

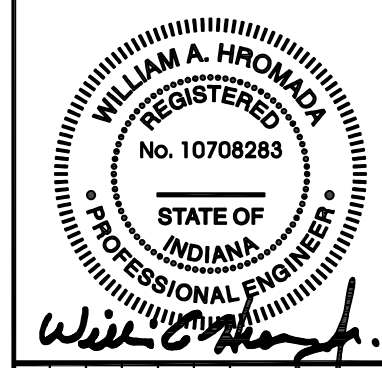
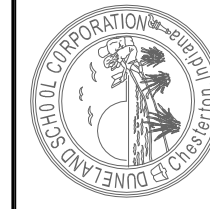
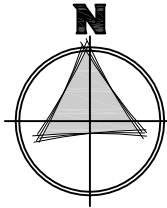
1 EXISTING FIRST FLOOR PLAN - ELECTRICAL  
3/32" = 1'-0"



- ### SHEET NOTES
1. CONNECT NEW CORRIDOR NORMAL POWER LIGHT FIXTURES TO EXISTING CORRIDOR LIGHTING CIRCUITRY AND EXISTING CORRIDOR SWITCHING VIA NEW SWITCHES AND OCCUPANCY SENSORS, COMPLETE AS REQUIRED. MAXIMUM 1400W PER 120 VOLT CIRCUIT AND 4400W PER 277V CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING PANEL AND EXTEND 2 #2 AND 1 #2 GND IN 1/2" CONDUIT COMPLETE AS REQUIRED. NEW SWITCHING ARRANGEMENT SHALL MATCH EXISTING SWITCHING ARRANGEMENT. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
  2. CONNECT NEW EXIT SIGNS TO EXISTING EMERGENCY EXIT SIGN CIRCUITRY, COMPLETE AS REQUIRED. MAXIMUM 1400W PER 120 VOLT CIRCUIT AND 4400W PER 277V CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING EMERGENCY PANEL AND EXTEND 2 #2 AND 1 #2 GND IN 1/2" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
  3. RECONNECT NEW NIGHT LIGHT FIXTURES TO EXISTING EMERGENCY NIGHT LIGHTING CIRCUITRY WITH EMERGENCY GENERATOR BACKUP, MAXIMUM 1400W PER 120 VOLT CIRCUIT AND 4400W PER 277V CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING EMERGENCY PANEL WITH EMERGENCY GENERATOR BACKUP AND EXTEND 2 #2 AND 1 #2 GND IN 1/2" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
  4. IF EXISTING FEEDER FROM REMOVED PUMPS IS SUITABLE FOR REUSE, EXTEND EXISTING FEEDER TO NEW 5A/3P CIRCUIT BREAKER IN EXISTING PANEL AND CONNECT VFD AND NEW PUMP, COMPLETE AS REQUIRED. IF EXISTING FEEDER OR PANEL IS NOT SUITABLE FOR USE, PROVIDE 4 #2 1/2" GND - 3/4" C. NEATLY ROUTED TO ONE (1) NEW 15A/3P CIRCUIT BREAKER IN EXISTING 211/480V, 3φ, 4W, 125A PANEL 1H1, COMPLETE AS REQUIRED.
  5. PROVIDE 4 #2 1/2" GND - 3/4" C. NEATLY ROUTED TO ONE (1) NEW 15A/3P CIRCUIT BREAKER IN EXISTING 211/480V, 3φ, 4W, 125A PANEL 1H1 FOR NEW PUMP CONNECTION, COMPLETE AS REQUIRED.

- ### GENERAL NOTES
1. CONTRACTOR SHALL CAREFULLY VERIFY EXISTING CONDUITS, BOXES, DEVICES, EQUIPMENT, LOW VOLTAGE DEVICES, FIRE ALARM DEVICES, ETC. LOCATED ON THE CEILING AND ON THE WALLS IN WHICH ARCHITECTURAL MODIFICATIONS, STRUCTURAL MODIFICATION OR NEW CEILING SHALL BE LOCATED. CONTRACTOR SHALL REMOVE AND RELOCATE ALL CEILING AND WALL MOUNTED DEVICES AS REQUIRED TO ELIMINATE CONFLICTS BETWEEN EXISTING DEVICES AND ARCHITECTURAL/STRUCTURAL MODIFICATIONS. PROVIDE NEW SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES AS REQUIRED FOR ALL RELOCATED DEVICES, COMPLETE AS REQUIRED.
  2. SHADED FIXTURES TO BE CONNECTED TO CONSTANT HOT NIGHT LIGHT CIRCUITRY WITH EMERGENCY GENERATOR BACKUP.
  3. CONTRACTOR SHALL FIELD VERIFY THE EXISTING VOLTAGE, PHASE AND WIRING OF EXISTING PANELS AND CAREFULLY COORDINATE EQUIPMENT WITH OTHER TRADES TO ELIMINATE CONFLICTS PRIOR TO ORDERING EQUIPMENT.

