1a) Occupancy Sensor — Wall Mounted

Neutral Circuit

Small Area (<100 sqft.)

Typ. Fixtures Area 1

Line Voltage OS Switch

OS

OS = Area Control and Auto Off
No Multi—level needed
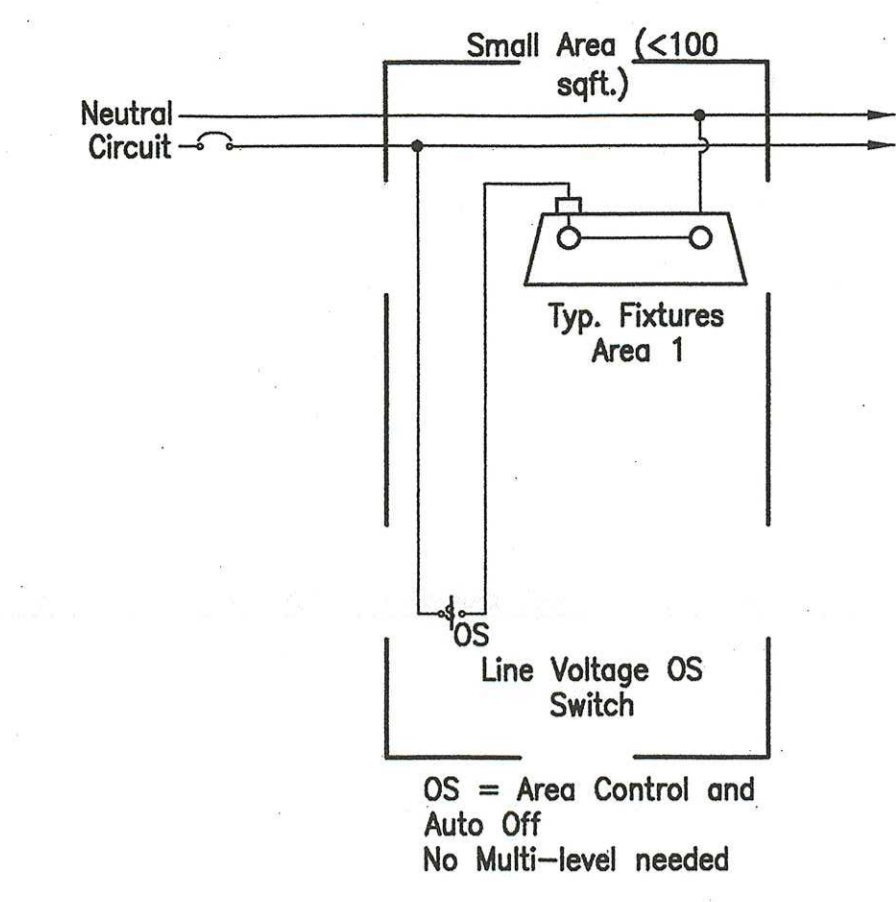
1b) Occupancy Sensor - Ceiling Mounted

Ceiling OS and SPST Switches

Neutral Circuit

+24VDC Common Control Output

Watt Stopper 24VDC Ceiling Occupancy Sensor

Power Pack

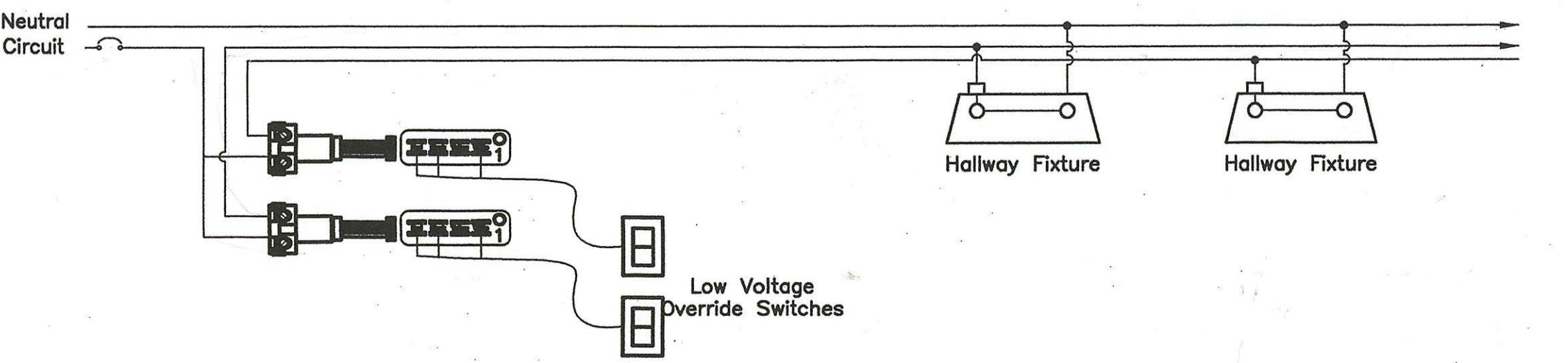Typ. Fixture "A"   Typ. Fixture "B"

