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SITE KEY DEMO NOTES:

1 APPRX. LOC OF EXIST POLE LIGHT TO BE RELOCATED.REMOVE LIGHT AND ASSOCIATED POLE FOR REUSE. DEMOLISH EXISTING POLE BASE SEE SITE PLAN FOR NEW LOCATION. REWORK EXTERIOR LTG CKT AS INDICATED.

SITE KEY NOTES:

A PROVIDE AND INSTALL NEW POLE LIGHT IN THIS LOCATION. TIE NEW LIGHTS BACK TO EXISTING POLE LIGHT POWER CKT "3LB-21" (SEE PANEL SCHEDULES).

B LOCATION OF RELOCATED 30' POLE LIGHT. TIE IN RELOCATED LIGHTS TO NEW OR LOCAL LIGHTING CIRCUIT AS INDICATED.

C PROVIDE AND INSTALL A 24" x 24" JUNCTION BOX (QUADTE OR EQUAL) IN THIS APPROXIMATE LOCATION AND AS NEEDED FOR PULLING FEEDERS.

D INSTALL EMPTY 3" CONDUIT WITH PULLSTRING UNDER BUILDING AND ROAD AS INDICATED FOR FUTURE GREENHOUSE POWER. CAP BOTH ENDS OF EMPTY CONDUIT. SEE "NOTE" FOR CIRCUIT BREAKER PROVIDED FOR FUTURE.

E PROVIDE NEW PUMP CONTROL/ALARM PANEL & COORDINATE LOCATION WITH OWNER AS REQUIRED BY S.C. (E.C. TO PROVIDE POWER)

F INSTALL 1.25"G UNDER BUILDING AND ROAD AS INDICATED FOR LIFT STATION CONTROL/ALARM PANEL CIRCUIT AND DISCONNECT SWITCH/WP RECEPT CIRCUIT.

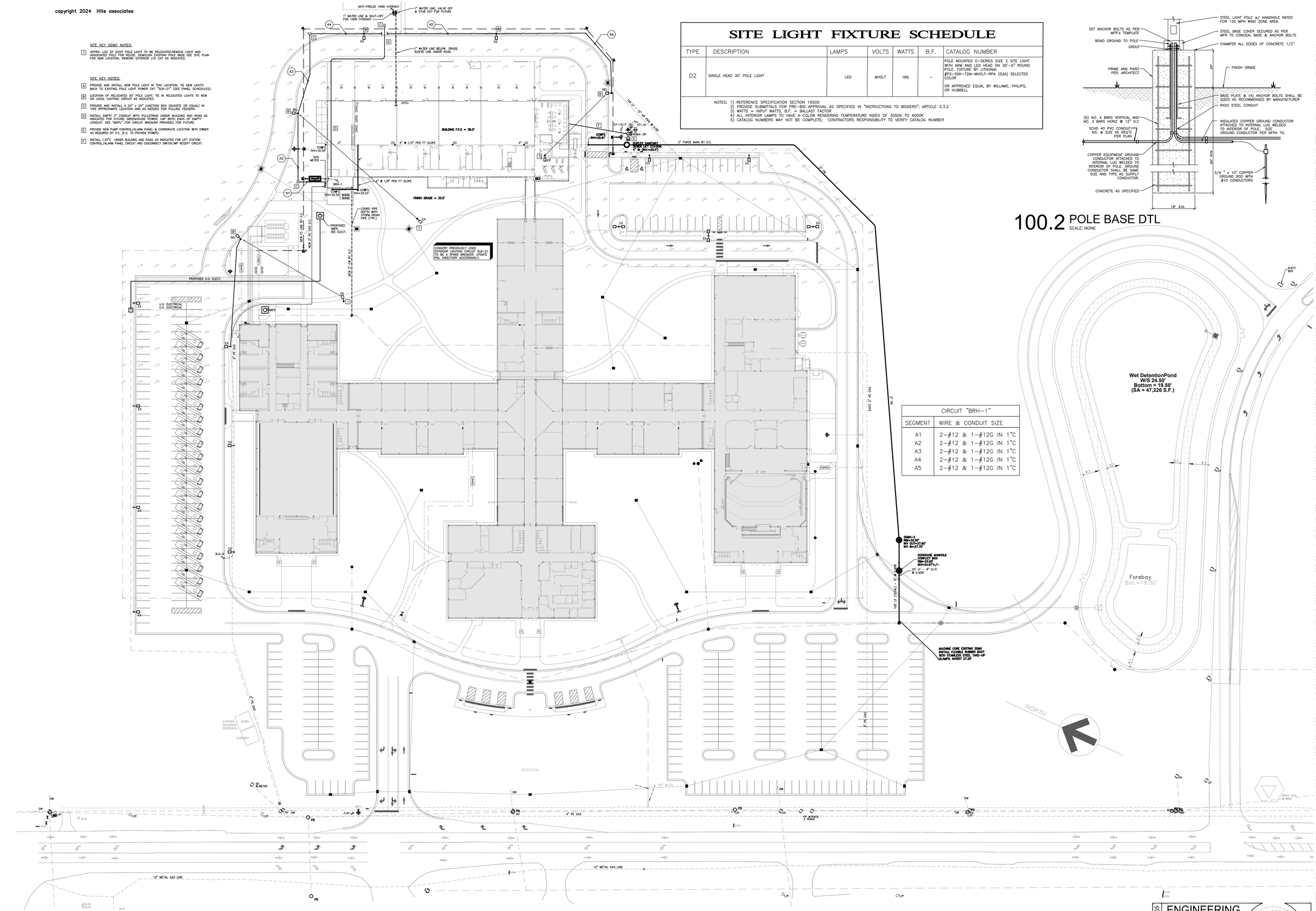
SITE LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMPS	VOLTS	WATTS	B.F.	CATALOG NUMBER
D2	SINGLE HEAD 30' POLE LIGHT	LED	MVOLT	185	–	POLE MOUNTED D-SERIES SIZE 2 SITE LIGHT WITH ARM AND LED HEAD ON 30'-0" ROUND POLE. FIXTURE BY LITHONIA: #P2-50K-T2M-MVOLT-RPA (D2A) SELECTED COLOR OR APPROVED EQUAL BY WILLAMS, PHILIPS, OR HUBBELL

NOTES: 1) REFERENCE SPECIFICATION SECTION 16500
2) PROVIDE SUBMITTALS FOR PRE-BID APPROVAL AS SPECIFIED IN "INSTRUCTIONS TO BIDDERS"; ARTICLE 3.3.2
3) WATTS = INPUT WATTS, B.F. = BALLAST FACTOR
4) ALL INTERIOR LAMPS TO HAVE A COLOR RENDERING TEMPERATURE INDEX OF 3500K TO 4000K
5) CATALOG NUMBERS MAY NOT BE COMPLETE; CONTRACTORS RESPONSIBILITY TO VERIFY CATALOG NUMBER

100.2 POLE BASE DTL
SCALE: NONE

CIRCUIT "BRH-1"	
SEGMENT	WIRE & CONDUIT SIZE
A1	2-#12 & 1-#12G IN 1"C
A2	2-#12 & 1-#12G IN 1"C
A3	2-#12 & 1-#12G IN 1"C
A4	2-#12 & 1-#12G IN 1"C
A5	2-#12 & 1-#12G IN 1"C



100.1 SITE PLAN
SCALE: 1"=40'

Revision	Date	No.

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NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

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Paging System Design Guidelines–Preferred Manufacture Bogen E7000

1. Interior Analog Paging Speakers
   a. Provide one paging speaker in each classroom, classrooms that exceed 900 sqft shall get two speakers.
   b. Provide interior paging speakers throughout hallways, common areas, work rooms, resource rooms, kitchens, cafeterias, media centers, auditoriums, multipurpose rooms, gymnasiums, lockers rooms, shop areas, bathrooms, and auxiliary gyms.
   c. Interior speakers can be one of the following types: Lay in Style where acoustical ceilings are installed, Recessed/Wall mounted in large open areas with high ceilings, Recessed/Ceiling mounted where hard ceilings are installed, surface mounted in exposed joist areas if wall mounting is not an option.
   d. The goal is to install speakers in locations that can easily be accessed for servicing the equipment.
   e. Do not install speakers in individual offices, these locations should be served from the corridors in these areas.
   f. Avoid volume controls on paging speakers, paging is used to notify staff and students in the event of an emergency and should not be allowed be locally overridden.
2. Exterior Analog Paging Speakers
   a. Exterior speakers should be installed to cover the entire exterior of the building. These are used to notify students and staff members of inclement weather and to return to the building after all clear is given from fire drills.
   b. Speakers should be recessed in the exterior walls of the building; they should be installed 8–12 feet AFF so they can be easily serviced. Specialty backbox to be provided to EC and will require ¾" conduit to accessible ceiling space.
   c. Locate speakers between 40–60 feet apart.
3. Administrative Phones
   a. Locate one single administrative phone at the main receptionist desk.
   b. Additionally, the system will interface with the owners VOIP phones for Office Staff and Administrators to access the paging system. However, they will not receive dedicated admin phones in these locations.
4. Wiring
   a. 22 Gauge Shielded wiring shall be installed from speakers back to the nearest data closet.
   b. Wiring will be terminated on the walls of the closet and connected to a local paging interface called and ASB. This device will require a single network connection to the owner provided switch inside each closet.
   c. No riser cabling is required between closets, system is a hybrid and converts alanog speakers to an IP based paging module.
5. Main System Controller
   a. The main system controller will be installed in the MDF and will communicate with the remote ASB modules over the owners' network.
6. Bells and Scheduler
   a. The main system controller contains the software to run all class change bells and the scheduling of these bells.

Clocks
1. All clocks are to be analog and not tied to the paging system. These are typically provided by the General Contractor.

Access Control Guidelines–Preferred Manufacture–S2

1. Card Readers "CR"
   a. Locate Card Readers at all primary staff entrances, these areas would be doors that the staff would regularly enter the building throughout the day or during special events and need badge into the facility. These should include the front door, kitchen, bus loading entrance, staff parking lot entrance, and gymnasiums.
   b. Card readers shall be exterior mounted and can be wall mounted in a single gang box with ¾" conduit stubbed to accessible ceiling.
   c. Card readers can also be located on door frames or storefront aluminum framing. EC to provide pathway into the door frames/storefronts to allow cable to be installed.
2. Door Position Switches "DPS"
   d. All doors that get a card reader require a door position switch; these switches are located at the top of the door frame on the strike side. EC to provide pathway into the door frames/storefronts to allow cable to be installed.
   e. In addition to doors that receive card readers, all exterior doors get door position switches to monitor these doors and report/alarm on propped or forced doors. EC to provide pathway into the door frames/storefronts to allow cable to be installed.
3. Request to Exit Sensors "REX"
   a. All doors that get a card reader require a Request to Exit Sensor; these sensors are located at the top of the door frame in the middle of the door. They can also be installed on the wall above the door or in the ceiling, if the ceiling height does not exceed 9'. EC to provide pathway into the door frames/storefronts to allow cable to be installed.
4. Electronic Locking Hardware
   a. Division 08 contractor to provide and install all electrified door locking hardware.
   b. Owner prefers Von Duprin electrified panic hardware and electronic transfer hinges. Division 08 contractor shall provide power supplies with each electrified panic device. Division 28 contractor will install and connect these power supplies.
   c. Division 28 contractor will make connections to the hinge.
   d. Some doors may require other types of electrical locking hardware such as electrified locks or electrified strikes. Division 08 contractor shall provide and install these devices.
5. Freezer and Cooler Sensors
   a. Provide temperature sensors on each cooler and freezer to monitor and report alarms through the door access control system.
6. Door Buzz In System–Preferred manufacture–AIPHONE
   a. Provide 2 door stations, one at the front door, and one in the security vestibule door that enters the main office reception area.
   b. Provide master station at receptionist desk to allow remote unlocking of these doors.
7. 120vac Power
   a. 120vac power is not required at each door.
   b. Panels that control doors will be located in the local data closets and require a direct 120vac connection, cannot be cord and plug connected.
8. Data Connections
   a. Provide 1 single data drop to the main control panel and each remote panel. These panels will be located in data closets, each panel can support up to 14 controlled doors.

Structured Cabling Design Guidelines–Preferred Manufacture BerkTek–Leviton

1. Outlet locations in classrooms
   a. Provide (1) two port Category 6 data outlet at teacher's station location.
   b. Provide (1) single port Category 6 data on opposing wall to teacher's station.
   c. Provide (1) Category 6A data outlet in ceiling for wireless access point.
   d. No data required for smart board/interactive white boards.
2. Outlet locations in offices and other areas
   a. Provide (2) two port Category 6 outlets in each office, these shall be located on opposing walls that would be the most likely locations for desk based on room layout.
   b. Front receptionist desk shall have (2) four port Category 6outlets installed.
   c. Provide (1) Category 6 data connection at each main entrance Evolve metal detector.
   d. Provide (3) Category 6A WAP drops in each of the following locations: Media, Cafeteria, Gym, Aux Gym, and Auditorium.
   e. Provide (1) Category 6 data outlet to each camera location.
   f. Provide (1) Category 6 data outlet to each Door Access Node.
   g. Provide (1) Category 6 data outlet to Napco Intrusion Panel.
   h. Provide (1) Category 6 data outlet to Each BAS Control Panel.
   i. Provide (1) Category 6 data outlet to Elevator for Cab Camera.
3. Cable Colors
   a. All Category Rated cabling, Cat 6 and Cat 6A shall be Blue in color. Blue is the most commonly available color and allows for less cable waste.
   b. Differentiation of system types will be accomplished by using colored jacks and patch cables.
4. Jack Colors
   a. Data=White
   b. WAP=Blue
   c. Cameras=Yellow
   d. BAS=Blue
   e. Door Access Nodes–Blue
   f. Fire=Red
5. Patch Cables
   a. Patch cable colors shall match the data jack colors.
   b. Provide one patch cable for every cable terminated in each data closet. Verify length with owner, typically these are 1' cables and match the colors of each system.
   c. Provide one 7' Category 6A Blue patch cable in the field for very WAP.
   d. Provide one 7' Category 6 Yellow Patch Cable in the field for very IP camera.
   e. Provide one 10' Category 6 White Patch for 50% of the field terminated data cables. If total data count is 700, provide 350 patch cables.
6. Data Racks
   a. MDF, provide one four post rack for owner's network equipment. This rack shall be a minimum depth of 30" and adjustable to 36".
   b. MDF, provide one two post data rack for local data cabling terminations.
   c. IDF's. provide one two post rack per IDF for local data cabling terminations and owner provided network switches.
   d. Provide rack mounted UPS for each data rack.
   e. All data closets shall have ladder tray installed to support cables and allow for service loops. This is not cable tray like is used to run down main cable pathways on mezzanines or in hallways. This is the black powder coated tray that is installed and connected to the top of the data racks.
7. Fiber Optic Backbone
   a. Provide (1) 12 Strand OM3 fiber from the MDF to each IDF.
   b. Terminations shall be SC.
   c. Provide (2) OM3 duplex fiber jumper for every IDF.
   d. Fiber shall be armored fiber and will not require innerduct.
   e. Provide (1) 6 strand fiber from MDF to Electronic Road Sign if applicable. This fiber shall be indoor/outdoor rated tight buffered fiber.
8. Network Electronics
   a. Owner to provide and install all active network electronics.
   b. Owner to provide WAP's to be installed by Division 27 Contractor.
9. Item Provided and Installed by Others
   a. Main cable tray system for corridors and mezzanines, division 27 will only be providing the ladder tray in each closet and J hooks form cable tray to outlet locations.
   b. Fire rated plywood in each closet.
   c. Sleeves, Raceways, Boxes and Firestopping
   d. 120vac Power

LOW VOLTAGE SYSTEM DESCRIPTION:

Fire Alarm:
The new Intermediate School will be protected by a new Addressable Fire Alarm system with Voice Notification. The system will have Class A wiring/cabling. All cables shall be installed in conduit or shall be plenum rate cables. There will be pull stations located at the exterior doors and all pull stations will have a "Stopper II" style cover that will annunciate if lifted to help reduce or prevent false alarms. The main panel shall be located in the Main Office Area and there shall be a remote annunciator located and the main entrance to the school. System shall be by Notifier, Gamewell, Edwards EST or Equal.

Intercom:
The new school will have a campus wide communication system that will consist of an Intercom system with ceiling mounted speakers throughout the school (Corridors, Gang Bathrooms, Media Center, Gym, Café, Kitchen, Classrooms, offices, Etc) for All–Calls and announcements and VOIP phones in each classroom, office, and Staff Resource space for direct communications person to person. Systems shall be a hard–wired using twisted pair cables and/or Cat6 data cables as needed to connect the equipment.
(See attached typical Paging System Design Guideline)

Data/IT:
The Data/IT system shall consist of a Main Data room that is connected to the Intermediate Data Rooms around the school via fiber optic cable. Each IDF room shall have a 2–post data rack and patch panel located in the room. The data cables shall be pulled from the outlet locations back to the IDF rooms and terminated in the patch panels. All cables shall be certified as operational and tagged for outlet location. Owner is responsible for providing the equipment for the racks (Switches, UPS devices, etc.), installing the equipment and making final terminations to the patch panel. All hard–wired data drop cables shall be Cat 6 and all Wireless Access Point (WAP) drops shall be Cat 6A. Owner is also responsible for providing and installing the WAP devices where indicated on the plans. Wireless Access Point drops shall be included in all Classrooms, Resource Rooms, the Gym, Café, Media Center, and as required to cover the administrative areas. (See attached typical Structured Cabling System Design Guideline)

Security:
The school will have a secure entry to prevent the public from having open access to the school buildings. There will be select doors with electronic access control, a security keypad at the main office entrance and the kitchen entrance, as well as cameras located around the interior corridors and building exterior. We will match your current security software and equipment or have an updated system that is compatible. (See attached Typical Access Control & IP Camera Design Guidelines)

GENERAL ELECTRICAL NOTES:

* "NEC" IS DEFINED AS BEING THE CURRENT NFPA–70 THAT HAS BEEN ADOPTED BY THE NC CODE COUNCIL AND THE NC DEPT OF INSURANCE.

1. DO NOT SCALE THESE DRAWINGS; REFER TO LARGEST SCALE ARCHITECTURAL PLANS.

2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW MINOR DETAILS AND EXACT LOCATIONS. DESIGN ADJUSTMENTS SHALL BE ANTICIPATED BY THE CONTRACTOR TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.

3. REFERENCE SPECIFICATIONS AND ARCHITECTURAL, STRUCTURAL, PLUMBING, & HVAC DRAWINGS PRIOR TO CONSTRUCTION.

4. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH NEC/NFPA 70. CONTRACTOR SHALL NOTIFY ENGINEER REGARDING ANY CODE DISCREPANCIES SHOWN ON PLANS. ANY PERMIT OR INSPECTION FEES ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

5. CONTRACTOR SHALL INSTALL, GROUND AND BOND SYSTEM PER THE NEC WITH ALL NC MODIFICATIONS.

6. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE METHOD & HAVE NOT BEEN VERIFIED; CONTRACTOR SHALL DETERMINE EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK & IS RESPONSIBLE FOR ANY DAMAGE INCURRED BY FAILURE TO DO SO. EACH PRIME CONTRACTOR PERFORMING EXCAVATIONS OR UNDERGROUND WORK SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY EXISTING UTILITIES IN THE AREA OF THEIR WORK. NOTIFY THE UTILITY LOCATOR SERVICE (1–800–632–4949) AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION IN ORDER THAT EXISTING UTILITIES IN THE AREA MAY BE FLAGGED AND CONTRACTOR SHALL USE ALL CARE NECESSARY WHEN WORKING IN AREAS KNOWN OR SUSPECTED TO CONTAIN UNDERGROUND UTILITIES, INCLUDING HAND DIGGING.

7. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL FIXTURES AND EQUIPMENT WITH OTHER PRIME CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS. CONTACT ARCHITECT IF ALTERNATE INSTALLATION METHOD IS REQUIRED.

8. CONTRACTOR SHALL NOT PUT MORE THAN SIX (6) DUPLEX RECEPTACLES ON ANY GIVEN 1P–20A CIRCUIT UNLESS SHOWN OTHERWISE.

9. MINIMUM WIRE SIZE SHALL BE #12 AWG., MINIMUM CONDUIT SIZE SHALL BE 3/4".

10. CONTRACTOR SHALL COORDINATE TELEPHONE AND DATA OUTLETS REQUIRED WITH OWNER PRIOR TO GYP. BOARD BEING INSTALLED.

11. HALLWAY AND MAINTENANCE RECEPTACLES SHALL NOT BE CIRCUITED WITH OFFICE OR OTHER GENERAL PURPOSE RECEPTACLES.

12. ELECTRICAL CONTRACTOR SHALL PROVIDE HACR RATED CIRCUIT BREAKERS ON ALL HVAC EQUIPMENT.

13. CONDUCTORS SHALL BE TYPE THWN OR THW. BRANCH CIRCUIT CONDUCTOR SHALL NOT BE SMALLER THAN No. 12 AWG., EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE. HOME RUNS ORIGINATING MORE THAN 80' AT 120V FROM PANEL LOCATION SHALL BE No. 10 AWG MINIMUM SIZE. WIRES No. 10 AWG AND SMALLER SHALL BE SOLID; WIRES No. 8 AWG AND LARGER SHALL BE STRANDED. PROVISIONS OF NEC SECTION 210–5 COLOR CODE SHALL BE STRICTLY COMPLIED WITH AND BE CONSISTENT THROUGHOUT ENTIRE SYSTEM.

14. ALL CIRCUITS SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250–122. HASHMARK FOR GROUNDING CONDUCTOR IS NOT INDICATED ON THESE DRAWINGS. RACEWAY SHALL NOT BE USED AS EQUIPMENT GROUND.

15. IN ADDITION TO MECHANICAL FASTENING TO CEILING TRACK, SUPPORT LIGHT FIXTURES AT EACH CORNER INDEPENDENTLY OF SUSPENDED CEILING WITH 12 GAUGE WIRE. CONNECT TO STRUCTURAL SYSTEM OF BUILDING PRIOR TO FIRE–PROOFING APPLICATION.