1 PARTIAL FIRST FLOOR PLAN - ELECTRICAL  
3/32" = 1'-0"



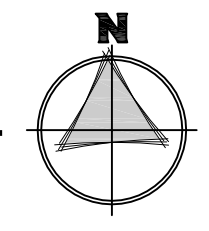
PROJECT NUMBER:	17-006
PROJECT NAME:	CH
DRAWN BY:	66612/28/2017 09/29/2017
CHECKED BY:	
DATE:	

PARTIAL FIRST FLOOR PLAN -  
ELECTRICAL



- SHEET NOTES**
  - CONNECT NEW CORRIDOR NORMAL POWER LIGHT FIXTURES TO EXISTING CORRIDOR LIGHTING CIRCUITRY AND EXISTING CORRIDOR SWITCHING VIA NEW SWITCHES AND OCCUPANCY SENSORS, COMPLETE AS REQUIRED, MAXIMUM 1400W PER 120 VOLT CIRCUIT AND 4400W PER 277V CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING PANEL AND EXTEND 2 #2 AND 1 #2 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. NEW SWITCHING ARRANGEMENT SHALL MATCH EXISTING SWITCHING ARRANGEMENT. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
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  - RECONNECT NEW NIGHT LIGHT FIXTURES TO EXISTING EMERGENCY NIGHT LIGHTING CIRCUITRY WITH EMERGENCY GENERATOR BACKUP, MAXIMUM 1400W PER 120 VOLT CIRCUIT AND 4400W PER 277V CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN EXISTING SPACE OF EXISTING EMERGENCY PANEL WITH EMERGENCY GENERATOR BACKUP AND EXTEND 2 #2 AND 1 #2 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
- GENERAL NOTES**
  - CONTRACTOR SHALL CAREFULLY VERIFY EXISTING CONDUITS, BOXES, DEVICES, EQUIPMENT, LOW VOLTAGE DEVICES, FIRE ALARM DEVICES, ETC. LOCATED ON THE CEILING AND ON THE WALLS IN WHICH ARCHITECTURAL MODIFICATIONS, STRUCTURAL MODIFICATION OR NEW MODIFICATIONS WILL BE LOCATED. CONTRACTOR SHALL REMOVE AND RELOCATE ALL CEILING AND WALL MOUNTED DEVICES AS REQUIRED TO ELIMINATE CONFLICTS BETWEEN EXISTING DEVICES AND ARCHITECTURAL/STRUCTURAL MODIFICATIONS. PROVIDE NEW SURFACE RACEWAY AND SURFACE RACEWAY BACKCOVER AS REQUIRED FOR ALL RELOCATED DEVICES, COMPLETE AS REQUIRED.
  - SHADED FIXTURES TO BE CONNECTED TO CONSTANT HOT NIGHT LIGHT CIRCUITRY WITH EMERGENCY GENERATOR BACKUP.

1 PARTIAL FIRST FLOOR PLAN - ELECTRICAL  
3/32" = 1'-0"



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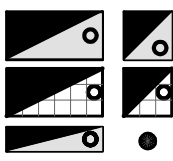


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PROJECT NUMBER:	17-006
PROJECT MANAGER:	CH
DRAWN BY:	CH
DATE:	08/09/2017
PARTIAL FIRST FLOOR PLAN - ELECTRICAL	






























