UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN

PLAZA ALTERATIONS

200 WEST 2ND STREET

PLAINFIELD, NEW JERSEY 07060

PROJECT DESCRIPTION

THE WORK SHALL CONSIST OF, BUT MAY NOT BE LIMITED TO, THE REPLACEMENT OF FOUR (4) ROOF TOP UNITS (RTU'S), REMOVAL AND REPLACEMENT OF EXISTING ROOFING SYSTEM, REMOVAL AND REPLACEMENT OF FAN POWERED BOXES (FPB) AND INTERIOR PAINTING OF STATE OCCUPIED SPACES. WORK COVERED BY THE CONTRACT DOCUMENTS ALSO INCLUDES THE MODERNIZATION OF THREE (3) ELEVATORS (ALTERNATE #1). ADDITIONAL INTERIOR PAINTING (ALTERNATE #2) AND THE REPLACEMENT OF THE SUSPENDED ACOUSTICAL CEILING TILE (ALTERNATE #3).

THE BASE BID SCOPE INCLUDES THE REMOVAL AND REPLACEMENT OF ROOF TOP UNITS (RTUS),THEIR ASSOCIATES CURBS AND COMPONENTS. REMOVING AND REPLACING THE EXISTING SINGLE PLY ROOFING SYSTEM. PROVIDING NEW PITCH POCKETS, RAISING CURBS AND PLUMBING VENTS AS REQUIRED AND WRAPPING EXISTING PARAPET WALLS. REMOVE AND REPLACE EXISTING CEILING TILE AND GRID AS REQUIRED FOR INSTALLATION OF NEW FAN POWERED BOXES. INTERIOR PAINTING OF ALL WALL AREAS AND DOOR FRAMES IN ALL STATE OCCUPIED SPACES WITHIN THE BUILDING. THE EXISTING WALL BASE IS EXISTING TO REMAIN. EXISTING FURNITURE AND EQUIPMENT TO REMAIN IN PLACE.

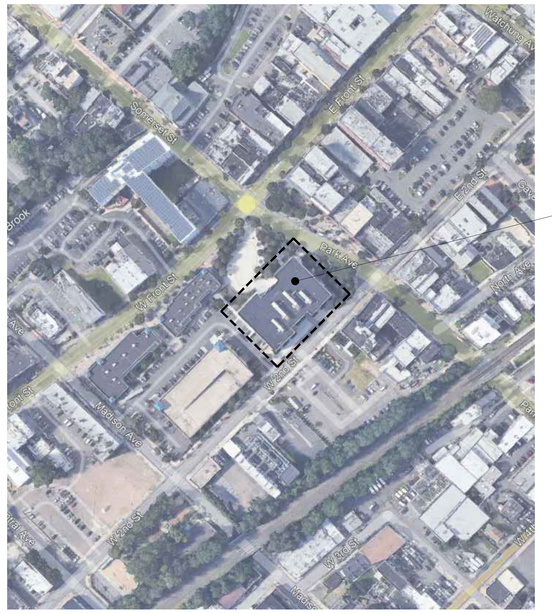
CODE INFORMATION:

THESE CONSTRUCTION DOCUMENTS CONFORM TO UNIFORM CONSTRUCTION CODE NEW JERSEY (UCCNJ) REHABILITATION SUBCODE, SUBCHAPTER 6, 5:23-6.3 DEFINITIONS, "ALTERATION" AND SHALL COMPLY WITH UCCNJ-1 5:23-6.4 REPAIR SECTION.



NORTH ARROW

1 SITE MAP
SCALE: NOT TO SCALE



GERRY B. GREEN PLAZA
200 WEST 2ND STREET
PLAINFIELD, NJ 07060

NORTH ARROW

2 LOCATION MAP
SCALE: NOT TO SCALE

ACT.	Acoustical Tile	JAN.	Janitor
ADJ.	Adjustable	J.C.	Janitor's Closet
ADMIN.	Administrative	JT.	Joint
A.F.F.	Above Finished Floor	KIT.	Kitchen
A.I.A	American Institute of Architects	LAB.	Laboratory
ALT.	Alternate	LAM.	Laminate
ALUM.	Aluminum	LAV.	Lavatory
ARCH.	Architectural	L.P.	Low Point
ASTM.	American Society of Testing Materials	LT.	Light
BD.	Board	MANUF.	Manufacturer
B.O.	Bottom of	MAX.	Maximum
BLDG.	Building	MECH.	Mechanical
C.B.	Catch Basin	M.E.P.	Mechanical Electrical Plumbing
C.F.	Cubic Feet	MH.	Manhole
C.J.	Control Joint	MIN.	Minimum
CL.	Center Line	MISC.	Miscellaneous
CLG.	Ceiling	M.O.	Masonry Opening
C.M.U.	Concrete Masonry Unit	M.S.	Marble Saddle
COL.	Column	MTD.	Mounted
CONC.	Concrete	N.A.	Not Applicable
CONF.	Conference	N.I.C.	Not In Contract
CONST.	Construction	N.T.S.	Not to Scale
CONT.	Continuous	O.A.	Overall
CORR.	Corridor	O.C.	On Center
CPT.	Carpet	O.D.	Outside Diameter
C.T.	Ceramic Tile	OPP.	Opposite
CTR.	Center	P.C.	Pre-cast Concrete
DBL.	Double	P.L.	Property Line
DEPT.	Department	P.LAM.	Plastic Laminate
DET.	Detail	PREFAB.	Prefabricated
D.F.	Drinking Fountain	PVC.	Poly Vinyl Chloride Pipe
DIA.	Diameter	R.	Riser
DIM.	Dimension	RAD.	Radius
DN.	Down	R.C.P.	Reinforced Concrete Pipe
DR.	Door	R.D.	Roof Drain
DWG.	Drawing	REF.	Reference
EA.	Each	REFR.	Refrigerator
E.J.	Expansion Joint	REINF.	Reinforced
ELEV.	Elevation	REV.	Revision
ELECT.	Electrical	RM.	Room
EMER.	Emergency	R.O.	Rough Opening
ENCL.	Enclosure	R.O.W.	Right of Way
E.P.	Electrical Panelboard	S.B.	Smart Board
EQ.	Equal	SECT.	Section
EQUIP.	Equipment	S.F.	Square Feet
EXIST.	Existing	SIM.	Similar
EXT.	Exterior	SPEC.	Specification
F.A.	Fire Alarm	S.T.C.	Sound Transmission Class
F.D.	Floor Drain	STD.	Standard
F.E.	Fire Extinguisher	STL.	Steel
F.H.C.	Fire Hose Cabinet	STOR.	Storage
FIN.	Finish	STRL.	Structural
FLR.	Floor	SUSP.	Suspended
F.R.P.	Fiber Reinforced Polyester	T.	Tread
FT.	Foot or Feet	T.B.	Tack Board
FTG.	Footing	TEL.	Telephone
GA.	Gage	TEMP.	Tempered
GALV.	Galvanized	TEMP. GL.	Tempered Glass
G.C.	General Contractor	T.O.	Top of
GL.	Glass	T.O.C.	Top of Curb
G.W.B.	Gypsum Wallboard	T.V.	Television
G.W.T.	Glazed Wall Tile	TYP.	Typical
GYP.	Gypsum	T.& G.	Tongue and Groove
H.B.	Hose Bibb	U.O.N.	Unless Otherwise Noted
HGT.	Height	V.C.T.	Vinyl Composition Tile
H.M.	Hollow Metal	VERT.	Vertical
HORIZ.	Horizontal	VEST.	Vestibule
H.P.	High Point	V.I.F.	Verify In Field
HR.	Hour	W/	With
H.V.A.C.	Heating Ventilation Air Conditioning	W.B.	White Board
I.D.	Inside Diameter	W.C.	Water Closet
INFO.	Information	W/O	Without
INSUL.	Insulation	W.T.	Wall Tile
INT.	Interior		
INv.	Invert Elevation		

3 ABBREVIATIONS
SCALE: NOT TO SCALE

LIST OF DRAWINGS:

ARCHITECTURAL:

CS -	COVER SHEET
A-101 -	FIRST FLOOR PLAN
A-102 -	SECOND FLOOR PLAN
A-103 -	THIRD FLOOR PLAN
A-104 -	FOURTH FLOOR PLAN
A-201 -	ALTERNATE #3 - FIRST FLOOR REFLECTED CEILING PLAN
A-202 -	ALTERNATE #3 - SECOND FLOOR REFLECTED CEILING PLAN
A-203 -	ALTERNATE #3 - THIRD FLOOR REFLECTED CEILING PLAN
A-204 -	ALTERNATE #3 - FOURTH FLOOR REFLECTED CEILING PLAN
A-105 -	ROOF PLAN
A-300 -	ROOF DETAILS
A-400 -	ALTERNATE #1 - ENLARGED FLOOR PLANS - ELEVATOR PLANS AND DETAILS

STRUCTURAL:

S001 -	STRUCTURAL NOTES
S100 -	STRUCTURAL FRAMING PLANS
S200 -	STRUCTURAL SECTIONS AND DETAILS

MECHANICAL:

M-001	MECHANICAL COVER SHEET
M-101	MECHANICAL 1ST/ FLOOR PLAN
M-102	MECHANICAL 2ND/ FLOOR PLAN
M-103	MECHANICAL 3RD/ FLOOR PLAN
M-104	MECHANICAL 4TH/ FLOOR PLAN
M-1R1D	MECHANICAL ROOF DEMOLITION PLAN
M-1R1	MECHANICAL ROOF NEW WORK PLAN
M-501	MECHANICAL DETAILS SHEET 1
M-502	MECHANICAL DETAILS SHEET 2
M-601	MECHANICAL SCHEDULES SHEET 1
M-602	MECHANICAL SCHEDULES SHEET 2
M-701	MECHANICAL CONTROLS SHEET 1
M-702	MECHANICAL CONTROLS SHEET 2
EN-001	ENERGY COMPLIANCE SHEET

ELECTRICAL:

E-001	ELECTRICAL COVER SHEET
E-002	ELECTRICAL SPECIFICATIONS SHEET
E-101	ELECTRICAL 1ST/ FLOOR PLAN
E-102	ELECTRICAL 2ND/ FLOOR PLAN
E-103	ELECTRICAL 3RD/ FLOOR PLAN
E-104	ELECTRICAL 4TH/ FLOOR PLAN
E-1R1	ELECTRICAL ROOF PLAN
E-501	ELECTRICAL DETAILS SHEET
E-601	ELECTRICAL SINGLE LINE DIAGRAM

FIRE PROTECTION:

FA-001	FIRE ALARM GENERAL NOTES
FA-101	FIRE ALARM 1ST/ FLOOR PLAN
FA-1R1	FIRE ALARM ROOF PLAN

TOTAL SHEETS: 41

4 DRAWING LIST
SCALE: NOT TO SCALE

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Pennoni

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PROJECT NO. 158-25-001

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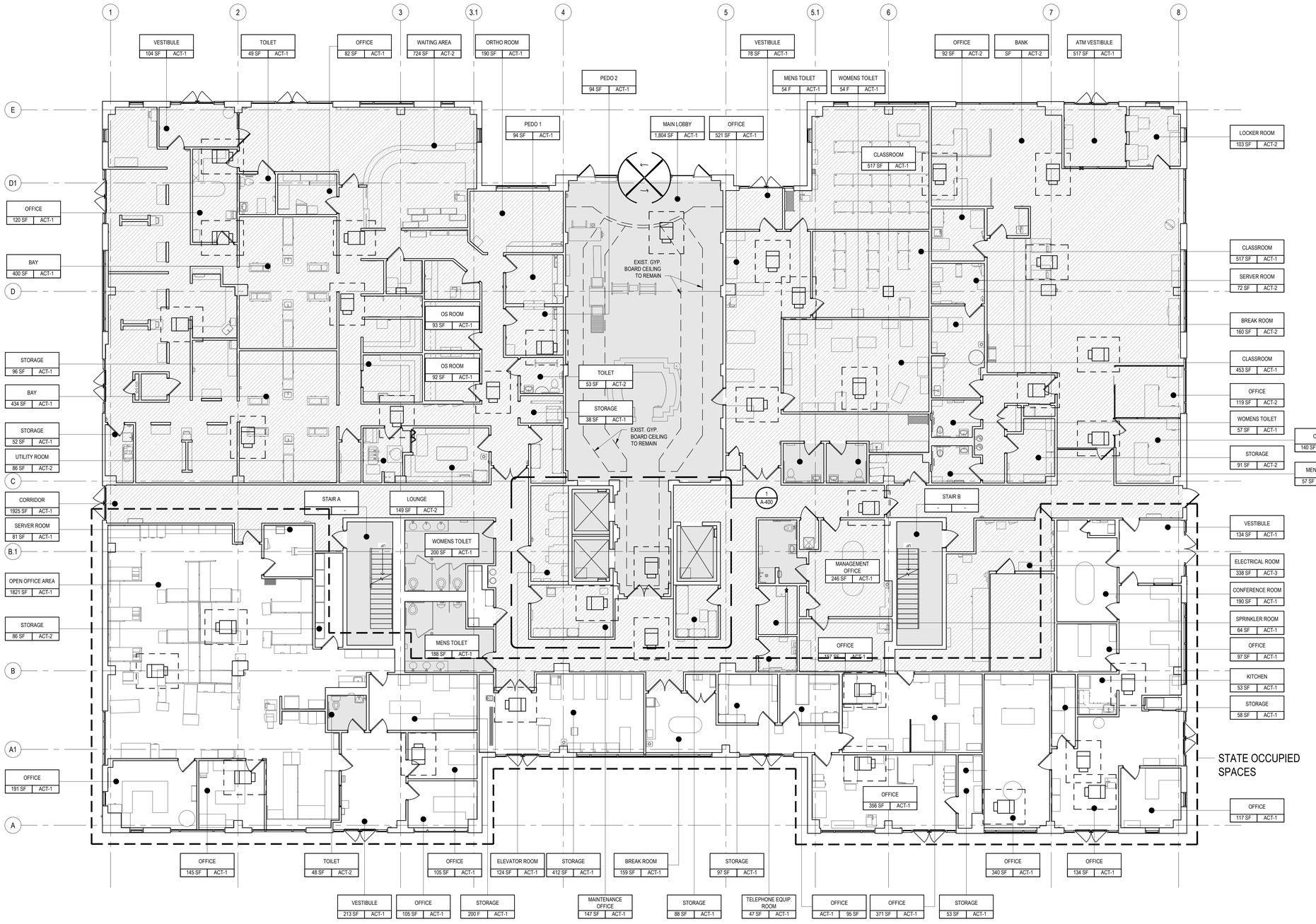
DRAWING TITLE

COVERSHEET

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

CS



1 FIRST FLOOR PLAN

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

1. PREP, PRIME AND PAINT ALL GYPSUM WALL SURFACES AND DOOR FRAMES IN STATE OCCUPIED SPACES. PROVIDE LEVEL "4" FINISH. REFER TO PAINT NOTES. PROTECT ALL EXISTING WALL BASE AND DECORATIVE WALL PANELS FOR DURATION OF WORK. SEE SPECIFICATION SECTION 099123. ALL LOOSE AND FIXED FURNITURE, FILE CABINETS, BULLETIN BOARDS, DEVICES (COPY MACHINES, COMPUTERS, TV'S, PHONE EQUIPMENT), SPECIALIZED EQUIPMENT AND PERSONAL BELONGINGS TO REMAIN IN PLACE. CONTRACTOR TO PROTECT ALL ITEMS EXISTING TO REMAIN AND RELOCATE LOOSE FURNITURE AS REQUIRED.
2. ALL EXISTING FAN-POWERED BOXES (FPB) TO BE REPLACED. REMOVE SECTION OF EXISTING SUSPENDED CEILING GRID AROUND FPB FOR INSTALLATION. UPON COMPLETION OF INSTALLATION OF NEW FPB CONTRACTOR TO PROVIDE NEW SUSPENDED GRID SYSTEM IN THE DEMOLISHED AREA AND TIE INTO EXISTING GRID SYSTEM. NEW SUSPENDED CEILING GRID TO MATCH EXISTING.

LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- A — COLUMN GRID
- EXISTING DOOR AND FRAME TO REMAIN
- EXISTING WALL CONSTRUCTION EXCLUDED FROM INTERIOR PAINTING SCOPE OF WORK
- LINE DENOTES STATE TENANT SPACES
- ROOM NAME | SQ FT | ACT-# — ROOM TAG
- CEILING TYPE

2 SCOPE OF WORK

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

1. **ALTERNATE #1 - "ELEVATOR MODERNIZATION"**
   EXISTING HYDRAULIC PASSENGER ELEVATORS AND SERVICE ELEVATOR TO BE MODERNIZED. SHEET A-400 FOR ADDITIONAL INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. **ALTERNATE #2 - "ADDITIONAL INTERIOR PAINTING"**
   PREP, PRIME AND PAINT ALL GYPSUM WALL SURFACES AND DOOR FRAMES. PROVIDE LEVEL "4" FINISH. REFER TO PAINT NOTES. SEE SPECIFICATION SECTION 099123.
3. **ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"**
   REMOVE EXISTING ACOUSTICAL CEILING TILES. INSTALL NEW CEILING ACOUSTICAL CEILING TILE. SEE A-200 SERIES FOR ADDITIONAL INFORMATION. SEE SPECIFICATION SECTION 095113.
   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 24"
   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 48"

2 SCHEDULE OF ALTERNATES

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

LEGEND

- ALTERNATE #2 - INTERIOR PAINTING OF ALL WALL AREAS AND DOOR FRAMES.

CEILING LEGEND

- EXISTING FAN-POWERED BOX (FPB) TO BE REPLACED. REMOVE SECTION OF EXISTING SUSPENDED CEILING GRID AROUND FPB FOR INSTALLATION. INSTALL NEW SUSPENDED CEILING GRID AS REQUIRED. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

3 CEILING LEGEND

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

GENERAL FINISH NOTES

1. ALL FINISHES TO BE SUBMITTED TO AND APPROVED BY ARCHITECT / OWNER PRIOR TO APPLICATION AND INSTALLATION.
2. PROVIDE ARCHITECT / OWNER WITH SAMPLES OF MANUFACTURER'S FULL RANGE OF COLORS AND TEXTURES FOR SELECTION. APPLY / INSTALL FINISHES AFTER RECEIVING WRITTEN APPROVAL BY ARCHITECT / OWNER.
3. PROVIDE, INSTALL / APPLY ALL FINISHES ACCORDING TO MANUFACTURER'S WRITTEN SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
4. ALL FINISHES TO COMPLY WITH LATEST IBC BUILDING CODE / NJ EDITION / (NJAC 5:23-3.14) CHAPTER 8 INTERIOR FINISHES FLAME SPREAD RATINGS.
5. DOORS FRAMES:
   A. ALL DOOR FRAMES TO BE PRIMED AND PAINTED. DO NOT PAINT OVER DOOR HARDWARE OR ACCESSORIES, FIRE RATING LABELS ON DOORS, OR OTHER CODE-REQUIRED LABELS OR NAME PLATES.
   B. DOOR FRAME TO BE PAINTED TO MATCH THE WALL THEY RESIDE IN, FINISH: SEMI GLOSS.
6. WALLS:
   A. PREPARE AND PRIME SURFACES. PROVIDE A LEVEL "4" FINISH. PRIMER SHALL BE COMPATIBLE WITH TOP COATS. PROVIDE INTERMEDIATE AND TOP COAT OF FINISH. THERE SHALL BE A MINIMUM OF (3) COATS INCLUDING PRIMER.
   B. WALL PAINT TO BE EGGSHELL, U.O.N.
   C. HEAVY TRAFFIC AREAS, UTILITY SPACES, JANITOR'S CLOSETS AND WET AREAS SHALL BE SEMI-GLOSS

4 PAINT NOTES

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

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RALPH J. WALKER AIA LICENSE NO. 21AI01588B

STATE OF NEW JERSEY JOHN P. CAPAZZI 21AI01002800 REGISTERED ARCHITECT

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Pennoni

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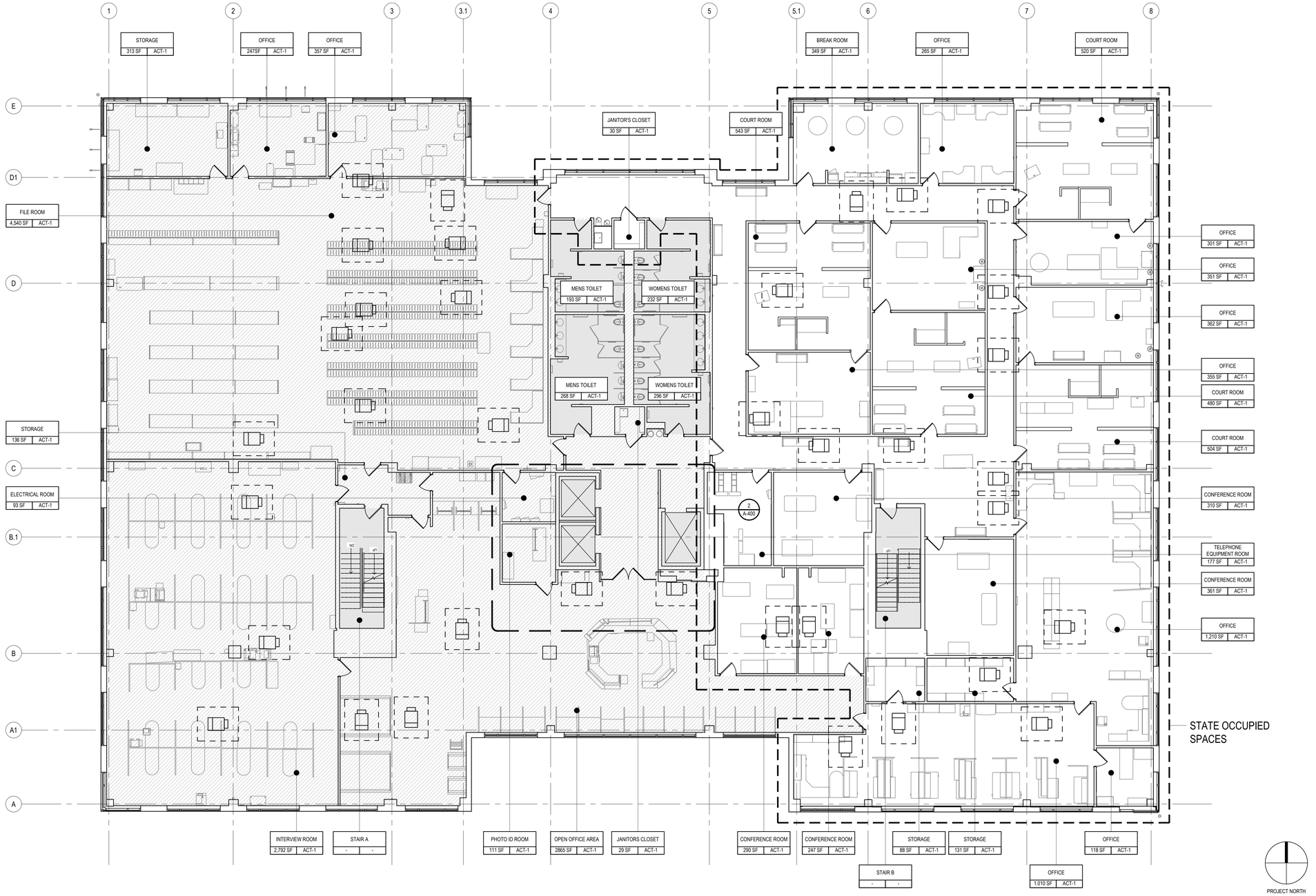
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FIRST FLOOR PLAN

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

A-101



1 SECOND FLOOR PLAN

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

1. PREP, PRIME AND PAINT ALL GYPSUM WALL SURFACES AND DOOR FRAMES IN STATE OCCUPIED SPACES. PROVIDE LEVEL "4" FINISH. REFER TO PAINT NOTES. PROTECT ALL EXISTING WALL BASE AND DECORATIVE WALL PANELS FOR DURATION OF WORK. SEE SPECIFICATION SECTION 099123. ALL LOOSE AND FIXED FURNITURE, FILE CABINETS, BULLETIN BOARDS, DEVICES (COPY MACHINES, COMPUTERS, TV'S, PHONE EQUIPMENT), SPECIALIZED EQUIPMENT AND PERSONAL BELONGINGS TO REMAIN IN PLACE. CONTRACTOR TO PROTECT ALL ITEMS EXISTING TO REMAIN AND RELOCATE LOOSE FURNITURE AS REQUIRED.
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LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- A — COLUMN GRID
- EXISTING DOOR AND FRAME TO REMAIN
- EXISTING WALL CONSTRUCTION EXCLUDED FROM INTERIOR PAINTING SCOPE OF WORK
- LINE DENOTES STATE TENANT SPACES
- ROOM NAME | SQ FT | ACT-# — ROOM TAG
- CEILING TYPE

2 SCOPE OF WORK

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

1. **ALTERNATE #1 - "ELEVATOR MODERNIZATION"**
   EXISTING HYDRAULIC PASSENGER ELEVATORS AND SERVICE ELEVATOR TO BE MODERNIZED. SHEET A-400 FOR ADDITIONAL INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. **ALTERNATE #2 - "ADDITIONAL INTERIOR PAINTING"**
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3. **ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"**
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   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 24"
   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 48"

2 SCHEDULE OF ALTERNATES

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

LEGEND

- ALTERNATE #2 - INTERIOR PAINTING OF ALL WALL AREAS AND DOOR FRAMES.

3 CEILING LEGEND

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

CEILING LEGEND

- EXISTING FAN-POWERED BOX (FPB) TO BE REPLACED. REMOVE SECTION OF EXISTING SUSPENDED CEILING GRID AROUND FPB FOR INSTALLATION. INSTALL NEW SUSPENDED CEILING GRID AS REQUIRED. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

4 PAINT NOTES

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

GENERAL FINISH NOTES

1. ALL FINISHES TO BE SUBMITTED TO AND APPROVED BY ARCHITECT / OWNER PRIOR TO APPLICATION AND INSTALLATION.
2. PROVIDE ARCHITECT / OWNER WITH SAMPLES OF MANUFACTURER'S FULL RANGE OF COLORS AND TEXTURES FOR SELECTION. APPLY / INSTALL FINISHES AFTER RECEIVING WRITTEN APPROVAL BY ARCHITECT / OWNER.
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STATE OF NEW JERSEY JOHN P. CAPAZZI LICENSED ARCHITECT 21AI01002800

Digitally signed by John Capazzi
Date: 2025.06.23 15:32:05-04'00'

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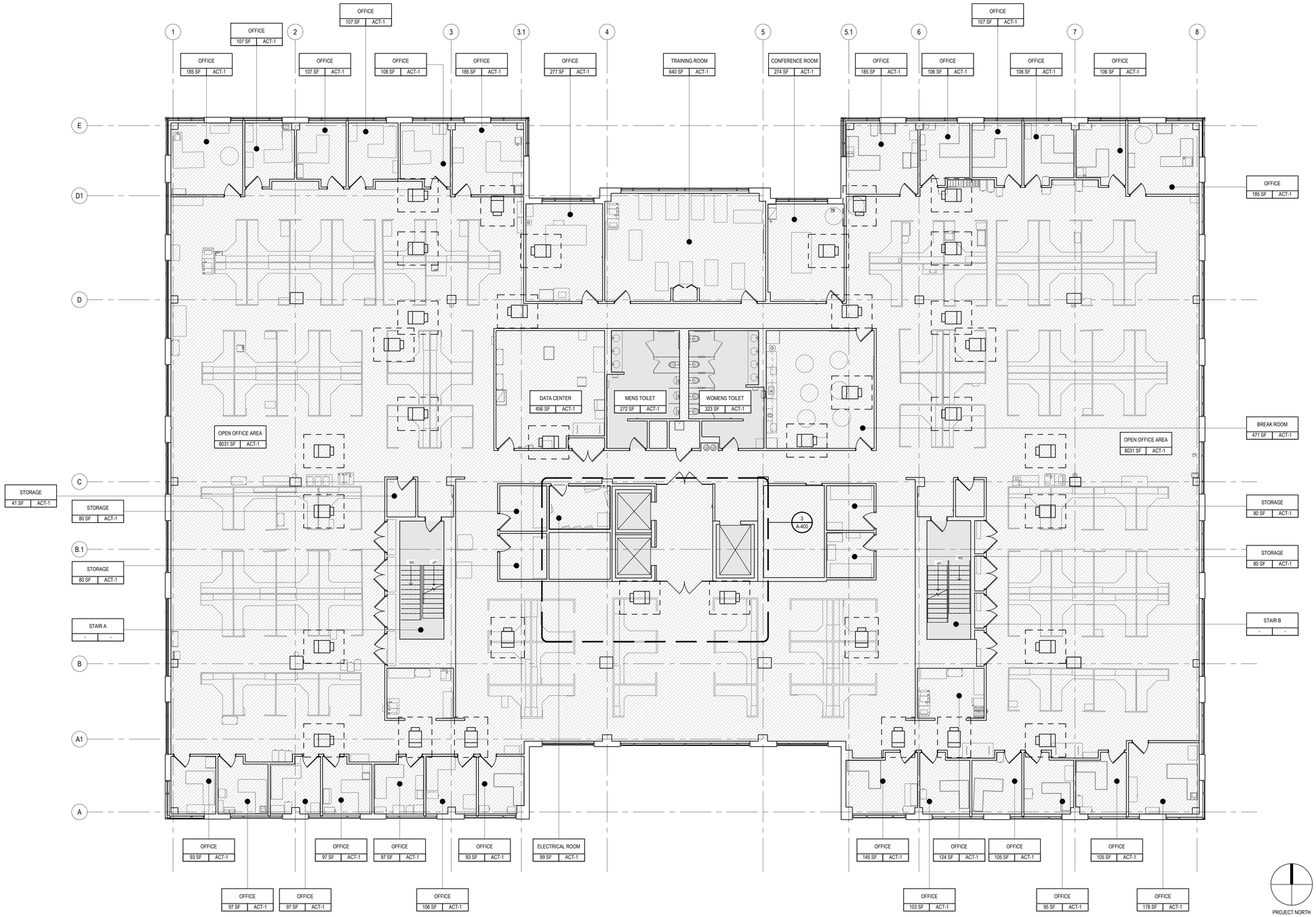
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SECOND FLOOR PLAN

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

A-102



1 THIRD FLOOR PLAN

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

1. PREP, PRIME AND PAINT ALL GYPSUM WALL SURFACES AND DOOR FRAMES IN STATE OCCUPIED SPACES. PROVIDE LEVEL "4" FINISH. REFER TO PAINT NOTES. PROTECT ALL EXISTING WALL BASE AND DECORATIVE WALL PANELS FOR DURATION OF WORK. SEE SPECIFICATION SECTION 099123.
2. ALL EXISTING FAN-POWERED BOXES (FPB) TO BE REPLACED. REMOVE SECTION OF EXISTING SUSPENDED CEILING GRID AROUND FPB FOR INSTALLATION. UPON COMPLETION OF INSTALLATION OF NEW FPB CONTRACTOR TO PROVIDE NEW SUSPENDED GRID SYSTEM IN THE DEMOLISHED AREA AND TIE INTO EXISTING GRID SYSTEM. NEW SUSPENDED CEILING GRID TO MATCH EXISTING.

LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- A — COLUMN GRID
- EXISTING DOOR AND FRAME TO REMAIN
- EXISTING WALL CONSTRUCTION EXCLUDED FROM INTERIOR PAINTING SCOPE OF WORK
- LINE DENOTES STATE TENANT SPACES
- ROOM NAME | SQ FT | ACT-# — ROOM TAG; CEILING TYPE

2 SCOPE OF WORK

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

1. **ALTERNATE #1 - "ELEVATOR MODERNIZATION"**
   EXISTING HYDRAULIC PASSENGER ELEVATORS AND SERVICE ELEVATOR TO BE MODERNIZED. SHEET A-400 FOR ADDITIONAL INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. **ALTERNATE #2 - "ADDITIONAL INTERIOR PAINTING"**
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3. **ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"**
   REMOVE EXISTING ACOUSTICAL CEILING TILES. INSTALL NEW CEILING ACOUSTICAL CEILING TILE.
   SEE A-200 SERIES FOR ADDITIONAL INFORMATION. SEE SPECIFICATION SECTION 095113.
   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 24"
   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 48"

2 SCHEDULE OF ALTERNATES

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

LEGEND

- ALTERNATE #2 - INTERIOR PAINTING OF ALL WALL AREAS AND DOOR FRAMES.

3 CEILING LEGEND

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

CEILING LEGEND

- EXISTING FAN-POWERED BOX (FPB) TO BE REPLACED. REMOVE SECTION OF EXISTING SUSPENDED CEILING GRID AROUND FPB FOR INSTALLATION. INSTALL NEW SUSPENDED CEILING GRID AS REQUIRED. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

4 PAINT NOTES

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

GENERAL FINISH NOTES

1. ALL FINISHES TO BE SUBMITTED TO AND APPROVED BY ARCHITECT / OWNER PRIOR TO APPLICATION AND INSTALLATION.
2. PROVIDE ARCHITECT / OWNER WITH SAMPLES OF MANUFACTURER'S FULL RANGE OF COLORS AND TEXTURES FOR SELECTION. APPLY / INSTALL FINISHES AFTER RECEIVING WRITTEN APPROVAL BY ARCHITECT / OWNER.
3. PROVIDE, INSTALL / APPLY ALL FINISHES ACCORDING TO MANUFACTURER'S WRITTEN SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
4. ALL FINISHES TO COMPLY WITH LATEST IBC BUILDING CODE / NJ EDITION / (NJAC 5:23-3.14) CHAPTER 8 INTERIOR FINISHES FLAME SPREAD RATINGS.
5. DOORS FRAMES:
   A. ALL DOOR FRAMES TO BE PRIMED AND PAINTED. DO NOT PAINT OVER DOOR HARDWARE OR ACCESSORIES. FIRE RATING LABELS ON DOORS, OR OTHER CODE-REQUIRED LABELS OR NAME PLATES.
   B. DOOR FRAME TO BE PAINTED TO MATCH THE WALL THEY RESIDE IN, FINISH: SEMI GLOSS.
6. WALLS:
   A. PREPARE AND PRIME SURFACES. PROVIDE A LEVEL "4" FINISH. PRIMER SHALL BE COMPATIBLE WITH TOP COATS. PROVIDE INTERMEDIATE AND TOP COAT OF FINISH. THERE SHALL BE A MINIMUM OF (3) COATS INCLUDING PRIMER.
   B. WALL PAINT TO BE EGGSHELL, U.O.N.
   C. HEAVY TRAFFIC AREAS, UTILITY SPACES, JANITOR'S CLOSETS AND WET AREAS SHALL BE SEMI-GLOSS

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GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

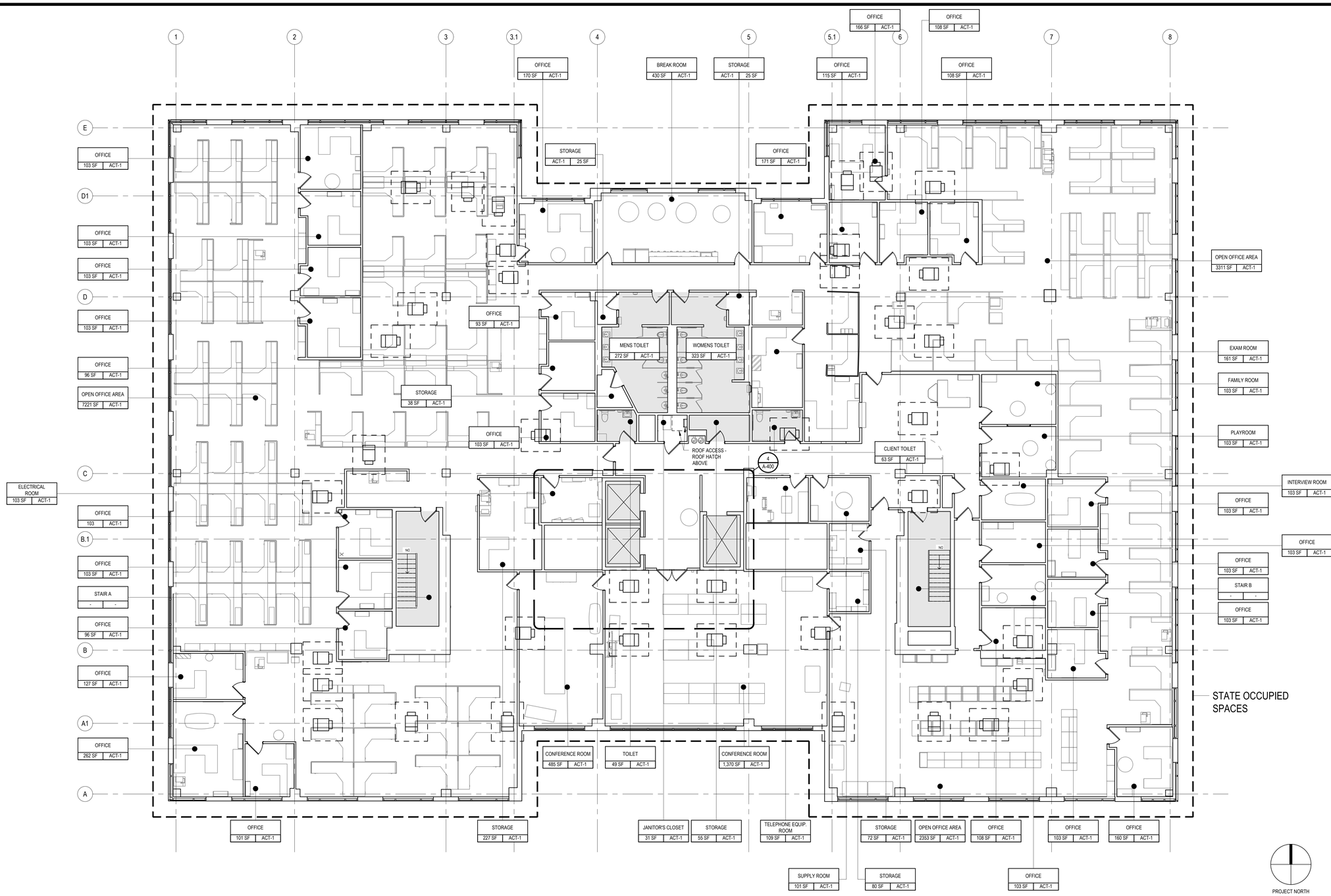
DRAWING TITLE

THIRD FLOOR PLAN

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

A-103



1 FOURTH FLOOR PLAN

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

1. PREP, PRIME AND PAINT ALL GYPSUM WALL SURFACES AND DOOR FRAMES IN STATE OCCUPIED SPACES. PROVIDE LEVEL "4" FINISH. REFER TO PAINT NOTES. PROTECT ALL EXISTING WALL BASE AND DECORATIVE WALL PANELS FOR DURATION OF WORK. SEE SPECIFICATION SECTION 099123. ALL LOOSE AND FIXED FURNITURE, FILE CABINETS, BULLETIN BOARDS, DEVICES (COPY MACHINES, COMPUTERS, TV'S, PHONE EQUIPMENT), SPECIALIZED EQUIPMENT AND PERSONAL BELONGINGS TO REMAIN IN PLACE. CONTRACTOR TO PROTECT ALL ITEMS EXISTING TO REMAIN AND RELOCATE LOOSE FURNITURE AS REQUIRED.
2. ALL EXISTING FAN-POWERED BOXES (FPB) TO BE REPLACED. REMOVE SECTION OF EXISTING SUSPENDED CEILING GRID AROUND FPB FOR INSTALLATION. UPON COMPLETION OF INSTALLATION OF NEW FPB CONTRACTOR TO PROVIDE NEW SUSPENDED GRID SYSTEM IN THE DEMOLISHED AREA AND TIE INTO EXISTING GRID SYSTEM. NEW SUSPENDED CEILING GRID TO MATCH EXISTING.

LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- A — COLUMN GRID
- EXISTING DOOR AND FRAME TO REMAIN
- EXISTING WALL CONSTRUCTION EXCLUDED FROM INTERIOR PAINTING SCOPE OF WORK
- LINE DENOTES STATE TENANT SPACES
- ROOM NAME | SQ FT | ACT-# — ROOM TAG; CEILING TYPE

2 SCOPE OF WORK

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

1. **ALTERNATE #1 - "ELEVATOR MODERNIZATION"**
   EXISTING HYDRAULIC PASSENGER ELEVATORS AND SERVICE ELEVATOR TO BE MODERNIZED. SHEET A-400 FOR ADDITIONAL INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. **ALTERNATE #2 - "ADDITIONAL INTERIOR PAINTING"**
   PREP, PRIME AND PAINT ALL GYPSUM WALL SURFACES AND DOOR FRAMES. PROVIDE LEVEL "4" FINISH. REFER TO PAINT NOTES. SEE SPECIFICATION SECTION 099123.
3. **ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"**
   REMOVE EXISTING ACOUSTICAL CEILING TILES. INSTALL NEW CEILING ACOUSTICAL CEILING TILE. SEE A-200 SERIES FOR ADDITIONAL INFORMATION. SEE SPECIFICATION SECTION 095113.
   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 24"
   MANUFACTURER: ARMSTRONG WORLD INDUSTRIES
   TYPE: FINE FISSURED SQUARE LAY-IN
   COLOR: WHITE
   SIZE: 24" X 48"

LEGEND

- ALTERNATE #2 - INTERIOR PAINTING OF ALL WALL AREAS AND DOOR FRAMES.

3 CEILING LEGEND

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

CEILING LEGEND

- EXISTING FAN-POWERED BOX (FPB) TO BE REPLACED. REMOVE SECTION OF EXISTING SUSPENDED CEILING GRID AROUND FPB FOR INSTALLATION. INSTALL NEW SUSPENDED CEILING GRID AS REQUIRED. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

4 PAINT NOTES

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

GENERAL FINISH NOTES

1. ALL FINISHES TO BE SUBMITTED TO AND APPROVED BY ARCHITECT / OWNER PRIOR TO APPLICATION AND INSTALLATION.
2. PROVIDE ARCHITECT / OWNER WITH SAMPLES OF MANUFACTURER'S FULL RANGE OF COLORS AND TEXTURES FOR SELECTION. APPLY / INSTALL FINISHES AFTER RECEIVING WRITTEN APPROVAL BY ARCHITECT / OWNER.
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   B. DOOR FRAME TO BE PAINTED TO MATCH THE WALL THEY RESIDE IN, FINISH: SEMI GLOSS.
6. WALLS:
   A. PREPARE AND PRIME SURFACES. PROVIDE A LEVEL "4" FINISH. PRIMER SHALL BE COMPATIBLE WITH TOP COATS. PROVIDE INTERMEDIATE AND TOP COAT OF FINISH. THERE SHALL BE A MINIMUM OF (3) COATS INCLUDING PRIMER.
   B. WALL PAINT TO BE EGGSHELL U.O.N.
   C. HEAVY TRAFFIC AREAS, UTILITY SPACES, JANITOR'S CLOSETS AND WET AREAS SHALL BE SEMI-GLOSS

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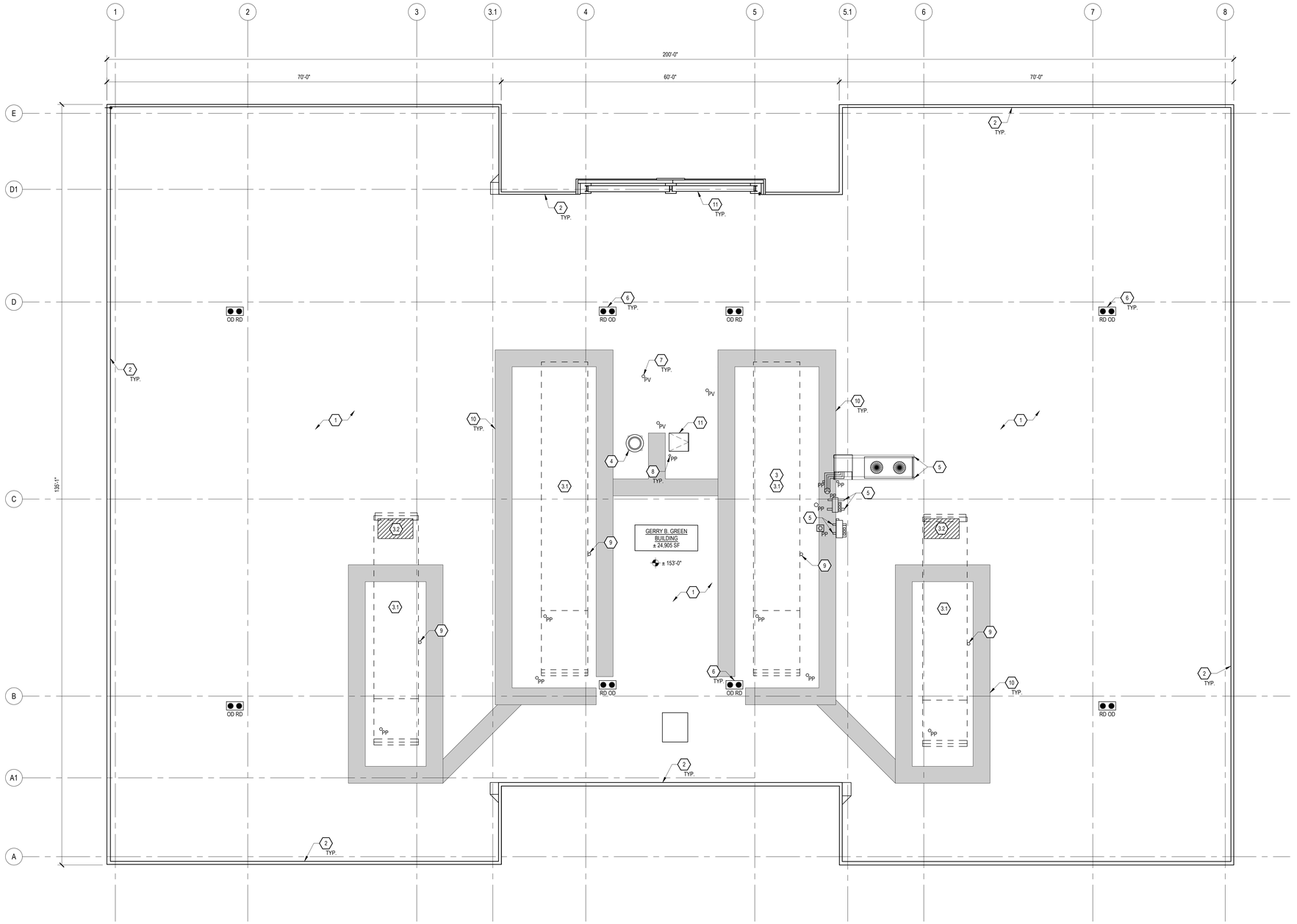
DRAWING TITLE

FOURTH FLOOR PLAN

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

A-104



1 ROOF PLAN

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

ROOF PLAN NOTES:

1. ALL NOTES AND CALL OUTS REFER TO NEW ITEMS UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF ANY DEMOLITION ACTIVITIES. REPORT ANY DISCREPANCIES TO ARCHITECT.
3. PROVIDE ALL DEMOLITION AND REMOVAL OF DEBRIS AS INDICATED ON THE DOCUMENTS OR AS OTHERWISE REQUIRED TO CARRY OUT THE RENOVATION AND INSTALLATION OF NEW WORK.
4. COORDINATE ALL DEMOLITION WORK WITH EXISTING MECHANICAL EQUIPMENT, THRU ROOF PENETRATIONS, SKYLIGHTS AND EXHAUST FANS AND OTHER EQUIPMENT. TAKE PRECAUTIONS NOT TO DISTURB OR DAMAGE THESE SYSTEMS.
5. ALL ROOFING DEBRIS SHALL BE REMOVED FROM THE ROOF BY MEANS OF COVERED DEBRIS CHUTES, TO DUMPSTERS AT GRADE. ALL MATERIALS REMOVED SHALL BE DISPOSED OF OFF THE PREMISES IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
6. PROTECT ALL EXPOSED ROOF DECK WITH WATER TIGHT COVERINGS IN THE EVENT THE RETROFIT ROOFING SYSTEM IS NOT COMPLETED WITHIN THE SAME REMOVAL DAY.
7. ALL WOOD TO BE PRESSURE TREATED.
8. CONTRACTOR TO CONFIRM ALL DRAIN LOCATIONS AND CONTACT ARCHITECT IMMEDIATELY IF ANY ABANDONED DRAINS ARE LOCATED.
9. ALL DUCTS TO BE TEMPORARILY SUPPORTED TO INSTALL ROOF THEN EXISTING DUCT SUPPORTS TO BE REINSTALLED AND FLASHED TO PROVIDE WATER TIGHT SYSTEM.
10. EXAMINE EXISTING CONDITIONS OF ROOF DECK, NOTIFY OWNER AND ARCHITECT OF CONDITION IMMEDIATELY UPON EXAMINATION OF RESULTS.
11. EXISTING TV, COMMUNICATION AND MISC. WIRES TO BE REMAIN UNLESS OTHERWISE NOTED. CONTRACTOR TO TEMPORARILY MOVE/ SUPPORT DURING INSTALLATION OF ROOF MATERIAL.

2 GENERAL NOTES

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

ROOF PLAN KEYNOTES: (#)

1. REMOVE EXISTING EPDM SINGLE PLY SYSTEM. EXISTING POLYISO. INSULATION TO REMAIN . CONTRACTOR TO TAKE PRECAUTIONS NOT TO DAMAGE EXISTING SYSTEMS TO REMAIN, CONTRACTOR IS RESPONSIBLE TO REPLACE ANY INSULATION BOARD TORN OR DAMAGED DURING REMOVAL OF SINGLE PLY SYSTEM. NEW ROOFING SYSTEM TO BE INSTALLED AND ADHERED TO EXISTING TAPERED INSULATION. SEE DETAIL 1/A-300.
2. REMOVE EXISTING COUNTERFLASHING, TERMINATION BAR, ETC. INSTALL NEW METAL COPING FLASHING SYSTEM AT EXISTING PARAPET. REFER TO DETAIL 2/A-300 FOR ADDITIONAL INFORMATION. TYPICAL PARAPET HEIGHT ±3'-0", VERIFY PARAPET HEIGHT AND WIDTH IN FIELD.
3. REMOVE AND REPLACE EXISTING MOTOR AND COMPRESSOR AT RTU #2. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

3.1 EXISTING ROOFTOP UNITS AND ASSOCIATED CURBS TO BE REMOVED AND REPLACED WITH NEW. AREA TO RECEIVE NEW CURBS AND STEEL DUNNAGE BEAMS. EXISTING INSULATION TO REMAIN. REFER TO STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR FINAL LOCATION AND ADDITIONAL INFORMATION. SEE DETAIL 3/A-300 FOR FLASHING INFORMATION. REFER TO SPECIFICATIONS FOR PHASING SCHEDULE, COORDINATE WITH OWNER REP.

3.2 INFILL EXPOSED OPENINGS. REFER TO STRUCTURAL DRAWINGS FOR INFILL DETAIL. REFER TO M.E.P. DRAWINGS FOR ADDITIONAL INFORMATION.

