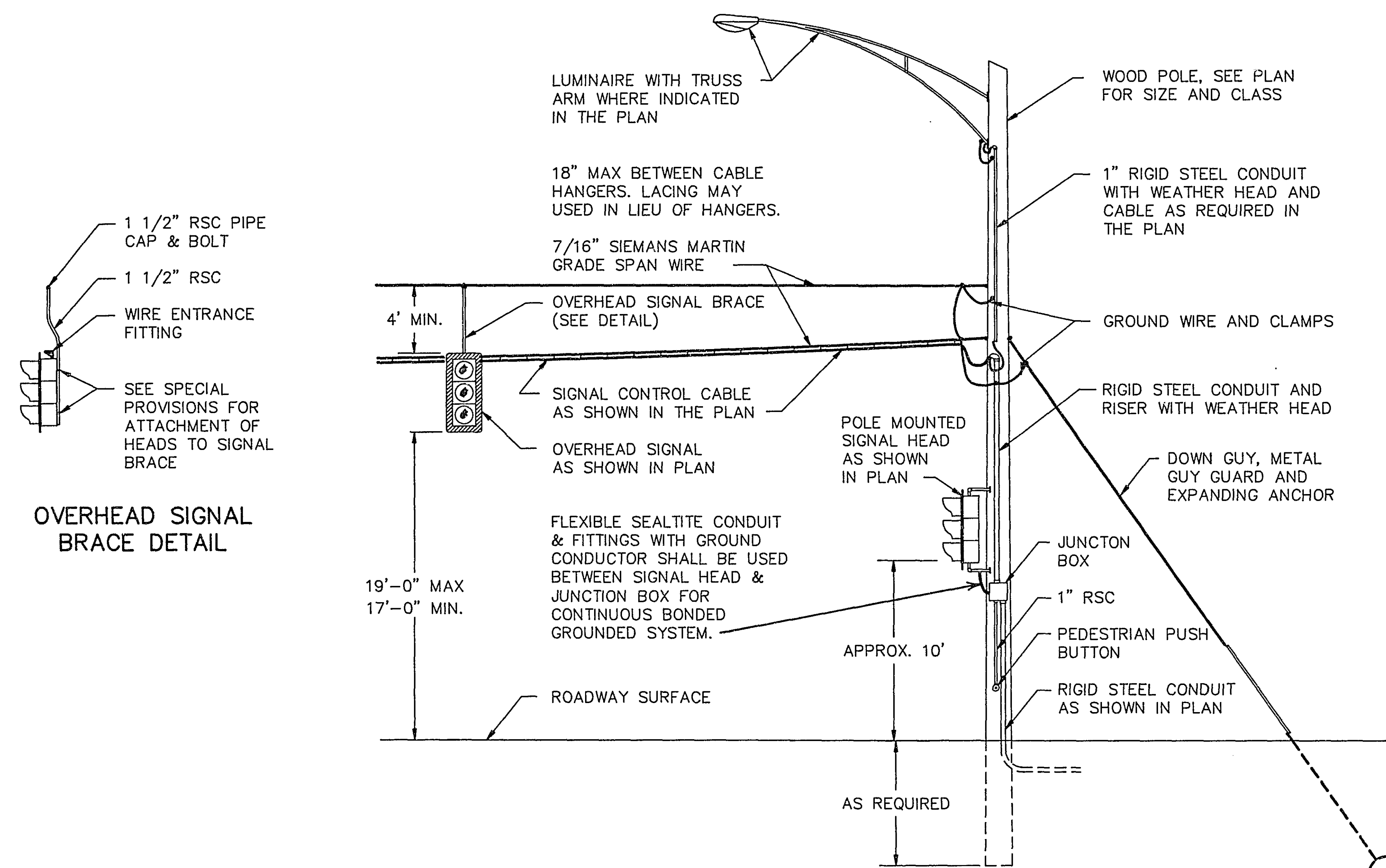




TYPICAL WOOD POLE AND SPAN WIRE
MOUNTED TRAFFIC SIGNAL DETAIL

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 1-31-94

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.
Daniel E. Soler
Date 8/4/92 Reg. No. 20452

