

OFFICE EXPANSION at: THE RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



Mark A. Furcolo, Director

February 22, 2024



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

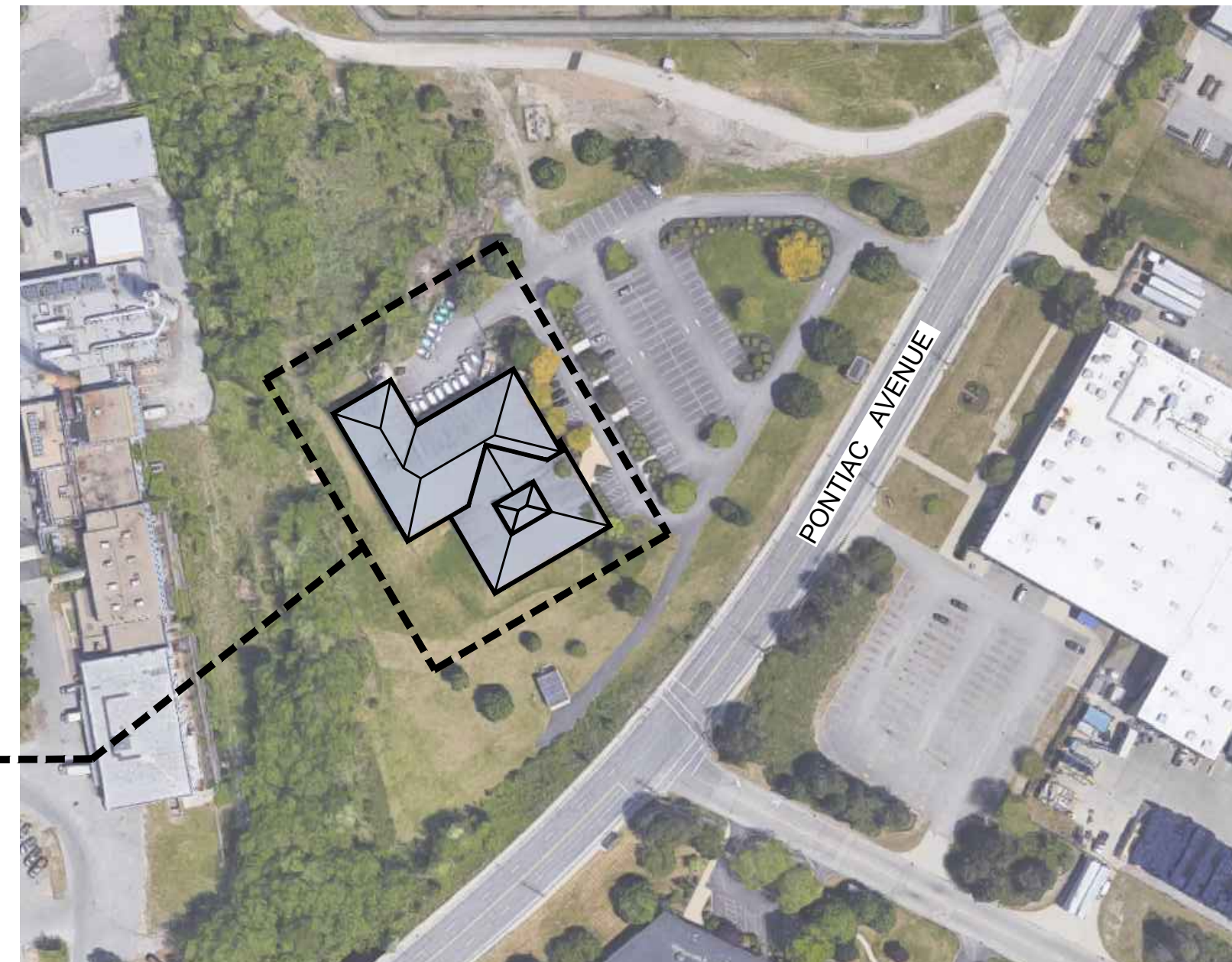
2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

BUILDING ENGINEERING RESOURCES, INC.

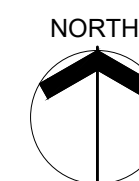
PLUMBING, FIRE PROTECTION, MECHANICAL,
& ELECTRICAL ENGINEERS
Warwick, Rhode Island

PROJECT LOCATION:

THE RI LOTTERY BUILDING
1425 PONTIAC AVE, CRANSTON, RI



LOCUS MAP
NOT TO SCALE

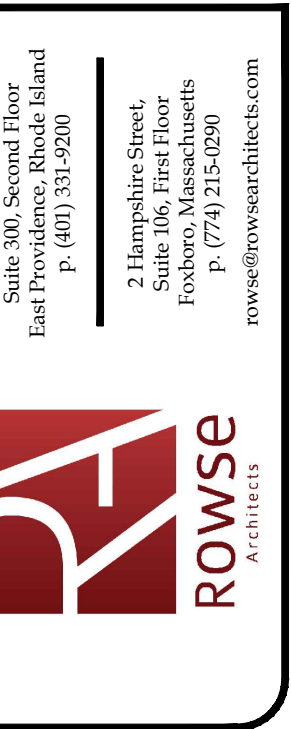


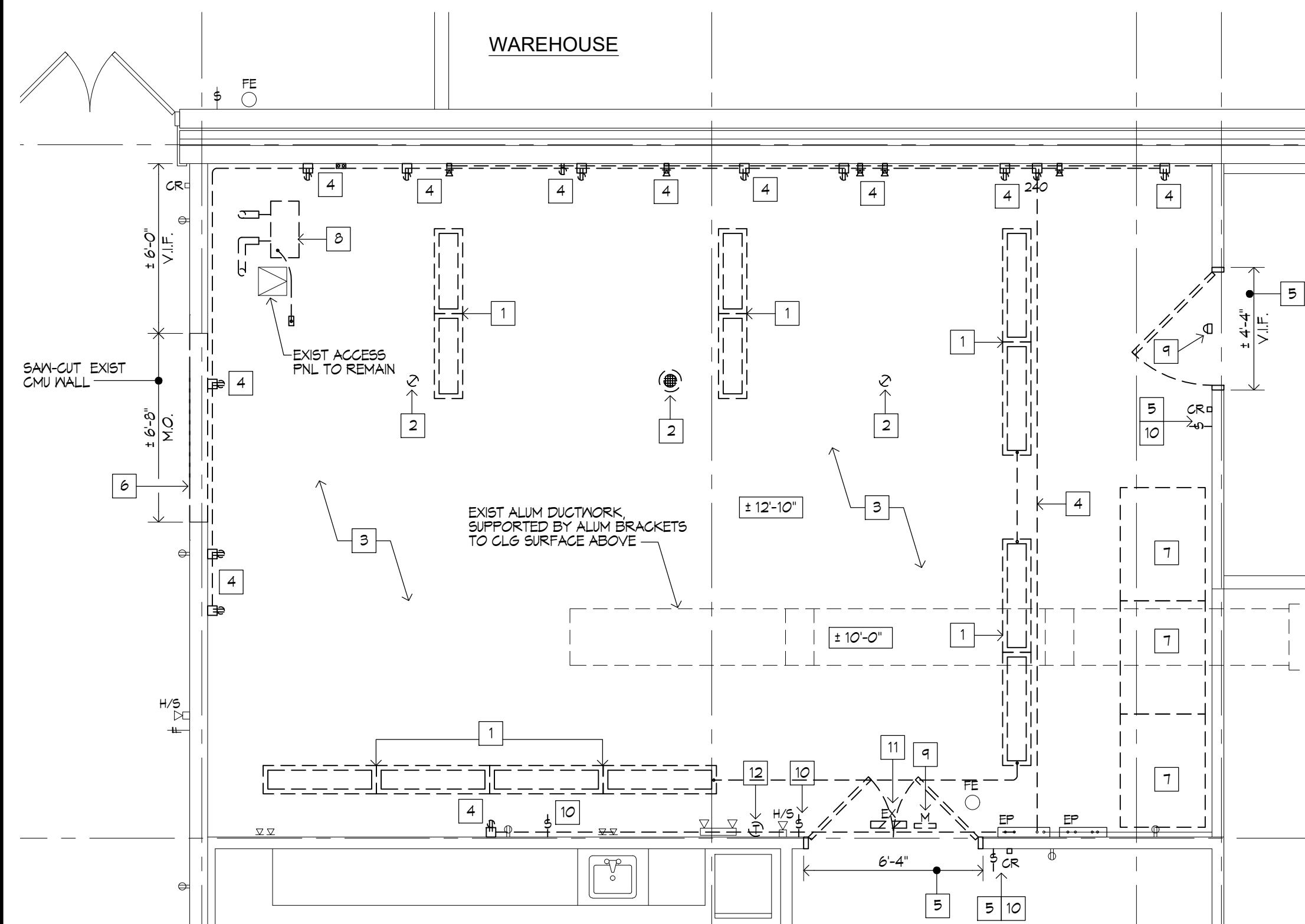
LIST OF DRAWINGS

T1	TITLE SHEET	1 OF 16
ARCHITECTURAL		
A0.0	ABBREVIATIONS, LEGEND, NOTES, AND WALL TYPES	2 OF 16
A1.0	PARTIAL NEW/ DEMOLITION FLOOR AND CEILING PLANS	3 OF 16
A1.1	SECURITY OFFICE PLANS, INTERIOR ELEVATION, SECTIONS AND DETAILS	4 OF 16
MECHANICAL		
M0.1	MECHANICAL - LEGEND, NOTES, SCHEDULES AND DETAILS	5 OF 16
M1.1	MECHANICAL - PARTIAL DEMOLITION FLOOR PLANS	6 OF 16
M2.1	MECHANICAL - PARTIAL RENOVATION FLOOR PLANS	7 OF 16
M3.1	MECHANICAL - SPECIFICATIONS	8 OF 16
ELECTRICAL		
E0.0	ELECTRICAL LEGEND, NOTES & ABBREVIATIONS	9 OF 16
E1.0	PARTIAL DEMOLITION FLOOR PLANS - LIGHTING & POWER	10 OF 16
E2.0	PARTIAL NEW FLOOR PLANS - LIGHTING	11 OF 16
E3.0	PARTIAL NEW FLOOR PLANS - POWER	12 OF 16
E4.0	ELECTRICAL SCHEDULES	13 OF 16
E5.0	ELECTRICAL SPECIFICATIONS	14 OF 16
FIRE ALARM		
FA0.0	FIRE ALARM LEGEND & RISER DIAGRAM	15 OF 16
FA1.0	PARTIAL DEMOLITION FLOOR PLANS - FIRE ALARM	16 OF 16

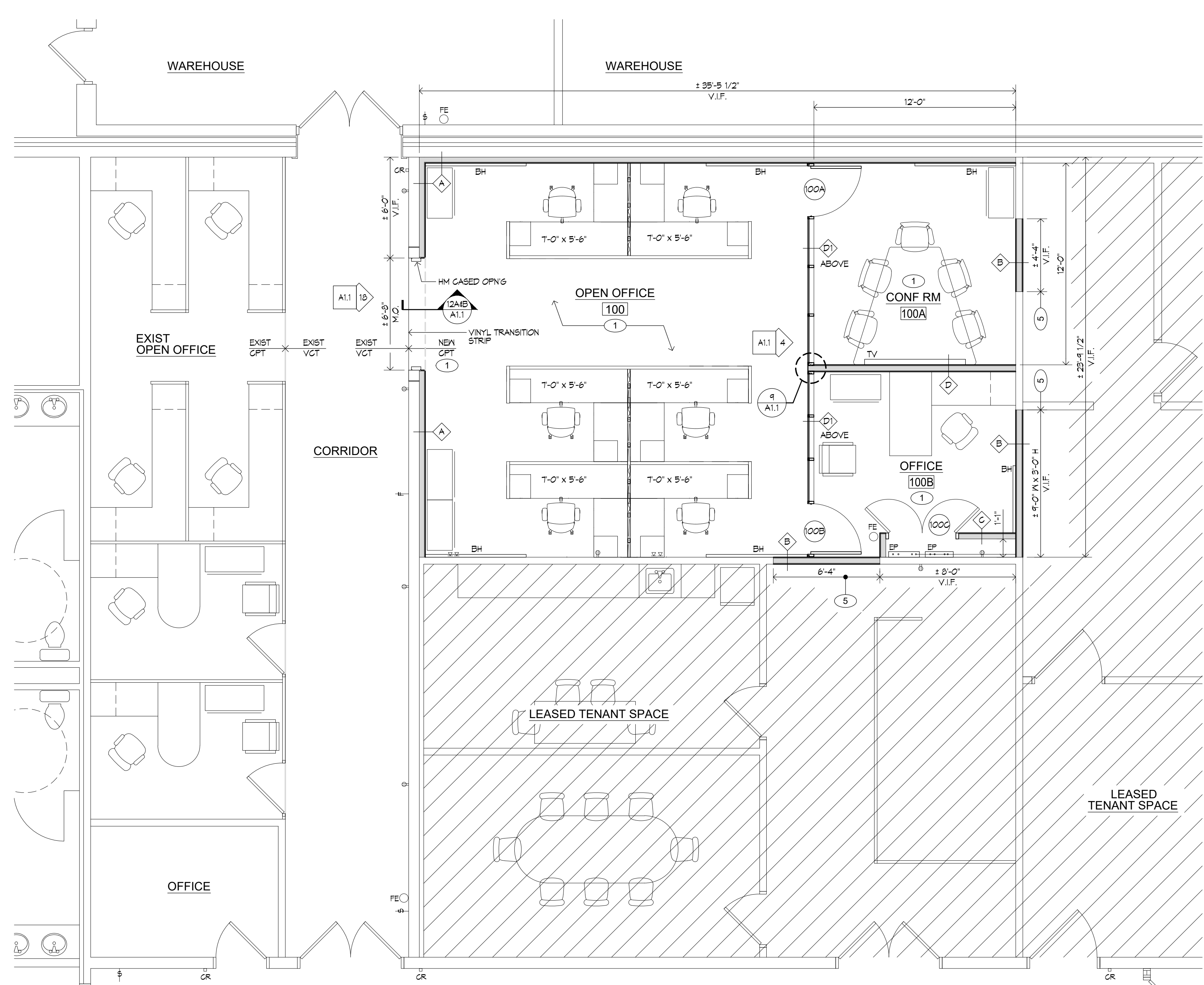
OFFICE EXPANSION at:
THE RHODE ISLAND LOTTERY BUILDING
1425 Pontiac Avenue Cranston, Rhode Island 02920

SET NUMBER
6
February 22, 2024

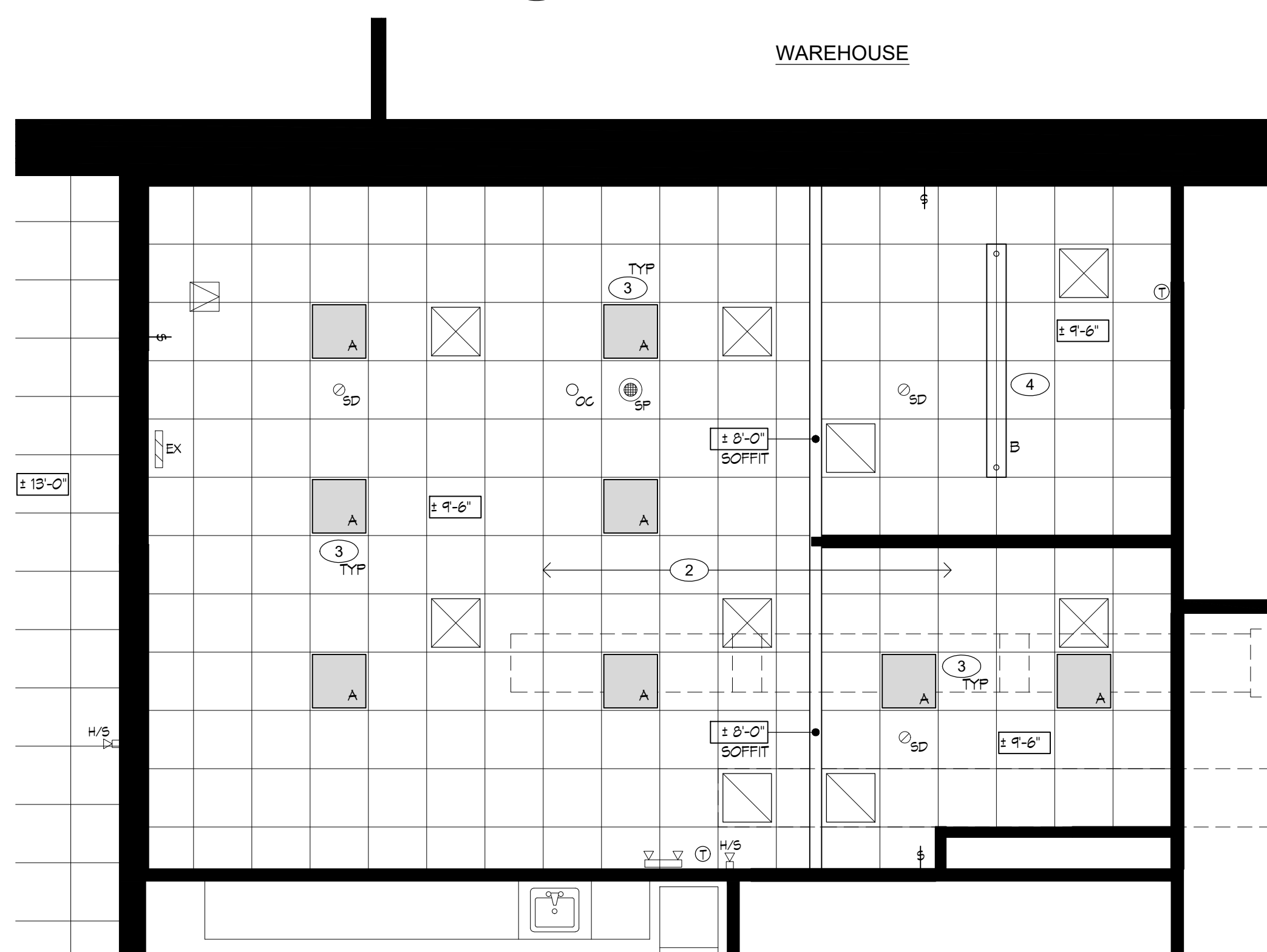




2
PARTIAL EXISTING/
DEMOLITION CEILING/ FLOOR PLAN
SCALE: 1/4" = 1'-0"



1
PARTIAL
NEW FLOOR PLAN
SCALE: 1/4" = 1'-0"



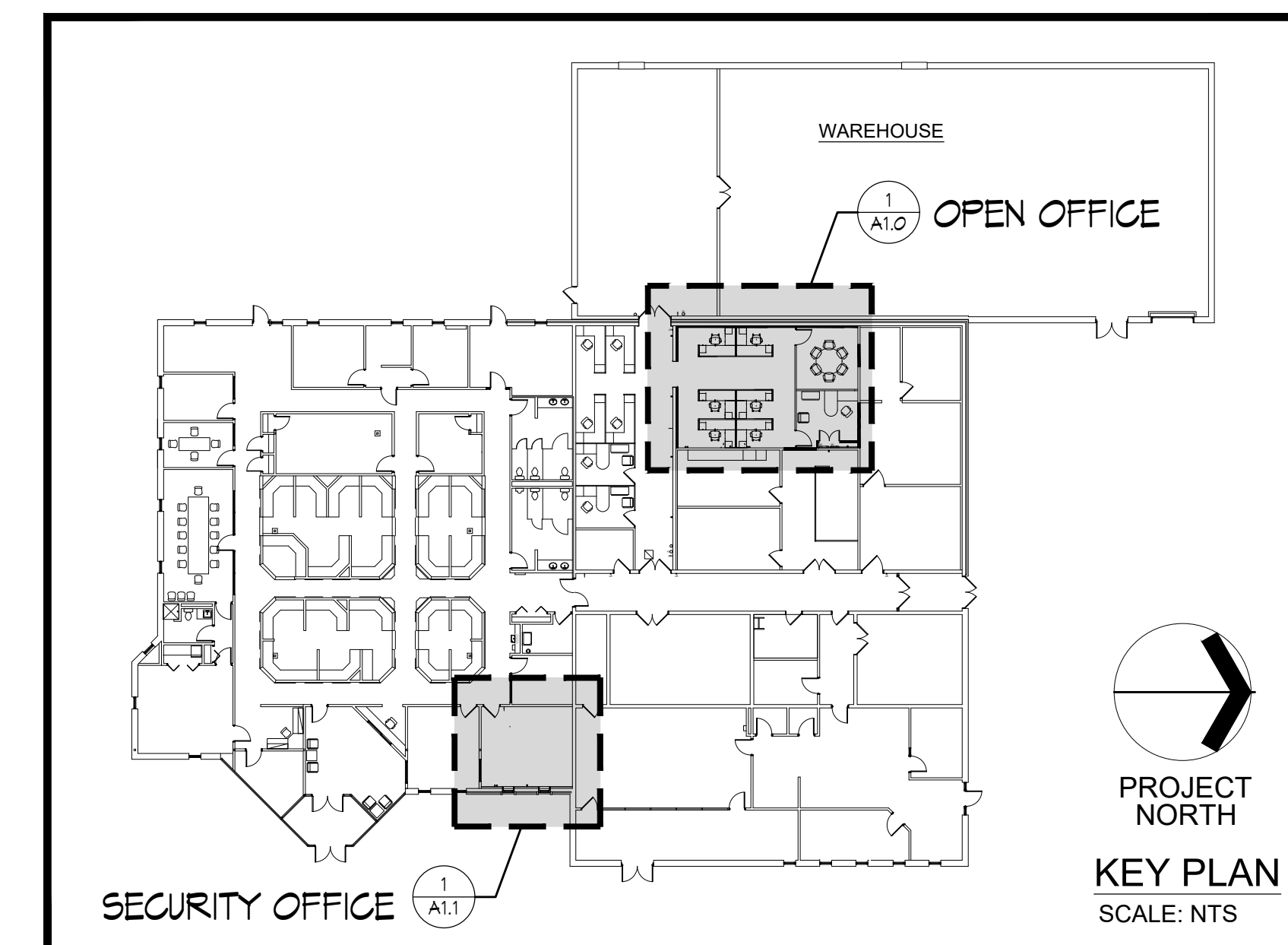
3
PARTIAL
NEW CEILING PLAN
SCALE: 1/4" = 1'-0"

CEILING/ PLAN LEGEND

	2'-0" x 2'-0" ACOUSTICAL CEILING TILE AND GRID SYSTEM - AS SPECIFIED EXISTING TO REMAIN AT SECURITY OFFICE ONLY		SPEAKER - EXISTING TO BE EXTENDED AND RELOCATED		SECURITY CAMERA - EXISTING TO BE REMOVED
	EXISTING RECESSED LIGHT FIXTURE TO REMAIN		EXISTING SPEAKER - TO REMAIN		EXIT SIGN, WALL/ CEILING MOUNTED - EXISTING TO BE RELOCATED
	2'-0" x 2'-0" LED TROFFER, MODEL NO. 'ZR22' MANUFACTURED BY CREE OR EQUAL		SPEAKER - NEW		EMERGENCY LIGHT - EXISTING TO REMAIN
	8'-0" LED PENDANT LIGHT FIXTURE		SMOKE DETECTORS - EXISTING TO BE EXTENDED AND RELOCATED		HORN STROBE - EXISTING TO REMAIN
	NEW/ RELOCATED LIGHT SWITCH		EXISTING SMOKE DETECTOR - TO REMAIN		THERMOSTAT
	NEW/ RELOCATED HVAC DIFFUSERS		SMOKE DETECTOR - NEW		ELECTRIC BASEBOARD HEATER
					MONITOR - N.I.C.

HATCH LEGEND

	DENOTES EXISTING OCCUPIED TENANT SPACE THAT IS NOT IN CONTRACT (N.I.C.) - NO WORK THIS AREA
--	---



PROJECT
NORTH
KEY PLAN
SCALE: NTS

OFFICE EXPANSION
at:
TheLot
Your Rhode Island Lottery

**RHODE ISLAND
LOTTERY BUILDING**

1425 Pontiac Avenue
Cranston, Rhode Island 02920

ROWSE
Architects
400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200
2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE, AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND AIE FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED. THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



Date: FEBRUARY 22, 2024

Drawn by: PAB Proj. Mgr.: BEG

Revisions

No.	Date	Description

**PARTIAL NEW
FLOOR & CEILING PLAN**

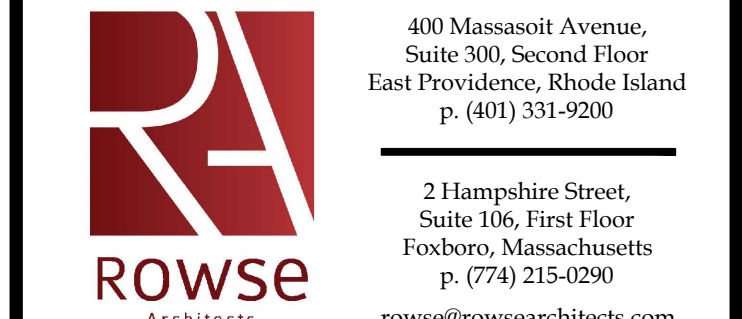
A1.0

OFFICE EXPANSION



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND AIE FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED. THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNERS OPERATIONS STOP.

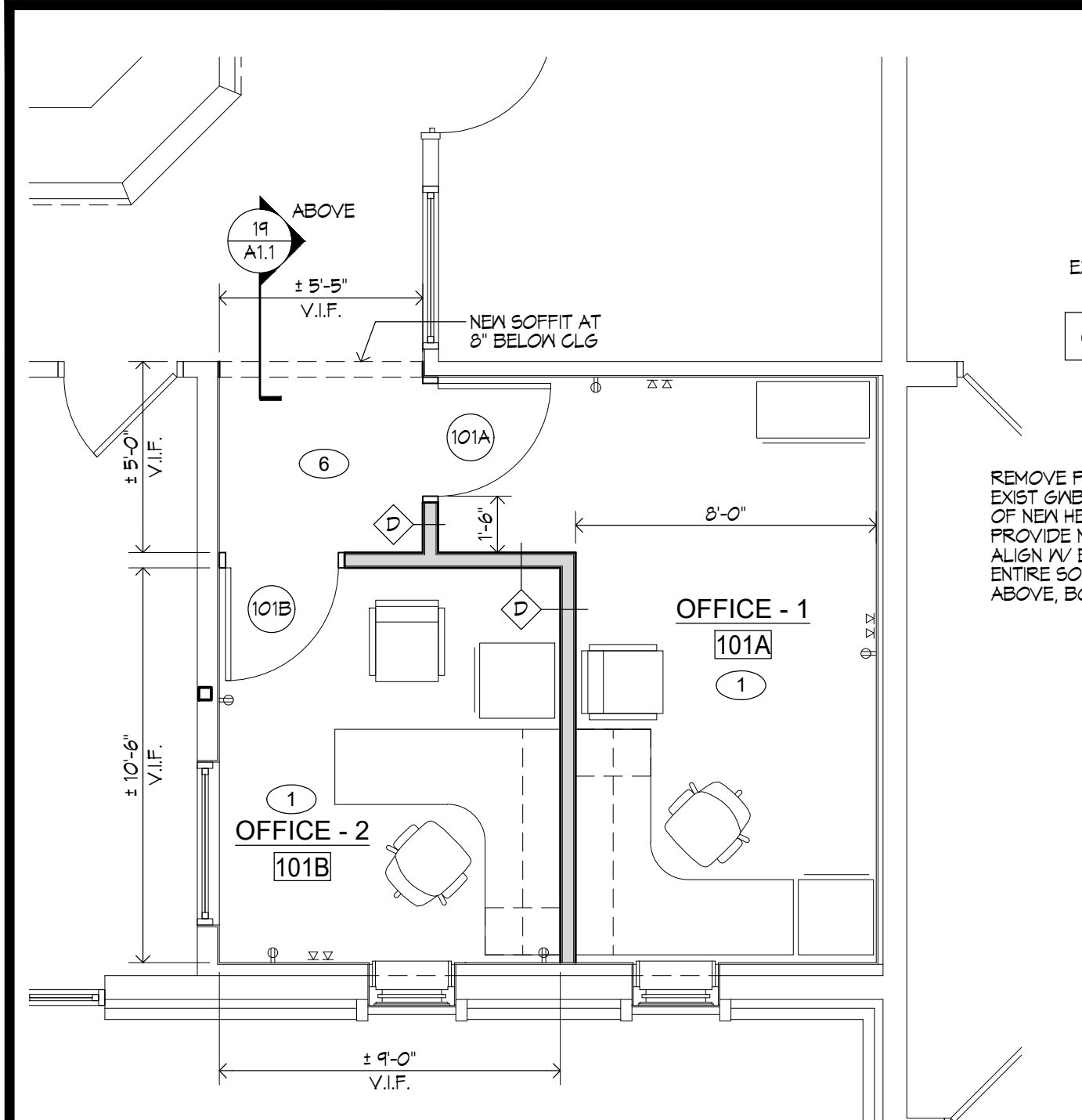


Date: FEBRUARY 22, 2024
 Drawn by: PAB Proj. Mgr.: BEG
 Revisions

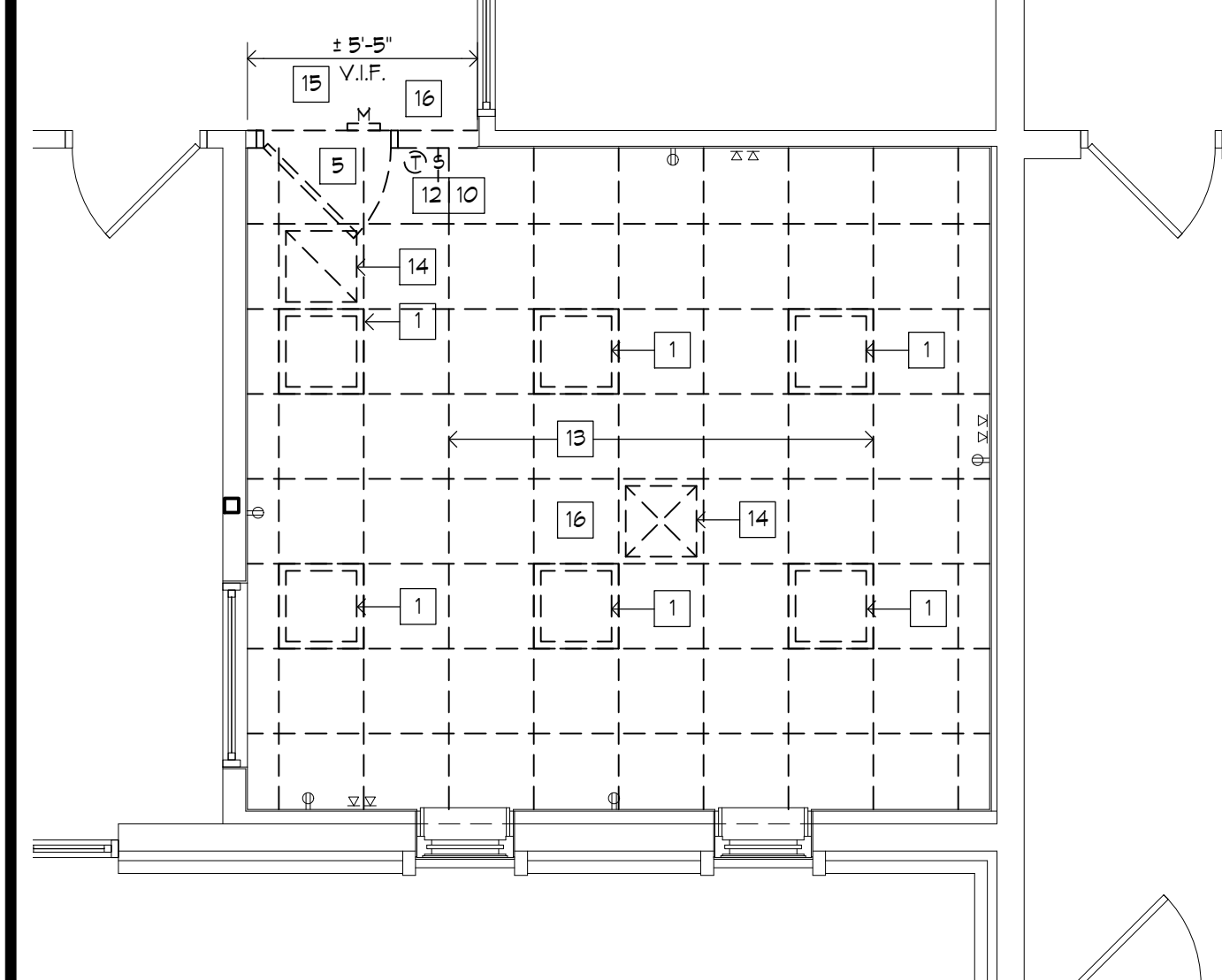
No.	Date	Description

INTERIOR ELEVATION, SECTIONS, DETAILS & SECURITY OFFICE PLANS

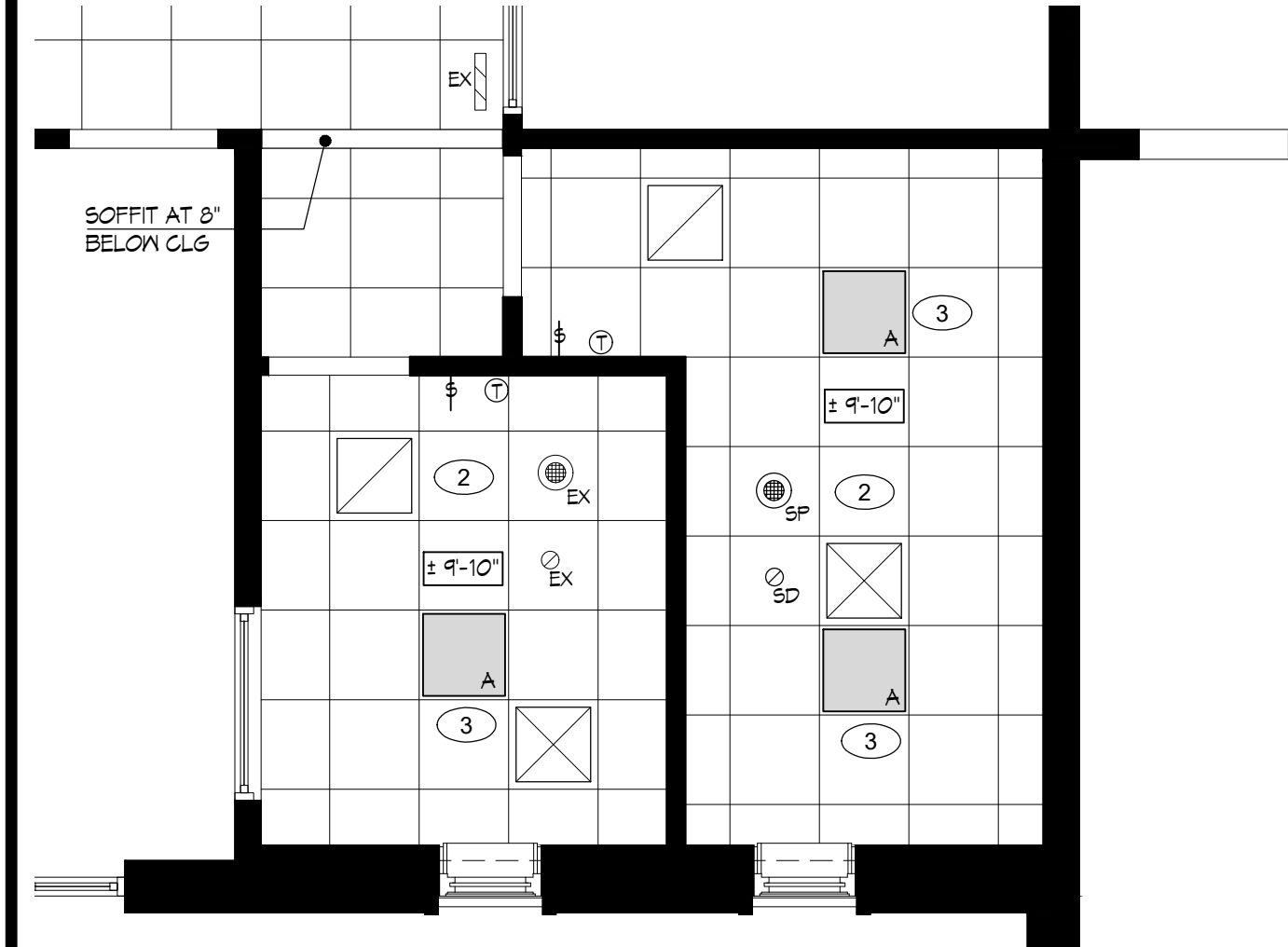
A1.1



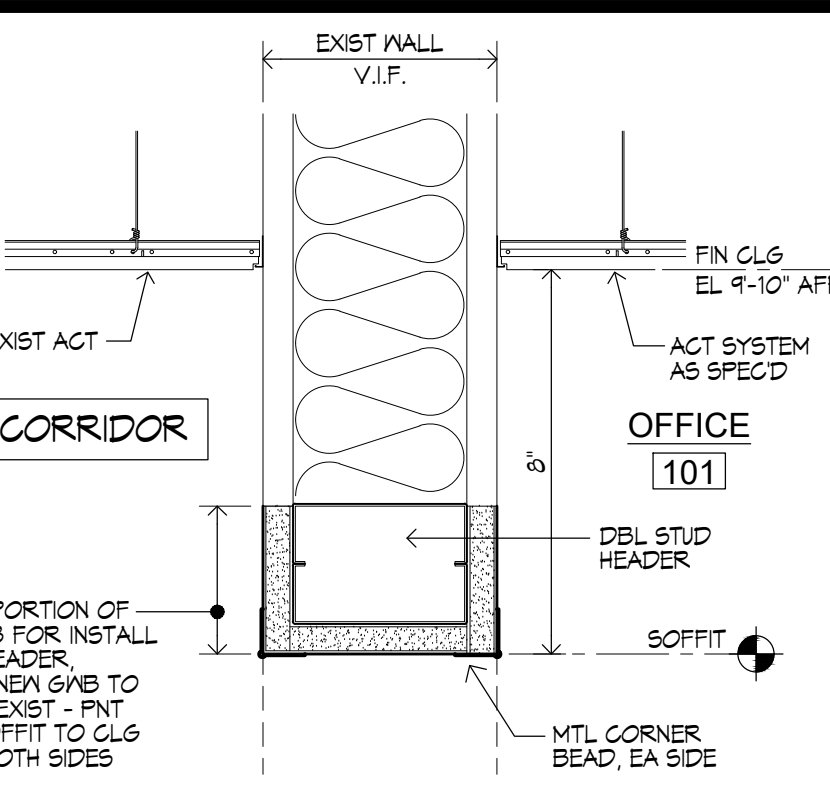
1 PARTIAL NEW FLOOR PLAN
 A1.1 SCALE: 1/4" = 1'-0" SECURITY OFFICE



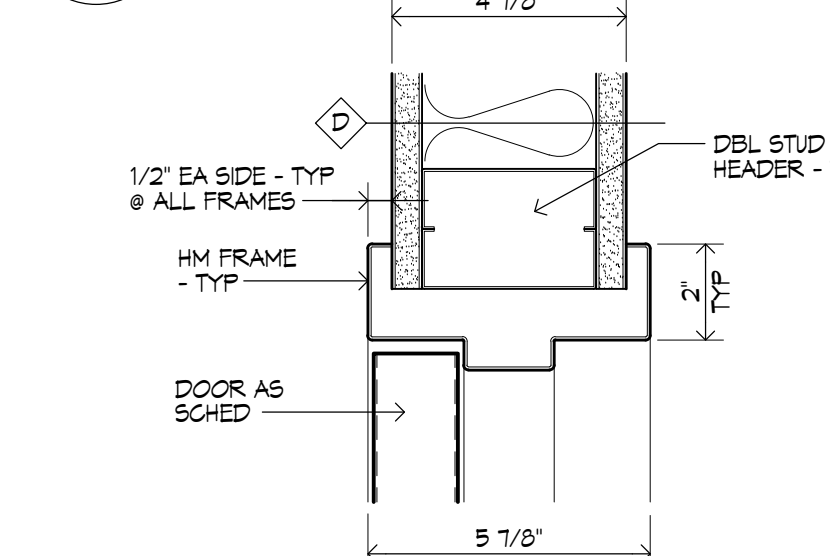
2 PARTIAL EXISTING/DEMOLITION CEILING/FLOOR PLAN
 A1.1 SCALE: 1/4" = 1'-0" SECURITY OFFICE



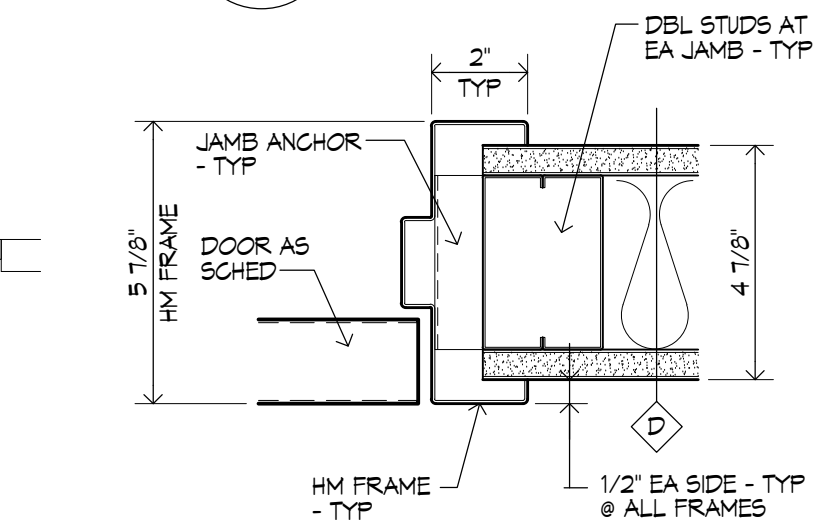
3 PARTIAL NEW CEILING PLAN
 A1.1 SCALE: 1/4" = 1'-0" SECURITY OFFICE



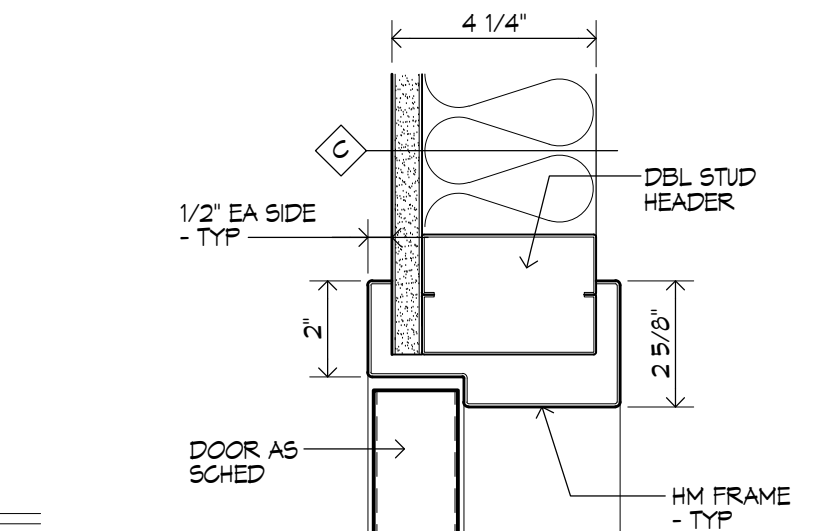
19 SOFFIT DETAIL
 A1.1 3" = 1'-0"



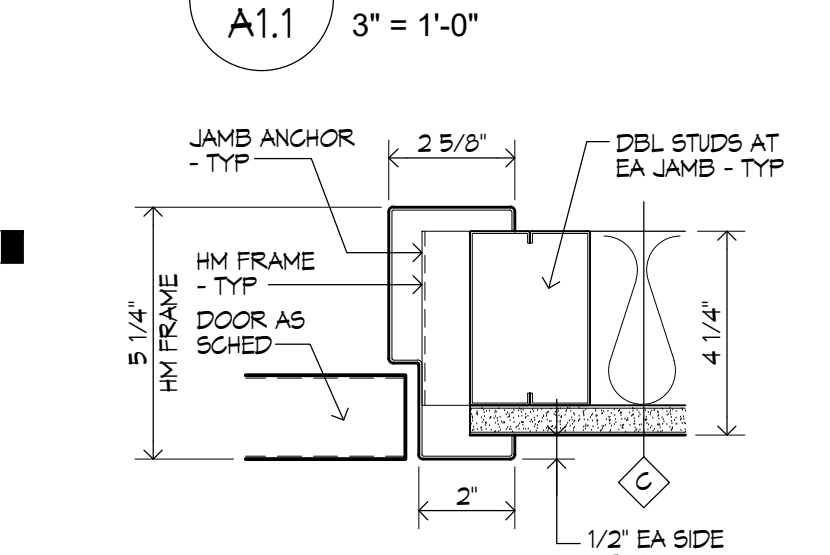
11 HEAD DETAIL
 A1.1 3" = 1'-0"



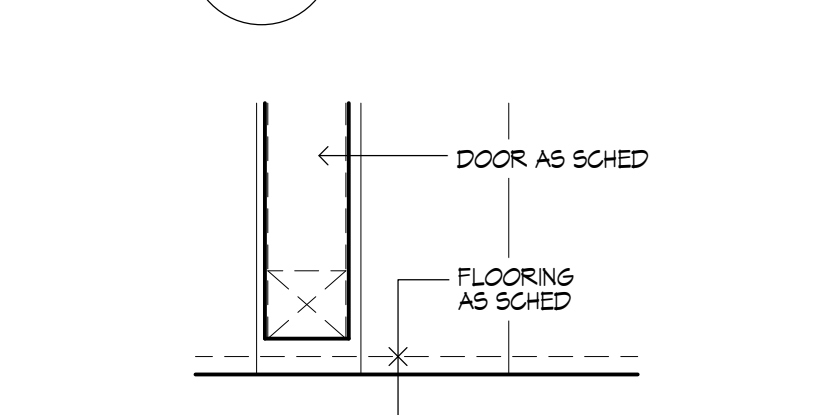
13 HEAD DETAIL
 A1.1 3" = 1'-0"



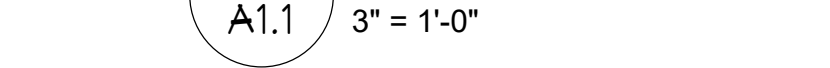
14 JAMB DETAIL
 A1.1 3" = 1'-0"



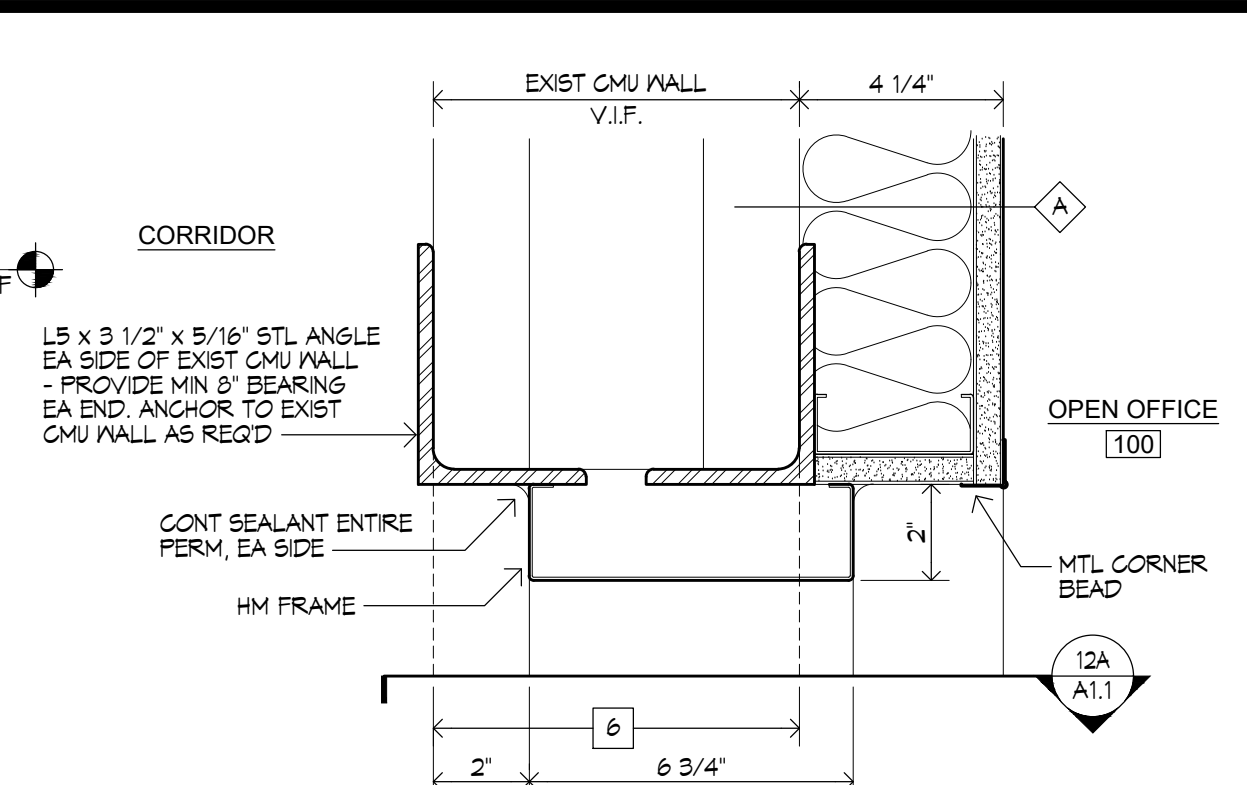
15 HEAD DETAIL
 A1.1 3" = 1'-0"



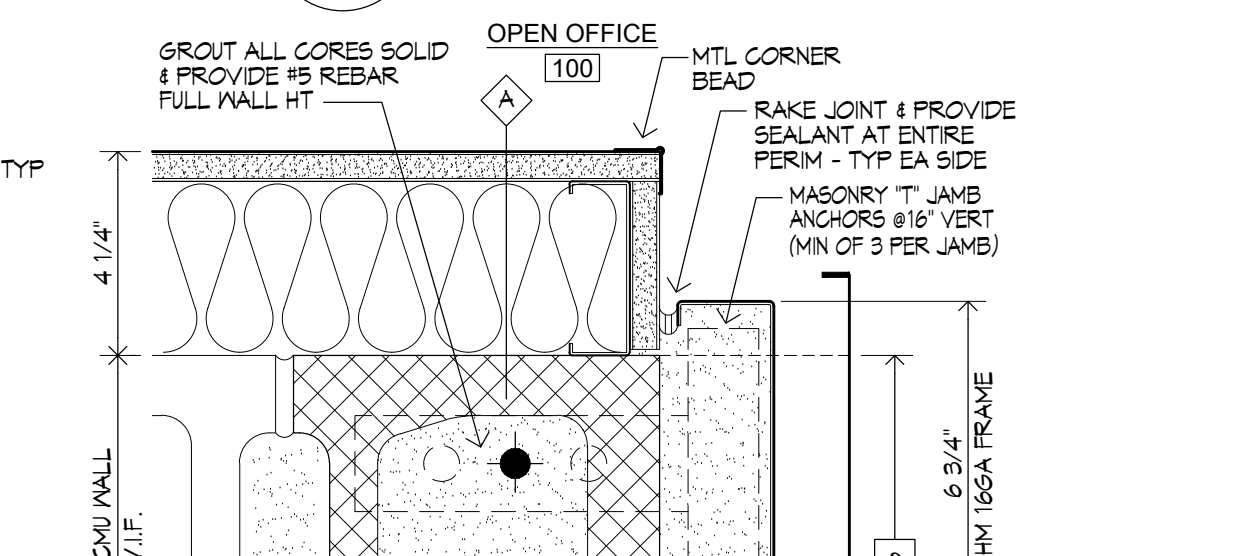
16 JAMB DETAIL
 A1.1 3" = 1'-0"



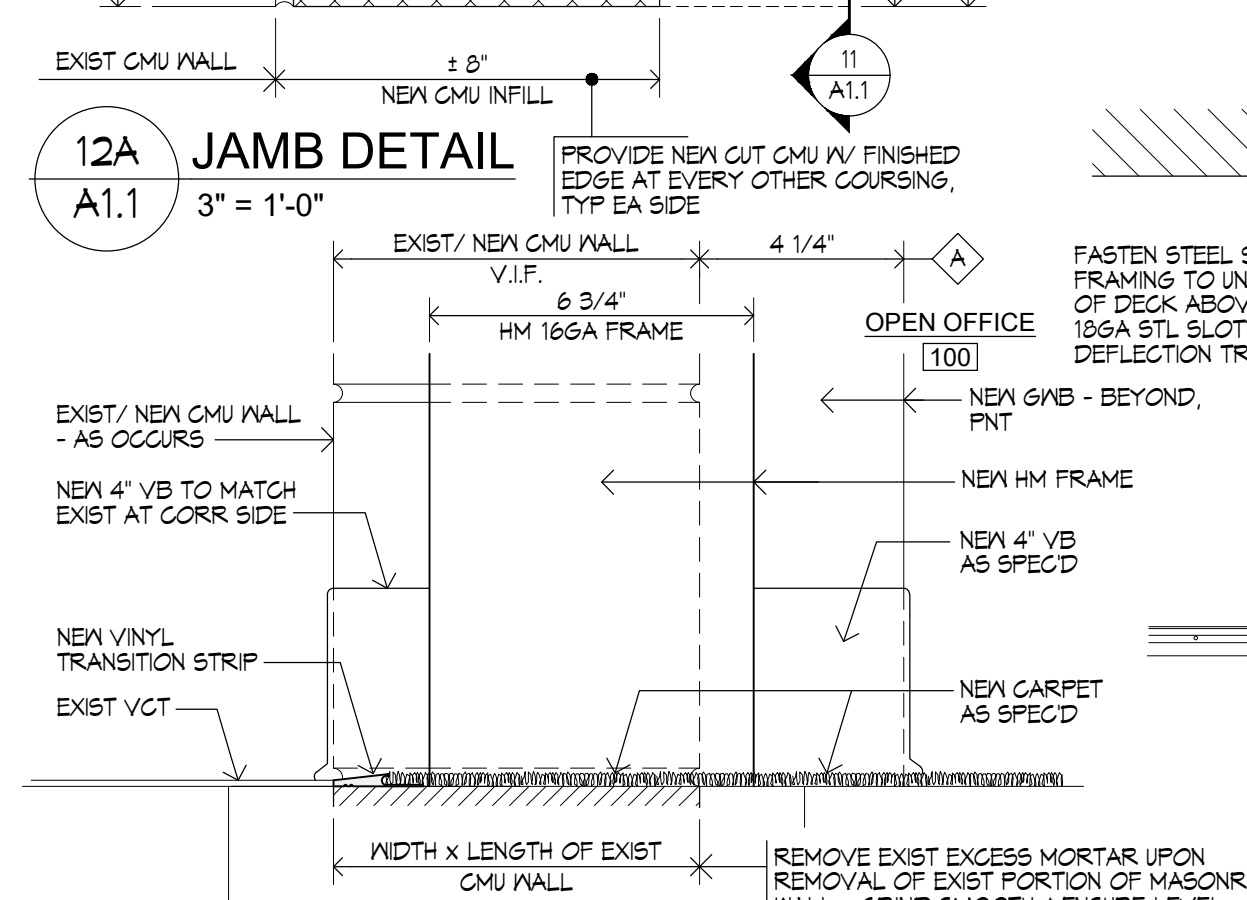
17 SILL DETAIL
 A1.1 3" = 1'-0"



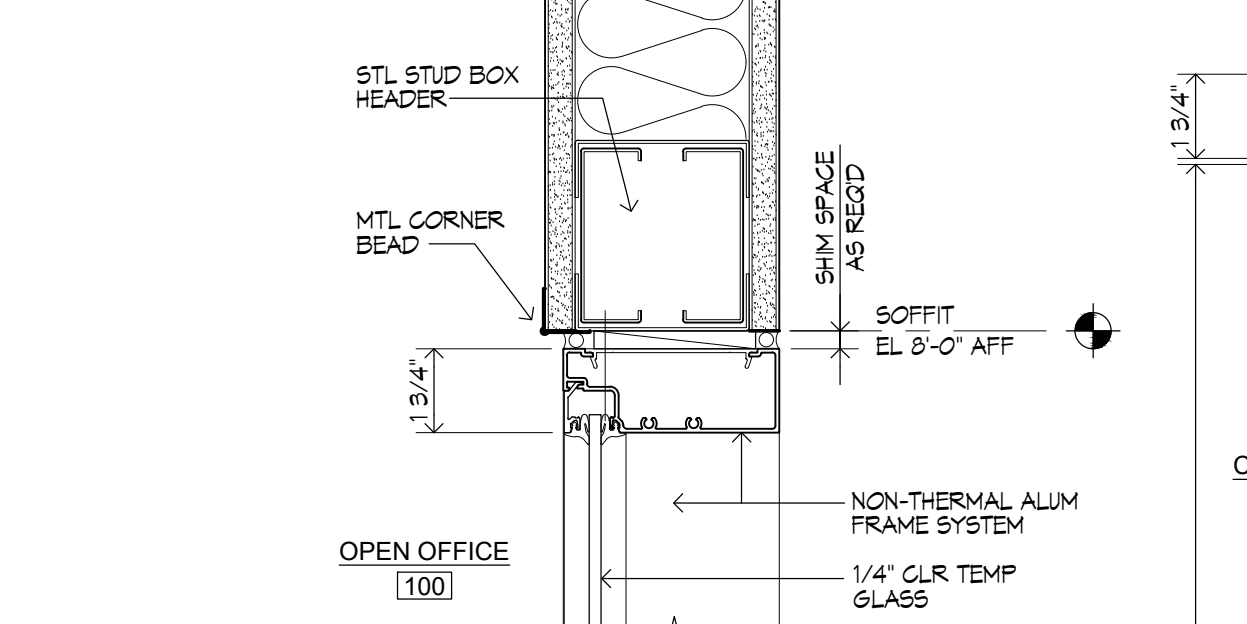
11 HEAD DETAIL
 A1.1 3" = 1'-0"



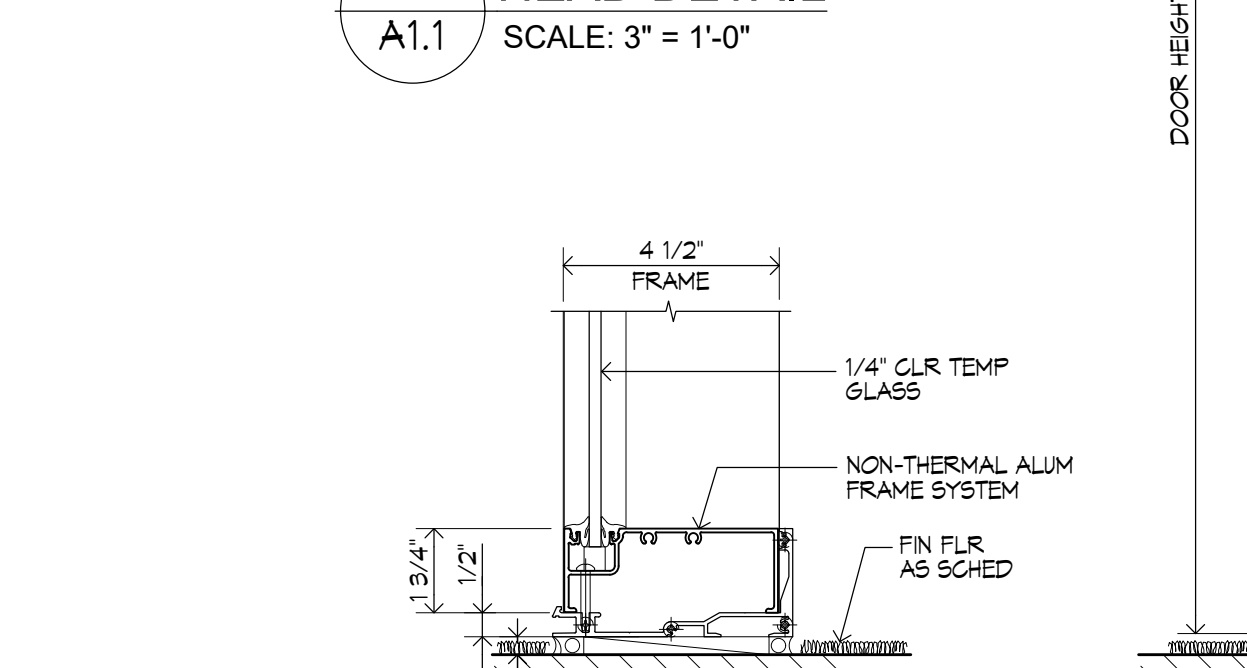
12A JAMB DETAIL
 A1.1 3" = 1'-0"



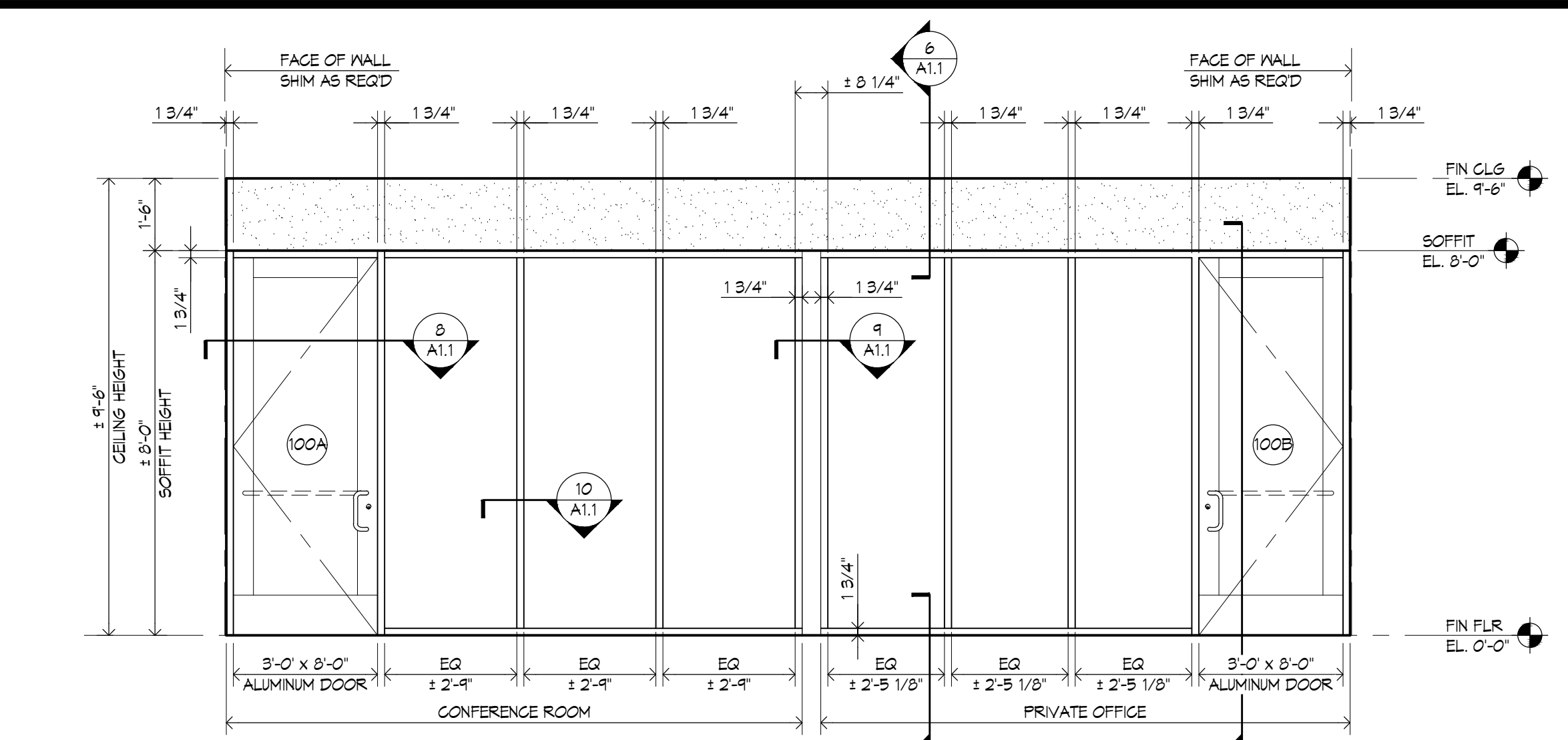
12B SILL DETAIL
 A1.1 3" = 1'-0"



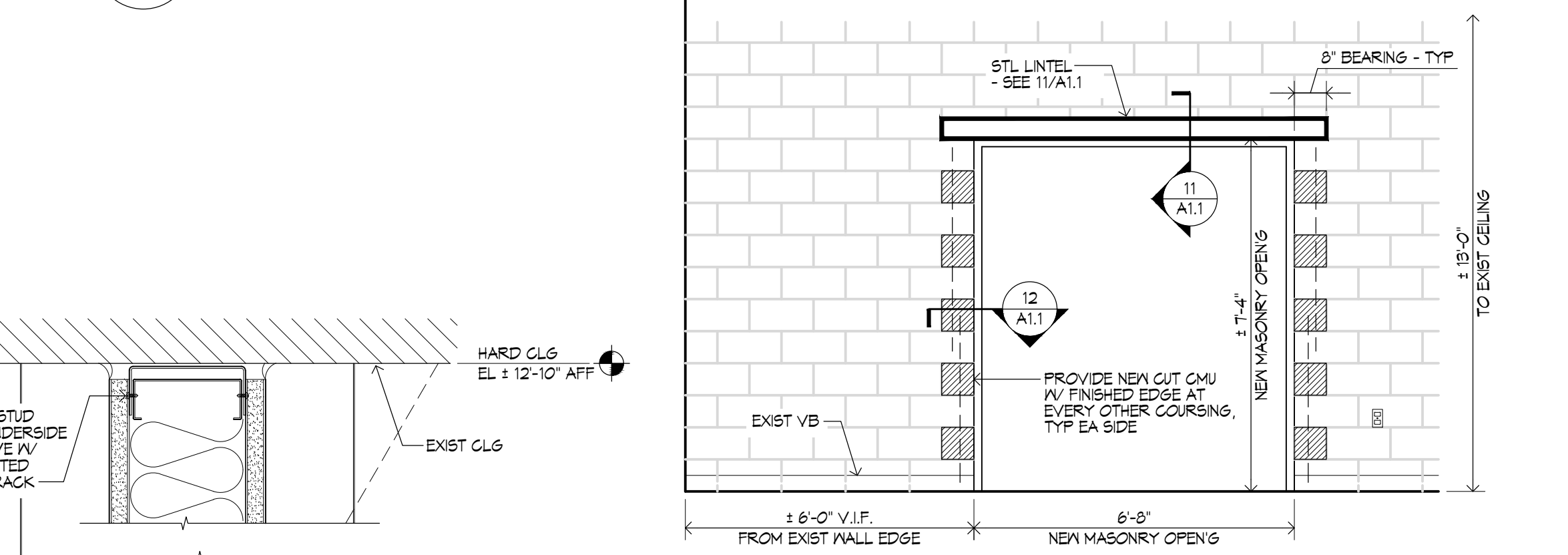
6 HEAD DETAIL
 A1.1 SCALE: 3" = 1'-0"



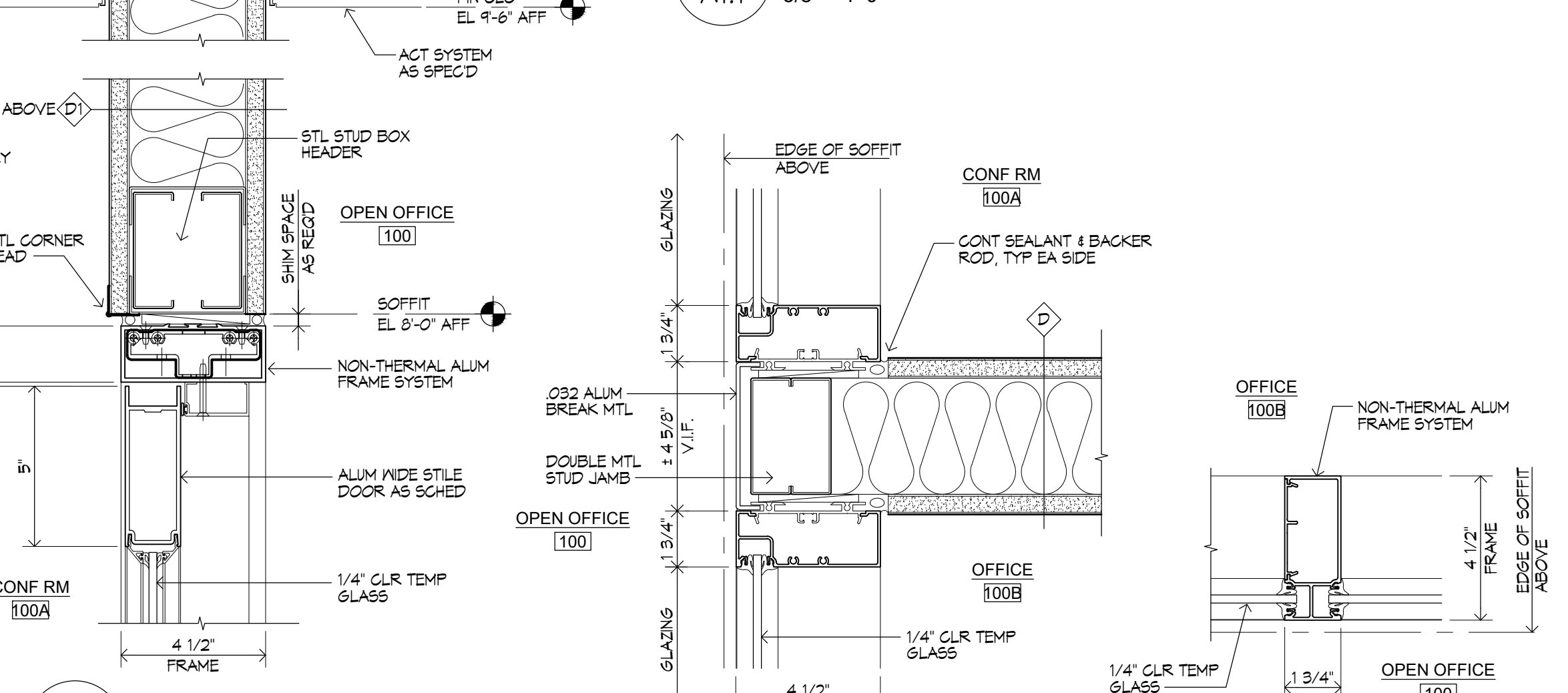
5 SILL DETAIL
 A1.1 SCALE: 3" = 1'-0"



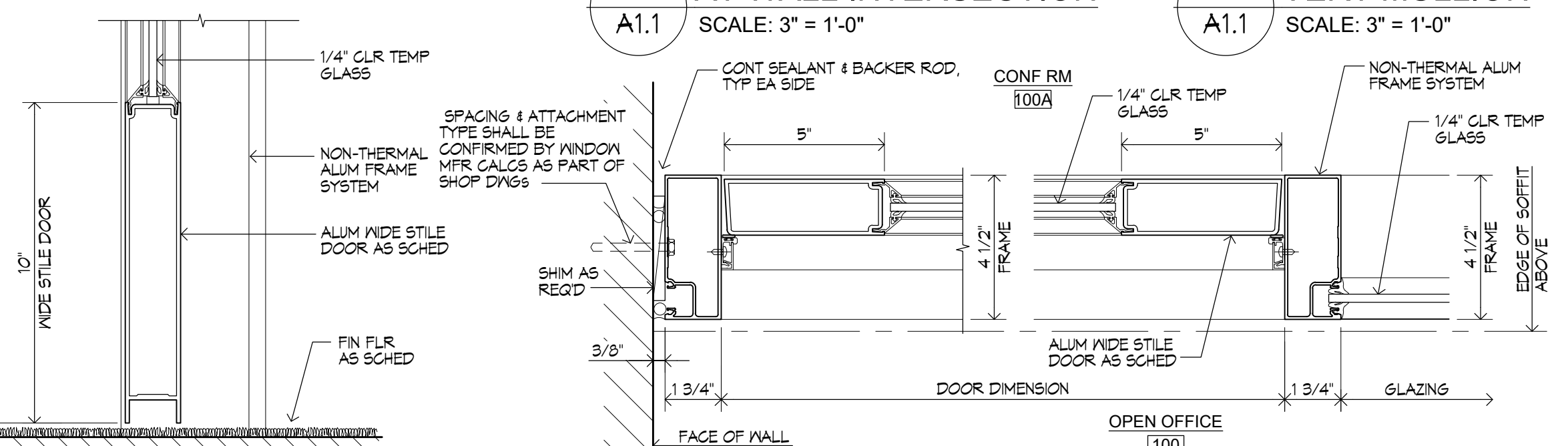
4 GLAZED WALL ELEVATION AT OPEN OFFICE - 100 VIEW
 A1.1 SCALE: 3/8" = 1'-0"



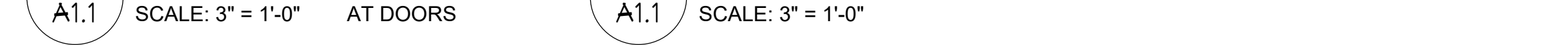
13 INTERIOR ELEVATION VIEW FROM CORRIDOR
 A1.1 3/8" = 1'-0"



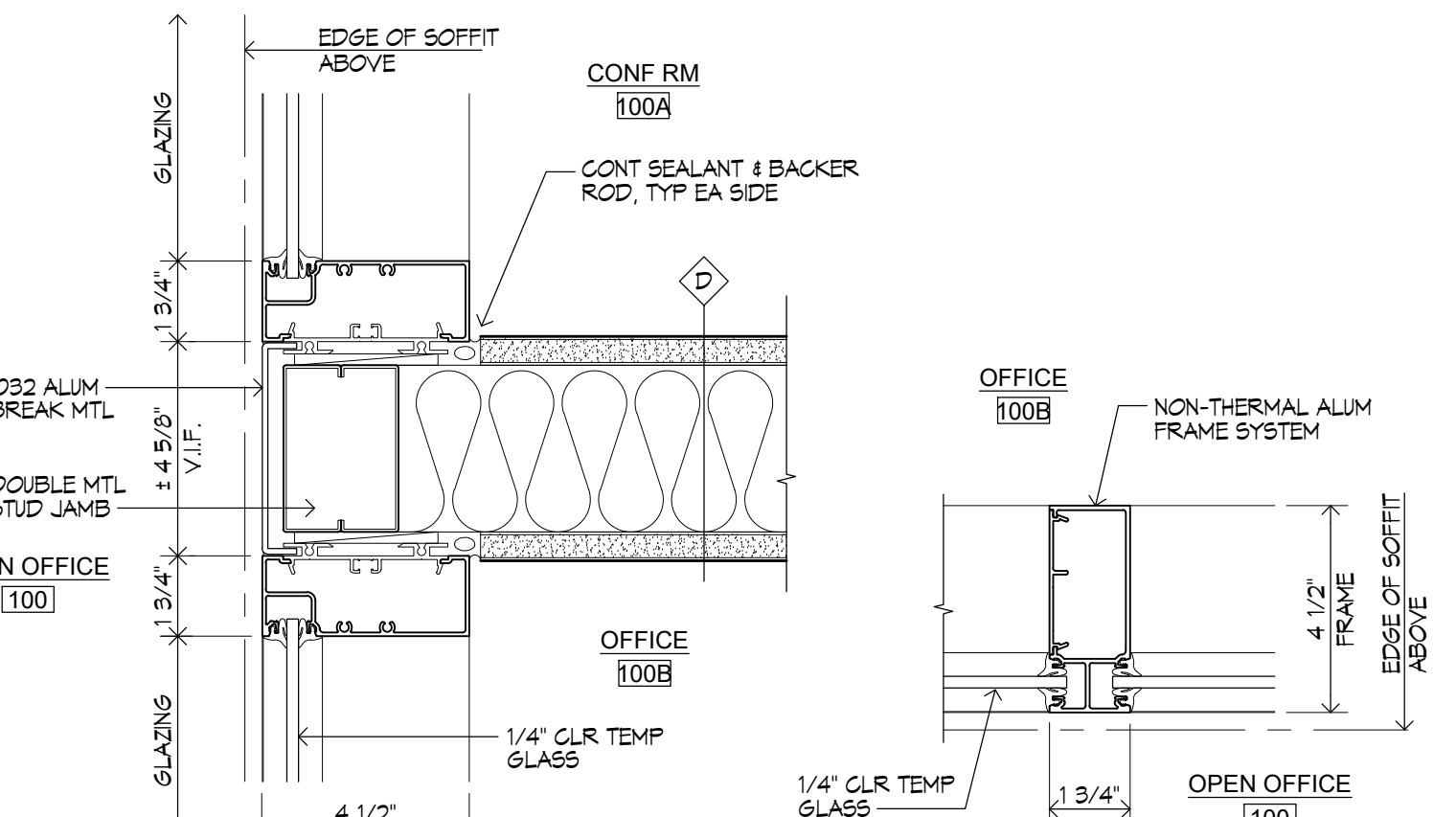
7B HEAD DETAIL AT DOORS
 A1.1 SCALE: 3" = 1'-0"



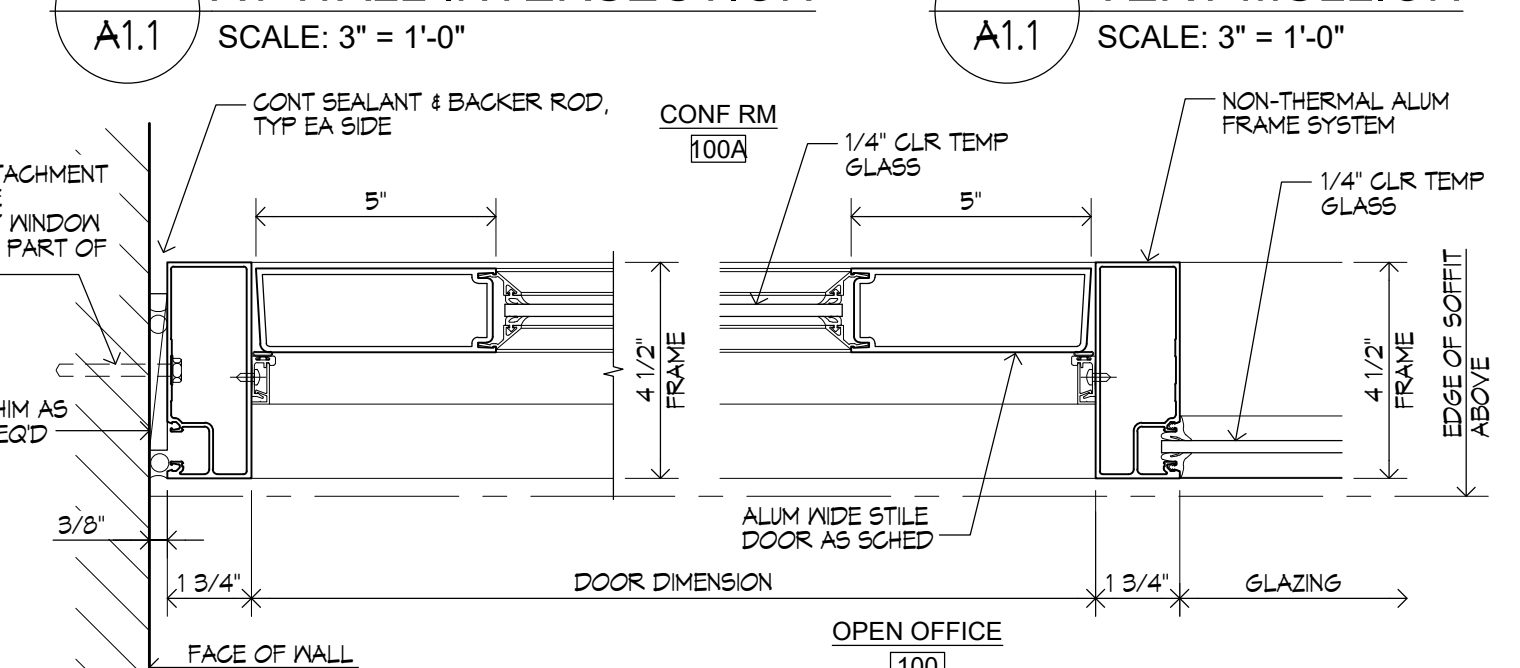
8 JAMB DETAILS AT ALUMINUM DOORS
 A1.1 SCALE: 3" = 1'-0"



7A SILL DETAIL AT DOORS
 A1.1 SCALE: 3" = 1'-0"



9 JAMB DETAIL AT WALL INTERSECTION
 A1.1 SCALE: 3" = 1'-0"



10 DETAIL AT VERT MULLION
 A1.1 SCALE: 3" = 1'-0"



8 JAMB DETAILS AT ALUMINUM DOORS
 A1.1 SCALE: 3" = 1'-0"

GENERAL MECHANICAL NOTES

- MECHANICAL EQUIPMENT AND SUCH OTHER APPARATUS AS MAY REQUIRE MAINTENANCE AND OPERATION FROM TIME TO TIME SHALL BE MADE EASILY ACCESSIBLE. ALTHOUGH THE EQUIPMENT MAY BE SHOWN ON THE DRAWINGS IN CERTAIN LOCATIONS, THE CONSTRUCTION MAY DISCLOSE THAT SUCH LOCATIONS DO NOT MAKE ITS POSITION READILY ACCESSIBLE. IN SUCH CASES, THE OWNER OR HIS REPRESENTATIVE SHALL BE NOTIFIED BEFORE ADVANCING THE CONSTRUCTION TO A STAGE WHERE A CHANGE WILL REFLECT ADDITIONAL EXPENSE.
- THE DRAWINGS SHOW THE LAYOUT OF THE MECHANICAL SYSTEMS AND INDICATE THE APPROXIMATE LOCATIONS OF DUCTWORK, PIPING, BRANCHES AND ELBOWS, AND EQUIPMENT. THE RUNS AND QUANTITY OF DUCTWORK, PIPING, OFFSETS AND ELBOWS AS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT ROUTING OF QUANTITY DUCTWORK, PIPING, OFFSETS AND ELBOWS SHALL BE DETERMINED BY THE STRUCTURAL CONDITIONS, POSSIBLE OBSTRUCTIONS AND COORDINATION DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT THE DESIGN OF THE SYSTEMS MAY BE CHANGED, BUT REFERS ONLY TO EXACT RUNS BETWEEN GIVEN POINTS.
- IT SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR TO STUDY ALL DRAWINGS AND DETAILS SO THAT THE INSTALLATION OF ALL NEW WORK CAN BE FULLY COORDINATED. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE OF EQUIPMENT.
- HVAC WORK IS INDICATED DIAGRAMMATICALLY. EXACT LOCATION OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. EQUIPMENT, DUCTS OR PIPES INTERFERING WITH OTHER INSTALLATIONS SHALL BE RELOCATED AS REQUIRED.
- HVAC CONTRACTOR SHALL COORDINATE ALL WALL, CEILING, FLOOR, ROOF AND BEAM PENETRATIONS WITH ARCHITECT AND STRUCTURAL ENGINEER.
- PRODUCTS REQUIRED BY CONSTRUCTION BUT NOT SPECIFICALLY DESCRIBED HEREIN SHALL BE AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE A/E.
- PROVIDE ALL MATERIALS, LABOR, AND ACCESSORIES FOR A COMPLETE AND OPERABLE SYSTEMS AND AS REQUIRED BY THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- INSTALL ALL MATERIALS, ACCESSORIES AND EQUIPMENT ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR A COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS MANUFACTURERS INSTRUCTIONS.
- ALL MISCELLANEOUS STRUCTURAL SUPPORTS REQUIRED FOR HVAC EQUIPMENT INSTALLATION SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- INSTALL ALL PIPING BELOW DUCTWORK UNLESS CLEARANCE CONDITION REQUIRES PIPING TO BE ABOVE.
- WHERE DUCTWORK PENETRATES ANY SMOKE AND/OR FIRE RATED PARTITIONS PROVIDE UL LISTED DYNAMIC FIRE AND/OR SMOKE DAMPERS PER NFPA GUIDELINES. INSTALL DAMPER PER MANUFACTURE INSTRUCTIONS.
- ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO UNITS AND RELATED ACCESSORIES.
- EXACT ELEVATION FOR SIDE WALL DIFFUSERS, REGISTERS AND GRILLES SHALL BE APPROVED BY THE ARCHITECT BEFORE INSTALLATION.
- INSTALL ROOM THERMOSTATS OR SENSORS 54" (MAXIMUM) ABOVE FINISHED FLOOR OR AS OTHERWISE DIRECTED BY THE ARCHITECT.

HVAC DEMOLITION GENERAL NOTES

- ALL DEMOLITION WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE NATIONAL, STATE AND LOCAL CODES, LAWS AND ORDINANCES.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND FILING ALL PLANS, SPECIFICATIONS AND OTHER DOCUMENTS, PAY ALL REQUISITE FEES AND SECURE ALL PERMITS, INSPECTIONS AND APPROVALS NECESSARY FOR THE LEGAL INSTALLATION AND OPERATION OF THE SYSTEM AND/OR EQUIPMENT FURNISHED UNDER THIS SECTION OF THE SPECIFICATIONS.
- INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, APPLIANCES AND SERVICES NECESSARY TO REMOVE AND DISPOSE OF ALL INDICATED EXISTING HVAC SYSTEMS
- PRIOR TO SUBMITTING BID, THE CONTRACTOR SHALL VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND TO DETERMINE THE EXTENT OF WORK TO REMOVE THE EXISTING HVAC SYSTEM COMPLETELY. IF DISCREPANCIES EXIST BETWEEN DRAWINGS AND/OR SITE CONDITIONS, THE HVAC CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER PRIOR TO SIGNING OF CONTRACT. REQUESTS FOR COMPENSATION FOR EXTRA WORK, WHICH WOULD HAVE BEEN EVIDENT BY COMPLIANCE WITH THE PREVIOUS STATEMENT, WILL NOT BE CONSIDERED.
- EQUIPMENT AND DUCTWORK LAYOUTS ON THIS DRAWING ARE DIAGRAMMATIC ONLY AND SHALL NOT BE CONSTRUED AS BEING 100% ACCURATE. WHERE ITEMS ARE SHOWN TO BE DEMOLISHED OR ALTERED ON THESE PLANS THAT ARE NOT REPRESENTED ACCURATELY, THE DEMOLITION SUBCONTRACTOR SHALL ISSUE FORMAL RF'S AS REQUIRED PRIOR TO COMPLETING THE REQUIRED WORK.
- REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR DEMOLITION WORK. CONTRACTOR SHALL COORDINATE WITH CONSTRUCTION PHASE PRIOR TO REMOVING ANY PIECE OF EQUIPMENT OR PIPING.
- ALL MAIN AND BRANCH DUCT SIZES INDICATED ARE FOR REFERENCE ONLY AND ARE BASED ON OBSERVATION ONLY, NOT EXACT MEASUREMENT OR SURVEYS.
- WHERE VOIDS OR OPENINGS IN THE DUCTWORK ARE FOUND AND ARE NOT SPECIFICALLY SHOWN TO BE CAPPED OR PATCHED, IT SHALL BE THE INTENT OF THIS DEMOLITION PLAN THAT CAPPING AND PATCHING IS COMPLETED TO PROVIDE A CLOSED/SEALED SUPPLY AIR SYSTEM TO ACCOMMODATE THE NEW WORK.
- ALL EQUIPMENT AND DIFFUSERS SHALL BE RETURNED TO THE OWNER. DEMOLITION OF ALL OTHER COMPONENTS SHALL INCLUDE PLACEMENT INTO CONTAINER, REMOVAL FROM SITE AND PROPER DISPOSAL OF, WITH PERMITS AND FEES INCLUDED. REFER TO NEW FLOOR PLANS FOR EXISTING SYSTEMS BEING USED UNDER THE NEW CONSTRUCTION.
- COORDINATE ALL SHUT-DOWNS, TIE-INS, ETC., WITH THE G.C. ELECTRICAL MAKE-SAFE OF HVAC EQUIPMENT REQUIRING DEMOLITION SHALL BE COMPLETED BY THE ELECTRICAL SUBCONTRACTOR.
- DEMOLITION SUBCONTRACTOR MUST PROTECT EXISTING SLAB, WALL, FENCING AND BUILDING STRUCTURE DURING DEMOLITION PHASE. DAMAGE TO EXISTING STRUCTURE SHALL BE REPAIRED AT DEMOLITION SUBCONTRACTORS EXPENSE.
- PRIOR TO START OF DEMOLITION WORK, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE IF ANY EQUIPMENT CALLED TO BE DISPOSED ON THE PLAN SHALL BE RETURNED TO THE OWNER AND STORED PER OWNERS REQUEST.

MECHANICAL DEMOLITION PLAN LEGEND

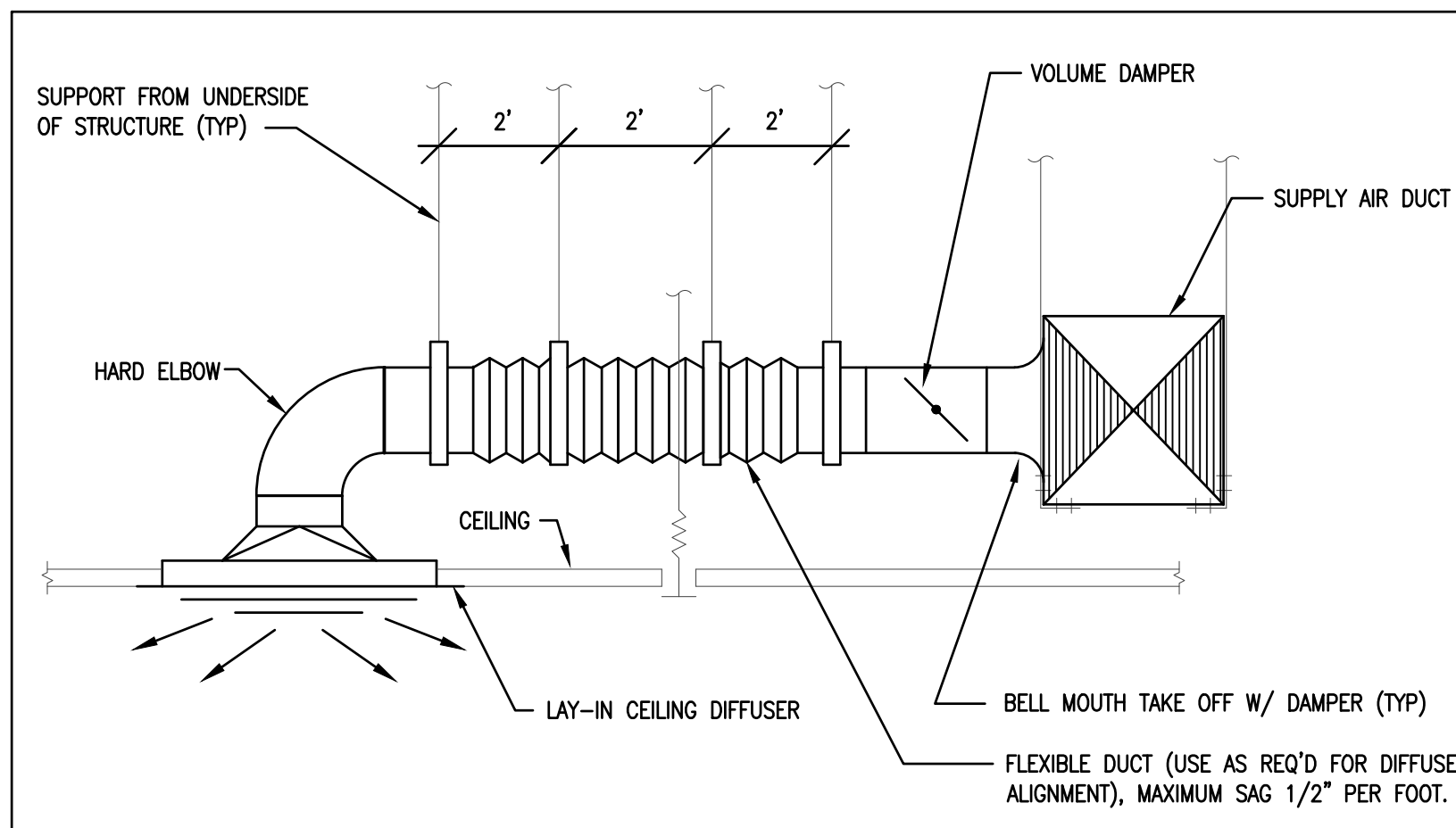
SYMBOL	DESCRIPTION
	EXISTING TO BE DEMOLISHED
	EXISTING TO REMAIN

TAG LEGEND

EQUIPMENT (REQUIRING POWER)	EQUIPMENT DESIGNATION	NUMBER

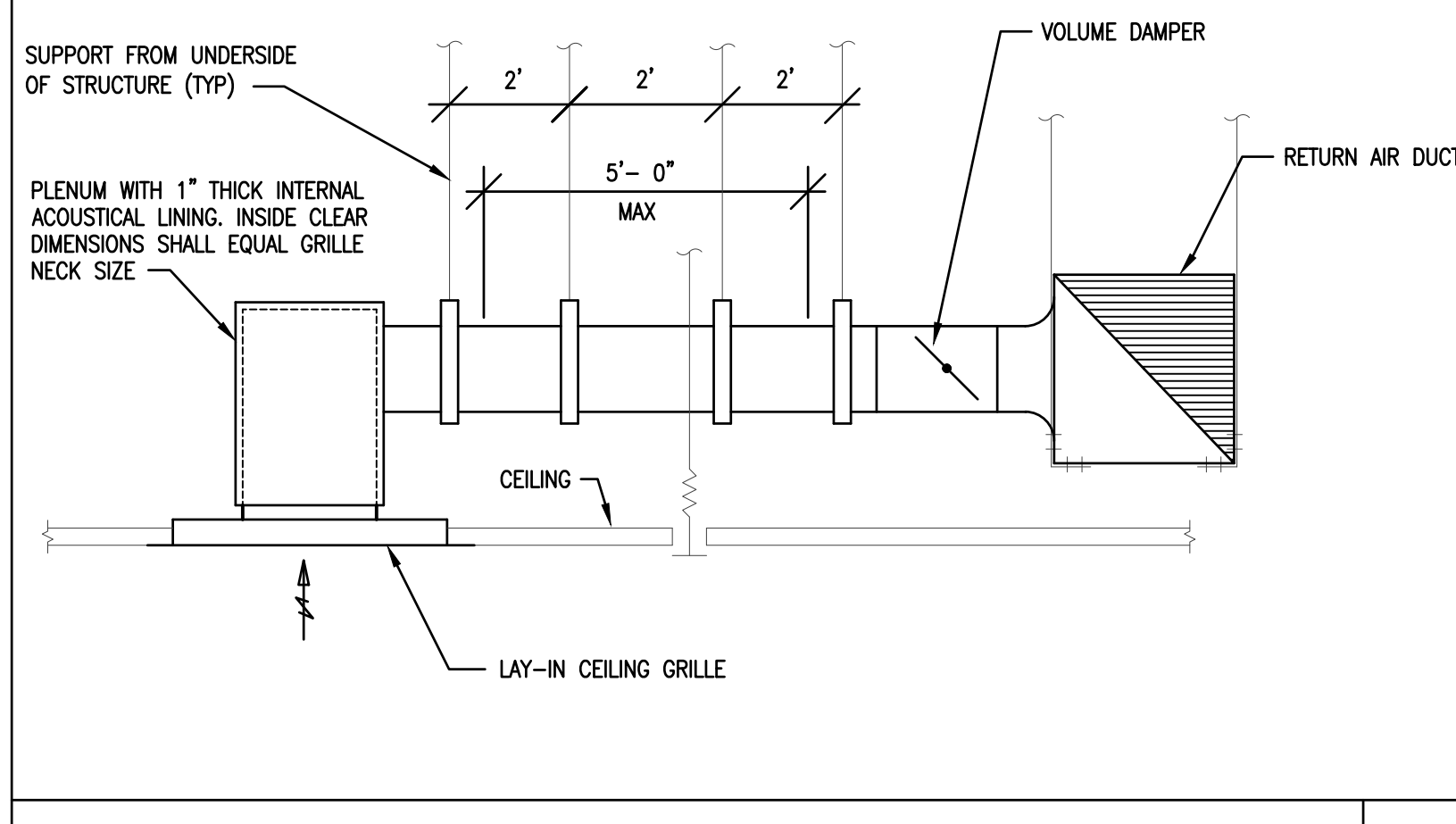
MOTORIZED DAMPER SCHEDULE

MD-1	LOW LEAKAGE CLASS-2 MOTORIZED DAMPER WITH 120/1/60 POWERED ACTUATOR. REFER TO PLANS FOR SIZE & QUANTITY. DAMPER SHALL BE INTERLOCKED WITH EXISTING INDOOR AIR HANDLER OPERATION.
------	--



CEILING SUPPLY DIFFUSER BRANCH TAKE-OFF DETAIL

NTS



CEILING RETURN GRILLE BRANCH TAKE-OFF DETAIL

NTS

ELECTRIC BASEBOARD

GENERAL		PERFORMANCE		ELECTRICAL			PHYSICAL		REMARKS			
TAG	LOCATION	BTU	WATTS	AMPS	VOLTAGE	PHASE	LENGTH (N)	MANUFACTURER MODEL	TYPE	RATINGS	FEATURES	INSTALL
EBB-1	OPEN OFFICE 100	5118	1500	7.2	208	1	72	OMARK QMKC2506W	①	①	①②	①
EBB-2	OFFICE 100A	1924	750	3.6	208	1	36	OMARK QMKC2503W	①	①	①③	①

① HEAVY-DUTY COMMERCIAL BASEBOARD HEATER
 ① UL LISTED
 ① 8" WIRING SECTION & BLANK SECTIONS, AS REQUIRED
 ② LOW VOLTAGE RELAY CONTROL SECTION RATED FOR SCHEDULED LINE VOLTAGE
 ③ LINE VOLTAGE WALL MOUNTED DIGITAL THERMOSTAT PROVIDED BY MANUFACTURER, TYPICAL TO OMARK MODEL TL8230A1003/U
 ① INTERLOCK RELAY CONTROL WITH LOW VOLTAGE WALL THERMOSTAT

DIFFUSER AND GRILLE SCHEDULE

GENERAL		PHYSICAL		REMARKS			
TAG	BLOW PATTERN	MANUFACTURER MODEL	TYPE	FEATURES	INSTALL		
S4	4-WAY	PRICE AMX	①	①②③	①②④		
S2C	2-WAY CORNER	PRICE AMX	①	①②③	①②④		
R1	-	PRICE 635	②	①④	①②④		
ETR	-	EXISTING TO REMAIN	①	①	①		

- LOUVERED HIGH INDUCTION DIRECTIONAL CEILING DIFFUSER, SQUARE/RECTANGULAR NECK & FACE, ALUMINUM CONSTRUCTION, WHITE FINISH.
- RETURN GRILLE, 45° FIXED BLADES ON 1/2" CENTERS, BLADES PARALLEL TO LONG DIMENSION, 2x2 LAY-IN PANEL, ALUMINUM CONSTRUCTION, WHITE FINISH.

TAG	DESCRIPTION	SIZE (IN.)	CFM
①	LAY-IN T-BAR CEILING MOUNT*	0x0	
②	INSULATED BACK PANEL	(XXX)	
③	SQUARE TO ROUND ADAPTOR	000	
④	INSULATED PLENUM BOX		

① LAY-IN T-BAR CEILING MOUNT*
 ② INSULATED BACK PANEL
 ③ SQUARE TO ROUND ADAPTOR
 ④ INSULATED PLENUM BOX

- *REFER TO ARCHITECTURAL DRAWINGS TO CONFIRM MOUNTING TYPE
- PROVIDE A DUCT MOUNTED VOLUME DAMPER WHETHER OR NOT A DUCT MOUNTED VOLUME DAMPER IS INDICATED ON PLAN. EXCEPTIONS:
 - TRANSFER AIR APPLICATIONS (GRILLE IS NOT CONNECTED BY A DUCTWORK SYSTEM TO A FAN)
 - EXHAUST AND RETURN GRILLES WHERE ONLY ONE GRILLE SERVES THE FAN/AIR HANDLING SYSTEM
 - GRILLES CONNECTED TO RELIEF AIR HOODS AND RELIEF AIR LOUVERS
- PROVIDE A 1" THICK ACOUSTICALLY LINED PLENUM, SAME SIZE AS DIFFUSER/GRILLE X HEIGHT/DEPTH NECESSARY TO CONNECT BRANCH DUCT INDICATED
- REFER DETAIL

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	DUCTWORK (DOUBLE LINE)
	DUCTWORK WITH ACOUSTICAL LINING (DOUBLE LINE)
	DUCTWORK (SINGLE LINE)
	DUCTWORK WITH ACOUSTICAL LINING (SINGLE LINE)
	FLEXIBLE DUCTWORK
	RECTANGULAR/ROUND SUPPLY AIR DUCTWORK UP
	RECTANGULAR/ROUND RETURN AIR DUCTWORK UP
	RECTANGULAR/ROUND EXHAUST AIR DUCTWORK UP
	RECTANGULAR/ROUND SUPPLY AIR DUCTWORK DOWN
	RECTANGULAR/ROUND RETURN AIR DUCTWORK DOWN
	RECTANGULAR/ROUND EXHAUST AIR DUCTWORK DOWN
	VOLUME DAMPER
	CONTROL DAMPER
	CONNECT TO EXISTING
	AIR ENTERING OPENING
	AIR LEAVING OPENING
	UNDERCUT DOOR
	SWITCH
	THERMOSTAT OR TEMPERATURE SENSOR
	CONTROL CONNECTION

ABBREVIATIONS

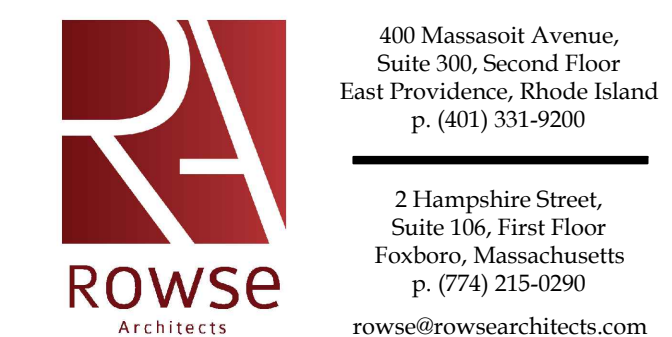
ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AH	AIR HANDLER
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
BTU	BRITISH THERMAL UNIT
BTUH	BTU/HOUR
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
EAT	ENTERING AIR TEMPERATURE (DRY BULB)
EBB	ELECTRIC BASEBOARD
E.C.	ELECTRICAL CONTRACTOR
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
F	DEGREES FAHRENHEIT
FT	FEET
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
G.C.	GENERAL CONTRACTOR
IN	INCHES
IN WG	INCHES WATER GAUGE
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSANDS OF BTU / HOUR
M.C.	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MOP	MAXIMUM OVERCURRENT PROTECTION
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE (DRY BULB)
PH	PHASE
PSIG	POUNDS PER SQUARE INCH GAUGE
QTY	QUANTITY
RE	REMOVE EXISTING
RPM	REVOLUTIONS PER MINUTE
SP	STATIC PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UOI	UNLESS OTHERWISE INDICATED
VD	VOLUME DAMPER

OFFICE EXPANSION at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE, AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

B|E|R

BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Easton, MA 02316
T 508.230.0260
F 508.230.0265
ber@ber-engineering.com

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



Date: 02/09/2024

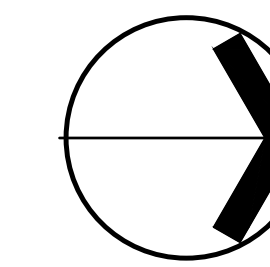
Drawn by: KB Proj. Mgr.: GA

Revisions

No.	Date	Description

MECHANICAL - LEGENDS, NOTES, SCHEDULES, AND DETAILS

MO.1



PROJECT
NORTH

OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE, AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.



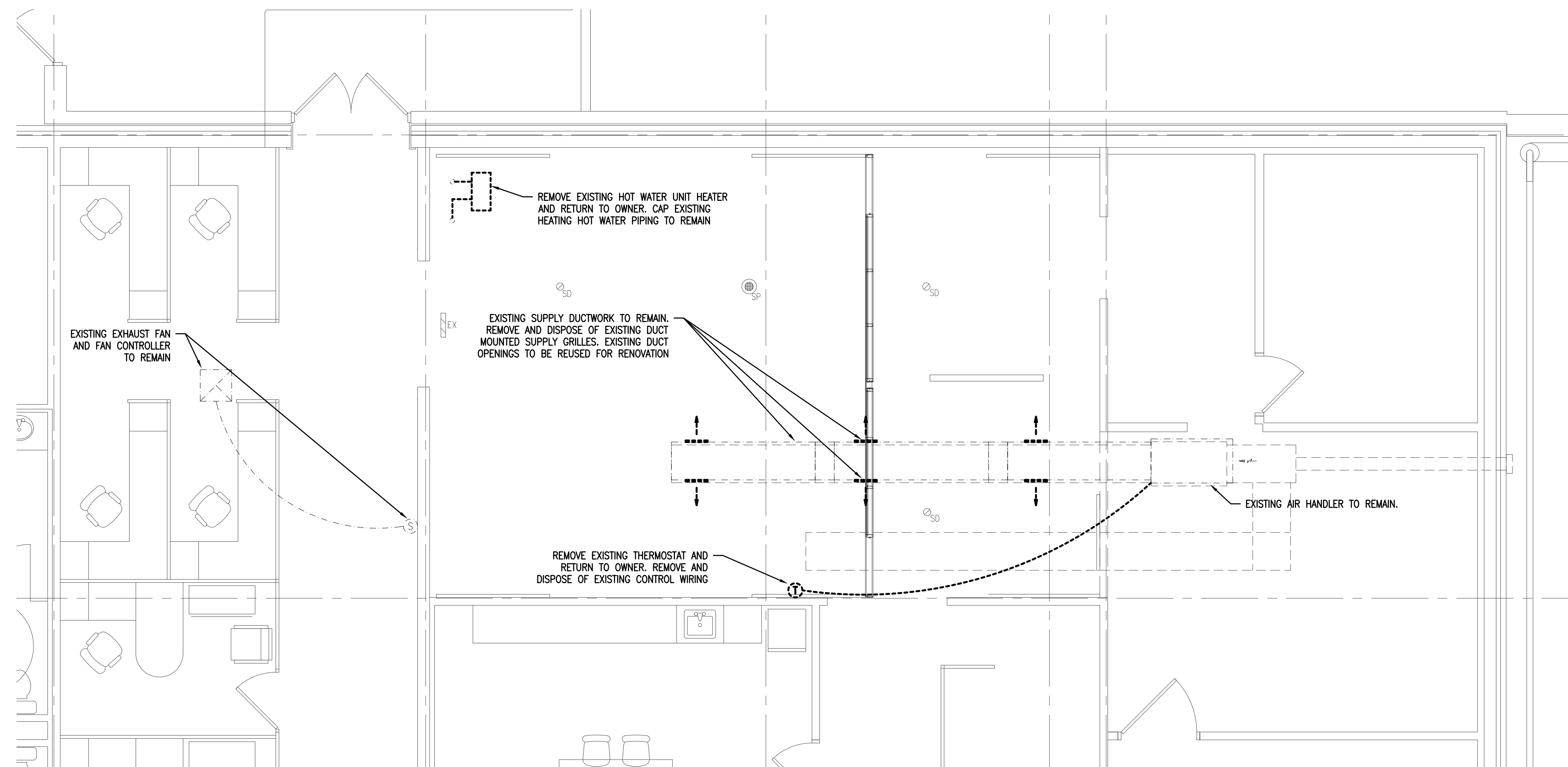
BUILDING ENGINEERING RESOURCES, INC.

66 Main Street
N. Easton, MA 02356
T 508.230.0260
F 508.230.0265
ber@ber-engineering.com

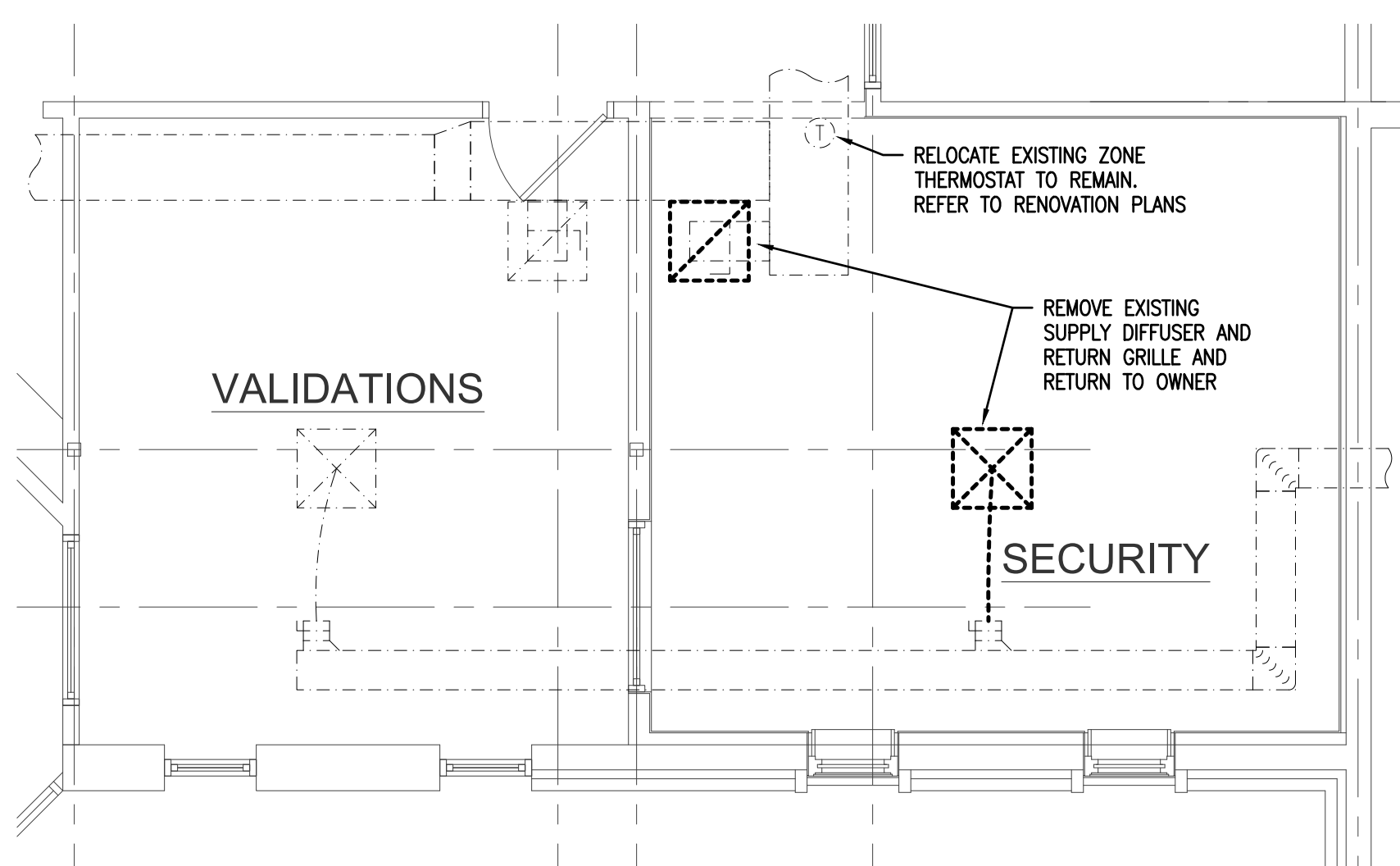
Office Commons 95
351 Centerville Road
Warwick, RI 02886
T 401.384.7682
www.ber-engineering.com

GENERAL NOTES

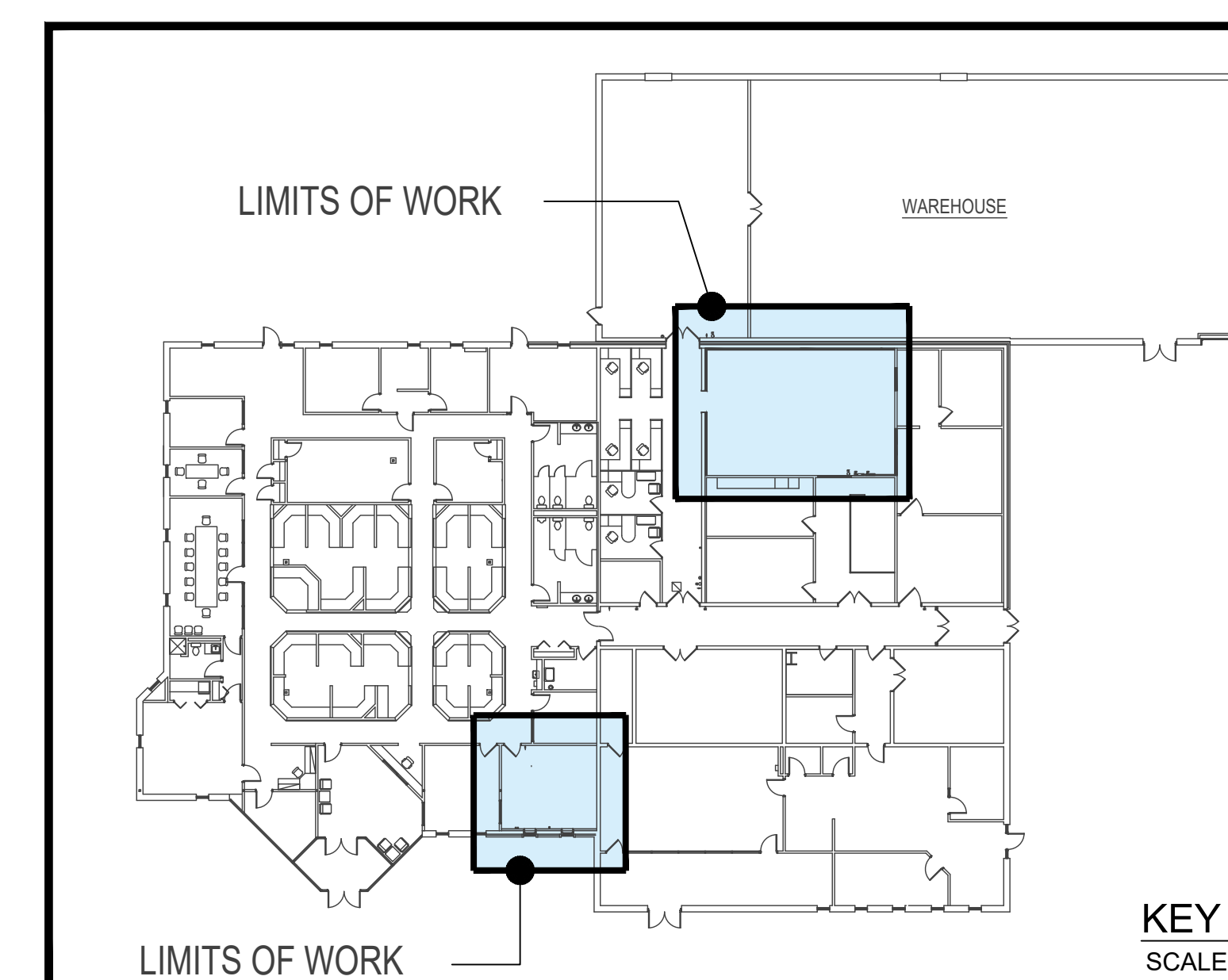
- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED. THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



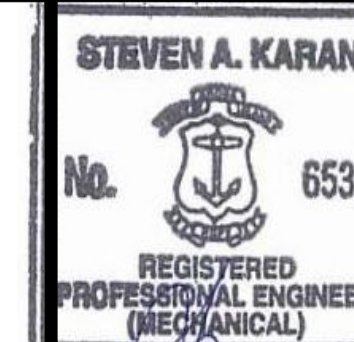
1 MECHANICAL - PARTIAL DEMOLITION FLOOR PLAN
M1.1 1/4"=1'-0"



2 MECHANICAL - SECURITY DEMOLITION FLOOR PLAN
M1.1 1/4"=1'-0"



KEY PLAN
SCALE: NTS



Date: 02/09/2024

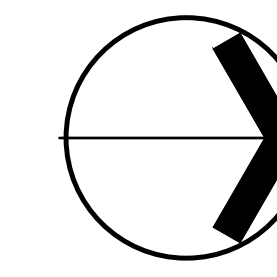
Drawn by: KB Proj. Mgr.: GA

Revisions

No.	Date	Description

MECHANICAL - PARTIAL DEMOLITION FLOOR PLANS

M1.1



PROJECT NORTH

OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massachusetts Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

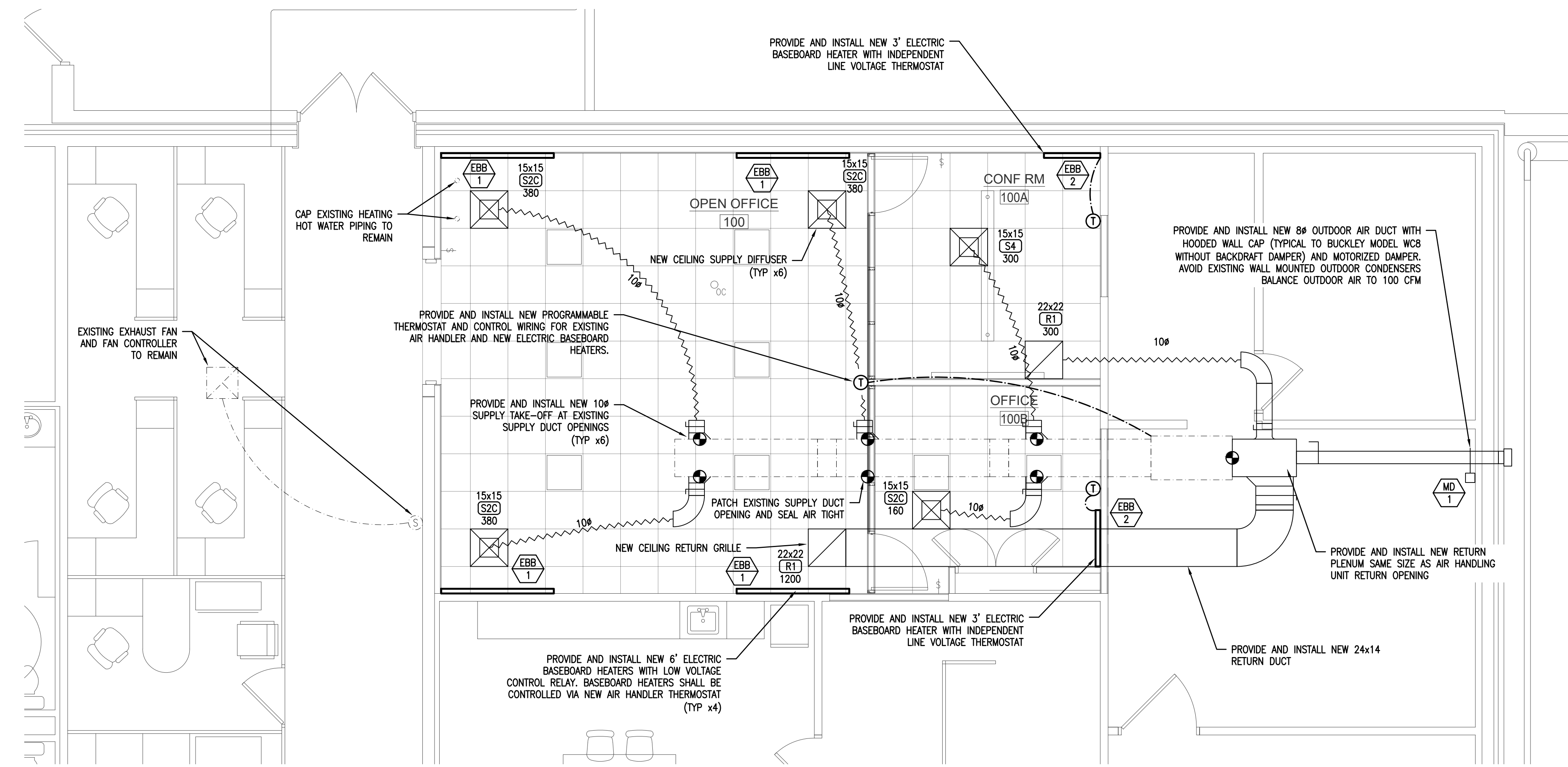
OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE ARE, AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

BER

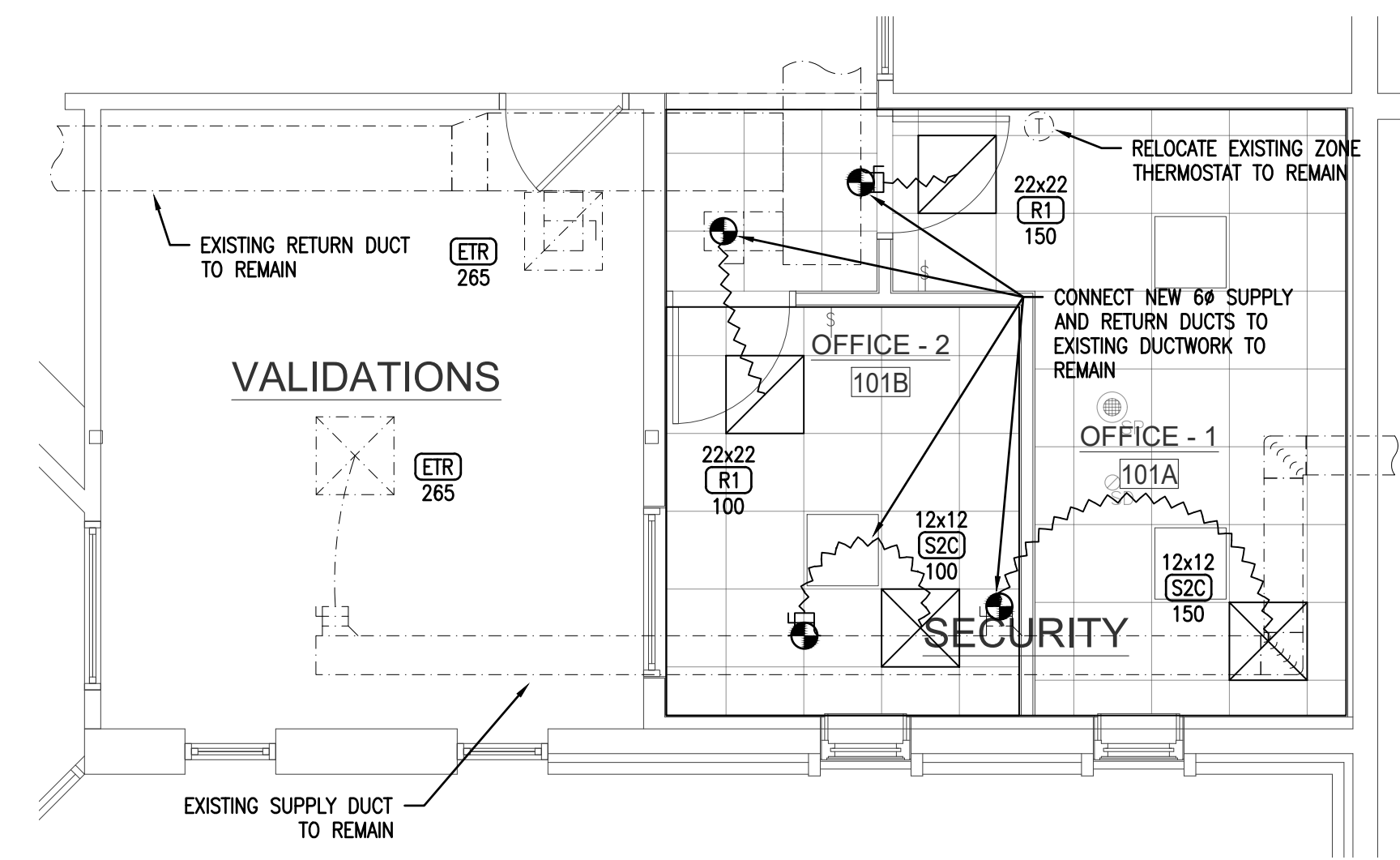
BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Easton, MA 02316
T 508.230.0265
ber@ber-engineering.com

GENERAL NOTES

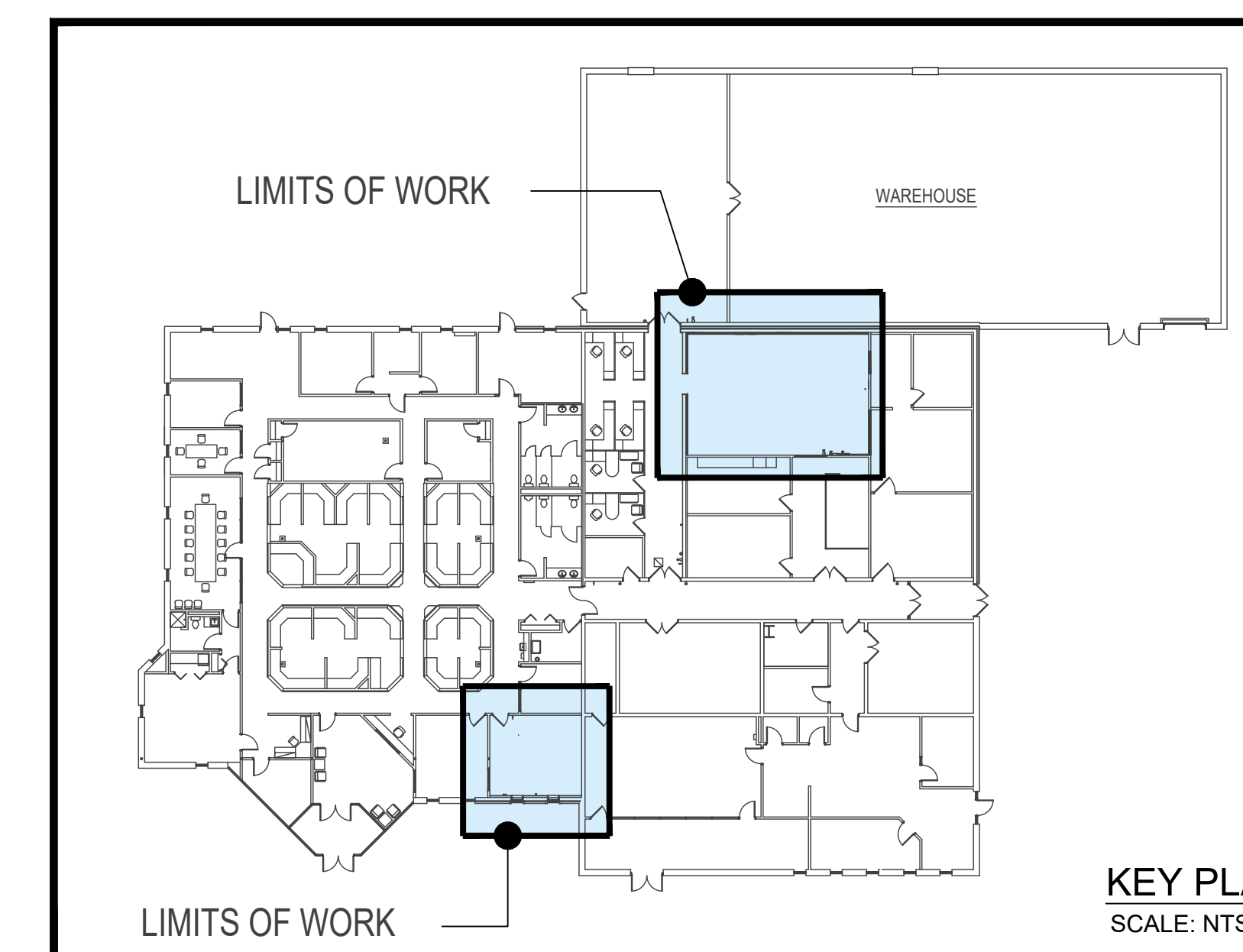
- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED. THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



1 MECHANICAL - PARTIAL RENOVATION FLOOR PLAN
M2.1 1/4"=1'-0"



2 MECHANICAL - SECURITY RENOVATION FLOOR PLAN
M2.1 1/4"=1'-0"



KEY PLAN
SCALE: NTS

M2.1



Date: 02/09/2024
Drawn by: KB Proj. Mgr.: GA

Revisions	No.	Date	Description

MECHANICAL - PARTIAL RENOVATION FLOOR PLANS

PART 1: GENERAL

- 1.1 DESCRIPTION OF WORK
- A. WORK INCLUDED: PROVIDE LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE WORK OF THIS SECTION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. DEMOLITION OF ALL EXISTING HVAC EQUIPMENT NOT TO BE REUSED AS LISTED HERE (BUT NOT LIMITED TO), HYDRONIC BASEBOARD HEATERS, HYDRONIC BOILER, GAS HEATERS, FLUE PIPING, LOUVERS, ROOF TOP UNITS, ROOF TOP CURBS, GAS PIPING, CONTROLS, ETC.
 2. HEATING, VENTILATION AND AIR CONDITIONING OF ALL SPACES AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER.
 3. FURNISH AND INSTALL REGISTERS AND DIFFUSERS, VOLUME DAMPERS, ETC. AS REQUIRED AND INDICATED ON DRAWINGS.
 4. FURNISH AND INSTALL A COMPLETE LOW VELOCITY SHEET METAL DUCTWORK DISTRIBUTION SYSTEM AS SHOWN ON THE DRAWINGS.
 5. TESTING, ADJUSTING AND BALANCING OF ALL AIR SYSTEMS AND EQUIPMENT.
 6. INSTALL THERMOSTATS, AND INTERLOCK WIRING AS SHOWN AND AS DESCRIBED HEREIN.
 7. COORDINATE ALL DUCTWORK WITH ELECTRICAL, PLUMBING, FIRE PROTECTION, AND ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.

- 1.2 REGULATORY REQUIREMENTS
- A. COMPLY WITH ALL APPLICABLE FEDERAL AND STATE LAWS, AND ALL LOCAL CODES, BY-LAWS AND ORDINANCES.
- B. REQUEST INSPECTIONS FROM AUTHORITIES HAVING JURISDICTION. OBTAIN ALL PERMITS AND PAY FOR THE WORK AND INSPECTION CERTIFICATES AS APPLICABLE AND/OR REQUIRED. ALL PERMITS AND CERTIFICATES SHALL BE TURNED OVER TO THE OWNERS UPON COMPLETION OF THE WORK.
- C. ALL WORK, EQUIPMENT AND MATERIALS SHALL CONFORM TO THE BUILDING CONSTRUCTION RULES AND REGULATIONS.

- 1.3 SUBMITTALS
- A. PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO:
 1. PACKAGED ROOFTOP UNITS AND MAKEUP AIR HANDLING UNITS AND EXHAUST FANS.
 2. ROOF CURBS AND VENTED EXHAUST FAN ROOF CURBS.
 3. REGISTERS AND DIFFUSERS.
 4. SHEET METAL FABRICATION STANDARDS.
 5. DUCT INSULATION.
 6. DUCT SMOKE DETECTORS INSTALLATION (PROVIDED AND WIRED BY ELECTRICIAN).
 7. ELECTRIC AND/OR GAS FIRED UNIT HEATERS AND ASSOCIATED CONTROLS.

- 1.4 COORDINATION
- A. WORK SHALL BE PERFORMED IN COOPERATION WITH OTHER TRADES ON THE PROJECT AND SO SCHEDULED AS TO ALLOW SPEEDY AND EFFICIENT COMPLETION OF THE WORK.
- B. FURNISH TO OTHER TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF ALL FRAMES, BOXES, SLEEVES AND OPENINGS NEEDED FOR THEIR WORK, AND ALSO FURNISH INFORMATION AND SHOP DRAWINGS NECESSARY TO PERMIT TRADES AFFECTED BY THE WORK TO INSTALL SAME.
- C. IF ANY HVAC WORK HAS BEEN INSTALLED BEFORE COORDINATION WITH OTHER TRADES SO AS TO CAUSE INTERFERENCE WITH THE WORK OF SUCH TRADES, ALL NECESSARY ADJUSTMENTS AND CORRECTIONS SHALL BE MADE BY THE HVAC TRADES INVOLVED WITHOUT EXTRA COST TO THE OWNERS.
- D. PROTECT ALL MATERIALS AND WORK OF OTHER TRADES FROM DAMAGE WHICH MAY BE CAUSED BY THE HVAC WORK AND REPAIR ALL DAMAGES WITHOUT EXTRA COST TO OWNERS.

- 1.5 MECHANICAL AND ELECTRICAL COORDINATION
- A. HEATING, VENTILATION, AND AIR CONDITIONING SUBCONTRACTOR SHALL FURNISH AND INSTALL VARIOUS ELECTRICAL ITEMS RELATING TO THE HVAC EQUIPMENT AND CONTROL APPARATUS. THE ELECTRICAL SUBCONTRACTOR SHALL BE REQUIRED TO CONNECT POWER WIRING TO THIS EQUIPMENT UNLESS NOTED OTHERWISE.
- B. THE HVAC AND ELECTRICAL SUBCONTRACTOR SHALL COORDINATE THEIR RESPECTIVE PORTIONS OF THE WORK, AS WELL AS THE ELECTRICAL CHARACTERISTICS OF THE HVAC EQUIPMENT.
- C. ALL POWER WIRING AND LOCAL DISCONNECT SWITCHES WILL BE PROVIDED BY THE ELECTRICAL SUBCONTRACTOR FOR THE LINE VOLTAGE POWER. ALL CONTROL AND INTERLOCKING WIRING SHALL BE THE RESPONSIBILITY OF THE HVAC SUBCONTRACTOR.
- D. 120 VOLT POWER WIRING SOURCES EXTENDED AND CONNECTED TO HEATING AND VENTILATING CONTROL PANELS, TRANSFORMERS, AND SWITCHES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL SUBCONTRACTOR. ALL LOW VOLTAGE THERMOSTAT, ZONE VALVE AND ANY SWITCH WIRING SHALL BE THE RESPONSIBILITY OF THE HVAC SUBCONTRACTOR.
- E. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF DIVISION 16.
- F. ALL STARTERS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 16 EXCEPT THOSE FURNISHED AS AN INTEGRAL PART OF PACKAGED EQUIPMENT. COORDINATE WITH ELECTRICAL CONTRACTOR.

- 1.6 INSTALLATION REQUIREMENTS
- A. THE ARRANGEMENT OF ALL HVAC WORK SHOWN ON THE DRAWINGS IS DIAGRAMMATICAL ONLY AND INDICATES THE MINIMUM REQUIREMENTS OF THE WORK. CONDITION AT THE BUILDING INCLUDING ACTUAL MEASUREMENTS SHALL DETERMINE THE DETAILS OF THE INSTALLATION.

- 1.7 RECORD DRAWINGS/PROJECT CLOSEOUT
- A. PROVIDE RECORD AS-BUILT DRAWINGS AT COMPLETION OF INSTALLATION.

- 1.8 GUARANTEE/WARRANTY
- A. ALL NEW MATERIALS, ITEMS OR EQUIPMENT AND WORKMANSHIP FURNISHED UNDER THIS SECTION SHALL CARRY STANDARD WARRANTY AGAINST ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF WORK. ANY FAULT DUE TO DEFECTIVE OR IMPROPER MATERIAL, EQUIPMENT, WORKMANSHIP OR MANUFACTURING DESIGN WHICH MAY DEVELOP WITHIN THAT PERIOD SHALL BE MADE GOOD, FORTHWITH, BY AND AT THE EXPENSE OF THIS CONTRACTOR, INCLUDING ALL OTHER DAMAGES DONE TO AREAS, MATERIALS AND OTHER SYSTEMS RESULTING FROM THIS FAILURE.
- B. THIS CONTRACTOR SHALL GUARANTEE THAT ALL NEW ELEMENTS OF THE SYSTEMS MEET THE SPECIFIED PERFORMANCE REQUIREMENTS AS SET FORTH HEREIN OR AS INDICATED ON THE DRAWINGS.

PART 2: PRODUCTS

- 2.1 DUCTWORK
- A. GENERAL: MATERIAL, CONSTRUCTION AND INSTALLATION SHALL MEET THE REQUIREMENTS OF THE MOST RECENT EDITIONS OF THE FOLLOWING STANDARDS AND REFERENCES, EXCEPT FOR MORE STRINGENT REQUIREMENTS SHOWN ON THE DRAWINGS:
 1. SMACNA HVAC DUCT CONSTRUCTION STANDARDS
 2. SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL
 3. NFPA 90A
 4. SMACNA GUIDELINES FOR WELDING SHEETMETAL
- B. PROVIDE SUPPORTING AND HANGING DEVICES NECESSARY TO INSTALL THE ENTIRE HVAC SYSTEM INDICATED ON THE DRAWINGS. DUCTWORK SHALL BE FREE FROM VIBRATION UNDER ALL CONDITIONS OF OPERATION. DIMENSIONS SHOWN ON THE DRAWINGS ARE NET INSIDE DIMENSIONS. NO PIPES, CONDUITS, HANGERS, OR ARCHITECTURAL ELEMENTS SHALL PASS THROUGH DUCTWORK.

- B. RATINGS:
 1. DUCT CONSTRUCTION CLASS 3" AND 4" AND STATIC PRESSURE RATING 3" AND 4" POSITIVE OR NEGATIVE SHALL BE SMACNA SEAL CLASS A AND LEAKAGE CLASS 6 FOR ALL VELOCITIES OF 4000 FEET/MIN. OR LESS.
 2. DUCT CONSTRUCTION CLASS 2" OR LESS AND STATIC PRESSURE RATINGS OF 2" OR LESS POSITIVE AND NEGATIVE SHALL BE SMACNA SEAL CLASS B AND LEAKAGE CLASS 12 FOR ALL VELOCITIES OF 2500 FEET/MIN. OR LESS.
- C. SEALING:
 1. CLASS A & B/LEAKAGE CLASS 6 & 12: GALVANIZED, NON-WELDED ALUMINUM OR NON-WELDED STAINLESS STEEL DUCTWORK TRAVERSE JOINTS SHALL BE MADE WITH SEALING TAPE EQUAL TO HARDCAST MODEL 1902-FR, CORNERS SHALL BE SEALED AS DESCRIBED BY SMACNA. SEAL ALL NON-FLANGED TRAVERSE JOINTS WITH HARDCAST VERSA MODEL 102 OR APPROVED EQUAL. LONGITUDINAL SEAMS SHALL BE SEALED WITH HARDCAST COLD SEAL MODEL 1001.
- D. SUPPORT: SPACE HANGERS AS REQUIRED BY SMACNA (8 FT. MAX.) FOR HORIZONTAL ON 8 FT. CENTERS, UNLESS CONCENTRATED LOADINGS REQUIRE CLOSER SPACING. SUPPORT VERTICAL DUCT AT ROOF PENETRATIONS. SUPPORTS FOR DUCTWORK AND EQUIPMENT SHALL BE GALVANIZED UNLESS SPECIFIED OTHERWISE.

- E. CONSTRUCTION:
 1. NO SHARP METAL EDGES SHALL EXTEND INTO AIR STREAMS. INSTALL DRIVE SLIPS ON AIR-LEAVING SIDE OF DUCT WITH SHEETMETAL SCREWS ON 6" CENTERS. SPIN IN COLLARS SHALL NOT BE USED FOR BRANCH CONNECTIONS IN 3" OR HIGHER PRESSURE CLASS DUCTWORK.
 2. CONNECTIONS TO ROOF FANS SHALL BE AT LEAST 22 GAUGE GALV. STEEL SOLDERED WATERTIGHT, SOLDER SIDE SEAMS AT LEAST 12" UP FROM BOTTOM, PROVIDE SUITABLE DIELECTRIC GASKETS TO JOIN DISSIMILAR MATERIALS.
 3. PLENUM AND CONNECTIONS TO LOUVERS SHALL BE 18 GAUGE MIN. CROSS-BROKEN AND PROPERLY REINFORCED WITH GALV. ANGLE IRONS TO SMACNA REQUIREMENTS AND SHALL HAVE BOTTOM AND CORNER SEAMS SOLDERED WATERTIGHT AT LEAST 12" UP FROM BOTTOM. PROVIDE NEOPRENE GASKETS TO MAKE CONNECTIONS TO LOUVERS WATERTIGHT. PLENUMS SHALL PITCH CONNECTIONS BACK TOWARDS LOUVER.
 4. 3" AND 4" PRESSURE CLASS DUCTWORK (ROUND-SINGLE WALL) JOINT LONGITUDINAL SEAMS SHALL BE LOCAL SPIRAL, LOCK LONGITUDINAL OR BUTT WELDED LONGITUDINAL TRAVERSE JOINTS SHALL BE SLIP TYPE, DRAW BAND JOINTS SHALL BE USED ON LONGITUDINAL SEAM DUCTS ONLY. SEAMS AND JOINTS IN FITTINGS SHALL BE CONTINUOUSLY WELDED. IF COATING IS DAMAGED DURING WELDING, REPAIR JOINTS TO PREVENT CORROSION.

- F. ACOUSTICAL DUCT LINING:
 1. PROVIDE 1" THICK ACOUSTICAL LINING BY CERTAIN-TEED, KNAUF, OWENS CORNING OR MANVILLE FOR THE FOLLOWING DUCTWORK:
 - A) SUPPLY AND RETURN DUCTWORK, INCLUDING PLENUMS FOR MINIMUM OF 20 FEET FROM ROOFTOP OR AIR HANDLING UNITS (OR TO SOUND ATTENUATE IF ATTENUATOR IS LOCATED FURTHER THAN 20 FEET FROM FAN).
 - B) EXHAUST DUCTWORK, INCLUDING PLENUMS, FOR MINIMUM OF 20 FEET FROM FAN INLET. EXCEPTIONS: KITCHEN HOODS, DISHWASHER AND FLUME HOOD SYSTEMS.
 - C) OTHER DUCTWORK INDICATED AS LINED ON THE DRAWINGS.
 2. INCREASE DUCT DIMENSIONS TO ACCOMMODATE LINING WHILE MAINTAINING INSIDE CLEAR DIMENSIONS SHOWN ON THE DRAWINGS.
 3. LINING SHALL BE AS FOLLOWS:
 - A) LOW-PRESSURE DUCTWORK (BELOW 4" S.P.): SHALL BE BLACK, MAT-FACED, 2 LB. DENSITY, FLEXIBLE GLASS TYPE WITH MIN. NRC VALUE OF 0.75 AND MAX. K-FACTOR AT 75°F MEAN OF 0.24.
 - B) MEDIUM AND HIGH PRESSURE DUCTWORK (ABOVE 4" S.P.): SHALL BE BLACK, MAT-FACED, 3 LB. DENSITY, RIGID BOARD TYPE WITH MIN. NRC VALUE OF 0.75 AND MAXIMUM K-FACTOR AT 75°F MEAN OF 0.23.
 4. FOR ALL LINED DUCTWORK AT THE INLETS AND OUTLETS OF FANS OVER 1 HP, AND FOR ALL LINED MEDIUM AND HIGH PRESSURE DUCTWORK (INCLUDING PLENUMS) WITHIN 20 FEET FROM RTU'S AND AHU'S PROVIDE A PERFORATED ALUMINUM (24 GAUGE) OR GALVANIZED LINER (MIN. 28 GAUGE), WITH 28% MIN. FREE AREA ON THE SIDE OF THE LINER EXPOSED TO THE MOVING AIRSTREAM. METAL LINE SHALL BE HELD IN PLACE BY WELDED PINS SPACED NO MORE THAN 12" O.C.
 5. MATERIAL AND INSTALLATION SHALL MEET ALL APPLICABLE CODES AND STANDARDS.
 6. DUCT LINER SHALL BE INSTALLED WITHOUT INTERRUPTIONS OR GAPS, USING 100% COVERAGE OF ADHESIVE AND MECHANICAL FASTENERS. MECHANICAL FASTENERS SHALL BE WELDED OR SECURED MECHANICALLY TO DUCT ON 12" MAX. CENTERS.
 7. CUT LINER TO ENSURE OVERLAPPED AND COMPRESSED LONGITUDINAL JOINTS AT CORNERS. TRAVERSE JOINTS IN LINER SHALL BUT PRECISELY. SEAL JOINTS AGAINST FIBER ENTRAINMENT WITH APPROVED ADHESIVE, AS RECOMMENDED BY MANUFACTURER. USE SHEETMETAL NOSING AT BEGINNING OF LINING (IN DIRECTION OF FLOW) TO PREVENT EROSION.
 8. THE CONTRACTOR SHALL ENSURE THE INTEGRITY OF ACOUSTICAL LINING WHEN SLIP-IN DUCT HEATERS ARE INSTALLED; LOOSE LINING SHALL NOT FLAP ABOUT IN THE AIRSTREAM. SECURE EDGES OF LINING WITH SHEETMETAL NOSING, WHERE LINER IS INTERRUPTED TO MAKE ROOM FOR SLIP IN HEATERS.
 9. FRICTION COEFFICIENT CORRECTION FACTOR AT 1000 FPM SHALL BE NO GREATER THAN 1.1.
 10. ANY CUT LINER DUE TO DUCT TAKE OFFS AND BRANCHES SHALL BE TOTALLY SEALED AT EDGES (WITH SHEETMETAL NOSE PIECES) TO PREVENT ENTRAINMENT OF LOOSE FIBERS.
 11. DO NOT INSULATE LINED DUCTS.

- 2.2 DUCT INSULATION
- A. GENERAL:
 1. INSULATION SHALL BE KNAUF, CERTAIN-TEED, JOHNS MANVILLE OR OWENS CORNING. INSTALL INSULATION, MASTICS, ADHESIVES, COATINGS, COVERS, ETC. AS REQUIRED BY MANUFACTURER'S RECOMMENDATIONS. MATERIALS SHALL MEET REQUIREMENTS OF ADHESIVE AND SEALANT COUNCIL STANDARDS AND SMACNA.
 2. APPLY INSULATION AFTER SYSTEMS HAVE BEEN TESTED, PROVED TIGHT AND APPROVED BY ARCHITECT. REMOVE DIRT, SCALE, OIL, RUST AND OTHER FOREIGN MATTER PRIOR TO INSTALLATION OF INSULATION.
 3. LEAKS IN VAPOR BARRIER OR VOIDS IN INSULATION WILL NOT BE ACCEPTED.
 4. ASTM E-84 MINIMUM FIRE HAZARD RATINGS SHALL BE 25 FLAME-SPREAD, 50 FUEL CONTRIBUTED AND 50 SMOKE DEVELOPED.
 5. WHERE DUCTS ARE INSULATED, FLEXIBLE CONNECTIONS TO DUCTS SHALL BE INSULATED.
 6. INSULATE STANDING SEAMS WITH SAME MATERIAL AND THICKNESS AS DUCT.
 7. INSULATION SHALL BE CONTINUOUS THROUGH WALL AND CEILING OPENINGS AND IN SLEEVES.
 8. TRANSMISSION RATES OF VAPOR BARRIERS SHALL NOT EXCEED 0.02 PERMS.
- B. RECTANGULAR AND CIRCULAR DUCTWORK
 1. INSULATE ALL SUPPLY AND RETURN AIR DUCTS IN CONCEALED SPACES WITH 2" (R-6) THICK FIBERGLASS DUCT WRAP WITH FOIL-KRAFT FLEAM RESISTANT VAPOR BARRIER.
 2. INSULATION DENSITY SHALL BE 3/4 LB. PER CUBIC FOOT AND MAXIMUM K-FACTOR SHALL BE 0.3 AT 75°F MEAN TEMPERATURE.
 3. COVER BREAKS IN VAPOR MATERIAL WITH PATCHES OF SAME MATERIAL, SECURED WITH ADHESIVE AND STAPLES. SEAL STAPLES WITH MATCHING FOIL FACE TYPE.

- 2.3 REGISTERS, GRILLES, AND DIFFUSERS
- A. REGISTERS, GRILLES AND DIFFUSERS SHALL BE OF STEEL AND/OR ALUMINUM CONSTRUCTION IN THE MODEL SIZE AND CAPACITY SCHEDULED ON THE DRAWINGS.
- B. EQUIPMENT SHALL BE AS MANUFACTURED BY PRICE, TITUS, KREUGER OR APPROVED EQUAL.
- C. FINISH AND STYLES TO CONFORM WITH BUILDING STANDARD.
- D. ALL REGISTERS, GRILLES, AND DIFFUSERS SHALL BE FURNISHED WITH INDIVIDUALLY ADJUSTABLE OPPOSED BLADE VOLUME CONTROL DAMPERS UNLESS SPECIFIED OTHERWISE.

- 2.4 REGISTERS, GRILLES, AND DIFFUSERS
- A. REGISTERS, GRILLES AND DIFFUSERS SHALL BE OF STEEL AND/OR ALUMINUM CONSTRUCTION IN THE MODEL SIZE AND CAPACITY SCHEDULED ON THE DRAWINGS.
- B. EQUIPMENT SHALL BE AS MANUFACTURED BY PRICE, TITUS, KREUGER OR APPROVED EQUAL.
- C. FINISH AND STYLES TO CONFORM WITH BUILDING STANDARD.
- D. ALL REGISTERS, GRILLES, AND DIFFUSERS SHALL BE FURNISHED WITH INDIVIDUALLY ADJUSTABLE OPPOSED BLADE VOLUME CONTROL DAMPERS UNLESS SPECIFIED OTHERWISE.

- 2.5 AUTOMATIC TEMPERATURE CONTROLS AND OTHER CONTROL COMPONENTS
- A. GENERAL: THERMOSTAT CONTROLS SHALL BE WIRED FOR LOW VOLTAGE (24V) OPERATION, UNLESS OTHERWISE SPECIFIED. PROVIDE LINE VOLTAGE (115V AND HIGHER) TO LOW VOLTAGE (24V) TRANSFORMER AND WIRING AS REQUIRED TO PROVIDE THE SEQUENCE OF OPERATION.
- B. MOTORIZED DAMPERS FOR OUTDOOR AIR INTAKE AND EXHAUST OPENINGS: ALL INTAKE AND EXHAUST OPENINGS INTEGRAL TO THE BUILDING ENVELOPE SHALL BE EQUIPPED WITH NOT LESS THAN A CLASS I MOTORIZED, LEAKAGE-RATED DAMPER WITH A MAXIMUM LEAKAGE RATE OF 4 CFM PER SQUARE FOOT AT 1.0 INCHES WATER GAUGE WHEN TESTED IN ACCORDANCE WITH AMCA 5000. APPLICABLE OPERABLE DAMPERS SHALL BE INSTALLED WHEN THE AIR BARRIER IS PENETRATED BY FIXED OPEN LOUVERS SUCH AS IN MACHINE ROOMS

- 2.6 SEQUENCE OF OPERATIONS
- A. EXISTING SINGLE-ZONE SPLIT-SYSTEM:
 1. AIR HANDLER UNIT SHALL CYCLE REFRIGERANT VALVE TO MAINTAIN A SPACE TEMPERATURE OF 74°F (OWNER SELECTABLE)
 2. MD-1 SHALL OPEN DURING AIR HANDLER OPERATION AND SHALL CLOSE WHEN THE AIR HANDLER IS POWERED OFF.
- D. ELECTRIC HEAT [EBB-1; EBB-2]
 1. EBB-1:
 - o THE ELECTRIC BASE BOARD HEATER SHALL BE CONTROLLED BY THE NEW PROGRAMMABLE THERMOSTAT PROVIDED FOR THE EXISTING SPLIT SYSTEM AIR HANDLER OPERATION. ON A CALL FOR HEAT, A LOW VOLTAGE RELAY SHALL ENERGIZE THE ELECTRIC BASEBOARD TO MAINTAIN A SPACE TEMPERATURE SET POINT OF 72°F (OWNER SELECTABLE)
 2. EBB-2:
 - o THE ELECTRIC BASE BOARD HEATER SHALL BE CONTROLLED BY A LINE VOLTAGE THERMOSTAT. THE LINE VOLTAGE THERMOSTAT SHALL CYCLE THE HEATER ON AND OFF TO MAINTAIN A SPACE TEMPERATURE OF 72°F (OWNER SELECTABLE)

PART 3: EXECUTION

- 3.1 TESTING AND CLOSEOUT
- A. CLEANING:
 1. UPON COMPLETION ALL SHEET METAL WORK SPECIFIED UNDER THIS SECTION IS TO BE CLEANED. ALL EQUIPMENT IS TO BE CLEANED, ALL TRIM INSTALLED, ALL PROTECTIVE OIL, TAPE OR OTHER MATERIALS USED TO PROTECT WORK ARE TO BE REMOVED.
 2. ALL DUCTS, FANS, AND EQUIPMENT SHALL BE THOROUGHLY CLEANED INSIDE AND OUTSIDE AND BLOWN OUT TO PREVENT AND DEBRIS FROM DAMAGING FAN SHIELDS OR DEBRIS HANGING THROUGH REGISTERS OR DIFFUSERS WHEN SYSTEMS ARE PLACED IN OPERATION. ALL TEMPORARY CONNECTIONS REQUIRED FOR BLOWING OUT THE SYSTEMS, CHEESECLOTH FOR ALL DUCT OPENINGS, AND ANY OTHER EQUIPMENT OR LABOR FOR CLEANING, SHALL BE PROVIDED BY THE HVAC CONTRACTOR. THE ENTIRE HVAC SYSTEM SHALL BE KEPT CLEAN UNTIL FINAL ACCEPTANCE. ANY DAMAGE TO CEILINGS BY THE HVAC CONTRACTOR SHALL BE RECTIFIED BY HIM AT NO ADDITIONAL CHARGE TO THE OWNER, TO THE SATISFACTION OF THE DESIGNER.

- 3.2 OPERATING AND MAINTENANCE INSTRUCTIONS
- A. PRIOR TO COMPLETION OF THE CONTRACT, PROVIDE FIELD AND WRITTEN OPERATING INSTRUCTIONS TO THE OWNER'S DESIGNATED REPRESENTATIVE WITH RESPECT TO OPERATION FUNCTIONS AND MAINTENANCE PROCEDURES FOR ALL EQUIPMENT AND SYSTEMS INSTALLED.
- B. ALL OPERATING EQUIPMENT INSTALLED UNDER THIS SECTION SHALL BE PLACED IN OPERATION AND SHALL FUNCTION CONTINUOUSLY IN AN OPERATING TEST FOR A PERIOD OF THREE DAYS, WITHOUT SHUTDOWN DUE TO MECHANICAL FAILURE OR NECESSITY OF ADJUSTMENT. PRIOR TO SCHEDULING THE PROJECT FINAL INSPECTION AND AFTER COMPLETION OF ALL INSTALLATION AND RUNNING EQUIPMENT AND AUTOMATIC CONTROL ADJUSTMENTS, PERFORM AIR BALANCING AND ANY OTHER WORK REQUIRED TO PLACE THE EQUIPMENT IN COMPLETE OPERATING CONDITION TO MEET ALL REQUIREMENTS UNDER THIS SPECIFICATION. DURING THIS RUNNING TEST PERIOD, DELIVER TO THE DESIGNER TWO COMPLETE SETS OF OPERATING, SERVICE, MAINTENANCE AND REPLACEMENT DATA FOR ALL EQUIPMENT WHICH WILL REQUIRE OPERATING MAINTENANCE OR REPLACEMENT AND ONE COPY OF THIS LITERATURE SHALL BE AVAILABLE DURING THE INSTRUCTION OF THE OPERATING PERSONNEL WHILE THE OTHER IS CHECKED FOR COMPLETENESS BY THE DESIGNER. DURING ALL WORKING HOURS OF THE "OPERATING TEST", THIS CONTRACTOR'S PERSONNEL SHALL BE AVAILABLE FOR GIVING FIELD INSTRUCTION, SHALL COVER OPERATION, MAINTENANCE AND ADJUSTING OF ALL EQUIPMENT INSTALLED.

- 3.3 HOISTING, SCAFFOLDING, STAGING AND PLANKING
- A. PROVIDE, SETUP AND MAINTAIN ALL REQUIRED DERRICKS, HOISTING MACHINERY, SCAFFOLDS AND STAGING, PLANKING AND PERFORM ALL HOISTING WORK REQUIRED TO COMPLETE THE WORK OF THIS FILED SUB-BID AS INDICATED AND SPECIFIED.
- B. SCAFFOLDS SHALL HAVE SOLID BACKS AND FLOORS TO PREVENT DROPPING MATERIALS FROM THERE TO THE FLOORS OR GROUND.

- 3.4 TESTING AND BALANCING
- A. TOTAL SYSTEM BALANCE SHALL BE PERFORMED IN ACCORDANCE WITH AABC NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION, TOTAL SYSTEM BALANCE OR ASHRAE SYSTEMS HANDBOOK.
- B. PROVIDE THE FOLLOWING:
 1. BEFORE COMMENCING WORK, VERIFY THAT SYSTEMS ARE COMPLETE AND OPERABLE. ENSURE THE FOLLOWING:
 - (1) EQUIPMENT IS OPERABLE AND IN A SAFE AND NORMAL CONDITION.
 - (2) TEMPERATURE CONTROL SYSTEMS ARE INSTALLED COMPLETE AND OPERABLE.
 - (3) PROPER THERMAL OVERLOAD PROTECTION IS IN PLACE FOR ELECTRICAL EQUIPMENT.
 - (4) FILTERS ARE CLEAN AND IN PLACE. IF REQUIRED, INSTALL TEMPORARY MEDIA IN ADDITION TO FINAL FILTERS.
 - (5) DUCT SYSTEMS ARE CLEAN OF DEBRIS.
 - (6) CORRECT FAN ROTATION.
 - (7) FIRE AND VOLUME DAMPERS ARE IN PLACE AND OPEN.
 - (8) ACCESS DOORS ARE CLOSED AND DUCT END CAPS ARE IN PLACE.
 - (9) AIR OUTLETS ARE INSTALLED AND CONNECTED.
 - (10) DUCT SYSTEM LEAKAGE HAS BEEN MINIMIZED.
 2. REPORT ANY DEFECTS OR DEFICIENCIES NOTED DURING PERFORMANCE OF SERVICES TO THE ARCHITECT.
 3. PROMPTLY REPORT ABNORMAL CONDITIONS IN MECHANICAL SYSTEMS OR CONDITIONS WHICH PREVENT SYSTEM BALANCE.
 4. IF, FOR DESIGN, REASONS, SYSTEM CANNOT BE PROPERLY BALANCED, REPORT AS SOON AS OBSERVED.
 5. START OF WORK MEANS ACCEPTANCE OF EXISTING CONDITIONS.
 6. PROVIDE ADDITIONAL BALANCING DEVICES AS REQUIRED.
 7. RECORDED DATA SHALL REPRESENT ACTUALLY MEASURED, OR OBSERVED CONDITION.
 8. AFTER ADJUSTMENT, TAKE MEASUREMENTS TO VERIFY BALANCE HAS NOT BEEN DISRUPTED OR THAT SUCH DISRUPTION HAS BEEN RECTIFIED.
 9. LEAVE SYSTEMS IN PROPER WORKING ORDER, REPLACING BELT GUARDS, CLOSING ACCESS DOORS, CLOSING DOORS TO ELECTRICAL SWITCH BOXES, AND RESTORING THERMOSTATS TO SPECIFIED SETTINGS.
 10. AT FINAL INSPECTION, RECHECK RANDOM SELECTIONS OF DATA RECORDED IN REPORT. RECHECK POINTS OR AREAS AS SELECTED AND WITNESSED BY THE OWNER.
 11. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE REQUIRED OR DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES.
 12. MAKE AIR QUANTITY MEASUREMENTS IN DUCTS BY PITOT TUBE TRAVERSE OF ENTIRE CROSS SECTIONAL AREA OF DUCT.
 13. MEASURE AIR QUANTITIES AT AIR INLETS AND OUTLETS.
 14. ADJUST DISTRIBUTION SYSTEM TO OBTAIN UNIFORM SPACE TEMPERATURES FREE FROM OBJECTIONABLE DRAFTS AND NOISE.
 15. USE VOLUME CONTROL DEVICES TO REGULATE AIR QUANTITIES ONLY TO EXTENT THAT ADJUSTMENTS DO NOT CREATE OBJECTIONABLE AIR MOTION OR SOUND LEVELS. EFFECT VOLUME CONTROL BY DUCT INTERNAL DEVICES SUCH AS DAMPERS.
 16. MEASURE STATIC AIR PRESSURE CONDITIONS ON AIR SUPPLY UNITS, INCLUDING FILTER AND COIL PRESSURE DROPS, AND TOTAL PRESSURE ACROSS THE FAN. MAKE ALLOWANCES FOR SOOT LOADING OF FILTERS.
 17. ADJUST OUTSIDE AIR AUTOMATIC DAMPERS, OUTSIDE AIR, RETURN AIR AND EXHAUST AIR DAMPERS FOR DESIGN CONDITIONS.
 18. MEASURE TEMPERATURE CONDITIONS ACROSS OUTSIDE AIR, RETURN AIR AND EXHAUST AIR DAMPERS TO CHECK LEAKAGE.

OFFICE EXPANSION at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue Cranston, Rhode Island 02920



400 Massachusetts Avenue, Suite 300, Second Floor East Providence, Rhode Island p. (401) 331-9200

21 Hampshire Street, Suite 106, First Floor Foxboro, Massachusetts p. (774) 215-0290 rowse@rowsearchitects.com

OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE. ARE, AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.



BUILDING ENGINEERING RESOURCES, INC. 66 Main Street N. Easton, MA 02316 T 508.230.0260 F 508.230.0265 ber@ber-engineering.com Office Commons 95 351 Cantonville Road Warwick, RI 02886 T 401.384.7682 www.ber-engineering.com

GENERAL NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND ARE FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
2. CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
3. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
4. NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
5. THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



Date: 02/09/2024 Drawn by: KB Proj. Mgr.: GA

No.	Date	Description

MECHANICAL - SPECIFICATIONS

M3.1

LEGEND NOTES

MOUNTING HEIGHTS SHALL BE AS INDICATED UNLESS INDICATED OTHERWISE ON ELECTRICAL DRAWINGS OR ARCHITECTURAL ELEVATIONS
ALL SYMBOLS MAY NOT BE SHOWN ON PLANS

HOMERUNS

HOMERUN TO PANELBOARD. "P" DENOTES PANEL. "1" DENOTES CIRCUIT NUMBER, 20 AMP 1 POLE CIRCUIT BREAKER UNLESS INDICATED OTHERWISE. WIRING SHALL BE 2#12-1#12G IN 3/4" C. AT MINIMUM.
MULTI-POLE HOMERUN TO PANELBOARD. "P" DENOTES PANEL. "2,4,6" DENOTES CIRCUIT NUMBERS, "30/3" DENOTES 30 AMP 3 POLE CIRCUIT BREAKER. WIRING SHALL BE AS INDICATED.

RACEWAYS AND WIRING

2#10,10#10 EMERGENCY ONLY WIRING
CABLE TRAY - REFER TO SPECIFICATIONS FOR REQUIREMENTS
FLEXIBLE CONNECTION TO EQUIPMENT. RACEWAY AND CONDUCTOR RATING TO MATCH ASSOCIATED BRANCH CIRCUIT OR FEEDER.
BRANCH CIRCUIT OR FEEDER CONCEALED IN FINISHED AREA.
BRANCH CIRCUIT OR FEEDER CONCEALED UNDER FINISHED FLOOR.
BRANCH CIRCUIT OR FEEDER TURNING UP TOWARDS OBSERVER.
BRANCH CIRCUIT OR FEEDER TURNING DOWN AWAY FROM OBSERVER.
CONDUIT STUBBED ABOVE CEILING.

LIGHTING FIXTURES

SURFACE OR RECESSED MOUNTED LIGHTING FIXTURE ON NORMAL CIRCUIT. "A" DENOTES FIXTURE TYPE, "2" DENOTES CIRCUIT NUMBER, "3" DENOTES SWITCH CONTROL.
LIGHTING FIXTURE WIRED TO CONSTANT-ON OR NORMAL EMERGENCY CIRCUIT
SURFACE OR RECESSED MOUNTED LINEAR LIGHTING FIXTURE
PENDANT MOUNTED LINEAR LIGHTING FIXTURE
ROUND RECESSED LIGHTING FIXTURE
DECORATIVE PENDANT LIGHTING FIXTURE
WALL MOUNTED LIGHTING FIXTURE
WALL WASH OR DIRECTIONAL LIGHTING FIXTURE
CEILING MOUNTED ILLUMINATED EXIT SIGN. SINGLE OR DOUBLE FACE, WITH OR WITHOUT ARROWS AS INDICATED ON DRAWINGS
WALL MOUNTED ILLUMINATED EXIT SIGN - SHADING INDICATES FACE PLATE(S)
SELF-CONTAINED EMERGENCY LIGHTING UNIT
REMOTE EMERGENCY LIGHTING HEADS - SINGLE OR DOUBLE AS SHOWN.
POLE MOUNTED SITE LIGHTING FIXTURE
TRACK LIGHTING AND HEADS; LENGTH OF TRACK AND QUANTITY OF HEADS AS SHOWN ON FLOOR PLANS
INVERTER

LIGHTING CONTROL DEVICES

Sa SINGLE POLE TOGGLE SWITCH; SUBSCRIPT INDICATES LIGHTING FIXTURE CONTROL.
S3a THREE WAY TOGGLE SWITCH; SUBSCRIPT INDICATES LIGHTING FIXTURE CONTROL.
S4a FOUR WAY TOGGLE SWITCH; SUBSCRIPT INDICATES LIGHTING FIXTURE CONTROL.
SKa KEY OPERATED SWITCH; SUBSCRIPT INDICATES LIGHTING FIXTURE CONTROL.
SP SINGLE POLE TOGGLE SWITCH WITH RED PILOT LIGHT.
SDa DIMMER SWITCH; SUBSCRIPT INDICATES LIGHTING FIXTURE CONTROL.
OS CEILING MOUNTED OCCUPANCY SENSOR.
V CEILING MOUNTED VACANCY SENSOR.
WC WALL MOUNTED VACANCY SENSOR.
VSW WALL MOUNTED VACANCY SENSOR.
PC PHOTOCELL.
TC TIME CLOCK.

RECEPTACLES AND POWER DEVICES

DUPLEX RECEPTACLE. "2" DENOTES CIRCUIT NUMBER, "48" DENOTES MOUNTING HEIGHT (18" UNLESS OTHERWISE NOTED), "IG" DENOTES ISOLATED GROUND TYPE DEVICE, "WP" DENOTES WEATHER PROOF COVER
DUPLEX RECEPTACLE MOUNTED 6" ABOVE COUNTER TOP OR AS INDICATED ON ARCHITECTURAL PLANS
DOUBLE DUPLEX RECEPTACLE
DOUBLE DUPLEX RECEPTACLE MOUNTED 6" ABOVE COUNTER TOP OR AS INDICATED ON THE ARCHITECTURAL PLANS
DUPLEX RECEPTACLE ONE HALF SWITCH CONTROLLED
DUPLEX RECEPTACLE FOR ELECTRIC WATER COOLER. PROVIDE DEDICATED 20A/1P GFCI CIRCUIT BREAKER UNLESS NOTED OTHERWISE.
DUPLEX RECEPTACLE FLOOR MOUNTED
SPECIAL PURPOSE RECEPTACLE, "L6-30" DENOTES TYPE, SEE POWER PLANS FOR EXACT TYPES USED
SINGLE RECEPTACLE
DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
CEILING MOUNTED DUPLEX RECEPTACLE
DUPLEX RECEPTACLE WITH (2) USB TYPE A PORTS.
FACTORY WIRED, FIELD ASSEMBLED UL LISTED, MULTIOUTLET ASSEMBLY. "12" DENOTES SINGLE RECEPTACLES MOUNTED ON 12" CENTERS
FIELD WIRED, UL LISTED, OF MULTIOUTLET ASSEMBLY, QUANTITY AND TYPE DEVICES AS INDICATED
SURFACE MOUNTED RACEWAY, DIVIDED RACEWAY WITH DATA AND DUPLEX RECEPTACLES AS INDICATED
POWER POLE ASSEMBLY
FIRE RATED POKE-THRU WITH FLUSH MOUNTED DEVICES. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.
FIRE RATED FURNITURE FEED WITH FLEXIBLE CONNECTION TO FURNITURE SYSTEM. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.
FIRE RATED FLOOR BOX WITH FLUSH MOUNTED DEVICES. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.

POWER DISTRIBUTION SYSTEM

DISTRIBUTION PANEL
PANELBOARD, SURFACE MOUNTED
PANELBOARD, FLUSH MOUNTED
JUNCTION BOX, SIZED PER NEC
MOTOR. "2" DENOTES HORSEPOWER
MANUAL MOTOR STARTER WITH THERMAL OVERLOAD. "P" DENOTES PILOT LIGHT
MAGNETIC MOTOR STARTER WITH ENCLOSURE, MINIMUM SIZE NEMA 1
NON-FUSED DISCONNECT SWITCH: "30/3" DENOTES 30 AMP/3 POLE SWITCH
FUSED DISCONNECT SWITCH: "30/20/3" DENOTES 30 AMP/3 POLE SWITCH, 20 AMP FUSES
COMBINATION MAGNETIC STARTER AND FUSED DISCONNECT SWITCH. SIZE OF STARTER, SWITCH AND FUSE AS REQUIRED
DRY-TYPE DISTRIBUTION TRANSFORMER. "15" DENOTES SIZE.
AUTOMATIC TRANSFER SWITCH
"K" FACTOR DRY TYPE TRANSFORMER. "2" DENOTES SIZE
TRANSIENT VOLTAGE SURGE SUPPRESSION
METER SOCKET AND UTILITY METER BY UTILITY COMPANY
ENCLOSED CIRCUIT BREAKER
UNINTERRUPTIBLE POWER SUPPLY
ELECTRICAL GROUNDING BUSBAR
ELECTRICAL MAIN GROUNDING BUSBAR
GROUND

TELECOMMUNICATIONS

TELECOMMUNICATIONS:
E.C. SHALL PROVIDE A DOUBLE GANG BACK BOX WITH SINGLE GANG REDUCER, 1" CONDUIT AND PULLSTRING STUBBED OUT ABOVE ACCESSIBLE CEILING AT ALL LOCATIONS. ALL DEVICES SHALL BE MOUNTED AT 18" AFF UNLESS OTHERWISE NOTED.
TELEPHONE OUTLET
TELEPHONE OUTLET MOUNTED 54" AFF
TELEPHONE OUTLET FLOOR MOUNTED
COMPUTER SYSTEM OUTLET
COMPUTER SYSTEM OUTLET, FLOOR MOUNTED
COMBINATION TELEPHONE/DATA OUTLET
COMBINATION TELEPHONE/DATA POWER POLE ASSEMBLY
TELECOMMUNICATIONS GROUNDING BUSBAR
TELECOMMUNICATIONS MAIN GROUNDING BUSBAR

ABBREVIATIONS

3R NEMA 3R RATING JB JUNCTION BOX
4X NEMA 4X RATING KCMIL ONE THOUSAND CIRCULAR MILS
A/AMP AMPERES KVA KILOVOLT-AMPERES
AC ALTERNATING CURRENT KW KILOWATTS
ADA AMERICAN WITH DISABILITIES ACT MCA MINIMUM CIRCUIT AMPS
AF AMPERE FRAME MCB MAIN CIRCUIT BREAKER
AFF ABOVE FINISHED FLOOR MCC MOTOR CONTROL CENTER
AFG ABOVE FINISHED GRADE MD MOTORIZED DAMPER
AHJ AUTHORITY HAVING JURISDICTION MLO MAIN LUGS ONLY
AIC AMPERE INTERRUPTING CAPACITY MOCP MAXIMUM OVER-CURRENT PROTECTION
AL ALUMINUM MH MANHOLE
AT AMPERE TRIP N NEUTRAL
ARCH ARCHITECT NC NORMALLY CLOSED
ATS AUTOMATIC TRANSFER SWITCH NEC NATIONAL ELECTRICAL CODE
AWG AMERICAN WIRE GAUGE NL NIGHT LIGHT
BFG BELOW FINISHED GRADE NO NOT IN CONTRACT
C CONDUIT NO NORMALLY OPEN
C.T. CURRENT TRANSFORMER NTS NOT TO SCALE
CAT CATALOG Ø PHASE
CATV CABLE TELEVISION P POLE
CB CIRCUIT BREAKER PC PLUMBING CONTRACTOR
CCTV CLOSED CIRCUIT TV SYSTEM P.T. POTENTIAL TRANSFORMER
CD CANDELA PVC POLYVINYL CHLORIDE
CKT CIRCUIT SN SOLID NEUTRAL
CU COPPER SM SURFACE MOUNT
dB DECIBEL ST SHUNT TRIP
DC DIRECT CURRENT T/D TEL/DATA
DWG DRAWING TEL TELEPHONE
E WIRED ON EMERGENCY CIRCUIT TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR
EC ELECTRICAL CONTRACTOR TYP TYPICAL
EM EMERGENCY UG UNDERGROUND
F FAHRENHEIT UL UNDERWRITERS LABORATORIES
FBA FINISH BY ARCHITECT UNO UNLESS NOTED OTHERWISE
FLA FULL LOAD AMPERES UPS UNINTERRUPTIBLE POWER SUPPLY
G GROUND V VOLTS
GC GENERAL CONTRACTOR V VOLTS
GFCI GROUND FAULT CIRCUIT INTERRUPTER VA VOLT-AMPERE
HH HAND HOLE VFD VARIABLE FREQUENCY DRIVE
HP HORSE POWER VIF VERIFY IN FIELD
HVAC HEATING, VENTILATION, AIR CONDITIONING CONTRACTOR W WATT
HZ HERTZ WP WEATHERPROOF
IG ISOLATED GROUND XFMR TRANSFORMER

MISCELLANEOUS

CONTROL PANEL
PULL BOX - SIZED PER NEC FOR CONDUITS ENTERING AND LEAVING AS REQUIRED
CABLE TELEVISION OUTLET. WALL MOUNTED. E.C. SHALL PROVIDE 3/4" EMPTY CONDUIT WITH PULL STRING TO NEAREST ACCESSIBLE CEILING. PROVIDE FACEPLATE WITH TYPE "F" CONNECTOR AT BOX.
GARAGE DOOR 3 BUTTON CONTROL STATION.
PUSHBUTTON AND PLATE
120 VOLT RECESSED CLOCK HANGER OUTLET
CENTRAL SYSTEM CLOCK WIRED TO CORRECTIVE CLOCK WIRING SYSTEM 1/2" DIAMETER UNLESS OTHERWISE NOTED "SP" DENOTES SHATTER GUARD
CLOCK/SPEAKER COMBINATION
MASTER CLOCK PANEL
INTERCOM
MASTER INTERCOM PANEL
DOOR BELL/BUZZER, LOW VOLTAGE
LOW VOLTAGE TRANSFORMER
MUSHROOM TYPE PUSHBUTTON STATION FOR ACTIVATION OF SHUNT-TRIP DEVICE ON INDICATED CIRCUIT BREAKER
COAXIAL CABLE OUTLET
PARTIAL PLAN/DETAIL CALL OUT TAG. TOP NUMBER INDICATES PLAN/DETAIL AND BOTTOM NUMBER INDICATES SHEET CONTAINING PLAN/DETAIL.
FLUSH VALVE/SENSOR FAUCET POWER CONNECTION TO ALL TRANSFORMERS FOR PLUMBING FIXTURES IN ROOM COORDINATE EXACT REQUIREMENTS AND LOCATIONS WITH PLUMBING CONTRACTOR.

DEMOLITION AND REMOVAL WORK

1. REMOVE ALL ELECTRICAL EQUIPMENT, WIRING, AND OTHER ELECTRICAL WORK AS REQUIRED. DISCONNECT LOAD AND LINE END OF CONDUCTORS FEEDING DEVICES WHICH ARE TO BE REMOVED OR ABANDONED. REMOVE CONDUCTORS NO LONGER IN USE. CUT BACK TO FLOOR, WALL, OR CEILING AND PLUG BOTH ENDS OF CONCEALED CONDUITS MADE OBSOLETE BY THIS ALTERATION. REMOVE EXPOSED OR ABANDONED CIRCUITS AND OUTLETS. REMOVE MATERIAL AND EQUIPMENT AND DISPOSE OF AS DIRECTED.
2. WHEREVER IT IS REQUIRED TO DISCONNECT OR REMOVE ANY PART OF AN EXISTING CIRCUIT, IMMEDIATELY RECONNECT THAT CIRCUIT OR REESTABLISH SERVICE IN THE REMAINING PORTION OF THE CIRCUIT. THE WORK SHALL ALSO INCLUDE THE REMOVAL OF MATERIALS AS DIRECTED. PRIOR TO REMOVING EQUIPMENT AND MATERIAL FROM PROJECT SITE, THE BUILDING MANAGER OR OWNER WILL INSPECT AND ADVISE WHICH ITEMS WILL BE STORED.
3. WHERE EXISTING RECEPTACLES AND/OR SWITCHES ARE LOCATED IN COLUMNS AND/OR EXTERIOR WALLS, AND ARE NOT TO BE REUSED, REMOVE RECEPTACLE AND CAP OUTLET BOX. RECEPTACLES SHOWN ON PARTITIONS TO BE REMOVED SHALL HAVE ALL WIRING AND CONDUIT REMOVED AS WELL.
4. WHERE PRESENT WORK IS DAMAGED IN THE EXECUTION OF THIS CONTRACT, OR WHERE OPENINGS ARE LEFT DUE TO THE REMOVAL OF CONDUITS, EQUIPMENT, OR APPARATUS, THE SAME SHALL BE REPAIRED OR CLOSED UP TO CORRESPOND IN MATERIAL, QUALITY, SHAPE, AND FINISH WITH THAT OR SIMILAR AND ADJOINING WORK, UNLESS OTHERWISE CALLED FOR.
5. SHOULD ANY DAMAGE DUE TO THE EXECUTION OF THIS CONTRACT OCCUR TO THE FURNITURE, FIXTURES, OR ANY OTHER EQUIPMENT OR APPARATUS, SUCH DAMAGES SHALL BE PROPERLY REPAIRED WITH THE SUPPLY OF NEW ARTICLES AND MADE GOOD WITHOUT EXTRA CHARGE.
6. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT WILL RESULT IN OUTAGES IN AREA NOT TO BE DEMOLISHED, THIS CONTRACTOR SHALL COORDINATE IN ADVANCE AND OBTAIN THE APPROVAL OF THE BUILDING MANAGER OR OWNER.

LIGHTING FIXTURE NOTES

1. PROVIDE ACCESSORIES AND MOUNTING HARDWARE FOR ALL FIXTURES.
2. COLORS SHALL BE AS SELECTED BY ARCHITECT.
3. COORDINATE EXACT LOCATIONS OF ALL FIXTURES WITH ARCHITECT'S REFLECTED CEILING PLAN, ELEVATIONS, SECTIONS, AND THE WORK OF OTHER TRADES PRIOR TO ROUGH-IN.
4. E.C. SHALL ENSURE THAT ALL PROPOSED SWITCHES AND DIMMER SWITCHES ARE COMPATIBLE WITH THE LIGHT FIXTURE(S) INDICATED TO BE CONTROLLED. INSTALL ALL SWITCHES AND DIMMER SWITCHES PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
5. ALL SELF CONTAINED EMERGENCY LIGHTING UNITS AND EXIT LIGHTING IN THE BUILDING SHALL BE CONNECTED TO THE NEAREST UN-SWITCHED LIGHTING CIRCUIT SERVING THE AREA WITH 2#12 & 1#12G, 3/4" CONDUIT UNLESS OTHERWISE NOTED.
6. LOCATIONS OF ALL SWITCHES SHALL COMPLY WITH ADA CRITERIA.
7. WHERE SWITCH CONTROLS ("a", "b", ETC.) ARE INDICATED, WIRE THE SWITCHES TO THE RESPECTIVE LIGHT FIXTURE. IF A FIXTURE HAS TWO OR MORE SWITCH DESIGNATIONS, WIRE FIXTURE SO THAT IT WILL BE CONTROLLED BY THE SWITCHES INDICATED.
8. WIRE EXIT SIGNS TO LIGHTING CIRCUIT SERVING THE AREA AHEAD OF ALL CONTROLS.
9. WIRE NIGHT LIGHTING FIXTURES FOR 24/7 OPERATION VIA UN-SWITCHED CIRCUIT AS INDICATED.
10. METAL ROOF DECKS SHALL NOT BE TAPPED FOR SUPPORT OF ANY LIGHTING FIXTURES OR ELECTRICAL EQUIPMENT. PROVIDE UNISTRUT OR OTHER SUPPLEMENTAL SUPPORT FITTINGS TO BE ATTACHED TO BUILDINGS STRUCTURAL FRAMING AS REQUIRED TO SUPPORT ALL LIGHTING FIXTURES AND ELECTRICAL EQUIPMENT.

BRANCH CIRCUIT WIRING NOTES

1. WIRING IS SHOWN ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
2. WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
3. ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.
4. ALTHOUGH ALL BRANCH CIRCUIT WIRING AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.
5. A GREEN GROUNDING CONDUCTOR SHALL BE RUN WITH ALL CIRCUITS. VERIFY CONDUIT SIZE TO ENSURE IT CAN ACCOMMODATE ALL PHASE, NEUTRAL AND GROUND CONDUCTORS.
6. PROVIDE A NEUTRAL CONDUCTOR TO ALL NEW LIGHTING SWITCH BOXES PER NEC ARTICLE 404.2.
7. IN ALL NON-DWELLING TYPE OCCUPANCIES, ALL 125-VOLT THROUGH 250-VOLT RECEPTACLES SUPPLIED BY SINGLE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL PER NEC ARTICLE 210.8(B)(2).
8. WHERE EXISTING SWITCHES AND RECEPTACLES ARE INDICATED TO REMAIN, THIS CONTRACTOR SHALL REPLACE SAID DEVICE(S) AND DEVICE PLATE(S) WITH NEW TO MATCH THE NEW CONSTRUCTION. WHERE THEY ARE INDICATED AS RELOCATED, EXTEND BRANCH CIRCUIT WIRING TO NEW LOCATION AND PROVIDE NEW DEVICE AND DEVICE PLATE TO MATCH NEW CONSTRUCTION.

MECHANICAL/PLUMBING EQUIPMENT TAG

MECHANICAL/PLUMBING EQUIPMENT TAG. "RTU" DENOTES EQUIPMENT TYPE. "1" DENOTES EQUIPMENT NUMBER. REFER TO "SCHEDULE FOR MECHANICAL/PLUMBING EQUIPMENT" FOR ALL CIRCUIT INFORMATION, INCLUDING BUT NOT LIMITED TO BRANCH CIRCUIT WIRING, CONDUIT SIZE, VOLTAGE, PHASE, DISCONNECT SWITCH, AND CIRCUIT BREAKER. REFER TO MECHANICAL, PLUMBING, AND FIRE PROTECTION PLANS FOR EXACT EQUIPMENT LOCATIONS AND EQUIPMENT TYPE ABBREVIATIONS.

DEMOLITION LEGEND

"ETR" DENOTES EXISTING ELECTRICAL DEVICE WHICH IS TO REMAIN.
"ETD" DENOTES EXISTING ELECTRICAL DEVICE WHICH IS TO BE DEMOLISHED. PULL BACK WIRING AND CONDUIT BACK TO NEXT ACTIVE OUTLET OR POWER SOURCE.
"ETRL" DENOTES EXISTING ELECTRICAL DEVICE TO BE DISCONNECTED AND RELOCATED. EXISTING CIRCUIT SHALL BE EXTENDED AS REQUIRED TO NEW LOCATION OF EXISTING ELECTRICAL DEVICE.
"RL" DENOTES NEW LOCATION OF RELOCATED EXISTING ELECTRICAL DEVICE.
"ETRP" DENOTES EXISTING DEVICE TO BE REMOVED AND REPLACED. EXISTING CIRCUIT/WIRING AND BACK BOX SHALL REMAIN. NEW DEVICE SHALL BE LOCATED IN PLACE.
"RP" DENOTES REPLACED DEVICE.

OFFICE EXPANSION



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920

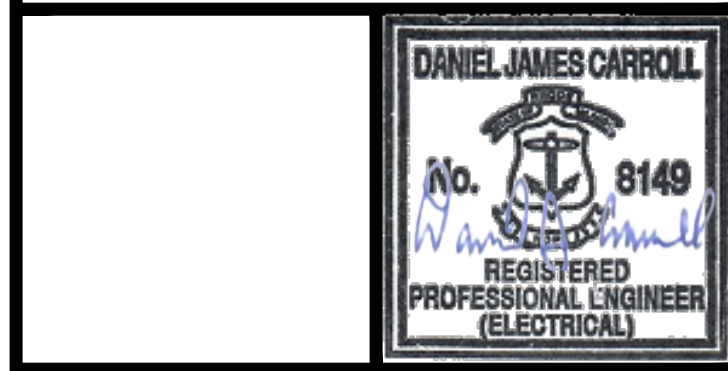


OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.



GENERAL NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
2. CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
3. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
4. NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
5. THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.

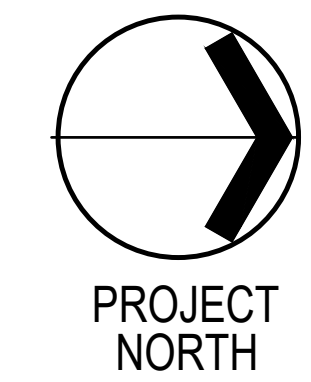


Date: 02/09/2024
 Drawn by: DD Proj. Mgr.: DC
 Revisions

No.	Date	Description

ELECTRICAL LEGEND, NOTES, & ABBREVIATIONS

E0.0



OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

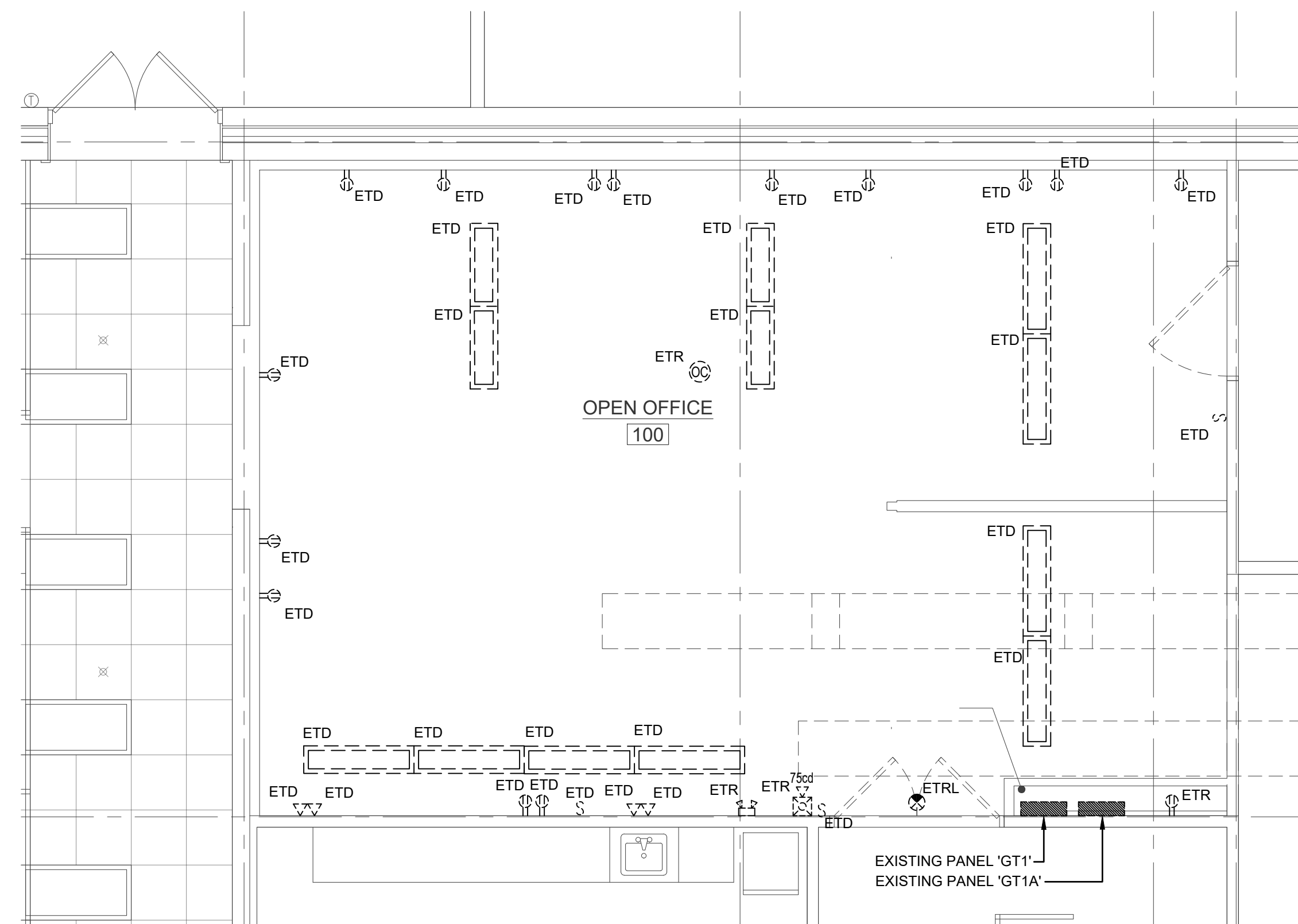
OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.



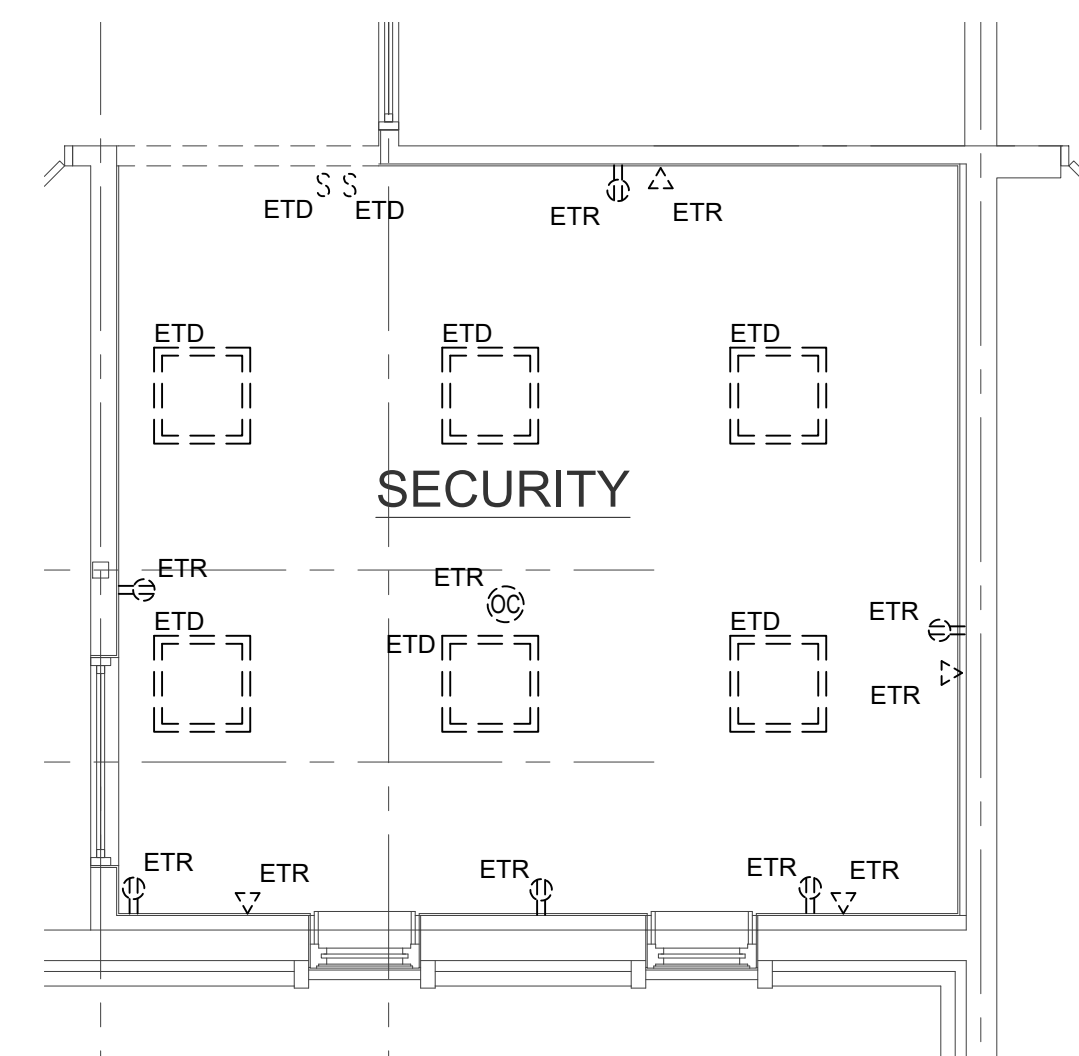
BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Easton, MA 02356
T 508 230-0260
F 508 230-0265
ber@ber-engineering.com
www.ber-engineering.com

GENERAL NOTES

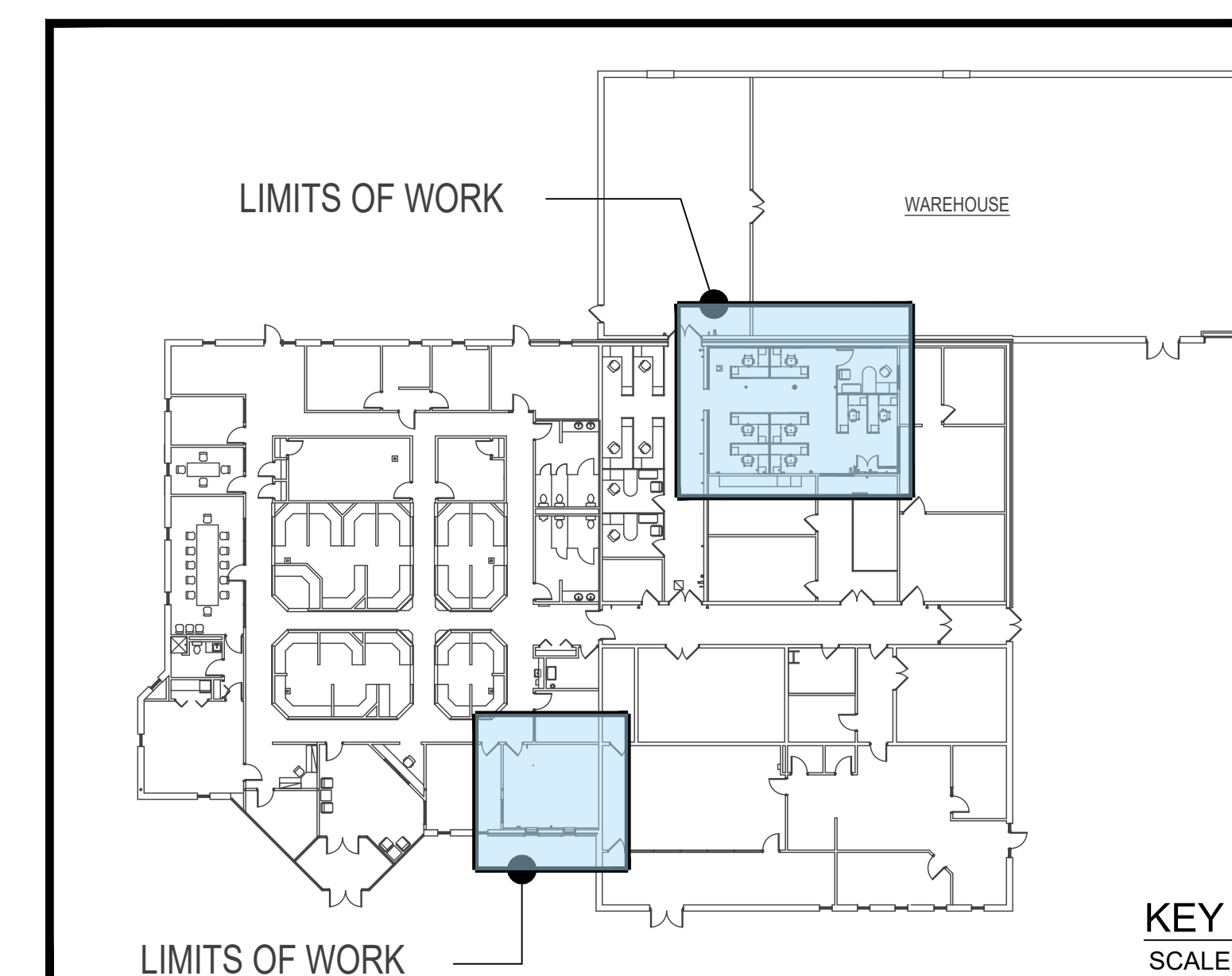
- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



1 PARTIAL DEMOLITION FLOOR PLAN - LIGHTING & POWER
E1.0 1/4"=1'-0"



2 SECURITY DEMOLITION FLOOR PLAN - LIGHTING & POWER
E1.0 1/4"=1'-0"



KEY PLAN
SCALE: NTS

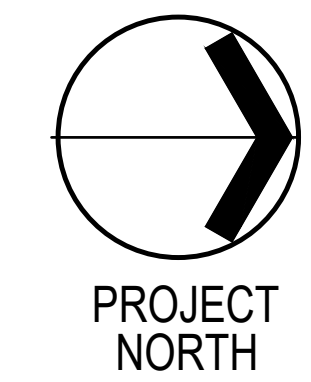


Date: 02/09/2024
 Drawn by: DD Proj. Mgr.: DC
 Revisions

No.	Date	Description

PARTIAL DEMOLITION FLOOR PLANS - LIGHTING & POWER

E1.0



OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

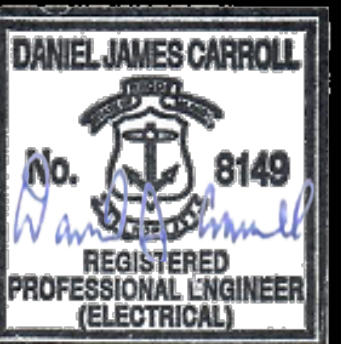
OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

B | E | R

BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Easton, MA 02356
T 508 230 0260
F 508 230 0265
ber@ber-engineering.com
www.ber-engineering.com
Office Commons 95
351 Centerville Road
Warwick, RI 02886
T 401 344 1882

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



Date: 02/09/2024

Drawn by: DD Proj. Mgr.: DC

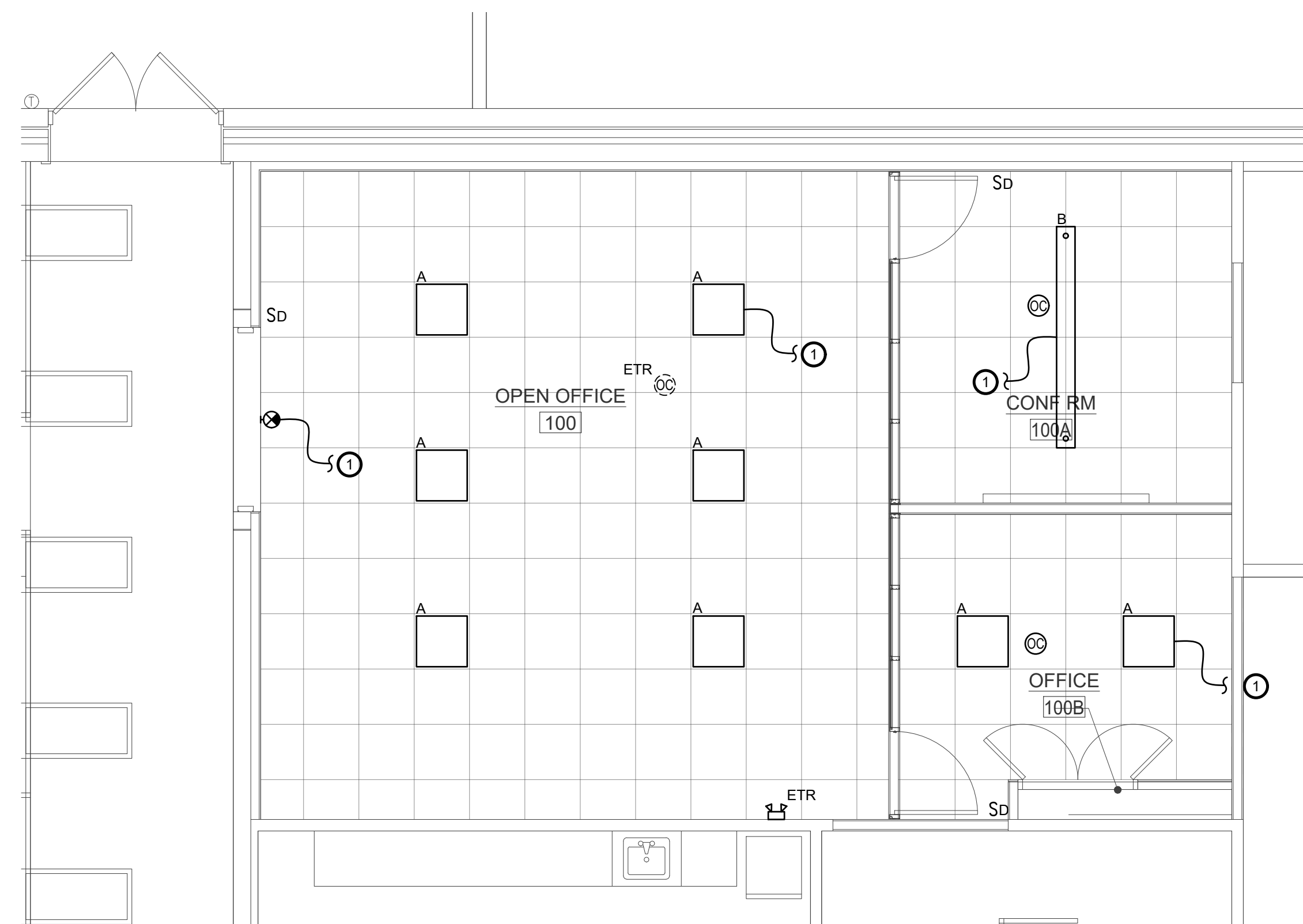
Revisions

No.	Date	Description

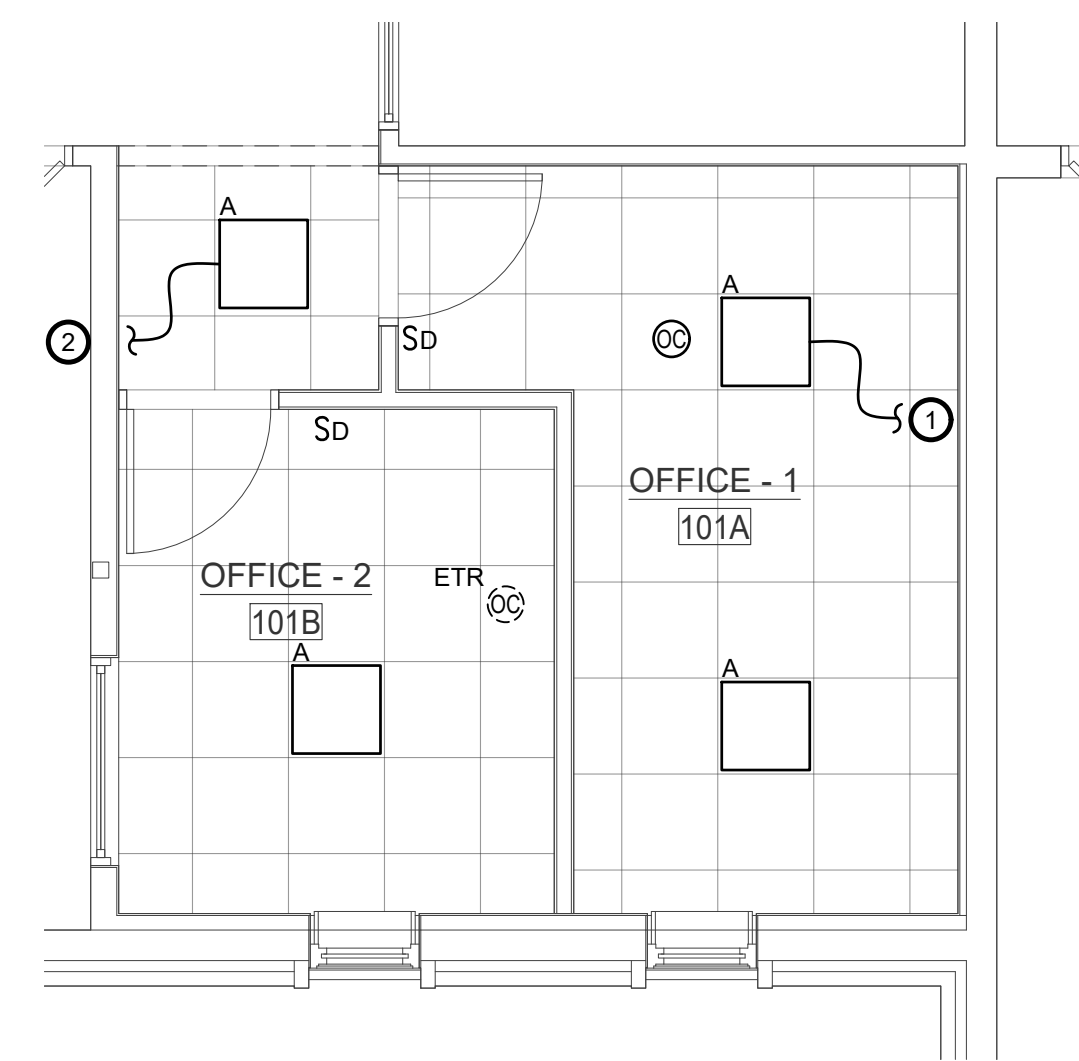
PARTIAL NEW FLOOR PLANS - LIGHTING

E2.0

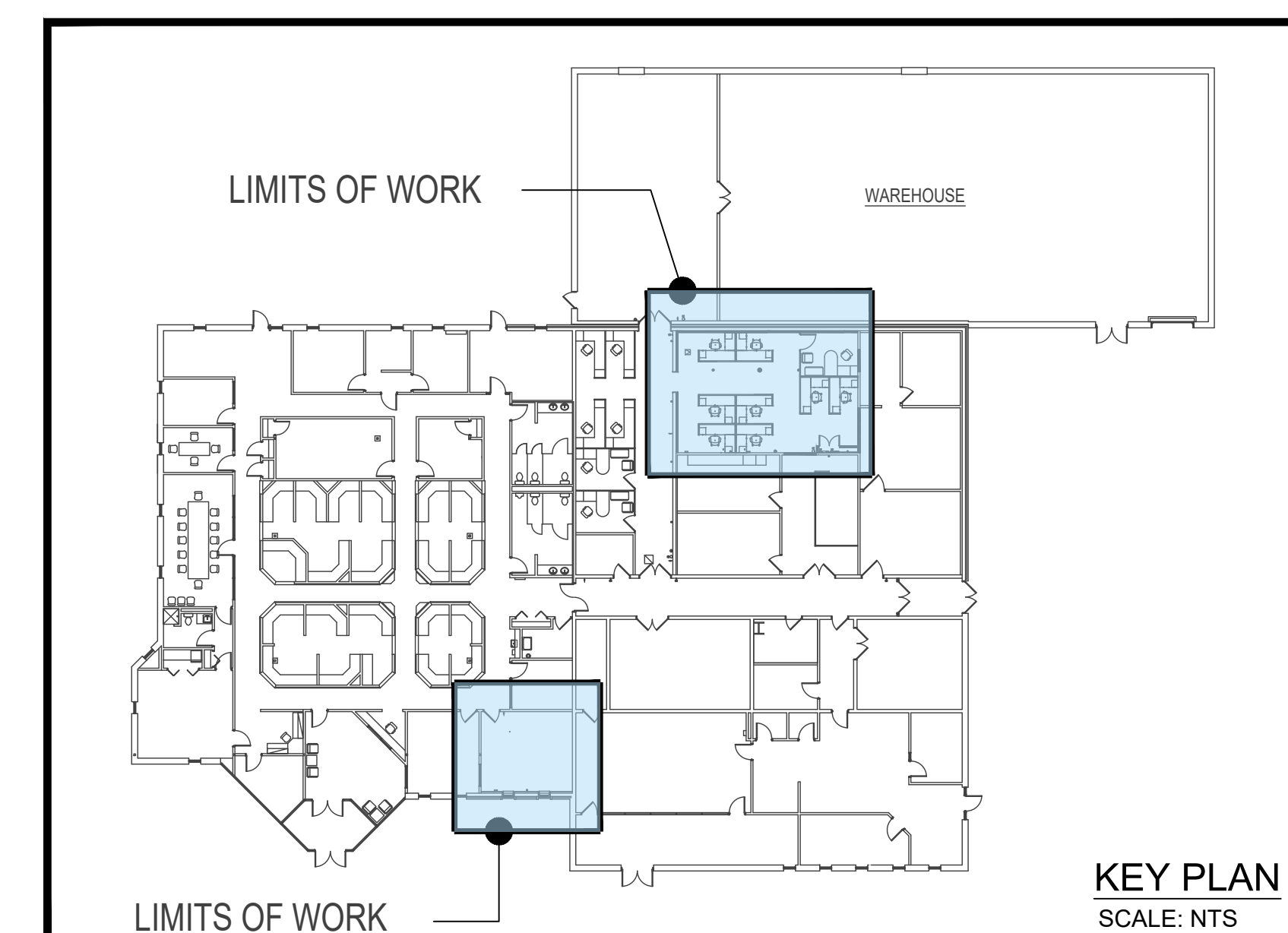
KEYED SHEET NOTES	
①	CONNECT TO EXISTING CIRCUIT FORMERLY SERVING LIGHTING IN THIS ROOM.
②	CONNECT TO EXISTING CORRIDOR CIRCUIT AND CONTROLS.



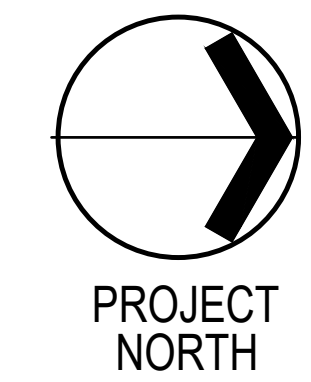
1 PARTIAL NEW FLOOR PLAN - LIGHTING
E2.0 1/4"=1'-0"



2 NEW SECURITY FLOOR PLAN - LIGHTING
E2.0 1/4"=1'-0"



KEY PLAN
SCALE: NTS



OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.



BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Easton, MA 02356
T 508 230 0260
F 508 230 0265
ber@ber-engineering.com
www.ber-engineering.com

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



Date: 02/09/2024

Drawn by: DD Proj. Mgr.: DC

Revisions

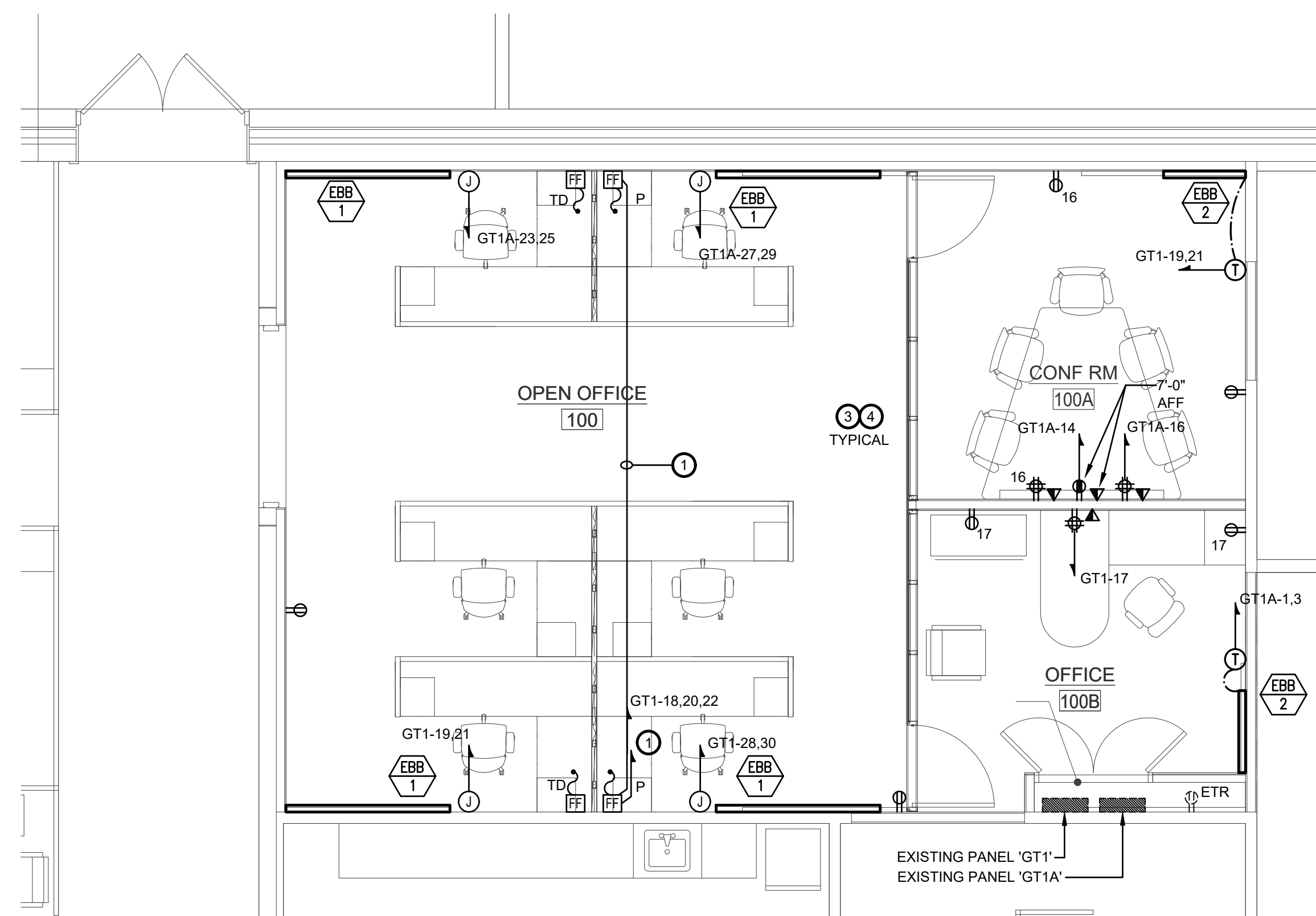
No.	Date	Description

PARTIAL NEW FLOOR PLANS - POWER

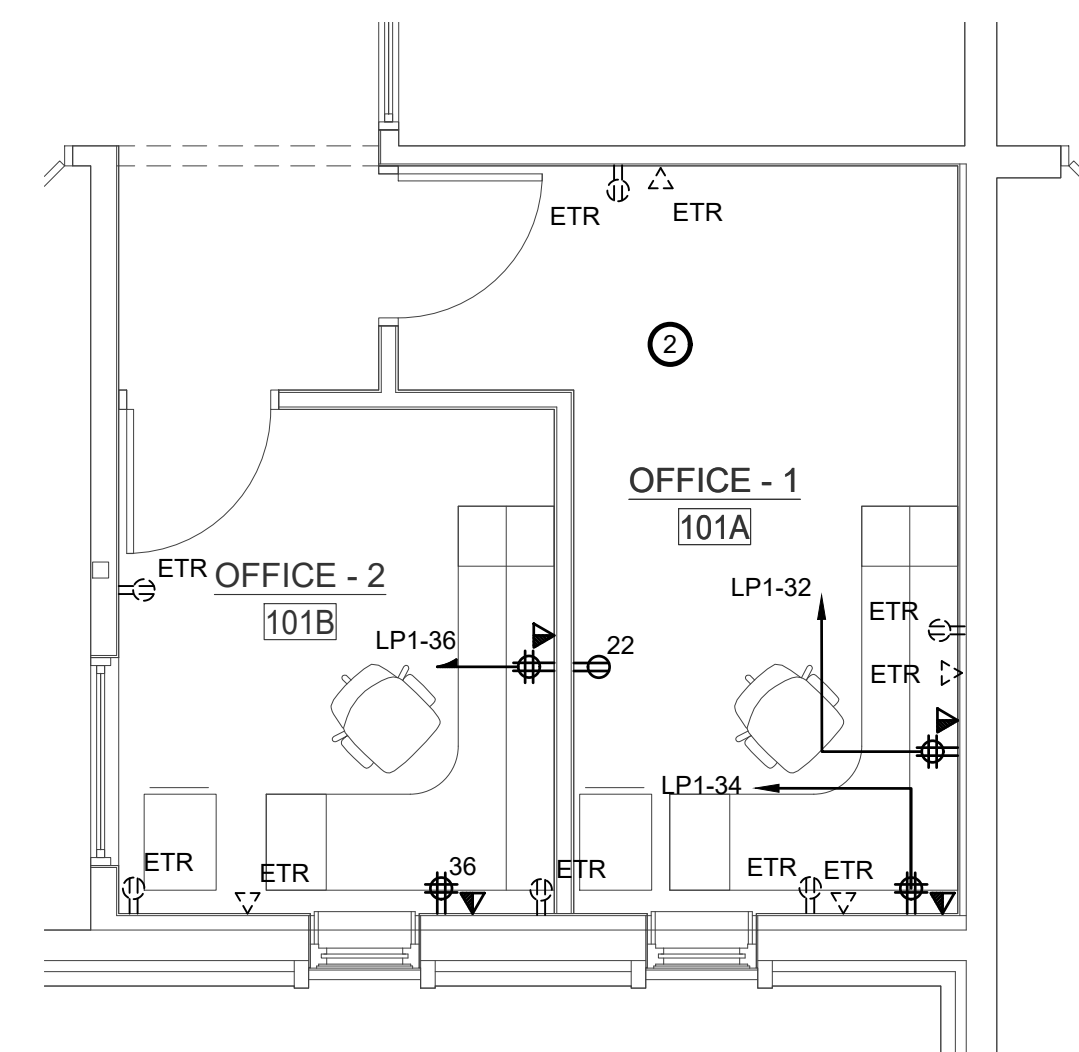
E3.0

KEYED SHEET NOTES

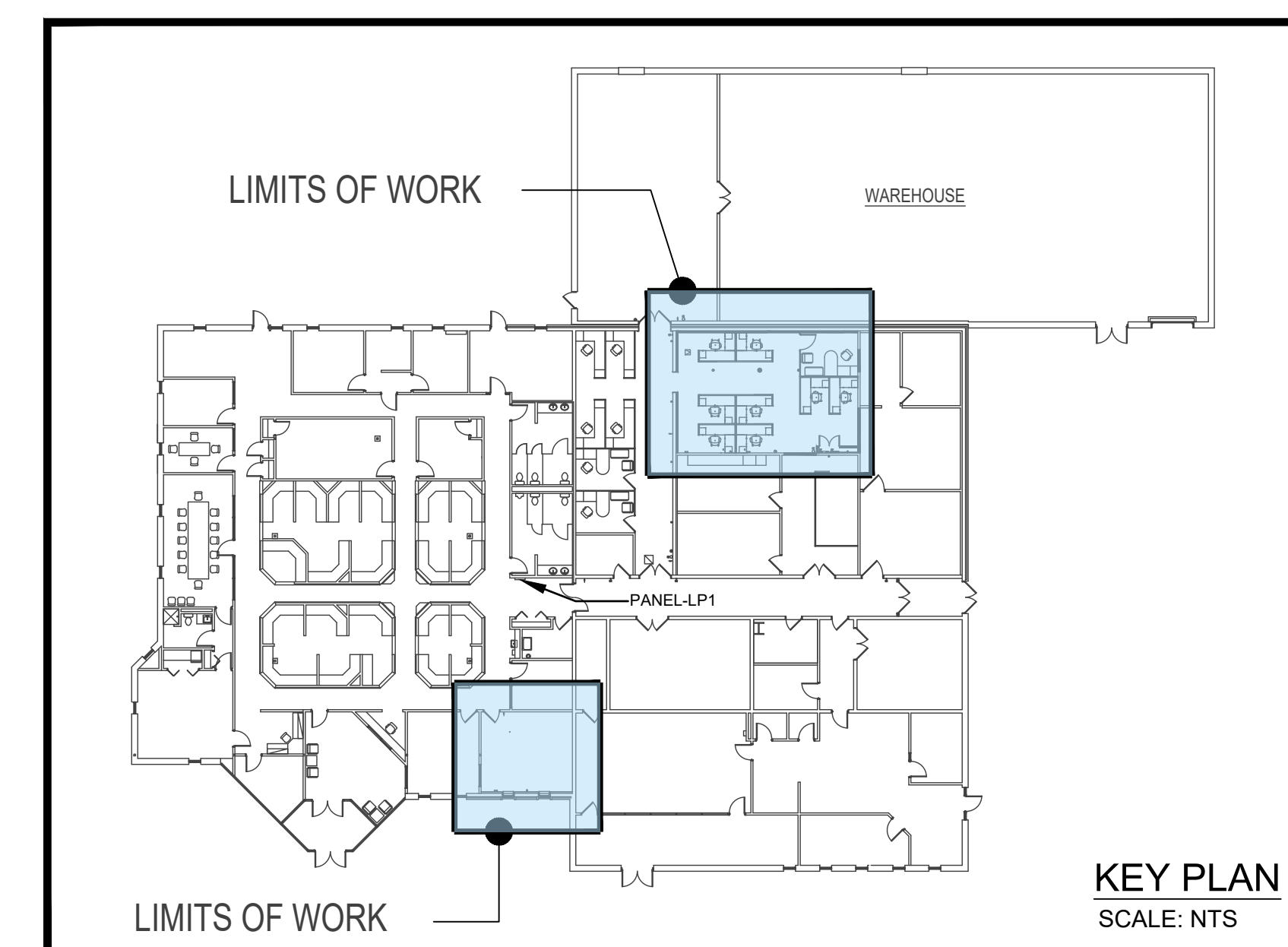
- A TYPICAL FURNITURE FEED CONSISTS OF THE FOLLOWING:
3 # 12 PHASE
1 # 10 SHARED NEUTRAL
1 # 12 SHARED GROUND
- SEE KEY PLAN FOR PANEL LOCATION.
- PROVIDE NEW 20A/1P CIRCUIT BREAKER FOR ALL NEW RECEPTACLE CIRCUITS.
- PROVIDE NEW 20/2P CIRCUIT BREAKER FOR EBB1 (TYPICAL).



1 PARTIAL NEW FLOOR PLAN - POWER
E3.0 1/4"=1'-0"



2 NEW SECURITY FLOOR PLAN - POWER
E3.0 1/4"=1'-0"



KEY PLAN
SCALE: NTS

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. THESE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO SERVE JOINTLY AS A BASIS UPON WHICH THE CONTRACTOR SHALL SUBMIT A PRICE FOR MATERIAL AND LABOR PROVISIONS.
- B. IT IS NOT INTENDED THAT THE PLANS OR SPECIFICATION SHOW OR STATE EVERY DETAILED REQUIREMENT OF THE WORK, BUT RATHER THAT THEY FURNISH ADEQUATE INFORMATION FOR AN EXPERIENCED CONTRACTOR TO PROVIDE A COMPLETELY ACCEPTABLE INSTALLATION. THE GENERAL CONDITIONS FORM A PART OF THESE SPECIFICATIONS WHETHER ATTACHED HERETO OR NOT. SHALL BE CAREFULLY EXAMINED BEFORE SUBMITTING A PROPOSAL. WHERE GENERAL CONDITIONS CLAUSES ARE REPEATED IN THIS SECTION, IT SHALL BE UNDERSTOOD AS CALLING SPECIAL ATTENTION TO THEM, OR AS A FURTHER QUALIFICATION, AND SHALL NOT BE ASSUMED AS OMITTING ANY OTHER CLAUSES. NO GENERAL CONDITIONS REFERRING TO THE WORK INCLUDED HEREIN SHALL BE CONSIDERED AS WAIVED UNLESS SPECIFICALLY STATED HEREIN.
- C. BEFORE SUBMITTING PROPOSAL, EXAMINE ALL PLANS RELATING TO THIS WORK, VERIFY ALL GOVERNING CONDITIONS AT THE SITE, BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER OF THE WORK REQUIRED AND ITS RELATION TO THE WORK OF OTHER TRADES. SUBMISSION OF A COST PROPOSAL (BID) WILL BE JUDGED AS EVIDENCE THAT THE SITE EXAMINATION HAS BEEN MADE. NO CONSIDERATION WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED FOR WORK TO BE DONE, IT BEING UNDERSTOOD THAT THE SUBMISSION OF A PROPOSAL IS AN AGREEMENT TO ALL CONDITIONS REFERRED TO HEREIN OR INDICATED ON THE PLANS.
- D. PROPOSAL MUST INCLUDE EVERYTHING REQUIRED TO PROVIDE A COMPLETE INSTALLATION AS CONTEMPLATED IN A SPECIFICATIONS AND PLANS, WHETHER SPECIFICALLY SHOWN OR SPECIFIED OR NOT. INCLUDED ARE LABOR, MATERIALS, EQUIPMENT, LIGHTS, TOOLS, SCAFFOLDING, ETC. NECESSARY TO COMPLETE INSTALLATION OF EVERYTHING DESCRIBED, SHOWN OR REASONABLY IMPLIED.
- E. ANY DISCREPANCIES BETWEEN THESE SPECIFICATIONS AND THE ACCOMPANYING PLANS, OR THESE SPECIFICATIONS AND PLANS AND THE SPECIFICATIONS OF OTHER TRADES, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE SUBMISSION OF THE BID. FAILURE TO COMPLY WITH THE ABOVE SHALL ALLOW THE ARCHITECT TO MAKE A FINAL AND BINDING DECISION AT A LATER DATE AND NO ALLOWANCE WILL BE GIVEN IF THE MORE EXPENSIVE OF THE ITEM IN QUESTION IS SELECTED.
- F. THE WORK CALLED FOR IN THESE PLANS AND SPECIFICATIONS SHALL BE COORDINATED WITH THE STRUCTURE, WORK OF ALL RELATED TRADES, AND SHALL BE SO ARRANGED THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF ANY PART OF EACH RESPECTIVE WORK, WHEREIN IT MAY BE INTERRELATED WITH THIS CONTRACT ALL WORK CAN PROCEED IN ITS NATURAL SEQUENCE WITHOUT UNNECESSARY DELAY. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL COST AND DELAYS IN THE WORK RESULTING FROM SUBSTITUTION UNDER THIS DIVISION: INCLUDING, BUT NOT LIMITED TO, ANY CHANGES, INDECISION, INSTALLATION OR THE WORK OF OTHER TRADES.

- G. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC (EXCEPT WHERE DIMENSIONED) AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEM AND WORK. FOLLOW ARCHITECTURAL, STRUCTURAL, AND MANUFACTURER'S SHOP DRAWINGS FOR GREATER ACCURACY. CONSULT ENGINEER IN CASE OF DOUBT OR CONFLICT, UNLESS, NOTED, FIXED DIMENSIONS ARE BASED ON THE PRODUCT OF ONE MANUFACTURER. VERIFY DIMENSIONS WITH THE SHOP DRAWINGS OF THE MATERIAL ACTUALLY APPROVED OR PURCHASED.
- H. EXACT LOCATION OF ALL EQUIPMENT, PANELS, PULL BOXES, FEEDERS, FIXTURES, ETC., SHALL BE APPROVED BY THE ARCHITECT, AND OWNER PRIOR TO THE INSTALLATION OF THE SAME.
- I. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS, AND ACCESSORIES TO FULFILL APPLICABLE CODES, REGULATIONS, AND THE BEST PRACTICES OF THE TRADE FOR INSTALLATION OF ALL ELECTRICAL WORK.
- J. EXPOSED CONDUITS CAN BE INSTALLED BUT IN NO CASE SHALL BE INSTALLED LESS THAN NINE FEET ABOVE THE FINISHED FLOOR OR AS NOTED. CONDUITS INSTALLED IN THE AREA WHERE HUNG CEILING OR OTHER FURRED SPACES ARE INDICATED SHALL BE INSTALLED CONCEALED. SHOULD ANY WORK REQUIRE SUBSEQUENT MODIFICATION OR RELOCATION TO AVOID INTERFERENCE OR CONFLICTS WITH OTHER WORK, SUCH CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
- K. ANY NECESSARY ELECTRICAL SERVICE INTERRUPTIONS SHALL BE AT A TIME CONVENIENT TO THE BUILDING OWNER.
- L. ALL PENETRATIONS THROUGH SLABS AND FIRE RATED PARTITIONS SHALL BE FIRE STOPPED USING APPROVED METHOD TO MAINTAIN THE FIRE RESISTANCE RATING.
- M. THE E.C. SHALL CALL FOR A FINAL PUNCH-LIST WHEN ALL ELECTRICAL WORK IS COMPLETE. IN THE EVENT REPRESENTATIVES OF THIS OFFICE ARRIVE AT THE SITE AND DEEM WORK IS NOT SUFFICIENTLY COMPLETE, NO REVIEW/PUNCH-LIST WILL OCCUR. THE E.C. WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH RESCHEDULED THE PUNCH-LIST.

- 1.02 SCOPE OF WORK
- A. WITHOUT INTENDING TO LIMIT AND/OR RESTRICT THE SCOPE OF WORK REQUIRED AND SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR, THE WORK OF THIS DIVISION SHALL, IN GENERAL COMPRISE THE FOLLOWING:
- FURNISHING AND INSTALLING NEW LIGHTING FIXTURES, LAMPS, AND LIGHTING CONTROLS.
 - FURNISHING AND INSTALLING NEW FEEDERS, CONDUITS, BRANCH CIRCUIT WIRING, ETC.
 - FURNISHING AND INSTALLING NEW RACEWAYS, OUTLET BOXES, WIRING AND CONNECTIONS FOR LIGHTING FIXTURES, SWITCHES, AND RECEPTACLES.
 - PROVIDE CONNECTIONS TO ALL ELECTRICAL EQUIPMENT FURNISHED BY OTHER TRADES OR BY THE OWNER.
 - POWER WIRING FOR ALL MOTORS, INCLUDING INSTALLING ALL REQUIRED DISCONNECT SWITCHES AND MOUNTING OF STARTERS.
 - FURNISHING AND INSTALLING ALL TELEPHONE/DATA SYSTEM CONDUITS, SLEEVES AND BOXES.
 - TEMPORARY LIGHT AND POWER.
 - GROUNDING.

9. CUTTING, CHANNELING, AND PATCHING.

10. FIRE ALARM SYSTEM MODIFICATIONS.

11. REMOVAL OF ELECTRICAL SYSTEM AS REQUIRED AND AS INDICATED ON PLANS.

1.03 WORK NOT INCLUDED

- A. FURNISHING MOTORS, MOTOR STARTER AND CONTROL DEVICES CONNECTED TO EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS. HOWEVER, ELECTRICAL CONTRACTOR WILL ERRECT AND WIRE SAME. FURNISH AUXILIARY MOTOR DISCONNECTS AS REQUIRED BY DRAWINGS OR CODE.
- B. FINISH PAINTING.
- C. TELEPHONE/DATA WIRING AND DEVICES.
- 1.04 CODES, PERMITS, AND INSPECTIONS
- A. ELECTRICAL WORK SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE STATE ELECTRICAL CODE, LOCAL ORDINANCES, AND OTHER AUTHORITIES EXERCISING JURISDICTION OVER ALL ELECTRICAL CONSTRUCTION WORK AND THE PROJECT.
- B. NOTHING CONTAINED IN THESE SPECIFICATIONS OR PLANS SHALL BE SO CONSTRUED AS TO CONFLICT WITH ANY LOCAL, MUNICIPAL, AND NATIONAL BOARD OF THE FIRE UNDERWRITERS REGULATIONS GOVERNING THE INSTALLATION OF WORK SPECIFIED HEREIN. ALL SUCH LAWS, ORDINANCES, AND REGULATIONS, WHERE THEY APPLY TO THIS WORK, ARE HEREBY INCORPORATED INTO AND MADE A PART OF THE SPECIFICATIONS. ALL SUCH REQUIREMENTS SHALL BE SATISFIED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- C. ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES SHALL BE OBTAINED, PAID FOR, AND MADE AVAILABLE AT THE COMPLETION OF THE WORK.
- D. COORDINATE ALL SERVICE WORK WITH THE LOCAL UTILITY COMPANIES. ALL WORK INCLUDING BUT NOT LIMITED TO, PRIMARY ELECTRIC DUCT BANKS, TRANSFORMER PADS, MAN-HOLES, PULL BOXES, METERING, PROTECTION BOLLARDS AND TELEPHONE/CABLE TV SERVICE DUCT BANKS SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE LOCAL UTILITY COMPANIES.

1.05 GUARANTEES AND CERTIFICATIONS

- A. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM DEFECTS, DEFECTIVE MATERIALS OR WORKMANSHIP, AS WELL AS DAMAGE TO THE WORK OF ANY/ALL TRADES RESULTING FROM THE SAME, SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR DURATION OF ONE YEAR, FROM THE DATE OF ACCEPTANCE.
- B. THE DATE OF ACCEPTANCE SHALL BE THE DATE OF THE FINAL PAYMENT FOR THE WORK OR THE DATE OF A FORMAL NOTICE OF ACCEPTANCE, WHATEVER IS EARLIER.
- C. NON-DURABLE ITEMS, SUCH AS ELECTRIC LAMPS, SHALL BE REPLACED UP TO THE DATE OF ACCEPTANCE, SUCH THAT THEY SHALL HAVE HAD NO MORE THAN 100 HOURS USE PRIOR TO THIS DATE.

SHOP DRAWINGS AND EQUIPMENT SUBMISSIONS

- A. PRIOR TO PURCHASING ANY EQUIPMENT OR MATERIAL, A LIST OF THEIR MANUFACTURERS SHALL BE SUBMITTED FOR APPROVAL.
- B. PRIOR TO ASSEMBLING OR INSTALLING THE WORK, CATALOG INFORMATION AND FACTORY ASSEMBLY DRAWINGS, AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL FIXTURES, DEVICES, DEVICES AND ITEMS OF EQUIPMENT, SHALL BE SUBMITTED FOR APPROVAL.
- C. FIELD INSTALLATION DRAWINGS AS REQUIRED TO EXPLAIN FULLY ALL PROCEDURES INVOLVED IN ERECTING, MOUNTING AND CONNECTING ALL ITEMS OF EQUIPMENT.
- D. NO EQUIPMENT SHALL BE FABRICATED, DELIVERED, ERECTED, OR RECONNECTED THAN FROM DRAWINGS APPROVED BY THE ENGINEER. SHOP DRAWING IN THE NUMBER DIRECTED SHALL BE SUBMITTED FOR THE FOLLOWING:
- | | |
|--|--|
| 1. LIGHTING FIXTURES AND CONTROL DEVICES | 5. PANEL BOARDS AND CIRCUIT BREAKERS |
| 2. WIRING DEVICES AND PLATES. | 6. SAFETY SWITCHES AND MOTOR STARTERS |
| 3. CONDUIT, BOXES, AND FITTINGS. | 7. FIRE ALARM SYSTEM INCLUDING BATTERY CALCULATIONS AND WIRING DIAGRAMS. |
- E. IT SHALL BE UNDERSTOOD THAT APPROVAL OF DRAWINGS WILL NOT BIND THE CONTRACTOR OR THE OWNER TO THE FINAL ACCEPTANCE OF SUCH EQUIPMENT AS THE COMPLETED INSTALLATION AND TEST OF EQUIPMENT AS A WHOLE MUST BE PROVIDED AND GUARANTEED HEREIN AS SPECIFIED.

1.07 SAMPLES

- A. UPON REQUEST BY ARCHITECT OR OWNER, SUBMIT FOR APPROVAL ONE SAMPLE OF EACH OF THE FOLLOWING:
- EACH TYPE OF LIGHTING FIXTURE.
 - EACH TYPE OF WIRING DEVICE.
 - EACH TYPE OF WIRING DEVICE PLATE.

1.08 AS-BUILT DRAWINGS

- A. THE CONTRACTOR SHALL, WITHIN 15 DAYS OF THE COMPLETION OF THE PROJECT AND PRIOR TO REQUESTING FINAL PAYMENT, SUBMIT AS-BUILT DRAWINGS OF THE ACTUAL INSTALLATION OF THE ELECTRICAL WORK. THREE (3) PAPER SETS OF DRAWINGS, SAME SCALE AS THE DESIGN SET UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS, AND THREE (3) CD DISKS WITH AutoCAD 2007 OR LATER VERSIONS OF THE AS-BUILTS ARE REQUIRED FOR SUBMISSION TO THE ARCHITECT ENGINEER.
- 1.09 TESTS
- A. BEFORE AN APPLICATION FOR THE FINAL ACCEPTANCE OF THE WORK WILL BE CONSIDERED, ALL TESTS DEEMED NECESSARY BY THE ARCHITECT TO SHOW PROPER EXECUTION OF THE WORK SHALL HAVE BEEN PERFORMED AND COMPLETED IN THE PRESENCE OF AN ARCHITECT'S REPRESENTATIVE. SCHEDULE OF ALL TESTING PROCEDURES SHALL BE ARRANGED TO SUIT THE CONVENIENCE OF THE ARCHITECT.
- B. ANY DEFECTS OR DEFICIENCIES DISCOVERED IN ANY OF THE ELECTRICAL WORK SHALL BE CORRECTED.

1.10 IDENTIFICATION

- A. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL TYPEWRITTEN DIRECTORY BEHIND TRANSPARENT PLASTIC COVERS IN METAL FRAMES, IN ALL NEW AND EXISTING PANELS INDICATING TYPE AND LOCATION OF LOAD BEING SERVED BY INDIVIDUAL CIRCUIT BREAKERS.
- B. ALL PARTS OF EQUIPMENT, SUCH AS PANELS, JUNCTION BOXES, SAFETY SWITCHES, MOTOR STARTER, CIRCUIT BREAKERS, CONDUCTORS AND SIMILAR ITEMS SHALL BE IDENTIFIED BY NAME, AT SUPPLY END, "LOAD SUPPLIED", AND AT LOAD END "LOAD SUPPLIED FROM".
- PART 2 - PRODUCTS**
- 2.01 EQUIPMENT AND MATERIALS
- A. ALL EQUIPMENT AND MATERIALS FOR PERMANENT INSTALLATION SHALL BE THE PRODUCTS OF RECOGNIZED MANUFACTURERS AND SHALL BE NEW.
- B. NEW EQUIPMENT AND MATERIALS SHALL:
- WHERE NORMALLY SUBJECTED TO UNDERWRITERS LABORATORY INC. LISTING OR LABELING SERVICES, BE SO LISTED OR LABELED.
 - BE WITHOUT BLEMISH OR DEFECT.
 - NOT TO BE USED FOR TEMPORARY LIGHT AND POWER PURPOSES WITHOUT ARCHITECT'S AUTHORIZATION.
 - BE IN ACCORDANCE WITH THE LATEST APPLICABLE N.E.M.A. STANDARD.
 - BE APPROVED BY BUILDING MANAGER OR OWNER.

- C. FOR ITEMS WHICH ARE TO BE INSTALLED BUT NOT PURCHASED AS PART OF THE ELECTRICAL WORK, THE ELECTRICAL WORK SHALL INCLUDE:
- THE COORDINATION OF THEIR DELIVERY.
 - THEIR FIELD MAKE-UP AND INTERNAL WIRING AS MAY BE NECESSARY FOR THEIR OPERATION.
- D. ELECTRICAL RACEWAY AND SUPPORTING SYSTEMS SHALL BE FURNISHED AND INSTALLED COMPLETE, WITH ALL MATERIALS, FITTINGS, CONNECTIONS AND ACCESSORIES NECESSARY TO PROVIDE IN EACH INSTANCE A COMPLETE OPERATING INSTALLATION, AS DESCRIBED HEREIN, AS INDICATED ON THE DRAWINGS, AND/OR AS APPROVED BY THE BUILDING MANAGER OR OWNER.

- E. THE DRAWINGS ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE WORK TO BE INSTALLED, BUT DO NOT SHOW ALL BENDS, FITTINGS, AND BOXES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE JOB CONDITIONS INCLUDING STRUCTURAL AND FINISH CONDITIONS AFFECTING ALL HIS WORK AND ARRANGE THE SAME ACCORDINGLY, FURNISHING SUCH FITTINGS, BOXES AND SIMILAR ITEMS AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.

- 2.02 WIRING MATERIALS
- A. WIRE AND CABLE SHALL BE COPPER, RATED FOR 600 VOLTS, TYPE THHN FOR BRANCH CIRCUITS AND XHHW FOR FEEDERS.
- B. WIRE #10 AWG AND SMALLER SHALL BE SOLID, WIRE #8 AWG AND LARGER SHALL BE STRANDED.
- C. WIRING SHALL BE CONSISTENTLY COLOR CODED THROUGHOUT. FOR 120/208 VOLT SYSTEMS, UTILIZE RED, BLUE, BLACK FOR LINE (PHASE) CONDUCTORS AND WHITE FOR NEUTRAL CONDUCTOR, SWITCH LEG SHALL BE SEPARATELY IDENTIFIED. GROUND CONDUCTOR SHALL BE GREEN. FOR 277/480V SYSTEMS, UTILIZE BROWN, ORANGE, YELLOW FOR LINE (PHASE) CONDUCTORS, AND GREY FOR NEUTRAL CONDUCTOR. GROUND CONDUCTOR SHALL BE GREEN WITH YELLOW TRACER.

- D. MINIMUM SIZE:
- LIGHTING AND POWER: #12 AWG, UNLESS OTHERWISE INDICATED.
 - CONTROL: #14 AWG.
 - 120 VOLT CIRCUITS OVER 100 FEET IN LENGTH AND 277 VOLT CIRCUITS OVER 200 FEET IN LENGTH FROM THE POINT OF SUPPLY TO THE FIRST OUTLET SHALL BE #10 AWG.
- E. SPLICES IN BRANCH CIRCUIT WORK SHALL BE MADE BY MEANS OF TYPE "R" "SCOTCHLOCK" ELECTRICAL TYPE.
- F. ELECTRICAL INSULATION TAPE SHALL BE VINYL PLASTIC TYPE WITH PRESSURE ADHESIVE "SCOTCH" ELECTRICAL TYPE.
- G. BRANCH CIRCUITRY NUMBERS INDICATED ON THE DRAWINGS ON MULTI-CIRCUIT HOMERUNS ARE FOR IDENTIFICATION OF DEVICES OR EQUIPMENT THEY ARE CONNECTED TO AND DO NOT NECESSARILY REFER TO PANELBOARD CIRCUIT NUMBERS. ASSIGNMENT OF BRANCH CIRCUIT NUMBERS SHALL BE PART OF THIS WORK AND INDICATED ON PANEL DIRECTORIES. BRANCH CIRCUITS SHALL BE CONNECTED TO CIRCUITS ON PANELBOARDS SO AS TO SECURE A REASONABLE BALANCE ON THE THREE PHASES. WHERE MORE THAN ONE CIRCUIT WITH A COMMON NEUTRAL IS INSTALLED IN THE SAME CONDUIT, EACH PHASE WIRE SHALL BE CONNECTED TO A DIFFERENT LEG OF THE SYSTEM.

- H. ALL CONDUCTORS SHALL BE COLOR CODED THROUGHOUT AND NUMBERED AND TAGGED AT EACH JUNCTION BOX, PULL BOX, PANEL, AND DEVICE WITH SUITABLE FIRE-PROOF TAGS OR ADHESIVE IDENTIFICATION BANDS.

- 2.03 CONDUITS AND RACEWAYS
- A. LIQUID TIGHT FLEXIBLE, GALVANIZED STEEL CONDUIT WITH CONTINUOUS COPPER BONDING CONDUCTOR SHALL BE USED FOR CONNECTIONS TO MOTORS AND AT OTHER LOCATIONS WHERE VIBRATION MOVEMENT IS ENCOUNTERED.
- B. UNLESS OTHERWISE INDICATED OR SPECIFIED ALL WIRING SHALL BE INSTALLED CONCEALED IN CEILINGS, WALLS, SLABS, PIPE CHASES AND FURRED SPACES WHENEVER POSSIBLE.
- C. CONDUIT AND FITTINGS SHALL CONFORM TO LATEST ACCEPTABLE STATE CODE AND ALL OTHER CODES HAVING JURISDICTION.
- D. CONDUIT SHALL BE 3/4" TRADE SIZE MINIMUM, UNLESS OTHERWISE INDICATED OR SPECIFIED.

- E. ALL CONDUITS WHICH ARE TO REMAIN EMPTY FOR FUTURE INTRODUCTION OF CONDUCTORS SHALL BE PROVIDED WITH A PULL LINE WITH IDENTIFICATION BAND AT BOTH ENDS.

- F. STEEL JACKETED METAL CLAD CABLE CAN BE USED FOR LIGHTING AND APPLIANCE BRANCH CIRCUITRY IN VOIDS OF CEILING AND PARTITIONS, PROVIDED THAT THIS TYPE OF WIRING IS ACCEPTABLE TO THE LOCAL BUILDING OFFICIAL OR HIS REPRESENTATIVE.
- G. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL CONFORM TO UL 6. FITTINGS SHALL BE THREADED.
- H. INTERMEDIATE METALLIC CONDUIT (IMC) SHALL CONFORM TO UL 1242. FITTINGS SHALL BE THREADED.

- I. ELECTRICAL METALLIC TUBING (EMT) SHALL CONFORM TO UL 797. FITTINGS SHALL BE GLAND AND RING COMPRESSION TYPE.
- J. FLEXIBLE METALLIC CONDUIT SHALL CONFORM TO UL 1. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL CONFORM TO UL 360.
- K. ALL CONDUIT FITTINGS AND CONNECTORS SHALL BE STEEL WITH INSULATED THROATS. DIE-FORMED ZINC FITTINGS ARE NOT ACCEPTABLE. BUSHINGS SHALL BE PROVIDED AT ALL CONDUIT TERMINATIONS. BUSHINGS LARGER THAN 1" SHALL BE GROUNDING TYPE. PVC BUSHINGS MAY BE UTILIZED ONLY FOR 3/4" BRANCH CIRCUIT CONDUITS TERMINATING AT PANELBOARDS.

- 2.04 JUNCTION BOXES
- A. JUNCTION BOX AND PULL BOXES SHALL BE PROVIDED WHERE INDICATED OR SPECIFIED AND WHERE NECESSARY TO FACILITATE THE INSTALLATION OF EQUIPMENT OR WIRING.
- B. ALL BOXES SHALL BE SIZED IN ACCORDANCE WITH NATIONAL ELECTRIC CODE.

- 2.05 OUTLET BOXES
- A. OUTLET, PULL AND JUNCTION BOXES SHALL BE FABRICATED FROM STEEL AND CONFORM TO UL 50, UL 514, AND NEMA OS1. BOXES FOR INTERIOR LOCATIONS SHALL BE CODE GAUGE, GALVANIZED SHEET STEEL.

- B. BOXES SHALL CONTAIN SUITABLE KNOCKOUTS. BARRIERS SHALL BE FURNISHED AS REQUIRED BY CODE.

- C. BOXES SHALL BE SIZED AS REQUIRED BY CODE FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER, THE MINIMUM BOX SIZE SHALL BE 4" SQUARE BE 1 1/2" DEEP. COVERS GREATER THAN 50LBS. SHALL BE DIVIDED INTO MULTIPLE SECTIONS.
- D. WHERE REQUIRED AND APPROVED BY THE ENGINEER, EXTRA DEEP OR EXTRA SHALLOW OUTLET BOXES SHALL BE USED TO FACILITATE THE INSTALLATION OF THE CONDUIT SYSTEM.

2.06 FASTENINGS, SUPPORTS, AND HANGERS

- A. ALL PARTS OF THE ELECTRICAL INSTALLATION SHALL BE ADEQUATELY SUPPORTED FROM THE BUILDING CONSTRUCTION USING APPROVED CLAMP SCREWS WITH THE INSERTS OF EXPANSION ANCHORS, EXPANSION BOLTS AND TOGGLE BOLTS. "IN NO CASE SHALL THE HUNG CEILING MEMBERS OR WIRES BE USED TO SUPPORT CONDUIT".
- B. ALL FASTENING, SUPPORTS, CLAMPS, ANCHORS, AND SIMILAR ITEMS SHALL BE OF TYPE SUITABLE FOR THE PURPOSE.

- 2.07 WIRING DEVICES
- A. ALL DEVICES SHALL BE SPECIFICATION GRADE, U.L. APPROVED.
- B. SINGLE POLE SWITCH, 20 AMP, 120/277 VOLTS, HUBBELL OR APPROVED EQUAL.
- C. RECEPTACLE, 20 AMP, 2 POLE, 3 WIRE DUPLEX, 125 VOLT, GROUP TYPE, HUBBELL OR APPROVED EQUAL.

2.08 GROUNDING

- A. ALL ENCLOSURES AND NON CURRENT CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, RACEWAY SYSTEMS AND EQUIPMENT GROUND BUSES SHALL BE EFFECTIVELY GROUNDED TO THE BUILDING GROUNDING SYSTEMS THROUGHOUT THE SYSTEM GROUND CONDUCTORS. METALLIC CONDUITS AND OTHER RACEWAYS AND ENCLOSURES FOR CONDUCTORS SHALL BE METALLIC ALLOY JOINED TOGETHER INTO A CONTINUOUS ELECTRICAL CONDUCTOR, AS TO PROVIDE EFFECTIVE ELECTRICAL CONTINUITY.
- B. GROUND CONTINUITY SHALL BE MAINTAINED THROUGHOUT.

2.09 LIGHTING FIXTURES

- A. ALL LIGHTING FIXTURES SHALL COMPLY WITH THE STATE ELECTRIC CODE AND SHALL BE U.L. APPROVED.
- B. ALL LIGHTING FIXTURES SHALL BE APPROVED PRIOR TO PURCHASE.
- C. ALL LIGHTING FIXTURES SHALL BE FURNISHED AND INSTALLED COMPLETE WITH NECESSARY COMPONENTS, ACCESSORIES, AND LAMPS OF CORRECT TYPE AND RATING AS INDICATED ON ELECTRICAL DRAWINGS.
- D. FIXTURES SHALL BE CAREFULLY SUPPORTED AND ALIGNED WITH NECESSARY HANGERS, SUPPORTING MEMBERS, AND FRAMES FOR PROPER INSTALLATION, ALL AS REQUIRED AND AS APPROVED.

- E. ALL FIXTURES SHALL BE PROPERLY WIRED AND CONNECTED TO BRANCH CIRCUITS, TESTED AND LEFT READY FOR OPERATION.
- F. FOR TYPE, MAKE, AND QUANTITIES OF LIGHTING FIXTURES REQUIRED, SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS.

