

GENERAL

- STRUCTURAL DRAWINGS TO BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS AND SPECIFICATIONS.
- CODES AND STANDARDS:
 - MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION.
 - ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
 - AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST EDITION.
 - ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
 - 2012 IECC ENERGY CODE
- ALL SAFETY REGULATIONS TO BE FOLLOWED STRICTLY. METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS IS CONTRACTOR'S RESPONSIBILITY.
- UNLESS OTHERWISE NOTED, DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
- EXISTING DIMENSIONS AND CONDITIONS MUST BE VERIFIED OR DETERMINED IN THE FIELD BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.

DESIGN

- DEAD LOAD:
WEIGHT OF THE STRUCTURE PLUS PERMANENT LOADS
(10 PSF MINIMUM COLLATERAL LOAD)
- SNOW LOAD:
GROUND SNOW LOAD, $P_g = 50$ PSF
DESIGN ROOF SNOW LOAD $P_f = 35$ PSF
- WIND LOAD:
BASIC WIND SPEED: 100 MPH
WIND EXPOSURE CATEGORY: C
BUILDING ENCLOSURE: CLOSED
- FLOOR LIVE LOAD = 40 PSF
ATTIC = 10 PSF

FOUNDATIONS

- ALLOWABLE SOIL BEARING CAPACITY ASSUMED 2 KSF, TO BE VERIFIED IN FIELD PRIOR TO START OF CONSTRUCTION.

CONCRETE

- ALL CONCRETE SHALL HAVE ULTIMATE COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.
- ALL CONCRETE WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).
- ALL CONCRETE SUBJECT TO FREEZE-THAW SHALL BE AIR-ENTRAINED. VERIFY AIR CONTENT BEFORE PLACEMENT OF ALL CONCRETE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 (UNLESS OTHERWISE NOTED), OR ASTM A706 WHERE DOWELS ARE INDICATED TO BE WELDED.
- CONCRETE COVER FROM FACE OF CONCRETE TO MAIN REINFORCING SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE:

SLABS AND WALLS (NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND).....	1"
FACE OF WALLS AND TOP OF SLABS EXPOSED TO EARTH, WEATHER, OR IMMERSED.....	2"
FOOTINGS, BOTTOM OF WALLS AND STRUCTURAL SLABS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....	3"
- DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN BARS, UNLESS OTHERWISE NOTED
- NO PIPES, CONDUITS AND SIMILAR NON-STRUCTURAL ELEMENTS SHALL BE EMBEDDED IN THE SLAB