16. ALL CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED. ALL EMPTY CONDUIT SHALL HAVE A PULL WIRE.

17. ALL CONDUIT SHALL BE ELECTRICAL METALLIC TUBING. EMT SHALL NOT BE INSTALLED WHERE IT MAY BE SUBJECT TO PHYSICAL DAMAGE, WHERE IT WILL BE SUBJECT TO SEVERE CORROSIVE INFLUENCE, WHERE THE SIZE IS LARGER THAN 2", OR WHERE TUBING, ELBOWS, COUPLINGS, AND FITTINGS WOULD BE IN CONCRETE OR IN DIRECT CONTACT WITH THE EARTH. SCHEDULE 40 PVC CONDUIT SHALL BE USED IN ALL CONCRETE FLOOR SLABS AND WHEN IN DIRECT CONTACT WITH THE EARTH. PVC CONDUIT SHALL BE USED FOR ALL CONDUIT INSTALLED IN MASONRY WALLS AND SHALL TRANSITION BACK TO EMT OR RIGID CONDUIT AT THE TOP OF THE MASONRY WALL. PVC CONDUIT IS NOT ALLOWED IN STUD WALLS.

18. ALL CONDUIT ON THE EXTERIOR OF THE BUILDING SHALL BE EMT OR SHALL BE RIGID CONDUIT WHERE IT WILL BE EXPOSED TO PHYSICAL DAMAGE. PVC CONDUIT IS NOT ACCEPTABLE TO BE USED ON THE EXTERIOR OF THE BUILDING UNLESS IT IS IN DIRECT CONTACT WITH THE EARTH.

19. CONDUIT SHALL NOT BE RUN EXPOSED IN FINISHED AREAS UNLESS APPROVED BY ARCHITECT / OWNER. CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALL & FLOOR CONSTRUCTION IN FIRST CLASS WORKMANSHIP MANNER. CONDUIT SHALL BE BENT IN ACCORDANCE WITH NEC MINIMUM RADIUS REQUIREMENTS. WHERE SCHD 40 PVC IS INSTALLED UNDER FLOOR SLABS, THE ELBOWS REQUIRED TO TURN THE RACEWAY UP INTO CABINETS, EQUIPMENT, ETC., WHERE SUBJECT TO DAMAGE, SHALL BE OF RIGID STEEL.

20. ALL CONDUIT FITTINGS SHALL BE COMPRESSION TYPE WITH INSULATED THROATS. ALL EXTERIOR CONDUIT FITTINGS SHALL BE LISTED FOR USE IN WET LOCATIONS PER NEC ARTICLE 314.

21. PROVIDE 3" WIDE RED MAGNETIC WARNING TAPE MARKED "BURIED ELECTRIC LINE BELOW" SIX INCHES BELOW FINISH GRADE FOR ALL U.G. CONDUIT. ENCASE ALL U.G. CONDUITS NOT UNDER BLDG SLAB IN 3" OF CONCRETE.

22. SERVICE ENTRANCE CONDUCTORS SHALL BE IN CONDUIT (RIGID OR PVC). EXTERIOR CONDUIT EXPOSED ABOVE SLAB SHALL BE RIGID. INTERIOR CONDUIT EXPOSED SHALL BE ELECTRICAL METALLIC TUBING (EMT). EMT SHALL BE COLD–ROLLED STEEL TUBING WITH A COATING ON THE OUTSIDE AND PROTECTED ON THE INSIDE BY A ZINC, ENAMEL, OR EQUIVALENT CORROSION RESISTANT COATING AND CONFORMING TO THE REQUIREMENTS OF ANSI C 80.3–1996 OR LATER EDITION. ALL UNDERGROUND CONDUIT SHALL BE UL LISTED SCHD 40 PVC CONFORMING TO ARTICLES 352 & 300 OF THE NEC. WHERE SCHD 40 PVC IS INSTALLED BELOW GRADE OR UNDER FLOOR SLABS, THE ELBOWS REQUIRED TO TURN THE RACEWAY UP INTO CABINETS, EQUIPMENT, ETC., SHALL BE OF RIGID STEEL AND SHALL CONTINUE AS RIGID STEEL TO THE CABINET, EQUIPMENT, ETC. FEEDER CIRCUITS SHALL BE IN CONDUIT.

23. ALL JUNCTION OR DEVICE BOXES SHALL HAVE A COVER; PROVIDE COVER PLATES AS SPECIFIED IN SECTION 16140.

24. ALL 1P–20A CIRCUITS SHALL BE 2–#12 & 1–#12G IN 3/4"C WITH NO SHARED NEUTRALS U.N.O.

25. WHERE DISTANCE TO FIRST OUTLET ON A 20 AMP CIRCUIT EXCEEDS 50 FEET, MINIMUM SIZE OF CONDUCTOR TO BE #10 AWG TO FIRST OUTLET

26. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL VOLUMES OF THE NCSBC, INSPECTORS HAVING JURISDICTION, AND ALL OTHER APPLICABLE CODES AND ORDINANCES.

27. EACH PIECE OF ELECTRICAL GEAR, EQUIPMENT, ETC., SHALL BEAR A "UL" LABEL.

28. ALL HOLES CUT IN FLOOR, CEILING AND WALLS SHALL BE CORE–DRILLED OR SAWED.

29. ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT ELECTRICAL ITEMS.

30. ALL EMERGENCY AND EXIT LIGHTS SHALL BE CONNECTED TO THE UNINTERRUPTED SIDE OF THE LOCAL LIGHTING CIRCUIT.

31. PROVIDE AND INSTALL ENGRAVED PHENOLIC LABELS ON ALL ELECTRICAL GEAR, DISCONNECTS, ETC. FASTEN WITH SCREW FASTENERS.

32. WHERE PROVIDED BY E.C., DISCONNECTS SHALL BE HEAVY DUTY NEMA–1 RATED AT ALL INTERIOR LOCATIONS INDICATED AND HEAVY DUTY NEMA–3R RATED AT ALL EXTERIOR LOCATIONS INDICATED ON THESE DRAWINGS.

33. VERIFY WITH OWNER LOCATION/TYPE OF ALL FIXTURES, PANEL BOXES, OUTLET PLACEMENT, ETC. BY HOLDING AN ELECTRICAL WALKTHROUGH ON THE BUILDING SITE ONCE FRAMING IS COMPLETED.

34. ELECTRICAL BOXES INSTALLED IN U.L. RATED WALLS SHALL BE LOCATED A MINIMUM OF 2'–0" FROM ANY OTHER ELECTRICAL BOX IN THAT WALL.

35. LIGHTING SWITCHES, RECEPTACLES AND/OR DATA OUTLETS SHALL NOT BE MOUNTED BACK TO BACK IN ANY WALL.

36. CABLE LOCATED IN PLENUMS SHALL BE PLENUM–RATED. ALL CABLE INSTALLED IN AREAS WITH EXPOSED STRUCTURE SHALL BE IN CONDUIT.

37. E.C. SHALL INSTALL COMPLY WITH ANSI A117.1 FOR OUTLET AND CONTROL SWITCH MOUNTING HEIGHTS FOR ADA ACCESSIBILITY.

38. E.C. SHALL BE RESPONSIBLE FOR ALL LINE SIDE AND LOAD SIDE WIRING ON ALL EQUIPMENT REQUIRING ELECTRICAL POWER, INCLUDING EQUIPMENT PROVIDED BY OTHERS. E.C. SHALL BE RESPONSIBLE FOR LINE SIDE WIRING AND INSTALLING DISCONNECT SWITCHES FOR EQUIPMENT PROVIDED BY OTHERS. DISCONNECT SWITCHES FOR EQUIPMENT PROVIDED BY OTHERS SHALL BE PROVIDED BY THE RESPECTIVE CONTRACTORS. LOAD SIDE WIRING FROM DISCONNECT SWITCH SHALL BE BY E.C. AND ALL FINAL CONNECTIONS TO EQUIPMENT PROVIDED BY OTHERS SHALL BE BY THE RESPECTIVE CONTRACTOR. FUSING FOR EQUIPMENT PROVIDED BY OTHERS SHALL BE PROVIDED BY THE RESPECTIVE CONTRACTOR. SEE "ELECTRICAL CONNECTION DETAIL".

39. "PROVIDE" IS DEFINED AS FURNISH AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

40. THE TERM "VERIFY" RELATIVE TO THESE DRAWINGS SHALL BE DEFINED AS OBTAINING EQUIPMENT INSTALLATION INSTRUCTIONS FROM EQUIPMENT SUPPLIER OR OBTAINED OWNER'S REPRESENTATIVE'S APPROVAL.

41. E.C. IS RESPONSIBLE FOR DEMOLITION OF EXISTING LIGHTS FIXTURES THAT ARE INDICATED TO BE REPLACED. E.C. SHALL FIELD VERIFY EXISTING SWITCH CIRCUITING AND REWORK SWITCH WIRING TO PROVIDE CONTROL OF LIGHTS AS INDICATED ON PLANS.

42. ALL 15 AND 20 AMP, 125V AND 250V NONLOCKING–TYPE RECEPTACLES SHALL BE TAMPER–RESISTANT IN THE FOLLOWING AREAS: (1) EDUCATION FACILITIES, (2) GUEST ROOMS AND GUEST SUITES OF HOTELS AND MOTELS AND THEIR COMMON AREAS, (3) BUSINESS OFFICES, CORRIDORS, WAITING ROOMS, EXAM ROOMS, AND THE LIKE IN CLINICS, MEDICAL AND DENTAL OFFICES, AND OUTPATIENT FACILITIES, (4) ALL ASSEMBLY OCCUPANCIES, (5) ALL OTHER AREAS LISTED IN THE RECEPTACLES ARTICLE OF THE NEC THE REQUIRE TAMPER–RESISTANT RECEPTACLES.

43, ALL RECEPTACLES IN KITCHENS AND FOOD PREPARATION AREAS SHALL BE GFCI PROTECTED.

44. ALL RECEPTACLES WITHIN 6 FEET OF A SINK, BATHTUB, SHOWER, OR THE LIKE SHALL BE GFCI PROTECTED REGARDLESS OF WHETHER THEY ARE INDICATED ON THESE PLANS. E.C. SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXACT DISTANCES AND PROVIDING THE GFCI PROTECTION AS REQUIRED.

45. ALL CLOTHES WASHING MACHINES AND CLOTHES DRYER ELECTRICAL CIRCUITS SHALL BE FED FROM A GFI BREAKER OR SHALL HAVE A GFI OUTLET INSTALLED. GAS FIRED DRYERS THAT BEAR A MANUFACTURER'S LABEL STATING THAT THEIR EQUIPMENT MUST NOT BE FED BY GFI WILL NOT REQUIRE GFI PROTECTION AND SHALL BE FED FROM A STANDARD CIRCUIT BREAKER.

46, ALL OUTLETS OR JUNCTION BOXES THAT ARE FED FROM A GFI BREAKER SHALL BEAR A LABEL THAT SHOWS THE CIRCUIT NUMBER AND PANEL IT IS BEING FED FROM AND SHALL READ "PROTECTED BY GFI BREAKER".

47. ALL CIRCUITS SHOWN ON THESE PLANS ARE INTENDED TO BE IN THEIR OWN RACEWAY. E.C. MAY ROUTE MULTIPLE CIRCUITS IN A SINGLE RACEWAY BUT SHALL DERATE ALL CONDUCTORS IN ACCORDANCE WITH NEC TABLE 310.15(C)(1).

48. ALL SERVICE ENTRANCE MAIN BREAKERS 1000 AMPS OR LARGER SHALL BE GFI MAIN BREAKERS.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	DUPLEX CONVENIENCE OUTLETS FOR GENERAL USE SHALL BE RATED 20 AMPERES, 125 VOLTS, DUPLEX, FOR STANDARD PARALLEL BLADE THREE–WIRE GROUNDED TYPE CAPS, HUBBELL NO. 5362 (BROWN) OR 5362–I (IVORY), OR EQUAL FROM MFG LISTED IN THE SPECIFICATIONS.
	QUADRUPLEX OUTLET AS SPECIFIED
	240V OUTLET – AMPERAGE PER CIRCUIT BREAKER FED FROM
GFI	DUPLEX OUTLET – GFI AS SPECIFIED
WP/GFI	DUPLEX OUTLET – GFI – EXTERIOR WATERPROOF AS SPECIFIED
HORIZ	DUPLEX OUTLET – INSTALL HORIZONTALLY
TP	TAMPER PROOF DUPLEX OUTLET EQUAL TO HUBBELL No. SG62 OR EQUAL FROM MFG LISTED IN THE SPECIFICATIONS.
TVSS	DUPLEX w/ TRANSIENT VOLTAGE SURGE SUPPRESSION w/ LIGHT (NEMA 5–15), HUBBELL No. 5260 OR EQUAL FROM MFG LISTED IN THE SPECIFICATIONS.
IG	NEMA 5–20R ISOLATED GROUND RECEPTACLE
	WATERTIGHT TWISTLOCK RECEPTACLE IN KITCHEN UTILITY DISTRIBUTION WALL
	DUAL COMPARTMENT ALUMINUM RACEWAY SYSTEM, WIREMOLD No. ALA4800 w/ TWIN COVER OR EQUAL FROM MFG LISTED IN THE SPECS; COLOR SELECTED BY ARCHITECT (SEE PLANS FOR RECEPTACLE & DATA OUTLET QUANTITIES & LOCATIONS)
	RECEPTACLES MOUNTED IN STEEL CITY GAB SERIES AFM PRE SET FLOOR BOX. EACH BOX CONTAINS (4) DUAL DATA OUTLETS (TYPICAL). ROUTE (2) 1" "C FROM EACH BOX BACK TO MDF ROOM. SECURE SQUARE OF CARPET TO MATCH IN LID OF BOX (BY ELECT. CONTR., TYP)
	DATA OUTLETS MOUNTED IN STEEL CITY GAB SERIES AFM PRE SET FLOOR BOX. EACH BOX CONTAINS (4) DUAL DATA OUTLETS (TYPICAL). ROUTE (2) 1" "C FROM EACH BOX BACK TO MDF ROOM. SECURE SQUARE OF CARPET TO MATCH IN LID OF BOX (BY ELECT. CONTR., TYP)
F, S, H	FIRE ALARM INITIATING DEVICES; SEE LEGEND SHEET E–004
	FIRE ALARM NOTIFICATION DEVICES; SEE LEGEND SHEET E–004
V, V, etc	VOICE/DATA DEVICES, SEE ICS LEGEND SHEETC–101. E.C. RESPONSIBLE FOR ROUGH–IN AS INDICATED ON ELECTRICAL DRAWINGS
K, K	SECURITY DEVICES; SEE LEGEND THESE DWGS. E.C. RESPONSIBLE FOR ROUGH–IN AS INDICATED ON ELECTRICAL DRAWINGS
, $	SINGLE POLE SWITCH – 48" A.F.F. U.O.N., 20 AMP, 120/277 VOLT, SPECIFICATION GRADE
$3, $4	3 OR 4–WAY SWITCH – 48" A.F.F. U.O.N., SPECIFICATION GRADE, SEE SPECIFICATION SECTION 16140
$K	KEY–OPERATED SWITCH – 48" A.F.F. U.O.N.
$D	DIMMER SWITCH RATED FOR LOAD – 48" A.F.F., LUTRON No. MAR OR APPROVED EQUAL
$DP	DOUBLE POLE SINGLE THROW SWITCH – 48" A.F.F.
$MS	MASTER / SATELLITE OR SPLIT BALLAST WIRING – SEE DETAILS THESE DRAWINGS
$LC	ELECTRONIC LIGHTING CONTROLLER AS SPECIFIED
$M	MOTOR STARTER SWITCH w/ PILOT LIGHT, HUBBELL No. HBL3031PL OR EQUAL BY SQUARE D OR EATON
T & S	VERTICAL J–BOX FOR THERMOSTATS & SENSORS – WITH 3/4" CONDUIT TO UTILITY PLATFORM; COORDINATE w/ M.C.
	FUSED EQUIPMENT DISCONNECT U.O.N.– SEE SPECIFICATION SECTION 16400
MS	COMBINATION MOTOR STARTER DISCONNECT
	COMBINATION START/STOP BUTTON MOTOR STARTER– SQUARE D No. MBG2 FOR WELDING (EF–60) & SQUARE D No. MCG3 FOR CARPENTRY (EF–6X) OR EQUALS BY HUBBELL OR EATON
	EMERGENCY STOP BUTTON – STI No. 040 OR APPROVED EQUAL WITH STOPPER II WARNING ALARM COVER, INDICATOR LIGHT, KEY RESET, YELLOW COLOR, & "EMERGENCY" GRAPHIC MESSAGE
J or J	JUNCTION BOX, FLUSH MOUNTED IN ALL FINISHED SPACES
	ELECTRICAL PANEL AS SPECIFIED – SEE SPECIFICATION SECTION 16400
2	GROUNDING ELECTRODE CONDUCTOR INSTALLED IN ACCORDANCE WITH NEC ARTICLE 250
	REFER TO KEY NOTE No. 2
SP	CEILING MOUNT SPEAKER BY TECHNOLOGY CONTRACTOR UNDER DIVISION 17
SP	RECESSED WALL MOUNT SPEAKER BY TECHNOLOGY CONTRACTOR, FURNISH & INSTALL BACKBOX & RACEWAY TO UTILITY PLATFORM
EM SP WP	RECESSED WEATHER–PROOF WALL MOUNT SPEAKER BY TECHNOLOGY CONTRACTOR UNDER DIVISION 17; E.C. FURNISH & INSTALL BACKBOX & RACEWAY TO UTILITY PLATFORM
OC	CEILING MOUNTED SPACE OCCUPANCY SENSOR FOR LIGHTING CONTROL (SEE OC SENSOR LEGEND FOR TYPE DESCRIPTIONS.)
OC	WALL MOUNTED SPACE OCCUPANCY SENSOR FOR LIGHTING CONTROL (SEE OC SENSOR LEGEND FOR TYPE DESCRIPTIONS.)
	EMERGENCY LIGHTS AS SPECIFIED – SEE LIGHT FIXTURE SCHEDULE
CCTV	FUTURE CCTV CAMERA BY OWNER UNDER SEPARATE CONTRACT – PROVIDE 3/4"C FROM BELOW UTILITY PLATFORM TO CABLE MANAGEMENT HOOK ABOVE. CABLE UNDER DIVISION 17
	VIDEO STUDIO CAMERA BY OWNER
	EXIT SIGN w/ DIRECTIONAL ARROW(S) & BATTERY BACK–UP – SEE LIGHT FIXTURE SCHEDULE
EM	EXIT SIGN w/ BATTERY BACK–UP & EM LIGHTS – SEE LIGHT FIXTURE SCHEDULE
	DRY–TYPE TRANSFORMER AS SPECIFIED – SEE RISER DIAGRAMS, INSTALLATION DETAILS, & SPECIFICATION SECTION 16460
	SLEEVE ROUGH–INS UNDER PAVING/CONCRETE; 3" FOR FUTURE USE, & 2" FOR SITE LIGHTING BY UTILITY CO.
— UE —	UNDERGROUND PRIMARY ELECTRICAL FEEDERS BY ELECTRICAL UTILITY
— E —	UNDERGROUND SECONDARY ELECTRICAL FEEDERS BY ELECTRICAL CONTRACTOR
— CATV —	TO FUTURE GROUND MOUNTED, SATELLITE BY OWNER CABLE TV CABLING BY OTHERS — BLONDER–TONGUE BIDA SERIES CATV AMPLIFIER INSIDE No. RSN–1924 OR EQUIVALENT NEMA 1 LOCKABLE CAB'T AUSTIN CO. OR EQUAL
— TELCOM —	TELECOMMUNICATIONS CABLING BY OTHERS
— FO —	FIBER OPTIC CABLE BY TECHNOLOGY CONTRACTOR; WIRE MANAGEMENT BY E.C.
	RACEWAY AS SPECIFIED CONCEALED ABOVE CEILING
	RACEWAY AS SPECIFIED CONCEALED U.G.
	HOME–RUN TO PANEL w/ CONDUCTORS, NEUTRAL, & GROUND
	CABLE TRAY (CENTER SPLINE & LADDER TYPES), SEE DETAILS THESE DRAWINGS

ABBREVIATIONS:

A.C.	ABOVE CEILING	C	CONDUIT AS SPECIFIED
A.F.F.	ABOVE FINISH FLOOR	NL	24 HOUR NIGHT LIGHT
A.H.J.	AUTHORITY HAVING JURISDICTION	NTS	NOT TO SCALE
EF	EXHAUST FAN	P.B.	PUSH BUTTON
EWC	ELECTRIC WATER COOLER	T.C.	TECHNOLOGY CONTRACTOR
EWH	ELECTRIC WATER HEATER	TP	TAMPER–PROOF
G	GROUND CONDUCTOR	U.O.N.	UNLESS OTHERWISE NOTED
G.C.	GENERAL CONTRACTOR	U.G.	UNDERGROUND
P.C.	PLUMBING CONTRACTOR	WP	WEATHERPROOF ENCLOSURE
M.C.	MECHANICAL CONTRACTOR	U.P.	UTILITY PLATFORM
E.C.	ELECTRICAL CONTRACTOR OR EMPTY CONDUIT		
B–2	TYPICAL CIRCUIT DESIGNATION: PANEL "B", BREAKER #2		

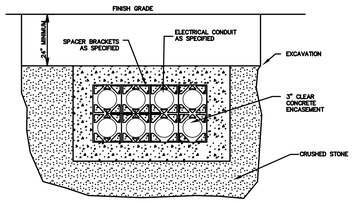
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No.	Date	Revision

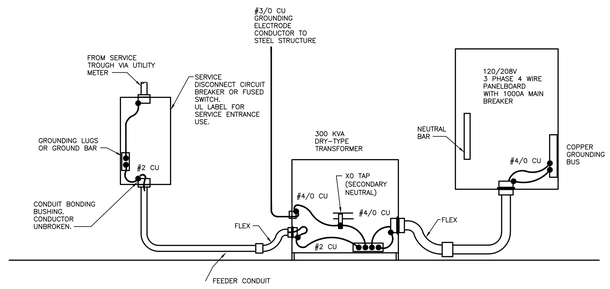
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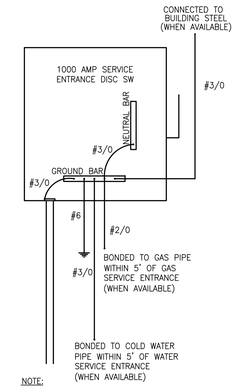
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002.3 SE DUCT BANK DETAIL
SCALE: N.T.S.



