** R/J  
**CHECKED BY:** R/J  
**DWG. NAME:** WRE  
**DATE:** 4-16-96

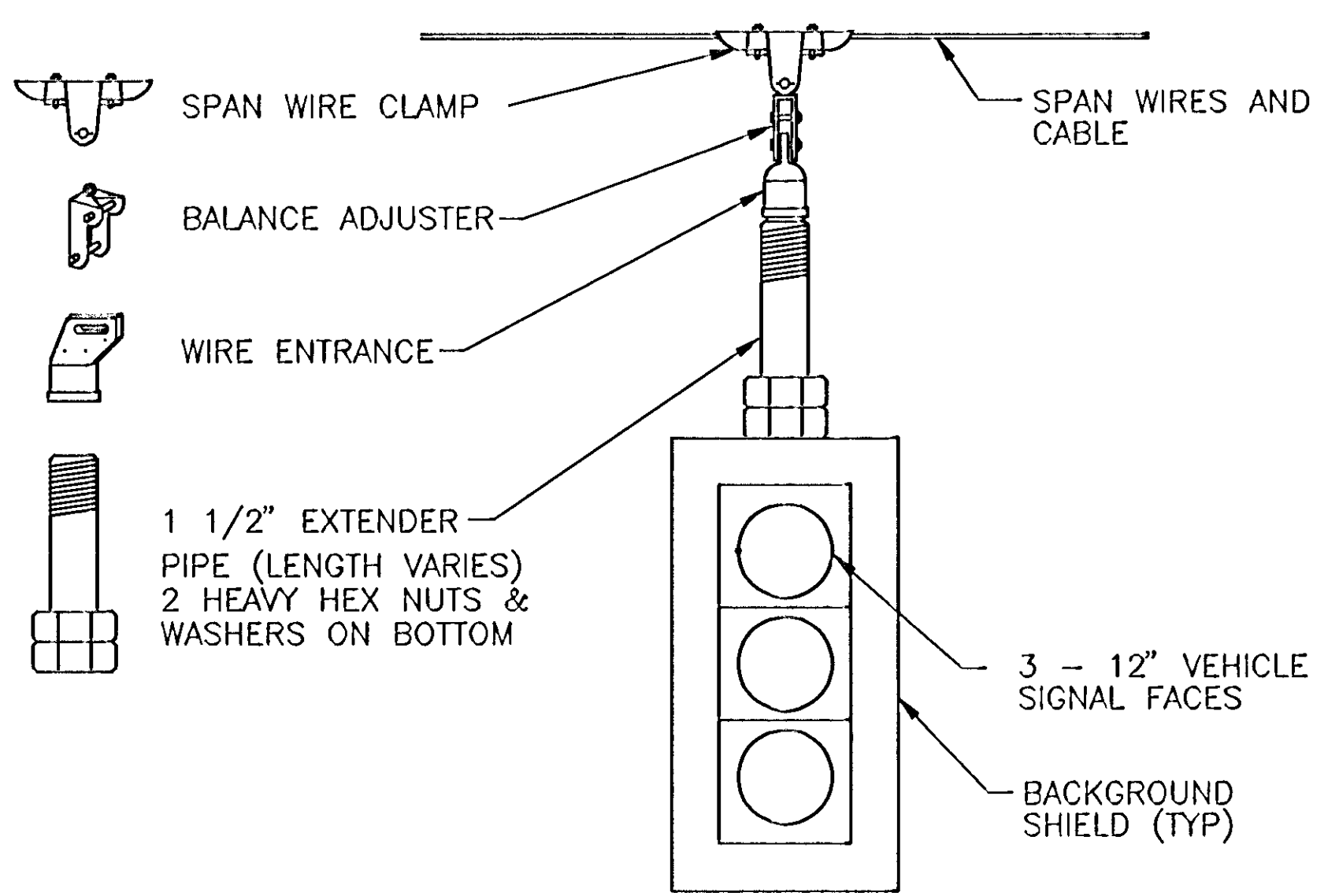
**B. R. W. INC.**  
 Thresher Square, 700 Third Street So.  
 Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378