2 SPST Switches

Ceiling OS and 3-Way Switches

+24VDC Common Control Output

Watt Stopper 24VDC Ceiling Occupancy Sensor

Power Pack

Typ. Fixture "A"   Typ. Fixture "B"

2 3—way Switches   2 3—way Switches
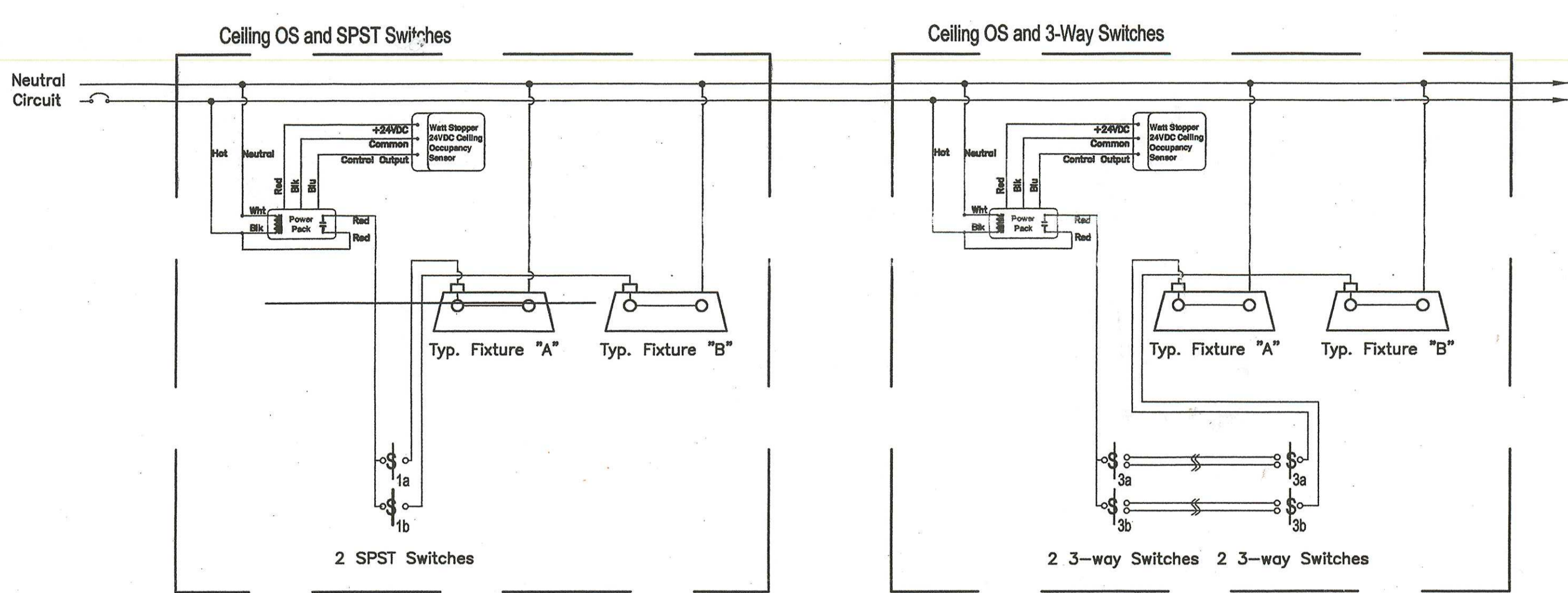
2a) Relay Panel - Low Voltage Switch

