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Delmarva Christian School
21777 Sussex Pines Road, Georgetown, Delaware
Bid Pac A– Contracts 1 thru 18
May 12, 2025

Addendum No. 5

Attention all Prospective Bidders:

The following clarifications, changes and /or additions shall by this reference be incorporated into the contract documents as though dully set forth therein.

Addendum No. 5 consists of:
RYJ Written directive (20 pages)
Design Criteria (1 page)
Section 099000 Interior and Exterior Painting (8 pages)
Electrical Drawings (8 Drawings)

Technical Specifications

Section 099123-INTERIOR PAINTING-Delete section and replace with Section 099000 INTERIOR AND EXTERIOR PAINTING.

General

1. Bids may be emailed to Jesse Dixon at jdixon@ryjson.com. If emailing your bid they must be received by 2:00 pm on May 14th.
2. Bids may be mailed to the address above, attention Justin Savini, (US mail, FEDEX, etc) in lieu of hand delivery. All mailed bids must be received by 3:00 PM on May 14th. Bidders are responsible for bids received after the due date/time.
3. Bids may be hand delivered to the address above by 4:00pm.
4. Note: Alternate 8 –Performance and Payment Bonds should be based on the cumulative cost of the base bid and all additive alternates for each contract.

Drawings

1. See attached Electrical drawings E-002, E-003,E-004, E-005, E-101, E-102, and E-111. Revisions include the following;
    a. Coordination with PTG design for smartboard layouts.
    b. Gymnasium equipment power and circuiting. (Bleachers, basketball goals, scoreboards).
    c. Motorized roller shade power and circuiting
2. Early Childhood Center, Sheet S-003, Add design criteria. See attached.

Section 011100 Summary of Work

Contract 1 Site Work

Page 011100-9; Add Paragraph PPP "PPP. This contract is required to have the owner parking area stoned and base paved along with the fire lane prior August 15, 2025; reference Drawing G104 in Addendum 2 for clarification."

Page 011100-5; Add to Paragraph A: "079200"

Page 011100-5; Revise Paragraph G to read: "G. Provide Sanitary Sewerage System complete including traffic control as needed. Provide force main, grinder pump, and grease trap including removal of existing grease trap. Provide abandonment of existing force main."

Page 011100-6: Revise Paragraph R to read: "R. Provide removal of existing gas line where required".

Page 011100-8: Delete Paragraph DDD in its entirety.

Contract 2 Concrete Work

Page 011100-10: Add to paragraph A: "071110, 072100, 079200"

Contract 5 Carpentry & General Work

Page 011100-18: Delete "FOR REFERENCE ONLY" from header.

Page 011100-20: Paragraph MM, revise "rustless" to "knotless".

Page 011100-20: Delete Paragraph RR in its entirety.

Contract 7 Furnish Hollow Metal/Doors/Hardware

Page 011100-24: Paragraph A, Delete "084113, 088000" and Add "087100".

Contract 8 Aluminum Storefront/Windows/Glass and Glazing

Page 011100-25: Paragraph A, Delete "084413"

Contract 12 Caulking/Painting

Page 011100-32: Revise paragraph L to read: "L. Provide color graphic in gym as noted in documents".

Page 011100-32: Delete from Paragraph A: "099123"

Page 011100-32: Add too Paragraph A: "099000"

Contract 13 Casework

Page 011100-34: Paragraph H,Revise "stationless" to "stainless".

Contract 14 Kitchen Equipment

Page 011100-36: Paragraph K, Revise "walk in" to "reach in" and "mechadiser" to "merchandiser".

Contract 17 Electrical

Page 011100-48: Delete Paragraph T in its entirety.

Contract 18 Wall Panels

Page 011100-51: Add Paragraph M: "M. Provide interior cham clad panel system and Alucobond rain screen system with C1 panels complete."

Bidders Questions + Clarification

RFI No.	Description
RFI 01	**Question 1:** Contract 1-Sitework, Scope of Work item Y, states to provide exterior caulking of expansion joints at all concrete locations including sidewalks and curbs. Note 2, states, concrete sidewalks shall be constructed per DelDOT specifications. DelDOT does not require caulking of expansion joints, please advise. **Answer 1:** Provide per DelDOT specifications. **Question 2:** Scope of Work Items DD., JJ., and LL. Appear to contradict each other. Will RYJ be providing CCR reports and all testing and inspections for site work? **Answer 2:** Delete Item JJ. In site work Scope of Work. Provide all required testing and CCR reports. **Question 3:** Scope of work Item NN. Our fencing subcontractor is asking for more information and details on the dumpster enclosure fencing/gates. **Answer 3:** See Keynote S27 and Details 10 & 13/CS6001.
RFI 02	

Question 1:
Which Contract is responsible for the exterior 5/8" wood sheathing on walls?
Answer 1:
Contract 9- Drywall/Metal Stud
Question 2:
Which contractor is responsible for wall tile?
Answer 2:
Contract 11- Floor Covering Work
Question 3:
On Drawing A605 it mentions Doors 165C Q-4 location circulation. Where and what floor plan are they shown?
Answer 3:
See detail 5/A605. They are in wall between existing building and new construction.
Question 4:
Does Trade need to provide dumpsters or is there job site dumpsters provided?
Answer 4:
Job site dumpsters will be provided.
Question 5:
Contract 5- Carpentry list items G, H, and I as to provide wood blocking as required to install items. But details on A501 call out metal blocking to be used, please clarify.
Answer 5: (Revised – Addendum 3)
Provide blocking as noted on Sheet A501, this blocking is to be provided by Contract A-9 Drywall/Metal Stud
Question 6:
Contract 5 Carpentry Item T-provide wood blocking for roof top mechanical. M501 shows no wood detail to roof. Please clarify detail drawing such.
Answer 6:
Provide blocking where indicated on details.
Question 7:
Can you clarify which contract is to carry the stainless steel corner protection for the Cornell Roll Down doors?
Answer 7:
Contract 5, Item QQ

RFI 03

Question 1:
For Contract 14-Food Service Equipment we do not see plans or specs?
Answer 1:
Please see drawing A403 for Prep Room equipment. There are no specifications.

RFI 04

Question 1:
Can the AWI certification requirements be waived.
Answer 1:
Yes, AWI Certification is not required.

RFI 05

Question 1:

Finish notes on finish legend indicate that all flooring materials are to be ordered from "Cornerstone Building Supply", is this correct?

Answer 1:

No, delete all references to "Cornerstone Building Supply" from documents. Materials may be purchased from any appropriate supplier/vendor.

RFI 06

Question 1:

Spec Section 42000 Masonry, calls for "US Brick-Chestnut Velour" as the face brick. The bid drawings specifically list three (3) different colors of Glen Gery Klaycoat brick in great detail on the elevations. Is the intent to use the Glen Gery brick per the drawings?

Answer 1:

The intent is to use the Glen Gery Brick per the drawings.

RFI 07

Question 1:

In Bid Pack A, Contract 5, Scope of Work Item RR says to install steel plate provided by steel contract on top of parapet walls to fasten wood blocking. Can you clarify which parapet wall is to receive this treatment, I see no detail anywhere referencing this plate.

Answer 1:

Delete Contract 5, Scope of Work Item RR.

RFI 08

Question 1:

Please confirm whether fencing around the playgrounds is included in site work base bid, or if it is to be part of Alternate 7?

Answer 1:

Proposed Playground fencing is to be included in Alternate 7.

RFI 09

Question 1:

No fire alarm devices are shown on plans. Will devices and locations be issued for bidding purposes?

Answer 1:

No additional information will be provided. All fire alarm design is to be by the installing contractor as a delegated design. Architect will coordinate placement off of the design submittal.

Question 2:

Please provide circuitry information and power requirements for DOAS-1 located on the rooftop (drawing E-300).

Answer 2:

See attached sheet for requested circuitry information on the DOAS unit. Power requirements are 27 MCA, 35 MOCP, 460V.All fire alarm design is to be by the installing contractor as a delegated design. Architect will coordinate placement off of the design submittal.

Question 3:

Contract 17 Scope of Work Item X mentions site lighting revisions. Please clarify if any site lights shown on E-009 will utilize existing poles. Will the existing parking lot remain throughout construction?

Answer 3:

All existing parking lot light poles/fixtures will be removed and replaced per civil drawings. Refer to electrical plans for wiring information. Existing lights will be needed while school is in operation, electrical contractor to coordinate schedule to remove with site contractor to remove/replace infrastructure.

Question 4:
The responsibility matrix on drawing TA-002 shows PTG furnishing architectural lighting? Please clarify who furnishes lighting and controls.
Answer 4:
PTG will NOT be furnishing any of the project lighting.
Question 5:
Is lightning protection required? If so is there an existing system.
Answer 5:
Lightning protection is not required.
Question 6:
The following light fixtures are not shown on the fixture schedules. Types R8 and S6 (both are shown on Drawing E-202 in Area 145). Please provide clarification.
Answer 6:
Type R8: Recessed linear in an "L" pattern and continuous row. "L" pattern #A-830-L, 5'-7.5" x 2'-6.5"- NF-U-FSD-1-0- to be determined by architect.
Continuous row #A-409-#A-830-4'-7"-NF-U-FSD-1-0- to be determined by architect.
Type S6: 2-ft surface linear strip BOH. #ZL1D-L24-SMR-3500LM-FST-MVOLT-35K-80CRI-WH-ZSPRG

RFI 10

Question 1:
Who owns the duct board insulation per note #5 on A-110 & A-111
Answer 1:
Contract 10 Acoustical Work
Question 2:
Who owns the K-13 Spray Insulation at CF-9-A on Page A-110?
Answer 2:
Contract 10 Acoustical Work
Question 3:
RCP General Note #8 calls for 4" batt insulation. Is this to be encapsulated in a bag or just glass fiber batt?
Answer 3:
Unfaced glass fiber batt only.
Question 4:
RCP Key note #10 indicates 4" batt insulation above lay in ceilings, please verify location where this applies.
Answer 4:
Above ceiling clouds in RM 195 (Music), RM 196 (MS Commons).
Question 5:
Please provide ceiling tag for the 5 ceilings located with a drywall border in Circulation #172.
Answer 5:
These ceilings are material tag 6, 24" x 96" Optima.
Question 6:
RCP Key Note #5 indicates duct board insulation non deck, what contractor owns this. Also, please provide spec.
Answer 6:
Contract 10, Acoustical Work. 1" Duct Board Liner, Owens Corning QuietR or equal. See attached data sheets. Any equivalent material substitution will be acceptable.

RFI 11

Question 1:

Frames W16, W17, and W18 are called out as anodized aluminum storefront on A-603. The door schedule states the doors in these frames are hollow metal in hollow metal frames. Please confirm that W16/W17/W18 are not in aluminum storefront.

Answer 1:

W16/W17/W18 are all hollow metal frames with side lites and painted hollow metal doors to match all other admin doors.

RFI 12

Question 1:

Is there a detail for the proposed preschool playground and elementary playgrounds?

Answer 1:

Playground equipment is by owner. Provide fencing as part of Alternate 7. Contract 1 to provide grading and seeding as indicated on Civil drawings.

RFI 13

Question 1:

Is the existing parking lot to be milled and over lay? If so please provide details.

Answer 1:

Not at this time.

Question 2:

Contract 1, Are we responsible for any work associated with movable bleachers as shown on drawing RP1005? If so please provide details.

Answer 2:

No, they are future installation by others.

Question 3:

Are we (contract 1) responsible for any work associated with propane or natural gas?

Answer 3:

No

Question 4:

Contract 1, Will RYJ be providing all temporary fencing per item X and also the temporary orange safety fencing per Item BBB.

Answer 4:

CM will provide temporary fence per item X. Contract 1 to provide Item BBB if noted on plans.

RFI 14

Question 1:

Please provide details/specs for new softball and soccer field.

Answer 1:

Finished softball and soccer fields will be provided by owner's contractor under separate contract. Contract 1-Site Work is to provide site as indicated in the bid documents and coordinate with owner's field contractor.

RFI 15

Question 1:

On A-110 & A-111, Note 2-Is the 10" Axiom trim needed? There appears to be a drywall perimeter surrounding these areas with a Note 2 indicated at outer perimeter.

Answer 1:

No, the Axiom trim is no longer needed at the outer perimeter of the ceiling elements in the Circulation space.

Question 2:

On A-110, what type of tile goes in the clouds in the MS Commons 196? What is the edge treatment for these clouds?

Answer 2:
The ceiling tile is to be Armstrong Optima 24”x24” Tegular (white) and the edge treatment is to be Armstrong 6” axiom trim.
Question 3:
On A-110, ceiling type CB-1-A is listed in Rooms 183 &184, but does not exist on the ceiling type legend. Please clarify.
Answer 3:
The ceilings in rooms 183 &184 are to be Armstrong 24”x24” Kitchen Zone ceiling tile.
Question 4:
On A-110, please clarify if the ceiling tags are correct in Rooms 191 & 191.1.
Answer 4:
The ceiling tags are incorrect in rooms 191 & 191.1. The tag should be “CE-4” in both spaces.
Question 5:
On A-111, please clarify the ceiling tags in the top right of Waiting Area 101 as there are two different tags (CF-10-C and CC-10-D).
Answer 5:
Both tags should be CC-10-D.

RFI 16

Question 1:
Contract 15, specs call for Uponor above ground and also PVC above ground. This all looks like plenum ceiling, should we plenum wrap all of the plastic or bid it as cast iron and copper instead?
Answer 1:
The mechanical design is using return air plenums and so all exposed services in the plenums will need to be plenum rated. All of the plastic (Uponor or PVC) piping material would need to be plenum wrapped and would be an acceptable option. Cast iron and copper are also acceptable.

RFI 17

Question 1:
Hardware Set 3.1 for the Early Learning Center is for a single door, but Doors 100B & 100C are pairs. Please advise what set to use.
Answer 1:
Doors 100b & 100C for the ELC are to be hardware set #1.0.

RFI 18

Question 1:
Contract 1, Per Addendum #3, RFI 14, Q&A #1, the finished softball and soccer field will be under separate contract. Please confirm we do not own any athletic field improvements. How are we expected to leave the fields for the future contractor if this is the case?
Answer 1:
Correct, Per Addendum #3, RFI 14, Q &A 1. Contract 1, Scope of Work, Item DDD will be removed.

RFI 19

Question 1:
Where is “Krylon Brilliant Metallic’ paint going, per finish legend A7, to be furnished?
Answer 1:
See Sheets A415 & A416. A7 Krylon Mettalic Paint is the finish of the painted ¾” plywood substrate wall protection panels located above the p-lam wrapped wall protection panels around the perimeter of the gymnasium.

RFI 20

Question 1:

In rooms 183 & 184 the ceilings are tagged as CB-1-A but there is no description of this, please clarify?

Answer 1:

See RFI, Answer 3.

Question 2:

In Music Room 195 the ceiling clouds are tagged CF-9-A with "9" being K-13 spray acoustical. Not sure how this is part of the cloud, please clarify?

Answer 2:

Tag should be revised to CF-1-A.

Question 3:

In Circulation 172 the clouds are tagged with keynote 2 which is called out as an Axiom trim, but the detail 4/A115 shows the perimeter as metal stud/drywall. Please clarify.

Answer 3:

See RFI 15, Answer 1

Question 4:

Is Ceiling type CG-7-E part of contract 10 or is it contract 18 scope of work?

Answer 4:

Contract 18

RFI 21

Question 1:

Contract 12, Scope of Work Item L, I don't see a cafeteria on the prints, is there one?

Answer 1:

No cafeteria.

Question 2:

Contract 12, Item M, Stain and varnish seem to be prefinished items, please verify.

Answer 2:

If job site finished items are noted in documents, Contract 12.

Question 3:

Contract 12, Item N, the only wall covering I see is an Inart Graphic in 143 HS. Is this all there is, will there be a spec?

Answer 3:

See Finish Schedule Section "Tile/Sheet/Metal Wall Protection treatments" as well as the finish plan & interior elevations.

Question 4:

Contract 12, Item T, is Cham Clad prefinished? We just paint the Hardie siding on the exterior?

Answer 4:

Cham Clad is prefinished.

RFI 22

Question 1:

Is Contract 1 responsible for pond plantings?

Answer 1:

Yes, per Contract 1, Scope of Work, Item SS

Question 2:

Is Contract 1 responsible for landscaping plans?

Answer 2:

Yes, Per Contract 1, Scope of Work, Item SS

Question 3:

Can we use on site suitable soils for the building pad fills?

Answer 3:
Yes

Question 4:
It looks like during the existing parking lot removal, the utility lights will have to get removed. Is this to be performed under electrical or civil scope? Is the proposed lighting under electrical or civil scope?

Answer 4:
See Answer RFI 9, Answer 3, Addenda 3. Parking Lot Lighting is by Contract 17, Item X.

Question 5:
The scope says Contract 1 is responsible for gas work, please clarify?

Answer 5:
See Answer RFI 13, Addenda 3, Question 3.

Question 6:
I am unable to find and details in the civil drawings or specifications regarding the softball and athletic fields.

Answer 6:
See answer RFI 14, Addenda 3, and answer RFI 18 this addenda.

RFI 23:

Question 1:
Details 4 & 11/A302 of the Early Learning Center show drywall at the bottom of the truss cord. Does the entire ELC receive a drywall ceiling, as well as a lowered ACT/GWB ceiling, where called out?

Answer 1:
Yes

Question 2:
Plan A102, General Note, Gypsum Drywall calls for Impact Resistant GWB to 4'-0" in Corridor/Hallway. Plan A303 Wall type notes call for Abuse Resistant GWB to 8'-0" in all corridors, foyers, and wrapped steel columns. Which is correct?

Answer 2:
Provide abuse resistant to 8'-0".

