

PLANS SYMBOLS

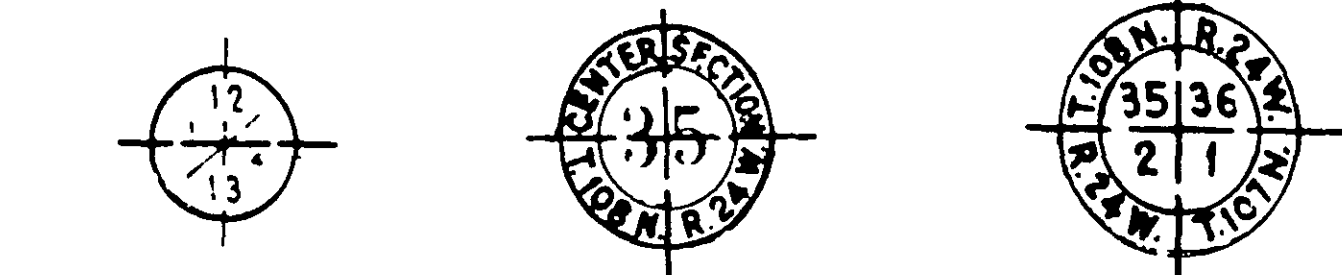
STATE LINE	----
COUNTY LINE	----
TOWNSHIP OR RANGE LINE	----
SECTION LINE	----
QUARTER LINE	----
SIXTEENTH LINE	----
RIGHT OF WAY LINE	----
PRESENT RIGHT OF WAY LINE	----
CONTROL OF ACCESS LINE	----
PROPERTY LINE (Except Land Lines)	----
VACATED PLATTED PROPERTY	----
CORPORATE OR CITY LIMITS	----
TRUNK 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 SNOW FENCE	----
STONE WALL OR FENCE	----
HEDGE	----
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	----
S STONE	----
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 ON 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	----

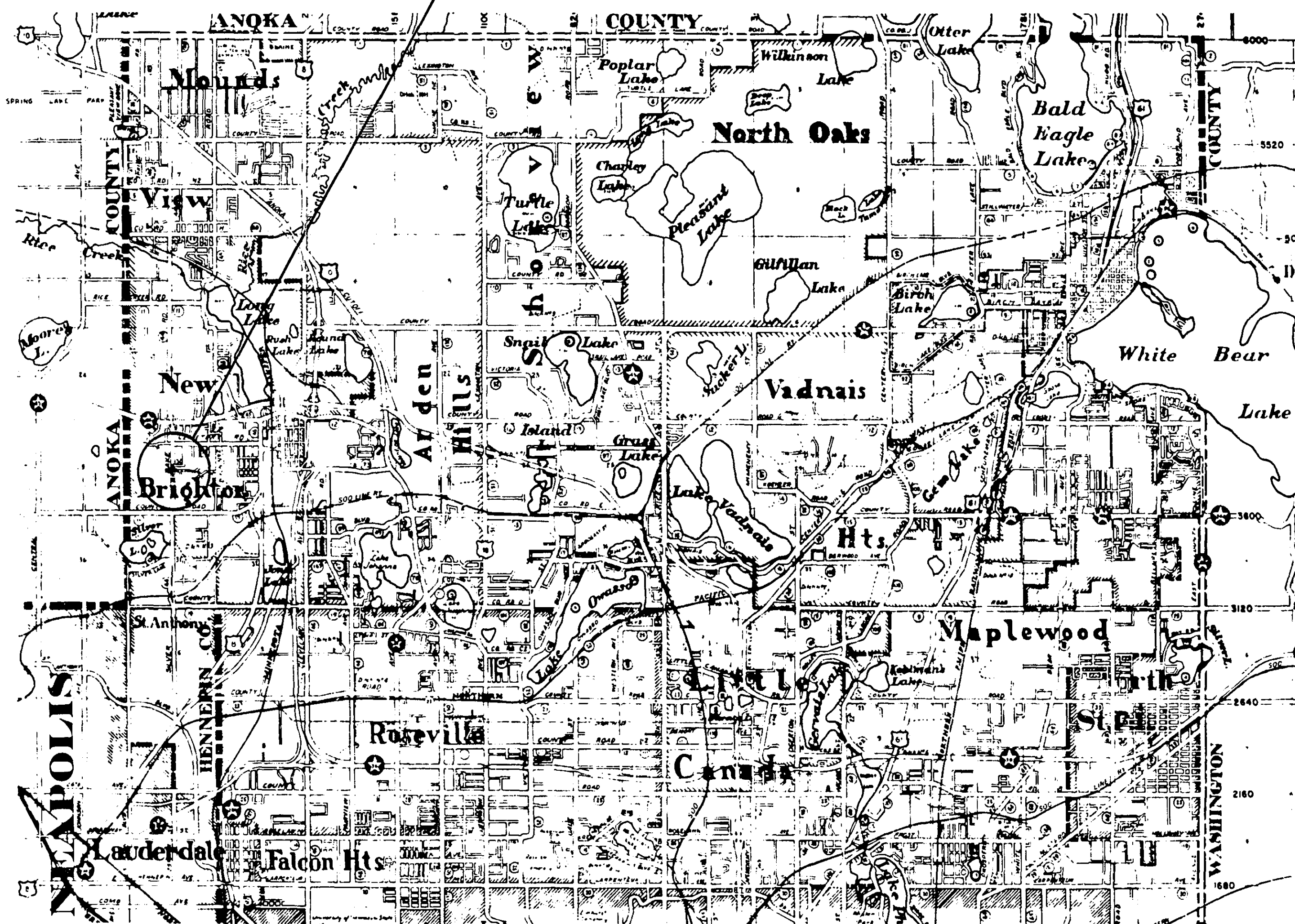


NOTE: SECTION NUMBERS FROM "THE SOUTH"