Single Circuit

Neutral Circuit

Hallway Fixture   Hallway Fixture

Low Voltage Override Switch in Hallway

Dual Level

Neutral Circuit

Hallway Fixture   Hallway Fixture

Low Voltage Override Switches

FOR STANDARD USE 3/#20
FOR PILOT USE 4/#20

120 or 277V (Typical)

N

Light Fixture

LOW VOLTAGE OVERRIDE SWITCH (Typical)

USE 4/#20

EXTERIOR PHOTOCELL EM-24A2

CLOCK SCREEN
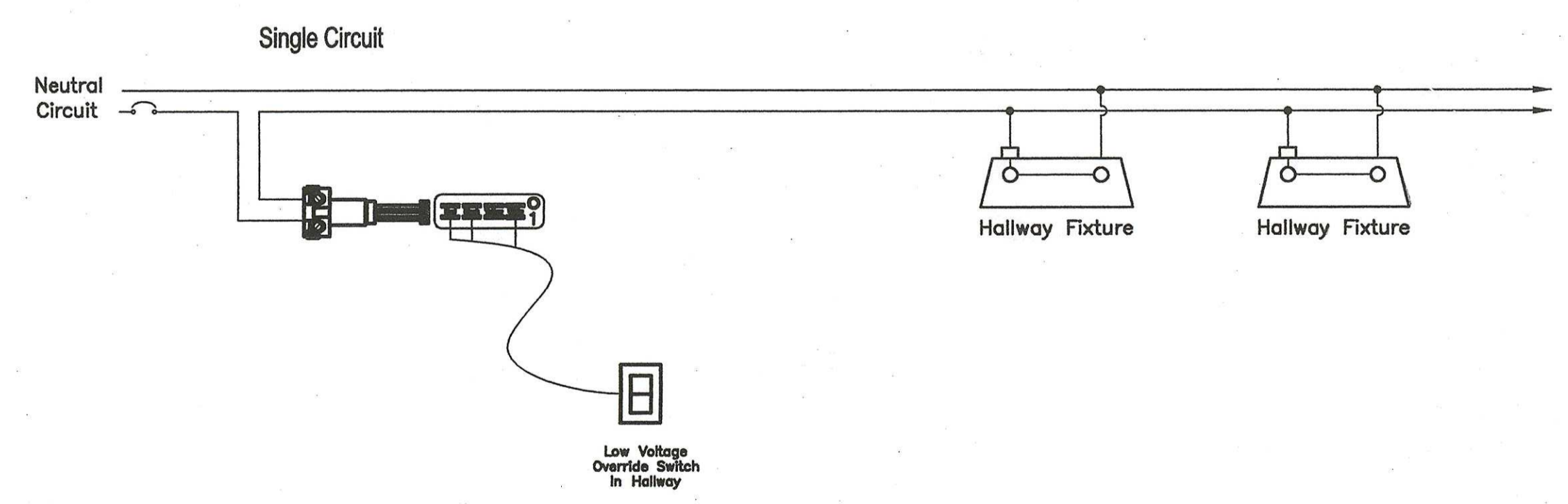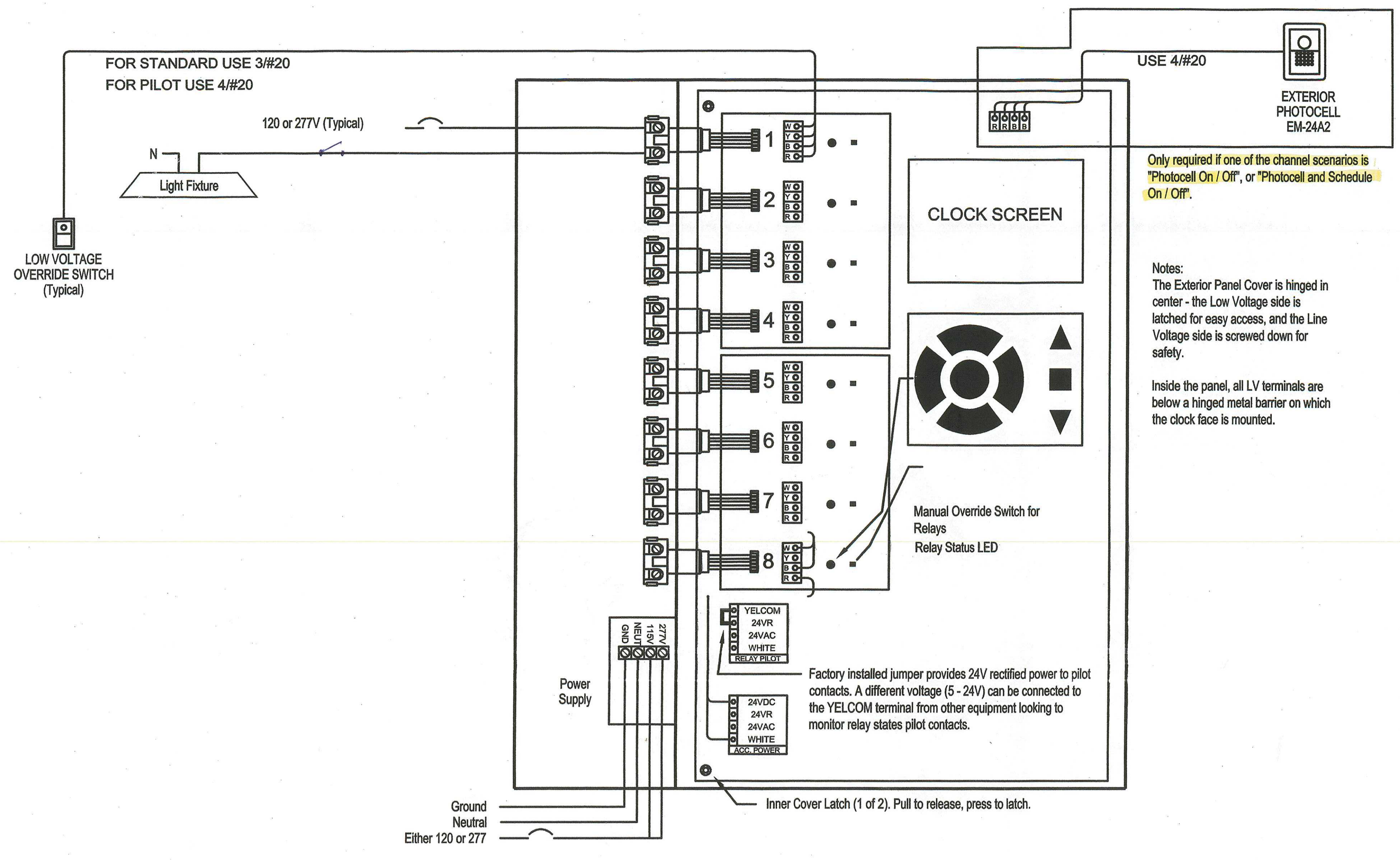
Only required if one of the channel scenarios is "Photocell On / Off", or "Photocell and Schedule On / Off".

