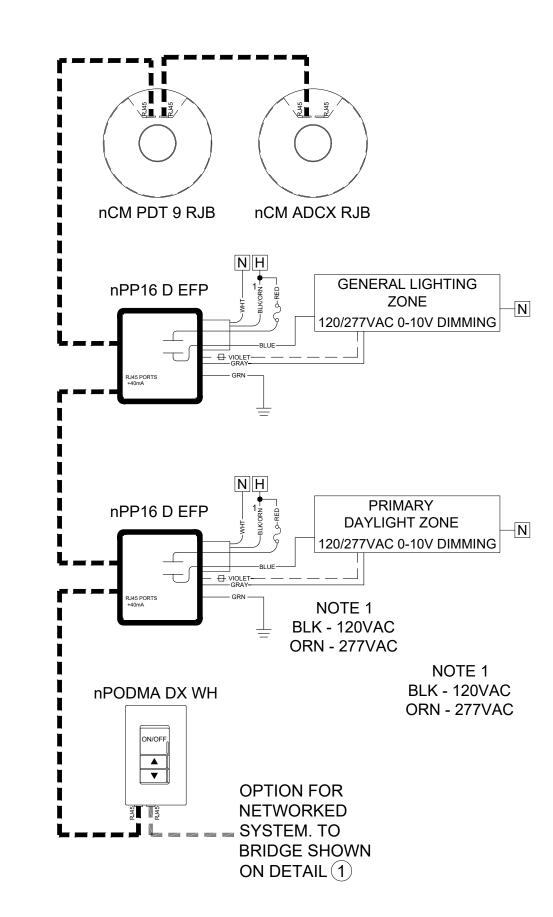


	0	OCCUPANCY SENSOR					TIME CLOCK			
					PAR OF		ES)			
ROOM TYPE	OCCUPANCY MODE (AUTO ON)	VACANCY MODE	DUAL TECHNOLOGY	OCCUPIED LEVEL (%)	TIME OF LAST DETECTED OCCUPANCY (MINUTES)	UNOCCUPIED DIM LEVEL(%)	OCCUPANCY TIME DELAY (MINUTES)	SCHEDULE ON TIME	SCHEDULE OFF TIME	SCHEDULE OVERRIDE SWITCH
BREAKROOMS/KITCHENS	X		X	100	7.5	10	10			
CLASSROOMS	Х		Х	50	7.5	10	10			
CONFERENCE ROOMS	Х		Х	50	7.5	10	10			
COPY ROOMS	Х		Х	100	7.5	10	10			
CORRIDORS/STAIRWELLS	Х			100	7.5	10	10			
EXTERIOR				100				DUSK	DAWN	
LABS	Х		Х	100	17.5	10	20			
MULTIPURPOSE ROOMS	Х		Х	50	7.5	10	10			
OPEN OFFICE AREAS > 300 SQ FT	Х		Х	100	7.5	10	10			
PARKING GARAGE	Х			100	10	10	12.5			
RESTAURANTS/STORES				100		10		TBD	TBD	X
RESTROOMS	Х		Х	100	7.5	10	10			
OFFICES < 300 SQ FT	Х		Х	50	7.5	10	10			
STORAGE ROOMS > 100 SQ FT	Х			100	7.5	10	10			
WAREHOUSES	Х			100	10	50	12.5	TBD	TBD	

