



CC# 630

Central Square

599 Massachusetts Avenue,
Cambridge, MA 02139

ISSUE FOR BID&PERMIT

03/21/2019

CBRE

Project Manager
2 Morrissey Blvd,
Dorchester, MA 02125
T: 617 483 2885
Attn: Annette Hicks

Gensler

Architect
1 Beacon St.
3rd Floor
Boston, MA 02108
T: 617.619.5700
Attn: Marc Sides

SYSKA HENNESSY GROUP

MEP Engineers
10 Post Office Square, Suite 725
Boston, MA 02109
T: 617.682.4745
Attn: Christopher Kruger

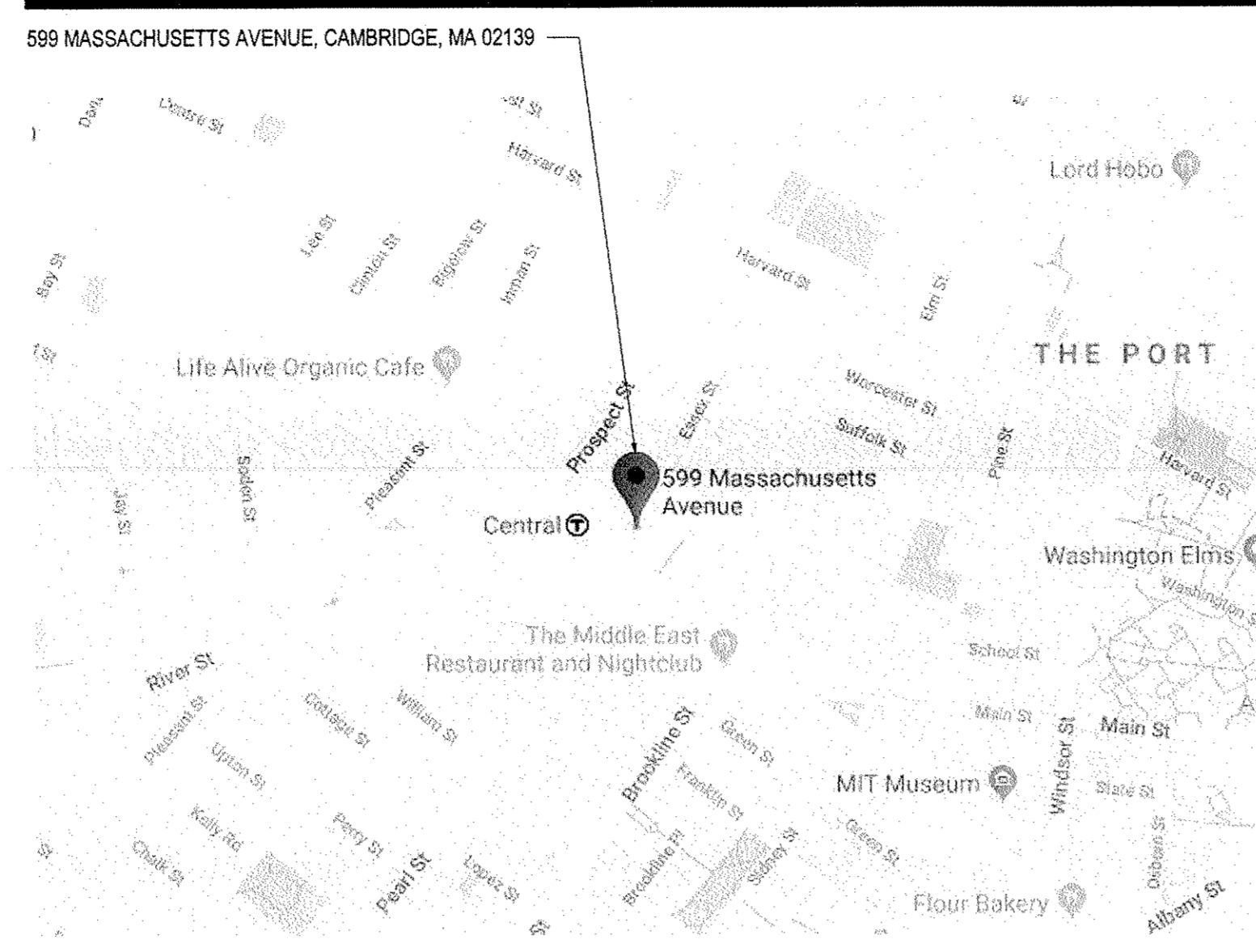
TF Moran

Structural Engineer
48 Constitution Drive
Bedford, NH 03110
T: 603.472.4488
Attn: Paul Sbacchi

ABBREVIATIONS

A	ACCES	ACCESSORY	JAN	JANITOR
ACOUS	ACOUSTICAL	K	KIT	KITCHEN
AF	ABOVE FINISHED FLOOR	L	LAV	LAVATORY
AL	ALUMINUM	LB	LB	POUND
ALT	ALTERNATE	LT	LT	LOUVER
ANNUNC	ANNUNCIATOR	LV	LV	LEVEL
AND	AND/IZED	M	M	MATCH EXISTING
APPL	APPLIANCE	M.E.	M.E.	MAXIMUM
AUTO	AUTOMATIC	MECH	MECH	MECHANICAL
AVG	AVERAGE	MEMB	MEMB	MEMBRANE
B	BOARD	MET	MET	METAL
BD	BUILDING	MEZZ	MEZZ	MEZZANINE
BLDG	BLOCKING	MFR	MFR	MANUFACTURED
BLKG	BOLLARD	MIN	MIN	MINIMUM
BOLLD	BROADLOOM	MISC	MISC	MISCELLANEOUS
BRODM	BUILT UP	MLWK	MLWK	MILLWORK
BU	CABINET	MOIST	MOIST	MOISTURE
C	CEMENT(TIOUS)	MOT	MOT	MOTOR(IZED)
CAB	CERAMIC	MTD	MTD	MOUNTED
CEM	CERAMIC	N	N	NOT IN CONTRACT
CER	CEILING	NO	NO	NUMBER
CLS	CONCRETE MASONRY UNIT	NTS	NTS	NOT TO SCALE
CMU	COATING	O	O	OPPOSITE HAND
COATG	COILING	OPND	OPND	OPENING(S)
COLS	CONC	OPP	OPP	OPPOSITE
CONC	CONSTRUCTION	OPR	OPR	OPERABLE
CONSTR	CONTINUOUS(ATION)	ORNA	ORNA	ORNAMENTAL
CONT	CONTRACT(OR)	OS	OS	OCCUPANCY SENSOR
CONTR	COVERING(S)	OVFL	OVFL	OVERFLOW
COV	CARPET	OVDH	OVDH	OVERHEAD
CPT	D	P	P	PARTICLE BOARD
D	DBL	PBD	PBD	PARTICLE BOARD
DBL	DEPT	PESTR	PESTR	PEDESTRIAN
DEPT	DES	PLM	PLM	PLASTIC LAMINATE
DES	DET	PLAS	PLAS	PLASTER
DET	DF	PLSTC	PLSTC	PLASTIC
DF	DIA	PLYWD	PLYWD	PLYWOOD
DF	DIFF	DR	DR	DOOR
DIA	DIM	DSCON	DSCON	DISCONNECT
DIFF	DISP	DWR	DWR	DRAWER
DIM	DIV	E	E	ELASTOMERIC
DISP	DN	ELAST	ELAST	ELASTOMERIC
DIV	DN	ELEC	ELEC	ELECTRICAL
DN	DR	EMBED	EMBED	EMBEDDED(ING)
DOWN	DSCON	ENGR	ENGR	ENGINEER(ED)
DOOR	DWR	ENTR	ENTR	ENTRANCE
DISCONNECT	E	EQ	EQ	EQUAL
DRAWER	ELAST	EQUIP	EQUIP	EQUIPMENT
PREFAB	ELEC	EX	EX	EXISTING
PREFABRICATED	EMBED	EXP JT	EXP JT	EXPANSION JOINT
PREFINISHED	ENGR	EXPS	EXPS	EXPOSE(D)
PREFINISHED	ENTR	EXT	EXT	EXTERIOR
PROTECTION	EQ	F	F	FABRICATION
PARTITION	EQUIP	FAB	FAB	FABRICATION
PARTITION	EX	FD	FD	FLOOR DRAIN
PARTITION	EXP JT	FE	FE	FIRE EXTINGUISHER
PARTITION	EXPS	FE&C	FE&C	FIRE EXTINGUISHER AND CABINET
PARTITION	EXT	FHC	FHC	FIRE HOSE CABINET
PARTITION	F	FIN	FIN	FINISH
PARTITION	FAB	FLDG	FLDG	FOLDING
PARTITION	FD	FLR	FLR	FLOORING
PARTITION	FE	FPLC	FPLC	FIREPLACE
PARTITION	FE&C	FR	FR	FIRE RATING(ED)
PARTITION	FHC	FRMG	FRMG	FRAMING
PARTITION	FIN	FURN	FURN	FURNITURE
PARTITION	FLDG	FVC	FVC	FABRIC WALL COVERING
PARTITION	FLR	FXD	FXD	FIXED
PARTITION	FPLC	FXTR	FXTR	FIXTURE
PARTITION	FR	G	G	GAUGE
PARTITION	FRMG	GFCI	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
PARTITION	FURN	GFRG	GFRG	GLASS FIBER REINFORCED CONCRETE
PARTITION	FVC	GFRG	GFRG	GLASS FIBER REINFORCED GYPSUM
PARTITION	FXD	GFRP	GFRP	GLASS FIBER REINFORCED PLASTER
PARTITION	FXTR	GL	GL	GLASS
PARTITION	G	GR	GR	GRAD(IE)(ING)
PARTITION	GFCI	GRP	GRP	GYP(SUM)
PARTITION	GFRG	H	H	HEAD
PARTITION	GFRP	HDWD	HDWD	HARDWOOD
PARTITION	GL	HDWE	HDWE	HARDWARE
PARTITION	GR	HM	HM	HOLLOW METAL
PARTITION	GRP	HOP	HOP	HIGHEST OPERABLE POINT
PARTITION	H	HORIZ	HORIZ	HORIZONTAL
PARTITION	HDWD	HVAC	HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
PARTITION	HDWE	I	I	INFILTRATION
PARTITION	HM	INFLTR	INFLTR	INFILTRATION
PARTITION	HOP	INFO	INFO	INFORMATION
PARTITION	HORIZ	INSTR	INSTR	INSTRUMENTATION
PARTITION	HVAC	INSUL	INSUL	INSULATION
PARTITION	I	INT	INT	INTERIOR
PARTITION	INFILTR	INTLK	INTLK	INTERLOCK(ING)
PARTITION	INFO			
PARTITION	INSTR			
PARTITION	INSUL			
PARTITION	INT			
PARTITION	INTLK			

LOCATION MAP



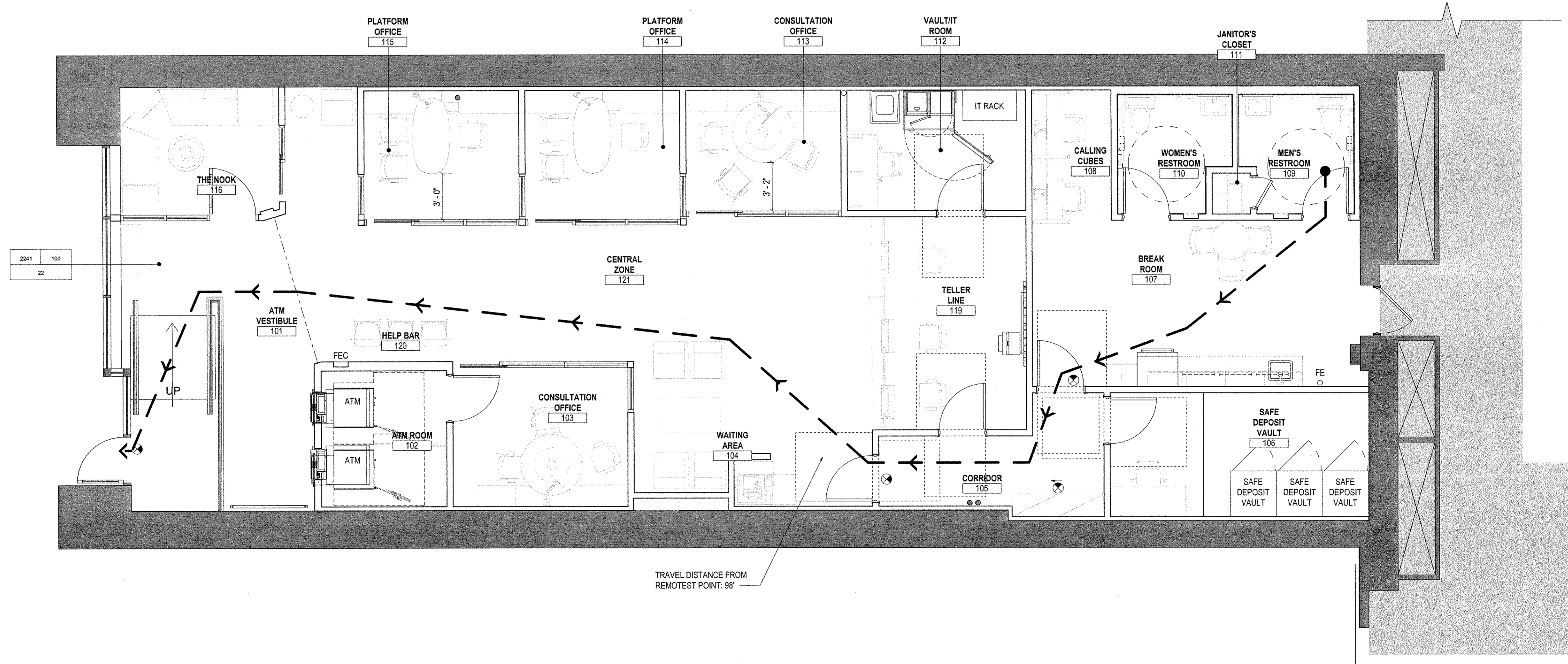
CODE AND LIFE SAFETY DATA

PROJECT INFORMATION	
Project Summary :	Alteration Level 02(Alteration), Interior finish upgrades and doors.
Project Name :	Santander - Central Square, Cambridge
Project Address :	CC# 630 Central Square 599 Massachusetts Avenue, Cambridge, MA 02139
Proposed Use/ Occupancy :	BUSINESS, GROUP B
Project Size :	2241 S.F. - BUSINESS
Construction Type :	I-B
Protection :	Sprinklered
Max. Floor Area per Occupant Per Table 1004.1.1:	BUSINESS AREAS - 100 GROSS
Calculated Occupants :	22 OCCUPANTS (2241/100)
Required Exits :	22 OCCUPANTS<49 OCC'S. 1 EXIT REQUIRED - 1 EXIT PROVIDED
Exit Access Travel Distance-Table 1016.2	OCCUPANCY B MAXIMUM TRAVEL DISTANCE: 300FT (WITH SPRINKLER SYSTEM) EGRESS PATH = 98' COMPLIES
APPLICABLE CODES	
BUILDING CODE:	IBC 2015 AMENDED WITH MASSACHUSETTS STATE BUILDING CODE CMR 780 (9TH EDITION)
PLUMBING CODE:	248 CMR 10.00 - UNIFORM STATE PLUMBING CODE
ELECTRICAL CODE:	527 CMR 12.00 - MASSACHUSETTS ELECTRICAL CODE, WHICH IS AN AMENDED VERSION OF THE 2017 EDITION OF NFPA 70, NATIONAL ELECTRICAL CODE
ENERGY CODE:	2015 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AS AMENDED BY THE STATE OF MASSACHUSETTS
MECHANICAL CODE:	INTERNATIONAL MECHANICAL CODE (IMC) 2015 EDITION AS AMENDED BY 780 CMR 28.00
FIRE/LIFE SAFETY:	MASSACHUSETTS FIRE PREVENTION REGULATIONS, 527 CMR 10.00
ACCESSIBILITY STANDARD:	MASSACHUSETTS ARCHITECTURAL ACCESS BOARD CMR 821, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

DRAWING INDEX

Sheet Number	Sheet Name	032119 - ISSUE FOR BID/PERMIT
ARCHITECTURAL		
A00.00	DRAWING INDEX, LIFE SAFETY & PROJECT INFORMATION	•
A00.10	GENERAL NOTES AND TYPICAL MOUNTING HEIGHTS	•
A00.11	ACCESSIBILITY INFORMATION	•
A00.20	WALL PARTITION TYPES	•
A00.30	DOOR & HARDWARE SCHEDULES	•
A01.01	DEMOLITION PLAN	•
A02.01	CONSTRUCTION PLAN	•
A03.01	POWER/COMM & EQUIPMENT PLAN - LEVEL 1	•
A03.02	SECURITY PLAN	•
A04.01	REFLECTED CEILING PLAN - LEVEL 1	•
A05.01	FINISH PLAN - LEVEL 1	•
A06.01	FURNITURE PLAN - LEVEL 1	•
A07.01	INTERIOR ELEVATIONS - FRONT OF HOUSE	•
A07.02	INTERIOR ELEVATIONS - BACK OF HOUSE	•
A07.03	ENLARGED PLAN & ELEVATIONS	•
A07.04	ENLARGED RESTROOM PLANS & ELEVATIONS	•
A07.05	ENLARGED RAMP PLAN & ELEVATIONS	•
A09.01	SECURITY GATE DETAILS	•
A12.01	CEILING & MILLWORK DETAILS	•
A12.02	TYPICAL DETAILS	•
MECHANICAL		
M-001	MECHANICAL COVER SHEET	•
M-002	MECHANICAL SPECIFICATIONS	•
M-101	MECHANICAL FLOOR PLAN	•
M-102	MECHANICAL ROOF PLAN	•
M-501	MECHANICAL DETAILS	•
M-701	MECHANICAL SCHEDULES	•
ELECTRICAL		
E-001	ELECTRICAL COVER SHEET	•
E-002	ELECTRICAL SPECIFICATIONS	•
E-501	ELECTRICAL DETAILS & SCHEDULES	•
EL-101	ELECTRICAL LIGHTING PLAN	•
EP-102	ELECTRICAL POWER PLAN	•
FIRE ALARM		
FA-001	FIRE ALARM COVER SHEET	•
FA-101	FIRE ALARM PLAN	•
FA-501	FIRE ALARM DETAILS	•
PLUMBING		
P-001	PLUMBING COVER SHEET	•
P-002	PLUMBING SPECIFICATIONS	•
P-101	PLUMBING FLOOR PLAN	•
P-501	PLUMBING ROOF CONSTRUCTION PLAN	•
FIRE PROTECTION		
FP-001	FIRE PROTECTION COVER SHEET	•
FP-002	FIRE PROTECTION SPECIFICATIONS	•
FP-101	FIRE PROTECTION FLOOR PLAN	•
FP-501	FIRE PROTECTION DETAILS	•
STRUCTURAL		
S-001	GENERAL STRUCTURAL NOTES, PLANS AND DETAILS	•
S-100	STRUCTURAL PLANS, SECTIONS AND DETAILS	•

EGRESS PLAN

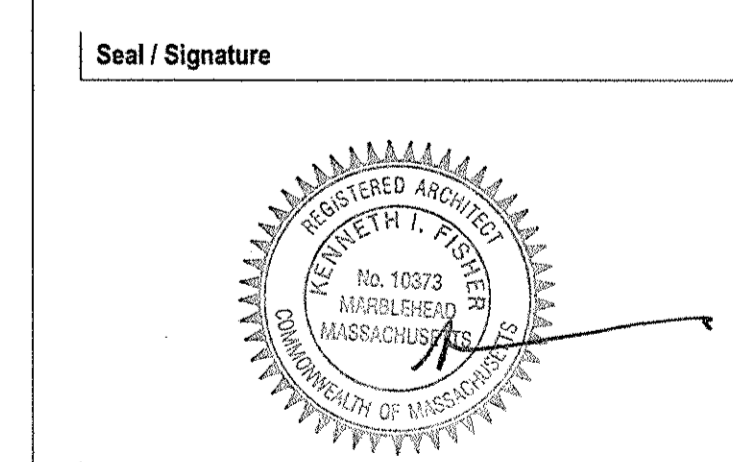


CC# 630
Central Square
599 Massachusetts Avenue,
Cambridge, MA 02139



One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel 617.619.5700
Fax 617.619.5701

Date	Description
1 03/21/2019	ISSUE FOR BID/PERMIT



Project Name
**Santander - Central Square,
Cambridge**

Project Number
11.6850.127

Description
**DRAWING INDEX, LIFE SAFETY &
PROJECT INFORMATION**

Scale
1/4" = 1'-0"

A00.00

© 2019 Gensler

CONSTRUCTION GENERAL NOTES

- 1. BEFORE COMMENCING WORK, CONTRACTOR SHALL BECOME FAMILIAR WITH DRAWINGS, SCOPE OF WORK AND VERIFY EXISTING CONDITIONS AND DIMENSIONS AT THE SITE AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
2. WHEN PROVIDING A BID, THE GENERAL CONTRACTOR SHALL SUBMIT TO SANTANDER BANK PROJECT MANAGER AND ARCHITECT AN ITEMIZED COST BREAKDOWN OF ALL WORK AND A CONSTRUCTION SCHEDULE. WORK TO BE SCHEDULED TO MEET SANTANDER REQUIREMENTS.
3. ALL WORK DESCRIBED OR INDICATED IN THESE DOCUMENTS AND ALL WORK DEPENDENT UPON OR NECESSARY TO COMPLETE THIS WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER CONSISTENT WITH THE BEST STANDARDS OF THE TRADE INVOLVED AND BE OF ITEMS AND MATERIALS SUITED FOR THE PURPOSE INTENDED.
4. TRADESMEN, CRAFTSMEN, INSTALLERS, FOREMEN, SUPERVISORS, AND SUBCONTRACTORS SHALL BE SKILLED, EXPERIENCED, AND LICENSED IF REQUIRED IN THE WORK THEY WILL BE PERFORMING.
5. PROJECT CONSTRUCTION ITEMS TO BE NEW, UNLESS NOTED OTHERWISE, NO SUBSTITUTIONS WILL BE ALLOWED UNLESS COMPLETE DESCRIPTIONS OF THE ITEMS INCLUDING DRAWINGS, TEST DATA, SAMPLES, COST AND SCHEDULE CHANGES ARE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. ANY ITEM NOTED ON THE DRAWINGS THAT ARE NOT AVAILABLE, OR WOULD CAUSE A TIME DELAY SHALL BE IDENTIFIED BY THE GENERAL CONTRACTOR AND THE ARCHITECT NOTIFIED.
6. TYPICAL DETAILS AND GENERAL NOTES SHALL BE USED WHENEVER APPLICABLE U.O.N. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF CONTRACTOR HAS ANY QUESTIONS REGARDING THE SAME OR THEIR EXACT MEANING, ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
7. DIMENSION LINES ARE TO FACE OF FINISH OF EXISTING AND NEW WORK, UNLESS NOTED AS FACE OF STUO OR MASONRY OR CENTERLINE OR OTHERWISE. DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALE AND LARGER SCALE DRAWINGS SHALL HAVE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
8. PROVIDE SHOP DRAWINGS WHERE INDICATED AND FOR ALL METAL FABRICATION OR WHERE THEY ARE CALLED OUT FOR ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL SUBMIT FIVE (5) SETS TO THE ARCHITECT WITH AMPLIFIED TIME TO REVIEW. REQUIRED CORRECTIONS WILL BE NOTED AND A COPY WILL BE RETURNED TO CONTRACTOR WHO SHALL REVISE DRAWINGS AND RESUBMIT FOR FINAL APPROVAL PRIOR TO FABRICATION.
9. CONTRACTOR TO SUBMIT SAMPLES OF ALL FINISH MATERIALS TO ARCHITECT AND OWNER PRIOR TO INSTALLATION. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF AS-BUILT DRAWINGS NOTING DEVIATIONS BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS AND NEW CONSTRUCTION OF ALL TRADES AND DELIVER TO SANTANDER BANK AT END OF PROJECT. GENERAL CONTRACTOR SHALL PROVIDE SUBCONTRACTORS WITH THE MOST CURRENT CONST. DOCUMENTS THROUGHOUT THE PROJECT, INCLUDING ALL REVISIONS.
11. ALL CONSTRUCTION SHALL BE ACCOMPLISHED ON STRAIGHT AND OVERTIME IN ORDER TO MEET THE REQUIRED PROJECT SCHEDULED TURN OVER. ALL WORK SHALL CONFORM TO ALL APPLICABLE BUILDING CODES AND BUILDING MANAGEMENT REGULATIONS. PROVIDE ALL NECESSARY SAFETY PROTECTION DURING ALL PHASES OF CONSTRUCTION TO FULLY SAFEGUARD ALL EMPLOYEES, AGENTS, CONSULTANTS, CONTRACTORS, SUBCONTRACTORS AND EXISTING TENANTS. A CONSTRUCTION IN PROGRESS SIGN SHALL BE CONSPICUOUSLY POSTED AT ALL TIMES. THE GENERAL CONTRACTOR TO CARRY BURDEN OF RISK INSUREANCE FOR THIS PROJECT.
12. PROVIDE SIGNAGE ABOVE EACH FIRE EXTINGUISHER, TYP

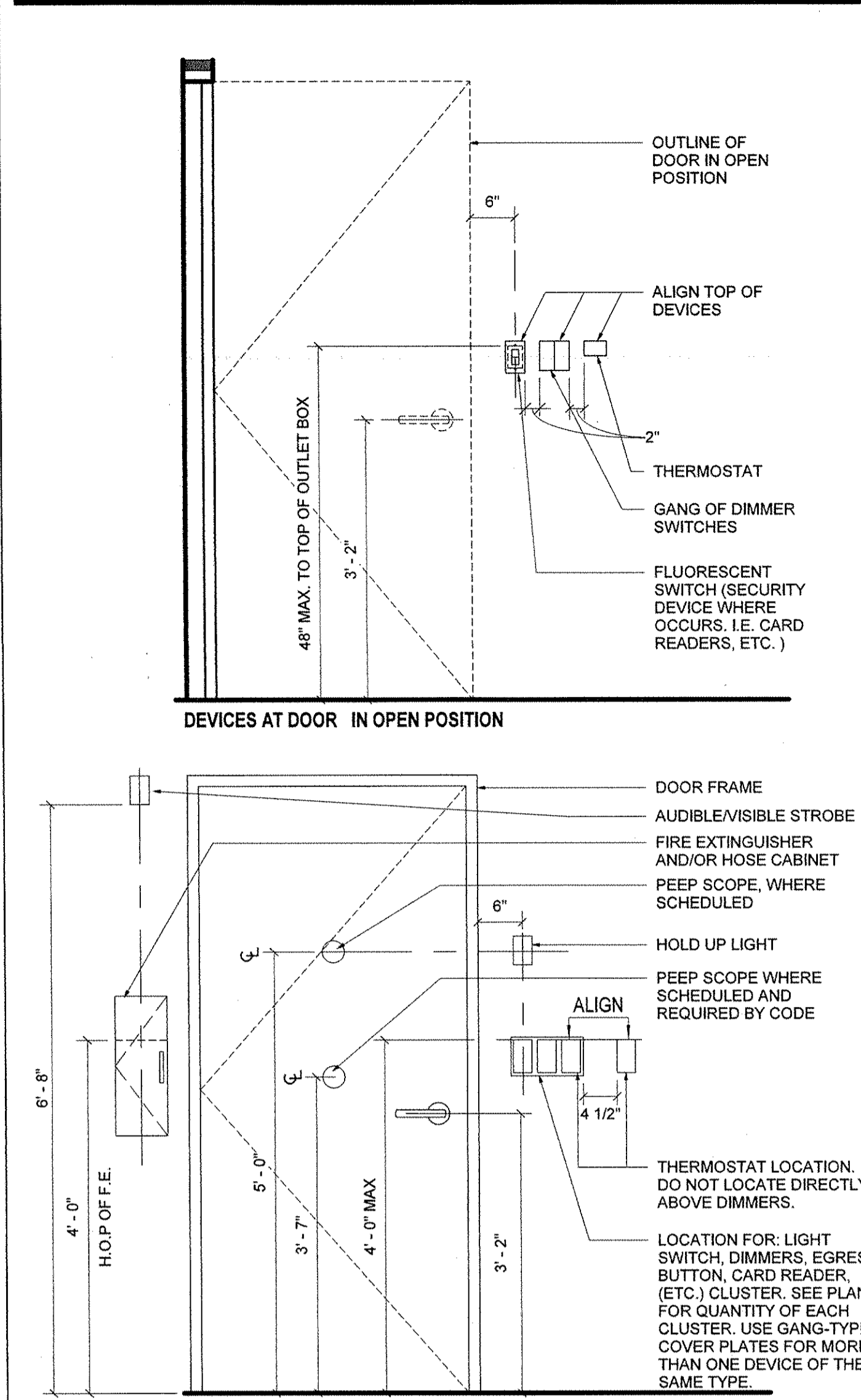
FIRE PROTECTION GENERAL NOTES

- 1. PROVIDE EXIT SIGN WITH 6" LETTERS OVER REQUIRED EXITS, WHERE SHOWN ON DRAWINGS, AND ADDITIONAL SIGNS AS REQUIRED BY BUILDING DEPARTMENT INSPECTOR OR FIRE DEPARTMENT FIELD INSPECTOR. CONNECT EXIT SIGNS TO EMERGENCY POWER CIRCUITS, COMPLY WITH BUILDING CODES.
2. MAINTAIN AISLES AT LEAST 44" WIDE AT PUBLIC AREAS.
3. EVERY EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. POSITIVE LOCKING DEVICES SHALL BE OF AN APPROVED TYPE. ALL NEW DOORS SHALL HAVE APPROVED LEVER HANDLES.
4. DOOR OPENINGS INTO REQUIRED 1-HOUR, FIRE-RESISTIVE CORRIDORS SHALL BE PROTECTED WITH A SMOKE OR DRAFT STOP ASSEMBLY HAVING A 20 MINUTE RATING AND SHALL BE SELF-CLOSING.
5. 20-MINUTE DOOR JAMBS TO BE TIGHT-FITTING, SMOKE AND DRAFT CONTROLLED.
6. EXIT DOORS SHALL SWING IN THE DIRECTION OF TRAVEL WHEN SERVING 50 OR MORE PERSONS AND IN ANY HAZARDOUS AREAS.
7. INTERIOR WALL AND CEILING FINISHES FOR EXIT CORRIDORS SHALL NOT EXCEED AN END POINT FLAME SPREAD RATING.
8. PROVIDE FIRE DAMPERS WHERE AIR DUCTS PENETRATE FIRE-RATED WALLS OR CEILINGS.
9. WOOD BLOCKING, CLEATS, GROUNDS, SHEATHING AND OTHER MISCELLANEOUS CARPENTRY ITEMS SHALL BE FIRE-TREATED IN ACCORDANCE WITH APPLICABLE CODES.
10. HEARING IMPAIRED: FLASHING VISUAL WARNINGS SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE, AND SHALL BE SYNCHRONIZED.
11. LOCATE THE HIGHEST POINT OF THE ACTIVATING HANDLE OF A MANUAL FIRE ALARM BOX A MINIMUM OF 42" AND A MAXIMUM OF 48" ABOVE FINISH FLOOR.
12. CONTRACTOR SHALL PERMANENTLY IDENTIFY ALL FIRE RATED WALLS (AND CORRESPONDING RATING) REQUIRED TO HAVE PROTECTED OPENINGS, CORRIDORS PARTITIONS, SMOKE STOP PARTITIONS, HORIZONTAL EXIT PARTITIONS, AND EXIT ENCLOSURES EITHER BY INSTALLING SIGNS OR BY STENOILING IN CONCEALED SPACES. THE FOLLOWING 1 HOUR FIRE AND SMOKE RATED PARTITIONS AND OPENINGS, IDENTIFICATION SHALL BE SPACED NO MORE THAN TWELVE (12) FEET ON CENTER WITH A MINIMUM LETTER SIZE OF TWO (2) INCHES IN HEIGHT ON A CONTRASTING BACKGROUND. (SEE SECTION 9.5 AND 9.505.1)
13. PROJECT DOES NOT INCLUDE STORAGE, DISPENSING OR USE OF ANY FLAMMABLE OR COMBUSTIBLE LIQUIDS, FLAMMABLE GAS OR HAZARDOUS SUBSTANCES.
14. FLOOR COVERINGS FOR CORRIDORS, LOBBIES, STAIRS AND OTHER EXIT PATHS OR EXIT AREAS ARE SPECIFIED TO BE CLASS B OR BETTER.
15. INTERIOR WALL, CEILING TRIM AND INCIDENTAL FINISH (OTHER THAN WALL BASE, BULLETIN BOARDS, POSTERS AND PAPER IN ACCORDANCE WITH FIRE CODE) SHOULD NOT EXCEED 10 PERCENT OF THE AGGREGATE WALL AND CEILING AREAS OF ANY ROOM OR SMALL SPACE.
16. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A-10-B-C WITHIN 75 FEET OF ALL INSTANCES TO ALL INSTANCES TO ALL INSTANCES TO ALL INSTANCES AND ADDITIONAL EXTINGUISHERS AS REQUIRED BY FIRE DEPARTMENT FIELD INSPECTOR OR BUILDING DEPARTMENT INSPECTOR.
17. PROVIDE EMERGENCY LIGHTING OF ONE FOOT-CANDLE AT FLOOR LEVEL, COMPLY WITH BUILDING CODES.
18. DEVICE COVERS TO BE TO MATCH LUTRON WHITE UNLESS DICTATED OTHERWISE BY LOCAL JURISDICTIONS.

GENERAL SAFETY PLAN

- 1. STRUCTURAL: CONTRACTOR(S) TO PROVIDE ADEQUATE TEMPORARY BRACING AND SHORING WHEREVER ANY STRUCTURAL WORK IS INVOLVED.
2. MEANS OF EGRESS: ALL EXISTING MEANS OF EGRESS FROM THE BUILDING SHALL BE MAINTAINED CLEAR AND FREE OF ALL OBSTRUCTIONS, SUCH AS BUILDING MATERIALS, TOOLS, ETC.
3. FIRE SAFETY: ALL MATERIALS STORED AT CONSTRUCTION AREAS, AND/OR IN ANY AREA OF THE BUILDING, ARE TO BE SECURED. ACCESS TO SUCH AREAS TO BE CONTROLLED BY THE GENERAL CONTRACTOR. ALL MATERIAL TO BE STORED IN AN ORDERLY FASHION. ALL FLAMMABLE MATERIALS TO BE KEPT TIGHTLY SEALED IN THEIR RESPECTIVE MANUFACTURERS' CONTAINERS. SUCH MATERIALS ARE TO BE KEPT AWAY FROM HEAT, ALL FLAMMABLE MATERIALS TO BE USED AND STORED IN AN ADEQUATELY VENTILATED SPACE. ALL ELECTRICAL POWER TO BE SHUT-OFF WHERE THERE IS EXPOSED CONDUITS, ALL ELECTRICAL POWER IN THE CONSTRUCTION AREA TO BE SHUT-OFF AFTER WORKING HOURS. CONTRACTOR(S), AT ALL TIMES, TO MAKE SURE THERE IS NO LEAKING OF NATURAL GAS IN THE BUILDING, OR ANY FLAMMABLE GAS USED DURING CONSTRUCTION.
4. DUST CONTROL: A. DEBRIS, RUBBISH, DIRT AND SOOT TO BE KEPT TO A MINIMUM, AND TO BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA. B. CONTRACTOR(S) SHALL ISOLATE CONSTRUCTION AREA FROM OCCUPIED BUILDING AREAS BY MEANS OF TEMPORARY PARTITIONS OR HEAVY WEIGHT DROP CLOTHS, IF APPLICABLE. C. DEBRIS, RUBBISH, DIRT, AND DUST TO BE CLEANED UP AND CLEARED FROM THE BUILDING PERIODICALLY TO AVOID ANY EXCESSIVE ACCUMULATION.
5. SPECIAL CARE MUST BE TAKEN DURING CONSTRUCTION ACTIVITIES THAT INVOLVE AREAS CONTAINING ASBESTOS MATERIALS. ALL CODE REQUIRED PROCEDURES SHALL BE EMPLOYED TO SAFEGUARD THE HEALTH OF ALL EMPLOYEES, CUSTOMERS, AGENTS, CONSULTANTS, CONTRACTOR AND SUBCONTRACTOR WORKERS. ALL CODE MANDATED PROTECTION AND ABATEMENT PROCEDURES SHALL BE EMPLOYED. APPROPRIATE INSPECTIONS AND OR PERMITS SHALL BE OBTAINED. NO CIRCUMSTANCES ARE ASBESTOS CONTAINING MATERIALS TO BE EMPLOYED DURING OR PART OF ANY CONSTRUCTION.
6. THE GENERAL CONTRACTORS RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY GENSLER'S REVIEW OF SUBMITTALS. ANY DEVIATIONS IN THE SUBMITTAL SHALL BE INDICATED IN WRITING AT THE TIME OF SUBMISSION. NO WORK SHALL BEGIN UNTIL SUBMITTALS HAVE BEEN RETURNED TO THE GENERAL CONTRACTOR WITH GENSLER'S REVIEW STAMP. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL METHODS AND SUB SEQUENCES OF CONSTRUCTION.
7. ALL MECHANICAL AND POWER SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY BOTH GENSLER AND THE CONSULTING ENGINEERS.
8. ELECTRONIC DISTRIBUTION IS PREFERRED FOR SUBMITTALS. PHYSICAL SAMPLES WILL BE REQUIRED FOR ITEMS REQUIRING COLOR APPROVAL.
9. THE GENERAL CONTRACTOR SHALL FILE PROJECT, PAY ALL REQUIRED FEES AND THEN "PICKUP" BUILDING PERMITS AND POST AS REQUIRED BY CODE.
10. SEE FLOORING AND FINISH PLAN FOR ALL FINISH TREATMENTS.
11. PREPARE ALL GYP. BOARD WALL SURFACES TO RECEIVE ONE PRIME COAT AND TWO FINISH COATS IN COLORS AS SPECIFIED BY GENSLER. ALL TAPING AND SPACKLING SHALL BE POLISHED, PERFECTLY SMOOTH AND FREE FROM ALL DEFECTS, BUMPS, GROOVES OR OTHER IMPERFECTIONS. TAPING AND SPACKLING SHALL BE APPROVED BY GENSLER PRIOR TO APPLICATION OF FINISH TREATMENTS. PREPARE ALL HOLLOW METAL DOOR ASSEMBLIES (INCLUDING RETURN PIECE) TO RECEIVE TWO FINISH COATS OF PAINTS IN COLORS AS SPECIFIED BY GENSLER. SEE FINISH PLAN. ALL GAPS BETWEEN RETURN EDGE OF HOLLOW METAL BUCKS AND PARTITION SHALL BE SEALED WITH A PAINTABLE CALULKING COMPOUND PRIOR TO APPLICATION OF FINISH COATS OF PAINT.
12. PROVIDE NEW METAL STUD AND GYP. BOARD PARTITIONS, SOFFITS AND FASCIAS AS SPECIFIED ON THE DRAWINGS.
13. THE GENERAL CONTRACTOR SHALL PROVIDE ALL CORING AND PLUMBING CONNECTIONS IN FULL COMPLIANCE WITH BUILDING MANAGEMENT REGULATIONS AND APPLICABLE CODES. PROVIDE ALL NECESSARY PROTECTION, ANY DAMAGE DURING THIS EFFORT SHALL BE PROMPTLY REPAIRED TO THE COMPLETE AND TOTAL SATISFACTION OF THE TENANT AND/OR B+W.
14. ALL CODE REQUIRED PROCEDURES SHALL BE FOLLOWED TO SAFEGUARD THE HEALTH OF ALL EMPLOYEES, CUSTOMERS, AGENTS, CONSULTANTS, CONTRACTOR AND SUBCONTRACTOR WORKERS. ALL CODE MANDATED PROTECTION AND ABATEMENT PROCEDURES SHALL BE EMPLOYED, IF ASBESTOS IS DISCOVERED, APPROPRIATE INSPECTIONS AND OR PERMITS SHALL BE OBTAINED.
15. THE GENERAL CONTRACTOR SHALL MARK THE LOCATIONS OF ALL NEW PARTITIONS ON THE FLOOR SLAB. B+W SHALL REVIEW ALL LINES PRIOR TO THE INSTALLATION OF TRACK STUDS. PARTITION LOCATIONS SHALL BE ADJUSTED AS PER REVIEW.
16. THE GENERAL CONTRACTOR SHALL INSPECT ALL EXISTING DOOR ASSEMBLIES AND MAKE ALL NECESSARY REPAIRS TO RESTORE TO 100% CODE COMPLIANT OPERATION AND AS-NEW APPEARANCE.
17. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROLLED INSPECTIONS REQUIRED.
18. THERE SHALL BE NO EXCEPTIONS OR QUALIFICATIONS IN THE SUBMITTED BID. ALL QUESTIONS SHOULD BE SUBMITTED AS AN RFI WHILE PRICING THE PROJECT.

TYPICAL MOUNTING HEIGHTS



NOTE: ALL DIMENSIONS TO CENTER LINE OF DEVICES UNLESS OTHERWISE NOTED. INTERCOM TO BE MOUNTED AT 3'-9" AFF U.O.C. CENTER ALL DEVICES BELOW SWITCH. ALL OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST WITH A MAX OF 5 LBS. OF FORCE TO OPERATE. A CLEAR SPACE TO BE PROVIDED OF 36" MIN. X 48" MIN.

REFLECTED CEILING NOTES

- 1. DESIGN SUSPENDED CEILING FRAMING SYSTEMS TO RESIST A LATERAL FORCE 1/3 OF THE WEIGHT OF THE CEILING ASSEMBLY AND ANY LOADS TRIBUTARY OF 20 TO THE SYSTEM.
2. WHERE CEILING LOADS DO NOT EXCEED 5 POUNDS PER SQUARE FOOT AND WHERE PARTITIONS ARE NOT CONNECTED TO THE CEILING SYSTEM, THE FOLLOWING BRACING METHODS MAY BE EMPLOYED: A. PROVIDE LATERAL SUPPORT BY FOUR WIRES OF MINIMUM NO. 12 GAUGE SPAYLED IN FOUR DIRECTIONS 60 DEGREES APART, AND CONNECTED TO THE MAIN RUNNER WITHIN 2" OF THE CROSS RUNNER AND TO THE STRUCTURE ABOVE AT AN ANGLE NOT EXCEEDING 45 DEGREES FROM THE PLANE OF THE CEILING. PROVIDE THESE LATERAL SUPPORT POINTS 12 FEET ON CENTER IN EACH DIRECTION, WITH THE FIRST POINT WITHIN 4" FROM EACH WALL. B. ALLOW FOR LATERAL MOVEMENT OF THE SYSTEM. ATTACH MAIN RUNNERS AND CROSS RUNNERS AT TWO ADJACENT WALLS, MAINTAIN CLEARANCE BETWEEN THE WALL, AND THE RUNNERS AT THE OTHER TWO WALLS. C. PROVIDE VERTICAL SUPPORT AS REQUIRED IN BUILDING CODES. IN ADDITION, VERTICALLY SUPPORT ENDS OF RUNNERS WITHIN 8' OF DISCONTINUITIES SUCH AS MAY OCCUR WHERE THE CEILING IS INTERRUPTED BY A WALL. D. SUPPORT LIGHT FIXTURES AND AIR DIFFUSERS DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
3. LOCATE RECEIVERS AND LIGHTING FIXTURES WITHIN GRID LINES, CENTER SPRINKLER HEADS, SPEAKERS, REGISTERED FIXTURES, AND SIMILAR CEILING ELEMENTS IN ACoustICAL UNITS, UNLESS OTHERWISE NOTED.
4. FINISH HVAC DIFFUSERS, DRAPERY POCKETS, AND SPEAKER GRILLES TO MATCH ADJACENT FINISH, UNLESS OTHERWISE NOTED.
5. REFER TO MEP DRAWINGS, FIRE PROTECTION DRAWINGS AND PROJECT MANUAL FOR DESIGN OF THESE SYSTEMS. LOCATIONS OF FIXTURES, REGISTERS, SWITCHES, ETC. SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW, COMMENCING CONSTRUCTION.
6. COORDINATE INSTALLATION OF TELECOMMUNICATIONS, DATA AND SECURITY SYSTEMS.
7. VERIFY EQUIPMENT SPECIFICATIONS, POWER AND INSTALLATION REQUIREMENTS WITH MANUFACTURER TO ENSURE PROPER FIT AND FUNCTION.
8. VERIFY MOUNTING REQUIREMENTS OF ELECTRICAL, TELEPHONE AND OTHER EQUIPMENT.
9. GANG ADJACENT LIGHT SWITCHES AND COVER WITH A SINGLE PLATE.
10. INDICATED DIMENSIONS ARE TO THE CENTER LINE OF OUTLET OR SWITCH, OR CLUSTER OF OUTLETS OR SWITCHES, UNLESS OTHERWISE NOTED.
11. INSTALL OUTLETS ON OPPOSITE SIDES OF PARTITIONS IN SEPARATE STUD CAVITIES. DO NOT INSTALL BACK-TO-BACK.
12. PROVIDE MATCHING COVER PLATES, RECEPTACLES AND RELATED ITEMS. PROVIDE ONE-PIECE TYPE GANG COVER PLATES, UNLESS OTHERWISE NOTED.
13. IDENTIFY DEDICATED OR ISOLATED GROUND ELECTRICAL OUTLETS WITH A RED DOT.

POWER & COMMUNICATION NOTES

- 1. COORDINATE INSTALLATION OF TELECOMMUNICATIONS, DATA AND SECURITY SYSTEMS.
2. VERIFY EQUIPMENT SPECIFICATIONS, POWER AND INSTALLATION REQUIREMENTS WITH MANUFACTURER TO ENSURE PROPER FIT AND FUNCTION.
3. VERIFY MOUNTING REQUIREMENTS OF ELECTRICAL, TELEPHONE AND OTHER EQUIPMENT.
4. GANG ADJACENT LIGHT SWITCHES AND COVER WITH A SINGLE PLATE.
5. INDICATED DIMENSIONS ARE TO THE CENTER LINE OF OUTLET OR SWITCH, OR CLUSTER OF OUTLETS OR SWITCHES, UNLESS OTHERWISE NOTED.
6. INSTALL OUTLETS ON OPPOSITE SIDES OF PARTITIONS IN SEPARATE STUD CAVITIES. DO NOT INSTALL BACK-TO-BACK.
7. PROVIDE MATCHING COVER PLATES, RECEPTACLES AND RELATED ITEMS. PROVIDE ONE-PIECE TYPE GANG COVER PLATES, UNLESS OTHERWISE NOTED.
8. IDENTIFY DEDICATED OR ISOLATED GROUND ELECTRICAL OUTLETS WITH A RED DOT.

ACCESSIBILITY NOTES

- 1. THE AMERICAN WITH DISABILITIES ACT (A.D.A.) PROVIDES THAT ALL ALTERATIONS TO A FACILITY MUST BE MADE IN SUCH A MANNER THAT, TO THE MAXIMUM EXTENT FEASIBLE, THE ALTERED PORTIONS OF THE FACILITY ARE READILY ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES. SANTANDER AND THE GENERAL CONTRACTOR ACKNOWLEDGE THAT THE INTERPRETATIONS OF THE A.D.A. REQUIREMENTS AND POSSIBLY CONTRADICTORY INTERPRETATIONS, THE ARCHITECT THEREFORE, WILL USE HIS/HER BEST PROFESSIONAL EFFORTS TO INTERPRET A.D.A. REQUIREMENTS AND REGULATIONS AS THEY APPLY TO THE PROJECT. THE ARCHITECT, HOWEVER, CANNOT AND DOES NOT WARRANT OR GUARANTEE THAT SANTANDER WILL CONFORM TO THE MOST RESTRICTIVE REQUIREMENTS OF THE A.D.A. OR THE REQUIREMENTS OF OTHER FEDERAL, STATE AND LOCAL LAWS, RULES, CODES, ORDINANCES AND REGULATIONS AS THEY APPLY TO THE PROJECT.
2. THE SCOPE OF WORK INDICATED IN THESE DRAWINGS IS FOR SPECIFIC ITEMS SELECTED BY SANTANDER FOR CUSTOMER ACCESS TO GOODS AND SERVICES. NOTE THAT SOME AREAS OF ACCESS HAVE NOT BEEN MODIFIED TO MEET A.D.A. REQUIREMENTS. ALL OTHER AREAS OF A.D.A. UPGRADE THAT MAY BE REQUIRED AT THIS TIME ARE NOT IN THIS CONTRACT. THE ARCHITECT HAS CONDUCTED VISUAL DOCUMENTS. SEE THIRD PARTY PROJECT MANAGER FOR ADDITIONAL INFORMATION CONCERNING THESE AREAS OF A.D.A. SCOPE OF WORK.
3. IN BUILDINGS AND FACILITIES, FLOORS OF A GIVEN STORY SHALL BE A COMMON LEVEL THROUGHOUT, OR SHALL BE CONNECTED BY PEDESTRIAN RAMPS, PASSENGER ELEVATORS OR SPECIAL ACCESS LIFTS.
4. FLOOR SURFACES SHALL BE SLIP RESISTANT.
5. EVERY CORRIDOR AND AISLE SERVING AN OCCUPANT LOAD OF 10 OR MORE SHALL BE NOT LESS THAN 44" IN WIDTH.
6. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2" IN HEIGHT. LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL. BEVEL OTHERS WITH A SLOPE NOT GREATER THAN 1:2.
7. LATCHING AND LOCKING DEVICES THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER, TYPE HARDWARE, PUSH BUTTON, PUSH PLATE, TACTILE SWITCH, OR OTHER HARDWARE SHALL BE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO EXERCISE OPENING HARDWARE. MOUNT DOOR OPENING HARDWARE BETWEEN 34" AND 44" A.F.F.
8. CENTER HAND-ACTIVATED DOOR OPENING HARDWARE BETWEEN 34" AND 44" A.F.F. MAXIMUM PULL OR PUSH EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS. MEASURED AT RIGHT ANGLES TO FOLDING DOORS AND AT CENTER PLANE OF SLIDING OR FOLDING DOORS. CORRESPONDING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. MAXIMUM EFFORT TO OPERATE REQUIRED FIRE DOORS MAY BE INCREASED BUT SHOULD NOT EXCEED 15 POUNDS.
9. THE BOTTOM 10" OF ALL DOORS (EXCEPT SLIDING) SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITIONS.
10. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL NOT BE LESS THAN 3' IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES AND SHALL BE MOUNTED SO THAT THE CLEAR WIDTH OF THE DOORWAY IS NOT LESS THAN 32".
11. WHERE A PAIR OF DOORS IS UTILIZED, AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32" WITH THE LEAF POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.
12. IDENTIFY ACCESSIBLE ENTRANCES WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, VISIBLE FROM APPROACHING PEDESTRIAN WAYS.
13. THE FLOOR OR LANDINGS ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL BE AT LEAST 60" LONG IN THE DIRECTION OF THE DOOR SWING AND 48" CLEAR IN THE DIRECTION OPPOSITE THE DOOR SWING MEASURED IN RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION.
14. FLOORS AND LANDINGS SHALL NOT BE MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NOT GREATER THAN 1:2.
15. TO ALERT THE VISUALLY IMPAIRED, MARK THE UPPER APPROACH AND THE LOWER TREAD OF EACH INTERIOR STAIR WITH A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2" WIDE PLACED PARALLEL TO AND NOT MORE THAN 1" FROM THE NOSE OF THE STAIR TREADING. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR.
16. ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE MOUNTED 15" MIN. A.F.F. TO THE BOTTOM OF THE BOX AND 48" MAX. A.F.F. TO THE TOP OF THE BOX.
17. SANITARY FACILITIES LOCATED ON AN ACCESSIBLE FLOOR OF A BUILDING SHALL BE ACCESSIBLE TO THE PHYSICALLY HANDICAPPED ACCESSIBLE TO THE PHYSICALLY HANDICAPPED.
18. ENTRY TO SANITARY FACILITIES: A. 44" CLEAR AISLES OR CORRIDORS WHERE OCCUPANT LOAD IS 10 OR MORE. B. DOORWAYS TO HAVE A 32" CLEAR OPENING. C. ON APPROACH SIDE, PROVIDE A 60" CLEAR LEVEL SPACE WHEN DOOR SWINGS TOWARD APPROACH AND 44" SPACE WHEN DOOR SWINGS AWAY FROM APPROACH. (REFER TO DRWG. A-040.00 FOR CLEARANCES BASED ON DIFFERENT APPROACHES)
19. TOILET ROOM ACCESSORIES: A. MOUNT BOTTOM EDGE OF MIRRORS NO HIGHER THAN 40" FROM THE FLOOR. B. MOUNT TOILET TISSUE DISPENSERS WITHIN 12" FROM THE FRONT EDGE OF THE TOILET SEAT. C. MOUNT DISPENSING AND DISPOSAL FIXTURES (TOWEL, SANITARY NAPKINS, WASTE, COIN SLOTS, ETC.) WITH OPERATING PARTS NO HIGHER THAN 40" FROM THE FLOOR.
20. SINGLE ACCOMMODATION TOILET FACILITY (SEE A-040.00 FOR CLEARANCE) REQUIREMENTS: A. THE HEIGHT OF THE WATER CLOSET (TOP OF SEAT) SHALL BE BETWEEN 17" AND 19". B. MOUNT FLUSH VALVE CONTROL NO MORE THAN 44" ABOVE THE FLOOR, ON THE SIDE OF THE TOILET WITH THE GREATEST SEPARATION FROM ADJACENT WALL OR OTHER SURFACE. C. PROVIDE GRAB BARS ON EACH SIDE, OR ONE SIDE AND BACK OF WATER CLOSET. D. GRAB BARS TO BE 33" ABOVE AND PARALLEL TO THE FLOOR. E. SIDE BARS TO BE 42" LONG AND PROJECT 24" IN FRONT OF WATER CLOSET STOOL. GRAB BAR AT BACK TO BE 36" LONG. F. DIAMETER OF GRAB BARS TO BE 1-1/4" TO 1-1/2". G. PROVIDE 1-1/2" CLEARANCE BETWEEN GRAB BARS AND WALL. H. GRAB BARS INCLUDING CONNECTORS, FASTENERS, SUPPORT BACKING, ETC.) SHALL SUPPORT A 250 POUND LOAD. I. GRAB BARS SHALL NOT ROTATE WITH THEIR FITTINGS. J. GRAB BARS AND ANY ADJACENT SURFACE SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS. H. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".
21. PROVIDE A CLEAR FLOOR SPACE 30"x48" IN FRONT OF LAVATORY TO PERMIT A FORWARD APPROACH.
22. MOUNT LAVATORIES WITH A MINIMUM CLEARANCE OF 28" FROM THE FLOOR TO THE BOTTOM OF THE APRON. PROVIDE KNEE CLEARANCE UNDER THE FRONT LIP EXTENDING A MINIMUM OF 30" IN WIDTH WITH 8" MINIMUM WIDTH, AND SHALL BE A MINIMUM OF 9" HIGH FROM THE FLOOR. A MINIMUM OF 17" DEEP FROM THE FRONT OF THE LAVATORY.
23. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE FORCE.
24. REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF CLOSING ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.
25. INSULATE OR OTHERWISE COVER HOT WATER AND DRAIN PIPES UNDER LAVATORIES. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

GENERAL NOTES

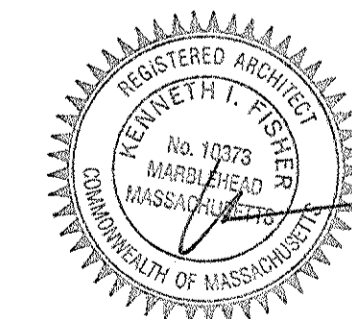
- 1. ALL WORK SHALL CONFORM TO THE AMERICAN WITH DISABILITIES ACT (A.D.A.), WHERE APPLICABLE ALONG WITH ALL STATE, COUNTY, AND LOCAL APPLICABLE CODES, ORDERS, ORDINANCES AND REGULATIONS. PRIOR TO START OF WORK, NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND CODE. ALL WORK SHALL CONFORM TO THE MOST RESTRICTIVE REQUIREMENTS.
2. BEFORE COMMENCING WORK, CONTRACTOR SHALL BECOME FAMILIAR WITH THE DRAWINGS AND THE SCOPE OF WORK. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. ARCHITECT SHALL BE NOTIFIED OF DISCREPANCIES.
3. BEFORE COMMENCING WORK, THE GENERAL CONTRACTOR SHALL SUBMIT AN ITEMIZED COST BREAKDOWN OF ALL SCOPE ITEMS AND A CONSTRUCTION SCHEDULE TO SANTANDER BANK PROJECT MANAGER AND ARCHITECT. WORK SHALL BE SCHEDULED TO MEET SANTANDER REQUIREMENTS.
4. ALL WORK DESCRIBED OR INDICATED IN THESE DOCUMENTS AND ALL WORK DEPENDENT UPON OR NECESSARY TO COMPLETE THIS WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER CONSISTENT WITH THE BEST STANDARDS OF THE TRADE ITEMS AND MATERIALS USED SHALL BE SUITED FOR THE INTENDED PURPOSE.
5. TRADESMEN, CRAFTSMEN, INSTALLERS, FOREMEN AND SUPERVISORS ARE TO BE SKILLED, EXPERIENCED AND LICENSED IF REQUIRED IN THE WORK THEY WILL BE PERFORMING.
6. PROJECT CONSTRUCTION ITEMS TO BE NEW, UNLESS NOTED OTHERWISE. NO SUBSTITUTIONS WILL BE ALLOWED UNLESS COMPLETE DESCRIPTIONS, DRAWINGS, TEST DATA, SAMPLES, COST AND SCHEDULED CHANGES ARE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. ANY ITEM NOTED ON THE DRAWINGS THAT ARE NOT AVAILABLE OR WOULD CAUSE A TIME DELAY SHALL BE IDENTIFIED BY THE GENERAL CONTRACTOR AND THE ARCHITECT SHALL BE NOTIFIED.
7. TYPICAL DETAILS AND GENERAL NOTES SHALL BE USED WHENEVER APPLICABLE U.O.N. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF CONTRACTOR HAS ANY QUESTIONS REGARDING THE SAME OR THEIR EXACT MEANING, ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
8. DIMENSIONS ARE TO THE FACE OF FINISH ON EXISTING OR NEW WORK, UNLESS NOTED OTHERWISE. DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALE. LARGER SCALE DRAWINGS SHALL HAVE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
9. PROVIDE SHOP DRAWINGS WHERE INDICATED AND FOR ALL METAL FABRICATION OR WHERE THEY ARE CALLED OUT FOR ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL SUBMIT FIVE (5) SETS TO THE ARCHITECT WITH AMPLIFIED TIME TO REVIEW. REQUIRED CORRECTIONS WILL BE NOTED AND A COPY WILL BE RETURNED TO CONTRACTOR WHO SHALL REVISE DRAWINGS AND RESUBMIT FOR FINAL APPROVAL PRIOR TO FABRICATION.
10. CONTRACTOR TO SUBMIT SAMPLES OF ALL FINISH MATERIALS TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
11. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF AS-BUILT DRAWINGS NOTING DEVIATIONS BETWEEN THE DRAWINGS, THE ACTUAL FIELD CONDITIONS AND THE NEW CONSTRUCTION. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF AS-BUILT DRAWINGS NOTING DEVIATIONS BETWEEN THE DRAWINGS, THE ACTUAL FIELD CONDITIONS AND THE NEW CONSTRUCTION. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF AS-BUILT DRAWINGS NOTING DEVIATIONS BETWEEN THE DRAWINGS, THE ACTUAL FIELD CONDITIONS AND THE NEW CONSTRUCTION. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF AS-BUILT DRAWINGS NOTING DEVIATIONS BETWEEN THE DRAWINGS, THE ACTUAL FIELD CONDITIONS AND THE NEW CONSTRUCTION. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF AS-BUILT DRAWINGS NOTING DEVIATIONS BETWEEN THE DRAWINGS, THE ACTUAL FIELD CONDITIONS AND THE NEW CONSTRUCTION.
12. CONTRACTOR TO NOTIFY ARCHITECT AND SANTANDER PROJECT MANAGER OF ALL REVISIONS TO THE DRAWINGS AND CHANGES TO THE SCOPE OF WORK OR SCHEDULE AS REQUIRED BY GOVERNING FIELD CONDITIONS OR SANTANDER.
13. CONTRACTOR TO NOTIFY ARCHITECT AND SANTANDER PROJECT MANAGER OF ALL REVISIONS TO THE DRAWINGS AND CHANGES TO THE SCOPE OF WORK OR SCHEDULE AS REQUIRED BY GOVERNING FIELD CONDITIONS OR SANTANDER.
14. SITE AND BUILDING SHALL BE MAINTAINED IN A CLEAN, SAFE MANNER. DIRTY OR NOISY WORK SHALL BE PERFORMED AT SUCH A TIME AS DIRECTED BY THE OWNER AND/OR CITY. ALL TRASH DEBRIS, SURPLUS MATERIAL, TOOLS AND EQUIPMENT TO BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER. LEAVE PREMISES IN A CONDITION ACCEPTABLE TO SANTANDER OR OWNER.
15. PROTECT AREA OF WORK AND ADJACENT AREAS FROM DAMAGE. WHERE EXISTING CONSTRUCTION FINISHES OR EQUIPMENT IS DAMAGED BY WORK IN THIS CONTRACT, IT SHALL BE PATCHED, REPAIRED OR REPLACED AS REQUIRED TO MATCH EXISTING AT NO COST TO SANTANDER.
16. THE LOCATION AND ELEVATIONS OF ALL WORK TO BE CONSTRUCTED IS SHOWN ON THE DRAWINGS. UNLESS OTHERWISE SPECIFICALLY NOTED BY THE ARCHITECT, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER LOCATION AND ELEVATIONS AS SHOWN AND INTENDED.
17. THE CONTRACTOR SHALL LAY-OUT THE WORK, ESTABLISH AND MAINTAIN NECESSARY MARKERS AND BE RESPONSIBLE FOR THE ACCURACY OF THE WORK. THE CONTRACTOR SHALL MARK, AS A GUIDE TO ALL TRADES AND TO HIS SUBCONTRACTORS, THE EXACT LOCATIONS OF NEW OR REMODELED WORK WITH RESPECT TO ALL CHANGES TO EXISTING.
18. INSTALL AND APPLY ITEMS, MATERIALS, EQUIPMENT, FINISHES, ETC. INCLUDING THE PREPARATION OF SURFACES IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED RECOMMENDATIONS AND INSTALLATION REQUIREMENTS.
19. PERTAINING TO EQUIPMENT: GENERAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND RELOCATION OF ANY EXISTING EQUIPMENT OR CONSTRUCTION AS NECESSARY FOR A COMPLETE INSTALLATION.
20. ACCESS PANELS SHALL BE PROVIDED FOR ALL EQUIPMENT SWITCHES, VALVES AND OTHER CONTROLS ARE CONCEALED. EXACT LOCATIONS TO BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
21. BESIDES GUARANTEES REQUIRED ELSEWHERE, THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A MINIMUM PERIOD OF ONE YEAR AFTER THE DATE OF ACCEPTANCE OF WORK WITHOUT EXPENSE TO SANTANDER. GUARANTEE SHALL INCLUDE ANY WORK THAT MAY BE DISPLACED BY GENERAL CONTRACTOR'S WORK.
22. OBTAIN AND PAY FOR PERMITS AND INSPECTIONS REQUIRED BY PUBLIC AUTHORITIES GOVERNING THE WORK.
23. SUBMIT REQUESTS FOR SUBSTITUTIONS, REVISIONS, OR CHANGES TO ARCHITECT FOR REVIEW PRIOR TO PURCHASE, FABRICATION OR INSTALLATION.
24. OWNER WILL PROVIDE WORK NOTED BY OTHERS' OR NIC' UNDER SEPARATE CONTRACT. CONTRACTOR SHALL INCLUDE SCHEDULE REQUIREMENTS IN CONSTRUCTION PROGRESS SCHEDULE AND COORDINATE TO ASSURE ORDERLY SEQUENCE OF INSTALLATION.
25. CONTRACTOR TO COORDINATE TELECOMMUNICATIONS, DATA AND SECURITY SYSTEM INSTALLATIONS.
26. PROTECT AREA OF WORK AND ADJACENT AREAS FROM DAMAGE.
27. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IN CASE OF CONFLICT, CONSULT THE ARCHITECT.
28. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO WALLS OR CEILINGS.
29. INTERRUPT DOORS TO CLEAR TOP OF FLOOR FINISHES BY 1/4 INCH, UNLESS NOTED OTHERWISE.
30. CONCEALED INSULATING MATERIALS INSTALLED WITHIN WALL SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 75 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 450.
31. INSULATING MATERIALS WHICH ARE SUBJECT TO DIRECT EXPOSURE TO POTENTIAL FIRE ON THE INSIDE OF THE BUILDING DUE TO INSTALLATION IN UNCONCEALED SPACES SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 450.
32. MATERIALS EXPOSED WITHIN PLENUMS ARE REQUIRED TO BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 AS DETERMINED IN ACCORDANCE WITH ASTM E 84.
33. IF APPLICABLE, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE CERTIFICATE OF OCCUPANCY AS REQUIRED AT THE COMPLETION OF ALL REQUIRED WORK.
34. UNLESS OTHERWISE SPECIFIED ALL GYPSUM WALL BOARD SHALL BE FIRECODE 60, TYPE X, AS PER BSA CAL #17152. SM AND SHALL BE USED ON PARTITIONS, WALLS AND CEILINGS IN BATHROOMS.
35. WATER-RESISTANT GYPSUM WALL BOARD SHALL BE FIRECODE 60, TYPE X, AS PER BSA CAL#17152. SM AND SHALL BE USED ON PARTITIONS, WALLS AND CEILINGS IN BATHROOMS. POWDER ROOMS AND OTHER AREAS WHERE PLUMBING FIXTURES ARE TO BE INSTALLED.
36. NEW AND EXISTING JOISTS, GIRDERS OR OTHER STRUCTURAL MEMBERS SHALL NOT BE CUT OR NOTCHED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT.

Santander Central Square 599 Massachusetts Avenue, Cambridge, MA 02139

Genler One Beacon Street Third Floor Boston, MA 02108 United States Tel: 617.619.5700 Fax: 617.619.5701

Table with 2 columns: Date, Description. Row 1: 03/21/2019, ISSUE FOR BID&PERMIT

Seal / Signature

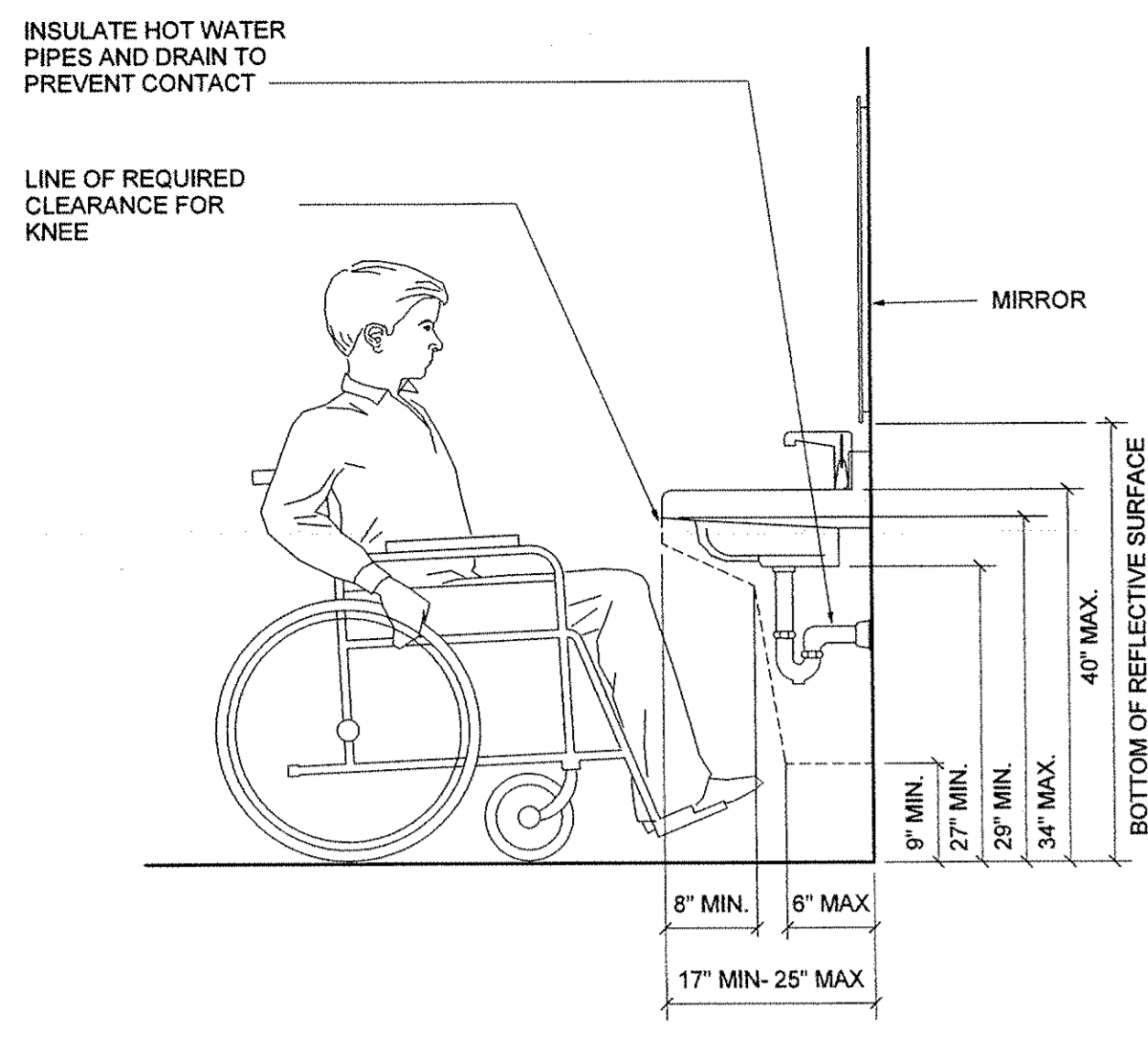


Project Name: Santander - Central Square, Cambridge Project Number: 11.6850.127

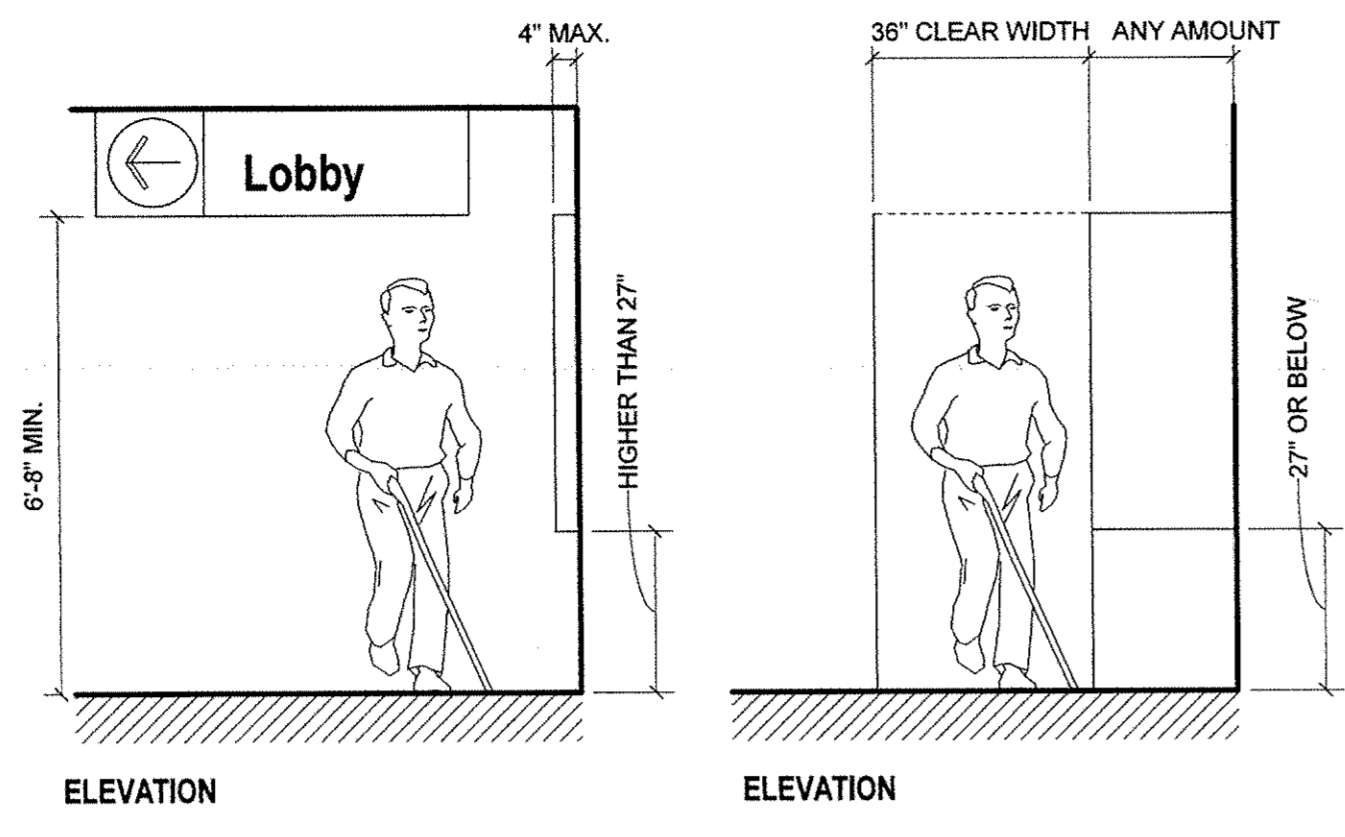
Description: GENERAL NOTES AND TYPICAL MOUNTING HEIGHTS

Scale: 3/4" = 1'-0"

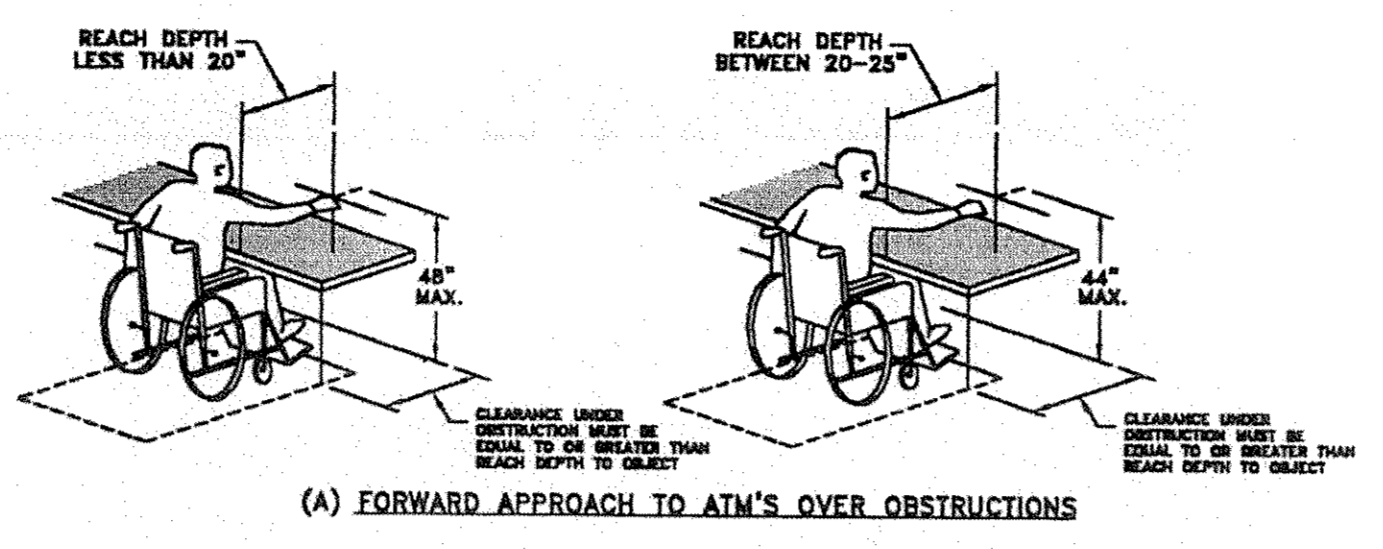
A00.10



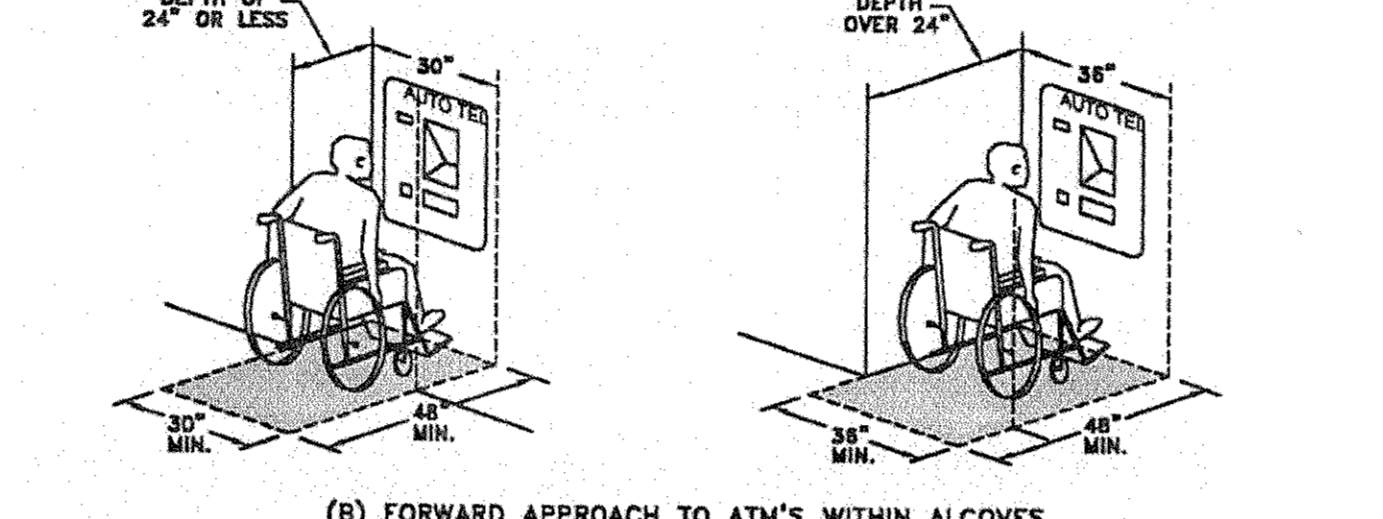
ACCESSIBLE - LAVATORY
SCALE: 3/4" = 1'-0"



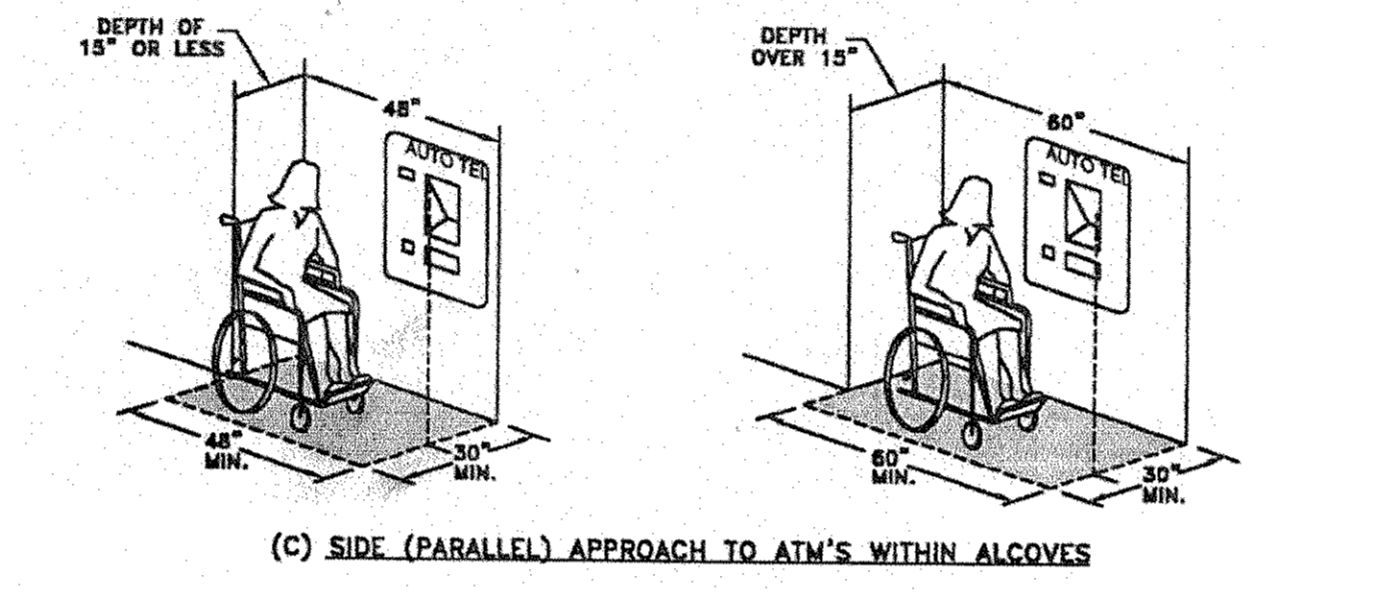
5 ACCESSIBLE-PROTRUDING OBJECTS
SCALE: 3/4" = 1'-0"



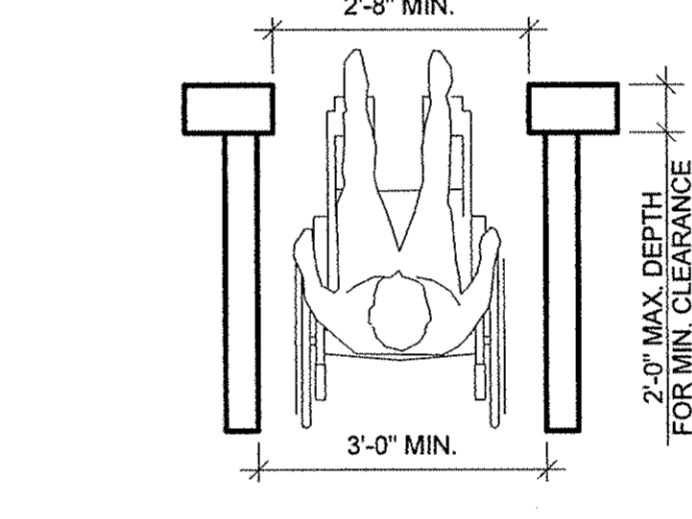
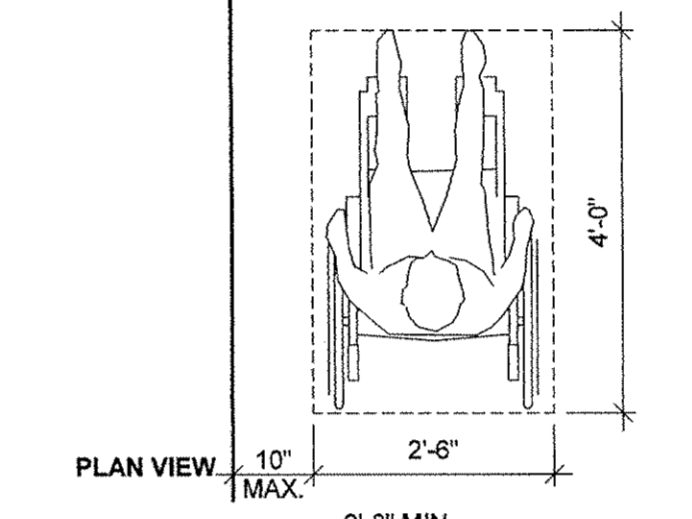
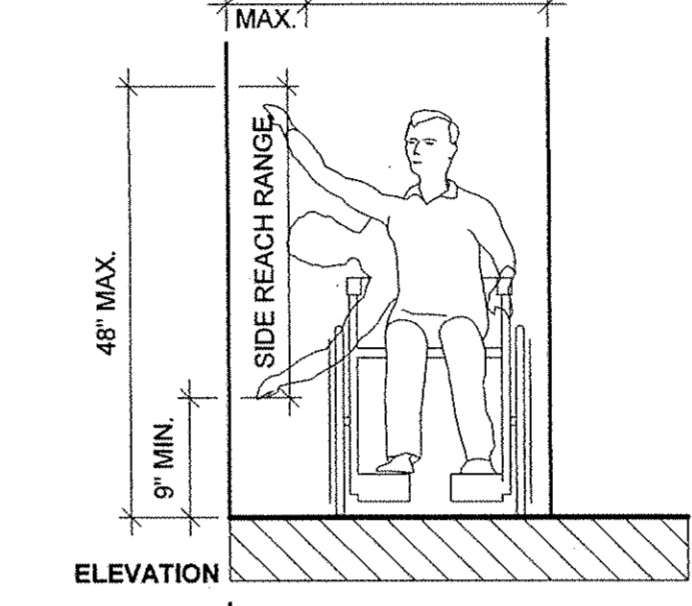
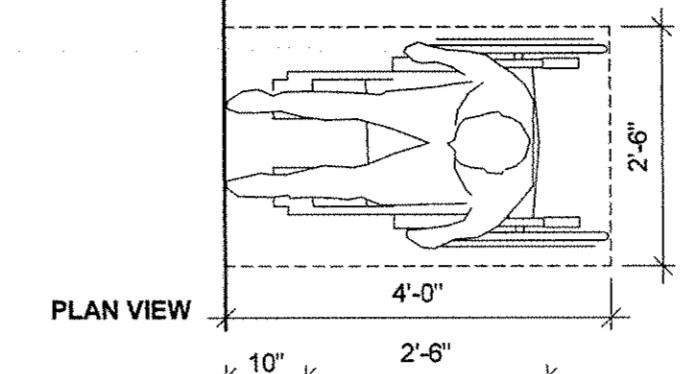
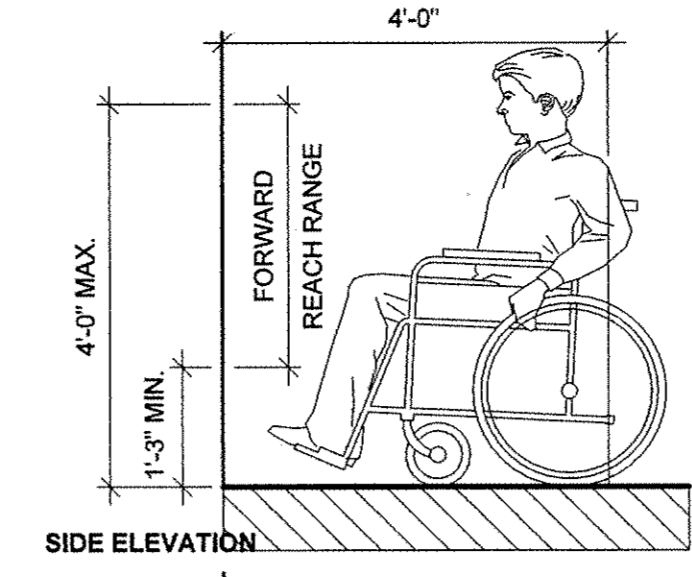
(A) FORWARD APPROACH TO ATM'S OVER OBSTRUCTIONS



