

## **Design Review Hearing**

**Application Number: 23.0739 HP** 146 Thornton Street, Roxbury, MA, 02119

Applicant - Joseph Higginbottom III

Proposed Work: Construct a new 3-story building.

1. **Intent** - To seek advisory for approval of the 146 Thornton Street Project. This is a proposed new 3-story building with 2 units included with 2 parking spaces and a full sprinkler on vacant land.
2. **Written Description**- We have been residents at 140 Thornton Street, Roxbury MA, 02119 for over 30 years and would like to begin developing on our land. The proposed 2 family unit building was designed by a licensed Architect and provides a detailed description of the project details and how it meets Boston Zone Code criteria. The project expects to preserve the significant features of the district in their social, political, historical, aesthetic, or architectural dimensions.
3. **Compatible with Goals** - The project expects to meet the new development guidelines for environmental support.
4. **Height of New Construction** - This project expects to meet all height requirements of the building zone code and be compatible with the current homes in the neighborhood.
5. **Setbacks and Space Between Near:** The project meets all described building zone codes and notes will be approximately equal to the setbacks and space between buildings of similar scale, context, and type that are adjacent to it.
6. **View of Open Lot** - The current 146 Thornton Street Lot Pictures are included in the documents.
7. **City Owned Open Lot** - The project expects to meet this review criteria as it does not apply to the project.
8. **Current future community gardens, urban wilds, and urban farms shall remain unbuilt.** - The project expects to meet this review criteria as it does not apply to the project.

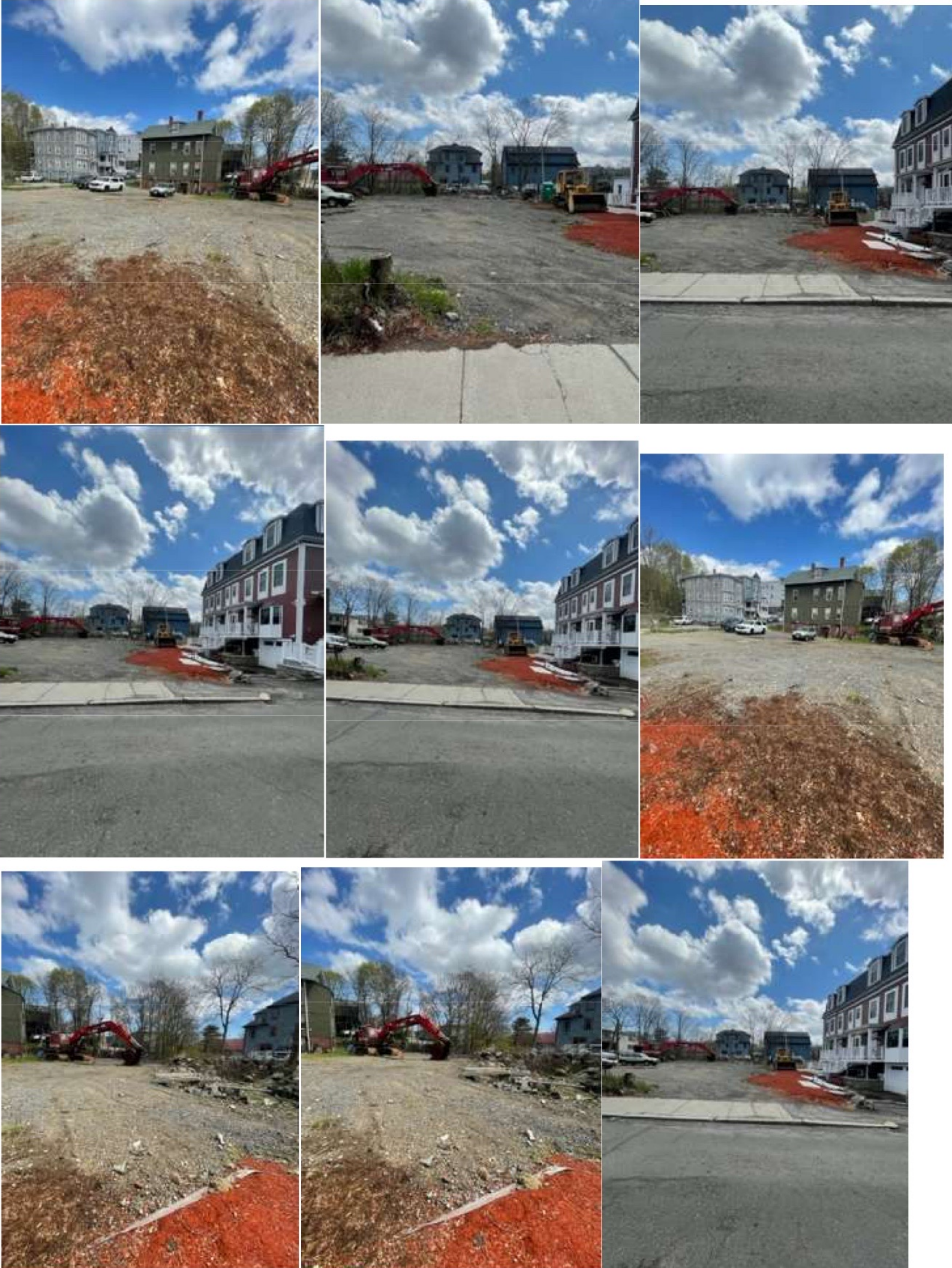
Document Attached - Application Number **23.0739 PDF Included**

- Current Photos of Vacant Lot: 146 Thornton Street, Roxbury, MA 02119
- Proposed Improvement Plot Plan
- Architectural Design by Licensed Contractor
- Structural Designs by Licensed Engineer
- Siding Colored Elevations
- SOV for Construction/ Material Cost

Thank you for your time and I look forward to your feedback.

Joe Higginbottom III

**Current Photos of Vacant Lot: 146 Thornton Street, Roxbury, MA 02119**



**BOSTON HEADQUARTERS**  
152 HAMPDEN STREET  
BOSTON, MA 02119

**WORCESTER OFFICE**  
27 MECHANIC STREET  
WORCESTER, MA 01608

(617)357-9740  
www.feldmangeo.com



ADDRESS:  
**146 THORNTON STREET  
BOSTON, MASS.**

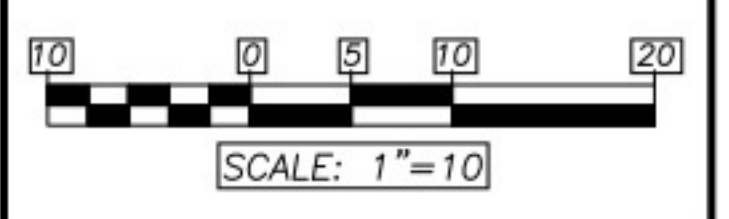
RESEARCH: MDH	FIELD CHIEF: CL
PROJ MGR: MDH	APPROVED: [Signature]
CALC: MDH	CADD: MDH/TGS
FIELD CHK:	CRD FILE: 2201113

REVISIONS:

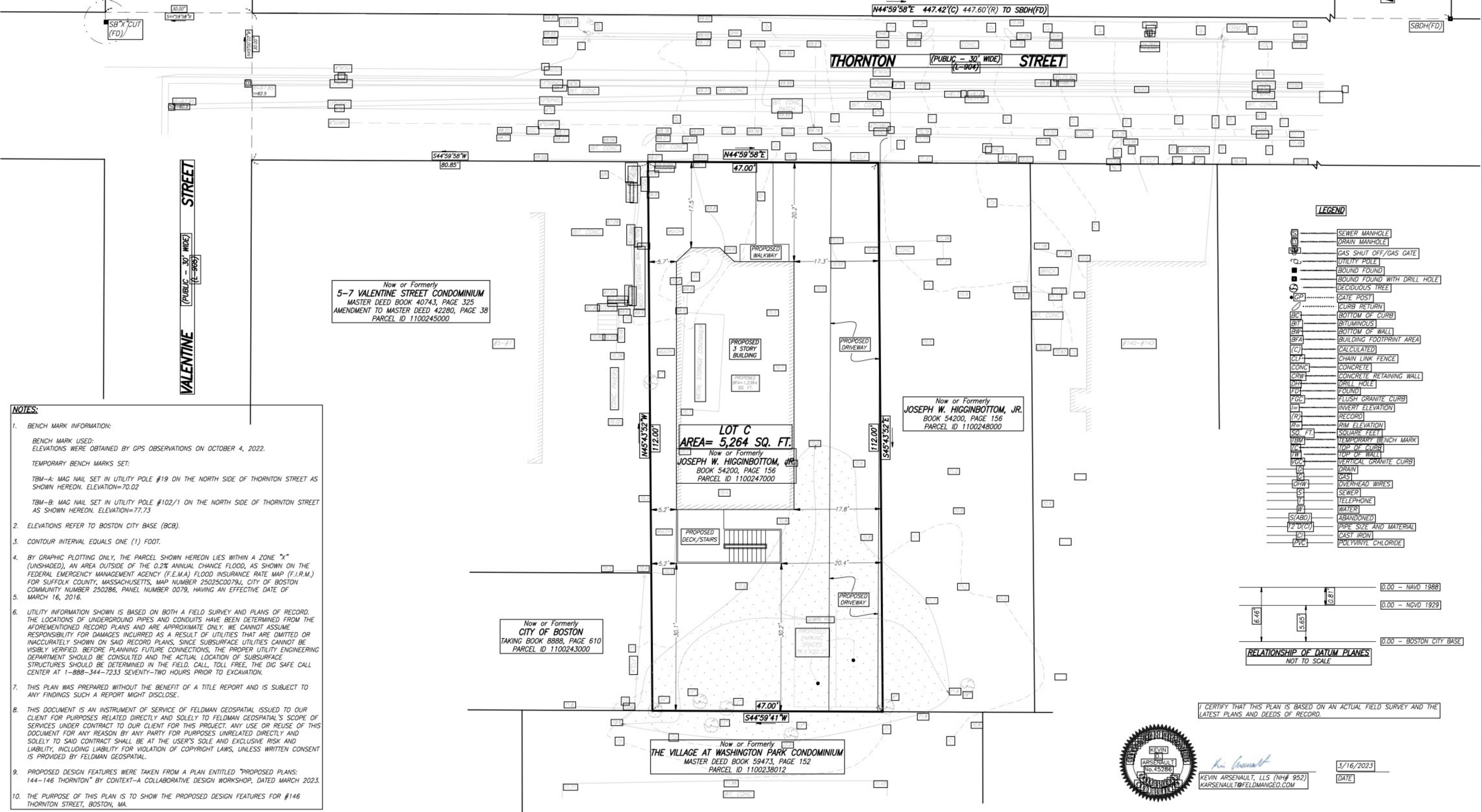
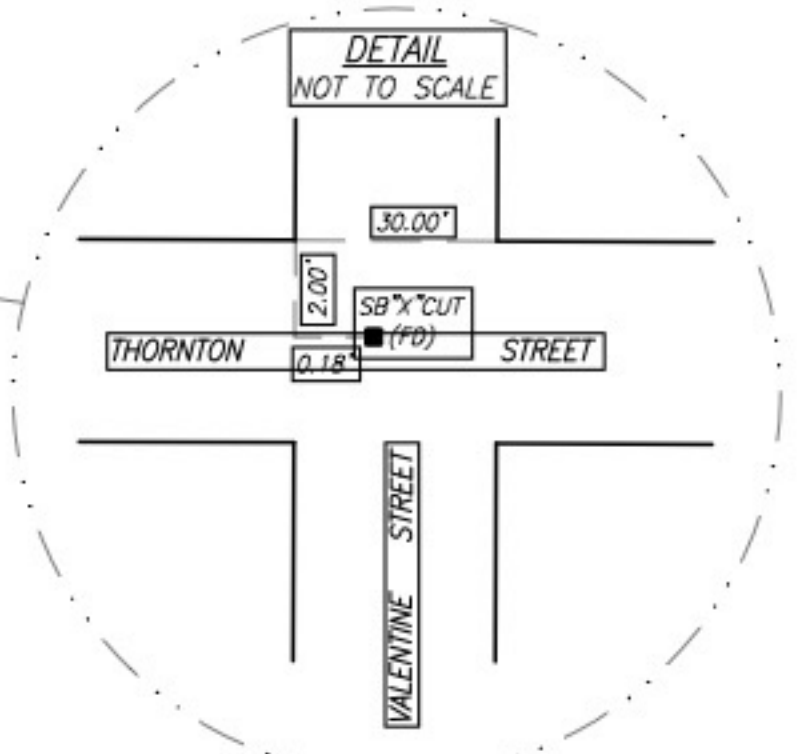
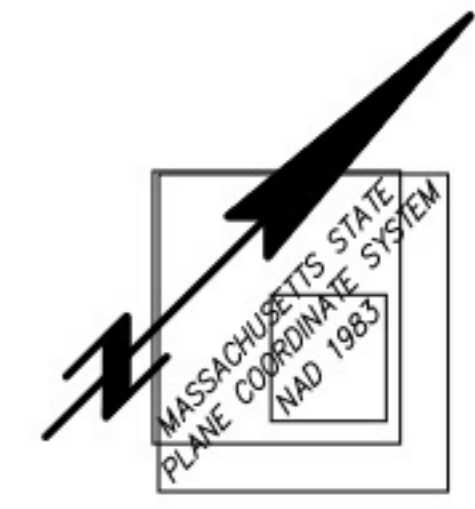

DRAWING NAME:

**PROPOSED  
IMPROVEMENT PLAN**

DATE: OCTOBER 12, 2022

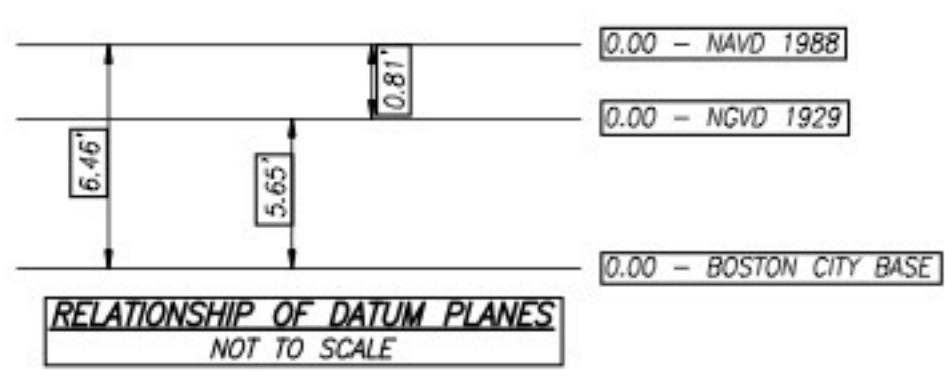


**REFERENCES**  
SUFFOLK COUNTY REGISTRY OF DEEDS  
PLAN NO. 275 OF 2022  
PLAN NO. 7 OF 2019  
PLAN NO. 322 OF 2011  
PLAN NO. 579 OF 2021  
PLAN NO. 870 OF 2007  
PLAN BOOK 4296, PLAN 583  
PLAN BOOK 4699, PLAN 574  
CITY OF BOSTON FIELD BOOK  
BOOK 1253, PAGES 36-38  
CITY OF BOSTON ENGINEERING DEPARTMENT  
L-904  
L-905



**LEGEND**

- SM SEWER MANHOLE
- DM DRAIN MANHOLE
- GS GAS SHUT OFF/GAS GATE
- UP UTILITY POLE
- BF BOUND FOUND
- DF BOUND FOUND WITH DRILL HOLE
- DT DECIDUOUS TREE
- GP GATE POST
- CR CURB RETURN
- BC BOTTOM OF CURB
- BT BOTTOM OF WALL
- BFA BUILDING FOOTPRINT AREA
- CL CALCULATED
- CLF CHAIN LINK FENCE
- CONC CONCRETE
- CRW CONCRETE RETAINING WALL
- DMH DRILL HOLE
- FD FOUND
- FGC FLUSH GRANITE CURB
- IE INVERT ELEVATION
- RE RECORD
- RE RECORD
- RM ELEVATION
- ST SQ. FT.
- TEMPORARY BENCH MARK
- TOP OF CURB
- TOP OF WALL
- VC VERTICAL GRANITE CURB
- DR DRAIN
- G GAS
- OW OVERHEAD WIRES
- S SEWER
- TE TELEPHONE
- W WATER
- AB ABANDONED
- PZ PIPE SIZE AND MATERIAL
- CI CAST IRON
- PVC POLYVINYL CHLORIDE



CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST PLANS AND DEEDS OF RECORD.



*Kevin Arsenault*  
KEVIN ARSENAULT, L.L.S. (NH# 952)  
KARSENAULT@FELDMANGEO.COM  
3/16/2023  
DATE

- NOTES:**
- BENCH MARK INFORMATION:  
BENCH MARK USED:  
ELEVATIONS WERE OBTAINED BY GPS OBSERVATIONS ON OCTOBER 4, 2022.  
TEMPORARY BENCH MARKS SET:  
TBM-A: MAG NAIL SET IN UTILITY POLE #19 ON THE NORTH SIDE OF THORNTON STREET AS SHOWN HEREON. ELEVATION=70.02  
TBM-B: MAG NAIL SET IN UTILITY POLE #102/1 ON THE NORTH SIDE OF THORNTON STREET AS SHOWN HEREON. ELEVATION=77.73
  - ELEVATIONS REFER TO BOSTON CITY BASE (BCB).
  - CONTOUR INTERVAL EQUALS ONE (1) FOOT.
  - BY GRAPHIC PLOTTING ONLY, THE PARCEL SHOWN HEREON LIES WITHIN A ZONE "X" (UNSHADED), AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 25025C0079J, CITY OF BOSTON COMMUNITY NUMBER 250286, PANEL NUMBER 0079, HAVING AN EFFECTIVE DATE OF MARCH 16, 2016.
  - UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. WE CANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID RECORD PLANS, SINCE SUBSURFACE UTILITIES CANNOT BE VISIBLY VERIFIED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR TO EXCAVATION.
  - THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY FINDINGS SUCH A REPORT MIGHT DISCLOSE.
  - THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN GEOSPATIAL ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN GEOSPATIAL'S SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY FELDMAN GEOSPATIAL.
  - PROPOSED DESIGN FEATURES WERE TAKEN FROM A PLAN ENTITLED "PROPOSED PLANS: 144-146 THORNTON" BY CONTEXT-A COLLABORATIVE DESIGN WORKSHOP, DATED MARCH 2023.
  - THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED DESIGN FEATURES FOR #146 THORNTON STREET, BOSTON, MA.

