PANEL MDP									SERVICE EQUIPMENT LIS
TYPE: SURFACE BOLT-ON	MOUNT: WA	20 V, LL TTOM	3 PH	, 4	WIRE		PROVIDE CHECKED		EQUIP. GROUND BUS NEUTRAL BUS GUTTER TAPS SUB-FEED LUGS
		KT CKT		AD VA	CKT	CKT	LOAD	040.050//	-
OAD SERVED PANEL MP		KR #	A 19,108	B C	#	BKR 30/3	VA 1	_OAD SERV	EU
 	19,008 20 19,008 18,128	1		9,108	2	30/3 	100	5PD 	
PANEL A		00/3	9,562	0,404	4	100/3 		PANEL C	
PANEL B	2,900 10 1,260 1,620	00/3 5 	3,620	3,060	6	100/3 	720 F 1,800 1,800	PANEL IT	
EDH01 	10,069 15 10,069 10,069	50/3 7 	20,138	0,138	8	150/3 	10,069 [10,069 10,069	EDH02 	
00AS02 	11,711 12 11,711 11,711	25/3 9	17,711	7,711 17,711	10	70/3 	6,000 E 6,000 6,000	ĒŴH1 	•
SPARE 		00/3 11			12	100/3 		SPARE 	
SPACE 		- - 13			14	-	5	SPACE 	
NOTE: I. HVAC EQUIPMENT SHALL USE ⁻	TYPE HACR BREAK	ERS.	70,139 7 584		TOTAL CONN.	. VOLT AMPS . AMPS		A. BUS (COI A. MAIN CIR	PPER) CUIT BREAKER
							42 H	KAIC MIN.	

TYPE: NEMA 1 BOLT-ON DOOR-IN-DOOR WITH-IN HINGED TRIM RONT COVER	208 MOUNT: FEED:		V, E	3	PH,	4	WIRE		PROVIDE		EQUIP. GROUND BUS NEUTRAL BUS GUTTER TAPS SUB-FEED LUGS
OAD SERVED	LOAD	CKT	CKT		LOAD VA		CKT	CKT	LOAD	LOAD SERVED	
OAD SERVED OAS01	VA 4,093	BKR 45/3	#	A 4,766	В	С	# 2	BKR 15/3		LOAD SERVED AH03-01	
	4,093	40/0	3	7,700	4,766		4	13/3	673	<u> </u>	
<u> </u>	4,093		5		7,700	4,766			673		
C01	131	15/2	7	804		.,. 50	8	15/3		AH04-01	
	131	i i	9		804		10	T T	673		
PARE		20/1	11			673		i i i i i i i i i i i i i i i i i i i	673	İ	
IP04	3,107	45/3	13	8,103			14	80/3	4,996	DHP01	
	3,107		15		8,103		16		4,996		
	3,107		17			8,103			4,996		
P03	3,107	45/3	19	3,856			20	15/2		DHP02	
	3,107		21		3,856		22		749		
	3,107		23			3,107	24	20/1		SPARE	
CC01	336	15/3	25	1,479			26	15/3		ACC02	
	336		27		1,479		28		1,143		
	336		29			1,479			1,143		
PARE		20/1	31				32	20/1	ļ	SPARE	
PARE	<u> </u>	20/1	33				34	20/1	_	SPARE	
SPARE		20/1	35				36	20/1	_	SPARE	
SPARE		20/1	37				38	20/1	-	SPARE	
SPARE SPARE	 	20/1 20/1	39				40 42	20/1 20/1	_	SPARE SPARE	
IOTES:		20/1	41	19,008	19,008	10 120		VOLT AMPS	200	A. BUS (COPPER)	
. HVAC & REFRIGERATION EQUIPMEN	IT MILICELIC)E		158			CONN.			A. MAIN CIRCUIT	
TYPE HACR BREAKERS.	11 10051 03) <u> </u>		100	130	101	CONN.	AIVIPS	200	A. MAIN CIRCUIT	DREARER
									22	KAIC MIN.	

TYPE: NEMA 1	208	120	V,	3	PH,	4	WIRE		PROVIDE		EQUIP. GROUND BUS
BOLT-ON	MOUNT:	SURFAC	E		,				CHECKE	D: XX	NEUTRAL BUS
DOOR-IN-DOOR WITH-IN HINGED TRIM	FEED:	TOP									GUTTER TAPS
FRONT COVER											SUB-FEED LUGS
,	LOAD	CKT	CKT		LOAD VA		CKT	CKT	LOAD		
OAD SERVED	VA	BKR	#	Α	В	С	#	BKR		LOAD SERVED	
RECEPTS: R101	360	20/1	1	1,080			2	20/1		RECEPTS: R101	
RECEPTS: R101	720	20/1	3		1,440		4	20/1		RECEPTS: R101	
RECEPTS: R101	720	20/1	5			1,620	6	20/1		RECEPTS: R101,R	106
RECEPTS: R108	360	20/1	7	720			8	20/1		RECEPTS: R115	
RECEPTS: R110	720	20/1	9		1,260		10	20/1		RECEPTS: R110	
LIGHTS: EXTERIOR	432	20/1	11			612	12	20/1		RECEPTS: R112	
LIGHTS: R110, R111, R112, R125	761	20/1	13	1,616			14	20/1		LIGHTS: R101,R10	
JGHTS: R125	1,310	20/1	15		2,422		16	20/1			00,R201, R202, R204
LIGHTS: R126,R126A,R127,R128	561	20/1	17			1,506	18	20/1	945	LIGHTS: R128	
DAH01-01,03,10	428	15/2	19	1,148			20	20/1	720	RECEPTS: R101	
	428		21		1,628		22	20/1		SIGN	
RECEPTS: R101	1,080	20/1	23			2,150	24	20/1	1,070	LIGHTS: R102,R11	3 THRU R124A
RECEPTS: R101	720	20/1	25	900			26	20/1	180	FMCP (NOTE 2)	
RECEPTS: R101	1,080	20/1	27		1,260		28	20/1	180	FTAC (NOTE 2)	
RECEPTS: R101	360	20/1	29			540	30	20/1	180	RECEPT: PROJEC	TOR
RECEPTS: R203, R204	540	20/1	31	1,080			32	20/1	540	RECEPTS: R205	
SPARE		20/1	33				34	20/1		SPARE	
SPARE		20/1	35				36	20/1		SPARE	
SPARE		20/1	37				38	20/1	-	SPARE	
SPARE		20/1	39				40	20/1		SPARE	
SPARE		20/1	41				42	20/1		SPARE	
NOTES:				6,544	8,010	6,428	TOTAL	VOLT AMPS	200	A. BUS (COPPER)	
I. HVAC & REFRIGERATION EQUIPMEN	T MUST US	SE		55	67	54	CONN.	AMPS	200	A. MAIN CIRCUIT	BREAKER
TYPE HACR BREAKERS.											
2. PROVIDE CIRCUIT BREAKER LOCKIN	IG DEVICE	FOR FA	CU ALC	NG WITH							
IDENTIFYING CIRCUIT BREAKER IN A											
3. PROVIDE GFI BREAKER	.500,10/1			200					20	KAIC MIN.	