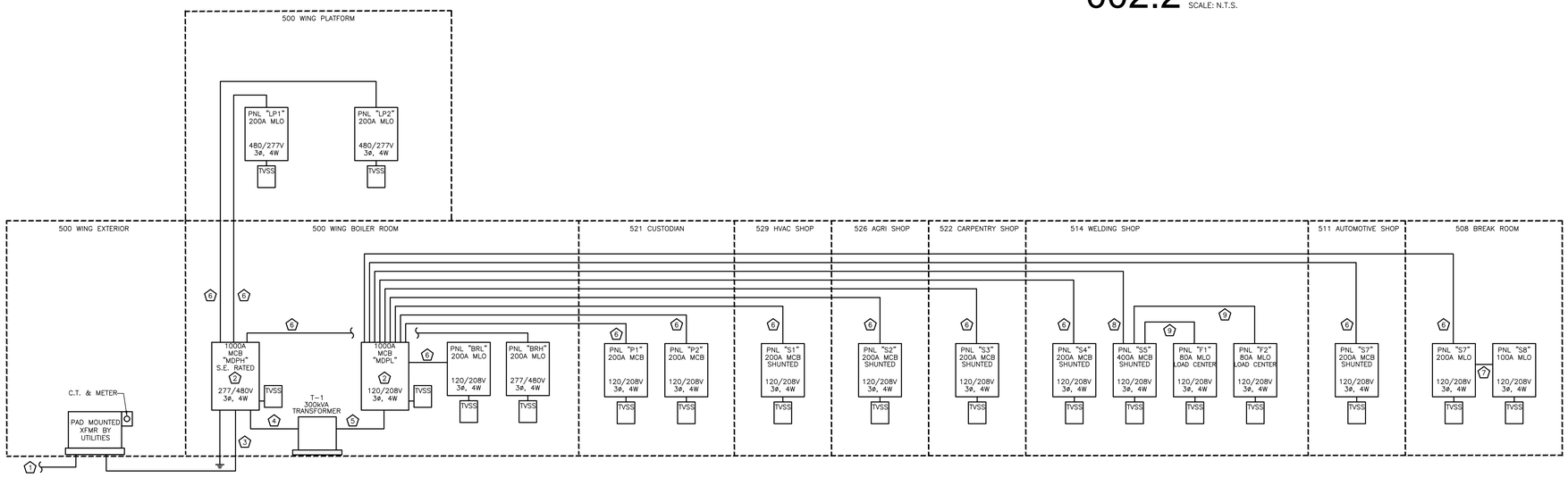
002.4 300 KVA TRANSFORMER GROUNDING DIAGRAM
SCALE: N.T.S.



NOTE:

1. THIS DRAWING ONLY SHOWS GROUNDING ELECTRODE CONDUCTORS AND BONDING JUMPERS. ALL CONDUITS SHALL ALSO HAVE EQUIPMENT GROUNDING CONDUCTORS SIZED PER NEC AND DRAWINGS.
2. BONDING OF GAS PIPE IS TO EQUALIZE POTENTIAL OF GAS PIPE ONLY, AS REQ'D BY N.E.C. & VOLUME VI OF NCBC.

002.2 1000A SERVICE ENTRANCE GROUNDING DETAIL
SCALE: N.T.S.



002.1 POWER RISER DIAGRAM
SCALE: N.T.S.

ELECTRICAL RISER NOTES:

1. COORDINATE UNDERGROUND/OVERHEAD SERVICE WITH UTILITY CO. PROVIDE ALL CONDUIT, WIRING, LABOR, AND/OR OTHER WORK AS REQUIRED BY UTILITY CO.
2. GROUND SERVICE ENTRANCE PER "SERVICE ENTRANCE GROUNDING DETAIL"
3. 3 SETS: 4-#400KCMIL IN 3.5"C UNDERSLAB
4. 2 SETS: 3-#250 & 1-#1/0G IN 3"C
5. 3 SETS: 4-#400 & 1-#3/0 IN 3.5" C
6. 4-#3/0 & 1-#6G. IN 2.5"C
7. 4-#3 & 1-#8G. IN 1.5"C
8. 2 SETS: 4-#3/0 & 1-#3G. IN 2.5"C
9. 4-#4 & 1-#8 IN 1.25"C

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HITE ASSOCIATES, P.C. REGISTERED CORPORATION NORTH CAROLINA 418 GREENVILLE

NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

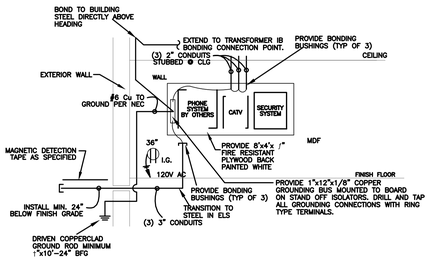
Project No. 22351
Date: March 2025
Drawing no. E 002

ENGINEERING SOURCE of NC, P.A.
102-42 Regency Blvd, Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 • Fax (252) 439-0482 • Firm #C-1973

ES Project No: ES24055

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039161 DAVID MICHAEL POOL 3/2/25

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003.1 TELEPHONE SYSTEM RISER
SCALE: N.T.S.

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: PRESCRIPTIVE ☒ PERFORMANCE ☐
ASHRAE 90.1: PRESCRIPTIVE ☐ PERFORMANCE ☐

LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
NUMBER OF LAMPS IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
BALLAST TYPE IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
NUMBER OF BALLASTS IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
TOTAL WATTAGE PER FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)

TOTAL INTERIOR WATTAGE SPECIFIED .VS. ALLOWED: * 10,264W VS. 25,362W *
EXTERIOR LIGHTING ZONE: 3
EXTERIOR LIGHTING WATTAGE SPECIFIED .VS. ALLOWED: ** 1,620W VS. 2,667W **

ADDITIONAL PRESCRIPTIVE COMPLIANCE

- ☐ C406.2 More Efficient HVAC Equipment Performance
- ☒ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the North Carolina Building Code, Energy Conservation Code.

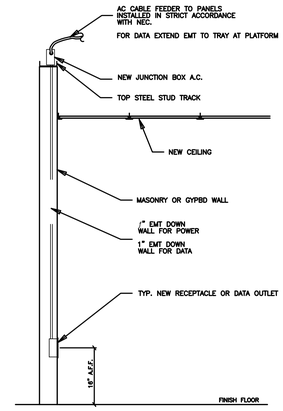
SIGNED: D. Wilson Pou

NAME: D. WILSON POU, P.E.

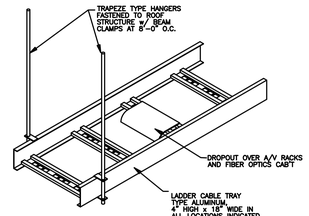
TITLE: PROFESSIONAL ENGINEER

ALLOWED: * 11,405W x 0.9= 10,264W 506 COMPLIANCE
TOTAL BUILDING INTERIOR LIGHTS WATTAGE: 28,180 SQ.FT (x .90)= 25,362W SPECIFIED C406.3 RLPD.
** ALLOWED: ZONE 3 @ 750W + 30W$/6FT FOR MAIN ENTRY
+ 0.4W/250 SQ.FT ENTRY CANOPY + 0.113 W/ 14,651 SQ.FT FOR FACADES **

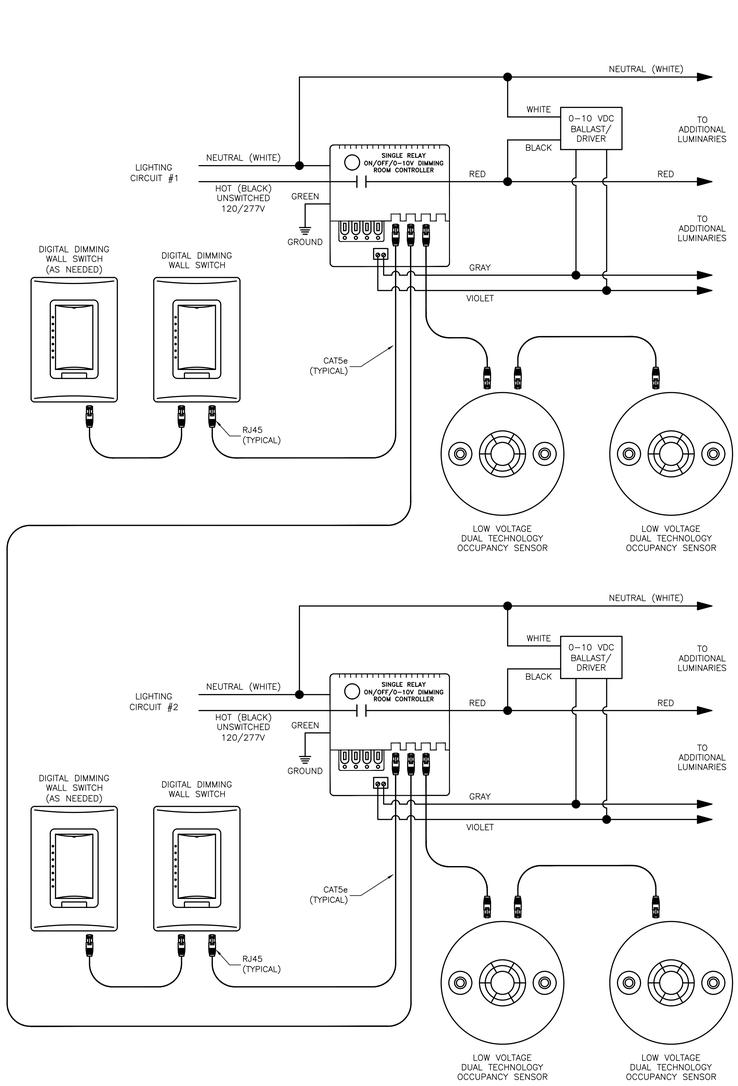
003.2 LIGHTING LOAD SUMMARY
SCALE: N.T.S.



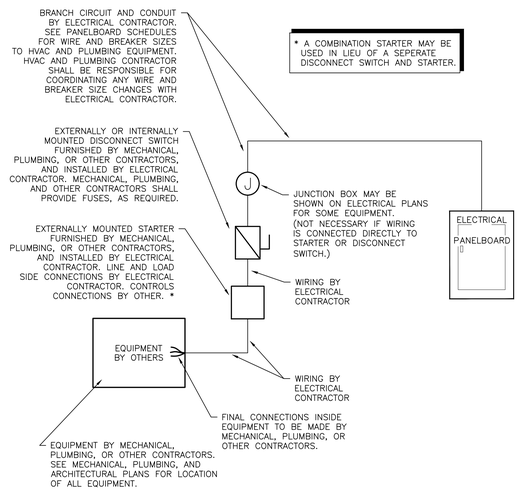
003.3 RACEWAY INSTALLATION
SCALE: N.T.S.



003.4 CABLE TRAY INSTALLATION DETAIL
SCALE: N.T.S.



003.6 MULTI-ZONE LOW VOLTAGE ROOM CONTROLLERS MULTI-LOCATION 0-10V DIMMING WIRING DIAGRAM
SCALE: N.T.S.



003.5 ELECTRICAL CONNECTION DETAIL
SCALE: N.T.S.

OC. SENSOR SCHEDULE

TYPE	DESCRIPTION
PIR	PASSIVE INFRARED –WALL MOUNT – WATT STOPPER #PW–100 – HUBBLE #LH–IR – LEVITON #ODW–IR –CEILING MOUNT – WATT STOPPER #CI–305 W/BZ–150 PPAK – HUBBLE #OMNI–IR–UVPP – LEVITON #ODC15–IDW
US	ULTRASONIC –WALL MOUNT – WATT STOPPER #UW–100 – HUBBLE #LH–US – LEVITON #ODW12–UDW –CEILING MOUNT – WATT STOPPER #UT–305 W/BZ–150 PPAK – HUBBLE #OMNI–US–UVPP – LEVITON #ODC10–UDW
DT DT–DR	DUAL TECHNOLOGY –WALL MOUNT – WATT STOPPER #DW–100 – HUBBLE #LH–MT – LEVITON #ODW12–MDW –WALL MOUNT DUAL RELAY – WATT STOPPER #DW–200 – HUBBLE #LH–MT–D2 – LEVITON #DSSMT–MDW–DR –CEILING MOUNT – WATT STOPPER #DT–305 W/BZ–150 PPAK – HUBBLE #OMNI–DT–UVPP – LEVITON #ODC10–MDW –CEILING MOUNT DUAL RELAY – WATT STOPPER #DT–305 W/(2) BZ–150 PPAK – HUBBLE #OMNI–DT– w/ (2) UVPP – LEVITON #O2C15–IDW
TIME	PUSH BUTTON TIMER –WALL MOUNT – WATT STOPPER #TS–400 – HUBBLE #TD–200 – LEVITON #TS300–DW

* ALL OCCUPANCY SENSORS SPECIFICED USE 120/277V AC POWER. EQUALS ACCEPTED, MAKE AND MODEL USED TO SET STANDARD OF PERFORMANCE & QUALITY.
* ALL OCCUPANCY SENSORS ARE INSTALLED AND CIRCUITED PER PLANS.

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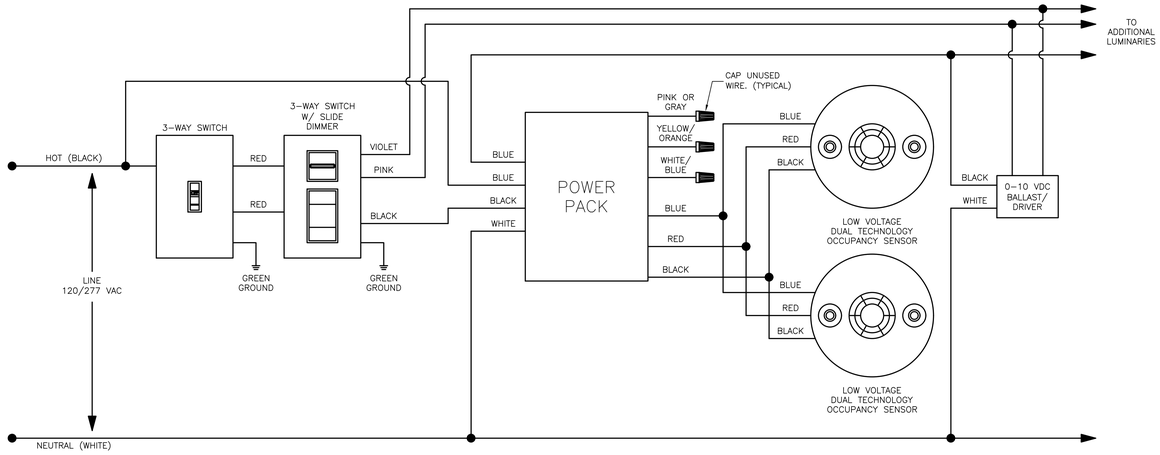
NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

Project No. 22351
Date: March 2025
Drawing no. E 003

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ES Project No: ES24055

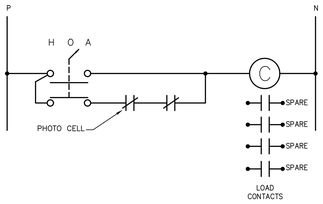
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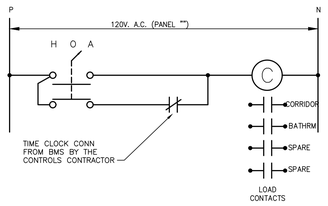
004.1 SINGLE ZONE POWER PACK - LOW VOLTAGE DEVICES 3-WAY SWITCHING WITH 0-10V DIMMING WIRING DIAGRAM

SCALE: N.T.S.



004.2 TYP EXTERIOR LIGHTING CONTACTOR

SCALE: N.T.S.

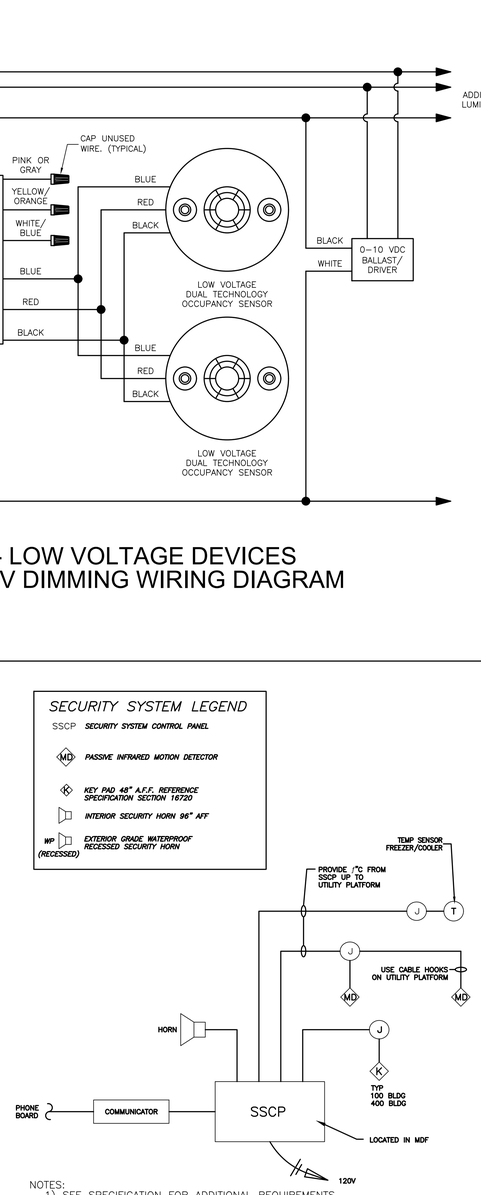


004.3 TYP INTERIOR LIGHTING CONTACTOR

SCALE: N.T.S.

SECURITY SYSTEM LEGEND

- SSCP — SECURITY SYSTEM CONTROL PANEL
- MD — PASSIVE INFRARED MOTION DETECTOR
- K — KEY PAD 48" A.F.F. REFERENCE SPECIFICATION SECTION 16720
- INTERIOR SECURITY HORN 96" AFF
- WP (RECESSED) — EXTERIOR GRADE WATERPROOF RECESSED SECURITY HORN



NOTES:
1) SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS
2) SEE PLANS FOR DEVICE QUANTITIES
3) ALL WIRING TERMINATIONS SHALL BE LABELED.

004.4 SECURITY ALARM RISER DIAGRAM

SCALE: N.T.S.

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMPS	VOLTS	WATTS	B. F.
A1	2'x4' LAY-IN LED FLAT PANEL WITH ACRYLIC LENS. PROVIDE WITH HIGH LUMEN PACKAGE (5000-6000 LUMENS) AND DIMMING DRIVER. PROVIDE: DAY-BRITE#: 2FPZ-60L840-4-DS-UNV-DIM OR LITHONIA#: EPANL-2X4-5000LM-80CRI-40K-MIN10-DIM-MVOLT OR WILLIAMS#: BP24-LS-8CS-DIM-UNV	LED	UNV	54W	-
A2 /NL	2'x4' LAY-IN LED FLAT PANEL WITH ACRYLIC LENS. PROVIDE WITH MEDIUM LUMEN PACKAGE (4,600-5,600 LUMENS) AND DIMMING DRIVER. PROVIDE: DAY-BRITE#: 2FPZ48L840-4-DS-UNV-DIM LITHONIA#: EPANL-2X4-4800LM-80CRI-40K-MIN10-DIM-MVOLT OR WILLIAMS#: BP24-LS-8CS-DIM-UNV * /NL INDICATES FIXTURE TO BE USED AS NIGHT LIGHT AND SHALL HAVE POWER 24/7.	LED	UNV	45W	-
AG	2'x4' SURFACE MOUNT LED TROFFER WITH ACRYLIC LENS WITH MEDIUM LUMEN OUTPUT (4,600 LUMENS). PROVIDE DAY-BRITE #: 2FPZ48L840-4-DS-UNV-DIM / FSF24 OR LITHONIA #: CPYZ4-5000L840-SWL-MIN10-ZT-UNV / 2X4SMKS OR WILLIAMS #: BP24-LS-8CS-DIM-UNV / BP24SMK-W	LED	UNV	39W	-
B	8' VAPOR TIGHT LED PENDANT MOUNTED LIGHT FIXTURE 10,000-13,000 LUMENS: LITHONIA #: CSVT-L96-10,000LM-MVOLT-40K-80CRI OR OR EQUAL BY COOPER & DAY-BRITE	LED	UNV	88W	-
H /NL	6" LED DOWN LIGHT 2000 LUMENS WITH 0-10V DIMMING DRIVER: LITHONIA #: LDN6-L20-40-L06-ARCH-MVOLT-GZ10 OR WILLAMS #: 6DR-L20/840-DIM-UNV-O-M-CS-N-F1 OR COOPER #: HALO PR6-FS24-D010-MVOLT * /NL INDICATES FIXTURE TO BE USED AS NIGHT LIGHT AND SHALL HAVE POWER 24/7.	LED	UNV	20W	-
K	3' ROUND LED PENDANT MOUNTED WITH OPEN CENTER HOOP STYLE PROVIDE WITH 0-10V DIMMING 2,500LM, 4000K, 80 CRI FINELITE # HP-2C-P-D-3'-S-840-DIM-277 OR EQUAL BY HUBBLE & COLUMBIA LIGHTING	LED	UNV	30W	
S /NL	4' STRIP STYLE ENCLOSED LED LIGHT FIXTURE FOR EXTREME ENVIRONMENTS WITH MEDIUM LUMEN OUTPUT (4,850 LUMENS) AND FROSTED ACRYLIC LENS. PROVIDE: LEDALUX #: MVT04-50W-27v-DIK-W-F OR WILLIAMS #: EGL2-4-L107/840-(L50)-HIAFR-HA/40C-DRV-UNV OR PHILIPS DAYBRITE #: DWAB51LH840-4-UNV-WHP * /NL INDICATES FIXTURE TO BE USED AS NIGHT LIGHT AND SHALL HAVE POWER 24/7.	LED	UNV	47W	-
WC	EXTERIOR SOFFIT MOUNTED 9" SQUARE RECESSED LED AND UL LISTED FOR WET LOCATIONS. FORWARD THROW OPTICS AIMED AWAY FROM BUILDING. PROVIDE: CEILEO #: CLO-80L-39-4K7-4F-UNV-SQ-ARCH SELECTED COLOR OR EQUAL BY HUBBLE & COLUMBIA LIGHTING	LED	UNV	35W	-
WCW	EXTERIOR CANOPY MOUNTED 9" SQUARE RECESSED LED AND UL LISTED FOR WET LOCATIONS. WIDE THROW OPTICS. PROVIDE: CEILEO #: CLO-80L-39-4K7-SQW-UNV-SQ-ARCH COLOR OR EQUAL BY HUBBLE & COLUMBIA LIGHTING	LED	UNV	35W	-
DR HR	CEILING OR WALL MOUNTED LED EXIT LIGHT CONFORMING TO NFPA 101 STANDARDS, w/ BATTERY & SOLID STATE CHARGER, SELF DIAGNOSTICS w/ A TEST CYCLE EVERY 30 DAYS MINIMUM, SELF-CONTAINED, DOUBLE OR SINGLE WHITE FACE/BODY, ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS, TEST SWITCH, & 90 MIN. EMERGENCY RUN TIME; EXIT SIGN SHALL HAVE 5 YEAR WARRANTY. PROVIDE MULE #: RMX-U-R-W-EM-SD OR WILLIAMS #: EXIT-R-EM-WHT-SDT OR LITHONIA #: LQM-S-W-3-R-120/277-ELN-SD	RED LED	UNV 277/ 6V	3.5W	N/A
	AUTOMATIC, SELF-CONTAINED, SELF DIAGNOSTIC, MAINTENANCE FREE 2-HEAD EMERGENCY LIGHT. UL 924 LISTED AND NFPA 101 COMPLIANT, ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS. SELF DIAGNOSTICS SHALL INCLUDE CONTINUOS SELF CHECKS AND 30 MINUTE FULL LOAD TEST WITH CHARGER OFF EVERY 30 DAYS. PROVIDE MULE #: TSR-W-SD OR WILLIAMS #: EMER/LED-WHT-HL-SDT OR LITHONIA #: EU2-LED-M12	2-10W	UNV 277/ 6V	20W	N/A
	CEILING OR WALL MOUNTED LED EXIT & 2-HEAD EMERGENCY LIGHT CONFORMING TO NFPA 101 STANDARDS, w/ BATTERY & SOLID STATE CHARGER, SELF DIAGNOSTICS w/ A TEST CYCLE EVERY 30 DAYS MINIMUM, SELF-CONTAINED, DOUBLE OR SINGLE WHITE FACE/BODY, ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS, TEST SWITCH, & 90 MIN. EMERGENCY RUN TIME, EXIT LIGHT SHALL CONTINUE TO OPERATE FOR 24 HOURS FOLLOWING POWER OUTAGE; EXIT SIGN SHALL HAVE 5 YEAR WARRANTY. PROVIDE MULE #: SQCR-U-R-WW-SD OR LITHONIA #: LHQM-LED-R-HO-SD OR WILLIAMS #: EXIT/EM/LED-SF-R-WHT-HL-SDT	RED LED 2-10W HALOGEN	UNV 277/ 6V	20	N/A
	WALL MOUNTED SCONCE LIGHT WITH PREMIUM MARINE GRADE DIE-CAST ALUMINUM HOUSING AND POLYCARBONATE GASKETED LENS TO WITHSTAND EXTREME WEATHER CONDITIONS. MOUNT ABOVE EXTERIOR DOOR. EMERGENCY LIGHT SHALL CONFORM WITH NFPA 101 STANDARDS AND NEC-700.16. PROVIDE MULE #: MAKO-LED-ACEM-DB OR WILLIAMS #: EMER/DECO-DBR-LT OR LITHONIA #: AFN-DB-EXT	2-6W	UNV 277/6VDC	12W	-

Hite associates
ARCHITECTURE / PLANNING / TECHNOLOGY
2600 Meridian Drive / Greenville, NC 27834 / tel (252) 757-0333

No.	Date	Revision

HITE ASSOCIATES, P.C. CORPORATION SEAL 4118 REGISTERED GREENVILLE, N.C.

NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

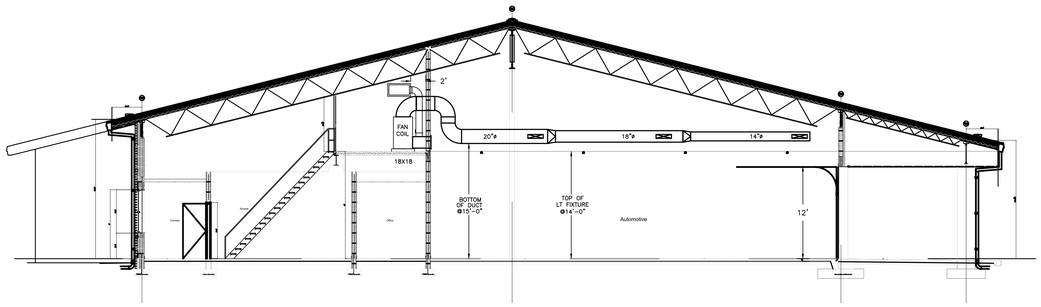
Project No. 22351
Date: March 2025
Drawing no. E 004

ES Project No: ES24055
ENGINEERING SOURCE of NC, P.A.
102-A2 Regency Blvd. Greenville, NC 27834
E-Mail Address: generalmail@engsource.com
Tele (252) 439-4338 • Fax (252) 439-4402 • Fax (C-107)

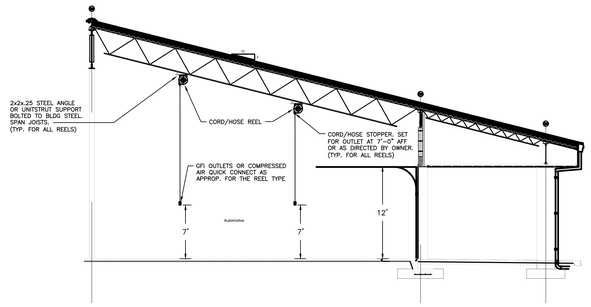
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005.2 LAB SPACE TYPICAL SECTION
SCALE: N.T.S.



005.1 CORD & HOSE REEL DETAIL
SCALE: N.T.S.

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No.	Date	Revision

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HITE ASSOCIATES, P.C.
REGISTERED CORPORATION
CERTIFICATE NUMBER C-418
GREENVILLE, N.C.

NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

Project No. 22351
Date: March 2025
Drawing no. E 005

ENGINEERING
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ES Project No: ES24055

PROFESSIONAL ENGINEER SEAL 039841 NORTH CAROLINA
3/2/25

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BRH DEMAND CALCS

LIGHTING	1.20	KVA	X	125	%	= **1.5 KVA**
RECEPTAC TOTAL	0.00	KVA				
1ST	10.00	KVA	X	100	%	= **0.0 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	0.00	KVA	X	100	%	= **0.0 KVA**
LARGEST	0.00	KVA	X	125	%	= **0.0 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	3.32	KVA	X	100	%	= **3.3 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	0.40	KVA	X	100	%	= **0.4 KVA**
TOTAL =	**6.3 amps**					= **5.2 KVA**

PANELBOARD SCHEDULE - 'BRH' BOILER ROOM

MAIN: 200A MLO | VOLTAGE: 480/277 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	SITE LIGHTING POWER	1.2															1.1		UNIT HEATER (BOILER)	3/4"	12	3	10	2
3	20	1	12	3/4"	LIGHTING CONTACTOR EXTERIOR						0.4										1.1							4
5	20	1	12	3/4"	SPARE																1.1							6
7	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	8
9	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	10
11	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	12
13	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	14
15	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	16
17	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	18
19	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	20
21	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	22
23	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	24
25	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	26
27					SPACE																		SPARE	3/4"	12	1	20	28
29					SPACE																		SPARE	3/4"	12	1	20	30
31					SPACE																		SPACE					32
33					SPACE																		SPACE					34
35					SPACE																		SPACE					36
37																							SPACE					38
39	30	3	10	3/4"	TVSS																		SPACE					40
41																							SPACE					42
LIGHTING (KVA):					1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.4				0.0	0.0	0.0	0.0	3.3	0.0	0.0	CONNECTED LOAD (KVA):				4.9	
RECEPTACLES (KVA):					0.0																		DEMAND LOAD (KVA):				5.2	
MOTORS (KVA):					0.0								PHASE A			2	8.3											
A/C (KVA):					0.0								PHASE B			2	5.4						CONNECTED LOAD (AMPS):				5.9	
HEATING (KVA):					3.3								PHASE C			1	4.0						DEMAND LOAD (AMPS):				6.3	
KITCHEN (KVA):					0.0											KVA	AMPS											
MISCELLANEOUS (KVA):					0.4																							
NOTES:																												

LP1 DEMAND CALCS

LIGHTING	7.87	KVA	X	125	%	= **9.8 KVA**
RECEPTAC TOTAL	0.00	KVA				
1ST	10.00	KVA	X	100	%	= **0.0 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	14.32	KVA	X	100	%	= **14.3 KVA**
LARGEST	2.83	KVA	X	125	%	= **3.5 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	6.00	KVA	X	100	%	= **6.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	0.80	KVA	X	100	%	= **0.8 KVA**
TOTAL =	**41.5 amps**					= **34.5 KVA**

PANELBOARD SCHEDULE - 'LP1' PLATFORM

MAIN: 200A MLO | VOLTAGE: 480/277 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	LIGHTING - PLATFORM 537	0.9										1.6							LIGHTING - EXTERIOR	3/4"	12	1	20	2
3	20	1	12	3/4"	LIGHTING - HVAC 529 AG 526	2.4										1.3							LIGHTING - CORRIDOR	3/4"	12	1	20	4
5	20	1	12	3/4"	LIGHTING - HVAC 529 AG 526 CLASS	1.7																0.4	LIGHTING CONTACTOR EXT	3/4"	12	1	20	6
7	20	1	12	3/4"	LIGHTING CONTACTOR INTERIOR						0.4										3.0		EWH1	3/4"	12	2	15	8
9	15	3	12	3/4"	FC-529		0.9														3.0							10
11							0.9									2.3							FC-526A	3/4"	12	1	15	12
13							0.9									2.3							FC-526B	3/4"	12	1	15	14
15	20	1	12	3/4"	SPARE											2.3							FC-527	3/4"	12	1	15	16
17	20	1	12	3/4"	SPARE											2.3							FC-523	3/4"	12	1	15	18
19	20	1	12	3/4"	SPARE											2.3							FC-522B	3/4"	12	1	15	20
21	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	15	22
23	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	15	24
25	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	26
27	20	1	10	3/4"	SPARE																		SPARE	3/4"	12	1	20	28
29	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	30
31	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	32
33	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	34
35	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	36
37																							SPARE	3/4"	12	1	20	38
39	30	3	10	3/4"	TVSS																		SPARE	3/4"	12	1	20	40
41																							SPARE	3/4"	12	1	20	42
LIGHTING (KVA):					7.9	5.0	0.0	2.8	0.0	0.0	0.0	0.4				2.9	0.0	11.5	0.0	6.0	0.0	0.4	CONNECTED LOAD (KVA):				29.0	
RECEPTACLES (KVA):					0.0																		DEMAND LOAD (KVA):				34.5	
MOTORS (KVA):					14.3								PHASE A			11	41.3											
A/C (KVA):					0.0								PHASE B			10	35.8						CONNECTED LOAD (AMPS):				34.9	
HEATING (KVA):					6.0								PHASE C			8	27.6						DEMAND LOAD (AMPS):				41.5	
KITCHEN (KVA):					0.0											KVA	AMPS											
MISCELLANEOUS (KVA):					0.8																							
NOTES:																												

PANELBOARD SCHEDULE - 'LP2' PLATFORM

MAIN: 200A MLO | VOLTAGE: 480/277 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	LIGHTING - CA. 522 WE. 514 AU. 511	2.7										2.6							LIGHTING - SALON/COSMO 505 509	3/4"	12	1	20	2
3	20	1	12	3/4"	LIGHTING - CA. 522 WE. 514 AU. 511 CLASS	1.8															3.0		EWH2	3/4"	12	2	15	4
5	20	1	12	3/4"	LIGHTING CONTACTOR INTERIOR						0.4										3.0							6
7	15	1	12	3/4"	FC-514A			2.3										5.0					AIR COMPRESSOR	1 1/4"	4	3	60	8
9	15	1	12	3/4"	FC-515			2.3										5.0										10
11	15	1	12	3/4"	FC-514B			2.3										5.0										12
13	15	1	12	3/4"	FC-511A			2.3										2.3					DS-1	3/4"	12	1	15	14
15	15	1	12	3/4"	FC-512			2.3										2.3					DS-2	3/4"	12	1	15	16
17	15	1	12	3/4"	FC-511B			2.3															SPARE	3/4"	12	1	20	18
19	15	1	12	3/4"	FC-505			2.3															SPARE	3/4"	12	1	20	20
21	15	1	12	3/4"	FC-509			2.3															SPARE	3/4"	12	1	20	22
23	15	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	24
25	15	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	26
27	20	1	10	3/4"	SPARE																		SPARE	3/4"	12	1	20	28
29	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	30
31	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	32
33	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	34
35	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	36
37																							SPACE					38
39	30	3	10	3/4"	TVSS																		SPACE					40
41																							SPACE					42
LIGHTING (KVA):					7.2	4.5	0.0	18.4	0.0	0.0	0.0	0.4				2.6	0.0	19.5	0.0	6.0	0.0	0.0	CONNECTED LOAD (KVA):				51.5	
RECEPTACLES (KVA):					0.0																		DEMAND LOAD (KVA):				71.9	
MOTORS (KVA):					37.9								PHASE A			20	70.5											
A/C (KVA):					0.0								PHASE B			19	68.5						CONNECTED LOAD (AMPS):				61.9	
HEATING (KVA):					6.0								PHASE C			13	46.8						DEMAND LOAD (AMPS):				86.5	
KITCHEN (KVA):					0.0											KVA	AMPS											
MISCELLANEOUS (KVA):					0.4																							
NOTES:																												

LP2 DEMAND CALCS

LIGHTING	7.18	KVA	X	125	%	= **9.0 KVA**
RECEPTAC TOTAL	0.00	KVA				
1ST	10.00	KVA	X	100	%	= **0.0 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	37.91	KVA	X	100	%	= **37.9 KVA**
LARGEST	14.92	KVA	X	125	%	= **18.6 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	6.00	KVA	X	100	%	= **6.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	0.40	KVA	X	100	%	= **0.4 KVA**
TOTAL =	**86.5 amps**					= **71.9 KVA**

MDPH DEMAND CALCS

LIGHTING	16.71	KVA	X	125	%	= **20.9 KVA**
RECEPTAC TOTAL	54.40	KVA				
1ST	10.00	KVA	X	100	%	= **10.0 KVA**
REMAIN	44.40	KVA	X	50	%	= **22.2 KVA**
MOTORS	287.02	KVA	X	100	%	= **287.0 KVA**
LARGEST	61.08	KVA	X	125	%	= **76.3 KVA**
A/C	44.00	KVA	X	100	%	= **44.0 KVA**
HEATING	15.32	KVA	X	125	%	= **19.2 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	113.24	KVA	X	100	%	= **113.2 KVA**
TOTAL =	**713.1 amps**					= **592.8 KVA**

SWITCHBOARD PANEL SCHEDULE - 'MDPH'

MAIN: 1000A MCB | VOLTAGE: 480/277 | PHASE: 3 | WIRE: 4
MTG: SURFACE | AIC: 65,000 | NOTES:

CKT #	CIRCUIT BREAKER FRAME	TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C
1	600	500	3	SEE	RISER	XFMR T-1	0.3	25.0	41.1	13.2	0.0	0.0	37.2			
	-	-	-			PANEL "MDPL"	0.0	16.8	35.2	15.4	0.0	0.0	41.6			
	-	-	-			-	0.1	12.6	36.3	15.4	0.0	0.0	32.8			
2	225	200	3	3/0	2"	PANEL "LP1"	2.5	0.0	5.5	0.0	3.0	0.0	0.4			
	-	-	-			-	3.7	0.0	3.2	0.0	3.0	0.0	0.0			
	-	-	-			-	1.7	0.0	5.5	0.0	0.0	0.0	0.4			
3	225	200	3	3/0	2"	PANEL "LP2"	5.4	0.0	14.2	0.0	0.0	0.0	0.0			
	-	-	-			-	1.8	0.0	14.2	0.0	3.0	0.0	0.0			
	-	-	-			-	0.0	0.0	9.6	0.0	3.0	0.0	0.4			
4	225	200	3	3/0	2"	PANEL "BRH"	1.2	0.0	0.0	0.0	1.1	0.0	0.0			
	-	-	-				0.0	0.0	0.0	0.0	1.1	0.0	0.4			
	-	-	-				0.0	0.0	0.0	0.0	1.1	0.0	0.0			
5	200	200	3	3/0	2"	CHILLER CH-1			40.7							
	-	-	-			-			40.7							
	-	-	-			-			40.7							
6						SPACE										
	-	-	-			-										
	-	-	-			-										
7						SPACE										
	-	-	-			-										
	-	-	-			-										
8						SPACE										
	-	-	-			-										
	-	-	-			-										
9						SPACE										
	-	-	-			-										
	-	-	-			-										
10	30	30	3	10	3/4"	TVSS										
	-	-	-			-										
	-	-	-			-										
							16.7	54.4	287.0	44.0	15.3	0.0	113.2			
CONNECTED LOAD (KVA):						530.7										
DEMAND LOAD (KVA):						592.8								PHASE A	689.0	191
														PHASE B	650.3	180
CONNECTED LOAD (AMPS						638.3								PHASE C	576.5	160
DEMAND LOAD (AMPS):						713.1									AMPS	KVA
NOTES:																

MDPL DEMAND CALCS

LIGHTING	0.45	KVA	X	125	%	= **0.6 KVA**
RECEPTAC TOTAL	54.40	KVA				
1ST	10.00	KVA	X	100	%	= **10.0 KVA**
REMAIN	44.40	KVA	X	50	%	= **22.2 KVA**
MOTORS	112.64	KVA	X	100	%	= **112.6 KVA**
LARGEST		KVA	X	125	%	= **0.0 KVA**
A/C	44.00	KVA	X	100	%	= **44.0 KVA**
HEATING	0.00	KVA	X	125	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	111.64	KVA	X	100	%	= **111.6 KVA**
TOTAL =	**835.5 amps**					= **301.0 KVA**

SWITCHBOARD PANEL SCHEDULE - 'MDPL'

MAIN: 1000A MCB | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4
MTG: SURFACE | AIC: 65,000 | NOTES:

CKT #	CIRCUIT BREAKER FRAME	TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C
1	225	200	3	3/0	2"	PANEL "S1"	0.0	2.6	0.0	13.2	0.0	0.0	0.0			
	-	-	-			-	0.0	1.4	0.0	15.4	0.0	0.0	0.0			
	-	-	-			-	0.0	0.8	0.0	15.4	0.0	0.0	0.0			
2	225	200	3	3/0	2"	PANEL "S2"	0.0	3.0	1.2	0.0	0.0	0.0	0.0			
	-	-	-			-	0.0	1.6	3.2	0.0	0.0	0.0	0.0			
	-	-	-			-	0.0	1.0	2.6	0.0	0.0	0.0	1.2			
3	225	200	3	3/0	2"	PANEL "S3"	0.0	2.0	10.9	0.0	0.0	0.0	0.0			
	-	-	-			-	0.0	1.0	11.3	0.0	0.0	0.0	0.0			
	-	-	-			-	0.0	1.0	11.4	0.0	0.0	0.0	0.0			
4	225	200	3	3/0	2"	PANEL "S4"	0.0	0.8	3.2	0.0	0.0	0.0	14.6			
	-	-	-			-	0.0	1.0	3.2	0.0	0.0	0.0	14.6			
	-	-	-			-	0.0	1.2	3.2	0.0	0.0	0.0	11.6			
5	400	400	3	600	3 1/2"	PANEL "S5"	0.0	0.2	20.6	0.0	0.0	0.0	14.6			
	-	-	-			-	0.0	0.2	13.6	0.0	0.0	0.0	14.6			
	-	-	-			-	0.0	0.2	12.7	0.0	0.0	0.0	11.6			
6	225	200	3	3/0	2"	PANEL "S6"	0.0	2.4	3.0	0.0	0.0	0.0	0.5			
	-	-	-			-	0.0	1.4	2.1	0.0	0.0	0.0	0.0			
	-	-	-			-	0.0	1.6	2.1	0.0	0.0	0.0	0.0			
7	225	200	3	3/0	2"	PANEL "S7"	0.0	4.6	0.0	0.0	0.0	0.0	6.8			
	-	-	-			-	0.0	2.8	0.0	0.0	0.0	0.0	9.3			
	-	-	-			-	0.1	1.4	1.3	0.0	0.0	0.0	5.7			
8	225	200	3	3/0	2"	PANEL "P1"	0.0	5.0	1.9	0.0	0.0	0.0	0.0			
	-	-	-			-	0.0	4.4	1.8	0.0	0.0	0.0	0.5			
	-	-	-			-	0.0	2.8	1.5	0.0	0.0	0.0	1.0			
9	225	200	3	3/0	2"	PANEL "P2"	0.3	3.4	0.4	0.0	0.0	0.0	0.4			
	-	-	-			-	0.0	3.0	0.0	0.0	0.0	0.0	1.7			
	-	-	-			-	0.0	2.6	0.1	0.0	0.0	0.0	0.8			
10	225	200	3	3/0	2"	PANEL "BRL"	0.0	1.0	0.0	0.0	0.0	0.0	0.4			
	-	-	-			-	0.0	0.0	0.0	0.0	0.0	0.0	1.0			
	-	-	-			-	0.0	0.0	1.4	0.0	0.0	0.0	0.8			
11						SPACE										
	-	-	-			-										
	-	-	-			-										
12						SPACE										
	-	-	-			-										
	-	-	-			-										
13						SPACE										
	-	-	-			-										
	-	-	-			-										
14						SPACE										
	-	-	-			-										
	-	-	-			-										
15						SPACE										
	-	-	-			-										
	-	-	-			-										
16						SPACE										
	-	-	-			-										
	-	-	-			-										
17						SPACE										
	-	-	-			-										
	-	-	-			-										
18						SPACE										
	-	-	-			-										
	-	-	-			-										
19						SPACE										
	-	-	-			-										
	-	-	-			-										
20	30	30	3	10	3/4"	TVSS										
	-	-	-			-										
	-	-	-			-										
							0.5	54.4	112.6	44.0	0.0	0.0	111.6			
CONNECTED LOAD (KVA):						323.1										
DEMAND LOAD (KVA):						301.0								PHASE A	973.8	117
														PHASE B	908.4	109
CONNECTED LOAD (AMPS						896.8								PHASE C	810.5	97
DEMAND LOAD (AMPS):						835.5									AMPS	KVA
NOTES:																

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No	Date	Revision

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NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

Project No. 22351
Date: March 2025
Drawing no. E 006

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SHUNTED PANELBOARD SCHEDULE - 'S3' CARPENTRY

