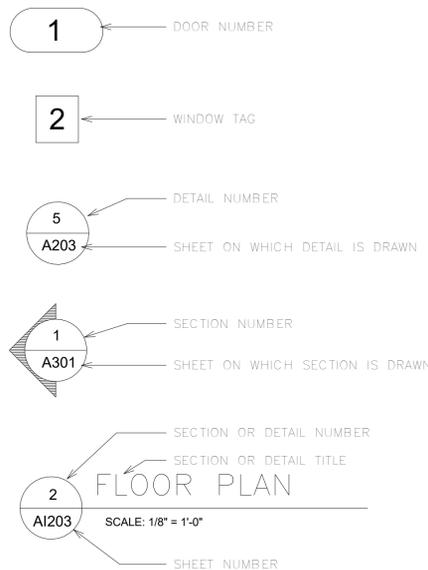
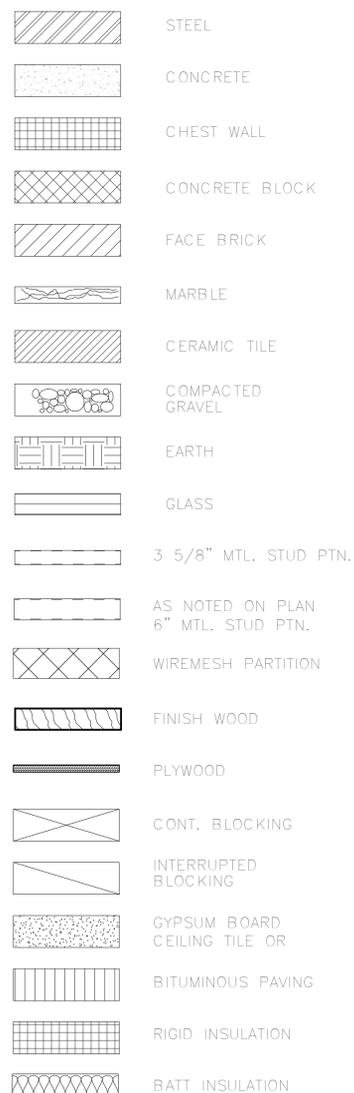


SYMBOLS



MATERIALS



GENERAL NOTES

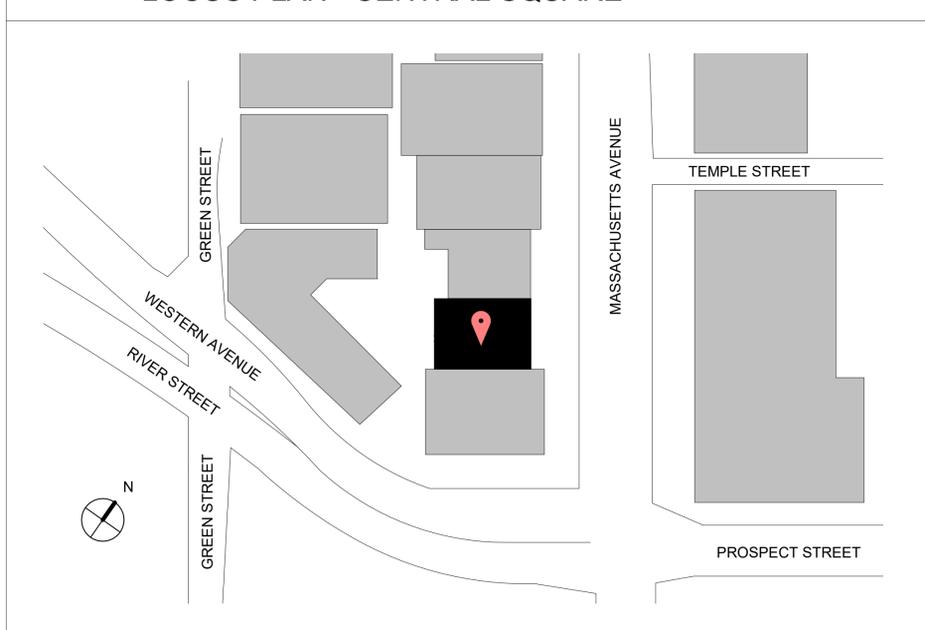
- ALL WORK SHALL BE PERFORMED IN A WORKMANSHIP LIKE MANNER.
- ALL WORK SHALL CONFORM WITH ALL CODES, ORDINANCES, REGULATIONS, ETC. HAVING JURISDICTION OVER THE PROJECT INCLUDING, BUT NOT LIMITED TO: THE AMERICANS WITH DISABILITIES ACT, ALL STATE, CITY AND COUNTY ZONING, BUILDING, PLUMBING, MECHANICAL, ELECTRICAL AND FIRE CODES. THE CONTRACTOR SHALL VERIFY ALL CODE REQUIREMENTS BEFORE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BRING ANY DISCREPANCIES BETWEEN CODE REQUIREMENTS AND THE CONSTRUCTION DOCUMENTS TO THE ATTENTION OF THE ARCHITECT IN ORDER TO AVOID DELAYS IN THE CONSTRUCTION PROCESS.
- DETAILS AND SECTIONS ON THE DRAWINGS ARE SHOWN AT SPECIFIC LOCATION, AND ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT THE WORK. DETAILS NOTED "TYPICAL" IMPLY THAT ALL CONDITIONS ARE TREATED SIMILARLY. MODIFICATIONS MADE BY THE CONTRACTOR TO ACCOMMODATE MINOR VARIATIONS ARE TO BE APPROVED IN WRITING BY THE ARCHITECT.
- ALL DRAWINGS SHALL BE FULLY COORDINATED BY THE GENERAL CONTRACTOR IN ORDER TO VERIFY ALL DIMENSIONS, LOCATE ALL DEPRESSED SLABS, STRUCTURAL COMPONENTS, SLOPES, DRAINS, OUTLETS, RECESSES, REGLETS, BOLT SETTINGS, SLEEVES, CHASES, BLOCKING REQUIREMENTS, AND BOLLARDS, ETC. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, AND BRING ALL CONFLICTS TO THE ATTENTION OF THE ARCHITECTS. ALL CONSTRUCTION TRADES AND THEIR WORK SHALL BE COORDINATED BY THE GENERAL CONTRACTOR.
- THE CONTRACTOR SHALL BRING ERRORS AND OMISSIONS THAT MAY OCCUR IN THE CONTRACT DOCUMENTS TO THE ATTENTION OF THE ARCHITECT IN WRITING, AND WRITTEN INSTRUCTIONS FROM THE ARCHITECT WILL BE RECEIVED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE RESULTS OF ALL ERRORS, DISCREPANCIES, OR OMISSIONS IN THE CONTRACT DOCUMENTS FOR WHICH THE CONTRACTOR FAILS TO NOTIFY THE ARCHITECT IN WRITING BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK.
- WHERE ARCHITECTURAL DRAWINGS DEPICT MECHANICAL OR ELECTRICAL ITEMS OR EQUIPMENT, INCLUDING, BUT NOT LIMITED TO LIGHT FIXTURES, DIFFUSERS, ETC., INSTALLATION OF THESE ITEMS SHALL CONFORM TO THE LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- WHERE ARCHITECTURAL DRAWINGS DEPICT STRUCTURAL COMPONENTS, THE SIZE, SHAPE, DETAIL, AND CONNECTIONS OF SUCH STRUCTURAL COMPONENTS SHALL BE CONFIRMED AND GOVERNED BY THE STRUCTURAL DRAWINGS.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PROVIDE THE BASIS FOR THE PERFORMANCE OF A COMPLETELY FINISHED AND FULLY FUNCTIONING PROJECT. ANYTHING NOT EXPRESSLY SET FORTH, BUT WHICH IS REASONABLY IMPLIED AND/OR NECESSARY FOR PROPER AND COMPLETE PERFORMANCE OF THE PROJECT SHALL BE INCLUDED IN THE WORK.
- SHOP DRAWINGS ARE REQUIRED FOR STRUCTURAL, MECHANICAL, ELECTRICAL AND SPECIALIZED CONSTRUCTION, AND AS REQUIRED BY THE SPECIFICATION. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE WORK. IN AREAS WHERE THE DRAWINGS DO NOT ADDRESS METHODOLOGY, THE CONTRACTOR SHALL BE BOUND TO PERFORM IN STRICT COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATION AND/OR RECOMMENDATIONS. SHOP DRAWINGS SUBMISSIONS SHALL COMPLY WITH THE REQUIREMENTS GIVEN IN THE SPECIFICATIONS.
- THE CONTRACTOR SHALL MAKE NO STRUCTURAL CHANGES WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.
- ALL GYPSUM WALLBOARD SHALL BE TYPE "X" FIRE CODE AT ALL REQUIRED FIRE RATED PARTITIONS AND FLOOR/CEILING ASSEMBLIES, UNLESS OTHERWISE NOTED. THICKNESSES SHALL BE AS SPECIFIED IN THE DRAWINGS.
- ALL DIMENSIONS ARE TAKEN AT THE CENTERLINE OF STEEL, FACE OF MASONRY, OR FACE OF GYPSUM WALLBOARD. DO NOT SCALE THE DRAWINGS. THE CONTRACTOR SHALL REQUEST VERIFICATION OF DIMENSIONAL REQUIREMENTS WHENEVER HE/SHE IS IN DOUBT.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL UNIT AND ROUGH OPENING DIMENSIONS WITH DOOR, WINDOW AND EQUIPMENT MANUFACTURERS, BASED UPON THE AWARDED WINDOW AND DOOR CONTRACTS. OPENINGS SHALL MEET ALL EGRESS REQUIREMENTS AND LIFE SAFETY CODES.
- THE CONTRACTOR SHALL PROVIDE ALL MOUNTING BLOCKS AND SEALANTS REQUIRED FOR ALL EXTERIOR ITEMS THAT MOUNT TO THE FACE OF THE BUILDING.
- GENERAL CONTRACTOR SHALL PROVIDE WOOD BLOCKING FOR MOUNTING OF EQUIPMENT AND FIXTURES, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING AREAS: CABINETS, BATHROOM ACCESSORIES, HVAC, PLUMBING, AND ELECTRICAL EQUIPMENT, APPLIANCES, SHELVING, RAILING, AND HANDICAPPED ACCESSIBILITY ITEMS AND EQUIPMENT.
- FIRE SEPARATIONS SHALL EXTEND TO THE UNDERSIDE OF CONCRETE SLABS OR STEEL DECKING ABOVE EACH FLOOR, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR SPECIFICATIONS. FLOOR AND WALL FIRE SEPARATIONS SHALL MEET ALL REQUIREMENTS FOR "UL" RATING.
- ALL TRENCHING INSIDE THE BUILDING(S) SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, INCLUDING, BUT NOT LIMITED TO, WATER, SEWER, ELECTRICAL AND REFRIGERATION INSTALLATIONS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL ROOFTOP EQUIPMENT LOCATIONS, HVAC UNITS, REFRIGERATION CONDENSERS AND HVAC CONDENSERS AND HVAC CONDENSERS PROVIDED BY THE GENERAL CONTRACTOR, OWNER OR ANY OF THE GENERAL CONTRACTORS SUBCONTRACTORS. THIS COORDINATION INCLUDES ALL STRUCTURAL SUBFRAMING, DUNNAGE STEEL, AND SUPPORT STRUCTURES FOR ROOFTOP EQUIPMENT.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY POWER REQUIREMENTS FROM START OF CONSTRUCTION UNTIL THE FINAL CERTIFICATE OF OCCUPANCY IS ISSUED, AND SHALL REMOVE ALL TEMPORARY POWER EQUIPMENT FROM THE SITE, UPON TERMINATION OF ITS USE.

ALTERNATE 1: 3-STOP MECHANICAL LIFT
CONTRACTOR TO PROVIDE PRICING FOR THE INSTALLATION OF A 3-STOP MECHANICAL LIFT, INCLUDING NEW MASONRY OPENING, EXTERIOR OVERHEAD DOOR, AND DEMO OF LOADING PLATFORM. SEE DRAWING A602.

ALTERNATE 2: HVAC DUCTWORK WITH SIDE REGISTERS
CONTRACTOR TO PROVIDE PRICING FOR MATERIALS AND INSTALLATION OF SALES FLOOR DUCTWORK WITH SIDEWALL REGISTERS. SEE DRAWING M102.

ALTERNATE 3: SITE BUILT COOLER & FREEZER BOXES
CONTRACTOR TO PROVIDE PRICING FOR MATERIALS AND INSTALLATION OF BASEMENT COOLER & FREEZER BOXES AS SHOWN ON PLAN, INCLUDING ALL WALLS, CEILINGS, FREEZER FLOOR & RAMP. (EXCLUDING DOORS). SEE A102 FOR DETAILS.

LOCUS PLAN - CENTRAL SQUARE



684 Massachusetts Ave.
Cambridge, MA 20139

ARCHITECT

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tscott@sga-architects.com

MECHANICAL/ PLUMBING/ ELECTRICAL AND FIRE PROTECTION ENGINEERS

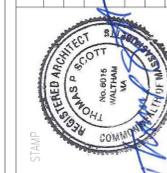
DWYER ENGINEERING
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LEESBURG, VA 20176
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703-777-5988
mdwyer@dwyer.com

DRAWING LIST

Sheet Number	Sheet Name	Sheet Issue Date
GENERAL		
A000	COVER SHEET	06/30/20
A001	CODE REVIEW & PROJECT INFORMATION	06/30/20
F100	FIXTURE PLAN	06/30/20
ARCHITECTURAL		
A100	BASEMENT & FIRST FLOOR DEMOLITION PLANS	06/30/20
A101	PROPOSED FIRST FLOOR PLAN	06/30/20
A102	PROPOSED BASEMENT FLOOR PLAN	06/30/20
A103	BASEMENT & FIRST FLOOR REFLECTED CEILING PLANS	06/30/20
A104	INTERIOR FINISHES PLAN	06/30/20
A105	PROPOSED ROOF PLAN	05/28/20
A401	ENLARGED PLANS & DETAILS	06/30/20
A402	ENLARGED PLANS & DETAILS	06/30/20
A601	DOOR SCHEDULE & DETAILS	06/30/20
A602	MATERIAL LIFT PLANS & LIFT ALTERNATE	06/30/20
AS01	SPECIFICATIONS - SHEET 1	06/30/20
AS02	SPECIFICATIONS - SHEET 2	06/30/20
AS03	SPECIFICATIONS - SHEET 3	06/30/20
AS04	SPECIFICATIONS - SHEET 4	06/30/20
FIRE PROTECTION		
FP100	BASEMENT SPRINKLER PLAN	06/30/20
FP101	FIRST FLOOR SPRINKLER PLAN	06/30/20
PLUMBING		
P100	PLUMBING NOTES, SYMBOLS AND SCHEDULES	06/30/20
P200	BASEMENT DWV DEMOLITION PLAN	06/30/20
P201	FIRST FLOOR DWV DEMOLITION PLAN	06/30/20
P202	BASEMENT DWV PLAN	06/30/20
P203	FIRST FLOOR DWV PLAN	06/30/20
P300	BASEMENT WATER AND GAS PLAN	06/30/20
P301	FIRST FLOOR WATER AND GAS PLAN	06/30/20
MECHANICAL		
M100	MECHANICAL NOTES, SYMBOLS & SCHEDULES	06/30/20
M101	BASEMENT MECHANICAL PLAN	06/30/20
M102	FIRST FLOOR MECHANICAL PLAN	06/30/20
ELECTRICAL		
E100	ELECTRICAL NOTES, SYMBOLS AND RISER	06/30/20
E101	ELECTRICAL SCHEDULES	06/30/20
E102	ELECTRICAL ENERGY COMPLIANCE	06/30/20
E200	ELECTRICAL POWER PLAN - BASEMENT	06/30/20
E201	ELECTRICAL POWER PLAN - FIRST FLOOR	06/30/20
E300	ELECTRICAL LIGHTING PLAN - BASEMENT	06/30/20
E301	ELECTRICAL LIGHTING PLAN - FIRST FLOOR	06/30/20

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
#	ISSUED FOR PERMIT & PRICING	6/30/20
1		



Scott Griffin ARCHITECTS
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Waltham, Massachusetts 02451
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DAILY TABLE
684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

COVER SHEET

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	As indicated

A000

BUILDING CODE INFORMATION

APPLICABLE CODES

- o Massachusetts State Building Code, 9th Edition, 780 CMR (Reference IBC 2015 w/ MA Amendments)
- o IEBC International Existing Building Code, 2015 w/ MA Amendments
- o Massachusetts Comprehensive Fire Code, 2018
- o Massachusetts Fire Laws, MGL Chapter 148
- o Massachusetts Electrical Code 527 CMR 12 (Reference NFPA 70, NEC 2017)
- o Massachusetts Fuel Gas and Plumbing Code, 248 CMR, 2016
- o International Energy Conservation Code, 2015 w/ MA Amendments
- o International Mechanical Code, 2015
- o Americans with Disabilities Act Accessibility Guidelines, 2010
- o Massachusetts Architectural Access Board Regulation, 521 CMR, 2006

BUILDING DESCRIPTION

AREA
Tenant: 5,625 Sq.Ft.

HEIGHT
Stories: 4
Tenant Level: Ground & Basement

SPRINKLERED Yes, throughout
[IBC 2015 903.2]

FIRE ALARM SYSTEM Yes
[IBC 2015 907.2]

* It is recommended that the fire alarm system consist of sprinkler water flow for detection and alarm notification appliances installed in accordance with NFPA 72 (i.e. audible notification throughout and visible notification in public and common area).

USE AND OCCUPANCY

OCCUPANCY MSBC
(M) Retail

CONSTRUCTION TYPE

This building is fully sprinklered, contains M occupancy and must conform with the IBC 2015 508.0 "Mixed Use and Occupancy as well as IBC 2015 707.0 "Fire Barriers"

The existing construction type for this building is IIIB unprotected.

CLASSIFICATION OF WORK

1 Classification of Work
The existing occupancies within the building, mercantile (M), assembly (A-3), storage (S-2) and business (B) are to remain the building occupancies after the renovations. The design of the fit-out is based on the work area method requirements of the existing building code provisions of the MSBC. Based on the work area method provisions, all areas renovated are required to meet the code for new construction with some exceptions. The exceptions to this requirement include the following. These exceptions have been used in the design.

2 Work Area Method Provisions

2.1 Level 2 Alterations (801.2)
The requirements for Level 2 alterations include the Level 2 provisions as well as the provisions associated with Level 1.

2.2 Use and Occupancy
The existing use of the building is mercantile, storage, assembly and business. The new use of the building will be the same occupancies; therefore, the change-of-use section of the existing building provisions does not apply. Given the fact the mercantile, business and assembly occupancies are intermixed to the point they cannot be separated, the unseparated use provisions are the only option for the project. The non-separated use provisions allow the uses to be unseparated provided the most restrictive height and area and fire protection provisions apply to the entire building.

2.3 Height and Area
The renovations to the building will not increase the height or area of the building as regulated by the height and area provisions based on construction type and occupancy. Therefore, the existing construction type need not be modified. Any internal additions to the floor area, such as the mezzanine spaces are required to be constructed of materials consistent with the existing building construction which is Type IIIB. Type IIIB construction consists of a 2-hour rated exterior wall and any type of construction allowed by the code for interior structure. This includes the structural system, floors, roof and walls.

2.4 Special Use and Occupancy (802)
There are no occupancies within the building that are classified under special use or occupancy.

2.5 Building Elements and Materials

2.5.1 Existing Shafts and Vertical Openings (803.2)
Section 803.2 requires existing shafts that are part of the means of egress to be provided with a 1-hour enclosure.

2.5.2 Interior Finish (803.2)
Existing materials in the exits that do not meet current flame spread requirements are required to be removed and replaced with materials in compliance with the current flame spread requirements. An alternative is to treat the materials in-place to provide the required flame spread rating. New materials will need to meet the provisions of the code for new construction. Since the assembly use is the most restrictive, the assembly provisions apply. Interior finishes for exit enclosures shall not exceed a Class B (0 to 75) flame spread rating. In newly renovated rooms and spaces the flame spread rating shall not exceed Class C (76 to 200).

2.6 Fire Sprinkler System (804.2)
The existing building is fully sprinklered and the renovated occupancy is required to be fully sprinklered as required by the Fire Prevention Laws and the MSBC. Modifications to the sprinkler system must be completed in accordance with current code provisions in Chapter 9 of the MSBC with Massachusetts modifications and NFPA 13, 2009 edition. The sprinkler system is required to be Hazard Group II in mercantile areas, Light Hazard in assembly and office areas and based on the configuration of the storage in the storage areas. Ordinary Hazard Group II should allow flexibility for varying storage arrangements, with the exception of racks with solid shelves.

2.7 Fire Alarm and Detection System (804.4)
The assembly occupancy is required to have a manual fire alarm system, sprinkler system monitoring and full annunciation. Since activation of the sprinkler system is required to trigger the annunciation system, the manual alarm pull stations may be eliminated, with the exception of one pull station in a readily accessible location. No smoke detection is required.

Manual pull stations, if provided, will need to be installed in accordance with the accessibility provisions of the ADA and MAAB. Clear space (30" x 48") shall be provided either directly in front of or beside the manual pull stations. The maximum side reach and front reach is 48 inches above the finished floor. The fire alarm system will need to be monitored by a central station with either direct connection to the Cambridge Fire Department or procedures to notify the Fire Department of any alarm condition.

2.8 Means of Egress (805)
Means of egress for the renovated areas will meet the requirements of the code for new construction. The stair enclosure to the basement storage area is required to be 30 minute fire rated construction in accordance with the 803.2.

2.8.1 Egress capacity
Egress capacity for the first floor space is based on a double panel break-away single slider door to the north and a single door to the south. In addition, the basement level also has a single door to the south. Therefore, the egress capacity for the space of 605 persons. However, the loss of a single exit cannot reduce overall capacity by more than half, therefore, allowable occupant load = capacity of the smallest door multiplied by 2 (34-inches clear/0.2 inches per occupant x 2 = 340). The occupant load for the first floor and basement have been calculated at 61 persons.

Based on the estimated occupant load, access to two exits from the mercantile and assembly space are required. The proposed plan has two exits provided.

2.8.2 Travel Distance
Allowable travel distances from all areas to an entrance, to an exit or to an exit discharge door to the exterior are listed below. The travel distances from all areas need only be met by access to a single exit. Estimates of the travel distances from all spaces to an exit are significantly less than the allowable distances.

Mercantile	250 feet
Assembly	250 feet
Business	300 feet
Storage	300 feet

2.8.3 Exit Signs and Emergency Lighting
All means of egress are required to be provided with egress lighting including the exit discharge. Lighting with emergency backup power shall be provided as part of the renovations in first floor spaces, in stairs, in corridors and at the exit discharge. Based on calculation of the occupant loads throughout the space, only the main area exceeds an occupant load of fifty and is required to have emergency lighting.

Exit signs are required in all spaces with occupant loads over fifty persons and at exits that serve over fifty persons. Based on calculation of the occupant loads throughout the space, only the main area and the doors to the stairs and the exterior are required to have exit signs. All exit signs are required to be illuminated either externally or internally or be self-luminous.

Backup power for egress signs and lighting is required to come on line within ten seconds of normal power loss. The emergency power source is required to provide power to the emergency egress lighting and exit sign lighting for a duration of not less than 90 minutes.

2.8.4 Dead End Corridors (805.6)
Since the building is fully sprinklered, existing extended or new dead end corridors may not exceed fifty feet. Existing dead end corridors may not exceed seventy feet.

3 Structural (807)

3.1.1 Gravity Loads (807.2 & 807.4)
New structural elements shall meet the requirements of the current MSBC. Any structural elements whose gravity load is increased by more than 5% shall meet the requirements of the current MSBC.

3.1.2 Lateral Load Resisting Structural Elements (807.5)
Existing lateral load-resisting structural element whose demand-capacity ratio with the alteration is more than 10 percent of existing shall comply with Section 807.4.

4 Accessibility (806)

The Massachusetts Architectural Access Board regulations apply to the work being done within the renovated spaces. Based on the value of the work (greater than \$100,000 but less than 30% of the equalized assessed value of the building), all renovated areas are required to meet the current provisions of the MAAB regulations. Title III of the Americans with Disabilities Act (ADA) requires that any alterations to "commercial facilities" must conform to the "ADA Accessibility Guidelines" (ADAAG). All renovated areas of the space are required to meet the ADAAG requirements.

For employee work areas, this means persons should be able to arrive at, enter and exit their work areas. In addition to the above requirement for the work area, all employee common areas are required to be fully accessible. Common areas are considered restrooms, conference rooms, training spaces, locker rooms, and any other area open to all employees. This requirement means an accessible path to the common areas, accessible fixtures and controls, accessible signage at exits and where permanent room signs are provided, fire alarm strobes, and accessible means of egress.

5 Mechanical (709)

5.1 Altered Existing Systems (709.2)
In mechanically ventilated spaces, existing mechanical ventilation systems that are altered or extended shall provide not less than 5 cfm per person of outdoor air and not less than 15 cfm of ventilation air per person or the amount of ventilation determined by the Indoor Air Quality Procedure of ASHRAE 62.

5.2 Local Exhaust (709.3)
All newly introduced equipment that produce vapor, shall be provided with local exhaust.

6 Plumbing (710)

The plumbing fixture count may need to be revised based on the occupant load for the building agreed upon with the plumbing official. This is frequently less than the amount calculated for the egress occupant load.

7 Energy Efficiency (711)

The fit-out is subject to the energy provisions of the Massachusetts State Building Code. The alterations are not subject to the provisions of the Stretch Code. Areas of the building not affected by the fit-out are not required to be upgraded. Components of the building not being altered are not required to be upgraded. Systems such as HVAC and lighting are not required to meet the requirements of the current code provided the overall energy use associated with the building is not increased. Walls, ceiling and floors where the internal cavity is not exposed or does not exist need not be upgraded. If the internal cavity is exposed, the space exposed is required to be filled with insulation.

END OF SUMMARY

BUILDING ELEMENTS - FIRE RESISTIVE REQUIREMENTS

[Table 601]

Structure Elements	Required Rating (Hours)	IIIB
Structural frame Including columns, girders, trusses	0	
Bearing walls - Interior	0	
Bearing walls - Exterior	2	
Nonbearing walls and partitions Exterior	0	
Nonbearing walls and partitions Interior	0	
Floor construction Including supporting beams and joists	0	
Roof construction Including supporting beams and joists	0	

CALCULATIONS

OCCUPANT LOAD

Room or Area	Occupancy	Factor Sq. Ft.	Area Sq. Ft.	Occupant Load	Travel Distance	
					Allowed*	Actual
DAILY TABLE	Mercantile (sales floor) Storage/Ancillary	60 Gross 300 Gross	3,100 2,525	52 9	250 400	65 75
			5,625	61		

* Allowed travel distance are per IBC 2015 Table 1016.1 with credit for a sprinkler system.

EGRESS CAPACITY

TENANT SPACE:	EXIT DOORS	TOTAL DOOR WIDTH (in.)	CAPACITY (ALLOW OCC. LOAD)
DAILY TABLE	2	121	340

* Egress width factor for doors is calculated with a factor of 0.2 inches per occupant per IBC 2015 Section 1005.3.2, however, the loss of a single exit cannot reduce overall capacity by more than half, therefore, allowable occupant load = capacity of the smallest door multiplied by 2 (34-inches clear/0.2 inches per occupant x 2 = 340).

EGRESS TABLE

USE & OCCUPANCY	A	B	M	S-2
EXIT ACCESS TRAVEL DISTANCE (FEET)	250	300	250	400
COMMON PATH OF EGRESS TRAVEL (FEET)	75	100	75	100
MAXIMUM DEAD END CORRIDOR (FEET)	20	50	50	50
REQUIRED NUMBER OF EXITS	2	2	2	2
MINIMUM DISTANCE BETWEEN EXITS (1/3 OVERALL DIAGONAL IN FEET)	28			

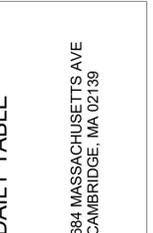
* THE LONGEST DIAGONAL FOR NEW TENANT SPACE IS 82'-FEET.

FIRE EXTINGUISHER:

Fire extinguishers per the IBC 2015 are required by section 906.1. They are required throughout the occupancies in accordance with NFPA 10

Rating: Minimum of 4A:10B:C [recommended]
Location: In the retail spaces, place the extinguishers one per each 3,000 sq.ft., within 75 feet of travel to all areas.

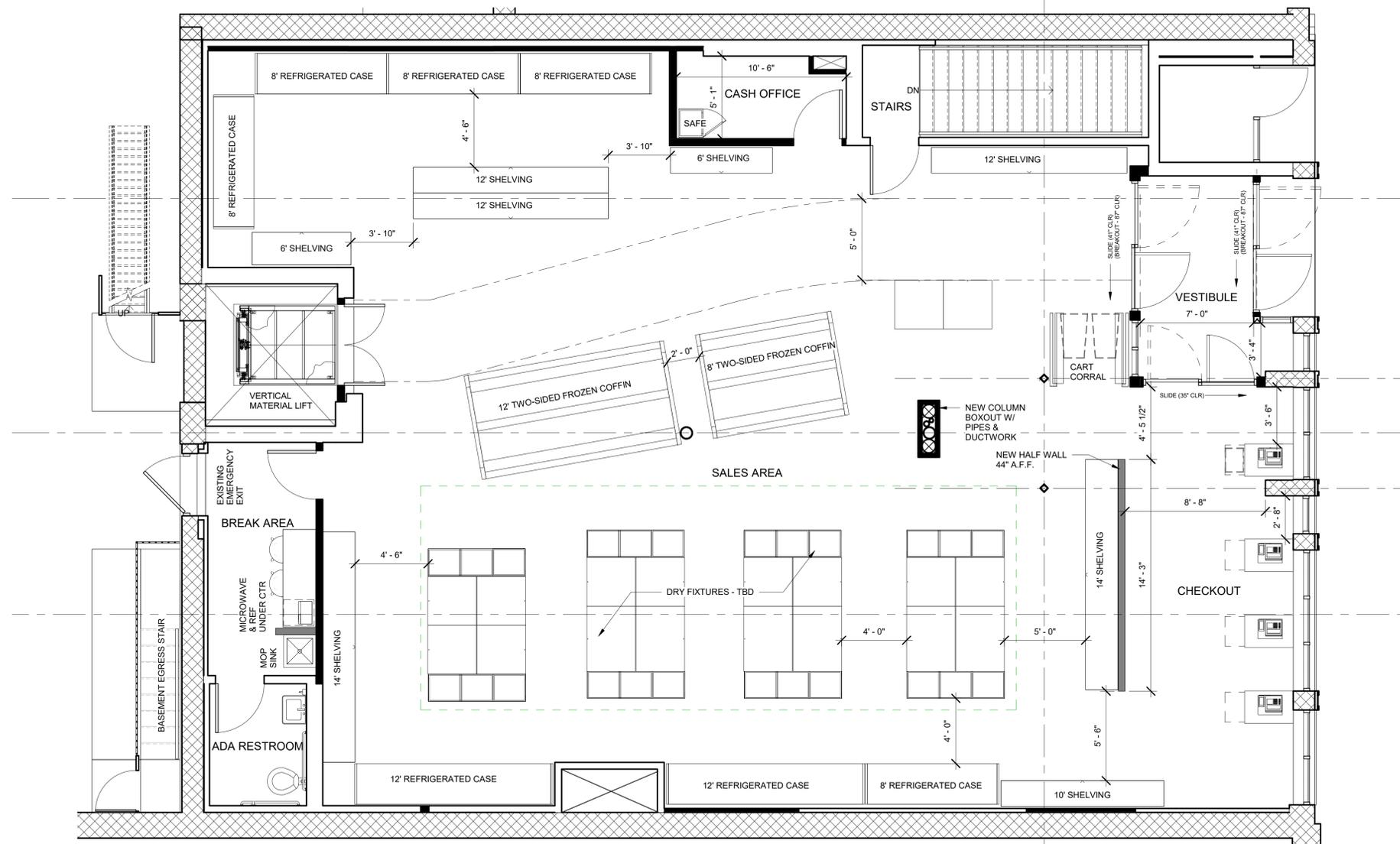
Revision Schedule	Description	Date
# 1	ISSUED FOR PERMIT & PRICING	6/30/20



DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	1" = 1'-0"

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	1" = 1'-0"

A001



1 PROPOSED FIXTURE PLAN
1/4" = 1'-0"

ITEMS	SUPPLIED	INSTALLED
AUTOMATIC ENTRY DOORS	G.C.	G.C.
FLOORING (SALES AREA)	D.T.	G.C.
CASH OFFICE COUNTER	G.C.	G.C.
SAFE	D.T.	D.T.
CHECKSTANDS	D.T.	G.C.
DISPLAY SHELVES	D.T.	D.T.
REFRIG / FROZEN FOOD CASES	D.T.	D.T.
PRODUCE DISPLAY	D.T.	D.T.
REFRIGERATOR (BREAKROOM)	D.T.	G.C.
BREAKROOM MILLWORK & COUNTERTOP	G.C.	G.C.
BREAKROOM FIXTURES (TABLES/ CHAIRS/ LOCKERS)	D.T.	D.T.
BATHROOM FIXTURES & DISPENSERS	G.C.	G.C.
LIGHTING FIXTURES	D.T.	G.C.
FREEZER/ COOLER PANELS	D.T.	D.T.
MECHANICAL LIFT	D.T.	G.C.
BALER	D.T.	D.T.
CART CORRAL	G.C.	G.C.
CONDENSING UNITS	D.T.	D.T.

NOTES:
D.T. = DAILY TABLE
G.C. = GENERAL CONTRACTOR

*D.T. PROVIDES MOST OF THE POWER EQUIPMENT, MECHANICAL EQUIPMENT, FIXTURES AND FINISHES.

Revision Schedule	Description	Date
# 1	ISSUED FOR PERMIT & PRICING	6/30/20

Scott Griffin ARCHITECTS
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Waltham, Massachusetts 02451
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DAILY TABLE
684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

FIXTURE PLAN

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	2002B.00
SCALE	1/4" = 1'-0"

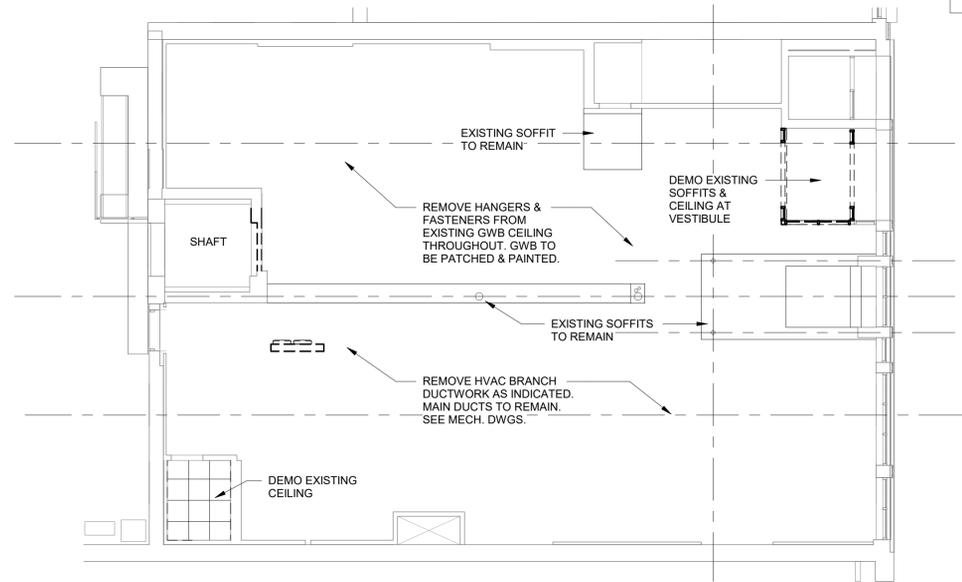
F100

- NUMBERED NOTES:**
- 1 REMOVE MORTAR, INFILL CORED HOLES THROUGHOUT. PREP SUBFLOOR AND LEVEL WITH ARDEX OR APPROVED EQUAL IN PREPARATION FOR NEW SALES FLOOR LVT.
 - 2 PERIMETER FURRING & STUDS TO REMAIN. REMOVE CHAIR RAIL WHERE PRESENT. INFILL PERIMETER FRAMING TO MAKE WALLS FLUSH. PATCH GWB TO UNDERSIDE OF CEILING, TAPE, SAND AND PREP FOR PAINT, TYP. THROUGHOUT.
 - 3 SCRAPE & SAND EXISTING COLUMNS TO UNDERSIDE OF GWB CEILING IN PREPARATION FOR PAINT.
 - 4 RESTROOM TO BE REFURBISHED. REMOVE WALL TILE, BASE AND FLOOR TILE IN PREPARATION FOR NEW FINISHES. GC TO VERIFY THAT ALL FIXTURES & ACCESSORIES ARE PRESENT, FUNCTIONAL AND ADA COMPLIANT.
 - 5 VESTIBULE TO BE RECONFIGURED. DEMO EXISTING ENTRANCE DOORS & STOREFRONT. REMOVE WALL TILE AND FLOOR TILE. SMOOTH & PREP SURFACES FOR NEW FINISHES. EXTERIOR FINISHES TO REMAIN. SEE ENLARGED PLAN FOR DETAILS.
 - 6 BASEMENT TOILET ROOM TO BE REFURBISHED. G.C. TO RUN CAMERA THRU SANITARY PIPE TO CHECK CONNECTION. REMOVE ALL FIXTURES, FINISHES & DOOR & FRAME.

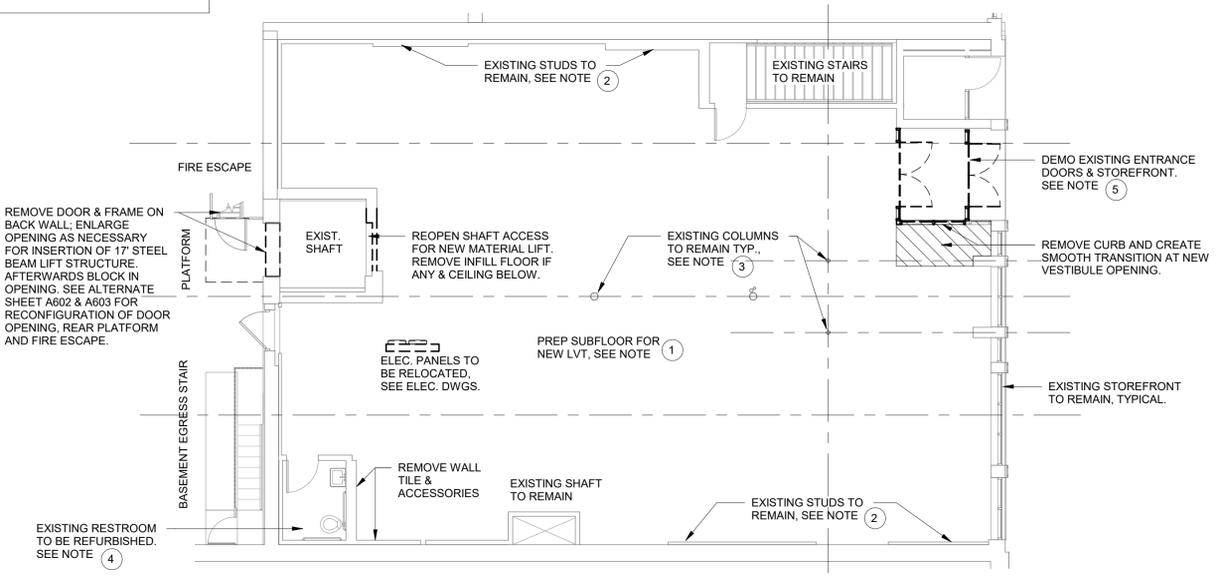
- GENERAL NOTES:**
- 1- ALL DEBRIS TO BE REMOVED FROM SITE IN AN ENVIRONMENTALLY FRIENDLY AND SAFE MANNER ACCORDING TO LOCAL CODES AND ZONING REGULATIONS.
 - 2- EXISTING SPRINKLER SYSTEM TO REMAIN IN PLACE AND OPERATIONAL.
 - 3- CONTRACTORS TO COORDINATE PATCHING WITH G.C. AT BUILDING EXTERIOR SURFACES WITH SIMILAR MATERIAL ONCE DEMO ITEMS ARE REMOVED.
 - 4- LEAVE SPACE IN BROOM CLEAN CONDITION.