Now or Formerly  
**5-7 VALENTINE STREET CONDOMINIUM**  
MASTER DEED BOOK 40743, PAGE 325  
AMENDMENT TO MASTER DEED 42280, PAGE 38  
PARCEL ID 1100245000

Now or Formerly  
**LOT C**  
AREA= 5,264 SQ. FT.  
Now or Formerly  
**JOSEPH W. HIGGINBOTTOM, JR.**  
BOOK 54200, PAGE 156  
PARCEL ID 1100247000

Now or Formerly  
**JOSEPH W. HIGGINBOTTOM, JR.**  
BOOK 54200, PAGE 156  
PARCEL ID 1100248000

Now or Formerly  
**CITY OF BOSTON**  
TAKING BOOK 8888, PAGE 610  
PARCEL ID 1100243000

Now or Formerly  
**THE VILLAGE AT WASHINGTON PARK CONDOMINIUM**  
MASTER DEED BOOK 59473, PAGE 152  
PARCEL ID 1100238012

# 146 Thornton St.

Boston, Massachusetts

Owner: Joe Higginbottom

ELEVATION TARGET



INTERIOR ELEVATION TARGET



DETAIL TARGET



WINDOW TARGET



## GENERAL NOTES:

- ALL WORK SHALL COMPLY WITH STATE, NATIONAL CODES, REGULATIONS AND RESTRICTIONS WHICH APPLY TO THIS PROJECT.
- THE CONTRACTOR SHALL VISIT THE SITE AND BE KNOWLEDGEABLE OF CONDITIONS THEREON. THE CONTRACTOR SHALL INVESTIGATE, VERIFY AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND POSTING ALL NECESSARY VALID CONSTRUCTION PERMITS FROM ALL LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION PRIOR TO THE START OF ON-SITE CONSTRUCTION.
- THE CONTRACTOR SHALL KEEP ALL BUILDING MEANS OF EGRESS CLEAR OF ANY OBSTRUCTIONS AT ALL TIMES. THE GENERAL CONTRACTOR MUST COORDINATE WITH THE BUILDING FACILITIES MANAGER ALL ACTIVITIES INCLUDING, BUT NOT LIMITED TO WORK WHICH WILL GENERATE EXCESSIVE NOISE AND MODIFICATION TO UTILITIES. WORK MUST NOT INTERFERE WITH EXISTING SMOKE DETECTORS, ALARMS OR BUILDING SYSTEM MANAGEMENT.
- THE GENERAL CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH ANY TENANT DESIGN AND CONSTRUCTION MANUAL AND ANY OTHER BUILDING OWNER OR BUILDING STANDARDS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION ACTIVITIES, MATERIALS, MEANS AND METHODS. THE CONTRACTOR IS TO COORDINATE ALL SUBCONTRACTORS TO COMPLETE THE FULL SCOPE OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROPERLY LAYING OUT THE WORK AND FOR ALL LINES AND MEASUREMENTS FOR THE WORK.
- BUILDING OR SITE COMPONENTS WHICH ARE AFFECTED OR DAMAGED BY THE WORK SHALL BE REPLACED OR RESTORED TO ORIGINAL CONDITION AND COLOR, OR AS APPROVED BY THE OWNER.
- WHERE THE DESIGN INTENT CANNOT BE DETERMINED FROM THE DRAWINGS, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. (312) 780-9456
- THE CONTRACTOR SHALL VERIFY THE DIMENSIONS SHOWN ON THE DRAWINGS BEFORE LAYING OUT THE WORK, AND SHALL BE HELD RESPONSIBLE FOR ANY ERRORS OR INACCURACIES RESULTING FROM FAILURE TO DO SO.
  - DETAILS SHOWN ARE INDICATIVE OF THE CHARACTER, PROFILES, MATERIALS AND SYSTEMS REQUIRED FOR THE WORK INCLUDING THOSE CONDITIONS NOT COVERED BY SPECIFIC DETAILS.
  - DIMENSIONS SHALL GOVERN. DO NOT SCALE THE DRAWINGS. WHERE THERE APPEARS TO BE A CONFLICT OR WHERE DIMENSIONS CANNOT BE DETERMINED, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
  - ALL DIMENSIONS ARE TO INSIDE FACE OF WALLS.
  - UNLESS SHOWN OTHERWISE, ALL DOORS SHALL BE LOCATED SUCH THAT THERE IS A 2 INCH WALL RETURN BETWEEN THE JAMB FRAME AND THE ADJACENT PERPENDICULAR WALL.
- CONSULT WITH THE ARCHITECT OR ENGINEER BEFORE PENETRATING ANY JOISTS, BEAMS, OR OTHER STRUCTURAL MEMBERS
- ALL CONSTRUCTION MATERIALS AND EQUIPMENT ARE TO BE STORED NEATLY WITHIN THE SCOPE OF WORK AREA ONLY.
- ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS
  - SUBMIT SHOP DRAWINGS AND SAMPLES FOR ALL STEEL, MILLWORK, SIGNAGE, HARDWARE AND INTERIOR FINISHES
  - SUBMIT PRODUCT DATA FOR FIXTURES AND HARDWARE
  - ALL INTERIOR AND EXTERIOR FINISHES, COLORS AND MATERIALS ARE TO BE SELECTED AND APPROVED BY THE OWNER PRIOR TO CONSTRUCTION
  - ALL INTERIOR FINISHES AND FURNISHINGS ARE TO BE CLASS 'A' FIRE RATED AND ARE TO COMPLY WITH MASSACHUSETTS BUILDING CODE AND THE BOSTON FIRE CODE
  - ALL WOOD COMPONENTS SHALL BE FIRE TREATED
  - CONFIRM THAT ALL MATERIALS AND FINISHES, INCLUDING THEIR FABRICATION AND INSTALLATION WILL NOT RELEASE FUMES OR AROMAS WHICH MAY BE A HAZARD OR NUISANCE TO PERSONNEL
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PANEL CONTROL AND CIRCUIT DESIGN AND FOR COMPLIANCE WITH ALL BUILDING, LIFE SAFETY, AND STATE AND NATIONAL ELECTRICAL CODES WHICH MAY APPLY
  - ALL EXPOSED UTILITY WIRES AND PIPES SHALL BE INSTALLED IN A WAY THAT DOES NOT OBSTRUCT OR PREVENT THE CLEANING OF FLOORS, WALLS AND CEILINGS; THEY SHALL BE INSTALLED A MINIMUM OF 6" OFF OF FLOORS AND 1" OFF OF WALLS, CEILINGS OR ADJACENT PIPES OR WIRES
- WHERE APPROPRIATE, EXISTING SPRINKLER HEADS ALARM SYSTEM AND DETECTORS ARE TO REMAIN. MODIFY LOCATIONS ONLY WHERE CEILING IS ALTERED OR AS INDICATED ON FIRE PROTECTION DRAWINGS.
- EQUIPMENT INFORMATION AND SPECIFICATIONS, INCLUDING EQUIPMENT SUPPLIED BY THE OWNER, ARE TO BE THE MOST CURRENT AT THE TIME OF DOCUMENTATION PREPARATION.
  - THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT DIMENSIONS AND EQUIPMENT CONNECTION REQUIREMENTS.
  - MAKE ALL FINAL CONNECTIONS, INSTALL THE SET UP IN WORKING ORDER, CHECK WARRANTIES, TEST AND NOTE VOID WARRANTIES.
  - COORDINATE WITH THE OWNER DELIVERY, STORAGE AND INSTALLATION OF ALL EQUIPMENT, INCLUDING THAT SUPPLIED BY THE OWNER.
- PROVIDE ALL TEMPORARY FACILITIES AND SERVICES, CONSTRUCTION AND SUPPORT FACILITIES AND SECURITY AND PROTECTION AS NEEDED TO PROTECT NEW AND EXISTING CONSTRUCTION FOR THE DURATION OF THE WORK
- ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE UNLESS OTHERWISE SPECIFIED FOR A LONGER PERIOD OF TIME FOR A CERTAIN ITEM
- SEAL AND CAULK AROUND ALL PENETRATIONS, CRACKS AND CREVICES AND ANY OPENINGS CAPABLE OF HARBORING INSECTS OR RODENTS
- EMPLOY EXPERIENCED WORKERS FOR FINAL CLEANING. CLEAN TO COMMERCIAL BUILDING PROGRAM STANDARDS
  - DISPOSE OF ALL WASTE AND DEBRIS OFF THE PREMISES



**1** LOCATION PLAN  
SCALE: NOT TO SCALE

## APPLICABLE CODES:

- BUILDING CODE: CMR 780 MASSACHUSETTS STATE BUILDING CODE, 9TH EDITION (AMENDED INTERNATIONAL BUILDING CODE 2015, INTERNATIONAL RESIDENTIAL CODE 2015 AND THE 2015 INTERNATIONAL EXISTING BUILDING CODE W/ MASSACHUSETTS AMENDMENTS)
- ACCESSIBILITY: MASSACHUSETTS ARCHITECTURAL ACCESS BOARD CMR 521 AND UNIFORM FEDERAL ACCESSIBILITY STANDARDS
- FIRE PROTECTION: MASSACHUSETTS COMPREHENSIVE FIRE SAFETY CODE CMR 527 1.00 - 2015 NFPA 1: FIRE CODE WITH AMENDMENTS
- ELECTRICAL: 527 CMR 12.00 MASSACHUSETTS ELECTRICAL CODE - 2020 NFPA 70 NATIONAL ELECTRICAL CODE WITH AMENDMENTS
- MECHANICAL: INTERNATIONAL MECHANICAL CODE 2015 W/ AMENDMENTS
- PLUMBING: 248 CMR BOARD OF STATE EXAMINERS OF PLUMBERS AND GAS FITTERS - UNIFORM STATE PLUMBING CODE
- ENERGY: INTERNATIONAL ENERGY CONSERVATION CODE 2018 (IECC)
- AMERICANS WITH DISABILITIES ACT
- BOSTON ZONING CODE
- MGL CH. 148 SECTION 26G

## BUILDING DESCRIPTION:

BUILD NEW 3-STORY BUILDING WITH 2 UNITS AND 2 PARKING. BUILDING WILL NOT HAVE AN ELEVATOR. BUILDING WILL BE FULLY SPRINKLERED.

## CODE SUMMARY:

- PROPOSED USE OR OCCUPANCY: RESIDENTIAL - 3F-4000
  - OCCUPANT LOAD: (200 GROSS SF/PERSON PER TABLE 1004.1.2) APPROX.  $\frac{3573 SF}{200} = 17$  PERSONS
- CONSTRUCTION TYPE: V.B. - TABLE 504.4
  - PER TABLE 601: STRUCTURAL FRAME, BEARING WALLS, FLOORS AND ROOF ARE NOT REQUIRED TO BE RATED
  - MAX. AREA IS 21,000 PER FLOOR PER TABLE 506 AND MAXIMUM HEIGHT IS 3 STORIES ABOVE GRADE - 504.4
- PER TABLE 1006.3.2(1) FOR USE GROUP R-2 - ONLY ONE EXIT IS REQUIRED WHEN THERE ARE LESS THAN FOUR STORIES AND 4 DWELLING UNITS OR LESS PER STORY. TRAVEL DISTANCE IS LIMITED TO 125'
- MINIMUM WIDTH OF EGRESS STAIR: 36 INCHES PER SECTION 1011.2
- MAXIMUM LENGTH OF EXIT TRAVEL: 250 FEET PER 1017.2
- FIRE RATED CONSTRUCTION:
  - PER TABLE 602, IN V.B. CONSTRUCTION EXTERIOR WALLS MORE THAN 10' FROM PROPERTY LINE ARE NOT REQUIRED TO BE RATED, 10' OR LESS MUST BE 1 HOUR RATED.
  - DEMISING PARTITION/CORRIDORS MUST BE 1 HOUR IN A SPRINKLERED TYPE V.B. BUILDING 420.2 AND 708.3
  - HORIZONTAL SEPARATION BETWEEN DWELLING UNITS: 1 HOUR IN A SPRINKLERED TYPE V.B. BUILDING PER 420.3 AND 711.2.4.3 - REFER TO DETAIL ON A-20
  - STAIRWAYS CONNECTING 4 OR MORE STORIES ARE TO BE 2 HOUR RATED, STAIRS CONNECTING LESS THAN 4 STORIES ARE TO BE 1 HOUR RATED PER 1023.2
  - PER TABLE 716.5: 1 HOUR ENCLOSURES AND EXIT ACCESS SHALL HAVE 1 HOUR DOORS. 1 HOUR AND 1/2 HOUR CORRIDORS SHALL HAVE A MINIMUM 20 MIN. RATED DOOR. 2 HOUR ENCLOSURES AND EXIT ACCESS SHALL HAVE 90 MINUTE RATED DOORS.
- DEMISING PARTITION MINIMUM: STC 50 PER SECTION 1207.2 AND MIN. 50 IIC BETWEEN FLOORS
- ACCESSIBILITY REQUIREMENTS:
  - CMR 521 9.3 - EXISTING BUILDINGS RENOVATED FOR RESIDENTIAL USE ARE EXEMPT FROM MAAB REQUIREMENTS PER 521 CMR, ARCHITECTURAL ACCESS BOARD, PARAGRAPH 9.2.1
- ENERGY REQUIREMENTS:

MASSACHUSETTS ENERGY STRETCH CODE, CHAPTER 4 - RESIDENTIAL ENERGY EFFICIENCY - RESIDENTIAL BUILDINGS, INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2018

  - CLIMATE ZONE 5 PER TABLE 301.1
  - EXISTING WALLS AND CEILINGS: FILL EXISTING WALL AND CEILING CAVITIES WITH INSULATION PER IECC 503.1
  - PER IECC TABLE 402.4, FENESTRATION SHALL HAVE A U-FACTOR OF 0.38 OR BETTER.
  - SKYLIGHTS SHALL HAVE A U-FACTOR OF 0.55 OR BETTER PER 402.4.
  - VAPOR RETARDER IS REQUIRED TO COMPLY WITH R402.1.1 OF THE IECC AND R702.7 OF THE INTERNATIONAL RESIDENTIAL CODE. VAPOR RETARDER IS NOT REQUIRED IN BASEMENT OR BELOW GRADE WALLS.
  - R402.1.3 - CEILING: R=49; WOOD FRAME WALL: R-20 (CAVITY)+ 3.8 (CONTINUOUS); FLOOR R=30; BASEMENT WALLS AND CRAWL SPACES: R=15 CONTINUOUS OR R=19 IN CAVITY OR R=13 IN CAVITY WITH R=5 CONTINUOUS; SLAB R=10
  - DEMAND RECIRCULATION WATER SYSTEMS SHALL HAVE CONTROLS THAT COMPLY WITH REQUIRED CODES
  - HOT WATER PIPES IN UNCONDITIONED SPACES SHALL ALL BE INSULATED TO AT LEAST R-3, AND HOT WATER PIPES IN CONDITIONED SPACES 3/4" AND LARGER SHALL BE INSULATED TO AT LEAST R-3.

## LIST OF DRAWINGS

- A-01 ANALYSIS, DRAWING LIST AND NOTES
- A-02 SITE PLAN
- A-10 PROPOSED PLANS
- A-30 PROPOSED ELEVATIONS
- A-40 PROPOSED DETAILS
- A-41 PROPOSED DETAILS



Eric Johnson

**146 Thornton**  
Joe Higginbottom

**context**  
a collaborative design workshop

Roxbury, Boston,  
Massachusetts

No.	Description	Date
01	Issued for Permit	03/06/2022

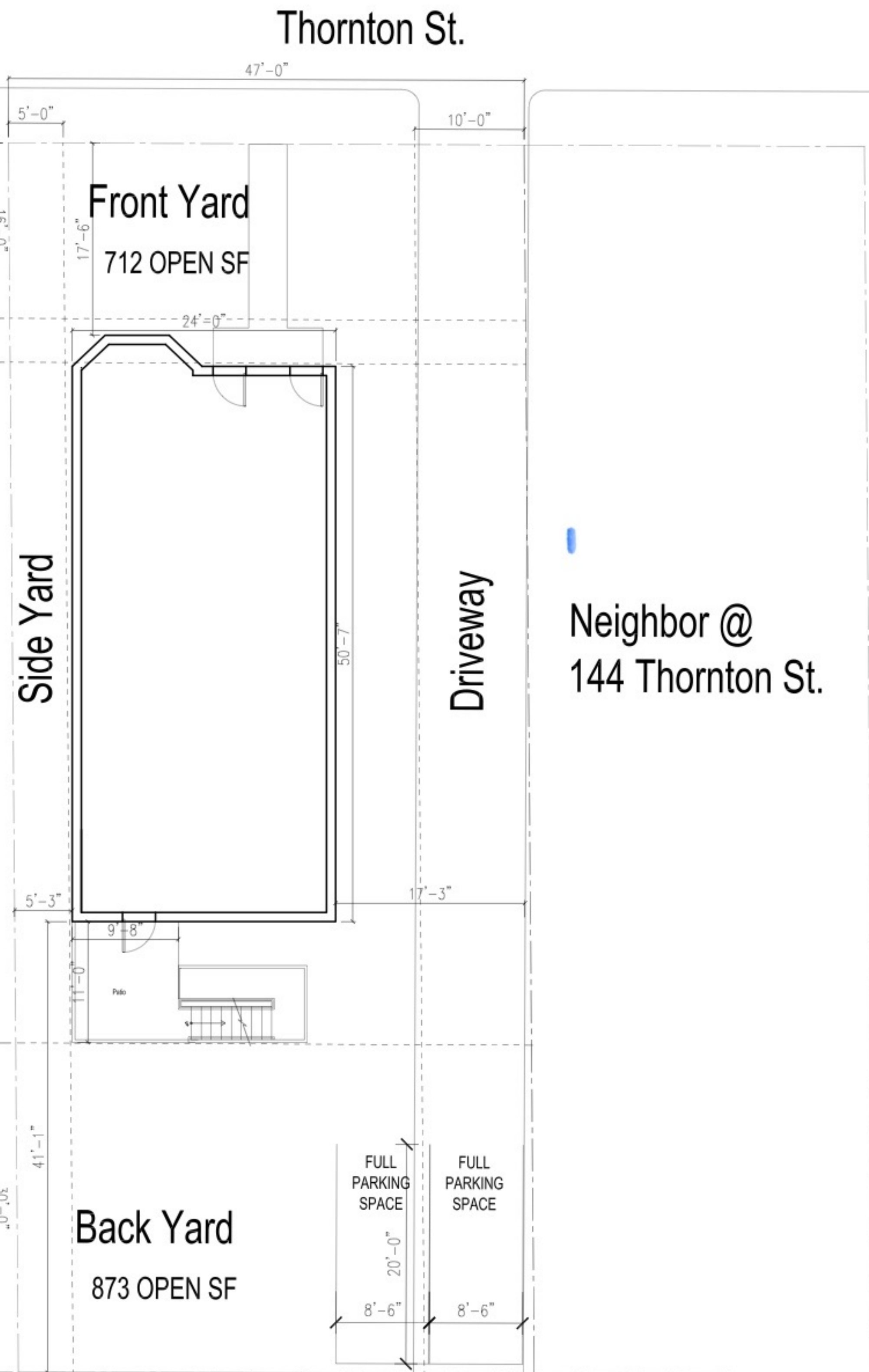
Drawing Title: ANALYSIS, DWG LIST, NOTES  
Project No.: 0533 Checked by: EZ

**A-01**

Neighbor @  
152-154  
Thornton St.

