

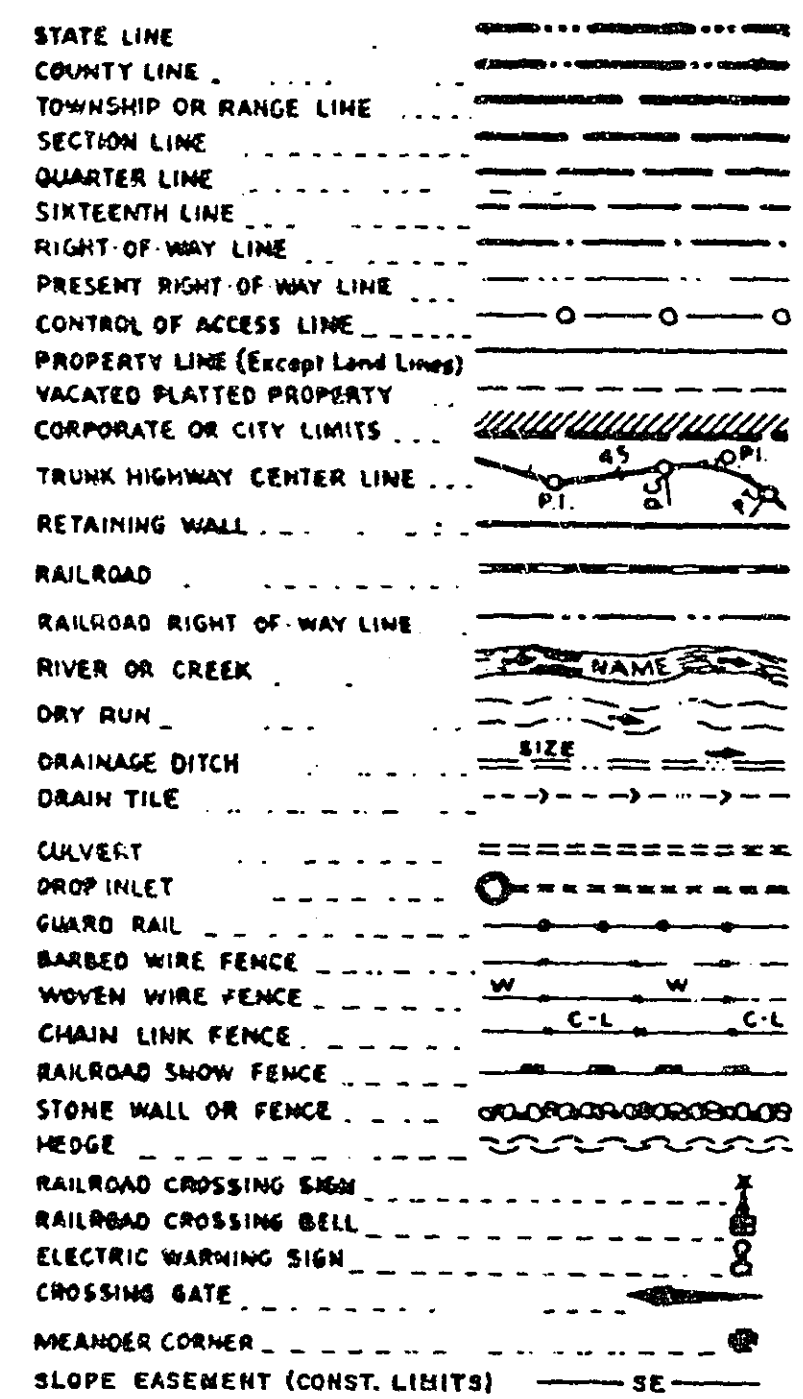
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DRAWING NUMBER
23-147

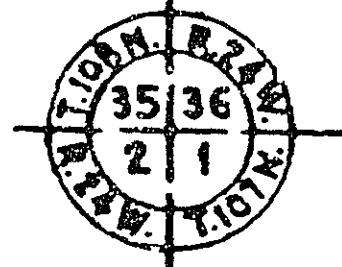
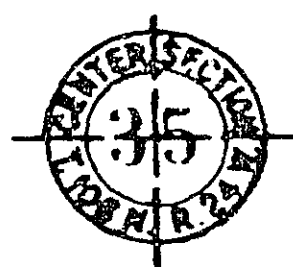
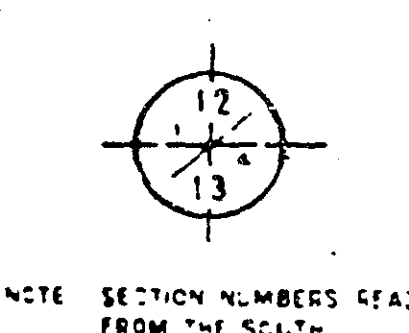
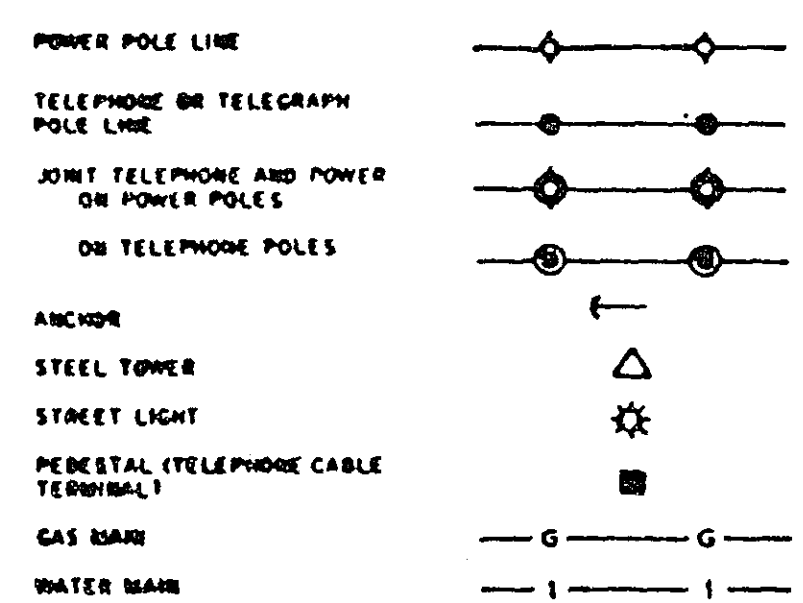
DRAWING NUMBER

NUMBER

PLANS SYMBOLS



UTILITIES SYMBOLS



NOTE: SECTION NUMBERS ARE FROM "THE S.C.D."

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

GEOMETRICS

DESIGN DESIGNATION

COUNTY ROAD E
S.A.P. 62-615-13

LEXINGTON AVE
S.A.P. 62-651-24

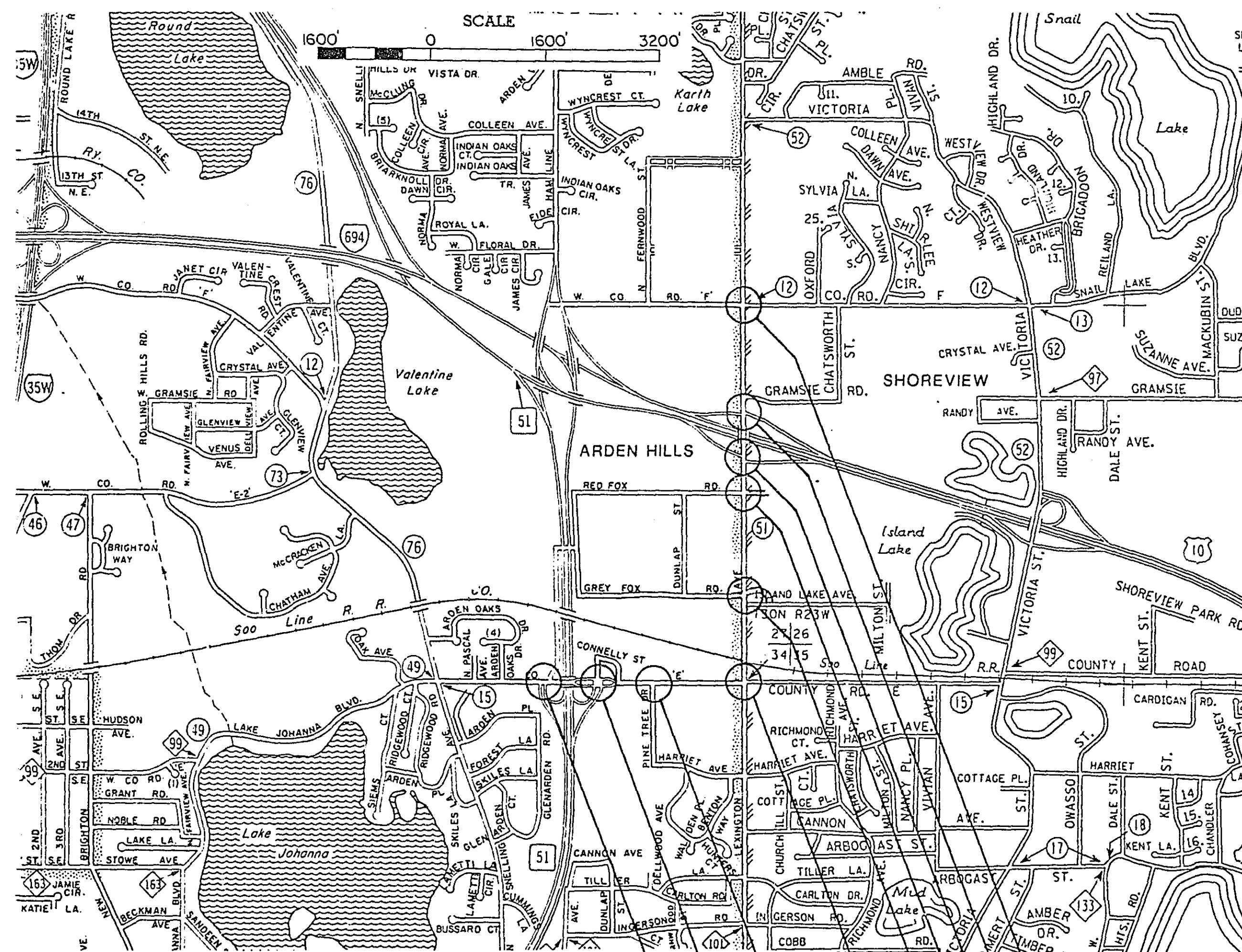
ADT CURRENT YEAR (1989)	16,700	14,800
ADT FUTURE YEAR (2009)	20,100	23,700
HEAVY COMMERCIAL ADT	3%	3%
EXISTING DESIGN STRENGTH	9 TON	9 TON
SOIL FACTOR %	100	100
DESIGN SPEED - MPH	40	55
POSTED SPEED - MPH	35	45
URBAN CLASSIFICATION	ARTERIAL - HIGH DENSITY	ARTERIAL - HIGH DENSITY
NO. OF TRAVEL LANES	4	4
NO. OF PARKING LANES	0	0

STOPPING SIGHT DISTANCE BASED ON:
3.5' HEIGHT OF EYE
0.5' HEIGHT OF OBJECT

GEOMETRICS

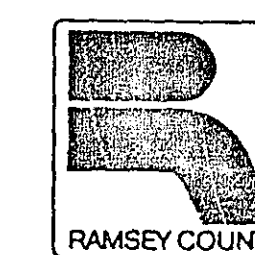
COUNTY ROAD E S.A.P. 62-615-13				LEXINGTON AVE S.A.P. 62-651-24			
REF-POINT	FROM:	LOC	(FEET)	LOC	(FEET)	(MILES)	
REF-POINT	CROSS ST: * PINE TREE DR	33+90	033+00.840	GREY FOX RD	227+42	004+00.320	
REF-POINT	TO:	35+15	003+00.864		229+53	004+00.360	
GROSS LENGTH			270			373	0.071
BRIDGE LENGTH			-0-		-0-	-0-	-0-
EXCEPTION			-0-		-0-	-0-	-0-
NET LENGTH			270			373	0.071

COMBINED LENGTH OF STATE AID PROJECTS: 1,240 FEET; 0.235 MILES



S.A.P. 187-020-05	SYSTEM A
S.A.P. 187-020-05	SYSTEM B
S.A.P. 187-104-02 & 187-020-05	SYSTEM C
S.A.P. 187-020-05	SYSTEM D
S.A.P. 187-105-03 & 187-020-05	SYSTEM E
S.A.P. 187-105-04 & 187-020-05	SYSTEM F
S.A.P. 187-020-05	SYSTEM G
S.A.P. 187-020-05	SYSTEM H
S.A.P. 187-101-03 & 187-020-05	SYSTEM I

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92



RAMSEY COUNTY

DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PLAN FOR TRAFFIC CONTROL SIGNAL SYSTEMS AND CONCRETE MEDIANS

S.A.P. No. 62-615-13

COUNTY RD E & T.H.51 W.RAMP	SYSTEM A
COUNTY RD E & T.H.51 E.RAMP (CONNELLY ST.)	SYSTEM B
COUNTY RD E & PINE TREE DR	SYSTEM C

S.A.P. No. 62-651-24

LEXINGTON AVE & COUNTY RD E	SYSTEM D
LEXINGTON AVE & GREY FOX RD	SYSTEM E
LEXINGTON AVE & RED FOX RD	SYSTEM F
LEXINGTON AVE & 1694 S.RAMP	SYSTEM G
LEXINGTON AVE & 1694 N.RAMP	SYSTEM H
LEXINGTON AVE & COUNTY RD F	SYSTEM I

INDEX

SHEET NO	DESCRIPTION
1	TITLE
2-4	ESTIMATED QUANTITIES & DETAILS
5-6	SYSTEM A
7-8	SYSTEM B
9-11	SYSTEM C
12-17	SYSTEM D
18	INTERCONNECT - SYS D to E
19-21	SYSTEM E
22	INTERCONNECT - SYS E to F
23-25	SYSTEM F
26-27	SYSTEM G
28-29	SYSTEM H
30	INTERCONNECT - SYS H to I
31-34	SYSTEM I
35-38	COUNTY RD E - UTILITIES & CONSTRUCTION
39-44	LEXINGTON AVE - UTILITIES & CONSTRUCTION

DESIGN SQUAD: *Revised* DATE: 6/20/89
DRAWN BY: _____ DATE: _____
CHECKED BY: _____ 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: 8/27/89 REG. NO. 12703 ENGR. *Paul K. Kuhl*

RAMSEY COUNTY

RECOMMENDED FOR APPROVAL: <i>DES</i> DATE: 6/27/89	RECOMMENDED FOR APPROVAL: <i>Kenneth Swartz</i> DATE: 8-24-89
RECOMMENDED FOR APPROVAL: <i>KHR</i> DATE: 6/27/89	APPROVED: <i>H.A. Ingard</i> DATE: 1/6/90
RECOMMENDED FOR APPROVAL: <i>DES</i> DATE: 7/20/89	APPROVED: <i>Gary R. Berger</i> DATE: 9/15/89
RECOMMENDED FOR APPROVAL: <i>RNP</i> DATE: 8/27/89	APPROVED: <i>R. Charles All</i> DATE: 9/15/89
RECOMMENDED FOR APPROVAL: <i>DES</i> DATE: 7/20/89	MINNESOTA DEPARTMENT OF TRANSPORTATION
RECOMMENDED FOR APPROVAL: <i>DES</i> DATE: 8-24-89	RECOMMENDED FOR APPROVAL: <i>John Skallman</i> DATE: 1/4/90
RECOMM'D: <i>Wendy</i> DATE: 8-25-89	RECOMMENDED FOR APPROVAL: <i>John Skallman</i> DATE: 12/6/89
RECOMM'D: <i>Paul K. Kuhl</i> DATE: 8/27/89	RECOMMENDED FOR APPROVAL: <i>Remond E. Eiler</i> DATE: 1-3-90

DATE	SHEET NO.	BY
7/15/89	STAFF REVIEW & CITY APPROVAL	<i>RKH</i>
9/26/89	ADD S.A.P. #'s	<i>RKH</i>
10/20/89	PER TRAFFIC REVIEW	<i>RKH</i>

APPROVED: *John M. Gray* DATE: 1/5/90
STATE AID ENGINEER

S.A.P. No. 62-615-13 S.A.P. No. 187-101-03, 187-104-02, 187-105-03, 187-105-04
S.A.P. No. 62-651-24 S.A.P. No. 187-020-05

Sheet No. 1 of 44 Sheets

23-147

24X

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 W. 1st & East Ramp
Lexington Ave to Rd E also Grey Fox Rd & 1694 South & North Ramps & County Rd F

ABBREVIATIONS

YEL	- YELLOW
GRN	- GREEN
WLK	- WALK
NEU	- NEUTRAL
DNK	- DON'T WALK
LUM	- LUMINAIRE
DNL	- DOWNLIGHT
SW	- SWITCH
SWD	- SWITCHED
CH.SW.	- CHECK SWITCH
H.H.	- HANDHOLE
J.B.	- JUNCTION BOX
GR.R.	- GROUND ROD
SERV.	- SERVICE
THA	- THRU ARROW
LTA	- LEFT TURN ARROW
RTA	- RIGHT TURN ARROW
TRA	- THRU AND RIGHT ARROW
RTA (EG)	- THRU ARROW - RED
GLTA (EG)	- LEFT TURN ARROW - GREEN
YRTA (EG)	- RIGHT TURN ARROW - YELLOW
PI-1 (EG)	- PEDESTRIAN INDICATIONS - PHASE "1"
PB2-2 (EG)	- PUSH BUTTON - PHASE "2"
3-2 (EG)	- SIGNAL HEADS - PHASE "3"
DI-2	- DETECTOR - PHASE "1"
P.E.C.	- PHOTOELECTRIC CELL
ST.LHT.	- STREET LIGHT
S.O.P.	- SOURCE OF POWER
EGG	- EQUIPMENT GROUND
SPR	- SPARE CONDUCTORS
R.S.C.	- RIGID STEEL CONDUIT
N.M.C.	- NON METALLIC CONDUIT
E.V.P.	- EMERGENCY VEHICLE PRE-EMPTION
EGG	- EGG CONNECTION
TOW	- TELEPHONE DROP WIRE
F&I	- FURNISH AND INSTALL
R&S	- REMOVE AND SALVAGE
FL	- FLASH/FLASHING
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
CLR.	- CLEAR
BR.GR.	- BARE GROUND

H.P.S.	- HIGH PRESSURE SODIUM
EVP	- EVP DETECTOR DIRECTION
SIGNAL BASE NO.	- SIGNAL BASE NO.
SIGNAL FACE NO.	- SIGNAL FACE NO.
LUMINAIRE NO.	- LUMINAIRE NO.

STATEMENT OF ESTIMATED QUANTITIES

(SIGNALS)

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	PARTICIPATION (%)											SHORE- VIEW	MN/DOT
				(COUNTY STATE AID HWY)		ARDEN HILLS (MUN. STATE AID HWY & LOCAL)										
				62-615-13	62-651-24	187-101-03	187-104-02	187-105-03	187-020-05	187-105-04	LOCAL					
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM C	SIG SYS	1	66.67	0	0	33.33	0	0	0	0	0	0	0	0	
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM E	SIG SYS	1	0	50	0	0	25	0	0	0	0	25	0	0	
2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM F	SIG SYS	1	0	50	0	0	0	0	25	0	0	25	0	0	
0565.601	TRAFFIC CONTROL INTERCONNECT	L. SUM	1	} 17.645	44.115	0	5.88	0	0	8.83	0		5.88	17.65		
0565.602	HANDHOLE TYPE C (INTERCONNECT)	EACH	11													
0565.603	2" NON-METALLIC CONDUIT (INTERCONNECT)	L.F.	3540													
0565.603	12 PAIR #19 (INTERCONNECT)	L.F.	6070													
0565.604	REVISE SIGNAL SYSTEM A	SYSTEM	1	66.67	0	0	0	0	0	0	0	0	0	33.33		
0565.604	REVISE SIGNAL SYSTEM B	SYSTEM	1	50	0	0	0	0	0	0	25	0	0	25		
0565.604	REVISE SIGNAL SYSTEM D	SYSTEM	1	0	100	0	0	0	0	0	0	0	0	0		
0565.604	REVISE SIGNAL SYSTEM G	SYSTEM	1	0	50	0	0	0	0	0	0	0	0	50		
0565.604	REVISE SIGNAL SYSTEM H	SYSTEM	1	0	50	0	0	0	0	0	0	0	0	50		
0565.604	REVISE SIGNAL SYSTEM I	SYSTEM	1	0	75	25	0	0	0	0	0	0	0	0		
0565.601	PAINT SIGNAL SYSTEM A	L. SUM	1	0	0	0	0	0	0	0	100	0	0	0		
0565.601	PAINT SIGNAL SYSTEM B	L. SUM	1	0	0	0	0	0	0	0	100	0	0	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM A	L. SUM	1	0	0	0	0	0	100	0	0	0	0	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM B	L. SUM	1	0	0	0	0	0	100	0	0	0	0	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM C	L. SUM	1	0	0	0	0	0	100	0	0	0	0	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM D	L. SUM	1	0	0	0	0	0	50	0	0	0	50	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM E	L. SUM	1	0	0	0	0	0	50	0	0	0	50	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM F	L. SUM	1	0	0	0	0	0	50	0	0	0	50	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM G	L. SUM	1	0	0	0	0	0	50	0	0	0	50	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM H	L. SUM	1	0	0	0	0	0	50	0	0	0	50	0		
0565.601	EMERGENCY VEHICLE PRE-EMPTION SYSTEM I	L. SUM	1	0	0	25	0	0	25	0	0	0	50	0		

STATEMENT OF ESTIMATED QUANTITIES

(GEOMETRICS)

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	PARTICIPATION	
				(COUNTY STATE AID HWY)	
				62-615-13	62-651-24
2104.501	REMOVE CONCRETE CURB AND GUTTER	L.F.	460	155	305
2104.503	REMOVE CONCRETE WALK	S.F.	1570	30	1540
2104.511	SAWING BITUMINOUS PAVEMENT	L.F.	105	90	15
2104.523	SALVAGE ELECTRIC SIGN	EACH	1	1	0
2105.525	TOPSOIL BORROW (L.V.)	C.Y.	10	10	0
2211.501	AGGREGATE BASE, CLASS 6A	TON	28	28	0
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	6.5	1.1	5.4
2331.508	WEARING COURSE MIXTURE	TON	10	10	0
2331.510	BINDER COURSE MIXTURE	TON	32	10	22
2331.514	BASE COURSE MIXTURE	TON	82	0	82
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	50	5	45
2361.504	ASPHALT CEMENT	TON	1	0	1
2361.508	WEARING COURSE MIXTURE	TON	15	0	15
2521.501	4" CONCRETE WALK (1)	S.F.	4020	1475	2545
2531.501	CONCRETE CURB AND GUTTER, DESIGN B624	L.F.	150	135	15
2531.502	CONCRETE CURB, DESIGN PRECAST 4" (2)	L.F.	1680	365	1315
2575.505	SODDING TYPE LAWN	S.Y.	65	65	0
0412.602	INSTALL ELECTRIC SIGN	EACH	1	1	0

NOTES:

(1) EXTRA THICKNESS OF CONCRETE WALK WILL BE CONSIDERED INCIDENTAL WORK. NO ADDITIONAL COMPENSATION WILL BE MADE THEREFOR.

(2) PAYMENT TO BE MADE ON THE BASIS OF LINEAR FOOT INSTALLED WITHOUT DISTINCTION OF TYPES OR LENGTHS OF PRECAST CURB SECTIONS.

COMMON EXCAVATION AND REMOVAL OF BITUMINOUS SURFACE TO CONSTRUCT MEDIANS AND ENTRANCES INCLUDING CURBS, WALKS AND BITUMINOUS SURFACE WILL BE CONSIDERED INCIDENTAL WORK AND NO DIRECT COMPENSATION WILL BE MADE THEREFORE.

DISPOSAL OF EXCESS MATERIALS AND DEBRIS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF MN/DOT 2104.3C AND SHALL BE CONSIDERED INCIDENTAL WORK AND NO DIRECT COMPENSATION WILL BE MADE THEREFORE.

AREA PROPERTY OWNERS, OWN AND MAINTAIN UNDERGROUND SPRINKLER SYSTEMS ADJACENT TO EXISTING ROADWAYS AND ENTRANCES. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE DAMAGE THERETO AND SHALL INFORM PROPERTY OWNERS WHEN HIS OPERATIONS WILL AFFECT THEIR SPRINKLER SYSTEMS.

INPLACE ORNAMENTAL STREET LIGHTING WITH BURIED CONDUIT AND CABLE ON COUNTY ROAD E BETWEEN T.H.51 AND LEXINGTON AVENUE SHALL BE PROTECTED OR MODIFIED AS SHOWN IN THE PLANS. SEE SPECIAL PROVISIONS.

ASBUILT PLAN

CONFORMING TO
CONST. RECORDS

DONE BY: JPH

DATE: 2-11-92

ESTIMATED QUANTITIES
& DETAILS

S.A.P. No. 187-020-05
S.A.P. No. 187-101-03, 187-104-02, 187-105-03, 187-105-04
S.A.P. No. 62-615-13

S.A.P. No. 62-651-24

Sheet No. 2 of 44 Sheets

23-147

23-147 County Rd C Pine Tree Drive
County Rd E to T.H. 51 West of East Range
Lexington Ave to Rd E also Hwy 104 Rd F
North Range & County Rd F

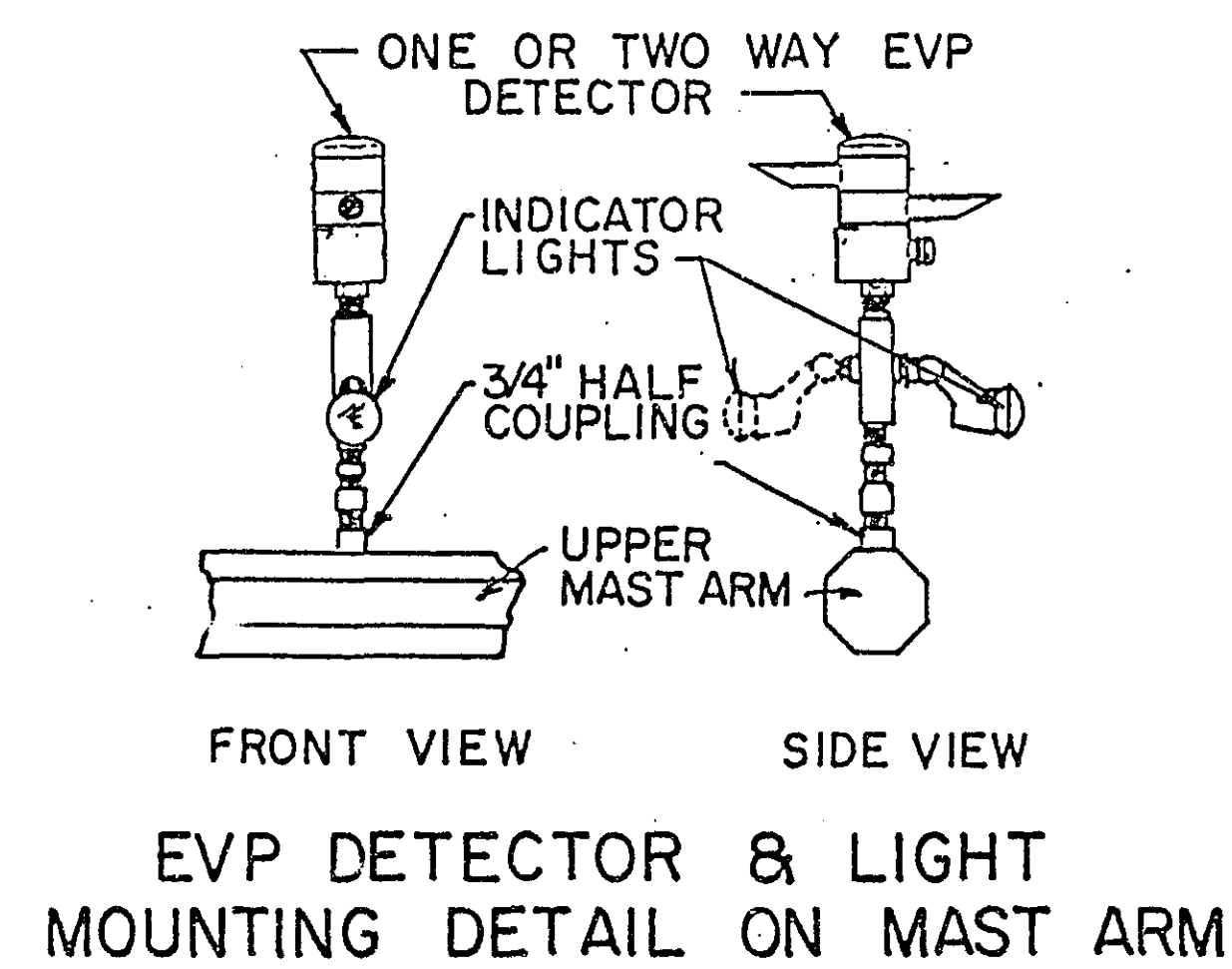
24X

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

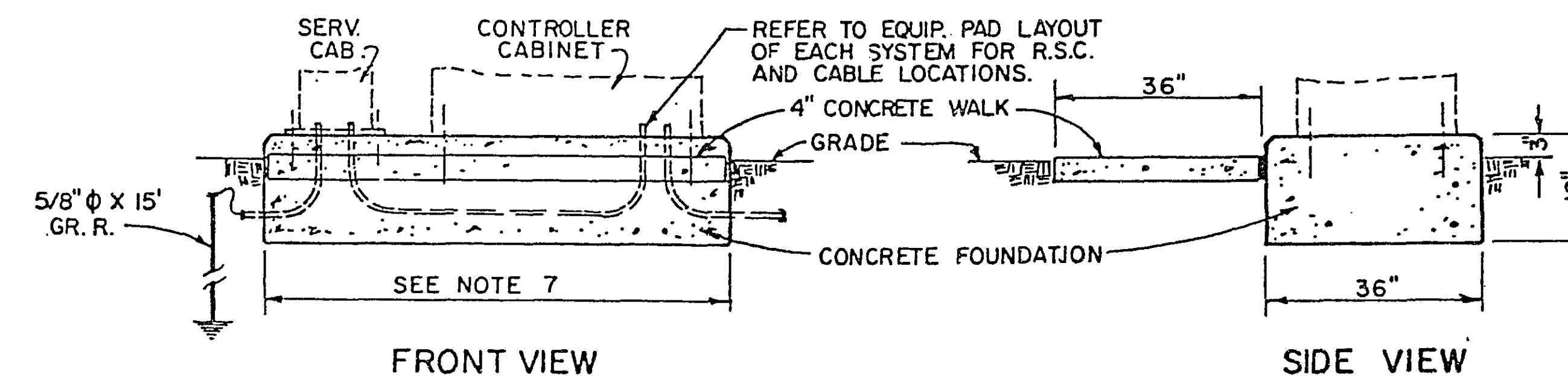
* STANDARD PLATES APPLICABLE TO THIS PROJECT.



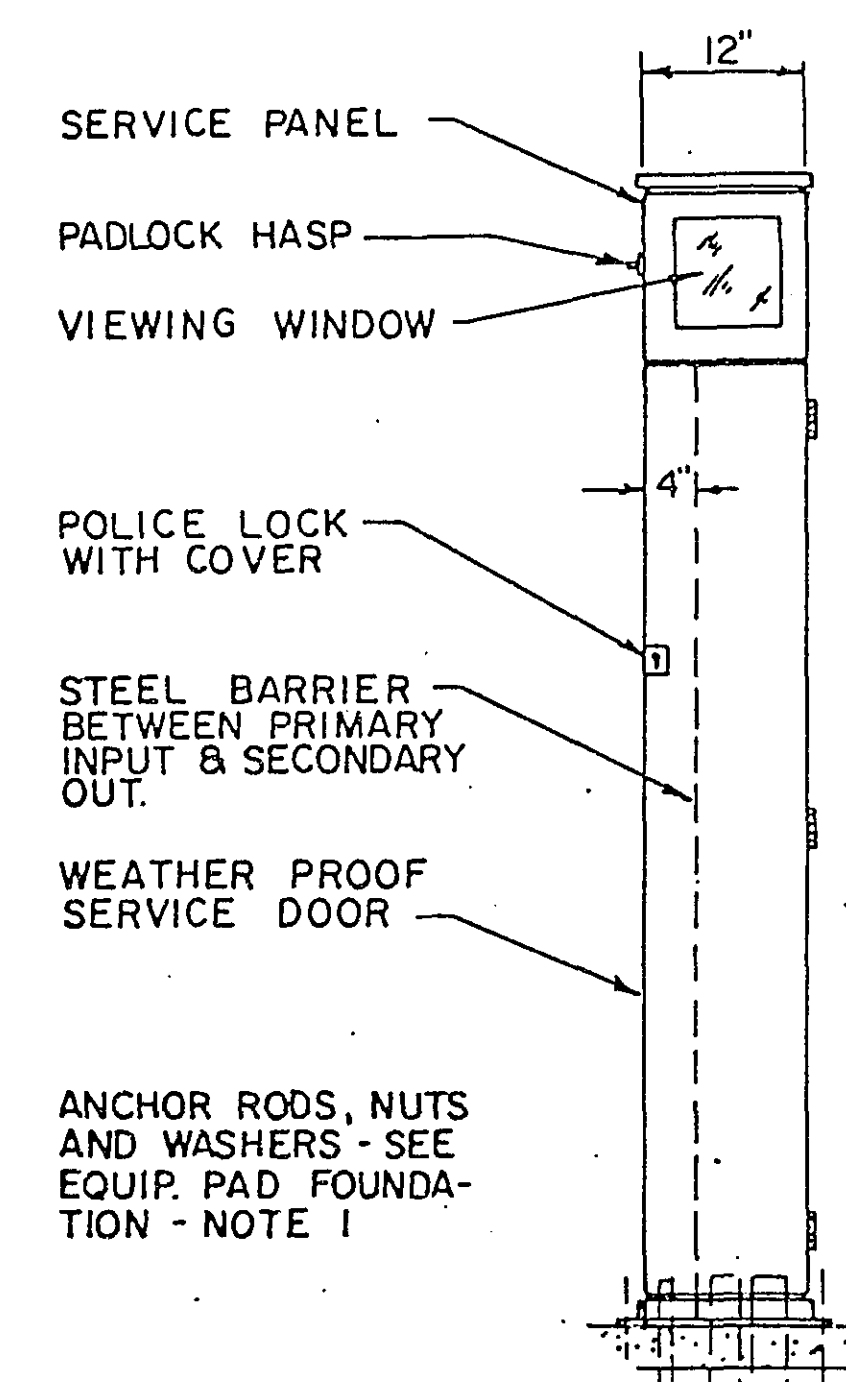
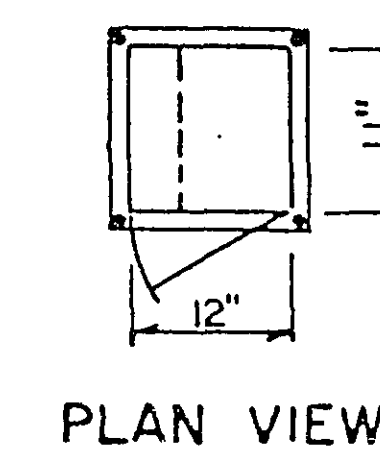
EQUIPMENT PAD FOUNDATION

NOTES:

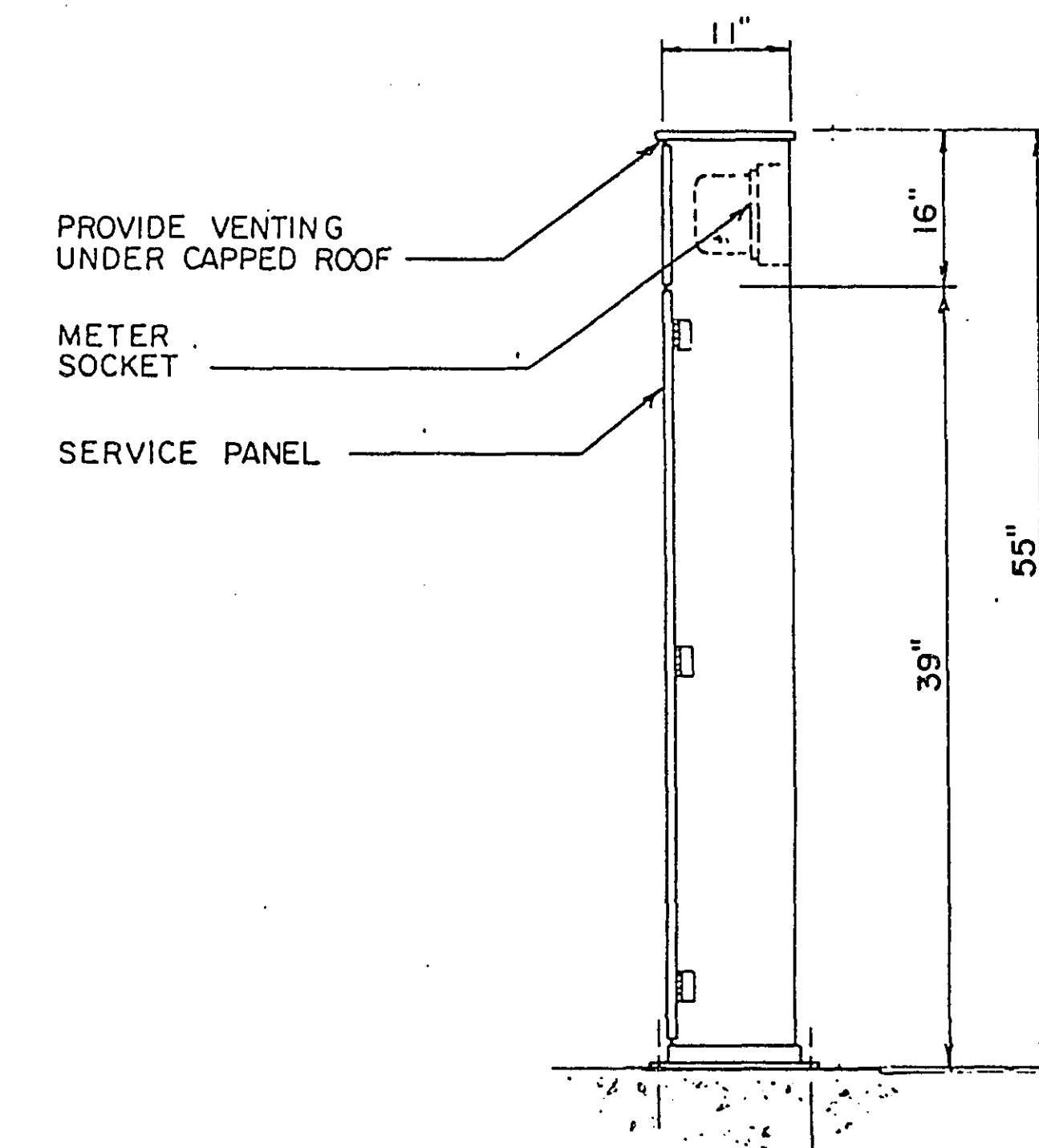
- ANCHOR RODS, NUTS AND WASHERS PER MN/DOT 3385 OR APPROVED EQUAL SET AS RECOMMENDED BY CABINET MANUFACTURER (NUMBER, SIZE AND LENGTH OF ANCHOR RODS) SHALL BE AS REQUIRED BY THE CABINET (MANUFACTURER).
- UPPER PART OF FOUNDATION SHALL BE BEVELED OR CHAMFERED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER IN THE FIELD.
- 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 OR SUPPORTING MEMBERS.
- CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR FOUNDATION AND CONCRETE WALK.
- CONDUITS WHICH HAVE BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
- EXACT LOCATIONS OF CONDUIT WITHIN THE PAD SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.
- REFER TO EQUIPMENT PAD LAYOUT OF EACH SYSTEM FOR FOUNDATION SIZE, CONDUIT PLACEMENT AND EQUIPMENT TO BE INSTALLED.



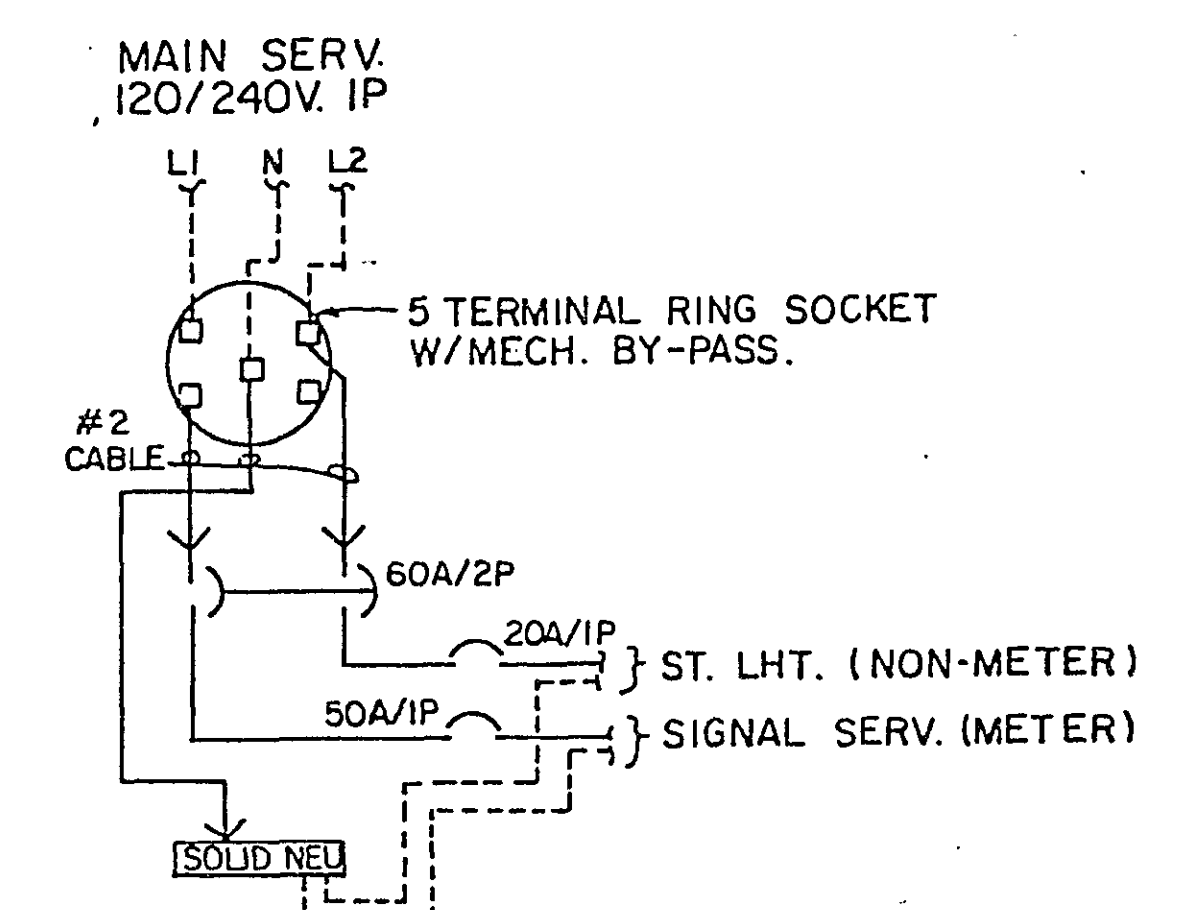
SERVICE CABINET DETAILS



FRONT VIEW



SIDE VIEW



SERVICE CABINET WIRING DIAGRAM

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: JPH
DATE: 2-11-92

DETAILS

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 8/27/87 Reg. No. 12703

S.A.P. No. 187-020-05
S.A.P. No. 187-104-02, 187-105-03, 187-105-04
S.A.P. No. 62-615-13

S.A.P. No. 62-651-24

Sheet No. 3 of 44 Sheets

23-147

24X

23-147
County Rd E Pine Tree Drive
County Rd E to T.H. 51 w/exit of East Ramp
from 1st Ave to Rd E also there for Rd E
I 694 South of North Ramp of County Rd F

DRAWING

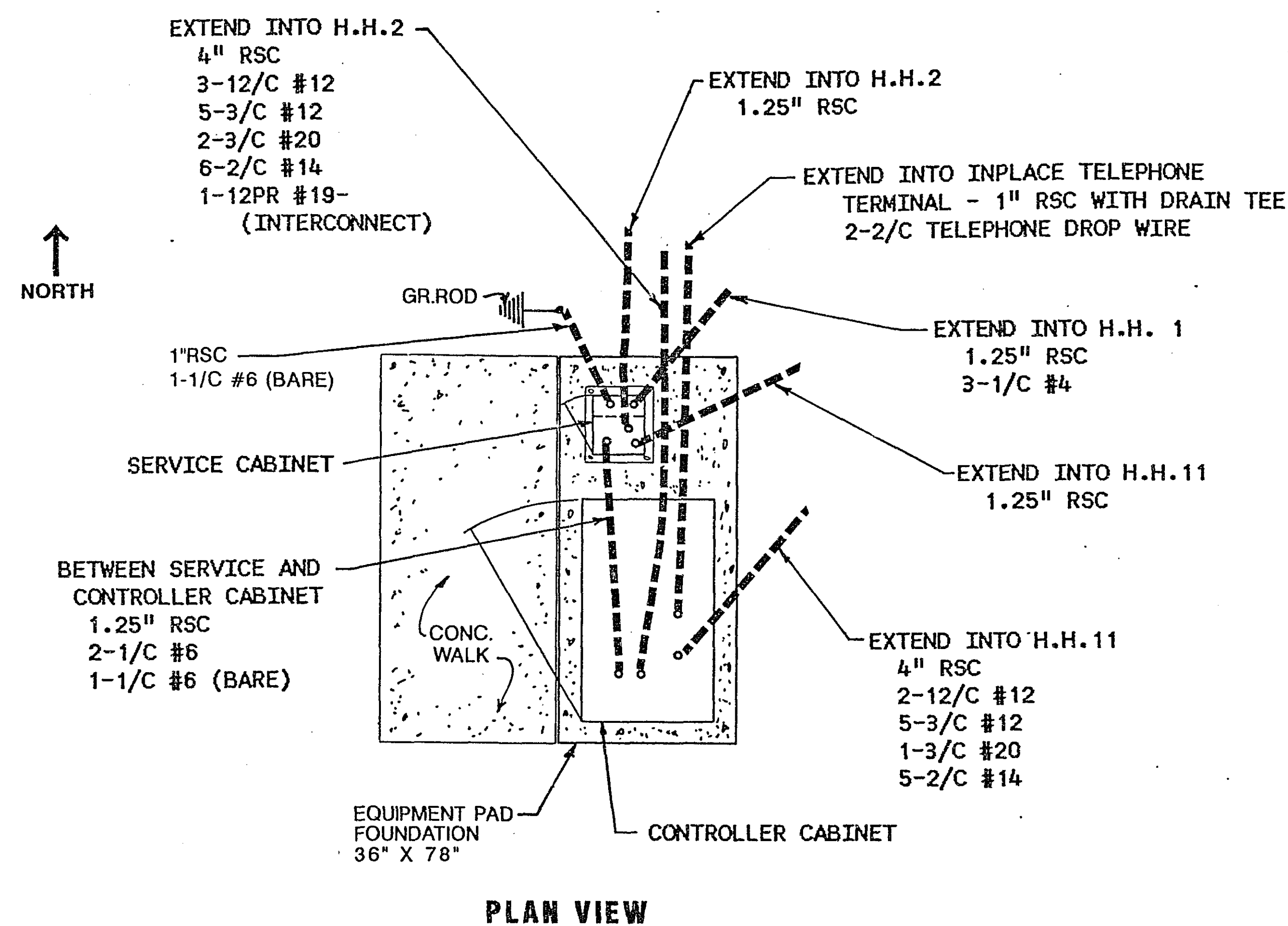
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23-147