LEGEND:

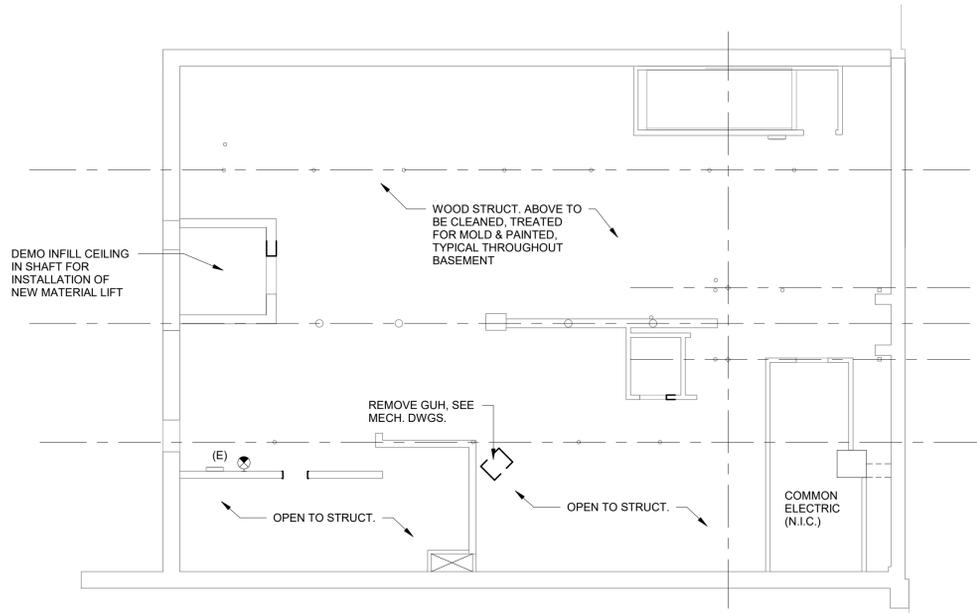
	EXISTING TO REMAIN
	TO BE REMOVED
	AREAS OF SLAB WORK
	AREAS TO BE CHIPPED DOWN & MADE FLUSH



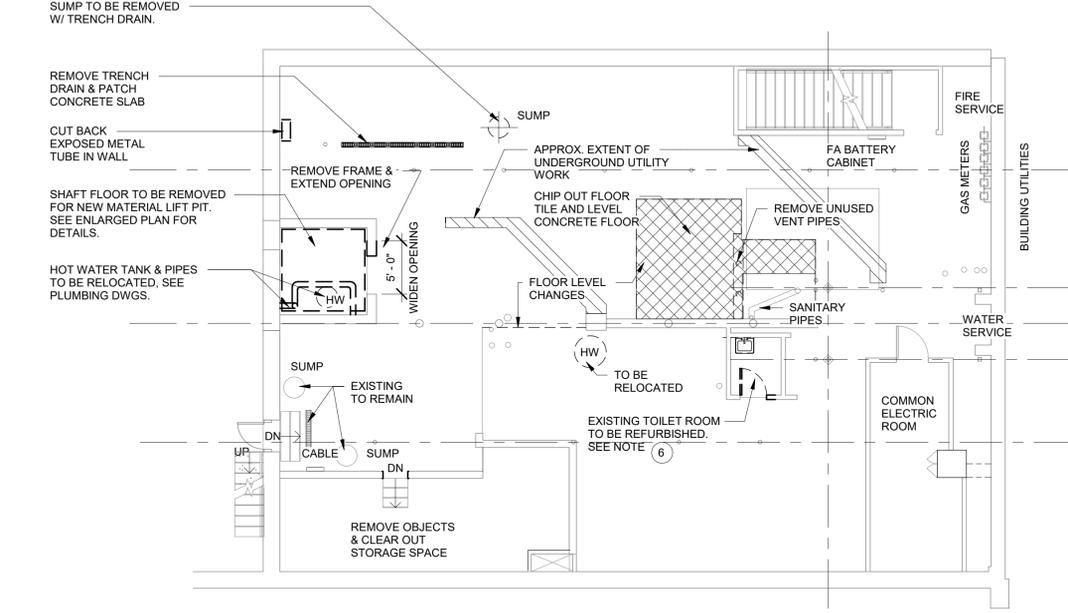
5 DEMO REFLECTED CLG PLAN
1/8" = 1'-0"



1 EXIST/DEMO FIRST FLOOR SHELL
1/8" = 1'-0"



4 DEMO BASEMENT RCP
1/8" = 1'-0"



2 EXIST/DEMO BASEMENT SHELL
1/8" = 1'-0"

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
# 1	ISSUED FOR PERMIT & PRICING	6/30/20

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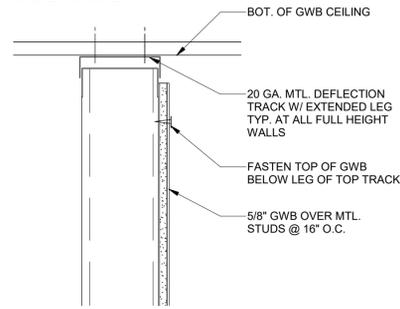
DAILY TABLE
 684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

BASEMENT & FIRST FLOOR DEMOLITION PLANS

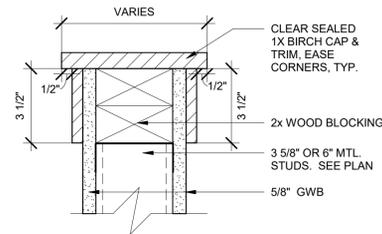
DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	As indicated

A100

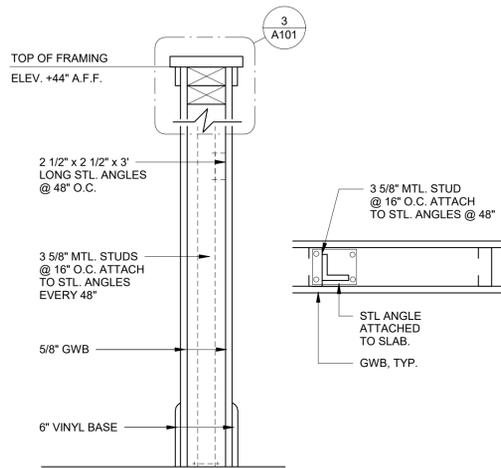
NOTE:
STUDS AND GWB ARE NOT TO BE FASTENED TO METAL TOP TRACK



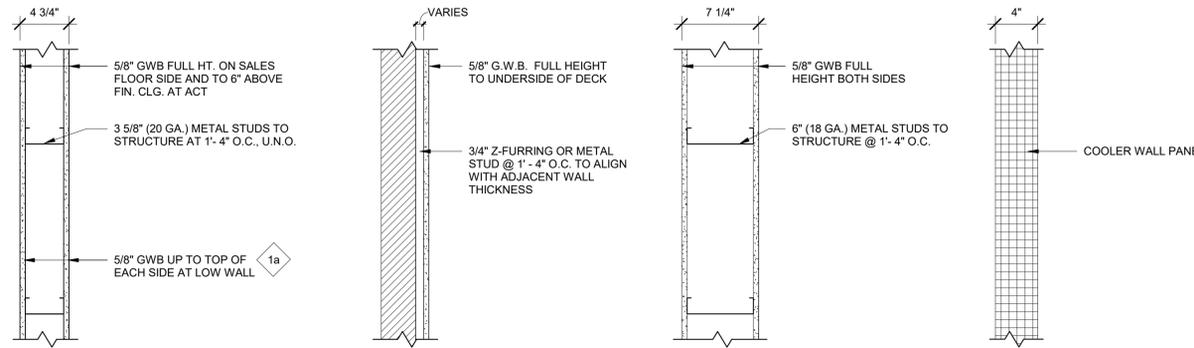
2 TOP SLIP TRACK
3" = 1'-0"



3 LOW WALL CAP
3" = 1'-0"



4 LOW WALL STIFFENER
1 1/2" = 1'-0"



TYPE 1
NON-RATED WALL

TYPE 2
FURRING AT PERIMETER/
EXISTING WALLS

TYPE 3
NON-RATED WALL

TYPE 4
CHEST WALLS
NON-RATED WALL

WALL TYPES

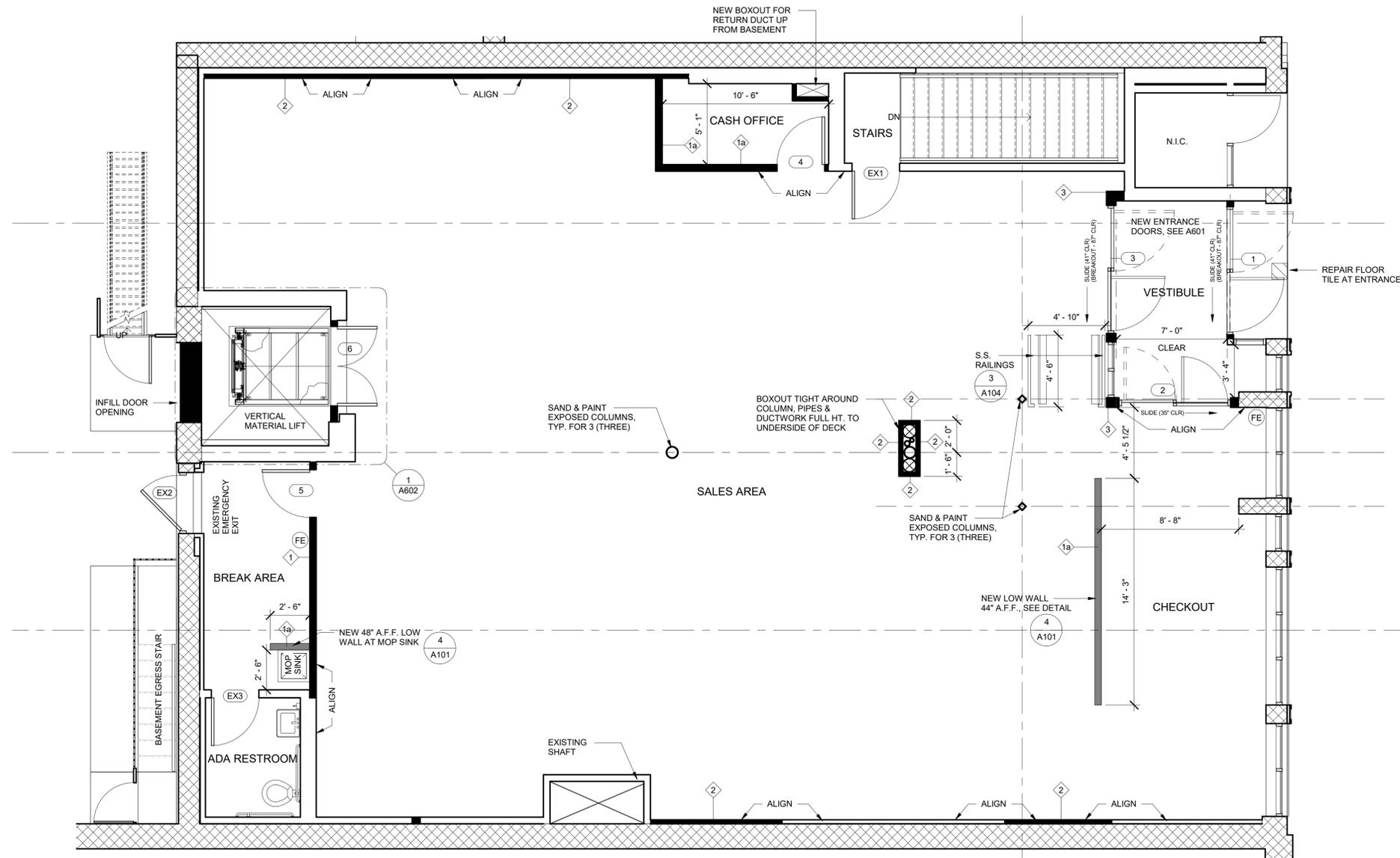
ALL WALLS TO EXTEND FULL HEIGHT TO UNDERSIDE OF FLOOR/ ROOF DECK UNLESS NOTED OTHERWISE. FILL CAVITY WITH F.G. SOUND ATTENUATION INSULATION AT ALL RESTROOM WALLS. USE MOISTURE RESISTANT GYP. BOARD AT ALL WET AREAS IN RESTROOMS AND CORRIDORS.

LEGEND:

- EXISTING WALL
- NEW WALL
- NEW LOW WALL
- AREAS OF SLAB REPAIR
- WALL TYPE NUMBER
- DOOR NUMBER
- PORTABLE FIRE EXTINGUISHER / 10LB B/C TYPICAL FOR 3 (THREE)

GENERAL NOTES:

- 1- FIRE EXTINGUISHERS SHALL BE LOCATED PER LOCAL FIRE DEPT. REQUIREMENTS AND REQUESTS.
- 2- PROVIDE FIRE DEPARTMENT REQUIRED KEY BOX, COORDINATE LOCATION AND TYPE WITH LOCAL AUTHORITIES.
- 3- SEE MEP DRAWINGS FOR INFORMATION REGARDING SPRINKLER AND FIRE ALARM SYSTEMS.
- 4- SEE ELECTRICAL DRAWINGS FOR EXIT SIGNS & EMERGENCY LIGHTING.
- 5- ALL EXIT DOORS SHALL BE EQUIPPED WITH PANIC HARDWARE, TYP.



1 PROPOSED FIRST FLOOR PLAN
1/4" = 1'-0"

Revision Schedule	Date
1 ISSUED FOR PERMIT & PRICING	6/30/20

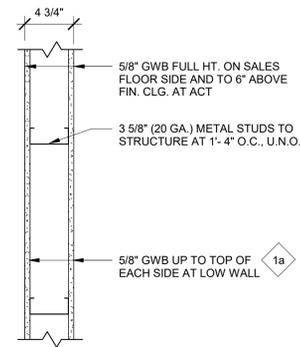
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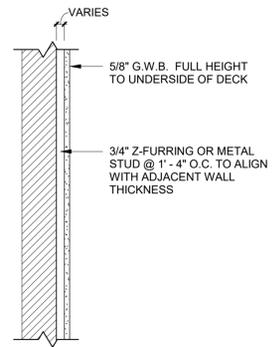
PROPOSED FIRST FLOOR PLAN

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	As indicated

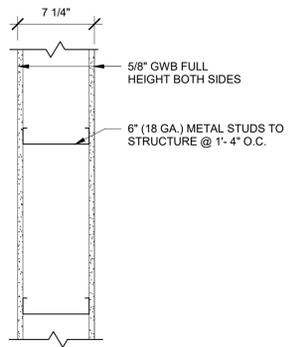
A101



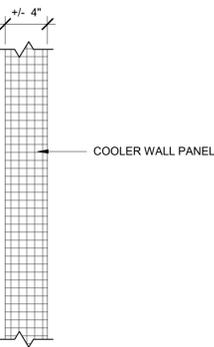
TYPE 1 1a
NON-RATED WALL



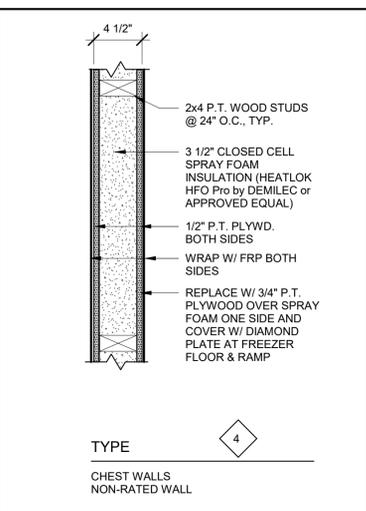
TYPE 2
FURRING AT PERIMETER/
EXISTING WALLS OR BOXOUT



TYPE 3
NON-RATED WALL



TYPE 4
CHEST WALLS
NON-RATED WALL



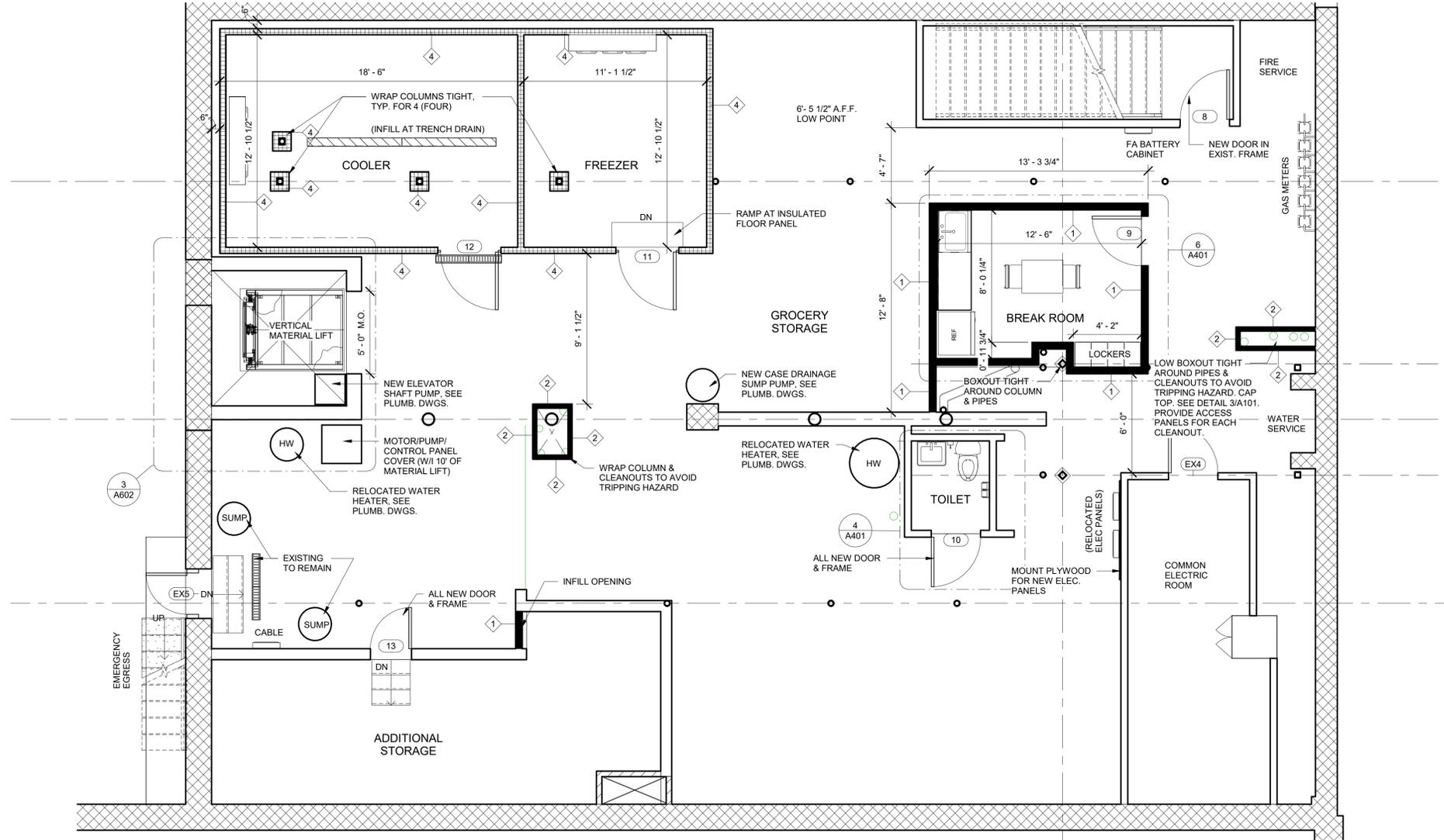
TYPE 4
CHEST WALLS
NON-RATED WALL
A ALTERNATE 3-COOLER PANELS
1 1/2" = 1'-0"

LEGEND:

	EXISTING WALL
	NEW WALL
	AREAS OF SLAB REPAIR
	WALL TYPE NUMBER
	DOOR NUMBER
	PORTABLE FIRE EXTINGUISHER / 10LB BIC TYPICAL FOR 3 (THREE)

NOTE: DIMENSIONS ARE TO FINISH FACE OF NEW WALLS, UNLESS NOTED OTHERWISE. NEW WALLS ARE TO UNDERSIDE OF DECK, UNLESS NOTED OTHERWISE.

WALL TYPES
ALL WALLS TO EXTEND FULL HEIGHT TO UNDERSIDE OF FLOOR/ ROOF DECK UNLESS NOTED OTHERWISE. FILL CAVITY WITH F.G. SOUND ATTENUATION INSULATION AT ALL RESTROOM WALLS. USE MOISTURE RESISTANT GYP. BOARD AT ALL WET AREAS IN RESTROOMS AND CORRIDORS.



1 PROPOSED BASEMENT FLOOR PLAN
1/4" = 1'-0"

Revision Schedule	Date
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#	
1	



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PROPOSED
BASEMENT
FLOOR PLAN

DATE	6/30/2020
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PROJECT NUMBER	20028.00
SCALE	As indicated

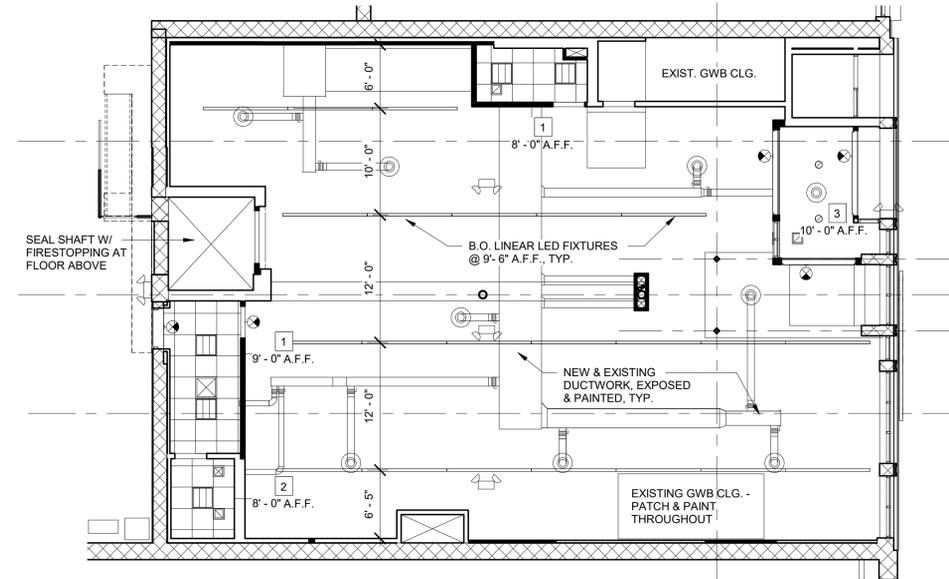
A102

FIXTURE LEGEND	
	8' PENDENT LED STRIP LIGHT
	2 x 2 RECESSED LED TROFFER LIGHT
	4' LED STRIP LIGHT
	SUPPLY AIR DIFFUSER
	SUPPLY AIR DIFFUSER -OPEN SALES AREA
	RETURN AIR DUCT
	EXTERIOR LIGHTING WALL PACK
	ILLUMINATED EXIT SIGNS
	EXTERIOR MOUNTED EMERGENCY LIGHT

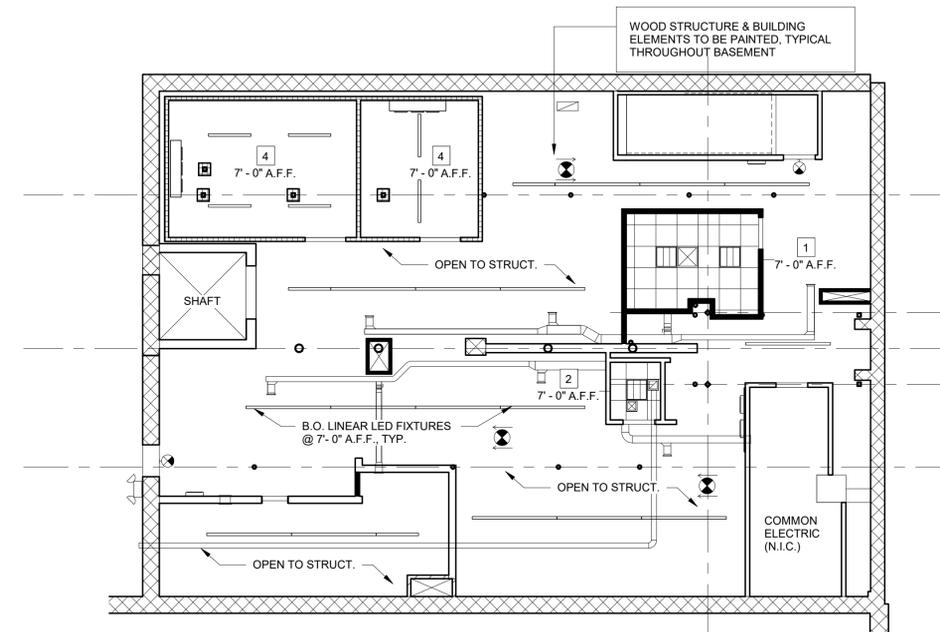
CEILING TYPES:	
0	OPEN TO DECK STRUCTURE ABOVE
1	ARMSTRONG #1754 - 24" x 24", FINE FISSURED 15/16" SQUARE LAY-IN, IN 2' x 2' SUSPENDED GRID SYSTEM
2	ARMSTRONG - WHITE 24" x 24" VINYL FACED SQUARE LAY-IN, IN 2' x 2' SUSPENDED GRID SYSTEM
3	GWB ON METAL STUDS
4	COOLER PANEL CEILING

RCP GENERAL NOTES:

- 1- SPRINKLER SYSTEM PIPES, FIRE ALARM CONDUITS AND EXPOSED DUCTWORK SHALL BE HELD TIGHT TO UNDERSIDE OF CEILING.
- 2- SALES AREA OPEN TO EXISTING GWB CEILING ABOVE. CEILING, ELECTRICAL CONDUITS, WATER LINES, AND OTHER EXPOSED BUILDING ELEMENTS SHALL BE PAINTED, PER PAINT SCHEDULE.
- 3- GROCERY STORAGE OPEN TO WOOD STRUCTURE ABOVE. JOISTS AND UNDERSIDE OF DECK TO BE TREATED FOR MOLD AND PAINTED, PER PAINT SCHEDULE.
- 4- LINEAR LIGHT FIXTURES TO BE HUNG AT UNIFORM HEIGHT BELOW OTHER EXPOSED BUILDING ELEMENTS, AS INDICATED ON RCP.
- 5- LIGHTING AND DUCTWORK SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL AND MECHANICAL DWGS.
- 6- SPRINKLER SYSTEM EXISTING TO REMAIN. MODIFY AS NECESSARY FOR NEW FLOOR PLAN LAYOUT. SEE FIRE PROTECTION DWG.



② REFLECTED CEILING PLAN
1/8" = 1'-0"



① BASEMENT REFLECTED CEILING PLAN
1/8" = 1'-0"

Revision	Schedule	Description	Date
1		ISSUED FOR PERMIT & PRICING	6/30/20

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BASEMENT & FIRST FLOOR REFLECTED CEILING PLANS

DATE	6/30/2020
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PROJECT NUMBER	20028.00
SCALE	As indicated

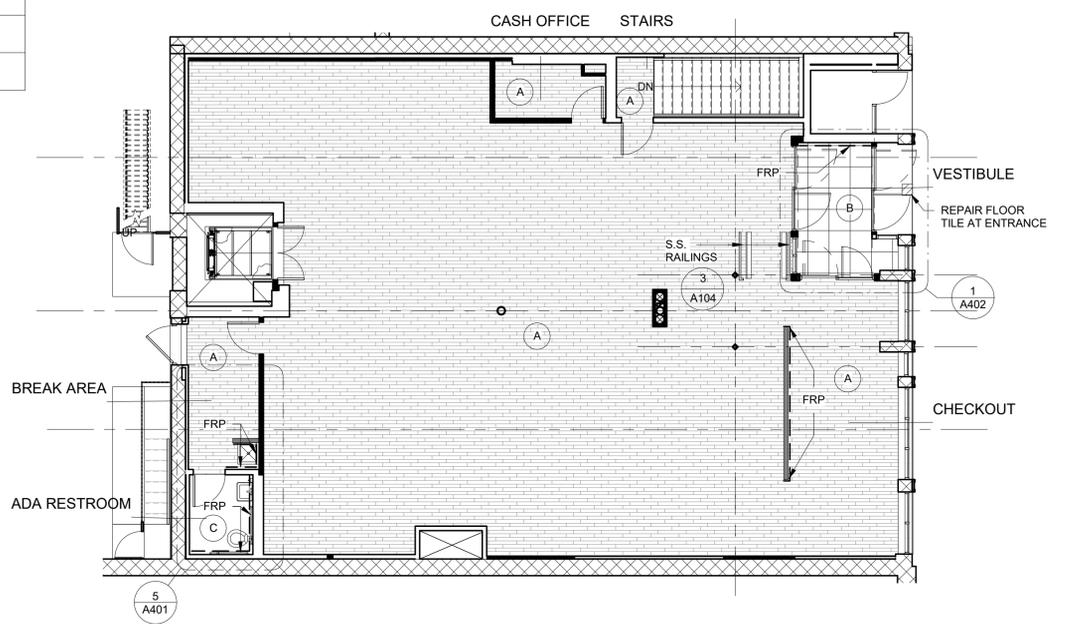
A103

ROOM FINISHES SCHEDULE						
ROOM NAME	FLOOR FINISH	WALL BASE	WALL FINISH	CEILING		COMMENTS
				MATERIAL	HEIGHT	
VESTIBULE	CARPET TILE OVER MARINE GRADE PLYWOOD	6" VINYL BASE	FRP-1/ GWB -PAINTED, ALUM/GLASS STOREFRONT	GWB -PAINTED	9'- 6" A.F.F. (V.I.F.)	TRANSITION SLOPE TO CHECKOUT SHOULD BE < 5%
CHECKOUT	LVT	6" VINYL BASE	FRP-1/ GWB -PAINTED	EXISTING GWB -PAINTED	EXISTING	
SALES AREA	LVT	6" VINYL BASE	GWB -PAINTED	EXISTING GWB -PAINTED	EXISTING	
BREAK AREA	LVT	6" VINYL BASE	FRP-2/ GWB -PAINTED	2 x 2 ACT	9'- 0" A.F.F.	
ADA RESTROOM	PORCELAIN TILE	4" VINYL BASE	FRP-2/ GWB -PAINTED	2 x 2 VINYL FACED CEILING TILE	8'- 0" A.F.F.	
CASH OFFICE	LVT	4" VINYL BASE	GWB -PAINTED	2 x 2 ACT	8'- 0" A.F.F.	
STAIRS	LVT (UPPER LANDING)/ EXISTING	6" VINYL BASE (UPPER LANDING)	EXISTING	EXISTING GWB -PAINTED	EXISTING	
GROCERY STORAGE	SEALED CONCRETE	6" WOOD BASE (ON NEW NON-MASONRY WALLS)	EXISTING	OPEN TO STRUCT. -PAINTED	EXISTING	
FREEZER	COOLER PANEL/ DIAMOND PLATE ALTERNATE	SANI-BOARD BASE	EMBOSSED WHITE PANEL	INSULATED CEILING PANEL	7'- 0" A.F.F. (V.I.F.)	INCLUDES INTERNAL RAMP
COOLER	SEALED CONCRETE	SANI-BOARD	EMBOSSED WHITE PANEL	INSULATED CEILING PANEL	7'- 0" A.F.F. (V.I.F.)	
BREAK ROOM	EPOXY PAINT	4" VINYL BASE	GWB -PAINTED	2 x 2 ACT	7'- 0" A.F.F.	
TOILET	EPOXY PAINT	4" VINYL BASE	EXISTING CMU - PAINTED	2 x 2 VINYL FACED CEILING TILE	7'- 0" A.F.F.	
ADDITIONAL STORAGE	EXISTING	-	EXISTING	OPEN TO STRUCT. -PAINTED	EXISTING	

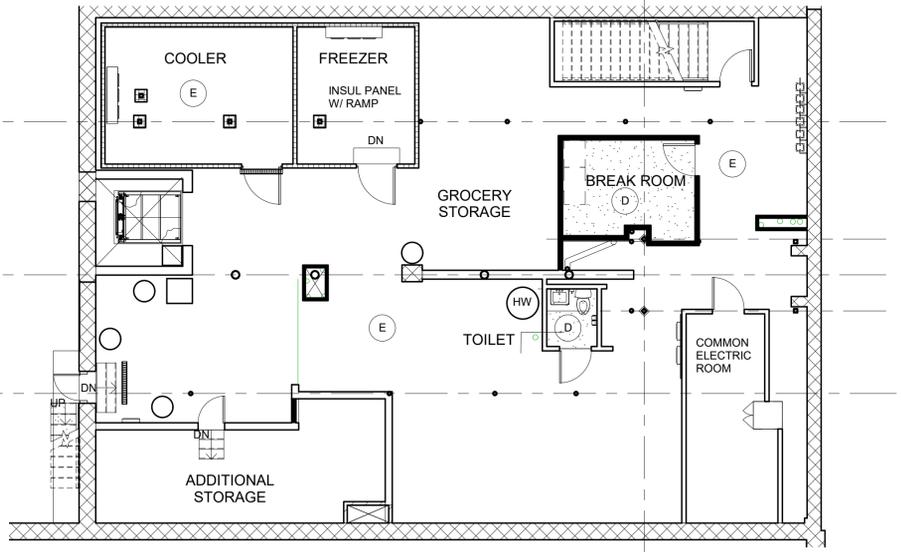
FRP SCHEDULE			
TAG	APPLICATION	MANUFACTURER	COLOR
FRP-1	ENTRANCE & CHECKOUT	TBD	TBD
FRP-2	RESTROOM & MOP SINK	TBD	TBD
FRP-3	COOLER & FREEZER BOXES (IF STICK BUILT)	TBD	TBD

PAINT SCHEDULE			
TAG	APPLICATION	MANUFACTURER	COLOR
PT-1	SALES FLOOR WALLS	TBD	TBD
PT-2	OFFICES, BACKROOM & BREAK ROOM	TBD	TBD
PT-3	SALES FLOOR CEILING, OVERHEAD PIPES, CONDUIT & MECHANICAL	TBD	TBD
PT-4	BASEMENT OVERHEAD STRUCTURE & MECHANICAL	TBD	TBD
PT-5	BATHROOM WALLS	TBD	WHITE - WASHABLE
PT-6	GWB CEILINGS	TBD	WHITE CEILING PAINT
PT-7	DOOR FRAMES	TBD	TBD
PT-8	EPOXY FLOOR PAINT	TBD	TBD

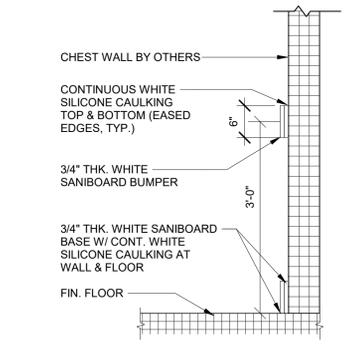
FLOOR FINISH SCHEDULE	
A	SALES FLOOR LVT - TBD
B	WALK-OFF MAT CARPET TILE ON MARINE GRADE PLYWD
C	PORCELAIN FLOOR TILE - TBD
D	EPOXY FLOOR PAINT
E	SEALED CONCRETE



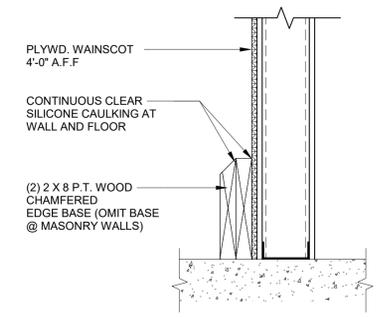
1 PROPOSED FIRST FLOOR FINISH PLAN
1/8" = 1'-0"



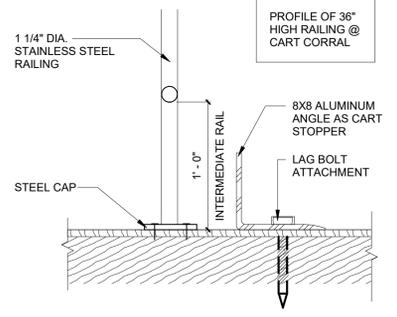
2 PROPOSED BASEMENT FINISH PLAN
1/8" = 1'-0"



5 SANIBOARD BASE
3/4" = 1'-0"



4 WOOD BASE DETAIL
1 1/2" = 1'-0"



3 CART CORRAL DETAIL
1 1/2" = 1'-0"

Revision Schedule	Date
# 1	6/30/20
ISSUED FOR PERMIT & PRICING	

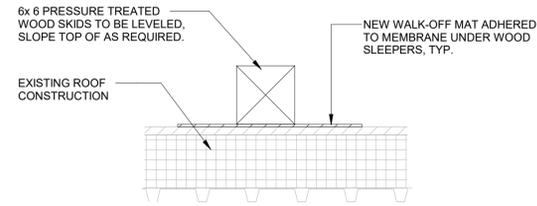
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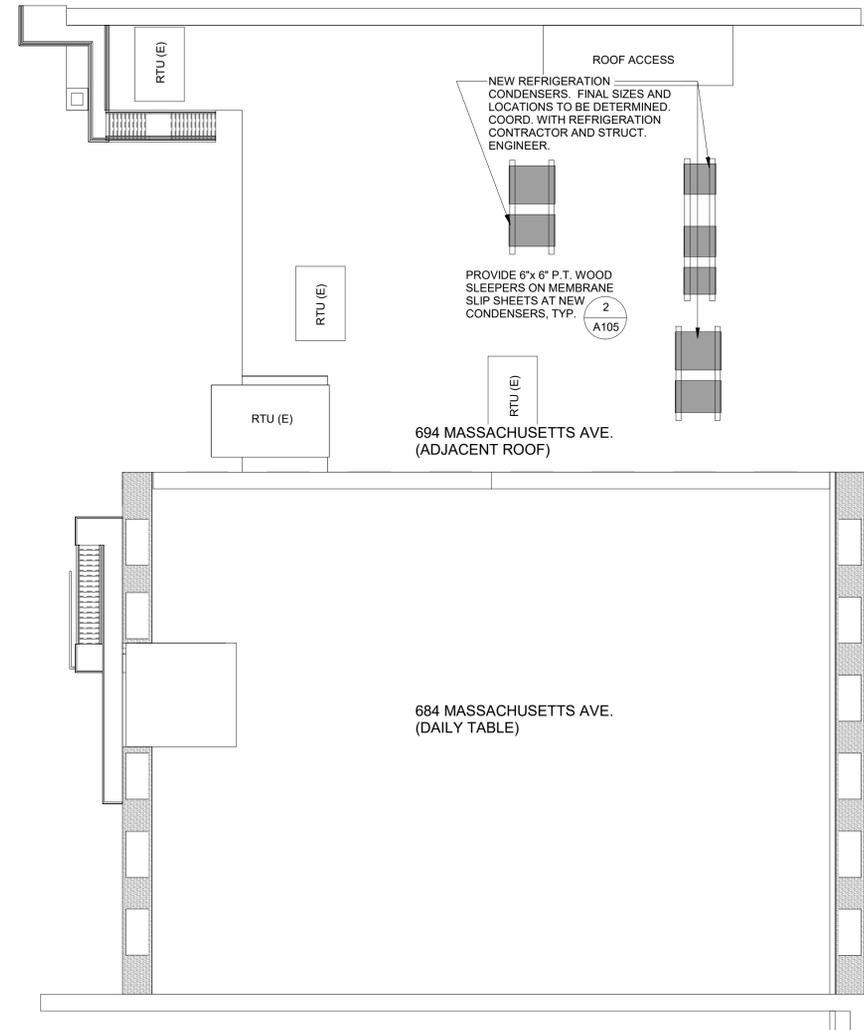
INTERIOR FINISHES PLAN

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	As indicated

A104



② P.T. WOOD SLEEPERS
1 1/2" = 1'-0"



① PROPOSED ROOF PLAN
1/8" = 1'-0"

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
# 1	ISSUED FOR PERMIT & PRICING	6/30/20

STAMP

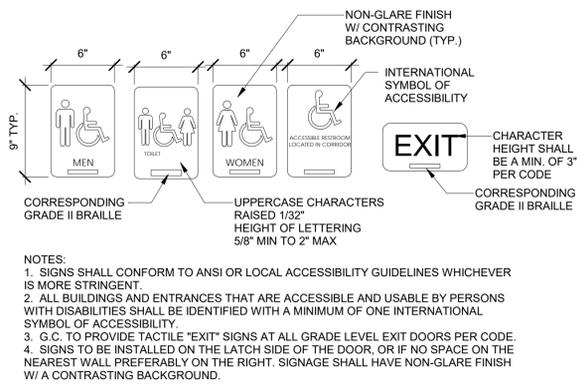
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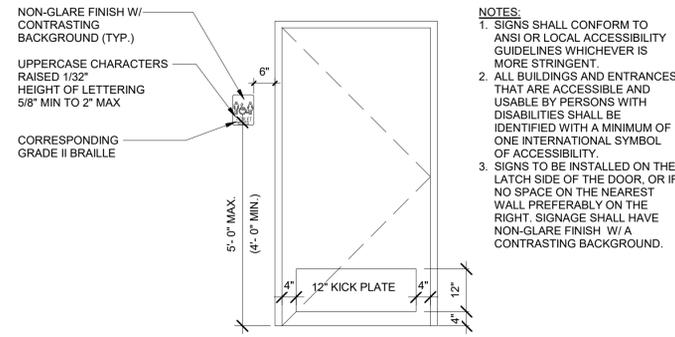
PROPOSED
ROOF PLAN

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	As indicated

A105



1 ACCESSIBLE SIGN PLAQUES
 1/2" = 1'-0"

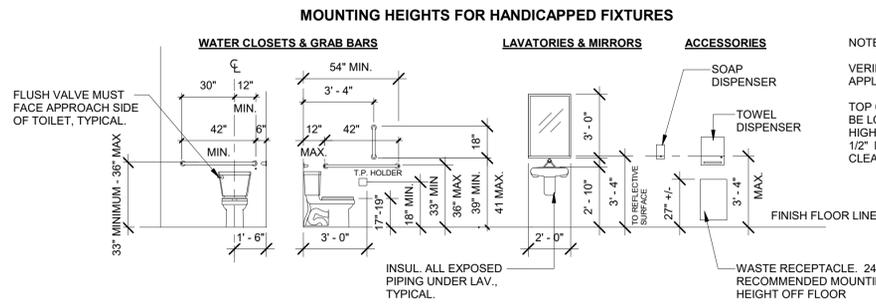


2 RESTROOM SIGNAGE
 1/2" = 1'-0"

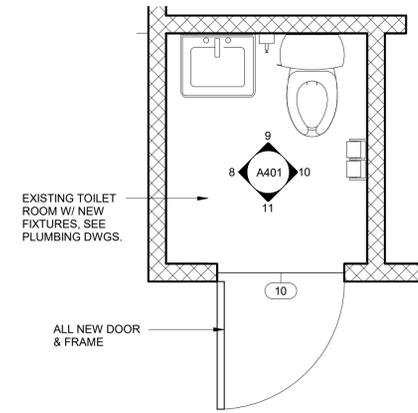
RESTROOM GENERAL NOTES:

- CONTRACTOR TO PROVIDE ONE (1) ADA COMPLIANT RESTROOM W/ TOILET, LAVATORY, ADA COMPLIANT GRAB BARS AND OTHER FIXTURES THAT SHALL BE PROVIDED PER CODE. RESTROOM IS EXISTING; CONTRACTOR TO CONFIRM THAT ALL FIXTURES AND ACCESSORIES ARE PRESENT, FUNCTIONAL AND ADA COMPLIANT.
- TOILET ACCESSORIES:
 - UNLESS OTHERWISE NOTED, MIRROR, GRAB BARS, SOAP DISPENSER, TOILET PAPER DISPENSER, COMBINATION PAPER TOWEL/ TRASH RECEPTACLE, SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
 - GENERAL CONTRACTOR TO PROVIDE ALL NECESSARY BLOCKING AS REQUIRED TO COMPLETE THE WORK. COORDINATE WITH DRAWINGS.
 - MOUNTING HEIGHTS: AS DETAILED ON THIS DRAWING SHEET.
 - QUANTITIES & SIZES: AS SHOWN ON THE DRAWINGS.
 - FIXTURES: AS SPECIFIED ON THE PLUMBING DRAWINGS.

