

**ADDENDUM NO. 3:**  
**ISSUED: June 18, 2020**  
to the Project Manual for

GLOBAL CAMPUS FIRST FLOOR RENOVATION  
Fayetteville, Arkansas

**POLK STANLEY WILCOX ARCHITECTS**  
**509 W. SPRING STREET, SUITE 150**  
**FAYETTEVILLE, ARKANSAS 72701**

*This addendum forms a part of the contract documents and modifies or interprets the Project Manual and/or Drawings as noted herein.*

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**GENERAL INFORMATION:**

See responses to bidder's questions that have been received for the Global Campus First Floor Renovation.

1. Fire caulking is only required in penetrations through Fire Rated walls. We are not adding any new fire rated walls.
2. There was a question about adding a S.F. allotment for the spray insulation. No - Price the spray insulation per A201. Ceiling types C4 (1" thick K-13) and C5 (2" thick K-13).
3. There was a question about the ceiling penetration cover detail in the RCP Legend on A201. This detail is needed (in lieu of a steel pan) to provide enough mass to reduce the sound transmission to the Black Box Theater above.
4. The IDIQ (Indefinite Delivery Indefinite Quantity) contractors to include in your bid prices are as follows:
  - a. Powers of AR – HVAC Controls – Chase Ransom ([cransom@powersar.com](mailto:cransom@powersar.com))
  - b. Keystone Digital – AV – Spencer Cox ([scox@keystonedigital.com](mailto:scox@keystonedigital.com))
  - c. Triple S – Access Control & Fire Alarm - Christian Tallmage ([christian@triplesalarm.com](mailto:christian@triplesalarm.com))
5. The State will be doing inspections for the project – A building permit will not be required.
6. The condition of the project area will be roughly what is seen on the Demolition plans. There may be some lighting hanging from the ceiling to provide light to the space.
7. Please contact the city to purchase parking spaces.
8. The finishes of the spiral staircase at the South end of the corridor are existing to remain.
9. See attached cut sheet for the Owner Furnished Cove Light. The owner will also provide the required J-trim to hang the cove light (Re: 1/A501).
10. There was a note left on S101 referencing 'Package 2'. 'Package 2' is the scope that is currently being bid under this project (Global Campus First Floor Renovation). 'Package 1' covers the demolition work that is being performed on the First Floor and is currently being performed under a previous contract.
11. Signage is not currently in the scope of this project.
12. School is planned to start back up on Monday August 24<sup>th</sup>, however, this building does not operate on the academic calendar.
13. To reiterate from the Pre-Bid conference, the building will be able to be accessed at all times (after hours).

**ADDENDUM SPECIFICATION SECTIONS:**

REVISED SECTION (08 4000) – “ENTRANCES AND STOREFRONTS” Replace Page 2 (dated 06/18/2020) with the attached to this addendum and are made a part of the Bid Documents.

Item #1: Changed 08 4000-2.02-D to “Refer to HARDWARE NOTES on Sheet A701.”

REVISED SECTION (23 0923) – “ DIRECT DIGITAL CONTROLS SYSTEM” Replace Page 5 (dated 06/18/2020) with the attached to this addendum and are made a part of the Bid Documents.

Item #1: Section 2.1.A, 2.1.A.1, 2.1.B: Revised to allow only Power of Arkansas as IDIQ Controls Vendor for Niagra Controls System.

**REVISED DRAWINGS:**

REPLACE SHEET (AD100) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents. Clarified information related to IDIQ.

REPLACE SHEET (A101) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents. Clarified information related to IDIQ.

REVISE SHEET (A301) Remove Toilet Accessory note “R1” on Detail 7 on Sheet A301.

REPLACE SHEET (A701) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents. Added specific information about Access Control.

REPLACE SHEET (E001) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents.

Item #1: Panels and Misc – Revised description for phone/data and above counter phone/data devices.

Item #2: Panels and Misc – Revised description for card reader devices.

Item #3: Panels and Misc – Added wireless access point to legend.

Item #4: Panels and Misc – Added security camera to legend.

Item #5: Panels and Misc – Added ceiling mounted microphone to legend.

Item #6: Panels and Misc – Added ceiling mounted camera to legend.

Item #7: Switches – Removed color temperature (CT) from abbreviations.

Item #8: Luminaire Schedule – Revised manufacturer 2 model number prefix for Type A2 fixture.

REPLACE SHEET (E100) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents.

Item #1: Detail 1 – Removed cable tray.

- Item #2: Detail 1 – Removed (1) quad receptacle and (1) phone/data box from south table in VR/AR 108.
- Item #3: Detail 1 – Removed (2) quad receptacles and (2) phone/data boxes from columns in VR/AR 109.
- Item #4: Detail 1 – Removed (1) quad receptacle and (1) phone/data box from south table in VR/AR 109.
- Item #5: Detail 1 – Removed (2) quad receptacles and (2) phone/data boxes from columns in VR/AR 110.
- Item #6: Detail 1 – Removed (1) quad receptacle and (1) phone/data box from south table in VR/AR 110.
- Item #7: Detail 1 – Added cable symbols to all phone/data boxes.
- Item #8: Detail 1 – Added wireless access points.
- Item #9: Detail 1 – Added card readers.
- Item #10: Detail 1 – Added security cameras.
- Item #11: Detail 1 – Added (2) ceiling mounted microphones to Auditorium 107.
- Item #12: Detail 1 – Added (1) ceiling mounted camera to Auditorium 107.
- Item #13: Detail 1 – Added (1) 4-gang junction box for a/v rack in Auditorium 107.
- Item #14: Detail 1 – Added (1) duplex receptacle for a/v equipment in Auditorium 107.
- Item #15: Detail 1 – Added box note for reusing and adding CAT6A cabling.
- Item #16: Keynotes – Removed keynote 26.18.
- Item #17: Keynotes – Revised keynotes 26.20 and 26.21.
- Item #18: Keynotes – Added keynotes 26.30, 26.31, 26.32, 26.33, and 26.34.

REPLACE SHEET (E103) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents.

- Item #1: Fire Alarm Installation Notes – Removed note for reusing existing fire alarm devices.

REPLACE SHEET (E104) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents.

- Item #1: Detail 1 – Added (1) smoke detector to Corridor 108A.

REPLACE SHEET (E201) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents.

- Item #1: Detail 1 – Removed (2) CT switches and note from Auditorium 107.
- Item #2: Detail 1 - Removed CT switch from VR/AR 108.

- Item #3: Detail 1 - Removed CT switch from VR/AR 109.
- Item #4: Detail 1 - Removed CT switch from VR/AR 110.
- Item #5: Detail 1 – Removed CT switch from Quiet Working 117.
- Item #6: Detail 1 – Added (1) single pole switch to Quiet Working 117.

REPLACE SHEET (E300) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents.

- Item #1: Detail 2 – Removed CT switch and note.
- Item #2: Detail 3 – Added detail to sheet.
- Item #3: Panel LPC – Revised circuit 52.

REPLACE SHEET (M005) of original issue date 05/15/2020 and revised 06/18/2020 are attached to this addendum and are made a part of the Bid Documents.

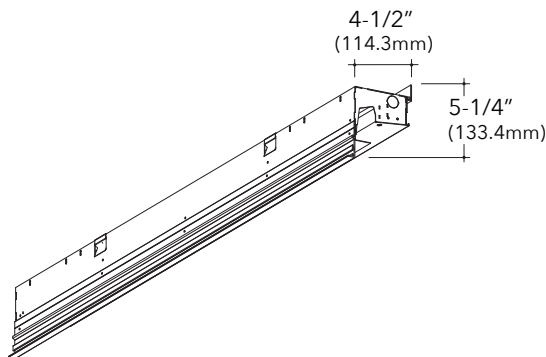
- Item #1: Revised WSHP Schedule notes to reflect approval of non-JCI controls components (DDC controller, LAT sensor, temperature and humidity sensors) by Controls Contractor (to be integrated into JCI Controls System per existing box note) and to clarify requirements for temperature and humidity sensors.

**END OF ADDENDUM NO. 3**





## RECESSED LINEAR PERIMETER OUTLINE SLOT SYSTEM



- Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing
- Extruded aluminum module for perfect perimeter illumination
- EVL LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL listed. IC rated
- Approved for dry/damp location unless otherwise noted
- Room-Side Maintenance for LED system
- Buy American Act compliant



Submitted by Gilmer Maddox, LLC

**GILMER MADDOX**  
LIGHTING + ELECTRICAL

**Job Name:**  
University of Arkansas - Global Campus 4th and 5th  
Floor Renovation  
Architect: Harrison French & Associates, LTD  
(Bentonville)

**Catalog Number:**  
EVL-835-5-G1-U-OL-1-1-0-W-EF

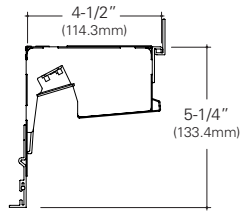
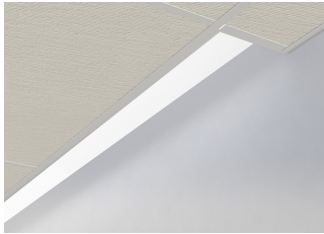
Notes:

**Type:**  
E5

GMLLC17-5696

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

# Evolution Outline Linear Perimeter Slot Luminaire



Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

EVL\_ **835** - **5** ' - **G1** - **U** - **OL1** - **1** - **0** - **W** - **EF** -

Housing CRI,CCT & Output Length or Pattern Mounting Voltage Driver Circuting Battery/EM Finish Fixture Options Controls

Example Part #: EVL-827-12-G9-U-OL1-1-0-W

<b>HOUSING</b> <small>pg. 3</small>	<b>EVL</b> Outline	<b>EVLS</b> Outline Shallow					<small>Details on pg. 3</small>	
<b>CRI, CCT &amp; OUTPUT</b> <small>pg. 4</small>	<b>27</b> 2700K	<b>30</b> 3000K	<b>835</b>	<b>40</b> 4000K	<b>CL</b> Custom Lumens	<b>CW</b> Custom Watts	<small>Lumen Outputs, 80 &amp; 90 CRI pg. 4</small>	
<b>LENGTH OR PATTERN</b> <small>pg. 5-6</small>	<b>5</b> Individual Fixture - 2', 3', 4', 5', 6', & 8'	<b>---</b> Continuous Row to 1/8"	<b>L_x</b> L Shape <small>Inside or Outside</small>	<b>R_x</b> Rectangle <small>Inside or Outside</small>	<b>S_</b> Square <small>Inside or Outside</small>	<b>U_x</b> U-Shape <small>Inside or Outside</small>	<small>More Options on pg. 5-6</small>	
<b>MOUNTING</b> <small>pg. 7</small>	<b>G1</b> 1" T-Bar	<b>G9</b> 9/16" T-Bar	<b>GS</b> Slotted T-Bar	<b>FL</b> Flanged	<b>SF</b> Spackle Flange	<b>NF</b> Flangeless	<small>Details on pg. 7</small>	
<b>VOLTAGE</b> <small>pg. 8</small>	<b>U</b> Universal <small>(120 thru 277V)</small>	<b>3</b> 347V						<small>Details on pg. 8</small>
<b>DRIVER</b> <small>pg. 8</small>	<b>OL1</b> Osram Dimming <small>0-10V, 10%</small>	<b>L_</b> Lutron Dimming	<b>E_</b> eldoLED Dimming	<b>P_</b> Philips Dimming		<small>Details on pg. 8</small>		
<b>CIRCUITING</b> <small>pg. 9</small>	<b>1</b> Single	<b>M</b> Multi	<b>E</b> Emergency <small>entire fixture</small>	<b>N</b> Night Light <small>entire fixture</small>		<small>Details on pg. 9</small>		
<b>BATTERY &amp; EMERGENCY</b> <small>pg. 10</small>	<b>0</b> None	<b>_B</b> # of Bodine 10W	<b>_J</b> # of Iota 10W		<small>More Options on pg. 10</small>			
<b>FINISH</b> <small>pg. 11</small>	<b>W</b> Matte White	<b>S</b> Metallic Silver	<b>BL</b> Textured Black	<b>BR</b> Bronze	<b>GR</b> Graphite	<b>CC</b> Custom Color	<small>Details on pg. 11</small>	
<b>FIXTURE OPTIONS</b> <small>pg. 11</small>	<b>CP</b> Chicago Plenum	<b>EF</b> End Filler		<small>More Options on pg. 11</small>				
<b>CONTROLS</b> <small>pg. 12</small>	Consult Factory						<small>More Options on pg. 12</small>	

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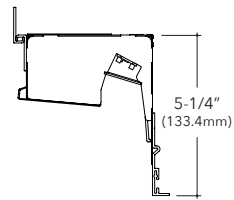
## Housing

- Extruded aluminum module with micro reflector for perfect wall wash illumination
- Clear lens and baffle are optional accessories. Specify in the Options section
- Wiring access available on bottom of housing

Ordering Code

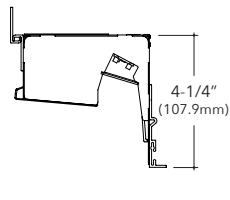
**EVL**

Outline



**EVLS**

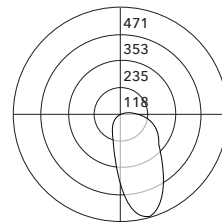
Outline Shallow



### Photometrics

#### Outline

Test # ITL84678  
 Catalog # EVL-840-4  
 Lumens 856 lm  
 Watts 12.5 W  
 Efficacy 68 LPW



#### Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	442	442	442	442	442
5	463	458	439	425	416
10	465	466	435	393	342
15	446	458	428	318	210
20	416	438	416	219	88
25	377	411	401	120	44
30	329	377	383	62	10
35	283	337	360	35	3
40	242	293	336	8	2
45	206	251	308	5	1
50	179	210	278	4	0
55	157	174	245	3	0
60	144	145	210	2	0
65	131	122	174	2	0
70	120	108	136	1	0
75	110	93	98	1	0
80	98	80	61	1	0
85	88	68	26	1	0
90	77	55	3	1	0
95	65	43	0	1	0
100	47	26	0	1	0
105	30	16	0	0	0
110	21	9	0	0	0
115	13	3	0	0	0
120	7	1	0	0	0
125	1	1	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

#### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1632	2444	7390
55	1180	1648	7027
65	968	1157	6441
75	818	915	5341
85	686	709	2775

HOUSING



Submitted by Glidner Maddox, LLC

**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-5-G1-U-OL-1-1-0-W-EF

Notes:

**Type:** E5

GMLLC17-5696

For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com). Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions.

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## Color Temperature & Output

- 25° C test environment. Lumen output has a margin of +/- 5%
- All luminaire configurations tested in accordance with IES LM-79
- Diodes tested in accordance with IES LM-80
- Minimum lifetime greater than 60,000 hours
- Lifetime Projections; L70 = 136,200 hours and L90 = 41,100 hours
- Specify either 80 or 90 CRI
- LED binned within McAdams 3-Step Ellipse
- 80 CRI = R9≥19 and 90 CRI = R9≥61

### Custom Output- Lumens OR Wattage

Ordering Code

**CL** - - - - - Specify CRI, CCT and desired lumens (i.e. CL835400) | Specify lumens between standard offering listed below. Lumens are specified per color temp

**CW** - - - - - Specify CRI, CCT and desired wattage (i.e. CW9405) | Specify watts between standard offering listed below

### 80 CRI

	Color	Output	Watts	Shielding	
				L	LPW
				Outline Lumens	
<b>830</b>	3000K	Standard	3.1	200	64.0
<b>830HO</b>	3000K	High	6.0	381	63.5
<b>830VHO</b>	3000K	Very High	8.1	492	60.9
<b>835</b>	3500K	Standard	3.1	209	66.9
<b>835HO</b>	3500K	High	6.0	398	66.3
<b>835VHO</b>	3500K	Very High	8.1	514	63.7
<b>840</b>	4000K	Standard	3.1	214	68.5
<b>840HO</b>	4000K	High	6.0	409	68.2
<b>840VHO</b>	4000K	Very High	8.1	527	65.3

### 90 CRI

<b>927</b>	2700K	Standard	3.1	164	52.5
<b>927HO</b>	2700K	High	6.0	313	52.2
<b>927VHO</b>	2700K	Very High	8.1	404	50.0
<b>930</b>	3000K	Standard	3.1	185	59.2
<b>930HO</b>	3000K	High	6.0	351	58.5
<b>930VHO</b>	3000K	Very High	8.1	454	56.2
<b>935</b>	3500K	Standard	3.1	188	60.2
<b>935HO</b>	3500K	High	6.0	358	59.7
<b>935VHO</b>	3500K	Very High	8.1	463	57.3
<b>940</b>	4000K	Standard	3.1	191	61.1
<b>940HO</b>	4000K	High	6.0	365	60.8
<b>940VHO</b>	4000K	Very High	8.1	471	58.3

CRI, CCT & OUTPUT



See Lighting Facts Spec Sheet for tables  
Not all products are Lighting Facts listed

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Submitted by Gildner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-5-G1-U-OL 1-1-0-W-EF  
 Notes:

**Type:** E5  
 GMLLC17-5696



## Length

- All individual units cannot be joined, end trims are factory installed and cannot be removed
- Refer to Pattern section for specification and ordering options
- Continuous Rows are made up of even and odd length fixtures; designed to fall on-grid
- Choose fixture length for Individual or Continuous Row length; for patterns refer to Pattern section on page 6
- For joining detail see installation instructions

### Ordering Code

2	3	4	5	6	8	-
Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Continuous Run Specify nominal overall row length to the 1'. (Example: 16' run is comprised of 96"+95" units.)
2' or 23" (584.2mm)	3' or 35" (889mm)	4' or 47" (1193.8mm)	5' or 59" (1498.6mm)	6' or 71" (1803.4mm)	8' or 95" (2413mm)	
						Specify to the 1' >>>

LENGTH OR PATTERN

Submitted by: Glidner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-5-G1-U-OL1-1-0-W-EF  
 Notes:

**Type:** E5  
 GMLLC17-5696

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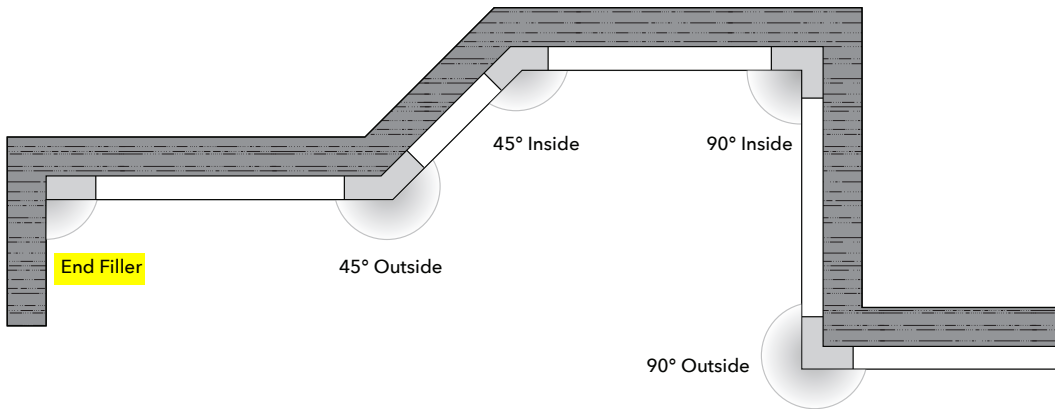


## Pattern

- Outline is a complete perimeter lighting solution that includes inside corners, outside corners, and end fillers
- 45 degree and 90 degree corners allow for +/- 5 degrees of adjustability to accommodate wall imperfections
- Specify runs to the nearest foot. Corners are slid into place to finish the perimeter lighting. Outside corners are non-illuminated
- Minimum distance for corners is 5-1/2" from the wall, with a max of 12" away from the wall
- **End Fillers have a maximum recommended length of 6"**
- See installation instructions for detailed information
- Inside and Outside corners are adjustable. Detailed length information will be on Factory Drawings

SI_	SO_	RI_x_	RO_x_	UI_x_x_	UO_x_x_	LI_x_	LO_x_	M
Square, Inside (SI) or Outside (SO) Provide overall length dimension for each fixture leg		Rectangle, Inside (RI) or Outside (RO) Provide overall length dimension for each fixture leg		U-Shape, Inside (UI) or Outside (UO) Provide overall length dimension for each fixture leg		L-Shape, Inside (LI) or Outside (LO) Provide overall length dimension for each fixture leg		Mod Layout For patterns or lengths not shown or standard

LENGTH OR PATTERN



All fixture lengths within a pattern will be rounded to the nearest foot. End fillers and Corners (both field adjustable) will be used to complete the pattern. Factory Drawings will reflect all fixture, corner, and end filler locations and will need to be approved before an order is entered.

**Catalog Number:**  
EVL-835-5-G1-U-OL-1-1-0-W-EF

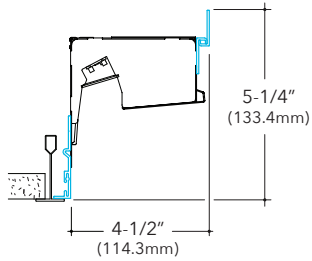
**Type:**  
E5

GMLLC17-5696

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## Mounting



- Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid)
- Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid)
- Outline must be installed prior to ceiling installation. Consult factory for detailed installation instructions
- Individual units shipped with end plates uninstalled
- Designed to install into acoustical grid and inaccessible ceilings
- Tie off fixture to structure with retention wires
- NF and NFN to be utilized for metal pan or millwork ceiling
- Approved for dry/damp location unless otherwise noted

### Ordering Code

G1G Individual Unit	G9G	GBG	GSG	FLF	NFN	SFS
G1 Continuous Run or Pattern	G9	GB	GS	FL	NF	SF
1" (15/16") T-Bar	9/16" T-Bar <i>For tegular tile installations, fixture position will not be flush to the bottom of the tile</i>	9/16" T-Bar <i>Rail has bevel edge details. For tegular tile installations, fixture position will be flush to the bottom of the tile</i>	Bolt Slot & 9/16" T-Bar <i>For 9/16" installations with tegular tile, fixture position will be flush to the bottom of the tile</i>	Exposed Standard 1/2" Flange Detail	Metal Pan or Millwork	Drywall, Flangeless Detail

## MOUNTING

Submitted by Glidner Maddox, LLC

**GLIDNER MADDOX**  
LIGHTING + ELECTRICAL

**Job Name:**  
University of Arkansas - Global Campus 4th and 5th  
Floor Renovation  
Architect: Harrison French & Associates, LTD  
(Bentonville)

**Catalog Number:**  
EVL-835-5-G1-U-OL 1-1-0-W-EF

Notes:

**Type:**  
E5

GMLLC17-5696

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## Voltage

- Some Outline configurations will not accommodate all voltage options; consult with factory

### Ordering Code

<b>U</b>	Universal	120 to 277 volt
<b>1</b>	120 volt	
<b>2</b>	277 volt	
<b>3</b>	347 volt	Must specify OL3 under driver section of part number

## Driver

- Standard Driver Option = OL1
- Electronic driver, power factor is >0.9 with a THD <20%
- Driver Lifetime: 50,000 hours at 25C ambient operating conditions
- Ambient operating range: -20F/-30C to 96F/35C
- For more Driver options, see Pinnacle Resource Guide
- Some Outline configurations will not accommodate all driver options; consult with factory

<b>OL1</b>	Osram 0-10v, 10%	Standard driver option
<b>OL3</b>	Osram 347 volt, 0-10v, 10%	Requires 347V option in the Voltage section of the part number
<b>LH1</b>	Lutron Hi-lume EcoSystem, 1% Soft on, Fade-to-Black	Lutron-LDE1
<b>LH3</b>	Lutron Hi-lume 1%, 3-wire	Lutron-L3DA3W
<b>L51</b>	Lutron 5-Series 5%, EcoSystem Digital	Lutron-LDE5
<b>EE1</b>	eldoLED ECOdrive 1%, 0-10v	Logarithmic Dimming
<b>ED1</b>	eldoLED DUALdrive 0%, DALI	Logarithmic Dimming
<b>ES1</b>	eldoLED SOLOdrive 0-10v, .1%	Logarithmic Dimming
<b>PS1</b>	Philips Advance Xitanium Step Dimming	50% / 100%
<b>PM1</b>	Philips Advance Mark 10 5%, Line	120v or 277v required

VOLTAGE

DRIVER

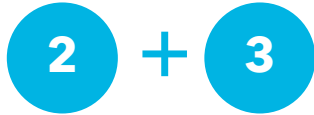
Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.







## Battery and/or Emergency



- Battery and emergency section options are available in addition to fixture circuit
- Select battery and emergency section options below; factory shop drawing required
- Some Outline configurations will not accommodate all circuiting options, consult with factory

### Ordering Code

**0** No battery or specific emergency section required

### Battery

- Select battery section type if required, indicate total QTY
- 90 minute battery runtime; test button is remote to fixture
- No battery option available for 2' lengths
- Entire fixture housing is on battery for lengths up to 5'

- Half of fixture is on battery for 6' or 8' housing lengths
- For more battery options available, see Pinnacle Resource Guide

0	No battery	
_B	Bodine 10w Integral	CEC Listed
_BS	Bodine 10w Integral	Self Testing, CEC Listed
_I	Iota 10w Integral	
_IC	Iota 10w Integral	CEC Listed
_IH	Iota 12w Integral	

### For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

### Emergency

- Select emergency section type if required, indicate total QTY
- Combine battery and emergency section ordering codes if both options are selected

_E	Emergency circuit section	Can be combined with circuit option <b>1</b> or <b>M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_N	Night Light circuit section	Can be combined with circuit option <b>1 M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_L	Life Safety circuit section NO THROUGH WIRE	Can be combined with circuit option <b>1 M</b> only
_G	Bodine GTD, Generator Transfer Device section	Can be combined with circuit option <b>1</b> only. 120v or 277v required

### Battery OR Emergency Ordering Examples

- Single circuit, 10w Integral Battery      Ordering Code: 1-1B
- Emergency only, 10w Integral Battery      Ordering Code: E-1B
- Single circuit, GTD required                  Ordering Code: 1-1G

### Combination Section Ordering Examples

- Single circuit, (1) 10w battery, (1) emergency section      Ordering Code: 1-1B1E
- Multi circuit, (2) 10w battery, (2) emergency sections      Ordering Code: M-2B2E
- Single circuit, (1) night light section                              Ordering Code: 1-1N

**BATTERY & EMERGENCY**

Submitted by Gildner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-5-G1-U-OL 1-1-0-W-EF  
 Notes:

**Type:** E5  
 GMLLC17-5696

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.





CONTROLS

## Fixture Options

- Some Outline configurations will not accommodate all control options; consult with factory

Submitted by Gildner Maddox, LLC

**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-5-G1-U-OL 1-1-0-W-EF  
**Notes:**

**Type:** E5  
GMLLC17-5696

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

## Approvals & Certifications

**Construction** Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing.

**Shielding** Extruded aluminum module with for perfect perimeter illumination.

**Mounting** Outline is designed to install into acoustical grid and inaccessible ceilings. Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid). Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid). Grid retention brackets are integral to housing. Consult factory for detailed installation instructions.

**LED** 25°C test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Minimum lifetime greater than 60,000 hours. Lifetime Projection L70 = 136,200 hours and L90 = 41,100 hours. MacAdam 3-Step Ellipses. Not all products are Lighting Facts listed. For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com).

**CRI, CCT & Lumen Output** Three lumen packages available. Standard, High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥61.

**Voltage** Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL3 in Driver section when 347 volt (3) is selected. Some Outline configurations will not accommodate all voltage options; consult with factory.

