

## ARCHITECTS SUPPLEMENTARY INSTRUCTIONS

Project: Cape Henlopen Middle School	Project No.: 2020-14	Request Date: 10/4/2022	ASI NO: 005R
Architects: ABHA Architects, Inc. 1621 N. Lincoln Street, Wilmington, DE		Reason for Request:  Clarification & drawing revisions	
To: Dean Johnson Richard Y. Johnson & Son 18404 Johnson Road, P.O. Box 105 Lincoln, DE 19960			
Description: Revisions to the electrical lighting plans & lighting schedule.			
Attachments: EL-111, EL-112, EL-121, EL-122, EL-131, EL-132, E-504, E-512, E-513, E-514, and E-517			
Issued by: Bryan Williams		Title: Project Architect	
ASI 005R is to replace ASI 005. See attached for the Electrical Engineer's narrative and drawings.			





**Gipe Associates, Inc.**  
CONSULTING ENGINEERS

W.O.#: 20050

October 3, 2022

Bryan Williams, AIA  
ABHA Architects  
1621 North Lincoln Street  
Wilmington, Delaware 19806

Project: Cape Henlopen Middle School  
Reference: ASI-005R

This ASI forms a part of the contract documents and modified the original bidding documents dated March 18, 2022.

This ASI consists of two (2) pages and the attached revised drawings.

**CHANGES TO DRAWINGS:**

1. Sheet EL-111 – FIRST FLOOR PLAN – AREA ‘A’ – LIGHTING  
**REVISE** lighting and circuiting in Corridor A100B.  
**REVISE** two (2) type ‘W4E’ luminaires in Stair A to type ‘W4’.  
**REVISE** four (4) type “L4E” luminaires in Elev. EL1 to type ‘L4’.
2. Sheet EL-112 – FIRST FLOOR PLAN – AREA ‘B’ – LIGHTING  
**REVISE** two (2) type ‘W4E’ luminaires in Stair B to type ‘W4’.
3. Sheet EL-121 – SECOND FLOOR PLAN – AREA ‘A’ – LIGHTING  
**REVISE** two (2) type ‘W4E’ luminaires in Stair A to type ‘W4’.
4. Sheet EL-122 – SECOND FLOOR PLAN – AREA ‘B’ – LIGHTING  
**REVISE** two (2) type ‘W4E’ luminaires in Stair B to type ‘W4’.
5. Sheet EL-131 – THIRD FLOOR PLAN – AREA ‘A’ – LIGHTING  
**REVISE** two (2) type ‘W4E’ luminaires in Stair A to type ‘W4’.  
**REVISE** four (4) type “L4E” luminaires in Elev. EL3 to type ‘L4’.
6. Sheet EL-132 – THIRD FLOOR PLAN – AREA ‘B’ – LIGHTING  
**REVISE** two (2) type ‘W4E’ luminaires in Stair B to type ‘W4’.
7. Sheet E-504 – SCHEDULES – ELECTRICAL  
**REVISE** relay #3 on schedule for INV-3.



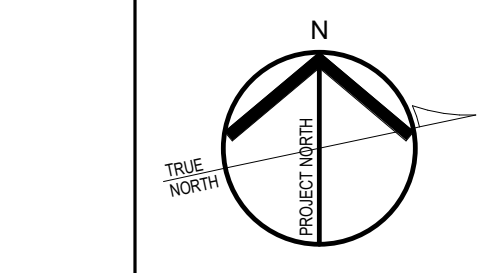
8. Sheet E-512 – SCHEDULES – ELECTRICAL  
**REVISE** VA rating, dimensions, and connected load for INV-3 on Inverter Schedule.
9. Sheet E-513 – SCHEDULES – ELECTRICAL  
**REVISE** emergency option for lighting fixture type 'L4' on Interior Lighting Fixture Schedule to "NONE".  
**REVISE** lighting fixture type 'L4E' on Interior Lighting Fixture Schedule to "NOT USED".
10. Sheet E-514 – SCHEDULES - ELECTRICAL  
**REVISE** lighting fixture type 'W2' on Interior Lighting Fixture Schedule to "NOT USED".  
**REVISE** last sentence of description for fixture type 'W4' to delete "with spackle flange".  
**REVISE** lighting fixture type 'W4E' on Interior Lighting Fixture Schedule to "NOT USED".
11. Sheet E-517 – SCHEDULES - ELECTRICAL  
**ADD** lighting fixture types "TTT2" and "TTT4" to Interior Lighting Fixture Schedule.  
**ADD** note 15 to Interior Lighting Fixture Schedule.

**END OF ASI-005R**

Enclosures:

EL-111  
EL-112  
EL-121  
EL-122  
EL-131  
EL-132  
E-504  
E-512  
E-513  
E-514  
E-517





1 FIRST FLOOR PLAN - AREA 'A' - LIGHTING  
1/8" = 1'-0"

10/3/2022 1:45:25 PM

E

D

C

B

A

1

2

3

4

5

6



- GENERAL NOTES**  
(APPLY TO ALL LIGHTING DRAWINGS)
- CONTROL WIRING FOR SWITCHES, OCCUPANCY/VACANCY SENSORS, DAYLIGHT SENSORS, AND 0-10V DIMMING RELAYS IS NOT SHOWN ON FLOOR PLANS. REFER TO DETAILS FOR TYPICAL WIRING DIAGRAMS. PROVIDE ALL CONTROL WIRING REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
  - LIGHTING BRANCH CIRCUITS WITH ASSOCIATED 0-10V CONTROLS SHALL USE LUMINAIRE CABLE WHERE MC CABLE WOULD BE USED (E.G. ABOVE ACCESSIBLE CEILING). SUPPORTING CONTROL WIRING TO MC CABLE IS NOT PERMITTED PER NEC 300.12.
  - EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES SHALL BE SERVED BY UNSWITCHED (HOT) PHASE CONDUCTOR FROM BRANCH CIRCUIT/RELAY SERVING THE SPACE.
  - REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF LIGHTING FIXTURES AND OTHER CEILING DEVICES.
  - IN AREAS THAT HAVE DAYLIGHT SENSORS WITH NO DASHED LINES, THE ENTIRE AREA SHALL BE CONTROLLED BY THE DAYLIGHT SENSOR. IN AREAS THAT HAVE DAYLIGHT SENSORS WITH A DASHED LINE, ONLY FIXTURES WITHIN THE DASHED LINES SHALL BE CONTROLLED BY THE DAYLIGHT SENSOR.
  - POWER PACK(S) ARE SHOWN ADJACENT TO LIGHTING FIXTURES BEING SERVED FOR DRAWING CLARITY ONLY. GROUP POWER PACKS TOGETHER ABOVE CEILING AS REQUIRED.

- KEYNOTES**
- MOUNT EMERGENCY LIGHTING FIXTURE APPROXIMATELY 13'-6" AFF. FIELD COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT.
  - FIELD COORDINATE LOCATION AND MOUNTING HEIGHT OF SWITCH FOR ELEVATOR PIT LIGHTS TO BE ON LADDER SIDE OF PIT, READILY ACCESSIBLE FROM THE PIT ACCESS DOOR.
  - LIGHTING FIXTURE TO BE LOCATED BELOW ELEVATOR WHEN ON COMPRESSED BUFFERS. FIELD COORDINATE LOCATION AND MOUNTING HEIGHT (TYPICAL FOR ALL FIXTURES IN ELEVATOR).
  - SEE SITE PLAN FOR EXTERIOR LIGHTING IN THIS AREA.
  - PROVIDE LOCKABLE DUST PROOF COVER FOR SWITCH PER SPECIFICATIONS.
  - MOUNT DAYLIGHT SENSOR SO THE SAME IS ALIGNED WITH THE BOTTOM OF THE LIGHTING FIXTURES IN SPACE.
  - LIGHTED TOGGLE SWITCH, LIT WHEN 'ON' FOR EXTERIOR WALL PACK ON ROOF ABOVE. PROVIDE LABEL TO READ 'ROOF LIGHTS'.
  - EXTEND BRANCH CIRCUIT WIRING UP TO WALL PACK ON ROOF. SEE SHEET EL-121 FOR CONTINUATION.
  - EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE IN ADJACENT COMMONS AREA. SEE SHEET EL-112 FOR CONTINUATION.
  - MOUNT LIGHTING FIXTURE APPROXIMATELY 8'-0" ABOVE STAIR LANDING.
  - EXTEND BRANCH CIRCUIT WIRING TO NORMAL LIGHTING FIXTURE AT TOP OF STAIRWELL. SEE SHEET EL-121 FOR CONTINUATION.
  - EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE WIRED THROUGH INVERTER AT TOP OF STAIRWELL. SEE SHEET EL-121 FOR CONTINUATION.
  - PROVIDE U-CHEMEL FRAMING SUPPORT BETWEEN STRUCTURE AS REQUIRED TO SUPPORT LIGHT HOIST. PAINT FRAMING TO MATCH STRUCTURE.
  - PROVIDE MOTORIZED LIGHT HOIST FOR WRESTLING SPOT LIGHT. SEE DETAILS FOR ADDITIONAL INFORMATION.
  - POWER CORD AND LIFT CABLE SHALL BE ROUTED FROM LIGHT HOIST TO ABOVE SPEAKER CLUSTER AND DOWN THROUGH CENTER OF SPEAKER CLUSTER TO WRESTLING SPOT LIGHT FIXTURE. PROVIDE ALL PULLEYS, LOFTBLOCK ASSEMBLIES, ETC. AS REQUIRED.
  - ELECTRICAL CORD REEL FURNISHED WITH WRESTLING LIGHT HOIST. SEE DETAILS FOR ADDITIONAL INFORMATION.
  - PROVIDE WIRING FROM LIGHT HOIST CONTROL BOX TO RAISE/LOWER SWITCH PER MANUFACTURER'S INSTRUCTIONS.
  - SLIDE CONTROL WALL DIMMER FURNISHED WITH CASEWORK. COORDINATE ROUGH-IN REQUIREMENTS WITH CASEWORK INSTALLER. PROVIDE WIRING BETWEEN SWITCH AND POWER SUPPLY PER MANUFACTURER'S INSTRUCTIONS.
  - DIMMABLE POWER SUPPLY FURNISHED WITH CASEWORK. COORDINATE ROUGH-IN REQUIREMENTS WITH CASEWORK INSTALLER.
  - PROVIDE VANDAL SHIELD OVER TOUCH SCREEN.
  - NETWORK TOUCH SCREEN FOR OVERALL LIGHTING FIXTURE OVERRIDES. SEE NETWORK WALL SWITCH SCHEDULE AND SEQUENCES OF OPERATION FOR ADDITIONAL INFORMATION. PROVIDE VANDAL SHIELD OVER TOUCH SCREEN.
  - PROVIDE KEYS OPERATION SWITCH FOR WRESTLING SPOTLIGHT HOIST. FIELD COORDINATE EXACT LOCATION WITH OWNER. LABEL SWITCH TO IDENTIFY CIRCUIT AND LOAD CONTROLLED, I.E. 'WRESTLING LIGHT HOIST'.
  - PROVIDE WIRING IN 3/4" CONDUIT FROM RAISE/LOWER SWITCH TO LIGHT HOIST CONTROL BOX PER MANUFACTURER'S INSTRUCTIONS.



1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

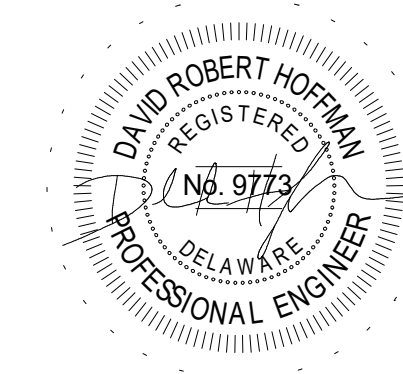
Pilottown Engineering  
Structural Engineer

Activitas, Inc.  
Landscape Architect

GIPE Associates  
MEP Engineer

Stages  
Theater & Acoustic Consultant

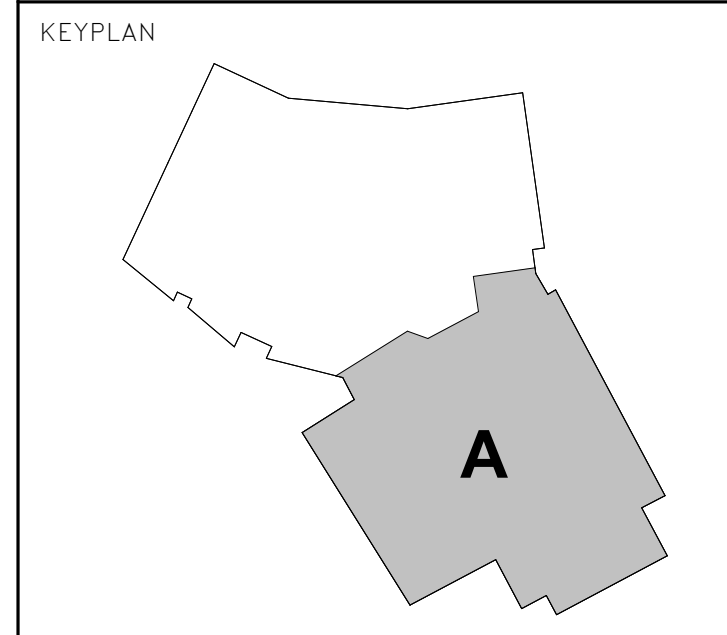
Corsi Associates  
Food Service Consultant



PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT  
1270 KINGS HWY  
LEWES, DE 19585



MARK	DATE	DESCRIPTION
2	10/03/2022	ASI--005R
1	05/17/2022	CONFORMANCE SET

PROJECT NUMBER: 2020-14  
FILE NAME: CHMS\_Arch\_v2020.rvt  
DRAWN BY: MPV  
CHECKED BY: CDH

The professional services of ABHA Architects, Inc. are undertaken for and performed in the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.

