

PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
PRESENT RIGHT OF WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SLOPE FENCE
STONE WALL OR FENCE
FENCE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER

SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH
POLE LINE
JOINT TELEPHONE AND POWER
OR POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL TELEPHONE CABLE
TERMINAL
GAS MAIN
WATER MAIN

CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER, (SANITARY OR STORM)
SEWER MANHOLE



NOTE: SECTION NUMBERS READ FROM THE SOUTH.

PIT DATA

PIT NO. Located in
Dead Man
PIT NO. Located in
Dead Man

10th ST. N.W. & 5th AVE. N.W.
S.A.P. NO. 62-612-06



RAMSEY COUNTY DEPARTMENT OF PUBLIC WORKS

PLAN OF TRAFFIC CONTROL SYSTEM FOR THE INTERSECTION OF

10th ST. N.W. & 5th AVE. N.W.

S.A.P. NO. 62-612-06

INDEX

SHEET NO.	DESCRIPTION
1	TITLE
2	DETAILS & QUANTITIES
3	INTERSECTION LAYOUT
4-5	FIELD WIRING DIAGRAM
6-7	INFORMATION

DESIGN SQUAD R. Weber DATE 8-8-80
DRAWN BY L.H.B. DATE 8-8-80
CHECKED BY W DATE

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 8-8-80 REG. NO. 12703 ENGR. Paul K. Weber

RECOMMENDED FOR APPROVAL TRAFFIC ENGR. DATE

RECOMMENDED FOR APPROVAL County Engineer DATE 9-5-80

RECOMMENDED FOR APPROVAL ENV. ENGR. DATE 8/27/80

APPROVED Chairman of the Ramsey County Board DATE 1-19-81

RECOMMENDED FOR APPROVAL MAINT. ENGR. DATE 8/12/80

APPROVED DATE

RECOMMENDED FOR APPROVAL CONST. ENGR. DATE 8-27-80

APPROVED Leslie Prosen DATE 11/26/80

RECOMMENDED FOR APPROVAL DESIGN ENGR. DATE 8-11-80

MINNESOTA DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL R.O.W. ENGR. DATE

RECOMMENDED FOR APPROVAL TRAFFIC ENGINEER DATE

APPROVED COORDINATING ENGR. DATE 9-3-80

RECOMMENDED FOR APPROVAL DATE 9/25/80

RECOMMENDED FOR APPROVAL DATE 11-20-80

APPROVAL DIRECTOR, OFFICE STATE AID DATE 11/20/80

DATE	SHEET NO.	BY
10-28-80	2	R.E.L.
10-29-80	3 & 4	R.E.L.

THE 1978 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" SHALL GOVERN.

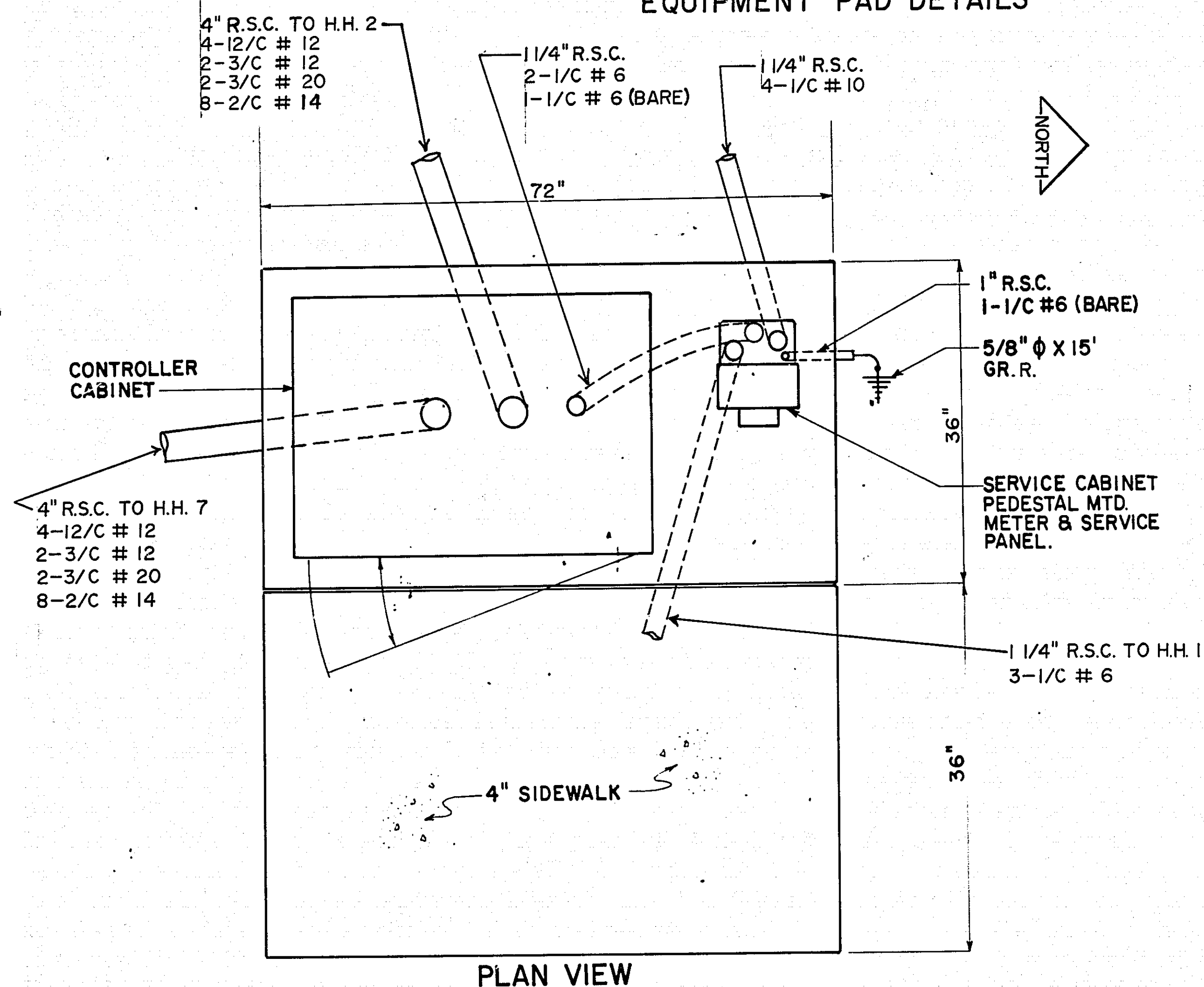
MICROFILMED
RAMSEY CO. ENGR.