**SHEET NO. 8**      **13**

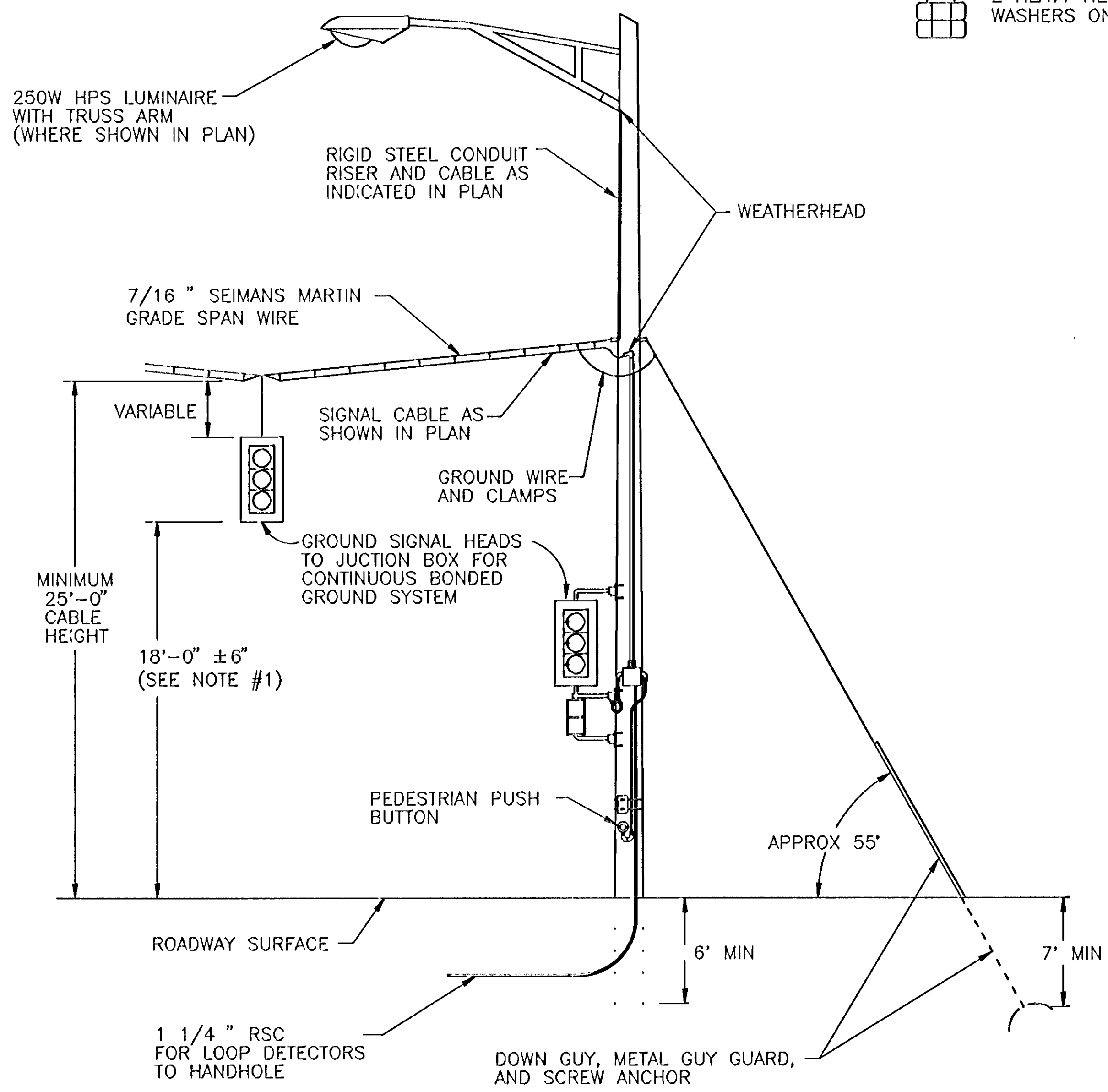




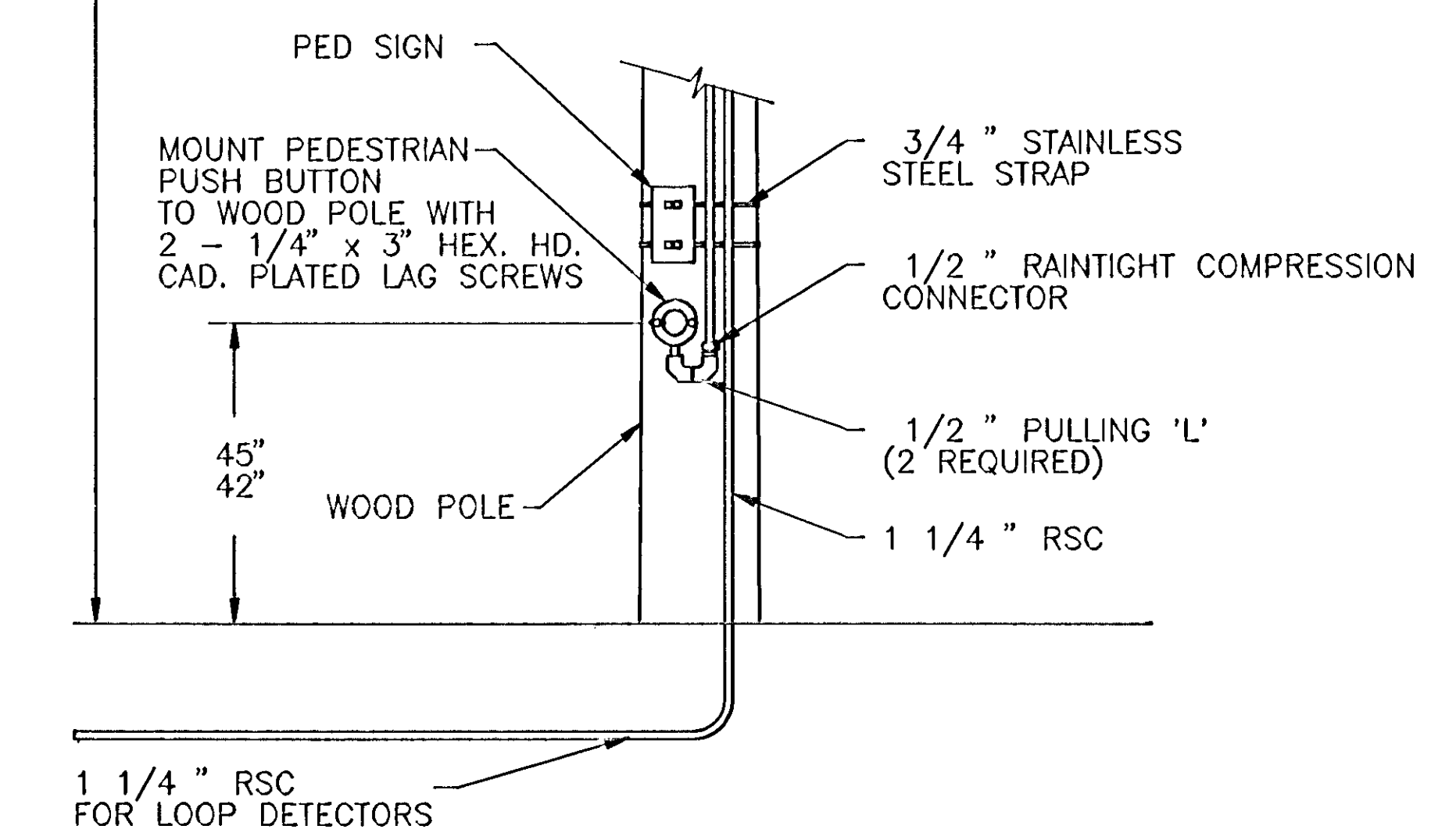
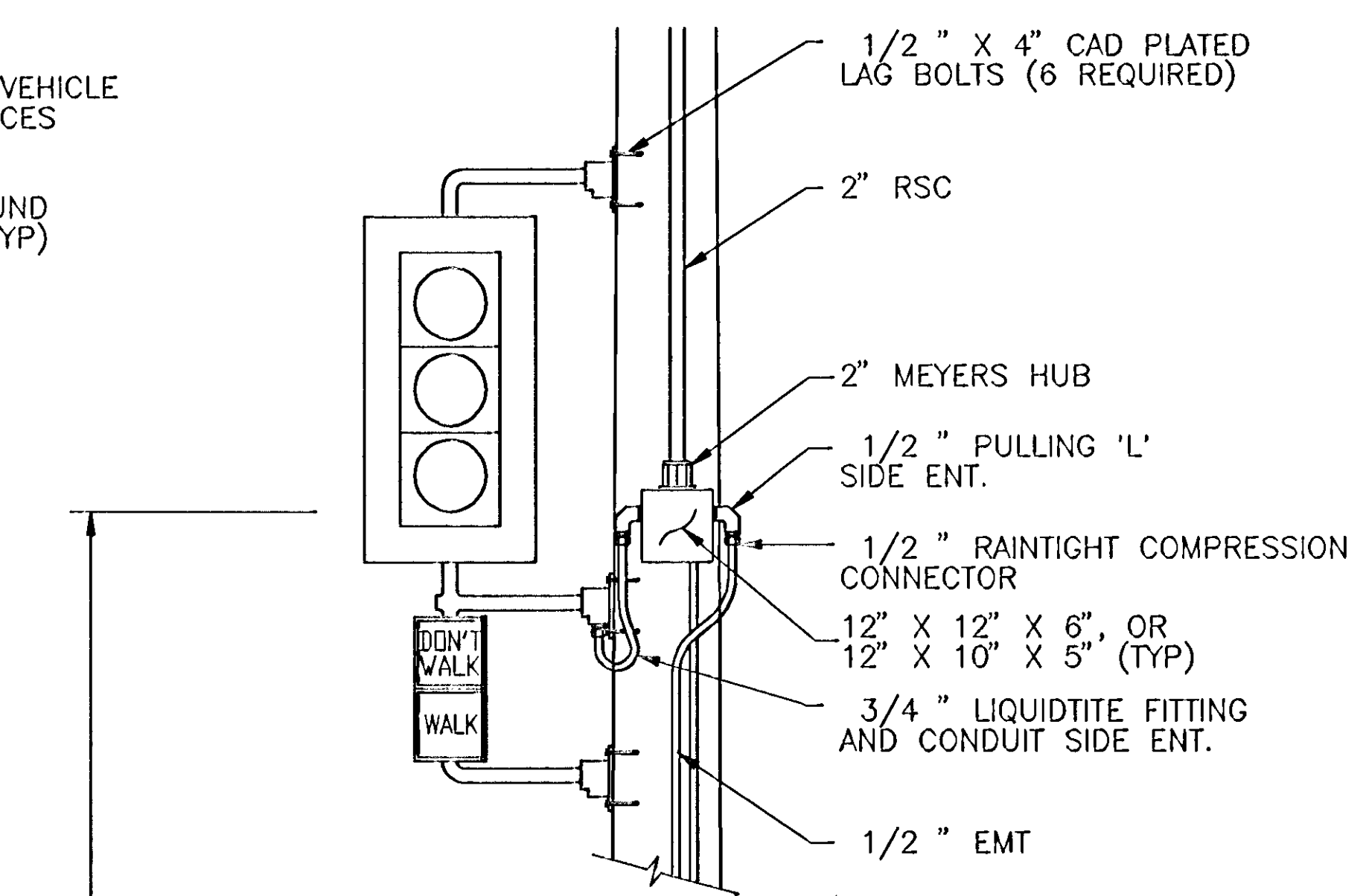
CITY OF COON RAPIDS TEMPORARY SIGNAL / STREET IMPROVEMENTS CITY PROJECT 95-29C	TRAFFIC SIGNAL INTERCONNECT LAYOUT	SHEET NO. 9	SHEET NO. 13
		B R W INC Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATIONS AND REPORT PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.
DESIGN FILE: 3193A10	DESIGN BY: RUG	DATE: 4-16-96	DESCRIPTION: PER ANOKA COUNTY COMMENTS AS-BUILT
DRAWN BY: JAS	CHECKED BY: RUG	DATE: 11/30/96	DWG. NAME: INTER