These documents are owned by ABHA Architects, Inc. and shall not be used without written permission. Copyright ABHA Architects, Inc. © 2021

SHEET TITLE  
FIRST FLOOR PLAN -  
AREA 'A' - LIGHTING

EL-111

0 4' 8' 16'



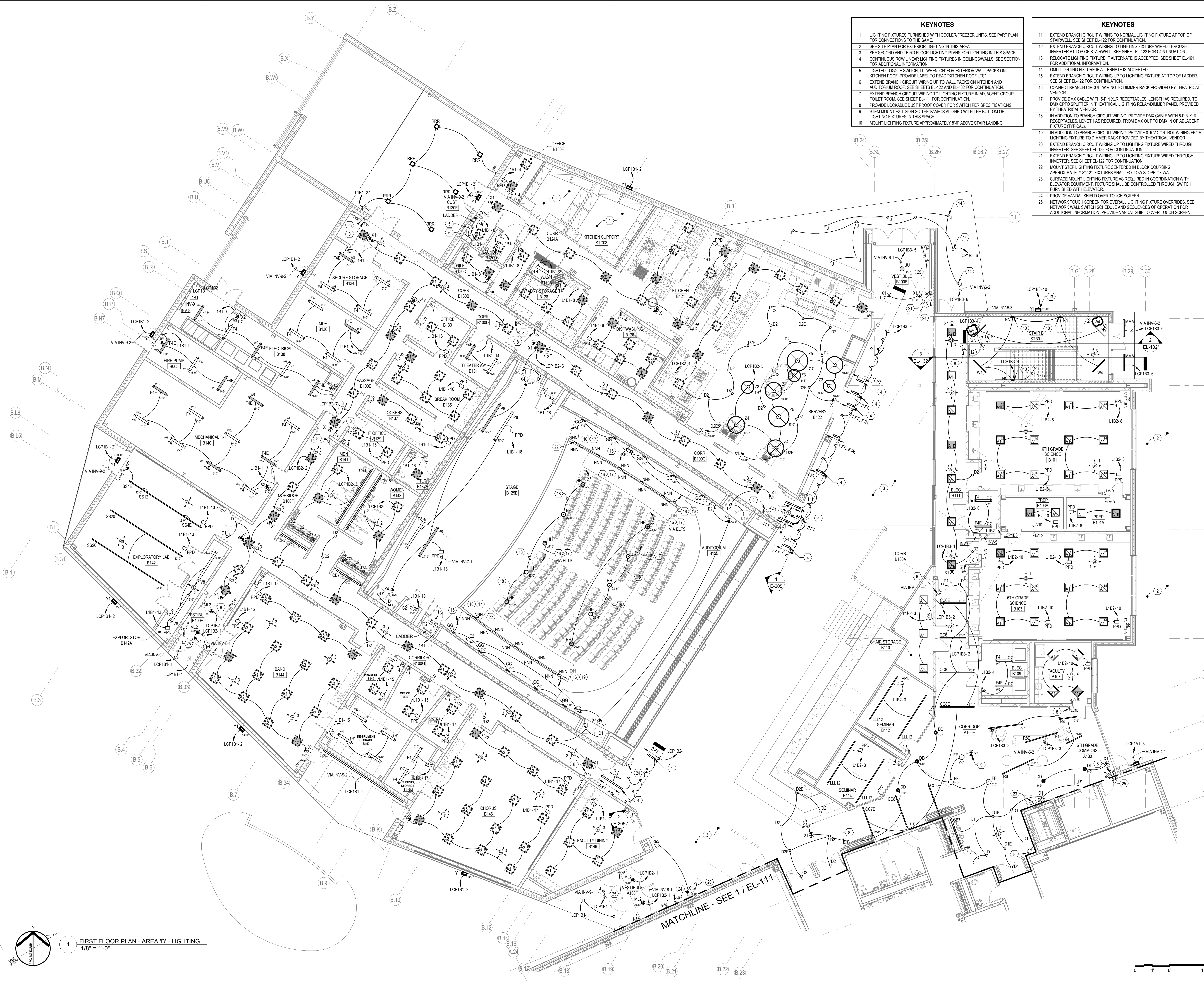
E

D

C

B

A



KEYNOTES	
1	LIGHTING FIXTURES FURNISHED WITH COOLER/FREEZER UNITS. SEE PART PLAN FOR CONNECTIONS TO THE SAME.
2	SEE SITE PLAN FOR EXTERIOR LIGHTING IN THIS AREA.
3	SEE SECOND AND THIRD FLOOR LIGHTING PLANS FOR LIGHTING IN THIS SPACE.
4	CONTINUOUS ROW LINEAR LIGHTING FIXTURES IN CEILING/WALLS. SEE SECTION FOR ADDITIONAL INFORMATION.
5	LIGHTED TOGGLE SWITCH, LIT WHEN ON, FOR EXTERIOR WALL PACKS ON KITCHEN ROOF. PROVIDE LABEL TO READ 'KITCHEN ROOF 15'.
6	EXTEND BRANCH CIRCUIT WIRING UP TO WALL PACKS ON KITCHEN AND AUDITORIUM ROOF. SEE SHEETS EL-122 AND EL-132 FOR CONTINUATION.
7	EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE IN ADJACENT GROUP TOILET ROOM. SEE SHEET EL-111 FOR CONTINUATION.
8	PROVIDE LOCKABLE DUST PROOF COVER FOR SWITCH PER SPECIFICATIONS.
9	STEM MOUNT EXIT SIGN SO THE SAME IS ALIGNED WITH THE BOTTOM OF LIGHTING FIXTURES IN THIS SPACE.
10	MOUNT LIGHTING FIXTURE APPROXIMATELY 8'-0" ABOVE STAIR LANDING.

KEYNOTES	
11	EXTEND BRANCH CIRCUIT WIRING TO NORMAL LIGHTING FIXTURE AT TOP OF STAIRWELL. SEE SHEET EL-122 FOR CONTINUATION.
12	EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE WIRED THROUGH INVERTER AT TOP OF STAIRWELL. SEE SHEET EL-122 FOR CONTINUATION.
13	RELOCATE LIGHTING FIXTURE IF ALTERNATE IS ACCEPTED. SEE SHEET EL-161 FOR ADDITIONAL INFORMATION.
14	OMIT LIGHTING FIXTURE IF ALTERNATE IS ACCEPTED.
15	EXTEND BRANCH CIRCUIT WIRING UP TO LIGHTING FIXTURE AT TOP OF LADDER. SEE SHEET EL-122 FOR CONTINUATION.
16	CONNECT BRANCH CIRCUIT WIRING TO DIMMER RACK PROVIDED BY THEATRICAL VENDOR.
17	PROVIDE DMX CABLE WITH 5-PIN XLR RECEPTACLES. LENGTH AS REQUIRED. TO DMX OPTO SPLITTER IN THEATRICAL LIGHTING RELAY/DIMMER PANEL PROVIDED BY THEATRICAL VENDOR.
18	IN ADDITION TO BRANCH CIRCUIT WIRING, PROVIDE DMX CABLE WITH 5-PIN XLR RECEPTACLES, LENGTH AS REQUIRED, FROM DMX OUT TO DMX IN OF ADJACENT FIXTURE (TYPICAL).
19	IN ADDITION TO BRANCH CIRCUIT WIRING, PROVIDE 0-10V CONTROL WIRING FROM LIGHTING FIXTURE TO DIMMER RACK PROVIDED BY THEATRICAL VENDOR.
20	EXTEND BRANCH CIRCUIT WIRING UP TO LIGHTING FIXTURE WIRED THROUGH INVERTER. SEE SHEET EL-132 FOR CONTINUATION.
21	EXTEND BRANCH CIRCUIT WIRING UP TO LIGHTING FIXTURE WIRED THROUGH INVERTER. SEE SHEET EL-122 FOR CONTINUATION.
22	MOUNT STEP LIGHTING FIXTURE CENTERED IN BLOCK COURSING, APPROXIMATELY 8'-12". FIXTURES SHALL FOLLOW SLOPE OF WALL.
23	SURFACE MOUNT LIGHTING FIXTURE AS REQUIRED IN COORDINATION WITH ELEVATOR EQUIPMENT. FIXTURE SHALL BE CONTROLLED THROUGH SWITCH FURNISHED WITH ELEVATOR.
24	PROVIDE VANDAL SHIELD OVER TOUCH SCREEN.
25	NETWORK TOUCH SCREEN FOR OVERALL LIGHTING FIXTURE OVERRIDES. SEE NETWORK WALL SWITCH SCHEDULE AND SEQUENCES OF OPERATION FOR ADDITIONAL INFORMATION. PROVIDE VANDAL SHIELD OVER TOUCH SCREEN.



1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

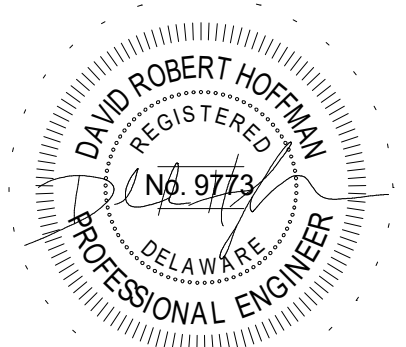
Pilottown Engineering  
Structural Engineer

Activitas, Inc.  
Landscape Architect

GIPE Associates  
MEP Engineer

Stages  
Theater & Acoustic Consultant

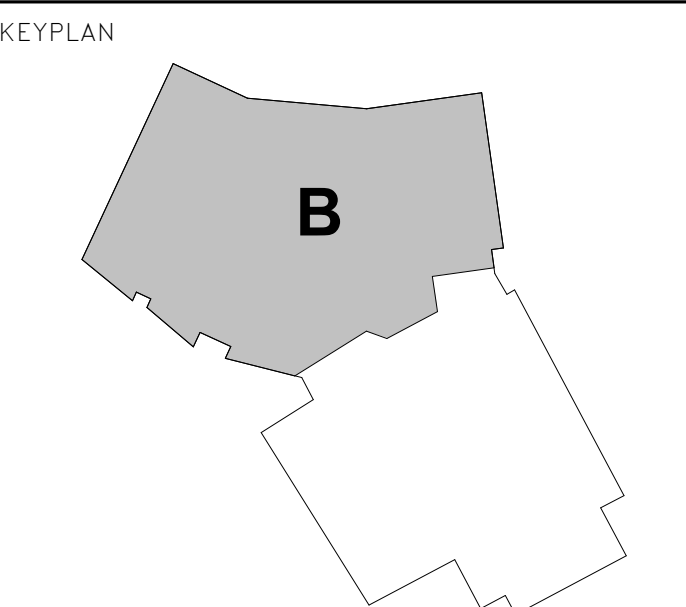
Corsi Associates  
Food Service Consultant



PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT  
1270 KINGS HWY  
LEWES, DE 19585



MARK	DATE	DESCRIPTION
2	10/03/2022	ASI--005R
1	05/17/2022	CONFORMANCE SET
	04/13/2022	ADDENDUM 2

PROJECT NUMBER: 2020-14  
FILE NAME: CHMS\_Arch\_v2020.rvt  
DRAWN BY: MPV  
CHECKED BY: CDH

The professional services of ABHA Architects, Inc. are undertaken for and performed in the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.

SHEET TITLE  
FIRST FLOOR PLAN -  
AREA 'B' - LIGHTING

EL-112

1 FIRST FLOOR PLAN - AREA 'B' - LIGHTING  
1/8" = 1'-0"

0 4' 8' 16'





1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302 . 658 . 6426  
(F) 302 . 658 . 8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

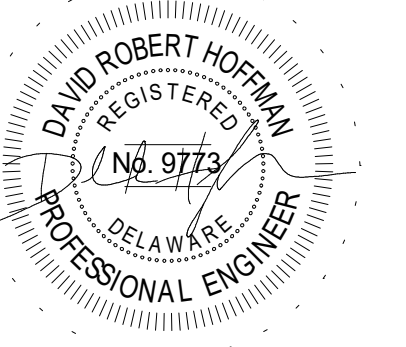
Pilottown Engineering  
Structural Engineer

Activitas, Inc.  
Landscape Architect

GIPE Associates  
MEP Engineer

Stages  
Theater & Acoustic Consultant

Corsi Associates  
Food Service Consultant

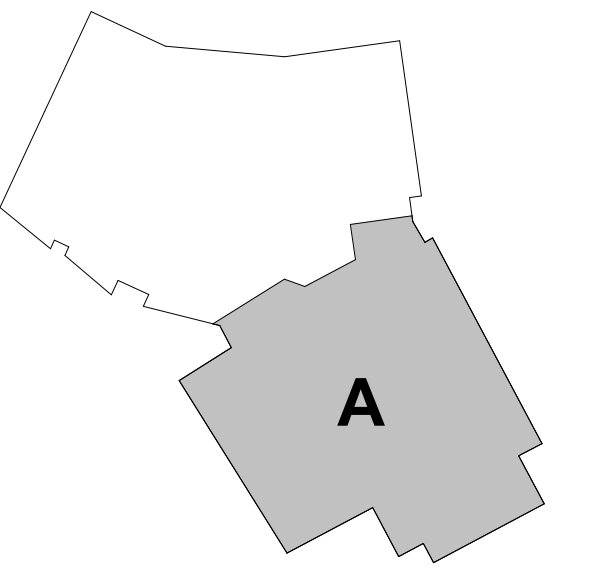


PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

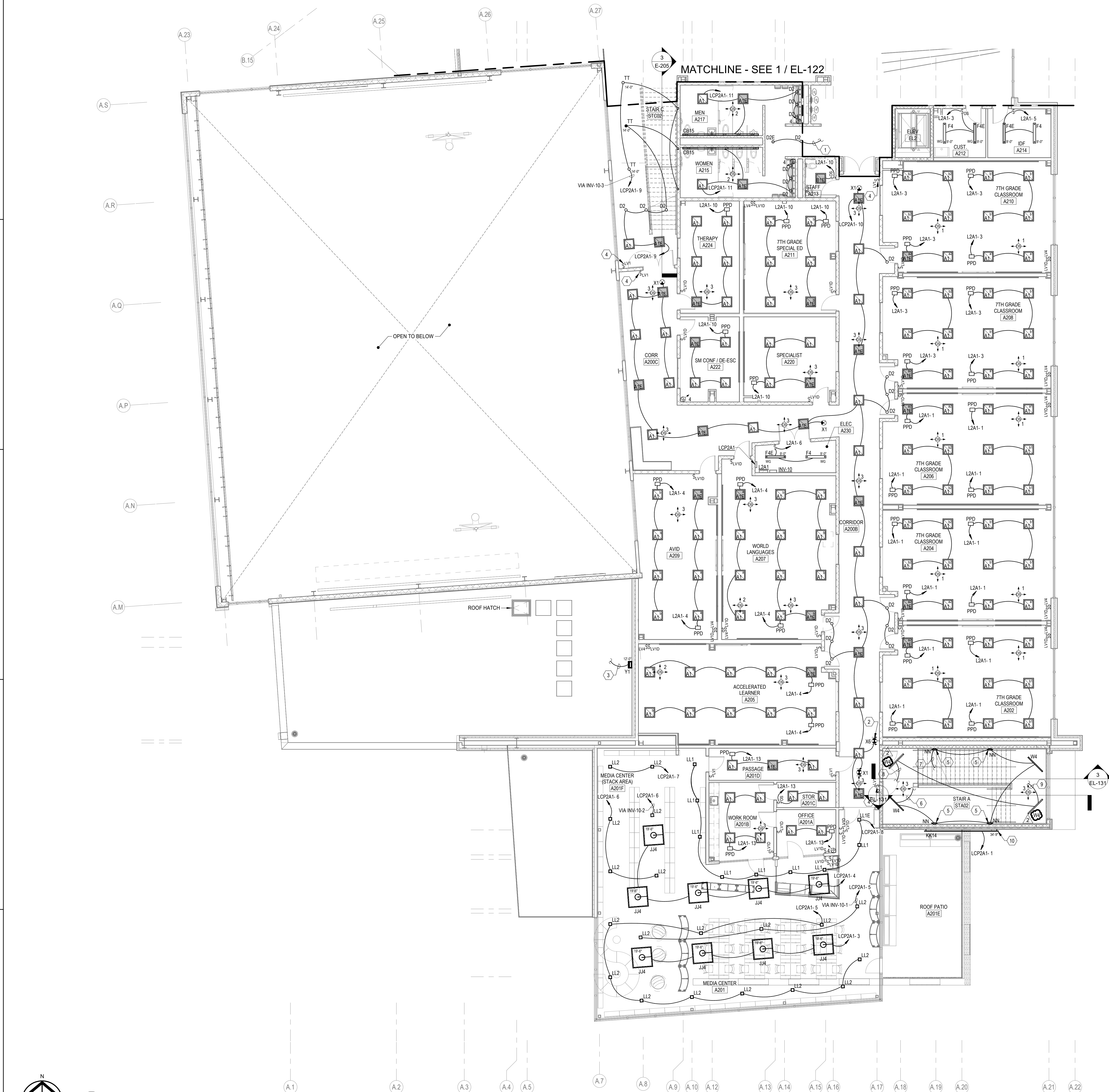
OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT  
1270 KINGS HWY  
LEWES, DE 19585

KEYPLAN



2	10/03/2022	ASI--005R
1	05/17/2022	CONFORMANCE SET
MARK	DATE	DESCRIPTION
PROJECT NUMBER: 2020-14		
FILE NAME: CHMS_Arch_v2020.rvt		
DRAWN BY: MPV		
CHECKED BY: CDH		

