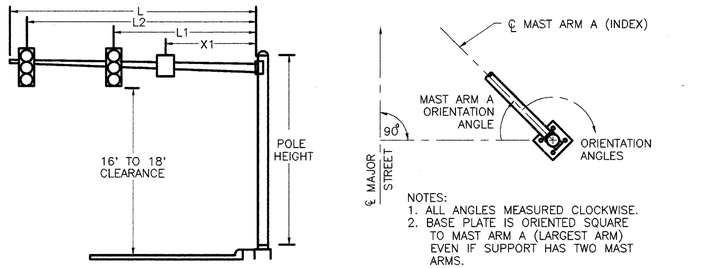
CALC. BY: DATE:	LAKE COUNTY LAK-91-4.56	OHIO
CHKD. BY: DATE:		FHWA REGION 5
		FEDERAL PROJECT

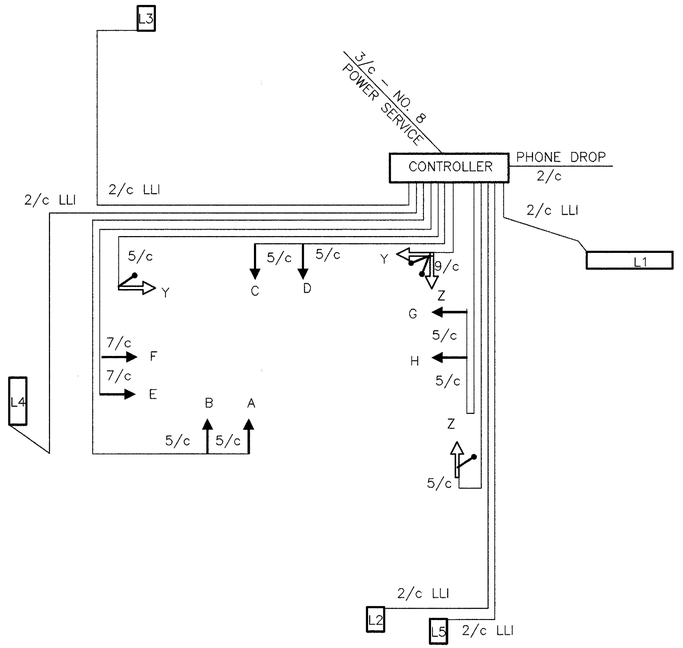
42
56



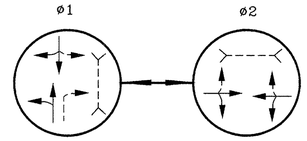
NOTES:
1. ALL ANGLES MEASURED CLOCKWISE.
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM A (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

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 (12" FROM TOP)		
	TC-81.20	TC-12.30			STATION	OFFSET	(FT.)	(FT.)	(FT.)	(FT.)	(FT.)											
P1	3			21	186+07	40'R	36	15	20			0		0/270	0/270	45	180		180			
P2	1			21	185+41	58'R	24	13	23			90		270	270				180			
P3	1			21	185+32	23'L	22	11	21			0							180			
P4	2			21	185+91	27'L	27	16	26			90		0	0				180			

ORIENTATION ANGLE CHART



WIRING DIAGRAM



PHASING DIAGRAM

SIGNAL HEAD	ø1 R/W		ø1 CLEAR		ø2 R/W		ø2 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
Y-Y	DW	DW	DW	DW	W	FDW	DW	DW	DARK
Z-Z	W	FDW	DW	DW	DW	DW	DW	DW	DARK

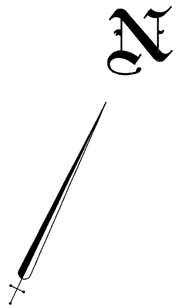
SIGNAL DISPLAY CHART

FUNCTION	ø1	ø2
MINIMUM GREEN	19	8
PED WALK	7	7
PED CLEARANCE	12	16
GREEN EXTENSION	3.0	2.5
MAXIMUM GREEN	55	35
YELLOW CLEARANCE	3.6	3.1
ALL RED CLEARANCE	1.0	1.6
RECALL	MAX	NONE

SIGNAL TIMING

LOOP #	SIZE	# TURNS	MODE	DELAY	UNIT #	PHASE
L1	8' x 30'	2	PRESENCE	8	1	2
L2	6' x 6'	3	PRESENCE	0	2	1
L3	6' x 6'	3	PRESENCE	0	3	1
L4	8' x 12'	2	PRESENCE	8	4	2
L5	6' x 6'	3	PRESENCE	0	5	1

LOOP DETECTOR CHART



ITEM	TOTAL	UNIT	DESCRIPTION
202	75	SQ FT	WALK REMOVED
608	175	SQ FT	4" CONCRETE WALK
608	1	SQ FT	CURB RAMP, TYPE 1
625	4	EACH	GROUND ROD
625	6	EACH	PULLBOX, 18", AS PER PLAN
625	250	LIN FT	CONDUIT, 2", 713.04
625	188	LIN FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
625	239	LIN FT	TRENCH
625	16	LIN FT	TRENCH IN PAVED AREA, TYPE "B"
630	14	LIN FT	GROUND MOUNTED SUPPORT, NO. 3 POST
630	6	SQ FT	SIGN, FLAT SHEET, TYPE G
632	8	EACH	VEHICULAR SIGNAL HEAD, 3 SECT., 12" LENS, 1 WAY, AS PER PLAN
632	4	EACH	PEDESTRIAN SIGNAL HEAD, TYPE "D-2"
632	4	EACH	PEDESTRIAN PUSHBUTTON
632	3	EACH	LOOP DETECTOR UNIT, AS PER PLAN
632	2	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	7.1	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 24' ARM
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 2, WITH 27' ARM
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 3, WITH 36' ARM
632	4	EACH	CABLE SUPPORT ASSEMBLY
632	290	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
632	936	LIN FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
632	63	LIN FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG
632	788	LIN FT	LOOP DETECTOR WIRE, TYPE E
632	757	LIN FT	LOOP DETECTOR LEAD-IN CABLE
632	51	LIN FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
632	1	EACH	POWER SERVICE, AS PER PLAN
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
632	1	EACH	PHONE DROP
633	1	EACH	CONTROLLER, ACTUATED, 2 PHASE, SOLID-STATE DIGITAL, MICROPROCESSOR, AS PER PLAN

REVISED 4-26-94

LAKESHORE BLVD. & HILLCREST DRIVE TRAFFIC CONTROL PLAN