SPAN WIRE MOUNTING DETAIL



TEMPORARY POLE DETAIL

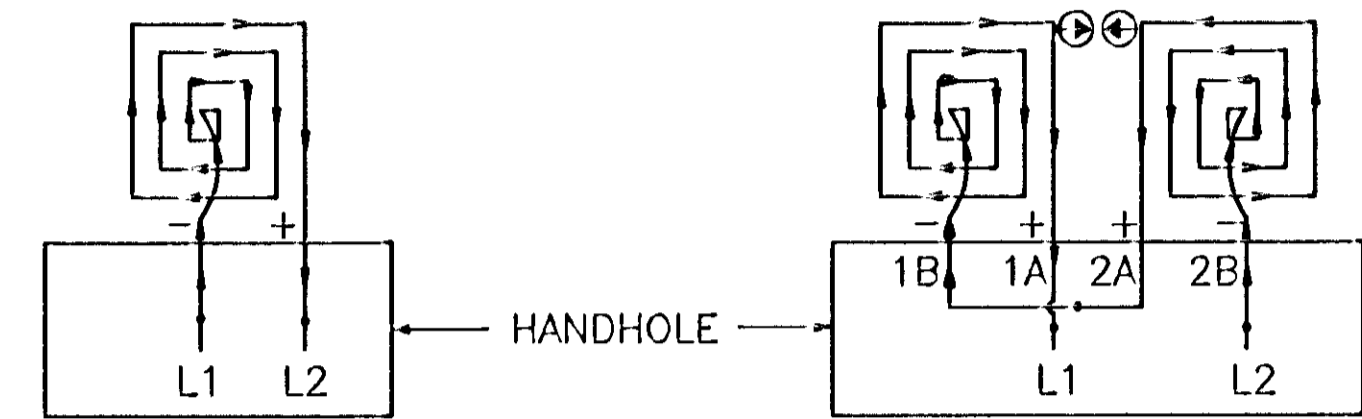
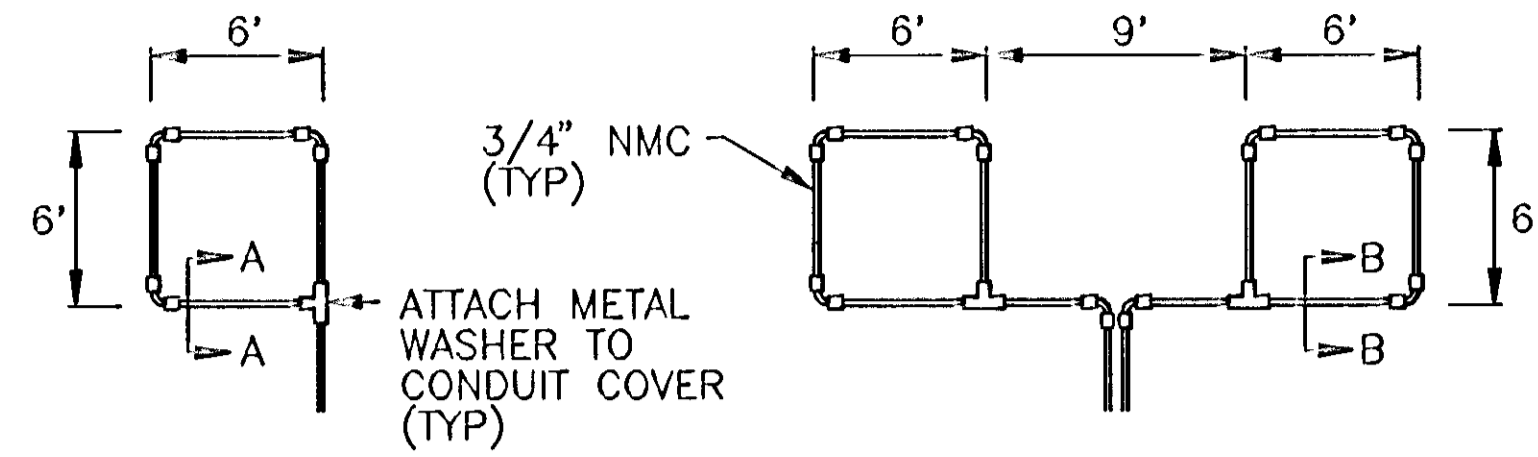


NOTES:  
 1) 24'- 0" CLEARANCE IS REQUIRED ON ALL MOVING ROUTES.

DESIGN FILE: 3193A10	DESIGN BY:	CHKD. BY:	DATE:
REV. NO. 1	DESIGN BY:	CHKD. BY:	DATE:
REV. NO. 2	DESIGN BY:	CHKD. BY:	DATE:
DESCRIPTION	DATE	AS PER ANOKA COUNTY COMMENTS	
	4-16-96	AS-BUTZT	
	7/2/90/796	AS-BUTZT	
I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.			
B R W INC. Threshor Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1378			22793
CITY OF COON RAPIDS TEMPORARY SIGNAL / STREET IMPROVEMENTS CITY PROJECT 95-29C			
SPAN WIRE MOUNTING DETAIL			
SHEET NO.	10 13		

DRAWING NAME: DET-1.DWG PLOT DATE: 04-03-96

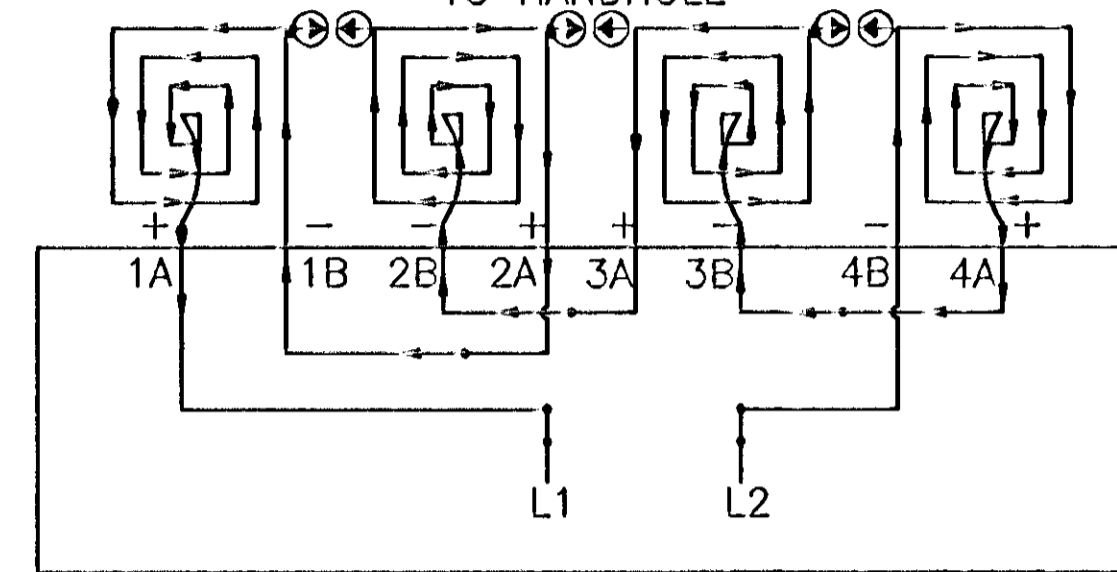
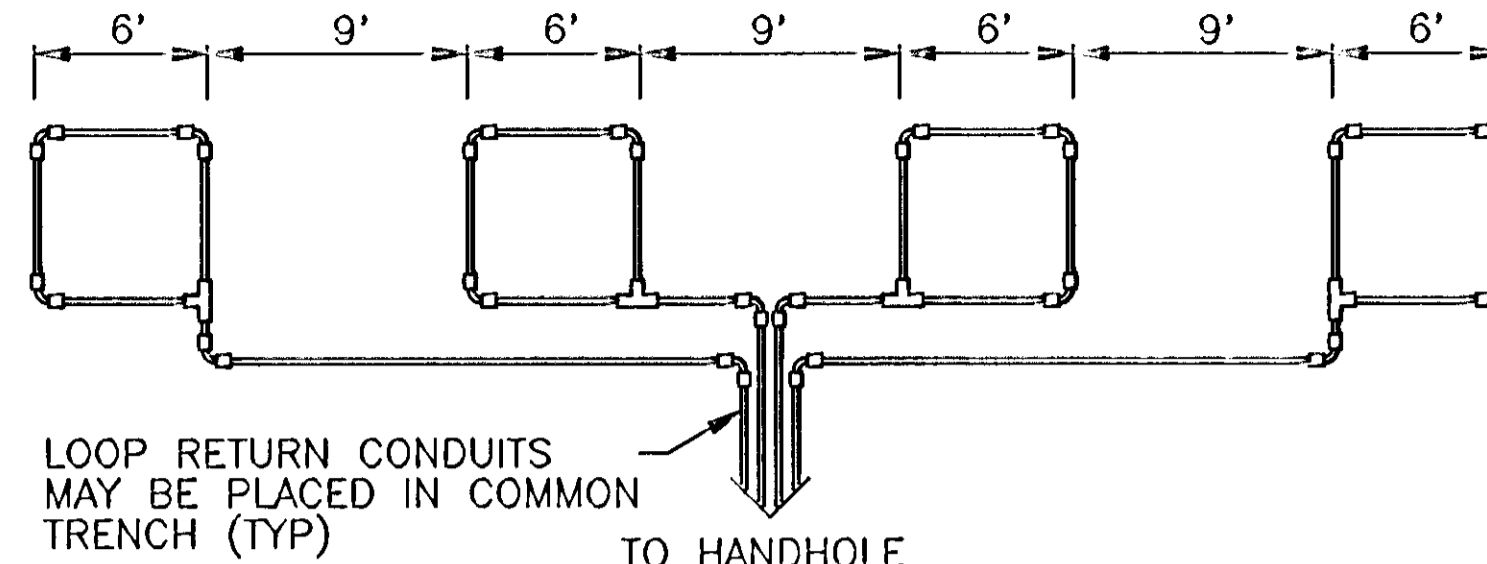