4. EXISTING EXHAUST VENT CURB SYSTEM TO REMAIN. ADD ADDITIONAL P.T. WOOD BLOCKING AS REQUIRED TO BUILD UP CURB AND PROVIDE 8" MIN CURB HEIGHT. CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD. SEE DETAIL 4/A-300 FOR FLASHING DETAIL INFORMATION.
5. EXISTING PRE-FABRICATED EQUIPMENT SUPPORTS (RAILS) TO REMAIN. SEE DETAIL 5/A-300 FOR FLASHING DETAIL INFORMATION.
6. REMOVE ALL EXISTING ROOF DRAIN/DRAIN BOWLS AND BASKETS. CLEAN OUT ALL PIPES OF DEBRIS AND VEGETATION. PROVIDE NEW DRAIN STRAINER, CLAMPING RING AND SEALANT. NEW ROOF DRAINS BY: J.R. SMITH MODEL #1010 OR ARCHITECT APPROVED EQUAL TO BE PROVIDED AS DIRECTED BY OWNER. SEE DETAIL 6/A-300 FOR DRAIN DETAIL.
7. EXISTING PLUMBING VENT TO REMAIN. SEE DETAIL 7/A-300 FOR ADDITIONAL INFORMATION. ALL PLUMBING VENTS TO BE RAISED TO A MIN OF 8" ABOVE NEW ROOF SYSTEM. MARKED ON DRAWING AS "PV".
8. REMOVE AND REPLACE EXISTING PITCH POCKET FOR CONDUIT INTO THE BUILDING SEE DETAIL 8/A-300 FOR ADDITIONAL INFORMATION. REFER TO M.E.P. DRAWINGS FOR MORE INFORMATION. MARKED ON DRAWING AS "PP"
9. ROOFTOP UNIT CONDENSATE, PROVIDE NEW 2" SCHEDULE 40 PVC PIPE TO NEAREST ROOF DRAIN. PROVIDE NEW ROOF TOP SUPPORT BLOCKS WITH PIPE CLAMPS. COORDINATE FINAL LOCATION OF CONDENSATE WITH MEP DRAWINGS.
10. WALKING PADS TO BE PROVIDED TO ROOF TOP EQUIPMENT AS SHOWN ON THE PLAN, WALKING PADS TO BE COMPATIBLE WITH NEW ROOFING SYSTEM.
11. EXISTING ROOF HATCH TO REMAIN. PREP, PRIME AND PAINT EXISTING STEEL CLOSURE FRAME.
    - SAND SURFACE WITH 80 GRIT TO CREATE A PROFILE AND CLEAN SURFACE FOR NEW PAINT
    - (1) COAT PRIMER AS SPECIFIED BY MANUFACTURER.
    - (2) TWO COATS OF DIRECT-TO-METAL (DTM) PAINT. COLOR - SELECTION TO BE APPROVED BY OWNER. MANUFACTURER - SHERWIN WILLIAMS
12. EXISTING STEEL TO REMAIN. PREP, PRIME AND PAINT EXISTING STEEL SUPPORT.
    - SAND SURFACE WITH 80 GRIT TO CREATE A PROFILE AND CLEAN SURFACE FOR NEW PAINT
    - (1) COAT PRIMER AS SPECIFIED BY MANUFACTURER.
    - (2) TWO COATS OF DIRECT-TO-METAL (DTM) PAINT. COLOR - SELECTION TO BE APPROVED BY OWNER. MANUFACTURER - SHERWIN WILLIAMS

LEGEND

- EXIST. CONSTRUCTION TO BE DEMOLISHED
- OD RD — ROOF DRAIN
- EV — EXISTING EXHAUST VENT
- PV — EXISTING PLUMBING VENT
- PP — EXISTING PITCH POCKET

3 KEYNOTES

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

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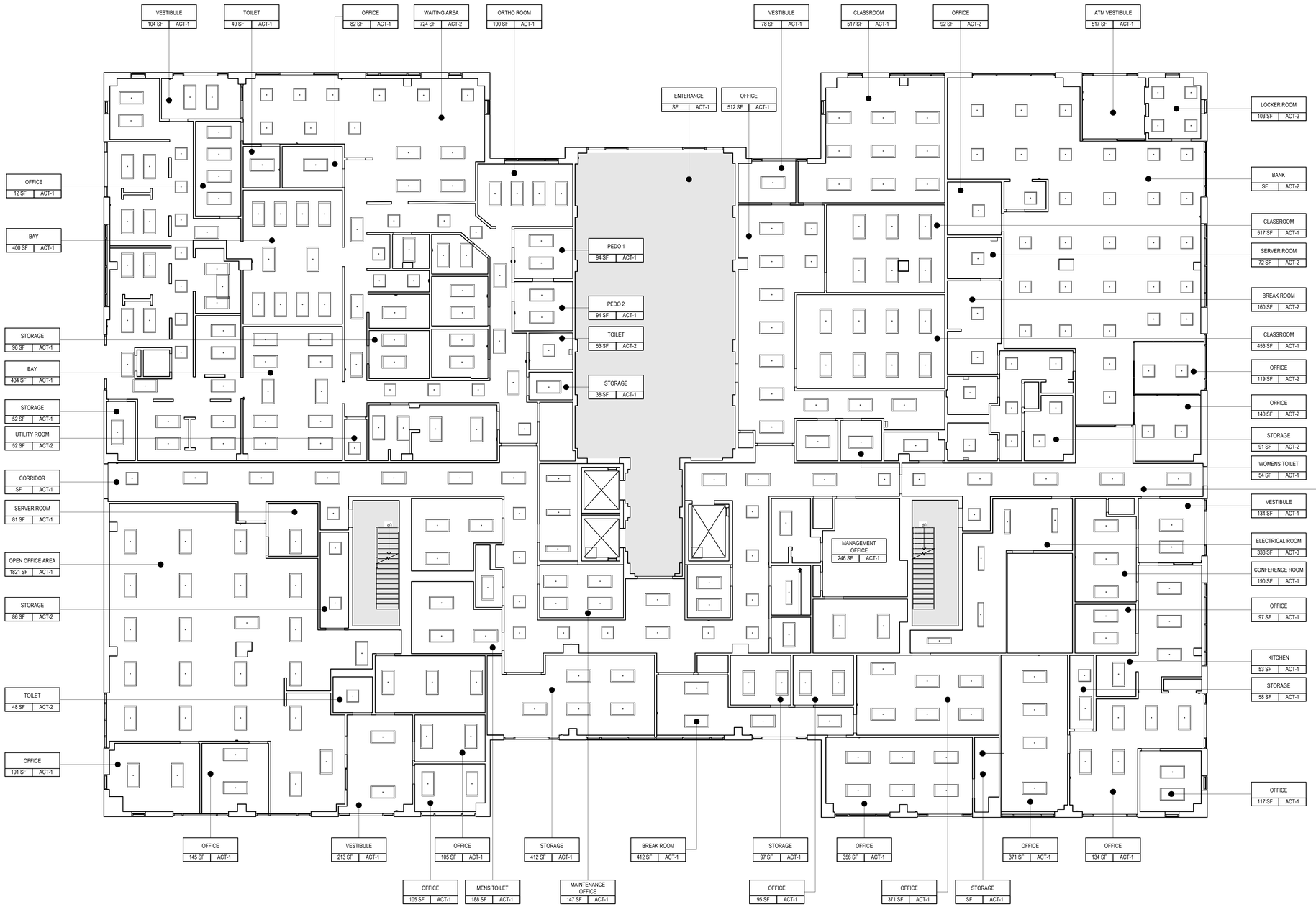
DRAWING TITLE

ROOF PLAN

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

A-105



1 ALTERNATE #3 - FIRST FLOOR REFLECTED CEILING PLAN

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

GENERAL NOTES

1. ALL LIGHT FIXTURES ARE EXISTING TO REMAIN.
2. TYPICAL CEILING HEIGHT IS ±10'-0". VERIFY IN FIELD.

LEGEND

- EXISTING CONSTRUCTION N.I.C.
- EXISTING LAY-IN LIGHT FIXTURE
- ROOM TAG (ROOM NAME / SQ.FT. | ACT-# / CEILING TYPE)

2 GENERAL NOTES

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

ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"

PROVIDE THE FOLLOWING WORK FOR THE CEILING TILE REPLACEMENT:

1. REMOVE AND DISPOSE OF EXISTING ACOUSTICAL CEILING TILES.
2. EXISTING GRID TO BE PAINTED PRIOR TO INSTALLATION OF NEW CEILING TILES.
   - CLEAN SURFACE FOR NEW PAINT.
   - (1) ONE COAT OF PAINT. COLOR SELECTION TO BE APPROVED BY OWNER. MANUFACTURER - SHERWIN WILLIAMS
3. INSTALL NEW CEILING ACOUSTICAL CEILING TILE. REFER TO CEILING TYPE LEGEND. SEE SPECIFICATION SECTION 095113.

CEILING TYPE LEGEND

ACT-1	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 48"
ACT-2	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 24"

3 SCHEDULE OF ALTERNATES

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

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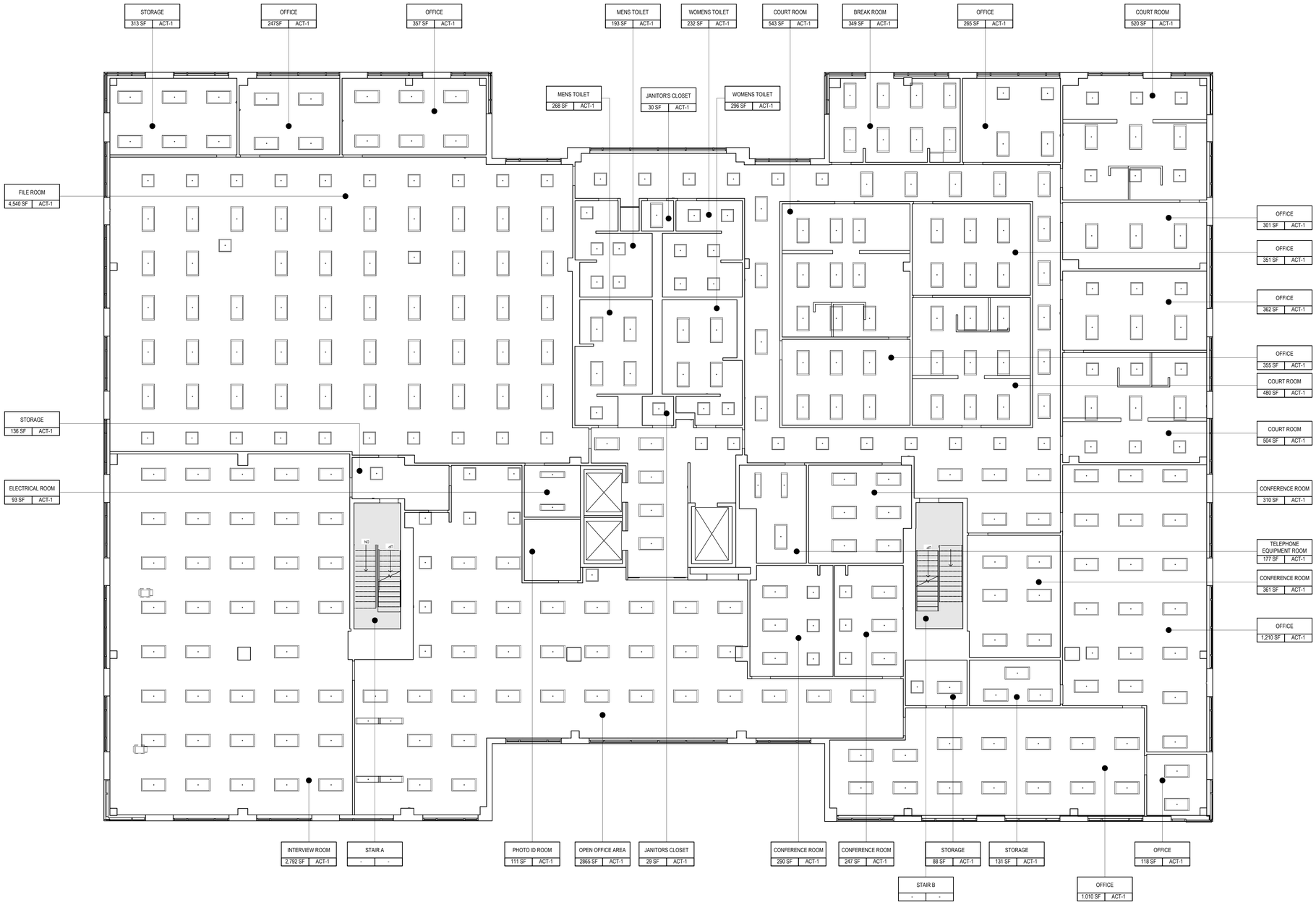
DRAWING TITLE

ALTERNATE #3 - FIRST FLOOR REFLECTED CEILING PLAN

CHECKED BY: TH | DRAWN BY: JV

DRAWING No.

A-201



1 ALTERNATE #3 - SECOND FLOOR REFLECTED CEILING PLAN

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

GENERAL NOTES

1. ALL LIGHT FIXTURES ARE EXISTING TO REMAIN.
2. TYPICAL CEILING HEIGHT IS ±10'-0". VERIFY IN FIELD.

LEGEND

- EXISTING CONSTRUCTION N.I.C.
- EXISTING LAY-IN LIGHT FIXTURE
- ROOM NAME / SQ FT. | ACT-# — ROOM TAG
- CEILING TYPE

2 GENERAL NOTES

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

ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"

PROVIDE THE FOLLOWING WORK FOR THE CEILING TILE REPLACEMENT:

1. REMOVE AND DISPOSE OF EXISTING ACOUSTICAL CEILING TILES.
2. EXISTING GRID TO BE PAINTED PRIOR TO INSTALLATION OF NEW CEILING TILES.
   - CLEAN SURFACE FOR NEW PAINT.
   - (1) ONE COAT OF PAINT. COLOR SELECTION TO BE APPROVED BY OWNER. MANUFACTURER - SHERWIN WILLIAMS
3. INSTALL NEW CEILING ACOUSTICAL CEILING TILE. REFER TO CEILING TYPE LEGEND. SEE SPECIFICATION SECTION 095113.

CEILING TYPE LEGEND

ACT-1	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 48"
ACT-2	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 24"

3 SCHEDULE OF ALTERNATES

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

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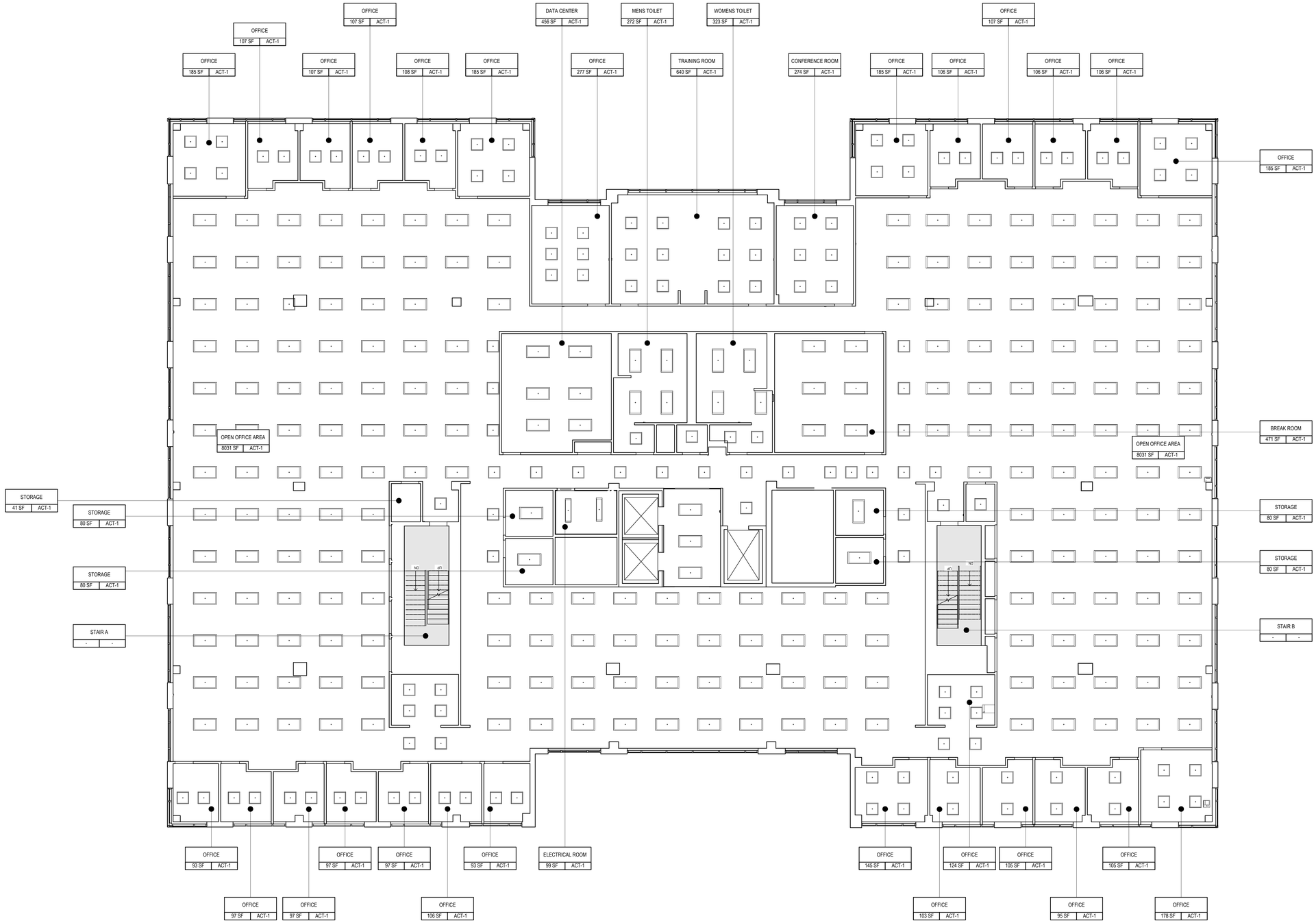
DRAWING TITLE

ALTERNATE #3 - SECOND FLOOR REFLECTED CEILING PLAN

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

A-202



1 ALTERNATE #3 - THIRD FLOOR REFLECTED CEILING PLAN

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

GENERAL NOTES

1. ALL LIGHT FIXTURES ARE EXISTING TO REMAIN.
2. TYPICAL CEILING HEIGHT IS ±10'-0". VERIFY IN FIELD.

LEGEND

- EXISTING CONSTRUCTION N.I.C.
- EXISTING LAY-IN LIGHT FIXTURE
- ROOM TAG (ROOM NAME / SQ FT / ACT-#)
- CEILING TYPE

2 GENERAL NOTES

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

ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"

PROVIDE THE FOLLOWING WORK FOR THE CEILING TILE REPLACEMENT:

1. REMOVE AND DISPOSE OF EXISTING ACOUSTICAL CEILING TILES.
2. EXISTING GRID TO BE PAINTED PRIOR TO INSTALLATION OF NEW CEILING TILES.
   - CLEAN SURFACE FOR NEW PAINT.
   - (1) ONE COAT OF PAINT. COLOR SELECTION TO BE APPROVED BY OWNER.
     MANUFACTURER - SHERWIN WILLIAMS
3. INSTALL NEW CEILING ACOUSTICAL CEILING TILE. REFER TO CEILING TYPE LEGEND. SEE SPECIFICATION SECTION 095113.

CEILING TYPE LEGEND

ACT-1	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 48"
ACT-2	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 24"

3 SCHEDULE OF ALTERNATES

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

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PROJECT NO. 158-25-001

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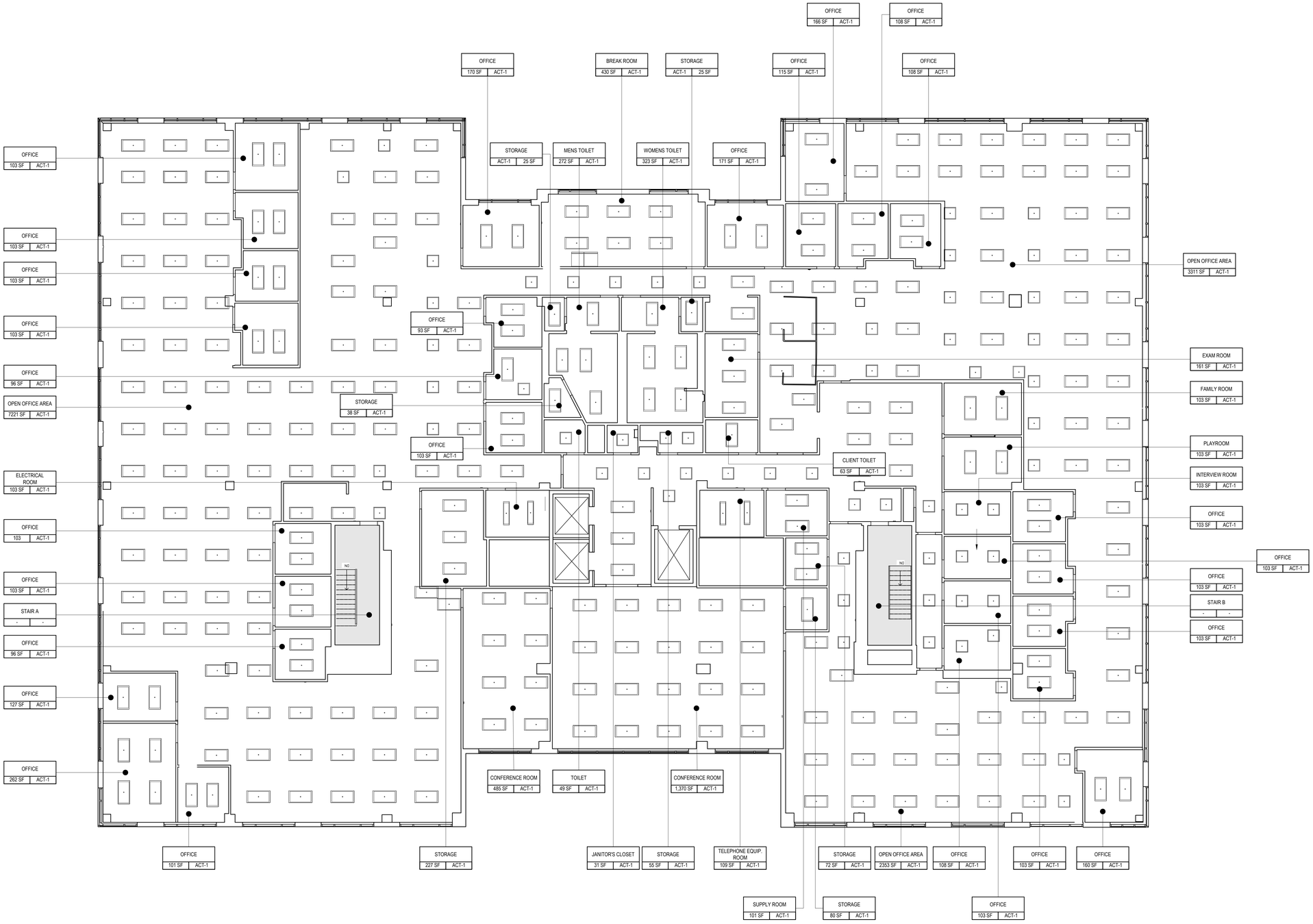
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ALTERNATE #3 -
THIRD FLOOR
REFLECTED CEILING PLAN

CHECKED BY: TH DRAWN BY: JV

DRAWING No.

A-203



1 ALTERNATE #3 - FOURTH FLOOR REFLECTED CEILING PLAN

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

GENERAL NOTES

1. ALL LIGHT FIXTURES ARE EXISTING TO REMAIN.
2. TYPICAL CEILING HEIGHT IS ±10'-0". VERIFY IN FIELD.

LEGEND

- EXISTING CONSTRUCTION N.I.C.
- EXISTING LAY-IN LIGHT FIXTURE
- ROOM TAG (ROOM NAME | SQ FT | ACT-#)
- CEILING TYPE

2 GENERAL NOTES

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

ALTERNATE #3 - "REPLACE EXISTING CEILING TILE"

PROVIDE THE FOLLOWING WORK FOR THE CEILING TILE REPLACEMENT:

1. REMOVE AND DISPOSE OF EXISTING ACOUSTICAL CEILING TILES.
2. EXISTING GRID TO BE PAINTED PRIOR TO INSTALLATION OF NEW CEILING TILES.
   - CLEAN SURFACE FOR NEW PAINT.
   - (1) ONE COAT OF PAINT. COLOR SELECTION TO BE APPROVED BY OWNER. MANUFACTURER - SHERWIN WILLIAMS
3. INSTALL NEW CEILING ACOUSTICAL CEILING TILE. REFER TO CEILING TYPE LEGEND. SEE SPECIFICATION SECTION 095113.

CEILING TYPE LEGEND	
ACT-1	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 48"
ACT-2	ACOUSTIC CEILING TILE: MANUFACTURER: ARMSTRONG WORLD INDUSTRIES TYPE: FINE FISSURED SQUARE LAY-IN COLOR: WHITE SIZE: 24" X 24"

3 SCHEDULE OF ALTERNATES

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

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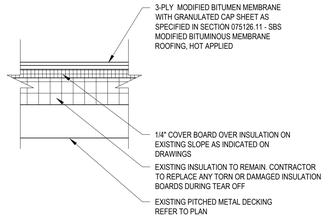
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ALTERNATE #3 - FOURTH FLOOR REFLECTED CEILING PLAN

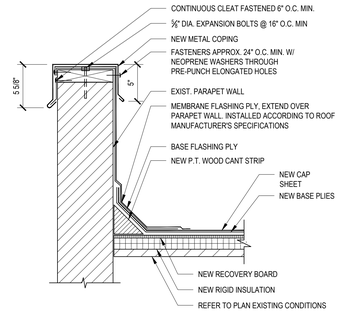
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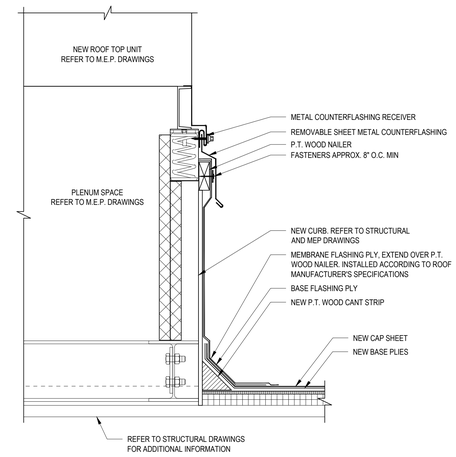
A-204



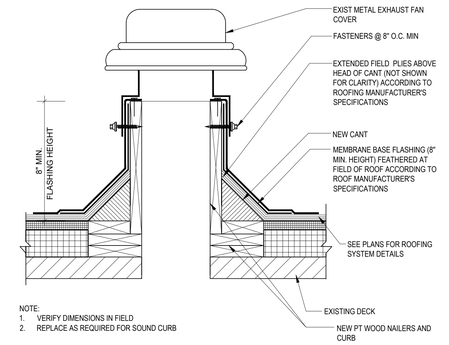
1 ROOF DETAIL
SCALE: 3" = 1'-0"



2 PARAPET FLASHING DETAIL
SCALE: 1-1/2" = 1'-0"

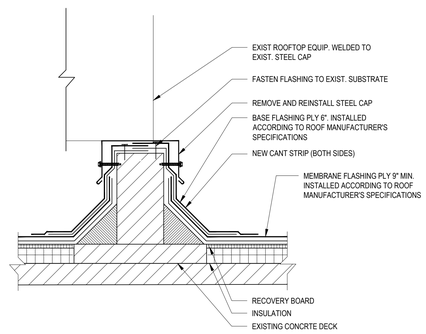


3 SUPPORT CURB
SCALE: 1-1/2" = 1'-0"

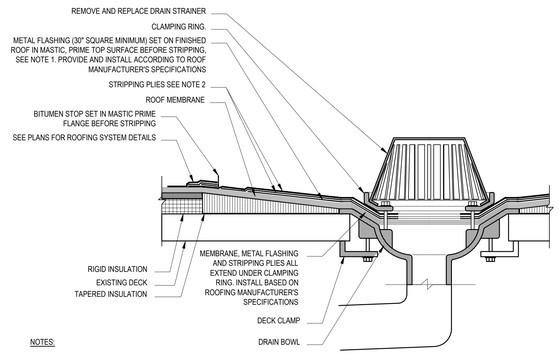


NOTE:
1. VERIFY DIMENSIONS IN FIELD
2. REPLACE AS REQUIRED FOR SOUND CURB

4 EXHAUST VENT CURB DETAIL
SCALE: 1-1/2" = 1'-0"

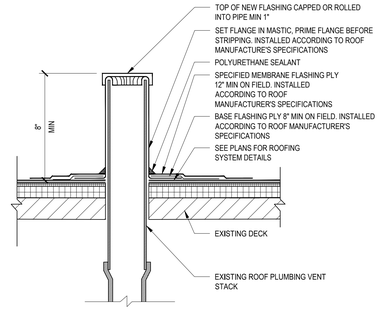


5 EQUIPMENT SUPPORT FLASHING DETAIL
SCALE: 1-1/2" = 1'-0"

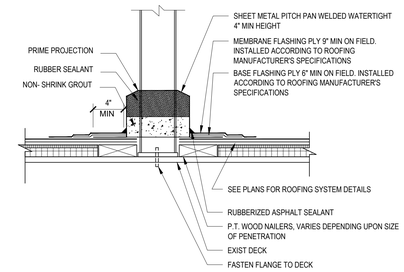


NOTES:
1. MINIMUM 30" SQUARE 2-1/2LB. TO 4LB. LEAD OR 16-OZ. SOFT COPPER FLASHING SET ON FINISHED ROOF FELTS IN ASPHALT MASTIC. PRIME TOP SURFACES BEFORE STRIPPING.
2. STRIPPING FELTS EXTEND 4" AND 6" BEYOND EDGE OF SHEET METAL STOP FLANGE
3. REMOVABLE AND REPLACEMENT OF FASTENERS IS PART OF BASE CONTRACT

6 TYP. ROOF DRAIN DETAIL
SCALE: 1-1/2" = 1'-0"



7 PLUMBING VENT DETAIL
SCALE: 1-1/2" = 1'-0"



8 PITCH POCKET DETAIL
SCALE: 1-1/2" = 1'-0"

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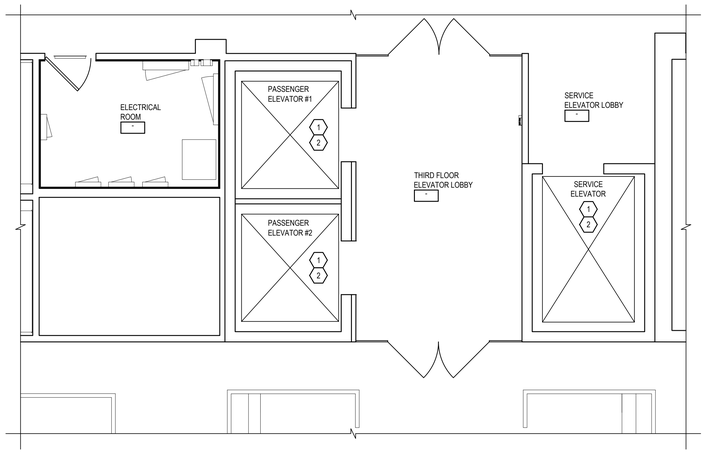
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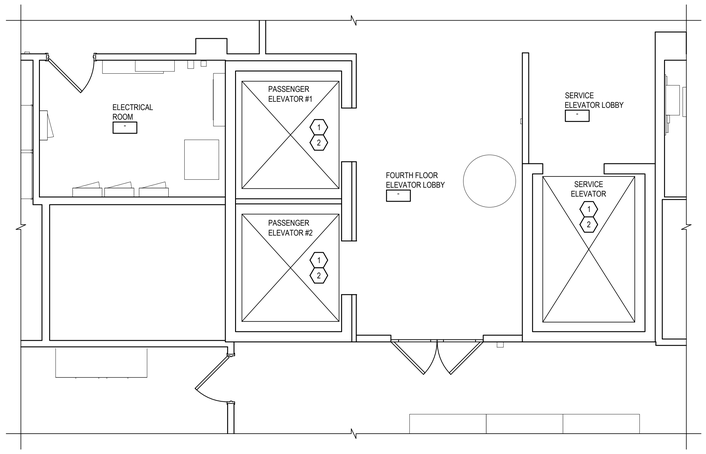
DRAWING TITLE
ROOF DETAILS

CHECKED BY: TH | DRAWN BY: JV

DRAWING No.
A-300



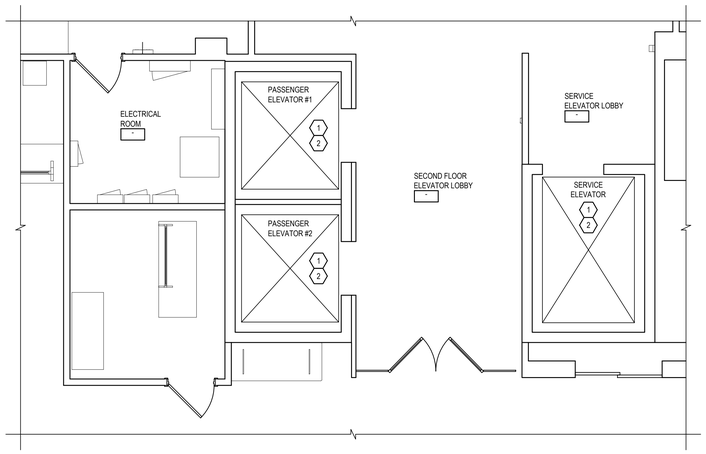
3 ENLARGED THIRD FLOOR - ELEVATOR PLAN
SCALE: 1/4" = 1'-0"



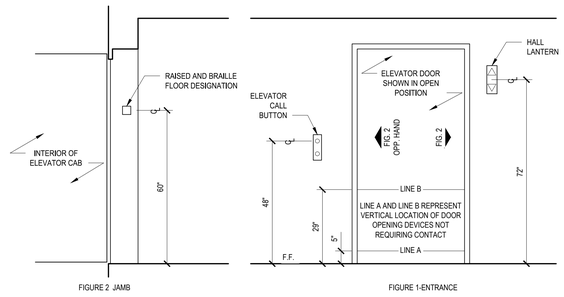
4 ENLARGED FOURTH FLOOR - ELEVATOR PLAN
SCALE: 1/4" = 1'-0"

ALTERNATE #1: #

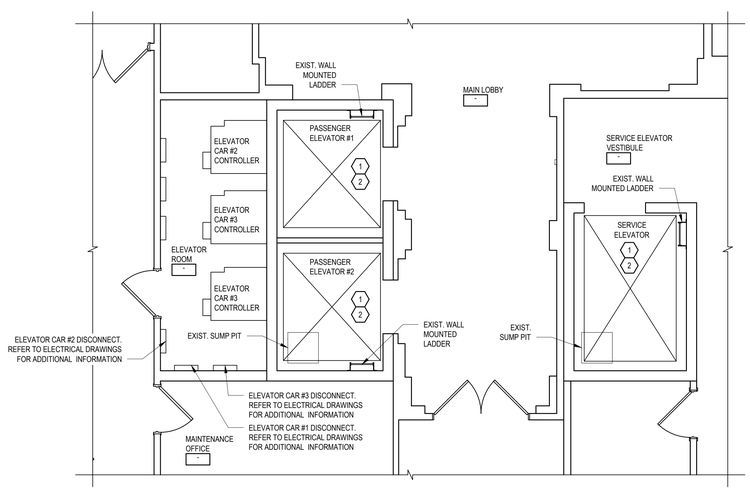
1. ELEVATOR TO BE MODERNIZED. SEE SPECIFICATION FOR SCOPE OF WORK.
2. REFER TO MEP DRAWINGS FOR ADDITIONAL SCOPE OF WORK.



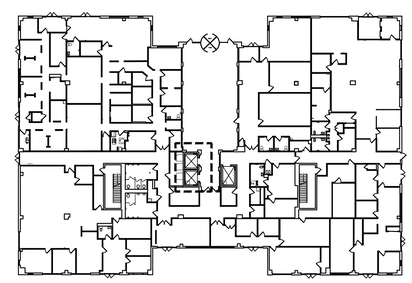
2 ENLARGED SECOND FLOOR - ELEVATOR PLAN
SCALE: 1/4" = 1'-0"



5 ELEVATOR ENTRANCE - DEVICE LOCATIONS AND MOUNTING HEIGHTS
SCALE: 1/4" = 1'-0"



1 ENLARGED FIRST FLOOR - ELEVATOR AND ELEVATOR ROOM PLAN
SCALE: 1/4" = 1'-0"



NORTH

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

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STATE OF NEW JERSEY JOHN P. CAPAZZI 21AI01002800 REGISTERED ARCHITECT

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DRAWING TITLE
ALTERNATE #1 - ENLARGED FLOOR PLANS - ELEVATOR PLANS

CHECKED BY: TH DRAWN BY: JV

DRAWING No.
A-400

MECHANICAL DRAWING NOTES:

A. GENERAL

1. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE, 2021 INTERNATIONAL BUILDING CODE WITH NEW JERSEY AMENDMENTS, 2021 INTERNATIONAL MECHANICAL CODE, 2021 INTERNATIONAL ENERGY CONSERVATION CODE, ASHRAE 90.1, 2016, BUILDING MANAGEMENT, AND ALL AUTHORITIES HAVING JURISDICTION AND APPLICABLE NATIONAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK SHALL BE INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS. CONTRACTOR IS TO INFORM ENGINEER OF ANY EXISTING WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED AT CONTRACTOR'S EXPENSE BY THIS CONTRACTOR AND AT NO EXPENSE TO THE OWNER.
2. CONTRACTOR WILL BE HELD RESPONSIBLE TO HAVE VISITED AND EXAMINED THE PREMISES PRIOR TO SUBMITTING HIS PROPOSAL IN ORDER TO UNDERSTAND THE EXISTING CONDITIONS RELATED TO HIS WORK.
3. PRIOR TO THE PROJECT START–UP, THE CONTRACTOR SHALL TAKE AIR READINGS AT THE SUPPLY AND RETURN SHAFTS AND SUBMIT A REPORT TO THE ARCHITECT'S AND ENGINEER'S OFFICE. THE READINGS SHALL INCLUDE CFM, STATIC PRESSURE AND SUPPLY AIR TEMPERATURES AT EACH LOCATION.
4. WORK IN THIS BUILDING SHALL BE DONE WHEN AND AS DIRECTED AND SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO ITS OCCUPANTS PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO AVOID INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES.
5. MATERIALS, DOCUMENTATION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS, LOCAL CODES AND AS SPECIFIED.
6. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE WORK. EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS. CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALLOWANCE FOR SUCH REMOVALS AND RELOCATIONS.
7. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIALS, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.
8. FIREPROOFING AND INSULATION DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION.
9. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING.
10. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NON–COMBUSTIBLE MATERIAL.
11. EXACT LOCATIONS OF ALL WALL MOUNTED THERMOSTATS, HUMIDISTAT, FAN COIL SWITCHES, ALARM PANELS, ETC., SHALL BE SUBJECT TO ARCHITECT'S APPROVAL.
12. TEST AND CALIBRATE ALL EXISTING THERMOSTATS IN SCOPE OF WORK AREA.
13. INVESTIGATE PATH THROUGH WHICH EQUIPMENT WILL BE MOVED. EQUIPMENT SHALL BE BROKEN DOWN IN SECTIONS AS NEEDED FOR MOVING THROUGH BUILDING SPACES. ASCERTAIN FROM BUILDING MANAGEMENT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED.
14. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN FULL COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
15. INSTALL EQUIPMENT AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE REQUIRED TO ACCOMPLISH THIS.
16. CHANGES IN ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL AND PLUMBING REQUIREMENTS FOR SUBSTITUTED EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE BIDDER WISHING TO MAKE THE SUBSTITUTION. THIS SHALL INCLUDE THE COST OF ANY REDESIGN BY THE AFFECTED DESIGNERS ANY ADDITIONAL COST INCURRED BY THE AFFECTED SUBCONTRACTORS SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND NOT THE OWNER.
17. CONTRACTOR TO COVER AND PROTECT FROM DEBRIS ALL EXISTING PERIMETER INDUCTION UNITS/ FAN COIL UNITS AND SUPPLY AND RETURN MAIN DUCTS AT SHAFTS DURING THE CONSTRUCTION PHASE.
18. CONTRACTOR SHALL CLEAN ALL PERIMETER UNITS IN THE SCOPE OF WORK AREA (INDUCTION UNITS, RADIATORS AND/OR FAN COIL UNITS) AT THE END OF THE PROJECT. THE CLEANING SHALL INCLUDE REMOVAL AND RE–INSTALLATION OF ALL UNITS ENCLOSURES, VACUUMING OF THE NOZZLES AND COILS (BOTH SIDES), AND FILTERS REPLACEMENT (WHERE APPLICABLE).

B. SKETCHER NOTES:

1. MECHANICAL CONTRACTOR TO INCLUDE IN HIS/HER BID PRICE FOR THE SKETCHER TO VISIT THE SITE AND SKETCH WORK AS FOLLOWS UNTIL FINAL FINAL SHOP DRAWING APPROVAL:

   1.A. ONE FIRST VISIT TO SKETCH 100% OF THE WORK;
   1.B. ONE SECOND VISIT TO SKETCH 40% OF THE WORK;
   1.C. ONE THIRD VISIT TO SKETCH 10% OF THE WORK.

MECHANICAL DEMOLITION NOTES

A. GENERAL

1. THIS CONTRACTOR SHALL VISIT THE SITE & ADJOINING AREAS & EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM & TO DETERMINE THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE & LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
2. THE DEMOLITION WORK SHALL INCLUDE, PROVIDING ALL MATERIALS, ALL NECESSARY EXTENSIONS, CONNECTIONS, CUTTING, REPAIRING, ADAPTING & OTHER MECHANICAL WORK REQUIRED, TOGETHER WITH ANY REQUIRED TEMPORARY CONNECTIONS TO MAINTAIN SERVICE PENDING THE COMPLETION OF THE PERMANENT WORK. NOTES & GRAPHIC REPRESENTATION SHALL NOT LIMIT THE EXTENT OF DEMOLITION REQUIRED. EXTENT OF DEMOLITION WORK SHALL BE COORDINATED WITH THE ARCHITECT & BUILDING MANAGEMENT.
3. ALL MECHANICAL SYSTEMS & EQUIPMENT BEING DEMOLISHED ARE TO BE SHUT DOWN & ALL ELECTRICAL POWER, GAS CONNECTIONS & PIPING TO EACH SHALL BE DISCONNECTED PRIOR TO COMMENCEMENT OF DEMOLITION WORK.
4. COORDINATE ALL EQUIPMENT AND SYSTEMS SHUTDOWNS AND DRAIN DOWNS WITH SITE PROJECT MANAGER. SUBMIT WORK PLAN TO SITE PROJECT MANAGER (2) TWO WEEKS IN ADVANCE FOR COORDINATION AND APPROVAL PRIOR TO COMMENCEMENT OF DEMOLITION WORK.
5. REFER TO MECHANICAL & ARCHITECTURAL PLANS FOR AREAS OF DEMOLITION WORK.
6. SCHEDULE DEMOLITION WORK WITH THE SITE PROJECT MANAGER.
7. WHERE DRAWINGS INDICATE DEMOLITION OF EXISTING PIPING, DUCTWORK, AND OTHER MECHANICAL EQUIPMENT, SUCH SERVICES SHALL BE PROPERLY TERMINATED IN AN APPROVED MANNER TO ALLOW AFFECTED SYSTEMS TO REMAIN IN OPERATION. PIPING SHALL BE PLUGGED.
8. IN SOME CASES, EXISTING CONDITIONS ARE SHOWN ON DEMOLITION DRAWINGS IN AREAS REQUIRING NO DEMOLITION. IN SUCH CASES. INFORMATION IS PROVIDED FOR REFERENCE ONLY.
9. WHERE DRAWINGS INDICATE DEMOLITION OF EXISTING MECHANICAL EQUIPMENT, CONTROL WIRING OR PNEUMATIC SERVING THAT EQUIPMENT SHALL BE PROPERLY TERMINATED IN AN APPROVED MANNER TO ALLOW AFFECTED SYSTEMS TO REMAIN IN OPERATION. REMOVE PNEUMATIC TUBING BACK TO RISERS AND CAP.
10. EQUIPMENT INDICATED FOR REMOVAL SHALL BE REVIEWED BY THE OWNER'S PROJECT MANAGER. REMOVE EQUIPMENT THE OWNER'S WISHES TO RETAIN AND DELIVER TO A LOCATION DESIGNATED BY OWNER. REMOVE PROMPTLY FROM SITE MATERIALS AND EQUIPMENT INDICATED FOR REMOVAL WHICH ARE NOT SPECIFIED FOR REUSE. STORAGE, OR RETAINAGE BY OWNER.
11. EXISTING PIPING SHALL BE SAW–CUT, NOT BROKEN AT POINT WHERE PIPING CONNECTS TO EXISTING AND THAN CAPPED.
12. PROVIDE CUTTING AND PATCHING TO MATCH EXISTING FINISH OF FLOOR, WALL, ETC. REQUIRED FOR DEMOLITION OF EXISTING SYSTEMS AND INSTALLATION OF NEW SYSTEMS.
13. CONTRACTOR SHALL VERIFY THAT ANY SERVICE OR SYSTEM BE REMOVED IS NOT REQUIRED WITHIN OR OUTSIDE OF THE AREA PRESENTLY UNDER CONSTRUCTION.
14. THE CONTRACTOR SHALL TAKE CARE TO DEMOLISH ONLY THAT WORK WHICH IS REQUIRED TO BE DEMOLISHED AND NOT TO DISTURB ANY WORK WHICH IS TO REMAIN. IF, IN THE COURSE OF DEMOLITION, THE CONTRACTOR DAMAGES OR DESTROYS ANY WORK WHICH IS TO REMAIN, THE CONTRACTOR SHALL REPAIR OR REPLACE, AS NECESSARY, SUCH WORK AT THE CONTRACTOR'S EXPENSE.
15. PATCH AND/OR FIREPROOF ALL DAMAGE CAUSED BY DEMOLITION WORK. HOLES IN FLOOR SLABS, ROOFS, AND WALLS CAUSED BY REMOVAL OF DUCTWORK AND PIPING SHALL BE CLOSED WITH APPROPRIATE MATERIALS.
16. IN THE EVENT THAT DEMOLITION WORK AFFECTS THE STRUCTURAL SUPPORT OF EXISTING MECHANICAL SYSTEMS THAT ARE TO REMAIN AND ARE NOT PART OF THE DEMOLITION WORK, THE CONTRACTOR SHALL PROVIDE SUPPORTS FOR EXISTING MECHANICAL SYSTEMS TO REMAIN IN MANNER APPROVED BY THE OWNER AND IN ACCORDANCE WITH APPLICABLE CODED.
17. PROVIDE SUPPORT AS REQUIRED FOR ANY EXISTING DUCTWORK, PIPING AND MECHANICAL EQUIPMENT WHOSE EXISTING SUPPORT IS AFFECTED BY GENERAL DEMOLITION.
18. DEMOLITION OF EXISTING PIPING SHALL INCLUDE CAPPING OF PIPING BELOW FLOORS OR IN WALLS AS APPLICABLE WHERE EQUIPMENT IS BEING REMOVED. ANY PIPING NO LONGER REQUIRED SHALL BE REMOVED AND CAPPED BACK AT THE LAST POINT OF CONTINUING SERVICE TO MINIMIZE ABANDONED PIPING
19. WHERE CONTROL PANELS ARE INDICATED FOR REMOVAL, THE REMOVAL INCLUDES POWER WIRING, CONTROL WIRING, AND PNEUMATIC TUBING FROM PANEL TO SOURCE OR TERMINATION POINT.
20. PNEUMATIC OR ELECTRIC CONTROL LINES ENCOUNTERED DURING DEMOLITION SHALL BE VERIFIED AS TO WHAT SYSTEMS THEY SERVE WITH THE SITE PROJECT MANAGER DIRECTION, THE CONTROL LINES SHALL BE MAINTAINED OR REROUTED TO MAINTAIN SYSTEM OPERABILITY DURING CONSTRUCTION, AT NO ADDITIONAL COST TO OWNER.
21. CONTROL LINES DAMAGED BY DEMOLITION SHALL BE IMMEDIATELY REPAIRED.
22. EXISTING THERMOSTATS TO BE REMOVED AS PART THIS PROJECT WILL BE CHECKED FOR MERCURY SWITCHES AND PROPERLY DISPOSE IN ACCORDANCE WITH EPA REGULATIONS.
23. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS BEFORE ANY WORK IS BEGUN.
24. ALL EXITS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES.
25. ALL WASTE AND DEBRIS SHALL BE REMOVED IN APPROVED CONTAINERS ON DAILY BASIS. AREA SHALL BE VACUUMED CLEAN WITH H.E.P.A. FILTER VACUUM CLEANERS.
26. REMOVE ALL WASTE RUBBLE AND REFUSE FROM THE INTERIOR AND EXTERIOR OF BUILDING.
27. COORDINATE ALL WORK WITH OTHER TRADES. CONTRACTOR SHALL VERIFY IN FIELD AND NOTIFY ENGINEER OF ANY AND ALL PIPING AND DUCTWORK THAT SERVES ADJACENT TENANTS PRIOR TO REMOVAL.
28. ALL EXISTING BASE BUILDING CORE, UTILITIES, RISERS AND ALL SHAFTS SHALL REMAIN UNLESS OTHERWISE NOTED.

B. SCOPE OF WORK

1. DEMOLITION, REMOVAL, AND RELOCATION

   a. REMOVAL, TEMPORARY CONNECTIONS AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE INSTALLATION OF THE NEW SYSTEMS. ALL EXISTING CONDITIONS ARE NOT TO BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY CHANGES REQUIRED BASED ON EXISTING CONDITIONS FOR PROPER INSTALLATION OF NEW WORK.

   b. DISCONNECT, REMOVE, AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.

   c. EQUIPMENT REQUIRED TO BE TEMPORARILY DISCONNECTED AND RELOCATED SHALL BE CAREFULLY REMOVED, STORED, CLEANED, REINSTALLED, RECONNECTED, AND MADE OPERATIONAL.

   d. ALL AIR CONDITIONING AND REFRIGERATION EQUIPMENT THAT IS TO BE DEMOLISHED AS PART OF THIS CONTRACT SHALL HAVE ITS REFRIGERANT PROPERLY RECLAIMED PRIOR TO DISASSEMBLY AND REMOVAL FROM SITE. REFRIGERANT RECOVERY SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

   e. ALL EXISTING WORK NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE. WHERE EXISTING WORK TO REMAIN IS DAMAGED OR DISTURBED, THE CONTRACTOR SHALL REPAIR OR REPLACE TO THE PROJECT MANAGER AND BUILDING MANAGER'S SATISFACTION AT NOT COST TO THE PROJECT MANAGER OR BUILDING MANAGEMENT.

   f. GENERAL CONTRACTOR TO REMOVE ALL CEILING IN AREAS WHERE NEW DUCTWORK OR PIPING IS TO BE INSTALLED OR EXISTING IS ALTERED, AS PER ARCHITECT'S INSTRUCTIONS.

   g. ALL NECESSARY CUTTING AND PATCHING TO ACCOMMODATE THE NEW HVAC WORK SHALL BE PERFORMED BY THIS CONTRACTOR AND COORDINATED WITH BUILDING MANAGEMENT SO AS TO MINIMIZE DISRUPTION OF EXISTING TENANTS AND SERVICES. RESTORE ALL ITEMS TO MATCH EXISTING CONDITIONS.

2. CONNECTION TO EXISTING WORK

   a. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING MANAGEMENT. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. INSTALL ISOLATION DAMPERS AT CONNECTION TO EXISTING DUCTWORK. PROVIDE TEMPORARY DUCTWORK AND PIPING CONNECTIONS AS REQUIRED TO MINIMIZE SHUTDOWN TIME.

   b. CONNECT NEW WORK TO EXISTING WORK IN A NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY THE ENGINEER AND SITE MANAGER.

   c. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES.

3. SUPPORT SERVICES

   a. PRIOR TO ANY CHASING, CHOPPING, OR CORE DRILLING BEING PERFORMED, THIS CONTRACTOR SHALL FIELD INVESTIGATE EXISTING CONDITIONS & COORDINATE WITH ALL APPROPRIATE TRADES & BUILDING MANAGEMENT TO ENSURE THAT WORK WILL BE IN HARMONY WITH OTHER WORK & NOT AFFECT ANY EXISTING BUILDING SYSTEMS. THIS WORK MUST BE APPROVED BY BUILDING MANAGEMENT PRIOR TO PROCEEDING.

   b. PROVIDE WEATHERTIGHT PROVISIONS TO ALL OUTDOOR AREAS WHERE ANY EXISTING DUCTWORK, PIPING & MECHANICAL EQUIPMENT HAS BEEN REMOVED.

   c. ALL MATERIALS & EQUIPMENT REMOVED AS A RESULT OF DEMOLITION SHALL BE TAKEN FROM THE SITE & DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS & ENVIRONMENTAL REGULATIONS.