S.A.P. NO. 62-612-06

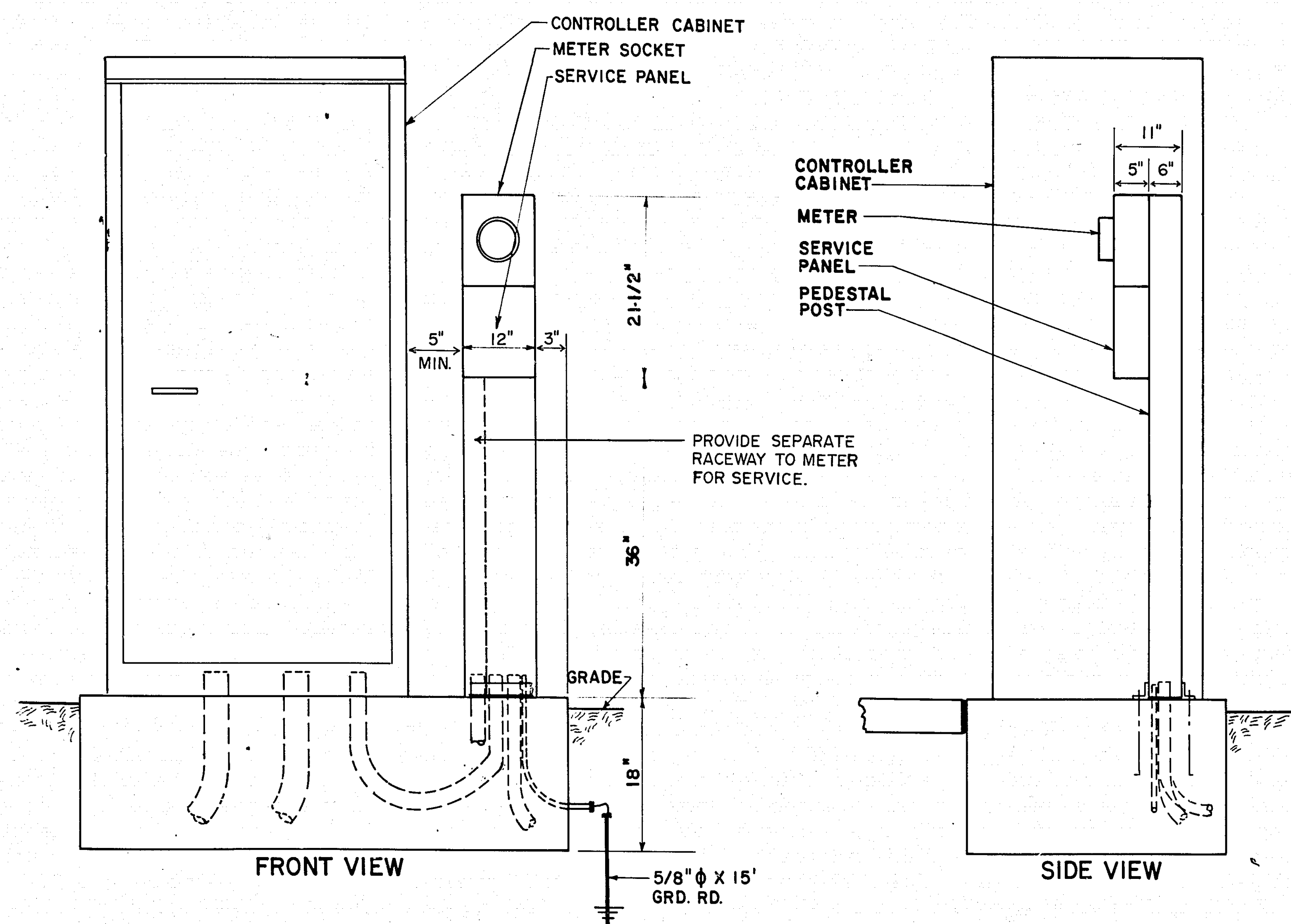
Sheet No. 1 of 7 Sheets

23-121

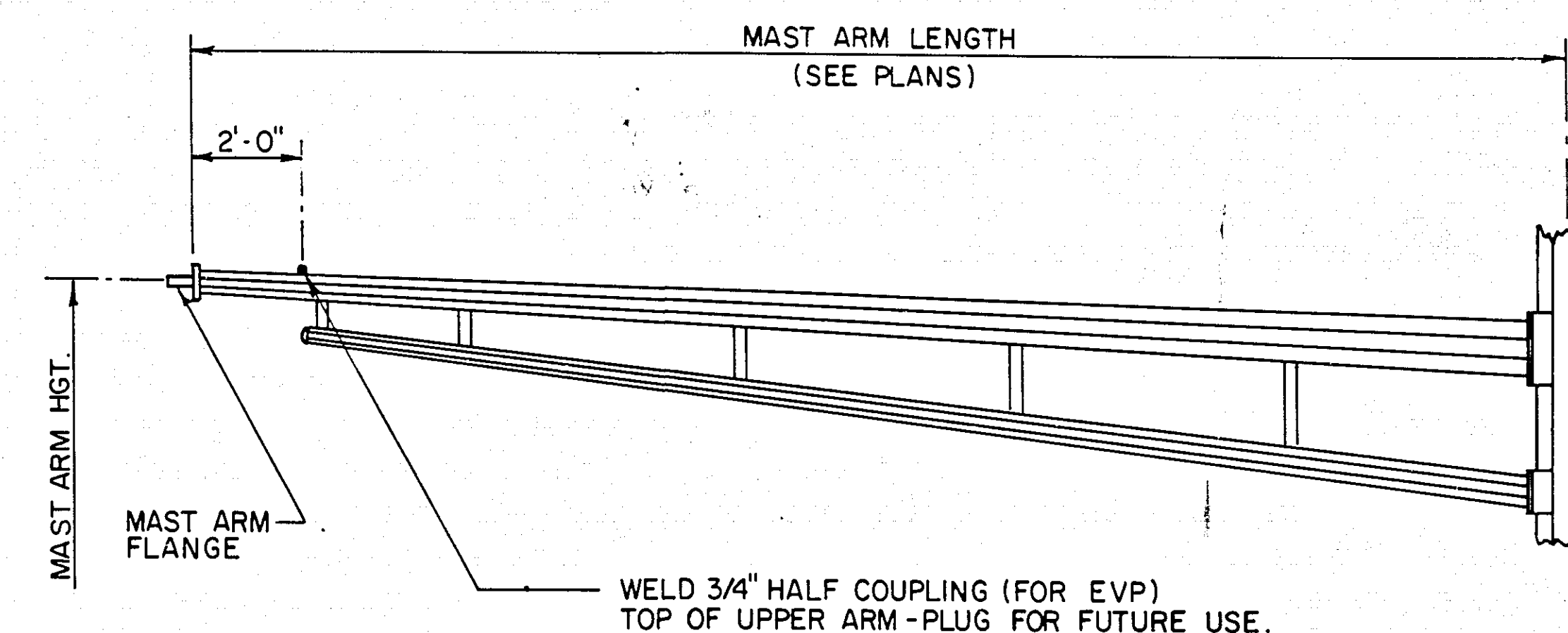
EQUIPMENT PAD DETAILS



1. ANCHOR RODS, NUTS AND WASHERS REQUIRED FOR THE CONTROLLER CABINET SHALL BE FURNISHED TO THE CONTRACTOR BY THE COUNTY.
2. UPPER PART OF FOUNDATION SHALL BE BEVELED OR CHAMFERED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER IN THE FIELD.
3. TOP OF CONDUITS SHALL BE THREADED AND CAPPED AFTER INSTALLATION (UNTIL CABLES ARE INSTALLED) CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE CONCRETE AND SHALL BE LOCATED INSIDE THE CABINET WHERE DIRECTED BY THE ENGINEER BUT SHALL NOT INTERFERE WITH CABINET FUNCTIONS. (SUPPORTING MEMBERS, ETC.)
4. CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR FOUNDATION AND CONCRETE WALK.
5. CONDUITS WHICH HAVE BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
6. EXACT LOCATIONS OF CONDUIT WITHIN THE PAD SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.



MAST ARM DETAILS



ABBREVIATIONS

EQUIPMENT & INDICATIONS

RED - RED
YEL - YELLOW
GRN - GREEN
LTA - LEFT TURN ARROW
THA - THRU ARROW
RTA - RIGHT TURN ARROW
TRA - THRU AND RIGHT ARROW
WLK - WALK
NEU - NEUTRAL
DWK - DON'T WALK
SW - SWITCH
SWD - SWITCHED
LUM - LUMINAIRE
P2-1(eg) - PEDESTRIAN INDICATION - "2" PHASE
PB4-2(eg) - PUSH BUTTON - "4" PHASE
2-2(eg) - SIGNAL HEAD - "2" PHASE
D2-4(eg) - DETECTOR - "2" PHASE
H.H. - HANDHOLE
GR. R. - GROUND ROD
SERV. - SERVICE
EVP - EMERGENCY VEHICLE PRE-EMPTION

DNL - DOWNLIGHT
P.E.C. - PHOTOELECTRIC CELL
ST. LHT. - STREET LIGHT
CH. - CHECK
S.O.P. - SOURCE OF POWER
EQ. G. - EQUIPMENT GROUND
SPR - SPARE CONDUCTOR

COLOR CODING OF CONDUCTORS

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

STANDARD PLATES

PLATE NO.	TITLE
* 8110C	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8111B	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8112C	PEDESTAL FOUNDATION
8113C	MAGNETIC VEHICLE DETECTOR INSTALLATION
* 8115C	PEDESTRIAN PUSH BUTTON INSTALLATION
* 8116C	STEEL GUARD POST
* 8117F	PRECAST CONCRETE HANDHOLE
8118C	SERVICE EQUIPMENT & POLE, TRAFFIC CONTROL SIGNALS
* 8119C	GROUND MOUNTED CABINET FOUNDATION
8120F	MAST ARM POLE FOUNDATION
8122C	PEDESTAL AND PEDESTAL BASE
* 8123A	POLE AND MAST ARM (LUMINAIRES AND TRAFFIC LIGHTS)
* 8124C	SIGNAL HEAD MOUNTS
8125A	SWING-AWAY HINGE (FOR TRAFFIC SIGNAL ARM MAST)
* 8126A	A 100 MAST ARM POLE FOUNDATION
* 8130D	SAW CUT LOOP DETECTORS

* STANDARD PLATES APPLICABLE TO THIS PROJECT

STATEMENT OF ESTIMATED QUANTITIES

PROJECT NO.	ITEM NO.	ITEM	UNIT	QUANT.
62-612-06	2565.501	FULL TRAFFIC ACTUATED TRAFFIC CONTROL SYSTEM	SIGNAL SYSTEM	1

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 laws of the State of Minnesota.