PLYWOOD ROOF SHEATHING

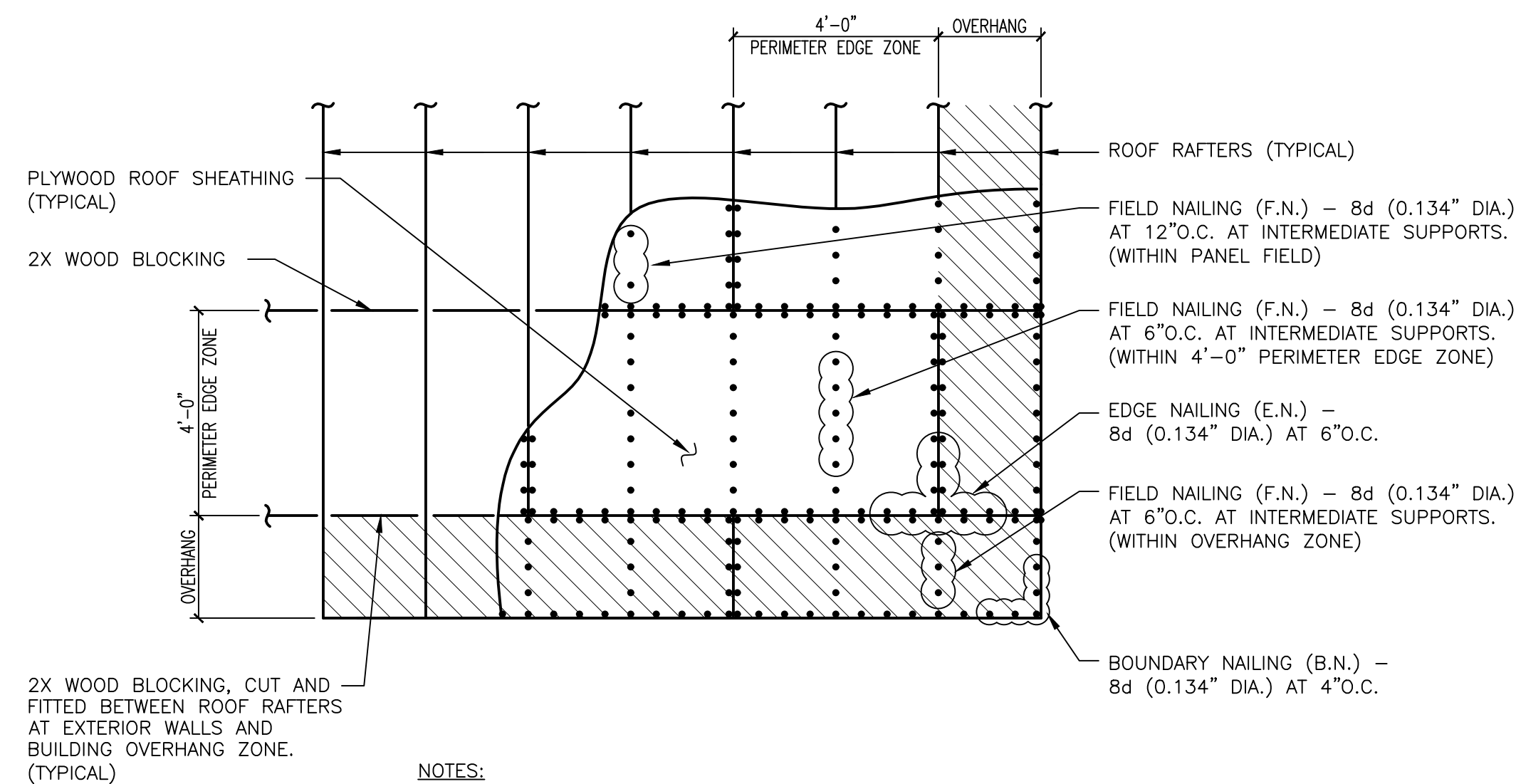
- 5/8" APA PLYWOOD FIRE RATED SHEATHING 24/0, EXTERIOR GRADE (C-D), EXPOSURE 1.
- LONG SIDE OF PLYWOOD PANELS SHALL BE PERPENDICULAR TO SUPPORTS.
- MINIMUM SIZE OF CONNECTIONS SHALL BE 10d NAILS TO WOOD. UNLESS NOTED, MAXIMUM SPACING OF CONNECTION; 6" O.C. AT PANEL EDGES AND DIAPHRAGM BOUNDARY AND 12" O.C. AT INTERMEDIATE SUPPORTS (FIELD NAILING). CONTINUOUS ON BACK OF SHEET.

PLYWOOD WALL SHEATHING

- 1/2" APA PLYWOOD RATED SHEATHING 32/16, EXTERIOR GRADE (C-D), EXPOSURE 1.
- MINIMUM SIZE OF CONNECTIONS SHALL BE 10d NAILS TO WOOD. UNLESS OTHERWISE NOTED, MAXIMUM SPACING OF CONNECTION; 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS (FIELD NAILING).
- SEE SHEAR WALL NOTES FOR SHEARWALL SHEATHING REQUIREMENTS.