PIT DATA

PIT NO.	Located in
PIT NO.	Located in

SILVER LAKE RD. & 5th ST. N.W.
S.A.P. NO. 62-644-09



CITY OF ST. PAUL

OFFICE OF COUNTY ENGINEER RAMSEY COUNTY

PLAN OF TRAFFIC CONTROL SYSTEM FOR THE INTERSECTION OF
SILVER LAKE RD. & 5th ST. N.W.
S.A.P. NO. 62-644-09

INDEX

SHEET NO.	DESCRIPTION
1	TITLE
2	DETAILS
3	INTERSECTION LAYOUT
4	FIELD WIRING DIAGRAM
5	UTILITY INFORMATION

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.
Diane R. Ankles
Date 12-22-76 Reg. No. 5031

RECOMMENDED FOR APPROVAL *Paul K. Kuchel* DATE 12-21-76
TRAFFIC ENGINEER
RECOMMENDED FOR APPROVAL *Diane R. Ankles* DATE 12-22-76
COUNTY ENGINEER
APPROVED *Wm. J. Schabert* DATE
CHAIRMAN OF THE RAMSEY COUNTY BOARD
APPROVED *Wayle C. Brumander* DATE 2-22-77
CITY MANAGER, CITY OF NEW BRIGHTON
APPROVED *Thomas J. Lewcock* DATE 2-22-77
CITY MANAGER, CITY OF NEW BRIGHTON

MINNESOTA STATE HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL *John J. O'Brien* DATE 2-22-77
DISTRICT STATE AID ENGINEER
RECOMMENDED FOR APPROVAL *Steve Yancey* DATE 4/20/77
DISTRICT STATE AID ENGINEER
APPROVAL *Wm. J. Schabert* DATE 9/23/77
STATE AID ENGINEER

RECOMMENDED FOR APPROVAL *D. J. S.* DATE 12-28-76
ENVIRONMENTAL ENGINEER
RECOMMENDED FOR APPROVAL *M. D. K.* DATE 12-21-76
MAINTENANCE ENGINEER
RECOMMENDED FOR APPROVAL *K. E. W.* DATE 12-21-76
CONSTRUCTION ENGINEER
RECOMMENDED FOR APPROVAL *W. J. S.* DATE 12-28-76
R.O.W. ENGINEER
RECOMMENDED FOR APPROVAL *W. J. S.* DATE 12-21-76
DESIGN ENGINEER
APPROVED *Diane R. Ankles* DATE 12-22-76
COUNTY ENGINEER