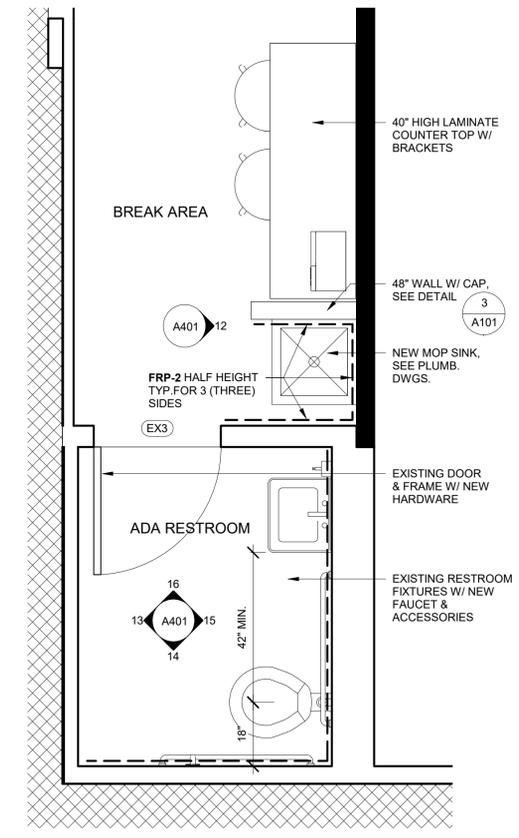
DESCRIPTION	MANUFACTURER	REMARKS
PAPER TOWEL DISPENSER & TRASH RECEPTACLE	GEORGIA-PACIFIC & BOBRICK	GEORGIA-PACIFIC 59590 SURFACE-MOUNTED WASTE RECEPTACLE WITH BOBRICK LINER MATE B-277 CONTURA SERIES
TOILET PAPER DISPENSER	BOBRICK	SURFACE- MOUNTED
SOAP DISPENSER	GEORGIA-PACIFIC	GEORGIA-PACIFIC AUTOMATIC SOAP DISPENSER - PACIFIC 53010
HANDICAP GRAB BARS	BOBRICK	BOBRICK BRUSHED ALUMINUM FINISH INSTALL TO COMPLY WITH ADA REQUIREMENTS. PROVIDE TWO 42" HORIZ GRAB BARS (B-5806 x 42), ONE 18" VERT GRAB BAR (B-5806 x 18)
MIRROR	BOBRICK	BOBRICK B-209 2436 WELDED-FRAME MIRROR. CENTER MIRROR OVER SINK. BOTTOM EDGE OF MIRROR REFLECTING SURFACE NO HIGHER THAN 40" A.F.F. MAX.
ADA-COMPLIANT UNDERSINK PIPE INSULATION/PROTECTION	TRUEBRO OR APPROVED EQUAL	LAV GAURD 2 TO COVER SANITARY PIPING & BOTH HOT & COLD WATER SUPPLY PIPING (INCLUDING VALVES)



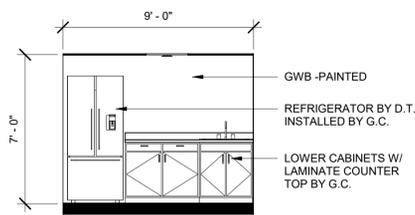
3 ADA COMPLIANT MOUNTING HEIGHT
 1/4" = 1'-0"



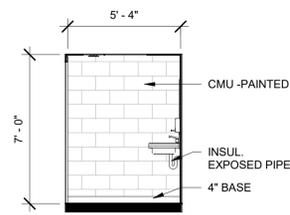
4 UNISEX STAFF RESTROOM
 1/2" = 1'-0"



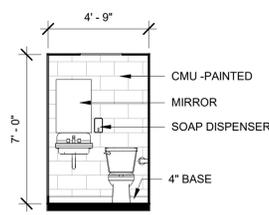
5 UNISEX ADA RESTROOM
 1/2" = 1'-0"



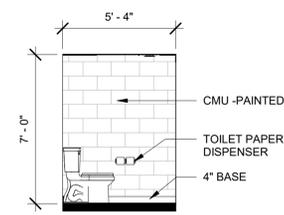
7 BREAKROOM
 1/4" = 1'-0"



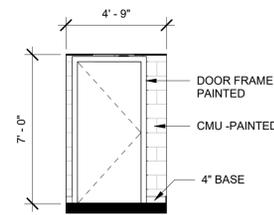
8 LEFT
 1/4" = 1'-0"



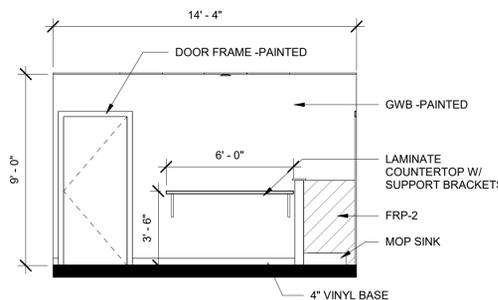
9 REAR
 1/4" = 1'-0"



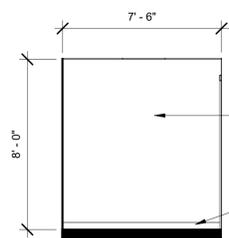
10 RIGHT
 1/4" = 1'-0"



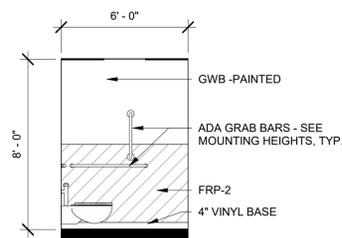
11 FRONT
 1/4" = 1'-0"



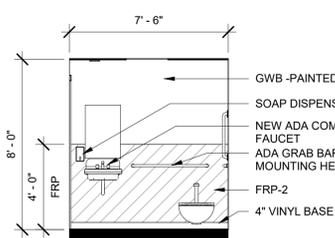
12 BREAK AREA
 1/4" = 1'-0"



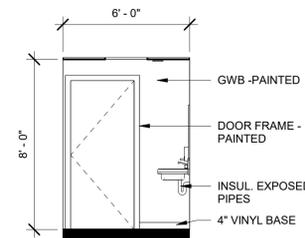
13 ADA - LEFT
 1/4" = 1'-0"



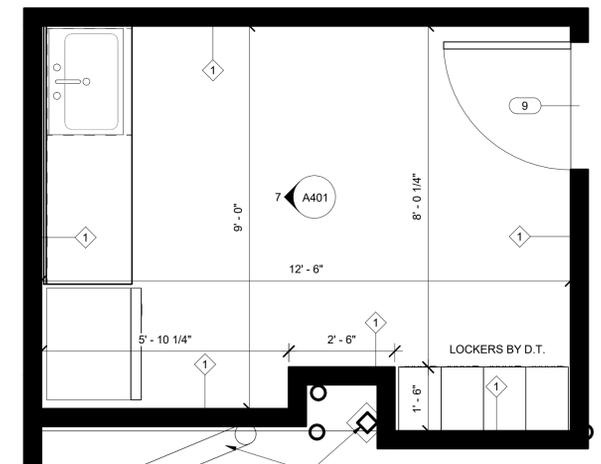
14 ADA - FRONT
 1/4" = 1'-0"



15 ADA - RIGHT
 1/4" = 1'-0"



16 ADA - REAR
 1/4" = 1'-0"



6 BREAK ROOM
 1/2" = 1'-0"

Revision Schedule	Date
1	6/30/20

Scott Griffin ARCHITECTS
 880 Main Street, Fifth Floor
 Waltham, Massachusetts 02451
 Phone (781) 683-7400 Fax (781) 693-7350

DAILY TABLE
 684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

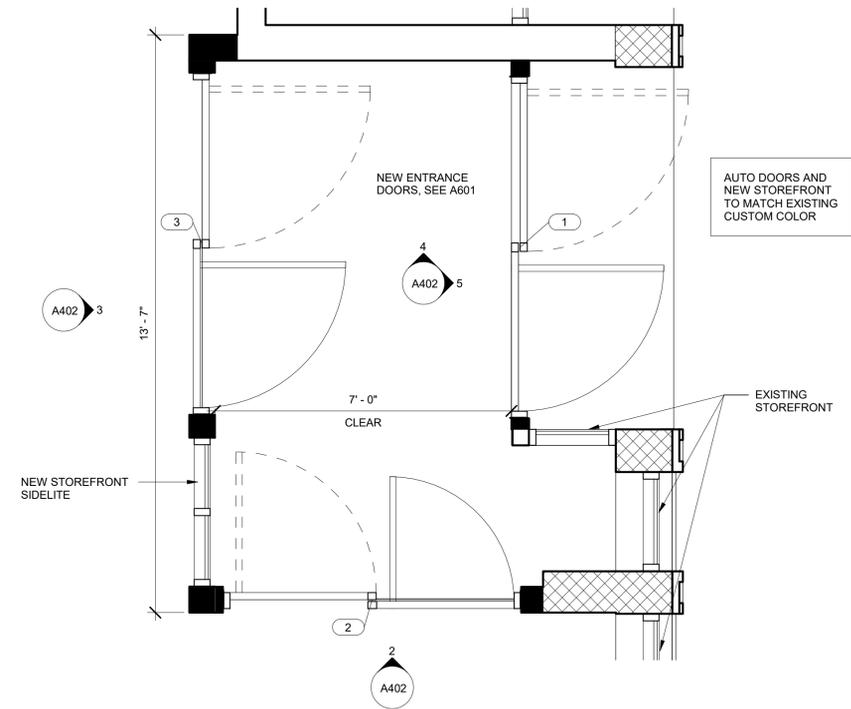
ENLARGED PLANS & DETAILS

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	As indicated

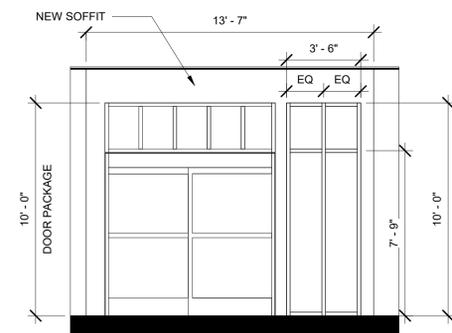
A401



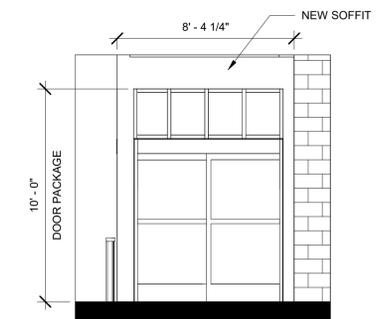
8 MASSACHUSETTS AVE. ELEVATION
1/4" = 1'-0"



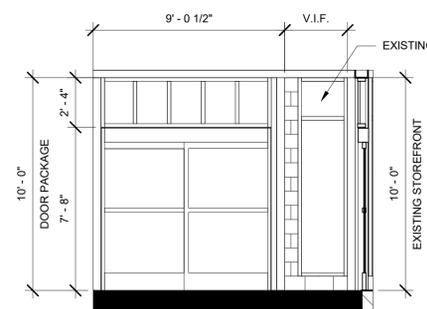
1 PROPOSED VESTIBULE
1/2" = 1'-0"



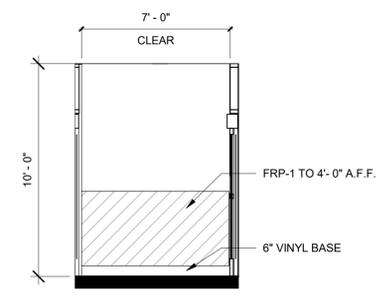
3 ENTRANCE - INTERIOR
1/4" = 1'-0"



2 EXIT - INTERIOR
1/4" = 1'-0"



5 ENTRANCE - VESTIBULE
1/4" = 1'-0"



4 VESTIBULE - SIDE WALL
1/4" = 1'-0"

Revision Schedule	Description	Date
# 1	ISSUED FOR PERMIT & PRICING	6/30/20

STAMP

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DAILY TABLE
 684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

ENLARGED
 PLANS &
 DETAILS

DATE	6/30/2020
DRAWN BY	MJD
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SCALE	As indicated

A402

HARDWARE SCHEDULE	
HARDWARE SET #1	HARDWARE SET #5
1 EA CYLINDER W/ THUMBTURN 1 EA MORTISE CYLINDER BALANCE BY AUTO DOOR MANUF.	3 EA HINGE 4.5 X 4.5 1 EA PRIVACY LOCKSET 1 EA KICK PLATE 10" X 2" LDW 1 EA WALL STOP 3 EA SILENCER 1 MARBLE THRESHOLD - SEE COMMENTS
HARDWARE SET #2	HARDWARE SET #6
3 EA HINGE 4.5 X 4.5 1 EA PUSH PLATE 4" X 16" 1 EA PULL PLATE 4" X 16" 1 EA SURFACE CLOSER 1 EA KICK PLATE 10" X 2" LDW 1 EA FLOOR/WALL STOP (SEE PLAN) 3 EA SILENCER	3 EA HINGE 4.5 X 4.5 1 EA STOREROOM LOCK 1 EA KICK PLATE 10" X 2" LDW 1 EA WALL STOP 3 EA SILENCER PROVIDE LOUVER
HARDWARE SET #3	HARDWARE SET #7
6 EA HINGE 5 X 4.5 1 EA DOOR COORD 1 EA MORTISE CYLINDER BALANCE & INTERLOCK CONNECTION BY LIFT MANUF.	3 EA HINGE 5 X 4.5 1 EA STOREROOM LOCK 1 EA RIM EXIT DEVICE W/ EXTERIOR LEVER 1 EA MORTISE CYLINDER 1 EA LATCH GUARD 1 EA SURFACE CLOSER 1 EA KICK PLATE 10" X 2" LDW WEATHER GASKETING
HARDWARE SET #4	
3 EA HINGE 4.5 X 4.5 1 EA PASSAGE LOCK 1 EA SURFACE CLOSER 1 EA KICK PLATE 10" X 2" LDW 1 EA WALL STOP 3 EA SILENCER	

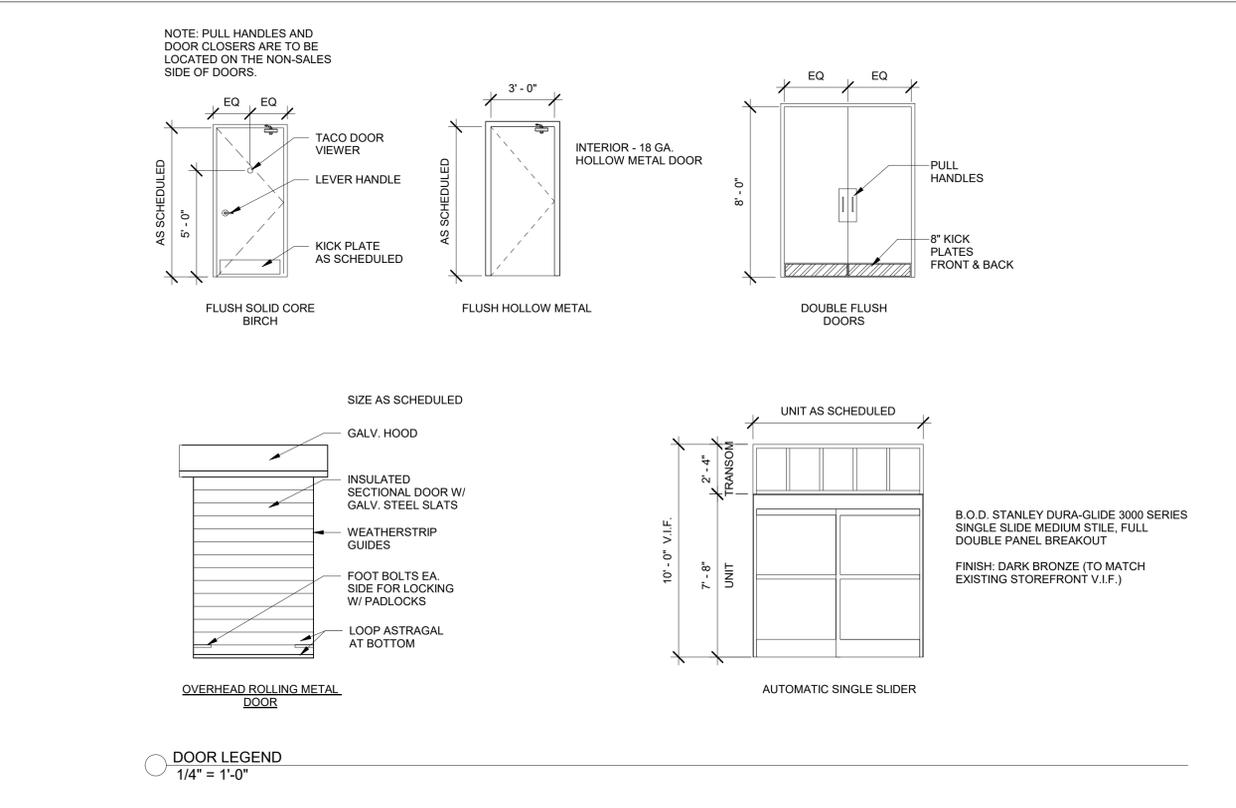
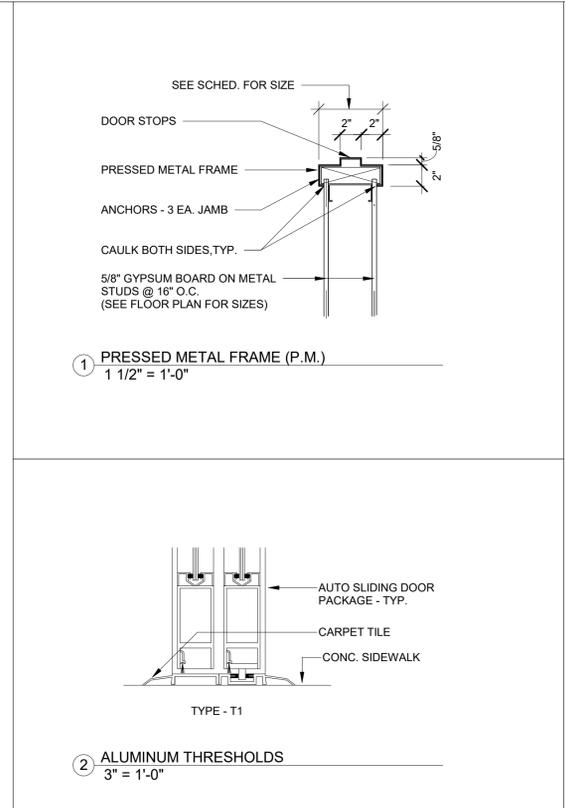
NOTE: PROVIDE HEAVY DUTY HINGES ON ALL DOORS LARGER THAN 3'-0", TYP.

DOOR SCHEDULE											
MARK	FROM	TO	WIDTH	HEIGHT	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	THRESHOLD	FIRE RATING	HW SET	COMMENTS
1	EXTERIOR	VESTIBULE	8' - 0"	7' - 8"	AUTOMATIC SINGLE SLIDER UNIT	ALUM/ GLASS	UNIT	ALUM.		1	WITH TRANSOM
2	CHECKOUT	VESTIBULE	7' - 0"	7' - 8"	AUTOMATIC SINGLE SLIDER UNIT	ALUM/ GLASS	UNIT	ALUM.		1	WITH TRANSOM
3	VESTIBULE	SALES AREA	8' - 0"	7' - 8"	AUTOMATIC SINGLE SLIDER UNIT	ALUM/ GLASS	UNIT	ALUM.		1	WITH TRANSOM
4	SALES AREA	CASH OFFICE	3' - 0"	7' - 0"	SINGLE FLUSH	S.C. WOOD - CLR. FINISHED BIRCH	P.M.	-		2	
5	SALES AREA	BREAK AREA	3' - 0"	7' - 0"	SINGLE FLUSH	S.C. WOOD - CLR. FINISHED BIRCH	P.M.	-		2	
6	SALES AREA	MATERIAL LIFT	5' - 0"	8' - 0"	DOUBLE FLUSH	HOLLOW METAL -PAINTED	P.M.	-		3	ALIGN OPENING W/ SERIES D MATERIAL LIFT; INTERLOCK BY LIFT INSTALLER
6-ALT	SALES AREA	MATERIAL LIFT	5' - 0"	8' - 0"	DOUBLE FLUSH	HOLLOW METAL -PAINTED	P.M.	-		3	ALIGN OPENING W/ SERIES M MATERIAL LIFT ALT -1; INTERLOCK BY LIFT INSTALLER
7-ALT	MATERIAL LIFT	EXTERIOR	5' - 0"	8' - 0"	OVERHEAD COILING DOOR	STEEL	STL. CHANNEL	-		-	EXTERIOR DOOR FOR ALT -1; INTERLOCK BY LIFT INSTALLER
8	STAIRS	COMMON AREA	3' - 0"	6' - 8"	SINGLE FLUSH	HOLLOW METAL -PAINTED	EXISTING	-	30 MIN.	4	NEW DOOR IN EXISTING FRAME
9	COMMON AREA	BREAK ROOM	3' - 0"	6' - 8"	SINGLE FLUSH	S.C. WOOD - CLR. FINISHED BIRCH	P.M.	-		2	
10	GROCERY STORAGE	TOILET	3' - 0"	6' - 8"	SINGLE FLUSH	S.C. WOOD - CLR. FINISHED BIRCH	P.M.	-		5	
11	GROCERY STORAGE	FREEZER BOX	3' - 6"	6' - 8"	COOLER DOOR	INSULATED METAL	UNIT	DIAMOND PLATE		-	BY COOLER MANUF.
12	GROCERY STORAGE	COOLER BOX	3' - 6"	6' - 8"	COOLER DOOR	INSULATED METAL	UNIT	DIAMOND PLATE		-	BY COOLER MANUF.
13	ADDITIONAL STORAGE	GROCERY STORAGE	2' - 6"	6' - 8"	SINGLE FLUSH	S.C. WOOD - CLR. FINISHED BIRCH	P.M.	-		6	
EX1	SALES AREA	STAIRS	3' - 0"	7' - 0"	EXISTING	-	-	-		4	NEW HARDWARE FOR EXISTING DOOR
EX2	BREAK AREA	EXTERIOR	3' - 6"	7' - 0"	EXISTING	-	-	-		7	NEW HARDWARE FOR EXISTING DOOR
EX3	BREAK AREA	RESTROOM	3' - 0"	7' - 0"	EXISTING	-	-	MARBLE		5	NEW HARDWARE FOR EXISTING DOOR
EX4	COMMON AREA	COMMON ELECTRIC	3' - 0"	7' - 0"	EXISTING	-	-	-		-	NO WORK
EX5	GROCERY STORAGE	EXTERIOR EXIT STAIRS	2' - 6"	7' - 0"	EXISTING	-	-	-		7	NEW HARDWARE FOR EXISTING DOOR

* NOTE ALL EXISTING DOORS & FRAMES TO BE FIELD PAINTED.

STOREFRONT AND GLAZING NOTES:

- ALL STOREFRONT SHALL BE 2" x 4-1/2" EXTERIOR THERMALLY BROKEN ALUMINUM FRAME (B.O.D. KAWNEER TRI-FAB 451T OR EQUAL), COLOR: TO MATCH EXISTING
- ALL GLAZING AND STOREFRONT FRAMING SHALL MEET IECC 2015 ENERGY CODE REQUIREMENTS. WINDOW CONTRACTOR SHALL SUBMIT DOCUMENTATION INDICATING PERFORMANCE DATA FOR WHOLE ASSEMBLIES.
- ASSEMBLY U-FACTOR FOR STOREFRONT WINDOWS SHALL BE 0.38 OR BETTER. ASSEMBLY U-FACTOR FOR AUTOMATIC DOOR SHALL BE 0.77. SHGC FOR ALL GLAZING SHALL BE 0.40 OR BETTER.
- ALL WINDOWS AND STOREFRONT DOORS SHALL BE 1" INSULATED GLASS WITH 1/2" AIRSPACE AND LOW-E COATING ON #2 SURFACE. LOW-E COAT SHALL BE SOLARBAN-60, AND SHALL BE FURNISHED ON ALL GLASS INCLUDING DOORS, TRANSOM AND SIDELIGHTS.
- ALL FRAMING SHALL BE HIGH-PERFORMANCE WITH THERMAL BREAK (KAWNEER TRI-FAB 451T OR EQUAL). FRAMING MEMBERS SHALL MEET 20 PSF WINDLOADS, AND INCLUDE STIFFER MEMBERS OR STEEL INSERTS AS NECESSARY.
- EXTRUDED SILL FLASHING W/ END DAMS SHALL BE FURNISHED AT ALL UNIT SILLS.
- SHOP DRAWINGS SHALL BE SUBMITTED FOR ARCHITECT APPROVAL AND SHALL INCLUDE FRAMING MANUFACTURER, TYPE, SIZES, AND DETAILS, GLASS MANUFACTURER, TYPES, SIZES, SHGC, CENTER OF WINDOW AND WHOLE ASSEMBLY U-FACTORS. STANDARD MANUFACTURER WARRANTIES SHALL BE SUBMITTED WITH SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE CUT SHEETS FOR ALL HARDWARE PROVIDED BY THE WINDOW CONTRACTOR INCLUDING CLOSERS, HINGES, EXIT DEVICES, ETC.
- WINDOW CONTRACTOR RESPONSIBLE FOR VERIFYING CLASS-I VAPOR BARRIER IS IN PLACE PRIOR TO STOREFRONT INSTALLATION. VAPOR BARRIER SHALL BE TIED INTO THE EXTERIOR WATER RESISTIVE BARRIER, OR THE EXTERIOR WALL ENVELOPE.
- ALL DIMENSIONS TO BE FIELD VERIFIED.



Revision Schedule	Date
Description	6/30/20
#	ISSUED FOR PERMIT & PRICING
1	

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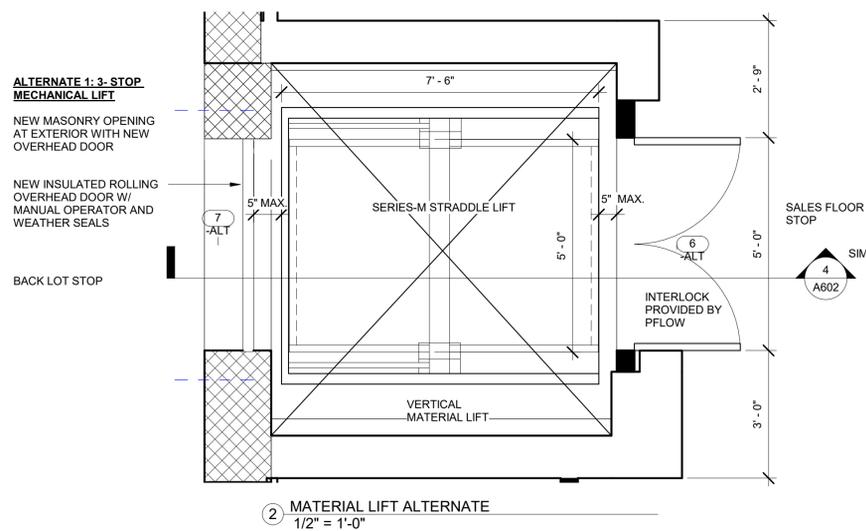
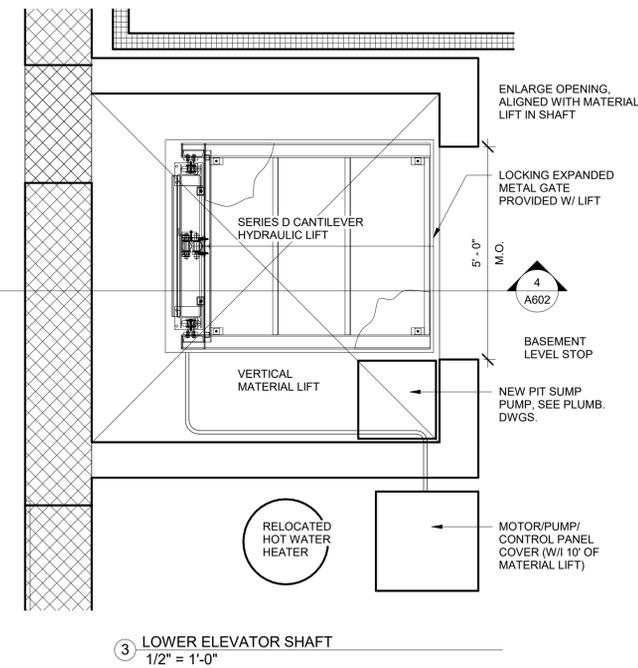
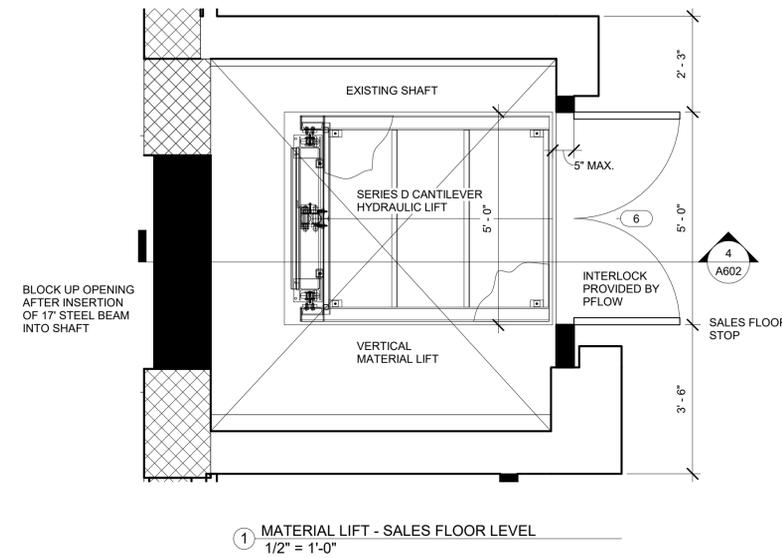
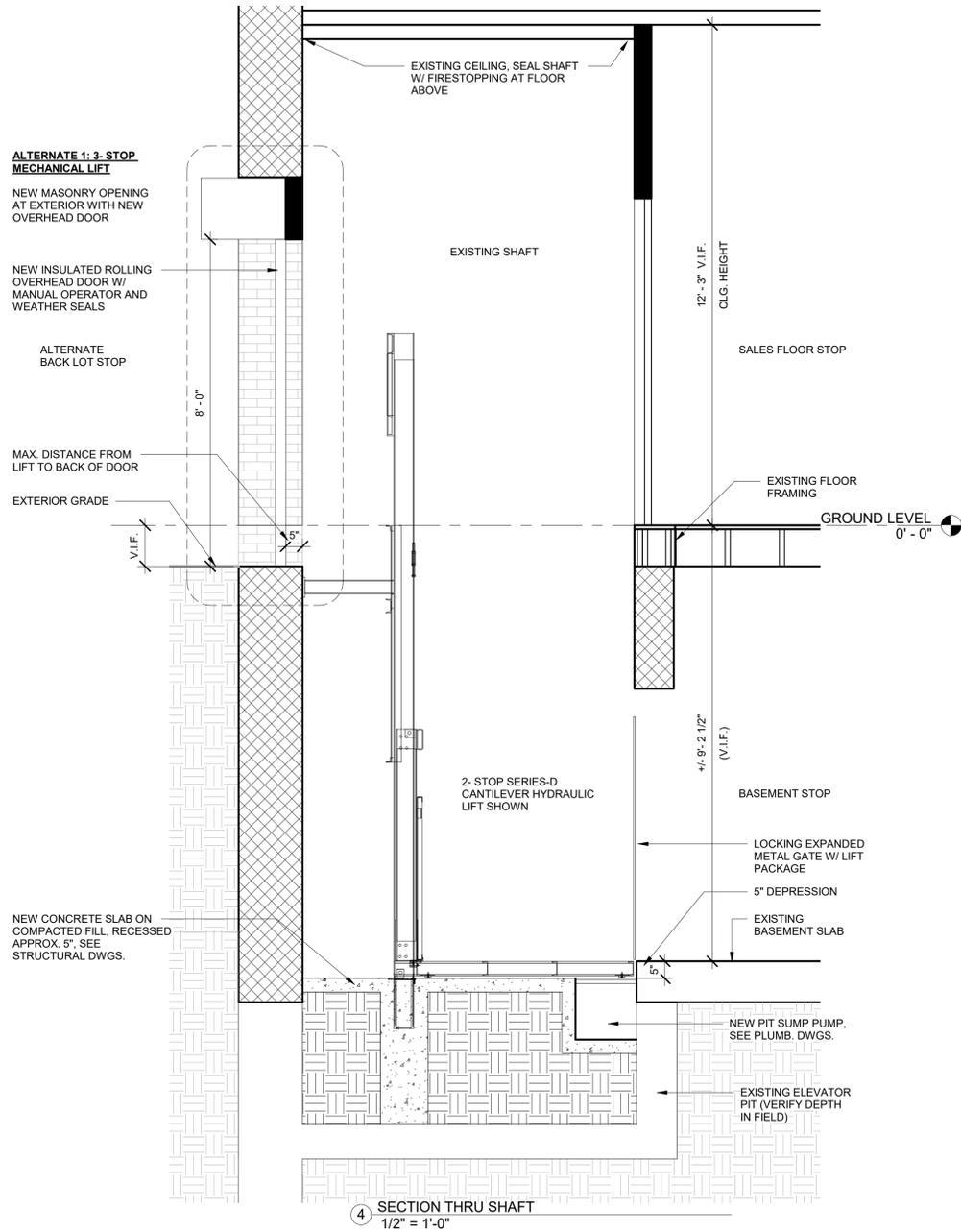
DAILY TABLE

684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

DOOR SCHEDULE & DETAILS

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	As indicated

A601



**BID ALTERNATE:
3-STOP MECHANICAL MATERIAL LIFT**

**BASIS OF DESIGN Pflow VRC Lift for Daily Table,
684 Mass Ave., Cambridge, MA**

Model: Series M
Configuration: Straddle
Capacity: 3,000 lbs.
Vertical Travel: 10' 0" (V.I.F.)
Levels: 3
Approximate Speed: 17 fpm
Carriage: 5' 0" W x 7' 6" L x 7' 0" H
Load Pattern: Z/C (loading/unloading on the length side)
Controls: 3-Level Call/Send
Floor Level Gates: Not by PFlow
Enclosures: Not by PFlow
Lift Location: Indoor
Operating Voltage: 208/3/60
Application: Shaftway
Pit/Ramp: Pit

2-STOP HYDRAULIC MATERIAL LIFT

**BASIS OF DESIGN: Pflow VRC Lift for Daily Table,
684 Mass Ave., Cambridge, MA**

Model: Series D
Configuration: Cantilever
Capacity: 3,000 lbs.
Vertical Travel: 10' 0" (V.I.F.)
Levels: 2
Approximate Speed: 17 fpm
Carriage: 5' 0" W x 5' 0" L x 7' 0" H
Load Pattern: C (loading/unloading on the length side)
Controls: 2-Level Call/Send
Floor Level Gates: Not by PFlow
Enclosures: Not by PFlow
Lift Location: Indoor
Operating Voltage: 208/3/60
Application: Shaftway
Pit/Ramp: Pit

SPECIAL FEATURES (included in base price unless otherwise noted):

- Diagonal drop bar on open end of the carriage (sensed in closed position).
- Illuminated push button stations at each level (allows operator to see what floor the carriage is on from any level), total 2.
- Safety buzzer in the upper level call/send push button station which annunciates if the door at the upper level is opened and the carriage is not present.
- Shaftway Safety Barrier at the upper level - This visual barrier provides additional protection for personnel if the upper level door is opened and the carriage is not present.
- Mandated by Massachusetts State and Local Codes:
- UL labeled control panel
- Carriage side guards to match load height
- Lower floor level enclosures to be minimum of 8' 0" H - NOT BY PFLOW - This unit will be enclosed in a shaftway by others
- Key operated pushbutton stations
- Overtravel and undetravel switches - Pflow is providing overtravel switches only, undetravel switches are not provided as carriage will sit on the floor
- Sealed relief valve not to exceed 150% of working pressure
- Over-speed (rupture) valve - hydraulic fluid line between the overspeed valve and the cylinder must be hard-piped
- Lockable gate valve on pump unit for simulated burst hose test.
- Light on carriage to provide 5-foot candles (54 lumens) of illumination on loading edge - Minimum two (2) lamps.
- Self-locking motor/pump/control panel cover.
- Column mounted manual maintenance pins with electrical proofing switches:
 Operating Sequence:
 • With gates closed, operator sends lift to the upper level.
 • Operator opens upper gate and pushes maintenance pins into place.
 • Limit switches on the guide columns act as a disconnect, disabling push button station functions.
 • Maintenance light is illuminated on control panel door.
 • Customer Lockout/Tagout (LO/TO) procedures are now followed to remove power from the lift.
 • Maintenance is now performed.
 • After completion of maintenance, customer LO/TO procedures are reversed.
 • Pins are manually pulled back in the stored position releasing the proofing limit switch.
 • Power is restored to the lift.
 • Gate is closed and lift can be placed back into service.

INSTALLATION REQUIREMENTS MANDATED BY MASSACHUSETTS STATE & LOCAL CODES - NOT BY PFLOW UNLESS OTHERWISE NOTED:

- An installation permit from the Department of Public Safety, inspection and 125% rated capacity load test is required. A safety cam rotation test or drop test may be required for units in which the carriage is raised and lowered by cable or chain (certified weights, if required, are not by PFlow). Please check with local building code official.
- Elevator mechanic's license and qualified welders are required for VRC installation, service, and/or maintenance
- Owner must provide adequate light. Minimum requirement of two (2) lamps to provide 10-foot candles (108 lumens) of illumination in lift space and area of controls and 5-foot candles (54 lumens) of illumination in loading area. Light switch to be provided in the machine room.
- Minimum two (2) lamps to provide 5-foot candles (54 lumens) of illumination on carriage loading edge(s) - BY PFLOW
- Owner must provide electrical outlet conforming to 527 CMR within 72" of control equipment.
- Owner to maintain onsite records of VRC operators
- Owner may be required to obtain certification letter from MA licensed structural engineer to confirm compliance with MA building code and 524 CMR 32.00.
- Inside of floor level gate panels must be within 5" of the carriage
- Fire-rated hoistway and doors may be required
- Hydraulic fluid line between the overspeed valve and the cylinder must be hard-piped.
- Electrical installer to provide a disconnect at the VRC motor.

DESCRIPTION:

Carriage - Constructed of heavy tube and channel with deckplate and 7' 0" high sheet metal on (3) sides of the carriage to accommodate a C loading pattern. Open end of carriage is protected by a diagonal drop bar. Carriage is designed to ship as one-piece construction and weighs approximately 1,601 lbs. Overall carriage dimensions are approximately 5' 5" W x 6' 2" L x 7' 5" H.
Backframe - Backframe is made up of 6" wide flange structural steel. Backframe ships in one-piece, braced together, and measures approximately 5' 5" W x 17' 1" L.
Lift Drive Mechanism - Carriage is lifted and lowered by two direct acting cylinders activated by a 5 HP remote mount, electric pump motor assembly.

Controls and Devices - One NEMA 12 rated main control panel and two NEMA 12 rated push button stations are provided to enable full call/send control from any level. Push button stations are self-maintained, momentary contact, and include a red mushroom E-stop. Physical stops are provided to position the carriage at each level. Control voltage is 24 VAC.

Floor Level Gates - Gates with elevator approved interlocks are required on all access sides at each level per ASME B20.1 Safety Standard for Conveyors. PFlow will provide the required electric mechanical interlocks for customer supplied door at each level - total, (2).

Level 1: PFlow expanded metal gate
Level 2: Not by PFlow

Floor Level Enclosures: Required on all non-access sides at each level per the ASME B20.1 Safety Standard for Conveyors.
Level 1: Not by PFlow
Level 2: Not by PFlow

Safety Features - Overtravel is prevented by positive mechanical stops. A pressure switch prevents carriage from drifting during load/unload operations. Redundant overload protection is provided to positively prevent raising of carriage if loaded to more than 120% of rated capacity. Velocity fuses prevent uncontrolled descent in the case of hose rupture. Check valves hold carriage position in the event of power loss.

Bracing Requirements - Bracing will be required for each column in two directions at minimum 20' 0" intervals. Please check the installation site to ensure adequate structure is available to be braced as described above. Contact factory for a quotation if special bracing is required.

Paint - Steel is painted with "PFlow Blue" industrial enamel. Steel is cleaned per SSPC-SP3 specifications.

CONTACT:

BARON INDUSTRIES, INC.
 Robert H. Knapp 207/651-3708
 sknapp@metrocast.net

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision	Schedule	Description	Date
1	ISSUED FOR PERMIT & PRICING		6/30/20

Scott Griffin ARCHITECTS

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DAILY TABLE

684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

MATERIAL LIFT PLANS & LIFT ALTERNATE

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	1/2" = 1'-0"