Date 8-8-90 Reg. No. 12703

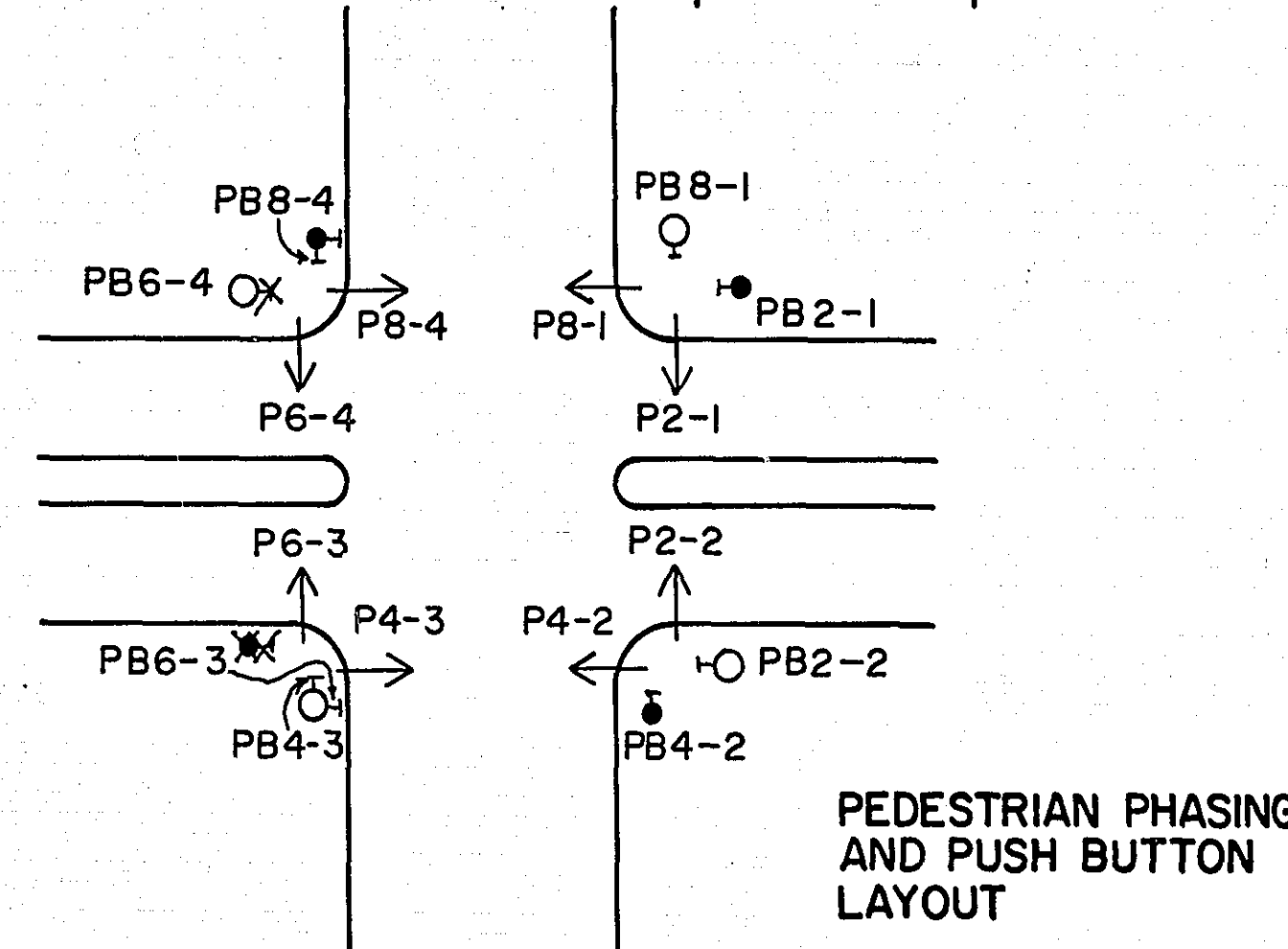
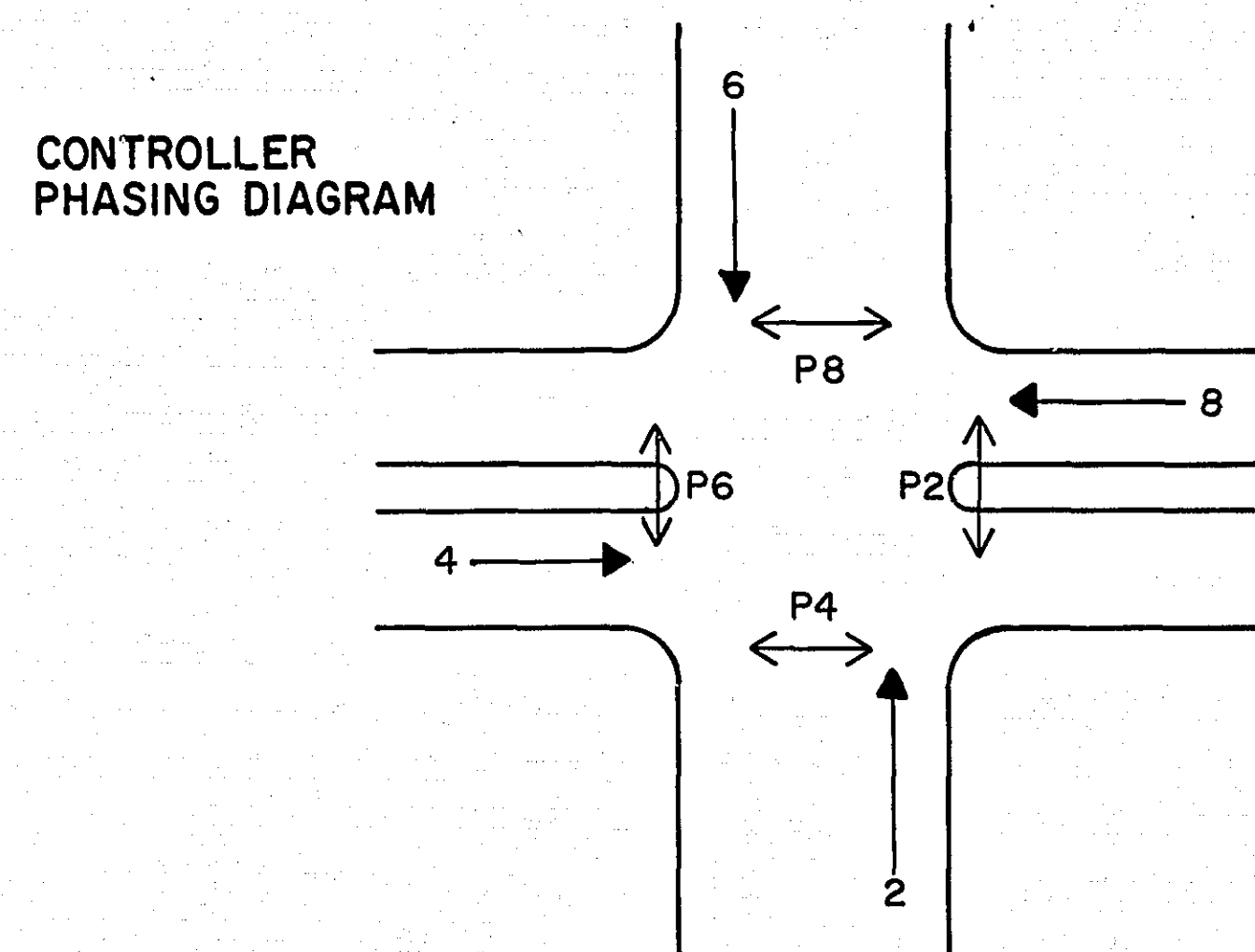
DETAILS

MICROFILM
RAMSEY CO. IN

LEGEND OF SYMBOLS

SIGNAL BASE No.	5
SIGNAL FACE No.	4
CONTROLLER AND CABINET	
CONTROLLER AND CABINET-INPLACE	
HANDHOLE	
HANDHOLE-INPLACE	
RIGID STEEL CONDUIT (R.S.C.)	
RIGID STEEL CONDUIT (R.S.C.)-INPLACE	
SIGNAL FACE	
SIGNAL FACE WITH BACKGROUND SHIELD	
SIGNAL FACE-INPLACE	
PEDESTRIAN INDICATIONS	
PEDESTRIAN INDICATIONS-INPLACE	
PEDESTRIAN PUSH BUTTON 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-INPLACE	
MAST ARM AND LUMINAIRE	
MAST ARM AND LUMINAIRE-INPLACE	
WOOD POLE	
WOOD POLE-INPLACE	
SOURCE OF POWER	
EMERGENCY VEHICLE PRE-EMPTION DETECTOR LOCATION	

CONTROLLER PHASING DIAGRAM



PEDESTRIAN PHASING AND PUSH BUTTON LAYOUT

SIGNAL INDICATION CHART

FACE	PHASE	FLASH	INDICATION SIZE			←	↑	→
			R	Y	G			
2-1	2	R	12"	12"	12"	—	—	—
2-2	2	R	12"	12"	12"	—	—	—
2-3	2	R	12"	12"	12"	—	—	—
4-1	4	R	12"	12"	12"	—	—	—
4-2	4	R	12"	12"	12"	—	—	—
4-3	4	R	12"	12"	12"	—	—	—
6-1	6	R	12"	12"	12"	—	—	—
6-2	6	R	12"	12"	12"	—	—	—
6-3	6	R	12"	12"	12"	—	—	—
8-1	8	R	12"	12"	12"	—	—	—
8-2	8	R	12"	12"	12"	—	—	—
8-3	8	R	12"	12"	12"	—	—	—

VEHICLE DETECTION

NUMBER	SIZE	OPERATION
D2-1	✓ 6' x 6'	CALL & EXTEND
D2-2	✓ 6' x 6'	CALL & EXTEND
D2-3	✓ 6' x 8'	CALL ONLY
D2-4	✓ 6' x 8'	CALL ONLY
D4-1	✓ 6' x 6'	CALL & EXTEND
D4-2	✓ 6' x 6'	CALL & EXTEND
D4-3	✓ 6' x 8'	CALL ONLY
D4-4	✓ 6' x 8'	CALL ONLY
D6-1	✓ 6' x 6'	CALL & EXTEND
D6-2	✓ 6' x 6'	CALL & EXTEND
D6-3	✓ 6' x 8'	CALL ONLY
D6-4	✓ 6' x 8'	CALL ONLY
D8-1	✓ 6' x 6'	CALL & EXTEND
D8-2	✓ 6' x 6'	CALL & EXTEND
D8-3	✓ 6' x 8'	CALL ONLY
D8-4	✓ 6' x 8'	CALL ONLY

PEDESTRIAN PUSH STATION (4" R.S.C.)
1- PEDESTRIAN PUSH BUTTON (MTD. EAST SIDE)
EXTEND INTO H.H. 5
1 1/4" R.S.C.
2-3/C # 12

TYPE A-20-T40-6
LUMINAIRE-200 WATT HIGH PRESSURE SODIUM (APPROX. 315°)
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS (COUNTY FURNISHED)
1-PEDESTRIAN PUSH BUTTON (MTD. 270°)
EXTEND INTO H.H. 5
3" R.S.C.
2-12/C # 12
1-3/C # 12
1-3/C # 20
2-1/C # 10

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: *E. Weber*
DATE: 8-24-81

TYPE A-20-T40-6
LUMINAIRE-200 WATT HIGH PRESSURE SODIUM (APPROX. 355°)
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS (COUNTY FURNISHED)
1-PEDESTRIAN PUSH BUTTON (MTD. 270°)
EXTEND INTO H.H. 7
3" R.S.C.
2-12/C # 12
1-3/C # 12
1-3/C # 20
2-1/C # 10

EQUIPMENT PAD (SEE DETAIL)
5-STEEL GUARD POSTS
SERVICE CABINET
EXTEND INTO H.H. 1
1 1/4" R.S.C.
3-1/C # 6
CONTROLLER AND CABINET
EXTEND INTO H.H. 2
4" R.S.C.
4-12/C # 12
2-3/C # 12
2-3/C # 20
8-2/C # 14
BETWEEN H.H. 2 AND 7
2" R.S.C.
2-1/C # 10

PEDESTRIAN PUSH STATION (4" R.S.C.)
1-PEDESTRIAN PUSH BUTTON (MTD. WEST SIDE)
EXTEND INTO H.H. 7
1 1/4" R.S.C.
2-3/C # 12

S.O.P. (N.S.P. POLE)
1 1/4" R.S.C. RISER WITH WEATHER HEAD
EXTEND INTO H.H. 1
1 1/4" R.S.C.
3-1/C # 6

1 1/4" R.S.C.
2-2/C # 14

TYPE A-25
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS (COUNTY FURNISHED)
1-PEDESTRIAN PUSH BUTTON (MTD. 270°)
EXTEND INTO H.H. 9
3" R.S.C.
2-12/C # 12
1-3/C # 12
1-3/C # 20

PEDESTRIAN PUSH STATION (4" R.S.C.)
1-PEDESTRIAN PUSH BUTTON (MTD. NORTH SIDE)
EXTEND INTO H.H. 9
1 1/4" R.S.C.
2-3/C # 12

1 1/4" R.S.C.
2-2/C # 14

- NOTES:**
- SUFFICIENT 3/C # 20 TO REACH THE END OF THE MAST ARM SHALL BE INSTALLED IN POLES 1, 2, 3, AND 4.
 - LOOP DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
 - CONCRETE WALK FROM H.H. 10 TO 130' NORTH IS INPLACE. CONTRACTOR SHALL SAW CUT WALK AS DIRECTED BY ENGR. AND REPLACE IN KIND.
 - 10 TH ST. N.W. IS UNDER CONTRACT FOR RECONSTRUCTION-SEE SHEETS 6 & 7 FOR INFORMATION. (CONSTRUCTION NEAR COMPLETION)
 - THE CONTRACTOR SHALL CONSTRUCT 4" CONCRETE WALK (APPROX. 816± SQ.FT.) WHERE INDICATED IN THE PLANS AND IN ACCORDANCE WITH MN/DOT SPEC. 2521 (WALKS). PAYMENT SHALL BE CONSIDERED INCIDENTAL WORK TO ITEM 2565.501 (FULL TRAFFIC ACTUATED TRAFFIC CONTROL SYSTEM.)