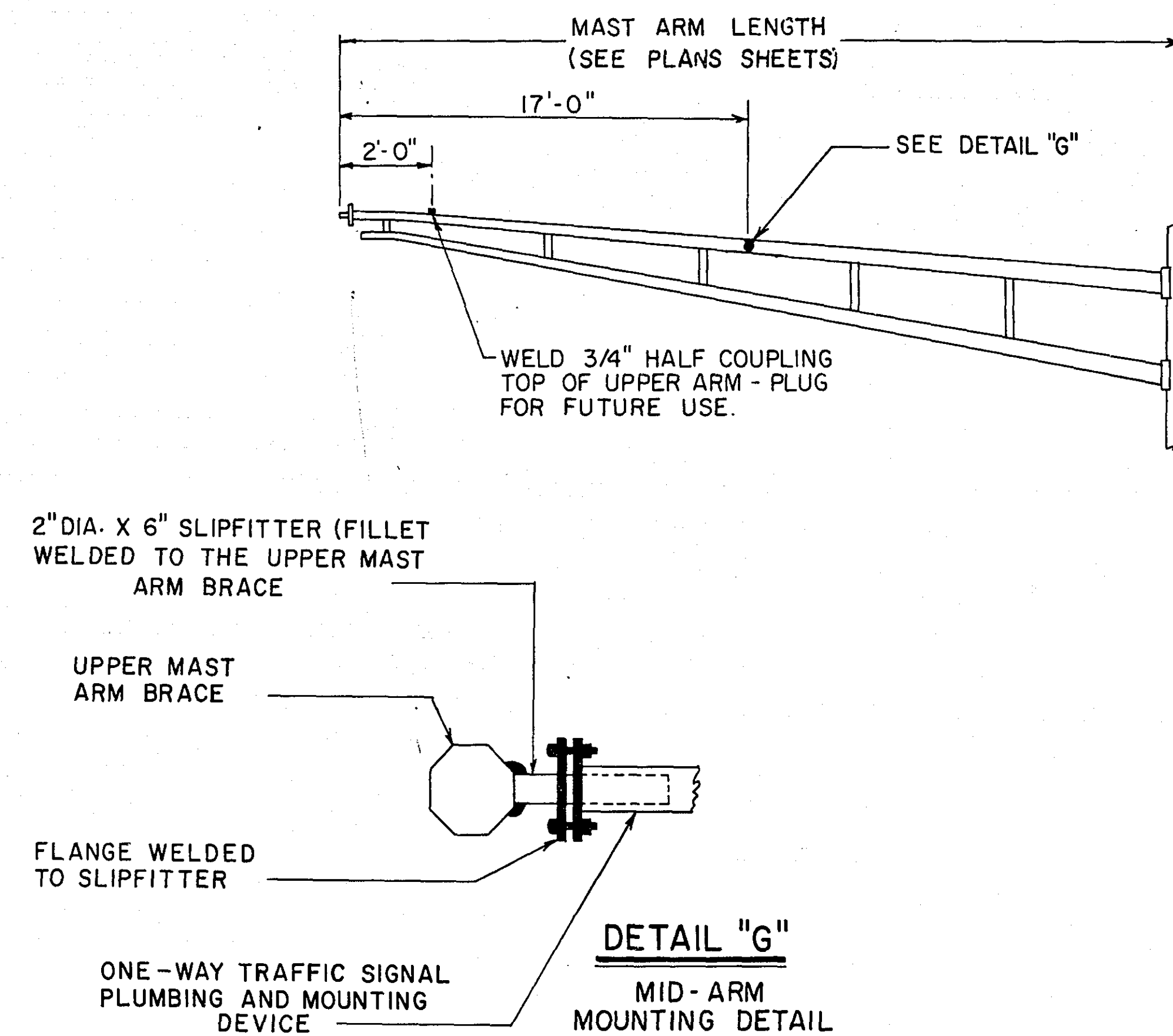
ACCOUNT NO. 50168

S.A.P. NO. 62-644-09 S.A.P. 147-103-07

Sheet No. 1 of 5 Sheets

23-110

MAST ARM DETAIL



STANDARD PLATES

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

* STANDARD PLATES APPLICABLE TO THIS PROJECT

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
 PA1 (eg) - PEDESTRIAN INDICATION - "A" PHASE
 PBB2 (eg) - PUSH BUTTON - "B" PHASE
 C3 (eg) - SIGNAL HEAD - "C" PHASE
 DA4 (eg) - DETECTOR - "A" PHASE
 H.H. - HANDHOLE
 GR.R. - GROUND ROD
 SERV. - SERVICE
 EVP - EMERGENCY VEHICLE PRE-EMPTION

DNL - DOWNLIGHT
 PE.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 CONDUCTOR

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

STATEMENT OF ESTIMATED QUANTITIES

PROJECT NO.	ITEM NO.	ITEM	UNIT	QUANT.
62-644-09	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.
Dean R. Amble
 Date 12-22-76 Reg. No. 5031