MECHANICAL DRAWING LIST

	SHEET No.	SHEET TITLE	ISSUE AND DATE: BID SET JUNE 16, 2025				
1	M–001	MECHANICAL COVER SHEET	●				
2	M–101	MECHANICAL 1ST FLOOR PLAN	●				
3	M–102	MECHANICAL 2ND FLOOR PLAN	●				
4	M–103	MECHANICAL 3RD FLOOR PLAN	●				
5	M–104	MECHANICAL 4TH FLOOR PLAN	●				
6	M–1R1D	MECHANICAL ROOF DEMOLITION PLAN	●				
7	M–1R1	MECHANICAL ROOF NEW WORK PLAN	●				
8	M–501	MECHANICAL DETAILS SHEET 1	●				
9	M–502	MECHANICAL DETAILS SHEET 2	●				
10	M–601	MECHANICAL SCHEDULES SHEET 1	●				
11	M–602	MECHANICAL SCHEDULES SHEET 2	●				
12	M–701	MECHANICAL CONTROLS SHEET 1	●				
13	M–702	MECHANICAL CONTROLS SHEET 2	●				

SYMBOL LIST

OR	EXISTING DUCTWORK TO REMAIN
OR	EXISTING DUCTWORK TO BE REMOVED
OR	NEW DUCTWORK
OR	NEW DUCTWORK WITH ACOUSTICAL LINING
	EXISTING SUPPLY DIFFUSER TO REMAIN
	EXISTING SUPPLY DIFFUSER TO BE REMOVED
	NEW SUPPLY DIFFUSER
	SUPPLY REGISTER
	EXISTING RETURN GRILLE TO REMAIN
	EXISTING RETURN GRILLE TO BE REMOVED
	NEW RETURN GRILLE
	RETURN REGISTER
VD	VOLUME DAMPER
FSD	COMBINATION FIRE/SMOKE DAMPER WITH ACCESS DOOR
FD	FIRE DAMPER WITH ACCESS DOOR
ALD	AUTOMATIC LOUVER DAMPER
MD	MOTORIZED DAMPER
OBD	OPPOSED BLADE DAMPER
CFM	CUBIC FEET PER MINUTE
A.L.	ACOUSTICAL LINING
WMS	WIRE MESH SCREEN
F.C.	FLEXIBLE CONNECTION
NK	NECK SIZE
Ø	DIAMETER
SQ. FT.	SQUARE FEET
R	INDICATES RELOCATION
(E)	EXISTING DESIGNATION
(N)	NEW DESIGNATION
SD	SMOKE DETECTOR
T	THERMOSTAT
SP	STATIC PRESSURE SENSOR
OR	OVERRIDE SWITCH
TC	TIME CLOCK
LD	LEAK DETECTOR
EOL	END OF LINE RESISTOR
	UNDER CUT DOOR – 1"
	LOUVERED DOOR
$	KEYED SWITCH FOR EXHAUST FAN OPERATION
	RETURN AIR OPENING, SQUARE FEET IN PARTITION ABOVE HUNG CEILING WITH FUSIBLE LINK DAMPER
CHWS&R	CHILLED WATER SUPPLY & RETURN
C.P.	CONDENSATE DRAIN PUMP
CD	CONDENSATE DRAIN LINE
	EXISTING PIPING
	STRAINER
	PLUG VALVE
	3 PIECE BALL VALVE
	SOLENOID VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	2–WAY AUTOMATIC CONTROL VALVE
	3–WAY AUTOMATIC CONTROL VALVE
	CAPPED OUTLETS
	FLOW GAUGE
	UNION CONNECTION
	DUPLEX STRAINER
	RELIEF VALVE
	FLOW SWITCH
	POINT OF CONNECTION OF NEW TO EXISTING
	POINT OF DISCONNECTION

NOTE: THE KEY OF SYMBOLS INDICATED IS FOR CONVENIENCE ONLY AND ITEMS INDICATED ARE NOT NECESSARILY WITHIN THE SCOPE OF THE WORK.

ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
ALD	AUTOMATIC LOUVERED DAMPER
AP	ACCESS PANEL
BDD	BACKDRAFT DAMPER
BR	BOTTOM REGISTER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
COV	CHANGE OF VALUE
CR	CEILING REGISTER
DN	DOWN
EF	EXHAUST FAN
FA	FACE AREA
FC	FLEXIBLE CONNECTION
FD	FUSIBLE LINK FIRE DAMPER W/ACCESS DOOR
FSD	FIRE/SMOKE DAMPER W/ ACCESS DOOR
GC	GENERAL CONTRACTOR
GE	GENERAL EXHAUST
MD	MOTORIZED DAMPER
MER	MECHANICAL EQUIPMENT ROOM
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NK	NECK SIZE
OBD	OPPOSED BLADE DAMPER
OV	OUTLET VELOCITY
RA	RETURN AIR
RF	RETURN FAN
RG	RETURN GRILLE
SD/AD	SMOKE DAMPER/ACCESS DOOR
SQ	SQUARE
SQ. FT	SQUARE FEET
SR	SUPPLY REGISTER
TC	TOP CONNECTION
TG	TOP GRILLE
TR	TOP REGISTER
TR GR	TRANSFER GRILLE
UL	UNDERWRITER'S LABORATORY
VD	VOLUME DAMPER
WMS	WIRE MESH SCREEN

NOTE: THE KEY OF SYMBOLS INDICATED IS FOR CONVENIENCE ONLY AND ITEMS INDICATED ARE NOT NECESSARILY WITHIN THE SCOPE OF THE WORK.

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UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV.	DESCRIPTION	DATE
-	Bid Set	06/16/2025

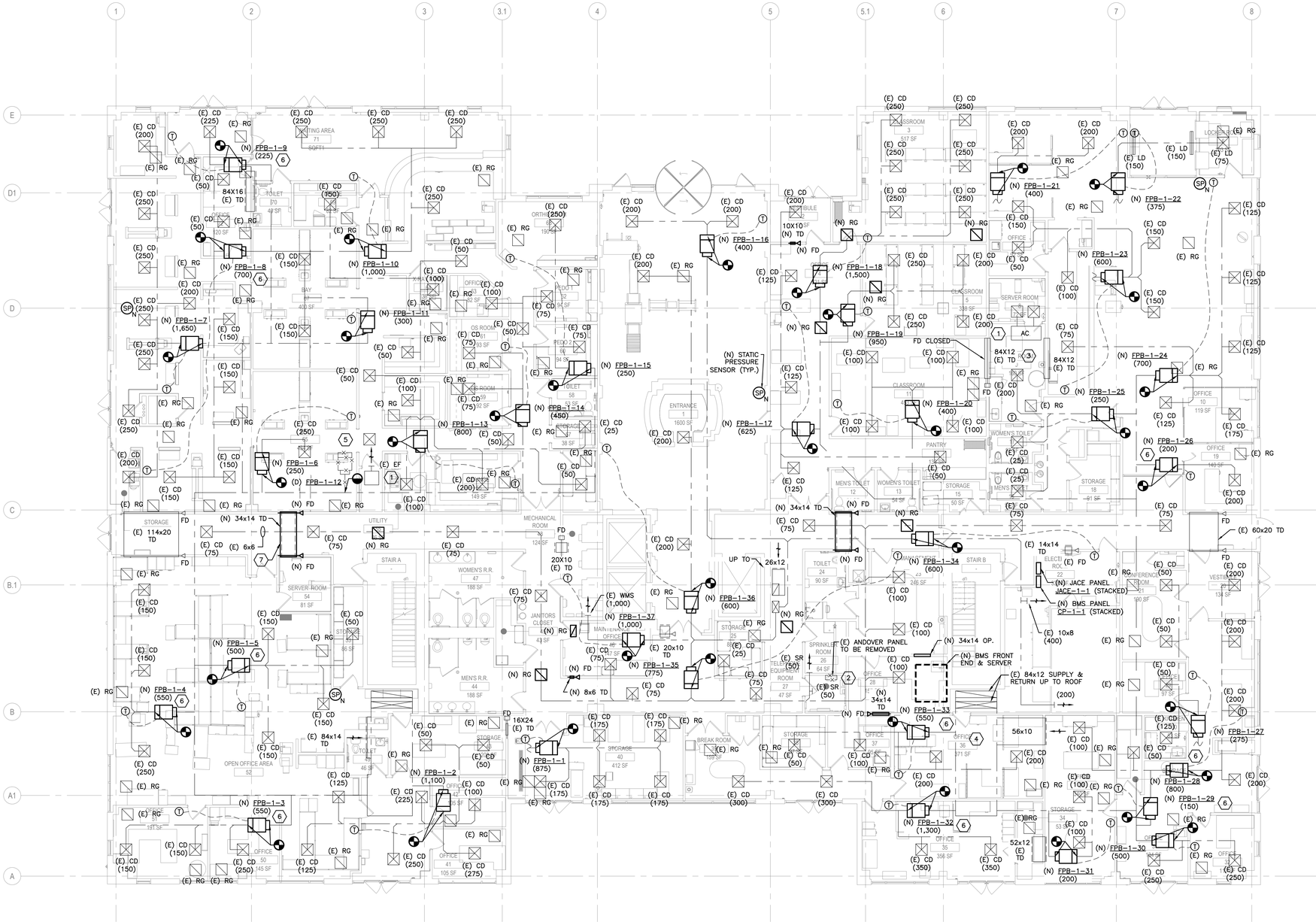
DRAWING TITLE

MECHANICAL COVER SHEET

CHECKED BY: KD | DRAWN BY: BC

DRAWING No.

M-001



1 MECHANICAL 1ST FLOOR NEW WORK PLAN

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

0 8' 16'

SHEET NOTES:

1. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES FOR ALL NEW MECHANICAL EQUIPMENT.
2. ALL EXISTING FAN-POWERED TERMINAL BOXES SHALL BE REPLACED WITH NEW. REFER TO MECHANICAL SCHEDULES FOR EQUIPMENT SPECIFICATIONS. CONTRACTOR SHALL MODIFY EXISTING DUCTWORK TO ACCOMODATE AND RE-CONNECT NEW TERMINAL BOXES.
3. NEW FAN-POWERED BOXES AND EXISTING CEILING DIFFUSERS SHALL BE BALANCED TO INDICATED AIRFLOW VALUES (CFM). REFER TO SPECIFICATIONS FOR MORE DETAILS.
4. CONTROLS VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING CONTROL SYSTEM. REMOVAL OF THE EXISTING SYSTEM CANNOT BE DONE UNTIL THE NEW SYSTEM IS OPERATIONAL. COORDINATE WORK AND PHASING WITH OWNER. PROVIDE A SEAMLESS TIE-IN FROM THE EXISTING BMS.
5. CONTROLS VENDOR SHALL BE RESPONSIBLE FOR ANY CUTTING, PATCHING, PAINTING, AND SURFACE RESTORATION REQUIRED TO REPLACE ALL DEVICES AND INSTALL NEW WIRING. NO EXOPSED WIRING OR SURFACE RACEWAY SHALL BE ACCEPTABLE.
6. ALL FAN-POWERED BOXES SHALL BE TIED INTO NEW BMS SYSTEM. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION. CONTROLS VENDOR SHALL REPLACE ALL EXISTING DAISY-CHAINED COMMUNICATION WIRING FOR FAN-POWERED BOXES.
7. ALL FAN-POWERED BOXES SHALL BE PROVIDED WITH NEW THERMOSTATS. ALL THERMOSTATS INSTALLED ON AN EXTERIOR WALL SHALL HAVE A PROPERLY INSULATED BACK PLATE. THERMOSTATS SHALL BE LABELED WITH THEIR ASSOCIATED FAN-POWERED BOX ID.
8. CONTRACTOR SHALL REMOVE AND REINSTALL CEILING AS REQUIRED FOR INSTALLATION OF NEW FAN-POWERED BOXES. CONTRACTOR SHALL MODIFY EXISTING CEILING TILES AND INSTALL NEW T-BAR AS REQUIRED FOR INSTALLION OF NEW RETURN GRILLES.
9. ALL NEW TRANSFER DUCTS (TD) SHALL HAVE 1" ACOUSTICAL LINING.

PHASING NOTES:

PHASE 1:

AIR BALANCER SHALL TAKE PRE-READINGS OF ALL EXISTING FAN-POWERED BOXES AND CEILING DIFFUSERS PRIOR TO THE REPLACEMENT OF FAN-POWERED BOXES AND RTU'S. READINGS SHALL BE TAKEN WITH EACH FAN-POWERED BOX AT ITS MAXIMUM AIRFLOW SETPOINT. TAB REPORT FOR PRE-READINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

RTU #	AREAS SERVED
RTU-1	WEST SIDE OF 2ND, 3RD, & 4TH FLOORS
RTU-2	1ST FLOOR CORE AREAS AND EAST SIDE OF 2ND, 3RD, & 4TH FLOORS
RTU-3	WEST SIDE OF 1ST FLOOR
RTU-4	EAST SIDE OF 1ST FLOOR

PHASE 2:

- FAN-POWERED BOX REPLACEMENT FOR 1ST FLOOR CORE AREAS, 2ND, 3RD, AND 4TH FLOORS.
- REPLACEMENT OF RTU-1 & RTU-2.
- RTU'S AND FAN-POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

PHASE 3:

- FAN-POWERED BOX REPLACEMENT FOR 1ST FLOOR (EXCEPT CORE AREAS)
- REPLACEMENT OF RTU-3 & RTU-4.
- RTU'S AND FAN-POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

KEY NOTES:

1. PROVIDE NEW CURRENT TRANSDUCER (CT) FOR EQUIPMENT STATUS (AMPS) BACK TO NEW CONTROL PANELS. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION.
2. EXISTING ANDOVER CONTROL PANEL AND ASSOCIATED CONTROLS WIRING TO BE DEMOLISHED AFTER NEW NIAGARA BMS SYSTEM IS INSTALLED AND OPERATIONAL. REFER TO PHASING NOTES. REMOVE ASSOCIATED CONTROL WIRING BACK TO SOURCE.
3. EXISTING TRANSFER OPENING WITH CLOSED FIRE DAMPER. CONTRACTOR SHALL RE-OPEN DAMPER AND REPLACE FUSIBLE LINK.
4. PROVIDE NEW 84x12 WIRE MESH SCREEN AT END OF (E) 84x12 RETURN DUCT.
5. REMOVE EXISTING FAN-POWERED BOX AND ASSOCIATED DUCTWORK. DISCONNECT AND CAP DUCTWORK AT EXISTING SUPPLY HEADER.
6. MODIFY EXISTING NECK SIZE TO ACCOMODATE NEW FAN-POWERED BOX. REFER TO MECHANICAL SCHEDULES FOR NECK SIZES.
7. MODIFY AND RELOCATE (E) 6x6 AS REQUIRED TO ACCOMODATE NEW TRANSFER DUCT ACROSS CORRIDOR.

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200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
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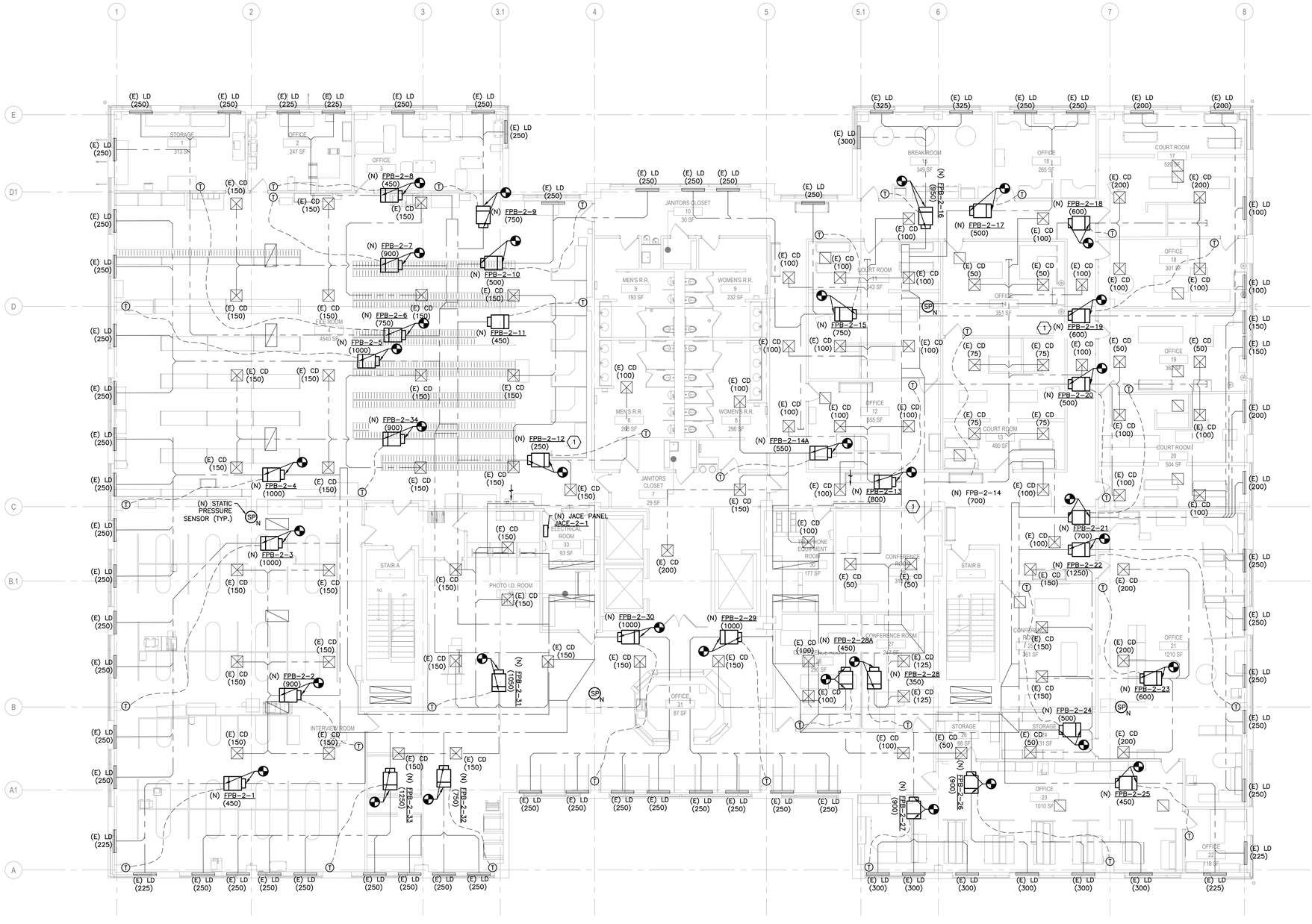
DRAWING TITLE

MECHANICAL 1ST FLOOR NEW WORK PLAN

CHECKED BY: KD DRAWN BY: JS

DRAWING No.

M-101



1 MECHANICAL 2ND FLOOR NEW WORK PLAN

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

0 8' 16'

SHEET NOTES:

1. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES FOR ALL NEW MECHANICAL EQUIPMENT.
2. ALL EXISTING FAN-POWERED TERMINAL BOXES SHALL BE REPLACED WITH NEW. REFER TO MECHANICAL SCHEDULES FOR EQUIPMENT SPECIFICATIONS. CONTRACTOR SHALL MODIFY EXISTING DUCTWORK TO ACCOMODATE AND RE-CONNECT NEW TERMINAL BOXES.
3. NEW FAN-POWERED BOXES AND EXISTING CEILING DIFFUSERS SHALL BE BALANCED TO INDICATED AIRFLOW VALUES (CFM). REFER TO SPECIFICATIONS FOR MORE DETAILS.
4. CONTROLS VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING CONTROL SYSTEM. REMOVAL OF THE EXISTING SYSTEM CANNOT BE DONE UNTIL THE NEW SYSTEM IS OPERATIONAL. COORDINATE WORK AND PHASING WITH OWNER. PROVIDE A SEAMLESS TIE-IN FROM THE EXISTING BMS.
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7. ALL FAN-POWERED BOXES SHALL BE PROVIDED WITH NEW THERMOSTATS. ALL THERMOSTATS INSTALLED ON AN EXTERIOR WALL SHALL HAVE A PROPERLY INSULATED BACK PLATE. THERMOSTATS SHALL BE LABELED WITH THEIR ASSOCIATED FAN-POWERED BOX ID.
8. CONTRACTOR SHALL REMOVE AND REINSTALL CEILING AS REQUIRED FOR INSTALLATION OF NEW FAN-POWERED BOXES. CONTRACTOR SHALL MODIFY EXISTING CEILING TILES AND INSTALL NEW T-BAR AS REQUIRED FOR INSTALLION OF NEW RETURN GRILLES.

PHASING NOTES:

PHASE 1:

AIR BALANCER SHALL TAKE PRE-READINGS OF ALL EXISTING FAN-POWERED BOXES AND CEILING DIFFUSERS PRIOR TO THE REPLACEMENT OF FAN-POWERED BOXES AND RTU'S. READINGS SHALL BE TAKEN WITH EACH FAN-POWERED BOX AT ITS MAXIMUM AIRFLOW SETPOINT. TAB REPORT FOR PRE-READINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

RTU #	AREAS SERVED
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RTU-2	1ST FLOOR CORE AREAS AND EAST SIDE OF 2ND, 3RD, & 4TH FLOORS
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PHASE 2:

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- REPLACEMENT OF RTU-1 & RTU-2.
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PHASE 3:

- FAN-POWERED BOX REPLACEMENT FOR 1ST FLOOR (EXCEPT CORE AREAS)
- REPLACEMENT OF RTU-3 & RTU-4.
- RTU'S AND FAN-POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

KEY NOTES:

1 MODIFY EXISTING NECK SIZE TO ACCOMODATE NEW FAN-POWERED BOX. REFER TO MECHANICAL SCHEDULES FOR NECK SIZES.

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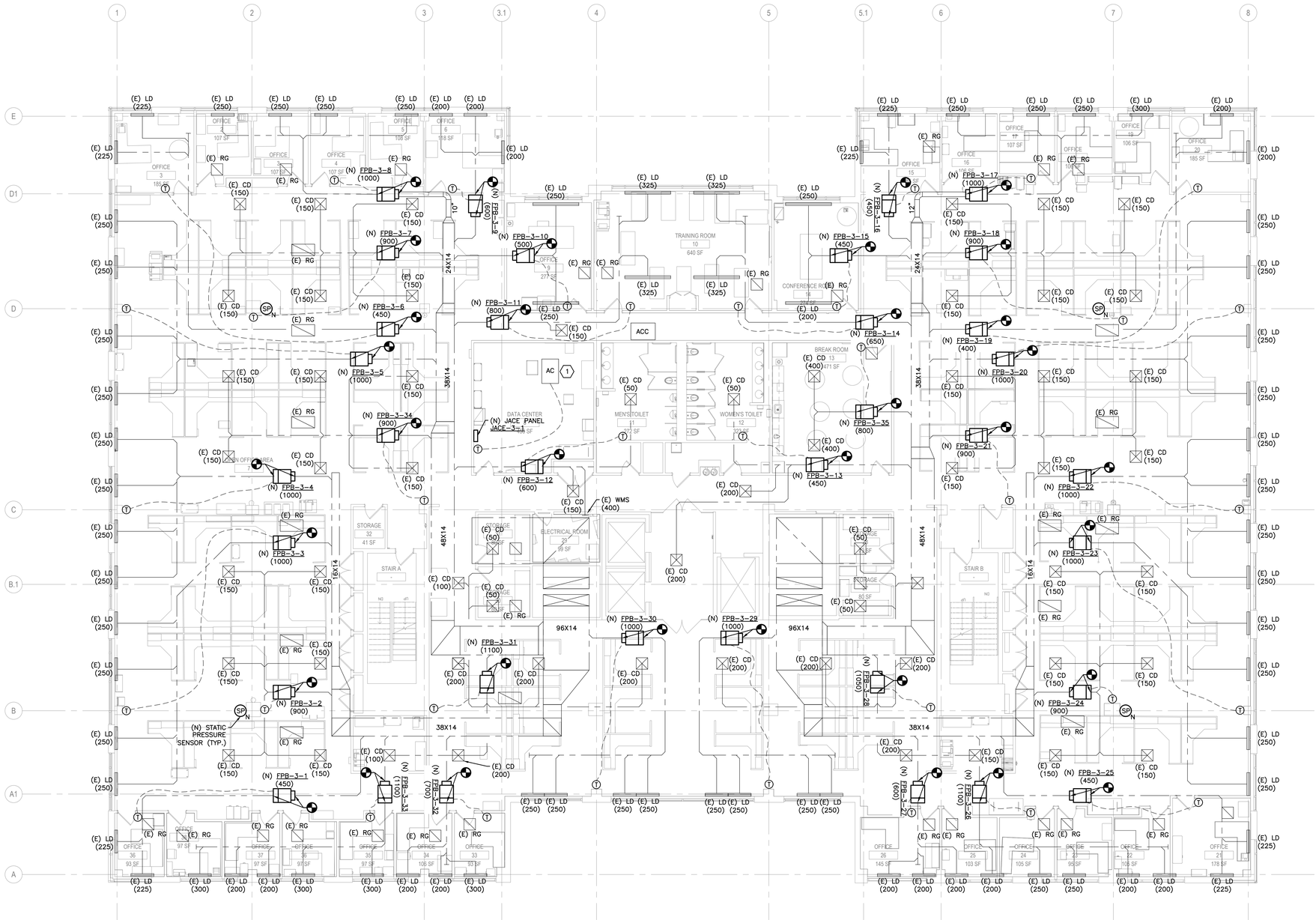
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MECHANICAL 2ND FLOOR NEW WORK PLAN

CHECKED BY: KD DRAWN BY: JS

DRAWING No.

M-102



1 MECHANICAL 3RD FLOOR NEW WORK PLAN

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

0 8' 16'

SHEET NOTES:

1. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES FOR ALL NEW MECHANICAL EQUIPMENT.
2. ALL EXISTING FAN-POWERED TERMINAL BOXES SHALL BE REPLACED WITH NEW. REFER TO MECHANICAL SCHEDULES FOR EQUIPMENT SPECIFICATIONS. CONTRACTOR SHALL MODIFY EXISTING DUCTWORK TO ACCOMODATE AND RE-CONNECT NEW TERMINAL BOXES.
3. NEW FAN-POWERED BOXES AND EXISTING CEILING DIFFUSERS SHALL BE BALANCED TO INDICATED AIRFLOW VALUES (CFM). REFER TO SPECIFICATIONS FOR MORE DETAILS.
4. CONTROLS VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING CONTROL SYSTEM. REMOVAL OF THE EXISTING SYSTEM CANNOT BE DONE UNTIL THE NEW SYSTEM IS OPERATIONAL. COORDINATE WORK AND PHASING WITH OWNER. PROVIDE A SEAMLESS TIE-IN FROM THE EXISTING BMS.
5. CONTROLS VENDOR SHALL BE RESPONSIBLE FOR ANY CUTTING, PATCHING, PAINTING, AND SURFACE RESTORATION REQUIRED TO REPLACE ALL DEVICES AND INSTALL NEW WIRING. NO EXOPSED WIRING OR SURFACE RACEWAY SHALL BE ACCEPTABLE.
6. ALL FAN-POWERED BOXES SHALL BE TIED INTO NEW BMS SYSTEM. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION. CONTROLS VENDOR SHALL REPLACE ALL EXISTING DAISY-CHAINED COMMUNICATION WIRING FOR FAN-POWERED BOXES.
7. ALL FAN-POWERED BOXES SHALL BE PROVIDED WITH NEW THERMOSTATS. ALL THERMOSTATS INSTALLED ON AN EXTERIOR WALL SHALL HAVE A PROPERLY INSULATED BACK PLATE. THERMOSTATS SHALL BE LABELED WITH THEIR ASSOCIATED FAN-POWERED BOX ID.
8. CONTRACTOR SHALL REMOVE AND REINSTALL CEILING AS REQUIRED FOR INSTALLATION OF NEW FAN-POWERED BOXES. CONTRACTOR SHALL MODIFY EXISTING CEILING TILES AND INSTALL NEW T-BAR AS REQUIRED FOR INSTALLION OF NEW RETURN GRILLES.

PHASING NOTES:

PHASE 1:

AIR BALANCER SHALL TAKE PRE-READINGS OF ALL EXISTING FAN-POWERED BOXES AND CEILING DIFFUSERS PRIOR TO THE REPLACEMENT OF FAN-POWERED BOXES AND RTU'S. READINGS SHALL BE TAKEN WITH EACH FAN-POWERED BOX AT ITS MAXIMUM AIRFLOW SETPOINT. TAB REPORT FOR PRE-READINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

RTU #	AREAS SERVED
RTU-1	WEST SIDE OF 2ND, 3RD, & 4TH FLOORS
RTU-2	1ST FLOOR CORE AREAS AND EAST SIDE OF 2ND, 3RD, & 4TH FLOORS
RTU-3	WEST SIDE OF 1ST FLOOR
RTU-4	EAST SIDE OF 1ST FLOOR

PHASE 2:

- FAN-POWERED BOX REPLACEMENT FOR 1ST FLOOR CORE AREAS, 2ND, 3RD, AND 4TH FLOORS.
- REPLACEMENT OF RTU-1 & RTU-2.
- RTU'S AND FAN-POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

PHASE 3:

- FAN-POWERED BOX REPLACEMENT FOR 1ST FLOOR (EXCEPT CORE AREAS)
- REPLACEMENT OF RTU-3 & RTU-4.
- RTU'S AND FAN-POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

KEY NOTES:

1. PROVIDE NEW CURRENT TRANSDUCER (CT) FOR EQUIPMENT STATUS (AMPS) BACK TO NEW CONTROL PANELS. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION.
2. MODIFY EXISTING NECK SIZE TO ACCOMODATE NEW FAN-POWERED BOX. REFER TO MECHANICAL SCHEDULES FOR NECK SIZES.

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Pennoni

UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

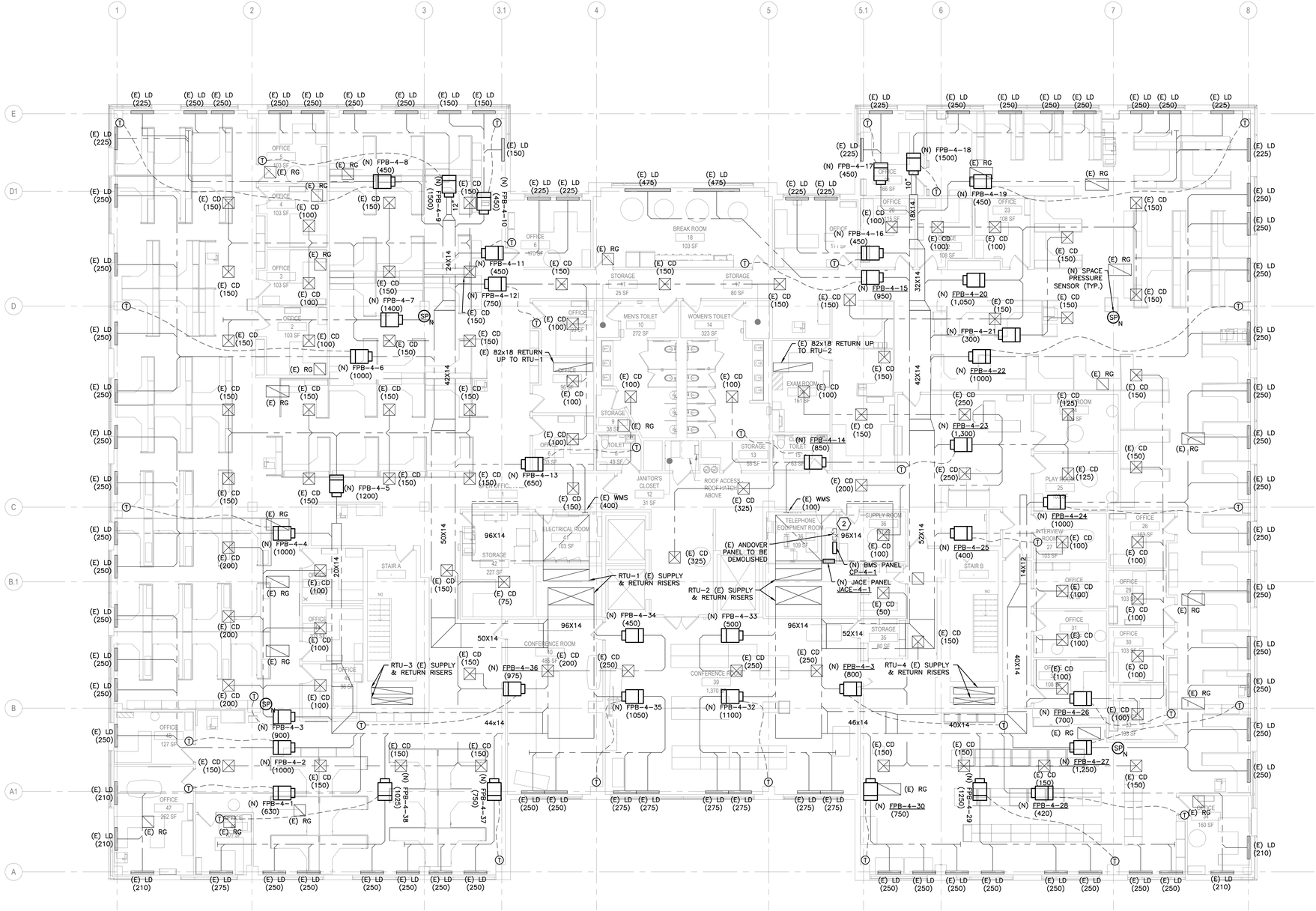
DRAWING TITLE

MECHANICAL
3RD FLOOR NEW
WORK PLAN

CHECKED BY: KD DRAWN BY: JS

DRAWING No.

M-103



1 MECHANICAL 4TH FLOOR NEW WORK PLAN

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

0 8' 16'

SHEET NOTES:

1. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES FOR ALL NEW MECHANICAL EQUIPMENT.
2. ALL EXISTING FAN–POWERED TERMINAL BOXES SHALL BE REPLACED WITH NEW. REFER TO MECHANICAL SCHEDULES FOR EQUIPMENT SPECIFICATIONS. CONTRACTOR SHALL MODIFY EXISTING DUCTWORK TO ACCOMODATE AND RE–CONNECT NEW TERMINAL BOXES.
3. NEW FAN–POWERED BOXES AND EXISTING CEILING DIFFUSERS SHALL BE BALANCED TO INDICATED AIRFLOW VALUES (CFM). REFER TO SPECIFICATIONS FOR MORE DETAILS.
4. CONTROLS VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING CONTROL SYSTEM. REMOVAL OF THE EXISTING SYSTEM CANNOT BE DONE UNTIL THE NEW SYSTEM IS OPERATIONAL. COORDINATE WORK AND PHASING WITH OWNER. PROVIDE A SEAMLESS TIE–IN FROM THE EXISTING BMS.
5. CONTROLS VENDOR SHALL BE RESPONSIBLE FOR ANY CUTTING, PATCHING, PAINTING, AND SURFACE RESTORATION REQUIRED TO REPLACE ALL DEVICES AND INSTALL NEW WIRING. NO EXOPSED WIRING OR SURFACE RACEWAY SHALL BE ACCEPTABLE.
6. ALL FAN–POWERED BOXES SHALL BE TIED INTO NEW BMS SYSTEM. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION. CONTROLS VENDOR SHALL REPLACE ALL EXISTING DAISY–CHAINED COMMUNICATION WIRING FOR FAN–POWERED BOXES.
7. ALL FAN–POWERED BOXES SHALL BE PROVIDED WITH NEW THERMOSTATS. ALL THERMOSTATS INSTALLED ON AN EXTERIOR WALL SHALL HAVE A PROPERLY INSULATED BACK PLATE. THERMOSTATS SHALL BE LABELED WITH THEIR ASSOCIATED FAN–POWERED BOX ID.
8. CONTRACTOR SHALL REMOVE AND REINSTALL CEILING AS REQUIRED FOR INSTALLATION OF NEW FAN–POWERED BOXES. CONTRACTOR SHALL MODIFY EXISTING CEILING TILES AND INSTALL NEW T–BAR AS REQUIRED FOR INSTALLION OF NEW RETURN GRILLES.

PHASING NOTES:

PHASE 1:

AIR BALANCER SHALL TAKE PRE–READINGS OF ALL EXISTING FAN–POWERED BOXES AND CEILING DIFFUSERS PRIOR TO THE REPLACEMENT OF FAN–POWERED BOXES AND RTU'S. READINGS SHALL BE TAKEN WITH EACH FAN–POWERED BOX AT ITS MAXIMUM AIRFLOW SETPOINT. TAB REPORT FOR PRE–READINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

RTU #	AREAS SERVED
RTU–1	WEST SIDE OF 2ND, 3RD, & 4TH FLOORS
RTU–2	1ST FLOOR CORE AREAS AND EAST SIDE OF 2ND, 3RD, & 4TH FLOORS
RTU–3	WEST SIDE OF 1ST FLOOR
RTU–4	EAST SIDE OF 1ST FLOOR

PHASE 2:

- FAN–POWERED BOX REPLACEMENT FOR 1ST FLOOR CORE AREAS, 2ND, 3RD, AND 4TH FLOORS.
- REPLACEMENT OF RTU–1 & RTU–2.
- RTU'S AND FAN–POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

PHASE 3:

- FAN–POWERED BOX REPLACEMENT FOR 1ST FLOOR (EXCEPT CORE AREAS)
- REPLACEMENT OF RTU–3 & RTU–4.
- RTU'S AND FAN–POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

KEY NOTES:

1. PROVIDE NEW CURRENT TRANSDUCER (CT) FOR EQUIPMENT STATUS (AMPS) BACK TO NEW CONTROL PANELS. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION.
2. EXISTING ANDOVER CONTROL PANEL AND ASSOCIATED CONTROLS WIRING TO BE DEMOLISHED AFTER NEW NIAGARA BMS SYSTEM IS INSTALLED AND OPERATIONAL. REFER TO PHASING NOTES. ASSOCIATED POWER WIRING SHALL BE DEMOLISHED BACK TO SOURCE, COORDINATE WITH ELECTRICAL CONTRACTOR.
3. MODIFY EXISTING NECK SIZE TO ACCOMODATE NEW FAN–POWERED BOX. REFER TO MECHANICAL SCHEDULES FOR NECK SIZES.

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UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

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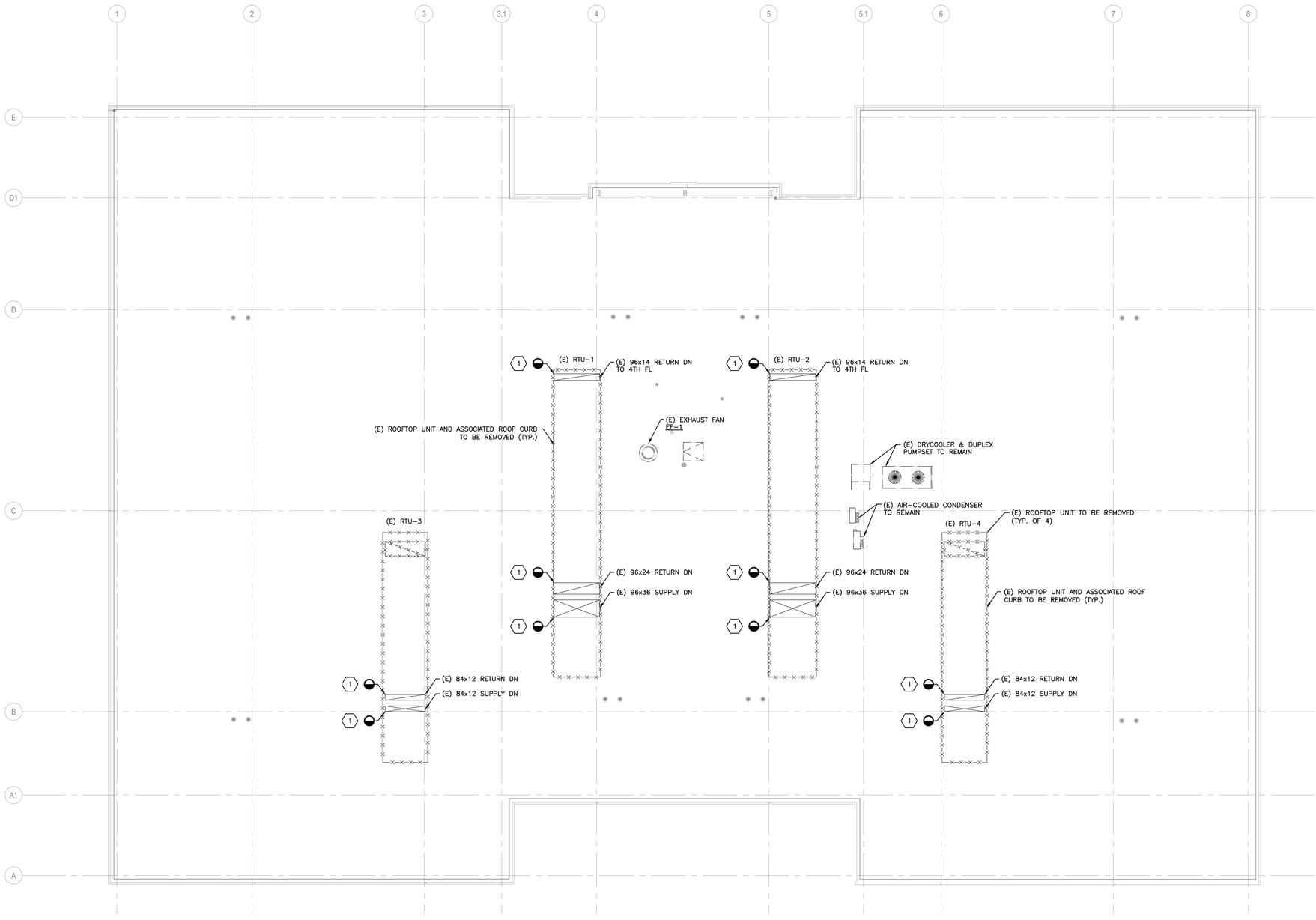
DRAWING TITLE

MECHANICAL 4TH FLOOR NEW WORK PLAN

CHECKED BY: KD DRAWN BY: JS

DRAWING No.

M-104



1 MECHANICAL ROOF DEMOLITION PLAN

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

0 8' 16'

PHASING NOTES:

PHASE 1:

AIR BALANCER SHALL TAKE PRE-READINGS OF ALL EXISTING FAN-POWERED BOXES AND CEILING DIFFUSERS PRIOR TO THE REPLACEMENT OF FAN-POWERED BOXES AND RTU'S. READINGS SHALL BE TAKEN WITH EACH FAN-POWERED BOX AT ITS MAXIMUM AIRFLOW SETPOINT. TAB REPORT FOR PRE-READINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

RTU #	AREAS SERVED
RTU-1	WEST SIDE OF 2ND, 3RD, & 4TH FLOORS
RTU-2	1ST FLOOR CORE AREAS AND EAST SIDE OF 2ND, 3RD, & 4TH FLOORS
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RTU-4	EAST SIDE OF 1ST FLOOR

PHASE 2:

- FAN-POWERED BOX REPLACEMENT FOR 1ST FLOOR CORE AREAS, 2ND, 3RD, AND 4TH FLOORS.
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PHASE 3:

- FAN-POWERED BOX REPLACEMENT FOR 1ST FLOOR (EXCEPT CORE AREAS)
- REPLACEMENT OF RTU-3 & RTU-4.
- RTU'S AND FAN-POWERED BOXES AND ASSOCIATED CEILING DIFFUSERS SHALL BE BALANCED TO THEIR INDICATED AIRFLOW CFM VALUES AT END OF PHASE.

KEY NOTES:

1. EXISTING SUPPLY AND RETURN DUCTWORK SHALL BE DISCONNECTED AT ROOF LEVEL AND CAPPED FOR FUTURE CONNECTION.
2. REMOVE AND REPLACE EXISTING (1) FAN MOTOR AND (1) COMPRESSOR PRIOR TO THE REPLACEMENT OF RTU-2. ASSOCIATED FAN PULLEYS, BUSHINGS, AND BELTS SHALL BE REPLACED.

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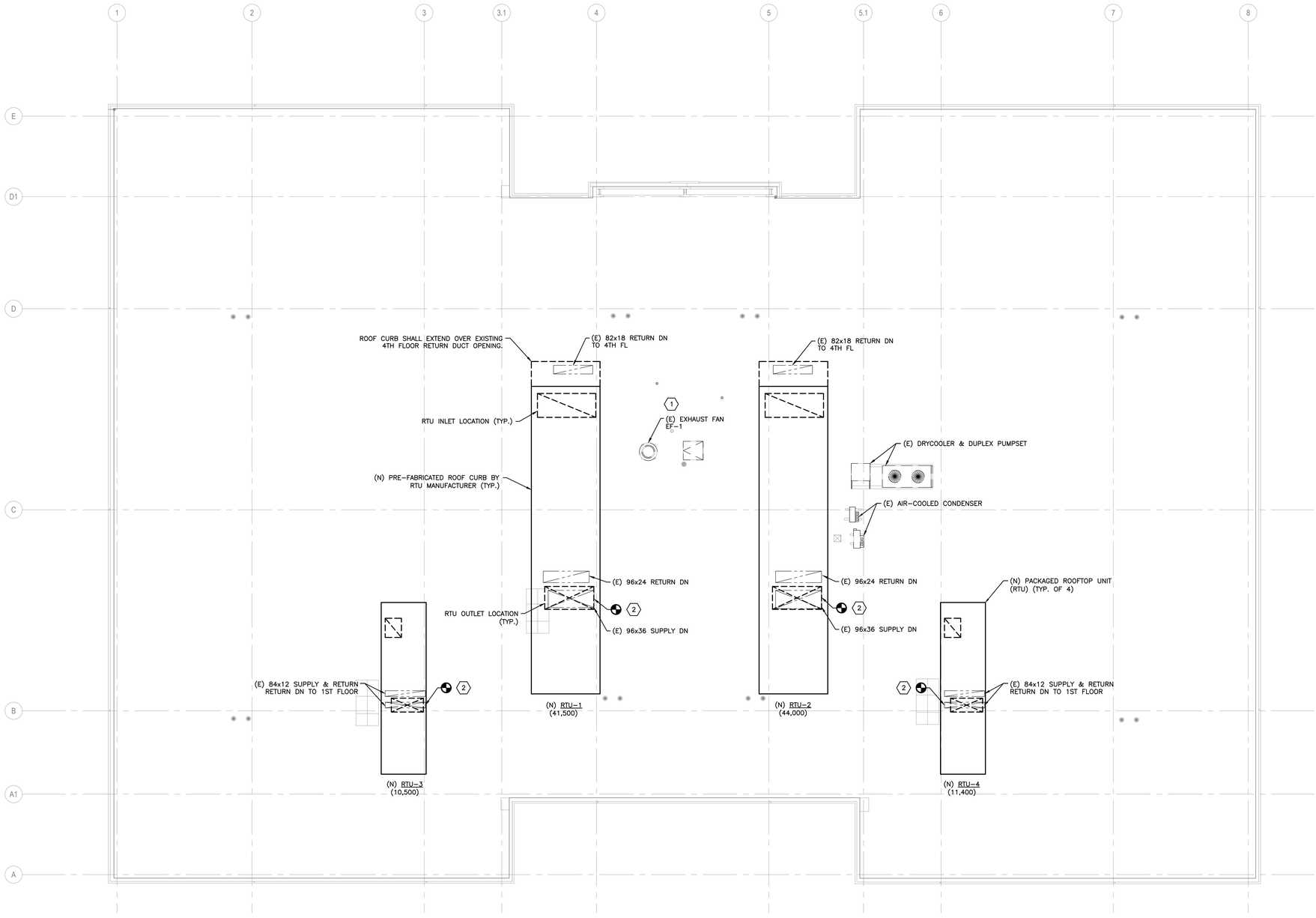
DRAWING TITLE

MECHANICAL ROOF DEMOLITION PLAN

CHECKED BY: KD DRAWN BY: BC

DRAWING No.

M-1R1D



1 MECHANICAL ROOF NEW WORK PLAN

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

0 8' 16'

SHEET NOTES:

1. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES FOR ALL NEW MECHANICAL EQUIPMENT.
2. ALL NEW ROOFTOP UNITS SHALL BE TIED INTO NEW BMS SYSTEM. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION. CONTROLS VENDOR SHALL REPLACE ALL EXISTING DAISY-CHAINED COMMUNICATION WIRING FOR RTU'S.
3. NEW RTU'S SHALL BE PROVIDED WITH ROOF CURBS. CURBS SHALL MATCH EXISTING ROOF PENETRATION LOCATIONS FOR SUPPLY AND RETURN DUCTWORK CONNECTIONS. CONTRACTOR SHALL FIELD-MEASURE EXISTING PENETRATION LOCATIONS AND DUCTWORK DIMENSIONS PRIOR TO CURB FABRICATION.

KEY NOTES:

1 PROVIDE NEW CURRENT TRANSDUCERS (CT) AT SUPPLY AND RETURN FANS FOR FAN STATUS (AMPS) BACK TO NEW CONTROL PANELS. REFER TO CONTROLS DRAWINGS FOR POINTS OF CONNECTION.

2 CONTRACTOR SHALL PROVIDE SUPPLY DUCT DROP WITH FLEXIBLE CONNECTION FROM RTU OUTLET AND TIE TO EXISTING SUPPLY DUCT RISER.

PHASING NOTES:

PHASE 1:

AIR BALANCER SHALL TAKE PRE-READINGS OF ALL EXISTING FAN-POWERED BOXES AND CEILING DIFFUSERS PRIOR TO THE REPLACEMENT OF FAN-POWERED BOXES AND RTU'S. READINGS SHALL BE TAKEN WITH EACH FAN-POWERED BOX AT ITS MAXIMUM AIRFLOW SETPOINT. TAB REPORT FOR PRE-READINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

RTU #	AREAS SERVED
RTU-1	WEST SIDE OF 2ND, 3RD, & 4TH FLOORS
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PHASE 2:

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PLAINFIELD, NJ

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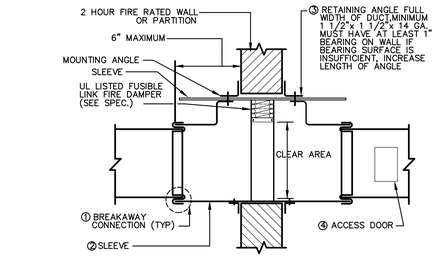
DRAWING TITLE

MECHANICAL ROOF NEW WORK PLAN

CHECKED BY: KD DRAWN BY: BC

DRAWING No.

M-1R1



KEY NOTES:

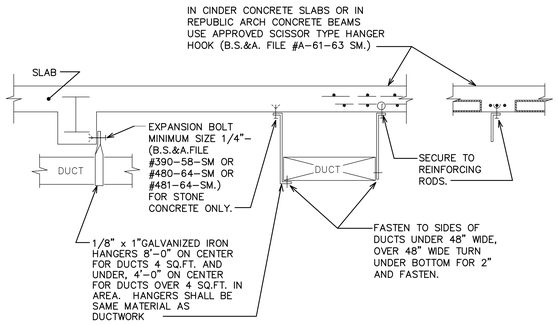
① BREAKAWAY CONNECTION SHALL BE SIMILAR TO UL555 SEC. 14.4 APPROVED TYPES, AND NFPA 90A.
② SLEEVE MAY BE DUCT GAUGE IF UL555 CONNECTIONS ARE USED. SLEEVE SHALL BE 16 GA. UP TO 36"Wx24"H OR 14 GA. FOR LARGER SIZES.
③ SHEET METAL CONTRACTOR SHALL FURNISH CONSTRUCTION CONTRACTOR WITH OPENING SIZES. ALL OPENINGS SHALL BE PACKED WITH SUITABLE FIRE RETARDANT MATERIAL.
④ ACCESS DOOR MUST BE LOCATED AS REQUIRED TO ENABLE RESETTING OF DAMPER. MORE THAN ONE DOOR MAY BE REQUIRED ON LARGE DUCTS.
⑤ DAMPER CLEAR OPEN AREA SHALL BE EQUAL TO INSIDE CLEAR DUCT DIMENSION OF CONNECTING DUCTS OR TRANSFER OPENING.
⑥ TYPE "B" OR "C" MOUNTING SHALL BE USED FOR ALL DAMPERS. TYPE "A" MOUNTING IS NOT PERMITTED.