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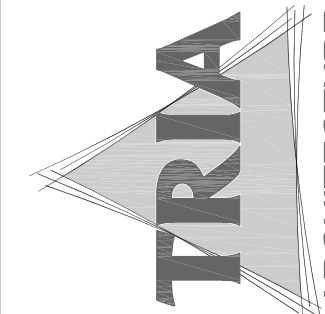
INTERIOR/EXTERIOR LIGHTING LUMINAIRE SCHEDULE							
TAG	SYMBOL	DESCRIPTION	MANUFACTURER SERIES OR CATALOG NUMBER	VOLTAGE/ BALLAST	LAMPS/CROSS SECTION	MOUNTING	REMARKS
AA		LED DIRECT/INDIRECT FIXTURE	LITHONIA *BLT4-30L-ADP-MVOLT-EZI-LF035 -XX OR APPROVED EQUAL BY HUBBELL OR LEGION LIGHTING	120/211 VOLT 0-10V DIM MIN 3000 LUMEN	LED 3500K CRI +85	RECESSED LAY-IN/ SAT	- - -
XA		SINGLE FACE EXIT SIGN WITH 6" GREEN LETTERS CAST ALUMINUM BODY, 90 MINUTE NI-CAD BATTERY BACK UP	LITHONIA LQC W1 G EL N OR APPROVED EQUAL BY DUAL-LITE OR LEGION LIGHTING	120/211 VOLT	LED - - -	CEILING/ WALL	-FURNISH WITH ARROWS AS REQ'D BY CODE -PROVIDE WIRE GUARD WHERE INDICATED ON PLANS
XB		DOUBLE FACE EXIT SIGN WITH 6" GREEN LETTERS CAST ALUMINUM BODY, 90 MINUTE NI-CAD BATTERY BACK UP	LITHONIA LQC-W-2-G-EL-N (ELA WGEX) OR APPROVED EQUAL BY DUAL-LITE OR LEGION LIGHTING	120/211 VOLT	LED - - -	CEILING/ WALL	-FURNISH WITH ARROWS AS REQ'D BY CODE -PROVIDE WIRE GUARD WHERE INDICATED ON PLANS
EM NL		FIXTURE ON EMERGENCY CIRCUIT WITH 90 MINUTE, HIGH LUMEN OUTPUT BATTERY UNIT OR INVERTER	BODINE FACTORY INSTALLED DRIVER (LED) OR MYERS LV SERIES INVERTER (LED)	120/211 VOLT	-	IN FIXTURE/ REMOTE	REMOTE MOUNT IN ACCESSIBLE CEILING'S WHERE INTERNAL INSTALLATION IS NOT POSSIBLE (PROVIDE TEST SWITCH & ALL NECESSARY AFFURTENANCES)

ELECTRICAL ABBREVIATIONS			
NOTE: ABBREVIATIONS USED ON DRAWINGS IN GENERAL ARE LISTED BELOW. REFER TO CSI SECTION 01420 FOR ANY ABBREVIATIONS LISTED ON THE DRAWINGS BUT ARE NOT LISTED BELOW.			
A	AMPS	KVA	KILOVOLT AMPERE
AC	AIR CONDITIONING	KW	KILOWATTS
AFF	ABOVE FINISH FLOOR	MECH	MECHANICAL
AFG	ABOVE FINISH GRADE	MTD	MOUNTED
BRKR	BREAKER	NE	NEW LOCATION OF EXISTING RELOCATED DEVICE
C	CONDUIT	NIC	NOT IN CONTRACT
CH	CIRCUIT	NL	NIGHTLIGHT
OKT	CABINET HEATER	NTS	NOT TO SCALE
DISTR	DISTRIBUTION	O/C	ON CENTER
EF	EXHAUST FAN	P	POLE
ELEC	ELECTRICAL	PNL	PANEL
EM	EMERGENCY	PH	PHASE
EMT	ELECTRICAL METALLIC TUBING	RR	REMOVE AND RELOCATED EXISTING DEVICE
ER	EXISTING DEVICE TO BE REMOVED	SW	SWITCH
EX	EXISTING DEVICE TO REMAIN	TYP	TYPICAL
F	FUSE	UN	UNLESS OTHERWISE NOTED
FS	FUSIBLE SWITCH	V	VOLTS
G	GROUND	VIF	VERIFY IN FIELD
GFI	GROUND FAULT INTERRUPTING PROTECTION	W	WATTS
GRC	GALVANIZED RIGID CONDUIT	WP	WEATHERPROOF TYPE DEVICE
HP	HORSEPOWER	WG	WIRE GUARD
J	JUNCTION BOX	F#1	FURNISH AND INSTALL

PUMP EQUIPMENT CONNECTION SCHEDULE															
TAG	DESCRIPTION	LOAD WATTS	HP	MOCP	VOLT	PHASE	PANEL	OKT. NO.	FUSED SWITCH C/B	FEEDER		STARTED BY:		LOCATION	REMARKS
										CABLE	C	MC.	EC.		
BP-1	-	3985.92	3	-	480	3	EX IHI	EX IHI	15A/3P	4 #2 4 1 #2 GRD.	¾'	-	-	-	-
BP-2	-	3985.92	3	-	480	3	EX IHI	EX IHI	15A/3P	4 #2 4 1 #2 GRD.	¾'	-	-	-	-
HWP-1	-	6311.04	5	-	480	3	EX FNL	EX FNL	15A/3P	4 #2 4 1 #2 GRD.	¾'	-	-	-	-
HWP-2	-	-	5	-	480	3	EX FNL	EX FNL	15A/3P	4 #2 4 1 #2 GRD.	¾'	-	-	-	-

