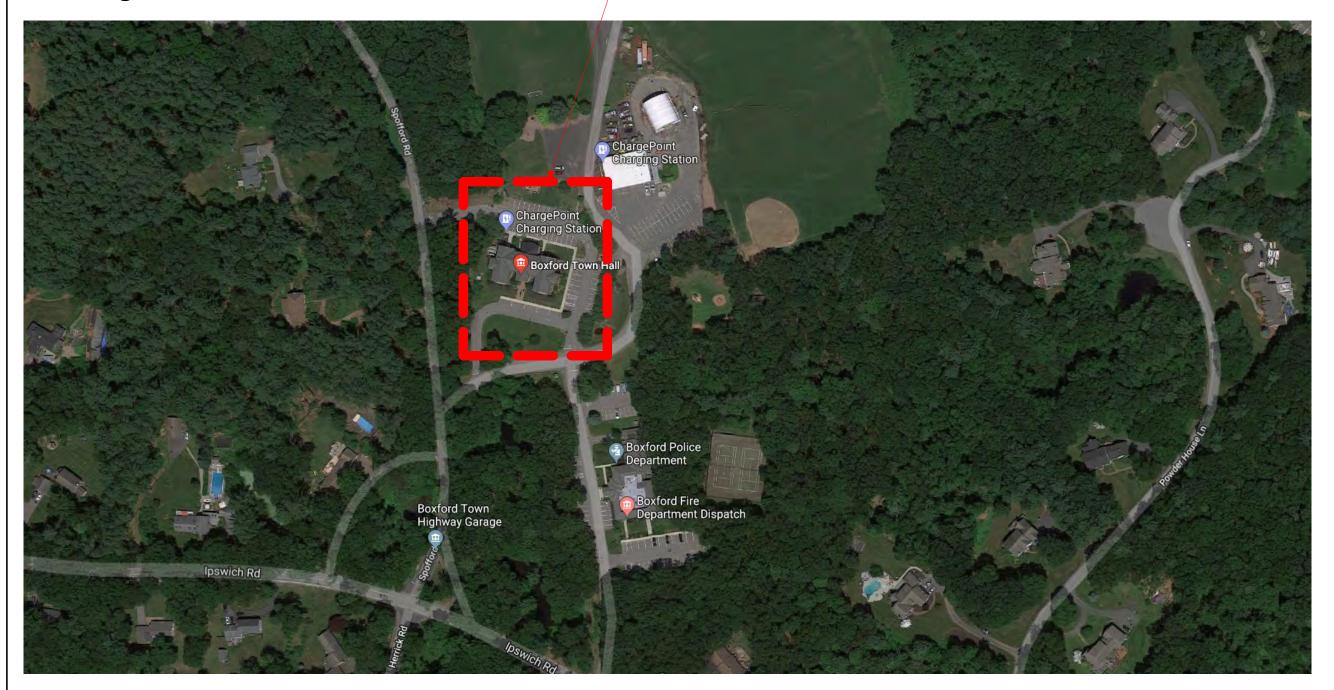
Project Summary

The following summary is a general description of the scope of work and is not intended to be an all inclusive:

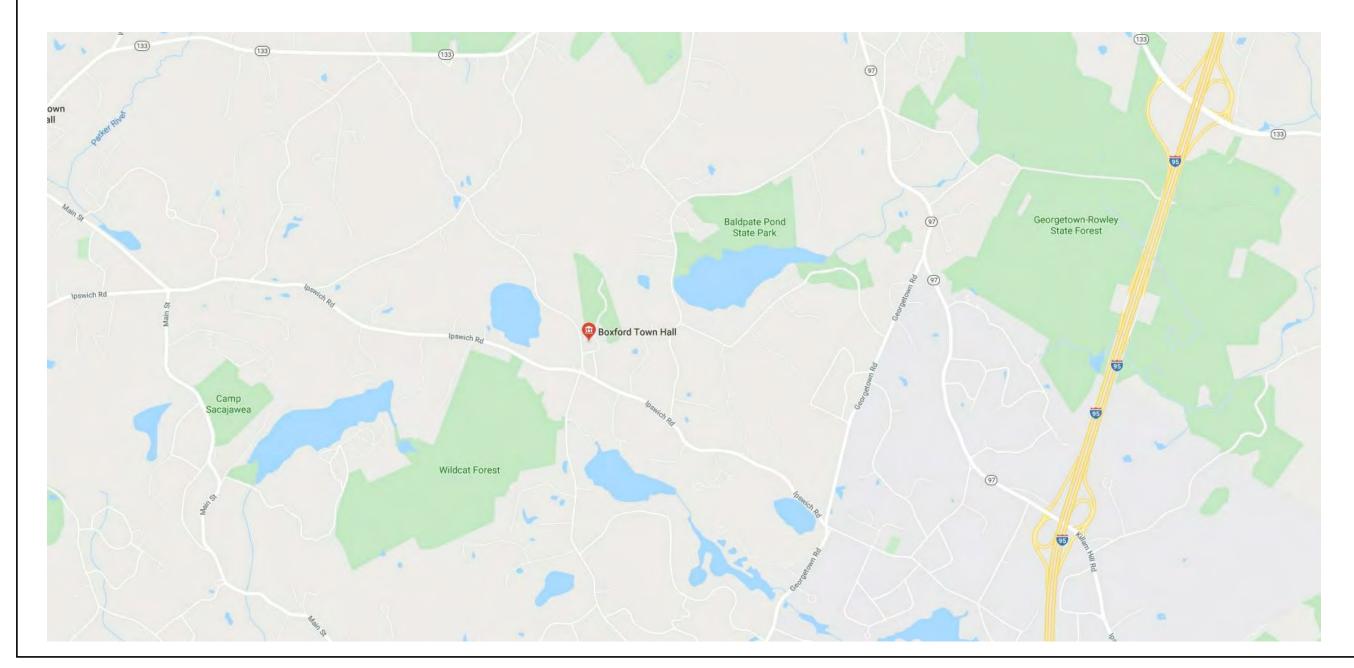
- 1. Address water infiltration at specific areas including, but not limited to, the following:
- a. Pre-cast stone rakes
- b. Pre-cast stone bands at gable ends
- c. Pre-cast stone vertical joints
- d. Pre-cast stone 'roofs' at first floor bump outs
- e. Masonry gable ends
- f. Second floor windows at gable ends
- g. Metal roofing at roof eaves and Meeting Room roofs2. Address site drainage issues to the east and west of the main entrance.
- 3. Address thermal issues at the eaves.
- 4. Upgrade HVAC throughout the entire building.
- 5. Renovate the first floor to improve the Library.

Building Aerial View

Area of Work



Locus Plan



Boxford Town Hall

HVAC, Exterior Repairs, Library Renovations

Plumbing

P-1

7 Spofford Rd, Boxford, MA 01921

7/15/2020 - Bid Set

DRAWING LIST

General P	roject Information
G001	Title Sheet
G002	Legends, Notes, and Abbreviations
Site Inform	nation
C101	Site Plan
C101-A	Architectural Site Plan - Site Drainage
Demolition	
AD111	First Floor Demolition Plan
AD121	Second Floor Demolition Plan
AD121 AD122	Second Floor Ceiling Demolition Plan
ADTZZ	Second Floor Centing Demonition Flan
Architectu	ral
A111	First Floor Plan
A121	Second Floor Plan
A131	Attic Floor Plan
A141	Roof Plan & Details
A151	First Floor Reflected Ceiling Plan
A152	Second Floor Reflected Ceiling Plan
A201	North and South Elevation
A202	East and West Elevation
A300	Exterior Building Details
A501	Interior Elevations and Enlarged Plans
A502	Interior Elevations and Millwork
A601	Partition and Door Schedules

Fire Protection

FP-1 Fire Protection New Work Plan

• •	
Mechanical HD-1 HD-2 HD-3 HD-4	Demolition HVAC First Floor Demolition Pla HVAC 2nd Floor Demolition Plar HVAC Attic Ductwork Demolition HVAC Attic Piping Demolition Pl
Mechanical	
H-0	HVAC Schedules
H-1	HVAC First Floor New Work Plan
H-2	HVAC 2nd Floor New Work Plan
H-3	HVAC Attic Ductwork New Work
Electrical G	eneral Info
E0-1	Electrical Legend
E0-2	Electrical Schedules and Power
Electrical D	emolition
ED1-0	Electrical Demolition
ED2-0	Electrical 1st Floor Demolition
Electrical	
E-1	Electrical New Work 1st Floor
E-2	Electrical New Work 2nd Floor
E-3	Electrical New Work Attic
E-4	Electrical New Work Part Plans

OWNER/CLIENT

Town of Boxford

7A Spofford Road Boxford, MA 01921

ARCHITECT



978-750-9062

gienapparchitects.com

<u>CIVIL</u>

Hancock Associates

185 Centre Street Danvers, MA 01923 T: (978) 777-3050

20 Conant Street

Plumbing New Work Plans

nolition Plan olition Plan **Demolition Plan** molition Plan

v Work Plan Work Plan New Work Plan

and Power Riser

MECHANICAL, PLUMBING, AND FIRE PROTECTION

NECS, Inc

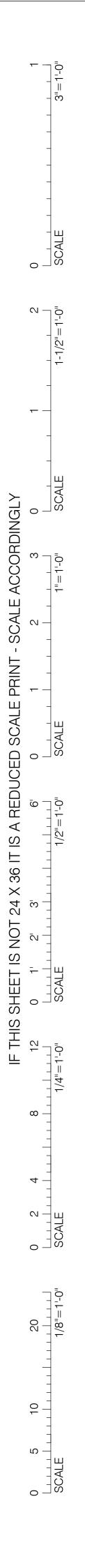
ELECTRICAL

BLW Engineers

311 Great Road Littleton, MA 01460 T: (978) 777 7650

enovations Ž Library Ha **UWD** Repairs, Exterior HVAC, Exterio Boxford

G001



C. D. E.	relative to el The Contract Work include Items noted ' to be neither informational
F.	and contract
G.	with that asp The Contract inspect the s
н.	work. The Contract to the Archit
I.	is provided. The Contract construction
J.	Minor details Codes or sta
K.	The Contract
L.	the Work unle The Contract unless specific responsible f

trades.

General Notes

Project Information

A. All work shall conform with all applicable Codes and ordinances and with accepted local standards of the

B. Only the highest quality of workmanship shall be considered acceptable and shall be firmly secured and levations and dimensions as shown in the drawings true to plumb, level, square, and line. ctor shall be responsible for securing all permits and approvals required for construction. ed consists of all work shown on the drawings and in the specifications.

"Not In Contract", "N.I.C.", "By [Separate] Vendor", "By [Separate] Contractor", or "By Owner" are r furnished nor installed under this Contract unless noted otherwise, but are shown for

I purposes only. It is the responsibility of the Contractor to coordinate with separate vendors tors to complete the work of this project. shown is unclear or ambiguous, the Contractor shall contact the Architect before proceeding

pect of work. ctor shall verify all conditions and dimensions in the field. The Contractor shall be expected to

site for conditions affecting work and for anticipating the effects of those conditions upon his

tor shall report any and all discrepancies or omissions found in the Drawings and Specifications itect. The Work affected shall not proceed until clarification is issued or permission to continue

tor shall not proceed with any work which he believes to be contrary to his knowledge of good standards and practices and shall not use any sub-standard materials. s not usually shown or specified, but necessary for the proper installation or conformance with

andards listed herein, shall be included in the Work. tor shall place orders for all materials included in the Work by General Contractor or tor (where applicable) in time to prevent any delays in the construction schedule or completion of less noted otherwise.

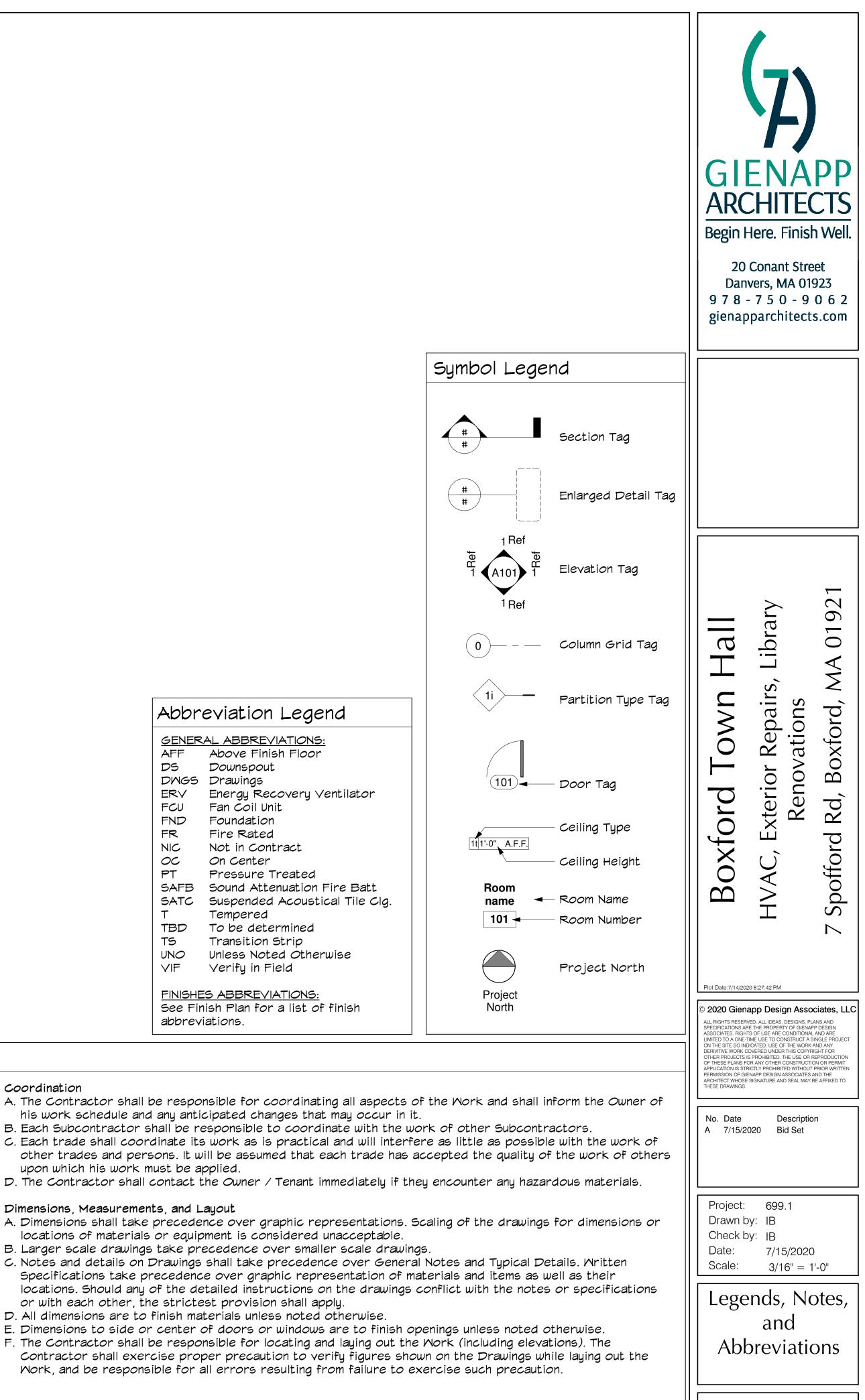
t Documents represent the finished structure and do not indicate the methods of construction ifically noted otherwise. The Contractor shall supervise and direct the Work and shall be solely for construction means, methods, techniques, sequences, and procedures.

Coordination

- upon which his work must be applied.

Dimensions, Measurements, and Layout

- or with each other, the strictest provision shall apply.

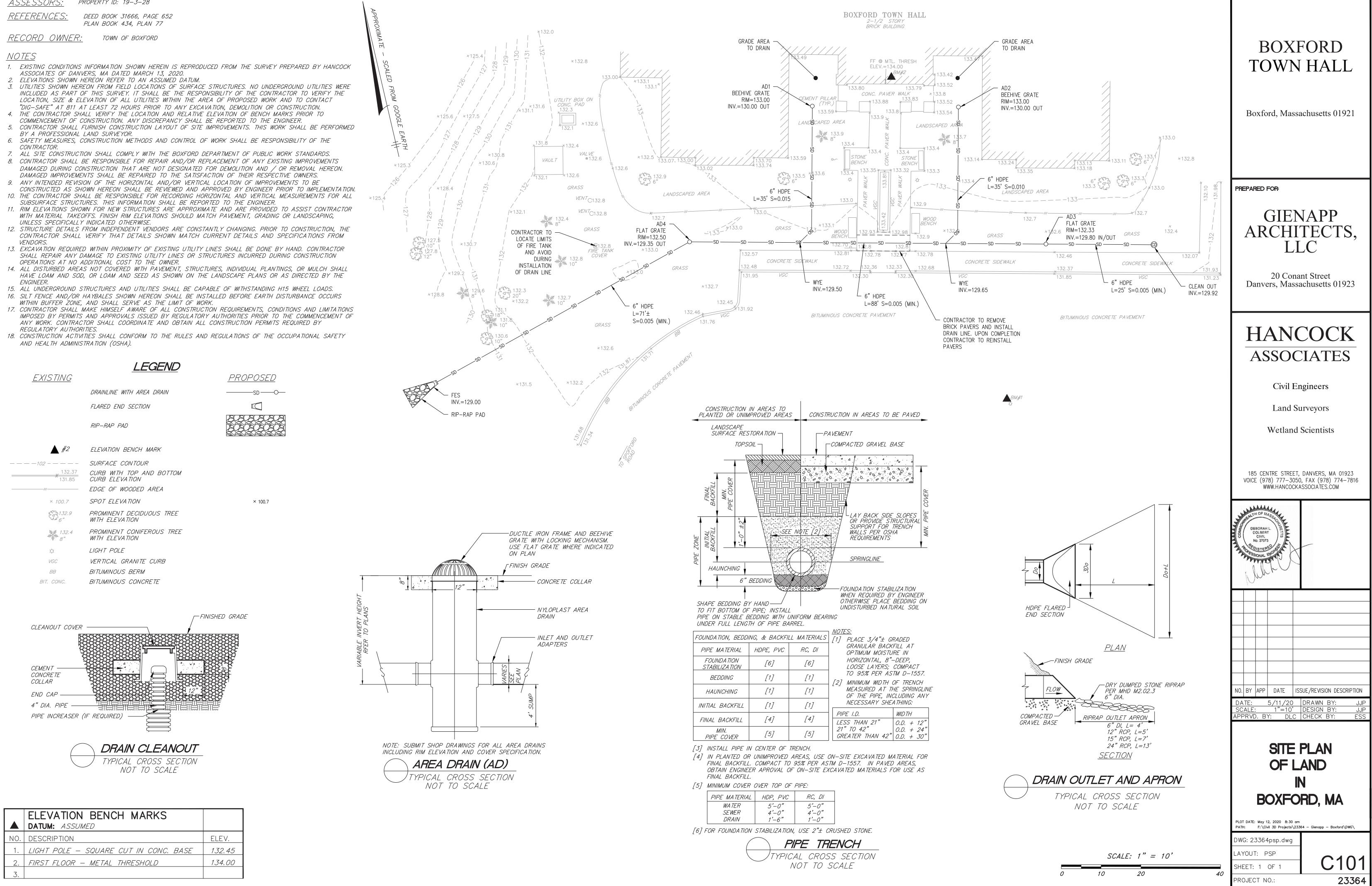


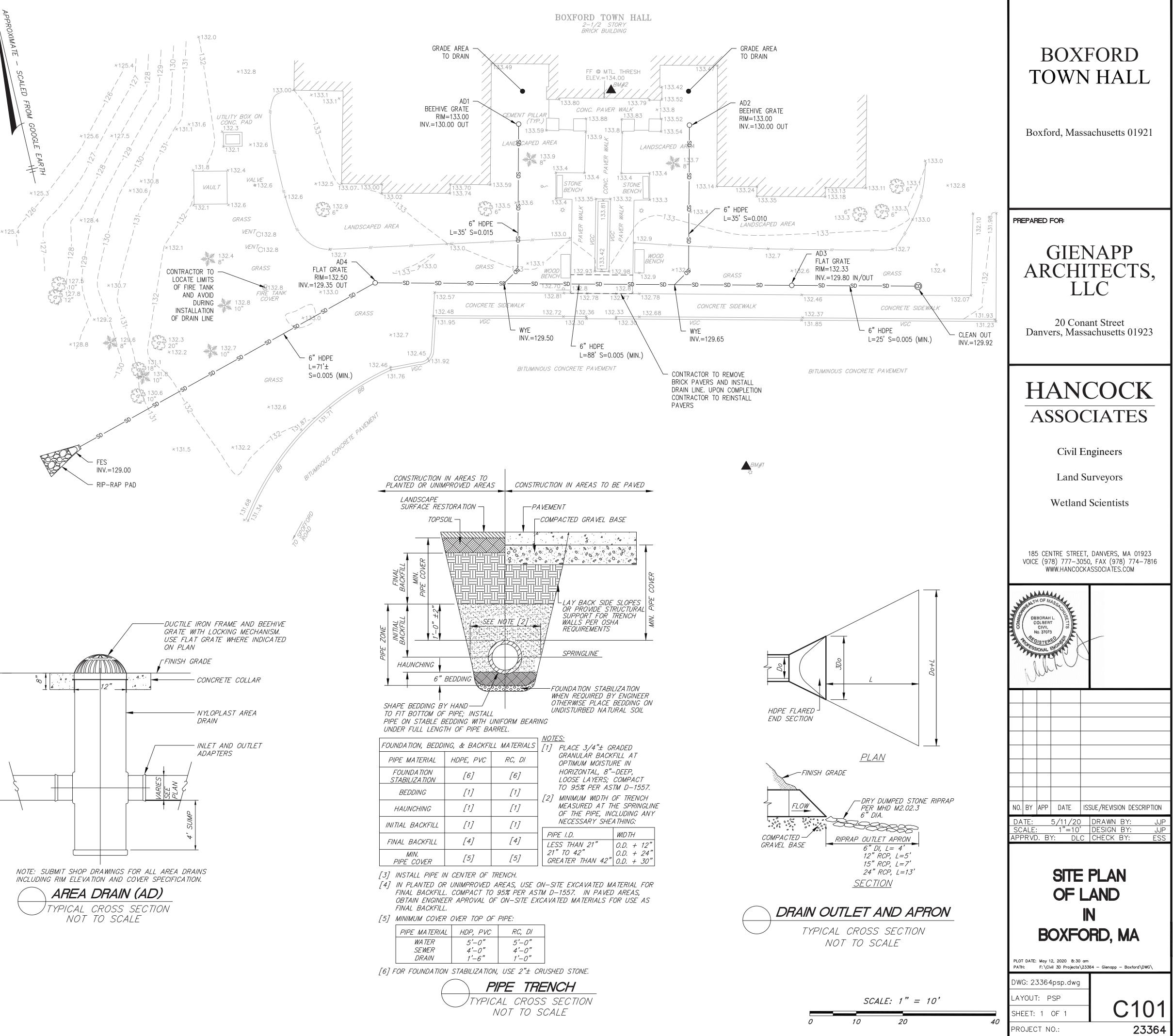
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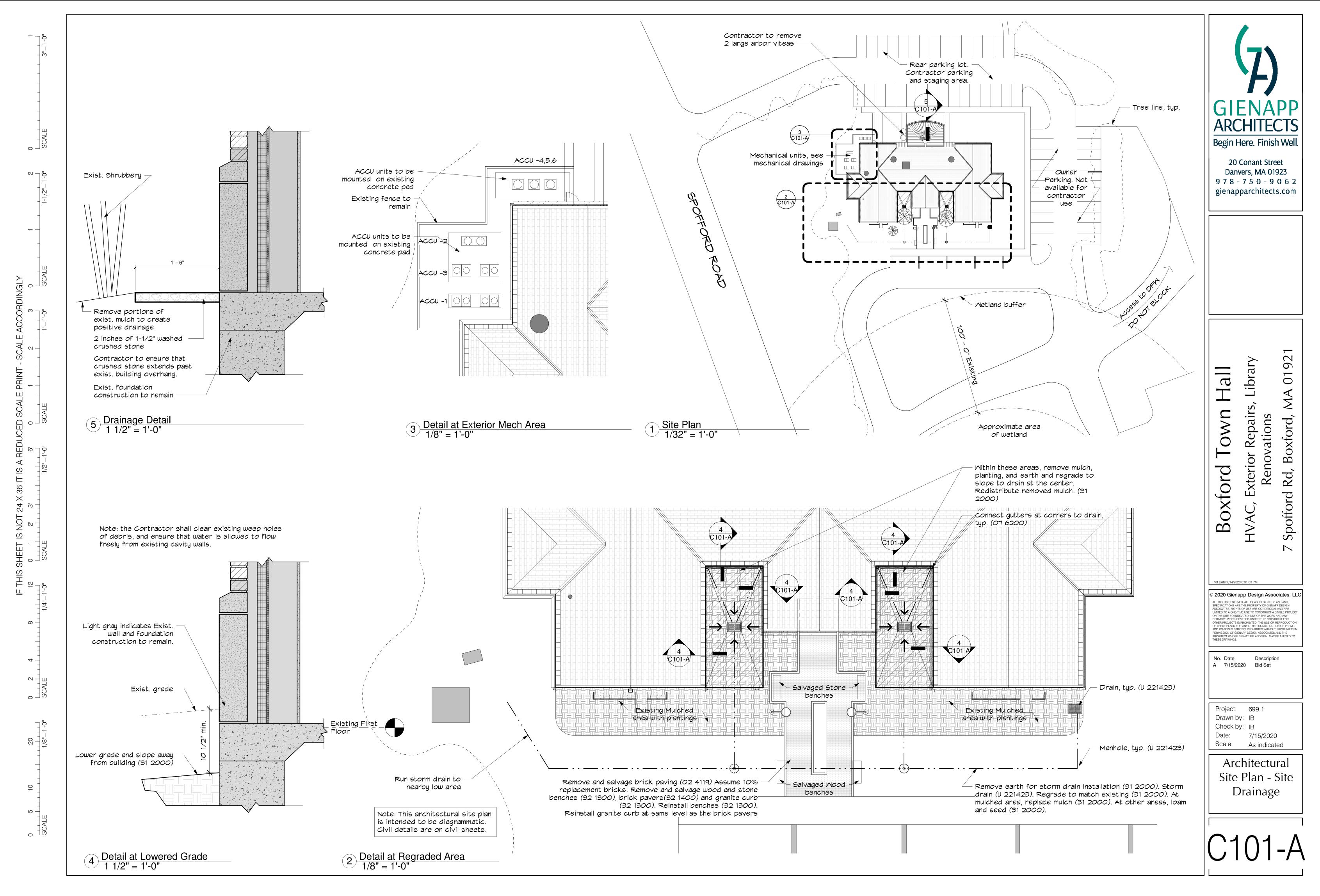
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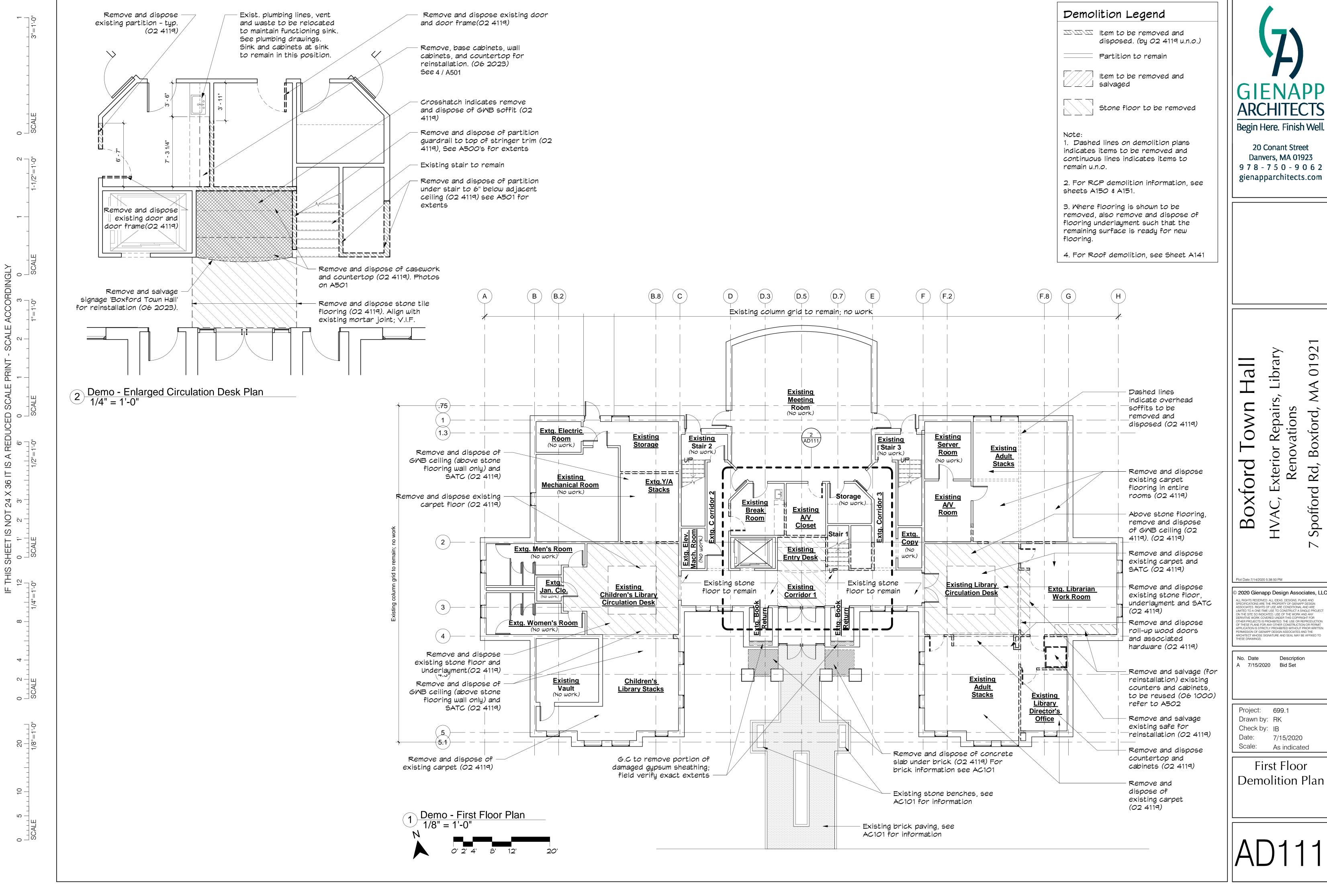
DEED BOOK 31666, PAGE 652

- ASSOCIATES OF DANVERS, MA DATED MARCH 13, 2020.
- INCLUDED AS PART OF THIS SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT
- BY A PROFESSIONAL LAND SURVEYOR.
- CONTRACTOR.
- DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
- SUBSURFACE STRUCTURES. THIS INFORMATION SHALL BE REPORTED TO THE ENGINEER.
- WITH MATERIAL TAKEOFFS. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- CONTRACTOR SHALL VERIFY THAT DETAILS SHOWN MATCH CURRENT DETAILS AND SPECIFICATIONS FROM VENDORS.
- SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.
- HAVE LOAM AND SOD, OR LOAM AND SEED AS SHOWN ON THE LANDSCAPE PLANS OR AS DIRECTED BY THE ENGINEER.
- ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY
- AND HEALTH ADMINISTRATION (OSHA).