STANDARD PLATES

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL
HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT

PLATE NO.	DESCRIPTION
* 0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 C	PEDESTRIAN CURB RAMP
7100 F	CONCRETE CURB AND GUTTERS (DESIGN B & DESIGN V)
7103 C	PRECAST CONCRETE CURB
8000 I	STANDARD BARRICADES
* 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 & POLE, TRAFFIC CONTROL SIGNALS
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 H	POLE FOUNDATION (P80 & P90)
8121 B	TRANSFORMER BASE WITH POLE BASE PLATE
8222 C	PEDESTAL AND PEDESTAL BASE
8123 B	POLE AND MAST ARM (LUMINAIRE AND TRAFFIC LIGHTS)
8124 D	MAST ARM SIGNAL HEAD MOUNTS
8126 C	P-100 POLE FOUNDATION
* 8130 D	SAW CUT LOOP DETECTORS

* STANDARD PLATES APPLICABLE TO THIS PROJECT

APPROVED *Mary L. Livingston* DATE 9/16/92
for METRO DIVISION STATE AID ENGR.
APPROVED *Mary L. Rice* DATE 9-16-92
for METRO DIVISION TRAFFIC ENGR.
APPROVED *Michael A. Schuman* DATE 9/18/92
DIRECTOR, OFFICE OF TRAFFIC ENGR.

DETAILS
T.H.49 & COUNTY RD 1 (TURTLE LK RD)
SYSTEM A

S.A.P. No. 62-601-06, S.A.2

Sheet No. 1 of 4 Sheets

23-152

23-152 T.H. 49 & County Rd 1 (Turtle Lake Rd) 1-4
SAP System A

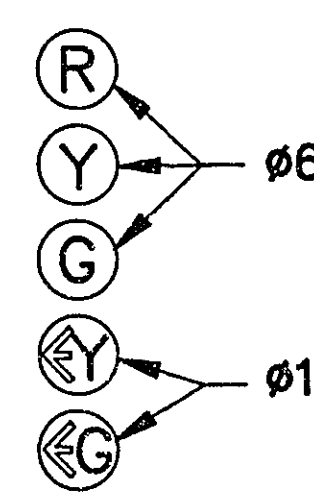
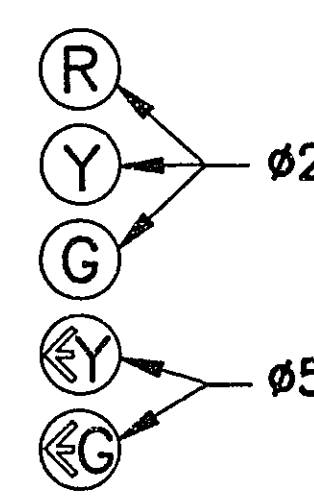


SIGNAL INDICATION CHART

FACE	PHASE	R	Y	G	Y	G
2-1	2	12"	12"	12"	Y	G
2-2	2 and 5	12"	12"	12"	12"	12"
2-3	2 and 5	12"	12"	12"	12"	12"
4-1	4	12"	12"	12"		
4-2	4	12"	12"	12"		
4-3	4	12"	12"	12"		
6-1	6	12"	12"	12"		
6-2	1 and 6	12"	12"	12"	12"	12"
6-3	1 and 6	12"	12"	12"	12"	12"
8-1	8	12"	12"	12"		
8-2	8	12"	12"	12"		
8-3	8	12"	12"	12"		

SIGNAL HEAD PHASING

HEADS 2-2 and 2-3 HEADS 6-2 and 6-3

5 turns on 02-1 + 06-1.
3 turns on all others.