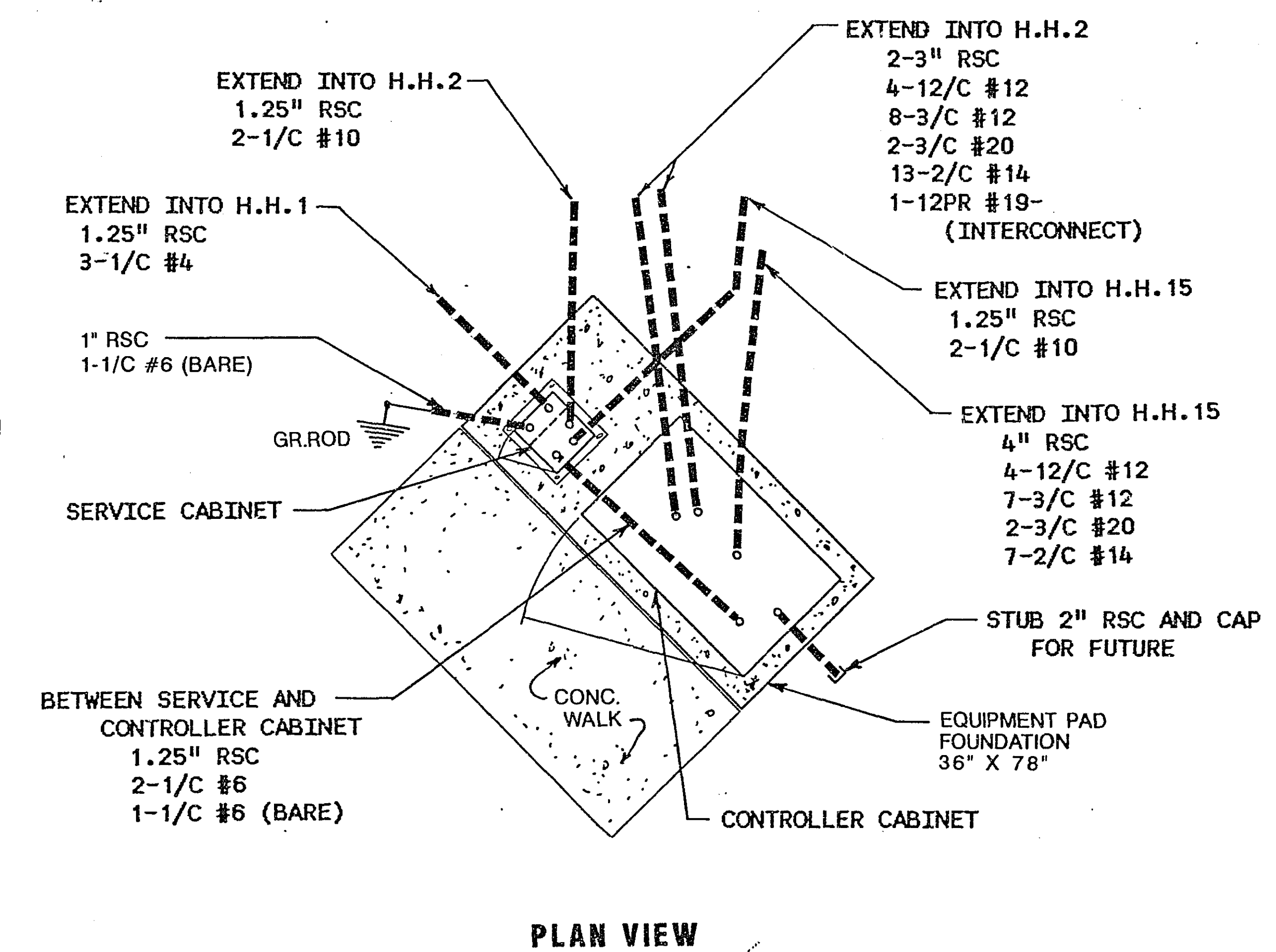
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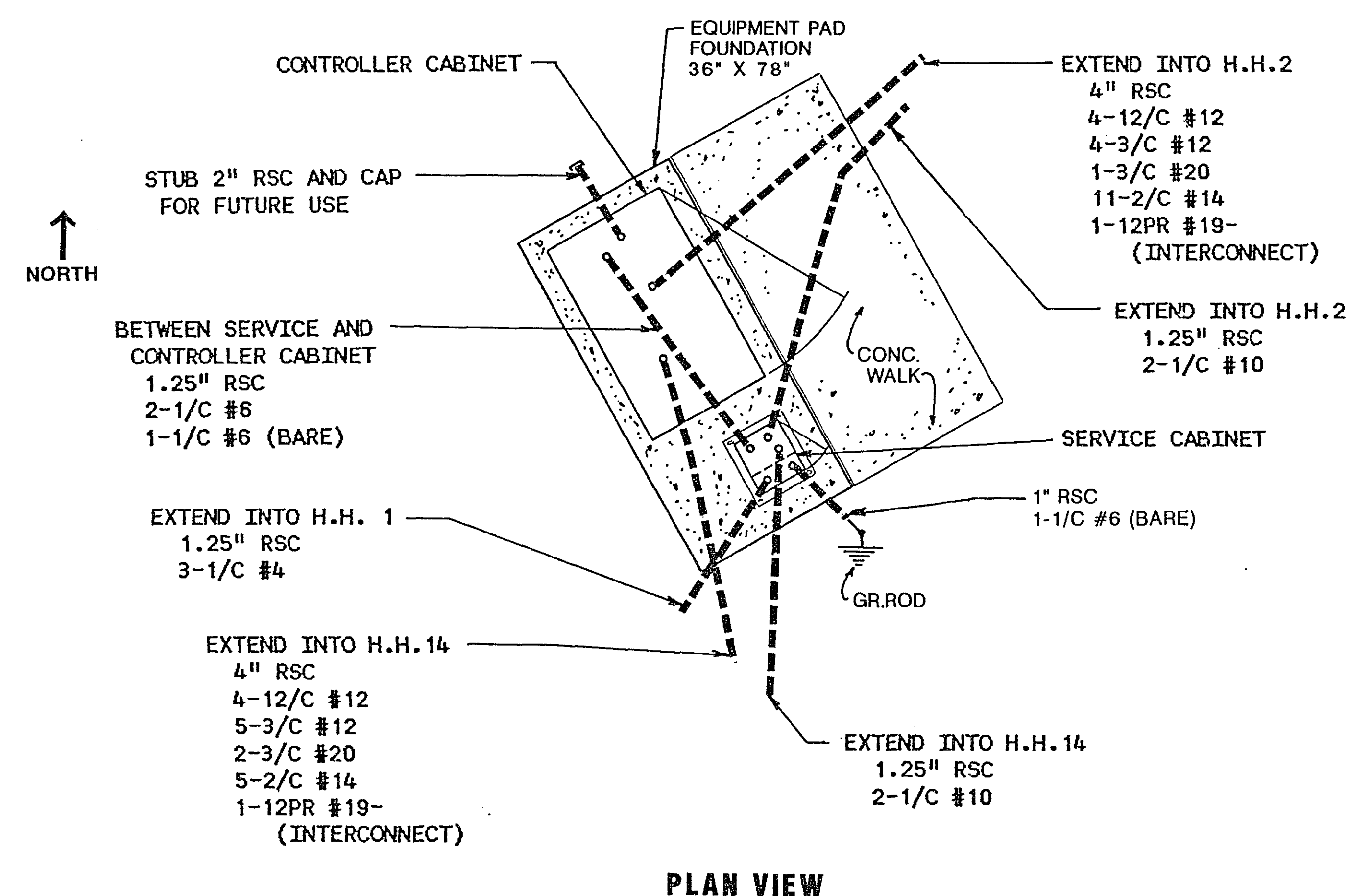
COUNTY RD E & PINE TREE DR SYSTEM C



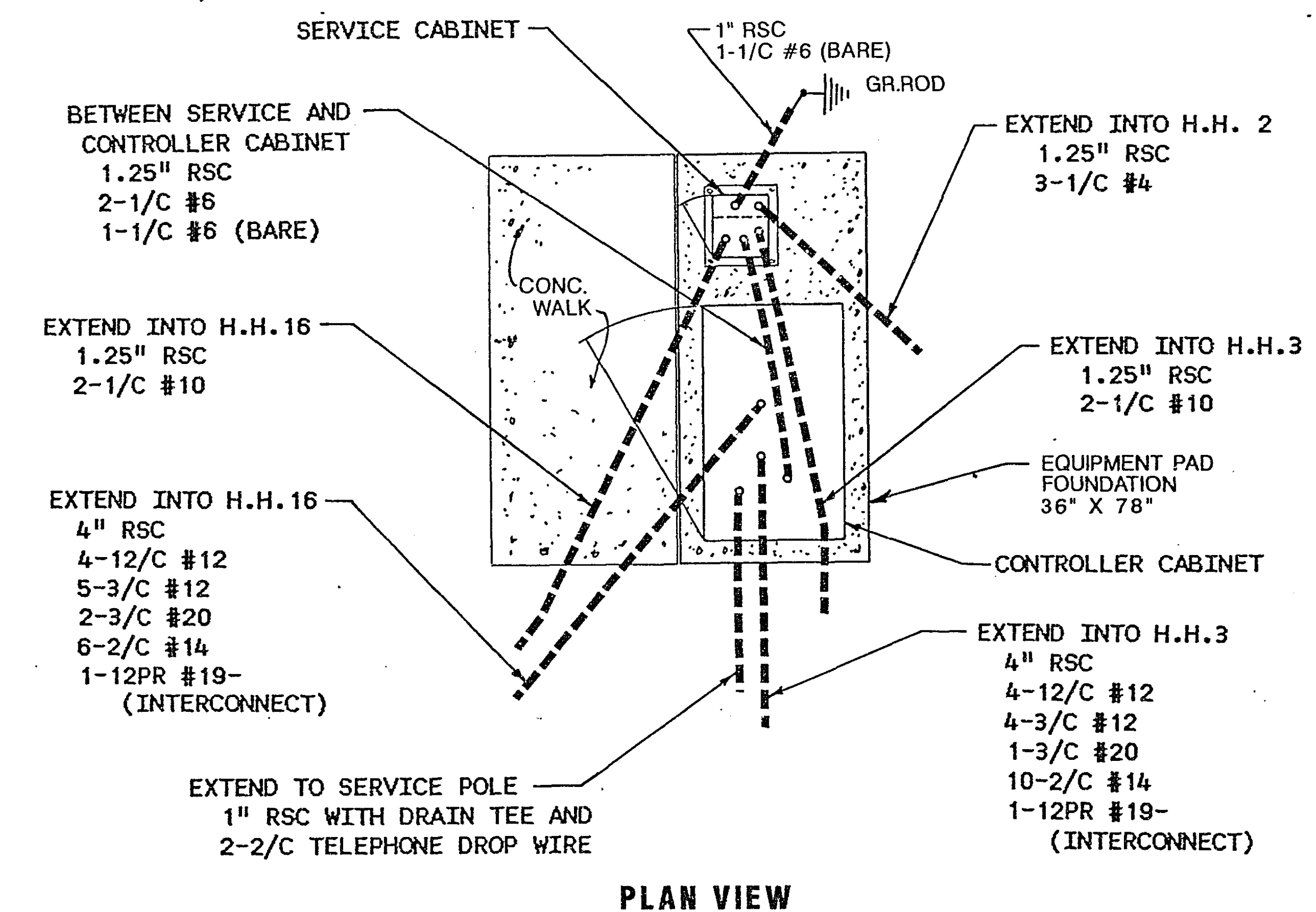
LEXINGTON AVE & COUNTY RD E SYSTEM D



LEXINGTON AVE & GREY FOX RD SYSTEM E



LEXINGTON AVE & RED FOX RD SYSTEM F



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. Wahl
Date 8/29/69 Reg. No. 12703

S.A.P. No. 187-020-05
S.A.P. No. 187-104-02, 187-105-03, 187-105-04
S.A.P. No. 62-615-13

S.A.P. No. 62-651-24

EQUIPMENT PAD LAYOUTS

Sheet No. 4 of 44 Sheets

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-72

23-147

2-4-X

23-147
County Rd E & Pine Tree Drive
County Rd E & T.H. 51 W. of East Ramp
Lexington Ave to Rd E also Grey Fox Rd & I 694 South of North Ramp of County Rd F

LOOP DETECTOR SIZE	
NUMBER	SIZE
D1-1	6'x20'
D1-2	6'x20'
D2-1	6'x6'
D2-2	6'x6'
D4-4	6'x20'
D4-3	6'x20'
D4-2	6'x12'
D4-1	6'x12'
D6-2	6'x6'
D8-3	8'x8'
D1	6'x16'
D2	6'x6'

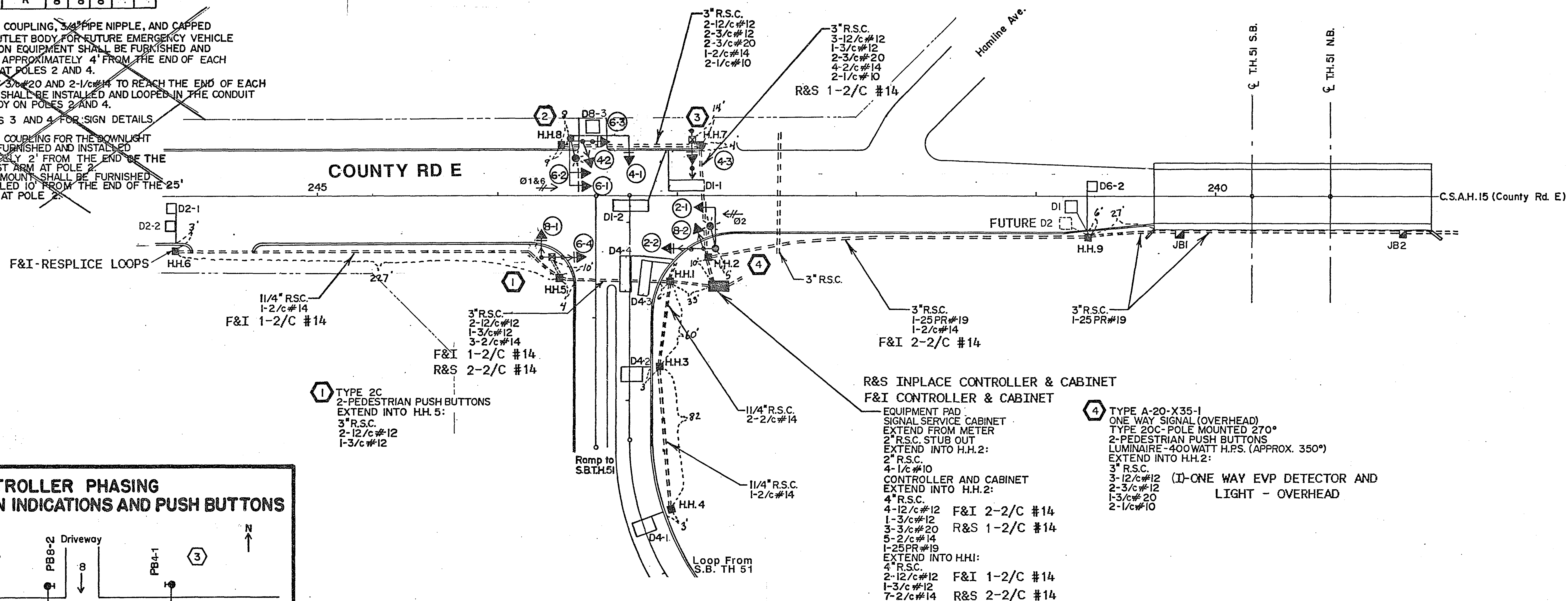
- (1) CALL AND EXTEND
- (2) DELAY CALL ONLY
- (3) EXTEND ONLY
- (4) CALL ONLY DENSITY
- (5) CALL ONLY
- (6) SPECIAL FUNCTION

2 TYPE A-25-30-X35-1
2-ONE WAY SIGNALS(OVERHEAD)
RIO-XI SIGN AND SIGN DOWNLIGHT
TYPE 20B -POLE MOUNTED 270°
LUMINAIRE -400 WATT H.P.S.(APPROX 350°)
1-PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H.8:
3 R.S.C. (I) 1-ONE WAY EVP DETECTOR AND
2-1/2c#12 LIGHT - OVERHEAD
2-3/c#12
2-3/c#20
2-1/c#10 R&S DOWNLIGHT

3 TYPE IC
I-PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 7
3" R.S.C.
I-12/c #12
3-3/c #12

NOTES:

- (1) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE, AND CAPPED CONDUIT OUTLET BODY FOR FUTURE EMERGENCY VEHICLE FRE-EMPTION EQUIPMENT SHALL BE FURNISHED AND INSTALLED APPROXIMATELY 4' FROM THE END OF EACH MAST ARM AT POLES 2 AND 4.
- (2) SUFFICIENT 3/4" x 20 AND 2-1/4" x 14 TO REACH THE END OF EACH MAST ARM SHALL BE INSTALLED AND LOOPED IN THE CONDUIT OUTLET BODY ON POLES 2 AND 4.
- (3) SEE SHEETS 3 AND 4 FOR SIGN DETAILS.
- (4) A 3/4" HALF COUPLING FOR THE DOWNLIGHT SHALL BE FURNISHED AND INSTALLED APPROXIMATELY 2' FROM THE END OF THE 25' MAST ARM AT POLE 2.
- (5) A MID ARM MOUNT SHALL BE FURNISHED AND INSTALLED 10' FROM THE END OF THE 25' MAST ARM AT POLE 2.



C.S.A.H. 15 (County Rd. E)

2 →

Driveway

8 ←

6 ←

1 ↻

T.H. 51 West Ramps

4 ↻

PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE.

1. ALL ITEMS ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE SPECIFIED AS FOLLOWS:
 - R&S (REMOVE AND SALVAGE)
 - F&I (FURNISH AND INSTALL) OR (I)-(INSTALL)
2. TEMPORARY ALL RED FLASH OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
3. PAINT REVISED SIGNAL SYSTEM. TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE SPECIAL PROVISIONS.
4. THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT. SEE SPECIAL PROVISIONS.

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 law of the State of Minnesota.

Frank K. Kish

Date 8/27/87 Reg. No. 12903

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

S.A.P. No. 187-020-05
62030051*010537W

S.A.P. No. 62-615-13

**REVISED
INTERSECTION LAYOUT
COUNTY RD E & T.H.51 (WEST RAMP)**

SYSTEM A

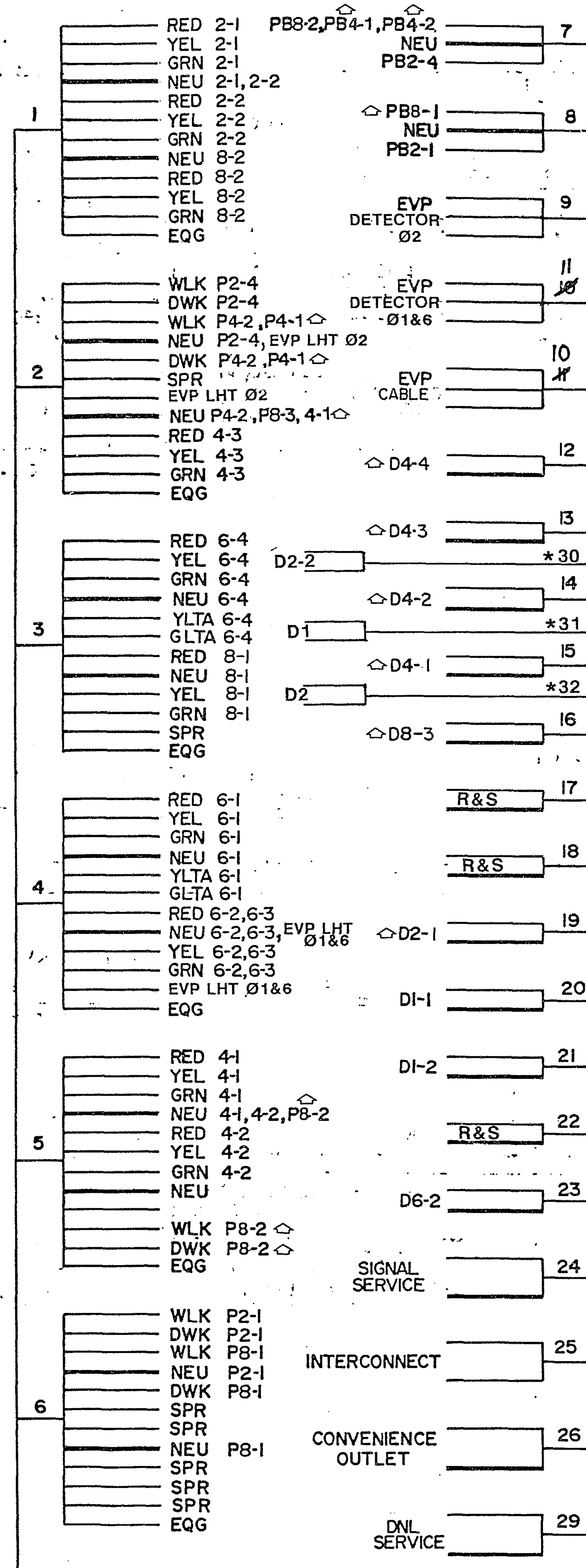
Sheet No. 5 of 44 Sheets

23-147

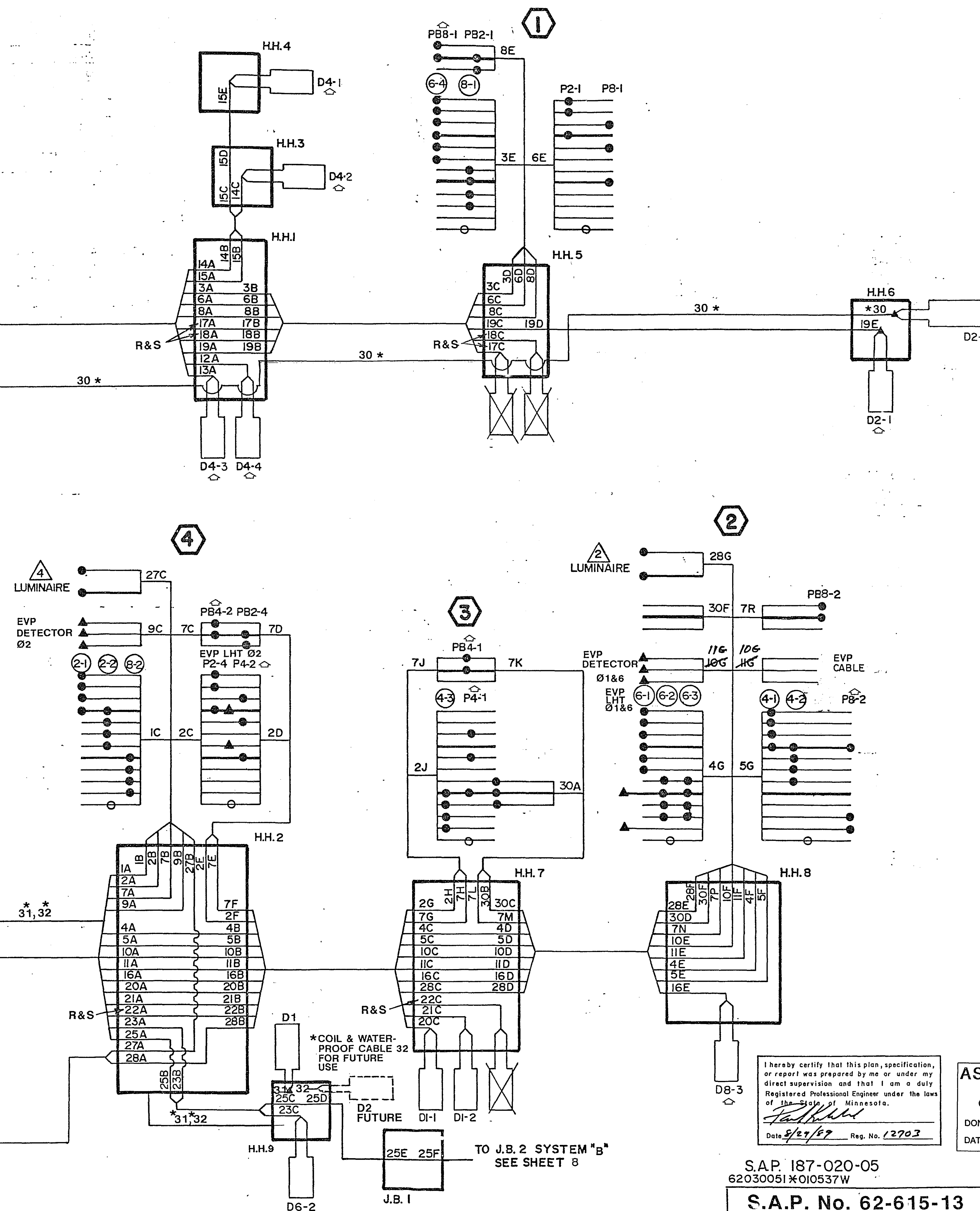
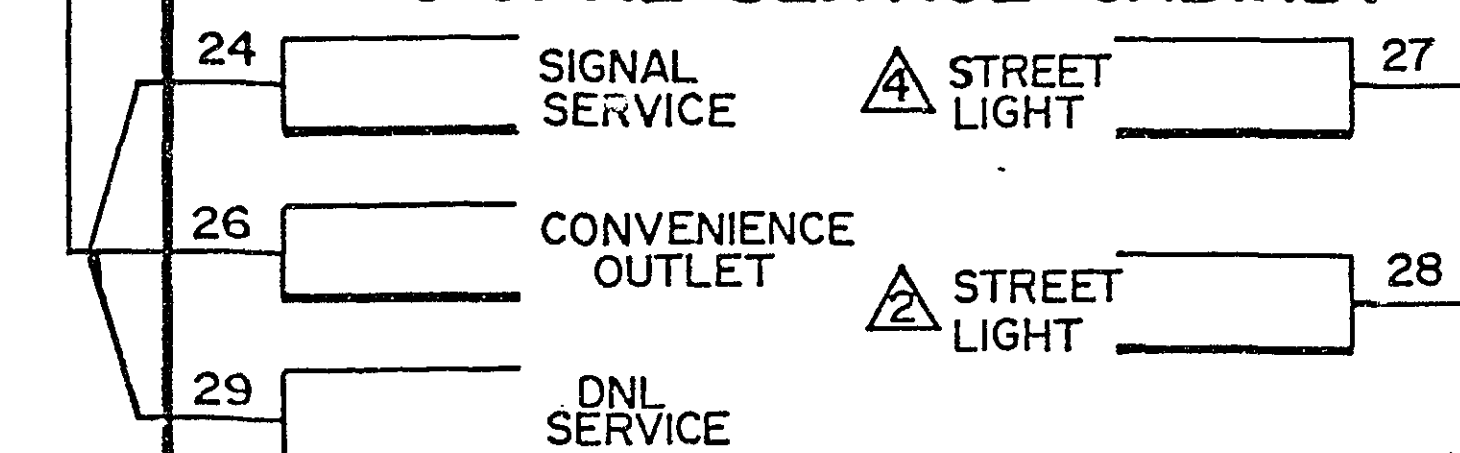
23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 West of East Ramp
Tupington Ave to Rd E also has Fox Rd & I 694 South of
North Ramps & County Rd F

2.4 X

CONTROLLER CABINET



SIGNAL SERVICE CABINET



ALL CABLES ARE INPLACE UNLESS OTHERWISE INDICATED.

R&S DENOTES REMOVE AND SALVAGE

▲ DENOTES NEW CONNECTION

* DENOTES NEW CABLE

⬠ RELABEL AS DIRECTED

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: *JPH*
DATE: *2-11-92*

REVISED
FIELD WIRING DIAGRAM
COUNTY RD E & T.H.51 (WEST RAMP)

SYSTEM A

S.A.P. 187-020-05
62030051*010537W

S.A.P. No. 62-615-13

Sheet No. 6 of 44 Sheets

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 west of East Range
Tupington Ave to Rd E also they fork Rd 4 I 694 South of
North Range & County Rd F

2.4x

DRAWING

DRAWING NUMBER

23-147

DRAWING NUMBER

NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
DESIGNED BY NUNPLAN HOLD CORPORATION • IRVINE, CALIFORNIA
DESIGNED BY NUNPLAN HOLD CORPORATION • IRVINE, CALIFORNIA
DESIGNED BY NUN

FACE	PHASE	FLASH	INDICATION SIZE				
			R	Y	G	YEL	GRN
2-1	2 AND 5	R	12"	12"	12"	12"	12"
2-2	2	R	12"	12"	12"	-	-
2-3	2	R	12"	12"	12"	-	-
2-4	2 AND 5	R	12"	12"	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	1 AND 6	R	12"	12"	12"	12"	12"
6-2	6	R	12"	12"	12"	-	-
6-3	1 AND 6	R	12"	12"	12"	12"	12"
8-1	8	R	12"	12"	12"	-	-
8-2	8	R	12"	12"	12"	-	-
8-3	8	R	12"	12"	12"	-	-

LOOP DETECTORS	
NUMBER	SIZE
DI-1	6'x20'
DI-2	6'x20'
D2-1	6'x6'
D4-3	2-6'x20'
D4-2	6'x10'
D4-1	6'x10'
D5-1	6'x20'
D5-2	6'x20'
D6-1	6'x6'
D6-2	6'x6'
D8-3	2-6'x15'
D8-1	6'x10'
F&I D1	6'x6'
F&I D2	6'x6'
F&I D3	6'x6'
F&I D4	6'x6'

LOOP DETECTOR FUNCTION

- (1) CALL AND EXTEND
(2) DELAY CALL-IMMEDIATE EXTEND
(3) EXTEND ONLY
(4) DELAY CALL ONLY
(5) CALL ONLY

- (2) TYPE A-25-X35-1
ONE WAY SIGNAL (OVERHEAD)
RIO-XI SIGN AND SIGN DOWNLIGHT
TYPE 20C-POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS
LUMINAIRE-400 WATT H.P.S. (APPROX. 350°)
EXTEND INTO H.H. 20:
3" R.S.C.
2-12/c #12
1-3/c #12
1-3/c #20
EXTEND INTO INPLACE LIGHTING HANDHOLE:
2" R.S.C.
3-1/c #4 AND 1-1/c #8 GROUND (INPLACE IN LIGHTING SYSTEM HANDHOLE)
(1) ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD
R&S DOWNLIGHT

COUNT

NOTES

- (1) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE, AND CAPPED CONDUIT OUTLET BODY FOR FUTURE EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT SHALL BE FURNISHED AND INSTALLED APPROXIMATELY 4' FROM THE END OF THE MAST ARM AT POLES 2, 3 AND 4.
(2) SUFFICIENT 3/4" AND 2-1/2" C#14 TO REACH THE END OF THE MAST ARM SHALL BE INSTALLED AND LOOPEL IN THE CONDUIT OUTLET BODY ON POLES 2, 3 AND 4.
(3) SEE SHEETS 3 AND 4 FOR SIGN DETAILS.

- (4) A 3/4" HALF COUPLING FOR THE DOWNLIGHT SHALL BE FURNISHED AND INSTALLED APPROXIMATELY 2' FROM THE END OF THE MAST ARM AT POLE 4.
(5) A MID ARM MOUNT SHALL BE FURNISHED AND INSTALLED 10' FROM THE END OF THE MAST ARM AT POLE 4.

TO H.H. 9 SYSTEM "A"
SEE SHEET 5
3" R.S.C.
1-25PR #19

T.H. 51 S.B.
T.H. 51 N.B.

3" R.S.C.
1-25PR #19

3" R.S.C.
1-2/c #14
1-25PR #19

3" R.S.C.
2-12/c #12
1-3/c #12
3-2/c #14
1-25PR #19

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: 8/27/92 Reg. No. 12703

S.A.P. 187-020-05
62030051X010537E

S.A.P. No. 62-615-13

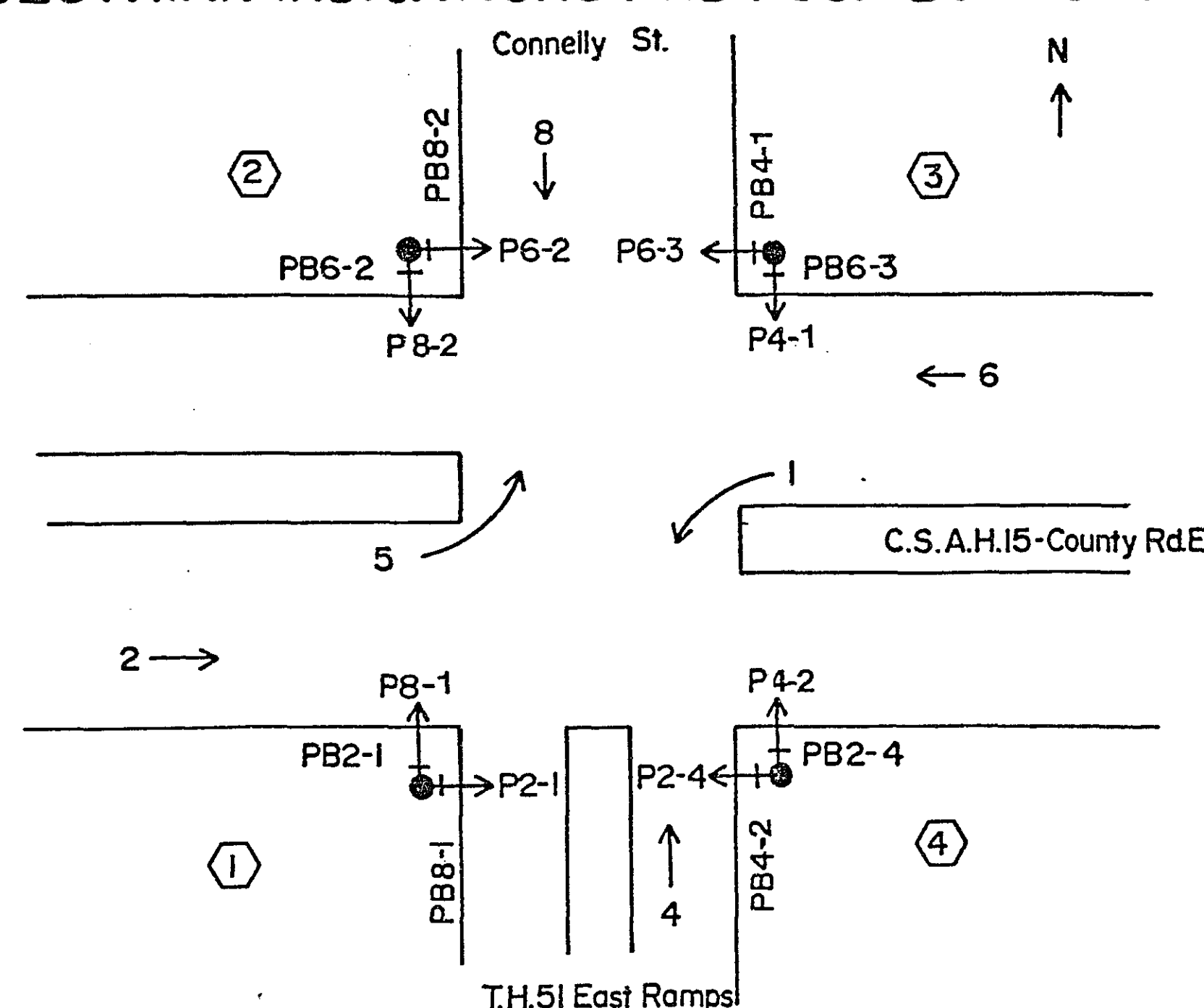
Fed. Proj. No.



SCALE IN FEET
0 10 20 30 40 50 100
SCALE IN METERS
0 10 20 30
ORIGINAL PLAN
SIZE: 1 CM

CONNELLY ST

MATCH LINE 29+60

CONTROLLER PHASING
PEDESTRIAN INDICATIONS AND PUSH BUTTONS

PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE.

NOTES:

- ALL ITEMS ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE SPECIFIED AS FOLLOWS:
- R&S (REMOVE AND SALVAGE)
- F&I (FURNISH AND INSTALL) OR (I) (INSTALL)
- (INTERCONNECT) DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE SPECIAL PROVISIONS.
- TEMPORARY ALL RED FLASH OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
- PAINT REVISED SIGNAL SYSTEM. TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE SPECIAL PROVISIONS.
- THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT. SEE SPECIAL PROVISIONS.

- (1) TYPE A-25
ONE WAY SIGNAL (OVERHEAD)
TYPE 20C-POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO H.H. 13:
3" R.S.C.
2-12/c #12
1-3/c #12
- (4) TYPE A-30-X35-1
2-ONE WAY SIGNALS (OVERHEAD)
RIO-XI SIGN AND SIGN DOWN LIGHT
TYPE 20C-POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS
LUMINAIRE-400 WATT H.P.S. (APPROX. 350°)
EXTEND INTO H.H. 17:
3" R.S.C.
2-12/c #12
2-3/c #12
1-3/c #20
EXTEND INTO INPLACE LIGHTING HANDHOLE:
2" R.S.C.
3-1/c #4 AND 1-1/c #8 GROUND (INPLACE IN LIGHTING SYSTEM HANDHOLE)
(1) ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD
R&S DOWNLIGHT
- R&S INPLACE CONTROLLER & CABINET
F&I CONTROLLER & CABINET
F&I 2" R.S.C. TO H.H. 24
(INSTALL IN EXIST. FOUNDATION)

REVISED
INTERSECTION LAYOUT
COUNTY RD E & T.H. 51 (EAST RAMP) & CONNELLY ST
SYSTEM B

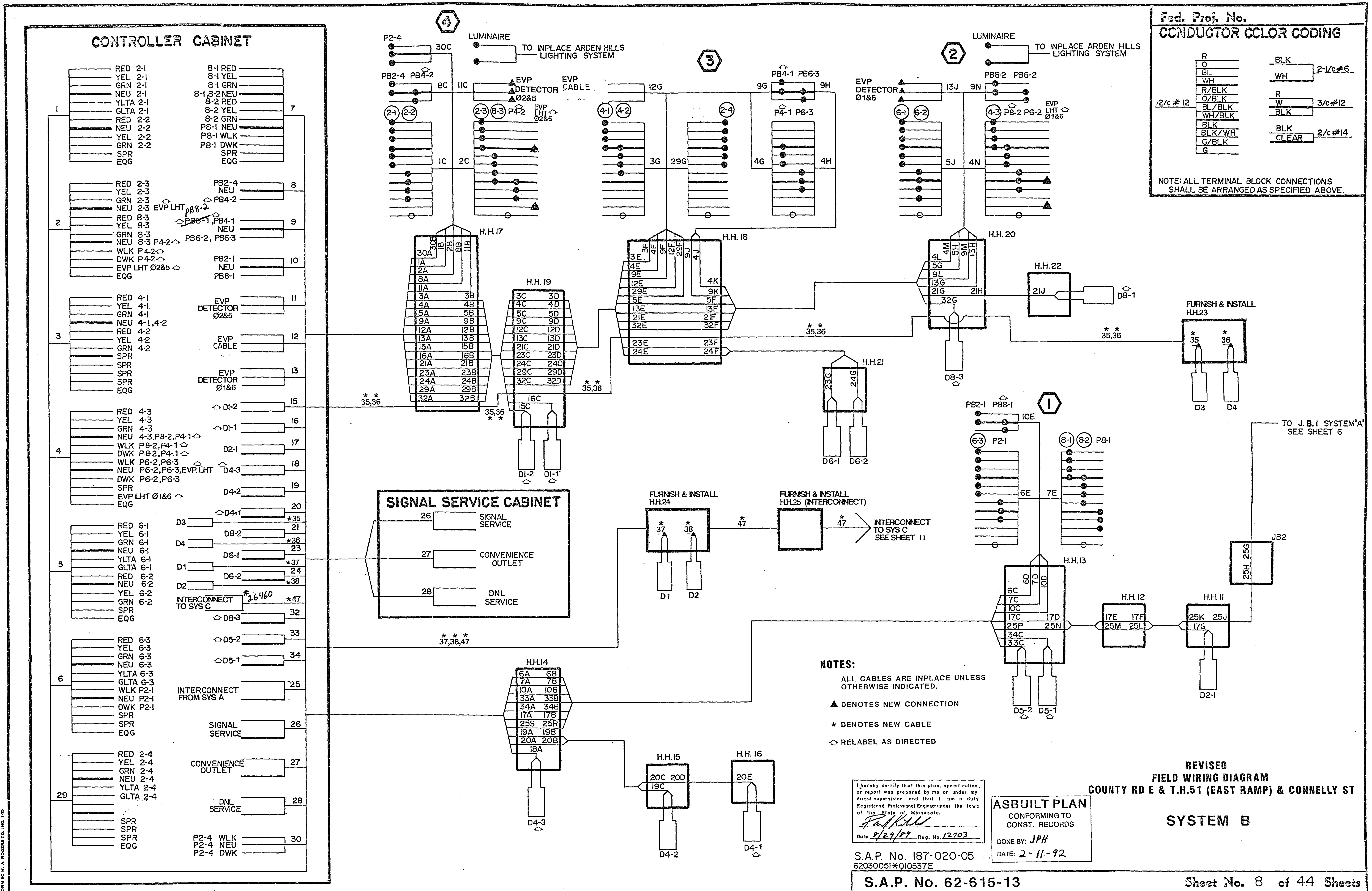
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

Sheet No. 7 of 44 Sheets

24X

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 West of East Ramp
Interpretation to Rd E also shows Fox Rd & I 694 South & North Ramps & County Rd F

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA



LEGEND OF SYMBOLS

SIGNAL BASE NO. 5
SIGNAL FACE NO. 2
CONTROLLER AND CABINET
CONTROLLER AND CABINET - INPLACE
HANDHOLE
HANDHOLE - INPLACE
CONDUIT
CONDUIT - 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

VEHICLE DETECTION

NO	SIZE	OPERATION	LOC
D2-1	6'X 6'	C&E	205'
D2-2	6'X 6'	C&E	205'
D4-1	2-6'X 6'	C&E	155'
D4-2	2-6'X 6'	C&E	70'
D4-3	2-6'X 15'	C&E (TD)	0'
D5-1	2-6'X 15'	C&E (TD)	0'
D5-2	6'X 25'	E	70'
D6-1	6'X 6'	C&E	205'
D6-2	6'X 6'	C&E	205'
D1	6'X 6'	COUNT	SEE PLAN
D2	6'X 6'	COUNT	SEE PLAN

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

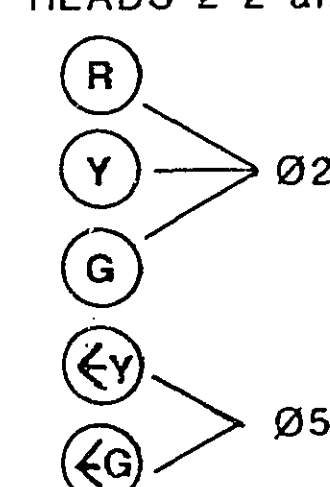
SIGNAL INDICATION CHART

FACE	PHASE	INDICATION SIZE					
		R	Y	G	←Y	←G	
2-1	2	12 ¹¹	12 ¹¹	12 ¹¹			
2-2	2 and 5	12 ¹¹	12 ¹¹	12 ¹¹	12 ¹¹	12 ¹¹	
2-3	2 and 5	12 ¹¹	12 ¹¹	12 ¹¹	12 ¹¹	12 ¹¹	
2-4	2	12 ¹¹	12 ¹¹	12 ¹¹			
4-1	4	12 ¹¹	12 ¹¹	12 ¹¹			
4-2	4	12 ¹¹	12 ¹¹	12 ¹¹			
4-3	4	12 ¹¹	12 ¹¹	12 ¹¹			
6-1	6	12 ¹¹	12 ¹¹	12 ¹¹			
6-2	6	12 ¹¹	12 ¹¹	12 ¹¹			

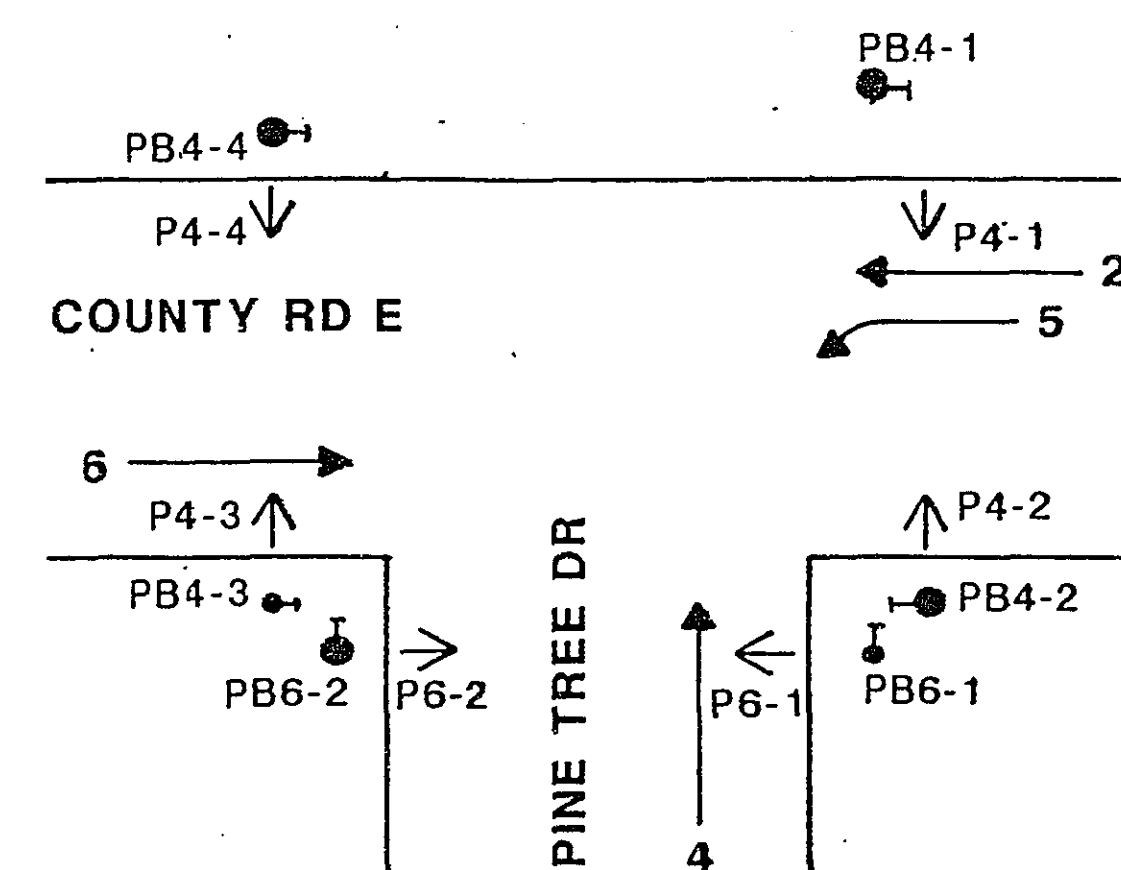
FLASH MODE = ALL RED

SIGNAL HEAD PHASING

HEADS 2-2 and 2-3



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



2 P90-A-30-X35-1
INSTALL LUMINAIRE - 400 WATT HPS AT 350°
(USE SALVAGED LUMINAIRE)
2-ONE WAY SIGNALS - OVERHEAD
TYPE 20B - POLE MOUNTED 270°
1 - PEDESTRIAN PUSH BUTTON AT 270°
ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD
EXTEND INTO H.H. 7
3" RSC
2-12/C #12
2-3/C #12
1-3/C #20
EXTEND INTO INPLACE STREET LIGHTING
JUNCTION BOX
0.75" RSC
3-1/C #10

REMOVE AND SALVAGE INPLACE ORNAMENTAL
STREET LIGHT POLE AND LUMINAIRE. CUT
INPLACE ANCHOR BOLTS FLUSH WITH CONCRETE
AND PLUG CONDUIT. SEE POLE 2.