A602

<p>SECTION 02221 SELECTIVE DEMOLITION:</p> <p>1.1 SUMMARY:</p> <p>A. Selective Demolition</p> <ol style="list-style-type: none"> 1. Selective demolition of interior partitions, systems, and building components designated to be removed. 2. Selective demolition of exterior facade, structures, and components designated to be removed. 3. Protection of portions of building adjacent to or affected by selective demolition. 4. Removal of abandoned utilities and wiring systems. 5. Notification to Owner and adjacent tenants of schedule of shut-off of utilities which serve occupied spaces. 6. Pollution control during selective demolition, including noise control. 7. Removal and legal disposal of materials. <p>1.2 SUBMITTALS</p> <p>A. Schedule: Submit for approval selective demolition schedule, including schedule and methods for capping utilities to be abandoned and maintaining existing utility service.</p> <p>1.3 QUALITY ASSURANCE</p> <p>A. Comply with governing codes and regulations. Use experienced workers.</p> <p>B. Remove and store refrigerant according to regulations of authorities having jurisdiction.</p> <p>3.1 DEMOLITION</p> <p>A. Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is prohibited.</p> <p>B. Locate, identify, disconnect, and seal or cap off utilities in buildings to be demolished.</p> <p>C. Provide and maintain interior and exterior shoring and bracing. Engage the services of a structural engineer licensed in the jurisdiction of the project to design shoring and bracing.</p> <p>D. No explosives are permitted. No on-site burning is permitted.</p> <p>E. Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.</p> <p>F. Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.</p> <p>G. Provide adequate protection against accidental trespassing. Secure project after work hours.</p> <p>H. Provide temporary dust control for interior areas.</p> <p>END OF SECTION</p>	<p>3.1 INSTALLATION</p> <p>A. Vapor Retarders: ASTM E 1643. Lap joints a minimum of 6 inches and seal with tape as recommended by manufacturer.</p> <p>B. Reinforcing Materials: Fabricate, place and support in accordance with the CSRI Manual of Standard Practice. Repair damage to vapor retarders prior to placement of concrete.</p> <p>C. Concrete: ASTM C 94. Do not change mix design without approval. Calcium chloride admixtures are not permitted.</p> <p>D. Installation Tolerance: Plus 1/8 inch in 10 feet for grade, alignment, and straightness, complying with specified fitness tolerances.</p> <p>E. Joints: Form joints true to line and perpendicular to surface of concrete. Comply with the following:</p> <ol style="list-style-type: none"> 1. Construction Joints: Continue reinforcement through joint. 2. Isolation Joints: Provide between slabs and vertical elements such as columns and structural walls. 3. Joint Quality: Uniform in depth and appearance. <p>F. Slab Finishes: Obtain sample approval before beginning work.</p> <ol style="list-style-type: none"> 1. Scratch: For surfaces to receive mortar setting beds or cementitious flooring materials. 2. Trowel: Hard, smooth, uniform surface for areas to receive resilient flooring, carpet, or other thin finish material. 3. Broom: After trowel finishing, roughen surface by fine brooming perpendicular to traffic direction for exposed exterior walks, steps and ramps. 4. Hardener Finish: For exposed interior concrete floors. Follow manufacturer's directions. <p>G. Wall Finishes: As-cast and patched for concealed work; rubbed smooth, filled and cement paste coated for exposed work.</p> <p>H. Cure and protect work. Report defective work in writing. Remove and replace non-conforming work at no additional expense to the Owner.</p> <p>END OF SECTION</p> <p>SECTION 04200 UNIT MASONRY</p> <p>1.1 SUMMARY</p> <p>A. Provide unit masonry construction:</p> <ol style="list-style-type: none"> 1. Concrete masonry units. 2. Mortar, grout, reinforcing and masonry accessories. <p>1.2 SUBMITTALS</p> <p>A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.</p> <p>B. Submit mortar and grout mix designs.</p> <p>1.3 QUALITY ASSURANCE</p> <p>A. Source Limitations for Masonry Units: Obtain through one source from a single manufacturer for each product required.</p> <p>B. Fire Performance for Fire-Rated Brick and Concrete Block Assemblies: ASTM E 119.</p> <p>C. Testing: Independent Testing Laboratory.</p> <p>D. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.</p> <p>E. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.</p> <p>2.1 MATERIALS</p> <p>A. Concrete masonry units.</p> <ol style="list-style-type: none"> 1. Acceptable Manufacturers: A. Jandris & Sons, Inc. Barnes & Cone Fizzano Brothers Concrete Products, Inc. or Approved Alternate 2. Integral Water Repellent For Exterior Units Exposed to the Weather 3. Density Type: Normal Weight, as required by mix design/color choice, or thermal performance. 4. Insulated units to be reinforced and fully grouted, as indicated on structural dwgs. <p>B. Mortar and Grout:</p> <ol style="list-style-type: none"> 1. Mortar Mix: ASTM C 270, provide Type S, for exterior masonry and for reinforced masonry, masonry below grade and masonry in contact with earth and ASTM C 270, Type N, for above-grade load bearing and non-load bearing walls and parapet walls and for interior load bearing and non-load bearing partitions. 2. Mortar Materials: Portland cement, ASTM C 150, Type I or II. Masonry cements are not acceptable. 3. Mortar Aggregate: ASTM C 144. 4. Grout Aggregate: ASTM C 404. 5. Hydrated Lime: ASTM C 207, Type S. 6. Admixtures: Do not use admixtures or antifreeze compounds. 7. Color: Color pigmented mortar as selected by Architect where exposed and natural color elsewhere. <p>E. Integral Water Repellent for Exterior Units exposed to the weather:</p> <ol style="list-style-type: none"> 1. ACM Chemistries, Rainbloc. <p>F. Ties and Anchors:</p> <ol style="list-style-type: none"> 1. Rigid Anchors: Galvanized steel straps. 2. Unit Type Masonry Inserts in Concrete: Malleable iron. 3. Dovetail Slots: Galvanized sheet metal. 4. Anchor Bolts: ASTM A 307, Grade A, galvanized. 5. Post-installed Anchors: Chemical or expansion anchors. <p>G. Masonry Accessories:</p> <ol style="list-style-type: none"> 1. Refer to Section 05500 for masonry ties and items built into masonry. 2. Cavity drainage material by MortarNet. 3. Filler for open head weep joints by MortarNet, matching mortar color. 4. Nonmetallic expansion joint strips. 5. Preformed control joint gaskets. 6. Bond breaker strips. 7. Refer to Division 7 specification sections for through-wall flashing, insulation, dampproofing and air and vapor membranes as applicable. <p>3.1 INSTALLATION</p> <p>A. Installation of Masonry Assemblies:</p> <ol style="list-style-type: none"> 1. For corners and ends, standard units cut as shown on drawings. 2. DO NOT REMOVE INSERTS from pre-insulated concrete masonry units. 3. Comply with PCA Recommended Practices for Laying Concrete Block, Brick Institute of America BIA Tech Notes, and NCMA TEK Bulletins. 4. Comply with applicable codes and regulations for spacing of ties and horizontal reinforcing. 5. Provide masonry patterns and colored mortar and bond patterns as indicated on the Drawings. Set units true to line, plumb and level. Do not use damaged units. 6. Sawcut joints when required. Maintain uniform joint width. Provide full bed, head and collar joints except at weep holes. 7. Tool exposed exterior joints concave; strike joints full where air and vapor barrier coating is applied over inner wythe in cavity wall construction. Cut out and repair defective joints. 8. Install lintels and accessories in masonry construction. Grout lintels and bond beams using low-lift grouting techniques only. High-lift grouting is not acceptable. 9. Coordinate installation of flashings. 10. Provide expansion and control joints in accordance with BIA and NCMA recommendations, and at locations indicated on the Drawings. 11. Remove and replace damaged units. <p>B. Final Cleaning:</p> <ol style="list-style-type: none"> 1. Clean brick using bucket and brush method, BIA Tech Note 20. 2. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A, <i>Removal of Stains from Concrete Masonry</i>, applicable to type of stain on exposed surfaces, and NCMA TEK 8-34, <i>Cleaning Concrete Masonry</i>. 3. Comply with manufacturer's instructions, recommendations, and precautions. 4. Protect adjacent surfaces with masking agent or other effective means. 5. Provide uniform final appearance. <p>END OF SECTION</p>	<p>SECTION 05400 COLD FORM METAL FRAMING:</p> <p>1.1 SUMMARY:</p> <p>A. Provide cold-formed metal framing units:</p> <ol style="list-style-type: none"> 1. Exterior load-bearing steel-stud walls. 2. Interior nonload-bearing steel-stud walls. <p>B. Provide engineered, stamped drawings by a qualified engineer licensed in the jurisdiction of the Project.</p> <p>1.2 SUBMITTALS</p> <p>A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.</p> <p>B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.</p> <ol style="list-style-type: none"> 1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project. <p>C. Engineering Certification: Submit for approval engineering certification of deflection criteria.</p> <p>1.3 QUALITY ASSURANCE</p> <p>A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.</p> <p>B. Standards: AISI, Specification for Design of Cold-Formed Steel Structural Members.</p> <p>C. Deflection Criteria:</p> <ol style="list-style-type: none"> 1. Interior Walls: L/360. 2. Fabrication Tolerances: 1/8 inch in 10 feet. 3. Erection Tolerances: 1/8 inch from true position. <p>2.1 MATERIALS</p> <p>A. Operating Company Requirements for Cold-Formed Metal Framing:</p> <ol style="list-style-type: none"> 1. Refer to the Drawings. <p>B. Cold-Formed Metal Framing Materials:</p> <ol style="list-style-type: none"> 1. Wall Framing: C-shaped load-bearing steel studs. 2. Units 16 gauge (0588 inch) and heavier: ASTM A 653, yield point 50,000. 3. Units 18 gauge (0358 inch) and lighter: ASTM A 653, yield point 37,000 psi. 4. Finish: Galvanized, ASTM A 653, G60. 5. Finish: Prime-coated, rust-inhibitive primer. <p>C. Framing Accessories:</p> <ol style="list-style-type: none"> 1. Supplementary framing. 2. Bracing, bridging, and solid blocking. 3. Web stiffeners. 4. Gusset plates. 5. Deflection track and vertical slide clips. 6. Stud kickers and girts. 7. Joist hangers and end closures. 8. Reinforcement plates. 9. Anchors, clips, and fasteners. <p>3.1 INSTALLATION</p> <p>A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.</p> <p>B. Comply with requirements of ASTM C 1007 for installation of steel studs and accessories and Metal Lath/Steel Framing Association Lightweight Steel Framing Systems Manual.</p> <p>C. Restore damaged components. Protect work from damage.</p> <p>END OF SECTION</p> <p>SECTION 05500 METAL FABRICATIONS:</p> <p>1.1 SUMMARY:</p> <p>A. Provide the following metal fabrications:</p> <ol style="list-style-type: none"> 1. Cart corral railings: Stainless steel. 2. Pipe bollards: Steel, shop primed, field painted. 3. Rough hardware: Steel, shop primed, field painted. 4. Lintels for masonry walls: Steel, shop primed, field painted. 5. Stairs: Steel, shop primed, field painted. 6. Handrails: Steel, shop primed, field painted. <p>1.2 SUBMITTALS</p> <p>A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.</p> <p>B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.</p> <ol style="list-style-type: none"> 1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project. <p>1.3 QUALITY ASSURANCE</p> <p>A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.</p> <p>2.1 MATERIALS</p> <p>A. Operating Company Requirements for Metal Fabrications: Refer to the Drawings.</p> <p>B. Ferrous Materials:</p> <ol style="list-style-type: none"> 1. Steel Plates, Shapes and Bars: ASTM A 36. 2. Gray Iron Castings: ASTM A 48, Class 30. 3. Malleable Iron Castings: ASTM A 47, Grade 40, 32510. 4. Brackets, Flanges, and Anchors: Cast or formed metal. 5. Concrete Inserts: Threaded or wedge type. <p>C. Fasteners:</p> <ol style="list-style-type: none"> 1. Bolts and Nuts: Hexagon head type, ASTM A 307, Grade A. 2. Lag Bolts: Square head, FS FF-B-561. 3. Machine Screws: Cadmium plated steel, FS FF-S-92. 4. Wood Screws: Flat head carbon steel, FS FF-S-111. 5. Plain Washers: Round carbon steel, FS FF-W-92. 6. Drilled-In Expansion Anchors: FS FF-S-325. 7. Toggle Bolts: Tumble-wing type, FS FF-B-588. 8. Lock Washers: Spring type carbon steel, FS FF-W-84. 9. Zinc-Coating: Fasteners in exterior assemblies or exterior walls. <p>D. Auxiliary Materials:</p> <ol style="list-style-type: none"> 1. Nonshrink Nonmetallic Grout: ASTM C 1107. 2. Exterior/Interior Anchoring Cement: Erosion-resistant hydraulic expansion cement. 3. Shop Primer: Fast curing, lead- and chromate-free, universal modified-alkyd primer complying with MP#79, compatible with topcoats. <p>2.2 FABRICATION</p> <p>A. Ladders: ANSI A14.3.</p> <p>B. Pipe Bollards: Schedule 80 pipe, concrete filled.</p> <p>3.1 INSTALLATION</p> <p>A. Take field measurements prior to preparation of shop drawings and fabrication. Do not delay job; allow for cutting and fitting if field measurement not practical.</p> <p>B. Form work true to line with sharp angles and edges. Weld continuously, grind flush and make smooth on exposed surfaces.</p> <p>C. Install work plumb and level with hairline joints and ground flash welds.</p> <p>D. Touch-up damaged galvanized coatings with organic zinc repair paint.</p> <p>END OF SECTION</p>	<p>SECTION 06100 ROUGH CARPENTRY</p> <p>1.1 SUMMARY</p> <p>A. Provide rough carpentry:</p> <ol style="list-style-type: none"> 1. Framing with dimension lumber. 2. Rooftop equipment bases and support curbs. 3. Wood grounds and nailers. 4. Wood blocking. 5. Wood furring. 6. Plywood backing panels. 7. Plywood sheathing. 8. Plywood wall facing. 9. Building wrap. <p>1.2 SUBMITTALS</p> <p>A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.</p> <p>1.3 QUALITY ASSURANCE</p> <p>A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.</p> <p>B. Lumber Standards and Grade Stamps: DOC PS 20, American Softwood Lumber Standard and inspection agency grade stamps.</p> <p>C. Construction Panel Standards: DOC PS 1, U.S. Product Standard for Construction and Industrial Plywood, APA PRP-108.</p> <p>D. Wood Framing Standards: NFPA House Framing Manual.</p> <p>E. Preservative Treatment: AWPA C2 for lumber and AWPA C9 for plywood; waterborne pressure treatment. Provide for wood in contact with soil, concrete, masonry, roofing, flashing, dampproofing and waterproofing.</p> <p>F. Fire-Retardant Treatment: AWPA C20 for lumber and AWPA C27 for plywood; non-corrosive type. Provide where required by code and as indicated on the Drawings.</p> <p>2.1 MATERIALS</p> <p>A. Dimension Lumber:</p> <ol style="list-style-type: none"> 1. Light Framing: Stud, No. 3 or Standard grade. 2. Structural Framing: Select structural grade. 3. Structural Framing: No. 1 grade. 4. Species: Any species of grade indicated. 5. Exposed Framing: Appearance grade. <p>B. Boards:</p> <ol style="list-style-type: none"> 1. Exposed Boards: 15 percent moisture content. 2. Concealed Boards: 19 percent moisture content. <p>C. Miscellaneous Lumber:</p> <ol style="list-style-type: none"> 1. Moisture Content: 19 percent. 2. Grade: Standard grade light framing. <p>D. Construction Panels:</p> <ol style="list-style-type: none"> 1. Combination Subfloor/Underlayment: Exposure 1, Underlayment. 2. Plywood Subflooring: Exterior, Structural I. 3. Plywood Wall Sheathing: Exterior, Structural I. 4. Plywood Roof Sheathing: Exterior, Structural I sheathing. 5. Plywood Wall Panels for Exposed Installation: DOC PS 1, Exposure 1, C-D Plugged. 6. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated. <p>E. Auxiliary Materials:</p> <ol style="list-style-type: none"> 1. Building Wrap: Air-retarder sheathing made from polyolefins; cross-laminated films, woven strands, or spun-bonded fibers; coated or uncoated; with or without perforations; ASTM E 1677, Type I. 2. Sill Sealer Gaskets: Glass fiber strip resilient insulation. 3. Framing Anchors and Fasteners: Non-corrosive, suitable for load and exposure. Drywall screws are not acceptable. <p>3.1 INSTALLATION</p> <p>A. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated.</p> <p>B. Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial" for installation of plywood.</p> <p>C. Provide nailers, blocking and grounds where required. Blocking shall withstand anticipated load requirements for materials being supported with suitable safety factor. Set work plumb, level and accurately cut.</p> <p>D. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with other work.</p> <p>E. Comply with manufacturer's requirements for cutting, handling, fastening and working treated materials.</p> <p>F. Restore damaged components. Protect work from damage.</p> <p>END OF SECTION</p> <p>Section 06400 Architectural Woodwork:</p> <p>1.1 SUMMARY:</p> <p>A. Provide exterior architectural woodwork:</p> <ol style="list-style-type: none"> 1. Ornamental items. <p>B. Provide interior architectural woodwork:</p> <ol style="list-style-type: none"> 1. Plastic-laminate cabinets, countertops and slatwall. 2. Ornamental items. 3. Shop finishing of woodwork. 4. Shelving and closet specialties. <p>1.2 SUBMITTALS</p> <p>A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.</p> <p>B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.</p> <p>C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.</p> <p>1.3 QUALITY ASSURANCE</p> <p>A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.</p> <p>B. Standards: Architectural Woodwork Institute (AWI) "Architectural Woodwork Quality Standards."</p> <p>C. Preservative Treatment: Nonpressure method, exterior type, AWPA N1</p> <p>D. Fire-Retardant Treatment:</p> <ol style="list-style-type: none"> 1. Lumber: AWPA C20, non-corrosive type. 2. Plywood: AWPA C27, non-corrosive type. 3. Particleboard: ASTM E 84, flame spread 20 or less. <p>E. Wood Products: Comply with the following:</p> <ol style="list-style-type: none"> 1. Hardboard: AHA A135-4. 2. Medium-Density Fiberboard: ANSI A208.2, Grade MD-Exterior Glue. 3. Particleboard: ANSI A208.1, Grade M-2-Exterior Glue. 4. Softwood Plywood: DOC PS 1, Medium Density Overlay. 5. Hardwood Plywood and Face Veneers: HPVA HP-1. <p>2.1 MATERIALS, GENERAL</p> <p>A. Operating Company Requirements for Architectural Woodwork: Comply with specified requirements for each product and the following:</p> <ol style="list-style-type: none"> 1. Walls at Equipment Backboards, Time Clock, Telephone Panel and Refrigeration: 3/4 inch thick CDX plywood full height. <p>2.2 EXTERIOR MATERIALS</p> <p>A. Exterior Ornamental Items:</p> <ol style="list-style-type: none"> 1. Species for Transparent Finish: cedar. 2. Species for Opaque Finish: Any closed-grain hardwood. 3. Grade: Custom. 4. Finish: Clear sealer <p>B. Exterior Fasteners:</p> <ol style="list-style-type: none"> 1. Nails: Stainless steel, aluminum or hot-dip galvanized siding nails. 2. Screws and Anchors: Noncorrosive, type required for secure anchorage. <p>2.3 INTERIOR MATERIALS</p> <p>A. Interior Wood Casework:</p> <ol style="list-style-type: none"> 1. Species for Transparent Finish: As indicated on the Drawings. 2. Species for Opaque Finish: Closed grain hardwood. 3. Grade: Custom. 4. Face Style: Flush overlay. 5. Grain Matching: Vertical. 6. Veneer Matching of Leaves: Slip. 6. Veneer Matching In Panel Face: Running. <p>END OF SECTION</p>	<p>B. Interior Plastic Laminate Clad Casework:</p> <ol style="list-style-type: none"> 1. Manufacturers: Nevamar, Formica, Wilsonart, Pionite. 2. Laminate: High pressure decorative laminate, NEMA LD-3. 3. Grade: Custom. 4. Face Style: Flush overlay. 5. Frame Fabrication: Frameless. <p>C. Casework Hardware and Auxiliary Materials:</p> <ol style="list-style-type: none"> 1. Hardware Standard: ANSIBHMA A156.9. 2. Hardware Finish and Base Metal: Satin chromium plated steel. 3. Glass: Clear tempered glass, ASTM C 1048. <p>D. Interior Plastic Laminate Clad Countertops:</p> <ol style="list-style-type: none"> 1. Manufacturers: Nevamar, Formica, Wilsonart, Pionite as indicated on the Drawings. 2. Laminate: High pressure decorative laminate, NEMA LD-3. 3. Grade: Custom. 4. Core: As allowed by grade. 5. Edge: Laminate. <p>E. Interior Ornamental Items:</p> <ol style="list-style-type: none"> 1. Species for Transparent Finish: As indicated on the Drawings. 2. Species for Transparent Finish: Match existing. 3. Species for Opaque Finish: Closed grain hardwood. 4. Grade: Custom. <p>F. Shelving and Closet Specialties:</p> <ol style="list-style-type: none"> 1. Shelving: Birch plywood with hardwood edgeband. 2. Closet Rods: Chrome plated steel. <p>G. Auxiliary Materials:</p> <ol style="list-style-type: none"> 1. Screws: FS FF-S-111. 2. Nails: FS FF-N-105. 3. Anchors: Type required for secure anchorage. <p>H. Factory Finishing of Interior Architectural Woodwork AWI Section 1500:</p> <ol style="list-style-type: none"> 1. Transparent Finish: <ol style="list-style-type: none"> a. Grade: Custom. b. Stain: Color as selected by Architect. c. Sheen: Rubbed medium gloss. 2. Opaque Finish: <ol style="list-style-type: none"> a. Grade: Custom. b. Sheen: Rubbed medium gloss. <p>3.1 INSTALLATION</p> <p>A. Provide work to sizes, shapes, and profiles indicated. Install work to comply with quality standards referenced. Back prime work and install plumb, level and straight with light joints; scribe work to fit.</p> <p>B. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified for type of woodwork involved.</p> <p>C. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Use non-corrosive fasteners for exterior work. Coordinate with work of other sections.</p> <p>D. Comply with manufacturer's requirements for cutting, handling, fastening and working treated materials.</p> <p>E. Repair minor damage, clean and protect.</p> <p>END OF SECTION</p> <p>SECTION 07210 BUILDING INSULATION</p> <p>1.1 SUMMARY</p> <p>A. Provide building insulation.</p> <p>B. For roofing insulation, refer to Section 0753 - Elastomeric Sheet Roofing. Roofing insulation shall have a minimum value of R-30. The building envelope insulation must comply with ASHRAE 90.1 2013 OR local code (whichever is more stringent).</p> <p>1.2 SUBMITTALS</p> <p>A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.</p> <p>1.3 QUALITY ASSURANCE</p> <p>A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.</p> <p>2.1 MATERIALS</p> <p>A. Blanket Insulation:</p> <ol style="list-style-type: none"> 1. Type: Extruded polystyrene (XPS), rigid, ASTM C 578. 2. Application: <ol style="list-style-type: none"> a. Foundation walls (where required by local code or where indicated on the Drawings). b. Under slabs-on-grade (where required by code or where indicated on the drawings). 3. Products/Manufacturer (in order of application listed above): <ol style="list-style-type: none"> a. Styrofoam Square Edge by Dow; Formular 250 by Owens Corning; or equal b. Styrofoam Square Edge by Dow; Formular 250 by Owens Corning; or equal c. Styrofoam Golvymate SC by Dow; Formular 250 by Owens Corning; or equal <p>B. Blanket/Batt Insulation:</p> <ol style="list-style-type: none"> 1. Type: Mineral fiber, ASTM C 665, Type I (unfaced). 2. Application: <ol style="list-style-type: none"> a. Thermal insulation in studs in exterior walls of stores with non-prototypical design. b. Thermal insulation at underside of roofs, over heated spaces and over soffits. c. Thermal insulation over unheated areas. 3. Products/Manufacturer: <ol style="list-style-type: none"> a. Thermal Batt Fiberglas by Owens Corning; or equal <p>C. Sound Control Batt Insulation:</p> <ol style="list-style-type: none"> 1. Type: Unfaced fiberglass batts or blankets, ASTM E 84 2. Application: Insulation designed to reduce transmission of both sound and heat at Demising Walls and Restrooms. 3. Product/Manufacturer: Sound Attenuation Batt Insulation by Owens Corning or equal. <p>D. Spray-Applied Polyurethane Insulation:</p> <ol style="list-style-type: none"> 1. Type: Spray-in-place rigid closed-cell polyurethane insulation in assemblies indicated on the Drawings, to provide an air barrier and improved thermal resistance. 2. Manufacturer: Demilec, 3315 E. Division St.; Arlington TX 76011; Tel: (817) 640-4900; Toll Free: (888) 261-7705. <ol style="list-style-type: none"> a. Product: HEATLOK HF O Pro b. Manufacturer's Warranty: Demilec warrants spray-in-place urethane foam insulation, when installed by authorized contractors using factory-trained applicators and applied in accordance to the Installation Instructions, will perform as stated in the Product Technical Data Sheet. 3. Application: Exterior CMU walls. 4. Standard: ASTM C 1029. <p>E. Accessories:</p> <ol style="list-style-type: none"> 1. Adhesives and mechanical anchors and clips. 2. Protection board. 3. Crack sealers and tapes. <p>3.1 INSTALLATION</p> <p>A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Provide full thickness in one layer over entire area, tightly fitting around penetrations.</p> <p>B. Install vapor BARRIER over entire area of inside face of exterior walls and elsewhere as indicated. Seal all seams and around perimeter and penetrations with duct tape to form a continuous vapor BARRIER free of holes.</p> <p>C. Protect installed insulation and vapor BARRIER. Replace and/or patch areas that are damaged during construction operations or during the installation of products under the direction of other trades.</p> <p>END OF SECTION</p>	<table border="1"> <tr> <td>DATE</td> <td>6/30/2020</td> <td>Revision</td> <td>Schedule</td> </tr> <tr> <td>DRAWN BY</td> <td>MJD</td> <td>Description</td> <td>6/30/20</td> </tr> <tr> <td>CHECKED BY</td> <td>TS</td> <td>#</td> <td>1</td> </tr> <tr> <td>PROJECT NUMBER</td> <td>20028.00</td> <td colspan="2" style="text-align: center;">ISSUED FOR PERMIT & PRICING</td> </tr> <tr> <td>SCALE</td> <td>1/8" = 1'-0"</td> <td colspan="2" style="text-align: center;">STAMP</td> </tr> </table> <p style="text-align: center;">  </p> <p style="text-align: center;">  </p> <p style="text-align: center;"> 880 Main Street, Fifth Floor Waltham, Massachusetts 02451 Phone (781) 693-7400 Fax (781) 693-7350 </p> <p style="text-align: center;"> DAILY TABLE 684 MASSACHUSETTS AVE CAMBRIDGE, MA 02139 </p> <p style="text-align: center;"> SPECIFICATIONS -SHEET 1 </p>	DATE	6/30/2020	Revision	Schedule	DRAWN BY	MJD	Description	6/30/20	CHECKED BY	TS	#	1	PROJECT NUMBER	20028.00	ISSUED FOR PERMIT & PRICING		SCALE	1/8" = 1'-0"	STAMP	
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SECTION 07270 AIR AND VAPOR BARRIERS

1.1 SUMMARY
A. Provide continuous air and vapor barrier membrane at exterior walls and soffits as required by local codes.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Qualifications of Installer: Submit qualifications of firm installing air and vapor barrier membrane materials, including qualifications of supervisor and projects where similar work was performed by both firm and supervisor.
1.3 QUALITY ASSURANCE
A. Performance Requirements for Air Barrier Characteristics of Air and Vapor Barrier Membrane: Provide a continuous air barrier to control air leakage into, or out of the conditioned space.
2.1 MATERIALS
A. Operating Company Requirements for Air Barrier Characteristics of Air and Vapor Barrier Membrane: Refer to the Drawings.
B. Manufacturers: Trecco; Sealant/Weatherproofing Division, or approved equal.
C. Through-Penetration Firestop Systems: Subject to compliance with requirements, provide systems designed for use required, of one or more of the following types:
1. Endothermic, latex sealant and compounds
2. Intumescent latex sealant, putty and wrap strips.
3. Job-mixed vinyl compound.
4. Mortar.
5. Pillows/bags.
6. Silicone foams and sealants.
D. Fire-Resistive Elastomeric Joint Sealants:
1. Single-component, neutral-curing, silicone sealant.
2. Multi-component, nonsag, urethane sealant.
E. Perimeter Fire-Resistive Joint Systems: Provide ThermoFiber LLC, or approved equal.
3.1 INSTALLATION
A. Review extent of work with authorities having jurisdiction and obtain approval of installation thicknesses and methods.
B. Sequence work to avoid need for removal of firestopping by work of other trades.
C. Comply with manufacturers' instructions and recommendations.
D. Protect, inspect and repair work until final acceptance.

END OF SECTION
SECTION 07900 JOINT SEALERS:
1.1 SUMMARY
A. Provide joint sealers at interior and exterior vertical and horizontal joints.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Self-Adhering Air and Vapor Barrier Membrane: Self-adhering, self-sealing and self-healing rubberized asphalt integrally bonded to polyethylene film, nominal 40 mil thickness overall.
B. Fluid-Applied Air and Vapor Barrier Membrane (Option): Spray or trowel applied membrane applied at 1/8 inch thickness wet.
3.1 INSTALLATION
A. Clean substrate surfaces to receive air and vapor barrier membrane in accordance with manufacturer's instructions.
B. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
C. Protect installed work from damage due to harmful weather exposures, physical abuse, and other causes.
D. Provide temporary protection over air and vapor barrier membrane if materials covering air and vapor barrier membrane will not be installed within manufacturer's recommended time limit for exposure.
E. Repair damage to air and vapor barrier membrane caused by construction activities or subsequent work prior to covering by other construction assemblies.

END OF SECTION

SECTION 07600 FLASHING AND SHEET METAL:

1.1 SUMMARY
A. Provide flashing and sheet metal for the following applications:
1. Metal counterflashing and base flashing.
2. Sheet metal accessories.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Operating Company Requirements for Flashing and Sheet Metal: Refer to the Drawings.
B. Sheet Metal Flashing and Trim:
1. Zinc-Coated Steel: ASTM A 653, G90 hot-dip galvanized prefinished High-Performance Organic Finish, 2-Coat 70% Fluoropolymer, 20-gauge (.0359 inch).
2. Sheet Aluminum: ASTM B 209, alloy 3003, prefinished High-Performance Organic Finish, 2-Coat 70% Fluoropolymer.
C. Fabricated Units: Compliance with SMACNA Sheet Metal Manual.
D. Auxiliary Materials:
1. Mastic and elastomeric sealants.
2. Epoxy seam sealer.
3. Reglets and metal accessories.
3.1 INSTALLATION
A. Follow recommendations of SMACNA Sheet Metal Manual. Allow for expansion.
B. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
C. Restore damaged components and finishes. Clean and protect work from damage.

END OF SECTION

SECTION 07840 FIRESTOPPING:

1.1 SUMMARY
A. Provide firestopping at locations required by code.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Submit for approval test reports.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Operating Company Requirements for Firestopping: Refer to the Drawings.
B. Manufacturers: Grace, W. R. & Co., Hill, Inc., Nelson Firestop Products, 3M, Fire Protection Products Div., Tremco; Sealant/Weatherproofing Division, or approved equal.
C. Through-Penetration Firestop Systems: Subject to compliance with requirements, provide systems designed for use required, of one or more of the following types:
1. Endothermic, latex sealant and compounds
2. Intumescent latex sealant, putty and wrap strips.
3. Job-mixed vinyl compound.
4. Mortar.
5. Pillows/bags.
6. Silicone foams and sealants.
D. Fire-Resistive Elastomeric Joint Sealants:
1. Single-component, neutral-curing, silicone sealant.
2. Multi-component, nonsag, urethane sealant.
E. Perimeter Fire-Resistive Joint Systems: Provide ThermoFiber LLC, or approved equal.
3.1 INSTALLATION
A. Review extent of work with authorities having jurisdiction and obtain approval of installation thicknesses and methods.
B. Sequence work to avoid need for removal of firestopping by work of other trades.
C. Comply with manufacturers' instructions and recommendations.
D. Protect, inspect and repair work until final acceptance.

SECTION 07900 JOINT SEALERS:

1.1 SUMMARY
A. Provide joint sealers at interior and exterior vertical and horizontal joints.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Latex Joint Sealants for Interior Joints with Limited Movement:
1. Manufacturers: Pecora Corporation, Polymeric Systems, Inc., Sonneborn Building Products, Tremco, or approved equal.
2. Type: Acrylic-emulsion, ASTM C 834.
B. Fire-Resistive Joint Sealers for Penetrations in Fire-Rated Assemblies:
1. Manufacturers: Pecora Corp., Sika Corp., Sonneborn, Division of ChemRex Inc., Tremco, or approved equal.
2. Type: Foamed-in-place fire-stopping sealants.
3. Type: One part fire-stopping sealant.
C. Exterior Joints in Composite Fiber Cement Panels, Silicone:
1. Manufacturers: Dow Corning 756 SMS or approved equal.
2. Type: One part, pre-pigmented, neutral cure sealant.
D. Exterior Joints in Vertical Surfaces, Silicone:
1. Manufacturers: Dow Corning; GE Silicones; Tremco; or approved equal.
2. Type: Two component silicone sealant.
E. Exterior Joints in Vertical Surfaces, Urethane:
1. Manufacturers: Pecora Corp.; Sika Corp.; Sonneborn; Tremco; or approved equal.
2. Type: Two component urethane sealant.
F. Exterior Joints in Vertical Surfaces, Preformed Compression Seals:
1. Manufacturers: Watson-Bowman Acme Corp.; or approved equal.
2. Type: Preformed precompressed foam sealant.
G. Exterior Joints in Horizontal Surfaces, Urethane:
1. Manufacturers: Pecora Corp.; Sandell Construction Solutions; Sika Corp.; Sonneborn; Tremco; or approved equal.
2. Type: Self-leveling urethane sealant, ASTM C 920.
H. Auxiliary Materials:
1. Plastic foam joint fillers.
2. Elastomeric tubing backer rods.
3. Bond breaker tape.
3.1 INSTALLATION
A. Examine substrate; report unsatisfactory conditions in writing.
B. Provide sealants in colors as selected from manufacturer's standards.
C. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
D. Depth shall equal width up to 1/2 inch wide; depth shall equal 1/2 width for joints over 1/2 inch wide.
E. Cure and protect sealants as directed by manufacturers.

END OF SECTION

SECTION 08110 STEEL DOORS AND FRAMES:

1.1 SUMMARY
A. Provide steel doors and frames.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Operating Company Requirements for Steel Doors and Frames: Refer to the Drawings.
B. Manufacturers: L Series by Steelcraft Manufacturing, or equal by Arneweld Building Products, Ceco Door Products, Republic Builders, or approved equal.
C. Steel Doors:
1. Door Type: Standard seamless steel doors with hollow or composite construction.
2. Interior Doors: ANSI/SDI-100, Grade II, standard-duty, level C, minimum 18 gauge cold-rolled steel, 1-3/4 inches thick.
3. Exterior Doors: ANSI/SDI-100, Grade III, heavy-duty, minimum 16 gauge galvanized steel sheet, 1-3/4 inches thick.
4. Accessories:
a. Sighthproof stationary louvers
b. Glazing stops.
5. Finish: Factory primed and field painted.
D. Steel Frames:
1. Interior Frames:
a. Material: Sheet steel.
b. Corners: Mitered or coped.
c. Type: Knockdown.
d. Thickness: 16 gauge (.0598 inch).
2. Accessories:
a. Adjustable jamb anchors.
b. Vision panel frames.
c. Clip angles at bottom of jamb.
d. Drilling for door silencers.
e. Metal drip edge at exterior doors.
f. Metal rain hood at exit doors.
3. Finish: Factory primed and field painted.

END OF SECTION

SECTION 08210 WOOD DOORS:

1.1 SUMMARY
A. Provide flush wood doors.
B. Refer to Division 15 for louver requirements.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Operating Company Requirements for Wood Doors: Refer to the Drawings.
B. Refer to the Drawings.
C. Interior Solid Core Doors for Transparent Finish:
1. Thickness: 1-3/4 inches thick.
2. Grade: AWI Custom Grade.
3. Construction: 5-ply construction.
4. Core for Non-Fire-Rated Doors: Particleboard, ANSI A208.1, Grade LD-2.
5. Core for Fire-Rated Doors: Solid mineral core.
6. Face: Rotary cut white birch.
7. Preparation for Hardware: Factory machining; coordinated with specified hardware.
8. Shop Finish: AWI Custom Grade, catalyzed polyurethane finish.
D. Interior Solid Core Doors for Opaque Finish:
1. Thickness: 1-3/4 inches thick.
2. Grade: AWI Custom, Grade 3.
3. Construction: 5-ply construction.
4. Core for Non-Fire-Rated Doors: Particleboard, ANSI A208.1, Grade LD-2.
5. Core for Fire-Rated Doors: Solid mineral core.
6. Face: Medium density overlay (MDO).
7. Preparation for Hardware: Factory machining; coordinated with specified hardware.
8. Shop Finish: Manufacturer's recommended primer compatible with field-applied finish coats.

3.1 INSTALLATION
A. Prefit doors to frames.
B. Install doors in accordance with manufacturer's recommendations.
C. Comply with NFPA 80 for installation of fire-rated assemblies.
D. Adjust for proper operation, clean, and protect.

END OF SECTION

SECTION 08310 ACCESS DOORS AND PANELS:

1.1 SUMMARY
A. Provide access doors and panels for walls and ceilings.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Comply with specified requirements for each product and the following:
1. Milcor Style M, 24 by 24 inches painted steel.
B. Manufacturers: Acudor, J. L. Industries, Karp Associates, Milcor, Nystrom or approved equal.
C. Access Doors:
1. Frames: 16-gauge (.0598 inch) sheet steel with flange suitable for adjacent material.
2. Doors: 14-gauge (.0625 inch) sheet steel.
3. Door Type: Flush panel.
4. Locking Devices: Screw-driver cam type.
5. Fire Rating: NFPA 80.

3.1 INSTALLATION
A. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
B. Restore damaged finishes and test for proper operation.
C. Clean and protect work from damage.

END OF SECTION

SECTION 08333 COILING DOORS:

1.1 SUMMARY
A. Provide overhead coiling doors.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Coiling Doors: Comply with specified requirements for each product and the following:
1. Overhead Coiling Doors at Receiving Areas: Cornell Iron Works
2. Thermisil Door: Overhead Door Corporation Stormite 625, Raynor Garage Doors Series IF, Metro Door Model IFC, or Dynamic Closures Corp. Insul-Air, 20 gauge curved galvanized steel slats, chain-operated insulated doors, factory painted.
3. Fire-Rated Doors: Cornell Rolling Fire Door, A label, with M60-FireGard System and Motor Operator M-29, vertical bracket mounted.
B. Overhead Coiling Doors:
1. Type: Insulated standard service door, exterior use.
2. Type: Standard service door, fire rated, interior use.
3. Type: Interior counter use, non-fire-rated.
4. Type: Interior counter use, fire-rated.
5. Door Curtain: Galvanized steel sheet, ASTM A 653, with ASTM A 653, G90 coating.
6. Slat Profile: Flat-face slats.
7. Bottom Bar: Steel angles.
8. Operation: Chain hoist.
9. Steel Finish: Polyester powder coating over galvanizing.
C. Auxiliary Materials:
1. Helical torsion spring counterbalance
2. Hood for curtain and operating mechanism.
3. Windlocks, end locks, jamb guides, and weatherstripping.
4. Automatic reversing control for bottom bar for electric door operator.
5. Vision panels.
6. Provision for padlocking.

3.1 INSTALLATION
A. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
B. Install assemblies complete with all hardware, anchors, inserts, supports and accessories.
C. Restore damaged finishes and test for proper operation.

END OF SECTION

SECTION 08411 ALUMINUM FRAMED ENTRANCES AND STOREFRONT:

1.1 SUMMARY
A. Provide aluminum entrances and storefront.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
C. Warranty: Submit manufacturer's standard warranty.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Comply with specified requirements for each product and the following:
1. Kawneer Tri-Fab 450 (single glazed) and Kawneer Tri-Fab VG 451 (insulating glass) with finish indicated on drawings, or equal by U.S. Aluminum or Vistawall.
B. Aluminum Entrances and Storefront:
1. Aluminum Members: ASTM B 209, ASTM B 221, ASTM B 429.
2. Steel Reinforcement: ASTM A 36, ASTM A 1008, and ASTM A 1011.
3. Door Style: Medium stile and rail doors unless indicated otherwise on the Drawings.
4. Glass and Glazing: Insulated glass, tempered.
5. Glazing Color: Clear glass.
6. Door Hanging Devices: Ball bearing butts.
7. Closers: Surface mounted.
8. Close Operation: Single acting closers.
9. Aluminum Finish: As indicated on drawings.
C. Auxiliary Materials:
1. Aluminum infill panels.
2. Push/pulls, doorstops, overhead holders, and deadlocks.
3. Weatherstripping and thresholds.
4. Exit devices.

3.1 INSTALLATION
A. Take field measurements before fabrication where possible; do not delay job progress.
B. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
C. Anchor securely in place; install plumb, level and in true alignment.
D. Coordinate with glass and glazing work; install hardware and adjust for smooth, proper operation.
E. Clean and protect completed system; repair damage.

END OF SECTION

SECTION 08460 AUTOMATIC ENTRANCE DOORS:

1.1 SUMMARY
A. Provide automatic entrance doors.
1.2 SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
C. Warranty: Submit manufacturer's standard warranty.
1.3 QUALITY ASSURANCE
A. Comply with governing codes and regulations.
2.1 MATERIALS
A. Auxiliary Materials:
1. Controls, safety devices, finger guards, hold open devices.
2. Tempered glass as specified in Section 08800.
3. Weatherstripping and thresholds.
4. Refer to Section 08710 - Hardware for hardware requirements.

3.1 INSTALLATION
A. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
B. Restore damaged finishes and test for proper operation.
C. Clean and protect work from damage.

END OF SECTION

Revision Schedule table with columns for Date, Description, and #. Includes a circular stamp for Scott Griffin Architects and contact information: 880 Main Street, Fifth Floor, Waltham, Massachusetts 02451, Phone (617) 693-7400 Fax (781) 693-7350.

Scott Griffin ARCHITECTS logo and address: 684 MASSACHUSETTS AVE, CAMBRIDGE, MA 02139.

DAILY TABLE

SPECIFICATIONS -SHEET 2

Table with columns: DATE (6/30/2020), DRAWN BY (MJD), CHECKED BY (TS), PROJECT NUMBER (20028.00), SCALE (1/8" = 1'-0").

AS02

SECTION 08710 DOOR HARDWARE:

1.1 SUMMARY

- A. Provide door hardware and accessories. Refer to the Door and Hardware Schedule on the Drawings.
- 1.2 SUBMITTALS**
- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Finish Hardware Schedule: Submit for approval hardware schedule proposed for use based on hardware sets specified in this Section and Owner's requirements. Include the following:
 - Type, style, function, size, and finish of each hardware item.
 - Name and manufacturer of each item.
 - Fastenings and other pertinent information.
 - Location of each hardware set cross-referenced to indications on Drawings.
 - Explanation of abbreviations, symbols, and codes contained in schedule.
 - Mounting locations for hardware.
 - Door and frame sizes and materials.
 - Name and phone number for the local manufacturer's representative for each product.
 - C. Key Schedule: After a keying meeting between representatives of the Owner, Architect, hardware supplier, and, if requested, the representative for the lock manufacturer, provide a keying schedule, listing the levels of keying, as well as an explanation of the key system's function, the key symbols used, and the door numbers controlled.
 - D. Templates: After final approval of the hardware schedule, provide templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware.
 - E. Wiring Diagrams: After final approval of the hardware schedule, submit wiring diagrams as required for the proper installation of electrical, electromechanical, and electromagnetic products.
 - F. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Hardware for Fire-Rated Openings: NFPA 80, and local requirements.
- C. Materials and Application: ANSI A156 series standards.

1.4 WARRANTY

- A. Provide manufacturer's standard warranties and as follows:
 - Closers: 10 years, except electronic closers, 2 years.
 - Exit Devices: 3 years, except electrified devices, 1 year.
 - Continuous Hinges: 10 years.
 - Other hardware: 1 year.

2.1 MATERIALS

- A. Manufacturers: Provide products of manufacturers listed below. Products from 'acceptable substitute' manufacturers shall provide all functions and features of the 'scheduled manufacturer.'

Item	Scheduled Manufacturer	Acceptable Substitute
Hinges	Ives (IVE)	McKinney, Hager
Continuous Hinges	Markar (MAR)	Stanley
Locksets & Deadlocks	Falcon (FAL)	Submit specs. for review
Chime & Keying	Falcon (FAL)	Submit specs. for review
Aluminum Door Locks	Adams Rite (ADA)	Submit specs. for review
Exit Devices & Mullions	Hager	Submit specs. for review
Door Closers	LCN (LCN)	Submit specs. for review
Push & Pull Plates & Bars	Ives (IVE)	Rockwood, Burns
Flush Bolts & Coodinators	Ives (IVE)	Rockwood, Burns
Protection Plates & Silencers	Ives (IVE)	Rockwood, Burns
Stops & Holders	Ives (IVE)	Rockwood, Burns
Overhead Stops	Glynn-Johnson (GLY)	Sargent, Rixson
Thresholds & Weatherstrip	National Guard (NGP)	Pemko, Reese
Sliding Door Hardware	Stanley (STA)	Hager, Lawrence

B. Fasteners:

- Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
- Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including preparation for painting.
- Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent that no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of reinforcing the work adequately to fasten the hardware securely.
- Hardware shall be installed with the fasteners provided by the hardware manufacturer.

C. Hinges:

- For 1-3/4 inches thick doors up to and including 3 feet 0 inches wide: Exterior: standard weight, ball bearing, bronze/stainless steel, 4-1/2 inches high; interior: standard weight, ball bearing, steel, 4-1/2 inches high.
 - For 1-3/4 inches thick doors over 3 feet 0 inches wide: Exterior: heavy weight, ball bearing, bronze/stainless steel, 5 inches high interior, heavy weight, ball bearing, steel, 5 inches high.
 - Provide 3 hinges per door leaf for doors 90 inches or less in height, and one additional hinge for each 30 inches of additional door height.
 - Hinge Pins: Provide steel pins for steel hinges, stainless steel pins for non-ferrous hinges, non-removable pins for out-swinging exterior doors, and non-rising pins for interior doors.
 - The width of hinges shall be 4 1/2 inches or as required for clearance.
- D. Cylindrical Locks:**
- Cylindrical locks shall have solid cast levers without plastic inserts, and wrought roses on both sides. Lever trim on the secure side of doors serving rooms considered by the authority having jurisdiction to be hazardous shall have a tactile warning.
 - Locks are to have a standard 2 3/4-inch backset with a 9/16-inch latch throw, unless a longer throw is required to comply with fire rating requirements.
 - Locksets shall have separate anti-rotation throughbolts.
 - Levers shall operate independently, and shall have individual heavy-duty springs mounted under roses to prevent lever sag. To prevent vandalism, outside lever shall operate freely when locked, without operating the latch bolt.
 - Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
 - Locksets shall conform to ANSI A156.2 Series 4000, Grade 1.
 - Locks meeting this specification: Falcon T series.

E. Exit Devices:

- Exit devices shall be touchpad type, fabricated of brass, bronze, stainless steel, or aluminum, plated or anodized to match the balance of the door hardware.
- Touchpad shall extend a minimum of one half of the door width. Touch-pad shall match exit device finish.
- Mechanism case shall sit flush on the face of flush doors, or spacers shall be furnished to fill gaps behind devices. Where glass trim or molding projects off the face of the door, provide glass bead kits.
- Non-fire-rated exit devices shall have cylinder dogging.
- Removable mullions shall be a 2-inch by 3-inch steel tube. Where scheduled, mullion shall be of a type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
- Where lever handles are specified as outside trim for exit devices, provide heavy duty lever trims with forged or cast escutcheon plates. Lever style will match the lever style of the locksets.
- Exit devices shall be UL listed panic exit hardware. Exit devices for fire rated openings shall be UL labeled fire exit hardware.
- Provide electrical options as scheduled.
- Exit devices meeting this specification: Monarch 18 series, no substitution.

F. Door Closers:

- Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder. Cylinder body shall be 1-1/2 inches in diameter, and double heat-treated pinion shall be 11/16 inches in diameter.
- Hydraulic fluid shall be of a type requiring no seasonal correction adjustment for temperatures ranging from 120 degrees F to -30 degrees F. Fluid shall be fireproof and shall pass the requirements of the UL 10C "positive pressure" fire test.
- Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and backcheck.
- Closers shall have solid forged steel main arms.
- Closers shall not incorporate a pressure relief valve.
- Closers shall have metal covers.
- Closer cylinders, arms, and metal covers shall have a powder coating finish which has been certified to exceed 100 hours salt spray testing by an independent testing laboratory used by BHMA for ANSI certification. For metal components that can't be powder coated, a special rust inhibiting finish (SRI) must be used.
- Door closers meeting this specification: LCN 4041 series, no substitution.

CONTINUED.

SECTION 08710 (CONT)

- H. Push Plates: 8 inches wide by 16 inches high by .050 inches thick. Where door stile does not allow 8 inches wide plates, 4 inches wide plates may be used.
- I. Door Pulls and Push Bars: Solid bar stock, diameter and length as scheduled.
- J. Protection Plates: Provide kick, mop, or armor plates as scheduled. Furnish with machine or wood screws, finished to match plates. Sizes of plates shall be as follows:
 - Kick Plates - 10 inches high by 2 inches LWOD on single doors, 1 inches LWOD on pairs
 - Mop Plates - 4 inches high by 2 inches LWOD on single doors, 1 inches LWOD on pairs
 - Armor Plates - 36 inches high by 2 inches LWOD on single doors, 1 inches LWOD on pairs
- K. Door Stops and Holders: It shall be the responsibility of the hardware supplier to provide door stops for doors. Wall stops shall be used wherever possible. Where wall stops cannot be used, provide dome type floor stops of the proper height. At any opening where a wall or floor stop cannot be used, a heavy duty overhead stop must be used.
- L. Thresholds and Weatherstrip: Furnish as scheduled and per architectural details. Match finish of other items as closely as possible. Provide only those units where resilient or flexible seal strip is easily replaceable and readily available.
- M. Silencers: "Push-in" type silencers for each hollow metal or wood frame, 3 for each single frame, 2 for each pair frame. Omit where gasketing is scheduled.

2.2 FINISHES

- A. With the exception of items listed below, the finish of hardware shall be US26D satin chrome or US32D satin stainless steel.
 - Door Closers: Aluminum powder coat finish.
 - Thresholds: Mill finish aluminum.
 - Weatherstrip, Sweeps: Clear anodized aluminum.
 - Silencers: Grey.
 - Magnetic Holders: Aluminum painted finish.

2.3 KEYING

- A. Locks and cylinders shall be construction master keyed and master keyed per the Owner's instructions, to existing masterkey system where applicable.
- B. Provide 3 keys per lock, 6 construction master keys, and a total of 6 master keys for each group. Provide 1 extra key blank per lock. Provide keys of nickel silver only.
- C. Permanently inscribe each key with number that identifies cylinder manufacturer's key symbol, and notation "DO NOT DUPLICATE."
- D. Master keys shall be delivered directly to the Owner by the hardware supplier, who shall obtain a receipt for delivery of same.

2.4 KEY CONTROL SYSTEM

- A. Provide a single tag key control system, including labels, tags with self-locking key clips, receipt forms, index cards, permanent markers, and standard metal cabinet, with capacity for 50 keys - Telkeo WC-50-1.
 - Provide complete cross index system set up by the hardware supplier, and place keys on markers and hooks in the cabinet as determined by the final key schedule.
 - Provide hinged-panel type cabinet for wall mounting.