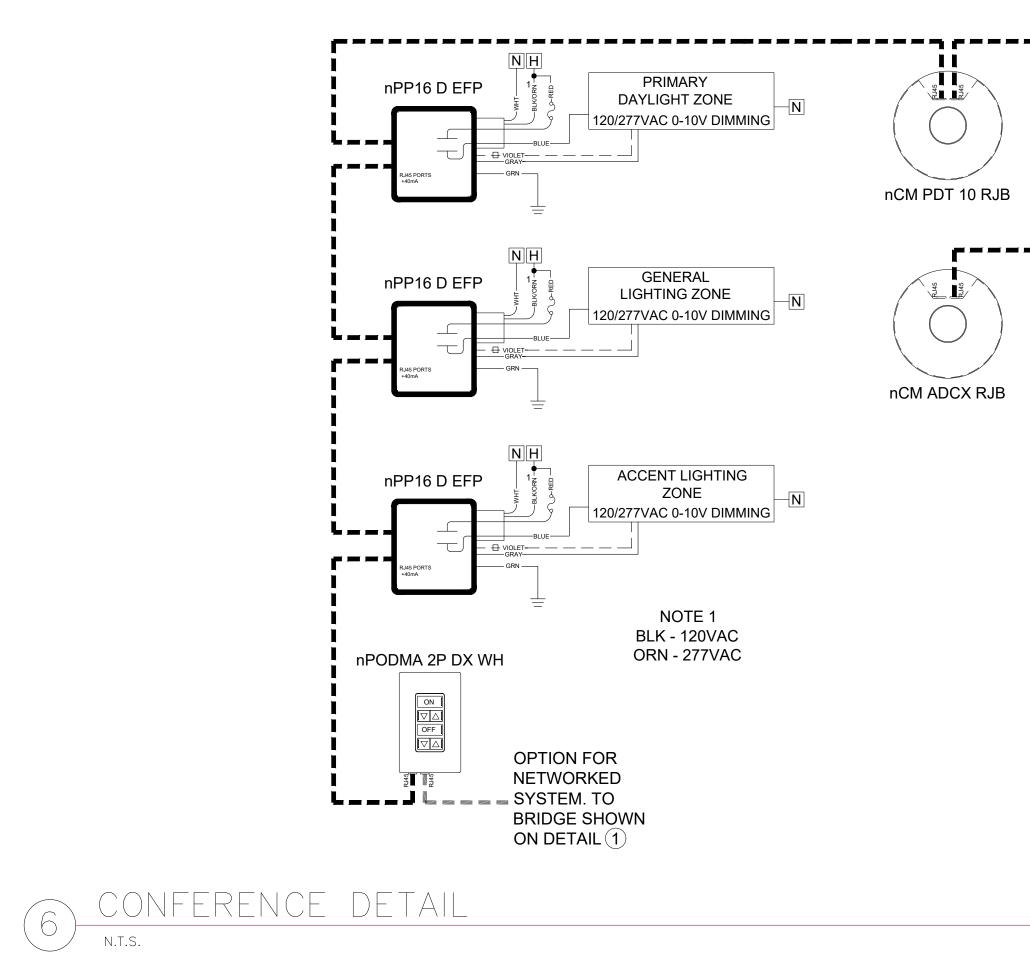
NOTES: \* 5 MINUTES BEFORE THE LIGHTING IS SCHEDULED TO TURN OFF, THE LIGHTS WILL TURN OFF FOR 1 SECOND AND THEN GO BACK TO IT'S PREVIOUS DIMMING LEVEL. THIS BLINK WARNING PREVENTS FALSE OFFS AND GIVES AUTHORIZED PERSONNEL A WARNING TO PRESS

WALL SWITCH TO ACTIVATE A 2-HOUR OVERRIDE. OWNER TO VERIFY TIME SCHEDULES. \*\* AUTOMATIC SCHEDULING CONTROLS SHALL BE CAPABLE OF LIGHTING SETBACK CONTROL IN ACCORDANCE TO C405.2.6.2 FOR DECORATIVE FIXTURES AND <u>C405.6.2.3</u> FOR NON-DECORATIVE FIXTURES. \*\*\* LIGHTING IN OPEN OFFICE AREAS GREATER THAN 300 SQUARE FEET, LIGHTING SHALL BE CONTROLLED SEPARATELY IN CONTROL ZONES NOT GREATER THAN 600 SQUARE. THE FIXTURES IN THE OCCUPIED CONTROL ZONES WILL BE ON AT 100% FULL BRIGHT AND THE FIXTURES IN THE UNOCCUPIED (AFTER 7.5 MINUTES OF NO DETECTED MOVEMENT) CONTROL ZONES WILL BE AT 20% FULL BRIGHT. IF ALL AREAS ARE UNOCCUPIED (AFTER 10 MINUTES OF NO DETECTED MOVEMENT IN ALL CONTROL ZONES) THEN THE LIGHTS WILL TURN OFF.

