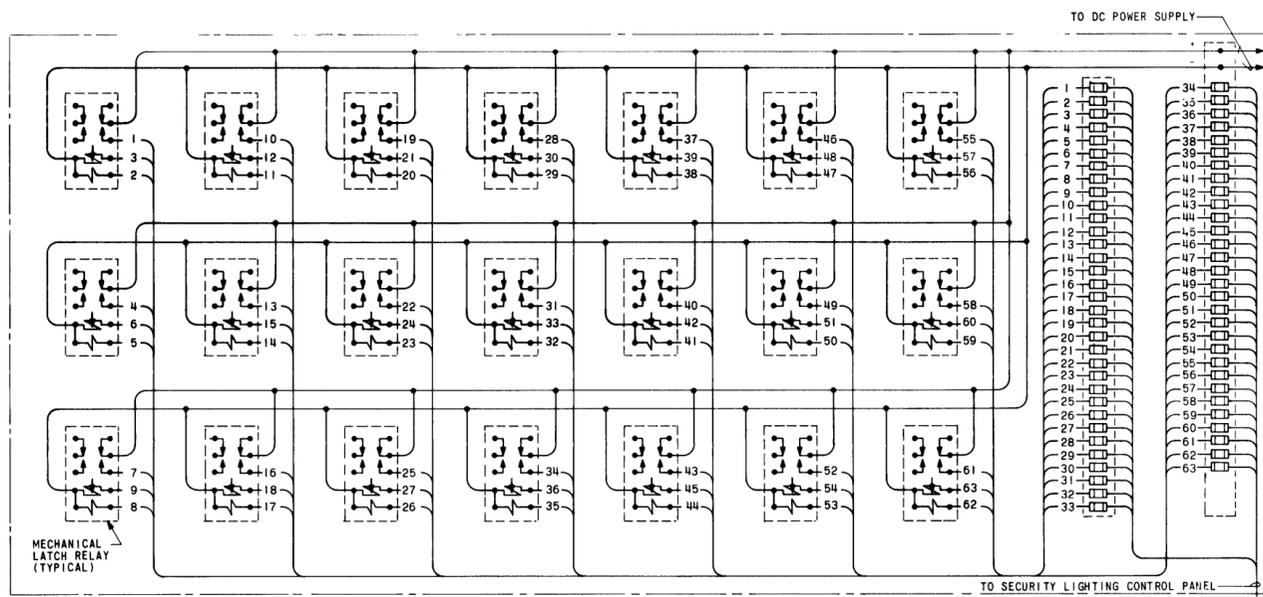


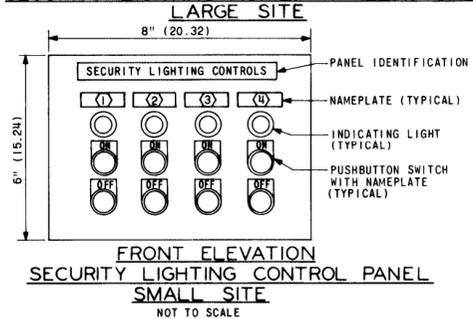
NOTE
THE WIRING DIAGRAM OF THE SECURITY LIGHTING CONTROL PANEL FOR THE TYPICAL SMALL AND MEDIUM SITES SHALL BE SIMILAR TO THAT SHOWN FOR THE TYPICAL LARGE SITE.

WIRING DIAGRAM OF SECURITY LIGHTING CONTROL PANEL LARGE SITE



NOTE
THE WIRING DIAGRAM OF THE SECURITY LIGHTING AUXILIARY RELAY CABINET FOR THE TYPICAL SMALL AND MEDIUM SITES SHALL BE SIMILAR TO THAT SHOWN FOR THE TYPICAL LARGE SITE.