WOOD FRAMING

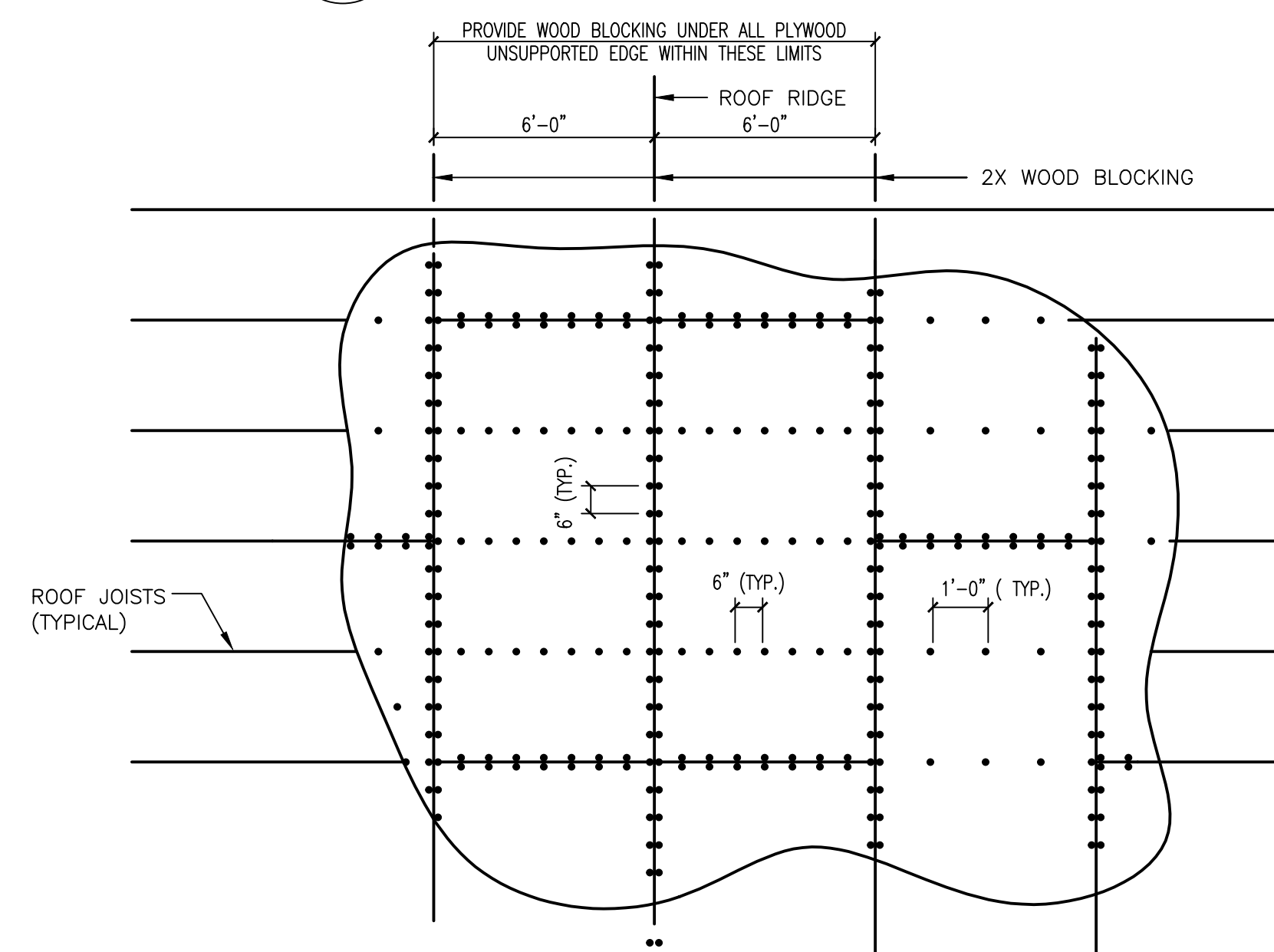
- STANDARDS BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
- ALL WOOD USED SHALL BE DOUGLAS FIR LARCH AS FOLLOWS:
- LOAD BEARING STUDS - No.2 OR BETTER
($F_b = 900$ PSF, $F_c = 1,350$ PSI, $E = 1,600,000$)
- SUBPURLINS, PLATES AND BLOCKING - No.1 OR BETTER
($F_b = 850$ PSF, $E = 1,400,000$)
- JOISTS, ROOF RAFTERS, BEAMS AND HEADERS - No.2 OR BETTER
($F_b = 900$ PSF, $E = 1,600,000$)
- ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.
- METAL CONNECTORS SHALL BE FASTENED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS TO DEVELOPE THE MAXIMUM PUBLISHED CAPACITY.
- UNLESS OTHERWISE NOTED, ALL NAILS SHALL BE COMMON NAILS IN ACCORDANCE WITH FEDERAL SPECIFICATIONS FF-N-105B. WHERE CONNECTIONS ARE NOT SHOWN OR NOTED ON THE PLANS, CONNECTIONS SHALL COMPLY WITH THE FASTENING SCHEDULE IN THE MASSACHUSETTS STATE BUILDING CODE.
- ALL 8d (0.131 DIAMETER) NAILS SHALL BE 2.5 INCHES LONG AND 10d (0.148 DIAMETER) NAILS SHALL BE 3 INCHES LONG, UNLESS NOTED OTHERWISE.
- FOR WOOD TO WOOD CONNECTIONS, SPACING OF THE NAILS SHALL NOT BE LESS THAN THE PENETRATION OR THE LEAST WOOD MEMBER THICKNESS. EDGE OR END DISTANCE SHALL BE A MINIMUM 1/2 THE NAIL SPACING.