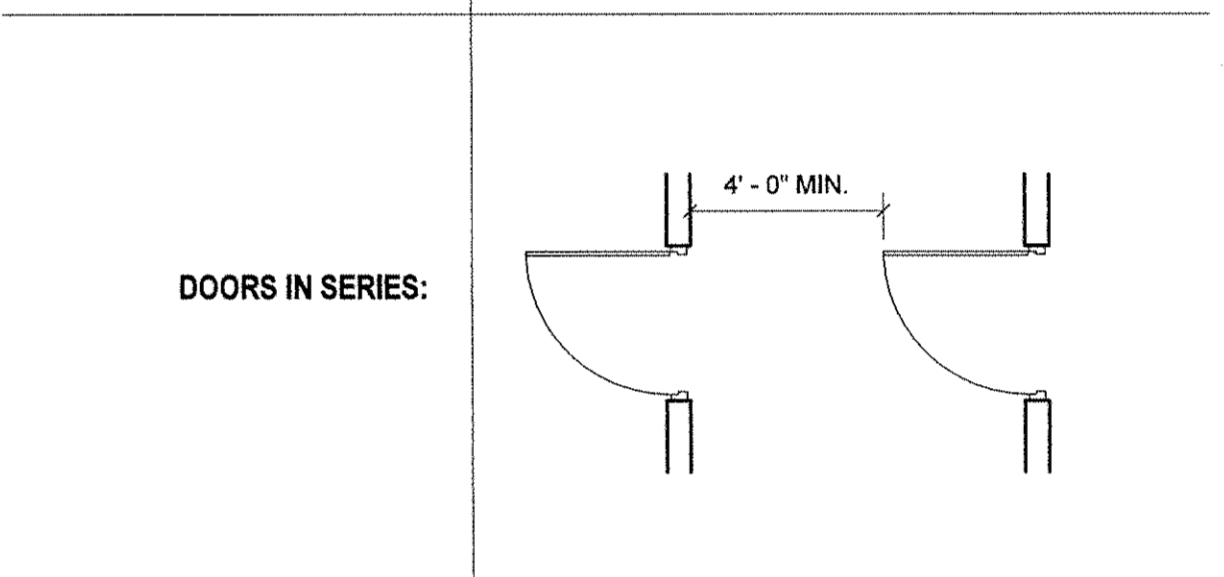
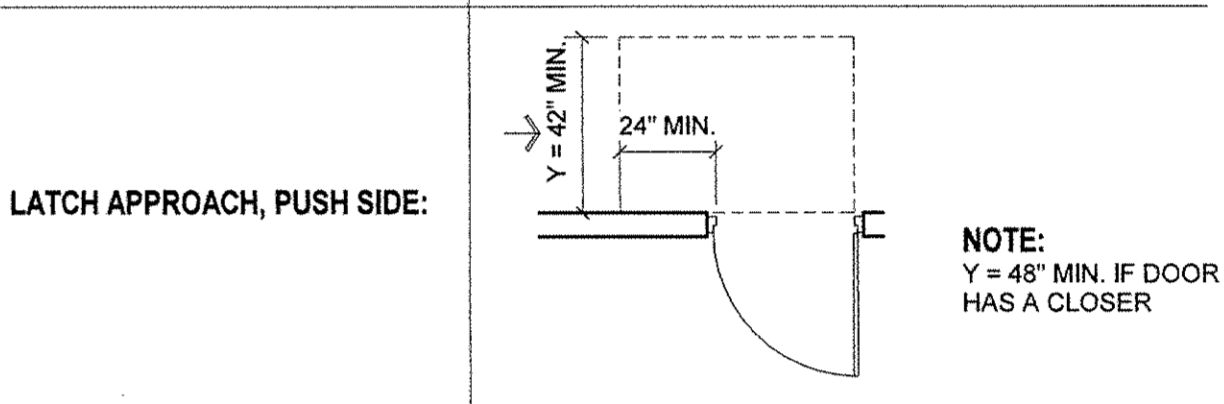
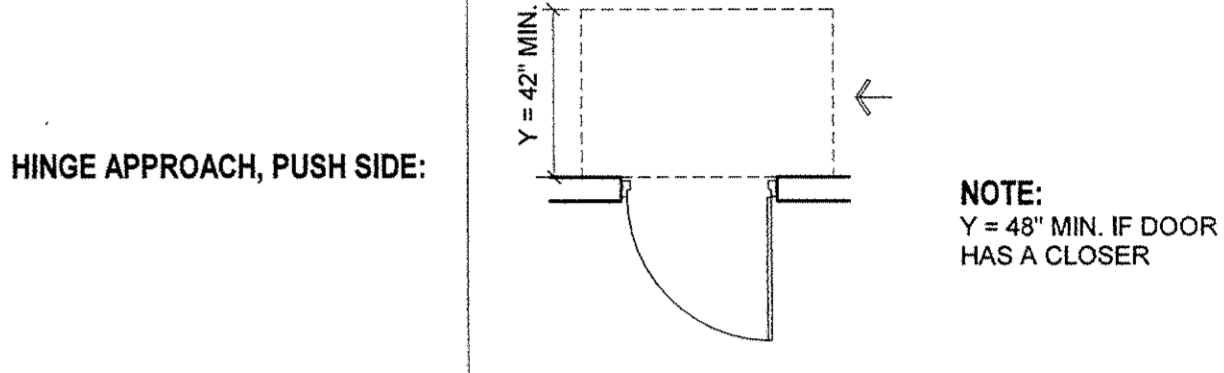
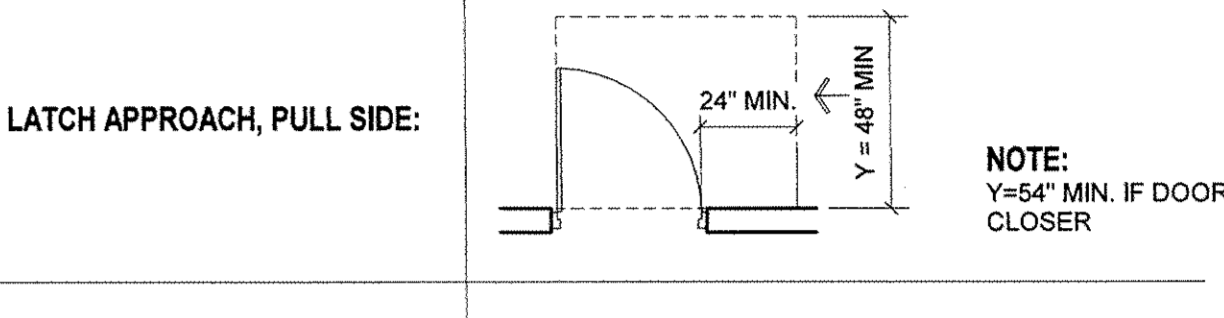
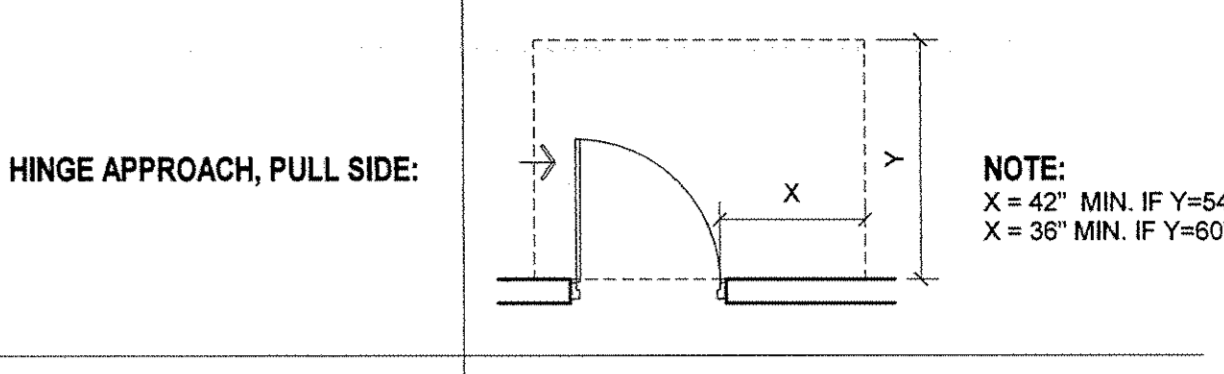
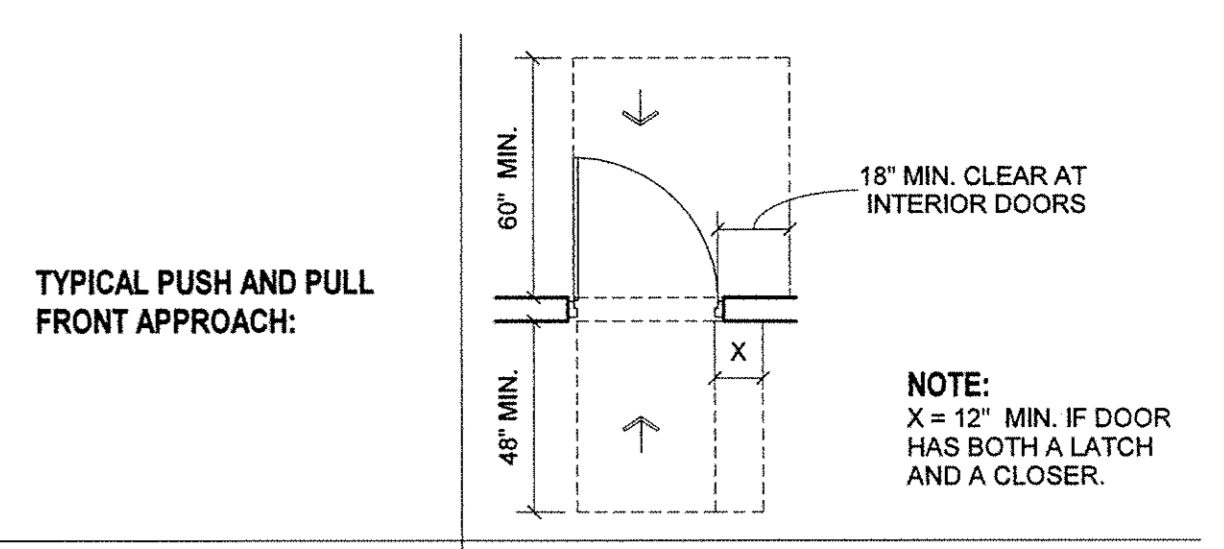
(B) FORWARD APPROACH TO ATM'S WITHIN ALCOVES



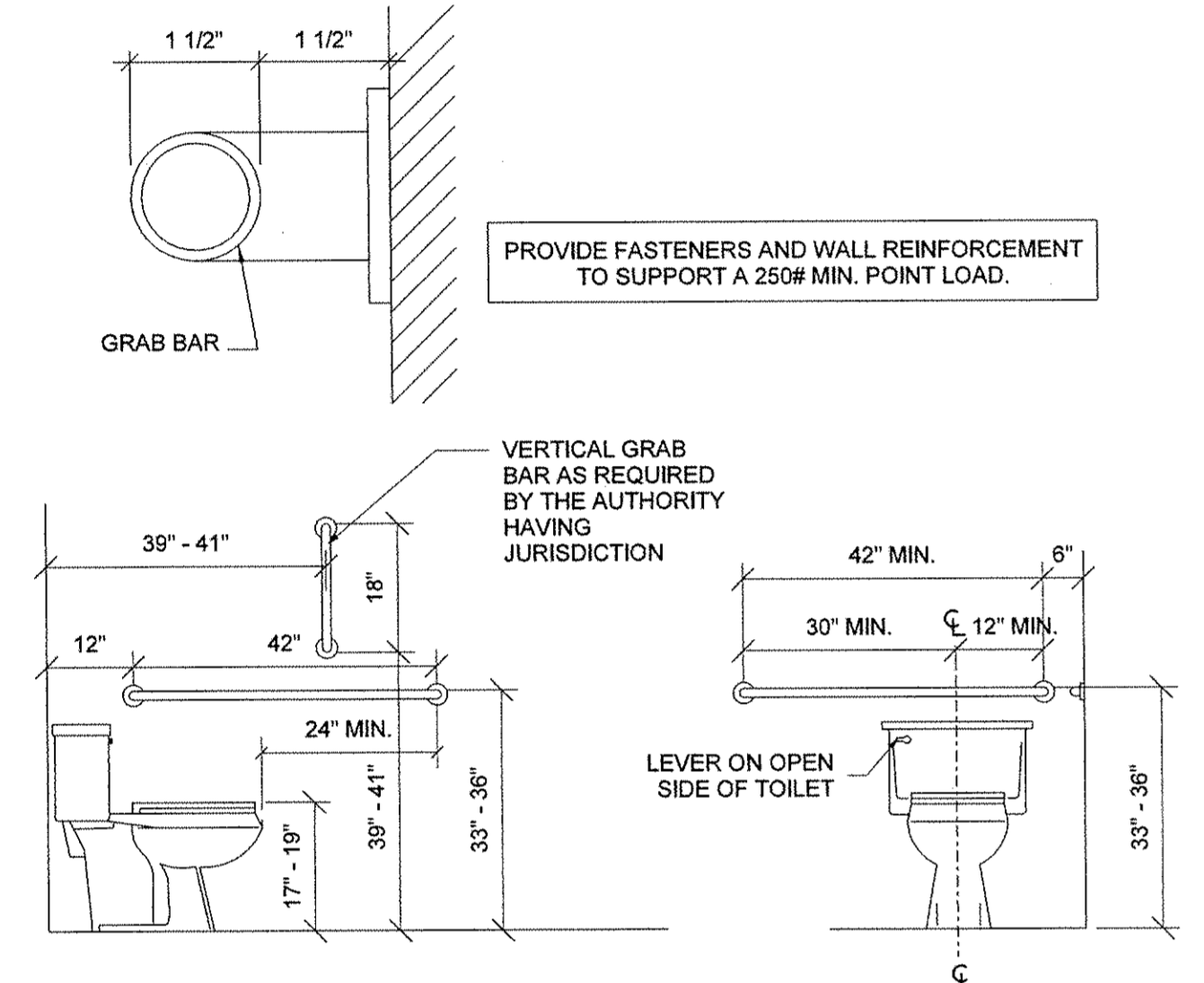
(C) SIDE (PARALLEL) APPROACH TO ATM'S WITHIN ALCOVES



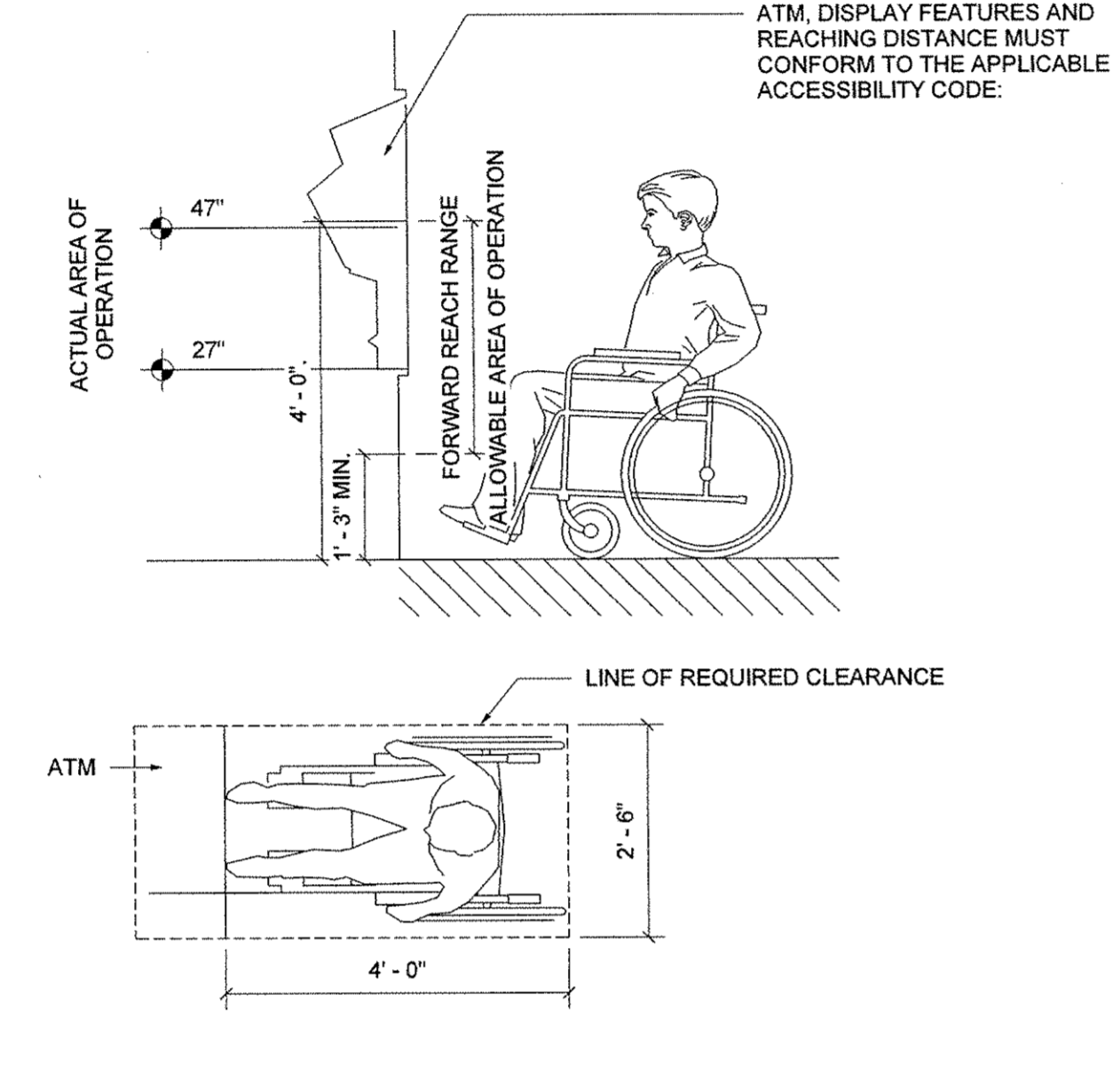
3 ACCESSIBLE - REACH RANGES
SCALE: 1/2" = 1'-0"



2 ACCESSIBLE - DOOR CLEARANCES¹
SCALE: 1/4" = 1'-0"



7 ACCESSIBLE GRAB BAR CLEARANCES
SCALE: 1/2" = 1'-0"



6 ATM APPROACH CLEARANCES
SCALE: 1/2" = 1'-0"

4 ATM GENERAL APPROACH
SCALE: N.T.S.

2 ACCESSIBLE - REACH RANGES
SCALE: 1/2" = 1'-0"

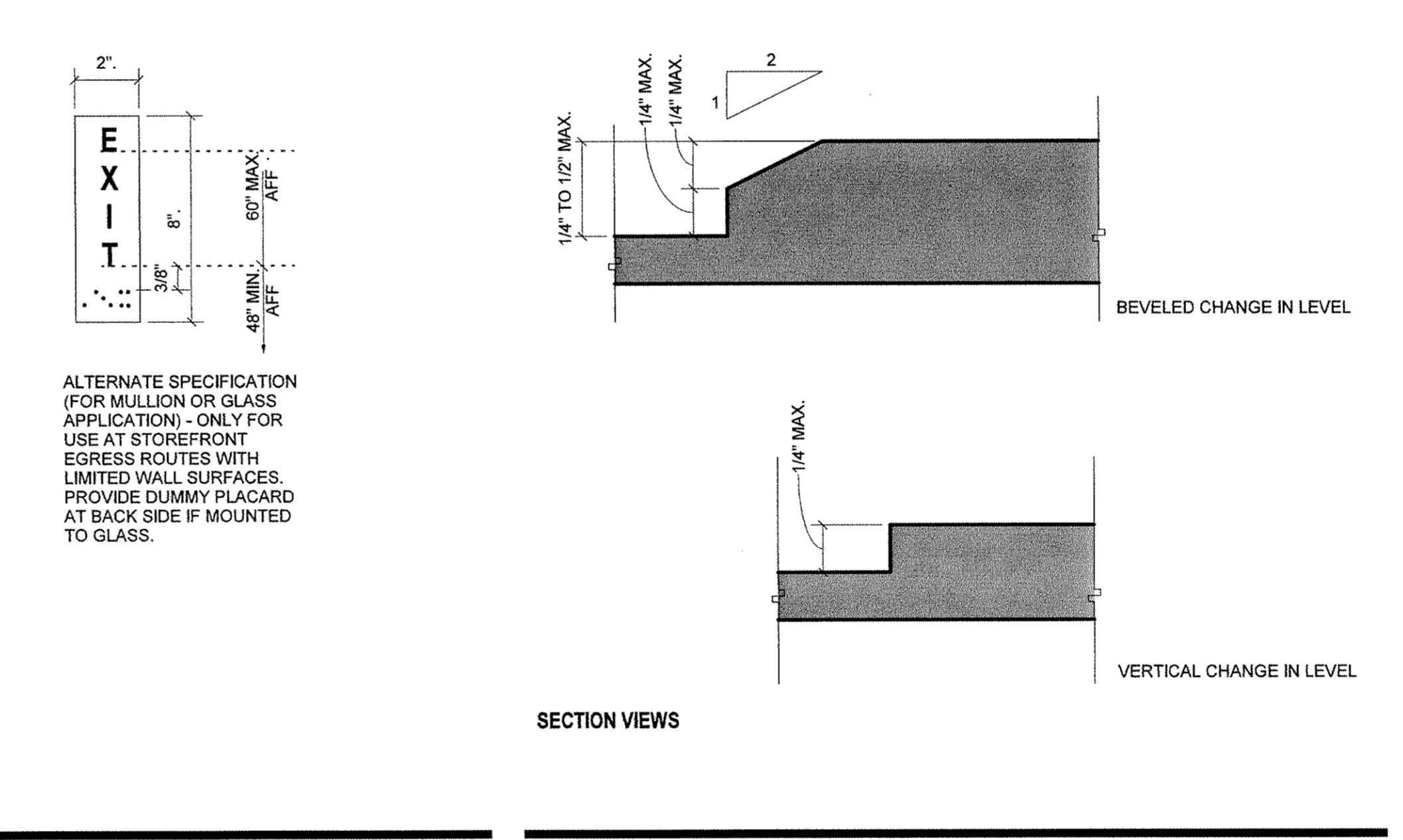
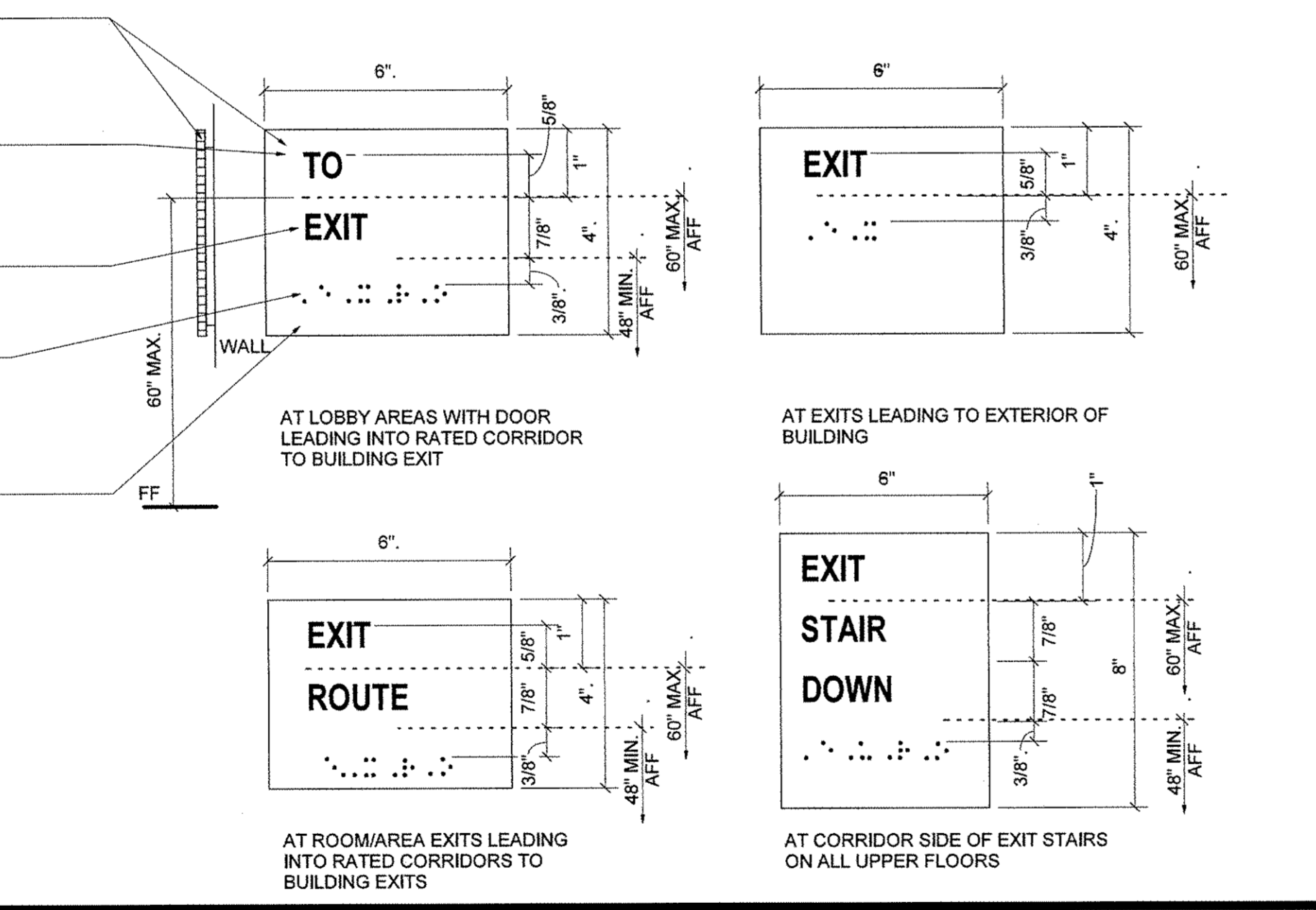
1 ACCESSIBLE-DOOR CLEARANCES¹
SCALE: 1/4" = 1'-0"

EXIT SIGNAGE IDENTIFICATION WITH RAISED LETTERS AND BRAILLE. BRAILLE TO MATCH BACKGROUND FINISH. CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.

CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 80 PERCENT MIN AND 110 PERCENT MAX OF THE HEIGHT OF THE UPPERCASE LETTER "I". CHARACTER HEIGHT SHALL BE 5/8 INCH MIN AND 2 INCHES MAX, BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAX OF THE HEIGHT OF THE CHARACTER.

CHARACTERS ON SIGNS SHALL BE RAISED 1/32" MIN. AND SHALL BE SAN SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2. BRAILLE SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE IS REQUIRED IN OTHER PORTIONS OF THESE STANDARDS. DOTS SHALL HAVE A DOMED OR ROUNDED SHAPE AND SHALL COMPLY WITH VISUAL CHARACTERS SHALL COMPLY WITH SECTION

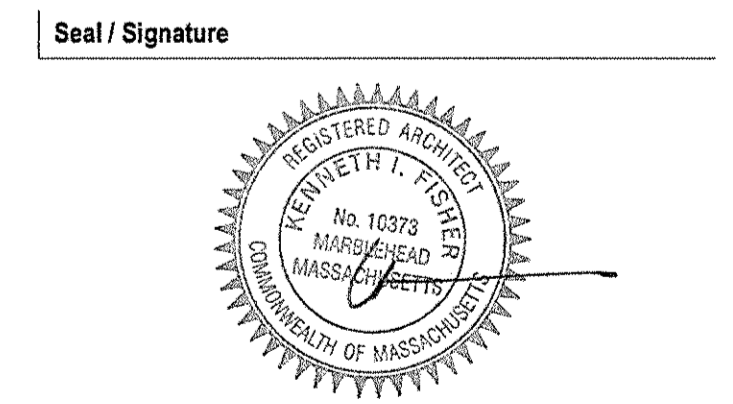
WHERE A TACTILE SIGN IS PROVIDED AT A DOOR FOR ROOMS AND SPACES, SIGNS SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR, WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, OR AT THE RIGHT SIDE OF DOUBLE LEAF DOORS. SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MIN. x 18" MIN. CENTERED ON THE TACTILE CHARACTER IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREES OPEN POSITION.



9 TACTILE EXIT SIGN
SCALE: 6" = 1'-0"

ACCESSIBLE THRESHOLD
SCALE: 3/4" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
ACCESSIBILITY INFORMATION

Scale
As indicated

PARTITION LEGEND

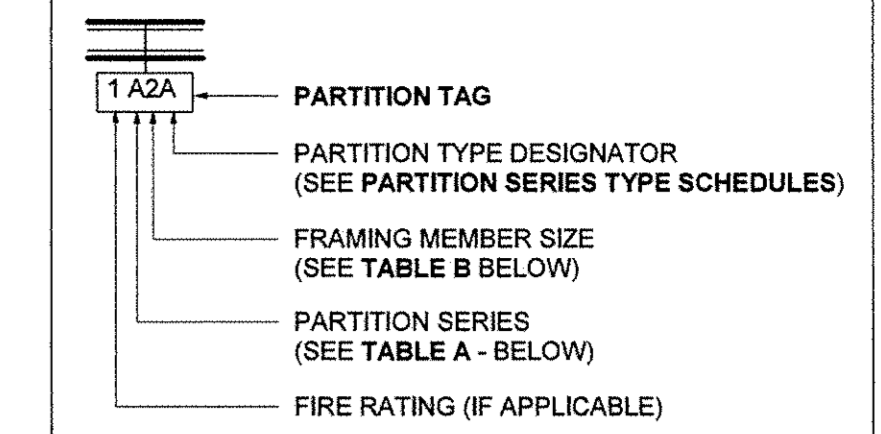


TABLE A- PARTITION SERIES CONSTRUCTION ASSEMBLY

SERIES	SHEATHING	FRAMING MEMBERS	SHEATHING
A	1 - LAYER	METAL C-STUD	1 - LAYER
B	2 - LAYERS	METAL C-STUD	2 - LAYERS
C	1 - LAYER	METAL C-STUD	2 - LAYERS
D	1 - LAYER	METAL C-STUD	NONE
E	2 - LAYERS	METAL C-STUD	NONE
F	1 - LAYER	MTL HAT CHANNEL	NONE
G	1 - LAYER	NONE	NONE
H	1 - LAYER	METAL C-H STUD	NONE
J	2 - LAYERS	METAL C-H STUD	LINER PANEL
K	1 - LAYER	(2) METAL C STUDS	1 - LAYER
L	2 - LAYERS	(2) METAL C STUDS	2 - LAYERS
M	NONE	CMU	NONE
N	1 - LAYER	METAL C-STUD	2 - LAYERS

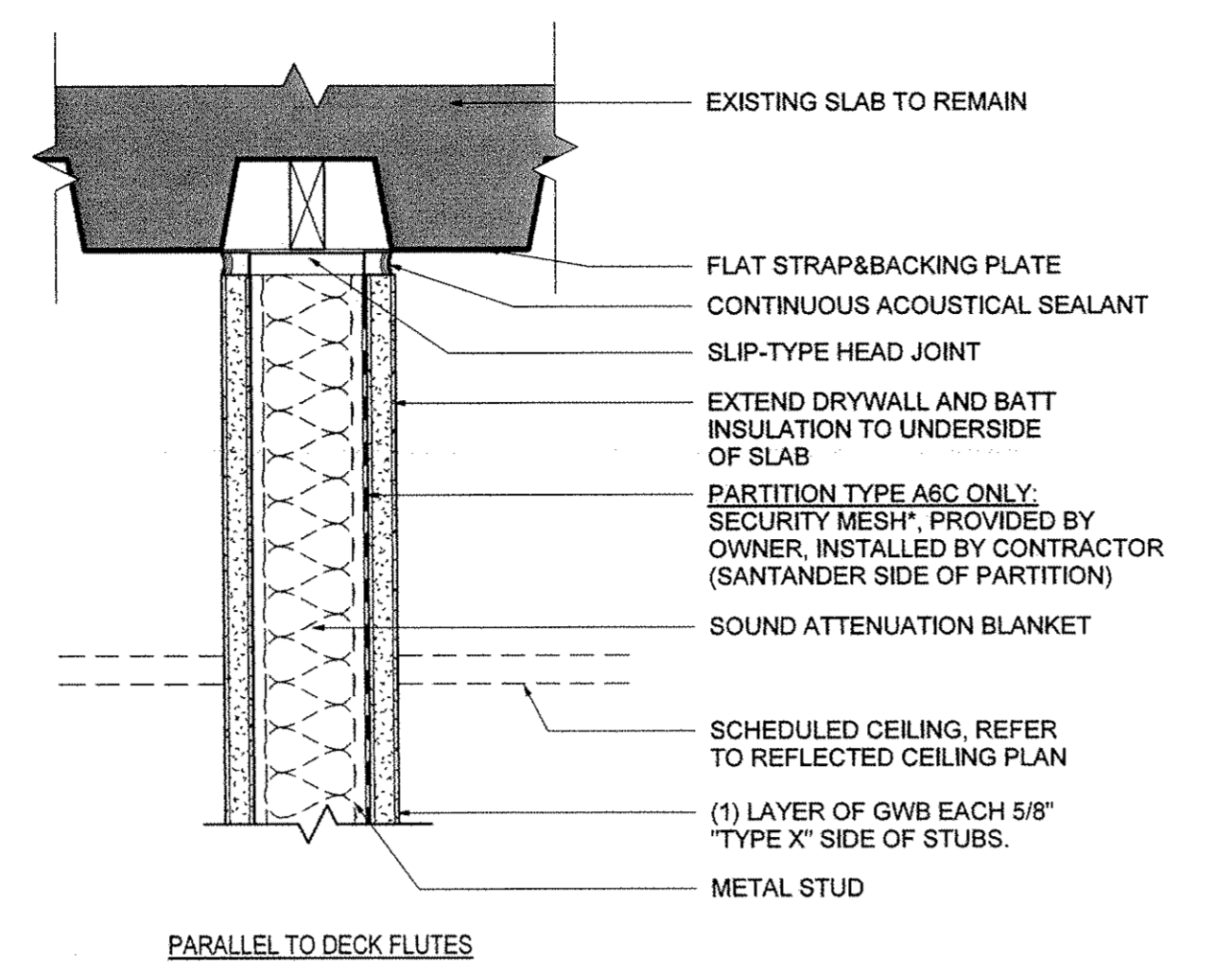
TABLE B- FRAMING DEPTH SCHEDULE

TAG NUMBER DESIGNATION	MTL STUD DEPTH	MTL C-H STUD DEPTH	WOOD STUD DEPTH
-	NO FRAMING		
0	7/8" FURRING CHANNEL	N/A	N/A
1	1 5/8"	N/A	N/A
2	2 1/2"	2 1/2"	N/A
3	3 5/8"	N/A	N/A
4	4"	4"	3 1/2"
6	6"	6"	5 1/2"
8	8"	N/A	7 1/4"
10	10"	N/A	9 1/4"

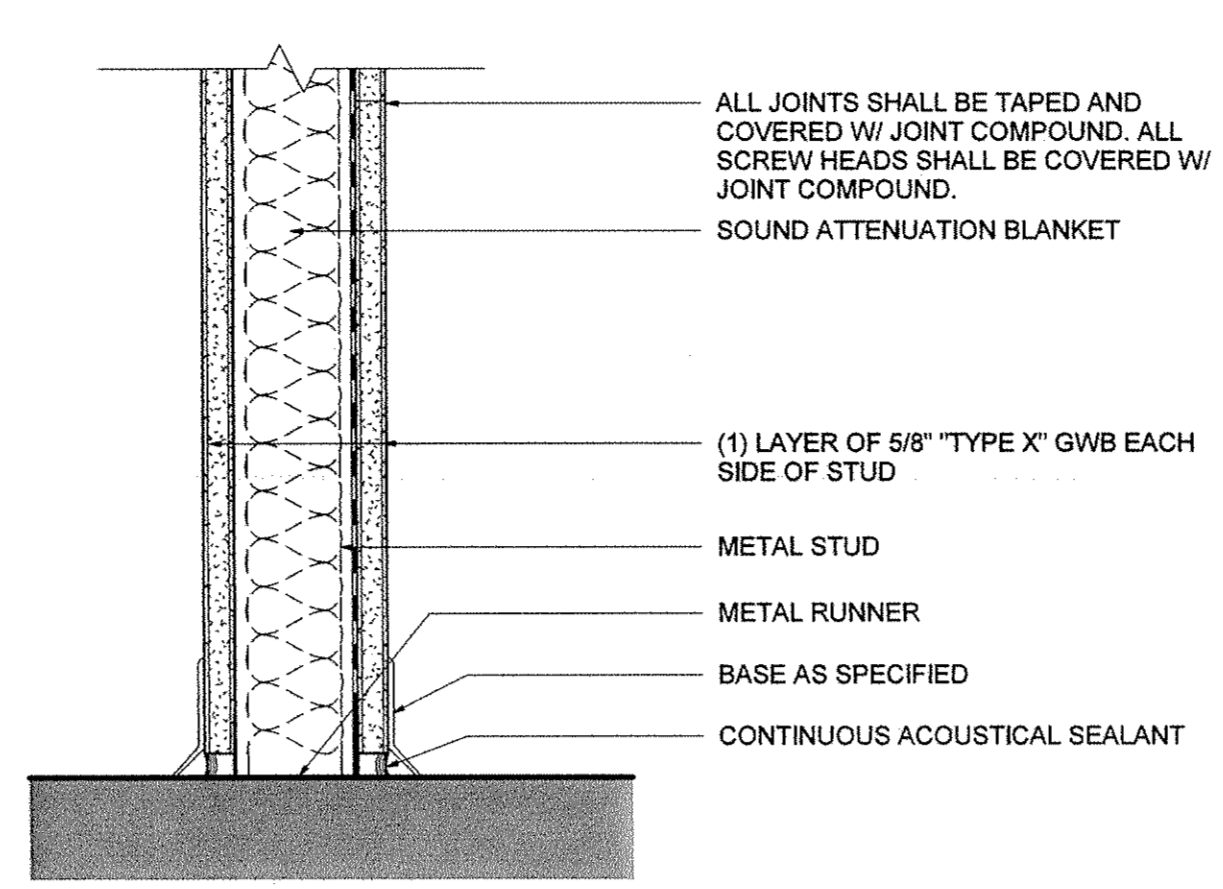
GENERAL NOTES

- ALL PARTITION SHEATHING TO BE 5/8" GYPSUM BOARD UNLESS OTHERWISE NOTED.
- ALL PARTITIONS SHALL BE COORDINATED WITH SCHEDULED FINISHES FOR PARTITION LAYOUT AND REQUIRED CLEARANCES.
- PROVIDE BLOCKING IN WALLS AS REQUIRED. COORDINATE WITH VENDOR/CONSULTANT ADDITIONAL INFORMATION.
- FOR INTERIOR FRAMING LIMITING HEIGHTS REFER TO ASTM C-754, TABLE(S) 3 AND 4.
- CONTRACTOR TO RE-CONFIRM STUD SIZING AND SUBMIT SELECTION CRITERIA FOR REVIEW INCLUDING CONFIRMATION OF SLAB TO UNDERSIDE OF SLAB INFORMATION. SPACING TO COMPLY WITH EXISTING CONDITIONS AND SSMA GUIDELINES.
- GYPSUM WALL BOARD SEAMS SHOULD BE STAGGERED BETWEEN DOUBLE LAYERS OF GYPSUM WALL BOARD.
- INSTALL JUNCTION BOXES THAT SERVE OPPOSITE SIDES OF A WALL IN SEPARATE STUD CAVITIES.
- INSTALL INSULATION PAD BEHIND JUNCTION BOXES FOR STC-50 - INSULATION IS TO BE CONTINUOUS AND MIGHT BE COMPRESSED.
- PROVIDE 2'-0" OF UNFACED INSULATION ABOVE CEILING ON BOTH SIDES OF PARTITION AT ALL OFFICES.
- PROVIDE WATER RESISTANT DRYWALL AT ALL LOCATIONS WHERE WATER IS PRESENT.

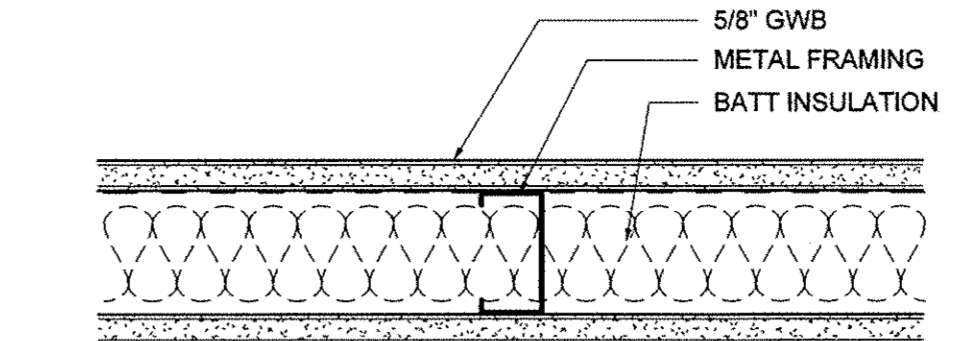
Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



PARTITION HEAD DETAIL A-T01
SCALE: 3" = 1'-0"

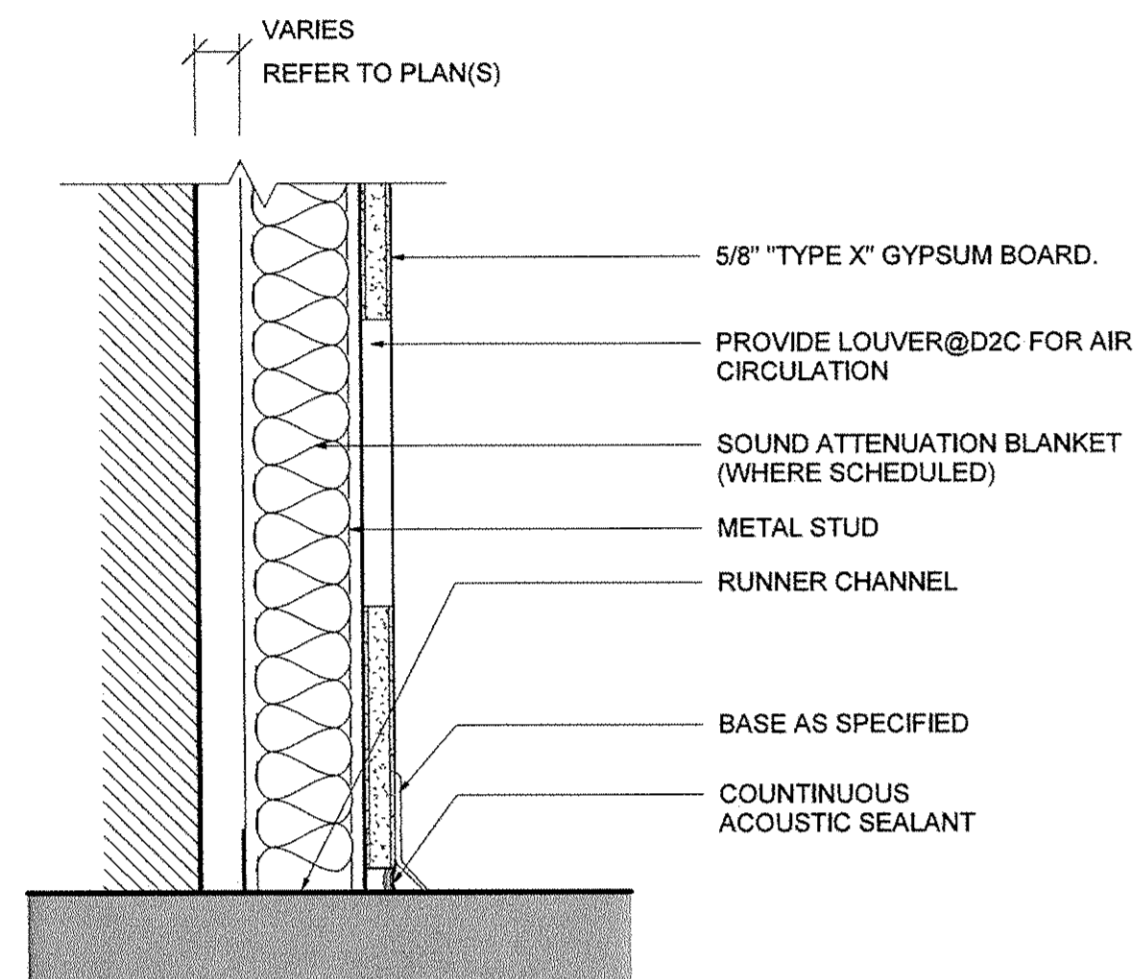


PARTITION BASE DETAIL A-B01
SCALE: 3" = 1'-0"

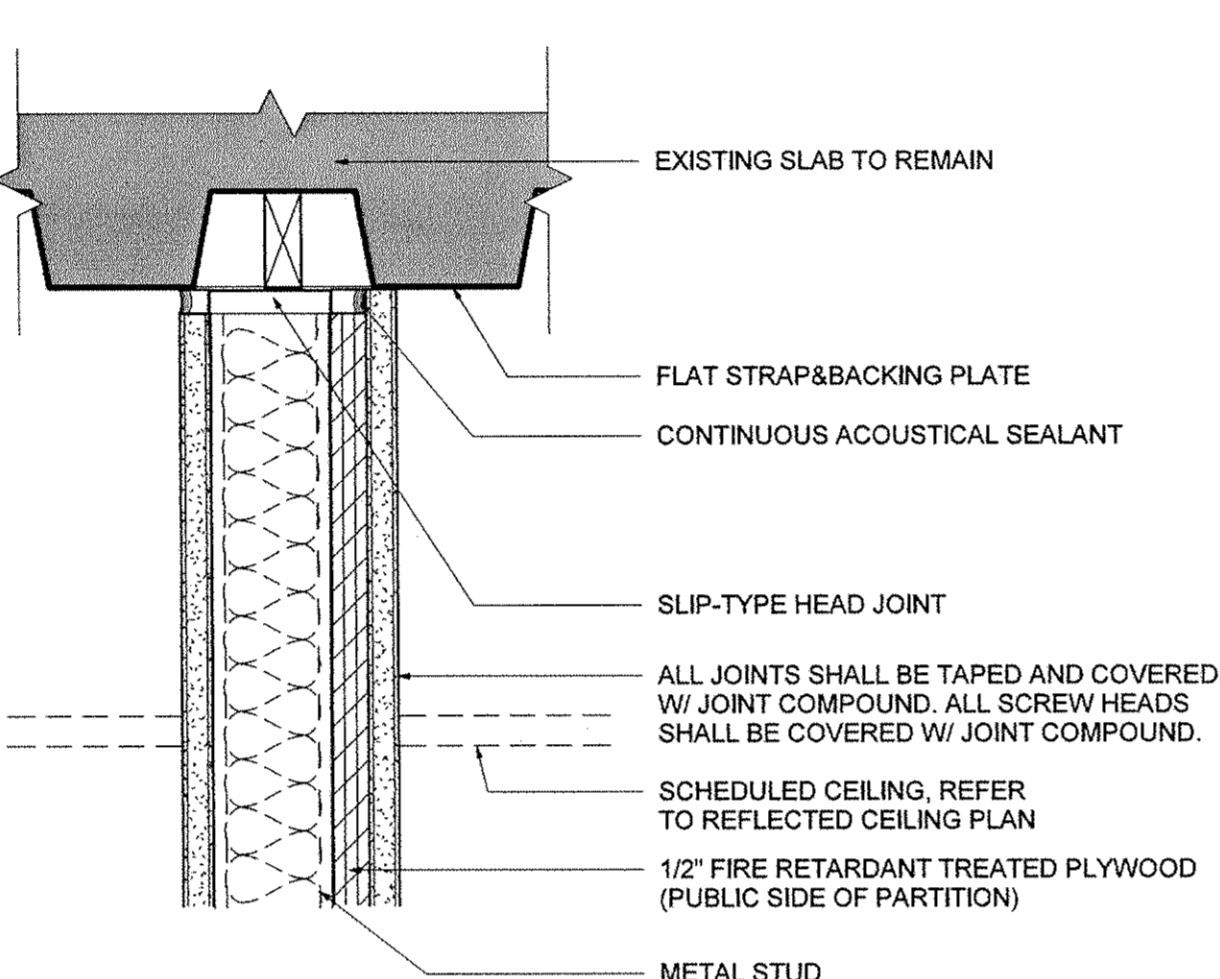


PARTITION TYPE MARK	FRAMING		DETAILS		ATTN THK	Comments
	DEPTH	SPACING	TOP	BOT		
A3A	3 5/8"	16"	A-T01	A-B01	3 1/2"	
A6A	6"	16"	A-T01	A-B01	6"	

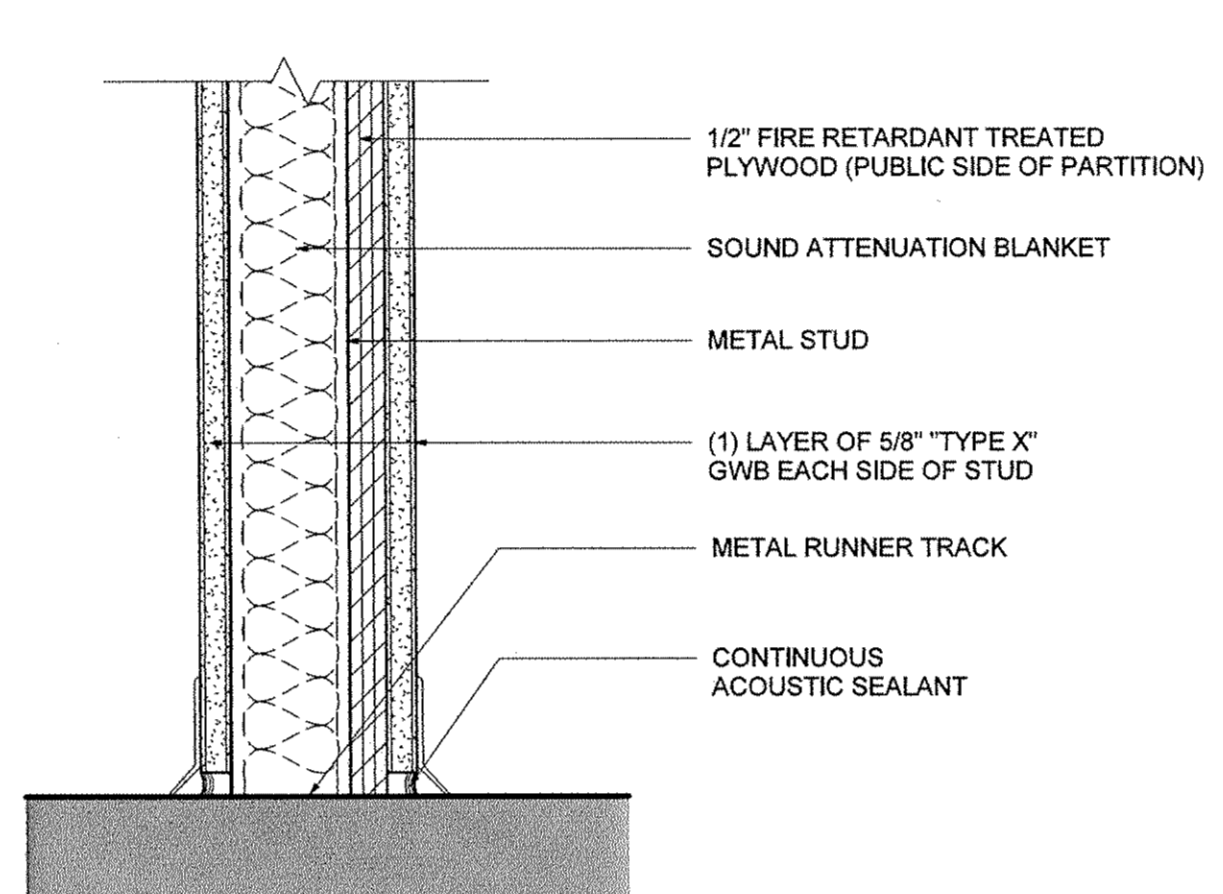
A SERIES PARTITION TYPES A
SCALE: 3" = 1'-0"



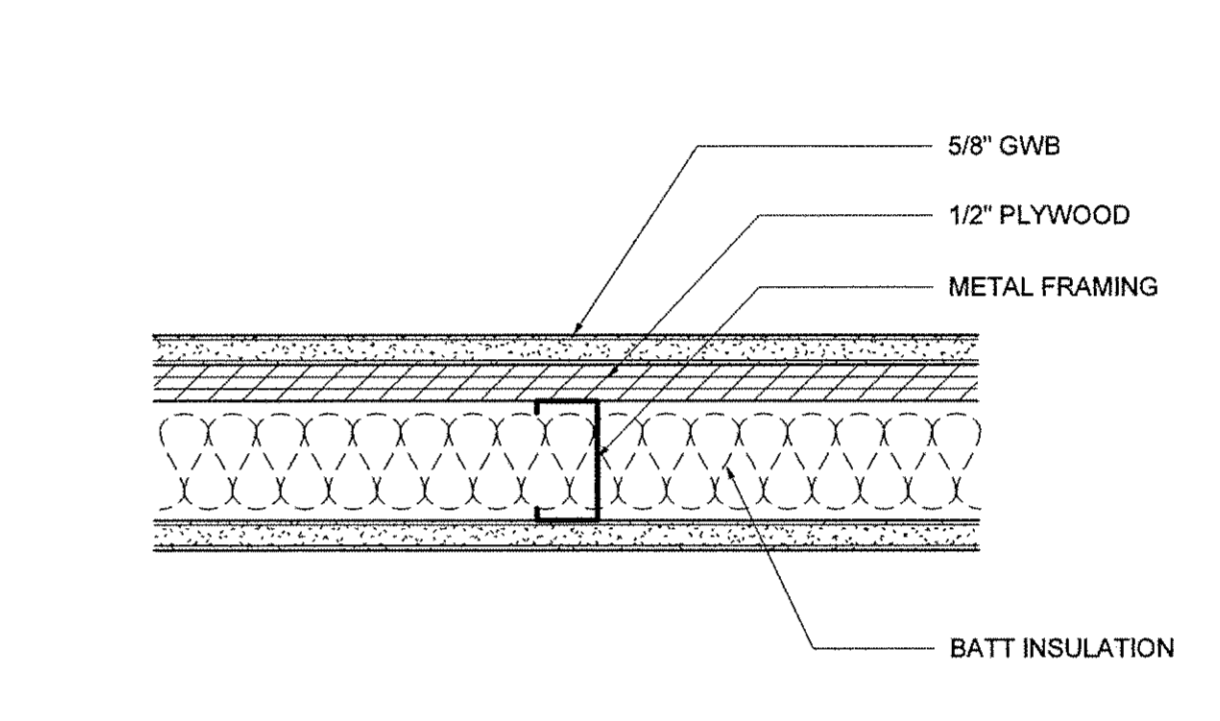
PARTITION BASE DETAIL D-B01
SCALE: 3" = 1'-0"



PARTITION HEAD DETAIL N-T01
SCALE: 3" = 1'-0"

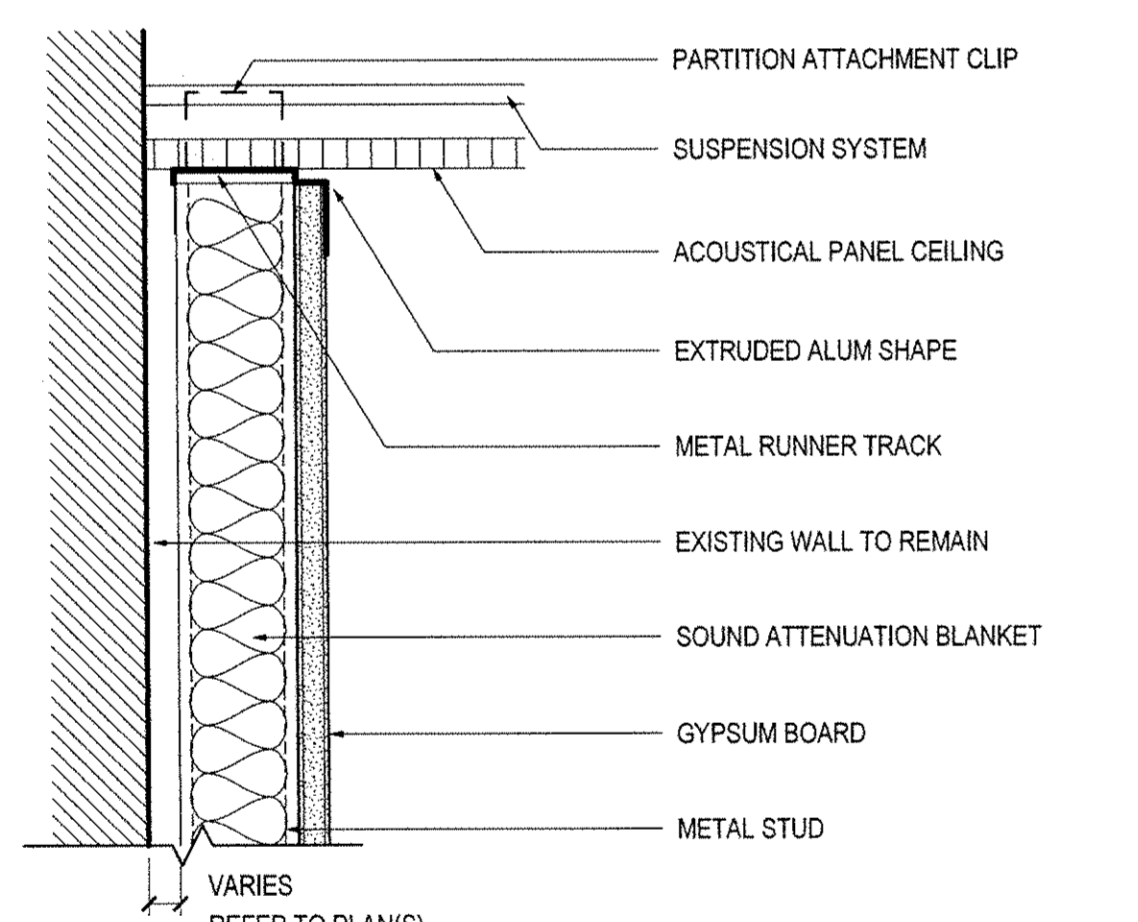


PARTITION BASE DETAIL N-B01
SCALE: 3" = 1'-0"

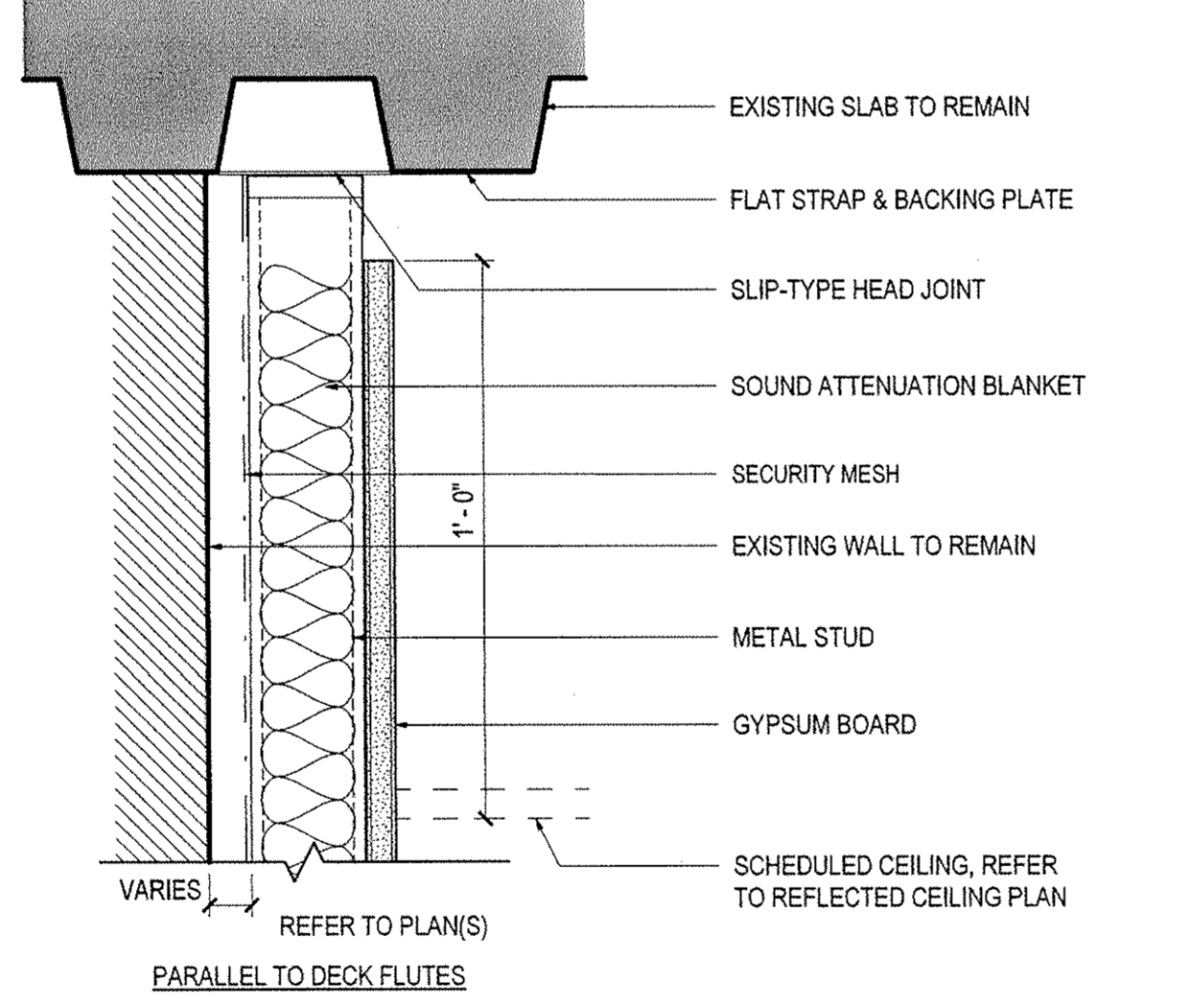


PARTITION TYPE MARK	FRAMING		DETAILS		ATTN THK	Comments
	DEPTH	SPACING	TOP	BOT		
N3A	3 5/8"	16"	N-T01	N-B01	3 1/2"	

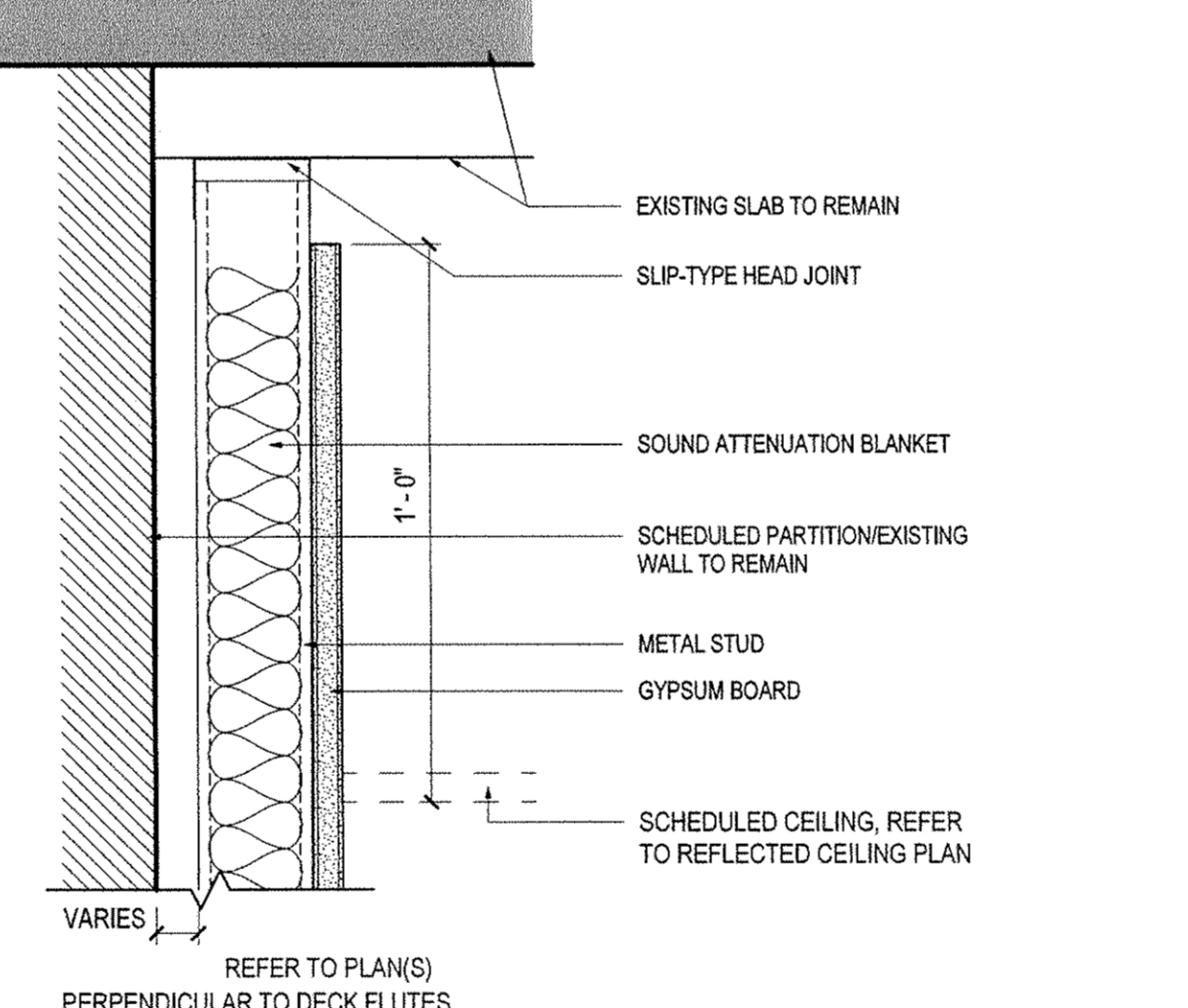
N SERIES PARTITION TYPES N
SCALE: 3" = 1'-0"



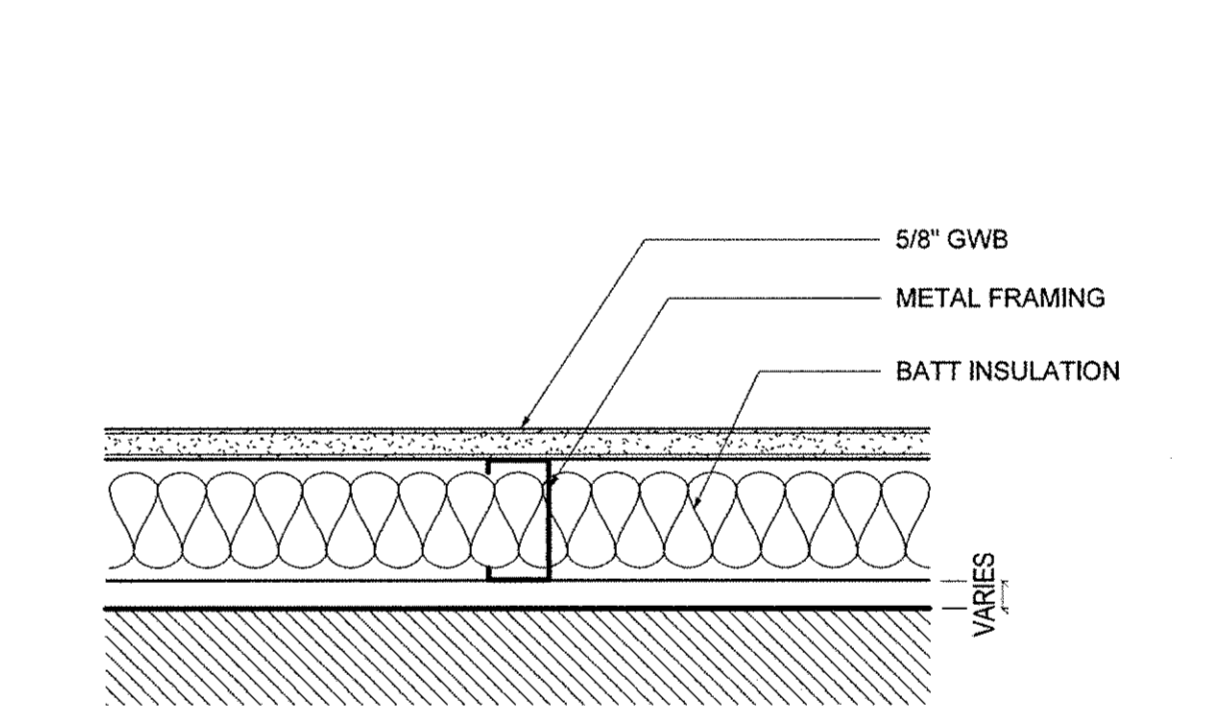
PARTITION HEAD DETAIL D-T03
SCALE: 3" = 1'-0"



PARTITION HEAD DETAIL D-T02
SCALE: 3" = 1'-0"



PARTITION HEAD DETAIL D-T01
SCALE: 3" = 1'-0"

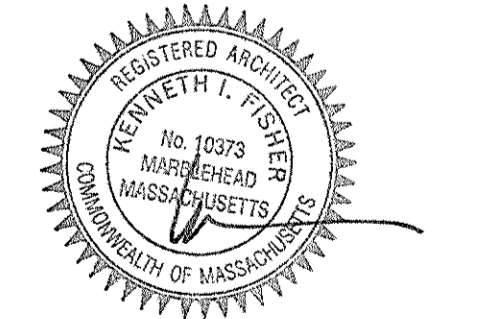


PARTITION TYPE MARK	FRAMING		DETAILS		ATTN THK	Comments
	DEPTH	SPACING	TOP	BOT		
D2A	2 1/2"	16"	D-T02	D-B01	2 1/2"	AMICO ASM-1.5-SF OR APPROVED EQUAL
D3A	3 5/8"	16"	D-T01	D-B01	3 1/2"	
D6A	6"	16"	D-T01	D-B01	NONE	

D SERIES PARTITION TYPES D
SCALE: 3" = 1'-0"

3/22/2019 3:04:36 PM I:\gms\ar\project\Revit\kennedys\2019\03\Santander - Central Square - Cambridge_R18_Mgmt_Jewel\gensler.com.rvt

Seal / Signature



Project Name
Santander - Central Square, Cambridge
Project Number
11.6850.127
Description
WALL PARTITION TYPES

Scale
As indicated

A00.20

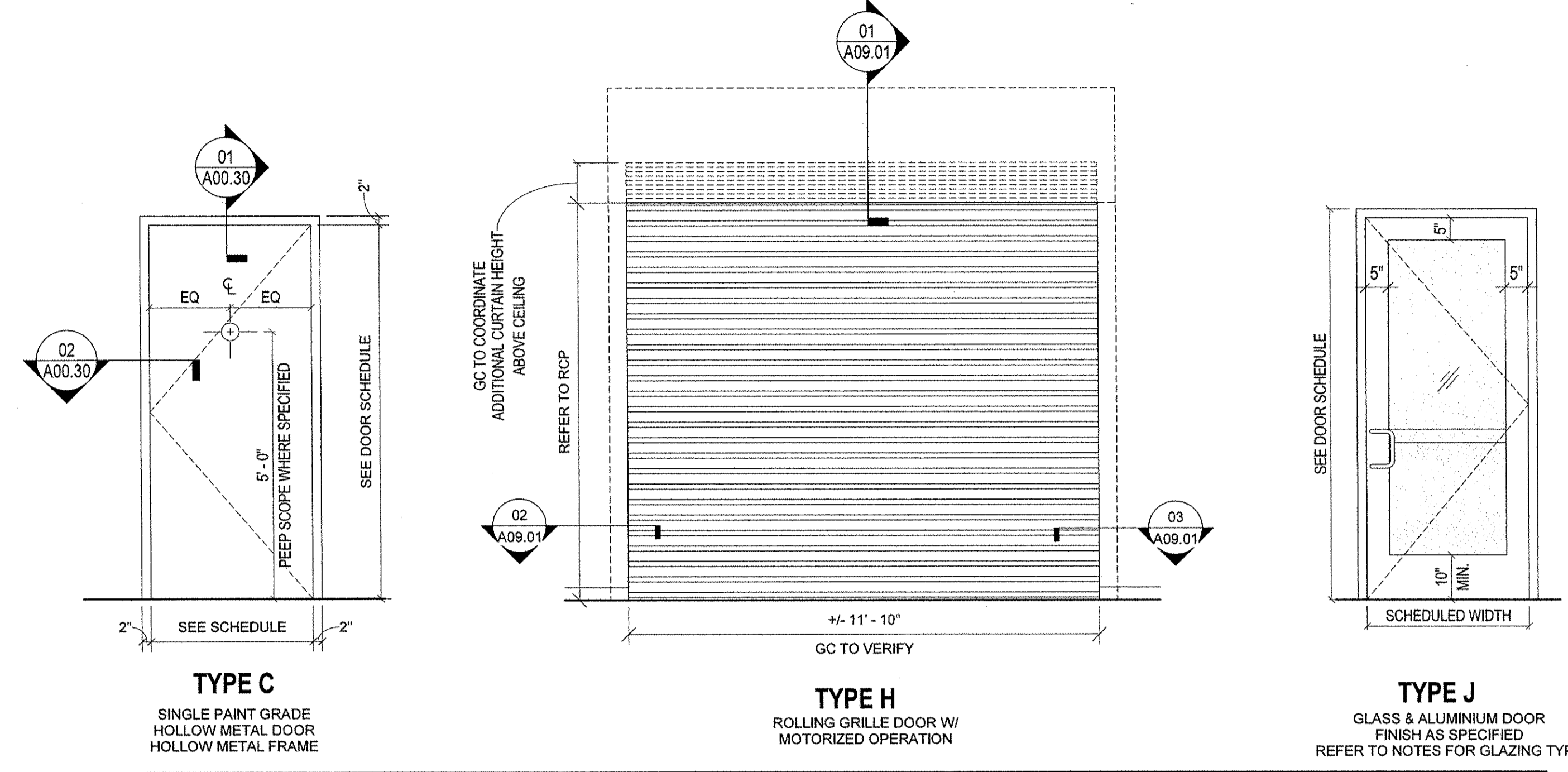
GLAZING SCHEDULE

GLAZING	[BAC PERFORMANCE]
GL-3	1/2" TEMPERED MONOLITHIC GLASS

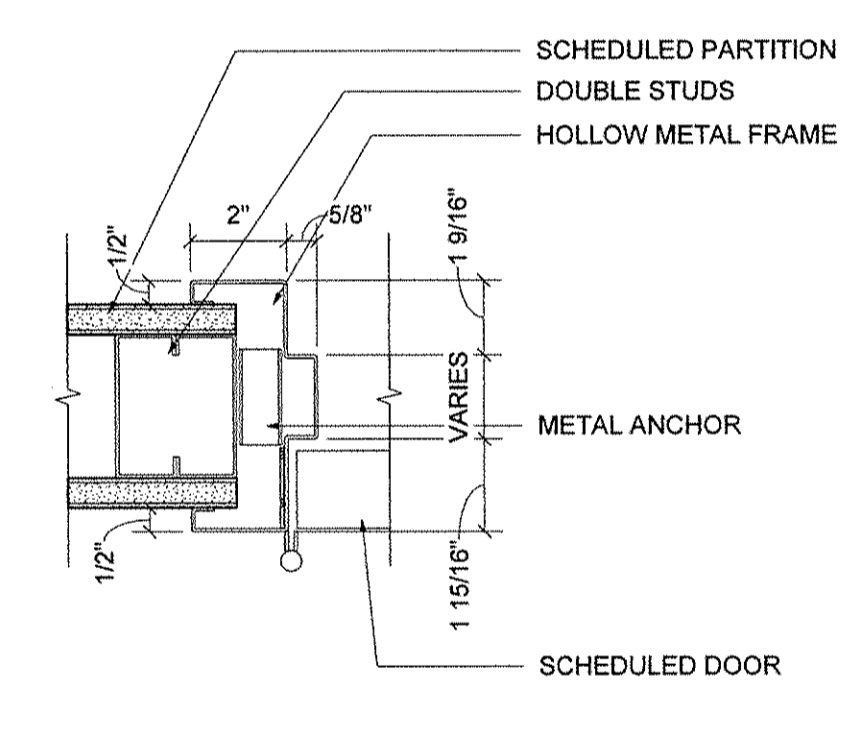
NOTE: GLASS THICKNESS AND HEAT TREATMENTS INDICATED ARE MINIMAL REQUIREMENTS. GLAZING DETAILS SHOWN ARE FOR CONVENIENCE OF DETAILING ONLY AND ARE TO BE CONFIRMED BY THE CONTRACTOR RELATIVE TO THE CODE REQUIREMENTS, INDUSTRY STANDARDS AND FINAL FRAMING DETAILS. CONFIRM GLASS THICKNESS AND HEAT TREATMENTS, VERIFIED BY ANALYSIS TO MEET LOCAL REGULATION FOR GLASS DEFLECTION.

DOOR SCHEDULE

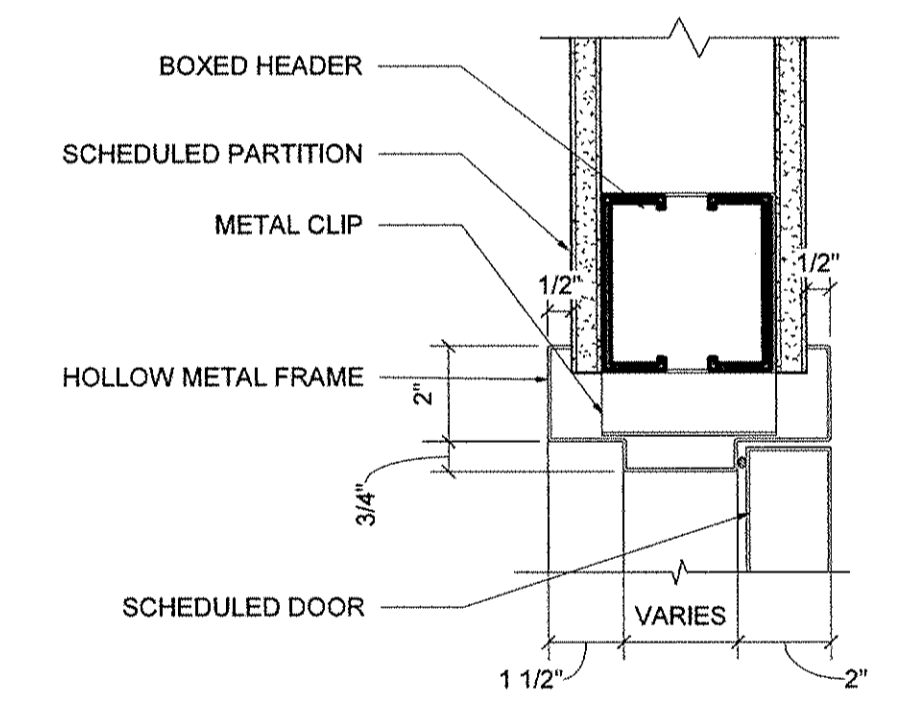
NO.	LOCATION	DOOR TYPE	DOOR DIMENSIONS			DOOR MATERIAL		FRAME MATERIAL		HARDWARE SET	NOTES	
			WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	MATERIAL	FINISH			
101	ATM VESTIBULE	A	EXG	EXG	EXG	2"	EXG			1		
102	ATM ROOM	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	3	GC TO PROVIDE AND INSTALL PEEP SCOPE.
104	WAITING AREA	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	3	GC TO PROVIDE AND INSTALL PEEP SCOPE.
106	SAFE DEPOSIT VAULT	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	3	
107A	BREAK ROOM	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	4	
107B	BREAK ROOM	C	EXG	EXG	EXG	1"	HM	P-1	HM	P-1	5	
109	MEN'S RESTROOM	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	5	
110	WOMEN'S RESTROOM	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	5	
111	JANITOR'S CLOSET	C	2'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	4	
112	VAULT/TIT ROOM	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	3	GC TO PROVIDE & INSTALL PEEP SCOPE.
116	THE NOOK	J	3'-0 1/16"	6'-0"	0'-0 1/2"		ALUMINUMGLASS	N/A	ALUMINUM	SEE NOTES.	3	DOOR AND FRAME TO BE BLACK ALUMINUM FINISH. GC TO COORDINATE SPECIFIC DOOR HARDWARE AND SECURITY REQUIREMENTS WITH BANK SECURITY VENDOR. GLAZING TO BE GL-1.
119	TELLER LINE	C	3'-0"	7'-0"	0'-1 3/4"		HM	P-1	HM	P-1	3	
120	ATM VESTIBULE	H	10'-0"	10'-0"							2	



DOOR TYPES



HOLLOW METAL FRAME JAMB DETAIL 02
SCALE: 3" = 1'-0"



HOLLOW METAL FRAME HEAD DETAIL 01
SCALE: 3" = 1'-0"

HARDWARE SETS

SET 1	SET 2	SET 3	SET 4	SET 5
(3) HINGE	MOTORIZED ROLL UP GATE. HARDWARE TO BE PROVIDED AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.	(3) HINGE	(3) HINGE	(3) HINGE
(1) PUSH-BAR (FOR ENTRY IN)		(1) STORE ROOM SET	(1) CLASSROOM SET	(1) PRIVACY SET
(1) OFF-SET DOOR PULL	(2) KEY SWITCHES	(1) SURFACE CLOSER	(1) WALL STOP	(1) WALL STOP
(1) MORTISE CYLINDER	(1) PANIC BUTTON	(1) OVERHEAD STOP	(1) SURFACE CLOSER	(1) SURFACE CLOSER
(1) DEAD LOCK	(1) BATTERY BACKUP	(1) DOOR SILENCER	(1) DOOR SILENCER	(1) DOOR SILENCER
(1) SURFACE CLOSER		(1) PEEP SCOPE		(1) SMOKE GASKETER
(1) WALL STOP		(1) CARD READER		
(1) MOUNTING PLATE		(1) ELECTRIC STRIKE		
(1) CUSH SHOE SUPPORT				
(1) BLADE STOP SPACER				
(1) DOOR SILENCER				
(1) THERMALLY BROKEN THRESHOLD				
(1) CARD READER				
(1) DOOR POSITION SWITCH				

NOTE: GC TO COORDINATE ALL DOOR HARDWARE AND SECURITY REQUIREMENTS WITH BANK VENDOR; OBTAIN WRITTEN CONFIRMATION FROM BANK SECURITY VENDOR PRIOR TO ORDERING.

SHEET NOTES

GENERAL NOTES

- A. ALL DOORS AND FRAMES TO BE PAINTED TO MATCH ADJACENT PARTITION UNLESS NOTED OTHERWISE.
- B. WHEREVER INDICATED, EXTERIOR FACE OF DOOR AND FRAME FINISH TO BE OIL BASE PAINT. COLOR AS SPECIFIED.
- C. ALL DOOR HARDWARE SHALL BE LEVER TYPE MEETING REQUIREMENTS OF ADA.
- D. CONTRACTOR SHALL COORDINATE ALL HARDWARE KEYING WITH THE OWNER AND OBTAIN OWNER'S APPROVAL PRIOR TO PLACING HARDWARE ORDER.
- E. MILLWORKER SHALL VERIFY IN FIELD ALL DIMENSIONS FOR MILLWORK.
- F. ALL DOOR FRAMES TO BE WELDED CONSTRUCTION UNLESS OTHERWISE NOTED. NOT KNOCKDOWN.
- G. GC TO PROVIDE BANK REP WITH COPIES OF ALL KEYS. PROVIDE A WALL MOUNTED KEY BOX IN VAULT/TIT ROOM. COORDINATE MOUNTING LOCATION WITH BANK REP.



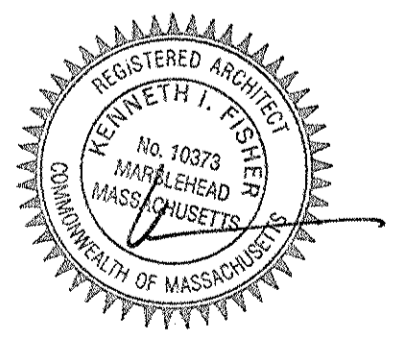
CC# 630
Central Square
599 Massachusetts Avenue,
Cambridge, MA 02139



One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel 617.619.5700
Fax 617.619.5701

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name
**Santander - Central Square,
Cambridge**
Project Number
11.6850.127
Description
DOOR & HARDWARE SCHEDULES

Scale
As indicated

A00.30

SHEET NOTES

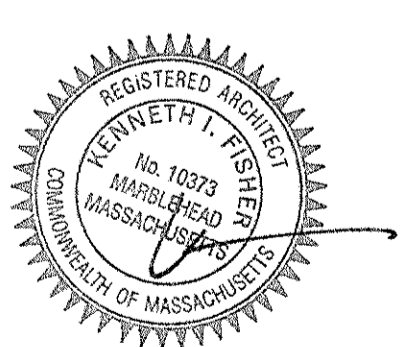
- 01 EXISTING VERTICAL PIPES TO REMAIN.
- 02 EXISTING ELECTRICAL PANELS TO REMAIN.
- 03 DASHED LINE INDICATED WHERE FLOORING STARTS TO SLOPE
- 04 EXISTING STOREFRONT SYSTEM AND DOOR TO REMAIN. G.C. TO CLEAN TO "LIKE NEW" CONDITION.
- 05 EXISTING REAR DOOR TO REMAIN. G.C. TO PATCH AND REPAIR EXISTING MASONRY WALL (ANY MISSING BRICKS, LOOSE BRICKS, GROUT, ETC.) PRIOR TO FURRING OUT WALL.
- 06 EXISTING FLOORING TO BE LEVELED, PATCHED AND REPAIRED FOR NEW FINISHES. SEE CONSTRUCTION AND FINISH PLANS FOR MORE INFORMATION.
- 07 G.C. TO REMOVE ALL ABANDONED PIPES, ELECTRICAL CONDUIT, HVAC, ETC. NOT UTILIZED IN NEW CONSTRUCTION. DO NOT ABANDON IN PLACE.
- 08 G.C. TO PATCH AND REPAIR EXISTING COLUMNS.

GENERAL NOTES

- A. IN THE EVENT OF ASBESTOS OR OTHER HAZARDOUS MATERIAL EXPOSURE OR THE SUBSTANTIAL RISK OF THEREOF, CLIENT WILL HAVE THE DUTY TO INFORM THE ARCHITECT OF SUCH RISKS KNOWN OR REASONABLY KNOWNABLE TO CLIENT.
- B. IF ASBESTOS OR ANY OTHER HAZARDOUS MATERIAL OR RISK TO EXPOSURE THERETO IS DISCOVERED BY ARCHITECT DURING WORK ON THE PROJECT, ARCHITECT SHALL IN ITS SOLE DISCRETION, HAVE THE RIGHT TO SUSPEND WORK ON THE PROJECT.
- C. CLIENT SHALL HAVE THE DUTY TO PROMPTLY RETAIN A QUALIFIED EXPERT SAFELY TO REMOVE OR SUPERVISE THE REMOVAL OF SUCH ASBESTOS OR OTHER TOXIC SUBSTANCE.
- D. CLIENT SHALL INDEMNIFY AND HOLD ARCHITECT, ITS AFFILIATES AND SUBCONTRACTORS AND THEIR OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY ON THE PART OF OR DAMAGE TO SUCH FEES AND EXPENSES ARE INCURRED, WHICH MAY RESULT IN ASBESTOS OR OTHER TOXIC SUBSTANCE EXPOSURE ON THE PROJECT.
- E. COORDINATE REMOVAL / RELOCATION OF ANY EXISTING EQUIPMENT AND FURNITURE WITH BANK REPRESENTATIVE.
- F. REMOVE OBSOLETE/ABANDONED POWER/TELECOM/DATA IN CUSTOMER FACING AREAS. COORDINATE WITH NEW WORK. PATCH/REPAIR AS REQUIRED MATCH EXISTING ADJACENT.
- G. WHERE PARTITIONS ARE REMOVED, PATCH AND REPAIR SURFACES TO REMAIN AS REQUIRED FOR APPLICATION OF NEW FINISHES.
- H. WORK IS TO BE CONDUCTED IN A MANNER SUCH THAT BANK OPERATIONS ARE MINIMALLY DISRUPTED. COORDINATE ALL WORK WITH BANK REPRESENTATIVE. NOTE THAT CERTAIN ASPECTS OF WORK WILL BE REQUIRED TO BE PERFORMED DURING BANK OFF-HOURS.
- I. G.C. TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. IF THERE ARE ANY MAJOR DISCREPANCIES, CONTACT ARCHITECT IMMEDIATELY.

Date	Description
1 03/21/2019	ISSUE FOR BID/PERMIT

Seal / Signature



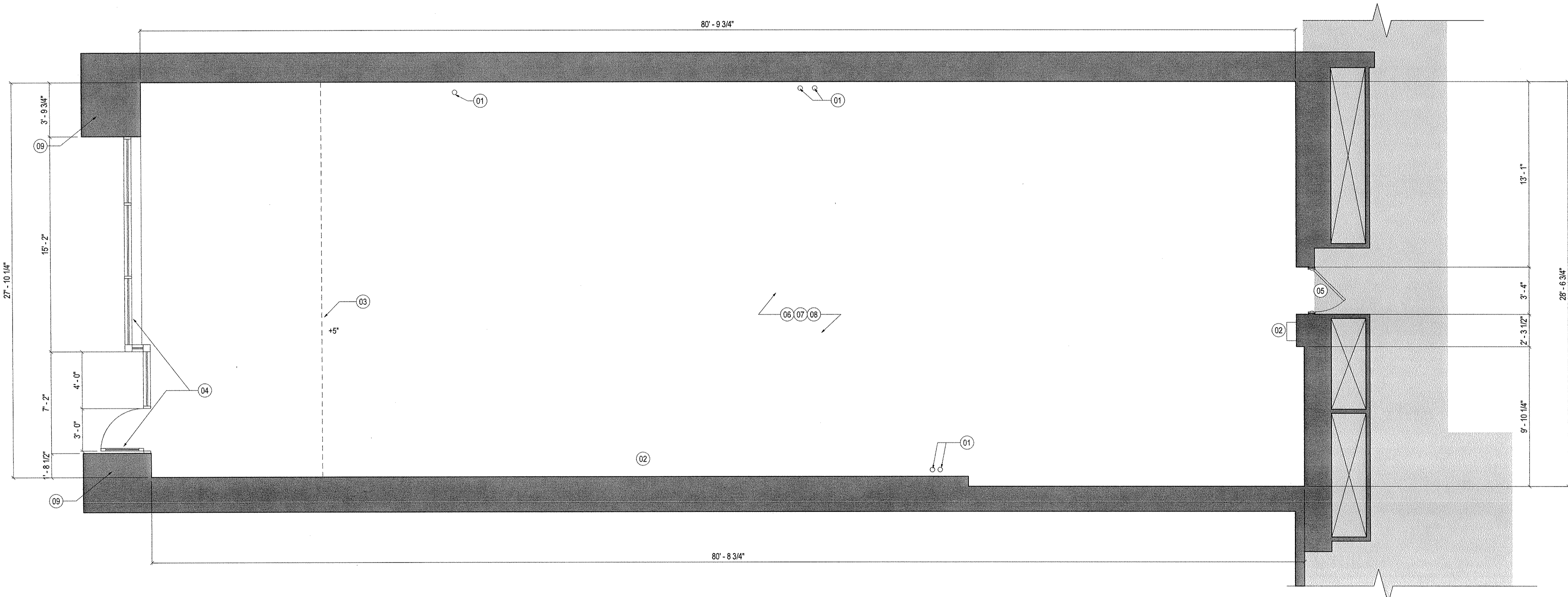
Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
DEMOLITION PLAN

Scale
1/4" = 1'-0"

A01.01



3/22/2019 3:04:39 PM \\gensler-ar\projects\Revit\ken\code\2019\20190321\Santander - Central Square - Cambridge_R18_Matn_levin@gensler.com.rvt

SHEET NOTES

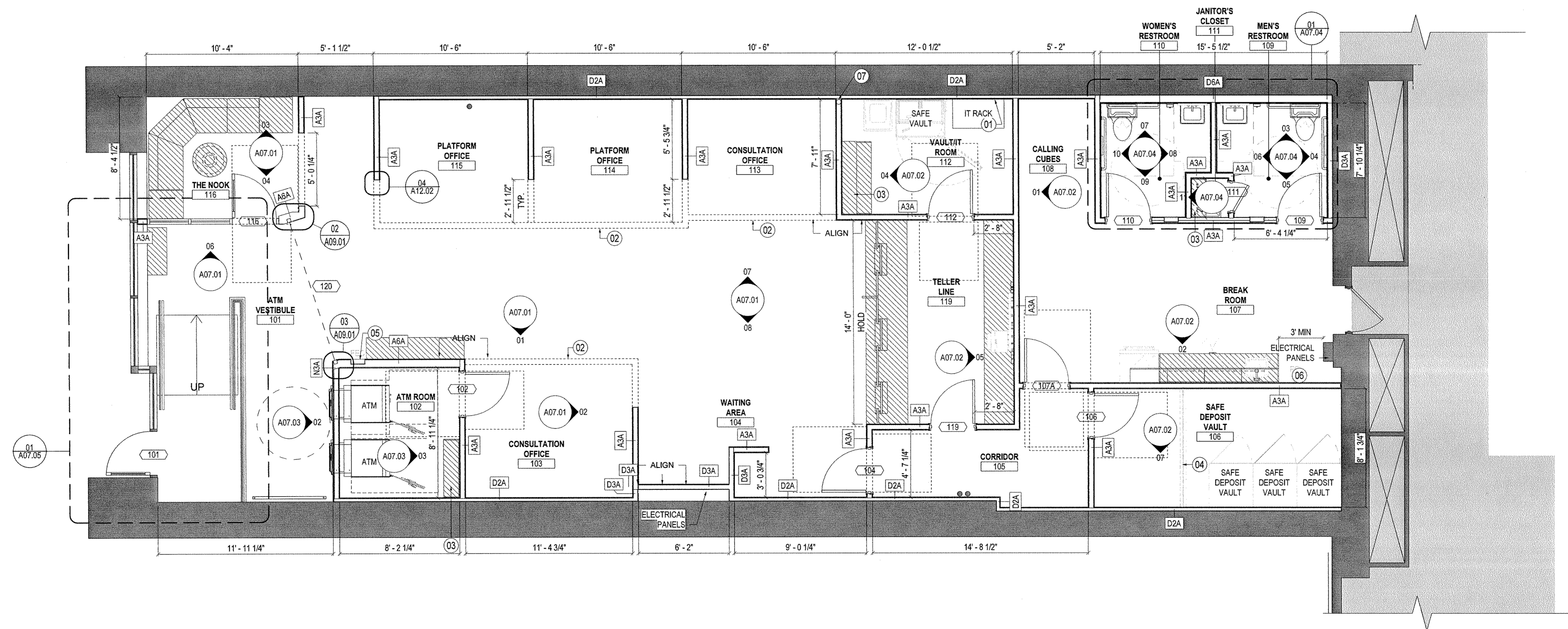
- 01 GC TO PROVIDE F.R.PLYWOOD ON WALL AT DATA RACK
- LINE OF SOFFIT ABOVE. GC TO BUILD A HEADER/SOFFIT TO STRUCTURE ABOVE. FURNITURE VENDOR TO PROVIDE NEW PARTITION BELOW AT OFFICES. GC TO COORDINATE WITH BANK'S FURNITURE VENDOR.
- 02 WALL HUNG SHELVING ON STANDARD BRACKETS PROVIDED AND INSTALLED BY GC. REFER TO ELEVATION FOR ADDITIONAL INFORMATION.
- 03 SIDE FOLDING SECURITY GRILL WITH CEILING MOUNTED TRACK. GC TO BUILD A HEADER/SOFFIT TO STRUCTURE ABOVE. PROVIDE SPECIFICATION ON APPROVED EQUAL
- 04 RECESSED FIRE EXTINGUISHER CABINET
- 05 WALL MOUNTED FIRE EXTINGUISHER
- 06 RELOCATE EXISTING PIPE. PROVIDE FIRESTOPPING.