# EL-121





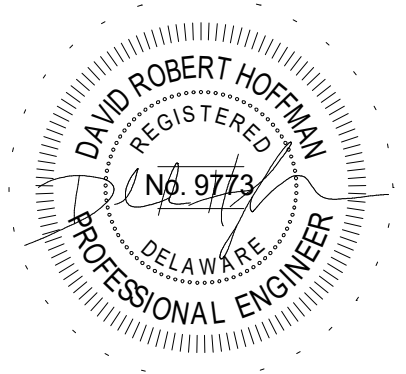


KEYNOTES	
1	AREA OF REFUGE ILLUMINATED SIGNAGE. INSTALL WITH BOTTOM OF SIGNAGE NO LESS THAN 60" AFF AND TOP OF SIGNAGE NO MORE THAN 80" AFF.
2	EXTEND BRANCH CIRCUIT WIRING UP TO WALL PACKS ON AUDITORIUM ROOF. SEE SHEET EL-121 FOR CONTINUATION.
3	EXTEND BRANCH CIRCUIT WIRING DOWN TO LIGHTED TOGGLE SWITCH IN CUST B100E. SEE SHEET EL-112 FOR CONTINUATION.
4	PROVIDE LOCKABLE DUST PROOF COVER FOR SWITCH PER SPECIFICATIONS.
5	EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE IN ADJACENT GROUP TOILET ROOM. SEE SHEET EL-121 FOR CONTINUATION.
6	MOUNT LIGHTING FIXTURE APPROXIMATELY 8'-0" ABOVE STAIR LANDING.
7	EXTEND BRANCH CIRCUIT WIRING TO NORMAL LIGHTING FIXTURE AT BOTTOM OF STAIRWELL. SEE SHEET EL-112 FOR CONTINUATION.
8	EXTEND BRANCH CIRCUIT WIRING TO NORMAL LIGHTING FIXTURE AT TOP OF STAIRWELL. SEE SHEET EL-132 FOR CONTINUATION.
9	EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE WIRED THROUGH INVERTER AT BOTTOM OF STAIRWELL. SEE SHEET EL-112 FOR CONTINUATION.
10	EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE WIRED THROUGH INVERTER AT TOP OF STAIRWELL. SEE SHEET EL-132 FOR CONTINUATION.
11	EXTEND BRANCH CIRCUIT WIRING DOWN TO LIGHTING FIXTURE AT BOTTOM OF LAUNDRY. SEE SHEET EL-112 FOR CONTINUATION.
12	EXTEND BRANCH CIRCUIT WIRING TO EXIT SIGN BELOW. SEE SHEET EL-112 FOR CONTINUATION.
13	RELOCATE LIGHTING FIXTURE IF ALTERNATE IS ACCEPTED.
14	NETWORK TOUCH SCREEN FOR CAFETERIA LIGHTING FIXTURE OVERRIDES. SEE NETWORK WALL SWITCH SCHEDULE AND SEQUENCES OF OPERATION FOR ADDITIONAL INFORMATION. PROVIDE VANDAL SHIELD OVER TOUCH SCREEN.
15	PROVIDE CUSTOM OVERALL FIXTURE HEIGHT, CUSTOM SPACING BETWEEN TIERS, CUSTOM ANGLE/TILT OF TIERS. COORDINATE WITH ARCHITECTURAL ELEVATIONS.



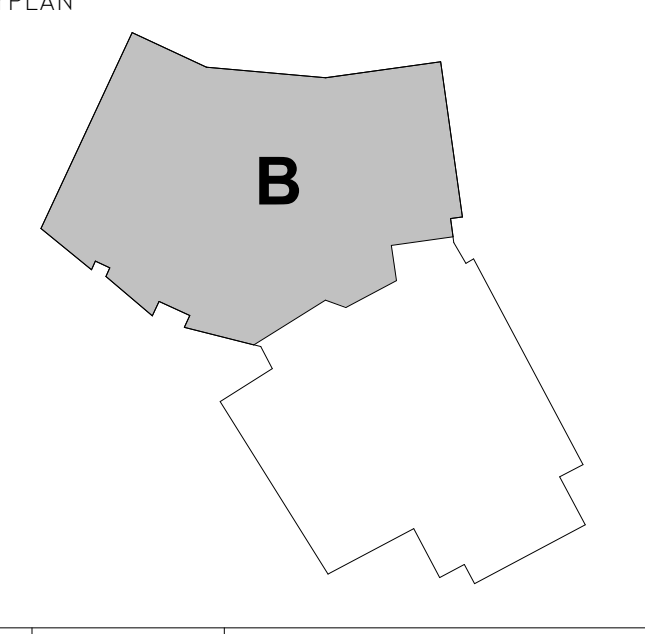
1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

- CONSULTANTS
- Davis Bowen & Friedel, Inc.  
Civil Engineer  
1 Park Avenue  
Miford, DE 19965
- Pilltown Engineering  
Structural Engineer  
17585 Nossau Commons Blvd, Unit 3  
Lewes, DE 19956
- Activitas, Inc.  
Landscape Architect  
70 Milton Street  
Dedham, MA 02026
- GIPE Associates  
MEP Engineer  
8719 Brooks Drive  
Easton, MD 21601
- Stages  
Theater & Acoustic Consultant  
732-333-8003
- Corsi Associates  
Food Service Consultant  
1489 Baltimore Pike  
Springfield, PA 19064



PROJECT  
NEW MIDDLE SCHOOL  
910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT  
1270 KINGS HWY  
LEWES, DE 19585



MARK	DATE	DESCRIPTION
2	10/03/2022	ASI-005R
1	05/17/2022	CONFORMANCE SET
PROJECT NUMBER: 2020-14		
FILE NAME: CHMS_Arch_v2020.rvt		
DRAWN BY: MPV		
CHECKED BY: CDH		

The professional services of ABHA Architects, Inc. are undertaken for and performed in the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.

These documents are owned by ABHA Architects, Inc. and shall not be used without written permission. Copyright ABHA Architects, Inc. © 2021

SHEET TITLE  
SECOND FLOOR PLAN -  
AREA 'B' - LIGHTING

EL-122

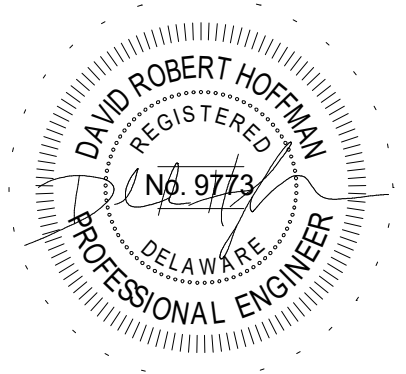
1  
SECOND FLOOR PLAN - AREA 'B' - LIGHTING  
1/8" = 1'-0"





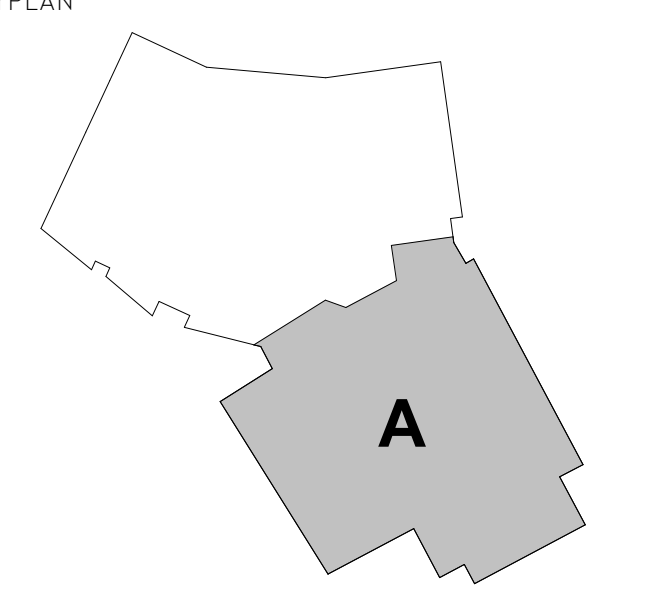
1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

- CONSULTANTS
- Davis Bowen & Friedel, Inc.  
Civil Engineer  
1 Park Avenue  
Middletown, DE 19966
  - Pilottown Engineering  
Structural Engineer  
17585 Nantux Commons Blvd., Unit 3  
Lewes, DE 19958
  - Activitas, Inc.  
Landscape Architect  
70 Milton Street  
Dedham, MA 02026
  - GIPE Associates  
MEP Engineer  
8719 Brooks Drive  
Easton, MD 21601
  - Stages  
Theater & Acoustic Consultant  
732-333-8003
  - Corsi Associates  
Food Service Consultant  
1489 Baltimore Pike  
Springfield, PA 19064



PROJECT  
NEW MIDDLE SCHOOL  
910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT  
1270 KINGS HWY  
LEWES, DE 19585



MARK	DATE	DESCRIPTION
2	10/03/2022	ASI--005R
1	05/17/2022	CONFORMANCE SET
PROJECT NUMBER: 2020-14		
FILE NAME: CHMS_Arch_v2020.rvt		
DRAWN BY: MPV		
CHECKED BY: CDH		
The professional services of ABHA Architects, Inc. are undertaken for and performed by the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.		
These documents are owned by ABHA Architects, Inc. and shall not be used without written permission. Copyright ABHA Architects, Inc. © 2021		

SHEET TITLE  
THIRD FLOOR PLAN -  
AREA 'A' - LIGHTING

EL-131



1

2

3

4

5

6

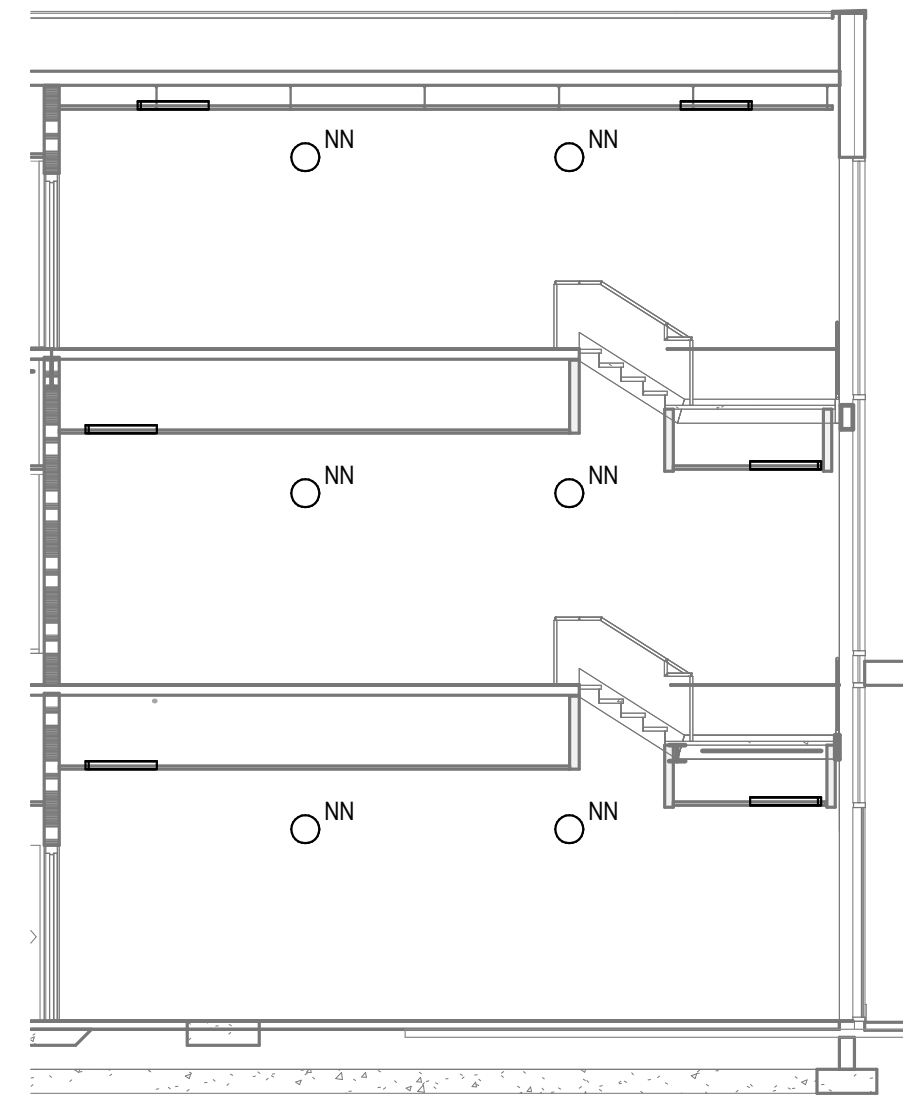
E

D

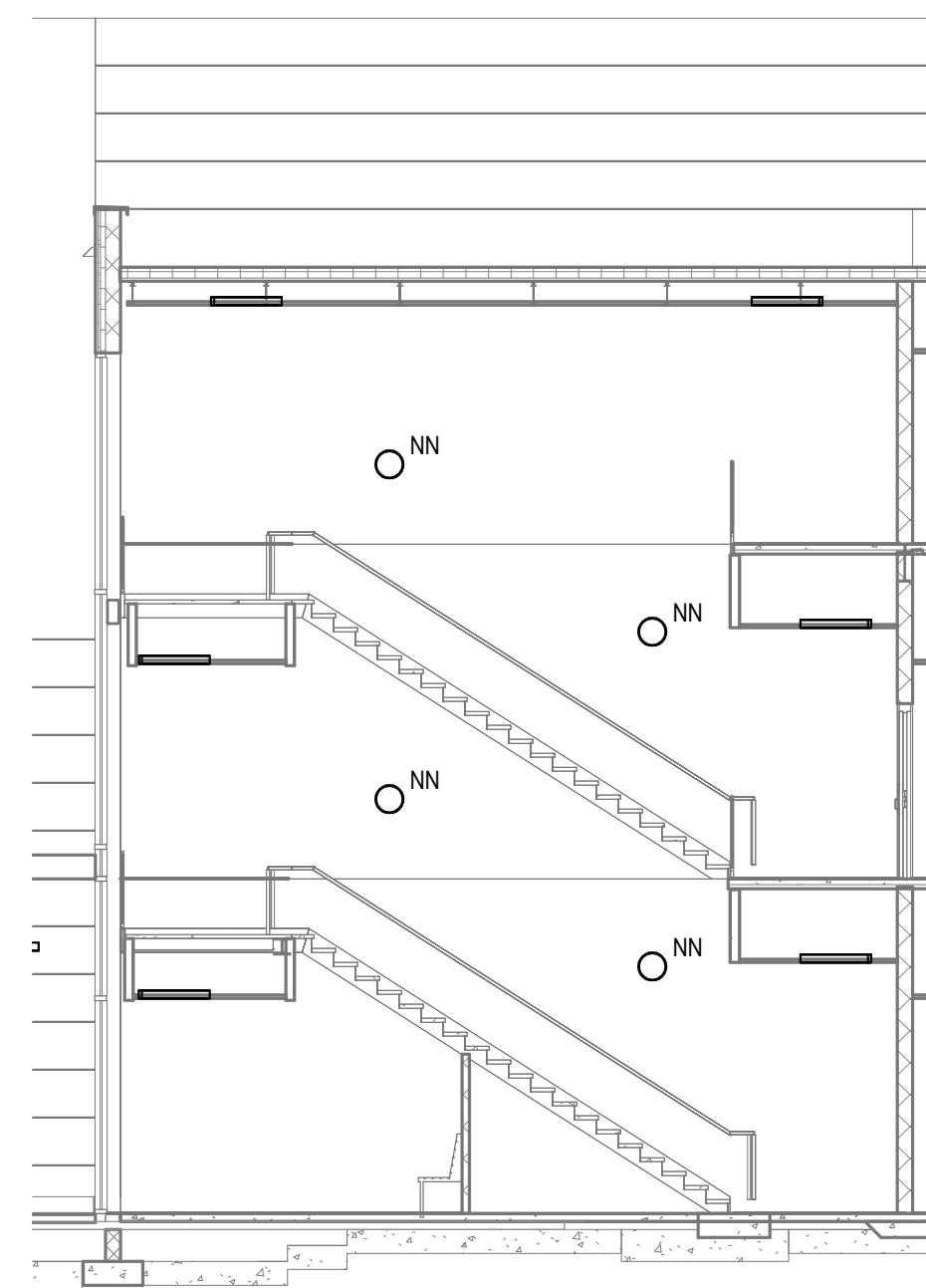
C

B

A

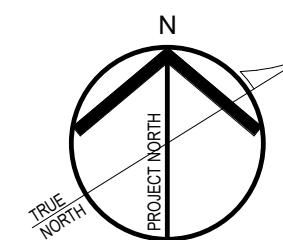


2 STAIR B STB03 WEST ELEVATION - LIGHTING  
EL-132 1/8" = 1'-0"



3 STAIR B STB03 EAST ELEVATION - LIGHTING  
EL-132 1/8" = 1'-0"

KEYNOTES	
1	EXTEND BRANCH CIRCUIT WIRING TO LIGHTING FIXTURE IN ADJACENT GROUP TOILET ROOM. SEE SHEET EL-131 FOR CONTINUATION.
2	AREA OF REFUGE ILLUMINATED SIGNAGE. INSTALL WITH BOTTOM OF SIGNAGE NO LESS THAN 80" AFF AND TOP OF SIGNAGE NO MORE THAN 80" AFF.
3	EXTEND BRANCH CIRCUIT WIRING DOWN TO WALL PACKS ON KITCHEN ROOF. SEE SHEET EL-122 FOR CONTINUATION.
4	PROVIDE LOCKABLE DUST PROOF COVER FOR SWITCH PER SPECIFICATIONS.
5	MOUNT LIGHTING FIXTURE APPROXIMATELY 8'-0" ABOVE STAIR LANDING.
6	EXTEND BRANCH CIRCUIT WIRING DOWN TO NORMAL LIGHTING FIXTURE AT BOTTOM OF STAIRWELL. SEE SHEET EL-122 FOR CONTINUATION.
7	EXTEND BRANCH CIRCUIT WIRING DOWN TO LIGHTING FIXTURE WIRED THROUGH INVERTER AT BOTTOM OF STAIRWELL. SEE SHEET EL-122 FOR CONTINUATION.
8	EXTEND BRANCH CIRCUIT WIRING DOWN TO EXIT SIGN BELOW. SEE SHEET EL-112 FOR CONTINUATION.
9	NETWORK TOUCH SCREEN FOR CAFETERIA LIGHTING FIXTURE OVERRIDES. SEE NETWORK WALL SWITCH SCHEDULE AND SEQUENCES OF OPERATION FOR ADDITIONAL INFORMATION. PROVIDE VANDAL SHIELD OVER TOUCH SCREEN.
10	PROVIDE CUSTOM OVERALL FIXTURE HEIGHT, CUSTOM SPACING BETWEEN TIERS, CUSTOM ANGLE/TILT OF TIERS, COORDINATE WITH ARCHITECTURAL ELEVATIONS.