**LOOP DETECTOR  
DETAIL 'A'**  
(LOOP PHASING FOR  
SINGLE CONNECTION)

**LOOP DETECTOR  
DETAIL 'B'**  
(LOOP PHASING FOR  
SERIES CONNECTION)

L1 TO 1A  
1B TO 2A  
2B TO L2



LOOP CONNECTIONS SHALL BE LABELED AND SPLICED  
IN THE HANDHOLE AS FOLLOWS:

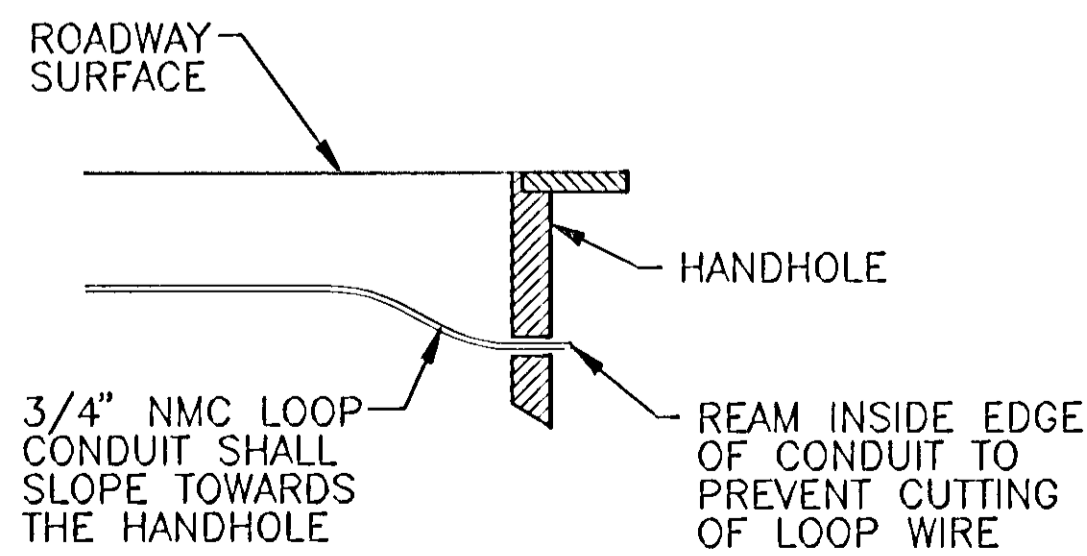
L1 TO 1A      3B TO 4A  
1B TO 2A      4B TO L2  
2B TO 3A

SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE.  
ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE  
(1A, 1B, ECT)

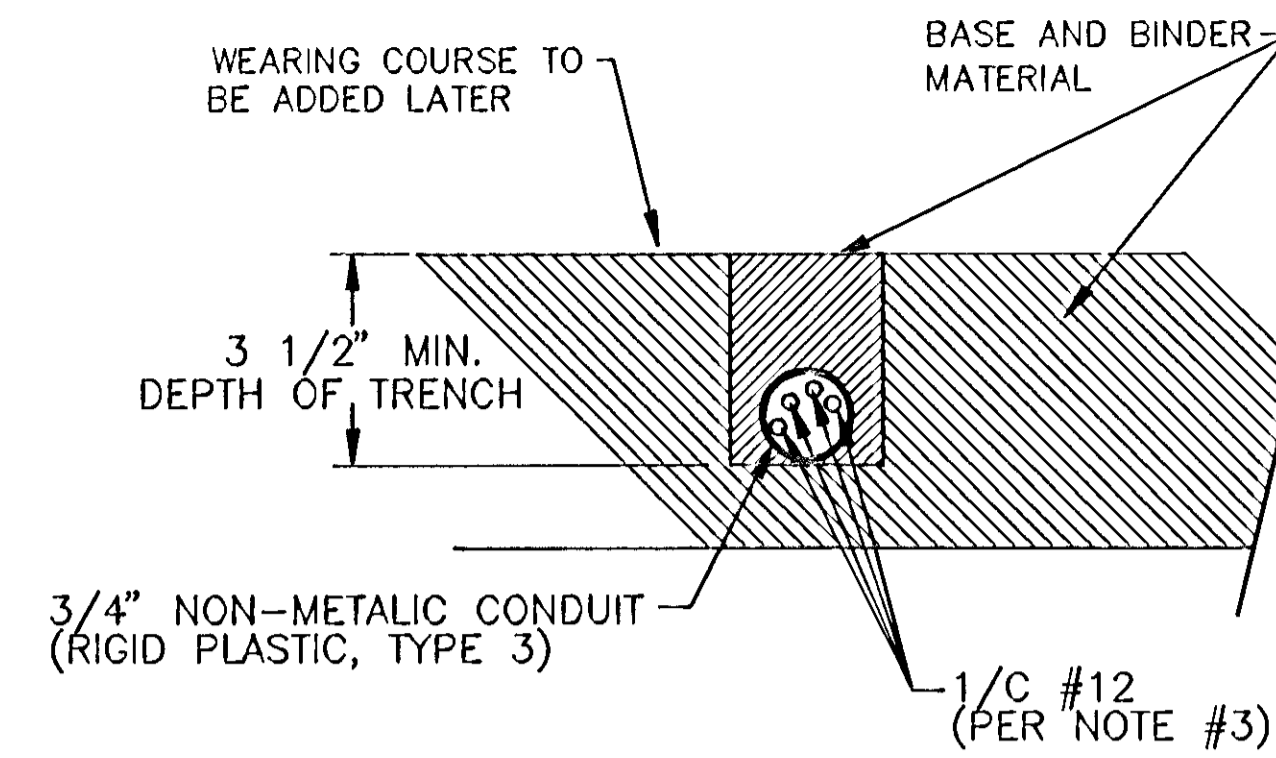
**LOOP DETECTOR  
DETAIL 'C'**  
(LOOP PHASING FOR  
SERIES CONNECTION)

**LOOP DETECTOR WIRING**

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6'x 6' THRU 6'x 14' SHALL HAVE (4) TURNS.
- 7) LOOPS 6'x 15' AND LARGER SHALL HAVE (2) TURNS.