Notes:
The Exterior Panel Cover is hinged in center - the Low Voltage side is latched for easy access, and the Line Voltage side is screwed down for safety.

Inside the panel, all LV terminals are below a hinged metal barrier on which the clock face is mounted.

Manual Override Switch for Relays
Relay Status LED

Power Supply

YELCOM
24VR
24VAC
WHITE
RELAY PILOT

24VDC
24VR
24VAC
WHITE
AUX POWER

Factory installed jumper provides 24V rectified power to pilot contacts. A different voltage (5 - 24V) can be connected to the YELCOM terminal from other equipment looking to monitor relay states pilot contacts.

Ground
Neutral
Either 120 or 277

Inner Cover Latch (1 of 2). Pull to release, press to latch.

Lighting Control Panel Schedule

LCP Name:	7LCP
Location:	Electric Room 7112
Surface/Flush:	Surface
Power Circuit:	7L-24

Relay #	Circuit	Description	LV Switch/Sensor	Channel
1	7L-7	Corridor, Floor 1	LV Switch x	A
2	7L-9	Corridor, Floor 2	LV Switch y	A
3	7L-11	Corridor, Floor 3	LV Switch z	A
4	7L-13	Ext. Lights	LV Switch e	D
5	7L-5	Utility Room Lights	LV Switch	E
6	7L-19	Roof Lights (2nd Floor)	LV Switch f	D
7	7L-22	Roof Access Light	LV Switch g	D
8	SPARE	SPARE	-	-