MAIN: 200A MCB | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	RECEPT - GENERAL		1.0										0.4						RECEPT - GENERAL	3/4"	12	1	20	2
3	20	1	12	3/4"	RECEPT - EXTERIOR		0.4											0.8						DRILL PRESS	3/4"	12	1	20	4
5	20	1	12	3/4"	RECEPT - EXTERIOR		0.4											1.0						CHOP SAW	3/4"	12	1	20	6
7	20	1	12	3/4"	CORD REEL (GFI BREAKER)			0.5										0.8						BAND SAW	3/4"	12	1	20	8
9	20	1	12	3/4"	CORD REEL (GFI BREAKER)			1.0										0.8						BAND SAW	3/4"	12	1	20	10
11	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											1.2						LARGE LATHE	3/4"	12	1	20	12
13	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											1.2						LARGE LATHE	3/4"	12	1	20	14
15	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.8						SMALL LATHE	3/4"	12	1	20	16
17	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.8						SMALL LATHE	3/4"	12	1	20	18
19	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											1.0						GRINDER	3/4"	12	1	20	20
21	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											1.0						GRINDER	3/4"	12	1	20	22
23	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.7						SCROLL SAW	3/4"	12	1	20	24
25	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.7						SCROLL SAW	3/4"	12	1	20	26
27	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.7						SCROLL SAW	3/4"	12	1	20	28
29	20	1	12	3/4"	AIR FILTER (2)			0.8										0.7						SCROLL SAW	3/4"	12	1	20	30
31	20	1	12	3/4"	AIR FILTER (2)			0.8										0.9						BELT SANDER	3/4"	12	1	20	32
33	25	2	12	3/4"	DUST COLLECTOR			1.2																SPARE	3/4"	12	1	20	34
35								1.2																SPARE	3/4"	12	1	20	36
37	20	1	12	3/4"	SPARE													5.0						DUST COLLECTION	1 1/4"	3	3	100	38
39	20	1	12	3/4"	SPARE													5.0											40
41	20	1	12	3/4"	SPARE													5.0											42
					SECTION 2																			SECTION 2					
43	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	44
45	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	46
47	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	48
49	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	50
51	20	1	12	3/4"	SPARE																			SPACE					52
53	20	1	12	3/4"	SPARE																			SPACE					54
55	30	3	10	3/4"	TVSS																			SPACE					56
57																								SPACE					58
59																								SPACE					60
LIGHTING (KVA):					0.0	0.0	3.6	5.6	0.0	0.0	0.0	0.0				0.0	0.4	28.0	0.0	0.0	0.0	0.0	CONNECTED LOAD (KVA):					37.6
RECEPTACLES (KVA):					4.0																		DEMAND LOAD (KVA):					56.3
MOTORS (KVA):					33.6								PHASE A			13	107.3											
A/C (KVA):					0.0								PHASE B			12	102.7						CONNECTED LOAD (AMPS):					104.4
HEATING (KVA):					0.0								PHASE C			12	103.5						DEMAND LOAD (AMPS):					156.2
KITCHEN (KVA):					0.0											KVA	AMPS											
MISCELLANEOUS (KVA):					0.0																							

NOTES: PANEL TO BE PROVIDED WITH SHUNT TRIP THAT CUTS OFF ALL POWER BY ACTIVATION OF PUSH BUTTON EMERGENCY STOP

SHUNTED PANELBOARD SCHEDULE - 'S4' WELDING

MAIN: 200A MCB | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	50	2	6	1"	WELDER							2.9						1.6						SAW	1"	6	3	50	2
3												2.9						1.6											4
5	50	2	6	1"	WELDER							2.9						1.6											6
7												2.9						0.2						CORD REEL (GFI BREAKER)	3/4"	12	1	20	8
9	50	2	6	1"	WELDER							2.9						0.2						CORD REEL (GFI BREAKER)	3/4"	12	1	20	10
11												2.9						0.2						CORD REEL (GFI BREAKER)	3/4"	12	1	20	12
13	50	2	6	1"	WELDER							2.9												SPARE	3/4"	12	1	20	14
15												2.9						1.6						PUNCH PRESS	3/4"	12	3	20	16
17	50	2	6	1"	WELDER							2.9						1.6											18
19												2.9						1.6											20
21	50	2	6	1"	WELDER							2.9						0.4						RECEPT - GENERAL	3/4"	12	1	20	22
23												2.9						0.6						RECEPT - GENERAL	3/4"	12	1	20	24
25	50	2	6	1"	WELDER							2.9						0.6						RECEPT - GENERAL	3/4"	12	1	20	26
27												2.9						0.4						RECEPT - EXTERIOR	3/4"	12	1	20	28
29	20	1	12	3/4"	SPARE													0.4						RECEPT - EXTERIOR	3/4"	12	1	20	30
31	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	32
33	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	34
35	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	36
37																								SPARE	3/4"	12	1	20	38
39	30	3	10	3/4"	TVSS																			SPARE	3/4"	12	1	20	40
41																								SPARE	3/4"	12	1	20	42
LIGHTING (KVA):					0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.8				0.0	3.0	9.5	0.0	0.0	0.0	0.0	CONNECTED LOAD (KVA):					53.3
RECEPTACLES (KVA):					3.0																		DEMAND LOAD (KVA):					59.2
MOTORS (KVA):					9.5								PHASE A			19	154.4											
A/C (KVA):					0.0								PHASE B			19	156.1						CONNECTED LOAD (AMPS):					147.9
HEATING (KVA):					0.0								PHASE C			16	133.5						DEMAND LOAD (AMPS):					164.3
KITCHEN (KVA):					0.0											KVA	AMPS											
MISCELLANEOUS (KVA):					40.8																							

NOTES: PANEL TO BE PROVIDED WITH SHUNT TRIP THAT CUTS OFF ALL POWER BY ACTIVATION OF PUSH BUTTON EMERGENCY STOP

SHUNTED PANELBOARD SCHEDULE - 'S5' WELDING

MAIN: 400A MCB | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	50	2	6	1"	WELDER							2.9						2.1						CNC	3/4"	10	2	30	2
3												2.9						2.1											4
5	50	2	6	1"	WELDER							2.9												CORD REEL	3/4"	12	1	20	6
7												2.9						0.2						CORD REEL	3/4"	12	1	20	8
9	50	2	6	1"	WELDER							2.9						0.2						CORD REEL	3/4"	12	1	20	10
11												2.9												DRILL PRESS	3/4"	12	1	20	12
13	50	2	6	1"	WELDER							2.9						1.2						GRINDER	3/4"	12	1	20	14
15												2.9												SPARE	3/4"	12	1	20	16
17	50	2	6	1"	WELDER							2.9												SPARE	3/4"	12	1	20	18
19												2.9												SPARE	3/4"	12	1	20	20
21	50	2	6	1"	WELDER							2.9												SPARE	3/4"	12	1	20	22
23												2.9												SPARE	3/4"	12	1	20	24
25	50	2	6	1"	WELDER							2.9												SPARE	3/4"	12	1	20	26
27												2.9												SPARE	3/4"	12	1	20	28
29	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	30
31	20	1	12	3/4"	SPARE											0.0	0.0	8.6	0.0	0.0	0.0	0.0	PANEL F1	1 1/4"	4	3	80	32
33	20	1	12	3/4"	SPARE											0.0	0.0	5.8	0.0	0.0	0.0	0.0							34
35	20	1	12	3/4"	SPARE											0.0	0.0	5.8	0.0	0.0	0.0	0.0							36
37																0.0	0.0	8.6	0.0	0.0	0.0	0.0	PANEL F2	1 1/4"	4	3	80	38
39	30	3	10	3/4"	TVSS											0.0	0.0	5.8	0.0	0.0	0.0	0.0							40
41																0.0	0.0	5.8	0.0	0.0	0.0	0.0							42
LIGHTING (KVA):					0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.8				0.0	0.6	46.9	0.0	0.0	0.0	0.0	CONNECTED LOAD (KVA):					88.2
RECEPTACLES (KVA):					0.6																		DEMAND LOAD (KVA):					93.4
MOTORS (KVA):					46.9								PHASE A			35	294.3											
A/C (KVA):					0.0								PHASE B			28	236.3						CONNECTED LOAD (AMPS):					244.9
HEATING (KVA):					0.0								PHASE C			25	204.7						DEMAND LOAD (AMPS):					259.4
KITCHEN (KVA):					0.0											KVA	AMPS											
MISCELLANEOUS (KVA):					40.8																							

NOTES: PANEL TO BE PROVIDED WITH SHUNT TRIP THAT CUTS OFF ALL POWER BY ACTIVATION OF PUSH BUTTON EMERGENCY STOP

BRL DEMAND CALCS

LIGHTING	0.00	KVA	X	125	%	= **0.0 KVA**
RECEPTAC TOTAL	1.00	KVA				
1ST	10.00	KVA	X	100	%	= **1.0 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	1.44	KVA	X	100	%	= **1.4 KVA**
LARGEST	0.00	KVA	X	125	%	= **0.0 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	2.20	KVA	X	100	%	= **2.2 KVA**
TOTAL	= **12.9 amps**					= **4.6 KVA**

S3 DEMAND CALCS

LIGHTING	0.00	KVA	X	125	%	= **0.0 KVA**
RECEPTAC TOTAL	4.00	KVA				
1ST	10.00	KVA	X	100	%	= **4.0 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	33.62	KVA	X	100	%	= **33.6 KVA**
LARGEST	14.92	KVA	X	125	%	= **18.6 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	0.00	KVA	X	100	%	= **0.0 KVA**
TOTAL	= **156.2 amps**					= **56.3 KVA**

S1 DEMAND CALCS

LIGHTING	0.00	KVA	X	125	%	= **0.0 KVA**
RECEPTAC TOTAL	4.80	KVA				
1ST	10.00	KVA	X	100	%	= **4.8 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS		KVA	X	100	%	= **0.0 KVA**
LARGEST		KVA	X	125	%	= **0.0 KVA**
A/C	44.00	KVA	X	100	%	= **44.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	0.00	KVA	X	100	%	= **0.0 KVA**
TOTAL	= **135.4 amps**					= **48.8 KVA**

S4 DEMAND CALCS

LIGHTING	0.00	KVA	X	125	%	= **0.0 KVA**
RECEPTAC TOTAL	3.00	KVA				
1ST	10.00	KVA	X	100	%	= **3.0 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	9.50	KVA	X	100	%	= **9.5 KVA**
LARGEST	4.75	KVA	X	125	%	= **5.9 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	40.77	KVA	X	100	%	= **40.8 KVA**
TOTAL	= **164.3 amps**					= **59.2 KVA**

S2 DEMAND CALCS

LIGHTING	0.00	KVA	X	125	%	= **0.0 KVA**
RECEPTAC TOTAL	5.60	KVA				
1ST	10.00	KVA	X	100	%	= **5.6 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	7.00	KVA	X	100	%	= **7.0 KVA**
LARGEST	1.50	KVA	X	125	%	= **1.9 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	1.20	KVA	X	100	%	= **1.2 KVA**
TOTAL	= **43.5 amps**					= **15.7 KVA**

S4 DEMAND CALCS

LIGHTING	0.00	KVA	X	125	%	= **0.0 KVA**
RECEPTAC TOTAL	0.60	KVA				
1ST	10.00	KVA	X	100	%	= **0.6 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	46.88	KVA	X	100	%	= **46.9 KVA**
LARGEST	4.16	KVA	X	125	%	= **5.2 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	40.77	KVA	X	100	%	= **40.8 KVA**
TOTAL	= **259.4 amps**					= **93.4 KVA**

PANELBOARD SCHEDULE - 'BRL' BOILER ROOM

MAIN: 200A MLO | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	RECEPT - EXTERIOR		0.4											0.6						RECEPT - BOILER ROOM	3/4"	12	1	20	2
3	20	1	12	3/4"	FIRE SPRINKLER POWER																	0.5		SPRINKLER HOTBOX	3/4"	12	1	20	4
5	20	1	12	3/4"	BOILER			1.4																CHILLER HEAT TAPE	3/4"	12	1	20	6
7	20	1	12	3/4"	SPARE																			CHILLER CONTROL	3/4"	12	1	20	8
9	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	10
11	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	12
13	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	14
15	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	16
17	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	18
19	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	20
21	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	22
23	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	24
25	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	26
27					SPACE																			SPARE	3/4"	12	1	20	28
29					SPACE																			SPARE	3/4"	12	1	20	30
31					SPACE																			SPARE	3/4"	12	1	20	32
33					SPACE																			SPACE					34
35					SPACE																			SPACE					36
37					SPACE																			SPACE					38
39	30	3	10	3/4"	TVSS																			SPACE					40
41																								SPACE					42
LIGHTING (KVA):					0.0	0.0	0.4	1.4	0.0	0.0	0.0	0.5					0.0	0.6	0.0	0.0	0.0	1.7	CONNECTED LOAD (KVA):					4.6
RECEPTACLES (KVA):					1.0																		DEMAND LOAD (KVA):					4.6
MOTORS (KVA):					1.4								PHASE A			1	11.7											
A/C (KVA):					0.0								PHASE B			1	8.3						CONNECTED LOAD (AMPS):					12.9
HEATING (KVA):					0.0								PHASE C			2	18.7						DEMAND LOAD (AMPS):					12.9
KITCHEN (KVA):					0.0											KVA	AMPS											
MISCELLANEOUS (KVA):					2.2																							

NOTES:

SHUNTED PANELBOARD SCHEDULE - 'S1' HVAC

MAIN: 200A MCB | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.8						RECEPT - GENERAL	3/4"	12	1	20	2
3	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.6						RECEPT - EXTERIOR	3/4"	12	1	20	4
5	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.6						RECEPT - TS/VM	3/4"	12	1	20	6
7	20	1	12	3/4"	CORD REEL (GFI BREAKER)		0.2											0.8						RECEPT - CLASSROOM	3/4"	12	1	20	8
9	30	2	10	3/4"	HVAC SYS 4				2.2										2.2					HVAC SYS 1	3/4"	10	2	30	10
11									2.2										2.2										12
13	30	2	10	3/4"	HVAC SYS 4				2.2										2.2					HVAC SYS 1	3/4"	10	2	30	14
15									2.2										2.2										16
17	30	2	10	3/4"	HVAC SYS 5				2.2										2.2					HVAC SYS 2	3/4"	10	2	30	18
19									2.2										2.2										20
21	30	2	10	3/4"	HVAC SYS 5				2.2										2.2					HVAC SYS 2	3/4"	10	2	30	22
23									2.2										2.2										24
25	20	1	12	3/4"	RECEPT - HVAC SERVICE INT.		0.6												2.2					HVAC SYS 3	3/4"	10	2	30	26
27	20	1	12	3/4"	RECEPT- HVAC SERVICE EXT.		0.6												2.2										28
29	20	1	12	3/4"	SPARE														2.2					HVAC SYS 3	3/4"	10	2	30	30
31	20	1	12	3/4"	SPARE														2.2										32
33	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	34
35	20	1	12	3/4"	SPARE																			SPARE	3/4"	12	1	20	36
37																								SPARE	3/4"	12	1	20	38
39	30	3	10	3/4"	TVSS																			SPARE	3/4"	12	1	20	40
41																								SPARE	3/4"	12	1	20	42
LIGHTING (KVA):					0.0	0.0	2.0	0.0	17.6	0.0	0.0	0.0					0.0	2.8	0.0	26.4	0.0	0.0	0.0	CONNECTED LOAD (KVA):					48.8
RECEPTACLES (KVA):					4.8																			DEMAND LOAD (KVA):					48.8
MOTORS (KVA):					0.0								PHASE A			16	131.7											
A/C (KVA):					44.0								PHASE B			17	140.0						CONNECTED LOAD (AMPS):					135.4
HEATING (KVA):					0.0		

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PANELBOARD SCHEDULE - 'P1' CUSTODIAN 521

MAIN: 200A MLO | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	OH DOOR HVAC 529			0.6								0.8							RECEPT - STORAGE 530	3/4"	12	1	20	2
3	20	1	12	3/4"	OH DOOR AGRICULTURE 526			0.6								1.2							RECEPT - OFFICE 529-B	3/4"	12	1	20	4
5	20	1	12	3/4"	OH DOOR CARPENTRY 522			0.6								0.8							RECEPT - AG SHOP CLASS 527	3/4"	12	1	20	6
7	20	1	12	3/4"	OH DOOR WELDING 514			0.6								0.8							RECEPT - AG SHOP CLASS 527	3/4"	12	1	20	8
9	20	1	12	3/4"	OH DOOR AUTO 511			0.6								0.4						0.5	RECEPT - AG SHOP CLASS 527	3/4"	12	1	20	10
11	20	1	12	3/4"	OH DOOR AUTO 511			0.6								1.2							RECEPT - OFFICE 526-B	3/4"	12	1	20	12
13	20	1	12	3/4"	OH DOOR AUTO 511			0.6								0.6							RECEPT - STORAGE 528	3/4"	12	1	20	14
15	20	1	12	3/4"	RECEPT - WELDING CLASS 515		0.8									0.8							RECEPT - CARPENTRY CLASS 523	3/4"	12	1	20	16
17	20	1	12	3/4"	RECEPT - WELDING CLASS 515		0.4					0.5				0.4						0.5	RECEPT - CARPENTRY CLASS 523	3/4"	12	1	20	18
19	20	1	12	3/4"	RECEPT - OFFICE 514 B		1.2									1.2							RECEPT - OFFICE 522-B	3/4"	12	1	20	20
21	20	1	12	3/4"	RECEPT - TOOLS 516 STOR. 517		0.6	0.6								0.6							RECEPT - TOOLS 524 STOR. 525	3/4"	12	1	20	22
23	20	1	12	3/4"	SPARE												0.3						EF-C & EF-D	3/4"	12	1	15	24
25	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	26
27	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	28
29	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	30
31	40	3	6	1"	PANEL "S" STORAGE 538	0.0	0.4	0.1	0.0	0.0	0.0	0.0											SPARE	3/4"	12	1	20	32
33						0.0	0.0	0.0	0.0	0.0	0.0	0.0											SPARE	3/4"	12	1	20	34
35						0.0	0.0	0.0	0.0	0.0	0.0	0.0											SPARE	3/4"	12	1	20	36
37																							SPACE					38
39	30	3	10	3/4"	TVSS																		SPACE					40
41																							SPACE					42
LIGHTING (KVA):					0.0	0.0	3.4	4.9	0.0	0.0	0.0	0.5				0.0	8.8	0.3	0.0	0.0	0.0	1.0	CONNECTED LOAD (KVA):					18.9
RECEPTACLES (KVA):					12.2																		DEMAND LOAD (KVA):					17.9
MOTORS (KVA):					5.2								PHASE A	7	57.6													
A/C (KVA):					0.0								PHASE B	7	55.8								CONNECTED LOAD (AMPS):					52.6
HEATING (KVA):					0.0								PHASE C	5	44.4								DEMAND LOAD (AMPS):					49.6
KITCHEN (KVA):					0.0									KVA	AMPS													
MISCELLANEOUS (KVA):					1.5																							
NOTES:																												

PANELBOARD SCHEDULE - 'P2' CUSTODIAN 521

MAIN: 200A MLO | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	RECEPT - AUTO 512		0.8									1.0							RECEPT - CORRIDOR 501	3/4"	12	1	20	2
3	20	1	12	3/4"	RECEPT - AUTO 512		0.4					0.5				0.6							RECEPT - CUSTODIAN 521	3/4"	12	1	20	4
5	20	1	12	3/4"	RECEPT - OFFICE 511 B		1.2									0.6							RECEPT - GANG RESTROOMS	3/4"	12	1	20	6
7	20	1	12	3/4"	RECEPT - STORAGE 513		0.8															0.4	GWH PILOT	3/4"	12	1	20	8
9	20	1	12	3/4"	RECEPT - WALKWAY 500		1.2															0.8	EWC (GFI BREAKER)	3/4"	12	1	20	10
11	20	1	12	3/4"	RECEPT - PLATFORM		0.8															0.8	EWC (GFI BREAKER)	3/4"	12	1	20	12
13	20	1	12	3/4"	RECEPT - PLATFORM		0.8										0.3		0.4				LIGHTING - GANG RESTROOMS	3/4"	12	1	15	14
15	20	1	12	3/4"	DATA RACK		0.8															0.4	NAC/VAC POWER	3/4"	12	1	20	16
17	20	1	12	3/4"	SPARE														0.1				RECIRC. PUMP EWH 2	3/4"	12	1	20	18
19	20	1	12	3/4"	SPARE														0.1				RECIRC. PUMP EWH 1	3/4"	12	1	20	20
21	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	22
23	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	24
25	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	26
27	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	28
29	20	1	12	3/4"	SPACE																		SPARE	3/4"	12	1	20	30
31					SPACE																		SPARE	3/4"	12	1	20	32
33					SPACE																		SPARE	3/4"	12	1	20	34
35					SPACE																		SPARE	3/4"	12	1	20	36
37																							SPACE					38
39	30	3	10	3/4"	TVSS																		SPACE					40
41																							SPACE					42
LIGHTING (KVA):					0.3	0.0	6.8	0.0	0.0	0.0	0.0	0.5				0.3	2.2	0.5	0.0	0.0	0.0	2.4	CONNECTED LOAD (KVA):					12.7
RECEPTACLES (KVA):					9.0																		DEMAND LOAD (KVA):					13.2
MOTORS (KVA):					0.5								PHASE A	5	37.7													
A/C (KVA):					0.0								PHASE B	5	39.2								CONNECTED LOAD (AMPS):					35.2
HEATING (KVA):					0.0								PHASE C	3	28.8								DEMAND LOAD (AMPS):					36.7
KITCHEN (KVA):					0.0									KVA	AMPS													
MISCELLANEOUS (KVA):					2.9																							
NOTES:																												

PANELBOARD SCHEDULE - 'S' STORAGE BUILDING 538 FED FROM PANEL "P1"

MAIN: 40A MLO | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	LIGHTING - INTERIOR	0.0		0.1								0.4							RECEPT - INTERIOR	3/4"	12	1	20	2
3	20	1	12	3/4"	SPARE																		RECEPT - EXTERIOR	3/4"	12	1	20	4
5	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	6
7	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	8
9					SPACE																		SPACE					10
11					SPACE																		SPACE					12
LIGHTING (KVA):					0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0				0.0	0.4	0.0	0.0	0.0	0.0	0.0	CONNECTED LOAD (KVA):					0.5
RECEPTACLES (KVA):					0.4																		DEMAND LOAD (KVA):					0.6
MOTORS (KVA):					0.1								PHASE A	1	4.3													
A/C (KVA):					0.0								PHASE B	0	0.0								CONNECTED LOAD (AMPS):					1.4
HEATING (KVA):					0.0								PHASE C	0	0.0								DEMAND LOAD (AMPS):					1.7
KITCHEN (KVA):					0.0									KVA	AMPS													
MISCELLANEOUS (KVA):					0.0																							
NOTES:																												