3.1 INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- B. Follow guidelines of DHI "Recommended Locations for Builder's Hardware" and hardware manufacturers' instructions. Do not install surface mounted items until finishes have been completed on the substrate. Protect installed hardware during painting.
- C. Adjust operation, clean and protect. Operating parts shall move freely and smoothly without binding, sticking, or excessive clearance.

END OF SECTION

SECTION 08800 GLAZING:

1.1 SUMMARY

- A. Provide glass and glazing as scheduled.
- 1.2 SUBMITTALS**
- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
 - C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - D. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials. Warranty period for laminated glass and mirror glass, 5 years. Warranty period for insulating glass and coated glass, 10 years.

1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Glazing for Fire-Rated Assemblies: Glazing for assemblies that comply with NFPA 80
- C. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.1 and, for wired glass, ANSI Z97.1.
- D. Glazing Publications:
 - GANA Publications: GANA Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
 - AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR- A7, "Sloped Glazing Guidelines."
 - IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."
- E. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship for each type of glazing.

2.1 MATERIALS

- A. Operating Company Requirements for Glazing: Refer to the Drawings.
- B. Manufacturers: AFG Industries, Cardinal IG, Pilkington/LOF, Viracon, or approved equal.
- C. Glazing Schedule:
 - Storefront: 1 inch thick insulating unit, clear glass, with Low-E coating where indicated on the Drawings, tempered where required.
 - Entrances: 1 inch thick insulating clear tempered glass, with Low-E coating where indicated on the Drawings.
 - Interior entrances: 1/4 inch clear tempered glass.
- D. Glass:
 - Primary Glass Products: ASTM C 1036.
 - Heat-Treated Glass Products: ASTM C 1048.
 - Wired Glass: ASTM C 1036, Type II, Class 1, Quality-Q-6.
 - Laminated Glass Units: Polyvinyl butyral interlayer.
 - Sealed Insulating Glass Units: ASTM E 774, Class A.
- E. Glazing Accessories:
 - Dense and Soft Compression Gaskets: Neoprene, EPDM, and silicone.
 - Elastomeric glazing sealants.
 - Preformed glazing tapes.
 - Glazing gaskets.
 - Setting blocks, spacers, and compressible filler rods.

3.1 INSTALLATION

- A. Inspect framing and report unsatisfactory conditions in writing.
- B. Comply with GANA "Glazing Manual" and manufacturers instructions and recommendations. Use manufacturer's recommended spacers, blocks, primers, sealers, gaskets and accessories.
- C. Install glass with uniformity of pattern, draw, bow and roller marks.
- D. Install sealants to provide complete wetting and bond and to create a substantial wash away from glass.
- E. Set mirrors on stainless steel clips and adhere to wall with mirror adhesive.
- F. Remove and replace damaged glass and glazing. Wash, polish and protect all glass supplied under this section.

END OF SECTION

SECTION 09260 GYPSUM BOARD ASSEMBLIES

1.1 SUMMARY:

- A. Provide gypsum board assemblies:
 - Interior walls, partitions, and ceilings with tape and joint compound finish.
 - Steel framing systems to receive gypsum board.
 - Insulation and vapor barrier systems in gypsum board assemblies.
 - Cementitious backer units for application of tile and behind FRP panels.
 - Installation of access panels in gypsum board assemblies.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Tolerances: Not more than 1/16-inch difference in true plane at joints between adjacent boards before finishing. After finishing, joints shall be not be visible. Not more than 1/8 inch in 10 feet deviation from true plane, plumb, level and proper relation to adjacent surfaces in finished work.
 - C. Fire Resistance for Fire-Rated Assemblies: ASTM E 119, with design designations in the Approval Guide, Building Products by Factory Mutual, Fire Resistance Directory by Underwriters' Laboratory or Directory of Listed Products by Intertek Testing Service as applicable.
 - D. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities. Refer to the Drawings.
 - Seismic Performance: ASTM E 580 and CISCA "Recommendations for Direct-Hung Acoustical Tile and Lay-in Panel Ceilings" and "Guidelines for Seismic Restraint of Direct-Hung Suspended Ceiling Assemblies" per applicable seismic zone.
- 1.4 PROJECT CONDITIONS**
- A. Environmental Requirements:
 - Maintain temperature of 50 degrees F or higher during and thereafter the installation of the gypsum board assemblies.
 - Areas to receive gypsum board shall be dry and within manufacturer's limitations for installation. Do not install gypsum board in areas where wet or moisture-releasing work is not complete.

2.1 MATERIALS

- A. Manufacturers of Gypsum Board: Georgia-Pacific Corp., National Gypsum Co., United States Gypsum Co., or approved equal.
- B. Manufacturers of Steel Framing and Furring: Dale Incor, Dietrich Industries, Marino Ware, National Gypsum Co., Unimast, or approved equal.
- C. Manufacturers of Grid and Suspension Systems: Armstrong World Industries, Chicago Metallic, United States Gypsum Co., or approved equal.
- D. Gypsum Board:
 - Gypsum Board for Tape and Joint Compound Finish: ASTM C 36, regular and fire-rated types as indicated, 1/2 inch and 5/8 inch thicknesses as indicated on the Drawings.
 - Water-Resistant Gypsum Board: ASTM C 630, 1/2 inch and 5/8 inch thicknesses as indicated on the Drawings.
 - Abuse-Resistant Gypsum Wallboard Where Indicated on the Drawings: ASTM C 36, 1/2 inch thickness.
 - Joint Treatment: ASTM C 475 and ASTM C 840, 3-coat system, paper or fiberglass tape.
- E. Cementitious Backer Units:
 - Type: ANSI A118.9, cement-coated Portland cement panels.
 - Thickness: 1/2 inch nominal.
- F. Trim Accessories:
 - Material: USG 200 Series manufactured by United States Gypsum or approved equal.
 - Types: Cornerbead, edge trim, and control joints.
- G. Steel Framing for Walls and Partitions:
 - Steel Studs and Runners: ASTM C 645, manufacturer's standard corrosion-resistant zinc coating.
 - Thickness: 20 gauge (0.329 inch) and 25 gauge (0.179 inch) as indicated on the Drawings, and as required for project conditions.
 - Typical Depth: 1-5/8 inch, 2-1/2 inch, 3-5/8 inch and 6 inch as indicated on the Drawings.
 - Furring Channels: ASTM C 645, manufacturer's standard corrosion-resistant zinc coating.
 - Thickness: 20 gauge (0.329 inch) and 25 gauge (0.179 inch) as indicated on the Drawings, and as required for project conditions.
 - Auxiliary Framing Components: Furring brackets, resilient furring channels, Z-furring members, and non-corrosive fasteners.

H. Steel Framing for Suspended and Furred Ceilings:

- Furring Channels: ASTM C 645, 20 gauge (0.329 inch), with manufacturer's standard corrosion-resistant zinc coating.
- Trim Accessories: USG 400 Series as manufactured by United States Gypsum or approved equal.
- Wire Materials:
 - Hanger Wire: 8 gauge.
 - Tie Wire: 16 gauge.

- I. Sound Control Batt Insulation: Unfaced fiberglass batts or blankets by Owens Corning or equal, designed to reduce transmission of both sound and heat, ASTM E 84.
- J. Auxiliary Materials:
 - Gypsum board screws, ASTM C 1002, Type S Bugle Head.
 - Gypsum board nails, ASTM C 514.
 - Fastening adhesive, ASTM C 557, permanent setting water resistant adhesive compatible with gypsum board.
 - Concealed acoustical sealant.
 - Polyethylene vapor BARRIER, 6 mils.
 - Acoustical sealant.

3.1 INSTALLATION

- A. Steel Framing: Install steel framing in compliance with ASTM C 754. Install with tolerances necessary to produce substrate for gypsum board assemblies with tolerances specified. Include blocking for items such as railings, grab bars, casework, toilet accessories, fixtures, furnishings and similar items.
- B. Wood Framing: Install wood framing in compliance with Section 06100 - Rough Carpentry. Install with tolerances necessary to produce substrate for gypsum board assemblies with tolerances specified. Include blocking for items such as railings, grab bars, casework, toilet accessories and similar items.
- C. Install gypsum board for tape and 3-coat joint compound finish in compliance with ASTM C 840 and GA 216, Recommended Specifications for the Application and Finishing of Gypsum Board, and GA Level 4 finish. Install gypsum board assemblies true, plumb, level and in proper relation to adjacent surfaces.
- D. Suspended Ceiling Installation:
 - For upper attachment or hanger wire anchoring wrap hanger wire around or through beams or joists. Do not support suspended ceiling from metal deck. Provide supplemental support material (miscellaneous metal) where support wires fall between structural steel.
 - Space 1-5/8 inch channels maximum 4 feet on center. Space 8 gauge hanger wire 48 inches on center along the carrying channels and within 6 inches of ends carrying channel runs.
 - Position 1 inch channels for proper ceiling height, level and secure with hanger wire saddle-tied along the channel. Provide one inch clearance between channel runners and abutting walls. At channel splices, interlock flanges, overlap ends 12 inches and secure each end with double strand 16 gauge tie wire.
- E. Provide continuous vapor BARRIER at exterior walls as indicated on the Drawings.
- F. Provide fire-rated systems where indicated and where required by authorities having jurisdiction.
- G. Install expansion/control joint strips at maximum 30 feet on center at all walls and furring, maximum 20 feet at dropped soffits, over jambs of double-acting doors, at masonry control joints and elsewhere as required by the manufacturer to prevent cracks in the gypsum wallboard.
- H. Install boards vertically: Do not allow butt-to-butt joints and joints that do not fall over framing members.
- I. Where new partitions meet existing construction, remove existing cornerbeads to provide a smooth transition.
- J. Provide insulation full height and thickness in partitions at conference rooms, toilet rooms, between different occupancies, and additional locations indicated on the Drawings.
- K. Provide acoustical sealant at both faces at top and bottom runner tracks, wall perimeters, openings, expansion and control joints.
- L. Install trim in strict compliance with manufacturer's instructions and recommendations.
- M. Repair surface defects. Leave ready for finish painting or wall treatment.

END OF SECTION

SECTION 09300 TILE:

1.1 SUMMARY:

- A. Provide interior floor tile and wall tile as indicated on drawings.
- 1.2 SUBMITTALS**
- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - Include manufacturer's full range of color and finish options if additional selection is required.
 - C. Acceptance of Substrate: Prior to installation, submit written certification by installer stating moisture content and finish of substrate has been tested and conditions for installation of tile are acceptable. Certification shall include acceptance of wall conditions.
 - D. Extra Stock: Submit extra stock equal to 2% of amount installed, and deliver and store in designated storage area.
- 1.3 QUALITY ASSURANCE**
- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Tile: ANSI A 137.1.
 - C. Tile Setting Materials: ANSI A 118 series standard specifications.
 - D. Tile Installation: ANSI 108 series standard specifications and Tile Council of America, Handbook for Ceramic Tile Installation.
 - E. Field Sample: Provide field sample consisting of first tile work installed to demonstrate workmanship and specified materials, and obtain Owner's approval before installation of subsequent tile work.

2.1 MATERIALS

- A. Refer to the Drawings for colors and additional requirements.
- B. Manufacturers of Tile: American Ocean, Crossville Ceramics, Dal-Tile, Graniti Fiandre, Interstyle Ceramic and Glass Ltd., Metropolitan Quarry, Provenza, Seneca Tile, Summitville Tiles, United States Ceramic Tile Co., as indicated on drawings or approved equal.
- C. Manufacturers of Setting Materials: American Ocean, Construction Products, Custom Building Products, Latcrete, Mapel Corp, or approved equal.
- D. Manufacturer of Sealer: Super-Onex-Seal by Hilliard Co., or approved equal.
- E. Glazed Wall Tile:
 - Thickness: 5/16-inch nominal thickness.
 - Style, Size and Pattern: As indicated on the Drawings.
 - Type: Interior type body, flat tile.
- F. Stone Thresholds: 1/2 inch thick marble with bevel edge, ADA compliant, color as approved.
- G. Setting Materials:
 - Floor Tile Setting Bed: Latex-Portland cement mortar for typical areas.
 - Floor Tile Grout: Latex-Portland cement grout at typical areas, and epoxy grout for high traffic and food preparation areas.
 - Ceramic Wall Tile Adhesive: Heavy duty CTA #11 (solvent type) for ceramic wall tile on cementitious backer board.
 - Adhesive: As recommended by manufacturer of tile and substrate.
- H. Floor Tile Setting Accessories:
 - Waterproofing membrane under tile at areas indicated on the Drawings, ANSI A 118.10.
 - Crack suppression membrane under tile at control joints, expansion joints, and as indicated on the Drawings, ANSI A 118.10.
- I. Elastomeric Sealants:
 - One-part mildew-resistant silicone sealant for non-traffic areas.
 - Multi-part pourable urethane sealant for traffic areas.
 - Chemical-resistant sealant at chemical-resistant flooring.

3.1 INSTALLATION

- A. Test moisture content of concrete substrates prior to start of work. Begin installation only when moisture content is acceptable to manufacturer of tile and adhesive.
- B. Comply with Tile Council of America and ANSI Standard Specifications for installation for substrate and installation required. Comply with manufacturer's instructions and recommendations.
 - Install tile with adequate lighting, minimum 30 foot-candles, simulating final lighting to ensure proper placement and appearance.
 - Install resilient flooring when temperature and humidity conditions are within limits acceptable to resilient flooring manufacturer.
- C. Install waterproof membrane in accordance with manufacturer's instructions and recommendations.
- D. Lay tile in grid pattern with alignment grids. Layout tile to provide uniform joint widths and to minimize cutting; do not use less than 1/2 tile units. Extend tile under shelving, fixtures, equipment and in recesses.
- E. Joint width as indicated on the Drawings; if not indicated provide 1/16 inch typical except 1/4 inch width for floor paver tile.
- F. Provide sealant joints where recommended by TCA and approved by Architect.
- G. Grout, cure and clean as recommended by manufacturer.
- H. Cover and protect tile from damage from construction operations. Replace broken or damaged tile prior to Substantial Completion at no additional expense to the Owner.

END OF SECTION

SECTION 09511 ACOUSTICAL PANEL CEILINGS:

1.1 SUMMARY:

- A. Provide acoustical lay-in panel ceilings and exposed metal suspension system.
 - B. Remodel existing acoustical panel ceilings.
- 1.2 SUBMITTALS**
- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities. Acoustical performance based on project requirements.
 - Surface Burning Characteristics: ASTM E 1264 for Class A materials per ASTM E 84.
 - Seismic Performance: ASTM E 580 and CISCA "Recommendations for Direct-Hung Acoustical Tile and Lay-in Panel Ceilings" and "Guidelines for Seismic Restraint of Direct-Hung Suspended Ceiling Assemblies" per applicable seismic zone.
- C. Extra Stock: Submit extra stock equal to 2% of amount installed, minimum 3 boxes of each type, and as required by Fresh Formats L.L.C. Label, deliver and store in designated storage area.

2.1 MATERIALS

- A. Manufacturers: Armstrong World Industries, CertainTeed, or equal.
- B. Acoustical Panels:
 - Size: 24 by 24 by 3/4 inch and 24 by 48 inches by 3/4 inch as indicated on the Drawings.
 - Edge Detail: Square edge and regular edge as indicated.
 - Pattern and Color: As indicated on the Drawings.
- C. Direct-Hung Suspension Systems, Non-Fire-Resistance Rated:
 - Type: Steel, ASTM C 635.
 - Classification: Heavy duty.
 - Suspension System Accessories: Attachment devices and hangers, ASTM C 635.
 - Finish: Baked enamel.
 - Series: As indicated on the Drawings.
- D. Auxiliary Materials:
 - Edge molding and trim; USG Compasso specialty trim where indicated on the Drawings.
 - Impact clips at vestibules, cart storage areas and as indicated on the Drawings.
 - Concealed acoustical sealant.

3.1 INSTALLATION

- A. Install materials and suspension systems in accordance with manufacturer's instructions and recommendations, ASTM C 636, and seismic performance requirements specified. Coordinate installation with location of mechanical and electrical work to ensure proper locations and anchorage.
 - Hang units from top chord of bar joists.
 - Do not hang units from deck mounted hangers.
 - Install ceiling panels when temperature and humidity conditions are within limits acceptable to ceiling panel manufacturer.
- B. Level ceiling to within 1/8 inch in 12 feet in both directions. Scribe and cut panels to fit accurately. Measure and layout to avoid less than half panel units.
- C. Removal and reinstallation at existing ceilings: Remove and store materials for reuse when allowed. Handle with white gloves and avoid damaging corners and edges. Clean Tiles and grid system, which have been removed. Provide additional materials to complete the work and to replace damaged existing materials. New materials shall match existing materials as approved.
- D. Adjust, clean, and touch-up all system components.

END OF SECTION

Revision Schedule	Date
6/30/20	6/30/20
ISSUED FOR PERMIT & PRICING	
#	1

Stamp: REGISTERED ARCHITECT, THOMAS P. SCOTT, ARCHITECT, WALTHAM, MA.

Stamp: Scott Griffin ARCHITECTS

Address: 880 Main Street, Fifth Floor, Waltham, Massachusetts 02451. Phone (781) 693-7400 Fax (781) 693-7350

DAILY TABLE

684 MASSACHUSETTS AVE, CAMBRIDGE, MA 02139

SPECIFICATIONS - SHEET 3

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	1/8" = 1'-0"

AS03

SECTION 09540 SPECIALTY WALL PANELS:

- 1.1 SUMMARY:
 - A. Provide fiber-reinforced-plastic wall panels.
 - B. Provide impact-resistant wall covering panels.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities. Acoustical performance based on project requirements.
 - C. Acceptance of Substrate: Prior to installation, submit written certification by installer stating acceptance of wall conditions.

- 2.1 MATERIALS
 - A. Operating Company Requirements for FRP Wall Panels: Refer to the Drawings for colors and additional requirements.
 - B. FRP Wall Panels:
 - 1. Manufacturer: Construction Specialties, Kalwall, Kemlite, Lasco, Marlite or approved equal.
 - 2. Thickness: 3/32 inch minimum.
 - 3. Sanitary Requirement: USDA accepted.
 - 4. Fire Rating: Class A.
 - 5. Substrate: Fire-retardant plywood.
 - 6. Adhesive: Fast Bond No. 3NF by 3M, XT-2000 mastic by Super-TEK or approved equal.
 - 7. Accessories: PVC moldings, sanitary silicone sealant.
 - 8. Color and Surface Finish: As indicated on the Drawings.
 - C. Impact Resistant Wall Covering:
 - 1. Manufacturer: Acrovyn by Construction Specialties, Lasco, Marlite or approved equal.
 - 2. Type: Rigid plastic wall covering.
 - 3. Thickness: 0.060 inches thick.
 - 4. Size: 4 foot width, with length selected to minimize seams.
 - 5. Fire Rating: Class A.
 - 6. Sanitary Requirement: USDA accepted.
 - 7. Trim: As supplied by manufacturer, at joints, corners and termination points.
 - 8. Adhesive: Fast Bond No. 3NF by 3M, XT-2000 mastic by Super-TEK or approved equal.
 - 9. Color and Surface Finish: As indicated on the Drawings.

- 3.1 INSTALLATION
 - A. Install materials and suspension systems in accordance with manufacturer's instructions and recommendations, including temperature restrictions.
 - B. Adjust and clean system components. Repair or replace damaged components.

END OF SECTION

SECTION 09650 RESILIENT FLOORING:

- 1.1 SUMMARY
 - A. Provide resilient flooring and floor preparation.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - C. Acceptance of Substrate: Prior to installation, submit written certification by installer stating moisture content and finish of substrate has been tested and conditions for installation of resilient flooring are acceptable.
 - D. Extra Stock: Submit extra stock consisting of two boxes of accent tile or each color and 4 boxes of field tile of each color.

- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Performance: Fire performance meeting requirements of building code and local authorities.
- 2.1 MATERIALS
 - A. Vinyl Composition Tile Flooring:
 - 1. Manufacturers: Armstrong World Industries, as indicated on drawings, or approved equal.
 - 2. Vinyl Composition Tile: ASTM F 1066.
 - 3. Size: Plank style.
 - 4. Thickness: 1/8 inch.
 - 5. Type and Color: As indicated on the Drawings.
 - B. Auxiliary Materials:
 - 1. Metal Edge Trim: Model suitable for edge conditions by Schluter Systems.
 - 2. Edging Strips: Johnsonite EG-XX-G or approved equal.
 - 3. Leveling Compound: Ardex or Slipro cementitious base, self-leveling and trowel-applied. Gypsum based leveling compounds are not acceptable.
 - 4. Adhesives: As recommended by resilient flooring manufacturer.
 - C. Moisture Control System: Confirm areas for use with Project Manager.
 - 1. Manufacturer: Moisture Control System by Ardex.
 - 2. Type: Epoxy-based, one coat ARDEX P-MC primer and one coat ARDEX S-MC sealer. Pre-smoothing ARDEX S-21 smoothing compound at uneven surfaces.
 - 3. Floor Preparation: Crack repair using two-part epoxy filler equal to MM80 by Metzger/McGuire, and mechanical preparation to provide minimum ICR1 profile of CSP 3 and moisture emission level 12 lb. or less, ASTM F 1869, and as recommended.
 - 4. Warranty: Manufacturer's 10 year warranty required.

END OF SECTION

SECTION 09651 RESILIENT BASE AND ACCESSORIES:

- 1.1 SUMMARY
 - A. Provide resilient wall base and accessories.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - C. Submit extra stock equal to 2% of total used.
- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Performance: Fire performance meeting requirements of building code and local authorities.
- 2.1 MATERIALS
 - A. Manufacturers: American Bitrite, Amtico, Armstrong World Industries or approved equal.
 - B. Resilient Wall Base: ASTM F 1861.
 - 1. Type and Color: As indicated on the Drawings.
 - 2. Material: TV (vinyl), 0.125 inches thick.
 - 3. Style: Coveed.
 - 4. Corners: Premolded.
 - 5. Height: 4 inches and 6 inches as indicated on the Drawings.
 - 6. Adhesive: As recommended by manufacturer.

- 3.1 INSTALLATION
 - A. Comply with manufacturer's instructions and recommendations. Install in proper relation to adjacent work.
 - 1. Install to minimize joints. Use premolded corners.
 - 2. Acclimatize resilient base prior to installation as recommended by manufacturer.
 - 3. Install resilient base on walls, columns, fixtures, recesses and locations indicated.
 - 4. Provide minimum 30 foot-candles lighting at all surfaces during installation.
 - 5. Install resilient base when temperature and humidity conditions are within limits acceptable to resilient base manufacturer.
 - 6. Fill gaps at top of resilient base installed on concrete masonry units with sealant.
 - B. Clean and polish as recommended by manufacturer. Coordinate cleaning and waxing materials and methods with Shop and Shop's project manager.
 - C. Protect resilient base and accessories from damage from construction operations. Replace damaged resilient base and accessories prior to Substantial Completion at no additional expense to the Owner.

END OF SECTION

SECTION 09910 PAINTING:

- 1.1 SUMMARY
 - A. Provide the following:
 - 1. Painting and surface preparation for interior unfinished surfaces as scheduled.
 - 2. Painting and surface preparation for exterior unfinished surfaces as scheduled.
 - 3. Field-painting and surface preparation of exposed mechanical and electrical piping, conduit, ductwork, and equipment where applicable
 - 4. Repainting and surface preparation at areas of remodeling.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - 1. Include manufacturer's full range of color and finish options if additional selection is required.
 - C. Extra Stock: Submit 3 unopened gallons of each paint and color used in the project. Label, deliver, and store in designated storage areas.
- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Regulations: Compliance with VOC and environmental regulations.

- 2.1 MATERIALS
 - A. Manufacturers: Benjamin Moore, PPG Architectural, Sherwin-Williams. Provide manufacturer's mid-level quality product as acceptable to the Owner. All paint containers shall be clearly labeled with manufacturer and contents; no unlabeled containers are allowed.
- 3.1 INSTALLATION
 - A. Inspect surfaces, report unsatisfactory conditions in writing; beginning work means acceptance of substrate.
 - B. Comply with manufacturer's instructions and recommendations and the following.
 - 1. Prepare surfaces by cleaning and priming as required.
 - 2. Remove hardware and electrical covers prior to painting.
 - 3. Acclimatize paint materials prior to installation as recommended by manufacturer.
 - 4. Extend painting into alcoves, closets and recesses.
 - 5. Provide minimum 30 foot-candles lighting at all surfaces during installation.
 - 6. Paint when temperature and humidity conditions are within limits acceptable to paint manufacturer.
 - 7. Provide final touch-up after work of other trades is completed.
 - C. At existing areas to be repainted, comply with the following:
 - 1. Remove blistered or peeling paint to sound substrates.
 - 2. Remove chalk deposits and mildew and wash all surfaces with mild detergent.
 - 3. Perform related minor preparation including caulk and glazing compounds.
 - 4. Spot prime bare areas before priming and painting as specified.
 - D. Match approved mock-ups for color, texture, and pattern. Re-coat or remove and replace work which does not match or shows loss of adhesion. Clean up, touch up and protect work.

- 3.2 PAINT SCHEDULE
 - A. Gypsum Board Walls, Latex Finish:
 - 1. Gloss: Eggshell.
 - 2. System: 1 coat primer, 2 coats latex finish.
 - B. Gypsum Board Walls and Ceilings in Bathrooms, Kitchens and Wet Areas:
 - 1. Gloss: Semigloss.
 - 2. System: 1 coat latex primer, 2 coats latex finish.
 - C. Gypsum Board Walls, Multicolor Finish:
 - 1. System: 1 coat multicolor primer, 1 coat spray-applied multicolor finish.
 - D. Gypsum Board Walls to Receive Wall Covering:
 - 1. System: 1 coat latex primer.
 - E. Gypsum Board Ceilings:
 - 1. Gloss: Flat.
 - 2. System: 1 coat latex primer, 2 coats latex finish.
 - F. Wood for Painted Finish:
 - 1. Gloss: Semigloss.
 - 2. System: 1 coat latex enamel, 2 coats latex enamel.
 - G. Wood for Transparent Finish:
 - 1. Gloss: Satin.
 - 2. System: 1 coat water base sealer, 2 coats water base varnish.
 - H. Wood for Stain Finish:
 - 1. Gloss: Satin.
 - 2. System: 1 coat water base wood stain, 1 coat water base sealer, 2 coats water base varnish.
 - I. Exterior Wood for Painted Finish:
 - 1. Gloss: Semigloss.
 - 2. System: 1 coat exterior primer, 2 coats latex enamel.
 - J. Concrete Masonry Units, Interior and Exterior As Indicated:
 - 1. Gloss: Semigloss.
 - 2. System: 1 coat latex block filler to fill all pores with additional coat if required to fill pores, 2 coats latex finish.
 - K. Concrete Floors, Epoxy Finish:
 - 1. Gloss: Semigloss.
 - 2. System: 1 coat primer, 2 coats epoxy finish.
 - L. Galvanized Metal:
 - 1. Gloss: Semigloss.
 - 2. System: 1 coat galvanized metal primer, 2 coats alkyd enamel.
 - O. Aluminum:
 - 1. Gloss: Semigloss.
 - 2. System: 1 coat primer, 2 coats alkyd enamel.
 - P. Interior Exposed Ceilings:
 - 1. System: 1 coat dry fall or dry fog material as approved.

END OF SECTION

SECTION 10260 WALL AND CORNER GUARDS:

- 1.1 SUMMARY
 - A. Provide wall and door protection systems.
 - B. Refer to Section 09540 for FRP wall panels and impact-resistant wall panels.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- 2.1 MATERIALS
 - A. Wall Guards: Construction Specialties, IPC, Tepromark or approved equal.
 - 1. Crash rail type wall guards.
 - 2. Bumper rail type wall guards.
 - B. Corner Guards: Construction Specialties, IPC, Tepromark or approved equal.
 - 1. Resilient plastic corner guards, surface mounted.
 - 2. Stainless steel corner guards, floor mounted and surface mounted.
 - C. Door Protection Systems: Construction Specialties, IPC, Tepromark or approved equal.
 - 1. Door edge protection.
 - 2. Doorframe protection.
- 3.1 INSTALLATION
 - A. Install materials in accordance with manufacturer's instructions and approved submittals. Coordinate with work of other sections.
 - B. Restore damaged finishes. Clean and protect work from damage.

END OF SECTION

SECTION 10440 INTERIOR SIGNAGE:

- 1.1 SUMMARY
 - A. Provide code-required interior SIGNAGE, including restroom signs, mechanical and equipment room signs, and accessibility signs.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Regulations for Materials and Locations: ADAAG and local authorities having jurisdiction.
- 2.1 MATERIALS
 - A. Manufacturers: Andco Industries Corp., ASI Sign Systems, Best Manufacturing, The Supersine Co., Vomar Products, or approved equal.
 - B. Panel Signs:
 - 1. Type: Unframed.
 - 2. Material: Plastic.
 - 3. Copy: Raised lettering, ADA compliant.
- 3.1 INSTALLATION
 - A. Install materials and systems in accordance with manufacturer's instructions and approved submittals.
 - B. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Installation tolerance is 1/16 inch from proper location, plumb and level. Coordinate with work of other sections.
 - C. Restore damaged finishes. Clean and protect work from damage.

END OF SECTION

SECTION 10623 FIRE EXTINGUISHERS AND CABINETS:

- 1.1 SUMMARY
 - A. Provide fire extinguishers and cabinets.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
 - B. Standards: UL and FM listed products, NFPA 10.
 - C. Regulations: ADAAG.
- 2.1 MATERIALS
 - A. Manufacturers: J. L. Industries, Larsen's Manufacturing, Potter-Roemer, or approved equal.
 - B. Fire Extinguishers:
 - 1. Type: Multipurpose dry chemical type.
 - 2. Type: Stored-pressure water type.
 - 3. Type at Computer Rooms: Carbon dioxide type.
 - 4. Rating: Sized for project requirements.
 - 5. Public Area Mounting: Cabinet mounted where indicated on the Drawings.
 - 6. Service Area Mounting: Metal brackets.
 - C. Cabinets:
 - 1. Mounting: Semi-recessed, 4 inch projection maximum.
 - 2. Trim: Exposed.
 - 3. Doors: Enameled steel, baked enamel finish.
 - 4. Door Style: Duo-panel.
 - 5. Accessories:
 - a. Glass breaker or fire handle.
 - b. Signage.
- 3.1 INSTALLATION
 - A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
 - B. Install fire extinguishers in mechanical and service areas with wall-hung brackets at locations and heights indicated and acceptable to authorities having jurisdiction.
 - C. Install fire extinguishers in cabinets in public areas plumb and level at heights acceptable to authorities having jurisdiction.
 - D. Restore damaged finishes. Clean and protect work from damage.

END OF SECTION

SECTION 10810 TOILET ACCESSORIES:

- 1.1 SUMMARY
 - A. Provide toilet accessories and metal-framed mirrors.
- 1.2 SUBMITTALS
 - A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
 - B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- 1.3 QUALITY ASSURANCE
 - A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- 2.1 MATERIALS
 - A. Toilet Accessories: Comply with specified requirements of each product and the following:
 - 1. Mirror: Bobrick B165-2436.
 - 2. Grab Bars at Handicap Stalls: Two 42" grab bars and one 18" grab bar, 1-1/4 inch diameter, type 304 stainless steel with non-slip surface.
 - B. Manufacturers: American Specialties Inc., Bobrick Wastroom Equipment, Bradley Corp., or approved equal.
 - C. Toilet Accessories:
 - 1. Paper towel dispensers.
 - 2. Toilet tissue dispensers, double roll.
 - 3. Waste receptacles.
 - 4. Grab bars, swing-away type where required by code.
 - 5. Sanitary napkin vendors.
 - 6. Sanitary napkin disposal units.
 - 7. Soap dispensers, wall mounted.
 - 8. Mop and broom holders.
 - 9. Baby changing stations.
 - D. Mirrors and Frames:
 - 1. Glazing: Mirror glass, 1/4 inch thick, ASTM C 1036.
 - 2. Frames: Stainless steel.
 - 3. Type: Fixed tilt type.
 - E. Finishes:
 - 1. Stainless Steel; AISI Type 302 or 304, No. 4 polished finish.
 - 2. Chromium Plated Brass or Steel; ASTM B 456, Type SC 2.
- 3.1 INSTALLATION
 - A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
 - B. Comply with ASTM F 446 for mounting accessories. Coordinate with Section 09260 for blocking requirements for all toilet accessories.
 - C. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

DATE	6/30/2020
DRAWN BY	MJD
CHECKED BY	TS
PROJECT NUMBER	20028.00
SCALE	1/8" = 1'-0"

Scott Griffin ARCHITECTS
 880 Main Street, Fifth Floor
 Waltham, Massachusetts 02451
 Phone (781) 683-7400 Fax (781) 693-7350

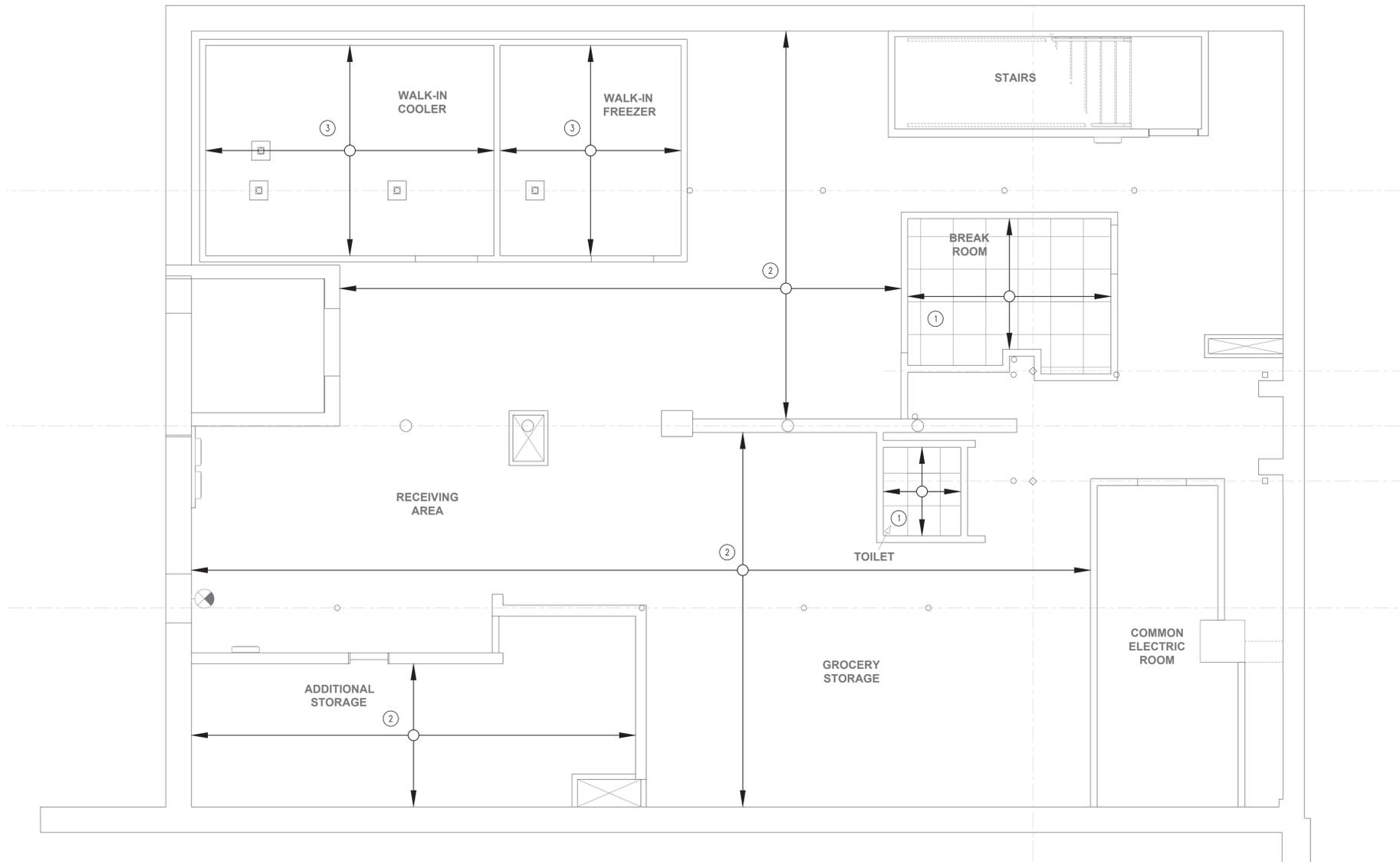
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 Waltham, Massachusetts 02451
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AS04



NUMBERED NOTES ①, ②, etc...	
①	BASEMENT AREAS WITH GRID AREA HAS EXISTING SPRINKLER HEADS. MODIFY FOR NEW TENANT AS NEEDED (E.G. SOME GRID IS NEW, SO SOME HEADS ARE UPRIGHT AND NOW PENDANT HEADS NEEDED TO MATCH EXISTING GRID) WITH A WET PIPE SYSTEM DESIGNED TO DELIVER A MINIMUM DENSITY OF 0.20 GPM/SQ.FT. OVER THE HYDRAULICALLY MOST REMOTE 1500 SQ.FT. OR ENTIRE AREA. SPRINKLERS SHALL BE A K-FACTOR OF 5.6 OR GREATER, RATED AT EITHER 165°F OR 212°F, 155°F OR 200°F, OR 286°F WITH A MAXIMUM OF 130 SQ.FT. SPACING.
②	BACK STORAGE/RECEIVING, AND UTILITY ROOMS EXISTING WET SYSTEM MUST BE MODIFIED TO MEET REQUIREMENTS OF STORAGE 1. A MINIMUM DENSITY OF 0.30 GPM/SQ.FT. OVER THE HYDRAULICALLY MOST REMOTE 2,000 SQ.FT. AREA. SPRINKLERS SHALL BE A K-FACTOR OF 8.0 OR GREATER, RATED AT 286°F WITH A MAXIMUM 100 SQ.FT. SPACING. SPRINKLERS IN STORAGE AREAS WHERE APPLICABLE FOR UP TO 12 FT. HIGH SHELF. REVIEW DESIRED STORAGE PARAMETERS WITH TENANT PRIOR TO PREPARING DESIGN.
③	INTERIOR REFRIGERATED CHESTS AND FREEZERS/ABOVE AND BELOW CEILINGS: INTERIORS AND EXTERIOR OF REFRIGERATED CHESTS AND FREEZERS SHALL BE PROTECTED WITH A WET PIPE SYSTEM EMPLOYING BOTH DRY PENDANT HEADS AND WET UPRIGHT HEADS DESIGNED TO DELIVER A MINIMUM DENSITY OF 0.20 GPM/SQ.FT. OVER THE HYDRAULICALLY MOST REMOTE 1,500 SQ.FT. OR ENTIRE AREA. SPRINKLERS SHALL BE A K-FACTOR OF 5.6, OR GREATER, RATED AT EITHER 165°F OR 212°F, 155°F OR 200°F, OR 286°F WITH A MAXIMUM 130 SQ.FT. SPACING.

① BASEMENT SPRINKLER PLAN
FP100 1/4" = 1'-0"

GENERAL NOTES

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|---|--|
| <p>A. THIS PLAN SHALL BE USED BY THE FIRE PROTECTION CONTRACTOR AS A GUIDE FOR INFORMATIONAL PURPOSES ONLY TO AID THE FIRE PROTECTION CONTRACTOR'S ENGINEER TO GENERATE SPRINKLER SHOP DRAWINGS SEALED BY CONTRACTOR'S ENGINEER. THIS PLAN IN NO WAY SUPERSEDES THE MINIMUM REQUIREMENTS OF THE LEASE, N.F.P.A., STATE CODES, LOCAL CODES, AND/OR AUTHORITIES HAVING JURISDICTION.</p> <p>B. REVIEW FIXTURE PLAN WITH THE TENANT AND GC TO CONFIRM THAT IT IS THE LATEST VERSION.</p> <p>C. THE SPRINKLER CONTRACTOR SHALL OBTAIN FLOW TEST WITHIN LAST 12 MONTHS FOR DESIGNING THE HYDRAULIC CALCULATIONS FOR THE SPRINKLER SYSTEM. IF ADDITIONAL TESTS ARE REQUIRED, ALL WATER TESTS SHALL BE CONDUCTED WITHIN ONE (1) YEAR PRIOR TO DATE OF THE AWARD OF THE SPRINKLER WORK. THE SPRINKLER CONTRACTOR SHALL COORDINATE ALL ADDITIONAL FLOW TESTS WITH THE LOCAL WATER SUPPLIER AND ACE AND/OR LOCAL AUTHORITIES, NOTIFYING EACH A MINIMUM OF 2 WEEKS IN ADVANCE TO ALLOW FOR THEIR REPRESENTATIVES TO WITNESS THE TEST.</p> <p>D. THE SPRINKLER CONTRACTOR SHALL PAY FOR ALL FEES, PERMITS, AND/OR PUBLIC NOTICES, ETC. REQUIRED BY THE WATER SUPPLIER ASSOCIATED WITH ADDITIONAL WATER FLOW TESTS, IF REQUIRED. THE SPRINKLER CONTRACTOR SHALL FILE ALL REQUIRED NOTICES AND PLANS WITH THE PROPER AUTHORITIES AND SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS, INSPECTIONS, TESTS AND COSTS INCIDENTAL TO HIS WORK.</p> <p>E. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE PREPARED BY AND SEALED BY A LICENSED PROFESSIONAL FIRE PROTECTION ENGINEER. ENGINEER SHALL HAVE A FIRE PROTECTION ENGINEERING SEAL FOR THE COMMONWEALTH OF MASSACHUSETTS.</p> <p>F. THE SPRINKLER CONTRACTOR SHALL, WITHIN THIRTY (30) DAYS AFTER THE AWARD OF THE SPRINKLER CONTRACT AND PRIOR TO FABRICATION, SUBMIT ONE (1) COMPLETE SET OF SPRINKLER SHOP DRAWINGS, HYDRAULIC CALCULATIONS AND MATERIAL SUBMITTALS IN BOTH PAPER AND ELECTRONIC FORMAT TO TENANT AND BUILDING OWNER FOR APPROVALS.</p> <p>G. BUILDING IS EXISTING WOOD STRUCTURE WITH WET PIPE SPRINKLER SYSTEM. REVIEW SITE CONSTRAINTS WITH LANDLORD, OWNER AND TENANT PRIOR TO PREPARING DRAWINGS, AS CERTIFIED DRAWINGS MUST ACCOUNT FOR EXISTING SYSTEM LIMITATIONS, IF ANY, AS WELL AS BUILDING CONSTRUCTION TYPES AND OCCUPANCY.</p> | <p>H. REVIEW OCCUPANCY REQUIREMENTS AND STORAGE HEIGHTS WITH TENANT TO VERIFY REQUIRED DESIGN FLOWS AND DENSITY. REPLACE AND/OR RELOCATE HEADS AND PIPING AS NEEDED TO COMPLY WITH NFPA 13 AND LOCAL AHJ.</p> <p>I. ALL SPRINKLER SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH THE LANDLORD, OWNER, GENERAL CONTRACTOR, THE STORE MANAGER, THE FIRE ALARM COMPANY, THE LOCAL FIRE DEPARTMENT AND THE LOCAL AUTHORITIES HAVING JURISDICTION PRIOR TO THE DEACTIVATION OF THE SPRINKLER SYSTEM.</p> <p>J. THE SPRINKLER CONTRACTOR SHALL COORDINATE AND PAY FOR ALL FIRE WATCHES REQUIRED THROUGHOUT THE DURATION OF THE PROJECT. ALL FIRE WATCHES/PROCEDURES SHALL BE APPROVED BY THE LOCAL FIRE DEPARTMENT, AND THE LOCAL AUTHORITIES HAVING JURISDICTION. ALL FIRE WATCH FEES SHALL BE QUALIFIED IN THE SPRINKLER BID.</p> <p>K. THE SPRINKLER CONTRACTOR SHALL CAREFULLY COORDINATE THE SPRINKLER SYSTEM DESIGN (HEADS, PIPING, ETC.), WITH ALL STRUCTURE, REFRIGERATION, PLUMBING, HVAC AND ELECTRICAL WORK. THE SPRINKLER CONTRACTOR SHALL MODIFY SPRINKLER DESIGN AS NECESSARY TO AVOID ALL LIGHTS, COOLING UNITS, EQUIPMENT, HVAC UNITS, DUCTS, GRILLES, DIFFUSERS, REGISTERS, HOODS, FLUES, PIPING, CONDUIT, AWNINGS, ETC. AND SHALL ESTABLISH EXACT ELEVATIONS FOR ALL SPRINKLER HEADS AND PIPING.</p> <p>L. THE SPRINKLER CONTRACTOR SHALL SUPPORT ALL SPRINKLER SYSTEM PIPING AND/OR COMPONENTS WITH HANGERS AND/OR SEISMIC RESTRAINTS FROM THE BUILDING STRUCTURE BY MEANS OF UL LISTED, FM APPROVED HANGERS, COMPONENTS AND SUPPORTS IN ACCORDANCE WITH NFPA 13.</p> <p>M. THE SPRINKLER CONTRACTOR SHALL GIVE SPECIAL ATTENTION TO THE SPACING, LOCATION AND CLEARANCES OF SPRINKLER HEADS REQUIRED FOR PROPER COVERAGE INSIDE AND ABOVE ALL REFRIGERATED COOLERS, FREEZERS AND COOLED ROOMS (MEAT AND PRODUCE PRE-PACK), WITH RESPECT TO REFRIGERATION FAN COIL.</p> <p>N. SPRINKLER CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF DRUM DRIPS, DRAIN VALVES, AND ANY EXPOSED SPRINKLER COMPONENTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.</p> |
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Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
#	ISSUED FOR PERMIT & PRICING	06/30/2020

STAMP

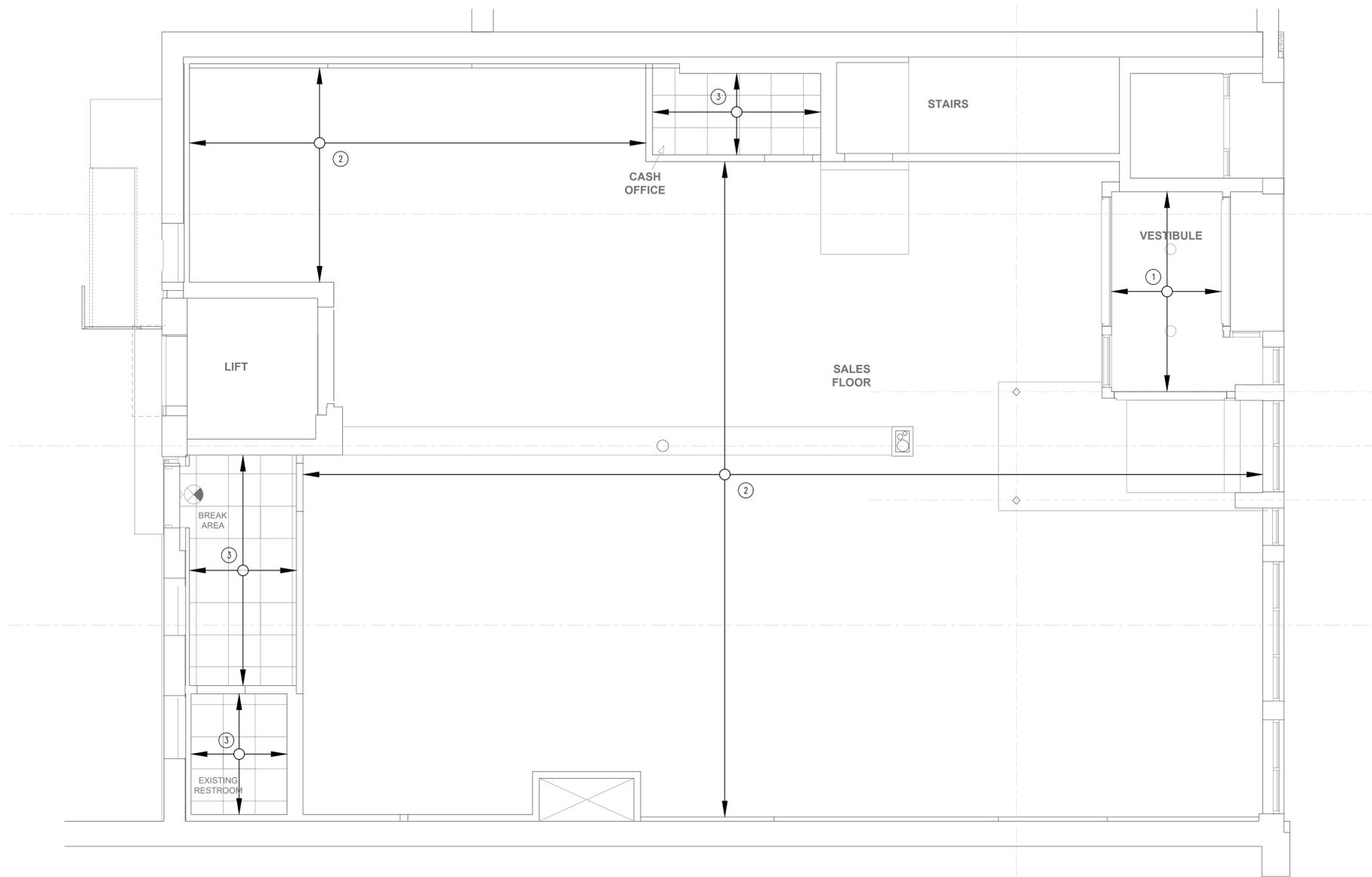


DAILY TABLE
684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

BASEMENT SPRINKLER PLAN

DATE	6/30/2020
DRAWN BY	MEA
CHECKED BY	DJG
PROJECT NUMBER	20028-00
SCALE	1/4"=1'-0"

FP100



NUMBERED NOTES ①, ②, etc...