DETAILS

ACCOUNT NO. 50168

S.A.P. NO. 62-644-09 S.A.P. 147-103-07

SHEET NO 2 OF 5 SHEETS

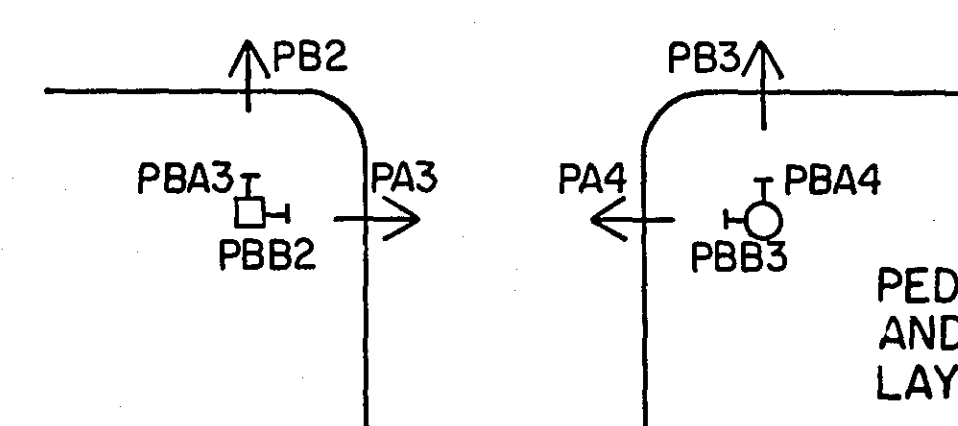
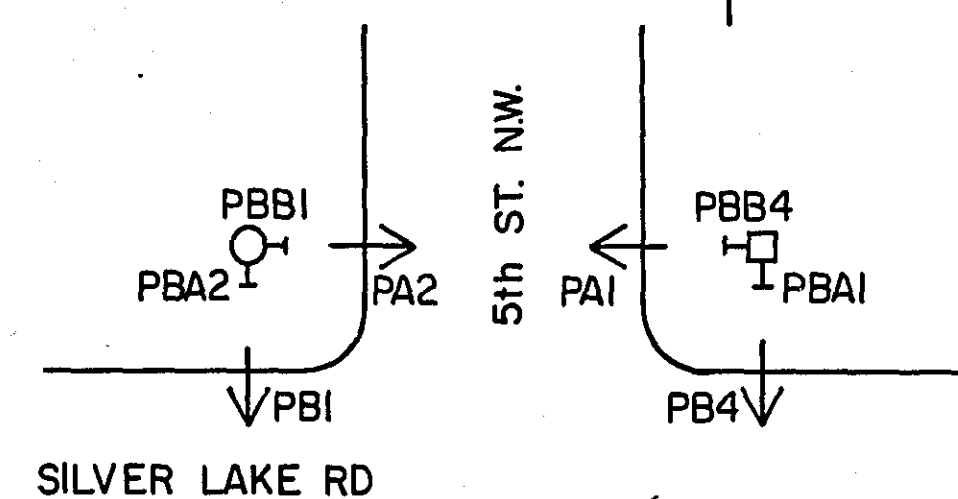
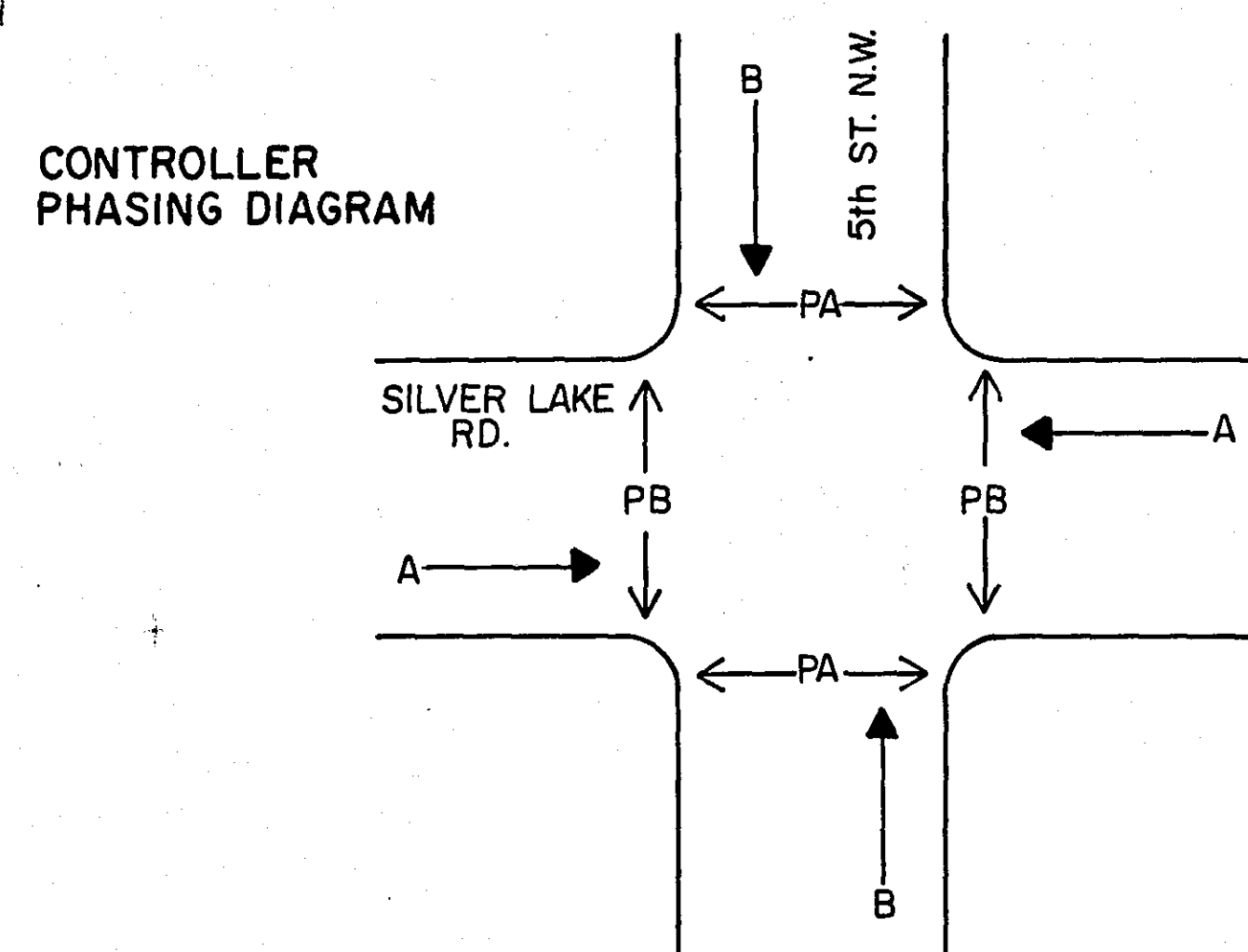
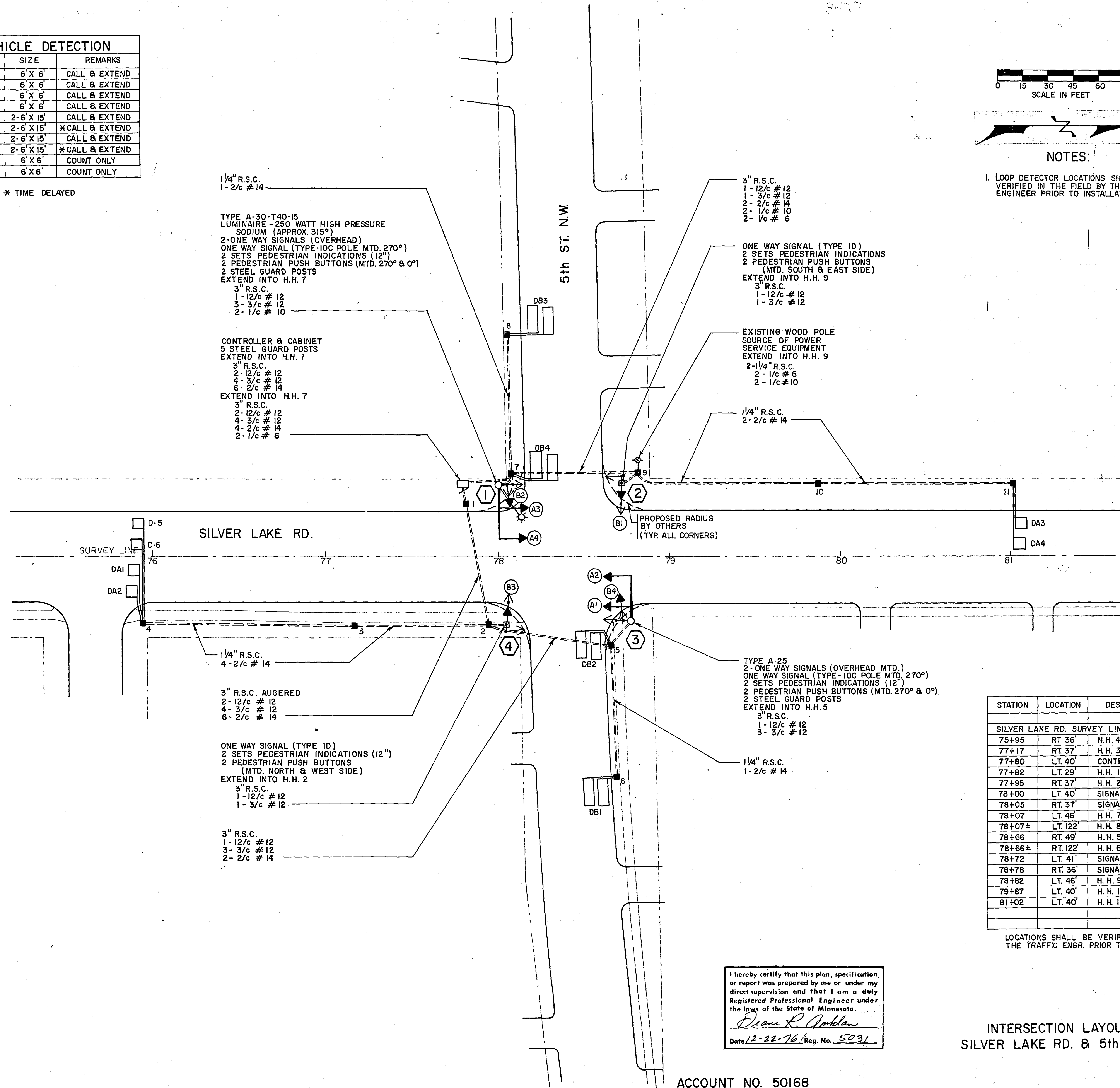
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23-110