GENERAL NOTES

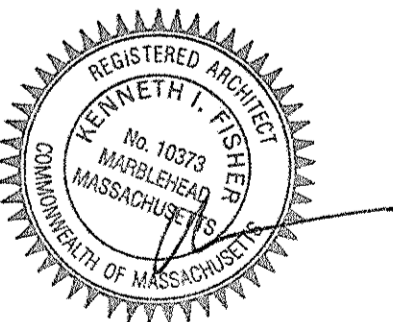
Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

LEGEND

- NOT IN CONTRACT REGION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION
- REFERENCE TO PARTITION TYPE
- NEW DOOR
- COLUMN GRID
- OFFICE ROOM NAME
- ROOM NUMBER
- DOOR NUMBER
- DOOR NUMBER HARDWARE
- DOOR TYPE
- SHEET NOTES
- DIRECTION OF ELEVATION
- ELEVATION NUMBER ON SHEET
- SHEET WHERE SHOWN
- DETAIL NUMBER
- SHEET WHERE SHOWN
- DESCRIPTION OF SIMILAR OR OPPOSITE
- AREA TO BE DETAILED
- MILLWORK
- MILLWORK SCHEDULE TAG
- ALIGN
- RECESSED FIRE EXTINGUISHER CABINET (F.E.C.)
- SURFACE-MOUNTED FIRE EXTINGUISHER CABINET (F.E.C.)



Seal / Signature



Project Name
**Santander - Central Square,
Cambridge**
Project Number
11.6850.127
Description
CONSTRUCTION PLAN

Scale
1/4" = 1'-0"

A02.01

POWER/COMMUNICATIONS GENERAL NOTES

- A ALL CONSTRUCTION TRADES SHALL BE ACCOMPLISHED ON STRAIGHT AND OVERTIME AS REQUIRED TO MEET THE PROJECT SCHEDULED TURN OVER. ALL WORK SHALL CONFORM TO APPLICABLE BUILDING CODES AND BUILDING MANAGEMENT REGULATIONS.
- B CONSTRUCTION GENERAL NOTES APPLY FOR WORK DESCRIBED IN THIS SECTION.
- C PROVIDE ALL REQUIRED PATHS, CONDUITS AND ACCESS FOR THE INSTALLATION OF ALL SECURITY COMMUNICATIONS & DATA SERVICES, EQUIPMENT AND CABLING. THE CONTRACTOR SHALL COORDINATE WITH TENANT TO FACILITATE THE INSTALLATION OF ALL SECURITY DATA AND COMMUNICATION CABLING IN CEILING AND UNDER-FLOOR PRIOR TO CLOSE-UP OF NEW AND REUSED SUSPENDED CEILINGS AND PARTITIONS. ALL NEW CONDUITS AND PULL BOXES SHALL BE LEFT ACCESSIBLE FOR INSTALLATION OF ALL COMMUNICATIONS DATA CABLING.
- D THE CONTRACTOR SHALL PROVIDE REPRODUCIBLE AS-BUILT DRAWINGS INDICATING THE LOCATION AND PATH OF ALL POWER, LIGHTING CIRCUITS AND LIGHT FIXTURES. ALL CIRCUITS SHALL BE CLEARLY AND PERMANENTLY MARKED ON THE CIRCUIT PANEL.
- E ALL WALL MOUNTED OUTLETS, UNLESS OTHERWISE NOTED, SHALL BE VERTICALLY MOUNTED 18" ON CENTER ABOVE FINISHED FLOOR. ALL RECEPTACLES, DIMMERS, SWITCHES SHALL BE AS PER SPECIFICATION.
- F COORDINATE INTERFACE WITH TENANT'S COMMUNICATIONS EQUIPMENT AS REQUIRED.
- G ALL WALL MOUNTED TELEPHONE AND DATA OUTLETS SHALL BE INSTALLED WITH PULL STRINGS EACH TAGGED AND TIED TO THE CEILING PLENUM STRUCTURE.
- H ALL FLOOR MOUNTED MONUMENTS FOR POWER AND DATA/COMMUNICATION CORES SHALL BE SERVICED VIA INDIVIDUAL MONUMENTS.
- I THE GENERAL CONTRACTOR SHALL PROVIDE ALL CORES, SLAB PENETRATIONS AND CONNECTIONS IN FULL COMPLIANCE WITH BUILDING MANAGEMENT REGULATIONS AND APPLICABLE CODES AND SHALL PROVIDE ALL CODE MANDATED FIRE STOPPING. ALL WORK REQUIRED TO FACILITATE SUCH CONNECTIONS, CABLING AND/OR CONDUIT RUNS IN THE CEILING PLENUM BELOW OR FLOOR SLAB ABOVE SHALL BE PROVIDED ON A STRAIGHT AND OVERTIME BASIS TO MEET PROJECT SCHEDULE. ANY DAMAGE DURING THIS EFFORT SHALL BE PROMPTLY REPAIRED TO THE COMPLETE AND TOTAL SATISFACTION OF THE OCCUPANT.

EQUIPMENT SCHEDULE

NUMBER	DESCRIPTION	MANUF/MODEL NO.	DIMENSION	NOTES
1. EQUIPMENT BY BANK SECURITY VENDOR: HAMILTON, DIEBOLD, & NCR				
16	WALK-UP ATM (THROUGH THE WALL)	NCR SELF SERVE 34 WALK UP VESTIBULE ATM	SEE MANUFACTURERS INFORMATION	
17	WALK-UP ATM WITH NIGHT DEPOSIT AND SAFE	NCR SELF-SERV 34 WALK UP VESTIBULE ATM WITH NIGHT DEPOSITORY	SEE MANUFACTURERS INFORMATION	
18	CASH SAFE	DIEBOLD TL-15 271-95 UNENCASED SAFE	40"Wx30 7/8"Dx72"H	CONFIRM WITH BANK SECURITY
22	SAFE DEPOSIT VAULT	CUSTOM TL-15-704030.875	40"Wx30 7/8"Dx72"H	CONFIRM WITH BANK SECURITY
2. EQUIPMENT BY SECURITY VENDOR				
1	HOLD UP BUTTON			
2	HOLD UP WIRELESS BUTTON			
3	MOTION DETECTOR - CEILING MOUNTED			
4	MOTION DETECTOR - WALL MOUNTED			
5	DOOR CONTACT WIRELESS			
6	ALARM CONTROL PANEL			
7	KEYPAD			
8	POINT OF CONNECTION			
9	CLOSED CIRCUIT T.V.			
10	DMP CARD READER			
11	PARABIT ATM VESTIBULE CONTROLLER			
12	HOLD UP INDICATOR LIGHT			
13	CARD READER			GC TO PROVIDE POWER & ELECTRIC STRIKE
14	REMOTE EXIT DOOR RELEASE BUTTON			
15	KEY OVERRIDE SWITCH			
21	WIRELESS RECEIVER			
3. EQUIPMENT BY OWNER (REFER TO NOTES FOR INSTALLATION BY CONTRACTOR)				
19	COAT HOOKS	DUG MCKET CH13K-25		PROVIDED BY GC
20	HR GRAPHICS			
56	MULTIFUNCTION PRINTER(DESK TOP)	KONICA MINOLTA, BIZHUB 4050	19 1/4"W x 19"D x 22"H	CONFIRM WITH BANK
57	MULTIFUNCTION PRINTER(FREE STANDING)	KONICA MINOLTA, BIZHUB 224e	24 1/4"W x 27 1/2"D x 30 3/4"H	CONFIRM WITH BANK

SHEET NOTES

- PROVIDE TWO DEDICATED 120V 20A QUAD NEMA 5-20R RECEPTACLES FOR DATA RACK. LOCATION TO BE FIELD VERIFIED WITH VENDOR.
- BANK VENDOR TO PROVIDE AND INSTALL TELEPHONE AS REQUIRED.
- GC TO PROVIDE POWER AND DATA FOR FURNITURE. COORDINATE INFEEED. REQUIREMENTS WITH BANK'S FURNITURE VENDOR
- GC TO PROVIDE POWER AND DATA FOR TELLER BACK COUNTER EQUIPMENT. COORDINATE MOUNTING HEIGHTS WITH BANK. DO NOT INSTALL IN WOOD WALL
- GC TO PROVIDE J-BOX FOR ATM SURROUND. CONFIRM FINAL LOCATION WITH SURROUND VENDOR.
- J-BOX FOR UNDER CABINET LIGHTING. SEE ENGINEERING DRAWINGS FOR SWITCHING. COORDINATE EXACT LOCATION AND INSTALLATION WITH MILLWORKER.
- PROVIDE POWER FOR STOREFRONT SIGNAGE
- PROVIDE OUTLETS W/ INTERNAL USB PORTS. MOUNTED HORIZONTALLY ABOVE LENDING BAR COUNTER HEIGHT
- KEY OPERATOR LOCATIONS FOR MOTORIZED GATE



CC# 630
Central Square
599 Massachusetts Avenue,
Cambridge, MA 02139

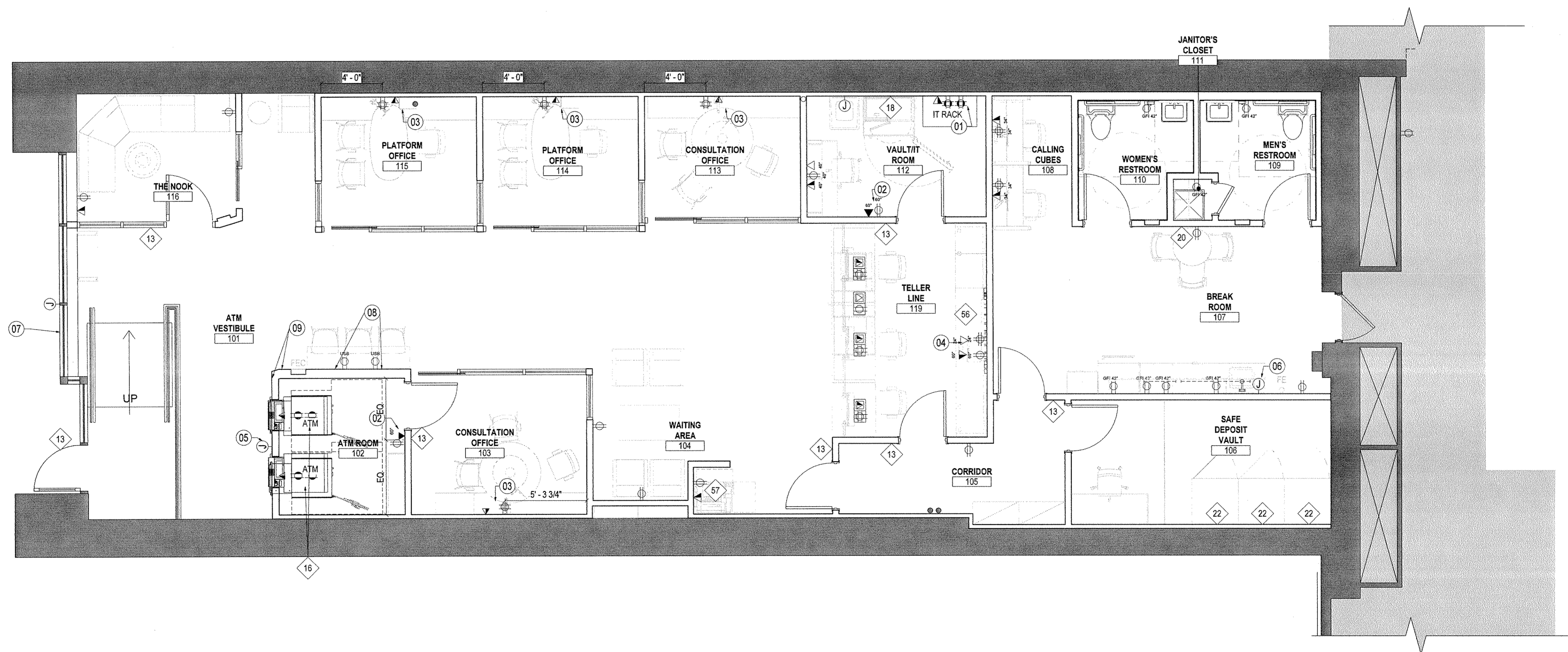


One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel 617.619.5700
Fax 617.619.5701

GENERAL NOTES

- A REFER TO ELECTRICAL ENGINEERS DRAWINGS FOR ADDITIONAL INFORMATION.
- B FURNITURE SHOWN FOR REFERENCE ONLY.

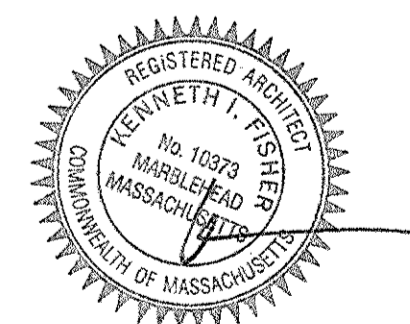
Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



LEGEND

- NOT IN CONTRACT REGION
- WALL MOUNTED DUPLEX
- WALL MOUNTED FOURPLEX
- FLUSH FLOOR MOUNTED DUPLEX
- FLUSH FLOOR MOUNTED 1 TELE / 2 DATA RECEPTACLE
- WALL MOUNTED 1 TELE / 2 DATA RECEPTACLE. DUAL DROP
- WALL MOUNTED TELE/DATA RECEPTACLE. SINGLE DROP
- FLUSH WALL MOUNTED POWER JUNCTION BOX WITH HARDWARE CONNECTION
- EQUIPMENT WITHOUT POWER SUPPLY
- EQUIPMENT WITH POWER SUPPLY (REFER TO SCHEDULE)
- FIRE ALARM PULL BOX
- FIRE ALARM HORN/STROBE
- WALL MOUNTED RECEPTACLE FOR TV, CAMERA OR MONITOR; 3" SQUARE
- DIGITAL TEMPERATURE SENSOR
- FLUSH FLOOR MOUNTED TELE/DATA. SINGLE DROP

Seal / Signature



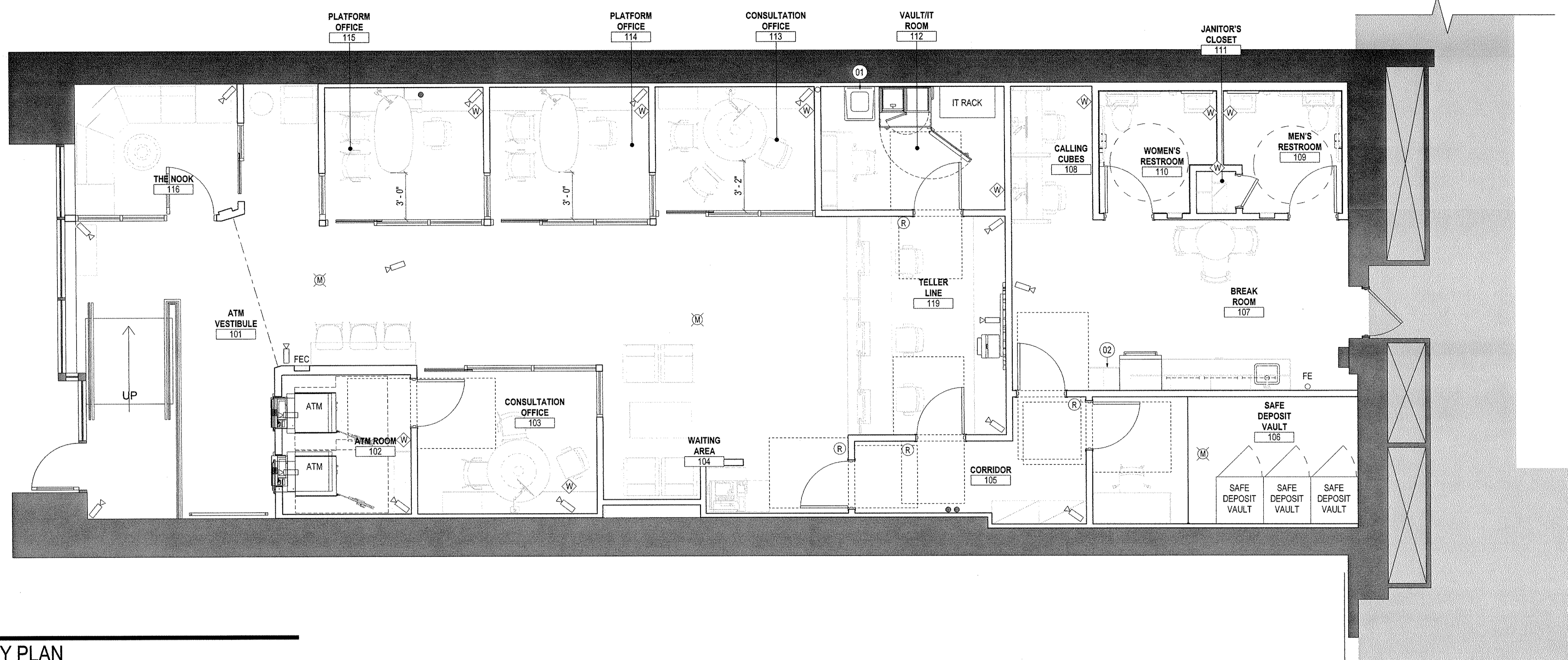
Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
POWER/COMM & EQUIPMENT PLAN - LEVEL 1

Scale
1/4" = 1'-0"

A03.01



01 SECURITY PLAN
SCALE: 1/4" = 1'-0"

INTRUSION DEVICE LEGEND	
MARK	DESCRIPTION
[ALM]	XR550N ALARM CONTROL PANEL
[KP]	KEYPAD
[R]	DMP CARD READER (HARD-WIRED)
[SFP]	SAFE PROTECTION POINT-OF-CONNECTION (HARD-WIRED)
[ATM]	ATM PROTECTION POINT-OF-CONNECTION (HARD-WIRED)
[ND]	NIGHT DEPOSITORY POINT-OF-CONNECTION (HARD-WIRED)
[TCD]	TELLER CASH DISPENSER POINT-OF-CONNECTION (HARD-WIRED)
[WR]	WIRELESS RECEIVER
[VS]	VAULT AUDIO SENSOR (HARD-WIRED)
[CR]	PARABIT CARD READER (HARD-WIRED)
[CR]	PARABIT ATM VESTIBULE CONTROLLER (HARD-WIRED)
[EL]	ELECTRIC LOCK (HARD-WIRED)
[KS]	PARABIT SYSTEM KEYSWITCH OVERRIDE
[DC]	DOOR CONTACT (CONVENTIONAL CONTACT WIRED TO XMITTER)
[MD]	MOTION DETECTOR, CEILING MOUNT WIRELESS
[MW]	MOTION DETECTOR, WALL MOUNT, WIRELESS
[MB]	HOLD-UP BUTTON, WIRELESS, DESK-MOUNTED
[BL]	HOLD-UP INDICATOR LIGHT (HARD-WIRED)
[C]	SECURITY CAMERA

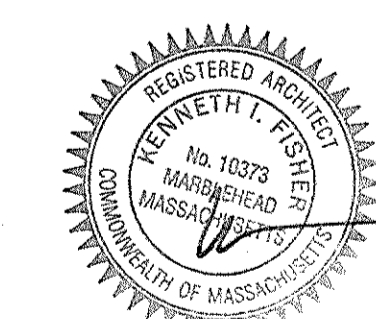
GENERAL NOTE:
GC TO COORDINATE WITH BANK SECURITY VENDOR FOR EXACT POWER, DATA, HARDWARE AND LOCKING REQUIREMENTS.

02 SECURITY SCHEDULE
SCALE: 12" = 1'-0"

GENERAL NOTES

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
SECURITY PLAN

KEY PLAN

Scale
As indicated

A03.02

REFLECTED CEILING GENERAL NOTES

- A ALL CONSTRUCTION TRADES SHALL BE ACCOMPLISHED ON STRAIGHT TIME AND OVERTIME IN ORDER TO MEET THE PROJECT TURN OVER DATE. ALL WORK SHALL CONFORM TO ALL APPLICABLE BUILDING CODES AND BUILDING MANAGEMENT REGULATIONS.
- B GENERAL CONSTRUCTION NOTES SHALL APPLY FOR CEILING AND PLENUM RELATED WORK.
- C WHERE CEILING GRID RESULTS IN AN ACOUSTIC TILE PIECE LESS THAN 4", MODIFY GRID TO RECEIVE A FULL TILE CUT FROM A 2'x4' ACOUSTIC TILE.
- D THE CONTRACTOR SHALL SUBMIT CUTS FOR ALL FIXTURES FOR REVIEW PRIOR TO PURCHASE AND INSTALLATION.
- E PROVIDE ALL BUILDING CODE MANDATED EMERGENCY LIGHTING, EXIT SIGNS, HANDICAP AND NIGHT CIRCUITS. SEE ENGINEERS DRAWINGS FOR A DETAILED DESCRIPTION OF THE SCOPE OF WORK.
- F ALL NEW AND EXISTING FLUORESCENT LIGHT FIXTURES SHALL BE CLEANED AND LAMPED WITH DELUXE WARM FLUORESCENT LAMPS. RECONFIRM LAMP COLOR SPECIFICATION WITH GENSLER AND THE TENANT PRIOR TO PLACING ORDER.
- G ALL RECEPTACLES, DIMMERS AND SWITCHES SHALL BE AS PER SPEC.
- H ALL CARRYING CHANNELS SHALL BE BOLTED TO HANGERS AS REQUIRED, BUT NOT OVER 4'-0" ON CENTER AND WITHIN 6" OF WALLS AND PARTITIONS PARALLEL TO THE CHANNELS. ALL INSTALLATION TECHNIQUES, PROCEDURES AND MATERIALS SHALL CONFORM WITH MANUFACTURER'S SPECIFICATIONS AND ALL APPLICABLE CODES.
- I ALL CEILING TILE JOINTS SHALL BE SQUARE, LEVEL AND PERFECTLY ALIGNED WITH EACH OTHER AND LIGHT FIXTURES.
- J PROVIDE ALL NECESSARY CUTOUTS TO ACCOMMODATE THE INSTALLATION OF CEILING REGISTERS, DIFFUSERS, STROBE/SPEAKER UNITS, AND OTHER MISCELLANEOUS ITEMS.
- K THE CONTRACTOR SHALL REINSTALL CEILING TILES AFTER THE INSTALLATION OF DATA AND COMMUNICATION CABLES. CEILING TILES SHALL BE REMOVED AND REINSTALLED AS OFTEN AS IS REQUIRED UNTIL INITIAL OCCUPANCY AND/OR COMPLETION OF ALL OPEN PUNCH LIST ITEMS.
- L LAY-IN TILE CEILING AND DUCT WORK HANGERS SHALL LOOP ONTO OR ENGAGE INTO EXISTING MESH OF CONCRETE SLAB ABOVE. RE-USE EXISTING HANGERS WHENEVER POSSIBLE.
- M IF CEILING HEIGHTS CANNOT BE MAINTAINED AS INDICATED ON THE CONSTRUCTION DRAWINGS, NOTIFY GENSLER IMMEDIATELY FOR RESOLUTION.
- N ALL EXIT SIGNS SHALL BE TIED INTO THE EMERGENCY GENERATOR DISTRIBUTION PANEL OR UL APPROVED BATTERY PACK. SEE ENGINEERING DRAWINGS FOR A DETAILED DESCRIPTION OF REQUIRED WORK.
- O STARTING POINTS FOR NEW CEILING GRIDS SHALL BE IN THE CENTER OF THE ROOM UNLESS OTHERWISE NOTED.

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MOUNTING	MANUFACTURER	LAMPS	WATTS	NOTES
A	LED TROFFER	LAY-IN-GRID	DAY-BRITE	LED	33 W	
R	6" OPEN APERTURE DOWNLIGHT WITH SOFT SATIN CLEAR REFLECTOR AND WHITE TRIM RING, 3500K LED LAMPS.	RECESSED GRID OR HARD CEILING	PHILIPS LIGHTOLIER LYTEPROFILE - P4RD15N210UVB-P4RDCC	LED	1 W	
TM	TULA MICRO SUSPENDED D-45MM, H-530MM	PENDANT	XAL	LED		
X5	UNDER CABINET LIGHT	SURFACE MOUNTED	DAY-BRITE	LED	4 W	
X7	FLUORESCENT WALL WASH	PENDANT	PHILLIPS WALLTYER FLUORESCENT, WL-R-N-1-2-2-120-EB	1/2	16 W	
X8	4" OPEN APERTURE DOWNLIGHT WITH SOFT SATIN CLEAR REFLECTOR AND WHITE TRIM RING, 3500K LED LAMPS	RECESSED GRID OR HARD CEILING	PHILIPS LIGHTOLIER LYTEPROFILE - P4RD15N210UVB-P4RDCC	1	7 W	
X10	LTU-MERIDIAN-JUMBO-PENDANT-LIGHT MODEL #RS-9230	PENDANT	LIGHTS UP 30" DIA. WHITE LINEN SHADE	2	26 W	MOUNTING HEIGHT: 7' ABOVE FINISH FLOOR

SHEET NOTES

- 01 DASHED LINE INDICATES THE LENDING BAR DESK.
- 02 CEILING MOUNTED EXHAUST FAN. REFER TO ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION.
- 03 SECURITY GRILL, CEILING MOUNTED TRACK, REFER TO THE DETAIL 09/A12.01
- 04 UNDERCABINET LIGHT FIXTURES. REFER TO ELEVATION FOR MOUNTING HEIGHT. COORDINATE LENGTH WITH MILLWORK.
- 05 PROVIDE JUNCTION BOX IN CEILING FOR BOTH PENDANT LIGHTS TO RUN CONCEALED POWER.
- SECURITY DOME CAMERAS SHOWN FOR REFERENCE ONLY. GC TO COORDINATE REQUIREMENTS AND FINAL SECURITY CAMERA LOCATIONS WITH BANK SECURITY VENDOR, TYP
- GC TO PROVIDE POWER FOR NEW BANK SIGNAGE. COORDINATE FINAL LOCATION W/BANK VENDOR. PROVIDE PHOTOVOLTAIC TIME SWITCH FOR SIGNS.
- 06 FIXTURE TO BE ON 247



CC# 630
Central Square
599 Massachusetts Avenue,
Cambridge, MA 02139

Gensler

One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel 617.619.5700
Fax 617.619.5701

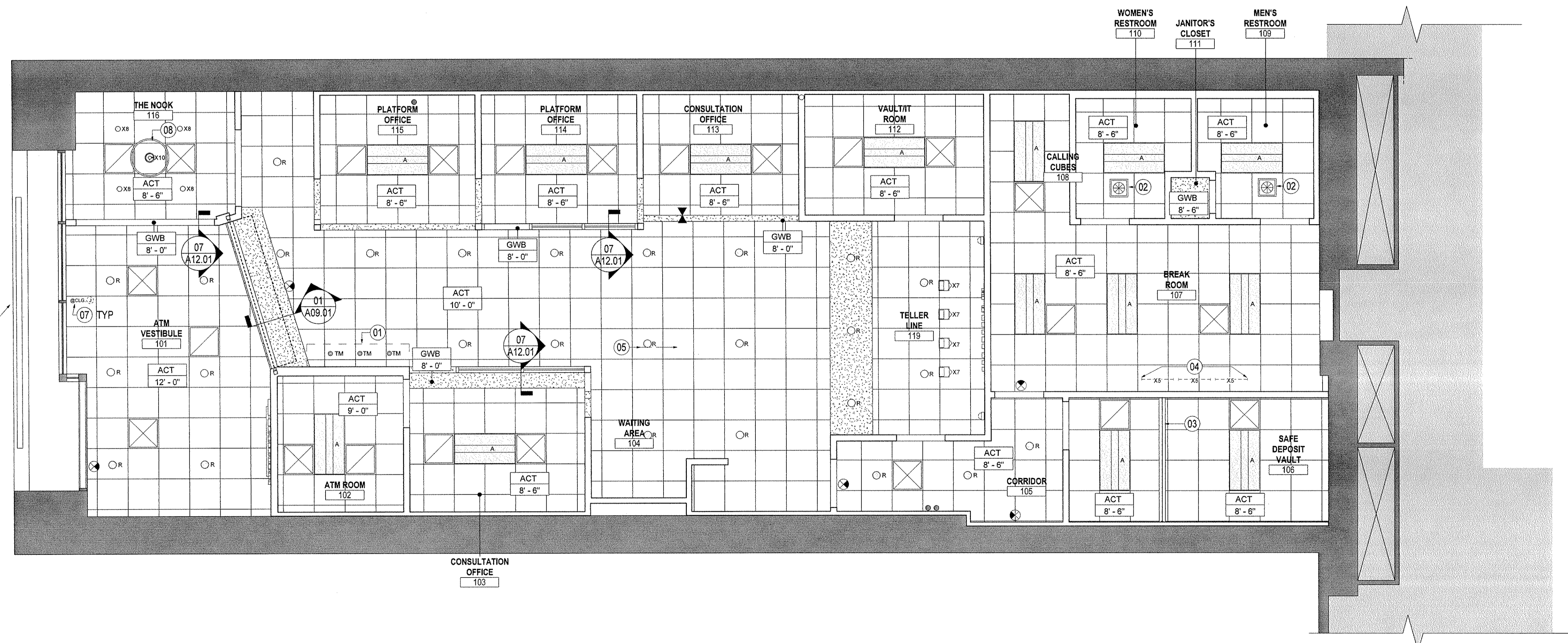
GENERAL NOTES

- A CEILINGS SHALL BE 8'-6" A.F.F., UNLESS NOTED OTHERWISE.
- B REFER TO A05.01 FOR FINISH SCHEDULE.
- C COORDINATE LENGTHS OF UNDER CABINET FIXTURES WITH SCHEDULED MILLWORK CABINETS.

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

LEGEND

- NOT IN CONTRACT REGION
- EXISTING PARTITION TO REMAIN
- ACOUSTICAL CEILING GRID
- GYPSON BOARD SOFFIT/CEILING
- DIMENSION OF CEILING ABOVE FLOOR FINISH
- SUPPLY AIR
- RETURN AIR
- 2'x4' LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED DOWNLIGHT
- ADJUSTABLE DOWNLIGHT
- ACCESS PANEL
- EXIT SIGN
- PASSIVE INFRARED WALL SWITCH OCCUPANCY SENSOR
- UNDERCABINET LIGHTING
- THERMOSTAT/SENSOR
- THERMOSTAT
- SECURITY CAMERA
- DOME CAMERA-CEILING
- DOME CAMERA-WALL
- WIRELESS APPLICATION PROTOCOL



BANK SIGNAGE PROVIDED AND INSTALLED BY BANK VENDOR. GC TO PROVIDE POWER AND BLOCKING AS REQUIRED.

01 REFLECTED CEILING PLAN - LEVEL 01

SCALE: 1/4" = 1'-0"

A04.01

© 2019 Gensler

FINISH SCHEDULE

ITEM	PRODUCT (SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION)
GROUT	
GR-1	GROUT: LATICRATE #91 SLATE GRAY
CARPET	
CP-1	STYLE: AGGREGATE 11016; COLOR: NATIVE ASPHALT 28302, 24"x24" TANDUS - SABRINA MESSMER (347) 260-5569 - SABRINA.MESSMER@TARKETT.COM
CERAMIC TILE	
CT-1	PORECELANOSA, URBATEK MAX GRAY NATURE, 12X24
RESILIENT FLOORING	
VT-1	IMPERIAL TEXTURE EXCELON VINYL COMPOSITE TILE, COLOR PEWTER (61908), 12" X 12" - ARMSTRONG - EMPLOYEE AREA FLOORING
VT-2	STATIC DISSIPATIVE EXCELON - ARMSTRONG - IT AREA TILE, COLOR FOSSIL GRAY (61966), 12" X 12" X 1/8"
WALL BASE	
WB-1	TRADITIONAL 4" TYPICAL, 6" FOR SITE SPECIFIC RETROFIT ONLY RUBBER WALL BASE COLOR: 20 CHARCOAL
PAINT	
P-1	SNOW WHITE 2122-70 FINISH ON WALLS, SATIN FINISH ON DOORS AND TRIM, USE: WALLS AND DOORS MATTE ON CEILING - BENJAMIN MOORE
P-2	TO BE DETERMINED - BENJAMIN MOORE
P-3	BENJAMIN MOORE - NOVEMBER SKIES 2128-50
P-4	2000-10 RED - BENJAMIN MOORE
P-5	CEMENT GRAY 2112-60 EGGSHELL FINISH ON WALLS, SATIN FINISH ON DOORS AND TRIM USE: CUSTOMER AREA WALLS AND DOORS - BENJAMIN MOORE
NUVACOR	
SP-1	NUVACOR, #592138-02082013 SANTANDER RED / GLOSS FINISH - NUVACOR - MILLWORK - BY BANK VENDOR
SP-2	NUVACOR, #00-4795 L-BRUVIO / GLOSS FINISH - NUVACOR - MILLWORK - BY BANK VENDOR
SP-3	NUVACOR, SANTANDER WHITE / GLOSS FINISH - NUVACOR - MILLWORK - BY BANK VENDOR
PLASTIC LAMINATE	
PL-1	WILSONART 7946-36, BRAZILWOOD, COUPON BOOTH COUNTERTOP, TELLER BAR, TELLER LINE
PL-2	ISTORM GRAY MATRIX (MRS504T) - NEVAMAR - BREAKROOM AND IT/Vault COUNTERTOP AND BACKSPLASH
PL-3	NEUTRAL GRAY, 6012T - NEVAMAR - BREAKROOM LOWER CABINET
PL-4	PRECISION WHITE, S7036 - NEVAMAR - BREAKROOM UPPER CABINET
PL-5	WHITE LAMINATE - MELAMINE - MILLWORK
SOLID SURFACE	
SS-1	NIGHT SKY, DOUBLE EASED - CORIAN - BY BANK VENDOR
CEILING SYSTEM	
CS-2	USG MARS CLIMA PLUS #88985 24"x24"x3/4" CENTRICITEE (DXT) 9/16" EXPOSED TEE. COLOR: WHITE - USG
WOOD FINISH	
WD-1	WOODGRAIN FINISH: 7911-60 MANITOBA MAPLE - WILSONART - MILLWORK - BY BANK VENDOR
WD-2	WOODGRAIN FINISH, COLOR L-BRUVIO # 004795 - NUVACOR - MILLWORK - BY BANK VENDOR
WALK-OFF MAT	
WO-2	SUPER NOP 52 TILE, COLOR: CHARCOAL, 3/8" THICK - MATS INC.
PAINTED GWB CEILING	
PC-4	SNOW WHITE 2122-70 - MATTE ON GWB CEILING
FRP PANEL	
FRP	48" FIBERGLASS REINFORCED PLASTIC PANELS AT RESTROOMS AND JANITOR CLOSET
WALL COVERING	
WC-1	GLINT 5619-804 FOG

FLOOR FINISH GENERAL NOTES

- A THE GENERAL CONTRACTOR SHALL PREPARE THE REMAINING SUB FLOOR AS NECESSARY CREATING A SMOOTH, LEVEL, PLUMB & MONOLITHIC FLOOR PLANE.
- B THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL FLOORING SHOWN ON THE FINISH DRAWING AND SPECIFICATIONS.
- C ALL JOINT SPACES SHALL BE ABSOLUTELY PARALLEL AND ALL SURFACES AND INTERSECTIONS PERFECTLY ALIGNED. ALL GROUT SHALL BE SELF-SEALING, NATURAL COLOR.
- D ALL VCT/LINOLEUM SHALL BE PERFECTLY SQUARE WITHOUT OVERLAPPING EDGES. VCT/LINOLEUM SHALL BE INSTALLED IN A "BASKET WEAVE" PATTERN OF ALTERNATING DIRECTION OF GRAIN. ALL THE GRID INTERSECTIONS SHALL FORM CRISP, NON-OVERLAPPING JOINTS.
- E PREPARE NEW LINOLEUM FLOORING AS REQUIRED TO RECEIVE TWO APPLICATIONS OF SLIP RESISTANT WAX.
- F PRIOR TO THE INSTALLATION OF THE NEW CARPET AND CARPET MATCH MATERIALS, THE GENERAL CONTRACTOR SHALL FLASH PATCH THE FLOOR AS REQUIRED OR LEVEL AND TIGHTEN RAISED FLOOR PANELS. ALL POINTS OF TRANSITION SHALL BE PERFECTLY SMOOTH AND NOT DISCERNIBLE BENEATH THE FINISHED FLOORING. THE SLAB SHALL BE PREPARED AS A SUITABLE SURFACE FOR THE INSTALLATION OF THE LINOLEUM AND CARPET AS SPECIFIED ON THE FINISH DRAWING.
- G ALL NEW PARTITIONS IN CARPETED AREAS SHALL RECEIVE NEW 4" STRAIGHT BASE AS SPECIFIED IN THE LEGEND. COVE BASE IS NOT ACCEPTABLE. BASE SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR PRIOR TO THE INSTALLATION OF NEW CARPET.
- H ALL NEW PARTITIONS IN VCT/LINOLEUM AREAS SHALL RECEIVE NEW 4" COVE BASE AS SPECIFIED.
- I THE ENTIRE WORK AREA SHALL BE CLEANED, VACUUMED AND FREE FROM ALL CUTTINGS, DUST AND "FUZZ" BY THE GENERAL CONTRACTOR.
- J THE GENERAL CONTRACTOR SHALL COORDINATE THE FLOORING WORK WITH OTHER TRADES AND ALL PROVIDE CUT-OUTS AS REQUIRED.
- K THE GENERAL CONTRACTOR SHALL PROVIDE ALL REQUIRED REDUCING STRIPS. ALL REDUCING STRIPS SHALL BE RUBBER AND SHALL SECURELY AND PERMANENTLY FASTENED TO THE SLAB. NEW TO MATCH EXISTING UNLESS OTHERWISE NOTED.
- L ALL CARPET SPLICES AND MEETING POINTS SHALL BE PERFECTLY MATCHED AND FIRMLY ADHERED IN PLACE WITHOUT DISCERNIBLE SEAMS AND WITHOUT UNRAVELED YARN ENDS.
- M THE GENERAL CONTRACTOR SHALL PROVIDE ALL REQUIRED LABOR TO DELIVER AND INSTALL CARPET.
- N THE GENERAL CONTRACTOR SHALL KEEP THE WORK AREA IN A SAFE AND CLEAN CONDITION AT ALL TIMES. THE WORK AREA SHALL BE CLEARLY MARKED AND BARRICADED TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING THE WORK AREAS.
- O THE GENERAL CONTRACTOR SHALL PROVIDE SAMPLES OF ALL MATERIALS AND FINISHES FOR APPROVAL PRIOR TO PLACING THE ORDER.
- P THE GENERAL CONTRACTOR SHALL PROVIDE CRACK SUPPRESSION MEMBRANE UNDER TILE FLOORING.

SHEET NOTES

- BANK VENDOR TO PROVIDE AND INSTALL "MURAL WALL" GRAPHIC. LOCATION TO BE CONFIRMED BY BANK VENDOR. GC TO COORDINATE WITH VENDOR AND PREPARE SURFACE TO RECEIVE GRAPHIC.
- GC SHALL INSTALL VCT AND SHALL WAX AND SEAL THE FLOOR PER MANUFACTURER'S INSTRUCTION, TYP.
- OFFICE GLAZING FILM PROVIDED AND INSTALLED BY BANK VENDOR, TYP
- GC TO PROVIDE AND INSTALL TACTILE EXIT SIGNAGE
- FULL TILE STARTS FROM THIS POINT
- CARPET TO ALIGN WITH OUTSIDE OF OFFICE STOREFRONT PARTITION
- WOOD WALL AND SIGNAGE, PROVIDED AND INSTALLED BY BANK VENDOR. GC TO COORDINATE REQUIREMENTS WITH BANK VENDOR
- GC TO PROVIDE AND INSTALL BANK STANDARD BATHROOM SIGNAGE
- WALLS TO RECEIVE 48" FRP PANELS IN WET AREA, TYP
- BANK VENDOR TO PROVIDE AND INSTALL "JUMP START BOARD". GC TO PROVIDE BLOCKING AS REQUIRED.
- WORD WALL PROVIDED AND INSTALLED BY BANK VENDOR.
- AREA TO BE LEVELED W/ PRIMARY FLOOR HEIGHT.
- FLOOR EXPANSION JOINT TO BE PROVIDED.

GENERAL NOTES

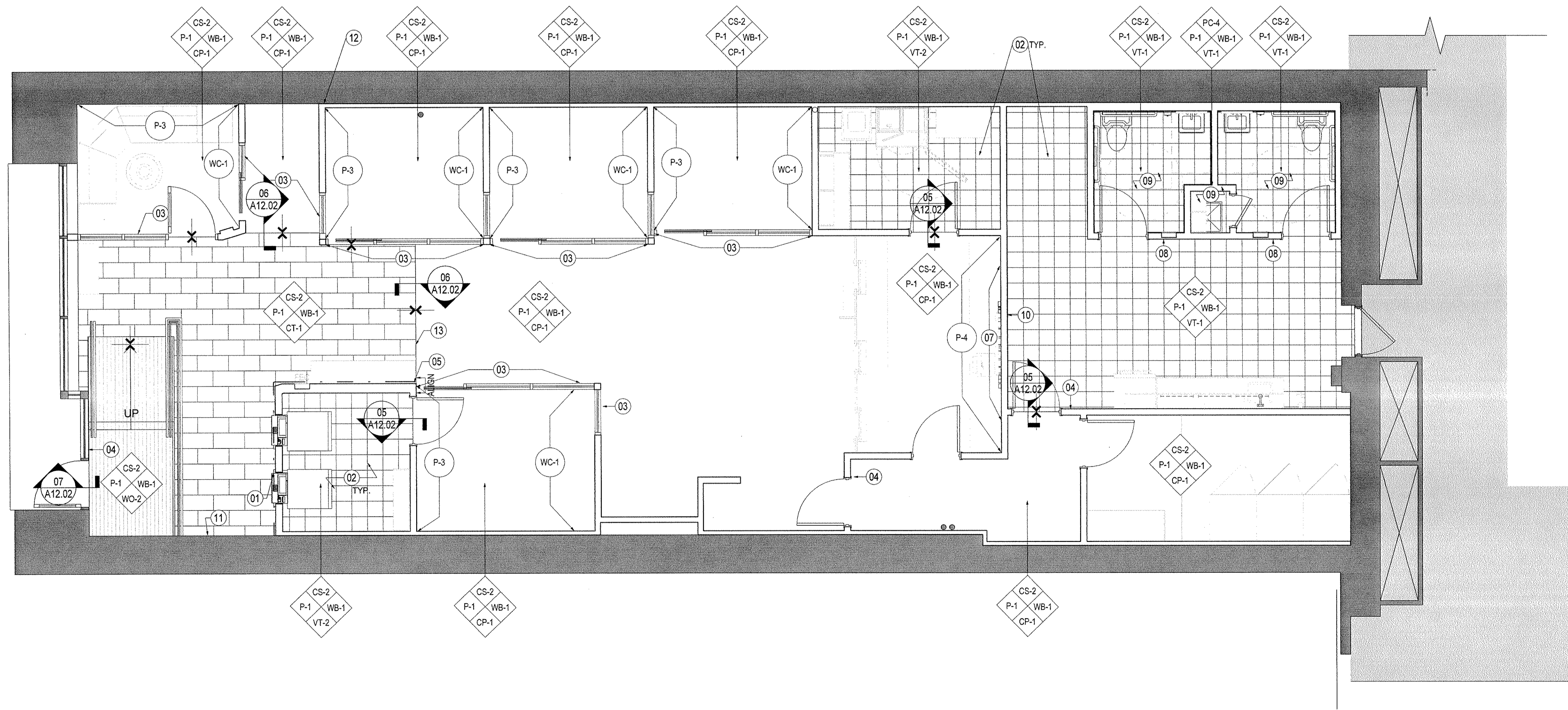
- A REFER TO DOOR HARDWARE SHEET A00.30 FOR DOOR & FRAME FINISHES INFORMATION.
- B ALL VERTICAL GYPSUM BOARD SURFACES IN THE CUSTOMER AREAS SHALL BE PAINTED P-1 (EGGSHELL) FINISH UNLESS OTHERWISE NOTED.
- C ALL GYPSUM BOARD CEILINGS, SOFFITS, BULKHEADS (HORIZONTAL SURFACES) SHALL BE PAINTED P-1 UNLESS OTHERWISE NOTED.
- D REFER TO FINISH SCHEDULE A05.01 FOR FINISH SPECIFICATIONS.
- E PRIOR TO INSTALLING THE FINISHED FLOOR, SCRAPE, GRIND, PREP AND FLASH PATCH THE SUB-FLOOR AS REQUIRED TO RECEIVE THE NEW FINISHED FLOOR MATERIAL.
- F RUBBER WALL BASE SHALL BE CONTINUOUS (4" STRIPS ARE NOT ACCEPTABLE). INSTALL 4" STRAIGHT BASE AT CARPET LOCATIONS AND 4" COVE BASE AT ALL OTHER LOCATIONS UNLESS OTHERWISE NOTED.
- G ALL PAINT FINISHES SHALL BE EVEN, SMOOTH AND WITHOUT IMPERFECTIONS, SCUFFMARKS, ETC.
- H ALL CARPET SHALL BE SMOOTH LEVEL AND EVEN AND FREE OF VISIBLE ENDS AND FRAYING. CARPET SEAMS SHALL BE INDISCERNIBLE.
- I ALL TILE AND OTHER FLOORING MATERIALS SHALL BE INSTALLED SQUARE AND LEVEL, AND ALL JOINTS SHALL BE STRAIGHT AND SQUARE.
- J UNLESS OTHERWISE NOTED THE GC SHALL PAINT ALL DOORS AND DOOR FRAMES TO P-1.



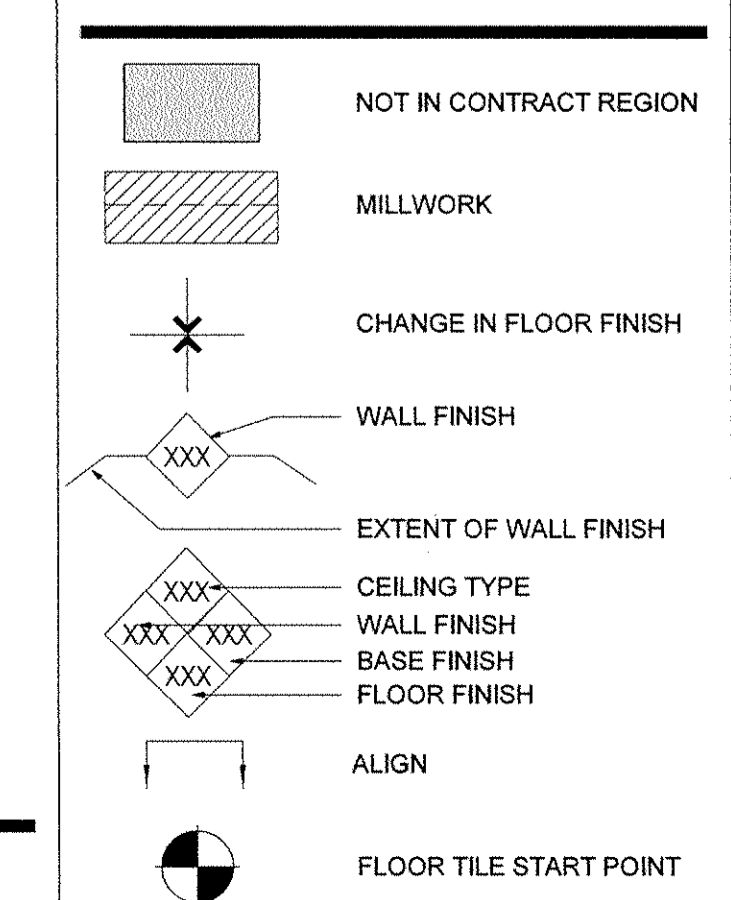
CC# 630
Central Square
599 Massachusetts Avenue,
Cambridge, MA 02139



One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel 617.619.5700
Fax 617.619.5701

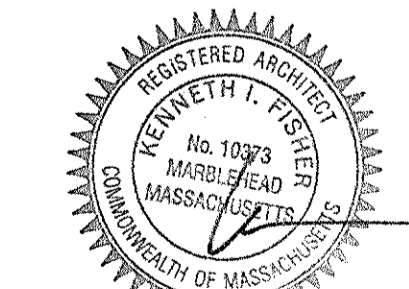


KEY PLAN



Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
FINISH PLAN - LEVEL 1

Scale
1/4" = 1'-0"

A05.01

FURNITURE SCHEDULE

TAG	MANUFACTURER	MODEL NAME, # & SIZE	DESCRIPTION	FABRIC/FINISH	COMMENTS
CC-1A					
CH-1	Haworth	Haworth_Chair_Very-Task	Very Task Chair		
CH-2	MEADOWS VERY	27"Wx26"Dx39-44"H	RETAIL OFFICE& CALLING CUBE VERY TASK CHAIR MESH BK,HARD CASTERS,4D ARMS & LUMBER CALLING CUBE		
CH-3	ALLSEATING	TUCC GUEST CHAIR	4 LEG BASE WITH ARMS		
CH-4	Haworth	Haworth_Chair_Very-Perforated Side and Seminar	Haworth_Chair_Very-Perforated Side and Seminar		
D-1	HAWORTH	COMPOSE	A-SERIES OPEN/LATERAL STORAGE		
D-2	HAWORTH	COMPOSE	COMPOSE STORAGE WITH FREESTANDING ROUND TABLE		
F-1K	HAWORTH	36"W X 18"D X 63.5"H	X-SERIES STORAGE: 5H LATERAL FILES		
F-4A					
LK-01			LOCKERS		
LO-1	OFS BRANDS	DESS LOUNGE CHAIR	DESS LOUNGE CHAIR FULLY UPHOLSTERED WITH ARMS.		
ST-1	Haworth	Haworth_Chair_Very-Task	Very Task Chair		
ST-3A	SQUIRCE INTERNATIONAL	282-STL	Mini Stool 30" H		
T-1A	OFS BRANDS	Type Catalog	Type Catalog		

BRANDED MILLWORK SCHEDULE

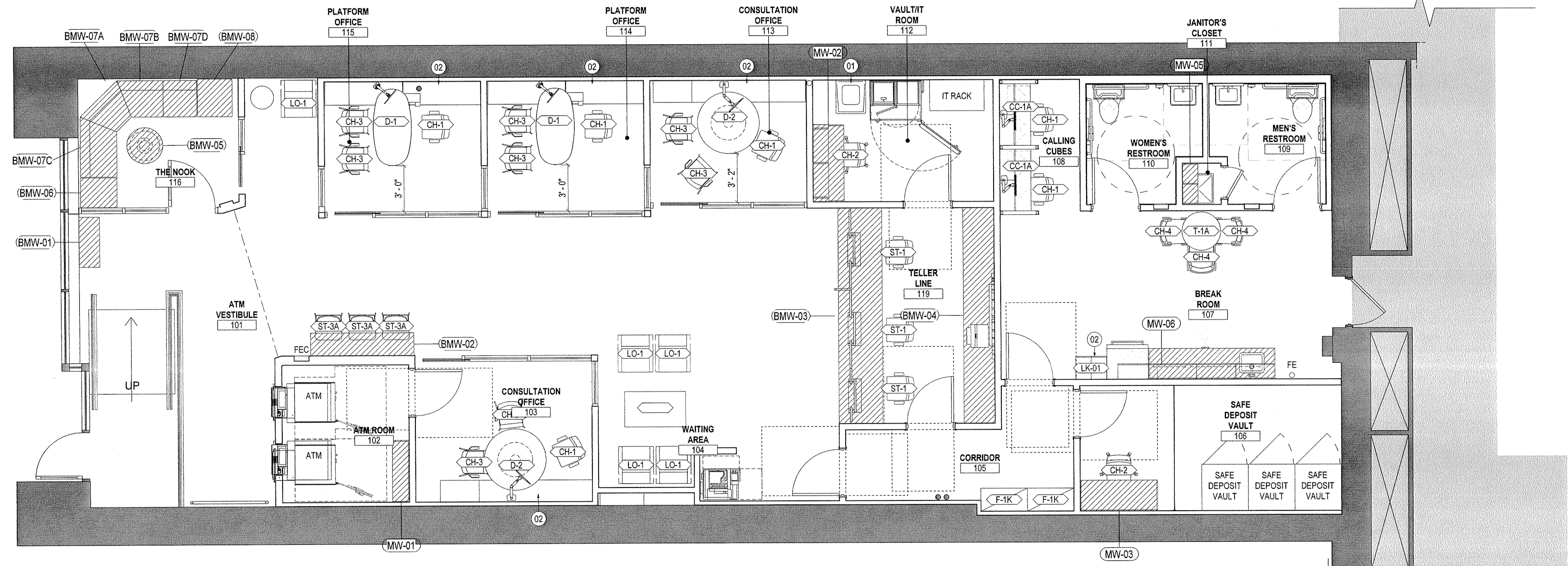
PROVIDED AND INSTALLED BY BANK VENDOR

MILLWORK NUMBER	NAME	WIDTH	DEPTH	REMARKS
BMW-01	ATM VESTIBULE CHECK DESK	3'-3"	1'-4"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-02	LENDING BAR	8'-8"	1'-5 1/4"	
BMW-03	TELLER LINE	14'-0"	2'-10"	
BMW-04	TELLER BACK COUNTER	14'-0"	2'-0"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-05	THE NOOK - ROUND TABLE	2'-4"	2'-4"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-06	NOOK DESK	2'-4 1/4"	3'-0"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-07A	NOOK LOUNGE - CORNER PIECE	2'-11"	2'-4 1/2"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-07B	NOOK LOUNGE - ANGLE PIECE RIGHT	2'-0"	2'-4 1/2"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-07C	NOOK LOUNGE - ANGLE PIECE LEFT	1'-6"	2'-4 1/2"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-07D	NOOK LOUNGE - SQUARE PIECE	2'-0"	2'-4 1/2"	REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR
BMW-08		2'-5 11/32"		REFER TO PLANS FOR QUANTITY AND LOCATION. GC TO COORDINATE WITH BANK VENDOR

MILLWORK SCHEDULE

PROVIDED AND INSTALLED BY GC

MILLWORK NUMBER	NAME	WIDTH	DEPTH	REMARKS
MW-01	WALL MOUNTED ADJUSTABLE SHELVING	0'-0"	0'-0"	
MW-02	IT VAULT ROOM 112 WORK COUNTER	5'-0"	2'-0"	REFER TO PLANS, ELEVATIONS, AND SECTIONS FOR ADDITIONAL INFORMATION
MW-03	IT VAULT ROOM 112 WORK COUNTER	5'-0"	2'-0"	REFER TO PLANS, ELEVATIONS, AND SECTIONS FOR ADDITIONAL INFORMATION
MW-05	JANITOR'S CLOSET SHELVING UNIT	3'-4 1/4"	1'-0"	
MW-06	BREAK ROOM KITCHENETTE	10'-2"	2'-0"	



SHEET NOTES

- 01 RECALL BIN PROVIDED BY BANK VENDOR
- 02 GC TO PROVIDE TRASH CANS AT DESK, TYP.

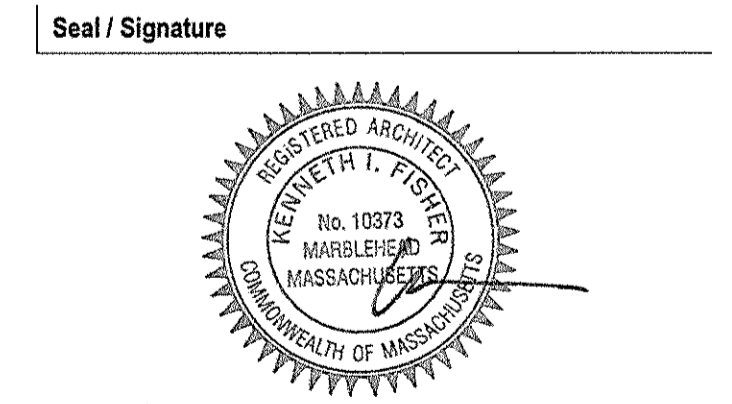
Santander
 CCH 630
 Central Square
 599 Massachusetts Avenue,
 Cambridge, MA 02139

Gensler
 One Beacon Street
 Third Floor
 Boston, MA 02108
 United States
 Tel 617.619.5700
 Fax 617.619.5701

GENERAL NOTES

- A. THE FURNITURE DEALER SHALL BE RESPONSIBLE TO PROTECT ALL WALLS, DOOR ASSEMBLIES AND FLOORING DURING ALL DELIVERIES AND INSTALLATION, UNLESS OTHERWISE DIRECTED BY THE PROJECT MANAGER.
- B. ALL PLASTIC PROTECTIVE COVERINGS ON CHAIRS SHALL REMAIN ON CHAIRS TO PROTECT FABRICS FROM CONSTRUCTION DUST AND SOIL PRIOR TO STORE OPENING.
- C. ALL LABOR USED DURING DELIVERY AND INSTALLATION SHALL BE SUCH THAT NO JURISDICTIONAL PROBLEMS OCCUR DUE TO THE DELIVERY AND/OR INSTALLATION. COORDINATION SHALL BE FACILITATED WITH TRADES NOT UNDER DIRECT JURISDICTION OF THE INSTALLER (SUCH AS ELECTRICIANS) BY THE GC AND/OR PROJECT MANAGER.
- D. FURNITURE CONTRACTOR SHALL COMPLY WITH ALL LAWS, RULES, REGULATIONS, WHETHER FEDERAL, STATE, OR OTHERWISE, WHICH APPLY TO OR IN ANY MANNER AFFECT THE WORK SCOPE, OR THE OPERATIONS OR ACTIVITIES OF ITS EMPLOYEES CONNECTED WITH THIS PROJECT.
- E. ALL FURNITURE ON THIS DRAWING IS BE PURCHASED AND INSTALLED BY THE BANK.

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



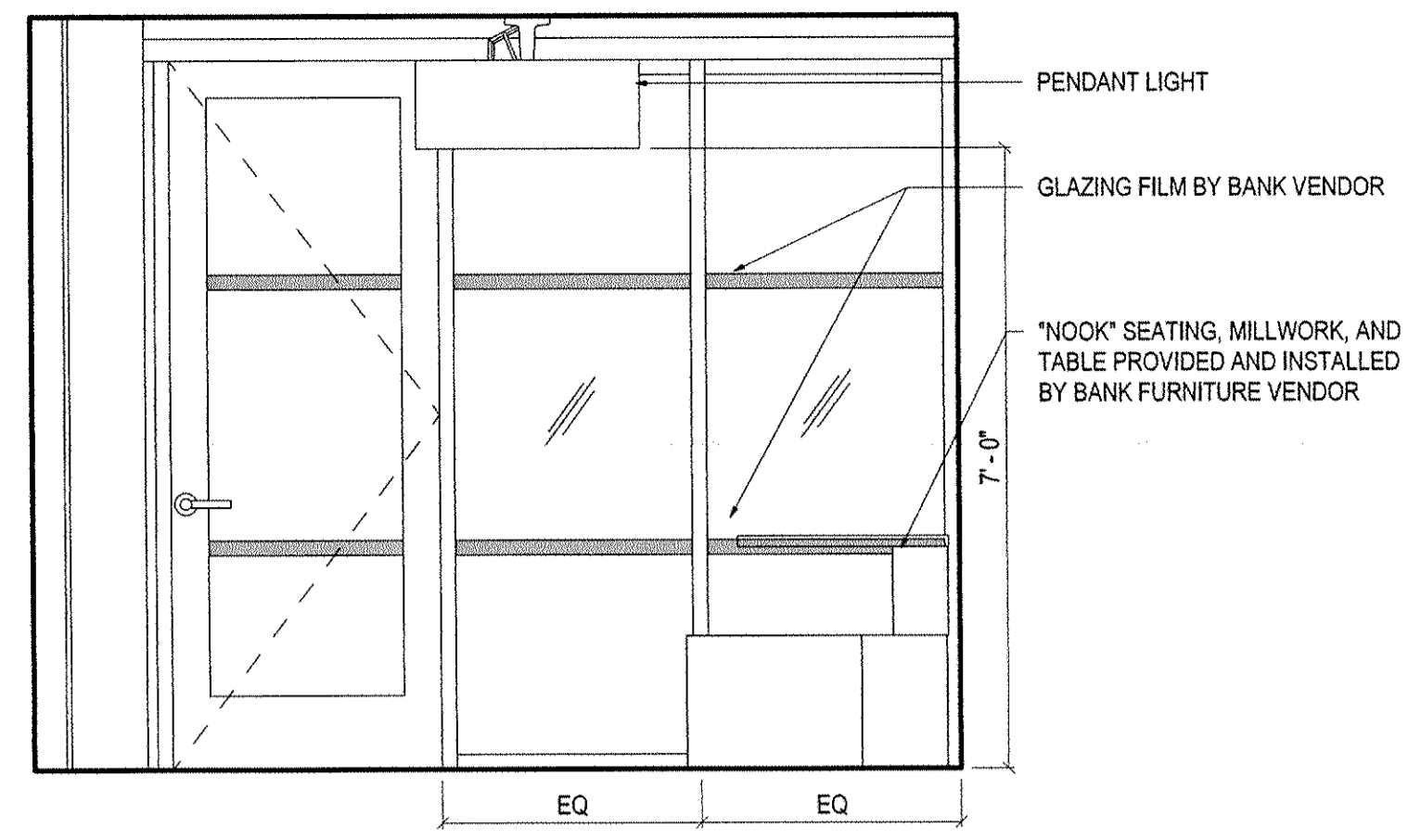
Project Name
Santander - Central Square, Cambridge
 Project Number
11.6850.127
 Description
FURNITURE PLAN - LEVEL 1

LEGEND

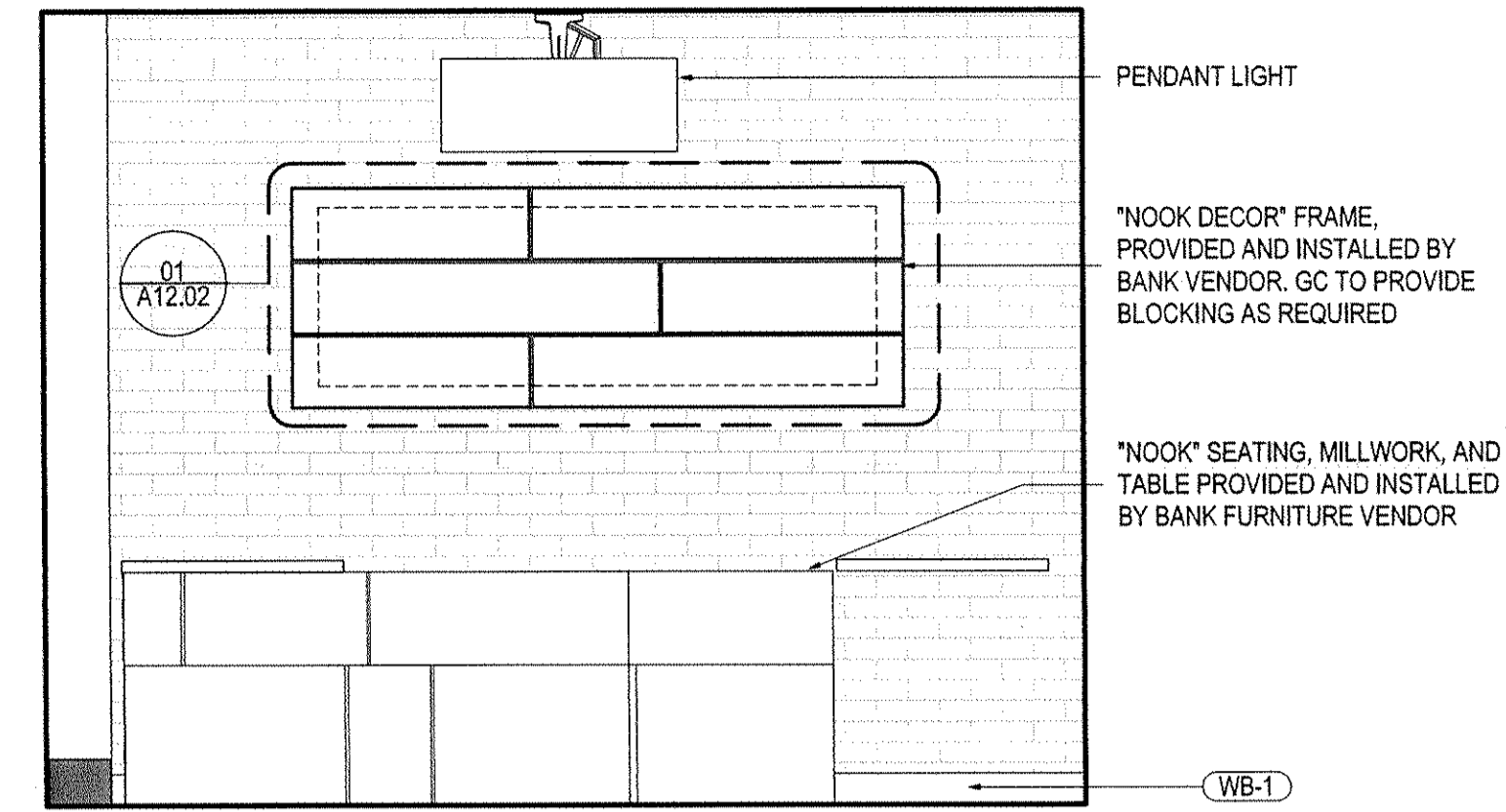
Scale
 1/4" = 1'-0"

A06.01

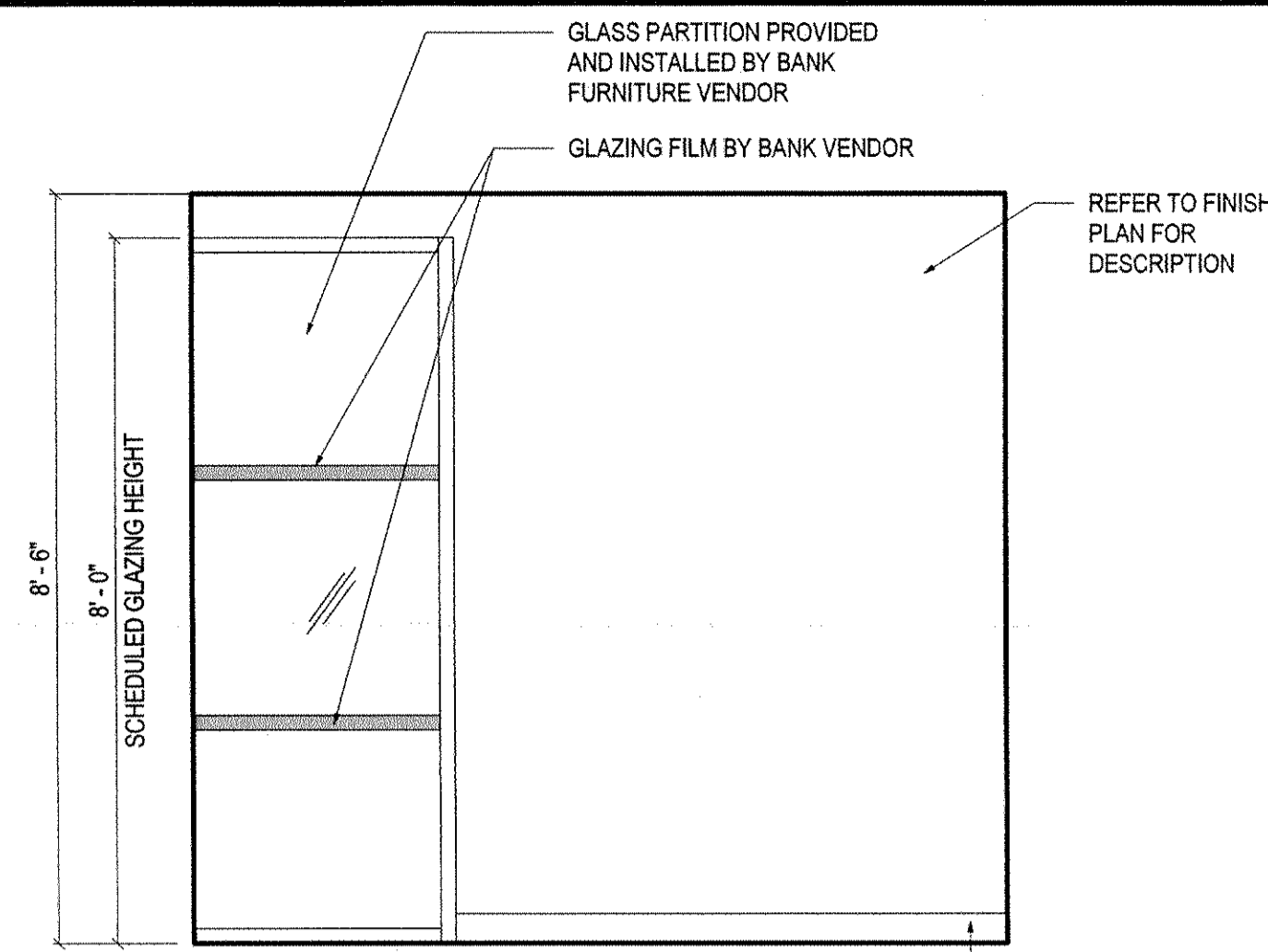
3/22/2019 3:02:28 PM I:\gms\ad\project\Revit\workbooks\26162\Santander - Central Square, Cambridge, R18_Magn_Javelin@gensler.com.rvt



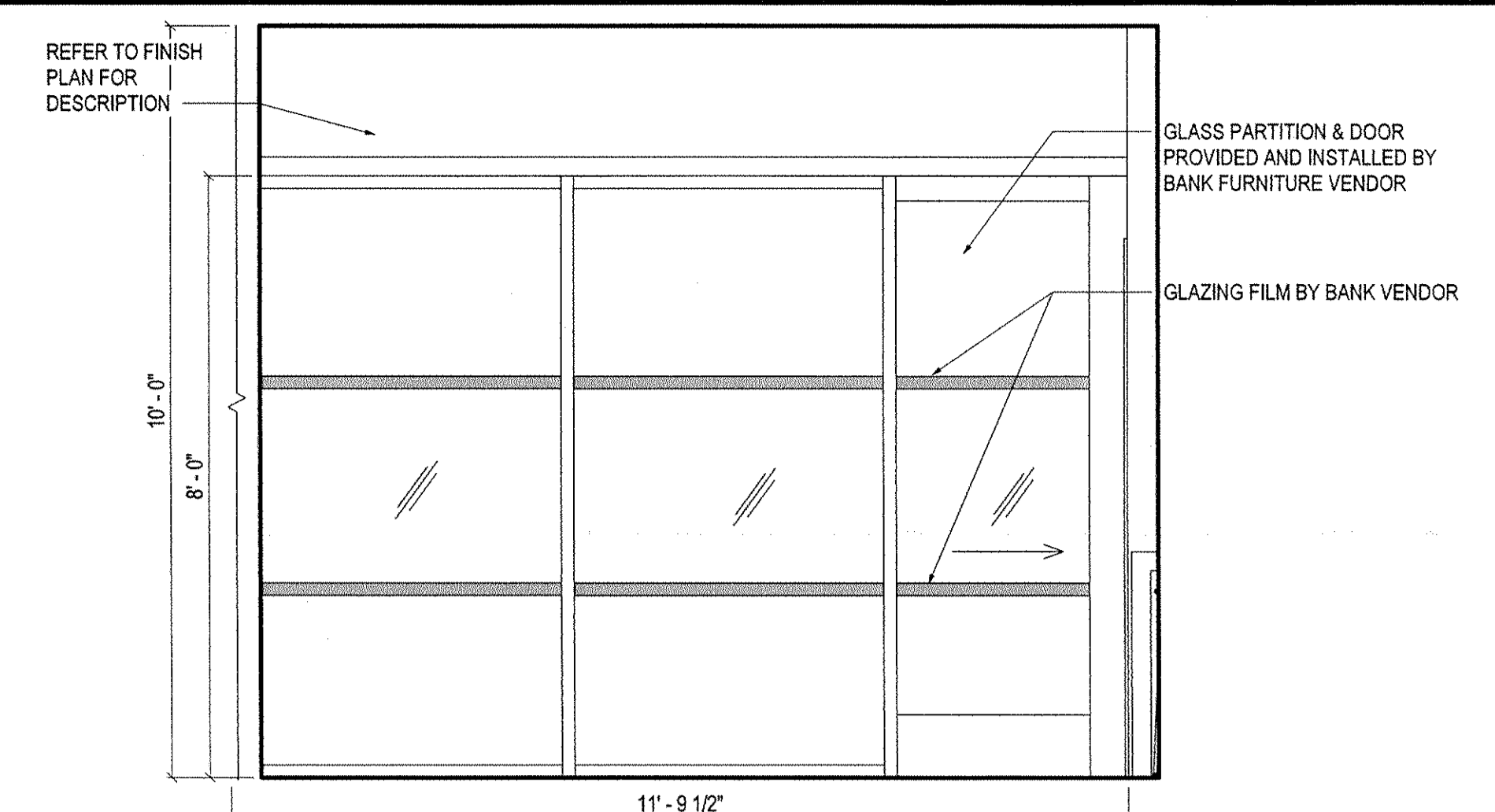
04 NOOK ELEVATION SOUTH
SCALE: 1/2" = 1'-0"



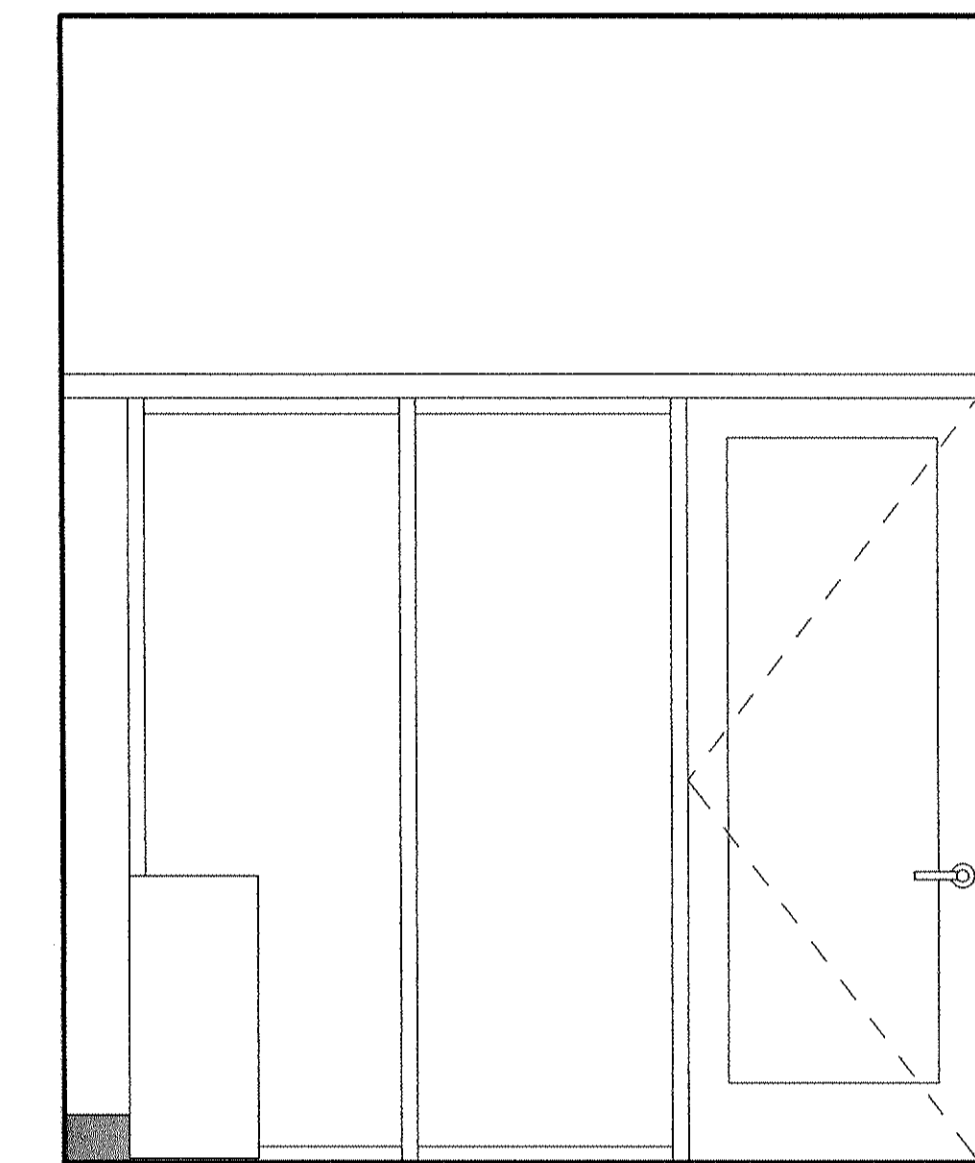
03 NOOK NORTH
SCALE: 1/2" = 1'-0"



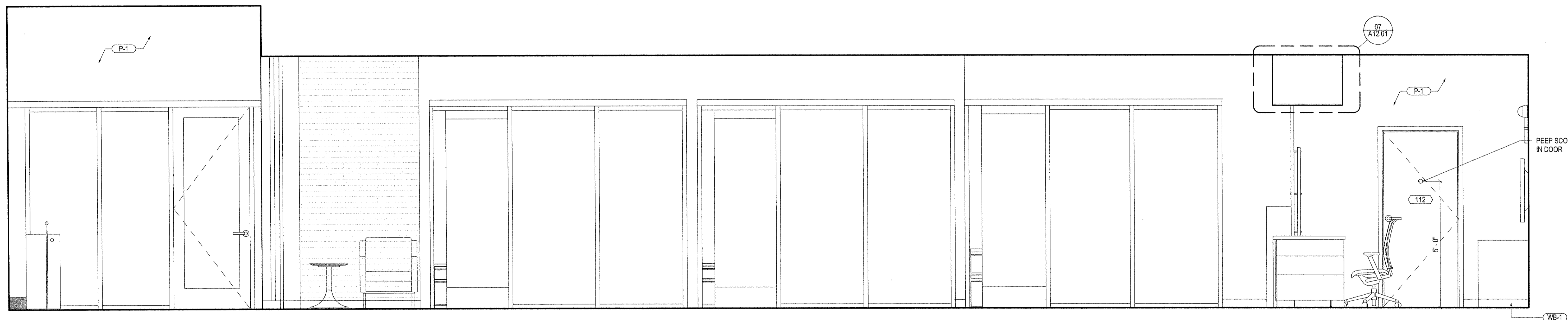
02 OFFICE ELEVATION 2
SCALE: 1/2" = 1'-0"



01 OFFICE ELEVATION
SCALE: 1/2" = 1'-0"



06 NOOK FACE ELEVATION
SCALE: 1/2" = 1'-0"



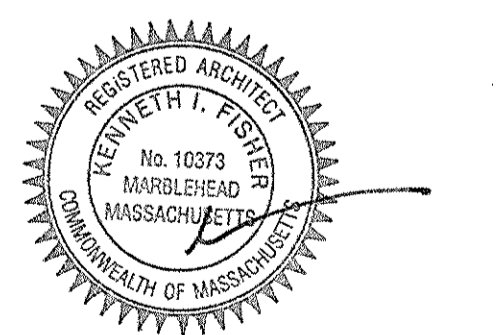
07 FULL ELEVATION - NORTH
SCALE: 1/2" = 1'-0"



08 FULL ELEVATION SOUTH
SCALE: 1/2" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

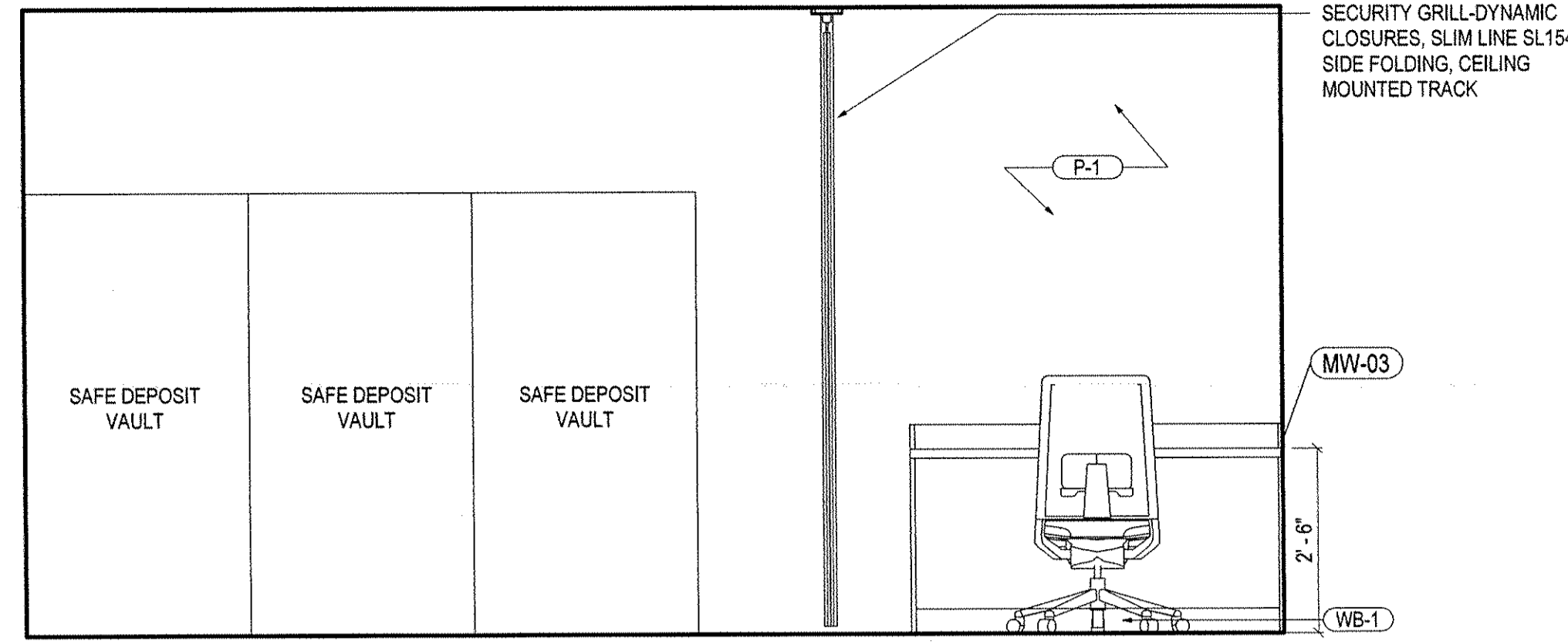
Seal / Signature



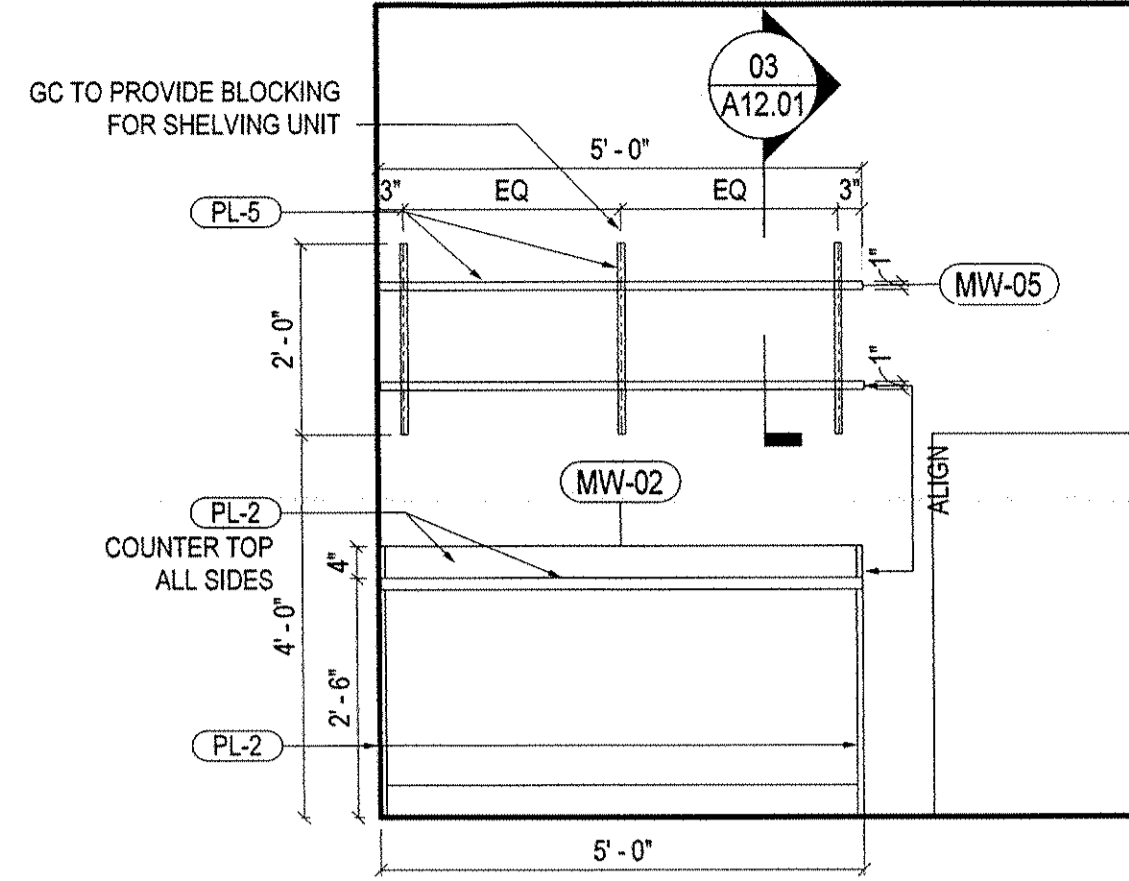
Project Name
Santander - Central Square,
Cambridge
Project Number
11.6850.127
Description
INTERIOR ELEVATIONS - FRONT OF
HOUSE

Scale
1/2" = 1'-0"

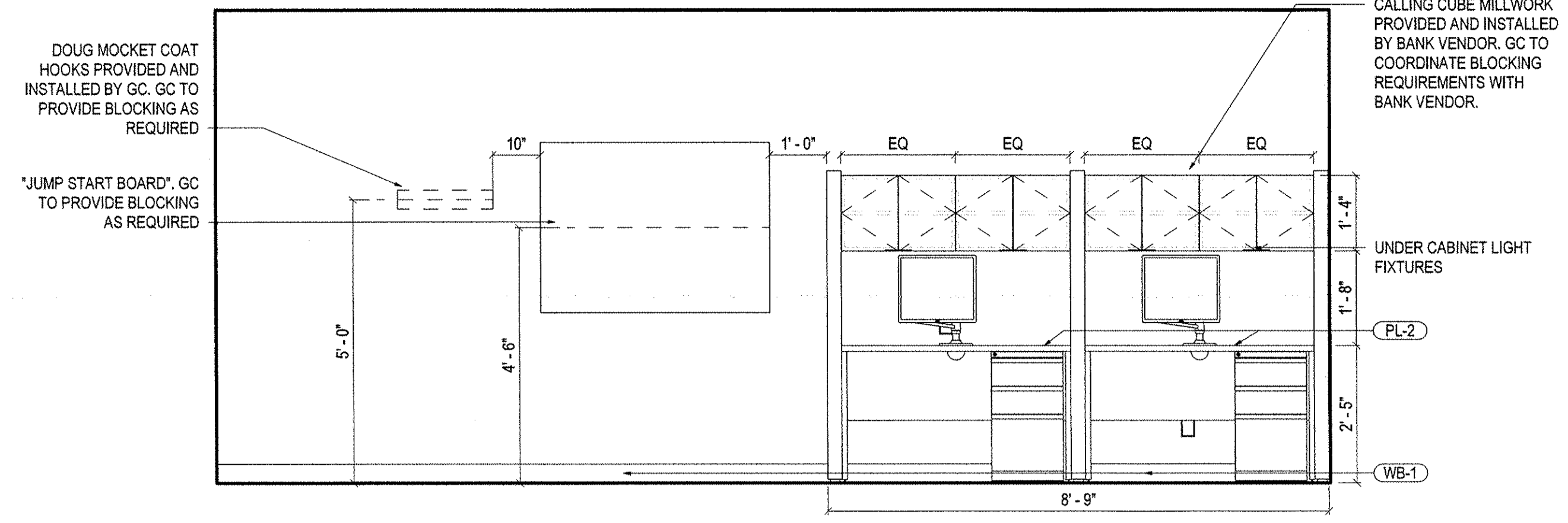
A07.01



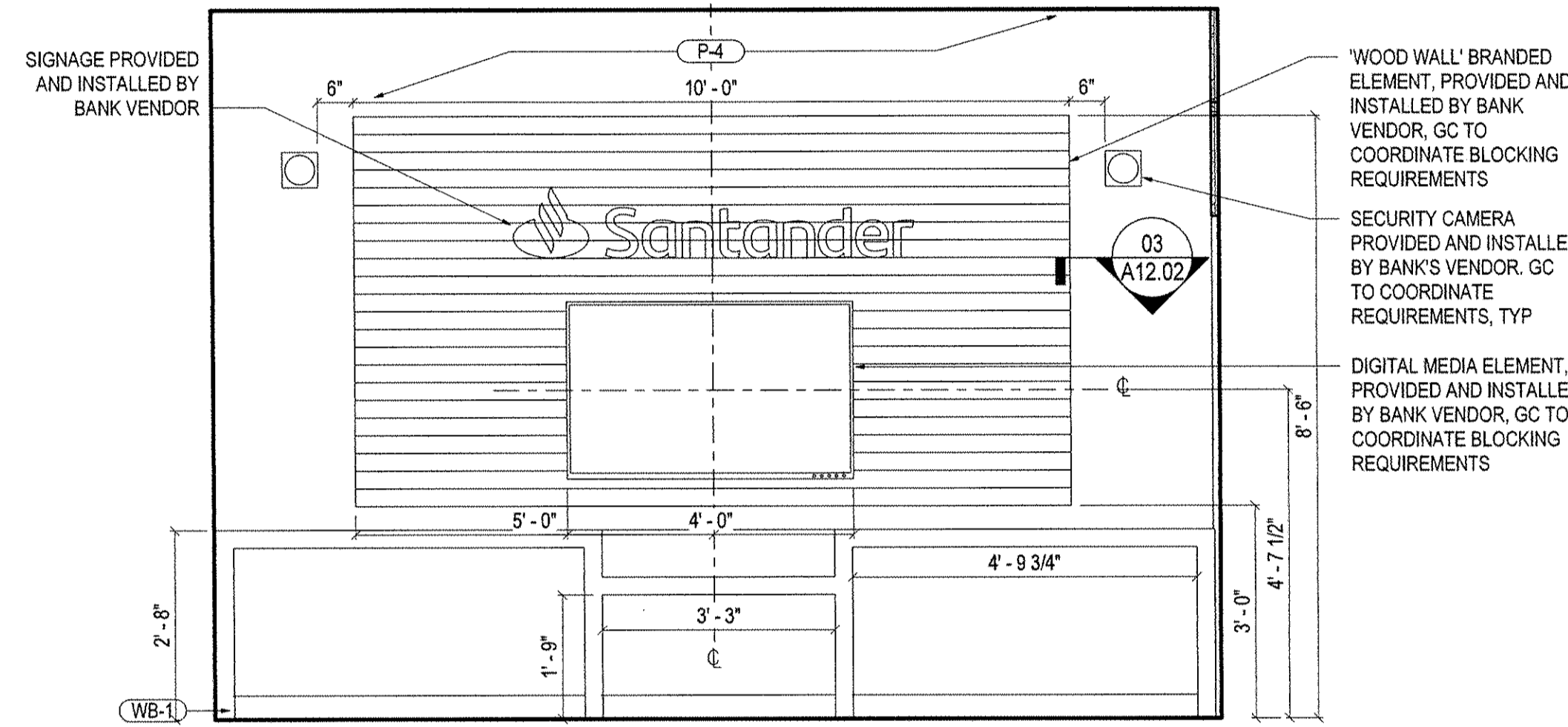
07 VAULT ROOM ELEVATION
SCALE: 1/2" = 1'-0"