2 SEQUENCE OF OPERATION / BASIS OF DESIGN TABLE



4 LARGE OFFICE (LESS THAN 300 SQUARE FEET) DETAIL



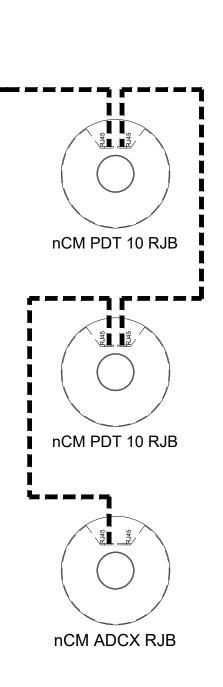
**NETWORK CONTROLLER INCLUDES THE FOLLOWING CAPABILITIES:** 

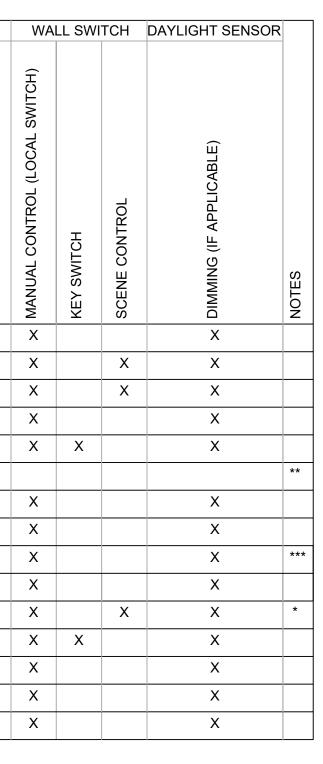
2. ASTRONOMICAL TIME CLOCK VIA SENSORVIEW SOFTWARE.

