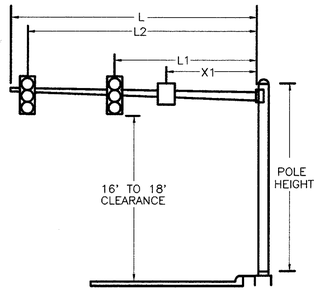
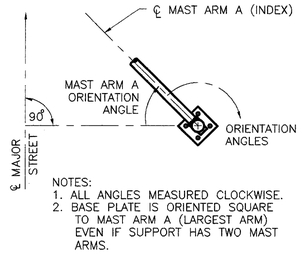
CALC. BY: DATE:	LAKE COUNTY LAK-20-2.70	OHIO
CHKD. BY: DATE:		FHWA REGION 5
		FEDERAL PROJECT

43/98

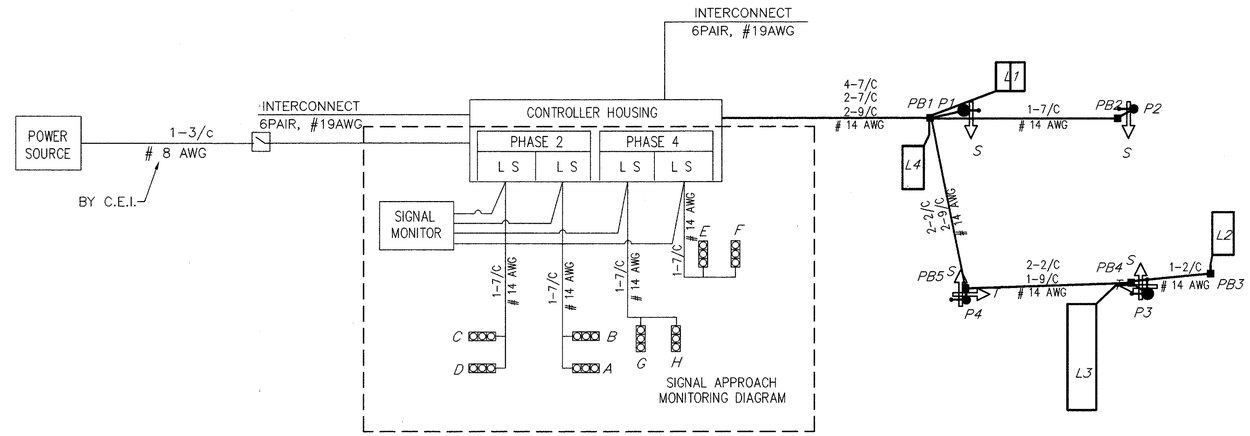




NOTES:
1. ALL ANGLES MEASURED CLOCKWISE.
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM A (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SUPPORT NO.	SIGNAL SUPPORT TC-81.20 TC-12.30: POLE DESIGN NO. TC-81.20	POLE DESIGN NO. TC-12.30	ARM DESIGN NO.	POLE HEIGHT (FT)	FOUNDATION STATION	FOUNDATION OFFSET	L (FT.)	L 1 (FT.)	L 2 (FT.)	L 3 (FT.)		X 1 (FT.)	MAST ARM A ANGLE (DEG.)	ORIENTATION ANGLES (DEG.) FROM MAST ARM "A": MAST ARM B	PEDESTRIAN SIGNALS	PEDESTRIAN PUSH BUTTONS	POWER SERVICE	CONTROLLER	LUMINAIRE BRACKET	HANDHOLE	CABLE ENTRANCE (12" FROM TOP)		
P1	1		1	20'	170+49	27'L	22	11	21				0		270	270				180			
P2	2			20'	171+07	26'L	25	14	24				90		0	0				180			
P3	4		3	20'	171+01	38'R	34	23	33				0		0/270	0/270				180			
			3				34	25	33					270									
P4	PED			8'	170+56	35'R							0		0/270	0/45				180			