VEHICLE DETECTION

NO.	SIZE	FUNCTION	LOCATION
D1-1	2'-6"X6'	C&E (TD)	5' & 35'
D1-2	2'-6"X6'	C&E	20' & 50'
D2-1	6'X6'	C&E	400'
D4-1	6'X6'	E	180'
D4-2	2'-6"X6'	C&E (TD)	0'
D5-1	2'-6"X6'	C&E (TD)	5' & 35'
D5-2	2'-6"X6'	C&E (TD)	20' & 50'
D6-1	6'X6'	C&E	400'
D8-1	6'X6'	E	180'
D8-2	6'X6'	C&E (TD)	0'

C&E = CALL & EXTEND
C = CALL ONLY
E = EXTEND ONLY
(TD) = TIME DELAYED1.25" RSC lead in
for left turn loops
to H.H. 7 and 13

④

INSTALL 45' WOOD POLE
1-DOWN GUY, GUARD AND ANCHOR
2-TYPE 10B - WOOD POLE MOUNTED
2-PEDESTRIAN PUSH BUTTONS, SIGNS
AND 1" RSC RISERS
METAL JUNCTION BOX WITH TERMINAL BLOCK
2" RSC RISER AND WEATHER HEAD ABOVE
JUNCTION BOX
1-12/C #12
2-3/C #12
2-2/C #14
1.25" RSC BELOW JUNCTION BOX
EXTENDED INTO H.H.10
2-2/C #14

SOURCE OF POWER
(INPLACE N.S.P. POLE)1-7/16" SPAN WIRES
6-12/C #12
10-3/C #12
9-2/C #14
1-3/C #12 (LUM)2-7/16" SPAN WIRES
2-12/C #12
2-3/C #12
2-2/C #142-7/16" SPAN WIRES
1-12/C #12SPAN WIRE MOUNTED SIGNS
SEE NOTE NO. 6

2-7/16" SPAN WIRES

2-7/16" SPAN WIRES
2-12/C #12
3-3/C #12
3-2/C #14

③

INSTALL 45' WOOD POLE
1-DOWN GUY, GUARD AND ANCHOR
2-TYPE 10B - WOOD POLE MOUNTED
2-PEDESTRIAN PUSH BUTTONS, SIGNS
AND 1" RSC RISERS
METAL JUNCTION BOX WITH TERMINAL BLOCK
2" RSC RISER AND WEATHER HEAD ABOVE
JUNCTION BOX
1-12/C #12
3-3/C #12
3-2/C #14
1.25" RSC BELOW JUNCTION BOX
EXTENDED INTO H.H.7
3-2/C #14