				SYM.							DATE	APPROVED
								-				
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										
208	120	V,	3	PH,	4	WIRE		PROVIDE II	XX	EQUIP. GRO	DUND BUS	
IOUNT:	FLUSH	'	•		·			CHECKED:	XX	NEUTRAL B	US	
EED:	TOP									GUTTER TA	PS	
										SUB-FEED L	UGS	
LOAD	CKT	CKT		LOAD V		CKT	CKT	LOAD				
VA	BKR	#	Α	В	С	#.	BKR	VA	LOAD SERVED			
900	20/1	1	1,800			2	20/1		RECEPTS: R125, E.	XTERIOR GFI		
180	20/1	3		360	0	4	20/1		RECEPTS: R128			
540	20/1	5			900	6	20/1		RECEPTS: R126			
360	20/1	7	900			8	20/1		RECEPTS: R126			
540	20/1	9		900	0	10	20/1	360	PV02, PV01			

REVISIONS

10 KAIC MIN.

LOAD SERVED
RECEPTS: R125, EXTERIOR GFI
RECEPTS: R127
RECEPTS: R126A
RECEPTS: R126A
RECEPTS: R125
RECEPTS: R125
FAUCET CONTROL (NOTE 3) 180 RECEPT: PROJECTOR
100 FAUCET CONTROL (NOTE 3) 24 20/1
26 20/1
7 28 20/1
9 30 20/1
2,900 1,260 1,620 TOTAL VOLT AMPS
24 11 14 CONN. AMPS SPARE
SPARE
SPARE
200 A. BUS (COPPER)
100 A. MAIN CIRCUIT BREAKER 1. HVAC & REFRIGERATION EQUIPMENT MUST USE
TYPE HACR BREAKERS.
2. PROVIDE CIRCUIT BREAKER LOCKING DEVICE FOR FACU ALONG WITH IDENTIFYING CIRCUIT BREAKER IN ACCORDANCE WITH NEC 760.40
3. PROVIDE GFI BREAKER

PANEL B

TYPE: NEMA 1
BOLT-ON
DOOR-IN-DOOR WITH-IN HINGED TRIM
FRONT COVER

PANEL C TYPE: NEMA 1

BOLT-ON

DOOR-IN-DOOR WITH-IN HINGED TRIM
FRONT COVER

208 | 120 V, | 3 PH, | 4 WIRE
MOUNT: SURFACE
FEED: TOP EQUIP. GROUND BUS NEUTRAL BUS GUTTER TAPS SUB-FEED LUGS PROVIDE IF XX CHECKED: XX LOAD SERVED VA BK
RECEPTS: R122 720 20
RECEPTS: R121,R124, EXTERIOR GFI 900 20
RECEPT: R114 180 20
RECEPT: EWC1 (NOTE 3) 180 20 SPARE RECEPTS: R124A DAH01-04,05,06,07,08,09,11 3,378 2,394 2,160 TOTAL VOLT AMPS 28 20 18 CONN. AMPS 200 A. BUS (COPPER) 100 A. MAIN CIRCUIT BREAKER NOTES:
1. HVAC & REFRIGERATION EQUIPMENT MUST USE TYPE HACR BREAKERS. 2. PROVIDE CIRCUIT BREAKER LOCKING DEVICE FOR FACU ALONG WITH IDENTIFYING CIRCUIT BREAKER IN ACCORDANCE WITH NEC 760.40
3. PROVIDE GFI BREAKER 10 KAIC MIN.

TYPE: NEMA 1 BOLT-ON DOOR-IN-DOOR WITH-IN HINGED TRIM FRONT COVER	208 MOUNT: FEED:		V, E	3	PH,	4	WIRE		PROVIDE IF CHECKED:	XX XX	EQUIP. GROUND BUS NEUTRAL BUS GUTTER TAPS SUB-FEED LUGS		
	LOAD	CKT	CKT		OAD VA		CKT	CKT	LOAD				
LOAD SERVED	VA	BKR	#	Α	В	С	#	BKR		D SERVED			
RECEPTS: R111	360	20/1	1	720			2	20/1	360 REC	EPTS: R111			
RECEPT: R111	900	30/2	3		1,800		4	30/2		EPT: R111			
	900		5			1,800	6		900				
SPARE		20/1	7				8	20/1	SPA	RE			
SPARE		20/1	9				10	20/1	SPA	RE			
SPARE		20/1	11				12	20/1	SPA	RE			
SPARE		20/1	13				14	20/1	SPA	RE			
SPARE		20/1	15				16	20/1	SPA	RE			
SPARE		20/1	17				18	20/1	SPA	RE			
SPARE		20/1	19				20	20/1	SPA	RE			
SPARE		20/1	21				22	20/1	SPA	RE			
SPARE		20/1	23				24	20/1	SPA	RE			
NOTES:				720	1,800	1,800	TOTAL	VOLT AMPS	200 A. B	US (COPPER)			
1. HVAC & REFRIGERATION EQUIPMEN	T MUST U	SE		6	15	15	CONN	. AMPS	100 A. MAIN CIRCUIT BREAKER				
TYPE HACR BREAKERS.						<u></u>			_				
2. PROVIDE CIRCUIT BREAKER LOCKIN	IG DEVICE	FOR FA	CU ALC	NG WITH									
IDENTIFYING CIRCUIT BREAKER IN A	ACCORDA	NCE WIT	H NEC	760.40									
3. PROVIDE GFI BREAKER									10 KAIC	: MIN			