NOTES:

1. FURNISH AND INSTALL A FIRE DAMPER WHERE ON THE DRAWINGS.
2. ALL FIRE DAMPERS SHALL BE RATED TO MAINTAIN THE RATING OF THE FIRE SEPARATION. THEY SHALL BE APPROVED AND LABELED BY UNDERWRITER'S LABORATORIES (U.L.) THE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S APPROVED INSTRUCTIONS. DAMPERS SHALL BE AS MANUFACTURED BY RUSKIN (SEE SPECIFICATION) OR APPROVED EQUAL BY THE ENGINEER.
3. ALL DUCT–SLEEVE CONNECTION SHALL COMPLY WITH UL 555 ASHRAE & SMACNA.
4. CONNECTIONS BETWEEN SLEEVE AND DUCTWORK SHALL BE RIGID TYPE IN ACCORDANCE WITH UL 555.
5. FIRE DAMPER SLEEVE SHALL BE OF THICKNESS NOT LESS THAN THAT REQUIRED BY THE STANDARD FOR INSTALLATION OF AIR CONDITIONING SYSTEMS, NFPA 90A (LATEST EDITION).
6. AFTER THE INSTALLATION AT DAMPERS THE CONTRACTOR SHALL SEAL AND TAPE ALL JOINTS FOR AIR TIGHTNESS. SEALANTS USED SHALL BE 3M COMPANY NO. 800, MIRACLE ADHESIVE CORPORATION, OR AS APPROVED AND GREY VINYL DUCT TAPE AS MANUFACTURED BY NASHUA CORPORATION OR AS APPROVED. BREAKAWAY CONNECTION SHALL BE SEALED PER FIRE DAMPER MANUFACTURER'S RECOMMENDATION.
7. TO ALLOW FOR EXPANSION, DAMPERS SHALL HAVE A TOP CLEARANCE EQUIVALENT TO 1/8" FOR EACH FOOT OF DAMPER HEIGHT. THE SIDE CLEARANCE SHALL BE 1/8" FOR EACH FOOT OF DAMPER WIDTH DIVIDED EQUALLY TO THE RIGHT AND LEFT OF THE COLLAR. THE MAXIMUM CLEARANCE FOR THE TOP AND THE TOTAL OF BOTH SIDES SHALL BE 1/2" EACH. THE RETAINING ANGLES SHALL BE 1–1/2"x1–1/2"x14 GAUGE BENT ANGLE SO THAT THERE WILL BE A MINIMUM OF 1" OF OVERLAP ON THE FIRE SEPARATION.
8. DAMPER SHALL BE SECURED TO SLEEVE WITH EITHER 1/2" TACKWELDS, NO. 10 SHEET METAL SCREWS, 1/4" DIA. NUTS AND BOLTS, OR 3/16" STEEL RIVETS ALL ON 8" CENTER.
9. GALVANIZED STEEL RETAINING ANGLES SHALL BE SECURED TO SLEEVE WITH EITHER 1/2" TACK WELDS, NO. 10 SHEETMETAL SCREWS, 1/4" DIA. NUTS AND BOLTS, OR 3/16" STEEL RIVETS, ALL 8" ON CENTER.
10. WHERE THE HUNG CEILING DOES NOT HAVE REMOVABLE TILES AN ACCESS DOOR (FIRE RATED WHERE REQUIRED) SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED IN CEILING NEAR LOCATION OF FIRE DAMPER.
11. ALL DUCT ACCESS DOORS SHALL BE LOCATED SO THAT THERE WILL NOT BE ANY INTERFERENCES FOR MAINTENANCE AND INSPECTION OF DAMPER.

FIRE DAMPER DETAIL

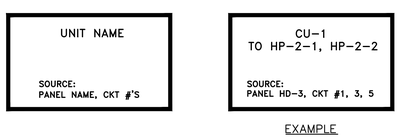
SCALE: N.T.S.



HANGER STRAP SCHEDULE		
DUCT SIZE	HANGER SIZE	MAXIMUM SPACING
UNDER 2 S.F.	1" x 1/16"	8'–0"
2 S.F. TO 4 S.F.	1" x 1/8"	8'–0"

TYPICAL DUCT HANGING DETAIL

SCALE: N.T.S.



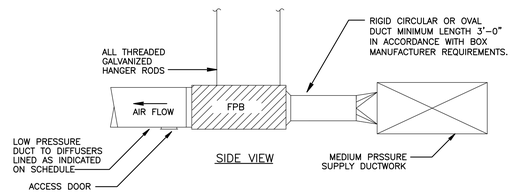
EXAMPLE

NOTES:

1. NAMEPLATES SHALL BE ENGRAVED, PHENOLIC NAMEPLATES. NAMEPLATES SHALL BE PLASTIC NAMETAG WITH ASTM D709 WITH WHITE LETTER COLOR, MIN. 1" HIGH LETTERS ON BLACK BACKGROUND.
2. NAMEPLATE SHALL ALSO LIST ASSOCIATED HEAT REJECTION EQUIPMENT (IE. AIR–COOLED CONDENSER, DRYCOOLER) IF APPLICABLE.

EQUIPMENT NAMEPLATE

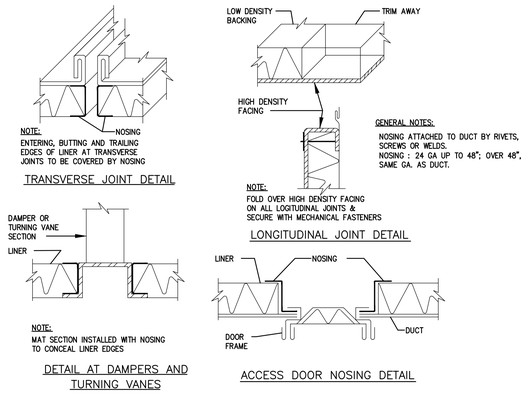
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NOTE:
THIS DETAIL APPLIES TO ALL TYPES OF TERMINAL BOXES

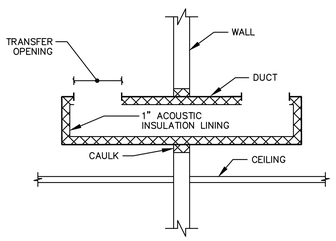
TERMINAL FAN-POWERED BOX DETAIL

SCALE: N.T.S.



SOUND LINING NOSING DETAIL

SCALE: N.T.S.



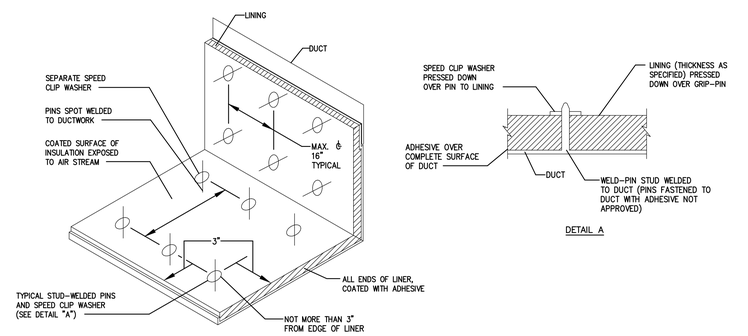
CFM RANGE	DUCT SIZE	OPENING SIZE
1–250	18 X 6	12 X 12
251–500	24 X 8	20 X 14
501–750	36 X 8	30 X 14

NOTES:

1. TRANSFER DUCT TO BE A MINIMUM OF 5 FT. IN LENGTH.

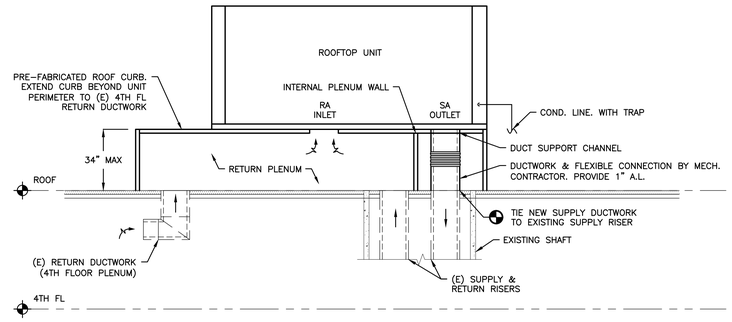
TRANSFER DUCT DETAIL

SCALE: N.T.S.



SOUND LINING INSTALLATION DETAIL

SCALE: N.T.S.

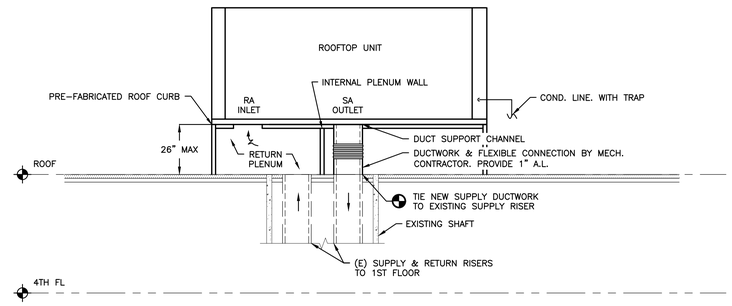


NOTES:

1. ROOFTOP CURBS SHALL MATCH EXISTING ROOF PENETRATION LOCATIONS FOR SUPPLY AND RETURN DUCTWORK CONNECTIONS. CONTRACTOR SHALL FIELD–VERIFY EXISTING PENETRATION LOCATIONS AND FIELD–MEASURE DUCTWORK DIMENSIONS PRIOR TO CURB FABRICATION.

ROOFTOP UNIT (RTU-1 & 2) INSTALLATION DETAIL

SCALE: N.T.S.



NOTES:

1. ROOFTOP CURBS SHALL MATCH EXISTING ROOF PENETRATION LOCATIONS FOR SUPPLY AND RETURN DUCTWORK CONNECTIONS. CONTRACTOR SHALL FIELD–VERIFY EXISTING PENETRATION LOCATIONS AND FIELD–MEASURE DUCTWORK DIMENSIONS PRIOR TO CURB FABRICATION.

ROOFTOP UNIT (RTU-3 & 4) INSTALLATION DETAIL

SCALE: N.T.S.

RSC architects
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RALPH J. WALKER AIA LICENSE NO. 21AI01588E

DATE

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344 RARITAN CENTER PARKWAY EDISON, NJ 08837
TEL: (732) 715-4000 FAX: (877) 703-9956

Pennoni

UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

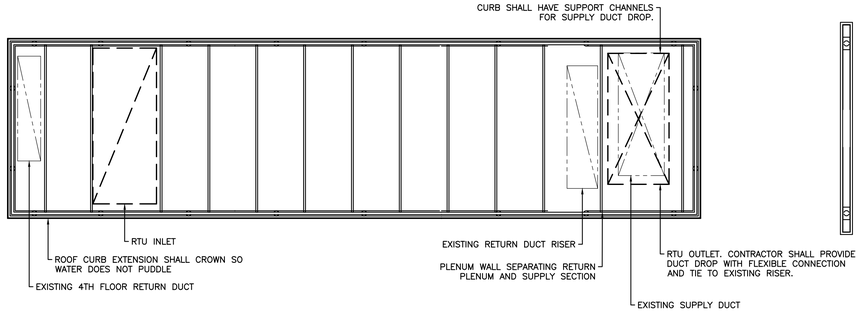
PROJECT NO. 158-25-001

REV.	DESCRIPTION	DATE
-	Bid Set	06/16/2025

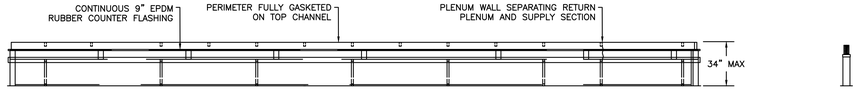
DRAWING TITLE
MECHANICAL
DETAILS SHEET 1

CHECKED BY: KD | DRAWN BY: BC

DRAWING No.
M-501



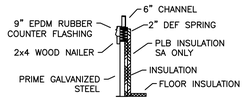
PLAN VIEW



ELEVATION VIEW

NOTES:

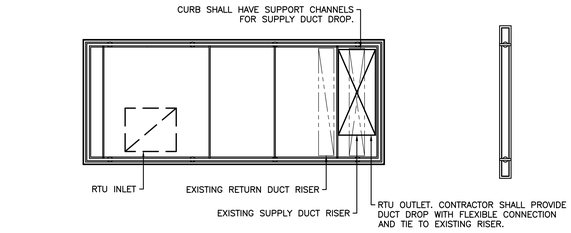
1. NEW RTU'S SHALL BE PROVIDED WITH ROOF CURBS. CURB OPENINGS SHALL MATCH EXISTING ROOF PENETRATION LOCATIONS FOR SUPPLY AND RETURN DUCTWORK CONNECTIONS. CONTRACTOR SHALL FIELD–MEASURE EXISTING PENETRATION LOCATIONS AND DUCTWORK DIMENSIONS PRIOR TO CURB FABRICATION.
2. CONTRACTOR SHALL FIELD–CUT SUPPLY AIR AND RETURN AIR OPENINGS THROUGH CURB FLOOR.
3. RETURN AIR PLENUM SECTION SHALL HAVE A MAXIMUM VELOCITY OF 1,800 FPM.
4. REFER TO SPECIFICATIONS SECTION 23 7416, PARAGRAPH 2.38 FOR MORE INFORMATION.

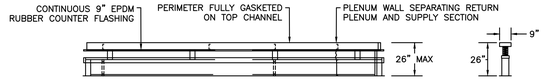


DETAIL

RTU-1 & 2 MECHANICAL EQUIPMENT CURB DETAIL

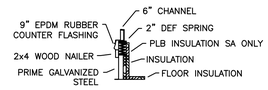
SCALE: N.T.S.





NOTES:

1. NEW RTU'S SHALL BE PROVIDED WITH ROOF CURBS. CURBS SHALL MATCH EXISTING ROOF PENETRATION LOCATIONS FOR SUPPLY AND RETURN DUCTWORK CONNECTIONS. CONTRACTOR SHALL FIELD–MEASURE EXISTING PENETRATION LOCATIONS AND DUCTWORK DIMENSIONS PRIOR TO CURB FABRICATION.
2. CONTRACTOR SHALL FIELD–CUT SUPPLY AIR AND RETURN AIR OPENINGS THROUGH CURB FLOOR.
3. RETURN AIR PLENUM SECTION SHALL HAVE A MAXIMUM VELOCITY OF 850 FPM.
4. REFER TO SPECIFICATIONS SECTION 23 7416, PARAGRAPH 2.38 FOR MORE INFORMATION.



DETAIL

RTU-3 & 4 MECHANICAL EQUIPMENT CURB DETAIL

SCALE: N.T.S.

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UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE

MECHANICAL
DETAILS SHEET 2

CHECKED BY: KD | DRAWN BY: BC

DRAWING No.

M-502

ROOFTOP AIR-CONDITIONING UNIT (RTU) SCHEDULE

UNIT NO.	SERVICE	LOCATION	OUTDOOR DESIGN CONDITION (°F)	MINIMUM OUTDOOR AIR CFM	SUPPLY FAN						RETURN FAN						EVAPORATOR COIL								COMPRESSOR		CONDENSER FAN			ELECTRICAL			FILTER	DIMENSIONS (LxWxH) (IN.)	OPERATING WEIGHT (LBS)	EER @ AHRI	IEER @ AHRI	MANUFACTURER MODEL NO. (BASIS OF DESIGN)
					SUPPLY AIR CFM	EXT. STATIC PRESS. (IN. WC)	FAN TYPE	FAN MOTOR QTY	FAN MOTOR HP	FAN MOTOR RPM	RETURN AIR CFM	EXT. STATIC PRESS. (IN. WC)	FAN TYPE	FAN MOTOR QTY	FAN MOTOR HP	FAN MOTOR RPM	NET TOTAL COOLING (MBH)	NET SENSIBLE COOLING (MBH)	COIL ENT. AIR DB (°F)	COIL ENT. AIR WB (°F)	COIL LVG. AIR DB (°F)	COIL LVG. AIR WB (°F)	ROWS / FPI	SQ. FT. AREA	QTY	REFRIG.	TYPE	QTY	MOTOR HP	V/PH/HZ	MCA (AMPS)	MOCP (AMPS)						
RTU-1	2ND, 3RD, & 4TH FL WEST	ROOF	95.0	5,800	41,500	2.25	AF	1	60	1,087	40,000	1.5	–	1	50	612	1,571.1	1,138.4	82.0	67.0	53.4	53.3	– / –	–	6	R-454B	PROPELLER	8	1.5	460/3/60	404.8	450.0	SEE NOTES	643x144x104	26,501.5	10.6	16.5	TRANE SXHT15040
RTU-2	2ND, 3RD, 4TH FL EAST & 1ST FL	ROOF	95.0	6,200	44,000	2.50	AF	1	75	1,139	42,000	1.5	–	1	60	630	1,559.4	1,154.8	82.0	67.0	54.2	54.1	– / –	–	6	R-454B	PROPELLER	8	1.5	460/3/60	440.4	500.0	SEE NOTES	643x144x104	23,172.2	10.6	16.5	TRANE SXHT15040
RTU-3	1ST FL WEST	ROOF	95.0	1,700	10,500	2.50	FC	2	15	1,000	10,000	1.5	–	1	5	1,118	448.5	304.6	84.0	69.0	54.2	54.2	5 / –	32.5	4	R-454B	PROPELLER	4	1.5	460/3/60	119.0	125.0	SEE NOTES	356x94x87	7,911.2	10.4	15.2	TRANE SAHPF4040
RTU-4	1ST FL EAST	ROOF	95.0	1,900	11,400	2.50	FC	2	15	1,000	11,000	1.5	–	1	5	1,187	443.9	304.6	82.0	68.0	54.3	54.2	5 / –	32.5	4	R-454B	PROPELLER	4	1.5	460/3/60	119.0	125.0	SEE NOTES	356x94x87	7,911.2	10.4	15.2	TRANE SAHPF4040

UNITS TO BE PROVIDED WITH THE FOLLOWING:

1. BOTTOM SUPPLY, BOTTOM RETURN
2. DOUBLE-WALL FOAM INJECTED CABINET PANELS (R-8 THERMAL RESISTANCE)
3. SINGLE POINT LATCHING, HINGED ACCESS DOORS
4. VAV CONTROL
5. SUPPLY & RETURN FANS WITH VFD AND BYPASS
6. UNIT-MOUNTED DISCONNECT SWITCH WITH HIGH FAULT SCCR (65 KAIC)
7. STAINLESS STEEL DRAIN PAN
8. 2-PIECE UNIT WITHOUT BLANK SECTION
9. 90-95% LOW PRESSURE DROP CARTRIDGE WITH PRE-FILTERS
10. CU-AL COOLING COIL
11. 2" SUPPLY FAN SPRING ISOLATOR
12. COMPARATIVE ENTHALPY ECONOMIZER
13. LOW LEAK DAMPERS
14. SUCTION SERVICE VALVES AND SERVICE LIGHT
15. BUILDING PRESSURIZATION CONTROL
16. 15 AMP/115V GFI CONVENIENCE OUTLET
17. FACTORY-INSTALLED LEAK DETECTION SYSTEM PER UL 60335-2-40
18. MARINE LIGHTS - CUSTOMER POWERED (RTU-1 & 2 ONLY)
19. ISOLATION DAMPER CONTROL
20. PRE-EVAPORATOR FILTERS & PRE-FILTERS
21. ENERGY RECOVERY WHEEL WITH BYPASS DEFROST

FAN-POWERED BOX SCHEDULE (1ST FLOOR)

DESIGNATION	TYPE	INLET SIZE	CFM		FAN DATA				ELECTRIC HEATING COIL				ELECTRICAL			RAD NC	WEIGHT LBS	MANUFACTURER	MODEL
			MAX.	MIN.	CFM	ESP	VOLTS/PH	HP	HEAT CFM	HEAT KW	STEPS	VOLTS/PH	FLA	MCA	MOP				
FPB-1-1	SERIES	8	875	250	875	0.25	277V/1PH	1/3	875	5	SCR	277V/1PH	1.52	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-1-2	SERIES	12	1100	485	1100	0.25	208V/1PH	3/4	1100	12	SCR	208V/1PH	1.25	80.49	90	30	–	ENVIRO-TEC	CRB
FPB-1-3	SERIES	8	550	250	550	0.25	208V/1PH	1/3	550	6	SCR	208V/1PH	0.71	39.81	40	30	–	ENVIRO-TEC	CRB
FPB-1-4	SERIES	8	550	250	550	0.25	208V/1PH	1/3	550	7	SCR	208V/1PH	0.71	45.82	50	30	–	ENVIRO-TEC	CRB
FPB-1-5	SERIES	8	500	250	500	0.25	208V/1PH	1/3	500	5	SCR	208V/1PH	0.63	33.80	35	30	–	ENVIRO-TEC	CRB
FPB-1-6	SERIES	6	250	125	250	0.25	277V/1PH	1/3	250	2	SCR	277V/1PH	0.30	11.78	15	30	–	ENVIRO-TEC	CRB
FPB-1-7	SERIES	12	1650	485	1650	0.25	277V/1PH	3/4	1650	16	SCR	480V/3PH	2.82	30.56	35	30	–	ENVIRO-TEC	CRB
FPB-1-8	SERIES	8	700	250	700	0.25	277V/1PH	1/3	700	7	SCR	480V/3PH	1.01	13.77	15	30	–	ENVIRO-TEC	CRB
FPB-1-9	SERIES	6	225	125	225	0.25	277V/1PH	1/3	225	2	SCR	277V/1PH	0.27	11.78	15	30	–	ENVIRO-TEC	CRB
FPB-1-10	SERIES	8	700	250	700	0.25	277V/1PH	1/3	700	6	SCR	277V/1PH	1.01	30.33	35	30	–	ENVIRO-TEC	CRB
FPB-1-11	SERIES	6	300	125	300	0.25	277V/1PH	1/3	300	2	SCR	277V/1PH	0.36	12.28	15	30	–	ENVIRO-TEC	CRB
FPB-1-13	SERIES	8	800	250	800	0.25	277V/1PH	1/3	800	6	SCR	277V/1PH	1.3	30.33	35	30	–	ENVIRO-TEC	CRB
FPB-1-14	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	2	SCR	277V/1PH	0.55	11.78	15	30	–	ENVIRO-TEC	CRB
FPB-1-15	SERIES	6	250	125	250	0.25	277V/1PH	1/3	250	2	SCR	277V/1PH	0.30	11.78	15	30	–	ENVIRO-TEC	CRB
FPB-1-16	SERIES	6	400	125	400	0.25	277V/1PH	1/3	400	3	SCR	277V/1PH	0.47	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-1-17	SERIES	8	625	250	625	0.25	277V/1PH	1/3	625	5	SCR	277V/1PH	0.83	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-1-18	SERIES	12	1500	485	1500	0.25	277V/1PH	3/4	1500	12	SCR	277V/1PH	2.33	60.65	70	30	–	ENVIRO-TEC	CRB
FPB-1-19	SERIES	8	950	250	950	0.25	277V/1PH	1/3	950	5	SCR	277V/1PH	1.84	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-1-20	SERIES	6	400	125	400	0.25	277V/1PH	1/3	400	3	SCR	277V/1PH	0.47	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-1-21	SERIES	6	400	125	400	0.25	277V/1PH	1/3	400	3	SCR	277V/1PH	0.47	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-1-22	SERIES	8	375	250	375	0.25	277V/1PH	1/3	375	5	SCR	277V/1PH	0.44	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-1-23	SERIES	10	600	335	600	0.25	277V/1PH	1/3	–	–	–	–	0.53	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-1-24	SERIES	10	700	335	700	0.25	277V/1PH	1/3	700	7.5	SCR	277V/1PH	0.68	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-1-25	SERIES	6	250	125	250	0.25	277V/1PH	1/3	–	–	–	–	0.29	2.75	15	30	–	ENVIRO-TEC	CRB
FPB-1-26	SERIES	6	200	125	200	0.25	277V/1PH	1/3	200	1.5	SCR	277V/1PH	0.25	9.52	15	30	–	ENVIRO-TEC	CRB
FPB-1-27	SERIES	6	275	125	275	0.25	277V/1PH	1/3	275	2	SCR	480V/3PH	0.32	5.76	15	30	–	ENVIRO-TEC	CRB
FPB-1-28	SERIES	8	800	250	800	0.25	277V/1PH	1/3	800	10	SCR	480V/3PH	1.30	18.29	20	30	–	ENVIRO-TEC	CRB
FPB-1-29	SERIES	6	150	125	150	0.25	277V/1PH	1/3	150	1	SCR	480V/3PH	0.25	4.25	15	30	–	ENVIRO-TEC	CRB
FPB-1-30	SERIES	8	500	250	500	0.25	277V/1PH	1/3	500	4	SCR	480V/3PH	0.63	9.26	15	30	–	ENVIRO-TEC	CRB
FPB-1-31	SERIES	6	200	125	200	0.25	277V/1PH	1/3	200	2	SCR	277V/1PH	0.25	11.78	15	30	–	ENVIRO-TEC	CRB
FPB-1-32	SERIES	12	1300	485	1300	0.25	277V/1PH	3/4	1300	11	SCR	277V/1PH	1.72	56.14	60	30	–	ENVIRO-TEC	CRB
FPB-1-33	SERIES	8	550	250	550	0.25	277V/1PH	1/3	550	7.5	SCR	277V/1PH	0.71	37.09	40	30	–	ENVIRO-TEC	CRB
FPB-1-34	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-1-35	SERIES	10	775	335	775	0.25	277V/1PH	1/3	775	6	SCR	277V/1PH	0.77	29.95	30	30	–	ENVIRO-TEC	CRB
FPB-1-36	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	7.5	SCR	277V/1PH	0.79	37.09	40	30	–	ENVIRO-TEC	CRB
FPB-1-37	SERIES	12	1000	485	1000	0.25	277V/1PH	3/4	–	–	–	–	0.97	6.50	15	30	–	ENVIRO-TEC	CRB

PROVIDE THE FOLLOWING:

1. 20 GAUGE GALV. STEEL CASING & VALVE
2. FORWARD CURVED, DIRECT DRIVE FAN
3. 1" MICROMAT INSULATION
4. SINGLE POINT POWER WIRING
5. SCR ELECTRIC HEATER
6. DOOR-INTERLOCKING DISCONNECT SWITCH
7. 1" THROWAWAY FILTERS
8. WIRED THERMOSTAT
9. CONTRACTOR SHALL PROVIDE DDC CONTROLLER FOR FACTORY MOUNTING
10. TRANSFORMER FOR 24VAC POWER TO CONTROLLER
11. TERMINAL BOXES SHALL BE FACTORY SET FOR 25% MINIMUM.

FAN-POWERED BOX SCHEDULE (2ND FLOOR)

DESIGNATION	TYPE	INLET SIZE	CFM		FAN DATA				ELECTRIC HEATING COIL				ELECTRICAL			RAD NC	WEIGHT LBS	MANUFACTURER	MODEL
			MAX.	MIN.	CFM	ESP	VOLTS/PH	HP	HEAT CFM	HEAT KW	STEPS	VOLTS/PH	FLA	MCA	MOP				
FPB-2-1	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-2-2	SERIES	8	900	250	900	0.25	277V/1PH	1/3	–	–	–	–	1.48	3.25	15	30	–	ENVIRO-TEC	CRB
FPB-2-3	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-2-4	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-2-5	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-2-6	SERIES	8	750	250	750	0.25	277V/1PH	1/3	750	5	SCR	277V/1PH	1.15	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-7	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-2-8	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-2-9	SERIES	8	750	250	750	0.25	277V/1PH	1/3	750	5	SCR	277V/1PH	1.15	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-10	SERIES	8	500	250	500	0.25	277V/1PH	1/3	500	5	SCR	277V/1PH	0.63	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-11	SERIES	8	450	250	450	0.25	277V/1PH	1/3	–	–	–	–	0.53	3.25	15	30	–	ENVIRO-TEC	CRB
FPB-2-12	SERIES	6	250	125	250	0.25	277V/1PH	1/3	250	2.5	SCR	277V/1PH	0.30	14.03	15	30	–	ENVIRO-TEC	CRB
FPB-2-13	SERIES	8	800	250	800	0.25	277V/1PH	1/3	–	–	–	–	1.21	3.25	15	30	–	ENVIRO-TEC	CRB
FPB-2-14	SERIES	8	700	250	700	0.25	277V/1PH	1/3	–	–	–	–	0.96	3.25	15	30	–	ENVIRO-TEC	CRB
FPB-2-14A	SERIES	8	550	250	550	0.25	277V/1PH	1/3	550	5	SCR	277V/1PH	0.71	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-15	SERIES	8	750	250	750	0.25	277V/1PH	1/3	750	5	SCR	277V/1PH	1.15	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-16	SERIES	8	950	250	950	0.25	277V/1PH	1/3	950	5	SCR	277V/1PH	1.84	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-17	SERIES	8	500	250	500	0.25	277V/1PH	1/3	500	4	SCR	277V/1PH	0.63	21.30	25	30	–	ENVIRO-TEC	CRB
FPB-2-18	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-19	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	7.5	SCR	270V/1PH	0.79	37.09	40	30	–	ENVIRO-TEC	CRB
FPB-2-20	SERIES	8	500	250	500	0.25	277V/1PH	1/3	500	2.5	SCR	277V/1PH	0.63	14.53	15	30	–	ENVIRO-TEC	CRB
FPB-2-21	SERIES	8	700	250	700	0.25	277V/1PH	1/3	700	7.5	SCR	277V/1PH	1.01	37.09	40	30	–	ENVIRO-TEC	CRB
FPB-2-22	SERIES	10	1250	335	1250	0.25	277V/1PH	1/3	1250	7.5	SCR	277V/1PH	1.74	38.34	40	30	–	ENVIRO-TEC	CRB
FPB-2-23	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	2.5	SCR	277V/1PH	0.79	14.53	15	30	–	ENVIRO-TEC	CRB
FPB-2-24	SERIES	8	500	250	500	0.25	277V/1PH	1/3	500	2	SCR	277V/1PH	0.63	12.28	15	30	–	ENVIRO-TEC	CRB
FPB-2-25	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-2-26	SERIES	10	900	335	900	0.25	277V/1PH	1/3	900	7	SCR	277V/1PH	1.0	34.46	35	30	–	ENVIRO-TEC	CRB
FPB-2-27	SERIES	8	900	250	900	0.25	277V/1PH	1/3	900	5	SCR	277V/1PH	1.60	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-28	SERIES	6	350	125	350	0.25	277V/1PH	1/3	350	5	SCR	277V/1PH	0.39	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-2-28A	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	1	SCR	277V/1PH	0.55	7.26	15	30	–	ENVIRO-TEC	CRB
FPB-2-29	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.2	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-2-30	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.2	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-2-31	SERIES	10	1050	335	1050	0.25	277V/1PH	1/3	–	–	–	–	1.12	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-2-32	SERIES	8	750	250	750	0.25	277V/1PH	1/3	750	5	SCR	277V/1PH	1.15	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-2-33	SERIES	12	1250	485	1250	0.25	277V/1PH	3/4	1250	7.5	SCR	277V/1PH	1.58	40.34	45	30	–	ENVIRO-TEC	CRB
FPB-2-34	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB

PROVIDE THE FOLLOWING:

1. 20 GAUGE GALV. STEEL CASING & VALVE
2. FORWARD CURVED, DIRECT DRIVE FAN
3. 1" MICROMAT INSULATION
4. SINGLE POINT POWER WIRING
5. SCR ELECTRIC HEATER
6. DOOR-INTERLOCKING DISCONNECT SWITCH
7. 1" THROWAWAY FILTERS
8. WIRED THERMOSTAT
9. CONTRACTOR SHALL PROVIDE DDC CONTROLLER FOR FACTORY MOUNTING
10. TRANSFORMER FOR 24VAC POWER TO CONTROLLER
11. TERMINAL BOXES SHALL BE FACTORY SET FOR 25% MINIMUM.

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DATE

ENGINEER

KARBON
DATA DRIVEN DESIGN
KARBON ENGINEERING SERVICES
344 RARITAN CENTER PARKWAY EDISON, NJ 08837
TEL: (732) 715-4000 FAX: (877) 703-9956

Pennoni

UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE

MECHANICAL SCHEDULES SHEET 1

CHECKED BY: KD | DRAWN BY: BC

DRAWING No.

M-601

FAN-POWERED BOX SCHEDULE (3RD FLOOR)

DESIGNATION	TYPE	INLET SIZE	CFM		FAN DATA				ELECTRIC HEATING COIL				ELECTRICAL			RAD NC	WEIGHT LBS	MANUFACTURER	MODEL
			MAX.	MIN.	CFM	ESP	VOLTS/PH	HP	HEAT CFM	HEAT KW	STEPS	VOLTS/PH	FLA	MCA	MOP				
FPB-3-1	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-3-2	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-3-3	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-4	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-5	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-6	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-3-7	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-3-8	SERIES	10	1,000	335	1,000	0.25	277V/1PH	1/3	1,000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-9	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-3-10	SERIES	8	500	250	500	0.25	277V/1PH	1/3	500	5	SCR	277V/1PH	0.63	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-3-11	SERIES	8	800	250	800	0.25	277V/1PH	1/3	800	5	SCR	277V/1PH	1.30	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-3-12	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-3-13	SERIES	8	450	250	450	0.25	277V/1PH	1/3	450	3.5	SCR	277V/1PH	0.55	19.04	20	30	–	ENVIRO-TEC	CRB
FPB-3-14	SERIES	8	650	250	650	0.25	277V/1PH	1/3	650	5	SCR	277V/1PH	0.88	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-3-15	SERIES	8	450	250	450	0.25	277V/1PH	1/3	450	3.5	SCR	277V/1PH	0.55	19.04	20	30	–	ENVIRO-TEC	CRB
FPB-3-16	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.79	20	30	–	ENVIRO-TEC	CRB
FPB-3-17	SERIES	10	1,000	335	1,000	0.25	277V/1PH	1/3	1,000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-18	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15.00	30	–	ENVIRO-TEC	CRB
FPB-3-19	SERIES	6	400	125	400	0.25	277V/1PH	1/3	400	3	SCR	277V/1PH	0.47	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-3-20	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-21	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-3-22	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-23	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-24	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-3-25	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-3-26	SERIES	10	1100	335	1100	0.25	277V/1PH	1/3	1100	7.5	SCR	277V/1PH	1.46	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-27	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-3-28	SERIES	10	1050	335	1050	0.25	277V/1PH	1/3	–	–	–	–	1.12	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-3-29	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-30	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-3-31	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-3-32	SERIES	8	700	250	700	0.25	277V/1PH	1/3	700	5	SCR	277V/1PH	1.01	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-3-33	SERIES	12	1100	485	1100	0.25	277V/1PH	3/4	1100	7.5	SCR	277V/1PH	1.25	40.34	45	30	–	ENVIRO-TEC	CRB
FPB-3-34	SERIES	10	900	335	900	0.25	277V/1PH	1/3	–	–	–	–	0.89	2.88	15	30	–	ENVIRO-TEC	CRB
FPB-3-35	SERIES	8	800	250	800	0.25	277V/1PH	1/3	–	–	–	–	1.21	3.25	15	30	–	ENVIRO-TEC	CRB

PROVIDE THE FOLLOWING:

1. 20 GAUGE GALV. STEEL CASING & VALVE
2. FORWARD CURVED, DIRECT DRIVE FAN
3. 1" MICROMAT INSULATION
4. SINGLE POINT POWER WIRING
5. SCR ELECTRIC HEATER
6. DOOR-INTERLOCKING DISCONNECT SWITCH
7. 1" THROWAWAY FILTERS
8. WIRED THERMOSTAT
9. CONTRACTOR SHALL PROVIDE DDC CONTROLLER FOR FACTORY MOUNTING
10. TRANSFORMER FOR 24VAC POWER TO CONTROLLER
11. TERMINAL BOXES SHALL BE FACTORY SET FOR 25% MINIMUM.

AIR OUTLET SCHEDULE

DESIGNATION	DESCRIPTION	NECK SIZE (IN)	FRAME SIZE	CFM RANGE	MAX NC	MANUFACTURER/ MODEL	REMARKS
RG	CEILING RETURN GRILLE	12x12	10x10	0-300	30	TITUS 350RL	SEE NOTES BELOW
	CEILING RETURN GRILLE	24x12	22x10	0-550	30	TITUS 350RL	SEE NOTES BELOW
	CEILING RETURN GRILLE	24x24	22x22	0-1,000	30	TITUS 350RL	SEE NOTES BELOW

NOTES:

1. FINISHES AND BORDER TYPE SHALL BE SPECIFIED BY THE ARCHITECT.
2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. ALL DIFFUSERS AND REGISTERS SHALL BE SUITABLE FOR THE TYPE OF CEILING CONSTRUCTION THAT THEY ARE BEING INSTALLED IN AND HAVE A UNIFORM FACE APPEARANCE.

FAN-POWERED BOX SCHEDULE (4TH FLOOR)

DESIGNATION	TYPE	INLET SIZE	CFM		FAN DATA				ELECTRIC HEATING COIL				ELECTRICAL			RAD NC	WEIGHT LBS	MANUFACTURER	MODEL
			MAX.	MIN.	CFM	ESP	VOLTS/PH	HP	HEAT CFM	HEAT KW	STEPS	VOLTS/PH	FLA	MCA	MOP				
FPB-4-1	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-2	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-3	SERIES	10	900	335	900	0.25	277V/1PH	1/3	900	7.5	SCR	277V/1PH	1.00	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-4	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-5	SERIES	12	1200	485	1200	0.25	277V/1PH	3/4	1200	7.5	SCR	277V/1PH	1.44	40.34	45	30	–	ENVIRO-TEC	CRB
FPB-4-6	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-7	SERIES	12	1400	485	1400	0.25	277V/1PH	3/4	1400	7.5	SCR	277V/1PH	2.02	40.34	45	30	–	ENVIRO-TEC	CRB
FPB-4-8	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-9	SERIES	12	1500	485	1500	0.25	277V/1PH	3/4	1500	7.5	SCR	277V/1PH	2.33	40.34	25	30	–	ENVIRO-TEC	CRB
FPB-4-10	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-11	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3.5	SCR	277V/1PH	0.55	18.54	20	30	–	ENVIRO-TEC	CRB
FPB-4-12	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-13	SERIES	8	600	250	600	0.25	277V/1PH	1/3	600	5	SCR	277V/1PH	0.79	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-14	SERIES	8	700	250	700	0.25	277V/1PH	1/3	700	5	SCR	277V/1PH	1.01	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-15	SERIES	8	950	250	950	0.25	277V/1PH	1/3	950	5	SCR	277V/1PH	1.84	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-16	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-17	SERIES	6	400	125	400	0.25	277V/1PH	1/3	400	3	SCR	277V/1PH	0.47	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-18	SERIES	12	1500	485	1500	0.25	277V/1PH	3/4	1500	7.5	SCR	277V/1PH	2.33	40.34	45	30	–	ENVIRO-TEC	CRB
FPB-4-19	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-20	SERIES	10	1050	335	1050	0.25	277V/1PH	1/3	1050	7.5	SCR	277V/1PH	1.31	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-21	SERIES	6	300	125	300	0.25	277V/1PH	1/3	300	3	SCR	277V/1PH	0.34	14.03	15	30	–	ENVIRO-TEC	CRB
FPB-4-22	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-23	SERIES	10	1150	335	1150	0.25	277V/1PH	1/3	1150	7.5	SCR	277V/1PH	1.66	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-24	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-25	SERIES	6	400	125	400	0.25	277V/1PH	1/3	400	3	SCR	277V/1PH	0.47	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-26	SERIES	8	700	250	700	0.25	277V/1PH	1/3	700	5	SCR	277V/1PH	1.01	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-27	SERIES	10	1250	335	1250	0.25	277V/1PH	1/3	1250	7.5	SCR	277V/1PH	1.74	38.34	40	30	–	ENVIRO-TEC	CRB
FPB-4-28	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-29	SERIES	12	1250	485	1250	0.25	277V/1PH	3/4	1250	7.5	SCR	277V/1PH	1.58	40.34	45	30	–	ENVIRO-TEC	CRB
FPB-4-30	SERIES	8	750	250	750	0.25	277V/1PH	1/3	750	5	SCR	277V/1PH	1.15	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-31	SERIES	10	800	335	800	0.25	277V/1PH	1/3	800	7.5	SCR	277V/1PH	0.81	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-32	SERIES	12	1200	485	1200	0.25	277V/1PH	3/4	1200	7.5	SCR	277V/1PH	1.44	40.34	40	30	–	ENVIRO-TEC	CRB
FPB-4-33	SERIES	6	450	125	450	0.25	277V/1PH	1/3	450	3	SCR	277V/1PH	0.55	16.29	20	30	–	ENVIRO-TEC	CRB
FPB-4-34	SERIES	8	450	250	450	0.25	277V/1PH	1/3	450	5	SCR	277V/1PH	0.55	25.81	20	30	–	ENVIRO-TEC	CRB
FPB-4-35	SERIES	10	1050	335	1050	0.25	277V/1PH	1/3	1050	7.5	SCR	277V/1PH	1.31	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-36	SERIES	10	1000	335	1000	0.25	277V/1PH	1/3	1000	7.5	SCR	277V/1PH	1.20	36.72	40	30	–	ENVIRO-TEC	CRB
FPB-4-37	SERIES	8	750	250	750	0.25	277V/1PH	1/3	750	5	SCR	277V/1PH	1.15	25.81	30	30	–	ENVIRO-TEC	CRB
FPB-4-38	SERIES	10	1025	335	1025	0.25	277V/1PH	1/3	1025	7.5	SCR	277V/1PH	1.26	36.72	40	30	–	ENVIRO-TEC	CRB

PROVIDE THE FOLLOWING:

1. 20 GAUGE GALV. STEEL CASING & VALVE
2. FORWARD CURVED, DIRECT DRIVE FAN
3. 1" MICROMAT INSULATION
4. SINGLE POINT POWER WIRING
5. SCR ELECTRIC HEATER
6. DOOR-INTERLOCKING DISCONNECT SWITCH
7. 1" THROWAWAY FILTERS
8. WIRED THERMOSTAT
9. CONTRACTOR SHALL PROVIDE DDC CONTROLLER FOR FACTORY MOUNTING
10. TRANSFORMER FOR 24VAC POWER TO CONTROLLER
11. TERMINAL BOXES SHALL BE FACTORY SET FOR 25% MINIMUM.

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DATE

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Pennoni

UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV.	DESCRIPTION	DATE
-	Bid Set	06/16/2025

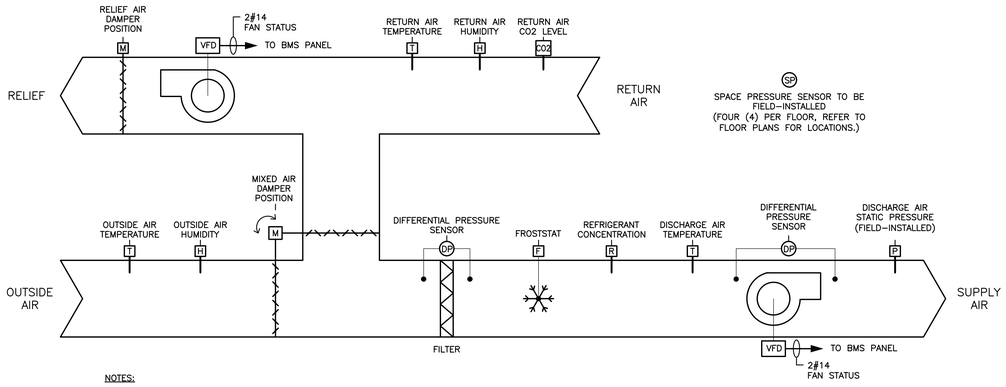
DRAWING TITLE

MECHANICAL SCHEDULES SHEET 2

CHECKED BY: KD | DRAWN BY: BC

DRAWING No.

M-602

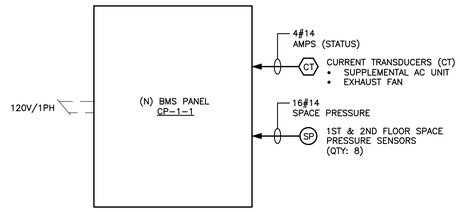


NOTES:

1. ALL SENSORS AND DAMPER ACTUATORS SHOWN ARE FACTORY-INSTALLED. DISCHARGE AIR STATIC PRESSURE SENSOR SHALL BE FIELD-INSTALLED.

ROOFTOP UNIT CONTROLS DIAGRAM

SCALE: N.T.S.

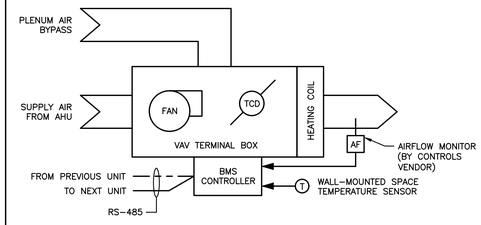


NOTES:

1. PROVIDE CURRENT TRANSDUCERS FOR THE EXISTING SUPPLEMENTAL AC UNIT SERVING BANK SERVER ROOM AND THE EXHAUST FAN SERVING THE DENTAL OFFICE DATA CLOSET. CURRENT TRANSDUCERS SHALL MONITOR AMPERAGE (UNIT STATUS) AND BE TIED TO NEW BMS PANEL.

BMS PANEL CP-1-1 CONTROL DIAGRAM

SCALE: N.T.S.

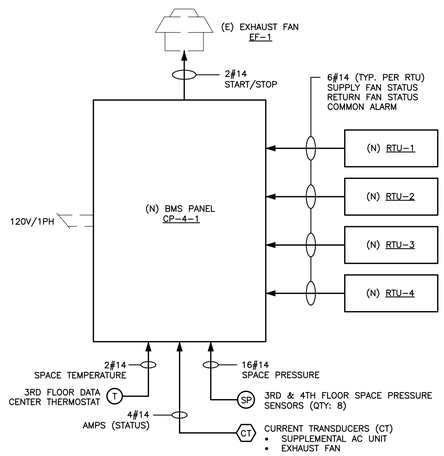


NOTES:

1. PROVIDE SPACE TEMPERATURE SENSORS, AIRFLOW MONITORING, AND CONTROLS WIRING FOR EACH FAN-POWERED BOX.
2. ALL FAN-POWERED BOXES SHALL BE TIED TO NEW BMS SYSTEM.

FAN-POWERED BOX CONTROLS DIAGRAM

SCALE: N.T.S.

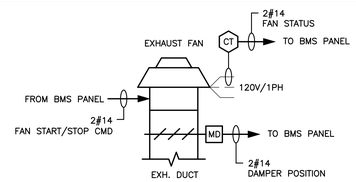


NOTES:

1. PROVIDE CURRENT TRANSDUCERS FOR THE EXISTING 3RD FLOOR DATA CENTER AC UNIT AND ROOF EXHAUST FAN. CURRENT TRANSDUCERS SHALL MONITOR AMPERAGE (UNIT STATUS) AND BE TIED TO NEW BMS PANEL.

BMS PANEL CP-4-1 CONTROL DIAGRAM

SCALE: N.T.S.



EXHAUST FAN CONTROLS DIAGRAM

SCALE: N.T.S.