CONFIGURABLE LOAD SHED DIMMING LEVELS THROUGH AN

5. SOFTWARE INTEGRATION FOR BACNET IP/MSTP BAS OR REST API SYSTEMS. BACnet TESTING LABORATORIES LISTED B-BC.

6. SECURITY FIPS PUBLICATION 140-2, LEVEL 1 INSIDE COMPLIANT



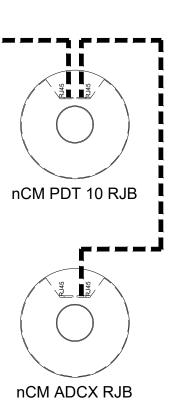


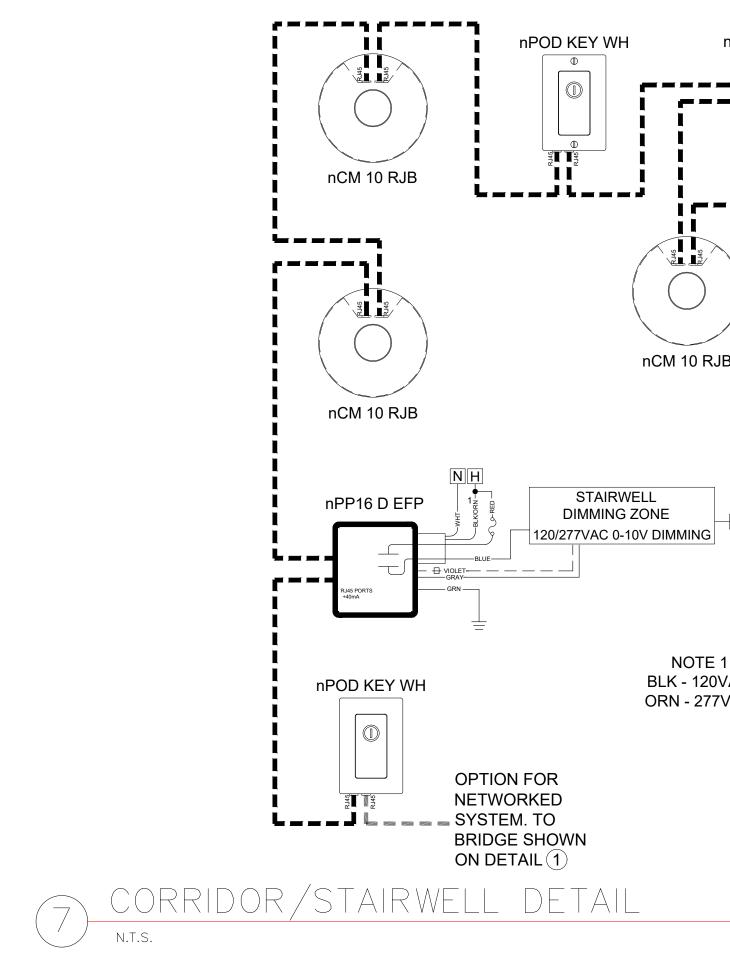
**GENERAL NOTES:** 1. DETAILS AND DESIGN IS BASED ON AN nLIGHT LIGHTING

- CONTROLS SYSTEM. 2. DETAILS ARE DIAGRAMMATIC AND FOR REFERENCE OF SYSTEM AND ROOM TYPE REQUIREMENTS TO MEET BASIS OF DESIGN. REFER TO MANUFACTURERS SHOP DRAWINGS FOR QUANTITIES AND DEVICES USED FOR EACH SPACE AND NETWORK.
- 3. LIGHTING CONTROL SUBMITTALS FOR NETWORKED SYSTEM SHALL BE PROVIDED BY THE MANUFACTURER OR FACTORY REPRESENATIVE AND SHALL INCLUDE THE FOLLOWING DOCUMENTS(NOT LIMITED TO FOLLOWING):
- 3.1. SHOP DRAWINGS SHOWING QUANTITY AND LOCATION OF ALL DEVICES. 3.2. STANDALONE/NETWORK SINGLE LINE DIAGRAM. 3.3. BASIS OF DESIGN PROGRAMMING OPERATION FOR EACH ROOM TYPE. 3.4. DEVICE CUTSHEETS.
- 4. MANUFACTURER OR FACTORY REPRESENTATIVE TO INCLUDE STARTUP AND COMMISSIONING OF THE LIGHTING CONTROL SYSTEM. MUST INCLUDE A SITE VISIT FOR THE FOLLOWING: 4.1. A PRE-CONSTRUCTION MEETING TO CONFIRM DESIGN AND
- FIELD INSTALLATION REQUIREMENTS. 4.2. PROGRAMMING AND COMMISSIONING OF THE LIGHTING CONTROL SYSTEM TO MEET THE BASIS OF DESIGN AND IECC REQUIREMENTS. 4.3. MAINTENANCE / OWNER WALK THROUGH FOR MAKING FINAL
- ADJUSTMENTS TO PROGRAMMING. 5. CONTRACTOR SHALL FURNISH AND INSTALL ALL LIGHTING CONTROL DEVICES, CABLES, ACCESSORIES AS REQUIRED BY MANUFACTURER'S RECOMMENDATION TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL COMPLIANT IECC SYSTEM.
- 6. CONTRACTOR SHALL TEST ALL LOW VOLTAGE NETWORK CABLES IN THE FIELD TO THE VERIFICATION AND REQUIREMENTS BY THE MANUFACTURER PRIOR TO SYSTEM STARTUP.
- 7. ALL DEVICES SHALL BE MOUNTED AND INSTALLED IN ACCESSIBLE CEILING LOCATIONS. CONTRACTOR WILL VERIFY BEST FIT LOCATIONS IN THE FIELD.
- 8. CONTRACTOR TO VERIFY COMPATIBILITY BETWEEN DIMMING POWERPACKS AND INSTALLED FIXTURES.
- 9. CONTACT HILA FOR COMPLETE nLIGHT LIGHTING CONTROLS BOM, CONTROLS@HI-LTG.COM - PHONE # 808-683-9344.

