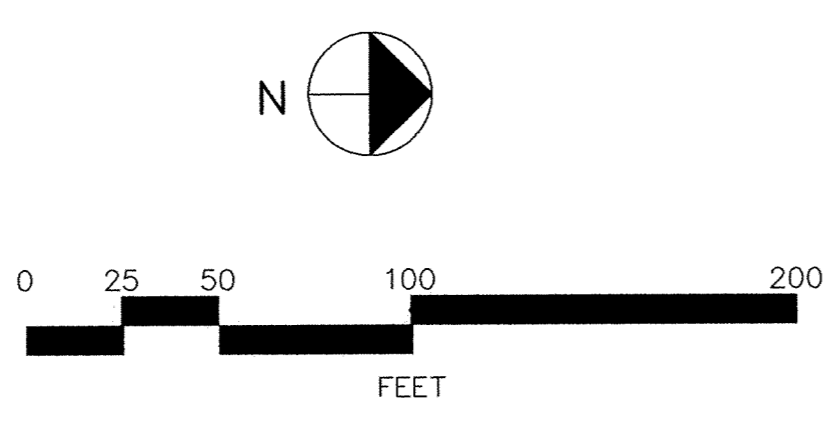
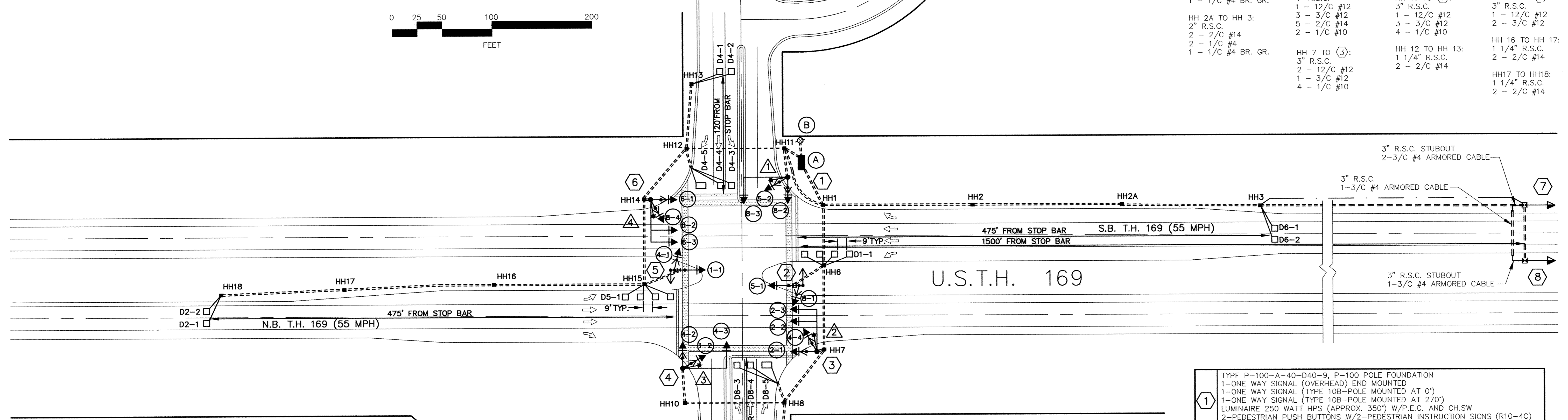