Neighbor @  
8 Valentine St.

Neighbor @  
6 Valentine St.



Neighbor @  
2779 Washington St.

Neighbor @  
2777 Washington St.  
(City of Boston)

ZONING ANALYSIS:	3F-4000	PROPOSED	COMMENTS
LOT AREA MIN.	2,000 SF	5,264 SF	
ADD'L LOT AREA REQ'D FOR EA. UNIT	2,000 SF		
MIN. LOT WIDTH	45'	47'	
MIN. LOT FRONTAGE	45'	47'	
MAX. F.A.R.	0.8	$\frac{3573}{5264} = 0.68$	
MAX. HEIGHT (STORIES/FEET)	3 / 35'	3 / 35'	
USABLE OPEN SPACE / UNIT	650	$\frac{1585}{2} = 792.5$	
MIN. FRONT YARD SETBACK	20'	20'-4"	
MIN. SIDE YARD SETBACK	5'/10'/15' TOTAL	5'-3"/17'-3"	
MIN. REAR YARD SETBACK	30'	30'-0"	
PARKING REQUIREMENT	1.0 / UNIT	2 SPACES	



*Eric Johnson*

146 Thornton  
Joe Higginbottom

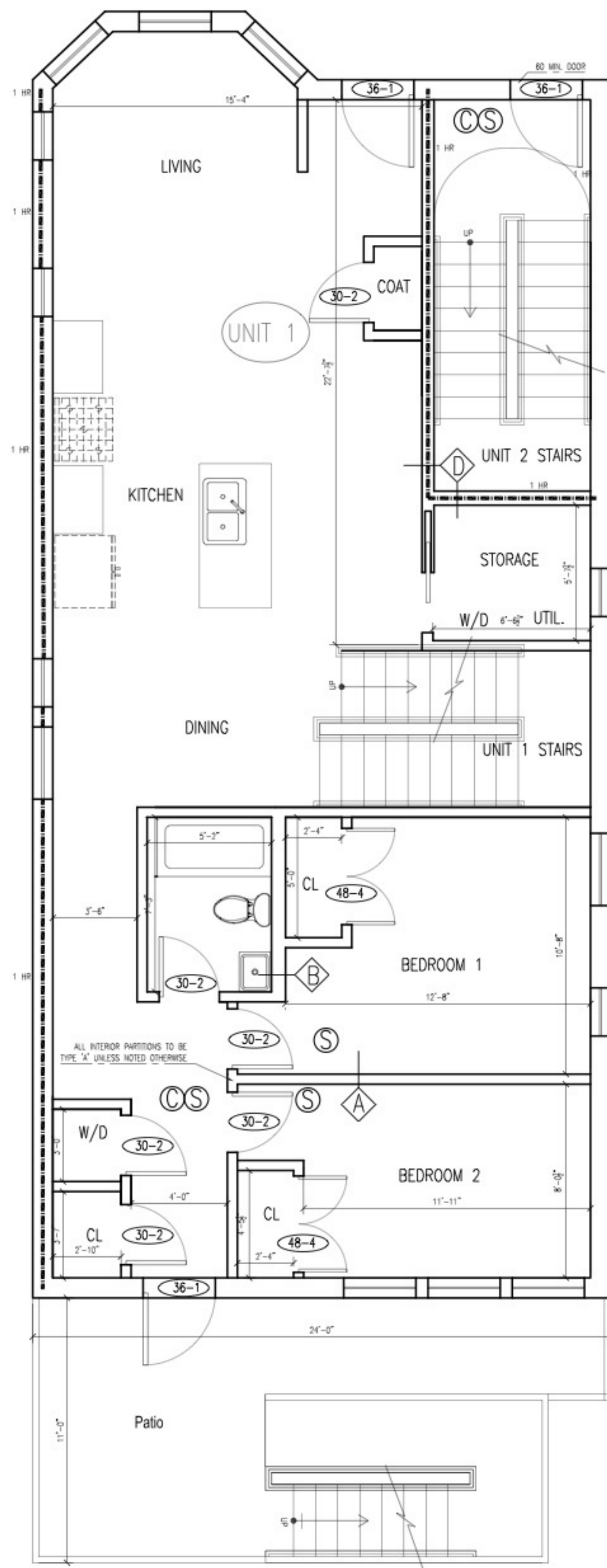
**context**  
a collaborative design workshop

Roxbury, Boston,  
Massachusetts

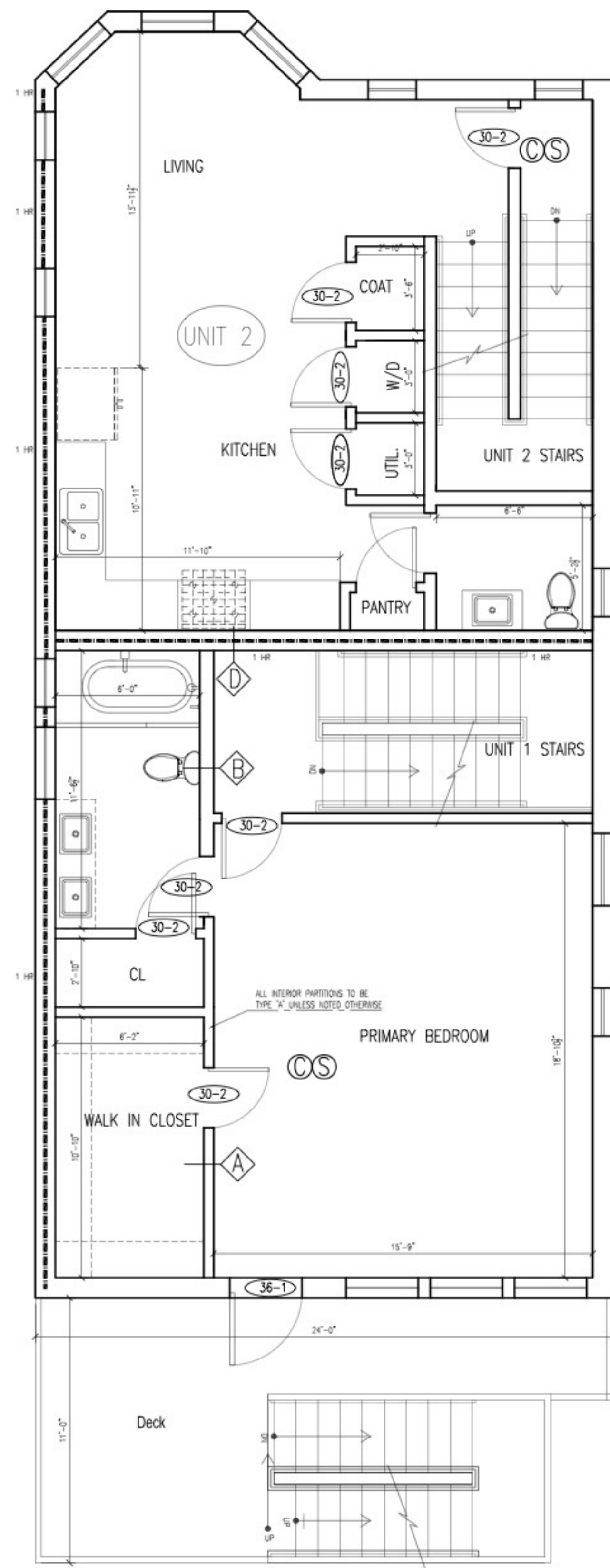
No.	Description	Date
01	Issued for Permit	03/06/2022
Drawing Title: Site Plan		
Project No.: 0533		Checked by: EZ

A-02

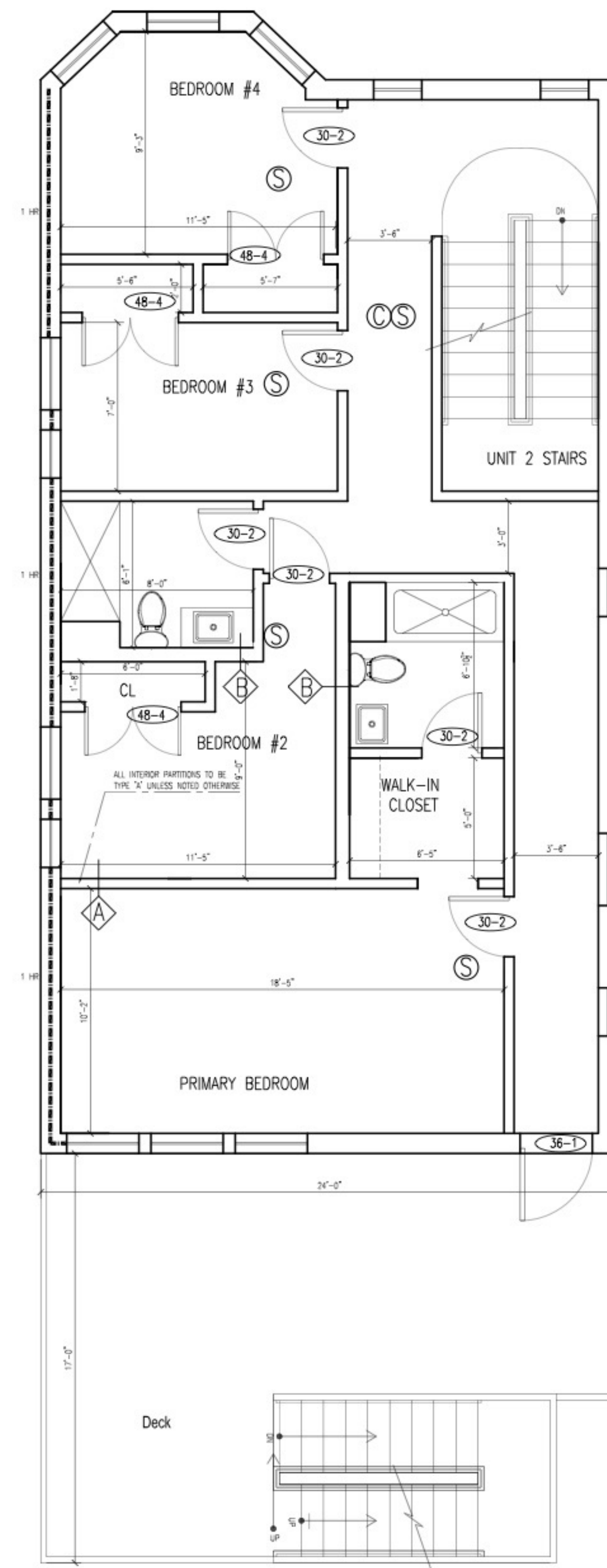
**1** PROPOSED SITE PLAN  
SCALE: 1/8" = 1'-0"



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

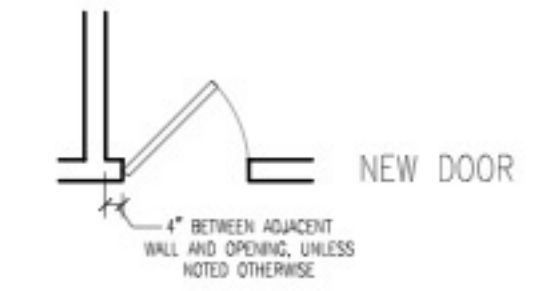


**2** LEVEL 2 PLAN  
SCALE: 1/4" = 1'-0"

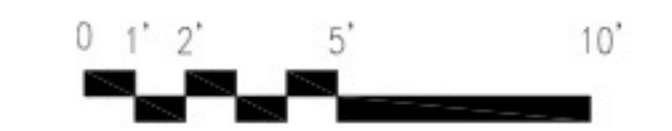


**3** LEVEL 3 PLAN  
SCALE: 1/4" = 1'-0"

- LEGEND**
- NEW PARTITION
  - 1/2 HOUR RATED PARTITION
  - 1 HOUR RATED PARTITION
  - 2 HOUR RATED PARTITION



- SMOKE DETECTOR, HARDWIRED AND INTERCONNECTED
- CARBON MONOXIDE DETECTOR, HARDWIRED AND INTERCONNECTED
- HEAT DETECTOR, HARDWIRED AND INTERCONNECTED
- WALL TYPE, REFER TO DRAWING A-01

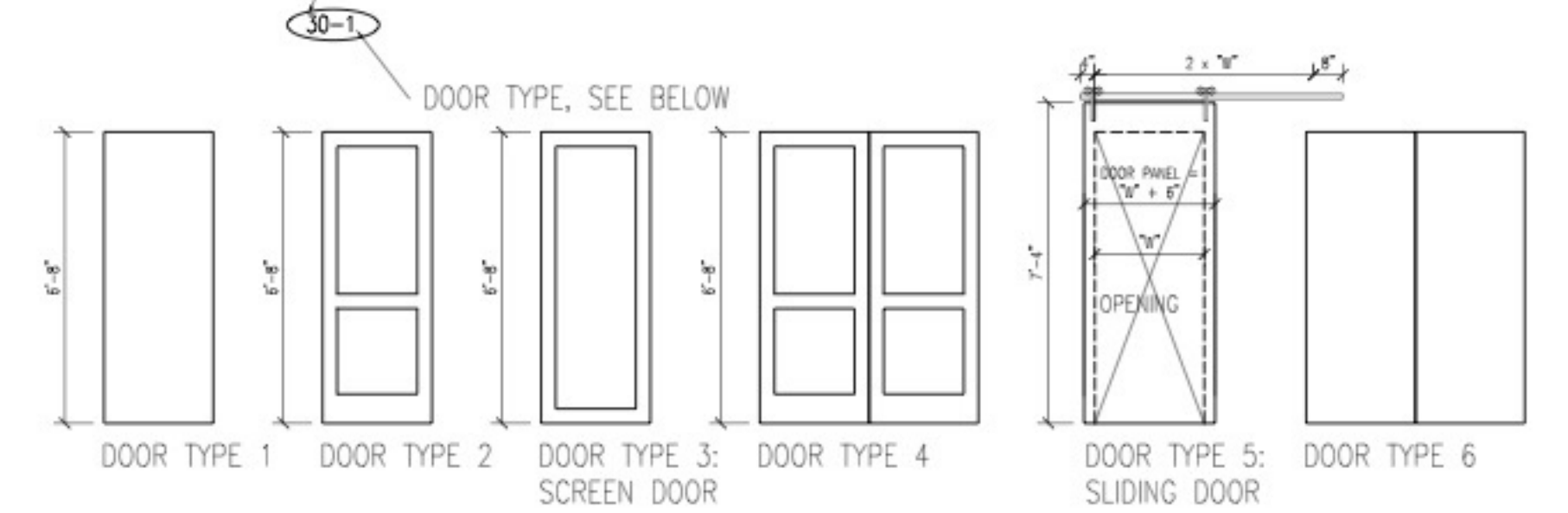


**FINISH NOTES:**

1. ALL WALLS TO BE PAINTED GWB, (WHITE TO MATCH ARCHITECT'S SAMPLE)
2. FLOORS TO BE HARDWOOD UNLESS NOTED OTHERWISE.

**DOOR NOTES:**

1. ALL NEW DOORS TO BE 6'-8" HIGH, 1 3/4" THICK SOLID CORE WOOD DOORS WITH WOOD FRAMES.
2. INTERIOR DOORS ARE TO BE PAINTED WHITE, CONFIRM EXTERIOR DOOR COLOR AND FINISH WITH OWNER AND ARCHITECT
3. DOOR TARGETS: / DOOR WIDTH