SIGNAL BASE No.		(5)	(A2)
SIGNAL FACE No.			
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			

VEHICLE DETECTION		
NUMBER	SIZE	REMARKS
DA1	6' X 6'	CALL & EXTEND
DA2	6' X 6'	CALL & EXTEND
DA3	6' X 6'	CALL & EXTEND
DA4	6' X 6'	CALL & EXTEND
DB1	2-6' X 15'	CALL & EXTEND
DB2	2-6' X 15'	*CALL & EXTEND
DB3	2-6' X 15'	CALL & EXTEND
DB4	2-6' X 15'	*CALL & EXTEND
D-5	6' X 6'	COUNT ONLY
D-6	6' X 6'	COUNT ONLY

* TIME DELAYED

[illegible]

NOTES:

1. LOOP DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.

STATION	LOCATION	DESCRIPTION
SILVER LAKE RD. SURVEY LINE		
75+95	RT 36'	H. H. 4
77+17	RT 37'	H. H. 3
77+80	LT. 40'	CONTROLLER
77+82	LT. 29'	H. H. 1
77+95	RT 37'	H. H. 2
78+00	LT. 40'	SIGNAL 1
78+05	RT 37'	SIGNAL 4
78+07	LT. 46'	H. H. 7
78+07±	LT. 122'	H. H. 8
78+66	RT. 49'	H. H. 5
78+66±	RT. 122'	H. H. 6
78+72	LT. 41'	SIGNAL 2
78+78	RT. 36'	SIGNAL 3
78+82	LT. 46'	H. H. 9
79+87	LT. 40'	H. H. 10
81+02	LT. 40'	H. H. 11

LOCATIONS SHALL BE VERIFIED BY
THE TRAFFIC ENGR. PRIOR TO INSTALLATION.

