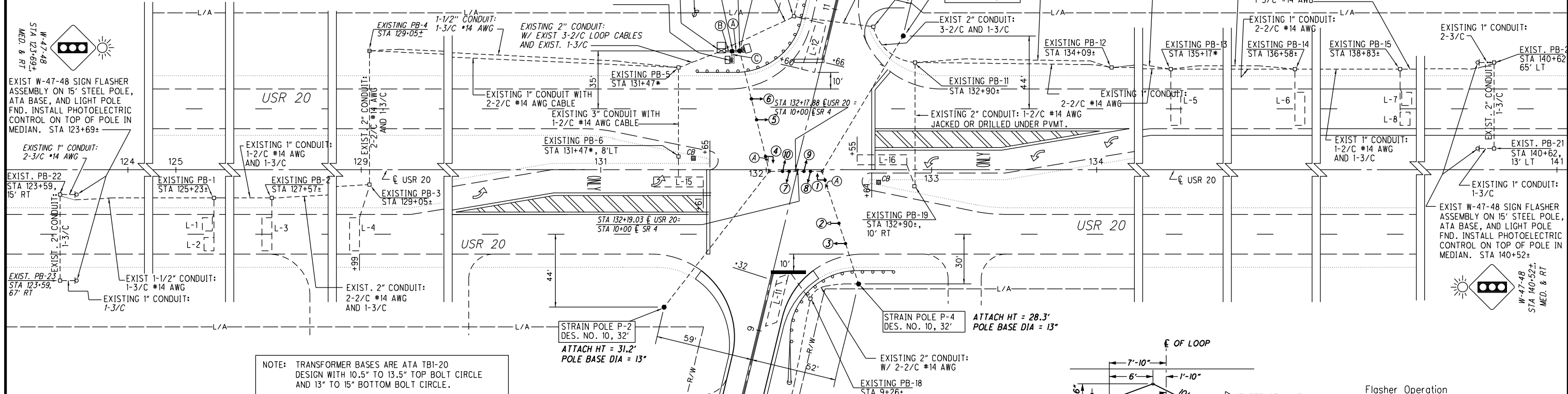
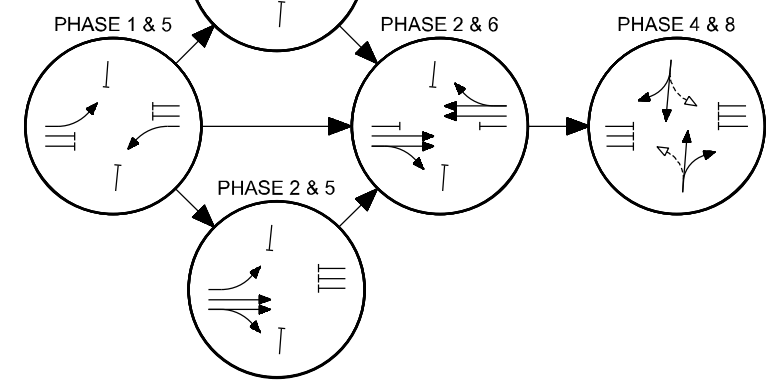
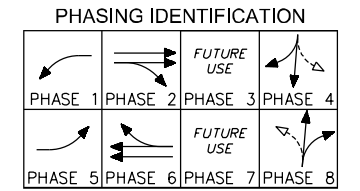
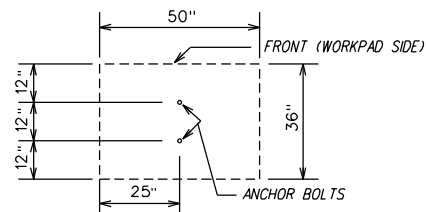