① VESTIBULE	SHALL BE PROTECTED WITH A WET PIPE SPRINKLER SYSTEM EMPLOYING RECESSED PENDANT HEADS DESIGNED TO DELIVER A MINIMUM DENSITY OF 0.20 GPM/SQ.FT. OVER THE HYDRAULICALLY MOST REMOTE 1950 SQ.FT. OR ENTIRE AREA. SPRINKLERS SHALL BE A K-FACTOR OF 5.6 OR GREATER, WITH HEADS TURNED UP & RATED AT EITHER 165°F OR 212°F, 155°F OR 200°F, OR 286°F WITH A 130 SQ. FT. SPACING.
② SALES AREAS	SALES AREAS HAVE EXISTING SPRINKLER HEADS TURNED UP. MODIFY FOR NEW TENANT AS NEEDED WITH A WET PIPE SYSTEM DESIGNED TO DELIVER A MINIMUM DENSITY OF 0.20 GPM/SQ.FT. OVER THE HYDRAULICALLY MOST REMOTE 1,500 SQ.FT. AREA. SPRINKLERS SHALL BE A K-FACTOR OF 5.6 OR GREATER, RATED AT EITHER 165°F OR 212°F, 155°F OR 200°F, OR 286°F WITH A MAXIMUM 130 SQ.FT. SPACING.
③ BACK AREAS WITH GRID	AREA HAS EXISTING SPRINKLER HEADS. MODIFY FOR NEW TENANT AS NEEDED (E.G. SOME GRID IS NEW, SO SOME HEADS ARE UPRIGHT AND NOW PENDANT HEADS NEEDED TO MATCH EXISTING GRID) WITH A WET PIPE SYSTEM DESIGNED TO DELIVER A MINIMUM DENSITY OF 0.20 GPM/SQ.FT. OVER THE HYDRAULICALLY MOST REMOTE 1500 SQ.FT. OR ENTIRE AREA. SPRINKLERS SHALL BE A K-FACTOR OF 5.6 OR GREATER, RATED AT EITHER 165°F OR 212°F, 155°F OR 200°F, OR 286°F WITH A MAXIMUM OF 130 SQ.FT. SPACING.

① FIRST FLOOR SPRINKLER PLAN
FP101 1/4" = 1'-0"

GENERAL NOTES

- | | |
|---|--|
| <p>A. THIS PLAN SHALL BE USED BY THE FIRE PROTECTION CONTRACTOR AS A GUIDE FOR INFORMATIONAL PURPOSES ONLY TO AID THE FIRE PROTECTION CONTRACTOR'S ENGINEER TO GENERATE SPRINKLER SHOP DRAWINGS SEALED BY CONTRACTOR'S ENGINEER. THIS PLAN IN NO WAY SUPERSEDES THE MINIMUM REQUIREMENTS OF THE LEASE, N.F.P.A., STATE CODES, LOCAL CODES, AND/OR AUTHORITIES HAVING JURISDICTION.</p> <p>B. REVIEW FIXTURE PLAN WITH THE TENANT AND GC TO CONFIRM THAT IT IS THE LATEST VERSION.</p> <p>C. THE SPRINKLER CONTRACTOR SHALL OBTAIN FLOW TEST WITHIN LAST 12 MONTHS FOR DESIGNING THE HYDRAULIC CALCULATIONS FOR THE SPRINKLER SYSTEM. IF ADDITIONAL TESTS ARE REQUIRED, ALL WATER TESTS SHALL BE CONDUCTED WITHIN ONE (1) YEAR PRIOR TO DATE OF THE AWARD OF THE SPRINKLER WORK. THE SPRINKLER CONTRACTOR SHALL COORDINATE ALL ADDITIONAL FLOW TESTS WITH THE LOCAL WATER SUPPLIER AND ACE AND/OR LOCAL AUTHORITIES, NOTIFYING EACH A MINIMUM OF 2 WEEKS IN ADVANCE TO ALLOW FOR THEIR REPRESENTATIVES TO WITNESS THE TEST.</p> <p>D. THE SPRINKLER CONTRACTOR SHALL PAY FOR ALL FEES, PERMITS, AND/OR PUBLIC NOTICES, ETC. REQUIRED BY THE WATER SUPPLIER ASSOCIATED WITH ADDITIONAL WATER FLOW TESTS, IF REQUIRED. THE SPRINKLER CONTRACTOR SHALL FILE ALL REQUIRED NOTICES AND PLANS WITH THE PROPER AUTHORITIES AND SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS, INSPECTIONS, TESTS AND COSTS INCIDENTAL TO HIS WORK.</p> <p>E. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE PREPARED BY AND SEALED BY A LICENSED PROFESSIONAL FIRE PROTECTION ENGINEER. ENGINEER SHALL HAVE A FIRE PROTECTION ENGINEERING SEAL FOR THE COMMONWEALTH OF MASSACHUSETTS.</p> <p>F. THE SPRINKLER CONTRACTOR SHALL, WITHIN THIRTY (30) DAYS AFTER THE AWARD OF THE SPRINKLER CONTRACT AND PRIOR TO FABRICATION, SUBMIT ONE (1) COMPLETE SET OF SPRINKLER SHOP DRAWINGS, HYDRAULIC CALCULATIONS AND MATERIAL SUBMITTALS IN BOTH PAPER AND ELECTRONIC FORMAT TO TENANT AND BUILDING OWNER FOR APPROVALS.</p> <p>G. BUILDING IS EXISTING WOOD STRUCTURE WITH WET PIPE SPRINKLER SYSTEM. REVIEW SITE CONSTRAINTS WITH LANDLORD, OWNER AND TENANT PRIOR TO PREPARING DRAWINGS, AS CERTIFIED DRAWINGS MUST ACCOUNT FOR EXISTING SYSTEM LIMITATIONS, IF ANY, AS WELL AS BUILDING CONSTRUCTION TYPES AND OCCUPANCY.</p> | <p>H. REVIEW OCCUPANCY REQUIREMENTS AND STORAGE HEIGHTS WITH TENANT TO VERIFY REQUIRED DESIGN FLOWS AND DENSITY. REPLACE AND/OR RELOCATE HEADS AND PIPING AS NEEDED TO COMPLY WITH NFPA 13 AND LOCAL AHJ.</p> <p>I. ALL SPRINKLER SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH THE LANDLORD, OWNER, GENERAL CONTRACTOR, THE STORE MANAGER, THE FIRE ALARM COMPANY, THE LOCAL FIRE DEPARTMENT AND THE LOCAL AUTHORITIES HAVING JURISDICTION PRIOR TO THE DEACTIVATION OF THE SPRINKLER SYSTEM.</p> <p>J. THE SPRINKLER CONTRACTOR SHALL COORDINATE AND PAY FOR ALL FIRE WATCHES REQUIRED THROUGHOUT THE DURATION OF THE PROJECT. ALL FIRE WATCHES/PROCEDURES SHALL BE APPROVED BY THE LOCAL FIRE DEPARTMENT, AND THE LOCAL AUTHORITIES HAVING JURISDICTION. ALL FIRE WATCH FEES SHALL BE QUALIFIED IN THE SPRINKLER BID.</p> <p>K. THE SPRINKLER CONTRACTOR SHALL CAREFULLY COORDINATE THE SPRINKLER SYSTEM DESIGN (HEADS, PIPING, ETC.), WITH ALL STRUCTURE, REFRIGERATION, PLUMBING, HVAC AND ELECTRICAL WORK. THE SPRINKLER CONTRACTOR SHALL MODIFY SPRINKLER DESIGN AS NECESSARY TO AVOID ALL LIGHTS, COOLING UNITS, EQUIPMENT, HVAC UNITS, DUCTS, GRILLES, DIFFUSERS, REGISTERS, HOODS, FLUES, PIPING, CONDUIT, AWNINGS, ETC. AND SHALL ESTABLISH EXACT ELEVATIONS FOR ALL SPRINKLER HEADS AND PIPING.</p> <p>L. THE SPRINKLER CONTRACTOR SHALL SUPPORT ALL SPRINKLER SYSTEM PIPING AND/OR COMPONENTS WITH HANGERS AND/OR SEISMIC RESTRAINTS FROM THE BUILDING STRUCTURE BY MEANS OF UL LISTED, FM APPROVED HANGERS, COMPONENTS AND SUPPORTS IN ACCORDANCE WITH NFPA 13.</p> <p>M. THE SPRINKLER CONTRACTOR SHALL GIVE SPECIAL ATTENTION TO THE SPACING, LOCATION, POSITION AND CLEARANCES OF SPRINKLER HEADS REQUIRED FOR PROPER COVERAGE INSIDE AND ABOVE ALL REFRIGERATED COOLERS, FREEZERS AND COOLED ROOMS (MEAT AND PRODUCE PRE-PACK), WITH RESPECT TO REFRIGERATION FAN COIL.</p> <p>N. SPRINKLER CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF DRUM DRIPS, DRAIN VALVES, AND ANY EXPOSED SPRINKLER COMPONENTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.</p> |
|---|--|

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Revision Schedule	Date
ISSUED FOR PERMIT & PRICING	06/30/2020
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STAMP

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Phone (781) 693-7400 Fax (781) 693-7350

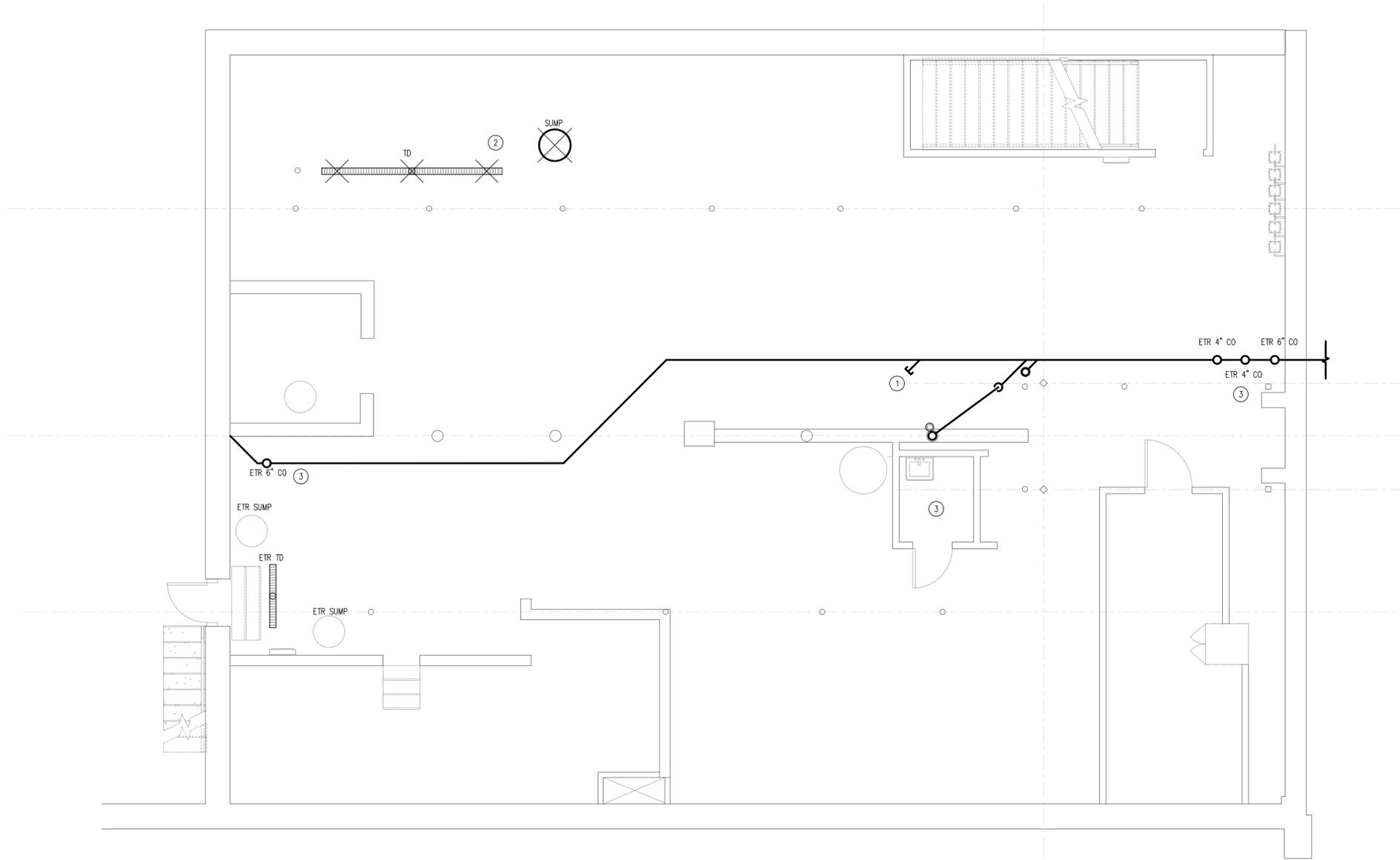
DAVID J. GRASER
MECHANICAL
No. 4857D
REGISTERED
PROFESSIONAL ENGINEER
7/1/20

DAILY TABLE
684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

FIRST FLOOR
SPRINKLER PLAN

DATE	6/30/2020
DRAWN BY	MEA
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

FP101



1 BASEMENT DWV DEMOLITION PLAN
 P200 1/4" = 1'-0"

NUMBERED NOTES

- 1 Remove any existing sanitary and vent piping above grade that is not to be reused for breakroom sink, see sheet P2.2. Report problems to the engineer.
- 2 Remove existing trench drain, sump pump, and associated piping.
- 3 PC shall camera scope the existing sanitary piping in existing restroom and main running through basement to verify condition for reuse. Report any problems to the owner, architect, and engineer.

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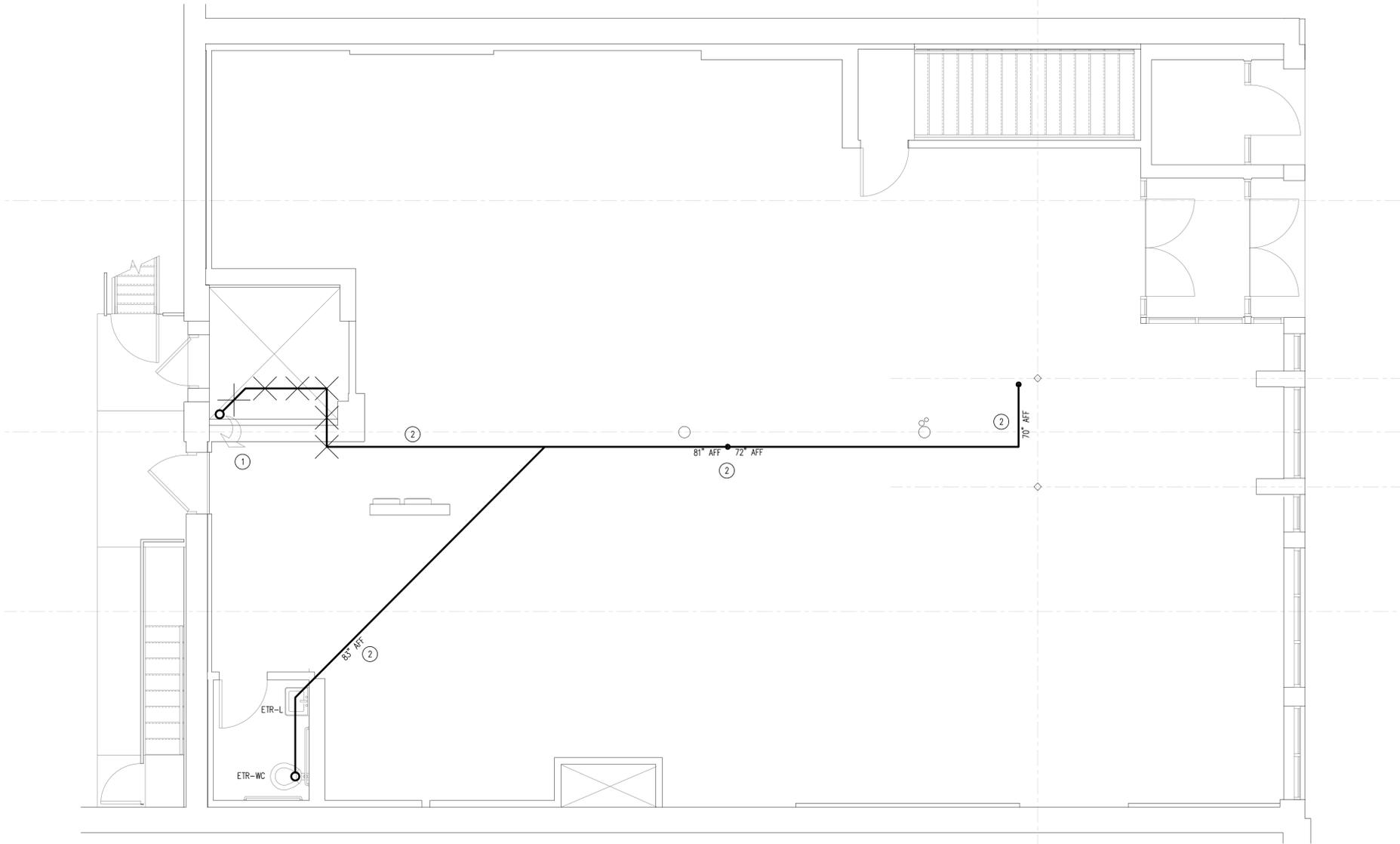
DAILY TABLE
 684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

BASEMENT DWV
 DEMOLITION PLAN

DATE	6/30/2020
DRAWN BY	MEA
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

P200

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.



- NUMBERED NOTES
- ① Relocate existing pipe running up in shaft to avoid conflict with new lift equipment. See sheet P2.3. Report problems to the engineer.
 - ② Existing sanitary piping below first floor, heights noted from basement floor. Verify heights in field.

① 1ST FLOOR DWV DEMOLITION PLAN
P201 1/4" = 1'-0"

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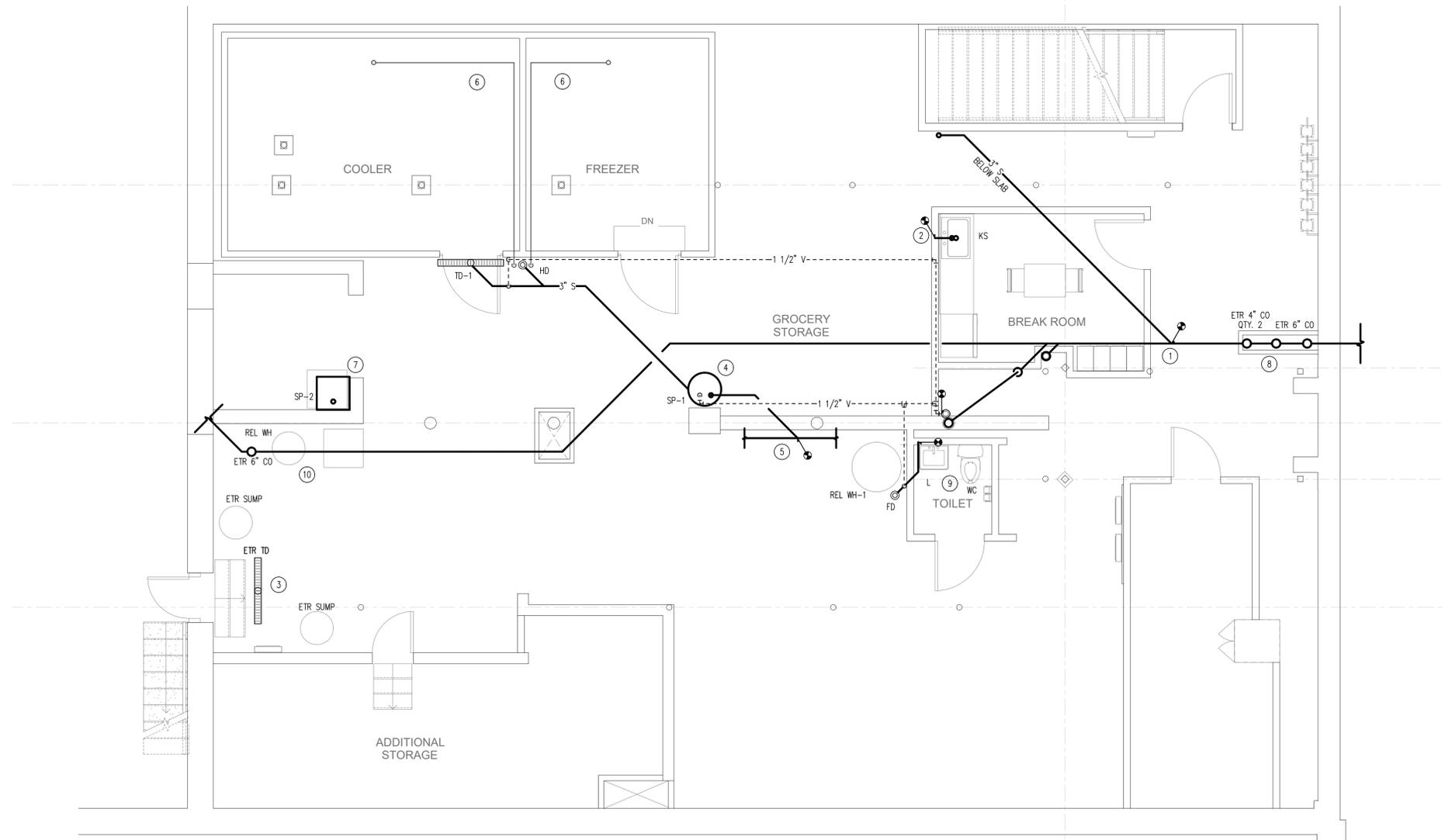


DAILY TABLE
 684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

FIRST FLOOR DWV DEMOLITION PLAN

DATE	6/30/2020
DRAWN BY	MEA
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

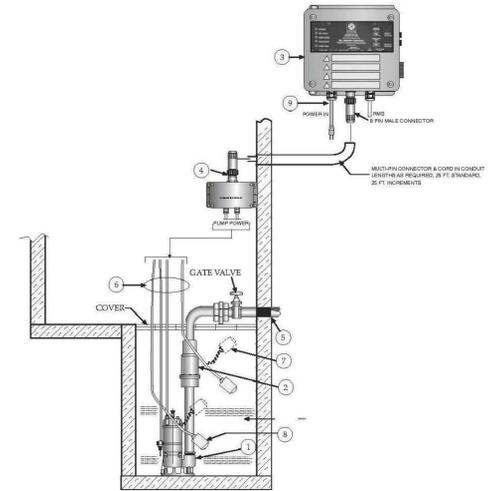
P201



1 BASEMENT DWV PLAN
 P202 1/4" = 1'-0"

- ### NUMBERED NOTES
- 1 Connect new sanitary piping to existing below slab. Verify size, direction of flow, exact point of connection, and available invert in field and report problems to engineer.
 - 2 Connect new sanitary and vent piping for breakroom sink to existing sanitary and vent piping in wall. Verify size and exact point of connection in field and report problems to engineer.
 - 3 Existing to remain sump pumps to existing trench drain and exterior area drain. Verify operation and report problems to tenant.
 - 4 Sump pump serving new trench drain and walk-in condensate hub drain. Verify in field that sump does not undercut footing and report problems to the engineer.
 - 5 Connect to existing sanitary piping running 72" AFF in basement. Verify size and exact point of connection in field and report problems to the engineer.
 - 6 Route condensate from cooler/freezer evaporator to CD-1 adjacent to cooler trench drain. See P100 for heat trace specifications.
 - 7 Run elevator sump sanitary line vertical in shaft, do not interfere with any new lift equipment in shaft. See continuation on P203.
 - 8 Provide access panel in new chase to allow access to existing cleanouts.
 - 9 Connect new fixtures to existing sanitary lines. Verify size and exact point of connection in field and report problems to the engineer.
 - 10 Route relocated water heater drainage to existing sump serving outside area drain.
 - 11 Route relocated water heater drainage to new floor drain. Connect floor drain to existing sanitary under slab serving bathroom, minimum sanitary main 3". Verify size and exact point of connection in field and report problems to the engineer.

Typical Stancor Simplex Multi-Option Oil-Minder® System



1. Stancor Model SE-50 submersible effluent pump .5 HP, 115 volt, 3600 RPM, 2" discharge connection
 2. Check valve (2")
 3. Stancor Oil-Minder 115V, 1Ø control system with built-in audible and visual alarm when pump does not run due to oil in pit or high liquid or high amperage condition. Provide silencing button for audible alarm built into panel. Panel shall have two contacts for a remote alarm location (one each for oil and high water or amperage alert). Junction box will be provided with multi-pin connector and cord in lengths as required, 25 ft. standard, optional 25 ft. increments.
 4. Junction box will be provided with multi-pin connector and cord in lengths as required; 25 ft. is standard, optional 25 ft. increments available up to 250 ft.
 5. All buried pump pressure discharge piping shall be protected with tapecoat CT corrosion protection tape
 6. Pump cable, probe cable, high liquid alarm cable, and pump "on" float cable (16 ft. lengths)
 7. High liquid alarm float with clamp device to mount to pump discharge piping
 8. Pump On float
 9. Power cord and molded ground plug (6 ft. length)
- ITEMS 1, 2, 3, 4, 6, 7, 8 AND 9 PROVIDED BY STANCOR AS A STANDARD PACKAGE

2 ELEVATOR PUMP DETAIL
 P202 N.T.S.

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

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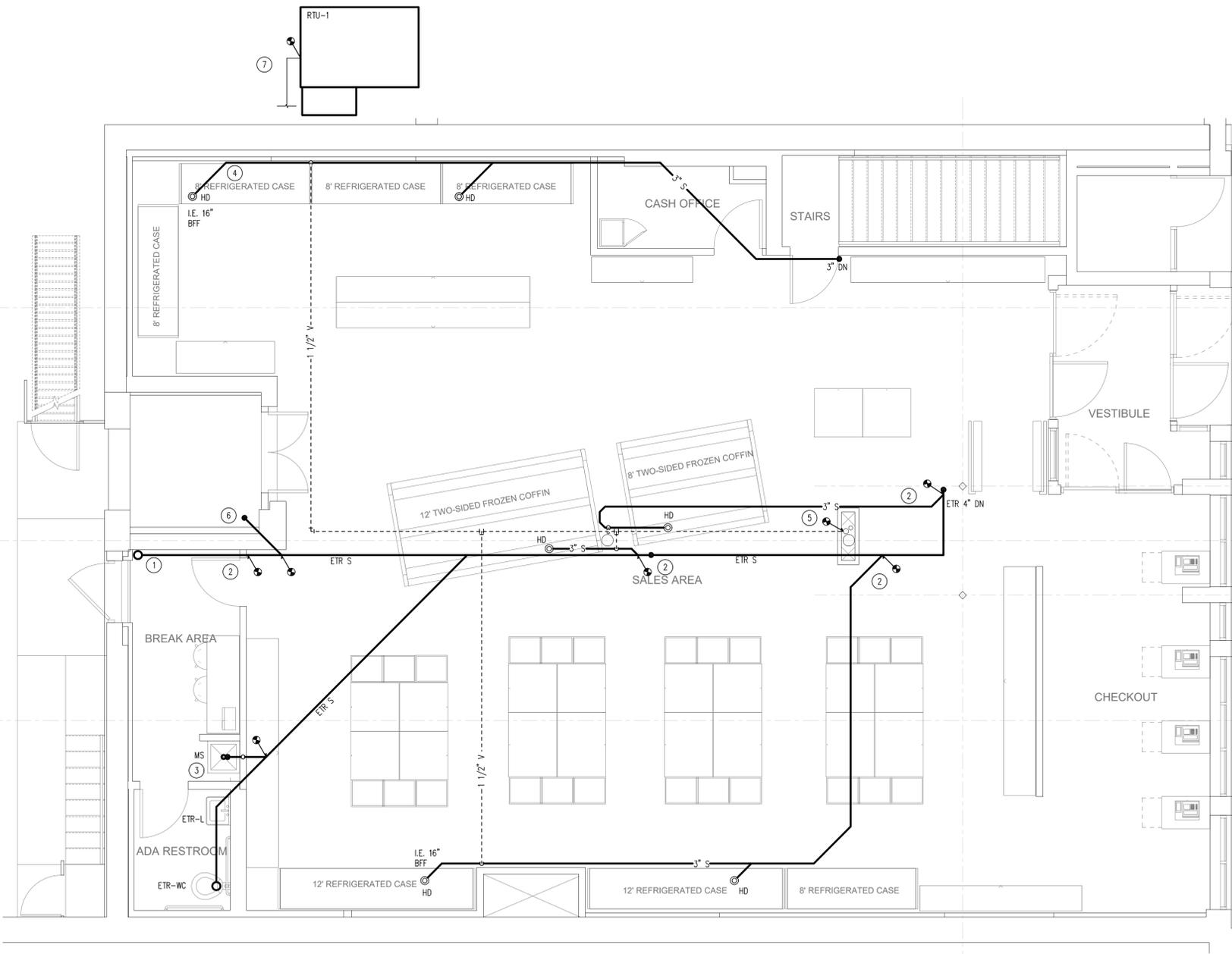
DAILY TABLE

684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

BASEMENT DWV PLAN

DATE	6/30/2020
DRAWN BY	MEA
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

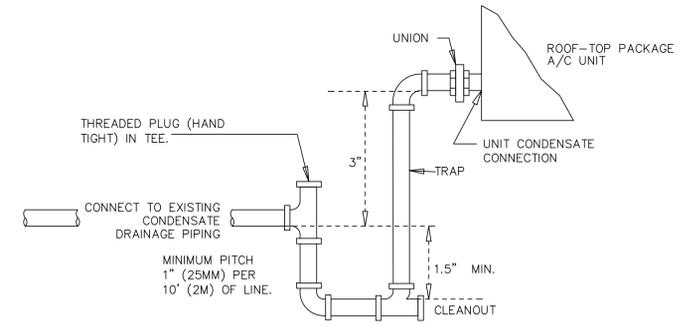
P202



1 FIRST FLOOR DWV PLAN
P203 1/4" = 1'-0"

NUMBERED NOTES

- 1 Relocated pipe up. Reconnect to existing pipe up in shaft above new lift equipment, match existing size. Report problems to the engineer.
- 2 Connect to existing sanitary piping running at 84" AFF in basement. Verify size and exact point of connection in field. Report problems to the engineer.
- 3 Connect new mop sink sanitary and vent piping to existing sanitary and vent piping serving bathroom. Verify size and exact point of connection in field. Report problems to the engineer.
- 4 Coordinate hub drain piping to run behind cooler/freezer walls in basement.
- 5 Connect to existing vent stack running adjacent to column. Verify size and exact point of connect in field and report problems to the engineer.
- 6 Pipe up from elevator sump pump. Verify in field size and exact point of connection and report problems to the engineer.
- 7 Reconnect/repair/replace existing condensate drainage piping as necessary. Connect piping to new RTU per detail 2, this sheet. Verify point of connection in field and report any problems to the engineer.



2 RTU CONDENSATE DRAINAGE DETAIL
P203 N.T.S.

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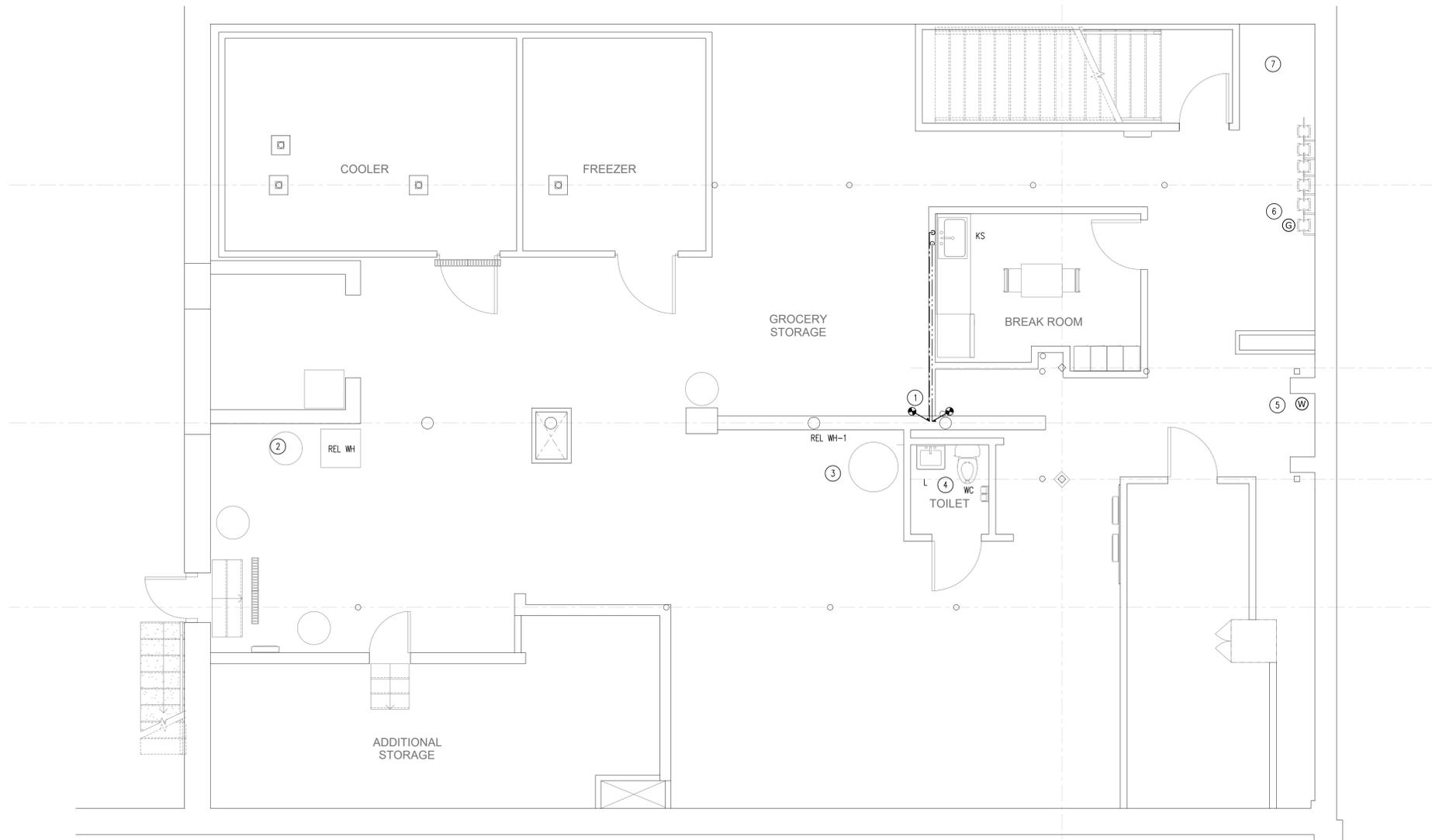
DAVID GRASER
MECHANICAL
No. 4857D
REGISTERED PROFESSIONAL ENGINEER
7/1/20

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FIRST FLOOR DWV PLAN

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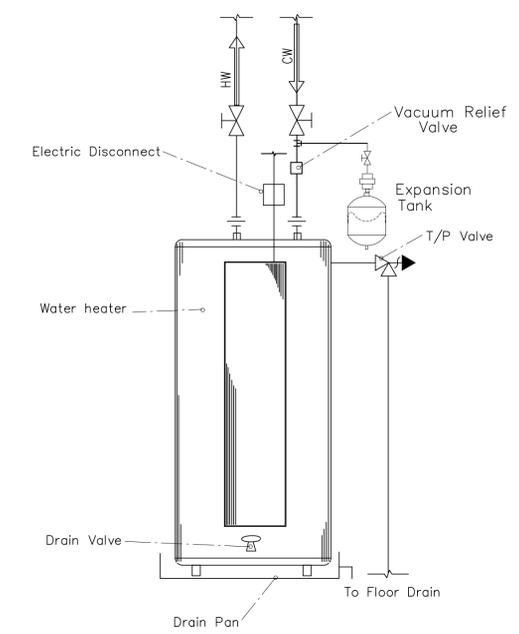
P203



1 BASEMENT WATER & GAS PLAN
P300 1/4" = 1'-0"

NUMBERED NOTES

- 1 Connect breakroom sink to existing water piping serving bathroom, minimum required 3/4". If existing CW piping serving bathroom is undersized, connect to CW main nearby. Verify size and exact point of connection in field and report problems to the engineer.
- 2 Relocated water heater serving NIC tenants above. Relocate all associated piping and maintain all existing shutoffs and by-passes to avoid conflicts with new lift equipment. Reconnect to any piping in shaft above new lift. See detail 2, this sheet.
- 3 Relocated water heater serving basement and first floor, see schedule on P100. Reconnect to existing piping serving space from water heater previous location. Remove and dispose of any piping not being reused and cap all tees not reconnected. Do not remove any piping serving NIC spaces above the first floor.
- 4 Connect new fixtures to existing water lines serving bathroom, presumed to be 1/2". Verify size and exact point of connection in field and report problems to the engineer.
- 5 Existing to remain water meter with 1-1/2" water line serving basement and first floor. Verify size and condition in field and report problems to the engineer. Verify an existing to remain backflow preventer. If backflow preventer not present, install with double check valves and report problems to the engineer.
- 6 Existing to remain gas meter serving basement and first floor. Remove any unused piping and cap all unused tees.
- 7 Existing water service to remain. PC shall verify operation in field and report problems to the owner.