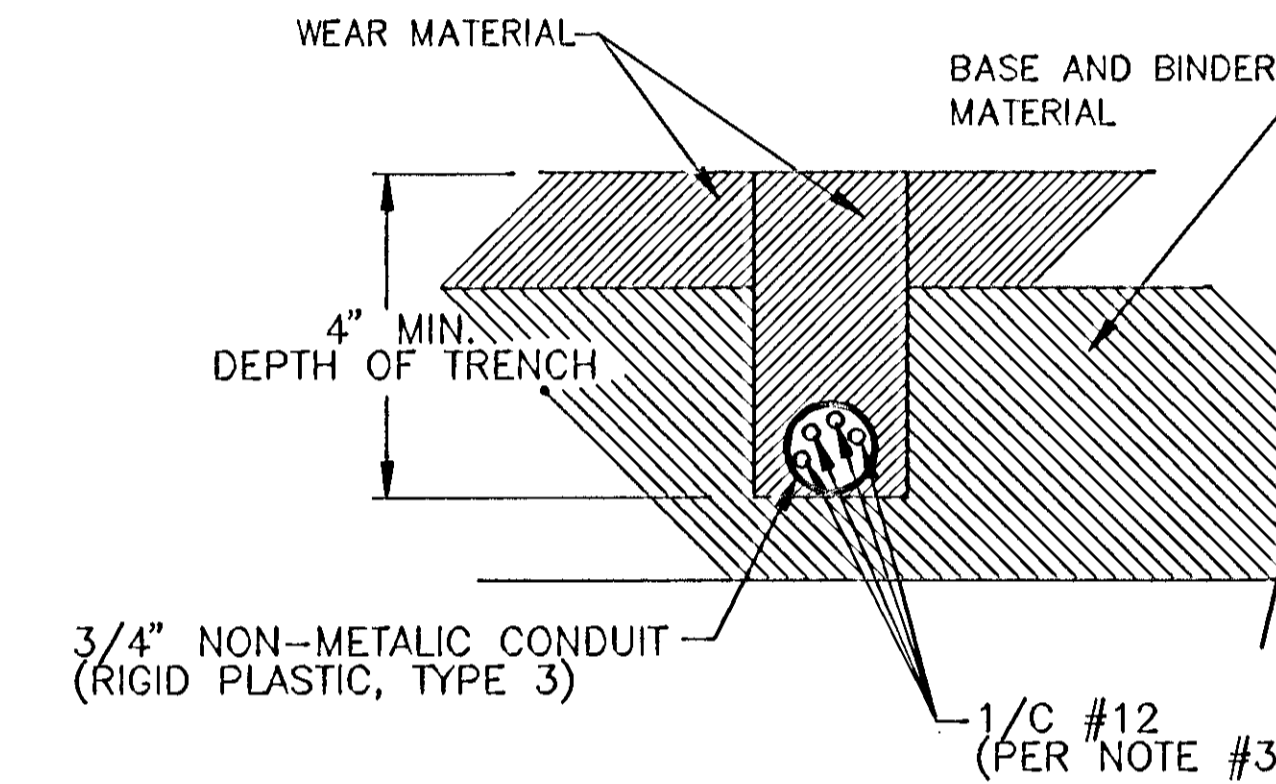


**DRAINAGE DETAIL**



**SECTION A-A**

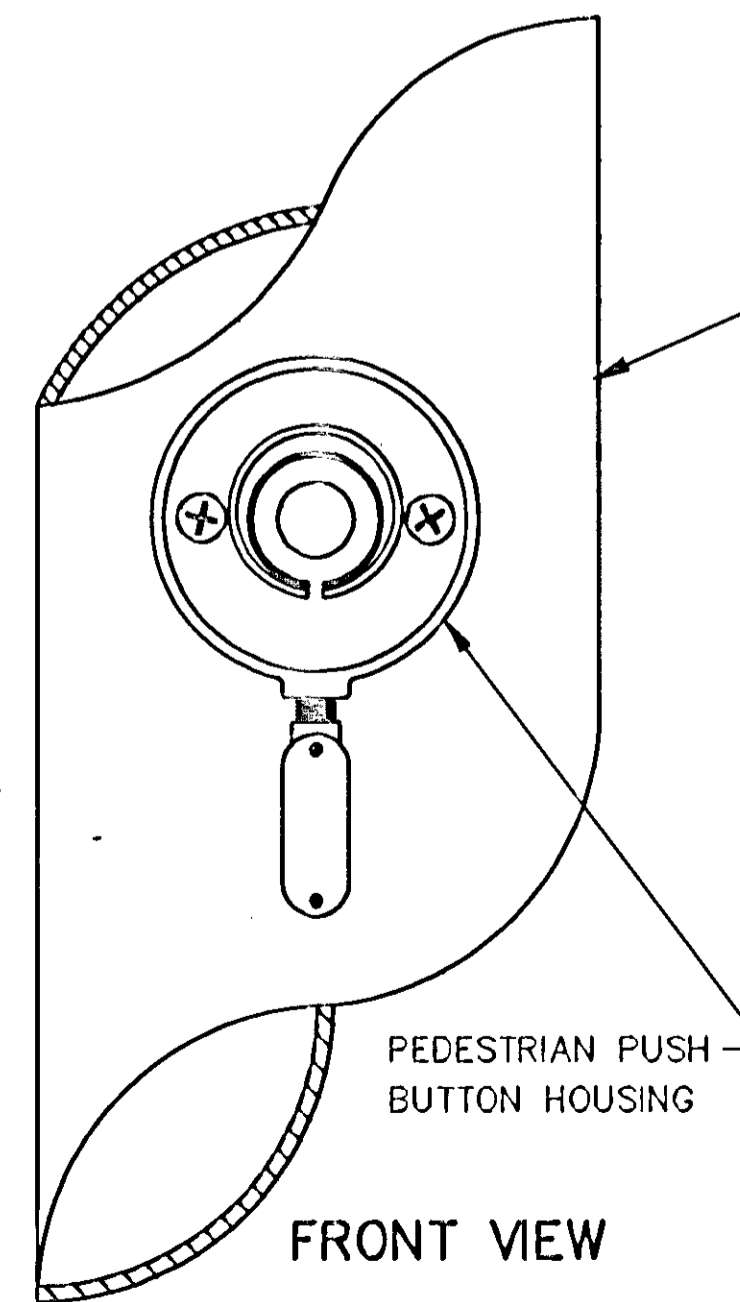
DETAIL FOR LOOP INSTALLATION  
IN NEW ROADWAY