1 THIRD FLOOR PLAN - AREA 'B' - LIGHTING  
1/8" = 1'-0"

MATCHLINE - SEE 1 / EL-131

0 4' 8' 16'



1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

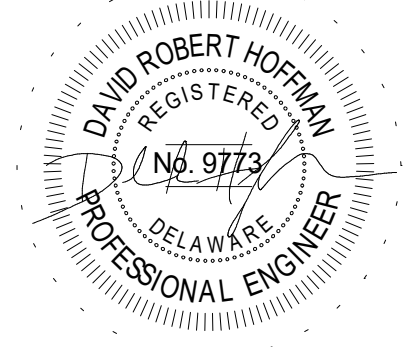
Pilottown Engineering  
Structural Engineer

Activitas, Inc.  
Landscape Architect

GIPE Associates  
MEP Engineer

Stages  
Theater & Acoustic Consultant

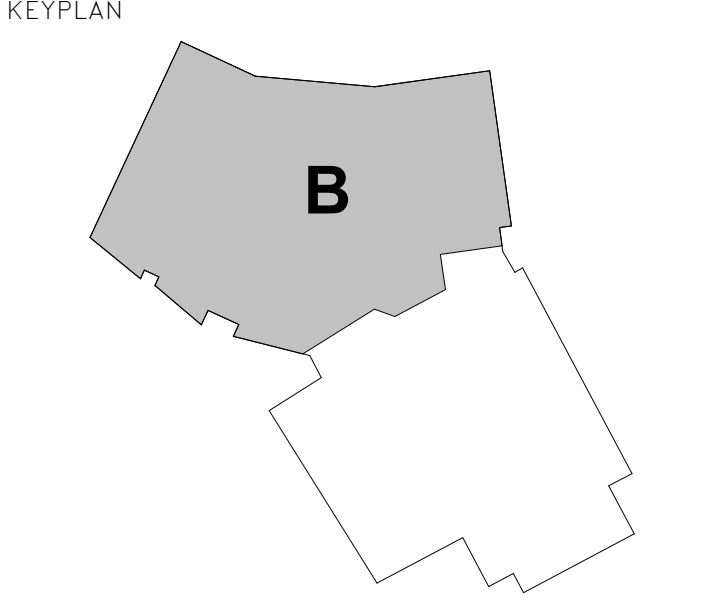
Corsi Associates  
Food Service Consultant



PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT  
1270 KINGS HWY  
LEWES, DE 19585



MARK	DATE	DESCRIPTION
2	10/03/2022	ASI-005R
1	05/17/2022	CONFORMANCE SET
PROJECT NUMBER: 2020-14		
FILE NAME: CHMS_Arch_v2020.rvt		
DRAWN BY: MPV		
CHECKED BY: CDH		

The professional services of ABHA Architects, Inc. are undertaken for and performed in the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.

Those documents are owned by ABHA Architects, Inc. and shall not be used without written permission. Copyright ABHA Architects, Inc. © 2021

SHEET TITLE  
THIRD FLOOR PLAN -  
AREA 'B' - LIGHTING

EL-132







E

D

C

B

A

OCCUPANCY SENSOR SCHEDULE									
TYPE	BASIS OF DESIGN (NOTE 1)			GENERAL INFORMATION			COVERAGE INFORMATION (NOTE 3)		
	MANUFACTURER	SERIES	MOUNTING (NOTE 2)	OPERATING VOLTAGE	SENSING TECHNOLOGY(IES)	DAYLIGHT SENSOR	RANGE (SQ. FT.)	PATTERN	ANGLE (DEGREES)
OS1	HUBBELL	NXSMP	CEILING MOUNT	12-24VAC/DC	PASSIVE INFRARED (PIR)	DIMMING	2000	CIRCULAR	360
OS2	HUBBELL	NXOS-OM-DT1	CEILING MOUNT	12-24VAC/DC	DUAL TECHNOLOGY (PIR & U.S.)	--	600	CIRCULAR	360
OS3	HUBBELL	NXOS-OM-DT2	CEILING MOUNT	12-24VAC/DC	DUAL TECHNOLOGY (PIR & U.S.)	--	2000	CIRCULAR	360
OS4	HUBBELL	NXOS-LD0T	CEILING CORNER MOUNT	12-24VAC/DC	DUAL TECHNOLOGY (PIR & U.S.)	--	--	WIDE ANGLE	120
OS5	HUBBELL	NXOS-LD0T	WALL MOUNT	12-24VAC/DC	DUAL TECHNOLOGY (PIR & U.S.)	--	--	WIDE ANGLE	120
OS6	HUBBELL	WSP	CEILING MOUNT	12-24VAC/DC	PASSIVE INFRARED (PIR)	--	2000	CIRCULAR	360
S <sup>(1)</sup>	HUBBELL	LHMTS-1	WALL MOUNT SWITCH	120-277 VAC	DUAL TECHNOLOGY (PIR & U.S.)	--	625	SEMI-CIRCULAR	180
S <sup>(10)</sup>	HUBBELL	LHDMT-5	WALL MOUNT SWITCH	120-277 VAC	DUAL TECHNOLOGY (PIR & U.S.)	--	625	SEMI-CIRCULAR	180
NOTES: 1. ONLY BASIS OF DESIGN MANUFACTURER AND SERIES HAS BEEN VERIFIED FOR PERFORMANCE. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, EQUIVALENT SENSORS BY OTHER MANUFACTURERS LISTED IN THE SPECIFICATIONS MAY BE INCORPORATED INTO THE WORK. 2. MOUNTING INDICATED IS TYPICAL BASED ON SENSOR TYPE. REVIEW FLOOR PLAN DRAWINGS FOR ANY VARIATIONS. 3. COVERAGE PATTERNS AND RANGES ARE BASED ON BASIS OF DESIGN MANUFACTURER. 4. SEQUENCE OF OPERATION SHALL BE REVIEWED WITH OWNER'S REPRESENTATIVE PRIOR TO PROGRAMMING. MAKE ALL ADJUSTMENTS TO SUIT OWNER'S DESIRED SYSTEM OPERATION. 5. MOUNTING HEIGHT SHALL BE 9'-0" AFF. U.O.N.									

LOW-VOLTAGE TRANSFORMER SCHEDULE																					
UNIT #	KVA	TYPE	PRIMARY ELECTRICAL CHARACTERISTICS				SECONDARY ELECTRICAL CHARACTERISTICS				MINIMUM EFFICIENCY (%) (NOTE 1)	MAXIMUM NOISE LEVEL (dB)	MINIMUM IMPEDANCE (Z) (%)	ENCLOSURE		DIMENSIONS AND WEIGHTS (NOTE 3)					REMARKS (NOTE 4)
			VOLTAGE (V)	PHASE	FREQUENCY (HZ)	CONFIGURATION TYPE	VOLTAGE (V)	PHASE	FREQUENCY (HZ)	CONFIGURATION TYPE				MOUNTING (NOTE 2)	NEMA RATING	HEIGHT (INCHES)	WIDTH (INCHES)	DEPTH (INCHES)	WEIGHT (LBS)		
TDCTB1	112.5	HIGH HARMONIC (K-RATED)	480	3	60	DELTA	120/208	3	60	WYE	98.79	47	3.70	PAD-MOUNTED	NEMA 1	37.52	31.3	28.43	802		
TDCTB2	112.5	HIGH HARMONIC (K-RATED)	480	3	60	DELTA	120/208	3	60	WYE	98.79	47	3.70	PAD-MOUNTED	NEMA 1	37.52	31.3	28.43	802		
TDCCB1	112.5	HIGH HARMONIC (K-RATED)	480	3	60	DELTA	120/208	3	60	WYE	98.79	47	3.70	PAD-MOUNTED	NEMA 1	37.52	31.3	28.43	802		
TDCCB1	112.5	HIGH HARMONIC (K-RATED)	480	3	60	DELTA	120/208	3	60	WYE	98.79	47	3.70	PAD-MOUNTED	NEMA 1	37.52	31.3	28.43	802		
TDM1B1	112.5	GENERAL PURPOSE	480	3	60	DELTA	120/208	3	60	WYE	98.8	44	3.70	PAD-MOUNTED	NEMA 1	37.52	31.3	28.43	724		
TDP1B1	150	GENERAL PURPOSE	480	3	60	DELTA	120/208	3	60	WYE	98.89	44	3.10	PAD-MOUNTED	NEMA 1	40.59	33.66	32.56	933		
TDP1B2	150	GENERAL PURPOSE	480	3	60	DELTA	120/208	3	60	WYE	98.89	44	3.10	PAD-MOUNTED	NEMA 1	40.59	33.66	32.56	933		
TDP2B1	150	GENERAL PURPOSE	480	3	60	DELTA	120/208	3	60	WYE	98.89	44	3.10	PAD-MOUNTED	NEMA 1	40.59	33.66	32.56	933		
TDP3B1	150	GENERAL PURPOSE	480	3	60	DELTA	120/208	3	60	WYE	98.89	44	3.10	PAD-MOUNTED	NEMA 1	40.59	33.66	32.56	933		
TKPB1	150	GENERAL PURPOSE	480	3	60	DELTA	120/208	3	60	WYE	98.89	44	3.10	PAD-MOUNTED	NEMA 1	40.59	33.66	32.56	933		
TPPAV	45	GENERAL PURPOSE	480	3	60	DELTA	120/208	3	60	WYE	98.45	39	4.10	PAD-MOUNTED	NEMA 1	29.33	25.51	25.94	369		
NOTES: 1. TRANSFORMERS SHALL BE LOW LOSS TYPE WITH MINIMUM EFFICIENCIES PER US DEPARTMENT OF ENERGY (DOE) 2016 STANDARDS, AS DEFINED IN THE CODE OF FEDERAL REGULATIONS, 10 CFR 431.192. 2. PROVIDE CONCRETE EQUIPMENT PAD AS DETAILED FOR PAD MOUNTED TRANSFORMERS. 3. DIMENSIONS AND WEIGHTS ARE NOMINAL AND ARE BASED ON BASIS-OF-DESIGN MANUFACTURER'S EQUIPMENT AND ALUMINUM WINDINGS. 4. REFER TO DIVISION 26 SPECIFICATION SECTION "LOW-VOLTAGE TRANSFORMERS" FOR ADDITIONAL INFORMATION.																					

MEDIUM-VOLTAGE TRANSFORMER SCHEDULE																												
UNIT #	GENERAL REQUIREMENTS / CHARACTERISTICS					PRIMARY ELECTRICAL CHARACTERISTICS					SECONDARY ELECTRICAL CHARACTERISTICS					TEMPERATURE RISE	MINIMUM IMPEDANCE	TAPS ABOVE NORMAL	TAPS BELOW NORMAL	BASIC IMPULSE LEVEL (kV)	MAXIMUM NOISE LEVEL (dB)	DIMENSIONS AND WEIGHTS (NOTE 1)			MOUNTING	REMARKS		
	kVA	FLUID TYPE	PRIMARY TERMINATIONS	SECONDARY TERMINATIONS	PRIMARY CONFIGURATION	WINDINGS	VOLTAGE (V)	PHASE	NO WIRES (+GND)	FREQUENCY (HZ)	CONFIGURATION TYPE	VOLTAGE (V)	PHASE	NO WIRES (+GND)	FREQUENCY (HZ)							CONFIGURATION TYPE	WIDTH (INCHES)	DEPTH (INCHES)			HEIGHT (INCHES)	WEIGHT (LBS)
T-1	1500	ENVIROTEMP FR3	DEAD-FRONT	10-HOLE SPADE	RADIAL	COPPER	12470/220	3	4	60	WYE	238V/120	3	4	60	WYE	65 °C	5.75%	2 @ 2-1/2%	2 @ 2-1/2%	125 kV	61	88	88	73	10,300	CONCRETE PAD	NOTE 2
NOTES: 1. DIMENSIONS AND WEIGHTS ARE NOMINAL AND ARE BASED ON BASIS-OF-DESIGN MANUFACTURER'S EQUIPMENT. 2. REFER TO DIVISION 26 SPECIFICATION SECTION "MEDIUM-VOLTAGE TRANSFORMERS" FOR ADDITIONAL INFORMATION.																												

PANELBOARD (NOTE 1): PZSS													
VOLTAGE: 120/240 1 PHASE, 3 WIRE AMPERES: 60 MAIN CIRCUIT BREAKER A.I.C. RATING: 22K					LOCATION: SITE SIGN								
CIRCUIT BREAKER			CIRCUIT DESCRIPTION	KVA PER PHASE		CIRCUIT			CIRCUIT BREAKER	CIRCUIT DESCRIPTION	KVA PER PHASE		
NO.	POLE	TRIP		A	B	NO.	POLE	TRIP			A	B	
1	2	60	MAIN	--	--	2	1	20	SCHOOL SIGN - LIGHT S	0.15	x		
3	--	--		x	--	4	1	20	RECEPTACLE	x	0.18		
5	--	--	SPACE	--	x	6	--	--	SPACE	--	--		
7	--	--	SPACE	x	--	8	--	--	SPACE	x	--		
9	--	--	SPACE	--	x	10	--	--	SPACE	--	x		
11	--	--	SPACE	x	--	12	--	--	SPACE	x	--		
13	--	--	SPACE	--	x	14	--	--	SPACE	--	x		
15	--	--	SPACE	x	--	16	--	--	SPACE	x	--		
SUBT TOTALS:				0.0	0.0					SUBT TOTALS: 0.2 0.2			
MOUNTING: SURFACE ENCLOSURE: NEMA 3R OPTIONS: +EQUIPMENT GROUND BAR										LOAD SUMMARY			
										PHASE:	A	B	TOTAL
										TOTAL KVA:	0.2	0.2	0.3
										DEMAND KVA:	0.3		
										TOTAL AMPERES:	1.3	0.8	1.4
NOTES:													
1. PANELBOARD IS INTEGRAL TO COMMERCIAL SERVICE PEDESTAL. REFER TO "COMMERCIAL SERVICE PEDESTAL" SCHEDULE FOR ADDITIONAL INFORMATION.													