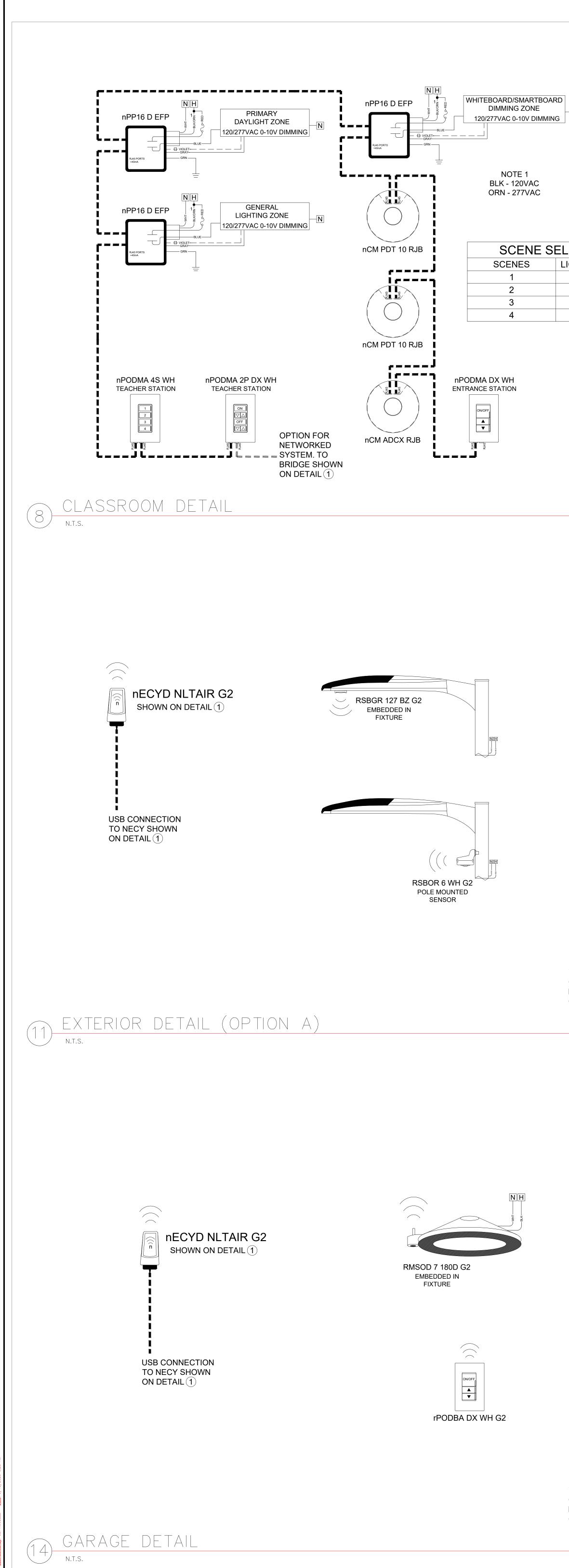
# IECC 2018 COMPLIANCE:

- 1. OCCUPANT SENSOR CONTROLS, SECTION C405.2.1
- 2. TIME-SWITCH CONTROLS, SECTION C405.2.2. 3. DAYLIGHT-RESPONSIVE CONTROLS, SECTION C405.2.3.
- 4. SPECIFIC APPLICATION CONTROLS, SECTION C405.2.4.
- 5. MANUAL CONTROLS, SECTION C405.2.5.
- 6. EXTERIOR LIGHTING CONTROLS, SECTION C405.2.6.
- 7. ENHANCED DIGITAL LIGHTING CONTROLS, SECTION C406.4 8. FUNCTIONAL TESTING OF LIGHTING CONTROLS, SECTION C408.3
- 9. CONTACT HILA FOR COMPLETE nLIGHT LIGHTING CONTROLS BOM, CONTROLS@HI-LTG.COM - PHONE # 808-683-9344.