PANEL P												
TYPE: NEMA 4X BOLT-ON DOOR-IN-DOOR WITH-IN HINGED TRIM FRONT COVER	208 MOUNT: FEED:	120 SURFAC BOTTOM		3	PH,	4	WIRE		PROVIDE CHECKE			EQUIP. GROUND BUS NEUTRAL BUS GUTTER TAPS SUB-FEED LUGS
	LOAD	CKT	CKT		LOAD VA		CKT	CKT	LOAD			
LOAD SERVED	VA	BKR	#	Α	В	С	#	BKR		LOAD SERV		
LTS: PAVILLION	624	20/1	1	804			2	20/1		RECEPTS:		
SPARE		20/1	3		180		4	20/1		RECEPTS:		
SPARE		20/1	5			180	6	20/1		RECEPTS:		
SPARE		20/1	7	180			8	20/1		RECEPTS:		
SPARE		20/1	9		180		10	20/1		RECEPTS:		
SPARE		20/1	11			180	12	20/1	180	RECEPTS:	PAVILLIO	N
SPARE		20/1	13				14	20/1		SPARE		
SPARE		20/1	15				16	20/1		SPARE		
SPARE		20/1	17				18	20/1		SPARE		
SPARE		20/1	19				20	20/1		SPARE		
SPARE		20/1	21				22	20/1		SPARE		
SPARE		20/1	23				24	20/1		SPARE		
NOTES:				984	360			L VOLT AMPS	100	A. BUS (CO	OPPER)	
1. HVAC & REFRIGERATION EQUIPMEN	IT MUST			8	3	3	CONN	I. AMPS	60	A. MAIN CI	RCUIT BF	REAKER
USE TYPE HACR BREAKERS.												
2. PROVIDE CIRCUIT BREAKER LOCKIN	NG DEVICE	E FOR FA	CU ALC	ING WITH								
IDENTIFYING CIRCUIT BREAKER IN A	ACCORDA	NCE WIT	H NEC	760.40								
3. PROVIDE GFI BREAKER									10	KAIC MIN.		

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

CBHF Engineers, PLLC	SHEET TITLE: EL		TRIC CHE				<u> </u>)
2246 Yaupon Drive Wilmington, NC 28401 Phone: 910.791.4000 Fax: 910.791.5266	TALLEY & SMITH ARCHITECTURE I P.O. BOX 518 SHELBY, NC 28151-0 409 EAST MARION ST. SHELBY, NC 28	518	N DE	EPARTMENT OF A CAME	1E	CORPS JEUNE, NORTH CARG	BAS	E
www.cbhfengineers.com © Copyright 2019 CBHF Engineers, PLLC NC# P-0506 NC# P-0506	DES. JLG DR. JLG CHK. JPF SUBMITTED BY: DESIGN DIR. T H BURTON, PE			CA		RENOVATION BLDG. M-104 EJEUNE, NORTH CAROLIN	A	
35230 GINE	APPROVED:	DATE	SIZE	code ident.		NAVFAC DRAWING NO. 600251	48	
06/28/2019	SATISFACTORY TO:	DATE	SCALE:	NOTED	SPEC.	L	19-B-0034 SHEET 50 OF	57

		1		1	·	1				
MARK	DESCRIPTION	SIZE/APERATURE	VOLTS	LAMPS	WATTS	LENS	COLOR	MOUNTING HEIGHT	DRIVER	REMARKS
Α	2x2 LED LAY-IN VOLUMETRIC LUMINARE	24"W X 24"L X 4"H	MVOLT	LED	45	VOLUMETRIC	WHITE	RECESSED CEILING	LED DRIVER	1
				4000K	1				DIMMING	
				4500 LUMENS					0-10V	
В	2x2 LED LAY-IN VOLUMETRIC LUMINARE	24"W X 24"L X 4"H	MVOLT	LED	27	VOLUMETRIC	WHITE	RECESSED CEILING	LED DRIVER	1
				4000K		1			DIMMING	
				3000 LUMENS					0-10V	
С	2x2 LED LAY-IN LENSED LUMINARE	24"W X 24"L X 4"H	MVOLT	LED	16	N/A	WHITE	CEILING MOUNTED	LED DRIVER	6
		1		4000K		İ				
				3000 LUMENS		· .				
D	RECESSED MOUNTED 6" SHOWER LIGHT	6" DIA.	MVOLT	LED	10	ACRYLIC	WHITE	RECESSED CEILING	LED DRIVER	3
_	WET LOCATION LISTED			4000K		CLEAR				
	WET EGOTTION EIGTED	1		1000 LUMENS		OLL/ III				
D1	RECESSED MOUNTED 6" DOWN LIGHT	6" DIA.	MVOLT	LED	10	ACRYLIC	WHITE	RECESSED CEILING	LED DRIVER	1,3
D 1	REGEORD MODIVIED O DOWN FIGHT	0 50%	WIVOLI	4000K	'	CLEAR	VVI 11 1 L	NEGEOGED GEIENG	DIMMING	1,0
				1000 LUMENS		OLLAN			0-10V	
E	2-HEAD EMERGENCY FIXTURE	12.5"W X 3.75"D X 3.75"H	MVOLT	2-1.8W LED	10	N/A	WHITE	WALL MOUNTED	N/A	8
-	CONSTRUCTION: INJECTION-MOLDED HIGH-IMPACT	12.5 W X 3.75 D X 3.75 H	WVOLI	SQUARE LAMPS		IN/A	VVIIII	1	IN/A	°
		1		SQUARE LAIVIPS				7' 6" AFF		
	THERMOPLASTIC WITH SNAP-FIT COMPONENTS	04504 × 4051 × 455	MACIT	LED	- 00	VOLUMETRIO	\A/I UTE	DECEMBED OF UNIO	1 ED DDI) (ED	
F	2x4 LED LAY-IN VOLUMETRIC LUMINARE	24"W X 48"L X 4"H	MVOLT	LED	36	VOLUMETRIC	WHITE	RECESSED CEILING	LED DRIVER]1
		1		4000K					DIMMING	
				4300 LUMENS					0-10V	
G	WALL MOUNTED VANITY FIXTURE	48"W X 4"T X 4"D	MVOLT	LED	31	FROSTED	WHITE	ABOVE MIRROR	LED DRIVER	2,6,7
	CAST ALUMINUM WITH POWDER COAT FINISH			4000K		ACRYLIC		1		
				2800 LUMENS						
Н	4' LENSED STRIP FIXTURE	2.5"W X 48"L X 3"H	MVOLT	LED	31	FROSTED	WHITE	SURFACE MOUNTED	LED DRIVER	4
		1 i		4000K				CEILING OR WALL		-
				4000 LUMENS						
J	4' CEILING MOUNTED SURFACE WET LOCATION VAPOR TITE	8"W X 48"L X 4"H	MVOLT	LED	39	CLEAR	WHITE	CEILING MOUNTED	LED DRIVER	3
		1		4000K						
				4300 LUMENS						
K	WALL MOUNTED FULL CUT OFF FIXTURE	7.5"W X 11.2"H X 3.75"D	MVOLT	LED	24	N/A	BRONZE	WALL MOUNTED	LED DRIVER	3,8,9
	WITH EMERGENCY BATTERY BACKUP			4500K						
				700/500 LUMENS						
L	LENSED RECESSED MOUNTED 6" DOWN LIGHT WITH	6" DIA.	MVOLT	LED	30	FROSTED		RECESSED CEILING	LED DRIVER	3,8
	EMERGENCY BATTERY BACKUP, WET LOCATION			4000K						
				2000 LUMENS						
М	TRACK LIGHTING 60 DEGREE LED WIDE FLOOD	3-3/8"x 5-3/4"	MVOLT	LED	21		WHITE	CEILING MOUNTED	LED DRIVER	1
	HEAD WITH 60 DEGREE REFLECTOR	4' TRACK		3500K					DIMMING	
	PROVIDE WITH 75W CURRENT LIMITER			2100 LUMENS					0-10V	
X	EXIT SIGN, SINGLE FACE, 6" RED LETTERS	12"W X 8"H X 2"D	MVOLT	LED	6	N/A	WHITE	SURFACE CEILING		8
								7'-6"AFF WHEN		1
		1						WALL MOUNTED		
X1	EXIT SIGN, SINGLE FACE, 6" RED LETTERS WITH EMERGENCY	12"W X 8"H X 2"D	MVOLT	LED	6	N/A	WHITE	SURFACE CEILING	N/A	8
Λ1	LIGHTING DUAL HEADS	12 W X 3 11 X 2 D	WIVOLI		ľ	13/7	VVI II 1 L	7'-6"AFF WHEN	14/7	ľ
	LIGHTING DUAL HEADS	1		1				1-0 AFF WHEN		