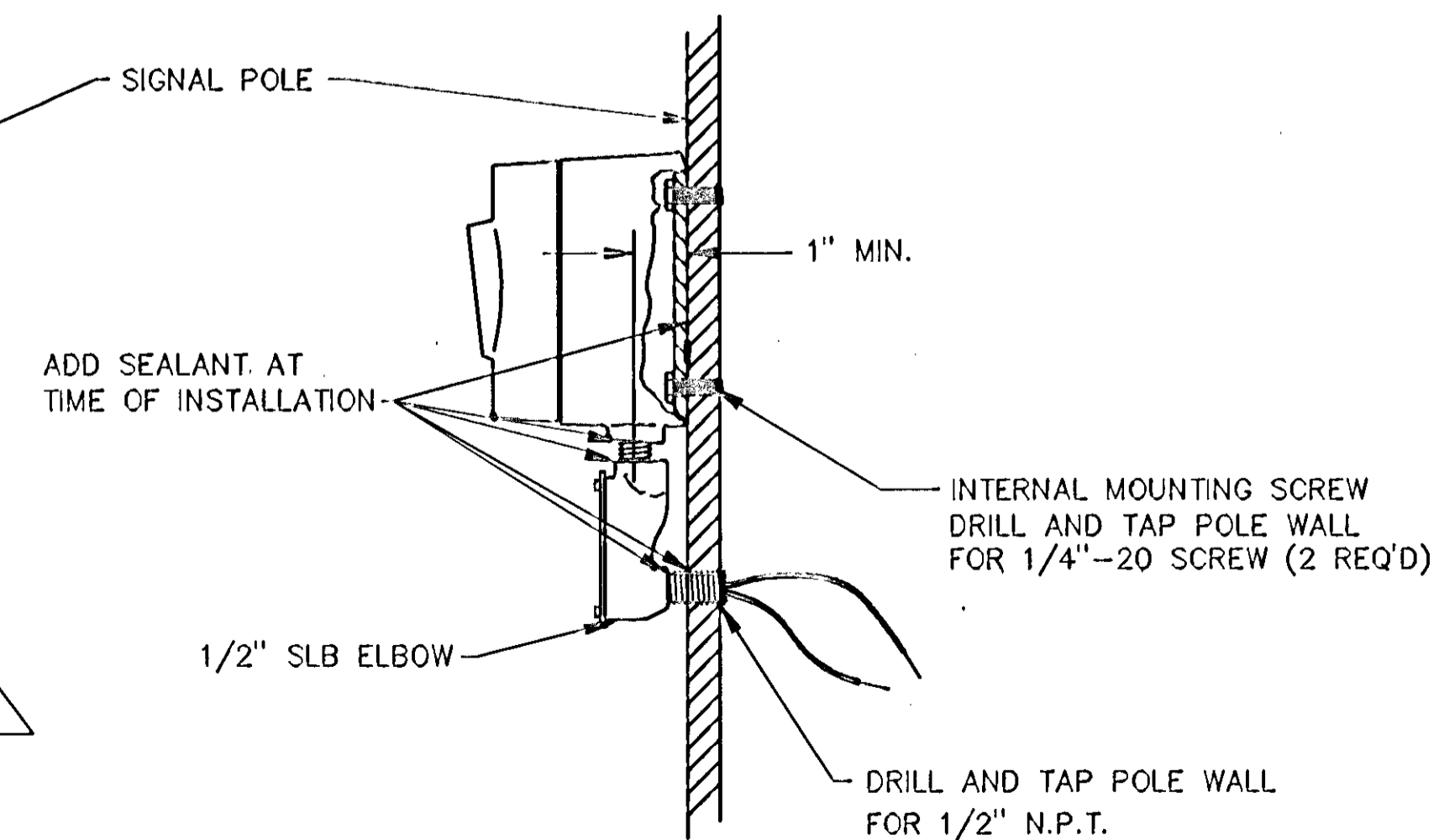
**SECTION B-B**

DETAIL FOR LOOP INSTALLATION  
IN EXISTING ROADWAY

**MAST ARM POLE  
PEDESTRIAN PUSH BUTTON DETAIL**



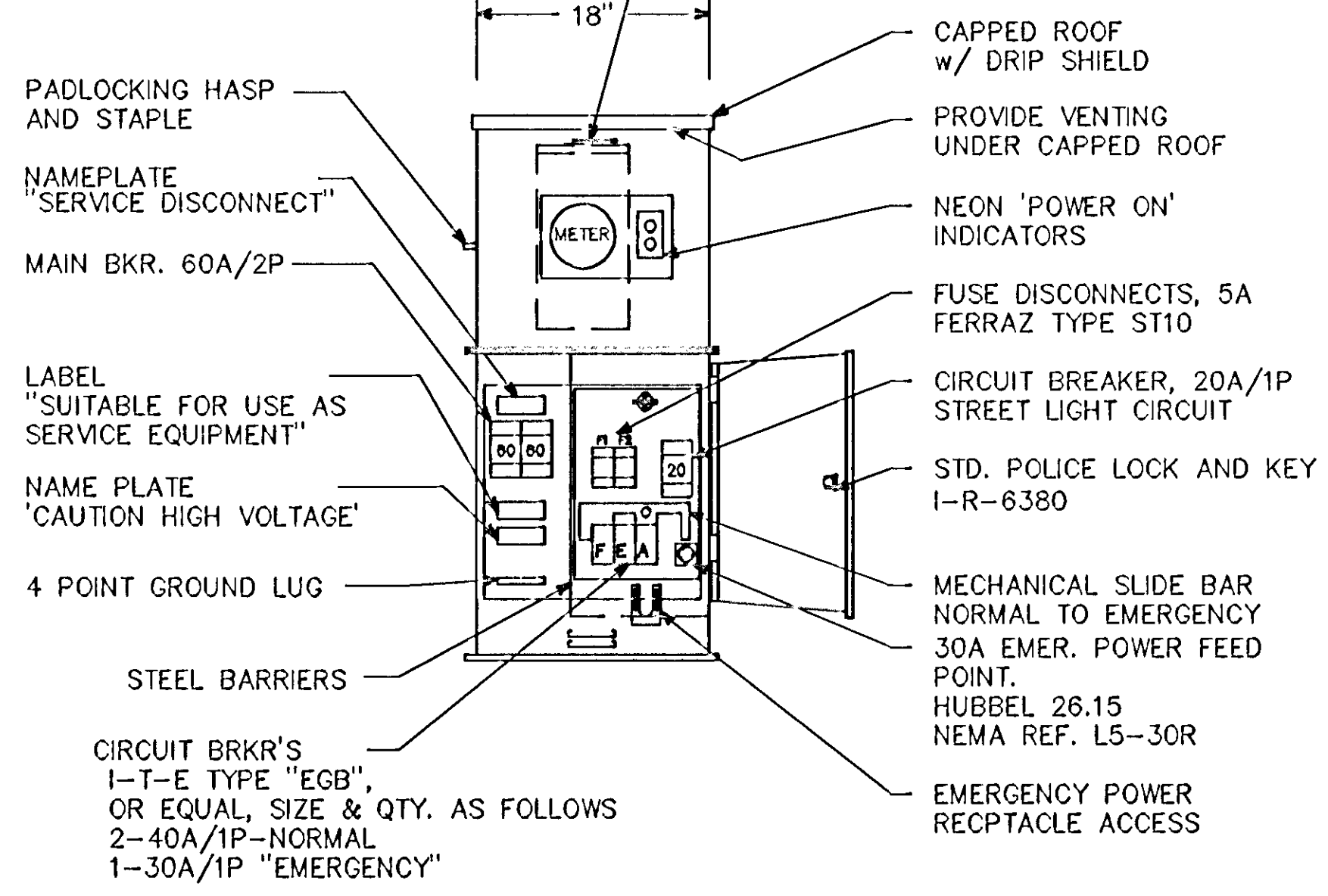
**FRONT VIEW**



**SIDE VIEW**

DISK FILE NAME: NMCDET.DWG PLOT DATE: 4-16-96	DESIGN FILE: 3193A10 DRAWN BY: CHKD. BY: DATE:	DESCRIPTION: AS PER ANOKA COUNTY COMMENTS AS-BUILT
REVISIONS:	DESIGN BY:	DATE:
1	DWG. NAME:	DATE:
2		
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.		DATE: 4-16-96 MINN. REG. NO. 22793
B R W INC. Thresher Square, 700 Third Street So. Minneapolis, MN 55415, Phone 612/370-0700, Fax 612/370-1278		
CITY OF COON RAPIDS TEMPORARY SIGNAL / STREET IMPROVEMENTS CITY PROJECT 95-29C	PREFORMED NMC LOOP DETECTOR DETAIL	
SHEET NO. 11	13	

N.S.P. METER SOCKET, 5-TERMINAL  
w/ POSITIVE BY-PASS MECHANISM  
MILBANK CAT. No. U-2272-RL.

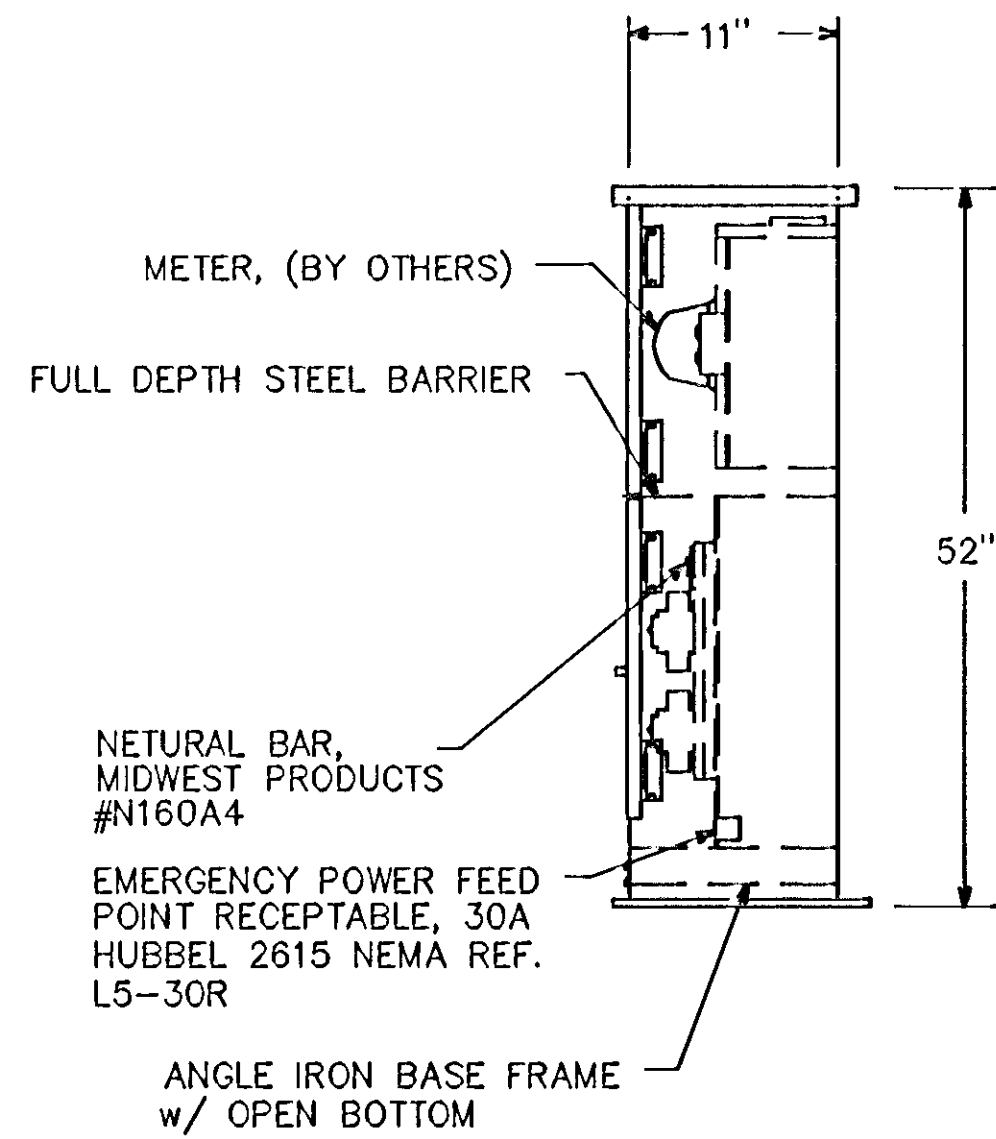


FRONT ELEV.