RFI 24

Question 1:
The drawings indicate volleyball sleeves (potentially equipment as well), wall/column padding and a scoreboard but there are no specifications for these items, as there are for the basketball hoops, divider curtain & gym bleachers. We provided all this equipment for Delmarva Christian School's existing gym in 2014, the manufacturers used for their existing gym in 2014 were Gared Performance Sports Systems (basketball hoops, divider curtain, volleyball equipment and wall padding), Daktronics (scoreboards) and Hussey Seating Company (bleachers). Will volleyball equipment, wall padding and/or scoreboards be required on this project, if so, can Gared Performance Sports Systems and Daktronics be approved as equal and a specification be provided (NOTE: The existing gym had Daktronics BB-2115 shot clocks mounted the main court basketball hoops, they many want to consider these for this gym as well, product info: https://www.daktronics.com/web-documents/hspr-documents/dd2481875.pdf)?

Answer 1:
Yes, Daktronics and PSS/Gared are acceptable manufacturers. Gared Model 6105 Scholastic telescopic volleyball system upright posts Model 61076, with winch post 6106 and 6400 sleeves.

Question 2:
Drawing E101 does not indicate any power supplies or key-switches for the basketball hoops and divider curtain or a power supply for the scoreboard (and potentially shot clocks). Can power supplies be added for this equipment?
Answer 2:
Yes, power will be provided for all equipment, see drawing revision.
Question 3:
Section 116653 & 16623 (or 166230) specify only Jaypro as an approved manufacturer. Will Gared Performance Sports Systems be considered equal manufacturer, as their products are already installed in the school's existing gymnasium?
Answer 3:
Yes, PSS/Gared is an acceptable manufacturer.
Question 4
Section 116653 specifies two style divider curtains, both of which would work at this facility. The more sensible curtain would be the slope fold curtain, Model Number SC-685. Can you confirm a slope fold divider curtain should be used for the gym?
Answer 4:
Slope fold divider is acceptable.

Question 5:
Drawing A415, detail #1 indicates 1 ¼" raschel knotless netting on a bi-parting trolly system that is 24'-0" wide and only 8'-4" below the bottom of the truss. We are assuming this is something similar to a #4013 bi-parting, walk-draw curtain but partial height and with netting, not traditional vinyl/mesh shown (reference product: https://www.garedperfsports.com/products/walk-draw-gymnasium-curtain. Can you confirm that this is the design intent for this item and it should be provided by the gym equipment manufacturer?
Answer 5:
This netting is only to protect the mezzanine opening. The vinyl mesh is ok as an alternative to be reviewed at a later date. Contractors to bid the netting as specified. Scope is to be included in Contract 5-General Trades.
Question 6:
Section 133416 specifies only Irwin Seating Company as an approved manufacturer. Will Hussey Seating Company be considered equal manufacturer, as their product is already in the school's existing gymnasium?
Answer 6:
Yes, Hussey is an acceptable manufacturer.
Question 7:
Drawing A418, detail 2 indicates a bleacher that is 74'-6" long but lacks self-storing end rails at each end, which occupy +/- 12" on each end. It would be suggested to provide a 72'-6" long bleacher that includes self-storing end rails on each side, see attached layout drawing for reference. A 72'-6" long by 4 row high bleacher would provide 167 maximum net seats with 18" wide seats or 133 with seats that have seat spacers. Will it be acceptable to provide a 72'-6" long bleacher, so that self-storing end rails can be provided, as well as enough clearance for the vinyl end curtains with graphic logos on each end of the bleacher?
Answer 7:
Yes, this is acceptable.
Question 8:

Section 13416 specifies the bleachers to be wall attached, electrically operated but drawing E101 does not seem to indicate a power supply for the bleachers. Are the bleachers to be electrically or manually operated, if electric, can a power supply be added to drawing E101?

Answer 8:

These will be electric motor operated and the power will be provided for each bleacher set.

Question 9:

Section 133416, page 181, specifies the risers and nose beams of the bleacher to be power coated black but this is very uncommon for a gym, these are almost always galvanized steel finish, as powder coating will add quite a bit of money to the cost. Can you confirm that the riser and nose beams should be galvanized steel finish and not powder coated black?

Answer 9:

This is an option on the Irwin telescopic system, the galvanized nosing is acceptable.

Question 10:

Section 133416, page 182, paragraph J. specifies seat numbers and row letters but these are usually not supplied for general admission gym seating. Can you confirm that seat number and row letters should not be provided?

Answer 10:

Please provide as specified, this may be revisited at a later date with owner.

Question 11:

Section 133416, page 182, paragraph K.1. specifies iScape custom graphics for the seats but with only 3 stacking rows this would not be a recommended option, as the area is so small (Link to Hussey's equivalent, the Xtreme Graphic logo: https://www.husseyseating.com/products/the-total-package/). Also, if the seat spacers are to be used, this is not a possible option. Can it be confirmed that the iScape custom graphics for the seating is not required?

Answer 11:

Please omit

Question 12:

Section 133416, page 182, paragraph N. specifies a seat spacer but it is unknown if these are to be provided on the bleachers based on drawing A418, detail 2. Will seat spacers be required for the seating?

Answer 12:

Please omit

Question 13:

Section 133416, page 182, paragraph P and paragraph Q specify accessories not used with wall attached bleachers. Can you confirm that these paragraphs should be deleted and don't relate to this project?

Answer 13:

Please omit

RFI 25

Question 1;

On A604 window details shows the exterior foam board as 1 ½". According to James Hardi representative anything over 1" including foam and sheathing must be stripped with 1x4 then siding installed. Is this the intention? This would change the design and depth around the windows considerably and endure considerable cost to the project. Please clarify.

Answer 1:

1" is correct

RFI 26

Question 1:

The door schedule lists restrooms 116a, 117a, 118a, and 119a as full glass, is that correct?

Answer 1:
Doors 116A, 117A, 118A, and 119A should not be full glass, they should be flush doors.
Question 2:
On Door Schedule A601, opening 115A is called out as hollow metal, but window schedule on A602 calls it out as a W6 Storefront. Please clarify?
Answer 2:
115A in the ELC building should be aluminum storefront as shown on the glazing schedule A602.

RFI 27

Question 1:
Please advise the sidelight frame type for openings #137A, 201A & 202A.
Answer 1:
The sidelite frame is HM (same as door frame) for these doors.
Question 2:
Please confirm the wall type at openings 201A & 202A is 2AA.
Answer 2:
2AA is correct.
Question 3:
Door 171 A is not in the door schedule, please advise.
Answer 3:
Door 171A Art is in door schedule on A601. It is a SGL 3'x7', AL storefront door with FG leaf, Hardware Group 7, with Group A access control.
Question 4
Please advise the wall type and frame detail for Openings 100G, 144A, 154B, 154E and 155A.
Answer 4:
The wall type at 155A is 8" CMU block, utilize subframe to maintain standard HM frame depth. 155A is an interior door located in a CMU wall, utilize subframe to maintain standard HM frame depth. 100G is an exterior door at the front entry (goes in the (E) sprinkler room and is in a rated wall assembly (6" metal stud wall with metal panel finish). 144A is an exterior door to the new sprinkler room and is in a metal stud wall with brick finish, frame should wrap the framed wall assembly, return brick back to finished frame. 154B and 154E are exterior doors in the Industrial Arts room that are in CMU wall with hardie siding and brick wainscot finish, utilize subframe to maintain standard HM frame depth.

RFI 28

Question 1:
What is basis of design for the sliding glass windows?
Answer:
Kawneer OptiQ AA5450 Series Windows (sliding configuration)
Question 2:
What is the basis of design for the aluminum storefront doors?
Answer 2:
Kawneer 350 Heavy Wall Entrance, which complies with the Storefront General Notes on A602.

RFI 29

Question 1:
Contract 3, Scope Item B references split face/decorative block, dumpster walls, jack arches, and signage wall of which I do not see any within the project documents. Please clarify.
Answer 1:
None required.
Question 2:

Contract 3, scope item C requests for us to provide all concealed or thru wall flashing. This is only if the flashing is embedded in masonry, correct?

Answer 2:

Correct

Question 3:

Scope Item M requires all masonry debris to be disposed of off-site. Does this mean that the masonry contractor owns providing their own dumpster?

Answer 3:

Yes

Question 4:

Scope Item Q requires the mason to provide any waterproofing membrane or damproofing that is attached to masonry, however, we cannot find a reference to either in the drawings.

Answer 4:

None required

Question 5:

Scope item S requests the mason provides any cement plaster if noted in documents, we do not see any, is this correct.

Answer 5:

Correct

Question 6:

Scope items W & X reference the mason providing in fills or relocating openings on the existing building. Outside of Doors 172A, B, C and D and 100 G does this occur anywhere else within the building? In addition, please clarify if the existing structure that will be affected is structurally composed of metal studs or CMU at each of the respective locations mentioned previously.

Answer 6:

Review all structural and architectural documents.

Question 7:

Scope Item DD request the mason provide a site sign, please clarify?

Answer 7:

No site sign

Question 8:

Scope Item FF says the mason owns select demolition of all interior or exterior masonry. Does this only occur for doors 172 A, 172B, 172C, 172D and 100G or are there other locations.

Answer 8:

Review all structural and architectural documents.

Question 9:

Elevation 1 on A203 In the Upper School Addition set it appears there is new masonry veneer going on to the existing building, however, there are no other details within the set. Please confirm this area is not in bid package,

Answer 9:

Correct, see floor plans for limit of work.

RFI 30

Question 1:

Specification Section 007300-9 - (Article 11 – Insurance and Bonds) –
Is it the Owner and Construction Manager's intent that all successful Prime/Trade Contractors (Contract #1 through Contract #18) acquire "All-Risk" Builder's Risk Insurance for the duration of this project?

Answer 1:

The contractor and subcontractors shall provide property coverage for their tools and equipment and liability insurance. Contractors pay for their own mandatory deductibles for their insurance.

Question 2:

2) Specification Section 008000-8 – (Article 9: Payments and Completion) Subsection 9.1.1 –
Is it the Owner's intent to withhold a ten percent (10%) retainage until the completion of the project even if Performance and Payment Bonds are accepted as a part of any or all of the Bid/Contract packages?

Answer 2:

Revise retainage to 5%.

Question 3:

3) Specification Section 011100-1 – (Summary of Work) Item 1.5.A.1 –
What is the incentive for each Trade Contractor to submit for approval and procure materials and equipment for "early" delivery if the Owner is only going to compensate us for 95% of the material/equipment value (and then potentially hold 10% retainage on top of that)? We will need to pay our supplier/vendor for the full value of the material/equipment at the time of delivery. Feels like the Contractor is financing the project in exchange for expediting deliveries.

Answer 3:

Bid as noted in documents.

Question 4:

4) Specification Section 011100-38 – (Scope of Work – Contract No. 15A Plumbing) and Specification Section 011100-41 – (Scope of Work – Contract No. 15B HVAC) – Item D

Why couldn't you have the Contract No. 5 Carpentry and General Work trade contractor install the Plumbing and HVAC access panels and doors? Plumbers and Pipe Fitters are not trained or qualified to install "finish" items of this nature (see Specification Section 011200-6 – (Multiple Contracts Summary) Item 1.16.B. Access Doors and Panels where the typical installation protocol is described)

Answer 4:

Bid as noted in documents.

Question 5:

5) Specification Section 013300-1 – (Submittal Procedures) Item 1.4.A –
If the Architect intends to charge a $200 processing fee for each of the consultant's CADD files (inclusive of plan drawings and backgrounds as noted), kindly tell us what constitutes a "file" in the Architects world so we can calculate how much to put in our estimate for reimbursement.

Answer 5:

There will be no fee for CADD files.

RFI 31

Question 1:

Contract 5 scope Item OO says to supply concrete seat top, where is this?

Answer 1:

Delete Item OO.

Question 2:

Contract 5 Scope Item FF says to provide wood benches, where are they?

Answer 2:

Delete Item FF.

RFI 32

Question 1:

There is a spec for Wood Doors but no wood doors listed on Door Schedule.

Answer 1:

Delete Specification Section 081416 Flush Wood Doors.

Question 2:

S1 -Acid etched glass is not noted anywhere on the doors or glass, Please advise.

Answer 2:

Delete if not indicated on drawings.

RFI 33

Question 1:

Sheet CS4502 water profile 3/CS4502 references 3" fires service line, C909 class PVC service to building. Sheet CS 1703 calls for 6" fire service line in this location. Please confirm 6" is correct.

Answer 1:

6" is correct.

Question 2:

Sheet CS1703 calls for 20" force main in Sussex Pines Road to be relocated, is this part of contract?

Answer 2:

20" force main to remain as is, no relocation.

Question 3:

Per scope of work, Item M we are to provide water meter pit and wet tap. Nothing is called out on plans, please advise.

Answer 3:

Contract 1 to provide $30,000 allowance for meter pits and associated work to be coordinated with the Town of Georgetown.

Question 4:

Please confirm we do not own any athletic field improvements>

Answer: 4:

Per previous addenda, no athletic field improvements in Contract 1.

Question 5:

Please provide detail for scope of work Item BB in regards to what is required at downspout areas?

Answer 5:

Provide concrete splash blocks at downspout locations, see architectural drawings for locations.

Question 6:

What work is required for site work contractor at playground areas?

Answer 6:

See RFI 12, Answer 1.

RFI 34

Question 1:

Does the concrete sidewalk between the Early Childhood Center and the paving go in the lump sum bid or the Alternate 7 price?

Answer 1:

Base bid /lump sum.

Question 2:

Contract 1, scope of work item BB references underground roof drain lines and downspout boots. There are no roof drain lines shown or boot details, please clarify.

Answer 2:

See RFI 33, answer 5 above.

Question 3:

Contract 1, Scope of Work Item T refers to installing bollards furnished under contract 4-Steel Work. Can you identify how many and where they go?

Answer 3:

Contract 1 and Contract 4 to provide twelve (12) bollards per detail 1/CS6003. Location to be determined in field.

Question 4:

Is the demolition/removal of the fencing, dugouts, and scoreboard in the existing softball field to be included in our bid?

Answer 4:

Yes, Scoreboard to be removed and turned over to owner.

RFI 35

Question 1:

What contract owns the Epoxy Coating/Stonhard?

Answer 1:

Contract 11- Floor Coverings

Question 2:

Is the ELC part of the Polished Concrete Alternate 2?

Answer 2:

No

RFI 36

Question 1:

Roof Plans call for TPO to be mechanically attached but Spec 075423 TPO Membrane Roofing states the system is to be adhered. Please clarify.

Answer 1:

Mechanically attached.

RFI 37

Question 1:

There are no frame details for Hollow Metal, are we assuming that everything is 2" jamb face and 2" head face? No borrowed lites aside from W16, W17 and W18?

Answer 1:

2" jambs and heads, Per spec 081113 Hollow Metal Doors and Frames:
Frame Construction , paragraph A.
Borrowed lites as indicated in drawings or as revised via addenda.

RFI 38

Question 1:

Please provide structural design criteria for the Early Childhood Center.

Answer 1:

Please see attached.

RFI 39

Question 1:

Will canopies be supplied and installed by Contract 8?

Answer 1:

Yes

Question 2:

Contract 5, Note YY, exterior scoreboard is not shown on drawings, Please advise.

Answer 2:

Delete "Exterior" from Item YY.

Question 3:

Addendum 4, Question 25 asks to install 1x4 with 1" insulation . The drawing indicates using Z furring. Please advise.

Answer 3:

The original answer of 1" is correct. The 1" is total including foam and sheathing. 1x4 are not required.

Question 4:

Contract 5, Item KK, calls for spray fire resistant material on steel, we will need locations and specs for the material.

Answer 4:

None required, Delete Item KK.

Question 5:

Which contract owns the substrate under the Hardi plank siding?

Answer 5:

If by substrate you mean the foam insulation, Contract 9.

Question 6:

The painted plywood panels in the gym are which contract and what type of plywood?

Answer 6:

These are to be p-lam panels, see attached.

DELETE RFI 19 answer and insert this response.

Question 7:

Who owns appliances?

Answer 7:

Residential appliance are by owner, kitchen equipment is by Contract 14.

Question 8:

Is there a spec for the cross?

Answer 8:

No

Question 9:

Please confirm allowances for Contract 5.

Answer 9:

Contract 5- Item UU and Item AAA are correct. Revise Allowances to match.

RFI 40

Question 1:

Reference RFI 24, Question 1, Answer 1 is incomplete. Please provide additional information on wall padding and scoreboards.

Answer 1:

1. Wall padding to be PSS/Gared 4120 and 4320 corner pads. Equivalent by other manufacturers are acceptable.
2. Scoreboard to be Daktronics BB-2107 or equivalent
3. Shot clocks Daktronic BB-2115, or equivalent, for main court

RFI 41

Question 1:

Contract 9, Item X, where is this located?

Answer 1:

Delete Item X.

RFI 42

Question 1:

Contract 1: Could not find any site furnishings per Scope of work item EE & JJJ?

Answer 1:

Items EE and JJJ are deleted.

RFI 43

Question 1:
Contract 15, the plumbing drawings don't show a domestic water back flow preventer or fire main back flow preventer. Can you confirm Contract 5 does not provide this?
Answer 1:
Contract 5 to provide back flow preventers. Size as appropriate for incoming water line sizes.
Question 2:
The plumbing scope mentions to provide the grease interceptor complete but there are no specs or drawings showing it. Letter G on the site work Scope says they provide it. Please clarify.
Answer 2:
Contract 1 to provide the grease interceptor.
Contract 15, Delete Item S.
Question 3:
Contract 15 Scope says to provide and install the access doors. Normally we would provide them and the Carpentry package would install.
Answer 3:
Contract 15 to provide. Contract 15 can sub the work to whoever they like.
Question 4:
Plumbing scope says to provide gas meter and regulator but that is noted to be provided by utility contractor. Please confirm.
Answer 4:
Confirmed.
Question 5:
Under plumbing and HVAC scopes it says to provide demo and installation of concrete pads where equipment has to be relocated, we believe this should fall under the concrete scope package, can you confirm.
Answer 5:
Confirmed.

RFI 44

Question 1:
Is all HVAC equipment stand alone or intended to be tied to a BAS? Is there an existing BAS on site? Are packaged RTUs, split heat pump systems, VRF fan coils, DOAS unit, and unitary split furnaces to be provided with factory controls with a BACnet interface by the unit manufacturer? Are any exhaust fans, air curtain, chemical fume hoods, unit heaters or domestic hot water systems to be controlled/monitored by BAS?
Answer 1:
All equipment is stand alone, there is no intent for BAS for any new equipment.