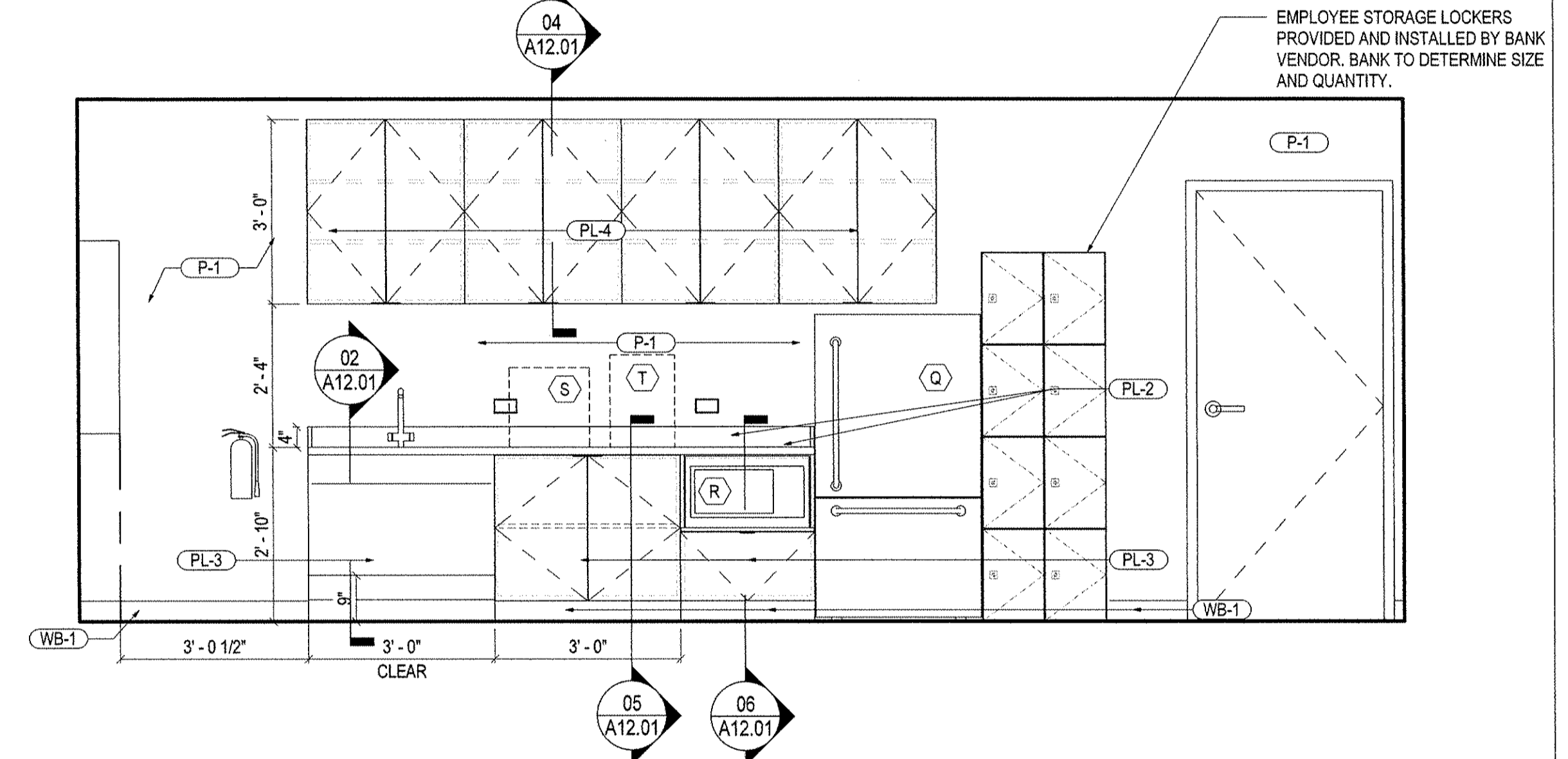
04 IT/VAULT ROOM ELEVATION
SCALE: 1/2" = 1'-0"



01 CALLING CUBE ELEVATION
SCALE: 1/2" = 1'-0"



05 REAR TELLER ELEVATION
SCALE: 1/2" = 1'-0"



02 PANTRY ELEVATION
SCALE: 1/2" = 1'-0"

EQUIPMENT BY GENERAL CONTRACTOR			
MARK	LOCATION	DESCRIPTION	SPECIFICATIONS
Q	BREAK AREA	REFRIGERATOR	SUMMIT APPLIANCE, AL54 32"H x 23.83"W x 22.83"D WHITE FINISH
R	BREAK AREA	MICROWAVE	GENERAL ELECTRIC MODEL PEB7228DFWW (W) 24 1/8"(H)14"(D)19 3/4" WHITE FINISH
U	BREAK AREA	PAPER TOWEL DISPENSER	C- FOLD DISPENSER

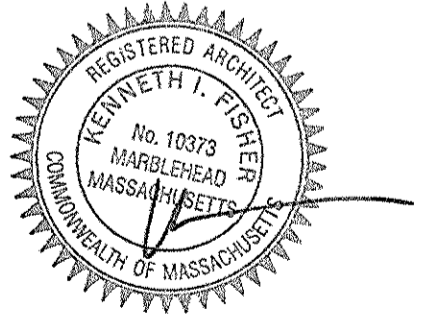
06 EQUIPMENT BY GC
SCALE: 1/2" = 1'-0"

EQUIPMENT BY BANK			
MARK	LOCATION	DESCRIPTION	SPECIFICATIONS
S	BREAK AREA	COFFEE MAKER	NEWCO ACE-LP 15 1/2"(W) x 15 7/8"(H) x 16 3/8"(D)
T	BREAK AREA	WATER COOLER	INNOWAVE CHILLER 3 MODEL #12- CHCLUS 13.5" x 16" x 40.5" 1/4" TUBING WATER CONNECTION, GC TO PROVIDE POWER/WATER LINE AS REQ'D

03 EQUIPMENT BY BANK
SCALE: 1/2" = 1'-0"

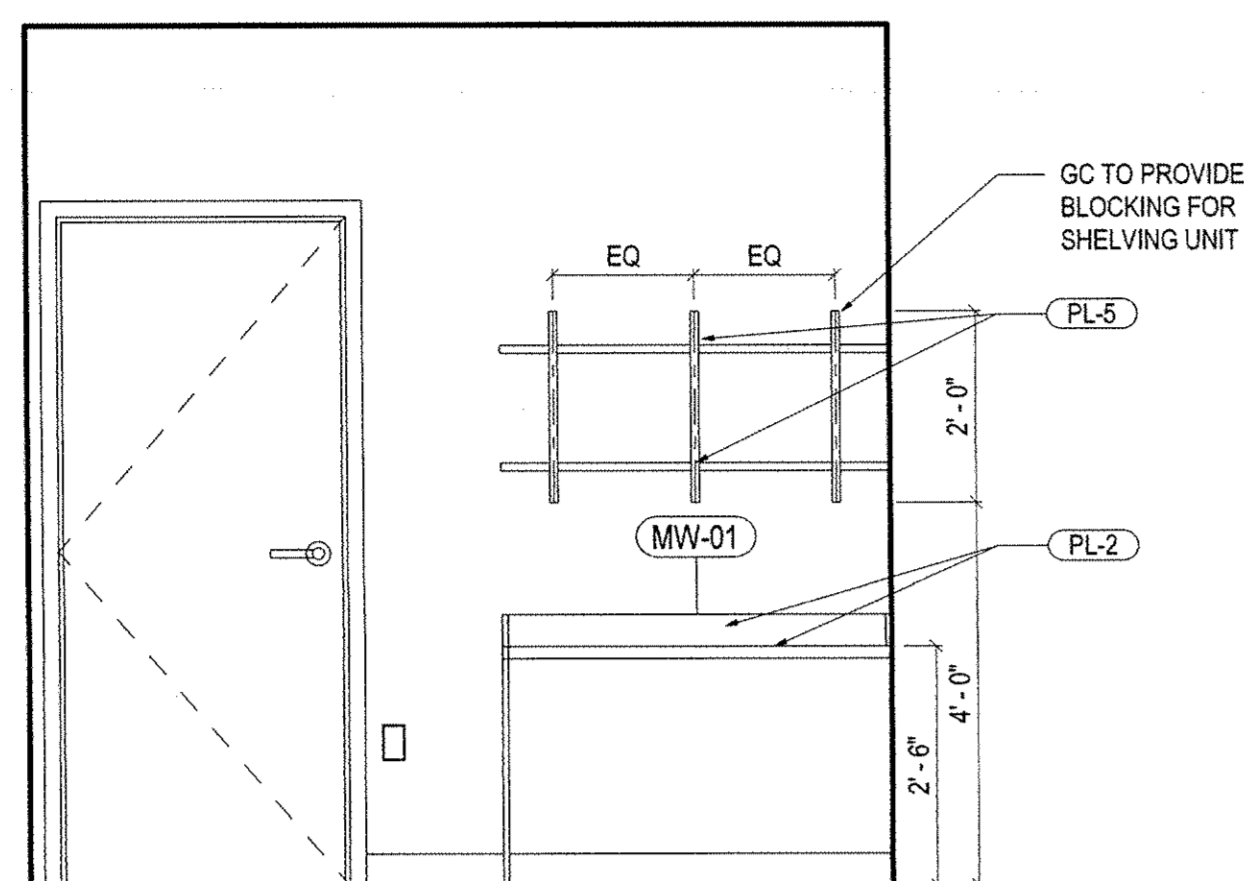
Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature

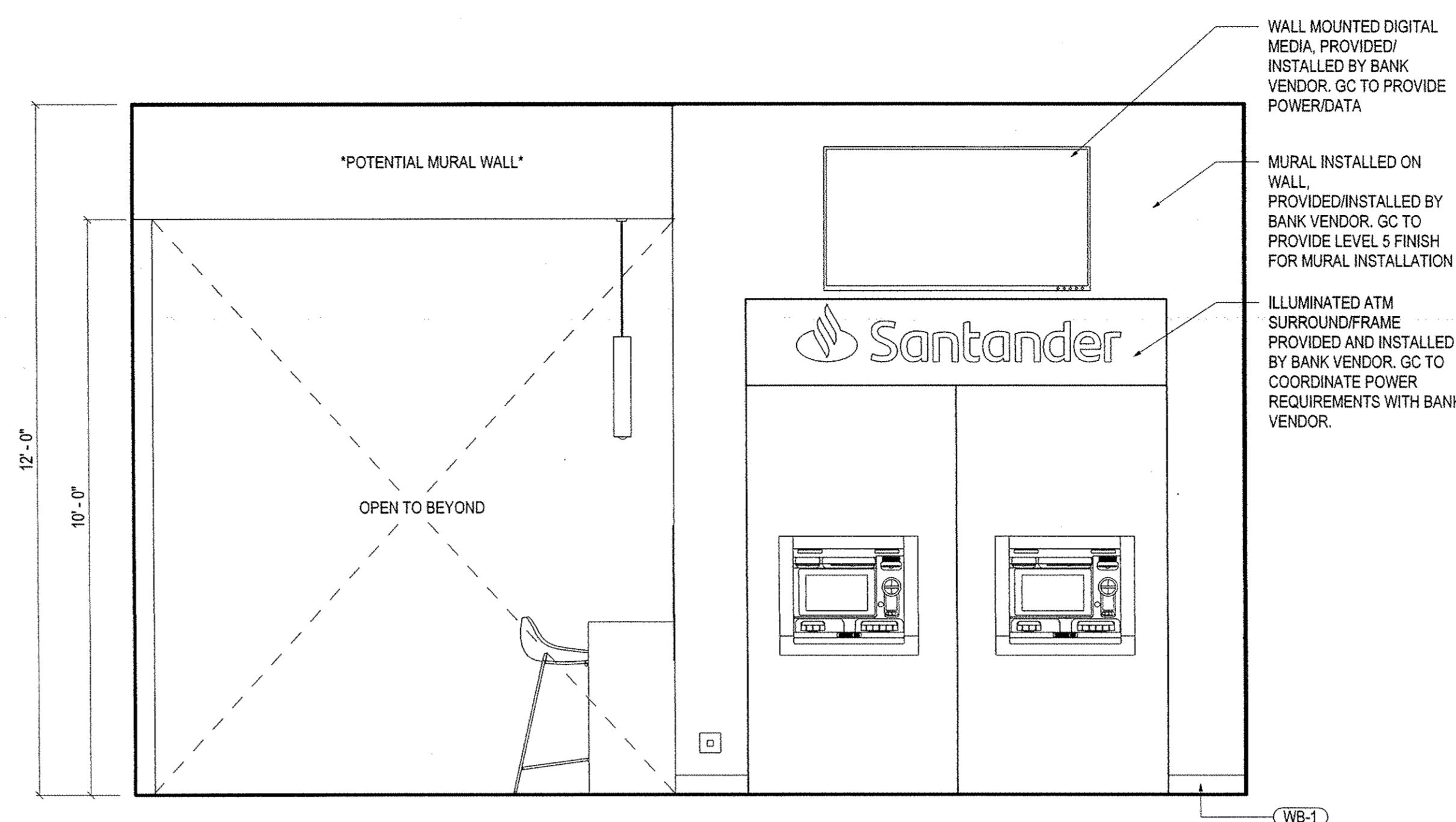


Project Name
**Santander - Central Square,
Cambridge**
Project Number
11.6850.127
Description
**INTERIOR ELEVATIONS - BACK OF
HOUSE**

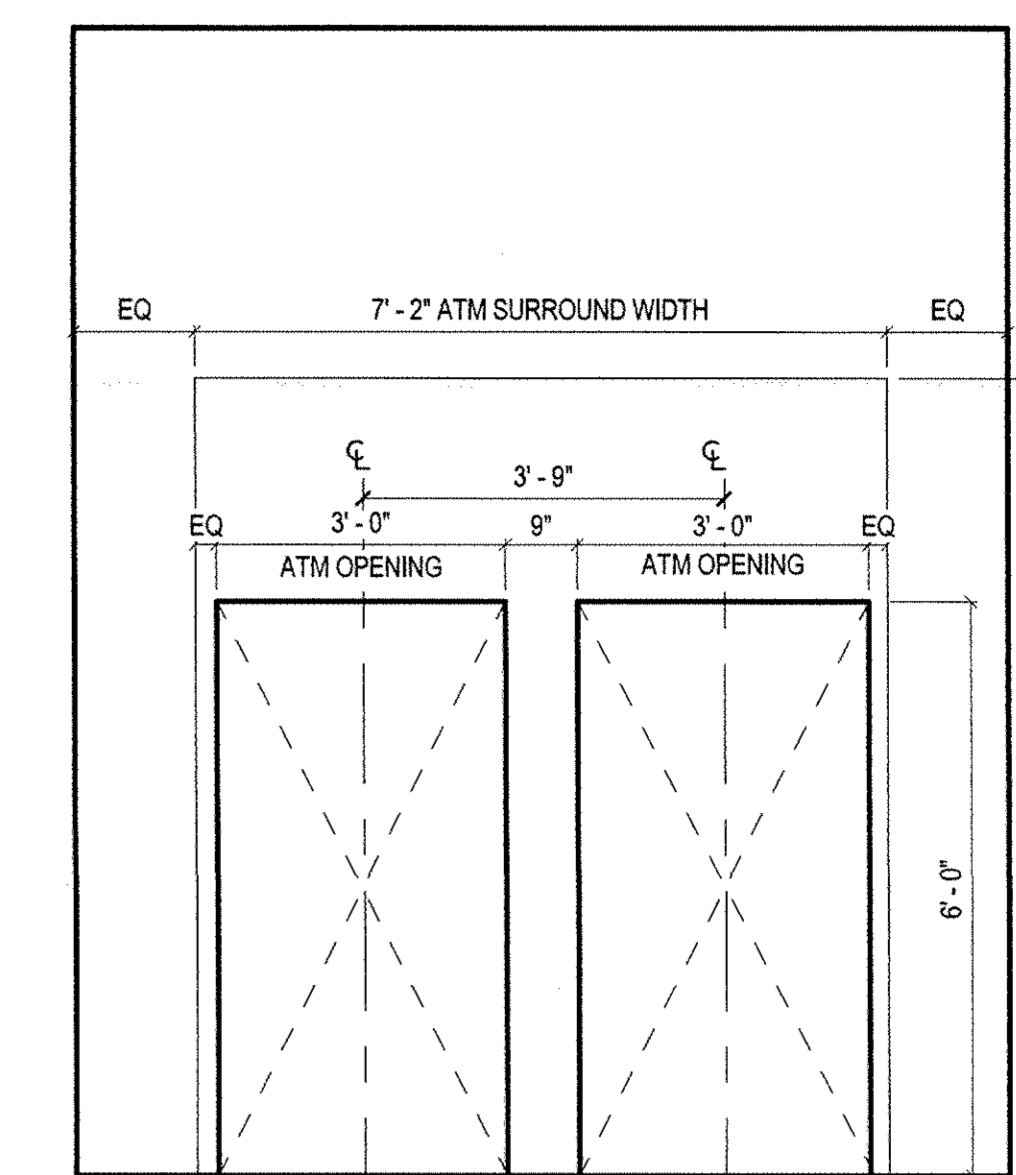
Scale
As indicated



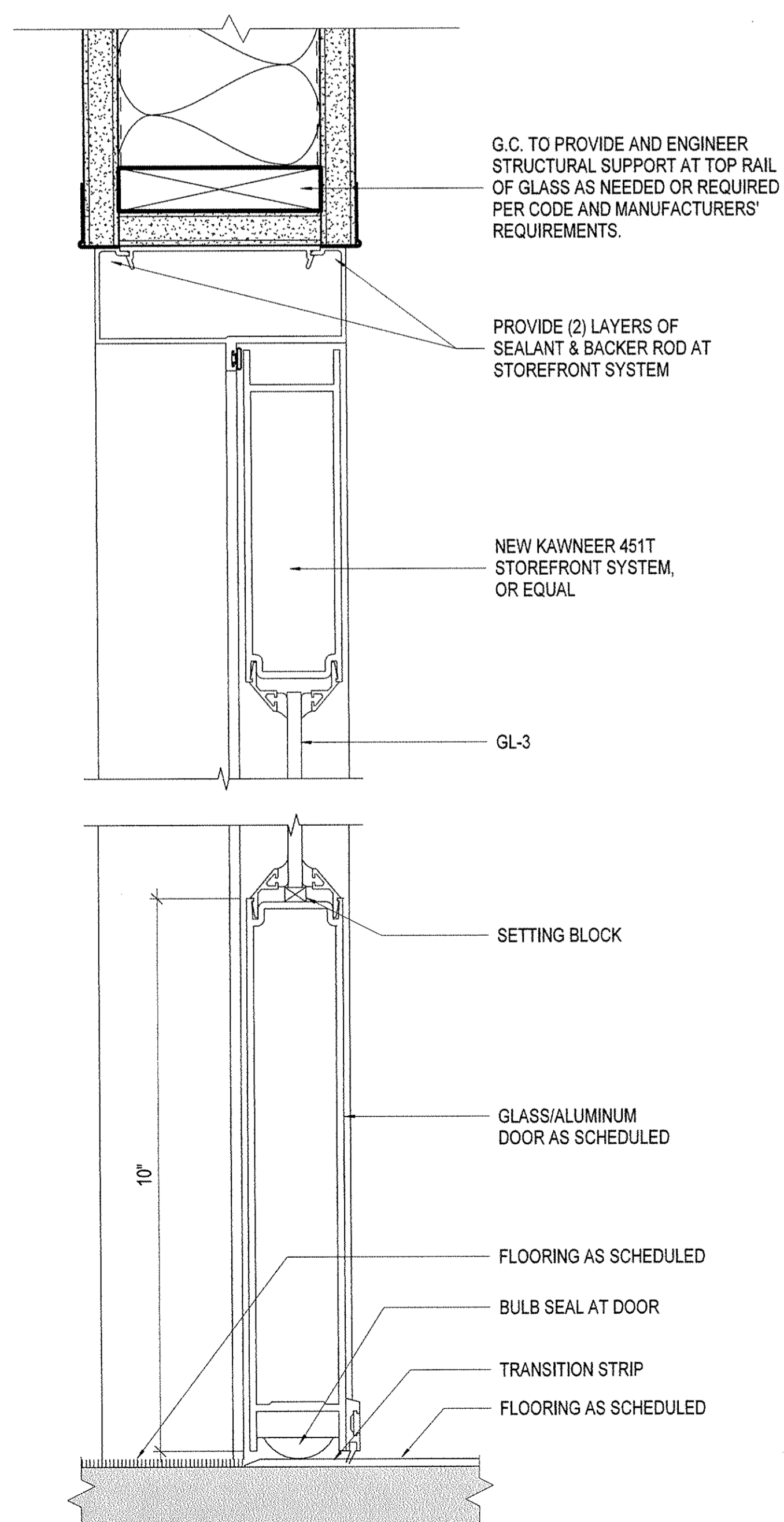
03 ATM ROOM MILLWORK
SCALE: 1/2" = 1'-0"



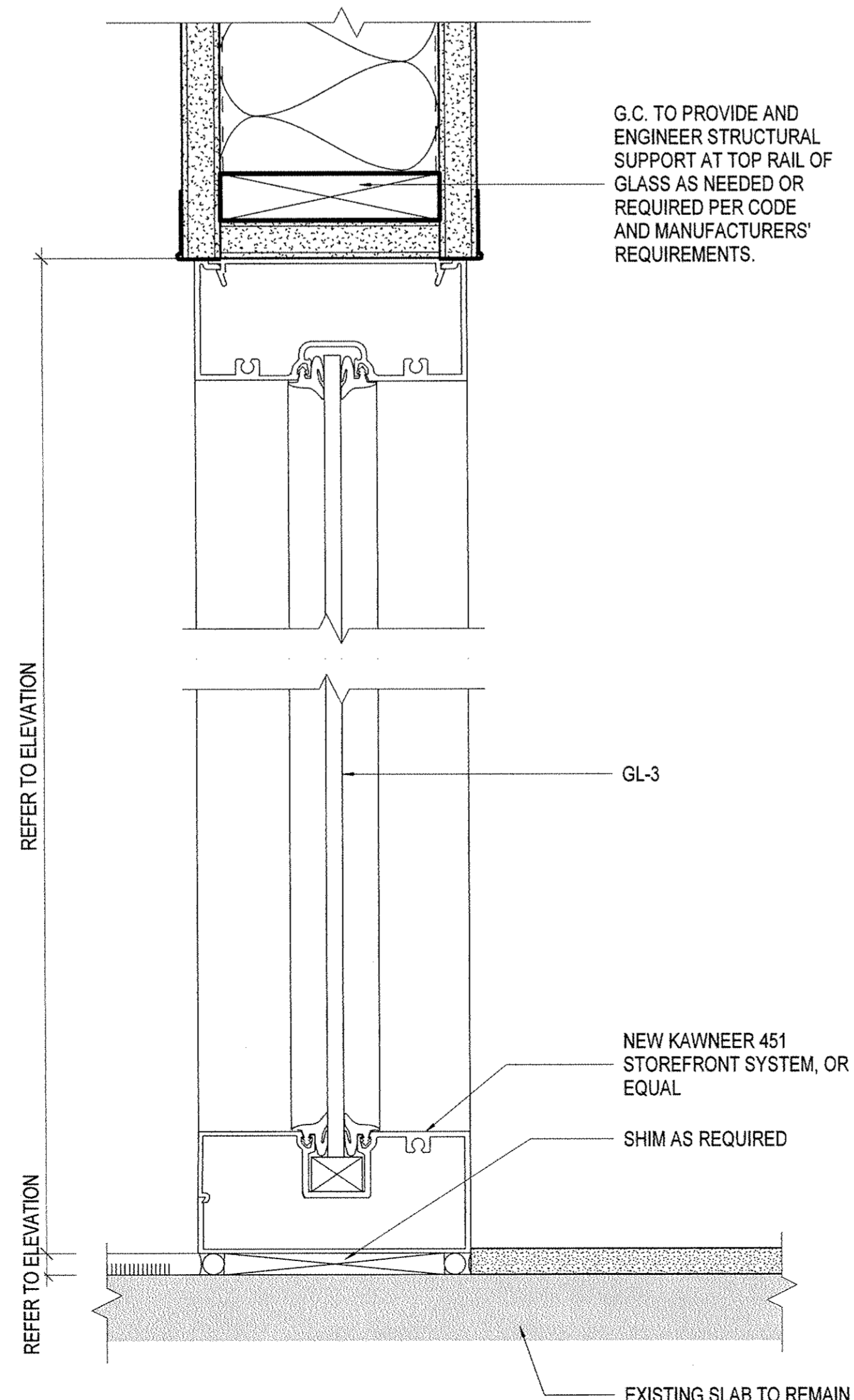
02 ATM VESTIBULE
SCALE: 1/2" = 1'-0"



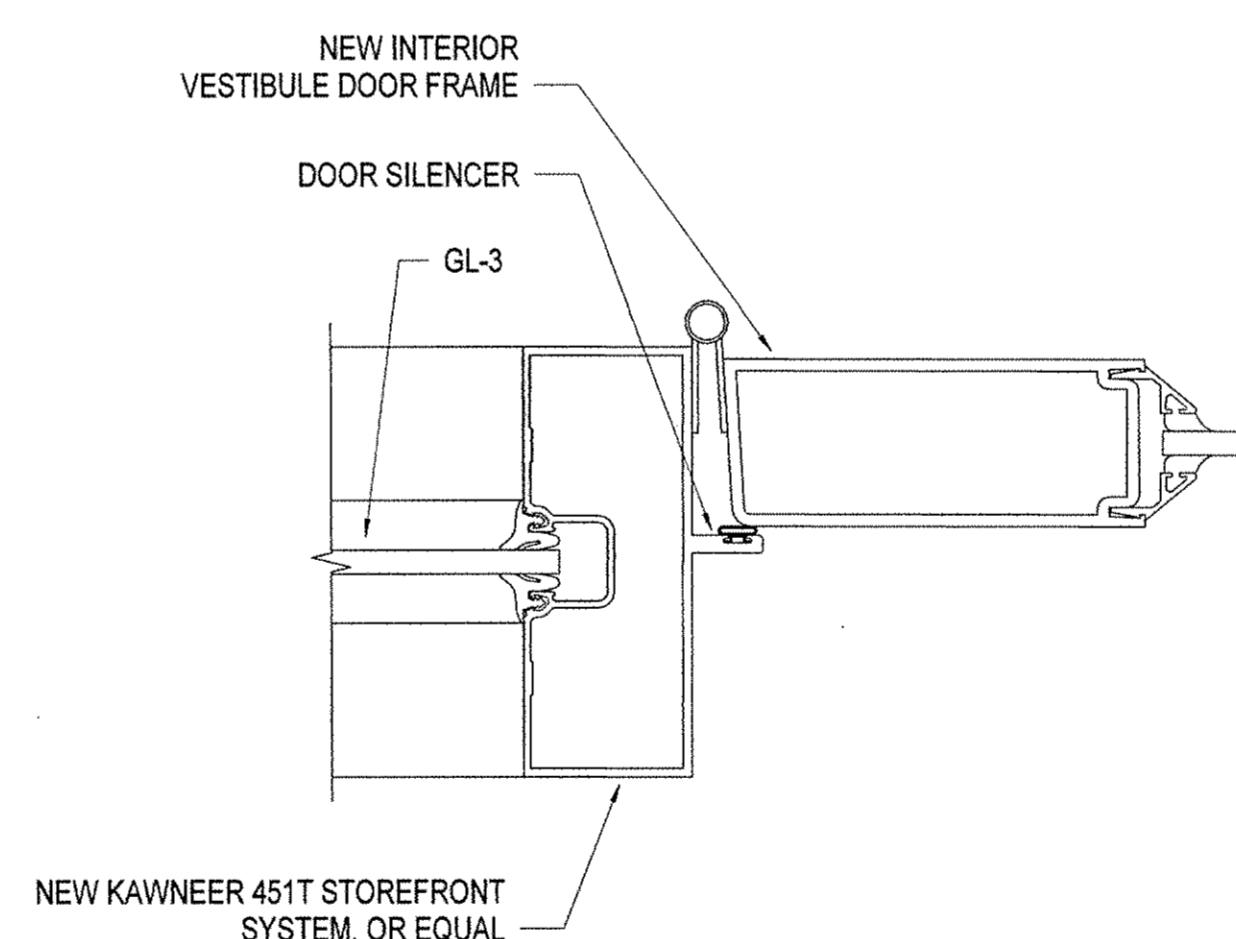
01 ATM ROUGH OPENING ELEVATION
SCALE: 1/2" = 1'-0"



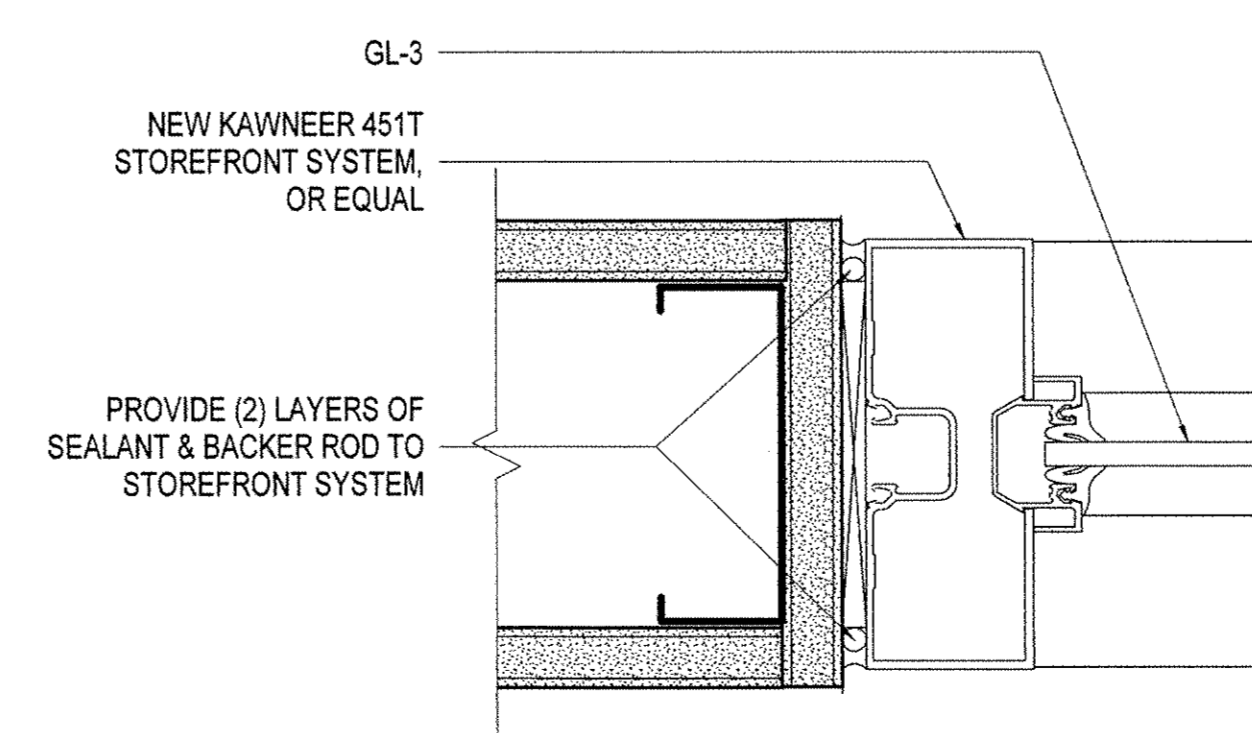
11 ATM STOREFRONT DOOR SECTION
SCALE: 8" = 1'-0"



09 ATM STOREFRONT SECTION
SCALE: 8" = 1'-0"



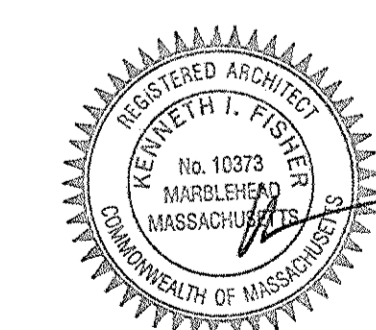
06 INTERIOR STOREFRONT DOOR JAMB
SCALE: 6" = 1'-0"



07 STOREFRONT DOOR JAMB DETAIL @ WALL
SCALE: 6" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

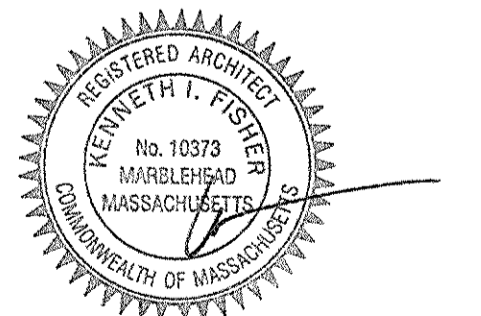
Description
ENLARGED PLAN & ELEVATIONS

Scale
As indicated

A07.03

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



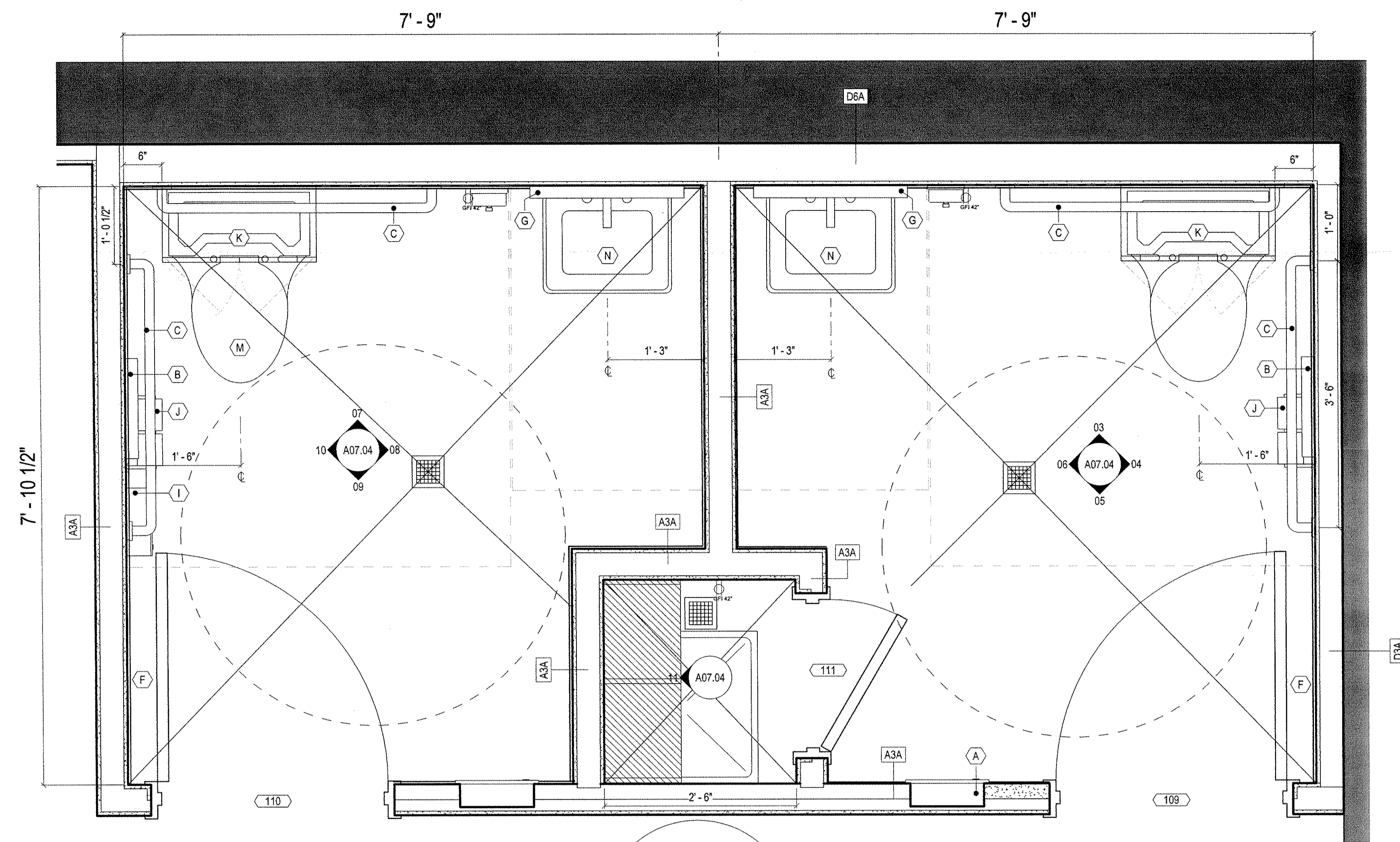
Project Name
Santander - Central Square,
Cambridge
Project Number
11.6850.127
Description
ENLARGED RESTROOM PLANS &
ELEVATIONS

Scale
As indicated

A07.04

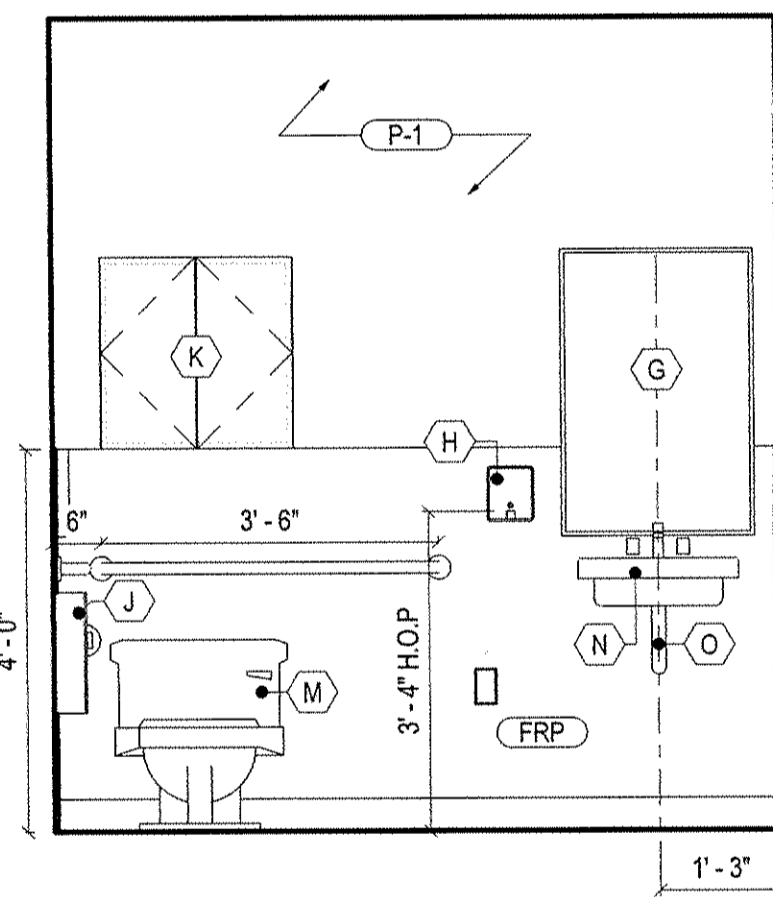
PLUMBING FIXTURE SCHEDULE			
MARK	LOCATION	DESCRIPTION	SPECIFICATIONS
M	RESTROOM	WATER CLOSET	SEE PLUMBING DRAWINGS
N	RESTROOM	LAVATORY	SEE PLUMBING DRAWINGS
O	RESTROOM & BREAKROOM	INSULATION SINK	LAV-GUARD UNDERSINK PROTECTIVE PIPE COVER, TRUEBRO, INC
L	BREAKROOM	KITCHEN SINK	SEE PLUMBING DRAWINGS
P	JANITOR	MOP AND BROOM HOLDER	BOBRICK - B-223 X 24

TOILET ACCESSORIES SCHEDULE				
MARK	LOCATION	DESCRIPTION	MOUNTING HT.	SPECIFICATIONS
A	RESTROOM	RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	REFER TO ELEVATION	BOBRICK B-38034
B	RESTROOM	SURFACE MOUNTED TOILET SEAT COVER DISPENSER	REFER TO ELEVATION	BOBRICK B-221
C	RESTROOM	HORIZONTAL GRAB BAR 42" LONG W/ ROUGHENED SURFACE	SEE ELEVATION AND ACCESSIBILITY DETAILS	BOBRICK B-6806.99. SEE DWGS FOR LOCATIONS & PROVIDE FRT BLOCKING.
D	NOT USED			
F	RESTROOM	UTILITY HOOK	48" A.F.F. TO CENTER LINE	BOBRICK B-6707
G	RESTROOM	MIRROR	40" A.F.F. TO BOTTOM OF REFLECTIVE SURFACE	BOBRICK B-165 (24"W x 36"H)
H	RESTROOM	SOAP DISPENSER	40" A.F.F. TO BOTTOM OF OPERABLE PART	BOBRICK B-40 (5 13/16"W x 5 7/8"H)
I	RESTROOM	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL	REFER TO ELEVATION	BOBRICK B-254
J	RESTROOM	TOILET PAPER DISPENSER	18" A.F.F. TO CENTERLINE OF ROLL	BOBRICK B-265
K	RESTROOM	24" WHITE OVER THE TOILET CABINET	BOTTOM OF CABINET 46" AFF	ESTATE BY RSI #TT210

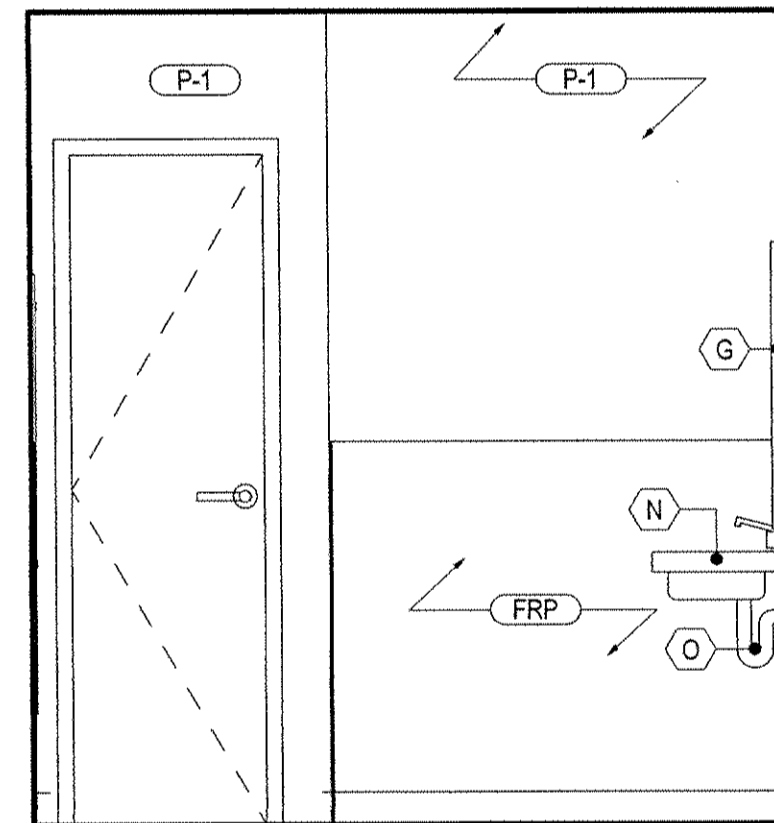


01 ENLARGED RESTROOM
SCALE: 1" = 1'-0"

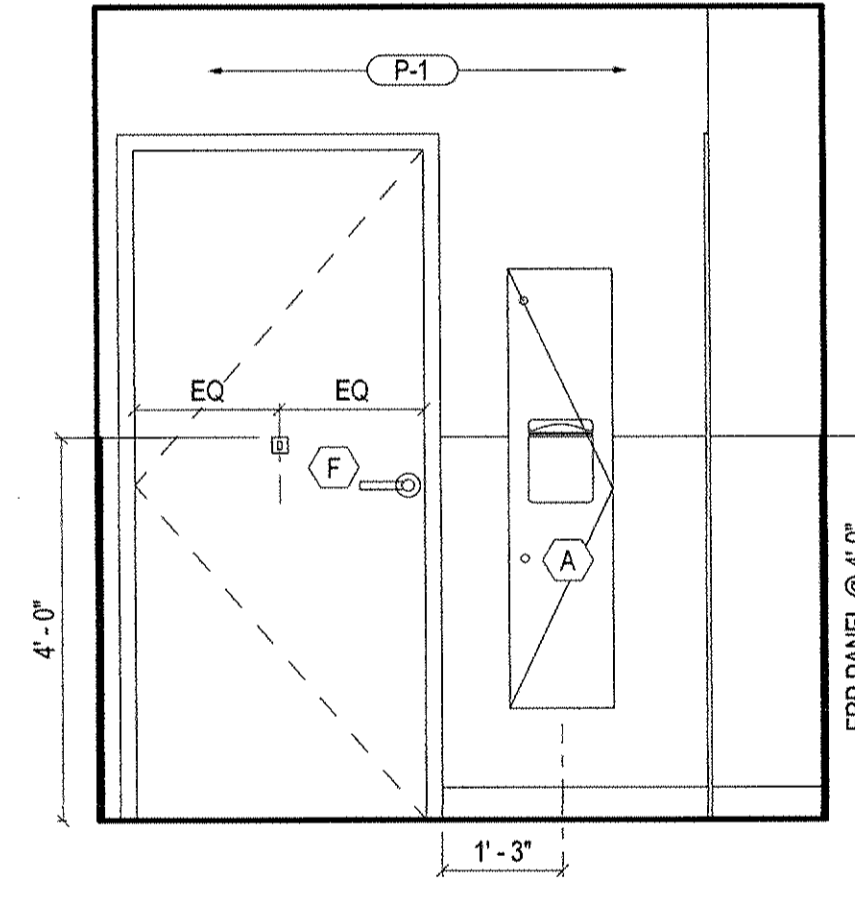
02 BATHROOM FIXTURE SCHEDULE
SCALE: 1/2" = 1'-0"



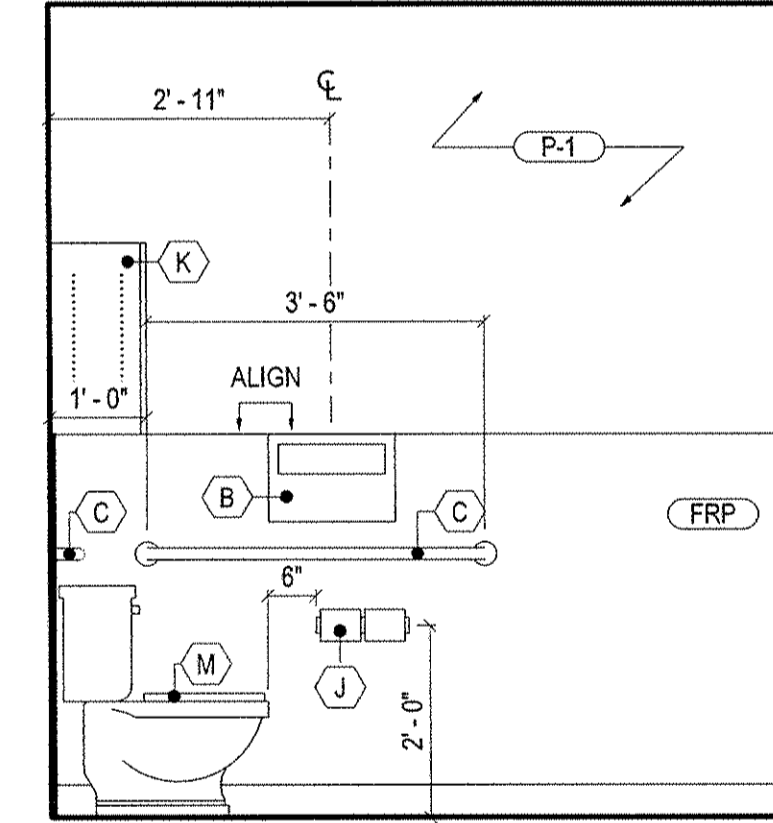
07 RESTROOM 110 - NORTH
SCALE: 1/2" = 1'-0"



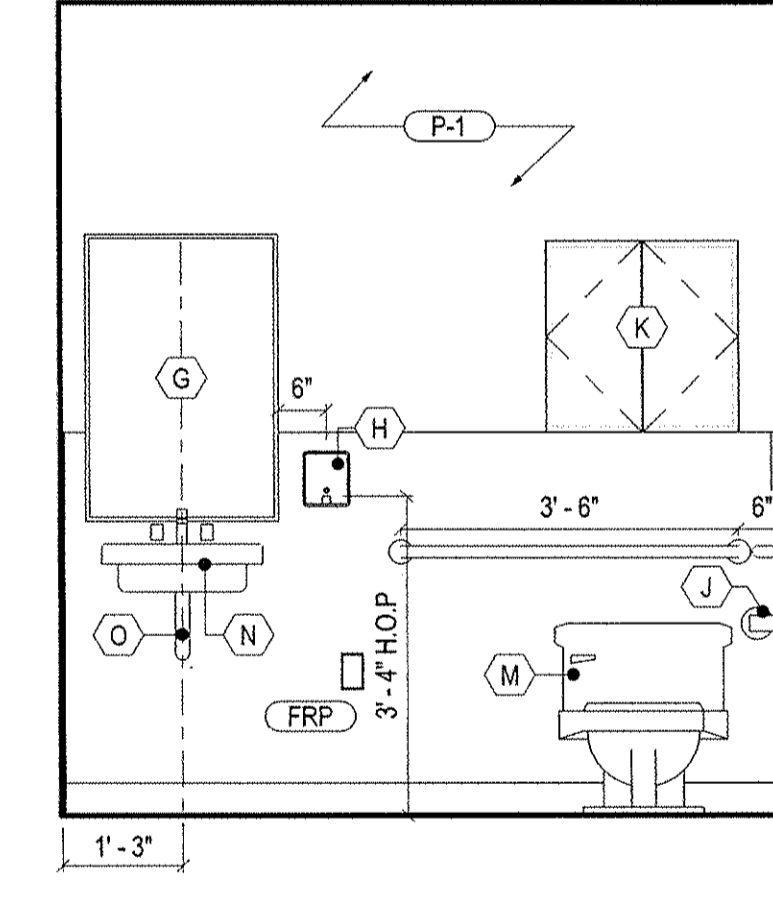
06 RESTROOM 109 - WEST
SCALE: 1/2" = 1'-0"



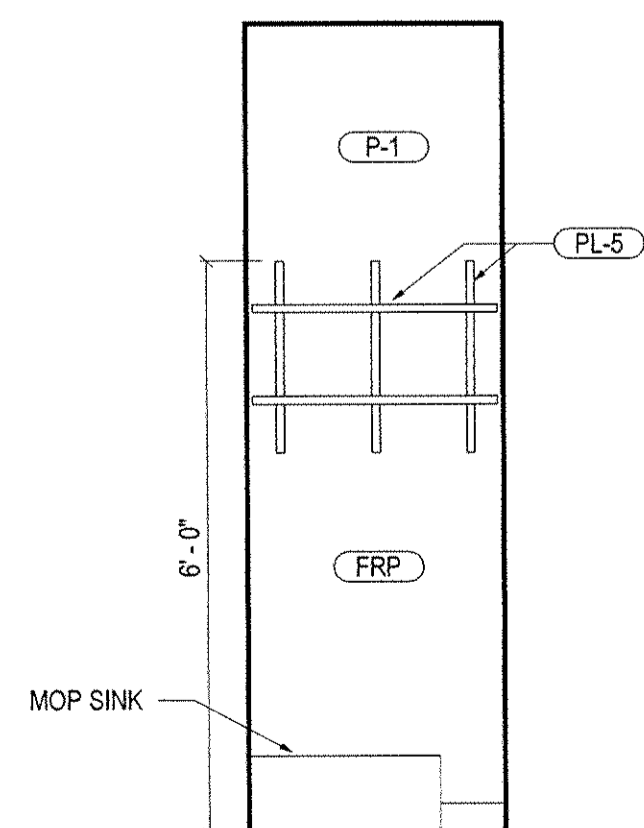
05 RESTROOM 109 - SOUTH
SCALE: 1/2" = 1'-0"



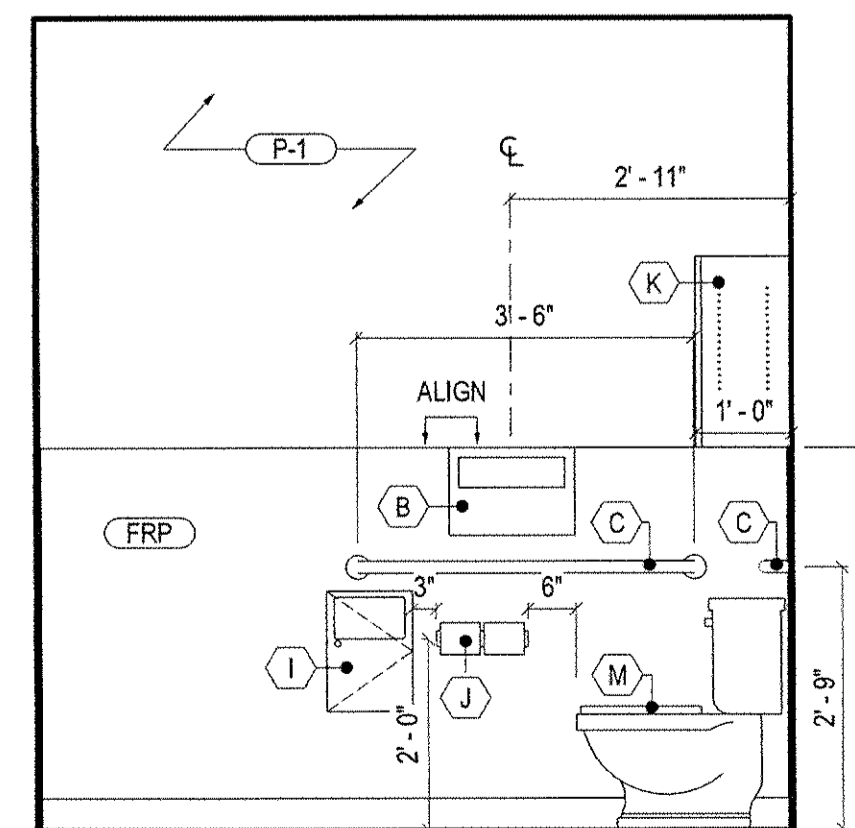
04 RESTROOM 109 - EAST
SCALE: 1/2" = 1'-0"



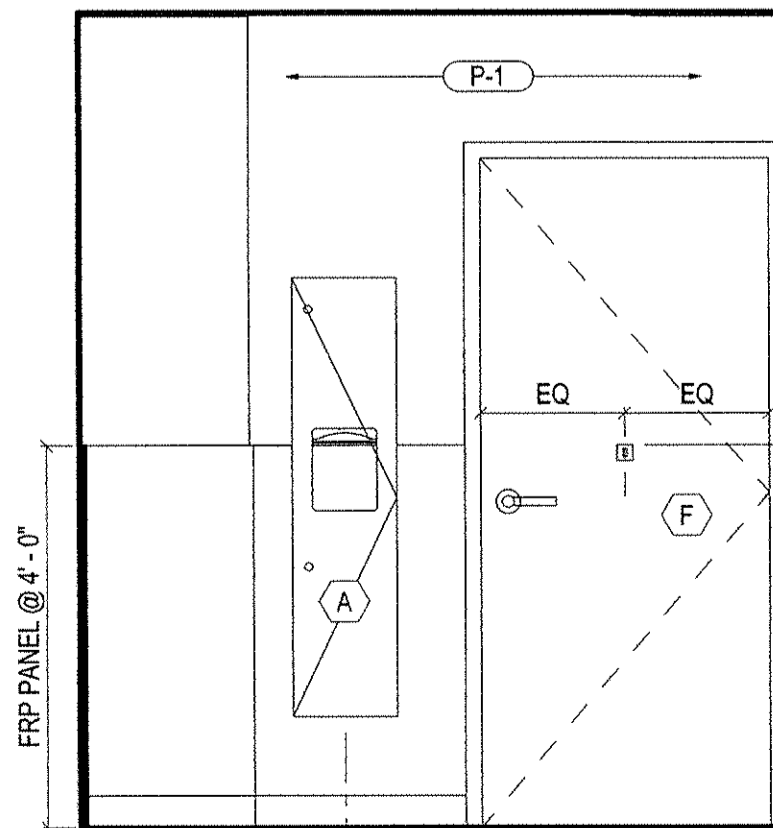
03 RESTROOM 109 - NORTH
SCALE: 1/2" = 1'-0"



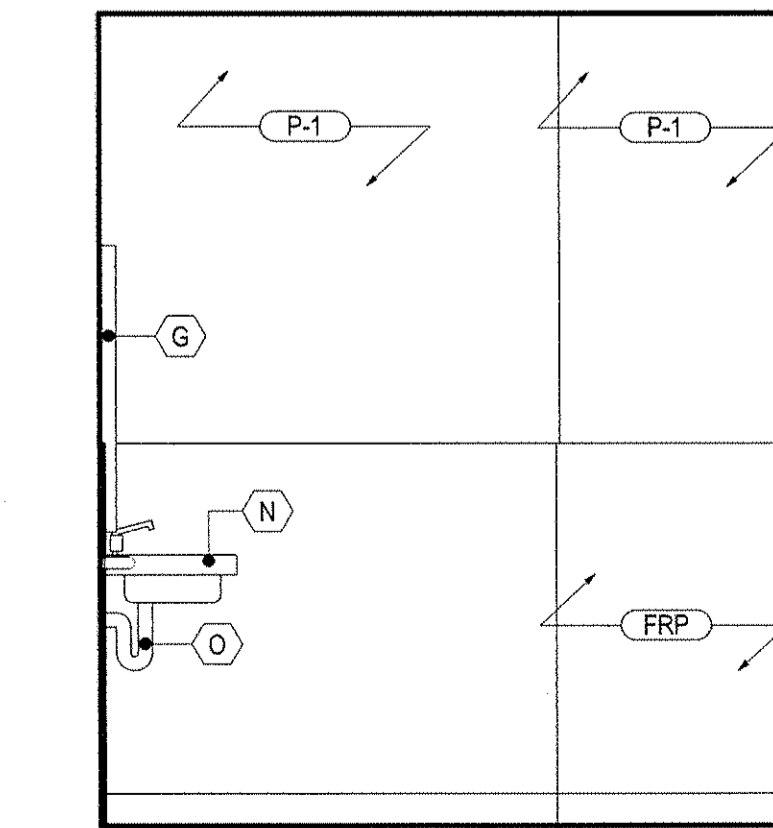
11 JANITORS CLOSET WEST
SCALE: 1/2" = 1'-0"



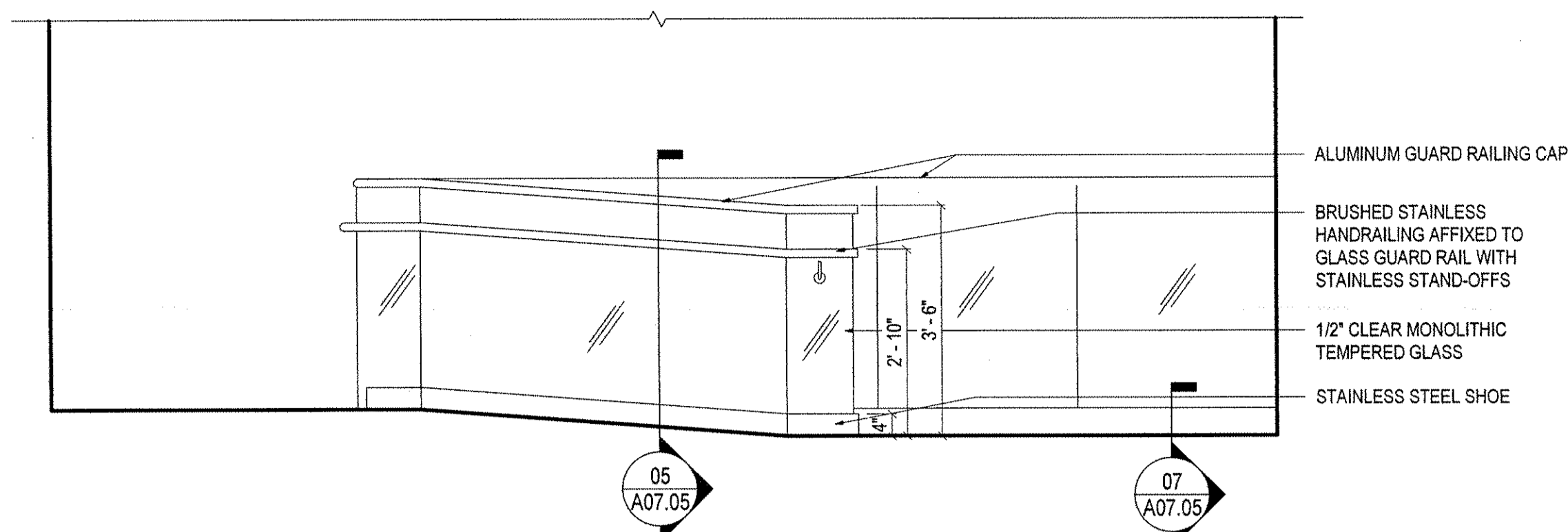
10 RESTROOM 110 - WEST ELEVATION
SCALE: 1/2" = 1'-0"



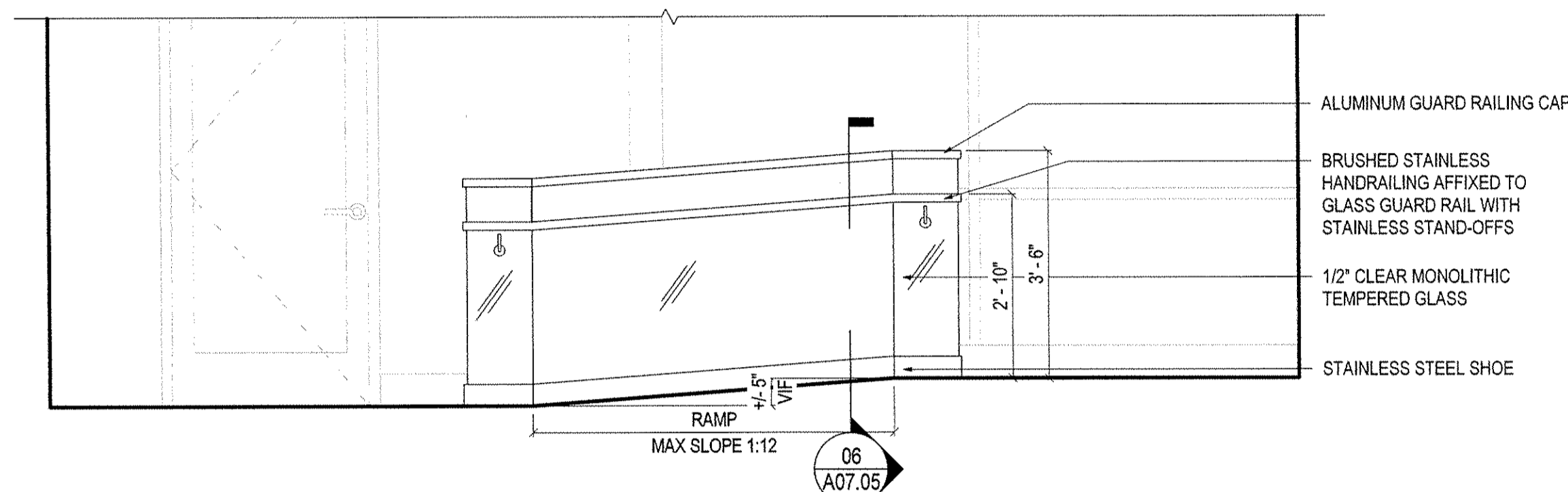
09 RESTROOM 110 SOUTH
SCALE: 1/2" = 1'-0"



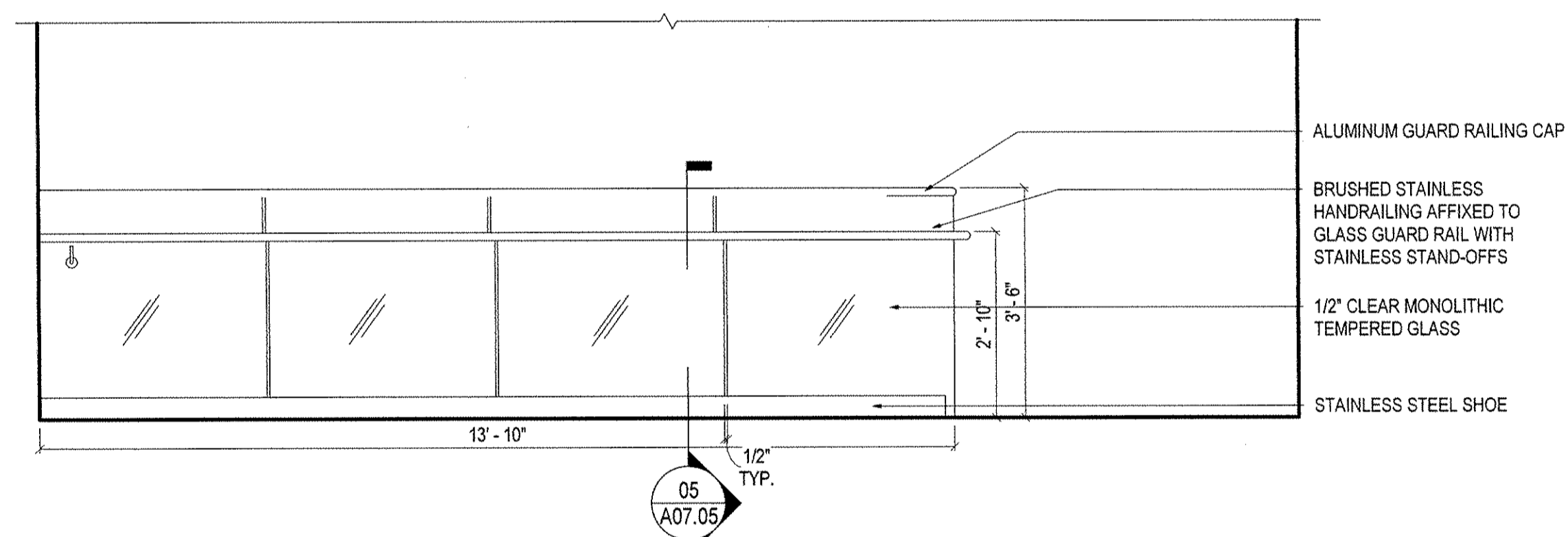
08 RESTROOM 110 EAST
SCALE: 1/2" = 1'-0"



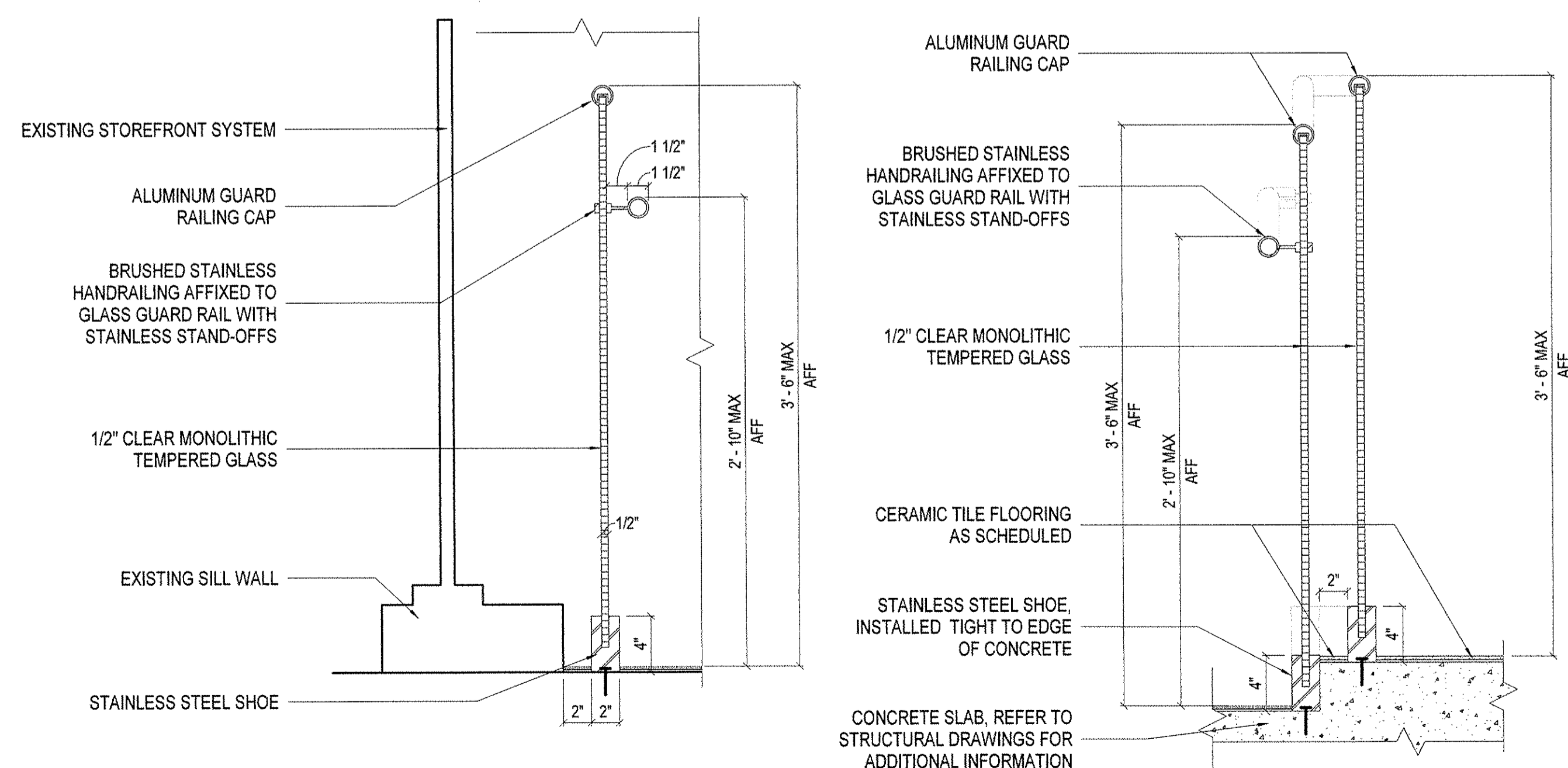
02 RAMP & RAILING ELEVATION - EAST
SCALE: 1/2" = 1'-0"



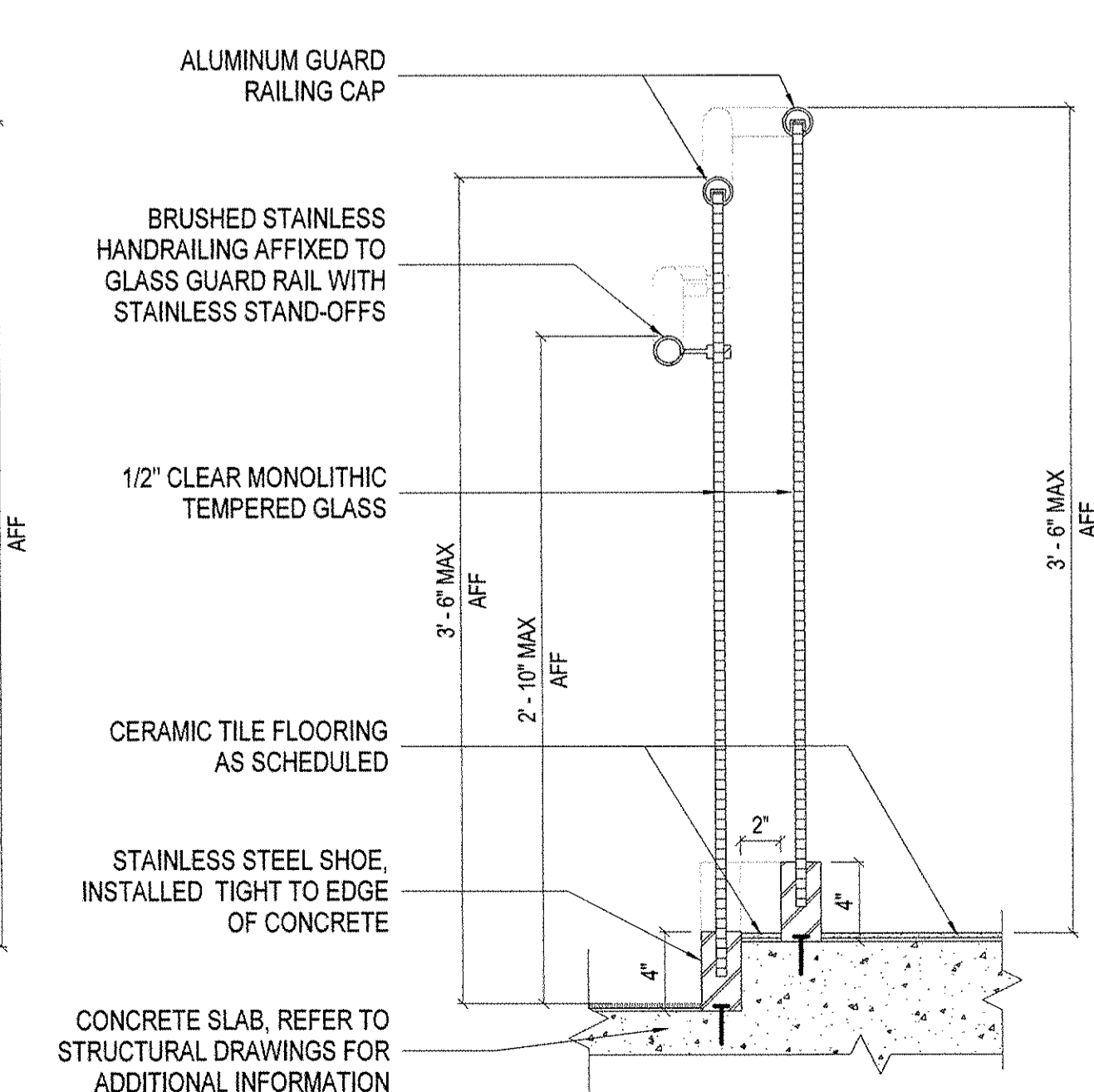
03 RAMP & RAILING ELEVATION - WEST
SCALE: 1/2" = 1'-0"



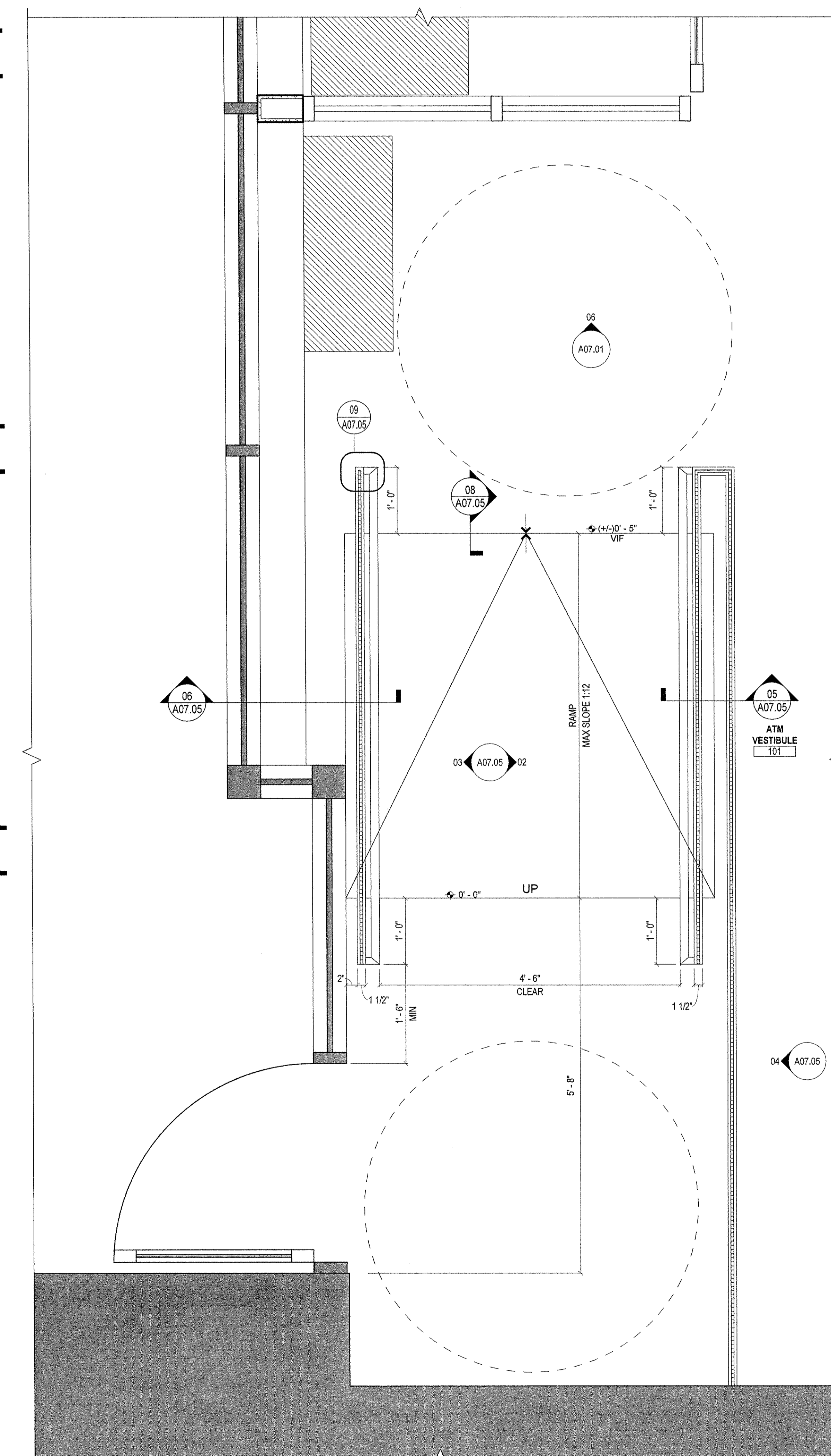
04 RAILING ELEVATION - EAST
SCALE: 1/2" = 1'-0"



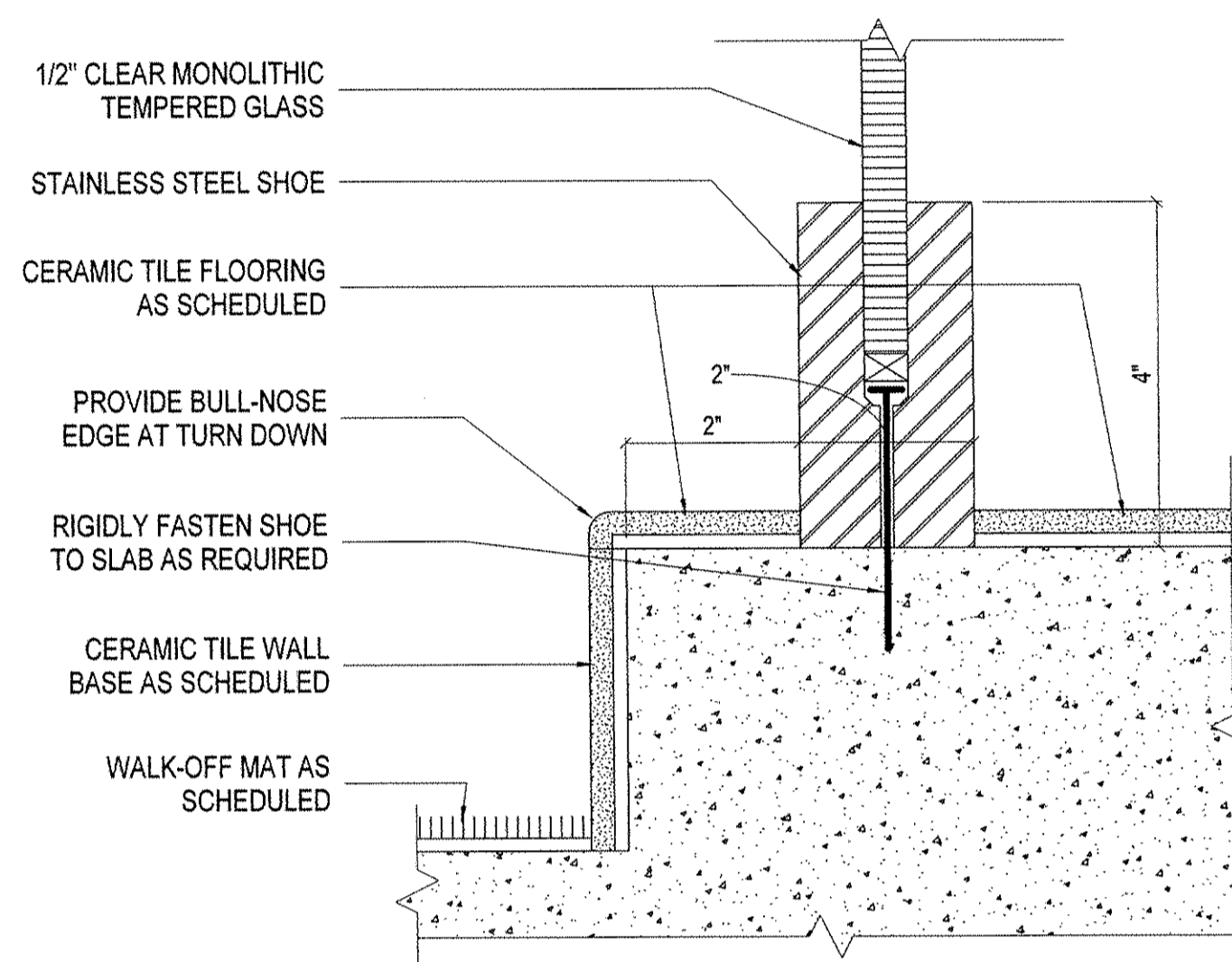
06 HAND RAILING DETAIL - WEST
SCALE: 1 1/2" = 1'-0"



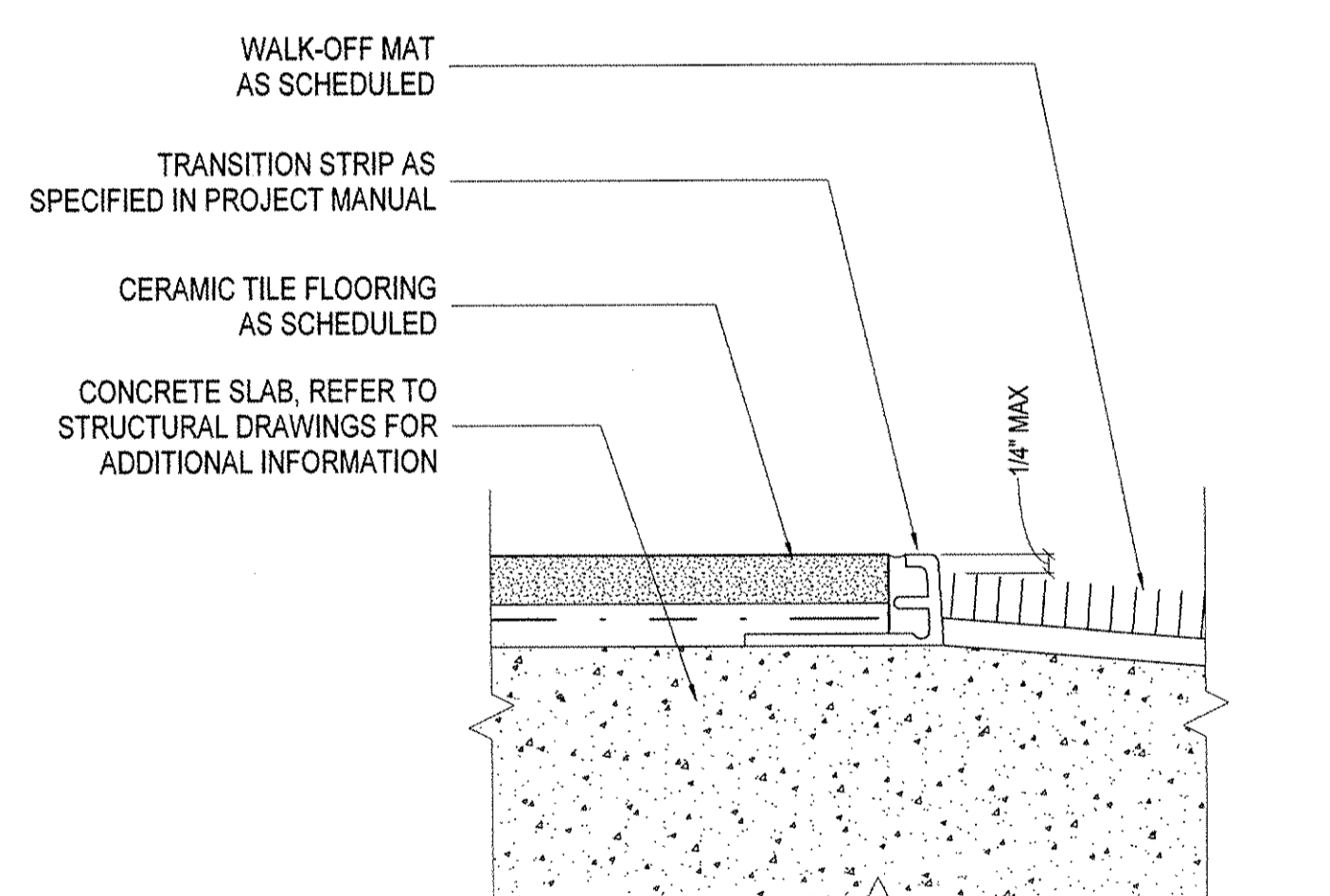
05 HAND RAILING DETAIL - EAST
SCALE: 1 1/2" = 1'-0"



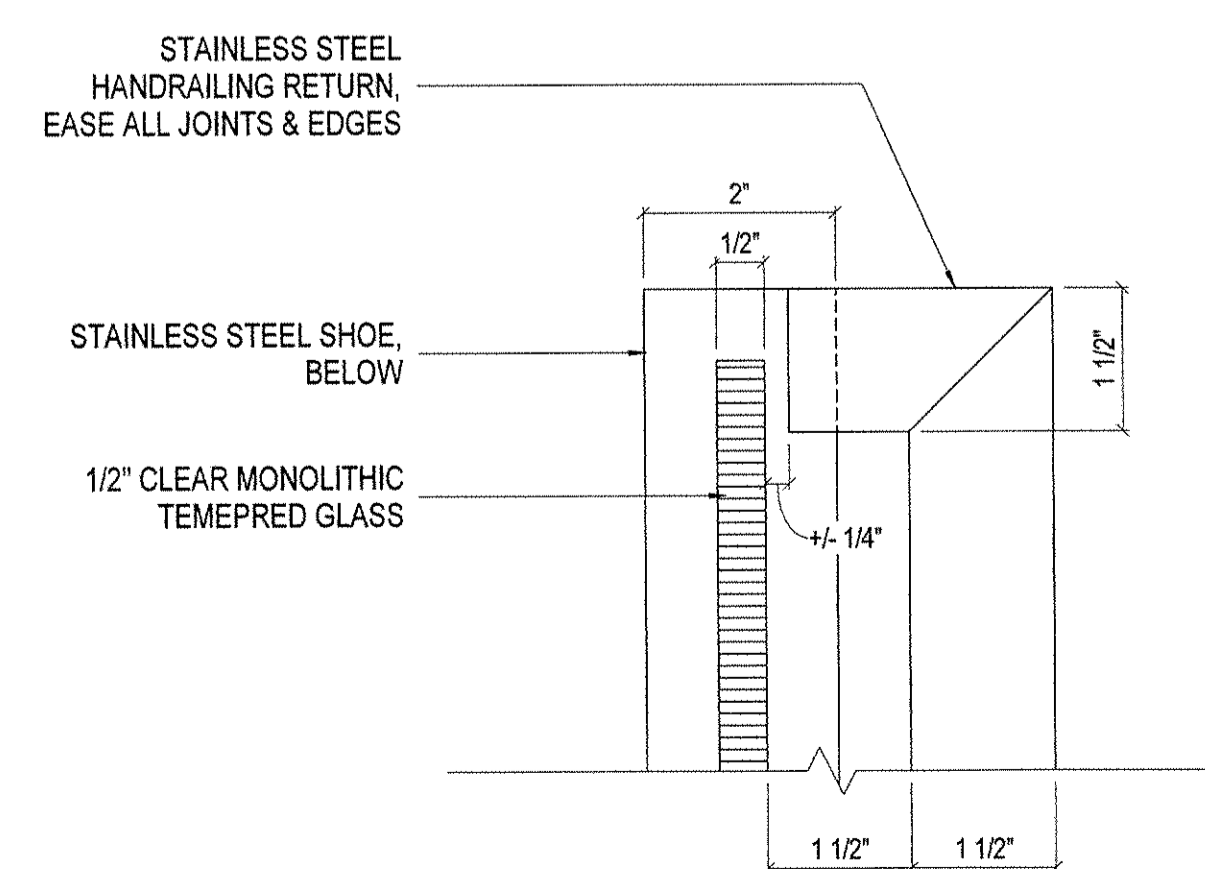
01 ENLARGED PLAN-RAMP
SCALE: 1" = 1'-0"