LOCATION CHART

STA.	LOC.	DESCRIPTION
24+40	LT. 219	H.H. 4
24+41	LT. 35	POLE # 4
24+58	LT. 44	PED. STA.
24+61	RT. 41	PED. STA.
24+73	RT. 52	POLE # 3
25+26	LT. 49	POLE # 1
25+37	RT. 38	PED. STA.
25+38	LT. 37	PED. STA.
25+42	LT. 65	EQUIP. PAD
25+50	RT. 35	POLE # 2
25+52	LT. 43	H.H. 1
25+56	RT. 215	H.H. 10
27+11	LT. 34	H.H. 8

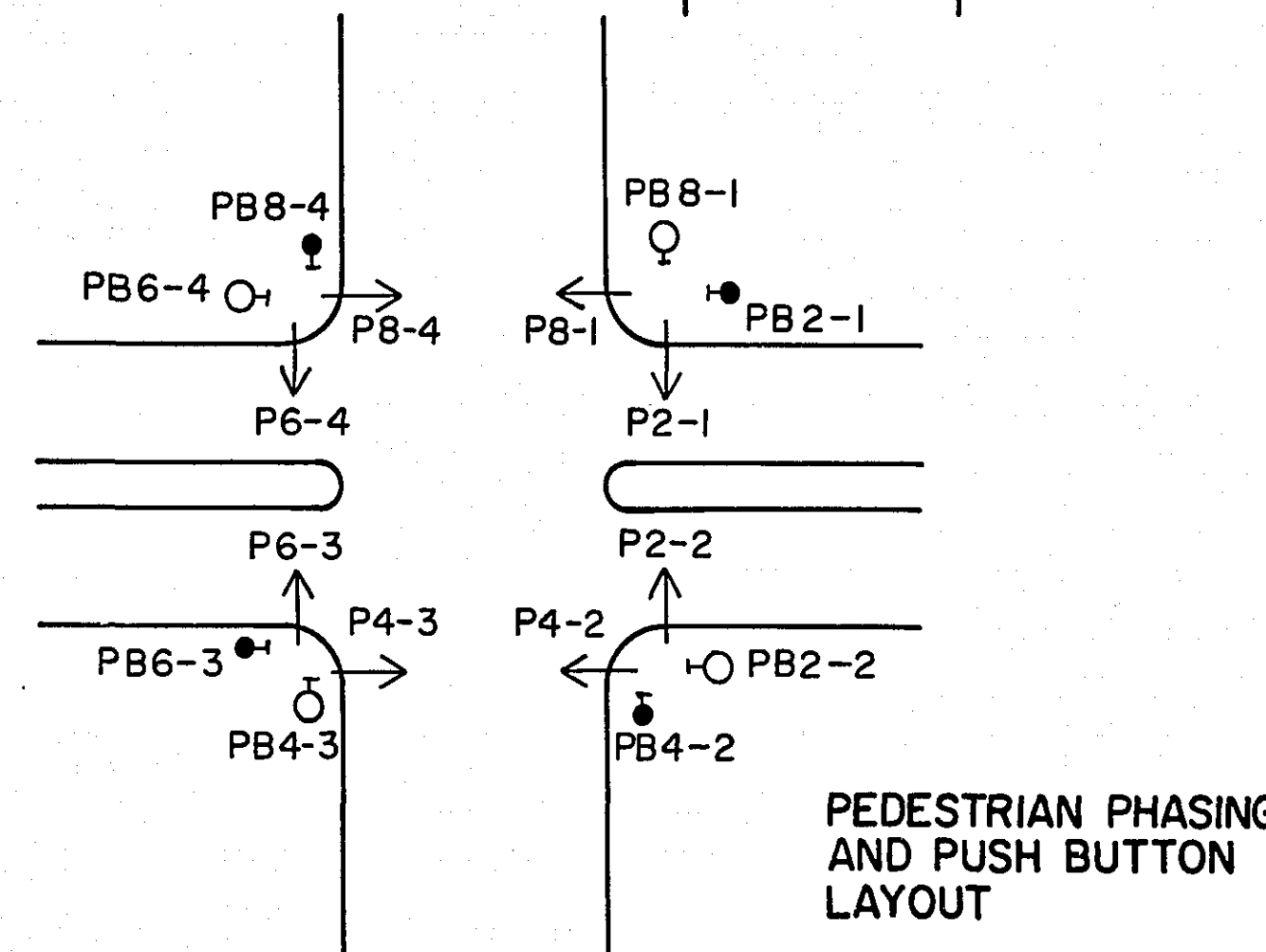
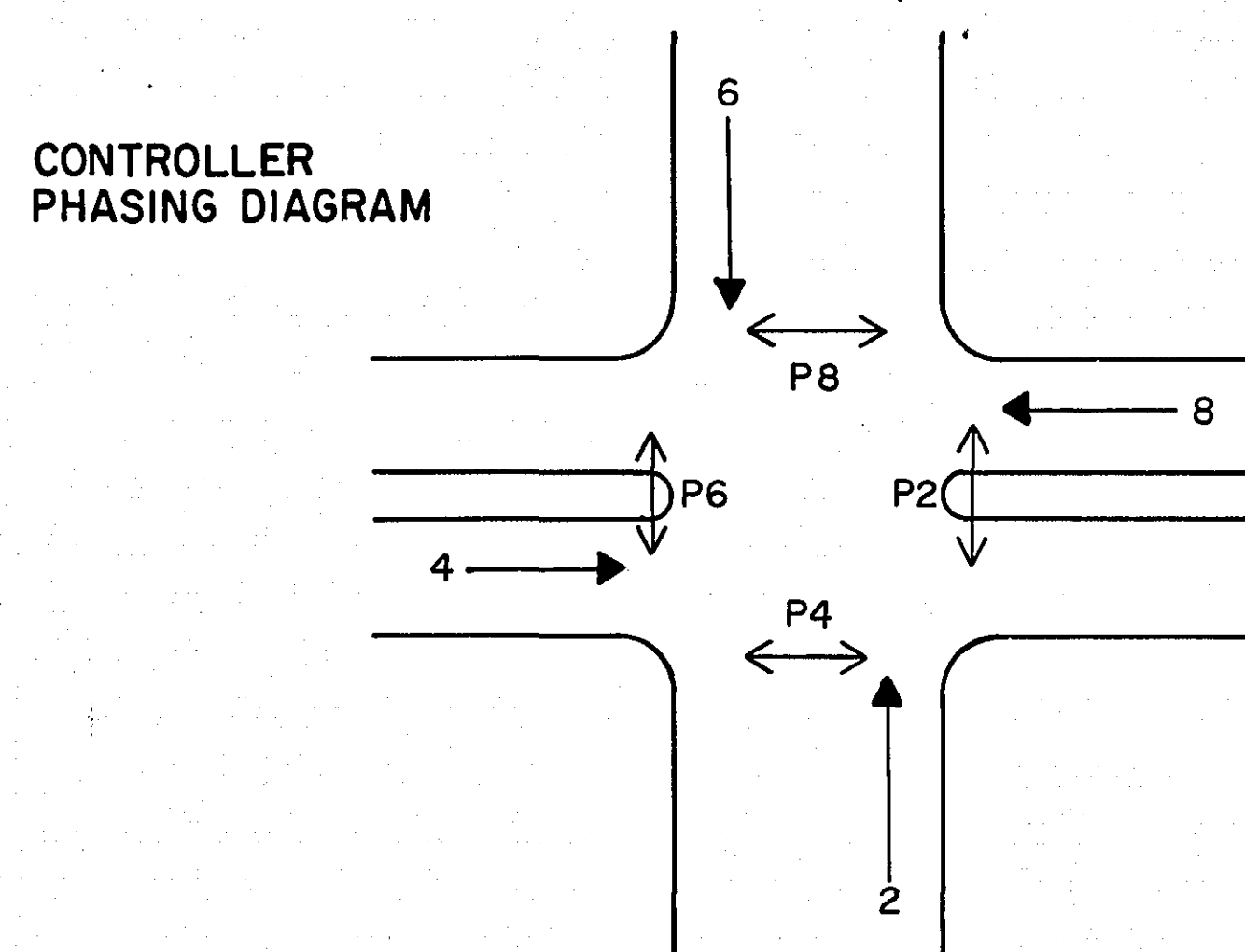
INTERSECTION LAYOUT
10th ST. N.W. & 5th AVE. N.W.

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 laws of the State of Minnesota.
Paul R. Kishner
Date: 8-8-80 Reg. No. 12703

LEGEND OF SYMBOLS

SIGNAL BASE No. _____	(5)
SIGNAL FACE No. _____	(4-2)
CONTROLLER AND CABINET _____	
CONTROLLER AND CABINET-INPLACE _____	
HANDHOLE _____	
HANDHOLE-INPLACE _____	
RIGID STEEL CONDUIT (R.S.C.) _____	
RIGID STEEL CONDUIT (R.S.C.)-INPLACE _____	
SIGNAL FACE _____	
SIGNAL FACE WITH BACKGROUND SHIELD _____	
SIGNAL FACE - INPLACE _____	
PEDESTRIAN INDICATIONS _____	
PEDESTRIAN INDICATIONS -INPLACE _____	
PEDESTRIAN PUSH BUTTON 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 -INPLACE _____	
MAST ARM AND LUMINAIRE _____	
MAST ARM AND LUMINAIRE -INPLACE _____	
WOOD POLE _____	
WOOD POLE -INPLACE _____	
SOURCE OF POWER _____	
EMERGENCY VEHICLE PRE-EMPTION DETECTOR LOCATION _____	