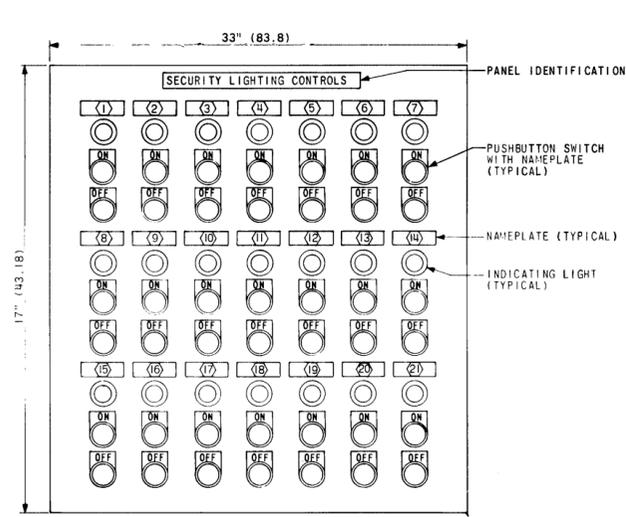
WIRING DIAGRAM OF SECURITY LIGHTING AUXILIARY RELAY CABINET LARGE SITE



FRONT ELEVATION SECURITY LIGHTING CONTROL PANEL SMALL SITE
NOT TO SCALE

NAMEPLATE LEGEND-SMALL SITE

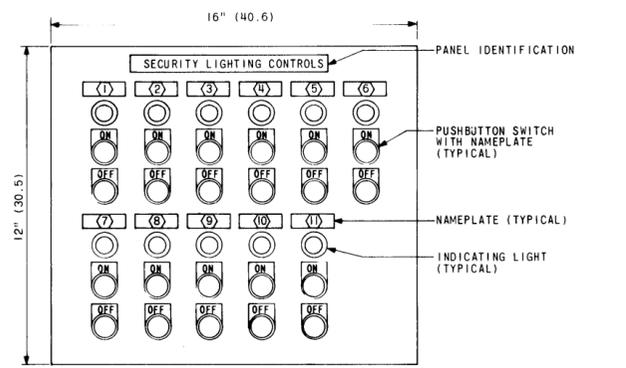
1	VEHICULAR ENTRANCE	3	PERIMETER LIGHTS NORTH HALF
2	PERIMETER LIGHTS SOUTH HALF	4	MAGAZINES 101, 102, 103



FRONT ELEVATION SECURITY LIGHTING CONTROL PANEL LARGE SITE
NOT TO SCALE

NAMEPLATE LEGEND-LARGE SITE

1	VEHICULAR ENTRANCE	12	MAGAZINES 141, 142, 143, 144, 145
2	PERIMETER LIGHTS EAST HALF	13	MAGAZINES 146, 147, 148, 149, 150
3	PERIMETER LIGHTS WEST HALF	14	MAGAZINES 151, 152, 153, 154, 155
4	MAGAZINES 101, 102, 103, 104, 105	15	MAGAZINES 156, 157, 158, 159, 160
5	MAGAZINES 106, 107, 108, 109, 110	16	MAGAZINES 161, 162, 163, 164, 165
6	MAGAZINES 111, 112, 113, 114, 115	17	MAGAZINES 166, 167, 168, 169, 170
7	MAGAZINES 116, 117, 118, 119, 120	18	MAGAZINES 171, 172, 173, 174, 175
8	MAGAZINES 121, 122, 123, 124, 125	19	MAGAZINES 176, 177, 178, 179, 180
9	MAGAZINES 126, 127, 128, 129, 130	20	MAGAZINES 181, 182, 183, 184, 185
10	MAGAZINES 131, 132, 133, 134, 135	21	MAGAZINES 186, 187, 188
11	MAGAZINES 136, 137, 138, 139, 140		



FRONT ELEVATION SECURITY LIGHTING CONTROL PANEL MEDIUM SITE
NOT TO SCALE

NAMEPLATE LEGEND-MEDIUM SITE

1	VEHICULAR ENTRANCE	7	MAGAZINES 116, 117, 118, 119, 120
2	PERIMETER LIGHTS EAST HALF	8	MAGAZINES 121, 122, 123, 124, 125
3	PERIMETER LIGHTS WEST HALF	9	MAGAZINES 126, 127, 128, 129, 130
4	MAGAZINES 101, 102, 103, 104, 105	10	MAGAZINES 131, 132, 133, 134, 135
5	MAGAZINES 106, 107, 108, 109, 110	11	MAGAZINES 136, 137, 138, 139, 140
6	MAGAZINES 111, 112, 113, 114, 115		

MATERIAL DESCRIPTION

BOOST-BUCK TRANSFORMER: THE TRANSFORMER SHALL BE SUITABLE FOR OUTDOOR INSTALLATION. THE UNIT SHALL BE INSULATING TYPE WITH ISO-C INSULATION SYSTEM FOR 80 C RISE. IT SHALL BE SINGLE PHASE 50 CYCLE FOUR WINDINGS (2 PRIMARY AND 2 SECONDARY) TO PERMIT CONNECTION IN EIGHT DIFFERENT WAYS. THE VOLTAGE RATING, KVA RATING AND CONNECTION SHALL BE AS SHOWN. THE TRANSFORMER SHOULD ALWAYS HAVE A RATING EQUAL TO OR GREATER THAN REQUIRED BY THE LOAD. OVERLOADED OR UNDERSIZED TRANSFORMERS HAVE A SHORT OPERATING LIFE.

MECHANICAL LATCH RELAY: THE RELAY SHALL BE TWO-COIL, LATCHING TYPE, PLUG-IN (WITH SOCKET) SUITABLE FOR TABLE OR WALL MOUNTING AND SHALL OPERATE ON 110 VOLT DC POWER. THE COILS SHALL BE EPOXY ENCAPSULATED AND SHALL BE CAPABLE OF OPERATING AT 80 PERCENT OF NORMAL VOLTAGE. THE OPERATE COIL CURRENT SHALL BE APPROXIMATELY 22 MILLIAMPERES AND THE RELEASE COIL CURRENT APPROXIMATELY 14.4 MILLIAMPERES. THE CONTACT SHALL BE DOUBLE POLE-DOUBLE THROW WITH A CURRENT CARRYING CAPACITY OF 10 AMPERES AT 220 VOLTS, 50 HERTZ AC. THE AMBIENT TEMPERATURE RANGE OF THE RELAY SHALL BE -45 C TO +70 C. AT THE MAGAZINE. THE RELAY SHALL BE INSTALLED IN A WEATHERPROOF CABINET.