*Eric Johnson*

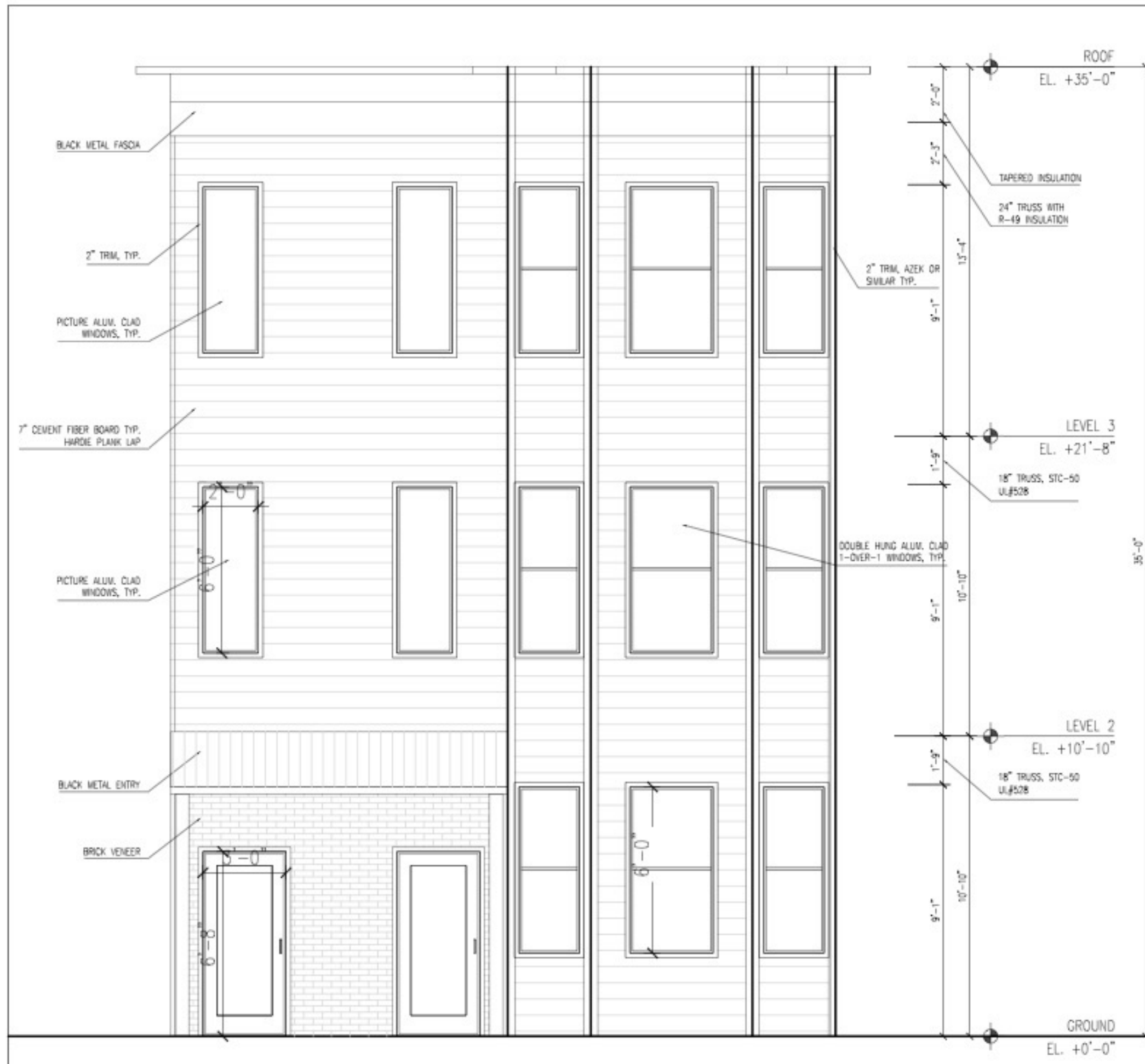
**146 Thornton**  
Joe Higginbottom

**context**  
a collaborative design workshop

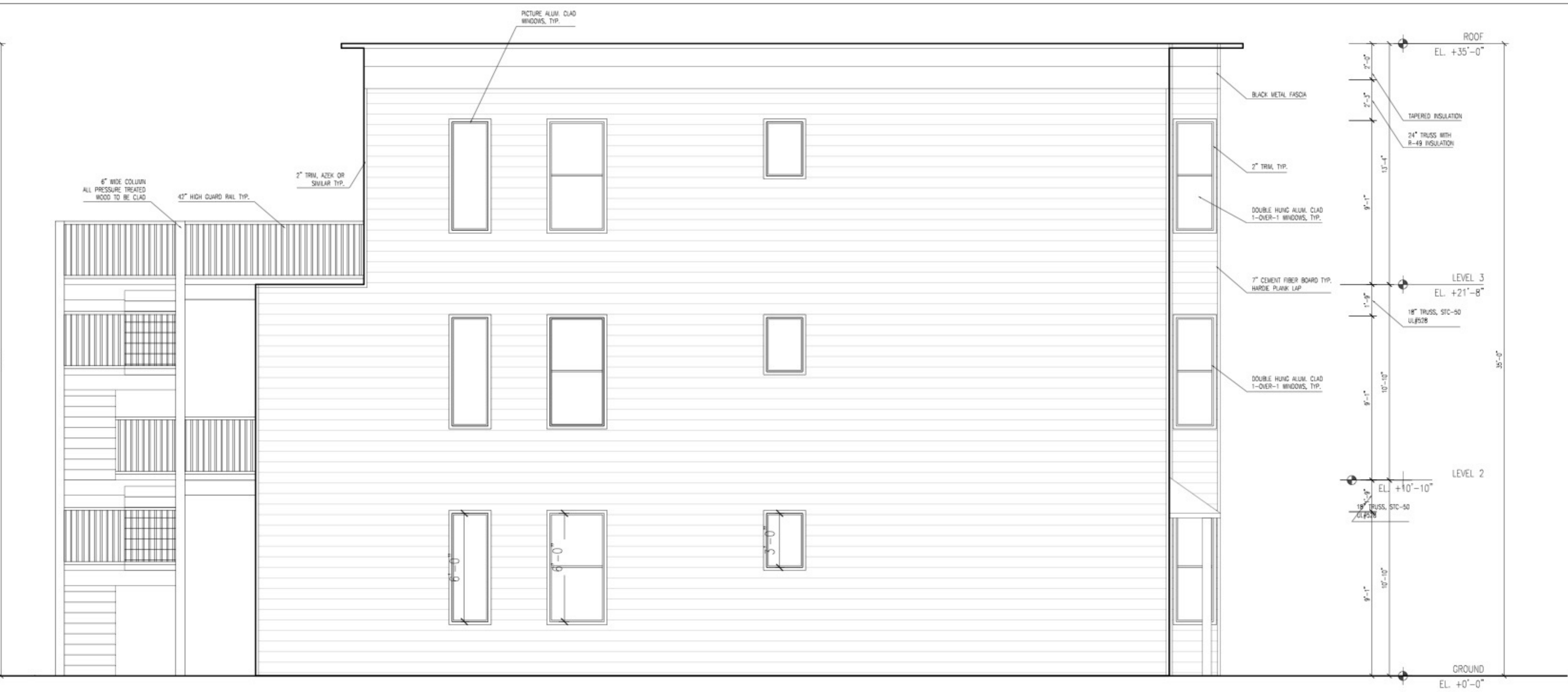
Roxbury, Boston,  
Massachusetts

01	Issued for Permit	03/06/2022
No.	Description	Date
Drawing Title: Proposed Plans		
Project No.: 0533		Checked by: EZ

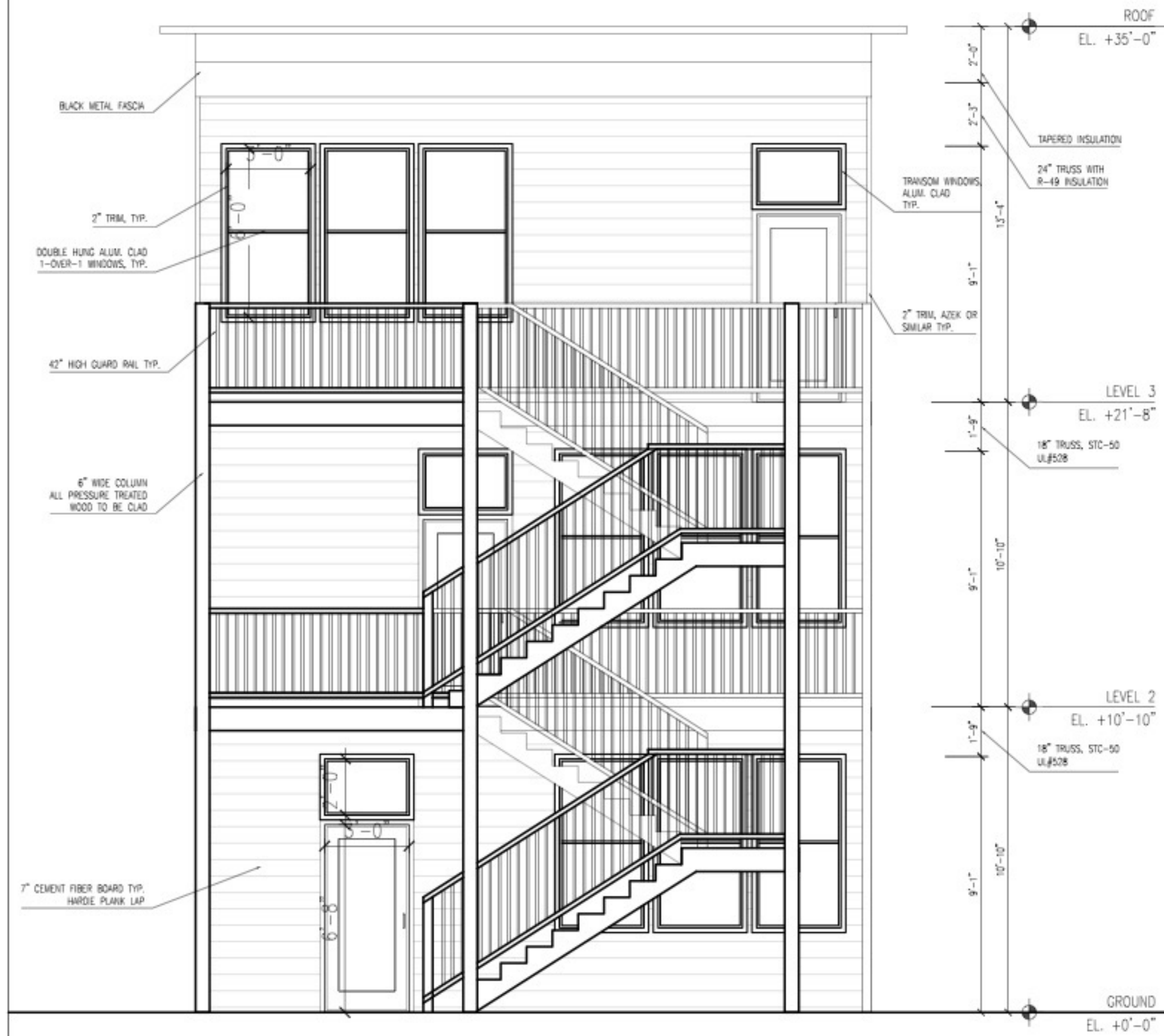
**A-10**



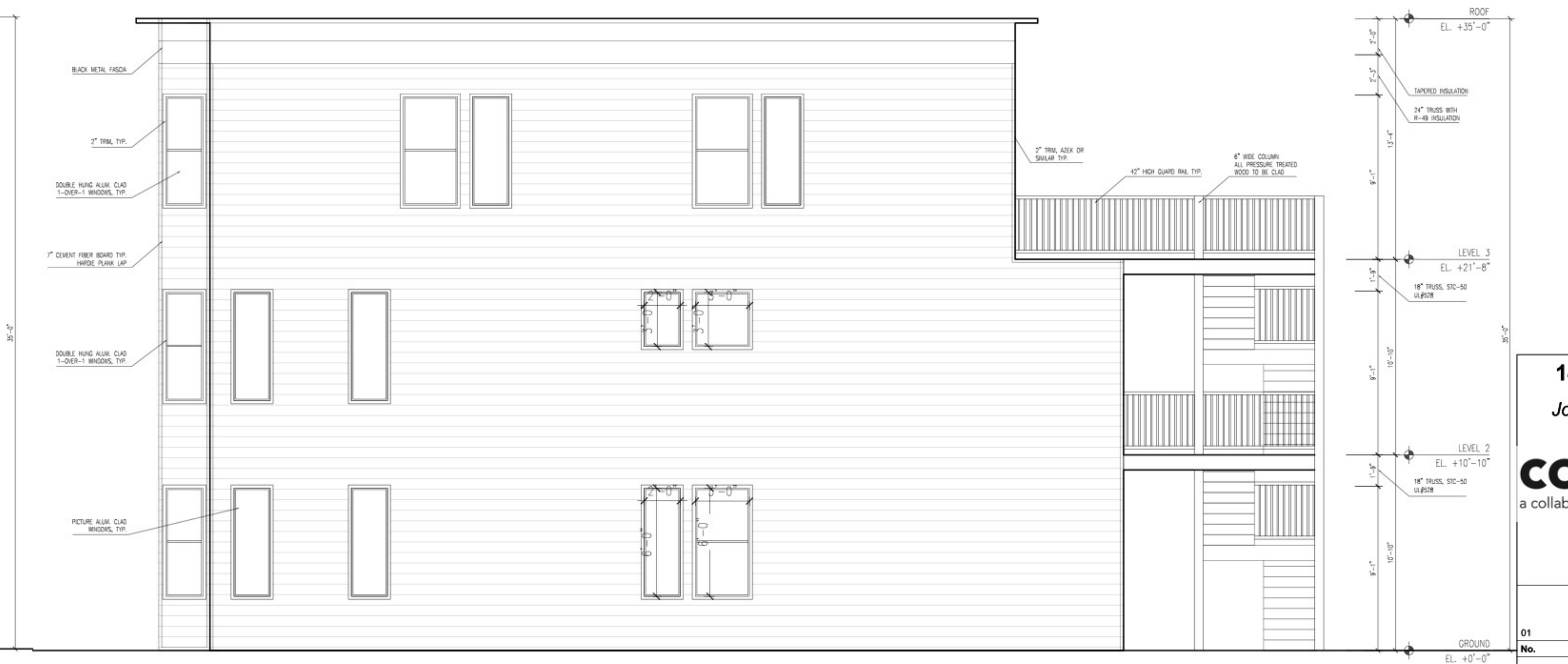
**1** PROPOSED FRONT ELEVATION  
SCALE: 1/4" = 1'-0"



**2** PROPOSED SIDE ELEVATION  
SCALE: 1/4" = 1'-0"



**3** PROPOSED REAR ELEVATION  
SCALE: 1/4" = 1'-0"



**4** PROPOSED SIDE ELEVATION  
SCALE: 1/4" = 1'-0"



*Eric Johnson*

**146 Thornton**  
Joe Higginbottom

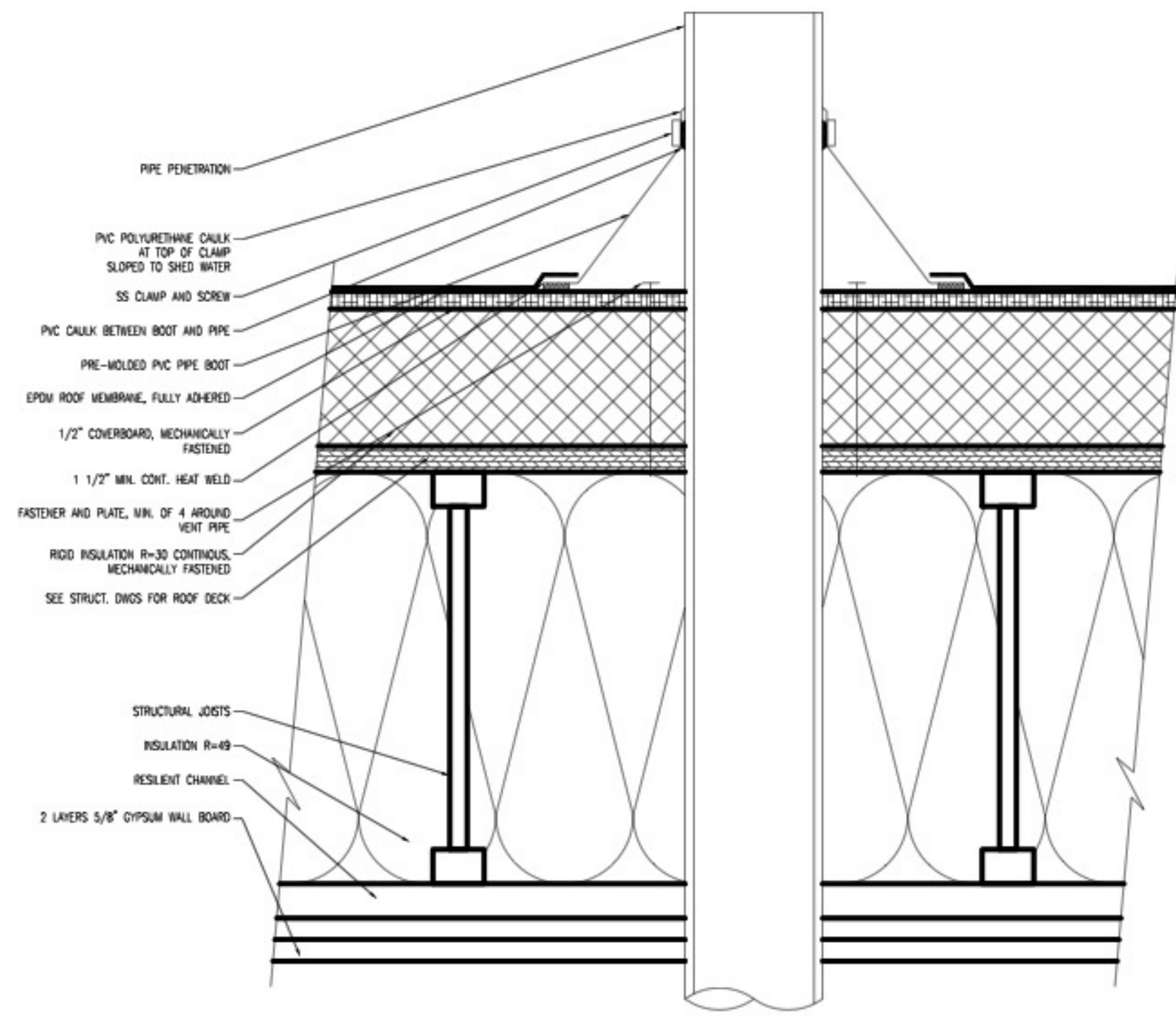
**context**  
a collaborative design workshop

Roxbury, Boston,  
Massachusetts

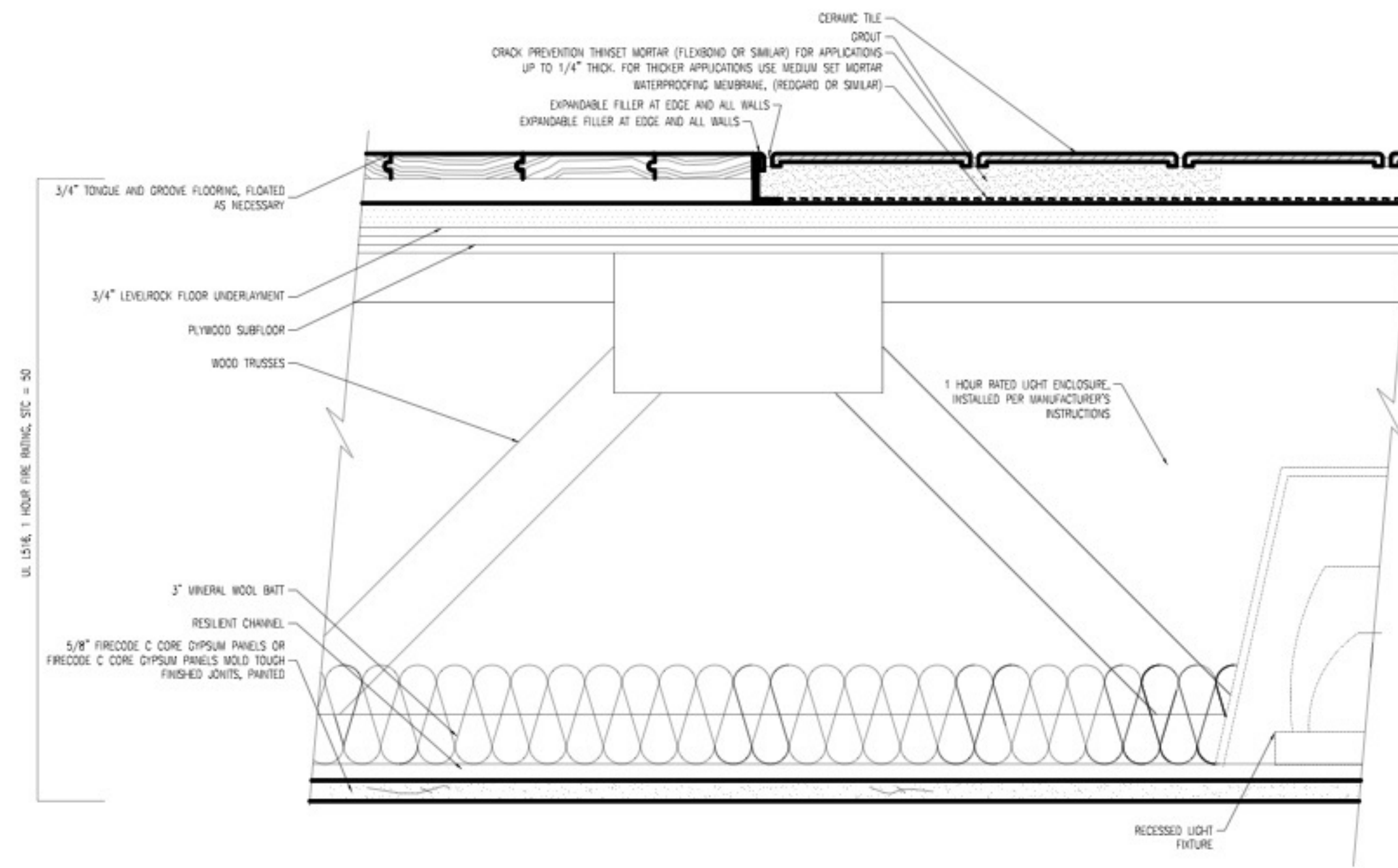
01	Issued for Permit	03/06/2022
No.	Description	Date