CONTROLLER PHASING DIAGRAM



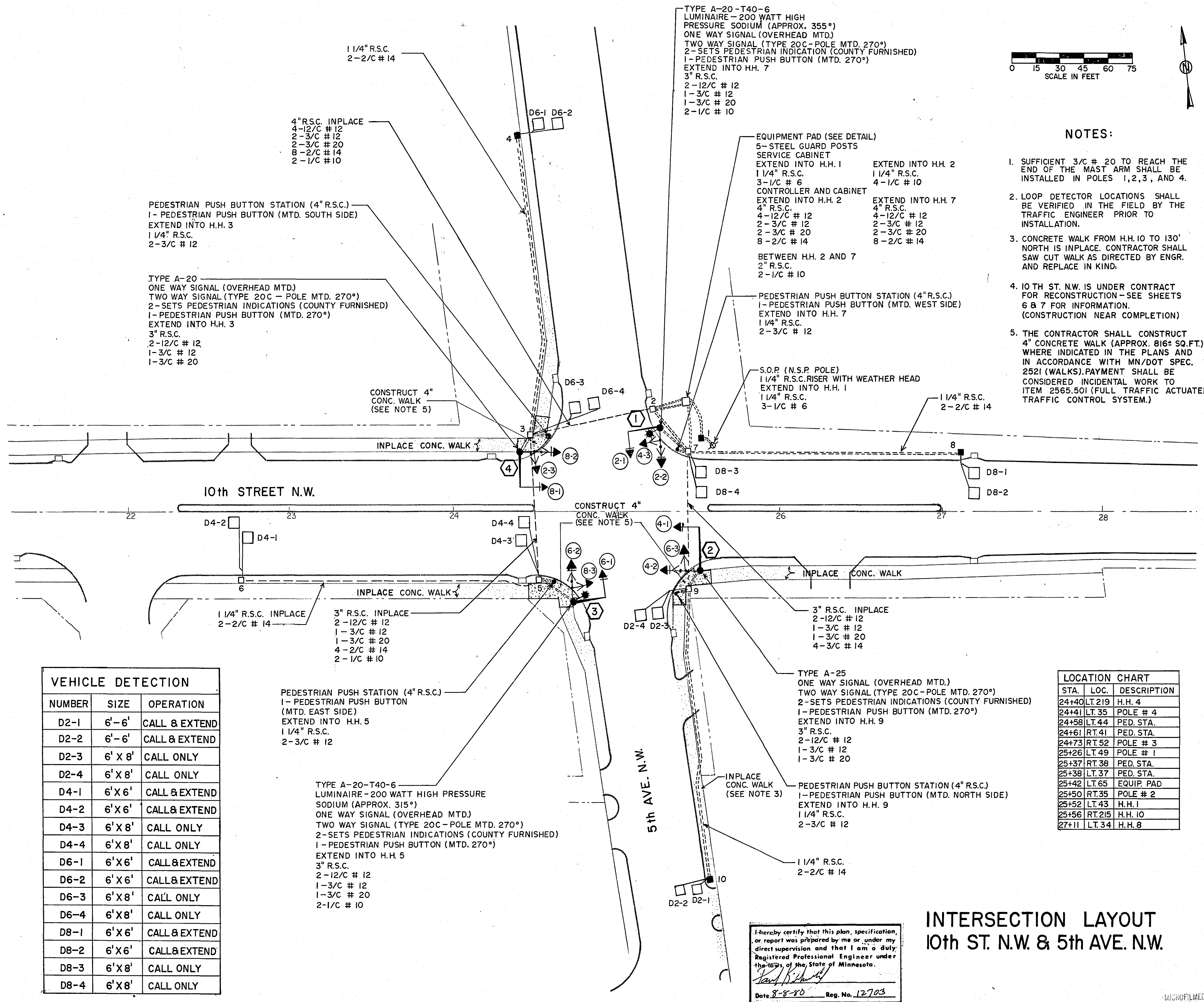
PEDESTRIAN PHASING AND PUSH BUTTON LAYOUT

SIGNAL INDICATION CHART

FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	←	↑	→
2-1	2	R	12"	12"	12"	—	—	—
2-2	2	R	12"	12"	12"	—	—	—
2-3	2	R	12"	12"	12"	—	—	—
4-1	4	R	12"	12"	12"	—	—	—
4-2	4	R	12"	12"	12"	—	—	—
4-3	4	R	12"	12"	12"	—	—	—
6-1	6	R	12"	12"	12"	—	—	—
6-2	6	R	12"	12"	12"	—	—	—
6-3	6	R	12"	12"	12"	—	—	—
8-1	8	R	12"	12"	12"	—	—	—
8-2	8	R	12"	12"	12"	—	—	—
8-3	8	R	12"	12"	12"	—	—	—

VEHICLE DETECTION

NUMBER	SIZE	OPERATION
D2-1	6'-6"	CALL & EXTEND
D2-2	6'-6"	CALL & EXTEND
D2-3	6' X 8'	CALL ONLY
D2-4	6' X 8'	CALL ONLY
D4-1	6' X 6'	CALL & EXTEND
D4-2	6' X 6'	CALL & EXTEND
D4-3	6' X 8'	CALL ONLY
D4-4	6' X 8'	CALL ONLY
D6-1	6' X 6'	CALL & EXTEND
D6-2	6' X 6'	CALL & EXTEND
D6-3	6' X 8'	CALL ONLY
D6-4	6' X 8'	CALL ONLY
D8-1	6' X 6'	CALL & EXTEND
D8-2	6' X 6'	CALL & EXTEND
D8-3	6' X 8'	CALL ONLY
D8-4	6' X 8'	CALL ONLY



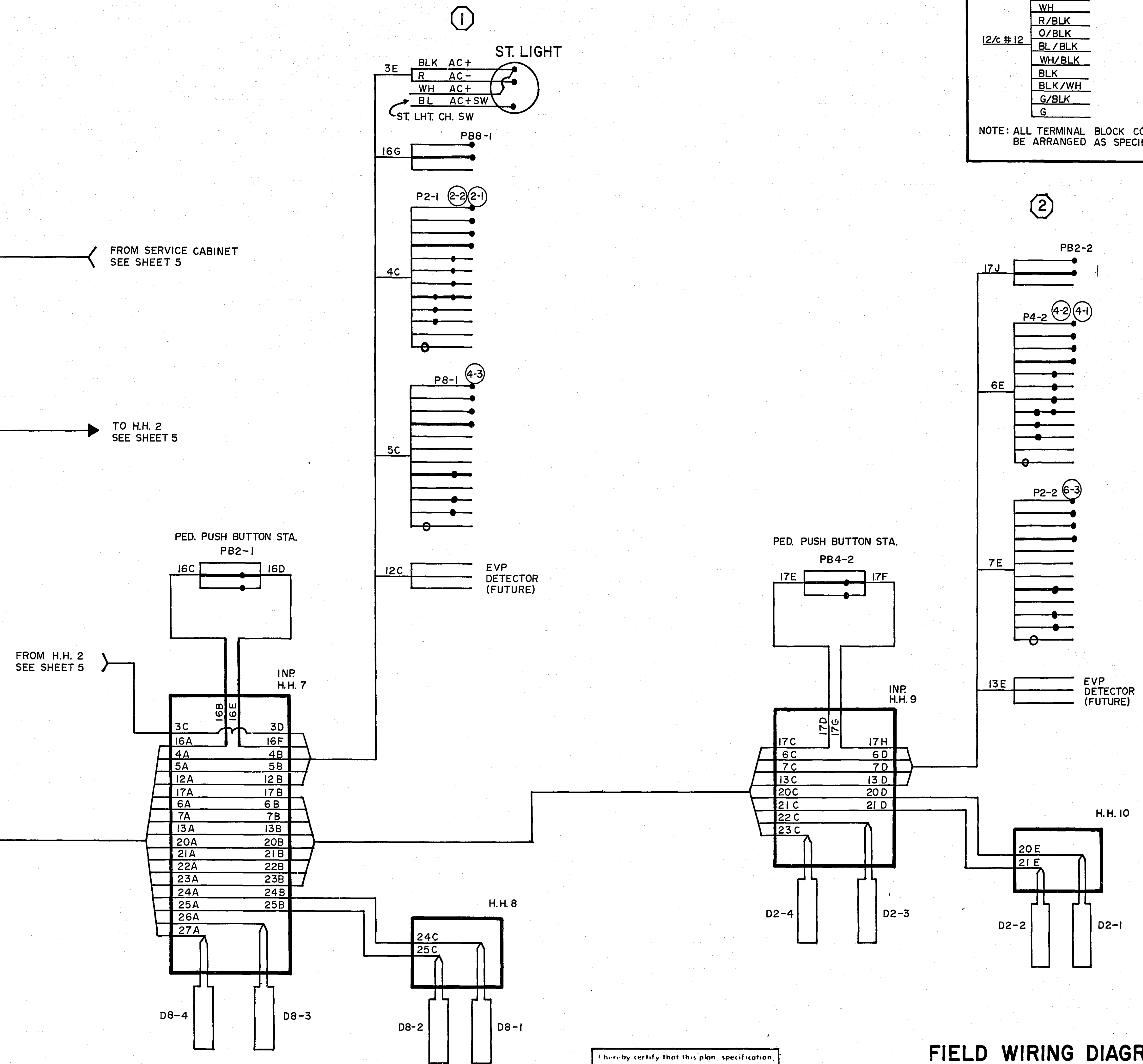
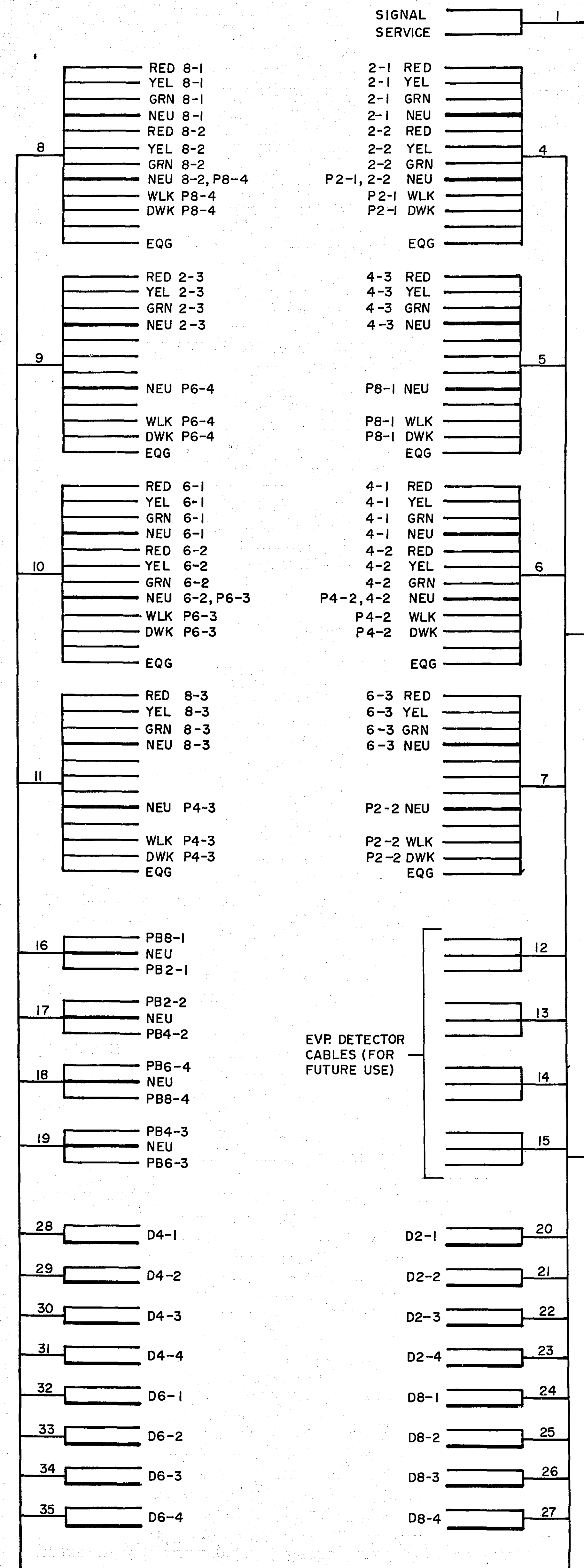
NOTES:

- SUFFICIENT 3/C # 20 TO REACH THE END OF THE MAST ARM SHALL BE INSTALLED IN POLES 1,2,3, AND 4.
- LOOP DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
- CONCRETE WALK FROM H.H. 10 TO 130' NORTH IS INPLACE. CONTRACTOR SHALL SAW CUT WALK AS DIRECTED BY ENGR. AND REPLACE IN KIND.
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STA.	LOC.	DESCRIPTION
24+40	LT.219	H.H. 4
24+41	LT.35	POLE # 4
24+58	LT.44	PED. STA.
24+61	RT.41	PED. STA.
24+73	RT.52	POLE # 3
25+26	LT.49	POLE # 1
25+37	RT.38	PED. STA.
25+38	LT.37	PED. STA.
25+42	LT.65	EQUIP. PAD
25+50	RT.35	POLE # 2
25+52	LT.43	H.H. 1
25+56	RT.215	H.H. 10
27+11	LT.34	H.H. 8

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 laws of the State of Minnesota.
 Date 8-8-80 Reg. No. 12703

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	BLK OR R
O	WH 2-1/c # 6
BL	2-1/c # 10
WH	R
R/BLK	WH 3/c # 12
O/BLK	BLK
BL/BLK	BLK 2/c # 14
BLK	CLEAR
BLK/WH	
G/BLK	
G	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

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 laws of the State of Minnesota.

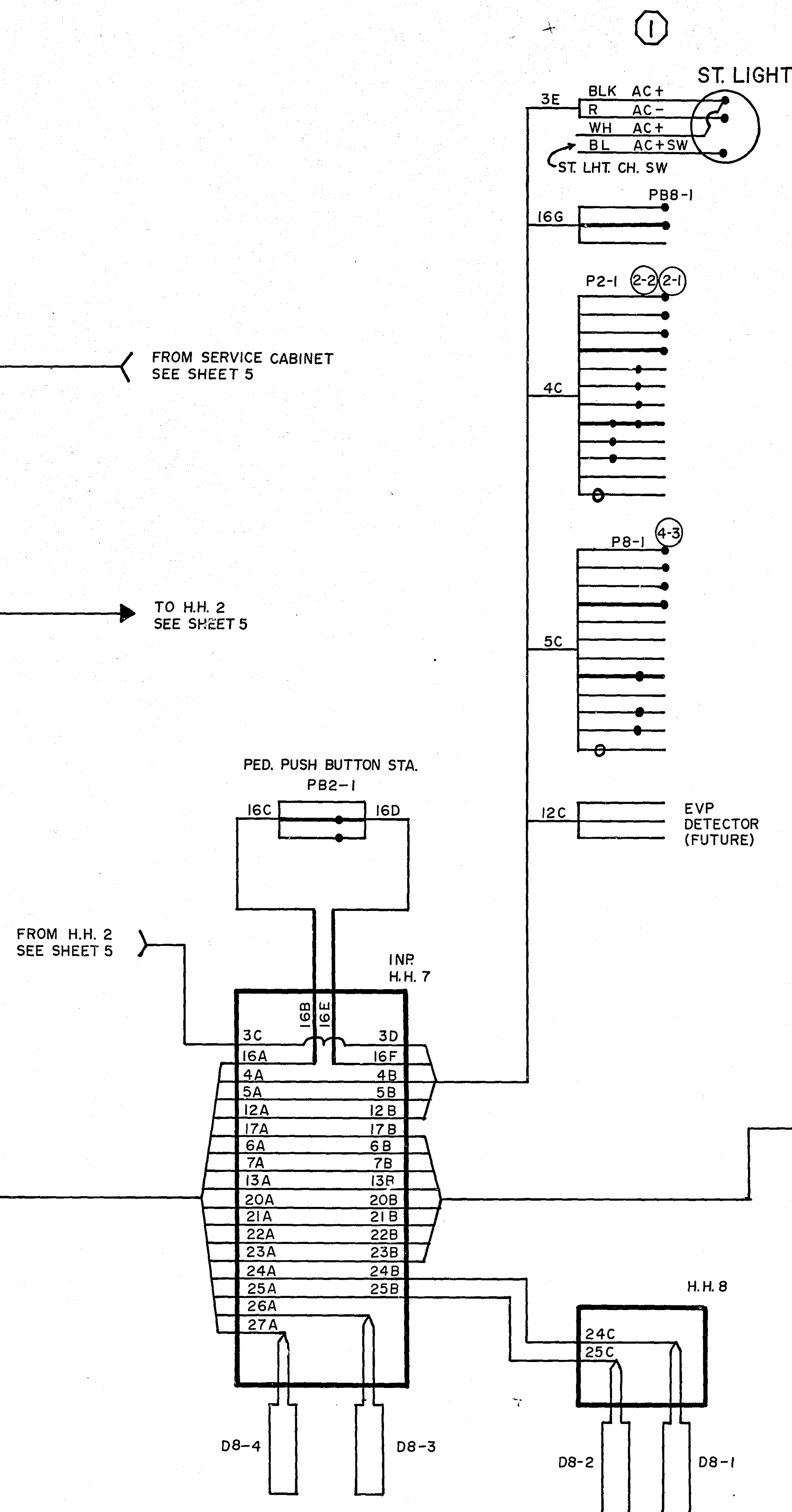
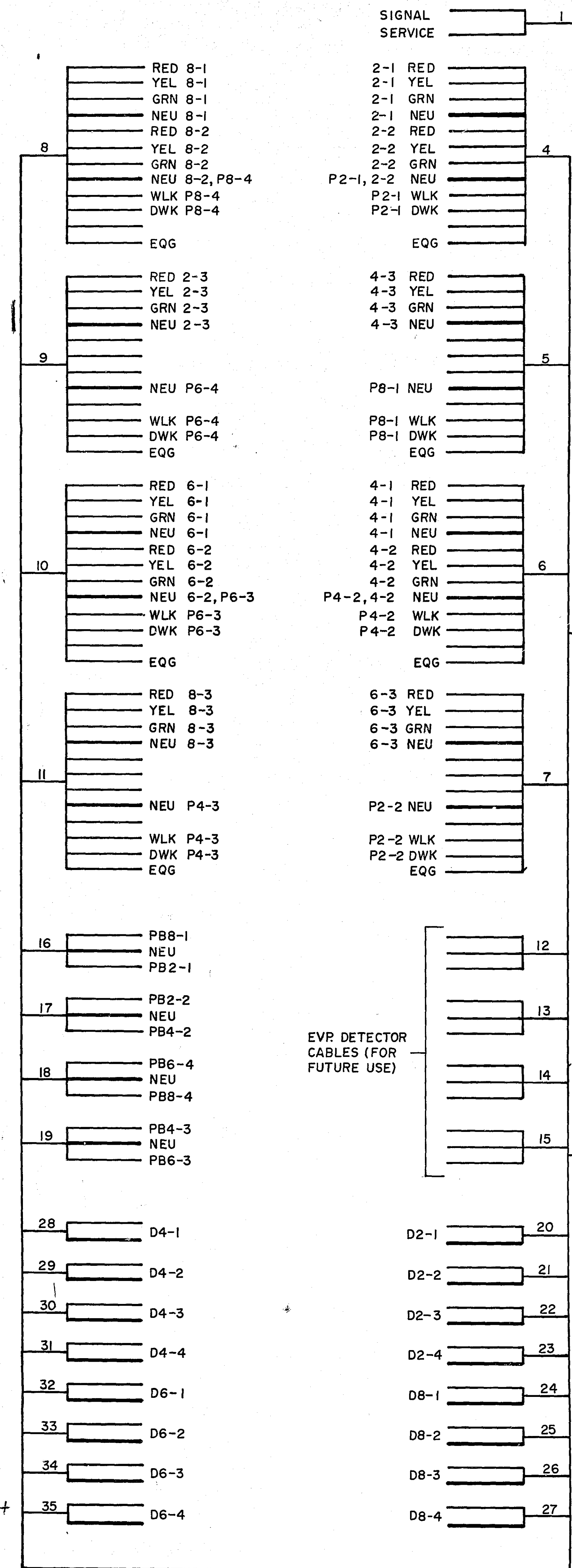
Signature

Date: 8-8-80 Reg. No. 12703

FIELD WIRING DIAGRAM
10th ST. N.W. & 5th AVE. N.W.

MICROFILMED
RAMSEY CO. ENGR.

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	BLK OR R
0	WH 2-1/c # 6
BL	2-1/c # 10
WH	R
R/BLK	WH 3/c # 12
O/BLK	BLK
BL/BLK	BLK
WH/BLK	BLK
BLK	CLEAR 2/c # 14
BLK/WH	G
G/BLK	
G	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

FIELD WIRING DIAGRAM
10th ST. N.W. & 5th AVE. N.W.