UNDERGROUND HANDHOLE SCHEDULE									
HANDHOLE IDENTIFICATION NUMBER	HANDHOLE/PULL BOX DIMENSIONS			ENCLOSURE		ENCLOSURE COVER (NOTE 2)		MINIMUM TIER RATING (NOTE 3)	REMARKS
	WIDTH (INCHES)	LENGTH (INCHES)	DEPTH (NOTE 1)	BOX TYPE	BOTTOM	COVER TYPE	LEGEND		
HH1	24" x 38"	24"	OPEN	OPEN	SOLID	ELECTRIC	TIER 22		
HH2	19" x 24"	18"	OPEN	OPEN	SOLID	LIGHTING	TIER 22		
HH3	12" x 12"	12"	OPEN	OPEN	SOLID	GROUND	TIER 15		NOTE 4
NOTES: 1. STACK BOXES OR PROVIDE EXTENSIONS AS REQUIRED TO ACCOMMODATE CONDUIT TERMINATING AT BOXES WITH TOP OF ENCLOSURE FLUSH WITH FINISHED GRADE ELEVATION. 2. ENCLOSURE COVERS SHALL BE HEAVY DUTY BOLT DOWN TYPE WITH GASKETING, UNLESS OTHERWISE NOTED. 3. TIER RATING APPLIES TO HANDHOLE ENCLOSURE AND COVER. TIER RATING SHALL BE DETERMINED IN COMPLIANCE WITH ANSI/ASTM F77-2007. 4. PROVIDE HANDHOLE AT EACH GROUND ROD AT GROUNDING T RAMP FOR TESTING, INSPECTION, ETC.									

UNDERGROUND DUCTBANK SCHEDULE					
DUCT BANK IDENTIFICATION NUMBER	CONDUIT DESCRIPTION	CONDUIT INFORMATION		DUCTBANK INFORMATION	REMARKS
		QUANTITY(IES)	SIZE(S)	CONDUIT ARRANGMENT	
DE1	PRIMARY ELECTRIC SERVICE	2	6"	2 x 1	DIRECT BURIED
DE2	SECONDARY ELECTRIC SERVICE	3	3"	3 x 3	DIRECT BURIED
DE3	FIRE PUMP SERVICE	2	1-1/2"	1 x 2	CONCRETE ENCASED
DE4	SCHOOL SITE SIGN	2	2" x 1	2 x 1	DIRECT BURIED
DE5	OUTDOOR CLASSROOM	2	2"	2 x 1	DIRECT BURIED
NOTES: 1. REFER TO DUCT BANK DETAIL DRAWINGS FOR DUCT BANK INSTALLATION REQUIREMENTS.					

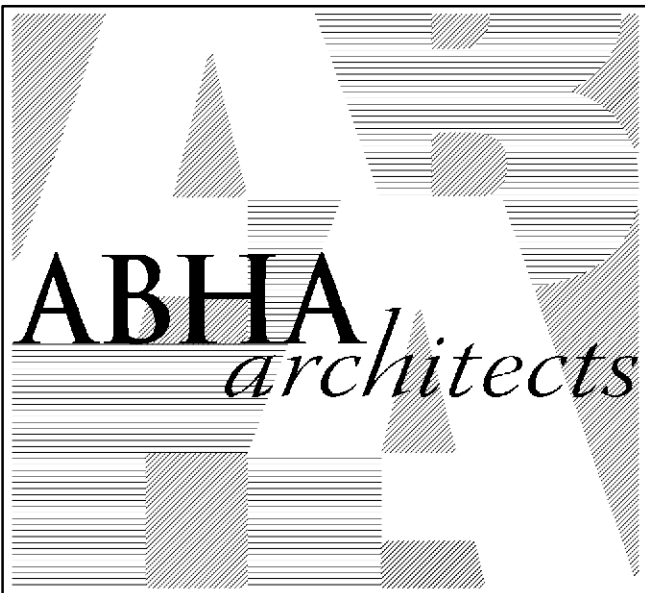
ENCLOSED CONTACTOR SCHEDULE					
CONTACTOR IDENTIFICATION	LOCATION	NO. OF POLES	VOLTAGE	AREA SERVED	REMARKS
EC-1	BOILER ROOM 300	4	120VAC	BOILERS & WATER HEATERS	NOTE 1
NOTES: 1. CONTROL POWER CIRCUIT SHALL BE CONTROLLED VIA EPO SWITCHES AT BOILER ROOM EXIT DOORS. REFER TO FLOOR PLANS.					

POWER PACK SCHEDULE					
TYPE	BASIS OF DESIGN (NOTE 1)		GENERAL INFORMATION		
	MANUFACTURER	SERIES	MOUNTING (NOTE 2)	DIMMING	OPERATING VOLTAGE
PPD	HUBBELL	NXR0CF-2RD	WALL ABOVE CEILING	0-10VDC DIMMING OUTPUT	120-277 VAC
PPL	HUBBELL	UVPP	WALL ABOVE CEILING	--	120 VAC
NOTES: 1. ONLY BASIS OF DESIGN MANUFACTURER AND SERIES HAS BEEN VERIFIED FOR PERFORMANCE. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, EQUIVALENT POWER PACKS BY OTHER MANUFACTURERS LISTED IN THE SPECIFICATIONS MAY BE INCORPORATED INTO THE WORK.					

NETWORK WALL SWITCH SCHEDULE			
SWITCH ID	BASIS OF DESIGN		CONTROLS BUTTON
	MANUFACTURER	SERIES	
SLV1	HUBBELL	NXSW-2	2
SLVD	HUBBELL	NXSW-ORLO	4
SLV2	HUBBELL	NXSW-4	4
SLVD2	HUBBELL	NXSW-6	6
SLV4	HUBBELL	NXSW-4	4
SLVSC	HUBBELL	NXSW-6	6
SLVKP	HUBBELL	nPOD TOUCH	--
NOTES: 1. SEE SEQUENCES OF OPERATION FOR ADDITIONAL INFORMATION.			

COMMERCIAL SERVICE PEDESTAL SCHEDULE																				
UNIT #	KVA	TRANSFORMER TYPE	PRIMARY ELECTRICAL CHARACTERISTICS				ELECTRICAL CHARACTERISTICS				MAXIMUM NOISE LEVEL (dB)	MINIMUM IMPEDANCE (Z) (%)	INTEGRAL PANELBOARD DIMENSIONS AND WEIGHTS (NOTE 1)				ENCLOSURE NEMA RATING	REMARKS		
			VOLTAGE (V)	PHASE	FREQUENCY (HZ)	MAIN OVERCURRENT DEVICE RATING (A)	VOLTAGE (V)	PHASE	FREQUENCY (HZ)	MAIN OVERCURRENT DEVICE RATING (A)			DESSIGNATION (NOTE 1)	NO. OF POLE POSITIONS	HEIGHT (INCHES)	WIDTH (INCHES)			DEPTH (INCHES)	WEIGHT (LBS)
PZSS	10	SEALED, GENERAL PURPOSE	480	1	60	40	120/240	1	60	60	42	3.3	PZSS	16	40.5	16	16	220	PAD-MOUNTED	NEMA3R
NOTES: 1. DIMENSIONS AND WEIGHTS ARE NOMINAL AND ARE BASED ON BASIS-OF-DESIGN MANUFACTURERS EQUIPMENT AND COPPER WINDINGS. 2. BASIS OF DESIGN: MILBANK COMMERCIAL SERVICE PEDESTAL.																				

RETRACTABLE CORD REEL SCHEDULE									
NO.	BASIS OF DESIGN		RECEPTACLE OUTLET DATA			CORD DATA		REEL DATA	
	MANUFACTURER	SERIES	RECEPTACLE TYPE	BLADE TYPE	NEMA CONFIGURATION	LENGTH (FT)	WIRE SIZE (AWG)	CONNECTION TYPE	REMARKS
CR-1	HUBBELL	HBL35123	DUPLEX GFCI RECEPTACLE	STRAIGHT BLADE	5-20R	35	12	5 FOOT PISTOL WITH MACHING PLUG	NOTES 1,2
NOTES: 1. CORD LENGTH(S) SHALL BE FIELD-VERIFIED TO SUIT ACTUAL CONDITIONS PRIOR TO ORDERING INSTALLATION. SET STOP TO SET RECEPTACLE AT HEIGHT REQUIRED BY OWNER. 2. PROVIDE PLENUM ENCLOSURE, HUBBELL HBL1PBOX (OR APPROVED EQUAL).									



1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

Pilottown Engineering  
Structural Engineer

Activitas, Inc.  
Landscape Architect

GIPE Associates  
MEP Engineer

Stages  
Theater & Acoustic Consultant

Corsi Associates  
Food Service Consultant



PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT

1270 KINGS HWY  
LEWES, DE 19585

KEYPLAN

PROJECT NUMBER: 2020-14

FILE NAME: CHMS\_Arch\_v2020.rvt

DRAWN BY: MPV

CHECKED BY: CDH

2 10/03/2022 ASI-005R  
1 05/17/2022 CONFORMANCE SET

MARK DATE DESCRIPTION

PROJECT NUMBER: 2020-14

FILE NAME: CHMS\_Arch\_v2020.rvt

DRAWN BY: MPV

CHECKED BY: CDH

The professional services of ABHA Architects, Inc. are undertaken for and performed in the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.

These documents are owned by ABHA Architects, Inc. and shall not be used without written permission. Copyright ABHA Architects, Inc. © 2022