Substitution Request/Approvals

1. Section 075423- Thermoplastic Polyolefin (TPO) Roofing
    a. GAF TPO Roofing is approved.

2. Section 074113-Metal Roof
    a. Metal Panel Systems MP-200 Panel, Standing Seam Series is approved.
3. Section 074213- Metal Composite Material Wall Panels

    a. Metal Panels Systems FP-100 Panel, Flush Seam Series is approved as equivalent to Metal Sales TLC-1.
4. “Knotwood” is approved as equivalent for the “ChamClad “panels.
5. “Certainteed Tavola Panels” are approved as equivalent for the CH-8-F Ceiling type.

End of Addendum No. 5

DESIGN LOAD SCHEDULE (psf)

DEAD LOAD COMPONENT \ LOCATION	SLAB ON GRADE	ROOF	
4" CONCRETE SLAB ON GRADE	50		
ROOFING & INSULATION		10	
FRAMING		5	
CEILING		2	
COLLATERAL		5	
MECHANICAL		3	
TOTAL DEAD LOAD	50	25	
TOTAL LIVE LOAD	100	30	
TOTAL LOAD	150	55	

WIND LOAD DESIGN CRITERIA

2021 INTERNATIONAL BUILDING CODE

ITEM	SYMBOL	VALUE
ULTIMATE WIND SPEED	V_{ULT}	130 MPH
ALLOWABLE WIND SPEED	V_{ASD}	101 MPH
RISK CATEGORY	-	III
WIND EXPOSURE CATEGORY	-	C
INTERNAL PRESSURE COEFFICIENT	GC_{PI}	± 0.18

SEISMIC LOAD DESIGN CRITERIA

2021 INTERNATIONAL BUILDING CODE

ITEM	SYMBOL	VALUE
SITE CLASS	-	D
SPECTRAL RESPONSE ACCELERATION (0.2 SEC.)		
MAPPED	S_S	0.103
DESIGN	S_{DS}	0.11
SPECTRAL RESPONSE ACCELERATION (1 SEC.)		
MAPPED	S_1	0.038
DESIGN	S_{D1}	0.061
RISK CATEGORY		III
IMPORTANCE FACTOR	I_E	1.25
SEISMIC DESIGN CATEGORY	-	A
ANALYSIS PROCEDURE	-	EQUIVALENT LATERAL FORCE
SEISMIC FORCE RESISTING SYSTEM	-	LIGHT FRAMED WALLS W/ SHEAR PANELS
RESPONSE MOD. FACTOR	R	2
SEISMIC RESPONSE COEFFICIENT	C_S	0.01
DESIGN BASE SHEAR	V	2.9 K

SNOW LOAD DESIGN CRITERIA

2021 INTERNATIONAL BUILDING CODE

ITEM	SYMBOL	VALUE
GROUND SNOW LOAD	P_G	20 PSF
RISK CATEGORY	-	III
EXPOSURE FACTOR	C_E	1.0
IMPORTANCE FACTOR	I	1.1
THERMAL FACTOR	C_T	1.0
FLAT-ROOF SNOW LOAD	P_F	22 PSF

SECTION 099000 INTERIOR AND EXTERIOR PAINTING

GENERAL

SECTION COVERS

A. Interior paint and coating commercial systems including surface preparation.

B. Exterior paint and coating systems including surface preparation.

REFERENCE STANDARDS

A. Steel Structures Painting Council (SSPC):
   1. SSPC-SP 1 - Solvent Cleaning.
   2. SSPC-SP 2 - Hand Tool Cleaning.
   3. SSPC-SP 3 - Power Tool Cleaning.
   4. SSPC-SP5/NACE No. 1, White Metal Blast Cleaning.
   5. SSPC-SP6/NACE No. 3, Commercial Blast Cleaning.
   6. SSPC-SP7/NACE No. 4, Brush-Off Blast Cleaning.
   7. SSPC-SP10/NACE No. 2, Near-White Blast Cleaning.
   8. SSPC-SP11, Power Tool Cleaning to Bare Metal.
   9. SSPC-SP12/NACE No. 5, Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating.
   10. SSPC-SP 13 / NACE No. 6 Surface Preparation for Concrete.

B. Material Safety Data Sheets / Environmental Data Sheets: Per manufacturer's MSDS/EDS for specific VOCs (calculated per 40 CFR 59.406). VOCs may vary by base and sheen.

SUBMITTALS

A. Product Data: For each paint system indicated, including.
   1. Product characteristics.
   2. Surface preparation instructions and recommendations.
   3. Primer requirements and finish specification.
   4. Storage and handling requirements and recommendations.
   5. Application methods.
   6. Cautions for storage, handling and installation.

B. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's products, colors, and sheens available.

C. Verification Samples: For each finished product specified, submit samples that represent the actual product, color, and sheen.

D. Coating Maintenance Manual: Upon conclusion of project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams, "Custodian Project Color and Product Information" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish

was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Paint exposed surfaces. If a color of finish, or a surface is not specifically mentioned, Architect will select from standard products, colors, and sheens available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish surfaces for verification of products, colors, and sheens.
   2. Finish area designated by Architect.
   3. Provide samples that designate primer and finish coats.
   4. Compatibility and Adhesion: Check after one week of drying and curing by testing in accordance with ASTM D3359; Adhesion by tape test. If the coating system is incompatible, additional surface preparation up to and including complete removal may be required.
   5. Do not proceed with remaining work until the Architect approves the mock-up.

DELIVERY STORAGE AND HANDLING

A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information.
   1. Product name, and type (description).
   2. Application and use instructions.
   3. Surface preparation.
   4. VOC content.
   5. Environmental handling.
   6. Batch date.
   7. Color number.

B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.

D. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

EXTRA MATERIALS

A. Furnish extra paint materials from the same production run as the materials applied and, in the quantities, described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.

B. Furnish Owner with an additional one percent of each material and color, but not less than 1 gal (3.8 l) or 1 case, as appropriate.

PART 2 - PRODUCTS

MANUFACTURER

A. Acceptable Manufacturer: Sherwin-Williams, which is located at: 101 Prospect Ave.; Cleveland, OH 44115; ASD Toll Free Tel: 800-524-5979; Tel: 216-566-2000; Fax: 440-826-1989; Email: request info specifications@sherwin.com; Web: www.swspecs.com .

B. Requests for substitutions will be considered.

APPLICATIONS/SCOPE

A. Interior Paint and Coating Commercial Systems:
   1. Metal: Structural steel, joists, trusses, beams, partitions, and similar items.
   2. Drywall: Drywall board, Gypsum board.

B. Exterior Paint and Coating Systems:
   1. Concrete: Cementitious siding, flexboard, transite, and shingles; non-roof.
   2. Metal: Miscellaneous iron, ornamental iron, ferrous metal.

PAINT MATERIALS - GENERAL

A. Paints and Coatings:
   1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
   2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufactures product instructions for optimal color conformance.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use a primer categorized as "best" by the manufacturer.

C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

D. Color: Refer to Finish Schedule for paint colors, and as selected.

INTERIOR PAINT AND COATING COMMERCIAL SYSTEMS

A. Metal: Structural Steel Columns, Joists, Trusses, Beams, Miscellaneous and Ornamental Iron, Structural Iron, and Ferrous Metal.
    1. Latex Systems:
        a. Eg-Shel / Satin Finish High Performance:
            1. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series (5.0 mils. wet, 2.0 mils. dry per coat).
            2. 2nd Coat: S-W Pro Industrial Acrylic Eg-Shel, B66-660 Series.
            3. 3rd Coat: S-W Pro Industrial Acrylic Eg-Shel, B66-660 Series (2.0-4.0 mils. dry per coat).
    2. Dryfall Waterborne Topcoat:
        a. Flat Finish:
            1. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series (5.0 mils. wet, 2.0 mils. dry per coat).
            2. 2nd Coat: S-W Pro Industrial Waterborne Acrylic Dryfall, B42-181 Series.

B. Drywall: Walls, Ceilings, Gypsum Board, and similar items.
    1. Latex Systems:
        a. Eg-Shel / Satin Finish: High Performance (HP) Upgrade.
            1. 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, B28W2600 (4 mils. wet, 1.5 mils. dry per coat).
            2. 2nd Coat: S-W ProMar 200 HP Zero VOC Latex Eg-Shel, B20-1950 Series.
            3. 3rd Coat: S-W ProMar 200 HP Zero VOC Latex Eg-Shel, B20-1950 Series (4 mils. wet, 1.7 mils. dry per coat).
    2. Epoxy Systems; Waterbased:
        a. Eg-Shel/Low Luster Finish:
            1. 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, B28W2600 (4 mils. wet, 1.5 mils. dry per coat).
            2. 2nd Coat: S-W Pro Industrial Pre-Catalyzed Waterbased Epoxy, K45-Series.
            3. 3rd Coat: S-W Pro Industrial Pre-Catalyzed Waterbased Epoxy, K45-Series (4 mils. wet, 1.5 mils. dry per coat)

EXTERIOR PAINT AND COATING SYSTEMS

A. Concrete: Cementitious Siding, Flexboard, Transite Board, Non-Roof Shingles, Common Brick, Stucco, Tilt-up, Precast, and Poured-in-place Cement.
    1. Latex Systems:
        a. Satin Finish Self Cleaning Upgrade:
            1. 1st Coat: S-W Loxon Self Cleaning Acrylic Coating-Satin, LX14-50 Series.
            2. 2nd Coat: S-W Loxon Self Cleaning Acrylic Coating-Satin, LX14-50 Series (5.0-7.0 mils. wet, 2.0-2.8 dry per coat).

B. Metal: Miscellaneous. Iron, Ornamental Iron, Structural Iron and Steel, Ferrous Metal.
    1. Alkyd Systems; Waterbased:
        a. Semi-Gloss Finish:
            1. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series (5.0 mils. wet, 2.0 mils. dry per coat).
            2. 2nd Coat: S-W Pro Industrial Waterbased Alkyd Urethane Enamel Semi-

Gloss, B53-1150 Series.

3. 3rd Coat: S-W Pro Industrial Waterbased Alkyd Urethane Enamel Semi-Gloss, B53-1150 Series (4.0-5.0 mils. wet, 1.4 - 1.7 mils. dry per coat).

EXECUTION

EXAMINATION

A. Do not begin installation until the substrates have been properly prepared; notify Architect of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

B. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.

C. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

SURFACE PREPARATION

A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint, or other contamination to ensure good adhesion.
   1. Prior to attempting to remove mildew, it is recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions are advised.
   2. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply solution and scrub the mildewed area. Allow solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow the surface to dry before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/ water solution.
   3. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
   4. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface, and material temperatures must be 50 degrees F (10 degrees F) or higher to use low temperature products.

B. Aluminum: Remove all oil, grease, dirt, oxide, and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.

C. Block (Cinder and Concrete): Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75 degrees F (24 degrees C). The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound.

D. Concrete, SSPC-SP13 or NACE 6: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.

E. Cement Composition Siding/Panels: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments.

F. Exterior Composition Board (Hardboard): Some composition boards may exude a waxy material that must be removed with a solvent prior to coating. Whether factory primed or unprimed, exterior composition board siding (hardboard) must be cleaned thoroughly and primed with an alkyd primer.

G. Drywall - Exterior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth, and all dust removed prior to painting. Exterior surfaces must be spackled with exterior grade compounds.

H. Drywall - Interior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth, and all dust removed prior to painting.

I. Galvanized Metal: Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply to a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.

J. Steel: Structural, Plate, And Similar Items: Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.
    1. Solvent Cleaning, SSPC-SP1: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.
    2. Hand Tool Cleaning, SSPC-SP2: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Beforehand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
    3. Power Tool Cleaning, SSPC-SP3: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods

outlined in SSPC-SP1.

4. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
5. Commercial Blast Cleaning, SSPC-SP6 or NACE 3: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
6. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.
7. Power Tool Cleaning to Bare Metal, SSPC-SP11: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.
8. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
9. High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials: SSPC-SP12 or NACE 5: This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.
10. Water Blasting, SSPC-SP12/NACE No. 5: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

K. Wood: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

INSTALLATION

A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.

B. Do not apply it to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or morning fog or dew.

C. Apply coatings using methods recommended by manufacturer.

D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.

E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness.

F. Regardless of the number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

G. Inspection: The coated surface must be inspected and approved by the Architect just prior to the application of each coat.

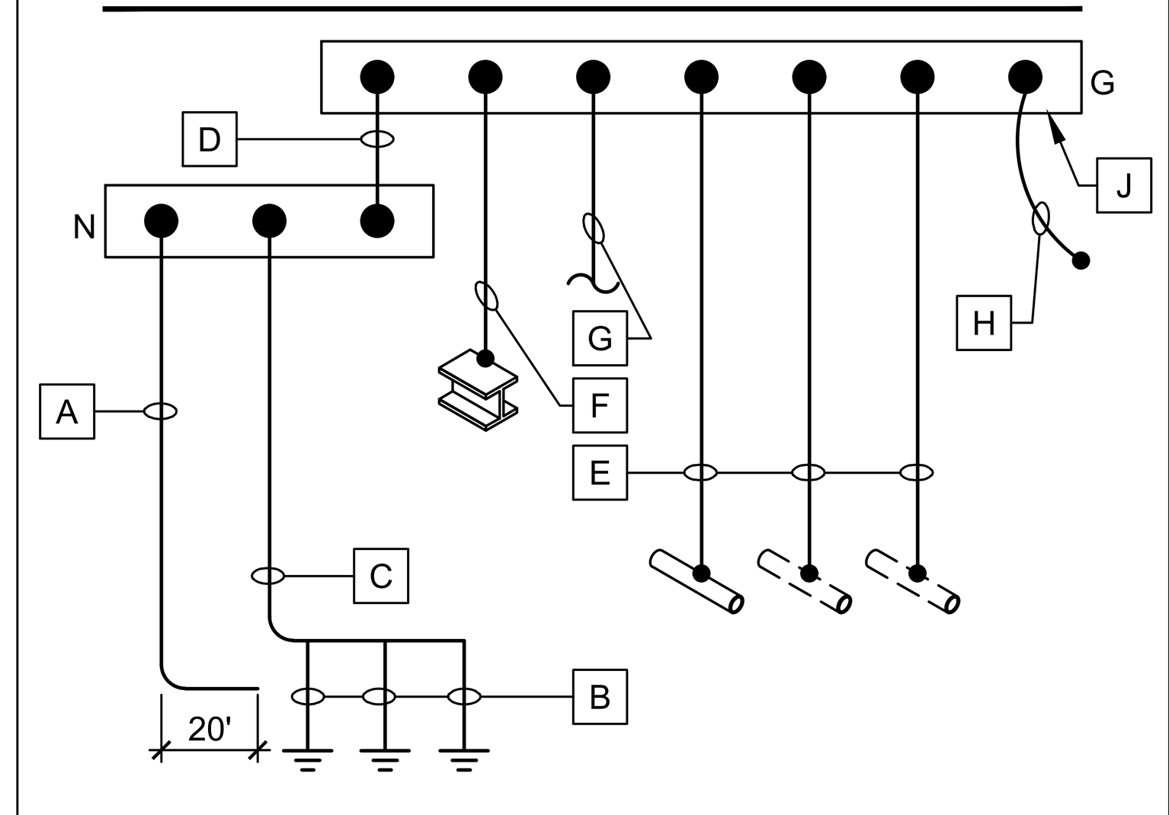
PROTECTION

A. Protect finished coatings from damage until completion of project.

B. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SPECIFICATION SECTION

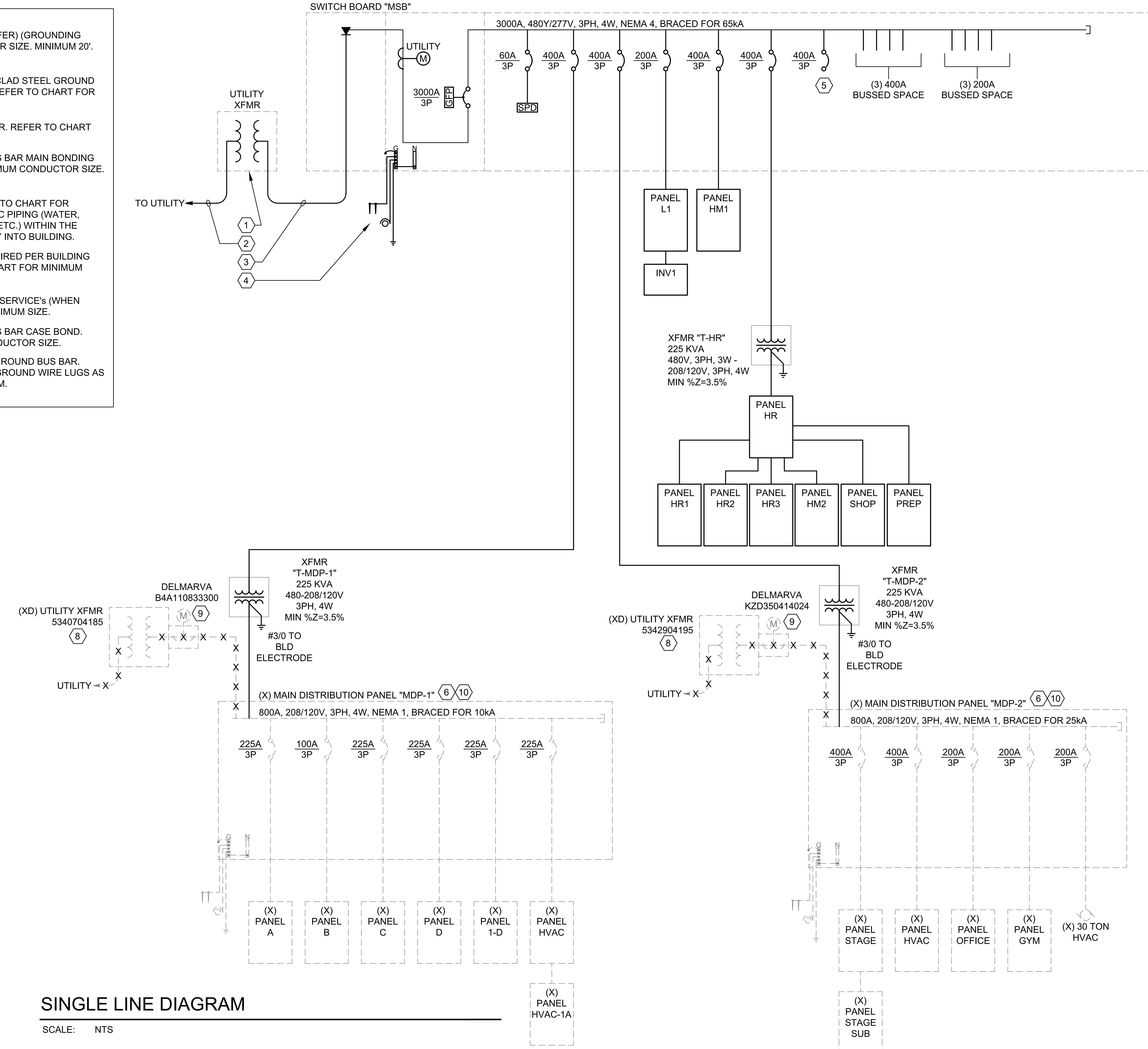
BONDING & GROUND DETAIL



ALL SIZES SHOWN ARE FOR Cu.. AL. IS NOT PERMITTED.