SIGNAL SYSTEM OPERATION

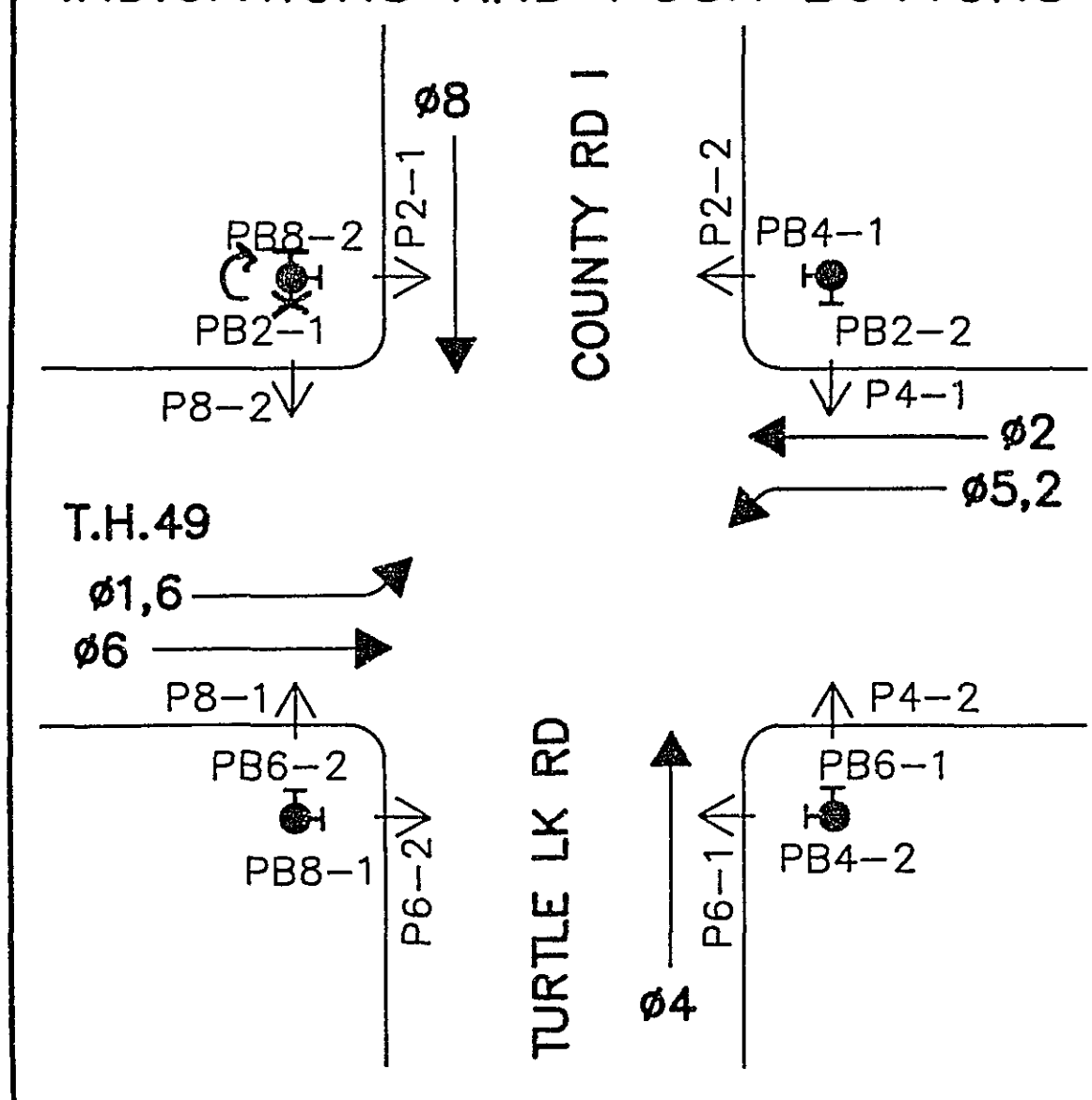
THE SIGNAL SYSTEM FLASH MODE IS ALL RED.

PHASES 1 AND 5 ARE
PROTECTED/PERMISSIVE LEFT TURNS.

PHASES 1,4,5 AND 8 ARE NON-LOCK DETECTION.

PHASES 2 AND 6 ARE LOCK DETECTION.

PHASES 2 AND 6 ARE ON VEHICLE RECALL.

CONTROLLER PHASING, PEDESTRIAN
INDICATIONS AND PUSH BUTTONS

①

INSTALL CONTROLLER CABINET
(MN/DOT FURNISHED)
(SEE NOTE NO. 2)
CABINET FOUNDATION
EXTEND INTO H.H.1
2" RSC
2-1/C #6
1-1/C #6 BR.GR.
EXTEND INTO H.H.12
2-3" RSC
6-12/C #12
10-3/C #12
7-2/C #14
EXTEND INTO H.H.2
3" RSC
1-2/C #14

①

INSTALL 45' WOOD POLE
1-DOWN GUY, GUARD AND ANCHOR
2-TYPE 10B - WOOD POLE MOUNTED
2-PEDESTRIAN PUSH BUTTONS, SIGNS
AND 1" RSC RISERS
METAL JUNCTION BOX WITH TERMINAL BLOCK
2" RSC RISER AND WEATHER HEAD ABOVE
JUNCTION BOX
1-12/C #12
3-3/C #12
2-2/C #14
1.25" RSC BELOW JUNCTION BOX
EXTENDED INTO H.H.13
2-2/C #14

⑤

INSTALL 45' WOOD POLE
2-DOWN GUYS, GUARDS AND ANCHORS
METER AND LOAD CENTER, WOOD POLE MTD
2" RSC ABOVE METER WITH WEATHER HEAD
3-1/C #2 FOR SERVICE
BELOW LOAD CENTER EXTEND
INTO H.H. 1
2-1/C #6
1-1/C #6 BR. GR.
2-3" RSC RISERS WITH WEATHER HEADS
EXTENDED INTO H.H.12
6-12/C #12
10-3/C #12
9-2/C #14
1.25" RSC RISER WITH WEATHER HEAD
ABOVE LOAD CENTER WITH
1-3/C #12 (LUM)

In H.H. 12
the lower
3" RSC goes
to the west
side.