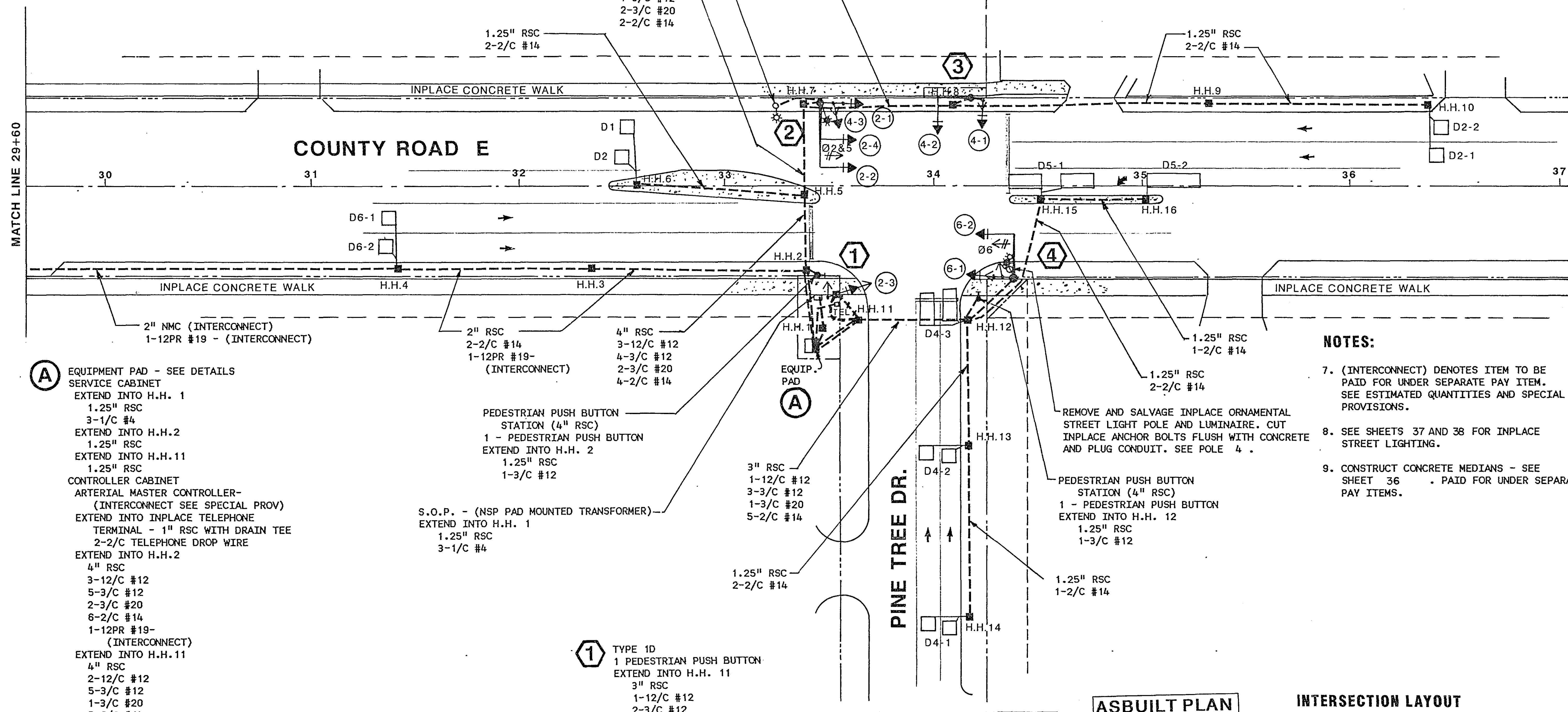
3 P80-A-15
ONE WAY SIGNAL - OVERHEAD
TYPE 10B - POLE MOUNTED 180°
1 - PEDESTRIAN PUSH BUTTON AT 180°
EXTEND INTO H.H. 8
3" RSC
1-12/C #12
2-3/C #12
1-3/C #20

4 P90-A-20-X35-1
INSTALL LUMINAIRE - 400 WATT HPS AT 350°
(USE SALVAGED LUMINAIRE)
ONE WAY SIGNALS - OVERHEAD
TYPE 10C - POLE MOUNTED 270°
1 - PEDESTRIAN PUSH BUTTON AT 270°
ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD
EXTEND INTO H.H. 12
3" RSC
1-12/C #12
4-3/C #12
1-3/C #20
EXTEND INTO INPLACE STREET LIGHTING
JUNCTION BOX
0.75" RSC
3-1/C #10

SCALE IN FEET
0 10 20 30 40 50 100

NOTES:

- POLE AND DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
- THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT (SEE SPECIAL PROVISIONS).
- A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM END OF THE MAST ON EACH POLE PER MVDOT 3831.2C
- A MID ARM MOUNT SHALL BE FURNISHED AND INSTALLED 12 FEET FROM THE END OF MAST ARM AT POLE 2.
- ALL PEDESTRIAN INDICATIONS SHALL BE 12"X12".
- ALL NEW SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACE 4-3.



NOTES:

- (INTERCONNECT) DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- SEE SHEETS 37 AND 38 FOR INPLACE STREET LIGHTING.
- CONSTRUCT CONCRETE MEDIANS - SEE SHEET 36. PAID FOR UNDER SEPARATE PAY ITEMS.

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 8/29/89 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: JPH
DATE: 2-11-92

INTERSECTION LAYOUT
COUNTY RD E & PINE TREE DR

SYSTEM C

S.A.P. No. 187-104-02 & 187-020-05

S.A.P. No. 62-615-13

Sheet No. 9 of 44 Sheets

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 W. 1st & East Ramp
Jefferson Ave to Rd E also Hwy 101 Rd & I 680 South & North Ramps & County Rd F

24X

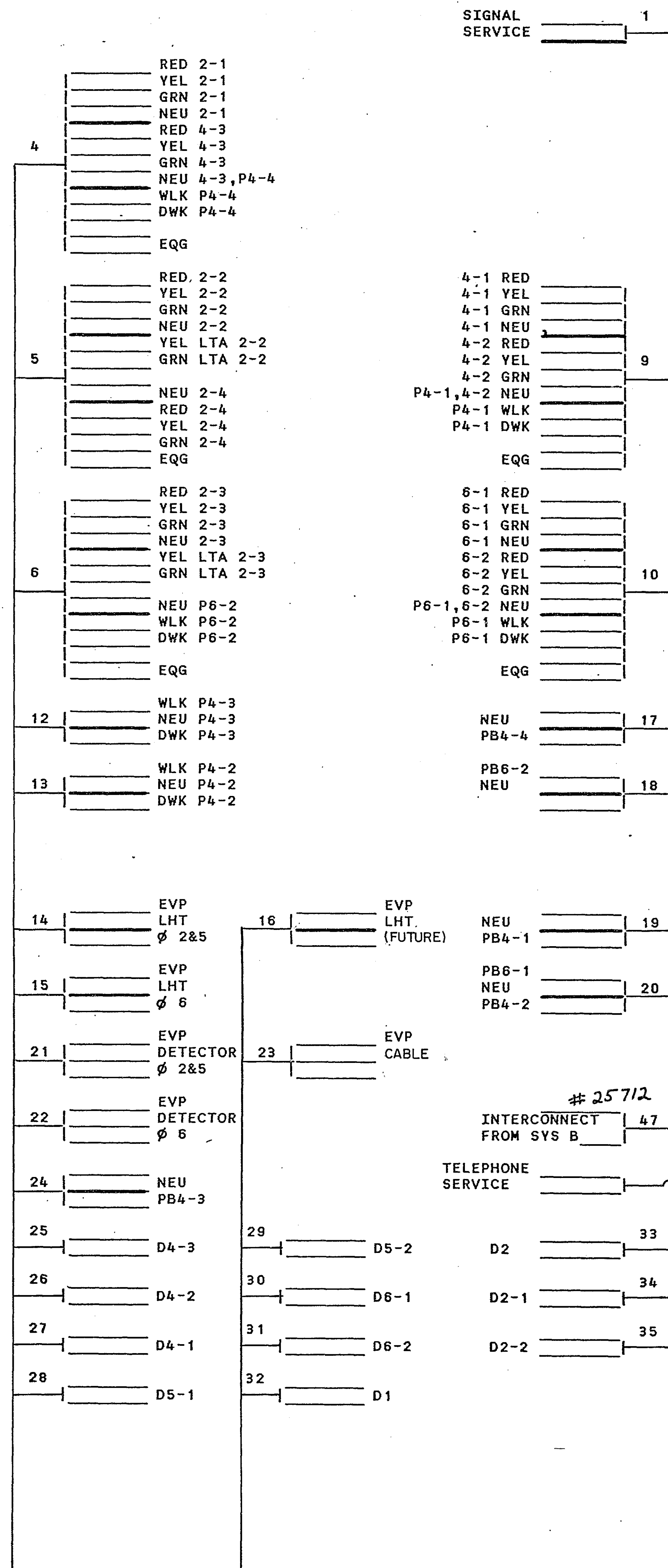
DRAWING
PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
REVISION BY N/A

DRAWING NUMBER
23-147

DRAWING NUMBER

NUMBER

CONTROLLER CABINET



SERVICE CABINET & METER

SIGNAL SERVICE (METERED)

S.O.P. 120/240 V. SERVICE

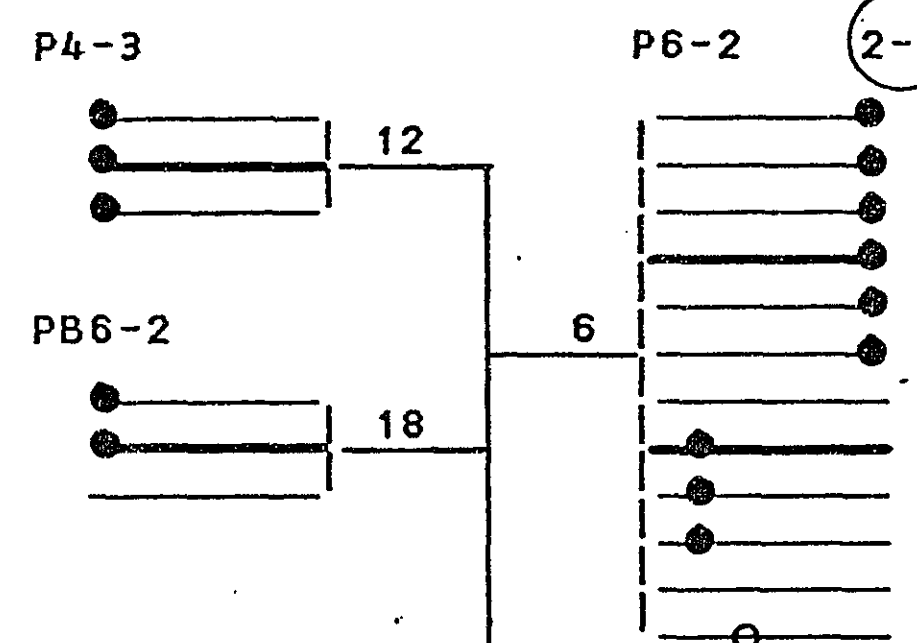
GR. ROD

S.O.P. PAD MOUNTED TRANSFORMER BY OTHERS

120/240 VOLT ELECTRIC SERVICE

H.H.1

1



6,10,12,13,15,18,20,22, 25,26,27,28,29

10,13,15,20,22, 25,26,27,28,29

TELEPHONE SERVICE

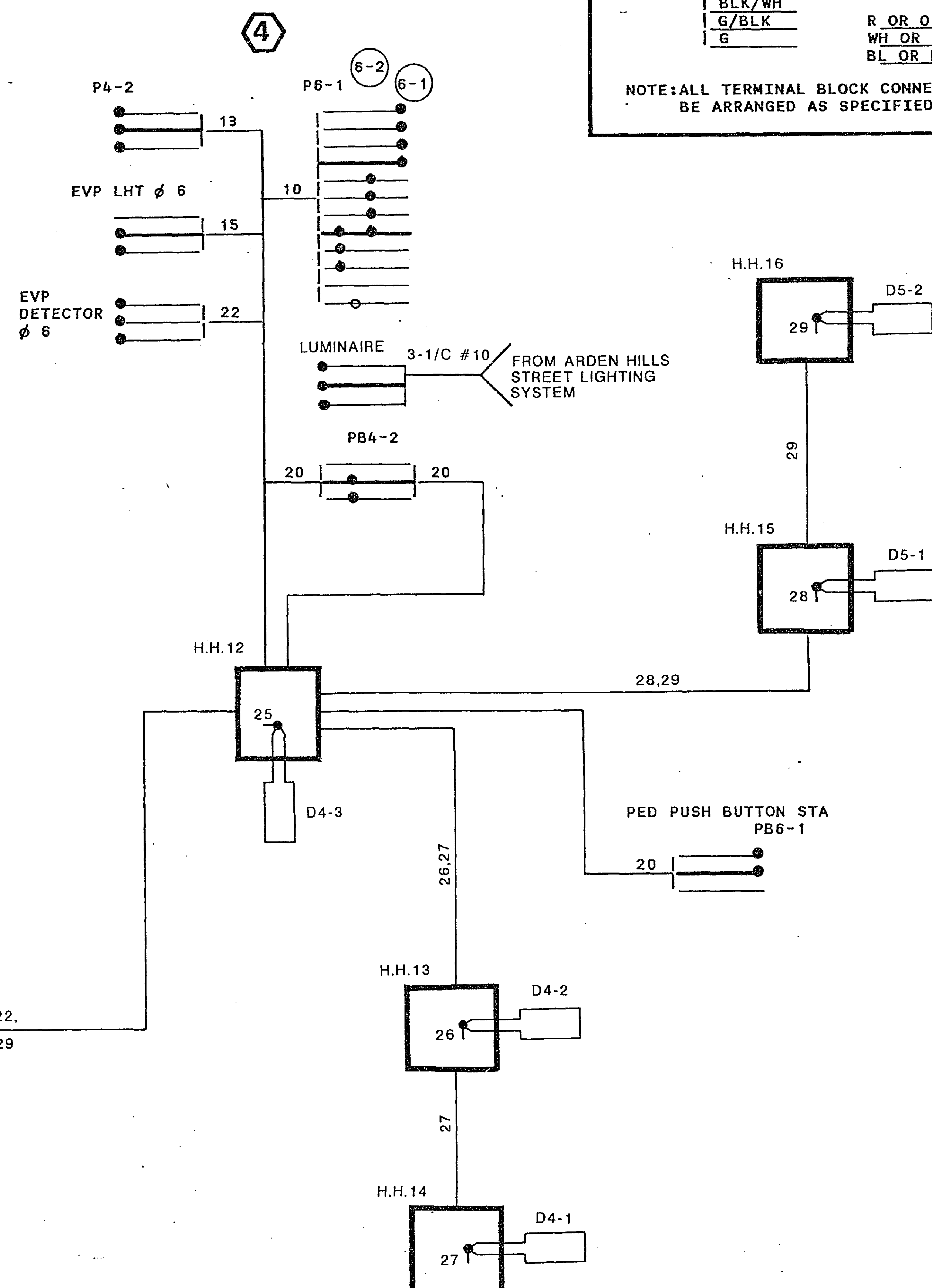
4,5,9,14,16,17,19,21,23,24, 30,31,32,33,34,35,47

TO H.H.2 SEE SHEET II

CONDUCTOR COLOR CODING

R	BLK	2-1/C #6
O	WH	2-1/C #10
BL		
WH	R	3/C #12
R/BLK	WH	
O/BLK	BLK	2/C #14
BL/BLK	CLEAR	
BLK		
BLK/WH	R OR O	3/C #20
G/BLK	WH OR YEL	
G	BL OR BLK	

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.
Date 8/27/87 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

FIELD WIRING DIAGRAM
COUNTY RD E & PINE TREE DR

SYSTEM C

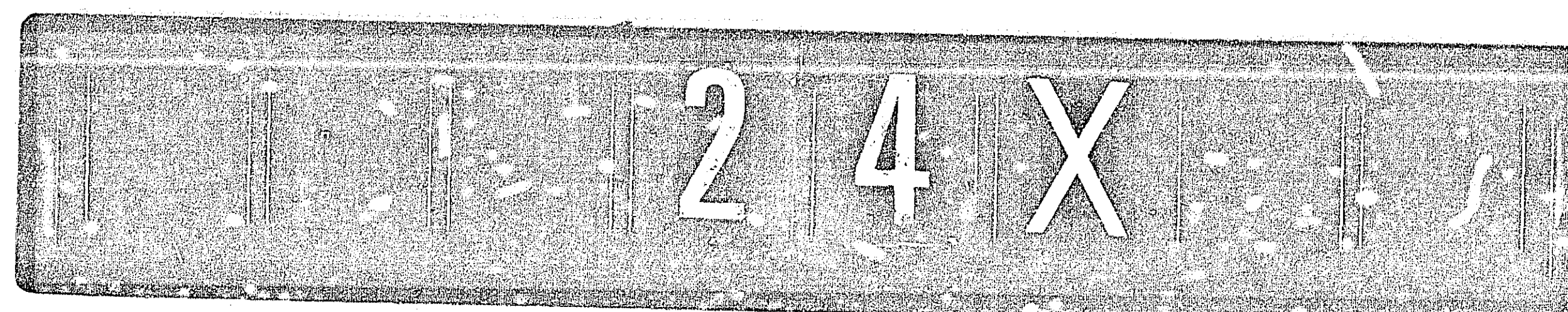
S.A.P. No. 187-104-02 & 187-020-05

S.A.P. No. 62-615-13

Sheet No. 10 of 44 Sheets

23-147

23-147 County Rd E & Pine Tree Drive
County Rd E & T.H. 51 west of East Ramp
Washington Ave to Rd E also Hwy 101 Rd & I 694 south of North Ramp & County Rd F



DRAWING

DRAWING NUMBER

23-147

DRAWING NUMBER

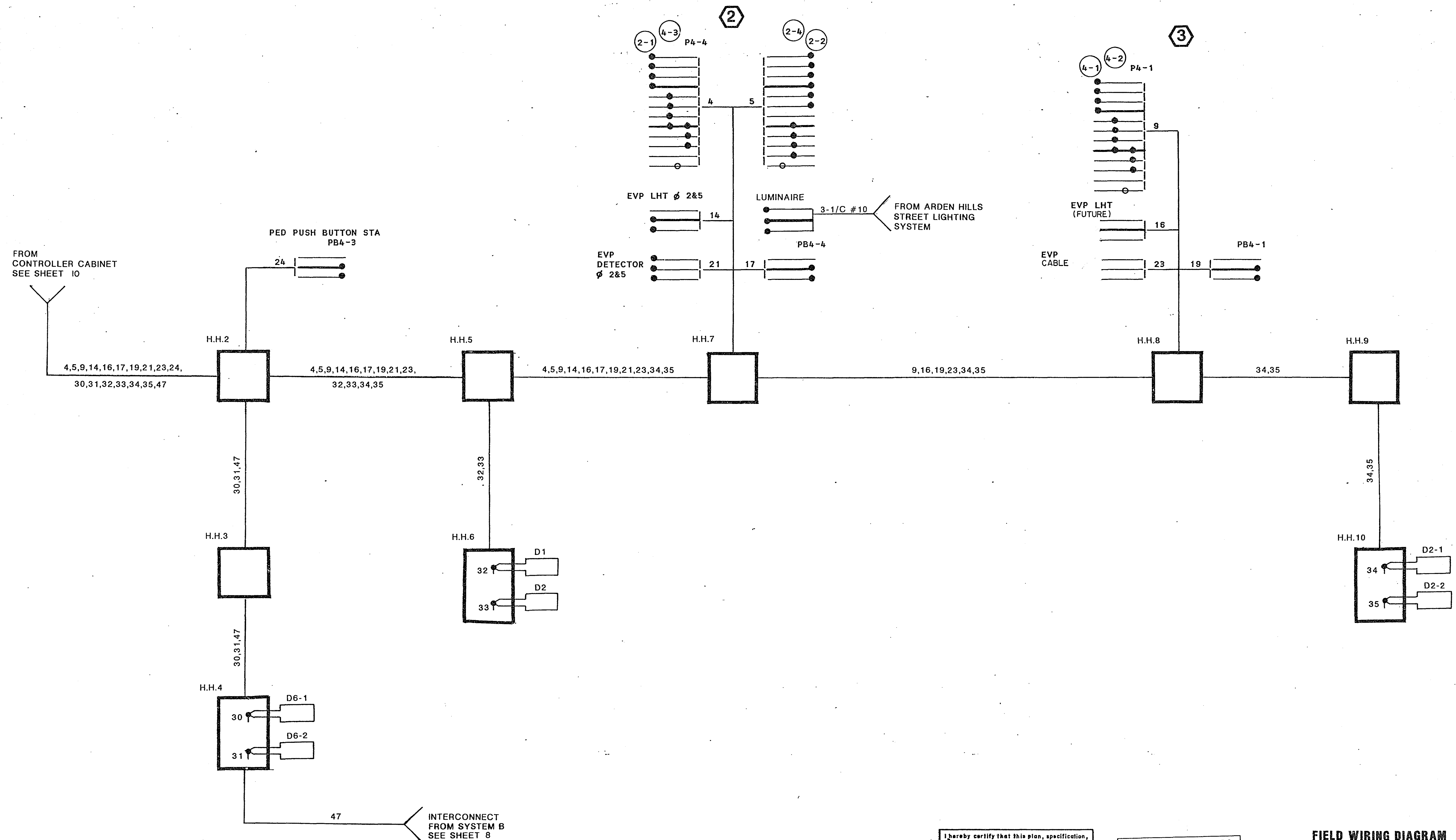
NUMBER

PLAN HOLD CORPORATION
REGISTERED PROFESSIONAL ENGINEER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER



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 K. Kelly
Date 8/27/91 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

FIELD WIRING DIAGRAM
COUNTY RD E & PINE TREE DR

SYSTEM C

S.A.P. No. 187-104-02 & 187-020-05

S.A.P. No. 62-615-13

Sheet No. 11 of 44 Sheets

23-147

23-147 County Rd E & Pine Tree Drive
County Rd E & T.H. 51 west of East Ramp
Springfield Ave to Rd E also these top Rd & I 694 North Ramp & County Rd F

24X

LEGEND OF SYMBOLS

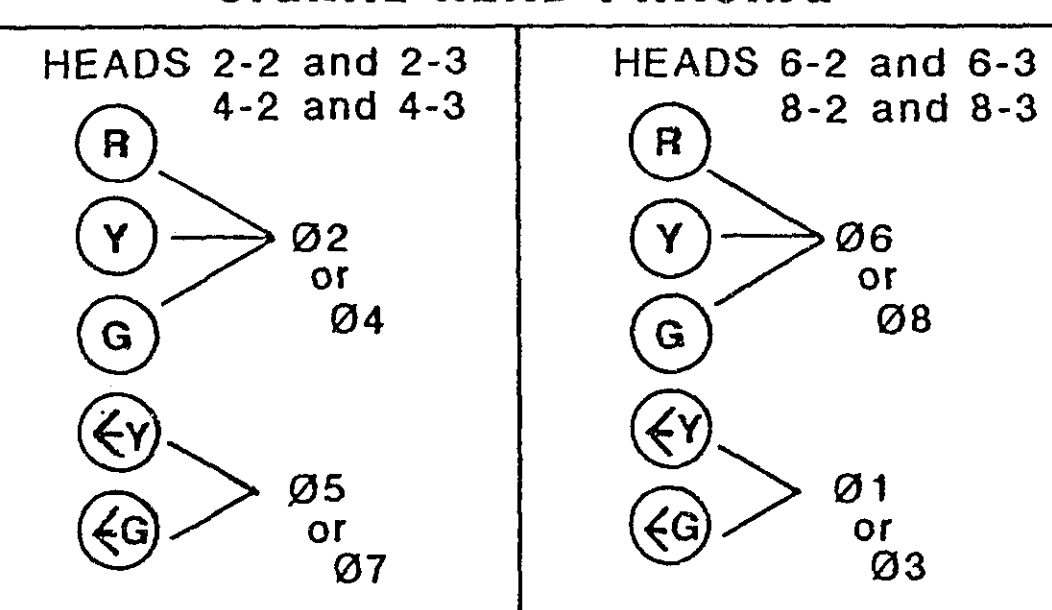
SIGNAL BASE NO.	5
SIGNAL FACE NO.	42
CONTROLLER AND CABINET	
CONTROLLER AND CABINET - INPLACE	
HANDHOLE - INPLACE	
CONDUIT - INPLACE	
SIGNAL FACE	
SIGNAL FACE WITH BACKGROUND SHIELD	
PEDESTRIAN INDICATIONS	
PEDESTRIAN INDICATIONS - INPLACE	
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE	
PEDESTRIAN PUSH 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	

* SIGNAL INDICATION CHART *

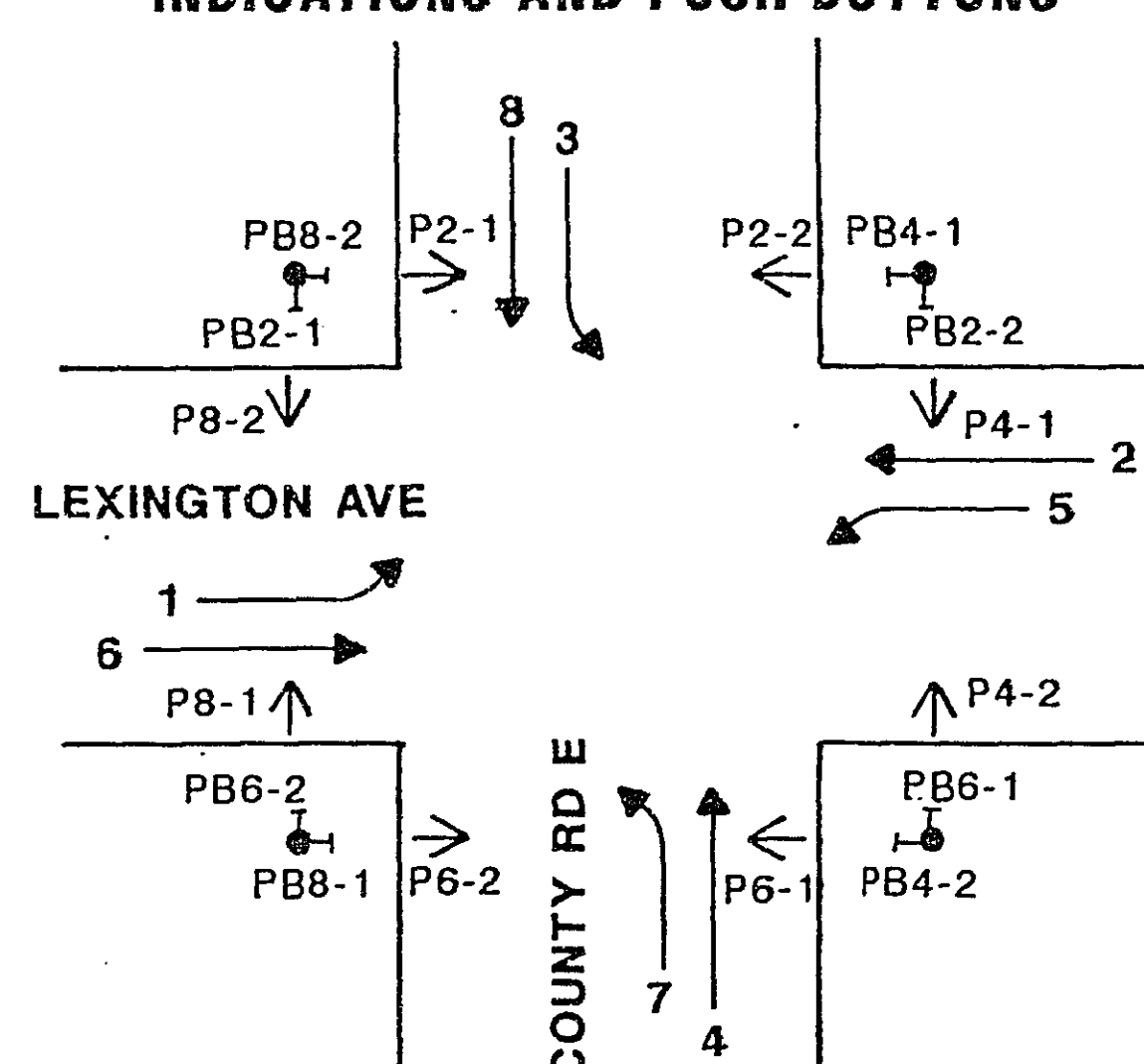
FACE	PHASE	INDICATION SIZE	R	Y	G	←Y	←G
* 2-1	2	12"	12"	12"	12"	12"	12"
* 2-2	2 and 5	12"	12"	12"	12"	12"	12"
* 2-3	2 and 5	12"	12"	12"	12"	12"	12"
* 2-4	2	12"	12"	12"	12"	12"	12"
* 4-1	4	12"	12"	12"	12"	12"	12"
* 4-2	4 and 7	12"	12"	12"	12"	12"	12"
* 4-3	4 and 7	12"	12"	12"	12"	12"	12"
* 4-4	4	12"	12"	12"	12"	12"	12"
* 6-1	6	12"	12"	12"	12"	12"	12"
* 6-2	1 and 6	12"	12"	12"	12"	12"	12"
* 6-3	1 and 6	12"	12"	12"	12"	12"	12"
* 6-4	6	12"	12"	12"	12"	12"	12"
* 8-1	8	12"	12"	12"	12"	12"	12"
* 8-2	3 and 8	12"	12"	12"	12"	12"	12"
* 8-3	3 and 8	12"	12"	12"	12"	12"	12"
* 8-4	8	12"	12"	12"	12"	12"	12"

FLASH MODE = ALL RED

SIGNAL HEAD PHASING



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



* VEHICLE DETECTION *

NO	SIZE	OPERATION	LOC
* D1-1	2-6'X 15'	C&E (TD)	0'
* D1-2	6'X 25'	E	80'
* D2-1	6'X 6'	C&E	215'
* D2-2	6'X 6'	C&E	215'
* D3-1	2-6'X 15'	C&E (TD)	0'
* D3-2	6'X 25'	E	80'
* D4-1	6'X 6'	C&E	205'
* D4-2	6'X 6'	C&E	205'
* D5-1	2-6'X 15'	C&E (TD)	0'
* D5-2	6'X 25'	E	80'
* D6-1	6'X 6'	C&E	260'
* D6-2	6'X 6'	C&E	260'
* D7-1	2-6'X 15'	C&E (TD)	0'
* D7-2	6'X 25'	E	80'
* D8-1	6'X 6'	C&E	205'
* D8-2	6'X 6'	C&E	205'
* D1	6'X 6'	COUNT	SEE PLAN
* D2	6'X 6'	COUNT	SEE PLAN

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

①

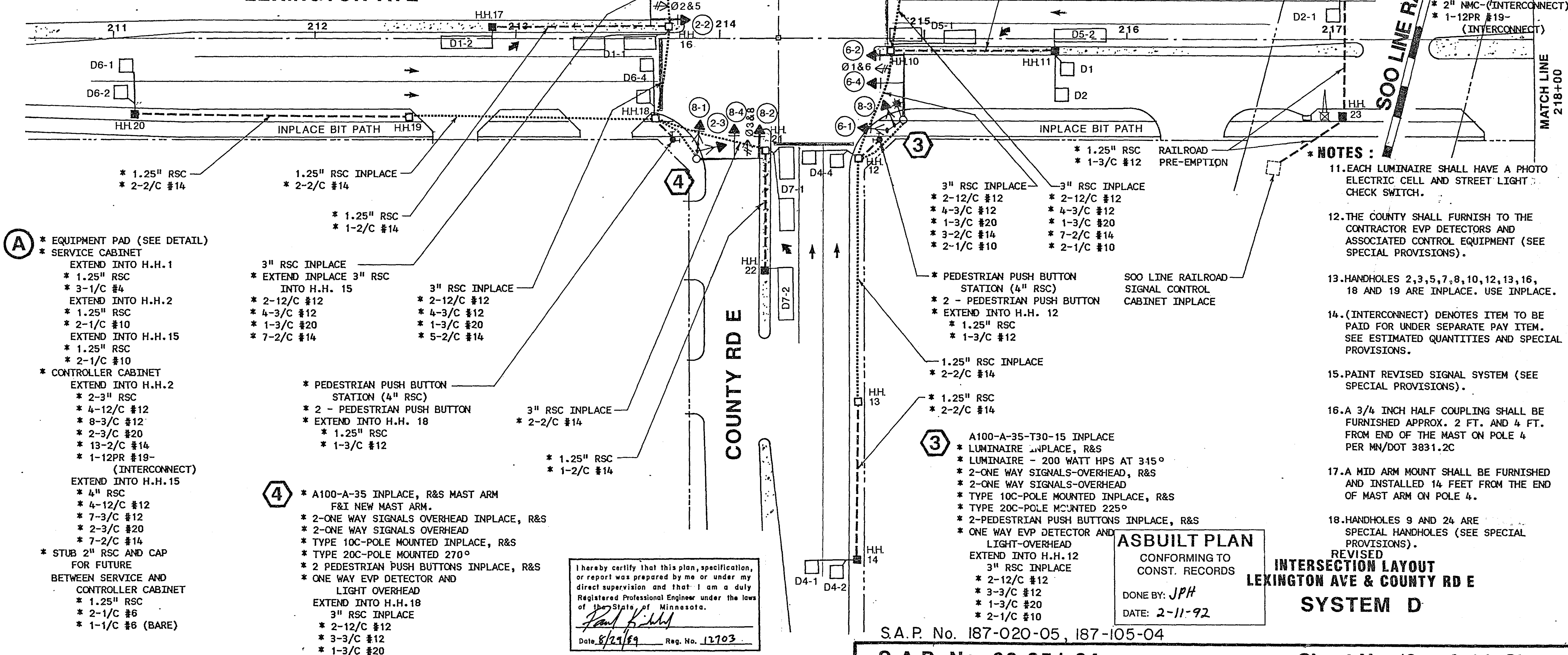
- A100-A-35-T30-15 INPLACE, R&S
- A100-A-35-T30-15
- LUMINAIRE INPLACE, R&S
- LUMINAIRE - 200 WATT HPS AT 315°
- 2-ONE WAY SIGNALS-OVERHEAD INPLACE, R&S
- 2-ONE WAY SIGNALS-OVERHEAD
- TYPE 10C-POLE MOUNTED INPLACE, R&S
- TYPE 20C-POLE MOUNTED 270°
- 2-PEDESTRIAN PUSH BUTTONS INPLACE, R&S
- ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD
- EXTEND INTO H.H. 15
- * 1.25" RSC
- * 2-2/C #14
- * 3" RSC
- * 2-12/C #12
- * 4-3/C #12
- * 1-3/C #20
- * 2-1/C #10

- S.O.P. (NSP POLE INPLACE)
- SERVICE EQUIPMENT & METER INPLACE, R&S
- * 1.25" RSC RISER WITH WEATHER HEAD
- EXTEND INTO H.H. 1
- * 1.25" RSC
- * 3-1/C #4

- CONTROLLER CABINET AND FOUNDATION INPLACE, R&S
- * TWO HANDHOLES AND RSC INPLACE, R&S AS DIRECTED

- PEDESTRIAN PUSH BUTTON STATION (4" RSC)
- * 2 - PEDESTRIAN PUSH BUTTON
- EXTEND INTO H.H. 15
- * 1.25" RSC
- * 1-3/C #12

LEXINGTON AVE



* NOTES *

- ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH A * (= WORK TO BE DONE, THIS SHEET ONLY).
- SEE SHEETS 15-17 FOR EXISTING SIGNAL SYSTEM.
- DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
- REMOVE AND SALVAGE INPLACE DOWN LIGHTS MOUNTED OVERHEAD (4 TOTAL).
- WELD NEW 1.5" DIA HALF COUPLINGS FOR REVISED SIGNAL HEAD MOUNTINGS ON POLES 2, 3, AND 5. PLUG UNUSED MOUNTINGS.
- R&S DENOTES REMOVE AND SALVAGE.
- REMOVE AND SALVAGE ALL CONTROL CABLE AND INSTALL NEW.
- TEMPORARY ALL RED FLASHING OPERATION DURING REVISIONS WORK. SEE SPECIAL PROVISIONS.
- ALL PEDESTRIAN INDICATIONS SHALL BE 12"X12".
- ALL NEW SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, 4-3, 6-3 AND 8-3.

* NOTES *

- EACH LUMINAIRE SHALL HAVE A PHOTO ELECTRIC CELL AND STREET LIGHT CHECK SWITCH.
- THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT (SEE SPECIAL PROVISIONS).
- HANDHOLES 2, 3, 5, 7, 8, 10, 12, 13, 16, 18 AND 19 ARE INPLACE. USE INPLACE.
- (INTERCONNECT) DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- PAINT REVISED SIGNAL SYSTEM (SEE SPECIAL PROVISIONS).
- A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM END OF THE MAST ON POLE 4 PER MN/DOT 3831.2C.
- A MID ARM MOUNT SHALL BE FURNISHED AND INSTALLED 14 FEET FROM THE END OF MAST ARM ON POLE 4.
- HANDHOLES 9 AND 24 ARE SPECIAL HANDHOLES (SEE SPECIAL PROVISIONS).

ASBUILT PLAN

CONFORMING TO CONST. RECORDS

DONE BY: JPH

DATE: 2-11-92

INTERSECTION LAYOUT
LEXINGTON AVE & COUNTY RD E
SYSTEM D

S.A.P. No. 187-020-05, 187-105-04

S.A.P. No. 62-651-24

Sheet No. 12 of 44 Sheets

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 W. 1st St. East Ramp
Lexington Ave to Rd E also Hwy 101 Rd & I 694 South & North Ramps & County Rd F

24X

DRAWING

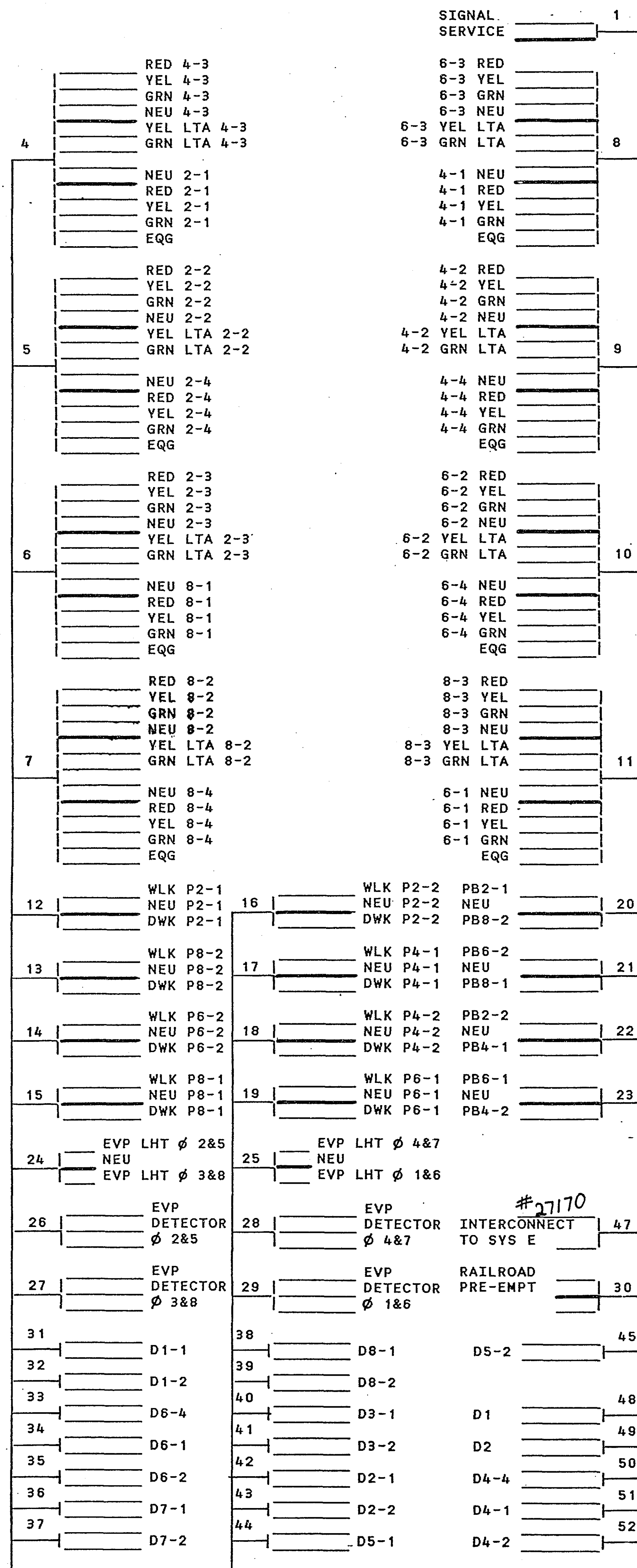
DRAWING NUMBER

23-147

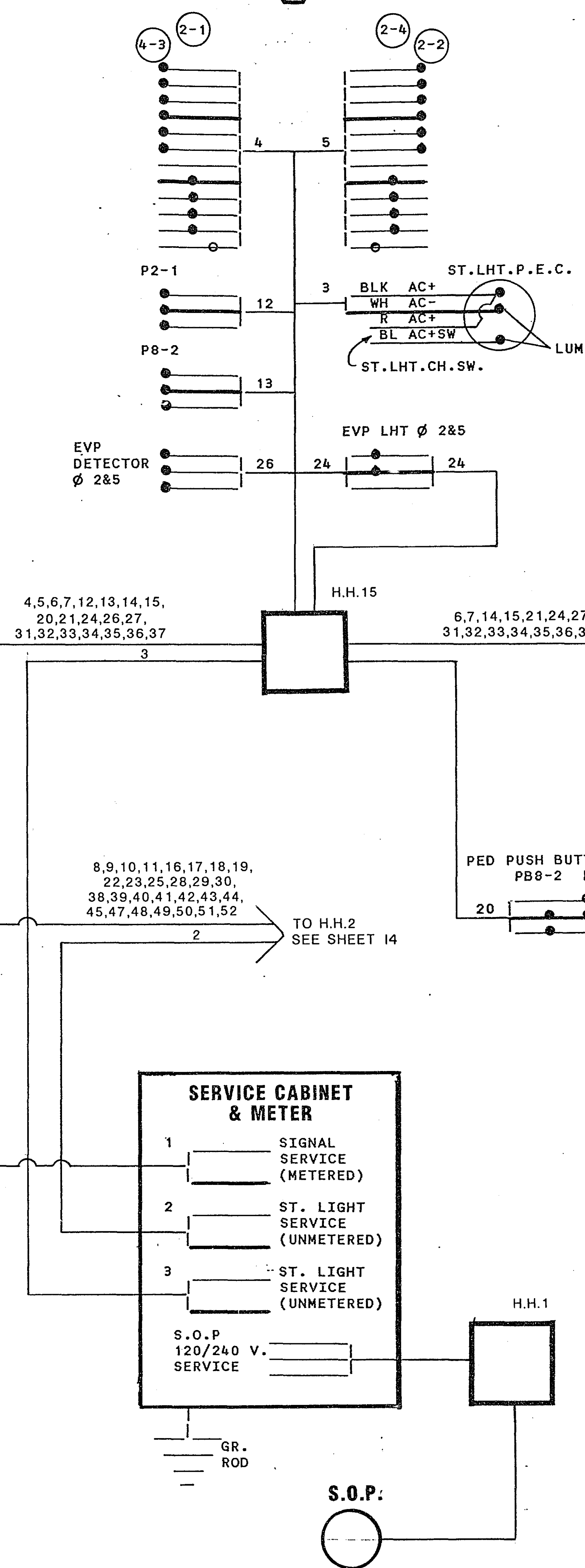
DRAWING NUMBER

NUMBER

CONTROLLER CABINET



①

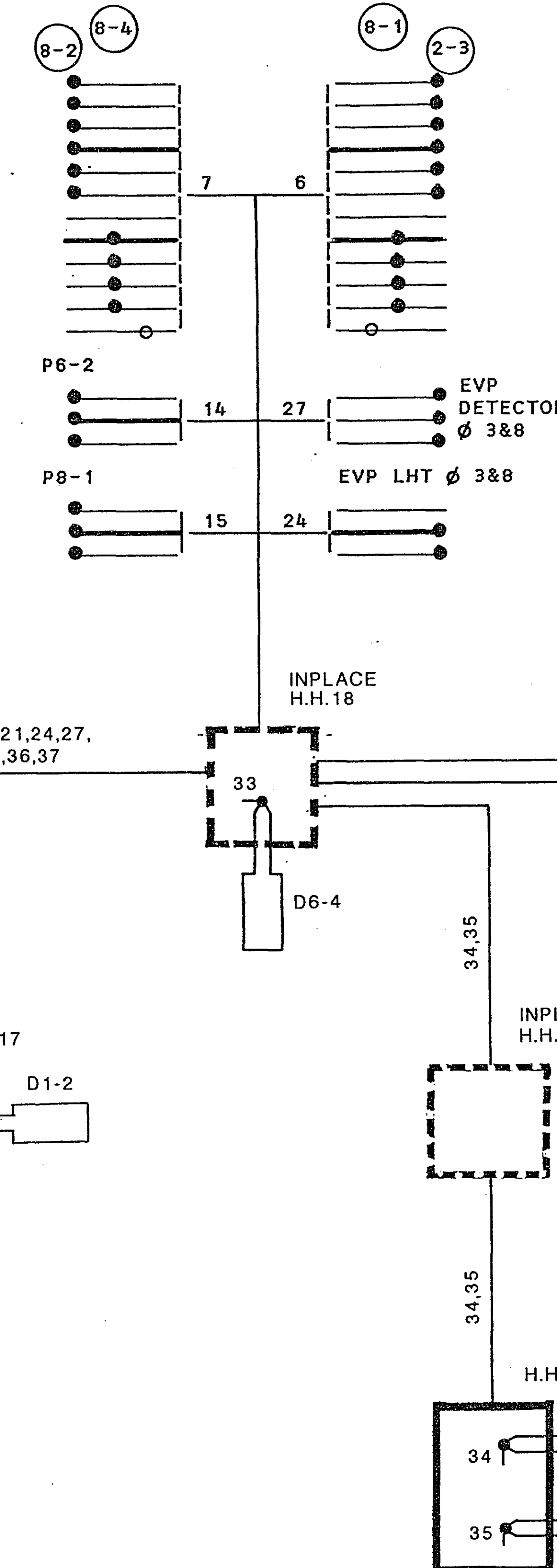


CONDUCTOR COLOR CODING

R	BLK	2-1/C #6
O	WH	2-1/C #10
BL	R	3/C #12
WH	WH	BLK
R/BLK	BLK	2/C #14
O/BLK	BLK	CLEAR
BL/BLK	BLK	R OR O
WH/BLK	BLK	WH OR YEL
BLK	BLK	BL OR BLK
BLK/WH	BLK	3/C #20
G/BLK	BLK	
G	BLK	