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY *R. Webb*
DATE: 8-24-81

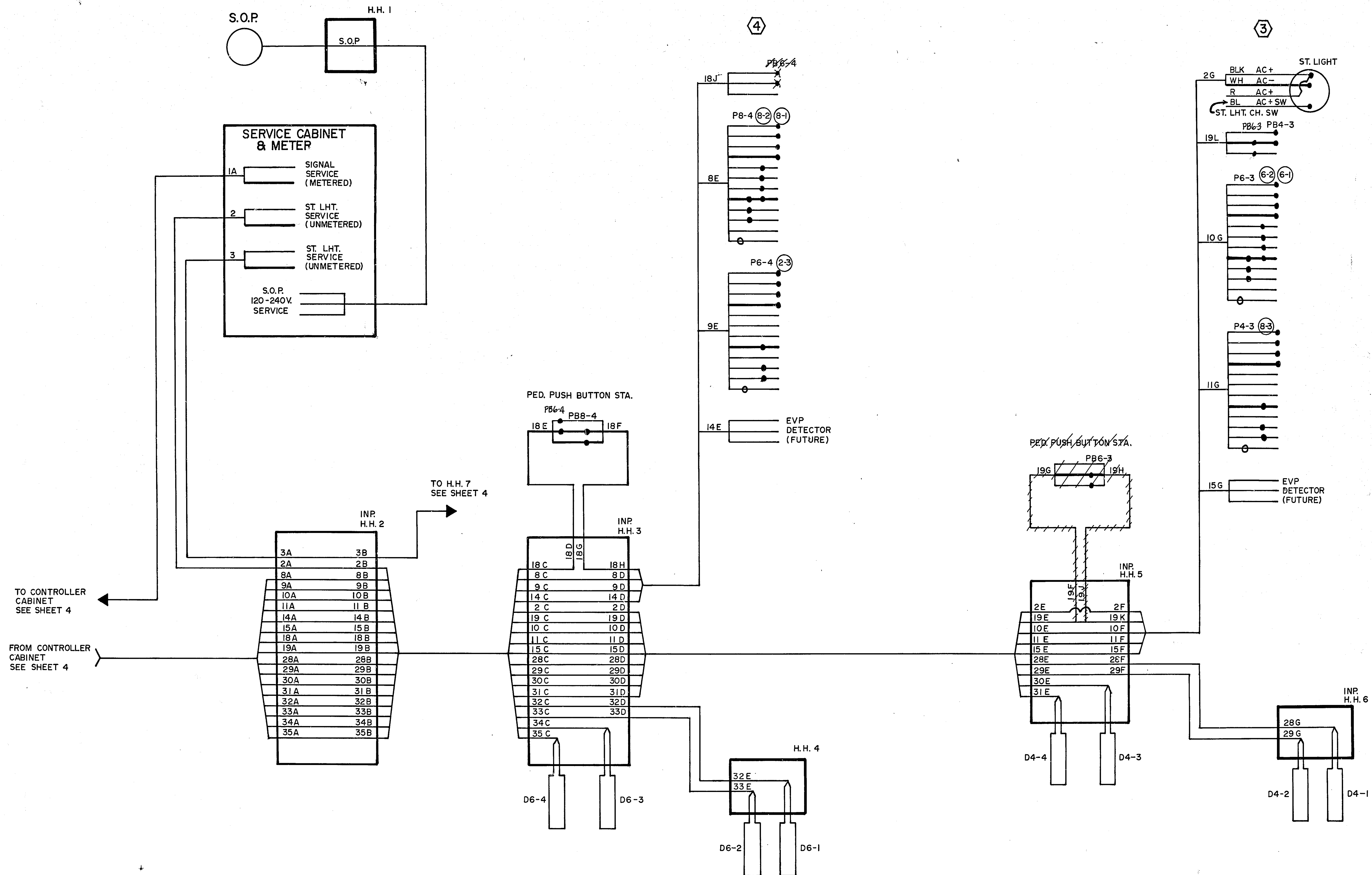
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Paul H. Smith
Date: 8-8-80 Reg. No. 12703

S.A.P. NO. 62-612-06

Sheet No 4 of 7 Sheets

MICROFILMED
RAMSEY CO. ENGR.

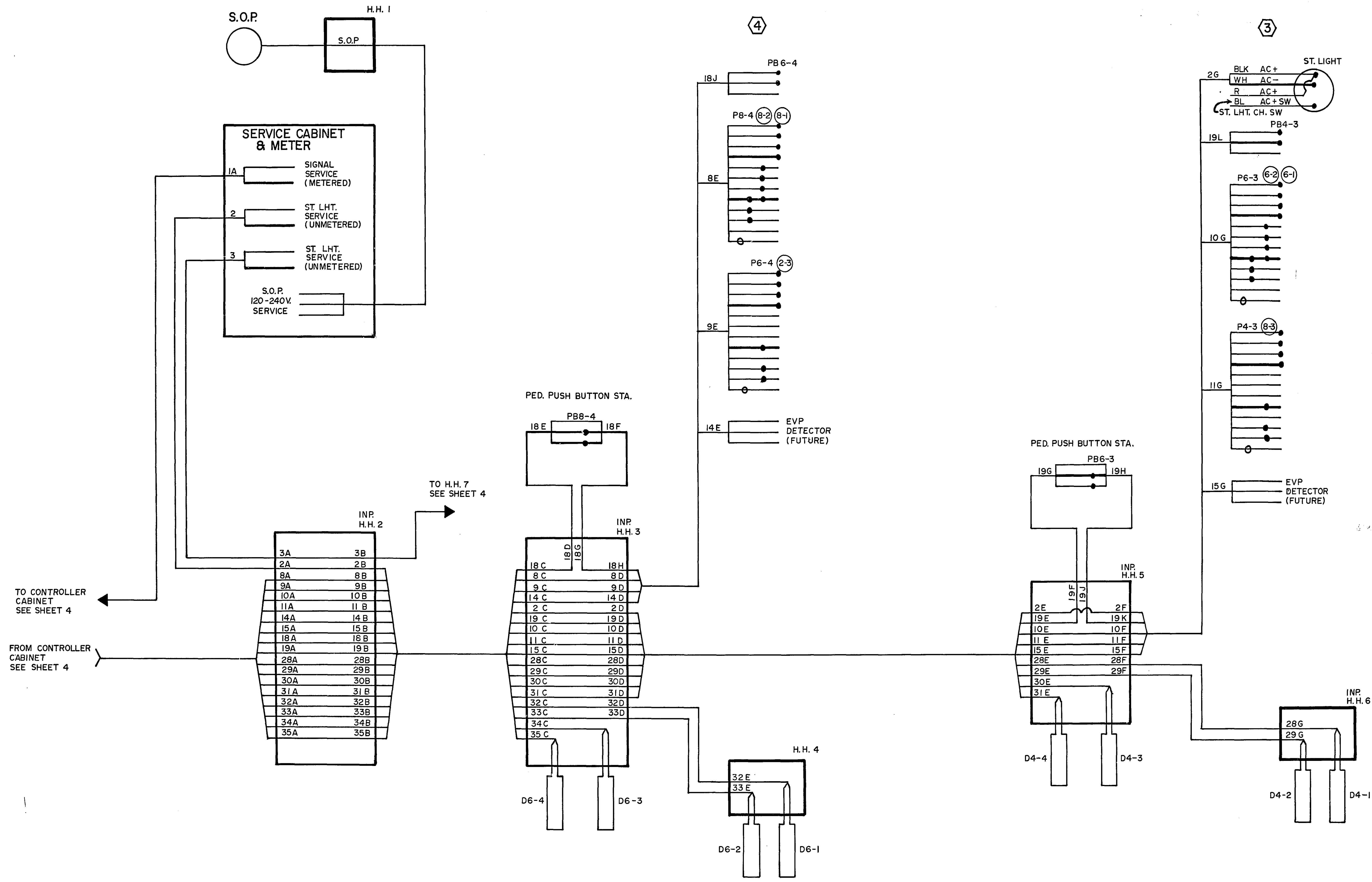
23-121



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS
 DONE BY: *R. Decker*
 DATE: 8-24-81

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 laws of the State of Minnesota.
Paul H. Schmidt
 Date: 8-8-80 Reg. No. 12703

FIELD WIRING DIAGRAM
 10th ST. N.W. & 5th AVE. N.W.



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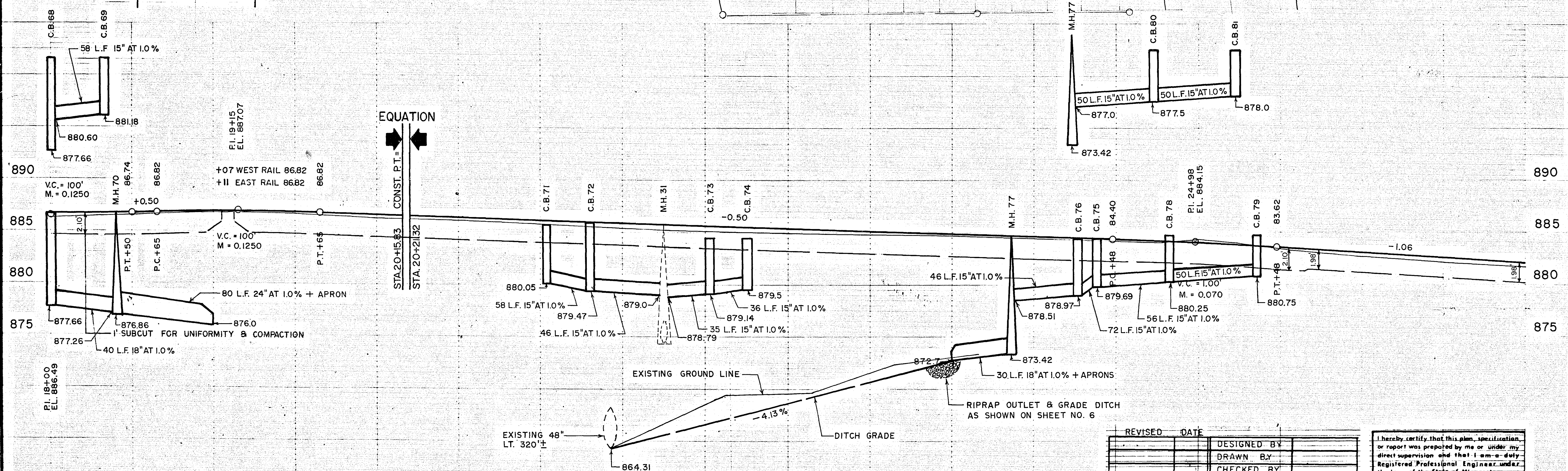
Paul J. Kirsch

Date: 8-8-80 Reg. No. 12703

FIELD WIRING DIAGRAM
10th ST. N.W. & 5th AVE. N.W.