②

INSTALL 45' WOOD POLE
1-DOWN GUY, GUARD & ANCHOR
18" MAST ARM & LUMINAIRE
LUMINAIRE - 200 WATT HPS WITH PEC
2-TYPE 10B - WOOD POLE MOUNTED
2-PEDESTRIAN PUSH BUTTONS, SIGNS
AND 1" RSC RISERS
METAL JUNCTION BOX WITH TERMINAL BLOCK
2" RSC RISER AND WEATHER HEAD ABOVE
JUNCTION BOX
1-12/C #12
2-3/C #12
2-2/C #14
2" RSC BELOW JUNCTION BOX
EXTENDED INTO H.H.5
2-2/C #14
1" RSC RISER AND WEATHER HEAD
WITH 1-3/C #12 (LUM).

ASBUILT PLAN

CONFORMING TO
CONST. RECORDS

DONE BY: JPH

DATE: 1-31-94

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.
Daniel F. Sola
Date 9/25/92 Reg. No. 20452

REVISED 9/22/92

S.A.P. No. 62-601-06, S.A.2

INTERSECTION LAYOUT
T.H. 49 & COUNTY RD 1 (TURTLE LAKE RD)
SYSTEM A

Sheet No. 2 of 4 Sheets

23-152

24X

23-152 T.H. 49 & County Rd 1 (Turtle Lake Rd) 1-4
SAP System A

DRAWING

DRAWING NUMBER
23-152

DRAWING NUMBER

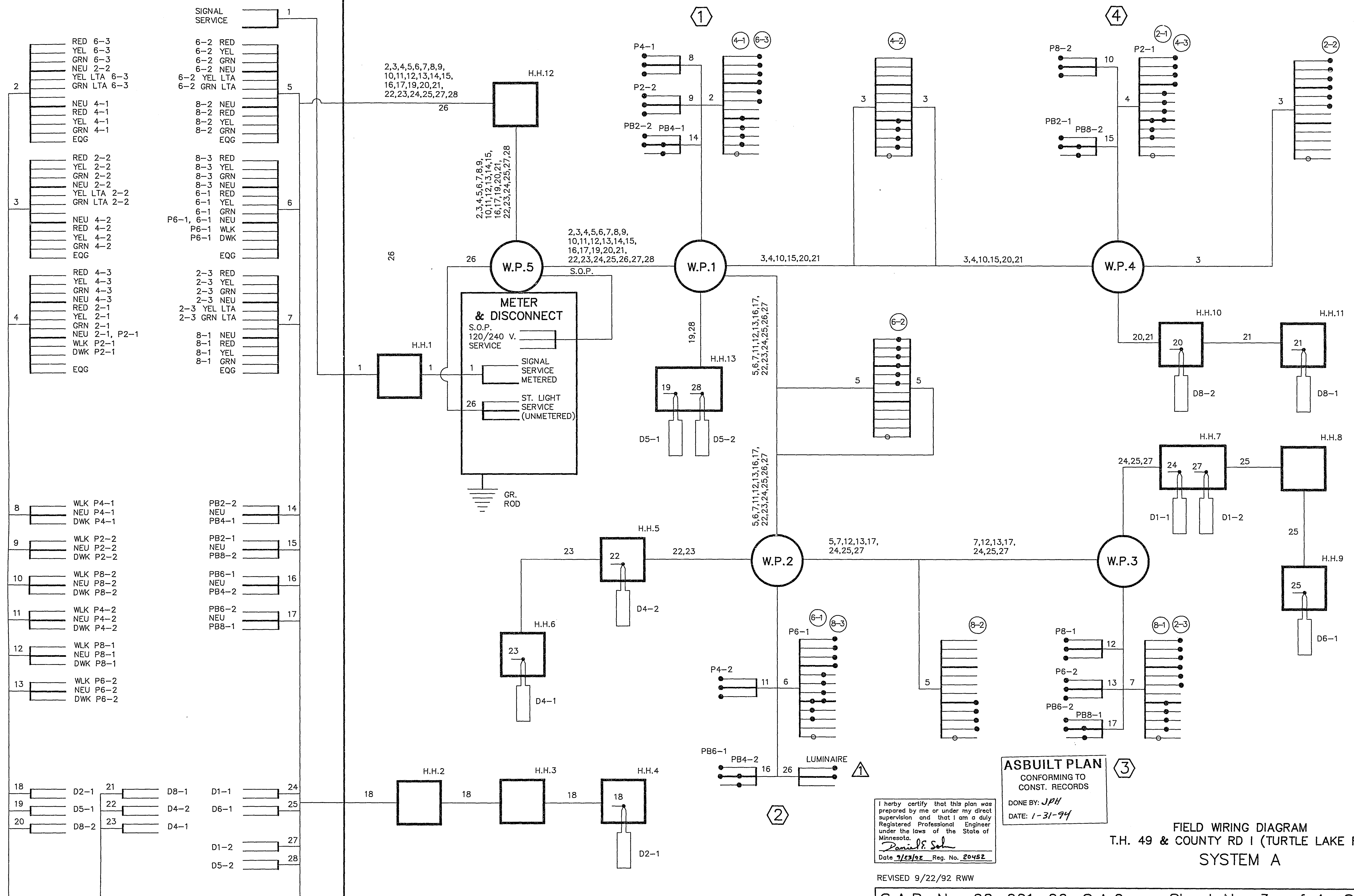
NUMBER

PLAN HOLD CORPORATION • PRINCE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
RECEIVED BY NUMBER 0248

PLAN HOLD CORPORATION • PRINCE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
RECEIVED BY NUMBER 0248

PLAN HOLD CORPORATION • PRINCE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
RECEIVED BY NUMBER 0248

CONTROLLER CABINET



23-152 T.H. 49 & County Rd I (Turtle Lake Rd) 1-4
SAP System A