07 RAMP LANDING LEVEL CHANGE DETAIL
SCALE: 6" = 1'-0"



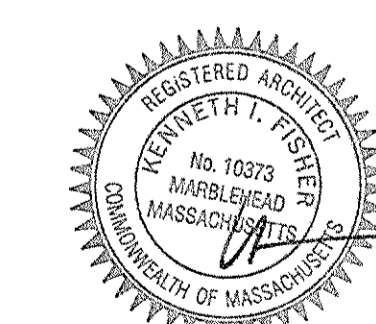
08 TOP OF RAMP - MATERIAL TRANSITION
SCALE: 1/2" = 1'-0"



09 TYP. HAND RAILING TERMINATION DETAIL
SCALE: 6" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

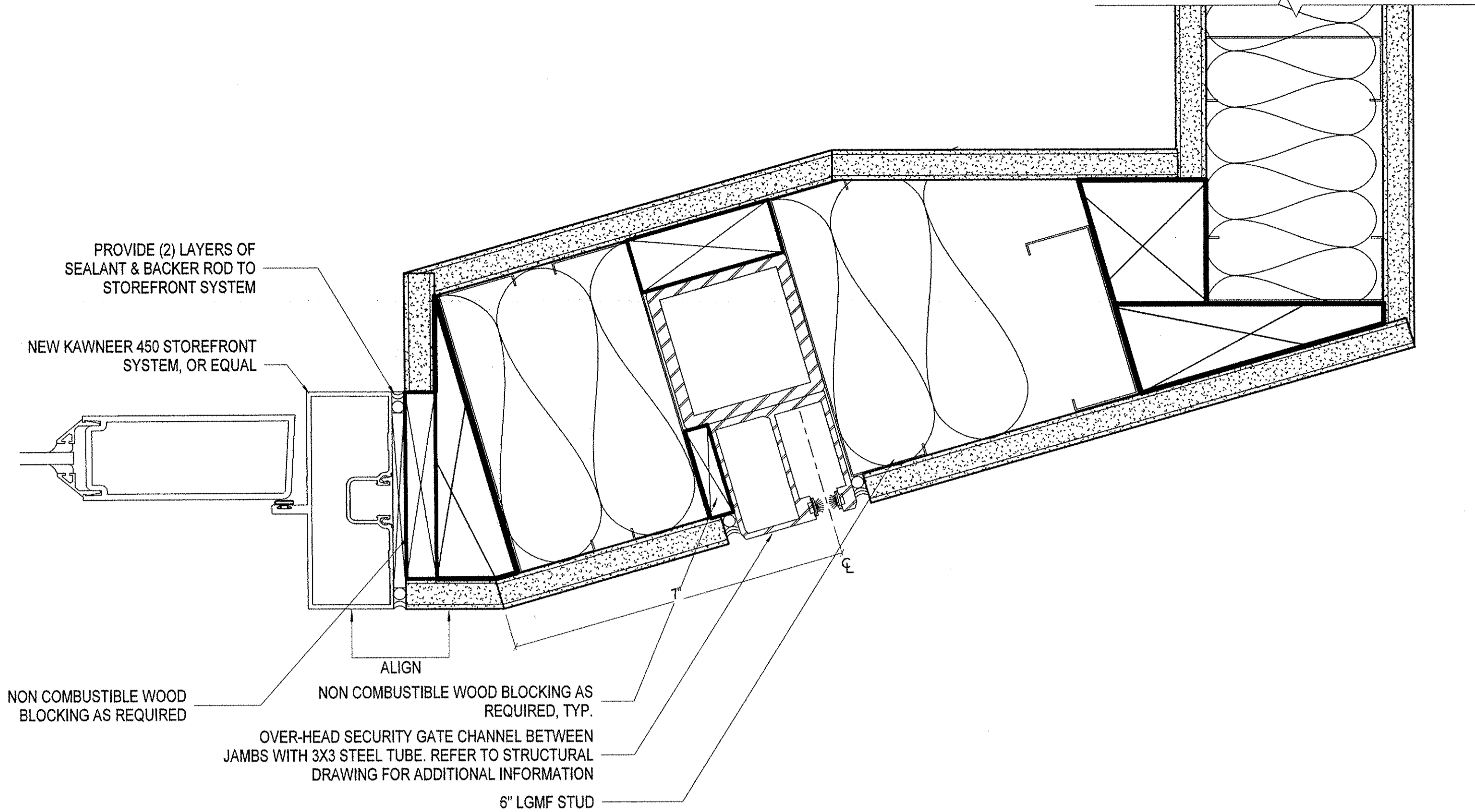
Seal / Signature



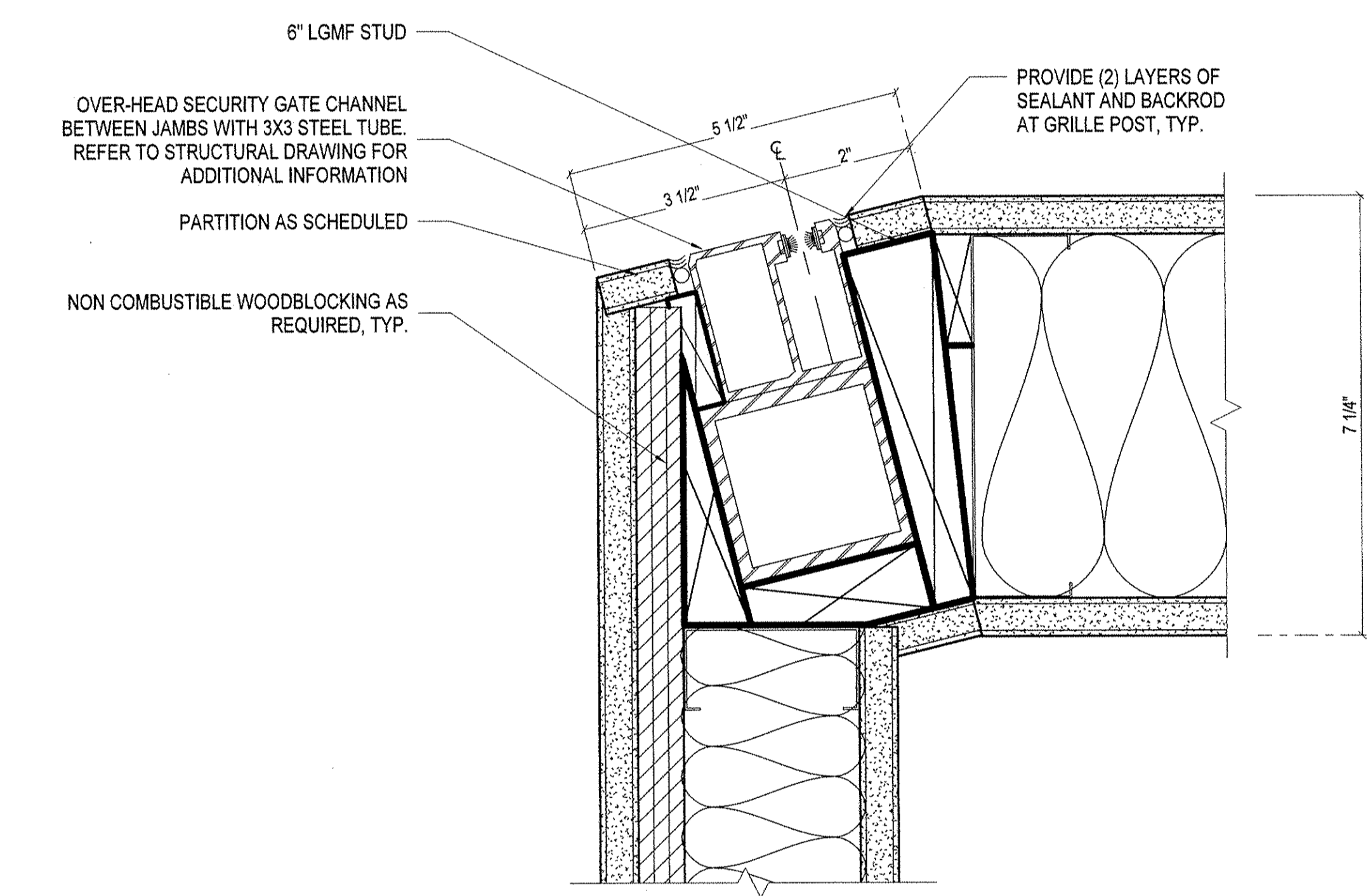
Project Name
Santander - Central Square, Cambridge
Project Number
11.6850.127
Description
ENLARGED RAMP PLAN & ELEVATIONS

Scale
As indicated

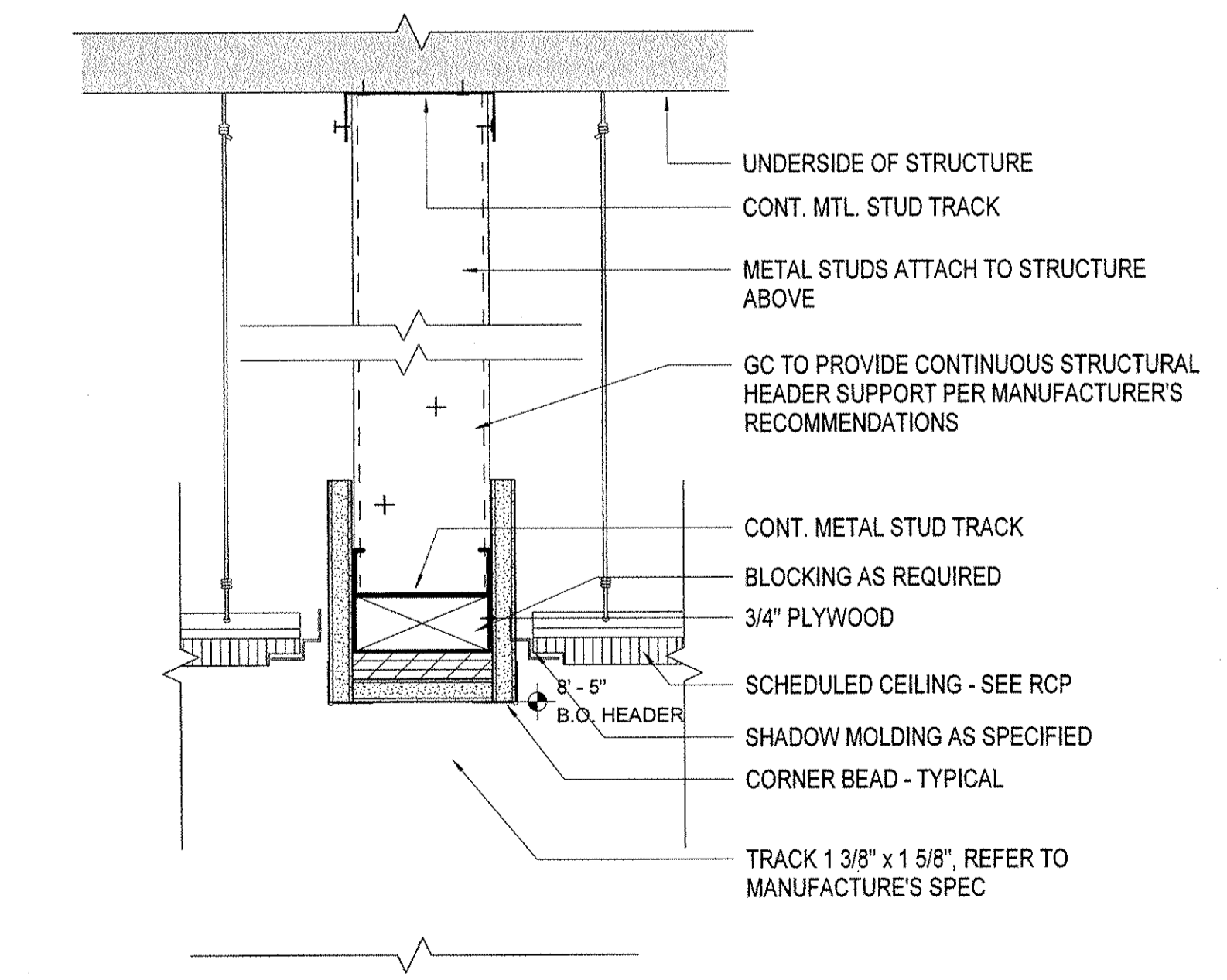
A07.05



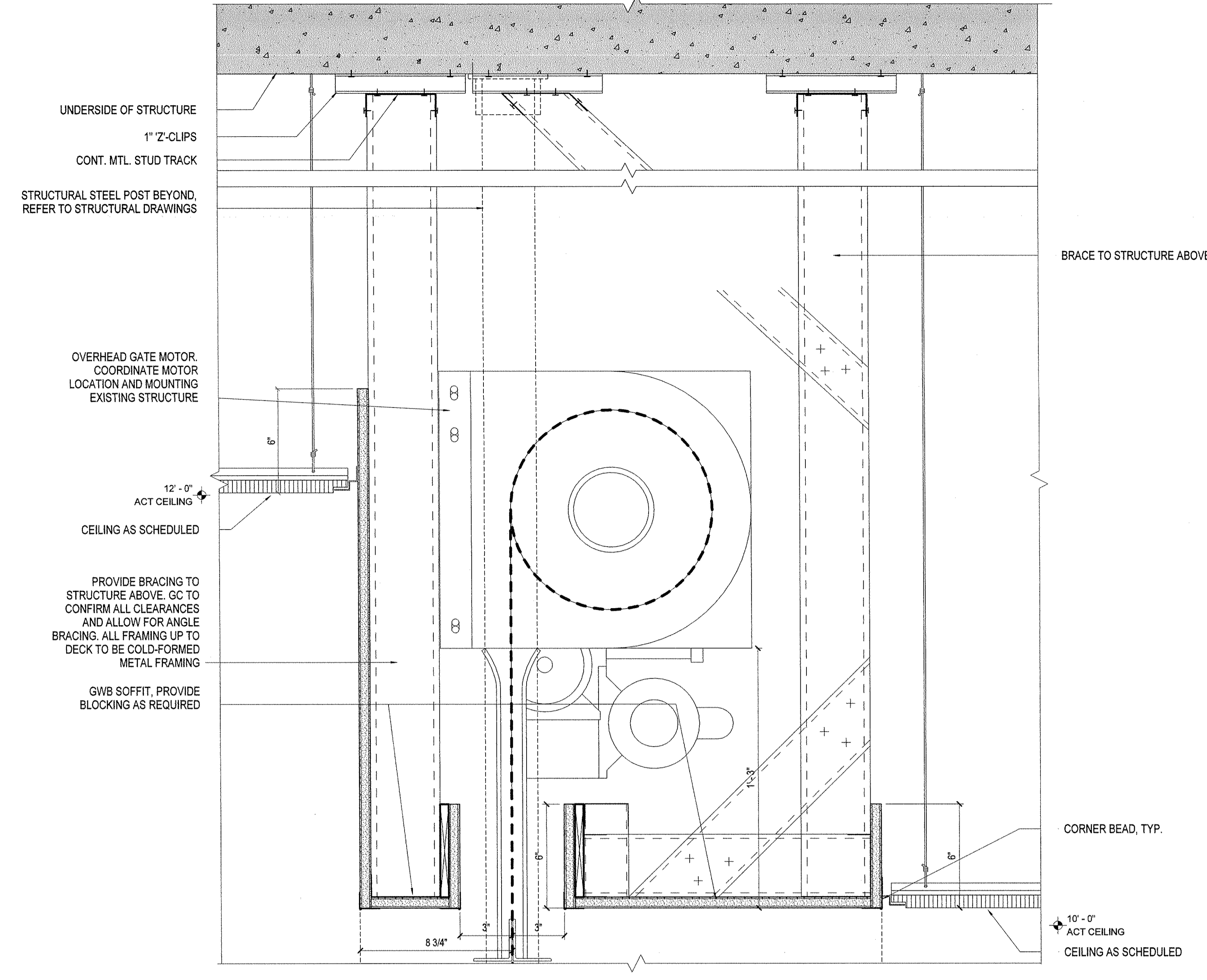
02 INTERIOR STOREFRONT HINGE @ GATE POST DETAIL
SCALE: 6" = 1'-0"



03 GATE POST DETAIL AT ATM WALL
SCALE: 6" = 1'-0"



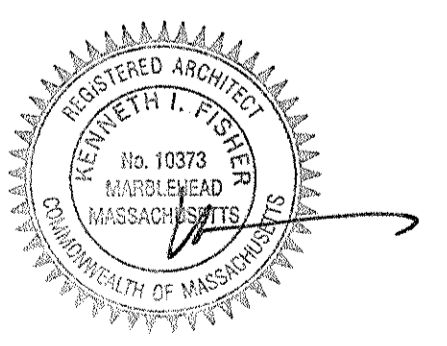
04 SECURITY GRILL HEADER DETAIL
SCALE: 3" = 1'-0"



01 SECURITY GATE DETAIL
SCALE: 3" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name
Santander - Central Square, Cambridge

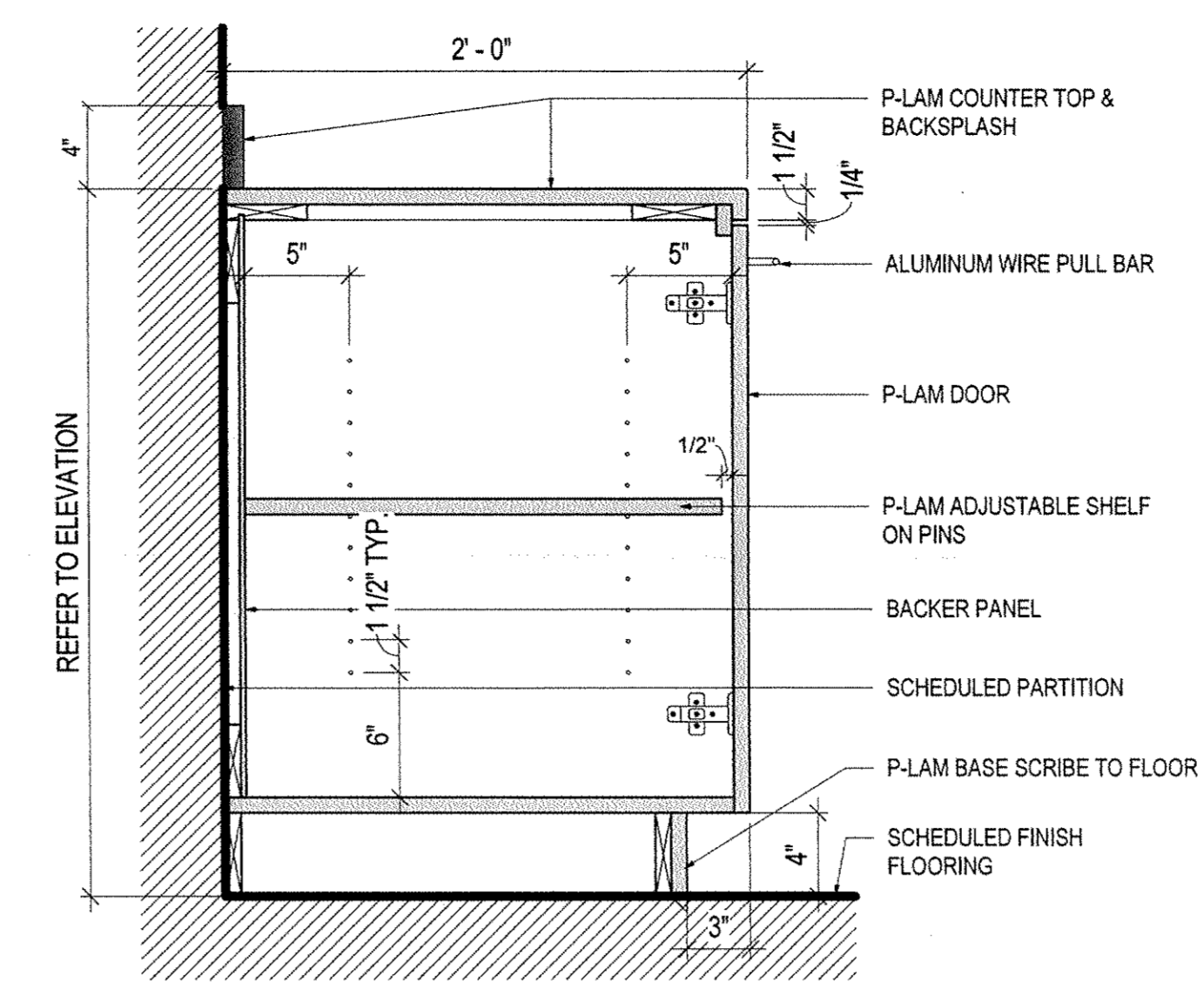
Project Number
11.6850.127

Description
SECURITY GATE DETAILS

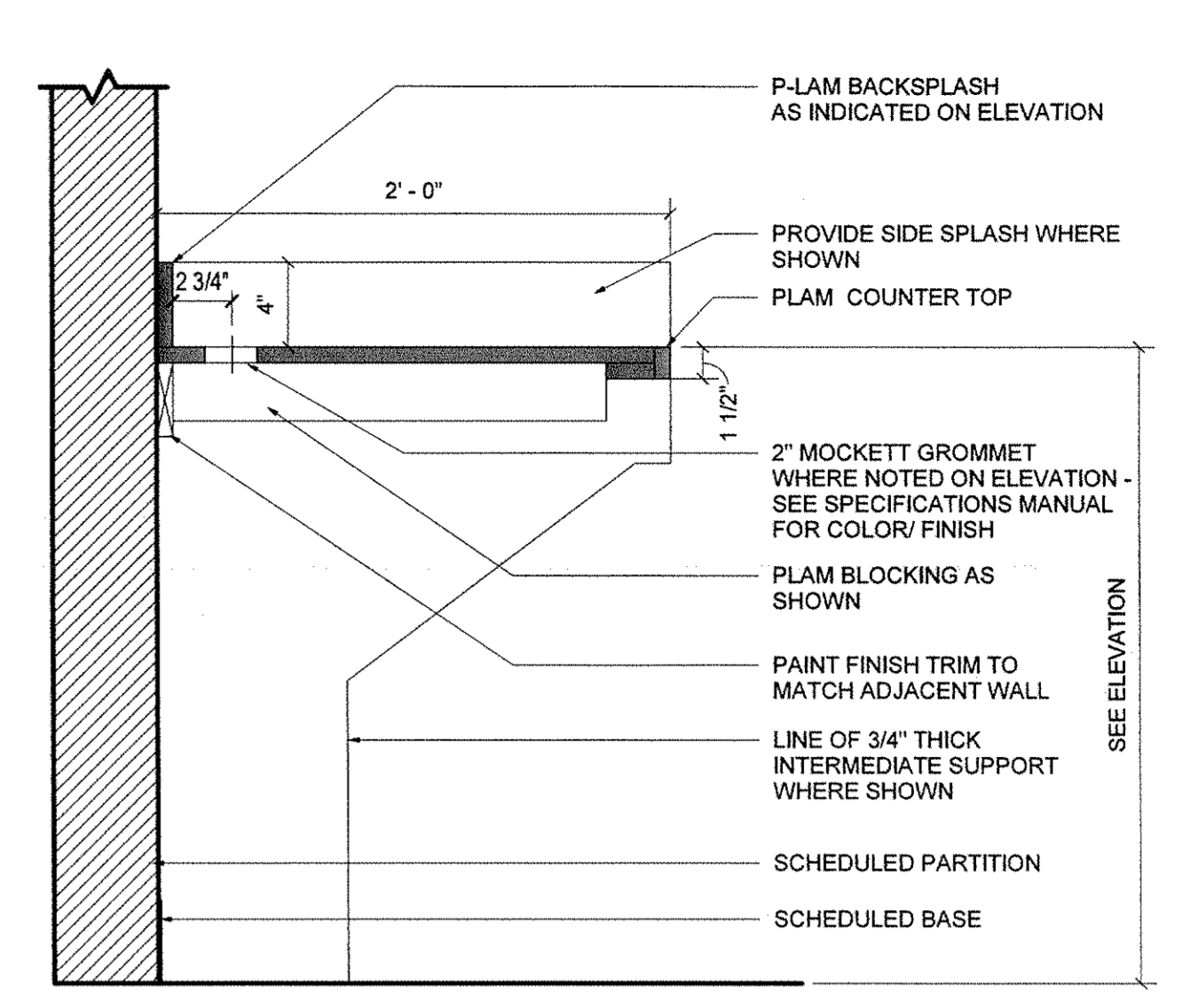
Scale
As indicated

A09.01

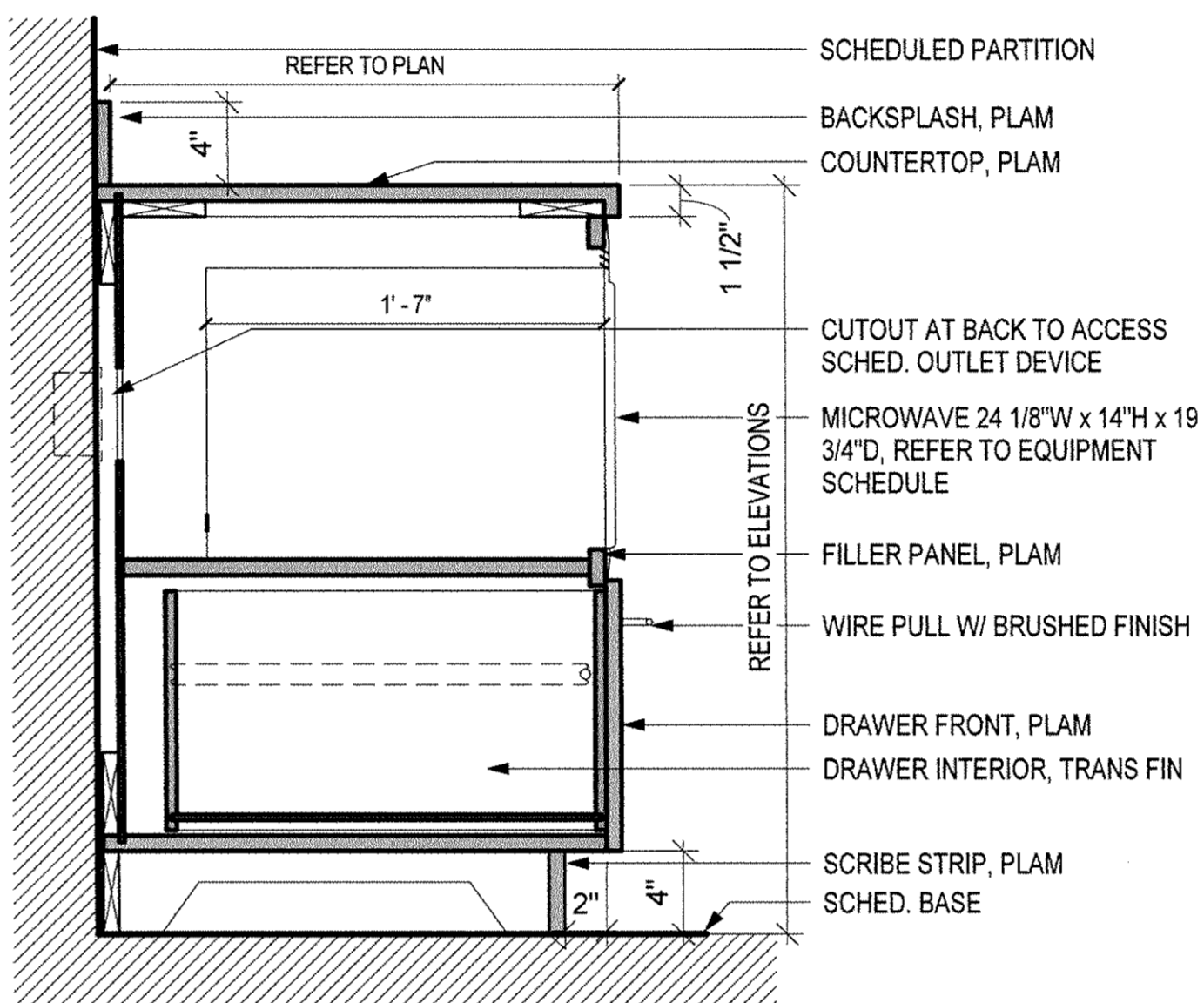
Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



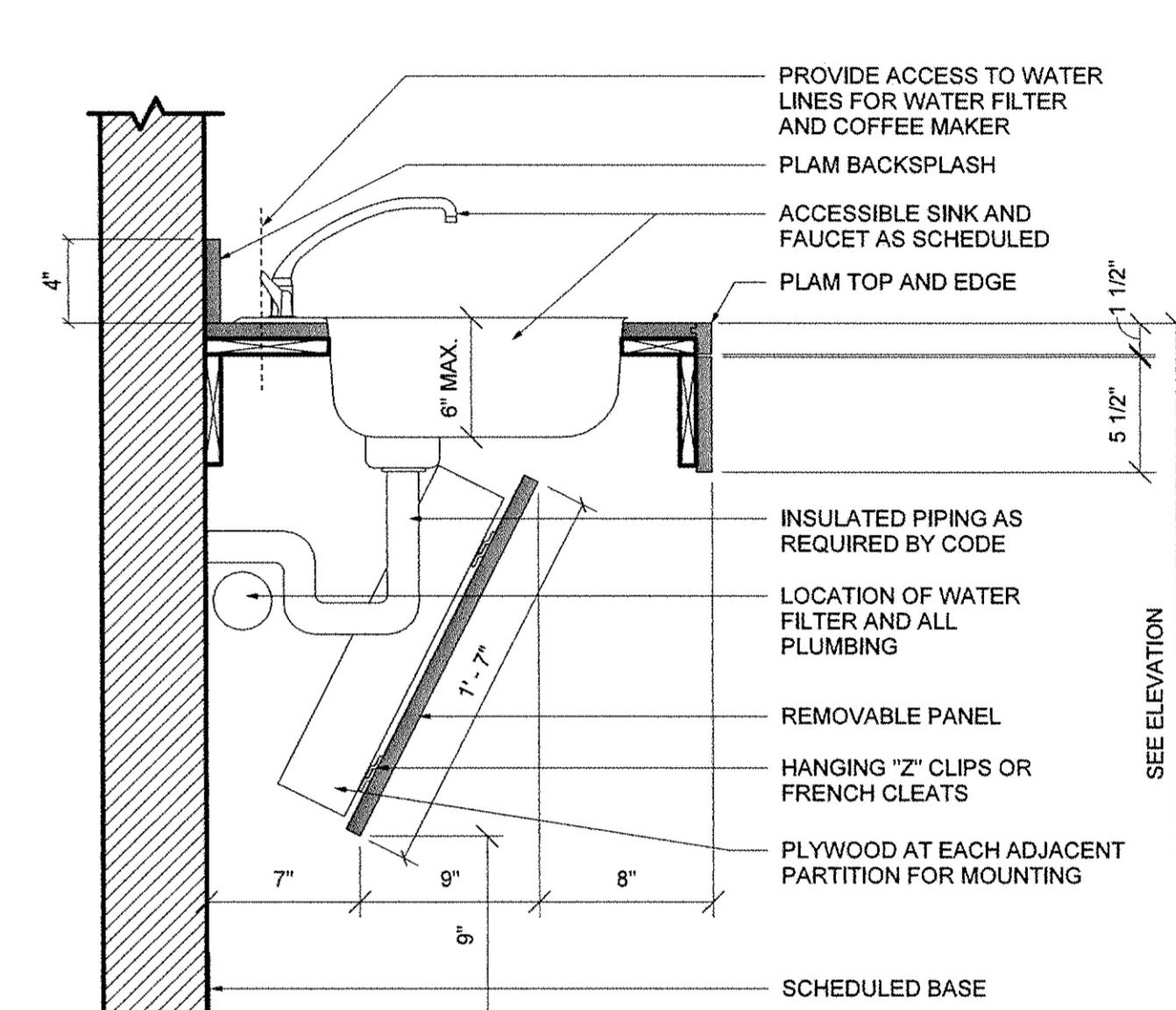
BASE CABINET WITH SHELVING 05
SCALE: 1 1/2" = 1'-0"



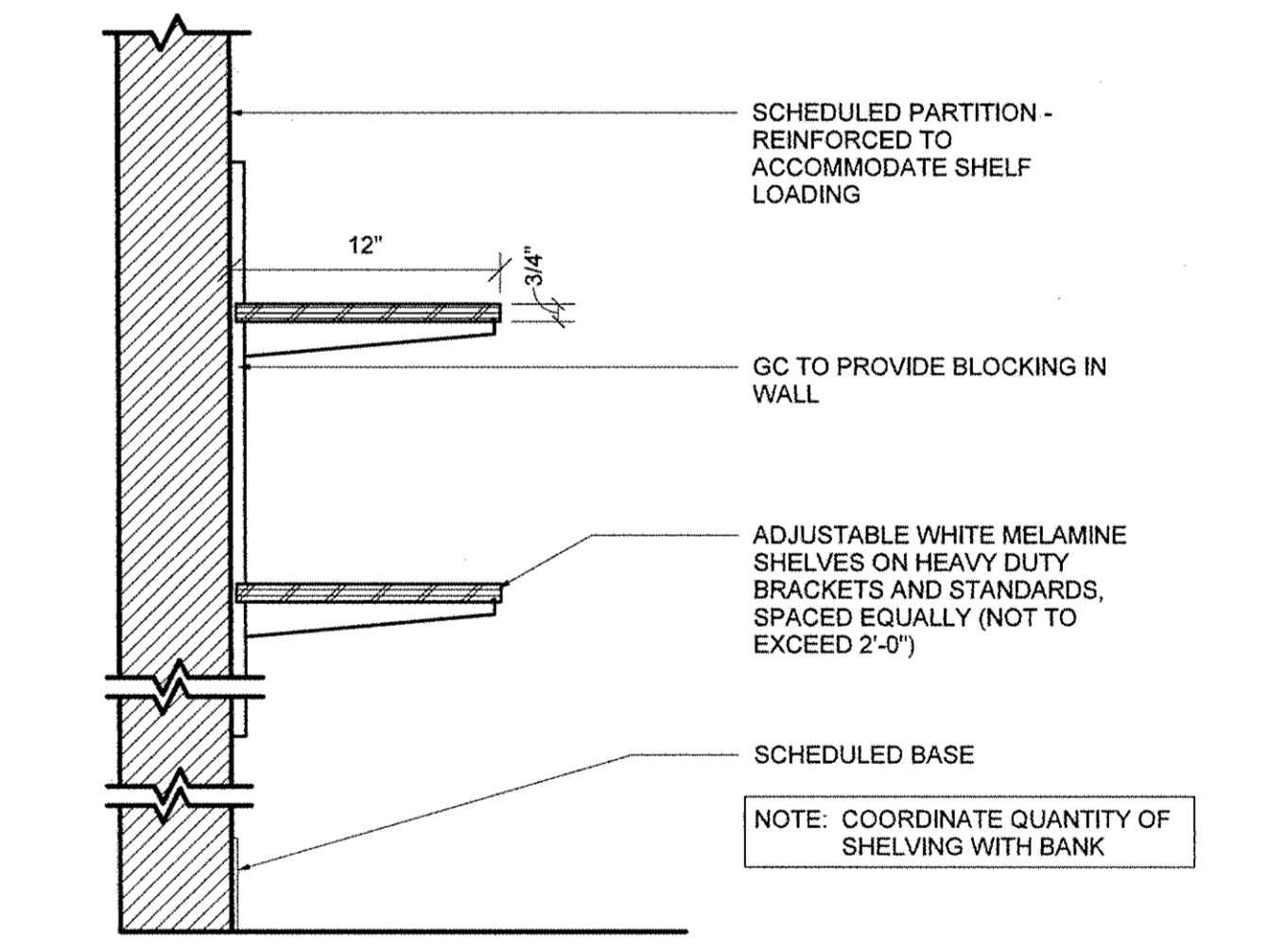
MILLWORK OPEN COUNTER 01
SCALE: 1 1/2" = 1'-0"



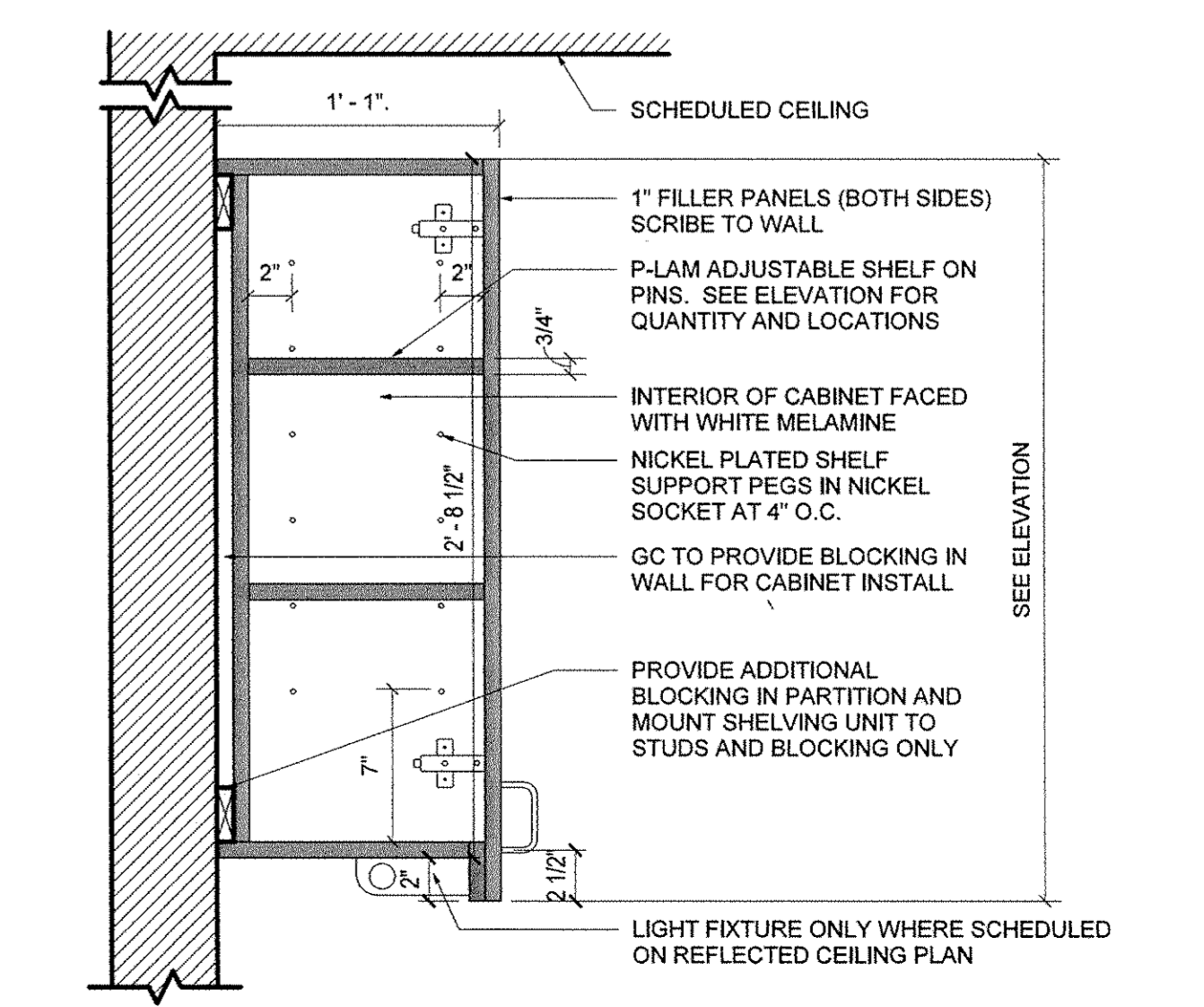
MICROWAVE BASE MILLWORK 06
SCALE: 1 1/2" = 1'-0"



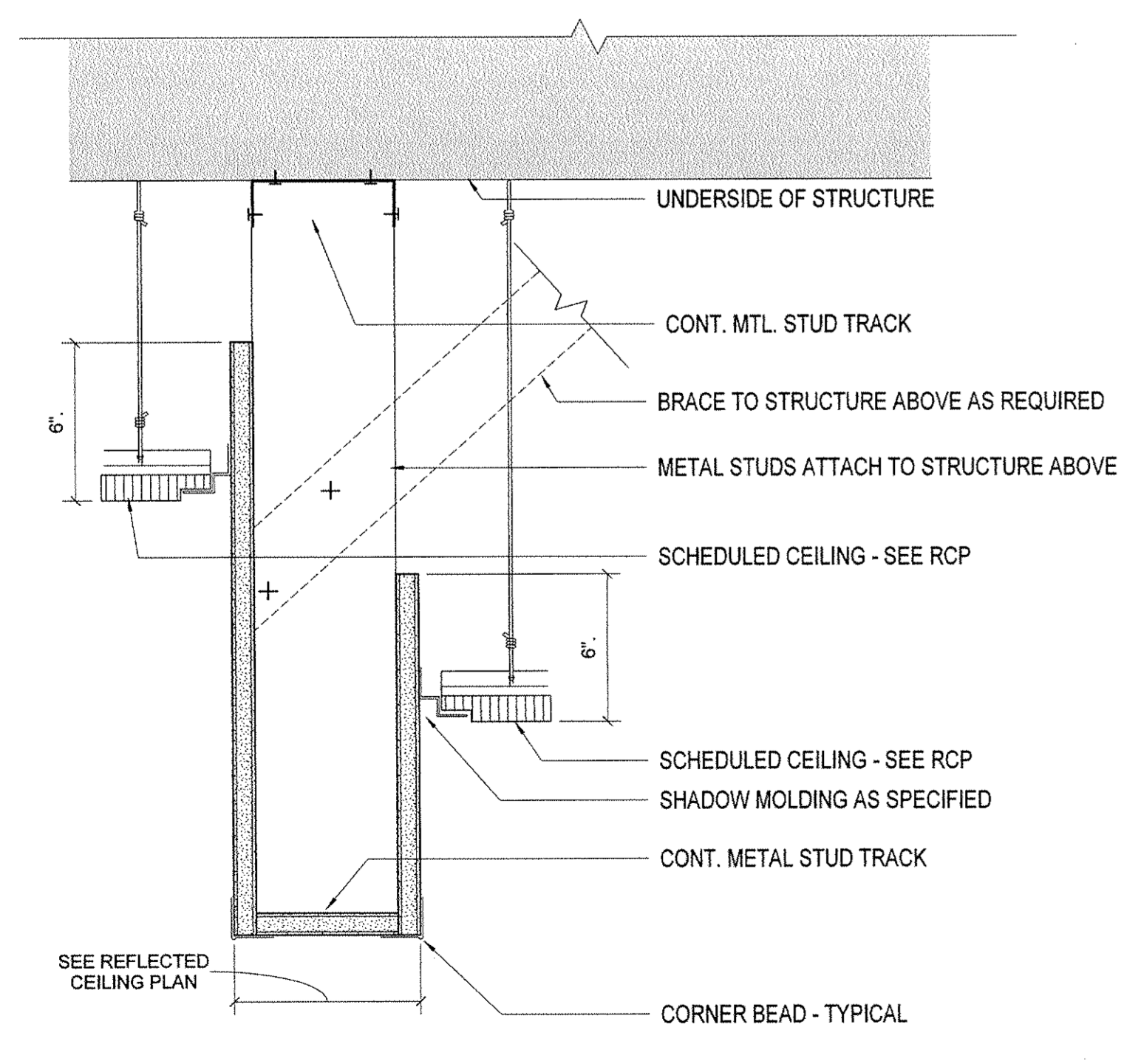
ADA BASE CABINET SINK 02
SCALE: 1 1/2" = 1'-0"



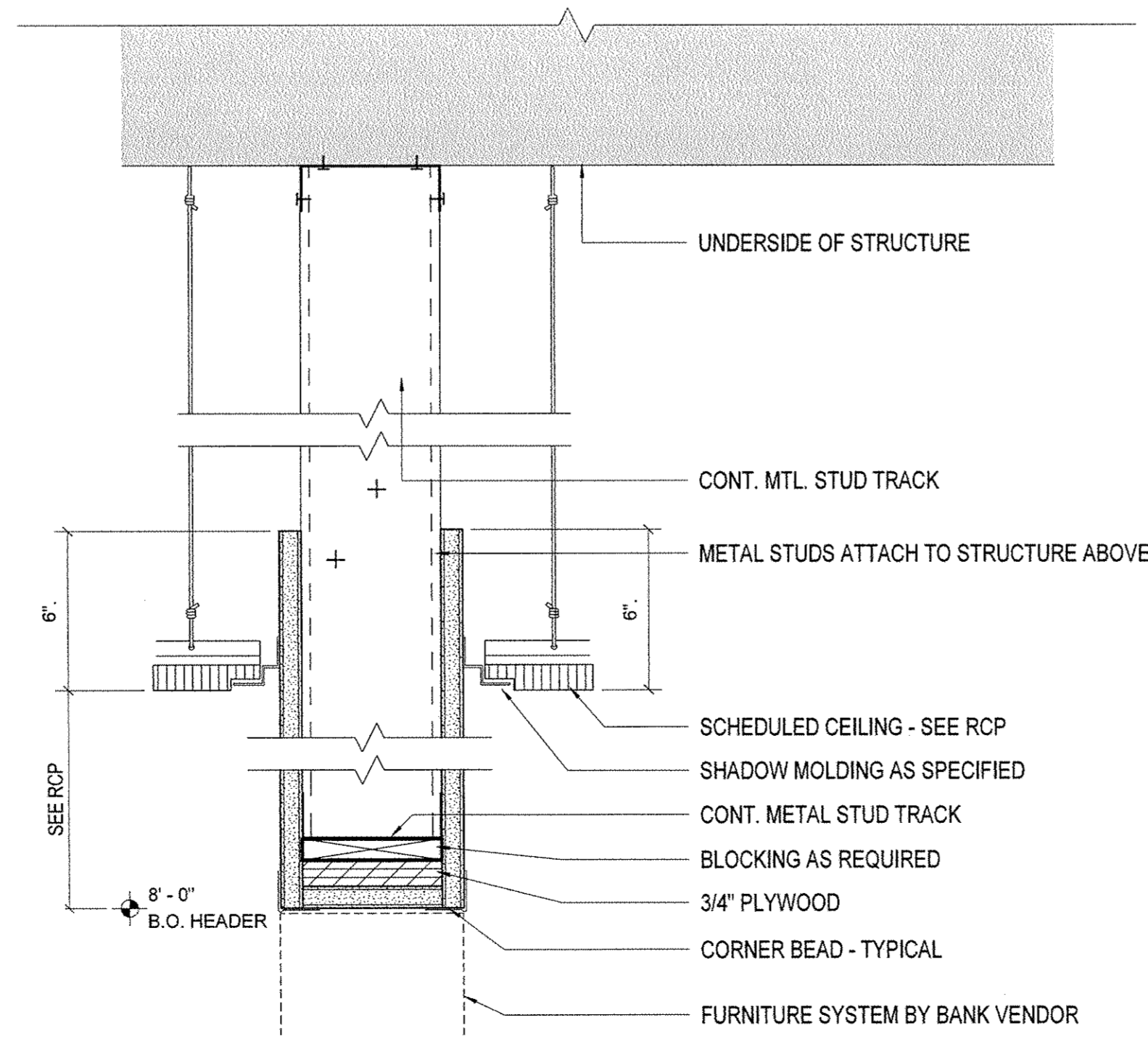
ADJUSTABLE WALL SHELVES 03
SCALE: 1 1/2" = 1'-0"



UPPER SHELVING UNIT1 04
SCALE: 1 1/2" = 1'-0"



08 ACT-GWB-ACT TRANSITION
SCALE: 3" = 1'-0"



07 DETAIL @ GWB HEADER
SCALE: 3" = 1'-0"

3/22/2019 3:55:49 PM I:\gensler\project\Revit\user\kmod\2019\02\Santander - Central Square, Cambridge, R18_Megan_Jewell@gensler.com.rvt

Seal / Signature

Project Name
Santander - Central Square, Cambridge

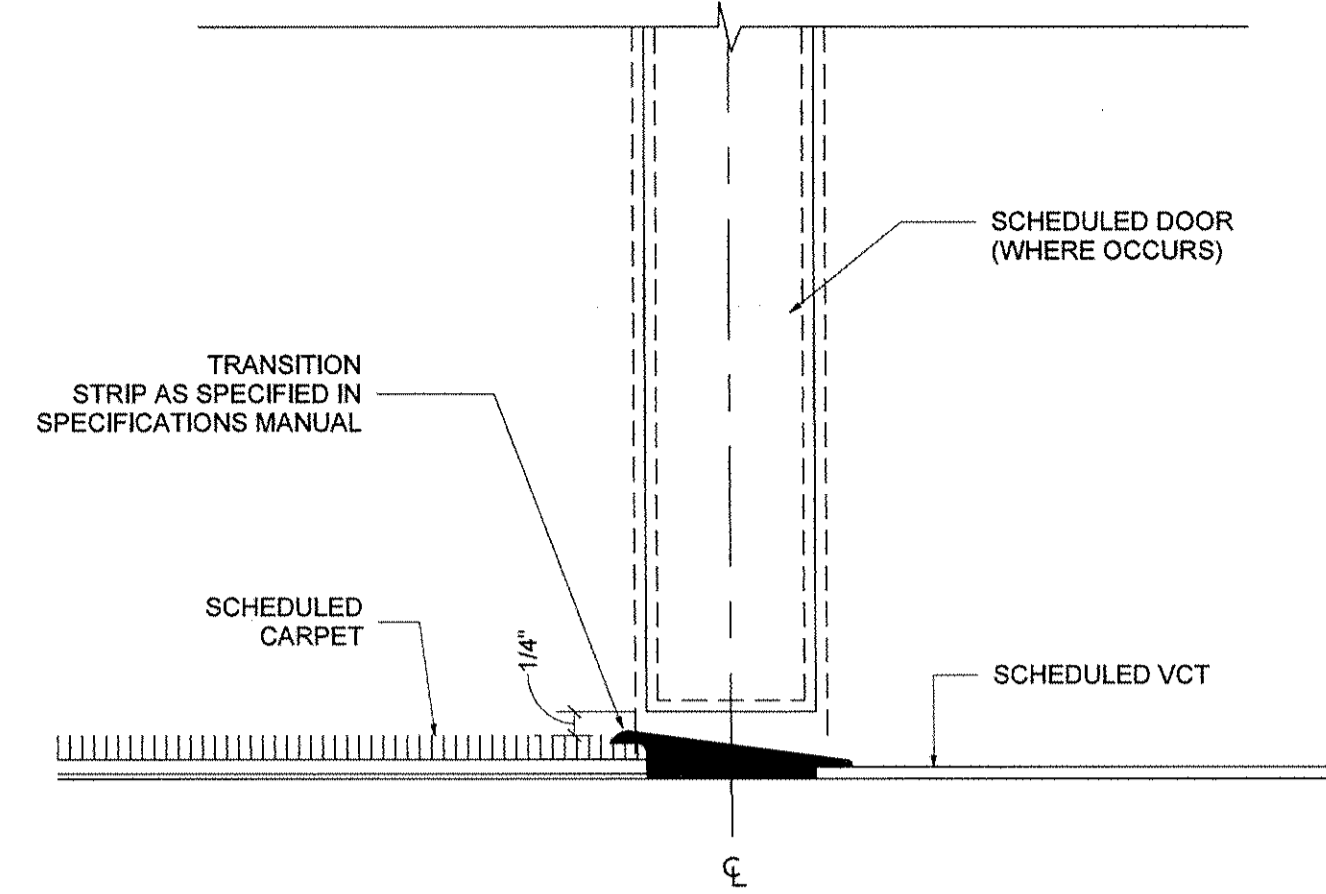
Project Number
11.6850.127

Description
CEILING & MILLWORK DETAILS

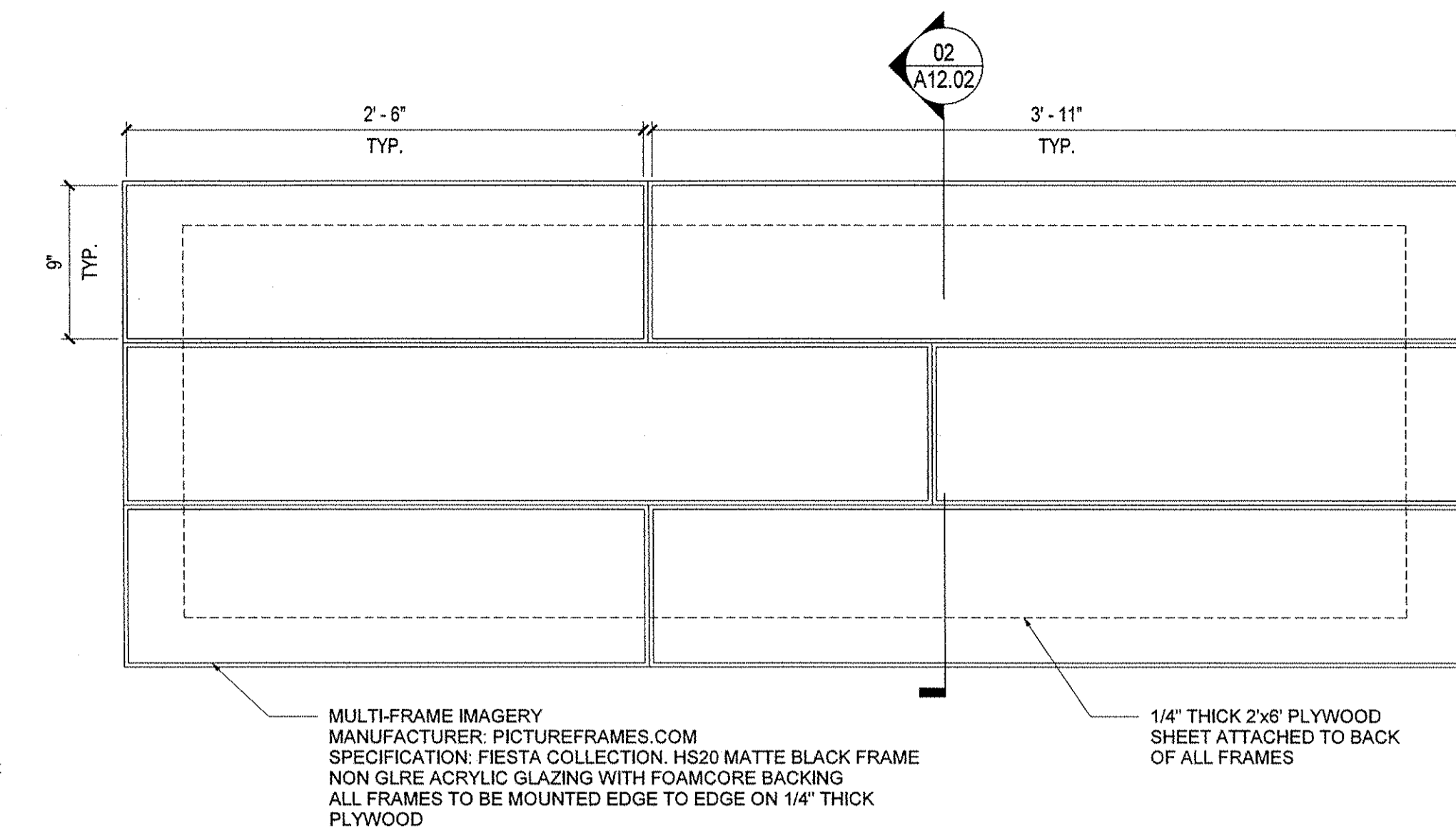
Scale
As indicated

A12.01

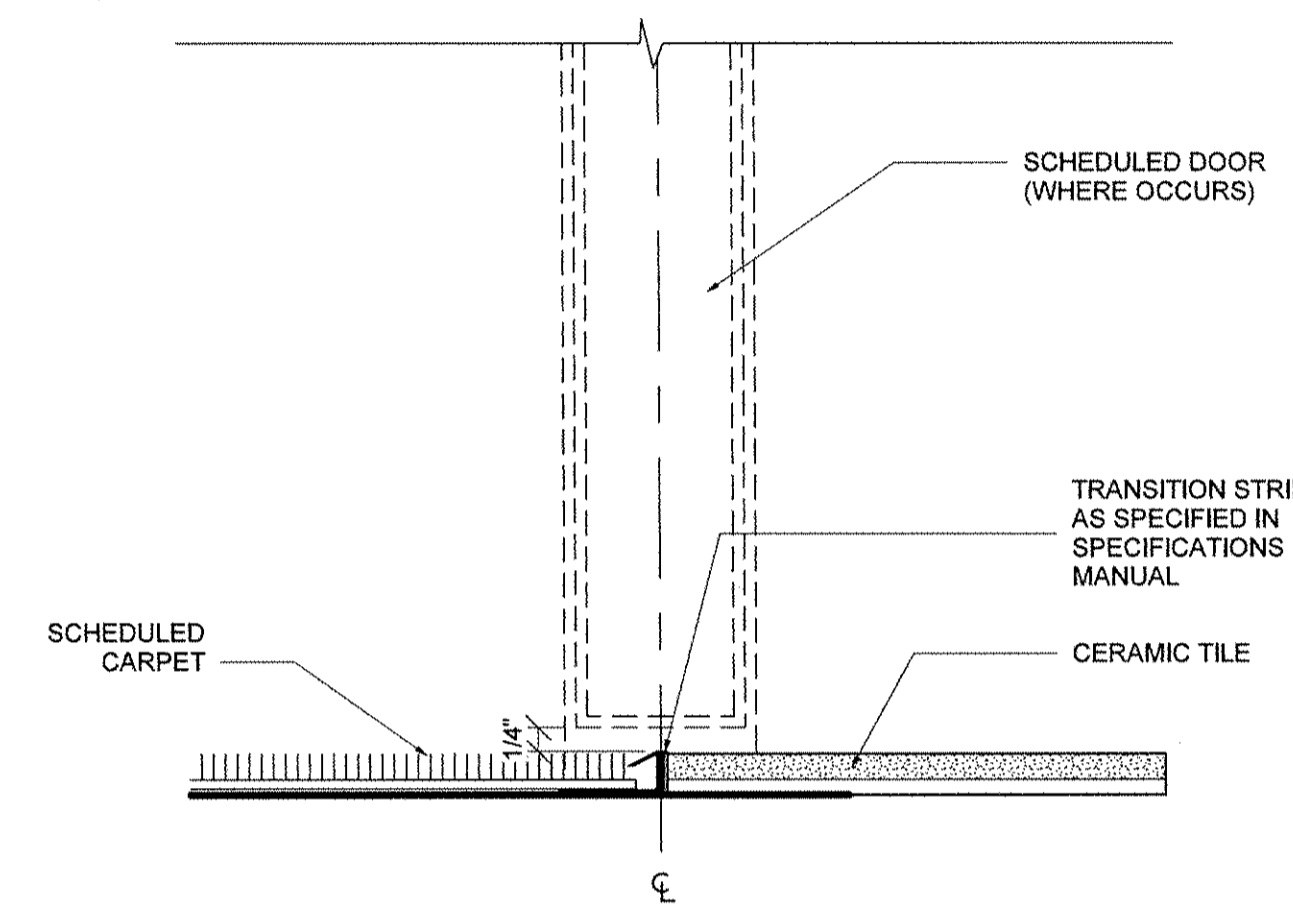
© 2019 Gensler



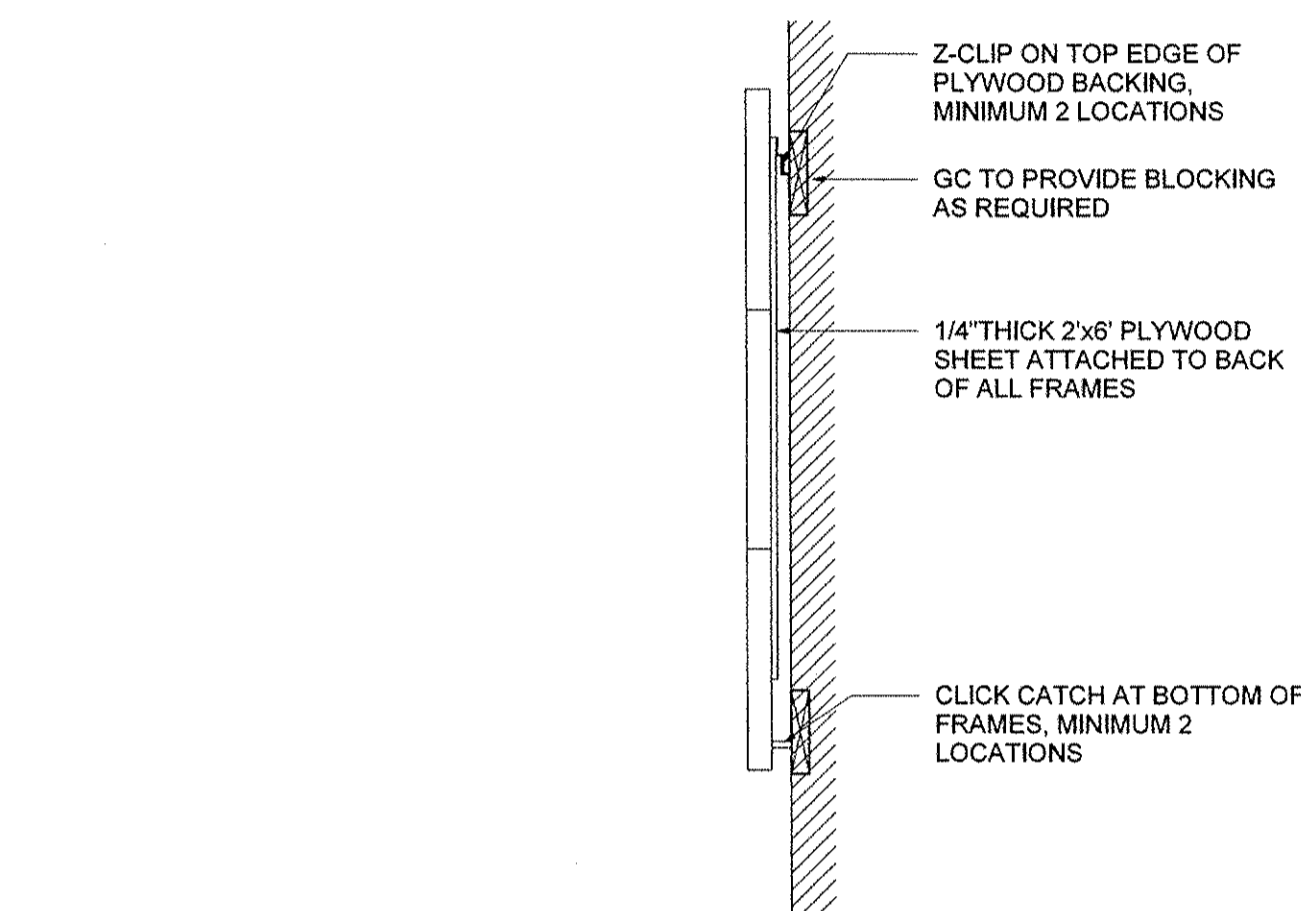
05 CARPET TO VCT TRANSITION
SCALE: 6" = 1'-0"



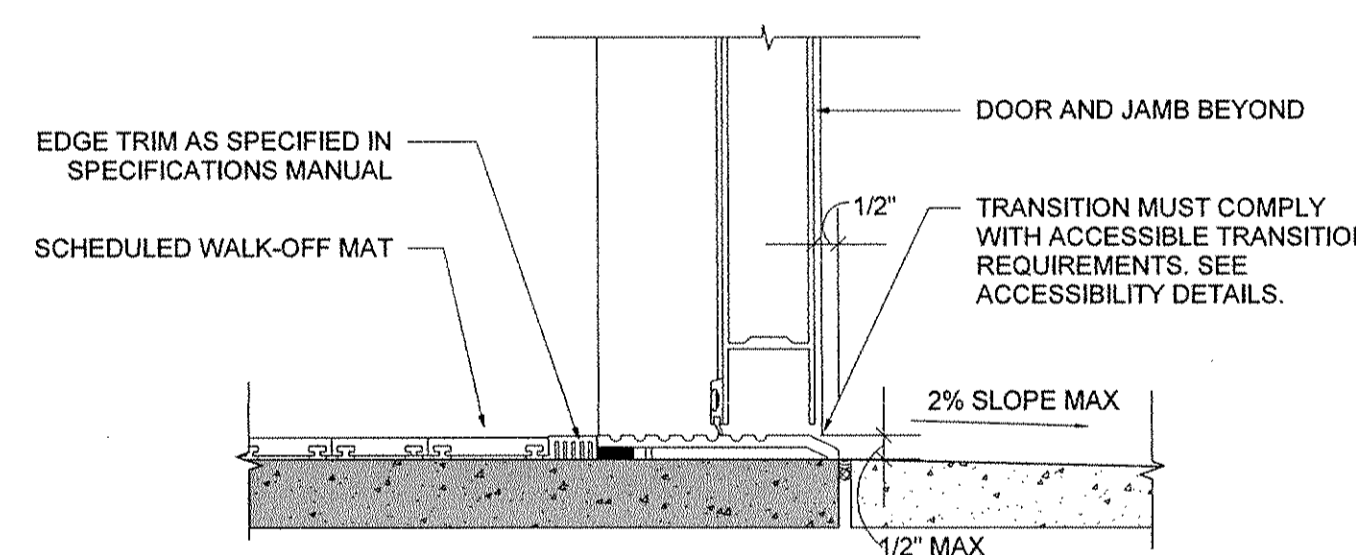
01 NOOK DECOR ELEVATION
SCALE: 1 1/2" = 1'-0"



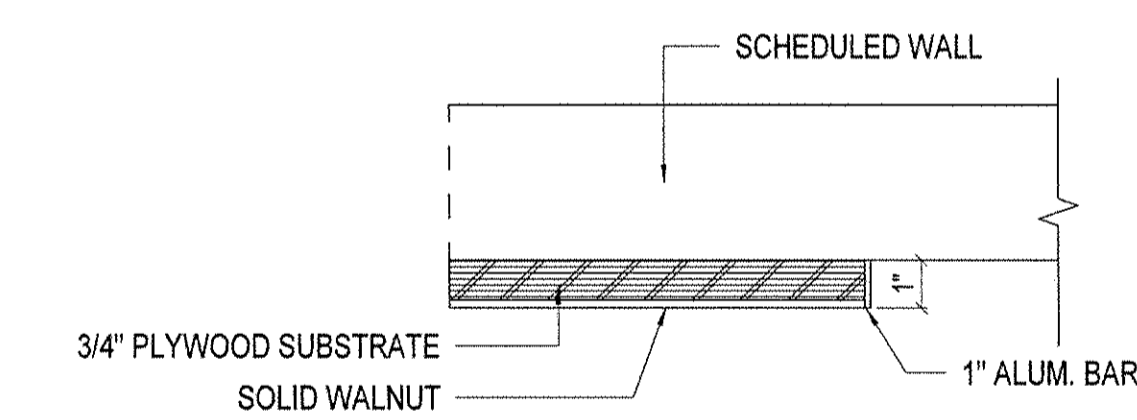
06 CARPET TO CERAMIC TILE TRANSITION
SCALE: 6" = 1'-0"



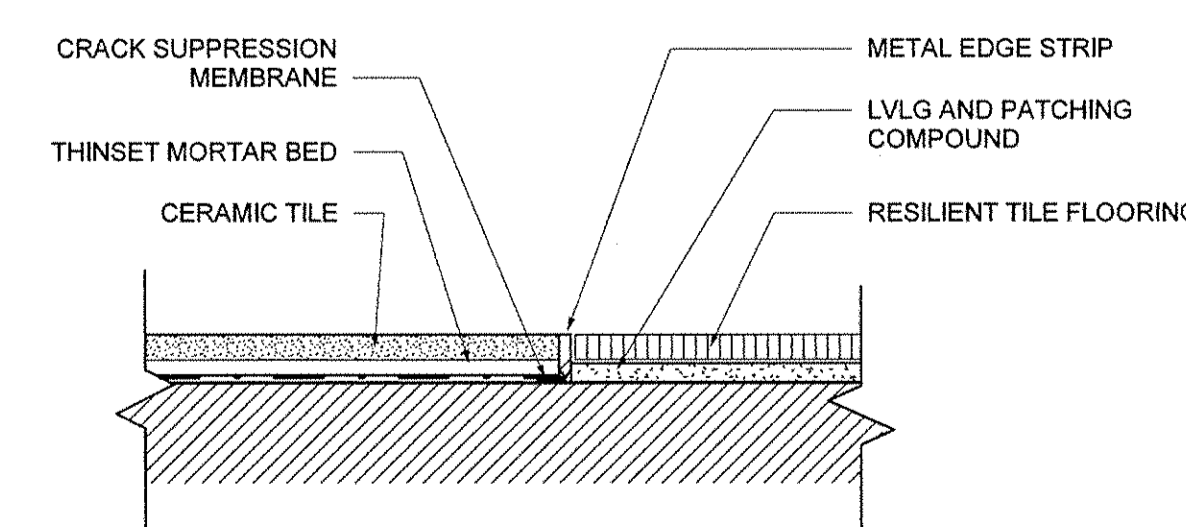
02 NOOK DECOR DETAIL
SCALE: 1 1/2" = 1'-0"



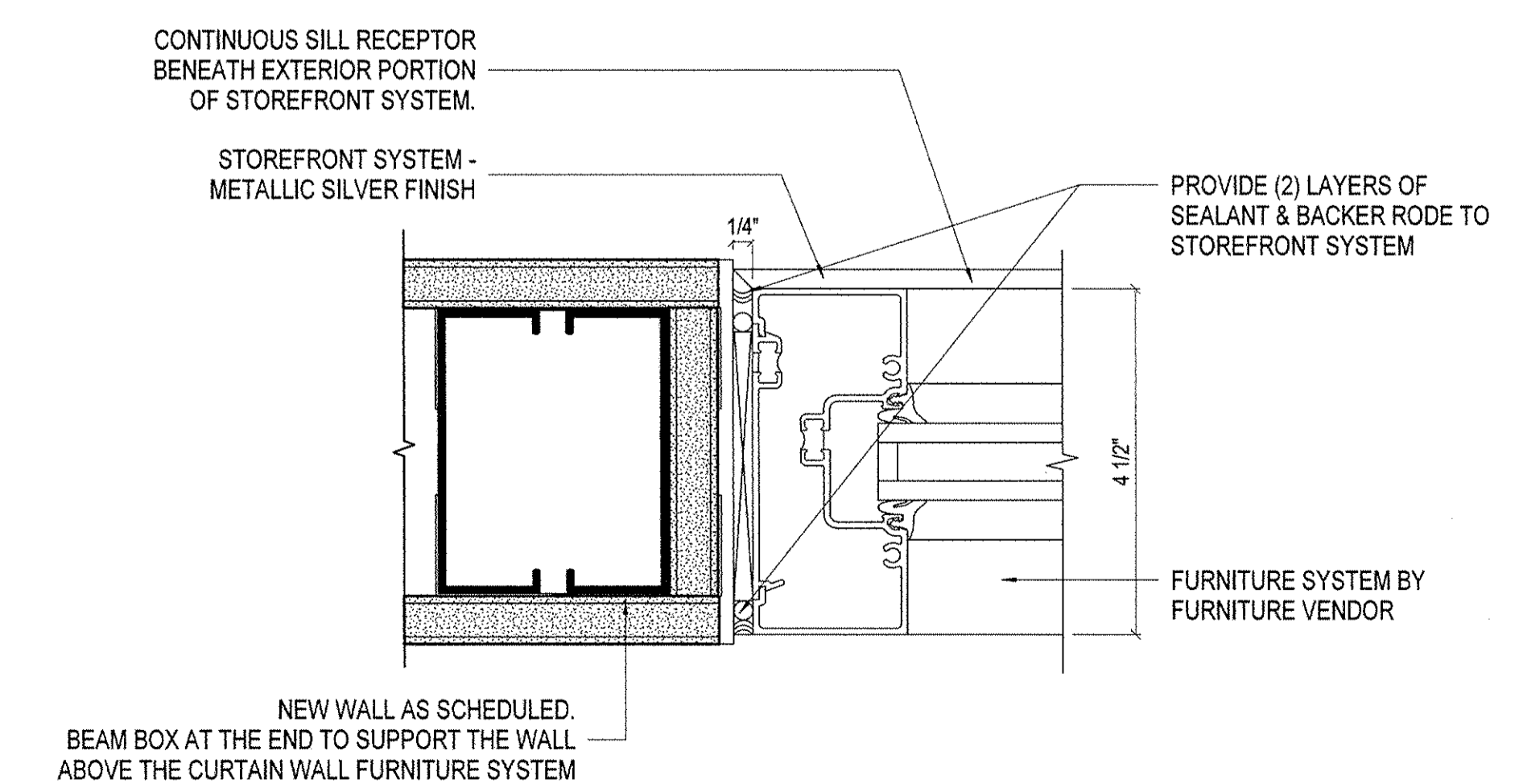
07 ENTRY DOOR WOM TRANSIT.
SCALE: 3" = 1'-0"



03 WOOD WALL EDGE DETAIL
SCALE: 3" = 1'-0"



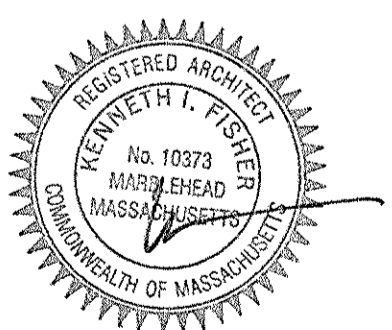
08 CERAMIC TILE TO RESILIENT TILE TRANSITION
SCALE: 6" = 1'-0"



04 FURNITURE SYSTEM @ WALL
SCALE: 6" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
TYPICAL DETAILS

Scale
As indicated

A12.02

ABBREVIATIONS

#	TWO-WAY	EAR	EXHAUST AIR REGISTER	MTGHT	MOUNTING HEIGHT
2WAY	TWO-WAY	EAT	ENTERING AIR TEMPERATURE	MU	MAKE UP WATER LINE
3WAY	THREE-WAY	EDBT	ENTERING DRY BULB TEMP	-N-	
-A-		EER	ENERGY EFFICIENCY RATIO	NIC	NOT IN CONTRACT
A/C	AIR CONDITION	EF	EXHAUST FAN	NO	NORMALLY OPEN, NUMBER
AD	ACCESS DOOR	EL	ELEVATION / ELEVATOR LOBBY	NTS	NOT TO SCALE
ADA	AMERICAN DISABILITIES ACT	ELEC	ELECTRIC / ELECTRICAL	-O-	
ADDL	ADDITIONAL	EQ	EQUAL	OA	OUTSIDE AIR
ADJ	ADJUSTABLE	ESP	EXTERNAL STATIC PRESSURE	OD	OUTSIDE DIAMETER
AFF	ABOVE FINISHED FLOOR	EWBT	ENTERING WET BULB TEMP	-P-	
AHJ	AUTHORITY HAVING JURISDICTION	EWT	ENTERING WATER TEMP	PD	PRESSURE DROP / DIFFERENCE
AHU	AIR HANDLING UNIT	EXH	EXHAUST	PERF	PERFORATED
AIA	AMERICAN INSTITUTE OF ARCH	EXIST	EXISTING	PH	PHASE
AMP	AMPERE	-F-		PLBG	PLUMBING
ARCH	ARCHITECT	F	FAHRENHEIT, FIRE SERVICE, FEMALE	POS	POSITIVE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION & AIR CONDITIONING ENGINEERS	FA	FACE, FREE AREA, FIRE ALARM	PRV	PRESSURE REDUCING VALVE
		FCU	FAN COIL UNIT	PSI	POUNDS PER SQUARE INCH
		FD	FIRE DAMPER	-R-	
AUTO	AUTOMATIC	FIN FLR	FINISH FLOOR	(R)	REMOVE EXISTING
AVG	AVERAGE	FLA	FULL LOAD AMPERES	R	
-B-		FLEX	FLEXIBLE	RA	RETURN AIR
BDD	BACKDRAFT DAMPER	FLTR	FILTER	RAG	RETURN AIR GRILLE
BFP	BACKFLOW PREVENTOR	FPM	FEET PER MINUTE	REC	RECESSED
BLDG	BUILDING	FT	FOOT, FEET	REFR	REFRIGERATION
BLW	BELOW / UNDERGROUND	-G-		REG	REGISTER
BTU	BRITISH THERMAL UNIT	GAL	GALLON	REM	REMOVABLE
BTUH	BRITISH THERMAL UNIT / HOUR	GALV	GALVANIZED	REQD	REQUIRED
-C-		GPM	GALLONS PER MINUTE	REFGT	REFRIGERANT
CAP	CAPACITY, CAPACITOR	GRL	GRILLE	RH	RELATIVE HUMIDITY
CC	COOLING COIL	-H-		RHC	REHEAT COIL
CD	CEILING DIFFUSER, CONSTRUCTION DOCUMENT	HD	HEAD	RLA	RUNNING LOAD AMPERES
CFM	CUBIC FEET PER MINUTE	HORIZ	HORIZONTAL	RL	REFRIGERANT LIQUID LINE
CFSD	COMBINATION FIRE/SMOKE DAMPER	HP	HORSEPOWER	RM	ROOM
CH	CHILLER	HVAC	HEATING, VENTILATION, & AIR CONDITIONING	RPM	REVOLUTIONS PER MINUTE
CHWP	CHILLED WATER PUMP	HWP	HOT WATER PUMP	RSL	REFRIGERANT SUCTION LINE
CHWR	CHILLED WATER RETURN	HWR	HOT WATER RETURN	-S-	
CHWS	CHILLED WATER SUPPLY	HWS	HOT WATER SUPPLY	SA	SUPPLY AIR, SHOCK ABSORBER
CL	CENTER LINE, CLOSE, CLOSET	HZ	HERTZ	SAR	SUPPLY AIR REGISTER
CLG	CEILING	-J-		SD	SMOKE DAMPER / DETECTOR, STORM DRAIN
CNDS	CONDENSATE DRAIN	ID	INSIDE DIMENSION	SEER	SEASONAL ENERGY EFFICIENCY
CO2	CARBON DIOXIDE	IN	INCH	SF	SQUARE FOOT (FEET)
COND	CONDENSER	INSUL	INSULATION	SF	SUPPLY FAN
CONN	CONNECT, CONNECTION	-K-		SP	STATIC PRESSURE
CP	CONTROL PANEL, CHROME PLATED	KW	KILOWATT	SPEC	SPECIFICATION
CV	CONSTANT VOLUME	-L-		SS	STAINLESS STEEL
CWP	CONDENSER WATER PUMP	(L)	LINED	STRUC	STRUCTURAL
CWR	CONDENSER WATER RETURN	LAT	LEAVING AIR TEMPERATURE	-T-	
CWS	CONDENSER WATER SUPPLY	LBS	POUND(S)	T	THROAT
-D-		LH	LATENT HEAT	TA	TRANSFER AIR
(D)	EXISTING TO BE DEMOLISHED	LTH	LENGTH	TDH	TOTAL DYNAMIC HEAD
DB	DRY BULB	LVR	LOUVER	TEMP	TEMPERATURE
dB	DECIBEL	LWT	LEAVING WATER TEMPERATURE	TSTAT	THERMOSTAT
DBA	UNIT OF SOUND LEVEL	-M-		TYP	TYPICAL
DBT	DRY BULB TEMPERATURE	MAT	MIXED AIR TEMPERATURE	-V-	
DDC	DIRECT DIGITAL CONTROL	MAX	MAXIMUM	V	VOLT, VENT, VIDEO
DEG	DEGREE	MBTUH	THOUSAND BTU PER HOUR	VAV	VARIABLE AIR VOLUME
DIA	DIAMETER	MECH	MECHANICAL	VD	VOLUME DAMPER
DMPR	DAMPER	MED	MEDIUM	VFD	VARIABLE FREQUENCY DRIVE
DN	DOWN	MER	MECHANICAL EQUIPMENT ROOM	-W-	
DPT	DEW POINT TEMPERATURE	MFR	MANUFACTURER	W	WIDTH, WIRE, WATT, WASTE
DR	DRAIN	MHP	MOTOR HORSEPOWER	W/	WITH
DWG	DRAWING	MIN	MINIMUM, MINUTE	W/O	WITHOUT
-E-		MOT	MOTOR	WB	WET BULB
(E) / EX	EXISTING TO REMAIN	MS	MOTOR STARTER	WMS	WIRE MESH SCREEN
(ER)	EXISTING TO BE RELOCATED	MTD	MEAN TEMP DIFFERENCE	WP	WEATHERPROOF, WORKING PRESSURE
EA	EXHAUST AIR				

SYMBOLS

ANNOTATION	
	TITLE MARK DETAIL OR PLAN NUMBER - 1 DETAIL OR PLAN REF LOCATION FOUND IN M-201
	DETAIL REFERENCE DETAIL NUMBER - 1 DETAIL FOUND IN M-501
	SECTION MARK SECTION NUMBER - 1 SECTION FOUND IN E-501
	SHEET KEYNOTE
	REVISION CLOUD (DELTA 1)
	DETAIL BOUNDARY B DETAIL NUMBER - 2
	EQUIPMENT TAG; DESIGNATION AC, DESIGNATION NUMBER 1-1
	LOUVER IN DOOR MINIMUM 1.0 SQ FT, FREE AREA
	POINT OF CONNECTION
	POINT OF DISCONNECTION
DUCT	
	DUCTWORK (NEW)
	DUCTWORK (EXISTING)
	DUCTWORK (EXISTING TO BE DEMOLISHED)
	DUCTWORK WITH ACOUSTIC LINING
	DUCT UNDER POSITIVE PRESSURE
	DUCT UNDER NEGATIVE PRESSURE
	RISE IN DUCT (IN DIRECTION OF AIR FLOW)
	DROP IN DUCT (IN DIRECTION OF AIR FLOW)
	REHEAT COIL
	FLEX DUCT
	DUCT TRANSITION
	VANED ELBOW
	RADIUS ELBOW

	DUCT FITTING (SEE DETAILS)
	FLEXIBLE DUCT CONNECTION
	TRANSFER AIR BOOT (STRAIGHT) SEE SCHEDULE REQUIREMENTS
	TRANSFER AIR ELBOW WITH ACOUSTIC LINING
	SOUND ATTENUATOR
	CEILING SUPPLY DIFFUSER, TYPE A, THROW PATTERN 4-WAY, 100 CFM
	CEILING RETURN REGISTER (GRILLE), TYPE A, 100 CFM
	CEILING EXHAUST TYPE A, 100 CFM
	CEILING SUPPLY WITH BLANKING PLATE (3-WAY)
	EXISTING TO REMAIN
	EXISTING TO BE DEMOLISHED
	SIDEWALL SUPPLY DIFFUSER
	LINEAR SLOT DIFFUSER
	12"x6" SIDEWALL SUPPLY REGISTER, 150 CFM
	12"x6" SIDEWALL RETURN / EXHAUST REGISTER, 150 CFM
	ROUND SUPPLY DIFFUSER
	ROUND RETURN DIFFUSER
	FLOOR REGISTER (GRILLE)
	ACCESS PANEL
	SINGLE DUCT VAV BOX
	SINGLE DUCT VAV WITH REHEAT
	SINGLE DUCT VAV BOX WITH REHEAT AND ATTENUATOR
	DUAL DUCT VAV BOX
	FAN POWERED VAV BOX
	SHUT-OFF VAV BOX WITH HYDRONIC HEATING COIL AND OUTLET BOX
	COMBINATION SMOKE/FIRE DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	BACK DRAFT DAMPER
	VOLUME DAMPER
	THERMOSTAT

PIPING	
	NEW PIPING (SEE ABBREVIATION FOR PIPE I.D.)
	EXISTING TO REMAIN
	EXISTING TO BE DEMOLISHED
VALVES	
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	FLOAT VALVE
	FUSIBLE LINK
	GATE VALVE
	GLOBE VALVE
	MOTORIZED BALL VALVE
	OS&Y VALVE
	PLUG VALVE
	PLUG SAFETY
	PRESSURE REDUCING
	RELIEF VALVE
	SOLENOID VALVE
	VALVED AND CAPPED OUTLET
	BACK FLOW PREVENTER
FITTINGS	
	ELBOW DOWN
	ELBOW DOWN TO TEE
	ELBOW UP
	END CAP
	TEE DOWN
	TEE UP
	UNION

GENERAL NOTES

- WHERE THERE IS A DISCREPANCY BETWEEN THE DRAWINGS AND SPECIFICATIONS, NOTIFY THE ENGINEER PRIOR TO BID. FOR BIDDING PURPOSES THE MORE STRINGENT SHALL APPLY.
- THE CONTRACTOR SHALL EXAMINE THE COMPLETE SET OF CONTRACT DOCUMENTS FOR ALL TRADES, AS ISSUED BY THE ARCHITECT AND REVIEW DIMENSIONS, SPACE REQUIREMENTS AND POINT OF CONNECTIONS TO ALL EQUIPMENT. MAKE ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER TRADES.
- UNLESS INSTRUCTED OTHERWISE, THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, AND FEES REQUIRED FOR INSTALLATION OF THE MECHANICAL WORK. FURNISH FINAL CERTIFICATE OF INSPECTION OR WRITTEN EVIDENCE OF ACCEPTANCE BY INSPECTION AUTHORITIES FOR ALL WORK INSTALLED.
- REFER TO COMPLETE DRAWING PACKAGE FOR EXTENT OF CONSTRUCTION, AND EXACT LOCATION OF FIXTURES, EQUIPMENT, DEVICES, ETC.
- CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO ENSURE AN UNDERSTANDING OF THE COMPLETE SCOPE OF PROJECT PRIOR TO START OF WORK.
- ALL EQUIPMENT & MATERIALS SHALL MATCH DESIGN SPECIFICATIONS AND MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- LOCATION OF DUCTWORK IS APPROXIMATE. ALL DRAWINGS AND LAYOUT ARE DIAGRAMMATIC TO SHOW DESIGN INTENT ONLY. CONTRACTOR TO COORDINATE ALL DUCTWORK AND PIPING WITH ALL OTHER WORK IF FIELD CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS AND AFFECT WORK, INFORM ARCHITECT IMMEDIATELY BEFORE PROCEEDING WITH THAT AREA.
- INSTALL FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER ON ALL DUCTS PENETRATING FIRE RATED ENCLOSURES AND PARTITIONS, AND RATED CEILINGS OF HORIZONTAL EXITS. THE CONTRACTOR SHALL INTERLOCK ALL COMBINATION FIRE/SMOKE DAMPERS WITH LISTED AREA TYPE SMOKE DETECTORS IN THE BUILDING FIRE LIFE SAFETY SYSTEM. VERIFY WITH LIFE SAFETY SYSTEM CONTRACTOR. SEE FIRE ALARM SPECIFICATION AND SMOKE CONTROL NOTES FOR ADDITIONAL INFORMATION.
- AIR HANDLING UNITS AND FAN COIL UNITS SHALL BE PROVIDED WITH DUCT SMOKE DETECTORS AT THE UNITS' OUTLET WHEN THE UNITS CAPACITY EQUALS 2000 CFM OR GREATER.
- A MINIMUM OF 36" CLEAR WORKING SPACE, NOT LESS THAN 30" WIDE, SHALL BE MAINTAINED IN FRONT OF ALL SWITCHES, OVERCURRENT DEVICES AND ELECTRIC CONTROL COMPONENTS. THE WORKING SPACE SHALL BE CLEAR AND EXTEND FROM THE GRADE, FLOOR, OR PLATFORM TO MINIMUM OF 6'-8" FT. WHERE THE ELECTRICAL EQUIPMENT EXCEEDS 6'-1/2 FT IN HEIGHT, THE MINIMUM HEADROOM SHALL NOT BE LESS THAN THE HEIGHT OF THE EQUIPMENT.
- A MINIMUM OF 24" CLEAR WORKING SPACE SHALL BE PROVIDED IN FRONT OF THE ACCESS PANELS.
- THE SMOKE DETECTORS LOCATED AT AIR MOVING EQUIPMENT SHALL SHUT DOWN ALL AIR HANDLING EQUIPMENT VIA THE LIFE SAFETY SYSTEM. WHEN SMOKE IS DETECTED AT EQUIPMENT, ALL OTHER AIR MOVING EQUIPMENT LOCATED IN OR CONNECTED TO COMMON PLENUM OR SMOKE ZONE SHALL SHUT DOWN.
- ALL ELECTRICAL CONTROLS FOR THE SMOKE CONTROL SHALL BE RATED FOR SUCH USE.
- PROVIDE ACCESS PANELS (MATCH WALL OR CEILING RATING) IN ALL WALLS OR CEILINGS WHERE ACCESS TO DAMPERS, CONTROLS, ETC ARE REQUIRED BY CODE. COORDINATE LOCATIONS WITH ARCHITECT.
- CONTRACTOR SHALL NOTE THE CRITICAL SPACE AVAILABLE ABOVE CEILINGS. PROVIDE TRANSITION PIECES AT CROSSOVERS, UNDER BEAMS, OVER/UNDER PIPES, AS REQUIRED TO ACCOMMODATE DUCTS WITHIN SPACE AVAILABLE, PROVIDING EQUIVALENT DUCT SIZE TO THE DIAMETER SHOWN. COORDINATE CLOSELY WITH OTHER TRADES TO REDUCE NECESSITY OF TRANSITIONS TO A MINIMUM. NO ADDITIONAL COSTS WILL BE PAID FOR ANY REQUIRED TRANSITIONS OR OTHER SPECIAL CHANGE SHAPE PIECES. ALL DUCTWORK SHALL BE SUPPORTED AND SEISMICALLY RESTRAINED PER THE CALIFORNIA BUILDING CODES AND SMACNA STANDARD.
- THERE SHALL BE NO PIPING AND/OR DUCTWORK RUN THROUGH ELECTRICAL ROOMS UNLESS THAT DUCTWORK AND/OR PIPING IS SERVING THAT ELECTRICAL SPACE.
- ALL FLEXIBLE DUCT CONNECTIONS TO AIR DISTRIBUTION DEVICES TO BE MAX. 5'-0" ACOUSTICAL FLEX DUCT PER SPECIFICATIONS.
- NOT ALL SYMBOLS, NOTES, DETAILS AND EQUIPMENT IN SCHEDULES ON GENERAL SHEETS WILL APPLY TO EACH BUILDING. THEY ARE TO COVER ALL BUILDINGS AND WILL APPLY BASED ON SCOPE IN BUILDING.
- LOCATE EXISTING REINFORCING STEEL UTILIZING ANY SUITABLE METAL DETECTION SYSTEM. DO NOT CUT ANY EXISTING STEEL REINFORCEMENT. SHIFT ANCHOR OR CORE TO MISS THE REBAR.
- BOLTS MUST BE INSTALLED TO AVOID DAMAGING EXISTING STEEL REINFORCEMENT. IN CASE OF CONFLICT, ADJUST BOLT LOCATION, ALLOWING FOR 1" CONCRETE COVER BETWEEN REBAR AND BOLT.
- PROVIDE TRANSFER DUCTS AS NECESSARY ABOVE CEILING FOR RETURN AIR PATH TO AIR HANDLING EQUIPMENT SERVING THAT SPACE. REFER TO DETAILS FOR TRANSFER DUCT SIZES.