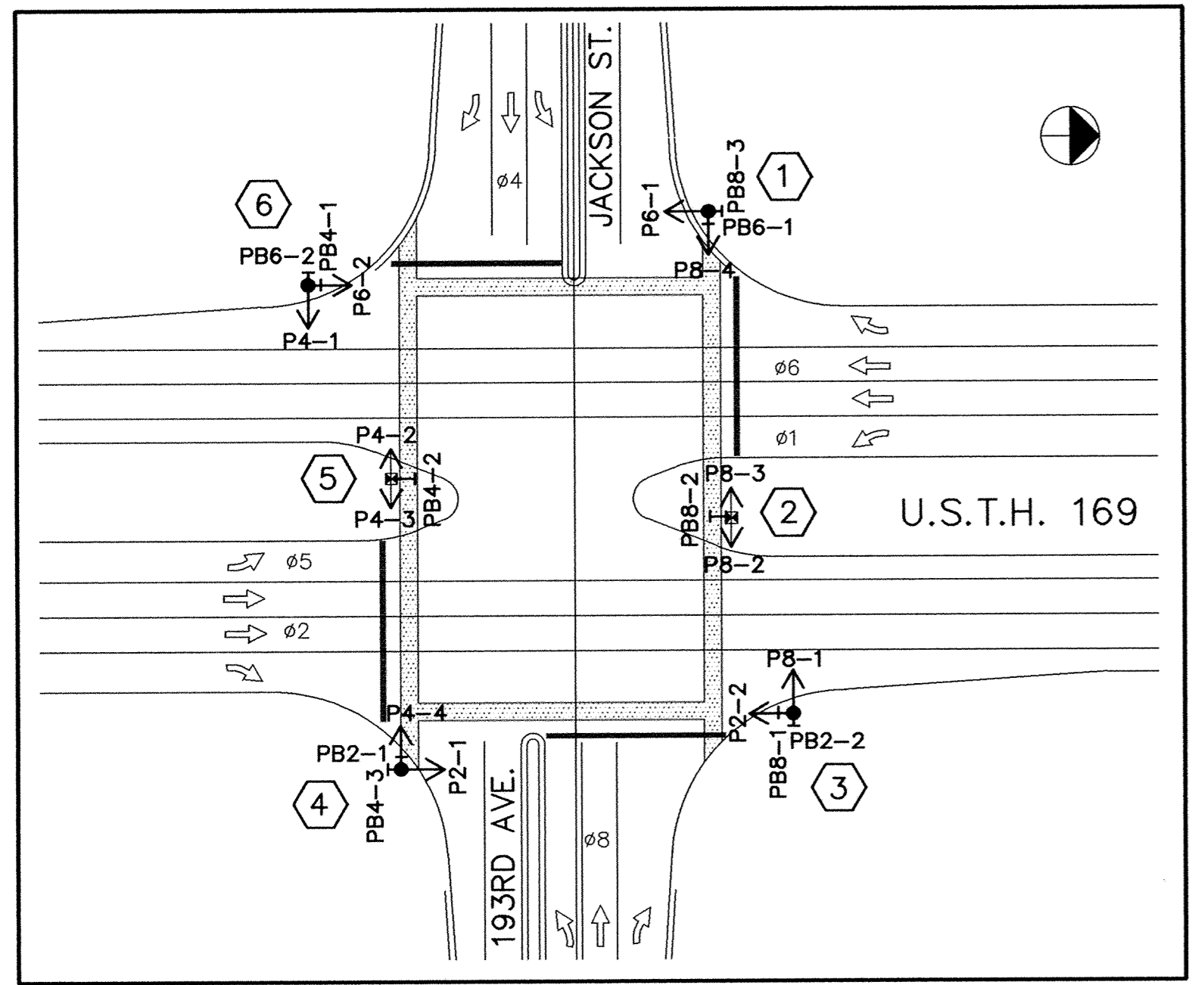
- NOTES:
- SEE SPECIAL PROVISIONS FOR DEPARTMENT FURNISHED MATERIALS.
 - PEDESTRIAN INDICATIONS SHALL BE 12" X 12"
 - HANDHOLES SHALL BE CONCRETE WITH CONCRETE COVERS (STD. PLATE 8117F).
 - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - EXTEND INPLACE 4" R.S.C. CONDUIT RUNS INTO NEW HH 8,10,11 & 12.
 - LUMINAIRES SHALL BE WIRED USING 1-3/C #12 (I.E. SUBSTITUTE 1-3/C #12 (LUM) FOR 2-1/C #10).