S6 DEMAND CALCS

LIGHTING	0.00	KVA	X	125	%	= **0.0 KVA**
RECEPTAC TOTAL	5.40	KVA				
1ST	10.00	KVA	X	100	%	= **5.4 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	7.20	KVA	X	100	%	= **7.2 KVA**
LARGEST	1.50	KVA	X	125	%	= **1.9 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	0.50	KVA	X	100	%	= **0.5 KVA**
TOTAL =	**41.6 amps**					= **15.0 KVA**

P1 DEMAND CALCS

LIGHTING	0.04	KVA	X	125	%	= **0.1 KVA**
RECEPTAC TOTAL	12.20	KVA				
1ST	10.00	KVA	X	100	%	= **10.0 KVA**
REMAIN	2.20	KVA	X	50	%	= **1.1 KVA**
MOTORS	5.21	KVA	X	100	%	= **5.2 KVA**
LARGEST	0.00	KVA	X	125	%	= **0.0 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	1.50	KVA	X	100	%	= **1.5 KVA**
TOTAL =	**49.6 amps**					= **17.9 KVA**

S7 DEMAND CALCS

LIGHTING	0.14	KVA	X	125	%	= **0.2 KVA**
RECEPTAC TOTAL	8.80	KVA				
1ST	10.00	KVA	X	100	%	= **8.8 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	1.30	KVA	X	100	%	= **1.3 KVA**
LARGEST	0.00	KVA	X	125	%	= **0.0 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	21.80	KVA	X	100	%	= **21.8 KVA**
TOTAL =	**89.0 amps**					= **32.1 KVA**

P2 DEMAND CALCS

LIGHTING	0.28	KVA	X	125	%	= **0.3 KVA**
RECEPTAC TOTAL	9.00	KVA				
1ST	10.00	KVA	X	100	%	= **9.0 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	0.49	KVA	X	100	%	= **0.5 KVA**
LARGEST	0.39	KVA	X	125	%	= **0.5 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	2.90	KVA	X	100	%	= **2.9 KVA**
TOTAL =	**36.7 amps**					= **13.2 KVA**

S8 DEMAND CALCS

LIGHTING	0.14	KVA	X	125	%	= **0.2 KVA**
RECEPTAC TOTAL	2.60	KVA				
1ST	10.00	KVA	X	100	%	= **2.6 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	1.30	KVA	X	100	%	= **1.3 KVA**
LARGEST	1.20	KVA	X	125	%	= **1.5 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	12.50	KVA	X	100	%	= **12.5 KVA**
TOTAL =	**50.1 amps**					= **18.1 KVA**

S DEMAND CALCS

LIGHTING	0.04	KVA	X	125	%	= **0.1 KVA**
RECEPTAC TOTAL	0.40	KVA				
1ST	10.00	KVA	X	100	%	= **0.4 KVA**
REMAIN	0.00	KVA	X	50	%	= **0.0 KVA**
MOTORS	0.08	KVA	X	100	%	= **0.1 KVA**
LARGEST	0.08	KVA	X	125	%	= **0.1 KVA**
A/C	0.00	KVA	X	100	%	= **0.0 KVA**
HEATING	0.00	KVA	X	100	%	= **0.0 KVA**
FUTURE	_____	KVA	X	100	%	= **0.0 KVA**
KITCHEN	0.00	KVA	X	65	%	= **0.0 KVA**
MISCELLANEOUS	0.00	KVA	X	100	%	= **0.0 KVA**
TOTAL =	**1.7 amps**					= **0.6 KVA**

SHUNTED PANELBOARD SCHEDULE - 'S6' AUTOMOTIVE

MAIN: 200A MCB | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	RECEPT - GENERAL		0.8									0.8							RECEPT - GENERAL	3/4"	12	1	20	2
3	20	1	12	3/4"	RECEPT - WORKBENCH		0.2									0.4							RECEPT - EXTERIOR	3/4"	12	1	20	4
5	20	1	12	3/4"	RECEPT - WORKBENCH		0.2									0.4							RECEPT - EXTERIOR	3/4"	12	1	20	6
7	20	1	12	3/4"	RECEPT - WORKBENCH		0.2											0.8					TIRE MACHINE	3/4"	12	1	20	8
9	20	1	12	3/4"	RECEPT - WORKBENCH		0.2											0.6					TIRE BALANCING	3/4"	12	2	20	10
11	20	1	12	3/4"	RECEPT - WORKBENCH		0.2											0.6										12
13	20	1	12	3/4"	RECEPT - WORKBENCH		0.2											0.8					LIFT	3/4"	8	2	35	14
15	20	1	12	3/4"	RECEPT - WORKBENCH		0.2											0.8										16
17	20	1	12	3/4"	RECEPT - LIFT		0.4											0.8					LIFT	3/4"	8	2	35	18
19	20	1	12	3/4"	RECEPT - LIFT		0.4											0.8										20
21	20	1	12	3/4"	RECEPT - ALIGNMENT		0.4											0.8					LIFT ALIGNMENT	3/4"	8	2	35	22
23	20	1	12	3/4"	RECEPT - ALIGNMENT		0.4											0.8										24
25	20	1	12	3/4"	DRILL PRESS			0.7								1						0.5	ALIGNMENT (GFI BREAKER)	3/4"	12	1	20	26
27	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	28
29	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	30
31	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	32
33	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	34
35	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	36
37																												
39	30	3	10	3/4"	TVSS																							
41																												
LIGHTING (KVA):					0.0	0.0	3.8	0.7	0.0	0.0	0.0	0.0				0.0	1.6	6.5	0.0	0.0	0.0	0.5	CONNECTED LOAD (KVA):					13.1
RECEPTACLES (KVA):					5.4																		DEMAND LOAD (KVA):					15.0
MOTORS (KVA):					7.2								PHASE A	6	49.2													
A/C (KVA):					0.0								PHASE B	4	29.2								CONNECTED LOAD (AMPS):					36.4
HEATING (KVA):					0.0								PHASE C	4	30.8								DEMAND LOAD (AMPS):					41.6
KITCHEN (KVA):					0.0									KVA	AMPS													
MISCELLANEOUS (KVA):					0.5																							
NOTES: PANEL TO BE PROVIDED WITH SHUNT TRIP THAT CUTS OFF ALL POWER BY ACTIVATION OF PUSH BUTTON EMERGENCY STOP																												

PANELBOARD SCHEDULE - 'S7' SALON

MAIN: 200A MLO | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: RECESSED | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	RECEPT - RECEPTION 502		0.8											0.8					RECEPT - OFFICE 506	3/4"	12	1	20	2
3	20	1	12	3/4"	RECEPT - SALON B 505		0.6															0.3	CARD READER/DOOR ACCESS	3/4"	12	1	20	4
5	20	1	12	3/4"	DRYER							1.5					0.4						RECEPT - SALON B 505	3/4"	12	1	20	6
7	20	1	12	3/4"	DRYER							1.5											SPARE	3/4"	12	1	20	8
9	20	1	12	3/4"	DRYER							1.5											SPARE	3/4"	12	1	20	10
11	20	1	12	3/4"	DRYER							1.5											SPARE	3/4"	12	1	20	12
13	20	1	12	3/4"	DRYER							1.5											SPARE	3/4"	12	1	20	14
15	20	1	12	3/4"	DRYER							1.5					0.2						RECEPT - MANI-PEDI	3/4"	12	1	20	16
17	20	1	12	3/4"	SPARE												0.2						RECEPT - MANI-PEDI	3/4"	12	1	20	18
19	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	20
21	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	22
23	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	24
25	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	26
27	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	28
29	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	30
31	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	32
33	20	1	12	3/4"	SPARE												0.4						RECEPT - SALON A 504	3/4"	12	1	20	34
35	20	1	12	3/4"	SPARE																		SPARE	3/4"	12	1	20	36
37																							SPARE					38
39	30	3	10	3/4"	TVSS																		SPARE					40
41																							SPARE					42
																0.0	1.8	0.0	0.0	0.0	0.0	3.8	PANEL "S8"	1 1/4"	3	3	100	
																0.0	0.8	0.0	0.0	0.0	0.0	6.0						
																0.1	0.0	1.3	0.0	0.0	0.0	2.7						
LIGHTING (KVA):					0.1	0.0	1.4	0.0	0.0	0.0	0.0	9.0				0.1	7.4	1.3	0.0	0.0	0.0	12.8	CONNECTED LOAD (KVA):					32.0
RECEPTACLES (KVA):					8.8																		DEMAND LOAD (KVA):					32.1
MOTORS (KVA):					1.3								PHASE A	11	95.0													
A/C (KVA):					0.0								PHASE B	12	100.8								CONNECTED LOAD (AMPS):					88.9
HEATING (KVA):					0.0								PHASE C	9	71.1								DEMAND LOAD (AMPS):					89.0
KITCHEN (KVA):					0.0									KVA	AMPS													
MISCELLANEOUS (KVA):					21.8																							
NOTES:																												

PANELBOARD SCHEDULE - 'S8' COSMETOLOGY

MAIN: 100A MLO | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: RECESSED | AIC: 22,000 | NOTES:

CKT #	BKR TRIP	POLE	WIRE SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHASE A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	3/4"	RECEPT - COSM. 509		1.2										0.6						RECEPT - COSM. 509 MONITOR	3/4"	12	1	20	2
3	20	1	12	3/4"	RECEPT - BREAK 508		0.8															1.5	DRYER COSM. 509	3/4"	12	1	20	4
5	20	1	12	3/4"	REFRIGERATOR BREAK 508							1.2						1.2					WASHING MACHINE COSM. 509	3/4"	12	1	20	6
7	20	1	12	3/4"	COFFEE BREAK 508							0.8										1.5	DRYER COSM. 509 (GFI BREAKER)	3/4"	10	2	30	8
9	20	1	12	3/4"	MICROWAVE BREAK 508							1.5										1.5						10
11	15	1	12	3/4"	LIGHTING - TOILET 503 & 507	0.1		0.1														1.5	DRYER COSM. 509	3/4"	12	1	20	12
13	20	1

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ALL CORD REELS IN SHOP AREAS ARE TO BE PROVIDED WITH A GFI RATED BREAKER IN ASSOCIATED PANELS.

WALL MOUNTED RECEPTACLES IN ALL SHOP AREAS TO BE MOUNTED & 48" AFF UNLESS OTHERWISE NOTED.

SEE EXISTING & NEW EQUIPMENT ELECTRICAL NAME PLATE DATA FOR ALL ELECTRICAL REQUIREMENTS AND ADJUST AS NECESSARY. PROVIDE CORRECT NEMA RECEPTACLES PER EQUIP. REQUIREMENTS.

OH DOOR POWER PROVIDED FOR UP TO 1HP MOTOR. FIELD COORDINATE WITH OVERHEAD DOOR MOTOR AND ADJUST AS NECESSARY.

STERNVENT DKPD-48020 — NEMA 3R — S3-38,40,42

Storage 534 — 120V — 3/4" C. TO PANEL "P1" — P1-23

HVAC 529 — Agriculture 526 — Ag Shop Classroom 527 — Carpentry 522 — Carpentry Shop Classroom 523 — Welding 514 — Welding Shop Classroom 515 — Automotive 511 — Automotive Classroom 512 — Salon A 504 — Salon B 505 — Cosmetology Classroom 509 — Office 506 — Reception 502 — Toilet 503 — Dispensary 507 — Break 508 — Storage 513 — Office 511-B — Office 514-B — Office 522-B — Office 526-B — Office 529-B — Storage 530 — Mech. / Elect. 531 — Storage 528 — Tools 524 — Storage 525 — Tools 516 — Storage 517 — Custodian / Storage 521 — Corridor 501 — Boys 520 — Staff 519 — Girls 518 — Pedestrian Walkway 500

EXTERIOR — OH DOOR SAFETY SENSOR — OH DOOR — CORD REEL — AIR FILTER — DUST COLLECT — DUST COLLECT CORD DROP — NEMA 14-50R CORD DROP — PROVIDE NEUTRAL LP2-8,10,12 — EF-C — EF-D — EF-H — 3/4"C. ABOVE — 24" GFI — PANEL "F1" F1-6 — PANEL "F2" — PANEL "S1" — PANEL "S2" — PANEL "S3" — PANEL "S4" — PANEL "S5" — PANEL "F1" — PANEL "F2" — PANEL "S6" — PANEL "S7" — PANEL "S8" — EWC (2) GFI BREAKERS — 3/4" C. BFF — SITE LIGHTING POWER SEE SITE PLAN — FIRE RPZ HOTBOX SEE SITE PLAN — DATA RACK W/ GROUND BAR — PDH — DRYERS (3) — SHAMPOO STATIONS (3) — MONITOR — (FIXED MANNEQUIN TABLES) — LOCKERS — SERVICE RECEPT — DS-1 — DS-2 — GWH — CHP-1 — CWP-1 — CWP-2 — MDPL — MDPH — MDPH-5 — Chiller CH-1 — BRH-1 — BRH-2,4,6 — BRH-8,10,12 — BRH-14,16,18 — BRH-20,22,24 — BRL-1 — BRL-2 — BRL-3 — BRL-4 — BRL-5 — BRL-6 — BRL-8 — BRL-10 — BRL-12

SEE ARCHITECTURAL SHEET SECTIONS FOR RECEPTACLE AND DATA MOUNTING HEIGHTS AND LOCATIONS PRIOR TO ANY ROUGH-INS.

EC SHALL PROVIDE TAMPER PROOF RECEPTACLES IN ALL CLASSROOMS AND AREAS ACCESSABLE TO STUDENTS. RECEPTACLES MUST MEET REQUIREMENTS OF 2017 NEC. SEE 406.2 AND 406.12.

DEMO EXISTING EXTERIOR RECEPTACLE REMOVE WIRING BACK TO EXISTING J-BOX

NORTH

POWER PLAN NOTES:

1. EMERGENCY STOP MUSHROOM PUSH BUTTON IN COLOR RED WITH LABEL EM TO CUT ALL POWER TO ASSOCIATED SHOP SHUNTED PANEL LOCATED IN ADJACENT STORAGE CLOSET.
2. 2.5" CONDUIT TO CHILLER. RUN BELOW GRADE TO CONCEALMENT. SEE CHILLER ELECTRICAL REQUIREMENTS FOR POINT OF CONNECTION AND ADJUST AS NECESSARY.

101.1 POWER PLAN
SCALE: 1/8"=1'-0"

Hite associates
ARCHITECTURE / PLANNING / TECHNOLOGY
2600 Meridian Drive / Greenville, NC 27834 / tel (252) 757-0333

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NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

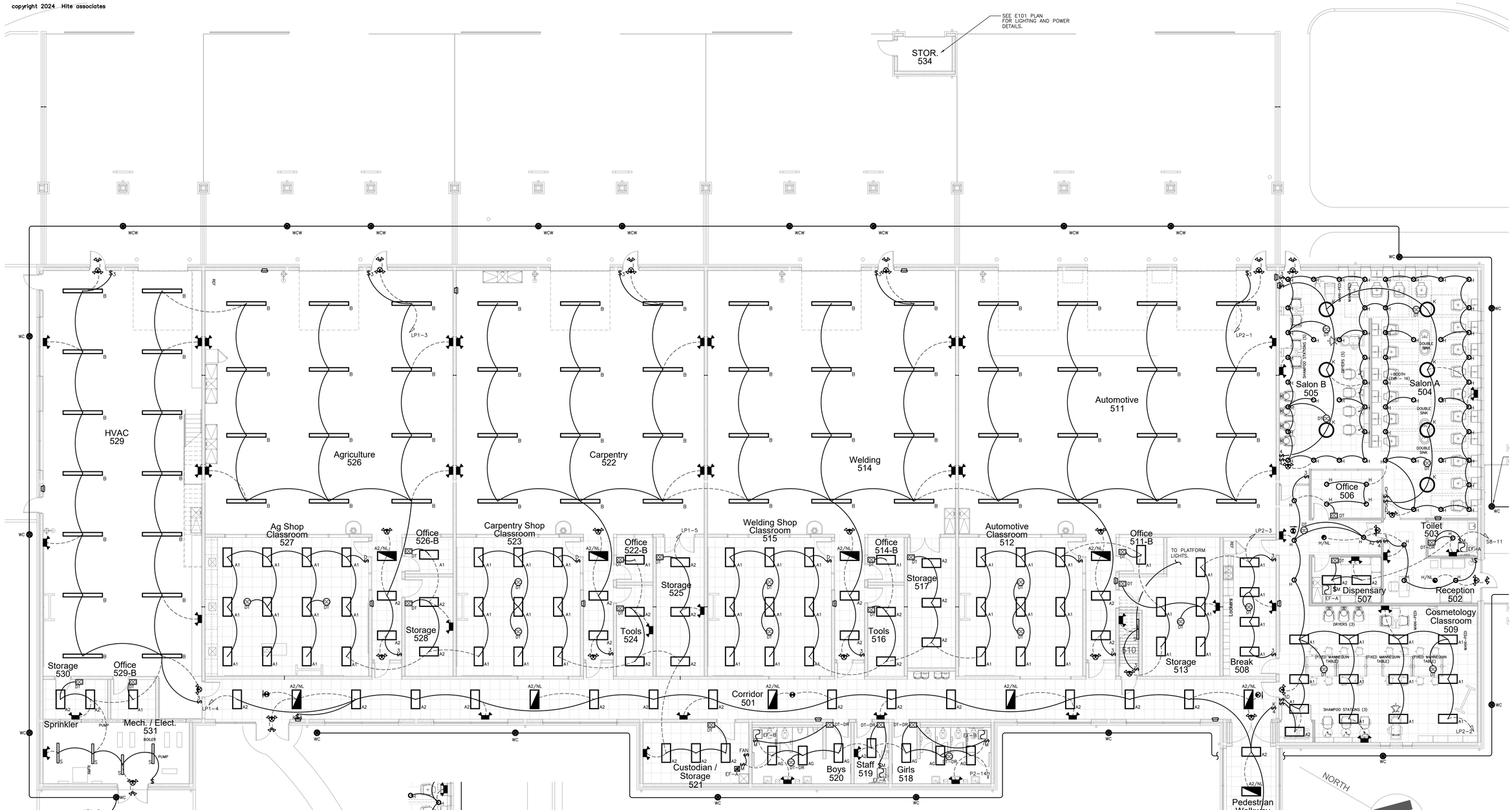
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Project No.	22351
Date:	March 2025
Drawing no.	E 101

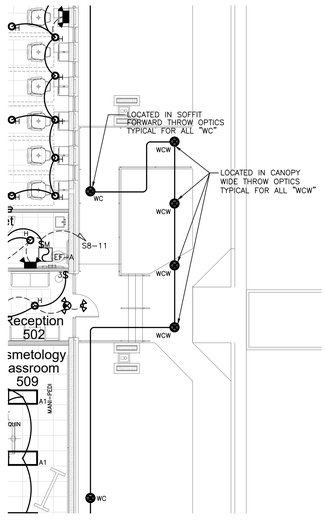
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ES Project No: ES24055

3/2/25

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102.1 LIGHTING PLAN
SCALE: 1/8"=1'-0"



102.2 ENTRY CANOPY LIGHTING PLAN
SCALE: 1/8"=1'-0"

No.	Date	Revision

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NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

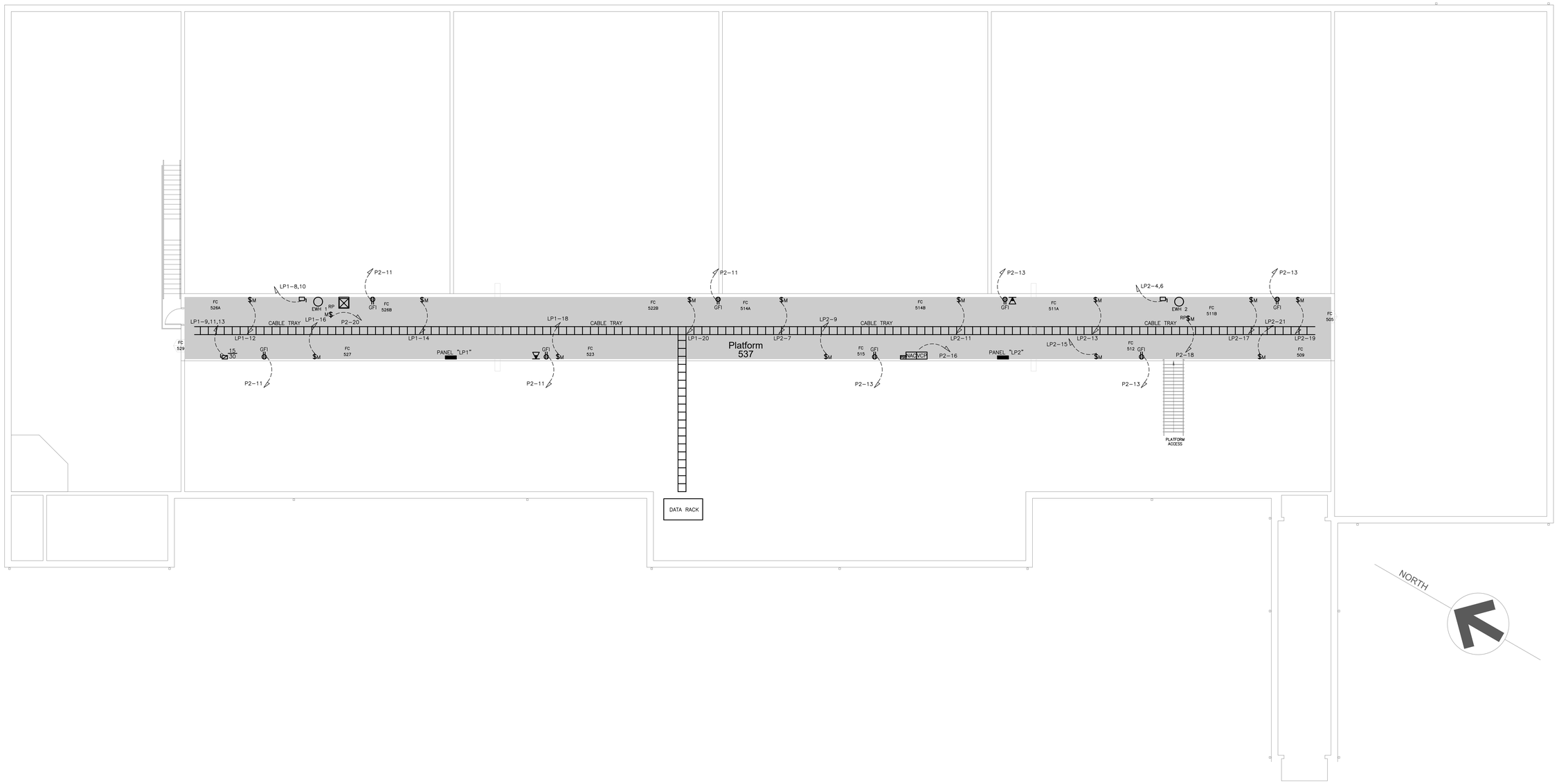
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ES Project No. ES24055