MATERIAL REQUIRED			
ITEM	UNIT	DESCRIPTION	QTY.
625	EACH	LIGHT POLE FOUNDATION, 24"x6" DEEP	4
625	EACH	ALUMINUM TRANSFORMER BASE, ATA	4
625	EACH	CONNECTOR KIT, TYPE III	4
625	EACH	CONNECTOR KIT, TYPE VIII	8
625	LIN.FT.	CONDUIT, 7/8" O.D., 1"	1800
625	LIN.FT.	CONDUIT, 7/8" O.D., 2"	145
625	LIN.FT.	CONDUIT, 7/8" O.D., 3"	46
625	LIN.FT.	CONDUIT, 7/8" O.D., 1-1/2"	953
625	LIN.FT.	CONDUIT JACKED OR DRILLED UNDER PVMT, 2"	360
625	EACH	PULL BOX, 7/8" O.D., 18"	23
625	EACH	GROUND ROD, APP	10
630	EACH	SIGN, FLAT SHEET	39
630	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE, APP	4
631	EACH	PHOTOELECTRIC CONTROL	2
631	EACH	SIGN FLASHER ASSEMBLY	4
632	EACH	VEH. SIGNAL HEAD, (LED), 3-SECT., 12" LENS, 1-WAY, POLYCARB., APP	10
632	EACH	BACKPLATE, 3-SECTION	10
632	EACH	LOOP DETECTOR UNIT, DELAY AND EXT. TYPE	10
632	LIN.FT.	MESS. WIRE, 7-STRAND, 3/8" DIA. W/ ACC.	378
632	LIN.FT.	MESS. WIRE, 7-STRAND, 1/4" DIA. W/ ACC.	378
632	EACH	BREAKAWAY TETHER POLE CONNECTION	4
632	LIN.FT.	LOOP DETECTOR LEAD-IN CABLE, 2/C, NO. 14 AWG	6060
632	LIN.FT.	POWER CABLE, 2/C, NO. 6 AWG	36
632	LIN.FT.	POWER CABLE, 3/C, NO. 6 AWG	30
632	EACH	POWER SERVICE	30
632	LIN.FT.	SIGNAL CABLE, 3/C, NO. 14 AWG	2351
632	LIN.FT.	SIGNAL CABLE, 5/C, NO. 14 AWG	927
632	EACH	CABLE SUPPORT ASSEMBLY	2
632	CU.YD.	CONCRETE FOR ANCHOR BASE FOUNDATION, APP	11.52
632	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 10,	4
632	EACH	STEEL STRAIN POLE, 7.5" DIA, 10.5" BOLT CIRCLE,	11 GA, 5
632	LIN.FT.	LOOP DETECTOR WIRE, TYPE E	2523
632	EACH	METER BASE, 200 AMP WITH BYPASS	1
633	EACH	CONTROLLER ACTUATED, 8-PHASE, SOLID-STATE	1
633	EACH	DIGITAL MICROPROCESSOR, APP	1
633	CU.YD.	CONCRETE FOR CABINET FOUNDATION	3.39
633	SQ.FT.	CONTROLLER WORK PAD	22.4
633	EACH	FLASHER CONTROLLER	1
633	EACH	1000W UPS W/ ENCLOSURE	1

- (A) EXISTING 1" CONDUIT: 1-2/C #6 AWG POWER CABLE EXISTING 3" CONDUIT W/ 4-5/C AND 2-3/C SIGNAL CABLES AND 2-2/C LOOP LEAD-IN CABLES
- (B) EXISTING 1" CONDUIT: 1-2/C #6 AWG POWER CABLE EXISTING 3" CONDUIT W/ 4-5/C AND 2-3/C SIGNAL CABLES AND 2-2/C LOOP LEAD-IN CABLES
- (C) EXIST 5' LENGTH OF 2" CONDUIT W/ 1-2/C POWER CABLE FROM DISCONNECT TO BACKUP AND 1-2/C POWER FROM BACKUP TO CONTROLLER

PB-5A - EXIST 18" STA 131+79±
POWER SOURCE, O.E. POLE NO. 4918A2-5, STA 131+57*, LT
EXISTING 8-PHASE CONTROLLER ON CONCRETE FND. W/ 3'X4' WORKPAD
EXIST UPS - GROUND MOUNTED ON TYPE 2 FND W/ 30"X50" WORK PAD

