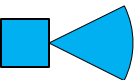
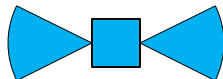


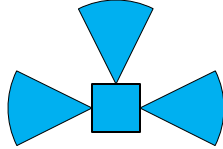
Technology Design – Video Surveillance Components



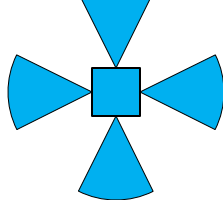
Single View – Indoor Camera



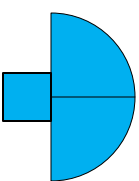
Two Way – Indoor Camera



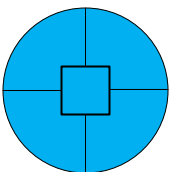
Three Way – Indoor Camera



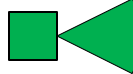
Four Way – Indoor Camera



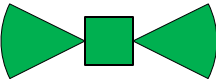
180-Degree – Indoor Camera



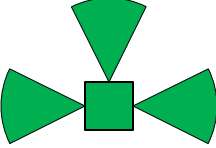
Fisheye – Indoor Camera



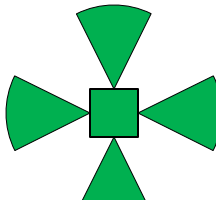
Single View – Indoor Camera



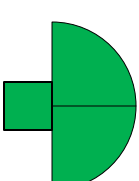
Two Way – Indoor Camera



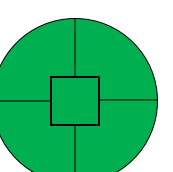
Three Way – Indoor Camera



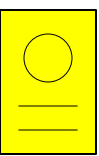
Four Way – Indoor Camera




180-Degree – Indoor Camera



Fisheye – Indoor Camera

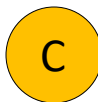


Video Intercom

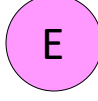


Intercom Master Station

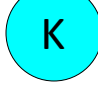
Technology Design – Door Access Control Components




Card Reader



Event Card Reader




Keypad Card Reader




ADA Operator Button


Technology Design – Audio/Visual Components




Interactive Flat Panel



Non-Interactive Flat Panel

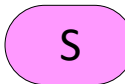


Audio Speaker




Teacher Station Location


Technology Design – Public Address & Clocks Components




Strobe



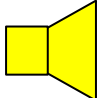
PA Speaker – Ceiling (interior)




PA Speaker – Wall (interior)




PA Speaker – Outdoor (15W)



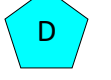
PA Speaker – Outdoor (30W)



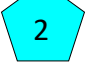
Analog Clock




Analog Clock – Dual Sided




Digital Clock



Digital Clock – Dual Sided




Bell




PA Control Console


Technology Design – Structured Cabling Components




General Data Cable (1 per location unless otherwise noted)



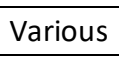
Wireless Access Point Data Cable (1 per location unless otherwise noted)




Audio/Visual Data Cable (1 per location unless otherwise noted)




Clock Data Cable (2 per location unless otherwise noted)



Camera Data Cable – see Video Surveillance Components  
(1 per location unless otherwise noted)



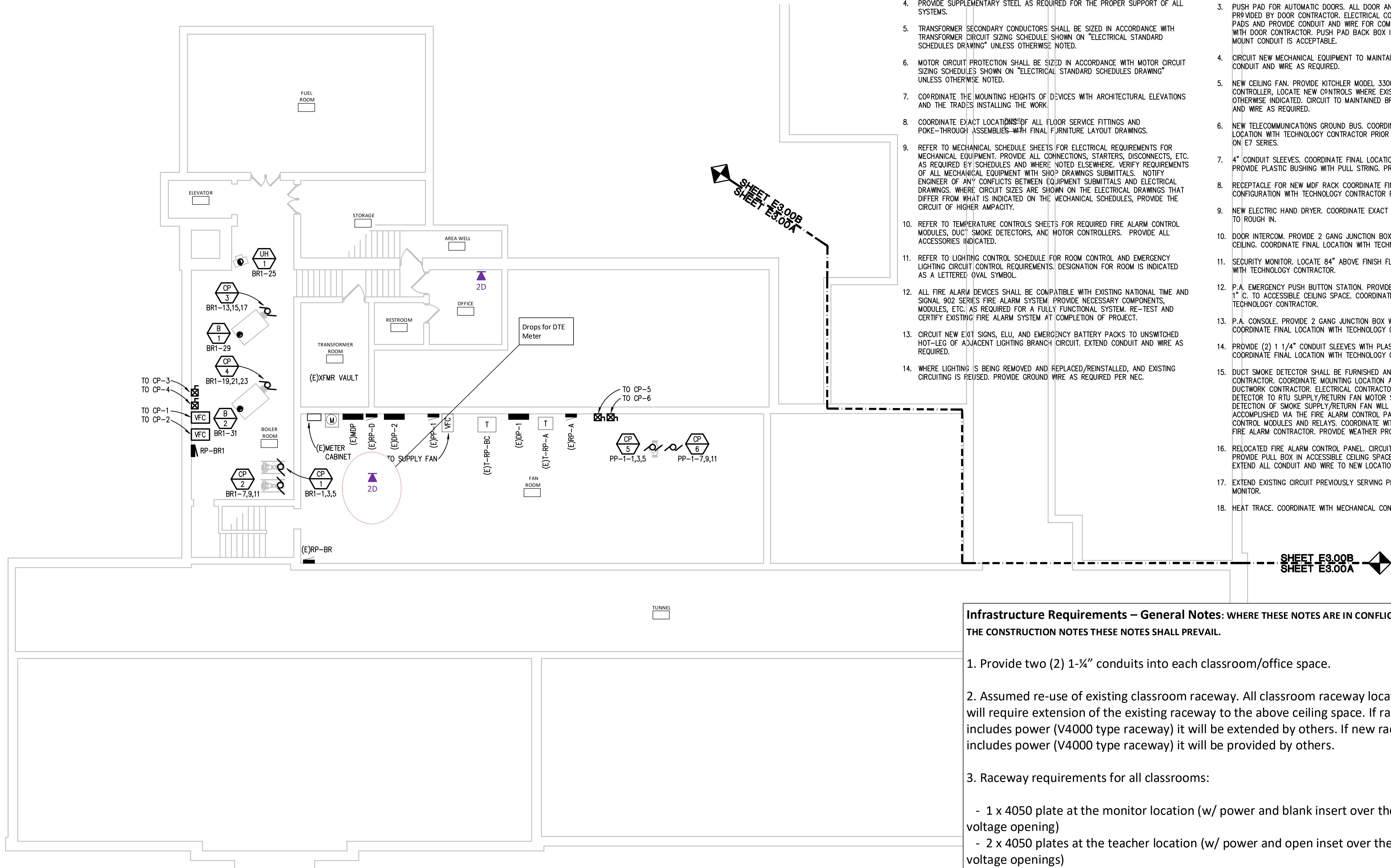
Main Distribution Frame



Intermediate Distribution Frame







### **# CONSTRUCTION KEY NOTES:**

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, FINAL CONNECTION REQUIREMENTS AND PROVIDE EACH SYSTEM COMPLETE INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
8. COORDINATE EXACT LOCATIONS OF ALL FLOOR SURFACE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
9. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPLIFY.
10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
11. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS; DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
12. ALL FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING NATIONAL TIME AND SIGNAL 900 SERIES FIRE ALARM SYSTEM. PROVIDE NECESSARY COMPONENTS, MODULES, ETC. AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. RE-TEST AND CERTIFY EXISTING FIRE ALARM SYSTEM AT COMPLETION OF PROJECT.
13. CIRCUIT NEW EXIT SIGNS, ELU, AND EMERGENCY BATTERY PACKS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
14. WHERE LIGHTING IS BEING REMOVED AND REPLACED/REINSTALLED, AND EXISTING CIRCUITING IS REVISED. PROVIDE GROUND WIRE AS REQUIRED PER NEC.

- PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH 1" STAINLESS STEEL FACE. PULL STRING FROM JUNCTION BOX INTO CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL, PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG, NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. NEW CEILING FAN. PROVIDE KITCHLER MODEL 330025WH AND NEW COMPATIBLE CONTROLLER, LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND HANGITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. RELOCATED FIRE ALARM CONTROL PANEL. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. PROVIDE PULL BOX IN ACCESSIBLE CEILING SPACE ABOVE EXISTING LOCATION AND EXTEND ALL CONDUIT AND WIRE TO NEW LOCATION.
17. EXTEND EXISTING CIRCUIT PREVIOUSLY SERVING PROJECTOR IN SPACE TO NEW MONITOR.
18. HEAT TRACE. COORDINATE WITH MECHANICAL CONTRACTOR.

1. Provide two (2) 1-1/2" conduits into each classroom/office space.
2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.
3. Raceway requirements for all classrooms:
  - 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
  - 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
  - The raceway should also extend above drop ceiling to allow speaker cabling to pass through.
4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

ISSUE DATE	ISSUED FOR
08/23/2021	CONSTRUCTION DRAWINGS
DRAWN	ZBD
CHECKED	ZBD
APPROVED	GJZ



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PBA Project No.: 2019.0124



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architects planners interior

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**frenchaia.com**  
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PROJECT

# GPPSS

GPPSS  
Mason Elementary School  
1640 Vernier Rd  
Building Improvements  
Grosse Pointe Woods,  
Michigan

SHEET

UNIT A BASEMENT  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

PROJECT NUMBER

0421

SHEET NUMBER

E3.00A

Revision Date: 11/15/2021



THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.

**Infrastructure Requirements – General Notes:** WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.

1. Provide two (2) 1-¼” conduits into each classroom/office space.

2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.

3. Raceway requirements for all classrooms:

- 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
- 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
- The raceway should also extend above drop ceiling to allow speaker cabling to pass through.

4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

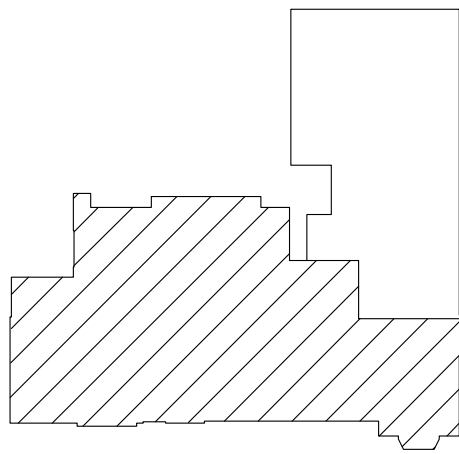
ELECTRICAL GENERAL NOTES:

- THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, FINAL CONNECTION REQUIREMENTS AND PROVIDE EACH SYSTEM COMPLETE INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
- INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
- TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
- MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
- COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
- COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
- REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE LARGER OF THE TWO.
- REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
- REFER TO LIGHTING CONTROL SCHEDULES FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
- ALL FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING NATIONAL TIME AND SIGNAL 902 SERIES FIRE ALARM SYSTEM. PROVIDE NECESSARY COMPONENTS, MODULES, ETC. AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. RE-TEST AND MAINTAIN EXISTING FIRE ALARM SYSTEM AT COMPLETION OF PROJECT.
- INSTALL NEW EXIT SIGNS, ELU, AND EMERGENCY BATTERY PACKS TO UNMOUNTED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
- WHERE LIGHTING IS BEING REMOVED AND REPLACED/REINSTALLED, AND EXISTING CIRCUITING IS REUSED. PROVIDE GROUND WIRE AS REQUIRED PER NEGAR FIVES CLASSROOM (105).

CONSTRUCTION KEY NOTES:

- PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
- FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH BLANK STAINLESS STEEL FACE PLATE. STUB 1" C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
- PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
- CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
- NEW CEILING FAN. PROVIDE KITCHLER MODEL 330025MH AND NEW COMPATIBLE CONTROLLER. LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
- NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
- 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
- RECEPTACLE FOR NEW MDF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
- NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
- DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
- RELOCATED FIRE ALARM CONTROL PANEL. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. PROVIDE PULL BOX IN ACCESSIBLE CEILING SPACE ABOVE EXISTING LOCATION AND EXTEND ALL CONDUIT AND WIRE TO NEW LOCATION.
- EXTEND EXISTING CIRCUIT PREVIOUSLY SERVING PROJECTOR IN SPACE TO NEW MONITOR.
- NEW TRANS COORDINATE WITH MECHANICAL CONTRACTOR.

KEY PLAN



ISSUE DATE	ISSUED FOR
09/28/2021	CONSTRUCTION DRAWINGS
DRAWN	ZBD
CHECKED	ZBD
APPROVED	GJZ



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architects planners interiors

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PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
MASON ES  
RENOVATIONS

GROSSE POINTE WOODS,  
MICHIGAN

SHEET

UNIT A FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

PROJECT NUMBER

2021-005

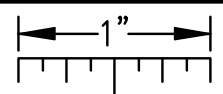
SHEET NUMBER

E3.10A

Revision Date: 11/15/2021

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1. Provide two (2) 1-¼" conduits into each classroom/office space.

2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.

### 3. Raceway requirements for all classrooms:

- 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
- 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
- The raceway should also extend above drop ceiling to allow speaker cabling to pass through.

4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.



## UNIT B FIRST FLOOR POWER AND AUXILIARY SYSTEMS PLAN

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

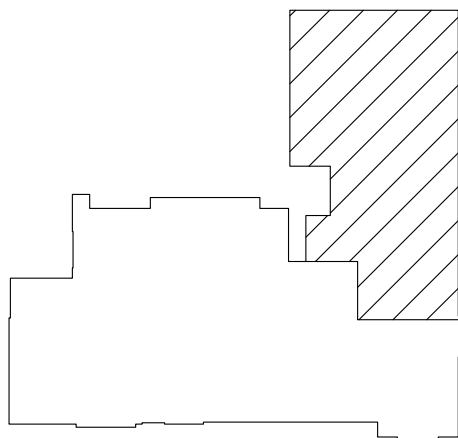
### ELECTRICAL GENERAL NOTES:

3. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXIST EQUIPMENT LOCATIONS, ELEVATIONS, FINAL CONNECTION REQUIREMENTS AND PROVIDE EACH SYSTEM COMPLETE INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
8. COORDINATE EXIST LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FLURRIE LAYOUT DRAWINGS.
9. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
11. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
12. ALL FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING NATIONAL TIME AND SIGNAL 902 SERIES FIRE ALARM SYSTEM. PROVIDE NECESSARY COMPONENTS, MODULES, ETC. AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. RE-TEST AND CERTIFY EXISTING FIRE ALARM SYSTEM AT COMPLETION OF PROJECT.
13. CIRCUIT NEW EXIT SIGNS, ELU, AND EMERGENCY BATTERY PACKS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
14. WHERE LIGHTING IS BEING REMOVED AND REPLACED/REINSTALLED, AND EXISTING CIRCUITING IS REUSED, PROVIDE GROUND WIRE AS REQUIRED PER NEC.