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103.1 PLATFORM POWER PLAN

SCALE: 1/8"=1'-0"

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NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

Project No. 22351

Date: March 2025

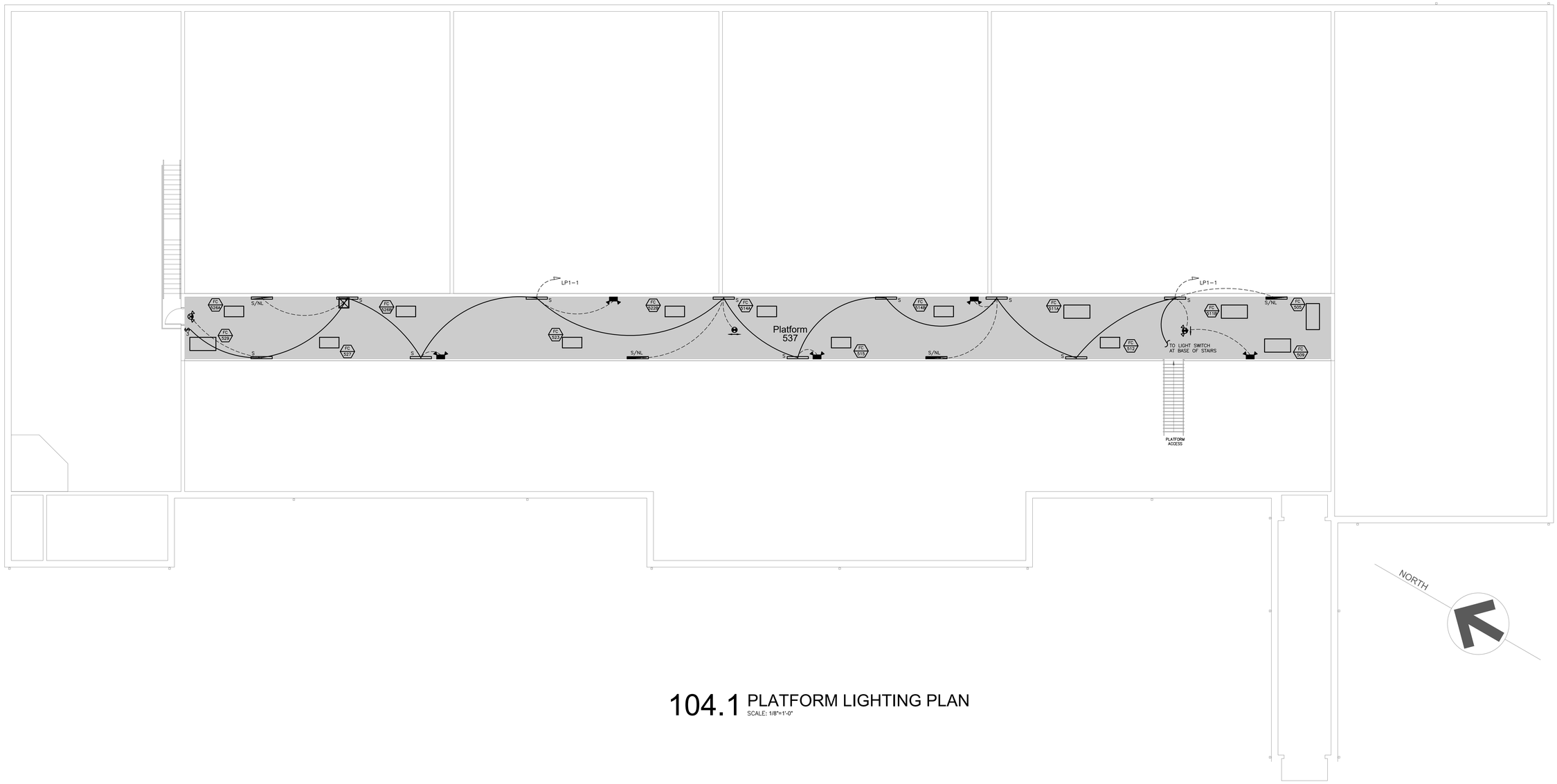
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ES Project No: ES24055
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104.1 PLATFORM LIGHTING PLAN
SCALE: 1/8"=1'-0"

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NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

Project No.	22351
Date:	March 2025
Drawing no.	E 104

ES Project No: ES24055
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FIRE ALARM SYMBOL LEGEND

(SEE MOUNTING HEIGHT SCHEDULE FOR MOUNTING INFORMATION UNLESS NOTED OTHERWISE)

P	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM HORN/STROBE
	VOICE NOTIFICATION WALL FIRE ALARM/STROBE
M	VOICE NOTIFICATION CEILING FIRE ALARM/STROBE
SP	VOICE NOTIFICATION SPEAKER
SP	VOICE NOTIFICATION SPEAKER WALL
	FIRE ALARM CEILING STROBE
	FIRE ALARM WALL STROBE
S	SMOKE DETECTOR
H	HEAT DETECTOR, CEILING MOUNTED
FACP	FIRE ALARM CONTROL PANEL, FLUSH MOUNTED.
VAC	VOICE EVAC PANEL OR AMPLIFIER SYSTEM
RA	REMOTE ANNUNICATOR PANEL, FLUSH MOUNTED
NAC	NAC BOOSTER PANEL
GA	GRAPHIC ANNUNICATOR PANEL, FLUSH MOUNTED
SD	DUCT MOUNTED SMOKE DETECTOR, PROVIDED AND WIRED BY E.C., INSTALLED BY M.C.
R	SHUT DOWN RELAY PROVIDED AND AND WIRED BY E.C.
RD BD	DUCT MOUNTED SMOKE DETECTOR REMOTE INDICATOR LIGHT MOUNTED IN CEILING PROVIDED AND INSTALLED BY E.C., LABEL ACCORDING TO MECHANICAL UNIT SERVED.
RP	ADDRESSABLE BEAM DETECTOR
	BEAM DETECTOR REFLECTOR
FS	FSPRINKLER RISER WATER FLOW SENSOR, PROVIDED & WIRED BY E.C., INSTALLED BY SPRINKLER CONTRACTOR.
TS	SPRINKLER RISER TAMPER SWITCH, PROVIDED AND WIRED BY E.C. INSTALLED BY SPRINKLER CONTRACTOR.
V	SPRINKLER RISER WATER VALVE SHUT-OFF SENSOR, PROVIDED & WIRED BY E.C., INSTALLED BY SPRINKLER CONTRACTOR.
TP	TEMPERATURE SENSOR 40 DEGREES (FREEZE STAT) SWITCH. WIRED BY E.C. INSTALLED BY FIRE ALARM CONTRACTOR.
MM	MONITOR MODULE
H	KITCHEN HOOD FIRE SUPPRESSION SYSTEM
BS	AREA OF RESCUE ASSISTANCE BASE STATION WITH VISUAL LOCATION INDICATOR. RATH 2500-205FMC (OR EQUAL)
RS	AREA OF RESCUE ASSISTANCE 2-WAY COMMUNICATION REMOTE STATION. RATH 2100 FLUSH MTD (OR EQUAL)
M	MAGNETIC DOOR HOLD OPEN DEVICE (POE)
CO	CARBON MON-OXIDE SENSOR
PB	PANIC BUTTON
PSP	POWER 120VAC SURGE PROTECTOR (DITEK DF-120S1) MODEL
LVSP	LOW VOLTAGE SURGE PROTECTOR (DITEK 2MHLPB-WB) MODEL
PCG	CLEAR PROTECTIVE POLYCARB GUARD
WG	WIRE GUARD
WP	WEATHER PROOF DEVICE

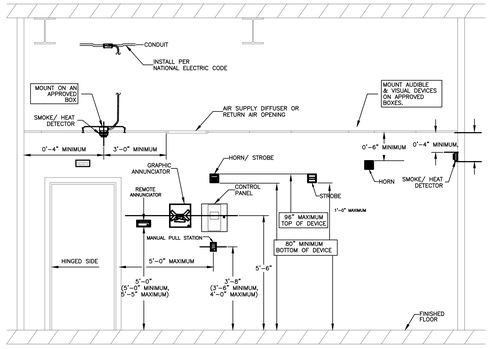
WIRE LEGEND

1. 1 PAIR #16 TWISTED UNSHIELDED CABLE (SLC)
2. 2 COND. #14 THHN (BLUE/BLACK) OR RED RISER CABLE (NAC)
3. 2 COND. #14 THHN (BLUE/BLACK) OR RED RISER CABLE (SYNC)
4. 1 PAIR #16 TWISTED SHIELDED (SPEAKERS)
5. 2 COND. #14 THHN (RED/BLACK) OR RED RISER CABLE (TRIGGER INPUT)
6. 2 COND. #16 THHN (RED/BLACK) OR RED RISER CABLE (CO DET. POWER))

FIRE ALARM INSTALLATION NOTES:

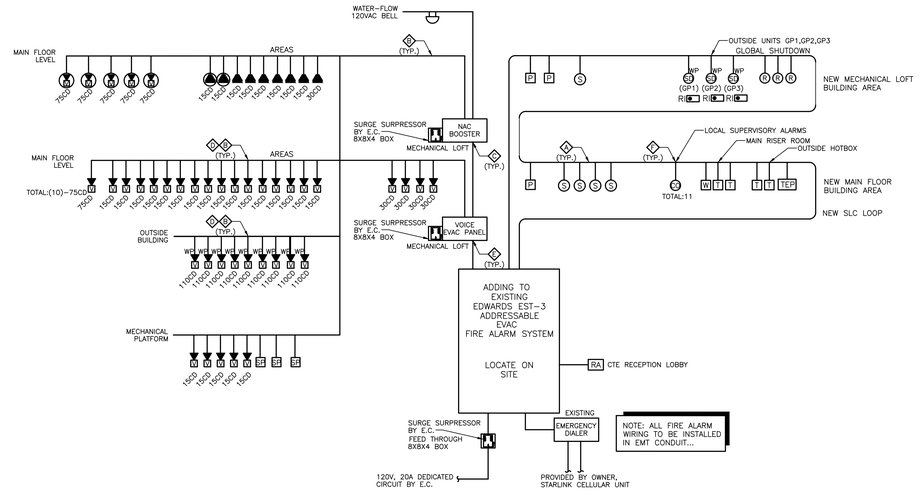
1. FIRE ALARM SHALL BE INSTALLED BY A MANUFACTURER APPROVED INSTALLATION COMPANY.
2. E.C. OR E.C.'S REPRESENTATIVE SHALL PERFORM THOROUGH TRAINING WITH OWNER'S REPRESENTATIVES PRIOR TO OWNER OCCUPANCY OF THE BUILDING.
3. FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE TO ALL APPLICABLE STATE AND LOCAL LAWS AND IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 72.
4. ALARM SHALL HAVE A SOUND LEVEL MEETING THE dB REQUIREMENTS OF 907.6.2.1.1 OF THE NC FIRE PREVENTION CODE AND NOT LESS THAN 20 dB ABOVE AMBIENT NOISE LEVELS. (TYPICALLY, 55 dB AMBIENT NOISE PER BUSINESS OCCUPANCY, ADJUST FOR NOISY ENVIRONMENTS).
5. ALL WIRING INSTALLED MUST BE IN (3") EMT CONDUIT. USE COMPRESSION INSULATED CONNECTORS NO SCREW IN TYPE.
6. FIRE ALARM CONTRACTOR SHALL PROVIDE A FULL SET OF SHOP DRAWINGS, INCLUDING BATTERY CALCULATIONS, WIRING DIAGRAMS, AND DEVICE PRODUCT DATA TO THE AHJ FOR REVIEW AND APPROVAL PRIOR TO STARTING ROUGH-INS.
7. E.C. SHALL PROVIDE FRAMED BUILDING LAYOUT NEXT TO REMOTE ANNUNICATOR. BUILDING LAYOUT SHALL SHOW ALL FIRE ALARM DEVICE LOCATIONS AND THEIR RESPECTIVE ADDRESSES.
8. EXISTING FIRE ALARM SYSTEM IN THE MAIN BUILDING IS AN EDWARDS EST-3 EVAC ADDRESSIBLE SYSTEM. THE NEW CTE BUILDING FIRE ALARM DEVICES, SHALL BE CONNECTED INTO THE EXISTING FIRE ALARM SYSTEM COMMUNICATION LOOP. PROVIDE NEW ADDRESSES FOR THE NEW INITIATING (INPUT AND OUTPUT) DEVICES AND PROGRAM THEM INTO THE EXISTING FIRE ALARM SYSTEM.
9. PROVIDE A SYNC CIRCUIT FOR THE NEW NAC BOOSTER STROBE PANEL AND A TRIGGER CIRCUIT FOR THE VOICE EVAC PANEL.
10. ALL SLC (INITIATING) LOOP WIRING SHALL BE SUPERVISED IN A CLASS A STYLE LOOP. NO T-TAPS PERMITTED.

NFPA 72 AND ADA DEVICE INSTALLATION REQUIREMENTS



001.2 FIRE ALARM DEVICE DETAIL

SCALE: N.T.S



001.1 FIRE ALARM RISER LAYOUT

SCALE: N.T.S

FIRE ALARM SYSTEM ACTION MATRIX

INITIATING DEVICE OR CONDITION	SYSTEM ACTION: ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE VOICE NOTIFICATION	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTUATE APPROPRIATE LOCATION INDICATOR	ACTUATE ALL AUDIBLE EVACUATION SIGNALS	ACTUATE ALL VISIBLE EVACUATION SIGNALS	DISPLAY / PRINT CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	FAN SHUT DOWN (UNIVERSAL)	GYM PA SYSTEM SHUT DOWN	DAMPER SHUT DOWN	RELEASE MAGNETIC DOORS	FIRE SHUTTERS	ACTIVATE SMOKE EVAC FAN IN RESPECTIVE CONNECTOR	SHUNT ALL GAS & POWER UNDER HOOD KITCHEN ZONE	FAN SHUT DOWN,AHU SERVING AREA	ACTUATE AN LOCAL AUDIBLE TEMP4 ALARM SIGNAL	COMMENTS/REMARKS
MANUAL ALARM STATION	X	X	X					X	X	X	X	X			X	X	X	X	X	X				
SMOKE SENSOR / DETECTOR	X	X	X					X	X	X	X	X			X	X	X	X	X	X				
DUCT SENSOR / DETECTOR				X	X			X	X	X	X	X												
WATERFLOW SWITCH	X	X	X					X	X	X	X	X			X	X	X	X	X	X				
TAMPER SWITCH				X	X			X			X		X											
EMERGENCY LOCKDOWN BUTTON																		X						
POST INDICATOR VALVE SWITCH				X	X			X			X		X											
FIRE ALARM AC POWER FAILURE						X	X				X			X										
FIRE ALARM SYSTEM LOW BATTERY						X	X				X			X										
OPEN CIRCUIT						X	X				X			X										
GROUND FAULT						X	X				X			X										
NOTIFICATION APPLIANCE CIRCUIT WIRE-TO-WIRE SHORT						X	X				X													
HOOD SUPPRESSION SYSTEM				X	X			X			X		X									X			
SMOKE DETECTOR - IN CONNECTORS ONLY						X	X	X			X		X	X				X		X					ONLY RELEASE DOORS IN SPECIFC CONNECTOR
CARBON MONOXIDE DETECTOR - IN ROOMS SERVED BY A FUEL BURNING APPLIANCES.				X	X			X			X		X	X								X	X	X	SHUT OFF ALL GAS & POWER TO ALL GAS APPLIANCES IN AREA OF ACTIVATION

FIRE ALARM MATRIX PLAN

SCALE: N.T.S.

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HITE ASSOCIATES, P.C. ESTABLISHED INCORPORATION CORPORATE SEAL 418 GREENVILLE, N.C.

NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

Project No. 22351

Date: March 2025

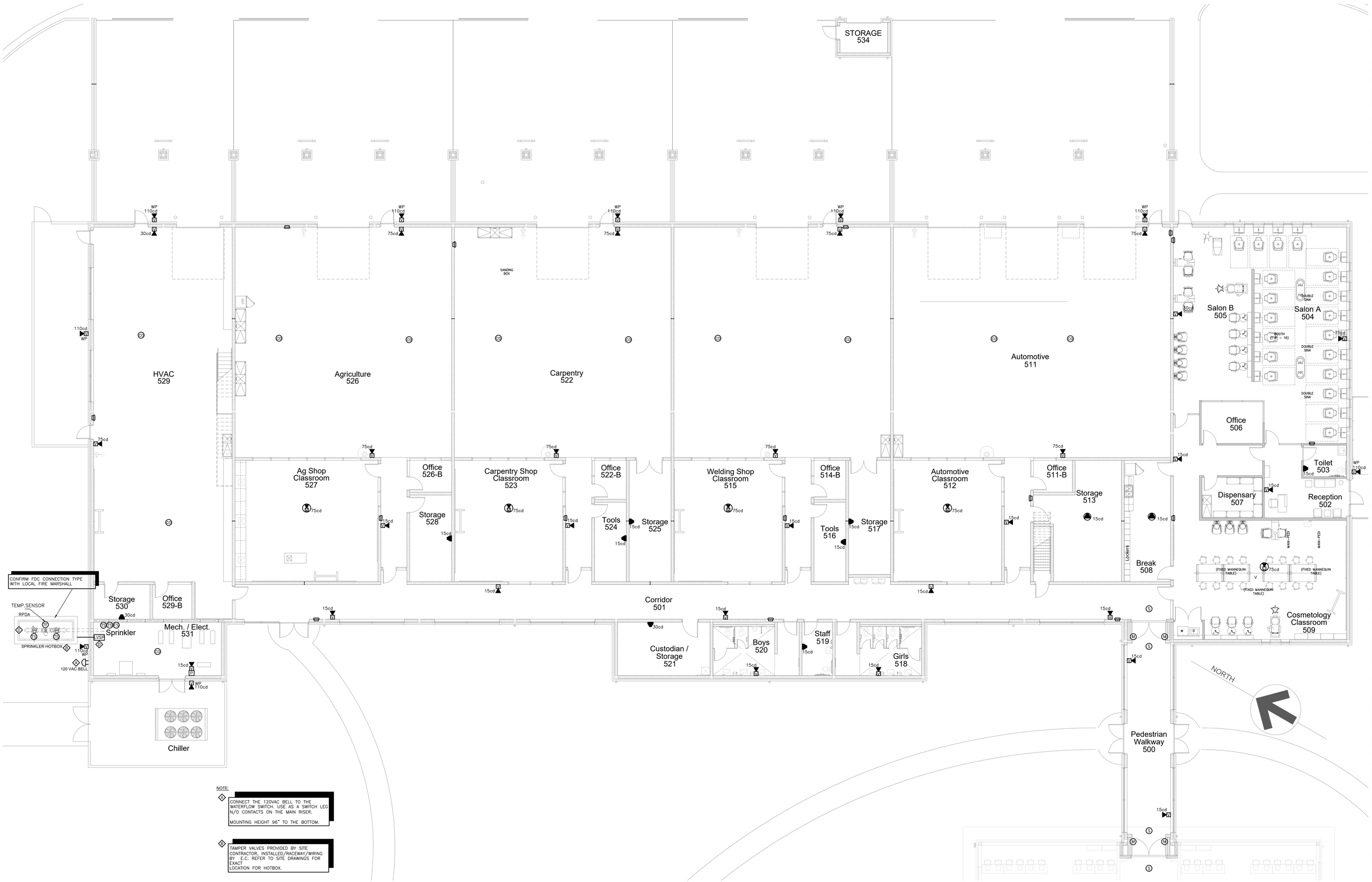
Drawing no. FA 001

ES Project No: ES24055
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NORTH CAROLINA SEAL 040109 ENGINEER D. WILSON FOX

3/2/25

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NOTE:

1. CONNECT THE 120VAC BELL TO THE WATERFLOW SWITCH. USE AS A SWITCH LEG N/O CONTACTS ON THE MAIN RISER.
   MOUNTING HEIGHT 96" TO THE BOTTOM.
2. TAMPER VALVES PROVIDED BY SITE CONTRACTOR, INSTALLED/RACEWAY/WIRING BY E.C. REFER TO SITE DRAWINGS FOR EXACT LOCATION FOR HOTBOX.
3. E.C NEEDS TO SET THE ELECTRIC HEATER TEMP. (50°–60°) RANGE.
4. LOW VOLTAGE SURGE FOR TAMPER CIRCUITS FROM MODULES TO TAMPER SWITCHES. MOUNT IN 4X4 DEEP EMT BOXES, COVER PLATES. RELOCATE TO SURGE TO THE ACTUAL BUILDING PIPE LOCATION IN THE BOILER ROOM. BOXES MOUNTING HEIGHT 24" AFF.