DC POWER SUPPLY: THE DC POWER SUPPLY SHALL CONSIST OF A POWER-VOLTAGE TRANSFORMER RATED 220 VOLTS, 50 HERTZ AC ON THE PRIMARY AND 110 VOLT AC ON THE SECONDARY. THE SECONDARY VOLTAGE SHALL BE CONVERTED TO DC BY A FULL WAVE, SILICON CONTROLLED RECTIFIER (SCR) WHICH SHALL BE PROTECTED AGAINST SURGE VOLTAGES BOTH ON THE AC AND THE DC SIDE AND OVERCURRENT PROTECTION ON THE AC SIDE. THE COMPONENTS SHALL BE RATED TO PROVIDE NOT LESS THAN 1 AMPERE AT 110 VOLTS DC AND HOUSED IN A GENERAL PURPOSE, VENTILATED STEEL ENCLOSURE.

SECURITY LIGHTING CONTROL PANEL: FABRICATE PANEL OUT OF SUITABLE SHEET STEEL. MOUNT PUSHBUTTON SWITCHES AND INDICATING LIGHTS ON HINGED COVER AND MAKE CONNECTIONS AS REQUIRED. PANEL DIMENSIONS SHALL BE MODIFIED TO SUIT EACH INDIVIDUAL SITE. ALL OUTGOING LINES SHALL BE CONNECTED THROUGH A TUBULAR TYPE FUSE RATED NOT GREATER THAN 1.4 AMPERE. AUXILIARY RELAYS FOR THE CONTROL PANEL SHALL BE INSTALLED AND CONNECTED IN A SIMILAR CABINET. SIZE OF CABINET SHALL BE ADEQUATE FOR QUANTITY AND TYPE OF RELAYS SELECTED.

PUSHBUTTON SWITCHES: THE PUSHBUTTON SWITCHES SHALL BE OF THE INDUSTRIAL MINIATURE OILTIGHT DESIGN SUITABLE FOR PANEL MOUNTING. BOTH THE "ON" AND "OFF" SWITCHES SHALL BE MOMENTARY CONTACT, SINGLE-POLE, DOUBLE THROW. THE SWITCHES SHALL HAVE A STANDARD COLORED BUTTON AND RING, RED FOR THE "ON" AND BLACK FOR THE "OFF" SWITCHES. EACH SWITCH SHALL HAVE A STANDARD SIZE NAMEPLATE MARKED TO SHOW SWITCH FUNCTION. CONTACT RATINGS AT 125 VOLTS AC SHALL BE 5 AMP CONTINUOUS, 30 AMP MAKE MOMENTARY AND 1.1 AMP BREAK ON DC INDUCTIVE CIRCUITS. FLOODLIGHTS AT NOT MORE THAN 5 MAGAZINES SHALL BE CONTROLLED BY ONE SET OF PUSHBUTTON SWITCHES.

INDICATING LIGHT: THE INDICATING LIGHT SHALL BE OF A PUSH-TO-TEST, RESISTOR TYPE, DESIGNED FOR USE IN CONJUNCTION WITH THE MINIATURE PUSHBUTTON SWITCHES. THE LIGHT SHALL OPERATE ON 110 VOLT DC POWER AND HAVE A GREEN COLOR LENS. THE LIGHT SHALL BE ILLUMINATED TO INDICATE WHEN SECURITY LIGHTS ARE ON.

NOTES:
1. FOR REFERENCE MATERIAL, RELATED DRAWINGS AND LIGHTING DESIGN GUIDES REFER TO SHEET 1.
2. UNLESS OTHERWISE INDICATED, THE PARENTHETIC METRIC DIMENSIONS SHOWN ARE IN CENTIMETERS AND ARE MINIMUM ACCEPTABLE.

GENERAL REVISIONS		HSMM	1/86	WJ
SYMBOL	DESCRIPTION	BY	DATE	APPROVAL
REVISIONS		DEPARTMENT OF THE ARMY OFFICE OF THE CHIEF OF ENGINEERS MILITARY CONSTRUCTION - ENGINEERING DIVISION WASHINGTON, D. C.		
BLACK & VEATCH CONSULTING ENGINEERS KANSAS CITY, MISSOURI		WEAPONS STORAGE AREA SECURITY LIGHTING SYSTEM CONTROL PANEL DETAILS		
DRAWN BY: PZ	TRACED BY: PZ	CHECKED BY: NJA	SUBMITTED: MLL	APPROVED: [Signature]
APPROVED FOR: [Signature]	SCALE: AS NOTED	SPEC. NO. NONE	DRAWING NUMBER	DATE: 3/7/87
DEF 812-30-01		SHEET 5 OF 8		