#	EQUIPMENT	POINTS	TYPE	DEVICE	UNITS	TREND	INTERVAL	GRAPHIC	ALARM
1		BUILDING STATIC PRESSURE	AI	THROUGH NETWORK	in. WC	X	15 MINS	X	
2		HIGH STATIC PRESSURE	DI	THROUGH NETWORK		X	COV	X	X
3		LOW STATIC PRESSURE	DI	THROUGH NETWORK		X	COV	X	X
4		STATIC PRESSURES SENSOR FAIL	DI	THROUGH NETWORK		X	COV	X	X
5		COMPRESSOR COMAND	DO	THROUGH NETWORK				X	
6		CONDENSATE OVERFLOW	DI	THROUGH NETWORK		X	COV	X	X
7		COOLING OUTPUT COMMAND	DO	THROUGH NETWORK	MBH			X	
8		DISCHARGE AIR STATIC PRESSURE	AI	THROUGH NETWORK	in. WC	X	15 MINS	X	
9		DISCHARGE AIR STATIC PRESSURES SETPOINT	AO	THROUGH NETWORK	in. WC			X	
10		DISCHARGE AIR HIGH STATIC PRESSURE	DI	THROUGH NETWORK		X	COV	X	X
11		DISCHARGE AIR LOW STATIC PRESSURE	DI	THROUGH NETWORK		X	COV	X	X
12		DISCHARGE AIR TEMPERATURE	AI	THROUGH NETWORK	deg. °F	X	15 MINS	X	
13		DISCHARGE AIR TEMP SENSOR FAIL	DI	THROUGH NETWORK		X	COV	X	X
14		DX COIL FROST STAT ALARM	DI	THROUGH NETWORK		X	COV	X	X
15		MIXED AIR DAMPER COMMAND	AO	THROUGH NETWORK	%			X	
16		MIXED AIR DAMPER POSITION	AI	THROUGH NETWORK	%			X	
17		OUTSIDE AIR DAMPER COMMAND	AO	THROUGH NETWORK	%			X	
18		OUTSIDE AIR DAMPER POSITION	AI	THROUGH NETWORK	%			X	
19		OUTSIDE AIR HUMIDITY	AI	THROUGH NETWORK	% RH	X	15 MINS	X	
20		OA HUMIDITY SENSOR FAIL	DI	THROUGH NETWORK		X	COV	X	X
21		OUTSIDE AIR TEMPERATURE	AI	THROUGH NETWORK	deg. °F	X	15 MINS	X	
22		OA TEMPERATURE SENSOR FAIL	DI	THROUGH NETWORK		X	COV	X	X
23		PRIMARY FILTER STATUS	DI	THROUGH NETWORK				X	
24		PRIMARY DIRTY FILTER ALARM	DI	THROUGH NETWORK		X	COV	X	X
25		REFRIGERANT LFL CONCENTRATION ALARM	DI	THROUGH NETWORK		X	COV	X	X
26		REFRIGERANT CONCENTRATION SETPOINT	AO	THROUGH NETWORK				X	
27		REFRIGERANT HIGH SIDE PRESSURE	AI	THROUGH NETWORK	psi	X	15 MINS	X	
28	ROOFTOP UNIT (RTU)	REFRIGERANT LOW SIDE PRESSURE	AI	THROUGH NETWORK	psi	X	15 MINS	X	
29		DUCT REFRIGERANT CONCENTRATION	AI	THROUGH NETWORK	ppm	X	15 MINS	X	
30		REFRIGERANT LEAK	DI	THROUGH NETWORK		X	COV	X	X
31		REFRIGERANT LEAK SENSOR STATUS	DI	THROUGH NETWORK				X	
32		REFRIGERANT CONCENTRATION	AI	THROUGH NETWORK	ppm	X	15 MINS	X	
33		REFRIGERANT MITIGATION MODE	DI	THROUGH NETWORK				X	
34		RELIEF AIR DAMPER COMMAND	DO	THROUGH NETWORK				X	
35		RELIEF AIR DAMPER POSITION	DI	THROUGH NETWORK				X	
36		RELIEF AIR FAN SPEED	AO	THROUGH NETWORK	rpm			X	
37		RELIEF AIR FAN START/STOP	DO	HARDWIRED				X	
38		RELIEF AIR FAN STATUS	DI	HARDWIRED	amps			X	
39		RELIEF AIR FAN FAIL	DI	BY BMS VENDOR		X	COV	X	X
40		RETURN AIR CO2 CONCENTRATION	AI	THROUGH NETWORK	ppm	X	15 MINS	X	
41		HIGH CO2 LEVEL	DI	THROUGH NETWORK		X	COV	X	X
42		CO2 SENSOR FAIL	DI	THROUGH NETWORK		X	COV	X	X
43		RETURN AIR HUMIDITY	AI	THROUGH NETWORK	% RH	X	15 MINS	X	
44		RETURN AIR HUMIDITY SENSOR FAIL	DI	THROUGH NETWORK		X	COV	X	X
45		RETURN AIR TEMPERATURE	AI	THROUGH NETWORK	deg. °F	X	15 MINS	X	
46		RA TEMPERATURE SENSOR FAIL	DI	THROUGH NETWORK		X	COV	X	X
47		SUPPLY AIR FAN SPEED	AO	THROUGH NETWORK	rpm			X	
48		SUPPLY FAN START/STOP	DO	HARDWIRED				X	
49		SUPPLY FAN STATUS	DI	HARDWIRED	amps			X	
50		SUPPLY AIR FAN FAIL	DI	BY BMS VENDOR		X	COV	X	X
51		UNIT FAIL	DI	HARDWIRED		X	COV	X	X
52		BMS COMMUNICATION FAIL	DI	THROUGH NETWORK		X	COV	X	X
53		ECONOMIZER MINIMUM POSITION SETPOINT	AO	THROUGH NETWORK	%			X	
54		OCCUPIED COOLING SETPOINT	AO	THROUGH NETWORK	MBH			X	
55		UNOCCUPIED COOLING SETPOINT	AO	THROUGH NETWORK	MBH			X	

#	EQUIPMENT	POINTS	TYPE	DEVICE	UNITS	TREND	INTERVAL	GRAPHIC	ALARM
1		FAN START/STOP COMMAND	DO	THROUGH NETWORK				X	
2		FAN STATUS	AI	THROUGH NETWORK				X	
3		FAN RUNTIME	AI	BY BMS VENDOR	hrs	X	15 MINS	X	
4		FAN FAIL	DI	BY BMS VENDOR		X	COV	X	X
5		DAMPER COMMAND	AO	THROUGH NETWORK	%			X	
6		DAMPER POSITION	AI	THROUGH NETWORK	%			X	
7		OCCUPANCY MODE	AI	BY BMS VENDOR				X	
8		AIRFLOW	AI	HARDWIRED					
9	FAN-POWERED BOX (FPB)	OCCUPIED MIN. AIRFLOW SETPOINT	AO	BY BMS VENDOR	cfm			X	
10		OCCUPIED MAX. AIRFLOW SETPOINT	AO	BY BMS VENDOR	cfm			X	
11		SPACE TEMPERATURE	AI	HARDWIRED	deg. °F	X	15 MINS	X	
12		OCCUPIED COOLING SETPOINT	AO	BY BMS VENDOR	deg. °F			X	
13		UNOCCUPIED COOLING SETPOINT	AO	BY BMS VENDOR	deg. °F			X	
14		HIGH SPACE TEMPERATURE	AI	BY BMS VENDOR	deg. °F	X	COV	X	X
15		HIGH SPACE TEMPERATURE SETPOINT	AO	BY BMS VENDOR	deg. °F			X	
16		LOW SPACE TEMPERATURE	AI	BY BMS VENDOR	deg. °F	X	COV	X	X
17		LOW SPACE TEMPERATURE SETPOINT	AO	BY BMS VENDOR	deg. °F			X	

#	EQUIPMENT	POINTS	TYPE	DEVICE	UNITS	TREND	INTERVAL	GRAPHIC	ALARM
1		FAN START/STOP COMMAND	DO	HARDWIRED				X	
2		FAN STATUS	AI	HARDWIRED (VIA CT)	amps			X	
3	EXHAUST FAN (EF)	FAN RUNTIME	AI	BY BMS VENDOR	hrs	X	15 MINS	X	
4		FAN FAIL	DI	BY BMS VENDOR		X	COV	X	X
5		DAMPER POSITION	DI	HARDWIRED				X	

SHEET NOTES:

1. THE CONTROLS DIAGRAM AND ELECTRICAL WIRING DIAGRAM SHOWN ARE DIAGRAMMATIC AND SHOWN FOR DESIGN INTENT ONLY. POINT-TO-POINT WIRING DIAGRAMS SHALL BE PROVIDED BY THE CONTROLS VENDOR SHOWING ALL CIRCUITS RAN TO AND FROM EACH DEVICE. CONTRACTOR SHALL CONFIRM EXACT WIRE QUANTITIES WITH VENDOR SHOP DRAWINGS FOR ALL EQUIPMENT ACTUALLY BEING SUPPLIED PRIOR TO START OF ANY WORK.
2. ALL NEW BMS SYSTEM EQUIPMENT SHALL TIE INTO THE NEW NIAGARA BMS. THE CONTROLS VENDOR SHALL UPDATE BUILDING BMS SCREENS AND GRAPHICS AS REQUIRED TO INTERFACE WITH CONTROL PANEL. ALL BMS ALARMS SHALL BE TRENDED.
3. AS PART OF THE ELECTRICAL WORK, THE CONTROLS CONTRACTOR SHALL PROVIDE AND INSTALL THE FOLLOWING:
   a. ALL ROUGHING (CONDUITS, JUNCTION BOXES, PULL BOXES, WIRE TROUGHS, CABLES, ETC.) PERTAINING TO THE INSTALLATION.
   b. ALL POWER OUTLETS FOR CONTROL EQUIPMENT.
4. NO POWER WIRING SHALL BE RUN IN THE SAME CONDUIT AS ANY INPUT, OUTPUT, OR COMMUNICATIONS WIRING CONDUIT.
5. CONTROLLER SHALL BE INSTALLED WITH 25% SPARE POINTS & 25% SPARE MEMORY CAPACITY FOR CONNECTION OF FLOOR WORK.
6. CONTRACTOR TO INSTALL ALL SENSORS, ACTUATORS, AND RELAYS. CONTRACTOR SHALL INSTALL ANY ADDITIONAL RELAYS AS REQUIRED. FIELD MOUNTED RELAYS NOT SHOWN ON EQUIPMENT CUTAWAY.
7. AS A MINIMUM, 3/4" ELECTRICAL METALLIC TUBING (EMT) CONDUIT WITH STEEL COMPRESSION FITTINGS SHALL BE SPECIFIED FOR RUNNING CONTROL AND BMS WIRING UNLESS STATED OTHERWISE. RUN CONTROL CABLING THROUGH CONDUIT FROM UNIT TO EXIST CABLE TRAY.
8. PLASTIC LABELS WITH ONE-INCH HIGH LETTERING SHALL BE PROVIDED FOR ALL BMS AND CONTROL PANEL ENCLOSURES. LABELS SHALL INCLUDE ENCLOSURE NUMBER, ELECTRICAL PANEL, AND CIRCUIT NUMBER OF CIRCUITS USED.
9. CONTRACTOR TO PROVIDE TAGS FOR ALL BMS WIRING ENTERING AND LEAVING THE ENCLOSURE. TAGS TO INDICATE ALARM/CONTROL POINT AND WHICH CONTROLLER OR ENCLOSURE IT ORIGINATES FROM.
10. CAP AND SAFE OFF ALL SPARE WIRING IN CONTROL PANELS FOR FUTURE USE.

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Pennoni

UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

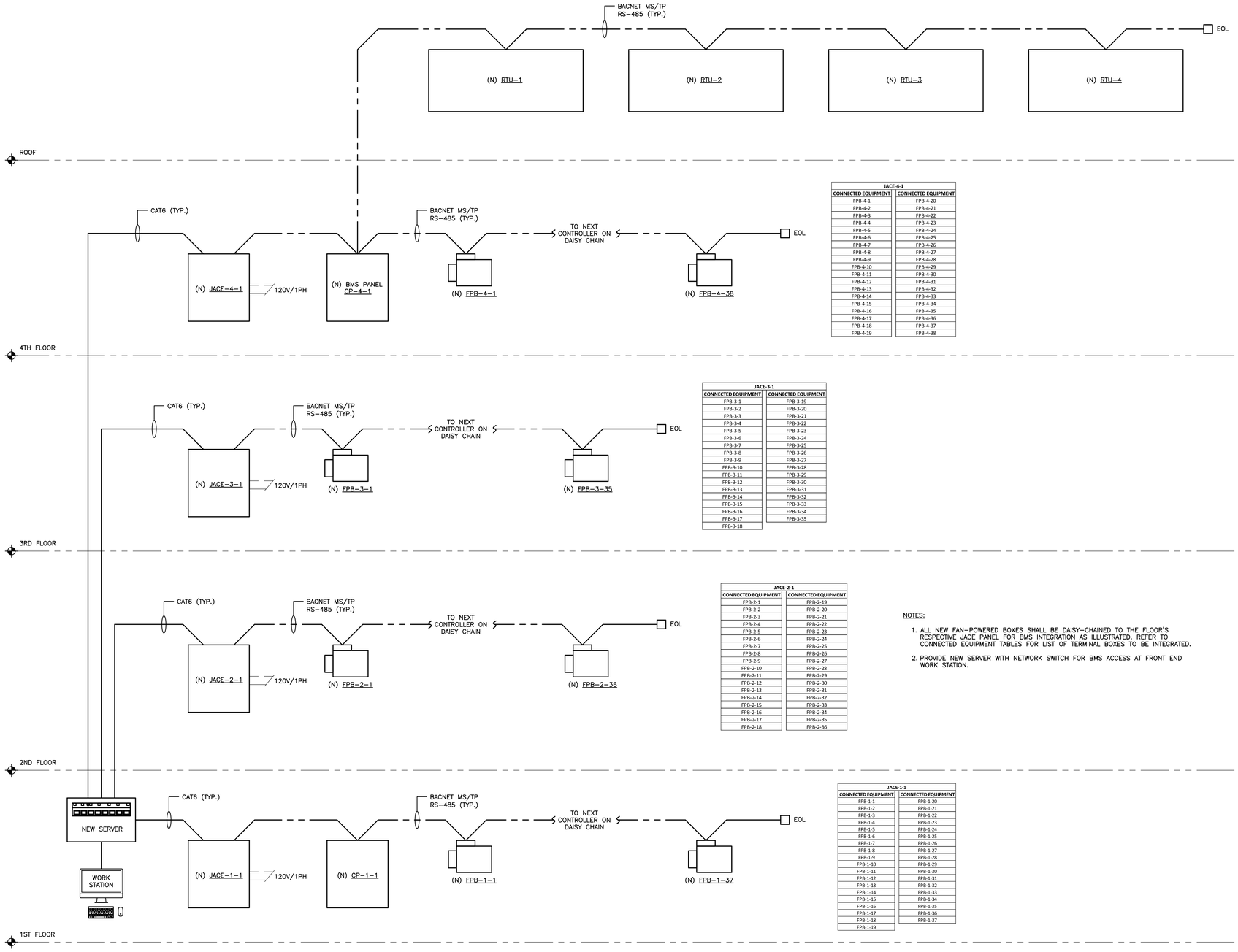
PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE
MECHANICAL CONTROLS SHEET 1

CHECKED BY: KD | DRAWN BY: BC

DRAWING No.
M-701



JACE-4-1	
CONNECTED EQUIPMENT	CONNECTED EQUIPMENT
FPB-4-1	FPB-4-20
FPB-4-2	FPB-4-21
FPB-4-3	FPB-4-22
FPB-4-4	FPB-4-23
FPB-4-5	FPB-4-24
FPB-4-6	FPB-4-25
FPB-4-7	FPB-4-26
FPB-4-8	FPB-4-27
FPB-4-9	FPB-4-28
FPB-4-10	FPB-4-29
FPB-4-11	FPB-4-30
FPB-4-12	FPB-4-31
FPB-4-13	FPB-4-32
FPB-4-14	FPB-4-33
FPB-4-15	FPB-4-34
FPB-4-16	FPB-4-35
FPB-4-17	FPB-4-36
FPB-4-18	FPB-4-37
FPB-4-19	FPB-4-38

JACE-3-1	
CONNECTED EQUIPMENT	CONNECTED EQUIPMENT
FPB-3-1	FPB-3-19
FPB-3-2	FPB-3-20
FPB-3-3	FPB-3-21
FPB-3-4	FPB-3-22
FPB-3-5	FPB-3-23
FPB-3-6	FPB-3-24
FPB-3-7	FPB-3-25
FPB-3-8	FPB-3-26
FPB-3-9	FPB-3-27
FPB-3-10	FPB-3-28
FPB-3-11	FPB-3-29
FPB-3-12	FPB-3-30
FPB-3-13	FPB-3-31
FPB-3-14	FPB-3-32
FPB-3-15	FPB-3-33
FPB-3-16	FPB-3-34
FPB-3-17	FPB-3-35
FPB-3-18	

JACE-2-1	
CONNECTED EQUIPMENT	CONNECTED EQUIPMENT
FPB-2-1	FPB-2-19
FPB-2-2	FPB-2-20
FPB-2-3	FPB-2-21
FPB-2-4	FPB-2-22
FPB-2-5	FPB-2-23
FPB-2-6	FPB-2-24
FPB-2-7	FPB-2-25
FPB-2-8	FPB-2-26
FPB-2-9	FPB-2-27
FPB-2-10	FPB-2-28
FPB-2-11	FPB-2-29
FPB-2-12	FPB-2-30
FPB-2-13	FPB-2-31
FPB-2-14	FPB-2-32
FPB-2-15	FPB-2-33
FPB-2-16	FPB-2-34
FPB-2-17	FPB-2-35
FPB-2-18	FPB-2-36

JACE-1-1	
CONNECTED EQUIPMENT	CONNECTED EQUIPMENT
FPB-1-1	FPB-1-20
FPB-1-2	FPB-1-21
FPB-1-3	FPB-1-22
FPB-1-4	FPB-1-23
FPB-1-5	FPB-1-24
FPB-1-6	FPB-1-25
FPB-1-7	FPB-1-26
FPB-1-8	FPB-1-27
FPB-1-9	FPB-1-28
FPB-1-10	FPB-1-29
FPB-1-11	FPB-1-30
FPB-1-12	FPB-1-31
FPB-1-13	FPB-1-32
FPB-1-14	FPB-1-33
FPB-1-15	FPB-1-34
FPB-1-16	FPB-1-35
FPB-1-17	FPB-1-36
FPB-1-18	FPB-1-37
FPB-1-19	

NOTES:

1. ALL NEW FAN-POWERED BOXES SHALL BE DAISY-CHAINED TO THE FLOOR'S RESPECTIVE JACE PANEL FOR BMS INTEGRATION AS ILLUSTRATED. REFER TO CONNECTED EQUIPMENT TABLES FOR LIST OF TERMINAL BOXES TO BE INTEGRATED.
2. PROVIDE NEW SERVER WITH NETWORK SWITCH FOR BMS ACCESS AT FRONT END WORK STATION.

BMS COMMUNICATION RISER DIAGRAM

SCALE: N.T.S.

SHEET NOTES:

1. THE CONTROLS DIAGRAM AND ELECTRICAL WIRING DIAGRAM SHOWN ARE DIAGRAMMATIC AND SHOWN FOR DESIGN INTENT ONLY. POINT-TO-POINT WIRING DIAGRAMS SHALL BE PROVIDED BY THE CONTROLS VENDOR SHOWING ALL CIRCUITS RAN TO AND FROM EACH DEVICE. CONTRACTOR SHALL CONFIRM EXACT WIRE QUANTITIES WITH VENDOR SHOP DRAWINGS FOR ALL EQUIPMENT ACTUALLY BEING SUPPLIED PRIOR TO START OF ANY WORK.
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200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE
MECHANICAL
CONTROLS SHEET 2

CHECKED BY: KD DRAWN BY: BC

DRAWING No.
M-702

COMcheck Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Green Building
Location: Plainfield, New Jersey
Climate Zone: 4a
Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Mechanical Systems List

Quantity System Type & Description

1 HVAC System (Multiple-Zone):
Cooling: 1 each - Field-Assembled DX System, Capacity = 1571 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 10.60 EER, Required Efficiency = 9.70 EER
Proposed Part Load Efficiency = 16.50 IEER, Required Part Load Efficiency = 12.50 IEER
Fan System: RTU-1 Supply Fan -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Multi-Zone VAV, 41500 CFM, 60.0 motor nameplate hp, 0.00 fan energy index , fan exception: 3rd party air/energy performance certified

1 HVAC System (Multiple-Zone):
Cooling: 1 each - Field-Assembled DX System, Capacity = 1559 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 10.60 EER, Required Efficiency = 9.70 EER
Proposed Part Load Efficiency = 16.50 IEER, Required Part Load Efficiency = 12.50 IEER
Fan System: RTU-2 Supply Fan -- Compliance (Motor nameplate HP and fan efficiency method) : Fails

Fans:
FAN 1 Supply, Multi-Zone VAV, 44000 CFM, 75.0 motor nameplate hp, 0.00 fan energy index , fan exception: 3rd party air/energy performance certified

1 HVAC System (Multiple-Zone):
Cooling: 1 each - Field-Assembled DX System, Capacity = 448 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 10.40 EER, Required Efficiency = 10.00 EER
Proposed Part Load Efficiency = 15.20 IEER, Required Part Load Efficiency = 13.20 IEER
Fan System: RTU-3 Supply Fan -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Multi-Zone VAV, 10500 CFM, 15.0 motor nameplate hp, 0.00 fan energy index , fan exception: 3rd party air/energy performance certified

1 HVAC System (Multiple-Zone):
Cooling: 1 each - Field-Assembled DX System, Capacity = 443 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 10.40 EER, Required Efficiency = 10.00 EER
Proposed Part Load Efficiency = 15.20 IEER, Required Part Load Efficiency = 13.20 IEER
Fan System: RTU-4 Supply Fan -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Multi-Zone VAV, 11400 CFM, 15.0 motor nameplate hp, 0.00 fan energy index , fan exception: 3rd party air/energy performance certified

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COMcheck Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2021 IECC

Requirements: 81.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical and service water heating systems and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. Hot water systems sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][7]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][7]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.12.3 [ME61][7]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Piping within HVAC equipment.
C403.8.1 [ME65][7]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.3 [ME117][7]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans included in equipment having certified seal for air or energy performance of the equipment package.
C403.8.3 [ME117][7]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans included in equipment having certified seal for air or energy performance of the equipment package.
C403.8.3 [ME117][7]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans included in equipment having certified seal for air or energy performance of the equipment package.
C403.8.3 [ME117][7]	Fans have a fan energy index (FEI) >= 1.00. Variable volume fans will have an FEI >= 0.95.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans included in equipment having certified seal for air or energy performance of the equipment package.
C403.8.4 [ME142][7]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.8.6 [ME143][7]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.9 [ME144][7]	Large diameter fans where installed shall be tested and labeled in accordance with AMCA 230.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.13.1 [ME71][7]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3 [ME55][7]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.1 [ME112][7]	Zone isolation devices and controls installed where applicable.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.5 [ME113][7]	Fault detection and diagnostics installed with air-cooled unitary DX units or VRF units having economizers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [ME59][7]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.1 [ME59][7]	Demand control ventilation provided for spaces >500 ft2 and >15 people/1000 ft2 occupant density and served by systems with air side economizer, auto-modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.2 [ME115][7]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.3 [ME140][7]	Units that provide ventilation air to multiple zones and operate in combination with zone heating and cooling systems that use reheat or heat recovery to warm supply air to a temperature greater than 60°F when representative building loads or outdoor air temperatures indicate that the majority of zones require cooling.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.7.6 [ME141][7]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.4 [ME57][7]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Systems serving spaces that are not cooled and heated to 60°F.
C403.7.5 [ME116][7]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.12.1 , C403.12.2 [ME60][7]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.5, C403.5.1, C403.5.2 [ME62][7]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.2 [ME16][7]	Economizer operation will not increase heating energy use during normal operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Economizers on VAV systems.
C403.5.3, 4 [ME124][7]	Air economizers automatically reduce outdoor air intake to the design minimum ventilation rate when outdoor air intake will not reduce cooling energy usage. See Table C403.5.3.3 for applicable device types and climate zones.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3, 4 [ME125][7]	System capable of relieving excess outdoor air during air economizer operation to prevent overpressurizing the building. The relief air outlet located to avoid recirculation into the building.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3, 5 [ME126][7]	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.7.7 for details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.6.1 [ME75][7]	Hydronic and multizone HVAC system controls are VAV fans driven by mechanical or electrical variable speed drive per Table C403.4.1.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.6.9 [ME67][7]	VAV fans have static pressure sensors located so controller setpoint <=1.2 w.c.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.3 [ME24][7]	Reset static pressure setpoint for DDC in C403.7.8.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.6.1 [ME130][7]	Supply air systems serving multiple zones have VAV systems with controls configured to reduce the volume of air that is reheated, recooled or mixed in each zone. See section for details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.6.2 [ME131][7]	Single-duct VAV systems use terminal devices configured to reduce the supply of primary supply air before reheating or recooling takes place.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.6.3 [ME132][7]	Systems that have 1 warm air duct and 1 cool air duct use terminal devices configured to reduce the flow from one duct to a minimum before mixing of air from the other duct takes place.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4 [ME133][7]	Individual dual-duct or mixing heating and cooling systems with a single fan and with total capacities > 90,000 Btu/h not equipped with air economizers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.6.5 [ME134][7]	Multiple zone HVAC systems have supply air temperature reset controls based on building loads or outside temperatures.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.6.7 [ME136][7]	Parallel-flow fan-powered VAV air terminals have automatic controls configured to 1) turn off the terminal fan except when space heating is required or during occupied ventilation, 2) turn on the terminal fan as the first stage of heating before the heating coil is activated, and 3) during heating for warmup or setback temperature control, either operate the terminal fan and heating coil without primary air or, reverse the terminal damper logic and provide heating from the central air handler by primary air.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.6.8 [ME137][7]	Systems with DDC of individual zones reporting to the central control panel configured to reset the static pressure setpoint based on zone requiring the most pressure, or the position of maximum zone damper positions or have an alternative method of indicating the need for static pressure. See section for details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.6.9 [ME138][7]	Static pressure sensors used to control VAV fans located such that the controller setpoint is <= 1.2 inches w.c.. Where this results in one or more sensors being located downstream of major duct splits, not less than one sensor located on each major branch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.4.1.4 [ME63][7]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.6.6 [ME135][7]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.3.3 [ME35][7]	Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][7]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.13.1 , C403.13.2 , C403.13.3 [ME123][7]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a conditioned space. Refrigerated display condensers that comply with Sections C403.11.3.1 and refrigeration compressor systems that comply with C403.11.3.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.7 [EL26][7]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.8 [EL27][7]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.9.1, C405.9.2 [EL28][7]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.10 [EL29][7]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.11.1 [EL30][7]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.11, C405.11.1 [EL31][7]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [FI8][7]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.1.1 [FI50][7]	HVAC systems and equipment design loads calculated in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1 [FI27][7]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Multiple units of the same type of equipment with sequencing controls.
C403.4.1 [FI47][7]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.2 [FI38][7]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.3 [FI20][7]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2 [FI39][7]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2.1, C403.4.2.2 [FI40][7]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2.3 [FI41][7]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.1.1 [FI57][7]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.1 [FI28][7]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3.1 [FI31][7]	HVAC equipment, systems and system-to-system relationships have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][7]	HVAC and service water heating control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.3 [FI32][7]	Economizers have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][7]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5 [FI7][7]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI43][7]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.2 [FI30][7]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Pennoni

UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE

MECHANICAL COVER SHEET

CHECKED BY: K.D DRAWN BY: S.K.

DRAWING No.

EN-001

GENERAL NOTES

1. WORK INCLUDED

MATERIALS, EQUIPMENT, FABRICATION, INSTALLATION AND TESTS FOR FULLY OPERATIONAL AND SAFE SYSTEMS, INCLUDING ALL NECESSARY MATERIALS, APPURTENANCES AND FEATURES WHETHER SPECIFIED OR SHOWN ON DRAWINGS OR NOT, IN CONFORMITY WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION.

2. CODES, PERMITS AND INSPECTIONS

ALL WORK SHALL MEET OR EXCEED THE LATEST REQUIREMENTS OF NATIONAL ELECTRICAL CODE WITH ANY LOCAL AMENDMENTS, ALONG WITH ALL APPLICABLE REQUIREMENTS OF STATE, COUNTY, MUNICIPAL, AND OTHER AUTHORITIES EXERCISING JURISDICTION OVER ELECTRICAL CONSTRUCTION WORK.

INSTALLATION PROCEDURES, METHODS AND CONDITIONS SHALL COMPLY WITH THE LATEST REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

ALL ELECTRICAL EQUIPMENT SHALL COMPLY WITH THE LATEST REQUIREMENTS OF ALL APPLICABLE STATE AND MUNICIPAL "ENERGY CODES". SUBMIT MANUFACTURER CERTIFICATION FOR ENERGY CODE COMPLIANCE FOR ALL ENERGY-CONSUMING EQUIPMENT.

ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES SHALL BE OBTAINED, PAID FOR, AND MADE AVAILABLE AT THE COMPLETION OF THE WORK.

3. CERTIFICATE OF INSURANCE

CONTRACTOR SHALL FURNISH THE OWNER WITH A COPY OF HIS CERTIFICATE OF INSURANCE FOR WORKMAN'S COMPENSATION, AND PERSONAL AND PROPERTY DAMAGE LIABILITY IN THE AMOUNT SPECIFIED BY THE OWNER.

4. CONTRACT DOCUMENTS

DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY AND SHALL BE TAKEN TOGETHER FOR A COMPLETE INTERPRETATION OF THE WORK. IF THERE ARE ANY CONFLICTS BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL BE ENFORCED, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

INDICATION AND/OR DESCRIPTION OF ANY ELECTRICAL EQUIPMENT, DEVICE, ETC. IN THE DRAWINGS AND SPECIFICATIONS SHALL BE UNDERSTOOD TO CARRY WITH IT THE INSTRUCTION TO FURNISH, INSTALL AND CONNECT THAT ELECTRICAL ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED.

THE ELECTRICAL DRAWINGS UTILIZE SYMBOLS, DETAILS, AND SCHEMATIC DIAGRAMS WHICH HAVE NO DIMENSIONAL SIGNIFICANCE. ALL ELECTRICAL WORK SHALL BE INSTALLED TO MEET THE DIAGRAMMATIC INTENT SHOWN ON THE DRAWINGS, AND IN CONFORMANCE WITH THE DIMENSIONS INDICATED ON THE FIELD LAYOUTS AND FINAL SHOP DRAWINGS.

ELECTRICAL EQUIPMENT ROOM LAYOUTS ARE GENERALLY DIAGRAMMATIC AND ALTHOUGH SIZE AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, SITE VERIFICATION IS REQUIRED PRIOR TO ANY EQUIPMENT INSTALLATION.

ELECTRICAL CONDUITS AND BUSWAY RUNS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC TO SHOW INTENT. FIELD VERIFICATION BY THE ELECTRICAL CONTRACTOR IS REQUIRED TO ENSURE THE FEASIBILITY OF CONDUITS AND BUSWAYS INSTALLATION.

5. QUALITY ASSURANCE

ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE NEW PROVIDED WITH MANUFACTURER'S WARRANTY. ALL NEW EQUIPMENT AND MATERIALS SHALL HAVE THE LISTING OF THE UNDERWRITER'S LABORATORIES AND SHALL BEAR LABELS ATTESTING TO APPROVALS BY UL AND OTHER MUNICIPAL DEPARTMENTS HAVING JURISDICTION.

ALL WORK SHALL BE INSTALLED IN NEAT WORKMANLIKE MANNER IN ACCORDANCE WITH LATEST NECA STANDARD FOR "GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION", AND OTHER ANSI APPROVED INSTALLATION STANDARDS.

6. GUARANTEE

ALL WORK SHALL BE GUARANTEED TO BE FREE FROM DEFECTS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AND ANY DAMAGE TO THE WORK DURING STIPULATED GUARANTEED PERIOD SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR WITHOUT ANY COST TO THE OWNER.

GUARANTEE PERIOD: ONE YEAR AFTER FINAL ACCEPTANCE OF WORK BY THE OWNER.

7. COORDINATION WITH OTHER CONTRACTORS

COORDINATE ALL WORK WITH OTHER CONTRACTORS TO ENSURE EFFICIENT FLOW OF WORK. EXAMINE DRAWINGS OF OTHER TRADES AND BECOME FULLY INFORMED AS TO EXTENT OF THE WORK PERFORMED BY OTHER CONTRACTORS AND ITS RELATION TO ELECTRICAL WORK PERFORMED BY THIS CONTRACTOR. THE CONTRACTOR SHALL REMOVE AND RELOCATE HIS WORK AS REQUIRED TO SUIT PROJECT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

8. SHOP DRAWINGS

SUBMIT SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND CERTIFICATE OF COMPLIANCE REQUIRED BY CONTRACT DOCUMENTS NO LATER THAN 30 DAYS AFTER SIGNING OF CONTRACT. SUBMIT TWO HARD COPIES, AND ELECTRONIC COPIES IN PDF FORMAT. ALL ELECTRICAL EQUIPMENT LAYOUTS, AND CONDUITS AND BUSWAY RUNS SHALL BE SUBMITTED IN ACAD FORMAT.

MAKE ANY CORRECTIONS OR CHANGES IN SUBMITTALS REQUIRED. RESUBMIT ONLY ITEMS REQUIRED FOR RESUBMITTAL FOR REVIEW UNTIL NO EXCEPTIONS ARE TAKEN OR A RESUBMISSION IS NOT REQUIRED. IT SHALL BE UNDERSTOOD THAT APPROVAL OF SHOP DRAWINGS WILL NOT BIND THE ENGINEER OR THE OWNER TO THE FINAL ACCEPTANCE OF SUCH WORK AS THE COMPLETED INSTALLATION AND FINAL INSPECTION MUST BE PROVIDED AND GUARANTEED.

SUBSTITUTIONS WILL GENERALLY NOT BE ACCEPTED. IF A SUBSTITUTION IS REQUIRED DUE TO PRODUCT UNAVAILABILITY, A REQUEST SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING THE ORDER. A DETAILED EXPLANATION SHALL BE INCLUDED ON WHY THAT SUBSTITUTION IS BEING REQUESTED. IF SUBSTITUTION IS MADE WITHOUT PRIOR KNOWLEDGE, EVEN THOUGH IT WAS SUBMITTED ON SHOP DRAWING BUT NOT LABELED AS SUBSTITUTE AND EVEN THOUGH IT WAS APPROVED, EQUIPMENT WILL NEED TO BE REMOVED AND REPLACED WITH SPECIFIED ITEM AT NO EXTRA CHARGE TO THE OWNER.

9. SITE WALK-THRU

BIDDERS, BEFORE SUBMITTING PROPOSAL, SHALL VISIT AND EXAMINE CAREFULLY THE AREAS AFFECTED BY THE WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK.

SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OF MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

BIDDERS SHALL INCLUDE PROVISIONS TO PERFORM CERTAIN TASKS AT PREMIUM TIME, OUTSIDE OF NORMAL WORKING HOURS. CERTAIN REMOVALS OF EXISTING ELECTRICAL WORK WILL BE NECESSARY TO THE SATISFACTORY INSTALLATION OF THE NEW WORK. ALL CHANGES CAN NOT BE COMPLETELY DETAILED ON THE DRAWINGS BUT SHALL BE INCLUDED IN THIS CONTRACTOR'S PROPOSAL.

10. CONSTRUCTION SCHEDULE

CONTRACTOR SHALL SUBMIT TO THE OWNER A DETAILED SCHEDULE FOR WORK WITH THE BID PROPOSAL LISTING ALL MAJOR CONSTRUCTION ACTIVITIES, AND FINAL TESTING AND COMMISSIONING.

ALL WORK REQUIRING SHUTDOWN OF CRITICAL EQUIPMENT SHALL BE PERFORMED AFTER 6:00 PM AND/OR ON WEEKENDS, UNLESS SPECIFIED IN WRITING BY THE FACILITY MANAGER. REQUEST TO WORK AFTER HOURS AND ON WEEKENDS MUST BE MADE IN WRITING 72 HOURS IN ADVANCE TO THE OWNER. ALL POWER SHUTDOWNS SHALL BE SCHEDULED AT LEAST TWO (2) WEEKS IN ADVANCE AND APPROVED BY THE OWNER. PROVIDE WRITTEN REQUEST TO OWNER FOR ALL SHUTDOWNS.

11. BUILDING RULES AND REGULATIONS

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A COPY OF THE BUILDING CONSTRUCTION RULES AND STANDARDS AND REGULATIONS. BID PRICE SHALL BE BASED ON ADHERENCE TO ALL THESE RULES AND REGULATIONS.

12. CUTTING AND PATCHING

PERFORM ALL CUTTING AND ROUGH PATCHING WHERE REQUIRED FOR INSTALLATION, TO THE SATISFACTION OF THE OWNER. PROPER CHOPPING SHALL BE PERFORMED, WHICH WILL NOT ALTER THE STRUCTURAL INTEGRITY OF THE BUILDING OR EQUIPMENT SUPPORTED BY SAME. CORING, CHOPPING AND CHASING OF CONCRETE MAY ONLY BE DONE BEFORE 7:00 AM AND AFTER 6:00 PM OR ON WEEKENDS OR AS PERMITTED BY FACILITY MANAGER.

PAINTING AND FINISHED PATCHING TO BE DONE GENERAL CONTRACTOR.

PROVIDE CUTTING AND PATCHING AS REQUIRED PER PHASE. ANY DAMAGE DONE TO THE STRUCTURE, PIPING OR EQUIPMENT AS A RESULT OF THIS CUTTING SHALL BE BORNE BY THE CONTRACTOR.

13. EQUIPMENT DELIVERY

CONTRACTOR SHALL ARRANGE FOR RECEIVING OF MATERIALS AT SITE AT TIMES PERMITTED BY THE OWNER. ALL MATERIALS AND EQUIPMENT SHALL BE BROKEN DOWN AND REASSEMBLED AS REQUIRED TO PERMIT ENTRANCE INTO THE ULTIMATE LOCATION OF INSTALLATION.

CONTRACTOR TO PAY ALL COST TO HAVE A MANUFACTURER'S AUTHORIZED FACTORY TRAINED TECHNICIAN PRESENT DURING BREAKDOWN, RE-ASSEMBLY AND START UP OF EQUIPMENT TO INSURE THAT FACTORY WARRANTIES AND/OR GUARANTEES ARE NOT VOIDED.

CONTRACTOR SHALL ARRANGE FOR STORING AND SECURING MATERIALS AND EQUIPMENT AT THE SITE AS DIRECTED BY THE FACILITY MANAGER OR GENERAL CONTRACTOR. THIS CONTRACTOR SHALL FURNISH ALL SUPERVISION, LABOR SERVICES, EQUIPMENT, MATERIAL, TOOLS, TRUCKING, HOISTING AND ERECTING APPARATUS, TRANSPORTATION AND SHALL PAY ALL FEES, PERMITS, INSPECTIONS, CERTIFICATES AND RELATED ITEMS.

14. RELOCATIONS AND REMOVALS

WHERE RELOCATION OR REMOVAL OF ELECTRICAL EQUIPMENT, AS INDICATED BY SYMBOLS OR OTHERWISE IN THE SPECIFICATIONS RESULTS IN LOSS OF POWER, FUNCTION AND/OR OPERATION, CONTARCTOR SHALL PROVIDE NECESSARY BRANCH WIRING, CONTROL WIRING, ETC. AS REQUIRED TO BYPASS THE REMOVED DEVICE TO MAINTAIN ELECTRICAL CONTINUITY TO THE REMAINING DEVICES ON INTERRUPTED FEED.

CONDUIT AND WIRE TO MATCH THE CONFIGURATION. CERTAIN REMOVAL AND RELOCATIONS OF EXISTING ELECTRICAL WORK WILL BE NECESSARY FOR THE SATISFACTORY PERFORMANCE OF THE GENERAL WORK. ALL CHANGES CANNOT BE COMPLETELY DETAILED ON THE DRAWING, BUT SHALL BE TAKEN INTO CONSIDERATION IN MAKING UP THE WORK PROPOSAL.

15. CLEANUP

CLEANUP SHALL BE IN ACCORDANCE WITH BASE BUILDING STANDARDS AND AS MANDATED BY THE OWNER. THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, SHALL CLEAN ALL EQUIPMENT, SWITCHES, CABINETS, DEVICE PLATES, ND OTHER ITEMS FURNISHED UNDER THIS CONTRACT AND SHALL ENSURE THAT ALL PANELBOARD DIRECTORIES ARE IN PLACE AND COMPLETED OR REVISED AS REQUIRED BY THE WORK AND THAT ALL IDENTIFICATION AND MARKING IF EQUIPMENT, CABLES, ALL JUNCTION BOXES AND OTHER ITEMS IS COMPLETED.

16. FIRESTOPPING

FIRE STOPS SHALL BE PROVIDED WHERE CONDUITS AND RACEWAYS PASS THROUGH FIRE RATED PARTITIONS, WALLS OR FLOORS. INSTALL A FIRE STOP THAT PROVIDES AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FIRE SMOKE AND GASES. THE FIRE STOP MATERIAL SHALL BE PACKED TIGHT AND COMPLETELY FILL CLEARANCES BETWEEN RACEWAYS AND OPENINGS. FIRE STOPS SHALL BE PROVIDED PER PHASE.

17. EXPANSION FITTINGS

ALL CONDUITS THAT CROSS BUILDING EXPANSION OR CONTROL JOINTS ARE TO BE PROVIDED WITH EXPANSION FITTINGS. ALL FITTINGS TO HAVE FLEXIBLE BONDING AND GROUNDING JUMPERS TO BY-PASS SLIDING OR MOVABLE PARTS.

ELECTRICAL SYMBOL LIST

POWER SYMBOL LIST

- DUPLEX RECEPTACLE; NEMA 5-20R
- QUAD RECEPTACLE
- SPECIALTY RECEPTACLE
- TWIST-LOCK RECEPTACLE
- TELE/DATA RECEPTACLE
- POWER AND DATA RECEPTACLE POKE-THRU
- JUNCTION BOX
- WALL-MOUNTED JUNCTION BOX
- SPLICE/PULL BOX
- BRANCH CIRCUIT HOMERUN TO PANEL
- MOTOR STARTER
- TINNED COPPER GROUND BUS BAR
- MOTOR – # REPRESENTS HORSEPOWER RATING
- SPD — SURGE PROTECTOR DEVICE
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR
- M — DEMAND METER
- FUSE
  RATING AS INDICATED ON DRAWINGS.
- SWITCH
  RATING AS INDICATED ON DRAWINGS.
- MOLDED CASE CIRCUIT BREAKER
  RATING AS INDICATED ON DRAWINGS.
- LOW VOLTAGE CIRCUIT BREAKER, DRAWOUT TYPE
  RATING AS INDICATED ON DRAWINGS.
- MEDIUM VOLTAGE CIRCUIT BREAKER, DRAWOUT TYPE
  RATING AS INDICATED ON DRAWINGS.
- DIESEL GENERATOR
  RATING AS INDICATED ON DRAWINGS.
- THREE PHASE DRY TYPE TRANSFORMER
  RATING AS INDICATED ON DRAWINGS.
- AUTOMATIC TRANSFER SWITCH
  RATINGS AS INDICATED ON DRAWINGS.
  N – NORMAL SOURCE
  E – EMERGENCY SOURCE
  L – LOAD
- UNFUSED DISCONNECT SWITCH
  #/#
  | └ – – SWITCH AMPS
  └ – – – NUMBER OF POLES
- FUSED DISCONNECT SWITCH
  #/#/#
  | | └ – FUSE AMPS
  | └ – – SWITCH AMPS
  └ – – – NUMBER OF POLES

LIGHTING SYMBOL LIST

- $ — TOGGLE SWITCH
  OS – SUBSCRIPT DENOTES SWITCH WITH INTEGRAL OCCUPANCY SENSOR
  D – SUBSCRIPT DENOTES SWITCH WITH DIMMING
  a – LOWERCASE SUBSCRIPT DENOTES DESIGNATION
- $3 — 3-WAY TOGGLE SWITCH
- OS — CEILING MOUNTED OCCUPANCY SENSOR

SECURITY SYMBOL LIST

- CR — CARD READER
- DC — DOOR CONTACT
- REX — REQUEST TO EXIT
- ES — ELECTRIC STRIKE

ELECTRICAL DRAWING LIST

SHEET No.		SHEET TITLE	CONSTRUCTION DOCS MAY 29, 2025	BID SET JUNE 16, 2025		
			ISSUE AND DATE			
1	E-001	ELECTRICAL COVER SHEET	●	●		
2	E-002	ELECTRICAL SPECIFICATIONS SHEET	●	●		
3	E-101	ELECTRICAL 1ST FLOOR PLAN	●	●		
4	E-102	ELECTRICAL 2ND FLOOR PLAN	●	●		
5	E-103	ELECTRICAL 3RD FLOOR PLAN	●	●		
6	E-104	ELECTRICAL 4TH FLOOR PLAN	●	●		
7	E-1R1	ELECTRICAL ROOF PLAN	●	●		
8	E-501	ELECTRICAL DETAILS SHEET	●	●		
9	E-601	ELECTRICAL SINGLE LINE DIAGRAM	●	●		

ABBREVIATIONS

A	–	AMPS
C	–	CONDUIT
DWG	–	DRAWING
E	–	EXISTING
EC	–	ELECTRICAL CONTRACTOR
EM	–	EMERGENCY
FA	–	FIRE ALARM
NEC	–	NATIONAL ELECTRIC CODE
NEMA	–	NATIONAL ELECTRICAL
N.T.S.	–	NOT TO SCALE
P	–	POLE
SPECS	–	SPECIFICATIONS
TYP	–	TYPICAL
U.O.N.	–	UNLESS OTHERWISE NOTED
V	–	VOLTS
W	–	WATTS

APPLICABLE CODES

- 2021 NEW JERSEY BUILDING CODE
- 2021 NEW JERSEY ENERGY CODE
- 2020 NFPA 70 NEW JERSEY AMENDMENTS
- 2019 NFPA 72

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	REFERENCE	LUMENS	WATTS	CCT	VOLTAGE
L1	OUTDOOR INTEGRATED LED FLOOD LIGHT	LITHONIA LIGHTING CONTRACTOR SELECT OUTDOOR LED FLOOD LIGHT #ESXF1 ALO SWW2 KY DDB	1500	9	4000K	120V

ADDITIONAL NOTES:

1. ALL NOTED FIXTURES WITH SPECIFIC MODEL NUMBERS ARE PROVIDED FOR REFERENCE / INTENT ONLY. ALL FINAL FIXTURES SHALL BE COORDINATED WITH OWNER.
2. ALL MOUNTING HARDWARE SHALL BE COORDINATED IN FIELD

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Pennoni

UNION COUNTY IMPROVEMENT AUTHORITY

GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE
ELECTRICAL COVER SHEET

CHECKED BY: I.I. DRAWN BY: C.M

DRAWING No.
E-001

DRAWING SPECIFICATIONS – ELECTRICAL

BASIC ELECTRICAL REQUIREMENTS:

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL WORK AS INDICATED ON THE DRAWINGS.

2. THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND SERVICES NECESSARY FOR REMOVAL OR RELOCATION OF EXISTING ELECTRICAL EQUIPMENT AS REQUIRED BY THE PROJECT.

3. TEST AND OPERATE ALL SYSTEMS TO DEMONSTRATE TO THE OWNER, OR HIS DESIGNATED REPRESENTATIVE, THAT THE INSTALLATION OF THESE SYSTEMS CONFORM TO DESIGN INTENT.

4. THE CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF THE OWNER, LOCAL, STATE AND FEDERAL LAWS, ORDINANCES, RULES AND REGULATIONS APPLICABLE TO THE WORK SHOWN OR SPECIFIED, AND WITH THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, THE OWNER'S UNDERWRITER, AND ALL PUBLIC UTILITIES HAVING CONNECTION WITH ANY OF THE VARIOUS SYSTEMS HEREIN SPECIFIED. WHERE APPLICABLE, ALL EQUIPMENT SHALL CARRY THE LABEL OF THE UNDERWRITERS LABORATORIES, INC.

5. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN, PAY FOR AND DELIVER ALL PERMITS, CERTIFICATES OF INSPECTION, AND PAY ALL COSTS, REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. DELIVER ALL PERMITS, CERTIFICATES AND APPROVALS TO THE OWNERS AGENT PRIOR TO FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR MUST FILE ALL NECESSARY DRAWINGS, PREPARE DOCUMENTS AND MAKE APPLICATION FOR EACH REQUIRED PERMIT AND INSPECTION, PRIOR TO COMMENCING WORK TO AVOID DELAYS DURING CONSTRUCTION.

6. INDEPENDENT INSPECTION AGENCY CERTIFICATES SHALL BE FURNISHED FOR ALL ELECTRICAL WORK. ALL CERTIFICATES SHALL BE IN DUPLICATE AND SHALL BE DELIVERED TO THE OWNER AND SHALL BECOME THE PROPERTY OF THE OWNER.

7. BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO PAY FOR ALL COSTS THAT MAY BE INCURRED DUE TO THE RELOCATION, REMOVAL OR MODIFICATION OF ANY PART OF THE EXISTING ELECTRICAL WORK THAT MAY BE REQUIRED, OR ANY CONDITION THAT MAY AFFECT THE COST OF INSTALLING THE NEW WORK.

8. IT IS THE INTENTION OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR CLEAR FINISHED WORK, TESTED AND READY FOR OPERATION. ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED OR SHOWN, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK, THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS.

9. SUBMIT 4 HARD COPIES AND ELECTRONIC COPY IN SEARCHABLE PDF FORMAT OF SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE PLANS, ELEVATIONS, SECTIONS, MOUNTING DETAILS OF COMPONENT PARTS, POINT TO POINT INTERCONNECTION DIAGRAMS, ELEMENTARY DIAGRAMS, SINGLE LINE DIAGRAMS AND ANY OTHER DRAWINGS NECESSARY TO SHOW THE FABRICATION AND CONNECTION OF THE COMPLETE ITEM OR SYSTEM.

10. RECORD DRAWINGS SHALL BE KEPT IN THE CONTRACTOR'S JOB SITE OFFICE FROM THE BEGINNING OF THE WORK, SHALL BE MAINTAINED DAILY AND SHALL BE PRODUCED FOR INSPECTION BY THE OWNER OR HIS AGENTS UPON DEMAND. AT THE COMPLETION OF THE PROJECT, BIND THE PRINTS INTO A SET AND FORWARD THEM TO THE OWNER. THE RECORD DRAWINGS SHALL CONSIST OF A SEPARATE SET OF WHITE PRINTS OF THE CONTRACT DRAWINGS ON WHICH SHALL BE RECORDED IN INK OR COLORED PENCIL THE FOLLOWING:

    A. DIMENSIONED LOCATIONS OF CONDUITS OVERHEAD AND BELOW THE RAISED FLOOR.

    B. DIMENSIONED LOCATIONS RECEPTACLE AND JUNCTION BOXES FOR CABINET POWER LOCATED BELOW THE RAISED FLOOR.

    C. LUMINAIRE ARRANGEMENTS, IF DIFFERENT FROM CONTRACT DRAWINGS.

    D. LOCATIONS OF RPP's, SERVER CABINETS, CEILING MOUNTED EQUIPMENT AND DEVICES, IF DIFFERENT FROM CONTRACT DRAWINGS.

    E. ALL WORK ADDED TO THE CONTRACT BY LAYOUT DRAWINGS, FIELD SKETCHES, ADDENDUM OR CHANGE ORDER.

11 BEFORE COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL FURNISH THREE COPIES OF OPERATION AND MAINTENANCE MANUALS COVERING IN DETAIL ALL REQUIRED INSTRUCTIONS FOR THE OPERATION OF THE SYSTEMS PROVIDED.

12. FURNISH ALL LABOR REQUIRED BY THE OWNER'S AGENT, AND OR INSPECTION AGENCIES IN MAKING EXAMINATION OF WORK, DURING THE COURSE OF CONSTRUCTION.

13. THE CONTRACTOR SHALL FURNISH A WRITTEN WARRANTY FOR THIS INSTALLATION, SUBSTANTIALLY STATING THAT ALL MATERIALS, EQUIPMENT, FIXTURES AND APPURTENANCES AND THE SYSTEMS WHICH THEY COMPRISE ARE FREE FROM INHERENT DEFECTS OR FLAWS IN WORKMANSHIP OR OPERATION, AND ARE FUNCTIONING PROPERLY AND CAPABLE OF PROVIDING SATISFACTORY OPERATION IN ACCORDANCE WITH DESIGN CONDITIONS. ANY DEFECTS IN WORKMANSHIP, DEFECTIVE MATERIALS, MALFUNCTION OF EQUIPMENT OR UNSATISFACTORY PERFORMANCE, AND ALL OTHER WORK DAMAGED THEREBY, SHALL BE REPAIRED, REPLACED OR OTHERWISE REMEDIED WITHOUT EXPENSE TO THE OWNER. SUCH REPAIRS OR REPLACEMENTS SHALL BE MADE WITHIN REASONABLE TIME AND AT THE CONVENIENCE OF THE OWNER. SUCH WARRANTY SHALL BE IN EFFECT FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF THE SYSTEMS AS A WHOLE.

14. MATERIAL OR EQUIPMENT SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OR CATALOG NUMBER, ARE DESIGNED TO ESTABLISH STANDARDS OF DESIRED QUALITY, STYLE, PERFORMANCE, ELECTRICAL, MECHANICAL AND PHYSICAL CHARACTERISTICS, AND DIMENSIONS. SUBSTITUTION OF ANY ITEMS SO SPECIFIED WILL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. WHERE THE SUBSTITUTION REQUIRES ANY REDESIGN OR RELOCATION OF THE STRUCTURE, PARTITIONS, PIPING, RACEWAYS, WIRING OR ANY OTHER PART OF THE MECHANICAL, ELECTRICAL, STRUCTURAL OR ARCHITECTURAL WORK, ALL SUCH REDESIGN AND ALL THE NEW DRAWINGS AND DETAILS REQUIRED SHALL BE PREPARED BY THE CONTRACTOR AT HIS OWN EXPENSE AND SUBMITTED FOR THE APPROVAL OF ENGINEER. ALL SUCH ADDITIONAL WORK AND ANY ADDITIONAL EQUIPMENT FOR THESE SYSTEMS SHALL BE PROVIDED AT THE EXPENSE OF THE CONTRACTOR.

15. THE CONTRACTOR SHALL PROVIDE, UPON REQUEST, COPIES OF MATERIAL SAFETY DATA SHEETS FOR ANY MATERIAL OR PRODUCT USED IN THE WORK AND NOT SUPPLIED BY THE OWNER. MSDS SHEETS SHALL BE PROVIDED PRIOR TO DELIVERY OF MATERIALS TO THE JOB SITE.

16. WORKMANSHIP SHALL BE FIRST CLASS IN EVERY RESPECT AND SHALL BE PERFORMED BY TRADESMAN SKILLED IN THE PARTICULAR AREA OF THE WORK AND IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE OR PUBLIC UTILITY LAWS, ORDINANCES OR REGULATIONS.

17. THE CONTRACTOR SHALL EFFECTIVELY PROTECT THE EXISTING BUILDING, ITS CONTENTS AND ALL HIS NEW WORK AGAINST DAMAGE FROM ANY SOURCE RELATED TO THIS CONTRACT UNTIL FINAL COMPLETION AND ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED WORK AT HIS EXPENSE AND TO THE SATISFACTION OF THE OWNER'S AGENT.

18 AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL AND RUBBISH CAUSED BY AGENTS AND EMPLOYEES OF THE CONTRACTOR.

19. THE CONTRACTOR SHALL NOT PERFORM ANY FUNCTIONS WHICH WILL INTERRUPT MECHANICAL OR ELECTRICAL SERVICES WITHOUT PRIOR APPROVAL OF THE OWNER. NECESSARY INTERRUPTIONS SHALL BE REVIEWED, SCHEDULED AND APPROVED BY THE OWNER. DURING PARTIAL OR FULL OCCUPANCY OF THE FACILITY, ALL WORK SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER SO THAT DISRUPTION TO THE AREAS INVOLVED IS KEPT TO A MINIMUM. THE CONTRACTOR SHALL GIVE THE OWNER A MINIMUM OF TWO WEEKS NOTICE OF ANY WORK THAT WILL INTERFERE WITH THE OWNER'S OPERATION SO A SCHEDULE SUITABLE TO THE OWNER CAN BE ARRANGED. ANY ACCIDENTAL INTERRUPTIONS TO SERVICES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.

20. PROVIDE SCAFFOLDING, LADDERS, RIGGING, HOISTING AND ALL OTHER EQUIPMENT REQUIRED FOR THE INSTALLATION OF THE WORK.

21. ESTABLISH PASSAGE CLEARANCES REQUIRED TO DELIVER, INSTALL AND ERECT ALL REQUIRED EQUIPMENT. IF STRUCTURES, EQUIPMENT AND SYSTEMS MUST BE ALTERED TO PROVIDE PASSAGE OF EQUIPMENT, THE CONTRACTOR SHALL RESTORE STRUCTURES, EQUIPMENT AND SYSTEMS TO THEIR ORIGINAL CONDITION, AT THE CONTRACTOR'S EXPENSE.

22. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL MAKE A THOROUGH INSPECTION OF ALL THE ELECTRICAL WORK. AT THE FINAL INSPECTION, ALL SYSTEMS MUST BE 100 PERCENT COMPLETE AND TESTS SHALL BE PERFORMED IN STRICT CONFORMITY WITH EACH EQUIPMENT MANUFACTURER'S STANDARD TEST PROCEDURES AND THE ACCEPTANCE TEST STANDARDS OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION. ALL INSTRUMENTS, METERS, WIRING, PERSONNEL, ETC., REQUIRED FOR TESTING SHALL BE INCLUDED UNDER THIS CONTRACT.

23. AFTER ALL ADJUSTMENTS AND TESTS HAVE BEEN COMPLETED, CLEAN, DUST, WASH AND VACUUM, ETC., ALL PARTS OF INSTALLATION, INCLUDING INTERIORS OF BOXES, CABINETS AND EQUIPMENT ENCLOSURES. CLEAN LIGHTING FIXTURE LENS AND REFLECTORS WITH ANTI-STATIC DETERGENT TO ENSURE RATED OUTPUT.

24. PROVIDE SERVICES OF MANUFACTURER'S FACTORY ENGINEERS TO SUPERVISE INSTALLATION, FINAL CONNECTIONS AND TESTING. PROVIDE SERVICES OF FACTORY ENGINEERS OR REPRESENTATIVES WHO WILL GIVE FULL INSTRUCTIONS AND DEMONSTRATIONS IN THE OPERATION AND MAINTENANCE OF ALL THE ELECTRICAL SYSTEMS AND EQUIPMENT INSTALLED TO THE DESIGNATED REPRESENTATIVE OF THE OWNER.

INSTALLATION PROCEDURE:

1. THIS CONTRACTOR'S WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: FURNISHING AND INSTALLATION OF ALL ELECTRICAL WORK, INCLUDING ELECTRICAL AND COMMUNICATION OUTLETS IN WALLS AND FLOOR, LIGHTING FIXTURES WITH LAMPS, SWITCHES, EXIT SIGNS, ETC., AND ASSOCIATED BRANCH CIRCUIT WIRING, DISCONNECT SWITCHES, SPECIAL RECEPTACLES, ETC. ALL SPECIAL EQUIPMENT, SUCH AS FANS, AIR CONDITIONING UNITS, VAVs BOXES, COPIERS, ETC., WILL BE FURNISHED BY OTHERS, U.O.N. WHERE EQUIPMENT REQUIRED PERMANENT CONNECTIONS, THESE CONNECTIONS SHALL BE PROVIDED WITH APPROPRIATE DISCONNECTING MEANS.

2. COORDINATE ALL WORK WITH OTHER CONTRACTORS TO ENSURE EFFICIENT FLOW OF WORK. EXAMINE DRAWINGS OF OTHER TRADES AND BECOME FULLY INFORMED AS TO EXTENT OF THE WORK PERFORMED BY OTHER CONTRACTORS AND ITS RELATION TO ELECTRICAL WORK PERFORMED BY THIS CONTRACTOR. THE CONTRACTOR SHALL REMOVE AND RELOCATE HIS WORK AS REQUIRED TO SUIT PROJECT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

3. COORDINATE ALL EQUIPMENT LOCATIONS AND CONDUIT RUNS SUPPLIED AND/OR INSTALLED UNDER THIS PROJECT TO AVOID CONFLICTS OR OBSTRUCTIONS TO OTHER TRADES. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY PULL BOXES, JUNCTION BOXES, AND CONDUIT OFFSETS REQUIRED TO ACCOMPLISH THE ABOVE NOTED COORDINATION AT NO ADDITIONAL COST TO THE OWNER, WHETHER OR NOT INDICATED ON THE PLANS. ALL PULL BOXES SHALL BE INSTALLED WHERE REQUIRED TO FACILITATE PULLS AND AT CODE REQUIRED INTERVALS, AT A MINIMUM.

4. ELECTRICAL CONDUITS RUNS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC TO SHOW INTENT. FIELD VERIFICATION AND COORDINATION WITH OTHER TRADES BY THE ELECTRICAL CONTRACTOR IS REQUIRED TO ENSURE THE FEASIBILITY OF CONDUITS INSTALLATION.

5. FURNISH AND INSTALL ALL NECESSARY CABLE SUPPORT BOXES, PULL BOXES AND CONDUIT SUPPORTS, WHERE NOTED AND AS REQUIRED BY APPLICABLE CODES. ALL LOW TENSION (COMMUNICATIONS, SECURITY, A/V, ETC.) CONDUIT, FIRE ALARM CONDUIT, ETC. WHICH HAVE RUNS IN EXCESS OF 100 FEET IN LENGTH AND/OR CONTAINING BENDS IN EXCESS OF 180 DEGREES SHALL BE PROVIDED WITH A PULLBOX. ALL PULLBOXES SHALL BE LABELED FOR THEIR INTENDED USE. DECALS SHALL BE PROVIDED FOR VOLTAGE LEVEL. FIRE ALARM SYSTEM BOXES SHALL BE PAINTED RED, AND ALL WIRE AND CABLE PROVIDED SHALL BE TAGGED AT ALL BOXES.

6. SURVEY EXISTING SPACE, CLOSETS AND PANELBOARDS TO VERIFY SUITABILITY OF INSTALLATION DESIGN INDICATED, ANY MODIFICATIONS NECESSARY TO COMPLY WITH THE DESIGN INTENT SHALL BE INCLUDED IN BID SUBMITTALS AND SHALL BE HIGHLIGHTED SO THAT CONSIDERATION TO SAME BE GIVEN DURING BID EVALUATION. INCLUDED IN THIS REQUIREMENT, SHALL BE THE EVALUATION OF THE AVAILABILITY OF BRANCH CIRCUIT CAPACITY TO ACCOMMODATE THE NUMBER OF BRANCH CIRCUITS REQUIRED ON THE DESIGN DOCUMENTS. REROUTING OF CIRCUITS TO ALTERNATE PANELS WITHIN THE SAME CLOSET OR AREA, SHALL BE INCLUDED IN BID PROPOSAL. CIRCUIT NUMBERS INDICATED ARE FOR REFERENCE ONLY.

7. UNLESS SPECIFICALLY APPROVED, NO WIRES SHALL BE PULLED IN UNTIL THE CONDUIT SYSTEM IS COMPLETED. NO GREASE OR OIL SHALL BE USED TO FACILITATE THE PULLING OF WIRES. ONLY APPROVED PULLING COMPOUND SHALL BE USED. ALL WIRES SHALL BE CONTINUOUS BETWEEN OUTLET AND OUTLET, OR FROM PANELBOARD TO FIRST OUTLET. JOINTS THAT BECOME NECESSARY IN CIRCUIT WORK SHALL BE MADE WITH APPROVED PRESSURE CONNECTORS. ALL JOINTS SHALL BE COVERED WITH AN INSULATION EQUAL TO THAT ON THE CONDUCTORS.

8. EXACT LOCATION AND MOUNTING HEIGHT OF ALL LIGHTING FIXTURES, SWITCHES, WALL OUTLETS, ETC. SHALL BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS. ANY DEVICE OR OUTLET WHICH IS SHOWN ON THE ARCHITECTURAL DRAWINGS AS EXISTING TO REMAIN, WHICH IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, SHALL BE LEFT AS EXISTING AND RELOCATED TO A HEIGHT AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

9. ALL EXISTING DEVICES (RECEPTACLES, TEL./DATA OUTLETS, SWITCHES, FIRE ALARM SYSTEM DEVICES, ETC.) WHICH ARE LOCATED ON WALL WHICH WILL BE RE-FINISHED (SEE ARCHITECTURAL DRAWINGS), SHALL SHALL BE TEMPORARILY REMOVED AND REINSTALLED TO MATCH NEW SURFACE CONDITIONS. PROVIDE ADDITIONAL CABLING NEEDED TO RELOCATE AS REQUIRED.

10. NO ELECTRICAL CONNECTIONS SHALL BE MADE TO, OR WORK PERFORMED ON, ENERGIZED EQUIPMENT.

11. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE ACCORDING TO VENDOR APPROVED SHOP DRAWINGS.

12. VERIFY ELECTRICAL REQUIREMENTS OF ALL EXISTING AND NEW EQUIPMENT TO BE USED. ALL SPECIAL PURPOSE OUTLETS INDICATED ON PLAN SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION, TO INSURE PROPER WIRING AND COMPATIBILITY WITH ATTACHMENT PLUGS OR JUNCTION BOXES THAT MAY BE FURNISHED AS AN INTEGRAL PART OF THE EQUIPMENT.

13. COORDINATE ALL LOCATIONS AND HEIGHTS OF STUB-UPS AND OUTLETS IN FIELD WITH VENDORS AND/OR FURNITURE MANUFACTURER'S APPROVED SHOP DRAWINGS. ALL RECEPTACLES ARE TO BE ACCESSIBLE.

14. ELECTRICAL CONTRACTOR SHALL VERIFY AVAILABILITY OF EXISTING CIRCUIT BREAKERS AFTER DEMOLITION OF EXISTING CONDITIONS TO MEET NEW REQUIREMENTS, AND REPORT ANY RESULTING DISCREPANCIES TO THE ARCHITECT AND ENGINEER IMMEDIATELY PRIOR TO PROCEEDING WITH WORK.

15. ALL RECEPTACLES SHALL BE ACCESSIBLE BELOW COUNTERS OR BEHIND EQUIPMENT. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF EQUIPMENT RECEPTACLES WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS.

16. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTS FOR ALL EQUIPMENT PER CODE AND SHALL COORDINATE ALL DISCONNECT SWITCH REQUIREMENTS AND LOCATIONS WITH VENDORS APPROVED SHOP DRAWINGS AND FINAL EQUIPMENT LOCATIONS.

17. ELECTRICAL CONTRACTOR SHALL VERIFY PHASE LOAD BALANCING ON POWER PANELS UPON COMPLETION OF THE ELECTRICAL INSTALLATION. INCLUDE RE-DISTRIBUTION OF CIRCUITS WITHIN PANELS TO BALANCE WITHIN A 10% WINDOW (±5%).

18. ALL CONDUIT AND CABLE "HOMERUNS" SHALL CONSIST OF A SINGLE CIRCUIT PER CONDUIT FOR FEEDERS SERVED BY AN OVERCURRENT PROTECTIVE DEVICE (OCPD) IN EXCESS OF 20 AMPERES, SINGLE POLE. WHERE WIRE AND CONDUIT BRANCH CIRCUITS SHARE A CONDUIT HOMERUN, (OCPD LESS THAN OR EQUAL TO 20 AMPERES, 1-POLE) THERE SHALL BE A MAXIMUM OF SIX CIRCUITS COMBINED IN A RACEWAY TO THE PANELBOARD, U.O.N. ALL CONDUCTORS SHALL BE DERATED PER NATIONAL ELECTRIC CODE (LATEST VERSION). COMBINING OF MULTIPLE HOMERUNS (MORE THAN SIX) IN A SINGLE CONDUIT SHALL NOT BE PERMITTED.

19. WHERE WORK IS ONGOING IN ELECTRICAL PANELS, THE COVERS ARE NOT TO BE LEFT OFF UNLESS WORK IS CURRENTLY BEING PERFORMED ON THE PANEL. COVERS SHALL BE REPLACED EACH NIGHT AT THE END OF SHIFT.

ARCHITECT'S AND/OR ENGINEER'S REVIEW:

1. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO START OF ANY WORK. ANY WORK OR EQUIPMENT INSTALLED PRIOR TO REVIEW OF SHOP DRAWINGS AND FOUND TO BE UNACCEPTABLE SHALL BE REMOVED AND MODIFIED AT THE CONTRACTOR'S SOLE EXPENSE INCLUDING ANY RESULTANT SCHEDULING DELAYS EXPERIENCED BY ANY TRADE.

2. THE ARCHITECT AND/OR ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN INTENT OF THE PROJECT AND THE INFORMATION SHOWN ON THE CONTRACT DOCUMENTS. THE ARCHITECT'S AND/OR ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES IS ONLY FOR THE CONVENIENCE OF THE OWNER IN FOLLOWING THE WORK AND DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE ARCHITECT'S AND/OR ENGINEER'S REVIEW SHALL NOT BE CONSTRUED AS A COMPLETE OR DETAILED CHECK OF THE WORK SUBMITTED, NOR SHALL IT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS AND SAMPLES, OR FROM THE NECESSITY OF FURNISHING ANY WORK REQUIRED BY THE CONTRACT DOCUMENTS WHICH MAY HAVE BEEN OMITTED FROM SHOP DRAWING SUBMITTALS.

3. THE REVIEW OF A SEPARATE ITEM SHALL NOT INDICATE REVIEW OF THE COMPLETE ASSEMBLY IN WHICH IT FUNCTIONS. NOTHING IN THE ARCHITECTS'S AND/OR ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES SHALL BE CONSIDERED AS AUTHORIZING:

    A. A DEPARTURE FROM CONTRACT DOCUMENTS OR SPECIFICATIONS, OR,

    B. ADDITIONAL COST TO THE OWNER, OR,

    C. INCREASED TIME FOR COMPLETION OF WORK.

4. NO PART OF THE WORK SHALL BE STARTED IN THE SHOP OR ON-SITE UNTIL THE ARCHITECT AND/OR ENGINEER HAS REVIEWED THE SHOP DRAWINGS AND SAMPLES FOR THAT PORTION OF THE WORK. THEREAFTER, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE INDICATED STATUS OF THE REVIEWED SHOP DRAWING.

5. SAMPLES SHALL BE SUBMITTED FOR REVIEW WHEN REQUESTED BY THE ARCHITECT AND/OR ENGINEER.

6. TWO WEEKS AFTER AWARD OF CONTRACT SUBMIT A SHOP DRAWING LOG FOR REVIEW WITH SUBMITTAL DATES AND TYPE.

RACEWAYS:

1. INSTALL ALL WIRE AND CABLES IN ELECTRICAL METALLIC TUBING UNLESS OTHERWISE SPECIFIED OR INDICATED BY THE DRAWINGS. ELECTRICAL METALLIC TUBING SHALL BE GALVANIZED STEEL IN ACCORDANCE WITH FS WWC 563, ANSI C80.3 AND UL 797. FITTINGS SHALL BE STEEL COMPRESSION TYPE.

2. RIGID GALVANIZED STEEL CONDUIT WITH THREADED FITTINGS SHALL BE USED FOR ALL CONDUIT INSTALLATIONS EXPOSED TO THE WEATHER. RIGID STEEL CONDUIT SHALL BE 6063 ALLOY, T41 TEMPER, CONFORMING TO FS WWC 540, ANSI C80.5 AND UL 6. FITTINGS SHALL BE THREADED TYPE OF STEEL CONSTRUCTION.

3. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR CONNECTION TO MOTORS AND OTHER EQUIPMENT WHICH PRODUCES OR TRANSMITS VIBRATION OR NOISE, UNLESS THE MOTORS OR EQUIPMENT ARE MOUNTED ABOVE SUSPENDED CEILING. PROVIDE SUITABLE GROUNDING JUMPER FOR ALL CONNECTIONS. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE CONSTRUCTED OF SINGLE STRIP, FLEXIBLE, CONTINUOUSLY INTERLOCKED AND DOUBLE-WRAPPED STEEL, GALVANIZED INSIDE AND OUTSIDE AND COATED WITH LIQUID-TIGHT JACKET OF FLEXIBLE POLYVINYL CHLORIDE (PVC). FITTINGS SHALL BE LIQUID-TIGHT COMPRESSION TYPE.

4. FLEXIBLE METALLIC CONDUIT (MIN. 3/4-INCH TRADE SIZE) SHALL BE USED FOR CONNECTION FROM A JUNCTION BOX TO LIGHTING FIXTURES, MOTORS AND SIMILAR EQUIPMENT MOUNTED IN A SUSPENDED CEILING, AS WELL AS FOR CONNECTION TO TRANSFORMERS. FLEXIBLE METAL CONDUIT SHALL BE FORMED FROM CONTINUOUS LENGTH OF SPIRALLY WOUND, INTERLOCKED ZINC-COATED STRIP STEEL CONFORMING TO FS WWC 566 AND UL 1. FITTINGS SHALL BE OF THE THREADLESS, HINGED CLAMP TYPE.

5. RIGID STEEL CONDUIT SHALL BE USED WHERE CONDUIT IS ENCASED IN THE BUILDING'S POURED CONCRETE CONSTRUCTION. RIGID STEEL CONDUIT SHALL BE HOT DIP GALVANIZED CONFORMING TO FS WWC 581, ANSI C80.1 AND UL 6. FITTINGS SHALL BE THREADED TYPE OF GALVANIZED MALLEABLE IRON CONSTRUCTION.

6. MINIMUM SIZE CONDUIT UNLESS OTHERWISE INDICATED SHALL BE 3/4-INCH TRADE SIZE. ALL CONDUITS WHICH ARE TO REMAIN EMPTY SHALL BE PROVIDED WITH A NYLON PULL LINE. CONDUITS SHALL BE INDEPENDENTLY SUPPORTED FROM THE BUILDING STRUCTURE AND SHALL NOT BE ATTACHED TO THE SUPPORT SYSTEMS PROVIDED BY OTHER TRADES UNLESS SPECIFICALLY INDICATED.

7. ALL LOW TENSION CONDUIT FOR DATA, TELEPHONE, SECURITY, A/V, TELEVISION, ETC. SHALL BE 1-1/4" MINIMUM E.M.T. U.O.N. TERMINATE WITH BUSHED OPENING IN HUNG CEILING. EMPTY FLEXIBLE CONDUIT SHALL NOT BE PERMITTED FOR LOW TENSION CABLING UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. ALL LOW TENSION EMPTY CONDUITS SHALL BE PROVIDED WITH DRAG-LINE TO PULL CABLES IN THE FUTURE.

8. ALL WALL MOUNTED TELEPHONE AND COMMUNICATIONS OUTLETS SHALL HAVE THE EMPTY CONDUIT STUBBED AND BUSHED INTO AN ACCESSIBLE AREA IN THE HUNG CEILING.

9. PROVIDE CONDUIT EXPANSION FITTINGS TOGETHER WITH BONDING JUMPER AND SUITABLE SLEEVES WHERE REQUIRED. CONDUIT EXPANSION FITTING SHALL BE INSTALLED IN EACH CONDUIT RUN WHEREVER IT CROSSES AN EXPANSION JOINT IN THE STRUCTURE. THE EXPANSION FITTING SHALL BE INSTALLED ON ONE SIDE OF THE JOINT WITH ITS SLIDING SLEEVE END FLUSH WITH THE JOINT AND WITH A LENGTH OF BONDING JUMPER IN THE EXPANSION JOINT EQUAL TO AT LEAST THREE TIMES THE NORMAL WIDTH OF THE JOINT.

10. ALL CONDUIT FOR LIGHTING AND POWER SYSTEMS SHALL BE MINIMUM 3/4 INCH.

11. TYPE MC CABLE MAY BE UTILIZED FOR BRANCH LIGHTING AND RECEPTACLE CIRCUITRY, WHERE PERMITTED BY CODE AND PROVIDED THAT:

    A. IT IS IN ACCORDANCE WITH BUILDING RULES AND REGULATIONS.

    B. CONTAINS AN INSULATED GROUND WIRE.

    C. CONDUIT IS RUN TO THE FIRST DEVICE FROM THE PANELBOARD.

    D. SPLICE BOXES MOUNTED ADJACENT TO THE ELECTRICAL CLOSET SHALL NOT BE PERMITTED TO CONVERT FROM A CONDUIT HOMERUN TO TYPE MC CABLE.

CONDUCTORS AND CABLES (600 VOLT AND BELOW):

1. WIRE AND CABLES FOR FEEDER AND BRANCH CIRCUITS SHALL BE SINGLE ANNEALED STRANDED COPPER CONDUCTORS WITH CONDUCTIVITY OF NOT LESS THAN 98 PERCENT AT 20 DEGREES C. WIRE AND CABLE SHALL BEAR THE UL LABEL AND SHALL MEET OR EXCEED THE REQUIREMENTS OF IPCEA-NEMA STANDARDS S-19-81 AND ASTM D-1352.

2. WIRE SIZES SHALL GENERALLY BE AS FOLLOWS:

    A. CONTROL AND INTERLOCK WIRING NO. 14 AWG.

    B. BRANCH CIRCUIT AND FEEDER WIRING NO. 12 AWG AND LARGER.

3. WIRE AND CABLE INSULATION SHALL BE AS FOLLOWS:

    A. CONDUCTORS SIZE NO. 14 AWG THROUGH NO. 4/0 AWG SHALL BE 600 VOLT TYPE THWN FOR DRY AND WET LOCATIONS WITH A MAXIMUM OPERATING TEMPERATURE OF 75 DEGREES C.

    B. CONDUCTORS SIZE 250 KCMIL AND LARGER SHALL BE 600 VOLT TYPE THHN/THWN OR XHHW FOR DRY AND WET LOCATIONS WITH A MAXIMUM OPERATING TEMPERATURE OF 90 AND 75 DEGREES C., RESPECTIVELY.

4. FOR CONVENIENCE IN TESTING AND MAINTENANCE ALL SECONDARY CONDUCTORS SHALL BE COLOR-CODED IN ACCORDANCE WITH THE ESTABLISHED BUILDING STANDARD. CONTROL CIRCUIT WIRING SHALL HAVE SEPARATED IDENTIFYING COLORS OR NUMBERS.

5. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID COPPER CONDUCTORS. ALL CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER.

6. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.

    A. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.

    B. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE SPLICED AND TAPPED WITH COLOR-KEYED WROUGHT COPPER COMPRESSION CONNECTORS AS MANUFACTURED BY THOMAS & BETTS. THE MANUFACTURER'S RECOMMENDED TOOLING SHALL BE USED FOR INSTALLATION. LONG BARREL SLEEVES, TWO HOLE LUGS AND "C" TYPE CONNECTORS SHALL BE USED. ALL COMPRESSION CONNECTORS SHALL HAVE AN INSPECTION WINDOW BETWEEN THE TANG AND THE BARREL. SPLICE AND TAP CONNECTORS SHALL BE COMPATIBLE WITH CONDUCTOR MATERIAL.

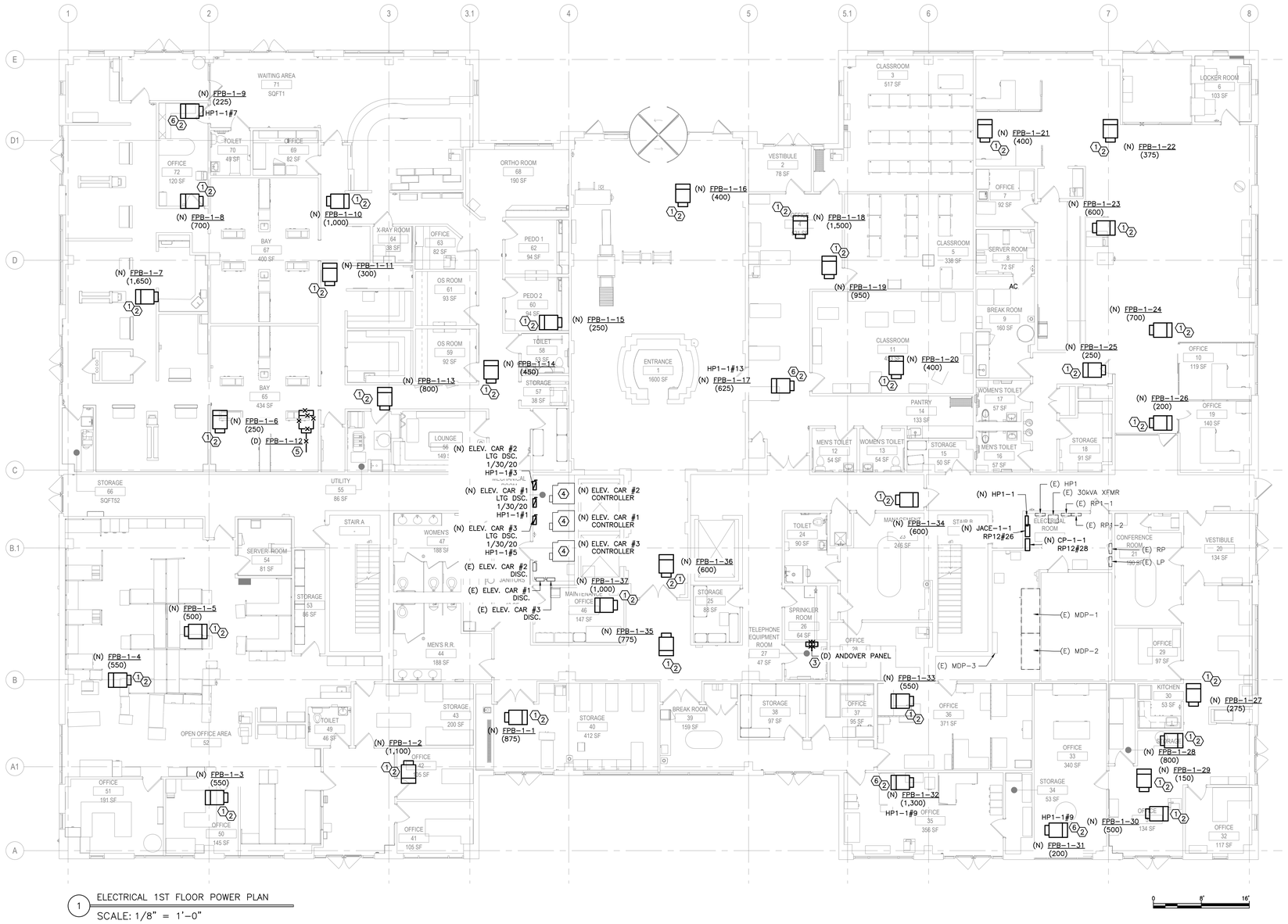
7. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

8. PROVIDE A SEPARATE "GREEN" INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS.

9. ALL 15A OR 20A, SINGLE POLE, 120 VOLT OR 208 VOLT BRANCH CIRCUIT RUNS IN EXCESS OF 100 FEET FROM THE PANEL TO THE DEVICE SHALL BE PROVIDED WITH #10 AWG MINIMUM WIRE FOR ITS ENTIRE LENGTH.

10. PROVIDE A #10 AWG NEUTRAL FOR ALL 15A OR 20A CIRCUITS WHERE EITHER TWO OR THREE PHASES SHARE A SINGLE CONDUCTOR NEUTRAL.

11. ALL CABLING FURNISHED FOR INSTALLATION EXPOSED (NOT IN AN EN



1 ELECTRICAL 1ST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"

LEGEND:

- (E) EXISTING EQUIPMENT TO REMAIN
- (R) EXISTING EQUIPMENT, CONDUIT, AND WIRING TO BE RELOCATED
- (D) EXISTING EQUIPMENT, WIRING, AND CONDUIT TO BE REMOVED
- (N) NEW EQUIPMENT, WIRING, AND CONDUIT

PANEL DESIGNATION

HP1#1 — CIRCUIT NUMBER(S); PANEL DESIGNATION – EXISTING PANEL "HP-1" (480/277V)

RP12#1 — CIRCUIT NUMBER(S); PANEL DESIGNATION – EXISTING PANEL "RP1-2" (208/120V)

GENERAL POWER DEMOLITION NOTES:

1. ALL WORK SHALL BE COORDINATED WITH OWNER. ANY POWER SHUTDOWNS SHALL BE COORDINATED WITH OWNER IN ADVANCE.
2. ALL CONDUITS, CABLING, PULL BOXES, SUPPORTS, ETC. ASSOCIATED WITH EQUIPMENT SHOWN TO BE DEMOLISHED ON PLAN SHALL BE DISCONNECTED AND REMOVED BACK TO SOURCE. REFER TO E60000 DRAWING SERIES FOR ELECTRICAL SINGLE LINE DIAGRAM.
3. ELECTRICAL CONTRACTOR SHALL FURNISH ALL LABOR REQUIRED FOR DEMOLITION OF EXISTING ELECTRICAL INSTALLATION AS DESCRIBED BELOW:
   A. MINIMIZE THE DISRUPTION OF OPERATION OF EXISTING FACILITY.
   B. REMOVE ALL EXISTING FLOOR BOXES, RECEPTACLES, JUNCTION BOXES, PULL BOXES, SUPPORTS, ETC. NO LONGER REQUIRED.
   C. DISCONNECT AND REMOVE CONDUITS AND CABLES DIRECTLY AFFECTED BY DEMOLITION OF DEVICES TO NEAREST JUNCTION BOX OR BACK TO SOURCE WHERE THERE IS NO ACTIVE DEVICE CONNECTED TO THAT CIRCUIT/LOOP AS REQUIRED, U.O.N.
5. AT THE COMPLETION OF WORK ALL RUBBISH, DEBRIS AND WASTE MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND THE PREMISES SHALL BE LEFT IN CLEAN CONDITION.
6. ALL WALL/FLOOR OPENINGS IN AREAS OF DEMOLITION SHALL BE PROPERLY SEALED AS REQUIRED. FIRE SEALANT SHALL MATCH WALL/FLOOR RATING.
7. REFER TO ARCHITECTURAL, MECHANICAL, AND OTHER TRADES DRAWINGS. COORDINATE AND PERFORM POWER DEMOLITION SCOPE OF WORK ASSOCIATED WITH OTHER TRADES DRAWINGS AS REQUIRED.
8. CONTRACTOR SHALL ATTEND SITE WALK-THROUGH PRIOR TO BID TO CAPTURE COMPLETE DEMOLITION SCOPE INCLUDING DEVICE QUANTITIES. NO CHANGE ORDER WILL BE ACCEPTED FOR ANY EQUIPMENT OR DEVICES WHICH REQUIRE DEMOLITION BUT ARE NOT SHOWN ON THESE PLANS.
9. PRIOR TO REMOVING ANY MATERIAL OR EQUIPMENT FROM THE SITE, CONSULT WITH OWNER, TO VERIFY IF OWNER WANTS TO RETAIN THE ITEM TO BE REMOVED. OWNER SHALL AT ALL TIMES RETAIN THE OPTION OF KEEPING ANY ITEM REMOVED. DELIVER THE ITEM TO A LOCATION DESIGNATED BY THE OWNER.
10. ANY EXISTING EQUIPMENT DAMAGED DURING DEMOLITION SHALL BE REPAIRED AND/OR RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE TO THE SATISFACTION AND APPROVAL OF THE OWNER.

GENERAL POWER NOTES:

1. COORDINATE ALL WORK AFFECTING INFRASTRUCTURE SERVING CRITICAL LOADS IN THE FACILITY INCLUDING DEMOLITION, SHUTDOWNS, PANELBOARD REPLACEMENTS, FEEDER REMOVALS AND TERMINATIONS, TESTING, ETC. WITH THE OWNER. NO WORK SHALL BE PERFORMED WITHOUT THE OWNER'S APPROVAL.
2. PERFORM ALL WORK ASSOCIATED WITH EQUIPMENT SHUTDOWNS DURING NON-BUSINESS HOURS, UNLESS OTHERWISE DIRECTED BY THE OWNER.
3. PREPARE DETAILED METHOD-OF-PROCEDURES (MOP'S) FOR ALL TASKS AFFECTING CRITICAL POWER DISTRIBUTION IN THE FACILITY. MOPs SHALL INCLUDE STEP-BY-STEP SCOPE OF WORK TASKS WITH RELATED INFORMATION INCLUDING PREREQUISITES, TASK DURATIONS, RESPONSIBLE PARTIES, ETC. MOP'S SHALL BE SUBMITTED FOR THE OWNER'S APPROVAL PRIOR TO COMMENCEMENT OF ANY WORK RELATED TO ITEMS LISTED ABOVE. NO WORK SHALL BE PERFORMED UNLESS THE MOP'S HAVE BEEN APPROVED BY ALL PARTIES.
4. WHERE ELECTRICAL WORK IS NOT SHOWN, EXISTING ELECTRICAL EQUIPMENT, OUTLETS, WIRING DEVICES AND ASSOCIATED BRANCH CIRCUITING TO REMAIN IN THAT AREA.
5. CIRCUITS ARE DESIGNATED BY THE NUMBER SHOWN ADJACENT TO EACH RECEPTACLE, EQUIPMENT, OR JUNCTION BOX. WIRING IS SHOWN ONLY UNDER SPECIAL CIRCUMSTANCES. PROVIDE ALL CONDUIT, WIRES AND BOXES AS REQUIRED TO ENERGIZE THE EQUIPMENT AS SHOWN.
6. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL MATERIALS, METAL STRUCTURES, ACCESSORIES, HARDWARE, ETC. NEEDED TO MOUNT AND SECURE ELECTRICAL EQUIPMENT.
7. ALL SINGLE PHASE 20A BRANCH CIRCUITS SHALL CONSIST OF 2#12, 1#12G., IN 3/4"C., UNLESS OTHERWISE NOTED. UTILIZE #10 GAUGE WIRE FOR BRANCH CIRCUITS EXCEEDING OF 100' LENGTH OF RUN FROM SOURCE.
8. ALL RECEPTACLE ELEVATION SHALL BE 18" A.F.F. UNLESS OTHERWISE NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. ALL MECHANICAL EQUIPMENT SHOWN ON PLAN SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND ENERGIZED BY ELECTRICAL CONTRACTOR. COORDINATE POWER REQUIREMENTS AND LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
10. ALL STUB UP LOCATIONS INTO ELECTRICAL EQUIPMENT SHALL BE COORDINATED IN FIELD WITH EQUIPMENT VENDORS.
11. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF ALL NEW EQUIPMENT WITH EXISTING INSTALLATIONS.
12. REMOVE AND RELOCATE EXISTING CONDUITS, DUCTS, LIGHT FIXTURES, ETC. IN CONFLICT WITH NEW EQUIPMENT LOCATIONS.
13. WHERE MORE THAN THREE CURRENT CARRYING CONDUCTORS ARE INSTALLED IN THE SAME CONDUIT, DE-RATING SHALL BE APPLIED PER NEC.
14. REFER TO E60000 DRAWING SERIES FOR SINGLE LINE DIAGRAMS.
15. UPDATE PANEL DIRECTORIES OF ALL EXISTING PANELBOARDS AFFECTED UNDER THE PROJECT'S SCOPE OF WORK.

KEY NOTES:

1. EXISTING HVAC EQUIPMENT TO BE REMOVED AND REPLACED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO DISCONNECT AND SAFE-OFF EXISTING CONDUIT AND WIRING TO POWER NEW EQUIPMENT IN SAME LOCATION. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED.
2. ELECTRICAL CONTRACTOR TO TRACE EXISTING CONDUIT AND WIRING AND VERIFY SOURCE PRIOR TO INSTALLATION OF NEW EQUIPMENT. UPDATE PANEL DIRECTORIES OF ALL EXISTING PANELBOARDS AFFECTED AFTER INSTALLATION OF NEW EQUIPMENT.
3. EXISTING CONTROL PANEL TO BE DEMOLISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRING ASSOCIATED WITH EQUIPMENT BACK TO SOURCE.
4. EXISTING ELEVATOR EQUIPMENT AND CAR TO BE MODERNIZED BY OTHERS. ELECTRICAL CONTRACTOR TO DISCONNECT AND SAFE-OFF EXISTING CONDUIT AND WIRING TO POWER NEW EQUIPMENT IN SAME LOCATION. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED.
5. EXISTING HVAC EQUIPMENT TO BE DEMOLISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO DISCONNECT AND REMOVE CONDUIT AND WIRING ENTIRELY BACK TO SOURCE.
6. EXISTING HVAC EQUIPMENT TO BE REMOVED AND REPLACED BY MECHANICAL CONTRACTOR. VERIFY VOLTAGE AND SOURCE OF EXISTING CIRCUIT SERVING UNIT. IF THE CIRCUIT IS 277V, THE CIRCUIT MAY BE RE-UTILIZED. IN THE EVENT THE CIRCUIT IS NOT 277V ELECTRICAL CONTRACTOR TO DISCONNECT AND REMOVE CONDUIT AND WIRING ENTIRELY BACK TO SOURCE. PROVIDE NEW ELECTRICAL CIRCUIT FROM NEW SOURCE AS NOTED.

(E) HP1 — 480/277 V 3-PHASE, 4-WIRE — BUS SIZE: 300A — MAIN: 300A MLO — NEUT: 100% — SC RATING: 10KAIC — LOCATION: ELECTRICAL ROOM 22 — MOUNTING:

	CIRCUIT BREAKER POLES	CIRCUIT BREAKER TRIP	LOAD DESCRIPTION	Load Type	LOAD (VA)	LOAD PER PHASE PHASE A	PHASE B	PHASE C	LOAD (VA)	Load Type	LOAD DESCRIPTION	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER POLES	CKT NO
1	1	20	LIGHTING STAIRWELLS								LIGHTING ROOM 108, 108A	20	1	2
3	1	20	CORRIDOR AND OFFICE LIGHTS								REVOLVING DOOR	20	1	4
5	1	20	LOBBY LIGHTS								REHEAT VAV ENTRANCE	25	1	6
7	1	20	LOBBY LIGHTS								VAV FB-H + FB-G	50	1	8
9	1	20	LOBBY LIGHTS								EXISTING	50	1	10
11	1	20	VAV								WC	40	1	12
13	1	20	ALDEN GROUP LIGHTING								WC	50	1	14
15	1	20	VESTIBULE HEATER								WC	50	1	16
17	1	20	WC LIGHTING								WC	50	1	18
19														20
21	3	40	30kVA XFMR								EXISTING	30	1	22
23														24
25	1	30	COFFEE SHOP VAV											26
27	1		SPACE								EXISTING	30	1	28
29	1		SPACE											30
31	1		SPACE								ALDEN GROUP VAV	50	1	32
33	1	20	WALL HEATER WEST WALL								WATER HEATER	20	2	34
35	1	20	WALL HEATER EAST WALL											36
37														38
39	3	40	RP1-1								*** HP1-1**	**100**	**3**	40
41														42
TOTAL NEW CONNECTED LOAD:					**0.00**	**kVA**								
TOTAL DEMAND LOAD:					**0**	**kVA**								

(N) HP1-1 — 480/277 V 3-PHASE, 4-WIRE — BUS SIZE: 100A — MAIN: 100A MLO — NEUT: 100% — SC RATING: 35KAIC — LOCATION: ELECTRICAL ROOM 22 — MOUNTING:

	CIRCUIT BREAKER POLES	CIRCUIT BREAKER TRIP	LOAD DESCRIPTION	Load Type	LOAD (VA)	LOAD PER PHASE PHASE A	PHASE B	PHASE C	LOAD (VA)	Load Type	LOAD DESCRIPTION	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER POLES	CKT NO
1	1	20	**ELEV CAR 1 LTG DSC**								Spare	20	1	2
3	1	20	**ELEV CAR 2 LTG DSC**								Spare	20	1	4
5	1	20	**ELEV CAR 3 LTG DSC**								Spare	20	1	6
7	1	20	**FPB-1-9**								Spare	20	1	8
9	1	20	**FPB-1-32**								Spare	20	1	10
11	1	20	**FPB-1-31**								Spare	20	1	12
13	1	20	**FPB-1-17**								Spare	20	1	14
15	1	20	Spare								Spare	20	1	16
17	1	20	Spare								Spare	20	1	18
19	1	20	Spare								Spare	20	1	20
21	1	20	Spare								Spare	20	1	22
23	1	20	Spare								Spare	20	1	24
25	1	20	Spare								Spare	20	1	26
27	1	20	Spare								Spare	20	1	28
29	1	20	Spare								Spare	20	1	30
31	1	20	Spare								Spare	20	1	32
33	1	20	Spare								Spare	20	1	34
35	1	20	Spare								Spare	20	1	36
37	1	20	Spare								Spare	20	1	38
39	1	20	Spare								Spare	20	1	40
41	1	20	Spare								Spare	20	1	42
TOTAL NEW CONNECTED LOAD:					**0.00**	**kVA**								
TOTAL DEMAND LOAD:					**0**	**kVA**								

(E) RP1-2 — 120/208V 3-PHASE, 4-WIRE — BUS SIZE: 100A — MAIN: 100A MLO — NEUT: 100% — SC RATING: KAIC — LOCATION: — MOUNTING:

	CIRCUIT BREAKER POLES	CIRCUIT BREAKER TRIP	LOAD DESCRIPTION	Load Type	LOAD (VA)	LOAD PER PHASE PHASE A	PHASE B	PHASE C	LOAD (VA)	Load Type	LOAD DESCRIPTION	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER POLES	CKT NO
1	1	20	EXISTING								EXISTING	20	1	2
3	1	20	EXISTING								EXISTING	20	1	4
5	1	20	EXISTING								EXISTING	20	1	6
7	1	20	EXISTING								EXISTING	20	1	8
9	1	20	EXISTING								EXISTING	20	1	10
11	1	20	EXISTING								EXISTING	20	1	12
13	1	20	EXISTING								EXISTING	20	1	14
15	1	20	EXISTING								EXISTING	20	1	16
17	1	20	EXISTING								EXISTING	20	1	18
19	1	20	EXISTING								EXISTING	20	1	20
21	1	20	EXISTING								EXISTING	20	1	22
23	1	20	EXISTING								EXISTING	20	1	24
25	1	20	EXISTING								*** JACE-1-1**	**20**	**1**	**26**
27	1	20	EXISTING								*** CP-1-1**	**20**	**1**	**28**
29	1	20	EXISTING								SPACE			30
TOTAL NEW CONNECTED LOAD:					**0.00**	**kVA**								
TOTAL DEMAND LOAD:					**0**	**kVA**								

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200 WEST 2ND STREET
PLAINFIELD, NJ

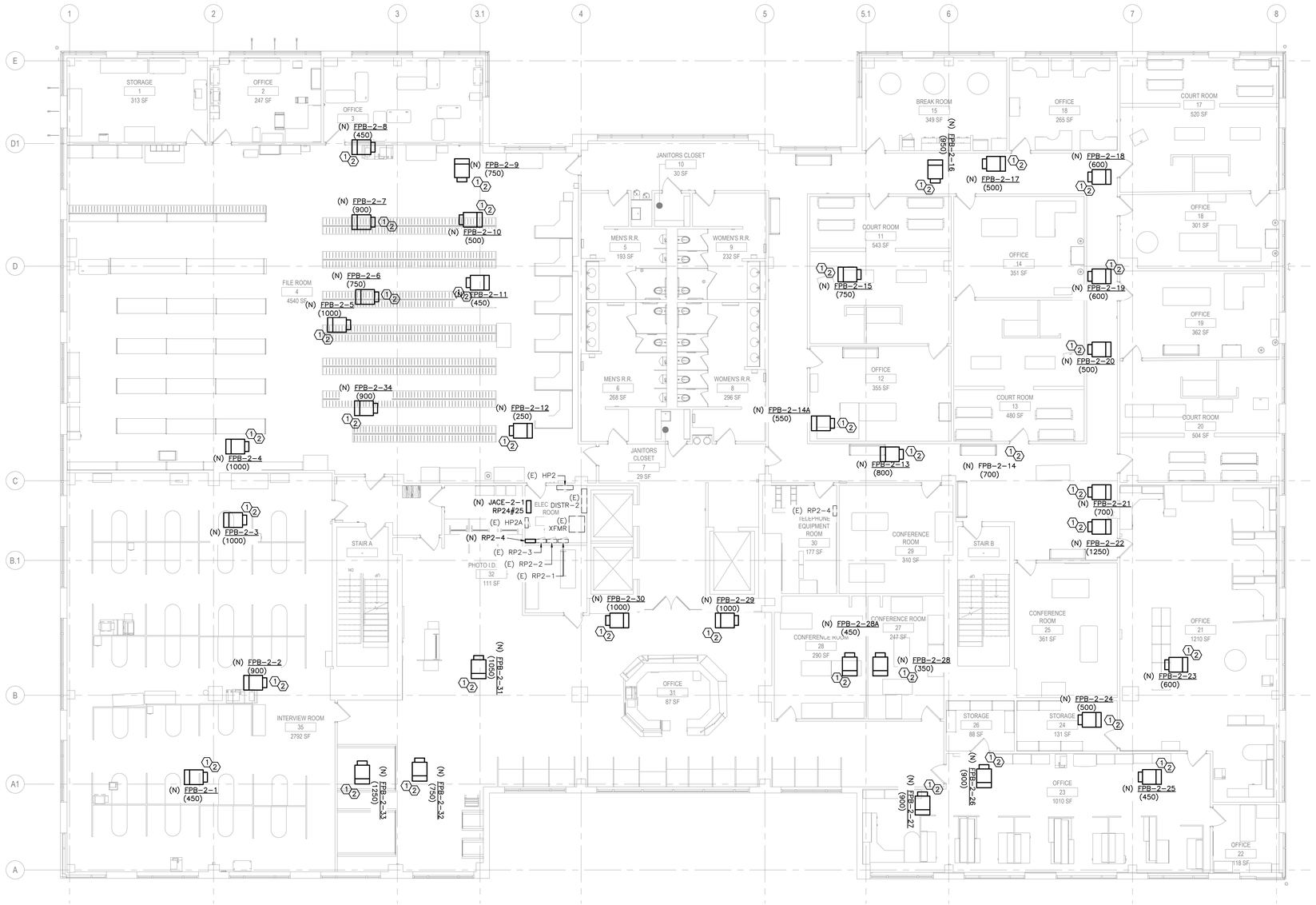
PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE
ELECTRICAL
1ST FLOOR
POWER PLAN

CHECKED BY: LL DRAWN BY: CM

DRAWING No.
E-101



2 ELECTRICAL 2ND FLOOR POWER PLAN

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

LEGEND:

- (E) EXISTING EQUIPMENT TO REMAIN
- (R) EXISTING EQUIPMENT, CONDUIT, AND WIRING TO BE RELOCATED
- (D) EXISTING EQUIPMENT, WIRING AND CONDUIT TO BE REMOVED
- (N) NEW EQUIPMENT, WIRING, AND CONDUIT

PANEL DESIGNATION

-#1 — CIRCUIT NUMBER(S); PANEL DESIGNATION – EXISTING PANEL '–' (480/277V)

RP24#1 — CIRCUIT NUMBER(S); PANEL DESIGNATION – EXISTING PANEL 'RP2-4' (208/120V)

GENERAL POWER DEMOLITION NOTES:

1. REFER TO E-101D FOR GENERAL POWER DEMOLITION NOTES.

GENERAL POWER NOTES:

1. REFER TO E-101 FOR GENERAL POWER NOTES.

KEY NOTES:

1. EXISTING HVAC EQUIPMENT TO BE REMOVED AND REPLACED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO DISCONNECT AND SAFE-OFF EXISTING CONDUIT AND WIRING TO POWER NEW EQUIPMENT IN SAME LOCATION. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED.
2. ELECTRICAL CONTRACTOR TO TRACE EXISTING CONDUIT AND WIRING AND VERIFY SOURCE PRIOR TO INSTALLATION OF NEW EQUIPMENT. UPDATE PANEL DIRECTORIES OF ALL EXISTING PANELBOARDS AFFECTED AFTER INSTALLATION OF NEW EQUIPMENT.

PANEL DESIGNATION: **(E) RP2-4**			VOLTAGE: 120/208V 3-PHASE, 4-WIRE	BUS SIZE: 150A	MAIN: 150A MLO	NEUT: 100%	SC RATING: KAIC		LOCATION:	MOUNTING:		
	CIRCUIT BREAKER		LOAD DESCRIPTION	Load Type	LOAD (VA)	LOAD PER PHASE			LOAD (VA)	Load Type	LOAD DESCRIPTION	CIRCUIT BREAKER		CKT NO
	POLES	TRIP				PHASE A	PHASE B	PHASE C				TRIP	POLES	
1	1	20	EXISTING								EXISTING	20	1	2
3	1	20	EXISTING								EXISTING	20	1	4
5	1	20	EXISTING								EXISTING	20	1	6
7	1	20	EXISTING								EXISTING	20	1	8
9	1	20	EXISTING								EXISTING	20	1	10
11	1	20	EXISTING								EXISTING	20	1	12
13	1	20	EXISTING								EXISTING	20	1	14
15	1	20	EXISTING								EXISTING	20	1	16
17	1	20	EXISTING								EXISTING	20	1	18
19	1	20	EXISTING								EXISTING	20	1	20
21	1	20	EXISTING								EXISTING	20	1	22
23	1	20	EXISTING								EXISTING	20	1	24
25	**1**	**20**	*** JACE-2-1**								SPACE			26
27			SPACE								SPACE			28
29			SPACE								SPACE			30
31			SPACE								SPACE			32
33			SPACE								SPACE			34
35			SPACE								SPACE			36
37			SPACE								SPACE			38
39			SPACE								SPACE			40
41			SPACE								SPACE			42
TOTAL NEW CONNECTED LOAD:					**0.00**				**kVA**					
TOTAL DEMAND LOAD:					**0**				**kVA**					

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200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

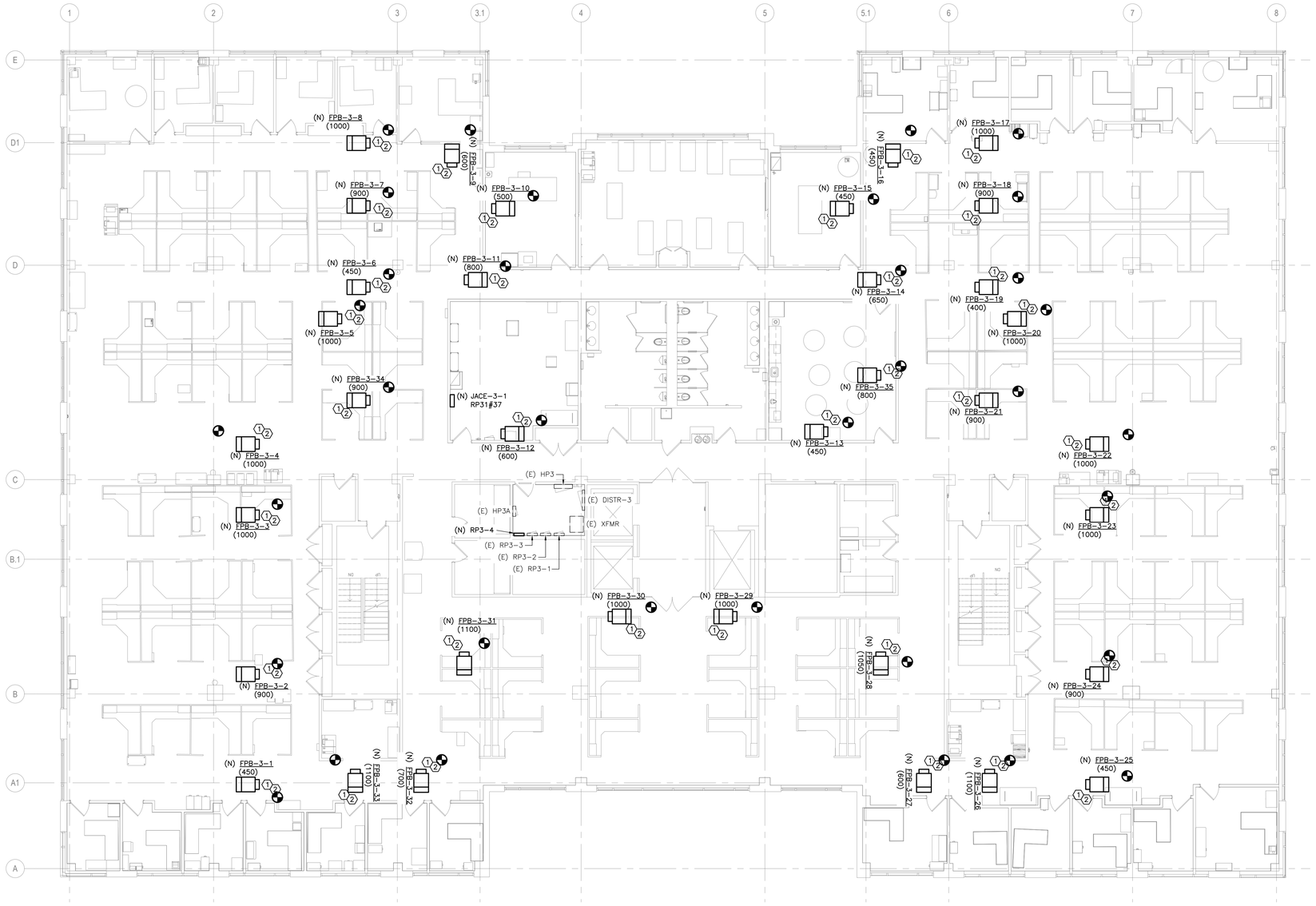
DRAWING TITLE

ELECTRICAL 2ND FLOOR POWER PLAN

CHECKED BY: I.L. DRAWN BY: C.M

DRAWING No.

E-102



3 ELECTRICAL 3RD FLOOR POWER PLAN

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

LEGEND:

- (E) EXISTING EQUIPMENT TO REMAIN
- (R) EXISTING EQUIPMENT, CONDUIT, AND WIRING TO BE RELOCATED
- (D) EXISTING EQUIPMENT, WIRING AND CONDUIT TO BE REMOVED
- (N) NEW EQUIPMENT, WIRING AND CONDUIT

PANEL DESIGNATION

–#1 — CIRCUIT NUMBER(S); PANEL DESIGNATION – EXISTING PANEL '–' (480/277V)

RP31#37 — CIRCUIT NUMBER(S); PANEL DESIGNATION – EXISTING PANEL 'RP3–1' (208/120V)

GENERAL POWER DEMOLITION NOTES:

1. REFER TO E–101 FOR GENERAL POWER DEMOLITION NOTES.

GENERAL POWER NOTES:

1. REFER TO E–101 FOR GENERAL POWER NOTES.

KEY NOTES:

1. EXISTING HVAC EQUIPMENT TO BE REMOVED AND REPLACED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO DISCONNECT AND SAFE–OFF EXISTING CONDUIT AND WIRING TO POWER NEW EQUIPMENT IN SAME LOCATION. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED.
2. ELECTRICAL CONTRACTOR TO TRACE EXISTING CONDUIT AND WIRING AND VERIFY SOURCE PRIOR TO INSTALLATION OF NEW EQUIPMENT. UPDATE PANEL DIRECTORIES OF ALL EXISTING PANELBOARDS AFFECTED AFTER INSTALLATION OF NEW EQUIPMENT.

PANEL DESIGNATION:			VOLTAGE:	BUS SIZE:	MAIN:	NEUT:	SC RATING:			LOCATION:	MOUNTING:		
(E) RP3-1			120/208V 3-PHASE, 4-WIRE	150A	150A MLO	100%	KAIC						
	CIRCUIT BREAKER										CIRCUIT BREAKER		CKT
	POLES	TRIP	LOAD DESCRIPTION	Load Type	LOAD (VA)	PHASE A	PHASE B	PHASE C	LOAD (VA)	Load Type	LOAD DESCRIPTION	TRIP	POLES	NO
1											EXISTING	20	1	2
3	3	20	EXISTING								EXISTING	20	1	4
5											EXISTING	20	1	6
7	1	20	EXISTING								EXISTING	20	1	8
9	1	20	EXISTING								EXISTING	20	1	10
11	1	20	EXISTING								EXISTING	20	1	12
13	1	20	EXISTING								EXISTING	20	1	14
15	1	20	EXISTING								EXISTING	20	1	16
17	2	15	EXISTING								EXISTING	20	1	18
19											EXISTING	20	1	20
21			SPACE								EXISTING	20	1	22
23			SPACE								EXISTING	20	1	24
25			SPACE								EXISTING	20	1	26
27			SPACE								EXISTING	20	1	28
29			SPACE								EXISTING	20	1	30
31			SPACE								EXISTING	20	1	32
33			SPACE								EXISTING	20	1	34
35			SPACE								EXISTING	20	1	36
37	**1**	**20**	*** JACE-3-1**								EXISTING	20	1	38
39	1	20	Spare								SPACE			40
41			SPACE								SPACE			42
TOTAL NEW CONNECTED LOAD:				**0.00**	**kVA**									
TOTAL DEMAND LOAD:				**0**	**kVA**									

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PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

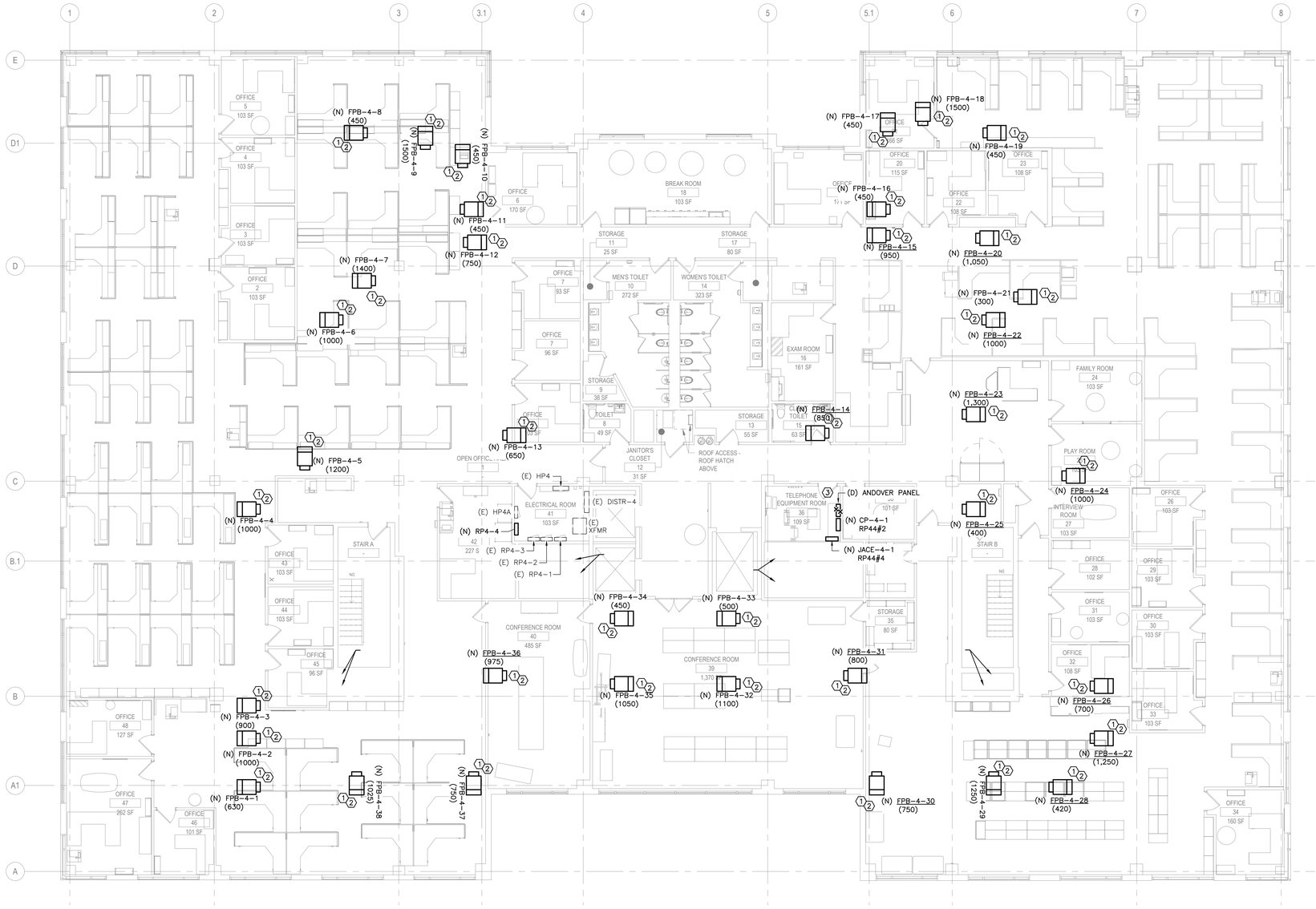
DRAWING TITLE

ELECTRICAL
3RD FLOOR
POWER PLAN

CHECKED BY: L.L. DRAWN BY: C.M

DRAWING No.

E-103



4 ELECTRICAL 4TH FLOOR POWER PLAN

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

0 8' 16'

PANEL DESIGNATION: **(N) RP4-4**			VOLTAGE: 120/208V 3-PHASE, 4-WIRE	BUS SIZE: 150A		MAIN: 150A MLO		NEUT: 100%	SC RATING: 22KAIC			LOCATION:	MOUNTING:		
	CIRCUIT BREAKER		LOAD DESCRIPTION	Load Type	LOAD (VA)	LOAD PER PHASE			LOAD (VA)	Load Type	LOAD DESCRIPTION	CIRCUIT BREAKER		CKT NO
	POLES	TRIP				PHASE A	PHASE B	PHASE C				TRIP	POLES	
1	1	20	**RTU 1 MARINE LTG DSC**								**CP-4-1**	20	1	2
3	1	20	**RTU 2 MARINE LTG DSC**								**JACE-4-1**	20	1	4
5	1	20	**RTU 3 MARINE LTG DSC**								**ROOF CONVENIENCE RECP**	20	1	6
7	1	20	**RTU 4 MARINE LTG DSC**								**ROOF LTG**	20	1	8
9	1	20	Spare								Spare	20	1	10
11	1	20	Spare								Spare	20	1	12
13	1	20	Spare								Spare	20	1	14
15	1	20	Spare								Spare	20	1	16
17	1	20	Spare								Spare	20	1	18
19	1	20	Spare								Spare	20	1	20
21	1	20	Spare								Spare	20	1	22
23	1	20	Spare								Spare	20	1	24
25	1	20	Spare								Spare	20	1	26
27	1	20	Spare								Spare	20	1	28
29	1	20	Spare								Spare	20	1	30
31	1	20	Spare								Spare	20	1	32
33	1	20	Spare								Spare	20	1	34
35	1	20	Spare								Spare	20	1	36
37	1	20	Spare								Spare	20	1	38
39	1	20	Spare								Spare	20	1	40
41	1	20	Spare								Spare	20	1	42
TOTAL NEW CONNECTED LOAD:					**0.00**	**kVA**								
TOTAL DEMAND LOAD:					**0**	**kVA**								

LEGEND:

- (E) EXISTING EQUIPMENT TO REMAIN
- (R) EXISTING EQUIPMENT, CONDUIT, AND WIRING TO BE RELOCATED
- (D) EXISTING EQUIPMENT, WIRING AND CONDUIT TO BE REMOVED
- (N) NEW EQUIPMENT, WIRING AND CONDUIT

PANEL DESIGNATION

-#1
- CIRCUIT NUMBER(S)
- PANEL DESIGNATION – EXISTING PANEL '–' (480/277V)

RP44#1
- CIRCUIT NUMBER(S)
- PANEL DESIGNATION – NEW PANEL 'RP4–4' (208/120V)

GENERAL POWER DEMOLITION NOTES:

1. REFER TO E–101 FOR GENERAL POWER DEMOLITION NOTES.

GENERAL POWER NOTES:

1. REFER TO E–101 FOR GENERAL POWER NOTES.

KEY NOTES:

1. EXISTING HVAC EQUIPMENT TO BE REMOVED AND REPLACED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO DISCONNECT AND SAFE–OFF EXISTING CONDUIT AND WIRING TO POWER NEW EQUIPMENT IN SAME LOCATION. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED.
2. ELECTRICAL CONTRACTOR TO TRACE EXISTING CONDUIT AND WIRING AND VERIFY SOURCE PRIOR TO INSTALLATION OF NEW EQUIPMENT. UPDATE PANEL DIRECTORIES OF ALL EXISTING PANELBOARDS AFFECTED AFTER INSTALLATION OF NEW EQUIPMENT.
3. EXISTING CONTROL PANEL TO BE DEMOLISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRING ASSOCIATED WITH EQUIPMENT BACK TO SOURCE.

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PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
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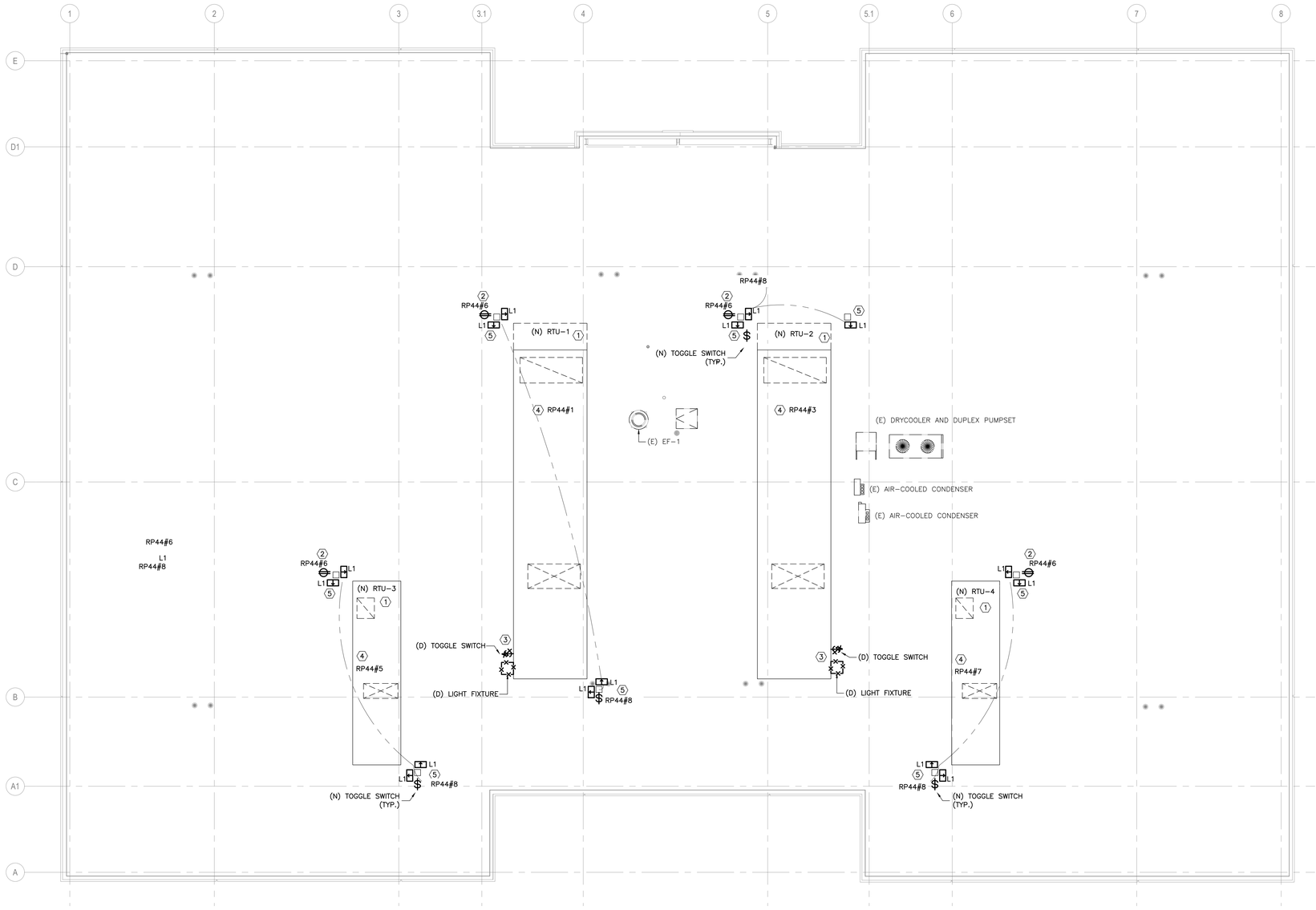
DRAWING TITLE

ELECTRICAL
4TH FLOOR
POWER PLAN

CHECKED BY: L.L. DRAWN BY: C.M.

DRAWING No.

E-104



1 ELECTRICAL ROOF POWER PLAN

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

LEGEND:

- (E) EXISTING EQUIPMENT TO REMAIN
- (R) EXISTING EQUIPMENT, CONDUIT, AND WIRING TO BE RELOCATED
- (D) EXISTING EQUIPMENT, WIRING AND CONDUIT TO BE REMOVED
- (N) NEW EQUIPMENT, WIRING, AND CONDUIT

PANEL DESIGNATION

-#1
- CIRCUIT NUMBER(S)
- PANEL DESIGNATION – EXISTING PANEL "-" (480/277V)

RP44#1
- CIRCUIT NUMBER(S)
- PANEL DESIGNATION – NEW PANEL "RP44" (208/120V) REFER TO E-104 FOR PANEL LOCATION.

GENERAL POWER DEMOLITION NOTES:

1. REFER TO E-101D FOR GENERAL POWER DEMOLITION NOTES.

GENERAL POWER NOTES:

1. REFER TO E-101 FOR GENERAL POWER NOTES.

KEY NOTES:

(1) EXISTING EQUIPMENT TO BE DEMOLISHED AND REPLACED BY MECHANICAL CONTRACTOR. REFER TO E-601 FOR ADDITIONAL INFORMATION.

(2) PROVIDE NEW GFCI CONVENIENCE RECEPTACLE ALONG WITH WEATHERPROOF COVER. COVER SHALL BE NEMA 3R RATED. RECEPTACLE TO BE MOUNTED TO STRUT.

(3) EXISTING LIGHT FIXTURES AND TOGGLE SWITCHES ALONG WITH ASSOCIATED CONDUIT AND WIRING TO BE DISCONNECTED AND REMOVED BACK TO SOURCE.

(4) PROVIDE NEW CIRCUIT TO POWER LIGHTING INTERNAL TO RTU. VERIFY LOCATION OF LIGHTING DISCONNECT ON FIELD. REFER TO PANEL SCHEDULES ON E-104 FOR ADDITIONAL INFORMATION.

(5) SPROVIDE NEW 9' STRUT TO MOUNT NEW LIGHT FIXTURE AND TOGGLE SWITCH. PROVIDE ALL HARDWARE AND SUPPORTS NECESSARY TO INSTALL AND MOUNT LIGHT FIXTURES TO STRUT.

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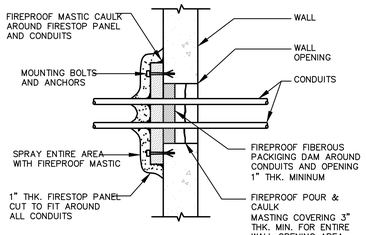
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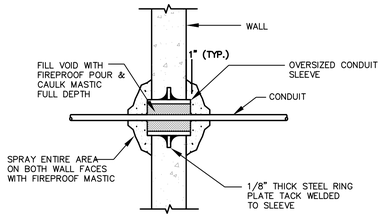
DRAWING TITLE
ELECTRICAL ROOF PLAN

CHECKED BY: I.I. DRAWN BY: C.M.

DRAWING No.
E-1R1



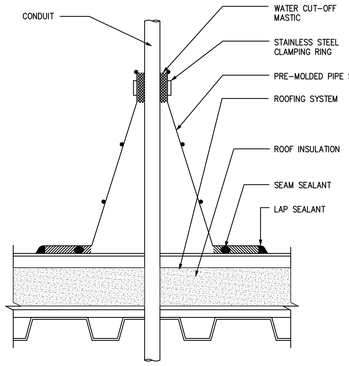
TYPICAL THRU WALL MULTIPLE CONDUIT INSTALLATION



TYPICAL THRU WALL SINGLE CONDUIT INSTALLATION

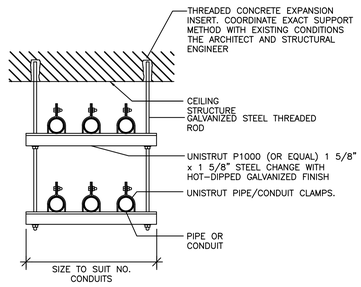
1 THRU WALL CONDUIT INSTALLATION

SCALE: NONE



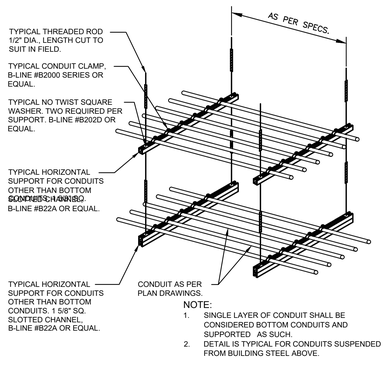
2 CONDUIT ROOF PENETRATION

SCALE: NONE



3 CEILING MOUNTED CONDUIT SUPPORT

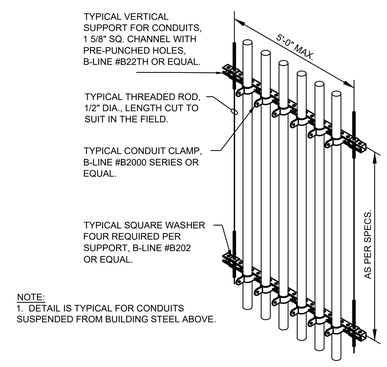
SCALE: NONE



NOTE:
1. SINGLE LAYER OF CONDUIT SHALL BE CONSIDERED BOTTOM CONDUITS AND SUPPORTED AS SUCH.
2. DETAIL IS TYPICAL FOR CONDUITS SUSPENDED FROM BUILDING STEEL ABOVE.

4 HORIZONTAL CONDUIT SUPPORT DETAIL

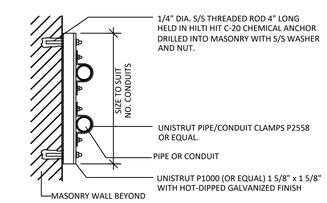
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NOTE:
1. DETAIL IS TYPICAL FOR CONDUITS SUSPENDED FROM BUILDING STEEL ABOVE.

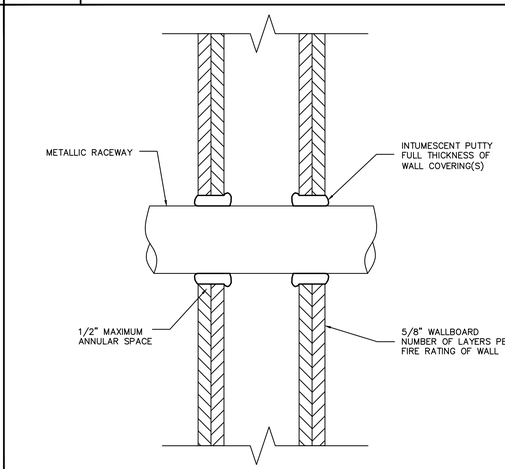
5 VERTICAL CONDUIT SUPPORT

SCALE: NONE



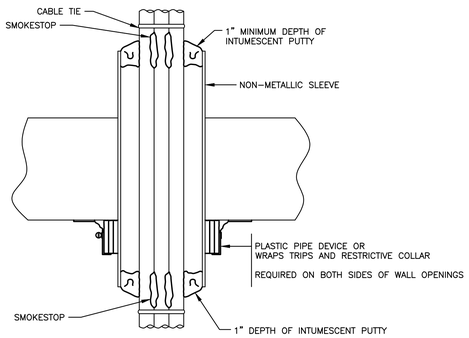
6 WALL MOUNTED CONDUIT SUPPORT

SCALE: NONE



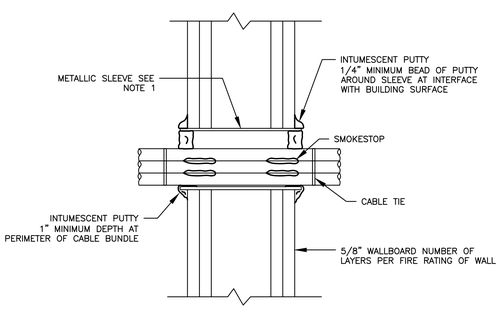
7 FIRE STOPPING METALLIC PIPE IN HOLLOW WALL

SCALE: NONE



8 FIRE STOPPING SEAL FOR CABLE PENETRATION IN HOLLOW WALL WITH NON-METALLIC SLEEVE

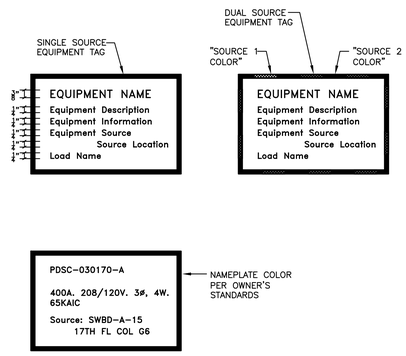
SCALE: NONE



NOTE
1. SLEEVE TO BE 4" MAXIMUM DIAMETER EMT OR NO.28 GAUGE GALVANIZED SHEET STEEL SLEEVE TO EXTEND 1/2" MINIMUM BEYOND WALL SURFACES. SHEET STEEL TO HAVE 2" MINIMUM OVERLAP ALONG ITS LONGITUDINAL LENGTH AND BE EQUIPPED WITH CABLE PROTECTION SUCH AS SLIT FLEXIBLE TUBING AT BOTH ENDS

9 FIRE STOPPING SEAL FOR CABLE PENETRATION IN HOLLOW WALL

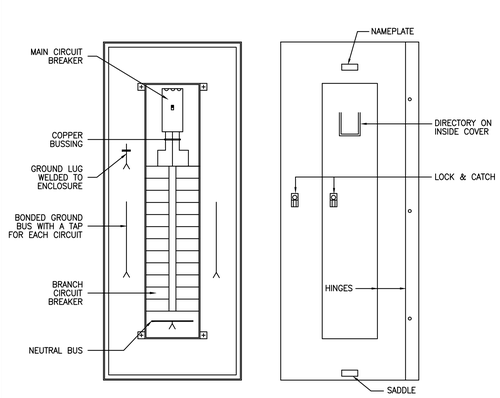
SCALE: NONE



NOTE:
1. NAMEPLATES SHALL BE ATTACHED USING SELF-TAPPING STAINLESS STEEL SCREWS.

5 EQUIPMENT NAMEPLATES - EXAMPLE

SCALE: NONE



6 TYPICAL PANEL INTERIOR, TRIM AND DOOR FOR 120/208V & 277/460V CIRCUIT BREAKER PANELS DIAGRAM

SCALE: NONE

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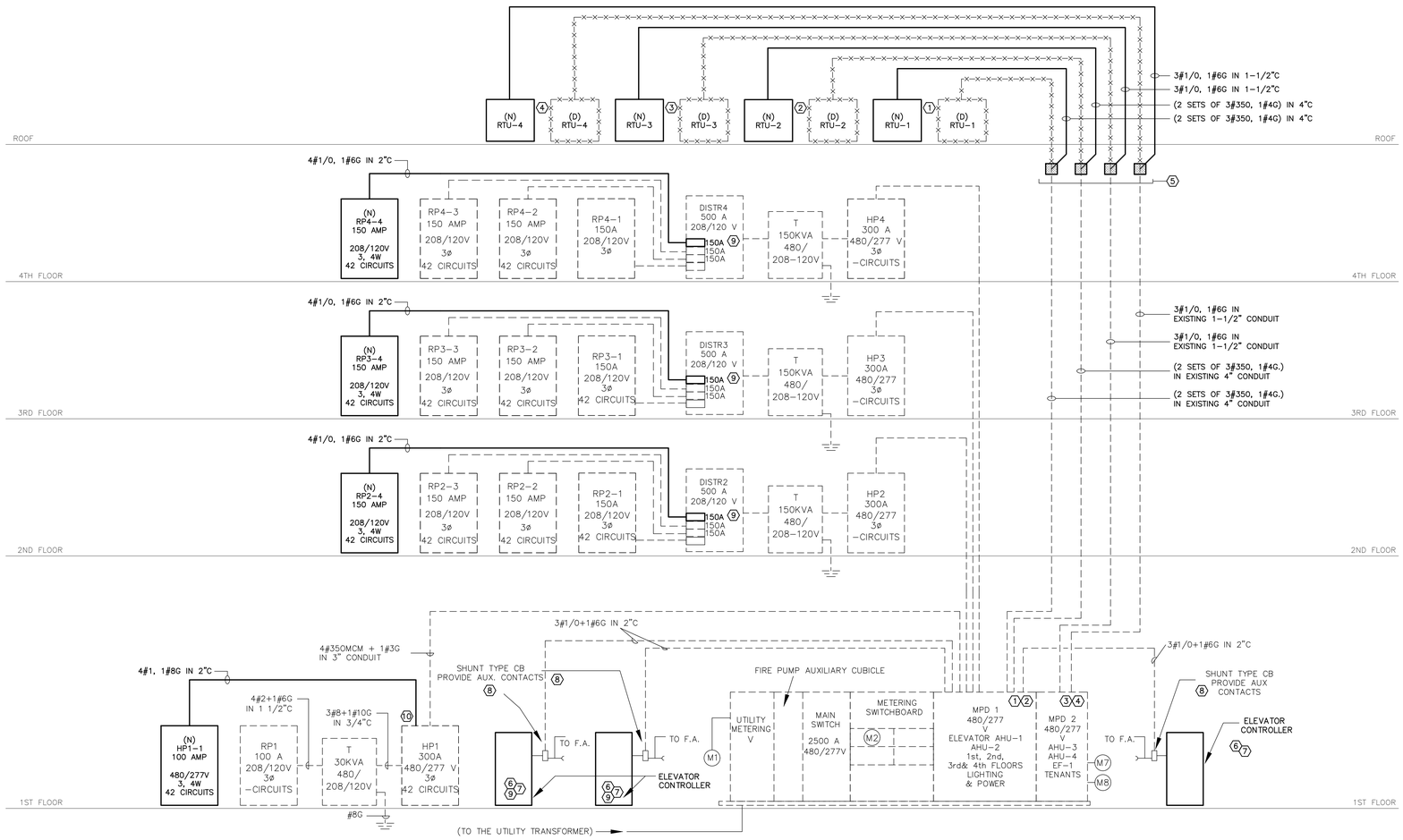
PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE
ELECTRICAL DETAILS SHEET

CHECKED BY: I.L. DRAWN BY: C.M.

DRAWING No.
E-501



LEGEND:

- (E) EXISTING EQUIPMENT TO REMAIN
- (R) EXISTING EQUIPMENT, CONDUIT, AND WIRING TO BE RELOCATED
- (D) EXISTING EQUIPMENT, WIRING AND CONDUIT TO BE REMOVED
- (N) NEW EQUIPMENT, WIRING AND CONDUIT

GENERAL POWER DEMOLITION NOTES:

1. ALL WORK SHALL BE COORDINATED WITH OWNER. ANY POWER SHUTDOWNS SHALL BE COORDINATED WITH OWNER IN ADVANCE.
2. ELECTRICAL CONTRACTOR SHALL FURNISH ALL LABOR REQUIRED FOR DEMOLITION OF EXISTING ELECTRICAL INSTALLATION AS DESCRIBED BELOW:
   A. MINIMIZE THE DISRUPTION OF OPERATION OF EXISTING FACILITY.
   B. REMOVE ALL EXISTING FLOOR BOXES, RECEPTACLES, JUNCTION BOXES, PULL BOXES, SUPPORTS, ETC. NO LONGER REQUIRED.
   C. DISCONNECT AND REMOVE CONDUITS AND CABLES DIRECTLY AFFECTED BY DEMOLITION OF DEVICES TO NEAREST JUNCTION BOX OR BACK TO SOURCE WHERE THERE IS NO ACTIVE DEVICE CONNECTED TO THAT CIRCUIT/LOOP AS REQUIRED, U.O.N.
3. AT THE COMPLETION OF WORK ALL RUBBISH, DEBRIS AND WASTE MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND THE PREMISES SHALL BE LEFT IN CLEAN CONDITION.
4. ALL WALL/FLOOR OPENINGS IN AREAS OF WORK SHALL BE PROPERLY SEALED AS REQUIRED. FIRE SEALANT SHALL MATCH WALL/FLOOR RATING.
5. PRIOR TO REMOVING ANY MATERIAL OR EQUIPMENT FROM THE SITE, CONSULT WITH OWNER, TO VERIFY IF OWNER WANTS TO RETAIN THE ITEM TO BE REMOVED. OWNER SHALL AT ALL TIMES RETAIN THE OPTION OF KEEPING ANY ITEM REMOVED. DELIVER THE ITEM TO A LOCATION DESIGNATED BY THE OWNER.
6. ANY EXISTING EQUIPMENT DAMAGED DURING DEMOLITION SHALL BE REPAIRED AND/OR RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE TO THE SATISFACTION AND APPROVAL OF THE OWNER.

GENERAL POWER NOTES:

1. COORDINATE ALL WORK AFFECTING INFRASTRUCTURE SERVING CRITICAL LOADS IN THE FACILITY INCLUDING DEMOLITION, SHUTDOWNS, PANELBOARD REPLACEMENTS, FEEDER REMOVALS AND TERMINATIONS, TESTING, ETC. WITH THE OWNER. NO WORK SHALL BE PERFORMED WITHOUT THE OWNER'S APPROVAL.
2. PERFORM ALL WORK ASSOCIATED WITH EQUIPMENT SHUTDOWNS DURING NON-BUSINESS HOURS, UNLESS OTHERWISE DIRECTED BY THE OWNER.
3. PREPARE DETAILED METHOD-OF-PROCEDURES (MOP'S) FOR ALL TASKS AFFECTING CRITICAL POWER DISTRIBUTION IN THE FACILITY. MOPs SHALL INCLUDE STEP-BY-STEP SCOPE OF WORK TASKS WITH RELATED INFORMATION INCLUDING PREREQUISITES, TASK DURATIONS, RESPONSIBLE PARTIES, ETC. MOP'S SHALL BE SUBMITTED FOR THE OWNER'S APPROVAL PRIOR TO COMMENCEMENT OF ANY WORK RELATED TO ITEMS LISTED ABOVE. NO WORK SHALL BE PERFORMED UNLESS THE MOP'S HAVE BEEN APPROVED BY ALL PARTIES.
4. WHERE ELECTRICAL WORK IS NOT SHOWN, EXISTING ELECTRICAL EQUIPMENT, OUTLETS, WIRING DEVICES AND ASSOCIATED BRANCH CIRCUITING TO REMAIN IN THAT AREA.
5. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL MATERIALS, METAL STRUCTURES, ACCESSORIES, HARDWARE, ETC. NEEDED TO MOUNT AND SECURE ELECTRICAL EQUIPMENT.
6. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF ALL NEW EQUIPMENT WITH EXISTING INSTALLATIONS.
7. WHERE MORE THAN THREE CURRENT CARRYING CONDUCTORS ARE INSTALLED IN THE SAME CONDUIT, DE-RATING SHALL BE APPLIED PER NEC.

KEY NOTES:

1. EXISTING RTU SHALL BE REMOVED AND REPLACED BY OTHERS. ELECTRICAL CONTRACTOR TO PROVIDE NEW 3P-450A CIRCUIT BREAKER IN EXISTING "MPD 1" TO POWER NEW "RTU-1". BREAKER TYPE AND SHORT CIRCUIT RATING SHALL MATCH EXISTING WITHIN PANEL. PROVIDE NEW CONDUIT AND WIRING FROM LOCATION SHOWN.
2. EXISTING RTU SHALL BE REMOVED AND REPLACED BY OTHERS. ELECTRICAL CONTRACTOR TO PROVIDE NEW 3P-500A CIRCUIT BREAKER IN EXISTING "MPD 1" TO POWER NEW "RTU-2". BREAKER TYPE AND SHORT CIRCUIT RATING SHALL MATCH EXISTING WITHIN PANEL. PROVIDE NEW CONDUIT AND WIRING FROM LOCATION SHOWN.
3. EXISTING RTU SHALL BE REMOVED AND REPLACED BY OTHERS. ELECTRICAL CONTRACTOR TO PROVIDE NEW 3P-125A CIRCUIT BREAKER IN EXISTING "MPD 2" TO POWER NEW "RTU-3". BREAKER TYPE AND SHORT CIRCUIT RATING SHALL MATCH EXISTING WITHIN PANEL. PROVIDE NEW CONDUIT AND WIRING FROM LOCATION SHOWN.
4. EXISTING RTUs SHALL BE REMOVED AND REPLACED BY OTHERS. ELECTRICAL CONTRACTOR TO PROVIDE NEW 3P-125A CIRCUIT BREAKER IN EXISTING "MPD 2" TO POWER NEW "RTU-4". BREAKER TYPE AND SHORT CIRCUIT RATING SHALL MATCH EXISTING WITHIN PANEL. PROVIDE NEW CONDUIT AND WIRING FROM LOCATION SHOWN.
5. EXISTING CONDUITS SHALL BE CUT BACK BELOW ROOF PENETRATION. EXISTING CONDUCTORS SHALL BE DISCONNECTED AND PULLED FROM THE EXISTING CONDUIT. EXISTING CONDUIT SHALL BE RE-UTILIZED FOR NEW RTU. CONTRACTOR SHALL INSPECT EXISTING CONDUIT AND VERIFY THAT IT IS IN GOOD CONDITION FOR RE-USE. INTERCEPT EXISTING CONDUIT FOR TERMINATION INTO NEW RTU. CONDUIT PENETRATIONS THROUGH THE ROOF SHALL BE PROPERLY SEALED. PULL NEW CONDUCTORS THROUGH EXISTING CONDUIT AS NOTED.
6. EQUIPMENT TO BE REMOVED AND REPLACED WITH NEW BY OTHERS. ELECTRICAL CONTRACTOR TO DISCONNECT AND SAFE OFF EXISTING CONDUIT AND WIRING FROM EQUIPMENT. RECONNECT EXISTING CONDUIT AND WIRING TO NEW ELEVATOR CONTROLLER AS SHOWN. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED.
7. ELEVATOR EQUIPMENT PROVIDED BY OTHERS. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SUPPORT AS REQUIRED FOR THE INSTALLATION / REPLACEMENT OF ELEVATOR WITH ITS ASSOCIATED CONTROLLER. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR:
   - ENGAGE "LERCH BATES" TO OBTAIN COMPLETE SCOPE OF WORK AS REQUIRED TO SUPPORT INSTALLATION.
   - AUXILIARY CONTACTS TO DISABLE EMERGENCY BATTERY LOWERING
   - SINGLE-PHASE COPPER POWER FEEDER TO EACH ELEVATOR WITH INDIVIDUAL PROTECTED LOCKABLE "OPEN" DISCONNECTING MEANS LOCATED IN MACHINE ROOM FOR UTILIZATION EQUIPMENT (REFER TO E-101 FOR EQUIPMENT LOCATIONS):
     - CAR LIGHTING AND BLOWER
     - PIT SUMP PUMP
   - EMERGENCY TELEPHONE LINE TO ELEVATOR CONTROL PANEL IN ELEVATOR MACHINE ROOM.
   - PROVIDE A DEDICATED PHONE LINE AT LOCATIONS THAT CALL FOR MASTER INTERCOM STATIONS.
   - DEDICATED CELLULAR
   - PROVIDE STARTUP SUPPORT AS REQUIRED

   ENSURE ALL INTERCONNECTIONS AND FUNCTIONALITY TO OTHER SYSTEMS ARE MAINTAINED AND RE-CONNECTED TO THE NEW ELEVATOR CONTROLLER / SYSTEM (FIRE ALARM, SECURITY, BMS, ETC...).
8. ELECTRICAL CONTRACTOR SHALL VERIFY FUNCTIONALITY OF SHUNT TRIP. PROVIDE NEW AS REQUIRED.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANEL TO POWER NEW PANEL AS SHOWN. BREAKER TYPE AND SHORT CIRCUIT RATING SHALL MATCH EXISTING IN PANELBOARD. REFER TO PANEL SCHEDULES ON E-101, E-102, E-103, AND E-104 FOR ADDITIONAL INFORMATION.
10. REMOVE 3 1P BREAKERS FROM PANEL TO MAKE SPACE FOR NEW 3P BREAKER. IF THERE ARE EXISTING LOADS UTILIZING THE REMOVED (3) 1P BREAKERS, THEY SHALL BE RELOCATED TO THE NEW PANEL BOARD SCHEDULED TO BE INSTALLED. PROVIDE WIRE AND CONDUIT MATCHING EXISTING AS REQUIRED.

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GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE

ELECTRICAL
SINGLE LINE DIAGRAM

CHECKED BY: I.L. DRAWN BY: C.M.

DRAWING No.

E-601

FIRE ALARM SYSTEM GENERAL NOTES:

1. PRIOR TO BID, CONTRACTOR SHALL CONTACT THE BUILDING FIRE ALARM VENDOR (SIMPLEX) AND OBTAIN PRICING FOR THE EQUIPMENT AND SERVICES LISTED BELOW, WHICH MUST BE PROVIDED BY THAT VENDOR.
2. NO WORK SHALL BE DONE UNTIL DRAWINGS ARE APPROVED BY PLAN EXAMINATION BOARD.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING AND COORDINATING INSPECTIONS WITH THE ATTENDANCE OF ALL REQUIRED TRADES AND PERSONNEL.
4. ALL EQUIPMENT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR SHALL BE PURCHASED FROM THE BUILDING FIRE ALARM VENDOR TO ASSURE COMPATIBILITY WITH EXISTING BASE BUILDING FIRE ALARM SYSTEM.
5. REPROGRAMMING OF FIRE ALARM CONTROL PANEL AND FINAL CONNECTIONS AT DGP ARE BY BUILDING'S FIRE ALARM VENDOR. INCLUDE PRICE FOR SAME IN BID PRICE.
6. FIRE ALARM STROBE LIGHT UNITS AND COMBINATION SPEAKER/STROBE UNITS SHALL BE BASE BUILDING TYPE, ADA APPROVED AND MOUNTED IN ACCORDANCE WITH SAME.
7. ALL NEW FIRE ALARM VISUAL DEVICES AND COMBINATION AUDIO/VISUAL DEVICES SHALL BE "SYNCHRONIZED" TYPE. PROVIDE SYNCHRONIZING INTERFACE PANEL AND NEW WIRING AS REQUIRED. ALL NOTIFICATION DEVICES SHALL SYNCHRONIZE WITH ADJACENT DEVICES.
8. PROVIDE NEW WIRING AS REQUIRED FOR RELOCATED FIRE ALARM DEVICES. ALL NOTIFICATION DEVICES SHALL SYNCHRONIZE WITH ADJACENT DEVICES.
9. COORDINATE FACEPLATE COLOR FOR ALL FIRE ALARM DEVICES WITH ARCHITECT PRIOR TO PLACING THE ORDER. ALL NEW FIRE ALARM DEVICES SHALL MATCH EXISTING.
10. ALL NEW FIRE ALARM DEVICES SHALL BE ADDRESSABLE TYPE AND U.L. LISTED.
11. CONNECT MAXIMUM OF TEN (10) SPEAKER/STROBES PER CIRCUIT.
12. ADJACENT SPEAKER/STROBES SHALL BE CIRCUITED TO ALTERNATE CIRCUITS.
13. ALL CABLING SHALL BE TEFLON INSULATED, JACKETED, AND RATED 200'C FIRE PROTECTION SERVICE APPROVED. RUN 4 #14 TO EACH SPEAKER/STROBE DEVICE AND 2 #16 TWISTED SHIELDED PAIR TO EACH INTELLIGENT DEVICE.
14. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN DEDICATED 3/4" EMT TYPE CONDUIT WITH COMPRESSION TYPE FITTINGS. ALL LB, JUNCTION BOX AND ENCLOSURE COVERS ASSOCIATED WITH FIRE ALARM RACEWAY SHALL BE PAINTED RED.
15. ALL FIRE ALARM WIRING SHALL BE SOLID COPPER, PLENUM RATED AND INSTALLED PER APPLICABLE CODE.
16. PROVIDE FIRE ALARM WIRING PER MANUFACTURER'S RECOMMENDATIONS.
17. PROVIDE ALL HARDWARE, APPURTENANCES, CIRCUITRY AND PROGRAMMING PER MANUFACTURER'S SPECIFICATIONS FOR FACP.
18. ALL FIRE ALARM WIRING WITHIN CABINETS AND BOXES SHALL BE TAGGED INDICATING THEIR FUNCTION.
19. ALL CIRCUITS SHALL NOT EXCEED THEIR RATED AMPACITY AND NUMBER OF DEVICES PER CIRCUIT. THE CONTRACTOR SHALL MEASURE/VERIFY CIRCUIT LOADING DURING NORMAL OPERATING MODE AND ALARM CONDITION.
20. PROVIDE ADDRESSABLE INTERFACE MODULES AS REQUIRED.
21. EXISTING FIRE ALARM DEVICES ARE NOT SHOWN UNLESS THEY ARE PART OF NEW INSTALLATION AND SHALL REMAIN INTACT.
22. PROVIDE ALL REQUIRED EXPANSION PANELS, POWER SUPPLIES, BATTERIES, LOCKABLE FUSED DISCONNECT SWITCHES, AND BRANCH CIRCUIT, ETC. FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM.
23. ALL PENETRATIONS THROUGH RATED WALLS SHALL BE SEALED WITH LISTED FIRE STOPPING MATERIAL TO MAINTAIN FIRE RATING.
24. THE PART FIRE ALARM RISER DIAGRAM SHOWN IS AN INDICATION OF THE WORK REQUIRED AND SHALL BE USED FOR ESTIMATING PURPOSES ONLY. THE SUCCESSFUL CONTRACTOR SHALL OBTAIN A POINT-TO-POINT WIRING DIAGRAM FROM THE BUILDING FIRE ALARM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.
25. THE OPERATION OF THE FIRE ALARM INSTALLATION DOES NOT CONSTITUTE AN ACCEPTANCE OF THE WORK BY THE OWNER. FINAL ACCEPTANCE IS TO BE MADE AFTER THE CONTRACTOR HAS DEMONSTRATED THAT THE WORK FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS AND HAS FURNISHED ALL REQUIRED CERTIFICATES OF APPROVAL FROM THE STATE AUTHORITIES, MUNICIPAL AUTHORITIES, AND UNDERWRITERS.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR THE AS-BUILT RISER REQUIRED TO BE PRESENTED AT THE TIME OF INSPECTION.

FIRE ALARM SYSTEM GENERAL SPECIFICATIONS:

1. PRIOR TO BID, ELECTRICAL CONTRACTOR SHALL REACH OUT TO BASE BUILDING FIRE ALARM VENDOR (SIMPLEX) TO OBTAIN PRICING FOR THE EQUIPMENT AND SERVICES LISTED THAT MEET WHAT IS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
2. ALL EQUIPMENT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR SHALL BE PURCHASED FROM THE BASE BUILDING FIRE ALARM VENDOR.
3. ALL NEW FIRE ALARM DEVICES SHALL BE ADDRESSABLE TYPE AND U.L. LISTED.
4. ALL NEW FIRE ALARM CIRCUITS SHALL BE INSTALLED IN CONDUIT FOR ENTIRE LENGTH OF RUN. UTILIZE EMT TYPE CONDUIT WITH COMPRESSION TYPE FITTINGS, 3/4" TRADE SIZE FOR INDOOR FIRE ALARM WIRING INSTALLATIONS. UTILIZE RIGID GALVANIZED STEEL CONDUIT WITH THREADED FITTINGS FOR OUTDOOR INSTALLATIONS.
5. PROVIDE FIRE ALARM WIRING PER MANUFACTURER'S RECOMMENDATIONS.
6. PROVIDE ALL HARDWARE, APPURTENANCES, CIRCUITRY AND PROGRAMMING AS REQUIRED TO SATISFY THE DESIGN INTENT SHOWN ON THE DRAWINGS.
7. ALL STROBES AND COMBINATION SPEAKER STROBES SHOWN ON DRAWINGS SHALL BE OF SYNCHRONIZABLE TYPE AND SHALL SYNCHRONIZE WITH OTHER STROBES IN SAME AREA AS REQUIRED PER NFPA 72. PROVIDE ALL DEVICES, ACCESSORIES AND COMPONENTS NEEDED IN ORDER TO ACHIEVE SYNCHRONIZATION.
8. ALL FIRE ALARM WIRING WITHIN CABINETS AND BOXES SHALL BE TAGGED INDICATING THEIR FUNCTION.
9. ALL CIRCUITS SHALL NOT EXCEED THEIR RATED AMPACITY AND NUMBER OF DEVICES PER CIRCUIT. THE FIRE ALARM CONTRACTOR SHALL MEASURE/VERIFY CIRCUIT LOADING DURING NORMAL OPERATING MODE AND ALARM CONDITION.
10. EXISTING FIRE ALARM EQUIPMENT AND DEVICES ARE NOT SHOWN UNLESS THEY ARE PART OF NEW INSTALLATION AND SHALL REMAIN INTACT.
11. PROVIDE SLEEVES FOR ALL FIRE ALARM CABLE WALL AND FLOOR PENETRATIONS.
12. ALL PENETRATIONS THROUGH RATED WALLS AND FLOORS SHALL BE SEALED WITH LISTED FIRE STOPPING MATERIAL TO MAINTAIN FIRE RATING. RATING OF SEAL SHALL MATCH RATING OF WALL/FLOOR. UTILIZE HILTI BRAND PRODUCTS FOR ALL FIRE RATED SEALS.
13. BATTERIES CALCULATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. EXISTING BATTERIES MUST BE SIZED TO HANDLE LOAD FOR ENTIRE SYSTEM FOR MINIMUM DURATION OF 24 HOURS UNDER QUIESCENT MODE AND 15 MINUTES UNDER ALARM MODE. CONTRACTOR TO PROVIDE ADDITIONAL BATTERIES WHERE REQUIRED IF EXISTING BATTERIES DO NOT PROVIDE MINIMUM RUNTIME REQUIRED.
14. ELECTRICAL/FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS THAT INCLUDE THE FOLLOWING FOR APPROVAL:
    - RISER DIAGRAM WHICH SHOWS THE QUANTITY OF DEVICES AS WELL AS THE CIRCUIT TYPE RAN BETWEEN EACH DEVICE.
    - FLOOR PLAN LAYOUT SHOWING LOCATION OF ALL DEVICES AND CONTROL EQUIPMENT.
    - BATTERY CALCULATIONS FOR EACH SYSTEM. BATTERY CALCULATIONS SHALL INCLUDE ALL NEW DEVICES AS WELL AS 20% DERATE FACTOR.
    - SEQUENCE OF OPERATION FOR NEW SYSTEM IN EITHER AN INPUT/OUTPUT MATRIX OR NARRATIVE FORM.
    - EQUIPMENT TECHNICAL DATA SHEETS FOR ALL EQUIPMENT TO BE USED.
15. THE FIRE ALARM RISER DIAGRAM SHOWN ON DRAWINGS IS AN INDICATION OF THE WORK REQUIRED AND SHALL BE USED FOR ESTIMATING PURPOSES ONLY. THE SUCCESSFUL CONTRACTOR SHALL OBTAIN A POINT-TO-POINT WIRING DIAGRAM FROM THE AWARDED FIRE ALARM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.
16. THE OPERATION OF THE FIRE ALARM INSTALLATION DOES NOT CONSTITUTE AN ACCEPTANCE OF THE WORK BY THE OWNER. FINAL ACCEPTANCE IS TO BE MADE AFTER THE CONTRACTOR HAS DEMONSTRATED THAT THE WORK FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS AND HAS FURNISHED ALL REQUIRED CERTIFICATES OF APPROVAL FROM THE STATE AUTHORITIES, MUNICIPAL AUTHORITIES AND UNDERWRITERS.
17. INCLUDE ALL FEES FOR FILING APPROVALS, AND SELF CERTIFICATION OF THE FIRE ALARM INSTALLATION.
18. FIRE ALARM STROBE LIGHT UNITS AND COMBINATION HORN/STROBE UNITS SHALL BE ADA APPROVED AND MOUNTED IN ACCORDANCE WITH SAME. EACH STROBE LIGHT SHALL HAVE SELECTABLE CANDELA RATINGS OF 15/30/60/75/110. CANDELA RATING SHALL BE SET TO THAT INDICATED ON DRAWINGS.
19. ALL NEW SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE TECHNOLOGY ONLY.
20. AT THE COMPLETION OF THE PROJECT THE FIRE ALARM CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS TO ENGINEER AND OWNER FOR RECORD. AS-BUILTS SHALL BE SUBMITTED TO ENGINEER IN CAD FORMAT AND OWNER IN PDF FORMAT. IN ADDITION TO AS-BUILT DRAWINGS, O&M MANUALS AND CUTSHEETS FOR ALL EQUIPMENT INSTALLED INCLUDING TEST AND INSPECTION REPORTS SHALL BE NEATLY ORGANIZED IN A BINDER AND PLACED ADJACENT TO MAIN FIRE ALARM CONTROL PANEL.