ATTACH HT = 30.6'
POLE BASE DIA = 13"

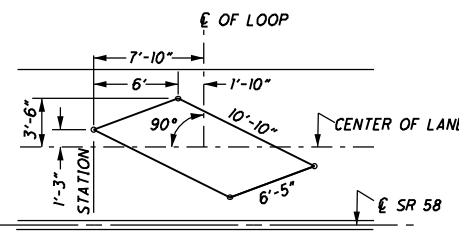


NOTE: TRANSFORMER BASES ARE ATA TB1-20 DESIGN WITH 10.5" TO 13.5" TOP BOLT CIRCLE AND 13" TO 15" BOTTOM BOLT CIRCLE.

LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE
L-1	6X8	3	PULSE		1	2
L-2	6X8	3	PULSE		1	2
L-3	6X20	2	PULSE		2	2
L-4	6X20	2	PULSE		2	2
L-5	6X20	2	PULSE		3	6
L-6	6X20	2	PULSE		3	6
L-7	6X8	3	PULSE		4	6
L-8	6X8	3	PULSE		4	6
L-9	6.4X10.8	4	PULSE	3*	5	8
L-10	6.4X10.8	4	PULSE	3*	5	8
L-11	6X30	3+3	PRESENCE	8*	6	8
L-12	6X8X30	2	PRESENCE	8*	7	4
L-13	5X5	3	PULSE	3*	8	4
L-14	5X5	3	PULSE	3*	8	4
L-15	6X30	3	PRESENCE	9	5	5
L-16	6X30	3	PRESENCE	10	1	1

* INHIBIT DELAY DURING ASSOC. PHASE GREEN INTERVAL



Flasher Operation
Yellow To US 20
Red To SR 4
Signal No. HUR-20-0250S
Section No. 00.98
Route Type 20
Installation Date 6-23-37
File No. 0018
OSIS No. 471

DATE	REVISIONS	INSTALLED
2/7/95	PLAN REDRAWN PER WORK ON PROJ 284(93)	9/8/94
4-24-96	SWITCHED PH 2&3, ADDED NO-SKIP FOR SR-4	4-11-96
2-19-97	NEW STRAIN POLES, HEADS, AND CONTROLLER	5-29-97
10-31-97	INSTALLED PROT. LT. TURN PHASES ON USR 20 & REMOVED NO-SKIP FOR SR 4	10-28-97
2-22-02	RELOCATED LOOPS L-15 AND L-16	3-8-02
1-6-04	REMOVED NOTE FOR STROBE LIGHTS	
1-29-04	PROJ 62103-REBUILD SIGN FLASHERS, NEW SIGNAL HEADS, 8-PH. CONTROLLER	6-2-04
3-4-05	INSTALLED BATTERY BACKUP - PROJ. 62-03	5-24-05
9-17-10	PROJ 58101-INSTALLED BREAKAWAY TETHER POLE CONNECTIONS	4-21-10
10-17-11	PROJ 3321101-INSTALLED NEWS SIGNAL HEADS W/ BACKPLATES	12-13-11
10-17-11	PROJ 6031101-UPGRADE LOOPS ON SOUTH APPROACH	6-8-12

OHIO DEPARTMENT OF TRANSPORTATION

ELECTRICAL INSTALLATION
LOCATED AT
U.S.R. 20 AND S.R. 4

PLAN REDRAWN
DISTRICT 3 COUNTY HURON

APPROVED _____ DATE _____
ENGINEER OF TRAFFIC

DESIGNED RJR 2/97 DRAWN RJR 2/97 REVISED RJR 1/04 CHECKED _____ REVIEWED _____ SHEET 1 OF _____

DESIGN FILE: I:\FIELD\N\VELECTRICAL\SIGNAL\DCGN\H20&4.dgn
WORKSTATION: RONEY DATE: 6/14/2012