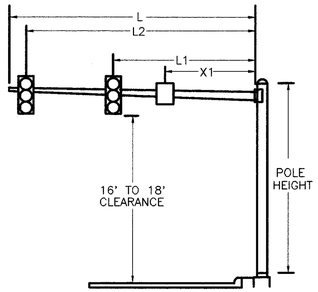
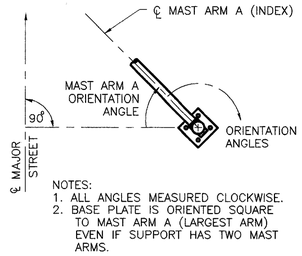
CALC. BY: DATE:	LAKE COUNTY LAK-20-2.70	OHIO
CHKD. BY: DATE:		FHWA REGION 5
		FEDERAL PROJECT

73
98

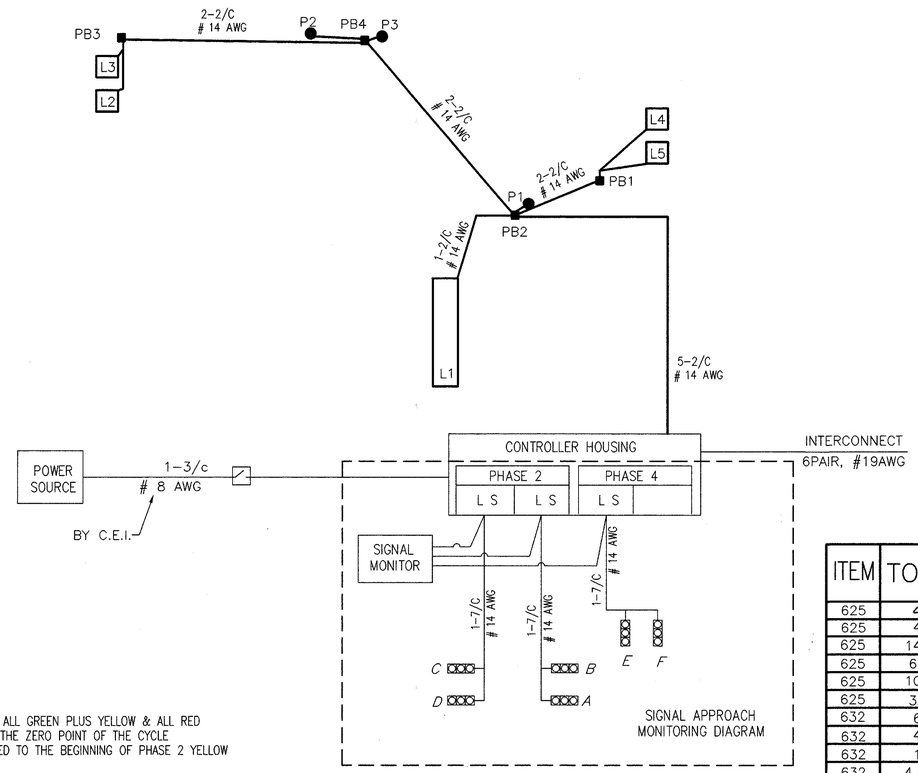




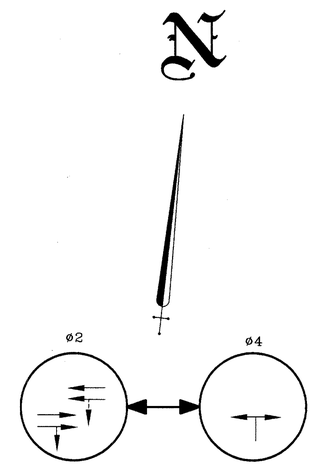
NOTES:
1. ALL ANGLES MEASURED CLOCKWISE.
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM A (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SUPPORT NO.	SIGNAL SUPPORT TC-81.20 TC-12.30												ORIENTATION ANGLES (DEG.) FROM MAST ARM "A"									
	POLE DESIGN NO.		ARM DESIGN NO.	POLE HEIGHT (FT)	FOUNDATION		L	L 1	L 2	L 3		X 1	MAST ARM A ANGLE (DEG.)	MAST ARM B	PEDESTRIAN SIGNALS	PEDESTRIAN PUSH BUTTONS	POWER SERVICE	CONTROLLER	LUMINAIRE BRACKET	HANDHOLE	CABLE ENTRANCE (1/2" FROM TOP)	
	TC-81.20	TC-12.30			STATION	OFFSET	(FT.)	(FT.)	(FT.)	(FT.)		(FT.)										
P1	1		1	20'	215+60	24'R	23	12	22				0							180		
P2	1		1	20'	214+99	23'L	22	11	21				0							180		
P3	2		2	20'	215+19	23'L	25	14	24				270							180		