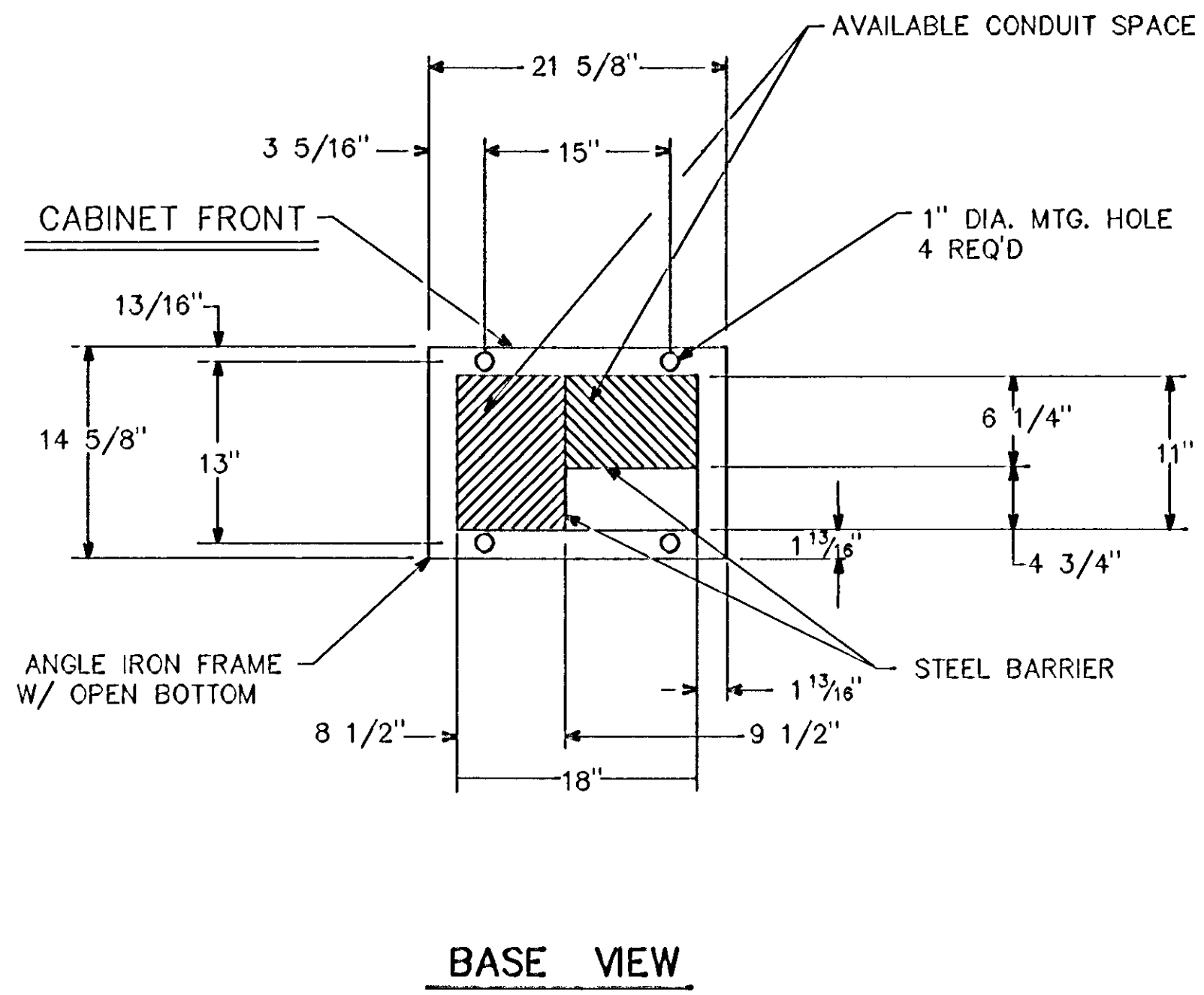
**CONSTRUCTION NOTES**

ENCLOSURE SHALL BE FABRICATED FROM #12 GA. ALL WELDED COLD ROLLED STEEL FOR OUTDOOR WEATHER PROOF SERVICE. DOORS TO BE GASKETED, ALL HINGES, PINS AND LOCKS TO BE OF NON CORRODING CONSTRUCTION. CABINET TO BE PRIMED INSIDE AND OUT WITH RUST INHIBITTING PRIMER. FINISH PER MN/DOT #3527  
ENCLOSURE SHALL BE 'UL' APPROVED

**SIGNAL SERVICE CABINET**

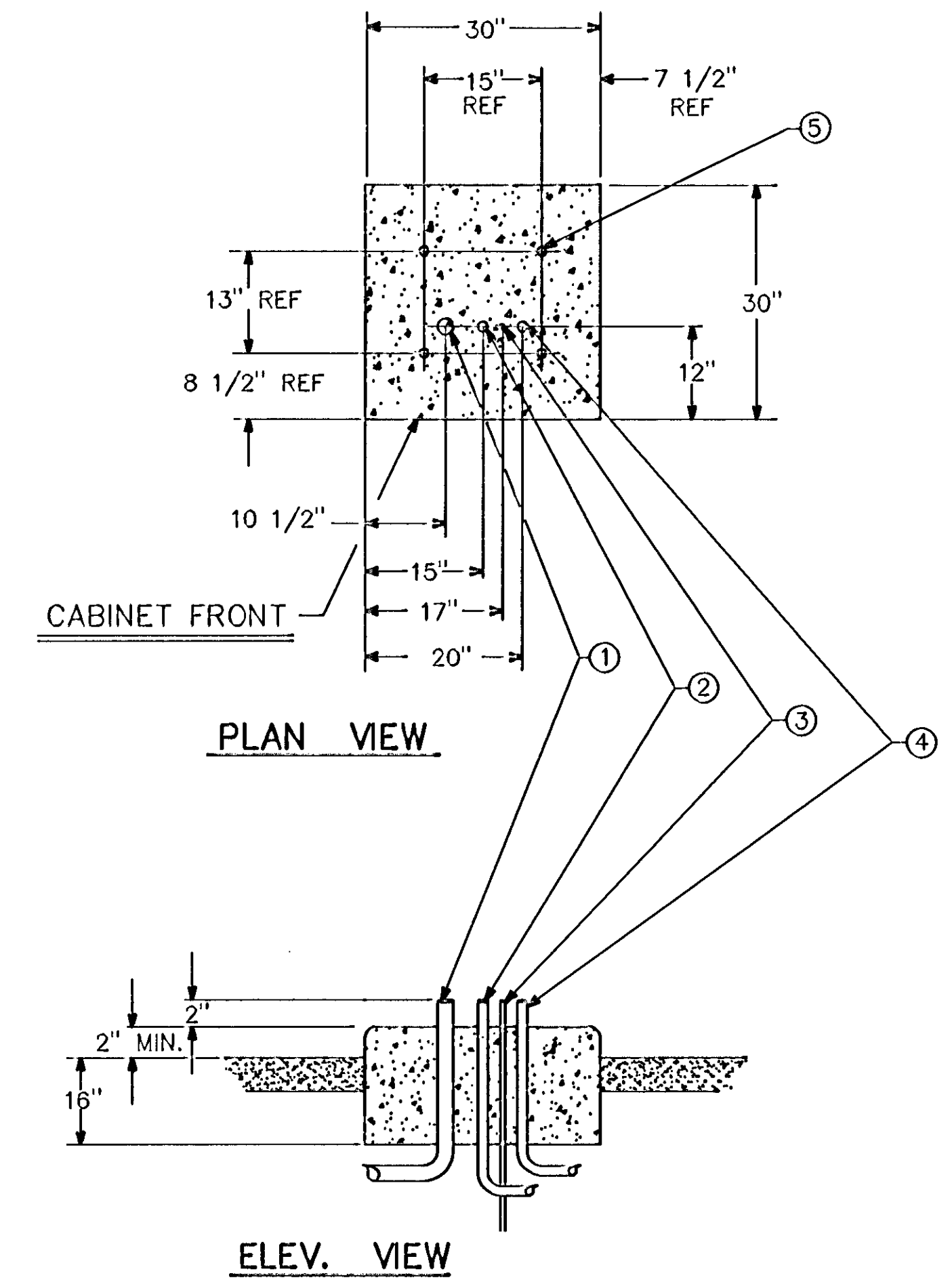


RIGHT SIDE ELEV.