- (A) EQUIPMENT PAD (SEE DETAIL)
CONTROLLER AND CABINET
SERVICE EQUIPMENT (PAD MOUNTED)
- LOAD CENTER TO CABINET: CABINET TO HH 1:
1 1/4" R.S.C. 4" R.S.C.
2 - 1/C #6 4 - 12/C #12
1 - 1/C #6 BR. GR. 5 - 3/C #12
8 - 2/C #14
- LOAD CENTER TO HH 11: CABINET TO HH 11:
1 1/4" R.S.C. 4" R.S.C.
4 - 1/C #10 4 - 12/C #12
2 - 1/C #4 5 - 3/C #12
1 - 1/C #4 BR. GR. 8 - 2/C #14
- (B) SOP WOOD POLE INPLACE
2" R.S.C. RISER AND WEATHERHEAD WITH
3 - 1/C #2
EXTEND TO METER 2" R.S.C.
AND 3 - 1/C #2
- HH 1 TO HH 2:
2" R.S.C.
2 - 2/C #14
2 - 1/C #4
1 - 1/C #4 BR. GR.
- HH 3 TO (7):
1 - 3/C #4 ARMORED
CABLE DIRECT BURIED
(7) TO (8):
3" R.S.C.
1 - 3/C #4
ARMORED CABLE
- HH 6 TO HH 7:
4" R.S.C.
3 - 12/C #12
4 - 3/C #12
5 - 2/C #14
2 - 1/C #10
- HH 8 TO HH 9:
1 1/4" R.S.C.
3 - 12/C #12
2 - 2/C #14
- HH 8 TO HH 10:
4" R.S.C. (INPLACE)
1 - 12/C #12
3 - 3/C #12
2 - 1/C #10
- HH 10 TO (4):
3" R.S.C.
1 - 12/C #12
4 - 3/C #12
2 - 1/C #10
- HH 11 TO HH 12:
4" R.S.C. (INPLACE)
2 - 3/C #12
8 - 2/C #14
2 - 1/C #10
- HH 11 TO (1):
3" R.S.C.
1 - 12/C #12
3 - 3/C #12
4 - 1/C #10
- HH 12 TO HH 13:
3" R.S.C.
1 1/4" R.S.C.
2 - 2/C #14
- HH 12 TO HH 14:
4" R.S.C.
3 - 12/C #12
2 - 3/C #12
3 - 2/C #14
- HH 14 TO HH 15:
4" R.S.C.
1 - 12/C #12
2 - 3/C #12
3 - 2/C #14
- HH 14 TO (6):
3" R.S.C.
2 - 12/C #12
2 - 1/C #10
- HH 15 TO HH 16:
1 1/4" R.S.C.
2 - 2/C #14
- HH 15 TO (5):
3" R.S.C.
1 - 12/C #12
3 - 3/C #12
- HH 16 TO HH 17:
1 1/4" R.S.C.
2 - 2/C #14
- HH 17 TO HH 18:
1 1/4" R.S.C.
2 - 2/C #14



NORMAL OPERATION IS 6 PHASE WITH: PROTECTED LEFT TURNS ON PHASES 1 & 5 (TH 169 LEFT TURNS); PHASES 2 & 6 (TH 169 THROUGH AND RIGHT TURN) ON VEHICLE RECALL; DUAL ENTRY AND PERMISSIVE LEFT TURNS ON PHASES 4 & 8 (JACKSON/193RD THROUGH, RIGHT TURNS, AND LEFT TURNS)



DETECTOR CHART			
DESIG-NATION	LOOP DETECTORS		DIST. FROM STOP BAR
	PHASE (ø)	SIZE (FT.)	
D1-1	1	MULTIPLE	5'
D2-1	2	6'X6'	475'
D2-2	2	6'X6'	475'
D4-1	4	6'X6'	120'
D4-2	4	6'X6'	120'
D4-3	4	6'X6'	5'
D4-4	4	6'X6'	5'
D4-5	4	10'X6'	5'
D5-1	5	MULTIPLE	5'
D6-1	6	6'X6'	475'
D6-2	6	6'X6'	475'
D8-1	8	6'X6'	120'
D8-2	8	6'X6'	120'
D8-3	8	6'X6'	5'
D8-4	8	6'X6'	5'
D8-5	8	10'X6'	5'

- CALL AND EXTEND
- DELAY CALL - IMMEDIATE EXTEND

SIGNAL INDICATION CHART										
POLE NO.	SIGNAL FACE	PHASE (ø)	FLASH	INDICATION SIZE (INCHES)						BACKGROUND SHIELD
				R	Y	G	R	Y	G	
5	1-1	1	R	-	-	-	12	12	12	X
4	1-2	1	R	-	-	-	12	12	12	X
3	2-1	2	R	12	12	12	-	-	-	X
3	2-2	2	R	12	12	12	-	-	-	X
3	2-3	2	R	12	12	12	-	-	-	X
5	4-1	4	R	12	12	12	-	-	-	X
4	4-2	4	R	12	12	12	-	-	-	X
4	4-3	4	R	12	12	12	-	-	-	X
3	4-4	4	R	12	12	12	-	-	-	X
2	5-1	5	R	-	-	-	12	12	12	X
1	5-2	5	R	-	-	-	12	12	12	X
6	6-1	6	R	12	12	12	-	-	-	X
6	6-2	6	R	12	12	12	-	-	-	X
6	6-3	6	R	12	12	12	-	-	-	X
2	8-1	8	R	12	12	12	-	-	-	X
1	8-2	8	R	12	12	12	-	-	-	X
1	8-3	8	R	12	12	12	-	-	-	X
6	8-4	8	R	12	12	12	-	-	-	X

- TYPE P-100-A-40-D40-9, P-100 POLE FOUNDATION
1-ONE WAY SIGNAL (OVERHEAD) END MOUNTED
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 0')
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 270')
LUMINAIRE 250 WATT HPS (APPROX. 350) W/P.E.C. AND CH.SW
2-PEDESTRIAN PUSH BUTTONS W/2-PEDESTRIAN INSTRUCTION SIGNS (R10-4C)
- PEDESTAL FOUNDATION, 12" SIGNAL PEDESTAL AND BASE
1-TWO WAY SIGNAL (TYPE 2D-PEDESTAL MOUNTED)
1-PEDESTRIAN PUSH BUTTON W/1-PEDESTRIAN INSTRUCTION SIGN (R10-4C)
- TYPE P-100-A-40-D40-9, P-100 POLE FOUNDATION
1-ONE WAY SIGNAL (OVERHEAD) END MOUNTED
1-ONE WAY SIGNAL (OVERHEAD) MID-MAST ARM MOUNTED 12' FROM END
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 0')
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 270')
LUMINAIRE 250 WATT HPS (APPROX. 350) W/P.E.C. AND CH.SW
2-PEDESTRIAN PUSH BUTTONS W/2-PEDESTRIAN INSTRUCTION SIGNS (R10-4C)
- TYPE P-100-A-40-D40-9, P-100 POLE FOUNDATION
1-ONE WAY SIGNAL (OVERHEAD) END MOUNTED
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 0')
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 270')
LUMINAIRE 250 WATT HPS (APPROX. 350) W/P.E.C. AND CH.SW
2-PEDESTRIAN PUSH BUTTONS W/2-PEDESTRIAN INSTRUCTION SIGNS (R10-4C)
- PEDESTAL FOUNDATION, 12" SIGNAL PEDESTAL AND BASE
1-TWO WAY SIGNAL (TYPE 2D-PEDESTAL MOUNTED)
1-PEDESTRIAN PUSH BUTTON W/1-PEDESTRIAN INSTRUCTION SIGN (R10-4C)
- TYPE P-100-A-40-D40-9, P-100 POLE FOUNDATION
1-ONE WAY SIGNAL (OVERHEAD) END MOUNTED
1-ONE WAY SIGNAL (OVERHEAD) MID-MAST ARM MOUNTED 12' FROM END
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 0')
1-ONE WAY SIGNAL (TYPE 10B-POLE MOUNTED AT 270')
LUMINAIRE 250 WATT HPS (APPROX. 350) W/P.E.C. AND CH.SW
2-PEDESTRIAN PUSH BUTTONS W/2-PEDESTRIAN INSTRUCTION SIGNS (R10-4C)
- PEDESTAL FOUNDATION, 12" SIGNAL PEDESTAL AND BASE, SIGNAL AHEAD FLASHER
12" YELLOW FLASHING SIGNAL INDICATION (3" RSC STUBOUT)
- PEDESTAL FOUNDATION, 12" SIGNAL PEDESTAL AND BASE, SIGNAL AHEAD FLASHER
12" YELLOW FLASHING SIGNAL INDICATION (3" RSC STUBOUT)

INCLUDED FOR INFORMATION ONLY
RECORD PLAN 1995

I.D. NO. 71030169*160390*

CONSULTING ENGINEERS
Maier Stewart & Associates Inc.

1959 SLOAN PLACE [612] 774-6021 ST. PAUL, MINNESOTA 55117

DATE	DESCRIPTION	DESIGNED	JEL
4/13/92	MNDOT TRAFFIC ENGINEER REVIEW COMMENTS	CHECKED	GMS
5/15/92	MNDOT TRAFFIC ENGINEER REVIEW COMMENTS	DRAWN	GG
6/23/92	MNDOT TRAFFIC ENGINEER REVIEW COMMENTS	GRAPHIC SCALE	
		0 HORIZ. 50	
		0 VERT. 1	

CITY OF ELK RIVER
TRAFFIC SIGNAL LAYOUT PLAN
T.H. 169 & JACKSON AVE. / 193RD AVE.
S.A.P 204-104-02

DATE JAN 1992 SHEET 69 OF 74 SHEETS PROJECT NO. 230-216