**Driver** Standard Driver Option is Osram 0-10V, 10% = OL1. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 96°F/35°C. For more driver options, see Pinnacle Resource Guide. Some Outling configurations will not accommodate all driver options.

**Circuiting** Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some Outline configurations will not accommodate all circuiting options; consult with factory.

**Battery & Emergency** Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is remote to fixture. For more Battery options, see Pinnacle Resource Guide.

**Finish** Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes or for additional custom color and finish options.

**Controls** Consult Factory.

**Labels** UL and cUL Listed. Standard, HO and VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

**Buy American Act Compliant**

**Warranty** Evolution LED offered with a 5-year limited warranty. Covers LED, driver and fixture.



Submitted by Gildner Maddox, LLC



**Job Name:**

University of Arkansas - Global Campus 4th and 5th  
Floor Renovation  
Architect: Harrison French & Associates, LTD  
(Bentonville)

**Catalog Number:**

EVL-835-5-G1-U-OL 1-1-0-W-EF

**Notes:**

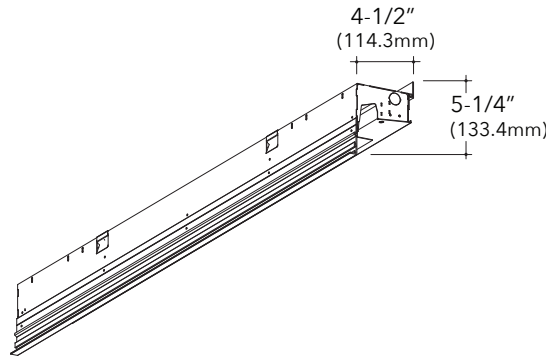
**Type:**

**E5**

GMILLC17-5696

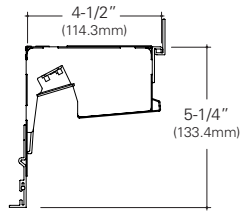
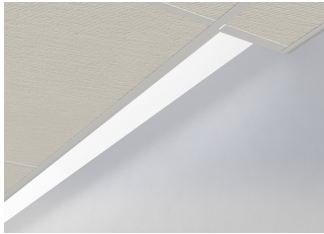


## RECESSED LINEAR PERIMETER OUTLINE SLOT SYSTEM



- Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing
- Extruded aluminum module for perfect perimeter illumination
- EVL LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL listed. IC rated
- Approved for dry/damp location unless otherwise noted
- Room-Side Maintenance for LED system
- Buy American Act compliant





Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

EVL\_ **835** - **7** ' - **G1** - **U** - **OL1** - **1** - **0** - **W** - **EF** - \_\_\_\_\_

Housing CRI,CCT & Output Length or Pattern Mounting Voltage Driver Circuiting Battery/EM Finish Fixture Options Controls

Example Part #: EVL-827-12-G9-U-OL1-1-0-W

<b>HOUSING</b> <small>pg. 3</small>	<b>EVL</b> Outline	<b>EVLS</b> Outline Shallow					<small>Details on pg. 3</small>
<b>CRI, CCT &amp; OUTPUT</b> <small>pg. 4</small>	<b>27</b> 2700K	<b>30</b> 3000K	<b>835</b>	<b>40</b> 4000K	<b>CL</b> Custom Lumens	<b>CW</b> Custom Watts	<small>Lumen Outputs, 80 &amp; 90 CRI pg. 4</small>
<b>LENGTH OR PATTERN</b> <small>pg. 5-6</small>	<b>7</b> Individual Fixture - 2', 3', 4', 5', 6', & 8'	<b>---</b> Continuous Row to 1/8"	<b>L_x</b> L Shape <small>Inside or Outside</small>	<b>R_x</b> Rectangle <small>Inside or Outside</small>	<b>S</b> Square <small>Inside or Outside</small>	<b>U_x</b> U-Shape <small>Inside or Outside</small>	<small>More Options on pg. 5-6</small>
<b>MOUNTING</b> <small>pg. 7</small>	<b>G1</b> 1" T-Bar	<b>G9</b> 9/16" T-Bar	<b>GS</b> Slotted T-Bar	<b>FL</b> Flanged	<b>SF</b> Spackle Flange	<b>NF</b> Flangeless	<small>Details on pg. 7</small>
<b>VOLTAGE</b> <small>pg. 8</small>	<b>U</b> Universal <small>(120 thru 277V)</small>	<b>3</b> 347V					<small>Details on pg. 8</small>
<b>DRIVER</b> <small>pg. 8</small>	<b>OL1</b> Osram Dimming <small>0-10V, 10%</small>	<b>L</b> Lutron Dimming	<b>E</b> eldoLED Dimming	<b>P</b> Philips Dimming		<small>Details on pg. 8</small>	
<b>CIRCUITING</b> <small>pg. 9</small>	<b>1</b> Single	<b>M</b> Multi	<b>E</b> Emergency <small>entire fixture</small>	<b>N</b> Night Light <small>entire fixture</small>		<small>Details on pg. 9</small>	
<b>BATTERY &amp; EMERGENCY</b> <small>pg. 10</small>	<b>0</b> None	<b>B</b> # of Bodine 10W	<b>J</b> # of Iota 10W		<small>More Options on pg. 10</small>		
<b>FINISH</b> <small>pg. 11</small>	<b>W</b> Matte White	<b>S</b> Metallic Silver	<b>BL</b> Textured Black	<b>BR</b> Bronze	<b>GR</b> Graphite	<b>CC</b> Custom Color	<small>Details on pg. 11</small>
<b>FIXTURE OPTIONS</b> <small>pg. 11</small>	<b>CP</b> Chicago Plenum	<b>EF</b> End Filler		<small>More Options on pg. 11</small>			
<b>CONTROLS</b> <small>pg. 12</small>	Consult Factory						<small>More Options on pg. 12</small>

Submitted by Glidner Maddox, LLC  
**Job Name:**  
 University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:**  
 EVL-835-7-G1-U-OL1-1-0-W-EF

**Type:**  
**E7**

GMLLC17-5696

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.





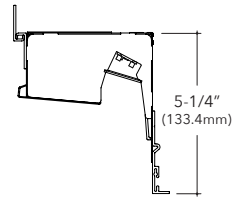
## Housing

- Extruded aluminum module with micro reflector for perfect wall wash illumination
- Clear lens and baffle are optional accessories. Specify in the Options section
- Wiring access available on bottom of housing

### Ordering Code

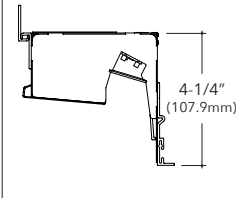
**EVL**

Outline



**EVLS**

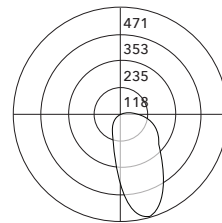
Outline Shallow



### Photometrics

#### Outline

Test # ITL84678  
 Catalog # EVL-840-4  
 Lumens 856 lm  
 Watts 12.5 W  
 Efficacy 68 LPW



#### Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	442	442	442	442	442
5	463	458	439	425	416
10	465	466	435	393	342
15	446	458	428	318	210
20	416	438	416	219	88
25	377	411	401	120	44
30	329	377	383	62	10
35	283	337	360	35	3
40	242	293	336	8	2
45	206	251	308	5	1
50	179	210	278	4	0
55	157	174	245	3	0
60	144	145	210	2	0
65	131	122	174	2	0
70	120	108	136	1	0
75	110	93	98	1	0
80	98	80	61	1	0
85	88	68	26	1	0
90	77	55	3	1	0
95	65	43	0	1	0
100	47	26	0	1	0
105	30	16	0	0	0
110	21	9	0	0	0
115	13	3	0	0	0
120	7	1	0	0	0
125	1	1	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

#### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1632	2444	7390
55	1180	1648	7027
65	968	1157	6441
75	818	915	5341
85	686	709	2775

HOUSING

Submitted by Glidner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-7-G1-U-OL-1-1-0-W-EF  
 Notes:

**Type:** E7  
 GMLLC17-5696

For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com). Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions.

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## Length

- All individual units cannot be joined, end trims are factory installed and cannot be removed
- Refer to Pattern section for specification and ordering options
- Continuous Rows are made up of even and odd length fixtures; designed to fall on-grid
- Choose fixture length for Individual or Continuous Row length; for patterns refer to Pattern section on page 6
- For joining detail see installation instructions

Ordering Code

2	3	4	5	6	8	- 7
Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Continuous Run Specify nominal overall row length to the 1'. (Example: 16' run is comprised of 96"+95" units.)
2' or 23" (584.2mm)	3' or 35" (889mm)	4' or 47" (1193.8mm)	5' or 59" (1498.6mm)	6' or 71" (1803.4mm)	8' or 95" (2413mm)	
						Specify to the 1' >>>

LENGTH OR PATTERN

Submitted by Glidner Maddox, LLC

**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-7-G1-U-OL1-1-0-W-EF

Notes:

**Type:** E7

GMLLC17-5696

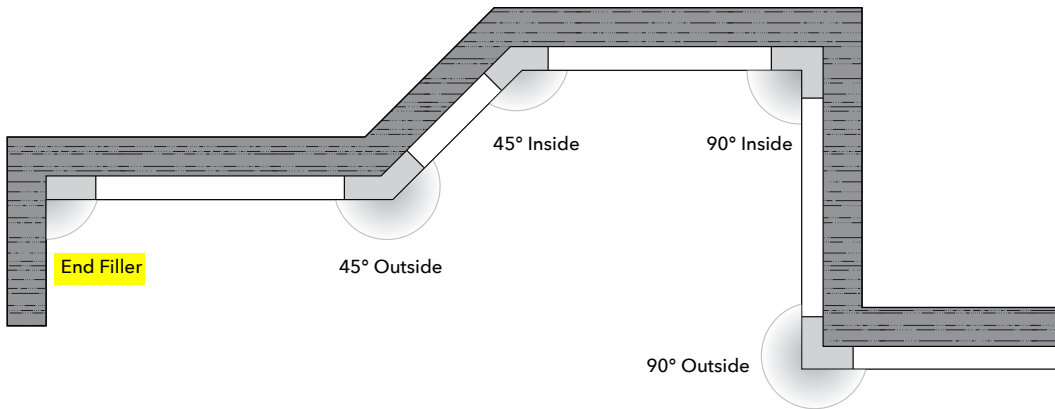
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## Pattern

- Outline is a complete perimeter lighting solution that includes inside corners, outside corners, and end fillers
- 45 degree and 90 degree corners allow for +/- 5 degrees of adjustability to accommodate wall imperfections
- Specify runs to the nearest foot. Corners are slid into place to finish the perimeter lighting. Outside corners are non-illuminated
- Minimum distance for corners is 5-1/2" from the wall, with a max of 12" away from the wall
- **End Fillers have a maximum recommended length of 6"**
- See installation instructions for detailed information
- Inside and Outside corners are adjustable. Detailed length information will be on Factory Drawings

SI_	SO_	RI_x_	RO_x_	UI_x_x_	UO_x_x_	LI_x_	LO_x_	M
Square, Inside (SI) or Outside (SO) Provide overall length dimension for each fixture leg		Rectangle, Inside (RI) or Outside (RO) Provide overall length dimension for each fixture leg		U-Shape, Inside (UI) or Outside (UO) Provide overall length dimension for each fixture leg		L-Shape, Inside (LI) or Outside (LO) Provide overall length dimension for each fixture leg		Mod Layout For patterns or lengths not shown or standard



All fixture lengths within a pattern will be rounded to the nearest foot. End fillers and Corners (both field adjustable) will be used to complete the pattern. Factory Drawings will reflect all fixture, corner, and end filler locations and will need to be approved before an order is entered.

LENGTH OR PATTERN

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**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

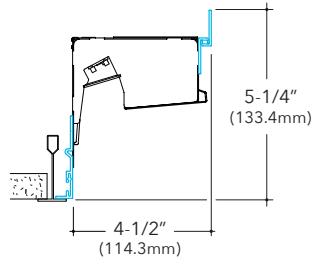
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 Notes:

**Type:** E7  
 GMLLC17-5696

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## Mounting



- Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid)
- Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid)
- Outline must be installed prior to ceiling installation. Consult factory for detailed installation instructions
- Individual units shipped with end plates uninstalled
- Designed to install into acoustical grid and inaccessible ceilings
- Tie off fixture to structure with retention wires
- NF and NFN to be utilized for metal pan or millwork ceiling
- Approved for dry/damp location unless otherwise noted

### Ordering Code

G1G Individual Unit	G9G	GBG	GSG	FLF	NFN	SFS
<b>G1</b> Continuous Run or Pattern	<b>G9</b>	<b>GB</b>	<b>GS</b>	<b>FL</b>	<b>NF</b>	<b>SF</b>
1" (15/16") T-Bar	9/16" T-Bar <i>For tegular tile installations, fixture position will not be flush to the bottom of the tile</i>	9/16" T-Bar <i>Rail has bevel edge details. For tegular tile installations, fixture position will be flush to the bottom of the tile</i>	Bolt Slot & 9/16" T-Bar <i>For 9/16" installations with tegular tile, fixture position will be flush to the bottom of the tile</i>	Exposed Standard 1/2" Flange Detail	Metal Pan or Millwork	Drywall, Flangeless Detail

## MOUNTING

Submitted by Glidner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-7-G1-U-OL 1-1-0-W-EF  
 Notes:

**Type:** E7  
 GMLLC17-5696

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## Voltage

- Some Outline configurations will not accommodate all voltage options; consult with factory

### Ordering Code

<b>U</b>	Universal	120 to 277 volt
<b>1</b>	120 volt	
<b>2</b>	277 volt	
<b>3</b>	347 volt	Must specify OL3 under driver section of part number

## Driver

- Standard Driver Option = OL1
- Electronic driver, power factor is >0.9 with a THD <20%
- Driver Lifetime: 50,000 hours at 25C ambient operating conditions
- Ambient operating range: -20F/-30C to 96F/35C
- For more Driver options, see Pinnacle Resource Guide
- Some Outline configurations will not accommodate all driver options; consult with factory

<b>OL1</b>	Osram 0-10v, 10%	Standard driver option
<b>OL3</b>	Osram 347 volt, 0-10v, 10%	Requires 347V option in the Voltage section of the part number
<b>LH1</b>	Lutron Hi-lume EcoSystem, 1% Soft on, Fade-to-Black	Lutron-LDE1
<b>LH3</b>	Lutron Hi-lume 1%, 3-wire	Lutron-L3DA3W
<b>L51</b>	Lutron 5-Series 5%, EcoSystem Digital	Lutron-LDE5
<b>EE1</b>	eldoLED ECOdrive 1%, 0-10v	Logarithmic Dimming
<b>ED1</b>	eldoLED DUALdrive 0%, DALI	Logarithmic Dimming
<b>ES1</b>	eldoLED SOLOdrive 0-10v, .1%	Logarithmic Dimming
<b>PS1</b>	Philips Advance Xitanium Step Dimming	50% / 100%
<b>PM1</b>	Philips Advance Mark 10 5%, Line	120v or 277v required

VOLTAGE

DRIVER

**Catalog Number:**  
EVL-835-7-G1-U-OL1-1-0-W-EF

Notes:

Type:

**E7**

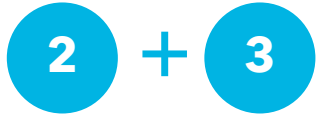
GMLLC17-5696

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## Battery and/or Emergency



- Battery and emergency section options are available in addition to fixture circuit
- Select battery and emergency section options below; factory shop drawing required
- Some Outline configurations will not accommodate all circuiting options, consult with factory

### Ordering Code

**0** No battery or specific emergency section required

### Battery

- Select battery section type if required, indicate total QTY
- 90 minute battery runtime; test button is remote to fixture
- No battery option available for 2' lengths
- Entire fixture housing is on battery for lengths up to 5'

- Half of fixture is on battery for 6' or 8' housing lengths
- For more battery options available, see Pinnacle Resource Guide

0	No battery	
_B	Bodine 10w Integral	CEC Listed
_BS	Bodine 10w Integral	Self Testing, CEC Listed
_I	Iota 10w Integral	
_IC	Iota 10w Integral	CEC Listed
_IH	Iota 12w Integral	

### For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

### Emergency

- Select emergency section type if required, indicate total QTY
- Combine battery and emergency section ordering codes if both options are selected

_E	Emergency circuit section	Can be combined with circuit option <b>1</b> or <b>M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_N	Night Light circuit section	Can be combined with circuit option <b>1 M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_L	Life Safety circuit section NO THROUGH WIRE	Can be combined with circuit option <b>1 M</b> only
_G	Bodine GTD, Generator Transfer Device section	Can be combined with circuit option <b>1</b> only. 120v or 277v required

### Battery OR Emergency Ordering Examples

- Single circuit, 10w Integral Battery      Ordering Code: 1-1B
- Emergency only, 10w Integral Battery      Ordering Code: E-1B
- Single circuit, GTD required                  Ordering Code: 1-1G

### Combination Section Ordering Examples

- Single circuit, (1) 10w battery, (1) emergency section      Ordering Code: 1-1B1E
- Multi circuit, (2) 10w battery, (2) emergency sections      Ordering Code: M-2B2E
- Single circuit, (1) night light section                              Ordering Code: 1-1N

**BATTERY & EMERGENCY**

Submitted by Gildner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-7-G1-U-OL 1-1-0-W-EF  
 Notes:

**Type:** E7  
 GMLLC17-5696

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.







## Fixture Options

- Some Outline configurations will not accommodate all control options; consult with factory

CONTROLS

Submitted by Gildner Maddox, LLC	
<b>Job Name:</b> University of Arkansas - Global Campus 4th and 5th Floor Renovation Architect: Harrison French & Associates, LTD (Bentonville)	<b>Catalog Number:</b> EVL-835-7-G1-U-OL 1-1-0-W-EF <b>Notes:</b>
<b>Type:</b> E7	GMLLC17-5696

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.



## Approvals & Certifications

**Construction** Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing.

**Shielding** Extruded aluminum module with for perfect perimeter illumination.

**Mounting** Outline is designed to install into acoustical grid and inaccessible ceilings. Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid). Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid). Grid retention brackets are integral to housing. Consult factory for detailed installation instructions.

**LED** 25°C test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Minimum lifetime greater than 60,000 hours. Lifetime Projection L70 = 136,200 hours and L90 = 41,100 hours. MacAdam 3-Step Ellipses. Not all products are Lighting Facts listed. For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com).

**CRI, CCT & Lumen Output** Three lumen packages available. Standard, High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥61.

**Voltage** Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL3 in Driver section when 347 volt (3) is selected. Some Outline configurations will not accommodate all voltage options; consult with factory.

**Driver** Standard Driver Option is Osram 0-10V, 10% = OL1. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 96°F/35°C. For more driver options, see Pinnacle Resource Guide. Some Outling configurations will not accommodate all driver options.

**Circuiting** Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some Outline configurations will not accommodate all circuiting options; consult with factory.

**Battery & Emergency** Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is remote to fixture. For more Battery options, see Pinnacle Resource Guide.

**Finish** Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes or for additional custom color and finish options.

**Controls** Consult Factory.

**Labels** UL and cUL Listed. Standard, HO and VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

**Buy American Act Compliant**

**Warranty** Evolution LED offered with a 5-year limited warranty. Covers LED, driver and fixture.

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Submitted by Gildner Maddox, LLC



**Job Name:**

University of Arkansas - Global Campus 4th and 5th  
Floor Renovation  
Architect: Harrison French & Associates, LTD  
(Bentonville)

**Catalog Number:**

EVL-835-7-G1-U-OL 1-1-0-W-EF

**Notes:**

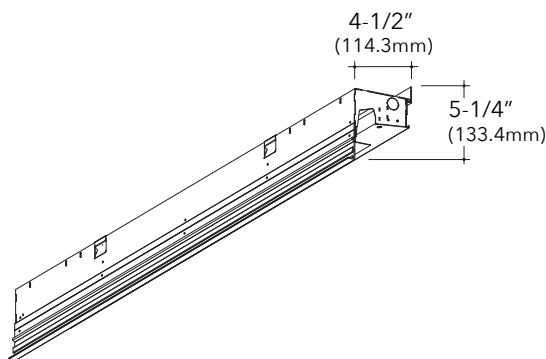
**Type:**

**E7**

GMILLC17-5696



## RECESSED LINEAR PERIMETER OUTLINE SLOT SYSTEM



- Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing
- Extruded aluminum module for perfect perimeter illumination
- EVL LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL listed. IC rated
- Approved for dry/damp location unless otherwise noted
- Room-Side Maintenance for LED system
- Buy American Act compliant



Submitted by Gilmer Maddox, LLC

**GILMER MADDOX**  
LIGHTING + ELECTRICAL

**Job Name:**  
University of Arkansas - Global Campus 4th and 5th  
Floor Renovation  
Architect: Harrison French & Associates, LTD  
(Bentonville)

**Catalog Number:**  
EVL-835-9-G1-U-OL 1-1-0-W-EF

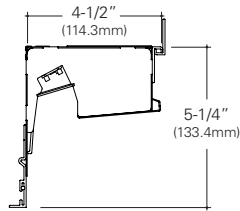
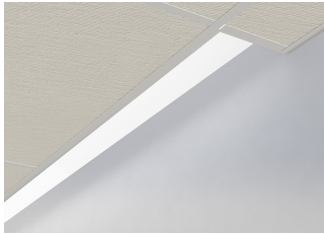
Notes:

**Type:**  
**E9**

GMLLC17-5696

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# Evolution Outline Linear Perimeter Slot Luminaire



Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

EVL\_ **835** - **9** ' - **G1** - **U** - **OL1** - **1** - **0** - **W** - **EF** - \_\_\_\_\_

Housing CRI,CCT & Output Length or Pattern Mounting Voltage Driver Circuiting Battery/EM Finish Fixture Options Controls

Example Part #: EVL-827-12-G9-U-OL1-1-0-W

<b>HOUSING</b> <small>pg. 3</small>	<b>EVL</b> Outline	<b>EVLS</b> Outline Shallow					<small>Details on pg. 3</small>
<b>CRI, CCT &amp; OUTPUT</b> <small>pg. 4</small>	<b>27</b> 2700K	<b>30</b> 3000K	<b>835</b>	<b>40</b> 4000K	<b>CL</b> Custom Lumens	<b>CW</b> Custom Watts	<small>Lumen Outputs, 80 &amp; 90 CRI pg. 4</small>
<b>LENGTH OR PATTERN</b> <small>pg. 5-6</small>	<b>9</b> Individual Fixture - 2', 3', 4', 5', 6', & 8'	<b>---</b> Continuous Row to 1/8"	<b>L_x</b> L Shape <small>Inside or Outside</small>	<b>R_x</b> Rectangle <small>Inside or Outside</small>	<b>S</b> Square <small>Inside or Outside</small>	<b>U_x</b> U-Shape <small>Inside or Outside</small>	<small>More Options on pg. 5-6</small>
<b>MOUNTING</b> <small>pg. 7</small>	<b>G1</b> 1" T-Bar	<b>G9</b> 9/16" T-Bar	<b>GS</b> Slotted T-Bar	<b>FL</b> Flanged	<b>SF</b> Spackle Flange	<b>NF</b> Flangeless	<small>Details on pg. 7</small>
<b>VOLTAGE</b> <small>pg. 8</small>	<b>U</b> Universal <small>(120 thru 277V)</small>	<b>3</b> 347V					<small>Details on pg. 8</small>
<b>DRIVER</b> <small>pg. 8</small>	<b>OL1</b> Osram Dimming <small>0-10V, 10%</small>	<b>L</b> Lutron Dimming	<b>E</b> eldoLED Dimming	<b>P</b> Philips Dimming		<small>Details on pg. 8</small>	
<b>CIRCUITING</b> <small>pg. 9</small>	<b>1</b> Single	<b>M</b> Multi	<b>E</b> Emergency <small>entire fixture</small>	<b>N</b> Night Light <small>entire fixture</small>		<small>Details on pg. 9</small>	
<b>BATTERY &amp; EMERGENCY</b> <small>pg. 10</small>	<b>0</b> None	<b>B</b> # of Bodine 10W	<b>J</b> # of Iota 10W		<small>More Options on pg. 10</small>		
<b>FINISH</b> <small>pg. 11</small>	<b>W</b> Matte White	<b>S</b> Metallic Silver	<b>BL</b> Textured Black	<b>BR</b> Bronze	<b>GR</b> Graphite	<b>CC</b> Custom Color	<small>Details on pg. 11</small>
<b>FIXTURE OPTIONS</b> <small>pg. 11</small>	<b>CP</b> Chicago Plenum	<b>EF</b> End Filler					<small>More Options on pg. 11</small>
<b>CONTROLS</b> <small>pg. 12</small>	Consult Factory						<small>More Options on pg. 12</small>

Submitted by Glidner Maddox, LLC  
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 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-9-G1-U-OL1-1-0-W-EF  
 Notes:

**Type:** E9  
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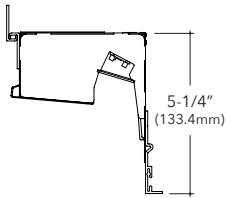
## Housing

- Extruded aluminum module with micro reflector for perfect wall wash illumination
- Clear lens and baffle are optional accessories. Specify in the Options section
- Wiring access available on bottom of housing

### Ordering Code

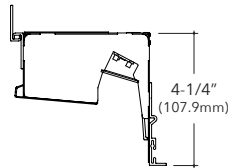
**EVL**

Outline



**EVLS**

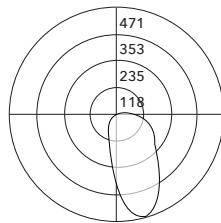
Outline Shallow



### Photometrics

#### Outline

Test # ITL84678  
 Catalog # EVL-840-4  
 Lumens 856 lm  
 Watts 12.5 W  
 Efficacy 68 LPW



#### Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	442	442	442	442	442
5	463	458	439	425	416
10	465	466	435	393	342
15	446	458	428	318	210
20	416	438	416	219	88
25	377	411	401	120	44
30	329	377	383	62	10
35	283	337	360	35	3
40	242	293	336	8	2
45	206	251	308	5	1
50	179	210	278	4	0
55	157	174	245	3	0
60	144	145	210	2	0
65	131	122	174	2	0
70	120	108	136	1	0
75	110	93	98	1	0
80	98	80	61	1	0
85	88	68	26	1	0
90	77	55	3	1	0
95	65	43	0	1	0
100	47	26	0	1	0
105	30	16	0	0	0
110	21	9	0	0	0
115	13	3	0	0	0
120	7	1	0	0	0
125	1	1	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

#### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1632	2444	7390
55	1180	1648	7027
65	968	1157	6441
75	818	915	5341
85	686	709	2775

HOUSING

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**Catalog Number:** EVL-835-9-G1-U-OL-1-1-0-W-EF  
 Notes:

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 GMLLC17-5696

For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com). Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions.