- G. FIXTURES AND/OR FIXTURE OUTLET BOXES SHALL BE PROVIDED WITH HANGERS TO ADEQUATELY SUPPORT THE COMPLETE WEIGHT OF THE FIXTURE. PROVIDE SUPPLEMENTAL SUPPORTS PER ALL LOCAL AND STATE CODES.
- H. ALL FLUORESCENT LIGHTING FIXTURES SHALL HAVE ENERGY SAVING LAMPS AND SOLID STATE ELECTRONIC ENERGY SAVING CLASS "P" BALLASTS.

- I. THE E.C. SHALL BE RESPONSIBLE FOR THE COST OF ALL PROGRAMMING AND COMMISSIONING OF THE LIGHTING CONTROLS AND LIGHTING CONTROLS SYSTEM(S). PROGRAMMING AND COMMISSIONING SHALL BE PERFORMED BY THE LIGHTING CONTROLS MANUFACTURER. THE E.C. SHALL BE RESPONSIBLE FOR THE COST OF PROVIDING (4) HOURS OF TRAINING BY THE LIGHTING CONTROLS MANUFACTURER TO THE TENANT. ALL LIGHTING CONTROLS SHALL BE FULLY PROGRAMMED AT TIME OF FINAL PUNCH LIST.

2.10 TELEPHONE SYSTEM

- A. PROVIDE EMPTY CONDUIT WITH PULL LINE 3/4" MINIMUM AT EACH TELEPHONE OUTLET LOCATION. EXTEND IT UP TO 12" ABOVE HUNG CEILING AND TERMINATE WITH PLASTIC BUSHING.
- B. PROVIDE 5/8" THICK, 4'-0" WIDE AND 8'-0" HIGH FIRE RETARDANT PLYWOOD BACKBOARD IN TELEPHONE CLOSET. COORDINATE SIZE WITH OWNER'S TELEPHONE SYSTEM VENDOR.
- C. ALL TELEPHONE/DATA WIRING, JACKS, COVERPLATES, PUNCH DOWN BLOCKS, ETC., ARE FURNISHED AND INSTALLED BY OWNER'S PRIVATE VENDOR.

2.11 PANEL BOARDS

- A. PANEL BOARDS SHALL CONSIST OF FACTORY COMPLETED DEADFRONT ASSEMBLIES OF BACK PANS, MAIN BUSES, OVER CURRENT AND SWITCHING UNITS, SHEET METAL CABINETS AND TRIMS. THEY SHALL BE SO DESIGNED THAT SWITCHING AND OVER CURRENT DEVICES CAN BE REPLACED WITHOUT DISTURBING ADJACENT UNITS AND WITHOUT REMOVING THE MAIN BUS CONNECTORS, SO THAT CIRCUITS MAY BE CHANGED WITHOUT MACHINING, DRILLING, OR TAPPING.
- B. BUS BARS FOR THEIR MAINS SHALL BE OF COPPER HAVING CURRENT CAPACITIES AS INDICATED AND SIZED FOR SUCH CAPACITIES IN ACCORDANCE WITH UNDERWRITER LABORATORY STANDARDS. UNLESS OTHERWISE NOTED, FULL SIZE NEUTRAL BARS SHALL BE INCLUDED. BUS BARS TAPS FOR PANELS WITH SINGLE POLE BRANCHES SHALL BE ARRANGED FOR SEQUENCE PHASING OF THE BRANCH CIRCUIT DEVICES. BUSSING SHALL BE BRACED THROUGHOUT TO CONFORM TO INDUSTRY STANDARD PRACTICE GOVERNING SHORT CIRCUIT STRESSES IN PANELBOARDS. PHASE BUSSING SHALL BE FULL HEIGHT WITHOUT REDUCTION.
- C. A GROUND BUS SHALL BE PROVIDED FOR EACH PANEL. EACH GROUND BUS SHALL BE OF THE SAME MATERIAL AS THE PHASE AND NEUTRAL BUSES.
- D. PANEL BOARDS SHALL COMPLY WITH THE FOLLOWING INDUSTRY STANDARDS:
- UL STANDARDS
 - PANEL BOARDS - UL67
 - CABINET & BOXES - UL50
 - NEMA STANDARD - PB1

- E. CIRCUIT BREAKERS FOR PANEL OR INDIVIDUAL MOUNTING SHALL BE MOLDED CASE TYPE, QUICK-MAKE, QUICK-BREAK, OR MANUAL OR AUTOMATIC OPERATION.

- F. AMPERE RATING AND NUMBER OF POLES SHALL BE AS INDICATED ON THE DRAWINGS.

- G. BREAKERS SHALL BE TYPE AS MANUFACTURED BY SQUARE D OR APPROVED EQUAL. MINIMUM CIRCUIT BREAKER INTERRUPTING CAPACITY SHALL MATCH EXISTING SYSTEM, BUT IN NO CASE SHALL BE LESS THAN 22,000 SYM RMS AMPERES.

2.12 FIRE ALARM EXISTING EQUIPMENT

- A. THE EXISTING FACILITY IS EQUIPPED WITH A FIRE ALARM SYSTEM WHICH IS TO BE EXPANDED IN THE WORK AREA. ALL NEW EQUIPMENT SHALL BE OF THE SAME MANUFACTURER AS OF THE EXISTING SYSTEM, INCLUDING PULL STATIONS, SMOKE DETECTORS, DUCT SMOKE DETECTORS, AND AUDIBLE/VISUAL SIGNALS, ETC. ALL NEW HORNS/TROBELS SHALL BE SYNCHRONIZED WITH EXISTING APPLIANCES.
- B. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW THE SCOPE OF WORK AND PROPOSED EQUIPMENT WITH THE SUPERINTENDENT OF FIRE ALARMS FOR THE CITY PRIOR TO PURCHASE AND INSTALLATION. THE E.C. SHALL ALSO NOTIFY THE LOCAL FIRE DEPARTMENT AND THE OWNER AT LEAST 48 HOURS IN ADVANCE OF ANY MODIFICATIONS, POSSIBLE DISRUPTION, OR ASSOCIATED WORK ON THE EXISTING FIRE ALARM SYSTEM.

- C. THE EXISTING FIRE ALARM SYSTEM SHALL BE REPROGRAMMED AS REQUIRED TO INDICATE THE RENOVATED AREAS. REVIEW ZONING WITH THE OWNER'S REPRESENTATIVE AND LOCAL FIRE MARSHAL. THE E.C. SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THIS WORK.
- D. THE E.C. SHALL BE RESPONSIBLE FOR ALL POWER SUPPLIES REQUIRED DUE TO THE NEW DEVICES/APPLIANCES PROVIDED UNDER THIS CONTRACT.

- E. THE E.C. SHALL FURNISH BATTERY CALCULATIONS WHICH INCORPORATE ALL EXISTING EQUIPMENT IN ADDITION TO ALL NEW APPLIANCES/DEVICES.
- F. PROVIDE ALL FIRE ALARM WIRING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

- G. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT SHALL HAVE A RED STRIPE PAINTED EVERY 10'-0". ALL JUNCTION BOXES AND COVERS SHALL BE PAINTED RED. FIRE ALARM RATED "MC" CABLE MAY BE USED WHERE RUN CONCEALED IF ACCEPTABLE TO THE LOCAL FIRE DEPARTMENT.

2.12 FIRESTOPPING, SMOKEPROOFING AND WATERPROOFING

- A. PROVIDE FIRESTOP OR SMOKESTOP BETWEEN SLEEVES AND CONDUIT MANUFACTURED BY BIO FIRE SHIELD, INC., OR DOW CORNING CORP. AS FOLLOWS:
- DOW CORNING SILICONE RTV FOAM.
 - DOW CORNING 96-081 RTV SILICONE ADHESIVE SEALANT.
 - MINERAL FIBER BOARD, MATTING AND PUTTY.
- B. PROVIDE WATERPROOFING OF ALL MATERIALS WHICH PENETRATE A FLOOR, EXTERIOR WALL SLAB OR ROOF. ALL SLEEVES SHALL EXTEND A MINIMUM OF 3 INCHES ABOVE FLOOR OR ROOF.

PART 3 - EXECUTION

3.01 DEMOLITION AND REMOVAL WORK

- A. REMOVE ALL ELECTRICAL EQUIPMENT, WIRING AND OTHER ELECTRICAL WORK AS REQUIRED. DISCONNECT LOAD AND LINE END OF CONDUCTORS FEEDING DEVICES WHICH ARE TO BE REMOVED OR ABANDONED. REMOVE CONDUCTORS NO LONGER IN USE. CUT BACK TO FLOOR, WALL, OR CEILING AND PLUG BOTH ENDS OF CONCEALED CONDUITS MADE OBSOLETE BY THIS ALTERATION. REMOVE EXPOSED OR ABANDONED CIRCUITS AND OUTLETS. REMOVE MATERIAL AND EQUIPMENT AND DISPOSE OF AS DIRECTED.
- B. WHEREVER IT IS REQUIRED TO DISCONNECT OR REMOVE ANY PART OF AN EXISTING CIRCUIT, IMMEDIATELY RECONNECT THAT CIRCUIT OR REESTABLISH SERVICE IN THE REMAINING PORTION OF THE CIRCUIT.
- C. THE WORK SHALL ALSO INCLUDE THE REMOVAL OF MATERIALS AS DIRECTED. PRIOR TO REMOVING EQUIPMENT AND MATERIAL FROM PROJECT SITE, THE BUILDING MANAGER OR OWNER WILL INSPECT AND ADVISE WHICH ITEMS WILL BE STORED.
- D. WHERE EXISTING RECEPTACLES AND/OR SWITCHES ARE LOCATED IN COLUMNS AND/OR EXTERIOR WALLS, AND ARE NOT TO BE REUSED, REMOVE RECEPTACLE AND CAP OUTLET BOX. RECEPTACLES SHOWN ON PARTITIONS TO BE REMOVED SHALL HAVE ALL WIRING AND CONDUIT REMOVED AS WELL.
- E. WHERE PRESENT WORK IS DAMAGED IN THE EXECUTION OF THIS CONTRACT, OR WHERE OPENINGS ARE LEFT DUE TO THE REMOVAL OF CONDUITS, EQUIPMENT, OR APPARATUS, THE SAME SHALL BE REPAIRED OR CLOSED UP TO CORRESPOND IN MATERIAL, QUALITY, SHAPE, AND FINISH WITH THAT OR SIMILAR AND ADJOINING WORK, UNLESS OTHERWISE CALLED FOR.
- F. SHOULD ANY DAMAGE DUE TO THE EXECUTION OF THIS CONTRACT OCCUR TO THE FURNITURE, FIXTURES, OR ANY OTHER EQUIPMENT OR APPARATUS, SUCH DAMAGES SHALL BE PROPERLY REPAIRED WITH THE SUPPLY OF NEW ARTICLES AND MADE GOOD WITHOUT EXTRA CHARGE.
- G. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT WILL RESULT IN OUTAGES IN AREA NOT TO BE DEMOLISHED, THIS CONTRACTOR SHALL COORDINATE IN ADVANCE AND OBTAIN THE APPROVAL OF THE BUILDING MANAGER OR OWNER.

OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE, AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

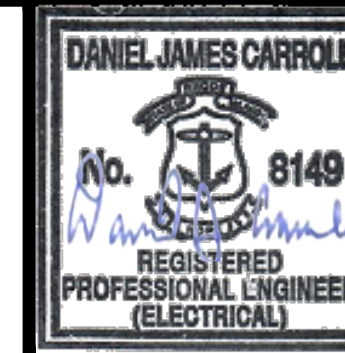
B | E | R

BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Easton, MA 02556
T 508 230-0260
F 508 230-0265
ber@ber-engineering.com

Office Commons 95
351 Centerville Road
Warwick, RI 02886
T 401 384-3882
www.ber-engineering.com

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEVER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



Date: 02/09/2024

Drawn by: DD Proj. Mgr.: DC

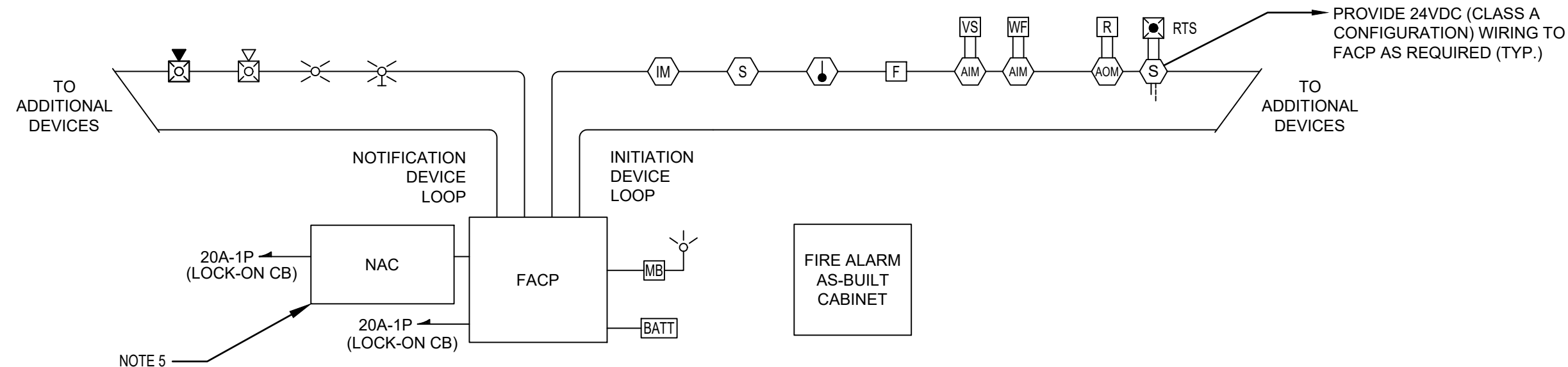
Revisions

No.	Date	Description
-----	------	-------------

ELECTRICAL SPECIFICATIONS

E5.0

ROOF



1ST FLOOR

FIRE ALARM RISER NOTES:

- REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF ALL DEVICES.
- THE FIRE ALARM SYSTEM SHALL CONFORM WITH THE REQUIREMENTS OF THE RHODE ISLAND FIRE SAFETY CODE AND THE CITY OF NORTH KINGSTOWN FIRE DEPARTMENT. SHOP DRAWINGS SHALL BE SUBMITTED TO THE FIRE DEPARTMENT FOR APPROVAL.
- ALL FIRE ALARM WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF NFPA, STATE, AND LOCAL BUILDING CODES AND THE AMERICANS WITH DISABILITIES ACT (ADA).

1
FA0.0

PARTIAL FIRE ALARM RISER DIAGRAM

NOT TO SCALE

FIRE ALARM GENERAL NOTES

- SMOKE ALARMS AND SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 36 INCHES HORIZONTAL PATH FROM THE TIP OF THE BLADE OF A CEILING/ SUSPENDED PADDLE FAN.
- DO NOT INSTALL SMOKE DETECTORS WITHIN UNFINISHED ATTICS OR GARAGES OR IN OTHER PLACES WHERE TEMPERATURES CAN FALL BELOW 40°F OR EXCEED 100°F.
- SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN A 36 INCHES HORIZONTAL PATH FROM THE SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW FROM THOSE REGISTERS.
- FOR TRAY-SHAPED CEILINGS (COFFERED CEILINGS), SMOKE DETECTORS SHALL BE INSTALLED ON THE HIGHEST PORTION OF THE CEILING OR ON THE SLOPED PORTION OF THE CEILING WITHIN 12 INCHES VERTICALLY DOWN FROM THE HIGHEST POINT.
- SMOKE DETECTORS INSTALLED IN ROOM WITH JOIST OR BEAMS SHALL COMPLY WITH THE REQUIREMENTS OF NFPA AND IBC 2021.
- PROVIDE ALL WIRING PER THE MANUFACTURER'S SPECIFICATIONS.
- THIS FIRE ALARM RISER DIAGRAM IS TYPICAL; WIRE TO ALL DEVICES ON ALL ZONES AND CIRCUITS. REFER TO FLOOR PLANS FOR TYPES AND QUANTITIES OF DEVICES.
- ALL FIRE ALARM WIRING SHALL BE RUN CONTINUOUS FROM DEVICE TO DEVICE.
- OUTGOING AND RETURN CONDUCTORS MUST BE RUN IN SEPARATE RACEWAYS. PROVIDE MINIMUM SEPARATION OF ONE FOOT WHERE THE CABLE IS RUN VERTICALLY AND A FOUR FEET SEPARATION WHERE THE CABLE IS RUN HORIZONTALLY (REFER TO NFPA FOR MORE INFORMATION).
- PROVIDE ANY ADDITIONAL REMOTE FIRE ALARM POWER SUPPLIES, DEVICES, WIRING, ETC. AS REQUIRED TO SERVE NEW FIRE ALARM NOTIFICATION DEVICES SHOWN ON THE DRAWINGS.
- PROVIDE ADDITIONAL SMOKE DETECTORS AS NECESSARY PER NFPA.
- PROVIDE HARDWARE AND PROGRAMMING SUCH THAT DURING ALARM, ALL HVAC UNITS WITH CFM >2000 WILL BE SHUTDOWN.
- PROVIDE INTERMEDIATE RELAYS AS NEEDED.
- SYNCHRONIZE ALL STROBE LIGHTS.
- VERIFY WIRING TYPE FOR INITIATING LOOP.
- WHEN CONNECTING AN ADDRESSABLE MODULE TO MONITOR A CONVENTIONAL SMOKE DETECTOR, A SEPARATE 24 VOLT AUXILIARY POWER SOURCE, ORIGINATING FROM THE FIRE ALARM CONTROL PANEL IS REQUIRED.
- VERIFY ADDITIONAL WIRING WITH SPECIFIED MANUFACTURER (E.G. 24V POWER FOR MODULES).
- NOTIFY OWNER, FIRE DEPARTMENT, AND POLICE DEPARTMENT PRIOR TO EXECUTING ANY WORK ON THE FIRE ALARM SYSTEM.
- PROVIDE ISOLATION MODULES AS REQUIRED IN ACCORDANCE WITH THE CONNECTICUT FIRE SAFETY CODE AND IBC. PROVIDE A MINIMUM OF ONE ISOLATION MODULE PER FLOOR, AND ONE ISOLATION MODULE FOR EVERY 25 INITIATING DEVICES.
- ALL FIRE ALARM EQUIPMENT INCLUDING AND NOT LIMITED TO FIRE ALARM CONTROL PANELS, CABINETS, ANNUNCIATORS, PULL STATIONS, ETC. SHALL BE LOCKABLE TYPE. PROVIDE KEY ALIKE LOCKABLE EQUIPMENT AS REQUIRED.
- COLOR CODE ALL FIRE ALARM WIRING PER THE REQUIREMENTS OF THE CONNECTICUT FIRE SAFETY CODE.
- FIRE SEAL ALL CONDUIT PENETRATIONS MADE THROUGH FIRE RATED WALLS, ELECTRICAL /TELECOMMUNICATION ROOMS AND CLOSETS.
- FIRE SEAL ALL PENETRATIONS THROUGH FLOORS.
- PROVIDE 25% SPARE CAPACITY ON INITIATION AND NOTIFICATION LOOPS.
- REFER TO FIRE PROTECTION DRAWINGS FOR QUANTITIES AND LOCATIONS OF TAMPER AND FLOW SWITCHES.
- TYPICALLY FIRE ALARM SYSTEM POWER CONDUCTORS SHALL BE #14 AWG, TYPE THHN SOLID. MINIMUM ELECTRICAL CONTRACTOR SHALL SIZE AND PROVIDE FIRE ALARM POWER CONDUCTORS TO ACCOMMODATE FUTURE LOW FREQUENCY HORN/STROBES WITHIN ALL DWELLING UNIT ROOMS FOR THE POSSIBILITY THAT ANY ROOM MAY BE CONVERTED TO AN ACCESSIBLE UNIT IN THE FUTURE.
- SMOKE DETECTORS SHALL BE INSTALLED A MINIMUM OF 20' HORIZONTAL DISTANCE FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. SMOKE DETECTORS INSTALLED WITHIN 6-20' FROM A PERMANENTLY INSTALLED COOKING APPLIANCE SHALL BE LISTED FOR RESISTANCE TO COMMON NUISANCE SOURCES FROM COOKING PER NFPA 72.
- SMOKE DETECTORS SHALL BE INSTALLED NOT LESS THAN 3 FEET HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE DETECTOR REQUIRED BY NFPA 72.

FIRE ALARM SYSTEM

FIRE ALARM SYSTEM:
ALL NOTIFICATION DEVICES SHALL BE MOUNTED 80" AFF, UNLESS OTHERWISE NOTED. THE FOLLOWING DESIGNATIONS SHALL APPLY TO ALL FIRE ALARM DEVICES:

- AC = ABOVE CEILING
 - C = CEILING MOUNTED
 - LF = LOW FREQUENCY
 - WG = WIRE GUARD
 - WP = WEATHERPROOF
- [F] MANUAL PULL STATION, MOUNTED 48" AFF
 - [K] ACCESS FEATURE-FIRE DEPARTMENT KEY REPOSITORY.
 - [R] INTERMEDIATE RELAY, PROVIDE AS NEEDED.
 - [A] RADIO MASTER BOX ANTENNA, MOUNT AT HIGHEST POINT ON BUILDING EXTERIOR.
 - [FAA] FIRE ALARM ANNUNCIATOR
 - [FAC] FIRE ALARM COMMUNICATOR
 - [FPC] FIRE PUMP CONTROLLER
 - [BATT] BATTERY CABINET
 - [FACP] FIRE ALARM CONTROL PANEL
 - [FATC] FIRE ALARM TERMINAL CABINET
 - [FAGM] FIRE ALARM GRAPHIC MAP
 - [NAC] NOTIFICATION APPLIANCE CIRCUIT POWER SUPPLY SIZE PER MANUFACTURERS SYSTEM CALCULATIONS.
 - [BDA] BI-DIRECTIONAL AMPLIFIER SYSTEM
 - [EVAC] VOICE EVACUATION CONTROL UNIT
 - [SSS] FIRE FIGHTER SMOKE CONTROL STATION
 - [ESR] ELEVATOR STATUS ANNUNCIATOR
 - [GANN] GENERATOR REMOTE ANNUNCIATOR
 - [S] SMOKE DETECTOR/SENSOR - BASIC SHAPE ORIENTATION NOT TO BE CHANGED.
 - [SS] SMOKE DETECTOR - SINGLE STATION, 120V WITH BATTERY BACKUP.
 - [S] DUCT MOUNTED SMOKE DETECTOR, INSTALLED BY MECHANICAL CONTRACTOR, WIRED AND FURNISHED BY ELECTRICAL CONTRACTOR.
 - [SB] SOUNDER BASE
 - [SBR] BEAM SMOKE DETECTOR RECEIVER.
 - [SBT] BEAM SMOKE DETECTOR TRANSMITTER.
 - [S] HEAT DETECTOR/SENSOR - BASIC SHAPE ORIENTATION NOT TO BE CHANGED.
 - [R] HEAT DETECTOR/SENSOR, RATE-OF-RISE.
 - [F] HEAT DETECTOR/SENSOR, FIXED TEMPERATURE (135°) F.
 - [F] HEAT DETECTOR/SENSOR, FIXED TEMPERATURE (190°) F.
 - [RF] HEAT DETECTOR/SENSOR, COMBINATION RATE-OF-RISE AND FIXED TEMPERATURE (135°) F.
 - [CO] CARBON MONOXIDE DETECTOR
 - [CO2] CARBON DIOXIDE DETECTOR
 - [S/CO] SMOKE/CARBON MONOXIDE DETECTOR COMBINATION
 - [S/R] SMOKE/HEAT DETECTOR/SENSOR COMBINATION
 - [S/R/CO] SMOKE/HEAT DETECTOR/CARBON MONOXIDE DETECTOR
 - [15cd] VISIBLE ONLY (STROBE) - CEILING MOUNT
CD=CANDELA RATING/SETTING
 - [15cd] VISIBLE ONLY (STROBE) - WALL MOUNT
CD=CANDELA RATING/SETTING
 - [H] HORN ONLY
 - [M] MINI-HORN
 - [S] SPEAKER ONLY, WALL MOUNT
 - [15cd] COMBINATION HORN/VISIBLE
CD= CANDELA RATING/SETTING
 - [15cd] COMBINATION SPEAKER/VISIBLE
CD= CANDELA RATING/SETTING
 - [RI] REMOTE ALARM INDICATOR, CEILING MOUNT
 - [RI] REMOTE ALARM INDICATOR, WALL MOUNT
 - [R] ROTATING BEACON
 - [F] FIRE BELL, FURNISHED AND INSTALLED BY FIRE PROTECTION SUBCONTRACTOR, WIRED BY THE ELECTRICAL SUBCONTRACTOR
 - [RTS] REMOTE ALARM INDICATING AND TEST SWITCH, MOUNTED 7'-0" AFF.
 - [COM] ADDRESSABLE OUTPUT CONTROL MODULE
 - [AM] ADDRESSABLE INPUT MONITOR MODULE
 - [AO] ADDRESSABLE INPUT/OUTPUT MODULE. # DENOTES NUMBER OF INPUTS AND OUTPUTS.
 - [AM] ADDRESSABLE OUTPUT CONTROL MODULE
 - [MB] FIRE ALARM MASTER BOX
 - [MH] MAGNETIC DOOR HOLD OPEN DEVICE
 - [WF] FLOW SWITCH (WATER), FURNISHED AND INSTALLED BY FIRE PROTECTION SUBCONTRACTOR, WIRED BY THE ELECTRICAL SUBCONTRACTOR.
 - [VS] TAMPER SWITCH, FURNISHED AND INSTALLED BY FIRE PROTECTION SUBCONTRACTOR, WIRED BY THE ELECTRICAL SUBCONTRACTOR.
 - [PS] PRESSURE SWITCH, FURNISHED AND INSTALLED BY FIRE PROTECTION SUBCONTRACTOR, WIRED BY THE ELECTRICAL SUBCONTRACTOR.
 - [DK] FIRE ALARM DRILL KEY

OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE, AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

B | E | R

BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Easton, MA 02356
T 508 230-0260
F 508 330-0265
ber@ber-engineering.com
www.ber-engineering.com

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND AIE FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



Date: 02/09/2024

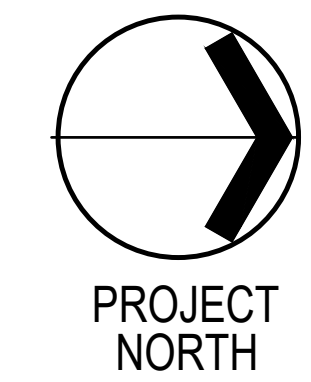
Drawn by: DD Proj. Mgr.: DC

Revisions

No.	Date	Description

FIRE ALARM LEGEND & RISER DIAGRAM

FA0.0



OFFICE EXPANSION

at:



RHODE ISLAND LOTTERY BUILDING

1425 Pontiac Avenue
Cranston, Rhode Island 02920



400 Massasoit Avenue,
Suite 300, Second Floor
East Providence, Rhode Island
p. (401) 331-9200

2 Hampshire Street,
Suite 106, First Floor
Foxboro, Massachusetts
p. (774) 215-0290
rowse@rowsearchitects.com

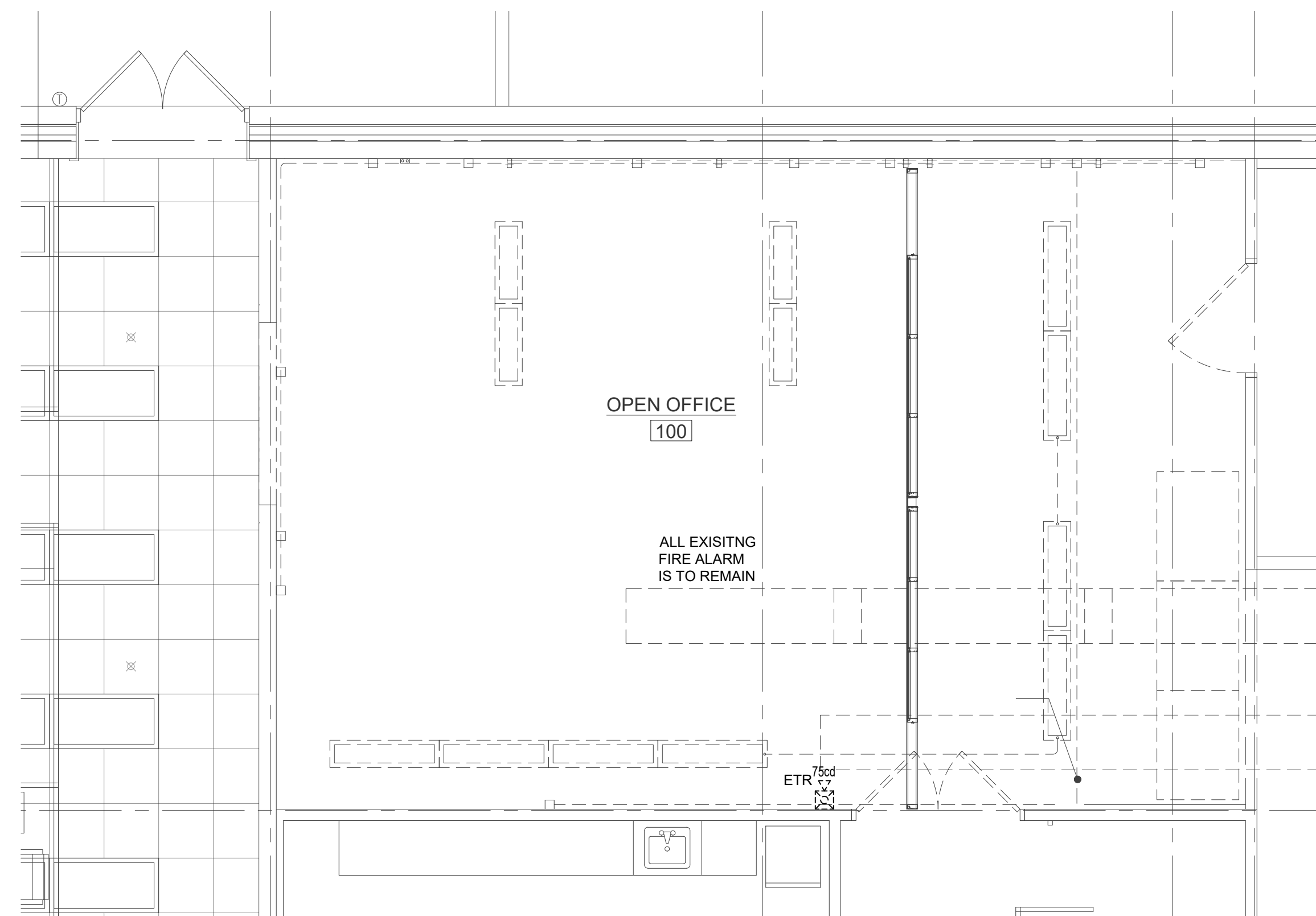
OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN, THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES THAN THOSE PROPERLY AUTHORIZED BY CONTRACT WITHOUT THE EXPRESS AUTHORIZATION OF THE ARCHITECT.

BER

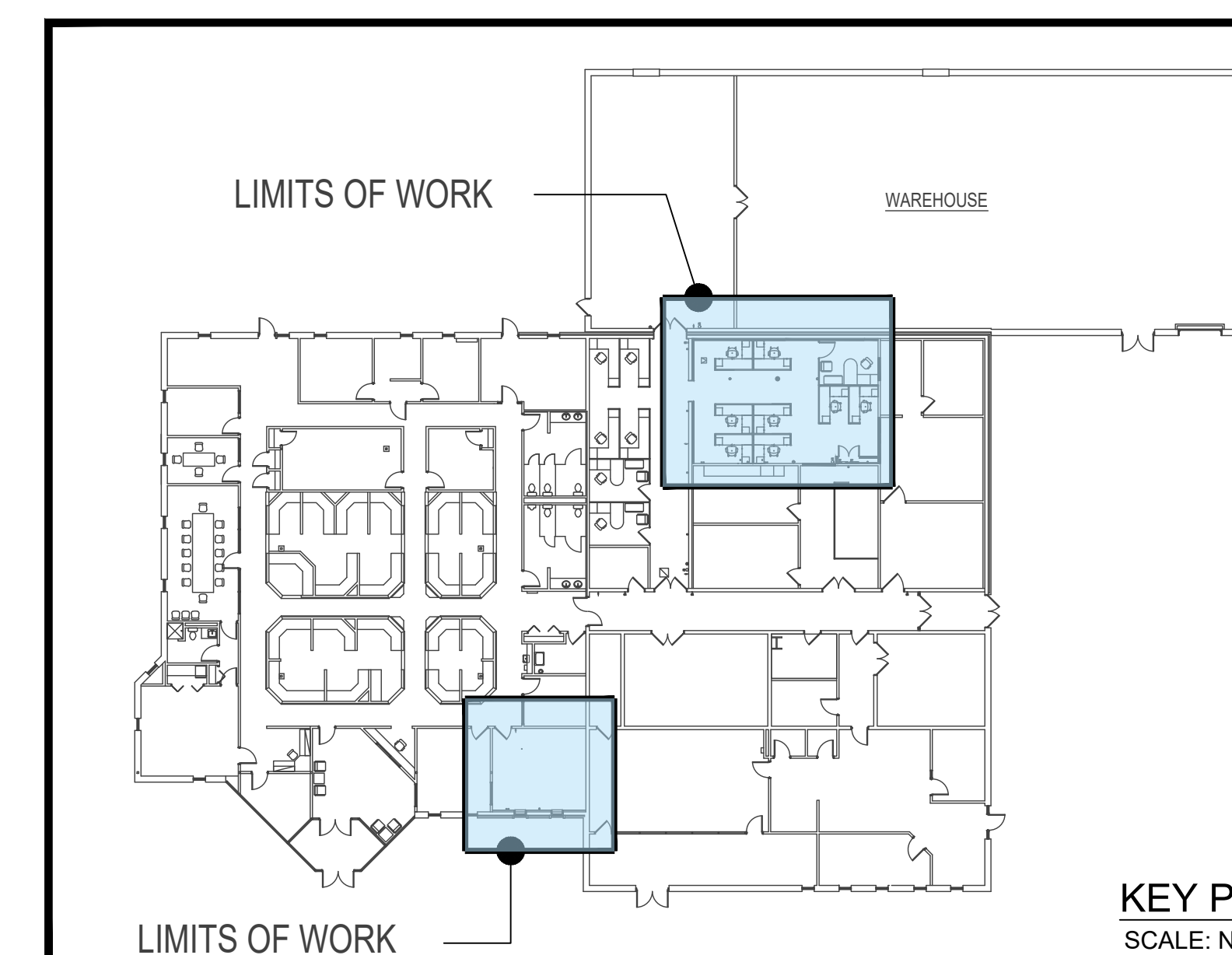
BUILDING ENGINEERING RESOURCES, INC.
66 Main Street
N. Eason, MA 02356
T 508 230 0260
F 508 230 0265
ber@ber-engineering.com
Office Commons 95
351 Centerville Road
Warwick, RI 02886
T 401 344 1882
www.ber-engineering.com

GENERAL NOTES

- EXISTING CONDITIONS WERE OBTAINED FROM DRAWINGS AND DATA PROVIDED BY THE OWNER AND A/E FIELD SURVEY. NO WARRANTY OF ACTUAL CONDITIONS IS INTENDED BY ARCHITECT OR OWNER. CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING CONDITIONS WITH NEW WORK PRIOR TO BID, START OF CONSTRUCTION OR ANY FABRICATION.
- CONTRACTOR SHALL VISIT SITE, PRIOR TO BID, AND CAREFULLY INVESTIGATE AND EXAMINE THE AREA OF WORK SO AS TO SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK. CONTRACTOR TO NOTE THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS REQUIRED AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR CONTRACTOR'S PERFORMANCE.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.



1 PARTIAL EXISTING FLOOR PLAN - FIRE ALARM
FA1.0 1/4"=1'-0"



KEY PLAN
SCALE: NTS

Date: 02/09/2024

Drawn by: DD Proj. Mgr.: DC

Revisions		
No.	Date	Description

PARTIAL DEMOLITION FLOOR PLANS - FIRE ALARM

FA1.0