SYMBOL LIST

F	MANUAL PULL STATION
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
SD NEW	VERY EARLY WARNING PHOTO ELECTRIC DETECTOR FSV-951R
CO	CARBON MONOXIDE DETECTOR
FD	FLAME DETECTOR
DD	DUCT DETECTOR
K	TEST KEY SWITCH
MM	MONITOR MODULE
DM	DUAL MONITOR MODULE
RM	RELAY MODULE
ANN	REMOTE ANNUNCIATOR
VESDA	VESDA DETECTOR
FACP	FIRE ALARM CONTROL PANEL
BAC	BUILDING ALARM CONTROL PANEL
NAC	NOTIFICATION APPLIANCE CIRCUIT PANEL
WF	WATERFLOW SWITCH
TS	TAMPER SWITCH
ID	ADDRESSABLE INITIATING DEVICE CIRCUIT INTERFACE MODULE
D	FIRE ALARM MAGNETIC DOOR HOLDER
BC	ADDRESSABLE BUILDING CONTROL CIRCUIT INTERFACE MODULE

NOTIFICATION SYMBOL LIST

	WALL HORN/STROBE COMBINATION
SP	WALL MOUNTED HORN
SL	WALL MOUNTED STROBE
SL	CEILING MOUNTED STROBE
SS	CEILING MOUNTED HORN/STROBE
SP	CEILING MOUNTED HORN
A	REMOTE INDICATOR

ABBREVIATION

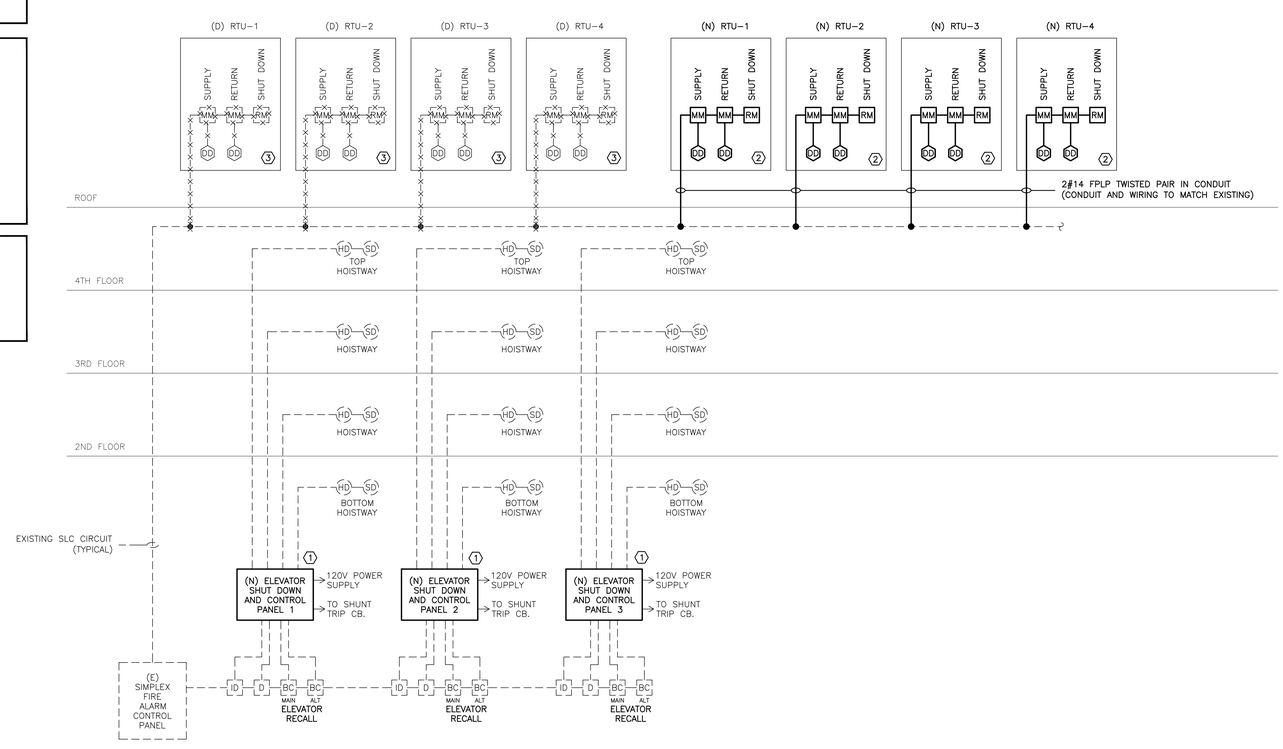
A	–	AMPS
APPROX	–	APPROXIMATE
C	–	CONDUIT
DWG	–	DRAWING
E	–	EXISTING
FACP	–	FIRE ALARM CONTROL PANEL
N	–	NEW
N.T.S.	–	NOT TO SCALE
N.I.S.	–	NOT IN SCOPE
P	–	POLES
SLC	–	SIGNALING LINE CIRCUIT
SPECS	–	SPECIFICATIONS
TYP.	–	TYPICAL
U.O.N.	–	UNLESS OTHERWISE NOTED
V	–	VOLTS
W	–	WATTS

APPLICABLE CODES:

- NEW JERSEY INTERNATIONAL BUILDING CODE 2021 EDITION
- NEW JERSEY INTERNATIONAL FIRE CODE 2015 EDITION
- NFPA 70 2020 EDITION
- NFPA 72 2019 EDITION
- NFPA 76 2016 EDITION
- NFPA 720 2015 EDITION

DRAWING LIST

	SHEET No.	SHEET TITLE	CONSTRUCTION DOCS MAY 29, 2025	BID SET JUNE 16, 2025			
			ISSUE AND DATE				
1	FA-001	FIRE ALARM GENERAL NOTES	●	●			
2	FA-101	FIRE ALARM 1ST FLOOR PLAN	●	●			
3	FA-1R1	FIRE ALARM ROOF PLAN	●	●			



FIRE ALARM PARTIAL RISER DIAGRAM
SCALE: NOT TO SCALE

DRAWING NOTES

1. AWARDED CONTRACTOR IS RESPONSIBLE TO ENGAGE FIRE ALARM VENDOR TO SUPPORT ALL WORK ASSOCIATED WITH THE FIRE ALARM SYSTEM.
2. COORDINATE WITH AWARDED FIRE ALARM EQUIPMENT VENDOR TO PROVIDE ALL REQUIRED MODULES, COMMUNICATION CARDS ETC.. FOR A COMPLETE AND OPERATIONAL SYSTEM
3. RISER DIAGRAM SHOWN ON DRAWING IS DIAGRAMMATIC. AWARDED FIRE ALARM VENDOR TO PROVIDE ACCURATE SHOP DRAWINGS SHOWING CIRCUITING REQUIREMENTS AND INTERCONNECTIVITY FOR ALL DEVICES AND COMPONENTS PART OF THE FIRE ALARM SYSTEM. ELECTRICAL CONTRACTOR TO OBTAIN COPY OF APPROVED SHOP DRAWING RISER DIAGRAM AND WORK OFF THAT IN FIELD
4. FPLP TYPE CABLE SHALL BE UL LISTED.
5. INTERPOSING RELAY SHALL BE PROVIDED WHERE MISMATCH IN CONTROL VOLTAGES BETWEEN EQUIPMENT IS PRESENT

LEGEND

———— (N) NEW EQUIPMENT, CONDUIT AND WIRING
– – – – – (E) EXISTING EQUIPMENT, CONDUIT AND WIRING TO REMAIN
–x–x–x–x– (D) EXISTING EQUIPMENT, CONDUIT AND WIRING TO BE DEMOLISHED

KEY NOTES:

1. EXISTING ELEVATOR EQUIPMENT AND CAR TO BE REPLACED/MODERNIZED BY OTHERS. CONTRACTOR TO DISCONNECT AND SAFE-OFF ASSOCIATED EXISTING FIRE ALARM EQUIPMENT, DEVICES, CONDUIT, AND WIRING AND RECONNECT TO NEW EQUIPMENT AS REQUIRED. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED. ALL INPUTS AND OUTPUTS FROM THE NEW ELEVATOR CONTROL PANEL SHALL BE INTEGRATED TO THE EXISTING FIRE ALARM SYSTEM SHALL. ENSURE ALL SYSTEMS / FUNCTIONALITY ARE FULLY INTEGRATED INTO THE NEW ELEVATOR CONTROL PANEL
2. NEW FIRE ALARM DEVICES SHOWN SHALL BE TIED INTO EXISTING FIRE ALARM CIRCUIT. DEVICES SHALL BE PROGRAMMED IN ACCORDANCE WITH THE EXISTING BUILDING SEQUENCE OF OPERATIONS. ENGAGE BASE BUILDING FIRE ALARM VENDOR FOR ALL PROGRAMMING REQUIRED TO INCORPORATE NEW DEVICES.
3. EXISTING FIRE ALARM DEVICES ASSOCIATED WITH THE AHU'S SCHEDULED TO BE REPLACED SHALL BE DISCONNECTED AND REMOVED.

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GERRY B. GREEN PLAZA ALTERATIONS

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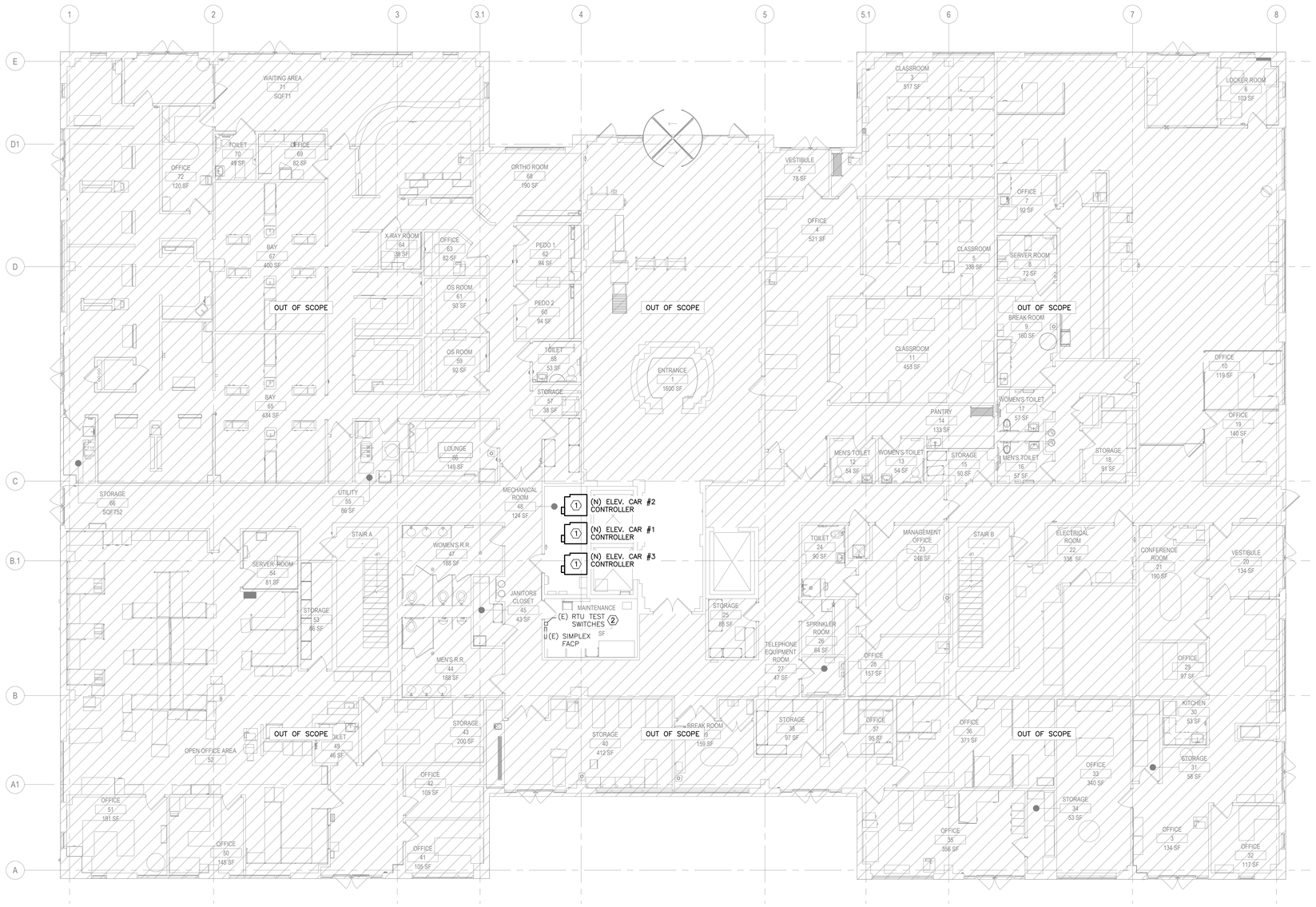
PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE
FIRE ALARM COVER SHEET

CHECKED BY: I.L. DRAWN BY: C.M.

DRAWING No.
FA-001



1 FIRE ALARM 1ST FLOOR POWER PLAN

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

LEGEND

- (N) NEW EQUIPMENT, CONDUIT AND WIRING
- (E) EXISTING EQUIPMENT, CONDUIT AND WIRING
- (R) EXISTING EQUIPMENT TO BE RELOCATED
- (D) EXISTING EQUIPMENT, CONDUIT AND WIRING TO BE DEMOLISHED

FIRE ALARM NOTES:

1. ALL FIRE ALARM CABLING SHALL BE RUN IN DEDICATED MINIMUM 3/4" EMT TYPE CONDUIT WITH COMPRESSION TYPE FITTINGS. ALL LB, JUNCTION BOXES, CONDUITS AND ENCLOSURE COVERS ASSOCIATED WITH FIRE ALARM RACEWAY SHALL BE PAINTED RED.
2. PROVIDE AND INSTALL NEW FIRE ALARM DEVICES AS SHOWN ON DRAWINGS TO PROVIDE FOR PROPER COVERAGE IN AND AROUND THE AREAS OF WORK.
3. THE INTEGRITY OF THE EXISTING FIRE ALARM SYSTEM SHALL BE MAINTAINED AT ALL TIMES DURING DEMOLITION OF EXISTING FIRE ALARM DEVICES OR INSTALLATION OF NEW FIRE ALARM DEVICES. EXISTING FIRE ALARM DEVICES WHETHER SHOWN ON PLAN OR NOT SHALL ALWAYS BE PROTECTED.
4. REFER TO DRAWING FA-001 FOR RISER DIAGRAM.

KEY NOTES:

(1) EXISTING ELEVATOR EQUIPMENT AND CAR TO BE MODERNIZED BY OTHERS. CONTRACTOR TO DISCONNECT AND SAFE-OFF EXISTING FIRE ALARM EQUIPMENT, CONDUIT, AND WIRING AND RECONNECT TO NEW EQUIPMENT AS REQUIRED. EXTEND CONDUIT AND WIRING AS REQUIRED. REFER TO FA-001 FOR ADDITIONAL INFORMATION.

(2) EXISTING RTU TEST SWITCHES SHALL BE TIED INTO NEW RTUS. COORDINATE INTEGRATION WITH MECHANICAL CONTRACTOR TO ENSURE FUNCTIONALITY OF SYSTEM. PROVIDE ALL NECESSARY HARDWARE AS REQUIRED.

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PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

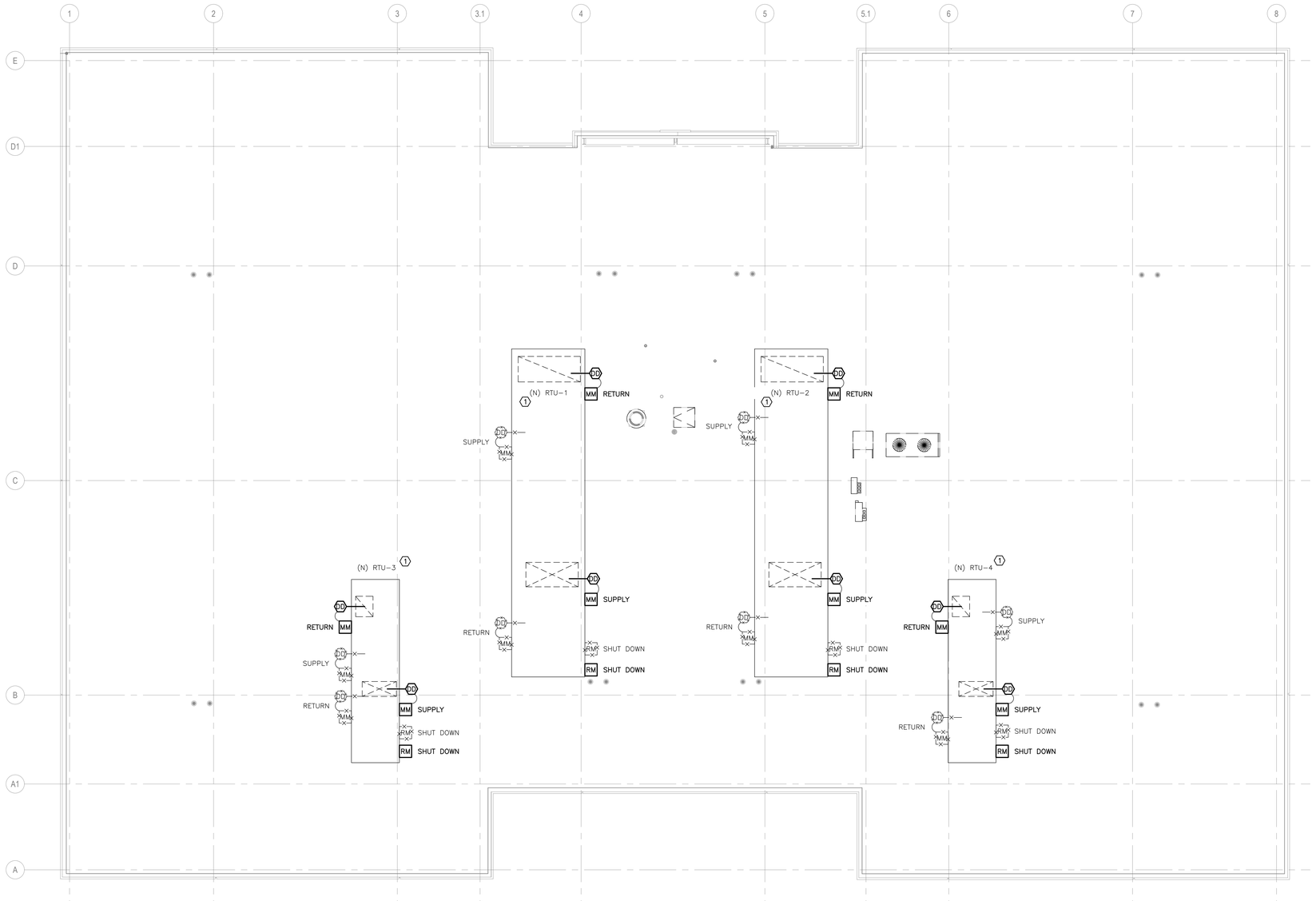
DRAWING TITLE

FIRE ALARM
1ST FLOOR PLAN

CHECKED BY: I.L. DRAWN BY: C.M.

DRAWING No.

FA-101



1 FIRE ALARM ROOF PLAN
SCALE: 1/8" = 1'-0"

LEGEND

——— (N) NEW EQUIPMENT, CONDUIT AND WIRING
– – – – – (E) EXISTING EQUIPMENT, CONDUIT AND WIRING
– – – – – (R) EXISTING EQUIPMENT TO BE RELOCATED
–x–x–x–x– (D) EXISTING EQUIPMENT, CONDUIT AND WIRING TO BE DEMOLISHED

FIRE ALARM DEMOLITION NOTES:

1. REFER TO FA-101 FOR GENERAL FIRE ALARM DEMOLITION NOTES.

FIRE ALARM NOTES:

1. REFER TO FA-101 FOR GENERAL FIRE ALARM NOTES.

KEY NOTES:

(1) EXISTING RTU SHALL BE DISCONNECTED, REMOVED, AND REPLACED IN KIND BY OTHERS. FIRE ALARM CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING FIRE ALARM EQUIPMENT ASSOCIATED WITH RTU. EXISTING CONDUIT AND WIRING SHALL BE SAFED-OFF FOR CONNECTION TO NEW FIRE ALARM EQUIPMENT. COORDINATE DEMOLITION SCOPE WITH MECHANICAL CONTRACTOR. PROVIDE NEW DEVICES AS SHOWN AND CONNECT TO EXISTING CONDUIT AND WIRING. EXTEND EXISTING CONDUIT AND WIRING AS REQUIRED. REFER TO FA-001 FOR ADDITIONAL INFORMATION.

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PROJECT NO. 158-25-001

REV	DESCRIPTION	DATE
-	Bid Set	06/16/2025

DRAWING TITLE
FIRE ALARM
ROOF PLAN

CHECKED BY: I.I. DRAWN BY: C.M.

DRAWING No.
FA-1R1

GENERAL STRUCTURAL AND CONSTRUCTION NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2021 NEW JERSEY INTERNATIONAL BUILDING CODE AS WELL AS ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES.
2. ALL CODES AND STANDARDS REFERENCED IN THESE NOTES APPLY TO THE DESIGN, CONSTRUCTION, DEMOLITION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. UNLESS SPECIFICALLY STATED, USE THE LATEST ADOPTED EDITIONS OF THE CODES AND STANDARDS.
3. THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL AND ALL OTHER APPLICABLE DISCIPLINE DRAWINGS. IN CASE OF CONFLICT BETWEEN THE NOTES AND DETAILS, THE MOST RIGID REQUIREMENTS SHALL GOVERN. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE DESIGNER'S OF RECORD PRIOR TO PERFORMING THE WORK.
4. ALL SECTIONS AND DETAILS, WHETHER EXPLICITLY CUT ON PLAN OR NOT, SHALL BE CONSIDERED TYPICAL AND APPLY AT SIMILAR CONDITIONS. MINOR DETAILS OR INCIDENTAL ITEMS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR A PROPER AND COMPLETE INSTALLATION SHALL BE INCLUDED IN THE WORK AT NO ADDITIONAL COST. SIGNIFICANT ADJUSTMENTS ACCOUNTING FOR VARYING CONDITIONS IN THE FIELD SHOULD BE SUBMITTED TO THE DESIGNER'S OF RECORD FOR APPROVAL AND BE RESOLVED PRIOR TO BEGINNING WORK.
5. GENERAL CONTRACTOR'S RESPONSIBILITIES:
   - A. THE CONTRACTOR SHALL NOT MAKE DEVIATIONS FROM THE DESIGN DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE DESIGNER'S OF RECORD. CHANGES BY THE CONTRACTOR, DUE TO CONTRACTOR PROPOSED ALTERNATIVES OR TO CORRECT CONTRACTOR ERRORS/OMISSIONS, MUST BE SUBMITTED TO THE DESIGNER'S OF RECORD FOR APPROVAL. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS, INCLUDING ENGINEERING FEES FOR REVIEW, SITE OBSERVATIONS, STRUCTURAL CALCULATIONS AND DRAWING REVISIONS. THE CONTRACTOR SHALL ALSO PROCESS THE REVISED PLANS REFLECTING ALL SUBSTITUTIONS THROUGH THE APPROPRIATE OFFICE OF ALL GOVERNING AGENCIES.
   - B. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER FREE AND HARMLESS OF LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
   - C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AND COORDINATION INVOLVED TO PROVIDE OPENINGS, CHASES, INSERTS, SLEEVES AND CURBS INDICATED ON THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE REVISED WITHOUT APPROVAL FROM THE ENGINEER.
   - D. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY AND ESTABLISH ALL EXISTING SITE CONDITIONS, DIMENSIONS, ELEVATIONS AND LOCATE ALL UTILITIES PRIOR TO STARTING ANY CONSTRUCTION. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE DESIGNER'S OF RECORD IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH HIS/HER PROPOSED MODIFICATION OF THE DETAILS FOR APPROVAL PRIOR TO COMMENCING WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF THE UNSATISFACTORY CONDITIONS.
   - E. THE CONTRACTOR SHALL VERIFY ALL EXISTING STRUCTURES RELATED TO THE PROJECT. STRUCTURAL MEMBERS IDENTIFIED ON THESE DRAWINGS AS EXISTING (EXST) WERE OBTAINED DURING LIMITED FIELD OBSERVATIONS AND/OR FROM LIMITED EXISTING DRAWINGS (IF AVAILABLE.) ACTUAL CONDITIONS MAY DIFFER FROM THAT WHICH IS INDICATED ON THE PLANS AND DETAILS. IF FIELD CONDITIONS VARY FROM THOSE SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL CONTACT THE DESIGNER'S OF RECORD IMMEDIATELY. ALL FIELD DIMENSIONS ARE TO BE VERIFIED AND NOTED AS SUCH ON SHOP DRAWINGS PRIOR TO FABRICATION OF ANY NEW STRUCTURAL MEMBERS.
   - F. WHERE PROPOSED WORK INVOLVES ALTERATIONS OF THE EXISTING SUPPORTING STRUCTURE, THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND PROTECTION REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE.
   - G. THE CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED DURING EXCAVATION AND CONSTRUCTION. CONSULT WITH THE PROJECT GEOTECHNICAL ENGINEER FOR ADDITIONAL REQUIREMENTS.
   - H. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR SAFEGUARDS DURING CONSTRUCTION, AS REQUIRED PER THE APPLICABLE EDITION OF THE INTERNATIONAL BUILDING CODE AS WELL AS ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES. WHERE ADDITIONAL ENGINEERING SERVICES OUTSIDE THE SCOPE OF THESE CONSTRUCTION DOCUMENTS ARE REQUIRED AS PART OF SAFEGUARDS DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION COMMENCING.
6. THE STRUCTURAL DRAWINGS ARE ONLY INTENDED TO CONVEY THE REQUIREMENTS OF THE STRUCTURE DOCUMENTED IN THESE PLANS. THE STRUCTURAL DRAWINGS SHOULD NOT BE USED AS MEANS OF COORDINATING BETWEEN TRADES OR DISCIPLINES.
7. THE CONTRACTOR IS TO PROVIDE SUBMITTALS FOR ALL STRUCTURAL MATERIALS, TO THE DESIGNER'S OF RECORD FOR REVIEW PRIOR TO THE START OF FABRICATION OR THE COMMENCEMENT OF WORK.
   - A. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RE-SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED AND SUBMITTAL OF SUCH DRAWINGS WILL BE REJECTED AND RETURNED.
   - B. SUBMITTALS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH CONSTITUTES CERTIFICATION THAT THE CONTRACTOR HAS VERIFIED ALL CONSTRUCTION CRITERIA, MATERIALS, AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
   - C. ALLOW FOR A MINIMUM OF TWO (2) WEEKS REVIEW PERIOD.

STRUCTURAL STEEL

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "STEEL CONSTRUCTION MANUAL", AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS," AND THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS."
2. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE - STEEL."
3. STRUCTURAL SECTIONS, SHAPES AND FASTENERS SHALL CONFORM THE ASTM SPECIFICATIONS LISTED IN THE STRUCTURAL STEEL MATERIALS SCHEDULE, UNLESS NOTED OTHERWISE.
4. HIGH-STRENGTH BOLTED CONNECTIONS HAVE BEEN DESIGNED BY PENNONI AND ARE DETAILED IN THESE CONSTRUCTION DOCUMENTS.
   - A. ALL BOLTED CONNECTIONS SHALL BE ASTM F3125 HIGH STRENGTH BOLTS AND BE A MINIMUM 3/4" DIAMETER, UNLESS NOTED OTHERWISE.
   - B. ALL BOLTS ARE TO BE INSTALLED "SNUG TIGHT" MINIMUM, UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS, AS REQUIRED BY AISC OR RCSC, OR AS NOTED ON CONNECTION DETAILS.
   - C. ALL BOLTED BEAM / GIRDER TO COLUMN CONNECTIONS ARE TO BE MADE WITH FULLY "PRE-TENSIONED" HIGH-STRENGTH BOLTS AS DEFINED BY AISC / RCSC.
   - D. THE STEEL FABRICATOR / ERECTOR MAY REQUEST ALTERNATE CONNECTION DETAILS IF SUCH DETAILS ARE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL. THE STEEL FABRICATOR / ERECTOR IS RESPONSIBLE FOR PROVIDING THE DESIGN OF ALTERNATE DETAILS, AND CONNECTION CALCULATIONS ARE TO BE PROVIDED, SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE HAVING JURISDICTION OVER THE PROJECT, FOR REVIEW AND APPROVAL. THE STRUCTURAL ENGINEER OF RECORD SHALL BE THE SOLE JUDGE OF ACCEPTANCE OF ALTERNATIVES, AND THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE DETAILS SHOWN ON THESE DRAWINGS.
6. THE CONTRACTOR IS REQUIRED TO SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL. SHOP DRAWINGS ARE TO INCLUDE:
   - A. COORDINATED DIMENSIONS OF MECHANICAL / ELECTRICAL EQUIPMENT REQUIRING SUPPORT, FLOOR AND ROOF PENETRATIONS, EDGES OF METAL DECK, ETC.
   - B. CLEARLY SHOW ALL SHOP WELDS AND SHOP BOLTED CONNECTIONS. CLEARLY SHOW ALL FIELD WELDS AND FIELD BOLTED CONNECTIONS.
   - C. CLEARLY SHOW ALL CUTS, HOLES, COPING, ETC. REQUIRED FOR OTHER TRADES OR EXISTING FIELD CONDITIONS THAT ARE TO BE MADE IN THE SHOP. CUTTING OR BURNING OF MAIN STRUCTURAL STEEL MEMBERS IS NOT PERMITTED IN THE FIELD.
7. THE GENERAL CONTRACTOR OR STEEL FABRICATOR / ERECTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY FABRICATION OR ERECTION ERRORS, OR DEVIATIONS FROM THE CONTRACT DRAWINGS AND RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE. FAILURE TO NOTIFY THE STRUCTURAL ENGINEER IS AT THE CONTRACTOR'S RISK.
8. FIELD WELDING TO THE EXISTING STEEL WILL NOT BE PERMITTED, UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS, AND THE CONTRACTOR SHALL ANTICIPATE USING FIELD DRILLED AND BOLTED CONNECTIONS TO THE EXISTING STEEL. WHEN SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS TO WELD TO EXISTING STEEL, THE EXISTING STEEL FRAMING SHALL BE THOROUGHLY CLEANED TO ENSURE PROPER WELDING PREPARATION. THE CONTRACTOR / STEEL ERECTOR IS REQUIRED TO PROVIDE TEMPORARY SHORING OF THE EXISTING STEEL MEMBER ON BOTH SIDES OF THE WELD LOCATION. SHORING IS TO BE IN PLACE PRIOR TO, FOR THE DURATION OF, AND REMAIN IN PLACE AFTER WELDING HAS BEEN COMPLETED, UNTIL THE WELDS HAVE BEEN INSPECTED BY A CERTIFIED WELDING INSPECTOR (CWI) AND THE INSPECTIONS REPORTS ARE SUBMITTED TO, REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
9. ALL DISSIMILAR METALS SHALL BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND/OR CORROSIVE EFFECTS.

DESIGN CRITERIA - LATERAL LOADS		
WIND DESIGN		
DESCRIPTION	SYMBOL	VALUE
BASIC DESIGN WIND SPEED	V_{ULT}	115 mph
ALLOWABLE STRESS DESIGN WIND SPEED	$V_{ASD} = V_{ULT} \times 0.6$	90 mph
RISK CATEGORY		II
WIND EXPOSURE CATEGORY		B
EARTHQUAKE (SEISMIC) DESIGN		
DESCRIPTION	SYMBOL	VALUE
RISK CATEGORY		II
IMPORTANCE FACTOR	I_e	1.0
SITE CLASSIFICATION		D (DEFAULT)
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS, S_S & S_1	S_s	0.267g
	S_1	0.057g
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS, S_{DS} & S_{D1}	S_{DS}	0.288g
	S_{D1}	0.092g
SEISMIC DESIGN CATEGORY	S_{DC}	B

DESIGN CRITERIA - SNOW LOADS		
DESCRIPTION	SYMBOL	VALUE
GROUND SNOW LOAD	P_g	25 psf
FLAT ROOF SNOW LOAD	P_f	20 psf
SNOW EXPOSURE FACTOR	C_e	1.0
SNOW LOAD IMPORTANCE FACTOR	I_s	1.0
THERMAL FACTOR	C_t	1.0
SLOPE FACTOR	C_s	1.0
SNOW DRIFT	NO NEW OR LARGER DRIFTS ARE CREATED BY THE REPLACEMENT OF THE RTUS	

DESIGN CRITERIA - ROOF LOADS	
DEAD LOADS (SEE NOTE #1)	
DESCRIPTION	VALUE (PSF)
TOTAL DEAD LOAD (PER EXISTING DWGS.)	21
LIVE LOAD	
ROOF LIVE LOAD	20 (30 + DRIFT PER EXISTING DWGS.)

NOTES:
1. SELF WEIGHT OF PRIMARY STRUCTURAL COMPONENTS (BEAMS, SLABS, COLUMNS) ARE INCLUDED SEPARATELY, UNLESS NOTED OTHERWISE ABOVE.

DELEGATED DESIGN

1. ALL DESIGN REQUIREMENTS, LOADING, PERFORMANCE CRITERIA, SUBMISSION STANDARDS AND ANY OTHER APPLICABLE INFORMATION IS LOCATED IN THE GENERAL NOTES, DESIGN DATA, PLANS, SECTIONS, DETAILS AND SPECIFICATIONS (CONSTRUCTION DOCUMENTS) FOR THE DELEGATED DESIGN OF THE COMPONENTS NOTED. BY BIDDING ON THIS PROJECT, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR THE DESIGN OF THE COMPONENTS DELEGATED BY THESE CONTRACT DOCUMENTS AND ACCEPTS THAT THERE IS ADEQUATE INFORMATION SHOWN ON THE CONTRACT DOCUMENTS TO PERFORM THE DELEGATED DESIGN.
2. A BID SUBMISSION THAT DOES NOT INCLUDE THE REQUIRED DELEGATED DESIGN WILL RESULT IN THE REJECTION OF ANY AND ALL CONSTRUCTION PHASE SUBMISSIONS, RFI'S AND SHOP DRAWINGS.
3. THE ARCHITECTURAL AND STRUCTURAL DRAWINGS MAY SHOW DETAILS FOR DELEGATED DESIGN COMPONENTS, INCLUDING MINIMUM OR MAXIMUM ASSEMBLY REQUIREMENTS (I.E. DEPTH, GAGE, LENGTH, SPAN OR SPACING) OR SUGGESTED ATTACHMENT METHODS. THESE DETAILS AND INFORMATION ARE INTENDED TO BE SCHEMATIC IN NATURE, AND ARE NOT INTENDED TO BE USED FOR BID QUANTITIES. THE CONTRACTOR SHALL MAKE ALLOWANCES IN THEIR BID TO ACCOMMODATE THE COST OF THE ACTUAL ASSEMBLIES AFTER DELEGATED DESIGN IS COMPLETE.
4. THE DESIGN OF DELEGATED COMPONENTS IS THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER, WHO MUST BE REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMITTALS SHALL BEAR THIS ENGINEER'S SEAL AND SIGNATURE. THE ENGINEER MUST BE QUALIFIED TO DESIGN THE DESIGNATED ASSEMBLY AND MUST BE ABLE TO DEMONSTRATE PRIOR EXPERIENCE WITH THE DESIGN OF THE ASSEMBLY. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT REQUIREMENTS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES.
5. THE CONTRACTOR SHALL SUBMIT, FOR REVIEW, DRAWINGS AND CALCULATIONS FOR ALL PERFORMANCE ASSEMBLIES IDENTIFIED BELOW.
6. DELEGATED DESIGNS SHALL ALSO BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION AS DEFERRED SUBMITTALS AS PART OF THE PERMIT APPROVAL PROCESS, IF REQUIRED.

DELEGATED DESIGNS:

- A. THE MEP CONTRACTOR SHALL PROVIDE PRE-FABRICATED METAL ROOF CURBS, INCLUDING ANCHORAGE, BELOW ROOF TOP EQUIPMENT. WHERE EQUIPMENT SITS ON STEEL DUNNAGE, ALL ATTACHMENTS BETWEEN THE EQUIPMENT AND THE DUNNAGE SHALL BE PROVIDED BY THE MEP CONTRACTOR. ATTACHMENTS SHALL BE DESIGNED TO SUPPORT THE WEIGHT OF THE EQUIPMENT IN ADDITION TO ALL APPLICABLE LATERAL FORCES. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.

MATERIAL SPECIFICATION - STRUCTURAL STEEL, BOLTS & WELDS	
SECTION TYPE	ASTM SPECIFICATION
WIDE FLANGE, MF SHAPES	ASTM A992, GRADE 50
PLATES, ANGLES, CHANNELS, ETC	ASTM A36
HSS STEEL TUBING (RECTANGULAR, SQUARE & ROUND)	ASTM A500, GRADE C
GALVANIZED STRUCTURAL STEEL: • STRUCTURAL SHAPES & RODS • BOLTS, FASTENERS & HARDWARE	ASTM A123 ASTM A153
HIGH STRENGTH BOLTS, NUTS & WASHER ASSEMBLIES	ALL BOLTS SHALL BE A MINIMUM 3/4" Ø, UNO ASTM F3125 BOLTS / ASSEMBLIES - (INCLUSIVE OF PREVIOUS ASTMS - A325, A490, F1852 AND F2280) ASTM A563 NUTS ASTM F436 WASHERS OR ASTM F959 DIRECT TENSION INDICATING (DTI) WASHERS
WELDING ELECTRODES	UTILIZE TO KSI MINIMUM STRENGTH, LOW HYDROGEN SERIES ELECTRODE / WIRE, UNO PERMITTED WELDING PROCESS • SHIELDED METAL ARC WELDING (SMAW) - E70XX ELECTRODES • GAS METAL ARC WELDING (GMAW) - ER70S-X FLUX-CORED WIRE

STRUCTURAL ABBREVIATIONS

ADDL	ADDITIONAL
AR	ANCHOR ROD
APPROX	APPROXIMATE
AVG	AVERAGE
ALT	ALTERNATE
ARCH	ARCHITECT / ARCHITECTURAL
BP	BASE PLATE / BEARING PLATE
BM	BEAM
BF	BRACED FRAME
BS	BOTH SIDES
BLDG	BUILDING
BOT	BOTTOM
B/	BOTTOM OF
CANT	CANTILEVER
CC	CENTER TO CENTER
CL	CENTER LINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CM	CONSTRUCTION MANAGER
CMU	CONCRETE MASONRY UNIT
CONN/CONNX	CONNECTION
CONSTR	CONSTRUCTION
CJ	CONSTRUCTION JOINT / CONTROL JOINT
CONT	CONTINUOUS
DBA	DEFORMED BARE ANCHOR
DEMO	DEMOLITION
DET	DETAIL
DIA / Ø	DIAMETER
DIM	DIMENSION
DWG	DRAWING(S)
EF	EACH FACE
EW	EACH WAY
ELEV	ELEVATION
EMBED	EMBEDDED / EMBEDMENT
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
EXST	EXISTING
EXP	EXPANSION
EJ	EXPANSION JOINT
FIS	FAR SIDE
FT	FEET
FLR	FLOOR
FD	FLOOR DRAIN
FTG	FOOTING(S)
FND	FOUNDATION
GALV	GALVANIZED
GA	GAGE
GC	GENERAL CONTRACTOR
GR	GRADE
HR	HAND RAIL
H&R	HANGER
HP	HIGH POINT
HORZ	HORIZONTAL
IF	INSIDE FACE
IN	INCHES
INFO	INFORMATION
ISO	ISOLATION JOINT
JT	JOINT
K	KIP(S) = 1000 LBS
KB	KNEE BRACE
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LP	LOW POINT
LBS / #	POUNDS
LW	LIGHTWEIGHT
MFR	MANUFACTURER
MAX	MAXIMUM
MEP	MECHANICAL / ELECTRICAL / PLUMBING
MIN	MINIMUM
MISC	MISCELLANEOUS
MC	MOMENT CONNECTION
NS	NEAR SIDE
NH	NORMAL HEIGHT
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OF	OUTSIDE FACE
OPP	OPPOSITE
OPNG	OPENING
PERP	PERPENDICULAR
PL	PLATE
PROJ	PROJECTION
QTY	QUANTITY
R	RADIUS
REF	REFERENCE
REINF	REINFORCE(D)
REQD	REQUIRED
REV	REVISION
SCH	SCHEDULE
SECT	SECTION
SER	STRUCTURAL ENGINEER OF RECORD
SF	STEP FOOTING
SIM	SIMILAR
SOG	SLAB ON GRADE
SSOG	STRUCTURED SLAB ON GRADE
SOMD	SLAB ON METAL DECK
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STIFF	STIFFENER
STRUCT	STRUCTURAL
TEMP	TEMPORARY
THK	THICK
T&G	TONGUE AND GROOVE
T&B	TOP AND BOTTOM
T/	TOP OF
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WWR / WWF	WELDED WIRE REINFORCING / WELDED WIRE FABRIC
WF	WIDE FLANGE
WP	WORK POINT

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GERRY B. GREEN PLAZA ALTERATIONS

200 WEST 2ND STREET
PLAINFIELD, NJ

PROJECT NO. 158-25-001

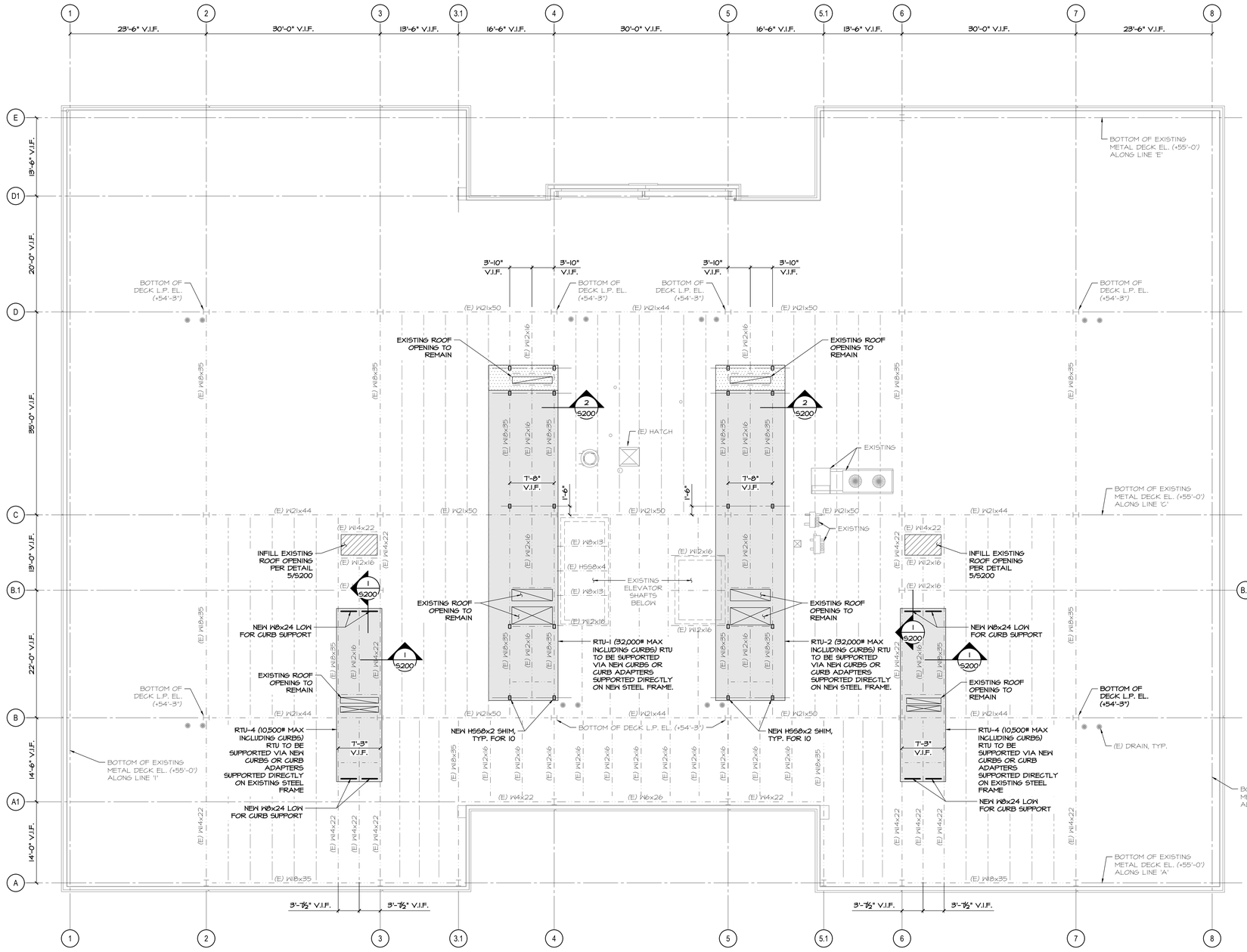
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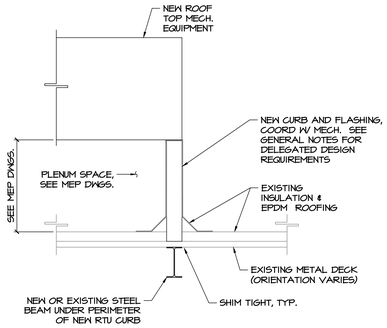
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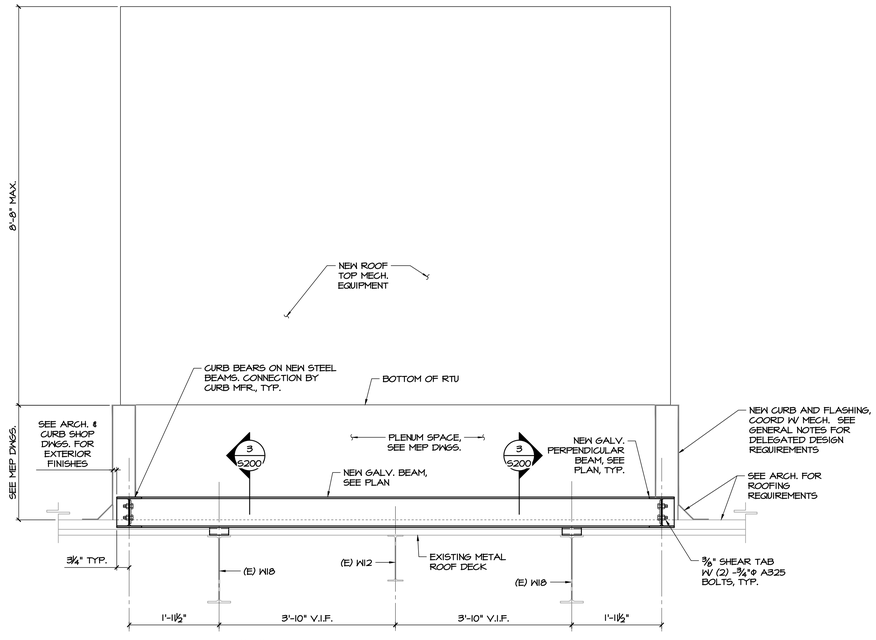
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DWG NAME: C:\Documents\CAD\RSC\2025\01 Union County Green Bldg Arch\CD\Structural\S001 Notes.dwg LAYOUT: S001


1
2
3
3.1
4
5
5.1
6
7
8
23'-6" V.I.F.
30'-0" V.I.F.
13'-6" V.I.F.
16'-6" V.I.F.
13'-6" V.I.F.
30'-0" V.I.F.
23'-6" V.I.F.
E
D1
D
C
B.1
B
A1
A
13'-6" V.I.F.
20'-0" V.I.F.
35'-0" V.I.F.
18'-0" V.I.F.
22'-0" V.I.F.
14'-6" V.I.F.
14'-0" V.I.F.
BOTTOM OF DECK L.P. EL. (+54'-3")
BOTTOM OF EXISTING METAL DECK EL. (+55'-0") ALONG LINE 'E'
BOTTOM OF EXISTING METAL DECK EL. (+55'-0") ALONG LINE 'C'
BOTTOM OF EXISTING METAL DECK EL. (+55'-0") ALONG LINE '1'
BOTTOM OF EXISTING METAL DECK EL. (+55'-0") ALONG LINE '5'
BOTTOM OF EXISTING METAL DECK EL. (+55'-0") ALONG LINE 'A'
3'-10" V.I.F.
7'-8" V.I.F.
1'-6"
3'-7½" V.I.F.
EXISTING ROOF OPENING TO REMAIN
INFILL EXISTING ROOF OPENING PER DETAIL 5/5200
NEW W8x24 LOW FOR CURB SUPPORT
RTU-1 (32,000# MAX INCLUDING CURBS) RTU TO BE SUPPORTED VIA NEW CURBS OR CURB ADAPTERS SUPPORTED DIRECTLY ON NEW STEEL FRAME.
RTU-2 (32,000# MAX INCLUDING CURBS) RTU TO BE SUPPORTED VIA NEW CURBS OR CURB ADAPTERS SUPPORTED DIRECTLY ON NEW STEEL FRAME.
RTU-4 (10,500# MAX INCLUDING CURBS) RTU TO BE SUPPORTED VIA NEW CURBS OR CURB ADAPTERS SUPPORTED DIRECTLY ON EXISTING STEEL FRAME
NEW HSS6x2 SHIM, TYP. FOR 10
EXISTING ELEVATOR SHAFTS BELOW
(E) HATCH
EXISTING
(E) W21x50
(E) W21x44
(E) W18x35
(E) W12x16
(E) W14x22
(E) W8x13
(E) HSS8x4
(E) W6x26
(E) W4x22
(E) W18x35
(E) W18x35
(E) W18x35



1 TYPICAL ROOF CURB DETAIL

SCALE: N.T.S.

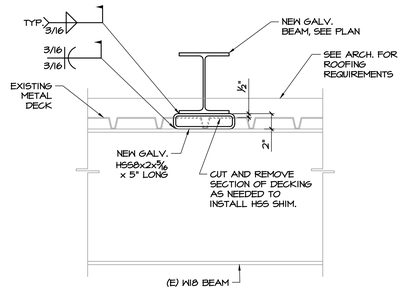


NOTES:

1. REFER TO ARCH. & M.E.P. DRAWINGS FOR DIMENSIONS NOT SHOWN.
2. BOTTOM OF NEW W8 DUNNAGE BEAMS TO BE 0'-0 ½" ABOVE EXISTING METAL ROOF DECK.

2

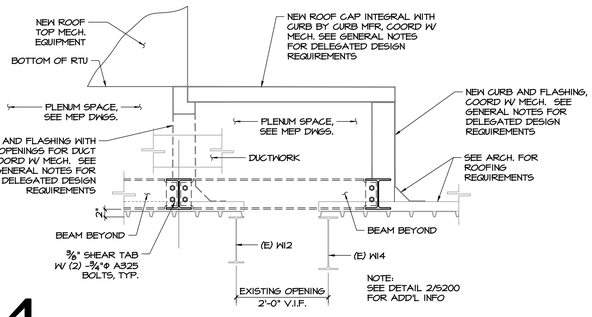
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NOTE:
CURB AND RTU NOT SHOWN FOR CLARITY

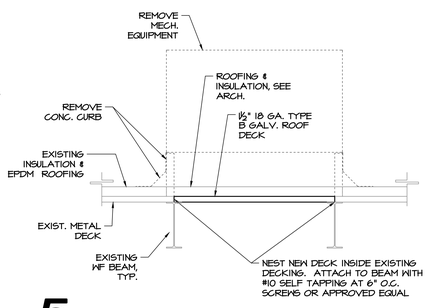
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SCALE: N.T.S.



4

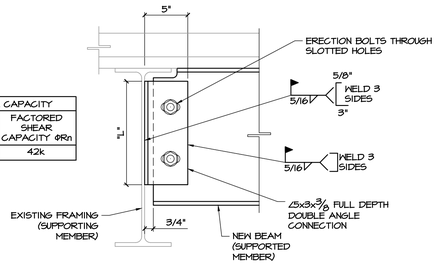
SCALE: N.T.S.



5 EXISTING OPENING INFILL

SCALE: N.T.S.

CONNECTION SHEAR CAPACITY		
BEAM SIZE	DIM "L"	FACTORED SHEAR CAPACITY ΦRn
W8	5½"	42k



6 NEW BEAM TO EXISTING BEAM DOUBLE ANGLE SHEAR CONNECTION

SCALE: N.T.S.

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REV	DESCRIPTION	DATE
-	BID SET	06/16/2025

DRAWING TITLE

STRUCTURAL SECTIONS AND DETAILS

CHECKED BY: RES DRAWN BY: KGM

DRAWING No.

S200

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