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

④



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: 8/29/91 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: JPH
DATE: 2-11-92

FIELD WIRING DIAGRAM
LEXINGTON AVE & COUNTY RD E

SYSTEM D

S.A.P. No. 187-020-05, 187-105-04

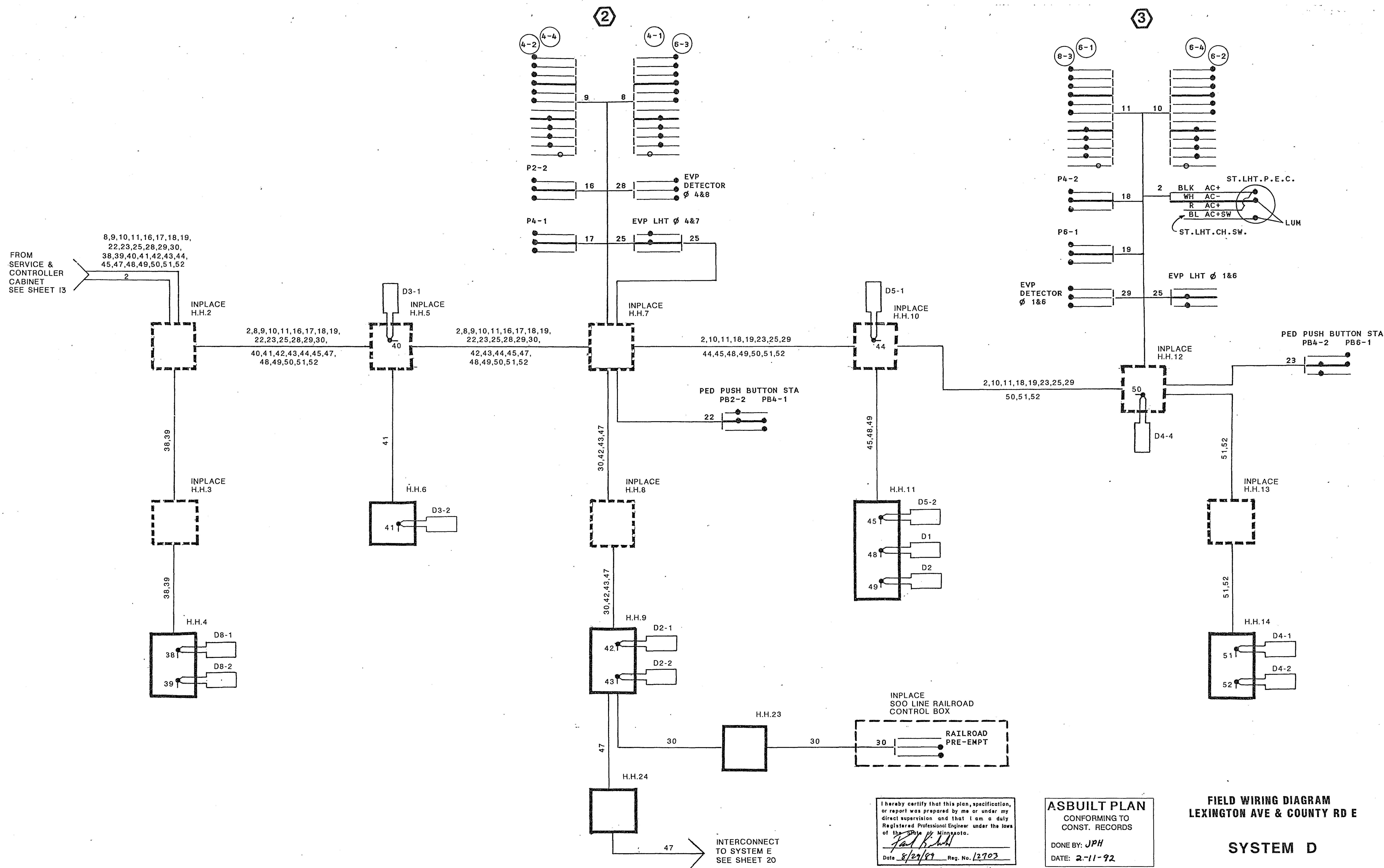
S.A.P. No. 62-651-24

Sheet No. 13 of 44 Sheets

23-147

23-147 County Rd G Pine Tree Drive
County Rd E & T.H. 51 at West of East Ramp
Lexington Ave to Rd E also Hwy 101 Rd & I 694 South of North Ramp & County Rd F

24X71



S.A.P. No. 187-020-05, 187-105-04

S.A.P. No. 62-651-24

**FIELD WIRING DIAGRAM
LEXINGTON AVE & COUNTY RD E**

SYSTEM D

Sheet No. 14 of 44 Sheets

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 west of East Range
Tupington Ave to Rd E also Grey Fox Rd & I 694 South of North Range & County Rd F



STATION	LOCATION	DESCRIPTION
LEXINGTON AVE.		
213+47	RT. 39'	HANDHOLE 13
213+68	RT. 39'	HANDHOLE 12
213+69	LT. 40'	SIGNAL NO. 1
213+68	LT. 60'	CONTROLLER CABINET
213+70	LT. 56'	HANDHOLE 10
213+72	LT. 58'	HANDHOLE 1
213+73	LT. 6'	HANDHOLE 11
213+88.5	RT. 60'	SIGNAL NO. 4
213+89	LT. 68'	HANDHOLE 2
214+22.5	RT. 55'	HANDHOLE 14
214+34.5	LT. 55'	HANDHOLE 4
214+68	RT. 60'	HANDHOLE 8
214+68.5	LT. 60'	SIGNAL NO. 2
214+84	RT. 6'	HANDHOLE 7
214+88.5	LT. 40'	SIGNAL NO. 3
214+89	LT. 39'	HANDHOLE 5
216+10	LT. 39'	HANDHOLE 6
COUNTY RD. "E"		
0+20	RT. 39'	HANDHOLE 3
3+80	LT. 39'	HANDHOLE 9

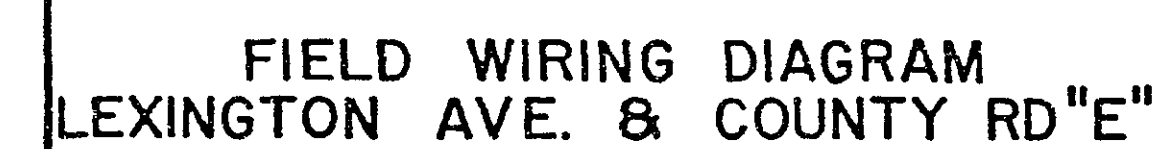
LEXINGTON AVE. & COUNTY RD. "E"
SYSTEM D

S.A.P. No. 62-651-24

SHEET NO. 15 OF 44 SHEETS

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. St west of East Ramps
Leighton Ave to Rd E also the Fox Rd & I 694 South &
North Ramps & County Rd F



SYSTEM D

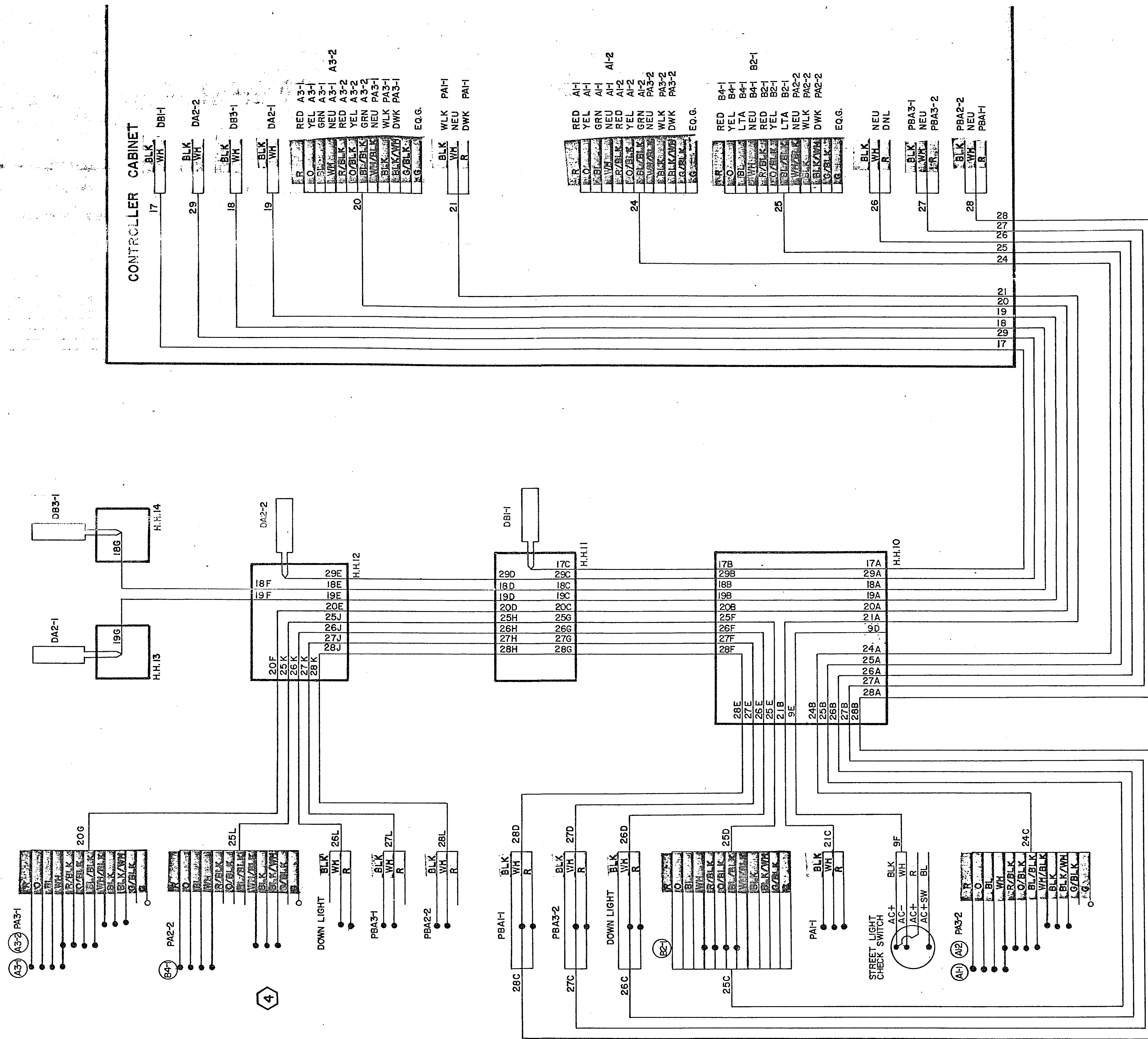
FOR INFORMATION ONLY
(INPLACE SYSTEM)

S.A.P. No. 62-651-24

SHEET NO. 16 OF 44 SHEETS

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 west of East Range
Lapingtonline Co Rd E also Grey Fox Rd & I 694 South of
North Range & County Rd F



FIELD WIRING DIAGRAM
LEXINGTON AVE. & COUNTY RD. "E"
SYSTEM D

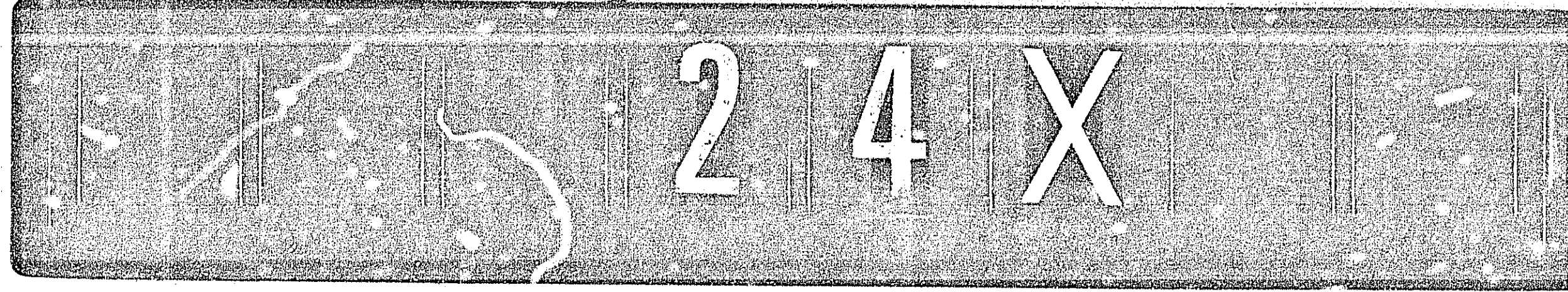
FOR INFORMATION ONLY
(INPLACE SYSTEM)

S.A.P. No. 62-651-24

SHEET NO. 17 OF 44 SHEETS

23-147

23-147 County Rd E Pine Tree Drive
County Rd E to T.H. St west of East Ramp
Lexington Ave to Rd E also the Fox Rd & I 694 South
North Ramp & County Rd F



DRAWING

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
RECORD BY NUMBER 07548
REVISION BY N/A

DRAWING NUMBER

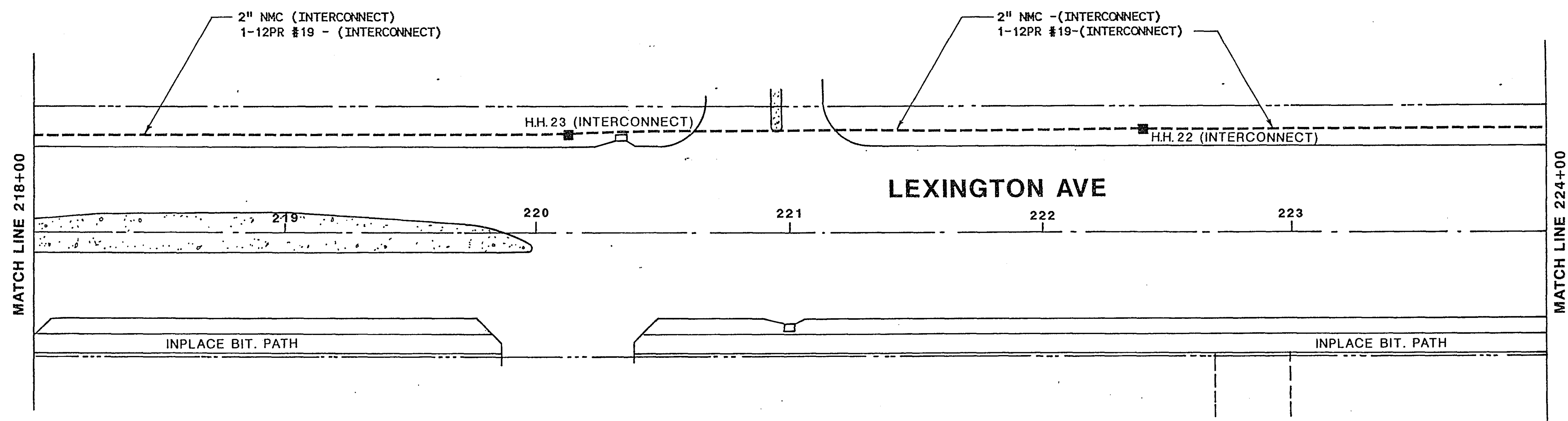
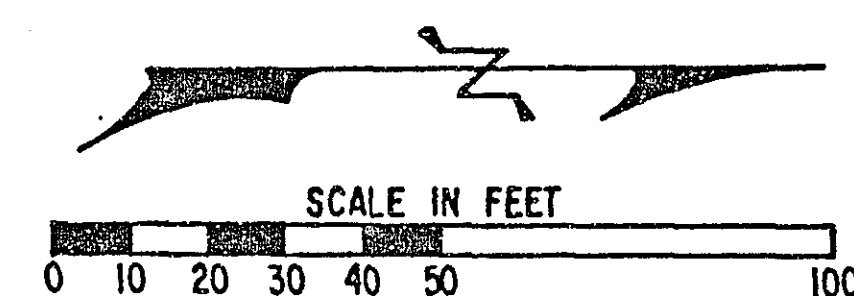
23-147

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
RECORD BY NUMBER 07548
REVISION BY N/A

DRAWING NUMBER

NUMBER

IRVINE, CALIFORNIA
RECORD BY NUMBER 07548
REVISION BY N/A



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 K. Hill
Date: 8/24/91 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

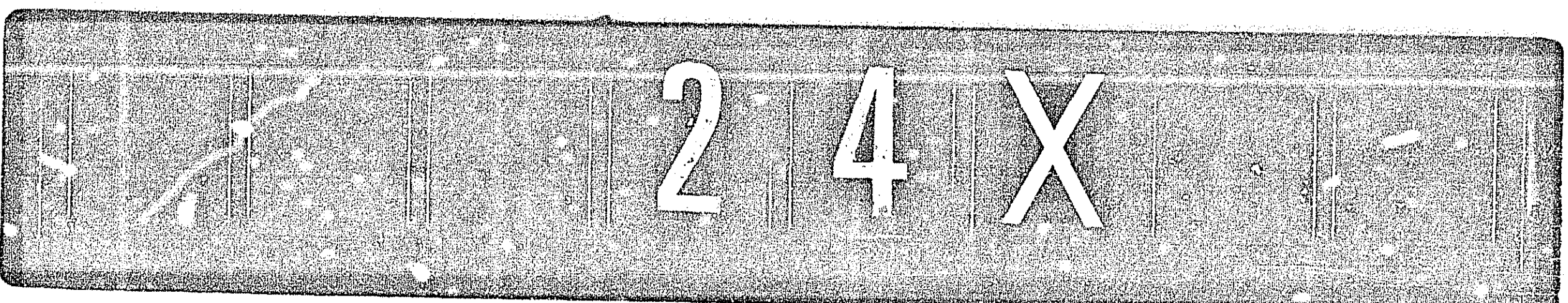
INTERCONNECT
LEXINGTON AVE
BETWEEN SYSTEM D & E

S.A.P. No. 187-1Q5-04
S.A.P. No. 62-651-24

Sheet No. 18 of 44 Sheets

23-147

23-147 County Rd C Pine Tree Drive
County Rd E & T.H. 51 W. 1st & 2nd Ramps
Lexington Ave to Rd E also there for Rd I & 694 South of North Ramps & County Rd F



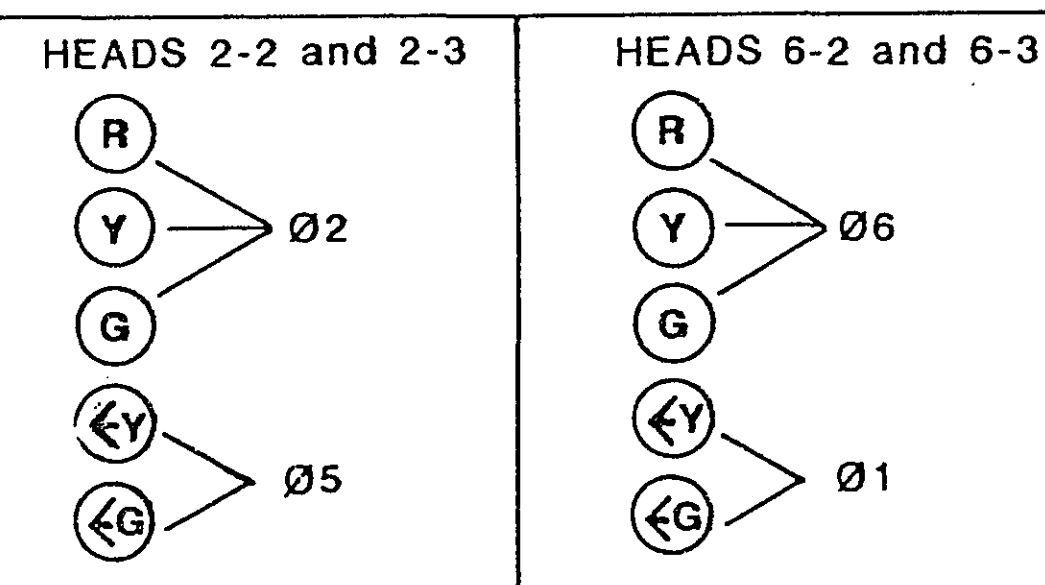
LEGEND OF SYMBOLS

SIGNAL BASE NO.	5
SIGNAL FACE NO.	42
CONTROLLER AND CABINET	
CONTROLLER AND CABINET - INPLACE	
HANDHOLE	
HANDHOLE - INPLACE	
CONDUIT	
CONDUIT - 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	

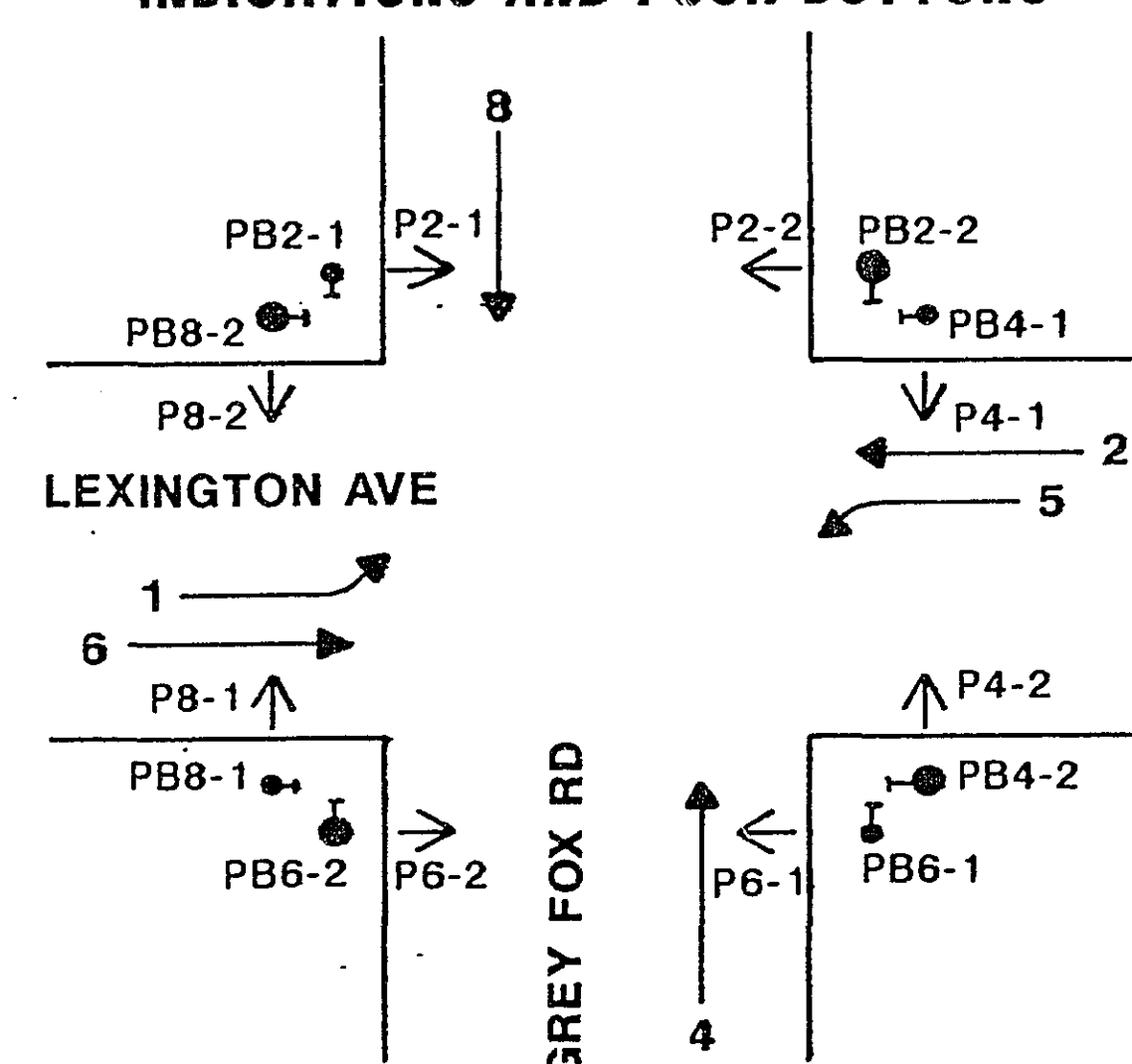
SIGNAL INDICATION CHART						
FACE	PHASE	INDICATION SIZE				
		R	Y	G	Y	G
2-1	2	12"	12"	12"	12"	12"
2-2	2 and 5	12"	12"	12"	12"	12"
2-3	2 and 5	12"	12"	12"	12"	12"
2-4	2	12"	12"	12"	12"	12"
4-1	4	12"	12"	12"	12"	12"
4-2	4	12"	12"	12"	12"	12"
4-3	4	12"	12"	12"	12"	12"
6-1	6	12"	12"	12"	12"	12"
6-2	1 and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

FLASH MODE = ALL RED

SIGNAL HEAD PHASING

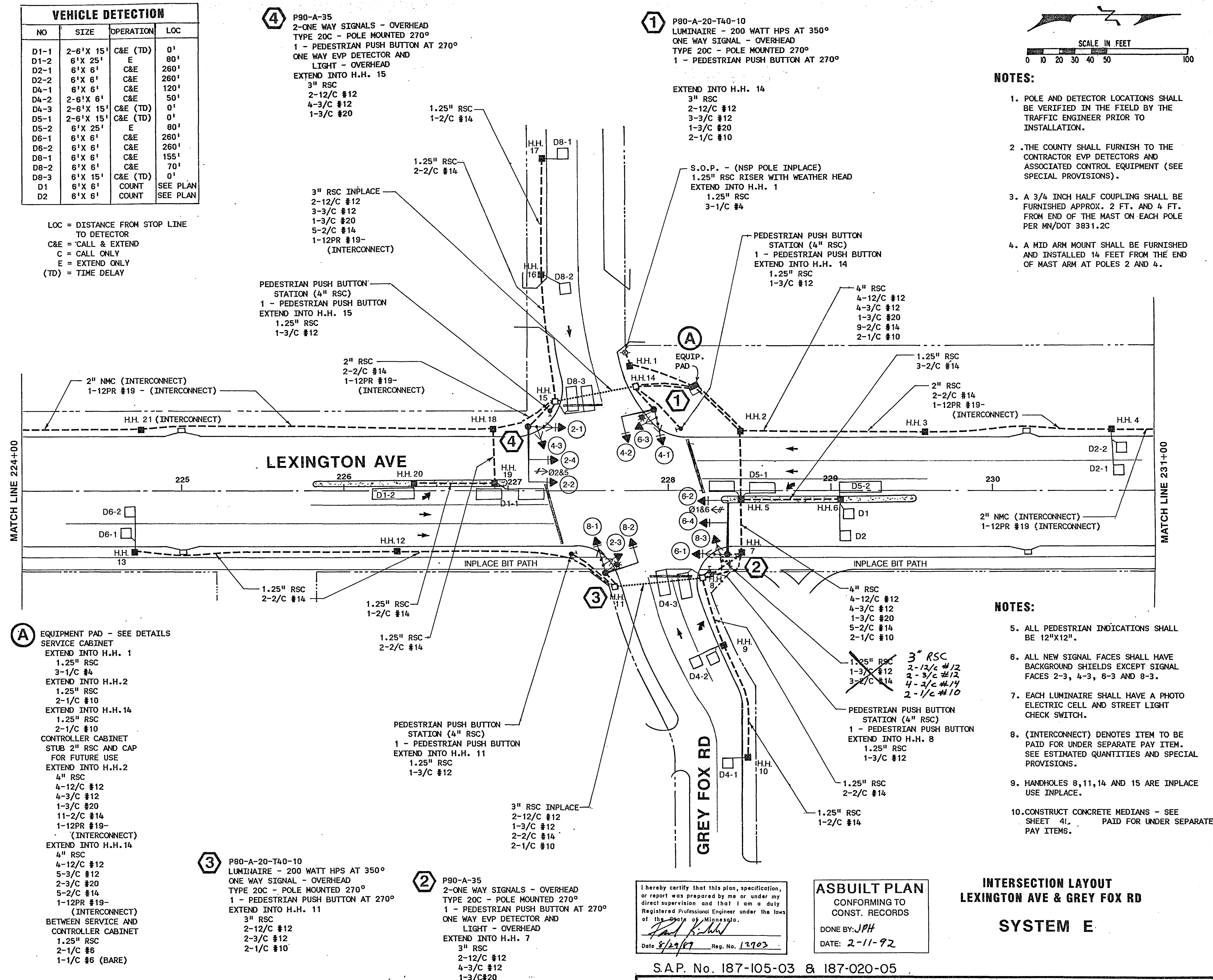


CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



VEHICLE DETECTION			
NO	SIZE	OPERATION	LOC
D1-1	2-6'X 15'	C&E (TD)	0'
D1-2	6'X 25'	E	80'
D2-1	6'X 6'	C&E	260'
D2-2	6'X 6'	C&E	260'
D4-1	6'X 6'	C&E	120'
D4-2	2-6'X 6'	C&E	50'
D4-3	2-6'X 15'	C&E (TD)	0'
D5-1	2-6'X 15'	C&E (TD)	0'
D5-2	6'X 25'	E	80'
D6-1	6'X 6'	C&E	260'
D6-2	6'X 6'	C&E	260'
D8-1	6'X 6'	C&E	155'
D8-2	6'X 6'	C&E	70'
D8-3	6'X 15'	C&E (TD)	0'
D1	6'X 6'	COUNT	SEE PLAN
D2	6'X 6'	COUNT	SEE PLAN

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



NOTES:

- POLE AND DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
- THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT (SEE SPECIAL PROVISIONS).
- A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM END OF THE MAST ON EACH POLE PER MNDOT 3831.2C
- A MID ARM MOUNT SHALL BE FURNISHED AND INSTALLED 14 FEET FROM THE END OF MAST ARM AT POLES 2 AND 4.

NOTES:

- ALL PEDESTRIAN INDICATIONS SHALL BE 12"X12".
- ALL NEW SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, 4-3, 6-3 AND 8-3.
- EACH LUMINAIRE SHALL HAVE A PHOTO ELECTRIC CELL AND STREET LIGHT CHECK SWITCH.
- (INTERCONNECT) DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- HANDHOLES 8, 11, 14 AND 15 ARE INPLACE USE INPLACE.
- CONSTRUCT CONCRETE MEDIANS - SEE SHEET 41. PAID FOR UNDER SEPARATE PAY ITEMS.

INTERSECTION LAYOUT
LEXINGTON AVE & GREY FOX RD

SYSTEM E

ASBUILT PLAN
CONFORMING TO
CONST. RECORDSDONE BY: JPH
DATE: 2-11-92

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: 8/29/97 Reg. No. 12902

S.A.P. No. 187-105-03 & 187-020-05

S.A.P. No. 62-651-24

Sheet No. 19 of 44 Sheets

23-147

24X

23-147 County AdC Pine Tree Drive
County Rd E & T.H. 51 West of East Ramp
Lexington Ave to Rd E also Grey Fox Rd & I 694 South of North Ramp & County Rd F

DRAWING

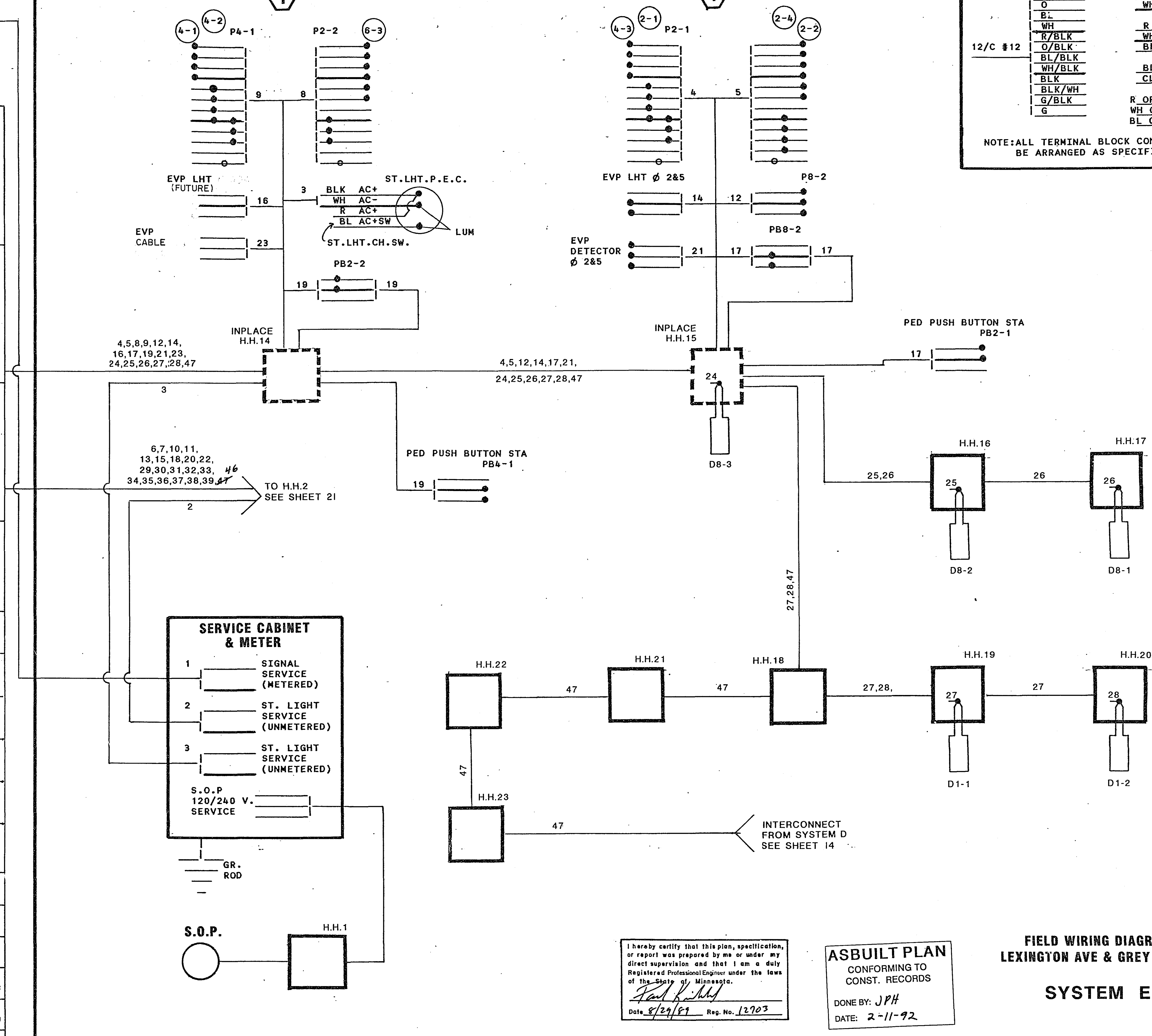
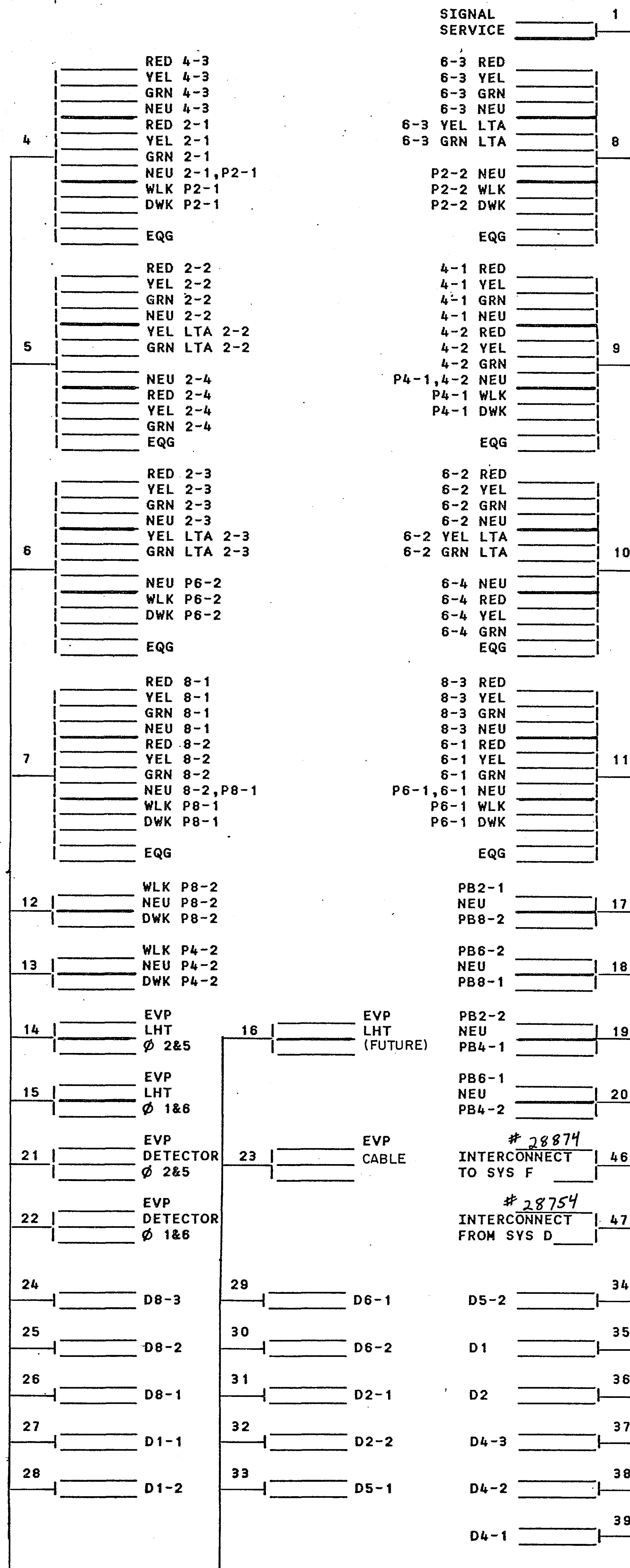
DRAWING NUMBER
23-147

DRAWING NUMBER

NUMBER

PLAYHOLD CORPORATION
REGISTERED BY NPLAYHOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED BY NUMBER 12345PLAYHOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED BY NUMBER 12345PLAYHOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED BY NUMBER 12345

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	BLK	2-1/C #6
O	WH	2-1/C #10
BL		
WH		
R/BLK	R	3/C #12
O/BLK	WH	
BL/BLK	BLK	2/C #14
WH/BLK	BLK	
BLK	CLEAR	
BLK/WH	R OR O	
G/BLK	WH OR YEL	3/C #20
G	BL OR BLK	

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.

Paul K. Kell

Date: 8/24/91 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

FIELD WIRING DIAGRAM
LEXINGTON AVE & GREY FOX RD

SYSTEM E

S.A.P. No. 187-105-03 & 187-020-05

S.A.P. No. 62-651-24

Sheet No. 20 of 44 Sheets

23-147

24X

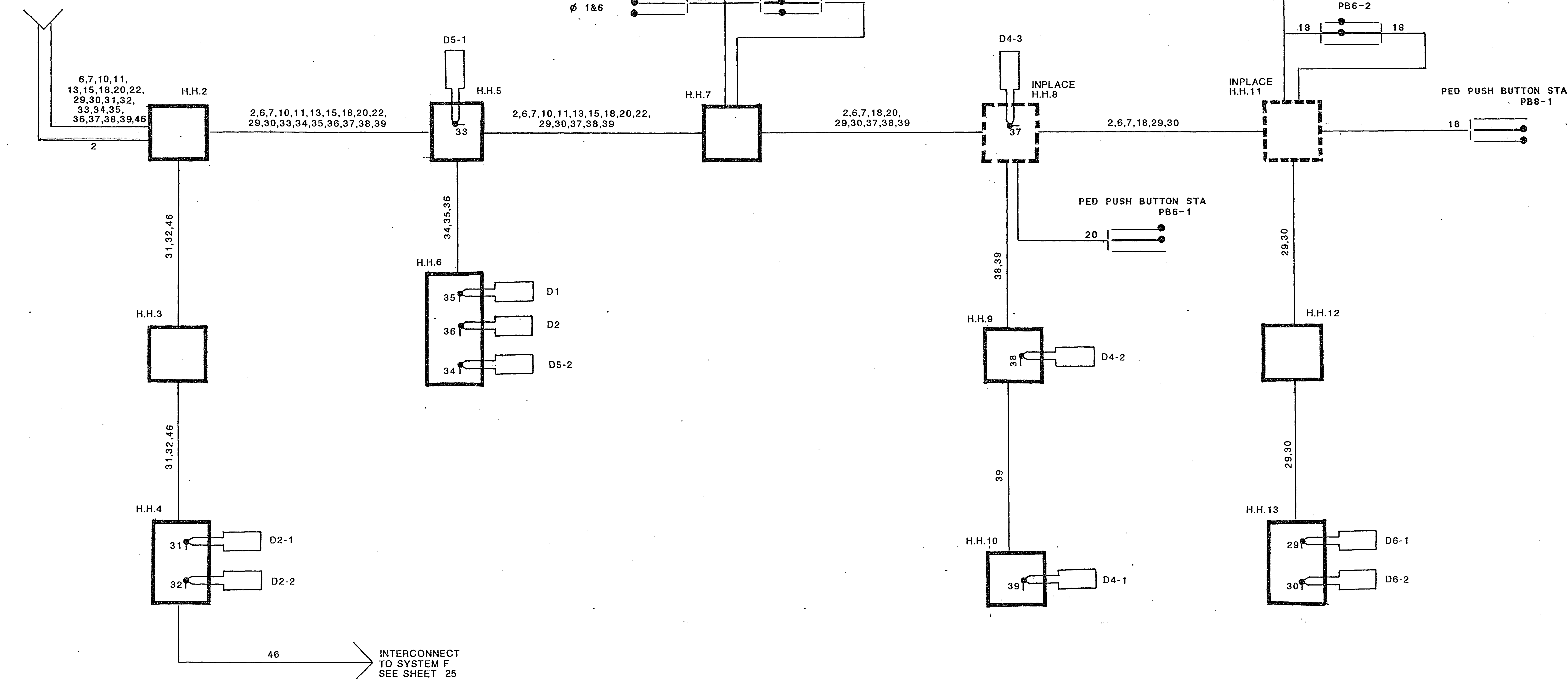
23-147 County Rd 6 Pine Tree Drive
County Rd 6 & T.H. 51 West of East Ramp
Lexington Ave to Rd E also Grey Fox Rd & I 694 South of North Ramp & County Rd F

DRAWING

DRAWING NUMBER
23-147

DRAWING NUMBER

NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY: JAUPLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY: JAUPLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY: JAUPLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY: JAUFROM SERVICE &
CONTROLLER CABINET
SEE SHEET 20

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 K. Kuhl
Date: 8/27/91 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

FIELD WIRING DIAGRAM
LEXINGTON AVE & GREY FOX RD

SYSTEM E

S.A.P. No. 187-105-03 & 187-020-05

S.A.P. No. 62-651-24

Sheet No. 21 of 44 Sheets

23-147

23-147 County Rd E, Pine Tree Drive
County Rd E to T.H. 51 at West of East Ramp
Lexington Ave to Rd E also Grey Fox Rd & I 694 South of North Ramps & County Rd F

24-X

DRAWING

PLAN HOLD CORPORATION
DESIGNED BY NVA

DRAWING NUMBER
23-147

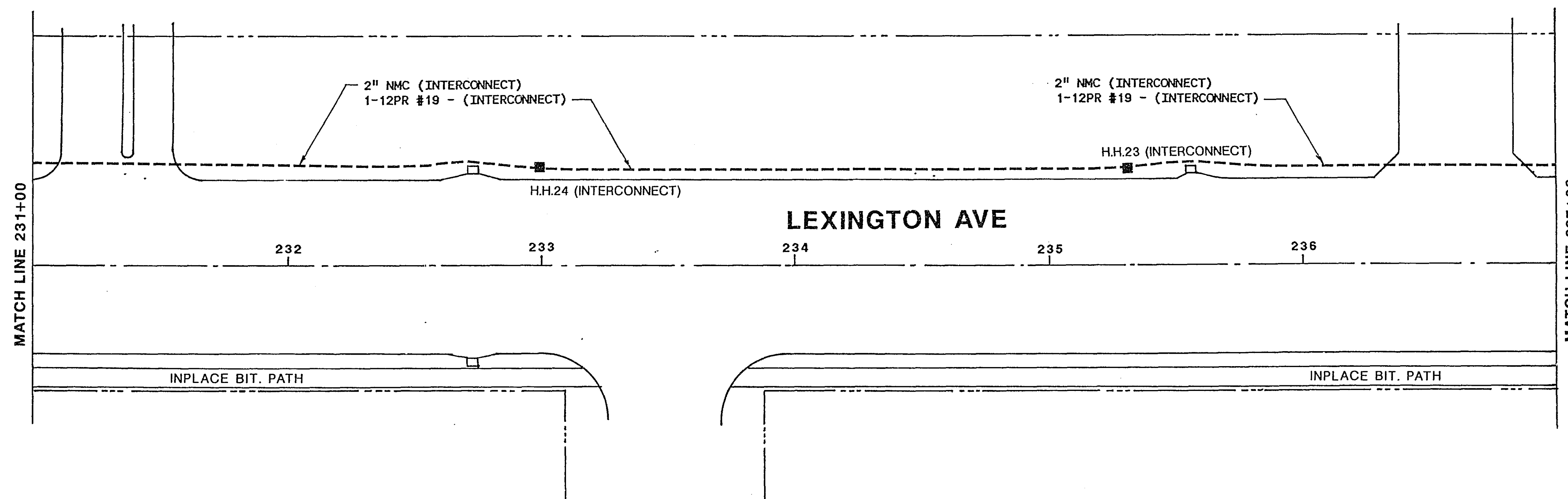
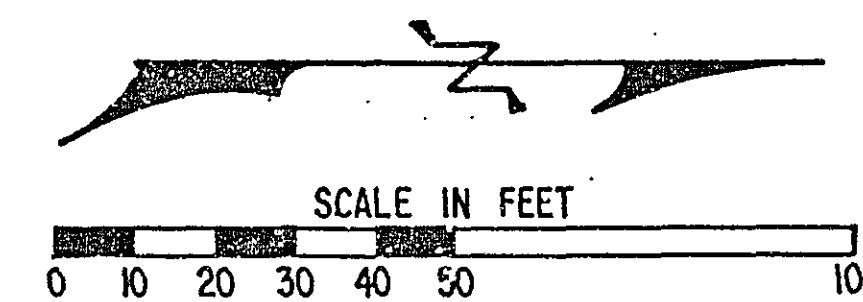
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
DESIGNED BY NVA

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
DESIGNED BY NVA

NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
DESIGNED BY NVA



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 Wisconsin.
[Signature]
Date 2/27/87 Reg. No. 12703

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

INTERCONNECT
LEXINGTON AVE
BETWEEN SYSTEM E & F

S.A.P. No. 187-105-04
S.A.P. No. 62-651-24

Sheet No. 22 of 44 Sheets
23-147

2-4-X

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 west of East Ramp
Lexington Ave to Rd E also Hwy 104 & I 694 south of
North Ramp & County Rd F