SES AMPACITY	A&C	B	D	E	F&G	H
3000 AMP	#4	3/4"x10' (x3)	#500	#3/0	#3/0	#500

- A — CONCRETE ENCASED ELECTRODE (UFER) (GROUNDING ELECTRODE #1). REFER TO CHART FOR SIZE. MINIMUM 20'.
- B — MINIMUM 10 MIL ANNEALED COPPER CLAD STEEL GROUND ROD. (GROUNDING ELECTRODE #2). REFER TO CHART FOR SIZE.
- C — GROUNDING ELECTRODE CONDUCTOR. REFER TO CHART FOR SIZE.
- D — INTEGRATED (FACTORY BONDED) BUS BAR MAIN BONDING JUMPER. REFER TO CHART FOR MINIMUM CONDUCTOR SIZE. (AMPACITY SHALL BE 150% RATED)
- E — METALLIC PIPING BOND WIRE, REFER TO CHART FOR MINIMUM SIZE. BOND TO ALL METALLIC PIPING (WATER, SPRINKLER, GAS, PNEUMATIC LINES, ETC.) WITHIN THE FIRST ACCESSIBLE 5' OF PIPES ENTRY INTO BUILDING.
- F — BUILDING STEEL BOND WIRE (IF REQUIRED PER BUILDING CONSTRUCTION TYPE). REFER TO CHART FOR MINIMUM SIZE.
- G — BOND WIRE FOR USE WITH MULTIPLE SERVICE's (WHEN PRESENT). REFER TO CHART FOR MINIMUM SIZE.
- H — INTEGRATED (FACTORY BONDED) BUS BAR CASE BOND. REFER TO CHART FOR MINIMUM CONDUCTOR SIZE.
- J — INTEGRATED (FACTORY INSTALLED) GROUND BUS BAR. SHALL BE SIZED TO ACCOMMODATE GROUND WIRE LUGS AS INDICATED ON THE ONE-LINE DIAGRAM.



SINGLE LINE DIAGRAM

SCALE: NTS

SHEET GENERAL NOTES

A. ALL EQUIPMENT SHALL BE FULLY RATED FOR THE AVAILABLE FAULT. SERIES RATING NOT ACCEPTABLE.

SHEET KEYED NOTES

1. UTILITY COMPANY PAD MOUNTED TRANSFORMER. VERIFY EXACT LOCATION AND REQUIREMENTS WITH UTILITY COMPANY PRIOR TO ROUGH-IN.
2. PRIMARY CONDUITS AND CABLING BY UTILITY. VERIFY ALL REQUIREMENTS WITH LOCAL UTILITY PRIOR TO ROUGH-IN.
3. SECONDARY UTILITY CABLING AND CONDUIT. PROVIDE (X) X"C. VERIFY ALL REQUIREMENTS WITH LOCAL UTILITY PRIOR TO ROUGH-IN.
4. SEE BONDING AND GROUNDING DETAIL, THIS SHEET, FOR DETAILS.
5. PROVIDE BREAKER FOR FUTURE BREAKER PHASE.
6. REFER TO ELECTRICAL SCHEDULES ON SHEET E004 FOR METERED DEMAND ON "MDP-1" AND "MDP-2".
7. NOT USED.
8. TRANSFORMER TO BE REMOVED BY UTILITY.
9. METER TO BE RETURNED TO UTILITY.
10. EXISTING PANELS BACK-FED FROM NEW DISTRIBUTION.

VOLTAGE DROP SCHEDULE

DEVICE	FEEDER		BRANCH CIRCUIT		TOTAL VOLTAGE DROP
	VOLTAGE DROP	WIRE SIZE	MAX VOLTAGE DROP	WIRE SIZE	
MSB	0%	(8)#500kcmil	-	-	0%
HM1	0.45%	#600kcmil	2.49% (CKT 50,52,54)	#10	2.95%
L1	0.26%	#1	1.74% (CKT 18)	#10	2%
INV1	0.56% / 0%	#8 / #8	1.45% (TAP 1)	#10	2.01%
T-HR	0.29%	#500kcmil	-	-	0.29%
HR	0.14%	(3)#300kcmil	2.77% (CKT 1,3)	#4	2.91%
HM2	0.24%	#600kcmil	4.54% (CKT 59)	#10	4.78%
HR1	0.26%	#1	4.52% (CKT 7)	#10	4.78%
HR2	0.37%	#1	3.08% (CKT 34)	#10	3.45%
HR3	1.71%	#1	2.83% (CKT 30)	#10	4.54%
PREP	2.42%	#1/0	0.79% (CKT 10)	#10	3.21%
SHOP	2.75%	#1/0	1.81% (CKT 17)	#8	4.56%
T-MDP-1	1%	#600kcmil	-	-	1%
(X) MDP-1	0.14%	(3)#300kcmil	-	-	0.14%
T-MDP-2	0.54%	#500kcmil	-	-	0.54%
(X) MDP-2	0.15%	(3)#300kcmil	-	-	0.15%

FEEDER SCHEDULE

FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
40	1/2"C,1#8,#8N,#10G	INV1
40	1/2"C,1#8,#8N,#8G	INV1
100	1-1/2"C,3#1,#1N,#8G	HR1, HR2, HR3, L1
125	1-1/2"C,3#1/0,#1/0N,#6G	SHOP
150	1-1/2"C,3#1/0,#1/0N,#6G	PREP
350	3-1/2"C,3#500kcmil,#500kcmil N,#2G	T-HR, T-MDP-2
400	3-1/2"C,3#600kcmil,#600kcmil N,#2G	HM1, HM2
400	3-1/2"C,3#600kcmil,#600kcmil N,#1G	T-MDP-1
800	(3)3"C,3#300kcmil,#300kcmil N,#2/0G	(X) MDP-1, (X) MDP-2, HR
3000	(8)3-1/2"C,3#500kcmil,#500kcmil N,#3/0G	MSB

FAULT CURRENT SCHEDULE

DEVICE	FAULT	AIC RATING	L-N VOLTS	UTILITY			FED FROM				FEEDER						TRANSFORMER						TOTAL MOTOR	DIRECTLY CONNECTED MOTOR LOAD			
				FAULT	X	R	DEVICE	FAULT	X	R	SIZE	X / 1000'	R / 1000'	LENGTH	X	R	KVA	Z%	XR RATIO	FAULT AT PRIMARY	X	R	FAULT	KVA	FAULT	X	R
MSB	64,813	65,000	277V	63,000	0.004311	0.0008623					(8)#500kcmil	0.0049	0.0034		0	0							1,813				
HM1	35,646	65,000	277V	34,084	0.007624	0.002816	MSB	63,000	0.004311	0.0008623	#600kcmil	0.039	0.023	85'	0.0033	0.002							1,562	302	1,451	0.1852	0.04629
L1	17,890	35,000	277V	17,800	0.008118	0.01328	MSB	63,000	0.004311	0.0008623	#1	0.046	0.15	83'	0.0038	0.0124							90				
INV1	7,024	10,000	277V	7,016	0.009783	0.03825	L1	17,800	0.008118	0.01328	#8	0.052	0.78	32'	0.0017	0.025							8				
T-HR	23,892		120V	22,866	0.005091	0.001273	MSB	63,000	0.004311	0.0008623	#500kcmil	0.039	0.027	71'	0.0028	0.0019	225	2	5	36,502	0.003765	0.0007531	1,026				
HR	22,859	42,000	120V	21,838	0.00529	0.001486	T-HR	22,866	0.005091	0.001273	(3)#300kcmil	0.0137	0.0147	15'	0.0002	0.0002							1,021				
HM2	20,549	22,000	120V	19,593	0.005849	0.001816	HR	21,838	0.00529	0.001486	#600kcmil	0.039	0.023	14'	0.0006	0.0003							956	61	677	0.172	0.043
HR1	18,508	22,000	120V	17,852	0.00585	0.003311	HR	21,838	0.00529	0.001486	#1	0.046	0.15	12'	0.0006	0.0018							656				
HR2	15,321	22,000	120V	14,885	0.006356	0.00496	HR	21,838	0.00529	0.001486	#1	0.046	0.15	23'	0.0011	0.0035							436	0.912	10	11.5	2.874
HR3	4,199	10,000	120V	4,150	0.01279	0.02593	HR	21,838	0.00529	0.001486	#1	0.046	0.15	163'	0.0075	0.0244							49	2.38	26	4.407	1.102
PREP	3,806	10,000	120V	3,786	0.01499	0.02793	HR	21,838	0.00529	0.001486	#1/0	0.044	0.12	220'	0.0097	0.0264							20				
SHOP	2,995	10,000	120V	2,737	0.0192	0.03942	HR	21,838	0.00529	0.001486	#1/0	0.044	0.12	316'	0.0139	0.0379							258	22.5	250	0.4651	0.1163
T-MDP-1	14,278		120V	14,240	0.007917	0.002886	MSB	63,000	0.004311	0.0008623	#600kcmil	0.039	0.023	457'	0.0178	0.0105	225	2	5	11,137	0.003765	0.0007531	38				
(X) MDP-1	13,578	10,000	120V	13,543	0.008247	0.00324	T-MDP-1	14,240	0.007917	0.002886	(3)#300kcmil	0.0137	0.0147	24'	0.0003	0.0004							35				
T-MDP-2	17,608		120V	17,550	0.006466	0.002224	MSB	63,000	0.004311	0.0008623	#500kcmil	0.039	0.027	258'	0.0101	0.007	225	2	5	16,906	0.003765	0.0007531	58				
(X) MDP-2	16,308	25,000	120V	16,258	0.006881	0.00267	T-MDP-2	17,550	0.006466	0.002224	(3)#300kcmil	0.0137	0.0147	30'	0.0004	0.0004							50				

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REV	DATE	DESCRIPTION
0	12/18/2024	ORIGINAL ISSUE
1	03/17/2025	REV0

PROJECT: DELMARVA CHRISTIAN HIGH SCHOOL
21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

291-004

SEAL: ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE: SINGLE LINE DIAGRAM

SHEET NUMBER: E002

DO NOT SCALE DRAWING

HR

ROOM STG 178 | VOLTS 208Y/120V 3P 4W | AIC 42,000
MOUNTING FLOOR | BUS AMPS 800 | MAIN BKR 800
FED FROM T-HR | NEUTRAL 100% | LUGS STANDARD
NOTE HIGH SCHOOL RECEPTACLES

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	70/2	NEMA L6-50R	5.2			2	-/1	SPACE	0		
3	|			5.2		4	-/1	SPACE		0	
5	20/3				0	6	-/1	SPACE			0
7	|		0			8	-/1	SPACE	0		
9	|	SPACE		0		10	-/1	SPACE		0	
11	-/1	SPACE			0	12	-/1	SPACE			0
13	-/1	SPACE	0			14	-/1	SPACE	0		
15	-/1	SPACE		0		16	-/1	SPACE		0	
17	-/1	SPACE			0	18	-/1	SPACE			0
19	-/1	SPACE	0			20	-/1	SPACE	0		
21	-/1	SPACE		0		22	-/1	SPACE		0	
23	-/1	SPACE			0	24	-/1	SPACE			0
25	100/3	PANEL SHOP	9.3			26	150/3	PANEL PREP	10.6		
27	|			9.27		28	|			12.7	
29	|				8.72	30	|				11.8
31	100/3	PANEL HR1	14.9			32	100/3	PANEL HR3	10.5		
33	|			15.4		34	|			9.7	
35	|				12	36	|				12
37	100/3	PANEL HR2	11.1			38	400/3	PANEL HM2	21.9		
39	|			13.5		40	|			24.5	
41	|				11.8	42	|				24.3
								TOTAL CONNECTED KVA BY PHASE	83.5	90.3	80.7
								TOTAL CONNECTED AMPS BY PHASE	698	753	672

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	4.88	1.22	(25%)	CONTINUOUS	24.3	30.4	(125%)
MOTORS	86.8	86.8	(100%)	NONCONTINUOUS	36	36	(100%)
RECEPTACLES	105	57.6	(50%>10)	HEATING	2.05	2.05	(100%)
				TOTAL LOAD		214	
				BALANCED 3-PHASE LOAD		594 A	

HR1

ROOM STG 178 | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 100 | MAIN BKR 100
FED FROM HR | NEUTRAL 100% | LUGS STANDARD
NOTE HIGH SCHOOL RECEPTACLES

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	CLASS 156 RECEPTACLE, TV	1.5			2	20/1	SPRK. 144 EXTERIOR RECEPTACLE	0.18		
3	20/1	CLASS 157 RECEPTACLE, TV		1.5		4	20/1	TECH. 169 RECEPTACLE, TV		0.78	
5	20/1	CLASS 158 RECEPTACLE, TV			1.5	6	20/1	CLASS 142 RECEPTACLE, TV			1.5
7	20/1	CLASS 159 RECEPTACLE, TV	1.5			8	20/1	CLASS 141 RECEPTACLE, TV	1.5		
9	20/1	CLASS 160 RECEPTACLE, TV		1.5		10	20/1	CLASS 140 RECEPTACLE, TV		1.5	
11	20/1	CLASS 152 RECEPTACLE, TV			1.5	12	20/1	LAB 167 RECEPTACLE			0.54
13	20/1	CLASS 151 RECEPTACLE, TV	1.5			14	20/1	LAB 167 RECEPTACLE	0.72		
15	20/1	CLASS 150 RECEPTACLE, TV		1.5		16	20/1	LAB 166 RECEPTACLE		0.9	
17	20/1	CLASS 149 RECEPTACLE, TV			1.5	18	20/1	LAB 166 RECEPTACLE			0.72
19	20/1	CLASS 148 RECEPTACLE, TV	1.5			20	20/1	LAB 166 RECEPTACLE, TV	0.72		
21	20/1	CORR. 127 RECEPTACLE		1.08		22	20/1	LAB 166 RECEPTACLE		0.54	
23	20/1	HIGH SCHOOL 143 RECEPTACLE			1.08	24	20/1	LAB 166 RECEPTACLE			0.72
25	20/1	HIGH SCHOOL 143 RECEPTACLE	1.08			26	20/1	LAB 168 RECEPTACLE	0.72		
27	20/1	HIGH SCHOOL 143 TV		0.6		28	20/1	LAB 168 RECEPTACLE		0.54	
29	20/1	HIGH SCHOOL 143 TV			0.6	30	20/1	LAB 168 RECEPTACLE			1.08
31	20/1	CORR. 139 RECEPTACLE, WATER FOUNTAIN	1.09			32	20/1	LAB 168 RECEPTACLE, TV	1.08		
33	20/1	RESTROOM 162 & 164 RECEPTACLE		0.9		34	20/1	TECH. 169 RECEPTACLE		1.08	
35	20/1	JAN. 161 WATER HEATER			0.216	36	20/1	TECH. 169 RECEPTACLE			1.08
37	20/1	EXTERIOR RECEPTACLE	0.9			38	20/1	TECH. 169 RECEPTACLE	0.9		
39	20/1	EXTERIOR RECEPTACLE		1.08		40	20/1	CLOCK & BELL NETWORK SWITCH		1.92	
41	20/1	SPARE			0	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	14.9	15.4	12
								TOTAL CONNECTED AMPS BY PHASE	124	129	100

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
RECEPTACLES	40.2	25.1	(50%>10)	CONTINUOUS	1.92	2.4	(125%)
				HEATING	0.216	0.216	(100%)
				TOTAL LOAD		27.7	
				BALANCED 3-PHASE LOAD		76.9 A	

HR3

ROOM RESOURCE 110.1 | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING FLUSH | BUS AMPS 100 | MAIN BKR 100
FED FROM HR | NEUTRAL 100% | LUGS STANDARD
NOTE OFFICE RECEPTACLES