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## Length

- All individual units cannot be joined, end trims are factory installed and cannot be removed
- Refer to Pattern section for specification and ordering options
- Continuous Rows are made up of even and odd length fixtures; designed to fall on-grid
- Choose fixture length for Individual or Continuous Row length; for patterns refer to Pattern section on page 6
- For joining detail see installation instructions

Ordering Code

2	3	4	5	6	8	9
Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Individual Fixture	Continuous Run Specify nominal overall row length to the 1'. (Example: 16' run is comprised of 96"+95" units.)
2' or 23" (584.2mm)	3' or 35" (889mm)	4' or 47" (1193.8mm)	5' or 59" (1498.6mm)	6' or 71" (1803.4mm)	8' or 95" (2413mm)	
						Specify to the 1' >>>

LENGTH OR PATTERN

Submitted by: Glidner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-9-G1-U-OL1-1-0-W-EF  
**Notes:**

**Type:** E9  
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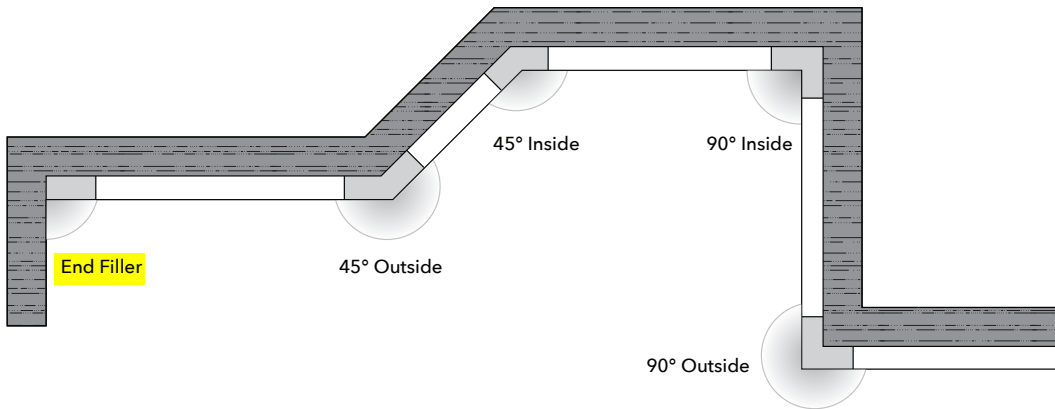
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## Pattern

- Outline is a complete perimeter lighting solution that includes inside corners, outside corners, and end fillers
- 45 degree and 90 degree corners allow for +/- 5 degrees of adjustability to accommodate wall imperfections
- Specify runs to the nearest foot. Corners are slid into place to finish the perimeter lighting. Outside corners are non-illuminated
- Minimum distance for corners is 5-1/2" from the wall, with a max of 12" away from the wall
- **End Fillers have a maximum recommended length of 6"**
- See installation instructions for detailed information
- Inside and Outside corners are adjustable. Detailed length information will be on Factory Drawings

SI_	SO_	RI_x_	RO_x_	UI_x_x_	UO_x_x_	LI_x_	LO_x_	M
Square, Inside (SI) or Outside (SO) Provide overall length dimension for each fixture leg		Rectangle, Inside (RI) or Outside (RO) Provide overall length dimension for each fixture leg		U-Shape, Inside (UI) or Outside (UO) Provide overall length dimension for each fixture leg		L-Shape, Inside (LI) or Outside (LO) Provide overall length dimension for each fixture leg		Mod Layout For patterns or lengths not shown or standard



All fixture lengths within a pattern will be rounded to the nearest foot. End fillers and Corners (both field adjustable) will be used to complete the pattern. Factory Drawings will reflect all fixture, corner, and end filler locations and will need to be approved before an order is entered.

LENGTH OR PATTERN

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**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

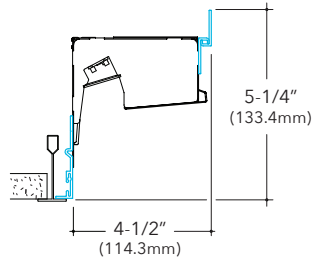
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## Mounting



- Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid)
- Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid)
- Outline must be installed prior to ceiling installation. Consult factory for detailed installation instructions
- Individual units shipped with end plates uninstalled
- Designed to install into acoustical grid and inaccessible ceilings
- Tie off fixture to structure with retention wires
- NF and NFN to be utilized for metal pan or millwork ceiling
- Approved for dry/damp location unless otherwise noted

### Ordering Code

G1G Individual Unit	G9G	GBG	GSG	FLF	NFN	SFS
G1 Continuous Run or Pattern	G9	GB	GS	FL	NF	SF
1" (15/16") T-Bar	9/16" T-Bar <i>For tegular tile installations, fixture position will not be flush to the bottom of the tile</i>	9/16" T-Bar <i>Rail has bevel edge details. For tegular tile installations, fixture position will be flush to the bottom of the tile</i>	Bolt Slot & 9/16" T-Bar <i>For 9/16" installations with tegular tile, fixture position will be flush to the bottom of the tile</i>	Exposed Standard 1/2" Flange Detail	Metal Pan or Millwork	Drywall, Flangeless Detail

## MOUNTING

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## Voltage

- Some Outline configurations will not accommodate all voltage options; consult with factory

### Ordering Code

<b>U</b>	Universal	120 to 277 volt
<b>1</b>	120 volt	
<b>2</b>	277 volt	
<b>3</b>	347 volt	Must specify OL3 under driver section of part number

## Driver

- Standard Driver Option = OL1
- Electronic driver, power factor is >0.9 with a THD <20%
- Driver Lifetime: 50,000 hours at 25C ambient operating conditions
- Ambient operating range: -20F/-30C to 96F/35C
- For more Driver options, see Pinnacle Resource Guide
- Some Outline configurations will not accommodate all driver options; consult with factory

<b>OL1</b>	Osram 0-10v, 10%	Standard driver option
<b>OL3</b>	Osram 347 volt, 0-10v, 10%	Requires 347V option in the Voltage section of the part number
<b>LH1</b>	Lutron Hi-lume EcoSystem, 1% Soft on, Fade-to-Black	Lutron-LDE1
<b>LH3</b>	Lutron Hi-lume 1%, 3-wire	Lutron-L3DA3W
<b>L51</b>	Lutron 5-Series 5%, EcoSystem Digital	Lutron-LDE5
<b>EE1</b>	eldoLED ECOdrive 1%, 0-10v	Logarithmic Dimming
<b>ED1</b>	eldoLED DUALdrive 0%, DALI	Logarithmic Dimming
<b>ES1</b>	eldoLED SOLOdrive 0-10v, .1%	Logarithmic Dimming
<b>PS1</b>	Philips Advance Xitanium Step Dimming	50% / 100%
<b>PM1</b>	Philips Advance Mark 10 5%, Line	120v or 277v required

VOLTAGE

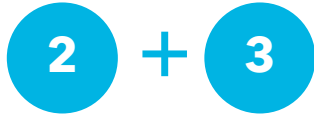
DRIVER

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## Battery and/or Emergency



- Battery and emergency section options are available in addition to fixture circuit
- Select battery and emergency section options below; factory shop drawing required
- Some Outline configurations will not accommodate all circuiting options, consult with factory

### Ordering Code

**0** No battery or specific emergency section required

### Battery

- Select battery section type if required, indicate total QTY
- 90 minute battery runtime; test button is remote to fixture
- No battery option available for 2' lengths
- Entire fixture housing is on battery for lengths up to 5'

- Half of fixture is on battery for 6' or 8' housing lengths
- For more battery options available, see Pinnacle Resource Guide

0	No battery	
_B	Bodine 10w Integral	CEC Listed
_BS	Bodine 10w Integral	Self Testing, CEC Listed
_I	Iota 10w Integral	
_IC	Iota 10w Integral	CEC Listed
_IH	Iota 12w Integral	

### For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

### Emergency

- Select emergency section type if required, indicate total QTY
- Combine battery and emergency section ordering codes if both options are selected

_E	Emergency circuit section	Can be combined with circuit option <b>1</b> or <b>M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_N	Night Light circuit section	Can be combined with circuit option <b>1 M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_L	Life Safety circuit section NO THROUGH WIRE	Can be combined with circuit option <b>1 M</b> only
_G	Bodine GTD, Generator Transfer Device section	Can be combined with circuit option <b>1</b> only. 120v or 277v required

### Battery OR Emergency Ordering Examples

- Single circuit, 10w Integral Battery      Ordering Code: 1-1B
- Emergency only, 10w Integral Battery      Ordering Code: E-1B
- Single circuit, GTD required                  Ordering Code: 1-1G

### Combination Section Ordering Examples

- Single circuit, (1) 10w battery, (1) emergency section      Ordering Code: 1-1B1E
- Multi circuit, (2) 10w battery, (2) emergency sections      Ordering Code: M-2B2E
- Single circuit, (1) night light section                              Ordering Code: 1-1N

**BATTERY & EMERGENCY**

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## Fixture Options

- Some Outline configurations will not accommodate all control options; consult with factory

CONTROLS

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## Approvals & Certifications

**Construction** Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing.

**Shielding** Extruded aluminum module with for perfect perimeter illumination.

**Mounting** Outline is designed to install into acoustical grid and inaccessible ceilings. Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid). Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid). Grid retention brackets are integral to housing. Consult factory for detailed installation instructions.

**LED** 25°C test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Minimum lifetime greater than 60,000 hours. Lifetime Projection L70 = 136,200 hours and L90 = 41,100 hours. MacAdam 3-Step Ellipses. Not all products are Lighting Facts listed. For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com).

**CRI, CCT & Lumen Output** Three lumen packages available. Standard, High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥61.

**Voltage** Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL3 in Driver section when 347 volt (3) is selected. Some Outline configurations will not accommodate all voltage options; consult with factory.

**Driver** Standard Driver Option is Osram 0-10V, 10% = OL1. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 96°F/35°C. For more driver options, see Pinnacle Resource Guide. Some Outling configurations will not accommodate all driver options.

**Circuiting** Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some Outline configurations will not accommodate all circuiting options; consult with factory.

**Battery & Emergency** Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is remote to fixture. For more Battery options, see Pinnacle Resource Guide.

**Finish** Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes or for additional custom color and finish options.

**Controls** Consult Factory.

**Labels** UL and cUL Listed. Standard, HO and VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

**Buy American Act Compliant**

**Warranty** Evolution LED offered with a 5-year limited warranty. Covers LED, driver and fixture.



Submitted by Gildner Maddox, LLC



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Architect: Harrison French & Associates, LTD  
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**Catalog Number:**

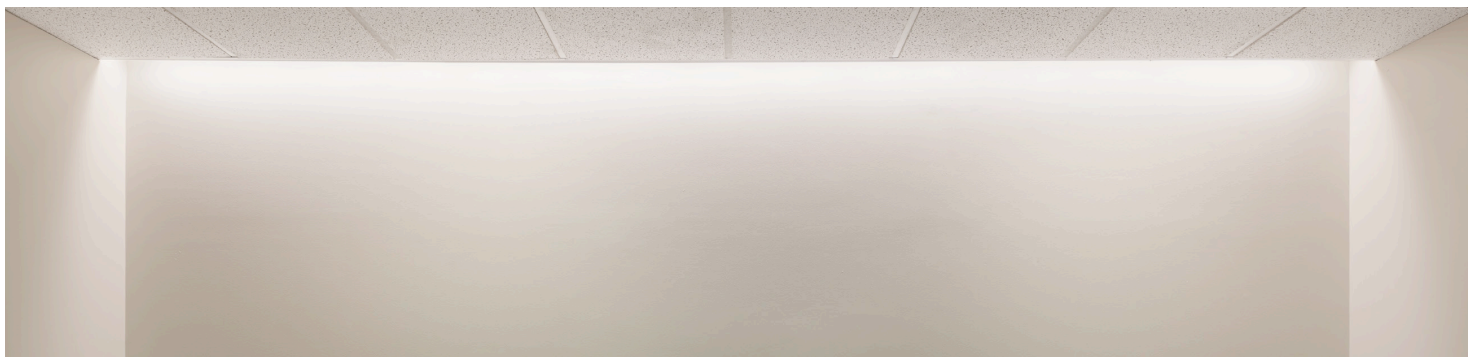
EVL-835-9-G1-U-OL 1-1-0-W-EF

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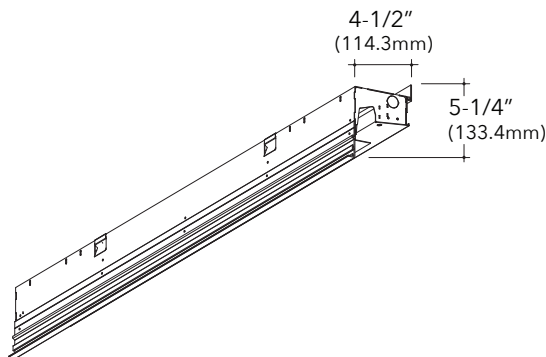
**Type:**

**E9**

GMILLC17-5696



## RECESSED LINEAR PERIMETER OUTLINE SLOT SYSTEM



- Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing
- Extruded aluminum module for perfect perimeter illumination
- EVL LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL listed. IC rated
- Approved for dry/damp location unless otherwise noted
- Room-Side Maintenance for LED system
- Buy American Act compliant



Submitted by Glidner Maddox, LLC

**GLIDNER MADDOX**  
LIGHTING + ELECTRICAL

**Job Name:**  
University of Arkansas - Global Campus 4th and 5th  
Floor Renovation  
Architect: Harrison French & Associates, LTD  
(Bentonville)

**Catalog Number:**  
EVL-835-10-G1-U-OL1-1-0-W-EF

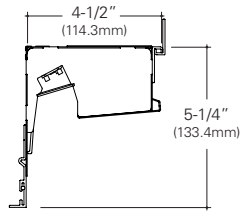
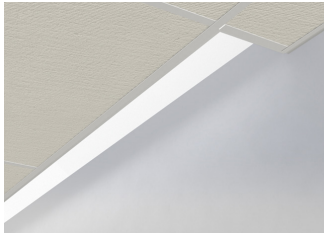
Notes:

**Type:**  
E10

GMLLC17-5696

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

# Evolution Outline Linear Perimeter Slot Luminaire



Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

EVL\_ **835** - **10** ' - **G1** - **U** - **OL1** - **1** - **0** - **W** - **EF** -

Housing CRI,CCT & Output Length or Pattern Mounting Voltage Driver Circuiting Battery/EM Finish Fixture Options Controls

Example Part #: EVL-827-12-G9-U-OL1-1-0-W

<b>HOUSING</b> pg. 3	<b>EVL</b> Outline	<b>EVLS</b> Outline Shallow					Details pg. 3
<b>CRI, CCT &amp; OUTPUT</b> pg. 4	<b>27</b> 2700K	<b>30</b> 3000K	<b>835</b>	<b>40</b> 4000K	<b>CL</b> Custom Lumens	<b>CW</b> Custom Watts	Lumen Outputs, 80 & 90 CRI pg. 4
<b>LENGTH OR PATTERN</b> pg. 5-6	<b>10</b> Individual Fixture - 2', 3', 4', 5', 6', & 8'	<b>---</b> Continuous Row to 1/8"	<b>L_x</b> L Shape Inside or Outside	<b>R_x</b> Rectangle Inside or Outside	<b>S</b> Square Inside or Outside	<b>U_x</b> U-Shape Inside or Outside	More Options on pg. 5-6
<b>MOUNTING</b> pg. 7	<b>G1</b> 1" T-Bar	<b>G9</b> 9/16" T-Bar	<b>GS</b> Slotted T-Bar	<b>FL</b> Flanged	<b>SF</b> Spackle Flange	<b>NF</b> Flangeless	Details on pg. 7
<b>VOLTAGE</b> pg. 8	<b>U</b> Universal (120 thru 277V)	<b>3</b> 347V					Details on pg. 8
<b>DRIVER</b> pg. 8	<b>OL1</b> Osram Dimming 0-10V, 10%	<b>L</b> Lutron Dimming	<b>E</b> eldoLED Dimming	<b>P</b> Philips Dimming		Details on pg. 8	
<b>CIRCUITING</b> pg. 9	<b>1</b> Single	<b>M</b> Multi	<b>E</b> Emergency entire fixture	<b>N</b> Night Light entire fixture		Details on pg. 9	
<b>BATTERY &amp; EMERGENCY</b> pg. 10	<b>0</b> None	<b>B</b> # of Bodine 10W	<b>J</b> # of Iota 10W		More Options on pg. 10		
<b>FINISH</b> pg. 11	<b>W</b> Matte White	<b>S</b> Metallic Silver	<b>BL</b> Textured Black	<b>BR</b> Bronze	<b>GR</b> Graphite	<b>CC</b> Custom Color	Details on pg. 11
<b>FIXTURE OPTIONS</b> pg. 11	<b>CP</b> Chicago Plenum	<b>EF</b> End Filler					More Options on pg. 11
<b>CONTROLS</b> pg. 12	Consult Factory						More Options on pg. 12

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**Catalog Number:**  
 EVL-835-10-G1-U-OL1-1-0-W-EF

**Type:**  
**E10**

GMLLC17-5696

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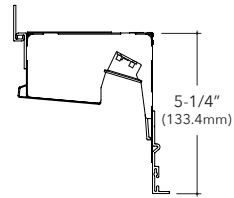
## Housing

- Extruded aluminum module with micro reflector for perfect wall wash illumination
- Clear lens and baffle are optional accessories. Specify in the Options section
- Wiring access available on bottom of housing

### Ordering Code

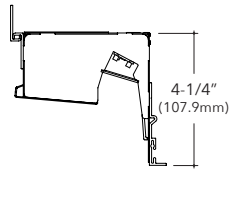
**EVL**

Outline



**EVLS**

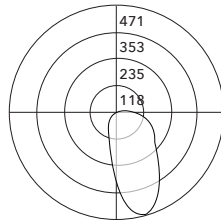
Outline Shallow



### Photometrics

#### Outline

Test # ITL84678  
 Catalog # EVL-840-4  
 Lumens 856 lm  
 Watts 12.5 W  
 Efficacy 68 LPW



#### Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	442	442	442	442	442
5	463	458	439	425	416
10	465	466	435	393	342
15	446	458	428	318	210
20	416	438	416	219	88
25	377	411	401	120	44
30	329	377	383	62	10
35	283	337	360	35	3
40	242	293	336	8	2
45	206	251	308	5	1
50	179	210	278	4	0
55	157	174	245	3	0
60	144	145	210	2	0
65	131	122	174	2	0
70	120	108	136	1	0
75	110	93	98	1	0
80	98	80	61	1	0
85	88	68	26	1	0
90	77	55	3	1	0
95	65	43	0	1	0
100	47	26	0	1	0
105	30	16	0	0	0
110	21	9	0	0	0
115	13	3	0	0	0
120	7	1	0	0	0
125	1	1	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

#### Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1632	2444	7390
55	1180	1648	7027
65	968	1157	6441
75	818	915	5341
85	686	709	2775

HOUSING

Submitted by Glidner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-10-G1-U-OL-1-1-0-W-EF  
 Notes:

**Type:** E10  
 GMLLC17-5696

For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com). Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions.

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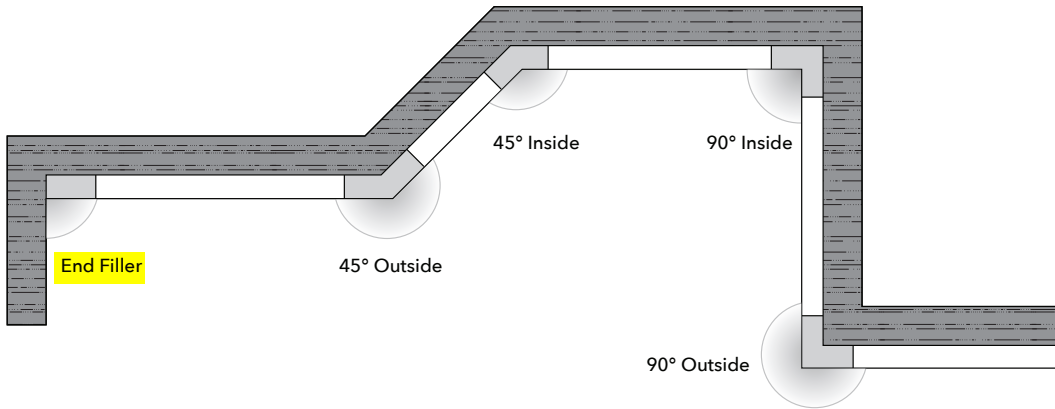


## Pattern

- Outline is a complete perimeter lighting solution that includes inside corners, outside corners, and end fillers
- 45 degree and 90 degree corners allow for +/- 5 degrees of adjustability to accommodate wall imperfections
- Specify runs to the nearest foot. Corners are slid into place to finish the perimeter lighting. Outside corners are non-illuminated
- Minimum distance for corners is 5-1/2" from the wall, with a max of 12" away from the wall
- **End Fillers have a maximum recommended length of 6"**
- See installation instructions for detailed information
- Inside and Outside corners are adjustable. Detailed length information will be on Factory Drawings

SI_	SO_	RI_x_	RO_x_	UI_x_x_	UO_x_x_	LI_x_	LO_x_	M
Square, Inside (SI) or Outside (SO) Provide overall length dimension for each fixture leg		Rectangle, Inside (RI) or Outside (RO) Provide overall length dimension for each fixture leg		U-Shape, Inside (UI) or Outside (UO) Provide overall length dimension for each fixture leg		L-Shape, Inside (LI) or Outside (LO) Provide overall length dimension for each fixture leg		Mod Layout For patterns or lengths not shown or standard

LENGTH OR PATTERN



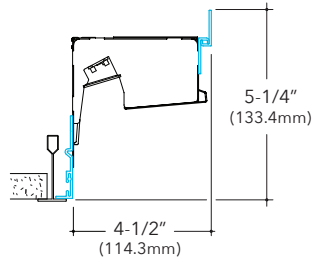
All fixture lengths within a pattern will be rounded to the nearest foot. End fillers and Corners (both field adjustable) will be used to complete the pattern. Factory Drawings will reflect all fixture, corner, and end filler locations and will need to be approved before an order is entered.

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## Mounting



- Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid)
- Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid)
- Outline must be installed prior to ceiling installation. Consult factory for detailed installation instructions
- Individual units shipped with end plates uninstalled
- Designed to install into acoustical grid and inaccessible ceilings
- Tie off fixture to structure with retention wires
- NF and NFN to be utilized for metal pan or millwork ceiling
- Approved for dry/damp location unless otherwise noted

### Ordering Code

G1G Individual Unit	G9G	GBG	GSG	FLF	NFN	SFS
<b>G1</b> Continuous Run or Pattern	<b>G9</b>	<b>GB</b>	<b>GS</b>	<b>FL</b>	<b>NF</b>	<b>SF</b>
1" (15/16") T-Bar	9/16" T-Bar <i>For tegular tile installations, fixture position will not be flush to the bottom of the tile</i>	9/16" T-Bar <i>Rail has bevel edge details. For tegular tile installations, fixture position will be flush to the bottom of the tile</i>	Bolt Slot & 9/16" T-Bar <i>For 9/16" installations with tegular tile, fixture position will be flush to the bottom of the tile</i>	Exposed Standard 1/2" Flange Detail	Metal Pan or Millwork	Drywall, Flangeless Detail

## MOUNTING

Submitted by Glidner Maddox, LLC

**GLIDNER MADDOX**  
LIGHTING + ELECTRICAL

**Job Name:**  
University of Arkansas - Global Campus 4th and 5th Floor Renovation  
Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:**  
EVL-835-10-G1-U-OL-1-1-0-W-EF

Notes:

**Type:**  
E10

GMLLC17-5696

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## Voltage

- Some Outline configurations will not accommodate all voltage options; consult with factory

### Ordering Code

<b>U</b>	Universal	120 to 277 volt
<b>1</b>	120 volt	
<b>2</b>	277 volt	
<b>3</b>	347 volt	Must specify OL3 under driver section of part number

## Driver

- Standard Driver Option = OL1
- Electronic driver, power factor is >0.9 with a THD <20%
- Driver Lifetime: 50,000 hours at 25C ambient operating conditions
- Ambient operating range: -20F/-30C to 96F/35C
- For more Driver options, see Pinnacle Resource Guide
- Some Outline configurations will not accommodate all driver options; consult with factory

<b>OL1</b>	Osram 0-10v, 10%	Standard driver option
<b>OL3</b>	Osram 347 volt, 0-10v, 10%	Requires 347V option in the Voltage section of the part number
<b>LH1</b>	Lutron Hi-lume EcoSystem, 1% Soft on, Fade-to-Black	Lutron-LDE1
<b>LH3</b>	Lutron Hi-lume 1%, 3-wire	Lutron-L3DA3W
<b>L51</b>	Lutron 5-Series 5%, EcoSystem Digital	Lutron-LDE5
<b>EE1</b>	eldoLED ECOdrive 1%, 0-10v	Logarithmic Dimming
<b>ED1</b>	eldoLED DUALdrive 0%, DALI	Logarithmic Dimming
<b>ES1</b>	eldoLED SOLOdrive 0-10v, .1%	Logarithmic Dimming
<b>PS1</b>	Philips Advance Xitanium Step Dimming	50% / 100%
<b>PM1</b>	Philips Advance Mark 10 5%, Line	120v or 277v required

VOLTAGE

DRIVER

**Catalog Number:**  
EVL-835-10-G1-U-OL1-1-0-W-EF

**Type:**  
E10

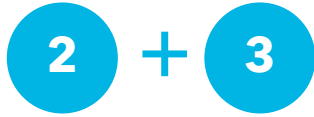
GMLLC17-5696

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## Battery and/or Emergency



- Battery and emergency section options are available in addition to fixture circuit
- Select battery and emergency section options below; factory shop drawing required
- Some Outline configurations will not accommodate all circuiting options, consult with factory

### Ordering Code

**0** No battery or specific emergency section required

### Battery

- Select battery section type if required, indicate total QTY
- 90 minute battery runtime; test button is remote to fixture
- No battery option available for 2' lengths
- Entire fixture housing is on battery for lengths up to 5'

- Half of fixture is on battery for 6' or 8' housing lengths
- For more battery options available, see Pinnacle Resource Guide

0	No battery	
_B	Bodine 10w Integral	CEC Listed
_BS	Bodine 10w Integral	Self Testing, CEC Listed
_I	Iota 10w Integral	
_IC	Iota 10w Integral	CEC Listed
_IH	Iota 12w Integral	

### For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

### Emergency

- Select emergency section type if required, indicate total QTY
- Combine battery and emergency section ordering codes if both options are selected

_E	Emergency circuit section	Can be combined with circuit option <b>1</b> or <b>M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_N	Night Light circuit section	Can be combined with circuit option <b>1 M</b> only; not required with circuit option <b>E</b> or <b>N</b>
_L	Life Safety circuit section NO THROUGH WIRE	Can be combined with circuit option <b>1 M</b> only
_G	Bodine GTD, Generator Transfer Device section	Can be combined with circuit option <b>1</b> only. 120v or 277v required

### Battery OR Emergency Ordering Examples

- Single circuit, 10w Integral Battery      Ordering Code: 1-1B
- Emergency only, 10w Integral Battery      Ordering Code: E-1B
- Single circuit, GTD required                  Ordering Code: 1-1G

### Combination Section Ordering Examples

- Single circuit, (1) 10w battery, (1) emergency section      Ordering Code: 1-1B1E
- Multi circuit, (2) 10w battery, (2) emergency sections      Ordering Code: M-2B2E
- Single circuit, (1) night light section                              Ordering Code: 1-1N

**BATTERY & EMERGENCY**

Submitted by Glidner Maddox, LLC  
**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
 Architect: Harrison French & Associates, LTD (Bentonville)

**Catalog Number:** EVL-835-10-G1-U-OL1-1-0-W-EF  
 Notes:

**Type:** E10  
 GMLLC17-5696

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## Fixture Options

- Some Outline configurations will not accommodate all control options; consult with factory

CONTROLS

Submitted by Gildner Maddox, LLC

**Job Name:** University of Arkansas - Global Campus 4th and 5th Floor Renovation  
Architect: Harrison French & Associates, LTD (Bentonville)

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## Approvals & Certifications

**Construction** Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing.

**Shielding** Extruded aluminum module with for perfect perimeter illumination.

**Mounting** Outline is designed to install into acoustical grid and inaccessible ceilings. Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall on-grid). Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid). Grid retention brackets are integral to housing. Consult factory for detailed installation instructions.