## CONSTRUCTION KEY NOTES

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND CIRCUIT CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH PLANK STAINLESS STEEL FACE PLATE, STUB 1" C. UP TO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. NEW CEILING FAN. PROVIDE KITCHER MODEL 330025MH AND NEW COMPATIBLE CONTROLLER, LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. RELOCATED FIRE ALARM CONTROL PANEL. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. PROVIDE PULL BOX IN ACCESSIBLE CEILING SPACE ABOVE EXISTING LOCATION AND EXTEND ALL CONDUIT AND WIRE TO NEW LOCATION.
17. EXTEND EXISTING CIRCUIT PREVIOUSLY SERVING PROJECTOR IN SPACE TO NEW MONITOR.
18. HEAT TRACE. COORDINATE WITH MECHANICAL CONTRACTOR.

## KEY PLAN



ISSUE DATE	ISSUED FOR
09/28/2021	CONSTRUCTION DRAWINGS
DRAWN	ZBD
CHECKED	ZBD
APPROVED	G.J.Z.



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## PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS

MASON ES

## RENOVATIONS

GROSSE POINTE WOODS,  
MICHIGAN

SHEET	
UNIT B FIRST FLOOR POWER AND AUXILIARY SYSTEMS PLAN	
PROJECT NUMBER	
2021-005	
SHEET NUMBER	

### E3.10B

Revision Date: 11/15/2021



1. Provide two (2) 1-1/2" conduits into each classroom/office space.
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10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL DEVICES, (NOT SMOKE DETECTORS) AND MOTOR CONTROLLERS. PROVIDE ROOM M. ACCESSORIES INDICATED. B220 B208
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PROJECT

GROSSE POINTE  
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MICHIGAN

SHEET

# UNIT A SECOND FLOOR POWER AND AUXILIARY SYSTEMS PLAN

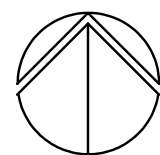
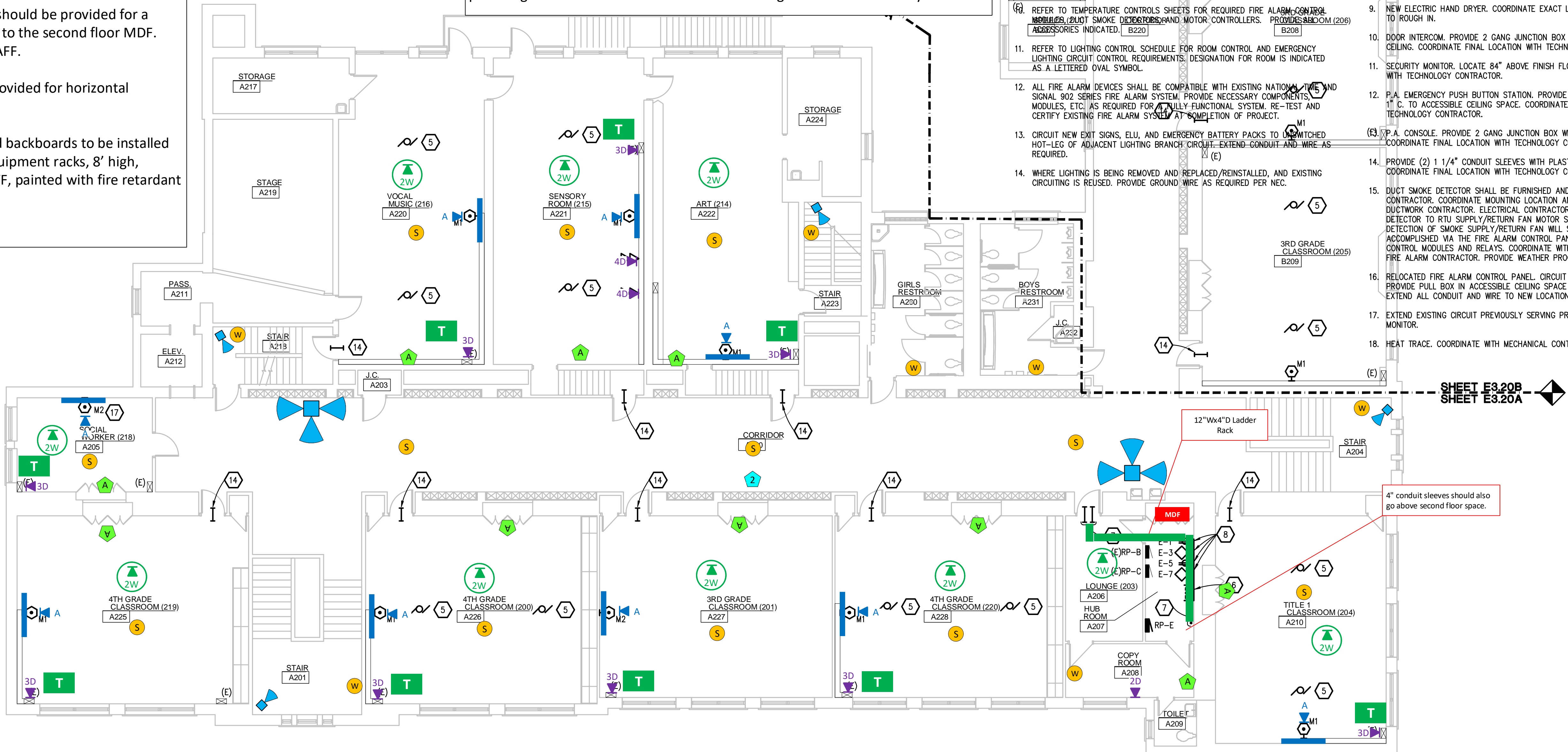
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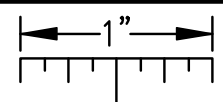
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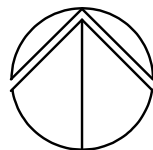
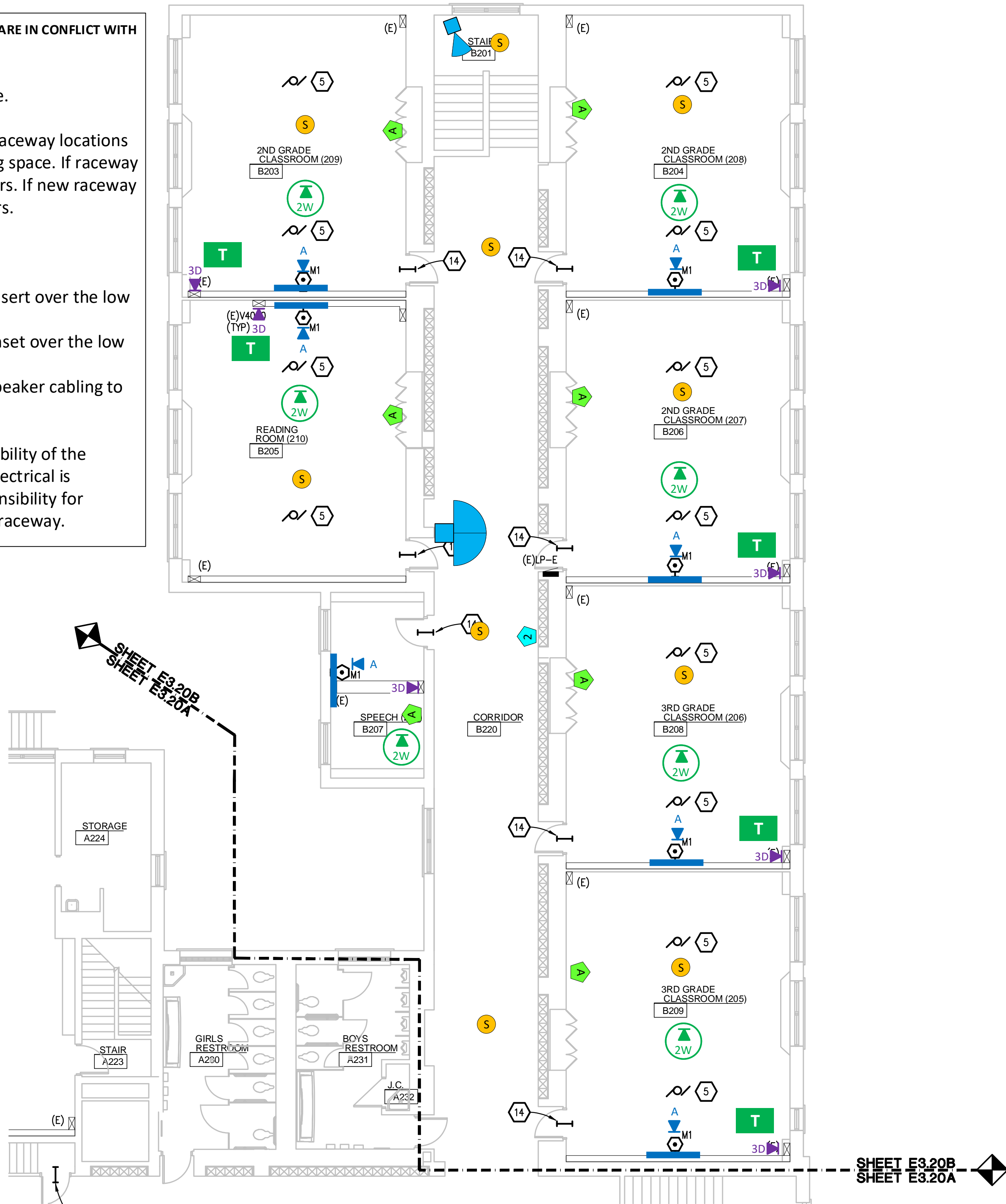
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12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND ANCHITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. RELOCATED FIRE ALARM CONTROL PANEL. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. PROVIDE PULL BOX IN ACCESSIBLE CEILING SPACE ABOVE EXISTING LOCATION AND EXTEND ALL CONDUIT AND WIRE TO NEW LOCATION.
17. EXTEND EXISTING CIRCUIT PREVIOUSLY SERVING PROJECTOR IN SPACE TO NEW MONITOR.
18. HEAT TRACE. COORDINATE WITH MECHANICAL CONTRACTOR.

ISSUE DATE	ISSUED FOR
09/28/2021	CONSTRUCTION DRAWINGS
DRAWN	ZBD
CHECKED	ZBD
APPROVED	GJZ



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## PROJEC

GROSSE POINTE  
PUBLIC SCHOOLS

# MASON ES RENOVATIONS

GROSSE POINTE WOODS,  
MICHIGAN

## SHEET

UNIT B SECOND  
FLOOR POWER AND  
AUXILIARY SYSTEMS  
PLAN

## PROJECT NUMBER

2021-005

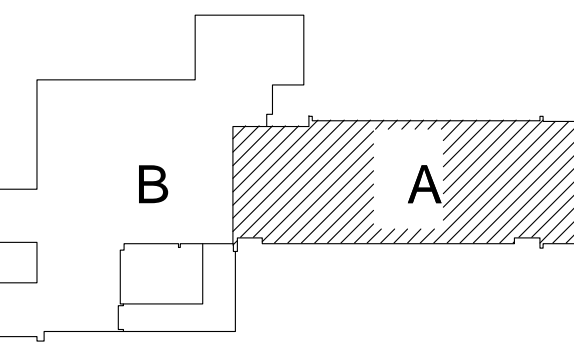
## SHEET NUMBER

### E3.20B

Revision Date: 11/15/2021



### KEY PLAN



ISSUE DATE	ISSUED FOR
09/22/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
CHECKED	ZDB
APPROVED	G.JZ



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PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
BARNES ECC  
RENOVATIONS

GROSSE POINTE WOODS  
MICHIGAN

SHEET

UNIT A FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

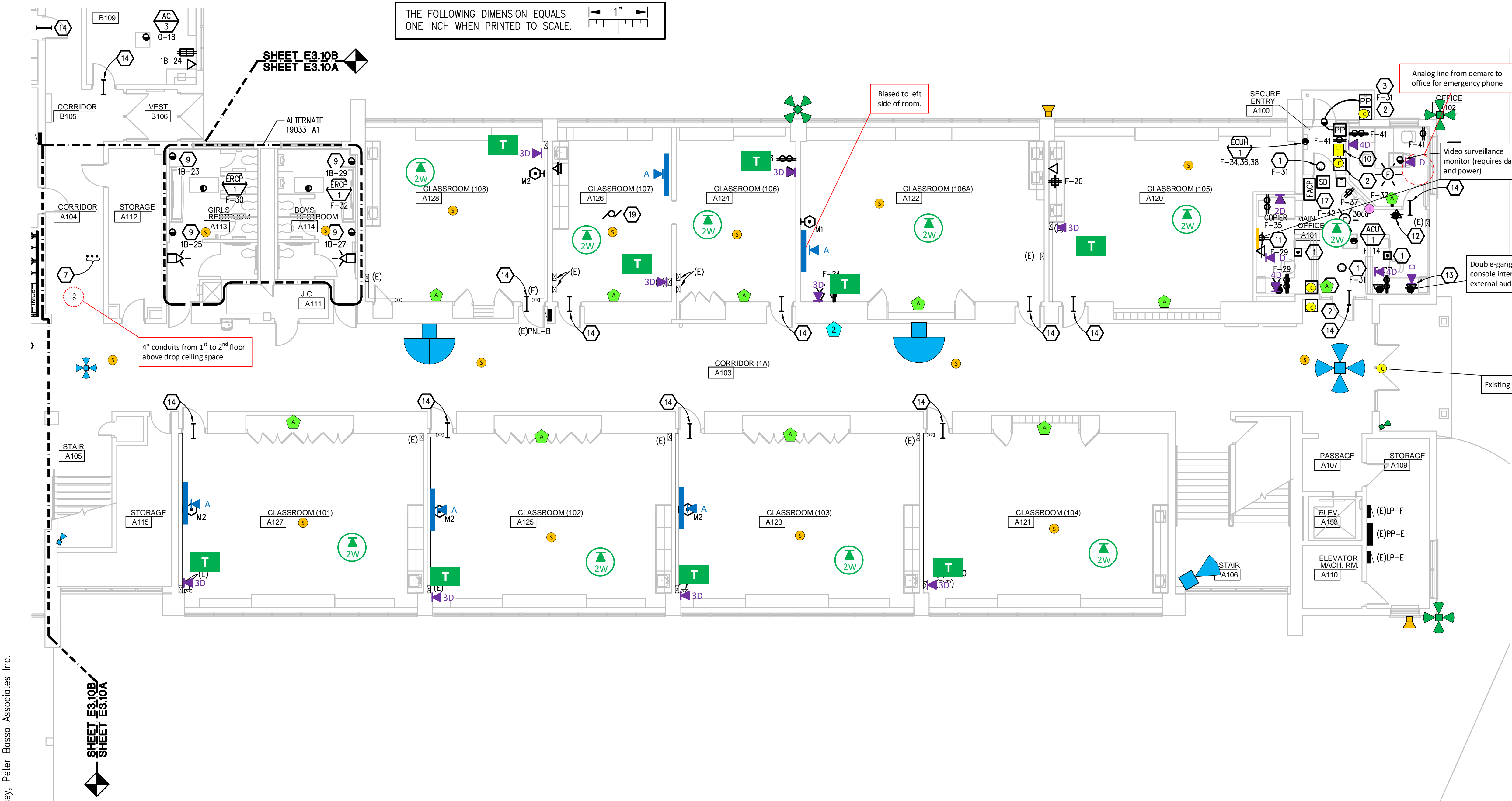
PROJECT NUMBER

2019-033

SHEET NUMBER

### E3.10A

Revision Date



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

1. Provide two (2) 1-¼" conduits into each classroom/office space.

2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.