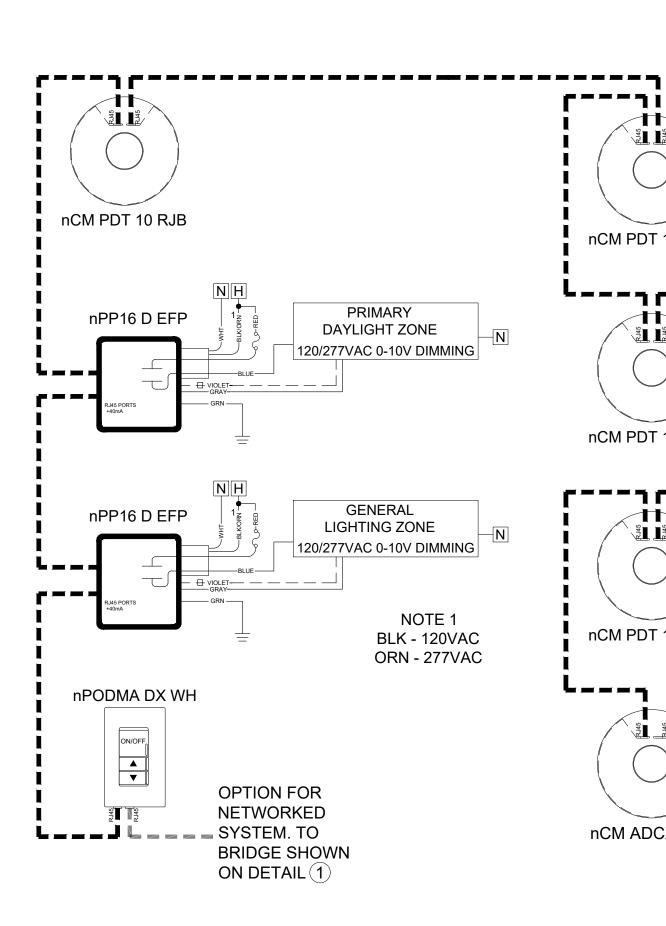




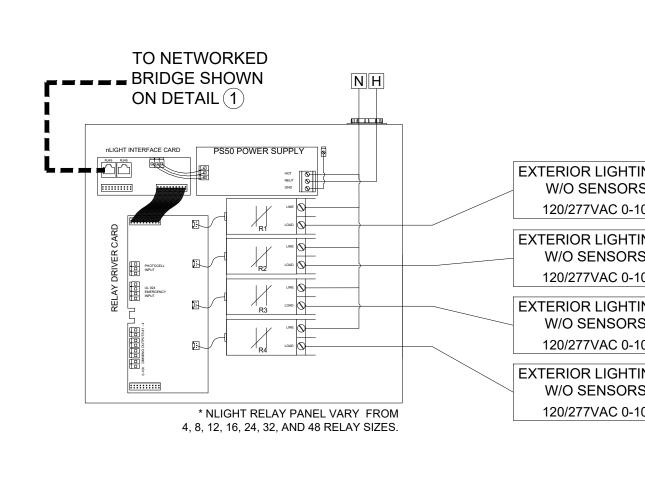
	EXTENDED RANGE 360° SENSOR-CEILING MOUNT, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY (PDT) DETECTION TECHNOLOGY SHALL BE SELECTABLE AS FOLLOWS: PIR/MICROPHONICS/BOTH OS - nCM PDT 10 R-IB	
DS	OS - nCM PDT 10 RJB AUTOMATIC DIMMING CONTROL PHOTOCELL- CEILING MOUNT, LOW VOLTAGE DS - nCM ADCX RJB	
DP a	16 AMP (120/227V) POWER/RELAY PACK WITH 0-10V DIMMING CONTROL, CHASE NIPPLE MOUNTING DP - nPP16 D EFP	
PL a	SUBSCRIPT REFERENCES CIRCUIT/ZONE OF CONTROL 20 AMP (120V) RELAY PACK FOR PLUG LOAD CONTROL, CHASE NIPPLE MOUNTING PL - nPP20 PL	
	SUBSCRIPT REFERENCES CIRCUIT/ZONE OF CONTROL 16 AMP (120/227V) POWER/RELAY PACK PHASE DIMMING CONTROL, CHASE NIPPLE MOUNTING	
PCD a	PCD - nPP PCD EFP SUBSCRIPT REFERENCES CIRCUIT/ZONE OF CONTROL LOW VOLTAGE ON/OFF TOGGLE SWITCH WITH DIMMING	
S2 a,b S4 a,b,c	1-ZONE = S1 - nPODMA DX XX 2-ZONE = S2 - nPODMA 2P DX XX 4-ZONE = S4 - nPODMA 4P DX XX subscript references ZONE OF CONTROL	
SS2 SS4	LOW VOLTAGE SCENE SELECTOR WITH DIMMING 2-SCENE = SS2 - nPODMA 4S DX XX 4-SCENE = SS4 - nPODMA 4S DX XX SUBSCRIPT REFERENCES ZONE OF CONTROL	
GFX a	LOW VOLTAGE GRAPHIC TOUCHSCREEN CONTROLLER, INCLUDES 16-ZONES AND 16-SCENES WITH DIMMING GFXX - nPOD TOUCH XX	
₩S a	SUBSCRIPT REFERENCES ZONE OF CONTROL LOW VOLTAGE WALL SWITCH OCCUPANCY SENSOR WITH ON/OFF/RAISE/LOWER, PASSIVE DUAL TECHNOLOGY (PDT) WS - nWSXA PDT LV DX XX SUBSCRIPT REFERENCES ZONE OF CONTROL	
	IG MANAGEMENT SYSTEMS INTEGRATION CATIONS:	
BUILI 2. OPTI	Net TESTING LABORATORIES (BTL) LISTED AS A BACnet DING CONTROLLER (B-BC). ONAL AUTOMATIC DEMAND RESPONSE CLIENT OPTION	