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	OFFICE 103 RECEPTACLE, TV	1.14			2	20/1	OFFICES 126 & CONSTABLE 126.1 RECEPTACLE	0.9		
3	20/1	OFFICES 104 & 105 RECEPTACLE		1.08		4	20/1	OFFICE 127 &129 RECEPTACLE		1.08	
5	20/1	OFFICES 106 & 107 RECEPTACLE			1.08	6	20/1	NURSE 130 RECEPTACLE			1.08
7	20/1	OFFICE 109 RECEPTACLE, TV	1.14			8	20/1	STUDY 135 & 136 RECEPTACLE	0.72		
9	20/1	OFFICE 112 RECEPTACLE, TV		1.14		10	20/1	FACULTY 125 FRIDGE		0.5	
11	20/1	CONF. 117 TABLE RECEPTACLE, TV			1.56	12	20/1	FACULTY 125 RECEPTACLE, TV			1.32
13	20/1	CONF. 117 RECEPTACLE	1.08			14	20/1	REC 114, RR 115 & 116 RECEPTACLE	0.72		
15	20/1	CONF. 117 UNDER COUNTER FRIDGE		0.5		16	20/1	CORR. 136 RECEPTACLE		0.72	
17	20/1	OFFICES 119 & 122 RECEPTACLE			1.08	18	20/1	RECEPTACLE, WATER FOUNTAIN			0.73
19	20/1	RECEP 120 RECEPTACLE	0.9			20	20/1	VEST. 100 RECEPTACLE	0.72		
21	20/1	CORR. 113 COPIER		0.5		22	20/1	CIRC. 172 TV		0.6	
23	20/1	RESOURCE 110.1 COPIER			0.5	24	20/1	EXTERIOR RECEPTACLE			0.54
25	20/1	WAITING 101 COPIER	0.5			26	20/2	FC-101, FC-102, FC-103, FC-104, FC-105, FC-106	0.275		
27	20/1	CORR 113 RECEPTACLE		0.9		28	|			0.275	
29	20/1	RECEPTACLE, WATER FOUNTAIN			1.09	30	20/1	CLOCK & BELL NETWORK SWITCH			1.92
31	20/1	CORR. 110 & 124	0			32	20/3	BLEACHER	0.61		
33	20/1	WAITING 101 RECEPTACLE		1.08		34	|			0.61	
35	20/1	RECEP. 102 RECEPTACLE			0.54	36	|				0.61
37	20/1	WAITING 101 TV	1.8			38	-/3	SPACE	0		
39	20/1	OFFICE 137 RECEPTACLE		0.72		40	|			0	
41	20/1	SPARE			0	42	|				0
								TOTAL CONNECTED KVA BY PHASE	10.5	9.7	12
								TOTAL CONNECTED AMPS BY PHASE	87.5	80.9	100

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.915	0.229	(25%)	RECEPTACLES	22.5	16.2	(50%>10)
MOTORS	2.38	2.38	(100%)	CONTINUOUS	4.42	5.53	(125%)
				NONCONTINUOUS	3	3	(100%)
				TOTAL LOAD		27.4	
				BALANCED 3-PHASE LOAD		76 A	

HR2

ROOM STG 178 | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 100 | MAIN BKR 100
FED FROM HR | NEUTRAL 100% | LUGS STANDARD
NOTE HIGH SCHOOL RECEPTACLES

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	ART 191 RECEPTACLE	0.72			2	20/1	MS COMMONS 196 RECEPTACLE, TV	0.96		
3	20/1	ART 191 RECEPTACLE		0.9		4	20/1	CIRC. 172 RECEPTACLE		0.72	
5	20/1	ART 191 RECEPTACLE, TV			1.14	6	20/1	CIRC. 172 RECEPTACLE			0.54
7	20/1	LAB 188 RECEPTACLE	0.9			8	20/1	RESTROOM 179 & 180 RECEPTACLE	0.72		
9	20/1	LAB 188 RECEPTACLE		0.54		10	20/1	GYM 173 RECEPTACLE		0.9	
11	20/1	LAB 188 RECEPTACLE			0.9	12	20/1	GYM 173 RECEPTACLE			1.08
13	20/1	LAB 188 RECEPTACLE, TV	0.54			14	20/1	RESTROOMS 174 & 176 EXTERIOR RECEPTACLE, RECEPTACLE	0.9		
15	20/1	LAB 189 RECEPTACLE		0.54		16	20/1	ART 171 RECEPTACLE, TV		1.14	
17	20/1	RESOURCE 187 RECEPTACLE			0.36	18	20/1	ART 171 RECEPTACLE			1.08
19	20/1	RESOURCE 187 COPIER	0.5			20	20/1	MEZZANINE 200 RECEPTACLE	0.9		
21	20/1	CLASS 186 RECEPTACLE, TV		1.5		22	20/1	OFFICES 201 & 202 RECEPTACLE		0.72	
23	20/1	CLASS 185 RECEPTACLE, TV			1.5	24	20/1	EXTERIOR RECEPTACLE			1.08
25	20/1	CLASS 192 RECEPTACLE, TV	1.5			26	20/1	LED VIDEO WALL, RECEPTACLE	0.78		
27	20/1	CLASS 193 RECEPTACLE, TV		1.5		28	20/1	LED VIDEO WALL, RECEPTACLE		0.78	
29	20/1	CLASS 194 RECEPTACLE, TV			1.5	30	20/1	LED VIDEO WALL, RECEPTACLE			0.78
31	20/1	MUSIC 195 RECEPTACLE	0.9			32	20/1	GYM AUDIO RACK	0.6		
33	20/1	OFFICES 198 & 199 RECEPTACLE		1.08		34	20/1	CLOCK & BELL NETWORK SWITCH		1.92	
35	20/1	CORR. 181 RECEPTACLE, WATER FOUNTAIN			1.09	36	20/1	GAS CONTROL PANEL			0.3
37	20/1	STG. 182 RECEPTACLE, WATER FOUNTAIN	0.91			38	20/1	GAS CONTROL PANEL	0.3		
39	20/1	MUSIC 195 RECEPTACLE, TV		0.78		40	20/2	CURTAIN HOIST		0.456	
41	20/1	SPARE			0	42	|				0.456
								TOTAL CONNECTED KVA BY PHASE	11.1	13.5	11.8
								TOTAL CONNECTED AMPS BY PHASE	92.8	112	98.4

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.912	0.228	(25%)	RECEPTACLES	30.1	20	(50%>10)
MOTORS	0.912	0.912	(100%)	CONTINUOUS	4.82	6.03	(125%)
				NONCONTINUOUS	0.6	0.6	(100%)
				TOTAL LOAD		27.8	
				BALANCED 3-PHASE LOAD		77.2 A	

L1

ROOM STG 178 | VOLTS 480Y/277V 3P 4W | AIC 35,000
MOUNTING FLUSH | BUS AMPS 100 | MAIN BKR 100
FED FROM MSB | NEUTRAL 100% | LUGS STANDARD
NOTE LIGHTING

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	LIGHTING	0.818			2	20/1	LIGHTING	1.16		
3	20/1	LIGHTING		1.31		4	20/1	LIGHTING		1.43	
5	20/1	LIGHTING			2.22	6	20/1	LIGHTING			1.27
7	20/1	LIGHTING	2.31			8	20/1	LIGHTING	1.4		
9	20/1	LIGHTING		1.86		10	20/1	LIGHTING		1.33	
11	20/1	LIGHTING			3.36	12	20/1	LIGHTING			1.33
13	20/1	LIGHTING	1.7			14	20/1	LIGHTING	1.54		
15	20/1	LIGHTING		1.58		16	20/1	LIGHTING		2.81	
17	20/1	EXTERIOR LIGHTING			0.502	18	20/1	LIGHTING			2.99
19	20/1	EXTERIOR LIGHTING	3.26			20	-/1	SPACE	0		
21	-/1	SPACE		0		22	-/1	SPACE		0	
23	-/1	SPARE			0	24	-/1	SPACE			0
25	-/1	SPACE	0			26	-/1	SPACE	0		
27	-/1	SPACE		0		28	-/1	SPACE		0	
29	-/1	SPACE			0	30	-/1	SPACE			0
31	-/1	SPACE	0			32	-/1	SPACE	0		
33	-/1	SPACE		0		34	-/1	SPACE		0	
35	-/1	SPACE			0	36	-/1	SPACE			0
37	-/1	SPACE	0			38	-/1	SPACE	0		
39	-/1	SPACE		0		40	-/1	SPACE		0	
41	-/1	SPACE			0	42	40/1	INV1			4.21
								TOTAL CONNECTED KVA BY PHASE	12.2	10.3	15.9
								TOTAL CONNECTED AMPS BY PHASE	44	37.3	57.3

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	38.4	48	(125%)	TOTAL LOAD	48
				BALANCED 3-PHASE LOAD	57.7 A

SHOP

ROOM INDUSTRIAL ARTS 154 | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING FLUSH | BUS AMPS 100 | MAIN BKR 100
FED FROM HR | NEUTRAL 100% | LUGS STANDARD
NOTE SHOP LOADS

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	RECEPTACLE	0.36			2	20/2	ACW-2	1.06		
3	20/1	RECEPTACLE		0.36		4	|			1.06	
5	20/1	RECEPTACLE			0.36	6	20/2	ACW-1			1.06
7	20/1	RECEPTACLE	0.36			8	|		1.06		
9	20/1	RECEPTACLE		0.18		10	20/2	SAW STOP		1.35	
11	20/1	RECEPTACLE			0.18	12	|				1.35
13	20/1	RECEPTACLE	0.54			14	30/2	SAW STOP	2.39		
15	20/1	WATER FOUNTAIN		0.37		16	|			2.39	
17	40/1	AIR COMPRESSOR, MITER SAW			3.12	18	20/2	JOINER			1.25
19	20/1	RECEPTACLE	0.36			20	|		1.25		
21	20/1	RECEPTACLE		0.36		22	20/2	BAND SAW		1.04	
23	20/1	RECEPTACLE			0.36	24	|				1.04
25	20/1	RECEPTACLE	0.36			26	20/2	DUST COLLECTOR	1.56		
27	20/1	TV		0.6		28	|			1.56	
29	-/1	SPACE			0	30	20/1	SPARE			0
31	-/1	SPACE	0			32	20/1	SPARE	0		
33	-/1	SPACE		0		34	20/1	SPARE		0	
35	-/1	SPACE			0	36	20/1	SPARE			0
37	-/1	SPACE	0			38	20/1	SPARE	0		
39	-/1	SPACE		0		40	20/1	SPARE		0	
41	-/1	SPACE			0	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	9.3	9.27	8.72
								TOTAL CONNECTED AMPS BY PHASE	78.5	78.3	72.6

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	4.78	1.2	(25%)	MOTORS	22.5	22.5	(100%)
				RECEPTACLES	4.75	4.75	(50%>10)
				TOTAL LOAD		28.5	
				BALANCED 3-PHASE LOAD		79.1 A	

SHEET GENERAL NOTES

A. --

SHEET KEYED NOTES

1 --

BGWARCHITECTS
Innovative design. Stewardship driven.

REV	DATE	DESCRIPTION
0	12/18/2024	ORIGINAL ISSUE
1	03/17/2025	REV0

PROJECT:
DELMARVA CHRISTIAN HIGH SCHOOL
21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

291-004

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ANTON NATHANSON
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No 29275
DELAWARE
PROFESSIONAL ENGINEER

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SHEET TITLE:
ELECTRICAL SCHEDULES
ORIGINAL ISSUE: Preliminary
PROJECT#: AC733

SHEET NUMBER:
E003

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HM1

ROOM STG 178 | VOLTS 480Y/277V 3P 4W | AIC 65,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR 400
FED FROM MSB | NEUTRAL 100% | LUGS STANDARD
NOTE HIGH SCHOOL MECHANICAL

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/3	RTU-101	3.33			2	25/3	RTU-113	4.88		
3	|			3.33		4	|			4.88	
5	|				3.33	6	|				4.88
7	20/3	RTU-102	3.33			8	25/3	RTU-114	4.88		
9	|			3.33		10	|			4.88	
11	|				3.33	12	|				4.88
13	25/3	RTU-103	4.66			14	15/3	RTU-115	2.88		
15	|			4.66		16	|			2.88	
17	|				4.66	18	|				2.88
19	45/3	RTU-104	7.54			20	25/3	RTU-116	4.66		
21	|			7.54		22	|			4.66	
23	|				7.54	24	|				4.66
25	25/3	RTU-105	4.88			26	15/3	RTU-117	2.66		
27	|			4.88		28	|			2.66	
29	|				4.88	30	|				2.66
31	20/3	RTU-106	3.33			32	20/3	RTU-118	3.33		
33	|			3.33		34	|			3.33	
35	|				3.33	36	|				3.33
37	25/3	RTU-107	4.88			38	30/3	RTU-119	5.76		
39	|			4.88		40	|			5.76	
41	|				4.88	42	|				5.76
43	20/3	RTU-108	3.33			44	30/3	RTU-120	5.76		
45	|			3.33		46	|			5.76	
47	|				3.33	48	|				5.76
49	25/3	RTU-109	4.88			50	30/3	RTU-121	5.76		
51	|			4.88		52	|			5.76	
53	|				4.88	54	|				5.76
55	25/3	RTU-110	4.66			56	20/3	BP-101	2.33		
57	|			4.66		58	|			2.33	
59	|				4.66	60	|				2.33
61	15/3	RTU-111	2.88			62	35/3	DOAS-1	5.99		
63	|			2.88		64	|			5.99	
65	|				2.88	66	|				5.99
67	25/3	RTU-112	3.99			68	-/3	SPACE	0		
69	|			3.99		70	|			0	
71	|				3.99	72	|				0
								TOTAL CONNECTED KVA BY PHASE	101	101	101
								TOTAL CONNECTED AMPS BY PHASE	363	363	363

	CONN KVA	CALC KVA			CALC KVA
LARGEST MOTOR	22.6	5.65	(25%)	TOTAL LOAD	307
MOTORS	302	302	(100%)	BALANCED 3-PHASE LOAD	370 A

HM2

ROOM STG 178 | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR 400
FED FROM HR | NEUTRAL 100% | LUGS STANDARD
NOTE HIGH SCHOOL MECHANICAL

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	30/2	HP-104	1.29			2	20/1	EF-104, EF-105	0.84		
3	|			1.29		4	20/1	EXTERIOR RECEPTACLE		1.08	
5	20/2	HP-105			1.29	6	20/1	EF-101, EF-103			0.948
7	|		1.29			8	20/1	EF-108	0.528		
9	20/2	HP-107		1.46		10	20/1	EF-106		0.696	
11	|				1.46	12	20/1	EF-107			0.696
13	20/2	HP-202	1.29			14	20/1	EF-102	0.528		
15	|			1.29		16	20/1	EXTERIOR RECEPTACLE		0.9	
17	20/2	HP-201			1.63	18	20/1	EXTERIOR RECEPTACLE			0.72
19	|		1.63			20	20/1	EXTERIOR RECEPTACLE	0.9		
21	20/2	HP-103		1.29		22	20/2	EUH-1		1.5	
23	|				1.29	24	|				1.5
25	30/2	HP-101	2.44			26	20/1	HAND DRYER	1		
27	|			2.44		28	20/1	HAND DRYER		1	
29	30/2	VRF-101			2.42	30	20/1	HAND DRYER			1
31	|		2.42			32	20/1	HAND DRYER	1		
33	20/2	HP-102		1.56		34	20/1	HAND DRYER		1	
35	|				1.56	36	20/1	HAND DRYER			1
37	20/2	HP-106	1.29			38	15/2	ERH-1	0.375		
39	|			1.29		40	|			0.375	
41	20/1	GYM RS-2, SCOREBOARD			1.44	42	-/1	SPACE			0
43	20/1	GYM RS-2	1.3			44	-/1	SPACE	0		
45	20/1	MEZZANINE RS-2		1.08		46	20/2	EUH-2		1.5	
47	20/1	HIGH 149 RS-2			0.864	48	|				1.5
49	20/1	WAITING RS-2	0.648			50	20/2	EUH-2	1.5		
51	20/1	HOOP HOIST		1.66		52	|			1.5	
53	20/1	HOOP HOIST			1.66	54	20/1	HOOP HOIST			1.66
55	20/1	HOOP HOIST	1.66			56	-/3	SPACE	0		
57	20/1	HOOP HOIST		1.66		58	|			0	
59	20/1	HOOP HOIST			1.66	60	|				0
								TOTAL CONNECTED KVA BY PHASE	21.9	24.5	24.3
								TOTAL CONNECTED AMPS BY PHASE	183	204	202

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	4.88	1.22	(25%)	RECEPTACLES	3.6	3.6	(50%>10)
MOTORS	61	61	(100%)	CONTINUOUS	0.14	0.175	(125%)
				NONCONTINUOUS	6	6	(100%)
				TOTAL LOAD		72	
				BALANCED 3-PHASE LOAD		200 A	

PREP

ROOM PREP. ROOM 183 | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING FLUSH | BUS AMPS 150 | MAIN BKR 150
FED FROM HR | NEUTRAL 100% | LUGS STANDARD
NOTE PREP AND SERVING ROOM LOADS

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	MICROWAVE	1			2	20/1	MICROWAVE	1		
3	20/1	MICROWAVE		1		4	20/1	MICROWAVE		1	
5	20/1	MICROWAVE			1	6	20/1	HOT DOG GRILL			1.15
7	20/1	MICROWAVE	1			8	20/1	NACHO CHEESE DISPENSER	0.225		
9	20/1	MICROWAVE		1		10	20/1	POPCORN MAKER		1.61	
11	20/1	MICROWAVE			1	12	20/1	TV			1.2
13	20/1	MICROWAVE	1			14	20/1	SODA MACHINE	0.156		
15	20/1	MICROWAVE		1		16	50/3	DISHWASHER		5.48	
17	20/1	RECEPTACLE			0.36	18	|				5.48
19	20/1	RECEPTACLE	0.18			20	|		5.48		
21	20/1	RECEPTACLE		0.36		22	-/1	SPACE		0	
23	20/1	RECEPTACLE			0.36	24	-/1	SPACE			0
25	20/1	RECEPTACLE	0.54			26	-/1	SPACE	0		
27	20/1	FREEZER		1.24		28	-/1	SPACE		0	
29	20/1	FREEZER			1.24	30	-/1	SPACE			0
31	-/1	SPACE	0			32	-/1	SPACE	0		
33	-/1	SPACE		0		34	-/1	SPACE		0	
35	-/1	SPACE			0	36	-/1	SPACE			0
37	-/1	SPACE	0			38	-/1	SPACE	0		
39	-/1	SPACE		0		40	-/1	SPACE		0	
41	-/1	SPACE			0	42	-/1	SPACE			0
								TOTAL CONNECTED KVA BY PHASE	10.6	12.7	11.8
								TOTAL CONNECTED AMPS BY PHASE	88.1	106	98.1

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
RECEPTACLES	4.15	4.15	(50%>10)	NONCONTINUOUS	26.4	26.4	(100%)
CONTINUOUS	2.63	3.29	(125%)	HEATING	1.84	1.84	(100%)
				TOTAL LOAD		35.7	
				BALANCED 3-PHASE LOAD		99.1 A	