4. COORDINATE LOCATION WITH DUCTWORK AND/OR EQUIPMENT

5. LED REQUIRED SURGE PROTECTION

THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.

SUBSTITUTIONS ARE ACCEPTABLE AS LONG AS THEY ARE EQUAL TO THE FIXTURE SPECIFIED, UNLESS OTHERWISE NOTED

ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES. LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FROM 1 LAMP FOR 90 MINUTES MINIMUM.

THIS INCLUDES LENS, COLORS, REFLECTORS, PHOTOMETRICS, HOUSING MATERIAL, FINISHES, ETC. ALL

ALL EXPEDITED EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS.

SURFACE, SHALL BE IC RATED BY MANUFACTURER.

LED MODULES SHALL BE REPLACEABLE.

ENGINEER AND OWNER TO MAKE AN INFORMED DECISION.

CONNECTED TO THE UNSWITCHED HOT LEG OF THE INDICATED CIRCUIT.

ACRYLIC PRISMATIC LENSES SHALL BE 0.156" NOMINAL MINIMUM THICKNESS.

REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL RATINGS.

ALL LUMINAIRE SUPPORTS, INCLUDING POLES, SHALL BE 3RD PARTY LISTED.

SEE SPECIFICATIONS SECTIONS 265100 AND 265200 FOR ADDITIONAL REQUIREMENTS.

NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.

FIXTURES TO BE INSTALLED IN CEILINGS, INDICATE ON THE ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH THE CEILING

LIGHTING FIXTURES SHALL MEET THE AESTHETICS, DESCRIPTION AND SPECIFICATIONS, SUBSTITUTIONS SHALL INCLUDE PT. BY PT. CALCULATIONS.

LIGHTING FIXTURES, AS SPECIFIED, HAVE BEEN SO SELECTED TO ACHIEVE REQUIRED/DESIRED FOOTCANDLE LEVELS IN THEIR RESPECTIVE AREA.

HENCE SPECIFIC FIXTURE CHARACTERISTICS WHICH MAY CREATE PARTICULAR ILLUMINATION RESULTS ARE ESSENTIAL. ANY DEVIATIONS FROM

SPECIFIED FIXTURES SHALL DEEM THE SUBMITTING AGENT AND CONTRACTORS RESPONSIBLE IN PROVIDINGSUCH DEVIATION FOR THE ARCHITECT/

ANY FIXTURE WITH THE TEXT "NL" ADJACENT TO IT SHALL INDICATE THAT THAT FIXTURE IS A NIGHT LIGHT (24HR LIGHT). THE FIXTURE SHALL BE

ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.
ALL LIGHTING FIXTURES PENETRATING RATED FLOOR/CEILING ASSEMBLY SHALL BE PROVIDED WITH ACCESSORIES TO MAINTAIN ASSEMBLY FIRE RATING.

THE ABOVE FIXTURE TYPES ARE LISTED AS THE DESIGN BASIS. THE ACTUAL FIXTURES SUBMITTED SHALL BE MANUFACTURED IN THE UNITED STATES.

PROVIDE MANUFACTURER INSTALLED NEC 2014 ARTICLE 410,130 (G) COMPLIANT DISCONNECTING MEANS FOR ALL APPLICABLE FIXTURES.

6. CONFIRM MOUNTING HEIGHT WITH ARCHITECT

1. 0-10V DIMMING DRIVER

2. DAMP LOCATION

3. WET LOCATION

GENERAL NOTES:

LUMINAIRE REQUIREMENTS:

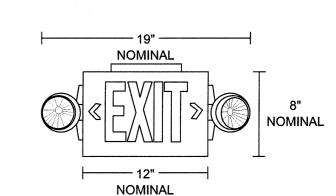
- HOUSING/TRIM EXTRUDED ALUMINUM WITH OPTIONAL FINISHES OF SATIN ALUMINUM, WHITE, BLACK, BRASS, BRONZE OR CHROME.
- 2. PLAQUE WATER-CLEAR INJECTION-MOLDED ACRYLIC. OPTIONAL MIRROR BACKGROUND ON SINGLE FACE MODELS; STANDARD ON DOUBLE-FACED MODELS.
- LETTERS/CHEVRONS MINIMUM 6" HIGH WITH 3/4" STROKE. RED OR GREEN LETTERS
 AS INDICATED. PROVIDE CHEVRONS AS INDICATED EITHER LEFT, RIGHT OR BOTH
 DIRECTIONS AS INDICATED.
- 4. EMERGENCY PACK SOLID-STATE, CONSTANT-CURRENT TYPE BATTERY CHARGER WITH MAINTENANCE-FREE, NICKEL-CADMIUM BATTERY, AC-ON INDICATOR LAMP AND TEST SWITCH.
- 5. MOUNTING UNIVERSAL MOUNTING KIT FOR CEILING, WALL OR END OF FIXTURE MOUNTING.
- 6. ILLUMINATION PROVIDED BY RED OR GREEN HIGH-OUTPUT LEDS IN TOP HOUSING. RATED LIFE SHALL BE IN EXCESS OF 20 YEARS.
- 7. CERTIFICATION UL LISTED AND LABELED.