HOTBOX FIRE CIRCUIT PROTECTION

101.1 MAIN FIRE ALARM FLOOR PLAN

SCALE: 1/8"=1'-0"

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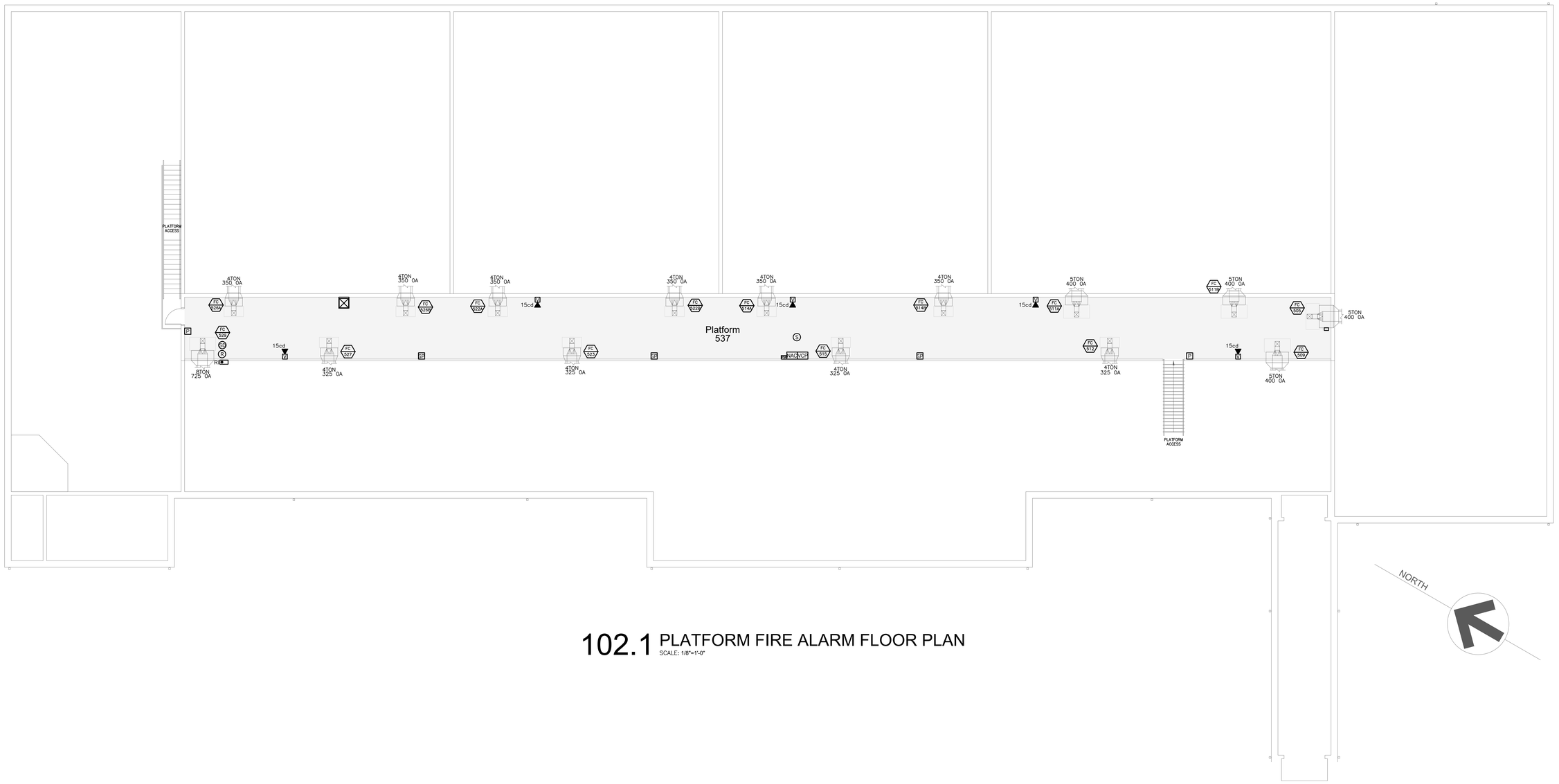
NEW CTE BUILDING FOR
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ES Project No: ES24055

Project No. 22351
Date: March 2025
Drawing no. FA 101

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102.1 PLATFORM FIRE ALARM FLOOR PLAN

SCALE: 1/8"=1'-0"

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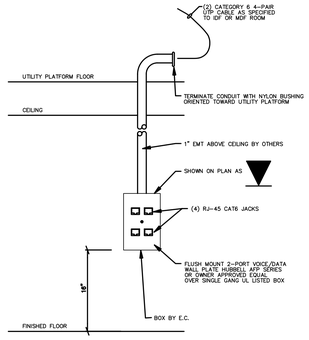
Project No. 22351
Date: March 2025
Drawing no. FA 102

ES Project No: ES24055
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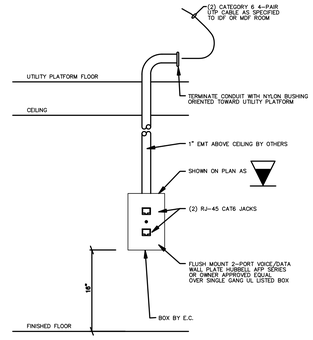
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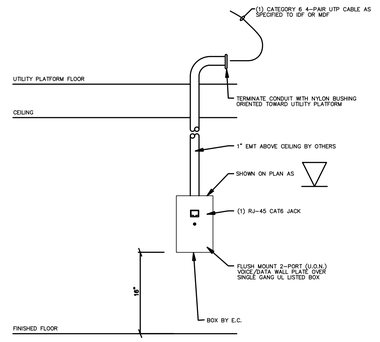
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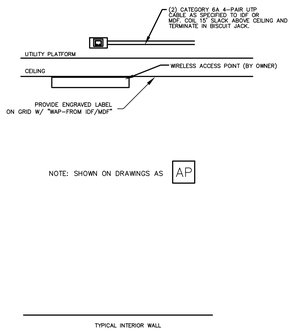
001.6 QUAD DATA OUTLET DETAIL
SCALE: NONE



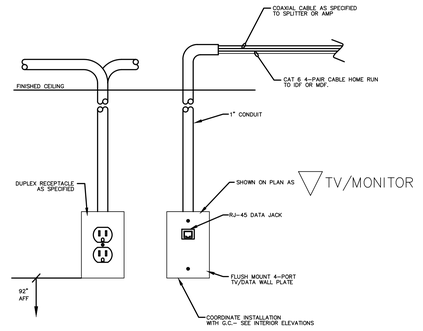
001.7 DUAL DATA OUTLET DETAIL
SCALE: NONE



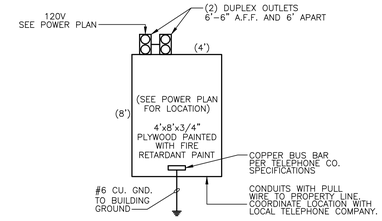
001.8 SINGLE DATA OUTLET DETAIL
SCALE: NONE



001.3 WAP OUTLET DETAIL
SCALE: NONE



001.4 POWER/TV/DATA WALL OUTLET DETAIL
SCALE: NONE



NOTE:
SECURE SPECS FROM LOCAL TELEPHONE CO. AS TO THEIR REQUIREMENTS REGARDING INSTALLATION OF UNDERGROUND CONDUITS, GROUNDING, TELEPHONE BOARD, ETC. AND PROVIDE AS NECESSARY.

001.5 IDF ROOM EQUIPMENT BOARD
SCALE: NONE

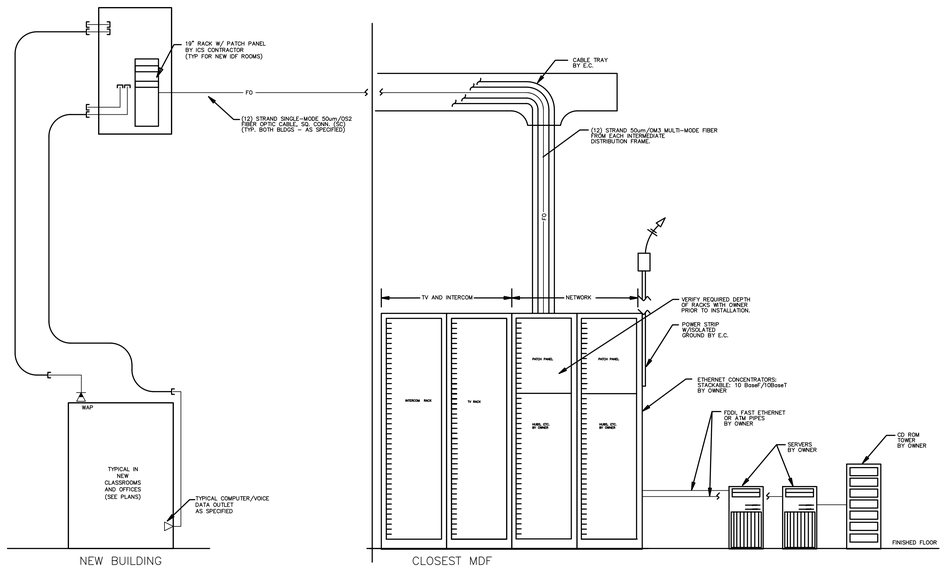
ICS SYMBOL LEGEND

	4-PORT DATA OUTLET – SEE DETAIL
	2-PORT DATA OUTLET – SEE DETAIL
2P	2-PORT TEACHERS STATION – SEE DETAIL
WB	INTERACTIVE WHITE BOARD OUTLET – SEE DETAIL
24"	INTERCOM PHONE OUTLET – SEE DETAIL
	SINGLE PORT DATA OUTLET – SEE DETAIL
	MASTER ADMINISTRATIVE PHONE OUTLET
CLG	CEILING MOUNTED SINGLE PORT DATA OUTLET
2P	2 PORT TEACHERS STATION OUTLET IN BUILTIN DESK WITH WITH CONDUIT FEED FROM BELOW FLOOR SLAB–SEE DETAIL
AP	CEILING MOUNTED WIRELESS ACCESS POINT–SEE DETAIL
	DUPLEX OUTLET – 18" A.F.F. CENTER (TYP) BY E.C.
	QUADRUPLEX OUTLET BY E.C.
	FLOOR OUTLET BY E.C.
IC	CEILING MOUNTED INTERCOM SPEAKER
SP	CEILING MOUNTED SPEAKER – W/INTEGRAL AMPLIPHIER
SP	RECESSED SPEAKER – WEATHERPROOF/VANDAL-RESISTANT
M	SINGLE GANG MICROPHONE JACK
C	DOOR CONTACT
E	ELECTRIC DOOR STRIKE
S	CARD READER SWIPE
M	CEILING MOUNTED MOTION DETECTOR
TV	TV OUTLET – WALL MOUNT – SEE DETAIL
TV C.L.G	TV OUTLET – CEILING MOUNT – SEE DETAIL
$V	INTERCOM VOLUME SWTICH
CCTV	CIRCUIT CAMERA SG BOX BY E.C.
	SECURITY KEYPAD, SG BOX 54" A.F.F.
WA	WIDE ANGLE MOTION DETECTOR FOR SECURITY SYSTEM
LR	LONG RANGE MOTION DETECTOR FOR SECURITY SYSTEM

ABBREVIATIONS:

A.C.	ABOVE CEILING
A.F.F.	ABOVE FINISH FLOOR
EF	EXHAUST FAN
EWH	ELECTRIC WATER HEATER
G.C.	GENERAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR OR EMPTY CONDUIT
T.C.	TECHNOLOGY SYSTEM CONTRACTOR
B-2	TYPICAL CIRCUIT DESIGNATION: PANEL 'B', BREAKER #2
C	CONDUIT AS SPECIFIED
NL	24 HOUR NIGHT LIGHT
U.O.N.	UNLESS ONTHERWISE NOTED
U.G.	UNDERGROUND

NOTE: LEGEND IS FOR REFERENCE ONLY – SYMBOLS/ABBREVIATIONS SHOWN DO NOT NECESSARILY APPLY TO THIS PROJECT.



001.2 ICS CONNECTION DIAGRAM
SCALE: NONE

CABLE SEPARATION DISTANCE TABLE			
	< 2kVA	2 TO 5kVA	> 5kVA
PANELS, MOTORS, XFMRS, SIMILAR	18"	24"	36"
FLUORESCENT FIXT., HID BALLASTS, SIM.	12"	18"	24"
UNSHIELDED CONDUCTORS & POWER CONDUCTORS IN GROUNDED METALLIC CONDUIT	6"	12"	18"
SHIELDED LOW TENSION CONDUCTORS	6"	8"	12"

NOTE:
1) ALL FIRE ALARM CONDUCTORS SHALL BE RUN IN CONDUIT ON OPPOSITE SIDE OF TELECOMM CLOSET ON UTILITY PLATFORM
2) VOICE & DATA TELECOMMUNICATIONS CABLE SHALL NOT BE RUN PARALLEL TO POWER CABLE WHEN WITHIN 36", EVEN FOR SHORT DISTANCES
3) DUCTWORK & PIPING HAVE RIGHT-OF-WAY OVER CABLING

No.	Date	Revision

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NEW CTE BUILDING FOR
Bertie High School
716 US 13 North / NCDPS Unit 080 - School 312
Windsor / Bertie County / North Carolina

Project No.	22351
Date:	March 2025
Drawing no.	IT 001

ES Project No: ES24055
ENGINEERING SOURCE of NC, P.A.
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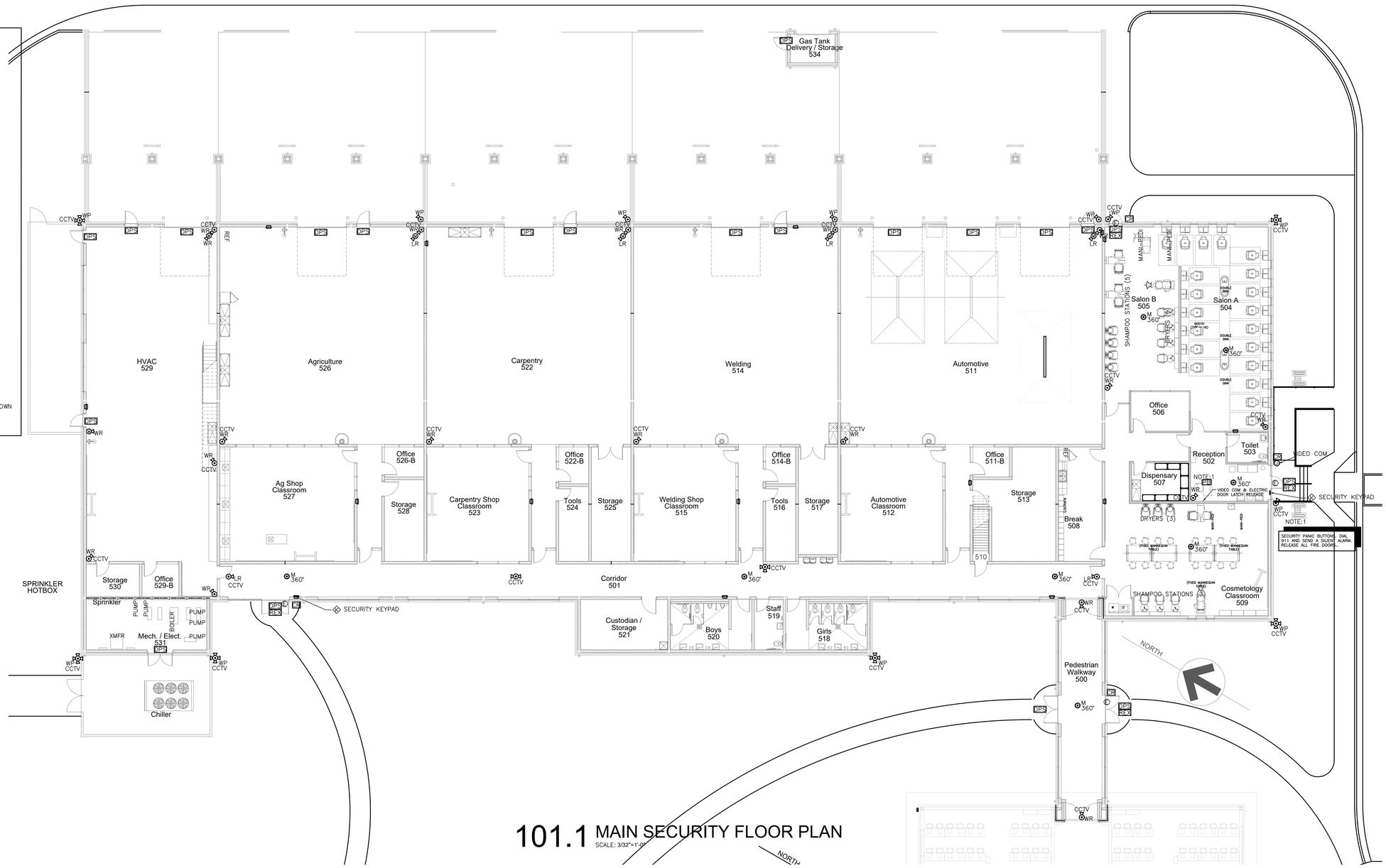
SECURITY SYMBOL LEGEND

- 360° CAMERA, BLANK-OFF QUAD IF NOT INDICATED ON DWG. OUTSIDE WEATHER PROOF HOUSING.
- 360° CAMERA, BLANK-OFF QUAD IF NOT INDICATED ON DWG.
- LONG RANGE CAMERA, BLANK-OFF QUAD IF NOT INDICATED ON DWG.
- WIDE RANGE CAMERA, BLANK-OFF QUAD IF NOT INDICATED ON DWG.
- TEMPERATURE SENSOR ALARM
- CEILING MOUNTED SPEAKER
- CEILING MOUNTED SPEAKER - W/INTEGRAL AMPLIPHIER
- REQUEST TO EXIT
- DOOR POSITION SWITCH
- CARD READER
- FOB READER
- CALL STATION
- POWER FOR ELECTRIFIED DOOR
- VOLUME CONTROL
- CIRCUIT CAMERA SG BOX BY E.C. (SINGLE DIRECTION)
- CIRCUIT CAMERA SG BOX BY E.C. (DOUBLE DIRECTION)
- SECURITY KEYPAD, SG BOX 54" A.F.F.
- 360 DEGREE MOTION DETECTOR FOR SECURITY SYSTEM
- WIDE ANGLE MOTION DETECTOR FOR SECURITY SYSTEM
- LONG RANGE MOTION DETECTOR FOR SECURITY SYSTEM
- PANIC BUTTON FOR SECURITY SYSTEM

ABBREVIATIONS:

A.C.	ABOVE CEILING
A.F.F.	ABOVE FINISH FLOOR
WP	WEATHERPROOF
WG	WIRE CAGE OR GUARD PROTECTION
EX	EXISTING
EF	EXHAUST FAN
EWH	ELECTRIC WATER HEATER
G.C.	GENERAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR OR EMPTY CONDUIT
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C	CONDUIT AS SPECIFIED
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U.G.	UNDERGROUND

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101.1 MAIN SECURITY FLOOR PLAN

SCALE: 3/32"=1'-0"

NORTH

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Windsor / Bertie County / North Carolina

ENGINEERING SOURCE of NC, P.A.
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ES Project No. ES24055

Project No.	22351
Date:	March 2025
Drawing no.	IT 101

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102.1 DATA/SPEAKER FLOOR PLAN

SCALE: 3/32"=1'-0"

No.	Date	Revision

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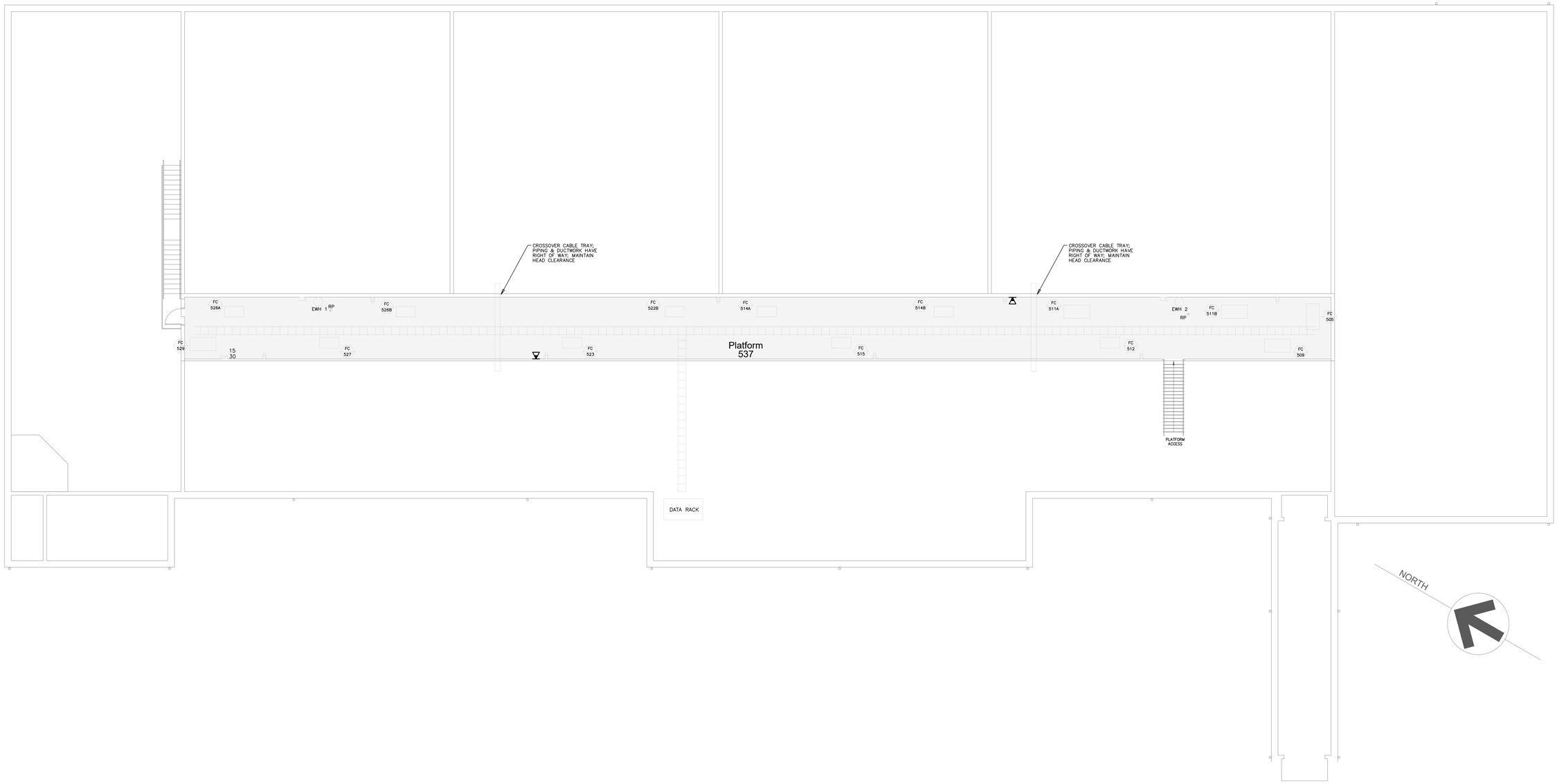
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3/2/25

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103.1 DATA PLATFORM FLOOR PLAN

SCALE: 1/8"=1'-0"

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Project No. 22351

Date: March 2025

Drawing no. IT 103

ES Project No: ES24055
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3/2/25