SHEET INDEX

NO.	TITLE	SCALE
M-001	MECHANICAL COVER SHEET	NONE
M-002	MECHANICAL SPECIFICATIONS	
M-101	MECHANICAL PLAN - LEVEL 01	
M-102	MECHANICAL PLAN - ROOF	
M-501	MECHANICAL DETAILS	
M-701	MECHANICAL SCHEDULES	



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139



One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel: 617.619.5700
Fax: 617.619.5701



A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
MECHANICAL COVER SHEET

Scale
NONE

M-001

PART 1 GENERAL

GENERAL PROVISIONS

General Requirements:

- Related Documents: Architectural specifications, appliance and fixture specification package, general, special and supplementary conditions, shall form a part of these specifications.
- Scope of Work: Provide all required labor, materials, equipment and contractor's services necessary for complete safe installation of Heating, Ventilating, Air Conditioning (HVAC) in conformity with requirements of all Authorities having jurisdiction, as indicated on drawings and/or herein specified or described.
- Site Clearance: Keep site free from this section's surplus material, tools and rubbish at all times during construction period and, upon completion, leave site in clean condition.
- Site Security: Protect this section's materials and equipment from all damage due to fire, theft, vandalism, weather, etc.
- Damage to Other Work: Repair any damage caused by this section to work of other sections.
- Damage to Freezing: Repair any damaged Freezing caused by this section to integrity of original construction.
- Site Safety: Contractor consents and agrees that he and his subcontractors and his and their agents, servants and employees will provide and maintain a safe place to work and that he and they will comply with all laws and regulations of any governmental authority having jurisdiction thereof, and Contractor agrees to indemnify, defend and hold harmless, Engineer, Owner and Architect from and against any liability, loss, damage or expense, including attorney's fees, arising from a failure or alleged failure on the part of Contractor, his subcontractors and his and their agents, servants and employees to provide and maintain a safe place to work or to comply with all laws and regulations of any governmental authority having jurisdiction thereof.
- Verification of Existing: Before submitting bid, become thoroughly familiar with actual existing conditions and of the present installations to which connections must be made or which must be changed or altered. The intent of the work is shown on the drawings and described herein, and no consideration will be granted by reason of lack of familiarity on the part of the Contractor with actual physical conditions, requirements, and practices at the site.
- Requirements of Other Sections: Carefully check the documents of other sections to ascertain the requirements of any interfering materials or equipment being furnished and/or installed by that section which relate to this section, and provide the proper installation and/or connection.
- Information Transfer: Transmit all information required for work being performed by other sections in ample time for the proper installation and connection, and for the provision of all openings required in floors and walls.
- Holes and Structure: Field drilling and cutting of holes in building structure required for work under this section shall be coordinated through the General Contractor and approved by Owner and Building Structure Engineer. All such coordination, cutting, cutting and reinforcing costs shall be borne by this Contractor.
- Shelves: Furnish and set all shelves for the passage of conduit through walls, roof and floors and elsewhere that will be required for the proper location and concealment of each conduit passing through building surfaces. Coordinate this work with the General Contractor in order to properly expedite and perform this work.
- Passage of Equipment: Check the dimensional requirements of equipment of this section to ensure that such equipment can pass through the necessary areas to reach its ultimate installed location. Include in bid costs for all work required, including any work required to move the equipment through the site to this final location, including any dismantling and re-assembly.
- Signage: Provide signage required by codes and authorities having jurisdiction.
- Potential Delivery Problems: Notify the General Contractor and Engineer in writing, within five days of award of contract, of the proposed delivery schedule of any equipment or material that may prevent the installation from being completed by the project completion date.
- Warranty: Submit a single guarantee stating that all portions of the work are in accordance with contract requirements. Guarantee all work against labor and material workmanship for a period of one year from date of final acceptance by Owner, except that where guarantees or warranties for longer terms are specified by contract, such longer term shall apply.
- Rectification: At no additional cost to the Owner, within 24 hours after notification, correct any deficiencies which occur during the guarantee period, all to the satisfaction of the Owner. The Contractor shall be responsible for any damage caused by such deficiencies and repair thereof and reimburse the Owner for all costs incurred.

Major Items of Work include:

- Air conditioning systems: Supply, return and exhaust air distribution systems, including ductwork, terminal air units, supply air diffusers, return air grilles, exhaust air registers, controls and connections to existing work.
- Thermal and acoustical insulation.
- Pipe and piping accessories.
- Computer room air conditioning.
- Cooling Tower.
- Pumps.
- Vibration isolation.
- Controls.
- Testing and balancing of all systems.

General Items:

- Access Doors Panels: Provide concealed controls, dampers, valves and equipment requiring access with adequately sized access doors/panels. In removable type ceiling, provide access the mechanical work.
- Cutting and patching for mechanical work.
- Insulation: Furnish insulation for all piping, equipment and ducts that permit heat loss or gain or will form condensation.
- Coordinate all new work with existing installations.

Make-up water for any industrial equipment shall first pass through an approved backflow prevention unit.

REFERENCE STANDARDS

- Published codes, specifications, standards, tests or recommended methods of trade, industry or governmental organizations, or local utilities apply to work in this Division where city below:
- AABC - Associated Air Balance Council.
 - ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers.
 - ASTM - American Society for Testing and Materials.
 - NFPA - National Fire Protection Association.
 - OSHA - Occupational Safety and Health Act.
 - UL - Underwriters Laboratories, Inc.
 - National, State and Local Codes of all authorities having jurisdiction.

In addition to complying with all other legal requirements, comply with current provisions of governing codes and regulations in effect during the progress of the work, and with the following:

- Drawings and specification requirements shall govern where they exceed code and regulation requirements.
- Where requirements between governing codes and regulations vary, the more stringent shall apply.
- Nothing contained in contract documents shall be construed as authority or permission to disregard or violate legal requirements. The Contractor shall immediately draw the attention of the Architect to any such conflicts noted in the contract documents.

PERMITS AND INSPECTIONS

The contractor shall secure all approvals and pay all fees for all work installed. Certificate shall be delivered to owner before final payment will be made.

DESCRIPTION

Specifications are of simplified form and include incomplete sentences. Words or phrases such as "The Contractor shall," "shall be," "furnish," "provide," "is," "an," "the," and "all" have been omitted for brevity.

Drawings are diagrammatic and indicate general arrangement of systems and work. Follow drawings in laying out work and check drawings of other trades to verify space conditions. Maintain headroom and space conditions.

Scope of Work: Labor, materials, equipment, services and fees necessary for complete safe installation in conformity with applicable codes and authorities having jurisdiction, as indicated on drawings and herein specified.

JOB CONDITIONS

Connections to Existing Work:
1. Install new work and connect to existing work with minimum interference to existing facilities.
2. Temporary shutdowns of existing services:
a. At no additional charges.
b. At times not to interfere with normal operation of existing facilities.
c. Only with written consent of Owner.
3. HVAC systems are not to be interrupted.
4. Maintain continuous operation of existing facilities as required with necessary temporary connections between new and existing work.
5. Connect new work to existing work in neat and acceptable manner. Restore existing disturbed work to original condition including maintenance of wiring continuity as required.

Removal and Relocation of Existing Work:

- Disconnect, remove or relocate material, equipment, piping and other work noted and required by removal or changes in existing construction.
- Where existing pipes, conduits and/or ducts which are to remain prevent installation of new work as indicated, relocate, or arrange for relocation, of existing pipes, conduits and/or ducts.
- Provide new material and equipment required for relocated equipment.
- Plug or cap active piping or ductwork behind or below finish.
- Do not leave long dead-end branches. Cap or plug as close as possible to active line.
- Remove unused piping, ductwork and material.
- Dispose of removed fixtures and equipment as directed.

QUALITY ASSURANCE

Quality and Gauges of Materials:
1. Quality of materials:
a. New and free from defects and tested by U.L. or bearing their label.
b. Materials and equipment of similar application: Same manufacturer, except as noted.
c. Conform to Reference Standards.

PRODUCT DELIVERY, STORAGE AND HANDLING

Moving of Equipment: Where necessary, ship in crated sections of size to permit passing through available spaces.

Accessibility

- For operation, maintenance and repair.
- Minor deviations: Permissible.
- Changes of regulate or involving extra cost: Not permissible without review.
- Group concealed mechanical equipment requiring access with equipment freely accessible through access doors.

SUBMITTALS

Provide six (6) copies of submittal material with descriptive data for all products and materials, including but not limited to the following, prior to installation. All submittals shall be highlighted to indicate specific products or materials being used:
1. Coordinated layout plans, showing work of all trades, including but not limited to ductwork, HVAC, plumbing, fire protection piping, electrical controls, and fire duct, equipment.
2. Ductwork accessories.
3. Ductwork typical construction.
4. Duct sealing.
5. Flexible ducting.
6. Dampers.
7. Insulation and lining.
8. Terminal air units.
9. Diffusers, grilles and registers.

10. Certified acoustical test performance data, for diffusers, registers, grilles and terminal air units.

11. Air and water test and balance.

12. Complete forms prepared for use in compiling and recording test and balance data.

13. Control devices and systems.

14. Control equipment and system drawings.

15. Vibration isolation.

16. One set of as-built drawings.

MAINTENANCE MANUALS AND AS-BUILT DRAWINGS

Provide four (4) copies of operating and maintenance manual for Owner's use for each piece of equipment. Each item shall be cross-referenced and numbered with its as-built drawing descriptions.

As-Built Drawings: Deliver to Owner, one set of mylar sepals and one bound set of blueprints and panel schedules showing work as actually installed.

PART 2 PRODUCTS

DUCTWORK

- Cold rolled "commercial" quality hot dipped galvanized in accordance with ASTM No. MS25-67.
 - Air Conditioning Systems.
 - Ventilation Systems.
- Dimensions shown on drawings are clear inside dimensions.
- Fittings: Same gauge and construction as ducts. Elbows shall have centerline radius not less than 1.5 times width.
- Duct supports.
- Ducts with transverse and longitudinal bracing in accordance with SMACNA.

General: All sealing ducts, dampers access doors, joints, hangers, diffusers, fire dampers and the retarding materials, in accordance with requirements of SMACNA, HVAC Duct Construction Standards, latest edition, and all other authorities having jurisdiction and as described herein. All sheet metal work shall have a pressure classification as follows:
1. Supply duct between main roof and inlet to terminal air unit - 4 inches W.G.
2. Supply ducts downstream of terminal air units, air handling units and fans - 2 inches W.G.
3. Return and exhaust air ducts - 2 inches W.G.

Ductwork: Unless otherwise specified,
1. Cold rolled "commercial" quality hot dipped galvanized in accordance with ASTM No. MS25-67.

- Air Conditioning Systems.
- Ventilation Systems.

- Dimensions shown on drawings are clear inside dimensions.
- Fittings: Same gauge and construction as ducts. Elbows shall have centerline radius not less than 1.5 times width.
- Duct supports.
- Ducts with transverse and longitudinal bracing in accordance with SMACNA.

Flexible Ductwork:
1. The flexible duct for connection of ceiling air diffusers to sheet metal duct shall be a factory fabricated assembly consisting of an inner sleeve, insulation and an outer moisture barrier. The inner sleeve shall be constructed of an elastomeric compound reinforced with woven fiberglass banded to a vinyl coated spring steel wire supporting helix. A minimum 1/8 inch thick fiberglass insulating blanket shall encase the inner sleeve and be sheathed with an outer moisture barrier of a reinforced metallized Mylar/polyester laminate, or equal.- Acoustical performance of the flexible duct shall be in accordance with Air Diffusion Council Flexible Air Duct Test FD72R: Paragraph 3.2.1, Sound Attenuation. An accredited independent testing laboratory in accordance with the above testing procedure shall make the tests.
- The sound attenuation (insertion loss) of the flexible duct shall meet or exceed the values tabulated herein:

Straight Duct Insertion Loss in Decibels Per Length of 10 Feet with No Airflow

Frequency Band - Hertz
Flexible Duct Inner Diameter (25 350 500 1000 2000 4000 8000)

8 inches 5 10 10 22 20 13
6 inches 4 9 17 22 22 19 10
4 inches 3 7 15 22 22 16 8

4. Certified test data shall be submitted for approval.
5. Installation of the flexible duct shall be in accordance with the manufacturer's instructions and recommended procedures.
6. Installation of the flexible duct shall be in accordance with the manufacturer's instructions and recommended procedure.
7. Flexible ductwork to be a maximum of 5 ft. in length. On runs requiring over 5 ft., install balance of duct run in sheet metal with standard sheet metal fittings.
8. Connections, air/tight joints, fastened with clamps (similar to Ideal 5200 or 5600 series) and sealed with sealing compound and tape.
9. Flexible duct bends shall be installed with centerline radius not less than 1.5 time diameter and shall not be crushed to fit limited clearance.

Access Doors:
1. Furnish access doors of sufficient size as required, for access, inspection, maintenance, and replacement to all instruments, controls and equipment.

Dampers

- Furnish all dampers necessary for proper control and balancing of air distribution as follows:
 - All ducts that split in 2 or more branches to serve supply diffusers.
 - At each supply and return branch duct, as far away from each outlet and inlet as possible.
 - Adjustable and accessible.
 - Additionally as indicated.
 - Jiffy-type and field fabricated dampers are not acceptable.

Fire dampers shall be designed and constructed in accordance with NFPA Standard 90A and UL Standard 555 and shall be so labeled with a permanent identification. Fire damper shall be out-of-air stream type with a factory-supplied sleeve.

Turning Vanes: Galvanized steel, single thickness turning vanes with 2 in. inside radius for all square elbows, unless otherwise noted.

AIR OUTLETS AND INLETS

All diffusers, grilles and registers shall be of type and capacity as indicated on drawings. Steel and/or extruded aluminum construction during the progress of the work, and with the following:
1. Drawings and specification requirements shall govern where they exceed code and regulation requirements.
2. Where requirements between governing codes and regulations vary, the more stringent shall apply.
3. Nothing contained in contract documents shall be construed as authority or permission to disregard or violate legal requirements. The Contractor shall immediately draw the attention of the Architect to any such conflicts noted in the contract documents.

Balancing dampers shall be provided in the branch duct as far as possible from all supply and return air devices. These shall be adjustable and accessible.

All diffuser and grille frame styles shall be appropriate for the type of ceiling. Supply air diffuser plenum shall be lined with 1/2" lining.

The noise level produced shall comply with all requirements of the acoustical specification stated herein. A representative sample shall be tested in accordance with the procedure specified herein in order to demonstrate such compliance. All measurements shall be made in accordance with Air Diffusion Council Test Code No. 10070, and ASHRAE Standard 30-72. Test conditions shall be in accordance with the applicable standards. The test results shall be certified by the testing agency and submitted for approval. The test report shall include a complete description of the test conditions, measurement procedure and sample calculation.

ROOM THERMOSTATS

Room thermostats and transmitter shall be of the miniature type. Unless otherwise noted, room thermostats shall have concealed adjustments, plain cover without visible top and shall match the base building standards.

Pneumatic two-pipe with pneumatic feedback and adjustable sensitivity.

Direct Digital controlled (DDC).

ESCUTCHEONS
Provide exposed piping with escutcheons where passing through walls, ceilings or partitions.

Provide sleeving for all piping that penetrates floor slabs.

ACCESS DOORS
Provide equipment and concealed valve access, except in removable tile ceilings and approved by local code, with adequate size access doors for inspection and maintenance.

INSULATION AND LINING
Materials:
1. Insulation, jackets, facings, adhesives, coatings, and accessories fire hazard rating by Underwriters Laboratories, Inc. Stener tunnel test method for fire hazard classification of building materials, standard UL 723, ASTM E-84, NFPA-225.
2. Insulation shall be Maxium 25.
3. Felt conditioned and smoke developed: Maximum 50.
4. Flameproofing treatments subject to deterioration due to moisture or humidity not acceptable.

Control Valves:
1. 125-psi wip, bronze rising stem gate type.
2. Threaded ends similar to Stockham No. B105.
3. Solder joint type ends, similar to Stockham N. B104.

Thermometers:
1. Thermometers to be dial type, mercury actuated, with adjustable angle face, immersion bulb, cast aluminum case, white background, black markings on face.
2. Similar to Therco MS700 series. Install in oversize pipe tee and nipple.

Disimilar Metals:
1. Connection between dissimilar metals shall be isolated by means of approved dielectric fittings.
2. Similar to "EPCO".

Backflow Preventers:
1. Reduced pressure, complete with bronze or stainless steel trim, 2-spring loaded check valves, differential pressure relief valve, 2 rising stem gate valves, test cocks, and unions.

- Brass body.
- Provide funnel drain and pipe relief to floor sink.

Insulation:
1. Insulate all fittings, valves, strainers, etc., by either pre-fabricating or by fabricating fittings from metered segments of pipe insulation to an equal thickness of adjoining pipe insulation.

Testing:
HVAC
1. Less than 100 psi operating pressure:

- Test hydrostatically to 150 psi.

- Over 100 psi operating pressure:
- Test hydrostatically to 1 1/2 times operating pressure.
- Never exceed test pressure ANSI B16.1 basis.
- Duration: 2 hours:
- With system valves capped and pressure apparatus disconnected:
 - Pressure change: none.
 - Compensate for temperature change.
- Leaks and defects:
 - Repair or replace as directed.
- Without additional cost.

5. Notify the Architect in writing one week before test.

6. Furnish written report and certification that tests have been satisfactorily completed.

SUPPORTS AND ANCHORS

Pipe Hangers, Supports, and Guides:

1. General:

- Assure adequate support for pipe and contents.
- Prevent vibration or swaying.
- Provide for expansion and contraction.
- Supports of wire rope, wood, chain, strap-ferroless bar or any other makeshift device not permitted.

Comply with applicable requirements of ANSI B31.1 and B31.3 for piping.
f. Support piping independently so that equipment is not stressed by piping weight or expansion.
g. Hangers and supports shall have minimum safety factor of three (3), based on ultimate tensile or compressive strength.

h. Prime coat exposed steel hangers and supports.
i. Hangers and supports isolated in crawl spaces, pipes shafts and suspended ceiling spaces are not considered exposed.

Horizontal piping, except as noted:

- Adjustable clevis type and rod.

All services at or below 550 deg F:

- Rollers or slide bases.

5. Pipe stand brackets: Inspector or other equivalent structural support.

6. Rollers not required where spring hangers are called for.

a. Trapeze hangers

7. Guide individual pipes on trapezes with 1/4 inch U-bolt or Supersteel 702 pipe clamp.

A. Install thermal hanger shield at each support point.

- Threaded steel rods.

1. 2 vertical adjustment with 2 nuts each end for positioning and locking.

2. Size to 12 in IPS.

Pipe, IPS Rod

To 2 in. 3/8 in.

2 1/2 in. and 3 in. 1/2 in.

4 in. 5/8 in.

3. Install Pipe isolators between hangers and:

- Uninsulated copper tubing.
- Wherever any pipe requires sound and vibration isolation.

4. Spring Supports for Piping:

- Minimum Static Deflection: 1 in:

1. 1 1/4 in. 6 lb.

5. Miscellaneous Steel:

- Provide miscellaneous steel members, beams, brackets, etc., for support of work in this division unless specifically included in other divisions.

Pipe Support Spacing:
1. Maximum spacing for horizontal piping:

Type of Pipe	Size	Maximum Spacing
Steel	1-1/2 in. and smaller	7 ft.
	2 in. and larger	10 ft.

Brass or copper	3/4 in. and smaller	5 ft.
	1-1/4 in. 6 ft.	
	1-1/2 to 3 in. 8 ft.	
	4 in. and larger	10 ft.

Note: Additional supports at:
1. Changes in direction.
2. Branch piping and runouts over 5 ft.
3. Concentrated loads due to valves, strainers and other similar items.
4. At valves 4 in. and larger in diameter and shall not be crushed to fit limited clearance.
5. Support piping on each side of valve.

2. Brace hangers piping to prevent horizontal and/or vertical movement.
3. Parallel piping on trapezes:

- Maximum spacing to be that of pipe requiring closest spacing.

Attachment to Structure:
1. Steel Beam Anchors:

- Approved beam or channel clamps.
- Do not cut or weld to structural steel without written approval of Owner.
- Other methods as detailed on drawings.

- Steel Deck Anchors: No attachment to metal deck permitted without written approval of Owner's representative.

3. Steel Wall Supports:

- Concrete walls: As specified above.
- Stud Walls:
 - Shuts welded to structural studs.
- Lag screws into wood backing.
- Other methods.

4. Support Spreader:

- Install spreaders spanning between structural members when hangers fall between them, and hanger load is too great for slab or deck attachment.
- Spreaders may be one of methods listed below, or combination of both as required:
 - Fabricated from structural channel.
 - End fittings bolted or welded.
- Secure to structural members.

1. As required by construction.
2. As approved by Structural Engineer.

2. Formed channels with fittings, similar to Superstrut.

- Submit manufacturer's calculations for installation.

Duct Hangers and Supports:
1. General:

- Support horizontal ducts with hangers of size and spacing as indicated in pertinent SMACNA Duct Construction Standards.

- Horizontal Duct Supports:
- Install hangers at each change in direction of duct.
- Strip hangers:
 - Extend strip down both sides of ducts.
 - Turn under bottom one inch minimum.
- Mesh screw hangers to:
 - Bottom of duct.
 - Upper and lower side of ducts.
 - Not more than 12 inches on center.
- Angle hangers:
 - Provide angle hangers formed by extended vertical bracing angles.

6. Cut materials accurately, work into place without springing or forcing, properly clear windows, doors and other openings. Excessive cutting or other weakening of the building structure will not be permitted.

7. Manufacturer's drawings shall be followed in all cases where the makers of devices and equipment furnish directions or details not shown on the drawings or described in the specifications.

8. Drawings are not intended to be scaled, but shall be followed with sufficient accuracy to coordinate with other work and structural limitations.

9. Seismic design: The Contractor shall be responsible for all anchors, supports and connections of mechanical work to the building structure to prevent damage as a result of an earthquake, including manufactured equipment; the connection and integrity of shop fabricated and field fabricated materials and equipment. All supports, equipment and connections thereto shall be designed to conform to requirements of the International Building Code, or other governing codes.

10. Refer to architectural drawings for exact location of diffusers, grilles, registers, and thermostats (if depicted). If thermostats are not depicted specifically on Architect's drawings, obtain Architect's approval for locations prior to installation.

11. Coordinate the work of this section with the work of other sections in ample time for proper installation and connection.

12. Carefully check space requirements, including servicing space requirements, with other sections to ensure that all equipment and materials can be installed in the spaces allotted thereto.

13. Prepare drawings, attend meetings, obtain all approvals required by all authorities having jurisdiction, conduct required tests and obtain required permits.

General:
1. Painting:

- Paint:
 - Best grade for its purpose.
 - Deliver in original sealed containers.
- Apply in accordance with manufacturer's instructions.
- Colors: As selected by Architect.
- Galvanized zinc primer:
 - Hot dipped galvanized or dipped in zinc chromate.
 - Zinc chromate with finish to match surroundings.
- Brush and clean work prior to concealing, painting and acceptance.
- Painted exposed work required for damage. Clean and repair to match adjoining work before final acceptance.

- Cleaning:
- Remove debris from inside and outside of material and equipment.
- Cutting and Patching: As noted on drawings.

CONTROL AIR AND DEVICES
All control devices not specified to be furnished and installed under the Electrical sections shall be provided under this section.

TESTING AND BALANCING
General:
1. Adjustment: Each piece of equipment and all of the systems shall be adjusted to insure proper functioning of all controls, and shall be left in operating condition.
2. Preliminary Operation: The Owner reserves the right to operate any systems or equipment prior to final completion and acceptance of the work. Such preliminary operation shall not be construed as an acceptance of any work.

Air Distribution Systems:
1. Balance and adjust air distribution system to quantities indicated on drawings in accordance with Associated Air Balance Council (AABC) manual, latest edition.
2. Balancing and testing shall be performed and supervised by a certified independent firm specializing in testing and balancing. Firm shall be a member of AABC. Test reports shall be submitted in bound folders and on AABC type report forms. All diffusers shall be identified by designations on drawings.
3. Diffuser air delivery shall not be less than nor exceed by more than 5% the air delivery indicated on the plans.
4. Upon completion of the installation, Contractor shall rebalance any air distribution system affected by the renovation, including terminal air units and air outlets.

HVAC Hydraulic Systems:
1. Less than 100 psi operating pressure:

- Test hydrostatically to 150 psi.

- Over 100 psi operating pressure:
- Test hydrostatically to 1 1/2 times operating pressure.
- Never exceed test pressure ANSI B16.1 basis.
- Duration: 2 hours:
- With system valves capped and pressure apparatus disconnected:
 - Pressure change: none.
 - Compensate for temperature change.
- Leaks and defects:
 - Repair or replace as directed.
 - Without additional cost.
- Notify the Architect in writing one week before test. Furnish written report and certification that tests have been satisfactorily completed.

PROJECT CLOSE-OUT
After final operation for inspection and acceptance, deliver all copies of operation instructions, maintenance manuals and parts descriptions to the Architect. All tools supplied with the equipment for maintenance shall be tagged and temporarily secured to the unit, or turned over to the Owner.

SEQUENCE OF OPERATIONS
VRF Heat pump:
1. Temperature Control - The thermostat activates the Heating or Cooling function
a. The indoor unit shall modulate its internal expansion valve (LEV) to maintain the temperature set point via the indoor unit's internal controller.
b. The set point is adjustable at the remote controller or central controller. The temperature set point can also be scheduled at the remote controller or the central controller.
c. The indoor unit shall determine whether it should be in auto-heat mode or auto-cool mode based on the space temperature relative to temperature set point.
d. The indoor unit shall switch from auto-heat to auto-cool when the space temperature rises above and remains above the temperature set point plus the dead band for 3 minutes. The opposite shall occur if the temperature is below set point.

Air Curtains:
1. The heat pump shall be activated by the opening of the entry door or if the temperature in the space drop below the set point.
2. The electric heat in the unit shall activate when the outside air temperature is below the set point or when the temperature in the space drops below the set point.



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139

One Beacon Street
Third Floor
Boston, MA 02108
United States

Tel: 617.619.5700
Fax: 617.619.5701



One Beacon Street
Third Floor
Boston, MA 02108
United States



A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com

All control devices not specified to be furnished and installed under the Electrical sections shall be provided under this section.

TESTING AND BALANCING
General:
1. Adjustment: Each piece of equipment and all of the systems shall be adjusted to insure proper functioning of all controls, and shall be left in operating condition.
2. Preliminary Operation: The Owner reserves the right to operate any systems or equipment prior to final completion and acceptance of the work. Such preliminary operation shall not be construed as an acceptance of any work.

Air Distribution Systems:
1. Balance and adjust air distribution system to quantities indicated on drawings in accordance with Associated Air Balance Council (AABC) manual, latest edition.
2. Balancing and testing shall be performed and supervised by a certified independent firm specializing in testing and balancing. Firm shall be a member of AABC. Test reports shall be submitted in bound folders and on AABC type report forms. All diffusers shall be identified by designations on drawings.
3. Diffuser air delivery shall not be less than nor exceed by more than 5% the air delivery indicated on the plans.
4. Upon completion of the installation, Contractor shall rebalance any air distribution system affected by the renovation, including terminal air units and air outlets.

HVAC Hydraulic Systems:
1. Less than 100 psi operating pressure:

- Test hydrostatically to 150 psi.

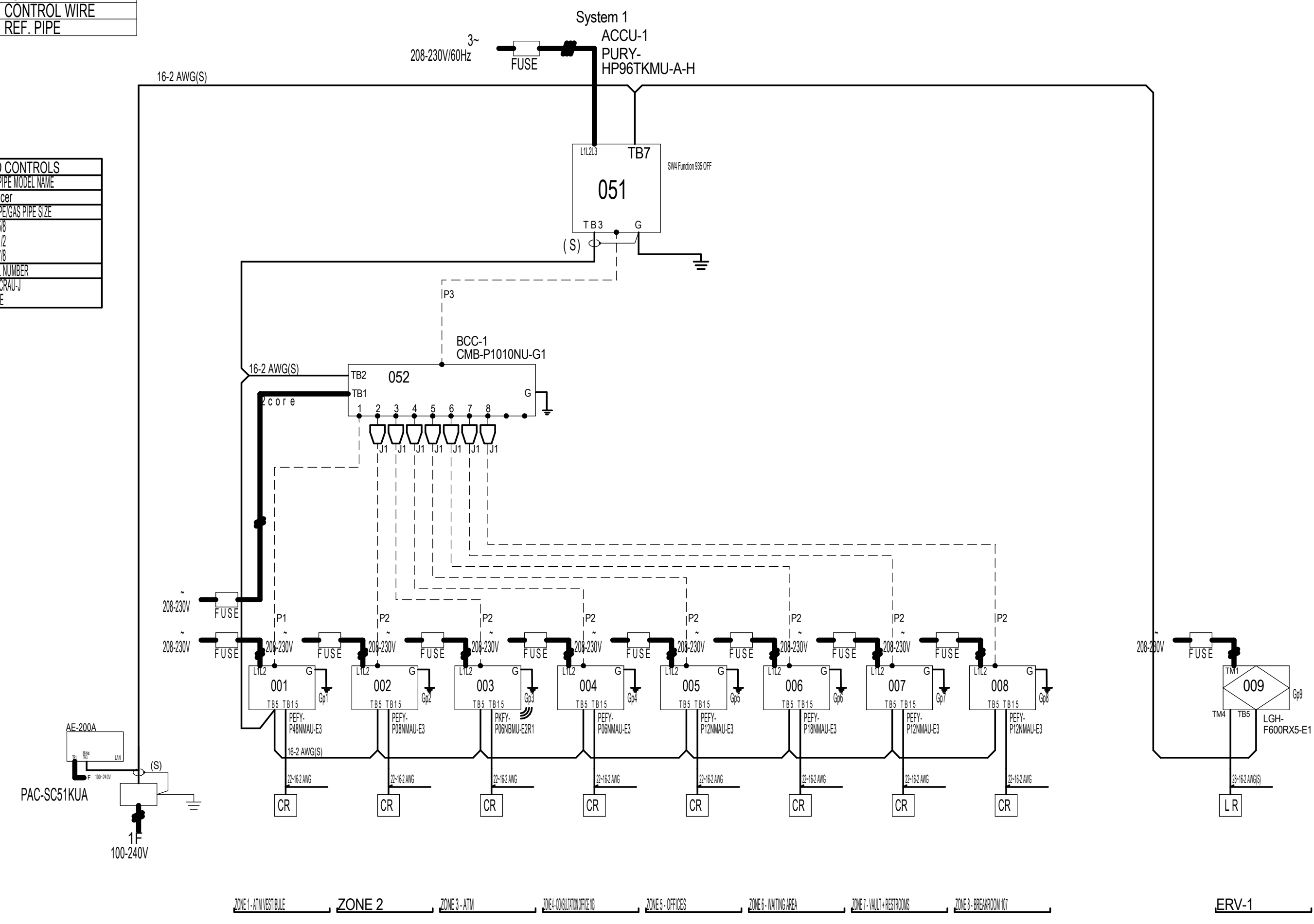
- Over 100 psi operating pressure:
- Test hydrostatically to 1 1/2 times operating pressure.
- Never exceed test pressure ANSI B16.1 basis.
- Duration: 2 hours:
- With system valves capped and pressure apparatus disconnected:
 - Pressure change: none.
 - Compensate for temperature change.
- Leaks and defects:
 - Repair or replace as directed.
 - Without additional cost.
- Notify the Architect in writing one week before test. Furnish written report and certification that tests have been satisfactorily completed.

Santander Central Square		CONT: No	PAGE
DIAGRAM SYMBOL LEGEND	DESCRIPTION		
—	POWER WIRE		
—	CONTROL WIRE		
—	REF. PIPE		

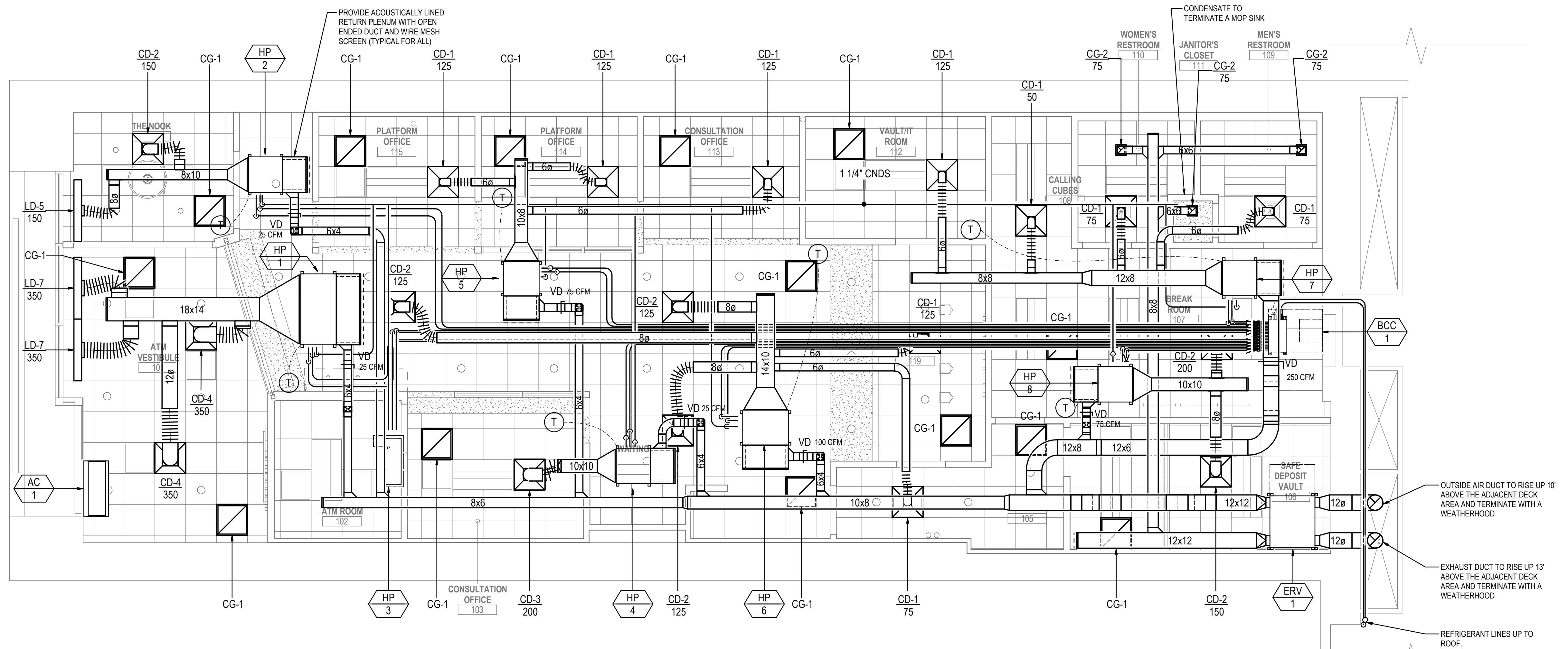
CITY MULTI
SYSTEM SCHEMATIC DWG.

Additional refrigerant charge is needed depending on the size and length of extended piping.
Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm (1/2 AWG), 1.25mm (1/2 AWG) or more. 0.75mm (3/16 AWG) between 0.5mm (3/16 AWG) and 1.25mm (1/2 AWG).

PIPING AND CONTROLS	
SYMBOL	DESCRIPTION
—	Refrigerant
—	Control Pipe
—	Control Wire
—	Power Wire
—	Ref. Pipe



2 VRF SYSTEM SCHEMATIC
SCALE: NONE



1 MECHANICAL PLAN - LEVEL 01
SCALE: 1/4" = 1'-0"

SHEET NOTES

GENERAL NOTES



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139



One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel: 617.619.5700
Fax: 617.619.5701



SYSKA HENNESSY
GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Project Name
Santander - Central Square,
Cambridge
Project Number
11.6850.127
Description
MECHANICAL PLAN - LEVEL 01

Scale
As indicated

M-101

SHEET NOTES



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139

Gensler

One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel: 617.619.5700
Fax: 617.619.5701



SYSKA HENNESSY
GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com

GENERAL NOTES

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name

Santander - Central Square,
Cambridge

Project Number

11.6850.127

Description

MECHANICAL PLAN - ROOF

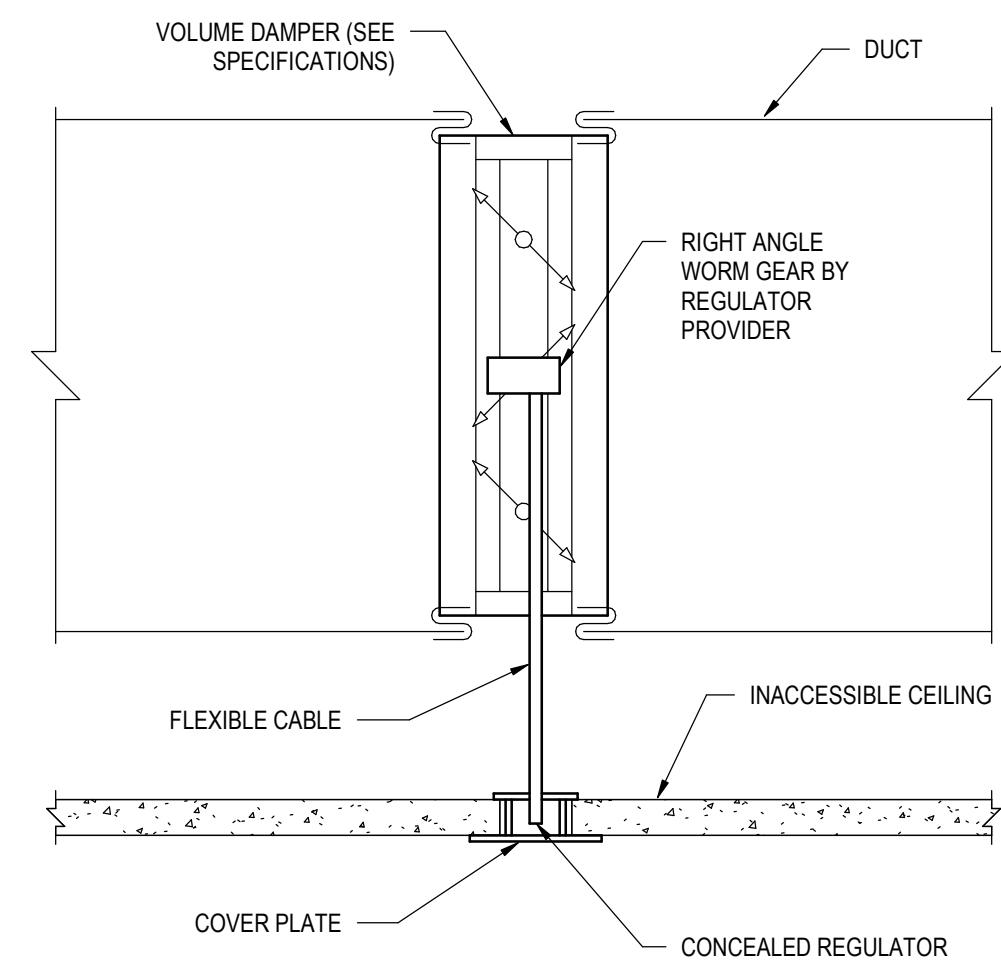
Scale

1/4" = 1'-0"

M-102

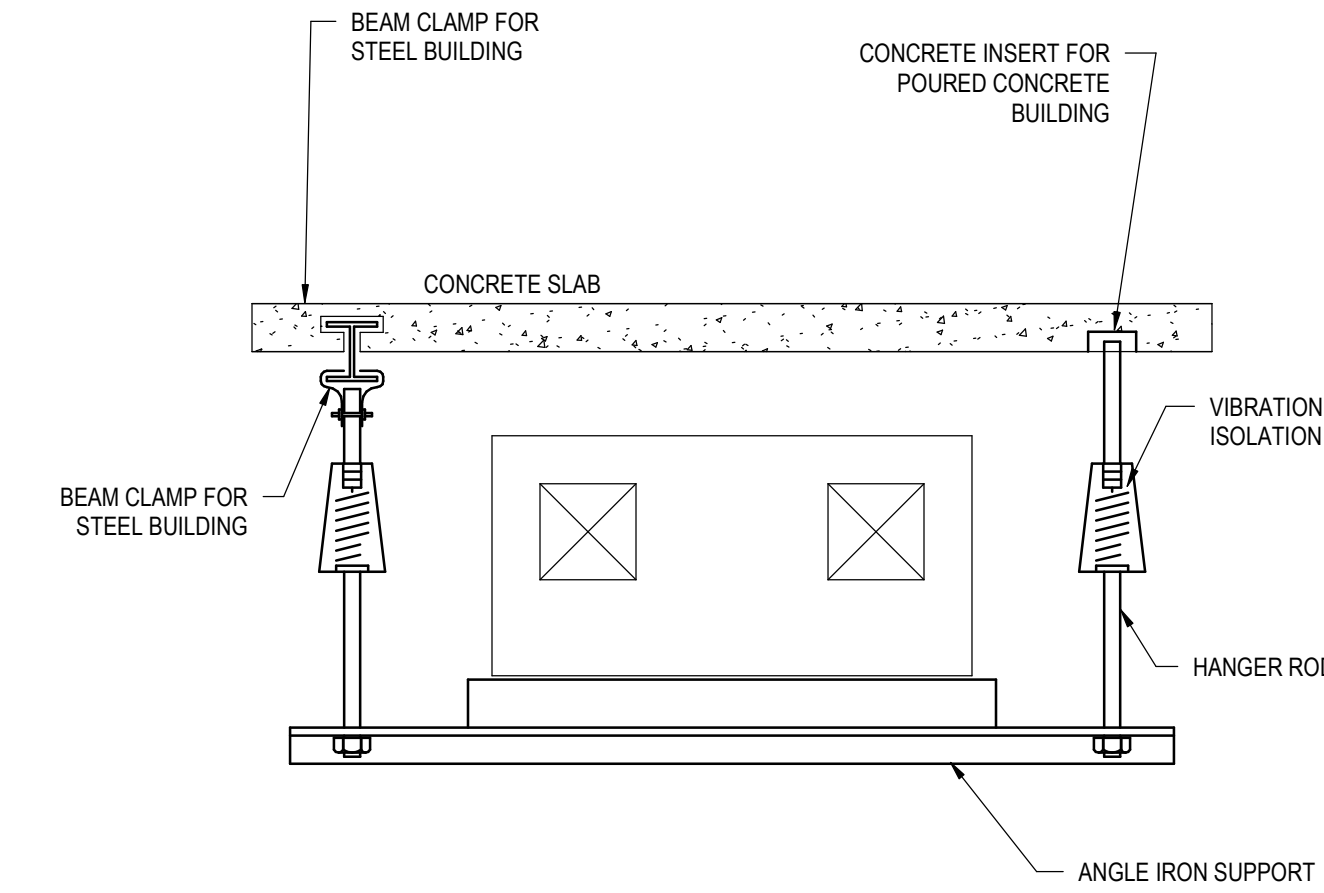


1 MECHANICAL PLAN - ROOF
SCALE: 1/4" = 1'-0"



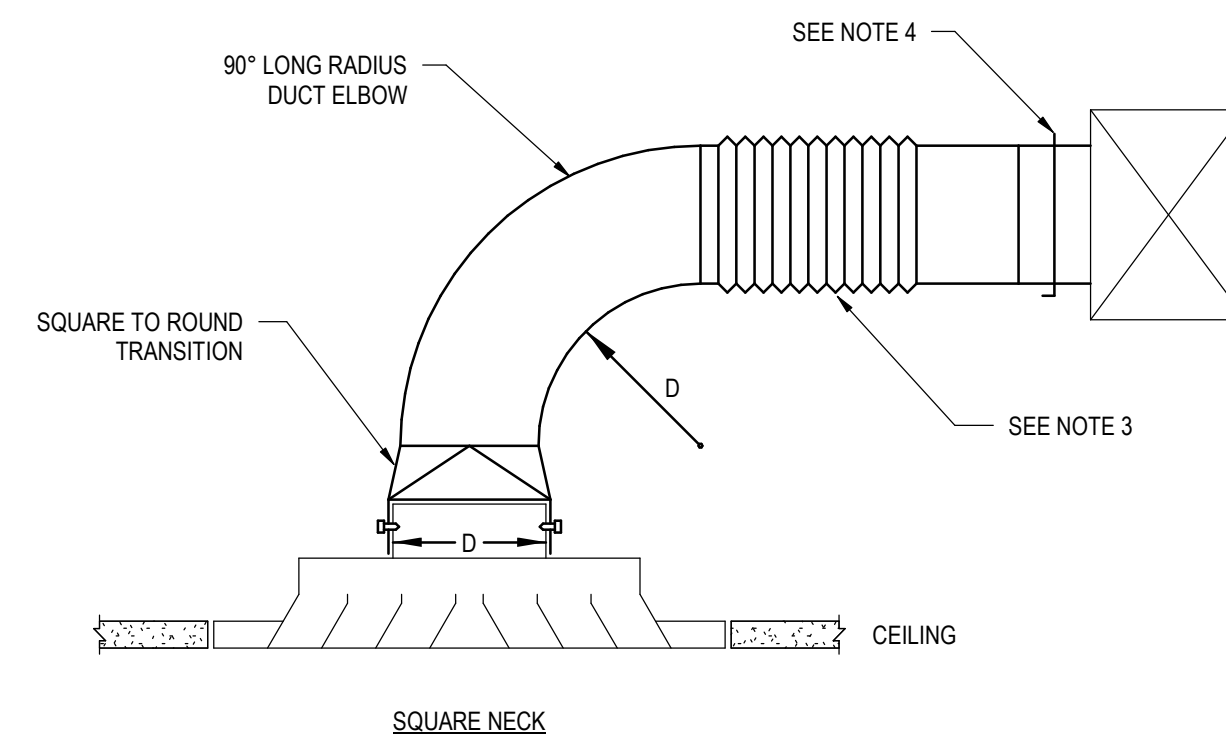
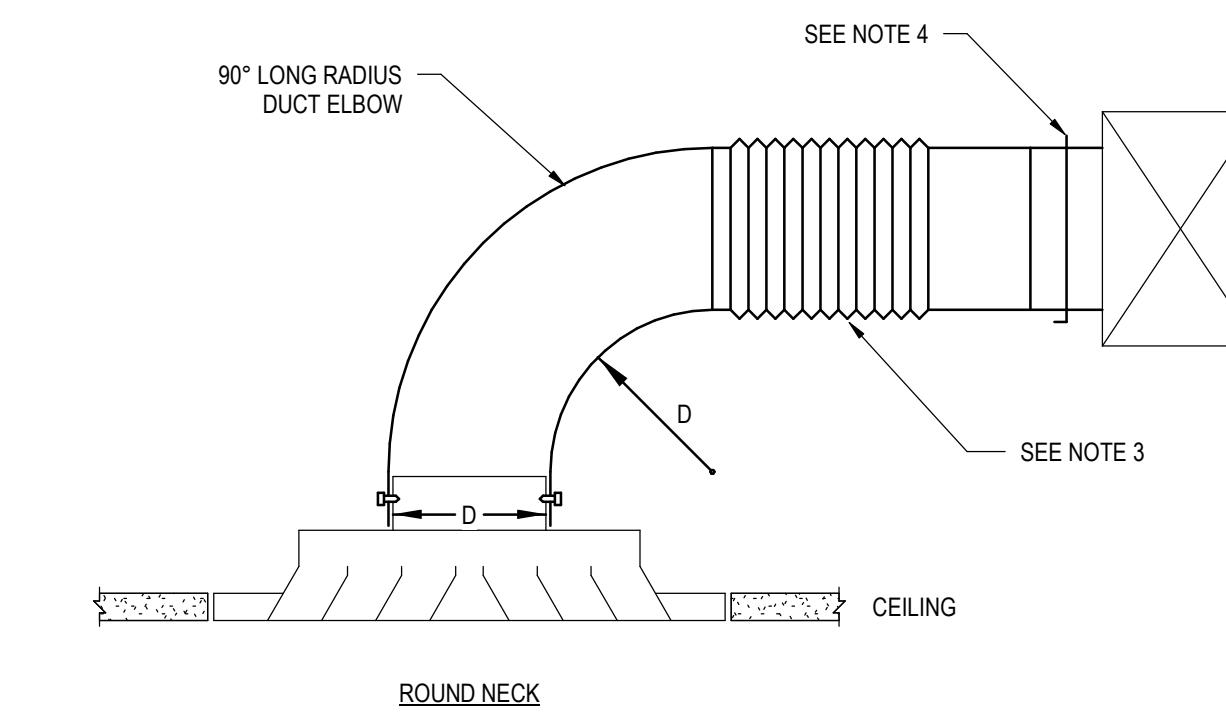
- NOTES:
1. A REMOTE ACTUATOR IS NOT REQUIRED WHEN THE VOLUME DAMPER IS INSTALLED ABOVE AN ACCESSIBLE CEILING.
 2. WHEN INSTALLED ABOVE AN INACCESSIBLE CEILING, ONE OF THE FOLLOWING SHALL APPLY.
 - A. INSTALL AN ACCESS PANEL.
 - B. WHEN INSTALLED WITHIN 10' OF A DIFFUSER, THE VOLUME DAMPER ASSEMBLY SHALL BE OPERABLE THROUGH THE FACE OF THE DIFFUSER BY MEANS OF FLEXIBLE CABLE.
 - C. ALL OTHER AREAS SHALL BE INSTALLED AS INDICATED.
 3. COORDINATE WITH THE ARCHITECT WHICH AREAS SHALL HAVE WHICH TYPE OF ACTUATION.
 4. SEE SPECIFICATIONS AND FLOOR PLANS FOR ANY ADDITIONAL INFORMATION.

2 VOLUME DAMPER (VD) DETAIL
SCALE: NONE

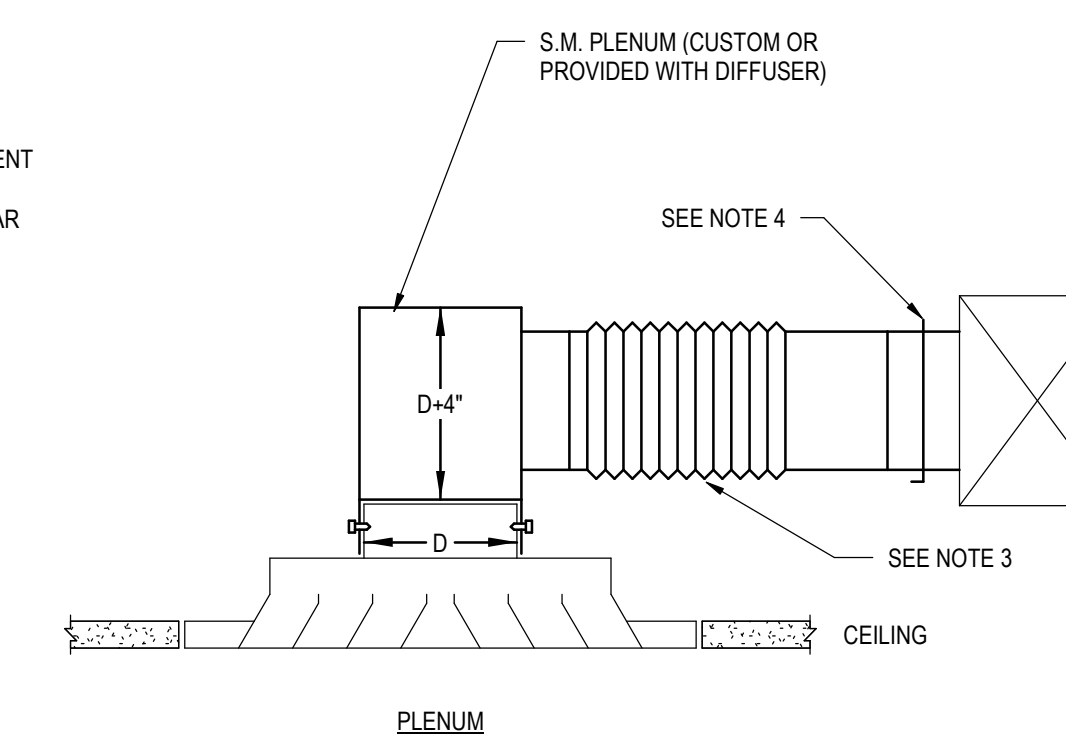
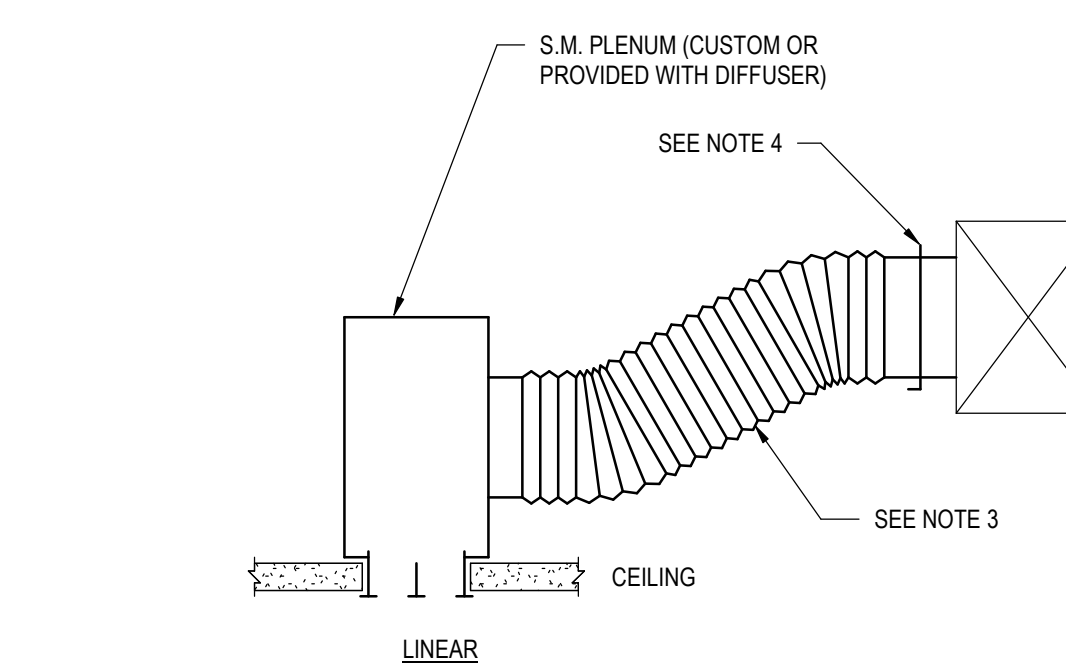


- NOTE:
1. METHOD OF HANGING, TYPE OF INSERT, BEAM CLAMP, ROD, ETC., MUST BE APPROVED BY STRUCTURAL ENGINEER PER SHOP DRAWING.

1 FAN EQUIPMENT HANGING DETAIL
SCALE: NONE



- NOTES:
1. SEE SCHEDULES AND PLANS FOR ADDITIONAL INFORMATION ON TYPE, SIZING, MOUNTING, ETC.
 2. ALL DUCTWORK (INCLUDING FLEXIBLE DUCT) SHALL BE INSULATED OR LINED IN ACCORDANCE WITH THE SPECIFICATIONS.
 3. SEE SPECIFICATIONS FOR EXTENT OF FLEXIBLE DUCT ALLOWED.
 4. MOUNT VOLUME DAMPER AS FAR FROM DIFFUSER AS POSSIBLE.



3 CEILING MOUNTED DIFFUSER CONNECTION DETAIL
SCALE: NONE



Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name

Santander - Central Square,
Cambridge

Project Number

11.6850.127

Description

MECHANICAL DETAILS

Scale

1/8" = 1'-0"

M-501



AIR TERMINAL SCHEDULE												
DESIGNATION	TYPE	CFM RANGE		MAX. SP (IN.)	FRAME SIZE (IN.)	NECK SIZE (IN.)	MAX. NC	MANUFACTURER	MODEL	NOTES		
		MIN.	MAX.									
CD-1	CEILING DIFFUSER	0	125	0.15	24"x24"	6"	25	PRICE INDUSTRIES	SMD	SEE PLANS FOR CFM		
CD-2	CEILING DIFFUSER	125	175	0.15	24"x24"	8"	25	PRICE INDUSTRIES	SMD	SEE PLANS FOR CFM		
CD-3	CEILING DIFFUSER	175	270	0.15	24"x24"	10"	25	PRICE INDUSTRIES	SMD	SEE PLANS FOR CFM		
CD-4	CEILING DIFFUSER	270	500	0.15	24"x24"	12"	25	PRICE INDUSTRIES	SMD	SEE PLANS FOR CFM		
CG-1	CEILING GRILLE	0	1800	0.15	24"x24"	22"x22"	25	PRICE INDUSTRIES	10	PROVIDE RETURN AIR SILENCER (RAS)		
CG-2	CEILING GRILLE	0	125	0.15	8x8	6x6	25	PRICE INDUSTRIES	510	SEE PLANS FOR CFM		
LD-5	LINEAR SLOT DIFFUSER	150	310	0.15	48"	8"	25	PRICE INDUSTRIES	AS210	(2) 1" SLOT, SEE PLANS FOR CFM		
LD-7	LINEAR SLOT DIFFUSER	310	500	0.15	48"	12"	25	PRICE INDUSTRIES	AS210	(2) 1" SLOT, SEE PLANS FOR CFM		

AIR CURTAIN SCHEDULE													
DESIGNATION	NO.	MOUNTING TYPE	MFR.	MODEL NO.	CFM STD. AIR	TEMP. RISE (°F)	HEATING KW	FAN RPM	MOTOR HP	ELEC. CHAR.			REMARKS
										V	PH	HZ	
AC	1	CEILING	POWERED AIRE, INC	CED-1-36	1710	19	10	2837	0.75	208	3	60	

HEAT PUMP AIR CONDITIONING UNIT SCHEDULE																	
DESIGNATION	NO.	TYPE	MFR.	MODEL NO.	COOLING CAPACITY				HEATING CAPACITY			ELEC. CHAR.				REMARKS	
					ENT. AIR °F		BTU/HR	ENT. AIR °F		BTU/HR	CFM	EXT. S.P. IN WG	TOTAL MCA	V	PH		HZ
					DB	WB		SENSIBLE	TOTAL								
HP	1	CEILING CONCEALED	Mitsubishi Electric	PEFY-P48NMAU-E3	80	67	48,000	32,092	70	54,000	1412	0.60	3.51	208	1	60	
HP	2	CEILING CONCEALED	Mitsubishi Electric	PEFY-P08NMSU-ER2	80	67	8,000	5,855	70	9,000	300	0.60	1.05	208	1	60	
HP	3	WALL MOUNTED	Mitsubishi Electric	PKA-A12HA7	80	67	12,000	3,808	70	18,000	208	0.00	0.19	208	1	60	PROVIDE BLUE DIAMOND MICRO CONDENSATE PUMP
HP	4	CEILING CONCEALED	Mitsubishi Electric	PEFY-P06NMSU-ER2	80	67	6,000	4,870	70	6,700	300	0.60	1.05	208	1	60	
HP	5	CEILING CONCEALED	Mitsubishi Electric	PEFY-P12NMSU-ER2	80	67	12,000	7,442	70	13,500	371	0.60	1.20	208	1	60	
HP	6	CEILING CONCEALED	Mitsubishi Electric	PEFY-P18NMSU-ER2	80	67	18,000	12,432	70	20,000	600	0.60	1.56	208	1	60	
HP	7	CEILING CONCEALED	Mitsubishi Electric	PEFY-P12NMSU-ER2	80	67	12,000	7,442	70	13,500	371	0.60	1.20	208	1	60	
HP	8	CEILING CONCEALED	Mitsubishi Electric	PEFY-P12NMSU-ER2	80	67	12,000	7,442	70	13,500	371	0.60	1.20	208	1	60	

AIR-COOLED CONDENSING UNIT SCHEDULE													
DESIGNATION	NO.	LOCATION	MFR.	MODEL NO.	NOMINAL HEATING CAPACITY (BTU/H)	NOMINAL COOLING CAPACITY (BTU/H)	COOLING EAT °F	ELEC. CHAR.				REMARKS	
								HEATING EAT °F		MCA	V		PH
ACCU	1	ROOF	Mitsubishi Electric	PURY-HP96TKMAU-H	108,000	96,000	91	5.0	60			208	

ENERGY RECOVERY UNIT SCHEDULE														
DESIGNATION	NO.	CORE TYPE	MFR.	MODEL NO.	TOTAL CFM STD. AIR	E. S.P. IN WG	TEMPERATURE RECOVERY	ENTHALPY COOLING	ENTHALPY HEATING	MCA	VOLTAGE	PHASE	HZ	REMARKS

BRANCH CIRCUIT CONTROLLER SCHEDULE												
DESIGNATION	NO.	TYPE	MFR.	MODEL NO.	CONNECTED CAPACITY	MCA	VOLTAGE	PHASE	HZ	REMARKS		
											BCC	1

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name

Santander - Central Square, Cambridge

Project Number

11.6850.127

Description

MECHANICAL SCHEDULES

Scale

M-701

ABBREVIATIONS

-A	HP	HORSEPOWER
AFF	HZ	HERTZ
AMP	-J-	AMPERE
ANN	JB	ANNUNCIATOR JUNCTION BOX
ARCH	-L-	ARCHITECT
ATS	LTG	AUTOMATIC TRANSFER SWITCH LIGHTING
AUX	LV	AUXILIARY LOW VOLTAGE
AV	-M-	AUDIO VISUAL
AVG	MAX	AVERAGE MAXIMUM
AWG	MCB	AMERICAN WIRE GAUGE MAIN CIRCUIT BREAKER
-B	MCC	MOTOR CONTROL CENTER
BAS	MECH	BUILDING AUTOMATION SYSTEM MECHANICAL
BLDG	MIN	BUILDING MINIMUM
BSMT	MV	BASEMENT MEDIUM VOLTAGE
-C-	-N-	CIRCUIT BREAKER NEUTRAL
CB	NC	CIRCUIT BREAKER NORMALLY CLOSED
CCTV	NEUT	CLOSED CIRCUIT TELEVISION NEUTRAL
CD	NO	CONSTRUCTION DOCUMENT NORMALLY OPEN, NUMBER
CKT	NTS	CIRCUIT NOT TO SCALE
CL	-P-	CENTER LINE / CLOSE
CLG	P	CEILING POLE
CTRL	PB	CONTROL PULL BOX
CTV	PH	CABLE TELEVISION PHASE
-D-	PNL	DIRECT CURRENT PANEL
DC	PWR	DIRECT CURRENT POWER
DEG	-R-	DEGREE
DEG F	RECPT	DEGREES FAHRENHEIT RECEPTACLE
DEMO	REQD	DEMOLITION REQUIRED
DIAG	RM	DIAGRAM ROOM
DIM	-S-	DIMENSION
DISC	SCHED	DISCONNECT SCHEDULE
DISTR	SD	DISTRIBUTION PANEL SMOKE DETECTOR
PNL	SECT	DISTRIBUTION PANEL SECTION
DIV	SPEC	DIVISION SPECIFICATION
DS	SPKR	DISCONNECT SWITCH SPEAKER
DWG	SWBD	DRAWING SWITCHBOARD
-E-	SWGR	ELECTRICAL CONTRACTOR SWITCHGEAR
EC	SYS	ELECTRICAL CONTRACTOR SYSTEM
EH	-T-	ELECTRIC HEATER
ELEC	TELCOM	ELECTRIC TELECOMMUNICATIONS
EMER	TV	EMERGENCY TELEVISION
EPO	TVSS	EMERGENCY POWER OFF TRANSIENT VOLTAGE SURGE SUPPRESSOR
EQUIP	TYP	EQUIPMENT TYPICAL
-F-	-U-	FAHRENHEIT
FA	UC	FIRE ALARM UNDERCOUNTER
FAAP	UL	FIRE ALARM ANNUNCIATOR PANEL UNDERWRITERS LABORATORIES
FACP	UON	FIRE ALARM CONTROL PANEL UNLESS OTHERWISE NOTED
FC	UPS	FOOTCANDLE UNINTERRUPTIBLE POWER SUPPLY
FDR	UTIL	FEEDER UTILITY
FLEX	-V-	FLEXIBLE
FLR	V	FLOOR VOLT
FLIOR	VA	FLOUORESCENT VOLT AMPERE
FR	VFD	FIRE RATING VARIABLE FREQUENCY DRIVE
FREQ	VOLT	FREQUENCY VOLTAGE
FT	-W-	FOOT / FEET
FU	W	FUSE WATT OR WIRE
FU SW	W/	FUSED SWITCH WITH
-G-	W/O	GROUND WITHOUT
G	WP	GROUND WEATHERPROOF
GC	-X-	GENERAL CONTRACTOR
GEN	XFER	GENERATOR TRANSFER
GFCI	XFMR	GROUND FAULT CIRCUIT INTERRUPTER TRANSFORMER
-H-	XM	EXISTING TO REMAIN

SYMBOLS LEGEND

ANNOTATION	
	SHEET KEYNOTE
	REVISION CLOUD (DELTA 1)
	LP4:12 PANEL.CIRCUIT
POWER OUTLETS	
	FLR WALL CLG DUPLEX
	QUADRUPLEX
	GFCI DUPLEX
	JUNCTION BOX
	POKE THRU
	ISOLATED GROUND DUPLEX
	SPECIAL OUTLET
WIRING	
	CONDUIT HOMERUN TO PANEL BOARD 1A WITH CIRCUIT 1.3.5
	CONDUIT RUN UNDERGROUND OR UNDER THE FLOOR SLAB
	CONDUIT TURNING DOWN
	CONDUIT TURNING UP
LIGHTING	
	FLR WALL CLG RECESSED DOWNLIGHT
	1X4 SURFACE MOUNTED LIGHT
	2X4 SURFACE MOUNTED LIGHT
	1X4 EMERGENCY LIGHT
	2X4 EMERGENCY LIGHT
	2X4 RECESSED LIGHT
	EXIT SIGN 1 FACE
	EXIT SIGN 1 FACE LEFT ARROW
SWITCHES/CONTROLS	
	FLR WALL CLG LIGHT SWITCH - SINGLE POLE
	LIGHT SWITCH - THREE WAY
	FLR WALL CLG DIMMER
	OCCUPANCY SENSOR
	PHOTOCELL
	VERRIDE SWITCH
POWER	
	SURFACE MOUNTED PANEL
	DISCONNECT SWITCH
	SWITCH - MOTOR RATED
	FUSED DISCONNECT SWITCH
	15AF FUSE SIZE
	30A5 SWITCH SIZE
	MOTOR
	RELAY
	METER

SINGLE LINE DIAGRAM	
	CIRCUIT BREAKER SWITCH
	PANEL
	2000 = AMPACITY 3-NO. 4 SINGLE, 5-DOUBLE = NEUTRAL (+) = ADDITIONAL INFO AS REQUIRED
SECURITY DEVICES	
	CARD READER
	DOOR RELEASE
	ELECTRIC STRIKE
TELECOM & AUDIOVISUAL	
	FLR WALL CLG TELE/DATA OUTLET
	AUDIOVISUAL EQUIPMENT LOCATION - WALL
	FLUSH MOUNTED CABLE TV OUTLET

GENERAL NOTES

- UNLESS REQUESTED OTHERWISE, THE AMPACITY OF 600 VOLTS OR LESS CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C (140°F) FOR CONDUCTOR SIZE 14 THROUGH 1 AWG OR 75°C (167°F) FOR CONDUCTOR SIZE OVER 1AWG.
- NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.
- FUSES SHALL BE PROVIDED WITH REJECTION TYPE FUSE HOLDERS.
- GREEN INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL BRANCH CIRCUITS AND FEEDERS.
- ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE WEATHERPROOF.
- PROJECT SPECIFICATIONS ARE AN INTEGRAL PART OF THESE DRAWINGS.
- A SINGLE RECEPTACLE INSTALLED ON AN INDIVIDUAL BRANCH CIRCUIT SHALL HAVE AN AMPERE RATING OF NOT LESS THAN THAT OF THE BRANCH CIRCUIT. INDICATE THE RECEPTACLE RATING.
- MINIMUM SIZE OF CONDUIT SHALL BE 3/4". MINIMUM SIZE OF NEUTRAL CONDUCTOR SHALL BE #12 AWG, ION MINIMUM SIZE OF CONDUCTOR SHALL BE #12 AWG, ION MINIMUM CONDUCTOR SIZE AT 120 VOLTS AND OVER 100FT CIRCUIT LENGTH SHALL BE #10 AWG, ION MINIMUM CONDUCTOR SIZE AT 277 VOLTS AND OVER 200FT. CIRCUIT LENGTH SHALL BE #10AWG UON.
- ALL CONDUCTORS SHALL BE COPPER TYPE THWN INSULATION.
- MAINTAIN CIRCUIT CONTINUITY TO THE AREAS NOT AFFECTED BY THE ALTERATION. RELOCATE ALL EXISTING CIRCUITS TO REMAIN IF AFFECTED BY NEW CONSTRUCTION.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR LOCATIONS OF EQUIPMENT.
- THE DRAWINGS INDICATE SIZE AND GENERAL LOCATION OF WORK. SCALE DIMENSIONS SHALL NOT BE USED. THE EXACT LOCATION AND ELEVATION OF ALL RECEPTACLES AND TELEPHONE/ DATA OUTLETS, ETC., SHALL BE DETERMINED FROM THE ARCHITECT'S DRAWINGS. UON.
- ALL CIRCUIT NUMBERS INDICATED ON PLANS ARE FOR CLARITY ONLY. FIELD CONDITIONS PREVAIL. CIRCUIT NUMBERS ARE INTENDED TO BE USED FOR QUANTITIES AND FOR DESIGNATING WHAT OUTLETS WILL BE ON THE SAME CIRCUIT. THEY NEED NOT BE APPLIED LITERALLY FOR ACTUAL CONNECTIONS TO OUTLETS EXCEPT WHERE DRAWINGS CALL FOR SEPARATE NEUTRAL. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUITS WITH PROPER PHASE SEQUENCING FOR EVERY NEUTRAL WIRE REQUIRED.
- ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AND CONFER WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION.
- FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO MOTORS AND TO RECESSED MOUNTED LIGHTING FIXTURES. LENGTH SHALL NOT EXCEED 6-FT.
- PANEL DIRECTORIES SHALL BE UPDATED TO CONFORM TO WORK.
- COORDINATE WITH BUILDING MANAGER, ARCHITECT, AND GENERAL CONTRACTOR PRIOR TO SLAB CUTS AND CORE DRILL.
- ALL RECEPTACLES WIRED TO 1P-20A BRANCH CIRCUIT BREAKERS SHALL BE NEMA 5-20R, U.O.N.
- SEE ARCHITECTURAL DRAWINGS FOR CEILING WORK AND SPECIFICATIONS. COORDINATE WITH GENERAL CONTRACTOR.
- BUILDING FIRE ALARM SYSTEM INTEGRITY SHALL BE MAINTAINED AT ALL TIMES (BEFORE, DURING AND AFTER DEMOLITION AND OR CONSTRUCTION).
- IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES ON THESE DRAWINGS THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION. IF ENGINEER CANNOT BE REACHED PRIOR TO PRICING THE CONTRACTOR MUST STATE SUCH DISCREPANCIES IN BID PROPOSAL AND BREAK OUT PRICING.
- ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE CAREFULLY THE EXISTING AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH DIFFICULTIES THAT WILL AFFECT THE INSTALLATION OF THE WORK. CONTRACTOR SHALL PERFORM THIS, PRIOR TO SUBMITTING HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
- PERFORM THE WORK AT SUCH TIME AND IN SUCH MANNER AS TO MINIMIZE INTERFERENCE WITH BUILDING'S NORMAL OPERATION. NOTIFY BUILDING REPRESENTATIVES IN ADVANCE EACH TIME A SERVICE OUTAGE OR INTERRUPTION WILL BE REQUIRED FOR THE PERFORMANCE OF SOME PHASE OF THE WORK.
- THE OPERATION OF THE ELECTRICAL INSTALLATION DOES NOT CONSTITUTE AN ACCEPTANCE OF THE WORK BY THE OWNER. FINAL ACCEPTANCE IS TO BE MADE AFTER THE CONTRACTOR HAS DEMONSTRATED THAT THE WORK FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS AND HAS FURNISHED ALL REQUIRED CERTIFICATES OF APPROVAL FROM THE STATE AUTHORITIES, MUNICIPAL AUTHORITIES AND UNDERWRITERS.
- CONTRACTOR SHALL COMPLY WITH BUILDING STANDARD SPECIFICATIONS. BUILDING STANDARD SHALL BE PART OF WORK. ANY DISCREPANCIES BETWEEN BUILDING STANDARD AND THE DESIGN DRAWINGS SHALL BE SUBMITTED IN RFI FORMAT FOR ENGINEER'S REVIEW DURING THE BID PROCESS. A COPY OF BUILDING STANDARD SHOULD BE OBTAINED FROM BUILDING ENGINEER.
- PROVIDE PLASTIC GROMMETS AND PULLWIRE FOR ALL EMPTY CONDUITS.
- PROVIDE BACKBOX & STUB-UP W/PULLWIRE FOR THERMOSTATS COORDINATE QUANTITY & LOCATION W/MECH CONTRACTOR.
- PROVIDE BACKBOX & STUB-UP W/PULLWIRE FOR TELEDATA OUTLETS, CARD READERS, AND TV BOXES.
- COLOR, HEIGHT AND LOCATION OF ALL RECEPTACLES SHALL BE AS PER ARCHITECT'S DRAWINGS.
- REFER TO AV, TELECOM & SECURITY DWGS FOR ADDITIONAL CONDUIT AND JUNCTION BOX REQUIREMENTS. PROVIDE PULLWIRE IN ALL AV, TELECOM, AND SECURITY CONDUITS.
- CONTRACTOR SHALL LABEL ALL RECEPTACLES WITH CIRCUIT AND PANEL FROM WHICH THEY ARE FED WITH STICK ON LABEL.
- ALL J-BOXES TO BE IN ACCESSIBLE CEILING SPACE. WHERE EXISTING J-BOXES ARE LOCATED WHERE NEW INACCESSIBLE CEILING IS BEING INSTALLED, RELOCATE J-BOXES TO ACCESSIBLE CEILING SPACE. EXTEND CONDUIT AND WIRING TO ACCOMMODATE RELOCATION.
- ALL J-BOXES SHALL BE SIZED PER NEC ARTICLE 314, TABLE 314.16(A).
- ALL BRANCH WIRING SHALL BE CONCEALED IN WALLS AND ABOVE HUNG CEILING, WHERE THERE IS NO HUNG CEILING CONDUIT SHALL BE RUN IN A NEAT AND ORDERLY MANNER PARALLEL AND PERPENDICULAR TO HVAC DUCTWORK AND FIRE PROTECTION SPRINKLER PIPING. NO FLEXIBLE CONDUIT IS PERMITTED IN AREAS WERE IT WILL BE EXPOSED.
- CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT DRAWINGS PRIOR TO COMPLETION OF PROJECT FOR REVIEW BY ARCHITECT AND ENGINEER.

DEVICE STATUS LEGEND

LETTER ADJACENT TO DEVICES INDICATES STATUS AS FOLLOWS:

- XM = EXISTING TO REMAIN
- XR = EXISTING TO BE RELOCATED, SYMBOL SHOWN DASHED
- X = EXISTING TO BE REMOVED, SYMBOL SHOWN DASHED
- XN = EXISTING CIRCUIT TO REMAIN CONNECTED TO NEW DEVICE
- XL = NEW LOCATION OF RELOCATED DEVICE

NOTE: DEVICES ARE NEW IF NO STATUS SHOWN.

GENERAL RENOVATION/DEMOLITION NOTES

- REMOVE ALL EXISTING LUMINAIRES, WIRING DEVICES, ELECTRICAL EQUIPMENT AND CIRCUITING, WHETHER SPECIFICALLY INDICATED OR NOT. AS REQUIRED DUE TO THE ARCHITECTURAL AND MECHANICAL DEMOLITION WORK IN THE AREA TO BE RENOVATED, ALL EQUIPMENT THAT HAS BEEN REMOVED AND IS NOT REUSED SHALL BE RETURNED TO THE OWNER, OR DISPOSED OF AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- RECONNECT CIRCUITING AS REQUIRED TO MAINTAIN CONTINUITY TO REMAINING OUTLETS WHEN EXISTING LUMINAIRES AND DEVICES ARE REMOVED. CONSOLIDATE PARTIALLY LOADED CONVENIENCE RECEPTACLE CIRCUITS TO MAXIMIZE SPACE MADE AVAILABLE AT THE PANELBOARD. TRACE CONSOLIDATED 20 AMP, 120 VOLT CIRCUITS TO VERIFY THAT THE TOTAL LOAD DOES NOT EXCEED 1920 VOLT AMPERES.
- PROVIDE EXTENSION RINGS, COVER PLATES OR ACCESS DOORS AS NECESSARY TO MAINTAIN ACCESS TO EXISTING WIRING, WHERE REQUIRED BY NEW CONSTRUCTION. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
- FIELD VERIFY LOCATIONS OF EXISTING OUTLETS, WHERE NEW CONSTRUCTION CONFLICTS WITH EXISTING OUTLETS, REMOVE WIRING DEVICES OR RELOCATE LUMINAIRES AS REQUIRED, WHETHER OR NOT SPECIFICALLY INDICATED.
- PROVIDE BLANK COVER PLATES ON JUNCTION BOXES WHICH ARE NOT REUSED.
- PROVIDE TYPE AND SIZE ON CONDUCTORS TO MATCH EXISTING FOR EXISTING CIRCUITS WHICH ARE EXTENDED TO SERVE NEW OR RELOCATED DEVICES OR LUMINAIRES.
- PROVIDE CUTTING AND PATCHING AS REQUIRED, WHETHER OR NOT SPECIFICALLY INDICATED. VERIFY EXTEND OF NEW AND EXISTING PARTITIONS WITH ARCHITECTURAL DRAWINGS.
- FIELD VERIFY EXISTING CIRCUITING AND MAKE ADJUSTMENTS AS NECESSARY TO THE CIRCUITING SHOWN ON THE PLANS, AS REQUIRED BY FIELD CONDITIONS.
- REMOVE ALL UNUSED CONDUITS AND WIRING, SWITCHES, RECEPTACLES, LUMINAIRES, ETC. WHERE CEILINGS, CEILING TILES OR WALLS ARE BEING DEMOLISHED EXCEPT AS FOLLOWS: WHERE WALLS AND CEILINGS ARE TO REMAIN, MAINTAIN EXISTING CONDUIT, WIRING AND BOXES SERVING ALL ELECTRICAL EQUIPMENT, OUTLETS AND SWITCHES IN THOSE AREAS. REMOVE ALL POWER WIRING BACK TO ITS OVERCURRENT DEVICE AND MARK CIRCUIT BREAKERS AS "SPARE". INSTALL BLANK COVERS ON ALL BOXES. REFER TO DRAWINGS FOR ADDITIONAL REQUIREMENTS AND OTHER SPECIFIC EXCEPTIONS.
- COORDINATE ALL DEMOLITION WORK WITH NEW REQUIREMENTS TO ASSURE THAT EXISTING EQUIPMENT, WIRING, ETC., THAT IS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM IS NOT REMOVED.
- ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW CONSTRUCTION, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.
- DISCONNECT AND RECONNECT THE EXISTING ELECTRICAL EQUIPMENT AS REQUIRED BY THE CONSTRUCTION MODIFICATIONS.
- MODIFY AND RECONNECT THE EXISTING ELECTRICAL EQUIPMENT AS REQUIRED TO REMAIN, AND NOT AFFECTED BY THE NEW CONSTRUCTION, TO ENSURE THE FINAL SYSTEM WILL FUNCTION IN A SAFE MANNER ACCEPTABLE TO AUTHORITIES.

BRANCH CIRCUIT VOLTAGE DROP (3%)

UNLESS INDICATED OTHERWISE, THE CONTRACTOR SHALL PROVIDE MINIMUM SIZED BRANCH CIRCUIT CONDUCTORS PER THE TABLE BELOW.

Conductor size (AWG)	Branch Circuit OCD (Amps)	Circuit Voltage			
		120	208	240	277
Maximum Allowable Length (ft)					
#12	15	82	142	164	189
#10	15	135	235	271	313
#8	15	205	356	411	474
#12	20	61	107	123	142
#10	20	102	176	203	234
#8	20	154	267	308	356

NOTES:

- ASSUMING SINGLE PHASE CIRCUIT, 90% POWER FACTOR, UNCOATED COPPER CONDUCTORS IN STEEL RACEWAY FROM NEC CHAPTER 9, TABLE 9.
- ASSUMING LOAD EQUAL TO 80% OF OCD RATING IS CONCENTRATED AT THE END OF THE CIRCUIT.
- LONGER BRANCH CIRCUIT LENGTHS SHALL BE ALLOWED WHEN THE CIRCUIT LOAD IS KNOWN AND THE CONTRACTOR HAS PROVIDED A VOLTAGE DROP CALCULATION. THE CALCULATION RESULTS SHALL BE MARKED ON THE AS-BUILT PLANS.