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Deane L. Appleman

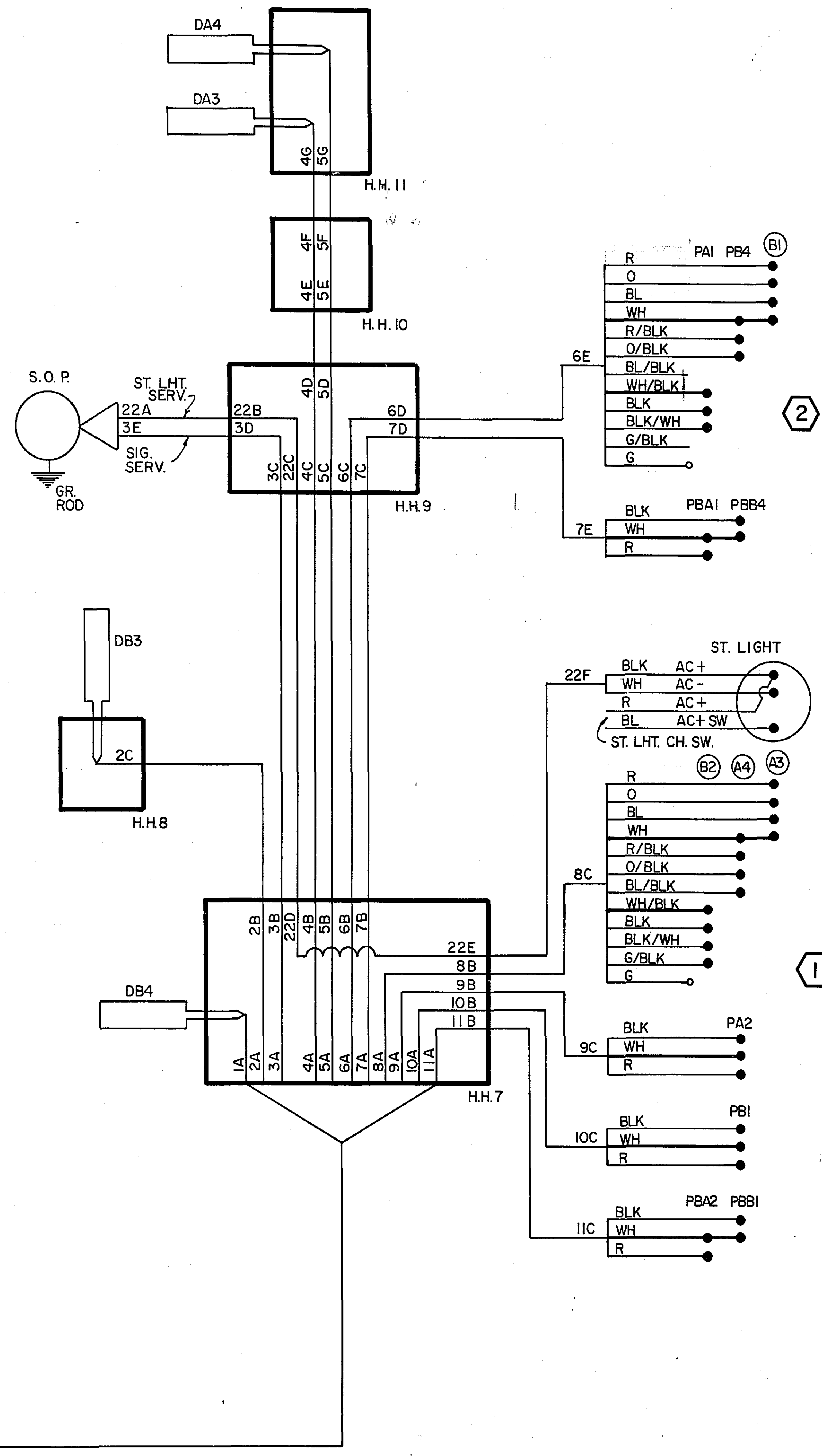
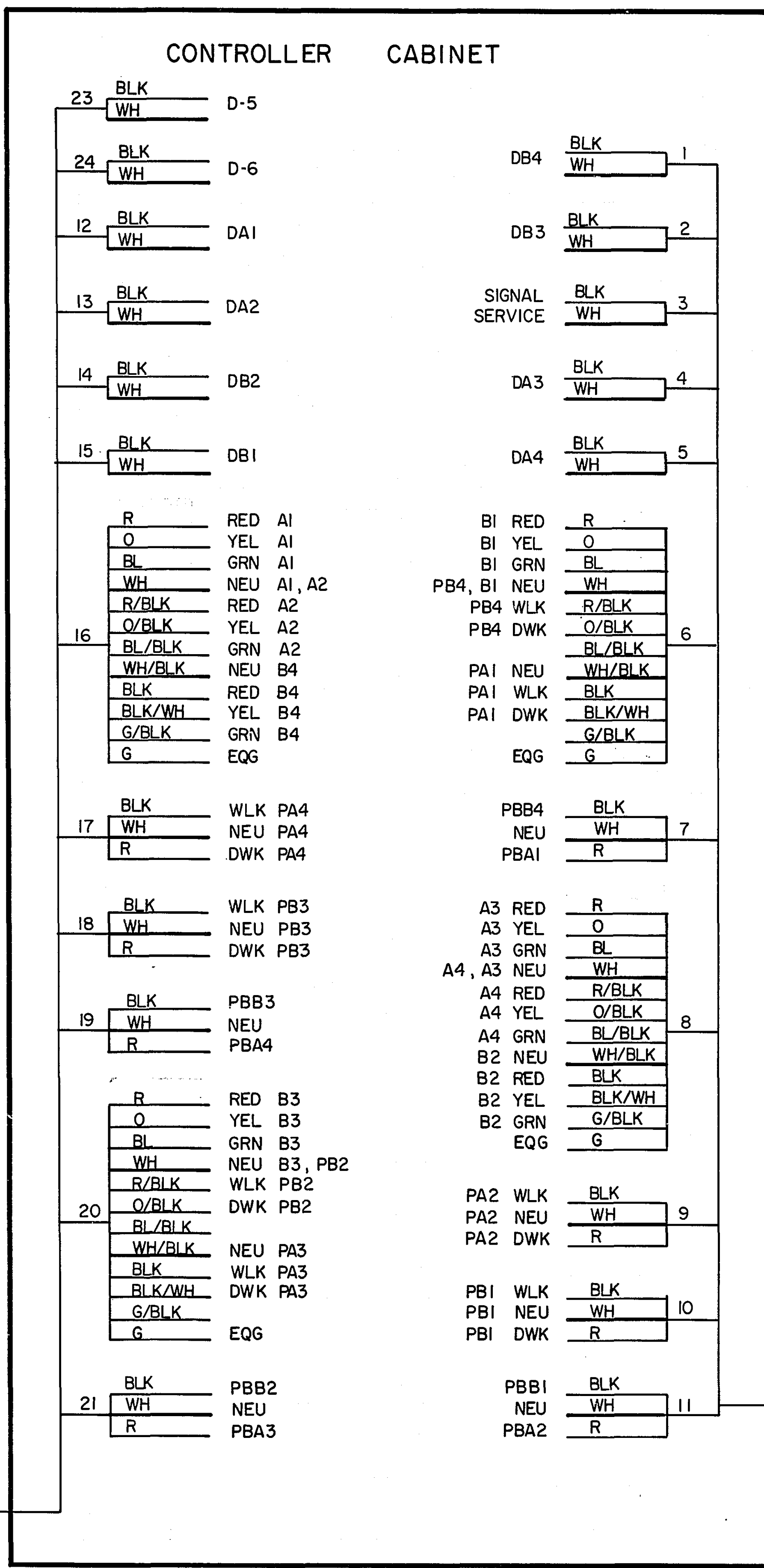