LEVE REQL	WS ACTIVATION OF CONFIGURABLE LOAD SHED DIMMING LS THROUGH AN OpenADR 2.0a VIRTUAL END NODE. JIRES OUTBOUND IP CONNECTION TO UTILITY DRAS. ANCED SECURITY PROVIDED BY BOTH:	
3.1. H 3.2. U	INCED SECURITY PROVIDED BY BOTH: ITTPS SERVER J.S. GOVERNMENT SECURITY STANDARD OF FEDERAL NFORMATION PROCESSING STANDARD (FIPS) PUBLICATION 40-2, LEVEL 1, INSIDE (VALIDATION CERTIFICATE PENDING).	
4. THE I FOLL TO TI	INSTALLING CONTRACTOR WILL BE RESPONSIBLE FOR THE OWING WHEN INTEGRATING LIGHTING CONTROL SYSTEM HE BUILDING MANAGEMENT SYSTEM:	
4.2. T	PROVIDING A PHYSICAL CONNECTION FROM LIGHTING CONTROL SYSTEM TO BMS VIA BACnet I/P. TO COORDINATE WITH THE BMS INSTALLER ON SPECIAL ABELING CONFIGURATIONS THAT THE LIGHTING CONTROLS PROGRAMMER WILL NEED TO FOLLOW FOR	
4.3. 1 (5. CON	SEAMLESS INTEGRATION OF THE TWO SYSTEMS. TO COORDINATE ONSITE MEETING WITH LIGHTING CONTROLS PROGRAMMER & BMS/CONTROLS CONTRACTOR. TACT HILA FOR FOR INTEGRATION WITH BMS,	
CONT	TROLS@HI-LTG.COM - PHONE # 808-683-9344.	
120.8(h)		
2. 2-DA`	UR ONSITE OR REMOTE TRAINING. Y IN PERSON OR REMOTE TRAINING @ HILA, AT CUSTOMER TION, OR VIDEOCONFERENCING SOFTWARE.	PROJECT NAME
THE 2	O TRAINING GIVEN TO EVERYONE WHO PARTICIPATES IN 2-DAY IN PERSON OR REMOTE TRAINING.	μ
# 808	FACT HILA FOR TRAINING, CONTROLS@HI-LTG.COM - PHONE -683-9344.	PROJECT NAME
		II OS
		· • •
D EFP		
	CORRIDOR DIMMING ZONE 120/277VAC 0-10V DIMMING	
D EFP	CORRIDOR DIMMING ZONE 120/277VAC 0-10V DIMMING	BMITAL
	CORRIDOR DIMMING ZONE 120/277VAC 0-10V DIMMING	G TYPE: JT \ SUBMITTAL
		RAWING TYPE: - LAYOUT \ SUBMITTAL
		DRAWING TYPE:
		DRAMING TYPE: CONTROL LAYOUT \SUBMITTAL
		CONTROL LAYOUT VSUBMITTAL BRANING TYPE: BRANING TYPE:
		REV
		REV