SHEET TITLE

SCHEDULES –

ELECTRICAL

E-512



E

D

C

B

A

INTERIOR LIGHTING FIXTURE SCHEDULE																										
TYPE	DESCRIPTION	BASIS OF DESIGN (NOTE 1)		APPROVED EQUAL(S) (NOTE 2)		LIGHT SOURCE CHARACTERISTICS/PERFORMANCE										BALLAST /DRIVER		EMERGENCY OPTION	INPUT VA	INPUT VOLTAGE	LENGTH (INCHES)	NOMINAL DIMENSIONS			MOUNTING	REMARKS
		MANUFACTURER	SERIES	MANUFACTURER	SERIES	QTY	WATTAGE	TYPE	DELIVERED LUMENS	CCT	CRI (MIN)	LPW (MIN)	LUMEN MAINTENANCE (NOTE 3)	HOURS	QTY	TYPE	WIDTH (INCHES)					DEPTH (INCHES)	DIAMETER (INCHES)			
A1	2X2 GLARE-FREE EDGE-LIT LED FLAT PANEL SEAMLESS ALUMINUM FRAME, DAMP LOCATION LISTED AND IC RATED. PRODUCT IS NOT TO BE STORED IN NON-CLIMATE CONTROLLED SPACES.	LITHONIA	EPANILED	COLUMBIA DAY-BRITE HEWILLIAMS METALUX	OFF FXP LP 22FP	--	--	LED	3,963	3500K	80	106	L97	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	37	120-277VAC	23.7	23.7	2.19	--	RECESSED, ACT CEILING		
A1E	SAME AS TYPE "A1" WITH EMERGENCY OPTION	LITHONIA	EPANILED	COLUMBIA DAY-BRITE HEWILLIAMS METALUX	OFF FXP LP 22FP	--	--	LED	3,963	3500K	80	106	L97	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	INTERNAL BATTERY	37	120-277VAC	23.7	23.7	2.19	--	RECESSED, ACT CEILING		
A2	2X2 GLARE-FREE EDGE-LIT LED FLAT PANEL SEAMLESS ALUMINUM FRAME, DAMP LOCATION LISTED AND IC RATED. PRODUCT IS NOT TO BE STORED IN NON-CLIMATE CONTROLLED SPACES.	LITHONIA	EPANILED	COLUMBIA DAY-BRITE HEWILLIAMS METALUX	OFF FXP LP 22FP	--	--	LED	4,730	3500K	80	106	L97	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	45	120-277VAC	23.7	23.7	2.19	--	RECESSED, ACT CEILING		
A2E	SAME AS TYPE "A2" WITH EMERGENCY OPTION	LITHONIA	EPANILED	COLUMBIA DAY-BRITE HEWILLIAMS METALUX	OFF FXP LP 22FP	--	--	LED	4,730	3500K	80	106	L97	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	INTERNAL BATTERY	45	120-277VAC	23.7	23.7	2.19	--	RECESSED, ACT CEILING		
B1	2X2 GLARE-FREE EDGE-LIT LED FLAT PANEL SEAMLESS ALUMINUM FRAME, DAMP LOCATION LISTED AND IC RATED. PRODUCT IS NOT TO BE STORED IN NON-CLIMATE CONTROLLED SPACES.	LITHONIA	EPANILED	COLUMBIA DAY-BRITE HEWILLIAMS METALUX	OFF FXP LP 22FP	--	--	LED	3,963	3500K	80	106	L97	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	37	120-277VAC	23.7	23.7	2.19	--	RECESSED, GWB CEILING		
B1E	SAME AS TYPE "B1" WITH EMERGENCY OPTION	LITHONIA	EPANILED	COLUMBIA DAY-BRITE HEWILLIAMS METALUX	OFF FXP LP 22FP	--	--	LED	3,963	3500K	80	106	L97	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	INTERNAL BATTERY	37	120-277VAC	23.7	23.7	2.19	--	RECESSED, GWB CEILING		
CB7	7'-0" LENGTH HIGH PERFORMANCE PERIMETER SLOT LED LUMINAIRE WITH WALL BRACKET MOUNTING AND 8" REGRESSED OPTIC DEPTH AND TELESOPING OPTION FOR BOTH LEFT AND RIGHT CONDITION. BOOSTED LUMEN LIGHT OUTPUT WITH WHITE POWDER COAT FINISH REFLECTOR. DAMP LOCATION LISTED.	FINELITE	HP-WIS	XAL HEWILLIAMS LITECONTROL DAY-LITE AXIS LUMENWERX	MINO EDGE PX SAE 202 WPL BEAM VAS PERIMETER	--	--	LED	2,786	3500K	80	87	L90	100,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	32.2	277VAC	84	4	4	--	RECESSED, GWB CEILING		
CB15	15'-0" LENGTH HIGH PERFORMANCE PERIMETER SLOT LED LUMINAIRE WITH WALL BRACKET MOUNTING AND 8" REGRESSED OPTIC DEPTH AND TELESOPING OPTION FOR BOTH LEFT AND RIGHT CONDITION. BOOSTED LUMEN LIGHT OUTPUT WITH WHITE POWDER COAT FINISH REFLECTOR. DAMP LOCATION LISTED.	FINELITE	HP-WIS	XAL HEWILLIAMS LITECONTROL DAY-LITE AXIS LUMENWERX	MINO EDGE PX SAE 202 WPL BEAM VAS PERIMETER	--	--	LED	5,970	3500K	80	87	L90	100,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	66	277VAC	180	4	4	--	RECESSED, GWB CEILING		
D1	4" ROUND LED DOWNLIGHT WITH EXTRA WIDE DISTRIBUTION AND SEMI-SPECULAR FINISH	PRESCOLITE	LTR-4RD	HEWILLIAMS LIGHT OLIER GOTHAM PORTFOLIO	4DR PAR EV04 LD4B	--	--	LED	644	3500K	80	83	L90	55,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	7.8	120-277VAC	14.36	14.09	4.97	4	RECESSED, GWB CEILING		
D1E	SAME AS TYPE "D1" WITH EMERGENCY OPTION	PRESCOLITE	LTR-4RD	HEWILLIAMS LIGHT OLIER GOTHAM PORTFOLIO	4DR PAR EV04 LD4B	--	--	LED	644	3500K	80	83	L90	55,000	--	0-10V DIMMING LED DRIVER, 1% MIN	INTERNAL BATTERY	7.8	120-277VAC	14.36	14.09	4.97	4	RECESSED, GWB CEILING		
D2	4" ROUND LED DOWNLIGHT WITH EXTRA WIDE DISTRIBUTION AND SEMI-SPECULAR FINISH	PRESCOLITE	LTR-4RD	HEWILLIAMS LIGHT OLIER GOTHAM PORTFOLIO	4DR PAR EV04 LD4B	--	--	LED	1,030	3500K	80	86	L90	55,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	12	120-277VAC	14.36	14.09	4.97	4	RECESSED, GWB CEILING		
D2E	SAME AS TYPE "D2" WITH EMERGENCY OPTION	PRESCOLITE	LTR-4RD	HEWILLIAMS LIGHT OLIER GOTHAM PORTFOLIO	4DR PAR EV04 LD4B	--	--	LED	1,030	3500K	80	86	L90	55,000	--	0-10V DIMMING LED DRIVER, 1% MIN	INTERNAL BATTERY	12	120-277VAC	14.36	14.09	4.97	4	RECESSED, GWB CEILING		
E1	WALL MOUNTED EMERGENCY LIGHTING WITH 2 INTERNAL LAMPS, HIGH IMPACT, INJECTION MOLDED POLYCARBONATE HOUSING AND UV STABILIZED, HIGH IMPACT, INJECTION MOLDED CLEAR POLYCARBONATE SHIELD, MATTE WHITE FINISH.	KENALL	METELHC	BARRON LIGHT ALARMS BEGHELLI EXTRONIX CHLORIDE MULE	CPXEMW SEVERE ECCOLUNA LEM54-14 TPO ARMA	--	--	LED	--	--	--	--	--	--	--	INTERNAL BATTERY	24	120-277VAC	20.5	9.5	5.96	--	SURFACE, WALL	NOTES 5,10		
E2	COMPACT INDOOR ARCHITECTURAL EMERGENCY LIGHTING UNIT WITH HIGH-IMPACT AND UV STABLE THERMOPLASTIC HOUSING, TWO (2) INTEGRAL FULLY ADJUSTABLE LAMP HEADS, AND SELF-TEST / SELF-DIAGNOSTICS. FINISH TO BE SELECTED BY ARCHITECT.	DUAL LITE	EV4D	SURE-LITES EVENT LITE LITHONIA	SILW WEATHERWAY ELM2LF	--	--	LED	--	--	--	--	--	--	--	INTERNAL BATTERY	2.88	120-277VAC	11	7	3.1875	--	SURFACE, WALL	NOTES 5,10		
ER	SURFACE MOUNT EMERGENCY REMOTE UNIT WITH HIGH IMPACT CLEAR WRAP AROUND POLYCARBONATE LENS AND (2) INTERNAL LAMPS AND SURFACE ADAPTER.	KENALL	METER	DUAL LITE CHLORIDE SURE-LITES LITHONIA	DYN REMOTE TPR NXFR	--	--	LED	--	--	--	--	--	--	--	NONE	6.5	12VACDC	6.5	9.12	3.98	--	SURFACE, WALL	NOTES 5,10		
F4	4'-0" LINEAR SUSPENDED LENSED LED STRIP LIGHT WITH ROUND LENS, CHANNEL AND COVER FORMED FROM COIL-GAUGE, COLD-ROLLED STEEL, DAMP LOCATION LISTED.	HEWILLIAMS	75R	LITHONIA COLUMBIA DAY-BRITE DELVIRO METALUX	ZL10 MPS FSS ZIP SNLED	--	--	LED	5,934	3500K	80	140	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	42.3	120-277VAC	48	2.9/6	3.5/6	--	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
F4E	SAME AS TYPE "F4" WITH EMERGENCY OPTION	HEWILLIAMS	75R	LITHONIA COLUMBIA DAY-BRITE DELVIRO METALUX	ZL10 MPS FSS ZIP SNLED	--	--	LED	5,934	3500K	80	140	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	INTERNAL BATTERY	42.3	120-277VAC	48	2.9/6	3.5/6	--	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
G	16" ROUND HIGH BAY LED LUMINAIRE, DIE CAST ALUMINUM HOUSING PENDANT MOUNTED FROM 3/4" THREADED CONDUIT WITH MEDIUM LUMEN OUTPUT, CLEAR ACRYLIC SHIELDING, WHITE FULL CAGE WIRE GUARD, AND LUMINAIRE RETAINER.	HUBBELL	UTB2	LITHONIA METALUX DAY-BRITE	JOBL RH8 RBX	--	--	LED	18,846	3500K	80	148	L80	60,000	--	0-10V DIMMING LED DRIVER, 10% MIN	NONE	128	120-277VAC	--	--	20	16	SUSPENDED, SINGLE STEM	NOTE 7	
H	4" NON-CONDUCTIVE RECESSED LED SHOWER LIGHT WITH FACEPLATE MADE OF IMPACT MODIFIED ACRYLIC, REGRESSLESS, WHITE PAINTED FLANGE, 1/8 GAUGE GALVANIZED STEEL CONSTRUCTION, 4" VERTICAL ADJUSTMENT, WET LOCATION LISTED, SMOOTH CLEAR LENS.	PRESCOLITE	LTR-4RD (SH)	GOTHAM LIGHT OLIER HEWILLIAMS LF ILLUMINATION DMF COOPER	EV0 PAR-SL 6DR VF150 DR02 HALO	--	--	LED	1,000	3500K	80	49	L90	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	12	120-277VAC	14.09	11.68	4.97	4	RECESSED, GWB CEILING (SHOWER)		
I	(NOT USED)																									
J	4" ROUND LED DOWNLIGHT WITH EXTRA WIDE DISTRIBUTION AND SEMI-SPECULAR FINISH, IC RATED.	PRESCOLITE	LTR-4RD	HEWILLIAMS LIGHT OLIER GOTHAM PORTFOLIO	4DR PAR EV04 LD4B	--	--	LED	1,030	3500K	80	86	L90	55,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	12	120-277VAC	14.36	14.09	4.97	4	RECESSED, CANOPY		
K	2'-0" x 2'-0" RECESSED TROFFER LED LUMINAIRE WITH 0.125" THICK ACRYLIC LENS (SMOOTH SIDE DOWN), FLUSH ALUMINUM DOOR (WHITE), TRIPLE NEOPRENE GASKETING.	COLUMBIA	LJT22	LITHONIA HEWILLIAMS VISCOR EATON DAY-BRITE METALUX	26TL 50 STATIC LRTA GRW KTR100 22GR	--	--	LED	4,265	3500K	80	103	L80	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	42	120-277VAC	24	24	4-1/4	--	RECESSED, ACT CEILING		
KE	SAME AS TYPE "K" WITH EMERGENCY OPTION	COLUMBIA	LJT22	LITHONIA HEWILLIAMS VISCOR EATON DAY-BRITE METALUX	26TL 50 STATIC LRTA GRW KTR100 22GR	--	--	LED	4,265	3500K	80	103	L80	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	INTERNAL BATTERY	42	120-277VAC	24	24	4-1/4	--	RECESSED, ACT CEILING		
L4	4'-0" SURFACE MOUNTED LED LUMINAIRE, SUITABLE FOR WET, DAMP AND COLD LOCATIONS, ONE PIECE 5VA FIBERGLASS HOUSING WITH INTEGRAL PERIMETER CHANNEL UTILIZING CONTINUOUS POURED-IN-PLACE CLOSED CELL GASKET, LOW PROFILE HOUSING WITH STAINLESS STEEL LATCHES AND WET LOCATION FITTINGS.	LITHONIA	FEM LED	DAY-BRITE HEWILLIAMS DELVIRO METALUX SPRING LIGHTING	VSW 96 VT34 VAPORTITE	--	--	LED	3,482	3500K	80	163	L80	60,000	--	0-10V DIMMING LED DRIVER, 10% MIN	NONE	23.8	120-277VAC	51-3/4	6.8	4.2	--	SURFACE		
L4E	(NOT USED)																									
ML2	10" DECORATIVE LUMINOUS PENDANT - LOW OUTPUT, WHITE MATTE ACRYLIC DIFFUSER WITH ALUMINUM CONSTRUCTION.	SPLIGHTING	VALLEJO 10"	BARBICAN LUMOS BOCK LIGHTING	HPC LC10 ACP410	--	--	LED	883	3500K	80	98	L80	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	9	120-277VAC	--	--	12	10	SUSPENDED, SINGLE STEM	NOTE 7	
MH2	10" DECORATIVE LUMINOUS PENDANT - HIGH OUTPUT, WHITE MATTE ACRYLIC DIFFUSER WITH ALUMINUM CONSTRUCTION.	SPLIGHTING	VALLEJO 10"	BARBICAN LUMOS BOCK LIGHTING	HPC LC10 ACP410	--	--	LED	1,570	3500K	80	98	L80	60,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	16	120-277VAC	--	--	12	10	SUSPENDED, SINGLE STEM	NOTE 7	



1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

1 Park Avenue  
Middletown, DE 19955

Pilotown Engineering  
Structural Engineer

17585 Nossau Commons Blvd, Unit 3  
Lewes, DE 19958

Activitas, Inc.  
Landscape Architect

70 Milton Street  
Dedham, MA 02026

GIPE Associates  
MEP Engineer

8719 Brooks Drive  
Easton, MD 21601

Stages  
Theater & Acoustic Consultant

732-333-8003

Corsi Associates  
Food Service Consultant

1489 Baltimore Pike  
Springfield, PA 19064



PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT

1270 KINGS HWY  
LEWES, DE 19585

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

KEYPLAN

The professional services of ABHA Architects, Inc. are undertaken for and performed in the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.

These documents are owned by ABHA Architects, Inc. and shall not be used without written permission. Copyright ABHA Architects, Inc. © 2022