### 3. Raceway requirements for all classrooms:

- 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
- 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
- The raceway should also extend above drop ceiling to allow speaker cabling to pass through.

4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

## # CONSTRUCTION KEY NOTES:

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY OR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH PLAIN STAINLESS STEEL FACE PLATE. STUB 1" C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE. PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PAD AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. RECEPTACLE FOR CONDENSATE PUMP. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/2" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. RELOCATED FARADAY FIRE ALARM CONTROL PANEL. CIRCUIT TO EXISTING BRANCH CIRCUIT. PROVIDE PULL BOX IN ACCESSIBLE CEILING SPACE ABOVE EXISTING LOCATION AND EXTEND ALL CONDUIT AND WIRE TO NEW LOCATION.
17. NEW FIRE ALARM CONTROL PANEL. CROSS-TIE INTO EXISTING FARADAY FIRE ALARM CONTROL PANEL.
18. PROVIDE PARTITION FEED. COORDINATE WITH ARCHITECTURAL.
19. NEW CEILING FAN. PROVIDE KIEHLER MODEL 330025WH AND COMPATIBLE CONTROLLER. LOCATE NEW CONTROLS ADJACENT TO LIGHTING CONTROLLER IN SPACE. CIRCUIT TO LIGHTING BRANCH CIRCUIT AHEAD OF LIGHTING CONTROL DEVICES. EXTEND CONDUIT AND WIRE AS REQUIRED.



6. 3/4" A/C fire treated plywood backboards to be installed behind the District-provided equipment racks, 8' high, mounted so the bottom is 6" AFF, painted with fire retardant white paint.



DEVICES. EXTEND CONDUIT AND WIRE AS REQUIRED.

## Revision Date

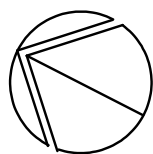
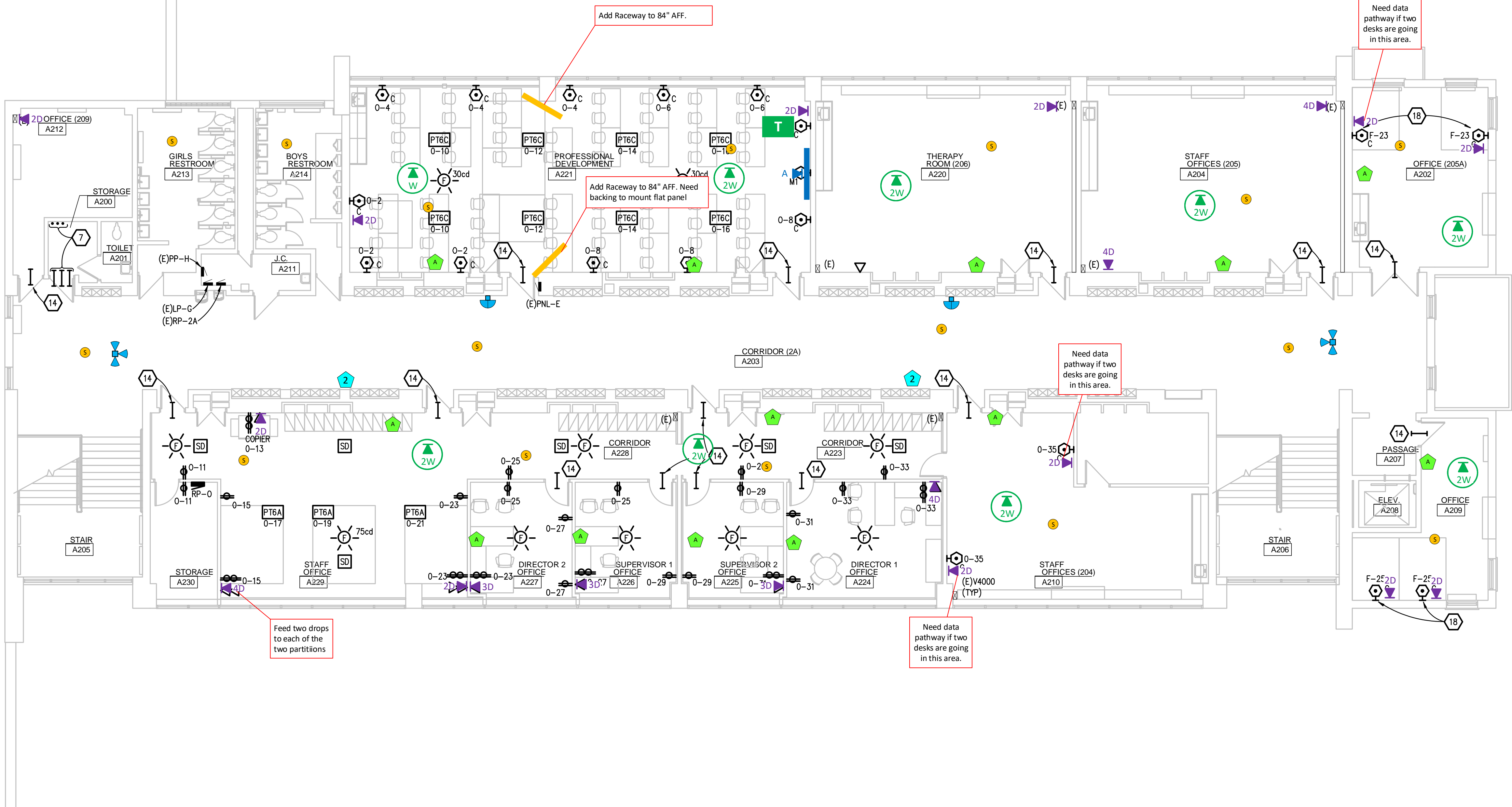
SPACE. CIRCUIT TO LIGHTING BRANCH CIRCUIT AHEAD OF LIGHTING CONTROL DEVICES. EXTEND CONDUIT AND WIRE AS REQUIRED.

4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

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



THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.



UNIT A SECOND FLOOR POWER AND AUXILIARY SYSTEMS PLAN

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

Infrastructure Requirements – General Notes: WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.

1. Provide two (2) 1-¼" conduits into each classroom/office space.

2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.

3. Raceway requirements for all classrooms:

- 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)

- 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)

- The raceway should also extend above drop ceiling to allow speaker cabling to pass through.

4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

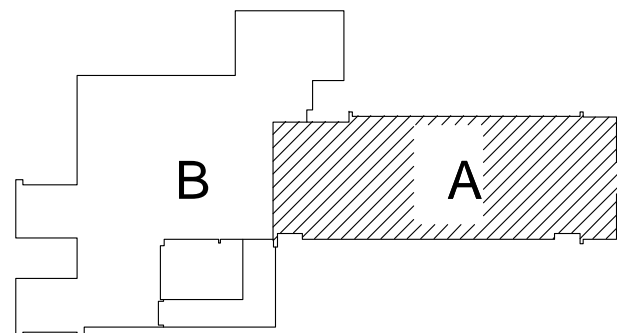
ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, FINAL CONNECTION REQUIREMENTS AND PROVIDE EACH SYSTEM COMPLETE INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT ON THE ELECTRICAL DRAWING THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
8. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
9. PROVIDE THE INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND REFLECTED CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
10. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
11. CIRCUIT NEW EXIT SIGNS, EMERGENCY LIGHTING UNITS, AND EMERGENCY BATTERY PACKS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
12. WHERE LIGHTING IS BEING REMOVED AND REINSTALLED/REPLACED AND EXISTING IS TO BE REUSED, PROVIDE GROUND WIRE, AS REQUIRED, PER NEC.
13. WHERE WALLS ARE BEING FURRED OUT EXTEND EXISTING DEVICES TO NEW WALL.

# CONSTRUCTION KEY NOTES:

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH BLANK STAINLESS STEEL FACE PLATE. STUB 1" C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. RECEPTACLE FOR CONDENSATE PUMP. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF RACK. COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/2" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. RELOCATED FARADAY FIRE ALARM CONTROL PANEL. CIRCUIT TO EXISTING BRANCH CIRCUIT. PROVIDE PULL BOX IN ACCESSIBLE CEILING SPACE ABOVE EXISTING LOCATION AND EXTEND ALL CONDUIT AND WIRE TO NEW LOCATION.
17. NEW FIRE ALARM CONTROL PANEL. CROSS-TIE INTO EXISTING FARADAY FIRE ALARM CONTROL PANEL.
18. PROVIDE PARTITION FEED. COORDINATE WITH ARCHITECTURAL.
19. NEW CEILING FAN. PROVIDE KICHLER MODEL 330025MH AND COMPATIBLE CONTROLLER. LOCATE NEW CONTROLS ADJACENT TO LOCATE CONTROLLER IN SPACE. CIRCUIT TO LIGHTING BRANCH CIRCUIT AHEAD OF LIGHTING CONTROL DEVICES. EXTEND CONDUIT AND WIRE AS REQUIRED.

KEY PLAN



ISSUE DATE	ISSUED FOR
09/22/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
CHECKED	ZDB
APPROVED	GUZ

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PBA Project No.: 2019-0119

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PROJECT

GROSSE POINTE

PUBLIC SCHOOLS

BARNES ECC

RENOVATIONS

GROSSE POINTE WOODS

MICHIGAN

SHEET

UNIT A SECOND

FLOOR POWER AND

AUXILIARY SYSTEMS

PLAN

PROJECT NUMBER

2019-033

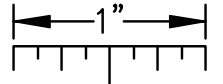
SHEET NUMBER

E3.20A

Revision Date:



THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.



1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SCHEDULING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
8. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. CLIRIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL SCHEDULES.

- |     |  |  |
|-----|--|--|
| 10. | REFER TO LIGHTING CONTROL SCHEDULE FOR R/LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESI AS A LETTERED OVAL SYMBOL.  | 75F (18°C to 24°C) with a relative humidity level between 37% to 55% non-condensing. Space should have a dedicated A/C unit.   |
| 11. | ALL NEW FIRE ALARM DEVICES SHALL BE COMP ALARM CONTROL PANEL. NEW CONTROL PANEL EXISTING FARADAY FIRE ALARM SYSTEM. PROVID MODULES, ETC. AS REQUIRED FOR A FULLY FUN CERTIFY FIRE ALARM SYSTEM AT COMPLETION O | 2. Grounding busbars shall be provided and grounded to the main building ground. Mount and secure to backboard at 16 AFF.  |
| 12. | CIRCUIT NEW EXIT SIGNS, EMERGENCY LIGHTING BATTERY BACKUP TO UNSWITCHED HOT LEG OF CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRE   |  |
| 13. | WHERE EXISTING CIRCUITING IS TO BE REUSED. PER NEC.  | 3. Each equipment rack should have 1 - L5-30R, 120V and 1 - 5-20R, 120V duplex outlet. Receptacles should be split on diverse panels (A/B per rack). Mount receptacles inside of |
| 14. | WHERE WALLS ARE BEING FURRED OUT AND EXI FINISH DEVICES FINISHED. FACE OF THE FU PROVIDE NEW STAINLESS STEEL COVER PLATES. PLANS FOR ALL FURRING LOCATIONS.  |  |

4. One 4" trade-size conduit should be provided for a vertical riser from the first floor to the tunnel. The conduit should extend 6" AFF.
5. Three 4" conduits should be provided for horizontal pathway from the hallway.

6. 3/4" A/C fire treated plywood backboards to be installed behind the District-provided equipment racks, as high as possible without obstructing window, mounted so the bottom is 6" AFF, painted with fire retardant white paint.

**Infrastructure Requirements – General Notes: WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.**

1. Provide two (2) 1-1/4" conduits into each classroom/office space.
2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.
3. Raceway requirements for all classrooms:
  - 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
  - 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
  - The raceway should also extend above drop ceiling to allow speaker cabling to pass through.
4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

N WITH TECHNOLOGY CONTRACTOR  
 PROVIDE FIRE STOP AS REQUIRED.

FINAL LOCATION AND NEMA  
PRIOR TO ROUGH IN.

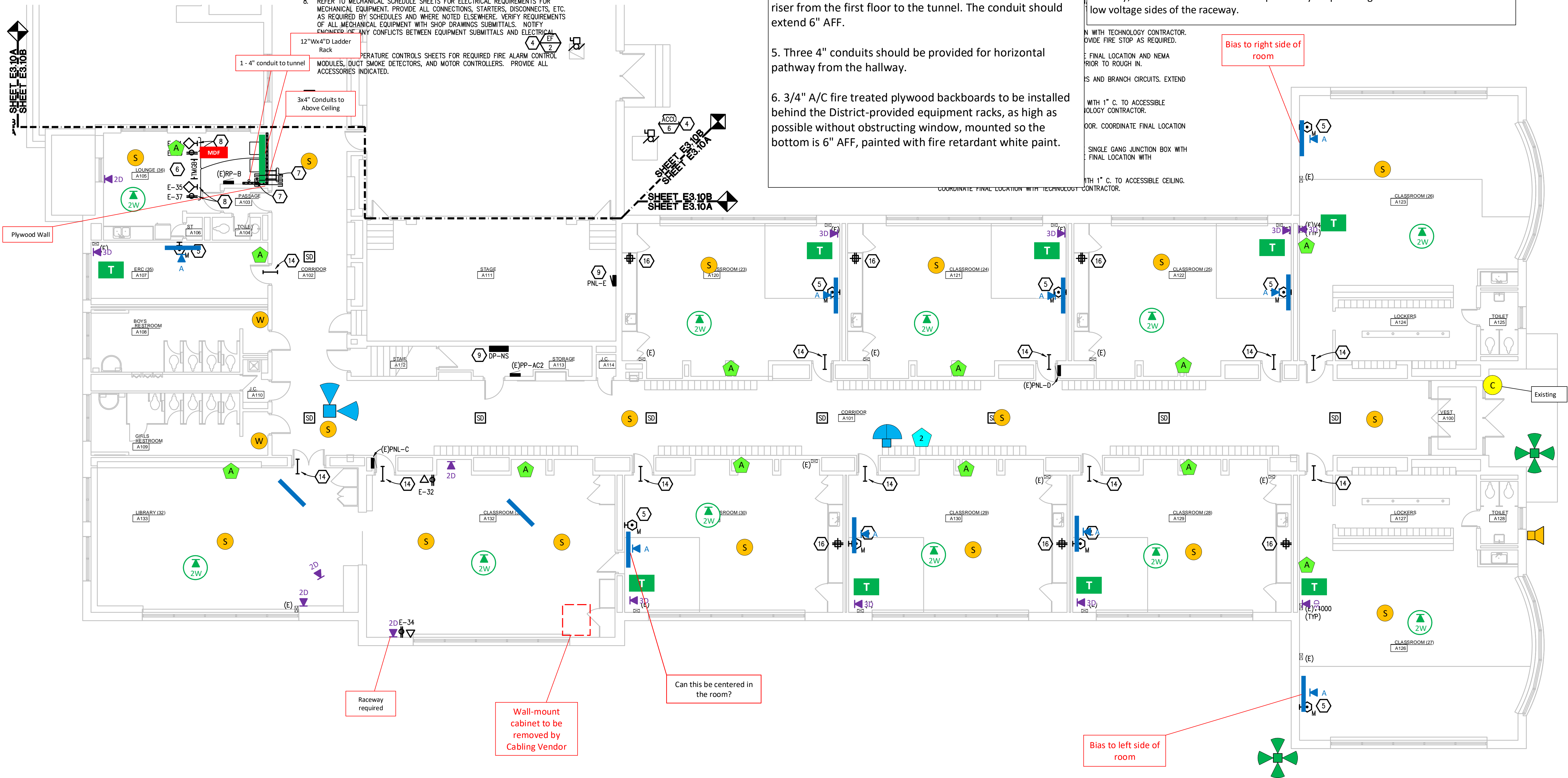
RS AND BRANCH CIRCUITS. EXTEND

WITH 1" C. TO ACCESSIBLE  
IOLOGY CONTRACTOR.