- TOE NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES TO THE VERTICAL FACE OF THE PIECE AND BE STARTED AT 1/3 THE NAIL LENGTH FROM THE END OF THE PIECE. MINIMUM OF (4)- 8d NAILS PER STUD.
- NAILING SIZE AND PATTERNS PER MASSACHUSETTS STATE BUILDING CODE. (UNLESS OTHERWISE NOTED)
- FABRICATED BUILT-UP MULTI-PLY 2X6 STUD POSTS AN JAMBS WITH (3)- ROWS OF 16d BOX NAILS AT 5" ON CENTER STAGGERED. NAIL FROM BOTH SIDES AND NAIL SUCCESSIVE PLIES. FABRICATE CORNERS WITH A MINIMUM OF (3)- STUDS SPIKED TOGETHER.
- DOUBLE TOP PLATES SHALL BE SPLICED LAPPED 4'-0" MINIMUM AND OVERLAPPED AT CORNERS AND INTERSECTIONS WITH OTHER EXTERIOR AND INTERIOR LOAD BEARING WALLS TO RESIST AND TRANSFER LATERAL LOADS TO ROOF AND FLOOR DIAPHRAGM.
- ALL MEMBER SUPPORTS SHALL BE RESTRAINED AGAINST TWISTING BY FULL HEIGHT RIM BAND JOIST, HEADER OR OTHER MEMBER OR BY USING BLOCKING PANELS BETWEEN MEMBER ENDS, INCLUDING BEARING WALL LOADS.
- NOTCHES IN JOISTS SHALL NOT EXCEED 1/6 THE JOIST DEPTH AND SHALL NOT OCCUR IN THE MIDDLE THIRD OF THE SPAN. BORED HOLES SHALL NOT BE WITHIN 2" OR JOIST EDGES AND NOT EXCEED 1/3 THE DEPTH OF THE JOIST.
- EPOXY ANCHORS AND EXPANSION BOLTS SHALL COMPLY WITH AND BE INSTALLED IN ACCORDANCE WITH THEIR APPROVED EVALUATION REPORT AND MANUFACTURERS INSTRUCTIONS.