**LED** 25°C test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Minimum lifetime greater than 60,000 hours. Lifetime Projection L70 = 136,200 hours and L90 = 41,100 hours. MacAdam 3-Step Ellipses. Not all products are Lighting Facts listed. For all available IES files, please visit our website at [pinnacle-ltg.com](http://pinnacle-ltg.com).

**CRI, CCT & Lumen Output** Three lumen packages available. Standard, High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥61.

**Voltage** Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL3 in Driver section when 347 volt (3) is selected. Some Outline configurations will not accommodate all voltage options; consult with factory.

**Driver** Standard Driver Option is Osram 0-10V, 10% = OL1. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 96°F/35°C. For more driver options, see Pinnacle Resource Guide. Some Outling configurations will not accommodate all driver options.

**Circuiting** Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some Outline configurations will not accommodate all circuiting options; consult with factory.

**Battery & Emergency** Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is remote to fixture. For more Battery options, see Pinnacle Resource Guide.

**Finish** Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes or for additional custom color and finish options.

**Controls** Consult Factory.

**Labels** UL and cUL Listed. Standard, HO and VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

**Buy American Act Compliant**

**Warranty** Evolution LED offered with a 5-year limited warranty. Covers LED, driver and fixture.

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Submitted by Glidner Maddox, LLC  
**GLIDNER MADDOX**  
 LIGHTING + ELECTRICAL  
**Job Name:**  
 University of Arkansas - Global Campus 4th and 5th  
 Floor Renovation  
 Architect: Harrison French & Associates, LTD  
 (Bentonville)

**Catalog Number:**  
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 Notes:

**Type:**  
**E10**  
 GMLLC17-5696

Submitted by Gildner Maddox, LLC



**Job Name:**

University of Arkansas - Global Campus 4th and 5th  
Floor Renovation  
Architect: Harrison French & Associates, LTD  
(Bentonville)

**Catalog Number:**

EVL-835-10-G1-U-OL 1-1-0-W-EF

**Notes:**

**Type:**

**E10**

GMILLC17-5696



## 1.06 ADJUSTMENT

- A. After installation, make adjustments as necessary to insure proper operation of all hardware items.
- B. Door Opening Force: In accordance with the Americans With Disabilities Act (ADA), adjust all door hardware so that the maximum force required for pushing or pulling open a door shall be as follows:
  - 1. Fire doors shall have the minimum opening force allowable by the appropriate administrative authority.
  - 2. Exterior hinged doors: 8.5 lbf (SBS)
  - 3. Interior hinged doors: 5.0 lbf
  - 4. These forces do not apply to the force required to retract latch bolts or disengage other devices that may hold the door in a closed position.
- C. Door Closers: If door is equipped with a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 deg., the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Manufacturers who produce products that may be submitted to Architect for review are:
  - 1. Kawneer
  - 2. Old Castle
  - 3. EFCO
  - 4. Tubelite

### 2.02 SWINGING GLASS DOORS

- A. Material Standard: ASTM B 221; 6063-T6 alloy and temper.
- B. The door stile and rail face dimensions of the 350 entrance door will be as follows:
  - 1. Vertical Stile: 3-1/2"
  - 2. Top Rail: 3-1/2"
  - 3. Bottom Rail: 10"
- C. Entrance System Fabrication:
  - 1. Door corner construction shall consist of mechanical clip fastening, SIGMA 1-1/8" long fillet welds along top and bottom of rail extrusion at stile and rail intersection, and deep penetration plug weld at all four corners of door. Must be full penetration plug weld to leg of clip, 1-1/8" long fillet welds along top and bottom or rails at stiles intersection, no tie-rod construction of any type or partial design allowed. Meeting rail to still joint fillet weld "only" is NOT ACCEPTABLE. Glazing stops shall be hook-in type with EPDM glazing gaskets reinforced with non-stretchable chord.
- D. Refer to **HARDWARE NOTES on A701**

- C. Equipment and Materials: Equipment and materials shall be cataloged products of manufacturers regularly engaged in the production and installation of HVAC control systems. Products shall be manufacturer's latest standard design and have been tested and proven in actual use.

## **1.8 DELIVERY, STORAGE AND HANDLING**

- A. Maintain integrity of shipping cartons for each piece of equipment and control device through shipping, storage and handling as required to prevent equipment damage. Store equipment and materials inside and protected from weather.

## **1.9 JOB CONDITIONS**

- A. Cooperation with Other Trades: Coordinate the Work of this section with that of other sections to insure that the Work will be carried out in an orderly fashion. It shall be this Contractor's responsibility to check the Contract Documents for possible conflicts between his Work and that of other crafts in equipment location, pipe, duct and conduit runs, electrical outlets and fixtures, air diffusers and structural and architectural features.

## **1.10 SEQUENCING**

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Acceptable **IDIQ Controls Manufacturers / Contractors:**
  - 1. **Niagra / Powers of Arkansas**
- B. Substitutions: **No substitutions allowed.**

### **2.2 GENERAL**

- A. The Building Management System (BMS) shall be comprised of a network of interoperable, stand-alone digital controllers, a network area controller, graphics and programming and other control devices for a complete system as specified herein.
- B. The installed system shall provide secure password access to all features, functions and data contained in the overall BMS.

### **2.3 OPEN, INTEROPERABLE, INTEGRATED ARCHITECTURE**

- A. The intent of this specification is to provide a peer-to-peer networked, stand-alone, distributed control system utilizing Open protocols in one open, interoperable system.
- B. The supplied computer software shall employ object-oriented technology (OOT) for representation of all data and control devices within the system. Physical connection



contact: \_\_\_\_\_  
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 14827 W 95th Street  
 Lenexa, KS 66215

project name: \_\_\_\_\_  
**GLOBAL CAMPUS  
 FIRST FLOOR  
 RENOVATION**  
 UNIVERSITY OF ARKANSAS  
 FAYETTEVILLE, AR

issue date | revisions: \_\_\_\_\_  
**05.15.2020**  
 # date description  
 1 06/18/20 ADD #3

psw job number: \_\_\_\_\_  
**245R**

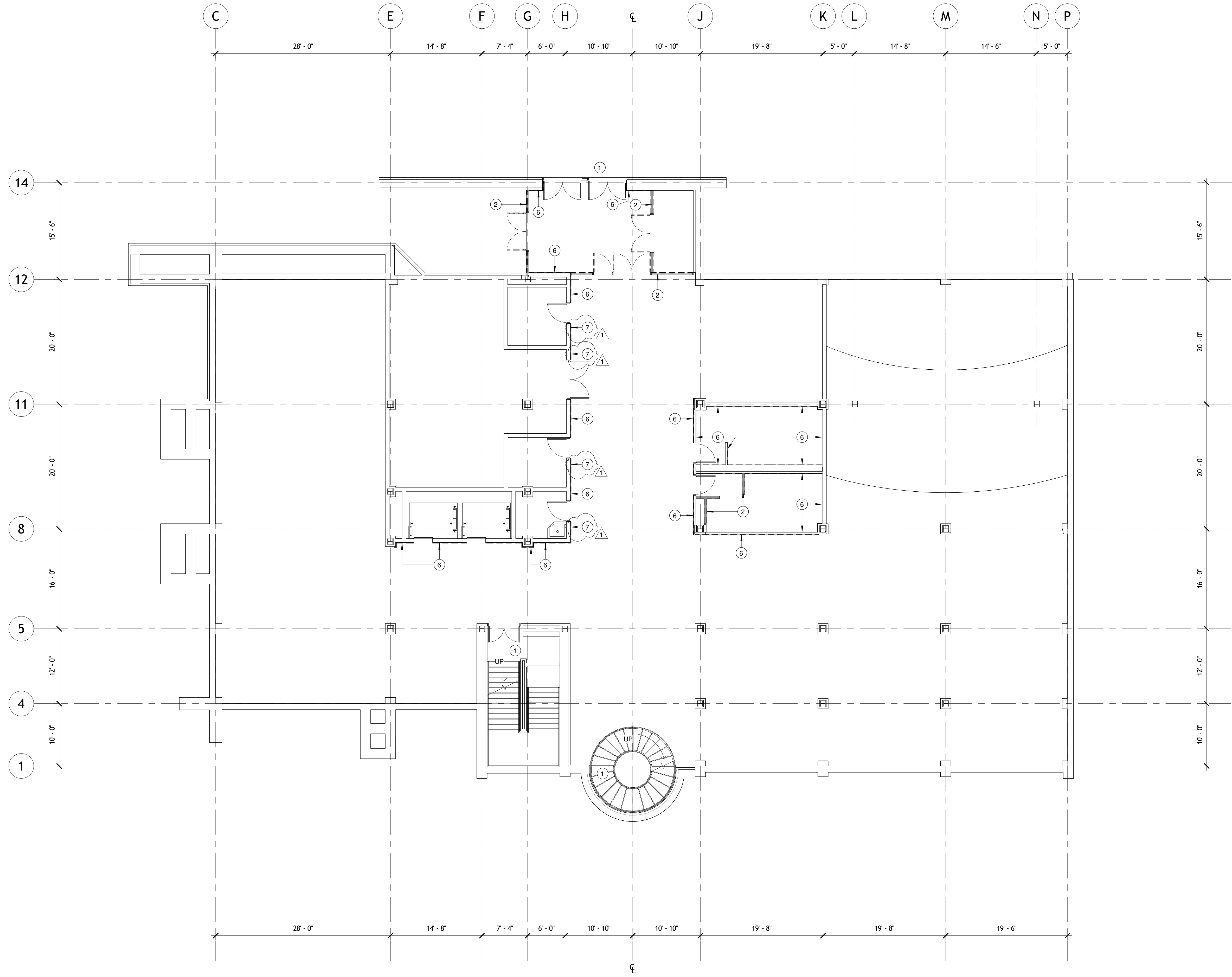
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**LEVEL 1 -  
 DEMOLITION  
 PLAN**

**DEMOLITION NOTES - PACKAGE 2**

1	PROTECT ALL EXISTING FINISHES TO REMAIN DURING DEMOLITION AND NEW CONSTRUCTION.
2	REMOVE EXISTING WALL (SHOWN AS DASHED & SHADED).
3	REMOVE EXISTING CEILINGS. PROTECT EXISTING ELECTRICAL DEVICES AND MECHANICAL EQUIPMENT FOR USE IN NEW CONSTRUCTION. REFER TO MEP DRAWINGS FOR MECHANICAL AND ELECTRICAL WORK.
4	REMOVE EXISTING CEILING SYSTEM IN ITS ENTIRETY.
5	REMOVE PORTION OF EXISTING SOFFIT TO INSTALL MECHANICAL EQUIPMENT. PROTECT EXISTING ADJACENT SOFFIT MATERIAL. REFER TO MECHANICAL DRAWINGS FOR SIZE AND LOCATION.
6	REMOVE EXISTING WALL FINISH AND SHEATHING DOWN TO EXISTING FRAMING. EXISTING FRAMING TO REMAIN.
7	REMOVE EXISTING ACCESS CONTROL DEVICE.

**GENERAL DEMOLITION NOTES**

- EXISTING CONDITIONS AFFECTING DEMOLITION AND NEW CONSTRUCTION NOT IDENTIFIED OR APPEARING DIFFERENTLY THAN WHAT HAS BEEN DOCUMENTED FOR THIS PROJECT ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT (IN WRITING) FOR CLARIFICATION & DIRECTION.
- REFER TO DEMOLITION DRAWINGS IN OTHER DISCIPLINES FOR COMPLETE SCOPE OF WORK.
- COORDINATE DEMOLITION AND NEW CONSTRUCTION WITH OWNER.



**1 | LEVEL 1 - DEMOLITION - PACKAGE 2**  
 1/8" = 1'-0"



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ACOUSTICAL ENGINEER:  
AVANT Acoustics  
14827 W 95th Street  
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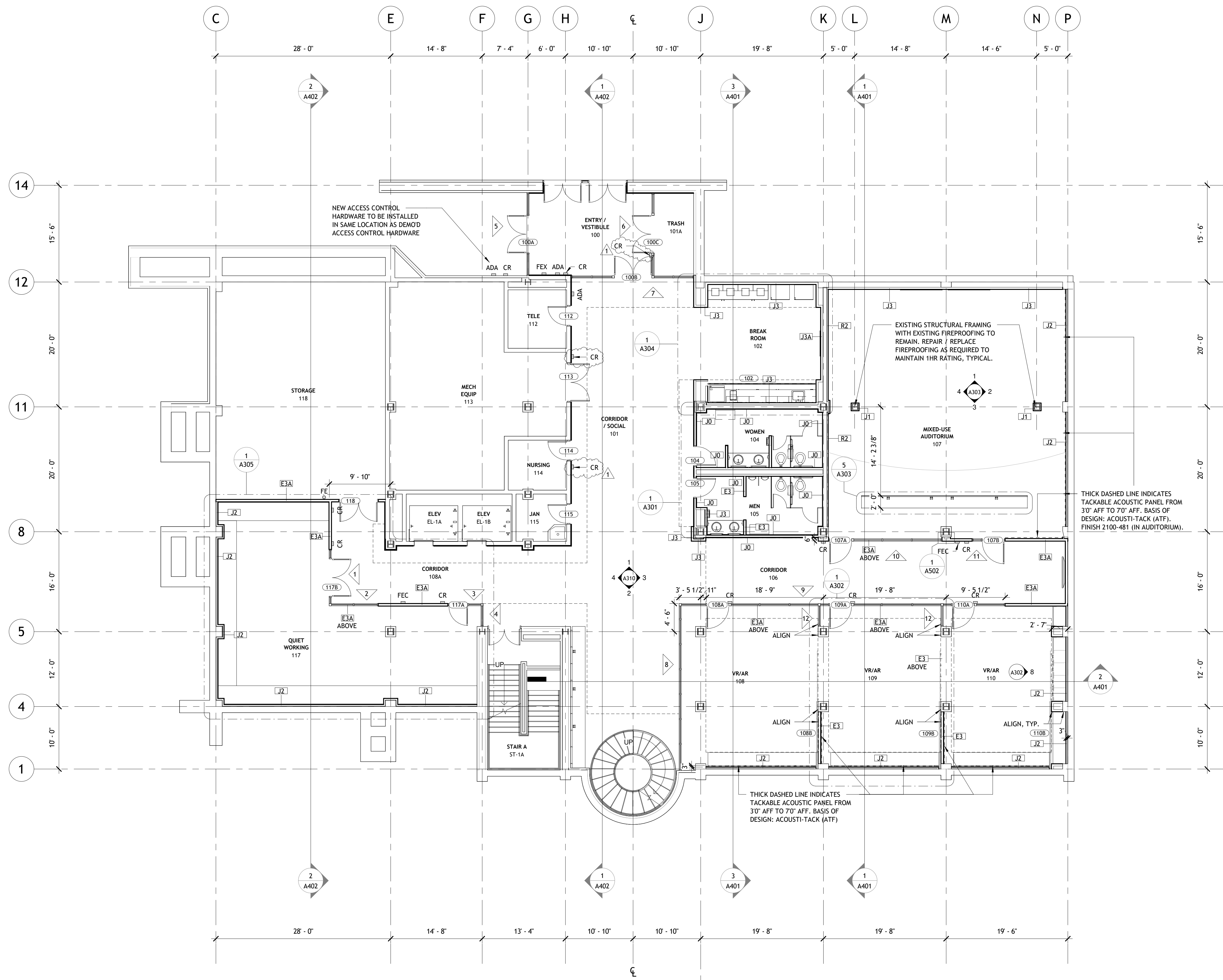
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**LEVEL 1 - FLOOR  
PLAN**

**A101**

**SYMBOLS LEGEND**

DRAWING NUMBER		GLAZING ELEVATIONS REFER TO SHEET A702
DRAWING NUMBER SHEET NUMBER		INTERIOR ELEVATIONS
DRAWING NUMBER SHEET NUMBER		WALL SECTION KEY
DRAWING NUMBER SHEET NUMBER		BUILDING SECTION KEY
DRAWING NUMBER SHEET NUMBER		DETAIL CALLOUT
		COLUMN GRID
		DOOR TAG
Room name		ROOM NAME/NUMBER
		PARTITION TAG
		EXISTING FIRE EXTINGUISHER CABINET TO REMAIN
		FIRE EXTINGUISHER CABINET
		FIRE EXTINGUISHER-BRACKET MOUNT
		NEW ADA DOOR OPERATOR. INSTALL IN SAME LOCATION AS DEMO'D BUTTON.
		NEW CARD READER. EACH CARD READER TO CONTROL ELECTRONIC STRIKE OF ADJACENT DOOR.



**1 | LEVEL 1 - FLOOR PLAN**  
1/8" = 1'-0"



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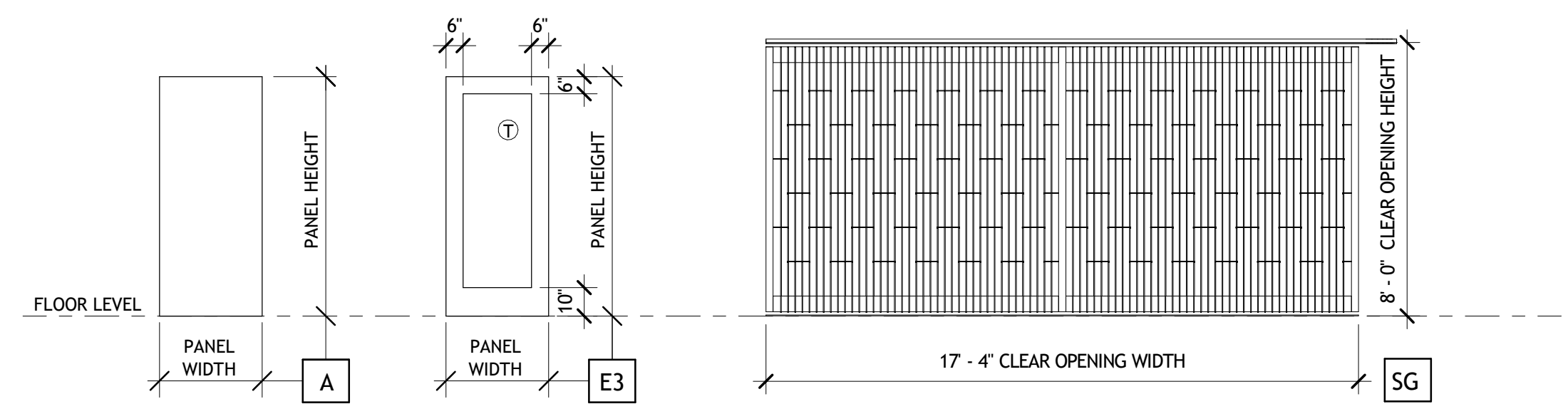
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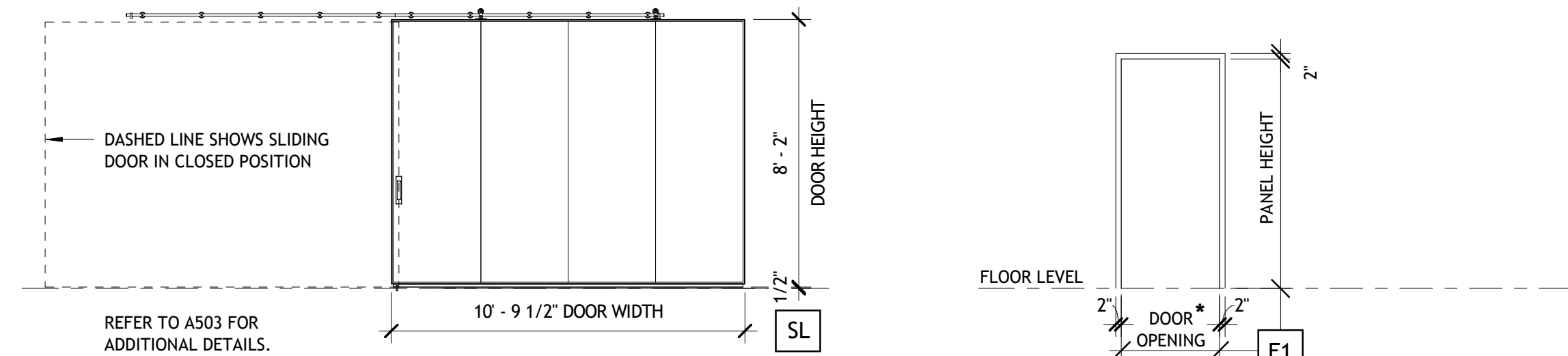
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**PARTITION /  
DOOR  
SCHEDULES**

SCALE: 1/4"=1'-0"

**VISION PANEL TYPES**



**HOLLOW METAL DOOR FRAME LEGEND**



\* REFER TO DOOR SCHEDULE FOR DOOR TYPE (SINGLE, DOUBLE, DOUBLE EGRESS, ETC.)

<b>DOOR MATERIAL:</b>		<b>FRAME TYPE:</b>	
SC = SOLID CORE - PAINTED	M = HOLLOW METAL	AL = ALUMINUM	EX = EXISTING - PAINT
S/R = STILE AND RAIL - STAINED	AL = ALUMINUM		
HM = HOLLOW METAL - PAINTED	EX = EXISTING - PAINT		
AL = ALUMINUM			
EX = EXISTING - PAINT			

**GENERAL DOOR NOTES:**

- FOR HARDWARE NOTES BELOW
- ALL WOOD DOORS TO BE 1 3/4" THICK. U.O.N.
- REFER TO A702 FOR GLAZING SCHEDULE AND GLAZING TYPES
- VERIFY DIMENSIONS ON SITE PRIOR TO FABRICATING DOORS AND DOOR FRAMES

**AUTO OPENER:**

INSTALL NEW ADA PUSH BUTTONS. MATCH LOCATION OF EXISTING BUTTONS. REFER TO A101 FOR LOCATIONS.  
REFER TO SPECS FOR ADDITIONAL INFOAION.

**ELECTRONIC HARDWARE:**

PROVIDE CARD READER TO MATCH THE TYPE USED ON LEVELS 4 & 5. SEE A101 AND A702 FOR CARD READER LOCATIONS. (HID MULTICLASS SEE RMP400/A)  
PROVIDE ELECTRONIC STRIKE TIED TO CARD READER. ELECTRONIC STRIKE TIED INTO UNIVERSITY'S ACCESS CONTROL SYSTEM. BASIS OF DESIGN: HES 8000 FAMILY STRIKE (TO BE COMPATIBLE WITH DOOR LATCHING DEVICE)  
PROVIDE KEYED LOCK TO WORK WITH UNIVERSITY'S EXISTING KEYING SYSTEM.  
PROVIDE LEVER ON INSIDE OF DOOR. BASIS OF DESIGN: ADAMS RITE 4560 LEVER.

**ACOUSTICAL TREATMENT:**

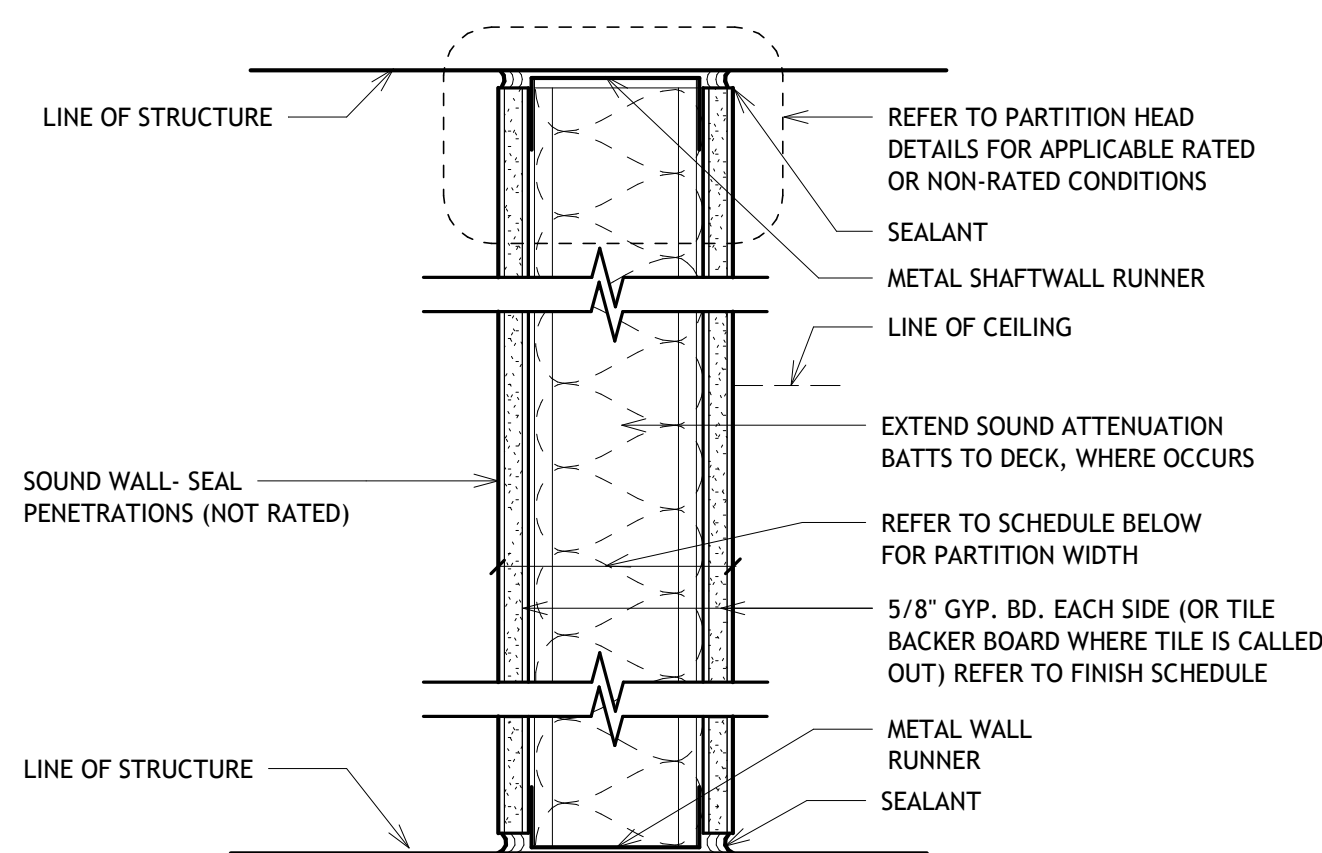
HEAD AND JAMB - PROVIDE PERIMETER SOUND GASKETING  
BASIS OF DESIGN: PEMKO #319/316 AND #5773

SILL - PROVIDE SMOOTH THRESHOLD AND AUTOMATIC DROP SEAL COMPATIBLE WITH DOOR TYPE.