ORIENTATION ANGLE CHART



WIRING DIAGRAM

FUNCTION	ø2	ø4
MINIMUM GREEN	15	8
PED WALK	7	7
PED CLEARANCE	8	10
GREEN EXTENSION	3.0	3.0
MAXIMUM GREEN	81	21
YELLOW CLEARANCE	3.6	3.1
ALL RED CLEARANCE	0.8	1.1
RECALL	PED	NONE

SIGNAL TIMING

NOTES:

1. PHASE SPLITS SHALL INCLUDE ALL GREEN PLUS YELLOW & ALL RED
2. PERMISSIVES SHALL START AT THE ZERO POINT OF THE CYCLE
3. OFFSETS SHALL BE REFERENCED TO THE BEGINNING OF PHASE 2 YELLOW

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	100	120	110
PHASE 2 SPLIT	72 %	83 %	72 %
PHASE 4 SPLIT	28 %	17 %	28 %
PERMISSIVE	15 %	15 %	15 %
OFFSET	2 %	13 %	37 %
TIME OF DAY SCHEDULE	ALL OTHER TIMES	6:30AM TO 9:00AM MON-SAT	3:30PM TO 6:30PM MON-SAT

COORDINATION TIMING

N

ITEM	TOTAL	UNIT	DESCRIPTION
202	650	SQ FT	WALK REMOVED
608	650	SQ FT	4" CONCRETE WALK
625	5	EACH	GROUND ROD
625	5	EACH	PULLBOX, MISC: AS PER PLAN
625	234	LIN FT	CONDUIT, 2", 713.04
625	10	LIN FT	CONDUIT, 3", 713.04
625	160	LIN FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
625	130	LIN FT	TRENCH
632	8	EACH	VEHICULAR SIGNAL HEAD, 3 SECT., 12" LENS, 1-WAY, AS PER PLAN
632	6	EACH	PEDESTRIAN SIGNAL HEAD, TYPE D2
632	6	EACH	PEDESTRIAN PUSHBUTTON
632	2	EACH	LOOP DETECTOR UNIT, AS PER PLAN
632	2	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	6.01	CU YD	CONCRETE FOR ANCHOR BASE FOUNDATION
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 1, 22' ARM
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 2, 25' ARM
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 4 WITH MAST ARMS
			TYPE TC-81.20, DES. 3, 34' AND TYPE TC-81.20, DES. 3, 34'
632	1	EACH	PEDESTAL, 8', TRANSFORMER BASE
632	3	EACH	CABLE SUPPORT ASSEMBLY
632	202	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
632	1032	LIN FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632	188	LIN FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG
632	564	LIN FT	LOOP DETECTOR WIRE, TYPE E
632	355	LIN FT	LOOP DETECTOR LEAD-IN CABLE
632	159	LIN FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
632	1	EACH	**CONDUIT RISER, 1 1/2"**
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	0.99	CU YD	CONCRETE FOR CABINET FOUNDATION
633	1	EACH	CONTROLLER, ACTUATED, 4 PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN

SIGNAL HEAD	ø2 R/W		ø2 CLEAR		ø4 R/W		ø4 CLEAR		FLASH
A	G	G	Y	R	R	R	R	R	Y
B	G	G	Y	R	R	R	R	R	Y
C	G	G	Y	R	R	R	R	R	Y
D	G	G	Y	R	R	R	R	R	Y
E	R	R	R	R	G	G	Y	R	R
F	R	R	R	R	G	G	Y	R	R
G	R	R	R	R	G	G	Y	R	R
H	R	R	R	R	G	G	Y	R	R
S-S	DW	DW	DW	DW	W	FDW	DW	DW	DARK
T-T	W	FDW	DW	DW	DW	DW	DW	DW	DARK

SIGNAL DISPLAY CHART

LOOP #	SIZE	# TURNS	MODE	DELAY	UNIT #	PHASE
L1	8' x 8'	2-4-2	PRESENCE	8	1	4
L2	6' x 12'	3	PRESENCE	0	2	SYSTEM
L3	8' x 30'	2	PRESENCE	8	3	4
L4	6' x 12'	3	PRESENCE	0	4	SYSTEM

LOOP DETECTOR CHART

VINE STREET & CLARK AVE. TRAFFIC CONTROL PLAN