SHEET INDEX

NUMBER	TITLE
E-001	ELECTRICAL COVER SHEET
E-002	ELECTRICAL SPECIFICATIONS
EL-101	ELECTRICAL LIGHTING PLAN
EP-102	ELECTRICAL POWER PLAN
E-501	ELECTRICAL DETAILS AND SCHEDULES



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139

Gensler

One Beacon Street
Third Floor
Boston, MA 02108
United States

Tel 617.619.5700
Fax 617.619.5701



SYSKA HENNESSY GROUP

A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel 617.577.9900
Fax 617.577.9191
www.syska.com

Date	Description
03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name

Santander - Central Square, Cambridge

Project Number

11.6850.127

Description

ELECTRICAL COVER SHEET

Scale

NOT TO SCALE

E-001

PART 1 - GENERAL		CONDUIT SHALL NOT BE PERMITTED.		OUTLINED BELOW IN BIDS:	
4. CONTRACT PERFORMANCE	3. ALL EXISTING EQUIPMENT TO BE RELOCATED, OR TO BE INSTALLED FROM STORAGE SHALL BE CLEANED.	5. SUBMIT ON LAMPS AND BALLASTS IN LIGHTING FIXTURES.	14. ALL CONDUIT SHOWN FOR INDOOR WORK SHALL BE EMT (3/4" MINIMUM) WITH SET-SCREW TYPE COUPLINGS UNLESS OTHERWISE NOTED OR PERMITTED BY THE BUILDING RULES AND REGULATIONS.	1) ALL SYSTEM DEVICE TESTING, BALANCE AND FUNCTION TESTS SHALL BE PROVIDED FOR ALL WORK INSTALLED AND MODIFIED WITHIN CONTRACT LIMITS OF CONSTRUCTION, INCLUDING ADJACENT AREA OUTSIDE OF CONTRACT AREAS AFFECTED BY WORK IN THIS CONTRACT.	
1. EXECUTE THE WORK IN THE BEST AND MOST THOROUGH MANNER & TO THE SATISFACTION OF THE CONSULTING ENGINEER, WHO WILL JOINTLY INTERPRET THE MEANING OF THE DRAWINGS AND SPECIFICATIONS AND SHALL HAVE THE POWER TO REFLECT ANY WORK AND MATERIALS WHICH, IN THEIR JUDGMENT, ARE NOT IN FULL ACCORDANCE THEREWITH.	4. ALL CONDUIT FOR LIGHTING AND POWER SYSTEMS SHALL BE 3/4" (MINIMUM).	G. FIRE ALARM SYSTEM	15. PROVIDE IMC CONDUIT WITH THREADED COUPLINGS WHERE REQUIRED BY CODE.	2) REPLACEMENT OF ALL DEFECTIVE AND/OR INSTALLED MATERIALS, WIRING, COMPONENTS AND DEVICES SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND/OR FIRE ALARM CONTRACTOR.	
2. EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE CONSULTING ENGINEERS, IN ACCORDANCE WITH ALTERNATES OF OPTIONS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS, COMPLETE IN EVERY WAY AND READY FOR SATISFACTORY AND EFFICIENT OPERATION WHEN DELIVERED TO THE OWNER.	5. INTERMEDIATE METAL CONDUIT SHALL BE USED WHERE SUBJECTED TO ANY WATER OR MOISTURE CONDITIONS, OR WHERE BURIED IN SLAB.	1. PROVIDE FIRE ALARM SYSTEM DEVICES AND COMPONENTS NECESSARY FOR A COMPLETE SYSTEM AND CONNECT TO EXISTING BASE BUILDING SYSTEM.	16. TYPE MC CABLE MAY BE PROVIDED FOR BRANCH LIGHTING AND RECEPTACLE CIRCUITRY, WHERE PERMITTED BY CODE AND UTILIZED THAT:	3) PROVIDE ALL WRITTEN COMPLETE TEST REPORTS AND SUBMIT TO ENGINEER.	
3. WHERE DISAGREEMENTS OCCUR BETWEEN THE PLANS AND THE SPECIFICATIONS, OR WITHIN EITHER DOCUMENT ITSELF, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUANTITY OR HIGHER COST SHALL BE INCLUDED IN THE BASE BID.	6. JUNCTION OR PULL BOXES SHALL BE FURNISHED AND INSTALLED WHERE INDICATED ON PLANS AND WHEREVER ELSE SUCH A BOX MAY BE NECESSARY TO FACILITATE INSTALLATION OR CONFORM TO CODE REQUIREMENTS. COORDINATE LOCATIONS OF SAME WITH ALL OPS FOR ACCESSIBILITY AND AESTHETIC CONSIDERATIONS. GENERALLY, JUNCTION BOXES AND PULL BOXES SHALL BE INSTALLED EVERY 100 FEET IN CONDUIT HORIZONTAL RUNS AND SHALL NOT BE EXPOSED IN FINISHED SPACES. ALL CABLES WITHIN PULL BOXES SHALL BE PROPERLY TAGGED FOR IDENTIFICATION, LABEL ALL CONDUITS WITH FEEDER DESIGNATION, AT ENTRY AND EXIT TO THE BOX.	2. THE ENTIRE INSTALLATION, INCLUDING MATERIALS AND EQUIPMENT SHALL BE COMPATIBLE WITH EXISTING BUILDING EQUIPMENT AND MEET OR EXCEED THE MINIMUM STANDARDS AND REQUIREMENTS STATED HEREIN.	a. IT IS IN ACCORDANCE WITH THE BUILDING RULES AND REGULATIONS.		
4. THE DRAWINGS SHOW THE VARIOUS CONDUIT AND PIPING SYSTEMS SCHEMATICALLY. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY JUNCTION BOXES, PULL BOXES, SUPPORT AND ACCESSORIES TO MEET APPLICABLE CODES, BUILDING STANDARDS AND FULL-FULL CONTRACT DOCUMENTS. NO ADDED COMPENSATION WILL BE PERMITTED FOR VARIATIONS DUE TO FIELD CONDITIONS.	7. INSULATING BUSHINGS OR INSULATING THROATS SHALL BE INSTALLED ON ALL FITTINGS.	3. ALL EQUIPMENT AND MATERIALS USED SHALL BE STANDARD COMPONENTS, REGULARLY MANUFACTURED AND OF THE SAME MANUFACTURER, AS THE EXISTING BASE BUILDING STANDARDS.	b. CONTAINS AN INSULATED GROUND WIRE.		
5. THE CONTRACTOR COVENANTS AND AGREES THAT HE AND HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES WILL PROVIDE AND MAINTAIN A SAFE PLACE TO WORK AND THAT HE AND THEY WILL COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF AND THE CONTRACTOR AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES TO PROVIDE AND MAINTAIN A SAFE PLACE TO WORK OR TO COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF.	8. DISCONNECT SWITCHES SHALL BE OMIB FUSIBLE OR NONFUSIBLE WITH CURRENT AND VOLTAGE RATINGS AS INDICATED ON PLANS. SWITCHES SHALL BE HORSEPOWER RATED, ENCLOSED TYPE, SUITABLE FOR PADLOCKING IN OPEN POSITION.	4. SYSTEM SUPERVISION: PER BUILDING STANDARDS.	c. CONDUIT BE RUN TO THE FIRST DEVICE DOWNLINE OF THE PANEL (I.E. RECEPTACLE, LIGHT FIXTURE, ETC.).		
6. THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM OR THEM IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE OR IMPROPER CONSTRUCTION, CONSTRUCTION TECHNIQUES OR THE USE OF IMPROPER OR INAPPROPRIATE MATERIAL OR TOOLS.	9. HORSEPOWER RATED THERMAL SWITCHES (BRYANT OR AS APPROVED) SHALL BE USED FOR ALL MOTOR CIRCUITS. ELECTRICAL CONTRACTOR SHALL INSTALL WHERE APPLICABLE TOGGLE SWITCHES FOR USE AS DISCONNECT. THESE SWITCHES SHALL BE "R" RATED FOR RESISTANCE LOADS AND "W" RATED FOR MOTOR LOADS.	5. EMERGENCY SIGNALING: PER BUILDING STANDARDS.			
7. THE CONTRACTOR AGREES THAT ANY CONTROVERSY OR DISPUTE TO WHICH THE CONTRACTOR, THE ARCHITECT, AND THE CONSULTING ENGINEERS ARE PARTIES SHALL BE SUBMITTED TO ARBITRATION FOR DECISION IN ACCORDANCE WITH THE RULES OF THE ASSOCIATION FOR CONSTRUCTION INDUSTRY DISPUTES. ALL SUBCONTRACTORS LIKEWISE AGREE TO SUBMIT TO SUCH ARBITRATION ANY DISPUTE BETWEEN OR AMONG THEM, THE CONTRACTOR, THE ARCHITECT AND THE CONSULTING ENGINEERS, AND THE CONTRACTOR AGREES TO MAKE AVAILABLE TO THE CONSULTING ENGINEERS ON DEMAND SIGNED COPIES OF THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR AND BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS. THE CONTRACTOR AND EACH SUBCONTRACTOR AGREE THAT BY SUBMITTING A BID WHICH IS ACCEPTED, THIS PARAGRAPH SHALL BE DEEMED A WRITTEN AGREEMENT TO SUBMIT ANY CONTROVERSY THEREAFTER ARISING ARISING ARBITRATION.	10. ALL CABLE SHALL BE COPPER WITH THIN OR THIN INSULATION FOR HORIZONTAL APPLICATIONS AND 20MM FOR VERTICAL APPLICATIONS (I.E. WHEN PASSING THROUGH A CABLE SUPPORT BOX), EMPLOYED AT THE 75°C CODE RATED CAPACITY. NO SMALLER THAN No. 12 AWG SHALL BE USED UNLESS SPECIFICALLY NOTED ON PLANS. COLOR CODING SHALL CONFORM TO CODE REQUIREMENTS. DERATE ALL CABLES PER LATEST VERSION OF THE NATIONAL ELECTRICAL CODE.	6. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR THE FIRE DETECTION, ALARM, RELEASING SYSTEM PERMIT AND THE PERMIT FOR ADDITIONS TO THE EXISTING SYSTEM. DRAWINGS AND INFORMATION FOR THE PERMIT SHALL BE PREPARED BY THE FIRE ALARM CONTRACTOR, AND SHALL BE PREPARED AND SIGNED BY A NICET LEVEL II FIRE ALARM DESIGNER WHO IS ALSO A CERTIFIED LICENSED FIRE ALARM TECHNICIAN, IN THE STATE WHERE THE PROJECT IS CONDUCTED, AND WHO HAS A CERTIFICATE STATING HE HAS SUCCESSFULLY COMPLETED TRAINING BY THE SYSTEM MANUFACTURER. THE DRAWINGS AND INFORMATION SHALL ALSO BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE WHERE THE PROJECT IS CONSTRUCTED AND THE BUILDING CODE COMPLIANCE OFFICIAL AND THE FIRE MARSHAL IN THIS PROJECT'S LOCATION.			
8. ALL WORK SHALL BE DONE IN CONFORMANCE WITH ALL GOVERNING CODES, INCLUDING AMENDMENTS, BULLETINS, ETC., AS WELL AS STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.	11. ALL CONDUCTORS #6 AND SMALLER SHALL BE SOLID CU CONDUCTORS. ALL CONDUCTORS #4 AND LARGER SHALL BE STRANDED COPPER.	7. SUBMITTALS FOR APPROVAL SHALL INCLUDE ALL OF THE REQUIREMENTS OF THE PREVIOUS PARAGRAPH AND SHALL INCLUDE WIRING DIAGRAMS, CUT SHEETS OF ALL DEVICES, BATTERY CALCULATIONS AND SEQUENCES OF OPERATION.			
9. OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE ALL NECESSARY FORMS, PAY ALL INSPECTION FEES.	12. ALL CABLING FURNISHED FOR INSTALLATION EXPOSED (NOT IN AN ENCLOSED RACEWAY) IN AN AIR PLENUM CEILING OR FLOOR SHALL BE APPROVED FOR USE BY GOVERNING AUTHORITIES, AND SHALL CONFORM TO UL 90 WITH A MINIMUM OF 16 DEGREES CELSIUS RATED JACKET.	8. THE SYSTEM SHALL COMPLY WITH ALL STATE AND LOCAL CODES AND THE FOLLOWING:			
10. COORDINATE SCHEDULING OF ALL WORK TO BE PERFORMED WITH OWNER AND/OR HIS AGENT AND INCLUDE ALL NECESSARY PREMIUM TIME REQUIRED FOR SHUTDOWNS, WORK IN OCCUPIED AREAS, ETC.	13. ALL SUPPLIED LOGS FOR EQUIPMENT REQUIRING HARD-WIRED CONNECTIONS, ETC. SHALL BE DOUBLE INDENT, 2" (50.8) HOLE, LONG BARREL, AND COMPRESSION TYPE. PROVIDE DOUBLE INDENT "HEXAGONAL" COMPRESSION DIES AND TOOL (IT 8.8 OR BURN'DY OR AS REVIEWED), MECHANICAL LOSS, SINGLE INDENT COMPRESSION TOOLS AND UNIVERSAL DIES SHALL NOT BE PERMITTED. ALL COMPRESSION TOOLS AND DIES SHALL BE MANUFACTURED BY THE LOG VENDOR.	a. ADA			
11. ALL AREAS ASSOCIATED WITH WORK TO BE PERFORMED SHALL BE EXAMINED PRIOR TO BID SUBMISSION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR CONDITIONS FOUND DURING INSTALLATION.	14. ALL SUPPLIED IN-LINE SPlice CONNECTORS, "T" CONNECTORS, ETC., SHALL BE DOUBLE INDENT (PER CONDUIT), LONG BARREL, AND COMPRESSION TYPE. PROVIDE DOUBLE INDENT "HEXAGONAL" COMPRESSION DIES AND TOOL (IT 8.8 BURN'DY OR AS REVIEWED), MECHANICAL CONNECTORS, SINGLE INDENT COMPRESSION TOOLS AND UNIVERSAL DIES SHALL NOT BE PERMITTED. ALL COMPRESSION TOOLS AND DIES SHALL BE MANUFACTURED BY THE CONNECTOR VENDOR.	b. NFPA 72			
12. BEFORE COMMENCING WORK, EXAMINE ALL ADJOINING WORK ON WHICH THIS WORK IS IN ANY WAY DEPENDENT FOR PERFECT WORKMANSHIP ACCORDING TO THE INTENT OF THIS SPECIFICATION, AND REPORT TO THE CONSTRUCTION MANAGER ANY CONDITION WHICH PREVENTS PERFORMANCE OF FIRST-CLASS WORK, NO "WAIVER OF RESPONSIBILITY" FOR INCOMPLETE, INADEQUATE OR DEFECTIVE ADJOINING WORK WILL BE CONSIDERED UNLESS NOTICE HAS BEEN FILED BEFORE SUBMITTAL OF A PROPOSAL.	15. PROVIDE LOCAL DISCONNECTS FOR ALL MOTORS, HARD-WIRED PANTRY/KITCHEN EQUIPMENT AND HOT WATER HEATERS, WHETHER OR NOT SHOWN ON PLAN. DISCONNECTS SHALL BE SIZED PER THE OVERCURRENT PROTECTION AND LOCATED PER THE ENGINEER.	c. NFPA 101			
13. COORDINATE ALL WORK WITH OTHER TRADES TO INSURE INSTALLATION IS MADE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.	16. CONFORM TO ANY ADDITIONAL LABELING, TESTING AND CONSTRUCTION REQUIREMENTS ESTABLISHED BY THE GOVERNING AUTHORITIES. SAME SHALL BE GUARANTEED FOR 1 YEAR SUBSEQUENT TO FINAL ACCEPTANCE.	d. NFPA 70			
14. FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS REQUIRED BY OWNER.	17. ALL WORK SHALL BE IN CONDUIT UNLESS OTHERWISE NOTED.	e. STANDARD BUILDING CODE, INTERNATIONAL BUILDING CODE AND STATE AMENDMENTS.			
15. INCLUDE ALL LABOR, MATERIALS, AND APPURTENANCES REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING OF ALL WORK, COMPLETE AND MAKE READY FOR OPERATION IN A MANNER SATISFACTORY TO THE CONSULTING ENGINEER. ALL WORK SHOWN ON DRAWINGS AND SPECIFIED HEREIN.	18. PROVIDE SLEEVES FOR ALL CONDUIT PASSING THROUGH FLOORS, WALLS, PARTITIONS AND ROOFS. SLEEVED ASSEMBLIES SHALL BE APPROVED FOR INTERED USE AND ALL WATERPROOF INSTALLATIONS (ROOF, FOUNDATION WALL, ETC.) PROVIDE OZ GEDNEY ASSEMBLIES, OR AS REVIEWED.	f. RULES AND REGULATIONS OF THE FIRE COMMISSIONER.			
16. ALL WORK SHALL BE GUARANTEED FOR TWO (2) FULL YEARS FROM THE DATE WHEN THE OWNER HAS ISSUED A "CERTIFICATE OF SUBSTANTIAL COMPLETION"	19. PANELBOARDS SHALL BE OF THE ENCLOSED TYPE, FLUSH OR SURFACE MOUNTED, AS REQUIRED, IN COUPE GAUGE STEEL CABINETS, WITH STEEL TRIM, CONCEALED HINGES, DOORS AND FLUSH TYPE LOCKS. ALL KEYS ALIKE. PROVIDE DUAL CONCEALED HINGED DOORS (DOOR-IN-DOOR CONSTRUCTION) WITH TWO KEED LATCHES, AND WITHOUT BOLTS OR SCREWS ON THE NON-HINGED SIDE OF THE DOOR.	g. UNDERWRITERS LABORATORIES LISTING AND LABELED.			
17. ALL WORK INVOLVED IN OTHER OCCUPIED TENANT SPACES SHALL BE PERFORMED ON PREMIUM TIME (WEEKDAYS AND SATURDAYS) OR AS OTHERWISE DIRECTED BY OWNER AND LANDLORD.	20. ALL SUPPLIED IN-LINE SPlice CONNECTORS, "T" CONNECTORS, ETC., SHALL BE DOUBLE INDENT (PER CONDUIT), LONG BARREL, AND COMPRESSION TYPE. PROVIDE DOUBLE INDENT "HEXAGONAL" COMPRESSION DIES AND TOOL (IT 8.8 BURN'DY OR AS REVIEWED), MECHANICAL CONNECTORS, SINGLE INDENT COMPRESSION TOOLS AND UNIVERSAL DIES SHALL NOT BE PERMITTED. ALL COMPRESSION TOOLS AND DIES SHALL BE MANUFACTURED BY THE CONNECTOR VENDOR.	h. FACTORY MUTUAL APPROVED AND LISTED.			
18. SHOP DRAWINGS AND SUBMITTALS	21. PROVIDE LOCAL DISCONNECTS FOR ALL MOTORS, HARD-WIRED PANTRY/KITCHEN EQUIPMENT AND HOT WATER HEATERS, WHETHER OR NOT SHOWN ON PLAN. DISCONNECTS SHALL BE SIZED PER THE OVERCURRENT PROTECTION AND LOCATED PER THE ENGINEER.	i. FACTORY MUTUAL APPROVED AND LISTED.			
19. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO THE START OF ANY WORK. ANY WORK OR EQUIPMENT INSTALLED PRIOR TO REVIEW OF SHOP DRAWINGS AND FOUND TO BE UNACCEPTABLE SHALL BE REMOVED AND REWORKED AT THE CONTRACTORS SOLE EXPENSE INCLUDING ANY RESULTANT SCHEDULING DELAYS EXPERIENCED BY ANY TRADE.	22. WHERE WORK IS ONGOING IN ELECTRICAL PANELS THE COVERS ARE NOT TO BE LEFT OFF UNLESS WORK IS CURRENTLY BEING PERFORMED ON THE PANEL. COVERS SHALL BE REPLACED EACH NIGHT AT THE END OF SHIFT.				
20. THE ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES IS ONLY FOR THE CONVENIENCE OF THE OWNER IN FOLLOWING THE WORK AND DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW SHALL NOT BE CONSTRUED AS A COMPLETE OR DETAILED CHECK OF THE WORK SUBMITTED, NOR SHALL IT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS AND SAMPLES, OR FROM THE NECESSITY OF FURNISHING ANY WORK REQUIRED BY THE CONTRACT DOCUMENTS WHICH MAY HAVE BEEN OMITTED FROM SHOP DRAWING SUBMITTALS.	23. TEMPORARY POWER FROM EXISTING PANELS FOR LIGHTS, DRILLS, WELDING EQUIPMENT, ETC., SHALL BE LABELED ON THE PANEL AND FIRE-APPROVED BY BUILDING ENGINEERS 48 HOURS PRIOR TO INSTALLATION.				
21. THE REVIEW OF A SEPARATE ITEM SHALL NOT INDICATE REVIEW OF THE COMPLETE ASSEMBLY IN WHICH IT FUNCTIONS, NOTHING IN THE ENGINEERS REVIEW OF SHOP DRAWINGS AND SAMPLES SHALL BE CONSIDERED AS AUTHORIZING:	24. EACH SYSTEM OF ELECTRICALLY CONTINUOUS METALLIC PIPING AND DUCTWORK SHALL BE ELECTRICALLY GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC FOR "BONDING" AS THEY APPLY TO THE BONDING OF PIPING SYSTEMS. ISOLATED METAL PIPING AND DUCT SYSTEMS SHALL BE BONDED TO THE BUILDING EQUIPMENT GROUNDING SYSTEM.				
a. A DEPARTURE FROM CONTRACT DOCUMENTS OR SPECIFICATIONS.	25. BONDING AND GROUNDING CONDUCTORS SHALL BE SIZED, SHALL BE RUN IN CONDUIT, AND SHALL BE CONNECTED TO VARIOUS SERVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE NATIONAL ELECTRICAL CODE.				
b. ADDITIONAL COST TO THE OWNER.	26. ALL GROUNDING CONDUCTORS, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR, WHEN RUN INDEPENDENT FROM ITS PHASE CONDUCTORS SHALL BE PROTECTED FROM MECHANICAL INJURY BY RIGID CONDUIT TO WHICH THE CONDUCTOR SHALL BE BONDED AT EACH END.				
c. INCREASED TIME FOR COMPLETION OF THE WORK.	27. ALL EXPOSED NON CURRENT-CARRYING METAL PARTS OF PERMANENTLY MOUNTED ELECTRICAL EQUIPMENT, ALL TERMINAL DEVICES AND THE CONDUIT SYSTEM SHALL BE EFFECTIVELY GROUNDED AND SECURELY BONDED TO THE REFERENCE GROUND POINT OF ITS SEPARATELY DERIVED SERVICE GROUND. THE EQUIPMENT GROUND PATH FROM CONDUIT, EQUIPMENT AND METAL ENCLOSURES SHALL BE CONTINUOUS AND PERMANENT. ALL SHALL HAVE THE CAPACITY TO SAFELY CONDUCT ANY FAULT CURRENTS IMPOSED ON IT WITH SUFFICIENTLY LOW IMPEDANCE TO FACILITATE THE OPERATION OF THE CIRCUIT PROTECTIVE DEVICES.				
NO PART OF THE WORK SHALL BE STARTED IN THE SHOP OR IN THE FIELD UNTIL THE ENGINEER HAS REVIEWED THE SHOP DRAWINGS AND SAMPLES FOR THAT PORTION OF THE WORK. THEREAFTER, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE INDICATED STATUS OF THE REVIEWED SHOP DRAWING.	28. UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS, CONDUITS LESS THAN 2 INCHES, OR ANY CONDUIT ENTERING DEVICES OTHER THAN THOSE LISTED ABOVE, MAY BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR IF THE CONDUIT IS ATTACHED TO THE METAL ENCLOSURE USING TWO LOCATIONS (ONE INSIDE AND ONE OUTSIDE THE ENCLOSURE) OR FITTINGS WITH SHOULDERS THAT SEAT FIRMLY AGAINST THE ENCLOSURE AND ARE APPROVED FOR THE PURPOSE. ALL NONCONDUCTIVE PAINT OR COATING SHALL BE REMOVED FROM THE ENCLOSURE AT THESE AREAS. CONTACT POINTS AND CONTACT SURFACES UNLESS THE FITTING PROVIDED IS DESIGNED TO MAKE SUCH REMOVAL UNNECESSARY.				
5. SAMPLES SHALL BE SUBMITTED FOR REVIEW WHEN REQUESTED BY THE ENGINEER.	29. FLEXIBLE METAL CONDUIT AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT, WHERE PERMITTED BY OTHER SECTIONS OF THIS SPECIFICATION, SHALL BE PROVIDED WITH A SEPARATELY DERIVED EQUIPMENT GROUNDING CONDUCTOR. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND IF INSULATED THE COLOR OF THE INSULATION SHALL BE GREEN FOR THE CONDUCTORS ENTIRE LENGTH. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED AT BOTH ENDS OF THE FLEXIBLE CONDUIT USING AN APPROVED FITTING OR BONDING SCHEME.				
6. TWO WEEKS AFTER AWARD OF CONTRACT SUBMIT A SHOP DRAWING LOG FOR REVIEW WITH SUBMITTAL DATES AND SUBMITTAL TYPE.	30. MOTOR FRAMES THAT ARE NOT DIRECTLY CLAMPED TO THE SUPPLY CONDUIT SHALL BE BONDED AND GROUNDED TO THE CONDUIT BY MEANS OF A SUITABLY SIZED GROUND CONDUCTOR AND GROUND CLAMP. NO SOLDERED CONNECTIONS SHALL BE USED IN LEADS. ALL CONNECTIONS SHALL BE MADE WITH AN APPROVED SOLDERLESS CONNECTOR.				
7. PROVIDE OPERATIONS AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND MATERIALS.	31. A SEPARATE INSULATED (GREEN) EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL BRANCH CIRCUITS UNDER THE FOLLOWING CONDITIONS:				
8. AS-BUILT DRAWINGS	a. WHERE THE BRANCH CIRCUIT USES AC ARMORED CABLE AS THE WIRING METHOD.				
1. PREPARE AND FURNISH TO OWNER "AS-BUILT" PLANS FOR ALL WORK INSTALLED. PROVIDE THREE (3) FULL SIZE SETS OF DRAWINGS AND CAD FILES ON A COMPACT DISC COMPLETED IN THE LATEST VERSION OF AUTOCAD. AS BUILT DRAWINGS HAVE TO BE REVIEWED AND COMPLETED PRIOR TO SUBMISSION. ALL DRAWINGS SHALL BE IN A STYLE COMMENSURATE WITH THE ENGINEERING DESIGN. THE ENGINEERS DESIGN CAD DRAWINGS OR BACKGROUNDS WILL BE FURNISHED FOR USE TO THIS CONTRACTOR FOR THE PURPOSE OF THIS SUBMISSION (SUBMIT A CAD INDEMNIFICATION AGREEMENT).	b. WHERE THE BRANCH CIRCUIT USES A MANUFACTURED WIRING SYSTEM.				
2. DURING CONSTRUCTION, KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK AS SHOWN ON DRAWINGS AND THAT WHICH IS ACTUALLY INSTALLED. THIS RECORD SET OF PRINTS SHALL BE KEPT AT JOB SITE FOR INSPECTION.	c. ALL BRANCH CIRCUITS USED FOR ELECTRONIC COMPUTER DATA PROCESSING OR TELECOMMUNICATIONS EQUIPMENT.				
3. UPON COMPLETION OF THE INSTALLATION, SUBMIT ONE SET OF BLACK AND WHITE PRINTS OF THESE "AS-BUILT" RECORD DRAWINGS TO THE CONSULTING ENGINEER FOR REVIEW. AFTER REVIEW BY THE CONSULTING ENGINEER, MAKE NECESSARY CHANGES TO THESE PRINTS AND THEN DELIVER THEM TO THE OWNER FOR RECORD. FINAL PAYMENT WILL BE WITHHELD UNTIL COMPLETION OF "AS-BUILT" DRAWINGS.	d. ALL BRANCH CIRCUITS SERVING LOADS IN HAZARDOUS LOCATIONS.				
4. AS-BUILT DRAWINGS SHALL CONTAIN EXACT ROUTING AND ELEVATIONS OF ALL CONDUIT BANKS. ACTUAL PANELBOARD CIRCUIT BREAKER POLE POSITIONS USED FOR EACH CIRCUIT, AND EXACT LOCATION OF ALL EQUIPMENT. ALL DIMENSIONS SHALL BE REFERENCED TO BUILDING STRUCTURE CENTERLINES.	e. ALL BRANCH CIRCUITS IN OUTDOOR LOCATIONS.				
	32. WHEN A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IS PROVIDED WITH A BRANCH CIRCUIT IT SHALL BE CONNECTED TO A GROUND BUS IN THE PANELBOARD FROM WHICH IT IS DERIVED. THE PANELBOARD GROUND BUS SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE ALL DEVICES SERVED INCLUDING LEAVE SPACE FOR FUTURE DEVICES, AS WELL AS LOSS OF APPROPRIATE SIZE FOR CONNECTION OF AN EQUIPMENT GROUNDING CONDUCTOR TO THE GROUNDING ELECTRODE OF THE DERIVED SOURCE.				
	33. A FLEXIBLE BONDING JUMPER SHALL BE PROVIDED AROUND ISOLATING COUPLINGS AND ISOLATING NIPPLES AND SHALL BE SIMILAR AND APPROVED EQUAL TO OZ GEDNEY TYPE "BF" ALL MECHANICAL PIPING REQUIRES ISOLATING COUPLINGS OR ISOLATING NIPPLES WHEN THE PIPING MATERIAL IS CHANGED.				
	34. ALL EXPANSION JOINTS, POINTS OF ELECTRICAL DISCONTINUITY, OR CONNECTIONS IN CONDUIT WHERE FIRM MECHANICAL BOND IS NOT POSSIBLE SHALL BE BONDED WITH OZ GEDNEY TYPE "BF" OR APPROVED EQUAL BONDING JUMPER.				
	35. PROVIDE COMPLETE FIRE ALARM SYSTEM FIELD SURVEY'S, FINAL DESIGN, SHOP DRAWINGS, PERMIT/CONSTRUCTION DRAWING PREPARATION, AS BUILT DOCUMENTATION, ETC., ENGINEERING DRAWINGS INDICATE AREA OF SYSTEMS COVERAGE WITHIN CONTRACT LIMITS AND RECOMMENDED LOCATIONS OF DEVICES.				
	36. IDENTIFY AND LABEL ALL FA RACEWAYS AND JUNCTION BOXES CONCEALED ABOVE CEILING TIE OR EXPOSED RUNS AS ADA EVERY 20 FEET AND AT TERMINATION WITH PERMANENT RED MARKING PEN.				
	37. ALL REQUIRED SEPARATE (DEDICATED) FA CONDUIT RACEWAY SHALL BE 3/4" MINIMUM CONDUIT, BOXES, SUPPORTS, CABLING AND WIRING SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MAXIMUM CONDUIT FILL OF 40% SHALL BE MAINTAINED AND SCHEDULED ON SUBMITTAL DRAWINGS TO FIRE DEPARTMENT.				
	38. INSTALLATION OF ALL NEW FA SYSTEM DEVICES, COMPONENTS AND THE REMOVAL AND RELOCATION OF EXISTING DEVICES INCLUDING ALL DEVICE FINAL TERMINATIONS AND MOUNTING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.				
	39. PROVIDE ALL INTERCONNECTING FA CABLING AND TERMINATIONS INCLUDING DEVICES AND AUXILIARY EQUIPMENT FOR INTERFACE WITH THE EXISTING BUILDING FIRE ALARM STROBE AND SPEAKER RISER SYSTEMS. ALL DEVICE TERMINATIONS SHALL BE APPROVED BY THE LOCAL FIRE DEPARTMENT WITH APPROPRIATE TERMINAL BOXES, ENCLOSURES, ETC.				
	40. THE FA SYSTEM INSTALLATION AND ALL COMPONENTS SHALL BE BUILDING STANDARD AND LL LISTED FOR FIRE PROTECTION SERVICE (UL STANDARD 148) AND COMPLY WITH REQUIREMENTS OR FEDERAL REGISTER VOL. 56, NO. 1444263.				
	41. ELECTRICAL CONTRACTOR SHALL VERIFY PHASE LOAD BALANCING ON POWER PANELS UPON COMPLETION OF THE ELECTRICAL INSTALLATION, INCLUDING RE-DISTRIBUTION OF CIRCUITS WITHIN PANELS TO BALANCE WITHIN A 10% WINDOW (±5%).				
	42. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE ALARM COMMAND PANEL PROGRAMMING FOR EXISTING AND NEW STROBE AND TALKER CIRCUITS SUBJECT TO LOCAL FIRE DEPARTMENT REVIEW AND APPROVAL. ALL WORK TO BE PERFORMED INCLUDING MATERIALS AND LABOR SHALL BE INCLUDED WITHIN CONTRACT. COMPLETE.				
	a. ALL SUBMITTALS AND FIRE DEPARTMENT INSPECTIONS SHALL BE SCHEDULED IN ADVANCE AND BE EXECUTED EXPEDITIOUSLY SO AS TO MEET THE OCCUPANCY DATE.				
	b. PERFORM AND COORDINATE ALL FUNCTION AND DEVICE TESTING. FOR A COMPLETE OPERATIONAL SYSTEM AS OUTLINED BELOW (INCLUDE ALL OF THE ASSOCIATED COSTS				



CC# 630
Central Square
 599 Massachusetts Avenue,
 Boston, MA 02139

Gensler

One Beacon Street
 Floor 10
 Boston, MA 02108
 United States

Tel 617.619.5700
 Fax 617.619.5701



Syska Hennessy Group, Inc.
 10 Post Office Square
 Suite 703
 Boston, MA 02109
 Tel: 617.577.9900
 Fax: 617.577.9181
 www.syska.com

- PROJECT CLOSE OUT REQUIREMENTS (A) THAT APPLIES)**
- A. THE FOLLOWING ARE THE CLOSE OUT REQUIREMENTS FOR THIS PROJECT. IT SHOULD BE NOTED THAT WHERE SIMILAR REQUIREMENTS AND/OR ADDITIONAL REQUIREMENTS ARE STATED ELSEWHERE IN THIS SPECIFICATION, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
1. DOCUMENTATION/TECHNICAL DATA DELIVERABLES: THE CONTRACTORS ARE RESPONSIBLE FOR KEEPING THE LATEST REVISIONS OF ALL DOCUMENTATION AND PROVIDING THE FOLLOWING:
2. AS-BUILT DRAWINGS (REPROducible PRINTS & COMPUTER DRAWING FILES) IN AUTOCAD R14 FORAMT OR LATEST VERSION)
- a. CONTRACT DRAWINGS AND SPECIFICATIONS (LATEST REVISIONS)
- b. SHOP DRAWINGS
- c. ELECTRICAL SINGLE LINE DIAGRAMS
- d. CONTROL DIAGRAMS
- e. PERMIT/CERTIFICATION DOCUMENTS
3. ALL APPROVED PERMITS AND CERTIFICATIONS HAVE BEEN PROCESSED AND A COPY ATTACHED.
- B. EQUIPMENT SPECIFICATION DATA
1. PERMANENT IMMEDIATELY IDENTIFYING EQUIPMENT, SYSTEM ACCESSORIES AND CONTROLS
- a. AUTOMATIC CONTROL DIAGRAMS AND OPERATIONS SEQUENCES OF THE BUILDING SYSTEMS READY FOR WALL-MOUNTING AND IN BUNDLES (2 COPIES)
- b. SYSTEM AND EQUIPMENT DESCRIPTIVE DATA AND SCHEMATIC DIAGRAMS (2 COPIES)
- C. ELECTRICAL PANEL AND PANELBOARD SCHEDULE DATA
1. PANEL AND PANELBOARD SCHEDULES
- a. COPIES OF SCHEDULES MOUNTED IN PANELS
- b. IDENTIFICATION OF EQUIPMENT
2. WALL-MOUNTED LOCATION CHARTS INDICATING MAJOR EQUIPMENT (I.E., VFD, PANELS, ETC.)
- D. PERMANENTLY AFFIXED LABELS FOR MAJOR EQUIPMENT
- E. SOFTWARE USERS MANUALS / ELECTRONIC BACKUPS
- F. OPERATION & MAINTENANCE MANUALS (3 SETS)
1. SITE SPECIFIC CUSTOMIZED O&M INSTRUCTIONS
- G. MANUFACTURERS O&M INSTRUCTIONS
- H. PREVENTIVE MAINTENANCE PROCEDURES (3 SETS)
1. MANUFACTURERS EQUIPMENT PM PROCEDURES
- I. SITE SPECIFIC CUSTOMIZED PM
- J. SPARE PARTS LIST (3 SETS)
1. ALL APPLICABLE MAINTENANCE PARTS AND ACCESSORIES OR MATERIALS
- K. WARRANTY INFORMATION
1. EQUIPMENT START-UP
2. EQUIPMENT OPERATION
3. AUTHORIZED REPAIRS

Date	Description
03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



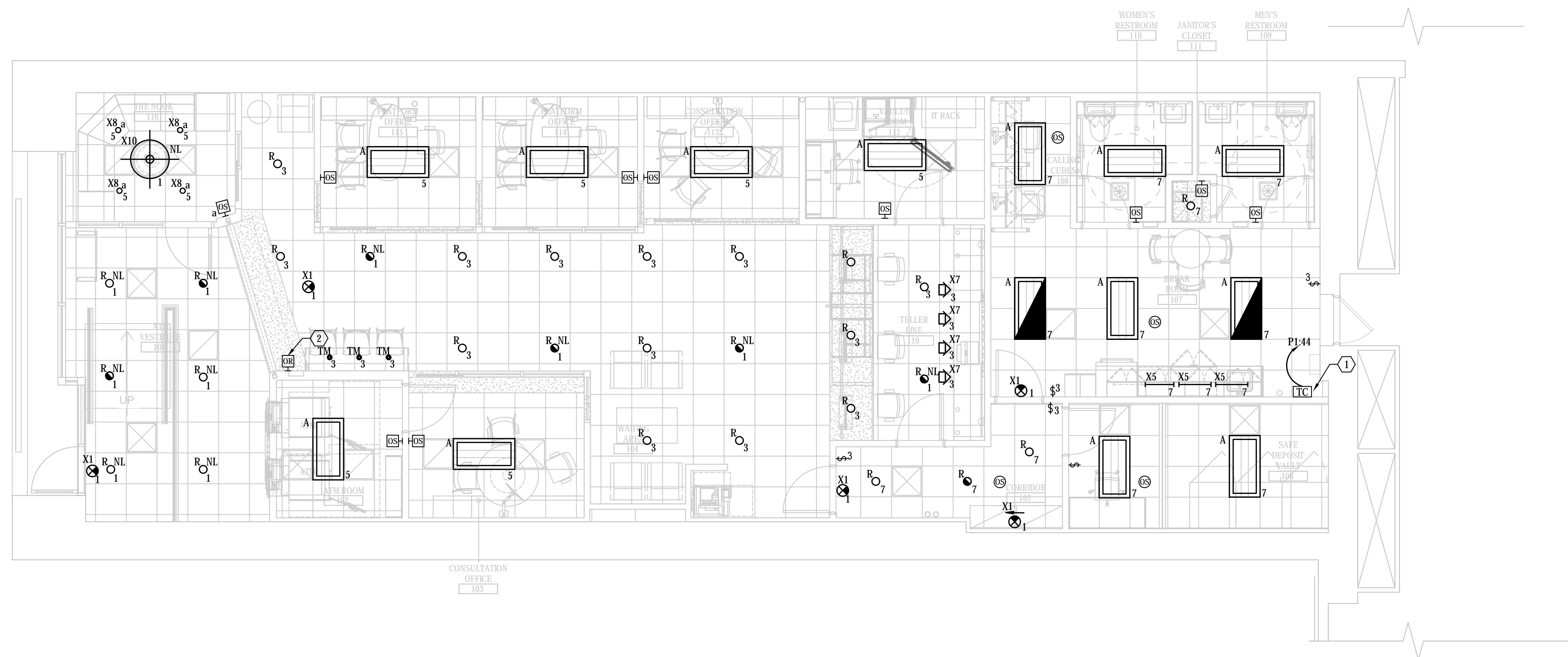
Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
ELECTRICAL SPECIFICATIONS

Scale
NOT TO SCALE

E-002



SHEET NOTES

1. ALL LIGHTING FIXTURES AND EXIT SIGNS SHALL BE FED FROM PANEL P1.
2. REFER TO E-501 FOR LIGHTING FIXTURE SCHEDULE AND DETAILS.
3. EXIT SIGNS AND NIGHT LIGHTS SHALL REMAIN UNSWITCHED. "NL" DENOTES NIGHT LIGHT.
4. CONNECT EMERGENCY FIXTURE BATTERY PACKS TO AN UNSWITCHED LEG OF THE CIRCUIT



CC# 630
 Central Square
 599 Massachusetts Avenue,
 Boston, MA 02139

Gensler

One Beacom Street
 Third Floor
 Boston, MA 02108
 United States
 Tel 617.619.5700
 Fax 617.619.5701



SYSKA HENNESSY GROUP

A member company of SH Group, Inc.
 Syska Hennessy Group, Inc.
 10 Post Office Square
 Suite 725
 Boston, MA 02109
 Tel: 617.577.9999
 Fax: 617.577.9191
 www.syska.com

Date	Description
03/21/2019	ISSUE FOR BID&PERMIT

SHEET KEYNOTES

1. LIGHTING FIXTURES WITHIN LOBBY AND TELLER AREA (CKT P1-5) SHALL BE CONTROLLED BY TIME CLOCK (TC). PROVIDE NEW 7 DAY DIGITAL TIME CLOCK EQUAL TO TORK DG100A.
2. PROVIDE OVERRIDE SWITCH TO TURN ON TIMECLOCK CONTROLLED LIGHTING CIRCUIT DURING "OFF" HOURS FOR 30 MINS.

Seal / Signature



Project Name
Santander - Central Square, Cambridge
 Project Number
11.6850.127
 Description
ELECTRICAL LIGHTING PLAN

Scale
 1/4" = 1'-0"

EL-101

SHEET NOTES

- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF DEVICES.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT.
- COORDINATE EXACT LOCATION AND QUANTITIES OF ALL SECURITY DEVICES, BOXES, AND CONDUIT WITH SECURITY VENDOR PRIOR TO INSTALLATION.
- COORDINATE LOCATIONS OF ALL FLOOR CORES WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO DRILLING.



CC# 630
 Central Square
 599 Massachusetts Avenue,
 Boston, MA 02139

Gensler

One Beacon Street
 Third Floor
 Boston, MA 02108
 United States
 Tel 617.619.5700
 Fax 617.619.5701



SYSKA HENNESSY GROUP

A member company of SH Group, Inc.
 Syska Hennessy Group, Inc.
 10 Post Office Square
 Suite 725
 Boston, MA 02109
 Tel: 617.577.9999
 Fax: 617.577.9191
 www.syska.com

Date	Description
03/21/2019	ISSUE FOR BID&PERMIT

SHEET KEYNOTES

- POWER FOR ATM SURROUND. COORDINATE EXACT LOCATION WITH ATM VENDOR.
- PROVIDE LEGRAND EVOLUTION 6AT POKETHRU DEVICE WITH 3/4" FOR POWER AND 1-1/2" FOR TELEDATA TO NEARBY WALL UP TO ACCESSIBLE CEILING.
- POWER FOR SIGNAGE. COORDINATE EXACT LOCATION IN THE FIELD. PROVIDE PHOTOCCELL MOUNTED ON ROOF FOR ON-OFF CONTROL OF SIGN.
- POWER AND DATA FOR DISPLAYS MOUNTED ABOVE ATMS AND LENDING BAR. COORDINATE WITH ARCHITECT FOR EXACT LOCATION AND MOUNTING HEIGHT.
- POWER AND DATA FOR FURNITURE. COORDINATE INFEED REQUIREMENTS WITH BANK'S FURNITURE VENDOR.
- PROVIDE DUPLEX RECEPTACLES WITH USB PORTS. MOUNTED HORIZONTALLY ABOVE COUNTER. COORDINATE EXACT LOCATION WITH ARCHITECT.
- POWER FOR WATER HEATER LEAK DETECTOR PANEL. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH PLUMBING CONTRACTOR.
- DISCONNECT AND REMOVE EXISTING PANELBOARD AT THIS LOCATION AND MAINTAIN EXISTING 200A FEEDER SERVING THE PANELBOARD. PROVIDE NEW 200A, 208/120V, 3PH, 4W, 60 POLE PANELBOARD AND RECONNECT TO EXISTING 200A FEEDER.
- POWER FOR MOTORIZED GATE. COORDINATE EXACT LOCATION IN THE FIELD.
- KEY OPERATED SWITCHES FOR CONTROL OF MOTORIZED GATE PROVIDED BY GATE SUPPLIER. WIRED BY ELECTRICAL CONTRACTOR. COORDINATE EXACT REQUIREMENTS WITH GATE MANUFACTURER.

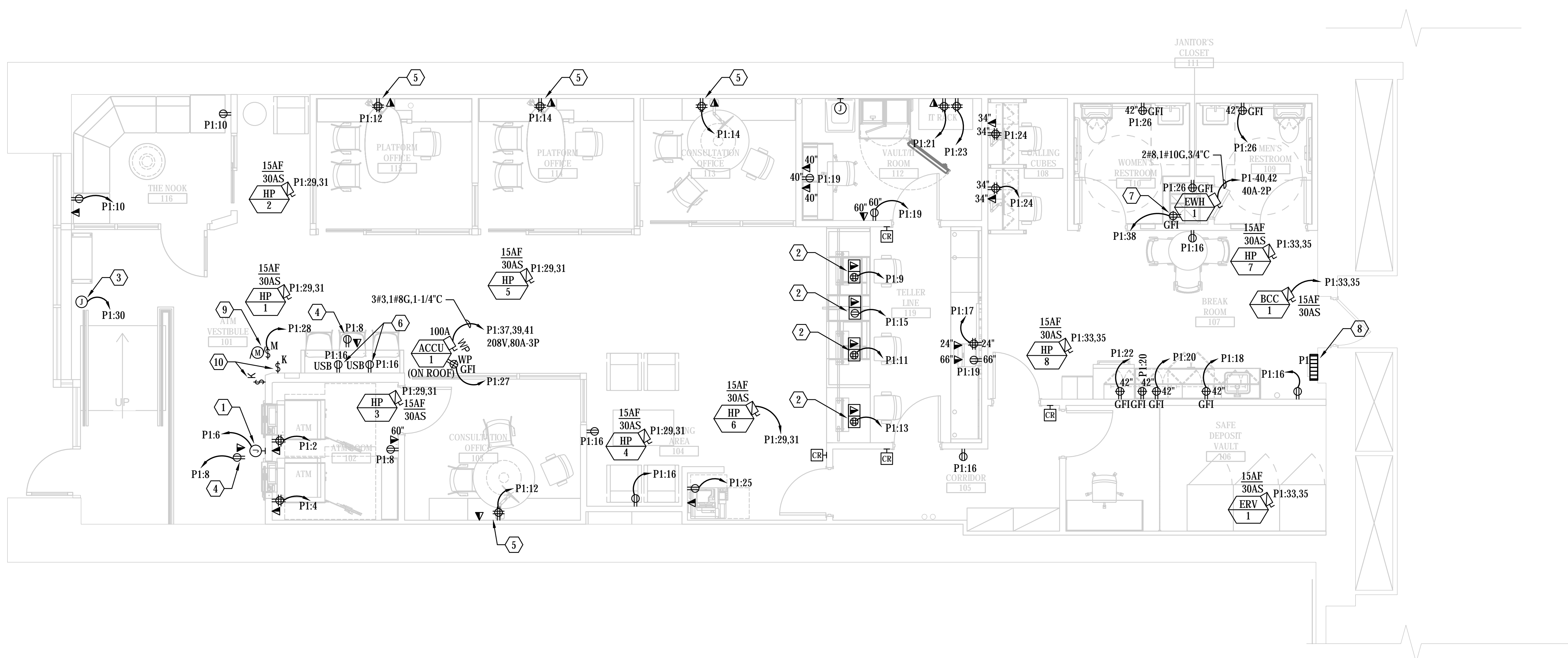
Seal / Signature

Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
ELECTRICAL POWER PLAN

Scale
1/4" = 1'-0"



ABBREVIATIONS

-A	ADDRESSABLE	MAX	MAXIMUM
ADDR.	ADDRESSABLE	MECH	MECHANICAL
AFF	ABOVE FINISHED FLOOR	MER	MECHANICAL EQUIPMENT ROOM
AFG	ABOVE PERFORATED CEILING	MFR	MANUFACTURER
AHJ	AUTHORITY HAVING JURISDICTION	MIN	MINIMUM OR MINUTE
AMCS	AUTOMATED MECHANICAL CONTROL SYSTEM	MTD	MOUNTED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MTGHT	MOUNTING HEIGHT
AP	ALARM PANEL	-N-	
AUTO	AUTOMATIC	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AUX	AUXILIARY	NIC	NOT IN CONTRACT
-B		NO	NORMALLY OPEN, NUMBER
BFF	BELOW FINISHED FLOOR	NTS	NOT TO SCALE
BFG	BELOW FINISHED GRADE	NYCBC	2014 NEW YORK CITY BLDG CODE
BLDG	BUILDING	NYCEC	2011 NEW YORK CITY ELEC CODE
BSMT	BASEMENT	NYCMC	2014 NEW YORK CITY MECH CODE
-C-		-O-	
C	CONDUIT	OC	ON CENTER
CE	CONNECT TO EXISTING	OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT
CL	CLOSET	-P-	
CLG	CEILING	PH	PHASE
CM	CONSTRUCTION MANAGER	PLBG	PLUMBING
COL	COLUMN	PR	PAIR
COND	CONDUCTOR	-R-	
CONN	CONNECT, CONNECTION	(R)	REMOVE EXISTING
-D-		REQD	REQUIRED
(D)	EXISTING TO BE DEMOLISHED	REV	REVISED, REVISION
DEMO	DEMOLITION	RM	ROOM
DN	DOWN	-S-	
DWG	DRAWING	SL	SLEEVE
-E-		S.P.	SHIELDED PAIR
E	EXISTING TO REMAIN	SQ FT	SQUARE FEET
ER	EXISTING TO RELOCATE	STD	STANDARD
EC	ELECTRICAL CONTRACTOR	-T-	
EL	ELEVATION / ELEVATOR LOBBY	T.P.	TWISTED PAIR
ELEC	ELECTRIC / ELECTRICAL	T.S.P.	TWISTED SHIELDED PAIR
EMR	ELEVATOR MACHINE ROOM	TYP	TYPICAL
EOLR	END OF LINE RESISTOR	-U-	
EQUIP	EQUIPMENT	UL	UNDERWRITERS LABORATORY
-F-		UNO	UNLESS NOTED OTHERWISE
(F)	FUTURE	-V-	
F	FIRE SERVICE	V	VOLT OR VENT
FAP	FIRE ALARM PANEL	VERT	VERTICAL
FAC	FIRE ALARM CONTRACTOR	-W-	
FACP	FIRE ALARM CONTROL PANEL	W	WITH
FAS	FIRE ALARM SYSTEM	W/O	WITHOUT
FL	FLOOR	WT	WEIGHT
FT	FEET	WTR	WATER
-G-			
GC	GENERAL CONTRACTOR		
-H-			
H	HEIGHT		
HCLG	HUNG CEILING		
HORIZ	HORIZONTAL		
HP	HORSEPOWER		
HVAC	HEATING, VENTILATION, & AIR CONDITIONING		
HZ	HERTZ		
-I-			
IN	INCH		
-I-			
LAP	LOCAL ALARM PANEL		
-M-			

SYMBOLS LEGEND

ANNOTATION	
	TITLE MARK DETAIL OR PLAN NO. - 1 FOUND IN FA-201
	DETAIL REFERENCE DETAIL NO. - 1 FOUND IN FA-501
	SECTION MARK SECTION NO. - 1 FOUND IN FA-501
	SHEET KEYNOTE
	REVISION CLOUD (DELTA 1)
	DETAIL BOUNDARY B DETAIL NO. - 2
	EQUIPMENT TAG; DESIGNATION AC, DESIGNATION NUMBER 1-1
	POINT OF CONNECTION
	POINT OF DISCONNECTION
FIRE ALARM CONDUIT	
	NEW CONDUIT HORIZONTAL
	NEW CONDUIT UP
	NEW CONDUIT DOWN
FIRE ALARM PANELS	
	NEW FIRE ALARM CONTROL PANEL
	NEW JUNCTION BOX
FIRE ALARM INITIATING DEVICES	
	NEW ADDRESSABLE MANUAL PULL STATION
	NEW ADDRESSABLE AREA SMOKE DETECTOR W/REMOTE LED
	NEW ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR W/ REMOTE LED & TEST SWITCH X-S DENOTES: SUPPLY X-R DENOTES: RETURN
	NEW ADDRESSABLE AREA HEAT DETECTOR R-DENOTES ELEVATOR MACHINE ROOM
	NEW WALL MOUNTED HORN/STROBE UNIT (X = SPEAKER / STROBE CIRCUIT)
	NEW WALL MOUNTED STROBE UNIT (X = STROBE CIRCUIT)
	NEW SPEAKER (X = SPEAKER CIRCUIT)
	NEW REMOTE ALARM LAMP
	NEW WARDEN STATION
	NEW MAGNETIC DOOR HOLDER

	NEW CEILING MOUNTED SPEAKER/STROBE UNIT (X=X = SPEAKER /STROBE CIRCUIT) NOTE: MOUNTED AT MESH CEILING.
	NEW ADDRESSABLE INTERFACE MONITOR MODULE
	NEW ADDRESSABLE INTERFACE MONITOR MODULE WITH CONTROL RELAY OUTPUT

GENERAL NOTES

- THIS PLAN IS APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
- THIS PLAN IS FILED FOR FIRE ALARM SYSTEM ONLY.
- THESE DRAWINGS ARE CONSTRUCTION DOCUMENTS FOR ADDING NEW DEVICES TO AN EXISTING FIRE ALARM SYSTEM. THE NEW WORK SHALL BE COMPLETED BY A LICENSED ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL BE THE PRIME CONTRACTOR RESPONSIBLE FOR PROVIDING AND INSTALLING ALL FIRE ALARM SYSTEM COMPONENTS, DEVICES, WIRING, CONDUIT AND REQUIRED HARDWARE. THE ELECTRICAL CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR SUB-CONTRACTING A FACTORY APPROVED FIRE ALARM VENDOR. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR SUPPLYING THE ELECTRICAL CONTRACTOR WITH ALL FIRE ALARM SYSTEM COMPONENTS, TECHNICAL SUPPORT, ASSISTANCE WITH SHOP DRAWING SUBMITTALS, THE SYSTEM PROGRAMMING, AND OVERALL INSTALLATION.
- THIS PROJECT SHALL INCLUDE THE INSTALLATION OF NEW FIRE ALARM DEVICES CONSISTING OF BUT NOT LIMITED TO FIRE ALARM RISER, ADDRESSABLE DETECTION AND CONTROL DEVICES, AND AUDIO/VISUAL NOTIFICATION DEVICES THROUGHOUT THE FACILITY.
- DURING INSTALLATION THE ELECTRICAL CONTRACTOR SHALL TEST ALL FAS WIRING FOR INTEGRITY (CONDUCTOR TO CONDUCTOR/CONDUCTOR TO GROUND). AFTER ALL EQUIPMENT IS COMPLETELY INSTALLED, TESTED AND OPERATIONAL AS DESCRIBED ABOVE THE NEW FCC SHALL BE PROGRAMMED AND ALL FAS PANELS SHALL BE TESTED AND THE WIRING RE-TESTED.
- THIS PROJECT SHALL INCLUDE THE INSTALLATION OF NEW FIRE ALARM INITIATING AND NOTIFICATION DEVICES, AS SHOWN ON THE DRAWINGS. FOLLOWING COMPONENTS SHALL BE PROVIDED UNDER THIS CONTRACT:
 - AREA SMOKE DETECTORS.
 - ADDRESSABLE MANUAL PULL STATIONS.
 - ADDRESSABLE CONTROL AND MONITORING INTERFACE DEVICES.
 - VISUAL ALARM STROBES AND/OR SPEAKER/STROBES.
 - FIRE ALARM CABLE:CONDUITS AND BACKBOXES.

FIRE ALARM CABLE TYPE LEGEND

ID	DESCRIPTION	TYPE	ID	DESCRIPTION	TYPE
A	PRIMARY RS-485 DATA (FPFR)	#16 TP (RISER)	M	SPARE (FLOOR)	#16 SP & #16 TP
B	REDUNDANT RS-485 DATA (FPFR)	#16 TR (RISER)	N	24 VDC POWER	#14 PR
C	PRIMARY LOW-LEVEL AUDIO	#16 TSP (RISER)	P	SYSTEM GROUND (2HR) - RHW	#8
D	REDUNDANT LOW LEVEL AUDIO RISER CIRCUIT	#16 TSP (RISER)	R	SYSTEM GROUND (2HR) - RHW	#10
E	TELEPHONE RISER (FPFR)	#16 TSP (RISER)	S	120VAC POWER (2HR) - RHW	2 #12
F	ADDRESSABLE CIRCUIT	#16 TP	T	120VAC POWER (2HR) - RHW	2 #10
G	SPEAKER CIRCUIT	#14 TSP	U	120VAC POWER (2HR) - RHW	3 #8
H	STROBE CIRCUIT	#12 TP	W	120VAC POWER (2HR) - RHW	3 #6
J	WARDEN TELEPHONE CKT.	#16 TSP	X	120VAC POWER (2HR) - RHW	3 #4
K	RELAY/MONITOR	#14 PR	Y	POWER TO REM. ANN. (24VDC)	2 #12 COND.
L	SPARE (RISER)	#14 SP & #14 TP	Z	RS-232 SERIAL	AS REQ.

THE CABLE TYPES LISTED REPRESENT BASIC FUNCTIONAL REQUIREMENTS OF A STANDARD FIRE ALARM SYSTEM. MANUFACTURERS REQUIRING VARIATIONS OF THE CABLE TYPES LISTED SHALL MAKE SUBSTITUTIONS ACCORDINGLY.

SHEET INDEX

NUMBER	TITLE
FA-001	FIRE ALARM COVER SHEET
FA-101	FIRE ALARM PLAN
FA-501	FIRE ALARM DETAILS



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139



One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel: 617.619.5700
Fax: 617.619.5701



SYSKA HENNESSY GROUP

A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9800
Fax: 617.577.9191
www.syska.com

Date	Description
03/21/2019	ISSUE FOR BID&PERMIT

Seal / Signature



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
FIRE ALARM COVER SHEET

Scale
NOT TO SCALE

FA-001

SHEET NOTES

1. REFER TO GENERAL NOTES ON DRAWING FA-001 FOR ADDITIONAL REQUIREMENTS. REFER TO FIRE ALARM SPECIFICATIONS ON E-002
2. CONNECT NEW FIRE ALARM DEVICES TO EXISTING BUILDING FIRE ALARM SYSTEM. NEW DEVICES SHALL MATCH EXISTING BUILDING SYSTEM. FACP LOCATED IN ADJACENT TENANT SPACE. COORDINATE WITH LANDLORD FOR EXACT LOCATION.



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139

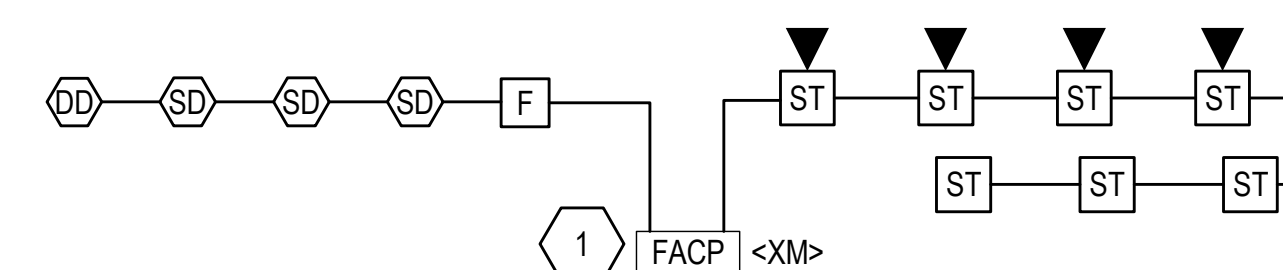
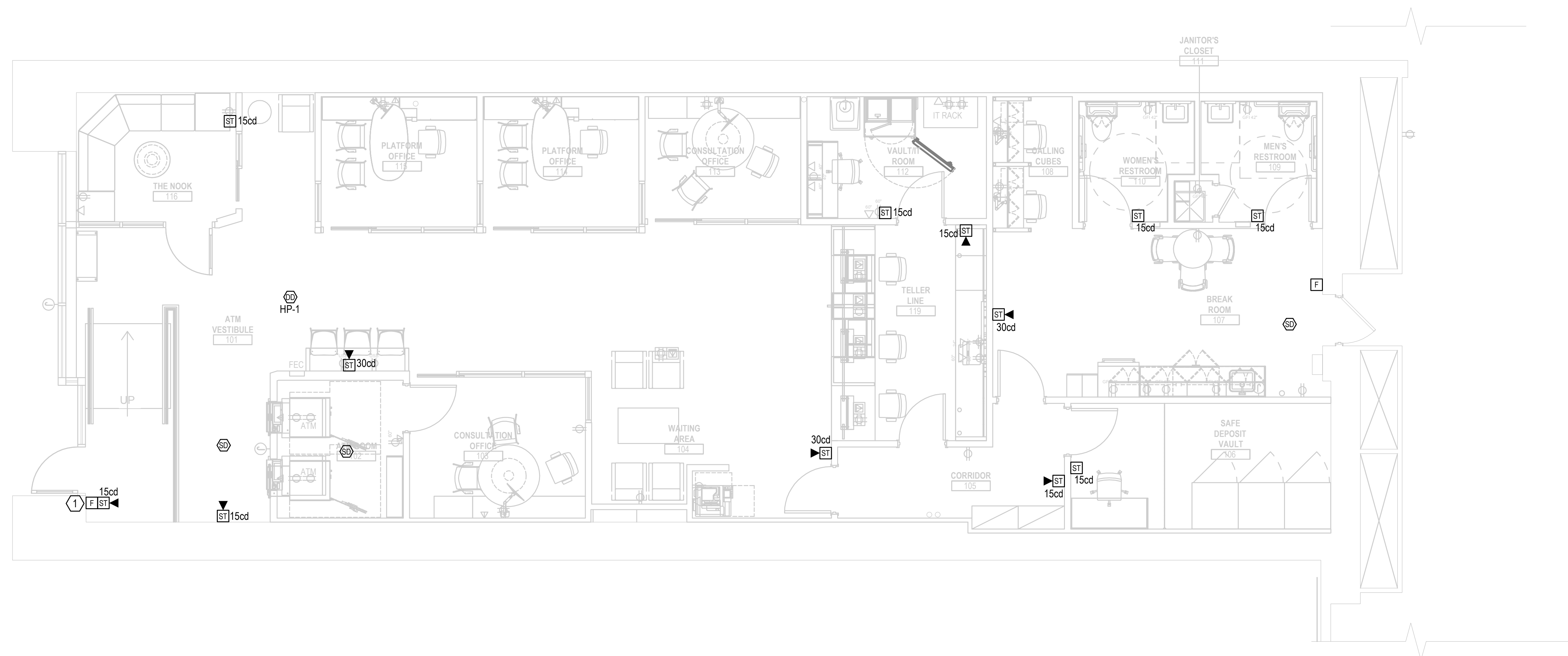
Gensler

One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel: 617.619.5700
Fax: 617.619.5701



SYSKA HENNESSY GROUP

A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com



FIRE ALARM RISER DIAGRAM

1 COORDINATE WITH LANDLORD FOR LOCATION OF FACP

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT

SHEET KEYNOTES

1. PROVIDE TAMPER-PROOF CASE FOR PULLSTATION IN ATM VESTIBULE

Seal / Signature



Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

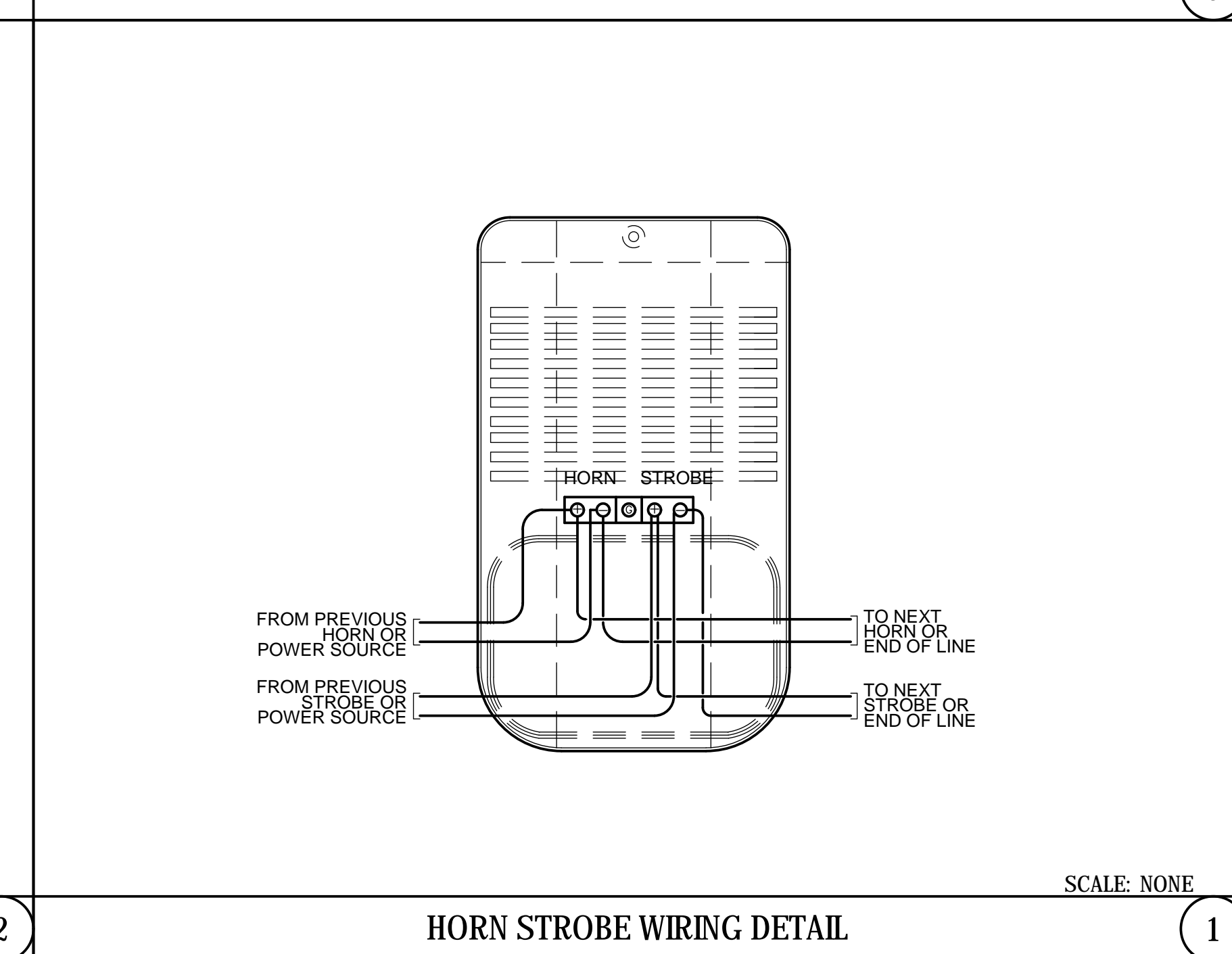
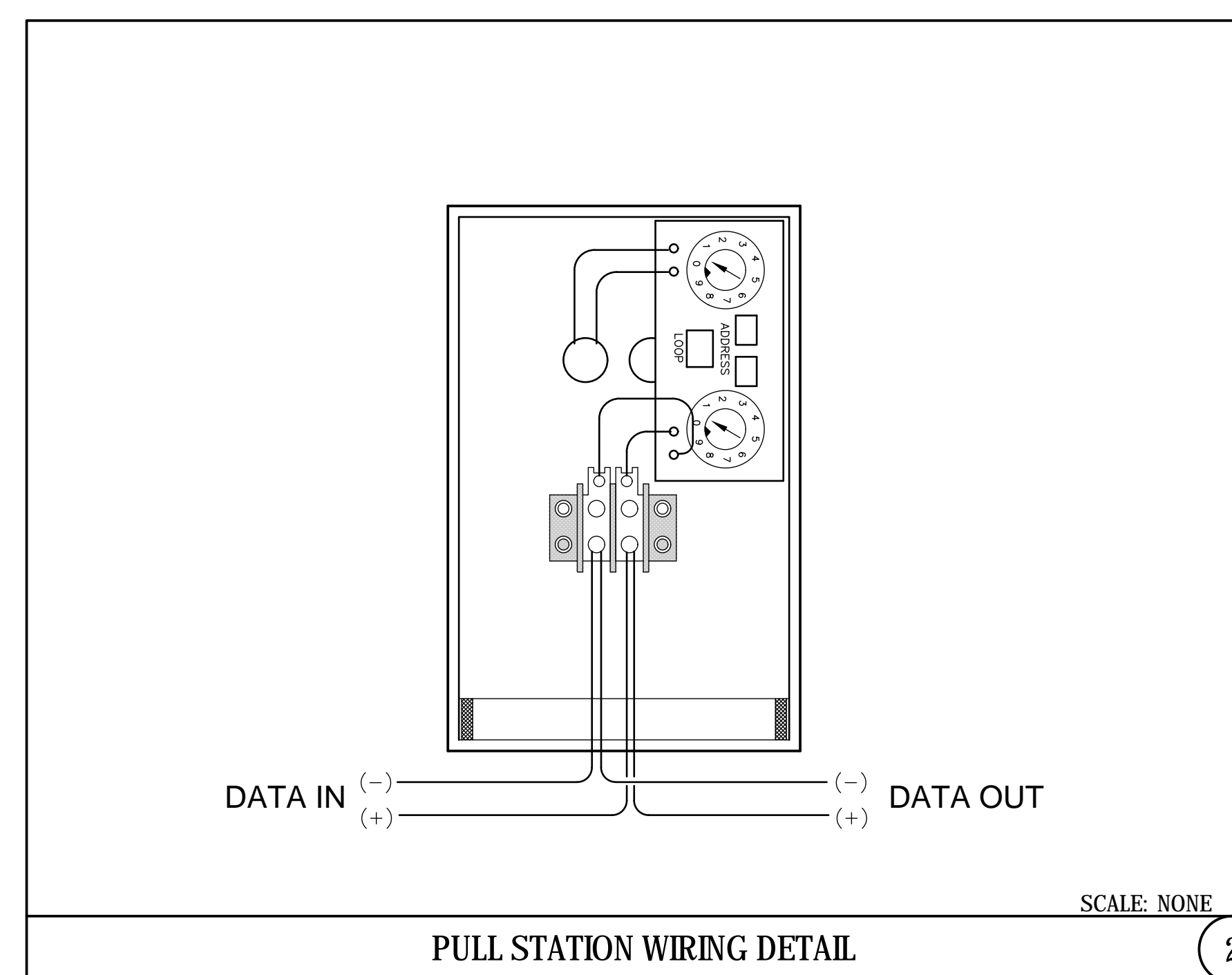
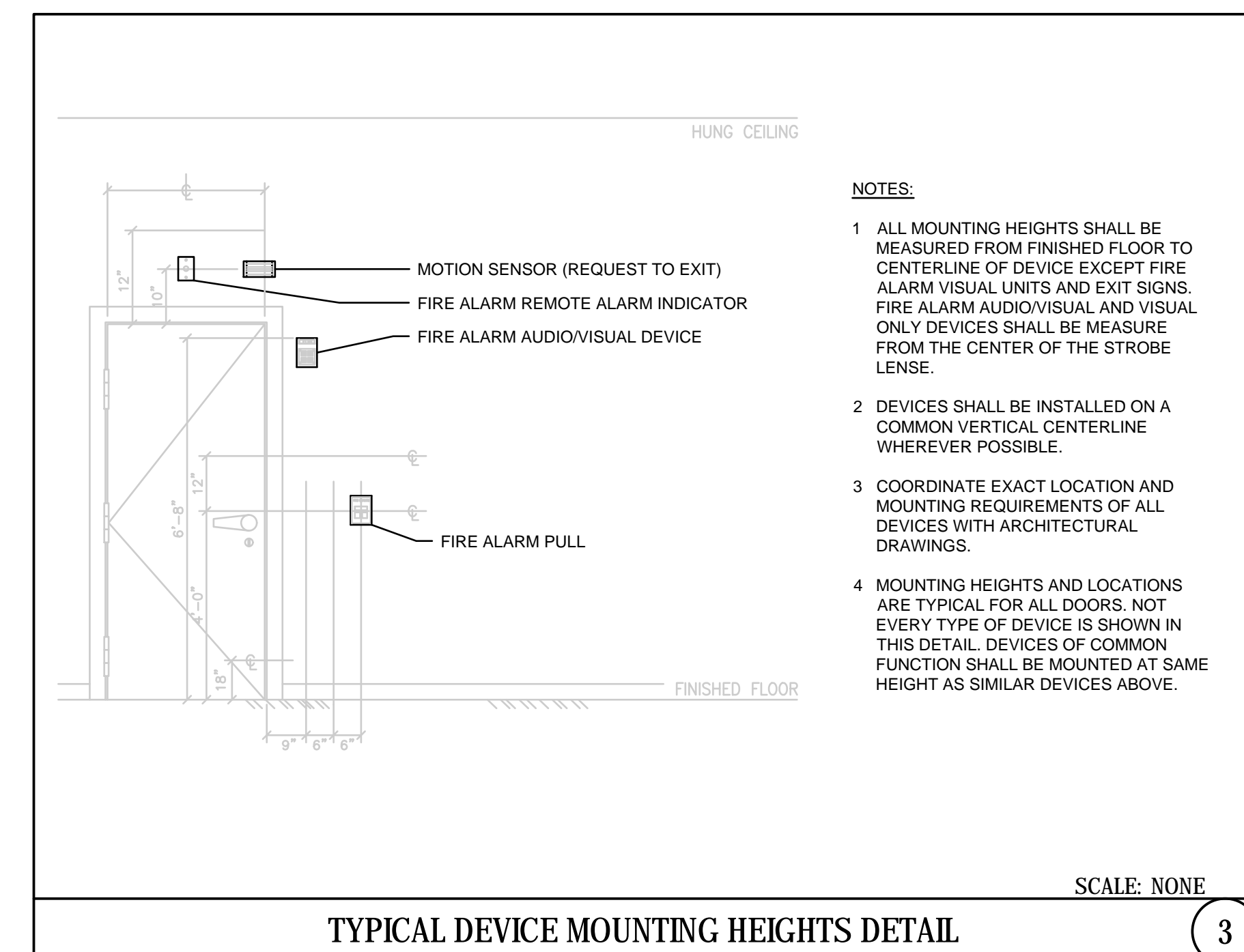
Description
FIRE ALARM PLAN

Scale
1/4" = 1'-0"

FA-101



Date	Description
03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature



Project Name

Santander - Central Square, Cambridge

Project Number

11.6850.127

Description

FIRE ALARM DETAILS

Scale

NOT TO SCALE

FA-501

ABBREVIATIONS

-A-		HWCP	HOT WATER CIRCULATING PUMP
ABAN	ABANDON	HWR	HOT WATER RETURN
ACS DR	ACCESS DOOR	-I-	
AFF	ABOVE FINISHED FLOOR	IE	INVERT ELEVATION
AG	AIR GAP	-J-	
AHJ	AUTHORITY HAVING JURISDICTION	JC	JANITORS CLOSET
AP	ACCESS PANEL	-K-	
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	KW	KILOWATT
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERS	-L-	
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	LAV	LAVATORY
AWWA	AMERICAN WATER WORKS ASSOCIATION	LDR	LEADER
		-M-	
-B-		MAX	MAXIMUM
BFF	BELOW FINISHED FLOOR	MECH	MECHANICAL
BFP	BACKFLOW PREVENTER	MER	MECHANICAL EQUIPMENT ROOM
BLDG	BUILDING	MIN	MINIMUM
BLW	BELOW / UNDERGROUND	MS	MOP SINK
BMS	BUILDING MANAGEMENT SYSTEM	-N-	
BTU	BRITISH THERMAL UNIT	NC	NORMALLY CLOSED
		NO	NORMALLY OPEN
-C-		NTS	NOT TO SCALE
CFM	CUBIC FEET PER MINUTE	-O-	
CL	CENTER LINE	OC	ON CENTER
CLG	CEILING	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	OS&Y	OPEN STEM AND YOKE
CODP	CLEANOUT DECK PLATE	-P-	
COND	CONDENSATE	PLBG	PLUMBING
COORD	COORDINATE	PO	PLUGGED OUTLET
CV	CHECK VALVE	PSI	POUNDS PER SQUARE INCH
CW	COLD WATER	-R-	
-D-		RCV	RISER CONTROL VALVE
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	RD	ROOF DRAIN
DCV	DOUBLE CHECK VALVE	RM	ROOM
DEMO	DEMOLITION	RPM	REVOLUTIONS PER MINUTE
DF	DRINKING FOUNTAIN	RPZ	REDUCED PRESSURE ZONE DEVICE
DFU	DRAINAGE FIXTURE UNIT	-S-	
DIA	DIAMETER	S	SOIL
DN	DOWN	SA	SHOCK ABSORBER
DWG	DRAWING	SAN	SANITARY
		SD	STORM DRAIN
-E-		SE	SEWAGE EJECTOR
(E)EX	EXISTING	SED	SEWAGE EJECTOR DISCHARGE
EJ	EJECTOR	SK	SINK
ELEC	ELECTRICAL	SMP	SUMP PUMP
EQUIP	EQUIPMENT	SMPD	SUMP PUMP DISCHARGE
EW	ELECTRIC WATER COOLER	SQ FT	SQUARE FEET
EW	ELECTRIC WATER HEATER	STD	STANDARD
-F-		-T-	
F	FAHRENHEIT	T&P	TEMPERATURE AND PRESSURE VALVE
FCO	FLOOR CLEANOUT	VALVE	
FD	FLOOR DRAIN	TDH	TOTAL DYNAMIC HEAD
FF EL	FINISHED FLOOR ELEVATION	TEMP	TEMPERATURE
FLR	FLOOR	TP	TRAP PRIMER
FP	FIRE PROTECTION	TW	TEMPERED WATER
FP	FEET PER MINUTE	TYP	TYPICAL
FS	FLOOR SINK	-U-	
FT	FOOT / FEET	UGND	UNDERGROUND
-G-		UL	UNDERWRITERS LABORATORY
G	GAS	UR	URINAL
GAL	GALLON	-V-	
GC	GENERAL CONTRACTOR	V	VENT
GPF	GALLONS PER FLUSH	VB	VACUUM BREAKER
GPH	GALLONS PER HOUR	VIF	VERIFY IN FIELD
GPM	GALLONS PER MINUTE	VOL	VOLUME
GR FL	GROUND FLOOR	VOV	VALVE ON VERTICAL
GWH	GAS WATER HEATER	VTR	VENT THROUGH ROOF
-H-		-W-	
HDC	HANDICAPPED	W	WASTE
HLAV	HANDICAPPED LAVATORY	W/	WITH
HP	HORSEPOWER	W/O	WITHOUT
HTR	HEATER	WC	WATER CLOSET
HUR	HANDICAPPED URINAL	WCO	WALL CLEANOUT
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	WH	WATER HEATER
HW	HOT WATER	WHA	WATER HAMMER ARRESTOR
HWC	HANDICAPPED WATER CLOSET	WM	WATER METER
		WSP	WORKING STEAM PRESSURE
		WWP	WORKING WATER PRESSURE

SYMBOLS LEGEND

ANNOTATION	
	TITLE MARK DETAIL OR PLAN NUMBER - 1 DETAIL OR PLAN REF LOCATION FOUND IN P-201
	DETAIL REFERENCE DETAIL NUMBER - 1 DETAIL FOUND IN P-501
	SECTION MARK SECTION NUMBER - 1 SECTION FOUND IN P-501
	SHEET KEYNOTE
	REVISION CLOUD (DELTA 1)
	DETAIL BOUNDARY B DETAIL NUMBER - 2
	EQUIPMENT TAG; DESIGNATION AC, DESIGNATION NUMBER 1-1
	POINT OF CONNECTION
	POINT OF DISCONNECTION
PLUMBING LINES	
	NEW PIPING
	EXISTING TO REMAIN
	EXISTING TO BE DEMOLISHED
	UNDERGROUND / UNDER
	COLD WATER
	HOT WATER
	HOT WATER RETURN
	VENT
VALVES	
	AUTOMATIC AIR VENT
	BACK WATER VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	DIAPHRAGM VALVE
	FIRE HOSE VALVE WITH REDUCER CAP AND CHAIN
	FLOAT VALVE
	FUSIBLE LINK
	GATE VALVE
	GLOBE VALVE
	MASTER GAS CONTROL VALVE
	SEISMIC GAS CONTROL VALVE
	MOTORIZED BALL VALVE
	OS&Y VALVE
	PLUG VALVE
	PLUG SAFETY
	PRESSURE REDUCING
	RELIEF VALVE
	SOLENOID VALVE
	VALVED IN VERTICAL (DROP)
	VALVED IN VERTICAL (RISE)
	VALVED AND CAPPED OUTLET
MISCELLANEOUS	
	BACK FLOW PREVENTER
	METER
	TRAP PRIMER
	VACUUM BREAKER
	HOSE BIBB
	WALL HYDRANT
FITTINGS	
	CLEANOUT
	CLEANOUT TO GRADE
	ELBOW DOWN
	ELBOW DOWN TO TEE
	ELBOW UP
	END CAP
	P-TRAP
	TEE DOWN
	TEE UP
	TEE SIDE OUTLET DOWN
	TEE SIDE OUTLET UP
	UNION
	VENT THROUGH ROOF
DRAINS	
	AREA DRAIN
	FLOOR / ROOF DRAIN
	FLOOR SINK
	FLOOR SINK W/ HALF GRATE
	ROOF DRAIN OVERFLOW
	ROOF RECEPTOR

GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. EXACT LOCATION SHALL BE COORDINATED WITH ALL TRADES, THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS, AND/OR GENERAL CONTRACTOR AND CONSTRUCTION MANAGER.
- LOCATION AND SIZES OF EXISTING PIPING ARE APPROXIMATE. VERIFY THE LOCATIONS AND SIZES OF EXISTING PIPING IN THE FIELD. IF ANY DISCREPANCIES OCCUR WITH THE CONTRACT DRAWINGS, NOTIFY THE ARCHITECT AND/OR THE ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK.
- ALL EXPOSED PIPING PENETRATIONS THROUGH WALLS OR CEILINGS SHALL BE PROVIDED WITH APPROPRIATE FIRE RETARDANT SEALANT AND ESCUTCHEONS.
- SEAL OPENINGS AROUND PLUMBING WORK AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH NON-COMBUSTIBLE MATERIAL AND ESCUTCHEONS.
- SUBMISSION OF A PROPOSAL SHALL BE EVIDENCE THAT A CAREFUL EXAMINATION OF THE SITE, DRAWINGS & SPECIFICATIONS HAVE BEEN MADE AND THE CONTRACTOR IS FAMILIAR WITH THOSE ITEMS AND AREAS THAT WILL PRESENT DIFFICULTY TO THE PERFORMANCE OF THIS CONTRACT. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT, ETC. NECESSARY TO COMPLETE ALL WORK AS A RESULT OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN.
- CONTRACTOR TO VERIFY THE EXISTING CONDITIONS BEFORE CONSTRUCTION; CONFIRMING SIZES AND LOCATIONS OF ALL EXISTING PIPING PRIOR TO START OF WORK.
- ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH ANY WORK.
- PRIOR TO STARTING DEMOLITION, DETERMINE LOCATIONS AND EXISTING CONDITIONS.
- THIS CONTRACTOR SHALL PAY FEES, GIVE NOTICE, FILE NECESSARY DRAWINGS AND OBTAIN PERMITS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT AND COMPLY WITH LOCAL LAWS AND ORDINANCES.
- PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION OF MECHANICAL IN FULL CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION; ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED FOR THE SYSTEMS INCLUDED. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER. INCLUDE ALL COSTS FOR PERMITS, LICENSES, CERTIFICATES, FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- UNDER NO CIRCUMSTANCES WILL THIS CONTRACTOR, OR HIS WORKMEN, BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP EXCEPT PARTS AS DESIGNATED FOR SUCH USE.
- ALL EXISTING WATER PIPING WITHIN FIVE (5) FT. OF NEW CONNECTIONS SHALL BE PROVIDED WITH NEW INSULATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR FINAL ADDITIONAL INFORMATION.
- ALL WORK MUST BE COORDINATED AROUND THE OPERATION OF THE FACILITY.
- STORE MATERIALS IN DESIGNATED SPACES.
- UNNECESSARY NOISE SHALL BE AVOIDED AT ALL TIMES AND NECESSARY NOISE SHALL BE REDUCED TO A MINIMUM.
- ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE CONSTRUCTION DOCUMENTS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
- REMOVAL OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP WORK PROPOSAL.
- DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF SYSTEM.
- THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL STATE.
- THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

SHEET INDEX

NO	TITLE
P-001	PLUMBING COVER SHEET
P-002	PLUMBING SPECIFICATIONS
P-101	PLUMBING FLOOR PLANS
P-501	PLUMBING DETAILS
P-601	PLUMBING ISOMETRICS

PLUMBING FIXTURE SCHEDULE		
EQUIPMENT ID	NO.	DESCRIPTION
KS	1	ELKAY MODEL LARDQ2219 SINK, INCLUDE KOHLER MODEL K-7506 FAUCET
LAV	1	TOTO MODEL LT307 LAVATORY, INCLUDE TOTO MODEL TL105-D10E FAUCET
MS	1	FIAT MODEL MSR-2424 MOP SINK, INCLUDE KOHLER K-8907 FAUCET AND DELTA MODEL 287911 MOP HANGER/HOSE, INCLUDE GRID DRAIN WITH TRAP
MV	1	POWERS MODEL LFM92-2 TEMPERING VALVE
WC	1	KOHLER MODEL K-3970 WATER CLOSET, INCLUDING OPEN FRONT ELONGATED SEAT
EWH	1	RHEEM MODEL EGSP15 15 GALLON 6KW ELECTRIC WATER HEATER
WM	1	BADGER RECORDALL SERIES WATER METER MODEL 55



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139

Gensler

One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel: 617.619.5700
Fax: 617.619.5701



A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature

Project Name
**Santander - Central Square,
Cambridge**

Project Number
11.6850.127

Description
PLUMBING COVER SHEET

Scale
NONE

P-001



SYSKA HENNESSY
GROUP

A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com

PLUMBING SPECIFICATION

A. GENERAL REQUIREMENTS

1. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
2. PRINCIPAL WORK IN THIS SECTION
 - a. GENERAL ITEMS.
 - b. PIPING, FITTINGS AND VALVES.
 - c. PLUMBING EQUIPMENT.
 - d. INSULATION
 - e. PLUMBING FIXTURES.
 - f. TESTING, FILING AND FEES.
 - g. CADD AS-BUILT DRAWINGS.

B. QUALITY ASSURANCE

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF PIPING. PROVIDE ALL NECESSARY SUPPORTS, PIPE, FITTINGS AND VALVES THAT ARE REQUIRED FOR COORDINATION OF THIS WORK WITH ALL OTHER TRADES AND THE EXISTING STRUCTURE.
2. THIS CONTRACTOR SHALL CONFIRM SIZES AND LOCATIONS OF ALL EXISTING PIPING TO BE CONNECTED TO PRIOR TO START OF WORK.
3. CAREFULLY EXAMINE EXISTING CONDITIONS BEFORE SUBMITTING PROPOSAL. COORDINATE ALL WORK TO MINIMIZE INTERFERENCE WITH EXISTING AND NEW FACILITIES.
4. CONNECTIONS TO EXISTING WORK: SHALL BE AT ODD HOURS TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL PIPING RUN IN OTHER TENANTS' AREAS SHALL BE COORDINATED WITH THAT TENANT, INSTALLED ON OVERTIME AND AT TIMES CONVENIENT TO TENANT AFFECTED. ALL WORK SPACE SHALL BE CLEANED AND RESTORED TO ITS ORIGINAL CONDITION. OBTAIN APPROVAL OF BUILDING MANAGEMENT PRIOR TO INSPECTION, SHUTDOWN OR COMMENCING WORK.
5. PROVIDE WORKMANSHIP OF HIGHEST GRADE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT BUILDING CODE.
6. PROVIDE ONE YEAR GUARANTEE AGAINST DEFECTIVE WORKMANSHIP AND MATERIAL.
7. ALL MATERIAL, PLUMBING ITEMS, ETC., SHALL BE NEW AND BEST OF ITS KIND, UNLESS OTHERWISE NOTED.
8. ALL PIPING PASSING OVER ELECTRICAL OR TELEPHONE EQUIPMENT SHALL BE PROVIDED WITH DRIP PANS.

C. SUBMITTALS

1. SUBMIT SHOP DRAWINGS OF PLUMBING DESIGN DEVIATIONS PRIOR TO COMPLETING ANY WORK.
2. IF THIS CONTRACTOR ELECTS TO USE MANUFACTURERS OTHER THAN THOSE LISTED IN THE SPECIFICATION, THE FOLLOWING IS REQUIRED:
 - a. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT A LIST OF MANUFACTURER SUBSTITUTIONS, FOR REVIEW AND ACCEPTANCE. SUBSTITUTION WILL NOT BE ACCEPTED AT ANY OTHER TIME.
 - b. AFTER VERIFYING ALL FIELD CONDITIONS THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.
 - c. AT THE TIME OF EACH SUBMISSION, THIS CONTRACTOR IS TO IDENTIFY ANY DEVIATION BY "CLOUDING" ON SHOP DRAWINGS.
 - d. SUBMIT THE FOLLOWING:
 1. SLEEVES.
 2. ACCESS DOORS.
 3. VALVES.
 4. SUPPORTS.
 5. PIPE, FITTINGS AND JOINTS.
 6. THERMOMETERS.
 7. CLEANOUTS.
 8. INSULATION.
 9. PLUMBING FIXTURES, TRIM, TRAPS, ETC.
 10. WATER HEATERS.
 11. SOLDER.
 12. VACUUM BREAKERS.
 13. BACKFLOW PREVENTERS.

D. SCOPE OF WORK

1. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT AND CONTRACTOR'S SERVICES NECESSARY FOR A COMPLETE SAFE INSTALLATION OF WORK IN FULL CONFORMITY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, AS INDICATED ON THE DRAWINGS AND/OR HEREIN SPECIFIED, INCLUDING THE FOLLOWING:
 - a. SANITARY DRAINAGE AND VENT SYSTEM, INCLUDING CONNECTIONS TO EXISTING PIPING, PLUMBING FIXTURES AND EQUIPMENT.
 - b. DOMESTIC WATER SUPPLY SYSTEM, INCLUDING CONNECTIONS TO EXISTING PIPING, VALVES, PLUMBING FIXTURES AND EQUIPMENT.
 - c. PLUMBING FIXTURES.
 - d. INSULATION
 - e. CORE DRILLING, ROUGH CUTTING AND PATCHING.
 - f. SHOP DRAWINGS.
 - g. TESTING, FILING AND FEES.
 - h. CADD AS-BUILT DRAWINGS
 - i. DISINFECTION OF DOMESTIC WATER SYSTEM.
 - j. CONTROL AND ALARM WIRING.
 - k. DRIP PANS.

E. DEMOLITION

1. IN DEMOLITION WORK, UNUSED PIPING SHALL NOT BE ABANDONED 'IN PLACE'. PIPING SHALL BE REMOVED BACK TO SOURCE OR POINT OF DISCHARGE, AND THE RESULTING OPENINGS PLUGGED AS INDICATED ON THE DRAWINGS.
2. DISCONNECT, REMOVE AND CAP OR PLUG EXISTING UNUSED PIPING AS NOTED OR REQUIRED TO PERMIT NEW INSTALLATION.
3. ALL EXISTING PLUMBING FIXTURES, PIPING AND EQUIPMENT TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.
4. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING UNUSED PIPING AND FIXTURES WITHOUT INTERRUPTING EXISTING REQUIRED FUNCTIONING SYSTEMS.
5. ALL PIPING FROM FIXTURES TO BE REMOVED AND REPLACED SHALL BE PROPERLY PLUGGED OR CAPPED, AT WALL OR FLOOR, TO AWAIT INSTALLATION OF NEW FIXTURES.
6. ALL UNUSED PIPING AND RELATED ITEMS CONCEALED IN WALLS, FLOORS AND CEILING WITHIN THE STRUCTURE SHALL BE ABANDONED AND REMOVED WHERE EXPOSED TO VIEW.
7. ALL WASTE AND SANITARY DRAINAGE PIPING NOT TO BE USED SHALL BE REMOVED AND PLUGGED AT ACTIVE MAIN OR RISER. NO DEAD END SHALL REMAIN LONGER THAN TWO (2) FT.

F. WORK NOT INCLUDED:

1. FINISHED PATCHING AND PAINTING.
2. TOILET ROOM ACCESSORIES, INCLUDING MEDICINE CABINETS, MIRRORS, GRAB BARS, ETC.
3. INSTALLATION OF ACCESS DOORS.

G. PHASING

1. CONTRACTOR SHALL SUBMIT A PLUMBING PHASING SCHEDULE UPON AWARD OF CONTRACT TO BE APPROVED BY THE ENGINEER AND OWNER.
2. AT NO TIME SHALL THE BUILDING BE WITHOUT WATER EXCEPT IN AREAS OF NEW WORK. IF WATER IS TO BE TURNED OFF, THEN TEMPORARY PIPING IS TO BE INSTALLED AS REQUIRED.
3. WATER PIPING SERVING PLUMBING FIXTURES SHALL NOT BE REMOVED UNTIL NEW PIPING IS INSTALLED AND CONNECTED TO THE EXISTING SOURCE OF SUPPLY.
4. REMOVAL OF EXISTING PIPING SHALL BE DONE IN A SATISFACTORY MANNER TO THE ENGINEER AND COORDINATED WITH THE G.C. SECTION.

H. GENERAL ITEMS

1. AIR CHAMBERS: 12 IN. HIGH, PROVIDE ON INDIVIDUAL HOT AND COLD WATER BRANCHES TO FIXTURES.
2. ESCUTCHEONS: PROVIDE EXPOSED PIPING BOTH BARE AND COVERED, WITH CP CAST BRASS ESCUTCHEONS ON BOTH SIDES WHERE PASSING THROUGH CEILINGS, WALLS OR PARTITIONS.
3. VALVE TAGS AND CHARTS: PROVIDE 2 IN. SQUARE, 18 GAUGE ALUMINUM WITH STAMPED NUMBERED TAGS, FILL IN WITH BLACK PAINT. PROVIDE ON CONTROL VALVES EXCEPT THOSE CONTROLLING A SINGLE FIXTURE AND LOCATED ADJACENT TO FIXTURES. FASTEN WITH BRASS HOOKS. PROVIDE FRAMED CHART LISTING OPERATION, LOCATION AND PURPOSE OF VALVES. COORDINATE WITH EXISTING BUILDING VALVE CHART.
4. SLEEVES: PROVIDE NO. 22 USSG GALVANIZED STEEL. SLEEVES EXTENDED THROUGH CONSTRUCTION IN CEILINGS, WALLS AND PARTITIONS. FOR INSULATED PIPING, SIZED TO ALLOW INSULATION TO PASS THROUGH SLEEVE. PROVIDE 1/2 IN. SPACE BETWEEN PIPE AND/OR INSULATION AND SLEEVE. FIREPROOF BY SEALING ALL SLEEVES IN ACCORDANCE WITH BUILDING CODE AND FIRE DEPARTMENT REQUIREMENTS.
5. HANGER AND PIPING SUPPORTS
 - a. SUPPORT MATERIALS: GALVANIZED, EXCEPT ON GAS OR MEDICAL GASES, SAME AS PIPING MATERIAL.
 - b. SUPPORT PIPING AT DISTANCES AS REQUIRED BY CODE.
 - c. ALL PIPING SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE. PIPE SUPPORTED FROM PIPE, CHAIN, STRAP, PERFORATED BAR, OR WIRE HANGERS ARE NOT PERMITTED.
 - d. PIPING 2 IN. OR LESS PROVIDE ELECTROPLATED SOLID BAND HANGERS, ANVIL INTERNATIONAL SWIVEL RING FIG. 69.
 - e. FOR HORIZONTAL PIPING 3 IN. AND LARGER, PROVIDE GALVANIZED "CLEVIS" HANGERS, ANVIL INTERNATIONAL FIG. 260.
 - f. SUPPORT HORIZONTAL BRANCH PIPING IN PIPE CHASES FROM WALL BRACKETS SUPPORTED FROM STRUCTURE.
 - g. TRAPEZE FOR MULTIPLE LINES, SUPPORTED BY A MINIMUM OF TWO HANGERS.
 - h. SUSPEND TRAPEZE AND/OR HANGERS FROM EXPANSION ANCHORS IN SOLID CONCRETE SLABS, SIMILAR TO HILTI HDI OR FROM EXISTING STRUCTURAL STEEL WITH BEAM CLAMPS SIMILAR TO ANVIL INTERNATIONAL FIG. 95 W/ RETAINING CLIP FIG. 89. PROVIDE RODS SIZED FOR PIPE SUPPORTED AND LOCK HANGER IN PLACE WITH DOUBLE NUTS. PROVIDE GALVANIZED METAL PROTECTION SHIELDS ON INSULATED PIPING. INSTALL HANGERS OVER INSULATION AND SHIELDS.
 - i. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND REVIEWED.

1. ACCESS DOORS: 12 IN. X 12 IN. NO. 4 FINISH STAINLESS STEEL FLUSH TYPE, LOCATE AND SET AFTER REVIEW. DOOR AND FRAME WITH METAL WINGS OR KEYING INTO CONSTRUCTION WITH CONCEALED HINGES AND SCREWDRIVER OPERATED STAINLESS STEEL CAM LOCK. KARP STYLE DSC 214M OR KRP-150-FR IN FIRE RATED CONSTRUCTION.
2. LABELING: PROVIDE ON ALL PIPING IN OR AT CEILING, 10 FT. ON CENTERS, INDICATING SYSTEM, SIZE AND DIRECTION OF FLOW.
3. DISSIMILAR METALS: PROVIDE BRASS OR COPPER WATER PIPING CONNECTED TO GALVANIZED PIPE AND FOR ANY OTHER DISSIMILAR METALS WITH DIELECTRIC FITTINGS.

4. DRIP PANS:

- a. PROVIDE DRIP PANS UNDER PIPING WHEN INSTALLATION OVER OR WITHIN 5 FT. OF TELEPHONE OR ELECTRICAL APPARATUS IS UNAVOIDABLE OR IN ROOMS CONTAINING TELEPHONE OR ELECTRICAL EQUIPMENT OR UNDER DRAINAGE PIPING AT CEILINGS OF FOOD PREPARATION AREAS. PAN SHALL BE REINFORCED, PROPERLY SUPPORTED AND MADE WATERTIGHT. PROVIDE ENCLOSED TYPE FOR PRESSURE PIPING, EXTEND 1" IN. DRAIN PIPE FROM PAN TO SPILL TO SERVICE SINK OR OVER NEAREST FLOOR DRAIN OR AS DIRECTED OR INDICATED. PROVIDE FLOOR DRAIN FOR DRIP PAN DRAINS WHERE THERE ARE NO EXISTING FLOOR DRAINS. PROVIDE HOSE BIBB ADJACENT TO FLOOR DRAINS.
- b. CONSTRUCTION SHALL BE 32 OZ SHEET COPPER.