LEGEND OF SYMBOLS

SIGNAL BASE NO.	5
SIGNAL FACE NO.	42
CONTROLLER AND CABINET	
CONTROLLER AND CABINET - INPLACE	
HANDHOLE	
HANDHOLE - INPLACE	
CONDUIT	
CONDUIT - 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	

SIGNAL INDICATION CHART

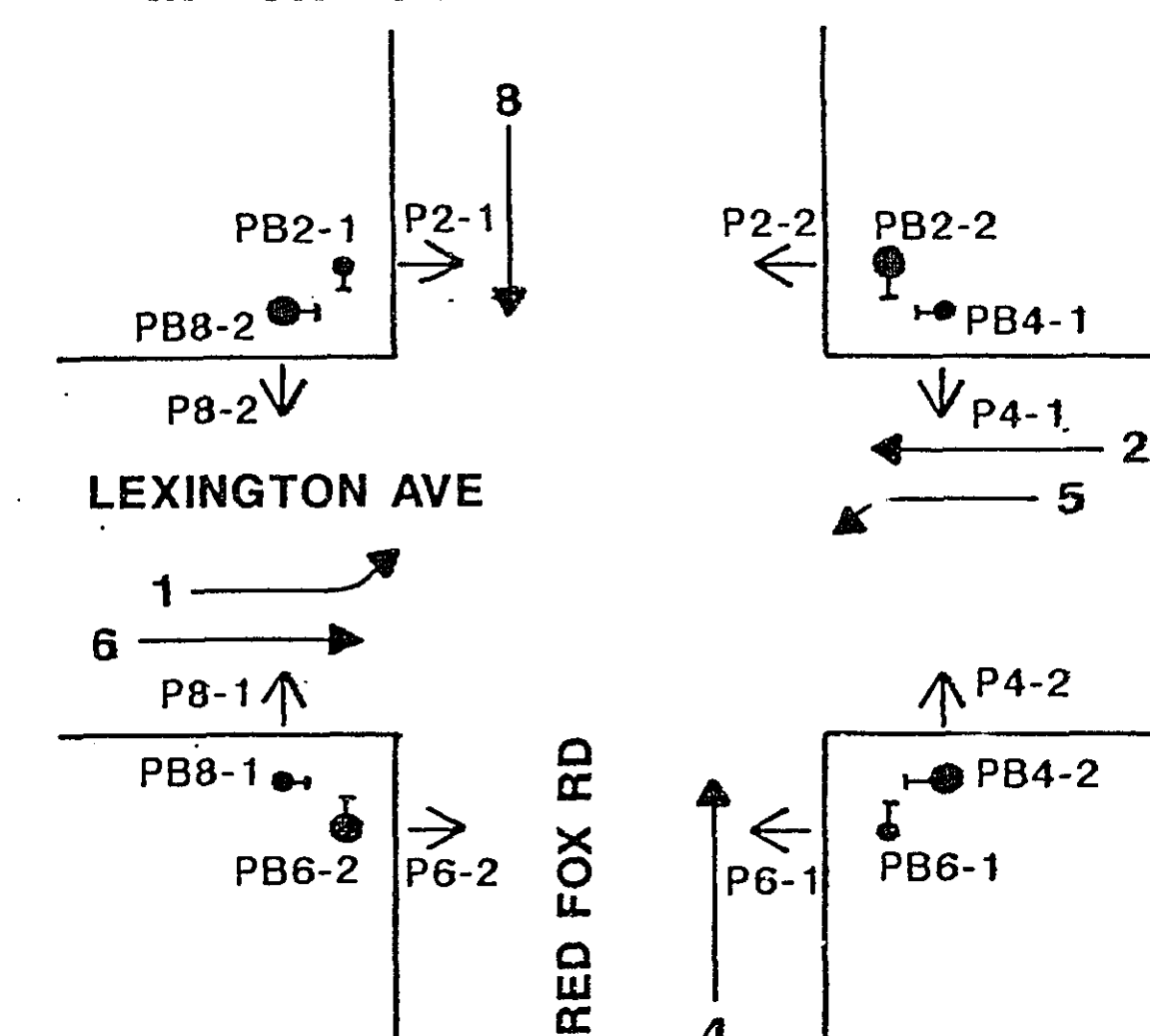
FACE	PHASE	R	Y	G	←Y	←G
2-1	2	12"	12"	12"		
2-2	2 and 5	12"	12"	12"	12"	12"
2-3	2 and 5	12"	12"	12"	12"	12"
2-4	2	12"	12"	12"		
4-1	4	12"	12"	12"		
4-2	4	12"	12"	12"		
4-3	4	12"	12"	12"		
6-1	6	12"	12"	12"		
6-2	1 and 8	12"	12"	12"	12"	12"
6-3	1 and 8	12"	12"	12"	12"	12"
6-4	6	12"	12"	12"		
8-1	8	12"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

FLASH MODE = ALL RED

SIGNAL HEAD PHASING

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

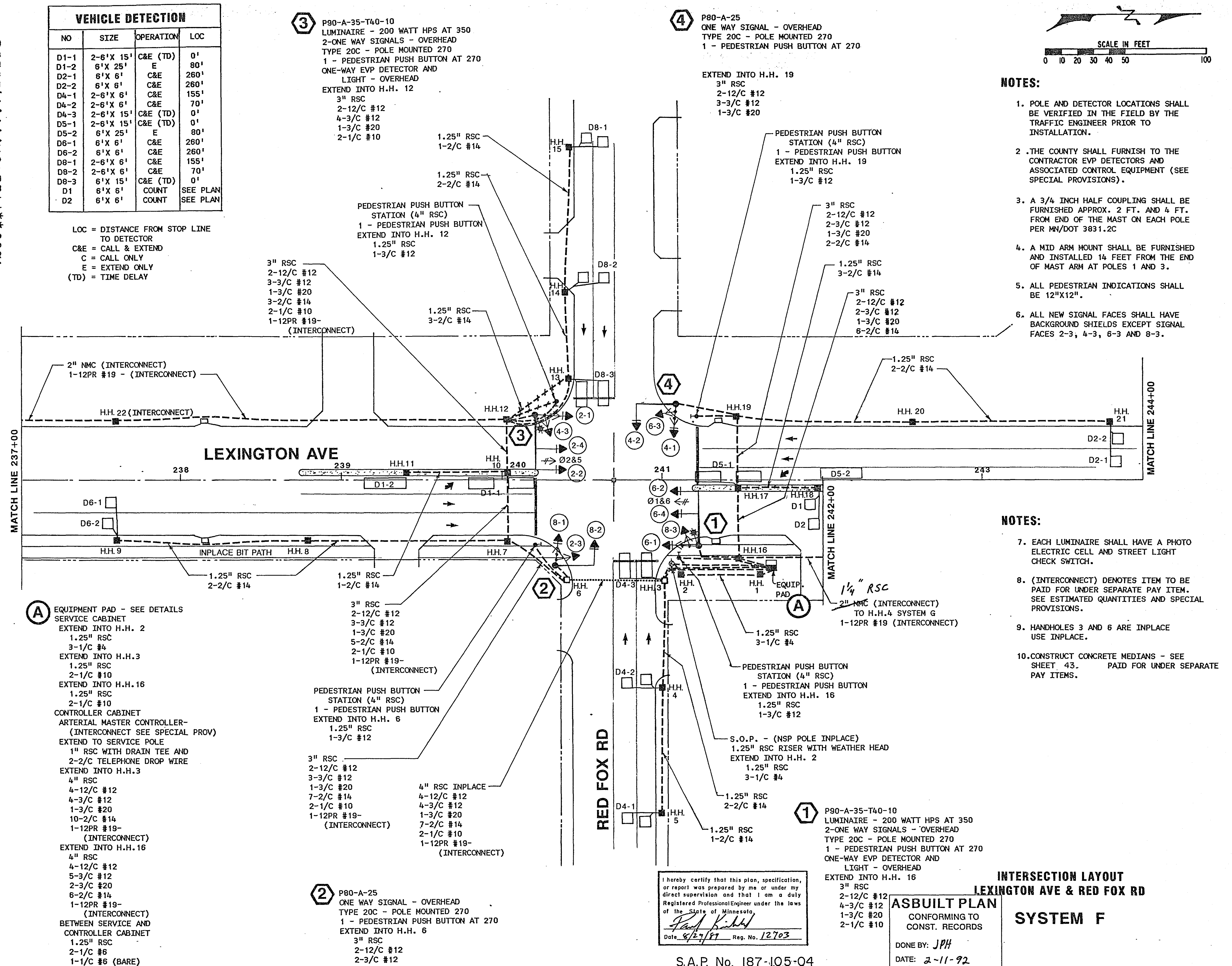
CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



VEHICLE DETECTION

NO	SIZE	OPERATION	LOC
D1-1	2-6'X 15'	C&E (TD)	0'
D1-2	6'X 25'	E	80'
D2-1	6'X 6'	C&E	260'
D2-2	6'X 6'	C&E	260'
D4-1	2-6'X 6'	C&E	155'
D4-2	2-6'X 6'	C&E	70'
D4-3	2-6'X 15'	C&E (TD)	0'
D5-1	2-6'X 15'	C&E (TD)	0'
D5-2	6'X 25'	E	80'
D6-1	6'X 6'	C&E	260'
D6-2	6'X 6'	C&E	260'
D8-1	2-6'X 6'	C&E	155'
D8-2	2-6'X 6'	C&E	70'
D8-3	6'X 15'	C&E (TD)	0'
D1	6'X 6'	COUNT	SEE PLAN
D2	6'X 6'	COUNT	SEE PLAN

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

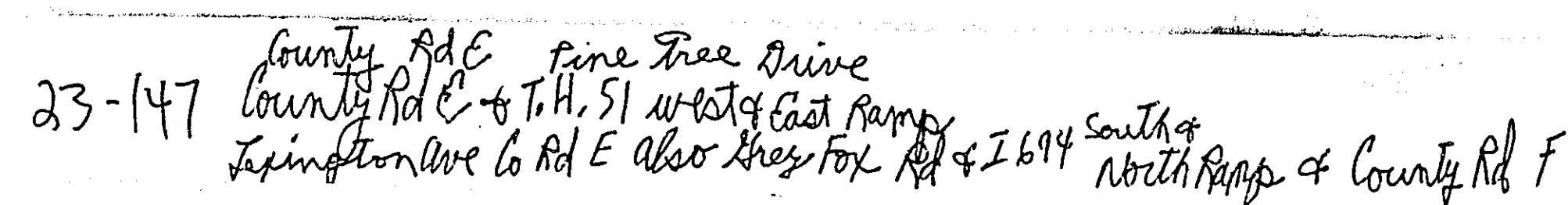


23-147 County Rd C Pine Tree Drive
 County Rd C to H.H. 51 west of East Ramp
 Lexington Ave to Red Fox Rd & I-694 South of
 North Ramp of County Rd F

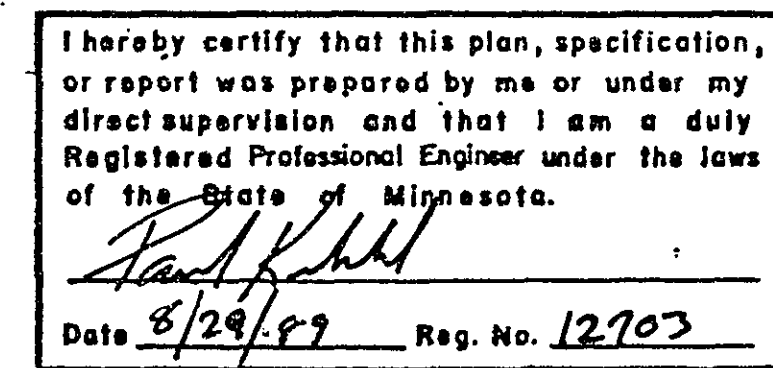
24X

NUMBER

• IRVINE, CALIFORNIA



2 4 X



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: *JPH*
DATE: *2-11-92*

**FIELD WIRING DIAGRAM
LEXINGTON AVE & RED FOX RD
SYSTEM F**

S.A.P. No. 187-105-04

S.A.P. No. 62-651-24

Sheet No. 25 of 44 Sheets

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 West of East Perry
Lexington Ave to Rd E also they took Rd 4 I 694 South of North Perry & County Rd F

2 4 X

NOTE:

- 1) REMOVE AND SALVAGE ALL ITEMS OF THE EXISTING SIGNAL SYSTEM NOT USED AS PART OF THE NEW SIGNAL SYSTEM. SEE SHEET 14 FOR EXISTING SIGNAL SYSTEM.
- 2) ALL ITEMS SHOWN OR NOTED IN PLACE SHALL BE USED IN PLACE UNLESS OTHERWISE SPECIFIED.
- 3) SEE SPECIAL PROVISIONS FOR STATE FURNISHED EQUIPMENT AND FOR USE OF SALVAGED EQUIPMENT.
- 4) INSTALL SALVAGED TYPE "D" SIGNS AT POLES 2 AND 3.
- 5) ALL PEDESTRIAN INDICATIONS SHALL BE 9" X 9" EXCEPT P4-1 AND P4-2 WHICH SHALL BE 12" X 12".
- 6) ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT FACE NO'S 4-3 AND 6-4.
- 7) ALL SIGNAL FACES SHALL BE 12" SECTION R-Y-G EXCEPT FACE NO'S 6-1 AND 6-4 WHICH SHALL BE 12" SECTION R-Y-G-Y-LTA-GLTA.
- 8) PAINT ALL ITEMS OF THIS SIGNAL SYSTEM. SEE SPECIAL PROVISIONS.
- 9) A MID-MAST ARM MOUNT SHALL BE INSTALLED 12' FROM THE END OF THE MAST ARM AT POLE 2.
- 10) SEE SHEET 9 FOR BRIDGE DETAILS.

LOOP DETECTORS

NUMBER	SIZE	FUNCTION	LOCATION
D1-1	MULTIPLE	I	5'
D2-1	INPLACE	I	300'
D2-2	INPLACE	I	300'
D4-1	23'-6" X 6'	I	250'
D4-2	23'-6" X 6'	I	120'
D4-3	6' X 20'	2	5'
D4-5	6' X 20'	I	5'
D4-6	6' X 20'	I	5'
D6-1	6' X 6'	I	300'
D6-2	6' X 6'	I	300'
F&I D1	6' X 6'	COUNT	SEE PLAN
F&I D2	6' X 6'	COUNT	SEE PLAN
F&I D3	6' X 6'	COUNT	SEE PLAN
F&I D4	6' X 6'	COUNT	SEE PLAN

LOCATION = DISTANCE FROM STOP LINE TO DETECTOR.

LOOP DETECTOR FUNCTIONS

1. CALL AND EXTEND
2. DELAY CALL - ONLY

②

TYPE A100-A-30-D40-9 (DAVIT AT 350°)
A100 POLE FOUNDATION
2-ONE WAY SIGNALS-OVERHEAD

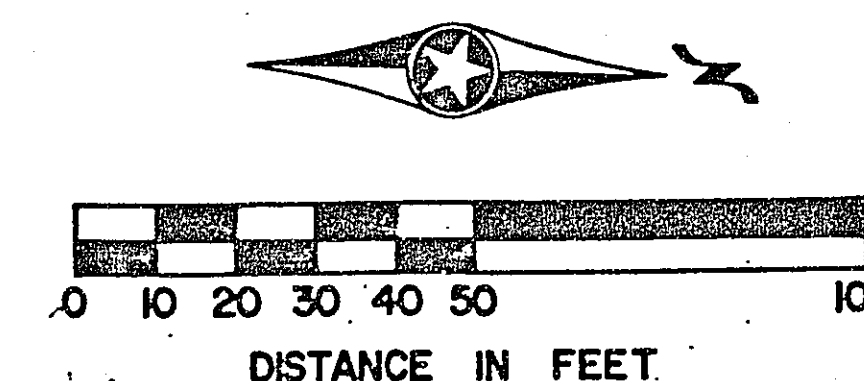
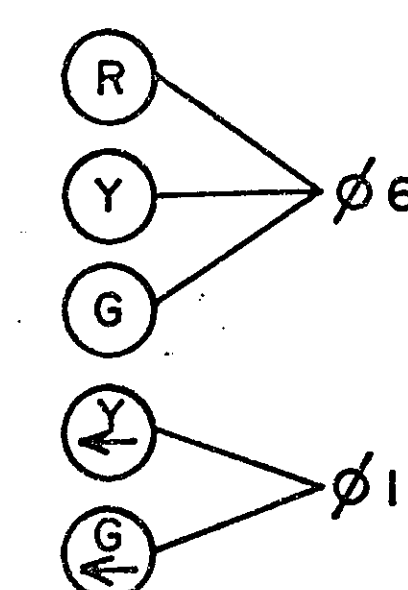
TYPE 10B-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.P.S.

1-PEDESTRIAN PUSH BUTTON AND SIGN
EXTEND INTO H.H. 10'
3" R.S.C.
2-12/C #12
1-3/C #12
2-1/C #10
F&I 1-3/C #20

(I) ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD

SIGNAL HEAD PHASING

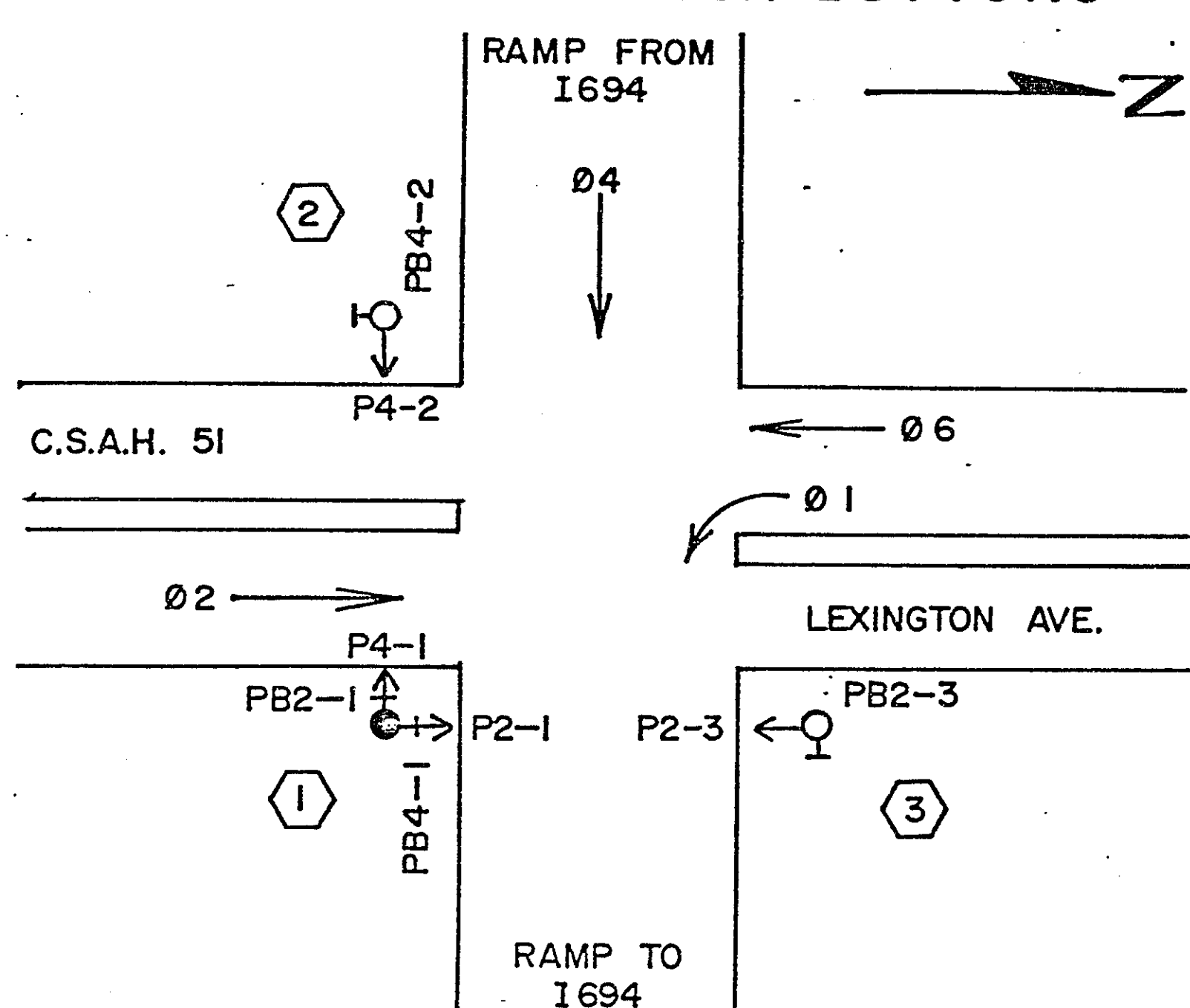
6-1 SIGNAL HEAD 6-4



NOTES:

1. ALL ITEMS ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE SPECIFIED AS FOLLOWS:
- R&S (REMOVE AND SALVAGE)
- F&I (FURNISH AND INSTALL) OR (I) (INSTALL)
2. (INTERCONNECT) DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE SPECIAL PROVISIONS.
3. TEMPORARY ALL RED FLASH OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
4. PAINT REVISED SIGNAL SYSTEM. SEE SPECIAL PROVISIONS.
5. THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT. SEE SPECIAL PROVISIONS.
6. CONSTRUCT CONCRETE MEDIAN - SEE SHEET 43. PAID FOR UNDER SEPARATE PAY ITEMS.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE.

①

TYPE A100-A-35
A100 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 20C-POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H. 2'
3" I.M.C.
2-12/C #12
3-3/C #12

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE WITH PHASE 1 BEING A PROTECTED PERMISSIVE LEFT TURN.

③

(I) ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD
TYPE A100-A-25-D40-9 (DAVIT AT 350°)
A100 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 20B-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.P.S.

1-PEDESTRIAN PUSH BUTTON AND SIGN
EXTEND INTO H.H. 1'
3" R.S.C.
3-12/C #12
1-3/C #12
2-1/C #10
F&I 1-3/C #20

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 K. Kuhl
Date 8/29/97 Reg. No. 12903

S.A.P. No. 187-020-05
62010694 * 0428085

S.A.P. No. 62-651-24

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: JPH
DATE: 2-11-92

REVISED
INTERSECTION LAYOUT
LEXINGTON AVE & I 694 (SOUTH RAMP)

SYSTEM G

Sheet No. 26 of 44 Sheets

23-147

23-147 County Rd C Pine Tree Drive
County Rd C & I.H. 51 W. 1st East Ramp
Lexington Ave to Rd E also Hwy 101 Rd & I 694 South
North Ramps & County Rd F

24X

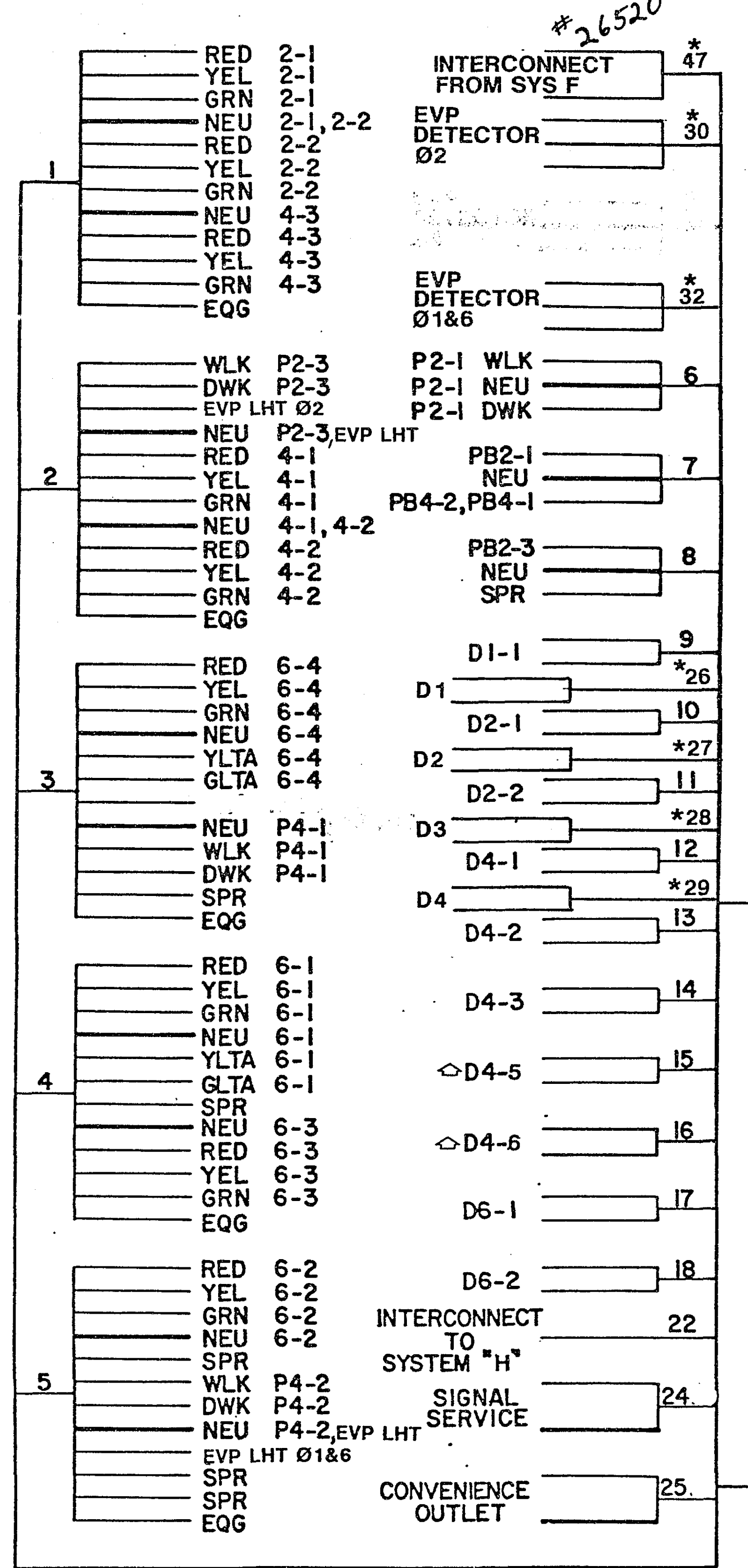
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DRAWING NUMBER
23-147

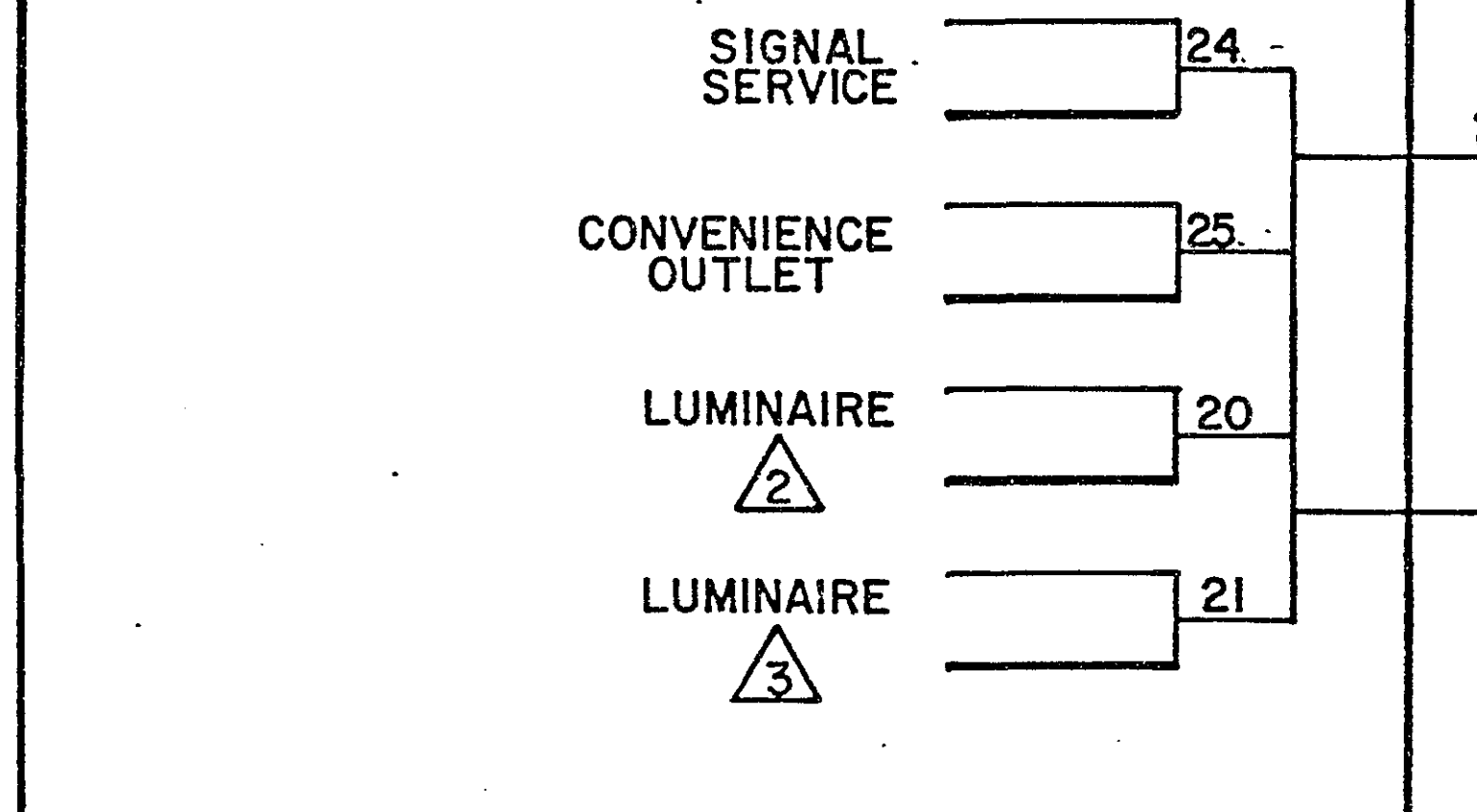
DRAWING NUMBER

NUMBER

CONTROLLER CABINET



SIGNAL SERVICE CABINET

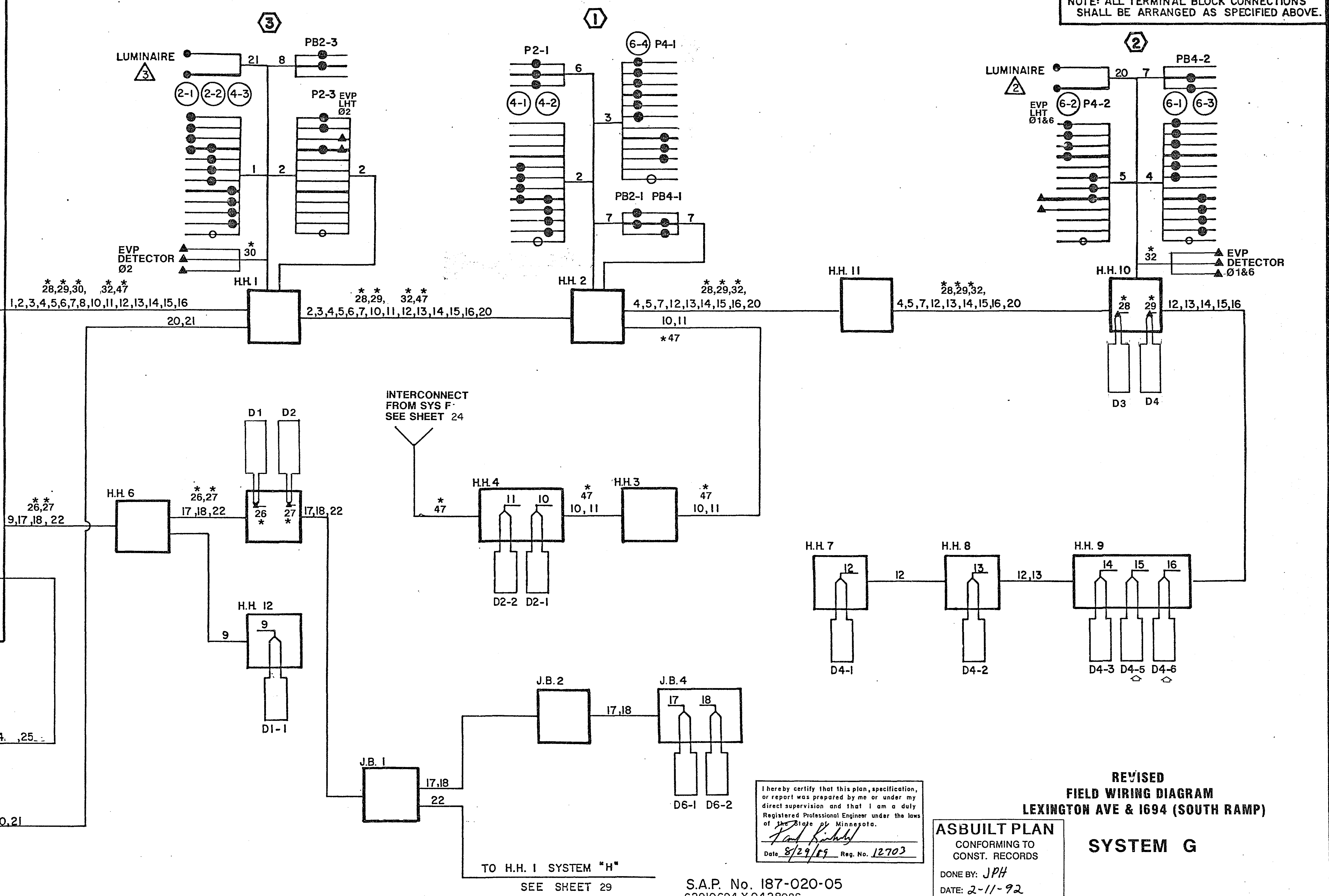


NOTES:
ALL CABLES ARE INPLACE UNLESS OTHERWISE INDICATED.
* DENOTES NEW CABLE
▲ DENOTES NEW CONNECTION
◇ RELABEL AS DIRECTED

CONDUCTOR COLOR CODING

R	BLK	2-1/C#6
0	WH	2-1/C#10
BL		
WH		
R/BLK		
0/BLK		
BL/BLK		
WH/BLK		
BLK		
BLK/WH		
G/BLK		
G		
	BLK	2/C#14
	CLEAR	

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.
Date: 8/29/89 Reg. No. 12703

REVISED
FIELD WIRING DIAGRAM
LEXINGTON AVE & I694 (SOUTH RAMP)

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

SYSTEM G

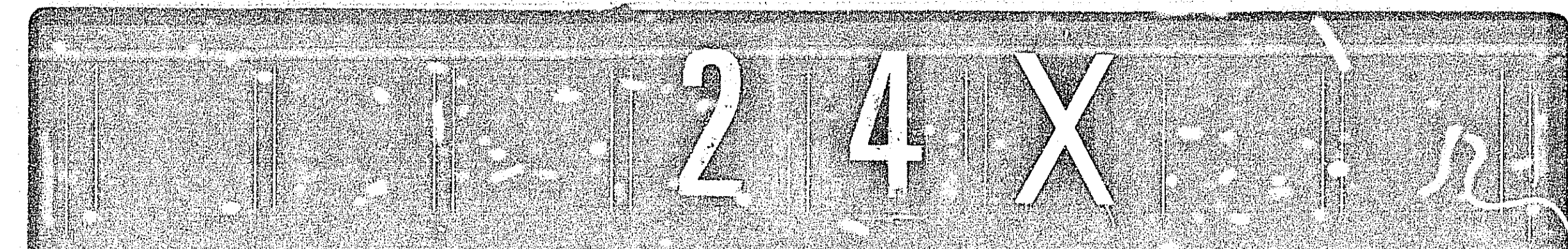
S.A.P. No. 187-020-05
62010694 *0428085

S.A.P. No. 62-651-24

Sheet No. 27 of 44 Sheets

23-147

23-147 County Ad E Pine Tree Drive
County Ad E to T.H. 51 west of East Ramp
Lexington Ave to Rd E also known as Fox Rd & I 694 South of North Ramp & County Rd F



- NOTE:**
- 1) REMOVE AND SALVAGE ALL ITEMS OF THE EXISTING SIGNAL SYSTEM NOT USED AS PART OF THE NEW SIGNAL SYSTEM. SEE SHEET 15 FOR EXISTING SIGNAL SYSTEM.
 - 2) ALL ITEMS SHOWN OR NOTED IN PLACE SHALL BE USED IN PLACE UNLESS OTHERWISE SPECIFIED.
 - 3) SEE SPECIAL PROVISIONS FOR STATE FURNISHED EQUIPMENT AND FOR USE OF SALVAGED EQUIPMENT.
 - 4) INSTALL SALVAGED TYPE D SIGNS AT POLES 2 AND 4.
 - 5) ALL PEDESTRIAN INDICATIONS SHALL BE 9" X 6" EXCEPT P4-3 AND P4-4 WHICH SHALL BE 12" X 12".
 - 6) ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT FACE NO. 4/3.
 - 7) ALL SIGNAL FACES SHALL BE 12" 3 SECTION RAMP EXCEPT FACE NO. 2-1 AND 2-4 WHICH SHALL BE 12" 5 SECTION RAMP Y-G-YLTA-GLTA.
 - 8) PAINT ALL ITEMS OF THIS SIGNAL SYSTEM - SEE SPECIAL PROVISIONS.
 - 9) A MID-MAST ARM MOUNT SHALL BE LOCATED 12' FROM THE END OF THE MAST ARM AT POLE 4.
 - 10) A 1/2" COUPLING SHALL BE INSTALLED AT 180° ON POLE 3.
 - 11) SEE SHEET 9 FOR BRIDGE DETAILS.

LOOP DETECTORS				
NUMBER	SIZE	FUNCTION	LOCATION	
D2-1	6' X 6'	1	300'	
D2-2	6' X 6'	1	300'	
D4-1	3-6' X 6'	1	250'	
D4-2	3-6' X 6'	1	120'	
D4-6	6' X 20'	1	5'	
D4-5	6' X 20'	1	5'	
D4-3	6' X 20'	2	5'	
D5-1	MULTIPLE	1	5'	
D6-1	INPLACE	1	300'	
D6-2	INPLACE	1	300'	
F&I D1	6' X 6'	COUNT	SEE PLAN	
F&I D2	6' X 6'	COUNT	SEE PLAN	
F&I D3	6' X 6'	COUNT	SEE PLAN	
F&I D4	6' X 6'	COUNT	SEE PLAN	

LOOP DETECTOR FUNCTIONS

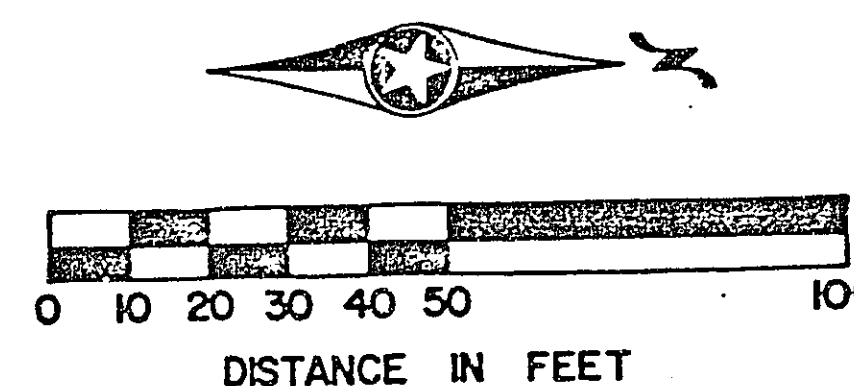
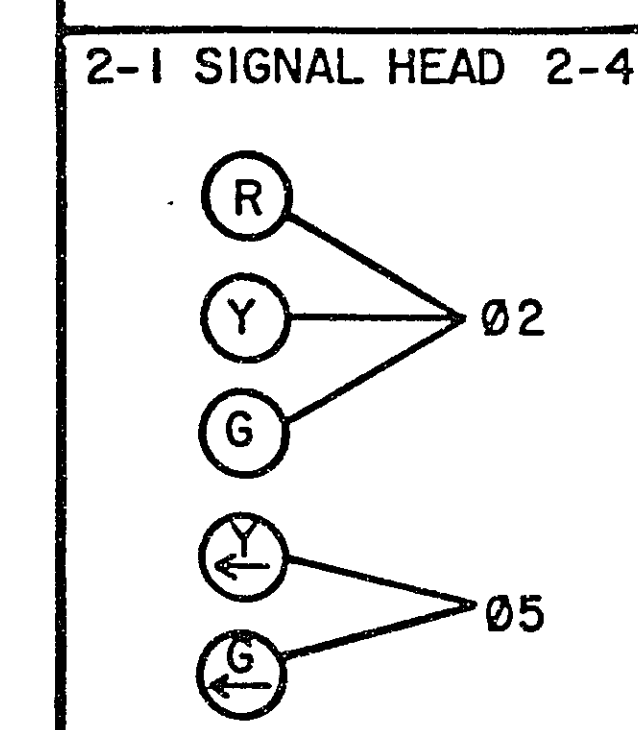
- 1 CALL AND EXTEND
- 2 DELAYED CALL ONLY

- ② TYPE A100-A-20-D40-9 (DAVIT AT 350°)
A100 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 20A-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.R.S.
- EXTEND INTO H.H. 11:
3" R.S.C.
1-12/C #12
2-1/C #10
F&I 1-3/C #20
F&I 1-3/C #12
(I) ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD

NOTES:

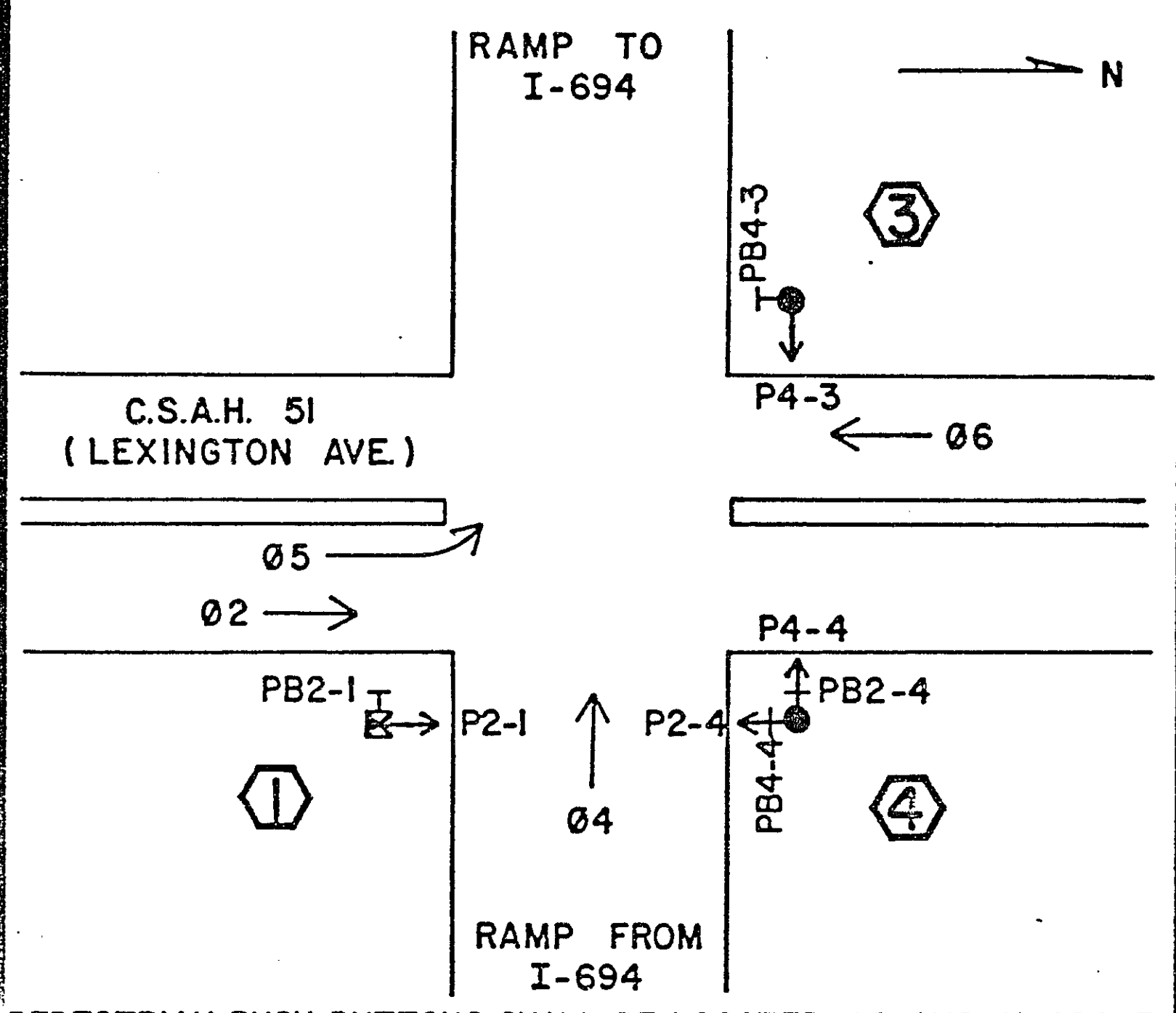
1. ALL ITEMS ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE SPECIFIED AS FOLLOWS:
 - R&S (REMOVE AND SALVAGE)
 - F&I (FURNISH AND INSTALL) OR (I) (INSTALL)
2. (INTERCONNECT) DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE SPECIAL PROVISIONS.
3. TEMPORARY ALL RED FLASH OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
4. PAINT REVISED SIGNAL SYSTEM. SEE SPECIAL PROVISIONS.
5. THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT. SEE SPECIAL PROVISIONS.