2 WATER HEATER DETAIL
P300 N.T.S.

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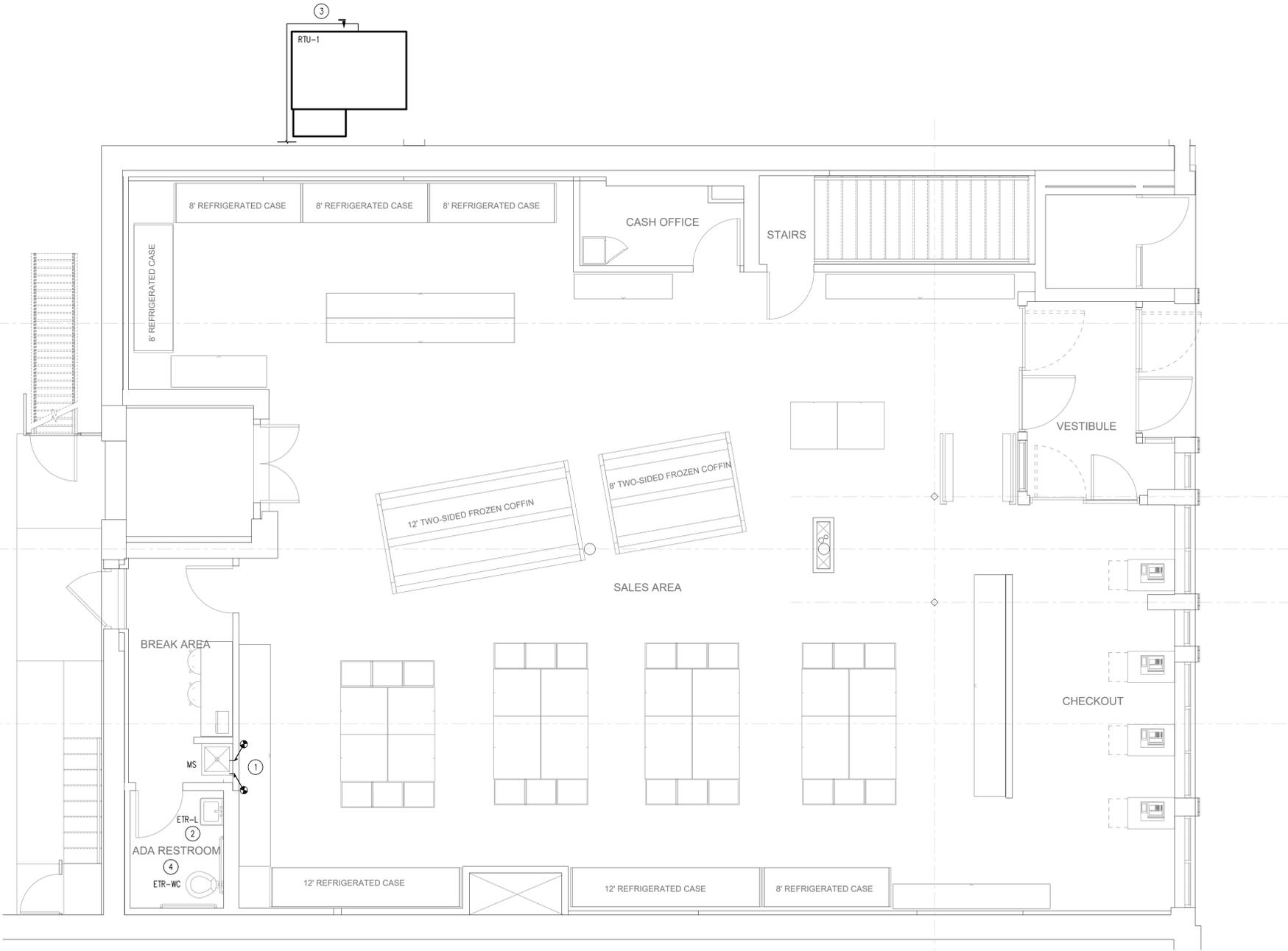


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684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

BASEMENT WATER & GAS PLAN

DATE	6/30/2020
DRAWN BY	MEA
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

P300



NUMBERED NOTES

- ① Connect mop sink to existing water piping serving bathroom. Verify size and exact point of connection in field and report problems to the engineer. Existing CW is presumed 1" serving flush valve toilet, verify in field and report problems to the engineer.
- ② Replace non ADA compliant faucet with scheduled faucet on P1.0.
- ③ Verify 3/4" gas connection size, condition, and exact point of connection in field and report problems to the engineer. See RTU schedule on M sheets.
- ④ Existing to remain bathroom fixtures, PC shall clean/repair/replace as necessary.

① FIRST FLOOR WATER/GAS PLAN
P301 1/4" = 1'-0"

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FIRST FLOOR
WATER & GAS PLAN

DATE	6/30/2020
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SCALE	1/4"=1'-0"

P301

GENERAL NOTES

- Materials, equipment, and systems shall meet all pertinent requirements of the Underwriters Laboratory (UL), Ninth Edition CMR 780, the 2015 International Mechanical Code, the 2015 International Plumbing Code, the 2015 International Energy Conservation Code, American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), Sheet Metal and Air Conditioning Contractors National Association (SMACNA), American Gas Association (AGA), National Fire Protection Association (NFPA), and other nationally recognized agencies as well as applicable local codes.
- Bidders shall be licensed contractors in accordance with local and state laws.
- Bidders shall thoroughly acquaint themselves with the conditions under which the work is to be performed. They shall examine all services, equipment, surfaces, etc., which this work is in any way dependent upon, and bring any discrepancies determined or omissions found in the drawings to the owner's attention before submitting bid. Verify all dimensions by field measurements.
- The systems shown on the drawings shall be provided to serve all fixtures, equipment, and areas within the Contract Limit Lines as set forth by the Architectural solution for the project. The bidding and contract requirements, general requirements, and general provisions shall apply to this section. Systems shall include all equipment, appurtenances, safety devices, and controls necessary for the intended service.
- All permits and fees required for this work shall be secured and paid for by the mechanical contractor and included in bid price.
- Anything drawn or specified on these plans shall not be construed to conflict with any local, municipal or state law, regulation or ordinance which governs the installation of any mechanical or related work. Where any portion of the systems is not installed as in accordance with applicable laws, ordinances, regulations and codes, this contractor shall make all changes required by the enforcing authorities in a manner approved by the owner and without additional cost to the owner. Where plan requirements are more stringent than code, the installation shall be in accordance with the plans.
- Where job conditions require changes from the contract documents that do not change the scope of installation or nature of work required, the contractor shall make such changes without additional cost to the owner. No other changes may be made without written permission of the owner.
- All equipment shall be new and unused, UON, and shall bear the label of an approved agency. All equipment shall be installed in strict conformance to manufacturer's instructions, except where these specifications require a higher quality installation than recommended by manufacturer. All mechanical equipment shall be provided with installation instructions, which shall be made available at the job site.
- All installed systems, devices and related items shall be tested in place on site. Replace any and all defective devices, items or systems at contractor's own expense before completion of the project.
- Contractor shall guarantee all work for which materials are furnished, fabricated or field erected, all factory assembled equipment for which no specific manufacturer's guarantee is furnished, and all work in connection with installing manufacturer's guaranteed equipment. This contractor's guarantee shall exist for a period of one (1) year from the date of final owner acceptance of the work and shall apply to defects in material and to defective workmanship of any kind.
- Contractor shall replace at contractor's own expense any contractor-supplied materials, equipment, and related items that fail or are found to be defective within the guarantee period.
- Arrange for chases, slots, and openings in other building components to allow for mechanical installations. Coordinate the installation of required supporting devices and sleeves to be set in poured in place concrete and other structural components, as they are constructed. Coordinate the cutting and patching of building components to accommodate installation of mechanical equipment and materials.
- Sequence, coordinate, and integrate installations of mechanical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to closing-in the building.
- Coordinate mechanical equipment and materials installation with other building components. Coordinate the installation of mechanical materials and equipment above ceilings with suspension system, light fixtures, and other installations.
- Equipment locations, roof & wall openings are approximate: verify size and coordinate with G.C., equipment supplier, and owner. Provide steel framing around roof opening(s) where required and around wall opening(s) where required.
- Do not endanger or damage installed Work through procedures and processes of cutting and patching. Arrange for repairs required to restore other work, because of damage caused as a result of mechanical installations.
- Where mounting heights are not detailed or dimensioned, install mechanical services and overhead equipment to provide the maximum headroom possible.
- Install mechanical equipment to facilitate maintenance and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
- For all air systems: adjust fans, supply register dampers, and duct volume dampers as needed to balance all systems to match listed airflow (+/- 10%), and provide a written summary report. Replace fan drive if required to achieve design airflows. Air balance shall be performed by an independent AABC or NEBB certified firm. Summary report shall include design, preliminary and final airflow data, and shall include a list of deficiencies.
- The entire installation, including the gauges of ductwork, shall be in strict compliance with SMACNA standards, except where these specifications require a stricter installation standard. System is 1" pressure class, UON. All ducts shall be sealed to meet SMACNA Class B requirements minimum, and shall be supported at intervals not exceeding 10'. Sealant shall be UL-181A or 181B certified.
- All 90 degree turns in supply and return ductwork shall be mitered elbows with single wall turning vanes at 2" spacing extended in the direction of airflow, or smooth radius elbows with a radius-to-width ratio of 1.0 or greater. Mitered elbows without turning vanes, square-throat radiused-heel elbows, and radiused-throat square-heel elbows are NOT acceptable. All duct transitions shall be smooth (30 degree taper maximum), not abrupt.
- All supply and return and outside air ducts inside the building thermal envelope, not visible from the Sales Floor, shall be insulated with 1.5" fiberglass duct insulation. All supply and return ductwork outside the building thermal envelope shall be insulated with 3" fiberglass duct insulation (minimum R-8 "installed" value). Insulation shall be fiberglass wrap with scrim-reinforced foil backing. Seal all joints and punctures to preserve vapor barrier.
- Duct smoke detectors and accessories shall be UL tested and listed. Equipment and installation shall meet all pertinent requirements of the mechanical code and NFPA 72. Duct smoke detectors located more than 10 ft above the finished floor, or located such that the detector's alarm indicator is not visible to responding personnel, shall be provided with remote alarm indicators. Each remote indicator shall be clearly labeled as to function and air handling unit served, with an acrylic engraved nameplate.
- All diffusers and grilles shall be factory finished white, unless otherwise noted.
- All curtain-type fire dampers shall be UL 555 listed and dynamic rated, except that static rated fire dampers shall be permitted where the air handling system is automatically shut down in the event of fire. Provide and install duct access panel with acrylic engraved nameplate for each fire damper.
- Provide and install aluminum registers and ducts for underslab, locker room, and high humidity applications.
- All mechanical equipment shall have vibration isolators, as well as flexible duct connectors. Flexible connectors shall be UL 181 tested and labeled, and shall not exceed 14' in length. Mechanical fasteners and sealants shall be used to connect ducts to mechanical equipment.
- All duct coverings, linings, tape and vibration isolation connectors shall have a maximum flame spread rating of 25, and a maximum smoke generation rating of 50.
- All duct dimensions listed on plans are inside clear dimensions. Where internally lined ductwork is specified, adjust sheet metal dimensions to accommodate liner.
- Flexible ducts shall not exceed 10' in length, nor shall they be installed where they must be flattened. Flexible ducts shall be UL 181 tested and labeled, and must be fastened per SMACNA standards. If job conditions do not permit proper installation of flexible duct, rectangular galvanized steel duct with equal free area shall be used instead. Flexible ducts shall not be used where exposed, or where concealed above drywall or plaster ceilings.
- Provide volume dampers at each branch off of a trunk duct to a supply diffuser.
- All air handlers, condensers, control devices and other mechanical apparatus shall be clearly marked for easy identification and safety. Use black plastic or bakelite name plate engraved with white letters 1/4" high. Punched tape is not acceptable.
- Mechanical contractor shall furnish record set of drawings with any deviations marked in red ink, within 90 days of system acceptance.
- Mechanical contractor shall furnish manuals for all new equipment within 90 days of system acceptance, including, at a minimum: equipment input and output capacity and required maintenance actions, O&M manuals, controls maintenance and calibration information (including wiring diagrams and controls set points), and a complete written narrative of how each system is intended to operate. Systems shall be tested to ensure that controls are calibrated, adjusted, and in proper working condition.
- All submittals shall be sent in pdf format, hard copies will not be reviewed. Submittals shall be highlighted or redlined to indicate equipment ID from schedules, model number, performance data, electrical data, dimensions, weights, options and accessories, and shall be emailed to the Architect.

EXHAUST FANS SCHEDULE

ID	Mfr	Type	Model	CFM	ESP	Drive	Fan RPM	Sones	Motor	Volt/Ph	Dimensions	Wt(lbs)	Serves	Notes
EF-1	Greenheck	Ceiling	SP-B110	75	0.25"	Direct	804	1.5	80 W	120/1	14"x 12"x 12"	12	Customer Restroom	1, 2, 3, 4, 5
EF-2	Greenheck	Ceiling	SP-B110	75	0.38"	Direct	804	1.5	80 W	120/1	14"x 12"x 12"	12	Employee Restroom	1, 2, 3, 4, 5

Notes

- Suspend from structure with mfr's vibration isolators.
- With built in gravity backdraft damper.
- Control via timeclock. Fan shall energize and run continuously during occupied hours, and shall de-energize in unoccupied hours.
- Terminate at existing wall cap.
- Provide and install speed controller, install at fan for balancing.

DIFFUSERS & GRILLES SCHEDULE

ID	Type	Mfr	Model	Description	Overall	Neck	CFM	NC max	Mounting	Material	DR	TR	FD
CD-A	S	Titus	TMRA	Round bladed, adjustable	18" dia	8" dia	130-240	25	Exposed Duct	Steel	YES	NO	NO
CD-B	S	Titus	MCD	Bladed modular core	24/24	8/8	180-300	25	T-bar grid	Steel	YES	YES	NO
CD-C	S	Titus	MCD	Bladed modular core	24/24	6/6	0-175	25	T-bar grid	Steel	YES	YES	NO
CD-D	S	Titus	MCD	Bladed modular core	12/12	6/6	0-175	25	Surface	Steel	YES	YES	NO
CG-A	R	Titus	350RL	Bladed, 3/4" spacing, 35 deg deflec	24 x 24	22 x 22	==	==	Surface	Steel	NO	NO	NO
CG-B	R	Titus	350RL	Bladed, 3/4" spacing, 35 deg deflec	12/12	8/8	0-200	20	Surface	Steel	NO	YES	NO
HSR-A	S	Titus	300RL	Bladed, 3/4" spacing, 35 deg deflec	14/8	12/6	205-300	25	Surface	Steel	NO	NO	NO
HSR-B	S	Titus	300RL	Bladed, 3/4" spacing, 35 deg deflec	10/8	8/6	0-200	25	Surface	Steel	NO	NO	NO
HSG-A	R	Titus	350RL	Bladed, 3/4" spacing, 35 deg deflec	10/8	8/6	0-180	==	Surface	Steel	NO	YES	NO

Abbreviations

- DR - Volume damper
- TR - Square to round neck transition.
- FD - Fire damper assembly with radiation blanket
- S - Supply
- R - Return or transfer
- E - Exhaust or relief

OUTSIDE AIR CALCULATIONS

ETR RTU-1													
Zone Description	Zone Area	Area OA Rate	Area OA	Occupant Load Rate	Occupant Load	Occupant OA Rate	Occupant OA	Breathing Zone OA	Zone Air Dist Eff	Zone OA Voz	Zone OA Vpz	OA Fraction Zp	Zone Vent Efficiency Ez
	Az (sq.ft.)	Ra (cfm/sq.ft.)	Az x Ra (cfm)	Pz (pp/1000 sf)	Pz (people)	Rp (cfm/pers)	Rp x Pz (cfm)	Vbz (cfm)	Ez	OA (cfm)	Supply Air Vpz (cfm)	Fraction Zp	Efficiency Ez
Sales Floor	2437	0.06	146	8	20	7.5	150	296	0.8	370	1500	0.247	0.924
Electric Room	155	0.12	19	0	0	0	0	19	0.8	23	100	0.233	0.938
Receiving	362	0.12	43	0	0	0	0	43	0.8	54	250	0.217	0.953
Break Area	97	0.06	6	5	1	5	5	11	0.8	14	100	0.135	1.035
Vestibule	98	0.06	6	0	0	0	0	6	0.8	7	200	0.037	1.134
Restrooms	73	0	0	0	0	0	0	0	0.8	0	100	0.000	1.171
Break Room	114	0.06	7	5	1	5	5	12	0.8	15	200	0.074	1.097
Comidor	451	0.06	27	0	0	0	0	27	0.8	34	150	0.226	0.945
Storage	1313	0.12	158	0	0	0	0	158	0.8	197	600	0.328	0.842
Cash Office	55	0.06	3	5	1	5	5	8	0.8	10	200	0.052	1.119
TOTAL	5155		415		23		165	580		725	3400	0.328	0.842
Occupant Diversity	D	1.00											
Uncorrected OA	Vou	580											
Average OA Fraction	Xs	0.171											
Ventilation Efficiency	Ev	0.84						0.82					
Ventilation Eff. Used	Ev	0.84											
TOTAL REQUIRED O₂		Vot	688	cfm									

ELECTRIC HEATER SCHEDULE

ID	MFR	Quantity	Model	Watts	Volts	Ph	Mounting	Dimensions	Serves	Notes
HTR-1	Q-Mark	1	EFF-4004	1500	208	1	Ceiling	24"x24"	Break Room	1,2,3

Notes

- Provide wall/ceiling mounting bracket.
- Provide and install remote line voltage thermostat Q-Mark M601W or equal. HTR-1 set to 70F.
- Heater shall be T-Bar mounted.

MECHANICAL SYMBOLS

	Duct section up, positive pressure	VIF	Verify In Field
	Duct section up, negative pressure	UIJ	Up In Joists
	Duct section down, positive pressure	UON	Unless otherwise noted
	Duct section down, negative pressure	RTU	Roof Top Unit
	Galvanized steel duct, 1st number is side shown (in inches).	MC	Mechanical Contractor
	Galvanized steel round duct; flexible ducts may be used where permitted per General Notes on this sheet.	GC	General Contractor
	Turning vanes, extended in direction of flow and located 2" on center	EC	Electrical Contractor
	Manual volume damper	PC	Plumbing Contractor
	Supply diffuser, CFM as noted	①	Numbered Note
	Return or exhaust grille, CFM as noted	HSG	High sidewall grille
	Thermostat	HSG	High sidewall register
	Heating only thermostat	EF	Exhaust Fan
	Humidistat	OA	Outside Air
	Remove and dispose of	AFF	Above Finished Floor
	Point of connection to existing	(E),ETR	Existing To Remain
		(R),REL	Relocate and reconnect
			Duct smoke detector
		U/C	Undercut door
		VAV	Variable air volume terminal unit

EXISTING TO REMAIN GAS-ELECTRIC ROOFTOP UNIT SCHEDULE

ID	Mfr	Model	Nom Tons	Tot Clg MBH	Sens Clg MBH	ARI EER	Heating MBH-in	Heating Eff	Heating Stages	Supply CFM	ESP	OA cfm	Wt(lbs)	Dimensions
RTU-1	Carrier	48HCFE09	8.5	103.6	81.0	12.0	224	82%	2	3400	0.75"	700	1100	89" x 60" x 50"

ID	Volt/Ph	Fan Motor	Drive	kW	MCA	MOP	Refrig	Accessories	Serves
RTU-1	208/3	2.4 Hp	Belt	8.1	41 A	50 A	R-410A	1,2,3,4,5,6,7	Sales Floor

Notes:

- Install level on existing steel structure. Unit is a direct replacement. Verify slope in field.
- Provide and install pleated disposable MERV-8 filters, change filters prior to turnover.
- All outside air dampers shall fully close in unoccupied mode.
- Provide and install Honeywell TH8321 or equivalent commercial touchscreen thermostat.

Accessories

- Provide with manufacturer's OA hood and 2-position motorized damper. Economizer is omitted per 2015 International Energy Conservation Code C403.3 Exception 6 (open case refrigeration).
- Phase loss protection
- Hot gas reheat dehumidification system and space humidity sensor
- Drain pan overflow switch
- Coated coils for a coastal application
- Hinged access panels
- Unit shall come with mfr's smoke detectors installed in return duct.

CONSTRUCTION INSPECTIONS

Contractor shall submit to General Contractor, Owner, Landlord, and to designated third party inspectors, prior to construction, a list of dates when inspections are needed. The Contractor shall submit an updated schedule of inspections a minimum of 2 weeks prior to the first inspection. Inspection schedule shall include the following inspections:

- close in of ceilings or walls (coordinate to avoid multiple trips if possible)
- final inspection

This list is intended to be a minimum, and the Contractor shall review this list with both the local code office and the 3rd party inspector. Add inspection dates (if any) as directed. Once list is edited and/or approved, Contractor shall confirm each date during construction with the 3rd party inspector 7 calendar days prior to each inspection. Failure to confirm dates with inspector may result in inspection delays. Under no circumstances may construction proceed without the proper inspections.

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

#	Description	Revision Schedule	
		Date	06/30/2020
	ISSUED FOR PERMIT & PRICING		

STAMP



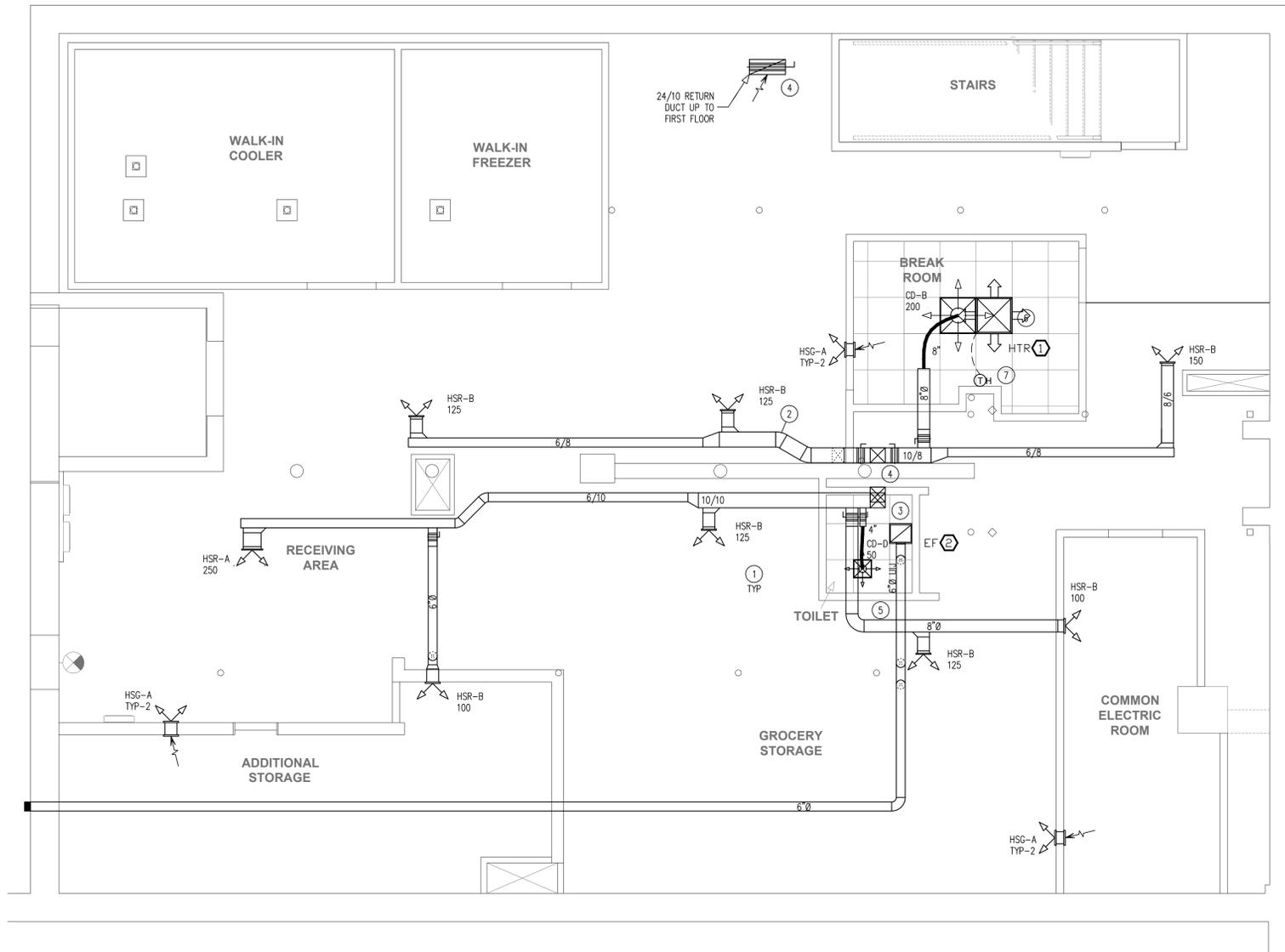
DAILY TABLE

684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

MECHANICAL NOTES, SYMBOLS & SCHEDULES

DATE	6/30/2020
DRAWN BY	DJG
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

M100



1 BASEMENT MECHANICAL PLAN
M101 1/4" = 1'-0"

- ### GENERAL NOTES
- 1 Verify exact duct locations and sizes in field and report problems to engineer.
 - 2 Ceiling space is limited throughout the basement. Where necessary run ductwork up in joist. If necessary duct sizes can be altered to accommodate field conditions. Equal duct free area to that shown on plans shall be used.

- ### NUMBERED NOTES
- 1 Remove and dispose of existing exhaust ductwork and unit heater that are not being reused.
 - 2 Insulate all supply and return ductwork in the basement, per General Notes on sheet M100.
 - 3 Ceiling exhaust fan supported from structure with vibration isolators. Terminate at new wall cap. Coordinate exact location, in field.
 - 4 Route supply and return ductwork up to the first floor. see sheet M102 for continuation. Adjust as necessary to account for field conditions. Stub return duct into space below joists. Terminate open to room with wire screen.
 - 5 Door shall be undercut for make-up/relief air.
 - 6 Electric ceiling heater suspended from structure. See schedule on sheet M100.
 - 7 Line voltage heating only thermostat mounted on wall. Coordinate location and mounting height with architect prior to installation.

DUCT ELBOW NOTES

ALL 90 DEGREE TURNS MUST EITHER BE MITERED ELBOWS WITH TURNING VANES PER SMACNA:



OR, SMOOTH RADIUS ELBOWS (R/W=1.0):



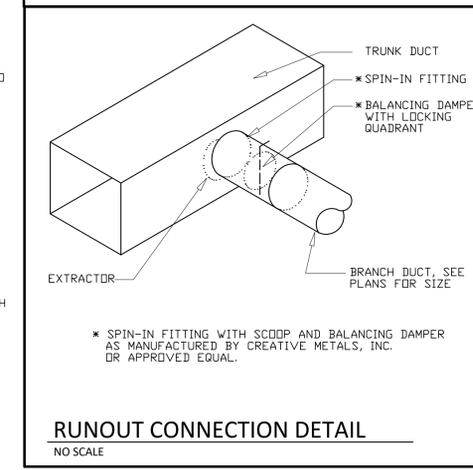
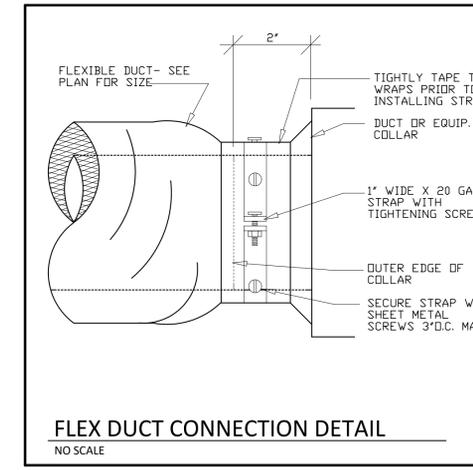
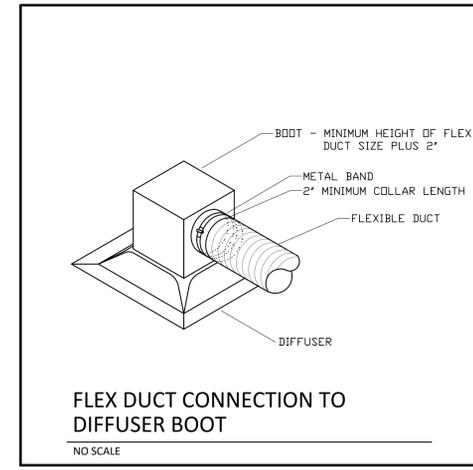
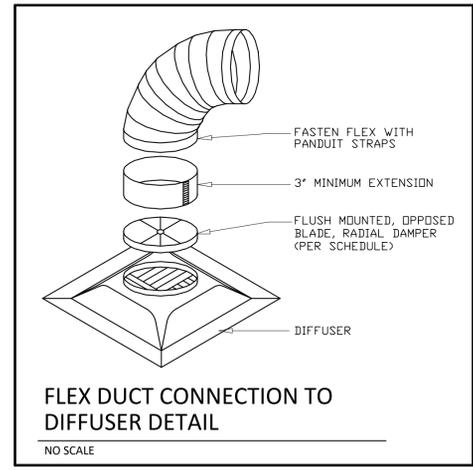
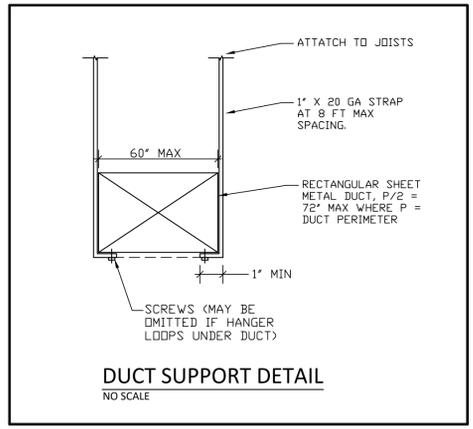
ALL ELBOWS IN GREASE EXHAUST DUCTS SHALL BE SMOOTH RADIUS (R/W=1.0 MIN) UDN.

OTHER TYPES OF ELBOWS, INCLUDING THOSE LISTED BELOW ARE NOT PERMITTED:



MITERED ELBOW WITHOUT VANES:
HALF RADIUS ELBOW:

SEE GENERAL NOTES ON SHEET M1 FOR ADDITIONAL INFORMATION.



Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
#	ISSUED FOR PERMIT & PRICING	06/30/2020

STAMP



880 Main Street, Fifth Floor
Waltham, Massachusetts 02451
Phone (781) 693-7400 Fax (781) 693-7350



DAVID GRASER
MECHANICAL
No. 4857D
REGISTERED
PROFESSIONAL ENGINEER
7/1/20

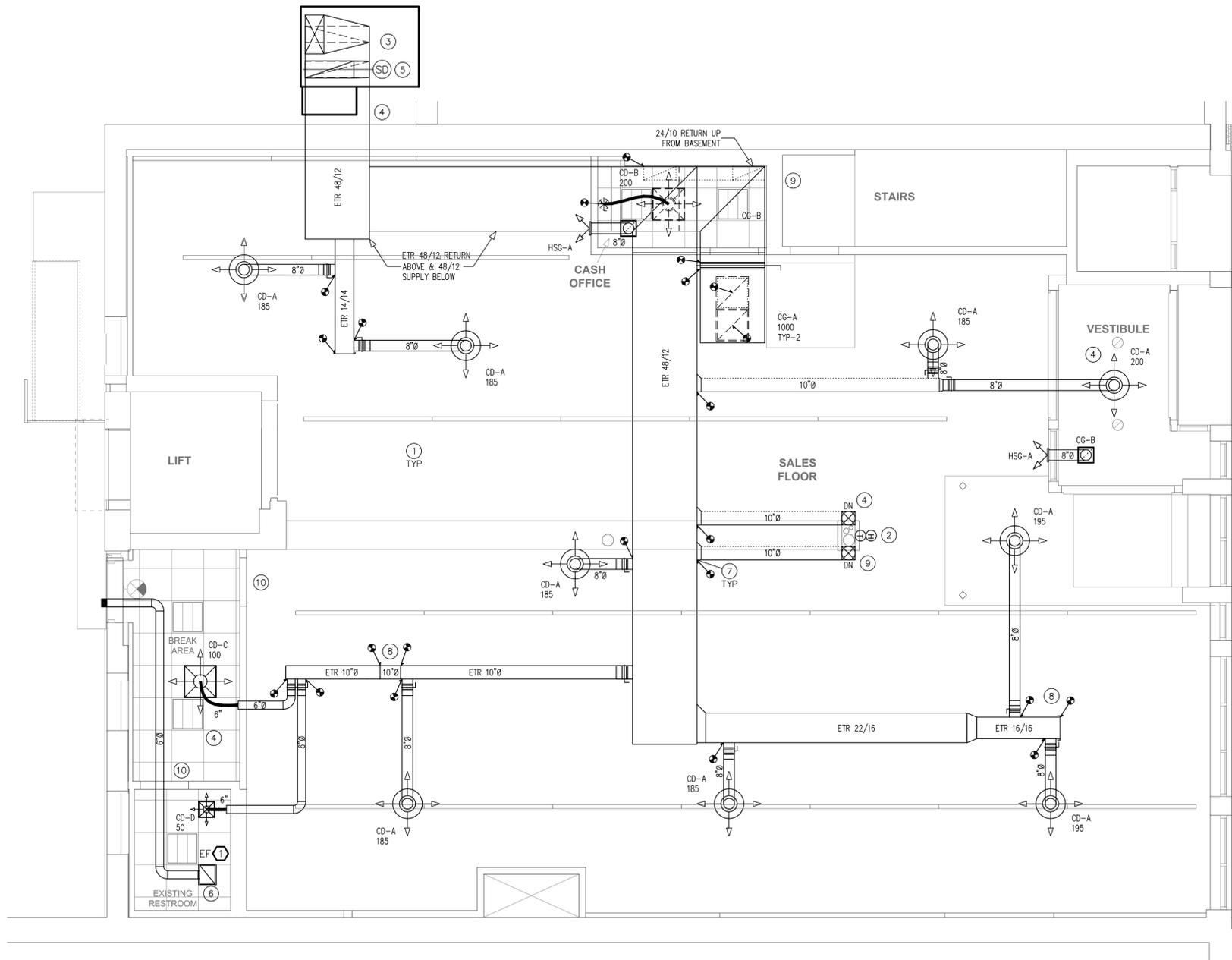
DAILY TABLE

684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

BASEMENT MECHANICAL PLAN

DATE	6/30/2020
DRAWN BY	DJG
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

M101



1 FIRST FLOOR MECHANICAL PLAN
 1/4" = 1'-0"

GENERAL NOTES

- 1 Verify exact duct locations and sizes in field and report problems to engineer.
- 2 Ceiling space in certain areas is limited. If necessary duct sizes can be altered to accommodate field conditions. Equal duct free area to that shown on plans shall be used.

ADD ALTERNATE BIDS

Provide an add alternate bid to utilize Titus sidewall registers, model 300RL, with a 12/6 neck and opposed blade damper instead of the round diffusers.

NUMBERED NOTES

- 1 Remove and dispose of existing ductwork and runouts that are not being reused. Cap and seal unused openings in existing to remain trunk ducts.
- 2 Relocate existing thermostat and humidity sensor. Verify location and mounting height with architect prior to installation.
- 3 Existing to remain rooftop unit on existing steel. Verify operation in field prior to construction.
- 4 Insulate concealed and exterior ductwork per General Notes on sheet M100.
- 5 Duct smoke detector factory installed in return duct to shut down the unit in the event of fire. Remote indicating/test/reset stations provided and installed by Fire Alarm Contractor. Verify location with inspector.
- 6 Ceiling exhaust fan supported from structure with vibration isolators. Terminate at existing wall cap. Inspect condition prior to construction and repair/replace, as necessary.
- 7 Verify exact point of connection locations in field.
- 8 Existing duct heaters shall be removed and replaced with ductwork, as necessary. Verify exact locations in field.
- 9 Turn supply and return ductwork down and route to basement. Adjust as necessary to account for field conditions.
- 10 Door shall be undercut for make-up/relief air.

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Date
Description	06/30/2020
#	ISSUED FOR PERMIT & PRICING

STAMP

Scott Griffin ARCHITECTS
 880 Main Street, Fifth Floor
 Waltham, Massachusetts 02451
 Phone (781) 693-7400 Fax (781) 693-7350



DAILY TABLE

684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

FIRST FLOOR MECHANICAL PLAN

DATE	6/30/2020
DRAWN BY	DJG
CHECKED BY	DJG
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

M102

GENERAL NOTES

- Materials, equipment, and systems shall meet all pertinent requirements of the American Society for Testing Materials (ASTM), the Underwriters Laboratory (UL), the 2017 National Electric Code (NEC) as amended by the MA Electrical Code, the National Electric Manufacturer's Association (NEMA), National Fire Protection Association (NFPA), American National Standards Institute (ANSI), and other nationally recognized agencies as well as applicable local codes.
- Bidders shall be licensed contractors in accordance with local and state laws.
- Bidders shall thoroughly acquaint themselves with the conditions under which the work is to be performed. They shall examine all services, equipment, surfaces, etc., which this work is in any way dependent upon, and bring any discrepancies determined or omissions found in the drawings to the owner's attention before submitting bid.
- The systems shown on drawings shall be provided to serve all fixtures, equipment, and areas within the Contract Limit Lines as set forth by the Architectural solution for the project. The bidding and contract requirements, general requirements, and general provisions shall apply to this section. Systems shall include all equipment, appurtenances, safety devices, and controls necessary for the intended service.
- All permits and fees required for the work shall be secured and paid for by the electrical contractor and included in bid price.
- Where job conditions require changes from the contract documents that do not change the scope of installation or nature of work required, the contractor shall make such changes without additional cost to the owner. No other changes may be made without written permission of the owner.
- Anything drawn or specified shall not be construed to conflict with any local, municipal or state law, regulation or ordinance which governs the installation of any electrical or related work. Items shall not be installed in conflict with the NEC. Resolve any and all conflicts before installation at no additional expense to the owner.
- All equipment shall be new and unused. All equipment shall be installed in strict conformance to manufacturer's recommendations, except where these specifications require a higher quality installation than recommended by the manufacturer.
- All installed systems, devices and related items shall be tested in place on site. Replace any and all contractor-supplied defective devices, items or systems at contractor's own expense before completion of the project.
- Contractor shall guarantee all work for which materials are furnished, fabricated or field erected, all factory assembled equipment for which no specific manufacturer's guarantee is furnished, and all work in connection with installing manufacturer's guaranteed equipment. This contractor's guarantee shall exist for a period of one (1) year from the date of final owner acceptance of the work and shall apply to defects in material and to defective workmanship of any kind.
- Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected. Verify all dimensions by field measurements.
- Arrange for chases, slots, and openings in other building components to allow for electrical installations. Coordinate the installation of required supporting devices and sleeves to be set in poured in place concrete and other structural components, as they are constructed.
- Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the work. Coordinate the cutting and patching of building components to accommodate installation of electrical equipment and materials.
- Coordinate the installation of electrical materials and equipment above ceilings with suspension system, mechanical equipment and systems, and structural components. Coordinate electrical equipment and materials installation with other building components.
- Where mounting heights are not detailed or dimensioned, install electrical services and overhead equipment to provide the maximum headroom possible. Install electrical equipment to facilitate maintenance and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
- Coordinate connection of electrical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service.
- Do not endanger or damage installed work through procedures and processes of cutting and patching. Arrange for repairs required to restore other work, because of damage caused as a result of electrical installations.
- All electrical equipment shall be rated at 75C minimum, and be listed and labeled for the qualified use. Verify circuit breaker interrupt capacity needed for each panel with local utility. For Bid Purposes, assume 65,000 AIC for equipment located within 20 feet of the service entrance point, and 42,000 AIC elsewhere. Balance the power equally (+/- 10%) on all phases.
- Verify mechanical equipment switch and connection requirements, item by item, with the mechanical contractor, prior to installation of electrical equipment. Resolve all discrepancies without further cost to owner.
- All wiring shall be in conduit, 1/2" EMT minimum with set screw fittings supported at 8'-0" intervals and 18" from each fitting. However, where permitted by local code, above suspended ceilings and in voids of walls, (AC) type armored cable may be used. Isolated ground circuits shall have dedicated, insulated ground wires.
- All wiring shall be THHN/THWN copper (No. 12 AWG minimum) unless otherwise noted. Wire and conduit sizes are shown on the panel schedule, and are based on 75C.
- All lights, including lights noted as ETR, shall be supported and secured in accordance with NEC. Support shall be independent from the ceiling grid.
- For each data or phone outlet: run 3/4" conduit in wall to above ceiling and extend stranded cat. 6 wire from jack back to phone board or server. All devices shall be rated CAT-6 minimum (verify w/owner). Verify wire type and jack type with phone vendor prior to purchasing wire. For each cable TV (CATV) outlet: run 3/4" conduit in wall to above ceiling and extend RG-6 cable from cable TV jack back to main cable entrance point. Verify wire type with CATV vendor prior to purchasing wire.
- All panels, control devices and miscellaneous electrical apparatus shall be clearly marked for easy identification and safety. Use black plastic or bakelite name plate engraved with white letters 1/4" high. Punched tape is not acceptable.
- All panelboards shall be rated at 75C minimum. Panelboards shall be provided with a typewritten directory affixed to inside of panel door with a clear plastic sleeve.
- The electrical drawings are diagrammatic and are for circuit allocation only. Do not scale drawings.
- Electrical contractor shall furnish record set of drawings with any deviations marked in red ink within 30 days of system acceptance.
- Electrical contractor shall furnish electrical power systems and equipment O&M manuals.
- Prior to passing the final inspection contractor shall provide the registered design professional evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition. Documentation shall also be provided to the building owner within 90 days from the date of receipt of the certificate of occupancy.
- ALL submittals MUST be sent in pdf format, highlighted or redlined to indicate product full model number, including suffix and options, and shall be emailed to the Architect. Hard copies of submittals will not be reviewed.

ELECTRICAL SYMBOLS

- LED Strip or Vapor Tight Light, see schedule
- Recessed Down light, see schedule
- 24 Hour LED Night Light, see schedule
- Wall Mounted Emergency Battery Pack with Twin Headlights
- Ceiling Mounted Emergency Battery Pack with Twin Headlights
- Exit Sign, filled section indicates face, arrows show direction
- Manual Fire Alarm Pull Station Mounted at 48" AFF to the top
- ADA compliant Xenon Strobe Light and Horn, 15 Candela U.O.N. Bottom of the device mounted at the lower of 80" AFF or 6" below the ceiling
- ADA compliant Xenon Strobe Light, 15 Candela U.O.N. Bottom of the device mounted at the lower of 80" AFF or 6" below the ceiling
- Ceiling mounted ADA compliant Xenon Strobe Light and Horn, 15 candela U.O.N.
- Ceiling mounted ADA compliant Xenon Strobe Light, 15 candela U.O.N.
- Connection to sprinkler Flow Switch
- Connection to sprinkler Tamper Switch
- Smoke Detector
- Heat Detector
- Duct type smoke detector, installed in supply and return ducts, provided and wired by fire alarm contractor, installed in duct by MC. Upon actuation, smoke detector shall shut down the HVAC unit and send a signal to the building fire alarm system. Remote signaling and test/reset station shall provided and installed by fire alarm contractor.
- Single pole switch, +48" U.O.N.
- 3 way single pole switch, +48" U.O.N.
- 4 way single pole switch, +48" U.O.N.
- Dimmer switch, +48" AFF U.O.N.
- Low Voltage On/Off/Dimming Switch, Wattstopper LMDM-101 or equal.
- Occupancy Sensing Wall Switch, Wattstopper DW-100 or equal.
- Occupancy Sensing Wall Dimmer, Wattstopper DW-311 or equal.
- Low-Temp Corner Mount Occupancy Sensing Switch, Wattstopper CB-100 or equal.
- Timeclock Override Switch, refer to timeclock control diagram
- Ceiling Occupancy Sensor, Wattstopper LMUC-100 or equal.
- Single Relay Room Controller, Wattstopper LMRC-211 or equal.
- Duplex outlet, 120V, 20 amps, 1 phase, +18" AFF, UON.
- Simplex outlet, 120V, 20 amps, 1 phase, +18" AFF, UON.
- Special Outlet, match to equipment. Contractor to coordinate with equipment supplier, provide and install appropriate receptacle type, voltage, amp at supplier recommended height.
- Quadruplex Outlet
- Ground Fault Circuit Interrupting Duplex Outlet
- Isolated Ground Duplex Outlet
- Half Switched Duplex Outlet with Controlled Outlet Labeling
- Duplex outlet mounted flush with the floor.
- Duplex outlet mounted flush with the ceiling.
- Telephone/Data outlet, 3/4" EMT up in wall to above ceiling.
- Electric Panel
- Phase
- Pole
- Amp
- Junction Box
- Disconnect
- Fan
- Manual Starter or Concealed Plug Disconnect
- Motor
- HVAC unit label, see mechanical schedule
- Electric Meter
- Branch circuit wiring CONCEALED, UON
- Branch circuit to panel. Numerals indicate assigned panel circuit number.
- Point of connection to existing
- ETR or (E) Existing to remain
- REL or (R) Relocated Equipment
- (P) Partial Circuit, Circuit Continued Elsewhere
- IG Isolated Ground
- EC Electrical Contractor
- MC Mechanical Contractor
- GC General Contractor
- PC Plumbing Contractor
- WP Weatherproof
- NFSS Non-fused safety switch
- FACP Fire Alarm Control Panel
- FAA Fire Alarm Annunciator Panel
- FSS Fused safety switch
- CB Circuit breaker
- UON Unless otherwise noted
- AFF Above finished floor
- CLG Ceiling
- DN Down
- Remove and Dispose of
- Numbered Note
- Relocate and extend existing item and reconnect associated wiring.