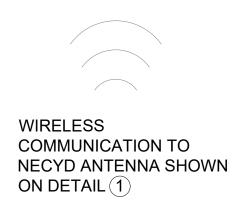


ELECTOR				
LIGHTING LEVELS				
100%				
A/V MODE				
25%				
OFF				



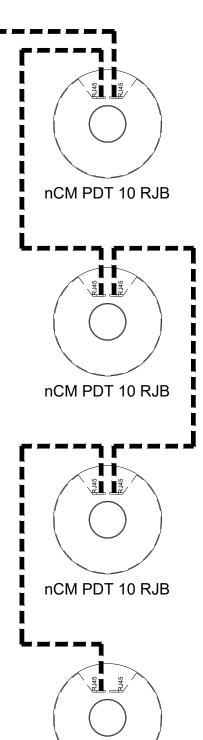
# 9 LAB DETAIL N.T.S.





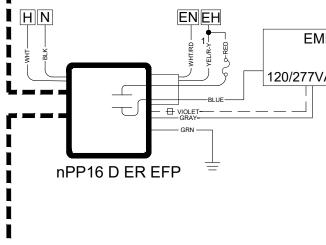
12 EXTERIOR DETAIL (OPTION B) N.T.S.

WIRELESS COMMUNICATION TO NECYD ANTENNA SHOWN ON DETAIL (1)



nCM ADCX RJB

TO ADDITIONAL NLIGHT DEVICES



TO ADDITIONAL NLIGHT DEVICES

10 EMERGENCY POWERPACK TYPICAL N.T.S.

ITING FIXTURES DRS - ZONE 1 D-10V DIMMING	—N
ITING FIXTURES PRS - ZONE 2 0-10V DIMMING	—N
ITING FIXTURES PRS - ZONE 3 0-10V DIMMING	—N
ITING FIXTURES PRS - ZONE 4 D-10V DIMMING	— N

TO NETWORKED BRIDGE SHOWN ON DETAIL (1) nPP16 D EFP ┗━━ GRN

13 EXTERIOR DETAIL (OPTION C) N.T.S.

PROJECT NAME CITY, STATE (PROVINCE)
REV DATE REV DATE Date: xx/xx/2015 Scale: NOT TO SCALE Drawn By: CNC Quote #: xxxxx