SIGNAL HEAD PHASING



- ③ TYPE A100-A-35
A100 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 10A-POLE MOUNTED 90°
TYPE 10B-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON AND SIGN
EXTEND INTO H.H. 10:
3" I.M.C.
2-12/C #12
1-3/C #12
F&I 1-3/C #12
- (I) ONE WAY EVP DETECTOR AND
LIGHT - OVERHEAD

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED
- NORMAL OPERATION IS 4 PHASE WITH PHASE 5 BEING A PROTECTED PERMISSIVE LEFT TURN

- 240/480 VOLT DISCONNECT SWITCH (SIGNALS)
2" R.S.C. RISER AND WEATHERHEAD ABOVE DISCONNECT
3-1/C #1/0
EXTEND INTO H.H. 3:
2" R.S.C. (LIGHTING) BELOW DISCONNECT
3-1/C #1/0 (LIGHTING) INPLACE

- ① TYPE 4A
PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
1-PEDESTRIAN PUSH
BUTTON AND SIGN
EXTEND INTO H.H. 4:
3" I.M.C.
1-12/C #12
1-3/C #12

- EQUIPMENT PAD
SIGNAL SERVICE CABINET
EXTEND INTO H.H. 2:
2" R.S.C.
2-1/C #10
EXTEND INTO H.H. 4:
2" R.S.C.
2-1/C #10

- CONTROLLER AND CABINET
EXTEND INTO H.H. 2:
4" R.S.C.
3-12/C #12 F&I 2-2/C #14
1-3/C #12 F&I 1-3/C #20
5-2/C #14 F&I 1-12PR #19 (INTERCONNECT)
1-25 PR. #19
EXTEND INTO H.H. 4:
4" R.S.C.
3-12/C #12 F&I 2-2/C #14
2-3/C #12 F&I 1-3/C #20
5-2/C #14

- R&S INPLACE CONTROLLER & CABINET
F&I CONTROLLER & CABINET

S.A.P. No. 187-020-05
62010694*042808N

S.A.P. No. 62-651-24

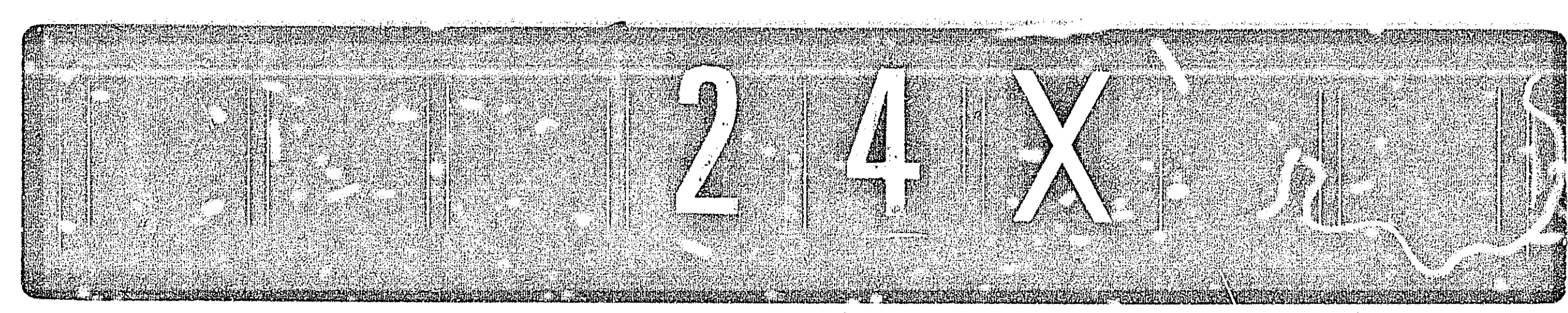
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

**REVISED
INTERSECTION LAYOUT
LEXINGTON AVE & I694 (NORTH RAMP)**

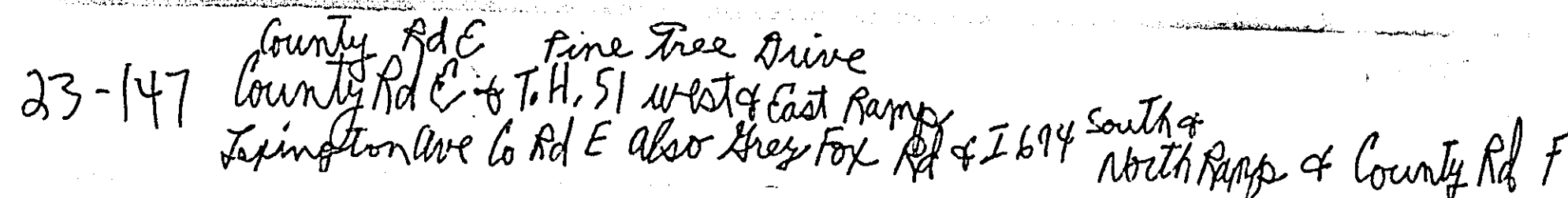
SYSTEM H

Sheet No. 28 of 44 Sheets

23-147



23-147 County Rd 51 Pine Tree Drive
County Rd 51 to H. 51 W. of East Ramp
Lexington Ave to Rd E also Hwy 694 South of
North Ramp & County Rd F



DRAWING

DRAWING NUMBER

23-147

DRAWING NUMBER

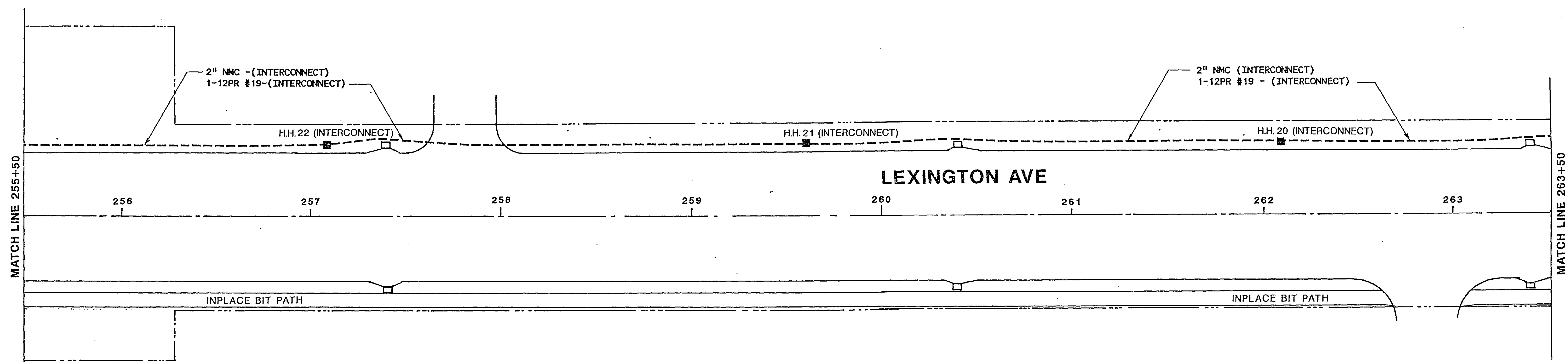
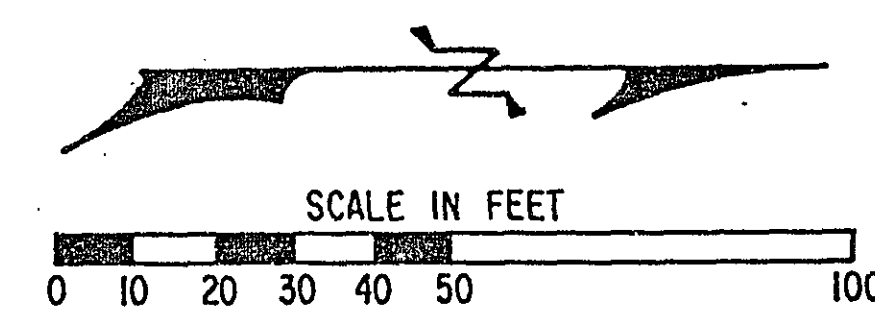
NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
REGISTERED NUMBER 12702

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
REGISTERED NUMBER 12702

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
REGISTERED NUMBER 12702

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
REGISTERED NUMBER 12702



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 K. Kishel
Date 8/29/89 Reg. No. 12702

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: JPH
DATE: 2-11-92

INTERCONNECT
LEXINGTON AVE
BETWEEN SYSTEM H & I

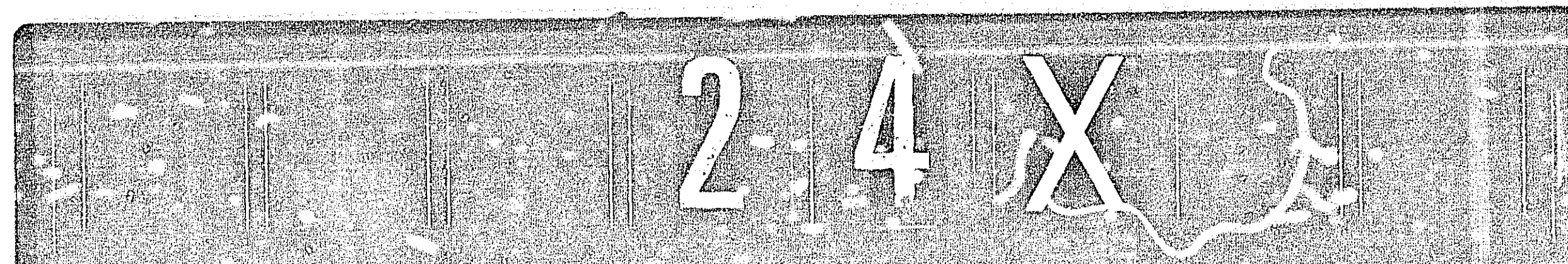
S.A.P. No. 187-105-04

S.A.P. No. 62-651-24

Sheet No. 30 of 44 Sheets

23-147

23-147 County Rd 6 Pine Tree Drive
County Rd 6 to T.H. 51 W of East Ramp
Lexington Ave to Rd E also they Fox Rd & I 694 South of
North Ramp & County Rd F



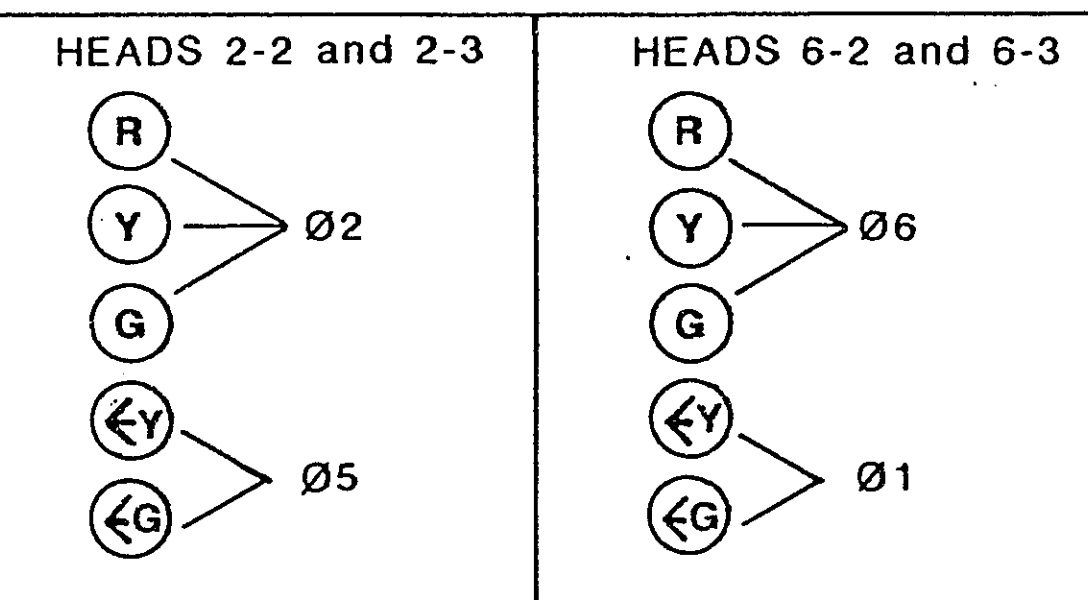
LEGEND OF SYMBOLS

SIGNAL BASE NO.	5
SIGNAL FACE NO.	42
CONTROLLER AND CABINET	
CONTROLLER AND CABINET - INPLACE	
HANDHOLE - INPLACE	
CONDUIT	
CONDUIT - 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	

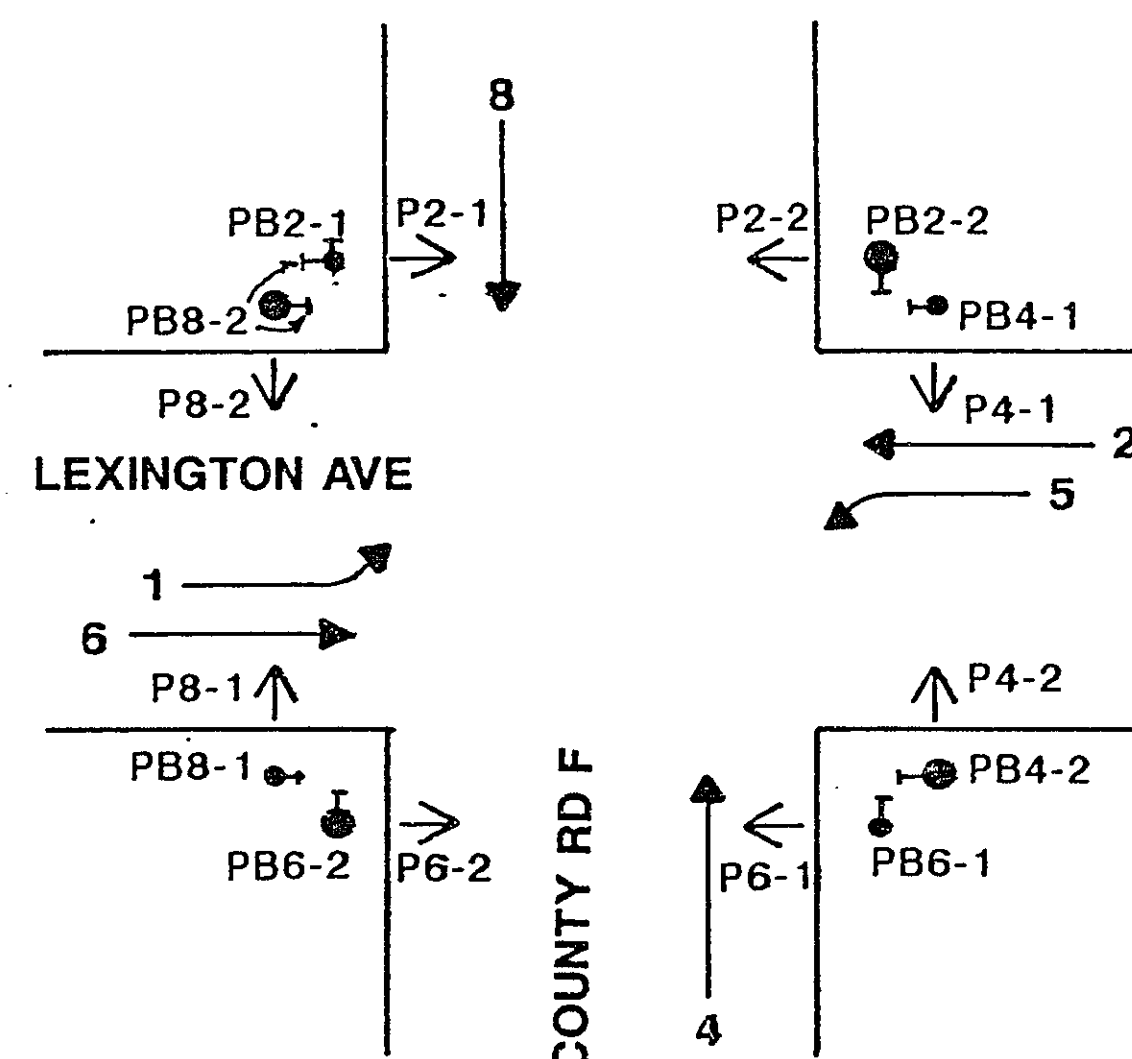
SIGNAL INDICATION CHART									
FACE	PHASE	INDICATION SIZE							
		R	Y	G	Y	G	Y	G	
2-1	2	12"	12"	12"					
2-2	2 and 5	12"	12"	12"	12"	12"			
2-3	2 and 5	12"	12"	12"	12"	12"			
2-4	2	12"	12"	12"					
4-1	4	12"	12"	12"					
4-2	4	12"	12"	12"					
4-3	4	12"	12"	12"					
6-1	8	12"	12"	12"					
6-2	1 and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

FLASH MODE = ALL RED

SIGNAL HEAD PHASING



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



VEHICLE DETECTION

NO	SIZE	OPERATION	LOC
D1-1	6'X 40'	C&E (TD)	0'
D1-2	6'X 25'	E	80'
D2-1	6'X 6'	C&E	290'
D2-2	6'X 6'	C&E	290'
D4-1	2-6'X 6'	C&E	165'
D4-2	6'X 15'	C&E	85'
D4-3	2-6'X 20'	C&E (TD)	0'
D5-1	6'X 40'	C&E (TD)	0'
D5-2	6'X 25'	E	80'
D6-1	6'X 6'	C&E	290'
D6-2	6'X 6'	C&E	290'
D8-1	2-6'X 6'	C&E	165'
D8-2	6'X 15'	C&E	90'
D8-3	2-6'X 20'	C&E (TD)	0'
D1	6'X 6'	COUNT	SEE PLAN
D2	6'X 6'	COUNT	SEE PLAN

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

MATCH LINE 263+50

A

- EQUIPMENT PAD INPLACE
* 7 STEEL GUARD POSTS INPLACE, R&S
SERVICE CABINET INPLACE
EXTEND INTO H.H. 1
1.25" RSC INPLACE
3-1/C #6 INPLACE
EXTEND INTO H.H. 11
1.25" RSC INPLACE
2-1/C #10 INPLACE
* 2-1/C #10
- * CONTROLLER CABINET INPLACE, R&S
* CONTROLLER CABINET
EXTEND INTO H.H. 2
4" RSC INPLACE
4-12/C #12 INPLACE
4-3/C #12 INPLACE
* 2-3/C #20 INPLACE, R&S ONE
* 1-3/C #20
8-2/C #14 INPLACE
* 2-2/C #14
- EXTEND INTO H.H. 11
4" RSC INPLACE
4-12/C #12 INPLACE
3-3/C #12 INPLACE
* 2-3/C #20 INPLACE, R&S ONE
4-2/C #14 INPLACE
* 2-2/C #14
* 1-12PR #19-
(INTERCONNECT)
- BETWEEN SERVICE AND
CONTROLLER CABINET
1.25" RSC INPLACE
2-1/C #6 INPLACE
1-1/C #6 (BARE) INPLACE
- BETWEEN H.H. 2 & 11
3" RSC INPLACE
* 2-1/C #10

4

- * TYPE 2C INPLACE, R&S AND
INSTALL IN BARREL-SEE NOTE 6
* PEDESTAL FOUNDATION INPLACE, R&S
* 1 STEEL GUARD POST INPLACE, R&S
* P80-A-25
* 1-ONE WAY SIGNAL-OVERHEAD
* TYPE 20C-POLE MOUNTED 270°
* 1-PEDESTRIAN PUSH BUTTON AT 270°
EXTEND INTO H.H. 14
* 3" RSC
* 2-12/C #12, REINSTALL
* 1-3/C #12, REINSTALL
* 1-3/C #12

1

- A100-A-35-T40-10 INPLACE
LUMINAIRE 250 WATT HPS INPLACE
SWING-AWAY HINGES INPLACE
2-ONE WAY SIGNALS OVERHEAD INPLACE
TYPE 20C-POLE MOUNTED INPLACE
1 PEDESTRIAN PUSH BUTTON INPLACE
* 1 STEEL GUARD POST INPLACE, R&S
* ONE WAY EVP DETECTOR AND
LIGHT OVERHEAD
EXTEND INTO H.H. 11
3" RSC INPLACE
2-12/C #12 INPLACE
2-3/C #12 INPLACE
1-3/C #20 INPLACE
2-1/C #10 INPLACE

- S.O.P. (NSP POLE INPLACE)
1.25" RSC RISER WITH WEATHER
HEAD INPLACE
EXTEND INTO H.H. 1
1.25" RSC INPLACE
3-1/C #6 INPLACE

- PEDESTRIAN PUSH BUTTON
STATION (4" RSC), INPLACE
1 - PEDESTRIAN PUSH BUTTON, INPLACE
EXTEND INTO H.H. 11
1.25" RSC INPLACE
1-3/C #12 INPLACE

- 3" RSC INPLACE
2-12/C #12 INPLACE
1-3/C #12 INPLACE
* 1-3/C #20 INPLACE, R&S
4-2/C #14 INPLACE
* 2-2/C #14

- 1.25" RSC INPLACE
1-2/C #14 INPLACE
* 2-2/C #14

- 3" RSC INPLACE
2-12/C #12 INPLACE
1-3/C #12 INPLACE
* 1-3/C #20 INPLACE, R&S
2-2/C #14 INPLACE

- * PEDESTRIAN PUSH BUTTON
STATION (4" RSC), INPLACE
* 1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 14
* 1.25" RSC
* 1-3/C #12

- 1.25" RSC INPLACE
1-2/C #14 INPLACE
* 1-2/C #14

- * 1.25" RSC
* 1-2/C #14

2

- * TYPE 2C INPLACE, R&S AND
INSTALL IN BARREL-SEE NOTE 6
* PEDESTAL FOUNDATION INPLACE, R&S
* 1 STEEL GUARD POST INPLACE, R&S
* P80-A-25-T40-10
* LUMINAIRE - 200 WATT HPS AT 350°
* 1-ONE WAY SIGNAL-OVERHEAD
* TYPE 20C-POLE MOUNTED 270°
* 1-PEDESTRIAN PUSH BUTTON AT 270°
* TWO WAY EVP DETECTOR AND
LIGHT-OVERHEAD
EXTEND INTO H.H. 4
* 3" RSC
* 2-12/C #12, REINSTALL
* 2-3/C #12, REINSTALL
* 1-3/C #20
* 2-1/C #10
* 1-3/C #12

- 4" RSC INPLACE
4-12/C #12 INPLACE
4-3/C #12 INPLACE
* 2-3/C #20, R&S ONE
6-2/C #14 INPLACE
* 2-1/C #10
* 1-2/C #14
* 1-3/C #20

- * PEDESTRIAN PUSH BUTTON
STATION (4" RSC)
* 1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 4
* 1.25" RSC
* 1-3/C #12

- 1.25" RSC INPLACE
1-2/C #14 INPLACE

- 1.25" RSC INPLACE
2-2/C #14 INPLACE

3

- 3" RSC INPLACE
2-12/C #12 INPLACE
2-3/C #12 INPLACE
1-3/C #20 INPLACE
4-2/C #14 INPLACE
* 1-2/C #14

- PEDESTRIAN PUSH BUTTON
STATION (4" RSC), INPLACE
1 - PEDESTRIAN PUSH BUTTON, INPLACE
EXTEND INTO H.H. 9
1.25" RSC INPLACE
1-3/C #12 INPLACE

3

- A100-A-35 INPLACE
SWING-AWAY HINGES INPLACE
2-ONE WAY SIGNALS OVERHEAD INPLACE
TYPE 20C-POLE MOUNTED INPLACE
1 PEDESTRIAN PUSH BUTTON INPLACE
* 1 STEEL GUARD POST INPLACE, R&S
* ONE WAY EVP DETECTOR AND
LIGHT OVERHEAD
EXTEND INTO H.H. 9
3" RSC INPLACE
2-12/C #12 INPLACE
2-3/C #12 INPLACE
1-3/C #20 INPLACE

ASBUILT PLAN

CONFORMING TO
CONST. RECORDSDONE BY: JPH
DATE: 2-11-92

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: 8/27/87 Reg. No. 12702

S.A.P. No. 187-101-03 & 187-020-05

S.A.P. No. 62-651-24

REVISED
INTERSECTION LAYOUT
LEXINGTON AVE & COUNTY RD F

SYSTEM I

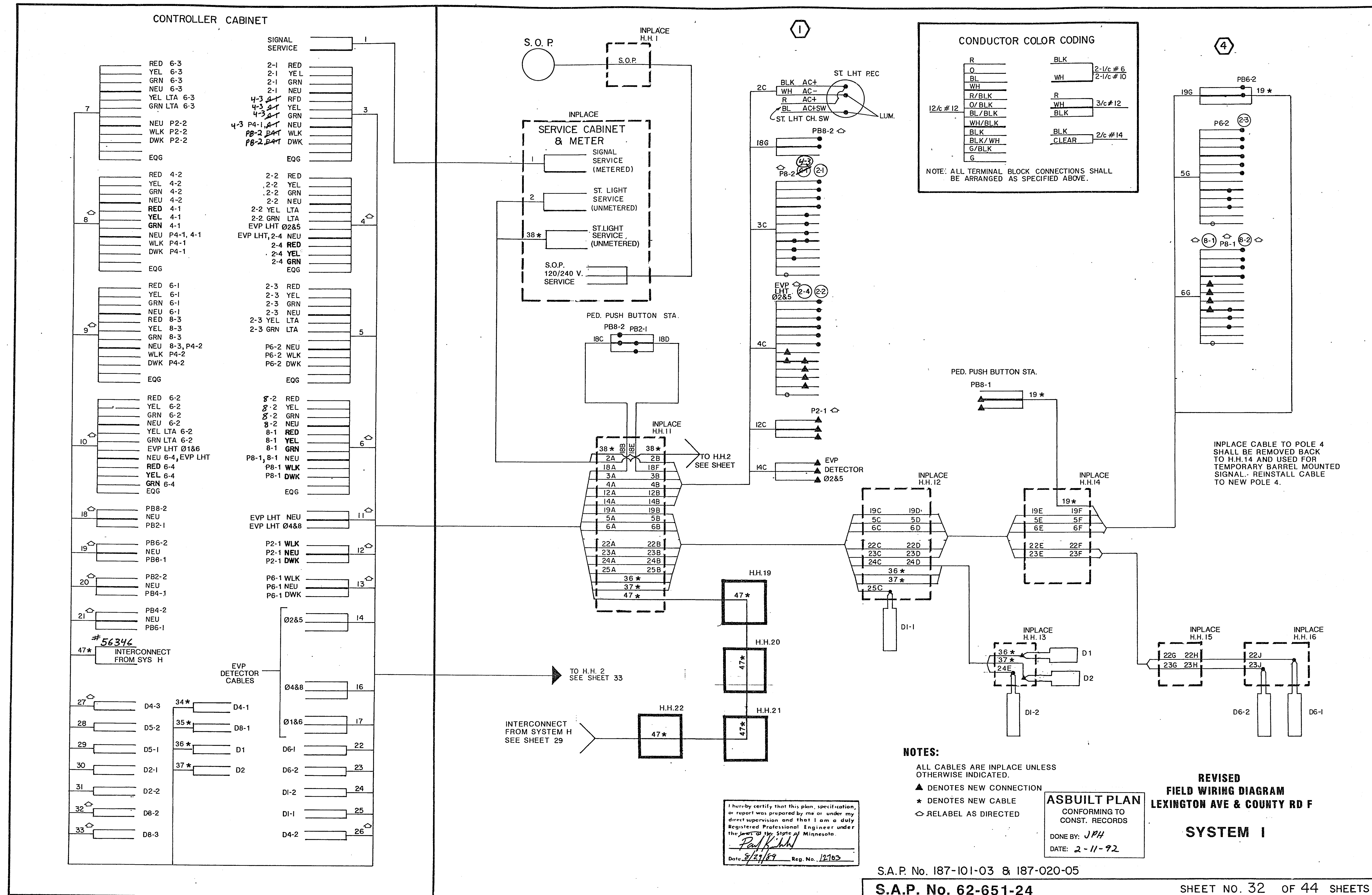
Sheet No. 31 of 44 Sheets

NOTES:

- ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH A * (*= WORK TO BE DONE, THIS SHEET ONLY).
- SEE SHEET 34 FOR EXISTING SIGNAL SYSTEM.
- DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
- REMOVE AND SALVAGE INPLACE DOWN LIGHTS MOUNTED OVERHEAD (2 TOTAL).
- R&S DENOTES REMOVE AND SALVAGE.
- INPLACE PEDESTAL POLES 2 & 4 SHALL BE REMOVED AND SALVAGED AND BE SET IN BARRELS FOR TEMPORARY OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
- ALL PEDESTRIAN INDICATIONS SHALL BE 12"X12".
- ALL NEW SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, AND 6-3.

NOTES:

- EACH LUMINAIRE SHALL HAVE A PHOTO ELECTRIC CELL AND STREET LIGHT CHECK SWITCH.
- THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT (SEE SPECIAL PROVISIONS).
- HANDHOLES 1,2,3,4,5,6,7,8,9,10,11, 12,13,14,15 AND 16 ARE INPLACE. USE INPLACE.
- (INTERCONNECT) DENOTES ITEM TO BE PAID FOR UNDER SEPARATE PAY ITEM. SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- PAINT REVISED SIGNAL SYSTEM (SEE SPECIAL PROVISIONS).
- A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM END OF THE MAST ON POLES 2&4 PER MN/DOT 3831.2C



23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 west of East Perry
Tepmington Ave Co Rd E also Hwy Fox Rd & I 694 South &
North Perry & County Rd F

24X

DRAWING

DRAWING NUMBER

23-147

DRAWING NUMBER

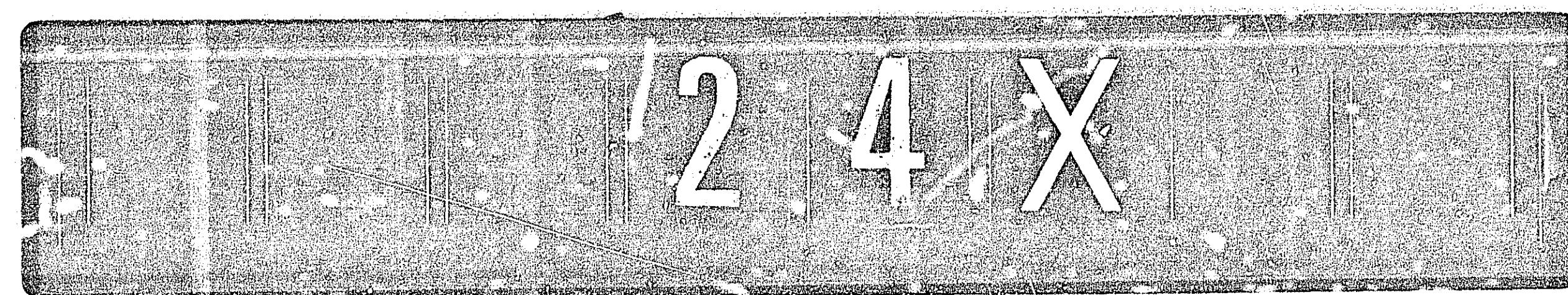
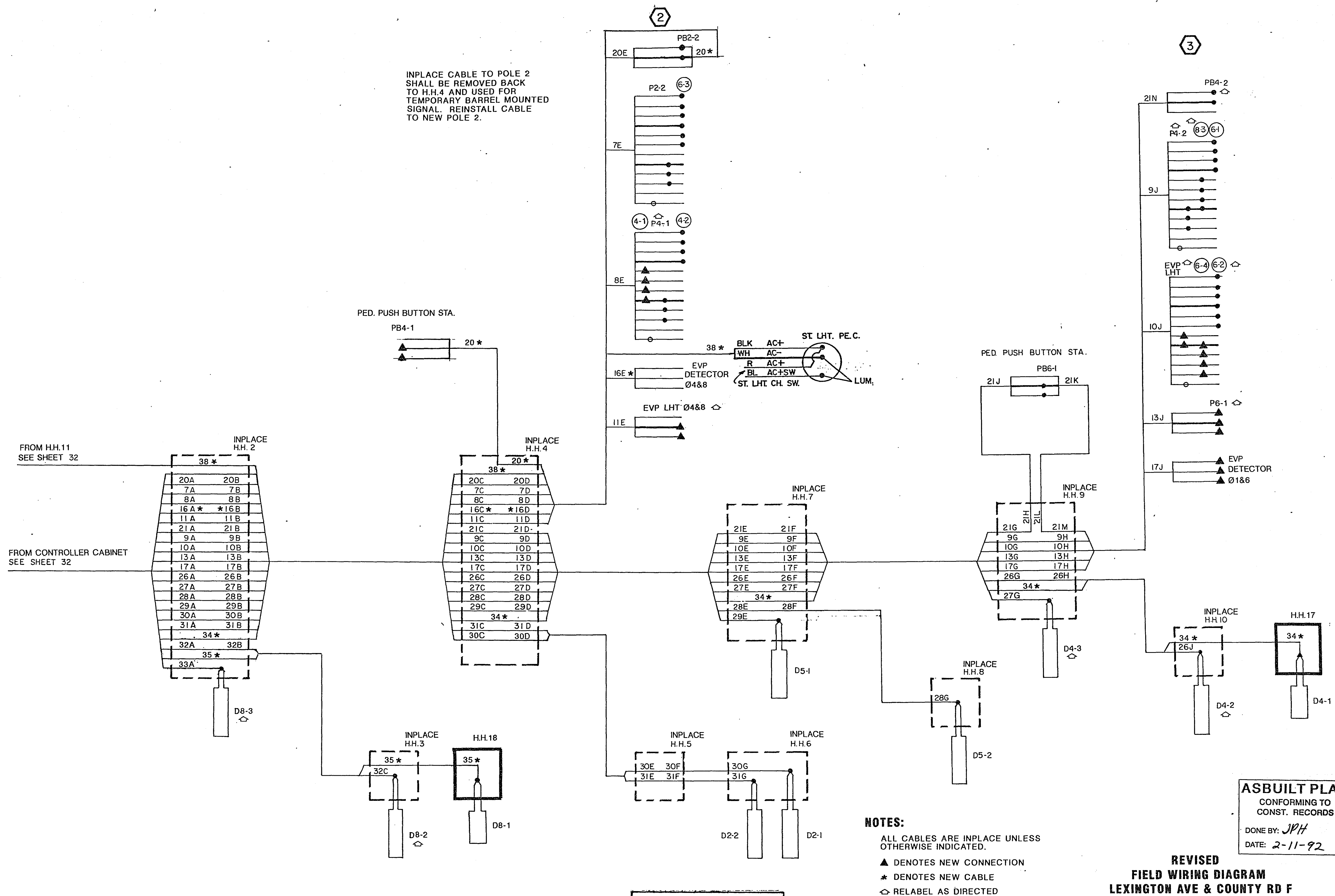
NUMBER

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
REVISION 1/79

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
REVISION 1/79

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
REVISION 1/79

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
REVISION 1/79



23-147 County Rd E Pine Tree Drive
County Rd E to T.H. 51 west of East Ramp
Lexington Ave to Rd E also the box Rd & I 694 South of
North Ramp & County Rd F

DRAWING NUMBER 23-147
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
DESIGNED BY: R. W. B. / DATE: 10-6-83
NUMBER

LEGEND OF SYMBOLS

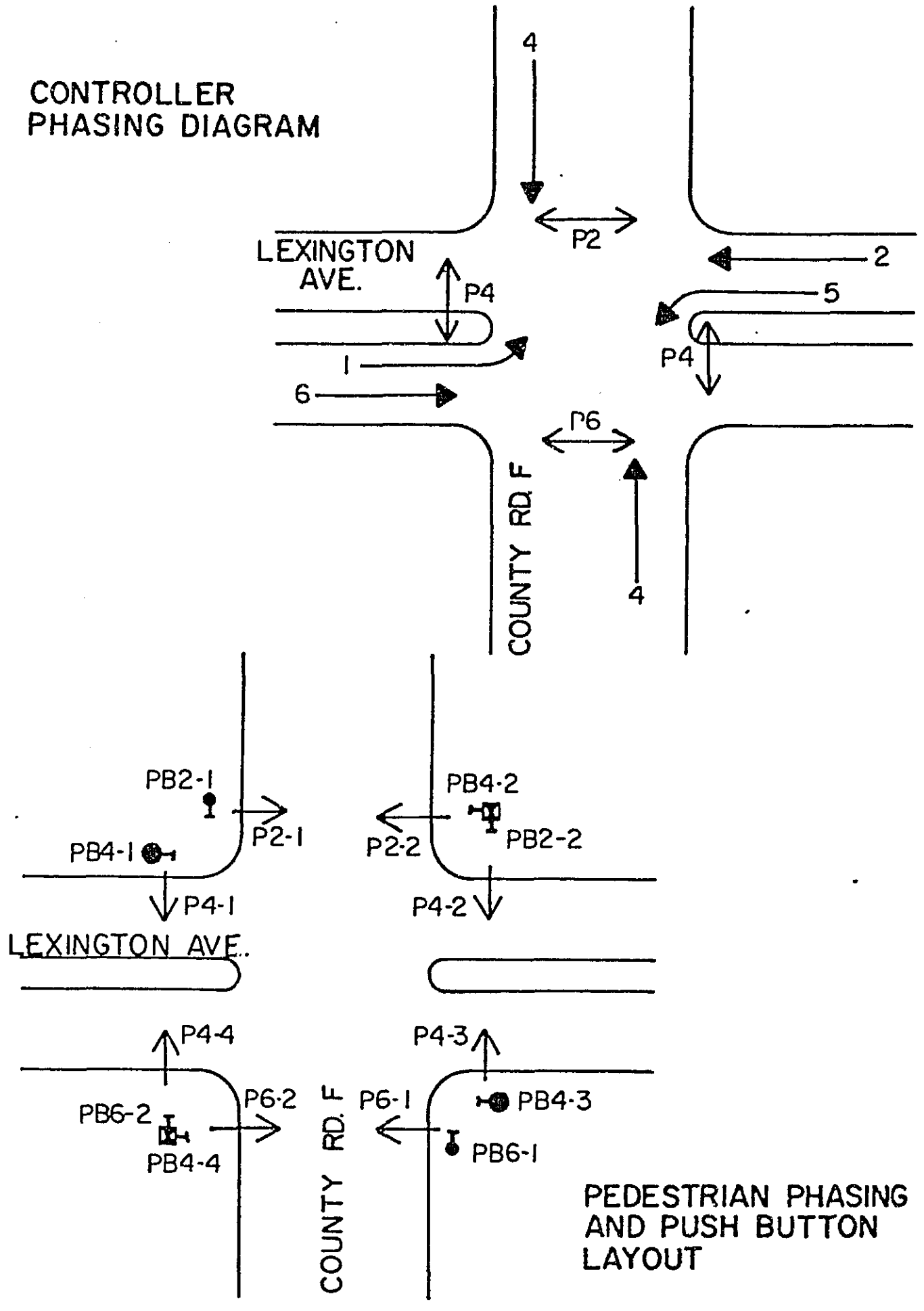
SIGNAL BASE No.	
SIGNAL FACE No.	
CONTROLLER AND CABINET	
CONTROLLER AND CABINET-INPLACE	
HANDHOLE	
HANDHOLE-INPLACE	
RIGID STEEL CONDUIT (R.S.C.)	
RIGID STEEL CONDUIT (R.S.C.)-INPLACE	
SIGNAL FACE	
SIGNAL FACE WITH BACKGROUND SHIELD	
SIGNAL FACE - INPLACE	
PEDESTRIAN INDICATIONS	
PEDESTRIAN INDICATIONS - 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	OPERATION
D1-1	6' X 40'	EXTEND ONLY
D1-2	6' X 25'	CALL & EXTEND ①
D2-1	6' X 6'	CALL & EXTEND
D2-2	6' X 6'	CALL & EXTEND
D4-1	6' X 15'	CALL & EXTEND
D4-2	2-6' X 20'	CALL & EXTEND ①
D4-3	6' X 15'	CALL & EXTEND
D4-4	2-6' X 20'	CALL & EXTEND ①
D5-1	6' X 40'	EXTEND ONLY
D5-2	6' X 25'	CALL & EXTEND ①
D6-1	6' X 6'	CALL & EXTEND
D6-2	6' X 6'	CALL & EXTEND

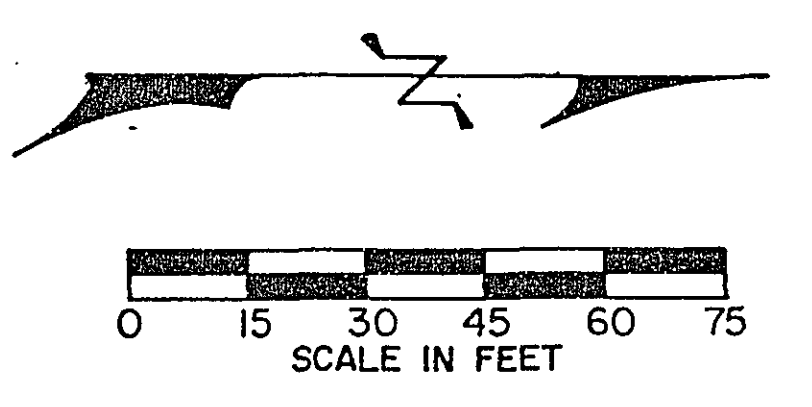
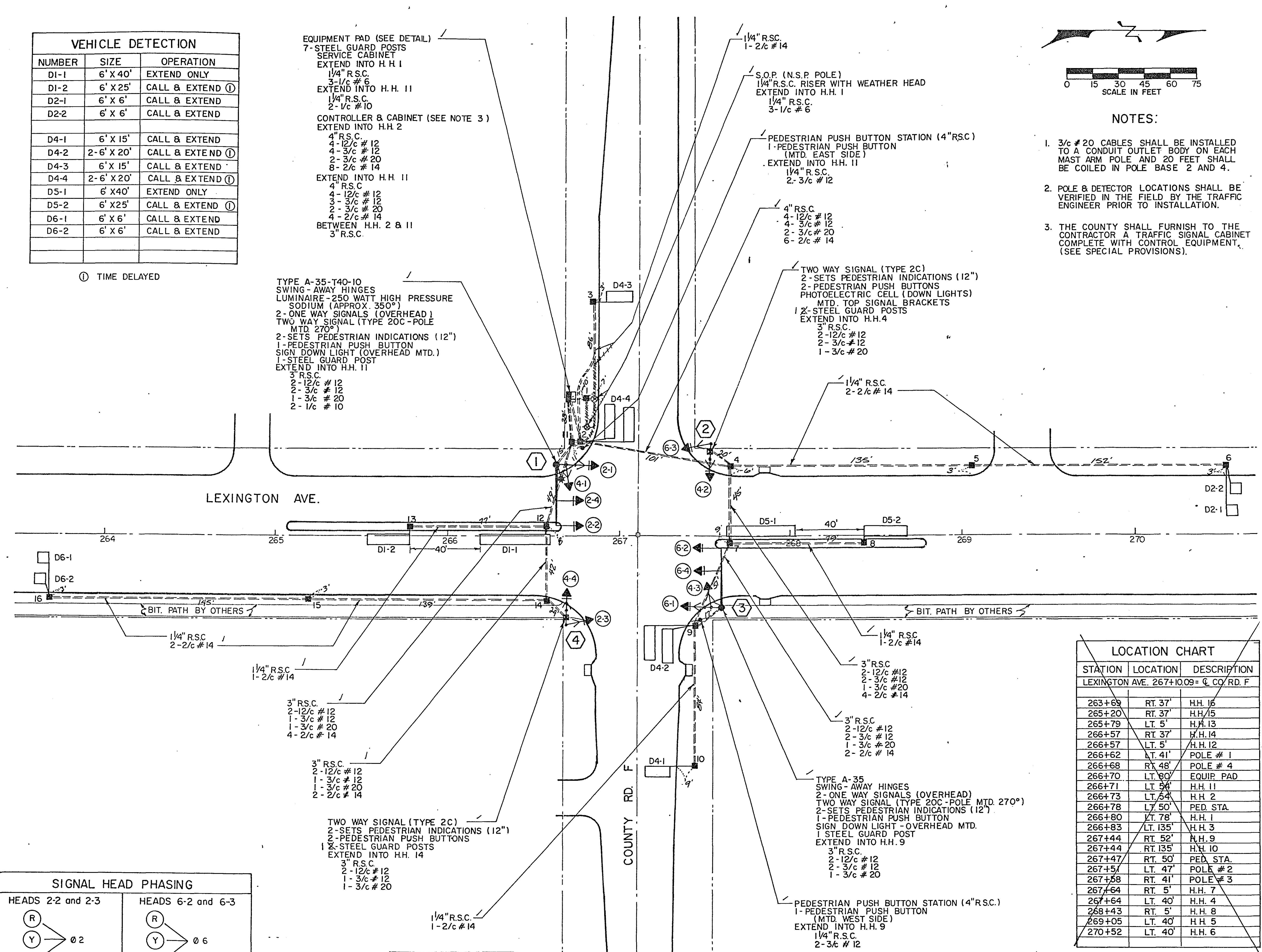
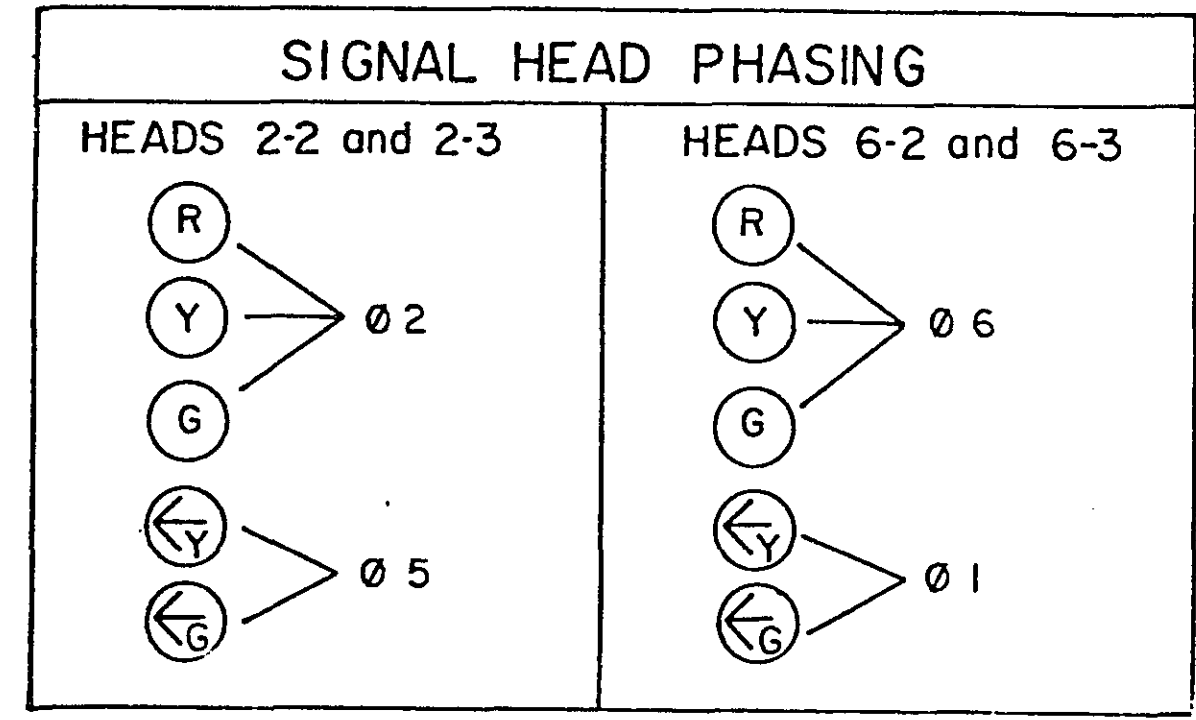
EQUIPMENT PAD (SEE DETAIL)
7-STEEL GUARD POSTS
SERVICE CABINET
EXTEND INTO H.H. 1
1/4" R.S.C.
3-1/2" # 6
EXTEND INTO H.H. 11
1/4" R.S.C.
2-1/2" # 10
CONTROLLER & CABINET (SEE NOTE 3)
EXTEND INTO H.H. 2
4" R.S.C.
4-12/c # 12
4-3/c # 12
2-3/c # 20
8-2/c # 14
EXTEND INTO H.H. 11
4" R.S.C.
4-12/c # 12
3-3/c # 12
2-3/c # 20
4-2/c # 14
BETWEEN H.H. 2 & 11
3" R.S.C.