ORIENTATION ANGLE CHART



WIRING DIAGRAM



PHASING DIAGRAM

FUNCTION	ø2	ø4
MINIMUM GREEN	8	7
PED WALK	–	–
PED CLEARANCE	–	–
GREEN EXTENSION	3	2.5
MAXIMUM GREEN	96	15
YELLOW CLEARANCE	3.1	3.1
ALL RED CLEARANCE	1.1	1.6
RECALL	MIN	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	85	100	120
PHASE 2 SPLIT	80%	83%	85%
PHASE 4 SPLIT	20%	17%	15%
PERMISSIVE	15%	15%	15%
OFFSET	32%	77%	61%
TIME OF DAY SCHEDULE	ALL OTHER TIMES	6:30AM TO 9:00AM MON-SAT	3:30PM TO 6:30PM MON-SAT

COORDINATION TIMING

SIGNAL HEAD	ø2			ø4			FLASH
	R/W	CLEAR		R/W	CLEAR		
A	G	Y	R	R	R	R	Y
B	G	Y	R	R	R	R	Y
C	G	Y	R	R	R	R	Y
D	G	Y	R	R	R	R	Y
E	R	R	R	G	Y	R	R
F	R	R	R	G	Y	R	R

SIGNAL DISPLAY CHART

LOOP #	SIZE	# TURNS	MODE	DELAY	UNIT #	PHASE
L1	7'x 30'	2	PRESENCE	8	1	4
L2	6'x 6'	3	PRESENCE		2	SYSYEM
L3	6'x 6'	3	PRESENCE		3	SYSYEM
L4	6'x 6'	3	PRESENCE		4	SYSYEM
L5	6'x 6'	3	PRESENCE		5	SYSYEM

LOOP DETECTOR CHART

ITEM	TOTAL	UNIT	DESCRIPTION
625	4	EACH	GROUND ROD
625	4	EACH	PULLBOX, MISC! AS PER PLAN
625	142	LIN FT	CONDUIT, 2", 713.04
625	66	LIN FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
625	107	LIN FT	TRENCH
625	32	LIN FT	TRENCH IN PAVED AREA, TYPE "B"
632	6	EACH	VEHICULAR SIGNAL HEAD, 3 SECT., 12" LENS, 1-WAY, AS PER PLAN
632	4	EACH	LOOP DETECTOR UNIT, AS PER PLAN
632	1	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	4.44	CU YD	CONCRETE FOR ANCHOR BASE FOUNDATION
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 1, WITH 22' ARM
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 1, WITH 23' ARM
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 2, WITH 25' ARM
632	3	EACH	CABLE SUPPORT ASSEMBLY
632	241	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
632	392	LIN FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632	664	LIN FT	LOOP DETECTOR WIRE, TYPE E
632	390	LIN FT	LOOP DETECTOR LEAD-IN CABLE
632	57	LIN FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
632	1	EACH	CONDUIT RISER, 1 1/2"
632	6	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	8.33	SQ FT	CONTROLLER WORK PAD
633	.99	CU YD	CONCRETE FOR CABINET FOUNDATION
633	1	EACH	CONTROLLER, ACTUATED, 4 PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN

EUCLID AVE. & POLICE STATION DRIVE TRAFFIC CONTROL PLAN