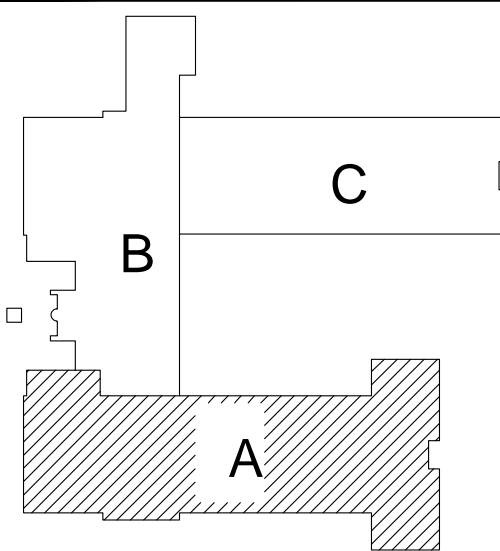
COOR. COORDINATE FINAL LOCATION

SINGLE GANG JUNCTION BOX WITH  
FINAL LOCATION WITH

WITH 1" C. TO ACCESSIBLE CEILING.  
CONTRACTOR.



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



ISSUE DATE	ISSUED FOR
09/16/2021	CONSTRUCTION DRAWINGS REVISED
DRAWN	ZDB
CHECKED	ZDB
APPROVED	G.J.Z.



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PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
KERBY ES  
RENOVATIONS

GROSSE POINTE FARMS  
MICHIGAN

SHEET

UNIT A FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

PROJECT NUMBER

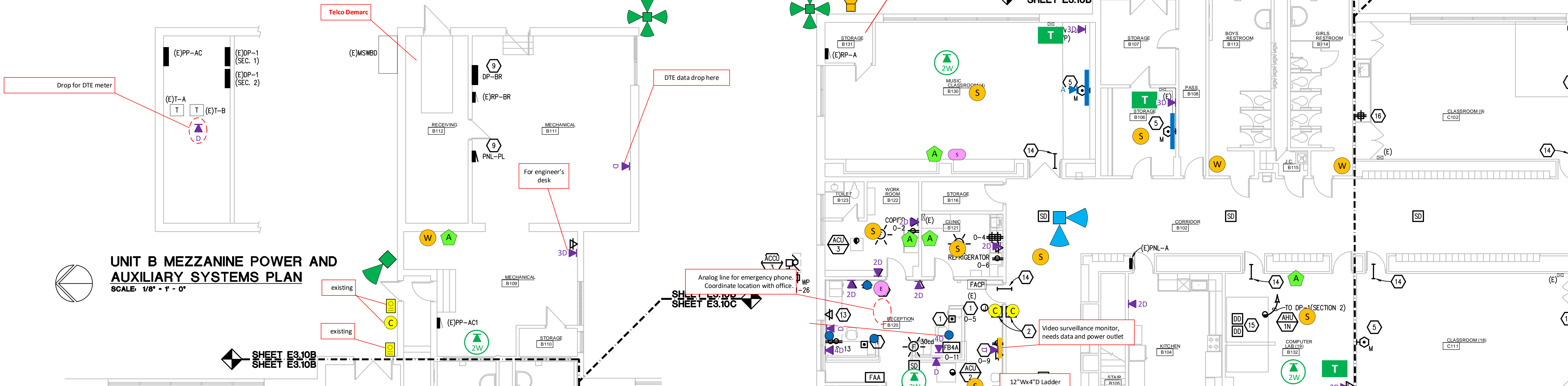
2019-025

SHEET NUMBER

E3.10A

Revision Date





### ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXIST EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. COORDINATE EXIST LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
8. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS. SUBMITTAL'S NOTE.

### CONSTRUCTION KEY NOTES:

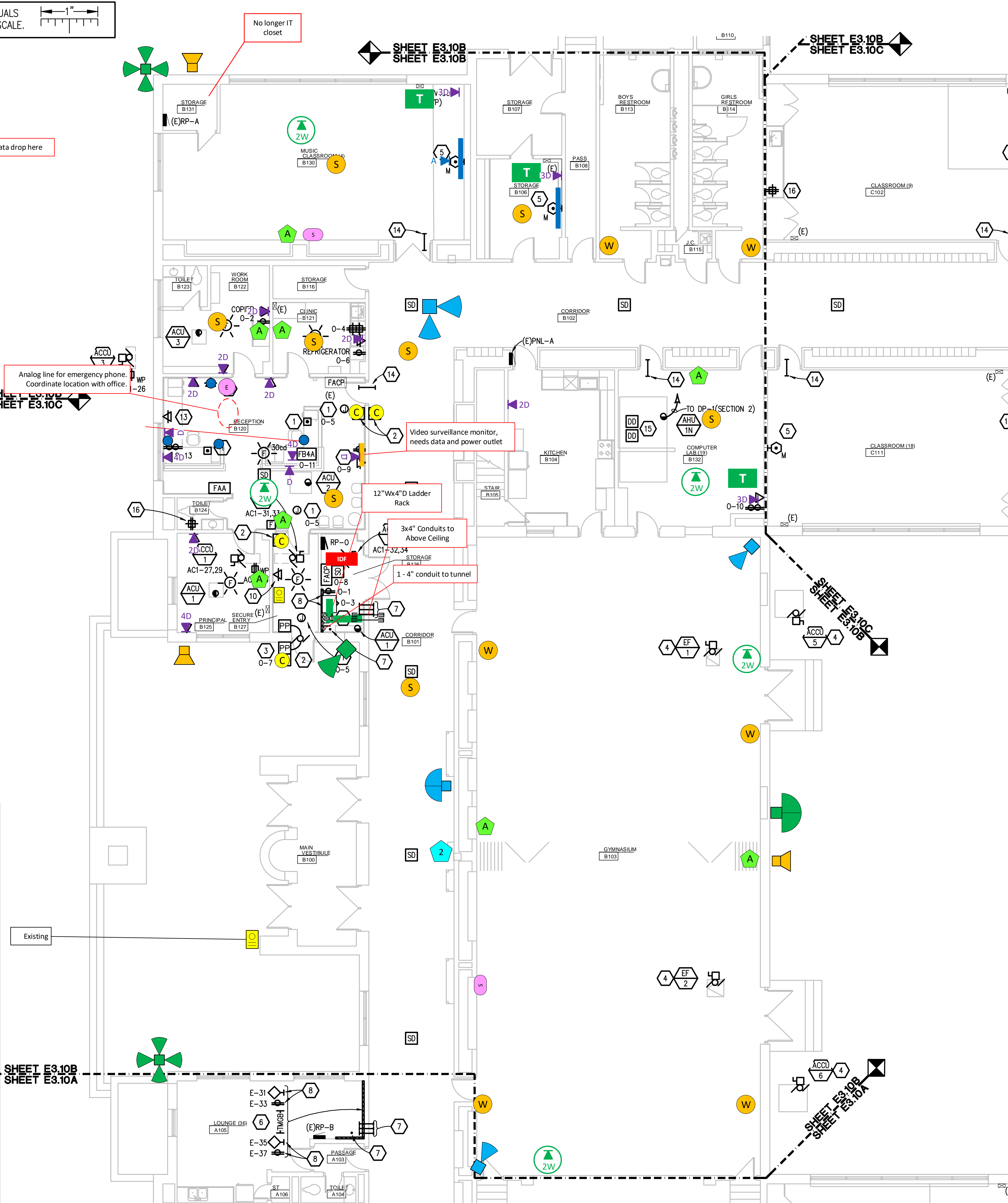
1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH BLANK STAINLESS STEEL FACE PLATE, STUD 1/2" C, UP TO ACCESSIBLE CORRIDOR CEILING SPACE. PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PAD AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. EXTEND CIRCUIT PREVIOUSLY SERVING PROJECTOR IN SPACE TO NEW INTERACTIVE FLAT PANEL. PROVIDE GROUND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.

**Infrastructure Requirements – General Notes: WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.**

1. Provide two (2) 1-1/2" conduits into each classroom/office space.
2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.
3. Raceway requirements for all classrooms:
  - 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
  - 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
  - The raceway should also extend above drop ceiling to allow speaker cabling to pass through.
4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

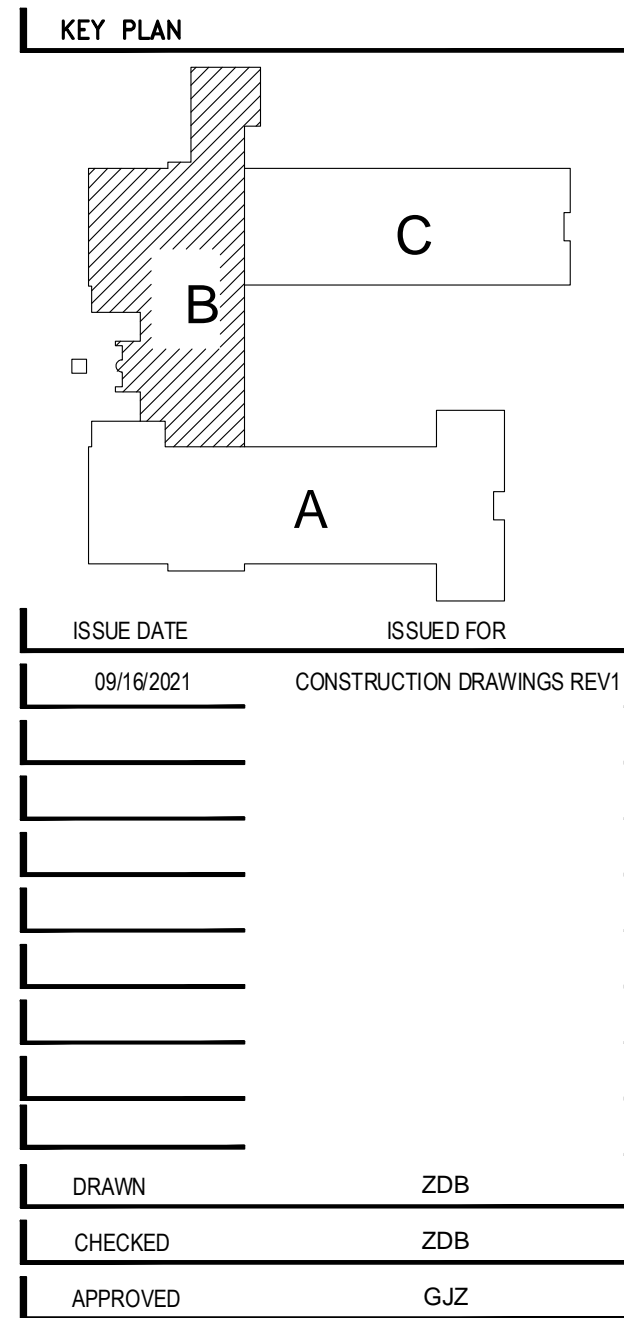
**IDF Closet Location – General Notes: TO BE PROVIDED BY OTHERS**

1. The space should be environmentally controlled to maintain a room temperature range of 64F to 75F (18°C to 24°C) with a relative humidity level between 37% to 55% non-condensing. Space should have a dedicated A/C unit.
2. Grounding busbars shall be provided and grounded to the main building ground. Mount and secure to backboard at 80" AFF.
3. Each equipment rack should have 1 – 5-20R, 120V duplex outlet. Mount receptacles above equipment rack attached to cable tray.
4. One 4" trade-size conduits should be provided for a vertical riser from the first floor to the tunnel. The conduit should extend 6" AFF.
5. Two 4" conduits should be provided for horizontal pathway from the hallway.
6. 3/4" A/C fire treated plywood backboards to be installed behind the District-provided equipment racks, 80" high, mounted so the bottom is 6" AFF, painted with fire retardant white paint.