SHEET TITLE

SCHEDULES –  
ELECTRICAL

E-513



# E

## D

**C**

**B**

**A**

INTERIOR LIGHTING FIXTURE SCHEDULE																										
TYPE	DESCRIPTION	BASIS OF DESIGN (NOTE 1)		APPROVED EQUIVA(L)S (NOTE 2)		LIGHT SOURCE CHARACTERISTICS/PERFORMANCE										BALLAST / DRIVER		EMERGENCY OPTION	INPUT VA	INPUT VOLTAGE	NOMINAL DIMENSIONS			DIAMETER (INCHES)	MOUNTING	REMARKS
		MANUFACTURER	SERIES	MANUFACTURER	SERIES	QTY	WATTAGE	TYPE	DECLAERED LUMENS	CCT	CRI (MIN)	LFW (MIN)	LUMEN MAINTENANCE (NOTE 3)	L-RATING	HOURS	QTY	TYPE				LENGTH (INCHES)	WIDTH (INCHES)	DEPTH (INCHES)			
N	DECORATIVE FOUR-TIERED CASCADING CHANDELIER, INTEGRATED SURGE PROTECTION WITH MATTE OPAL ACRYLIC DIFFUSER AND ALUMINUM CONSTRUCTION. MONOPOINT CANOPY WITH POWER SUPPLY AND ENERGIZED CABLES. 80% DOWN, 20% UP DISTRIBUTION. CUSTOM TILT, OVERALL HEIGHT, AND SPACING BETWEEN TIERS TO BE SELECTED BY ARCHITECT DURING SHOP DRAWING REVIEW.	SPLIGHTING	ZYNN RING TIERS	INTERLUX DELRAY LUMOS WESTPORT	T-OUR DOS RPM ECLIPSE	--	--	LED	16,823	3500K	80	57	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	284	120-277VAC	SEE FLOOR PLANS			MONOPOINT CANOPY	NOTE 7		
O	(NOT USED)																									
P8	8'-0" LINEAR SUSPENDED LENSED LED STRIPLIGHT WITH ROUND LENS, CHANNEL AND COVER FORMED FROM 6006-GAUGE, COLD-ROLLED STEEL. DAMP LOCATION LISTED. MATTE BLACK FINISH.	HE WILLIAMS	75R	LITHONIA COLUMBIA DAYBRITE DELVRO METALUX	ZL10 MPS FSS ZIP SNELED	--	--	LED	12,285	3500K	80	152	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	85.5	120-277VAC	96	2-9/16	3-5/16	--	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
Q	(NOT USED)																									
R4	4'-0" INDIRECT DIRECT LED LUMINAIRE WITH STANDARD LUMEN UPLIGHT OUTPUT AND BOOSTED LUMEN DOWNLIGHT OUTPUT. DIE-FORMED 20-GAUGE COLD-ROLLED STEEL REFLECTORS WITH HIGH REFLECTANCE MATTE WHITE POWDER COAT PAINT AND FROST WHITE SNAP-IN LENS. FLUSH DIFFUSER.	FINELITE	HP-2 ID	LIFECONTROL NEO-RAY LUXILLUMINAIRE HE WILLIAMS PAL LIGHTING MARK	MOD2 ID DEFINE2 EOS 2.0 MX2UD MLS2-ID S2LID	--	--	LED	3,196	3500K	80	97	L90	100,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	32.8	277VAC	48	2-1/4	4	--	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
R8	8'-0" INDIRECT DIRECT LED LUMINAIRE WITH STANDARD LUMEN UPLIGHT OUTPUT AND BOOSTED LUMEN DOWNLIGHT OUTPUT. DIE-FORMED 20-GAUGE COLD-ROLLED STEEL REFLECTORS WITH HIGH REFLECTANCE MATTE WHITE POWDER COAT PAINT AND FROST WHITE SNAP-IN LENS. FLUSH DIFFUSER.	FINELITE	HP-2 ID	LIFECONTROL NEO-RAY LUXILLUMINAIRE HE WILLIAMS PAL LIGHTING MARK	MOD2 ID DEFINE2 EOS 2.0 MX2UD MLS2-ID S2LID	--	--	LED	6,392	3500K	80	97	L90	100,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	65.6	277VAC	96	2-1/4	4	--	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
R8E	SAME AS TYPE "R8" WITH EMERGENCY OPTION	FINELITE	HP-2 ID	LIFECONTROL NEO-RAY LUXILLUMINAIRE HE WILLIAMS PAL LIGHTING MARK	MOD2 ID DEFINE2 EOS 2.0 MX2UD MLS2-ID S2LID	--	--	LED	6,392	3500K	80	97	L90	100,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	65.6	277VAC	96	2-1/4	4	--	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
S2	2'-0" WALL MOUNT FIXTURE WITH DIRECT/HIGH DOWNLIGHT OUTPUT AND FLUSH DIFFUSER. PRECISION CUT EXTRUDED ALUMINUM BODY AND DIE-FORMED 20-GAUGE COLD-ROLLED STEEL REFLECTORS.	FINELITE	HP-2 WM	LIFECONTROL AXIS PAL LIGHTING LUXILLUMINAIRE NEO-RAY MARK	MOD 2L BEAM2 MLP2 EOS 2.0 DEFINE2 S2LWD	--	--	LED	1,250	3500K	80	88	L90	100,000	--	ELECTRONIC LED DRIVER	NONE	14	277VAC	24	2-1/4	4	--	SURFACE, WALL		
T2	2'-0" WALL MOUNT FIXTURE WITH INDIRECT/HIGH UPLIGHT AND DIRECT/HIGH DOWNLIGHT OUTPUT AND FLUSH DIFFUSER. PRECISION CUT EXTRUDED ALUMINUM BODY AND DIE-FORMED 20-GAUGE COLD-ROLLED STEEL REFLECTORS.	FINELITE	HP-2 WM ID	LIFECONTROL AXIS PAL LIGHTING LUXILLUMINAIRE NEO-RAY MARK	MOD 2L BEAM2 MLP2 EOS 2.0 DEFINE2 S2LWD	--	--	LED	3,290	3500K	80	100	L90	100,000	--	ELECTRONIC LED DRIVER	NONE	28	277VAC	24	2-1/4	4	--	SURFACE, WALL		
U4	4'-0" WALL MOUNT FIXTURE WITH DIRECT/HIGH DOWNLIGHT OUTPUT AND FLUSH DIFFUSER. PRECISION CUT EXTRUDED ALUMINUM BODY AND DIE-FORMED 20-GAUGE COLD-ROLLED STEEL REFLECTORS. INTEGRAL OCCUPANCY SENSOR	FINELITE	HP-2 WM	LIFECONTROL AXIS PAL LIGHTING LUXILLUMINAIRE NEO-RAY MARK	MOD 2L BEAM2 MLP2 EOS 2.0 DEFINE2 S2LWD	--	--	LED	2,500	3500K	80	88	L90	100,000	--	ELECTRONIC LED DRIVER	NONE	28	277VAC	48	2-1/4	4	--	SURFACE, WALL		
V8	8'-0" LINEAR SUSPENDED LENSED LED STRIPLIGHT WITH ROUND LENS, CHANNEL AND COVER FORMED FROM 6006-GAUGE, COLD-ROLLED STEEL. DAMP LOCATION LISTED.	HE WILLIAMS	75R	LITHONIA COLUMBIA DAYBRITE DELVRO METALUX	ZL10 MPS FSS ZIP SNELED	--	--	LED	5,814	3500K	80	153.9	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	35.5	120-277VAC	96	2-9/16	3-5/16	--	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
W2	(NOT USED)																									
W4	4'-0" DIRECT LED LUMINAIRE WITH BOOSTED LUMEN OUTPUT. DIE-FORMED 20-GAUGE COLD-ROLLED STEEL REFLECTORS WITH HIGH REFLECTANCE MATTE WHITE POWDER COAT PAINT AND FROST WHITE SNAP-IN LENS. FLUSH DIFFUSER.	FINELITE	HP-2 R	LIFECONTROL AXIS PAL LIGHTING LUXILLUMINAIRE NEO-RAY MARK	MOD 2L BEAM2 MLP2 EOS 2.0 DEFINE2 S2LS	--	--	LED	2,556	3500K	80	90	L90	100,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	28.4	120-277VAC	48	2-1/4	4	--	RECESSED, ACT CEILING		
W4E	(NOT USED)																									
X1	UNIVERSAL SURFACE MOUNT EDGE-LIT LED EXIT SIGN. WATER-CLER INJECTION-MOLDED ACRYLIC PLAQUE WITH HIGH STRENGTH EXTRUDED ALUMINUM TRIM. GALVANIZED STEEL HOUSING WITH FULLY CONCEALED MOUNTING HARDWARE. MIRROR PLAQUE BACKGROUND. FINISH BY ARCHITECT AND LETTER COLOR BY AHJ.	DUAL-LITE	LES	ISOLITE LIGHT ALARMS BEGHELLI SURELITES EVENLITE MULE LITHONIA	MAX20 SIMPLICITY CURVA ELUX SOV CEL EDG	--	--	LED	--	--	--	--	--	--	--	--	INTERNAL BATTERY	3.3	120-277VAC	7-1/2	14-3/8	1/2	--	UNIVERSAL (WALL, CEILING)	NOTES 5,6,10	
X2	UNIVERSALLY-MOUNTED LED EXIT SIGN WITH NI-CAD BATTERY, UV-STABLE THERMO-PLASTIC HOUSING. DAMP LOCATION LISTED. IMPACT AND SCRATCH RESISTANT, CORROSION PROOF AND UL LISTED. FINISH BY ARCHITECT AND LETTER COLOR BY AHJ.	DUAL-LITE	EVE	ISOLITE LIGHT ALARMS BEGHELLI SURELITES EVENLITE MULE LITHONIA	MAX20 SIMPLICITY CURVA ELUX SOV CEL EDG	--	--	LED	--	--	--	--	--	--	--	--	INTERNAL BATTERY	2.01	120-277VAC	9-6/3	11.5	1-1/2	--	UNIVERSAL (WALL, CEILING)	NOTES 5,6,10	
X3	WALL MOUNTED EXIT SIGN WITH HIGH IMPACT, INJECTION MOLDED CLEAR POLYCARBONATE HOUSING. STANDARD EMERGENCY BATTERY PACK. FINISH BY ARCHITECT AND LETTER COLOR BY AHJ.	KEI'VAL	METSU	ISOLITE LIGHT ALARMS BEGHELLI SURELITES EVENLITE MULE LITHONIA	MAX20 SEVERE XV FTZ UX TWL WLMXX WLTE	--	--	LED	--	--	--	--	--	--	--	--	INTERNAL BATTERY	5	120-277VAC	9-5/5	14	3-27	--	UNIVERSAL (WALL, CEILING)	NOTES 5,6,10	
X4	SAME AS TYPE "X1" WITH BLACK FINISH.	DUAL-LITE	LES	ISOLITE LIGHT ALARMS BEGHELLI SURELITES EVENLITE MULE LITHONIA	EUG SIMPLICITY CURVA ELUX SOV CEL EDG	--	--	LED	--	--	--	--	--	--	--	--	INTERNAL BATTERY	3.3	120-277VAC	7-1/2	14-3/8	1/2	--	UNIVERSAL (WALL, CEILING)	NOTES 5,6,10	
X5	WALL MOUNTED EXIT/EMERGENCY COMBO UNIT WITH HIGH IMPACT POLYCARBONATE CONSTRUCTION. COLD WEATHER BATTERY WITH REMOTE CAPACITY (2) 6.5W LED EMERGENCY LAMPS. LIFETIME WARRANTY FINISH BY ARCHITECT AND LETTER COLOR BY AHJ.	KEI'VAL	METEC	ISOLITE LIGHT ALARMS BEGHELLI SURELITES EVENLITE MULE LITHONIA	FALSAFE DYNIC TWLCOM CML WLTC	--	--	LED	--	--	--	--	--	--	--	--	INTERNAL BATTERY	40	120-277VAC	7-1/2	14-3/8	1/2	--	UNIVERSAL (WALL, CEILING)	NOTES 5,6,10	
X6	END MOUNT EDGE-LIT EXIT SIGN WITH CUSTOM LETTERING TO READ "AREA OF REFUGE" WITH WHEELCHAR SYMBOL. DOUBLE FACE SIGN WITH RED LETTERING AND DIRECTIONAL ARROWS AS INDICATED ON THE FLOOR PLANS. SATIN ALUMINUM FINISH WITH MIRROR-PLAQUE BACKGROUND.	DUAL-LITE	LES	ISOLITE LIGHT ALARMS BEGHELLI SURELITES EVENLITE MULE EXITRONIX	EUG SIMPLICITY CURVA ELUX SOV CEL 90SE	--	--	LED	--	--	--	--	--	--	--	--	INTERNAL BATTERY	3.4	120-277VAC	7-1/2	15-3/8	1/2	--	END MOUNT	NOTE 6	
Y1	EXTERIOR WALL PACK ARCHITECTURAL LOW GLARE LED EXTERIOR WALL PACK WITH WIDE THROW DISTRIBUTION AND DIE-CAST ALUMINUM HOUSING AND DOOR. IP65 RATED HOUSING.	HUBBELL	TRP	LITHONIA HE WILLIAMS NLS EXIT ON GARDCO	WST VWP TRAC SLOPE 101L	--	--	LED	4,843	3000K	80	145	L70	60,000	--	0-10V DIMMING LED DRIVER, 10% MIN	NONE	33.4	120-277VAC	16-68	9-65	7-25	--	SURFACE, WALL	NOTE 8	
Z3	ARCHITECTURAL SLIM PROFILE MINIMALIST LED RING FIXTURE WITH 3 DIAMETER ALUMINUM HOUSING WITH POWER SUPPLY INTEGRATED IN CANOPY. MATTE OPAL ACRYLIC DIFFUSER WITH ALUMINUM CONSTRUCTION. 80% DOWN, 20% UP DISTRIBUTION.	SPLIGHTING	AP12095	INTERLUX DELRAY LUMOS WESTPORT	T-OUR DOS RPM ECLIPSE	--	--	LED	1,894	3500K	80	59	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	32	120-277VAC	--	1-2	1-2	35.5	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
Z4	ARCHITECTURAL SLIM PROFILE MINIMALIST LED RING FIXTURE WITH 4 DIAMETER ALUMINUM HOUSING WITH POWER SUPPLY INTEGRATED IN CANOPY. MATTE OPAL ACRYLIC DIFFUSER WITH ALUMINUM CONSTRUCTION. 80% DOWN, 20% UP DISTRIBUTION.	SPLIGHTING	AP12096	INTERLUX DELRAY LUMOS WESTPORT	T-OUR DOS RPM ECLIPSE	--	--	LED	2,605	3500K	80	59	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	44	120-277VAC	--	1-2	1-2	48	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
Z5	ARCHITECTURAL SLIM PROFILE MINIMALIST LED RING FIXTURE WITH 5 DIAMETER ALUMINUM HOUSING WITH POWER SUPPLY INTEGRATED IN CANOPY. MATTE OPAL ACRYLIC DIFFUSER WITH ALUMINUM CONSTRUCTION. 80% DOWN, 20% UP DISTRIBUTION.	SPLIGHTING	AP12097	INTERLUX DELRAY LUMOS WESTPORT	T-OUR DOS RPM ECLIPSE	--	--	LED	3,197	3500K	80	59	L70	50,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	54	120-277VAC	--	1-2	1-2	58.6	SUSPENDED, AIRCRAFT CABLE	NOTE 7	
AA	4" ROUND LED DOWNLIGHT WITH EXTRA WIDE DISTRIBUTION AND SEMI-SPECULAR FINISH. BLACK REFLECTOR COLOR.	PRESCOLITE	LTR-4RD	HE WILLIAMS LIGHTOLIER GOTHAM PORTFOLIO	4DR PAR EV04 LD48	--	--	LED	1,030	3500K	90	86	L90	55,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	12	120-277VAC	14-36	14-09	4-97	4	RECESSED, GWB CEILING		
AAE	SAME AS TYPE "AA" WITH EMERGENCY OPTION	PRESCOLITE	LTR-4RD	HE WILLIAMS LIGHTOLIER GOTHAM PORTFOLIO	4DR PAR EV04 LD48	--	--	LED	1,030	3500K	90	86	L90	55,000	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	12	120-277VAC	14-36	14-09	4-97	4	RECESSED, GWB CEILING		



1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302 . 658 . 6426  
(F) 302 . 658 . 8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

Pilottown Engineering  
Structural Engineer

Activitas, Inc.  
Landscape Architect

GIPE Associates  
MEP Engineer

Stages  
Theater & Acoustic Consultant

Corsi Associates  
Food Service Consultant



PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT

1270 KINGS HWY  
LEWES, DE 19585

KEYPLAN

2	10/03/2022	ASI-0098
1	05/17/2022	CONFORMANCE SET
MARK	DATE	DESCRIPTION

PROJECT NUMBER:	2020-14
FILE NAME:	CHMS_Arch_v2020.
DRAWN BY:	MPV
CHECKED BY:	CDH

The professional services of ABHA Architects, Inc. are undertaken for and performed in the interest of Cape Henlopen School District. No contractual obligation is assumed by ABHA Architects, Inc. for the benefit of any other person involved in the project.

These documents are owned by ABHA Architects, Inc. and shall not be used without written permission. Copyright ABHA Architects, Inc. © 2022

SHEET TITLE

SCHEDULES —  
ELECTRICAL

# E-514



E

D

C

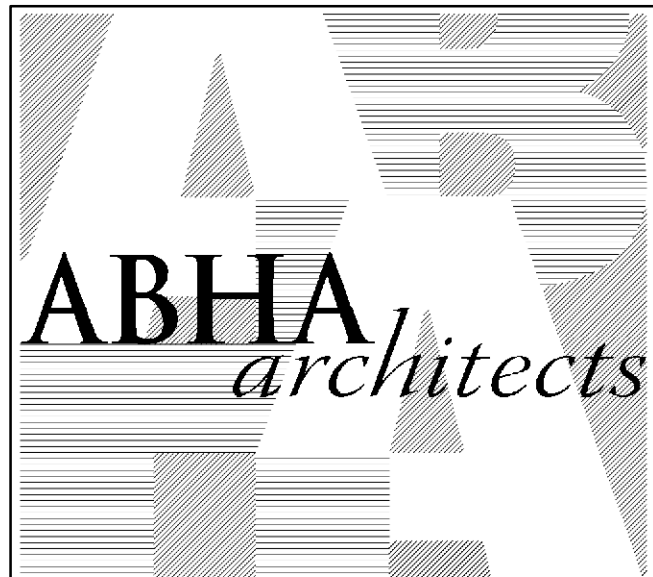
B

A

INTERIOR LIGHTING FIXTURE SCHEDULE																										
TYPE	DESCRIPTION	BASIS OF DESIGN (NOTE 1)		APPROVED EQUAL(S) (NOTE 2)		LIGHT SOURCE CHARACTERISTICS/PERFORMANCE										BALLAST / DRIVER		EMERGENCY OPTION	INPUT VA	INPUT VOLTAGE	NOMINAL DIMENSIONS				MOUNTING	REMARKS
		MANUFACTURER	SERIES	MANUFACTURER	SERIES	QTY	WATTAGE	TYPE	DELIVERED LUMENS	CCT	CRI (MIN)	LPM (MM)	LUMEN MAINTENANCE (NOTE 3)	HOURS	QTY	TYPE	LENGTH (INCHES)				WIDTH (INCHES)	DEPTH (INCHES)	DIAMETER (INCHES)			
PPP	22" RECESSED LINEAR WET LOCATION LISTED LED LUMINAIRE, EXTRUDED ALUMINUM HOUSING WITH WIRING ACCESSIBLE THROUGH BOTTOM OF HOUSING. IP65 AND IK10 RATED. FINISH TO BE SELECTED BY ARCHITECT.	PIRANOLE ARCHITECTURAL LIGHTING	EDGE EVSWET	P/L SELUX	ML3WL L125R1	--	--	LED	9,592	3000K	80	92	L90	36,700	--	0-10V DIMMING LED DRIVER, 1% MIN	NONE	103.4	120-277VAC	264	3-11/16	4-13/16	--	RECESSED, CANOPY		
QQQ	(NOT USED)																									
RRR	SURFACE MOUNT, CANOPY LED LUMINAIRE WITH ACRYLIC LENS AND DIE-CAST ALUMINUM HOUSING WITH CORROSION RESISTANT POWDER COAT FINISH. IMPACT RESISTANT DIFFUSER. FINISH TO BE SELECTED BY ARCHITECT.	HUBBELL	LSQ	ILP LITHONIA	CP CHY	--	--	LED	3,055	4000K	70	126	L70	185,000	--	0-10V DIMMING LED DRIVER, 10% MIN	NONE	24.3	277VAC	10	10	4	--	SURFACE, CANOPY		
SSS	2'-0" LENGTH SURFACE MOUNTED LENSED LED STRIPLIGHT WITH ROUND LENS, CHANNEL AND COVER FORMED FROM CODE-GAUGE, COLD-ROLLED STEEL. DAMP LOCATION LISTED.	HE WILLIAMS	75R	LITHONIA COLUMBIA DAY-BRITE	ZL16 MPS FSS ZIP SHLED	--	--	LED	2,470	4000K	80	135.5	L90	50,000	--	ELECTRONIC LED DRIVER	NONE	18.2	120-277VAC	24	2-3/4	2	--	SURFACE, CEILING		
TTT2	2'-0" LONG 24VDC LINEAR ILLUMINATION SYSTEM FOR INSTALLATION ON T-BAR CEILING GRID WITH HOUSING REQUIRING ADDITIONAL SUPPORTS. HIGH OUTPUT. FROSTED LENS. 15/10° T-BAR MOUNTING. POWER-FEED ON BACK OF FIXTURE. QUICK CONNECTS AND/OR WIRELEADS AS REQUIRED. WHITE POWDER COATED FINISH HOUSING. 5-YEAR WARRANTY. UNIVERSAL POWER SUPPLY WITH 0-10V DIMMING.	LUMINII	BARAHE	JLC TECH	T-BAR LED	--	--	LED	1,584	4000K	80	87	L70	50,000	--	24VDC POWER SUPPLY WITH 0- 10V DIMMING	NONE	18.2	120-277VAC	24	0.93	0.4	--	SURFACE, T-BAR		
TTT4	SAME AS TYPE TTT2 EXCEPT 4'-0" LENGTH.	LUMINII	BARAHE	JLC TECH	T-BAR LED	--	--	LED	3,168	4000K	80	87	L70	50,000	--	24VDC POWER SUPPLY WITH 0- 10V DIMMING	NONE	36.4	120-277VAC	48	0.93	0.4	--	SURFACE, T-BAR		
NOTES: 1. ONLY BASIS OF DESIGN FIXTURE INDICATED HAS BEEN VERIFIED FOR PERFORMANCE. 2. ALTERNATE MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO, THOSE LISTED BELOW. BEING LISTED DOES NOT GUARANTEE APPROVAL OF SUBMITTED FIXTURE(S); FIXTURE(S) MUST COMPLY WITH PROJECT REQUIREMENTS AND MEET OR EXCEED BASIS OF DESIGN FIXTURE(S) PERFORMANCE. 3. L70 RATING SHALL BE REPORTED VALUE WHICH SHALL BE DETERMINED IN ACCORDANCE WITH IESNA STANDARDS LM-80 AND TM-21. 4. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT. 5. EMERGENCY LIGHTS AND/OR EXIT SIGNS SHALL BE MOUNTED 8'-0" AFF UON. WHERE INSTALLED ABOVE DOORS, FIXTURE HEIGHT SHALL BE FIELD COORDINATED. 6. CONFIGURE MOUNTING, FACE CONFIGURATIONS AND CHEVRON INDICATORS WITH SYMBOLS ON THE FLOOR PLANS. 7. FIXTURE SHALL BE SUSPENDED TO HEIGHT INDICATED ON DRAWINGS. FIELD VERIFY SUSPENSION LENGTH PRIOR TO ORDERING. 8. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR FIXTURE MOUNTING HEIGHTS AND LOCATIONS. 9. COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLAN (RCP). 10. ALL EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES, INCLUDING REMOTE HEADS, SHALL BE OF THE SAME MANUFACTURER AND SERIES. 11. DRIVER SHALL BE REMOTE MOUNTED. INSTALL CAUTION WARNING LABELS ON INTERIOR OF DRIVER ENCLOSURE AND PAINT DRIVER ENCLOSURE TO MATCH ADJACENT SURFACES. 12. FIXTURE SHALL BE SUSPENDED FROM CHANDELIER LIFT TO RAISE LOWER FOR WRESTLING EVENTS. SET UPPER LIMIT SUCH THAT FIXTURE IS SAME HEIGHT AS REMAINDER OF FIXTURES IN GYMNASIUM. 13. FIXTURE LENGTHS AND CORNER ANGLES SHALL BE AS INDICATED ON FLOOR PLANS AND/OR DETAILS. FIELD VERIFY DIMENSIONS PRIOR TO ORDERING. 14. BASIS OF DESIGN VALUE IS PROVIDED FOR INFORMATION. EXACT LOCATIONS OF FIXTURES SHALL BE FIELD COORDINATED. FIXTURES SHALL BE AIMED AT BUILDING AS REQUIRED. 15. LUMINAIRES SHALL CLIP TO T-BAR CEILING. PROVIDE POWER SUPPLIES OF SUFFICIENT CAPACITY AND QUANTITY TO SUIT QUANTITY AND CIRCUITING ARRANGEMENT OF FIXTURES. SEE FLOOR PLANS.																										