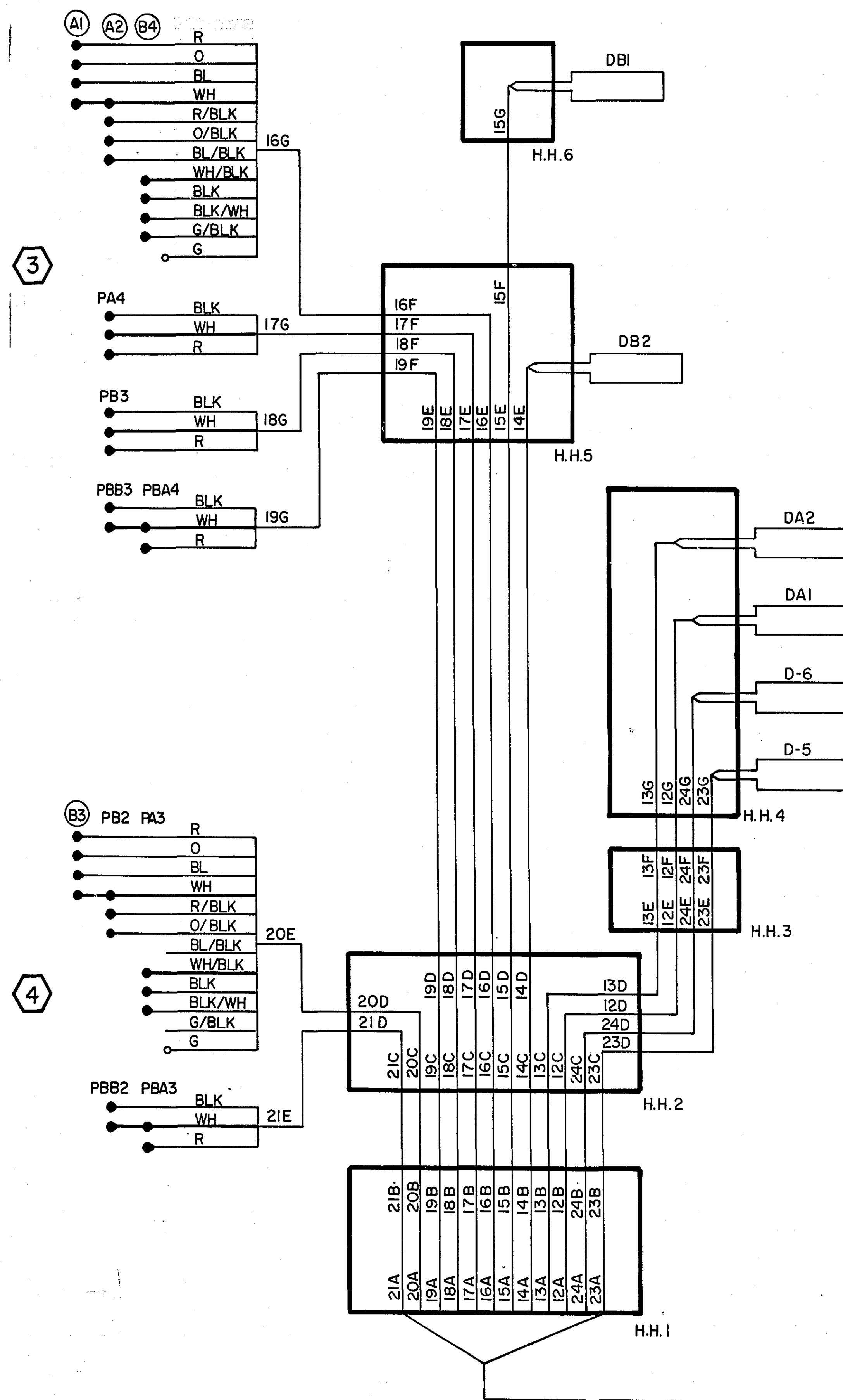
Date 12-22-76 Reg. No. 5031

INTERSECTION LAYOUT
SILVER LAKE RD. & 5th ST. N.W.