7. FINAL COLOR SELECTION BY ARCHITECT

8. 90 MIN BATTERY BACKUP-INTEGRAL

9. INTEGRAL PHOTOCELL

EDGE-LIT EXIT SIGN



REVISIONS

DATE APPROVED

LUMINAIRE REQUIREMENTS:

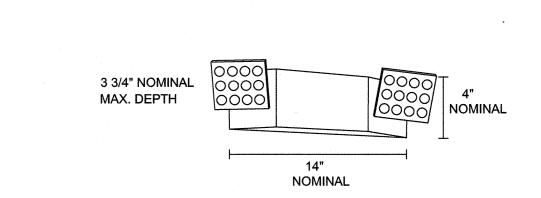
- 1. THERMOPLASTIC HOUSING, IMPACT-RESISTANT, SCRATCH-RESISTANT AND CORROSION-PROOF. UL94V-0 FLAME RATING. UV-STABLE RESIN. RUGGED UNIBODY HOUSING SNAPS TOGETHER WITH NO ADDITIONAL FASTENERS. UNIVERSAL, DIRECTIONAL CHEVRON INSERTS ARE EASILY REMOVED AND REINSERTED. LETTERS ARE 6" HIGH WITH 3/4" STROKE, WITH 100 FT. VIEWING DISTANCE RATING BASED UPON UL924 STANDARD. LEDs MOUNTED ON PRIMARY CIRCUIT BOARDS FOR SIGN ILLUMINATION. LOW-ENERGY LED LAMP IN SIGN OPERATES IN NORMAL (AC INPUT) AND EMERGENCY (DC INPUT) MODES. LOW-PROFILE, INTEGRATED TEST SWITCH/PILOT LIGHT. RED STATUS INDICATOR. UNIQUE TRACK-AND-SWIVEL ARRANGEMENT PERMITS FULL RANGE OF DIRECTION OF LAMP HEAD ADJUSTMENT. TOOL-LESS ACCESS FOR MAINTENANCE.
- OPTICS TWIN LED LAMP HEADS OPERATE IN EMERGENCY (DC INPUT) MODE WITH 12 SERIES-PARALLEL WHITE LEDS IN EACH HEAD.
- 3. ELECTRICAL DUAL-VOLTAGE INPUT CAPABILITY (120/277V).

 CURRENT-LIMITING CHARGER. SHORT-CIRCUIT PROTECTION. SINGLE MULTI-COLOR LED INDICATOR
 TO DISPLAY TWO-STATE CHARGING, TEST ACTIVATION AND THREE-STATE DIAGNOSTIC TEST.
 TEST SWITCH. SELF-DIAGNOSTIC TESTING FOR 30 SECONDS EVERY 30 DAYS, 30 MINUTES AT
 180-DAY INTERVAL, AND 90 MINUTES ANNUALLY. DIAGNOSTIC EVALUATION OF LED LIGHT SOURCE,
 AC-TO-DC TRANSFER, CHARGING AND BATTERY CONDITION. BATTERY: SEALED, MAINTENANCE-FREE
 NICKEL-CADMIUM BATTERY. DELIVERS 90-MINUTE CAPACITY TO EMERGENCY LAMPS.
- 4. INSTALLATION TOP, END OR BACK MOUNTING. HOUSING SNAPS TO CANOPY WITH POSITIVE-LOCKING TABS. CAM LOCKING PIN SECURES HOUSING TO CANOPY.
- 5. LISTINGS UL DAMP LOCATION LISTED STANDARD 50°-104°F (10°-40°C). MEETS UL 924, NFPA 101 (CURRENT LIFE SAFETY CODE), NEC AND OSHA ILLUMINATION STANDARDS.

LED COMBO/EXIT SIGN







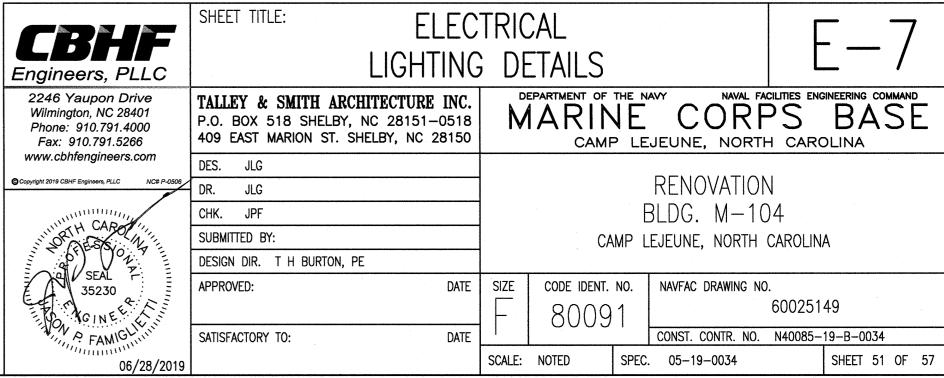
LUMINAIRE REQUIREMENTS:

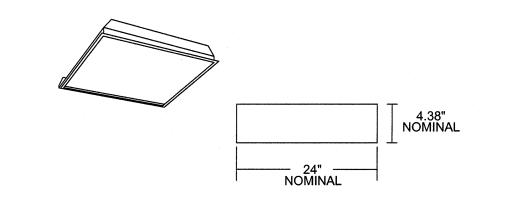
- 1. HOUSING INJECTION-MOLDED, FAME-RETARDANT, HIGH-IMPACT, THERMOPLASTIC HOUSING WITH SNAP-FIT DESIGN COMPONENTS. TRACK AND SWIVEL ARRANGEMENT PERMITS FULL RANGE OF LAMP ADJUSTMENT.
- 2. OPTICS TWO 1.8W LED LAMPS FOR EMERGENCY LIGHT.
- 3. ELECTRICAL DUAL-VOLTAGE INPUT 120V OR 277V AC. EMERGENCY UNIT PROVIDED WITH TEST SWITCH, STATUS INDICATOR AND RECHARGEABLE BATTERY. MAINTENANCE-FREE NICKEL-CADMIUM BATTERY, 90 MINUTES OF EMERGENCY POWER.
- 4. LISTINGS UL LISTED. MEETS UL 924, NFPA 101, NFPA 70-NEC AND OSHA ILLUMINATION STANDARDS. DAMP LOCATION 32°F TO 122°F (0°C TO 50°C) LISTED STANDARD.