J. PIPING AND FITTINGS

1. SANITARY DRAINAGE AND VENT PIPING: SERVICE WEIGHT CAST IRON HUB AND SPIGOT SOIL PIPE AND DRAINAGE FITTINGS, OR GALVANIZED STEEL PIPE WITH GALVANIZED THREADED CAST IRON DRAINAGE FITTINGS, WITH GALVANIZED THREADED MALLEABLE IRON VENT FITTINGS OR CAST IRON NO-HUB WITH 24 GAUGE, 304 STAINLESS STEEL COUPLINGS WITH NEOPRENE GASKETS, RATED FOR 15 PSI AND REQUIRING A MINIMUM OF 100 IN./LBS. OF TORQUE.
 - a. ALL HUBLESS PIPES SHALL BE ANCHORED AT EACH SIDE OF COUPLING (OR NO HUB CLAMP) AT FIVE (5) FT. INTERVALS.
2. WATER PIPING: BRASS PIPE IN COMPLIANCE WITH NSF 61 WITH THREADED CAST BRASS FITTINGS OR TYPE "L" COPPER TUBING WITH WROUGHT COPPER OR CAST BRONZE FITTINGS WITH 86-8 SOLDERED JOINTS.
 - a. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.

K. VALVES

1. SHUT-OFF OR THROTTLING VALVES (WATER): BRONZE BODY BALL VALVE WITH STAINLESS STEEL BALL AND STEM, VIRGIN TEE SEATS AND SEALS, 600 PSI W.O.G., THREADED ENDS CONBRACO 'APOLLO' 70-100 SERIES. SOLDER JOINT ENDS CONBRACO 'APOLLO' 70-200 SERIES.
2. CHECK VALVES (WATER): BRONZE SWING TYPE, 125 PSI WSP, THREADED ENDS, STOCKHAM NO. B-319. SOLDER JOINT ENDS, STOCKHAM NO. B-309.

A. PLUMBING EQUIPMENT

1. FIXED AIR GAP:
 - a. CHROME PLATED CAST BRONZE.
 - b. CONFORMING TO ANSI A112.1.2.
 - c. J.R. SMITH NO. 3950 FOR UNDERCOUNTER DISHWASHERS.
2. VACUUM BREAKERS:
 - a. NON-CONTINUOUS PRESSURE USE WITH BACK PRESSURE.
 - b. CAST BRASS BODY, WITH FULL SIZE ORIFICE
 - c. ATMOSPHERIC TYPE, WATTS NO 288A.
3. BACKFLOW PREVENTERS:
 - a. BRONZE BODY, STAINLESS STEEL INTERNAL PARTS.
 - b. LOW FLOW, LOW HEAD LOSS TYPE.
 - c. WATTS NO. 9D.
 - d. SPILL DRAIN TO SERVICE SINK OR FLOOR DRAIN.
 - e. PROVIDE AIR GAP, WATTS 909-AG-C.

5. HOSE BIBBS:

- a. CAST BRASS ANGLE VALVE WITH INTEGRAL STOP, RENEWABLE SEAT, COMPOSITION WASHER, METAL HANDLE, VACUUM BREAKER AND HOSE THREADED END.
- b. WALL FLANGE ON CONCEALED PIPING.
- c. ON EXPOSED PIPING, LESS WALL FLANGE.
- d. SPEAKMAN NO. S-9911-S.

B. PLUMBING PIPING INSULATION

1. MINERAL-FIBER, PREFORMED PIPE INSULATION: SHALL BE TYPE I, WITH FACTORY-APPLIED WITH SELF-SEALING, PRESSURE-SENSITIVE, ACRYLIC-BASED ADHESIVE COVERED BY A REMOVABLE PROTECTIVE STRIP, COMPLYING WITH ASTM C 1136, TYPE I.
2. PROTECTIVE SHIELDING PIPE COVERS SHALL BE PLASTIC WRAPS FOR COVERING PLUMBING FIXTURE HOT, COLD AND DRAIN PIPING. COMPLY WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.
3. INSULATION SHALL HAVE A FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS.
4. INSTALL INSULATION MATERIALS, ACCESSORIES, AND FINISHES WITH SMOOTH, STRAIGHT, FREE OF VOIDS THROUGHOUT THE LENGTH OF PIPING INCLUDING FITTINGS, VALVES, AND SPECIALTIES.
5. INSTALL INSULATION WITH LEAST NUMBER OF JOINTS PRACTICAL
6. INSTALL INSULATION ON FITTINGS, VALVES, STRAINERS, FLANGES, AND UNIONS
7. ALL POTABLE WATER INSULATION AND CONDENSATION DRAINS SHALL BE MINERAL-FIBER, PREFORMED PIPE INSULATION 1 INCH THICK.

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature

Project Name

Santander - Central Square, Cambridge

Project Number

11.6850.127

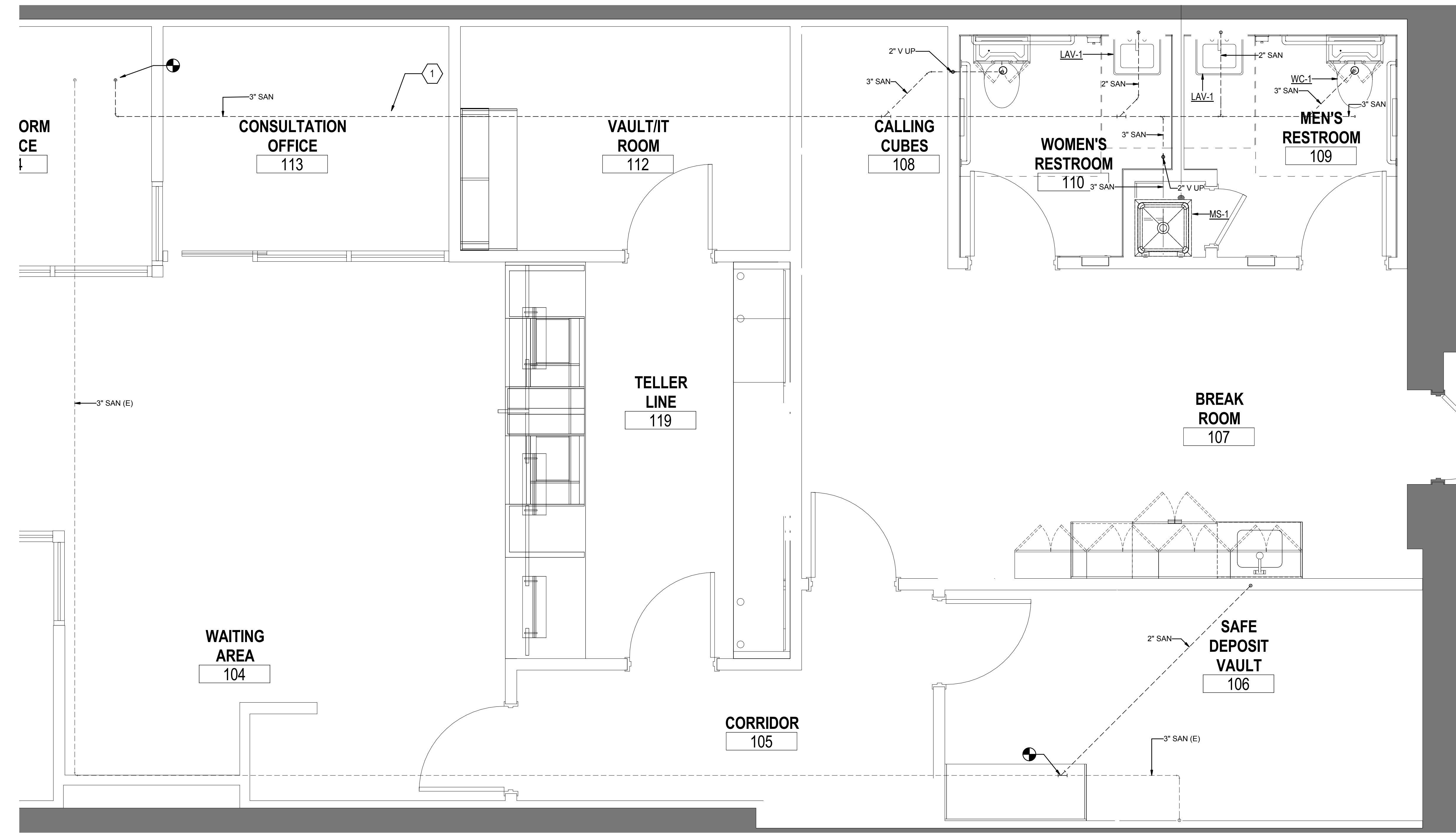
Description

PLUMBING SPECIFICATIONS

Scale

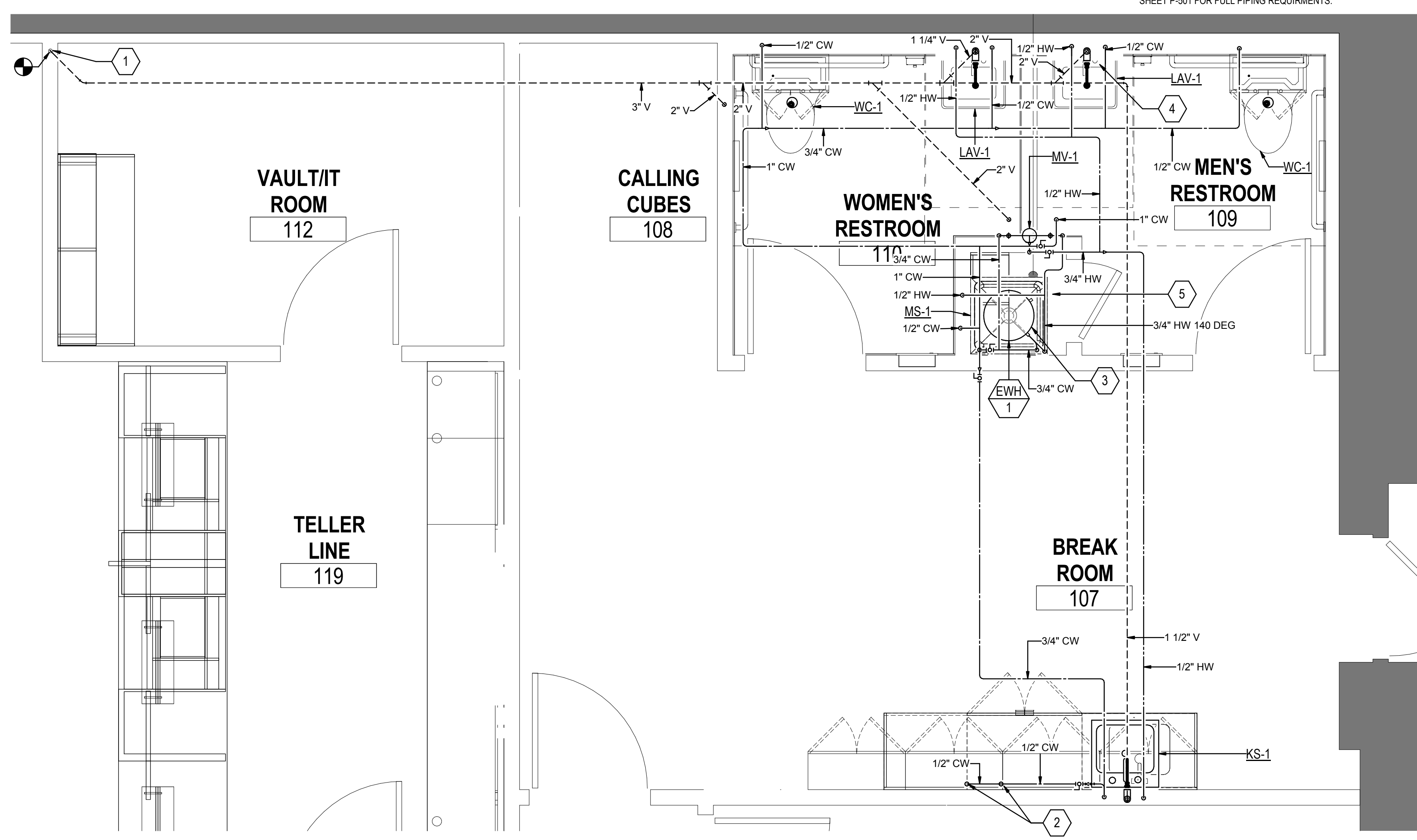
NONE

P-002

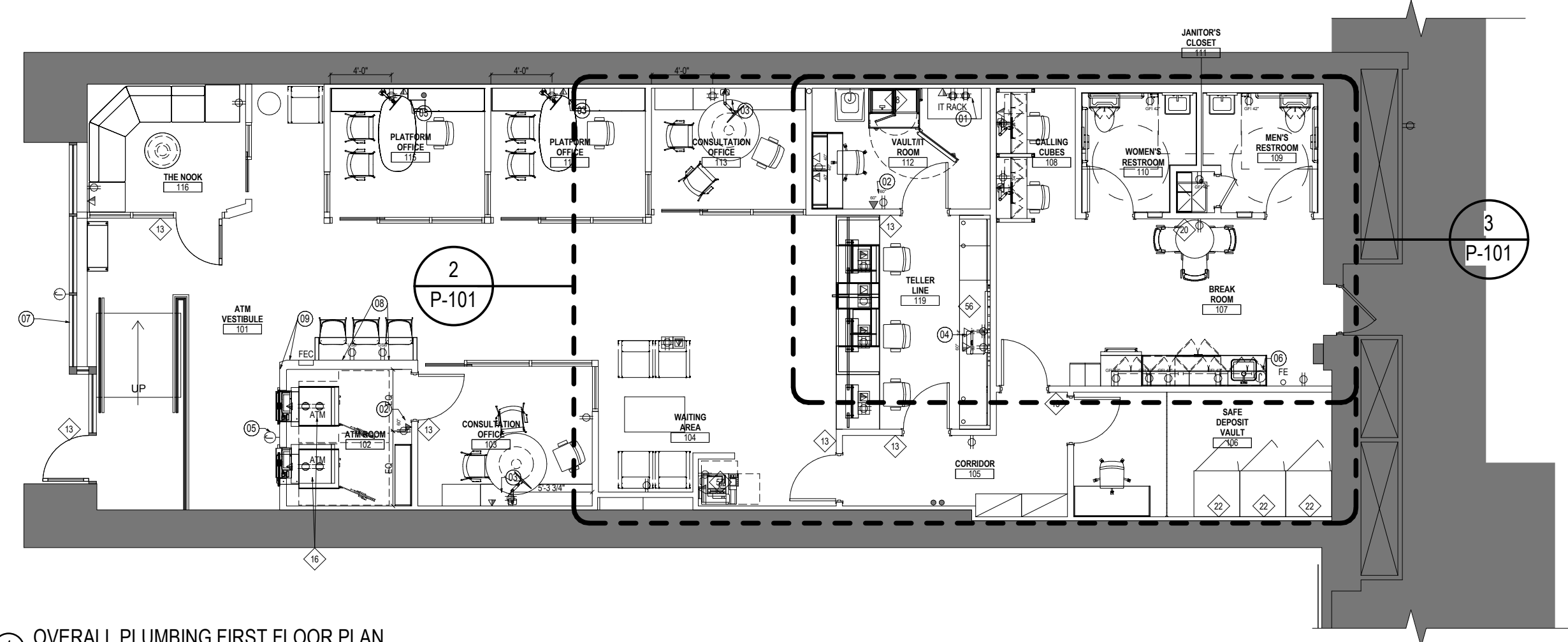


2 SANITARY WASTE PLAN
1/2" = 1'-0"

- DOMESTIC WATER AND VENT PLAN NUMBERED NOTES**
1. CONNECT NEW 3" VENT TO EXISTING VENT STACK.
2. PROVIDE WATER CONNECTION TO COUNTER MOUNTED APPLIANCES PROVIDED BY OTHERS. SEE PANTRY SINK PIPING DETAIL ON SHEET P-501.
3. LOCATE ELECTRIC WATER HEATER ABOVE MOP SINK. LOCATE AT 6" AFF TO BOTTOM OF EWH-1. SEE SUSPENDED ELECTRIC WATER HEATER DETAIL ON SHEET P-501.
4. PROVIDE TEMPERING VALVE ON HOT WATER SUPPLY TO LAV-1 (TYPICAL). SEE LAVATORY MIXING VALVE DETAIL ON SHEET P-501.
5. WATER HEATER PIPING SHOWN SCHEMATIC ON THIS PLAN. SEE HOT WATER PIPING SCHEMATIC DETAIL ON SHEET P-501 FOR FULL PIPING REQUIREMENTS.



3 DOMESTIC WATER AND VENT PLAN
1/2" = 1'-0"



1 OVERALL PLUMBING FIRST FLOOR PLAN
1/8" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature

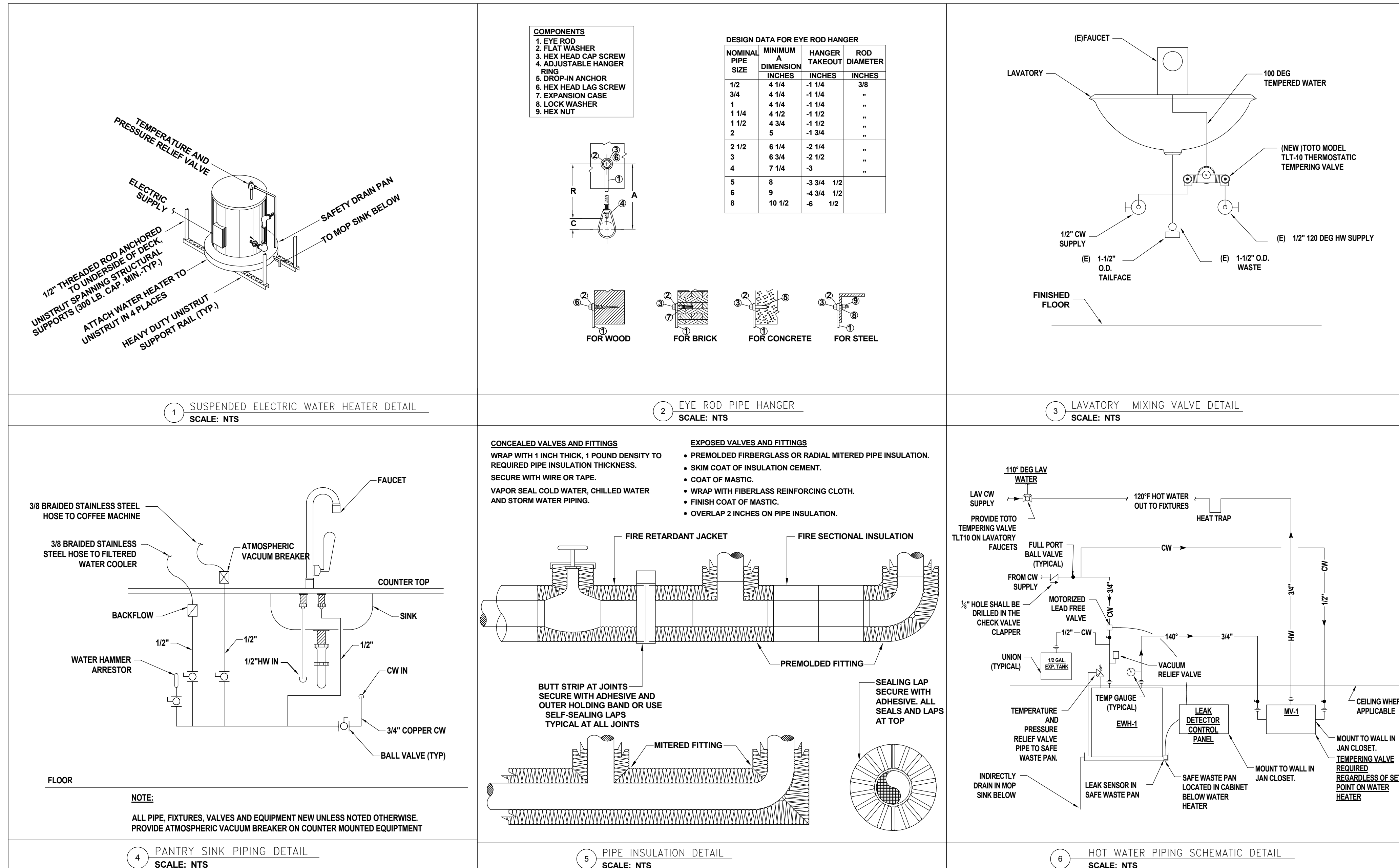
Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
PLUMBING FLOOR PLANS

Scale
As indicated

P-101



Date	Description
03/21/2019	ISSUE FOR BID/PERMIT



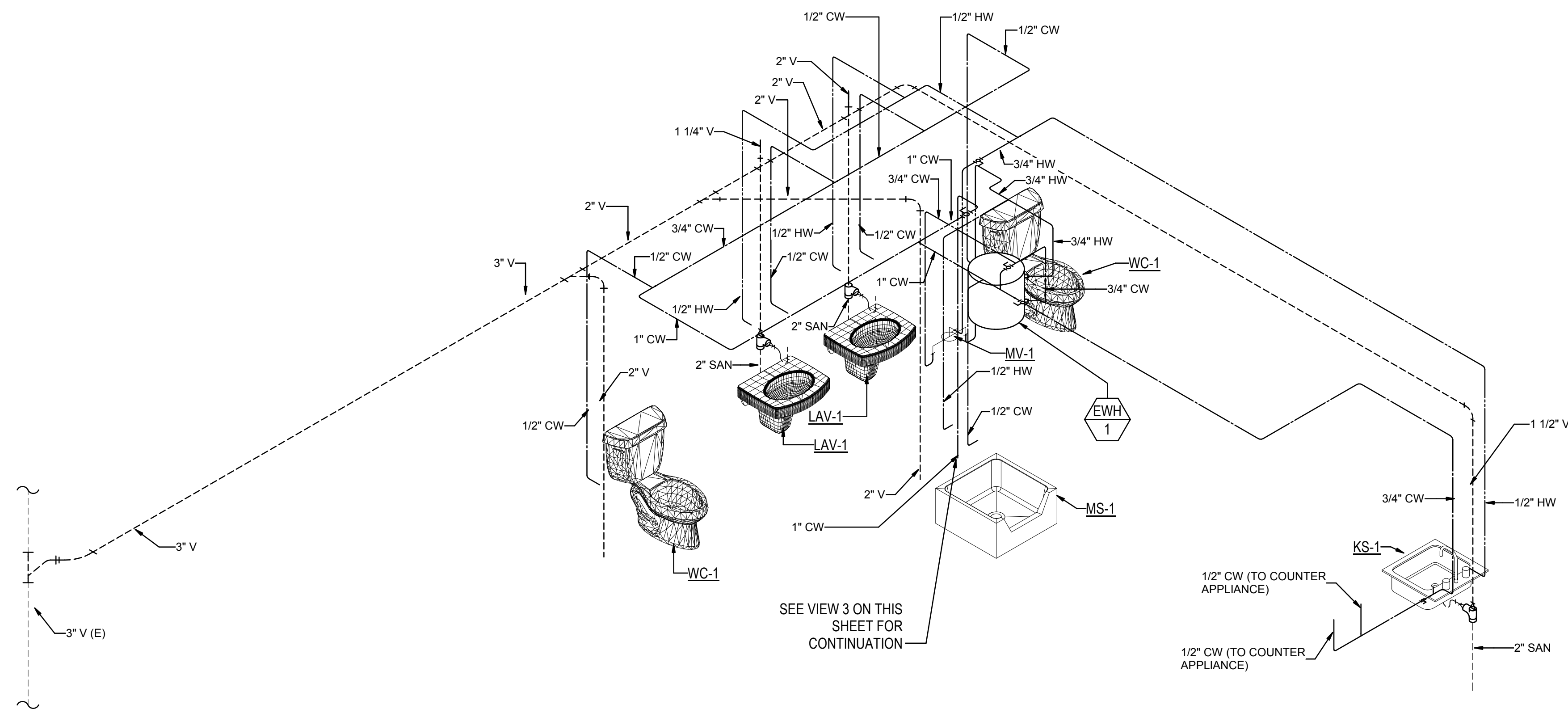
Seal / Signature

Project Name
Santander - Central Square,
Cambridge

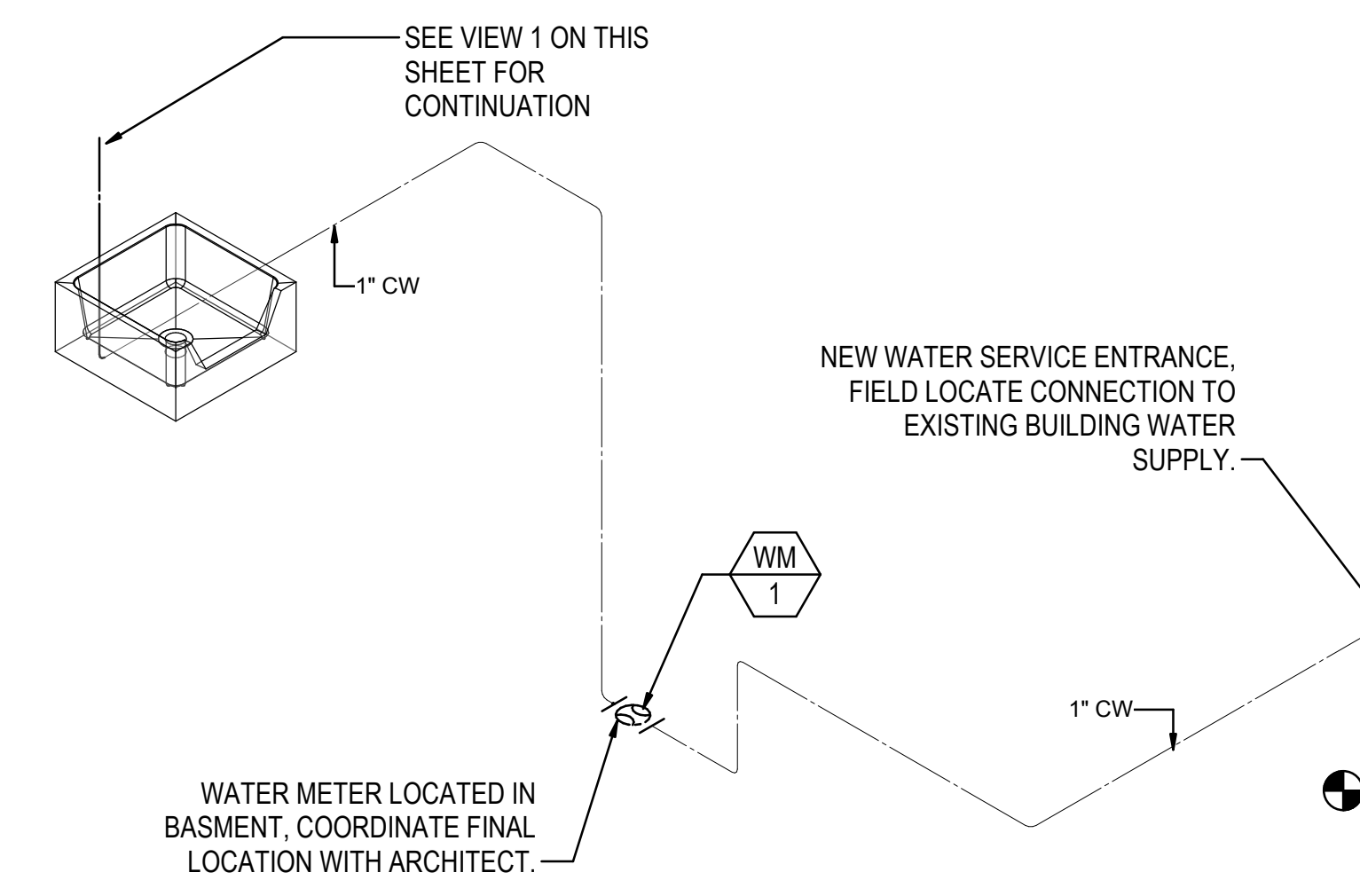
Project Number
11.6850.127

Description
PLUMBING DETAILS

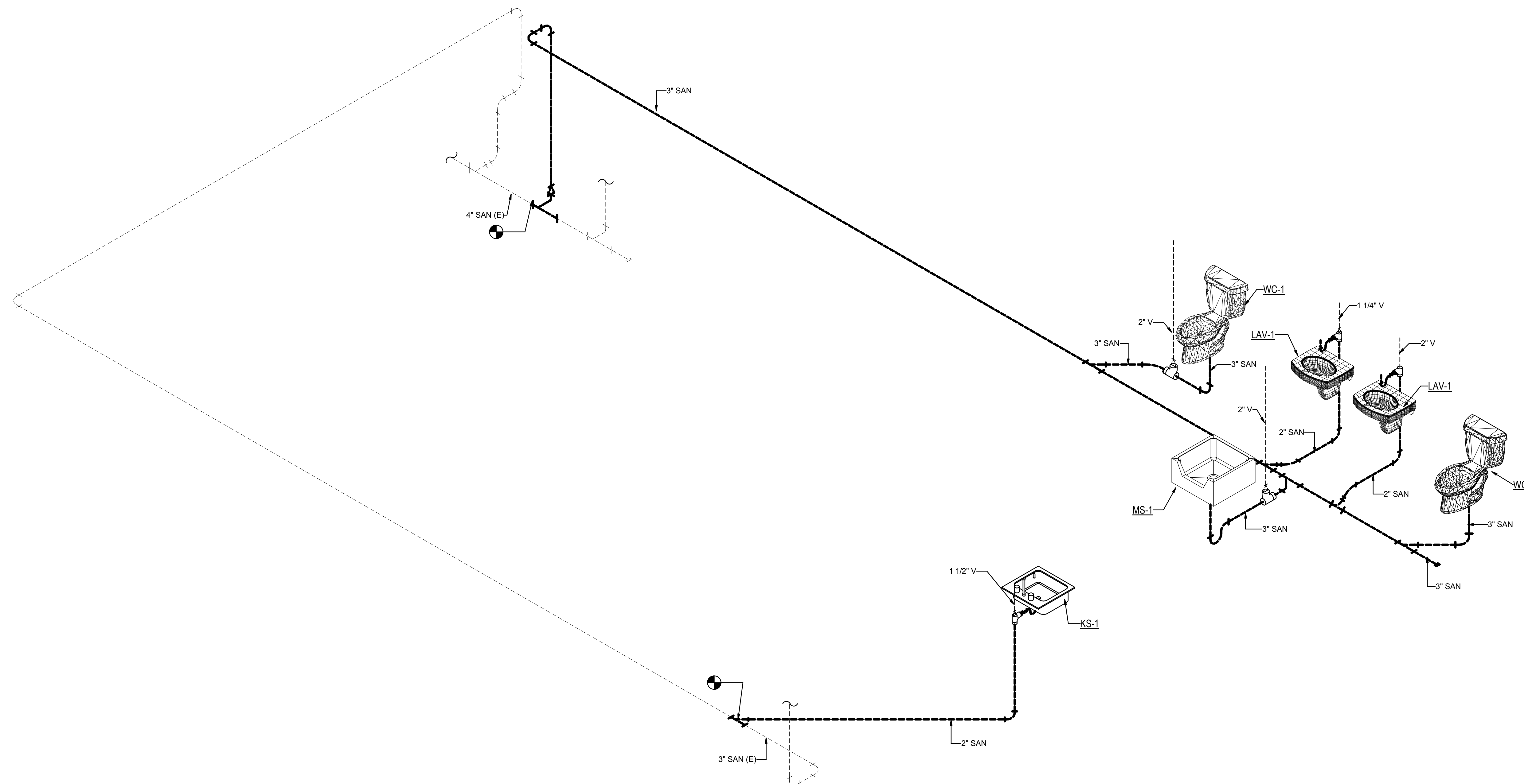
Scale
NOT TO SCALE



1 DOMESTIC WATER AND VENTING ISOMETRIC PLAN



3 WATER ENTRANCE ISOMETRIC PLAN



2 SANITARY WASTE ISOMETRIC PLAN

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature

Project Name
Santander - Central Square, Cambridge
 Project Number
11.6850.127
 Description
PLUMBING ISOMETRICS

Scale

ABBREVIATIONS

-A-	COMPRESSED AIR	GALV	GALVANIZED
A	AUTOMATIC BALL DROP	GPM	GALLONS PER MINUTE
ABD	AIR COMPRESSOR	GV	GATE VALVE
ACO	ACCESS DOOR	-H-	HEIGHT
AD	ABOVE FINISHED FLOOR	HCLG	HUNG CEILING
AFF	ABOVE FINISHED GRADE	HDS	HEADS
AFG	AUTHORITY HAVING JURISDICTION	HOR	HORIZONTAL
AHJ	AMERICAN NATIONAL STANDARDS INSTITUTE	HP	HORSE POWER
ANSI	ALARM PANEL	HVAC	HEATING, VENTILATING & AIR CONDITIONING
AP	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	HZ	HERTZ
ASME	AMERICAN SOCIETY FOR TESTING & MATERIALS	-I-	IRON BODY, BRONZE MOUNTED
ASTM	AUTOMATIC	IBBM	IRON BODY, BRONZE MOUNTED
AUTO	AUXILIARY	JC	JANITORS CLOSET
AUX	ALARM VALVE	JP	JOCKEY PUMP
AV	AMERICAN WATER WORKS ASSOCIATION	JPC	JOCKEY PUMP CONTROLLER
AWWA		-M-	MAXIMUM
-B-	BY DIRECTIONAL SHUTOFF VALVE	MECH	MECHANICAL
BDVS	BELOW FINISHED GRADE	MER	MECHANICAL EQUIPMENT ROOM
BFG	BACKFLOW PREVENTER	MIN	MINIMUM
BFP	BUILDING	MTD	MOUNTED
BLDG	BEAM	-N-	NEW SPRINKLER HEAD
BM	BRANCH	(N)	NORMALLY CLOSED
BR	BASEMENT	NC	NORMALLY CLOSED
BSMT		NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
-C-	CONNECTION TO EXISTING	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CE	COMBINED FIRE SPRINKLER	NIC	NOT IN CONTRACT
CFSF	CEILING	NO	NORMALLY OPEN
CLG	COLUMN	NS	NO SPRINKLERS IN ROOM
COL	CONNECT, CONNECTION	NTS	NOT TO SCALE
CONN	CHROME PLATED	-O-	ON CENTER
CP	CASING RELIEF VALVE	PAV	PRE-ACTION VALVE
CR	CONTROL VALVE	PG	PRESSURE GAUGE
CTV	CHECK VALVE	PH	PHASE
CV	CAPPED AND VALVE OUTLET	PLBG	PLUMBING
CVO		PNEU	PNEUMATIC
-D-	EXISTING TO BE DEMOLISHED	PO	PLUGGED OUTLET
(D)	DOUBLE CHECK DETECTOR ASSEMBLY	PRV	PRESSURE REDUCING VALVE
DCDA	DETAIL	PS	PRESSURE SWITCH
DET	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIA	DELUGE VALVE	PSP	PREACTION SPRINKLER PIPING
DLV	DOWN	-R-	REMOVE EXISTING
DN	DRY PIPE ALARM VALVE	(R)	REMOVE EXISTING
DPAV	DRAIN	RCV	RISER CONTROL VALVE
DR	DRY SPRINKLER PIPING	REC	RECESSED
DSP	DRAWING	REV	REVISED, REVISION
DWG		RM	ROOM
-E-	EXISTING TO REMAIN	RPL	REPLACE EXISTING
(E)	EXISTING TO BE RELOCATED	RPM	REVOLUTIONS PER MINUTE
(ER)	ELEVATION	RV	RELIEF VALVE
EL	ELECTRICAL	-S-	SLEEVE
ELEC	EQUIPMENT	SL	SLEEVE
EQUIP	FIRE SERVICE	SP	SPRINKLER, SPRINKLER PIPING
-F-	FLOOR CONTROL VALVE ASSEMBLY	SP HD	SPRINKLER HEAD STANDARD
F	FLOOR DRAIN	STD	STANDARD
FCA	FIRE DEPARTMENT CONNECTION	STP	STANDPIPE
FD	FIRE EXTINGUISHER	-T-	TOTAL DYNAMIC HEAD
FDC	FIRE EXTINGUISHER CABINET	TDH	TOTAL DYNAMIC HEAD
FE	FIRE EXTINGUISHER CABINET W/ FIRE EXTINGUISHER	TS	TAMPER SWITCH
FEC	FIRE EXTINGUISHER	TYP	TYPICAL
FEC/E	FIRE HOSE RACK	-U-	UNDERWRITERS LABORATORIES
FHR	FIRE HOSE VALVE	USGG	UNITED STATES STANDARD GAUGE
FHV	FLOOR	-V-	VOLTS
FLR	FACTORY MUTUAL GLOBAL	VERT	VERTICAL
FM	FOAM PIPING	VO	VALVED OUTLET
FO	FIRE PROTECTION	-W-	WITH
FP	FIRE PUMP CONTROLLER	W/O	WITHOUT
FPC	FIRE PUMP	WFS	WATER FLOW SWITCH
FPMP	FIRE STANDPIPE	VMG	WATER MOTOR GONG
FSP	FOOT, FEET	WOG	WATER, OIL, OR GAS
FT	FOOT HEAD	WP	WORKING PRESSURE
FT HD	FAHRENHEIT	WSP	WORKING STEAM PRESSURE
*F	GALLON	-Z-	ZONE CONTROL VALVE
-G-		ZCV	ZONE CONTROL VALVE
GAL			

SYMBOLS LEGEND

ANNOTATION		MISCELLANEOUS	
	TITLE MARK DETAIL OR PLAN NUMBER - 1 DETAIL OR PLAN REF LOCATION FOUND IN P-201		BACK FLOW PREVENTER
	DETAIL REFERENCE DETAIL NUMBER - 1 DETAIL FOUND IN P-501		FLOW METER
	SECTION MARK SECTION NUMBER - 1 SECTION FOUND IN P-501		FLOW SWITCH
	SHEET KEYNOTE		MANUAL PULL STATION
	REVISION CLOUD (DELTA 1)		PURGE PANEL
	DETAIL BOUNDARY B DETAIL NUMBER - 2		PRESSURE SWITCH
	EQUIPMENT TAG; DESIGNATION AC, DESIGNATION NUMBER 1-1		FULLY SPRINKLERED SPACE
	POINT OF CONNECTION		NON- SPRINKLERED SPACE
	POINT OF DISCONNECTION		SPRINKLER FLOOR CNTL ASSEMBLY WITH RV
PLUMBING LINES			SPRINKLER FLOOR CNTL ASSEMBLY
	NEW PIPING		MOTOR CONTROLLER
	EXISTING TO REMAIN		WET STANDPIPE HOSE STATION
	EXISTING TO BE DEMOLISHED		DRY STANDPIPE HOSE STATION
	UNDERGROUND / BELOW		GRAPHICAL ANNUNCIATOR
FITTINGS			FIRST DETECTION BELL AND LIGHT
	RISER		FIRST DETECTION HORN AND LIGHT
	CONCENTRIC REDUCER		ENCLOSED SIGHT CONE
	ECCENTRIC REDUCER		OPEN SIGHT CONE
	ELBOW DOWN		FIRE HOSE CABINET
	ELBOW DOWN TO TEE		FIRE EXTINGUISHER CABINET
	ELBOW UP		FREESTANDING SIAMESE CONN
	END CAP		SIAMESE CONNECTION
	TEE DOWN		SINGLE CONNECTION
	TEE UP		PUBLIC TWO OUTLET HYDRANT
	UNION		WALL TWO OUTLET HYDRANT
VALVES			PUBLIC 2 OUTLET W/ PUMPER CONN HYDRANT
	AUTOMATIC AIR RELIEF VALVE		FREESTANDING TEST HEADER
	AUTOMATIC AIR VENT		WALL MOUNTED TEST HEADER
	ANGLE VALVE		FIRE PUMP
	BALL VALVE		SIGHT GLASS
	FIRE HOSE VALVE WITH REDUCER CAP AND CHAIN		FIXED AIR GAP
	FIRE HOSE VALVE WITH REDUCER ON RACK		SMOKE DETECTOR
	FLOW ORIFICE		WATER MOTOR GONG
	STRAINER		DO NOT ENTER WARN SIGN/LIGHT
SPRINKLERS			PRESSURE GAUGE
	PENDANT SPRINKLER		THERMOMETER GAUGE

GENERAL NOTES

- CONTRACTOR SHALL VERIFY EXISTING PIPING RUNS AND CONDITIONS WITH THE NEW WORK PRIOR TO START.
- CONTRACTOR SHALL OBTAIN ALL PERMITS AND FILE ALL WORK INCLUDING HYDRAULIC CALCULATION WITH THE AUTHORITY HAVING JURISDICTION AND OWNERS INSURANCE CARRIER.
- COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO START OF WORK.
- SPRINKLER HEAD LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLANS.
- ALL SPRINKLER HEADS SHALL BE INSTALLED AT CENTER OF CEILING TILES.
- SCHEDULE DRAINDOWN OF EXISTING SPRINKLER SYSTEM WITH OWNER PRIOR TO START OF WORK.
- TESTING OF SPRINKLER AND STANDPIPE SYSTEM IN ACCORDANCE WITH NFPA AND LOCAL CITY BUILDING CODE.

SHEET INDEX

NO.	TITLE
FP-001	FIRE PROTECTION COVER SHEET
FP-002	FIRE PROTECTION SPECIFICATIONS
FP-101	FIRE PROTECTION FLOOR PLAN
FP-501	FIRE PROTECTION DETAILS



CC# 630
Central Square
599 Massachusetts Avenue,
Boston, MA 02139

Gensler

One Beacon Street
Third Floor
Boston, MA 02108
United States
Tel: 617.619.5700
Fax: 617.619.5701



A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
10 Post Office Square
Suite 725
Boston, MA 02109
Tel: 617.577.9900
Fax: 617.577.9191
www.syska.com

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature

Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
FIRE PROTECTION COVER SHEET

Scale
NONE

FP-001



FIRE PROTECTION SPECIFICATIONS

ALL REFERENCES IN THIS SPECIFICATION TO:

1. NFPA 13 SHALL BE REFERRED TO AS NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS 2013 EDITION.
 2. NFPA 241 STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS 2004 EDITION
- A. THE THIS SPRINKLER SYSTEM SHALL BE DESIGNED UNDER THE 9TH EDITION OF THE MASSACHUSETTS BUILDING CODE**
- B. ALL WET PIPING SYSTEM AND COMPONENT SHALL BE LISTED FOR 175-PSIG UNLESS HIGH-PRESSURE PIPING SYSTEM IS INDICATED ON PLANS. ALL COMPONENT AND PIPING IN HIGH PRESSURE SYSTEMS SHALL BE LISTED FOR 300-PSIG WORKING PRESSURE.**
- C. LOCATIONS AND ARRANGEMENTS: DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PIPING. INSTALL PIPING AS INDICATED, AS FAR AS PRACTICAL.**
- D. FIRE-HYDRANT FLOW TEST RECORDS:**
- a. WHEN REQUIRED THE FIRE CONTRACTOR SHALL OBTAIN A FIRE-HYDRANT FLOW TEST ACCORDING TO NFPA 13. THE SPRINKLER SYSTEM SHALL BE DESIGNED BY SPRINKLER CONTRACTORS AND REVIEWED BY THE ENGINEERS INCLUDING HYDRAULICS. THE HYDRANT FLOW TEST SHALL BE WITNESSED BY LOCAL ANY OF THE FOLLOWING: WATER DEPARTMENT, FIRE DEPARTMENT OR DEPARTMENT OF PUBLIC WORKS. REPORT TEST IN WRITING TO FIRE ENGINEER AND LOCAL AUTHORITY THAT PERFORMED OR WITNESSED FLOW TEST.
- D. SPRINKLER OCCUPANCY HAZARD CLASSIFICATIONS SHALL BE BASED ON:**
1. LIGHT HAZARD SHALL INCLUDE AREAS SUCH AS: CHURCHES, LIBRARIES EXCEPT STACK AREAS, OFFICE AND PUBLIC AREAS, RESIDENTIAL LIVING AREAS, SEATING AREAS, ATTIC SPACES WITH NO ACCESS FOR STORAGE, COMPUTER/SERVER ROOMS, AND THE DENSITY SHALL BE 0.10 GPM OVER ANY 1500-SQ. FT AREA.
 2. ORDINARY HAZARD, GROUP 1 SHALL INCLUDE AREAS SUCH AS: AUTOMOBILE PARKING AREAS, BUILDING SERVICE AREAS, GENERAL STORAGE AREAS, LAUNDRIES, MECHANICAL EQUIPMENT ROOMS, AND RESTAURANT SERVICE AREAS AND THE DENSITY SHALL BE 9.15 GPM OVER ANY 1500-SQ. FT AREA.
 3. ORDINARY HAZARD GROUP 2 OCCUPANCIES SHALL BE DEFINED AS OCCUPANCIES OR PORTIONS OF OTHER OCCUPANCIES WHERE THE QUANTITY AND COMBUSTIBILITY OF CONTENTS ARE MODERATE TO HIGH, STOCKPILES OF CONTENTS WITH MODERATE RATES OF HEAT RELEASE DO NOT EXCEED 12 FT. AND STOCKPILES OF CONTENTS WITH HIGH RATES OF HEAT RELEASE DO NOT EXCEED 8 FT. THE DESIGN DENSITY SHALL BE .20 OVER 1500-SQ. FT AREA.
 4. THE AREA OF DESIGN FOR LIGHT HAZARD AND ORDINARY HAZARD SHALL BE INCREASED BY 30% IF THE ANGLE OF ROOF OR CEILING EXCEEDS A PITCH OF 16.7 PERCENT INCLINE OR THE SYSTEM IS A DRY PIPE OR DOUBLE INTERLOCKED SYSTEM, IF BOTH OCCUR THEN THE INCREASE IN AREA SHALL BE 60%.
 5. THE AREA OF DESIGN FOR LIGHT HAZARD AND ORDINARY HAZARD SHALL BE REDUCED AS INDICATED IN NFPA 13 FIGURE 11.2.3.2.3.1 IF THE SPRINKLERS ARE QUICK RESPONSE TYPE THAT ARE USED IN A WET PIPE SYSTEM, AND THE CEILING IS LESS THAN 20 FEET TALL WITH NO SIGNIFICANT OPENINGS AS INDICATED IN SECTION 8.6.7 AND 8.8.7 OF NFPA 13. THIS REDUCTIONS SHALL NOT BE APPLIED TO ANY AREA THAT CONTAINS STORAGE OVER 8' TALL.
 6. TOTAL COMBINED HOSE-STREAM DEMAND REQUIREMENT SHALL BE 100 GPM FOR 30 MINUTES IN LIGHT HAZARD OCCUPANCIES AND 250 GPM FOR 60 MINUTES IN ORDINARY HAZARD GROUP 1 OCCUPANCIES.
- E. SUBMITTALS SHALL BE PROVIDED FOR:**
1. PRODUCTS SPECIFIED ITEMS INDICATED IN THIS SPECIFICATION SHALL BE THE BASIS OF DESIGN ITEMS. ALTERNATE PRODUCTS MAY BE SUBMITTED FOR CONSIDERATION THAT ARE EQUAL IN QUALITY AND DESIGN. ALL REVISIONS REQUIRED TO ACCOMMODATE THE ALTERNATE PRODUCT SHALL BE AT THE EXPENSE OF THIS CONTRACTOR INCLUDING ANY HVAC, ARCHITECTURAL OR ELECTRICAL REVISIONS REQUIRED.
 2. CONTRACTOR SHALL CLEARLY INDICATE ON SUBMITTAL ANY SUBSTITUTIONS FOR PRODUCTS. FAILURE TO INDICATED MAY RESULT IN REMOVAL OF PRODUCT AT CONTRACTORS EXPENSE.
 3. PIPE AND FITTINGS DOWN STREAM BACKFLOW DEVICE.
 4. SHOP DRAWINGS ARE REQUIRED FOR FIRE-SUPPRESSION SYSTEMS. INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.
 5. DEVIATIONS FROM APPROVED SHOP DRAWINGS REQUIRE PRIOR APPROVAL FROM ENGINEER.
 6. ALL ITEMS THAT CONTAIN CONTROL WIRING.
 7. CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ABOVEGROUND AND UNDERGROUND PIPING.
 8. ANY PRODUCT IN THIS SPECIFICATION THAT REQUIRED BOTH UL AND FM LISTING.
 9. SPRINKLER CABINET INCLUDING QUANTITY AND TYPE OF SPRINKLER INCLUDED WITH CABINET.
 10. INSPECTORS TEST FITTINGS.
 11. PROVIDE SUBMITTALS FOR EACH TYPE OF SEISMIC PRODUCT USED.
 12. SPARE SPRINKLER CABINET SHALL BE RED STEEL WITH HINGED COVER THAT IS WALL-MOUNTED, AND WITH SPACE FOR MINIMUM OF SIX SPARE SPRINKLERS PLUS SPRINKLER WRENCH. INCLUDE NUMBER OF SPRINKLERS REQUIRED BY NFPA 13 AND SPRINKLER WRENCH. INCLUDE SEPARATE CABINET WITH SPRINKLERS AND WRENCH FOR EACH TYPE OF SPRINKLER USED ON PROJECT.

F. STEEL PIPE AND FITTINGS

1. SPRINKLER PIPING SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO NFPA 13.
 2. 1-1/2" AND SMALLER PIPE SHALL BE SCHEDULE 40 BLACK-STEEL PIPE THREADED ENDS.
 3. 2" AND LARGER PIPE SHALL BE SCHEDULE 10, BLACK-STEEL PIPE WITH GROOVED OR THREADED ENDS.
 4. GROOVED FITTINGS SHALL BE VICTAULIC COMPANY WITH A PRESSURE RATING OF 175 PSIG UNLESS HIGH PRESSURE SYSTEM IS INDICATED ON DRAWINGS, HIGH PRESSURE SYSTEMS SHALL UTILIZE FITTINGS RATED FOR 300 PSIG.
 5. MECHANICAL TEE OUTLETS OR BRANCH OUTLET FITTINGS SHALL NOT BE USED.
 6. FLEXIBLE, SPRINKLER HOSE FITTINGS MAY BE USED AS AN OPTION TO ARMOVER PIPING. IF USED THE MANUFACTURE SHALL BE FLEXHEAD INDUSTRIES, INC.
 7. FILL WET PIPE SPRINKLER SYSTEM PIPING WITH WATER.
 8. AFTER INSTALLATION, CHARGE SYSTEMS AND TEST FOR LEAKS. REPAIR LEAKS AND RETEST UNTIL NO LEAKS EXIST.
 9. REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS. BEVEL PLAIN ENDS OF STEEL PIPE.
- G. INSPECTOR'S TEST FITTINGS SHALL BE BRONZE AND MANUFACTURED BY AGF MANUFACTURING INC. THE UNIT SIZE SHALL BE THE SAME SIZE AS THE PIPE IT CONNECT TO AND SHALL FLOW THE EQUIVALENT OF THE LEAST FLOWING SPRINKLER IN THE SPRINKLER ZONE**
- H. AUTOMATIC SPRINKLERS**
1. AUTOMATIC SPRINKLERS WITH HEAT-RESPONSIVE ELEMENT SHALL BE MANUFACTURED BY TYCO AND RATED FOR 175 PSIG (REFER TO DRAWINGS FOR MODEL, K-FACTOR AND TEMPERATURE). UNLESS NOTED OTHERWISE ON DRAWINGS SPRINKLER FINISHES AND ESCUTCHEONS SHALL BE CHROME PLATED AND SEMI RECESSED. THE MAXIMUM PROTECTION AREA PER SPRINKLER SHALL NOT EXCEED ITS UL LISTING.
 2. SPRINKLER GUARDS SHALL BE INSTALLED IN CLOSETS AND MECHANICAL ROOMS.
 3. INSTALL SPRINKLERS IN SUSPENDED CEILING IN CENTER OF NARROW DIMENSION OF ACOUSTICAL CEILING PANELS.
 4. DO NOT INSTALL PENDENT OR SIDEWALL, WET-TYPE SPRINKLERS IN AREAS SUBJECT TO FREEZING.
- I. SLEEVES AND SLEEVE SEALS**
1. FIRE-BARRIER PENETRATIONS SHALL MAINTAIN FIRE RATING OF WALLS, PARTITIONS, CEILING, AND FLOORS AT PIPE PENETRATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS.
- M. ESCUTCHEONS FOR FIRE-SUPPRESSION PIPING**
1. INSTALL ESCUTCHEONS FOR PIPING PENETRATIONS OF WALLS, CEILING, AND FLOORS.
 2. ESCUTCHEONS SHALL BE SPLIT-PLATE, STAMPED-STEEL TYPE WITH CONCEALED HINGE AND A CHROME-PLATED FINISH.
 3. PIPING WITH FITTING OR SLEEVE PROTRUDING FROM WALL SHALL BE DEEP-PATTERN TYPE.
- N. SEISMIC REQUIREMENTS**
1. HANGER-ROD STIFFENER SHALL BE STEEL TUBE OR REINFORCING STEEL ANGLE CLAMPED TO HANGER ROD.
 2. HINGED AND SWIVEL BRACE ATTACHMENTS SHALL BE MULTIFUNCTIONAL STEEL CONNECTORS FOR ATTACHING HANGERS TO RIGID CHANNEL BRACING.
 3. ANCHOR BOLTS SHALL BE DRILLED-IN FEMALE-WEDGE TYPE IN ZINC-COATED STEEL.
 4. INSTALL HANGER-ROD STIFFENERS WHERE REQUIRED TO PREVENT BUCKLING OF HANGER RODS DUE TO SEISMIC FORCES.
 5. PIPING RESTRAINTS SHALL BE SPACED FOR LATERAL SUPPORTS A MAXIMUM OF 40 FEET O.C. AND LONGITUDINAL SUPPORTS A MAXIMUM OF 80 FEET O.C. RESTRAINTS SHALL BE REQUIRED AT A CHANGE OF DIRECTION LONGER THAN 12 FEET.
 6. ANCHOR BRACING TO STRUCTURE AT FLANGES OF BEAMS, AT UPPER TRUSS CHORDS OF BAR JOISTS, OR AT CONCRETE MEMBERS.
 7. INSTALL FLEXIBLE CONNECTIONS IN PIPING WHERE THEY CROSS SEISMIC JOINTS.

P. PIPE HANGERS AND ASSEMBLIES

1. PIPE HANGERS, BEAM CLAMPS, AND ACCESSORIES SHALL BE MANUFACTURED BY EATON B-LINE A DIVISION OF COOPER INDUSTRIES. THE HANGERS SHALL BE UL LISTED AND FM LISTED.
2. HANGERS SUPPORTING PIPES 2 INCH AND SMALLER SHALL BE ADJUSTABLE STEEL SWIVEL RING (BAND TYPE) HANGER, COOPER B-LINE MODEL B3170.
3. HANGERS SUPPORTING PIPES 2-1/2 INCH UP TO 3 INCH: SHALL BE ADJUSTABLE STEEL CLEVIS HANGER, B-LINE B3100.
4. HANGERS SUPPORTING PIPES 4 INCH UP TO 24 INCH: SHALL BE ADJUSTABLE STEEL CLEVIS HANGER, B-LINE B3102. PIPES THAT REQUIRE HORIZONTAL MOVEMENT SHALL USE B3142 CLAMPS AND B3200 EYE NUTS.
5. TRAPEZE HANGERS SHALL BE CONSTRUCTED FROM B-LINE B22 STRUT MOUNT PIPES TO TRAPEZE B-LINE B2000 SERIES PIPE STRAPS.
6. VERTICAL SUPPORTS SHALL USE B-LINE B3373 STEEL RISER CLAMPS.
7. BEAM CLAMPS SHALL COOPER B-LINE 68S OR 68W WHERE PIPING IS TO BE SUSPENDED FROM BUILDING STEEL. CLAMP SHALL INCLUDE RESTRAINING STRAP 68. NO ONE CLAMP SHALL NOT EXCEED 600 POUNDS POINT LOAD INCLUDING WEIGHT OF WATER.
8. CONCRETE INSERTS SHALL BE COOPER B-LINE AWA-37 OR AWA-50 WEDGE ANCHOR INSERT. AND SHALL ATTACH TO ROD WITH COOPER B-LINE ROD COUPLING B3220 OR B3202 TURNBUCKLE.
9. ATTACHMENT TO WOOD STRUCTURE SHALL BE WITH COOPER B-LINE PART #78 ALL STEEL CEILING PLATE OR PART #60 THREADED SIDE BEAM BRACKET.
10. HANGER RODS SHALL BE CONTINUOUS THREADED RODS. USE ADJUSTING LOCKNUTS AT UPPER ATTACHMENTS AND HANGERS.
11. PIPE HANGERS SHALL BE ZINC PLATED.
12. STRUT CHANNELS SHALL BE PRE-GALVANIZED.
13. 1-1/4 INCH AND SMALLER FIRE PROTECTION PIPING SHALL BE SUPPORTED WITH 3/8 INCH ALL THREAD ROD NOT EXCEEDING 7 FEET ON CENTER.
14. ARMOVER PIPING HANGERS SHALL BE LOCATED WITHIN 24 INCH OF SPRINKLER IF RESIDUAL WATER PRESSURE IS LESS THAN 100 PSIG. PRESSURES OVER 100 PSIG SHALL REQUIRE HANGER WITHIN 12 INCH OF SPRINKLER AND SHALL HAVE A SURGE RESTRAINER.
15. 2" FIRE PROTECTION PIPING SHALL BE SUPPORTED WITH 3/8 INCH ALL THREAD ROD NOT EXCEEDING 10 FEET ON CENTER.
16. 2-1/2 INCH FIRE PROTECTION PIPING SHALL BE SUPPORTED WITH 1/2 INCH ALL THREAD ROD NOT EXCEEDING 11 FEET ON CENTER.
17. 3 INCH FIRE PROTECTION PIPING SHALL BE SUPPORTED WITH 1/2 INCH ALL THREAD ROD NOT EXCEEDING 12 FEET ON CENTER.
18. 3-1/2 INCH FIRE PROTECTION PIPING SHALL NOT BE USED.
19. 4 INCH FIRE PROTECTION PIPING SHALL BE SUPPORTED WITH 5/8 INCH ALL THREAD ROD NOT EXCEEDING 14 FEET ON CENTER.
20. PLACE A HANGER WITHIN 12 INCHES OF EACH HORIZONTAL ELBOW.
21. DO NOT SUPPORT PIPING FROM OTHER PIPES, DUCTWORK OR OTHER EQUIPMENT THAT IS NOT BUILDING STRUCTURE.

△	Date	Description
1	03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature

Project Name

Santander - Central Square, Cambridge

Project Number

11.6850.127

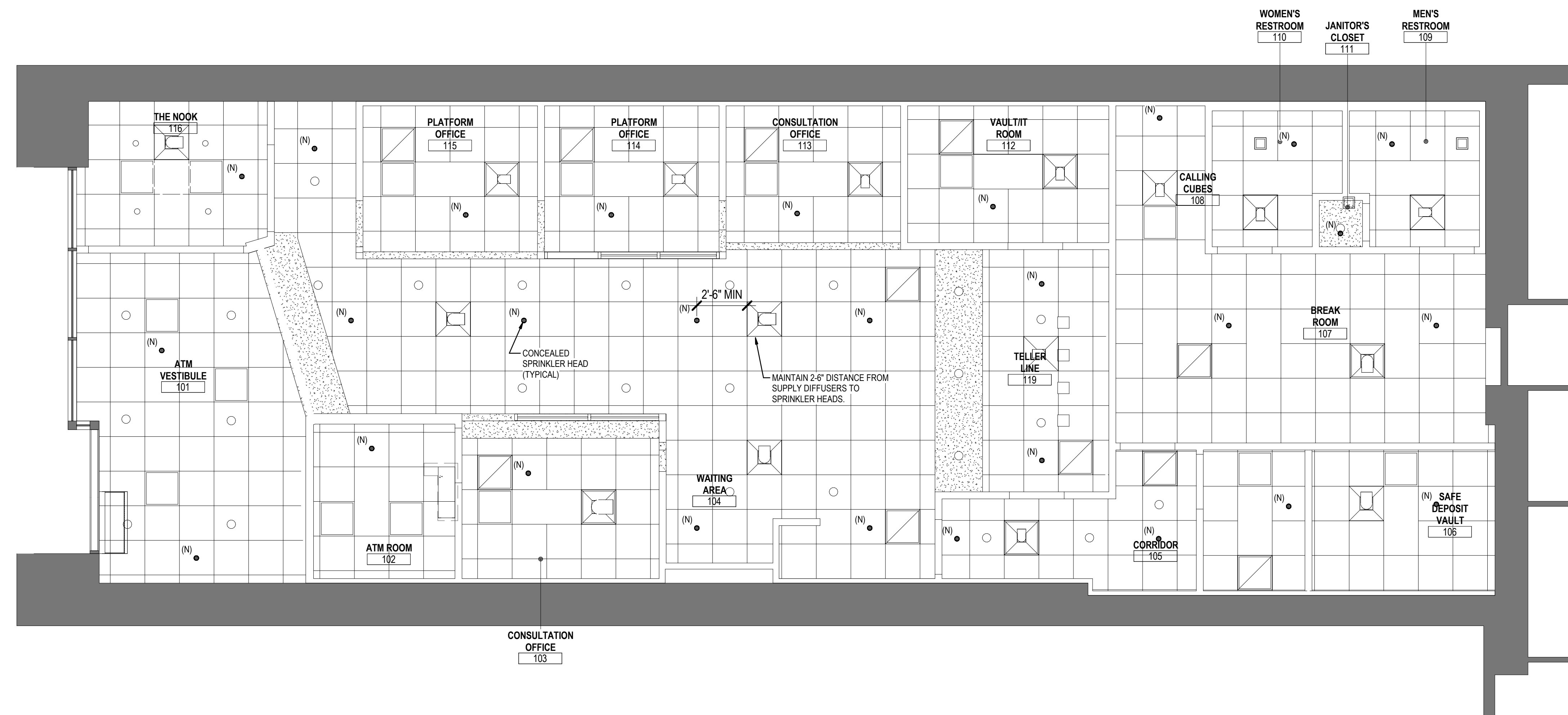
Description

FIRE PROTECTION SPECIFICATIONS

Scale

12" = 1'-0"

FP-002



SPRINKLER PLAN NOTES:
 EXISTING UPRIGHT SPRINKLERS SHALL REMAIN ABOVE
 CEILING (NOT SHOWN FOR CLARITY) SEE DETAIL ON SHEET
 FP-501.

1 LEVEL 1 FIRE PROTECTION PLAN
 1/4" = 1'-0"

Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



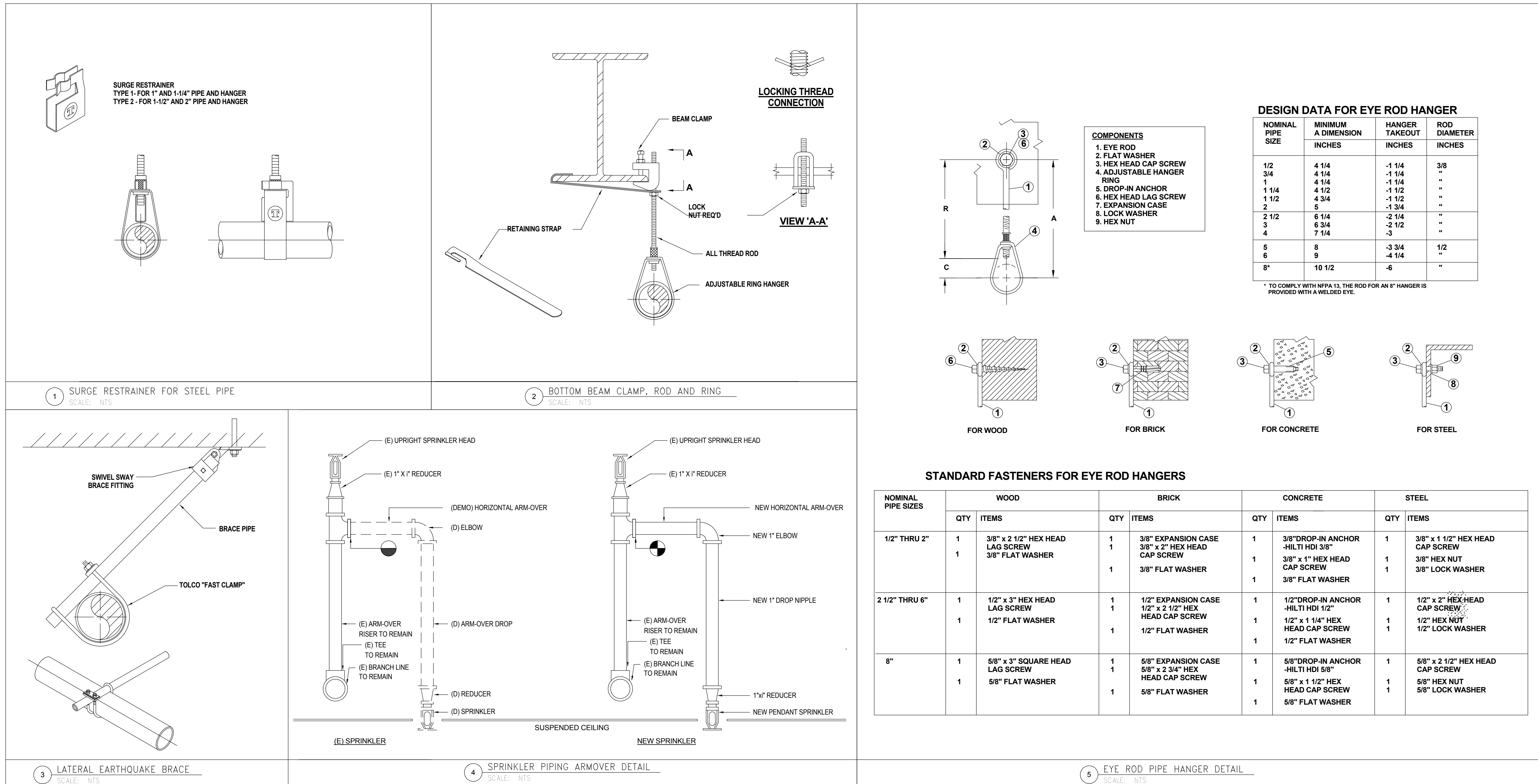
Seal / Signature

Project Name
**Santander - Central Square,
 Cambridge**

Project Number
11.6850.127

Description
FIRE PROTECTION FLOOR PLAN

Scale
 1/4" = 1'-0"



Date	Description
1 03/21/2019	ISSUE FOR BID&PERMIT



Seal / Signature

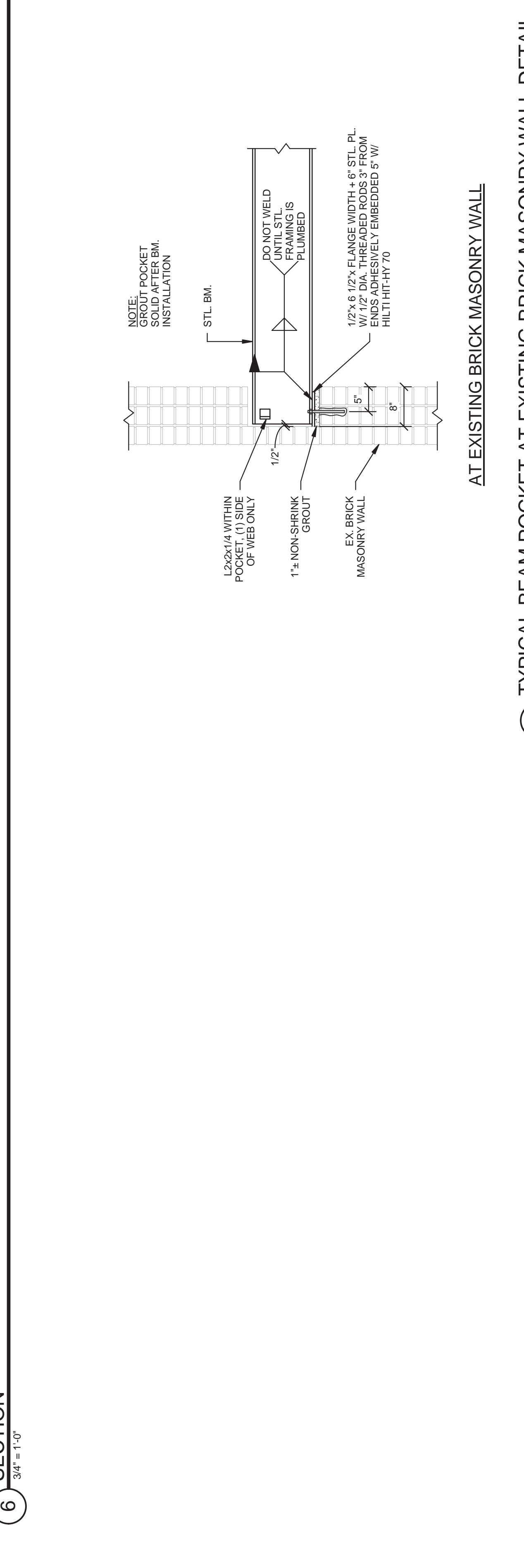
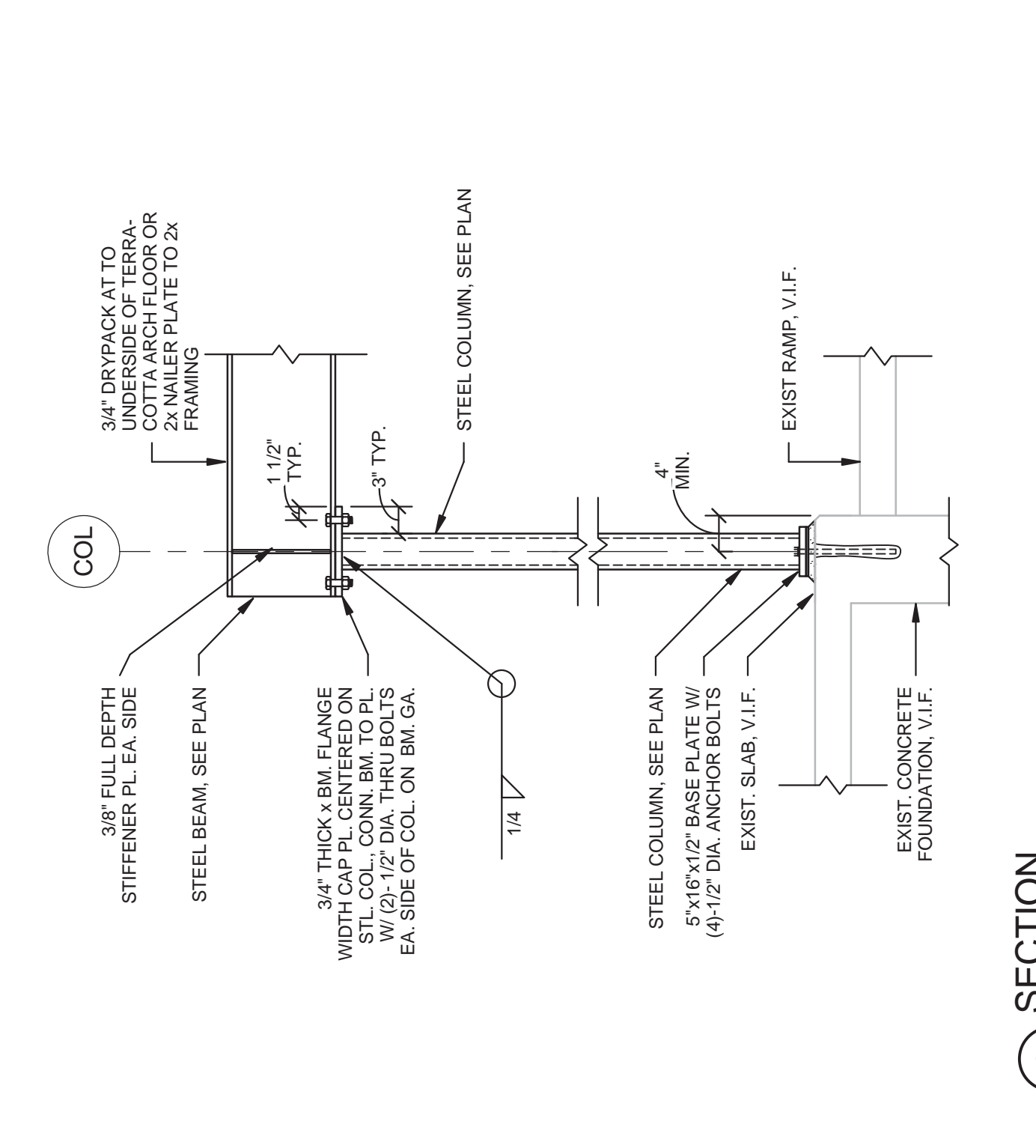
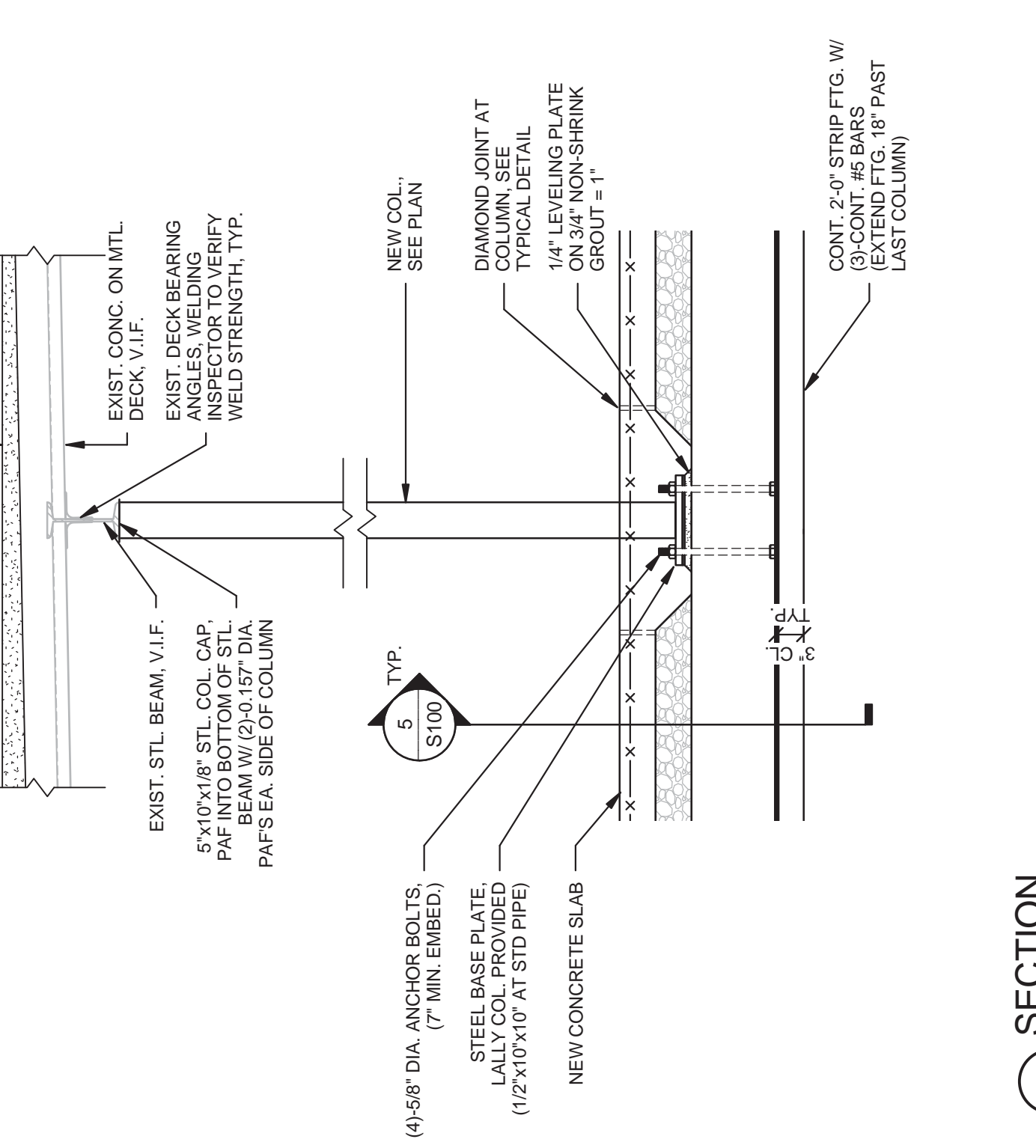
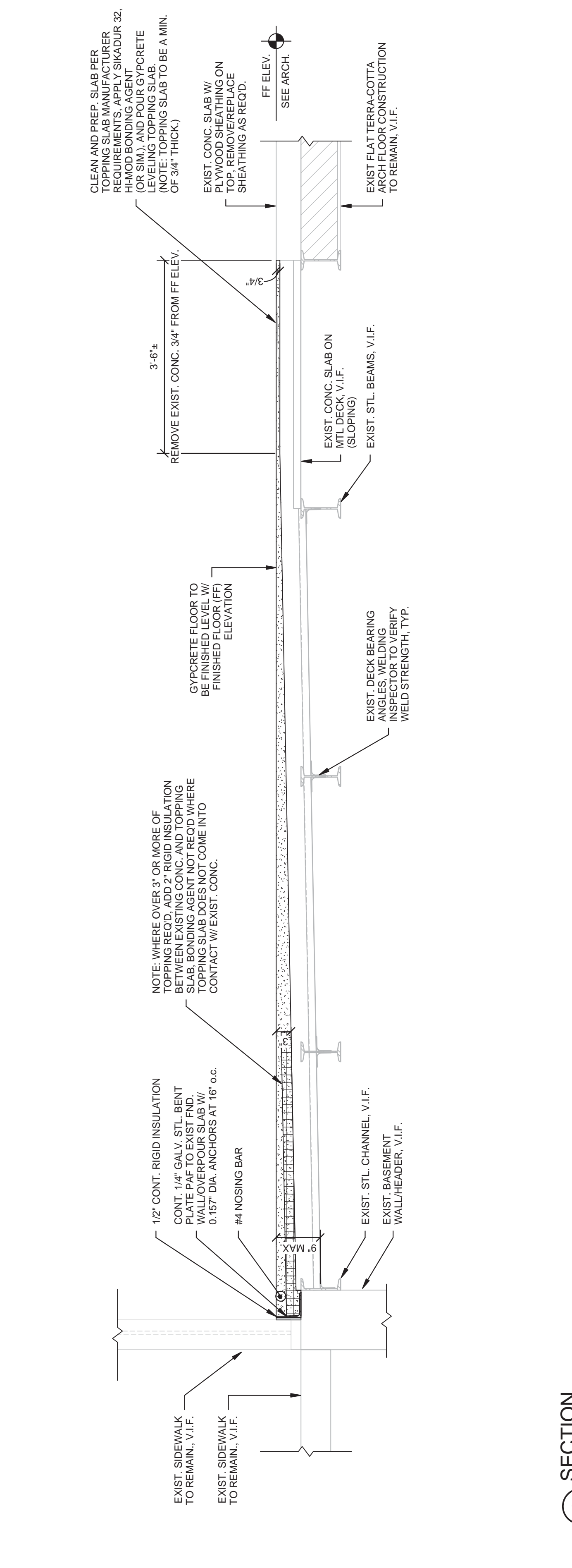
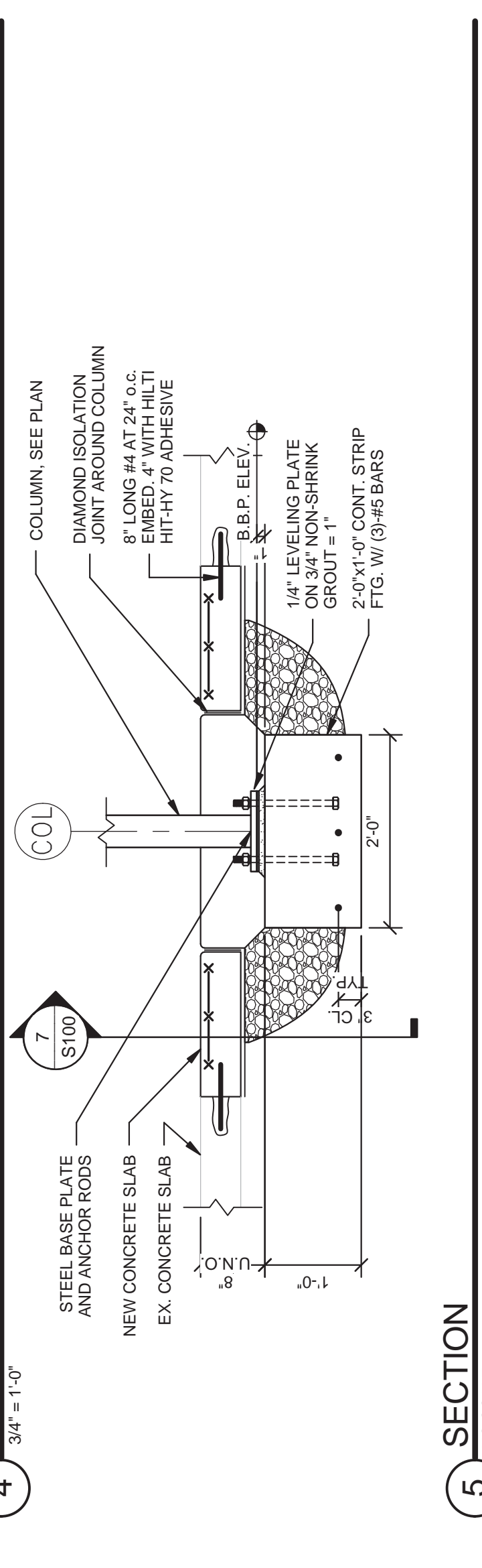
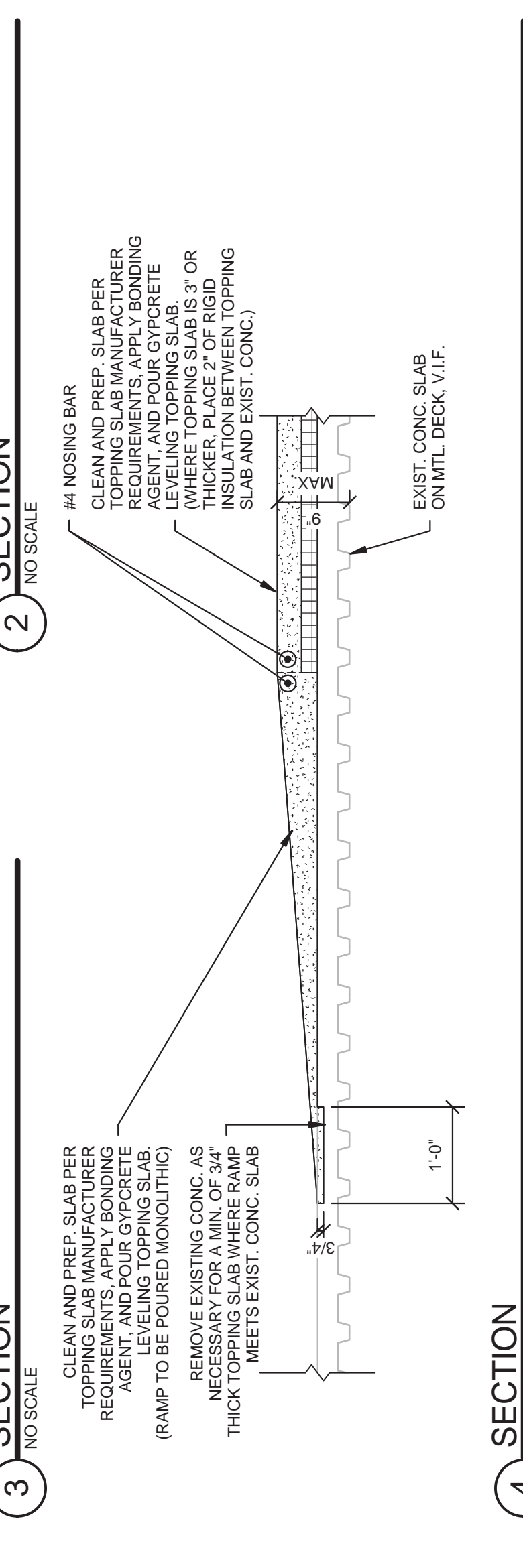
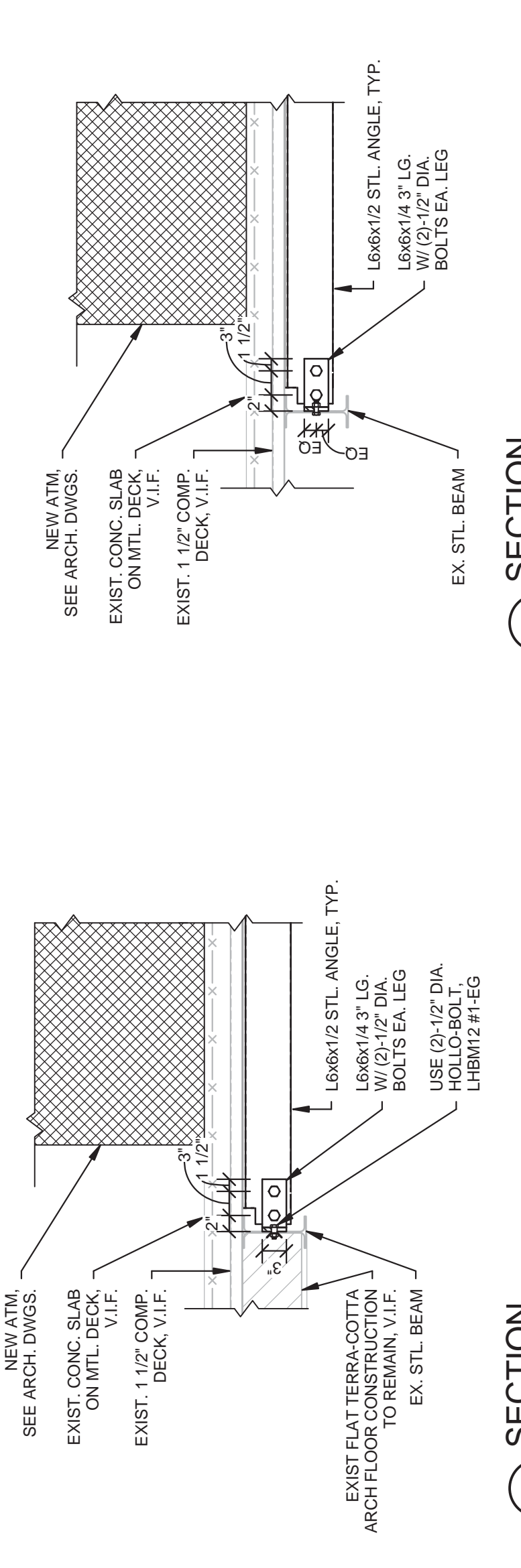
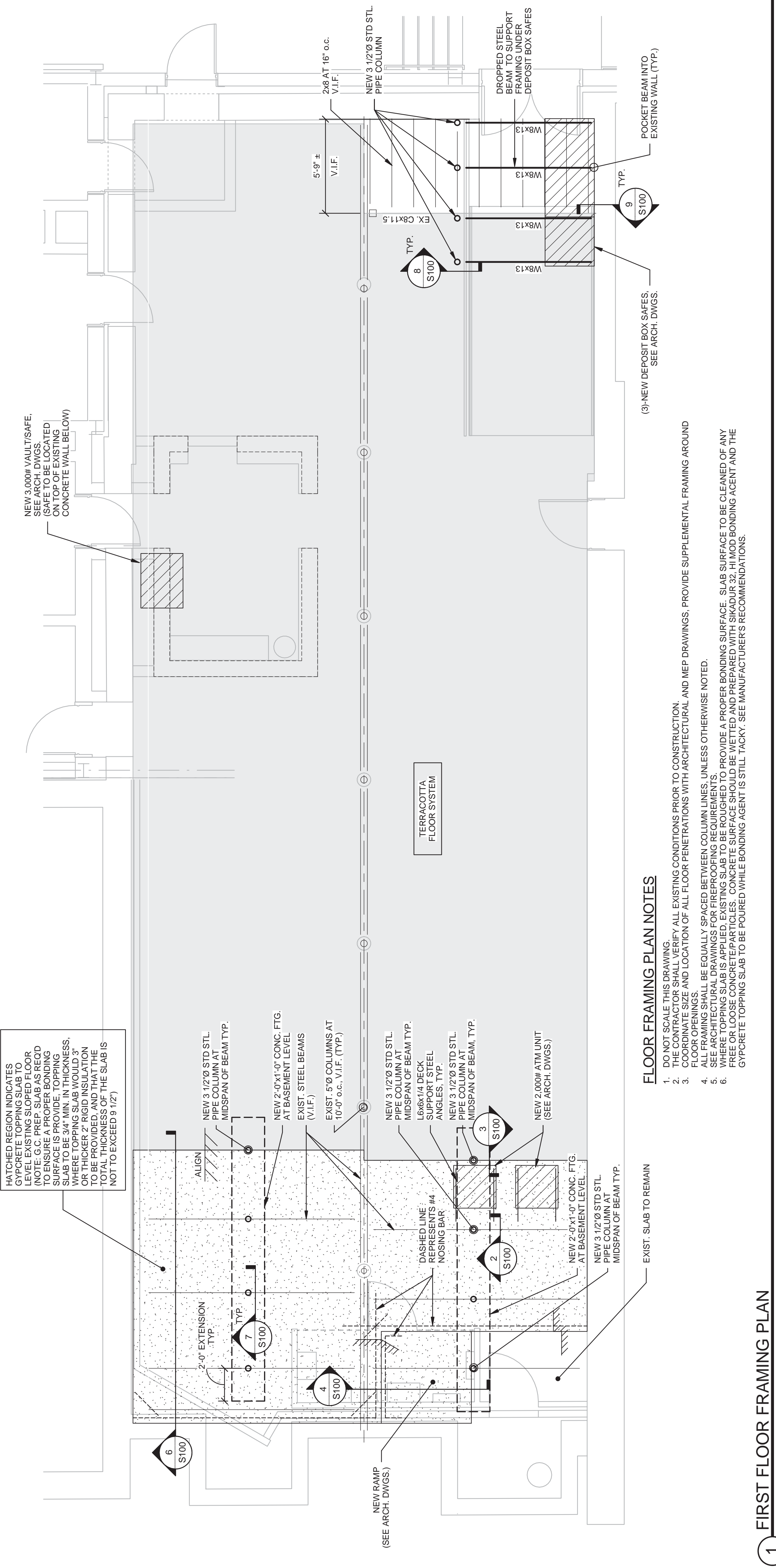
Project Name
Santander - Central Square, Cambridge

Project Number
11.6850.127

Description
FIRE PROTECTION DETAILS

Scale
NOT TO SCALE

REV. #	DESCRIPTION OF REV.	REV. DATE
02/21/2019	ISSUE FOR BID & PERMIT	



9 TYPICAL BEAM POCKET AT EXISTING BRICK MASONRY WALL DETAIL
 NO SCALE

AT EXISTING BRICK MASONRY WALL