**EXISTING DOOR HARDWARE:**

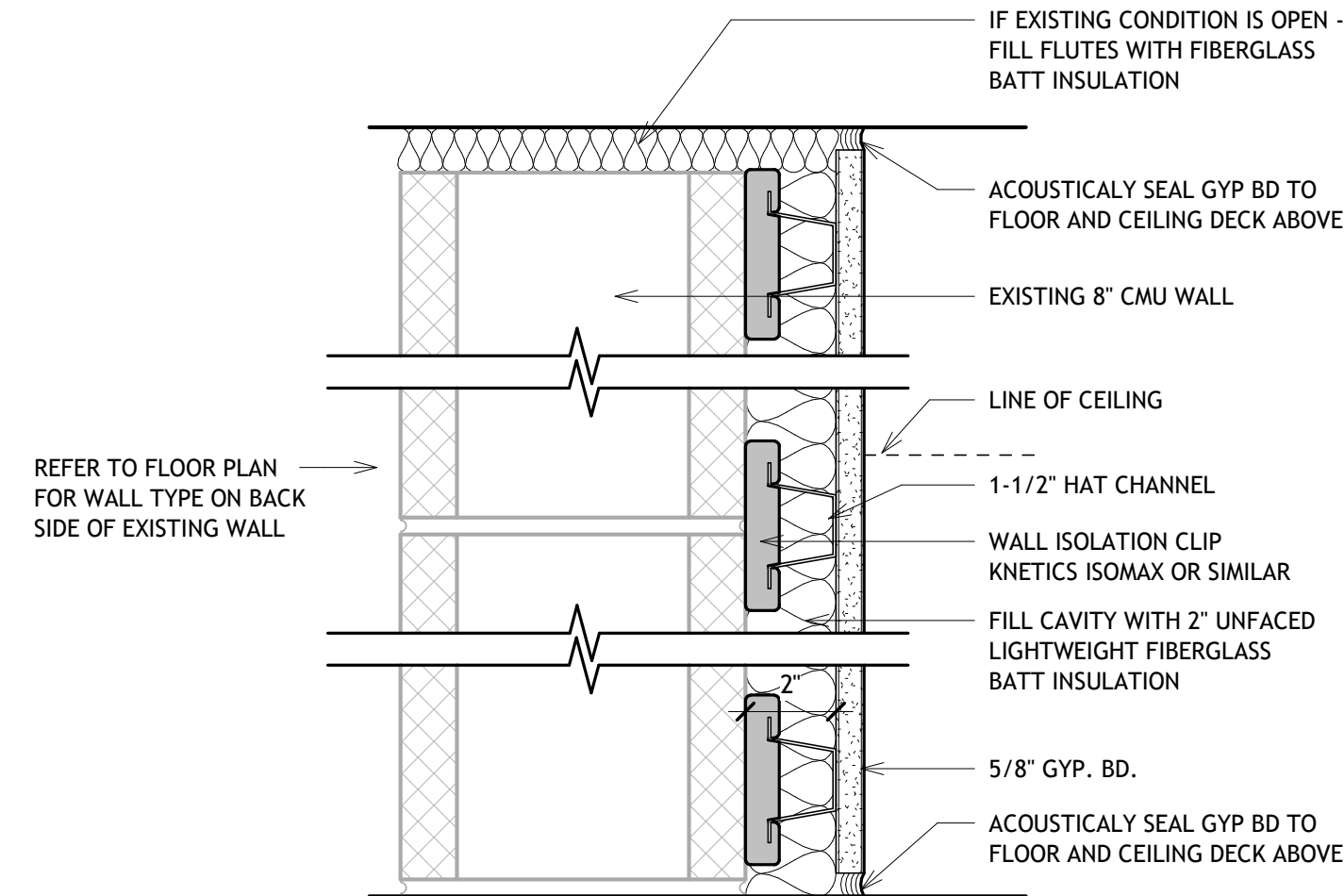
REPLACE EXISTING DOOR HARDWARE WITH SIMILAR HARDWARE TO USE WITH EXISTING DOOR & FRAME. NEW HARDWARE TO HAVE A BRUSHED ALUMINUM FINISH.  
NEW HARDWARE TO MATCH KEYING & FUNCTIONALITY OF EXISTING HARDWARE.

DOOR SCHEDULE - PACKAGE 2											
Door Number	Door Type	Door		Door Material	Vision Panel	Frame		Auto Opener	Electronic Hardware	Acoustical Treatment	Misc. Comments
		Panel Width	Panel Height			Frame Material	Frame Material				
100A	DOUBLE	6' - 0"	7' - 10"	AL	E3	AL	AL	Yes	Yes	No	
100B	DOUBLE	6' - 0"	7' - 10"	AL	E3	AL	AL	Yes	Yes	No	
100C	DOUBLE	6' - 0"	7' - 10"	AL	E3	AL	AL	No	Yes	No	
102	SIDE STACKING	17' - 4"	8' - 0"	AL	SG	-	-	No	No	No	RE: A504
104	SINGLE	3' - 0"	7' - 10"					No	No	No	
105	SINGLE	3' - 0"	7' - 10"					No	No	No	
107A	SINGLE	3' - 6"	7' - 10"	AL	E3	AL	AL	No	Yes	Yes	
107B	SINGLE	3' - 6"	7' - 10"	AL	E3	AL	AL	No	Yes	Yes	
108A	SINGLE	3' - 6"	7' - 10"	AL	E3	AL	AL	No	Yes	Yes	
108B	SLIDING	10' - 9 1/2"	8' - 1"	-	SL	-	-	No	No	No	REF: A503
109A	SINGLE	3' - 6"	7' - 10"	AL	E3	AL	AL	No	Yes	Yes	
109B	SLIDING DOOR	10' - 9 1/2"	8' - 1"	-	SL	-	-	No	No	No	REF: A503
110A	SINGLE	3' - 6"	7' - 10"	AL	E3	AL	AL	No	Yes	Yes	
110B	SLIDING DOOR	10' - 9 1/2"	8' - 1"	-	SL	-	-	No	No	No	REF: A503
112	SINGLE	3' - 0"	7' - 10"	EX	EX	EX	EX	No	No	No	EXIST. DOOR - PAINT - REPLACE HARDWARE
113	DOUBLE	3' - 0"	7' - 10"	EX	EX	EX	EX	No	No	No	EXIST. DOOR - PAINT - REPLACE HARDWARE
114	SINGLE	3' - 0"	7' - 10"	EX	EX	EX	EX	No	No	No	EXIST. DOOR - PAINT - REPLACE HARDWARE
115	SINGLE	3' - 0"	7' - 10"	EX	EX	EX	EX	No	No	No	EXIST. DOOR - PAINT - REPLACE HARDWARE
117A	SINGLE	3' - 0"	7' - 10"	AL	E3	AL	AL	No	Yes	Yes	
117B	DOUBLE	6' - 0"	7' - 10"	AL	E3	AL	AL	No	Yes	Yes	
118	DOUBLE	3' - 0"	7' - 10"	SC	A	HM	HM	No	Yes	No	



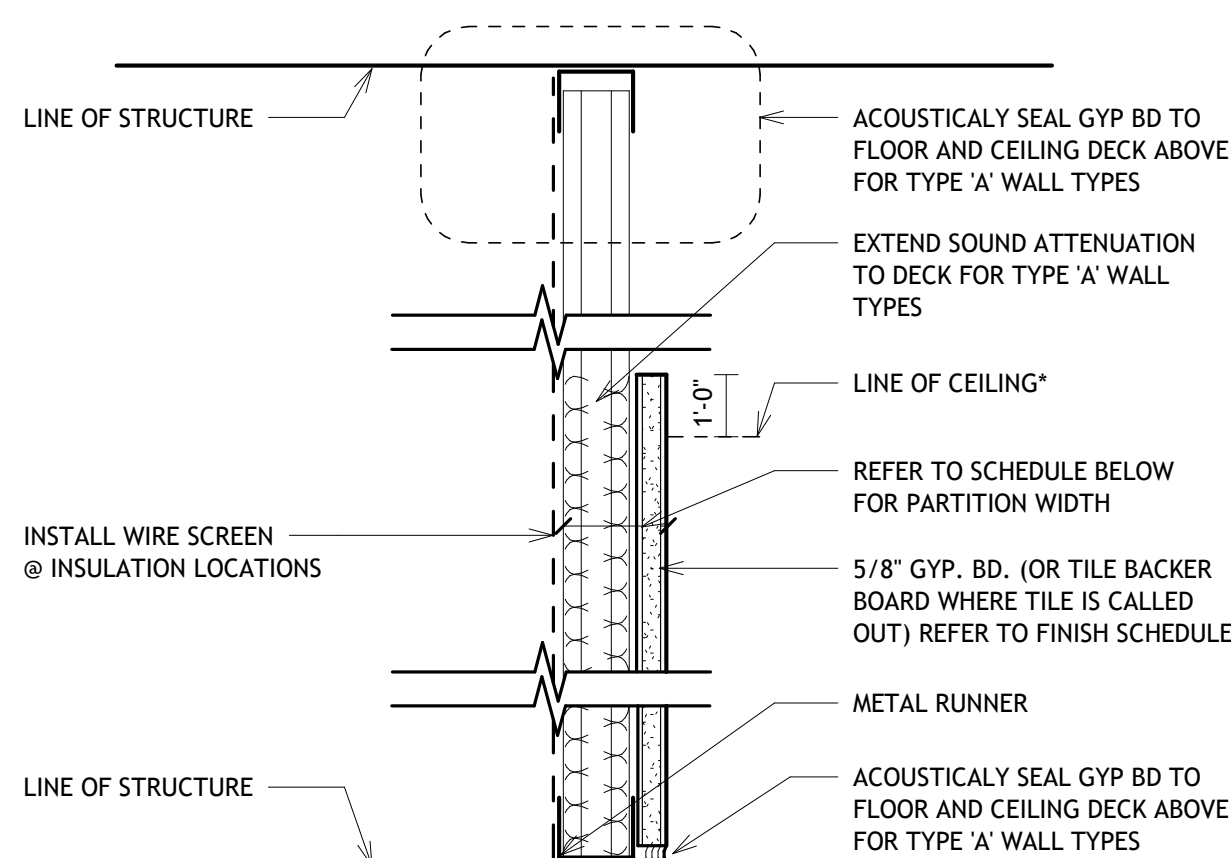
FLOOR PLAN DESIGNATION	STUD WIDTH	PART. WIDTH	FIRE RATING	U.L. DESIGN #	S.T.C.	REMARKS
E2	2-1/2"	3-3/4"	NOT RATED	N/A	40	
E2A	2-1/2"	3-3/4"	NOT RATED	N/A	48 W/ 2' S.A.B.	
E3	3-5/8"	4-7/8"	NOT RATED	N/A	40	
E3A	3-5/8"	4-7/8"	NOT RATED	N/A	49 W/ 3' S.A.B.	
E6	6"	7 1/4"	NOT RATED	N/A	40	
E6A	6"	7 1/4"	NOT RATED	N/A	49 W/ 3' S.A.B.	

**EI NON-RATED PARTITION**  
3"=1'-0"



FLOOR PLAN DESIGNATION	STUD WIDTH	PART. WIDTH	FIRE RATING	U.L. DESIGN #	S.T.C.	REMARKS
R2	2"	2-5/8"	NOT RATED	N/A	60	

**RI RESILIENT-CHANNEL PARTITION**  
3"=1'-0"

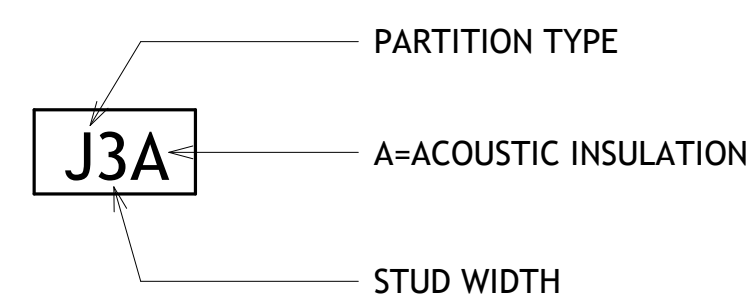


FLOOR PLAN DESIGNATION	STUD WIDTH	PART. WIDTH	FIRE RATING	U.L. DESIGN #	S.T.C.	REMARKS
J0	EXIST.	5/8"	NOT RATED	N/A	N/A	
J1	7/8"	1-1/2"	NOT RATED	N/A	N/A	
J2A	1-3/8"	2"	NOT RATED	N/A	N/A	ISOMAX SOUND ISOLATION CLIP
J3	3-5/8"	4 1/4"	NOT RATED	N/A	N/A	
J3A	3-5/8"	4 1/4"	NOT RATED	N/A	N/A	
J6	6"	6 5/8"	NOT RATED	N/A	N/A	
J6A	6"	6 5/8"	NOT RATED	N/A	N/A	

\* IF NO CEILING IS SCHEDULED, CONTINUE GYPSUM/ INSULATION TO DECK

**J FURRING PARTITION**  
3"=1'-0"

**PARTITION KEY LEGEND**



**NOTES**

- ALL INTERIOR PARTITION FRAMING TO BE 20 GA. U.O.N.
- CORRIDOR PARTITIONS AT HOSPITALS ARE REQUIRED TO LIMIT THE TRANSFER OF SMOKE. SEAL ALL PENETRATIONS AT LAYER OF GYPSUM BOARD THAT EXTENDS TO DECK.
- PROVIDE STENCILED RATING IDENTIFICATION ABOVE THE CEILING OF EACH ROOM OR 10'-0" ON CENTER (WHICHEVER IS LESS) AT RATED PARTITIONS. REFER TO LIFE SAFETY PLANS FOR TEXT DESIGNATION.  
RATED WALLS APPEAR SHADED ON THE FLOOR PLANS. REFER TO WALL TAG FOR SPECIFIC RATED WALL TYPE.



**EXISTING ELECTRICAL AND DEMOLITION NOTES**

- PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE FACILITY AND RELATED SITE. REVIEW THE GENERAL NOTES AND ALL OTHER TRADE DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER OR OWNER, AS SPECIFIED, OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMITTING BID.
- ANY EXISTING CONDITIONS REFLECTED WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS AND CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
- PROVIDE ALL DEMOLITION OF EXISTING ELECTRICAL SYSTEMS AND NEW ELECTRICAL SYSTEM MODIFICATIONS REQUIRED BECAUSE OF BUILDING REMODELING, AS NOTED ON THE DRAWINGS, OR NECESSARY FOR PROPER OPERATION AND NEW CONSTRUCTION. REMOVE ALL ABANDONED CABLES AND WIRING ABOVE ACCESSIBLE CEILINGS AND VENTILATION SHAFTS.
- COORDINATE INTERRUPTION OF ALL BUILDING SERVICES INCLUDING BUT NOT LIMITED TO BRANCH CIRCUITS, DATA, TELEPHONE, ETC WITH BUILDING OWNER PRIOR TO INTERRUPTION. PROVIDE LABOR AND MATERIALS AS REQUIRED TO REDUCE INTERRUPTIONS IN ORDER TO MAINTAIN EXISTING OPERATION.
- PAY SPECIAL ATTENTION NOT TO DAMAGE THE FINISH OF EXISTING WALLS AND CEILINGS THAT ARE TO REMAIN WHEN REMOVING OR REPLACING LIGHT FIXTURES AND OTHER ELECTRICAL DEVICES. REPAIR ANY DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO THE OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- RELOCATE ALL EXISTING ELECTRICAL, FIRE ALARM, AND OTHER LOW-VOLTAGE SYSTEMS REQUIRED TO BE IN OPERATION AT SUBSTANTIAL COMPLETION OF THE CONTRACT, IF REQUIRED, AS A RESULT OF WORK INCLUDED UNDER THIS CONTRACT, EVEN IF NOT SPECIFICALLY INDICATED IN THE DRAWINGS OR SPECIFICATIONS.
- SEAL ALL PENETRATIONS THROUGH FLOORS, WALLS, CEILINGS, AND ROOF WHERE ELECTRICAL COMPONENTS ARE REMOVED AND WHERE THE EXISTING PENETRATION IS NOT USED FOR THE NEW INSTALLATION. REPAIR DAMAGED SURFACES TO MATCH ADJACENT AREAS OR AS DIRECTED BY THE OWNER.
- UNLESS NOTED OTHERWISE, ABANDONED CONDUIT SERVING DEMOLISHED DEVICES SHALL BE REMOVED BACK TO NEAREST JUNCTION BOX OUTSIDE OF AREA OF DEMOLITION AND LABELED AS REQUIRED FOR FUTURE USE. ASSOCIATED WIRING SHALL BE REMOVED BACK TO SERVING PANELBOARD, UPDATE PANELBOARD CIRCUIT DIRECTORY AS REQUIRED TO INDICATE RELATED CIRCUIT(S) AS "SPARE".
- ANY PANELBOARD CIRCUIT DESCRIPTIONS SHOWN AS "existing" OR IN OTHER LOWER CASE LETTERING IS INTENDED TO REFLECT AN EXISTING CIRCUIT TO REMAIN UNLESS OTHERWISE IDENTIFIED DIFFERENTLY THRU THE COURSE OF CONSTRUCTION.
- ALL CIRCUIT BREAKERS SERVING BRANCH CIRCUITS TO BE REMOVED SHALL REMAIN IN RESPECTIVE PANELBOARD FOR FUTURE USE UNLESS NOTED OTHERWISE.

**GENERAL POWER NOTES**

- ALL RECEPTACLES SHALL BE GROUNDING TYPE.
- ALL RECEPTACLES INSTALLED IN BATHROOMS, OUTDOORS AND KITCHENS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
- COORDINATE MECHANICAL EQUIPMENT CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. LOCATE FEEDERS, DISCONNECTS AND MAINTENANCE RECEPTACLES SO THAT THEY WILL NOT INTERFERE WITH OPERATION OR MAINTENANCE OF MECHANICAL EQUIPMENT.
- PROVIDE POWER TO MECHANICAL, PLUMBING, AND ALL OTHER EQUIPMENT AS REQUIRED FOR PROPER OPERATION. COORDINATE AND VERIFY EACH PIECE OF EQUIPMENT POWER/CONTROL REQUIREMENTS PRIOR TO ORDERING RELATED ELECTRICAL EQUIPMENT. REFER TO RELATED MECHANICAL, PLUMBING, AND OTHER RELATED DOCUMENTS FOR LOCATIONS OF EQUIPMENT AND REQUIRED CLEARANCES AROUND EQUIPMENT.
- COORDINATE EXACT MOUNTING HEIGHT OF EACH ABOVE COUNTER RECEPTACLE WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- ALL OUTLETS LOCATED IN AREAS REQUIRING GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION PER NEC-210 SHALL CONSIST OF A GFCI PROTECTED DEVICE, EVEN IF NOT SPECIFICALLY INDICATED IN THE DRAWINGS. THE GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION AS DEFINED IN THE NEC. ALL RECEPTACLES SUPPLIED THROUGH A GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE MARKED "GFCI PROTECTED."
- COORDINATE EXACT LOCATION OF ALL FLOOR BOXES WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. VERIFY EACH TYPE OF FLOOR BOX WITH INTENDED USE AND INSTALLATION. COORDINATE THIS WITH THE CONSTRUCTION OF FLOOR TYPE TO BE INSTALLED PRIOR TO ROUGH-IN SO AS TO ENSURE A CLEAN AND PROPER INSTALLATION. FOR INSTALLATIONS IN CONCRETE SLAB WITH OVERLAY OF CARPET, WOOD, AND/OR OTHER SIMILAR MATERIALS, LEAVE A 48"x48" BLOCK OUT WHEN FLOOR IS POURED SO THAT FINAL LOCATION OF FLOOR BOX MAY BE DETERMINED IN THE FIELD.

**GENERAL LIGHTING NOTES**

- WHERE RECESSED LIGHTING FIXTURES ARE INDICATED IN A FIRE RATED CEILING, PROVIDE A ONE HOUR RATED "TENT" FOR FIXTURE
- PROVIDE ALL MOUNTING AND SUPPORT HARDWARE FOR LIGHT FIXTURES TO MEET SPECIFIED MOUNTING HEIGHTS. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHTS OF FIXTURES.
- CONNECT "UNSWITCHED" HOT CONDUCTOR FROM CIRCUIT SERVING SPACE LIGHTING TO EACH EXIT SIGN, EMERGENCY LIGHT, AND ANY FIXTURE DESIGNATED AS NIGHT LIGHT SERVING THE SPACE.
- COORDINATE ALL DEVICES AND WALL-MOUNTED LIGHT FIXTURE LOCATIONS WITH THE ARCHITECTURAL WALL FINISHES AND ELEVATIONS. SPECIAL ATTENTION AND COORDINATION OF WALL TYPES AND FINISHES IS REQUIRED PRIOR TO ROUGH-IN. EXACT LOCATION OF DEVICES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN TO AVOID INSTALLATION ON SPECIAL ARCHITECTURAL WALL FINISHES. DEVICES NOT PROPERLY COORDINATED WITH THE SPECIAL WALL FINISHES INDICATED IN THE CONSTRUCTION DOCUMENTS PRIOR TO ROUGH-IN SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.
- ELECTRICAL CONTRACTOR SHALL VERIFY CHEVRON DIRECTIONS OF ALL EXIT SIGNS PRIOR TO ORDERING.
- FOR BATTERY FED EMERGENCY LIGHTS: PROVIDE EMERGENCY BALLAST. PROVIDE "HOT" WIRE TO EMERGENCY BALLAST. SWITCH FIXTURE AS INDICATED ON PLANS.
- COORDINATE AND PROVIDE DIMMER SWITCHES RATED FOR AND COMPATIBLE WITH INTENDED LIGHT FIXTURE(S) TO BE CONTROLLED. CIRCUITS CONTROLLED WITH LINE-VOLTAGE DIMMER SWITCHES SHALL NOT SHARE NEUTRAL CONDUCTORS.

**GENERAL ELECTRICAL NOTES**

- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW ALL GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS.
- SPECIAL ATTENTION SHALL BE GIVEN TO ALL RACEWAYS WITHIN FINISHED AREAS WITHOUT CEILINGS AND EXPOSED TO STRUCTURE. IN GENERAL, ALL RACEWAYS SHALL BE CONCEALED WITHIN WALLS, ABOVE STRUCTURE FINISH, OR BELOW FLOOR SLABS WHEN SPECIFIED. WHERE EXPOSED CONDITIONS ARE NECESSARY OR UNAVOIDABLE DUE TO OTHER CONDITIONS, THE BID SHALL INCLUDE ANY REASONABLE MEANS TO MINIMIZE THE AMOUNT OF SURFACE MOUNTED EQUIPMENT. PRIOR TO ROUGH-IN, COORDINATE ALL EXPOSED RACEWAY AND BOX CONDITIONS WITH ARCHITECT PRIOR TO CONSTRUCTION OF WALLS, ROOF DECK, OR FLOOR SLABS. ATTACHMENT TO ROOF DECK OR JOIST WEBBINGS IS NOT ALLOWED. MAINTAIN A MINIMUM SPACING OF 1-1/2" FROM CONDUIT TO ROOF DECK. IN AREAS WHERE EXPOSED RACEWAYS ARE REQUIRED, INSTALL SYSTEMS SQUARE AND TIGHT TO STRUCTURE AND PAINT TO MATCH THE STRUCTURE PER ARCHITECT AND/OR OWNER SPECIFICATIONS. FAILURE TO PROPERLY COORDINATE THE ROUTING OF EXPOSED RACEWAYS MAY RESULT IN RELOCATION OF SUCH RACEWAYS AT NO ADDITIONAL COST TO THE OWNER.
- OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE-RESISTANT-RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING. PROVIDE PENETRATION FIRE STOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479. FIRE STOPPING SHALL NOT BE LESS THAN FIRE RESISTANCE RATING OF CONSTRUCTED PENETRATIONS.
- FIELD MOUNTED DEVICES SUCH AS SWITCHES, MOTOR STARTERS, RECEPTACLES, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. SWITCH MOUNTING HEIGHT SHALL BE 48" ABOVE FINISHED FLOOR AND RECEPTACLE MOUNTING HEIGHT SHALL BE 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. REFER TO THE TYPICAL MOUNTING HEIGHT DETAIL.
- INSTALL EQUIPMENT IN A MANNER TO REMAIN ACCESSIBLE WITH REASONABLE MEANS BY THE OWNER FOLLOWING COMPLETION OF WORK. SPECIAL ATTENTION AND ADDITIONAL COORDINATION IS EXPECTED IN AREAS OF THE BUILDING WHERE THE CEILING AND STRUCTURE HEIGHTS HAVE SIGNIFICANT DIFFERENT ELEVATIONS. EQUIPMENT REQUIRING POSSIBLE FUTURE ACCESS SHALL BE INSTALLED SUCH THAT IT MAY BE SAFELY ACCESSED FROM A STANDARD STEP LADDER OR PERSONNEL LIFT SUITABLE FOR THE LOCATION AND CEILING HEIGHT, WITHOUT REMOVING OR DAMAGING THE CEILING GRID STRUCTURE.
- COORDINATE ALL CEILING MOUNTED ELECTRICAL ITEMS WITH OTHER DISCIPLINES, POLE, CEILING, AND STRUCTURE. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
- FIELD VERIFY LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, INCLUDING POWER POLES, TELEPHONE PEDESTALS, OVERHEAD AND UNDERGROUND FEEDERS, METERS, PANELS, DEVICES, ETC. PROVIDE FOR COORDINATION WITH EXISTING EQUIPMENT.
- ROOM NAMES/NUMBERS SHOWN IN PANELBOARD SCHEDULES ARE PER ARCHITECTURAL FLOOR PLANS. CONTRACTOR SHALL PROVIDE FINALIZED PANELBOARD SCHEDULES AT COMPLETION OF PROJECT WITH OWNER PROVIDED ROOM NAMES/NUMBERS.
- CONDUCTORS FOR BRANCH CIRCUITS AS DEFINED IN ARTICLE 100, SHALL BE SIZED TO PREVENT A VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST LOAD, AND WHERE THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST LOAD DOES NOT EXCEED 5%.
- ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE, STATE LAWS, ALL AUTHORITIES HAVING JURISDICTION, AND ALL OTHER REGULATIONS GOVERNING WORK OF THIS NATURE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIAL, AND LABOR TO SATISFY A COMPLETE AND WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
- CONTRACTOR TO CONFIRM EXACT LOCATION OF EXISTING AND NEW EQUIPMENT.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING SYSTEMS (AS REQUIRED) IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
- ALL ELECTRIC MATERIALS AND EQUIPMENT FOR THE PROJECT SHALL BE NEW AND U.L. OR EQUALLY LISTED.
- SUBMIT TO THE OWNER CERTIFICATES OF INSPECTIONS IN DUPLICATE FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION.
- THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES AS REQUIRED.
- THE CONTRACTOR SHALL FURNISH ALL INSTRUMENTS AND QUALIFIED PERSONNEL OR FIRM TO PERFORM ALL REQUIRED TESTS.
- NO EQUIPMENT SHALL BE ENERGIZED UNTIL ALL TEST AND ADJUSTMENTS HAVE BEEN MADE. THREE COPIES OF ALL TEST RESULTS SHALL BE DELIVERED TO THE OWNER.
- ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE MECHANICAL WORK AS CALLED FOR IN MECHANICAL SPECIFICATIONS AND PLANS.
- JUNCTION BOXES LOCATED ABOVE GRID CEILINGS SHALL BE LOCATED NO GREATER THAN 4-FEET ABOVE THE CEILING IN A LOCATION ACCESSIBLE VIA A LADDER FROM THE ROOM BELOW.
- ALL WIRING DEVICE COVERPLATES SHALL INDICATE PANELBOARD AND CIRCUIT SERVING THE DEVICE. UTILIZE CLEAR VINYL (BLACK LETTERING) IDENTIFICATION LABELS MANUFACTURED BY 3M COMPANY (OR APPROVED EQUIVALENT).
- DESIGNATED SPARE CIRCUIT BREAKERS SHALL BE PLACED IN THE OFF POSITION
- PROVIDE SPD AS REQUIRED FOR OWNER PROVIDED EQUIPMENT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ACCESS CONTROL SYSTEM, COMMUNICATION SYSTEM, DATA SYSTEM, SECURITY SYSTEM.