BASE VIEW

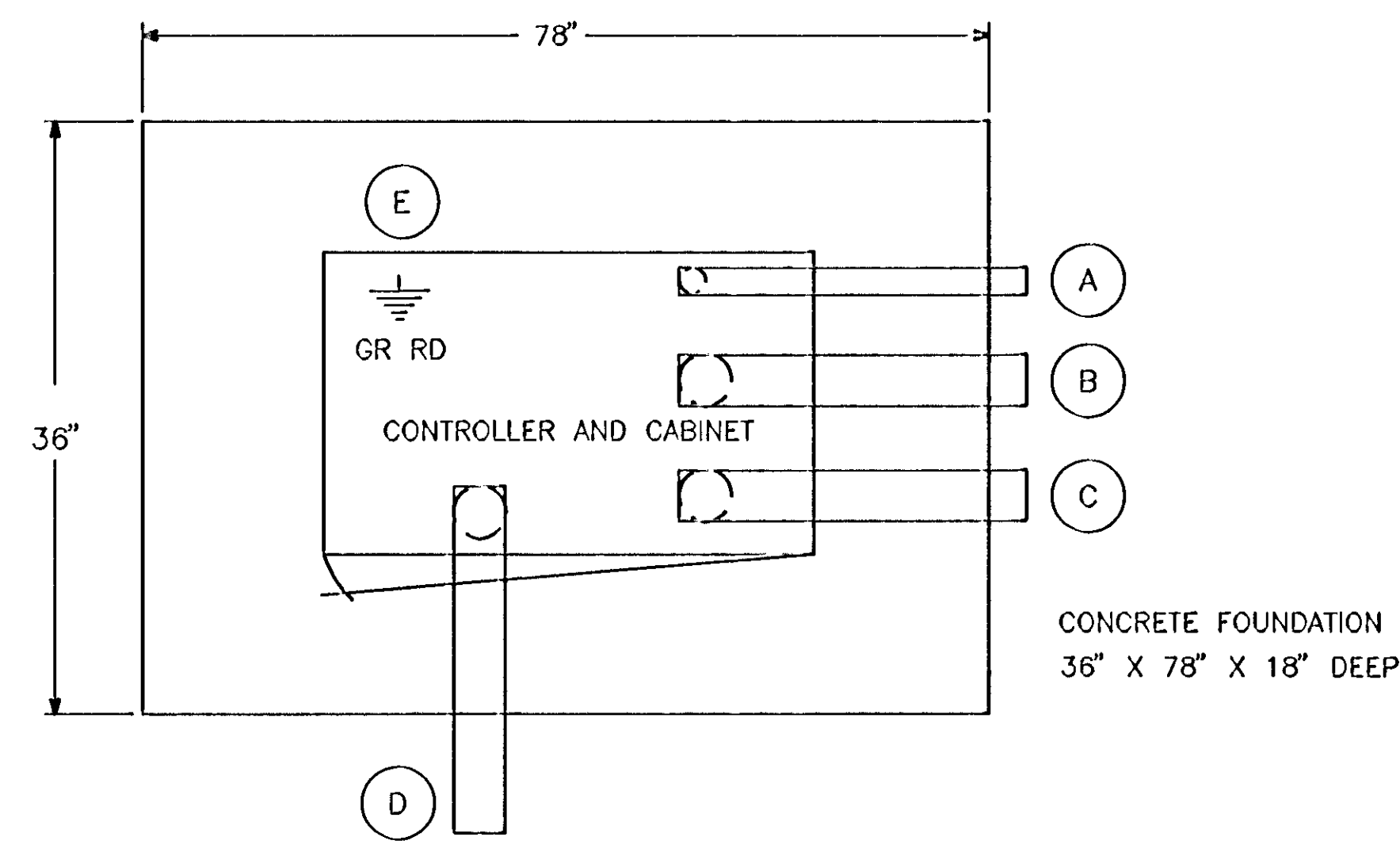
**SERVICE CABINET FOUNDATION**



PLAN VIEW

ELEV. VIEW

- ① 2" RSC FROM SOURCE OF POWER
- ② 1 1/4" RSC TO CONTROLLER CABINET (VIA HANDHOLE 14)
- ③ GROUNDING ROD
- ④ 1 1/4" RSC TO HANDHOLE 1 (STREET LIGHTING)
- ⑤ ANCHOR BOLT LOCATIONS (4 REQUIRED)



SEE INTERSECTION LAYOUT FOR CONDUIT & CABLE INFORMATION

**CONTROLLER CABINET PAD LAYOUT**  
NO SCALE

**ELECTRICAL ENG. CERT.**

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

DATE: \_\_\_\_\_ REG. NO.: \_\_\_\_\_

REV. NO.	DATE	DESCRIPTION
1	4-16-96	AS PER ANOKA COUNTY COMMENTS
2	12/20/96	AS-BUILT

DESIGN FILE: 3193A10  
DESIGN BY:  
DRAWN BY:  
CHKD. BY: DET3  
DWC. NAME:  
DATE:

I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE STATE OF MINNESOTA STATUTES SECTION 326.02 TO 326.16.  
DATE: 4-16-96 MINN. REG. NO. 22793

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

CITY OF COON RAPIDS  
TEMPORARY SIGNAL / STREET IMPROVEMENTS  
CITY PROJECT 95-29C  
EQUIPMENT PAD DETAILS

DISK FILE NAME: DET-3.DWG  
PLOT DATE: 4-16-96



### SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	ESTIMATED QUANTITY
2565.511	FULL-TRAFFIC-ACTUATED-TRAFFIC CONTROL SIGNAL SYSTEM	SIG SYSTEM	1
0563.601	TRAFFIC CONTROL INTERCONNECTION	LUMP SUM	1

### LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO's	
SIGNAL BASE NO.	
SIGNAL FACE NO.	
LUMINAIRE NO.	
CONTROLLER AND CABINET	
CONTROLLER AND CABINET - IN PLACE	
HANDHOLE	
HANDHOLE - IN PLACE	
RIGID STEEL CONDUIT (RSC)	
RIGID STEEL CONDUIT (RSC) - IN PLACE	
SIGNAL FACE WITH BACKGROUND SHIELD	
SIGNAL FACE W/O BACKGROUND SHIELD	
SIGNAL FACE - IN PLACE	
PEDESTRIAN INDICATORS	
PEDESTRIAN INDICATORS - IN PLACE	
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	
PEDESTRIAN PUSH BUTTON STATION	
TRAFFIC SIGNAL PEDESTAL	
TRAFFIC SIGNAL PEDESTAL - INPLACE	
TRAFFIC SIGNAL POLE AND MAST ARM	
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	
STREET LIGHT POLE AND LUMMINAIRE	
STREET LIGHT POLE AND LUMMINAIRE - IN PLACE	
MAST ARM AND LUMMINAIRE	
MAST ARM AND LUMMINAIRE - INPLACE	
WOOD POLE	
WOOD POLE - IN PLACE	
SOURCE OF POWER	
RAILROAD SIGNAL - IN PLACE	
RIGHT OF WAY LINE	
CENTERLINE	
EDGE OF ROADWAY	
SHOULDERLINE	
CURB LINE	
STOP BAR	

### CONDUCTOR COLOR CODE

R	RED
O	ORANGE
BL	BLUE
WH	WHITE
R/BLK	RED WITH BLACK TRACER
O/BLK	ORANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER
WH/BLK	WHITE WITH BLACK TRACER
BLK	BLACK
BLK/WH	BLACK WITH WHITE TRACER
G/BLK	GREEN WITH BLACK TRACER
G	GREEN

### ABBREVIATIONS

3-1(EG)	SIGNAL HEAD PHASE "3" - NO. "1"	P1-(EG)	PEDESTRIAN INDICATION PHASE "2"-NO."1"
BR. GR.	BARE GROUND	PB	PUSH BUTTON
CH. SW.	CHECK SWITCH	PB-2(EG)	PUSH BUTTON PHASE "2"-NO. "1"
CLR	CLEAR	PEC	PHOTOELECTRIC CELL
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"	PED	PEDESTRIAN
DWK	DON'T WALK	R	RED
EQG	EQUIPMENT GROUND	R&S	REMOVE AND SALVAGE
EVP	EMERGENCY VEHICLE PRE-EMPTION	RLTA	RED LEFT TURN ARROW
F&I	FURNISH AND INSTALL	RRTA	RED RIGHT TURN ARROW
FL	FLASH/FLASHING	RSC	RIGID STEEL CONDUIT
G	GREEN	SOP	SOURCE OF POWER
GLTA	GREEN LEFT TURN ARROW	SPR	SPARE
GRN	GREEN	ST. LHT.	STREET LIGHT
GR. R.	GROUND ROD	STA	STATION
GRTA	GREEN RIGHT TURN ARROW	SW	SWITCH
GTHA	GREEN THRU ARROW	SWD	SWITCHED
HH	HANDHOLE	TDW	TELEPHONE DROP WIRE
HPS	HIGH PRESSURE SODIUM	WLK	WALK
JB	JUNCTION BOX	YEL	YELLOW
LUM	LUMINAIRE	YLTA	YELLOW LEFT TURN ARROW
NEU	NEUTRAL	YRTA	YELLOW RIGHT TURN ARROW
NMC	NONMETALLIC CONDUIT	YTHA	YELLOW THRU ARROW

### STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:	
PLATE NO.	DESCRIPTION
* 8110 C	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
8111 B	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
8112 C	PEDESTAL FOUNDATION
8113 C	MAGNETIC VEHICLE DETECTOR INSTALLATION
* 8115 C	PEDESTRIAN PUSH BUTTON INSTALLATION
* 8117 F	PRECAST CONCRETE HANDHOLE
8118 C	SERVICE EQUIPMENT AND POLE
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 K	PA85 AND PA90 POLE FOUNDATION
8121 D	TRANSFORMER BASE WITH POLE BASE
8122 C	PEDESTAL AND PEDESTAL BASE
8123 D	POLE AND MAST ARM
8124 D	SIGNAL HEAD MOUNTS
8126 F	PA100 POLE FOUNDATION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3124 B	METAL APRON CONNECTION
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
7035 J	CONCRETE WALK AND CURB RETURNS AT ENTRANCES
7100 F	CONCRETE CURB AND GUTTERS
7036 D	PEDESTRIAN CURB RAMP

\* - APPLIES TO THIS PROJECT

REV. NO.	DATE	DESCRIPTION
1	4-16-96	AS PER ANOKA COUNTY COMMENTS
2	12/20/96	AS PER

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 TEMPORARY SIGNAL / STREET IMPROVEMENTS  
 CITY PROJECT 95-29C

STANDARD PLATES