SYMBOL LIST	
* NOTE: FIRE ALARM DEVICES, MOUNTING HEIGHT, ETC. SHALL COMPLY WITH 'ADA' STANDARDS.	
	FIRE ALARM SYSTEM HEAT DETECTOR - COMBINATION TYPE (R/R - FIXED TEMP.) IN BOILER ROOM
	FIRE ALARM SYSTEM SMOKE DETECTOR - CEILING MOUNTED - ABOVE FACP
	FURNISH AND INSTALL CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH POWER PACK. MANUFACTURERS: SENSORSWITCH *CM1-PDT1-10-MF-20 (WITH MICROPHONICS) OR APPROVED EQUAL BY LEVITON OR HUBBELL CONTROLS.
	GENERAL PURPOSE 1-POLE SWITCH - (TYPICAL - MOUNTED 42" AFF.) (HUBBELL *1221 OR EQUAL)
	GENERAL PURPOSE 3-WAY SWITCH MTD 42" AFF (HUBBELL *1223 OR EQUAL)
	GENERAL PURPOSE FOUR WAY SWITCH MTD. 42" AFF (HUBBELL *1224 OR EQUAL)
	MANUAL STARTING SWITCH WITH THERMAL OVERLOAD PROTECTION
	EXISTING CEILING SPEAKERS TO BE REMOVED AND RELOCATED
	120V-20A SPECIFICATION GRADE DUPLEX RECEPTACLE - (MOUNTED 18" AFF. OR AS NOTED) (HUBBELL *5362 OR EQUAL).
	120V-20A SPECIFICATION GRADE DUPLEX RECEPTACLE - (MOUNTED 42" AFF. OR 2" ABOVE BACKSPLASH IF LOCATED ABOVE COUNTER) (HUBBELL *5362 OR EQUAL)
	120V-20A SPECIFICATION GRADE GROUNDED DUPLEX RECEPTACLE WITH G.F.I. PROTECTION - (MOUNTED 18" AFF. OR AS NOTED) (HUBBELL *GF20 OR EQUAL)
	JUNCTION BOX - SIZE AND TYPE AS REQUIRED.
	FLEX CONDUIT CONNECTION
	JUNCTION BOX W/ FLEX CONDUIT CONNECTION.
	ELECTRIC MOTOR CONNECTION - PROVIDE LOCAL DISCONNECT SWITCH PER NATIONAL ELECTRIC CODE - CONNECT MISCELLANEOUS ACCESSORIES SUCH AS BACK DRAFT DAMPERS, ETC. COMPLETE AS REQUIRED.
	CONDUIT CONCEALED ABOVE CEILING OR IN WALL
	CONDUIT CONCEALED IN OR BELOW FINISHED FLOOR.
	CONDUIT EXPOSED ON CEILING, WALL OR BAR JOIST - ROUTED IN NEAT MANNER
	HEXAGON TAG REFERENCE TO EQUIPMENT CONNECTION SCHEDULE
	ELLIPSE TAG REFERENCE TO SHEET NOTES
	TWO DEVICE MOUNTED UNDER COMMON COVER. WHERE LOW VOLTAGE DEVICES ARE MOUNTED UNDER COMMON COVER, COMBINE CONDUIT STUBS MAINTAINING THE EQUIVALENT FREE AREA FOR THE LOW VOLTAGE CABLING.
	ELECTRIC PANELBOARDS.
	DISCONNECT SWITCH SIZE AND TYPE AS REQUIRED - COORDINATE AMPERE RATING WITH EQUIPMENT SUPPLIER
	REMOVE EXISTING DEVICE AND PROVIDE NEW AS INDICATED IN EXISTING BACK BOX, JUNCTION BOX, ETC. VERIFY EXACT LOCATION AND CONDITIONS IN FIELD. MODIFY EXISTING BACK BOX, JUNCTION BOX, ETC. PROVIDE TRIM PLATES, EXTENSION RINGS, ETC. AS REQUIRED TO MOUNT NEW DEVICE AS INDICATED.
	F#1 NEW DEVICE AS INDICATED.
	EXISTING LIGHTS, RECEPTABLES, SPECIAL SYSTEMS, DEVICE, ETC. TO REMAIN.
	EXISTING LIGHTS, RECEPTABLES, SPECIAL SYSTEMS, DEVICE, ETC. TO BE REMOVED COMPLETE IN ITS ENTIRETY. REMOVE ALL ASSOCIATED SURFACE MOUNTED CONDUIT, OUTLETS, ETC. AND BLANK-OFF FLUSH WITH NEW OR EXISTING CONSTRUCTION. SEE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
	REMOVE EXISTING LIGHTS, RECEPTABLES, SPECIAL SYSTEMS, DEVICES, ETC. AND RELOCATE TO NEW LOCATION COMPLETE AS REQUIRED.
	NEW LOCATION OF EXISTING RELOCATED LIGHTS, RECEPTABLES, SPECIAL SYSTEMS, DEVICE, ETC. EXTEND CONDUIT, WIRE, CABLE, ETC. COMPLETE AS REQUIRED TO NEW LOCATION FOR A COMPLETE AND PROPER INSTALLATION.