**GENERAL LOW VOLTAGE NOTES**

- PROVIDE (1) 1/2" CONDUIT, AND 4" SQUARE BOX WITH SINGLE GANG DEVICE RING FOR ALL THERMOSTAT LOCATIONS INDICATED ON THE MECHANICAL DRAWINGS. ROUTE CONDUIT FROM BOX TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS. PROVIDE PULL STRINGS IN ALL EMPTY CONDUIT SYSTEMS. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- PROVIDE CABLE HOOKS ABOVE LAY-IN CEILING AS REQUIRED. MOUNT 6 INCHES ABOVE CEILING. COORDINATE WITH OTHER DISCIPLINES PRIOR TO INSTALLATION.
- PROVIDE ROUGH-IN OF ALL BACK BOXES, CONDUITS (WITH BUSHINGS AND PULL STRINGS) AND OTHER WIRE WAYS AS REQUIRED FOR LOW VOLTAGE SYSTEMS. COORDINATE ALL REQUIRED LOCATIONS WITH OWNER AND RESPONSIBLE CONTRACTOR(S).
- PROVIDE BACK BOX AND CONDUIT TO ABOVE THE ACCESSIBLE CEILING AS REQUIRED FOR THE HVAC BUILDING AUTOMATIC DEVICES. COORDINATE EXACT LOCATIONS AND OTHER REQUIREMENTS WITH RELATIVE MEP DRAWINGS AND THE CONTROLS CONTRACTOR PRIOR TO ROUGH-IN. THERMOSTATS, TEMPERATURE SENSORS, STATIC PRESSURE SENSORS, HUMIDISTATS, ETC. SHALL BE INSTALLED AT THE SAME ELEVATION AS THE LIGHT SWITCHES UNLESS REQUIRED OTHERWISE.

**LUMINAIRE SCHEDULE**

- NOTES:  
 1. EC SHALL PROVIDE A SUBMITTAL PACKAGE INCLUDING CUTSHEETS FOR EACH FIXTURE.  
 2. EC SHALL PROVIDE ALL ACCESSORIES FOR A COMPLETE ASSEMBLY INCLUDING MOUNTING HARDWARE.  
 3. THE MOUNTING TYPE OF EACH FIXTURE SHALL BE COMPATIBLE WITH INSTALLATION SURFACE OF EACH FIXTURE.  
 4. ALL FINISHES SHALL BE COORDINATED WITH ARCHITECT AND DOCUMENTED ON SUBMITTALS.

TYPE	LAMP	DIMMING	COLOR TEMP	LUMENS	VOLTS	WATTS	DESCRIPTION	MANUFACTURER 1	MANUFACTURER 2	MANUFACTURER 3
A1	LED	0-10V	3500K	3828	120/277	34 W	2X2, TROFFER, PRISMATIC, 80 CRI	PINNACLE AD22	CORONET KSR1 LED	MERCURY LIGHTING LED-CBT
A1E	LED	0-10V	3500K	3828	120/277	34 W	2X2, TROFFER, PRISMATIC, 80 CRI, EMERGENCY	PINNACLE AD22	CORONET KSR1 LED	MERCURY LIGHTING LED-CBT
A2	LED	0-10V	3500K	4000	120/277	46 W	8" RECESSED LINEAR, SATINE LENS, 80 CRI, WHITE	PINNACLE EV3D	LUX EOS 3.0-P	MERCURY LIGHTING MLS3
D2	LED	0-10V	3500K	2000	120/277	11 W	2" SURFACE STRIP, SATINE LENS, 80 CRI, SPACKLE FLANGE, WHITE	PINNACLE EV3D	LUX EOS 3.0-P	MERCURY LIGHTING MLS3
L1	LED	0-10V	3500K	2000	120/277	23 W	4" SUSPENDED DIRECT LINEAR, 80 CRI, METALLIC SILVER	PINNACLE EX3D	LUX EOS 3.0-P-D	MERCURY LIGHTING MLS3
L2	LED	0-10V	3500K	4000	120/277	46 W	8" SUSPENDED DIRECT LINEAR, 80 CRI, METALLIC SILVER	PINNACLE EX3D	LUX EOS 3.0-P-D	MERCURY LIGHTING MLS3
L2E	LED	0-10V	3500K	4000	120/277	46 W	8" SUSPENDED DIRECT LINEAR, 80 CRI, METALLIC SILVER, EMERGENCY, INTEGRAL TEST SWITCHES	PINNACLE EX3D	LUX EOS 3.0-P-D	MERCURY LIGHTING MLS3
L3	LED	0-10V	3500K	6000	120/277	68 W	12" SUSPENDED DIRECT LINEAR, 80 CRI, METALLIC SILVER	PINNACLE EX3D	LUX EOS 3.0-P-D	MERCURY LIGHTING MLS3
L3E	LED	0-10V	3500K	6000	120/277	68 W	12" SUSPENDED DIRECT LINEAR, SATINE LENS, 80 CRI, METALLIC SILVER, EMERGENCY, INTEGRAL TEST SWITCHES	PINNACLE EX3D	LUX EOS 3.0-P-D	MERCURY LIGHTING MLS3
V1	LED	0-10V	3500K	209	120/277	3 W	5" RECESSED COVE LIGHT, 80 CRI, MATTE WHITE	PINNACLE EVL	N/A	N/A
V2	LED	0-10V	3500K	209	120/277	3 W	7" RECESSED COVE LIGHT, 80 CRI, MATTE WHITE	PINNACLE EVL	N/A	N/A
V3	LED	0-10V	3500K	209	120/277	3 W	9" RECESSED COVE LIGHT, 80 CRI, MATTE WHITE	PINNACLE EVL	N/A	N/A
V4	LED	0-10V	3500K	209	120/277	3 W	10" RECESSED COVE LIGHT, 80 CRI, MATTE WHITE	PINNACLE EVL	N/A	N/A
X1	LED	NA	NA	NA	120/277	5 W	EXIT SIGN, SELF DIAGNOSTIC, RED LETTERS, BLACK FINISH	PINNACLE SOV	MULE LIGHTING CEL	PRESTIGE BLX

RECESSED COVE LIGHT FIXTURES V1, V2, V3, AND V4 ARE OWNER FURNISHED.

**PANELS AND MISC.**

- LIGHT OR POWER PANEL
- Ⓧ 4x4 JUNCTION BOX.
- EQUIPMENT DISCONNECT: INTERIOR DISCONNECTS SHALL BE NEMA 1 TYPE. EXTERIOR DISCONNECTS SHALL BE NEMA 3R TYPE. SIZE AS INDICATED IN THE PLANS AND PER NAMEPLATE RATING.
- ▽ PHONE/DATA: PROVIDE 4"x4", 30-1/4 CUBIC INCH OUTLET BOX AT 8" ABOVE COUNTER (UON) WITH (2) 3/4" CONDUITS (WITH PULL STRINGS) ROUTED TO ACCESSIBLE CEILING SPACE. PROVIDE SINGLE GANG MUD RING WITH BLANK COVER. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS.
- ▽ PHONE/DATA: PROVIDE 4"x4", 30-1/4 CUBIC INCH OUTLET BOX AT +18" (UON) WITH (2) 3/4" CONDUITS (WITH PULL STRINGS) ROUTED TO ACCESSIBLE CEILING SPACE. PROVIDE SINGLE GANG MUD RING WITH BLANK COVER. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS.
- Ⓢ EMERGENCY CALL STATION: MANUFACTURER BY OWNER
- Ⓢ CEILING MOUNTED SPEAKER
- Ⓢ CR CARD READER: REFER TO SYSTEM PLANS AND SPECIFICATIONS. AT EACH DOOR WITH A CARD READER PROVIDE A 120V CIRCUIT FOR CONNECTION TO POWER SUPPLY. ALARM CONTRACTOR TO PROVIDE RACEWAY. COORDINATE COMPLETE INSTALLATION WITH ALARM CONTRACTOR. PROVIDE POWER TO THE LOCK SYSTEM IN THE SERVER ROOM WHERE NEEDED BY ALARM CONTRACTOR.
- Ⓢ WIRELESS ACCESS POINT
- Ⓢ SECURITY CAMERA
- Ⓢ M CEILING MOUNTED MICROPHONE
- Ⓢ CAM CEILING MOUNTED CAMERA

**ABBREVIATIONS**

- |                                      |   |
|--------------------------------------|---|
| AC ABOVE COUNTER                     | IG ISOLATED GROUND                            |
| AFF ABOVE FINISHED FLOOR             | MCC MOTOR CONTROL CENTER                      |
| CB CIRCUIT BREAKER                   | NEC NATIONAL ELECTRICAL CODE                  |
| E EXISTING                           | NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOC. |
| EC ELECTRICAL CONTRACTOR             | NIC NOT IN CONTRACT                           |
| EP EXPLOSION PROOF                   | NL NIGHT LIGHT                                |
| GF1 GROUND FAULT CIRCUIT INTERRUPTER | UG UNDERGROUND                                |
| GR GROUND                            | UON UNLESS OTHERWISE NOTED                    |
| HP HORSE POWER                       | WP WEATHERPROOF                               |
|                                      | WR WEATHER RESISTANT                          |

**WIRING**

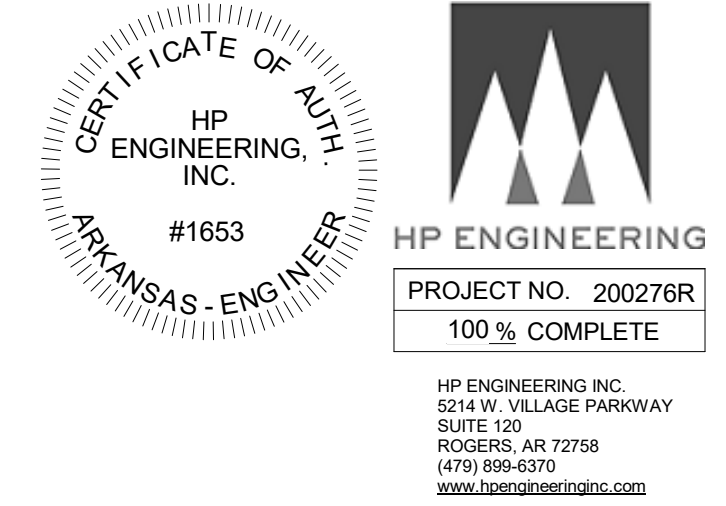
- WIRING CONCEALED IN CEILING OR WALLS UON. ALL WIRE IS NUMBER #12 AWG MINIMUM.
- EXPOSED RACEWAY.
- UNDERGROUND RACEWAY, TYPE, SIZE, CONDUCTORS, AND ARRANGEMENT BY NOTATION OR SCHEDULE.

**SWITCHES**

- Ⓢ\* SWITCH MOUNTED AT +48". SINGLE POLE UON. LOWER CASE LETTER, WHEN PRESENT, INDICATES FIXTURES CONTROLLED.
- \* ABBREVIATIONS FOR SWITCH
- 2 DOUBLE POLE SWITCH
- 3 3-WAY SWITCH
- 4 4-WAY SWITCH
- D DIMMER SWITCH (SHALL BE COMPATIBLE WITH FIXTURE BEING DIMMED)
- F FAN SWITCH: DUAL OPERATION WITH DIMMER
- K KEYSWITCH
- M MOTOR RATED SWITCH
- OS DUAL TECHNOLOGY OCCUPANCY SENSOR
- V VOLUME CONTROL SWITCH
- ◇ OS CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH SPARE DRY CONTACTS. HUBBELL OMNIDIARP SERIES

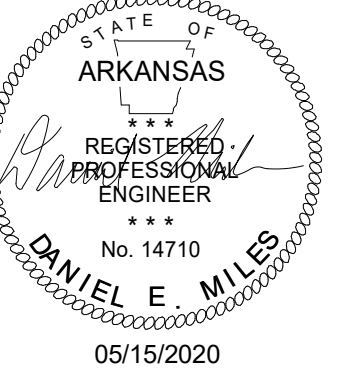
**RECEPTACLES**

- Ⓢ DUPLEX RECEPTACLE (NEMA 5-20R)
- Ⓢ DUPLEX RECEPTACLE (NEMA 5-20R); MOUNTED 8" ABOVE COUNTERTOP
- Ⓢ (ALL RECEPTACLE TYPES) WITH USB CHARGING PORTS
- Ⓢ GFI DUPLEX RECEPTACLE (NEMA 5-20R), SELF-TEST TYPE
- Ⓢ GFI DUPLEX RECEPTACLE (NEMA 5-20R), SELF-TEST TYPE; MOUNTED 8" ABOVE COUNTERTOP.
- Ⓢ QUADRUPLEX RECEPTACLE (TWO NEMA 5-20R)
- Ⓢ SPECIAL RECEPTACLE: VERIFY NEMA TYPE WITH MANUFACTURER
- Ⓢ TV TELEVISION: PROVIDE HUBBELL NSAV62M JUNCTION BOX (OR EQUAL) WITH 12" CONDUIT FOR POWER AND 1" CONDUIT (WITH PULL STRINGS) FOR AV ROUTED TO ACCESSIBLE CEILING SPACE. PROVIDE CONNECTIONS FOR POWER, DATA, COAX, AND HDMI. MOUNT AT +60" AFF UNO. CONFIRM HEIGHTS WITH ARCHITECT PRIOR TO ROUGH-IN.
- Ⓢ SINGLE RECEPTACLE (NEMA 5-20R)
- Ⓢ SPLIT WIRED DUPLEX RECEPTACLE (NEMA 5-20R)
- Ⓢ DIRECT EQUIPMENT CONNECTION FOR LEGRAND XCSAL2GRU-SV: VERIFY CONNECTION DETAILS WITH MANUFACTURER
- Ⓢ FLOOR BOX: LEGRAND XB814C520C2BK. CONTRACTOR SHALL FOLLOW ALL INSTALLATION INSTRUCTIONS TO INSURE PROPER OPERATION
- Ⓢ CEILING MOUNTED RECEPTACLE (NEMA 5-20R)



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**GLOBAL CAMPUS FIRST FLOOR RENOVATION**

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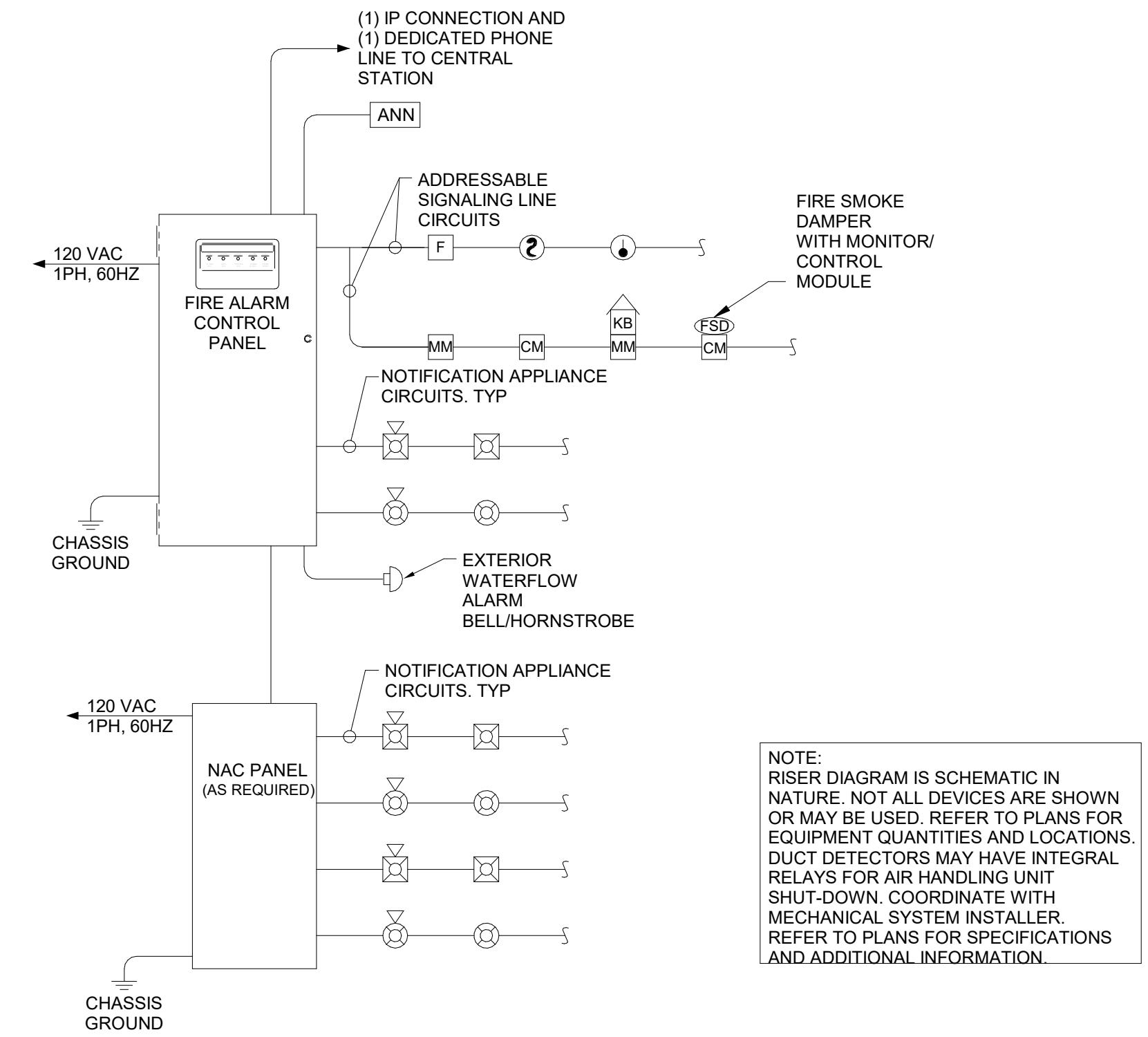
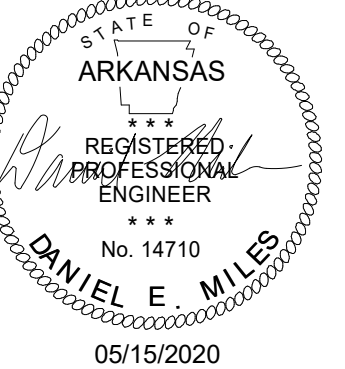
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**05.15.2020**  
 # date description  
 3 | 06.18.2020 | ADD #3

psw job number:  
**245R**

**ELECTRICAL LEGENDS AND SCHEDULES**

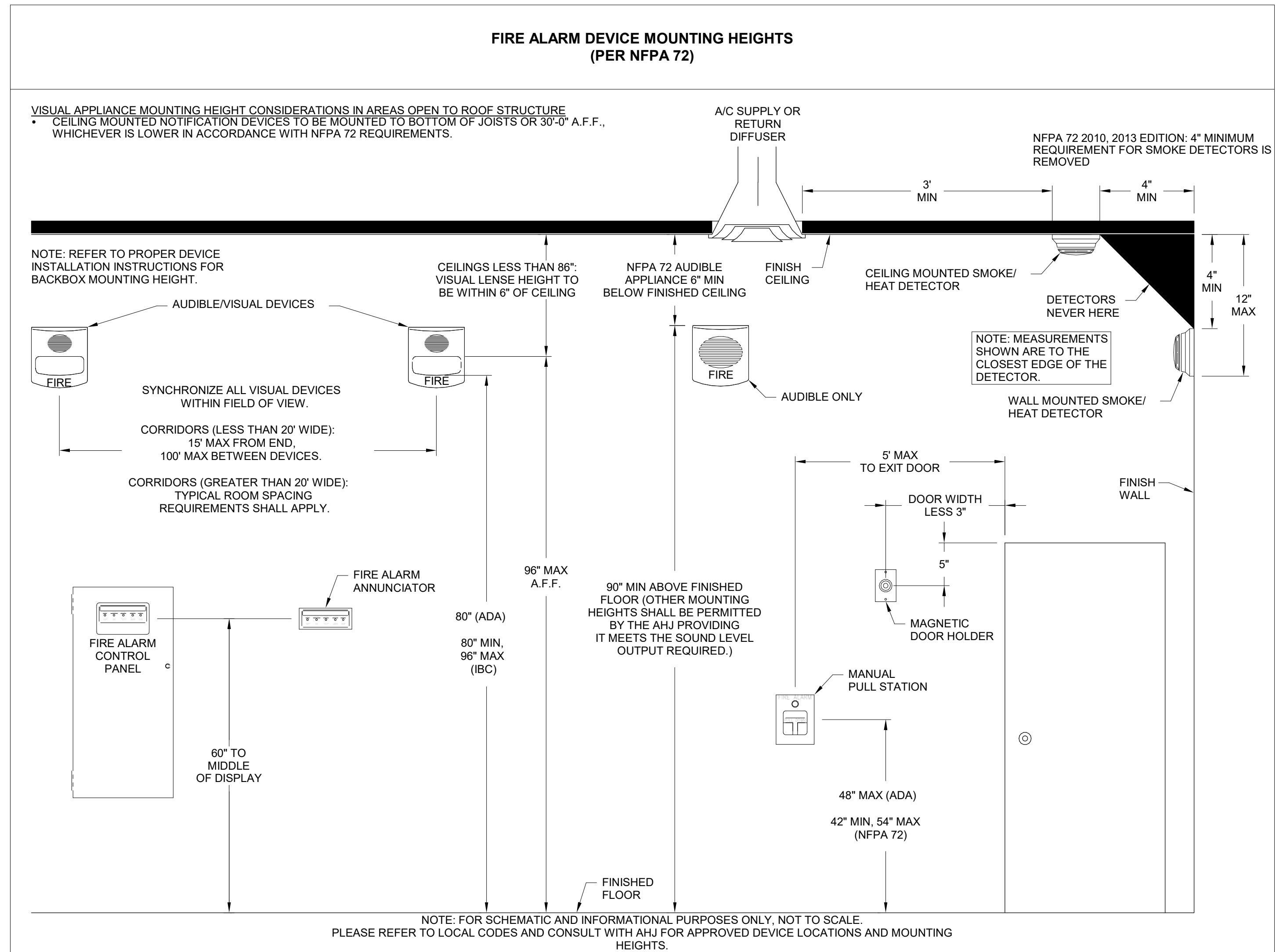






**2 | TYPICAL FIRE ALARM RISER DETAIL**  
 N.T.S.

- FIRE ALARM GENERAL NOTES**
- FIRE ALARM SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH NFPA 70 AND NFPA 72. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.
  - INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND COORDINATION WITH OTHER TRADES.
  - PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM.
  - PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
  - AUDIBLE NOTIFICATION DEVICES SHALL SOUND UNTIL SILENCED AT THE CONTROL PANEL OR REMOTE ANNUNCIATOR AS REQUIRED. VISUAL ALARM IS DISPLAYED UNTIL DEVICE IS RETURNED TO ITS NORMAL POSITION OR SUPERVISORY CONDITION IS CLEARED.
  - PROVIDE NOTIFICATION, INITIATING AND MONITORING DEVICES AS INDICATED ON THE DRAWINGS. FIRE ALARM DEVICES SHALL BE OF ONE MANUFACTURER AND SHALL BE LISTED FOR USE WITH THE FIRE ALARM CONTROL PANEL.
  - FORWARD COMPLETED FIRE ALARM CERTIFICATE OF COMPLETION TO THE OWNER.
- FIRE ALARM INSTALLATION NOTES**
- SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 72 AND LOCAL CODES AND REGULATIONS. ALL EQUIPMENT AND MATERIALS SHALL BE UL LISTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
  - INTERFACE WITH AND MONITOR ALL FIRE SUPPRESSION SYSTEM DEVICES.
  - WIRE AND CABLE SHALL BE UL LISTED AND LABELED AS COMPLYING WITH NFPA 70, ARTICLE 760. SIGNALING LINE CIRCUITS TO BE TWISTED, SHIELDED PAIR, SIZED AS RECOMMENDED BY SYSTEM MANUFACTURER. NON-POWER-LIMITED CIRCUITS TO BE SOLID-COPPER CONDUCTORS WITH 600-V RATED, 75 DEG C, COLOR-CODED INSULATION. 9.1 LOW-VOLTAGE CIRCUITS: NO. 16 AWG, MINIMUM. 9.2 LINE-VOLTAGE CIRCUITS: NO. 12 AWG, MINIMUM.
  - INSTALL AND TEST SYSTEMS ACCORDING TO NFPA 72. COMPLY WITH NECA 1
  - TEST ALL SYSTEM DEVICES FOR PROPER OPERATION IN THE PRESENCE OF THE AHJ AND OTHER OFFICIALS INSPECTING THE FIRE ALARM SYSTEM.
  - IF REQUIRED BY THE LOCAL AHJ, EQUIPMENT DATA SHEETS AND BATTERY CALCULATIONS IN ACCEPTANCE WITH NFPA 72 SHALL BE PERFORMED BY THE FIRE ALARM SYSTEM MANUFACTURER/INSTALLER TO MATCH EQUIPMENT TO BE INSTALLED.
  - SYSTEM INSTALLER SHALL BE A LICENSED FIRE ALARM CONTRACTOR IN THE RESPECTIVE STATE OF THIS PROJECT.