TYPE A-35-T40-10
SWING-AWAY HINGES
LUMINAIRE - 250 WATT HIGH PRESSURE
SODIUM (APPROX. 350°)
2-ONE WAY SIGNALS (OVERHEAD)
TWO WAY SIGNAL (TYPE 20C-POLE
MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS (12")
1-PEDESTRIAN PUSH BUTTON
SIGN DOWN LIGHT (OVERHEAD MTD.)
1-STEEL GUARD POST
EXTEND INTO H.H. 11
3" R.S.C.
2-12/c # 12
1-3/c # 12
1-3/c # 20
2-1/2" # 10



SIGNAL INDICATION CHART

FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	←	→	↔
2-1	2	Y	12"	12"	12"	-	-	-
2-2	2 and 5	Y	12"	12"	12"	12"	12"	-
2-3	2 and 5	Y	12"	12"	12"	12"	12"	-
4-1	4	R	12"	12"	12"	-	-	-
4-2	4	R	12"	12"	12"	-	-	-
4-3	4	R	12"	12"	12"	-	-	-
4-4	4	R	12"	12"	12"	-	-	-
6-1	6	Y	12"	12"	12"	-	-	-
6-2	6 and 1	Y	12"	12"	12"	12"	12"	-
6-3	6 and 1	Y	12"	12"	12"	12"	12"	-
2-4	2	Y	12"	12"	12"	-	-	-
6-4	6	Y	12"	12"	12"	-	-	-



- NOTES:
- 3/c # 20 CABLES SHALL BE INSTALLED TO A CONDUIT OUTLET BODY ON EACH MAST ARM POLE AND 20 FEET SHALL BE COILED IN POLE BASE 2 AND 4.
 - POLE & DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
 - THE COUNTY SHALL FURNISH TO THE CONTRACTOR A TRAFFIC SIGNAL CABINET COMPLETE WITH CONTROL EQUIPMENT, (SEE SPECIAL PROVISIONS).

LOCATION CHART

STATION	LOCATION	DESCRIPTION
LEXINGTON AVE. 267+10.09 = C.C. RD. F		
263+69	RT 37	H.H. 15
265+20	RT 37	H.H. 15
265+79	LT 5'	H.H. 13
266+57	RT 37	H.H. 12
266+57	LT 5'	H.H. 12
266+62	LT 41'	POLE # 1
266+68	RT 48'	POLE # 4
266+70	LT 80'	EQUIP. PAD
266+71	LT 34'	H.H. 11
266+73	LT 34'	H.H. 2
266+78	LT 50'	PED. STA.
266+80	LT 78'	H.H. 1
266+83	LT 135'	H.H. 3
267+44	RT 52'	H.H. 9
267+44	RT 135'	H.H. 10
267+47	RT 50'	PED. STA.
267+57	LT 47'	POLE # 2
267+58	RT 41'	POLE # 3
267+64	RT 5'	H.H. 7
267+64	LT 40'	H.H. 4
268+43	RT 5'	H.H. 8
269+05	LT 40'	H.H. 5
270+52	LT 40'	H.H. 6

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: R. W. B.
DATE: 10-6-83

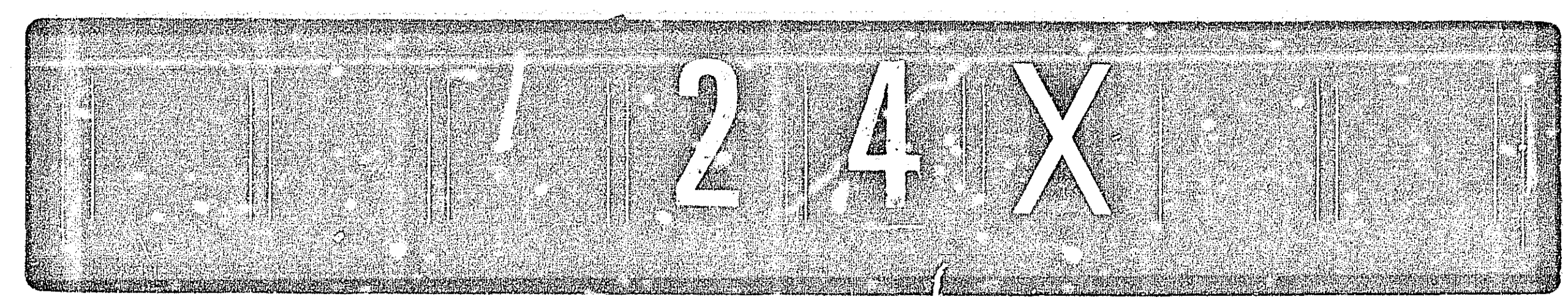
FOR INFORMATION ONLY
(INPLACE SYSTEM)

INTERSECTION LAYOUT
LEXINGTON AVE. & COUNTY RD. F
SYSTEM I

S.A.P. No. 62-651-24

SHEET NO. 34 OF 44 SHEETS

23-147 County Rd F Pine Tree Drive
County Rd C to T.H. 51 west of East Ramp
Lexington Ave to Rd E also they for Rd E 1694 South of North Ramp & County Rd F



DRAWING

DRAWING NUMBER

23-147

DRAWING NUMBER

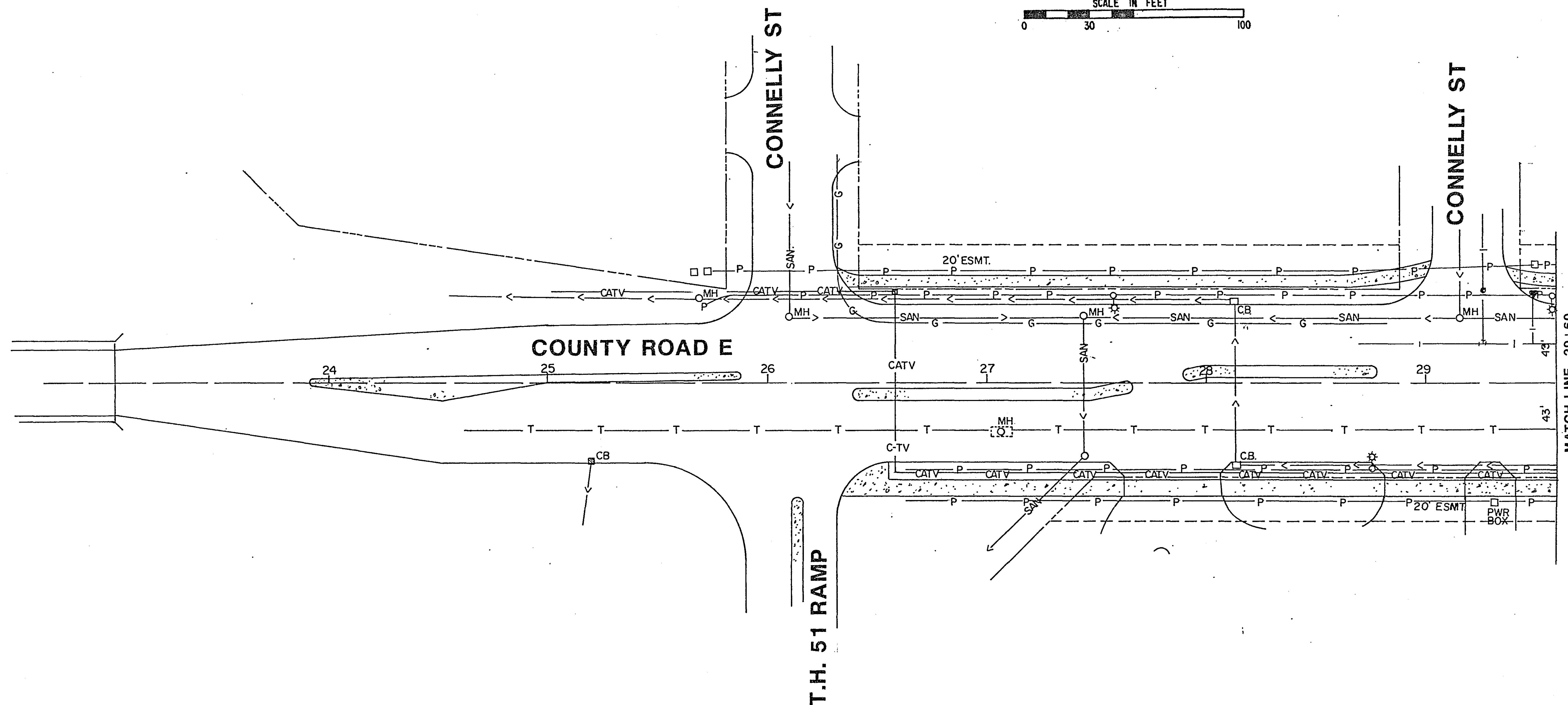
NUMBER

PLAN HOLD CORPORATION
REGISTERED IN CA

PLAN HOLD CORPORATION • PRIME CALIFORNIA
REGISTERED NUMBER 05348

PLAN HOLD CORPORATION • PRIME CALIFORNIA
REGISTERED NUMBER 05348

PRIME CALIFORNIA
REGISTERED NUMBER 05348



UTILITIES
COUNTY RD E

S.A.P. No. 62-615-13

Sheet No. 35 of 44 Sheets

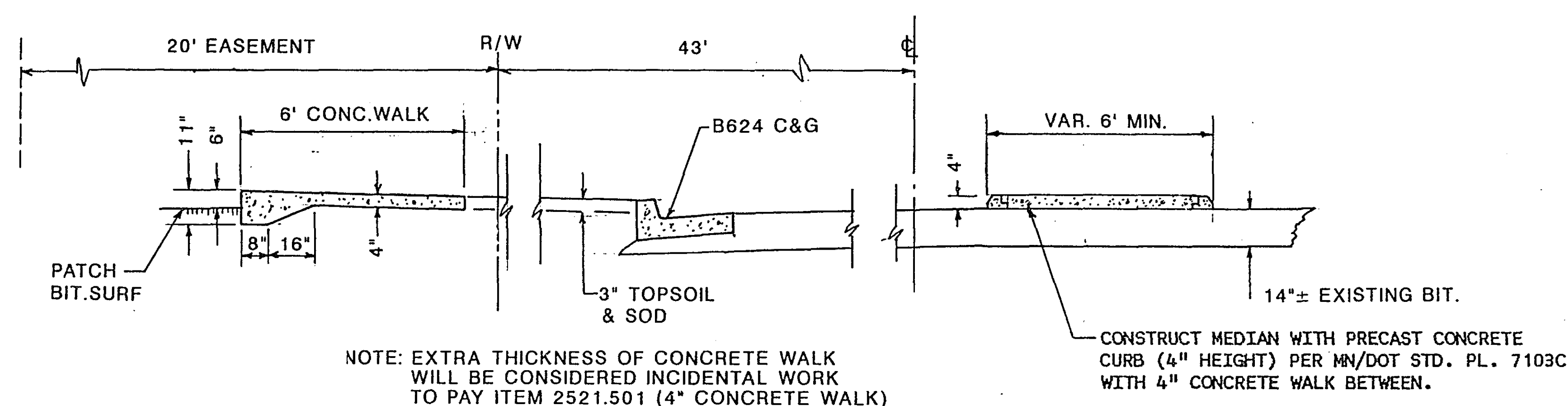
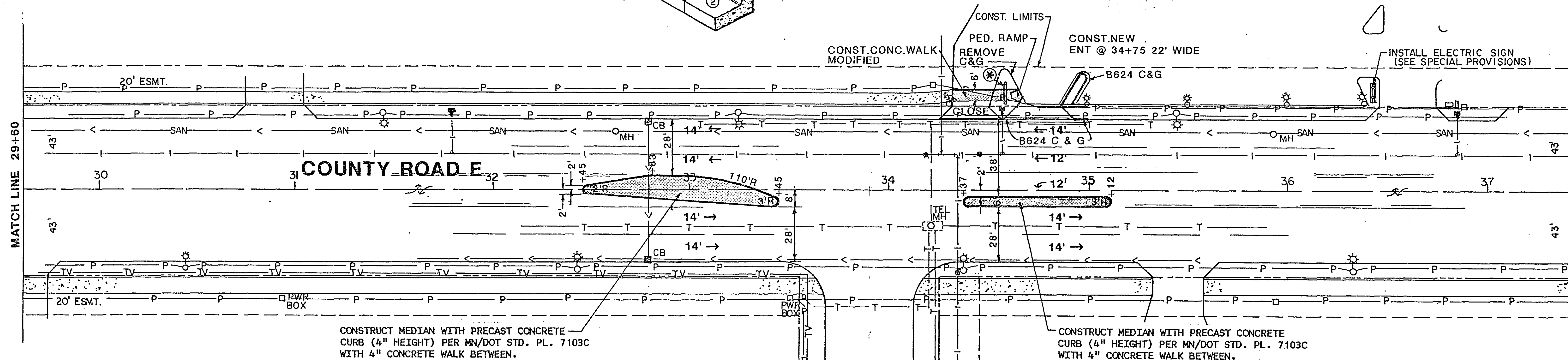
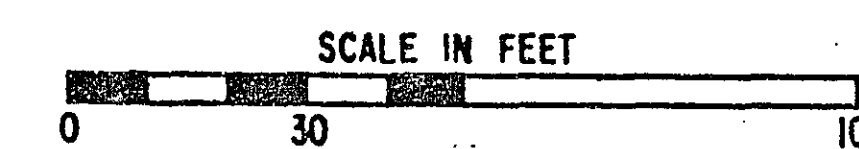
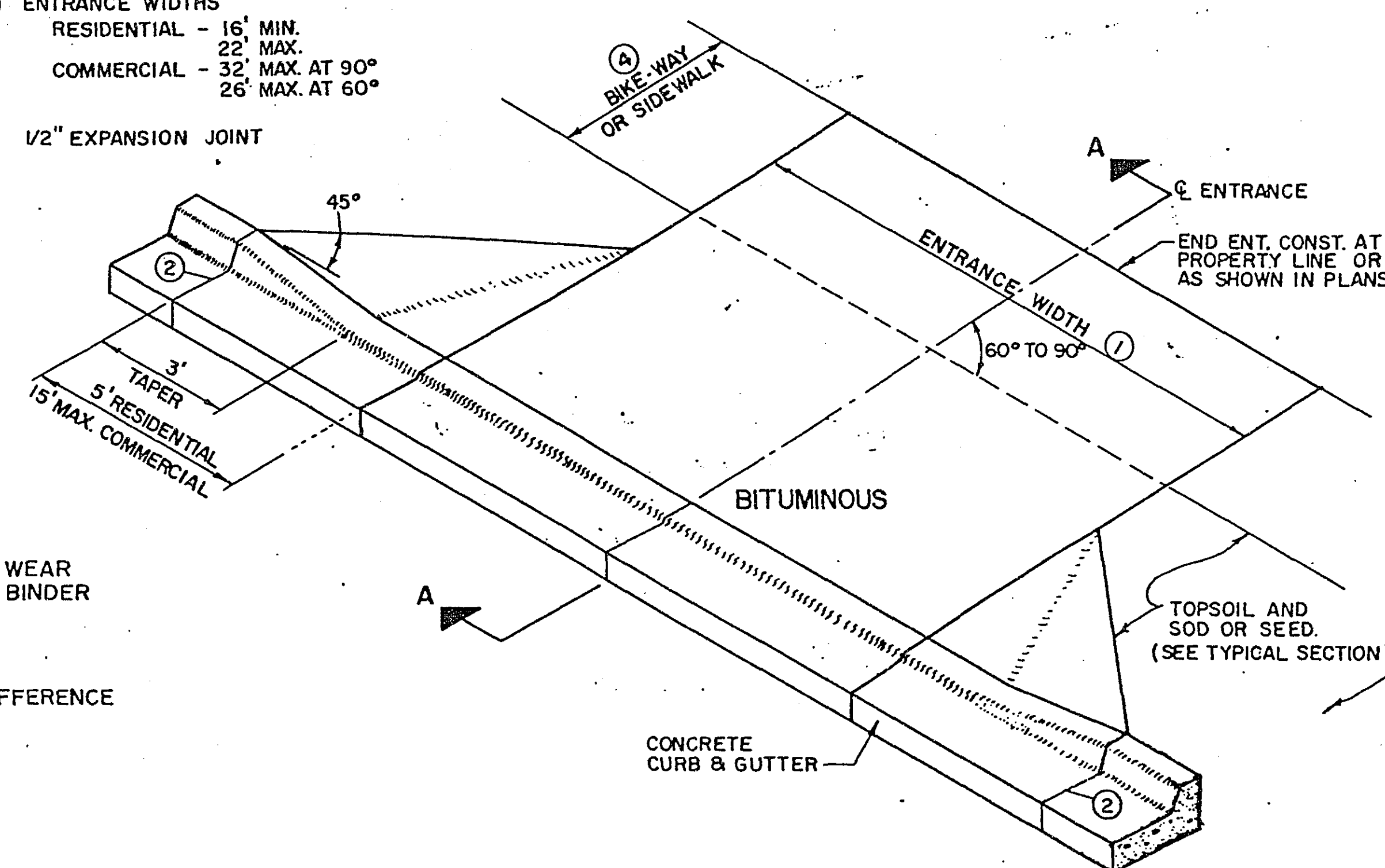
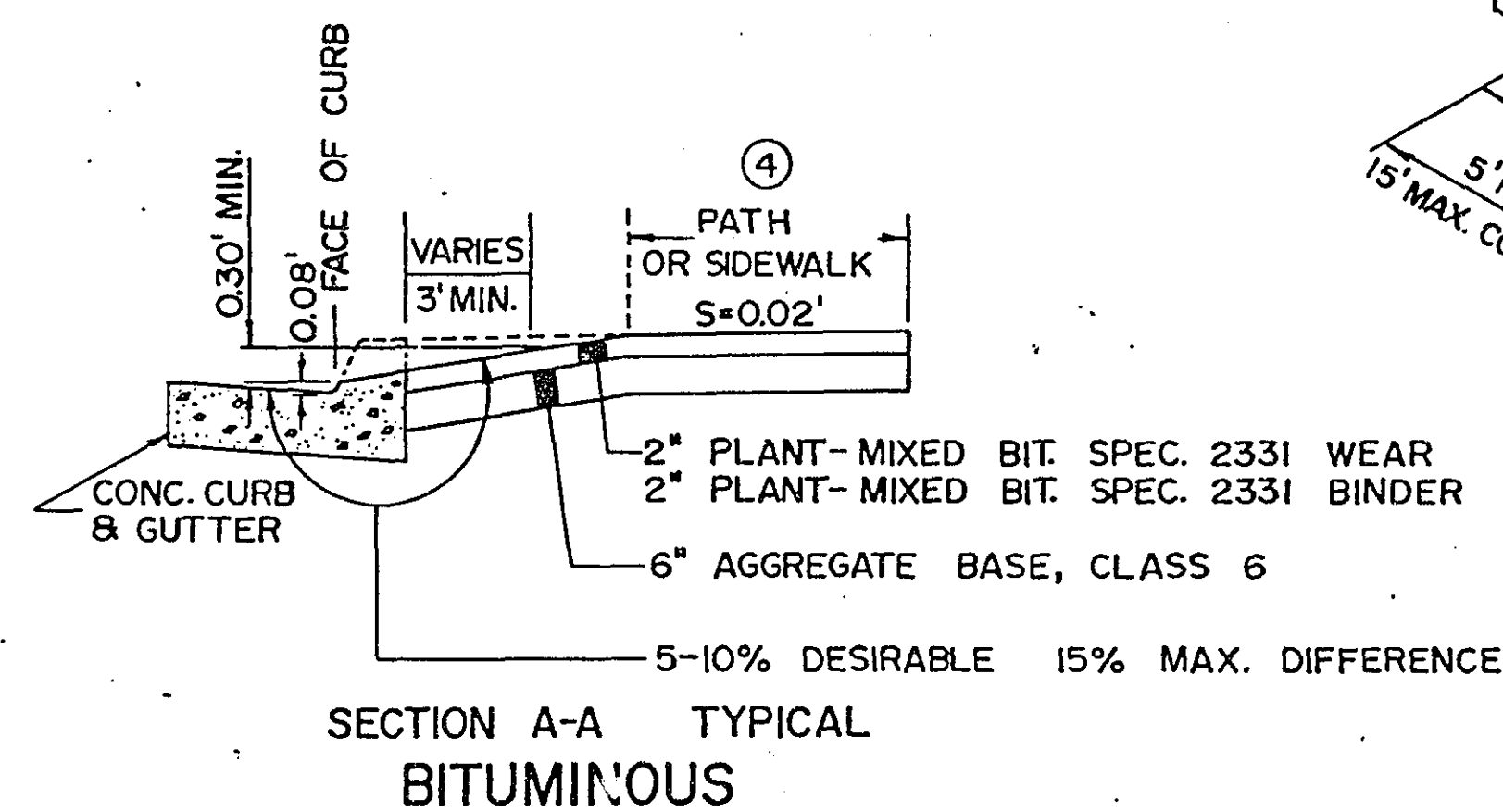
23-147

24X

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 west of East Ramp
Interpretation to Rd E also the Fox Rd & I 694 South of
North Ramp of County Rd F

ENTRANCE DETAIL

- ① ENTRANCE WIDTHS
RESIDENTIAL - 16' MIN.
22' MAX.
COMMERCIAL - 32' MAX. AT 90°
26' MAX. AT 60°
- ② 1/2" EXPANSION JOINT



TYPICAL SECTION
STA. 32+45 to 35+12

PINE TREE DRIVE

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 Kibicki

Date 8/29/89 Reg. No. 12703

UTILITIES & CONSTRUCTION

COUNTY RD E

S.A.P. No. 62-615-13

Sheet No. 36 of 44 Sheets

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 west of East Ramp
Lintonville Co Rd E also Ches Fox Rd & I 694 South & North Ramps & County Rd F

2 4 X

DRAWING

DRAWING NUMBER
23-147

DRAWING NUMBER

NUMBER

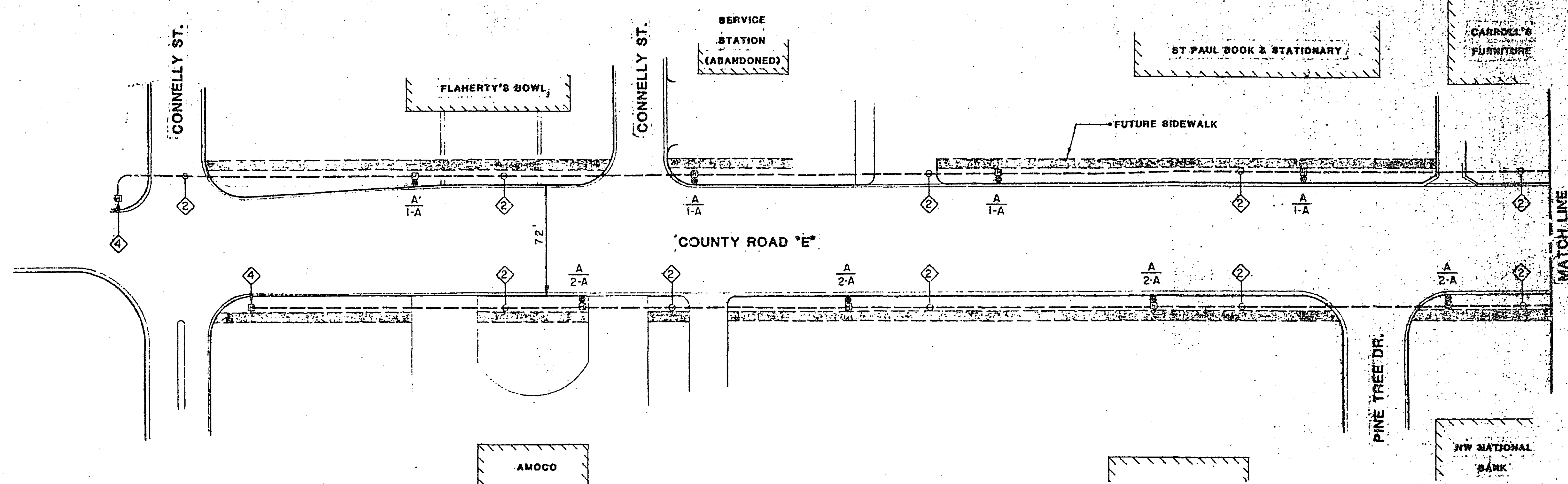
SYMBOLS

- FEED POINT
- HANDHOLE
- ROADWAY LIGHTING STANDARD
- ORNAMENTAL LIGHTING STANDARD
- EXISTING LIGHTING STANDARD (SEE SPEC)
- EXISTING TRAFFIC SIGNAL (SEE SPEC)
- PEDESTAL MOUNTED WALK-UP TELEPHONE BOOTH
- WALL MOUNTED WALK-UP TELEPHONE BOOTH

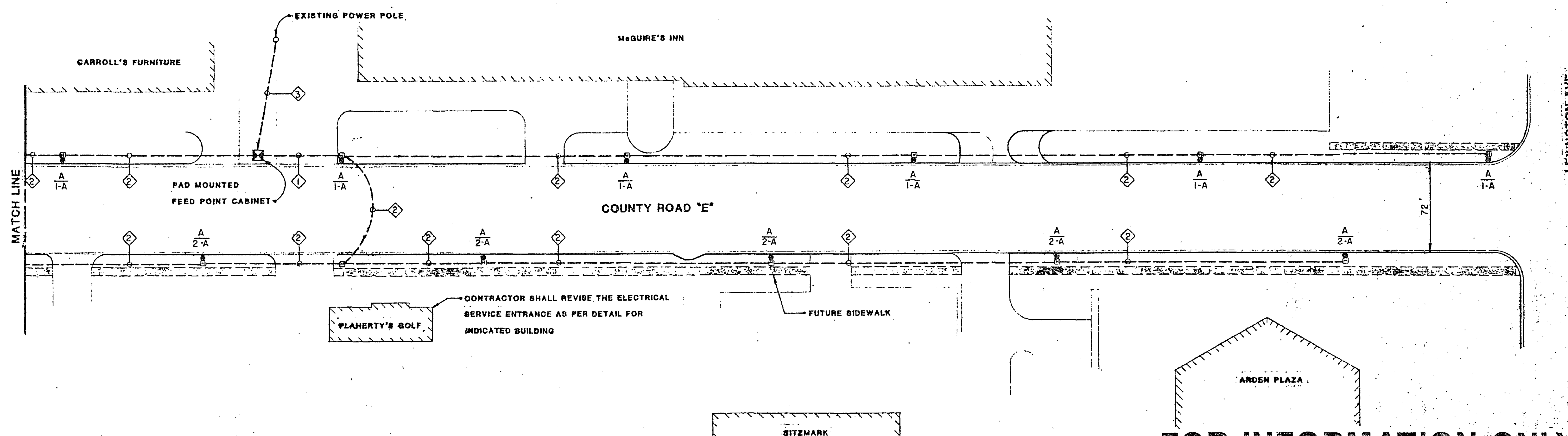
- INDICATES LIGHTING STANDARD TYPE
- INDICATES CIRCUIT TYPE (ALL-NIGHT OR MID-NIGHT)
- INDICATES CIRCUIT NUMBER
- INDICATES NOTE ON PLAN

ABBREVIATIONS

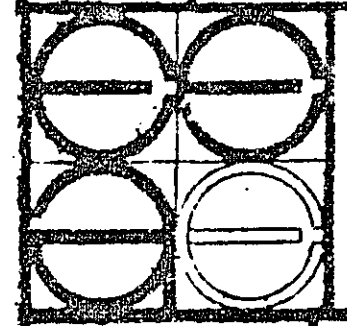
CCT	CIRCUIT	MTD	MOUNTED
C	CONDUIT	MTG	MOUNTING
MT	EMPTY	P	POLE
EXIST	EXISTING	TEL	TELEPHONE
JCT	JUNCTION	TRFR	TRANSFORMER
LGT	LIGHT	TYP	TYPICAL
LTG	LIGHTING	WP	WEATHERPROOF



- DRAWING NOTES:
- (1) 1-1/2" C, 8-#4 & 1-#8 GRD.
 - (2) 1-1/4" C, 8-#4 & 1-#8 GRD.
 - (3) 1-1/2" C, 3-#2 & 3-#10!
 - (4) PROVIDE 10'-0" OF COILED SPARE CIRCUIT CONDUCTORS WITHIN HANDHOLE FOR EXTENSION TO STREET LIGHTING FIXTURE ON TRAFFIC SIGNAL STANDARD BY OTHERS.



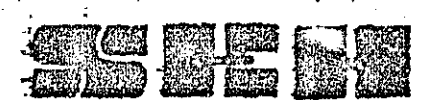
FOR INFORMATION ONLY
(INPLACE STREET LIGHTING)



ERICKSON ELLISON
AND ASSOCIATES INC.
CONSULTING ENGINEERS
SAINT PAUL MINNESOTA

SURVEY:	SCALE:	NO.	DATE	REVISIONS
DESIGN: MPR	1"=50'			
DRAWN: JGR				

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 JAN. 12, 1963 Reg. No. 34718



SHORT-ELLIOTT-HENDRICKSON, INC.
Saint Paul, Minnesota • Chippewa Falls, Wisconsin

S.A.P. No. 62-615-13

Sheet No. 37 of 44 Sheets

FILED	DATE
37	1-12-63

23-147 County Rd E Pine Tree Drive
County Rd E to T.H. St. west of East Pump
Lexington Ave to Rd E also Hwy 104 & I 694 South of
North Pump & County Rd F

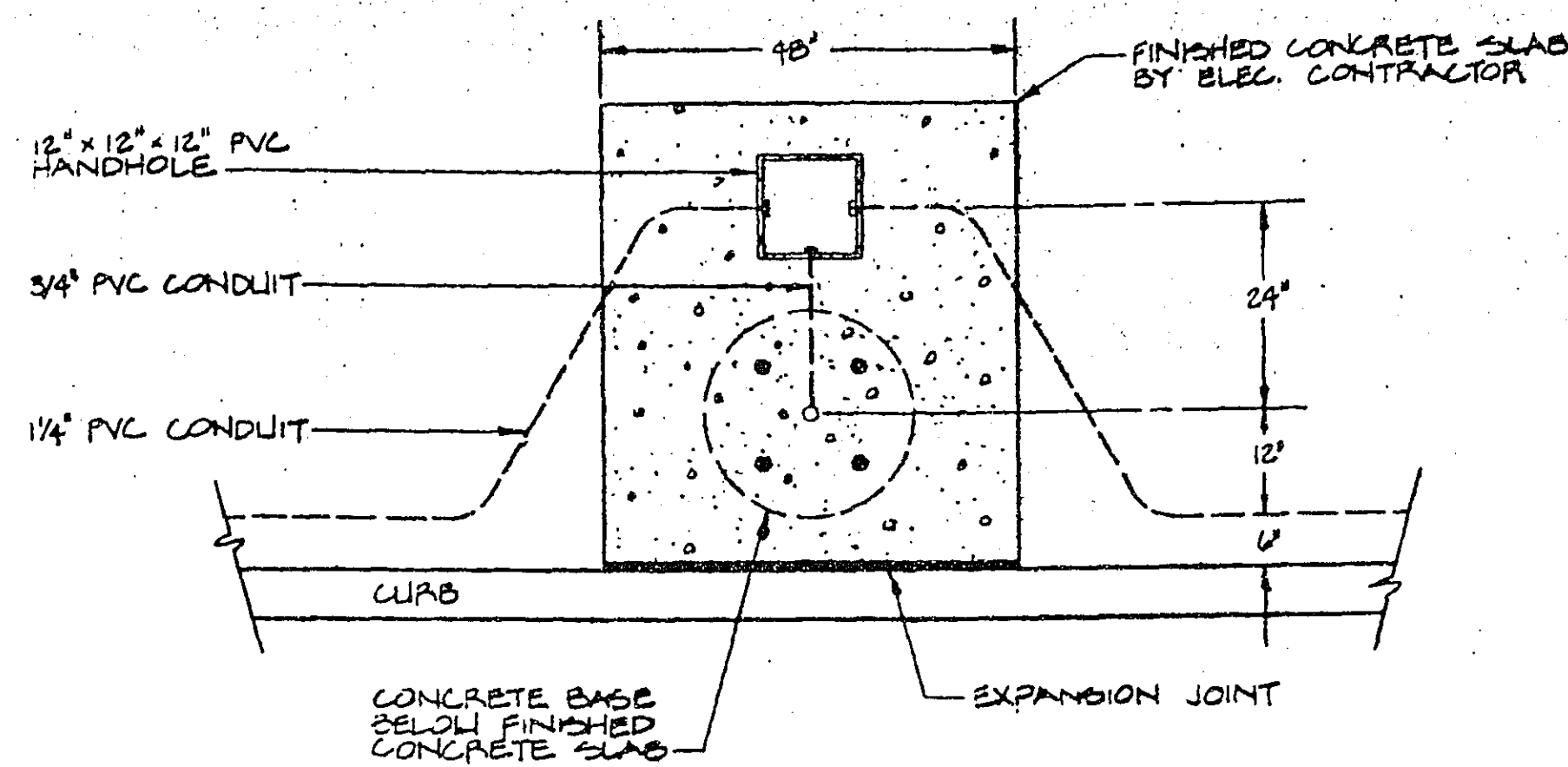
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DRAWING

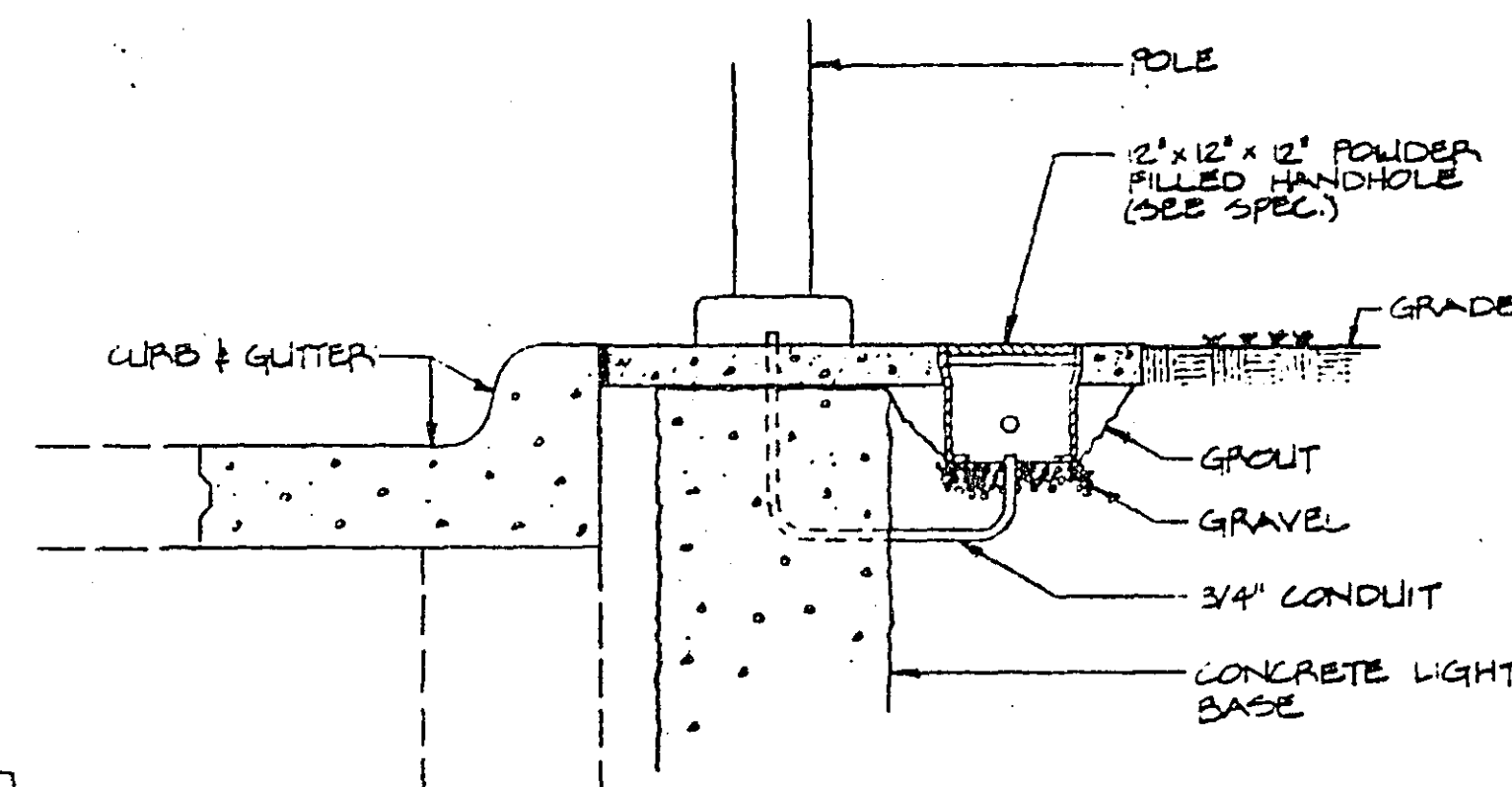
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23-147

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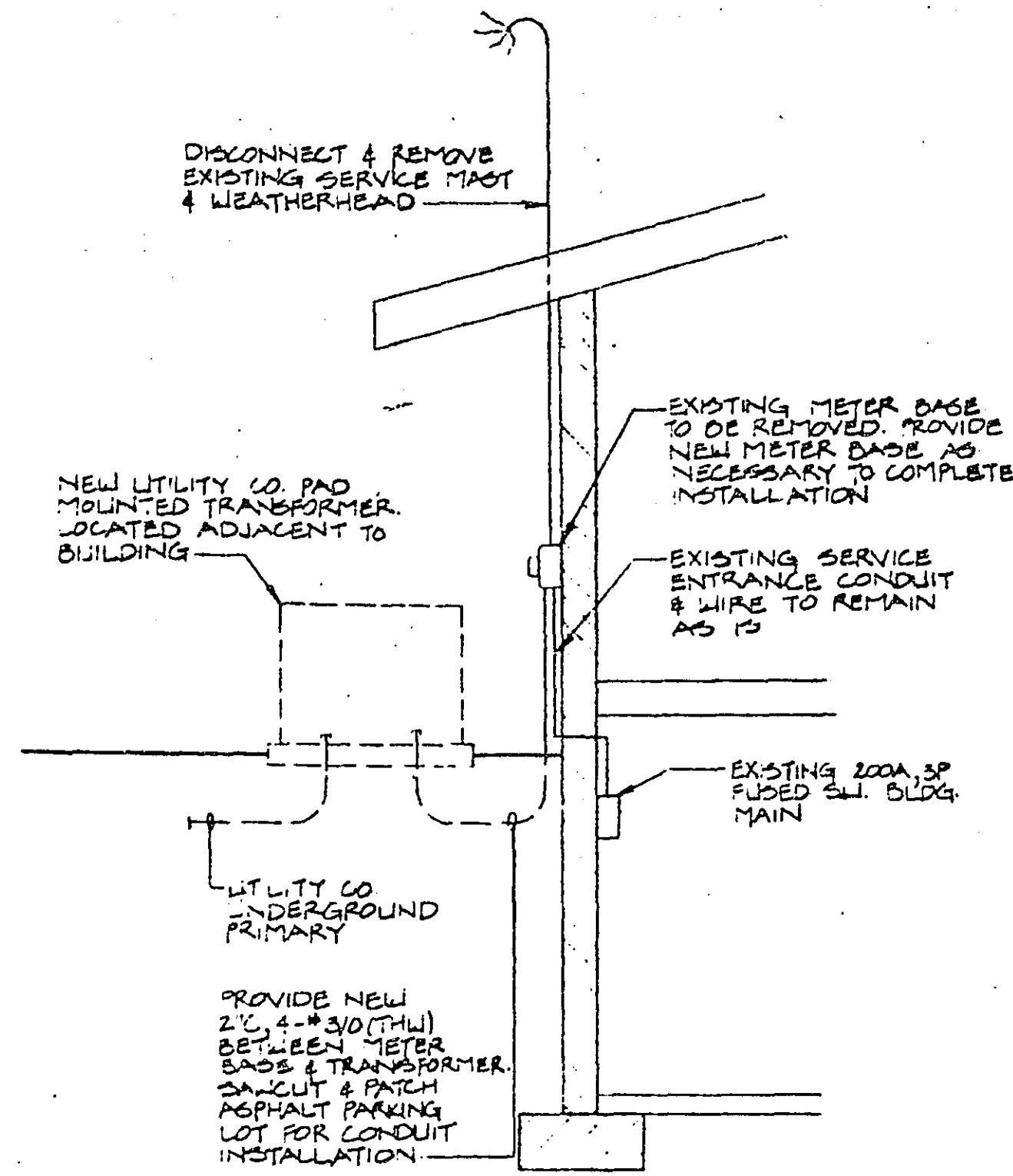
NUMBER

PLAN HOLD CORPORATION
DESIGNED BY R.H.PLAN HOLD CORPORATION • PINE, CALIFORNIA
REVISION NUMBER 07/84PLAN HOLD CORPORATION • PINE, CALIFORNIA
REVISION NUMBER 07/84PLAN HOLD CORPORATION
DESIGNED BY R.H.

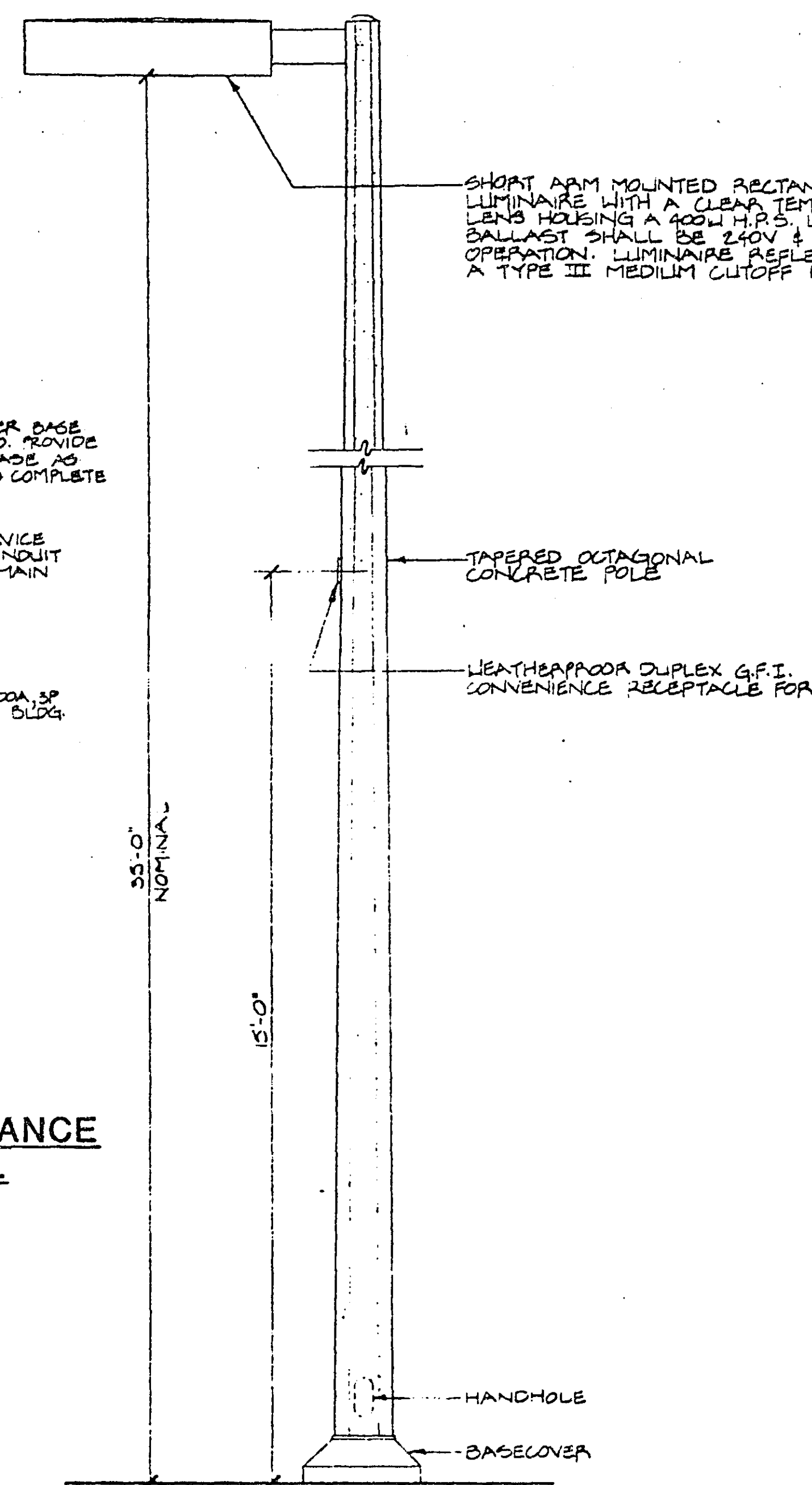
TYPICAL LIGHTING STANDARD PLAN



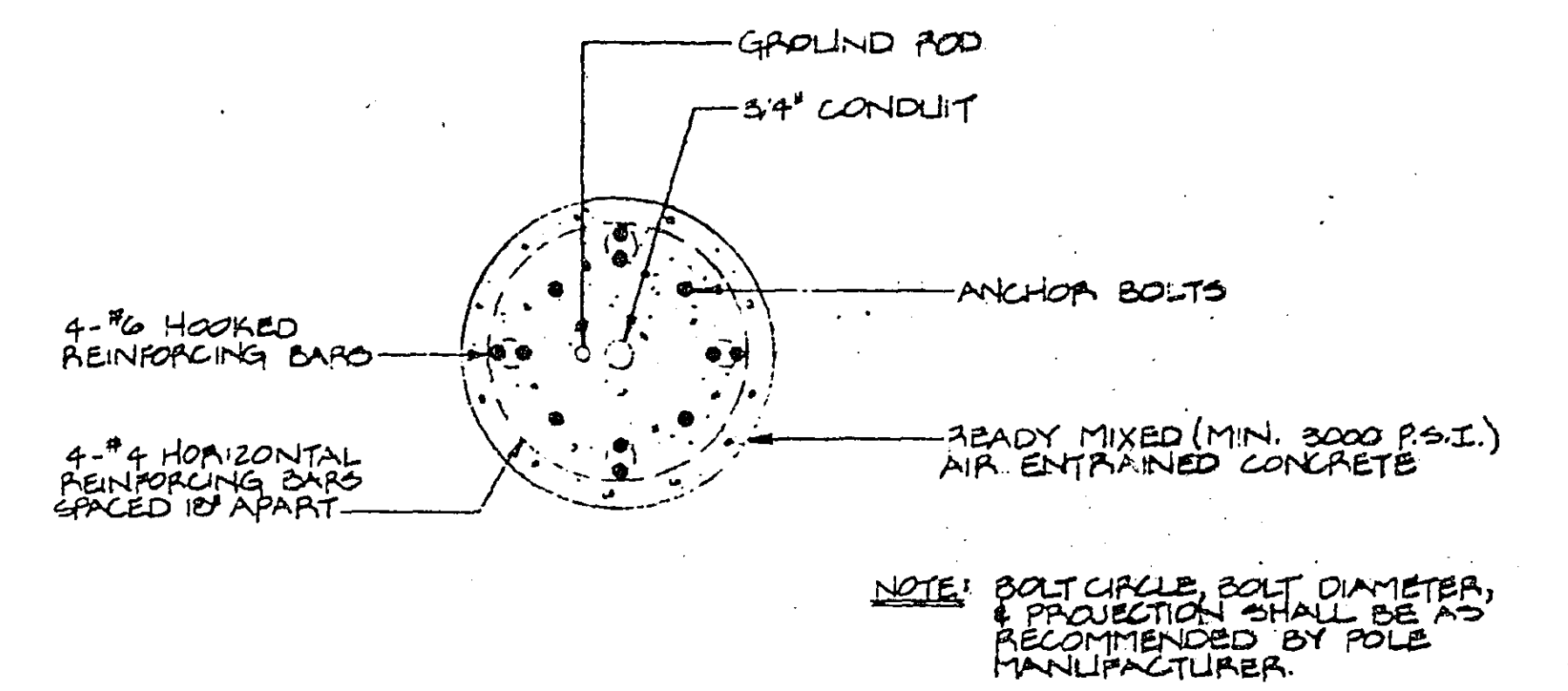
CONCRETE BASE & HANDHOLE SECTION



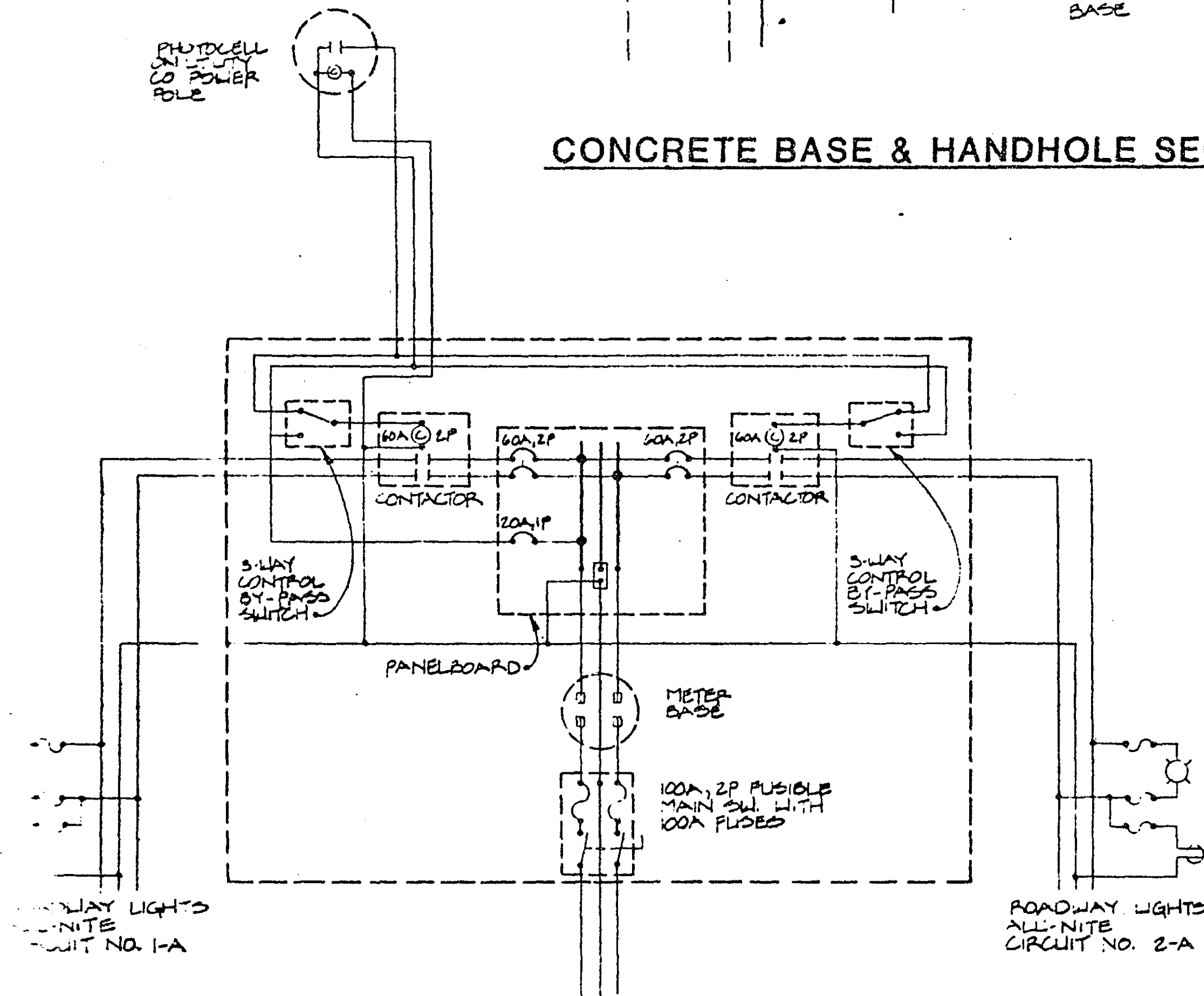
ELECTRICAL SERVICE ENTRANCE MODIFICATION DETAIL