LCP Channel Automation Schedule

Channel	Scenario *	Scenario Times	Flick ?	Time Delay
A	2	7:00am - 9:00pm M-F	Yes	120 Min.
B				
C				
D	6	Astro On / Off	No	na
E	7	Astro On / 11:00pm Off	No	na
F				
G				
H				

Scenario Listings
(1) Manual On / Sched Off
(2) Scheduled On/Off
(3) Manual ON / AS Switch Off
(4) Photocell On/Off
(5) Photo & Sched On/Off
(6) Astronomic On/Off
(7) Astro and Sched On/Off

Specifications:
Provide a single relay panel with up to 8 relays. Each relay to be individually scheduled through an easy to use integral clock with a backlit 8-line LCD display. Relays are to be SPST 20 Amp rated, mechanically held contactors capable of switching either 120 or 277VAC loads. Mounted next to each relay should be a LED to annunciate status and a pushbutton to toggle the relay's state. Panel shall have a multitap transformer and accept either 120V or 277V for power.

Panel enclosure to be NEMA 1, rated for environments from 32 - 139°F, 5 - 95% RH non-condensing. Panel to come with a split cover hinged in the center such that the high voltage side must be unscrewed to access the relays, but the low voltage side can be opened via a locking latch. Surface or flush covers shall be available.
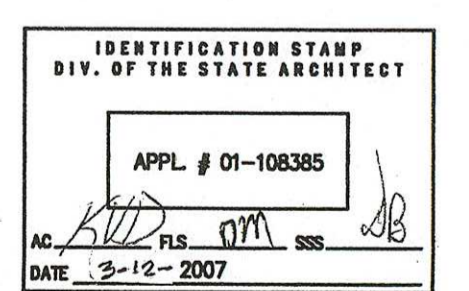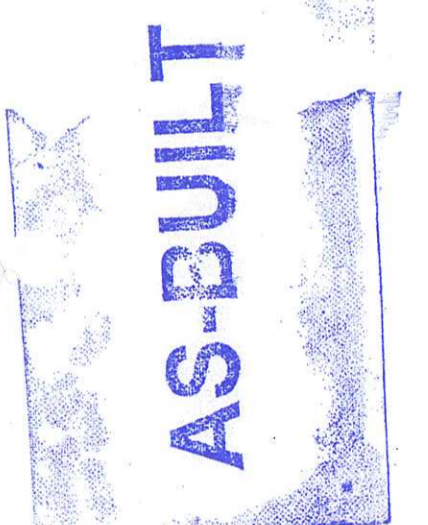
Each relay can be controlled remotely by external switches or motion detectors. Switches can be 2- or 3-wire, momentary or maintained low voltage devices. Motion detectors must provide a 24VDC pilot signal to control the relays. Panel must be able to interlock time based schedules with the occupancy sensor input, so that lights scheduled on during the day are not affected by the motion detector, but after hours the occupancy sensor has control or the relay. Panel shall be capable of blink warning before "OFF" and true after hours time delay.

All programming to be entered via a simple keypad. Each relay can be programmed independently, or relays can be grouped together in firmware to follow the same channel schedule. On a daily 7-day repeating basis, relays can be assigned to follow any of the following scenarios:
(1) Manual On / Sched Off
(2) Scheduled On/Off
(3) Manual ON / AS Switch Off (for use with AS-100 switches)
(4) Photocell On/Off
(5) Photo & Sched On/Off
(6) Astronomic On/Off
(7) Astro and Sched On/Off

The LCD screen should normally show the current time and date, as well as sunrise and sunset times for that day. Relay channels can also be monitored from the display to see their status - either ON, OFF, or MIXED. Additionally the relay groups can be overriden from the screen. Context sensitive help shall be available for each screen.

Panel to be The Watt Stopper's (800-852-2778) LP8 panel and must be UL Listed 916, meet local energy codes (California CEC), and have a 1 year warranty.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APPL. # 01-108385

02.27.07	DSA BACK CHECK
11.02.06	DSA SUBMITTAL
10.13.06	75% CD
09.12.06	40% PROGRESS
rev.	date	issue

key plan

STEINBERG ARCHITECTS

project no: 06015   date: 02.27.07
drawn by: MAMP   checked by: VB
scale: NONE

LIGHTING CONTROL DIAGRAM

E0.02