MSB

ROOM CENTERAL HIGHSCHOOL EXTERIOR | VOLTS 480Y/277V 3P 4W | AIC 65,000
MOUNTING SURFACE | BUS AMPS 3000 | MAIN BKR 3000
FED FROM UTILITY | NEUTRAL 100% | LUGS STANDARD
NOTE MAIN SERVICE

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	60/3	SPD	0	0	0	-
2	350/3	XFMR T-MDP-1	33.5	33.5	33.5	3-1/2"C,3#600kcmil,#600kcmil N,#1G
3	350/3	XFMR T-MDP-2	29.4	29.4	29.4	3-1/2"C,3#500kcmil,#500kcmil N,#2G
4	100/3	PANEL L1	12.2	10.3	15.9	1-1/2"C,3#1,#1N,#8G
5	400/3	PANEL HM1	101	101	101	3-1/2"C,3#600kcmil,#600kcmil N,#2G
6	350/3	XFMR T-HR	83.5	90.3	80.7	3-1/2"C,3#500kcmil,#500kcmil N,#2G
7	400/3	FUTURE PANEL	0	0	0	-
8	20/3	SPACE	0	0	0	-
9	20/3	SPACE	0	0	0	-
10	20/3	SPACE	0	0	0	-
11	20/3	SPACE	0	0	0	-
12	20/3	SPACE	0	0	0	-
13	20/3	SPACE	0	0	0	-
14	20/3	SPACE	0	0	0	-
15	20/3	SPACE	0	0	0	-
16	20/3	SPACE	0	0	0	-
17	20/3	SPACE	0	0	0	-
18	20/3	SPACE	0	0	0	-
19	20/3	SPACE	0	0	0	-
20	20/3	SPACE	0	0	0	-
		TOTAL CONNECTED KVA BY PHASE	259	264	260	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	38.4	48	(125%)	CONTINUOUS	24.3	30.4	(125%)
LARGEST MOTOR	22.6	5.65	(25%)	NONCONTINUOUS	36	36	(100%)
MOTORS	388	388	(100%)	HEATING	2.05	2.05	(100%)
RECEPTACLES	105	57.6	(50%>10)	METERED DEMAND	189	236	(125%)
				TOTAL LOAD		804	
				BALANCED 3-PHASE LOAD		967 A	

SHEET GENERAL NOTES

A. --

SHEET KEYED NOTES

1 --

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REV	DATE	DESCRIPTION
0	12/18/2024	ORIGINAL ISSUE
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PROJECT:
DELMARVA CHRISTIAN HIGH SCHOOL
21777 SUSSEX PINES RD,
GEORGETOWN, DE 19947

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SHEET TITLE:
ELECTRICAL SCHEDULES

ORIGINAL ISSUE: Preliminary
PROJECT#: AC733

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E004

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(X) MDP-2 — EXISTING

ROOM EXISTING MECH 145	VOLTS 208Y/120V 3P 4W	AIC 25,000
MOUNTING SURFACE	BUS AMPS 800	MAIN BKR MLO
FED FROM T-MDP-2	NEUTRAL 100%	LUGS STANDARD
NOTE		

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	-/3	SPACE	0	0	0	-
2	-/3	SPACE	0	0	0	-
3	-/3	SPACE	0	0	0	-
4	20/3	(X) OFFICE PANEL	0	0	0	-
5	20/3	(X) STAGE PANEL	0	0	0	-
6	20/3	(X) GYM PANEL	0	0	0	-
7	400/3	(X) HVAC PANEL	0	0	0	-
8	200/3	(X) 30 TON HVAC UNIT	0	0	0	-
		TOTAL CONNECTED KVA BY PHASE	29.4	29.4	29.4	

	CONN KVA	CALC KVA			CALC KVA
METERED DEMAND	88.2	110	(125%)	TOTAL LOAD	110
				BALANCED 3-PHASE LOAD	306 A

INV1

ROOM STG 178	INPUT VOLTS 277V 1P 2W	AIC 10,000
MOUNTING SURFACE	OUTPUT VOLTS 277V 1P 2W	INPUT KVA 8
FED FROM L1		OUTPUT KVA 8
NOTE EMERGENCY LIGHTING		

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	FEEDER RACEWAY AND CONDUCTORS
1	20/1	LIGHTING	2.94	3/4"C,1#10,#10N,#10G
2	20/1	LIGHTING	0.727	3/4"C,1#10,#10N,#10G
3	20/1	LIGHTING	0.54	3/4"C,1#10,#10N,#10G
4	20/1	SPARE	0	
5	20/1	SPARE	0	
6	20/1	SPARE	0	
7	20/1	SPARE	0	
8	20/1	SPARE	0	
9	20/1	SPARE	0	
10	20/1	SPARE	0	
		TOTAL CONNECTED KVA BY PHASE	4.21	

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	4.21	5.26	(125%)	TOTAL LOAD	5.26
				TOTAL LOAD	19 A

(X) MDP-1 — EXISTING

ROOM MDP 106	VOLTS 208Y/120V 3P 4W	AIC 10,000
MOUNTING SURFACE	BUS AMPS 800	MAIN BKR MLO
FED FROM T-MDP-1	NEUTRAL 100%	LUGS STANDARD
NOTE		

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	225/1	(X) PANEL D	0			-
2	225/3	(X) PANEL 1-D	0	0	0	-
3	225/3	(X) PANEL A	0	0	0	-
4	100/1	(X) PANEL B	0			-
5	225/3	(X) PANEL C	0	0	0	-
6	225/3	(X) PANEL HVAC	0	0	0	-
		TOTAL CONNECTED KVA BY PHASE	33.5	33.5	33.5	

	CONN KVA	CALC KVA			CALC KVA
METERED DEMAND	101	126	(125%)	TOTAL LOAD	126
				BALANCED 3-PHASE LOAD	349 A

SHEET GENERAL NOTES

A. --

SHEET KEYED NOTES

1 --

BGW ARCHITECTS
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SHEET NUMBER: E005

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SHEET GENERAL NOTES

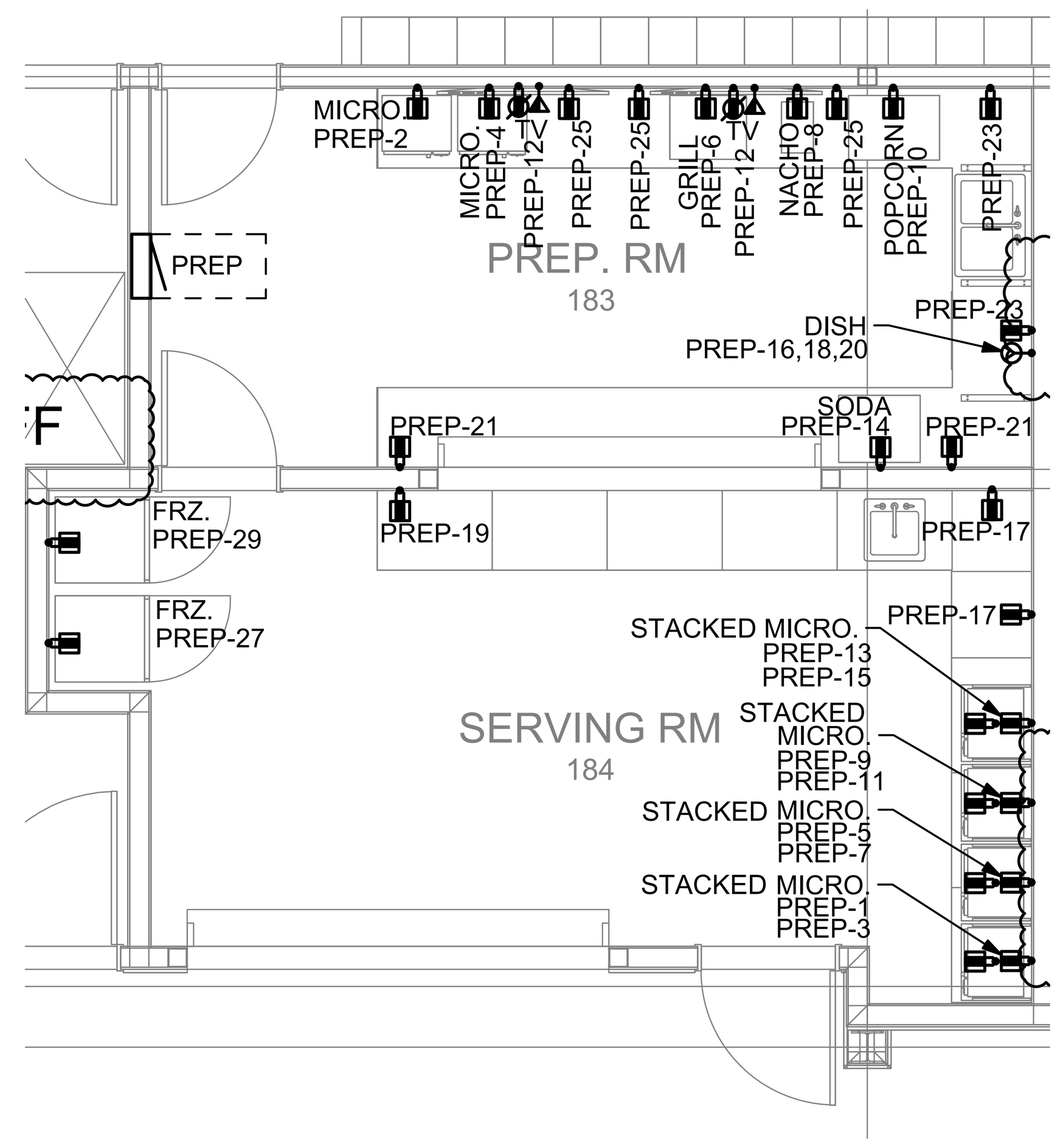
A. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL DEVICE LOCATIONS WITH ARCHITECTS DIMENSION PLAN PRIOR TO ROUGH IN.
B. PROVIDE DEDICATED NEUTRALS FOR EACH CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
C. CIRCUIT DESIGNATIONS SHOWN ARE FOR PANEL "HR2" UNO.
D. PROVIDE METALLIC COVER AND HOUSING FOR EXTERIOR WEATHER PROOF OUTLETS.

SHEET KEYED NOTES

1. PROVIDE INDUSTRIAL CORD REEL WITH DUPLEX GFCI OUTLET WITH WEATHER PROOF IN-USE COVER.
2. PROVIDE 4"C LINK THROUGH DRYWALL CEILING TO LINK CABLE TRAYS.
3. REFER TO E600 DETAILS 1 & 2 FOR LOW VOLTAGE ACCESS CONTROL DETAILING.
4. CIRCUIT INDOOR MECHANICAL UNIT POWER TO MATCHING ROOFTOP UNIT.
5. PROVIDE A GFCI BREAKER OR ALTERNATE MEANS OF GFCI PROTECTION TO COMPLY WITH NEC 210(B).

BID ALTERNATES

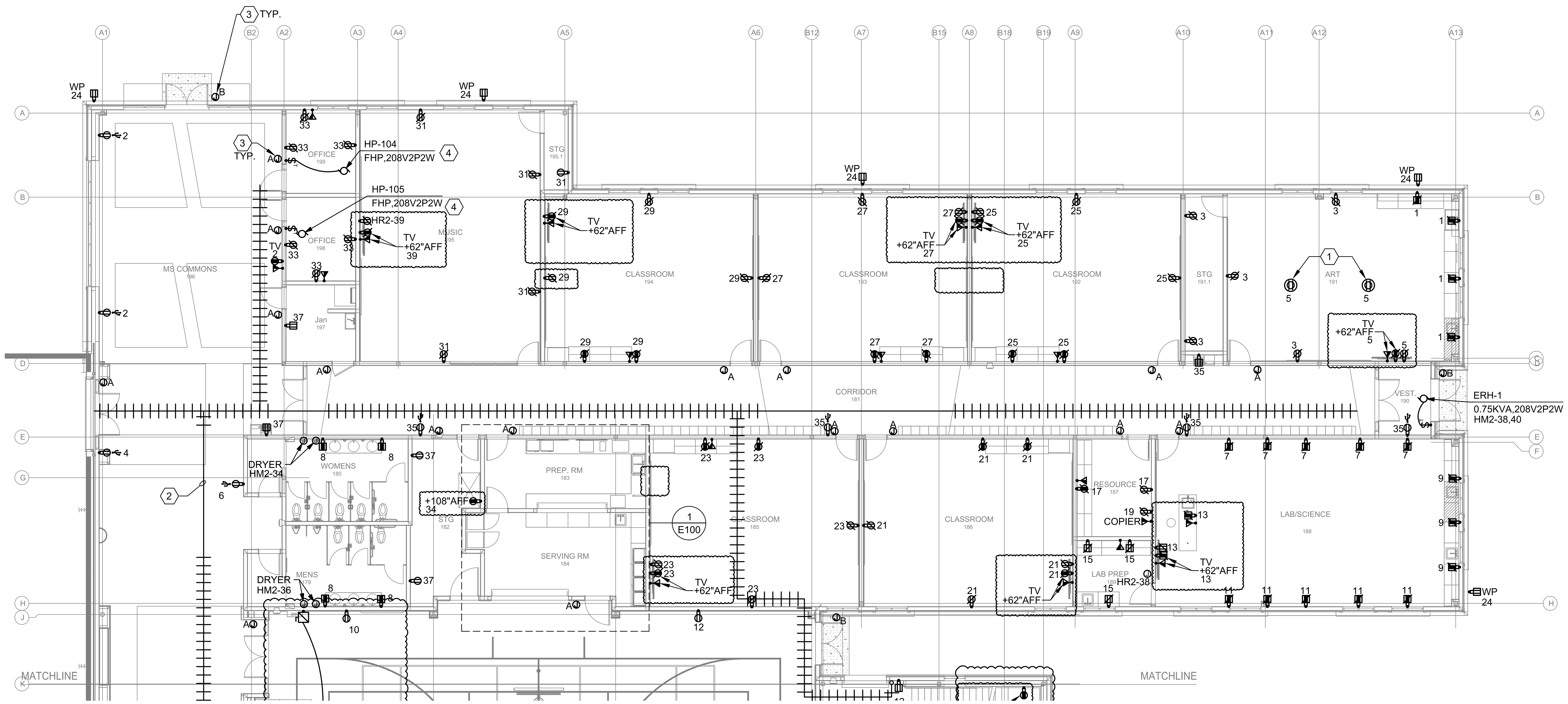
1. PROVIDE ADD ALTERNATE FOR ALL CABLE TRAYS DEPICTED ON PLANS.



1 ENLARGED POWER - PREP. RM 183 & SERVING RM 184
SCALE: 1/4" = 1'-0"

NORTH

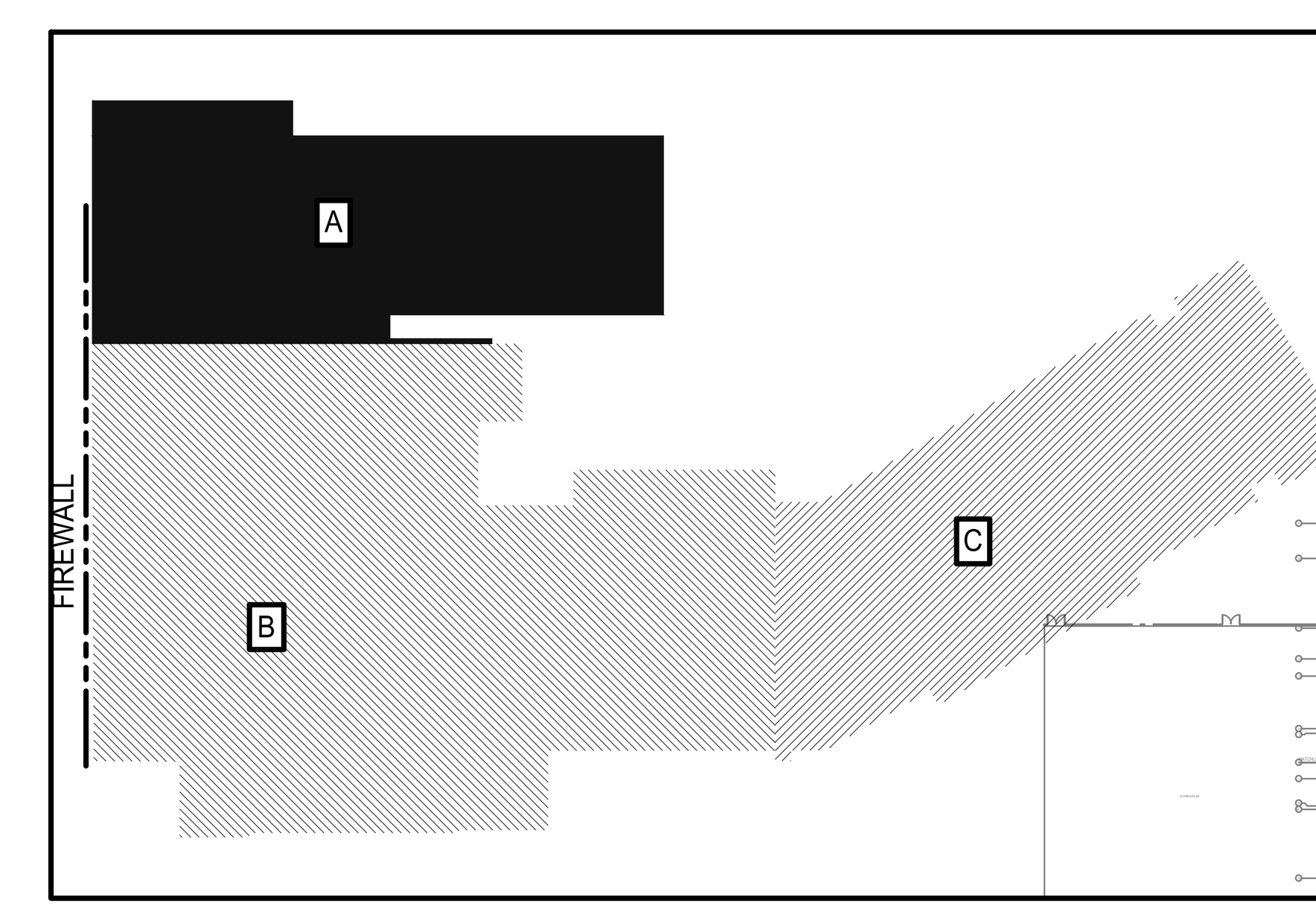
SCALE: 1/4" = 1'-0"