Drawing Title: Proposed Elevations  
Project No.: 0533 Checked by: EZ

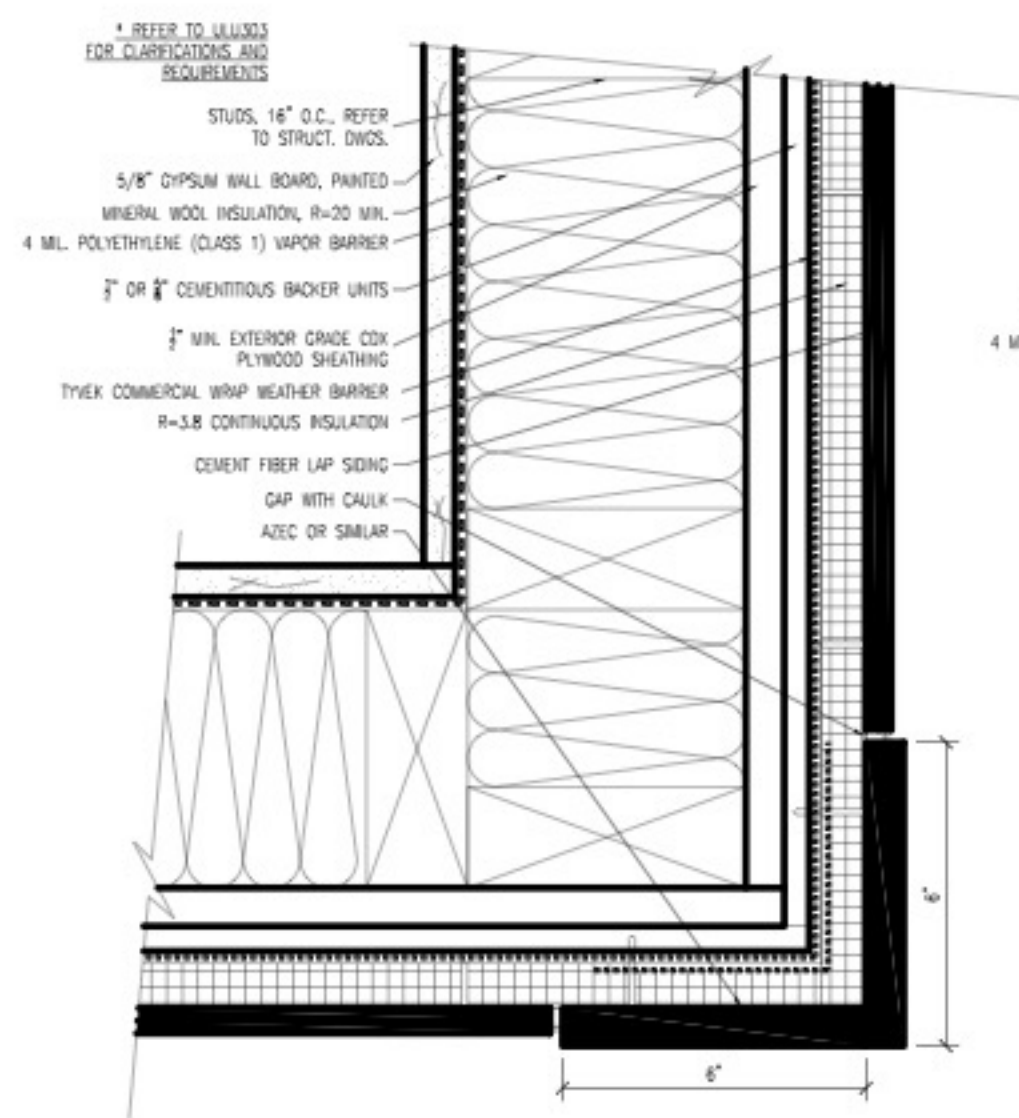
**A-30**



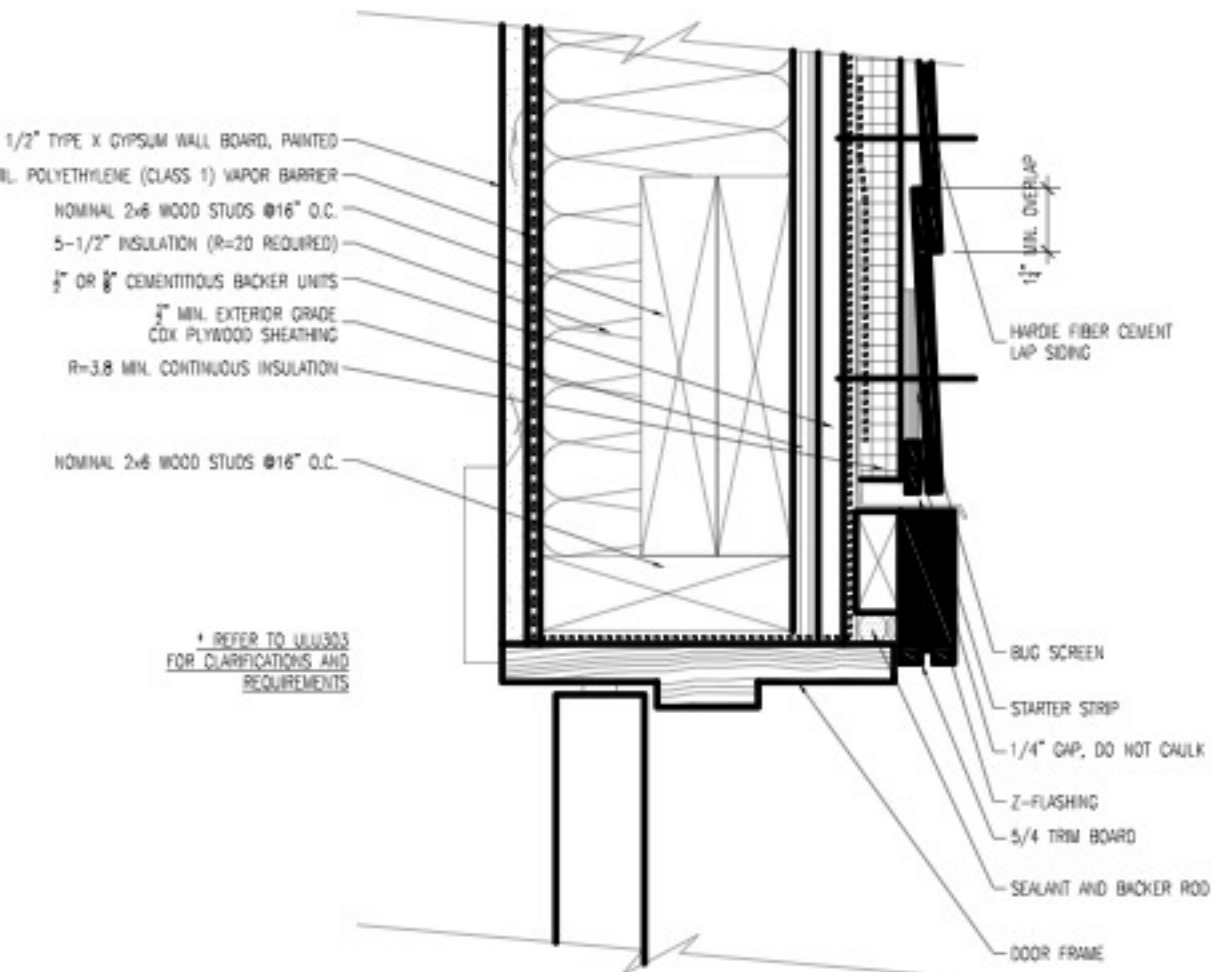
**1** ROOF PENETRATION SECTION DETAIL  
SCALE: 3" = 1'-0"



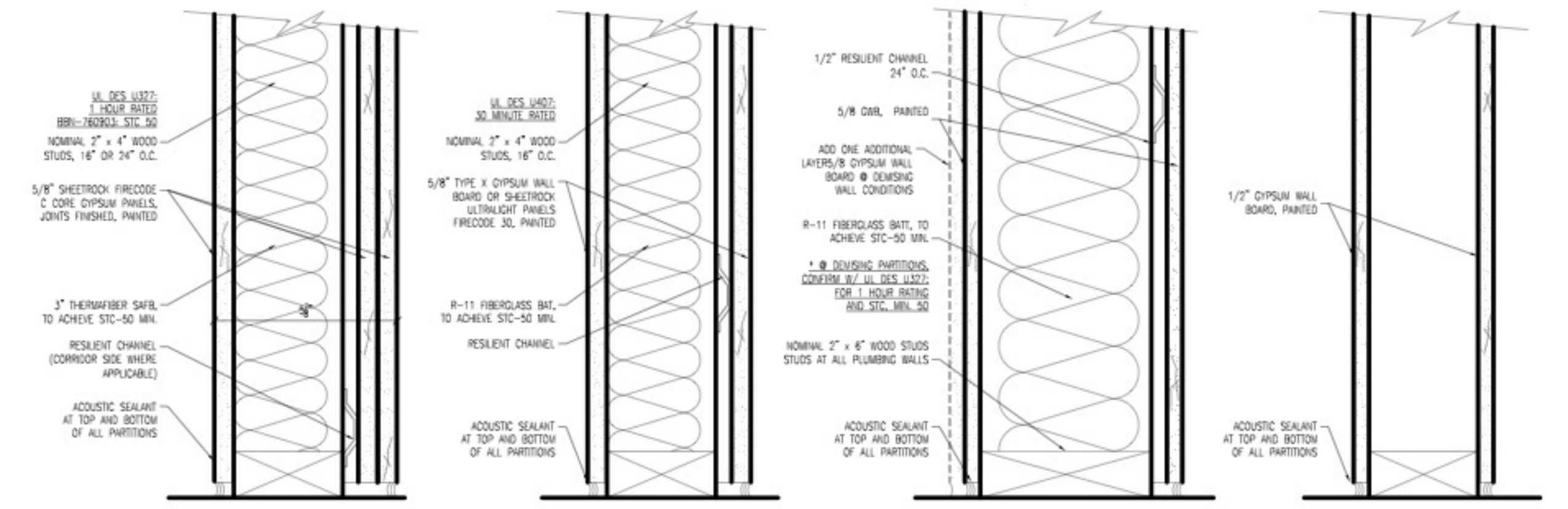
**2** CEILING SANDWICH SECTION DETAIL  
SCALE: 3" = 1'-0"



**3** RATED EXTERIOR WALL PLAN DETAIL  
SCALE: 3" = 1'-0"



**4** RATED EXTERIOR WALL SECTION DETAIL  
SCALE: 3" = 1'-0"



**D** WALL TYPE D 1 HOUR RATED SECTION DETAIL SCALE: 3" = 1'-0"  
**C** WALL TYPE C 30 MINUTE RATED SECTION DETAIL SCALE: 3" = 1'-0"  
**B** WALL TYPE B SECTION DETAIL SCALE: 3" = 1'-0"  
**A** WALL TYPE A SECTION DETAIL SCALE: 3" = 1'-0"



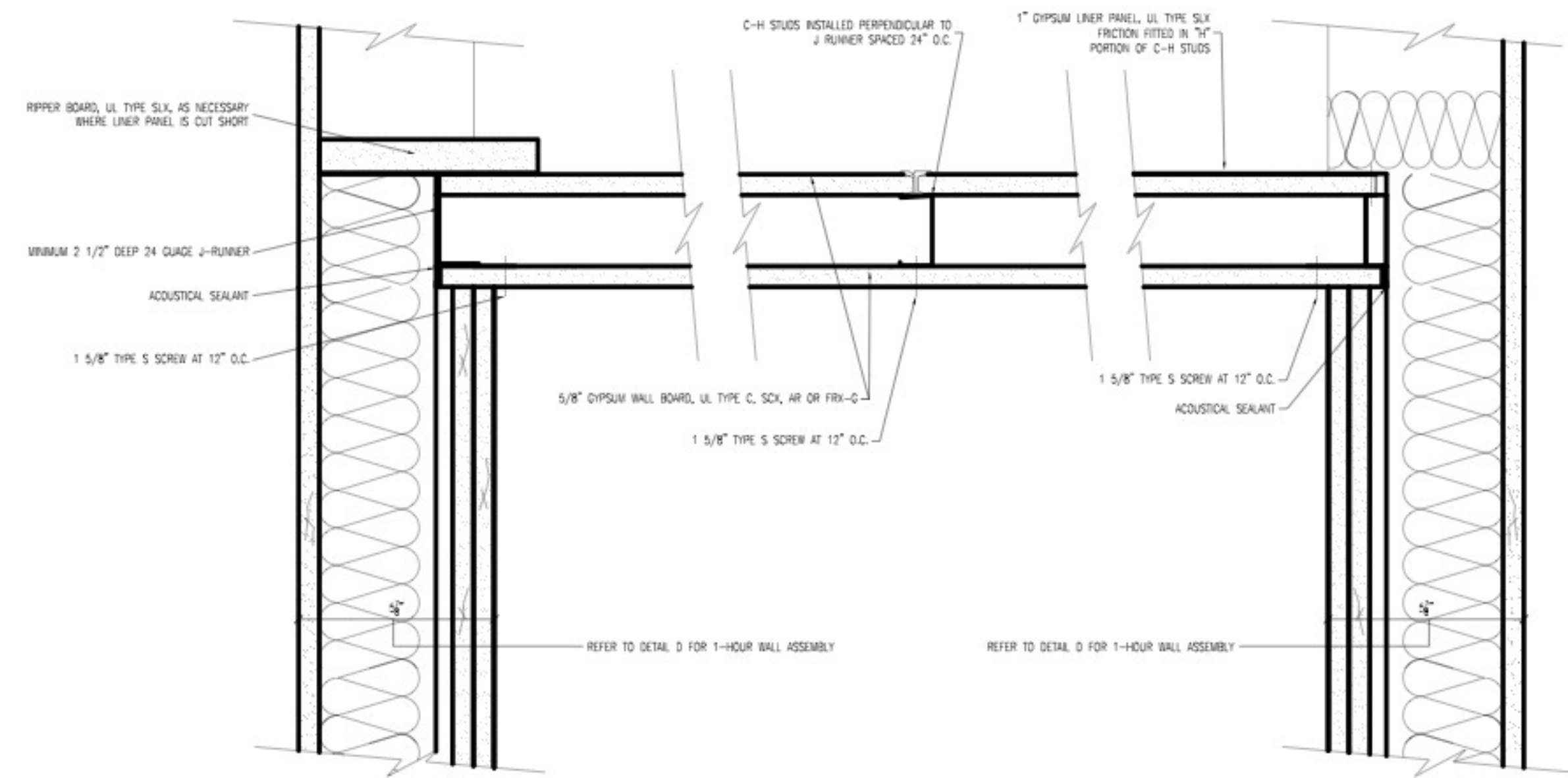
Eric Johnson

146 Thornton  
Joe Higginbottom  
**context**  
a collaborative design workshop  
Roxbury, Boston, Massachusetts

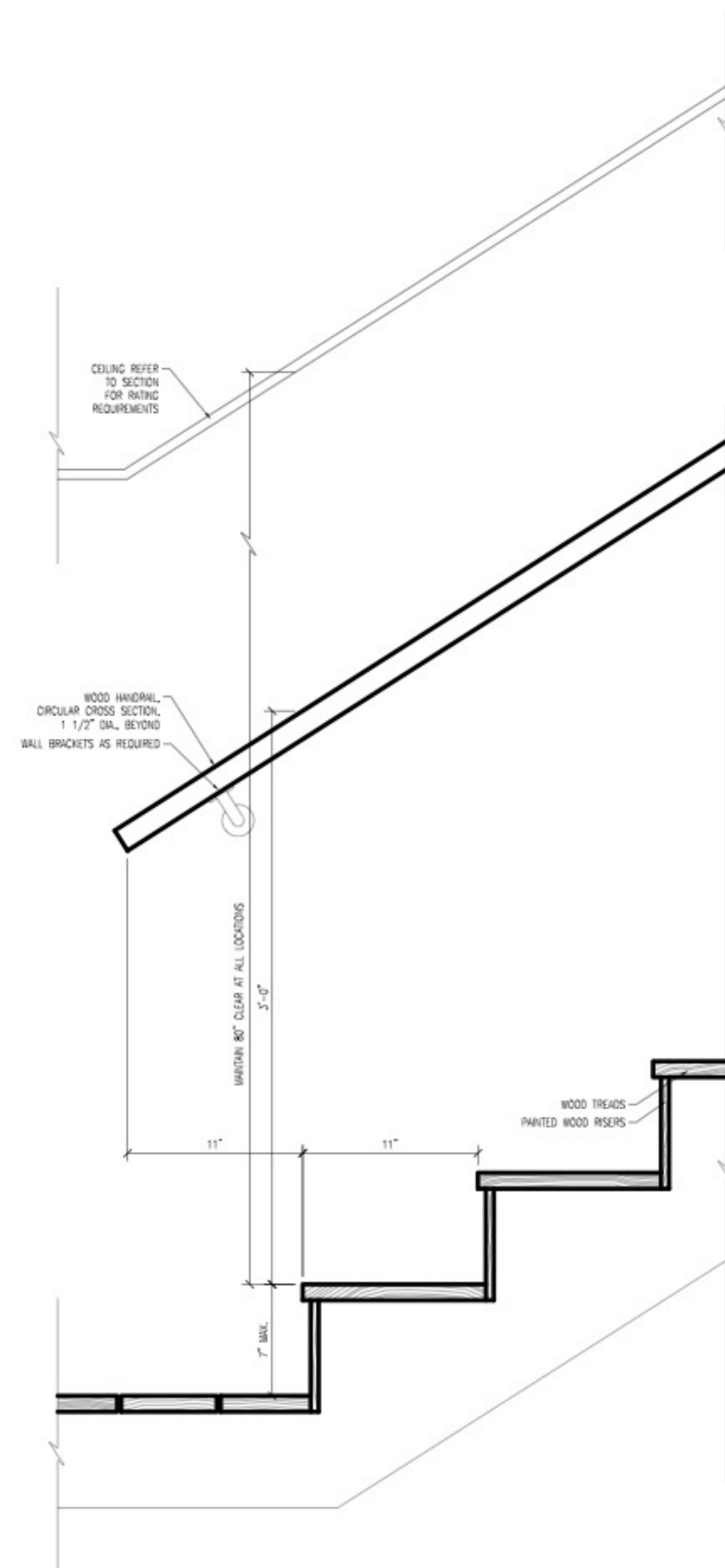
01	Issued for Permit	03/06/2022
No.	Description	Date
Drawing Title: Proposed Details		
Project No.: 0533	Checked by: EZ	