DECORATIVE EMERGENCY LIGHTING UNIT



SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1





LUMINAIRE REQUIREMENTS:

- 1. CONSTRUCTION COMPONENTS ARE DIE-FORMED FOR DIMENSIONAL CONSISTENCY AND PAINTED AFTER FABRICATION WITH A POLYESTER POWDER PAINT FOR IMPROVED PERFORMANCE AND PROTECTION. THE REFLECTOR IS FINISHED WITH A HIGH REFLECTIVE MATTE WHITE POWDER PAINT FOR IMPROVED AESTHETICS AND INCREASED LIGHT DIFFUSION. END PLATES CONTAIN EASY-TO-POSITION INTEGRAL T-BAR CLIPS FOR SECURELY ATTACHING THE LUMINAIRE TO THE T-GRID. FOR ADDITIONAL T-GRID SECURITY, OPTIONAL SCREW ON T-BAR CLIPS ARE AVAILABLE. DIFFUSERS ARE EXTRUDED FROM IMPACT MODIFIED ACRYLIC FOR INCREASED DURABILITY. LED BOARDS AND DRIVERS ARE ACCESSIBLE FROM THE PLENUM.
- 2. OPTICS VOLUMETRIC ILLUMINATION IS ACHIEVED BY CREATING AN OPTIMAL MIX OF LIGHT TO WALLS, PARTITIONS AND VERTICAL AND HORIZONTAL WORK SURFACES - RENDERING THE INTERIOR SPACE, OBJECTS AND OCCUPANTS IN A MORE BALANCED, COMPLIMENTARY LUMINOUS ENVIRONMENT. HIGH PERFORMANCE EXTRUDED ACRYLIC DIFFUSERS CONCEAL LEDS AND EFFERENTLY DELIVER LIGHT IN A VOLUMETRIC DISTRIBUTION. FOUR DIFFUSER CHOICES AVAILABLE - CURVED AND SQUARE DESIGNS WITH LINEAR PRISMS OR A SMOOTH FROSTED FINISH.
- 3. ELECTRICAL LONG-LIFE LEDS, COUPLED WITH HIGH-EFFICENCY DRIVERS, PROVIDE SUPERIOR QUANTITY AND QUALITY OF ILLUMINATION FOR EXTENDED SERVICE LIFE. FIXTURE SHALL BE RATED TO DELIVER L80 PERFORMANCE FOR 50,000 HOURS.
- 4. LED DRIVER DRIVER DELIVERS FULL RANGE DIMMING FROM 0 10V CONTROL SIGNAL.
- 5. INSTALLATION GRID INTERFACING ARRANGEMENT PROVIDES MOUNTING INTO STADARD 1" AND 9/16" TEE BAR OR SCREW SLOT GRIDS. 9/16" ALLOWS FIXTURE TRIM TO HANG LEVEL WITH ARCHITECTURAL CEILING TILES. DRYWALL CEILING ADAPTORS AVAILABLE. SUITABLE FOR DAMP LOCATION.
- 6. LISTINGS CSA CERTIFIED TO MEET US AND CANADIAN STANDARDS. PATENTS PENDING. DLC CERTIFIED TEST TO LM80 STANDARDS.
- 7. SEE SCHEDULE FOR DELIVERED LUMEN PACKAGE, 3500K
- 8. FIXTURE MUST HAVE A HIGH IMPACT RESISTANT LENS SUITABLE FOR THE APPLICATION OF THE FIXTURE IN THE ATHLETIC FACILITY.

LUMINAIRE REQUIREMENTS:

3. LENS - CLEAR GLASS.

6. ELECTRICAL - 120/277V

8. INTEGRAL PHOTOCELL

4. LAMPS - LEDs.

1. HOUSING - CAST ALUMINUM HOUSING.

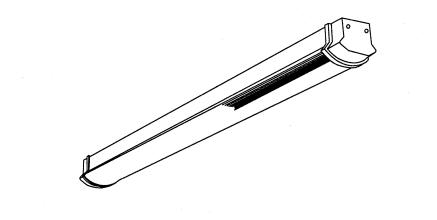
2. FINISH - THERMOSET POWDER COAT FINISH.

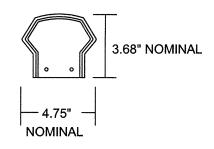
5. DRIVER - ELECTRONIC >90% POWER FACTOR.

7. CERTIFICATION - UL LISTED AND LABELED.

9. PROVIDE DRYWALL FLANGE KIT AND ANY OTHER OPTIONS AS REQUIRED FOR

DIRECT RECESSED 2' X 2' LED





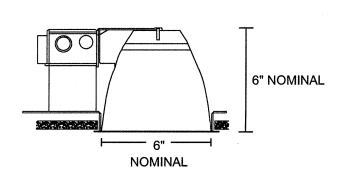
LUMINAIRE REQUIREMENTS:

- 1. HOUSING 2NOMINAL 1 1/4" X 1 3/4" RECTANGULAR HOUSING FORMED FROM COLD-ROLLED STEEL.
- 2. END CAPS DIE-CAST END CAPS ARE MECHANICALLY ATTACHED WITH NO EXPOSED FASTENERS. FLAT END CAPS STANDARD, SCULPTURED END CAPS OPTIONAL.
- 3. COLOR HOUSING AND END CAPS IS WHITE, BLACK OR PAINTED ALUMINUM.
- 4. LUMINAIRE LENGTH 4' AND 8' LENGTHS IS A SINGLE SECTION FOR EXACT SUSPENSION SPACING OF 4' OR 8'. FOR TOTAL LUMINAIRE LENGTH, ADD 5/8" FOR EACH FLAT END CAP AND 4" FOR EACH SCULPTURED END CAP. USING INTERNAL JOINERS, 4' AND 8' SECTIONS CAN BE JOINED TO FOR LONGER ROWS.
- 5. SOURCE TWO LED LUMEN PACKAGES AND THREE AVAILABLE COLOR TEMPERATURE
- OPTIONS (3000K, 3500K, AND 4000K) ALL WITHIN 2.5 MACADAM ELLIPSE.