DUNELAND SCHOOL CORPORATION  
2017 MECHANICAL RENOVATIONS AT:  
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*William A. Hromadsky*

PROJECT NUMBER: IT-006	REVISION:
PROJECT MANAGER:	
DRAWN BY:	
ISSUED FOR BIDDING: 08/09/2017	
ELECTRICAL SCHEDULES	

GENERAL NOTES

- A. WORK SHALL COMPLY WITH LOCAL, STATE AND NATIONAL ELECTRIC CODES, AND THE AMERICANS WITH DISABILITIES ACT.

B. COORDINATE EQUIPMENT ELECTRICAL REQUIREMENTS (VOLTAGES, PHASE, LOAD, ETC.) TO AVOID CONFLICTS.

C. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL ELECTRICAL INFORMATION AND REQUIREMENTS. IN ALL CASES, DEVICE MOUNTING HEIGHTS AND LOCATIONS SHALL CONFORM TO THE LATEST AMERICANS WITH DISABILITIES FEDERAL STANDARDS.

D. REFER TO THE PLANS FOR ADDITIONAL ELECTRICAL WORK AND REQUIREMENTS. FURNISH, INSTALL AND LOCATE DISCONNECT SWITCHES AT EQUIPMENT/MOTOR LOCATION, AS REQUIRED, AND IN ACCORDANCE WITH CODE. IF THE WORK OF OTHER TRADES CAUSES A LOSS OF CONTINUITY OF THE EXISTING ELECTRICAL DISTRIBUTION, GROUNDING SYSTEM OR CIRCUITRY, IT SHALL BE RECONNECTED OR REPAIRED AT NO ADDITIONAL COST.

E. FIELD VERIFY IF EXISTING ASBESTOS WILL BE ENCOUNTERED PRIOR TO STARTING ANY WORK. IF ASBESTOS IS PRESENT, THE OWNER WILL PROVIDE FOR THE REMOVAL OF ANY MATERIAL CONTAINING ASBESTOS. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.

F. COORDINATE PHASING OF WORK AND PROVIDE TEMPORARY POWER AND SERVICES AS REQUIRED FOR THE IMPLEMENTATION OF WORK WHILE MAINTAINING SERVICES TO PORTIONS OF BUILDING TO REMAIN OCCUPIED.  
  
SCHEDULE WORK TO AVOID DOWNTIME AND INCONVENIENCE TO OWNER. OWNER'S EXISTING FACILITY SHALL REMAIN IN OPERATION AT ALL TIMES, INCLUDING F/A AND OTHER SPECIAL SYSTEMS, ELECTRICAL POWER DISTRIBUTION, ETC. REQUIRED SHUTDOWN OF EXISTING FACILITY UTILITIES SHALL BE SCHEDULED WITH OWNER'S OPERATING PERSONNEL.

G. LAYOUT IS DIAGRAMMATIC AND INSTALL DEVICES, CONDUIT AND EQUIPMENT TO MEET ACTUAL FIELD CONDITIONS. REVIEW PROJECT SPECIFICATIONS BEFORE STARTING WORK AND SUBMIT COMPLETE SHOP DRAWINGS AS PER SPECIFICATIONS.

H. VISIT SITE PRIOR TO BID TO DETERMINE AND VERIFY EXISTING INTERIOR AND EXTERIOR ELECTRICAL SYSTEMS TO VERIFY QUANTITIES AND LOCATIONS OF EXISTING SYSTEMS TO DETERMINE FULL EXTENT OF WORK. INCLUDE THE NECESSARY MODIFICATIONS TO THE EXISTING CONDITIONS (INCLUDING CEILINGS, WALLS, FLOORS, PIPES, CONDUIT, ROOF WORK, ETC.) AS REQUIRED, TO ALLOW FOR PROPER INSTALLATION OF WORK. ADJUST INSTALLATIONS TO MEET FIELD CONDITIONS AS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION. NO EXTRAS WILL BE ALLOWED AFTER BIDDING FOR ANY REWORK OF EXISTING FIELD CONDITIONS TO RESOLVE CONFLICTS OR NOT FULLY UNDERSTANDING THE SCOPE OF THE WORK REQUIRED. EXISTING EQUIPMENT, CONDUIT, PIPING, ETC. SHALL BE REMOVED AS NOTED ON DRAWINGS AND AS REQUIRED TO MEET NEW SCOPE OF WORK.

I. HIDDEN CONDITIONS IDENTIFIED THROUGH THE COURSE OF CONSTRUCTION SHALL BE IMMEDIATELY BROUGHT TO ATTENTION IN WRITTEN FORM FOR REVIEW AND DIRECTION. FAILURE TO DO SO SHALL REQUIRE THE CHANGES AND COSTS TO CORRECT SAID HIDDEN CONDITION TO BE COMPLETED AT NO COST. EXISTING EQUIPMENT NOT IDENTIFIED SHALL BE BROUGHT TO ATTENTION FOR REVIEW AS TO WHETHER THE EQUIPMENT SHALL REMAIN AND BE RECONNECTED TO THE NEW SERVICES, BE RELOCATED, BE ABANDONED, ETC.