A-40

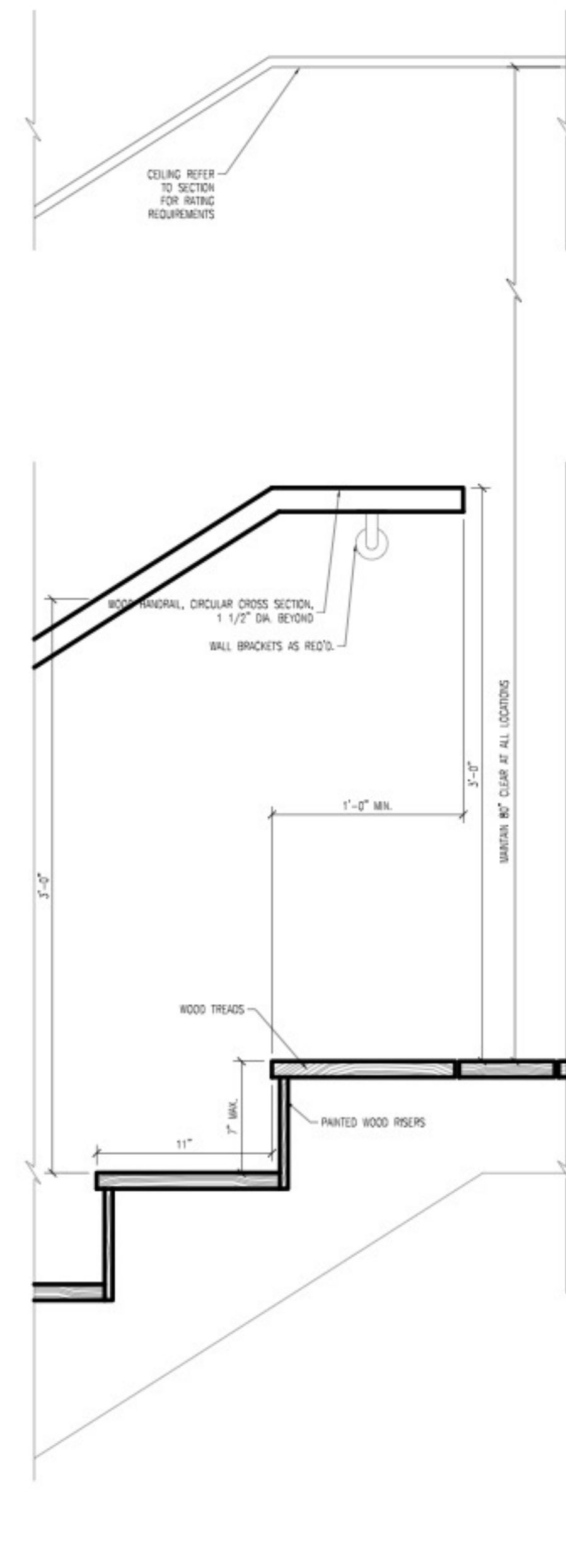




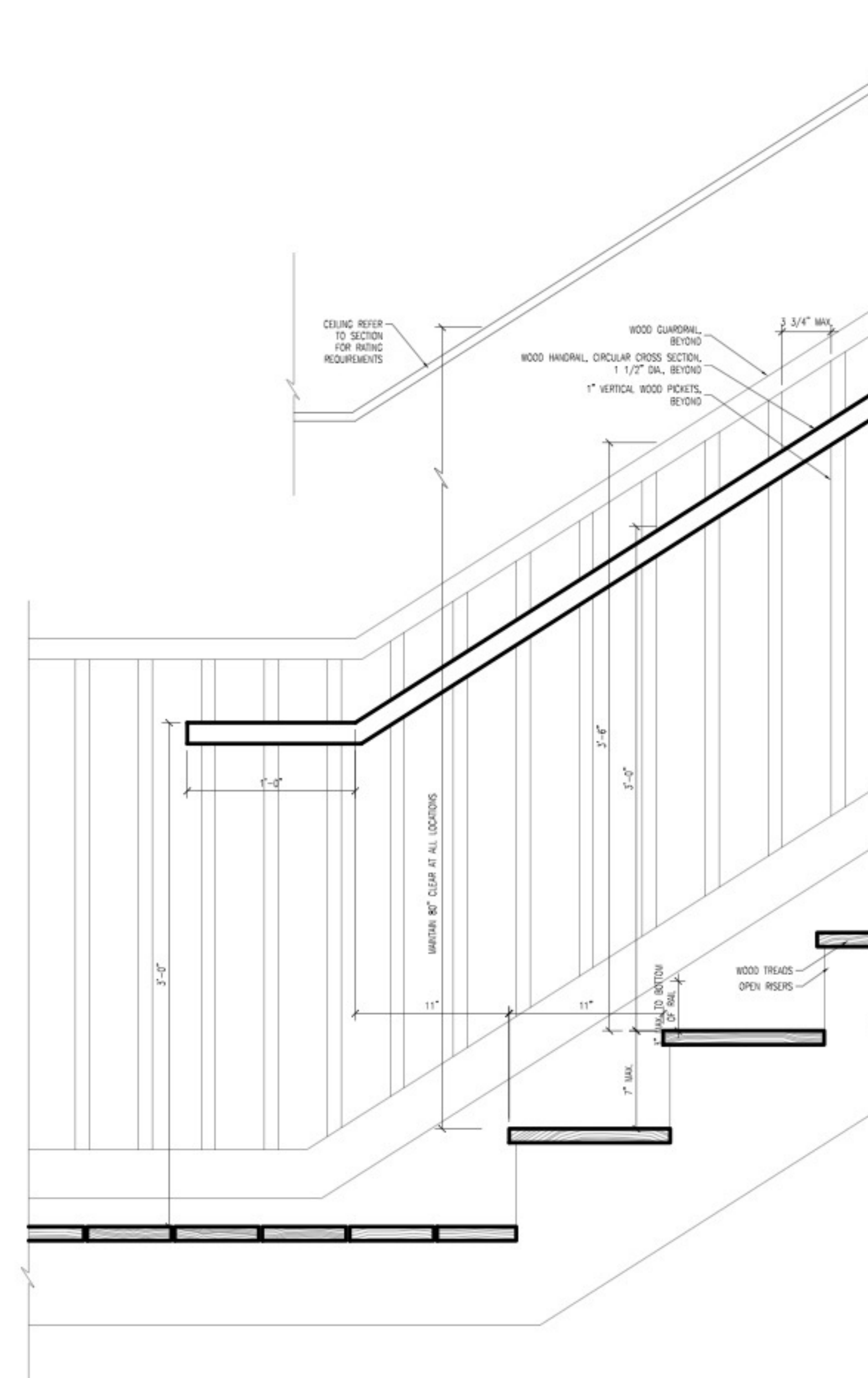
**15** SHAFT WALL/CEILING DETAIL  
SCALE: 3" = 1'-0"



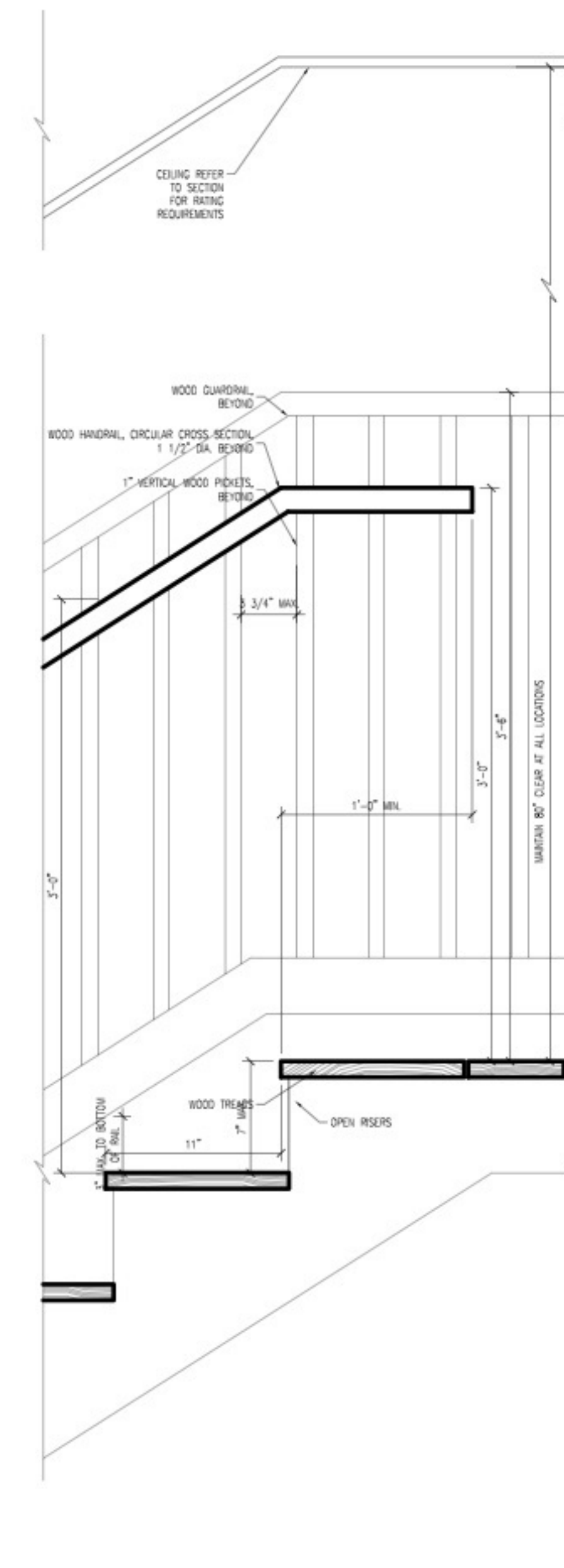
**16** BASE OF INTERIOR COMMON STAIR DETAIL  
SCALE: 1 1/2" = 1'-0"



**17** TOP OF INTERIOR COMMON STAIR DETAIL  
SCALE: 1 1/2" = 1'-0"



**18** BASE OF EXTERIOR COMMON STAIR DETAIL  
SCALE: 1 1/2" = 1'-0"



**19** TOP OF EXTERIOR COMMON STAIR DETAIL  
SCALE: 1 1/2" = 1'-0"



*Eric Johnson*

**146 Thornton**  
Joe Higginbottom

**context**  
a collaborative design workshop

Roxbury, Boston,  
Massachusetts

01	Issued for Permit	03/06/2022
No.	Description	Date
Drawing Title: Proposed Details		
Project No.: 0533		Checked by: EZ

A-41

## GENERAL

- STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 9th Edition MA Building Code. ALL STRUCTURAL WORK TO BE COMPLETED IN ACCORDANCE WITH THIS CODE.
- DESIGN LOAD ASSUMPTIONS:

LIVE LOAD	
FLOORS	40 PSF
COMMON AREAS	100 PSF
GROUND SNOW LOAD	50 PSF
WIND LOAD	
BASIC WIND SPEED	130 MPH
EXPOSURE	B
IMPORTANCE FACTOR	1
MWFRS LATERAL LOAD	20 PSF
C&C LATERAL LOAD	30 PSF
- THE CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS BEFORE COMMENCING WITH THE WORK AND SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES REQUIRING CLARIFICATION OR REVISIONS. DO NOT SCALE STRUCTURAL DRAWINGS.
- IN THE EVENT THAT CERTAIN DETAILS OF THE CONSTRUCTION ARE NOT FULLY SHOWN OR NOTED ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME TYPE AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED, SUBJECT TO THE STRUCTURAL ENGINEER'S APPROVAL.
- SEE THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
  - SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON BEARING PARTITIONS.
  - SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, INSERTS, ETC. EXCEPT AS SHOWN.
  - SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS EXCEPT AS SHOWN.
  - FLOOR AND ROOF FINISHES.
  - WATERPROOFING AND DAMP PROOFING DETAILS.
  - FINISHED FLOOR AND EXTERIOR ELEVATIONS.
  - DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- BOLTS AND ANCHOR RODS MUST BE OF SUFFICIENT LENGTH TO PROTRUDE BEYOND THE END OF THE NUT WHEN FULLY INSTALLED.
- CUTTING, SPLICING, OR NOTCHING OF STRUCTURAL MEMBERS IS NOT PERMITTED UNLESS NOTED OTHERWISE IN THE STRUCTURAL DRAWINGS FOR SPECIFIC LOCATIONS.

## FOUNDATION

- FOUNDATIONS ON THIS PROJECT CONSIST OF CAST IN PLACE CONCRETE SPREAD FOOTINGS AND CAST IN PLACE CONCRETE WALLS OVER CONTINUOUS SPREAD FOOTINGS.
- PROVIDE 4'-0" MINIMUM FROST COVER FOR FOOTINGS.
- ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2,000 PSF. BEARING CAPACITY OF SOIL SHALL BE CONFIRMED BY A GEOTECHNICAL ENGINEER PRIOR TO POURING FOOTINGS AS REQUIRED.
- NO FOUNDATION CONCRETE SHALL BE PLACED INTO STANDING WATER. WATER SHALL NOT BE ALLOWED TO STAND IN TRENCHES BEFORE OR AFTER CONCRETE IS PLACED. IF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE THE CONCRETE IS CAST, THE CONTRACTOR SHALL EXCAVATE THE SOFTENED MATERIAL AND REPLACE WITH CONCRETE OR WELL COMPACTED CRUSHED STONE.
- FOUNDATION UNITS SHALL BE CENTERED UNDER SUPPORTED STRUCTURAL MEMBER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- BACKFILL UNDER ANY PORTION OF THE STRUCTURE SHALL BE COMPACTED IN 6 INCH LIFTS.
- FOUNDATION WALLS SHALL NOT BE BACKFILLED UNTIL FIRST FLOOR DECK IS INSTALLED UNLESS APPROVED BY ENG.

## CONCRETE AND REINFORCEMENT

- CONCRETE 28 DAYS COMPRESSIVE STRENGTH TO BE 4000 PSI MINIMUM.
- NOMINAL COARSE AGGREGATE SIZE SHALL NOT EXCEED 3/4" U.N.O..
- STEEL REINFORCING IN CONCRETE TO BE ASTM A615 GRADE 60.
- WELDED WIRE FABRIC TO BE ASTM A185 WITH ULTIMATE TENSILE STRENGTH OF 70,000 PSI.
- OVERLAP STEEL REINFORCING BARS TO PROVIDE CLASS B LAP SPLICES. RETURN BARS BY 1'-0" MIN. AROUND CORNERS.
- MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6" OR ONE FULL MESH, WHICHEVER IS GREATER, AND SHALL BE WIRED TOGETHER.
- PROVIDE CLEAR COVERAGE OF OUTER REINFORCEMENT AS FOLLOWS:

LOCATION IN STRUCTURE	CLEAR COVERAGE
SURFACE CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER	
#5 BAR OR SMALLER	1 1/2"
#6 BAR TO #18 BAR	2"
FORMED SLABS, WALLS AND JOISTS NOT EXPOSED TO EARTH OR WEATHER	3/4" **
**MAX COARSE AGGREGATE SIZE FOR 3/4" COVER IS 1/2" NOMINAL DIAMETER	
FORMED BEAMS AND COLUMNS NOT EXTERIOR SLABS AND EQUIPMENT PADS	1 1/2"
- THE MINIMUM CLEAR SPACING BETWEEN PARALLEL REINF. BARS IN A LAYER SHALL BE EQUAL TO THE BAR DIAMETER, BUT NOT LESS THAN ONE INCH.
- CAST IN PLACE OPENING, POCKETS, ETC. LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, OR WALLS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC. LARGER THAN 6" WHICH ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
- CAST IN PLACE STRUCTURAL CONCRETE SHALL NOT BE CUT OR CORED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- ALL REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI 315 DETAILING MANUAL.
- ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PROPER POSITION WHILE POURING CONCRETE. IF REQUIRED, ADDITIONAL BARS AND STIRRUPS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT TO THE REINFORCING STEEL.
- CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS AND CONCRETE MIX DESIGN FOR ENGINEER'S APPROVAL. SHOP DRAWINGS SHALL SHOW EXTENTS OF CONCRETE AS WELL AS REBAR PLACEMENT.
- NO CONCRETE SHALL BE POURED UNTIL ALL REINFORCEMENT AND INSTALLATIONS HAVE BEEN INSPECTED AND APPROVED BY THE OWNER'S TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE OWNER'S TESTING AGENCY 48 HOURS BEFORE POURING CONCRETE TO ALLOW FOR ALL NECESSARY INSPECTIONS.
- NO PIPES OR CONDUIT SHALL BE EMBEDDED IN THE STRUCTURAL CONCRETE FLOOR SLABS WITHOUT APPROVAL OF STRUCTURAL ENGINEER.
- PROVIDE VAPOR BARRIER UNDER INTERIOR GROUND LEVEL SLABS.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR ENTRAINED. PROVIDE AIR CONTENT OF 4% TO 7%.

## STRUCTURAL STEEL

- STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING GRADES:

ANGLES, PLATES, AND BARS	ASTM A36
WIDE FLANGE COLUMNS & BEAMS	A572
HSS COLUMNS & BEAMS	ASTM A500 GRADE B
PIPES	A53, GRADE B
- STEEL CONNECTION BOLTS TO BE ASTM A325. ANCHOR BOLTS TO BE ASTM F1554. WELDED STEEL CONNECTIONS TO BE MINIMUM 3/8" CONTINUOUS FILLET WELD, UNLESS LARGER WELDS ARE REQUIRED.
- PROVIDE MINIMUM 3/4" THICK BASE PLATE WITH 4-1/2" NUT AND WASHER TYPE ANCHOR BOLTS FOR COLUMNS. U.N.O. EMBED ANCHOR BOLTS 12" MINIMUM IN CONCRETE.
- WHERE STEEL COLUMNS ARE WITHIN STUD WALLS, ANCHOR STUDS TO STEEL USING A MINIMUM OF (2) HILTI X-U POWDER ACTUATED FASTENERS @ 8 INCHES O.C., UNO.
- BOLTED CONNECTIONS SHALL BE AS FOLLOWS: MINIMUM BOLT DIAMETER 3/4".
- EXPOSED STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED IN AREAS WHERE STRUCTURAL STEEL ELEMENTS ARE EXPOSED TO THE ELEMENTS.
- ALL CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR. CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR REVIEW. THE CALCULATIONS SHALL BEAR THE SIGNATURE AND SEAL OF A MASSACHUSETTS REGISTERED STRUCTURAL ENGINEER.

