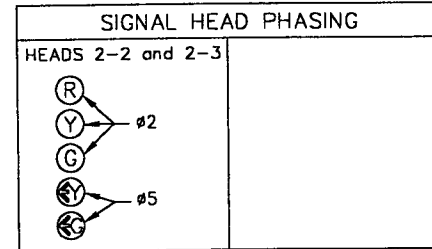


SIGNAL INDICATION CHART					
FACE	PHASE	INDICATION SIZE 300mm			
		Y	G	←	→
2-1	2	●	●	←	←
2-2	2 and 5	●	●	←	←
2-3	2 and 5	●	●	←	←
2-4	2	●	●	←	←
4-1	4	●	●	←	←
4-2	4	●	●	←	←
4-3	4	●	●	←	←
6-1	6	●	●	←	←
6-2	6	●	●	←	←

VEHICLE DETECTION			
NO.	SIZE (m)	FUNCTION	LOC. (m)
D2-1	1.7 x 1.7	C&E	80
D4-1	2-1.7 x 1.7	C&E	50
D4-2	2-1.7 x 1.7	C&E	22
D4-3	1.7 x 4.6	C&E	0
D4-4	1.7 x 4.6	C&E (TD)	0
D5-1	2-1.7 x 4.6	C&E (TD)	0, B
D5-2	1.7 x 1.7	C&E	25
D6-1	1.7 x 1.7	C&E	75
D6-2	1.7 x 1.7	C&E	75
D1	1.7 x 1.7	COUNT	SEE PLAN
D2	1.7 x 1.7	COUNT	SEE PLAN
D3	1.7 x 1.7	COUNT	SEE PLAN
D4	1.7 x 1.7	COUNT	SEE PLAN



SIGNING

F&d OVERHEAD TYPE D SIGNS, SEE SHEET 19 (SEPARATE PAY ITEM)

F&d OVERHEAD TYPE R10-12 (914x1219 mm) SIGNS ON MAST ARM POLE 3.

F&d PEDESTRIAN PUSH BUTTON SIGNS, TYPE R10-4b (229x305 mm) WITH SYMBOL MESSAGE

F&d 2-R9-3a SIGN PANELS - POLE MOUNTED (FACING POLE 1 AND 3)

SEE SHEET 21 FOR ADDITIONAL SIGNING WORK.

INTERCONNECT CABLE FOOTAGE MARKERS

TO THE SOUTH = 08818

TO THE NORTH = 08714

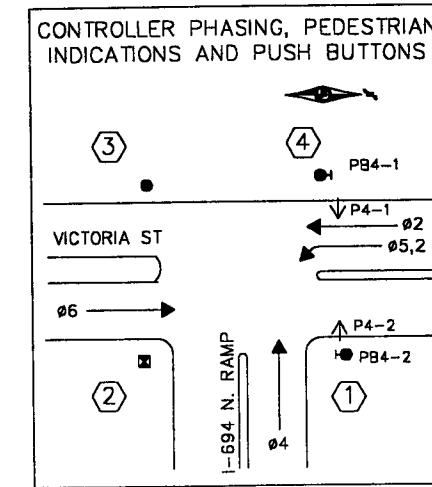
SIGNAL SYSTEM OPERATION

THE SIGNAL SYSTEM FLASH MODE IS ALL RED. PHASE 5 IS PROTECTED/PERMISSIVE LEFT TURN.