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Description

7/15/2020

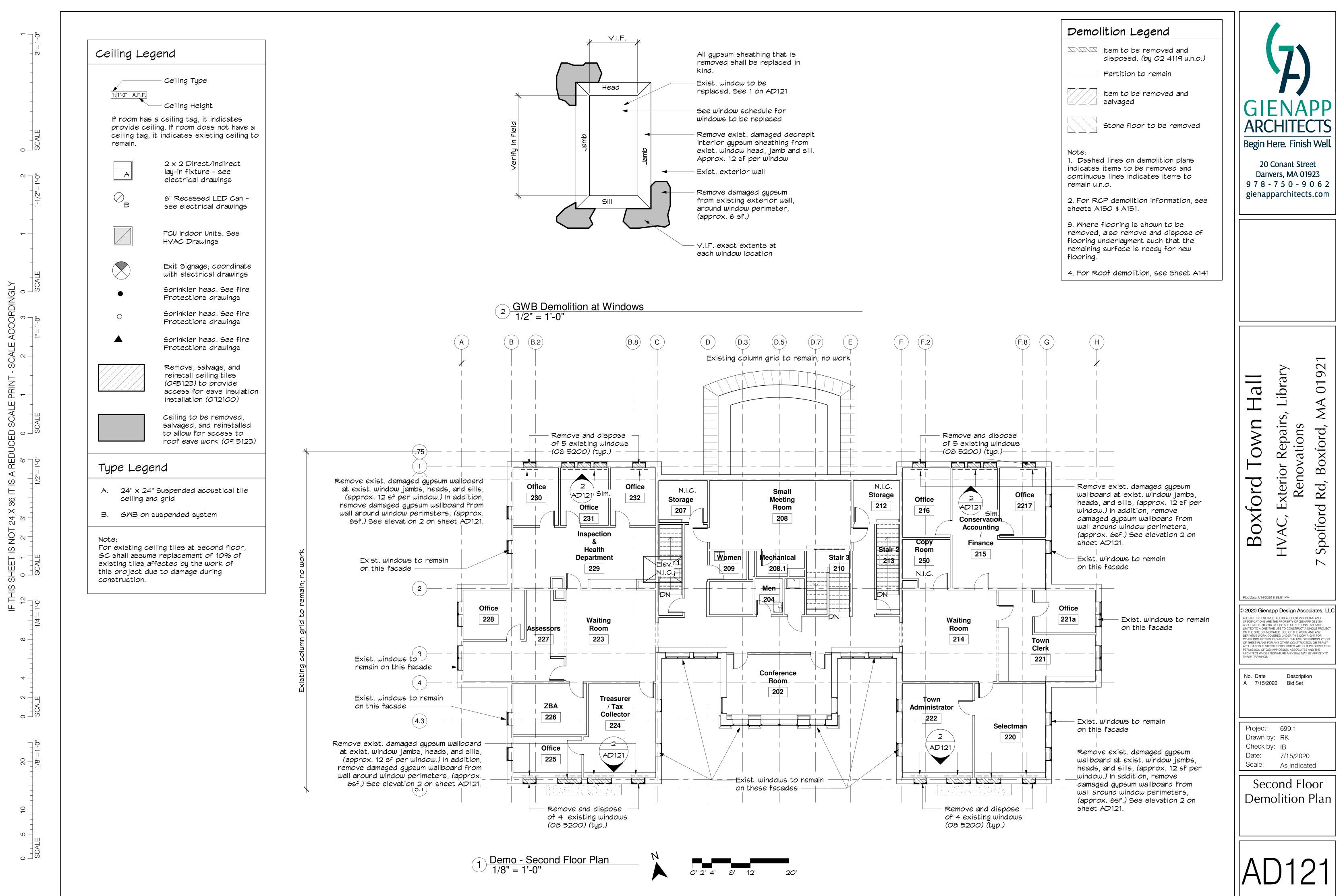
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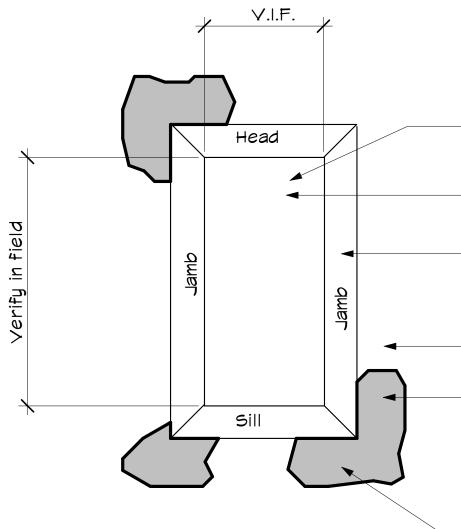
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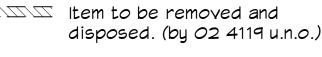
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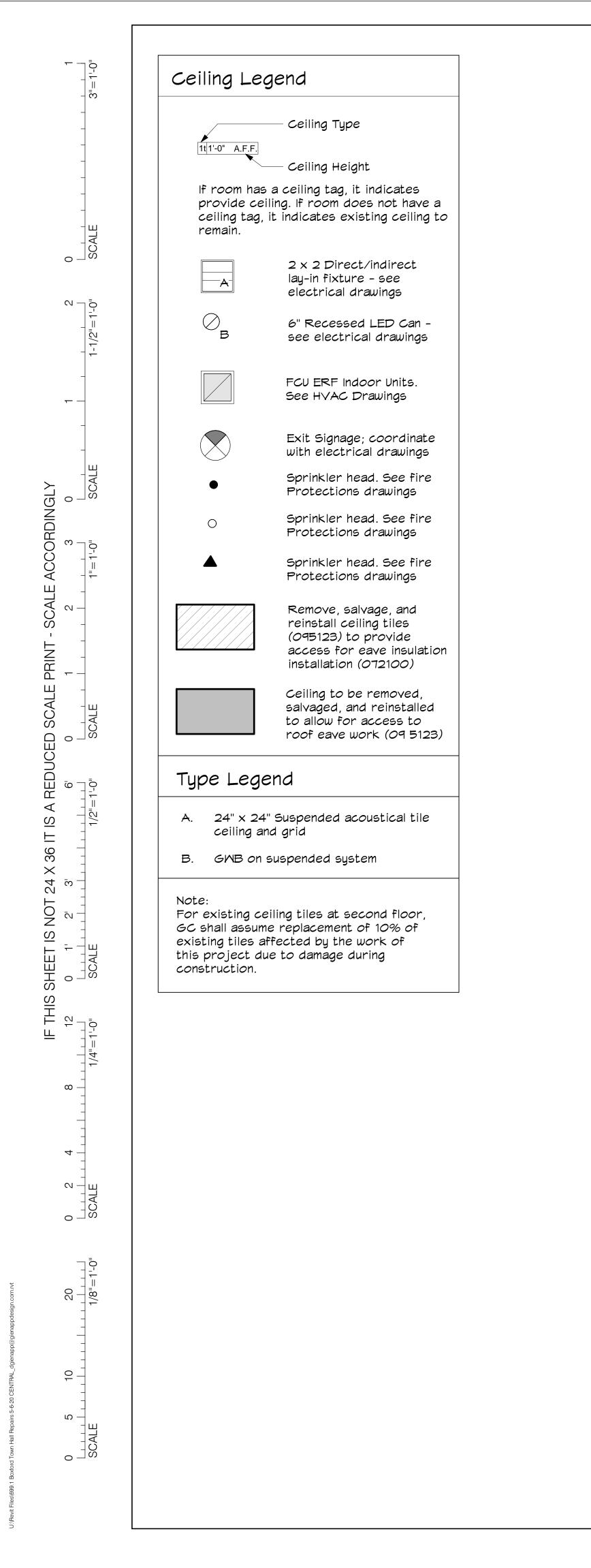


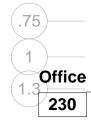












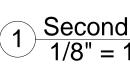
Inspection/ Health Department 229

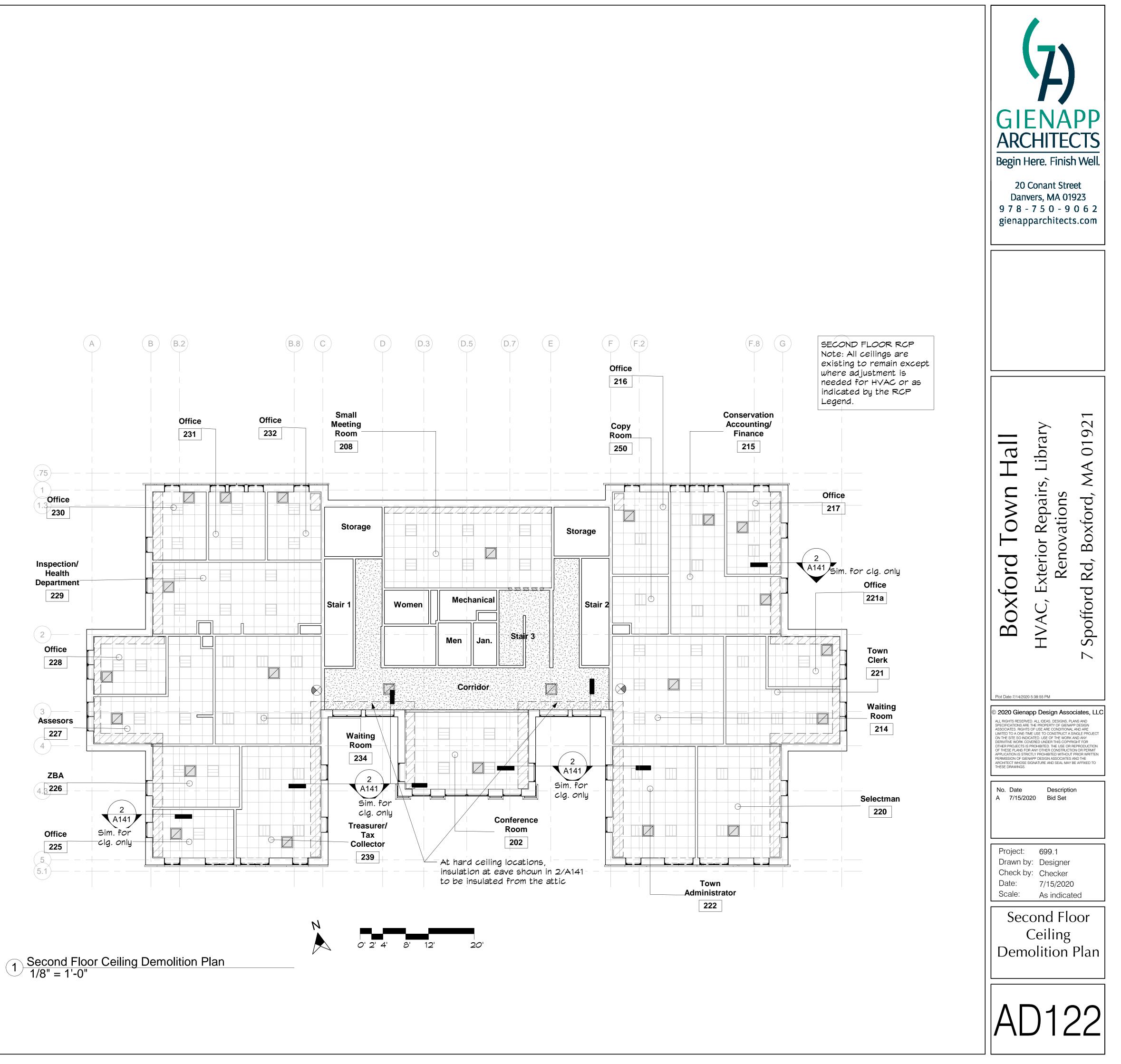
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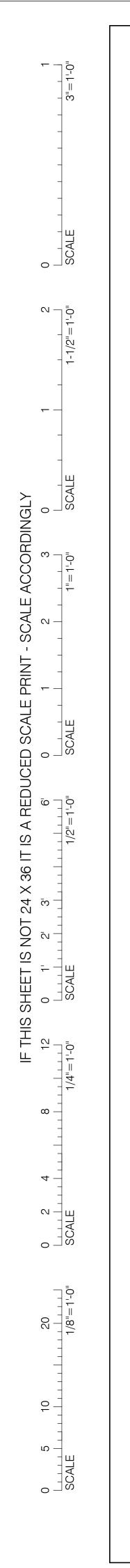
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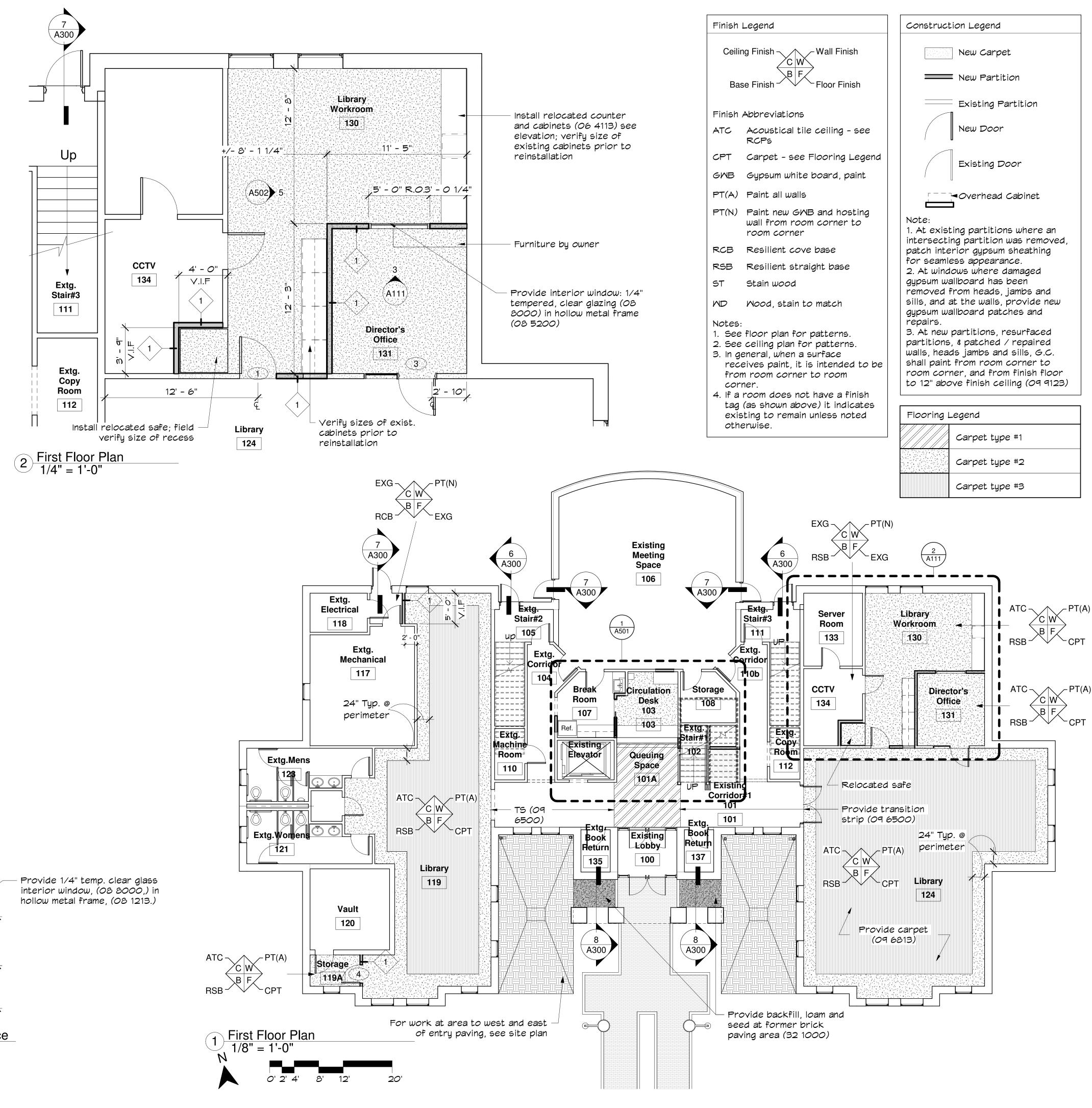
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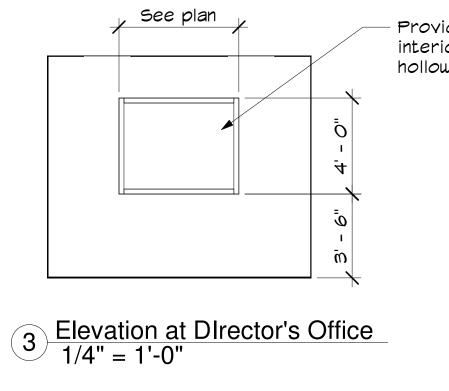
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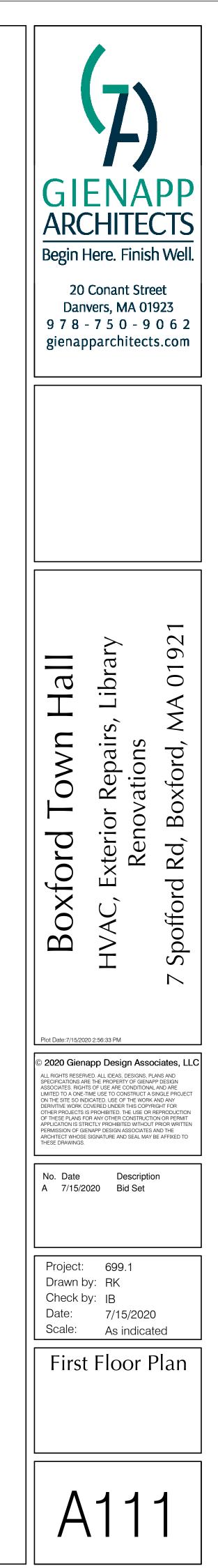


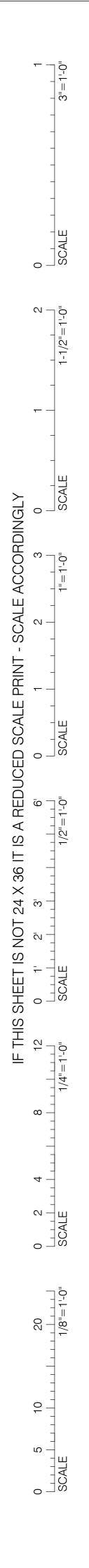


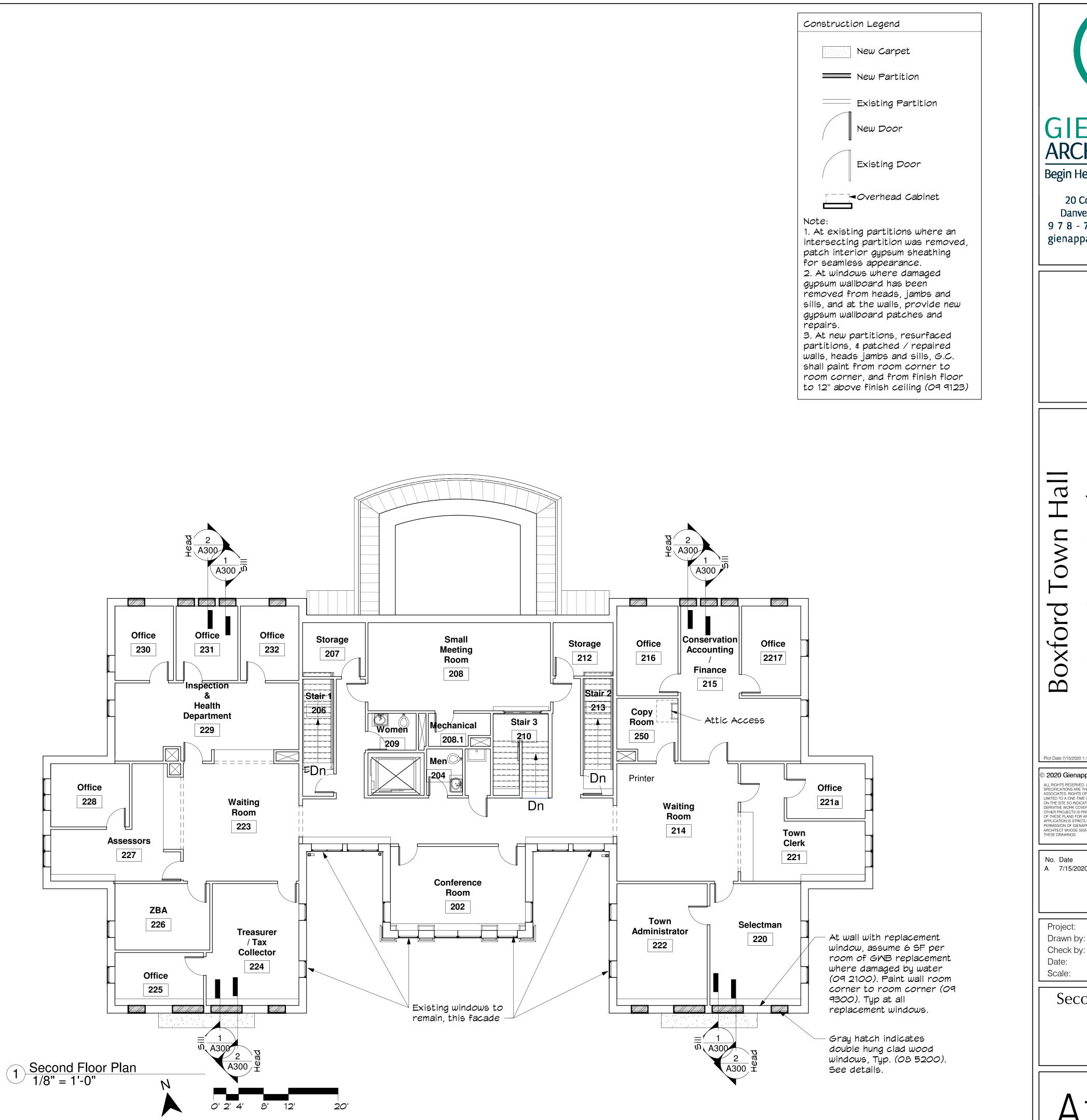




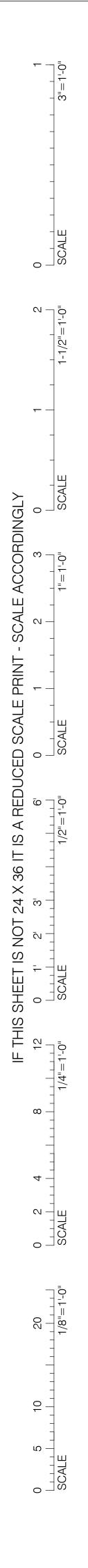
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	Carpet type #1								
	Carpet type #2								
	Carpet type #3								

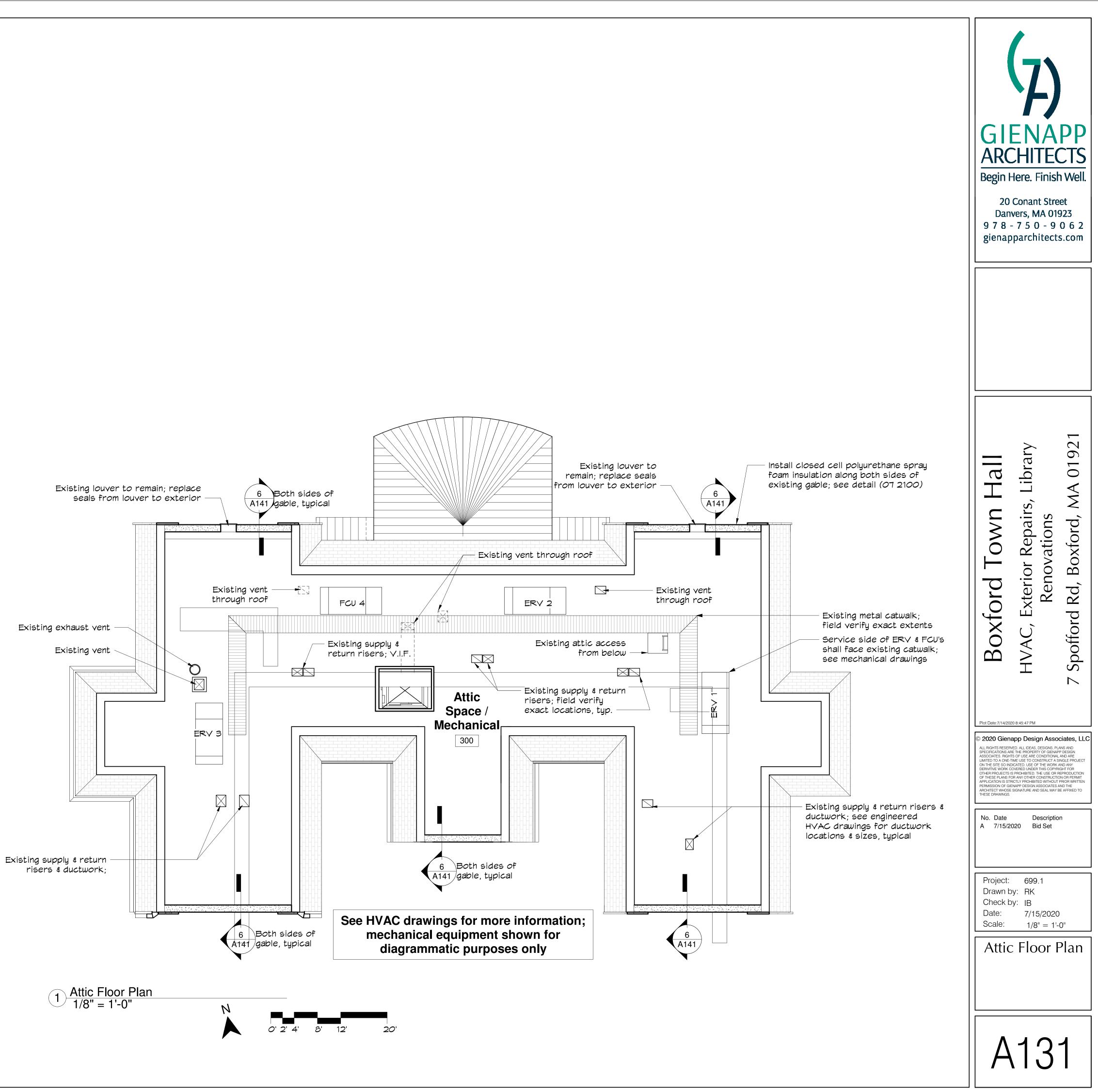


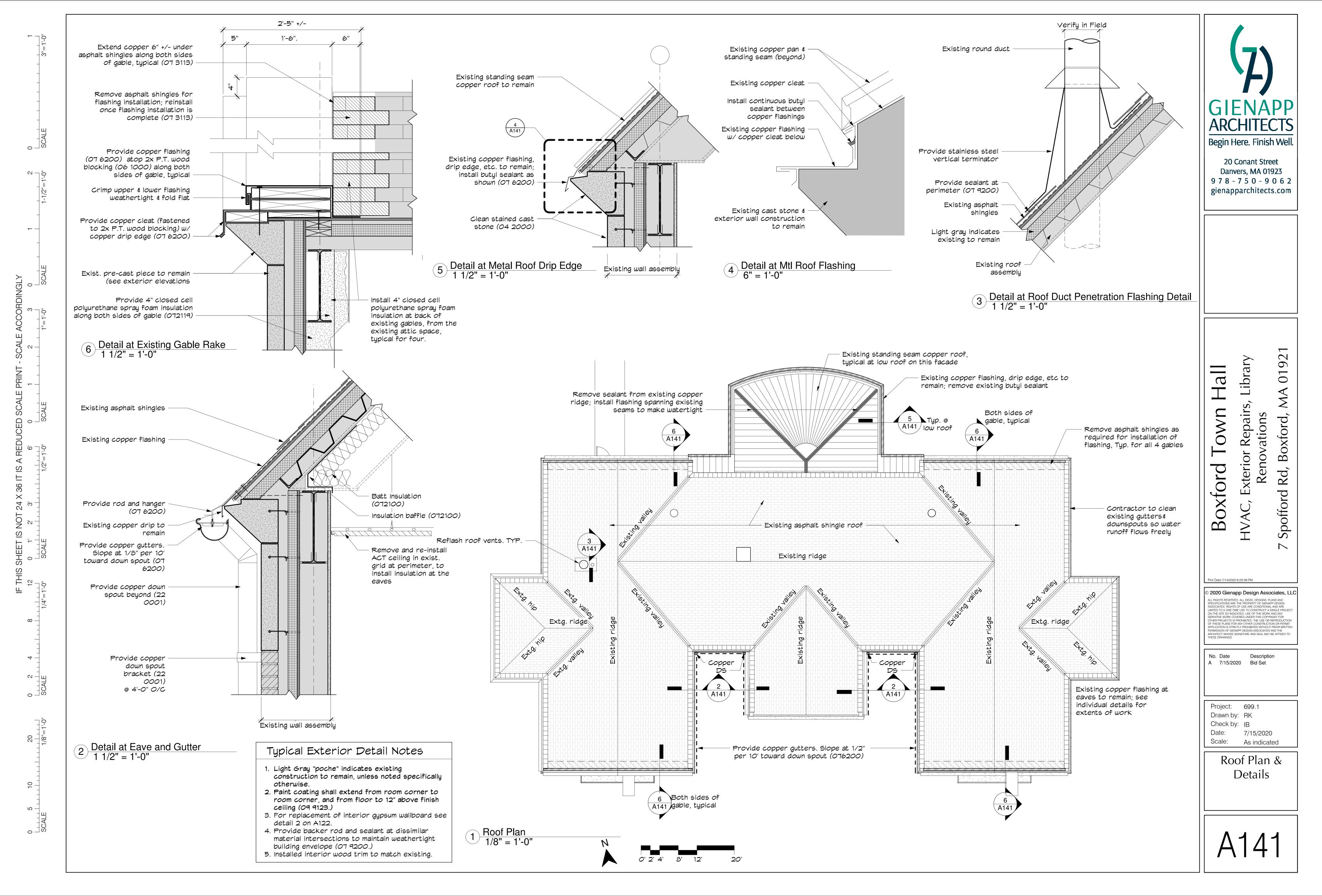




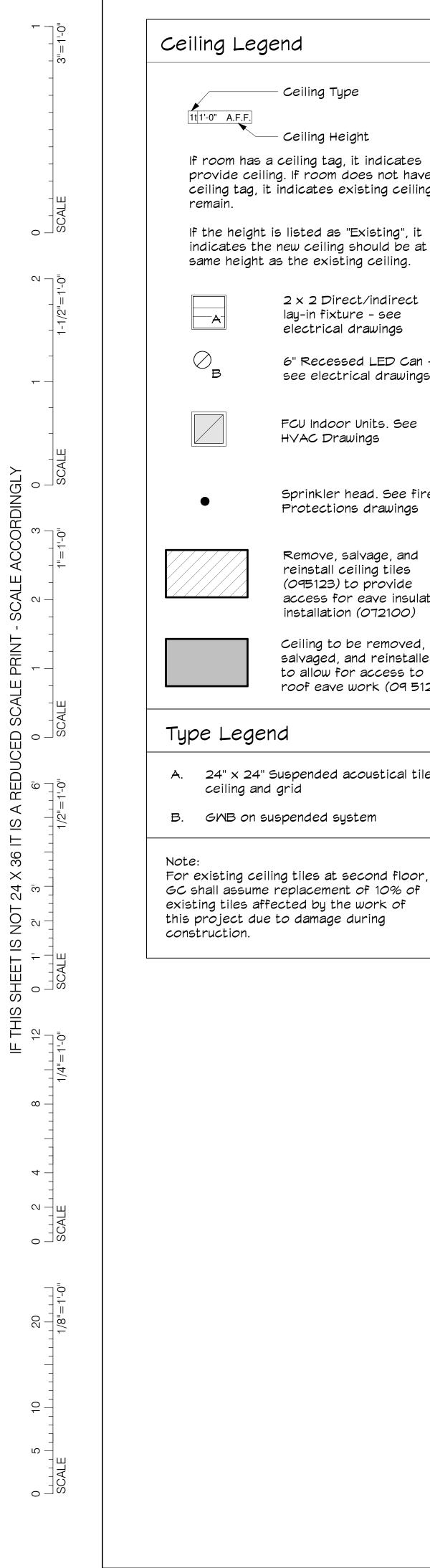
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Boxford Town Hall	HVAC, Exterior Repairs, Library	Kenovations	7 Spofford Rd, Boxford, MA 01921
Plot Date:7/15/202 © 2020 Giena ALL RIGHTS RESER SPECIFICATIONS AR ASSOCIATES. RIGHT LIMITED TO A ONE-T ON THE SITE SO IND DERIVITIVE WORK O OTHER PROJECTS II: OF THESE PLANS FC APPLICATION IS STF PERMISSION OF GIE ARCHITECT WHOSE THESE DRAWINGS. No. Date A 7/15/20	App Design /ED. ALL IDEAS, DES IE THE PROPERTS SOF USE ARER CON IME USE TO CONSTI- IDICATED. USE OF THI- SOF THE UNDER THI- SOF ANY OTHER CONSI- INCTLY PROHIBITED V ENAPP DESIGN ASSC SIGNATURE AND SE DESC	IGNS, PLANS GIENAPP E DITIONAL AN RUCT A SINGE WORK ANE S COPYRIGH JSE OR REP STRUCTION - NITHOUT PRI DCIATES ANE AL MAY BE A	AND ESIGN D ARE LE PROJECT O ANY T FOR RODUCTION DR PERMIT OR WRITTEN OTHE
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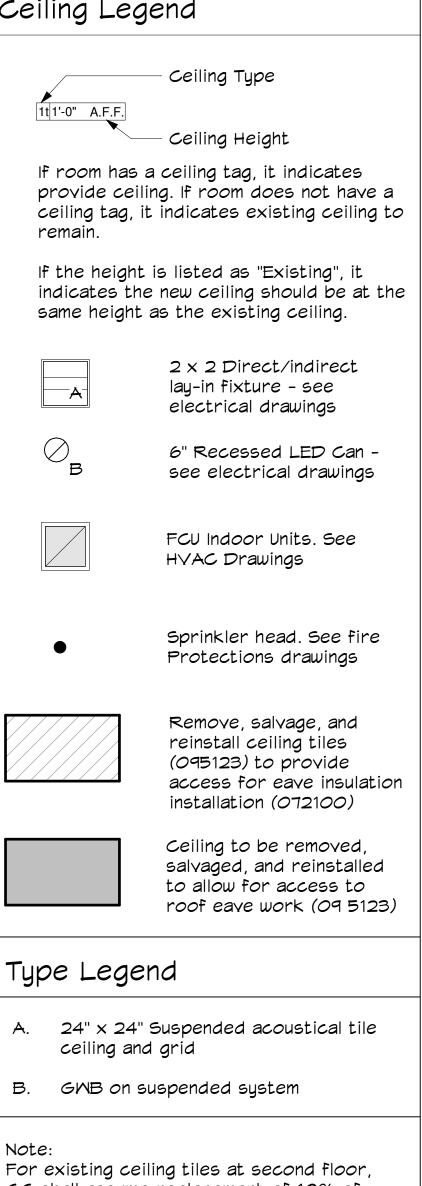






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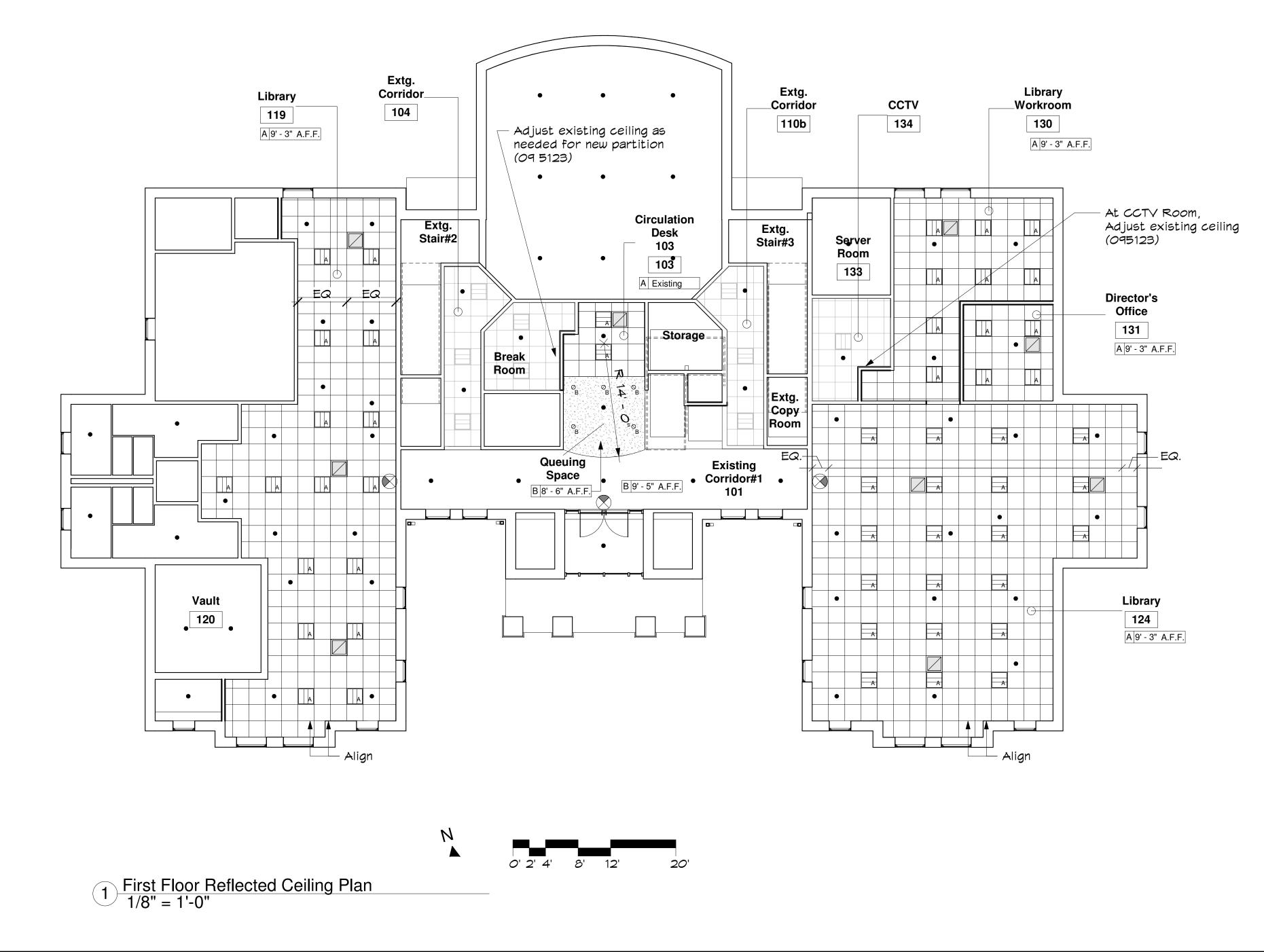
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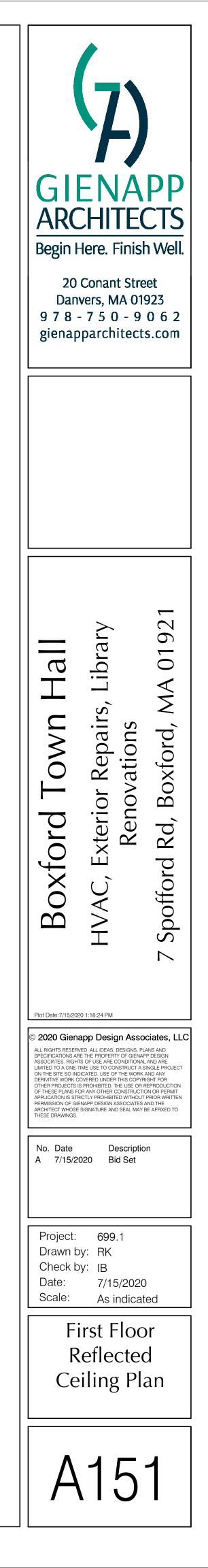
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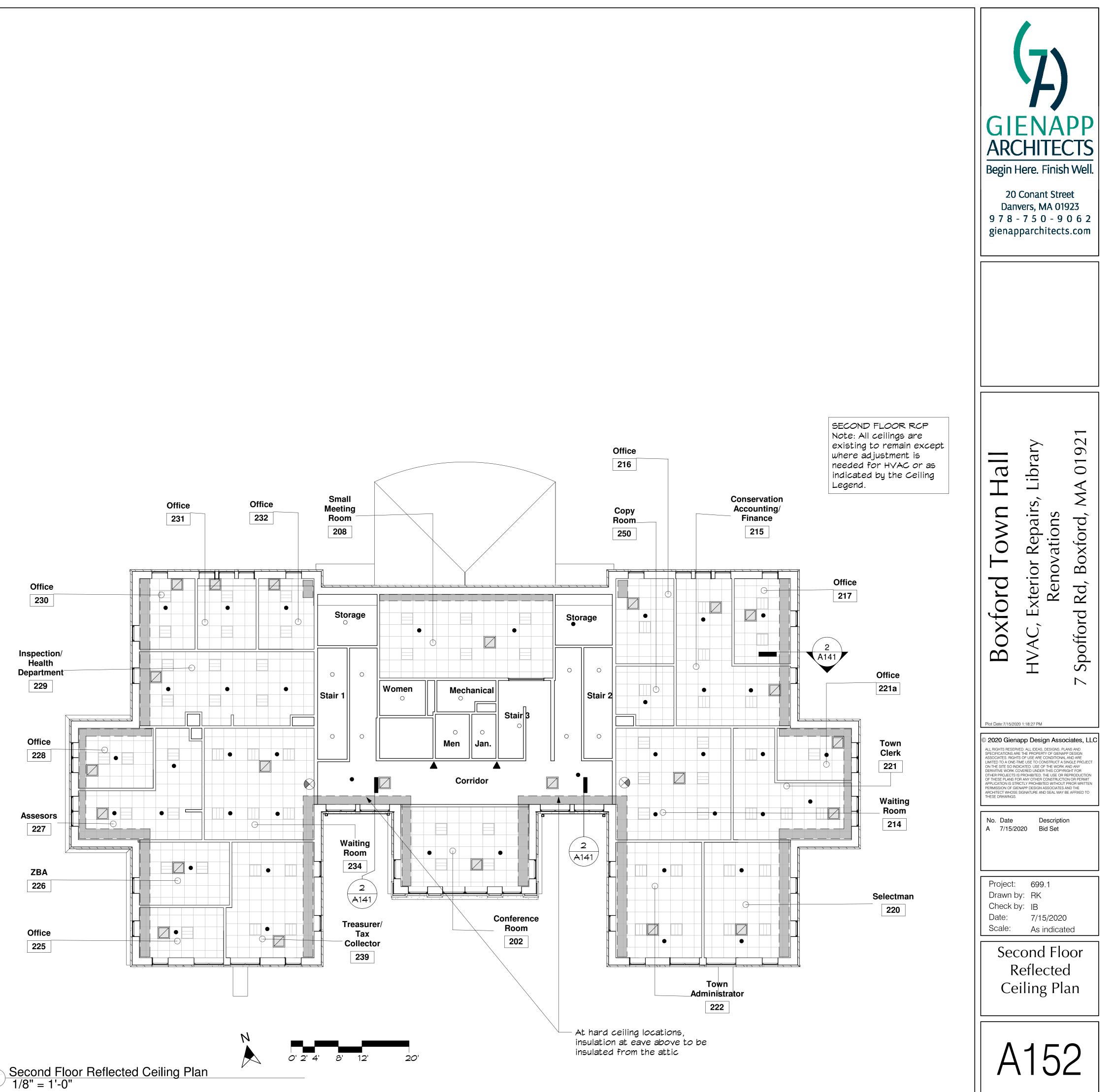
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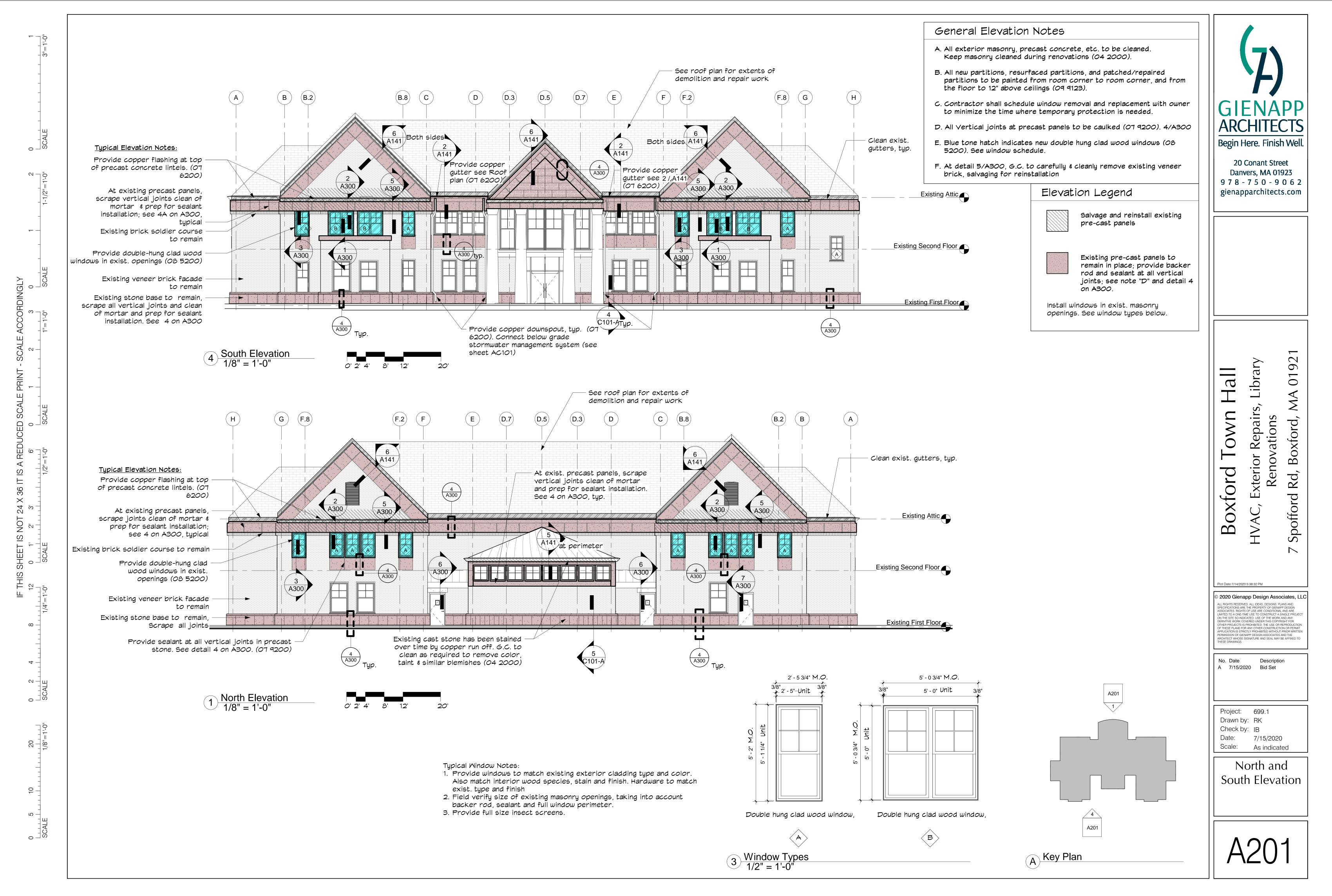
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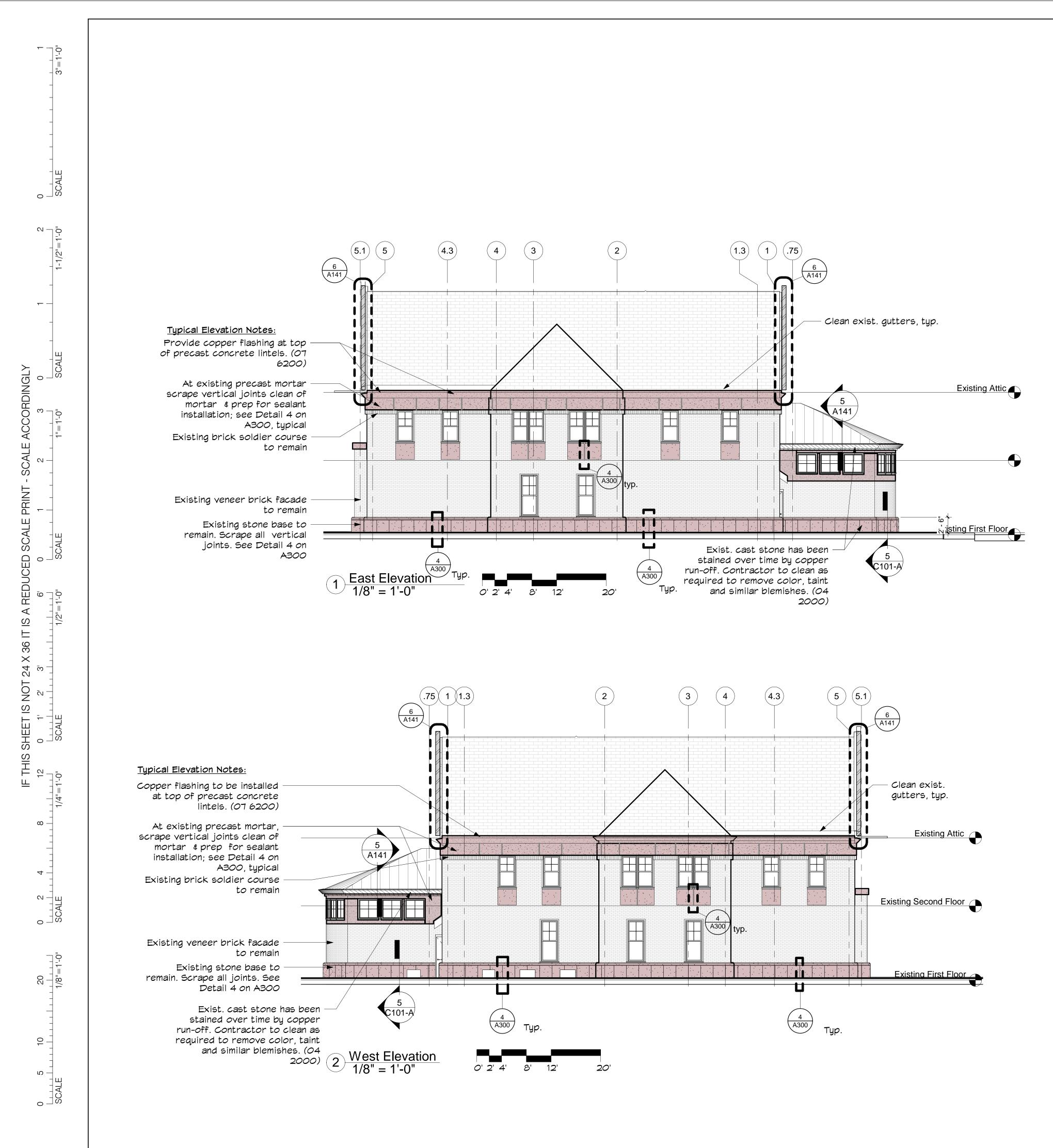




3"=1-0 - 1-0	Ceiling Legend	
	Ceiling Type	
- - - - Щ	Ceiling Height If room has a ceiling tag, it indicates provide ceiling. If room does not have a ceiling tag, it indicates existing ceiling to	
SCALE	remain. If the height is listed as "Existing", it indicates the new ceiling should be at the same height as the existing ceiling.	
2 1-1/2"=1'-0"	A 2 x 2 Direct/indirect lay-in fixture - see electrical drawings	
	6" Recessed LED Can - B see electrical drawings	
SCALE	FCU Indoor Units. See HVAC Drawings	
ORDINGL 	• Sprinkler head. See fire Protections drawings	
- SCALE ACCORDINGLY	Remove, salvage, and reinstall ceiling tiles (095123) to provide access for eave insulation installation (072100)	
	Ceiling to be removed, salvaged, and reinstalled to allow for access to roof eave work (09 5123)	
JCED SCA 0 SCALE	Type Legend	
IT IS A REDUCED SCALE 6' 0 1/2"=1'-0" SCALE	 A. 24" x 24" Suspended acoustical tile ceiling and grid B. GNB on suspended system 	
SHEET IS NOT 24 X 36 IT 0 1' 2' 3' 0 1' 1111 SCALE	Note: For existing ceiling tiles at second floor, GC shall assume replacement of 10% of existing tiles affected by the work of this project due to damage during construction.	
IF THIS (12 /4"=1'-0"		
2 – 4 – – – 4		
SCALE		
20 		
10		
- - - - -		
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Typical Window Notes: 1. Provide windows to match existing exterior cladding type and color. Also match interior wood species, stain and finish. Hardware to match exist. type and finish

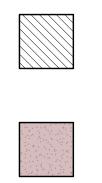


2. Field verify size of existing masonry openings, taking into account backer rod, sealant and full window perimeter. 3. Provide full size insect screens.



- A. All exterior masonry, precast concrete, etc. to be cleaned. Keep masonry cleaned during renovations (04 2000).
- B. All new partitions, resurfaced partitions, and patched/repaired partitions to be painted from room corner to room corner, and from the floor to 12" above ceilings (09 9123).
- C. Contractor shall schedule window removal and replacement with owner to minimize the time where temporary protection is needed.
- D. All Vertical joints at precast panels to be caulked (07 9200). 4/A300
- E. Blue tone hatch indicates new double hung clad wood windows (08 5200). See window schedule.
- F. At detail 5/A300, G.C. to carefully & cleanly remove existing veneer brick, salvaging for reinstallation

Elevation Legend



Salvage and reinstall existing pre-cast panels

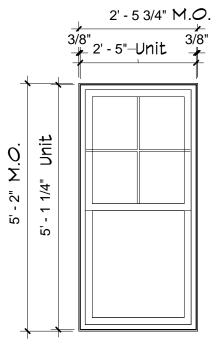
Existing pre-cast panels to

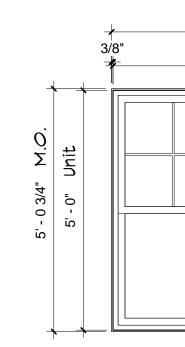
remain in place; provide backer rod and sealant at all vertical joints; see note "D" and detail 4 on A300.

Install windows in exist. masonry openings. See window types below.

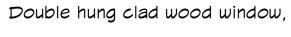
5' - 0 3/4" M.O.

5' - 0" Unit

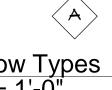




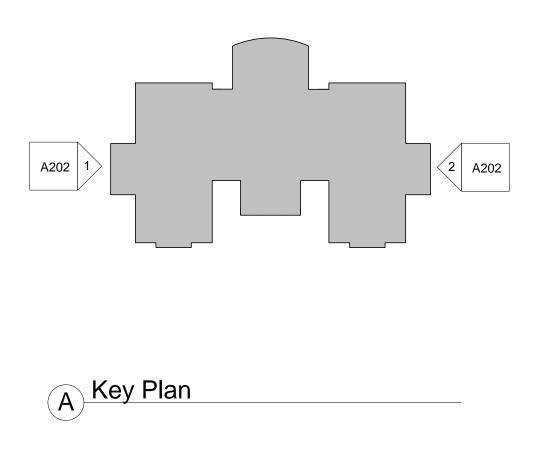
Double hung clad wood window,



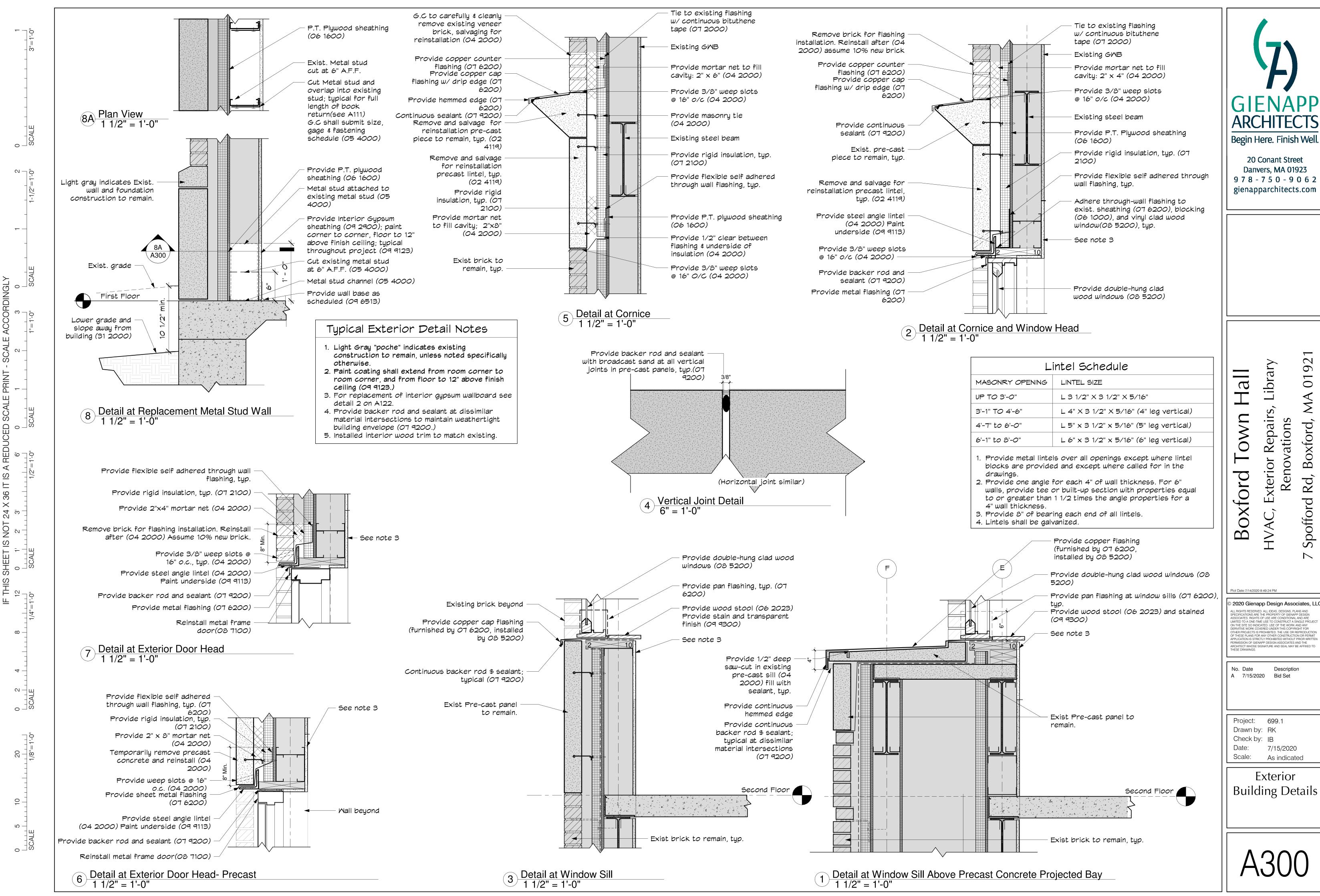
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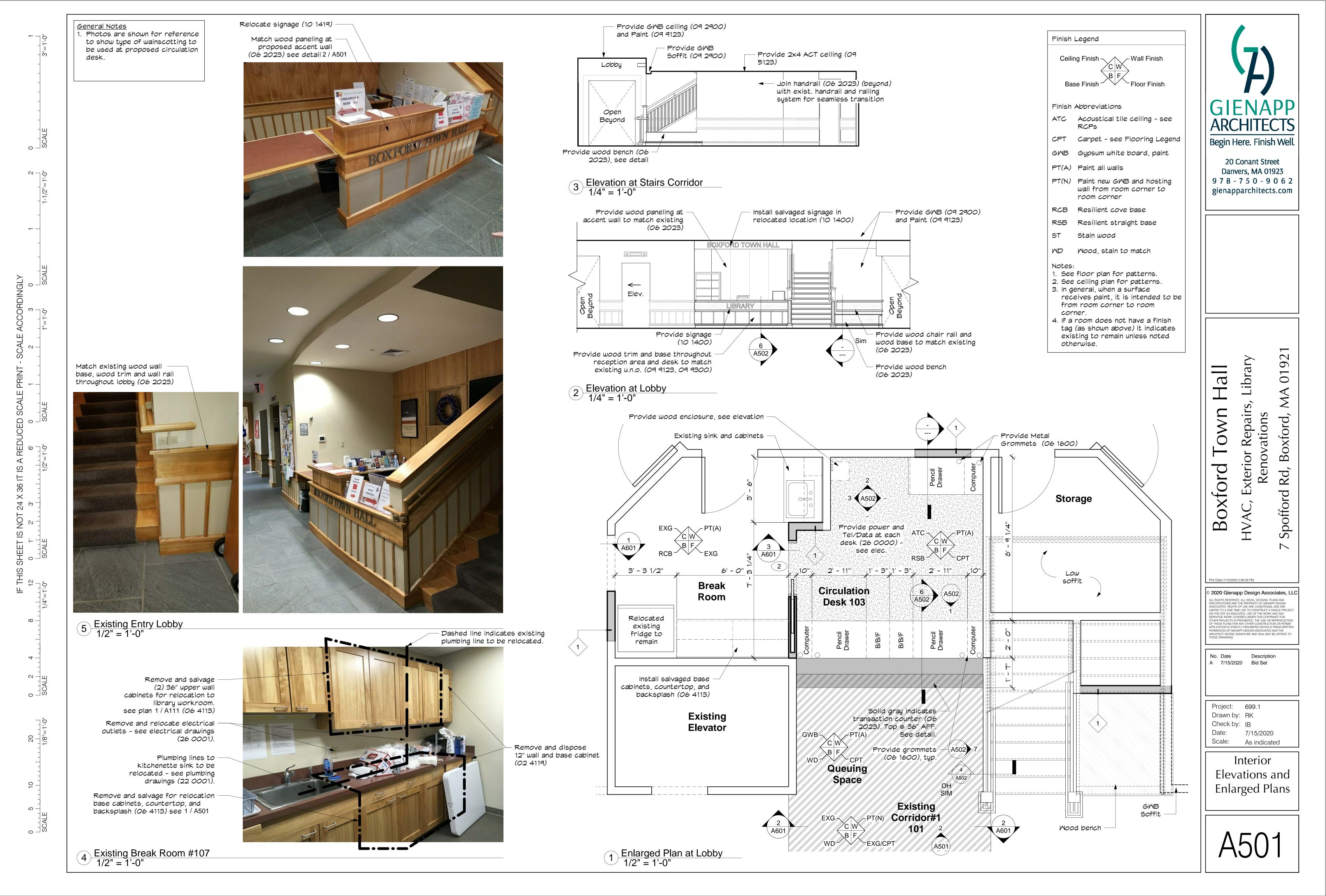
³ Window Types 1/2" = 1'-0"

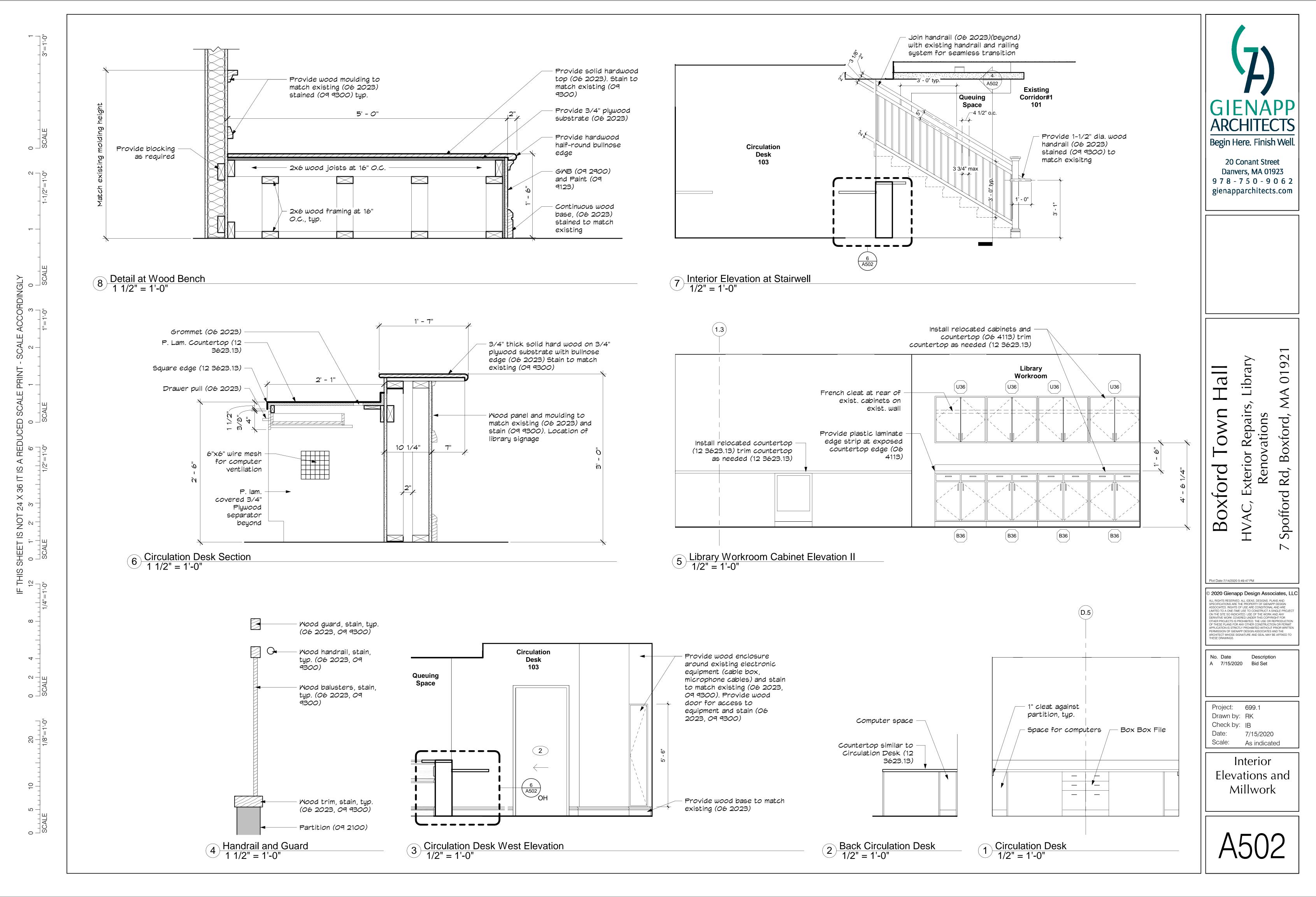


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Boxford Town Hall	HVAC, Exterior Repairs, Library Renovations	7 Spofford Rd, Boxford, MA 01921
ALL RIGHTS RESER SPECIFICATIONS AF ASSOCIATES. RIGH LIMITED TO A ORE- ON THE SITE SO INID DERIVITIVE WORK CO OTHER PROJECTS I OF THESE PLANS F APPLICATION IS STI PERMISSION OF GI ARCHITECT WHOSE THESE DRAWINGS. No. Date A 7/15/2 Project: Drawn & Check & Date: Scale: EaS	app Design Asse veb. ALL IDEAS, DESIGNS, F are THE PROPERTY OF GIEN TIME USE TO CONSTRUCT A DICATEO. USE OF THE WORI OVERED UNDER THIS COPY IS PROHIBITED. THE USE OF OR ANY OTHER CONSTRUCT RICTLY PROHIBITED WITHOU ENAPP DESIGN ASSOCIATES SIGNATURE AND SEAL MAY Descripti 020 Bid Set 699.1 Dy: RK	PLANS AND APP DESIGN AL AND ARE SINGLE PROJECT (AND ANY RIGHT FOR REPRODUCTION TON OR PERMIT IT PRIOR WRITTEN S AND THE (BE AFFIXED TO on 0 ted Vest
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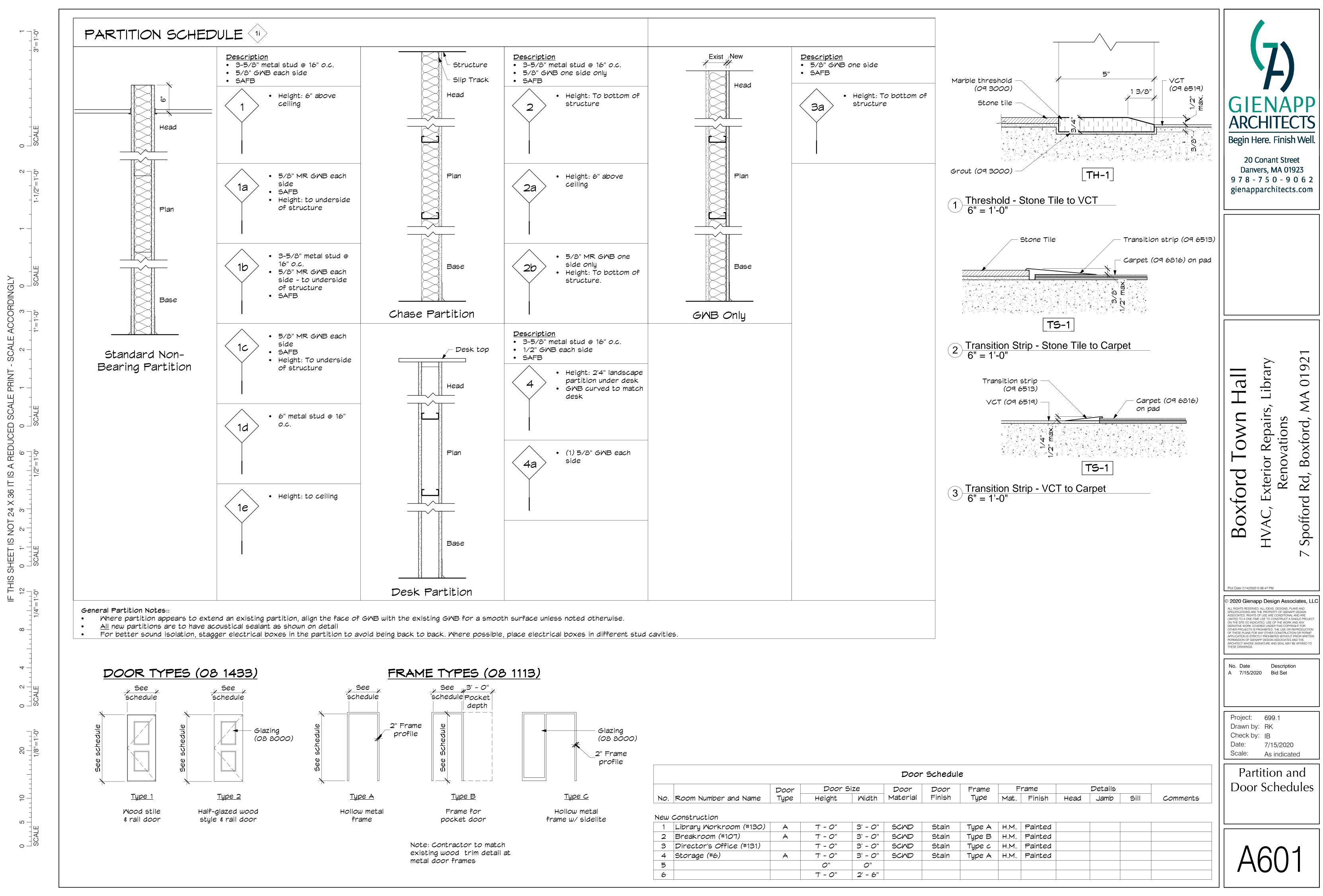


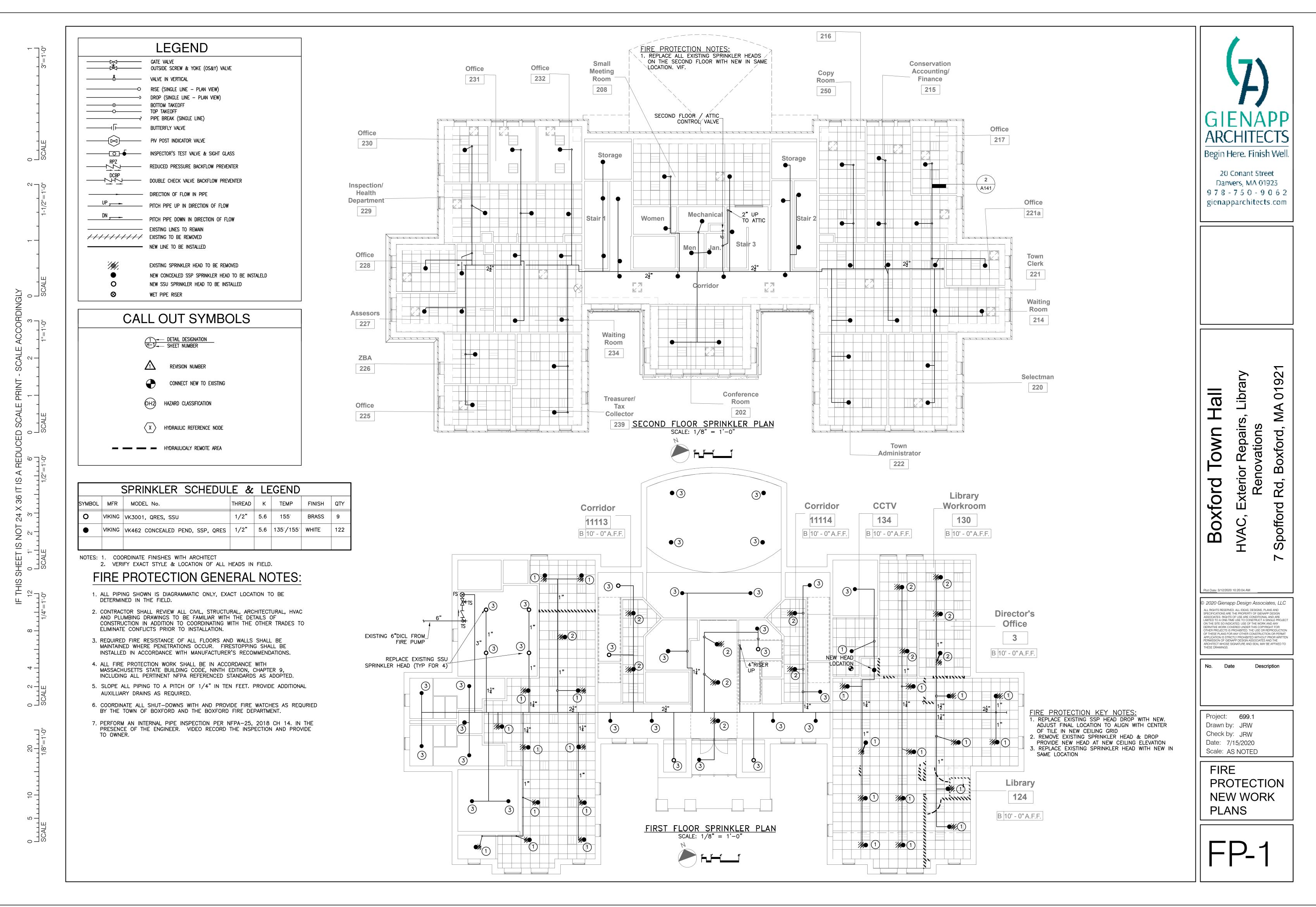


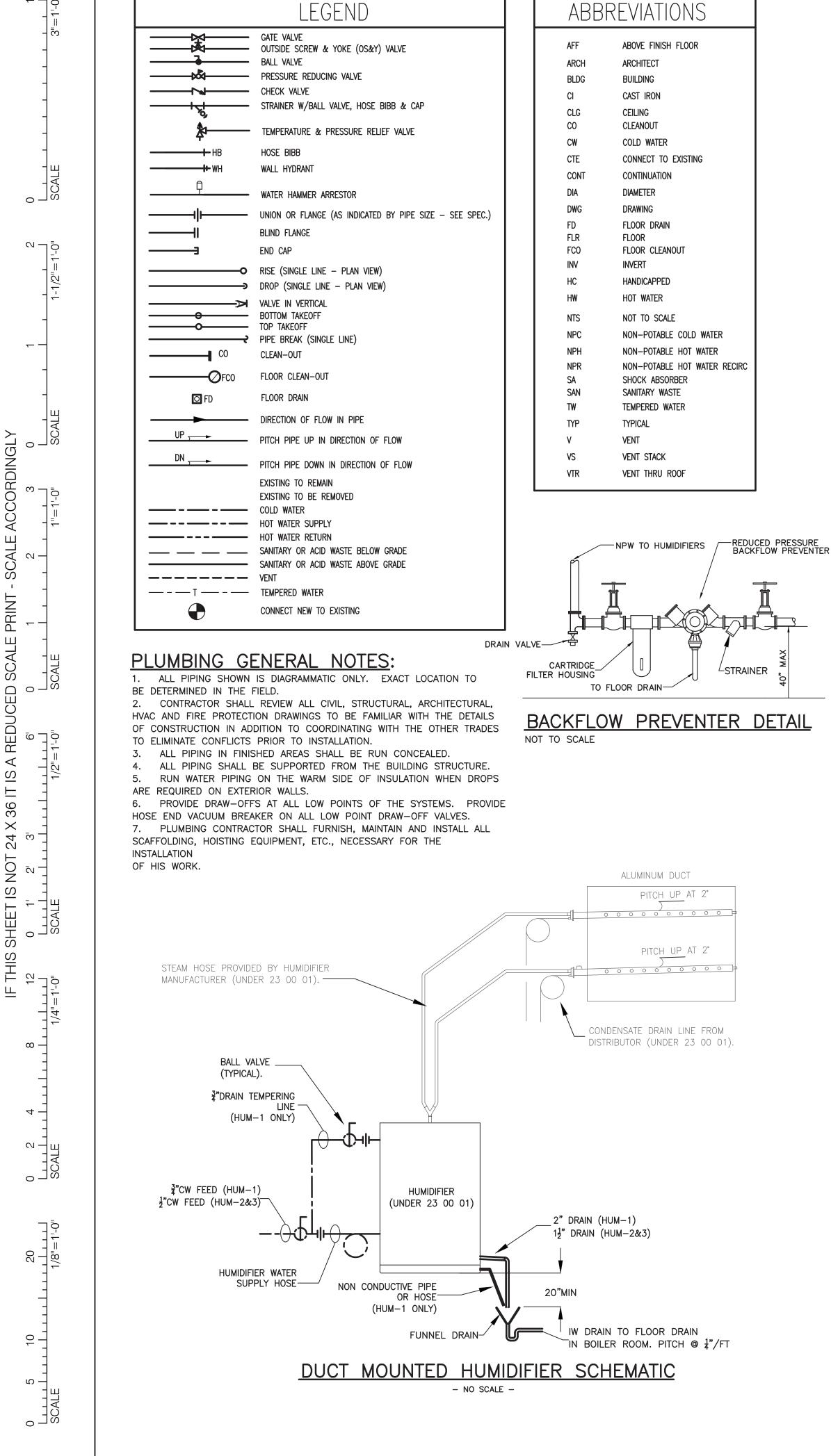




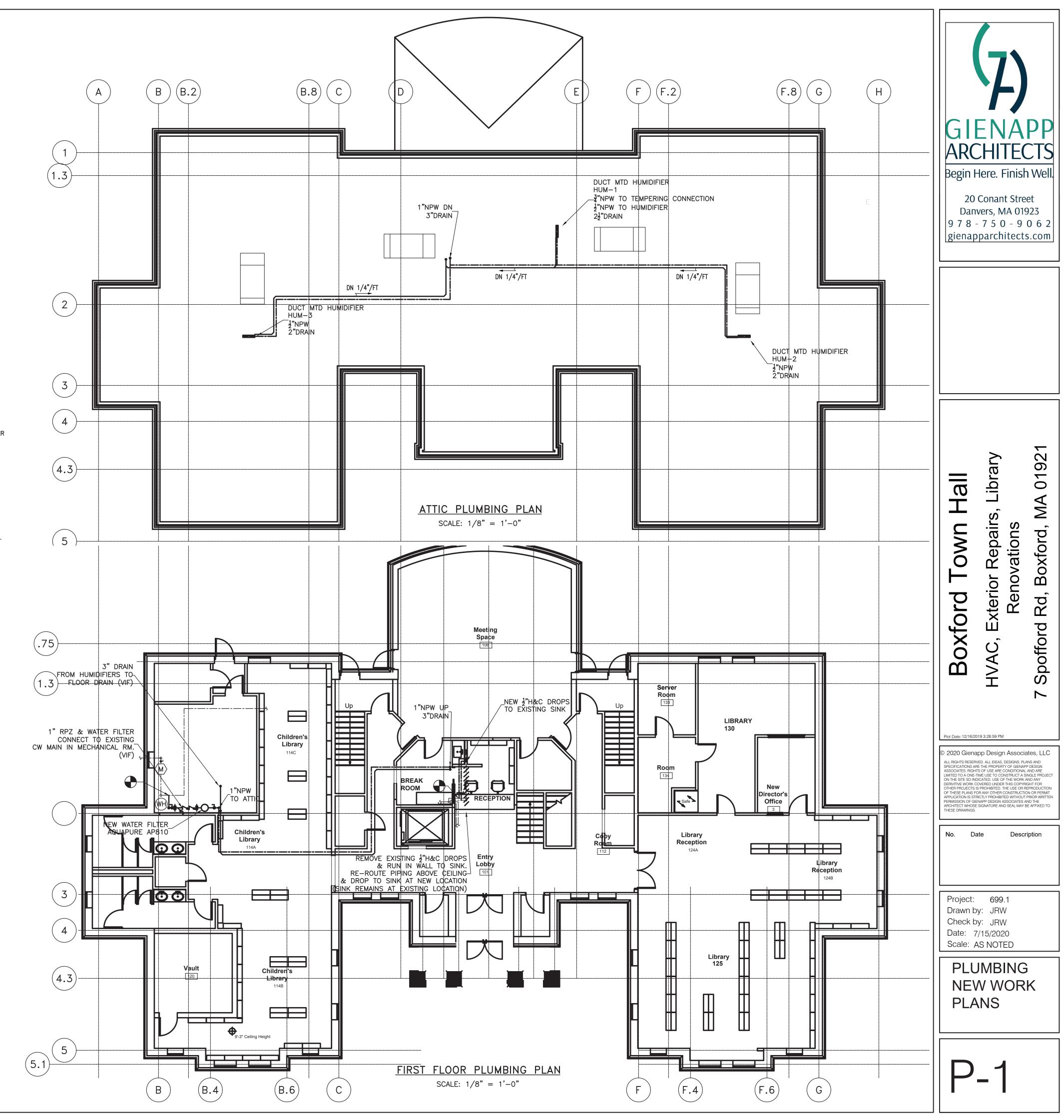
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DEMOLITION NOTES

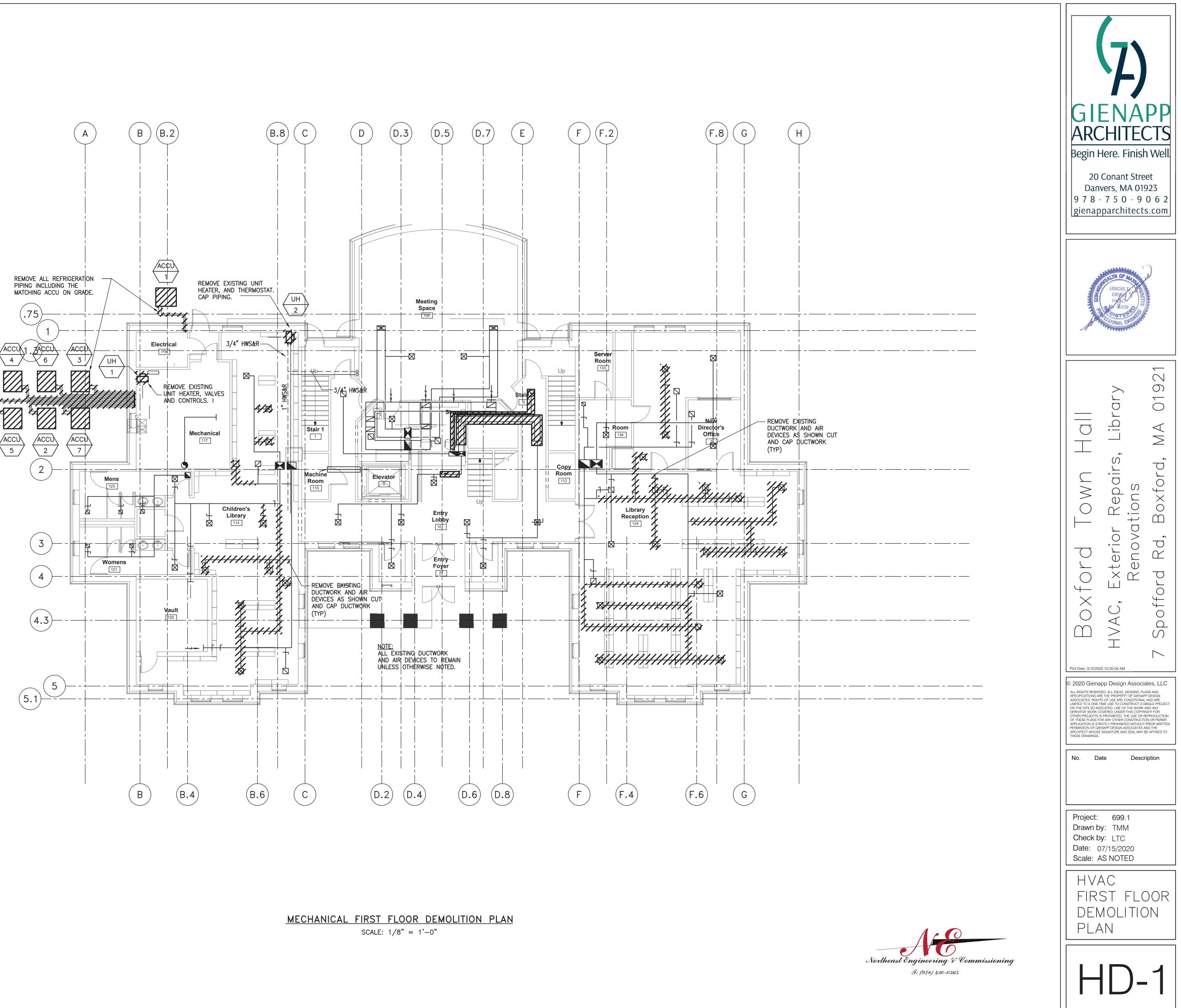
THE LIMITED DEMOLITION SCOPE OF WORK IS TO REMOVE SEVEN EXISTING AIR COOLED CONDENSING UNITS, REFRIGERANT PIPING, THERMOSTATS, DUCTWORK, REGISTERS GRILLS AND DIFFUSERS, INSULATION, AND ASSOCIATED CONTROL WIRING.

MECHANICAL EQUIPMENT, DUCTWORK, PIPING, INSULATION AND CONTROLS SHALL BE REMOVED AS SHOWN. ALL EXISTING HANGERS, HARDWARE, AND VIBRATION ISOLATORS TO BE REMD∨ED.

ALL SEVEN CONDENSING UNITS NOTED TO BE REMOVED SHALL BE PUMPED DOWN AND THE REFRIGERANT STORED IN TANKS SPECIFICALLY DESIGNED AND LABELED FOR THE REFRIGERANT. THE REFRIGERANT TANKS SHALL THEN BE TURNED DVER TO THE DWNER OR REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES, AT THE DISCRETION OF THE OWNER.

WHERE EQUIPMENT ELECTRICALLY DISCONNECTED FROM POWER SOURCE, THE POWER SOURCE SHALL BE SAFELY TERMINATED IN ACCORDANCE WITH STATE AND LOCAL CODES BY A LICENSED ELECTRICIAN.

DEMOLISHED AND REMOVED PIPING, DUCTWORK, CONTROLS, INSULATION, AND ASSOCIATED EQUIPMENT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, FEDERAL STATE AND LOCAL CODES.





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THE LIMITED DEMOLITION SCOPE OF WORK IS TO REMOVE SEVEN EXISTING AIR COOLED CONDENSING UNITS, REFRIGERANT PIPING, THERMOSTATS, DUCTWORK, REGISTERS GRILLS AND DIFFUSERS, INSULATION, AND ASSOCIATED CONTROL WIRING.

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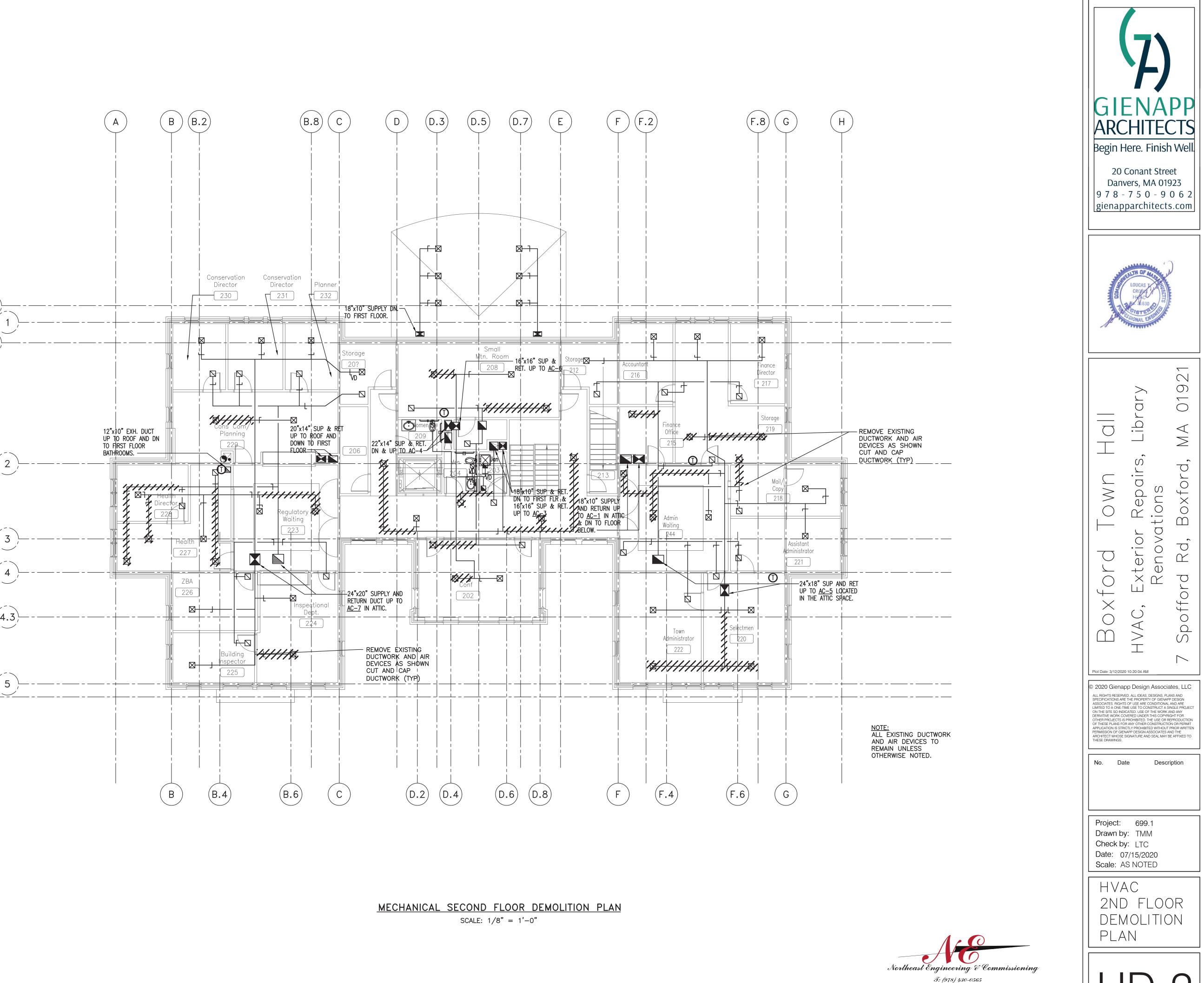
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MECHANICAL EQUIPMENT, DUCTWORK, PIPING, INSULATION AND CONTROLS SHALL BE REMOVED AS SHOWN. ALL EXISTING HANGERS, HARDWARE, AND VIBRATION ISOLATORS TO BE REM⊡∨ED.

WHERE EQUIPMENT ELECTRICALLY DISCONNECTED FROM POWER SOURCE, THE POWER SOURCE SHALL BE SAFELY TERMINATED IN ACCORDANCE WITH STATE AND LOCAL CODES BY A LICENSED ELECTRICIAN.

DEMOLISHED AND REMOVED PIPING, DUCTWORK, CONTROLS, INSULATION, AND ASSOCIATED EQUIPMENT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, FEDERAL STATE AND LOCAL CODES.





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THE LIMITED DEMOLITION SCOPE OF WORK IS TO REMOVE THE SEVEN EXISTING AIR CONDITIONING UNITS, FOUR EXISTING HDT WATER UNIT HEATERS, REFRIGERANT PIPING, THERMOSTATS, DUCTWORK, INSULATION, AND ASSOCIATED CONTROL WIRING.

MECHANICAL EQUIPMENT, DUCT∀ORK, PIPING, INSULATION AND CONTROLS SHALL BE REMO∨ED IN AS SHOWN. ALL EXISTING HANGERS, HARDWARE AND VIBRATION ISOLATORS TO BE REMOVED.

WHERE EQUIPMENT ELECTRICALLY DISCONNECTED FROM POWER SOURCE, THE POWER SOURCE SHALL BE SAFELY TERMINATED IN ACCORDANCE WITH STATE AND LOCAL CODES BY A LICENSED ELECTRICIAN.

DEMOLISHED AND REMOVED PIPING, DUCTWORK, CONTROLS, INSULATION, AND ASSOCIATED EQUIPMENT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, FEDERAL STATE AND LOCAL CODES.

WHEN REMOVED THE SEVEN EXISTING AIR HANDLING UNITS CARE SHALL BE TAKEN TO PE SURE EACH REFRIGERANT SYSTEM IS PUMPED DOWN AND THE REFRIGERANT STORED IN TANKS SPECIFICALLY DESIGNED AND LABELED FOR THE REFRIGERANT. THE REFRIGERANT TANKS SHALL THEN BE TURNED OVER TO THE OWNER OR REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL CODES, AT THE DISCRETION OF THE OWNER.

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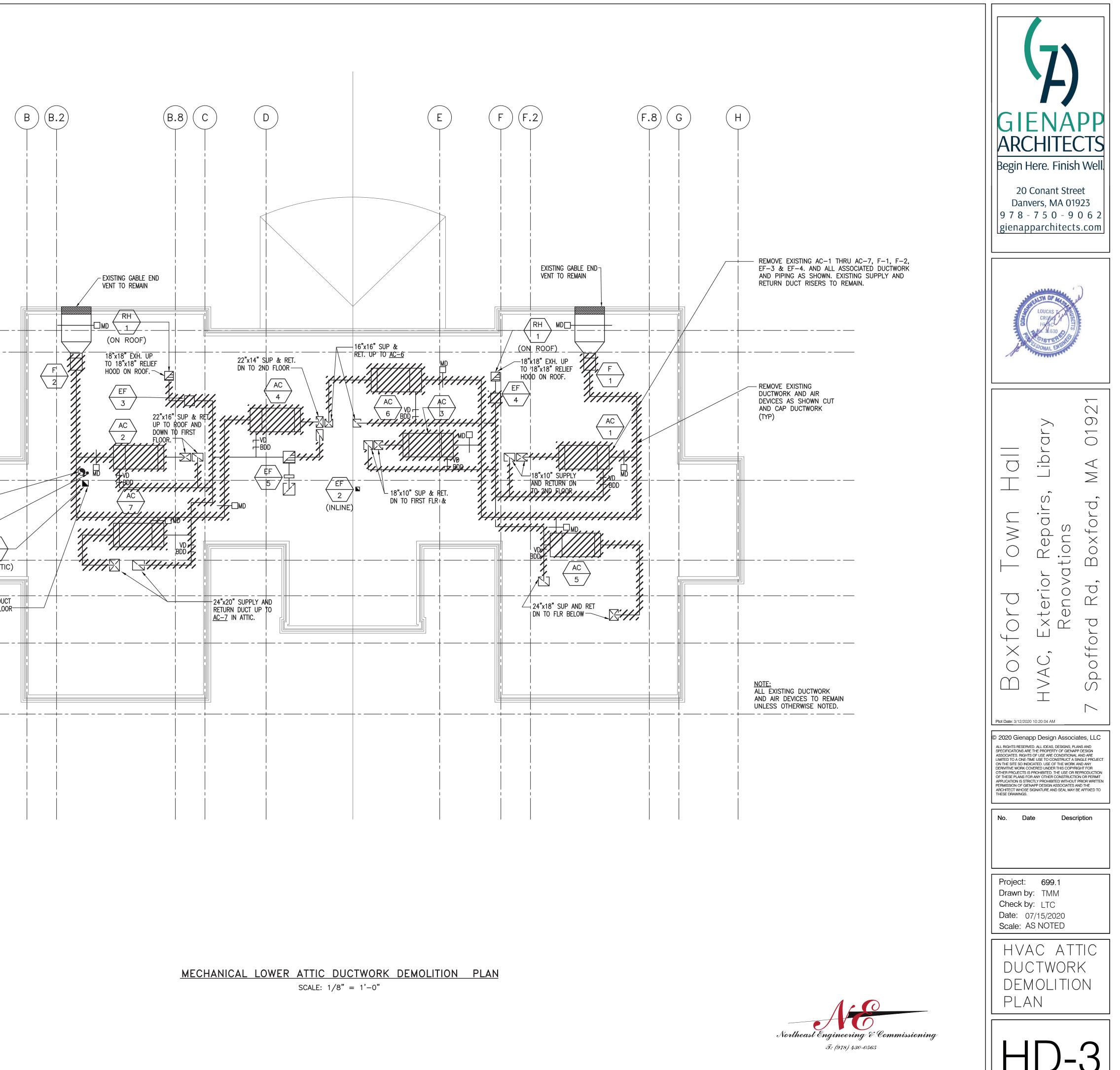
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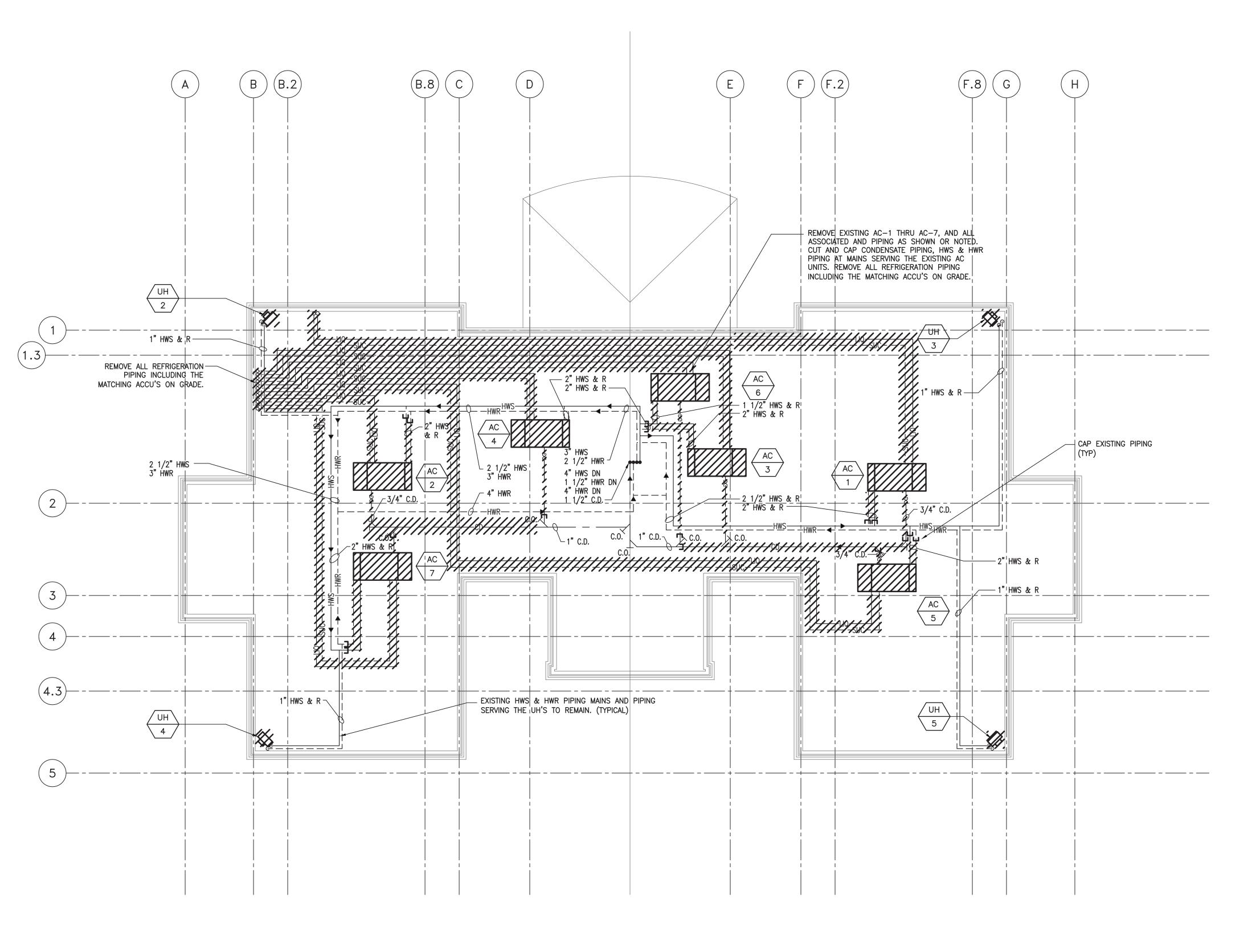
THE LIMITED DEMOLITION SCOPE OF WORK IS TO REMOVE THE SEVEN EXISTING AIR CONDITIONING UNITS, FOUR EXISTING HOT WATER UNIT HEATERS, REFRIGERANT PIPING, THERMOSTATS, DUCTWORK, INSULATION, AND ASSOCIATED CONTROL WIRING.

MECHANICAL EQUIPMENT, DUCTWORK, PIPING, INSULATION AND CONTROLS SHALL BE REMOVED IN AS SHOWN. ALL EXISTING HANGERS, HARDWARE AND VIBRATION ISOLATORS TO BE REMOVED.

WHERE EQUIPMENT ELECTRICALLY DISCONNECTED FROM POWER SOURCE, THE POWER SOURCE SHALL BE SAFELY TERMINATED IN ACCORDANCE WITH STATE AND LOCAL CODES BY A LICENSED ELECTRICIAN.

DEMOLISHED AND REMOVED PIPING, DUCTWORK, CONTROLS, INSULATION, AND ASSOCIATED EQUIPMENT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, FEDERAL STATE AND LOCAL CODES.

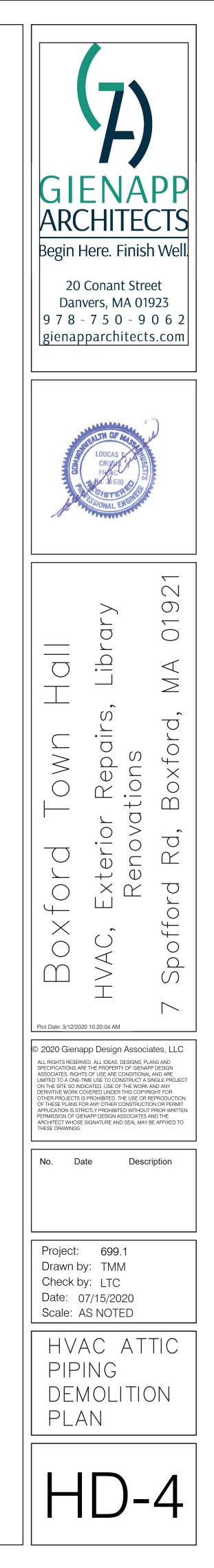
WHEN REMOVED THE SEVEN EXISTING AIR HANDLING UNITS CARE SHALL BE TAKEN TO PE SURE EACH REFRIGERANT SYSTEM IS PUMPED DOWN AND THE REFRIGERANT STORED IN TANKS SPECIFICALLY DESIGNED AND LABELED FOR THE REFRIGERANT. THE REFRIGERANT TANKS SHALL THEN BE TURNED OVER TO THE OWNER OR REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL CODES, AT THE DISCRETION OF THE OWNER.



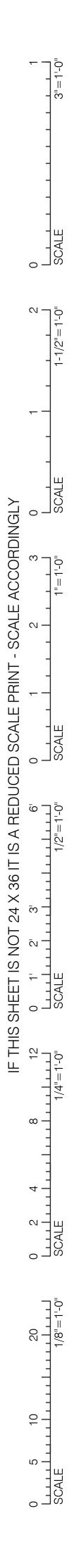


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MECHANICAL LOWER ATTIC PIPING DEMOLITION PLAN SCALE: 1/8" = 1'-0"



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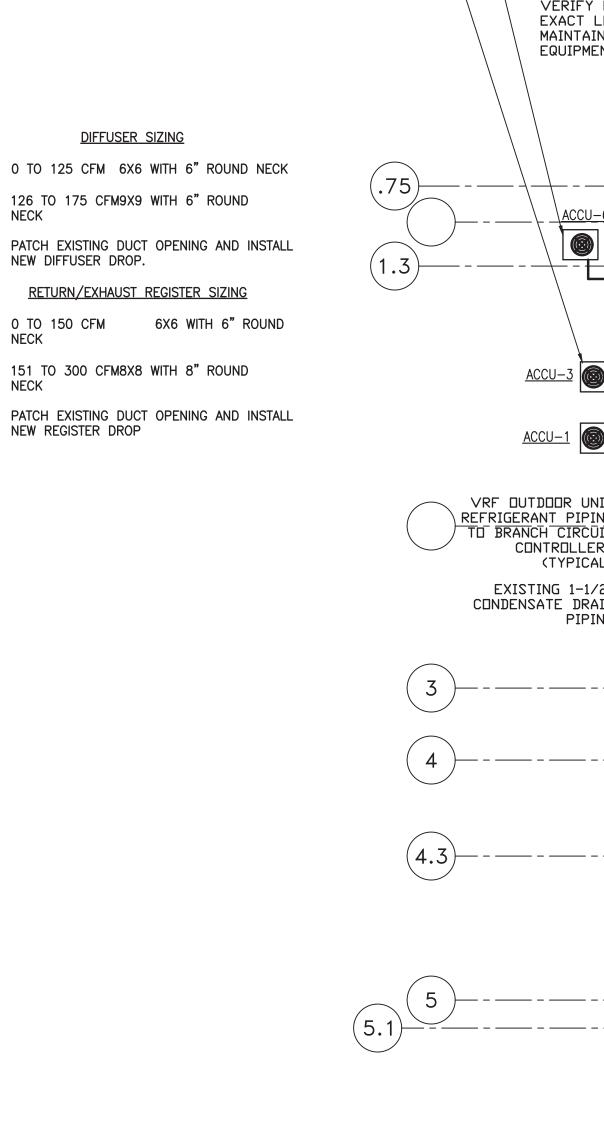
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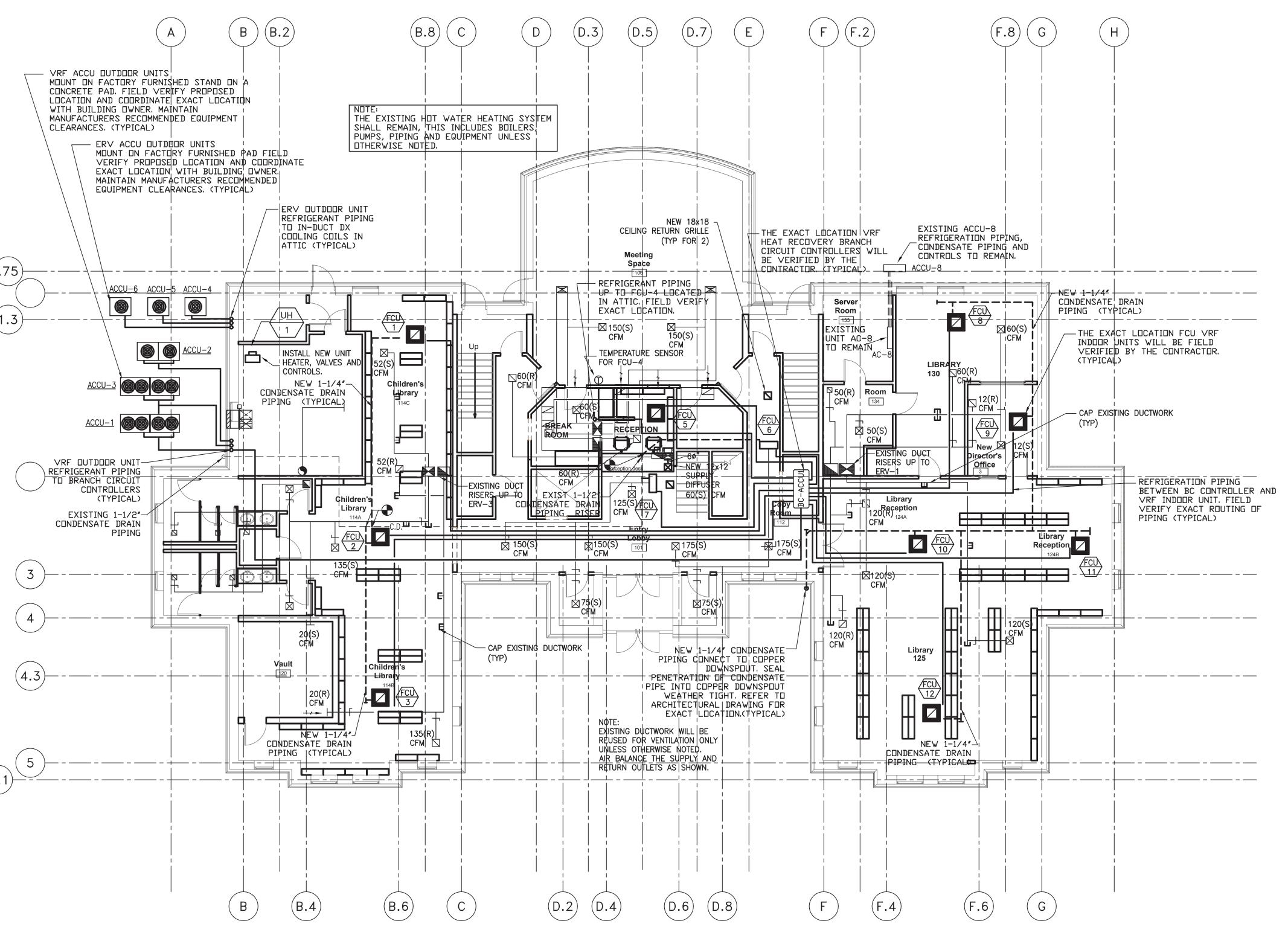
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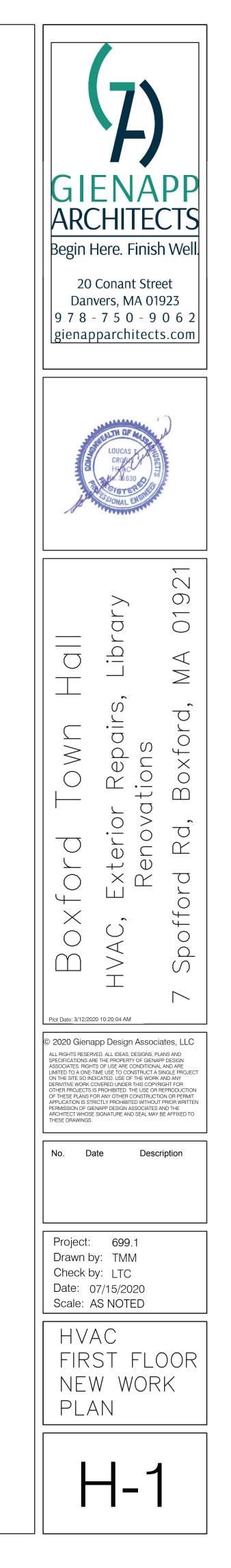
NEW DIFFUSER DROP.

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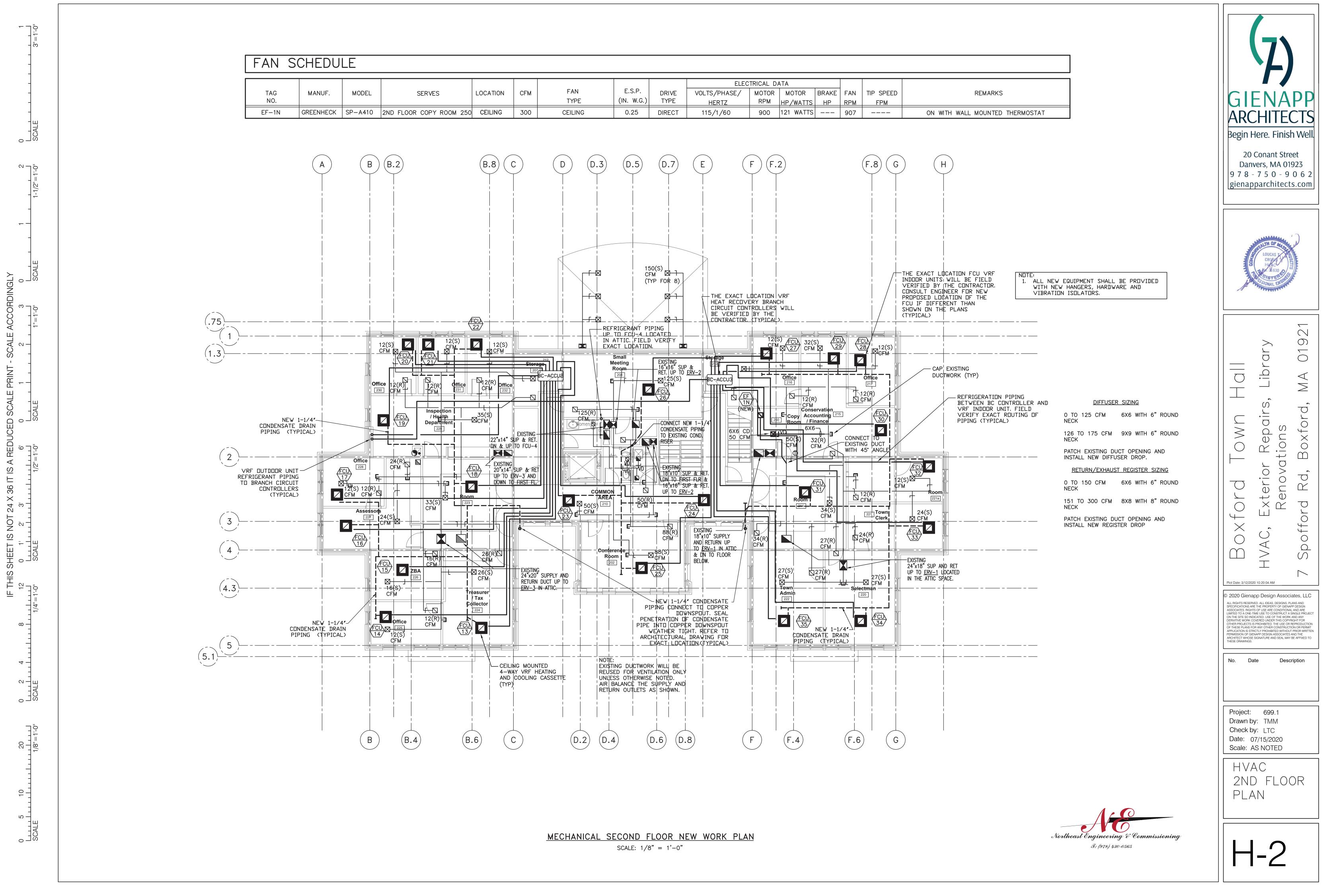


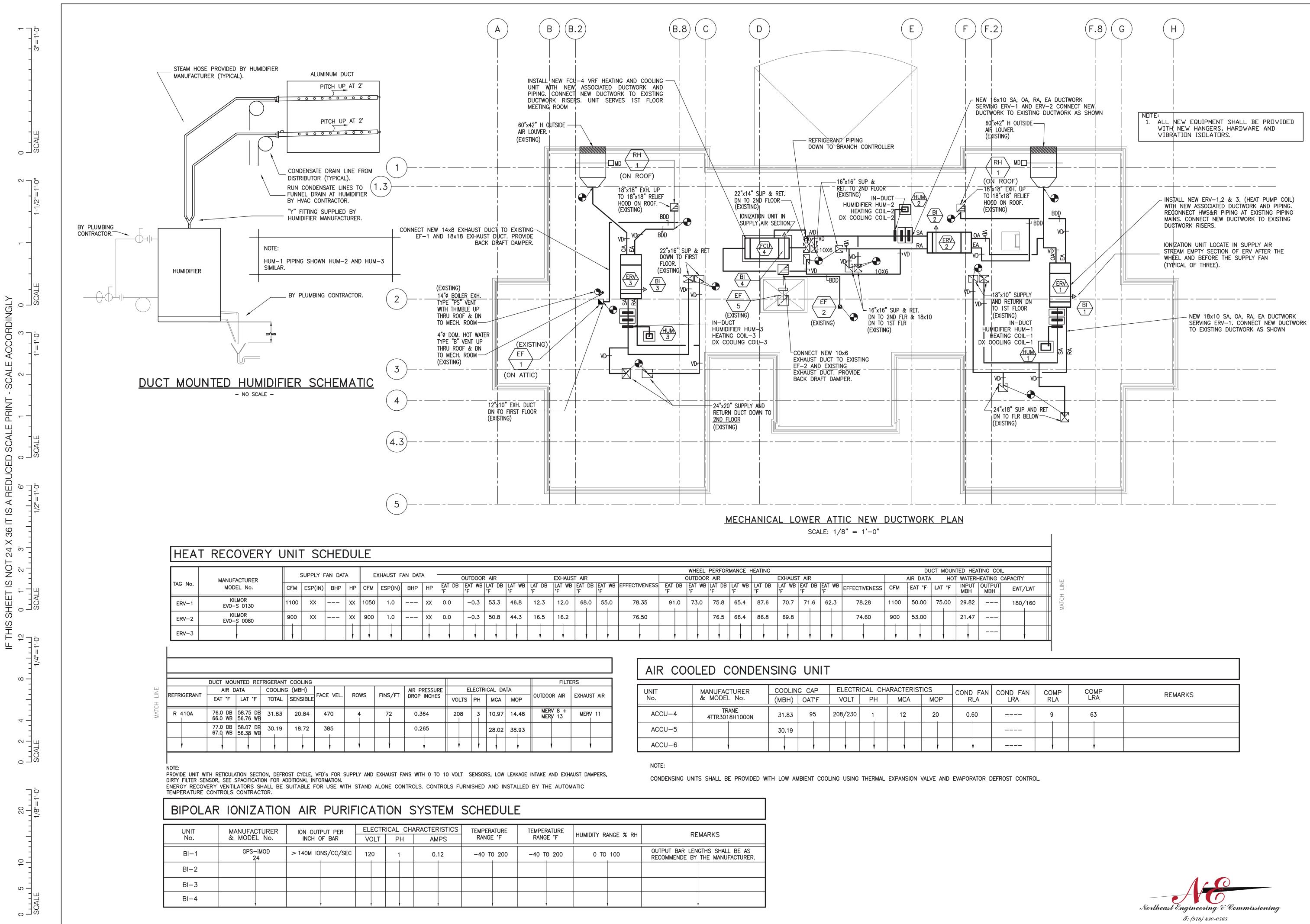


MECHANICAL FIRST FLOOR NEW WORK PLAN SCALE: 1/8" = 1'-0"









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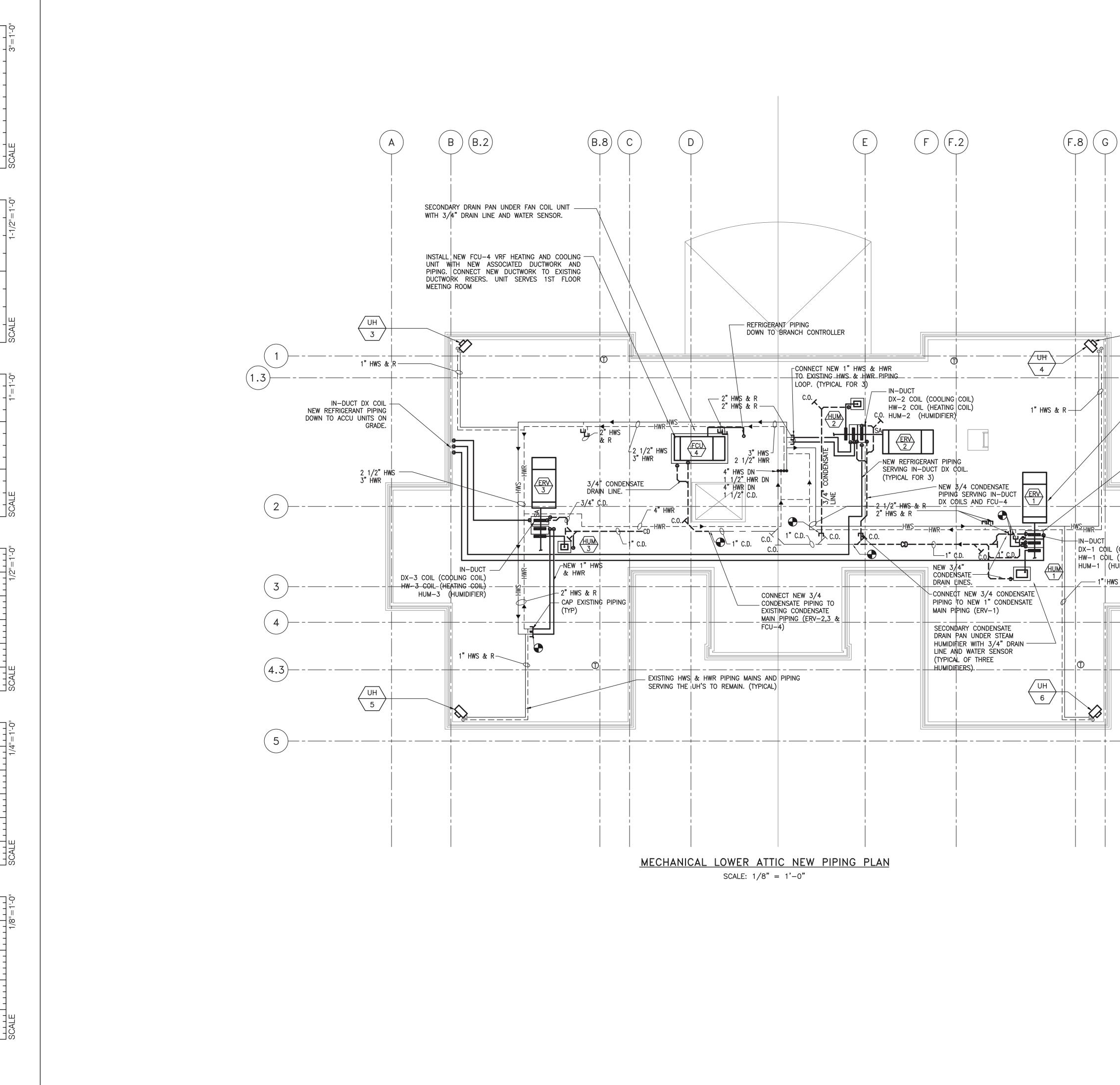
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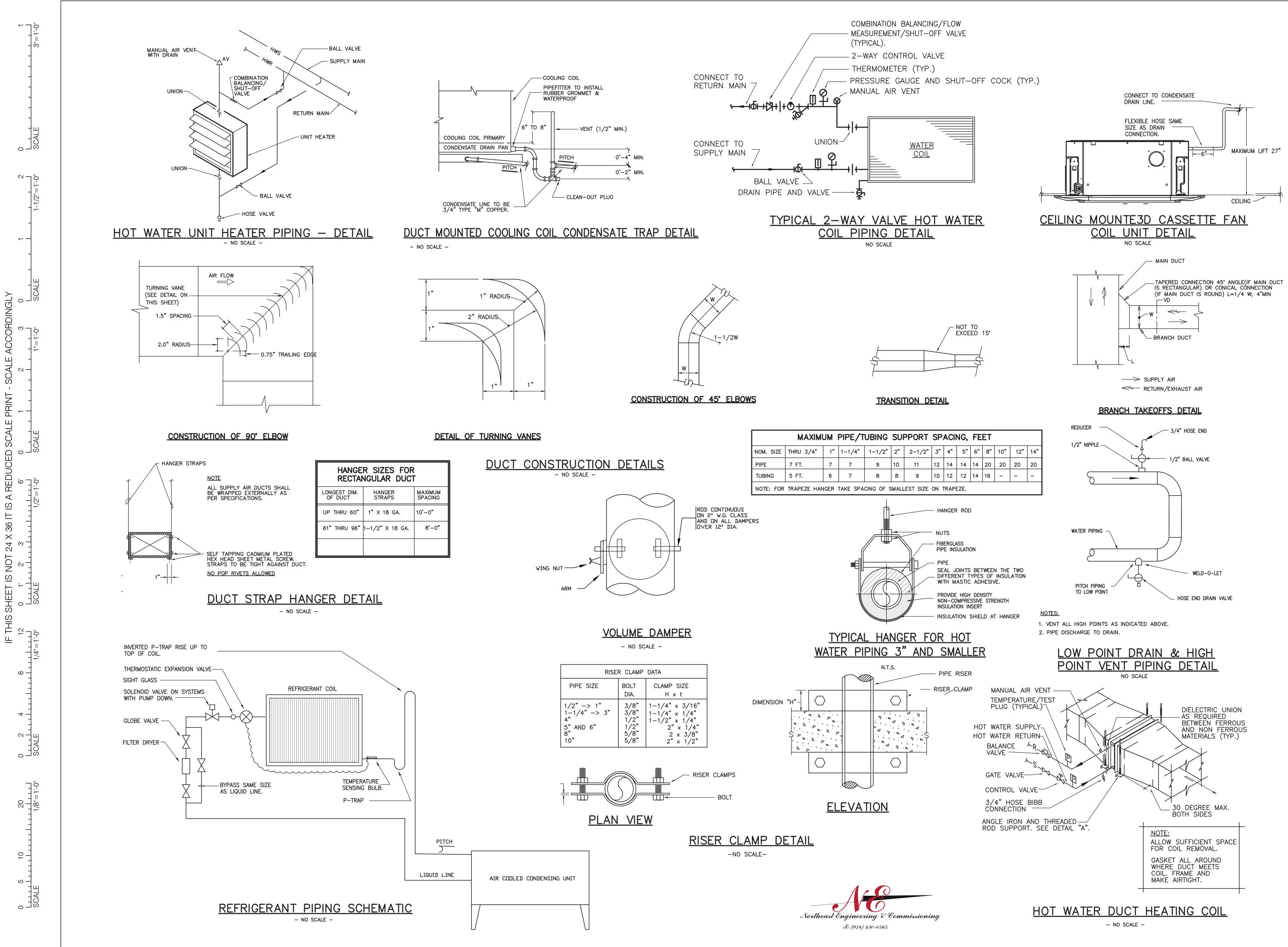
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Boxford Town Hall HVAC, Exterior Repairs, Library Renovations 7 Spofford Rd, Boxford, MA 01921
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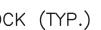




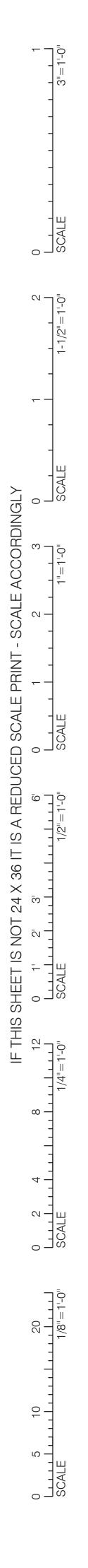


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NDTE: 1. ALL NEW EQUIPMENT SHALL BE PROVIDED WITH NEW HANGERS, HARDWARE AND VIBRATION ISOLATORS. NEW HOT WATER UNIT HEATER CONNECT TO EXISTING PIPING WITH NEW VALVES AND AIR VENT (TYPICAL OF 4).	LOUCAS T CROWS HACC HACC HACC HACC HACC HACC HACC HAC
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GENERAL SPECIFICATIONS

- 1. CONDITIONS OF THE CONTRACT AND DIVISION 1, GENERAL REQUIREMENTS APPLY TO WORK SHOWN ON THESE DRAWINGS. EXAMINE DRAWINGS AND OTHER SPECIFICATIONS FOR REQUIREMENTS THAT AFFECT WORK SHOWN ON THESE DRAWINGS.
- 2. PROVIDE ITEMS REFERRED TO IN SINGULAR NUMBER IN CONTRACT DOCUMENTS IN QUANTITIES NECESSARY TO COMPLETE
- 3. VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
- 4. PERFORM WORK AND PROVIDE MATERIALS AND EQUIPMENT AS SHOWN ON DRAWINGS. COORDINATE ELECTRICAL WORK WITH WORK SHOWN ON THESE DRAWINGS.
- 5. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
- 6. PERFORM WORK AS REQUIRED BY CODES, REGULATIONS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES WITH LAWFUL JURISDICTION.
- 7. MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSI, IEEE, ADA & CBM APPROVED FOR INTENDED SERVICE. MATERIAL AND INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND STATE ELECTRICAL CODE.
- 8. MAINTAIN RECORD DRAWINGS ON SITE. RECORD SET MUST BE COMPLETE, CURRENT AND AVAILABLE FOR INSPECTION WHEN REQUISITIONS FOR PAYMENT ARE SUBMITTED.
- 9. GUARANTEE WORK IN WRITING FOR ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
- 10. SUBMIT GUARANTEE TO ARCHITECT BEFORE FINAL PAYMENT. STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERPRETED TO LIMIT OWNER'S RIGHTS UNDER LAW AND THIS CONTRACT.
- 11. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. PROVIDE INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS BUT NOT SHOWN ON PLANS, AND VICE VERSA, AS IF EXPRESSLY REQUIRED ON
- 12. UTILIZE MOLDED CASE CIRCUIT BREAKERS. MINIMUM INTERRUPTING CAPACITY SHALL BE 10,000 AMPS SYMMETRICAL AT 240 VOLTS, AND 14,000 AMPS SYMMETRICAL AT 480 VOLTS.
- 13. ADDRESS QUESTIONS REGARDING DRAWINGS TO ARCHITECT IN WRITING BEFORE AWARD OF CONTRACT. OTHERWISE, ARCHITECT INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
- 14. DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS OR EQUIPMENT FOR THOSE SPECIFIED, SHALL BE REQUESTED IN SEPARATE LETTER, WHETHER DEVIATIONS ARE DUE TO FIELD CONDITIONS, STANDARD SHOP PRACTICE, OR OTHER CAUSE.
- 15. ALL WIRING SHALL BE RUN CONCEALED UNLESS SPECIFIED OTHERWISE.
- 16. ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE. 17. LOCATION OF MECHANICAL EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTIONS ARE SHOWN ON THE MECHANICAL DRAWINGS.
- 18. ALL RACEWAY RUNNING THROUGH BUILDING EXPANSION JOINTS SHALL BE EQUIPPED WITH EXPANSION FITTINGS.
- 19. CONDUIT HOMERUNS SHOWN ON THE DRAWING WITH MORE THAN THREE (3) CURRENT CARRYING CONDUCTORS ARE SHOWN DIAGRAMMATICALLY. THE CONTRACTOR SHALL NOT INSTALL MORE THAN THREE (3) CURRENT CARRYING CONDUCTORS IN A RACEWAY UNLESS DONE SO STRICTLY BY THE NATIONAL ELECTRICAL CODE AS AMENDED BY THE STATE.
- 20. THE ELECTRICAL CONTRACTOR SHALL CONSULT AND COOPERATE WITH CONTRACTORS OF OTHER TRADES TO AVOID ANY INTERFERENCE IN THE INSTALLATION OF THEIR RESPECTIVE EQUIPMENT. CONTRACTOR SHALL REVIEW ALL TRADES' CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT. COORDINATE EXACT MOUNTING LOCATIONS WITH THE ARCHITECT
- 21. BRANCH CIRCUIT WIRING MAY NOT BE SHOWN GRAPHICALLY ON DRAWINGS AND MAY BE INDICATED BY CIRCUIT NUMBERS BESIDE FIXTURES, DEVICES AND EQUIPMENT. PROVIDE COMPLETE WIRING SYSTEM WHETHER OR NOT INDICATED GRAPHICALLY. PHASE BALANCE ALL PANELBOARDS IN FIELD. CIRCUIT NUMBERS ARE DIAGRAMMATIC. UTILIZE AVAILABLE SPACE OR PROVIDE ADDITIONAL BREAKERS AND PANELBOARDS AS NECESSARY.
- 22. ALL NEW WIRING SHALL BE TYPE THHN/THWN RATED 75-90°C, 600V. WET-DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE NO. 12 AWG SOLID COPPER. BRANCH CIRCUITS LONGER THAN 150 FEET FOR 120 VOLTS OR 250 FEET FOR 277 VOLTS SHALL BE AT LEAST NO. 10 AWG FROM PANEL TO LAST OUTLET.
- 23. ALL NEW EXPOSED INTERIOR WIRING ABOVE 8'-0" NOT EXPOSED TO DAMAGE SHALL BE INSTALLED IN ELECTRIC METALLIC TUBING. ALL WIRING IN CONCRETE SLABS OR EXPOSED IN ROOM BELOW 8'-0" OR EXPOSED TO DAMAGE SHALL BE INSTALLED IN RIGID STEEL CONDUIT. EXTERIOR WIRING SHALL BE IN GALVANIZED RIGID METALLIC CONDUIT.
- 24. INTERRUPTIONS TO EXISTING ELECTRIC SERVICES AND SYSTEMS SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE ARCHITECT OR OWNER. INCLUDE ALL PREMIUM TIME ASSOCIATED WITH INTERRUPTIONS, TWENTY-FOUR (24) HOUR NOTICE IS REQUIRED.
- 25. ALL GROUNDING SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AS AMENDED BY THE STATE OF MASSACHUSETTS.
- 26. ALL FIREPROOFING FOR ELECTRICAL PENETRATIONS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- 27. SYSTEM FEEDERS AND BRANCH CIRCUITS THAT PASS THROUGH ALTERED AREAS AND SERVE OTHER AREAS SHALL BE MAINTAINED.
- 28. PROVIDE NEW TYPED IDENTIFICATION DIRECTORY IN PANELBOARDS INDICATING CIRCUIT FUNCTION OR EQUIPMENT SERVED. LABEL ALL ELECTRICAL PANELS, DISCONNECT SWITCHES AND OTHER EQUIPMENT WITH ENGRAVED VINYL PLATES. NAMEPLATE LETTERING SHALL BE 1/4" MINIMUM.
- 29. DISCONNECT SWITCHES SHALL BE HEAVY DUTY (HD). SIDE OPERATED WITH INTERLOCKING COVER, G.E., SQUARE "D", CUTLER HAMMER OR SIEMENS OR EQUAL.
- 30. ALL WIRING (LOW VOLTAGE, TEL/DATA, FIRE ALARM, POWER BRANCH CIRCUIT) SHALL BE PLENUM RATED; NO EXCEPTIONS. NON-PLENUM RATED CABLES OF ANY KIND SHALL NOT BE PROVIDED.
- 31. PROVIDE UL LISTED MOLDABLE PUTTY PADS TO SEAL ANNULAR SPACES/PENETRATIONS AROUND ALL JUNCTION BOXES.

POWER NOTES

- 1. ALL CONDUIT, WIRING AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST STANDARDS OF THE NATIONAL & STATE ELECTRICAL CODES AND ANY APPLICABLE LOCAL REGULATIONS.
- 2. ALL CONDUITS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN. ALL CONDUIT RUNS SHALL BE RIGIDLY SUPPORTED
- 3. NO CONDUIT SMALLER THAN 3/4 INCH ELECTRICAL TRADE SIZE SHALL BE USED, UNLESS SPECIFICALLY CALLED FOR ON THE DRAWINGS.
- 4. PERFORM WORK AND PROVIDE MATERIALS AND EQUIPMENT TO MAKE INSTALLATION COMPLETE IN EVERY DETAIL UNDER THIS CONTRACT WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS.
- 5. WIRING DEVICES SHALL BE TAMPER RESISTANT GRADE IN ACCORDANCE WITH NEC ARTICLE 406.11 AND ASSEMBLY SUBSETS LISTED IN 518.2, 20 AMP, WITH SMOOTH NYLON DEVICE PLATES AS MANUFACTURED BY HUBBELL, OR EQUAL. COLOR TO MATCH EXISTING OR AS APPROVED BY ARCHITECT.
- 6. CONDUCTORS AND CABLE SHALL BE MINIMUM #12 AWG, 600 VOLT, COPPER WITH TYPE THHN/THWN INSULATION. PROVIDE SEPARATE GREEN GROUND IN ALL FEEDERS. WIRE SIZE #8 AWG AND LARGER SHALL BE STRANDED, #10 AWG AND SMALLER SHALL BE SOLID. COLOR CODE CONDUCTORS BLACK, RED, BLUE, WITH WHITE NEUTRAL AND GREEN GROUND EXCEPT AS NOTED FOR 120 VOLT
- 7. MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED: a.) CONVENIENCE RECEPTACLE (GENERAL), 1'-6" FROM FLOOR TO CENTERLINE. b.) CONVENIENCE RECEPTACLE (OFFICE), 1'-6" FROM FLOOR TO CENTERLINE. c.) TELEPHONE OUTLETS, 1'-6" FROM FLOOR TO CENTERLINE.
- 8. PROVIDE SEPARATE HOT, GROUND AND NEUTRAL CONDUCTOR FOR ALL CIRCUITS CONNECTED TO ARC-FAULT CIRCUIT BREAKERS.

GENERAL NOTES

- 1. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS AND EXACT LOCATIONS OF ALL DEVICES. 2. ALL FLOOR, MASONRY WALLS AND STRUCTURAL CEILING PENETRATIONS SHALL BE SLEEVED.
- 3. PROVIDE FIRE/MOISTURE SEAL FOR WALL, FLOOR OR CEILING PENETRATIONS.
- 4. DO NOT LAY CABLES OR RACEWAY ON, OR SUPPORT FROM SUSPENDED CEILING OR PIPING AND DUCTWORK.
- 5. OUTLET BOXES SHALL BE MOUNTED FLUSH. CONDUIT SHALL BE RUN CONCEALED. WHERE WALLS ARE BLOCK, DEVICES AND WIRING SHALL BE SURFACE MOUNTED. PROVIDE WIREMOLD OR EQUAL TO SURFACE MOUNTED RACEWAY WITH FINISHED BOXES. 6. ALL WIRING WITHIN UTILITY CLOSETS MAY BE IN SURFACE MOUNTED CONDUIT. EMT MAY BE UTILIZED.
 - 7. FLEXIBLE CONDUIT CONNECTIONS SHALL BE A MAXIMUM OF 6'-0".
 - 8. MC TYPE CONDUCTOR WITH INTEGRAL GROUND WIRE MAY BE UTILIZED FOR POWER AND LIGHTING CIRCUITS. MC CABLE SHALL BE UTILIZED ONLY WHERE COMPLETELY CONCEALED.
 - 9. STEEL OR FIRE-RATED ELECTRICAL BOXES (SWITCHES, OUTLETS, JUNCTION BOXES, ETC.) SHALL BE PROVIDED AND INSTALLED IN ALL FIRE RATED ASSEMBLIES AS IN ACCORDANCE WITH BUILDING AND ELECTRICAL CODES. UL LISTED MOLDABLE PUTTY PADS OR FIREBLOCK/SPRAY FOAM INSULATE SHALL BE USED TO SEAL ALL ANNULAR SPACES/PENETRATIONS AROUND OUTLET BOXES. FIRE RATED ASSEMBLIES INCLUDE EXTERIOR WALLS, FIRE-RATED WALLS, FLOOR/CEILING ASSEMBLIES AND ROOF/CEILING ASSEMBLIES.

DEMOLITION NOTES

- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FULL EXTENT OF THE SCOPE OF DEMOLITION. DISCONNECT AND MAKE SAFE ALL ELECTRICAL EQUIPMENT IDENTIFIED FOR REMOVAL ON THE HVAC, PLUMBING AND FIRE PROTECTION PLANS. THE ELECTRICAL SCOPE MAY EXTEND BEYOND THE AREA DEFINED BY THE ARCHITECTURAL DEMOLITION LIMITS TO FULLY COMPLY WITH VARIOUS REQUIREMENTS DEFINED BY THESE NOTES.
- 2. THE ELECTRICAL DEMOLITION PLANS AND DETAILS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE SUBMISSION OF BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF WORK. DEVICES AND EQUIPMENT LOCATED ON WALLS AND/OR CEILINGS TO BE REMOVED SHALL BE DISCONNECTED AND MADE SAFE. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING DEMOLITION.
- 3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL SYSTEMS OR BUILDING COMPONENTS DAMAGED DURING THE EXECUTION OF THE WORK. DAMAGE SHALL INCLUDE BUT NOT BE LIMITED TO DESTRUCTION OR DISPOSAL OF ITEMS INTENDED TO REMAIN OR TO BE SALVAGED.
- 4. THE ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH CIRCUITS AND FEEDERS WITHIN THE AREA OF DEMOLITION SCOPE PRIOR TO DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS IDENTIFIED FOR REMOVAL SHALL BE TRACED AND LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE LIMIT IS AFFECTED.
- 5. THE ELECTRICAL CONTRACTOR SHALL IDENTIFY ALL BRANCH CIRCUITS, FEEDERS AND SYSTEM COMPONENTS, WHICH ARE TO REMAIN WITHIN THE AREA OF DEMOLITION SCOPE. THERE SHALL BE NO INTERRUPTION OF SERVICE TO ANY AREA OUTSIDE THE SCOPE LIMITS WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE. EXISTING EQUIPMENT TO REMAIN SHALL BE LEFT IN A CODE COMPLIANT MANNER.
- THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS TO THEIR POINTS OF ORIGIN WITHIN THE AREA OF DEMOLITION SCOPE. ITEMS IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SCOPE SHALL BE DE-ENERGIZED AND LABELED SPARE.
- THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURAL COMPONENTS (WALLS, CEILINGS, ETC.). TEMPORARILY SUPPORTED ITEMS SHALL BE PERMANENTLY SUPPORTED AND INSTALLED WHEN FINALIZED STRUCTURES ARE IN PLACE.
- 8. ALL REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF UNLESS IDENTIFIED FOR REUSE. THE OWNER'S REPRESENTATIVE SHALL INSPECT ALL RETAINED ITEMS PRIOR TO PLACEMENT IN THE IDENTIFIED STORAGE LOCATION BY THE ELECTRICAL CONTRACTOR.
- 9. THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN FULLY FUNCTIONAL DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD. REUSE OF EXISTING FIRE ALARM SYSTEM RACEWAYS SHALL NOT BE ALLOWED. ALL REQUIRED SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER'S REPRESENTATIVE AND THE AUTHORITY HAVING JURISDICTION. DEMOLITION OF THE EXISTING SYSTEM SHALL NOT COMMENCE UNTIL THE NEW SYSTEM HAS BEEN COMPLETELY INSTALLED, TESTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 10. ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC, SHALL BE INCLUDED IN THIS CONTRACT.
- 11. REMOVED FLUORESCENT AND HID LAMPS AND BATTERIES SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFF'S PRIOR TO APPLICATION FOR FINAL PAYMENT.
- 12. ALL BALLAST IN LIGHTING FIXTURES TO BE DISPOSED SHALL BE VERIFIED TO BE PCB FREE. ALL BALLAST MANUFACTURED PRIOR TO 1979 AND NOT LABELED AS PCB FREE SHALL BE CONSIDERED TO CONTAIN PCBs. PROVIDE WRITTEN VERIFICATION TO TH OWNER'S REPRESENTATIVE THAT CONFIRMS PCB FREE WASTE, WHERE PCB FREE WASTE CANNOT BE VERIFIED, BALLAST SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE, WITH PCB COMPONENTS ELIMINATED BY A HIGH TEMPERATURE INCINERATION. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFF'S PRIOR TO APPLICATION FOR FINAL PAYMENT. ALL HANDLING SHALL CONFORM TO EPA REQUIREMENTS. PROVIDE BREAKOUT COST FOR THIS SCOPE.

ABBREVIATIONS

A/AMP	AMPERE	IMC	INTERMEDIATE METALLIC CONDUIT
AC	ALTERNATING CURRENT	JB	JUNCTION BOX
AF	AMPERE FRAME	KVA	KILOVOLT-AMPERE
AFF	ABOVE FINISHED FLOOR	KW	KILOWATT
AFG	ABOVE FINISHED GRADE	LTG	LIGHTING
AIC	AMPERE INTERRUPTING CAPACITY	PWR	POWER
AL	ALUMINUM	MCB	MAIN CIRCUIT BREAKER
AT	AMPERE TRIP	MEC	MASSACHUSETTS ELECTRICAL CODE
ATS	AUTOMATIC TRANSFER SWITCH	MLO	MAIN LUGS ONLY
AWG	AMERICAN WIRE GAUGE	MTG	MOUNTING
С	CONDUIT	MTD	MOUNTED
СКТ	CIRCUIT	MCC	MOTOR CONTROL CENTER
СВ	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
CU	COPPER	NS	NON-SYSTEM
CL	CENTERLINE	NTS	NOT TO SCALE
DC	DIRECT CURRENT	No., #	NUMBER
DE	DUAL ELEMENT	PC "	PLUMBING CONTRACTOR
DWG	DRAWING	RPM	REVOLUTIONS PER MINUTE
EC	ELECTRICAL CONTRACTOR	RMS	ROOT MEAN SQUARE VALUE
EMH	ELECTRICAL MANHOLE	RGS	RIGID STEEL CONDUIT
EWC	ELECTRIC WATER COOLER	SF	SQUARE FOOT
EMT	ELECTRIC METALLIC CONDUIT	SN	SOLID NEUTRAL
FLMT	FLEXIBLE LIQUID TIGHT METALLIC TUBING	ST	SHUT TRIP CIRCUIT BREAKER
GC	GENERAL CONTRACTOR	SWBD	SWITCHBOARD
GND	GROUND	TYP	TYPICAL
GF	GROUND FAULT CIRCUIT BREAKER	V	VOLTS
GFI	GROUND FAULT INTERRUPTING	VA	VOLT-AMPERE
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	VFD	VARIABLE FREQUENCY DRIVE
HP	HORSEPOWER	WP	WEATHERPROOF

LIGHTING NOTES

- 1. ALL CONDUIT, FIXTURES AND OUTLETS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN.
 - b.) LIGHTING PANELBOARDS, 6'-6" FROM FLOOR TO TOP.
 - RFFI FCTOR.
- 4. WHERE REQUIRED, ADDITIONAL SUPPORT STEEL FOR THE LIGHTING INSTALLATION SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. SEISMIC RESTRAINTS SHALL BE INCLUDED AS PER STATE BUILDING CODE.
- 5. PROVIDE SEPARATE UN-SWITCHED NEUTRAL TO ALL EXIT SIGNS, EMERGENCY BATTERY UNITS AND EMERGENCY LIGHT FIXTURES CONTAINING EMERGENCY PACKS OR BALLASTS.
- OTHERWISE ON DRAWINGS.
- 7. ALL EXISTING FIXTURES TO REMAIN SHALL BE CLEANED AND RE-LAMPED.
- 8. FIRE-RATED BOXES/ENCLOSURES FOR RECESSED LIGHTING FIXTURES SHALL BE PROVIDED AND INSTALLED IN FIRE-RATED ASSEMBLIES AS IN ACCORDANCE WITH BUILDING AND ELECTRICAL CODES. FIRE-RATED ASSEMBLIES INCLUDE; FIRE-RATED WALLS, FLOOR/CEILING ASSEMBLIES AND ROOF/CEILING ASSEMBLIES. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES.

- 2. ALL LIGHTING FIXTURE SPACING DIMENSIONS AND MOUNTING HEIGHTS ARE RECOMMENDED LOCATIONS. SLIGHT VARIATIONS WHERE NECESSARY TO AVOID INTERFERENCE SHALL BE DETERMINED IN THE FIELD.
- 3. MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED: a.) LIGHT SWITCHES, 4'-0" FROM FLOOR TO CENTERLINE.
 - c.) LIGHT FIXTURES SEE LIGHTING FIXTURE SCHEDULE, MOUNTING HEIGHT OF FIXTURE IS MEASURED TO BOTTOM OF
- 6. FOR RENOVATION PROJECTS, PROVIDE NEW BRANCH CIRCUITRY BETWEEN ALL NEW FIXTURES BEING PROVIDED, UNLESS NOTED

- BRANCH CIRCUIT AND FEEDER SYMBOLS
- BRANCH CIRCUIT OR FEEDER CONCEALED UNLESS OTHERWISE NOTED. BRANCH CIRCUIT DIAGONAL LINES INDICATE NUMBER OF CONDUCTORS, GROUND WIRE(S) NOT INDICATED. MINIMUM SIZE CONDUCTOR #12 AWG AND 3/4" CONDUIT, UNLESS OTHERWISE NOTED
- 4#1,1#6G-1½"C INDICATES (3) #1 AWG(PHASE), (1)#1 AWG(NEUTRAL), (1) #6 GROUND IN A 1-1/2" CONDUIT
- \checkmark FLEXIBLE CONNECTION TO MOTOR OR EQUIPMENT
- HOMERUN TO PANELBOARD 'P1' CIRCUIT NUMBER 1. DIAGONAL LINES INDICATE (1) PHASE AND (1) NEUTRAL ₽ 20A/1P CONDUCTOR. (1) GROUNDING CONDUCTOR UNDERSTOOD.
- HOMERUN TO PANELBOARD 'P1' CIRCUIT NUMBER 1 & 3. DIAGONAL LINES INDICATE (2) PHASE AND (2) NEUTRAL (2)20A/1P CONDUCTOR. (2) GROUNDING CONDUCTOR UNDERSTOOD.

SWITCHING SYMBOLS

- SINGLE POLE SWITCH, RATED 20A, 120/277V, MOUNTING HEIGHT 48" TO CENTERLINE OF TOGGLE SWITCH IN "ON" POSITION, "a" DENOTES FIXTURE SWITCH CONTROL
- THREE WAY SWITCH, RATED 20A, 120/277V, MOUNTING HEIGHT 48" TO CENTERLINE OF TOGGLE SWITCH IN "ON" POSITION, "a" DENOTES FIXTURE SWITCH CONTROL
- FOUR WAY SWITCH, RATED 20A, 120/277V, MOUNTING HEIGHT 48" TO CENTERLINE OF TOGGLE SWITCH IN "ON" POSITION, "a" DENOTES FIXTURE SWITCH CONTROL
- MANUAL MOTOR STARTER, RATED 20A, 250V, COORDINATE MOUNTING HEIGHT IN FIELD, MOUNTING HEIGHT SHALL NOT EXCEED 6'-7" AFF

LIGHTING FIXTURE SYMBOLS

- LIGHTING FIXTURE, CEILING/SURFACE/RECESSED/PENDANT OR WALL MOUNTED. "A" DENOTES LIGHTING FIXTURE TYPE (SEE FIXTURE SCHEDULE), "2" DENOTES CIRCUIT NUMBER, "a" DENOTES SWITCH CONTROL ^**___**__
- LIGHT FIXTURE, CEILING/SURFACE/RECESSED OR PENDANT MOUNTED. "B" DENOTES LIGHTING FIXTURE TYPE, "4" DENOTES CIRCUIT NUMBER, "b" DENOTES SWITCH CONTROL
- LIGHTING FIXTURE CONNECTED TO THE EMERGENCY GENERATOR, OR CONTAINS AN EMERGENCY BALLAST. SEE LIGHTING NOTE 5
- EXIT SIGN, SHADED REGION INDICATES FACE

EXISTING EQUIPMENT DESIGNATIONS

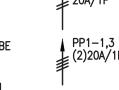
- EXISTING TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS AND LABEL BREAKER AS SPARE
- XM EXISTING TO REMAIN.
- EXISTING EQUIPMENT TO BE REPLACED WITH NEW. CONNECT NEW EQUIPMENT TO EXISTING CIRCUIT.
- EXISTING EQUIPMENT TO BE RELOCATED. JUNCTION AND EXTEND EXISTING CONDUIT AND CONDUCTORS.
- XL NEW LOCATION FOR EXISTING EQUIPMENT. JUNCTION AND EXTEND CONDUIT AND CONDUCTORS AS REQUIRED.

OCCUPANCY SENSORS

- * •H WALL MOUNTED OCCUPANCY SENSOR, 180°, 300SF COVERAGE (20'W x 25'L), PHILIPS LIGHTING CONTROLS No. ITS2U-COLOR OR EQUAL
- * 💽 CEILING MOUNTED OCCUPANCY SENSOR, 360° TWO-SIDED, 1950SF COVERAGE (50' DIAMETER), PHILIPS LIGHTING CONTROLS No. ITSCS (FOR PARTIAL COVERAGE APPLICATIONS, A PROVIDED MASK CAN BE TRIMMED TO ADJUST COVERAGE) OR EQUAL
 - COVERAGE DIMENSIONS APPLY TO DEVICE BEING CENTERED. ACTUAL COVERAGE'S CAN VARY ON THE SHAPE AND USE OF APPLICABLE SPACE. COVERAGE MAY BE REDUCED IF DEVICE IS MOUNTED GREATER THAN 12 FEET HIGH. SENSORS REQUIRE RELAY PACKS, PHILIPS LIGHTING CONTROLS No. ITSRP1U (SINGLE CIRCUIT), ITSRP2 (TWO CIRCUIT) OR ITSRP4 (FOUR CIRCUIT).

MISCELLANEOUS

MECHANICAL EQUIPMENT TAG, REFER TO MECHANICAL SCHEDULE





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RECEPTACLES AND OUTLETS

- DUPLEX CONVENIENCE TAMPER RESISTANT RECEPTACLE OUTLET, GROUNDING TYPE, RATED 20A, 125V TYPE. "5" DENOTES CIRCUIT NUMBER, MOUNTING HEIGHT 18" TO CENTERLINE AFF
- GROUND FAULT INTERRUPTING OUTLET, RATED 20A, 125V RECEPTACLE, MOUNTING HEIGHT 18" TO CENTERLINE AFF

GROUND FAULT DUPLEX RECEPTACLE, MOUNTING HEIGHT 42" TO CENTERLINE AFF OR MOUNTED 6" ABOVE COUNTER TOP

DUPLEX CONVENIENCE TAMPER RESISTANT OUTLET, MOUNTING HEIGHT 42" TO CENTERLINE AFF OR 6" ABOVE COUNTER

- DOUBLE DUPLEX CONVENIENCE OUTLET, MOUNTING HEIGHT 18" TO CENTERLINE AFF
- J_r Junction Box, coordinate mounting height with architect, 'f' indicates fan rated junction box
- FLOOR MOUNTED DUPLEX RECEPTACLE, UTILIZE BRASS COVERPLATE
- TELEPHONE/COMPUTER OR DATA OUTLET (RJ45), FLUSH MOUNTING 18" TO CENTERLINE AFF WITH SINGLE GANG BACK * 🔻 BOX AND COVER PLATE
- * FLOOR MOUNTED COMMUNICATIONS OUTLET (RJ45), UTILIZE BRASS COVERPLATE
- DUPLEX CONVENIENCE RECEPTACLE OUTLET FOR MICROWAVE, TV, ETC., COORDINATE MOUNTING HEIGHT WITH ARCHITECT PP POWER POLE
- * INDICATES 4"x4" BOX WITH 1" CONDUIT TO ABOVE HUNG CEILING WITH PULL WIRE

MOTOR AND CONTROLS

MOTOR, NUMERAL INDICATES HORSEPOWER

DISCONNECT SWITCH, NON-FUSIBLE TYPE, RATED 30A/3P, IN NEMA TYPE "1" ENCLOSURE, UNLESS OTHERWISE NOTED. "3R" DENOTES NEMA TYPE ENCLOSURE

30AF 20AT DISCONNECT SWITCH, FUSED TYPE, RATED 30A, 20A FUSE, 3 POLE IN NEMA TYPE "1" ENCLOSURE, UNLESS OTHERWISE NOTED

PANELBOARD AND TERMINAL CABINET

120/208VOLT LIGHTING OR POWER PANEL, SURFACE MOUNTED

277/480VOLT DISTRIBUTION PANEL, SURFACE MOUNTED

- TELEPHONE TERMINAL 4'x8' 3/4" PLYWOOD BACKBOARD, PAINTED BLACK
- TRANSFORMER. DRY TYPE

FIRE ALARM SYSTEM

EX 15 AUDIBLE/VISUAL DEVICE, TOP OF DEVICE MOUNTED NOT LESS THAN 90" AFF AND NOT LESS THAN 6" BELOW FINISHED

(S) R SMOKE DETECTOR, "D" INDICATES DUCT MOUNTED SMOKE DETECTOR, "R" INDICATES ELEVATOR RECALL, "NS" INDICATES NON-SYSTEM



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Date

Project: 20049

07/15/2020

Electrical

Drawn by: SWD

Check by: JP

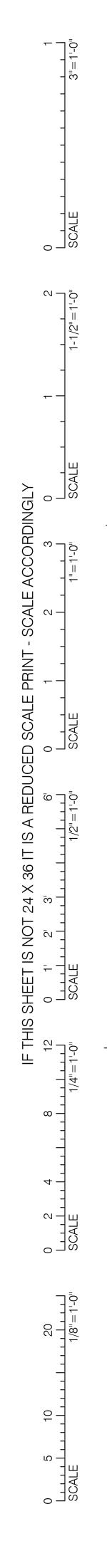
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Scale:

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1		r: 10,000	AMPS	RMS SY	М		MAII	N: 225A	M.C.B.		M	DUNTING: SURFAC	
ľ	LOAD DESCRIPTION	СВ	CIRC	kVA LOAD					CIRC	СВ	LOAD		
l			NO.	A	В	С	A	В	С	NO.			
			1	1.32			1.32			2			
	ERV-1	20A/3P	-		1.32			1.32		4	20A/3F	ERV-2	
			5		,	1.32			1.32	6			
l			7	1.32		1	1.00			8			
l	ERV-3	20A/3P	-		1.32			1.00		10	20A/3F	20A/3F	HUM-3
ļ			11	1.00	1	1.32			1.00	12			
			13	1.00	4.00	1			I	14		00405	
l	HUM-1	20A/3P			1.00	4.00				16	15AV3P	SPARE	
ŀ			17	4.00	1	1.00				18	00 4/40		
		004/00	19	1.00	4 00	1			I	20		EXISTING	
I	HUM-2	20A/3P			1.00	4.00				22		EXISTING EXISTING	
┝	EXISTING	20A/1P	23 25		1	1.00				24		EXISTING	
ŀ	EXISTING	ZUAV IP	25 27		0.10	1			1	26 28		EXISTING	
I	FCU-4	20A/2P	27		0.10	0.10				28 30		EXISTING	
ŀ			29			0.10				30	ZUAV IP	EXISTING	
l	PHASE A 6.96 kVA				тот	AL LOA	D 21.08	kVA				NOTES:	
l	PHASE B 7.06 kVA												
I	PHASE C 7.06 kVA												

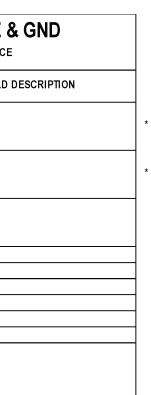
LOAD DESCRIPTION	СВ	CIRC			kVA	LOAD			CIRC	СВ	LOAD
LOAD DESCRIPTION		NO.	A	B	С	A	В	C	NO.		
BI-1, BI-2, BI-3, BI-4	20A/1P	1	0.50			0.20			2	204/20	BC-2 AND BC-3
ATTIC RECEPTACLES	20A/1P	3		0.36			0.20]	4		DC-2 AND DC-3
SPARE	20A/1P	5							6	20A/1P	SPARE
		7			_				8		
SPARE	30A/3P	9							10	30A/3P	SPARE
		11							12		
EXISTING	20A/1P	13]]		14	20A/1P	EXISTING
EXISTING	20A/1P	15]	16	20A/1P	EXISTING
	20A/1P	17							18		SPACE
EXISTING	20A/1P	19]		0.25]		20	201/21	FCU-32, 33, 34, 35
EXISTING	20A/1P	21					0.25]	22		FG0-52, 55, 54, 55
FCU-18,19,20,21,22	20A/2P	23			0.15	1		0.25	24	204/20	FCU-28,29,30,31
FC0-10, 19,20,21,22	204/25	25	0.15]		0.25]		26		FG0-20,29,30,31
FCU-13,14,15,16,17	20A/2P	27		0.20			0.25]	28	204/20	FCU-23,24,25,26,27
FCO-13, 14, 13, 10, 17	204/25	29			0.20	1		0.25	30		FCU-23,24,23,20,27
PHASEA 1.35 kVA				то	AL LO	AD 3.46	kVA				NOTES:
PHASE B 1.26 kVA											

L * - DENOTES NEW CIRCUIT BREAKER. REMOVE EXISTING TURN OVER TO OWNER AND PROVIDE NEW AS INDICATED

LOAD DESCRIPTION	СВ	CIRC NO.				LOAD	P	^	CIRC NO.	СВ	LOAD DESCRIPTION
EXISTING	20A/1P	43	A	В	C C	A	В	С	NO. 44	204/10	EXISTING
EXISTING	20A/1P	45			1				44		EXISTING
EXISTING	2070 II 20A/1P	43							40		EXISTING
EXISTING	20/V11 20A/1P	49		1					50		EXISTING
EXISTING	20/V11 20A/1P	51			1				52		EXISTING
EXISTING	20A/1P	53							54		EXISTING
FXISTING	20A/1P	55		1					56		EXISTING
EXISTING	20A/1P	57			1			l	58		EXISTING
EXISTING	20A/1P	59							60		EXISTING
EXISTING	20A/1P	61		1					62		EXISTING
EXISTING	20A/1P	63			1				64		SPARE
		65		L	1.25				66		EXISTING
ACCU-4	20A/2P	67	1.25	1					68	20A/1P	SPARE
		69		1.25	1				70	20A/1P	SPARE
ACCU-5	20A/2P	71		I	1.25	1 '			72	20A/1P	SPARE
		73	0.10]		1.25			74		
BC-1	20A/2P	75		0.10]		1.25		76	-20A/2P	ACCU-6
		77			0.39				78	20A/1P	EXISTING
FCU-7,8,9,10,11,12	20A/2P	79	0.39]					80	20A/1P	EXISTING
	004/00	81		0.30]				82	20A/1P	EXISTING
FCU-1,2,3,5,6	20A/2P	83			0.30	1 '			84	20A/1P	EXISTING

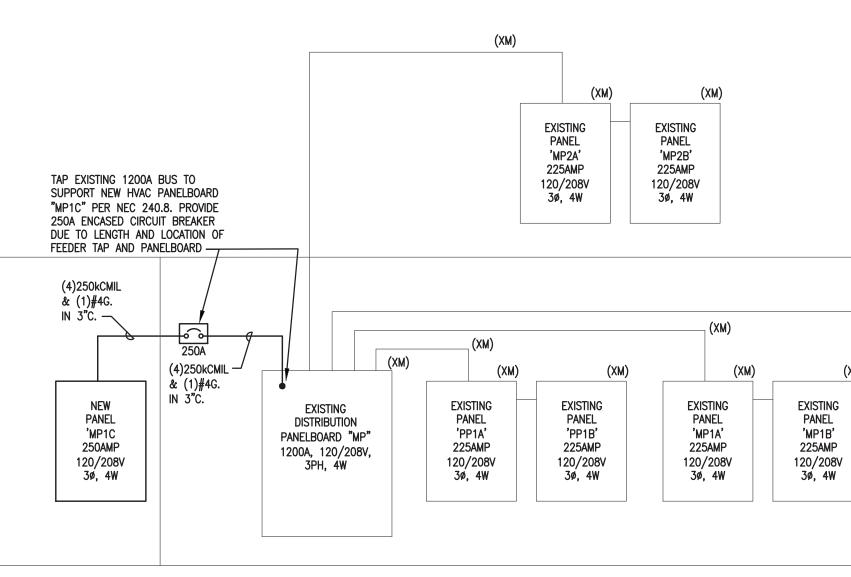
L * - DENOTES NEW CIRCUIT BREAKER. REMOVE EXISTING TURN OVER TO OWNER AND PROVIDE NEW AS INDICATED

INTERRUPTING CAPACITY:	10.000	AMPS I	RMS SY	M		МАЦ	N: 250A	M.C.B.		мс	UNTING: SURFACE	
									······			
LOAD DESCRIPTION	СВ	CIRC NO.	A	В	kVA C	LOAD	В	С	CIRC	СВ	LOAD DESCRIPTION	
	-	1	4.92			4.92	Ь	U	2			
ACCU-1 (SECTION-1)	60A/3P	3	4.92	4.92	1	4.92	4.92	1	4	604/20	ACCU-3 (SECTION-1)	
ACC0-1 (SEC110N-1)	004/35	5		4.92	4.92	-	4. 9Z	4.92	6			
		7	3.72	1	4.32	3.72		4.32	8			
ACCU-1 (SECTION-2)	60A/3P		0.12	3.72		0.72	3.72	1	10		ACCU-3 (SECTION-2)	
	00/ 00/	11		0.72	3.72	-	0.72	3.72	12			
	-	13	6.84	1					14		SPACE	
ACCU-2	90A/3P	15		6.84				1	16		SPACE	
		17			6.84	1			18		SPACE	
SPACE		19							20		SPACE	
SPACE		21]	22		SPACE	
SPACE		23				1			24		SPACE	
SPACE		25							26		SPACE	
EXTERIOR RECEPTACLE	20A/1P	27		0.18]	28		SPACE	
UH-1	20A/1P	29			0.20				30		SPACE	
PHASE A 24.12 kVA				TOT	AL LOA	D 72.74	kVA				NOTES:	
PHASE B 24.30 kVA												
PHASE C 24.32 kVA												



& GND

ESCRIPTION	
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PARTIAL POWER RISER DIAGRAM N.T.S.