## WOOD & ENGINEERED WOOD CONSTRUCTION

- DIMENSIONAL LUMBER TO BE SPRUCE-PINE-FIR (SPF) NO. 2 OR BETTER UNO.
- ALL ENGINEERED LUMBER SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- ALTERNATE PRODUCTS SHALL NOT BE SUBSTITUTED UNLESS APPROVED IN WRITING BY ENGINEER OF RECORD.
- LVL'S (LAMINATED VENEER LUMBER) TO BE  $f_c = 3100$  PSI.
- PSL'S (PARALLEL STRAND LUMBER) TO BE  $f_c = 2650$  PSI.
- PROVIDE SIMPSON CONNECTORS AT POST/BEAM, POST BASE, JOIST/BEAM AND BEAM/BEAM CONNECTIONS. USAGE AND INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE SIMPSON HURRICANE TIES AT ROOF RAFTER CONNECTIONS TO STUD WALL CONNECTIONS OR SUPPORTING BEAMS.
- PROVIDE MINIMUM 3/4" PLYWOOD SHEATHING FOR FLOORS AND ROOFS. PLYWOOD TO BE AFA-RATED EXPOSURE 1 GRADE C-D (CDX). PROVIDE 1" SPACE BETWEEN EDGES OF ADJACENT PLYWOOD PANELS AND STAGGER PANEL JOINTS BETWEEN ROWS OF SHEATHING.
- ALL PLYWOOD FLOOR AND ROOF SHEATHING SHALL BE GLUED AND SCREWED TO SUPPORTING WOOD FRAMING. GLUE SHALL CONSIST OF CONSTRUCTION GRADE ADHESIVE. SCREWS NOT TO BE PLACED WITHIN 3/4" OF PANEL EDGES. MAXIMUM SCREW SPACING TO BE 6" UNO. SCREWS TO BE MIN #8x2 1/2" LONG. SCREW LENGTH SHALL BE SUFFICIENT TO PROVIDE EMBEDMENT OF 10X SCREW DIAM INTO FRAMING.
- PROVIDE MINIMUM 1/2" PLYWOOD SHEATHING FOR EXTERIOR WALLS AND SHEAR WALLS. FASTEN SHEATHING TO STUDS WITH MINIMUM 8d NAILS @ 4" O.C..
- PROVIDE CONTINUOUS BLOCKING ABOVE INTERIOR SHEAR WALLS.
- MAXIMUM MOISTURE CONTENT OF DIMENSIONAL LUMBER AT TIME OF INSTALLATION TO BE 19%.
- SILL PLATE ANCHOR BOLTS: PROVIDE 1/2" BOLT ANCHOR BOLTS AT 3' TWO BOLTS MINIMUM PER SILL PIECE WITH A BOLT WITHIN 10" OF EACH END OF EACH PIECE. BOLT SPACING SHALL BE COORDINATED PRIOR TO PLACING OF STUDS AND POSTS TO AVOID CONFLICTS. ALL BOLTS SHALL HAVE STEEL WASHERS.
- PROVIDE PERPENDICULAR BLOCKING AT 32 INCHES O.C. BETWEEN ALL PERIMETER JOISTS AND EXTERIOR WALLS OR PERIMETER BEAMS.
- STAND-ALONE WOOD POSTS OVER CONCRETE SHALL BEAR UPON SIMPSON POST BASE EMBEDDED IN OR ANCHORED TO CONCRETE FOUNDATION.
- WASHERS SHALL ALWAYS BE INSTALLED BETWEEN BOLT HEADS OR NUTS AND WOOD OR ENGINEERED WOOD.

## PRESSURE PRESERVATIVE TREATED (P.T.) WOOD

- ALL P.T. LUMBER SHALL BE SOUTHERN PINE NO. 2 OR BETTER.
- ALL P.T. LUMBER SHALL BE UNINCISED.
- ALL WOOD IN CONTACT WITH THE GROUND, OR CONCRETE, OR EXPOSED TO THE WEATHER, SHALL BE PRESSURE-PRESERVATIVE TREATED AND SUITABLE FOR EXTERIOR USE AND GROUND CONTACT IN ACCORDANCE WITH AWP A STANDARDS, UNO.
- FIELD-CUT ENDS, NOTCHES, AND DRILLED HOLES OF PRESERVATIVE-TREATED WOOD SHALL BE TREATED IN THE FIELD WITH COMPATIBLE PRESERVATIVE IN ACCORDANCE WITH AWP A M4.
- ALL HARDWARE AND STEEL CONNECTORS USED IN CONTACT WITH P.T. LUMBER SHALL BE HOT-DIP GALVANIZED, STAINLESS STEEL, OR OTHERWISE NOTED BY THE MANUFACTURER AS APPROVED FOR EXTERIOR USE AND FOR CONTACT WITH ALL P.T. LUMBER PRESERVATIVES. CARE SHALL BE TAKEN NOT TO MIX GALVANIZED MILD STEEL WITH STAINLESS STEEL IN CONNECTIONS.

## MASONRY

- CONCRETE MASONRY UNITS TO BE ASTM C55
- MORTAR FOR USE IN FOUNDATIONS WALLS, RETAINING WALLS, AND BELOW-GRADE CMU TO BE ASTM C270 TYPE M. ADMIXTURES ARE NOT ALLOWED.
- MORTAR FOR USE IN ABOVE GRADE STRUCTURAL MASONRY WALLS TO BE ASTM C270 TYPE S.
- MORTAR FOR USE IN NON-STRUCTURAL ABOVE GRADE WALLS/VENEERS TO BE ASTM C270 TYPE S OR TYPE N
- GROUT TO CONFORM TO ASTM C476, FINE, WITH A MINIMUM STRENGTH OF 3000 PSI.
- REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.
- MASONRY OPENINGS FOR MORE THAN 16" WIDE REQUIRE APPROVED LINTELS.
- PROVIDE AND INSTALL LINTELS FOR VENEER OPENINGS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

MAX OPENINGS	LINTEL PER 4' OF MASONRY WIDTH
4'-0"	1-L4x4x3/8
7'-0"	1-L6x4x3/8
- PROVIDE 1-#5 VERTICAL REINFORCING BAR AT 32" O.C. AT CMU WALLS, UNO. THIS REINFORCING SHALL BE CONTINUOUS FOR THE FULL HEIGHT OF THE WALL. MASONRY BLOCK CELLS CONTAINING VERTICAL REINFORCING SHALL BE GROUTED SOLID. FILLING CELLS WITH MORTAR IS NOT ACCEPTABLE.
- REINFORCED MASONRY WALLS SHALL HAVE 9 GA LONGITUDINAL WIRES, LADDER OR TRUSS TYPE, AT 16 INCHES O.C. HORIZONTAL REINFORCEMENT, UNO.
- PROVIDE BOND BEAM AT EACH FLOOR LEVEL AND 8 FEET ON CENTER VERTICALLY.

## ABBREVIATION LIST

ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MAX	MAXIMUM
B or BOT	BOTTOM	MECH	MECHANICAL
BEW	BOTTOM EACH WAY	MEZZ	MEZZANINE
BM	BEAM	MFR	MANUFACTURER
BS	BOTH SIDES	MID	MIDDLE
		MID-PT	MIDPOINT
		MIN	MINIMUM
CANT	CANTILEVER	NF	NEAR FACE
CIP	CAST-IN-PLACE	NIC	NOT IN CONTRACT
CJ	CONTROL JOINTS	NO or #	NUMBER
CL	CENTERLINE	NTS	NOT TO SCALE
CLR	CLEAR	NWC	NORMAL WEIGHT CONCRETE
CMU	CONCRETE MASONRY UNIT	OC or O/C	ON CENTER
CO	CLEAN OUT	OD	OUTSIDE DIAMETER
COL	COLUMN	OF	OUTSIDE FACE
CONC	CONCRETE	OH	OPPOSITE HAND
CONN	CONNECTION	OPNG	OPENING
CONST JT	CONSTRUCTION JOINT	OPP	OPPOSITE
CONT	CONTINUOUS		
D	DEPTH	P/C	PRE-CAST
DIA or Ø	DIAMETER	PC	PILE CAP
DIM	DIMENSION	PCI	PRECAST CONCRETE INSTITUTE
DIR	DIRECTION	PEN	PENETRATION
DWG	DRAWING	PL	PLATE
DWLS	DOWELS	PSF	POUNDS/SQUARE FOOT
		PSI	POUNDS/SQUARE INCH
EA	EACH	PT	PRESSURE-TREATED
EE	EACH END	PVC	POLYVINYL CHLORIDE
EF	EACH FACE		
EL or ELEV	ELEVATION	R or RAD	RADIUS
EQ	EQUAL	RD	ROOF DRAIN
ES	EACH SIDE	REF	REFERENCE
EW	EACH WAY	REINF	REINFORCE or REINFORCEMENTING
EXIST	EXISTING	REQ'D	REQUIRED
EXP BOLT	EXPANSION BOLT	RET	RETURN
EXP JT	EXPANSION JOINT	REV	REVISION
EXT	EXTERIOR	SAD	SEE ARCHITECTS DRAWINGS
FD	FLOOR DRAIN	SC	SLIP CRITICAL
FF	FAR FACE	SCHED	SCHEDULE
FIN	FINISH	SECT	SECTION
FIN FL	FINISHED FLOOR	SF	STEP FOOTING
FL	FLOOR	SIM	SIMILAR
FND	FOUNDATION	SOG	SLAB ON GROUND / GRADE
FP	FULL PENETRATION	SPECS	SPECIFICATIONS
FS	FAR SIDE	SS	STAINLESS STEEL
FTG	FOOTING	STD	STANDARD
		STIFF	STIFFENER
GA	GAUGE	STL	STEEL
GALV	GALVANIZED	STR	STRUCTURAL
GB	GRADE BEAM		
GND	GROUND	T	TOP
GR	GRADE	TB	TIE BEAM
GUS PL	GUSSET PLATE	TEMP	TEMPORARY
		THK	THICK or THICKNESS
H or HORIZ	HORIZONTAL	THRD	THREADED
HEF	HORIZONTAL EACH FACE	T/SLAB	TOP OF SLAB
HIF	HORIZONTAL INSIDE FACE	TOC	TOP OF CONCRETE
HOF	HORIZONTAL OUTSIDE FACE	or T/CONC	TOP OF STEEL
HP	HIGH POINT	TOS or T/ST	TOP OF WALL
HSB	HIGH STRENGTH BOLT	TOW or TW	TYPICAL
HT	HEIGHT	TYP	
		UL	UPPER LAYER
ID	INSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
IF	INSIDE FACE		
INT	INTERIOR	V or VERT	VERTICAL
INV	INVERT	VEF	VERIFY IN FIELD
		VIF	VERTICAL OUTSIDE FACE
JST	JOIST	VOF	
JT	JOINT		
		W/	WITH
K	KIP (1000 POUNDS)	W/O	WITHOUT
		WP	WORKING POINT
LL	LOWER LAYER	WWF	WELDED WIRE FABRIC
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LOC	LOCATION		
LP	LOW POINT		
LW	LIGHTWEIGHT		



SCOTT FOREST  
STRUCTURAL  
NO. 54886  
REGISTERED  
PROFESSIONAL ENGINEER

## Forest Structural Engineering

231 W. Newton St #1  
Boston, MA 02116  
617-447-8030  
scott@foreststructural.com

OWNER:  
146 Thornton Street  
Roxbury, MA

## General Notes

Scale: Not Applicable

S001

FASTENING SCHEDULE (IBC TABLE 2304.9.3)		
DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER <sup>a</sup>	SPACING AND LOCATION
<b>ROOF</b>		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW.	4- 8d BOX, 3- 8d COMMON, OR 3- 10d BOX	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2- 8d BOX	EACH END, TOENAIL
	2- 16d COMMON	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON @ 6" OC	FACE NAIL
2. CEILING JOISTS TO TOP PLATE	4- 8d BOX, 3- 8d COMMON, OR 3- 10d BOX	EACH END, TOENAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE IBC TABLE 2308.7.3.1)	3- 16d COMMON OR 4- 10d BOX	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE IBC TABLE 2308.7.3.1)	SEE TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	3- 10d COMMON OR 4- 10d BOX	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE IBC TABLE 2308.7.5)	3- 10d COMMON, 4- 10d BOX, OR 3- 16d BOX	2 TOENAILS ON ONE SIDE AND 1 TOENAIL ON OPPOSITE SIDE OF RAFTER OR TRUSS <sup>e</sup>
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	2- 16d COMMON, 3- 16d BOX, OR 3- 10d BOX	END NAIL
	3- 10d COMMON, 4- 10d BOX, OR 4- 16d BOX	TOENAIL
<b>WALL</b>		
8. STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON	24" OC FACE NAIL
	10d BOX	16" OC FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTION WALL CORNERS (AT BRACED WALL PANELS)	16d COMMON	16" OC FACE NAIL
	16d BOX	12" OC FACE NAIL
10. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON	16" OC EACH EDGE, FACE NAIL
	16d BOX	12" OC EACH EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	4- 8d COMMON, 4- 10d BOX, OR 5- 8d BOX	TOENAIL
12. TOP PLATE TO TOP PLATE	16d COMMON	16" OC FACE NAIL
	10d BOX	12" OC FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	8- 16d COMMON, 12- 16d BOX, OR 12- 10d BOX	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON	16" OC FACE NAIL
	16d BOX	12" OC FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST, OR BLOCKING AT BRACED WALL PANELS	2- 16d COMMON OR 3- 16d BOX	16" OC FACE NAIL
	3- 16d BOX, 4- 8d COMMON, OR 4- 10d BOX	TOENAIL
16. STUD TO STUD OR BOTTOM PLATE	2- 16d COMMON, 3- 16d BOX, OR 3- 10d BOX	ENDNAIL
	2- 16d COMMON OR 3- 10d BOX	FACE NAIL
17. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2- 16d COMMON OR 3- 10d BOX	FACE NAIL
18. 1" BRACE TO EACH STUD AND PLATE	3- 8d BOX, 2- 8d COMMON, 2- 10d BOX	FACE NAIL
19. 1" x 6" SHEATHING TO EACH BEARING	3- 8d BOX, 2- 8d COMMON, OR 2- 10d BOX	FACE NAIL
20. 1" x 8" AND WIDER SHEATHING TO EACH BEARING	3- 8d COMMON, 3- 8d BOX, OR 3- 10d BOX	FACE NAIL
	WIDER THAN 1" x 8": 3- 8d COMMON, 4- 8d BOX, OR 3- 10d BOX	FACE NAIL
<b>FLOOR</b>		
21. JOIST TO SILL, TOP PLATE, OR GIRDER	4- 8d BOX, 3- 8d COMMON, 3- 10d BOX	TOENAIL
22. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d BOX	4" OC TOENAIL
	8d COMMON OR 10d BOX	6" OC TOENAIL
23. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST	3- 8d BOX, 2- 8d COMMON, 3- 10d BOX	FACE NAIL
24. SUBFLOOR TO JOIST OR GIRDER	3- 16d BOX, 2- 16d COMMON	BLIND AND FACE NAIL
25. 2" PLANKS (PLANK & BEAM- FLOOR & ROOF)	3- 16d BOX, 2- 16d COMMON	END BEARING, FACE NAIL
26. BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS (SAWN LUMBER)	20d COMMON	32" OC FACE NAIL AT TOP AND BOTTOM, STAGGERED ON OPPOSITE SIDES
	10d BOX	24" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND 2- 20d COMMON, 3- 10d COMMON, OR 3- 10d BOX	ENDS AND AT EACH SPLICE, FACE NAIL
27. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3- 16d COMMON, 4- 16d BOX, OR 4- 10d BOX	EACH JOIST OR RAFTER, FACE NAIL
28. JOIST TO BAND JOIST OR RIM JOIST	3- 16d COMMON OR 4- 10d BOX	END NAIL
29. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2- 8d COMMON OR 2- 10d BOX	EACH END, TOENAIL

FASTENING SCHEDULE (IBC TABLE 2304.9.3) CONT.			
DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER		
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF, AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING			
		EDGE (INCHES)	INTERMEDIATE SUPPORTS (INCHES)
30. $\frac{3}{4}$ " - $\frac{1}{2}$ "	6d COMMON OR DEFORMED	6	12
	8d COMMON OR DEFORMED	6"	6"
31. $\frac{3}{4}$ " - $\frac{1}{2}$ "	8d COMMON (SUBFLOOR AND WALL)	6	12
	8d COMMON (ROOF) <sup>d</sup>	6"	6"
32. $\frac{1}{2}$ " - 1 $\frac{1}{2}$ "	10d COMMON	6	12
OTHER EXTERIOR WALL SHEATHING			
33. $\frac{1}{2}$ " FIBERBOARD SHEATHING <sup>b</sup>	1 $\frac{1}{2}$ " x 0.120" GALVANIZED ROOFING NAIL	3	6
34. $\frac{3}{4}$ " FIBERBOARD SHEATHING <sup>b</sup>	1 $\frac{1}{2}$ " x 0.120" GALVANIZED ROOFING NAIL	3	6
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
35. $\frac{1}{2}$ " AND LESS	8d COMMON	6	12
36. $\frac{1}{2}$ " - 1"	8d COMMON	6	12
37. 1 $\frac{1}{2}$ " - 1 $\frac{1}{2}$ "	10d COMMON	6	12
PANEL SIDING TO FRAMING			
38. $\frac{1}{2}$ " OR LESS	6d CORROSION RESISTANT SIDING OR 6d CORROSION RESISTANT CASING	6	12
39. $\frac{1}{2}$ "	8d CORROSION RESISTANT SIDING OR 8d CORROSION RESISTANT CASING	6	12
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING <sup>e</sup>			
		EDGE (INCHES)	INTERMEDIATE SUPPORTS (INCHES)
40. $\frac{1}{2}$ "	4d CASING OR 4d FINISH	6	12
41. $\frac{1}{2}$ "	6d CASING OR 6d FINISH (PANEL SUPPORTS AT 24")	6	12

a. NAILS SPACED AT 6" AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX, OR CASING.  
b. SPACING SHALL BE 6" ON CENTER ON THE EDGES AND 12" ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).  
c. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.  
d. RSR5-01 IS A ROOF SHEATHING RING SHANK NAIL MEETING THE SPECIFICATIONS IN ASTM F1667.  
e. TABULATED FASTENER REQUIREMENTS APPLY WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN 140 mph. FOR WOOD STRUCTURAL PANEL ROOF SHEATHING ATTACHED TO GABLE-END ROOF FRAMING AND TO INTERMEDIATE SUPPORTS WITHIN 48" OF ROOF EDGES AND RIDGES, NAILS SHALL BE SPACED AT 4 INCHES ON CENTER WHERE THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 mph IN EXPOSURE B OR GREATER THAN 110 mph IN EXPOSURE C. SPACING EXCEEDING 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS SHALL BE PERMITTED WHERE THE FASTENING IS DESIGNED PER THE AWC NDS.  
f. FASTENING IS ONLY PERMITTED WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN OR EQUAL TO 110 mph.  
g. NAILS AND STAPLES ARE CARBON STEEL MEETING THE SPECIFICATIONS OF ASTM F1667. CONNECTIONS USING NAILS AND STAPLES OF OTHER MATERIALS, SUCH AS STAINLESS STEEL, SHALL BE DESIGNED BY ACCEPTABLE ENGINEERING PRACTICE OR APPROVED UNDER SECTION 104.11