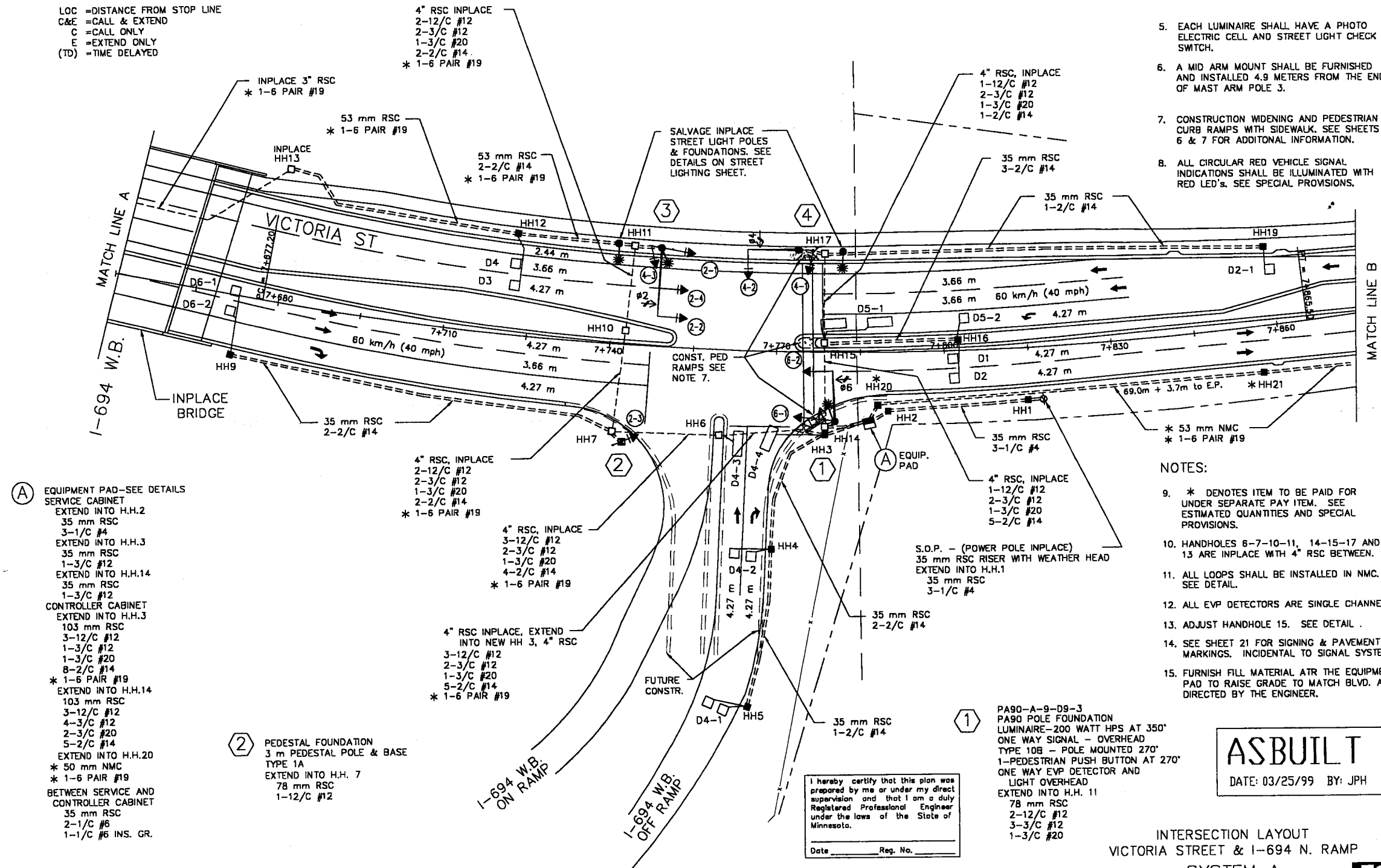
PHASES 4 AND 5 ARE NON-LOCK DETECTION.

PHASES 2 AND 6 ARE LOCK DETECTION.

PHASES 2 AND 6 ARE ON VEHICLE RECALL.



LOC = DISTANCE FROM STOP LINE
 C&E = CALL & EXTEND
 C = CALL ONLY
 E = EXTEND ONLY
 (TD) = TIME DELAYED



- (A) EQUIPMENT PAD - SEE DETAILS SERVICE CABINET EXTEND INTO H.H.2 35 mm RSC 3-1/C #4 EXTEND INTO H.H.3 35 mm RSC 1-3/C #12 EXTEND INTO H.H.14 35 mm RSC 1-3/C #12 CONTROLLER CABINET EXTEND INTO H.H.3 103 mm RSC 3-12/C #12 1-3/C #12 1-3/C #20 8-2/C #14 * 1-6 PAIR #19 EXTEND INTO H.H.14 103 mm RSC 3-12/C #12 4-3/C #12 2-3/C #20 5-2/C #14 * 1-6 PAIR #19 EXTEND INTO H.H.20 * 50 mm NMC * 1-6 PAIR #19 BETWEEN SERVICE AND CONTROLLER CABINET 35 mm RSC 2-1/C #6 1-1/C #6 INS. GR.
- (2) PEDESTAL FOUNDATION 3 m PEDESTAL POLE & BASE TYPE 1A EXTEND INTO H.H. 7 78 mm RSC 1-12/C #12