**1 | FIRE ALARM MOUNTING HEIGHTS**  
 12" = 1'-0"

**FIRE ALARM LEGEND**

	SMOKE DETECTOR
	HEAT DETECTOR
	DUCT DETECTOR
	WALL MOUNT HORN STROBE
	CEILING MOUNT HORN STROBE
	WALL MOUNT STROBE
	CEILING MOUNT STROBE
	PULL STATION
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM CONTROL PANEL
	SPRINKLER FLOW SWITCH
	SPRINKLER TAMPER SWITCH
	FIRE ALARM MONITOR MODULE
	FIRE ALARM CONTROL MODULE

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project name:

**GLOBAL CAMPUS  
 FIRST FLOOR  
 RENOVATION**

UNIVERSITY OF ARKANSAS  
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3	06.18.2020	ADD #3

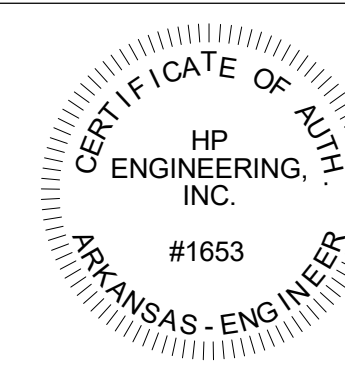
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**245R**

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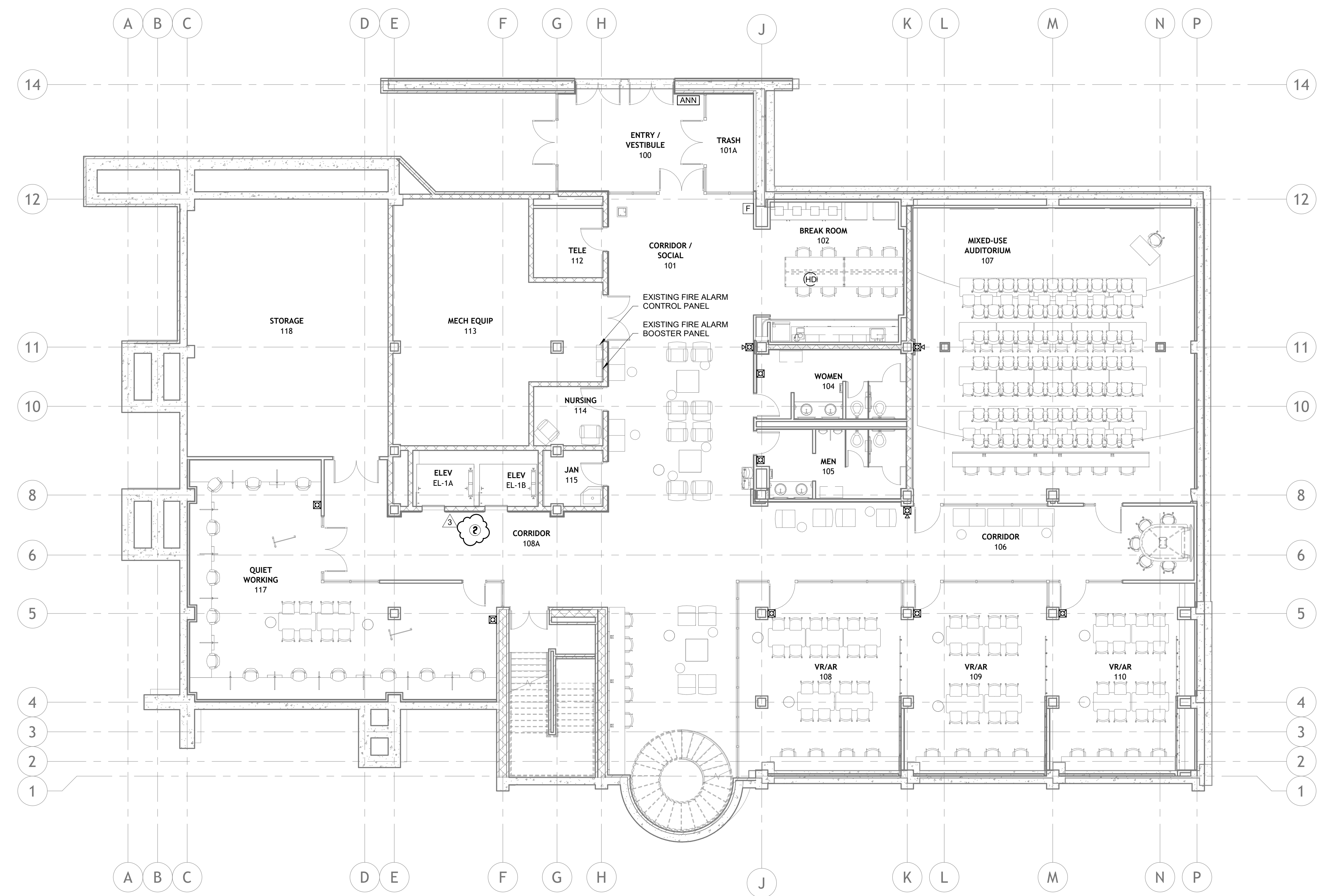
**FIRE ALARM  
 DETAILS, NOTES,  
 AND LEGEND**





**HP ENGINEERING**  
 PROJECT NO. 200276R  
 100% COMPLETE  
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**POLK STANLEY WILCOX**  
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**1 | LEVEL 1 ELECTRICAL - FIRE ALARM PLAN**  
 1/8" = 1'-0"



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contents:  
**FIRE ALARM PLAN**

6/18/2020 5:15:04 PM - 1st Floor Renovation 2020/06/18/2020 5:15:04 PM

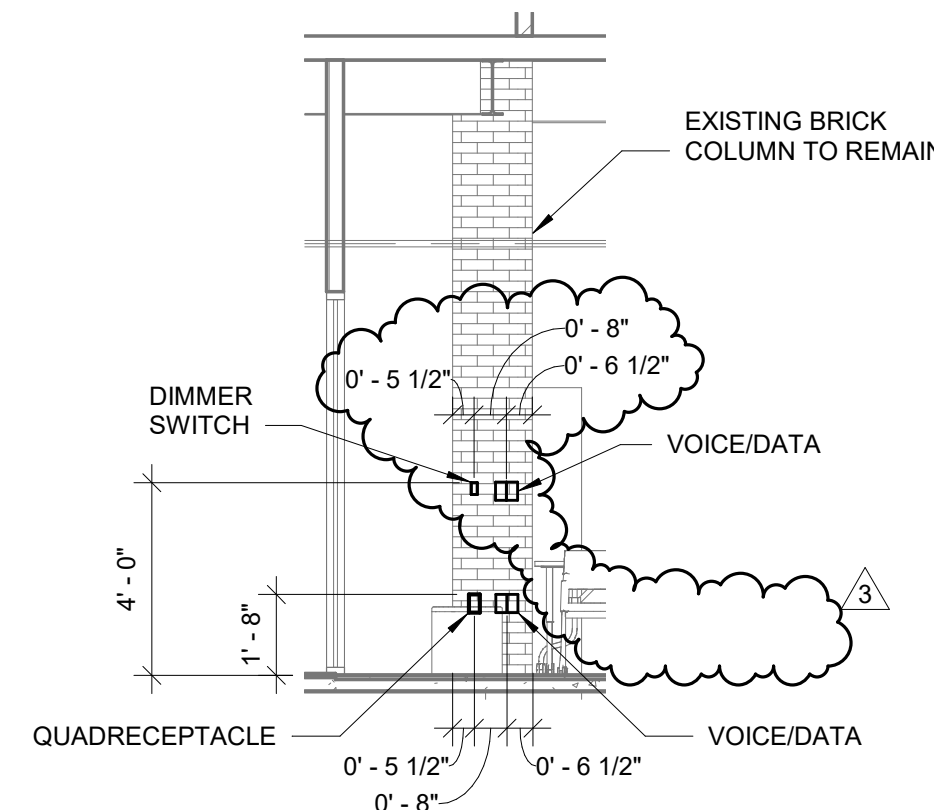


Branch Panel: DPA		EXISTING PNLBOARD				Branch Panel: LPC		NEW PANELBOARD				
Location: MECH EQUIP 113		Volts: 480/277 Wye		A.I.C. Rating:		Location: MECH EQUIP 113		Volts: 120/208 Wye		A.I.C. Rating: FULLY RATED (7)		
Supply From: MSB		Phases: 3		Mains Type: MLO		Supply From: TPC		Phases: 3		Mains Type: MCB		
Mounting: SURFACE		Wires: 4		Mains Rating: 400 A		Mounting: SURFACE		Wires: 4		Mains Rating: 225 A		
Enclosure: NEMA 1						Enclosure: NEMA 1						
Notes:												
CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1					270...	9361						2
3	t-2 dimmer transformer (13)	150	3		270...	9361				110	t-1 lg (13)	4
5					0	222...						6
7					0	222...						8
9	spare (13)	100	3		0	222...				100	TRANSFORMER TPC (13)	10
11												12
13	WSHP-1-11 (11)	15	1		2493	3880				15	WSHP-1-4 (11)	16
15	space	--	--									14
17	space	--	--									18
19					3880	3048						20
21	WSHP-1-5 (11)	15	3							15	WSHP-1-6 (11)	22
23					3048	8341						24
25					3048	8341						26
27	WSHP-1-7 (11)	15	3							3	DHE-1-1 (11)	28
29												30
Total Load:		83293 VA		80804 VA		77144 VA						
Total Amps:		303 A		294 A		278 A						
Load Classification		Connected Load		Demand Factor		Estimated Demand		Panel Totals				
HVAC		97573 VA		100.00%		97573 VA		Total Conn. Load: 241241 VA				
LIGHTING		4377 VA		125.00%		5472 VA		Total Est. Demand: 238317 VA				
RECEPTACLE		18520 VA		77.00%		14260 VA		Total Conn. Current: 290 A				
CONTINUOUS		966 VA		125.00%		1208 VA		Total Est. Demand... 287 A				
MISCELLANEOUS		119805 VA		100.00%		119805 VA						

FAULT CURRENT SCHEDULE		
EQUIPMENT NAME	FAULT CURRENT AT EQUIPMENT	
EXISTING MDP	14607	
EXISTING DPA	13894	
TPC-P	12574	
TPC-S	8612	
LPC	8412	

FAULT CURRENT CALCULATIONS ARE BASED ON THE AVAILABLE FAULT CURRENT AT THE SECONDARY OF THE UTILITY TRANSFORMER OF 15,000 AMPS. INFORMATION PROVIDED BY JAMES SARGENT AT AEP.

Branch Panel: DPA		EXISTING PNLBOARD				Branch Panel: LPC		NEW PANELBOARD				
Location: MECH EQUIP 113		Volts: 480/277 Wye		A.I.C. Rating:		Location: MECH EQUIP 113		Volts: 120/208 Wye		A.I.C. Rating: FULLY RATED (7)		
Supply From: MSB		Phases: 3		Mains Type: MLO		Supply From: TPC		Phases: 3		Mains Type: MCB		
Mounting: SURFACE		Wires: 4		Mains Rating: 400 A		Mounting: SURFACE		Wires: 4		Mains Rating: 225 A		
Enclosure: NEMA 1						Enclosure: NEMA 1						
Notes:												
CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1					1144	1872				#10	2	25
3	WSHP-1-1	15	2		1144	1872					WSHP-1-2	4
5					1144	3603				#3	3	45
7	WSHP-1-10	45	2	#8	1144	3603					WSHP-1-8	8
9					35	2	#8				SPARE	10
11	WSHP-1-9	35	2	#8	2496	3603					SPARE	12
13	EF-1-1	15	1		102	0					SPARE	14
15	SF-1-1	20	1		864	2184					WSHP-1-3	16
17	SPARE	20	1	--			0	2184	#10	2	30	18
19	KEURIG COFFEE MAKER	20	1		1400	720					CORRIDOR/SOCIAL 101 RECEPTACLES	20
21	BREAKROOM 102 RECEPTACLES	20	1			860	504				EW-1 (4)	22
23	BREAKROOM 102 MICROWAVE (4)	20	1				1680	360			WOMEN/MEN PAPER TOWEL DISP.	24
25	CORRIDOR 106 RECEPTACLES	20	1		900	1200					OVERHEAD DOOR (2)	26
27	VR/AR 108 TABLE RECEPTACLES	20	1			720	360				VR/AR 110 RECEPTACLES	28
29	VR/AR 109 TABLE RECEPTACLES	20	1			720	540				CORRIDOR/SOCIAL 101 TABLE RECEPTS	30
31	VR/AR 110 TABLE RECEPTACLES	20	1		720	1080					QUIET WORKING 117 RECEPTACLES	32
33	VR/AR 110 RECEPTACLES	20	1			720	1080				QUIET WORKING 117 RECEPTACLES	34
35	QUIET WORKING 117 RECEPTACLES	20	1				1080	1080			QUIET WORKING 117 RECEPTACLES	36
37	QUIET WORKING 117 RECEPTACLES	20	1		1080	720					VR/AR 108 RECEPTACLES	38
39	VR/AR 109 RECEPTACLES	20	1			360	360				VR/AR 109 RECEPTACLES	40
41	VR/AR 110 RECEPTACLES	20	1				360	600			BREAKROOM 102 REFRIGERATOR (4)	42
43	VR/AR/AUDITORIUM LIGHTING	20	1		2074	1440					BREAKROOM 102 VEND. MACHINE (4)	44
45	AUDITORIUM 107 FLOORBOXES	20	1			720	1440				BREAKROOM 102 VEND. MACHINE (4)	46
47	AUDITORIUM 107 FLOORBOXES/TVS	20	1				2000	720			AUDITORIUM 107 FLOORBOXES	48
49	CORRIDOR/RESTROOM/WORKING LTG	20	1		2303	720					AUDITORIUM AV EQUIP. RECEPTACLE	50
51	SINK & TOILET AUTO	20	1			2760	180				SPARE	52
53	SPARE	20	1	--			0	0			SPARE	54
55	SPARE	20	1	--	0	0					SPARE	56
57	SPARE	--	--				0	0			SPARE	58
59	SPARE	--	--				0	0			SPARE	60
61	SPARE	--	--		0	0					SPARE	62
63	SPARE	--	--				0	0			SPARE	64
65	SPARE	--	--				0	0			SPARE	66
67	SPARE	--	--		0	0					SPARE	68
69	SPARE	--	--				0	0			SPARE	70
71	SPARE	--	--				0	0			SPARE	72
73	SPARE	--	--		0	0					SPARE	74
75	SPARE	--	--				0	0			SPARE	76
77	SPARE	--	--				0	0			SPARE	78
79	SPARE	--	--		0	0					SPARE	80
81	SPARE	--	--				0	0			SPARE	82
83	SPARE	--	--				0	0			SPARE	84
Total Load:		22222 VA		22222 VA		18567 VA						
Total Amps:		190 A		190 A		155 A						
Load Classification		Connected Load		Demand Factor		Estimated Demand		Panel Totals				
HVAC		28489 VA		100.00%		28489 VA		Total Conn. Load: 63016 VA				
LIGHTING		4377 VA		125.00%		5472 VA		Total Est. Demand: 60092 VA				
RECEPTACLE		18520 VA		77.00%		14260 VA		Total Conn. Current: 175 A				
CONTINUOUS		966 VA		125.00%		1208 VA		Total Est. Demand... 167 A				
MISCELLANEOUS		10664 VA		100.00%		10664 VA						



2 | POWER AND LIGHTING DEVICE TYPICAL MOUNTING ON BRICK COLUMNS  
N.T.S.

**EQUIPMENT LABELS**

ALL SWITCHBOARDS AND PANELBOARDS SHALL HAVE A LABEL APPLIED TO WARN OF POTENTIAL ARC FLASH HAZARDS

**WARNING**

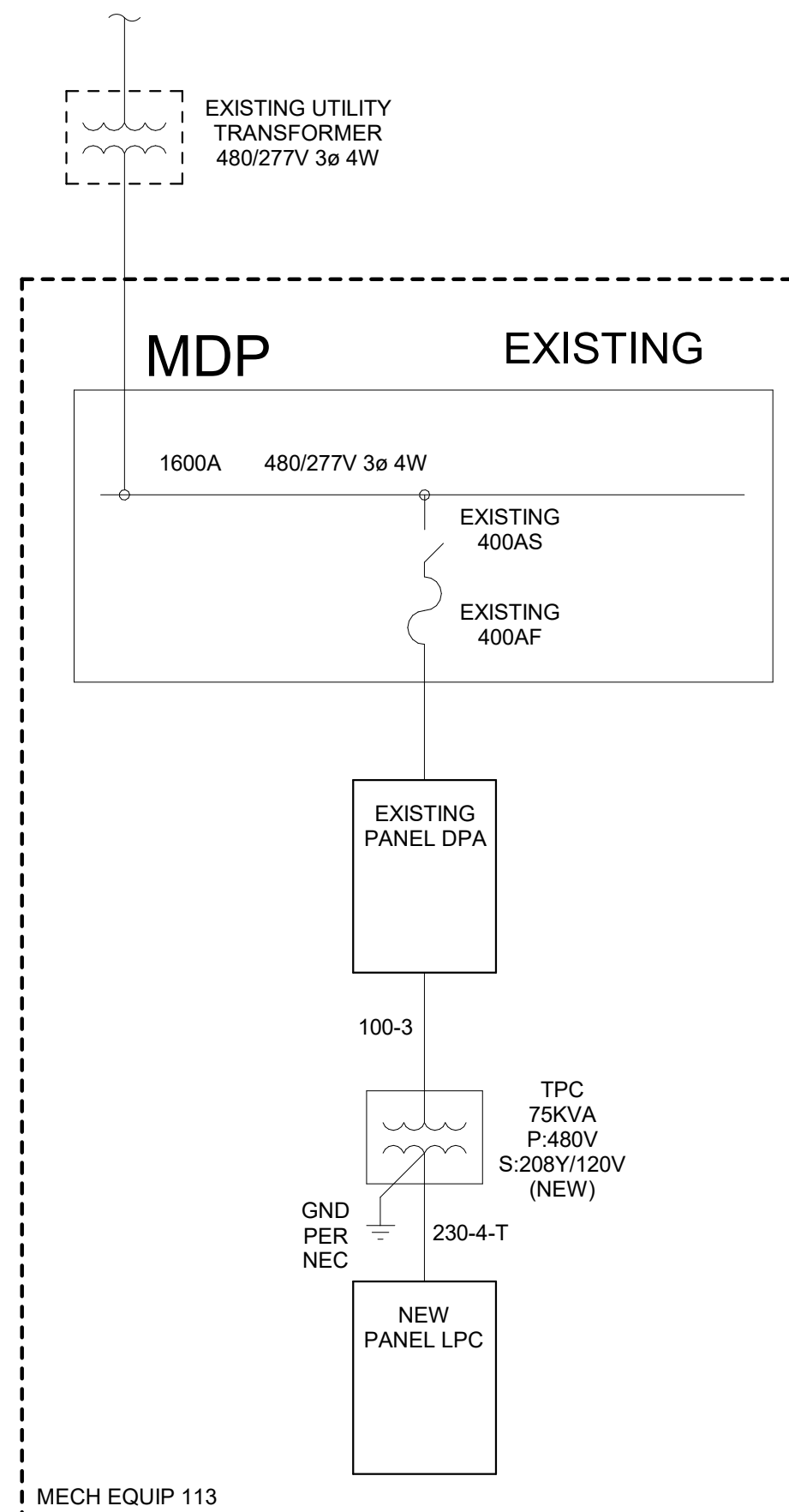
**ARC FLASH AND SHOCK HAZARD. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIRED.**

NOTES:

A. ALL SWITCHBOARDS AND PANELBOARDS SHALL HAVE A COMMERCIAL PRODUCED PERMANENT LABEL APPLIED, SIMILAR TO THE ABOVE, TO WARN OF POTENTIAL ARC FLASH HAZARDS, IN ACCORDANCE WITH NEC 110.16 AND NFPA 70E.

B. LABELING MAY BE COMPLETED BY EQUIPMENT MANUFACTURER, EQUIPMENT VENDOR/SUPPLIER, OR THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THAT ALL SWITCHBOARDS AND PANELBOARDS ARE PROPERLY LABELED IN THE FIELD.

CONTRACTOR TO VERIFY EXISTING FUSES IN MDP FOR DPA ARE 400A. IF FUSES ARE NOT 400A, REPLACE WITH 400A BUSSMAN LPS-RK FUSES.



1 | PARTIAL ONE-LINE DIAGRAM  
N.T.S.

- PANELBOARD NOTES (#)**
- TERMINATE GROUND ON ISOLATED GROUND BUS.
  - INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-OFF FOR MAINTENANCE).
  - INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-ON FOR CRITICAL LOAD).
  - GFI BREAKER FOR PERSONNEL PROTECTION (5 mA).
  - SFI BREAKER FOR EQUIPMENT PROTECTION (30mA).
  - CONDUCTOR SIZE SHOWN IN PANEL SCHEDULE HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUND PROPORTIONALLY PER NEC. REFERENCE GROUND WIRE SIZING CHART.
  - REFER TO FAULT CURRENT SCHEDULE FOR AVAILABLE FAULT CURRENT FOR INTERRUPT RATINGS.
  - REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
  - FACTORY WIRED TO LOAD.
  - THRU CONTROLLER. REFER TO LIGHTING CONTROLLER DETAIL.
  - ADD NEW CIRCUIT BREAKER TO EXISTING PANEL. NEW CIRCUIT BREAKER SHALL MATCH AIC RATING, MANUFACTURER, AND TYPE OF EXISTING CIRCUIT BREAKERS.
  - MATCH AIC RATING OF SERVICING DEVICE.
  - EXISTING CIRCUIT BREAKER TO REMAIN. VERIFY CONDITION OF CIRCUIT BREAKER TO ENSURE THAT IT IS OPERATIONAL AND MEETS ALL U.L. RATINGS.

**EQUIPMENT GROUNDING CONDUCTOR SIZING CHART**

BRKR AMPS		WIRE SIZE			
15-20	PHASE GROUND	12	10	8	6
		12	10	8	6
25-30	PHASE GROUND	10	8	6	4
		10	8	6	4
35-50	PHASE GROUND	8	6	4	3
		10	8	4	4
60	PHASE GROUND	6	4	3	2
		10	6	4	4
70	PHASE GROUND	6	4	3	2
		8	4	4	3
80-90	PHASE GROUND	4	3	2	1
		8	6	4	4
100	PHASE GROUND	3	2	1	1/0
		8	6	4	4

PER NEC 250.122(B)

CIRCUIT DESCRIPTIONS SHOWN AS "EXISTING" OR IN LOWER CASE LETTERS INDICATE AN EXISTING CIRCUIT BREAKER TO REMAIN AND IS BASED ON ORIGINAL BUILDING PLANS, PANEL SCHEDULES AND BREAKER ARRANGEMENTS AT THE TIME OF THE SITE VISIT.

**ELECTRICAL FEEDER KEYNOTES**

100-3	1" C. 3#3, 1#8 GR
230-4-T	1 - 2 1/2" C. #4/0, 1#2 GR

- CONDUIT SIZED BASED ON CONDUCTOR PROPERTIES LISTED IN THE CURRENT NEC EDITION, CHAPTER 9, TABLES 5 AND 5A, AND CONDUIT AREAS LISTED CHAPTER 9, TABLE 4 FOR EMT WITH 40% FILL. OTHER CONDITIONS MAY REQUIRE A LARGER CONDUIT, SUCH AS UNDERGROUND PVC, SIZED FOR NEC.
- GROUND SIZES: EQUIPMENT GROUNDING CONDUCTOR BASED ON NEC TABLE 250.122 - COPPER / GROUNDING ELECTRODE CONDUCTOR BASED ON NEC TABLE 250.66 - COPPER
- CONDUCTOR SIZES BASED ON NEC TABLE 310.15 - COPPER 75°C.

**CERTIFICATE OF AUTHORITY**

HP ENGINEERING INC.

#1653

PROJECT NO. 200276R

100% COMPLETE

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**POLK STANLEY WILCOX**

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05/15/2020

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project name:

**GLOBAL CAMPUS FIRST FLOOR RENOVATION**

UNIVERSITY OF ARKANSAS  
FAYETTEVILLE, AR

issue date | revisions:

**05.15.2020**

#	date	description
3	06.18.2020	ADD #3

psw job number:

**245R**

contents:

**ELECTRICAL SCHEDULES AND RISER**

**E300**

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MECHANICAL PIPING & INSULATION SCHEDULE						
SERVICE	PIPING TYPE	INSULATION TYPE	INSULATION THICKNESS			
			<1	1 TO <1-1/2	1-1/2 TO <4	4 TO <8
CONDENSER WATER, ABOVE GRADE	STEEL SCHEDULE 40, BLACK TYPE "L" HARD COPPER	N/A	-	-	-	-
EQUIPMENT DRAINS, COOLING CONDENSATE LINES, AND OVERFLOWS	TYPE "L" HARD COPPER	ELASTOMERIC	0.5	0.5	1.0	1.0

GENERAL NOTE:  
ALL DUCT SIZES SHOWN ARE THE INSIDE CLEAR DIMENSIONS.

MECHANICAL DUCTWORK & INSULATION SCHEDULE			
SERVICE	DUCT TYPE	INSULATION TYPE	INSULATION THICKNESS
SUPPLY AND OUTSIDE AIR DUCT OVER EXPOSED CEILING AREAS AND ALL SUPPLY DUCTWORK WITHIN FIRST TEN FEET DOWNSTREAM OF WSHF.	ROUND OR RECTANGULAR LINED, AS INDICATED ON PLANS.	INTERNALLY LINED, ANTI-MICROBIAL PER UL 181, ANTI-FUNGAL PER ASTM G21	1" LINER, R VALUE=6.0
SUPPLY (GREATER THAN TEN FEET DOWNSTREAM OF WSHF OUTLET) AND OUTSIDE AIR DUCT CONCEALED ABOVE CEILING AND WITHIN MECHANICAL ROOMS.	ROUND OR RECTANGULAR WRAPPED, AS INDICATED ON PLANS.	FIBERGLASS WRAP	2" WRAP, R VALUE=6.0
SUPPLY AIR DIFFUSERS (BACKSIDE, NOT EXPOSED TO SPACE)	N/A	FIBERGLASS WRAP	2" WRAP, R VALUE=6.0
RETURN AIR DUCT FROM WSHF AND ALL RETURN AIR TRANSFER BOOT.	ROUND OR RECTANGULAR, AS INDICATED ON PLANS.	INTERNAL 1" FIBER-FREE, ANTI-MICROBIAL, COATED OPEN-CELL ACOUSTIC LINER, PINTA ACOUSTIC HYPALON WILLDUCT OR EQUAL. COLOR = GREY OR BLACK.	1" LINER, MIN 250 Hz INSERTION LOSS = 0.57 dB/FT @ 1,000 FPM REVERSE FLOW

ELECTRIC DUCT HEATER SCHEDULE												
TAG	MFR	MODEL	WIDTH x HEIGHT (IN)	CFM	EAT / LAT (F)	KW	MBH	MIN. STAGES	VOLTS / PH	FLA (A)	WEIGHT	CONTROL TYPE
DHE-1-1	INDECO	QUA	20 x 16	1,620	3 / 53	25	87.500	SCR	480 / 3	30.1	50 lb	LAT VIA BAS

- FACTORY MOUNTED INTEGRAL DISCONNECT DEVICE.
- THERMAL CUTOFF.
- ELEMENT FUSING.
- POSITIVE AIRFLOW SWITCH.
- CONTROL CIRCUIT TRANSFORMER.
- REFER TO SPECIFICATIONS FOR APPROVED ALTERNATES.
- COORDINATE CONTROL BOX SIDE AND OVERHANG HAND WITH FIELD CONDITIONS.

LOUVER SCHEDULE										
TAG	SERVICE	MFR	MODEL	CFM	NET FREE AREA (SQFT)	MAX VEL. (FPM)	MAX PRESSURE DROP (IN W.G.)	MATERIAL	SIZE	COLOR / FINISH
LV-1	OUTSIDE AIR	RUSKIN	EME420DD	1620	0.3	595	0.1	ALUMINUM	72"x18"	BRUSHED ALUMINUM
LV-2	EXHAUST AIR	RUSKIN	EME420DD	590	0.65	510	0.1	ALUMINUM	24"x24"	BRUSHED ALUMINUM

GENERAL NOTES APPLICABLE TO ALL UNITS:  
1. FLATTENED ALUMINUM BIRD SCREEN.  
2. COORDINATE LOUVER FRAME DEPTH WITH WALL WIDTH.

GENERAL NOTE:  
CONTRACTOR TO COORDINATE EQUIPMENT SIZE AND ORIENTATION WITH SPACE REQUIREMENTS BEFORE ORDERING EQUIPMENT.