2 POWER FIRST FLOOR PLAN- A
SCALE: 1/8" = 1'-0"

NORTH

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



KEY FLOOR PLAN
SCALE: NTS

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REV	DATE	DESCRIPTION
0	12/18/2024	ORIGINAL ISSUE
1	03/17/2025	REV 1

PROJECT: DELMARVA CHRISTIAN HIGH SCHOOL
21777 SUSSEX PINES RD. GEORGETOWN, DE 19947

291-004

SEAL: ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE: POWER FIRST FLOOR PLAN- A

SHEET NUMBER: E100

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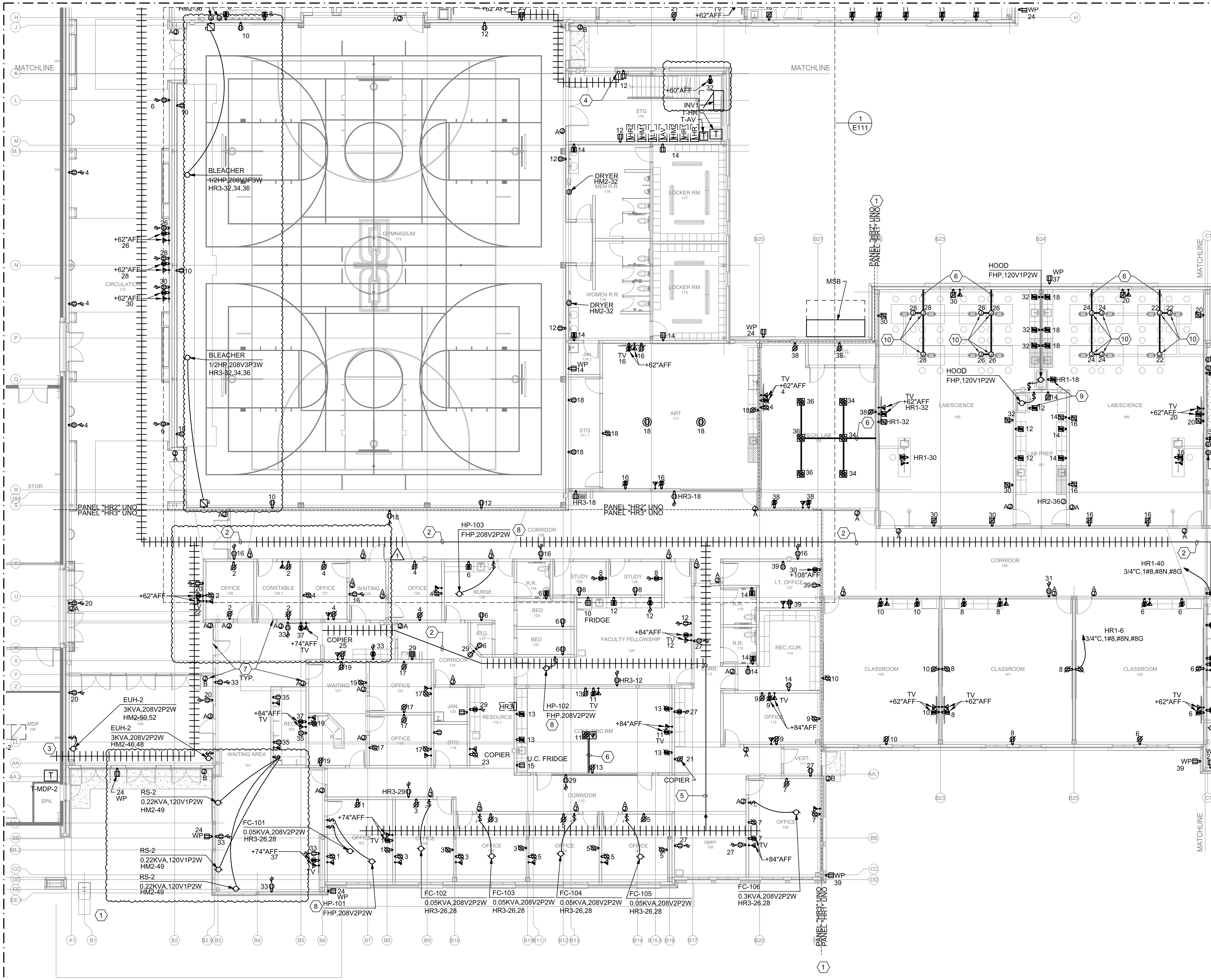


POWER FIRST FLOOR PLAN-B

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

NORTH

0" 4' 12' / 2' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET GENERAL NOTES

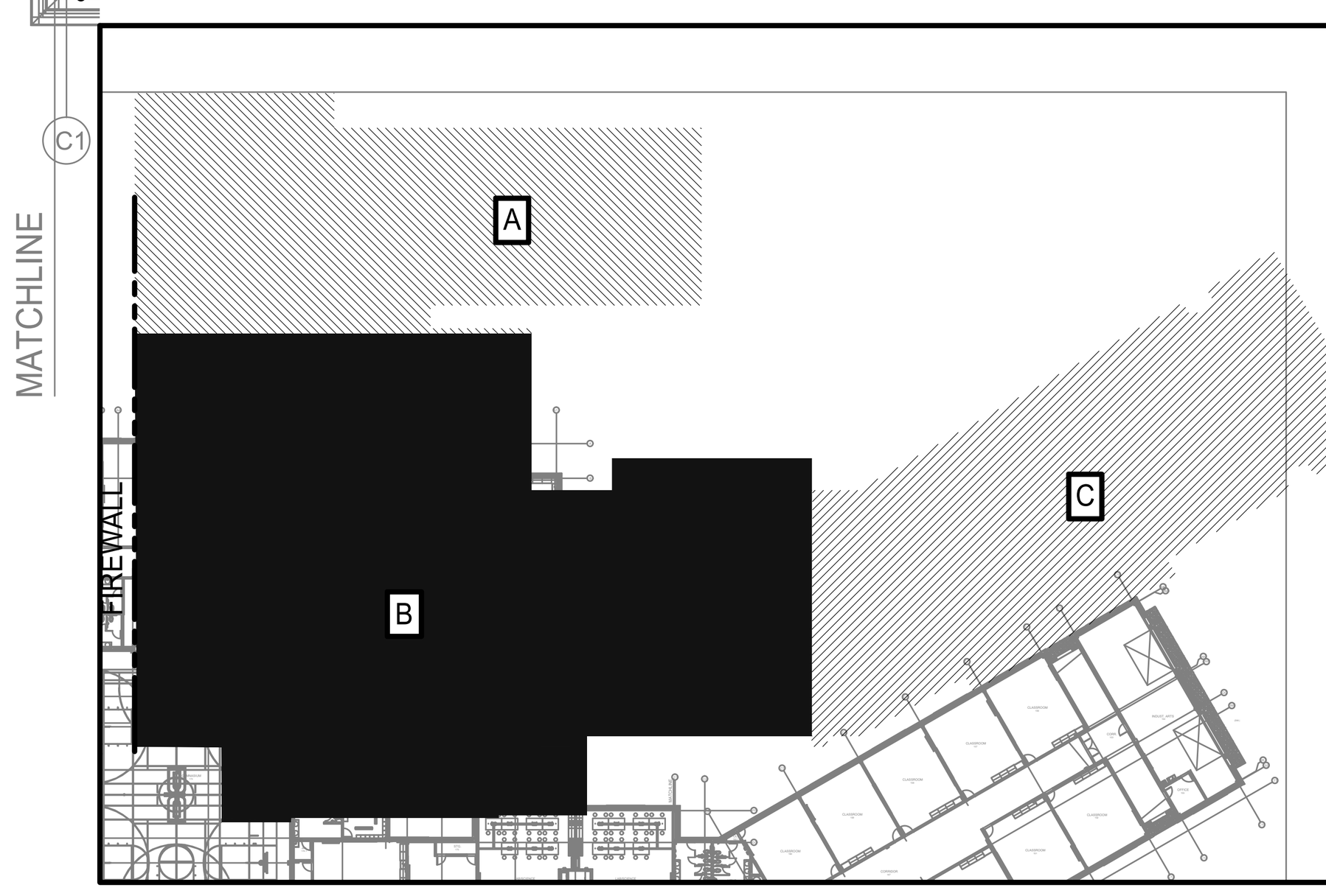
- A. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL DEVICE LOCATIONS WITH ARCHITECTS DIMENSION PLAN PRIOR TO ROUGH IN.
- B. PROVIDE DEDICATED NEUTRALS FOR EACH CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
- C. CIRCUIT DESIGNATIONS SHOWN ARE FOR PANEL "HR2" UNO.
- D. PROVIDE METALLIC COVER AND HOUSING FOR EXTERIOR WEATHER PROOF OUTLETS.

SHEET KEYED NOTES

1. CIRCUIT DESIGNATIONS SHOWN WITH AREA DIVISION DELINEATION.
2. PROVIDE (1) 4"C LINK THROUGH DRYWALL CEILING TO LINK CABLE TRAYS.
3. CABLE TRAY PENETRATION THROUGH RATED FIRE WALL.
4. PROVIDE (1) 4"C TO MEZZANINE TO TERMINATE IN 24" X 24" BOX.
5. PROVIDE (1) 2"C BETWEEN CABLE TRAYS RUNNING AT DECK LEVEL AND DROPPING AT CONNECTION POINTS.
6. PROVIDE (1) 3/4"C FOR POWER AND (1) 1-1/4"C FOR DATA IN SLAB FOR FLOOR BOX.
7. REFER TO E600 DETAILS 1 & 2 FOR LOW VOLTAGE ACCESS CONTROL DETAILING.
8. CIRCUIT INDOOR MECHANICAL UNIT POWER TO MATCHING ROOFTOP UNIT.
9. SHOWN DUPLEX IS BUILT INTO THE EXHAUST HOOD.
10. CONNECT J-BOX TO BUILT IN DUPLEX OF THE LAB DESK ABOVE.

BID ALTERNATES

1. PROVIDE ADD ALTERNATE FOR ALL CABLE TRAYS DEPICTED ON PLANS.



KEY FLOOR PLAN

SCALE: NTS

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REV	DATE	DESCRIPTION
0	12/18/2024	ORIGINAL ISSUE
1	03/17/2025	REV0

PROJECT: DELMARVA CHRISTIAN HIGH SCHOOL
21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

291-004

ANTON NATHANSON
LICENSE No 29275
DELAWARE PROFESSIONAL ENGINEER

SEAL:

SHEET TITLE: POWER FIRST FLOOR PLAN-B

ORIGINAL ISSUE: Preliminary

PROJECT#: AC733

SHEET NUMBER: E101

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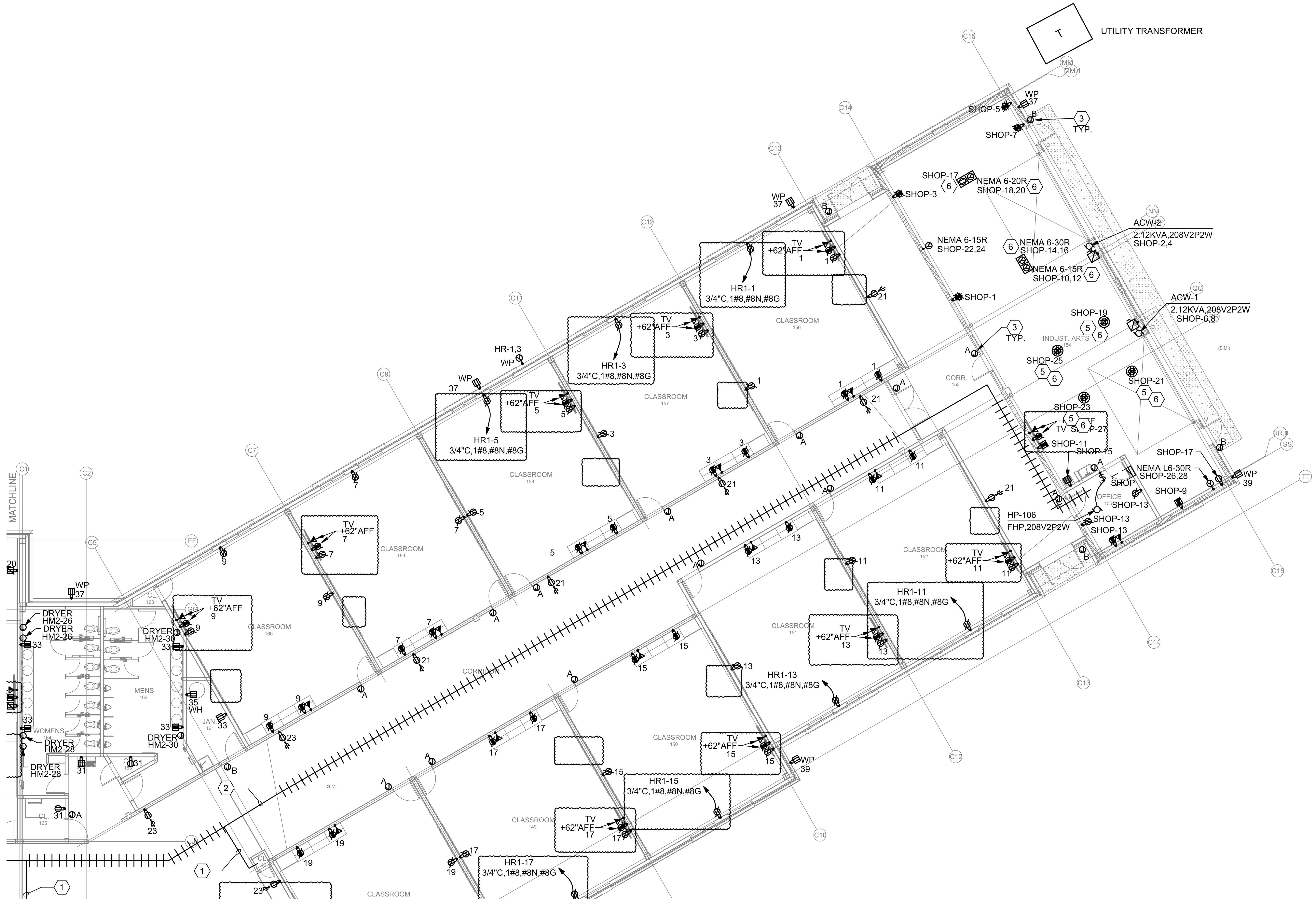
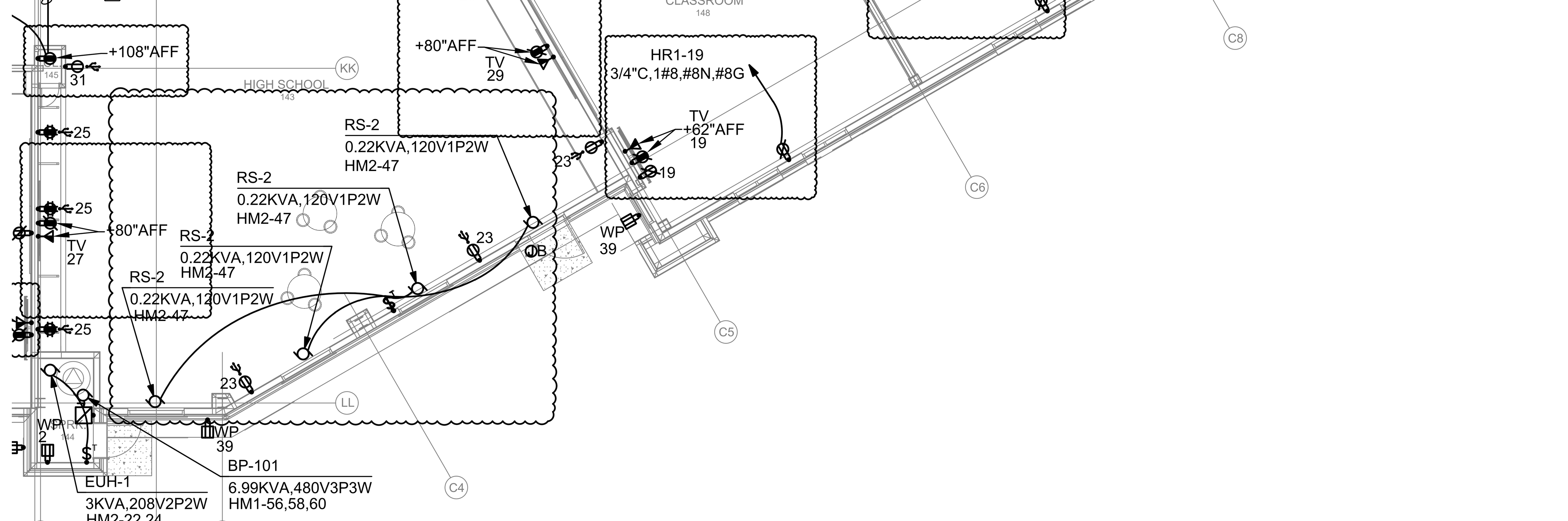