(3) PA90-A-12-D12-3 PA90 POLE FOUNDATION LUMINAIRE-200 WATT HPS AT 350' 2-ONE WAY SIGNALS - OVERHEAD 2-TYPE 10A- POLE MOUNTED 90' & 270' ONE WAY EVP DETECTOR AND LIGHT OVERHEAD EXTEND INTO H.H. 11 78 mm RSC 2-12/C #12 2-3/C #12 1-3/C #20

(4) PA85-A-9 PA85 POLE FOUNDATION ONE WAY SIGNAL - OVERHEAD TYPE 10B - POLE MOUNTED 180' 1-PEDESTRIAN PUSH BUTTON AT 180' ONE WAY EVP DETECTOR AND LIGHT OVERHEAD EXTEND INTO H.H. 17 78 mm RSC 1-12/C #12 2-3/C #12 1-3/C #20

- NOTES:**
- POLE AND DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
 - A 21 mm HALF COUPLING SHALL BE FURNISHED APPROXIMATELY 600 mm AND 1200 mm FROM END OF THE MAST ARM ON EACH POLE PER MN/DOT 3831.2C.
 - ALL PEDESTRIAN INDICATIONS SHALL BE ONE-SECTION HAND/WALKING PERSON INDICATION. THE HAND SYMBOL SHALL BE ILLUMINATED WITH PORTLAND ORANGE LED'S. SEE SPECIAL PROVISIONS.
 - ALL SIGNAL FACES SHALL HAVE BACK-GROUND SHIELDS.
 - EACH LUMINAIRE SHALL HAVE A PHOTO ELECTRIC CELL AND STREET LIGHT CHECK SWITCH.
 - A MID ARM MOUNT SHALL BE FURNISHED AND INSTALLED 4.9 METERS FROM THE END OF MAST ARM POLE 3.
 - CONSTRUCTION WIDENING AND PEDESTRIAN CURB RAMPS WITH SIDEWALK. SEE SHEETS 6 & 7 FOR ADDITIONAL INFORMATION.
 - ALL CIRCULAR RED VEHICLE SIGNAL INDICATIONS SHALL BE ILLUMINATED WITH RED LED'S. SEE SPECIAL PROVISIONS.

- NOTES:**
- * DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
 - HANDHOLES 6-7-10-11, 14-15-17 AND 13 ARE INPLACE WITH 4" RSC BETWEEN.
 - ALL LOOPS SHALL BE INSTALLED IN NMC. SEE DETAIL.
 - ALL EVP DETECTORS ARE SINGLE CHANNEL.
 - ADJUST HANDHOLE 15. SEE DETAIL.
 - SEE SHEET 21 FOR SIGNING & PAVEMENT MARKINGS. INCIDENTAL TO SIGNAL SYSTEM.
 - FURNISH FILL MATERIAL ATR THE EQUIPMENT PAD TO RAISE GRADE TO MATCH BLVD. AS DIRECTED BY THE ENGINEER.

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 _____ Reg. No. _____

ASBUILT
 DATE: 03/25/99 BY: JPH

INTERSECTION LAYOUT
 VICTORIA STREET & I-694 N. RAMP
 SYSTEM A

S.P. No. 6285-118
 S.A.P. No. 167-020-11
 S.A.P. No. 62-652-15

Sheet No. 12 of 23 Sheets

METER ADDRESS: 3800 VICTORIA STREET
 MN/DOT SIGNAL SYSTEM I.D. No. 22169
 RAMSEY COUNTY SIGNAL SYSTEM I.D. No. TRF 384