CONSTRUCTION INSPECTIONS

Contractor shall submit to General Contractor, Owner, Landlord, and to designated third party inspectors, prior to construction, a list of dates when inspections are needed. The Contractor shall submit an updated schedule of inspections a minimum of 2 weeks prior to the first inspection. Inspection schedule shall include the following inspections:

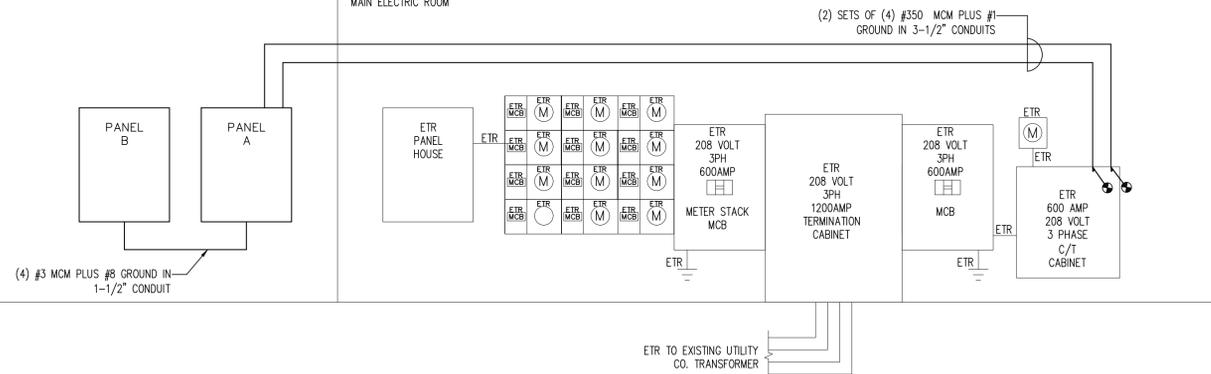
- close in of ceilings or walls (coordinate to avoid multiple trips if possible)
- final inspection

This list is intended to be a minimum, and the Contractor shall review this list with both the local code office and the 3rd party inspector. Add inspection dates (if any) as directed. Once list is edited and/or approved, Contractor shall confirm each date during construction with the 3rd party inspector 7 calendar days prior to each inspection. Failure to confirm dates with inspector may result in inspection delays. Under no circumstances may construction proceed without the proper inspections.

FIRST FLOOR

BASEMENT

MAIN ELECTRIC ROOM



1 ELECTRICAL RISER
E101 NOT TO SCALE

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
#	ISSUED FOR PERMIT & PRICING	06/30/2020



STAMP 07/01/2020

Scott Griffin ARCHITECTS

880 Main Street, Fifth Floor
Waltham, Massachusetts 02451
Phone (781) 693-7400 Fax (781) 693-7350

DAILY TABLE

684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

ELECTRICAL NOTES, SYMBOLS, AND RISER

DATE	6/30/2020
DRAWN BY	DES
CHECKED BY	BSD
PROJECT NUMBER	20028.00
SCALE	1/8"=1'-0"

E100

PANEL SCHEDULE A																																																					
208 Volt, 3 Phase, 4 Wire, 42 Pole, 600 Amp MLO Panel with 200 Amp Sub-Feed Breaker.																																																					
#	Description	P	A	W	Cond	FLA	Watts	KwA	KwB	KwC	#	Description	P	A	W	Cond	FLA	Watts	KwA	KwB	KwC																																
1	Lit	3	30	#10	3/4"	15	5472	1.8			2	RTU-1	3	50	#8	3/4"	23	8100	2.7																																		
				#10		15			1.8		8	WH-1	2	50	#8	3/4"	38	8000	4.0			2.7																															
7	Ref Case Cond	3	20	#12	3/4"	13	4752	1.6		1.6	12	SPARE	1	20			0						0.0																														
				#12		13					14	Walkin Freezer Cond	3	50	#8	3/4"	34	12204	4.1				4.1																														
13	Ref Case Cond	3	20	#12	3/4"	13	4752	1.6		1.6							34						4.1																														
				#12		13					20	Coffin Frozen Cond	3	50	#8	3/4"	34	12204	4.1					4.1																													
19	Walkin Cooler Cond	3	20	#12	3/4"	11	3996	1.3		1.3							34						4.1																														
				#12		11					26	Coffin Frozen Cond	3	50	#8	3/4"	34	12204	4.1					4.1																													
25	SPARE	1	20			0		0.0									34						4.1																														
27	SPARE	1	20			0		0.0									34						4.1																														
29	SPARE	1	20			0		0.0		0.0							34						4.1																														
31	SPARE	1	20			0		0.0			32	Space	1				0		0.0																																		
33	SPARE	1	20			0		0.0			34	Space	1				0		0.0																																		
35	Space	1				0		0.0		0.0	36	Space	1				0		0.0					0.0																													
37	Space	1				0		0.0			38	Panel B	3	100	#3	1-1/2"	76	27415	8.9					9.2																													
39	Space	1				0		0.0		0.0							76																																				
41	Space	1				0		0.0		0.0							76							9.3																													
43	SPARE	3	200			0		0.0		0.0																																											
Total KW Phase A.....								34.1	Total Connected KW.....								99	Total KW Phase B.....								34.4	Total Connected Amps.....								275	Total KW Phase C.....								30.5	Minimum Service Size.....								344 AMPS

NOTES:

PANEL SCHEDULE B																																																					
208 Volt, 3 Phase, 4 Wire, 42 Pole, 225 Amp MLO Panel.																																																					
#	Description	P	A	W	Cond	FLA	Watts	KwA	KwB	KwC	#	Description	P	A	W	Cond	FLA	Watts	KwA	KwB	KwC																																
1	(2) Cooler/Freezer Heat Trace	1	20	#12	3/4"	4	500	0.5			2	(1) EF-1/EF-2	1	15	#12	3/4"	1	160	0.2																																		
3	Walkin Evap	1	15	#12	3/4"	2	242		0.2		4	(3) Pump Alarm	1	15	#12	3/4"	4	500				0.5																															
5	(2) Freezer Door Heater	1	20	#12	3/4"	4	500			0.5	6	SP-1	1	20	#12	3/4"	6	696				0.7																															
7	Basement Breakroom Refrig	1	20	#12	3/4"	7	800	0.8			8	SP-2	1	20	#12	3/4"	10	1176			1.2																																
9	Basement Breakroom Counter	1	20	#12	3/4"	2	180			0.2	10	(1) Case Lights - Rear Right	1	20	#12	3/4"	5	602				0.6																															
11	Basement Breakroom Counter	1	20	#12	3/4"	2	180			0.2	12	Case Fans - Rear Right	1	20	#12	3/4"	6	767				0.8																															
13	Basement Breakroom	1	20	#12	3/4"	5	540	0.5			14	(1) Case Lights - Left	1	20	#12	3/4"	5	602	0.6																																		
15	Basement Recepts	1	20	#12	3/4"	8	900		0.9		16	Case Fans - Left	1	20	#12	3/4"	6	767			0.8																																
17	Basement Recepts	1	20	#12	3/4"	8	900			0.9	18	Basement Cooler/BreakLts	1	20	#12	3/4"	4	513				0.5																															
19	Restroom Recepts	1	20	#12	3/4"	3	360	0.4			20	SPARE	1	20			0		0.0																																		
21	Storage Recepts	1	20	#12	3/4"	6	720		0.7		22	First Floor Break/Cash Lts	1	20	#12	3/4"	1	140			0.1																																
23	Show Window Recepts	1	20	#12	3/4"	8	900			0.9	24	(1) First Floor Lts	1	20	#12	3/4"	15	1840				1.8																															
25	First Floor Breakroom	1	20	#12	3/4"	6	720	0.7			26	(3) First Floor EM/NL Lts	1	20	#12	3/4"	3	408	0.4			0.7																															
27	First Floor Breakroom Counter	1	20	#12	3/4"	2	180			0.2	28	Cashroom Recepts	1	20	#12	3/4"	6	720				0.7																															
29	First Floor Breakroom Micro	1	20	#12	3/4"	10	1200			1.2	30	Sales Recepts Front	1	20	#12	3/4"	6	720				0.7																															
31	Registers	1	20	#12	3/4"	7	800	0.8			32	Sales Recepts Back	1	20	#12	3/4"	5	540	0.5																																		
33	IG Registers	1	20	#12	3/4"	7	800		0.8		34	Basement Lts	1	20	#12	3/4"	12	1402			1.4																																
35	Registers	1	20	#12	3/4"	7	800			0.8	36	(4) Exterior Lts	1	20	#12	3/4"	1	100				0.1																															
37	IG Registers	1	20	#12	3/4"	7	800	0.8			38	HTR-1	2	20	#12	3/4"	14	3000	1.5																																		
39	Cond Maintenance Recepts	1	20	#12	3/4"	5	540		0.5								14				1.5																																
41	Timeclock/Contactor Power	1	15	#12	3/4"	2	200			0.2	42	SPARE	1	20			0					0.0																															
Total KW Phase A.....								8.9	Total Connected KW.....								27	Total KW Phase B.....								9.2	Total Connected Amps.....								76	Total KW Phase C.....								9.3	Minimum Service Size.....								95 AMPS

NOTES:

- (1) Circuit shall be ran through a contractor and controlled via timeclock. See detail #2 on sheet E302
- (2) Breaker shall be GFCI type with 30ma trip for equipment protection.
- (3) Breaker shall have a lock-on type device installed to prevent inadvertent shut-off.
- (4) Circuit shall be controlled via photocell.

LIGHTING FIXTURE SCHEDULE							
ID	TYPE	MFG	MODEL	LAMP	WATTS	SIZE	MTG SERVES
A	LED	Lithonia	PTNSL8-ND-OSR-LP835-CRE	Included	92	97"x 47" 4"	P General
A1	LED	Lithonia	PTNSL4-ND-OSR-LP835-CRE	Included	47	51"x 47" 4"	P General
B	LED	Lithonia	2GTL2-3300LM-LP835	Included	28	2x 2x 3"	R Break/Rest Rooms
C	LED	Lithonia	XVML-L48-5000LM-MVOLT-40K-80CRI	Included	33	4x 3x 3"	S Cooler/Freezer
D	LED	Lithonia	LDN8-35/60-LO8-AR-LSS-MVOLT-EZ10	Included	92	8" Dia.	R Vestibule
E	LED	Lithonia	OLWXI-LED-20W-40K	Included	20	8"x 3"x 8"	W Exterior
ES1	LED	Lithonia	LHQM-LED-R-SD	Included	4	19"x 2"x 8"	S Egress Ltg/Marker W/ Battery
ES2	LED	Lithonia	LHQM-LED-R-HO-SD	Included	4	19"x 2"x 8"	S Egress Ltg/Marker W/ Battery & Remote Capacity
BP	LED	Lithonia	ELM4L UVOLT LTP	Included	3	13"x 7"x 5"	S Egress Ltg W/ Battery
RH	LED	Lithonia	ELA-T-QWP-LO309	Included			S Exterior Egress Ltg

NOTES:
1) Coordinate lay-in fixtures with ceiling grid.
2) Verify finishes, mounting heights, locations and lamp color with architect.

ABBREVIATIONS
I Incandescent
F Fluorescent
MH Metal Halide
LED Light Emitting Diode
S Surface mounted
R Recessed
W Watts or Wall
P Pole or Pendant

Revision Schedule
Description
ISSUED FOR PERMIT & PRICING
Date
06/30/2020



STAMP
07/01/2020

Scott Griffin ARCHITECTS
880 Main Street, Fifth Floor
Waltham, Massachusetts 02451
Phone (781) 693-7400 Fax (781) 693-7350

DAILY TABLE
684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

ELECTRICAL SCHEDULES

DATE 6/30/2020
DRAWN BY DES
CHECKED BY BSD
PROJECT NUMBER 20028.00
SCALE 1/8"=1'-0"

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

E101

COMcheck Software Version 4.1.2.1
Interior Lighting Compliance Certificate

Project Information

Energy Code: 780 CMR Massachusetts State Building Code, 9th Edition, Energy Efficiency
 Project Title: Alteration
 Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Common Space Types:Lounge/Breakroom	256	0.62	159
2-Common Space Types:Restrooms	113	0.85	96
3-Common Space Types:Office - Enclosed	92	0.93	86
4-Common Space Types:Storage	2924	0.63	1842
5-Common Space Types:Sales Area	2863	1.59	4552
Total Allowed Watts =			6735

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Common Space Types:Lounge/Breakroom (256 sq.ft.) LED: B: 2x 2' LED Troffer: Other:	1	4	28	112
Common Space Types:Restrooms (113 sq.ft.) LED: B: 2x 2' LED Troffer: Other:	1	2	28	56
Common Space Types:Office - Enclosed (92 sq.ft.) LED: B: 2x 2' LED Troffer: Other:	1	2	28	56
Common Space Types:Storage (2924 sq.ft.) LED: A: 8' LED: Other:	1	12	92	1104
LED: A1: 4' LED: Other:	1	2	47	94
LED: C: 4' LED Vapor Tight: Other:	1	6	33	198
Common Space Types:Sales Area (2863 sq.ft.) LED: A: 8' LED: Other:	1	22	92	2024
Total Proposed Watts =				3644

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 780 CMR Massachusetts State Building Code, 9th Edition, Energy Efficiency requirements in COMcheck Version 4.1.2.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title: Report date: 06/24/20
 Data filename: P:\SGA\MTABLEMASSAVE\LightingCompliance.cck Page 1 of 6

Name - Title Signature Date

Project Title: Report date: 06/24/20
 Data filename: P:\SGA\MTABLEMASSAVE\LightingCompliance.cck Page 2 of 6

COMcheck Software Version 4.1.2.1
Inspection Checklist

Energy Code: 780 CMR Massachusetts State Building Code, 9th Edition,

Requirements: 100.0% were addressed directly in the COMcheck software

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

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices. Completed COMcheck Interior Lighting certificate and Plan Review Checklist will be submitted with application.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

Project Title: Report date: 06/24/20
 Data filename: P:\SGA\MTABLEMASSAVE\LightingCompliance.cck Page 3 of 6

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15] ¹	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1 [EL18] ¹	Occupancy sensors installed in required spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1, C405.2.2, [EL23] ¹	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.2 [EL22] ¹	Automatic controls to shut off all building lighting installed in all buildings.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.3 [EL16] ¹	Daylight zones provided with individual controls that control the lights independent of general area lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Sidelight zones on first floor in Group A-2 and M occupancies.
C405.2.3, C405.2.3.1, C405.2.3.2 [EL20] ¹	Primary sidelighted areas are equipped with required lighting controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Sidelight zones on first floor in Group A-2 and M occupancies.
C405.2.3, C405.2.3.1, C405.2.3.3 [EL21] ¹	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.2.4 [EL4] ¹	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.3 [EL6] ¹	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

Project Title: Report date: 06/24/20
 Data filename: P:\SGA\MTABLEMASSAVE\LightingCompliance.cck Page 4 of 6

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [F117] ¹	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.4.1 [F118] ¹	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C408.2.5.1 [F116] ¹	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.3 [F133] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

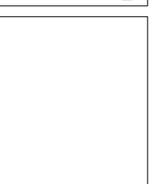
1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Report date: 06/24/20
 Data filename: P:\SGA\MTABLEMASSAVE\LightingCompliance.cck Page 5 of 6

Project Title: Report date: 06/24/20
 Data filename: P:\SGA\MTABLEMASSAVE\LightingCompliance.cck Page 6 of 6

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Date
Description	06/30/2020
ISSUED FOR PERMIT & PRICING	
#	

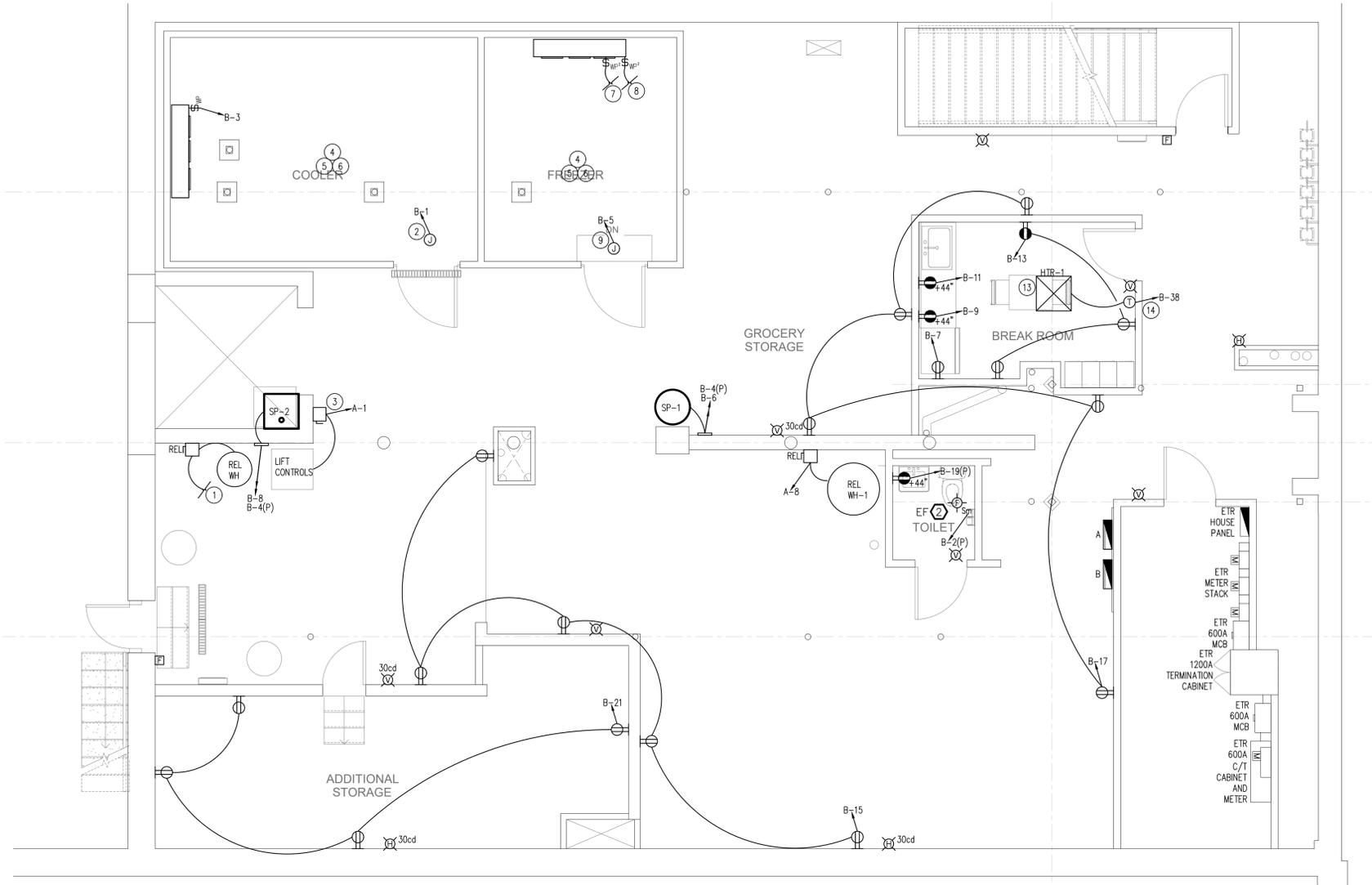
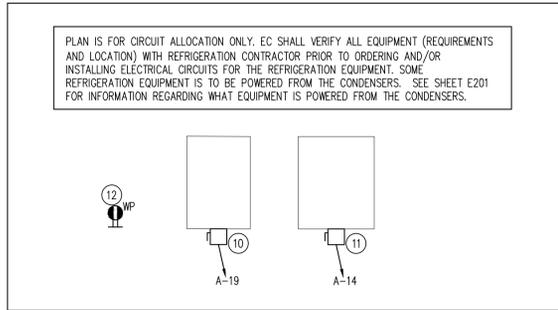


DAILY TABLE
 684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

ELECTRICAL
 ENERGY
 COMPLIANCE

DATE	6/30/2020
DRAWN BY	DES
CHECKED BY	BSD
PROJECT NUMBER	20028.00
SCALE	1/8"=1'-0"

E102



1 ELECTRICAL POWER PLAN – BASEMENT
E201
1/4" = 1'-0"

GENERAL NOTES – FIRE ALARM

1. Fire alarm device shall be wired to the existing building fire alarm system. Verify system capacity in field and provide additional batteries or booster panel as necessary. Match existing building fire alarm devices. Mount fire alarm devices in conformance with ADA mounting heights. Fire alarm system shall be in accordance with NFPA 70, 72, 90A, 101, ADA, UL and other applicable codes.
2. All FA devices are shown as new. Existing devices may be reused if found to be in good working condition.

NUMBERED NOTES

- 1 Provide wire and conduit as necessary to extend existing circuit and reconnect water heater (208V, 30A circuit serving other tenants powered from the house service).
- 2 Junction box for connection for cooler and freezer condensate heat trace, Coordinate exact location and requirements with plumbing contractor in field.
- 3 208 volt, 3 pole, 30 amp, FSS, fused per manufacturer's recommendations for lift, coordinate mounting location in field to maintain all required clearances.
- 4 Walk-in cooler and freezer evaporators are shown for circuit allocation only, coordinate exact requirements and locations in field.
- 5 Provide power and control wiring in EMT from refrigerated cases, walk-in cooler, and freezer to respective remote condensers.
- 6 Provide seal-offs per NEC 300.7 at all cooler/freezer penetrations. Fill around conduit and conductors with duct-in seal or silicone caulk where it passes through cooler wall or ceiling.
- 7 Run 2 #12 plus ground from case to respective roof mounted condenser for power/control of fans and anti-condensate heaters.
- 8 Run 2 #12 plus ground from case to respective roof mounted condenser for power/control of defrost heaters.
- 9 Junction box for connection of freezer door heater, coordinate exact location and requirements in field.
- 10 208 volt, 3 pole, 30 amp, NEMA 3R, FSS, fused per manufacturer's recommendations.
- 11 208 volt, 3 pole, 60 amp, NEMA 3R, FSS, fused per manufacturer's recommendations.
- 12 EC shall install weatherproof GFCI receptacles in locations so that no condenser is more than 25' from one. These receptacles shall be wired to circuit B-39.
- 13 Heater has built-in disconnect.
- 14 Line voltage thermostat provided by MC, wired by EC.

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
#	ISSUED FOR PERMIT & PRICING	06/30/2020

STAMP
07/01/2020

Scott Griffin ARCHITECTS
880 Main Street, Fifth Floor
Waltham, Massachusetts 02451
Phone (781) 693-7400 Fax (781) 693-7350

DAILY TABLE
684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

ELECTRICAL POWER PLAN - BASEMENT

DATE	6/30/2020
DRAWN BY	DES
CHECKED BY	BSD
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

E200

Revision Schedule	Description	Date
#	ISSUED FOR PERMIT & PRICING	06/30/2020



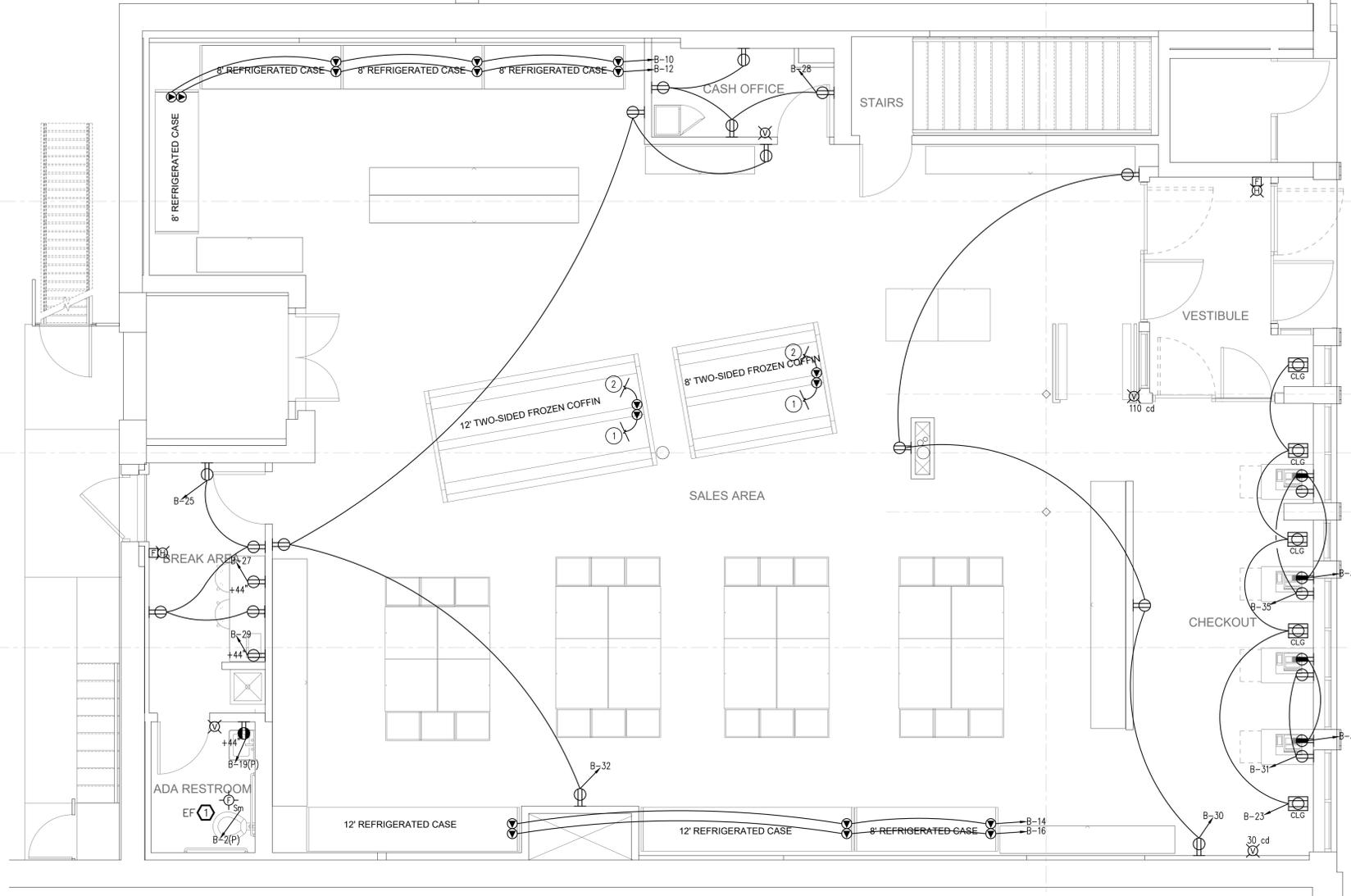
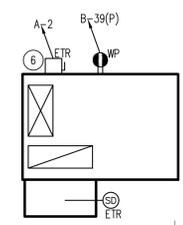
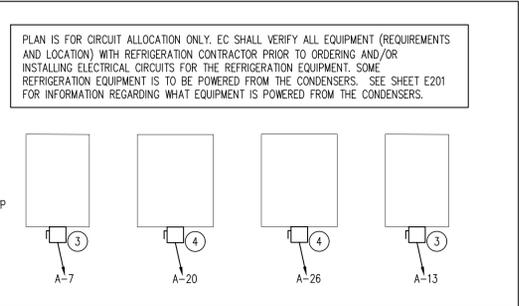
Scott Griffin ARCHITECTS
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 Waltham, Massachusetts 02451
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DAILY TABLE
 684 MASSACHUSETTS AVE
 CAMBRIDGE, MA 02139

ELECTRICAL POWER PLAN - FIRST FLOOR

DATE	6/30/2020
DRAWN BY	DES
CHECKED BY	BSD
PROJECT NUMBER	20028.00
SCALE	1/4"=1'-0"

E201



GENERAL NOTES – FIRE ALARM

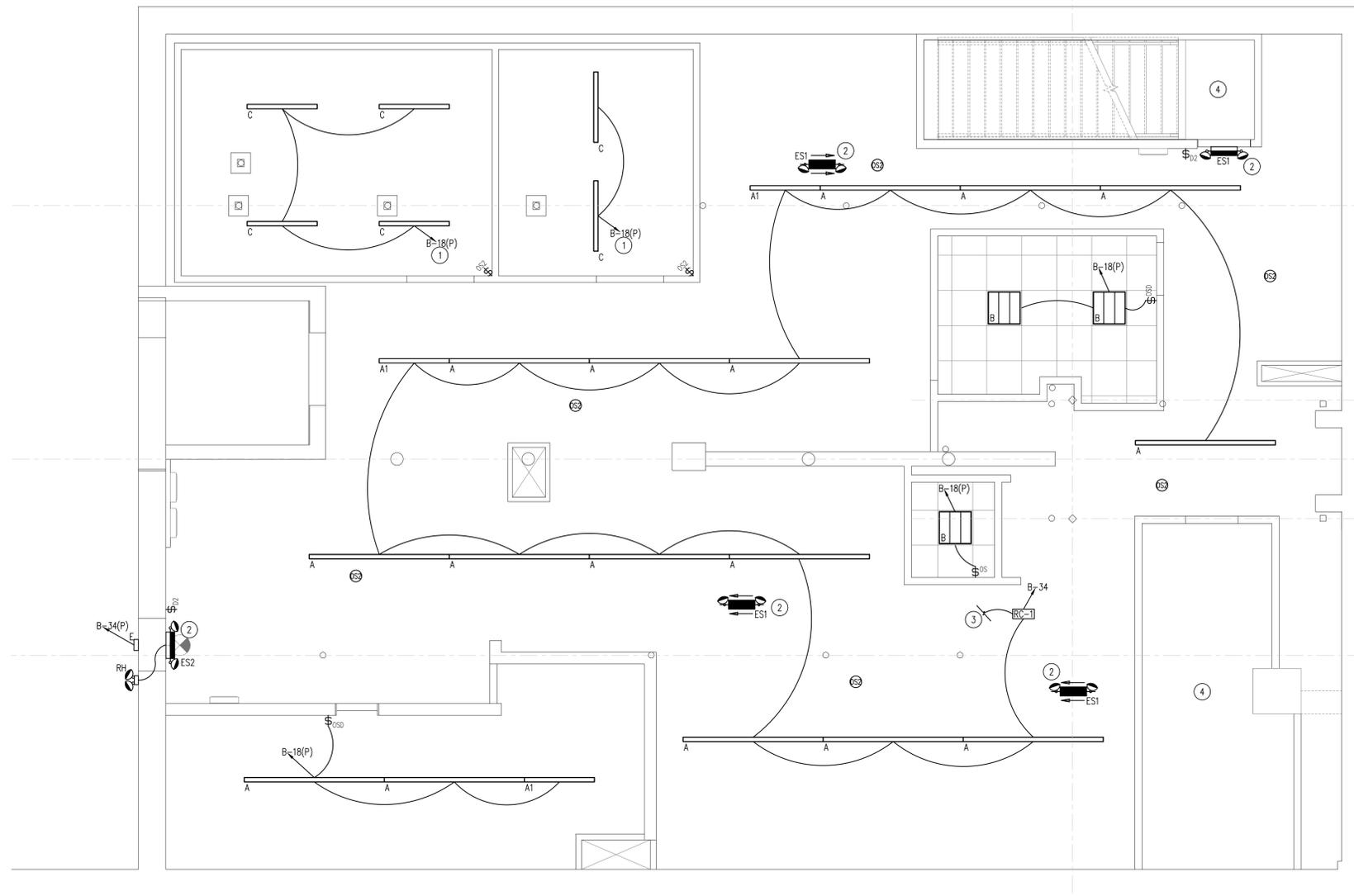
1. Fire alarm device shall be wired to the existing building fire alarm system. Verify system capacity in field and provide additional batteries or booster panel as necessary. Match existing building fire alarm devices. Mount fire alarm devices in conformance with ADA mounting heights. Fire alarm system shall be in accordance with NFPA 70, 72, 90A, 101, ADA, UL and other applicable codes.
2. All FA devices are shown as new. Existing devices may be reused if found to be in good working condition.

NUMBERED NOTES

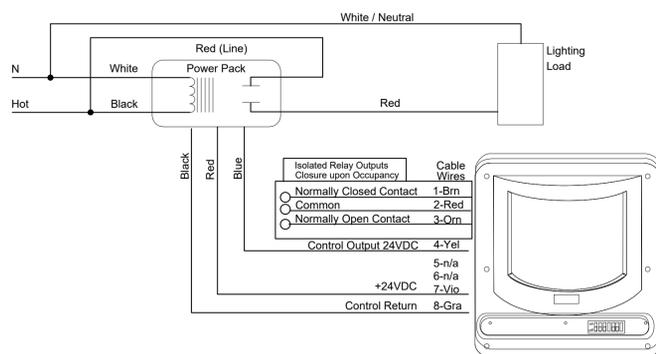
- 1 Run 2 #12 plus ground from case to respective roof mounted condenser for power/control of fans and anti-condensate heaters.
- 2 Run 2 #12 plus ground from case to respective roof mounted condenser for power/control of defrost heaters.
- 3 208 volt, 3 pole, 30 amp, NEMA 3R, FSS, fused per manufacturer's recommendations.
- 4 208 volt, 3 pole, 60 amp, NEMA 3R, FSS, fused per manufacturer's recommendations.
- 5 EC shall install weatherproof GFCI receptacles in locations so that no condenser is more than 25' from one. These receptacles shall be wired to circuit B-39.
- 6 Existing to remain, 208 volt, 3 pole, 60 amp, NEMA 3R, FSS, fused at 50 amps.

1 ELECTRICAL POWER PLAN – FIRST FLOOR
 E202 1/4" = 1'-0"

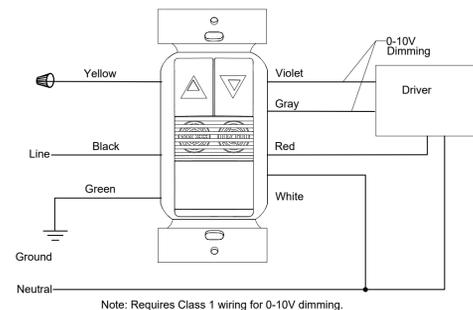
Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.



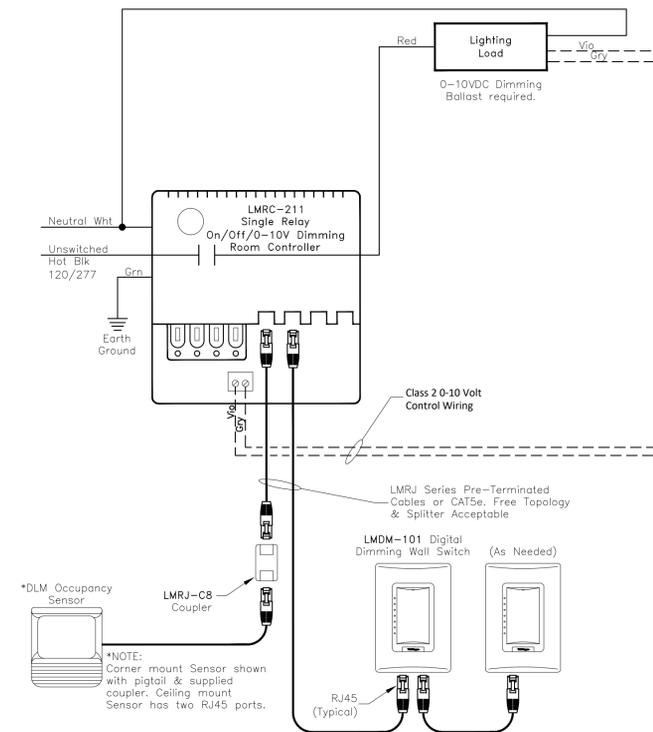
1
E301
ELECTRICAL LIGHTING PLAN - BASEMENT
1/4" = 1'-0"



2
E301
CB-100 LOW TEMP OCCUPANCY SENSOR WIRING DIAGRAM
NOT TO SCALE



3
E301
DW-311 DIMMING OCCUPANCY SENSOR WIRING DIAGRAM
NOT TO SCALE



4
E301
LMRC-211 0-10 VOLT DIMMING ROOM CONTROLLER WIRING DIAGRAM
NOT TO SCALE

GENERAL NOTES

1. Spaces using Switch type D2 with a room controller and ceiling occupancy sensor OS2 shall be programmed for Automatic On to 50%, Manual to Full Lighting Output and Automatic Off operation.
2. Spaces using the OS wall mounted occupancy sensor shall be programmed for automatic On/Off operation.
3. Spaces using the OSD wall mounted occupancy sensor shall be programmed for Automatic On to 50% of full brightness, then manual dimming controls to full brightness and Automatic Off.
4. Contractor is responsible for all final occupancy sensor adjustments and locations. Coordinate with manufacturer's recommendations and installation instructions.
5. Verify switch locations prior to rough-in.
6. Contractor shall verify compatibility of dimmer switches with the lights they serve.
7. For drawing clarity low voltage CAT 5 cabling is not being shown. EC shall provide and install CAT 5 cabling to the sensors, switches and light fixtures per the manufacture's installation instructions.

NUMBERED NOTES

- 1 Wire to circuit shown and control via low temperature corner mount occupancy sensor, see detail #2 this sheet for wiring diagram.
- 2 Wire to circuit B-20 ahead of all controls.
- 3 Low voltage wiring to sensors and switches.
- 4 Lighting in this area (including emergency lighting) is existing to remain and NIC.

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Revision Schedule	Description	Date
ISSUED FOR PERMIT & PRICING		06/30/2020
#		

Stamp: BRAN S. DAVIS ELECTRICAL No. 46232 PROFESSIONAL ENGINEER 07/01/2020

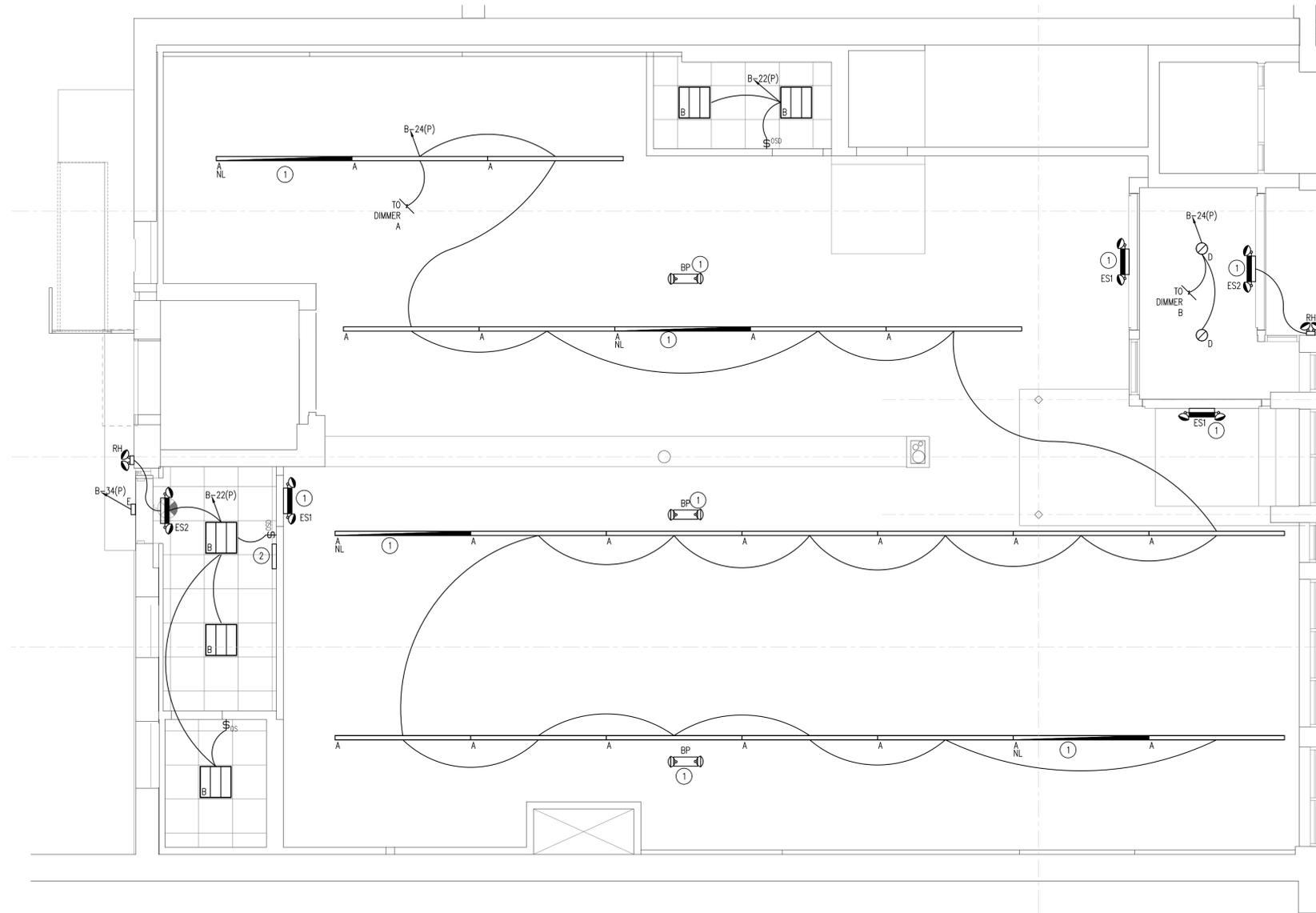
Logo: Scott Griffin ARCHITECTS
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Waltham, Massachusetts 02451
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DAILY TABLE
684 MASSACHUSETTS AVE
CAMBRIDGE, MA 02139

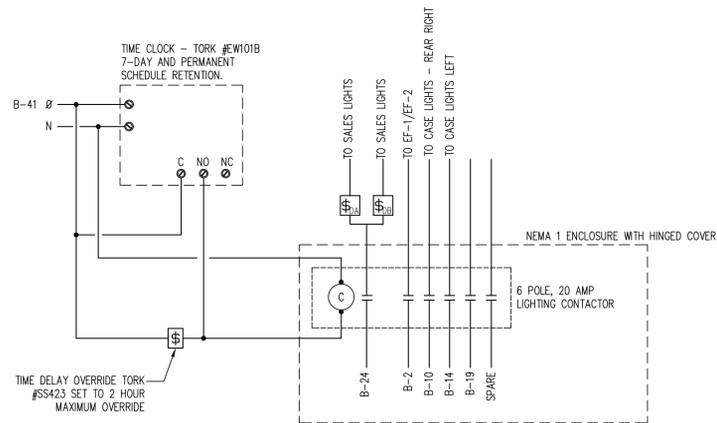
ELECTRICAL LIGHTING PLAN - BASEMENT

DATE	6/30/2020
DRAWN BY	DES
CHECKED BY	BSD
PROJECT NUMBER	20028-00
SCALE	1/8"=1'-0"

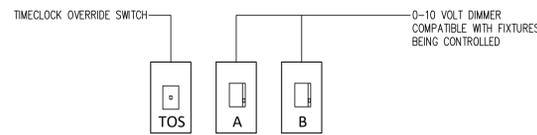
E300



1 ELECTRICAL LIGHTING PLAN – FIRST FLOOR
 1/4" = 1'-0"



2 TIMECLOCK W/ OVERRIDE DETAIL
 NOT TO SCALE



3 SWITCHBANK DETAIL
 NOT TO SCALE

GENERAL NOTES

1. Spaces using the OS wall mounted occupancy sensor shall be programmed for automatic On/Off operation.
2. Spaces using the OSD wall mounted occupancy sensor shall be programmed for Automatic On to 50% of full brightness, then manual dimming controls to full brightness and Automatic Off.
3. Contractor is responsible for all final occupancy sensor adjustments and locations. Coordinate with manufacturer's recommendations and installation instructions.
4. Verify switch locations prior to rough-in.
5. Contractor shall verify compatibility of dimmer switches with the lights they serve.

NUMBERED NOTES

- 1 Wire to circuit B-26 ahead of all controls.
- 2 Proposed switchbank location, verify location with owner prior to installation. See detail #3 this sheet for additional information.

Field verification of existing conditions is the responsibility of the General Contractor. Where new work abuts existing construction, the General Contractor shall take care to verify that all existing and proposed conditions are coordinated and field verified. Where new work is intended to align with existing conditions, the General Contractor shall ensure that existing conditions are field verified to ensure proper alignment. Objects depicted on the drawings as "existing" shall be field verified by the General Contractor to ensure accuracy. The General Contractor shall bring discrepancies to the attention of the Owner and Architect for resolution before continuing with the work. Shop drawings must be field verified by each sub-contractor or the General Contractor as required for complete coordination. The Architect will only review shop drawings that have been: 1. Reviewed by the General Contractor, 2. Drawn to reflect field verified conditions, and 3. Stamped with the General Contractor's approval verifying such review, field verification, and coordination.

Date 06/30/2020

Revision Schedule Description ISSUED FOR PERMIT & PRICING

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 07/01/2020
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ELECTRICAL LIGHTING PLAN - FIRST FLOOR

DATE 6/30/2020
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 SCALE 1/8"=1'-0"

E301