## UNIT B FIRST FLOOR POWER AND AUXILIARY SYSTEMS PLAN

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



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## PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
KERBY ES  
RENOVATIONS

GROSSE POINTE FARMS  
MICHIGAN

## 1 SHEET

UNIT B FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

## PROJECT NUMBER

2019-025

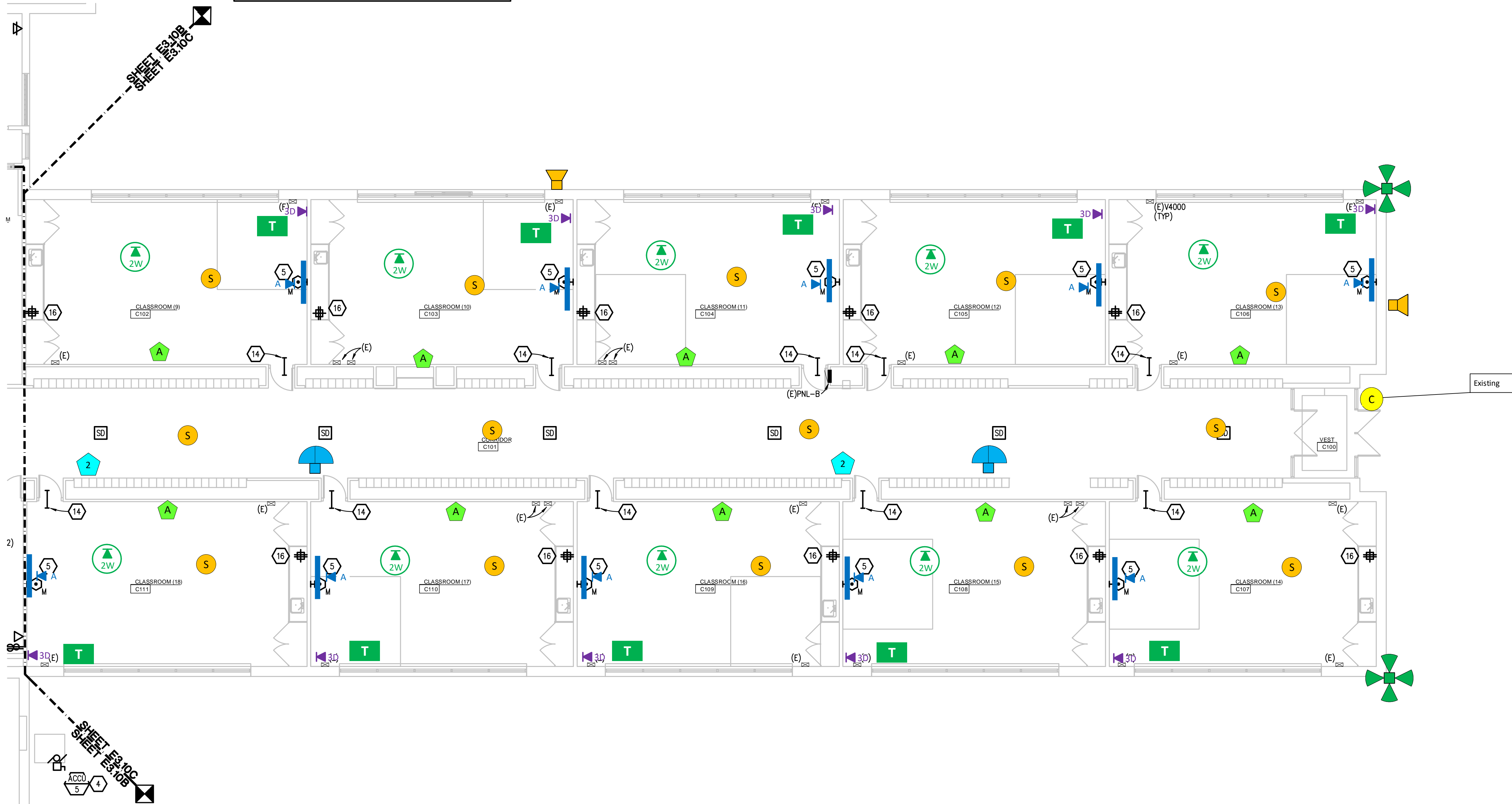
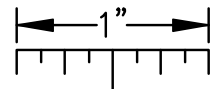
## SHEET NUMBER

E3.10B

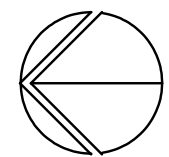
Revision Date



THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.



4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

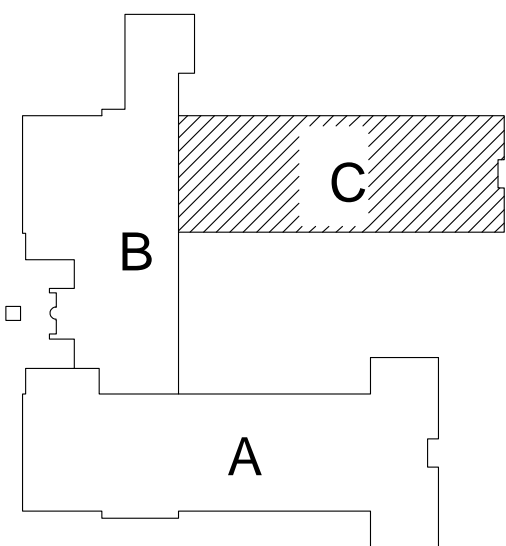


**SCALE: 1/8" = 1' - 0"**

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3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
8. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS.
9. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DETECT SMOKE DETECTORS, AND MOTOR CONTROLS. PROVIDE ALL ACCESSORIES INDICATED.
10. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
11. ALL NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH NEW EDWARDS FIRE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE CROSS-TIED INTO EXISTING PARADAY FIRE ALARM SYSTEM. PROVIDE NECESSARY COMPONENTS, MODULES, ETC. AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. RE-TEST AND CERTIFY FIRE ALARM SYSTEM AT COMPLETION OF PROJECT.
12. CIRCUIT NEW EXIT SIGNS, EMERGENCY LIGHTING UNITS(ELU), AND EMERGENCY BATTERY BACKUP TO UNSWITCHED HOT LEG OF ADJACENT LIGHTING BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
13. WHERE EXISTING CIRCUITING IS TO BE REUSED, PROVIDE GROUND WIRE AS REQUIRED PER NEC.
14. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN, EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAMS. (S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACK AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH BLANK STAINLESS STEEL FACE PLATE. STUB 1" C. UP TO ACCESSIBLE CEILING OR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. EXTEND CIRCUIT PREVIOUSLY SERVING PROJECTOR IN SPACE TO NEW INTERACTIVE FLAT PANEL. PROVIDE GROUND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF/DF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. REPLACE RECEPTACLE WITH NEW GFCI RECEPTACLE IN SAME LOCATION. CIRCUIT TO EXISTING BRANCH CIRCUIT.

## KEY PLAN



ISSUE DATE	ISSUED FOR
09/16/2021	CONSTRUCTION DRAWINGS REVISED
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APPROVED	G.J.Z.



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## PROJECT

GROSSE POINTE  
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RENOVATIONS

GROSSE POINTE FARMS  
MICHIGAN

## SHEET

UNIT C FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

PROJECT NUMBER

2019-025

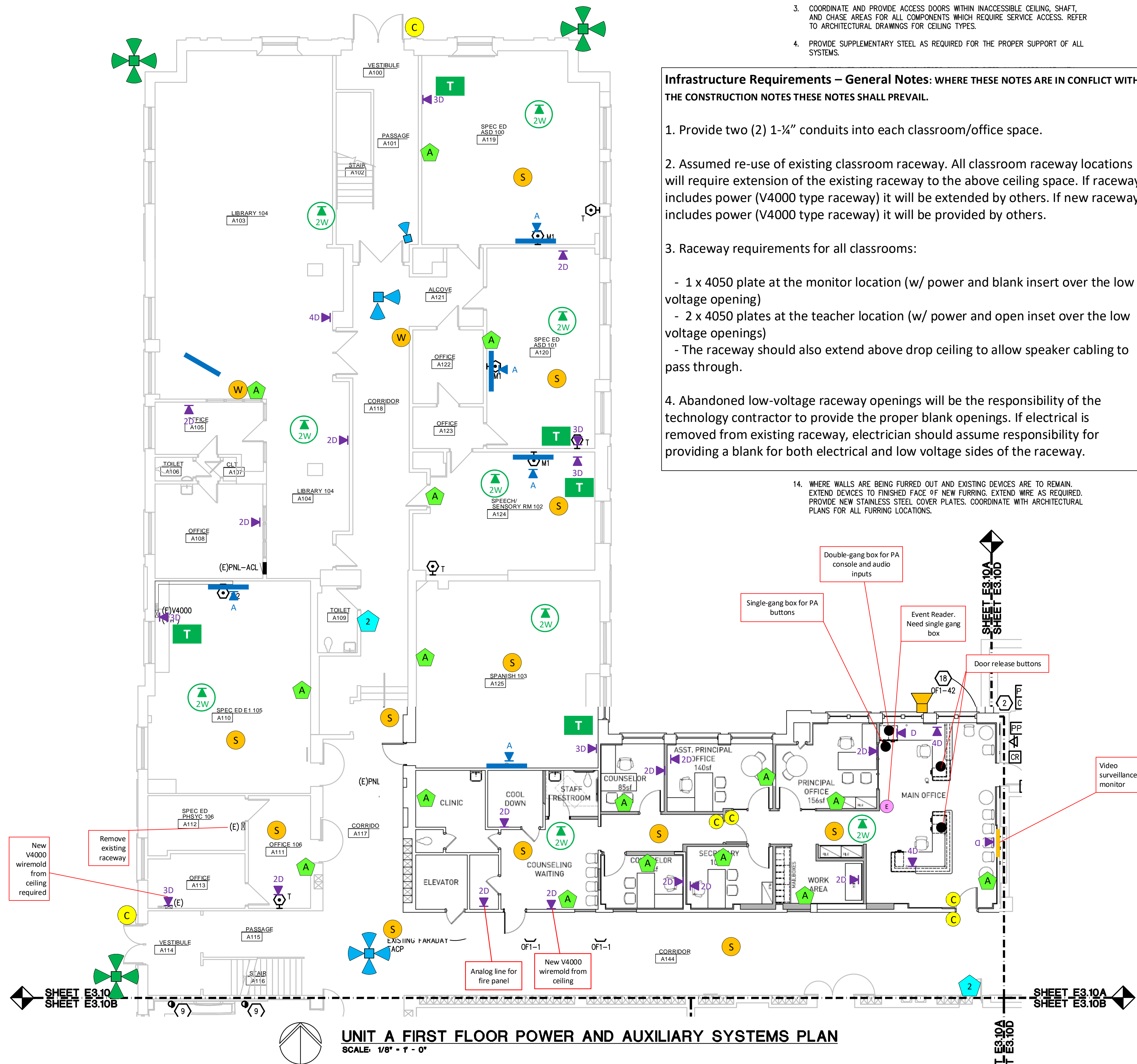
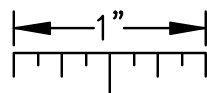
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Revision Date



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### ELECTRICAL GENERAL NOTES:

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4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.

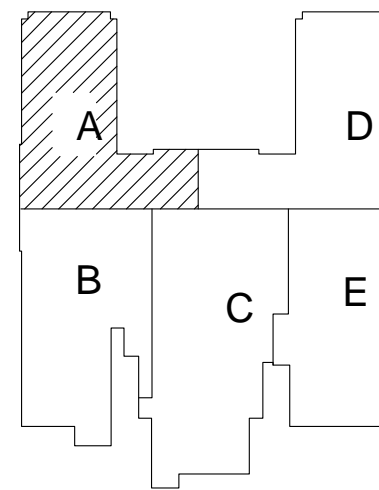
**Infrastructure Requirements – General Notes:** WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.

1. Provide two (2) 1-3/4" conduits into each classroom/office space.
  2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.
  3. Raceway requirements for all classrooms:
    - 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
    - 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
    - The raceway should also extend above drop ceiling to allow speaker cabling to pass through.
  4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.
- 
14. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN:  
EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED.  
PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL  
PLANS FOR ALL FURRING LOCATIONS.

### CONSTRUCTION KEY NOTES:

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH 1/2" BUNK STAINLESS STEEL FACE PLATE, STUB 1' C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE. PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
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4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. NEW CEILING FAN. PROVIDE KITCHER MODEL 330025WH AND NEW MULTI-FAN CONTROLLER MODEL 3700032MUL. LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF/JDF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
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16. CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.
17. CIRCUIT NEW TRANSFORMER TO MAINTAINED PRIMARY FEEDER. EXTEND CONDUIT AND WIRE AS REQUIRED.
18. NEW FIRE ALARM CONTROL PANEL. CROSS THE INTO EXISTING FARADAY FIRE ALARM SYSTEM.

## KEY PLAN



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## PROJEC

GROSSE POINTE  
PUBLIC SCHOOLS  
PIERCE MS  
RENOVATIONS

GROSSE POINTE PARK,  
MICHIGAN

## SHEET

UNIT A FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

PROJECT NUMBER

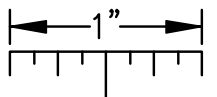
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SHEET NUMBER

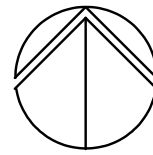
E3.10A

Revision Date





4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.



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

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH ANTI-STARSS STEEL FACE PLATE. STUB 1' C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. NEW CEILING FAN. PROVIDE KITCHLER MODEL 330025WH AND NEW MULTI-FAN CONTROLLER MODEL 3700032MUL. LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF/DF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.
17. CIRCUIT NEW TRANSFORMER TO MAINTAINED PRIMARY FEEDER. EXTEND CONDUIT AND WIRE AS REQUIRED.
18. NEW FIRE ALARM CONTROL PANEL. CROSS THE INTO EXISTING FARADAY FIRE ALARM SYSTEM.



GROSSE POINTE  
PUBLIC SCHOOLS  
PIERCE MS  
RENOVATIONS  
GROSSE POINTE P  
MICHIGAN

SHEET

# UNIT B FIRST FLOOR POWER AND AUXILIARY SYSTEMS PLAN

PROJECT NUMBER

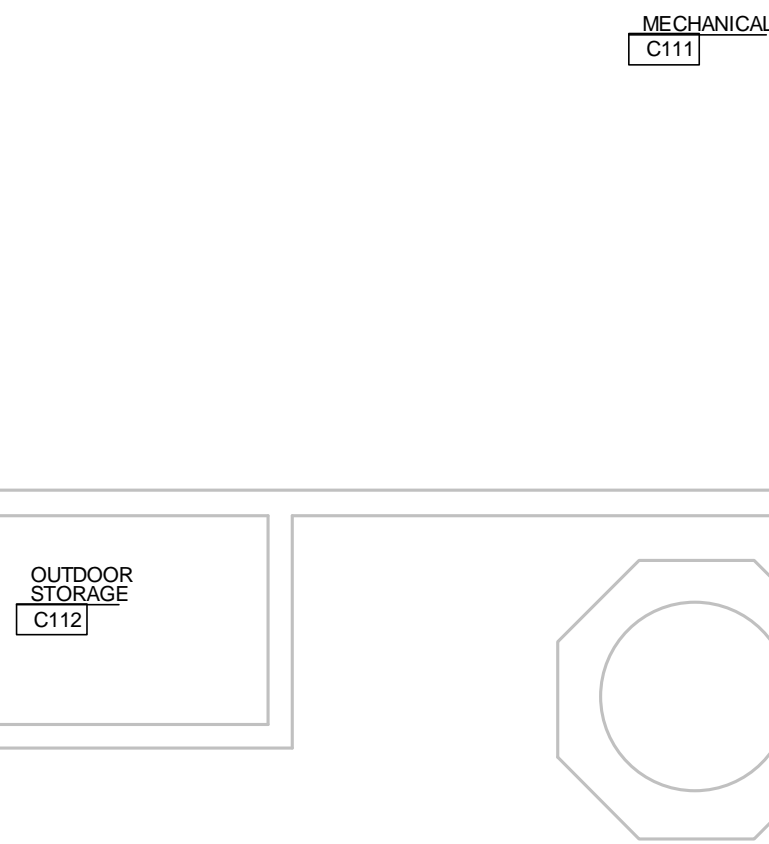
2019-031

SHEET NUMBER

### E3.10B

Revision Date

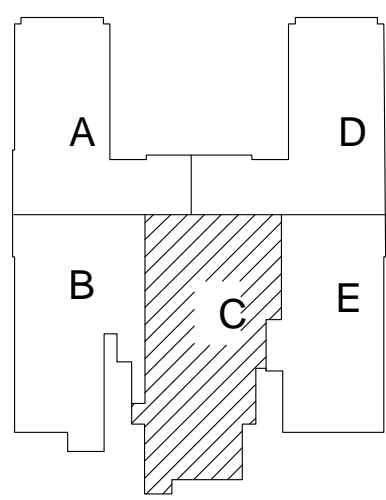




1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.

14. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN. EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.

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



ISSUE DATE	ISSUED FOR
09/20/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
CHECKED	ZDB
APPROVED	G.JZ



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PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
PIERCE MS  
RENOVATIONS

GROSSE POINTE PARK,  
MICHIGAN

SHEET

UNIT C FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

PROJECT NUMBER

2019-031

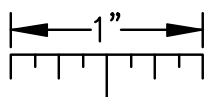
SHEET NUMBER

### E3.10C

Revision Date

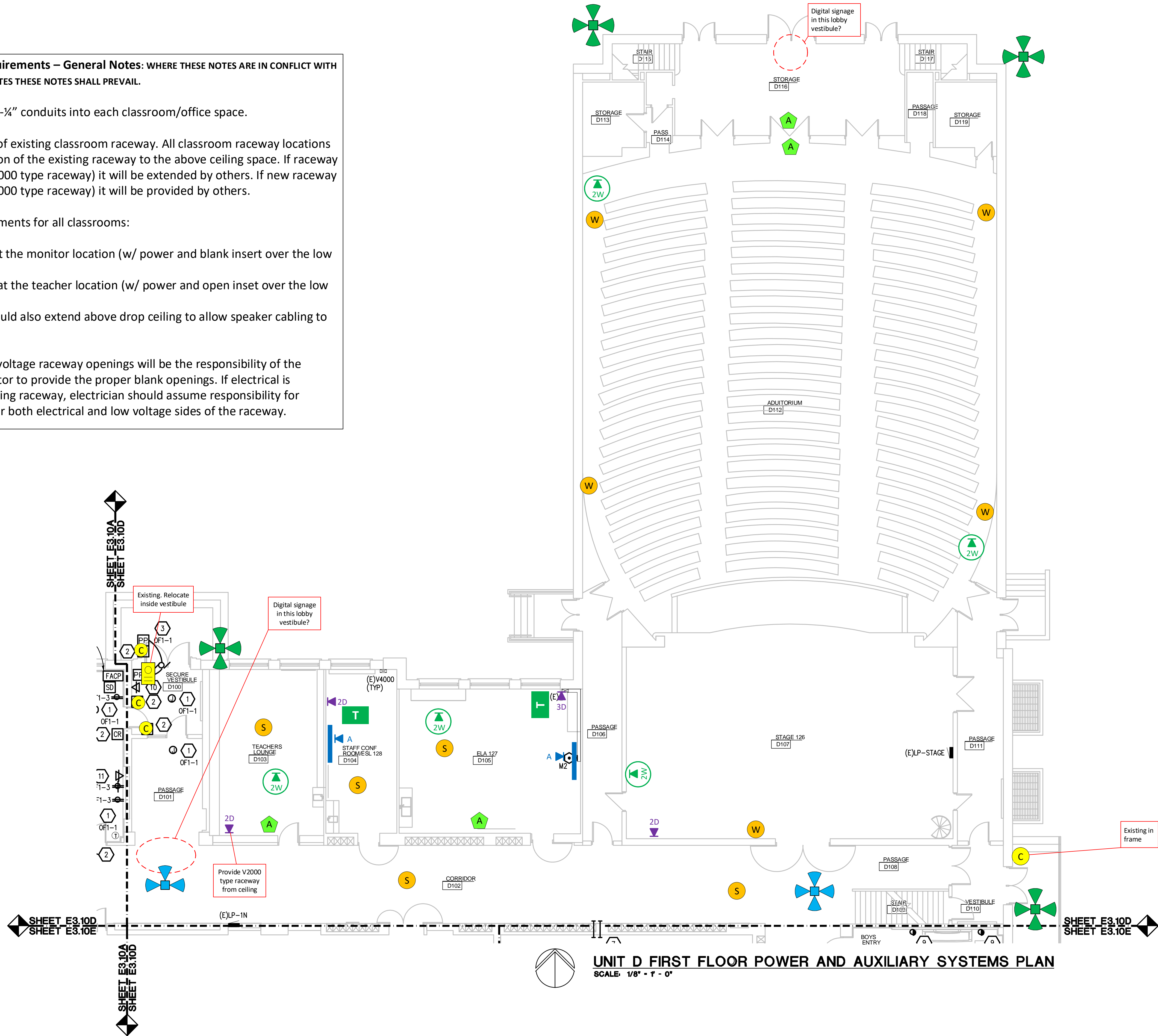


THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.



Infrastructure Requirements – General Notes: WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.

- Provide two (2) 1-¼” conduits into each classroom/office space.
- Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.
- Raceway requirements for all classrooms:
  - 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
  - 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
  - The raceway should also extend above drop ceiling to allow speaker cabling to pass through.
- Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.



UNIT D FIRST FLOOR POWER AND AUXILIARY SYSTEMS PLAN  
SCALE: 1/8" = 1' - 0"

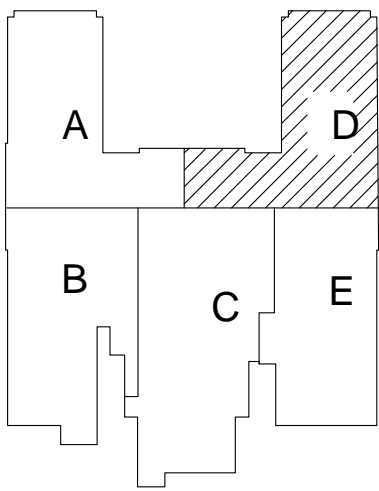
ELECTRICAL GENERAL NOTES:

- THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
- INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
- TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
- MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
- COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
- COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
- REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
- REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
- PROVIDE THE DESIGN AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND REFLECTED CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
- REFER TO LIGHTING CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
- CIRCUIT NEW EXIT SIGNS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT.
- WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN. EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.

CONSTRUCTION KEY NOTES:

- PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
- FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH BLANK STAINLESS STEEL FACE PLATE. STUB 1" C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE. PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
- PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
- CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
- NEW CEILING FAN. PROVIDE KITCHLER MODEL 330025WH AND NEW MULTI-FAN CONTROLLER MODEL 3700032MUL. LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
- NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
- 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
- RECEPTACLE FOR NEW MDF/DF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
- NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
- DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
- DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
- CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.
- CIRCUIT NEW TRANSFORMER TO MAINTAINED PRIMARY FEEDER. EXTEND CONDUIT AND WIRE AS REQUIRED.
- NEW FIRE ALARM CONTROL PANEL. CROSS TIE INTO EXISTING FARADAY FIRE ALARM SYSTEM.

KEY PLAN



ISSUE DATE	ISSUED FOR
09/20/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
CHECKED	ZDB
APPROVED	GJZ

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PROJECT

GROSSE POINTE  
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PIERCE MS  
RENOVATIONS

GROSSE POINTE PARK,  
MICHIGAN

SHEET

UNIT D FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

PROJECT NUMBER

2019-031

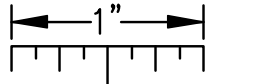
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E3.10D

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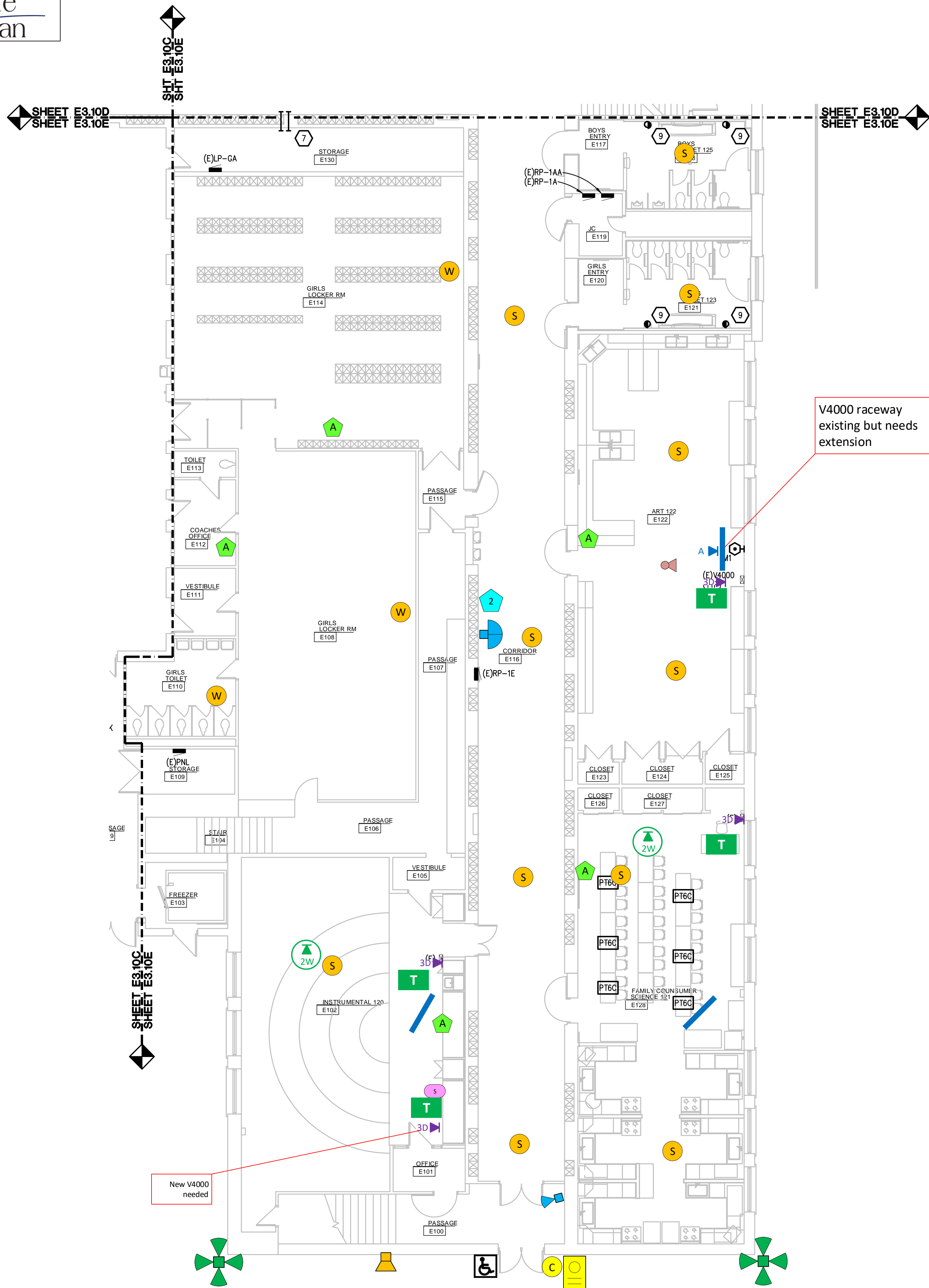


THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.



**Infrastructure Requirements – General Notes: WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.**

1. Provide two (2) 1- $\frac{1}{4}$ " conduits into each classroom/office space.
2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.
3. Raceway requirements for all classrooms:
  - 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
  - 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
  - The raceway should also extend above drop ceiling to allow speaker cabling to pass through.
4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.



**UNIT E FIRST FLOOR POWER AND AUXILIARY SYSTEMS PLAN**  
SCALE: 1/8" = 1' - 0"

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

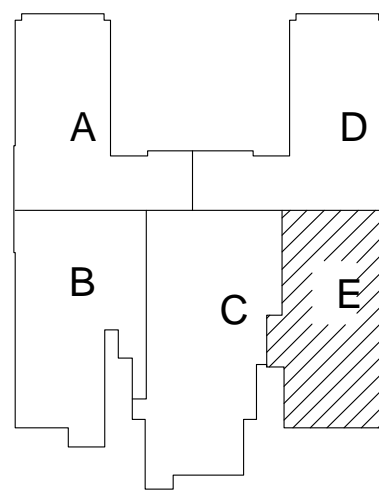
**ELECTRICAL GENERAL NOTES:**

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL CONNECTIONS FOR WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
8. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
9. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY AND RESOLVE ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
11. PROVIDE THE DESIGN AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS AND THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND REFLECTED CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. ALLOWANCE VARIATIONS FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
12. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
13. CIRCUIT NEW EXIT SIGNS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT.

### CONSTRUCTION KEY NOTES:

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL (DIAGRAMS) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH BLANK STAINLESS STEEL FACE PLATE. STUB 1' C. UP TO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. NEW CEILING FAN. PROVIDE KITCHLER MODEL 330025WH AND NEW MULTI-FAN CONTROLLER MODEL 3700032MUL. LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF/IDF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT SMOKE DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN. EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.
17. CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.

## KEY PLAN



ISSUE DATE	ISSUED FOR
07/23/2021	DESIGN DEVELOPMENT
DRAWN	ZDB
CHECKED	ZDB
APPROVED	GJZ



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## PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
PIERCE MS  
RENOVATIONS

GROSSE POINTE PARK,  
MICHIGAN

## SHEET

UNIT E FIRST FLOOR  
POWER AND  
AUXILIARY SYSTEMS  
PLAN

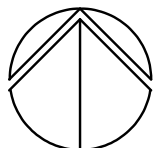
## PROJECT NUMBER

2019-031

## SHEET NUMBER

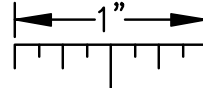
E3.10E

Revision Date





THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.



1. Provide two (2) 1-¼" conduits into each classroom/office space.

2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.

### 3. Raceway requirements for all classrooms:

- 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
- 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
- The raceway should also extend above drop ceiling to allow speaker cabling to pass through.

4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

1. The space should be environmentally controlled to maintain a room temperature range of 64°F to 75°F (18°C to 24°C) with a relative humidity level between 37% to 55% non-condensing. Space should have a dedicated A/C unit.