J. REMOVE AND REINSTALL EXISTING CEILINGS NOT BEING REPLACED (INCLUDING LIGHTS, MOTION SENSORS, FIRE ALARM DEVICES AND ANY OTHER ELECTRICAL DEVICES AS REQUIRED) WHERE NECESSARY TO PERFORM WORK. THIS ALSO INCLUDES EXISTING CEILINGS OF PLASTER, DRYWALL, ETC. COORDINATE WORK IN CEILING SPACE SO AS TO MINIMIZE THE AMOUNT OF CEILINGS WHICH MUST BE REMOVED AND REINSTALLED. REVIEW THE ENTIRE SET OF CONTRACT DOCUMENTS IN ORDER TO FULLY UNDERSTAND AND INCLUDE CEILING WORK NECESSARY FOR WORK ON THE PROJECT. WHEN THE WORK IS COMPLETED IN THE SPACE, REINSTALL OR PATCH EXISTING CEILINGS, REINSTALL DEVICES AND EQUIPMENT AND REPAIR DAMAGE AS REQUIRED TO COMPLETELY MATCH EXISTING CONDITIONS. REPAIR OR REPLACE ANY DAMAGE CAUSED TO EXISTING CEILING AREAS.

K. REMOVE EXISTING CONSTRUCTION AS REQUIRED AT EXISTING WALLS, FLOORS, PIPE CHASES, SURFACES, FINISHES, ETC. WHICH ARE AFFECTED. REPAIR EXISTING SURFACES AFFECTED, TO MATCH EXISTING SURFACE OF EQUAL OR BETTER QUALITY TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

L. COORDINATE NEW INSTALLATIONS WITH EXISTING SYSTEMS. RELOCATE EXISTING LIGHTING, CONDUIT, EQUIPMENT, ETC., AS NECESSARY FOR NEW INSTALLATIONS.

M. PROVIDE NEW PANEL DIRECTORIES IN EXISTING MODIFIED PANELBOARDS TO CORRECTLY IDENTIFY EXISTING AND NEW LOADS. FINAL DIRECTORIES SHALL BE TYPE WRITTEN.

N. EXISTING LIGHTING FIXTURES, ELECTRICAL DEVICES, CONDUIT, ETC., SHALL BE REMOVED AS NOTED ON DRAWINGS AND AS REQUIRED TO MEET NEW SCOPE OF WORK. EXISTING ELECTRICAL EQUIPMENT SHALL REMAIN PROPERTY OF THE OWNER AND SHALL BE PROPERLY STORED ON SITE, OR DESIGNATED TO BE ABANDONED AND REMOVED FROM SITE AS DIRECTED BY OWNER.

O. PERFORM CUTTING AND PATCHING OF EXISTING FLOOR SLABS AND WALLS AS REQUIRED FOR THE INSTALLATION OF ELECTRICAL SYSTEMS.

P. EXISTING ELECTRICAL DEVICES (RECEPTACLES, SWITCHES, OUTLET BOXES, CONDUIT, ETC.) WITHIN WALLS TO BE REMOVED SHALL BE DISCONNECTED COMPLETELY, REROUTE AND EXTEND EXISTING CIRCUITRY, ELECTRICAL FEEDERS AND GROUNDING SYSTEMS AS REQUIRED TO MAINTAIN CIRCUIT, FEEDER AND GROUNDING SYSTEM INTEGRITY FOR ALL REMAINING DEVICES/EQUIPMENT. VERIFY EXACT CONDITIONS AND REQUIREMENTS IN FIELD.

Q. WHERE NEW CIRCUIT BREAKERS, FUSES AND SWITCHES ARE TO BE ADDED TO EXISTING PANELBOARDS, SWITCHBOARDS, ETC. THEY SHALL BE OF THE SAME MANUFACTURER AND DESIGN AS THE EXISTING BREAKERS OR SWITCHES IF NOT OBSOLETE AND SHALL BE OF THE SIZES AS INDICATED. REARRANGE CIRCUIT BREAKERS WITHIN THE EXISTING EQUIPMENT TO ACCOMMODATE THE NEW CIRCUIT BREAKERS OR SWITCHES. BRANCH CIRCUIT NUMBERS ASSIGNED TO EXISTING PANELBOARDS ARE ARBITRARY AND ARE INTENDED TO INDICATE BRANCH CIRCUIT REQUIREMENTS ONLY. ACTUAL PANEL NUMBER ASSIGNMENTS FOR DESIGNATED BRANCH CIRCUITS SHALL BE ADJUSTED TO MEET FIELD CONDITIONS. PROVIDE ADDITIONAL BUS, BUS EXTENSION, BOLTS AND HARDWARE, ENCLOSURE MODIFICATIONS, DIRECTORY MODIFICATIONS, ETC., AS REQUIRED TO ACCOMPLISH THE WORK.