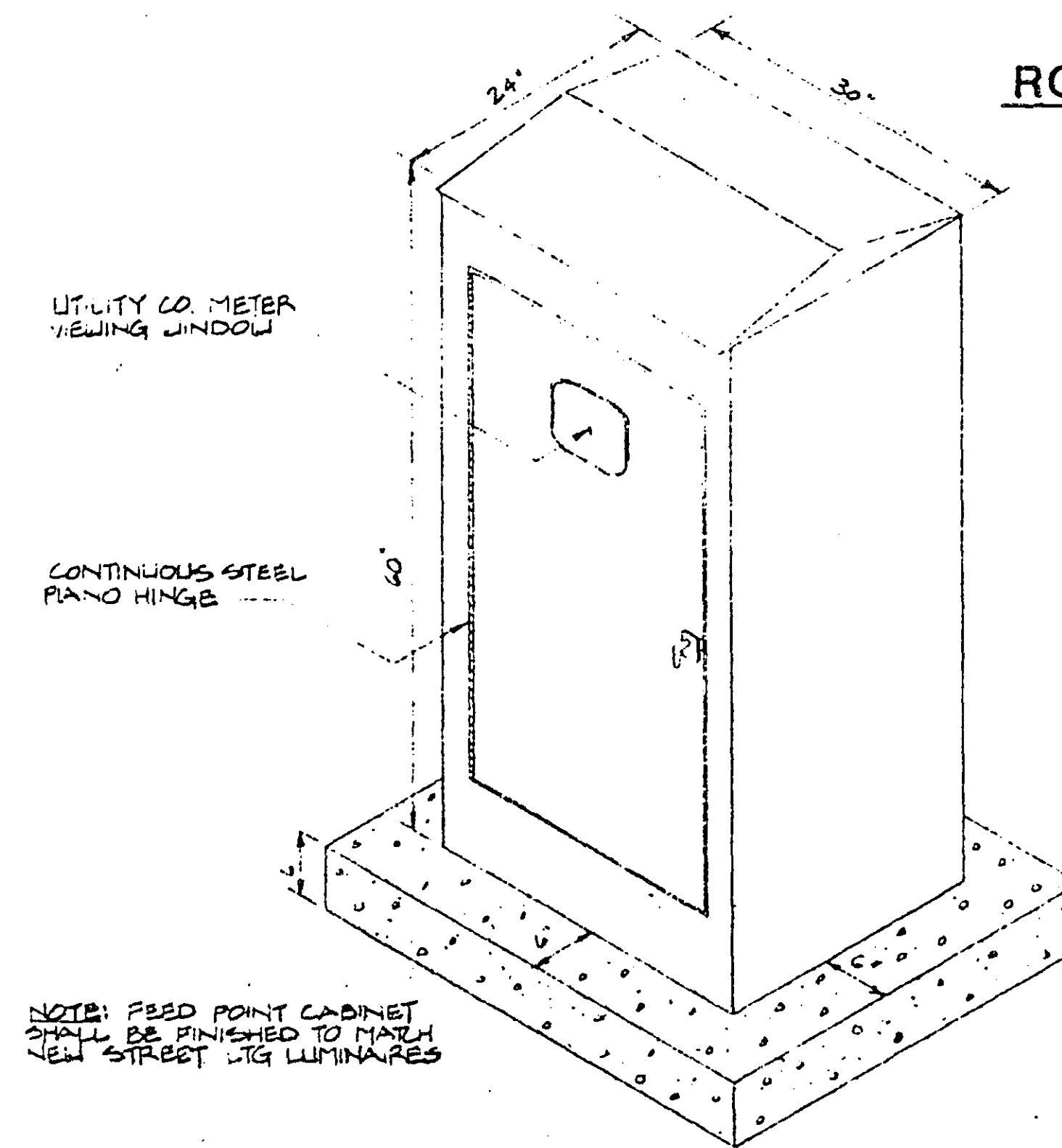
ROADWAY LIGHTING STANDARD



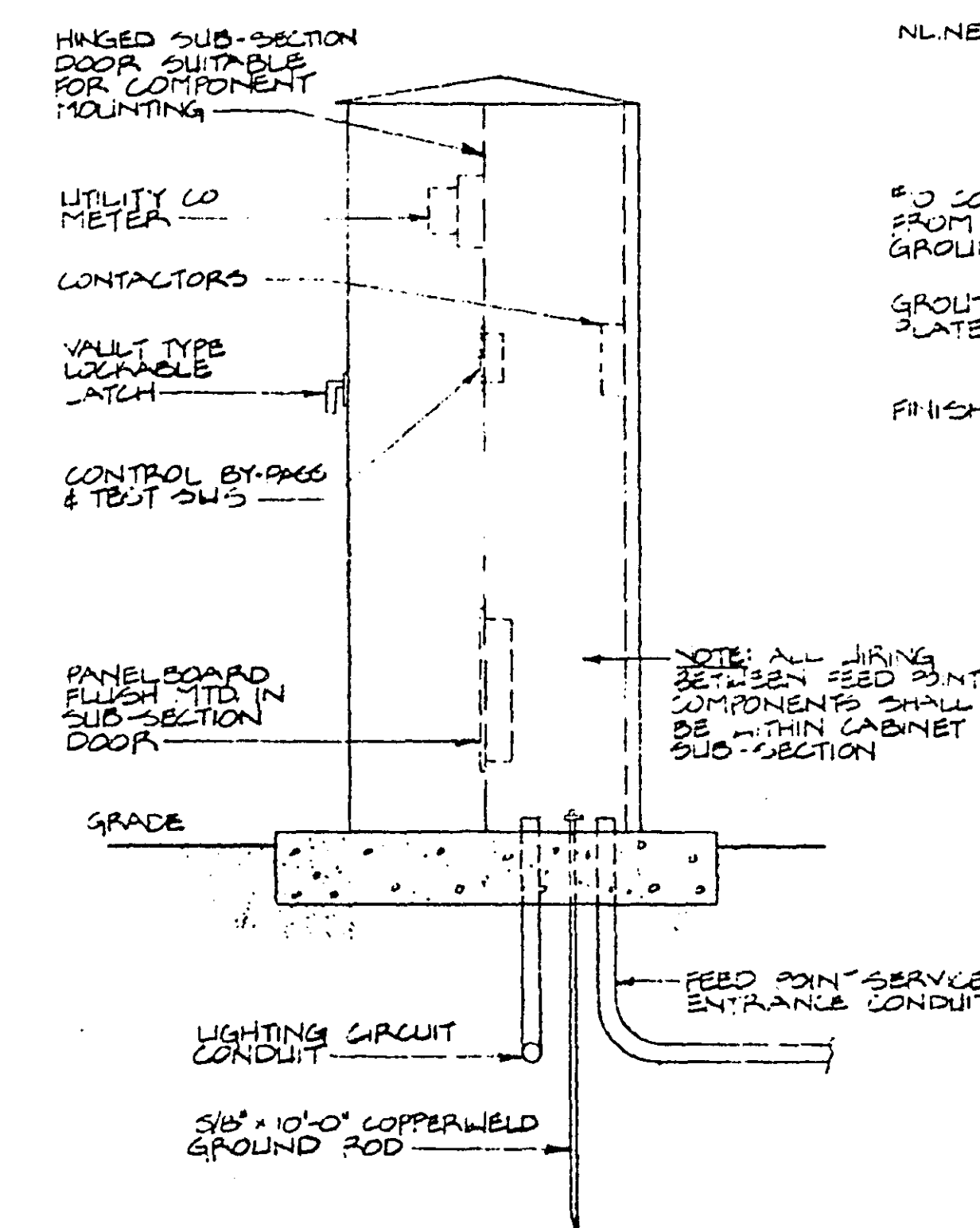
CONCRETE BASE DETAIL



FEED POINT WIRING DIAGRAM



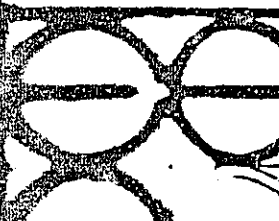
FEED POINT CABINET DETAILS



LIGHTING STANDARD WIRING CONNECTIONS

FOR INFORMATION ONLY

(INPLACE STREET LIGHTING)
COUNTY RD E

	ERICKSEN ELLISON AND ASSOCIATES INC. CONSULTING ENGINEERS SAINT PAUL MINNESOTA			
	SCALE:	NO.	DATE	
	NO SCALE			

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.

Robert H. Erickson
Date: JAN 12, 1987 Reg. No. 4778



SHORT - ELLIOTT - HENDRICKSON, INC.
Saint Paul, Minnesota • Chippewa Falls, Wisconsin

S.A.P. No. 62-615-13

Sheet No. 38 of 44 Sheets

FILE NO.:
30048
DATE:
2-12-87

23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 W. 1st of East Ramp
Knoxington Ave to Rd E also Knox Ave Rd & I 694 South & North Ramps & County Rd F

24X

DRAWING

PLAN HOLD CORPORATION
ENGINEERING
DESIGN

DRAWING NUMBER

23-147

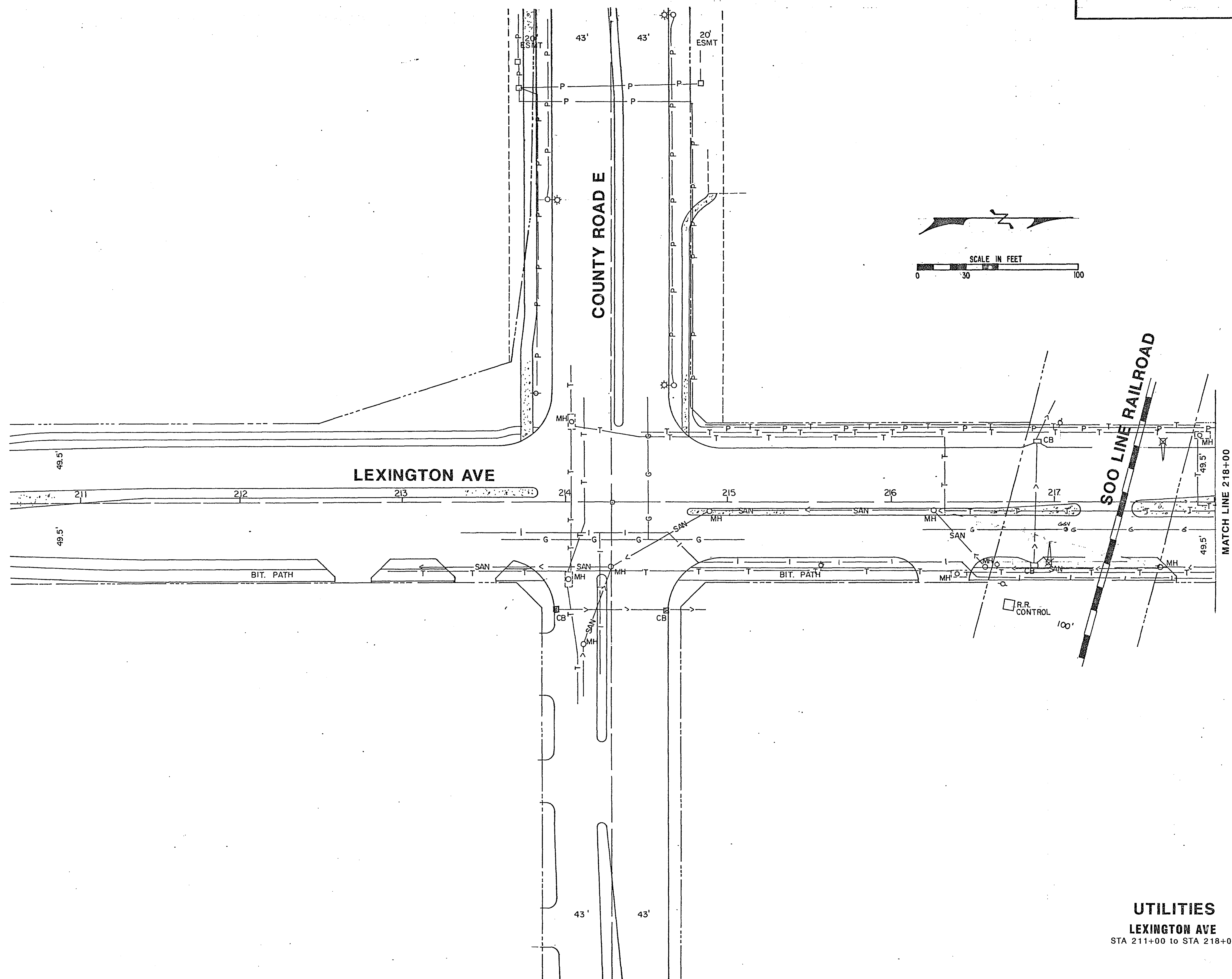
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

NUMBER

PLAN HOLD CORPORATION
IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

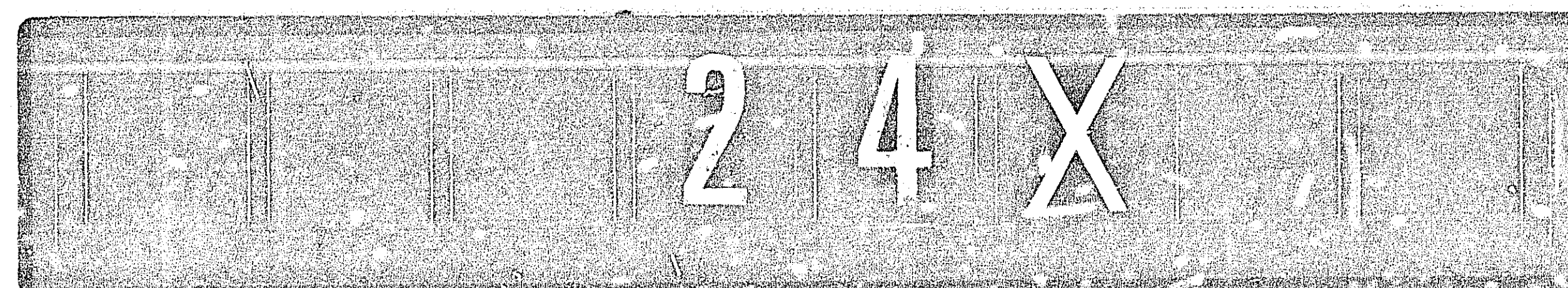


S.A.P. No. 62-651-24

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23-147

23-147 County Rd E Pine Tree Drive
County Rd E & T.H. 51 W-101st East Ramp
Lexington Ave to Rd E also these two Rd & I 694 South of
North Ramps & County Rd F



DRAWING

PLAN HOLD CORPORATION • PINE, CALIFORNIA
REGISTERED BY N.E.A.

DRAWING NUMBER
23-147

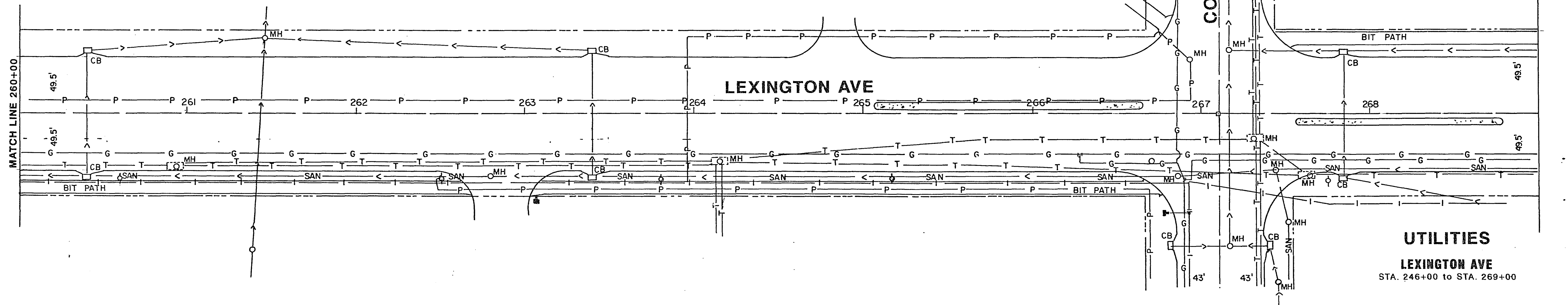
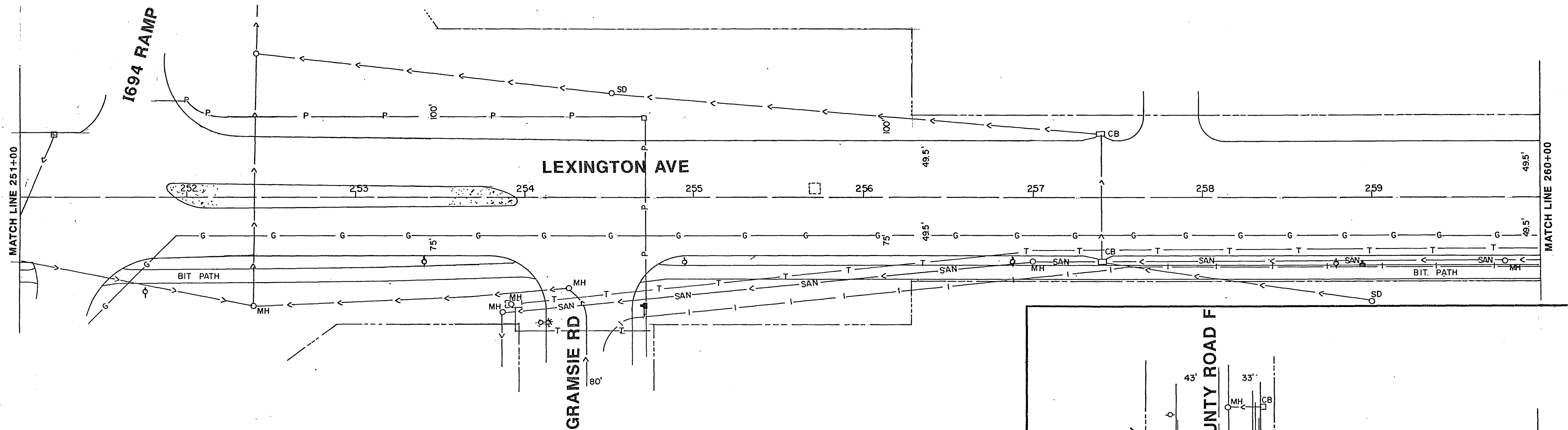
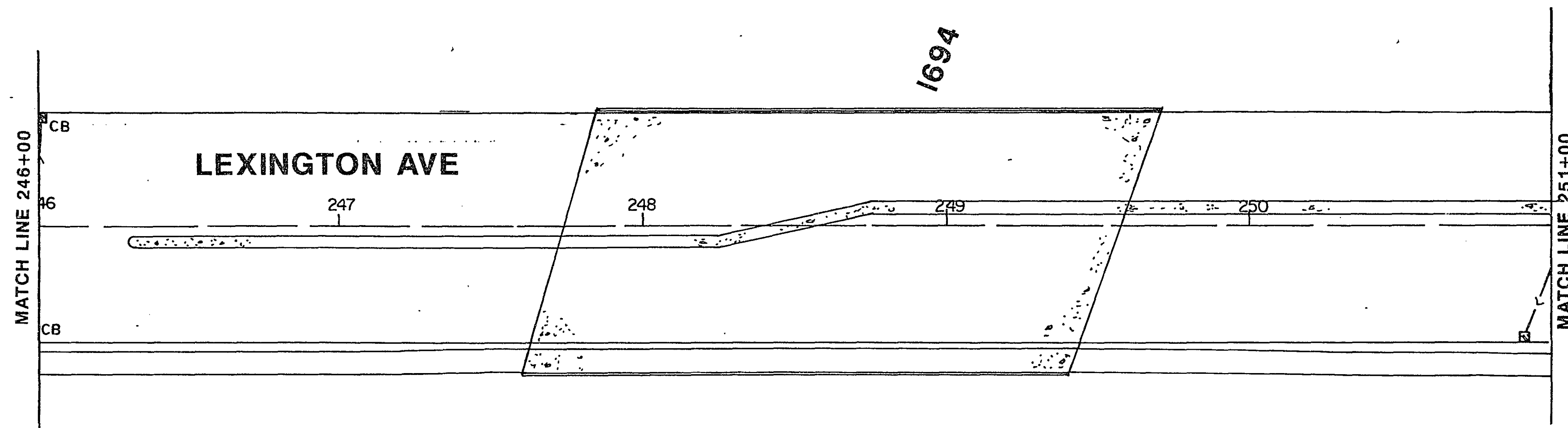
PLAN HOLD CORPORATION • PINE, CALIFORNIA
REGISTERED BY N.E.A.

DRAWING NUMBER

PLAN HOLD CORPORATION • PINE, CALIFORNIA
REGISTERED BY N.E.A.

NUMBER

PLAN HOLD CORPORATION • PINE, CALIFORNIA
REGISTERED BY N.E.A.



UTILITIES

LEXINGTON AVE

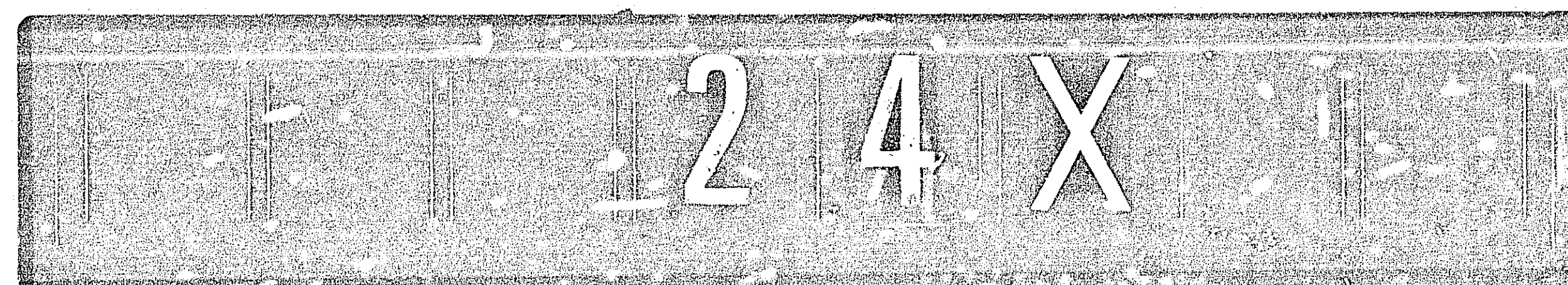
STA. 246+00 to STA. 269+00

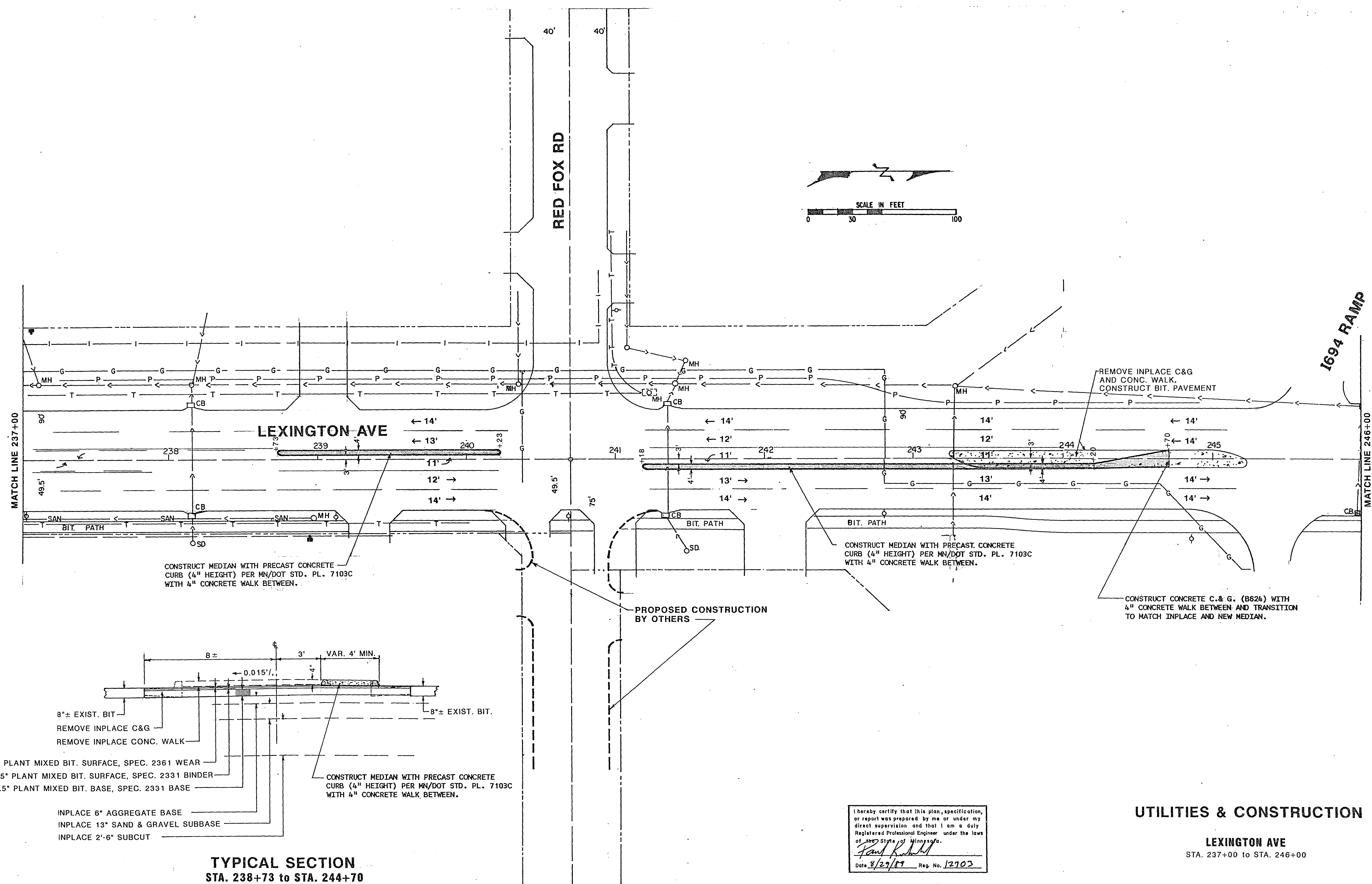
S.A.P. No. 62-651-24

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23-147

23-147 County Rd C Pine Tree Drive
County Rd E & T.H. 51 west of East Ramp
Lexington Ave to Rd E also Hwy 101 Rd & I 694 South of
North Ramp of County Rd F





DRAWING

23-147

DRAWING NUMBER

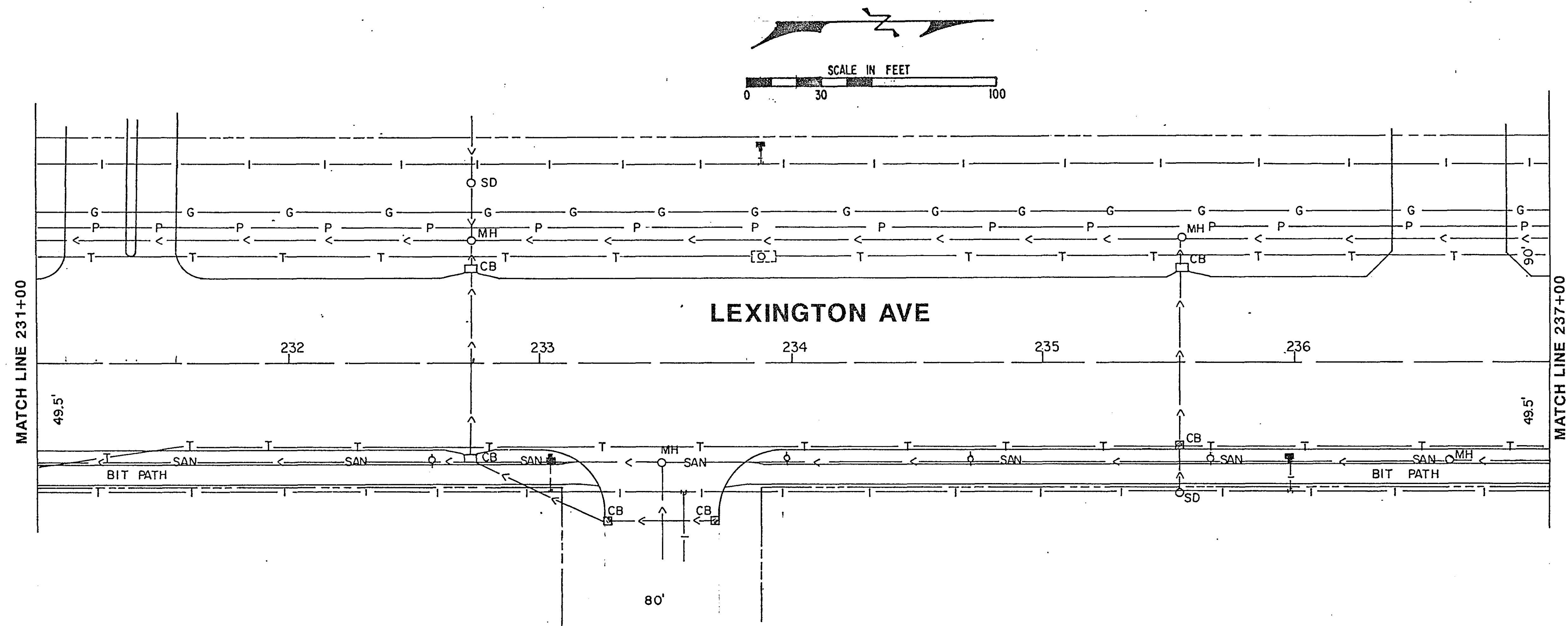
NUMBER

PLAN FIELD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PLAN FIELD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PLAN FIELD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PLAN FIELD CORPORATION • IRVINE, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER



UTILITIES

LEXINGTON AVE
STA. 231+00 to STA. 237+00

S.A.P. No. 62-651-24

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23-147

24X

23-147 County Rd E Pine Tree Drive
County Rd E to T.H. 51 west of East Ramp
Lexington Ave to Rd E also shows for Rd E I 694 South
North Ramp of County Rd F

DRAWING

DRAWING NUMBER

23-147

DRAWING NUMBER

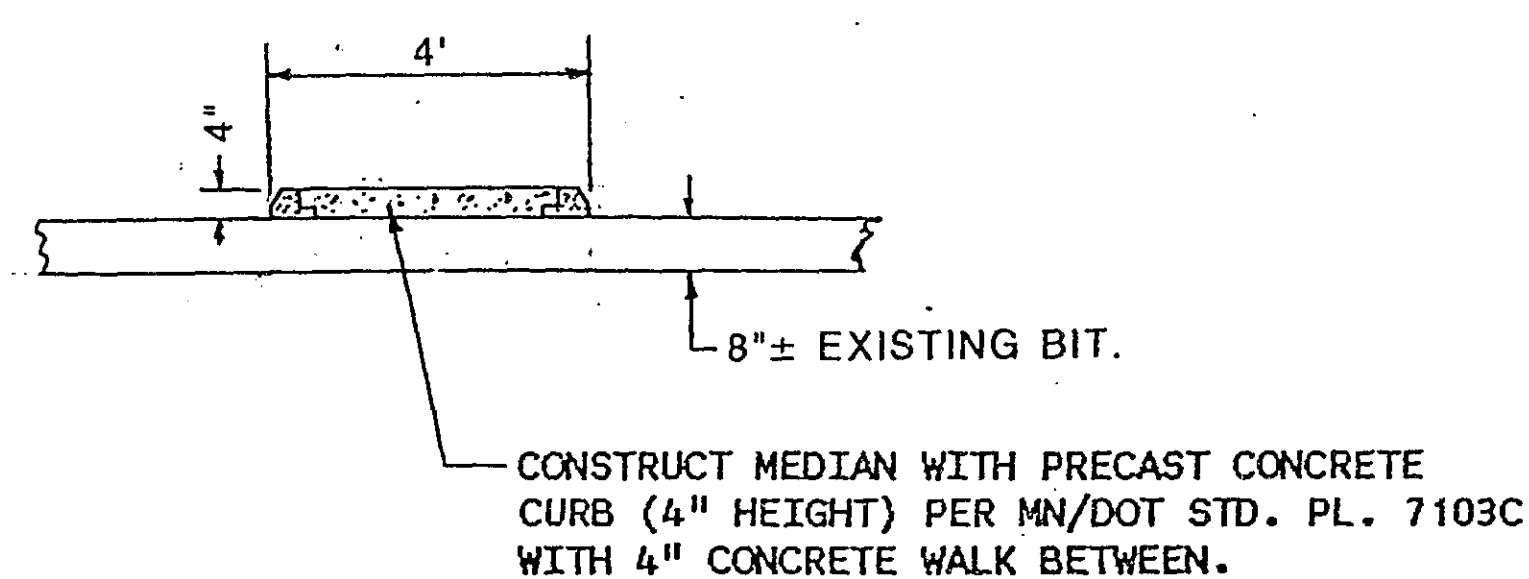
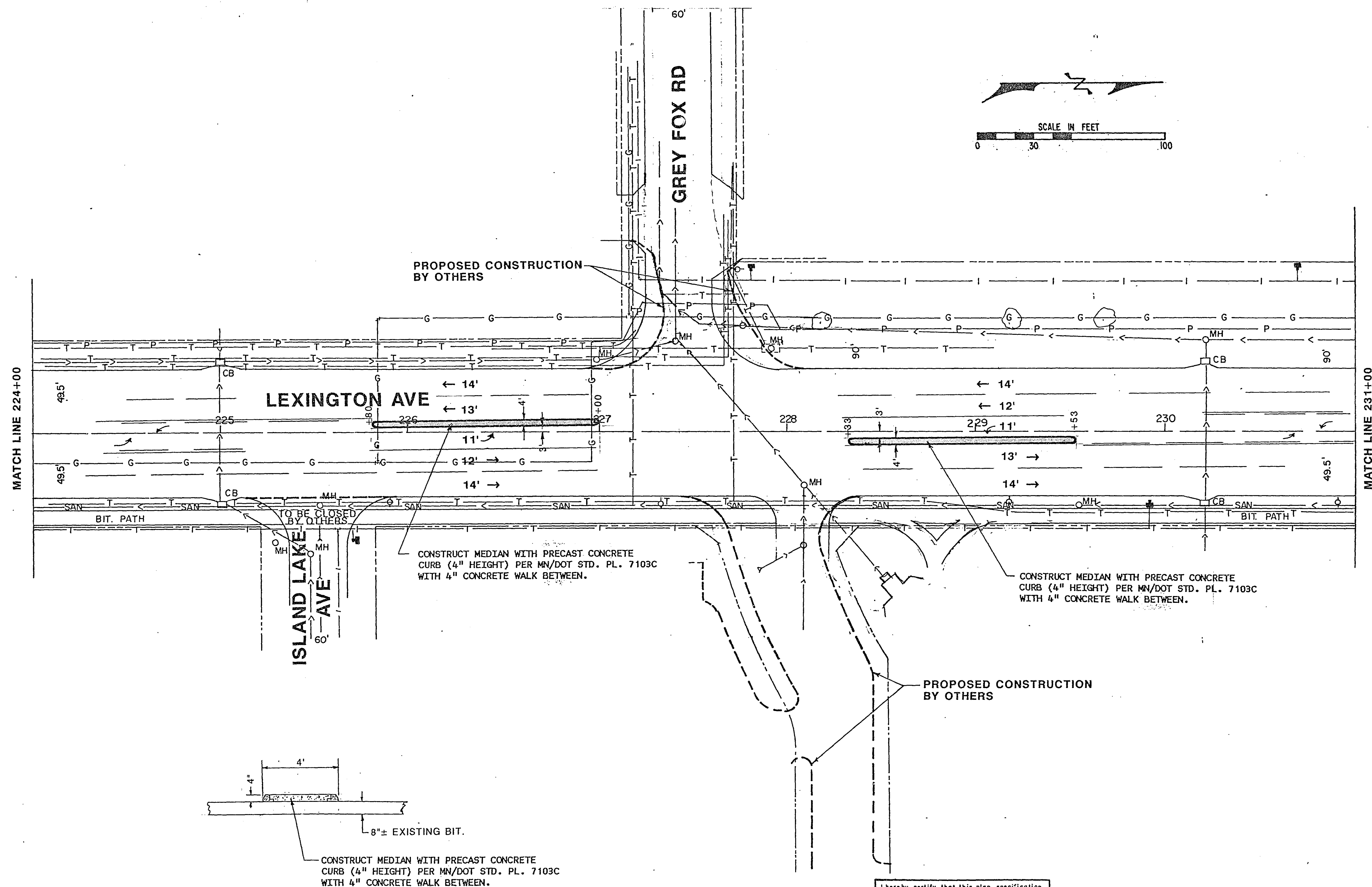
NUMBER

PLAN HOLD CORPORATION
MINNESOTA

PLAN HOLD CORPORATION • PRIME CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PLAN HOLD CORPORATION • PRIME CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

PLAN HOLD CORPORATION • PRIME CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER



TYPICAL SECTION
STA. 225+80 to STA. 229+53

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.
Pat R. Smith
Date 8/27/89 Reg. No. 12703

UTILITIES & CONSTRUCTION

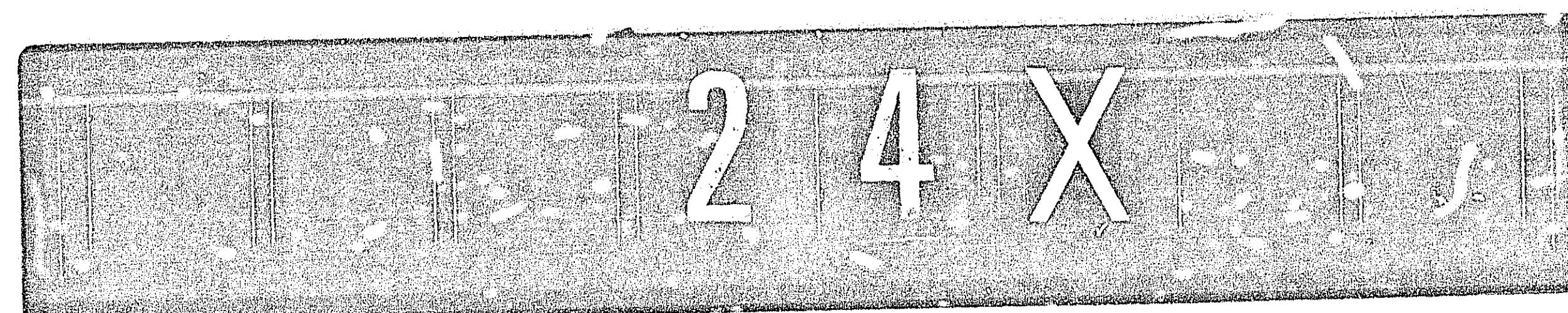
LEXINGTON AVE
STA. 224+00 to STA. 231+00

S.A.P. No. 62-651-24

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23-147

23-147 County Rd E Pine Tree Drive
County Rd C & T.H. 51 W. 1st & 2nd Ramps
Lexington Ave to Rd E also Grey Fox Rd & I 694 South & North Ramps & County Rd F



DRAWING

PLANFIELD CORPORATION
ENGINEERING
BIRMINGHAM

DRAWING NUMBER

23-147

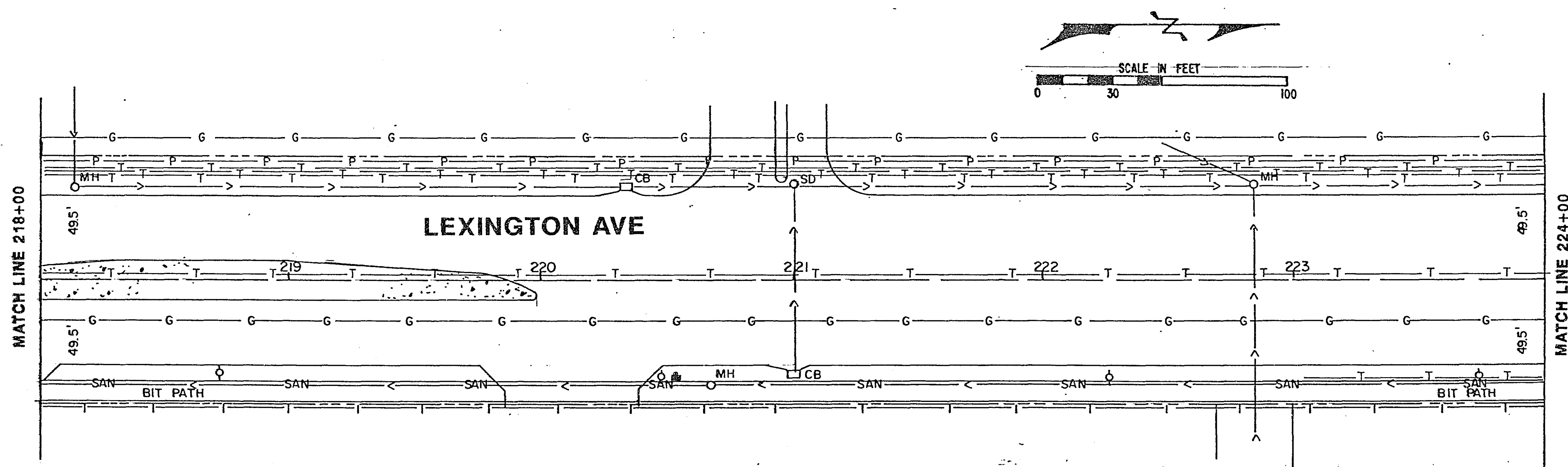
PLANFIELD CORPORATION • IRVING, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

DRAWING NUMBER

PLANFIELD CORPORATION • IRVING, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

NUMBER

PLANFIELD CORPORATION • IRVING, CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

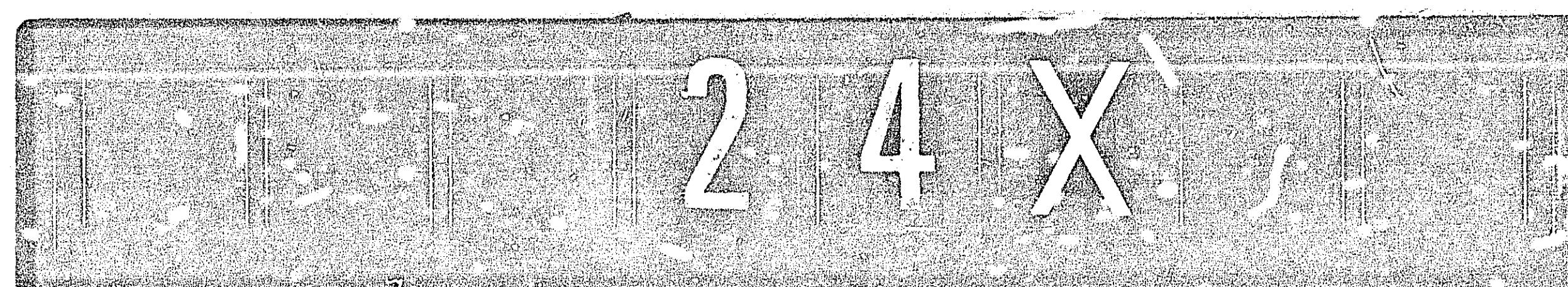


UTILITIES
LEXINGTON AVE
STA 218+00 to STA 224+00

S.A.P. No. 62-651-24

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23-147



23-147 County Rd E Pine Tree Drive
County Rd E to T.H. 51 West of East Ramp
Lexington Ave to Rd E also Hwy Fox Rd & I 694 South of
North Ramp & County Rd F