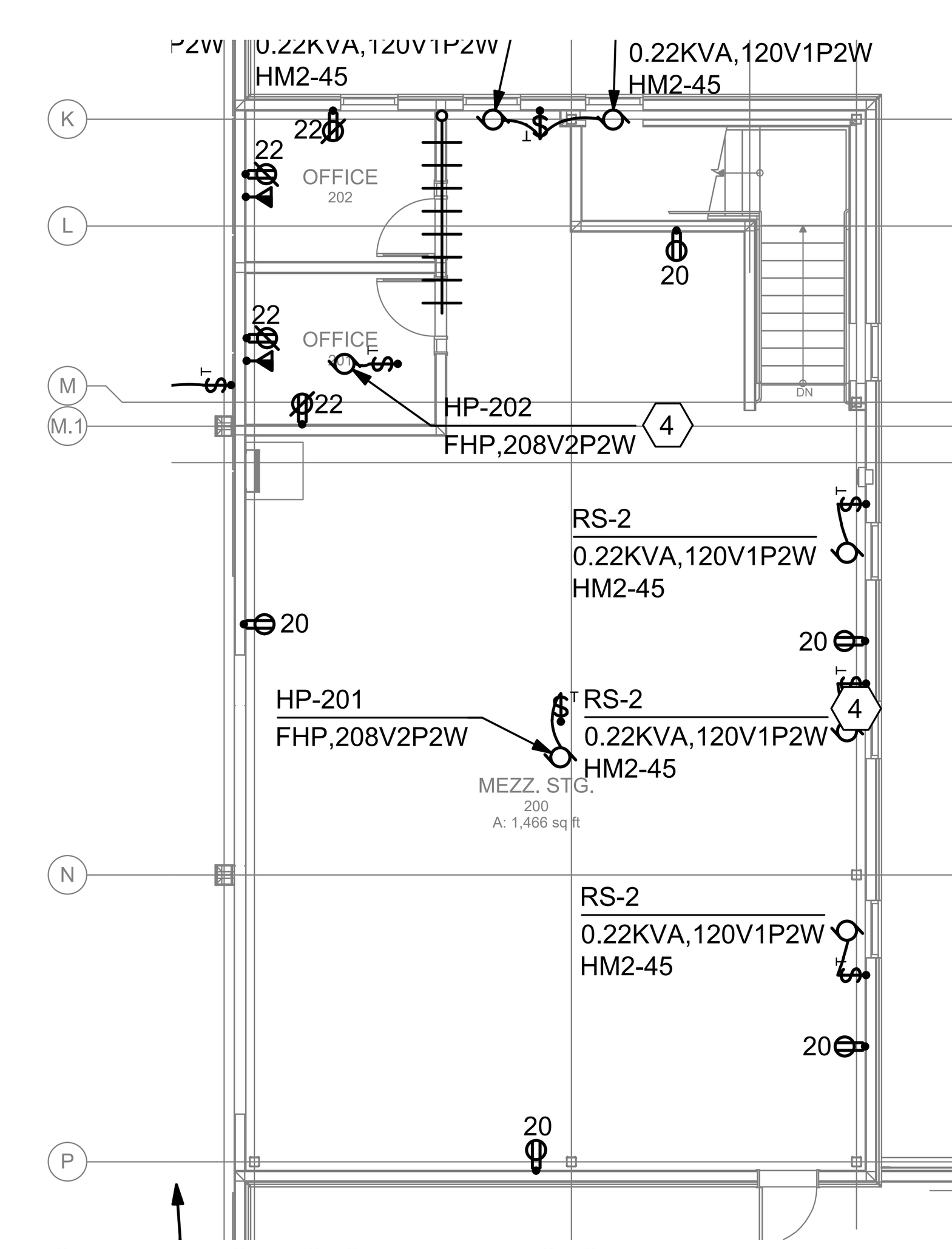
2 POWER FIRST FLOOR PLAN-C

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

NORTH

0" 4' 12' 2' 8' 16'

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



1 POWER SECOND FLOOR MEZZANINE

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

NORTH

0" 4' 12' 2' 8' 16'

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

SHEET GENERAL NOTES

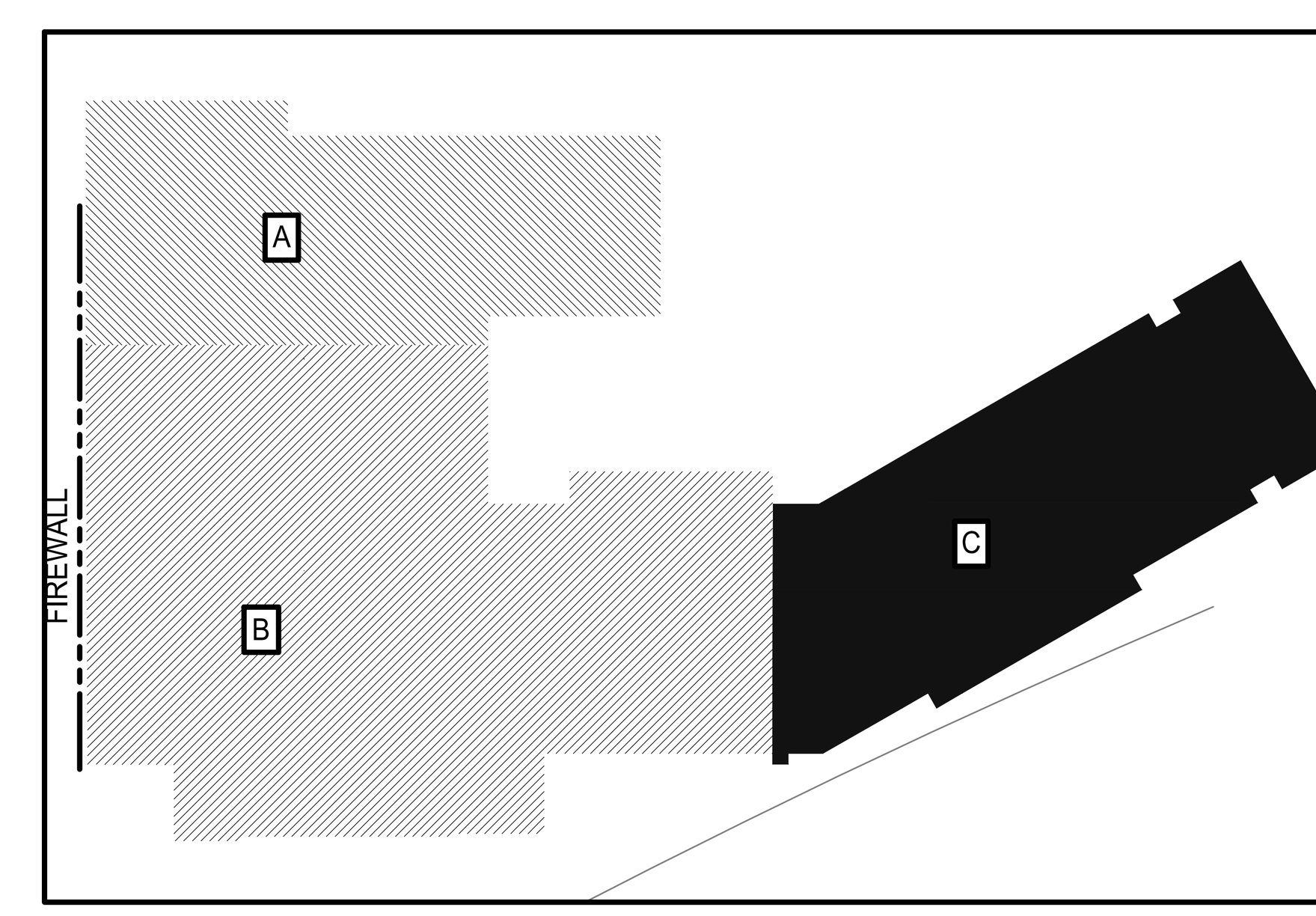
A. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL DEVICE LOCATIONS WITH ARCHITECTS DIMENSION PLAN PRIOR TO ROUGH IN.
B. PROVIDE DEDICATED NEUTRALS FOR EACH CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
C. CIRCUIT DESIGNATIONS SHOWN ARE FOR PANEL "HR2" UNO.
D. PROVIDE METALLIC COVER AND HOUSING FOR EXTERIOR WEATHER PROOF OUTLETS.

SHEET KEYED NOTES

1. PROVIDE 1-1/2"C TO 10" X 10" TERMINATION BOX IN CLOSET.
2. PROVIDE 4"C LINK THROUGH DRYWALL CEILING TO LINK CABLE TRAYS.
3. REFER TO E600 DETAILS 1 & 2 FOR LOW VOLTAGE ACCESS CONTROL DETAILING.
4. CIRCUIT INDOOR MECHANICAL UNIT POWER TO MATCHING ROOFTOP UNIT.
5. PROVIDE INDUSTRIAL CORD REEL HUBBELL #ACA12335-BC20 WITH DOUBLE GFCI OUTLET WITH WEATHER PROOF IN-USE COVER.
6. COORDINATE PLACEMENT OF FLOOR AND CEILING RECEPTACLES WITH ARCHITECT PRIOR TO ROUGH-IN.

BID ALTERNATES

1. PROVIDE ADD ALTERNATE FOR ALL CABLE TRAYS DEPICTED ON PLANS.



KEY FLOOR PLAN

SCALE: NTS

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REV	DATE	DESCRIPTION
0	12/18/2024	ORIGINAL ISSUE
1	03/17/2025	REV1

PROJECT: DELMARVA CHRISTIAN HIGH SCHOOL
21777 SUSSEX PINES RD.
GEORGETOWN, DE 19947

291-004

SEAL: ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE: POWER FIRST FLOOR PLAN-C

SHEET NUMBER: E102

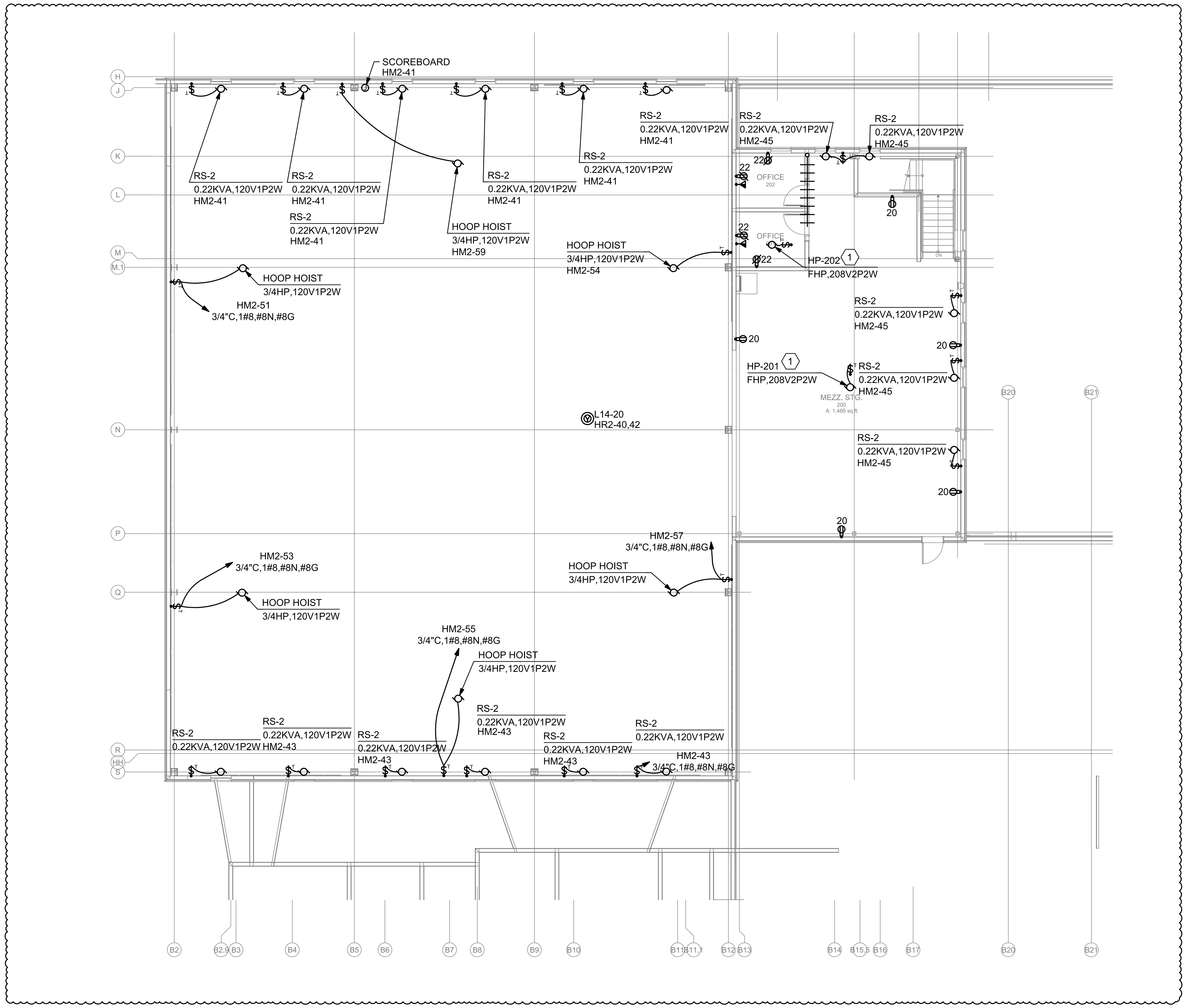
DO NOT SCALE DRAWING

SHEET GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL DEVICE LOCATIONS WITH ARCHITECTS DIMENSION PLAN PRIOR TO ROUGH IN.
B. PROVIDE DEDICATED NEUTRALS FOR EACH CIRCUIT. SHARED NEUTRALS ARE NOT PERMITTED.
C. CIRCUIT DESIGNATIONS SHOWN ARE FOR PANEL "HR2" UNO.
D. PROVIDE METALLIC COVER AND HOUSING FOR EXTERIOR WEATHER PROOF OUTLETS.
E. PROVIDE ADD ALTERNATE FOR ALL CABLE TRAYS DEPICTED ON PLANS.

SHEET KEYED NOTES

1. CIRCUIT INDOOR MECHANICAL UNIT POWER TO MATCHING ROOFTOP UNIT.
2. POSITION CONTROLS FOR RS-2 BLINDS TOGETHER.

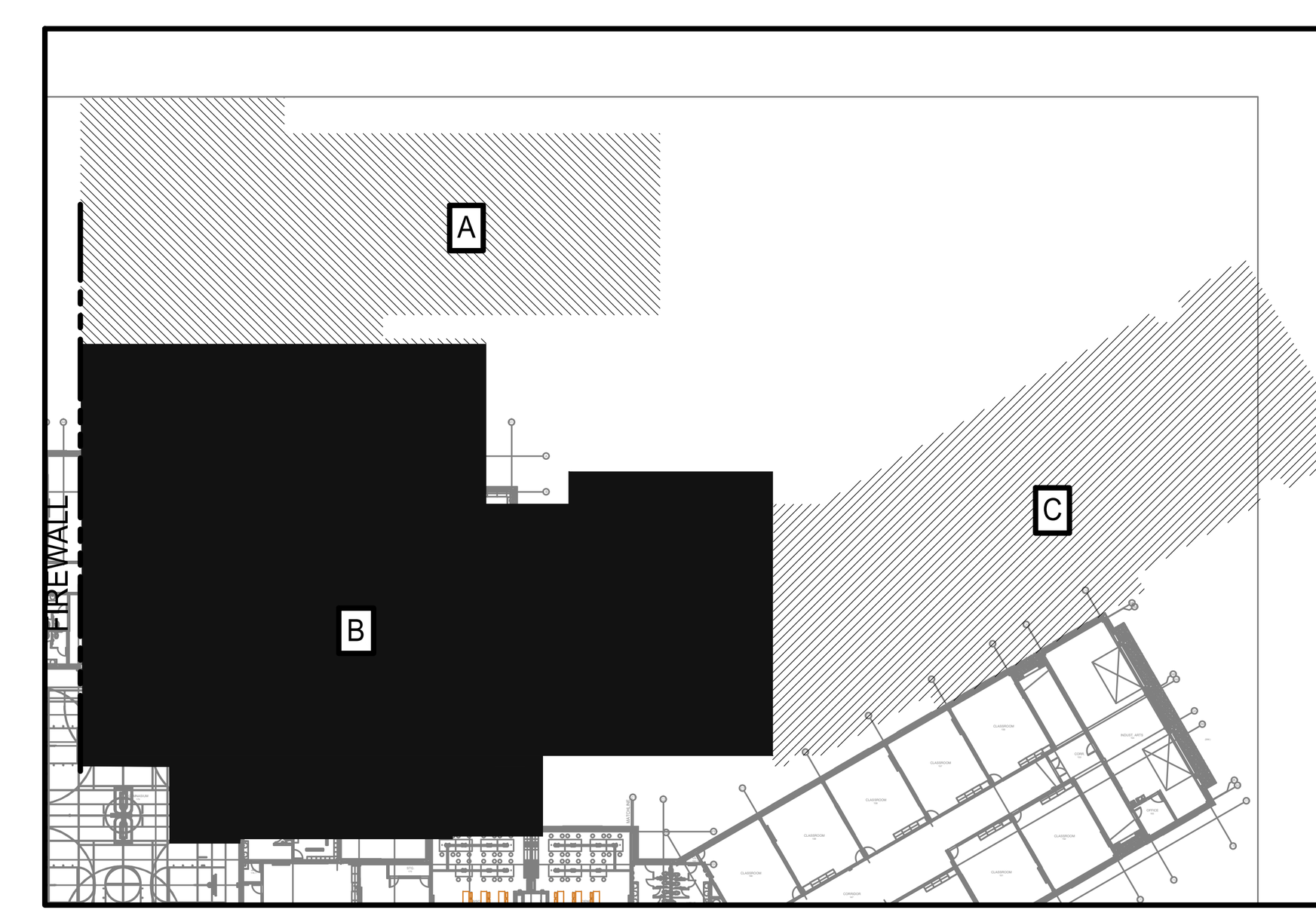


POWER SECOND FLOOR PLAN-B

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

NORTH

0" 4' 12'
2' 8' 16'
SCALE: 1/8" = 1'-0"



KEY FLOOR PLAN

SCALE: NTS

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REV	DATE	DESCRIPTION
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1	03/17/2025	REV0

PROJECT: DELMARVA CHRISTIAN HIGH SCHOOL
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GEORGETOWN, DE 19947

291-004

SEAL: ANTON NATHANSON LICENSE No 29275 DELAWARE PROFESSIONAL ENGINEER

SHEET TITLE: POWER SECOND FLOOR PLAN-B

SHEET NUMBER: E111

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