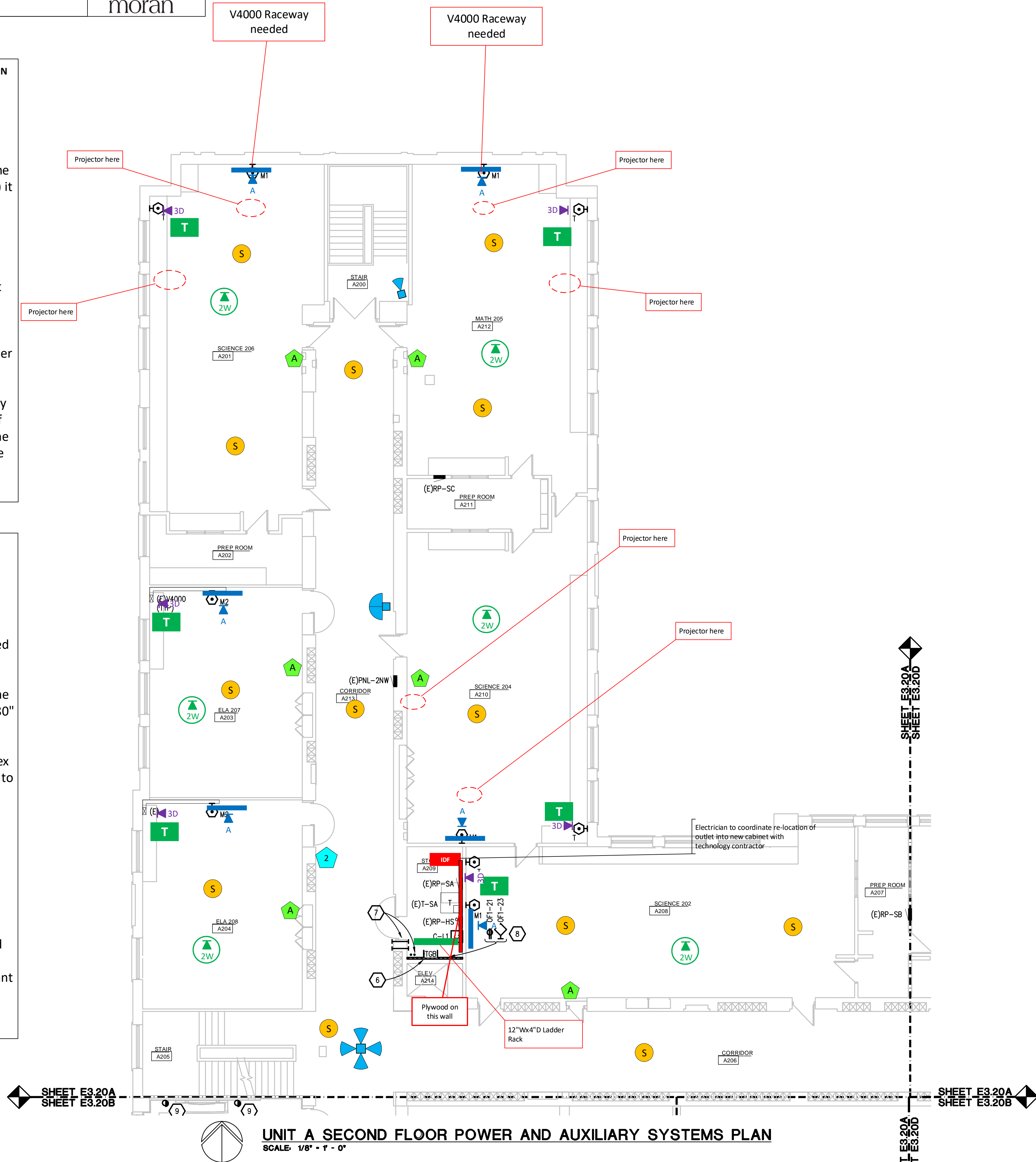
2. Grounding busbars shall be provided and grounded to the main building ground. Mount and secure to backboard at 80" AFF.

3. Each equipment rack should have 1 – 5-20R, 120V duplex outlet. Mount receptacles above equipment rack attached to cable tray.

4. One 4" trade-size conduits should be provided for a vertical riser from the first floor to the tunnel. The conduit should extend 6" AFF.

5. Two 4" conduits should be provided for horizontal pathway from the hallway.

6. 3/4" A/C fire treated plywood backboards to be installed behind the District-provided equipment racks, 80" high, mounted so the bottom is 6" AFF, painted with fire retardant white paint.



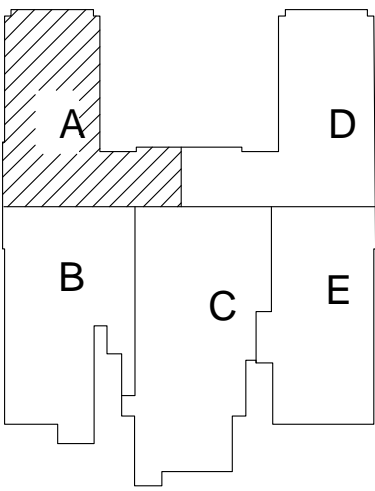
### ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITH INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
8. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
9. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS WITH MECHANICAL ENGINEER WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
11. PROVIDE THE DESIGN AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND REFLECTED CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
12. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
13. CIRCUIT NEW EXIT SIGNS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT.
14. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN, EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.

### CONSTRUCTION KEY NOTES:

- PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION STATE AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH 1" STAINLESS STEEL FACE PLATE. STUB 1" C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL, PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. NEW CEILING FAN. PROVIDE KITCHLER MODEL 330025WH AND NEW MULTI-FAN CONTROLLER MODEL 3700032MUL. LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF/DF RACK. COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
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16. CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.
17. CIRCUIT NEW TRANSFORMER TO MAINTAINED PRIMARY FEEDER. EXTEND CONDUIT AND WIRE AS REQUIRED.
18. NEW FIRE ALARM CONTROL PANEL. CROSS TIE INTO EXISTING FARADAY FIRE ALARM SYSTEM.

## KEY PLAN



ISSUE DATE	ISSUED FOR
09/20/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
CHECKED	ZDB
APPROVED	G.J.Z



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## PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
PIERCE MS  
RENOVATIONS

GROSSE POINTE PARK,  
MICHIGAN

## SHEET

UNIT A SECOND  
FLOOR POWER AND  
AUXILIARY SYSTEMS  
PLAN

## PROJECT NUMBER

2019-031

## SHEET NUMBER

E3.20A

Revision Date



THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.

1"

**Infrastructure Requirements – General Notes:** WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.

1. Provide two (2) 1-¼" conduits into each classroom/office space.

2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.

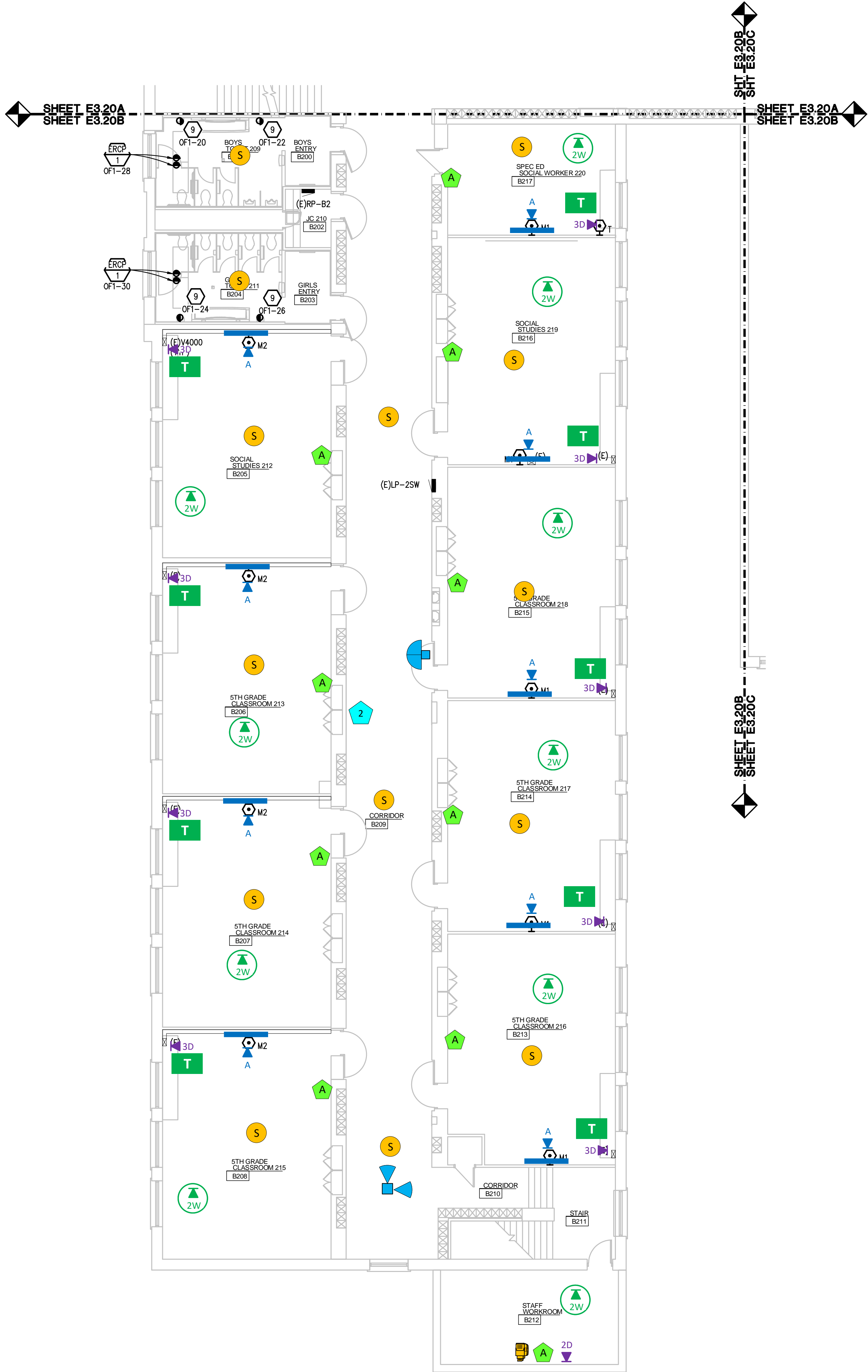
3. Raceway requirements for all classrooms:

- 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)

- 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)

- The raceway should also extend above drop ceiling to allow speaker cabling to pass through.

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**UNIT B SECOND FLOOR POWER AND AUXILIARY SYSTEMS PLAN**  
SCALE: 1/8" = 1' - 0"

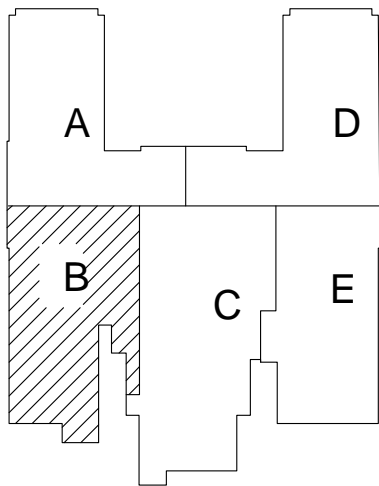
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2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
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**KEY PLAN**



ISSUE DATE	ISSUED FOR
09/20/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
CHECKED	ZDB
APPROVED	GJZ

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PBA Project No. 2019-031

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**PROJECT**

GROSSE POINTE  
PUBLIC SCHOOLS  
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RENOVATIONS

GROSSE POINTE PARK,  
MICHIGAN

**SHEET**

UNIT B SECOND  
FLOOR POWER AND  
AUXILIARY SYSTEMS  
PLAN

**PROJECT NUMBER**

2019-031

**SHEET NUMBER**

E3.20B

Revision Date:

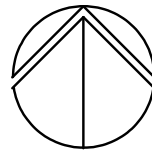
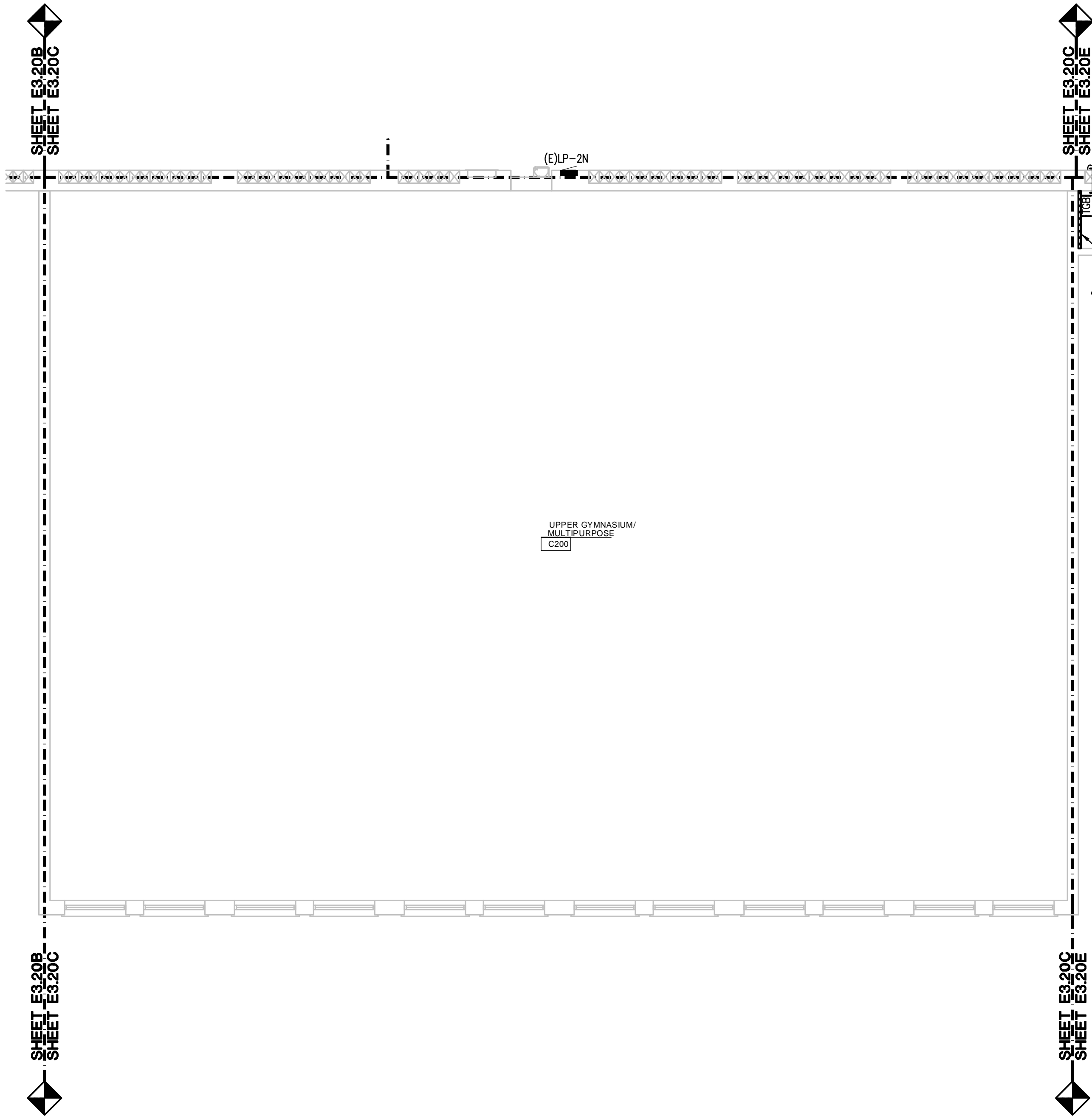
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2019-031 OPPS PIERCE MIDDLE SCHOOL RENOVATIONS



A horizontal scale bar with vertical tick marks. The top half of the bar is divided into four equal segments by three vertical tick marks. Above the first segment, there is a double-headed arrow pointing from the left end to the first tick mark, and the text "1" is placed above the arrow. This indicates that the total length of the bar is 1 inch.