2-4 X

DRAWING

DRAWING NUMBER
23-152

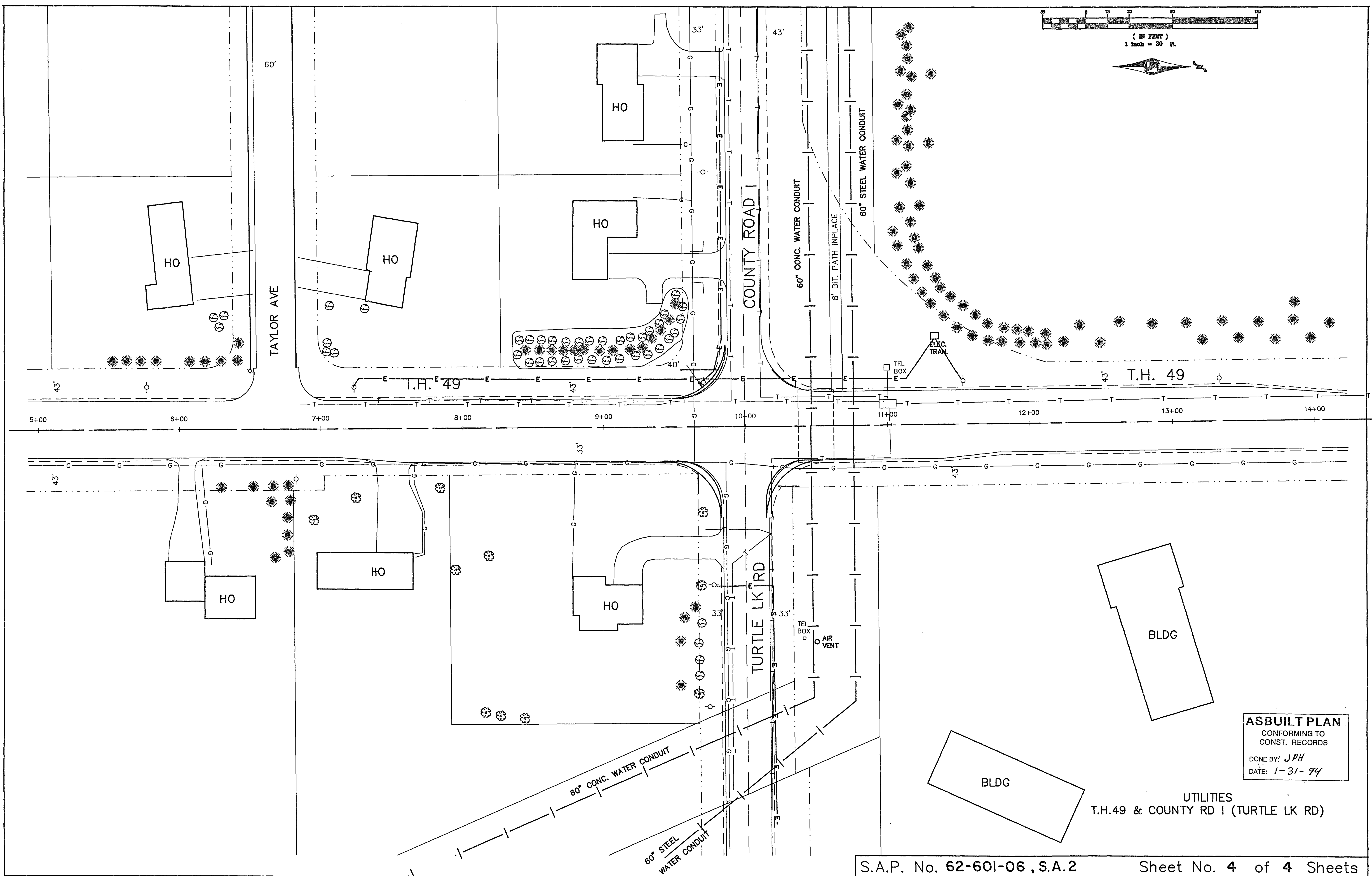
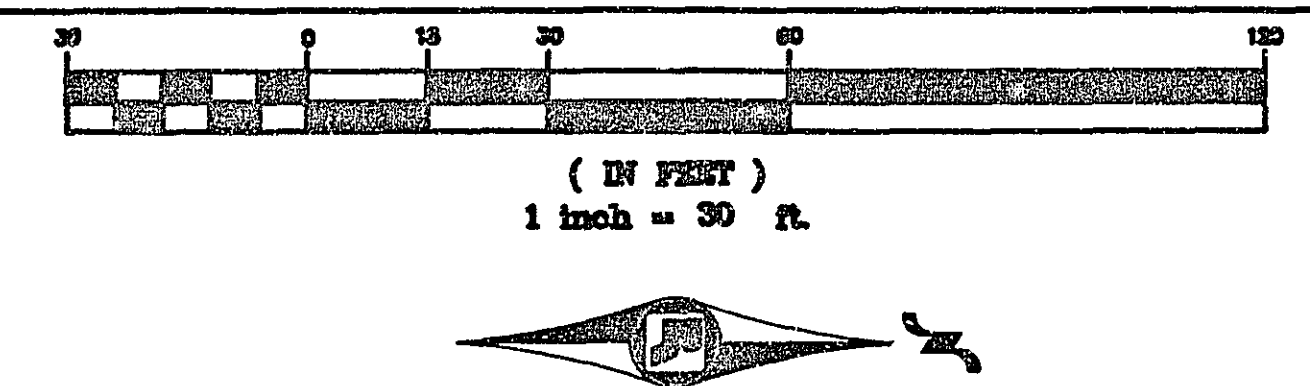
PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
RECORD BY NAME 07/54

DRAWING NUMBER

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
RECORD BY NAME 07/54

NUMBER

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
RECORD BY NAME 07/54



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 1-31-74

UTILITIES
T.H.49 & COUNTY RD I (TURTLE LK RD)

S.A.P. No. 62-601-06 ,S.A.2

Sheet No. 4 of 4 Sheets

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23-152 T.H. 49 & County Rd I (Turtle Lake Rd) 1-4
SAP System A

24X