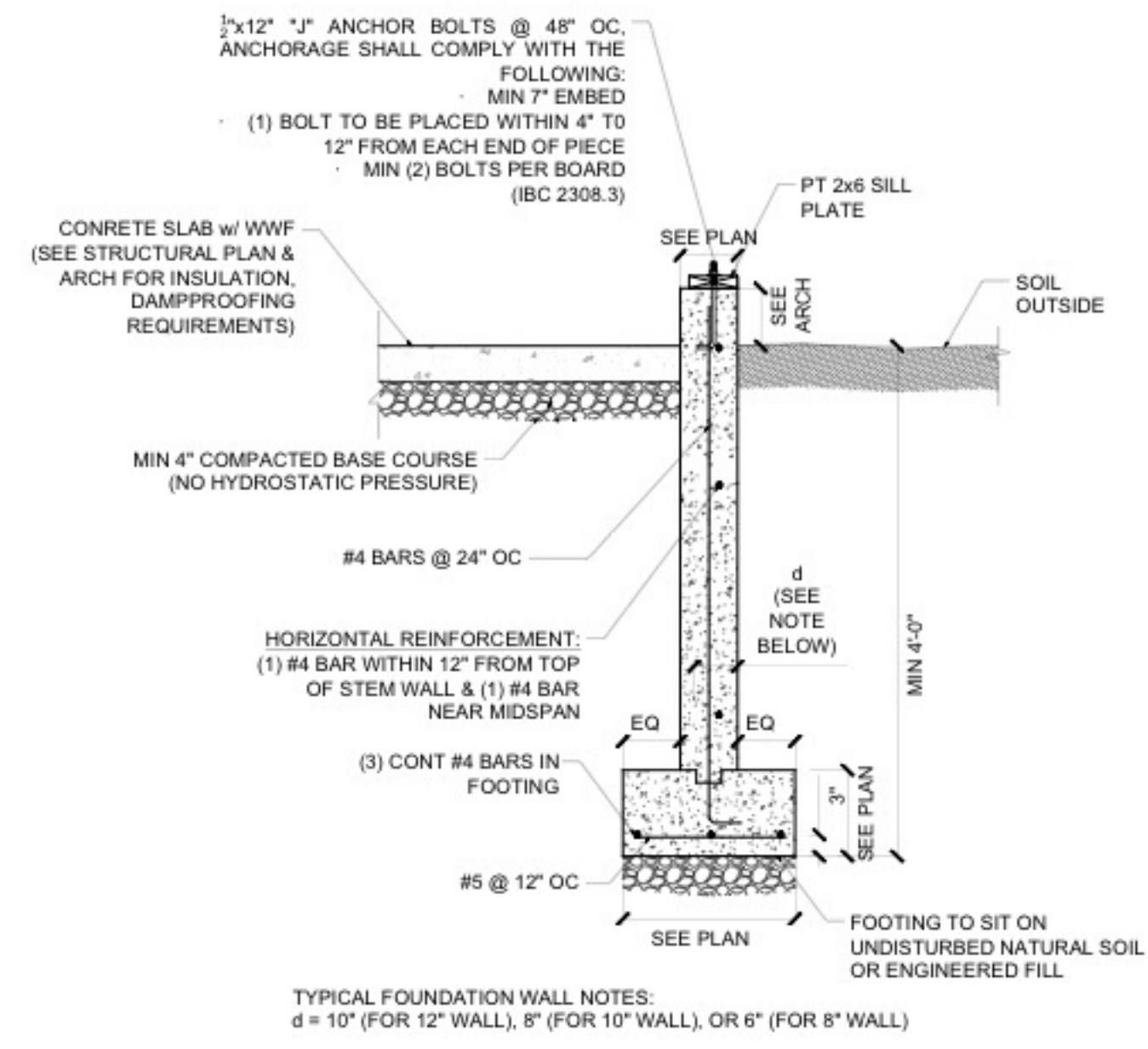
**Forest Structural Engineering**  
231 W. Newton St #1  
Boston, MA 02116  
617-447-8030  
scott@foreststructural.com

**OWNER:**  
146 Thornton Street  
Roxbury, MA

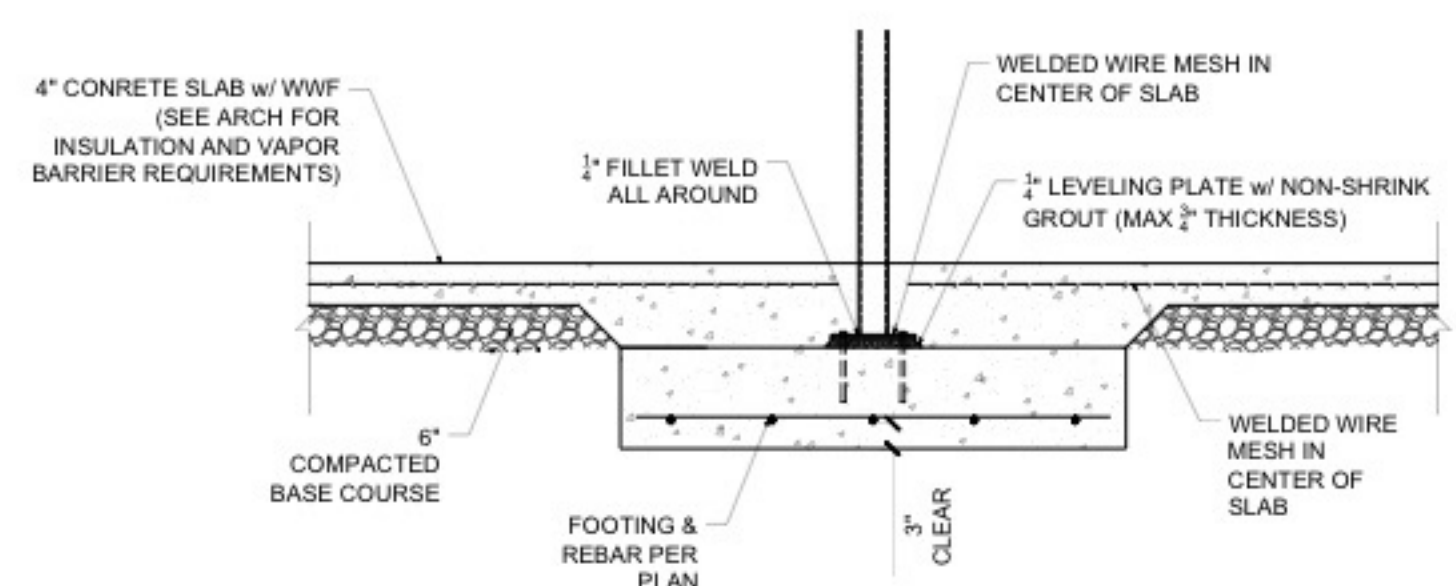
**Fastening Schedule**

Scale: Not Applicable

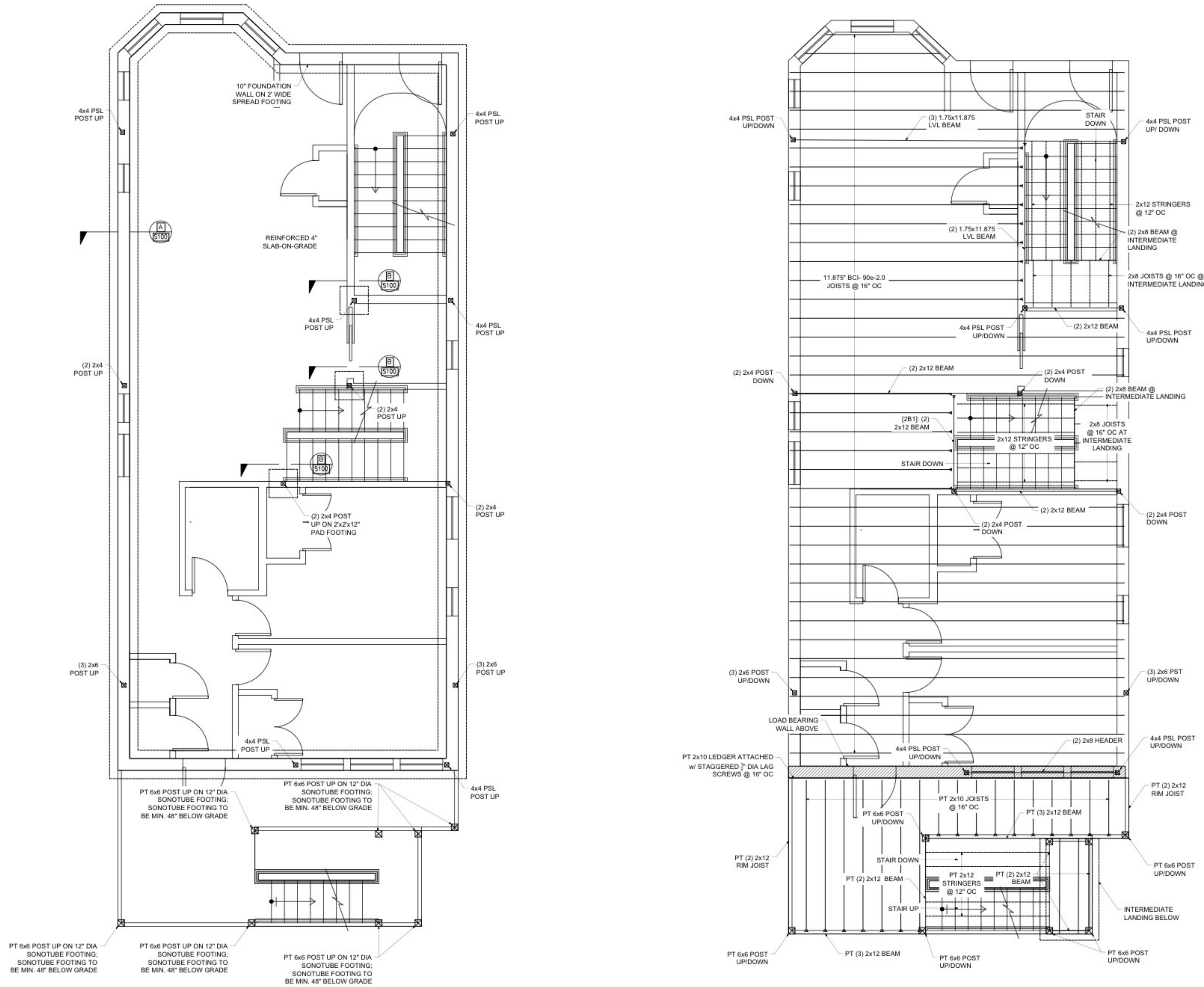
**S001**



(A) TYPICAL FOUNDATION WALL DETAIL  
1/2" = 1' - 0"



(B) INTERIOR FOOTING DETAIL  
1/2" = 1' - 0"

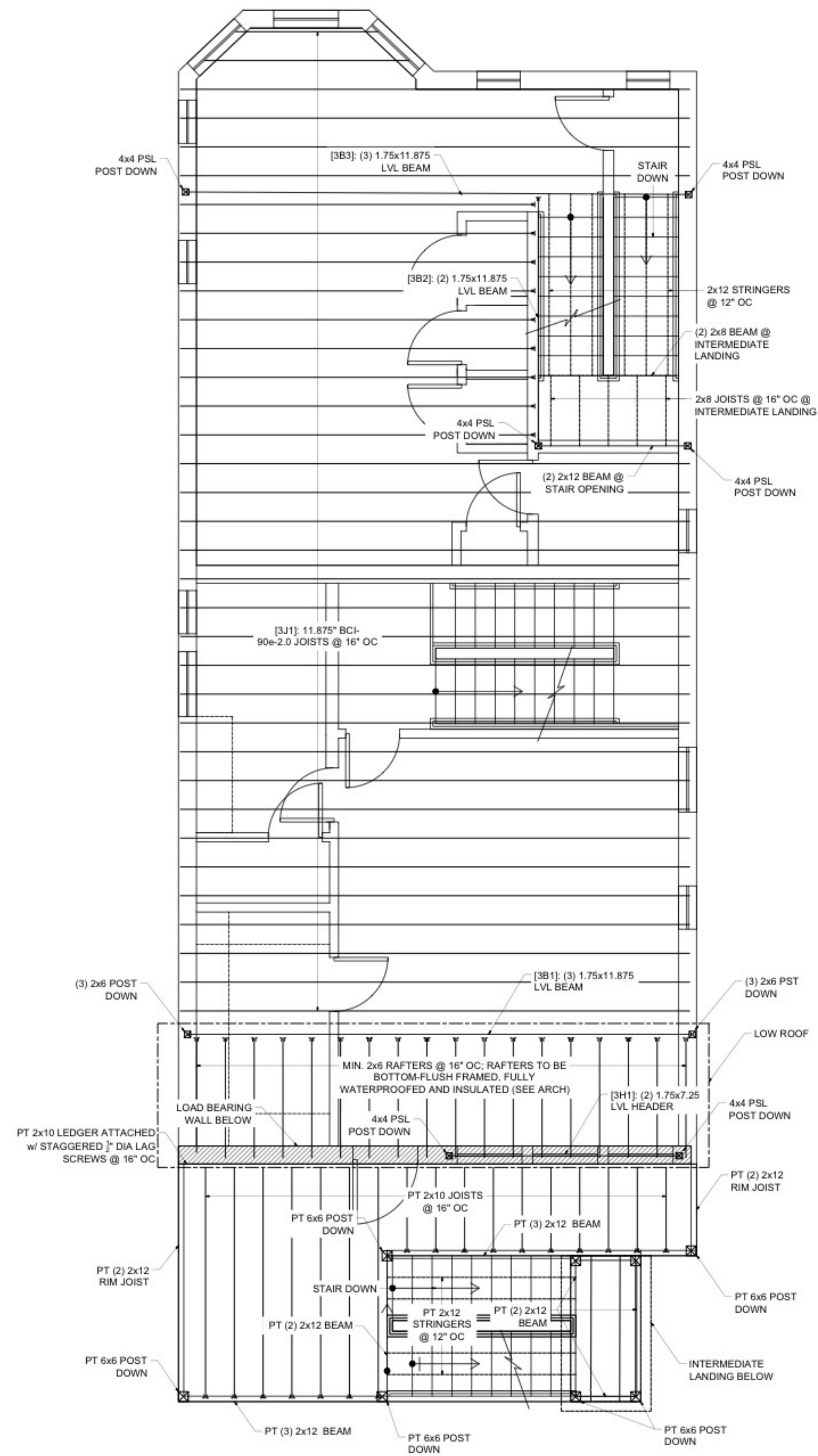


(1) FOUNDATION PLAN  
1/2" = 1' - 0"

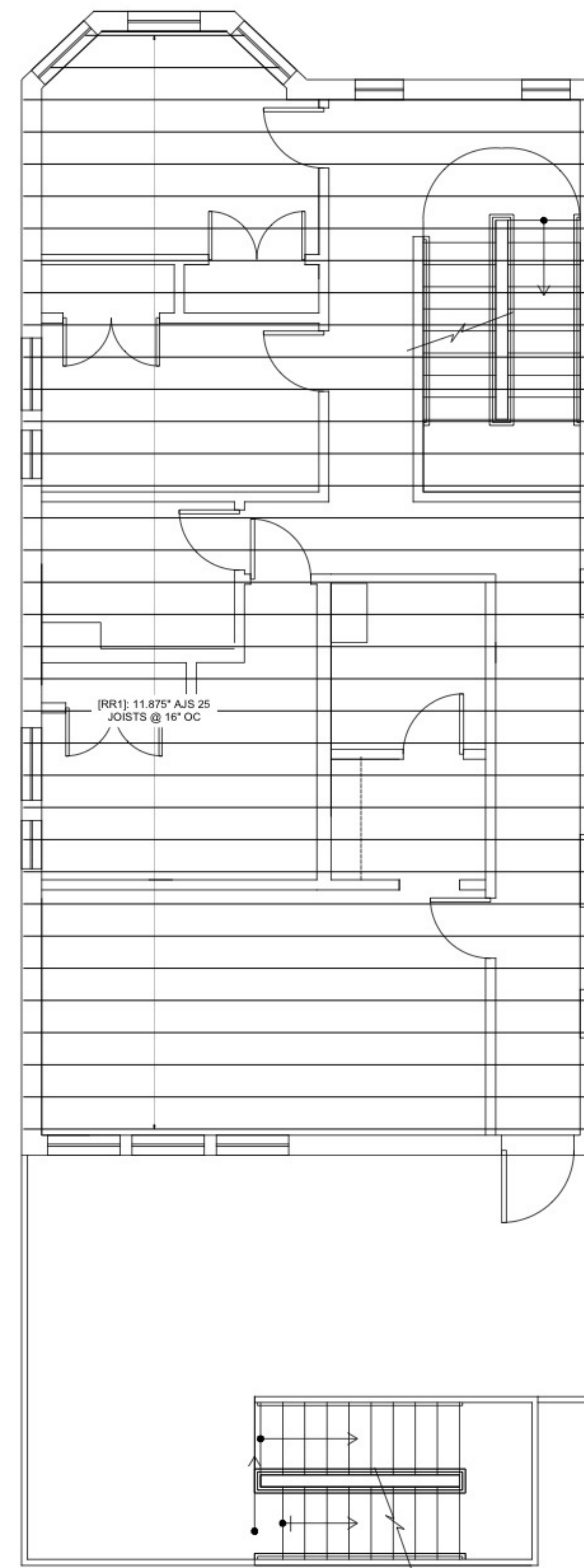
*Scott*

8/2/23

<b>Forest Structural Engineering</b> 231 W. Newton St #1 Boston, MA 02116 617-447-8030 scott@foreststructural.com	<b>OWNER:</b> 146 Thornton Street Roxbury, MA	<b>Proposed Framing Plans</b> Scale: 1/4" = 1' - 0"	<b>S100</b>
---	---	--	-------------



1 THIRD FLOOR FRAMING PLAN  
 $\frac{1}{4}'' = 1' - 0''$



2 ROOF PLAN  
 $\frac{1}{4}'' = 1' - 0''$

*Scott*  
 3/2/23



**Forest Structural Engineering**  
 231 W. Newton St #1  
 Boston, MA 02116  
 617-447-8030  
 scott@foreststructural.com

**OWNER:**  
 146 Thornton Street  
 Roxbury, MA

**Proposed Framing Plans**  
 Scale: 1/4" = 1' - 0"

**S101**



MIDNIGHT SOOT



CHISELED GREEN



MOUNTAIN SAGE