R. VERIFY CEILING STYLES/FRAMES AND TYPES BEFORE ORDERING FIXTURES AND CEILING MOUNTED DEVICES. PROVIDE APPROPRIATE STYLES/FRAMES AS REQUIRED TO MATCH CEILING STYLE AND TYPES.
- S. COORDINATE LIGHTING LAYOUTS WITH CEILING REGISTERS, GRILLES, DIFFUSERS, SPRINKLER HEADS AND CEILING GRID (SEE ARCHITECTURAL REFLECTED CEILING PLAN). VERIFY LOCATION WITH OWNER'S REPRESENTATIVE IN FIELD PRIOR TO INSTALLATION.

T. PROVIDE PLENUM RATED LIGHT FIXTURES IN PLENUM CEILING AREAS WHERE REQUIRED BY LOCAL OR NATIONAL CODES.

U. SOME CEILING SPACES ARE RETURN AIR PLENUMS. EXAMINE PLENUM BEFORE CEILING IS INSTALLED (OR REPLACED) AND SEAL ALL OPENINGS AROUND CONDUIT, CABLE, ETC. PROVIDE PLENUM RATED CABLE (UNLESS IN CONDUIT), DEVICES AND EQUIPMENT PER CODE.

V. THE MINIMUM DISTANCE BETWEEN SMOKE OR HEAT DETECTORS AND CEILING MOUNTED SUPPLY DIFFUSERS SHALL BE A MINIMUM OF 4 FEET AND WALL MOUNTED DIFFUSERS SHALL BE 10 FEET.

W. WHERE INDICATED ON THE DRAWINGS IN UNFINISHED SPACES, RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALL.

X. NO RACEWAYS SHALL BE INSTALLED WITHIN 6' OF HOT WATER PIPES OR SIMILAR HEAT PRODUCING APPLIANCES.

Y. PROVIDE FULL WIRE IN EACH RACEWAY IN WHICH WIRING IS NOT INSTALLED.

Z. COVERS OF JUNCTION OR PULL BOXES SHALL BE ACCESSIBLE AND IDENTIFIED PER SPECIFICATIONS. FIRE ALARM JUNCTION BOXES SHALL BE PAINTED RED. JUNCTION OR PULL BOXES AND THE LIKE SHALL BE INDEPENDENTLY SUPPORTED TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.

AA. WIRE COLOR CODING SHALL BE COORDINATED THROUGHOUT THE ENTIRE PROJECT/BUILDING FOR NEW AND EXISTING SYSTEMS.

BB. IF MORE THAN THREE (3) PHASE (UNGROUND) CONDUCTORS ARE RUN IN THE SAME RACEWAY, CONDUCTOR AMPACITY SHALL BE DERATED IN ACCORDANCE WITH NEC ARTICLE 310.

CC. CONDUIT, LIGHTING, EQUIPMENT, ETC. SHALL NOT BE SUPPORTED FROM THE BOTTOM CHORD OF ENGINEERED JOISTS WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. CONDUITS, ROUTED THROUGH AREAS WITH NO CEILING, SHALL BE ROUTED WITHIN THE WEBBING OF THE JOISTS AND SHALL NOT BE ROUTED BELOW THE BOTTOM CHORD OF THE JOIST.

DD. SMOKE OR HEAT DETECTORS SHALL BE SURFACE MOUNTED TO CEILING, ROOF DECK MATERIALS, ETC. IN LIEU OF MOUNTING TO BOTTOM CHORD OF ENGINEERED JOIST OR ANY OTHER COMPONENTS NOT AN INTEGRAL PART OF THE HORIZONTAL CEILING.

EE. VERIFY EXISTING AND NEW MECHANICAL, ELECTRICAL AND FIRE PROTECTION SYSTEMS PRIOR TO START OF NEW CONSTRUCTION. COORDINATE AND ADJUST NEW WORK AS REQUIRED TO AVOID CONFLICTS WITH EXISTING SERVICES AND NEW SERVICES PROVIDED.

FF. WIRING DEVICES SHOWN BACK-TO-BACK IN WALLS SHALL BE SEPARATED BY 8" MINIMUM.

GG. UNLESS OTHERWISE NOTED, DEVICE ELEVATIONS REFER TO CENTER LINE OF JUNCTION BOX. VERIFY JUNCTION BOX LOCATIONS WITH FINAL EQUIPMENT LAYOUT PRIOR TO ROUGHING IN SAME.