6. OPTICS - HIGH PERFORMANCE LENS, DIFFUSERS AND METAL REFLECTORS.

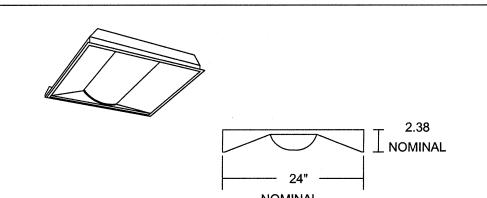
- 7. DIMMING DRIVER SMOOTH CONTINUOUS AND FLICKER-FREE DIMMING TO DARK (0.1%). SYNCING FOR CONTROLS: 2mA MAX. THD:<20%. INSIGNIFICANT INRUSH CURRENT AT 120 AND 277VAC. FCC CLASS A AND B TESTED FOR EMI AND RFI.
- 8. ELECTRICAL LED LIGHT ENGINE CONSISTING OF MODULAR LED BOARDS AND ELDOLED DIMMING DRIVER - RATED FOR 50,000 HOURS (L80) AT 25°C AMBIENT TEMPERATURE. SPECIFY 120V OR 277V. PRE-WIRED WITH 16WAG FIXTURE WIRE. PLUG-IN ELECTRICAL CONNECTORS INCLUDED.

LED 4' SURFACE MOUNT STRIP FIXTURE



LUMINAIRE REQUIREMENTS:

- 1. HOUSING ONE-PIECE, DIE-STAMPED, COLD ROLLED STEEL OR ACRYLIC-ENAMELED ALUMINUM. PROVIDE WITH PRE-WIRED JUNCTION BOX HAVING SNAP-ON ACCESS COVER. ACCESS TO JUNCTION BOX FROM BELOW CEILING SHALL BE PROVIDED THROUGH FIXTURE AFTER REMOVAL OF REFLECTOR.
- 2. REFLECTOR AND TRIM ONE-PIECE, CLEAR, SPUN ALUMINUM, IRIDESCENCE-SUPRESSED, WITH PAINTED WHITE SELF TRIM. OTHER FINISHES AND TYPES AVAILABLE. SEE LIGHTING FIXTURE SCHEDULE.
- 3. LED DRIVER DRIVER DELIVERS FULL RANGE DIMMING FROM 0 10V CONTROL SIGNAL. 4. ELECTRICAL - LONG-LIFE LEDS, COUPLED WITH HIGH-EFFICENCY DRIVERS, PROVIDE
- SUPERIOR QUANTITY AND QUALITY OF ILLUMINATION FOR EXTENDED SERVICE LIFE. FIXTURE SHALL BE RATED TO DELIVER L80 PERFORMANCE FOR 50,000 HOURS.
- 5. CERTIFICATION UL LISTED AND LABELED.
- REFLECTOR TYPE DIRECT DOWNLIGHT OR WALL WASH; SEMI-SPECULAR OR SPECULAR. REFLECTOR COLOR - CLEAR, CHAMPAGNE, PEWTER, WHEAT, GOLD OR BRONZE. TRIM - OPEN REFLECTOR, STEPPED WHITE OR BLACK BAFFLE.



REVISIONS

DATE APPROVED

LUMINAIRE REQUIREMENTS:

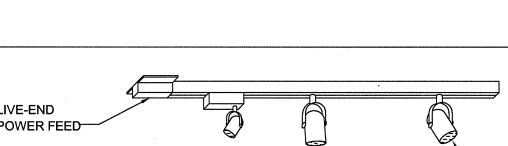
- 1. CONSTRUCTION COMPONENTS ARE DIE-FORMED FOR DIMENSIONAL CONSISTENCY AND PAINTED AFTER FABRICATION WITH A POLYESTER POWDER PAINT FOR IMPROVED PERFORMANCE AND PROTECTION. THE REFLECTOR IS FINISHED WITH A HIGH REFLECTIVE MATTE WHITE POWDER PAINT FOR IMPROVED AESTHETICS AND INCREASED LIGHT DIFFUSION. END PLATES CONTAIN EASY-TO-POSITION INTEGRAL T-BAR CLIPS FOR SECURELY ATTACHING THE LUMINAIRE TO THE T-GRID. FOR ADDITIONAL T-GRID SECURITY, OPTIONAL SCREW ON T-BAR CLIPS ARE AVAILABLE. DIFFUSERS ARE EXTRUDED FROM IMPACT MODIFIED ACRYLIC FOR INCREASED DURABILITY. LED BOARDS AND DRIVERS ARE ACCESSIBLE FROM THE PLENUM.
- 2. OPTICS VOLUMETRIC ILLUMINATION IS ACHIEVED BY CREATING AN OPTIMAL MIX OF LIGHT TO WALLS, PARTITIONS AND VERTICAL AND HORIZONTAL WORK SURFACES - RENDERING THE INTERIOR SPACE, OBJECTS AND OCCUPANTS IN A MORE BALANCED, COMPLIMENTARY LUMINOUS ENVIRONMENT. HIGH PERFORMANCE EXTRUDED ACRYLIC DIFFUSERS CONCEAL LEDS AND EFFERENTLY DELIVER LIGHT IN A VOLUMETRIC DISTRIBUTION. FOUR DIFFUSER CHOICES AVAILABLE - CURVED AND SQUARE DESIGNS WITH LINEAR PRISMS OR A SMOOTH FROSTED FINISH.
- 3. ELECTRICAL LONG-LIFE LEDS, COUPLED WITH HIGH-EFFICENCY DRIVERS, PROVIDE SUPERIOR QUANTITY AND QUALITY OF ILLUMINATION FOR EXTENDED SERVICE LIFE. FIXTURE SHALL BE RATED TO DELIVER L80 PERFORMANCE FOR 50,000 HOURS.
- 4. LED DRIVER DRIVER DELIVERS FULL RANGE DIMMING FROM 0 10V CONTROL SIGNAL.
- 5. INSTALLATION GRID INTERFACING ARRANGEMENT PROVIDES MOUNTING INTO STADARD 1" AND 9/16" TEE BAR OR SCREW SLOT GRIDS. 9/16" ALLOWS FIXTURE TRIM TO HANG LEVEL WITH ARCHITECTURAL CEILING TILES. DRYWALL CEILING ADAPTORS AVAILABLE. SUITABLE FOR DAMP LOCATION.
- 6. LISTINGS CSA CERTIFIED TO MEET US AND CANADIAN STANDARDS. PATENTS PENDING. DLC CERTIFIED TEST TO LM80 STANDARDS.
- 7. SEE SCHEDULE FOR DELIVERED LUMEN PACKAGE, 3500K