AIR DEVICE SCHEDULE										
TAG	DESCRIPTION	MFR	MODEL	FACE SIZE	FRAME SIZE	NECK SIZE	MATERIAL/ FINISH	NOTES		
CD-1	SQUARE LOUVERED CEILING DIFFUSER - ADJUSTABLE	TITUS	TDCA-AA	22x22	24x24	PER PLANS	ALUMINUM / WHITE	18x18 DIM 'A'		
CD-2	ROUND LOUVERED CEILING DIFFUSER - ADJUSTABLE	TITUS	TMRA-AA	-	-	10	ALUMINUM / BLACK	-		
CD-3	ROUND LOUVERED CEILING DIFFUSER - ADJUSTABLE	TITUS	TMRA-AA	-	-	8	ALUMINUM / BLACK	-		
EG-1	EGGCRATE EXHAUST GRILLE	TITUS	50F	22x22	24x24	8	ALUMINUM / WHITE	-		
ER-1	SIDEWALL EXHAUST REGISTER; 0-DEFLECTION BLADES PARALLEL TO LONG DIMENSION	TITUS	350ZFL	-	PER PLANS	-	ALUMINUM / BLACK	0-DEFLECTION		
RG-1	EGGCRATE RETURN GRILLE	TITUS	50F	22x22	24x24	24x24	ALUMINUM / WHITE	-		
RR-1	SIDEWALL RETURN REGISTER; 0-DEFLECTION BLADES PARALLEL TO LONG DIMENSION	TITUS	350ZFL	-	PER PLANS	-	ALUMINUM / NOTE 'A'	0-DEFLECTION		
SR-1	SIDEWALL SUPPLY REGISTER - 22.5-DEGREE DEFLECTION FRONT BLADES PARALLEL TO LONG DIMENSION, REAR BLADES PARALLEL TO SHORT DIMENSION	TITUS	272FL	PER PLANS	PER PLANS	PER PLANS	ALUMINUM / BLACK	FACE-OPERABLE DAMPER		

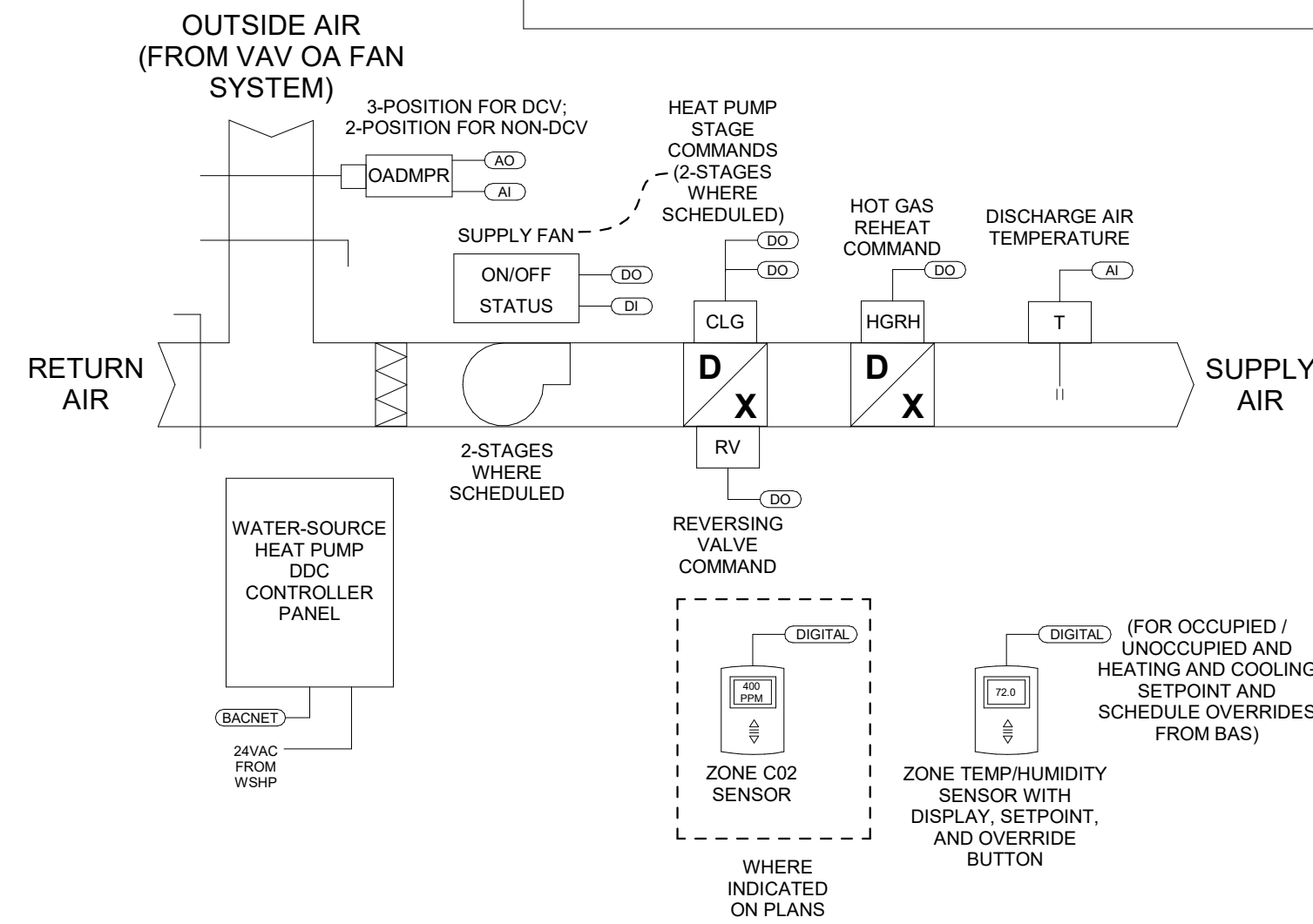
GENERAL NOTES APPLICABLE TO ALL UNITS:  
1. COORDINATE AIR DEVICE DEFLECTION ADJUSTMENTS WITH THE MECHANICAL ENGINEER DURING AIR BALANCE.  
2. PROVIDE 2" FACTORY FIBERGLASS WRAP ON ALL SUPPLY DIFFUSERS WITH BACKSIDE NOT EXPOSED TO SPACE.  
3. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.  
4. ALL AIR DEVICES ARE 4-WAY THROW UNLESS OTHERWISE NOTED IN SCHEDULES OR WITH FLOW ARROWS ON DRAWINGS.  
5. REFER TO SPECIFICATIONS FOR APPROVED ALTERNATES.  
6. BRANCH DUCT SIZE SHALL BE SAME AS NOTED DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE. PROVIDE TRANSITION WHERE DUCT SIZE DIFFERS FROM NECK SIZE.  
7. COORDINATE WITH ARCHITECT'S REFLECTED CEILING PLAN TO PROVIDE APPROPRIATE FRAME TYPE AND MOUNTING ACCESSORIES.

WHERE NOTED IN SCHEDULE:  
A) FIELD-COORDINATE ELEVATION WITH ARCHITECT AND COORDINATE COLOR WITH ARCHITECT FROM STANDARD RANGE OF COLORS BASED UPON ELEVATION DATUM.

WSHP-4 AND WSHF-5 STAGING CONTROL NOTE:  
REFER TO BOX NOTE ON M100 FOR WSHF-4 AND WSHF-5 STAGING CONTROL REQUIREMENTS.

CONTROLS CONTRACTOR SHALL PROVIDE 8 HOURS ON SITE TO ASSIST THE ENGINEER WITH FUNCTIONAL TESTING OF PROPER OPERATION OF EQUIPMENT.

EXISTING BUILDING AUTOMATION SYSTEM NOTE:  
THE EXISTING BAS SYSTEM IS JOHNSON CONTROLS.  
CONTRACTOR TO FIELD-VERIFY, PRIOR TO BID, ALL REQUIREMENTS TO ADD NEW CONTROLS SCOPE SHOWN ON DRAWINGS TO THE EXISTING BUILDING BAS CONTROL TRUNK AND VERIFY ADEQUACY OF THE EXISTING BAS SYSTEM TO ACCOMMODATE THE NEW SCOPE. IF THE EXISTING BAS INFRASTRUCTURE IS FOUND TO BE INADEQUATE, THE CONTRACTOR SHALL INFORM BOTH THE PROJECT ENGINEER AND THE PROJECT ARCHITECT OF THE INADEQUACY ALONG WITH THE ESTIMATED COST OF NECESSARY UPGRADES TO BASE-BUILDING BAS INFRASTRUCTURE PRIOR TO SUBMITTING BID.  
ALL EQUIPMENT SEQUENCES MUST AUTO-RESTART AFTER A POWER OUTAGE.



## CONTROL DIAGRAM AND SEQUENCE - WATER-SOURCE HEAT PUMP

SCALE: N.T.S.

WSHP SEQUENCE OF OPERATIONS:

MODE OF OPERATION:  
THE UNIT MODE OF OPERATION SHALL BE EITHER OCCUPIED OR UNOCCUPIED. MODE OF OPERATION SHALL BE DETERMINED BY THE BUILDING AUTOMATION SYSTEM (BAS) SCHEDULE, OVERRIDE COMMAND FROM THE BAS, OR TEMPORARY OVERRIDE COMMAND FROM THE ZONE TEMPERATURE SENSOR.

OCCUPIED OPERATION:  
THE SUPPLY FAN SHALL RUN CONTINUOUSLY FOR VENTILATION. UNIT SHALL MODULATE BETWEEN LOW AND HIGH FAN SPEEDS CORRESPONDING WITH COMPRESSOR STAGING. OA DAMPER SHALL BE OPEN.

THE SPACE TEMPERATURE SETPOINT SHALL BE ADJUSTABLE BY THE OCCUPANT AT THE THERMOSTAT BETWEEN A MINIMUM OF 68°F AND A MAXIMUM OF 78°F. THE SPACE COOLING SETPOINT SHALL BE EQUAL TO THE SPACE TEMPERATURE SETPOINT PLUS 1°F, AND THE SPACE HEATING SETPOINT SHALL BE EQUAL TO THE SPACE TEMPERATURE SETPOINT MINUS 1°F.

ON AN INCREASE IN SPACE TEMPERATURE ABOVE THE COOLING SETPOINT, THE REVERSING VALVE SHALL BE COMMANDED TO THE COOLING POSITION, AND THE HEAT PUMP COMPRESSOR SHALL BE COMMANDED ON IN STAGES AS NEEDED TO MAINTAIN THE SPACE COOLING SETPOINT. THE INITIAL OCCUPIED COOLING SETPOINT SHALL BE 72°F (ADJ).

ON A DECREASE IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT, THE REVERSING VALVE SHALL BE COMMANDED TO THE HEATING POSITION, AND THE HEAT PUMP COMPRESSOR SHALL BE COMMANDED ON IN STAGES AS NEEDED TO MAINTAIN THE SPACE HEATING SETPOINT. THE INITIAL OCCUPIED SPACE HEATING SETPOINT SHALL BE 70°F (ADJ).

WHEN THE SPACE RELATIVE HUMIDITY RISES ABOVE THE SPACE HUMIDITY SETPOINT, THE HEAT PUMP COMPRESSOR SHALL BE CONTROLLED TO COOLING MODE, AND THE HOT GAS REFRIGERANT REHEAT SHALL BE ACTIVATED TO CONTROL THE SPACE HUMIDITY AT SETPOINT. THE INITIAL ZONE HUMIDITY SETPOINT SHALL BE 55%RH (ADJ).

DEMAND-CONTROL VENTILATION (WHERE SCHEDULED):  
DURING OCCUPIED MODE, AN OUTSIDE AIR CONTROL DAMPER IN THE OUTSIDE AIR BRANCH DUCT TO THE UNIT SHALL PROVIDE THE SCHEDULED OCCUPIED MINIMUM OUTSIDE AIR RATE. WHEN THE SPACE CO2 RISES ABOVE THE HIGH CO2 LEVEL SETPOINT OF 1200PPM (ADJ), THE OUTSIDE AIR DAMPER SHALL OPEN FULLY, AND A MANUAL BALANCING DAMPER, SET DURING TAB, SHALL PROVIDE THE SCHEDULED OCCUPIED MAXIMUM OUTSIDE AIR RATE UNTIL THE SPACE CO2 HAS FALLEN BELOW 800PPM (ADJ).

UNOCCUPIED OPERATION:  
DURING UNOCCUPIED MODE, THE UNIT SHALL OPERATE AS DESCRIBED IN THE OCCUPIED MODE EXCEPT THAT THE FAN SUPPLY SHALL BE 'OFF' EXCEPT DURING A CALL FOR HEATING OR COOLING AND THE OUTSIDE AIR DAMPER SHALL BE FULLY CLOSED. DURING UNOCCUPIED MODE, THE SPACE TEMPERATURE SETPOINTS SHALL BE SUBJECT TO THE UNOCCUPIED MODE HEATING AND COOLING SETPOINTS. THE INITIAL UNOCCUPIED HEATING SETPOINT SHALL BE 65°F (ADJ). THE INITIAL UNOCCUPIED COOLING SETPOINT SHALL BE 80°F (ADJ). THE UNIT SHALL REVERT TO 'OCCUPIED MODE' BASED UPON BUILDING SCHEDULE, CO2 CALL, OR LOCAL THERMOSTAT OVERRIDE BUTTON.

WHEN THE SPACE TEMPERATURE IS BETWEEN THE UNOCCUPIED HEATING AND COOLING SETPOINTS, THE UNIT SHALL BE OFF.

SETPOINTS AND PARAMETERS:  
ALL CONTROL BANDS, SETPOINTS, SETPOINT LIMITS, SETPOINT INCREMENTAL VALUES, SETPOINT DECREMENTAL VALUES, TIME DELAYS, AND EQUIPMENT ROTATION SEQUENCES, AND OTHER PARAMETERS SHALL BE ADJUSTABLE FROM THE BAS. ALL PARAMETERS SHALL BE COMMISSIONED BY THE CONTROLS CONTRACTOR TO PROVIDE STABLE CONTROL OF ALL SYSTEMS.

BAS OVERRIDES:  
ALL LOCAL HEATING AND COOLING SCHEDULES AND SETPOINTS SHALL BE ABLE TO BE OVERRIDDEN VIA THE BUILDING BAS.

ALARM MONITORING:  
1. CONDENSATE OVERFLOW

SUPPLY FAN SCHEDULE															
TAG	DESCRIPTION	MFR	MODEL	DRIVE	FLOW (CFM)	ESP (IN. W.G.)	FAN RPM	VOLTS	PH	POWER	RLA	MOTOR HP	SONES IN/OUT	CONTROL TYPE	WEIGHT (LBS)
SF-1-1	INLINE CENTRIFUGAL	LOREN COOK	135SQN170 (VF)	DIRECT - ECM	1,620	0.5	1404	120 V	1	0.334 hp	6.2	0.5	11.5 / 10.6	DUCT STATIC PRESSURE VIA BAS	120

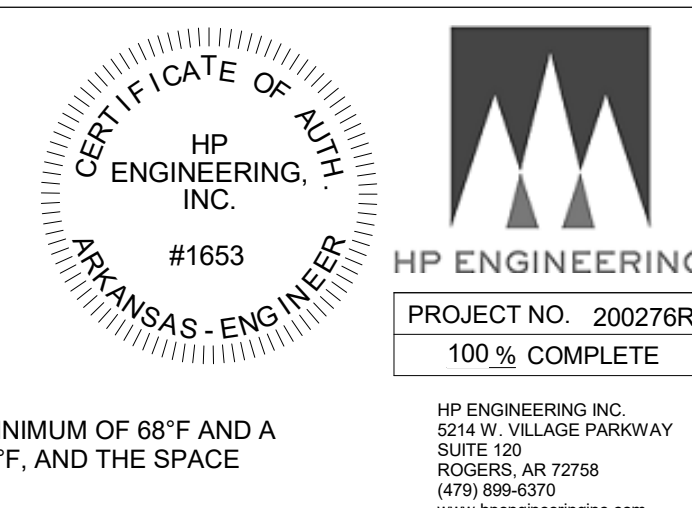
GENERAL NOTES APPLICABLE TO ALL UNITS:  
1. PROVIDE SECOND 120V POWER CONNECTION TO AIR BALANCE KIT.  
2. FACTORY-WIRED DISCONNECT SWITCH.  
3. AIR BALANCE KIT, COOK 'VFABK' OR EQUAL, WITH INTEGRAL 24V CONTROL TRANSFORMER.  
4. 18-GAUGE COATED GALVANIZED STEEL CABINET.  
5. PROVIDE DUCT STATIC PRESSURE SENSOR, BY JCI, TO BE LOCATED, INSTALLED AND WIRED BY CONTROLS CONTRACTOR TO PROVIDE BAS WITH ANALOG INPUT OF OUTSIDE AIR SUPPLY DUCT STATIC PRESSURE; PROVIDE ADJUSTABLE DUCT STATIC PRESSURE SETPOINT VIA BAS; INITIAL SETPOINT VALUE TO BE 0.5" W.G.; FINAL SETPOINT VALUE TO BE SET DURING TAB. BAS TO CONTROL SUPPLY FAN SPEED TO MAINTAIN DUCT STATIC PRESSURE WITHIN BAS SETPOINT RANGE. FAN SHALL BE COMMANDED 'OFF' WHENEVER FAN IS OPERATING AT MINIMUM SPEED AND OA DUCT STATIC PRESSURE IS ABOVE SETPOINT FOR 3 (ADJ) MINUTES. FAN SHALL BE LOCKED OUT AND REMAIN 'OFF' FOR 30 (ADJ) MINUTES AFTER BEING COMMANDED 'OFF'.  
6. RUBBER IN SHEAR ISOLATOR KIT.

EXHAUST FAN SCHEDULE															
TAG	DESCRIPTION	MFR	MODEL	DRIVE	FLOW (CFM)	ESP (IN. W.G.)	FAN RPM	VOLTS	PH	POWER	SONES IN/OUT	CONTROL TYPE	WEIGHT (LBS)		
EF-1-1	INLINE CENTRIFUGAL	LOREN COOK	100SQN170ECM	DIRECT ECM	590	0.5	1585	120 V	1	102 VA	5.9 / 7.2	BUILDING SCHEDULE VIA BAS	65		

GENERAL NOTES APPLICABLE TO ALL UNITS:  
1. PROVIDE PRE-WIRED FACTORY MOUNTED INTEGRAL DISCONNECT DEVICE.  
2. PROVIDE VARIABLE SPEED CONTROLLER (FACTORY INSTALLED IF AVAILABLE) FOR FAN BALANCING.  
3. MOUNT FAN SPEED CONTROLLER IN ACCESSIBLE LOCATION ABOVE CEILING UNLESS OTHERWISE NOTED.  
4. ON/OFF CONTROL BY USER-ADJUSTABLE SCHEDULE VIA EXISTING BAS.  
5. BACKDRAFT DAMPER.  
6. ALUMINUM BIRD SCREEN.  
7. SPRING ISOLATOR KIT.

HORIZONTAL WATER-SOURCE HEAT PUMP SCHEDULE																														
MARK	SERVES	EXISTING / NEW	MANUF.	MODEL	NOM. TONS	COM-PRESSOR STAGES	MIN FAN STAGES	GPM / MIN BRANCH PIPING SIZE (IN)	MAX WATER PRESS. DROP (FT. W.G.)	FAN MOTOR TYPE	MIN COOLING CAPACITY TOTAL / SENS. (MBH)	CONFIG.	UNIT SUPPLY CFM	MIN. SUPPLY FAN ESP (IN W.G.)	FILTER MERV RATING	OA CFM (OCCUPIED MODE) MIN / MAX	COOLING EAT DB / WB (F)	MAX COOLING LAT DB/WB (F)	APPLIED COOLING EER	COOLING EWT / MAX LWT (F)	MIN. HEATING CAPACITY (MBH)	HEATING EAT / MAX LAT (F)	HEATING EWT / MIN LWT (F)	APPLIED COP	VOLTS	PH	FLA	MCA	MOCP	NEUTRAL WIRE? (Y/N)
WSHP-1-1	ENTRY / VESTIBULE	NEW	DAIKIN	WGTH0191	1.5	2	1	4.5 / 0.75"	10.5	ECM (CONST. CFM)	15.7 / 12.7	HORIZONTAL	600	0.5	8	0 / 0	73.8 / 61.8	55	13.5	90 / 100.4	24.2	73.2 / 110	75 / 65	5.5	208-230	1	9.4 A	11 A	15 A	YES
WSHP-1-2	BREAK ROOM	NEW	DAIKIN	WGTH0261	2	2	2	6 / 1"	10.5	ECM (CONST. CFM)	22.1 / 15.4	HORIZONTAL	800	0.5	8	85 / 85	75.6 / 64.2	55	14	90 / 100.4	18.6	65.2 / 102	75 / 65	6.1	208-230	1	14.7 A	18 A	25 A	NO
WSHP-1-3	CORR 101 NORTH, CORR 108A	NEW	DAIKIN	WGTH0321	2.5	2	2	7.5 / 1"	10.5	ECM (CONST. CFM)	29.1 / 16.6	HORIZONTAL	1000	0.5	8	90 / 175	77.5 / 67.3	55	14	90 / 100.4	25.3	56.1 / 95	75 / 65	6	208-230	1	18.1 A	21 A	30 A	NO
WSHP-1-4	MIXED-USE AUDITORIUM 107	NEW	DAIKIN	WGTH0491	4	2	2	12 / 1.25"	10.5	ECM (CONST. CFM)	48 / 29.6	HORIZONTAL	1600	0.5	8	45 / 270	77.1 / 66.5	55	14	90 / 100.4	42.8	58.1 / 95	75 / 65	5.9	460	3	11.9 A	14 A	15 A	YES
WSHP-1-5	MIXED-USE AUDITORIUM 107	NEW	DAIKIN	WGTH0491	4	2	2	12 / 1.25"	10.5	ECM (CONST. CFM)	48 / 29.6	HORIZONTAL	1600	0.5	8	45 / 270	77.1 / 66.5	55	14	90 / 100.4	42.8	58.1 / 95	75 / 65	5.9	460	3	11.9 A	14 A	15 A	YES
WSHP-1-6	VRIAR 101C	NEW	DAIKIN	WGTH0381	3	2	2	9 / 1.25"	10.5	ECM (CONST. CFM)	34.6 / 23	HORIZONTAL	1250	0.5	8	30 / 145	75.9 / 64.8	55	14	90 / 100.4	29.1	63.8 / 100	75 / 65	6.3	460	3	9.8 A	11 A	15 A	YES
WSHP-1-7	VRIAR 101B	NEW	DAIKIN	WGTH0381	3	2	2	9 / 1.25"	10.5	ECM (CONST. CFM)	33.6 / 22	HORIZONTAL	1250	0.5	8	30 / 140	75.9 / 64.8	55	14	90 / 100.4	28.2	63.8 / 100	75 / 65	6.3	460	3	9.8 A	11 A	15 A	YES
WSHP-1-8	VRIAR 101A	NEW	DAIKIN	WGTH0411	3.5	2	2	10.5 / 1.25"	10.5	ECM (CONST. CFM)	39.3 / 25.7	HORIZONTAL	1400	0.5	8	35 / 165	76 / 64.9	55	14	90 / 100.4	33	63.5 / 100	75 / 65	5.8	208-230	3	25.2 A	30 A	45 A	NO
WSHP-1-9	CORR 101 SOUTH, CORR 108B	NEW	DAIKIN	WGTH0381	3	2	2	9 / 1.25"	10.5	ECM (CONST. CFM)	33.1 / 19.6	HORIZONTAL	1250	0.5	8	80 / 185	77.1 / 66.8	55	14	90 / 100.4	28.9	58.0 / 95	75 / 65	6.3	208-230	1	20.5 A	24 A	35 A	NO
WSHP-1-10	QUIET WORKING 117	NEW	DAIKIN	WGTH0441	3.5	2	2	10.5 / 1.25"	10.5	ECM (CONST. CFM)	38.4 / 26.3	HORIZONTAL	1400	0.5	8	115 / 165	75.4 / 64.1	55	14	90 / 100.4	33.6	64.7 / 100	75 / 65	5.8	208-230	1	25.2 A	30 A	45 A	NO
WSHP-1-11	STORAGE 118	EXISTING	MCQUAY	WCW4019	1.5	1	1	4.5 / 0.75"	10.5	ECM (CONST. CFM)	15.1 / 11.9	HORIZONTAL	600	0.5	8	55 / 55	74.2 / 60.8	55	-	90 / 100.4	24.6	73.5 / 110	75 / 65	-	277	1	7.0 A	9 A	15 A	YES

GENERAL NOTES APPLICABLE TO ALL UNITS:  
1. PROVIDE PREMIUM EFFICIENCY UNITS WITH SCROLL COMPRESSORS.  
2. PROVIDE WITH CONSTANT AIRFLOW ECM FANS.  
3. PROVIDE WITH HOT GAS REHEAT.  
4. PROVIDE WITH CONTROL TRANSFORMER(S) AS REQUIRED.  
5. PROVIDE WITH ANTI-MICROBIAL CLOSED CELL FOAM INSULATION.  
6. PROVIDE FACTORY-MOUNTED NON-FUSED DISCONNECT.  
7. PROVIDE CO2 SENSOR WHERE INDICATED FOR OA DAMPER CONTROL.  
8. PROVIDE SUPPLY AND RETURN ISOLATION BALL VALVES, STAINLESS STEEL BALL VALVES AND 1/2" TO 1" LONGER IS REQUIRED ON 1" DIAMETER PIPING, NEW OR REINFORCED FLEXIBLE HOSE WITH BRAIDED STAINLESS STEEL OUTER COVERING.  
9. PROVIDE WITH BTL-CERTIFIED BACNET DDC CONTROLLER. PROVIDED, INSTALLED AND WIRED BY CONTROLS CONTRACTOR. WITH REMOTE TEMPERATURE AND HUMIDITY SENSORS WITH OCCUPANCY OVERRIDE BUTTON.  
10. UNITS SHALL CONTROL ZONE HUMIDITY VIA A FACTORY-PROGRAMMED DE-HUMIDIFICATION SEQUENCE CONTROLLING ONE OF A COMBINATION TEMPERATURE AND HUMIDITY SENSOR WITHIN THE ZONE SERVED.  
11. RE-CONNECT TO EXISTING CONDENSER WATER LOOP PIPING PER PLANS.  
12. COORDINATE DISCHARGE ORIENTATION AND RETURN AIR (FILTER ACCESS) SIDE WITH PLANS AND FIELD CONDITIONS.  
13. PROVIDE FACTORY WARRANTY: 1-YR PARTS (PARTS ONLY) AND 5-YEAR COMPRESSOR (PARTS ONLY).  
14. SCHEDULED PERFORMANCE BASED UPON 90 F EWT COOLING AND 75 F EWT HEATING.  
15. PROVIDE HORIZONTAL UNITS WITH FACTORY-MOUNTED HANGER BRACKETS AND RUBBER ISOLATOR KITS.  
16. 2-SPEED FAN (WHERE SCHEDULED) SPEED CONTROL TO BE LINKED WITH COMPRESSOR STAGING.  
17. PROVIDE WITH PREMIUM ACOUSTIC SOUND PACKAGE.  
18. PROVIDE GRIWOLD AUTOMATIC FLOW CONTROL VALVE ON RETURN PIPING. MAXIMUM VALVE PRESSURE DROP AT SCHEDULED FLOW TO BE 2.75 FEET W.G.  
19. PROVIDE WITH FACTORY-WIRED 2-WAY MOTORIZED 90-Degree CONTROL VALVE.  
20. NOT USED.  
21. PROVIDE WITH TEMPERATURE SENSOR PROVIDED, INSTALLED AND WIRED BY CONTROLS CONTRACTOR.  
22. PROVIDE WITH AUXILIARY DRAIN PAN WITH MOISTURE SENSOR FOR UNIT SHUT-OFF. SENSOR TO BE PROVIDED, INSTALLED, AND WIRED BY CONTROLS CONTRACTOR.  
23. BALANCE MANUAL OUTSIDE AIR DAMPER TO THE MAXIMUM SCHEDULED OUTSIDE AIR VALUE WITH CONTROL DAMPER FULLY OPEN; CONTROL DAMPER TO BE USED TO BALANCE OA TO 'OCCUPIED MINIMUM' AND UNOCCUPIED (FULLY CLOSED) AIRFLOWS.  
24. FILTER: 2" PLEATED THROU-AWAY, MERV 8, COORDINATE FILTER BOX ACCESS DOOR ORIENTATION WITH SITE CONDITIONS TO ENSURE FULL FILTER ACCESS CLEARANCE IS ALLOTTED PRIOR TO ORDERING. MAX PRESSURE DROP 0.1" WC.  
25. WSHF-1-11 SHALL BE EXISTING LEVEL-3 WSHF-302, REMOVED AND PROVIDED TO OWNER FOR RE-USE IN PACKAGE-1 SCOPE. T-STAT SHALL BE EXISTING T-STAT-WSHP-302 PROVIDED TO OWNER ALONG WITH WSHF IN PACKAGE-1 SCOPE.



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GLOBAL CAMPUS  
FIRST FLOOR  
RENOVATION

UNIVERSITY OF ARKANSAS  
FAYETTEVILLE, AR

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M005