	LIGHTING	FIXTURE SCHEDULE
FIXTURE TYPE	DESCRIPTION	MANUFACTURER AND CATALOG NUMBER
A	2X2 LED BASKET TYPE GRID FIXTURE	LITHONIA 2BLT2-33L-ADP-MVOLT-EZ1-LP835
AE	2X2 LED BASKET TYPE GRID FIXTURE WITH EMERGENCY	LITHONIA 2BLT2-33L-ADP-MVOLT-EZ1-LP835-EL14L
В	DOWNLIGHT	
⊗়⊉	LED EXIT SIGN, SINGLE FACE, BATTERY BACK-UP, CEILING OR WALL MOUNTED	LITHONIA LQM-S-W-3R-120/277-ELN
†⊕†	LED EXIT SIGN, DOUBLE FACE, BATTERY BACK-UP, CEILING OR WALL MOUNTED	LITHONIA LQM-S-W-3R-120/277-ELN

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Project: 20049 Drawn by: SWD

Date: 07/15/2020

ELECTRICAL

SCHEDULES

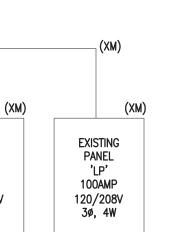
AND POWER

Check by: JP

RISER

Scale:

No.



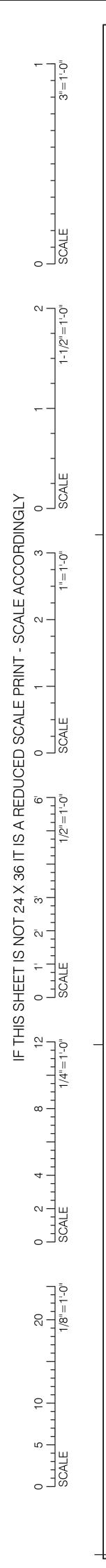
FIRST FLOOR

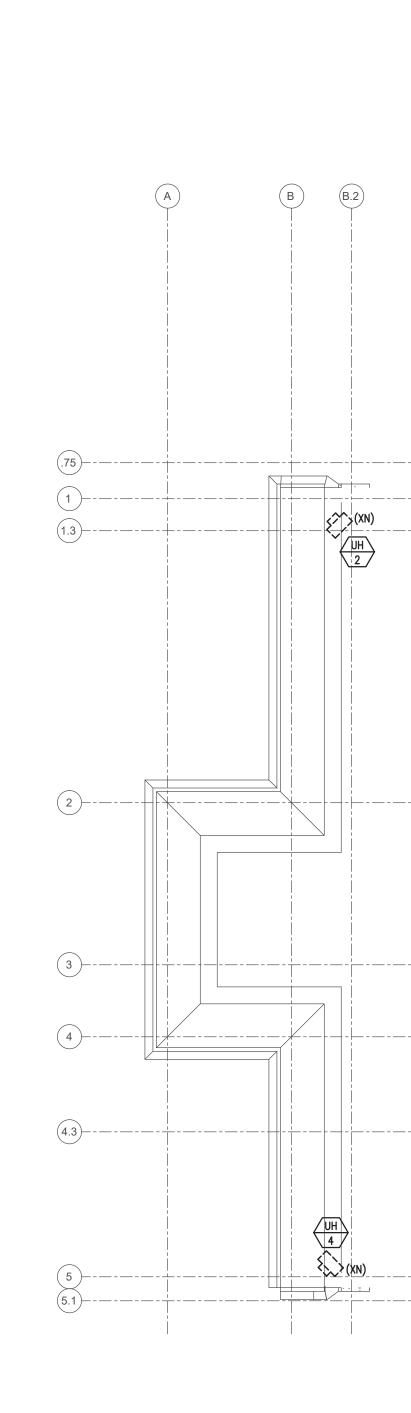
SECOND FLOOR

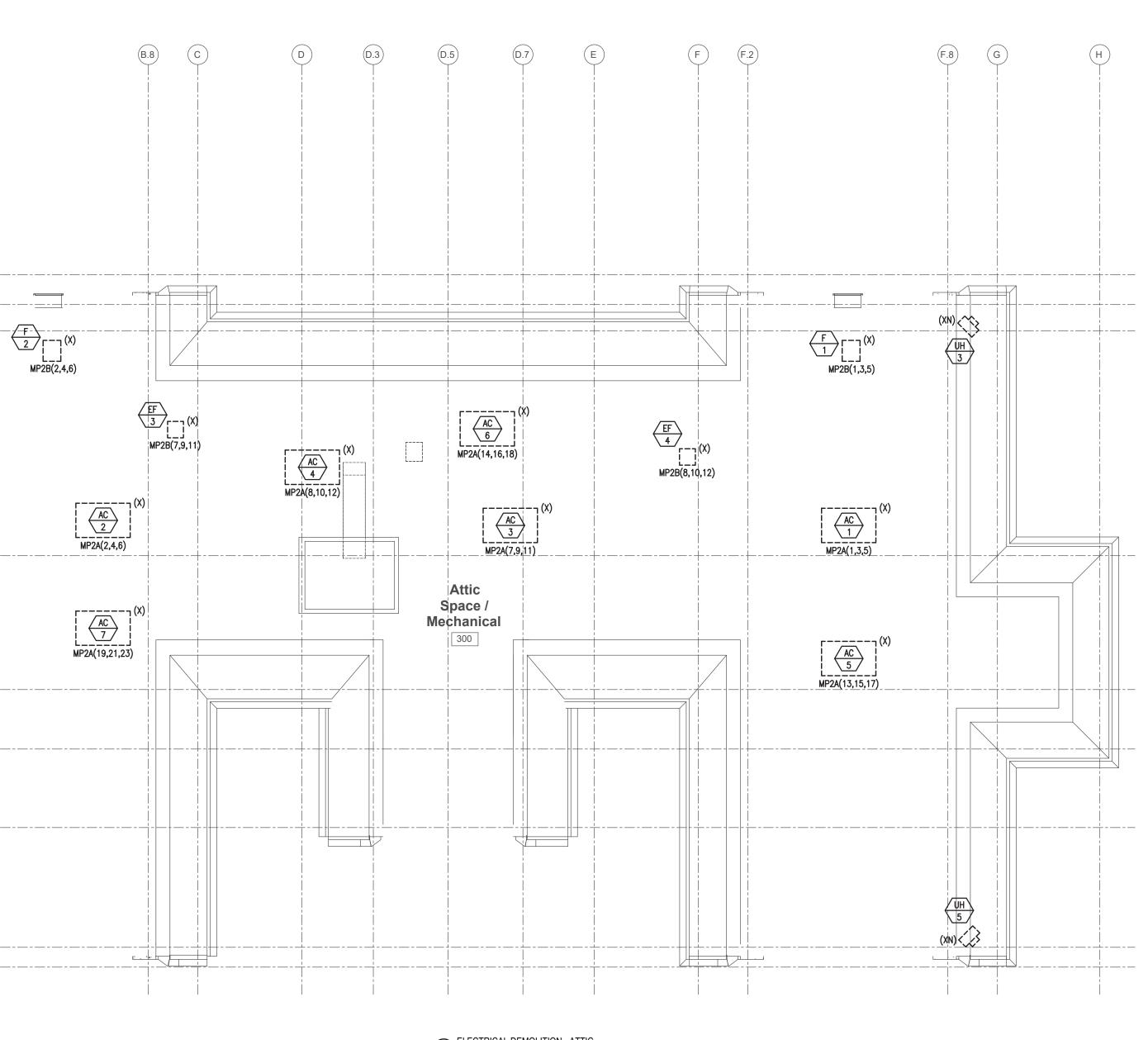
No.	WATTAGE	TYPE	VOLTAGE
-	26	LED	MVOLT
-	26	LED	MVOLT
		LED	MVOLT
-	4	LED	120/277
-	4	LED	120/277







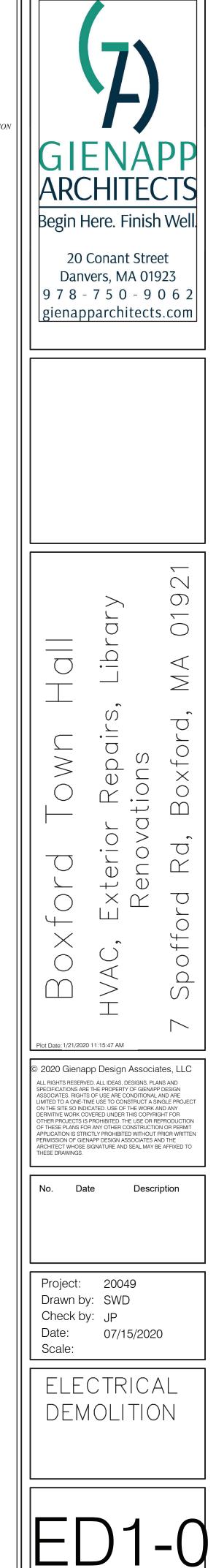




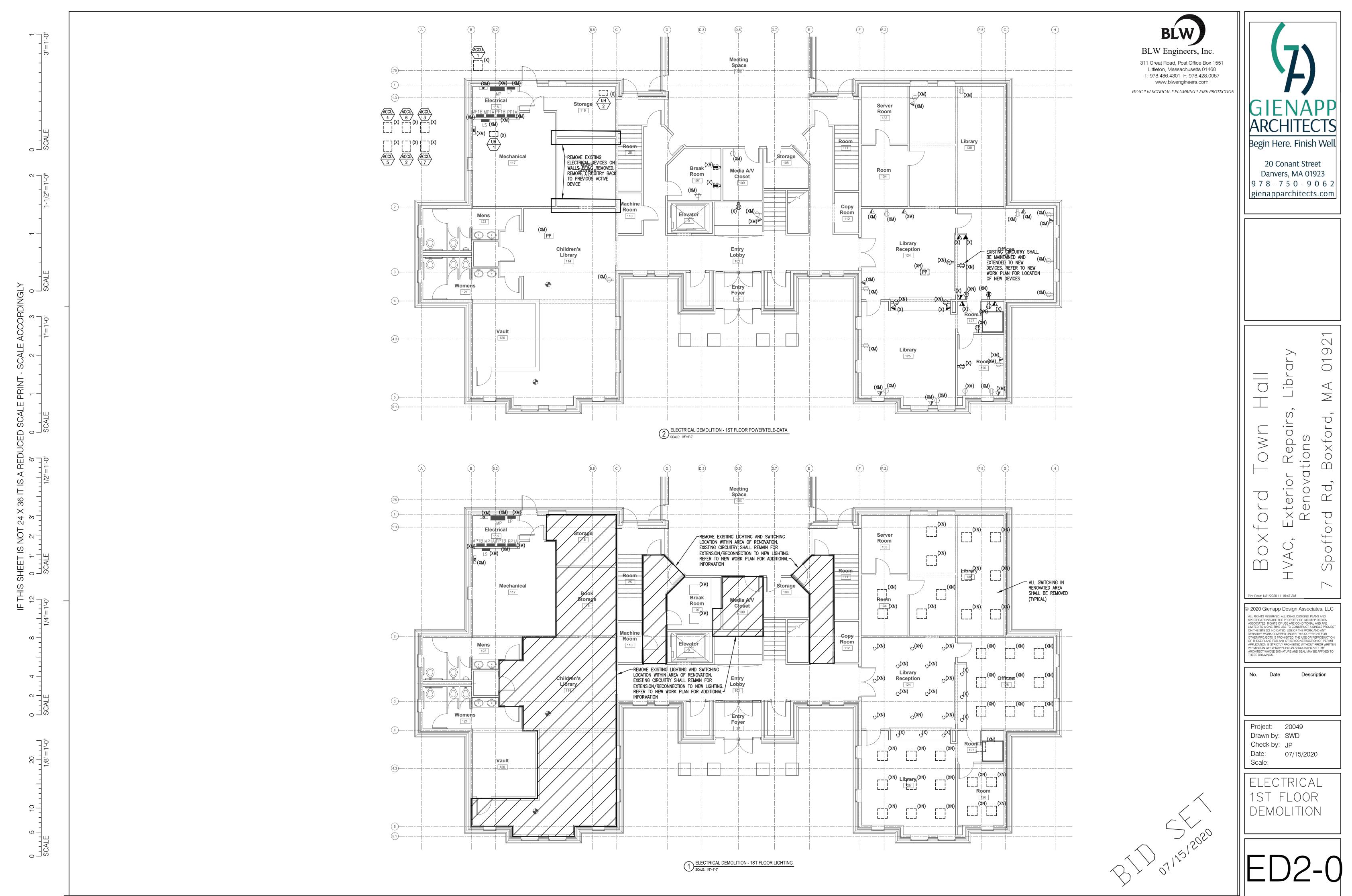
ELECTRICAL DEMOLITION - ATTIC SCALE: 1/8"=1"-0"



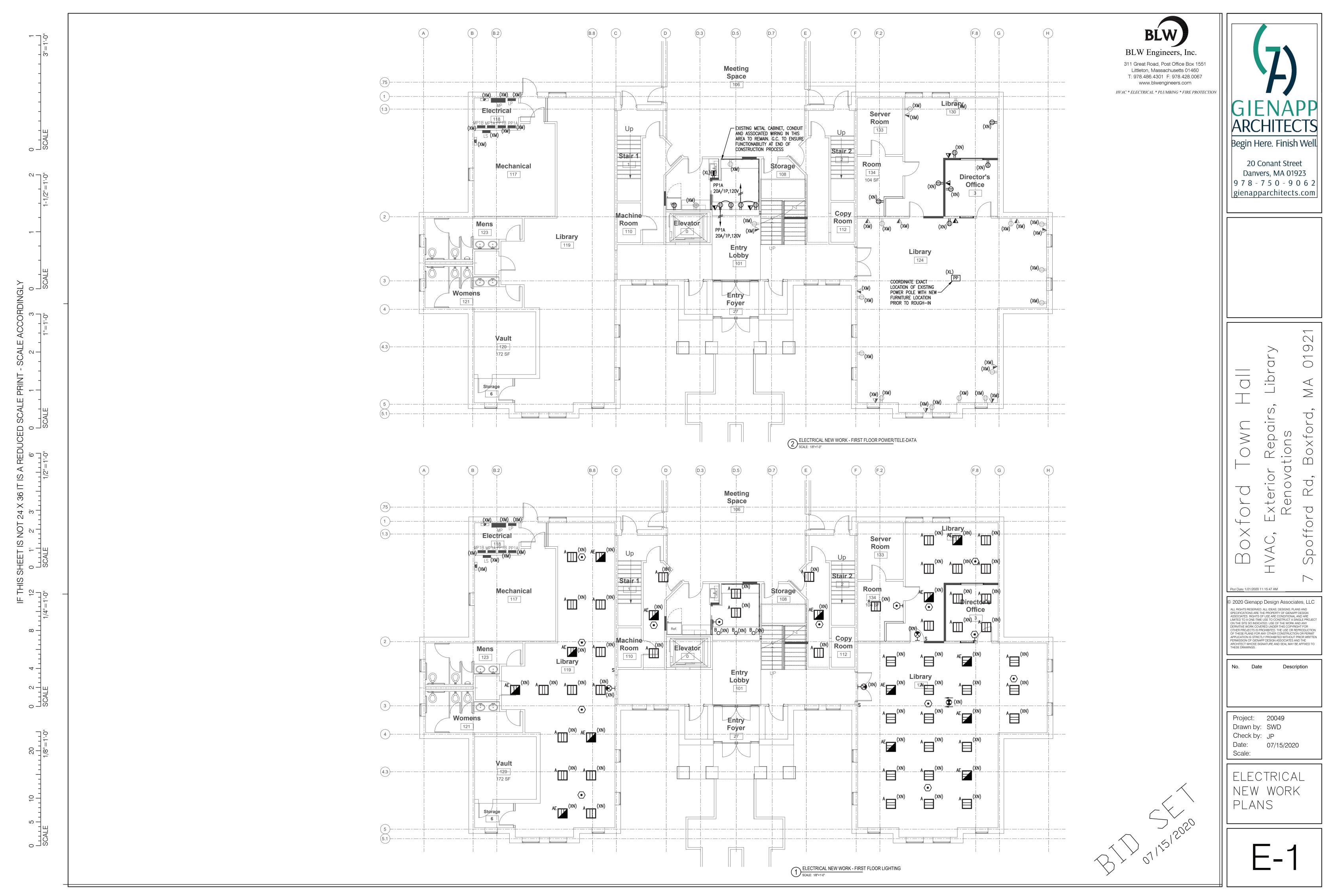
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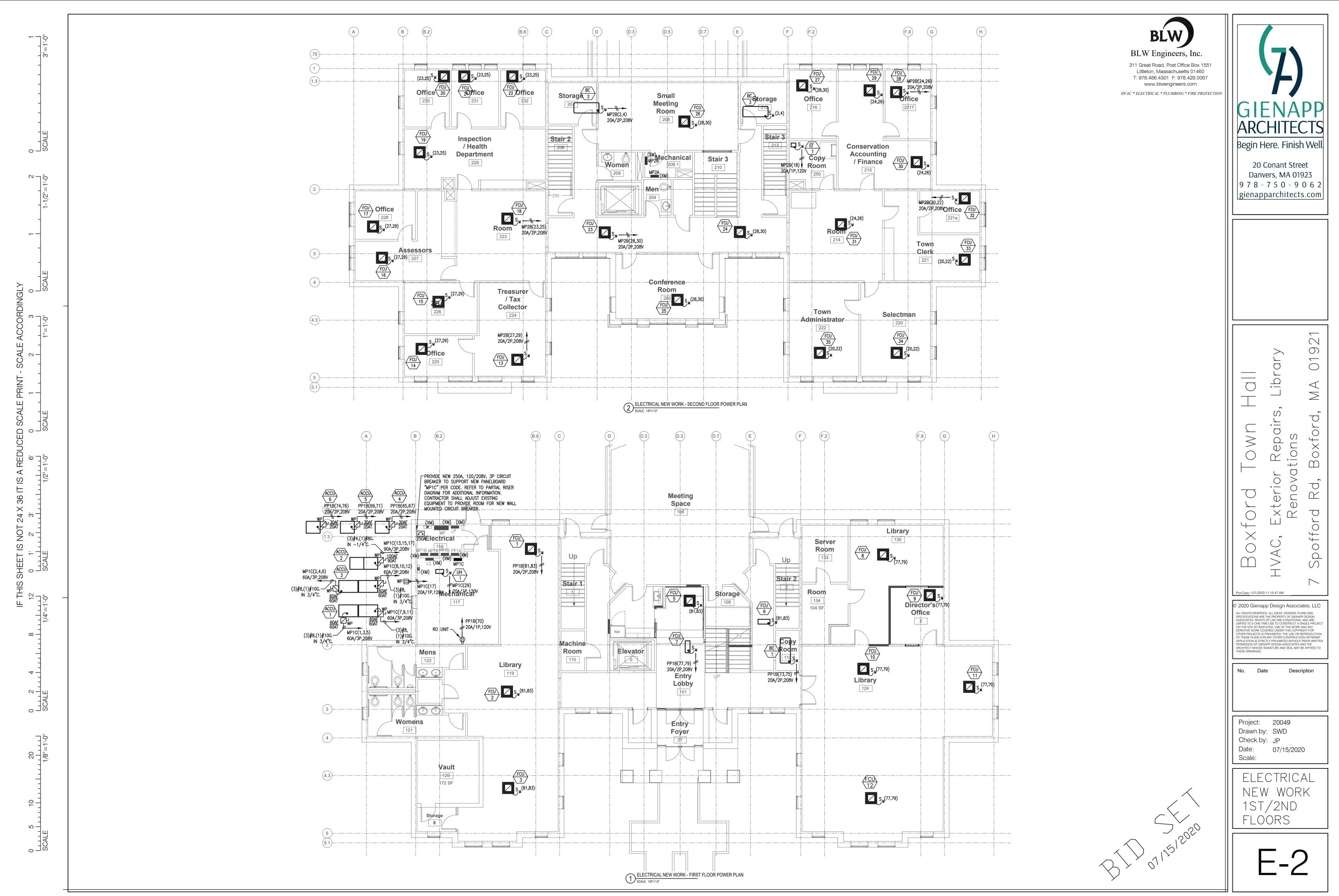
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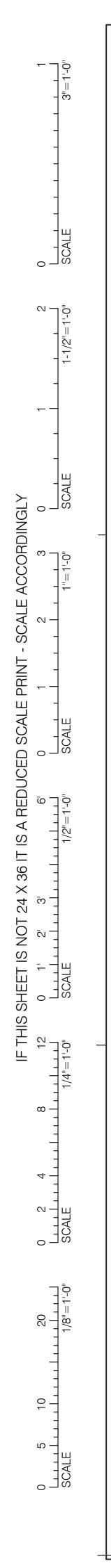


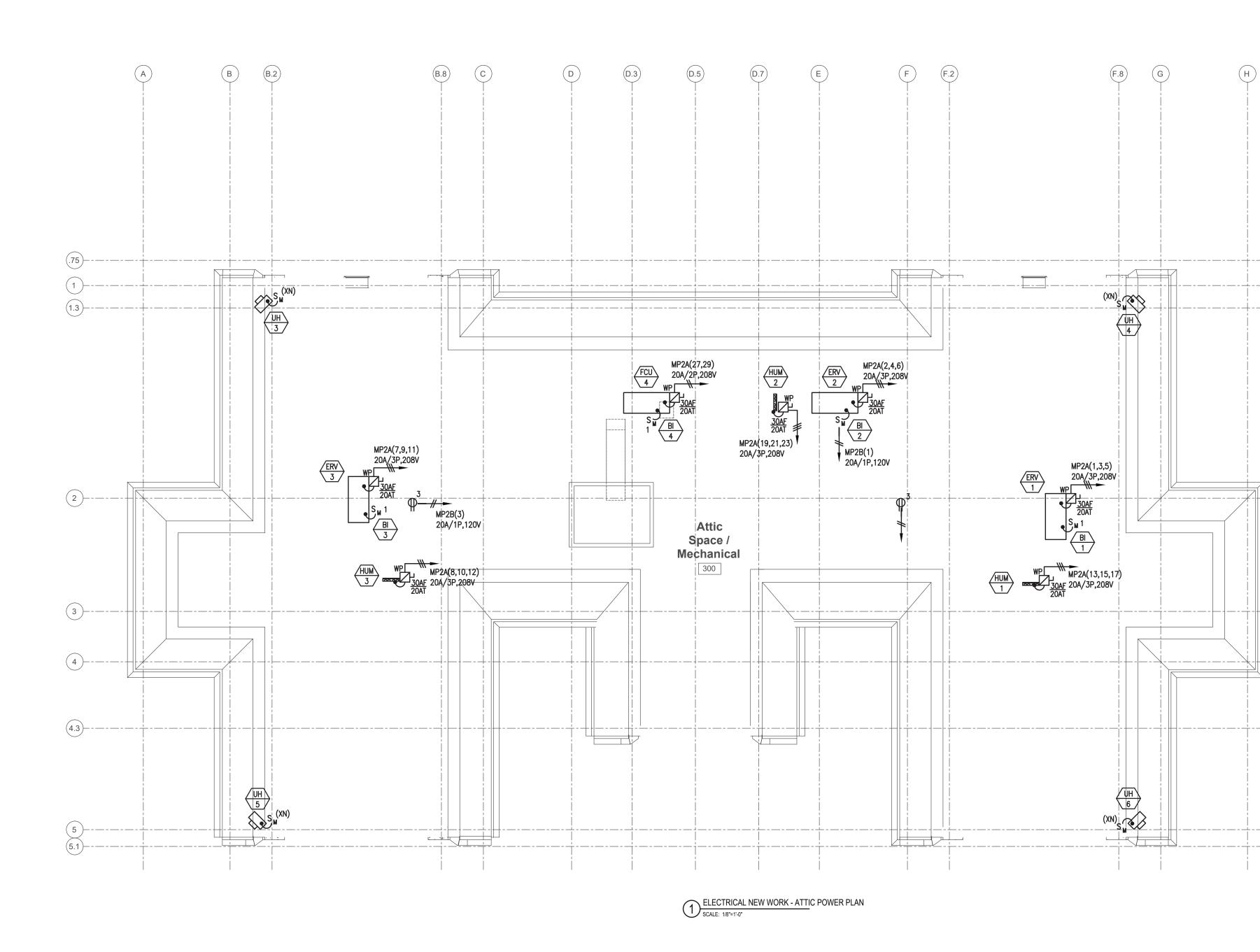
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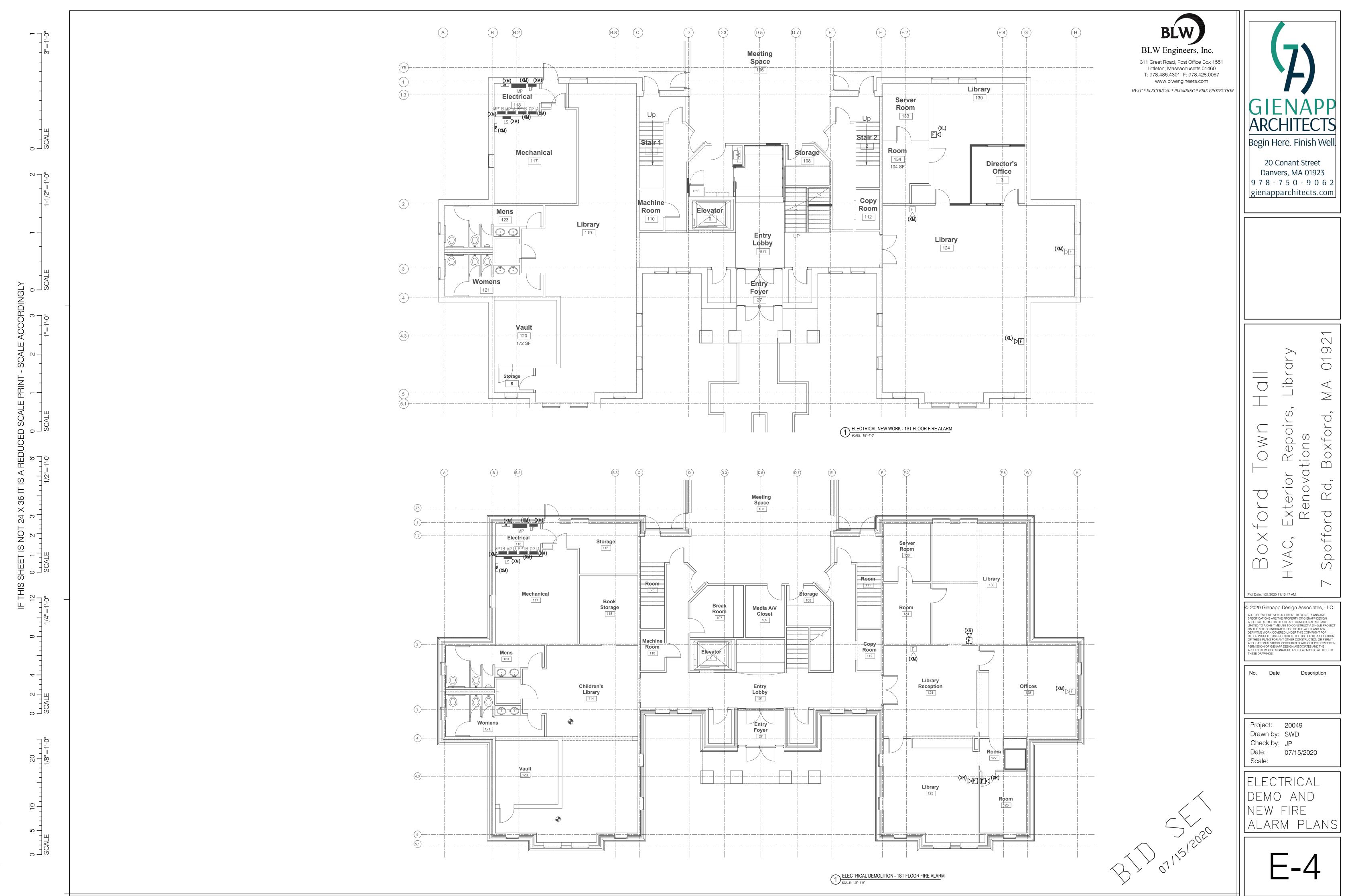




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