4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.



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

3. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
8. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
9. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH EHP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
11. PROVIDE THE DESIGN AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND REFLECTIVE CEILING PLANS INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
12. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
13. CIRCUIT NEW EXIT SIGNS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT.
14. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN. EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND CIRCUIT CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CARD ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH 1/2" STAINLESS STEEL FACE PLATE. STUD 1" C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
5. NEW CEILING FAN. PROVIDE KITCHLER MODEL 330025WH AND NEW MULTI-FAN CONTROLLER MODEL 3700032MUL. LOCATE NEW CONTROLS WHERE EXISTING WAS REMOVED, UNLESS OTHERWISE INDICATED. CIRCUIT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
6. NEW TELECOMMUNICATIONS GROUND BUS. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN. REFER TO DETAIL ON E7 SERIES.
7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF/DFR KICK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
13. P.A. CONSOLE. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
14. PROVIDE (2) 1 1/4" CONDUIT SLEEVES WITH PLASTIC BUSHING AND PULL STRING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
15. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO RTU SUPPLY/RETURN FAN MOTOR STARTER SUCH THAT UPON DETECTION OF SMOKE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CIRCUIT, MODULES AND RELAYS. COORDINATE WITH TEMPERATURE CONTROLS AND FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
16. CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.
17. CIRCUIT NEW TRANSFORMER TO MAINTAINED PRIMARY FEEDER. EXTEND CONDUIT AND WIRE AS REQUIRED.
18. NEW FIRE ALARM CONTROL PANEL. CROSS TIE INTO EXISTING FARADAY FIRE ALARM SYSTEM.

ISSUE DATE	ISSUED FOR
09/20/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
CHECKED	ZDB
APPROVED	G.J.Z



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GROSSE POINTE PARK,  
MICHIGAN

## SHEET

UNIT C SECOND  
FLOOR POWER AND  
AUXILIARY SYSTEMS  
PLAN

## PROJECT NUMBER

2019-031

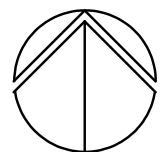
## SHEET NUMBER

### E3.20C

Revision Date



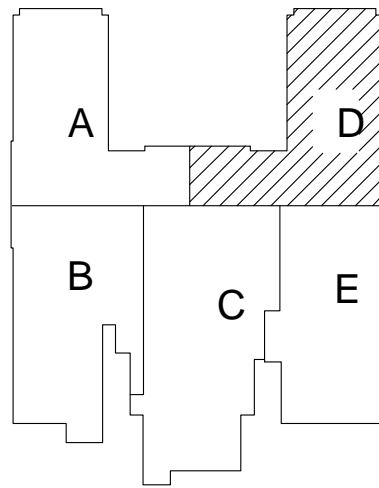
4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.



**UNIT D SECOND FLOOR POWER AND AUXILIARY SYSTEMS PLAN**  
SCALE: 1/8" = 1' - 0"

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2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND OTHER AREAS. EQUIPMENT WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
8. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
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10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
11. PROVIDE THE DESIGN AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
12. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
13. CIRCUIT NEW EXIT SIGNS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT.
14. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN. EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.



ISSUE DATE	ISSUED FOR
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DRAWN	ZDB
CHECKED	ZDB
APPROVED	G.J.Z



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## PROJECT

GROSSE POINTE  
PUBLIC SCHOOLS  
PIERCE MS  
RENOVATIONS

GROSSE POINTE PARK,  
MICHIGAN

## SHEET

UNIT D SECOND  
FLOOR POWER AND  
AUXILIARY SYSTEMS  
PLAN

## PROJECT NUMBER

2019-031

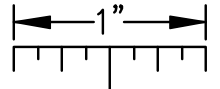
## SHEET NUMBER

E3.20D

Revision Date



THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.

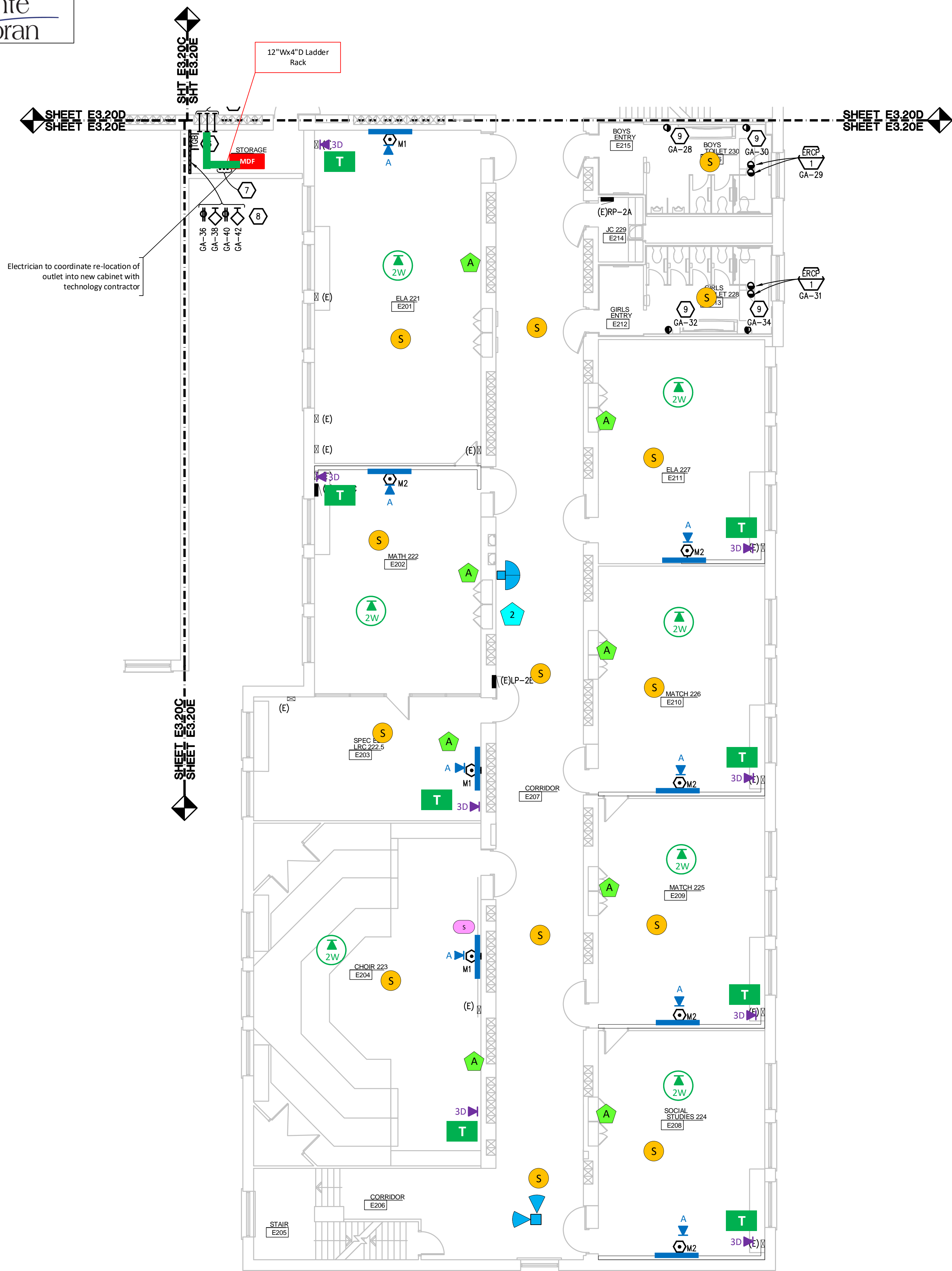


**Infrastructure Requirements – General Notes: WHERE THESE NOTES ARE IN CONFLICT WITH THE CONSTRUCTION NOTES THESE NOTES SHALL PREVAIL.**

1. Provide two (2) 1-1/4" conduits into each classroom/office space.
2. Assumed re-use of existing classroom raceway. All classroom raceway locations will require extension of the existing raceway to the above ceiling space. If raceway includes power (V4000 type raceway) it will be extended by others. If new raceway includes power (V4000 type raceway) it will be provided by others.
3. Raceway requirements for all classrooms:
  - 1 x 4050 plate at the monitor location (w/ power and blank insert over the low voltage opening)
  - 2 x 4050 plates at the teacher location (w/ power and open inset over the low voltage openings)
  - The raceway should also extend above drop ceiling to allow speaker cabling to pass through.
4. Abandoned low-voltage raceway openings will be the responsibility of the technology contractor to provide the proper blank openings. If electrical is removed from existing raceway, electrician should assume responsibility for providing a blank for both electrical and low voltage sides of the raceway.

**MDF Closet Location – General Notes: TO BE PROVIDED BY OTHERS**

1. The space should be environmentally controlled to maintain a room temperature range of 64°F to 75°F (18°C to 24°C) with a relative humidity level between 37% to 55% non-condensing. Space should have a dedicated A/C unit.
2. Grounding busbars shall be provided and grounded to the main building ground. Mount and secure to backboard at 80" AFF.
3. Each equipment rack should have 1 - L5-30R, 120V and 1 – 5-20R, 120V duplex outlet. Receptacles should be split on diverse panels (A/B per rack). Mount receptacles inside of equipment racks provided by technology contractors.
4. Three 4" trade-size conduits should be provided for a vertical riser from the first floor to the second floor MDF. The conduits should extend 6" AFF.
5. Three 4" conduits should be provided for horizontal pathway from the hallway.
6. 3/4" A/C fire treated plywood backboards to be installed behind the District-provided equipment racks, 8' high, mounted so the bottom is 6" AFF, painted with fire retardant white paint.



**UNIT E SECOND FLOOR POWER AND AUXILIARY SYSTEMS PLAN**  
**SCALE: 1/8" = 1' - 0"**

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

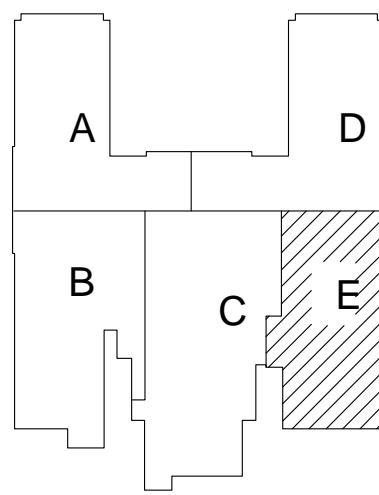
### ELECTRICAL GENERAL NOTES:

- THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND PANEL AREAS FOR CONNECTIONS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
7. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
8. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
9. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
10. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
11. PROVIDE THE DESIGN AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND THE COORDINATED CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
12. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED Oval SYMBOL.
13. CIRCUIT NEW EXIT SIGNS TO UNSWITCHED HOT-LEG OF ADJACENT LIGHTING BRANCH CIRCUIT.
14. WHERE WALLS ARE BEING FURRED OUT AND EXISTING DEVICES ARE TO REMAIN, EXTEND DEVICES TO FINISHED FACE OF NEW FURRING. EXTEND WIRE AS REQUIRED. PROVIDE NEW STAINLESS STEEL COVER PLATES. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FURRING LOCATIONS.

### **# CONSTRUCTION KEY NOTES:**

1. PROVIDE 120V CIRCUITING IN CEILING SPACE FOR DOOR SECURITY AND CONTROLS. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DIAGRAM(S) ON E7 SERIES FOR RACEWAYS AND BACK BOXES REQUIRED FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL REQUIRED RACEWAYS AND BACK BOXES. COORDINATE WITH DOOR HARDWARE CONTRACTOR. PROVIDE 1" CONDUIT FROM ARCHITECTURAL CASEWORK DOOR RELEASE BUTTON TO ACCESSIBLE CEILING SPACE ABOVE DOORS FOR SECURITY DOOR RELEASE.
2. FUTURE CAR ACCESS LOCATION. PROVIDE RECESSED SINGLE GANG JUNCTION BOX WITH STAINLESS STEEL FACE PLATE. STUB 1" C. UP INTO ACCESSIBLE CORRIDOR CEILING SPACE, PROVIDE NYLON PULL STRING WITH PLASTIC BUSHING ON END OF CONDUIT.
3. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BACK BOX IS 2-GANG. NO EXTERIOR SURFACE MOUNT CONDUIT IS ACCEPTABLE.
4. CIRCUIT NEW MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.
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7. 4" CONDUIT SLEEVES. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR. PROVIDE PLASTIC BUSHING WITH PULL STRING. PROVIDE FIRE STOP AS REQUIRED.
8. RECEPTACLE FOR NEW MDF/DF RACK COORDINATE FINAL LOCATION AND NEMA CONFIGURATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
9. NEW ELECTRIC HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.
10. DOOR INTERCOM. PROVIDE 2 GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
11. SECURITY MONITOR. LOCATE 84" ABOVE FINISH FLOOR. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
12. P.A. EMERGENCY PUSH BUTTON STATION. PROVIDE SINGLE GANG JUNCTION BOX WITH 1" C. TO ACCESSIBLE CEILING SPACE. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR.
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16. CIRCUIT NEW PANELBOARD TO MAINTAINED FEEDERS AND BRANCH CIRCUITS. EXTEND CONDUIT AND WIRE AS REQUIRED.
17. CIRCUIT NEW TRANSFORMER TO MAINTAINED PRIMARY FEEDER. EXTEND CONDUIT AND WIRE AS REQUIRED.
18. NEW FIRE ALARM CONTROL PANEL. CROSS THE INTO EXISTING FARADAY FIRE ALARM SYSTEM.

### KEY PLAN



<b>ISSUE DATE</b>	<b>ISSUED FOR</b>
09/20/2021	CONSTRUCTION DRAWINGS
DRAWN	ZDB
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## PROJECT

GROSSE POINTE  
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PIERCE MS  
RENOVATIONS

GROSSE POINTE PARK,  
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## SHEET

UNIT E SECOND  
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E3.20E

Revision Date