EXTERIOR LIGHTING FIXTURE SCHEDULE																																		
TYPE	DESCRIPTION	BASIS OF DESIGN (NOTE 1)		APPROVED EQUAL(S) (NOTE 2)		LIGHT SOURCE CHARACTERISTICS/PERFORMANCE								OPTICS					BALLAST / DRIVER			LUMINAIRES			INPUT VA	INPUT VOLTAGE	NOMINAL DIMENSIONS			POLE		REMARKS		
		MANUFACTURER	SERIES	MANUFACTURER	SERIES	QTY	WATTAGE	TYPE	LUMENS	CCT	CRI (MIN)	LPW (MIN)	LUMEN MAINTENANCE (NOTE 3)	DISTRIBUTION	OPTIONS	B	U	G	QTY	TYPE	CURRENT (mA) (MAX)	QTY	MOUNTING	ORIENTATION			LENGTH (INCHES)	WIDTH (INCHES)	DEPTH (INCHES)	HEIGHT (FEET)	STYLE		MATERIAL	
SA1	SQUARE LED AREA LUMINAIRE CONSTRUCTED WITH ONE-PIECE DIE-CAST ALUMINUM HOUSING. IP66 ENCLOSURE RATING. HOUSING AND ARE FINISHED IN TIG POLYESTER POWDER COAT PAINT. 2.5 MIL NOMINAL THICKNESS. FINISH SELECTED BY ARCHITECT. FIXTURE SHALL HAVE WAVE LINX OUTDOOR CONTROL MODULE FOR ON AT DUSK/OFF AT DAWN OPERATION, OCCUPIED AT FULL, VACANT AT 50% OUTPUT.	KIM LIGHTING	ARX16	COOPER LITHONIA GARDCO	TLM DSX1 P26	--		LED	15,420	3000K	70	122	L95	60,000	TYPE III	--	3	0	3	1	0-10V DIMMING LED DRIVER	530mA	1	8" ARM	90 DEGREES	127	277VAC	23-1/4"	16-1/4"	8"	20	SQUARE, STRAIGHT	ALUMINUM	
SA2	SQUARE LED AREA LUMINAIRE CONSTRUCTED WITH ONE-PIECE DIE-CAST ALUMINUM HOUSING. IP66 ENCLOSURE RATING. HOUSING AND ARE FINISHED IN TIG POLYESTER POWDER COAT PAINT. 2.5 MIL NOMINAL THICKNESS. FINISH SELECTED BY ARCHITECT. FIXTURE SHALL HAVE WAVE LINX OUTDOOR CONTROL MODULE FOR ON AT DUSK/OFF AT DAWN OPERATION, OCCUPIED AT FULL, VACANT AT 50% OUTPUT.	KIM LIGHTING	ARX16	COOPER LITHONIA GARDCO	TLM DSX1 P26	--		LED	15,420	3000K	70	122	L95	60,000	TYPE III	--	3	0	3	2	0-10V DIMMING LED DRIVER	530mA	1	8" ARM	180 DEGREES	127	277VAC	23-1/4"	16-1/4"	8"	20	SQUARE, STRAIGHT	ALUMINUM	
SA3	SQUARE LED AREA LUMINAIRE CONSTRUCTED WITH ONE-PIECE DIE-CAST ALUMINUM HOUSING. IP66 ENCLOSURE RATING. HOUSING AND ARE FINISHED IN TIG POLYESTER POWDER COAT PAINT. 2.5 MIL NOMINAL THICKNESS. FINISH SELECTED BY ARCHITECT. FIXTURE SHALL HAVE WAVE LINX OUTDOOR CONTROL MODULE FOR ON AT DUSK/OFF AT DAWN OPERATION, OCCUPIED AT FULL, VACANT AT 50% OUTPUT.	KIM LIGHTING	ARX16	COOPER LITHONIA GARDCO	TLM DSX1 P26	--		LED	15,110	3000K	70	119	L95	60,000	TYPE IV	--	2	0	3	2	0-10V DIMMING LED DRIVER	530mA	1	8" ARM	180 DEGREES	127	277VAC	23-1/4"	16-1/4"	8"	20	SQUARE, STRAIGHT	ALUMINUM	
SB	SQUARE LED AREA LUMINAIRE CONSTRUCTED WITH ONE-PIECE DIE-CAST ALUMINUM HOUSING. IP66 ENCLOSURE RATING. HOUSING AND ARE FINISHED IN TIG POLYESTER POWDER COAT PAINT. 2.5 MIL NOMINAL THICKNESS. FINISH SELECTED BY ARCHITECT. FACTORY INSTALLED HOUSE SIDE SHIELD. FIXTURE SHALL HAVE WAVE LINX OUTDOOR CONTROL MODULE FOR ON AT DUSK/OFF AT DAWN OPERATION, OCCUPIED AT FULL, VACANT AT 50% OUTPUT.	KIM LIGHTING	ARX16	COOPER LITHONIA GARDCO	TLM DSX1 P26	--		LED	15,161	3000K	70	119	L95	60,000	SL3	--	2	0	3	1	0-10V DIMMING LED DRIVER	530mA	1	8" ARM	90 DEGREES	127	277VAC	23-1/4"	16-1/4"	8"	20	SQUARE, STRAIGHT	ALUMINUM	
SC	SQUARE LED AREA LUMINAIRE CONSTRUCTED WITH ONE-PIECE DIE-CAST ALUMINUM HOUSING. IP66 ENCLOSURE RATING. HOUSING AND ARE FINISHED IN TIG POLYESTER POWDER COAT PAINT. 2.5 MIL NOMINAL THICKNESS. FINISH SELECTED BY ARCHITECT. SPILL LIGHT ELIMINATOR RIGHT DISTRIBUTION. FIXTURE SHALL HAVE WAVE LINX OUTDOOR CONTROL MODULE FOR ON AT DUSK/OFF AT DAWN OPERATION, OCCUPIED AT FULL, VACANT AT 50% OUTPUT.	KIM LIGHTING	ARX16	COOPER LITHONIA GARDCO	TLM DSX1 P26	--		LED	13,912	3000K	70	110	L95	60,000	SLR	--	2	0	3	1	0-10V DIMMING LED DRIVER	530mA	1	8" ARM	90 DEGREES	127	277VAC	23-1/4"	16-1/4"	8"	20	SQUARE, STRAIGHT	ALUMINUM	
SD	12" DIAMETER MODULAR IN-GRADE LUMINAIRE WITH FACTORY SEALED LAMP MODULE AND ENCAPSULATED POWER MODULE. LED MODULE SHALL BE AIMABLE WITH 15 DEGREE TILT MECHANISM. HEAVY DUTY POLYMER HOUSING WITH CONVECTIVE COOLING, INTEGRAL JUNCTION BOX, FINISH DOOR TRIM ASSEMBLY, AND FLAT CLEAR LENS WITH ROCK GUARD, DOOR AND TRIM RING MATERIAL, FINISH SELECTED BY ARCHITECT.	KIM LIGHTING	LTV81	HYREL TARGETTI	M8720C KEPLERO WW	--		LED	4,109	3000K	70	92	L70	60,000	WALL WASH	ROCK GUARD	--	--	--	1	LED DRIVER	400mA	1	IN-GRADE	ADJUSTABLE	35	277VAC	12"	12"	16"	--	--	--	NOTE 5
SE	NOT USED																																	
SF	LED POST TOP AREA LUMINAIRE CONSTRUCTED OF ONE-PIECE DIE-CAST ALUMINUM HOUSING. IP65 RATED. 10KV SURGE PROTECTION. FIVE-YEAR WARRANTY. FINISH SELECTED BY ARCHITECT.	KIM LIGHTING	OURO	LITHONIA GARDCO	RADEAN PPT	--		LED	6,702	3000K	70	102	L70	60,000	TYPE V, RECTANGULAR	--	3	0	3	1	LED DRIVER	800mA	1	POST TOP	--	65	277VAC	20"	20"	24"	14	ROUND, STRAIGHT	ALUMINUM	
SG	12" DIAMETER MODULAR IN-GRADE LUMINAIRE WITH FACTORY SEALED LAMP MODULE AND ENCAPSULATED POWER MODULE. LED MODULE SHALL BE AIMABLE WITH 15 DEGREE TILT MECHANISM. HEAVY DUTY POLYMER HOUSING WITH CONVECTIVE COOLING, INTEGRAL JUNCTION BOX, FINISH DOOR TRIM ASSEMBLY, AND FLAT CLEAR LENS WITH ROCK GUARD, DOOR AND TRIM RING MATERIAL, FINISH SELECTED BY ARCHITECT.	HYREL	M8720C	ORGATECH INSIGHT HYREL KIM LIGHTING TARGETTI	4750L LTV81 KEPLERO ZOOM	--		LED	4,109	3000K	70	92	L70	60,000	NARROW FLOOD	ROCK GUARD	--	--	--	1	LED DRIVER	400mA	1	IN-GRADE	ADJUSTABLE	35	277VAC	12"	12"	16"	--	--	--	NOTE 4
SH	ARCHITECTURAL SOLAR POWERED LED BOLLARD, CAST, MARINE-GRADE CORROSION RESISTANT ALUMINUM HOUSING WITH STAINLESS FASTENERS WITH SECURITY FASTENER OPTION. ASYMMETRIC TYPE 3 DISTRIBUTION. PROGRAMMED TO BE ON AT DUSK, DIM TO 30% AFTER 5 HOURS, ON 1 HOUR BEFORE DAWN, OFF AT DAWN. SQUARE CONCRETE FOUNDATION.	FIRST LIGHT TECHNOLOGIES	PLB	VALEN	BOLLARD BP	--		LED	300	3000K	--	--	L70	100,000	TYPE III	SECURITY FASTENERS	--	--	--	1	LED DRIVER	--	1	BOLLARD	--	--	--	6"	6"	36"	--	ROUND, STRAIGHT	ALUMINUM	
SI	NOT USED																																	
SJ	2' FLOOD ARCHITECTURAL LINEAR FLOODLIGHT WITH STAINLESS STEEL EXTERNAL FASTENERS AND SILICONE GASKET FOR DRIVER COMPARTMENT. IP65 CERTIFIED FOR WET LOCATION LISTING. FINISH TO BE SELECTED BY ARCHITECT, INCLUDING CUSTOM COLOR OPTION. THREADED KNUCKLE, STANCHION MOUNT WITH WIDE FLOOD BEAM SPREAD AND DIFFUSED LENS. CONTROL BOX TO ALLOW FOR PRESET LIGHT LEVELS WITH BUILT-IN TIME CLOCK AND BLUETOOTH CONTROLLER TO CONNECT TO THE CONTROL BOX FOR PROGRAMMING.	KIM LIGHTING	INT	ORGATECH INSIGHT HYREL LIGMAN	4750L UKWH-3001	--		LED	2,803	3000K	70	98	L94	100,000	WIDE FLOOD	FIXED HOOD/AMSOR	--	--	--	1	LED DRIVER	360mA	1	DIE-CAST ALUMINUM STANCHION WITH HANDHOLE	ADJUSTABLE	30	120VAC	24	3.9	5.29	--	--	--	

NOTES:  
1. ONLY BASIS OF DESIGN FIXTURE INDICATED HAS BEEN VERIFIED FOR PERFORMANCE.  
2. ALTERNATE MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO, THOSE LISTED BELOW. BEING LISTED DOES NOT GUARANTEE APPROVAL OF SUBMITTED FIXTURE(S); FIXTURE(S) MUST COMPLY WITH PROJECT REQUIREMENTS AND MEET OR EXCEED BASIS OF DESIGN FIXTURE(S) PERFORMANCE.  
3. L70 RATING SHALL BE REPORTED VALUE WHICH SHALL BE DETERMINED IN ACCORDANCE WITH IESNA STANDARDS LM-80 AND TM-21.  
4. FIXTURE(S) TO BE INSTALLED ADJACENT TO BUILDINGS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. EXACT LOCATIONS OF FIXTURES TO BE FIELD COORDINATED. FIXTURES SHALL BE AIMED AT FLAGPOLES AS REQUIRED.  
5. FIXTURES TO BE INSTALLED ADJACENT TO BUILDING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. EXACT LOCATIONS OF FIXTURES TO BE FIELD COORDINATED. FIXTURES SHALL BE AIMED AT BUILDING AS REQUIRED.



1621 N. Lincoln Street  
Wilmington, DE 19806  
(P) 302.658.6426  
(F) 302.658.8431  
abhagen@ABHA.com  
www.ABHA.com

CONSULTANTS  
Davis Bowen & Friedel, Inc.  
Civil Engineer

1 Park Avenue  
Milledale, DE 19953

Pilotown Engineering  
Structural Engineer

17585 Nossau Commons Blvd, Unit 3  
Lewes, DE 19958

Activitas, Inc.  
Landscape Architect

73 Wilton Street  
Dedham, MA 02026

GIPE Associates  
MEP Engineer

8719 Brooke Drive  
Easton, MD 21601

Stages  
Theater & Acoustic Consultant

732-333-8003

Corsi Associates  
Food Service Consultant

1489 Baltimore Pike  
Springfield, PA 19064



PROJECT  
NEW MIDDLE SCHOOL

910 SHIELDS AVENUE  
LEWES, DE 19958

OWNER  
CAPE HENLOPEN  
SCHOOL DISTRICT

1270 KINGS HWY  
LEWES, DE 19585

KEYPLAN