ACCOUNT NO. 50168

S.A.P. NO. 62-644-09 S.A.P. 147-103-07

SHEET NO. 3 OF 5 SHEETS



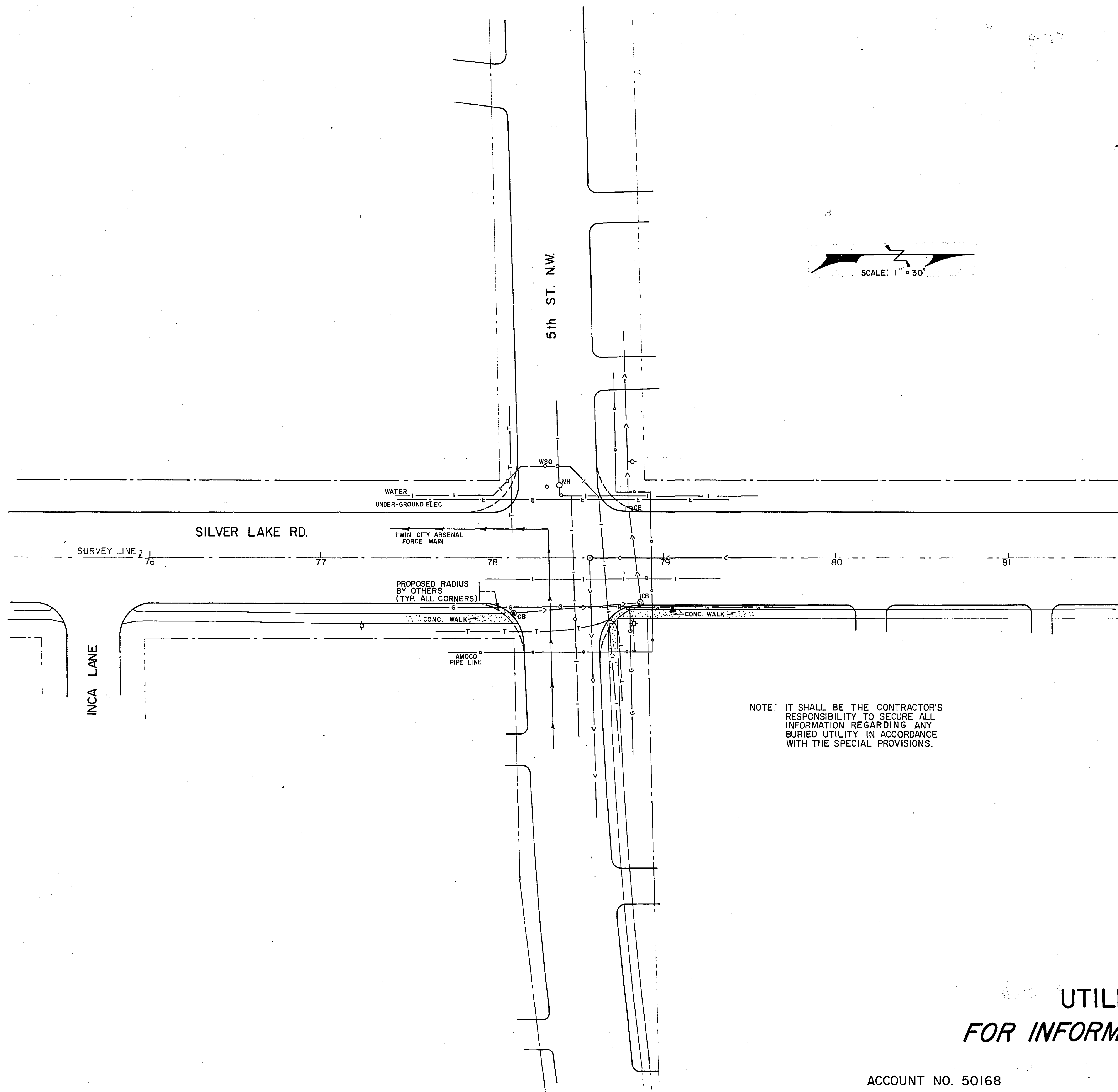
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Diane R. Amble

Date 12-22-76 Reg. No. 5031

FIELD WIRING DIAGRAM
SILVER LAKE RD & 5th ST. NW.

ACCOUNT NO. 50168



NOTE: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL INFORMATION REGARDING ANY BURIED UTILITY IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

UTILITIES FOR INFORMATION ONLY

ACCOUNT NO. 50168

S.A.P. NO. 62-644-09 S.A. P. 147-103-07 SHEET NO 5 OF 5 SHEETS

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