DIRECT/INDIRECT RECESSED 2' X 2' & 2' X 4' LED





TYPE H DETAIL



LUMINAIRE REQUIREMENTS:

1. TRACK SECTION - HEAVY-GAUGE, EXTRUDED ALUMINUM CHANNEL WITH NATURAL ALUMINUM OR BAKED ENAMEL OR POWDER COAT WHITE, OR BLACK FINISH.

TYPICAL FIXTURE

- 2. AMPACITY TRACK SHALL HAVE ONE OR TWO 20 AMP CIRCUITS INTEGRAL TO EXTRUDED TRACK CHANNEL AS NOTED.
- 3. LENGTHS TRACK SHALL BE AVAILABLE IN 2', 4', 8', AND 12' CONTINUOUS SECTIONS.
- 4. MOUNTING EACH 4' OR LESS SECTION OF TRACK SHALL BE SECURED BY TWO TOGGLE-BOLT TYPE FASTENERS, OR SCREWS IF JOIST IS AVAILABLE.
- 5. FIXTURE TYPES SEE NL-43 FOR COMMON TRACK LIGHTING FIXTURES.
- 6. CERTIFICATION UL LISTED AND LABELED. 7. OPTIONS - PROVIDE ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION.
- AVAILABLE ACCESSORIES INCLUDE:
- A. LIVE END FEED USED TO START A SINGLE RUN.
- B. LINEAR COUPLER USED TO JOIN TWO STRIGHT TRACKS. C. L FEED CONNECTOR - JOINS TWO TRACKS IN 90 DEGREE CONFIGURATION.
- D. T FEED CONNECTOR JOINS THREE TRACKS IN TEE CONFIGURATION. E. X FEED CONNECTOR - JOINS FOUR TRACKS IN AN X CONFIGURATION.
- F. FLEXIBLE CONNECTOR JOINS TWO TRACKS IN UP TO A 90 DEGREE BEND.
- G. SURFACE CONDUIT FEED PERMITS TRACK END TO BE CONNECTED TO 1/2" CONDUIT. H. CONCEALED FEED - PERMITS TRACK TO BE CONNECTED FROM ABOVE WITHOUT OUTLET BOX.

SURFACE-MOUNTED TRACK LIGHTING



RECESSED LED DOWNLIGHT

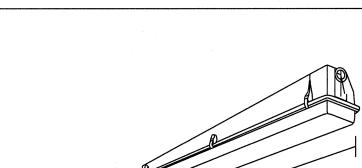


TYPE A & B & F DETAIL



LUMINAIRE REQUIREMENTS:

- 1. HOUSING SEAMLESS ALUMINUM WITH CAST ALUMINUM TOP FOR HEAT DISSAPATION.
- 2. FINISH TYPE L & M: MATTE WHITE POWDER COAT STANDARD. VARIETY OF OTHER COLORS AVAILABLE. ADD SPECIFIC DESCRIPTION TO LIGHTING FIXTURE SCHEDULE.
- 3. DRIVER LED DIMMABLE TO 5% VIA AN ELECTRONIC LOW VOLTAGE DIMMER ON 120V TRACK TRACK. MUST HAVE A SEAMLESS DRIVER CASE
- 4. LAMPS LED LIGHT SOURCE 2100L/CRI 80+ @ 3000k. TYPE L - 21 DEGREE SPOT TYPE M - 60 DEGREE WIDE FLOOD
- 5. CERTIFICATION UL LISTED AND LABELED.



LUMINAIRE REQUIREMENTS:

- HOUSING ONE-PIECE, IMPACT-RESISTANT, FIBERGLASS REINFORCED POLYESTER
- 2. FINISH ALUMINUM REFLECTOR
- 3. LENS 100% CLEAR OR FROSTED POLYCARBONITE. FILM. CLOSED CELL NEOPRENE GASKET WITH CAPTIVE NONMETALLIC, SNAP ACTION CAM LATCHES TO SECURE LENS TO HOUSING.
- 4. LUMEN SOURCE LED ARRAYS WITH LUMEN OUTPUTS AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
- 5. POWER SUPPLY/LED DRIVER CLASS 1 DRIVER SHALL OPERATE AT 120/277 VOLTS, 50/60 HZ, WITH OTHER VOLTAGES OPTIONAL; POWER FACTOR GREATER THAN 0.9 AND THD LESS THAN 20% AT FULL LOAD.
- 6. CERTIFICATION UL LISTED AND LABELED. SUITABLE FOR WET LOCATION AS DESIGNATED IN LIGHTING FIXTURE SCHEDULE.

LED SURFACE MOUNTED FIXTURE



FLUSH OR BACKBOX MOUNT

TYPE K DETAIL

LED EXTERIOR / EGRESS SURFACE FIXTURE

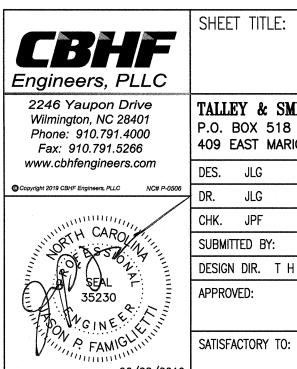




TYPICAL TRACK LIGHTING FIXTURES



SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1



ELECTRICAL SUBMITTED BY:

TALLEY & SMITH ARCHITECTURE INC P.O. BOX 518 SHELBY, NC 28151-0518 409 EAST MARION ST. SHELBY, NC 28150 DESIGN DIR. TH BURTON, PE APPROVED:

MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA

RENOVATION BLDG. M-104 CAMP LEJEUNE, NORTH CAROLINA Q

DATE SIZE CODE IDENT. NO. NAVFAC DRAWING NO.

CONST. CONTR. NO. N40085-19-B-0034 SCALE: NOTED SPEC. 05-19-0034 SHEET 52 OF 57