HH. FURNISH AND INSTALL A GREEN GROUND WIRE IN POWER CONDUITS (NOT LIGHTING). ALL DEVICES, EQUIPMENT, FIXTURES AND THE LIKE, MUST BE GROUNDED. MECHANICAL/ELECTRICAL BONDS OF THE METALLIC RACEWAY SYSTEM SHALL BE MAINTAINED.

II. PROVIDE CONDUIT AND WIRE AND MAKE FINAL POWER CONNECTIONS AS REQUIRED TO EXHAUST FANS AND MISCELLANEOUS EQUIPMENT FURNISHED WITH MOTORIZED BACKDRAFT DAMPERS. DAMPERS SHALL BE CONNECTED TO EQUIPMENT 120 VOLT POWER CIRCUIT SO AS TO INTERLOCK THE MOTORIZED DAMPER WITH THE EXHAUST FAN. FOR THREE PHASE MOTORS, PROVIDE AN ADDITIONAL 120 VOLT CIRCUIT ROUTED THROUGH AN AUXILIARY CONTACT IN THE MOTOR STARTER.

JJ. AT NEW FIRE OR SMOKE/FIRE DAMPER LOCATIONS, WIRE EACH SMOKE/FIRE DAMPER TO NEAREST EMERGENCY PANEL, TO LOCAL ACTIVATION SMOKE DETECTORS ON EITHER SIDE OF THE DAMPER (WITHIN 3'-0") AND ALSO WIRE THE SAME TO THE FIRE ALARM CONTROL PANEL AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM. REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR LOCATIONS WHERE DUCTS PASS THROUGH SMOKE OR FIRE BARRIERS.

KK. MODIFY EXISTING FIRE ALARM SYSTEM AS INDICATED ON DRAWINGS AND SPECIFICATIONS AND AS REQUIRED FOR A COMPLETE, CODE COMPLIANT INSTALLATION. FURNISH AND INSTALL INTERFACE WIRING INTEGRAL TO THE FIRE ALARM SYSTEM AS WELL AS INTERFACE TO NEW ELEVATOR CONTROL PANEL, BUILDING AUTOMATION SYSTEM, ETC. FOR A COMPLETE AND OPERATING INSTALLATION. QUESTIONS REGARDING THE REQUIREMENTS OF THE FIRE ALARM SYSTEM OR THE INTENT OF THE CODE SHALL BE DIRECTED TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO BID.

LL. CONDUIT INSTALLED FOR LOW VOLTAGE SYSTEMS SHALL BE COORDINATED WITH THE LOW VOLTAGE INSTALLER IN FIELD, PRIOR TO ROUGH-IN. SUCH CONDUIT SHALL BE ROUTED TO MINIMIZE CABLE LENGTH AND COMPLY WITH LOW VOLTAGE CABLING DISTANCE LIMITATIONS.

MM. SINGLE POLE CIRCUITS SHALL HAVE SEPARATE INDEPENDENT NEUTRAL CONDUCTORS (NON-NETWORKED), WHICH (PER CODE) ARE CONSIDERED CURRENT CARRYING CONDUCTORS. THEREFORE, IF MORE THAN THREE (3) CURRENT CARRYING CONDUCTORS ARE RUN IN THE SAME RACEWAY, CONDUCTOR AMPACITY SHALL BE DERATED IN ACCORDANCE WITH NEC ARTICLE 310. AS SUCH, MULTIPLE BRANCH CIRCUIT HOME RUNS SHALL, AT A MINIMUM, UTILIZE #10 AWG CONDUCTORS TO COMPLY WITH REQUIREMENTS HEREIN. COORDINATE REQUIREMENTS IN FIELD WITH SPECIFIC HOME RUN CONFIGURATION AND NEC 2008.

NN. PRIOR TO THE START OF WORK AND THE ORDERING OF EQUIPMENT, CONTRACTOR SHALL CAREFULLY MEASURE AND VERIFY THE VOLTAGE, PHASE AND WIRING CONFIGURATION OF EXISTING PANELS AND EXISTING GEAR THAT ARE PART OF WORK AND SHALL CAREFULLY VERIFY THAT ALL ELECTRICAL CONNECTIONS, GEAR AND EQUIPMENT HAVE BEEN CAREFULLY COORDINATED TO ELIMINATE CONFLICTS. COORDINATE WITH OTHER TRADES AS REQUIRED TO ELIMINATE ELECTRICAL CONFLICTS PRIOR TO START OF WORK.

OO. CAREFULLY VERIFY COLOR TEMPERATURES OF FIXTURES WITH ARCHITECT PRIOR TO ORDERING.

DUNELAND SCHOOL CORPORATION  
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GENERAL NOTES - ELECTRICAL

E3.00

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