NOTE: MINN. TR
RAILWAY CROSS
BE CONSTRUCT
OTHERS



THIS SHEET FOR INFORMATION ONLY

THIS WORK UNDER 22
SEPARATE CONTRACT

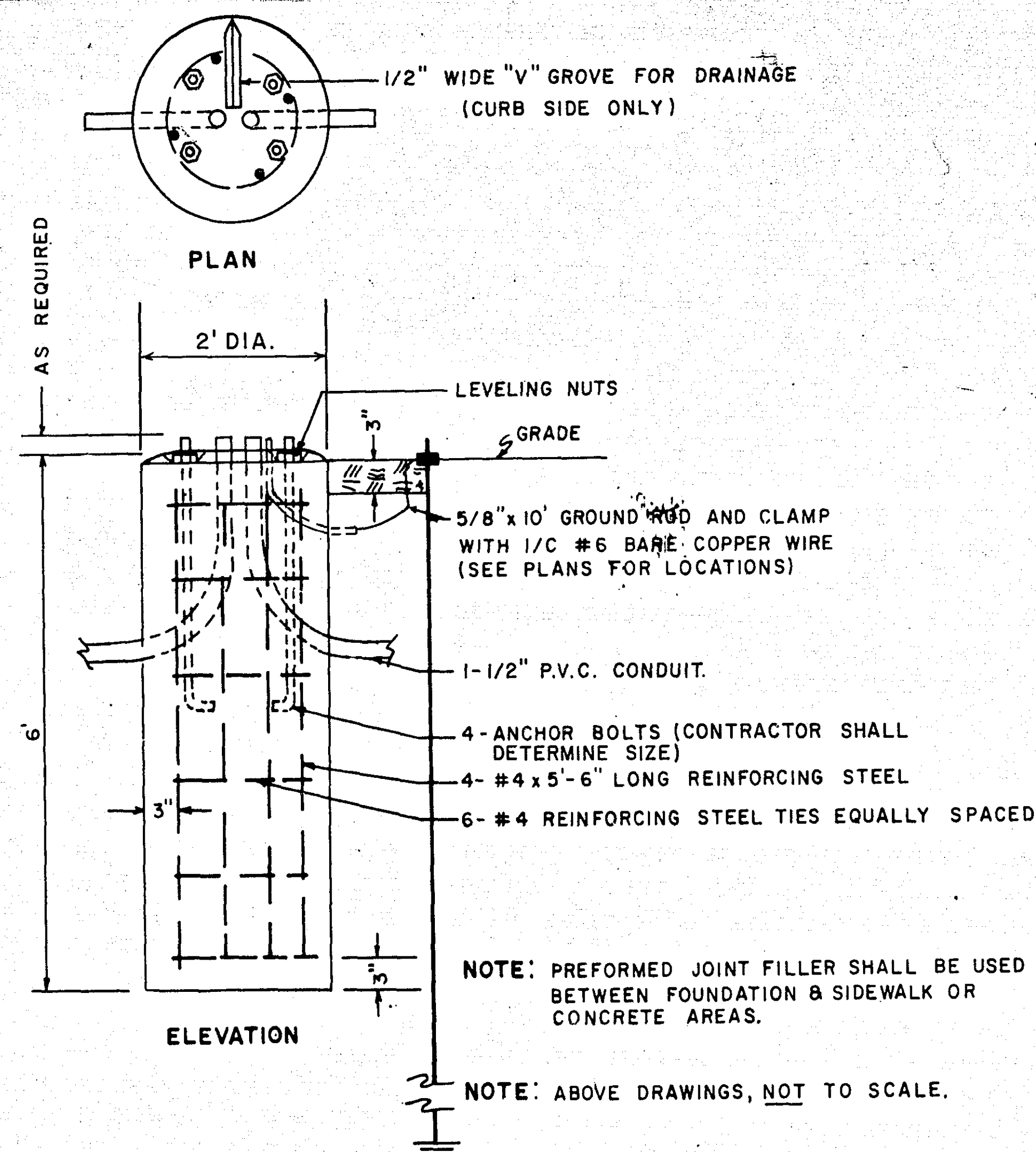
REVISED	DATE	DESIGNED BY
		DRAWN BY
		CHECKED BY

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 laws of the State of Minnesota.

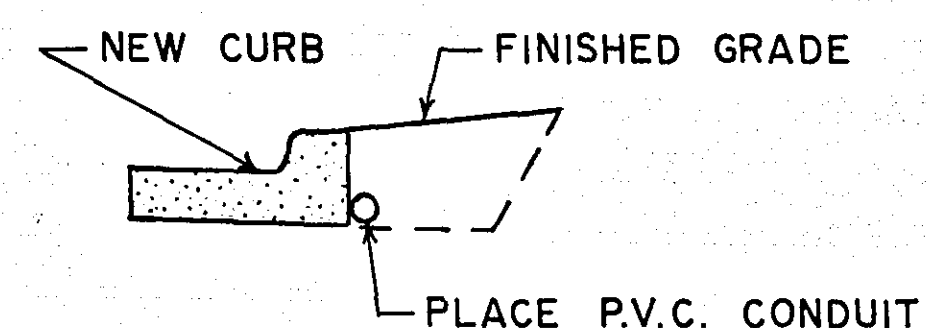
Charles E. Felt

Date: 3-12-80 Reg. No. 13501

LIGHT BASE, DESIGN A



CONDUIT PLACEMENT DETAIL FOR STREET LIGHTING

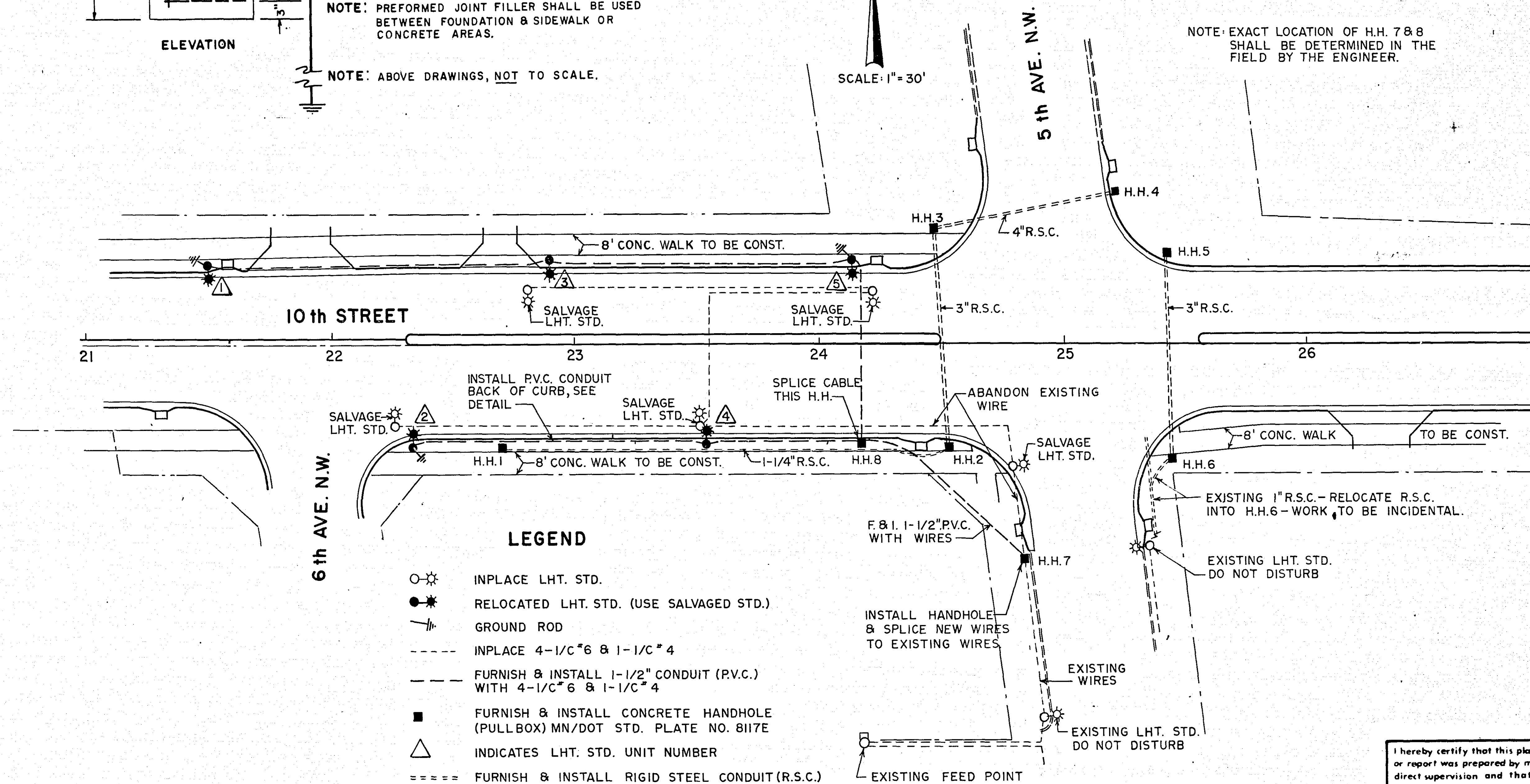


LIGHT STD. LOCATION CHART

UNIT NUMBER	STATION	LOCATION	REMARKS
1	21+50	LT. 28'	USE SALVAGED LIGHT STD.
2	22+33	RT. 38'	USE SALVAGED LIGHT STD.
3	22+90	LT. 32'	USE SALVAGED LIGHT STD.
4	23+55	RT. 38'	USE SALVAGED LIGHT STD.
5	24+15	LT. 32'	USE SALVAGED LIGHT STD.

R.S.C. & HANDHOLE CHART

NUMBER	STATION	LOCATION	RIGID STEEL CONDUIT (R.S.C.) SIZE & LENGTH
H.H.1	22+70	RT. 40'	1-1/4" R.S.C. X 183'
H.H.2	24+53	RT. 40'	3" R.S.C. X 84'
H.H.3	24+48	LT. 44'	4" R.S.C. X 70'
H.H.4	25+20	LT. 58'	
H.H.5	25+42	LT. 34'	3" R.S.C. X 79'
H.H.6	25+45	RT. 45'	



THIS SHEET FOR INFORMATION ONLY

THIS WORK UNDER
SEPARATE CONTRACT

REVISED	DATE	DESIGNED BY	DRAWN BY	CHECKED BY

STREET LIGHTING & R.S.C. PLAN

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 laws of the State of Minnesota.

Date: 3/2/80 Reg. No. 13501