- NOTES:
- HATCHED AREA INDICATES OVERHANG
 - PROVIDE WOOD BLOCKING UNDER ALL PLYWOOD UNSUPPORTED ZONE.

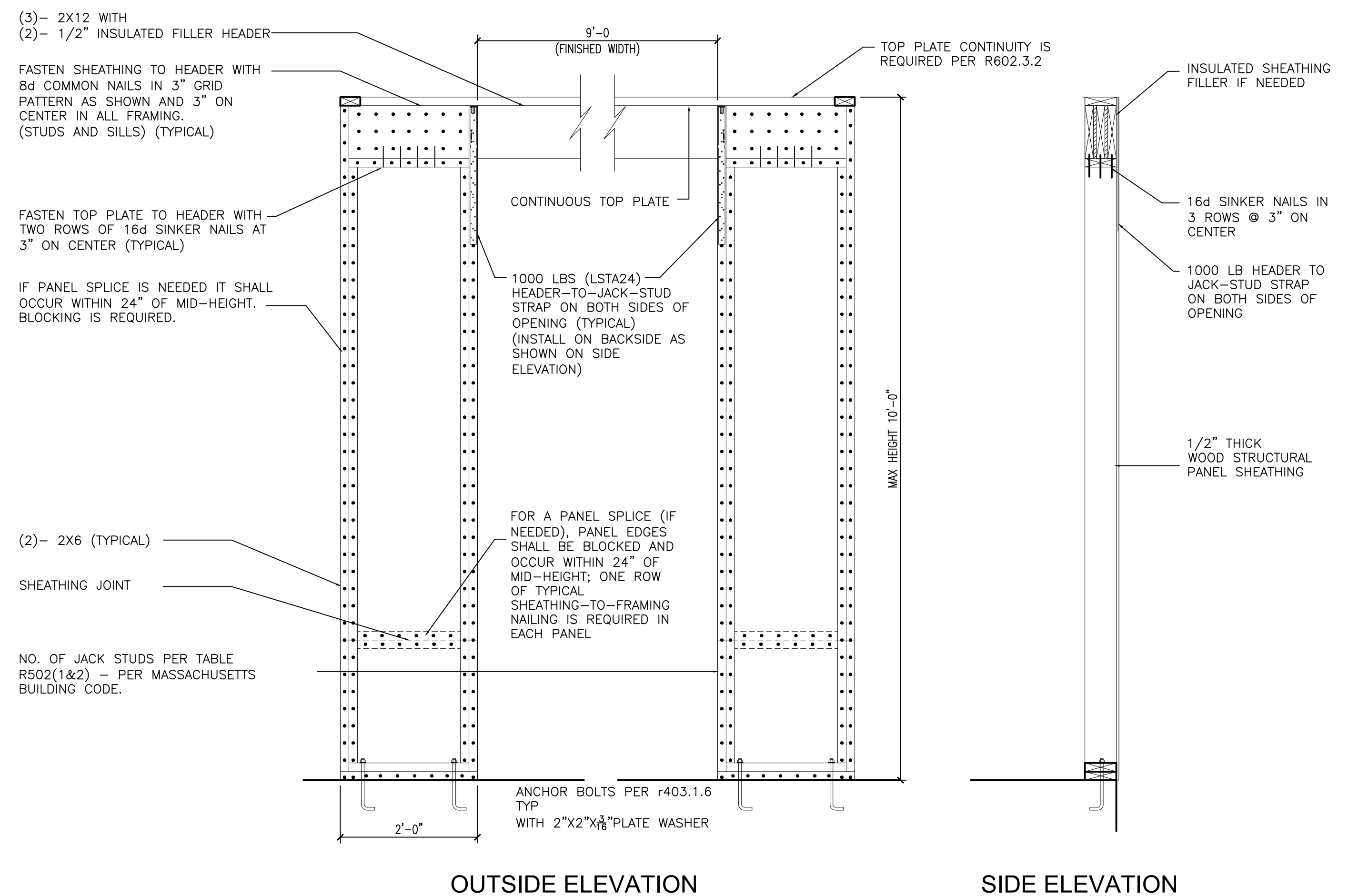
3 NAILING PATTERN AT ROOF PERIMETER EDGE ZONE

A-4 NONE



2 NAILING PATTERN AT ROOF RIDGE

A-4 NONE

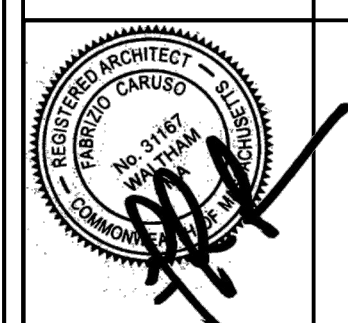


OUTSIDE ELEVATION

SIDE ELEVATION

1 PFG PORTAL FRAME AT GARAGE DOOR OPENING

A-4 SCALE 3/4"=1'-0"



FABRIZIO CARUSO AIA
110 WETHERBEE RD
WALTHAM, MA.

Proj. Mgr.: FC
Designed: FC
Drawn: FC
Checked: FC
Scale: NOTED
Date: 03-15-2022

RESIDENCE FOR
MR AND MRS THOMAS MORGAN
20 RAILROAD AVE
STOW, MA.

Proj. No. 20-005

Dwg. No.

A-4

Revisions:
Approved: