

VICINITY MAP
N.T.S.

PROJECT SITE

CONTACTS

PROPERTY OWNER: SEBO LLC
URBAN DESIGN GROUP: ALEXEY ANCHEYEV
INTERLAKEN ENGINEERING: MATTHEW HARINGA

SITE ADDRESS

16640 31ST AVE S
SEATAC, WA 98188

OWNER (CONTACT)

RICK BRAR (206) 351-2925 rick16852@gmail.com

SITE INFORMATION

PARCEL #: 8709600055
PRESENT USE: VACANT LOT
LAND (SQ. FT.): 9,000 SF
ACRES: 0.21
ZONING: UM-2400

SITE COVERAGE:

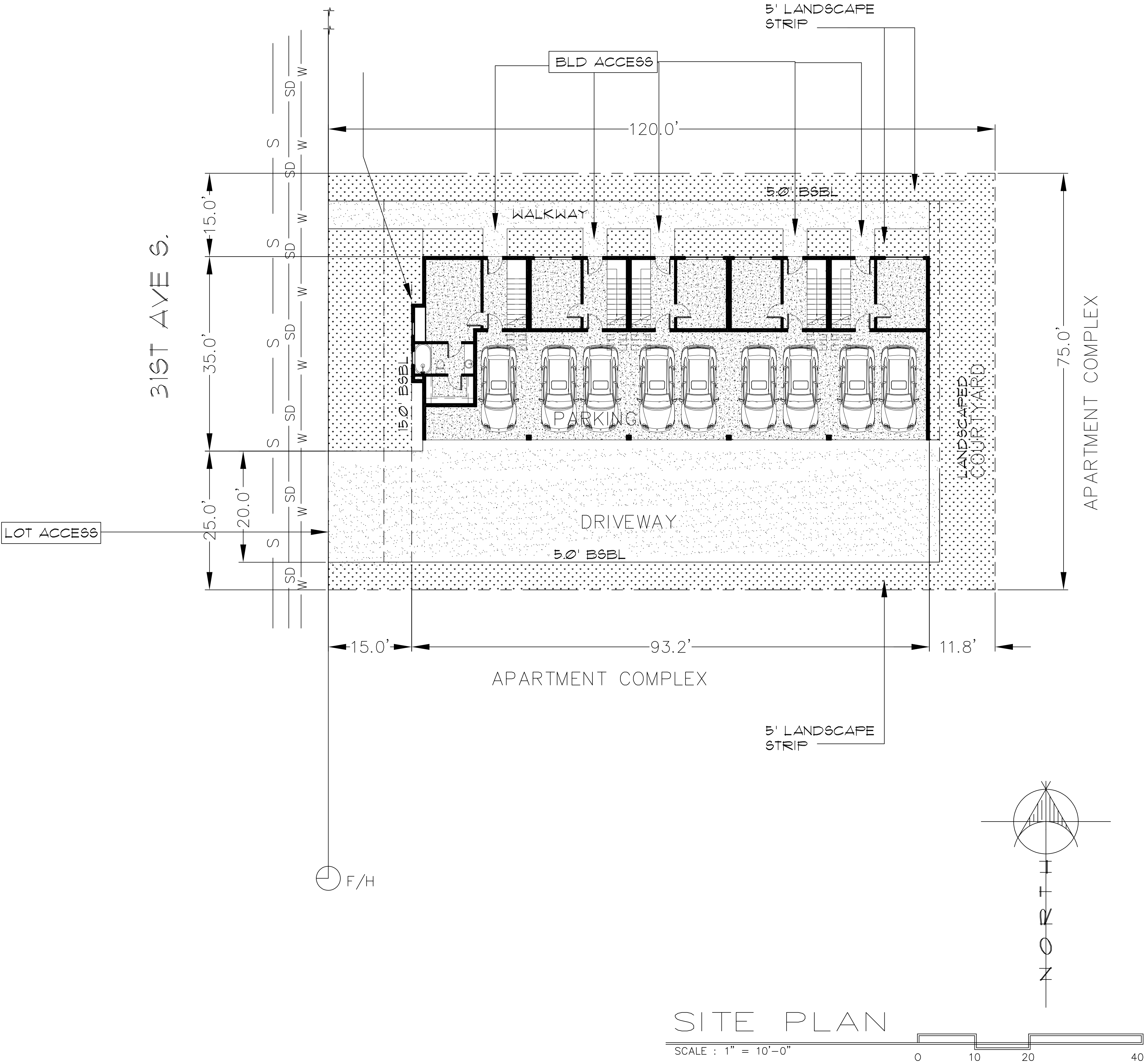
MAX. BUILDING COVERAGE REQUIRED: 55%
BUILDING COVERAGE PROVIDED: 2.654 SF (29.5%)

LEGAL DESCRIPTION

TURNER BELL ADD PP ACT 39973391 MOBILE HOME N 15 FT OF 10 & ALL OF 11

UTILITY PROVIDERS

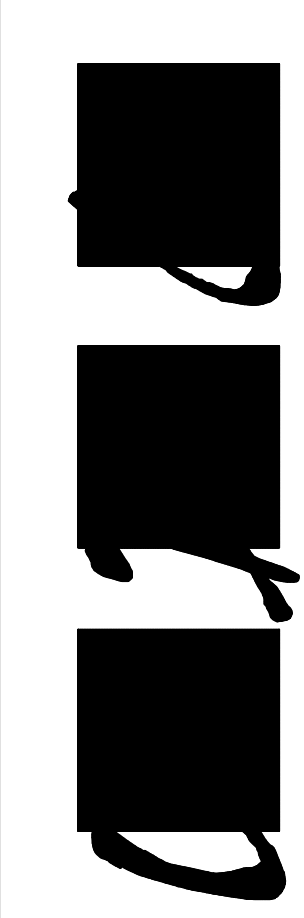
WATER PROVIDER:
SEWER PROVIDER:
ROAD ACCESS



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on these shall have precedence
over scale dimensions. Contractors
shall verify and be responsible for
all dimensions and conditions of
the job and URBAN DESIGN GROUP
must be notified in writing of any
variation from the dimensions,
conditions and specifications
construction shown by these
drawings. All shall be in accordance
with the standard building code,
(SBCI) or state and local codes.

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PROJECT:
SEBO APARTMENTS
LOCATION:
16640 31ST AVE S SEATAC, WA 98188



URBAN DESIGN GROUP

879 RAINIER AVE. N. SUITE A200 RENTON, WA 98057
PH: (206) 838-8250 E: admin@urbandesigns.us

DRAWN BY:	AVA
DATE ISSUED:	07/10/20
MODIFIED BY:	AVA
ENGINEER:	INTER
REVISION	Δ
REVISION	Δ

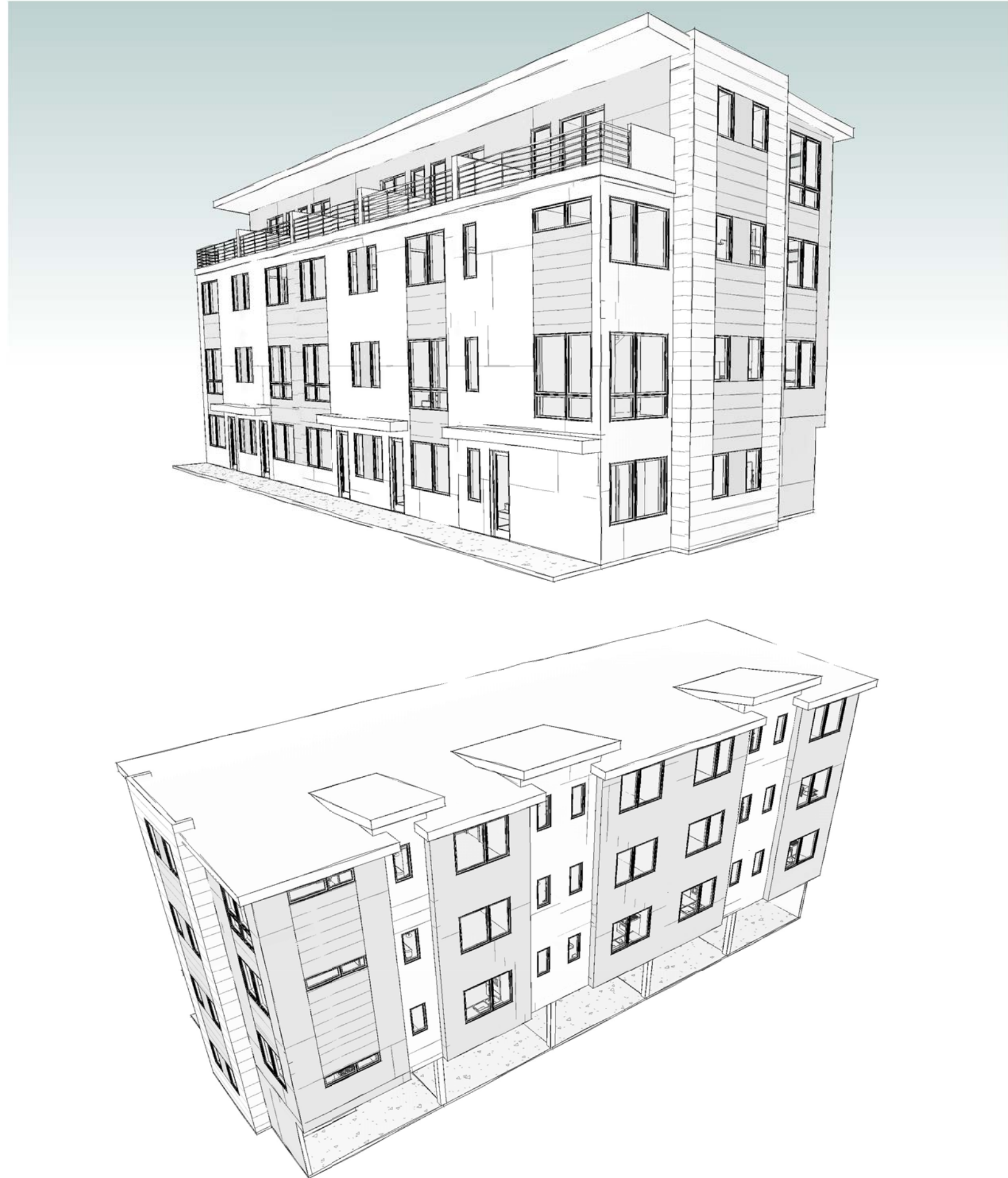
Project No.: 20160

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NORTH ELEVATION



SOUTH/EAST ELEVATION

BIRD'S EYE VIEW

PROJECT NAME:

SIBO APARTMENTS

PROJECT DATA:

LEGAL DESCRIPTION:
TURNER BELL ADD PP ACT
39473391 MOBILE HOME N 15
FT OF 10 & ALL OF 11

PARCEL NO.: 870960-0055
PROPERTY TYPE: R
LAND AREA: 9.000
ACRES: 0.21
RTSQQ: NE-28-23-4
ADDRESS: 16640 31ST AVE S
SEATAC, WA 98188
UM-2400

ZONING: UM-2400
MIN SETBACKS: FRONT: 15 FT.
SIDE: 5 FT.
REAR: 10 FT.

MAX HEIGHT: 40 FT.
WATER: WATER DISTRICT
SEWER/SEPTIC: PUBLIC
ROAD ACCESS: PUBLIC
STREET SURFACE: PAVED

DESIGN TEAM:

URBAN DESIGN GROUP
15445 53rd AVE. S. STE. 110
TUKWILA, WA 98188
(206) 838-8250
mok_ka@yahoo.com
CONTACT: ALEXEY ANCHEYEV

STRUCTURAL ENGINEER:

NN ENGINEERING
P.O. BOX 39681 LAKEWOOD, WA 98499
(253) 250-6651
nnengineering@comcast.net
CONTACT: NORM P. NAVARRO

OWNER(S):

RICK BRAR
(206) 351-2425
rick16852@gmail.com
CONTACT: RICK BRAR

GENERAL NOTES:

1. THE DRAWINGS ARE INTENDED TO PROVIDE THE BASIS FOR THE PROPER COMPLETION OF THE PROJECT SUITABLE FOR THE INTENDED USE OF THE OWNER.
2. ITEMS NOT EXPRESSLY SET FORTH BUT WHICH ARE REASONABLY IMPLIED OR NECESSARY FOR THE PROPER PERFORMANCE OF THIS WORK SHALL BE INCLUDED.
3. CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES.
4. DO NOT SCALE THE DRAWINGS. USE WRITTEN DIMENSIONS. PLEASE NOTIFY ARCHITECT OF ANY SUSPECTED ERRORS OR OMISSIONS PRIOR TO PROCEEDING WITH WORK. WHEN REQUIREMENTS ARE IN CONFLICT WITH THE DRAWINGS, THE CODE SHALL GOVERN.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.
6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL PERMANENT CONNECTIONS ARE IN PLACE.
7. CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM HIS WORK.
8. ALL WORK SHALL BE IN CONFORMANCE WITH THE 2018 BC AND ALL OTHER LOCAL CODES AND ORDINANCES.
9. UNLESS NOTED OTHERWISE PLAN DIMENSIONS ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, NOMINAL SURFACES OF MASONRY, AND CENTERLINES OF OPENINGS.
10. INTERIOR FRAME WALLS SHALL BE 2x4 STUDS 169 O.O. OR 3-K" METAL STUDS. (UNO)
11. PROVIDE APPROPRIATE FIREBLOCKING AT ALL ELECTRICAL, MECHANICAL AND PLUMBING PENETRATIONS.
12. ALL EXHAUST FANS SHALL BE DUCTED TO THE OUTSIDE VIA SMOOTH METAL DUCTS WITH APPROVED BACK -DRAFT DAMPERS.
13. WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL MOVEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER 1/3 AND LOWER 1/3 OF ITS VERTICAL DIMENSIONS. AT THE LOWER POINT A MIN. DISTANCE OF 4 INCHES SHALL BE MAINTAINED ABOVE THE CONTROLS WITH THE STRAPPING.
14. VERIFY ROUGH-IN DIMENSIONS FOR EQUIPMENT, CABINETS, BUILT-INS AND FIXTURES. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
15. ALL DEBRIS, WASTE, DEMOLISHED OR REMOVED MATERIALS SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER.

ENERGY NOTES:

1. 2018 EDITION WASHINGTON STATE ENERGY CODE SHALL BE FOLLOWED DURING CONSTRUCTION.
2. BUILDING ENVELOPE SHALL BE INSULATED PER PRESCRIPTIVE REQUIREMENTS.
3. EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, PLATE & FOUNDATION WALL, OPENINGS BETWEEN WALLS & FOUNDATION, BETWEEN WALLS & ROOF; OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS, FLOORS AND CEILINGS; AND ALL OTHER SUCH OPENINGS SHALL BE SEALED, CAULKED, GASKETTED OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.

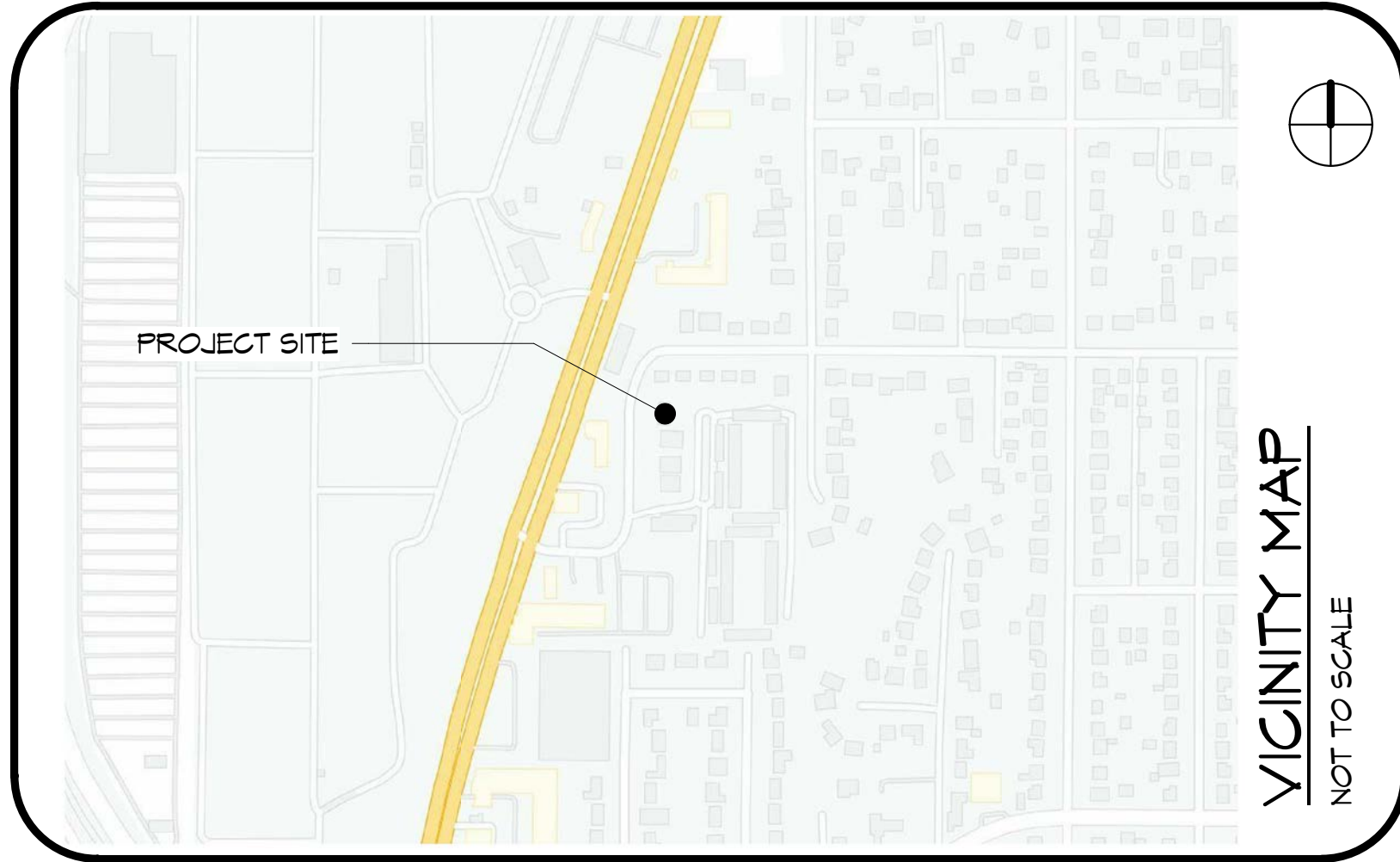
NOTE:

PLUMBING, MECHANICAL & ELECTRICAL PERMITS SHOULD BE APPLIED FOR SEPARATELY.

DRAWING INDEX	
SHEET NUMBER	SHEET NAME
A0	ARCHITECTURAL PLAN
A1	COVER SHEET
A2	GENERAL NOTES & PLAN PREVIEW
A3	ENERGY CREDIT OPTIONS
A4	1ST & 2ND FLOOR PLAN
A5	3RD & 4TH FLOOR PLAN
A6	FRONT & LEFT ELEVATIONS
A7	LEFT & RIGHT ELEVATIONS
A8	ROOF LAYOUT
A9	PERSPECTIVE VIEWS
A9.1	DETAILS & NOTES
A10	PROJECT DETAILS
A11	BUILDING CROSS-SECTION
A11.1	SCHEDULES
A12	SCHEDULES
A13	HARDIE PANEL SIDING DETAILS
A13	ARTISAN LAP SIDING DETAILS

PROJECT DESCRIPTION:

4 STORIES TOWNHOMES. TOTAL OF 5 UNITS: 4 THREE-BEDROOM UNITS AND 1 FOUR-BEDROOM UNIT.



PROJECT NAME

MULTI-FAMILY RESIDENCE
SIBO APARTMENTS
16640 31ST AVE S
SEATAC, WA 98188
PARCEL NO.: 87096000055

PREPARED FOR

SIBO LLC

SUBMITTAL/REVISION DATE
SUBMITTED: 6/30/2023
REVISED: -

DESIGNED BY:

A.ANCHHEYEV

DRAFTED BY:

HANNA
SHADRINA

SHEET TITLE

COVER
SHEET

PROJECT NUMBER

20160

SHEET NUMBER

A0

URBAN DESIGN GROUP
15445 53RD AVE. S. STE. 110, TUKWILA, WA 98188
(206) 838-8250 E-MAIL: URBANDESIGNCENTER@YAHOO.COM

GENERAL NOTES

INTERNATIONAL RESIDENTIAL CODE 2018 EDITION AND ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION TO BE FOLLOWED.
2018 INTERNATIONAL RESIDENTIAL CODE
2018 WASHINGTON STATE ENERGY CODE

CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION & PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS HAVE BEEN INSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY

REPETITIVE FEATURES NOT NOTED ON THE DRAWINGS SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL

CONTRACTOR SHALL VERIFY ALL ROUGH-IN DIMENSIONS FOR ALL EQUIPMENT TO BE INSTALLED

SITE WORK

GENERAL
UNLESS A SOILS INVESTIGATION BY A QUALIFIED SOILS ENGINEER IS PROVIDED, FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING OF 1500 PSF
EXTERIOR FOOTINGS SHALL BEAR 1'6" (MINIMUM) BELOW FINISHED GRADE. ALL FOOTINGS TO BEAR ON FIRM UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS.
BACK FILL TO BE THOROUGHLY COMPACTED.
FOUNDATION VENTS SHALL NOT INTERFERE WITH DIRECT LOAD PATH OF COLUMNS.

CONCRETE

MIX AND 28 DAY STRENGTH OF CONCRETE
- BASEMENT WALLS & FOUNDATIONS
& OTHER CONCRETE NOT EXPOSED TO WEATHER:

- BASEMENT SLABS & INTERIOR SLABS
& INTERIOR SLABS ON GRADE,
EXCEPT GARAGE DOOR SLABS

- BASEMENT WALLS & FOUNDATION
WALLS, EXTERIOR WALLS & OTHER
VERTICAL CONCRETE WORK EXPOSED
TO THE WEATHER:

- PORCHES, CARPORT SLABS & STEPS
EXPOSED TO WEATHER, & GARAGE

FLOOR SLABS:

GARAGE FLOORS TO SLOPE 1/8"/FT. MIN. TOWARDS
OPENING AS REQUIRED FOR DRAINAGE. CONCRETE SLABS
TO HAVE CONTROL JOINTS AT 25' FT. (MAX.) INTERVALS
E.A. WAY. SLABS ARE TO BE 5-AIR ENTRAINED
CONCRETE SIDEWALKS TO HAVE 3/4" IN. TOOLED JOINTS
AT 5' FT. (MIN.) O.C.

CONCRETE COVER OF REINFORCING

3" CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED
TO EARTH.
1 1/2" CONCRETE EXPOSED TO EARTH OR WEATHER.
1 1/2" BEAMS AND COLUMNS NOT EXPOSED TO EARTH
OR WEATHER.
3/4" SLABS AND WALLS NOT EXPOSED TO EARTH
OR WEATHER.
LAP COLUMN VERTICALS. CLASS "A" CONCRETE AND
MASONRY COLUMN AND WALL VERTICALS 32 DIAMETERS.
LAP ALL OTHER REINFORCING 24 DIAMETERS. SPLICES AT
TENSION REGIONS SHALL NOT BE PERMITTED.

CARPENTRY

GENERAL
ALL FRAMING TO COMPLY WITH ENGINEERING S-SHEETS
FOR NAIL SIZES AND SPACING.

ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE
TREATED.

6" MIN. CLEARANCE BETWEEN WOOD AND EARTH.
18" MIN. CLEARANCE BETWEEN FLOOR JOIST AND
EARTH.
12" MIN. CLEARANCE BETWEEN FLOOR BEAMS AND
EARTH.

FASTENERS FOR PRESSURE PRESERVATIVE AND
FIRE-RETARDANT-TREATED WOOD SHALL BE OF
HOT-DIPPED GALVANIZED STEEL.

BOLT HEADS AND NUTS BEARING AGAINST WOOD TO BE
PROVIDED WITH 3"x3"x.224" PLATE WASHERS. WOOD BEARING
ON OR INSTALLED WITHIN 1" OF MASONRY OR CONCRETE TO
BE TREATED WITH AN APPROVED PRESERVATIVE. SOLID
BLOCKING OF NOT LESS THAN 2 X THICKNESS SHALL BE
PROVIDED AT ENDS AND AT ALL SUPPORT OF JOISTS AND
RAFTERS. BETWEEN SUPPORTS PROVIDED AT ENDS AND AT
ALL SUPPORT OF JOISTS AND RAFTERS, JOISTS, 10'-0" FOR
ROOF JOISTS. TYPICAL SILL BOLTS TO BE 5/8" DIAMETER
AT 6'-0" O.C. MINIMUM 1" EMBED. ALL METAL FRAMING ANCHORS
AND HANGERS SHOWN ON DRAWINGS SHALL BE STRONG TIE
CONNECTORS AS MANUFACTURED BY SIMPSON COMPANY.

PLYWOOD
PLYWOOD WALL AND ROOF SHEATHING SHALL BE 3/4" CDX,
UNLESS OTHERWISE SPECIFIED. PLYWOOD FLOOR SHEATHING
SHALL BE 3/4" CDX T&G. UNLESS OTHERWISE SPECIFIED.
STAGGER END LAPS AT ROOF AND FLOOR SHEATHING.
OSB SHEATHING PRODUCTS OF EQUIVALENT SPAN RATINGS
SHALL BE ALLOWED.

WOOD TRUSSES
ALL ROOF TRUSSES SHALL BE FRAMED AND TIED INTO THE
FRAME WORK AND SUPPORTING WALLS SO AS TO FROM AN
INTEGRAL PART OF THE WHOLE BUILDING. ROOF TRUSSES
SHALL HAVE JOINTS WELL FITTED AND SHALL HAVE ALL
TENSION MEMBERS WELL TIGHTENED BEFORE ANY LOAD IS
PLACED UPON THE TRUSS. DIAGONAL AND SWAY BRACING
SHALL BE USED TO BRACEALL TRUSSES.

INSULATION AND MOISTURE PROTECTION

GENERAL
INSULATION BAFFLES TO MAINTAIN 1" ABOVE BATT
INSULATION
BAFFLES TO EXTEND 6" ABOVE BATT INSULATION
BAFFLES TO EXTEND 12" ABOVE LOOSE FILL
INSULATION
INSULATE BEHIND TUBS/SHOWERS, PARTITIONS
AND CORNERS FACE STAPLE BATTS
FRICTION FIT FACED BATTS
USE 4 MIL POLY VAPOR RETARDER AT
WALLS.
* R-10 RIGID FOAM INSULATION ON 4X EVADERS
AT EXTERIOR WALLS.

INFILTRATION CONTROL

1. EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES,
OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN
WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS
AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS,
FLOOR AND ROOFS, AND ALL OTHER SUCH OPENINGS IN
THE BUILDING ENVELOPE, INCLUDING ACCESS PANELS INTO
UNHEATED SPACES, SHALL BE SEALED, CAULKED, GASKETED
OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE. ALL OPENINGS
SHALL BE FLASHED. APPROVED CORROSION-RESISTIVE
FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL
ENVELOPE
IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO
THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING
STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL
EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH AND
SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING
THE EXTERIOR WALL ENVELOPE. APPROVED
CORROSION-RESISTANT FLASHING SHALL
BE INSTALLED AT ALL OF THE FOLLOWING LOCATIONS:

- AT TOP OF ALL EXTERIOR WINDOW AND DOOR OPENINGS
IN SUCH A MANNER AS TO BE LEAKPROOF, EXCEPT THAT
SELF-FLASHING WINDOWS HAVING A CONTINUOUS LAP OF NOT
LESS
THAN 1-1/8" OVER THE SHEATHING MATERIAL AROUND THE
PERIMETER OF THE OPENING, INCLUDING CORNERS, DO NOT
REQUIRE ADDITIONAL FLASHING; JAMB
FLASHING MAY ALSO BE OMITTED WHEN SPECIFICALLY
APPROVED BY THE BUILDING OFFICIALS.
- AT THE INTERSECTION OF CHIMNEYS OR OTHER MASONRY
CONSTRUCTION WITH FRAME OR WALLS, WITH PROJECTING LIPS
ON
BOTH SIDES UNDER STUCCO COPINGS.
- UNDER AND AT THE ENDS OF MASONRY, WOOD OR METAL
COPINGS AND SILLS.
- CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM.
- WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH
TO A
WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION.
- AT WALL AND ROOF INTERSECTIONS.
- AT BUILT-IN GUTTERS.

- ALL EXTERIOR DOORS, OTHER THAN FIRE-RATED
DOORS, SHALL BE DESIGNED TO LIMIT AIR LEAKAGE
AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION.
DOORS BETWEEN RESIDENCE AND GARAGE ARE NOT
CONSIDERED FIRE-RATED AND MUST MEET THE ABOVE
REQUIREMENT.

- ALL EXTERIOR WINDOWS SHALL BE DESIGNED TO
LIMIT INFILTRATION INTO OR FROM THE BUILDING
ENVELOPE.

- RECESSED LIGHTING FIXTURES; WHEN INSTALLED IN
THE BUILDING ENVELOPE, RECESSED LIGHTING FIXTURES
SHALL BE TYPE IC RATED AND CERTIFIED TO HAVE NO
MORE THAN 2.0 CFM AIR MOVEMENT FROM THE
CONDITIONED SPACE TO THE CEILING CAVITY.
THE LIGHTING FIXTURE SHALL BE TESTED AT 75 PASCAL'S
OR 1.51 LBS/FT2 PRESSURE DIFFERENCE AND HAVE A
LABEL ATTACHED, SHOWING COMPLIANCE WITH THIS TEST
METHOD. RECESSED LIGHTING FIXTURES SHALL BE
INSTALLED
WITH A GASKET OR CAULK BETWEEN THE FIXTURE AND
CEILING
TO PREVENT AIR LEAKAGE.

VAPOR BARRIERS/ GROUND COVERS
AN APPROVED VAPOR BARRIER SHALL BE PROPERLY
INSTALLED IN ROOF DECKS, IN ENCLOSED RAFTER SPACES
FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE
UNDERSIDE OF ROOF RAFTERS, AND AT EXTERIOR WALLS,
INSET STAPLED BATTS WITH A PERM RATING LESS THAN
ONE MAY BE INSTALLED IF THE VAPOR BARRIER IS TO THE
WARM SIDE, STAPLES ARE PLACED NOT MORE THAN 8 INCHES
ON CENTER AND GAPS BETWEEN THE FACING AND THE
FRAMING
DO NOT EXCEED 1/16 INCH.

A GROUND COVER OF 6 MIL (0.006")BLACK POLYETHYLENE
OR EQUIVALENT, SHALL BE LAID OVER THE GROUND IN ALL
GRAVL SPACES. THE GROUND COVER SHALL BE
OVERLAPPED
ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE
FOUNDATION WALL.

WINDOWS, DOORS, HVAC, & ELECT. EQUIP.

GLAZING MAXIMUM:
ALL CLIMATE ZONES:
GLAZING "U" VALUE: VERTICAL (MAX): .28
OVERHEAD (MAX): .50
DOOR "U" VALUE (MAX): .20
(DOORS W/ MORE THAN 50
CONSIDERED A WINDOW)
RECESSED LIGHT FIXTURES: IC RATED

DOORS, WINDOWS AND SKYLIGHTS

GENERAL
DOORS TO THE EXTERIOR SHALL HAVE MAX. 3" STEP TO
MIN. 36" DEEP LANDING. .

BEDROOM EMERGENCY EGRESS WINDOWS MINIMUM NET CLEAR
OPENING OF 5.7 SQ. FT. MIN. NET CLEAR OPEN ABLE WIDTH
OF 20" AND MINIMUM NET CLEAR OPENING HEIGHT OF 24".
MAXIMUM FINISHED SILL HEIGHT OF 44" ABOVE FLOOR.

FACTORY BUILT WINDOWS TO BE CONSTRUCTED TO PERMIT
MAXIMUM INFILTRATION OF 0.5 CFM PER LINEAL FOOT OF
OPERABLE SASH PERIMETER AS TESTED BY ASTM STANDARDS.
SITE BUILT AND MILL WORK SHOP BUILT WOODEN SASH ARE
EXEMPT FROM INFILTRATION CRITERIA ABOVE, BUT MUST BE
MADE TIGHTLY FITTING AND WEATHER STRIPPED OR CAULKED.
SLIDING GLASS DOORS TO PERMIT MAXIMUM INFILTRATION
OF 0.5 CFM INFILTRATION PER SQUARE FOOT OF DOOR AREA.

SAFETY GLAZING SHALL BE LOCATED WITHIN

- INGRESS AND EGRESS DOORS
- SLIDING GLASS DOORS, SWINGING GLASS DOORS
- SHOWER AND BATHTUB ENCLOSURES
- GLAZING W/ THE EXPOSED EDGE WITHIN A 24" ARC OF EITHER
VERTICAL EDGE OF A DOOR IN THE CLOSED PORTION4 BOTTOM
EDGE IS LESS THAN 60" ABOVE THE WALKING SURFACE
GLAZING GREATER THAN 4 S.P. LESS THAN 13" ABOVE FINISHED
FLOOR.
WINDOW SILLS: 612.2, 24" MINIMUM SILL HEIGHT EXCEPTIONS
ALLOW FOR OPENING LIMITING DEVICE FOR 4" DIAMETER
SPHERE AND WINDOW FALL PREVENTION DEVICE THAT COMPLIES
WITH R312.2

STRUCTURAL NOTES

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO
THE CONTRACT DRAWINGS.
- DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL
BE
RESPONSIBLE FOR THE SAFETY OF THE BUILDING.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL
CONSTRUCTION PROCEDURES INCLUDING LAGGING, SHORING AND
PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS
AND
UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL
SAFETY ORDINANCES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING
THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS.
ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF
ENGINEER.
- ALL DETAILS DESIGNATED AS STANDARD OR TYPICAL SHALL
OCCUR IN ADDITION TO ANY OTHER SPECIFIC DETAIL CALLED OUT
- COORDINATE WITH MECHANICAL, PLUMBING, AND ELECTRICAL
REQUIREMENTS FOR SIZE AND LOCATION OF ALL OPENINGS
REQUIRED FOR DUCTS, PIPES, AND PIPE SLEEVES, ELECTRICAL
CONDUITS, AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR
OTHERWISE INCORPORATED IN STRUCTURAL WORK.
- PROVIDE OPENINGS AND SUPPORTS, AS REQUIRED PER
STANDARD
DETAILS FOR HEATERS, MECHANICAL EQUIPMENT, VENTS, DUCTS,
PIPING, ETC. ALL SUSPENDED MECHANICAL EQUIPMENT
SHALL BE SWAY OR LATERALLY BRACED.

TYPE OF CONSTRUCTION

V-B

UNPROTECTED WOOD FRAME
(EXAMPLES OF CONSTRUCTION ARE SINGLE
FAMILY HOMES AND
GARAGES. THEY OFTEN HAVE EXPOSED
WOOD SO THERE IS NO
FIRE RESISTANCE.)



PLAN PREVIEW

NOT TO SCALE

VERTICAL
FENESTRATION U=0.26

FLOOR R-38

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Multifamily (effective February 1, 2021)

Version 1.0

These requirements apply to Group R-2 buildings three stories or less in height above grade plane.
Other Group R-2 buildings must comply with the commercial energy code.

Project Information

Contact Information

Instructions: This multifamily project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative

Date

All Climate Zones (Table R402.1.1)

	R-Value ^a	U-Factor ^a
Fenestration U-Factor ^b	n/a	0.30
Skylight U-Factor ^b	n/a	0.50
Glazed Fenestration SHGC ^{b,c}	n/a	n/a
Ceiling ^d	49	0.026
Wood Frame Wall ^{d,h}	21 int	0.056
Floor	30	0.029
Below Grade Wall ^{c,h}	10/15/21 int + TB	0.042
Slab ^{d,f} R-Value & Depth	10, 2 ft	n/a

a

R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A101.4 shall not be less than the R-value specified in the table.

b

The fenestration U-factor column excludes skylights.

c

"10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.

d

R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.

e

For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.

f

R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.

g

For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for climate zone 5 of ICC 400.

h

Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Multifamily (effective February 1, 2021)

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) so as to achieve the following minimum number of credits:

• Multifamily R2 Dwelling Unit: 4.5 credits

Before selecting your credits on this Summary table, review the details in Table 406.3 (Multifamily), on page 3.

Summary (Table R406.2)

Heating Options	Fuel Normalization Descriptions	Credits - select ONE heating option	User Notes
1	Combustion heating minimum NAECA ³	0.0	<input type="checkbox"/>
2	Heat pump ²	1.0	<input type="checkbox"/>
3	Electric resistance heat only - furnace or zonal	-1.0	<input type="checkbox"/>
4	DHP with zonal electric resistance per option 3.4	na	<input checked="" type="checkbox"/>
5	All other heating systems	-0.5	<input type="checkbox"/>

Energy Options	Energy Credit Option Descriptions	Credits - select ONE energy option from each category ⁴	
1.1	Efficient Building Envelope	0.5	<input type="checkbox"/>
1.2	Efficient Building Envelope	1.0	<input type="checkbox"/>
1.4	Efficient Building Envelope	1.0	<input type="checkbox"/>
1.5	Efficient Building Envelope	1.5	<input type="checkbox"/>
1.6	Efficient Building Envelope	2.0	<input type="checkbox"/>
1.7	Efficient Building Envelope	0.5	<input type="checkbox"/>
2.1	Air Leakage Control and Efficient Ventilation	1.0	<input checked="" type="checkbox"/>
2.2	Air Leakage Control and Efficient Ventilation	1.5	<input type="checkbox"/>
2.3	Air Leakage Control and Efficient Ventilation	2.0	<input type="checkbox"/>
2.4	Air Leakage Control and Efficient Ventilation	2.5	<input type="checkbox"/>
3.1 ^a	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.3 ^a	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.4	High Efficiency HVAC	2.0	<input checked="" type="checkbox"/>
3.6 ^a	High Efficiency HVAC	3.0	<input type="checkbox"/>
4.1	High Efficiency HVAC Distribution System	0.5	<input type="checkbox"/>
5.1 ^d	Efficient Water Heating	0.5	<input type="checkbox"/>
5.2	Efficient Water Heating	0.5	<input type="checkbox"/>
5.3	Efficient Water Heating	1.0	<input type="checkbox"/>
5.4	Efficient Water Heating	2.0	<input type="checkbox"/>
5.5	Efficient Water Heating	2.5	<input type="checkbox"/>
5.6	Efficient Water Heating	3.0	<input type="checkbox"/>
6.1 ^e	Renewable Electric Energy (3 credits max)	1.0	<input type="checkbox"/>
7.1	Appliance Package	1.5	<input checked="" type="checkbox"/>
Total Credits		4.5	<div>Calculate Total</div> <div>Clear Form</div>

a.

An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.

b.

Equipment listed in Table C403.3.2(4) or C403.3.2(5)

c.

Equipment listed in Table C403.3.2(1) or C403.3.2(2)

d.

You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.

e.

1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See Table R406.2 for full requirements and complete option descriptions.

f.

Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

PERSPECTIVE ENERGY CREDITS

Table 406.3 – Energy Credits (Multifamily)

Option

Description

Credits: MF

1. EFFICIENT BUILDING ENVELOPE OPTIONS

Only one option from Items 1.1 through 1.7 may be selected in this category.

Compliance with the conductive UA targets is demonstrated using Section R402.1.4, Total UA alternative, where [1-(Proposed UA/Target UA)] > the required %UA reduction.

1.1

Prescriptive compliance is based on Table R402.1.1 with the following modifications:
Vertical fenestration U = 0.24

0.5

1.2

Prescriptive compliance is based on Table R402.1.1 with the following modifications:
Vertical fenestration U = 0.20

1.0

1.4

Prescriptive compliance is based on Table R402.1.1 with the following modifications:
Vertical fenestration U = 0.25
Floor R-38
Basement wall R-21 int plus R-5 ci
Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab **or**
Compliance based on Section R402.1.4: Reduce the Total conductive UA by 15%
Prescriptive compliance is based on Table R402.1.1 with the following modifications:
Vertical fenestration U = 0.22
Ceiling and single-rafter or joist-vaulted R-49 advanced
Wood frame wall R-21 int plus R-12 ci
Floor R-38
Basement wall R-21 int plus R-12 ci
Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab **or**
Compliance based on Section R402.1.4: Reduce the Total conductive UA by 30%

1.0

1.5

Prescriptive compliance is based on Table R402.1.1 with the following modifications:
Vertical fenestration U = 0.18
Ceiling and single-rafter or joist-vaulted R-60 advanced
Wood frame wall R-21 int plus R-16 ci
Floor R-48
Basement wall R-21 int plus R-16 ci
Slab on grade R-20 perimeter and under entire slab Below grade slab R-20 perimeter and under entire slab **or**
Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%.

1.5

1.6

Prescriptive compliance is based on Table R402.1.1 with the following modifications:
Vertical fenestration U = 0.18
Ceiling and single-rafter or joist-vaulted R-60 advanced
Wood frame wall R-21 int plus R-16 ci
Floor R-48
Basement wall R-21 int plus R-16 ci
Slab on grade R-20 perimeter and under entire slab Below grade slab R-20 perimeter and under entire slab **or**
Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%.

2.0

1.7

Advanced framing and raised heel trusses or rafters
Vertical Glazing U-0.28
R-49 Advanced (U-0.020) as listed in Section A102.2.1, **Ceilings below a vented attic and**
R-49 vaulted ceilings with full height of uncompressed insulation extending over the wall top plate at the eaves.

0.5

Table 406.3 – Energy Credits (Multifamily)

Option

Description

Credits: MF

2. AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS

Only one option from Items 2.1 through 2.4 may be selected in this category.

Compliance based on R402.4.1.2:

2.1

Reduce the tested air leakage to **3.0 air changes per hour** maximum at 50 Pascals **or**
For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.3 cfm/sf maximum at 50 Pascals and**

All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a high efficiency fan(s) (**maximum 0.35 watts/cfm**), not interlocked with the furnace fan (if present). Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode.

To qualify to claim this credit, the building permit drawings shall specify the option being selected and the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.

1.0

2.2

Compliance based on Section R402.4.1.2:
Reduce the tested air leakage to **2.0 air changes per hour** maximum at 50 Pascals **or**
For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.25 cfm/sf** maximum at 50 Pascals **and**

All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.65**. ¹

Compliance based on Section R402.4.1.2:
Reduce the tested air leakage to **1.5 air changes per hour** maximum at 50 Pascals **or**
For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.25 cfm/sf** maximum at 50 Pascals **and**

All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.75**. ¹

1.5

2.3

Compliance based on Section R402.4.1.2:
Reduce the tested air leakage to **1.5 air changes per hour** maximum at 50 Pascals **or**
For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.25 cfm/sf** maximum at 50 Pascals **and**

All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.75**. ¹

Compliance based on Section R402.4.1.2:
Reduce the tested air leakage to **0.6 air changes per hour** maximum at 50 Pascals **or**
For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.15 cfm/sf** maximum at 50 Pascals **and**

All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.80**. **Duct installation shall comply with Section R403.3.7**. ¹

2.0

2.4

Compliance based on Section R402.4.1.2:
Reduce the tested air leakage to **0.6 air changes per hour** maximum at 50 Pascals **or**
For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.15 cfm/sf** maximum at 50 Pascals **and**

All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.80**. **Duct installation shall comply with Section R403.3.7**. ¹

2.5

¹ To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.

Table 406.3 – Energy Credits (Multifamily)

Option

Description

Credits: MF

3. HIGH EFFICIENCY HVAC EQUIPMENT OPTIONS

Only one option from Items 3.1 through 3.6 may be selected in this category.

3.1²

Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% **or**
Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. ³
Closed-loop ground source heat pump; with a minimum COP of 3.3 **or**

1.0

3.3²

Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. ³

1.0

3.4

Ductless mini-split heat pump system, zonal control. In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF of 10.0 shall be installed and provide heating to the largest zone of the housing unit.

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.

2.0

3.6²

Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature.

To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).
² An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
³ To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.

3.0

² An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
³ To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.

4. HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS

4.1

All supply and return ducts located in an unconditioned attic shall be deeply buried in ceiling insulation in accordance with Section R403.3.7.

For mechanical equipment located outside the conditioned space, a maximum of 10 linear feet of return duct and 5 linear feet of supply duct connections to the equipment may be outside the deeply buried insulation. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices.

Duct leakage shall be limited to 3 cfm per 100 square feet of conditioned floor area.

Air handler(s) shall be located within the conditioned space.

0.5

Table 406.3 – Energy Credits (Multifamily)

Option

Description

Credits: MF

5. EFFICIENT WATER HEATING OPTIONS

Only one option from Items 5.2 through 5.6 may be selected in this category. Item 5.1 may be combined with any option.

5.1

A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all and only the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled.

To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.

0.5

5.2

Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. ⁴

0.5

5.3

Water heating system shall include one of the following:
Energy Star rated gas or propane water heater with a minimum UEF of 0.91 **or**
Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems **or**
Water heater heated by ground source heat pump meeting the requirements of Option 3.3.
To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.

1.0

5.4

Water heating system shall include one of the following:
Electric heat pump water heater meeting the standards for Tier I of NEEA's advanced water heating specification **or**
For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier I of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. ⁴

2.0

5.5

Water heating system shall include one of the following:
Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification **or**
For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. ⁴

2.5

5.6

Water heating system shall include one of the following:
Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard *Advanced Water Heating Specification* with the UEF noted above **or**
For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. ⁴

3.0

⁴ To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.

Table 406.3 – Energy Credits (Multifamily)

Option

Description

Credits: MF

6. RENEWABLE ELECTRIC ENERGY OPTION

6.1

For each 1200 kWh of electrical generation per housing unit provided annually by on-site wind or solar equipment a 1.0 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows:
For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTS or approved alternate by the code official.

Documentation noting solar access shall be included on the plans. For wind generation projects designs shall document annual power generation based on the following factors:
The wind turbine power curve, average annual wind speed at the site, frequency distribution of the wind speed at the site and height of the tower.

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.

1.0

7. APPLIANCE PACKAGE OPTION

7.1

All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards:
Dishwasher – Energy Star rated
Refrigerator (if provided) – Energy Star rated
Washing machine – Energy Star rated
Dryer – Energy Star rated, ventless dryer with a minimum CEF rating of 5.2

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.

1.5

ENERGY CREDITS DESCRIPTION

PROJECT NAME
MULTI-FAMILY RESIDENCE
SIBO APARTMENTS
16640 31ST AVE S
SEATAC, WA 98188
PARCEL NO.: 8709600055

PREPARED FOR
SIBO LLC

SUBMITTAL/REVISION DATE
SUBMITTED: 6/30/2023
REVISED: -

DESIGNED BY:
A.ANCHEYEV

DRAFTED BY:
HANNA
SHADRINA

SHEET TITLE

ENERGY
CREDIT
OPTIONS

PROJECT NUMBER
20160

SHEET NUMBER

A2

AREA SUMMARY PER UNIT (UNIT A-D):		
1ST FLOOR:	243	SF.
2ND FLOOR:	572	SF.
3RD FLOOR:	554	SF.
4TH FLOOR:	403	SF.
TOTAL (LIVING/HEATED SPACE):	1 777	SF.
ROOF TOP DECK:	155	SF.
AREA SUMMARY PER UNIT (UNIT E):		
1ST FLOOR:	419	SF.
2ND FLOOR:	633	SF.
3RD FLOOR:	617	SF.
4TH FLOOR:	451	SF.
TOTAL (LIVING/HEATED SPACE):	2 120	SF.
ROOF TOP DECK:	163	SF.
TOTAL (LIVING/HEATED SPACE):	2 228	SF.
PARKING:	1 647	SF.

EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE INSTALLED IN EVERY SLEEPING ROOM BELOW THE 4TH STORY AND IN BASEMENTS. OPENABLE W/O KEYS OR SPECIAL TOOLS
* MIN. 5.7 SF NET CLR OPENABLE AREA
* MIN. 24" NET CLR OPENABLE HEIGHT
* MIN. 20" NET CLR OPENABLE WIDTH
* MAX. 44" FINISHED SILL HEIGHT
IRC 310 & IBC 1030

EACH DOOR TO BE UNDERCUT A MINIMUM OF 1/2-INCH TO ASSURE FREE FLOW OF FRESH AIR THROUGHOUT HABITABLE ROOMS

36" H. GUARDRAIL A.F.F.
GUARD RAILS MUST BE ABLE TO WITHSTAND A CONCENTRATED LOAD OF 200 LBS. APPLIED AT ANY POINT ALONG THE RAIL IN ANY DIRECTION. PER TABLE R301.5

BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH SURFACE SHALL EXTEND TO HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. IRC 301.2

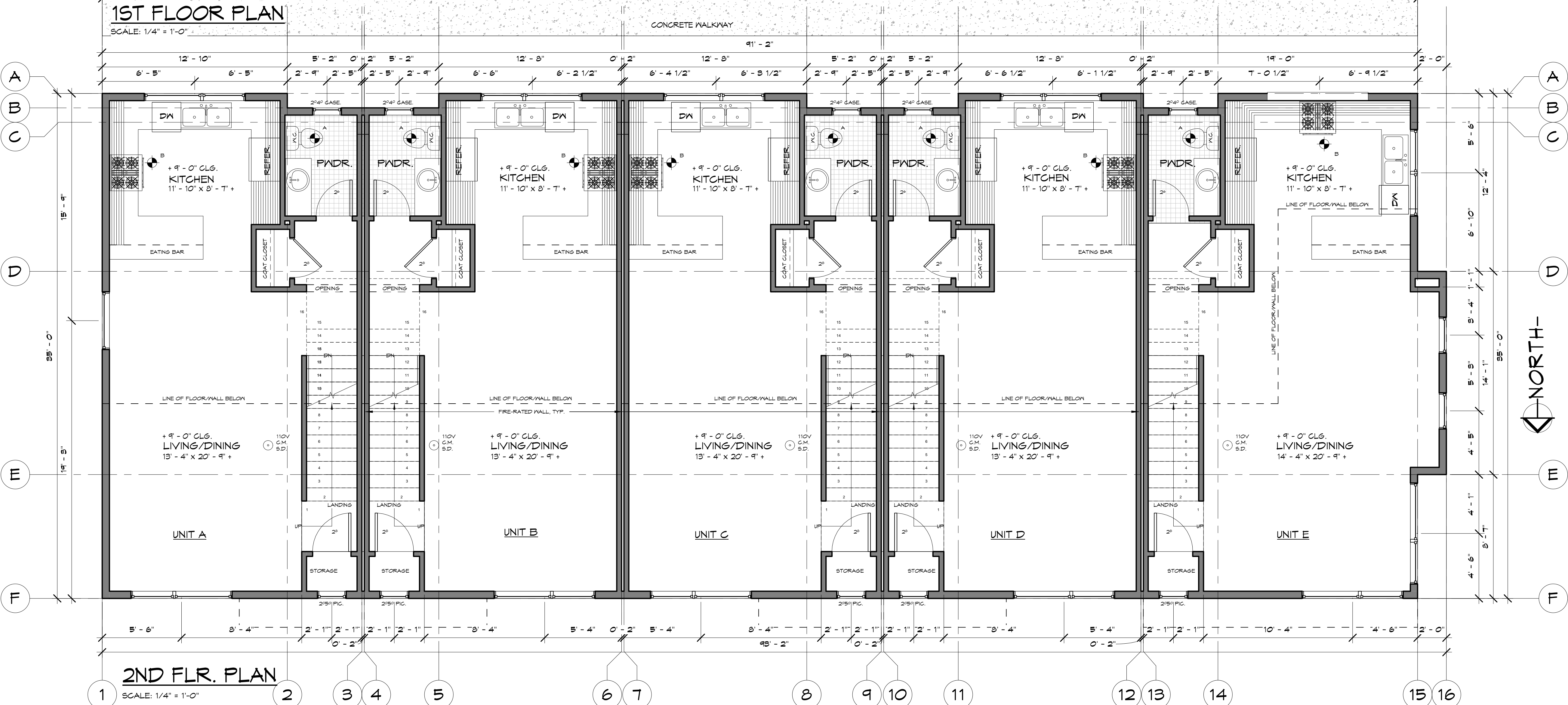
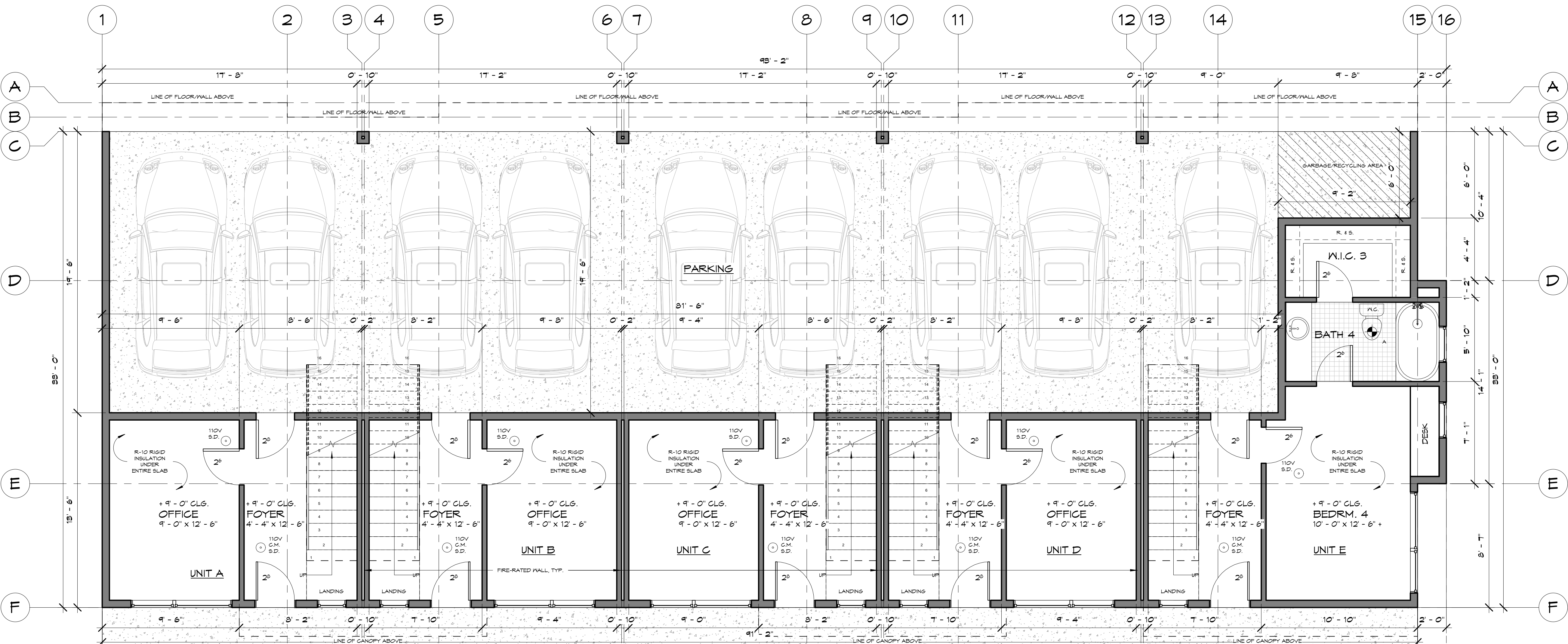
NO OPERABLE WINDOW SHALL BE INSTALLED LESS THAN 24 INCHES ABOVE FINISHED FLOOR THAT IS GREATER THAN 12 INCHES ABOVE THE FINISH GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR.

REFER TO STRUCTURAL SHEETS FOR SHEAR WALL SCHEDULE AND ENGINEERING PLAN WHICH CONTAIN REFERENCES AND/OR INSTRUCTIONS PERTAINING TO EACH SHEAR WALL INDICATED IN THIS PLAN

TYPICAL FLOOR NOTES:

1. INSTALL SMOKE DETECTORS IN ALL SLEEPING ROOMS AND AT AREAS ADJACENT TO SLEEPING ROOMS, AND AT CEILING HEIGHT. CHANGES GREATER THAN 24". SMOKE DETECTORS TO BE HARD-WIRED AND INTERCONNECTED, WITH BATTERY BACK-UP PER CODE.
2. INSTALL CARBON MONOXIDE SENSORS ADJACENT TO SLEEPING AREAS.
3. ALL INTERIOR WALLS TO BE 2x4 @ 16" O.C. (U.N.O.)
4. ALL EXTERIOR WALLS TO BE 2x6 @ 16" O.C. (U.N.O.)
5. FLOOR HEADERS PER STRUCTURAL @ 8'-0" A.F.F. (U.N.O.)
6. WINDOW SIZES ARE NOMINAL ROUGH OPENING, WIDTH AND HEIGHT.
7. DOOR SIZES NOTED ARE SLABS NOT ROUGH OPENINGS
8. PROVIDE FIREBLOCKING AT ALL PLUMBING OPENINGS.
9. PROVIDE SOLID BLOCKING OVER SUPPORTS.
10. WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF CONCEALED SPACE DOES NOT EXCEED 1000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS AND SHALL BE OF 1/2" GYP BOARD OR OTHER APPROVED MATERIALS INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS PER CODE.
11. PROVIDE FIREBLOCKING TO CUT OFF ALL CONCEALED HORIZONTAL AND VERTICAL DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL CONSIST OF NOT LESS THAN 2" NOMINAL LUMBER OR OTHER APPROVED MATERIAL.
12. ASPHALT-SATURATED FELT FREE FROM HOLES OR BREAKS, WEIGHING NOT LESS THAN 14 POUNDS PER 100 SQUARE FEET AND COMPLYING WITH ASTM D 226 OR OTHER APPROVED WEATHER RESISTANT MATERIAL SHALL BE APPLIED OVER SHEATHING OF ALL EXTERIOR WALLS. APPROVED ALTERNATIVE WEATHERPROOF MEMBRANES SHALL BE USED FOR OPEN JOINT RAIN SCREEN SIDING. WEATHER RESISTANT MATERIALS SHALL BE APPLIED HORIZONTALLY PERMANUFACTURERS RECOMMENDATIONS, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES AND NOT LESS THAN 6 INCHES WHERE JOINTS OCCUR PER CODE.
13. APPROVED CORROSION-RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING'S STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL SURFACE AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE. FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS:
-THE TOP OF ALL EXTERIOR WINDOW & DOOR OPENINGS
-INTERSECTIONS OF FRAME WALLS & MASONRY OR STUCCO
-UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS
-CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM
-WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL
-AT WALL AND ROOF OR SOFFIT INTERSECTIONS
-AT BUILT-IN GUTTERS
14. EXTERIOR LOCATIONS FOR ENVIRONMENTAL AIR DUCT EXHAUST & INTAKE OPENINGS TO BE A MINIMUM OF 3'-0" FROM PRIOR OR MINIMUM 3'-0" FROM BUILDING OPENINGS. EQUIP ALL DUCTS W/ BACK-DRAFT DAMPERS.
15. AIR EXHAUST & INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED W/ CORROSION RESISTANT SCREENS, LOUVERS, OR GRILLS W/ 1/4" MINIMUM & 1/2" MAX OPENINGS IN ANY DIMENSION. OPENINGS SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS PER 2018 IRC.
16. DUCTS FOR KITCHEN RANGES SHALL BE OF METAL AND BE EQUIPPED W/ BACK-DRAFT DAMPERS PER CODE.
17. ALL INTERIOR FINISHES TO MEET MINIMUM FLAME SPREAD INDEX AND SMOKE DEVELOPMENT INDEX AS REQUIRED BY 2018 IRC.
18. UNDER FLOOR CLEANOUT NOT MORE THAN 20" FROM ACCESS DOOR WITH AN UNOBSTRUCTED 30" WIDE X 18" HIGH PATH PATHWAY. CLEANOUTS ARE ACCESSIBLE. 12" CLEARANCE REQUIRED AT LINES LESS THAN OR EQUAL TO 2", 18" CLEARANCE AT LINES GREATER THAN 2". (UPC 101.4)
19. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION, SAFETY GLAZING.



AREA SUMMARY PER UNIT (UNIT A-D):		
1ST FLOOR:	243	SF.
2ND FLOOR:	572	SF.
3RD FLOOR:	554	SF.
4TH FLOOR:	403	SF.
TOTAL (LIVING/HEATED SPACE):	1,777	SF.
ROOF TOP DECK:	155	SF.
AREA SUMMARY PER UNIT (UNIT E):		
1ST FLOOR:	413	SF.
2ND FLOOR:	633	SF.
3RD FLOOR:	617	SF.
4TH FLOOR:	451	SF.
TOTAL (LIVING/HEATED SPACE):	2,120	SF.
ROOF TOP DECK:	163	SF.
TOTAL (LIVING/HEATED SPACE):	2,283	SF.
PARKING:	1,647	SF.

EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE INSTALLED IN EVERY SLEEPING ROOM BELOW THE 4TH STORY AND IN BASEMENTS. OPENABLE W/O KEYS OR SPECIAL TOOLS
* MIN. 5.7 SF NET CLR OPENABLE AREA
* MIN. 24" NET CLR OPENABLE HEIGHT
* MIN. 20" NET CLR OPENABLE WIDTH
* MAX. 44" FINISHED SILL HEIGHT
IRC 310 & IBC 1030

EACH DOOR TO BE UNDERCUT A MINIMUM OF 1/2-INCH TO ASSURE FREE FLOW OF FRESH AIR THROUGHOUT HABITABLE ROOMS

36" H. GUARDRAIL A.F.F.
GUARD RAILS MUST BE ABLE TO WITHSTAND A CONCENTRATED LOAD OF 200 LBS. APPLIED AT ANY POINT ALONG THE RAIL IN ANY DIRECTION. PER TABLE R301.5

BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH SURFACE SHALL EXTEND TO HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. IRC 301.2

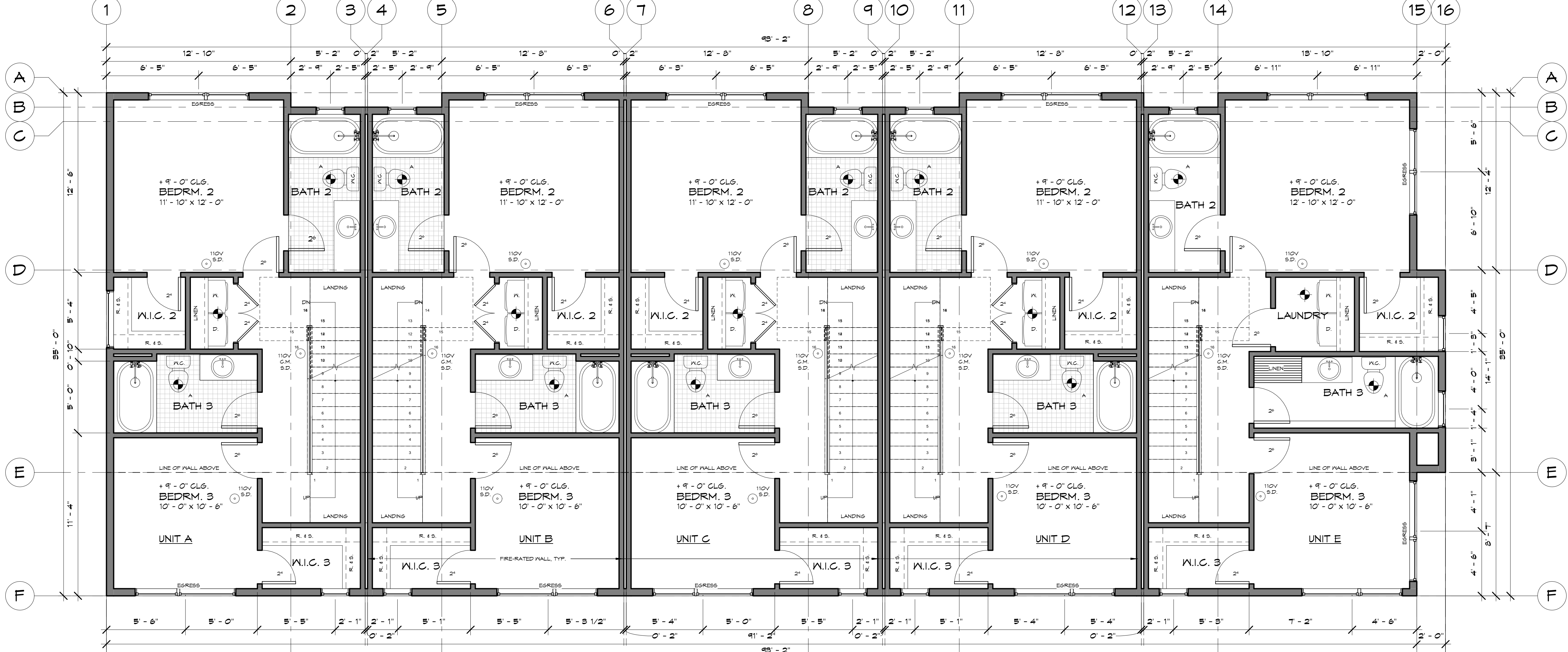
NO OPERABLE WINDOW SHALL BE INSTALLED LESS THAN 24 INCHES ABOVE FINISHED FLOOR THAT IS GREATER THAN 12 INCHES ABOVE THE FINISH GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR.

REFER TO STRUCTURAL SHEETS FOR SHEAR WALL SCHEDULE AND ENGINEERING PLAN WHICH CONTAIN REFERENCES AND/OR INSTRUCTIONS PERTAINING TO EACH SHEAR WALL INDICATED IN THIS PLAN

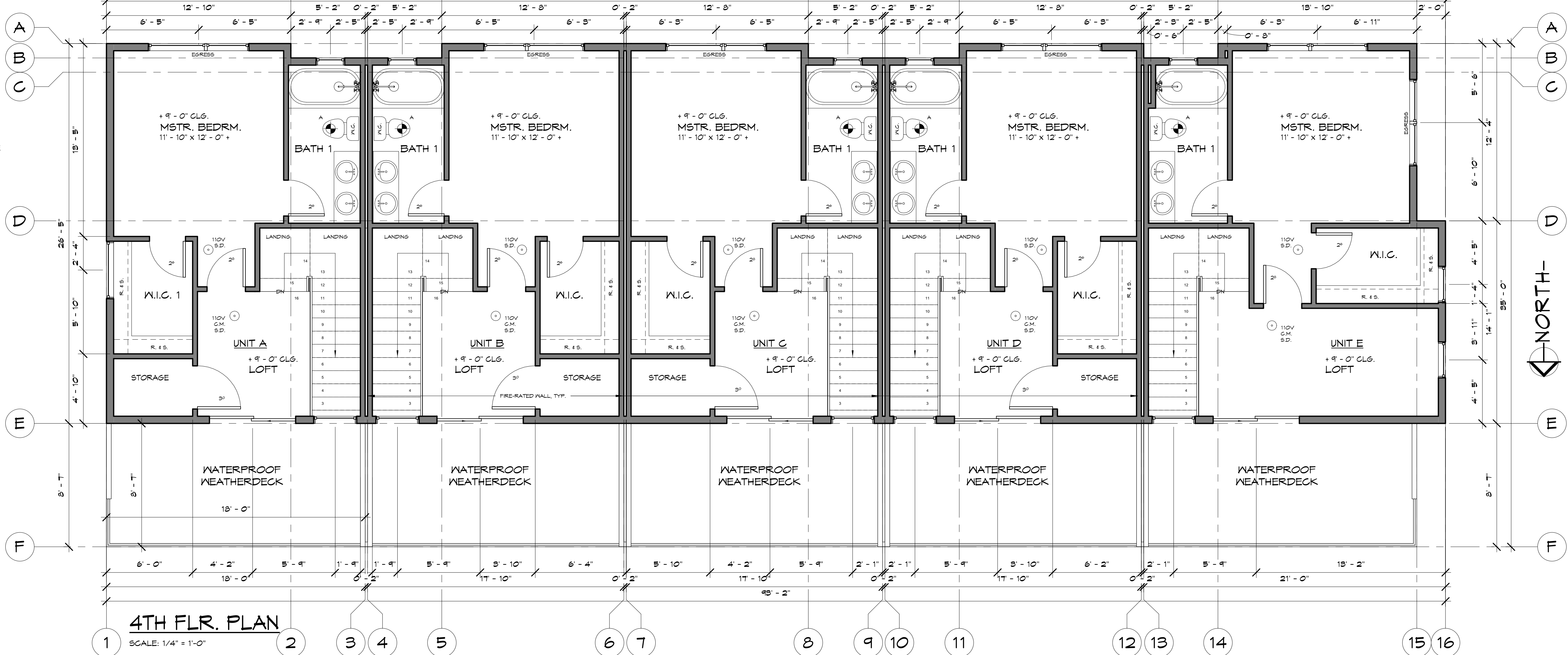
TYPICAL FLOOR NOTES:

1. INSTALL SMOKE DETECTORS IN ALL SLEEPING ROOMS AND AT AREAS ADJACENT TO SLEEPING ROOMS, AND AT CEILING HEIGHT CHANGES GREATER THAN 24". SMOKE DETECTORS TO BE HARD-WIRED AND INTERCONNECTED, WITH BATTERY BACK-UP PER CODE.
2. INSTALL CARBON MONOXIDE SENSORS ADJACENT TO SLEEPING AREAS.
3. ALL INTERIOR WALLS TO BE 2x4 @ 16" O.C. (U.N.O.)
4. ALL EXTERIOR WALLS TO BE 2x6 @ 16" O.C. (U.N.O.)
5. FLOOR HEADERS PER STRUCTURAL @ 8'-0" A.F.F. (U.N.O.)
6. WINDOW SIZES ARE NOMINAL ROUGH OPENING, WIDTH AND HEIGHT.
7. DOOR SIZES NOTED ARE SLABS NOT ROUGH OPENINGS
8. PROVIDE FIREBLOCKING AT ALL PLUMBING OPENINGS.
9. PROVIDE SOLID BLOCKING OVER SUPPORTS.
10. WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF CONCEALED SPACE DOES NOT EXCEED 1000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS AND SHALL BE OF 1/2" GYP BOARD OR OTHER APPROVED MATERIALS INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS PER CODE.
11. PROVIDE FIREBLOCKING TO CUT OFF ALL CONCEALED HORIZONTAL AND VERTICAL DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL CONSIST OF NOT LESS THAN 2" NOMINAL LUMBER OR OTHER APPROVED MATERIAL.
12. ASPHALT-SATURATED FELT FREE FROM HOLES OR BREAKS, WEIGHING NOT LESS THAN 14 POUNDS PER 100 SQUARE FEET AND COMPLYING WITH ASTM D 226 OR OTHER APPROVED WEATHER RESISTANT MATERIAL SHALL BE APPLIED OVER SHEATHING OF ALL EXTERIOR WALLS. APPROVED ALTERNATE WEATHERPROOF MEMBRANES SHALL BE USED FOR OPEN JOINT RAIN SCREEN SIDING. WEATHER RESISTANT MATERIALS SHALL BE APPLIED HORIZONTALLY PERMANUFACTURERS RECOMMENDATIONS, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES AND NOT LESS THAN 6 INCHES WHERE JOINTS OCCUR PER CODE.
13. APPROVED CORROSION-RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDINGS STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL SURFACE AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE. FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS:
-THE TOP OF ALL EXTERIOR WINDOW & DOOR OPENINGS
-INTERSECTIONS OF FRAMED WALLS AND MASONRY OR STUCCO
-UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS
-CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM
-WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL
-AT WALL AND ROOF OR SOFFIT INTERSECTIONS
-AT BUILT-IN GUTTERS
14. EXTERIOR LOCATIONS FOR ENVIRONMENTAL AIR DUCT EXHAUST & INTAKE OPENINGS TO BE A MINIMUM OF 3'-0" FROM PROPERTY LINE & MINIMUM 3'-0" FROM BUILDING OPENINGS. EQUIP ALL DUCTS W/ BACK-DRAFT DAMPERS.
15. AIR EXHAUST & INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED W/ CORROSION RESISTANT SCREENS, LOUVERS, OR GRILLS W/ 1/4" MINIMUM & 1/2" MAX OPENINGS IN ANY DIMENSION. OPENINGS SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS PER 2018 IRC.
16. DUCTS FOR KITCHEN RANGES SHALL BE OF METAL AND BE EQUIPPED W/ BACK-DRAFT DAMPERS PER CODE.
17. ALL INTERIOR FINISHES TO MEET MINIMUM FLAME SPREAD INDEX AND SMOKE DEVELOPMENT INDEX AS REQUIRED BY 2018 IRC.
18. UNDER FLOOR CLEANOUT NOT MORE THAN 20" FROM ACCESS DOOR WITH AN UNOBSTRUCTED 30" WIDE X 18" HIGH PATH PATHWAY. CLEANOUTS ARE ACCESSIBLE. 12" CLEARANCE REQUIRED AT LINES LESS THAN OR EQUAL TO 2", 18" CLEARANCE AT LINES GREATER THAN 2". (UPC 101.1)
19. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION, SAFETY GLAZING.



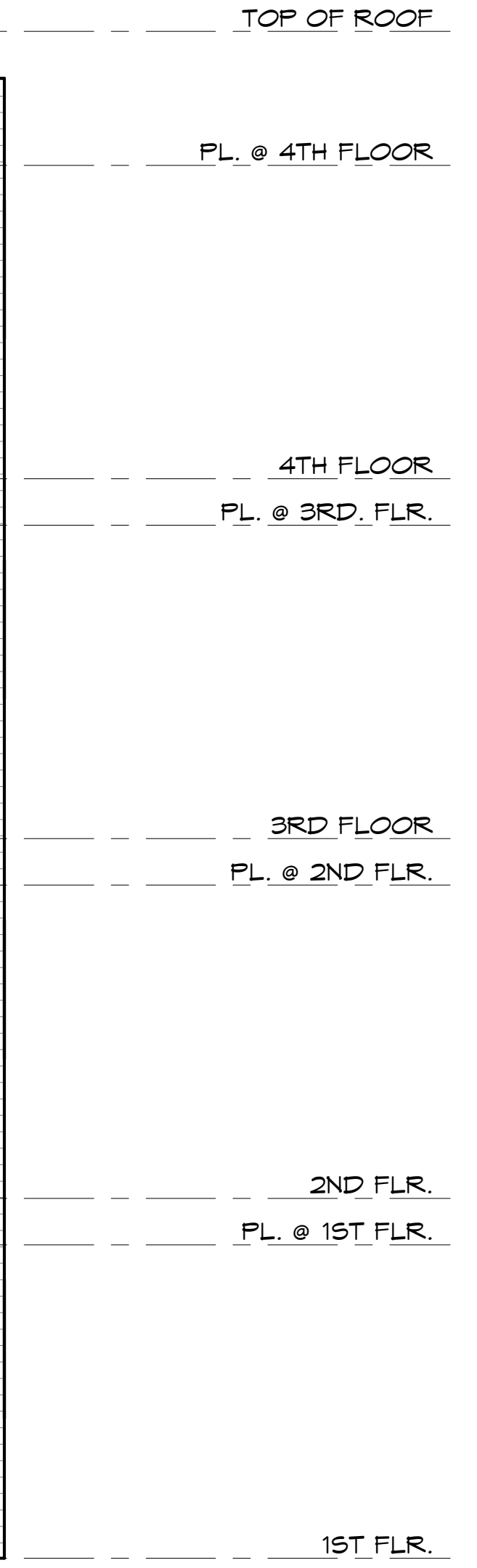
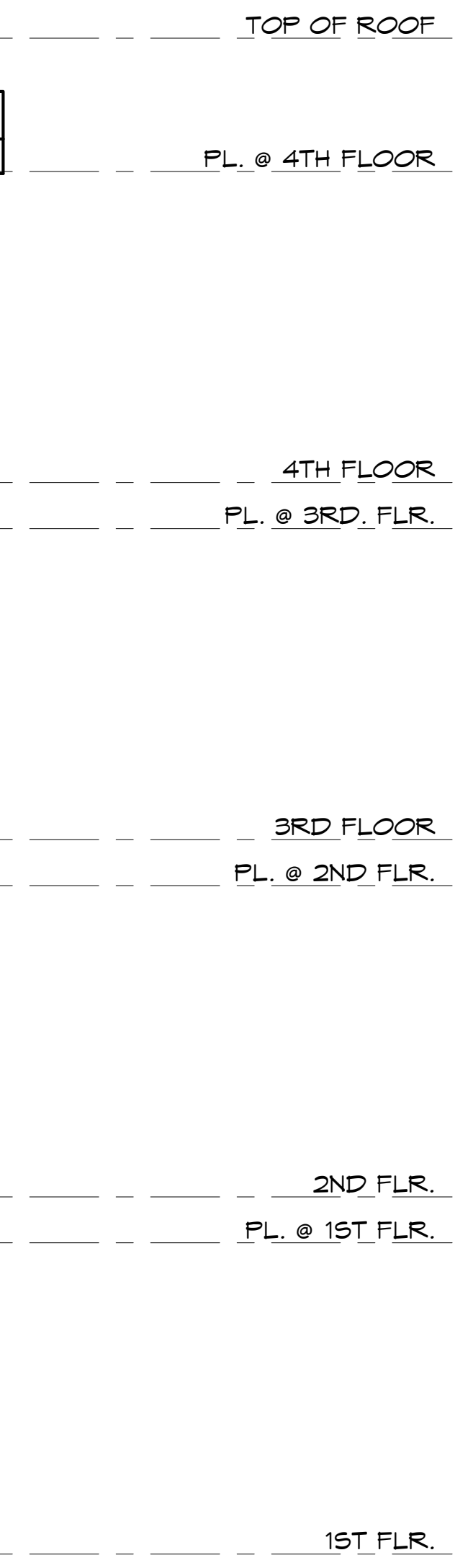
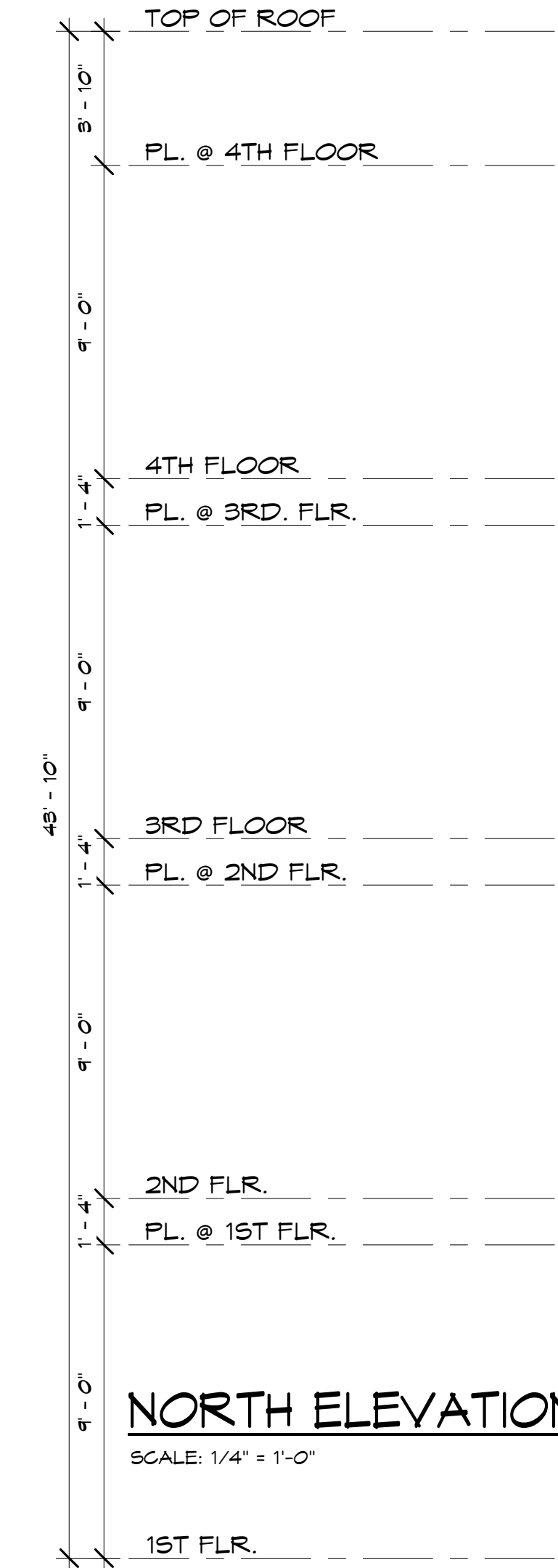
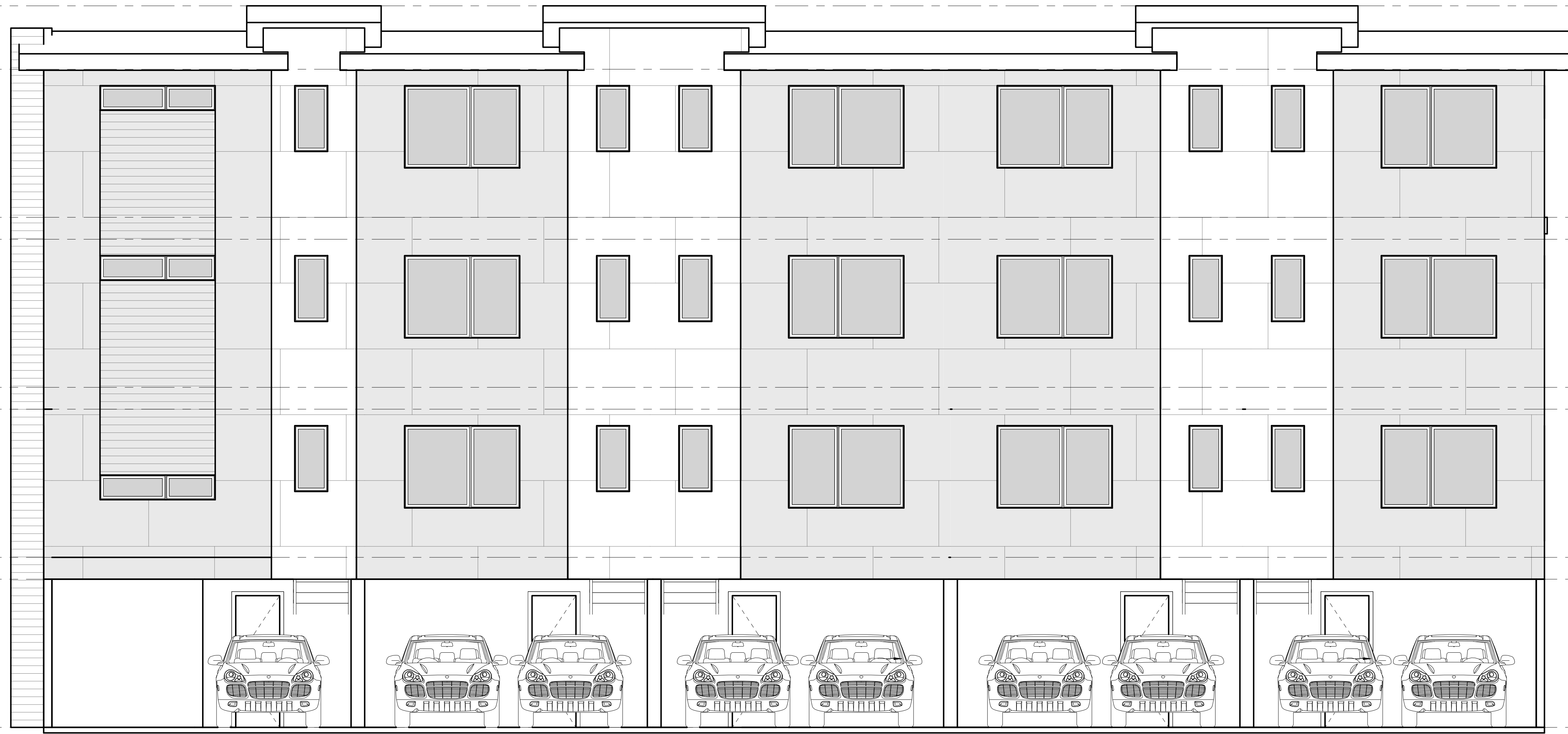
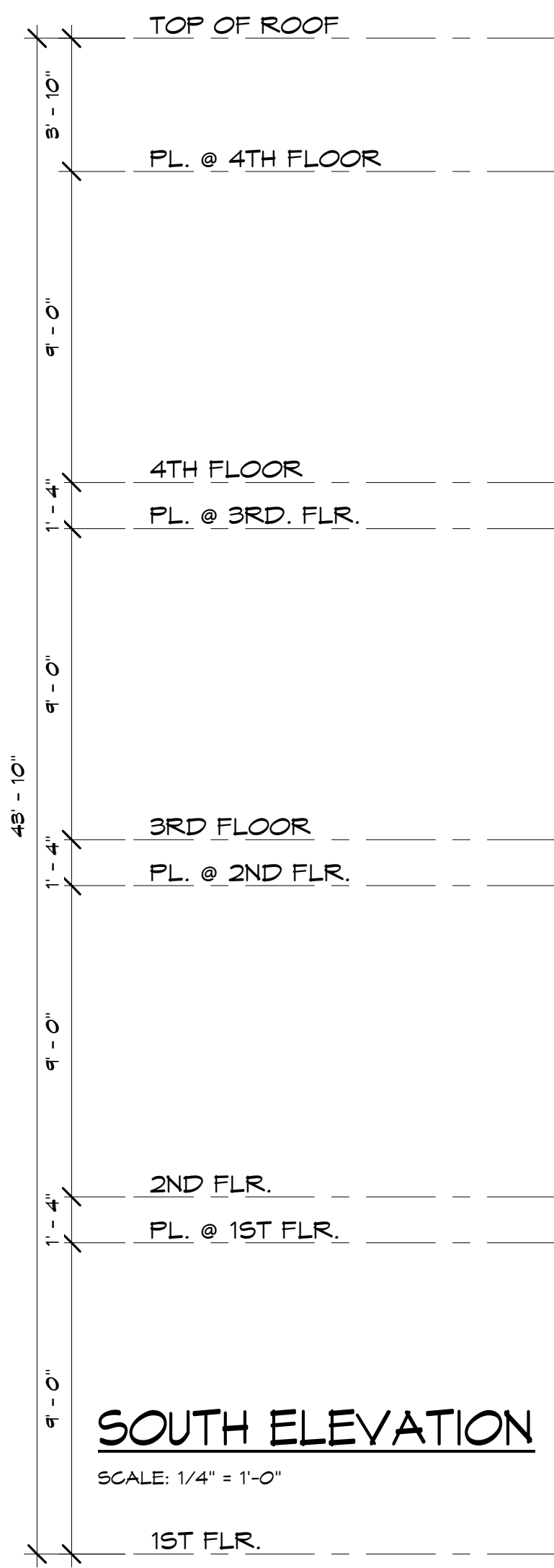
3RD FLR. PLAN

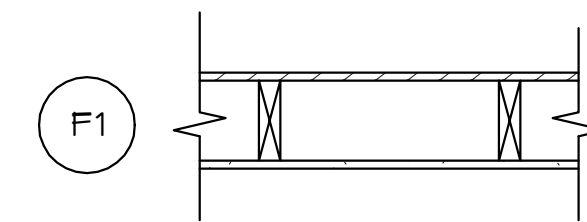
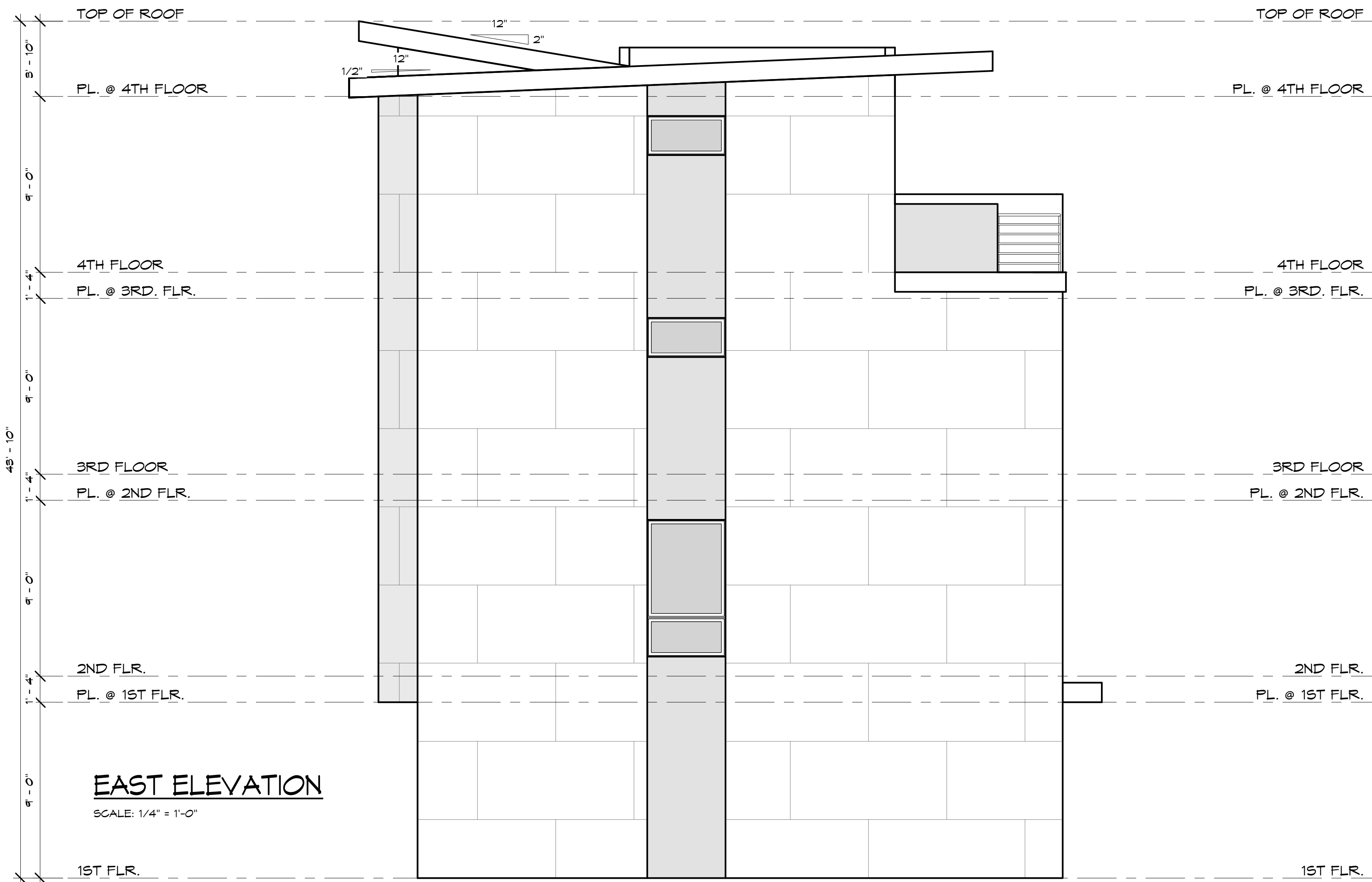
SCALE: 1/4" = 1'-0"



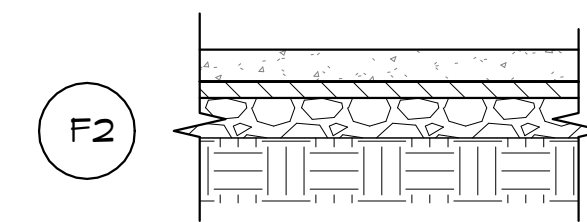
4TH FLR. PLAN

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

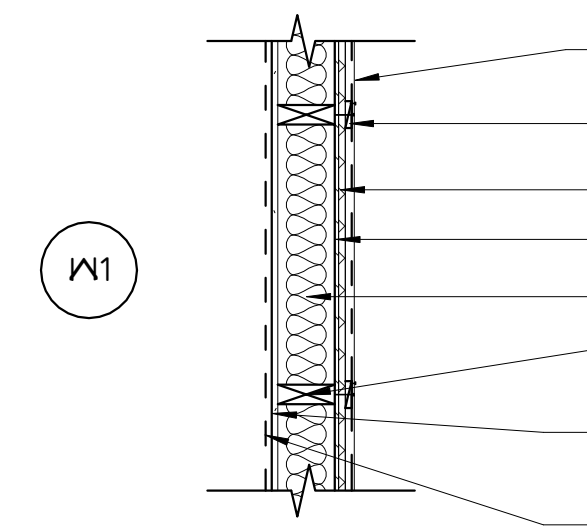




- SHTG PER STRUCT.
- JOIST OR TJ PER STRUCT.
- 5/8" G.W.B.

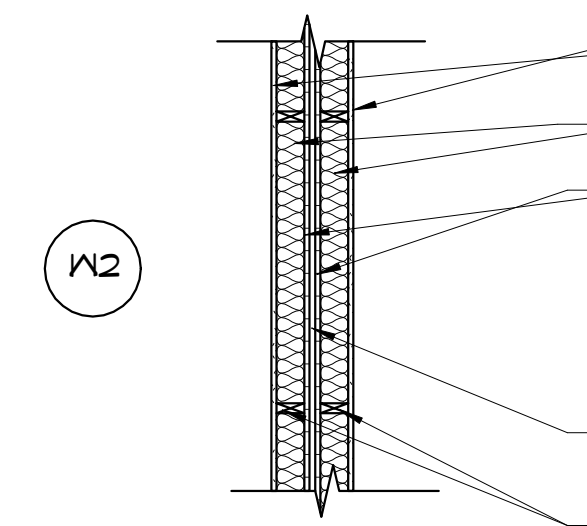


- CONCRETE FLOOR PER STRUCT.
- VAPOR BARRIER
- 2" RIGID SLAB INSUL., R-10 MIN. UNDER ENTIRE SLAB
- COMPACT FILL PER STRUCT.
- EARTH



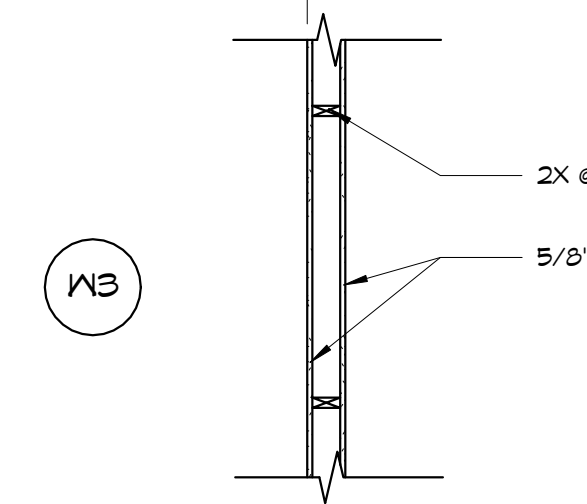
- CLADDING PER ELEVATION
- 3/4" PT WOOD FURRING STRIPS
- FLUID APPLIED WRB MEMBRANE
- SHEATING PER STRUCTURE
- R-21 HIGH DENSITY FIBERGLASS BATT
- FRAMING PER STRUCTURE
- 1 LAYER 5/8" TYPE X GYP BOARD (1 HR RATING INSIDE)
- VAPOR CONTROL G.W.B. PRIMER

NOTE: BATHROOMS AT HIGH HUMIDITY ZONES ALONG EXTERIOR WALLS MUST HAVE A VAPOR BARRIER (CLASS 1)
2) BASIS OF DESIGN: MEMBRANE BY CERTANTEED



- 5/8" TYPE 'X' GYP BOARD
- R-21 HIGH DENSITY FIBERGLASS BATT
- MIN. 1/16 CATEGORY LP FLAMEBLOCK 1-SIDED IV0.060" THICK PYROCLITE LAMINATE APPLIED TO ONLY FACE OF THE WOOL PANEL FACING WALL CAVITY IN ASSEMBLY
- U350, TYPE B (1 LAYER ON EACH SIDE OF AIR SPACE), (2 LAYERS TOTAL)
- MIN. 1" AIR SPACE SEPARATION
- FRAMING PER STRUCTURE

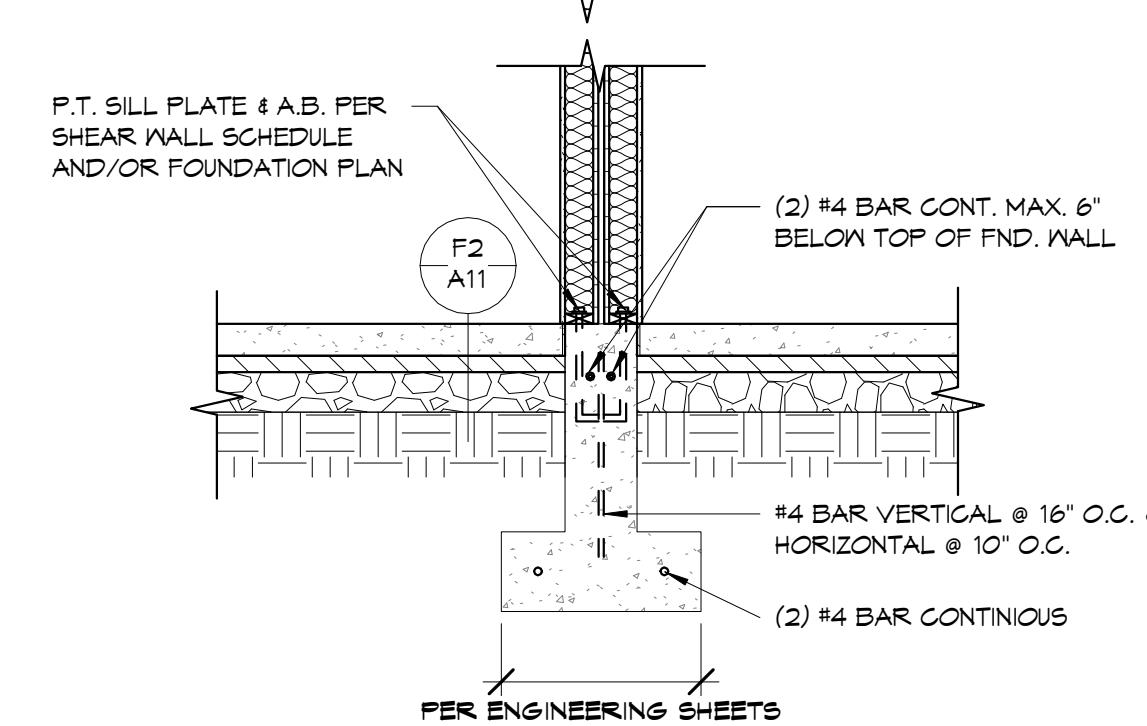
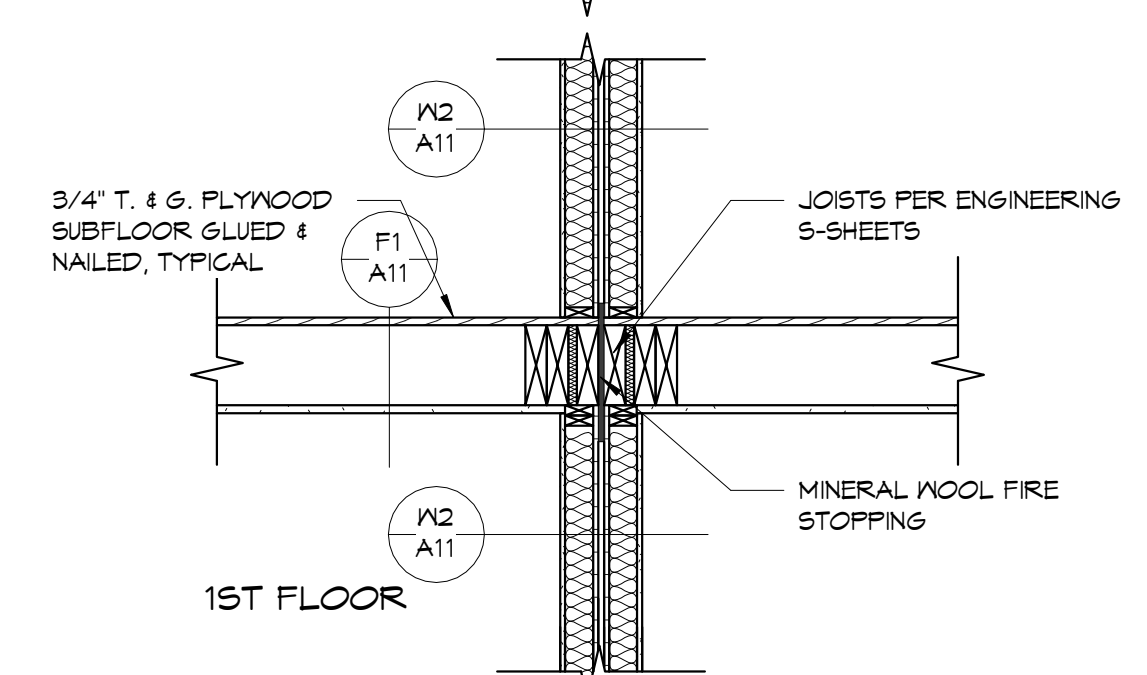
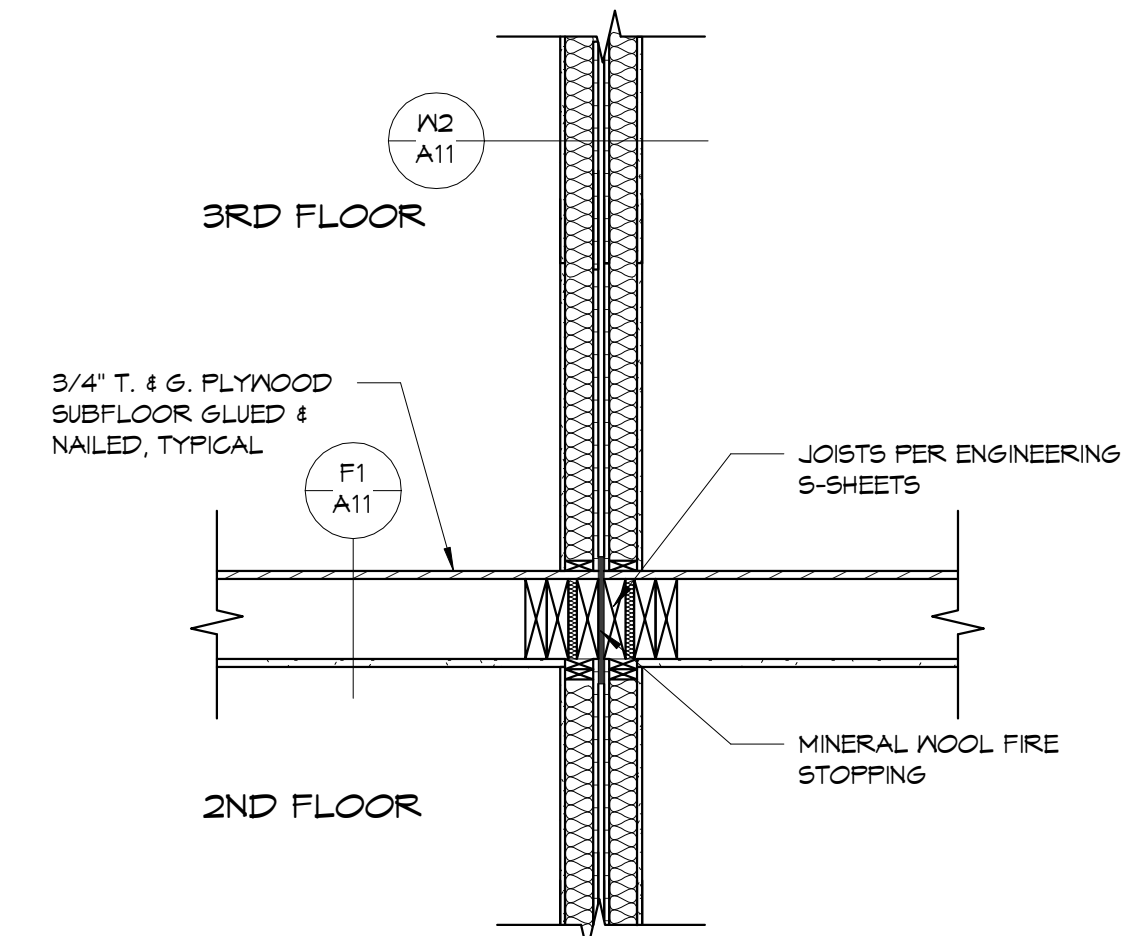
UL ASSEMBLY U350 TYPE B
FIRE RATING: 2 HRS

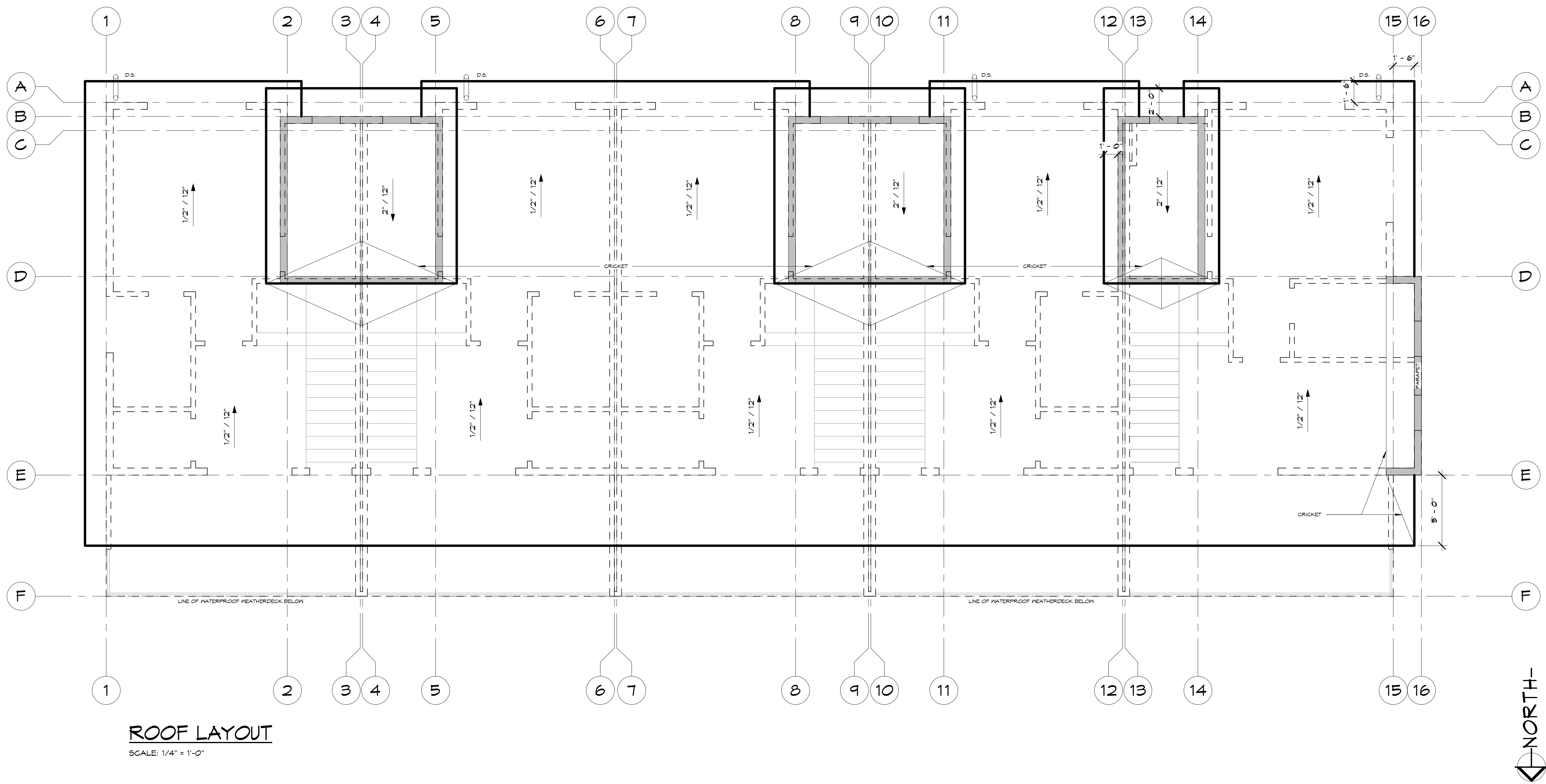


- 2X @ 24" O.C.
- 5/8" G.W.B.
- TYPICAL INTERIOR WALL
- PROVIDE TYPE-X G.W.B. AT BATHROOMS & LAUNDRY

PARTY WALL DETAILS

SCALE: 1/2" = 1' - 0"





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



PERSPECTIVE VIEW: SOUTH/WEST ELEVATION



PERSPECTIVE VIEW: NORTH/WEST ELEVATION

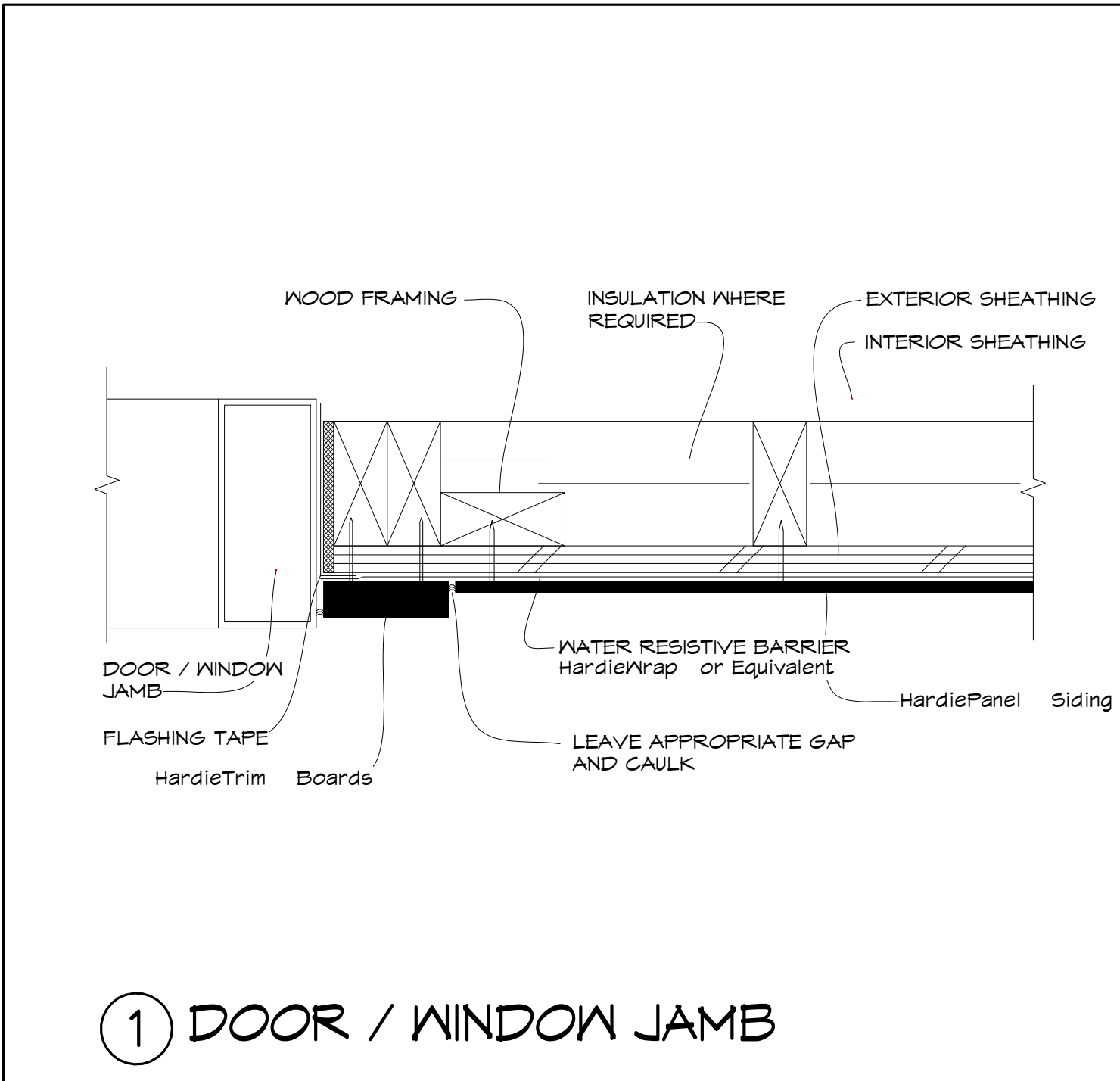


PERSPECTIVE VIEW: NORTH/EAST ELEVATION

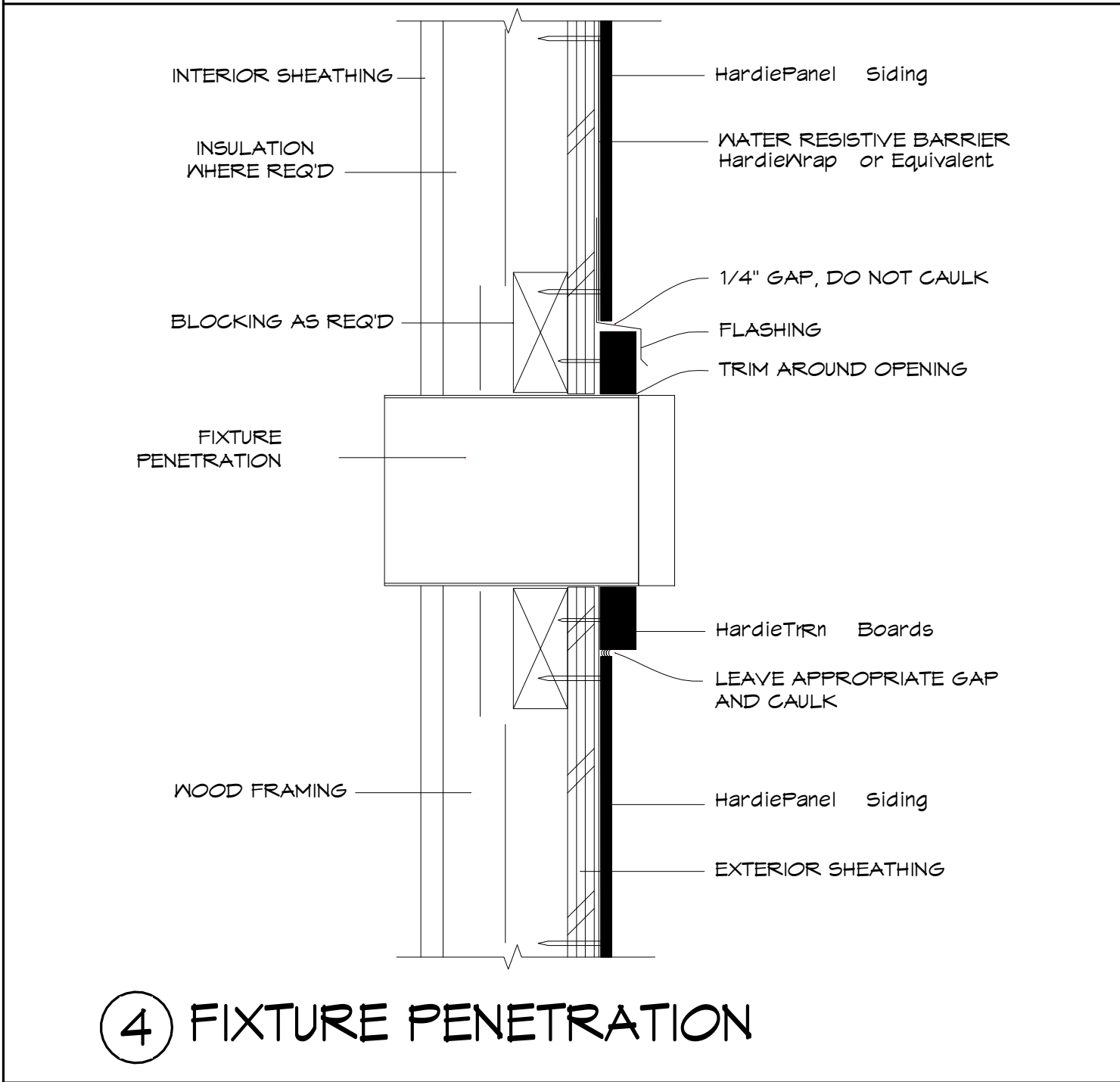


PERSPECTIVE VIEW: BIRD'S EYE VIEW

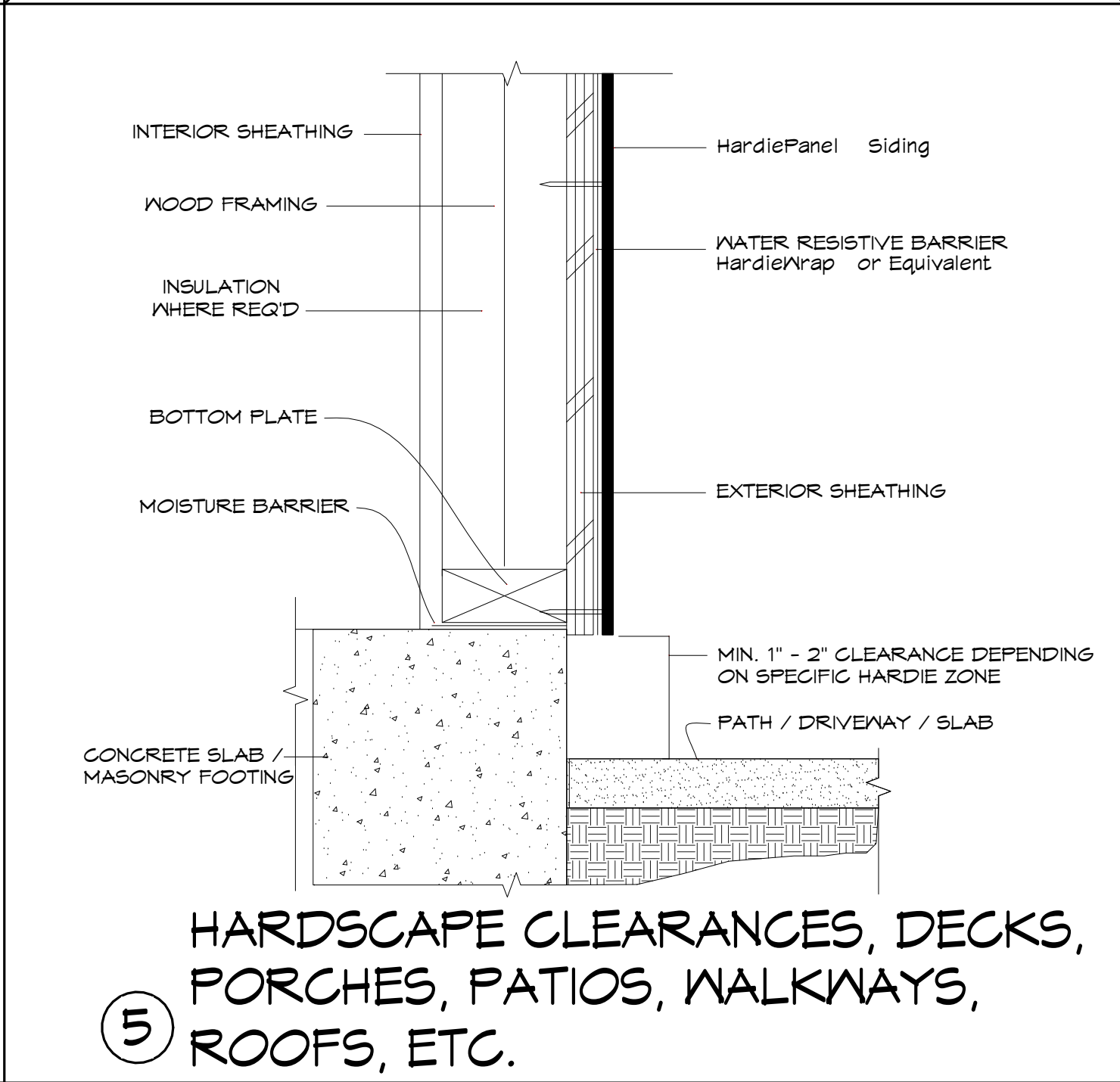
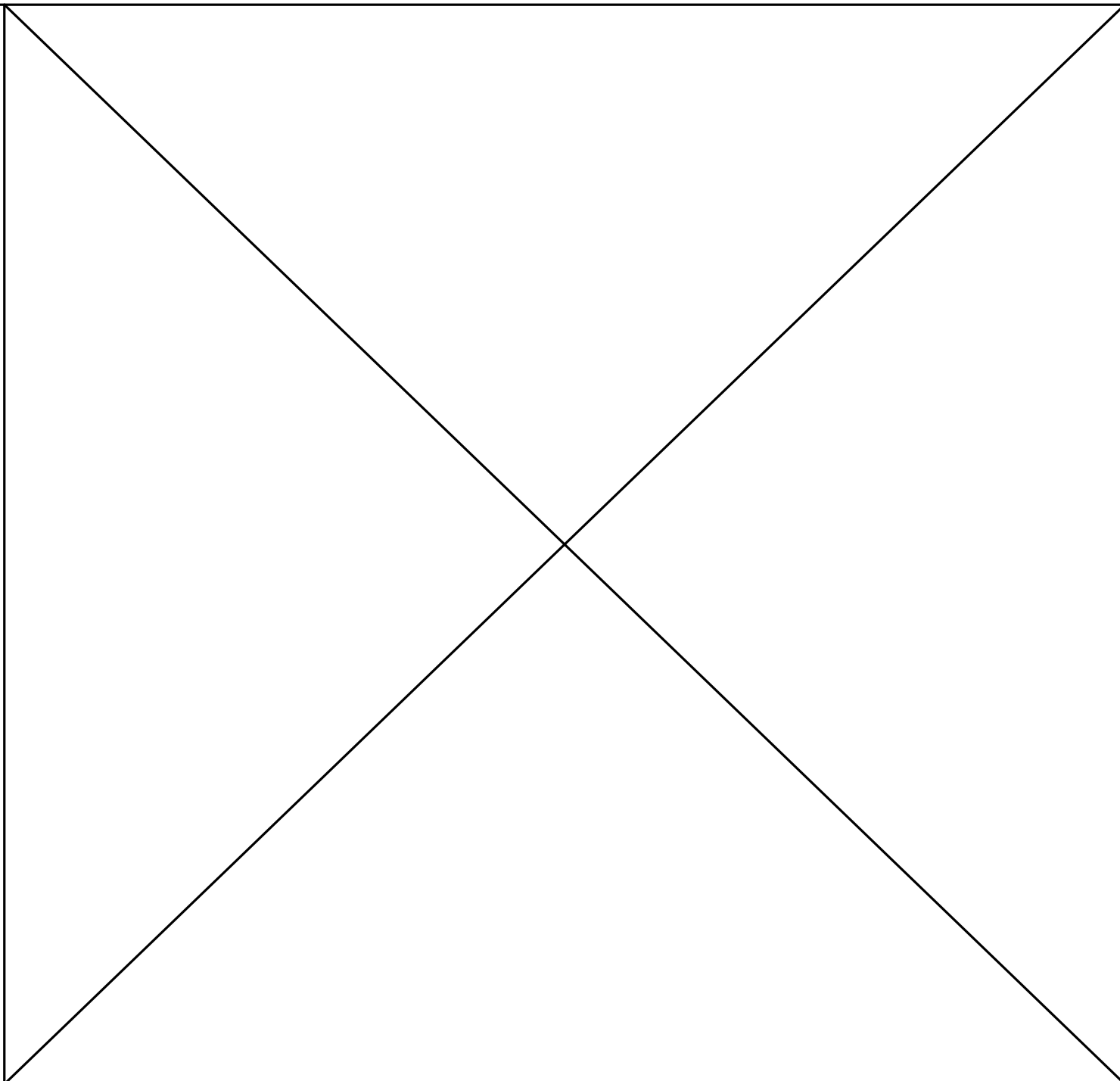
PERSPECTIVE VIEW:
PERSPECTIVE VIEWS ARE FOR REFERENCE ONLY.
THEY SHOULD NOT BE USED TO DETERMINE ANY PORTION OF THE
CONSTRUCTION OTHER THAN GENERAL MATERIAL APPEARANCE.
REFER TO ELEVATION SHEETS FOR DETAILS.



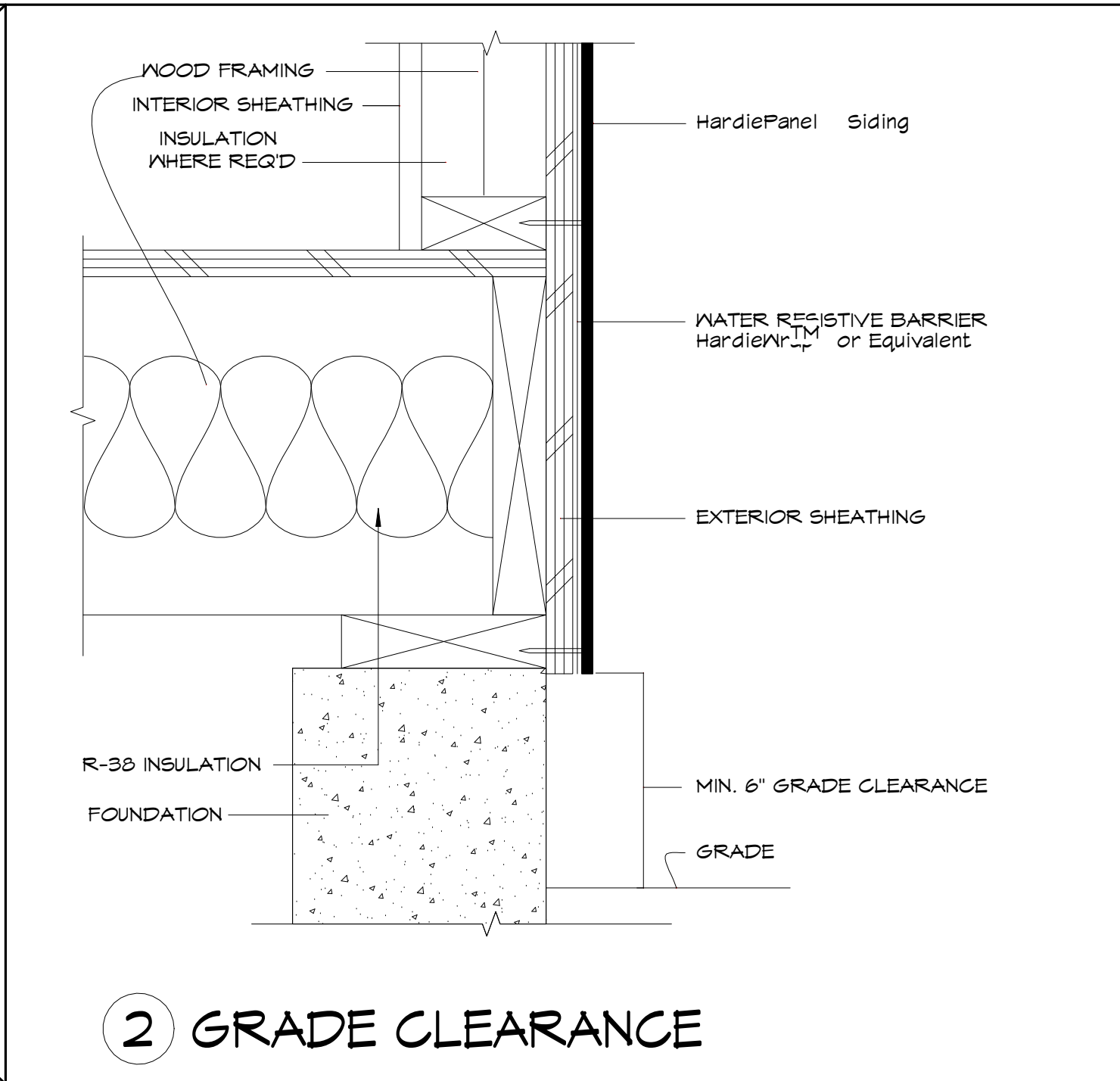
① DOOR / WINDOW JAMB



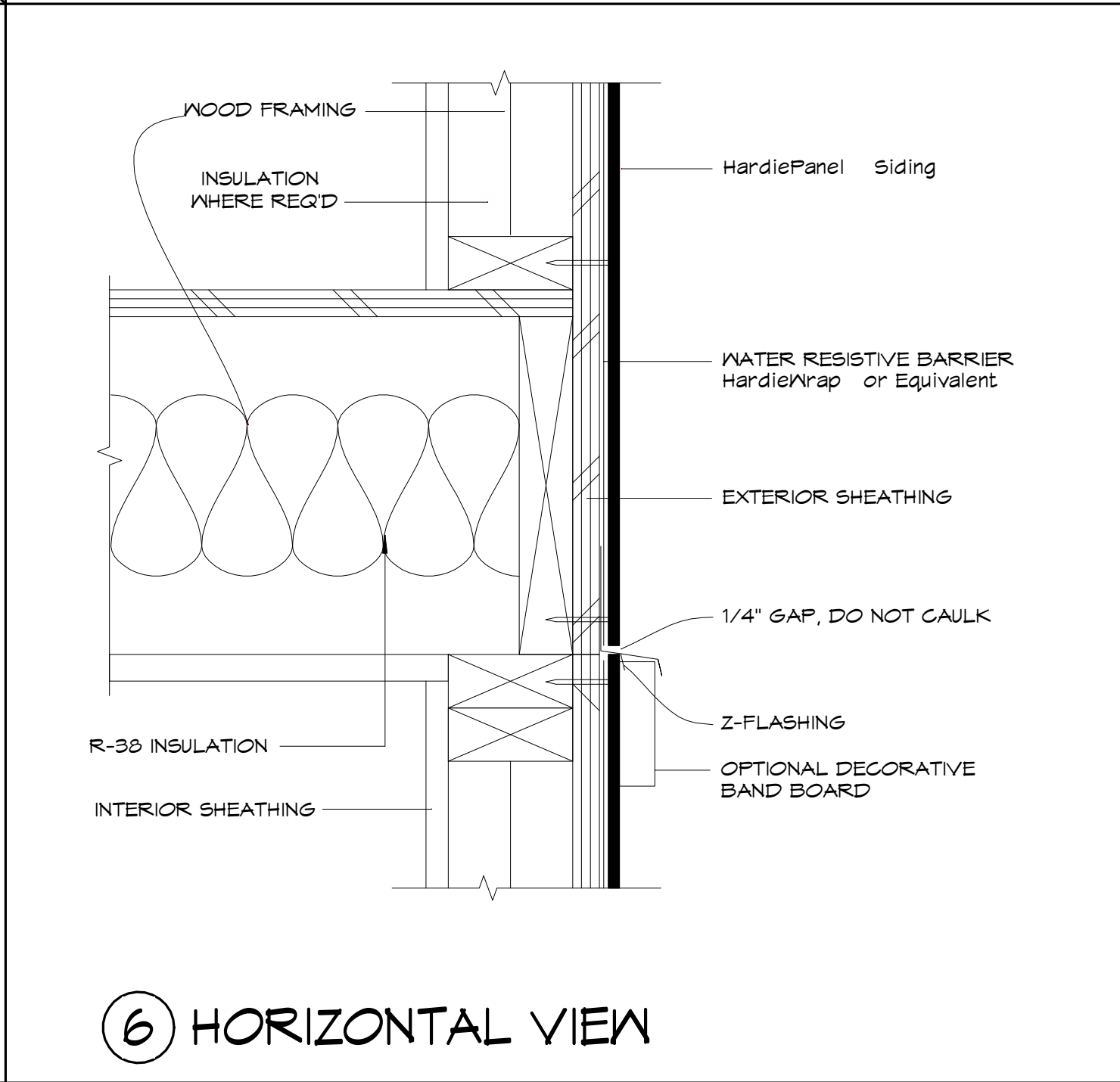
④ FIXTURE PENETRATION



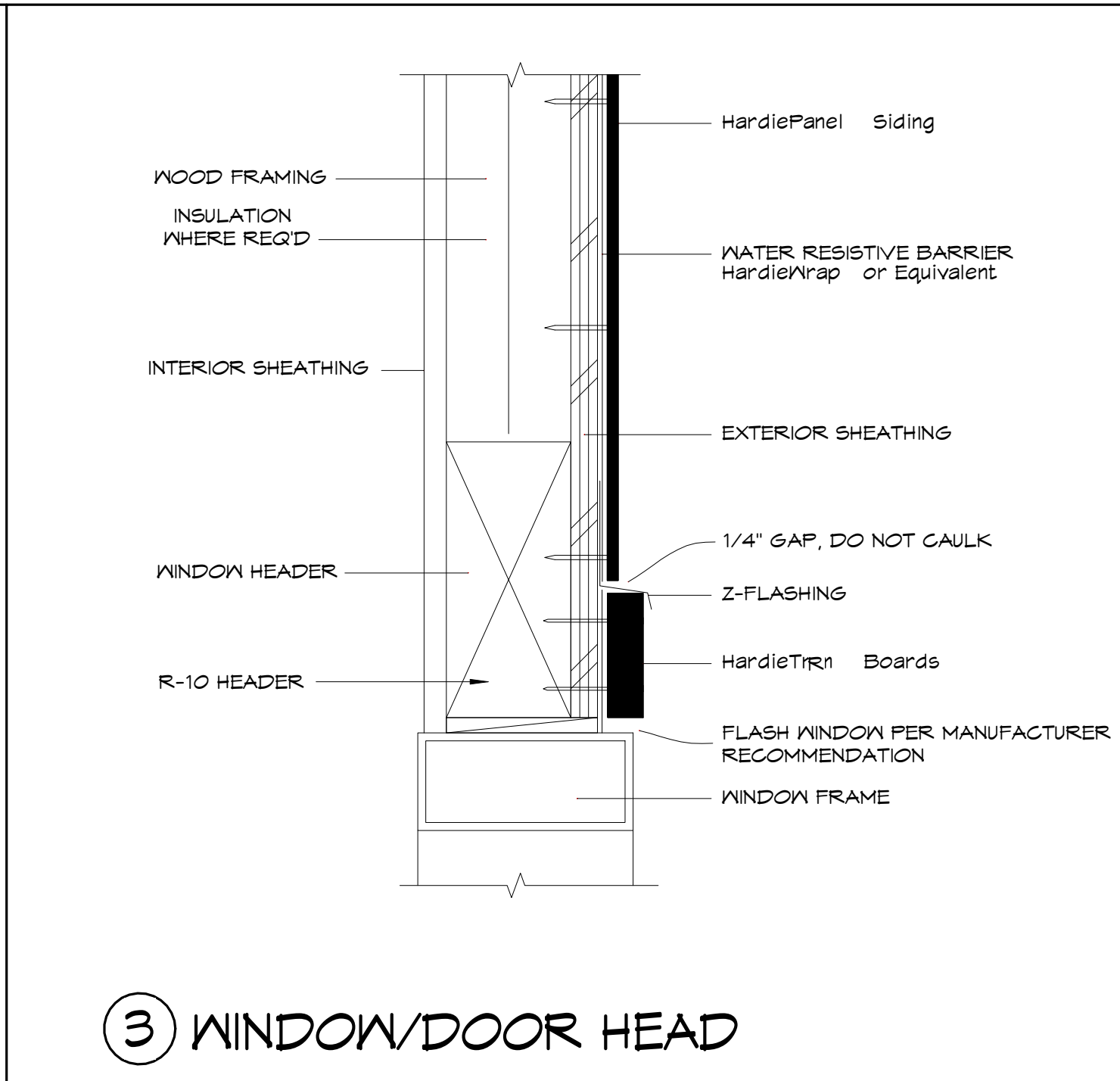
⑤ HARDSCAPE CLEARANCES, DECKS, PORCHES, PATIOS, WALKWAYS, ROOFS, ETC.



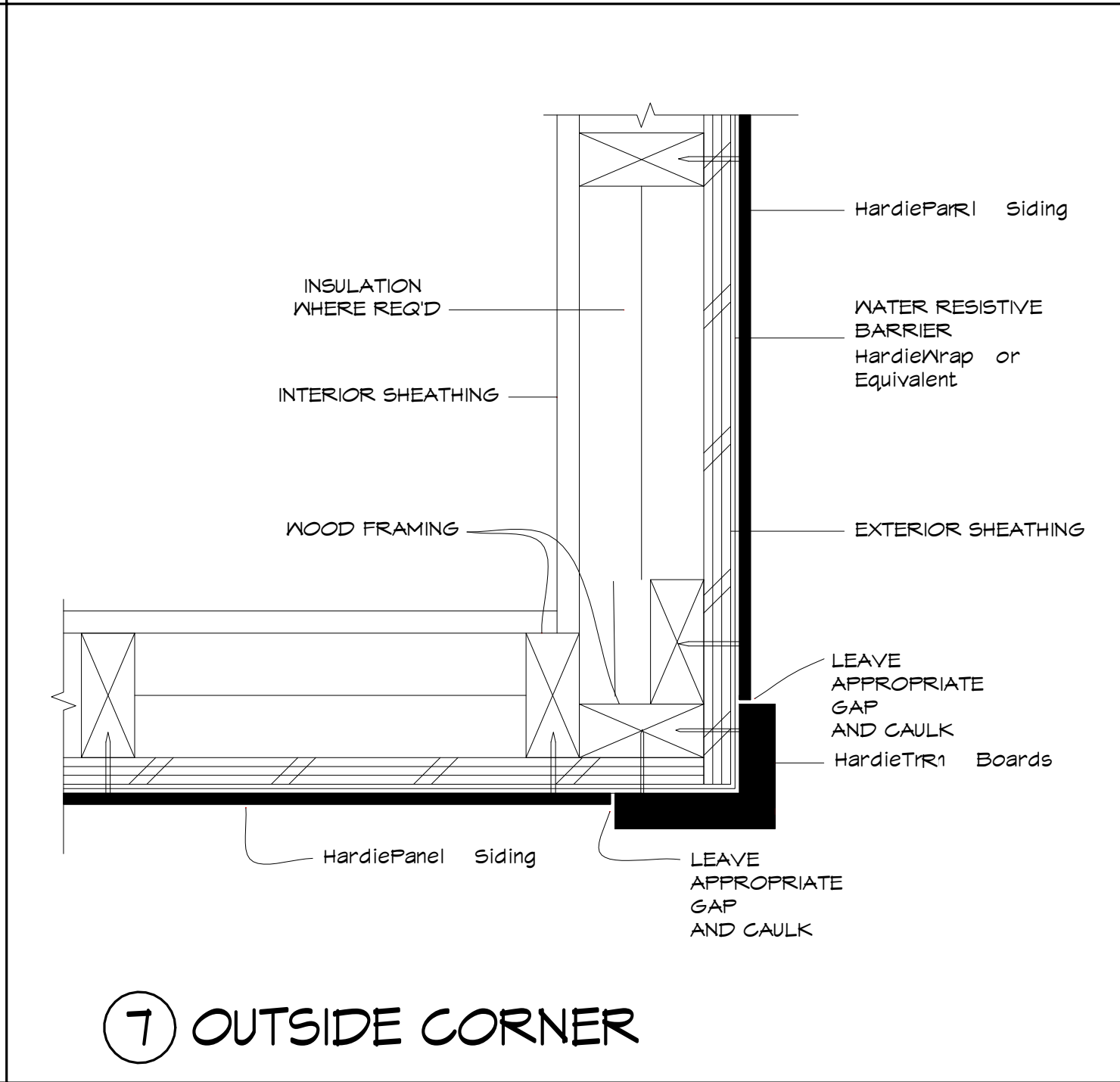
② GRADE CLEARANCE



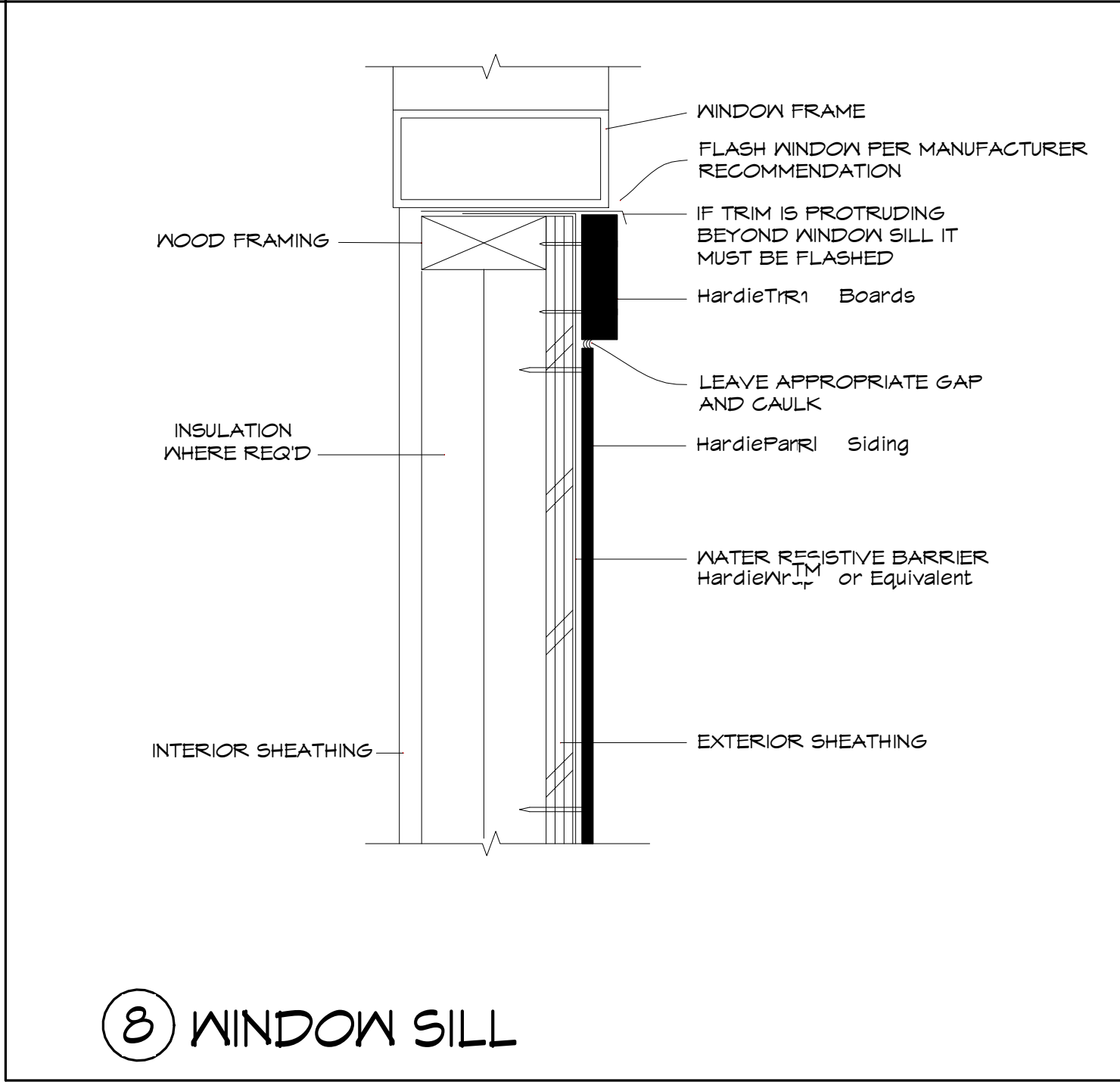
⑥ HORIZONTAL VIEW



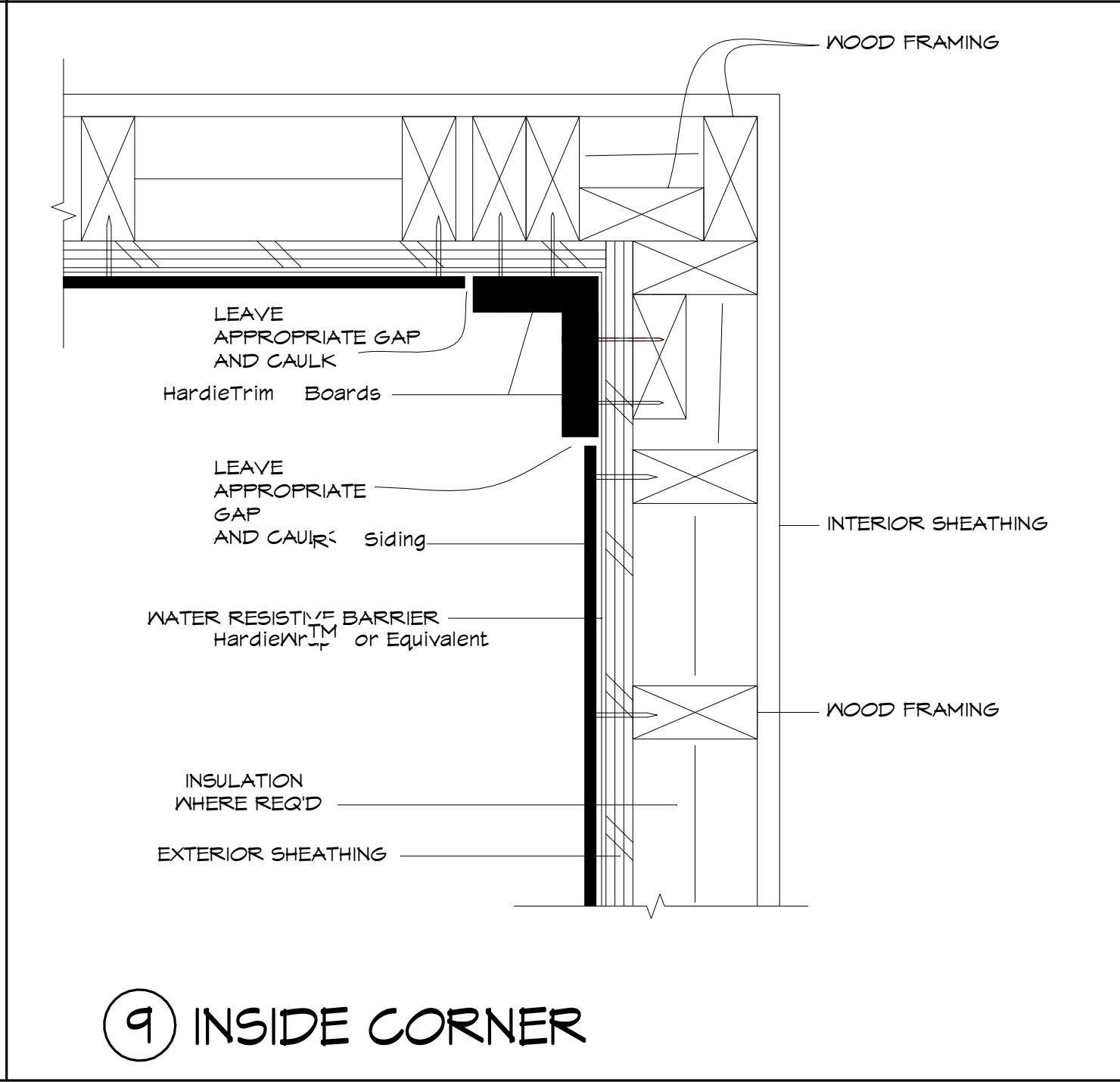
③ WINDOW/DOOR HEAD



⑦ OUTSIDE CORNER



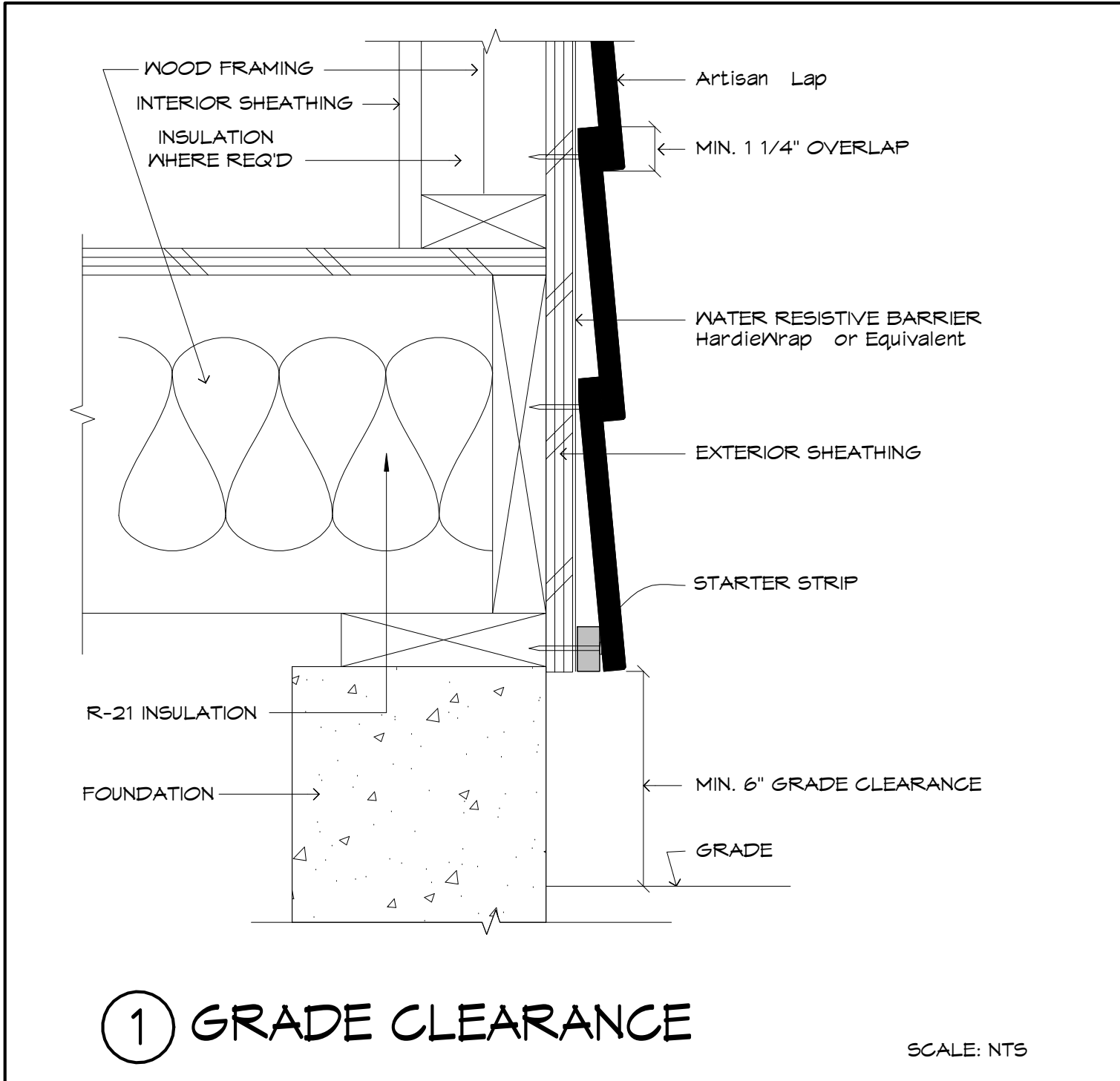
⑧ WINDOW SILL



⑨ INSIDE CORNER

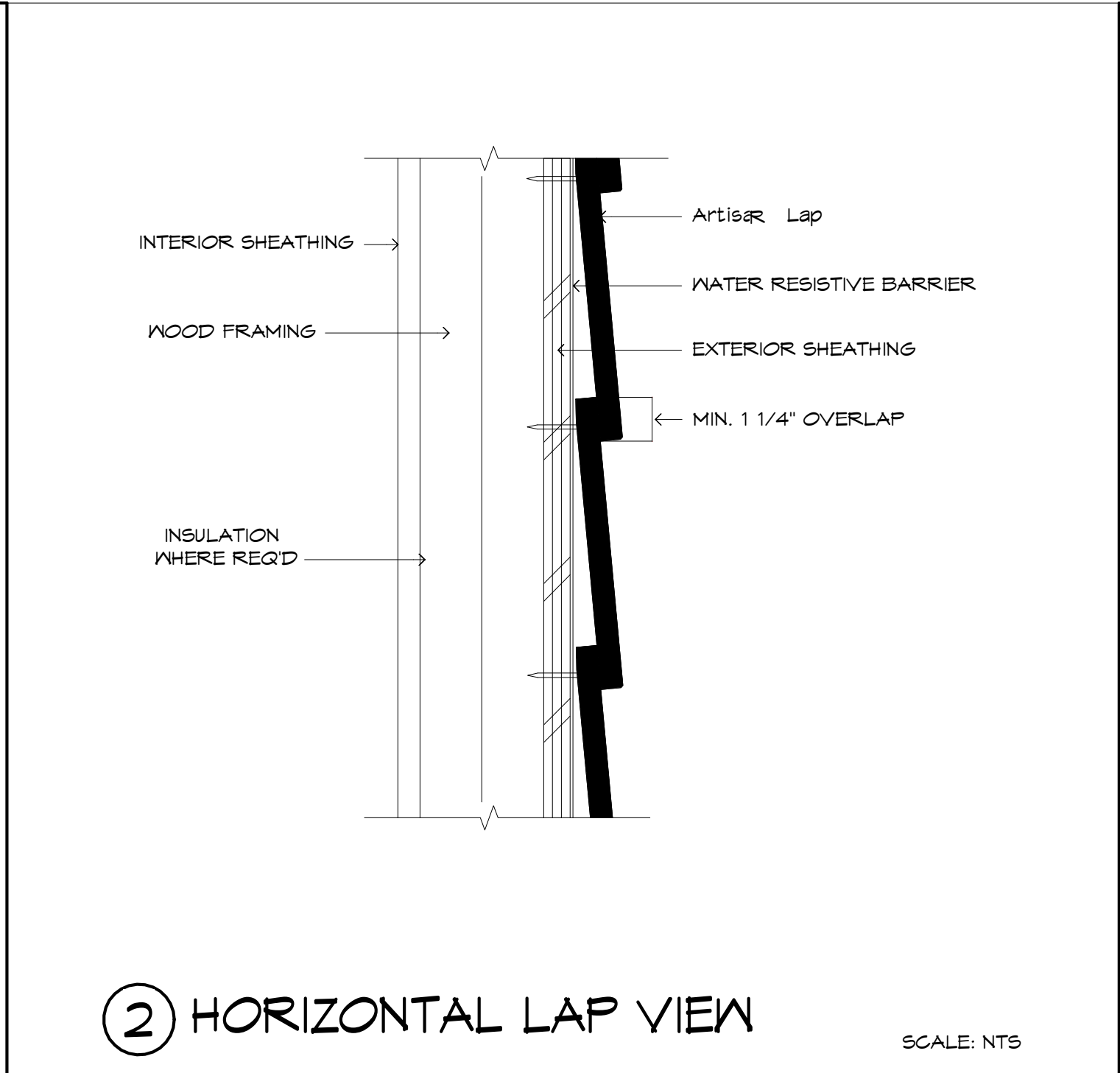
HARDIE PANEL SIDING DETAILS

SCALE: NOT TO SCALE (N.T.S.)



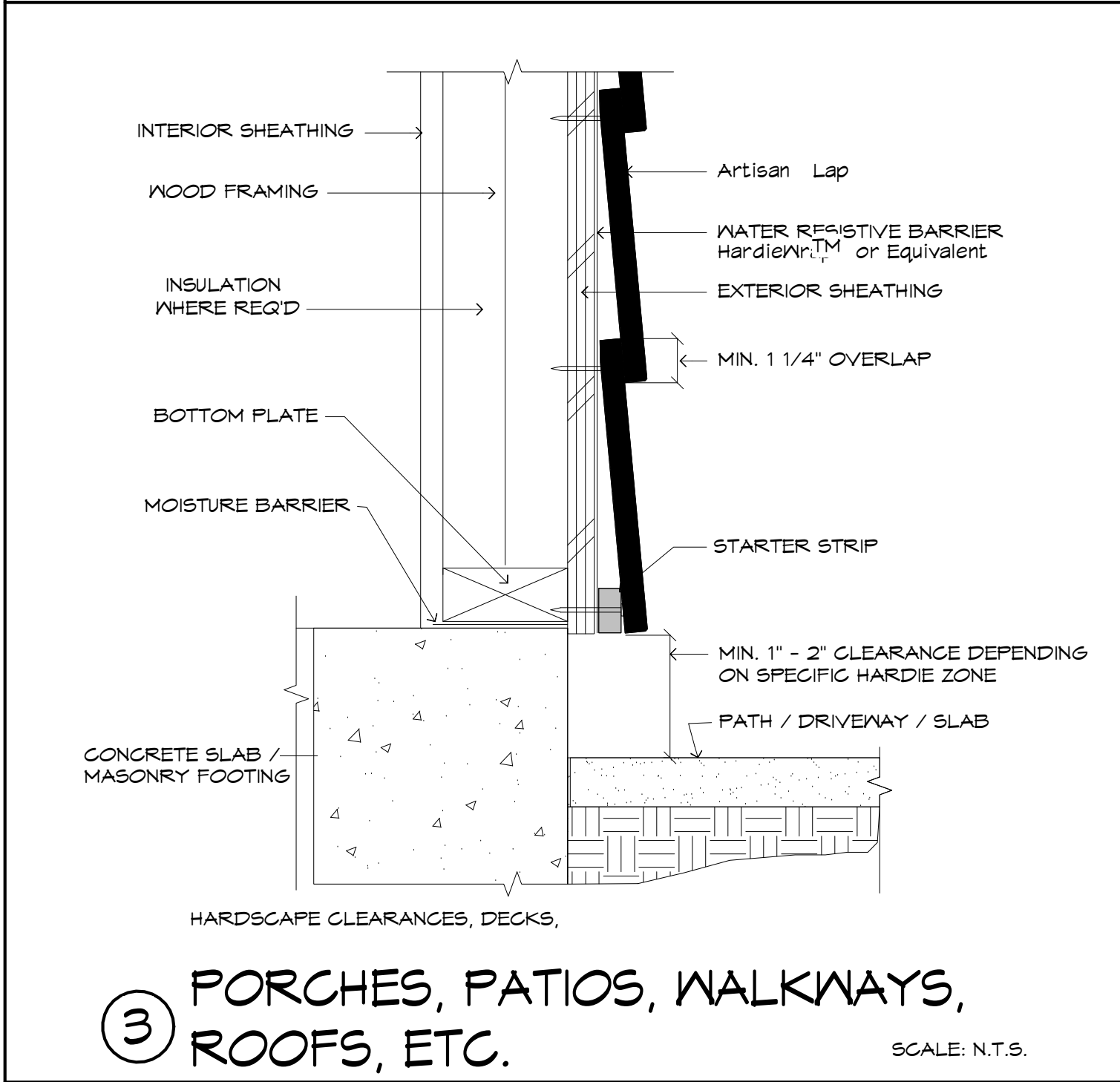
① GRADE CLEARANCE

SCALE: N.T.S.



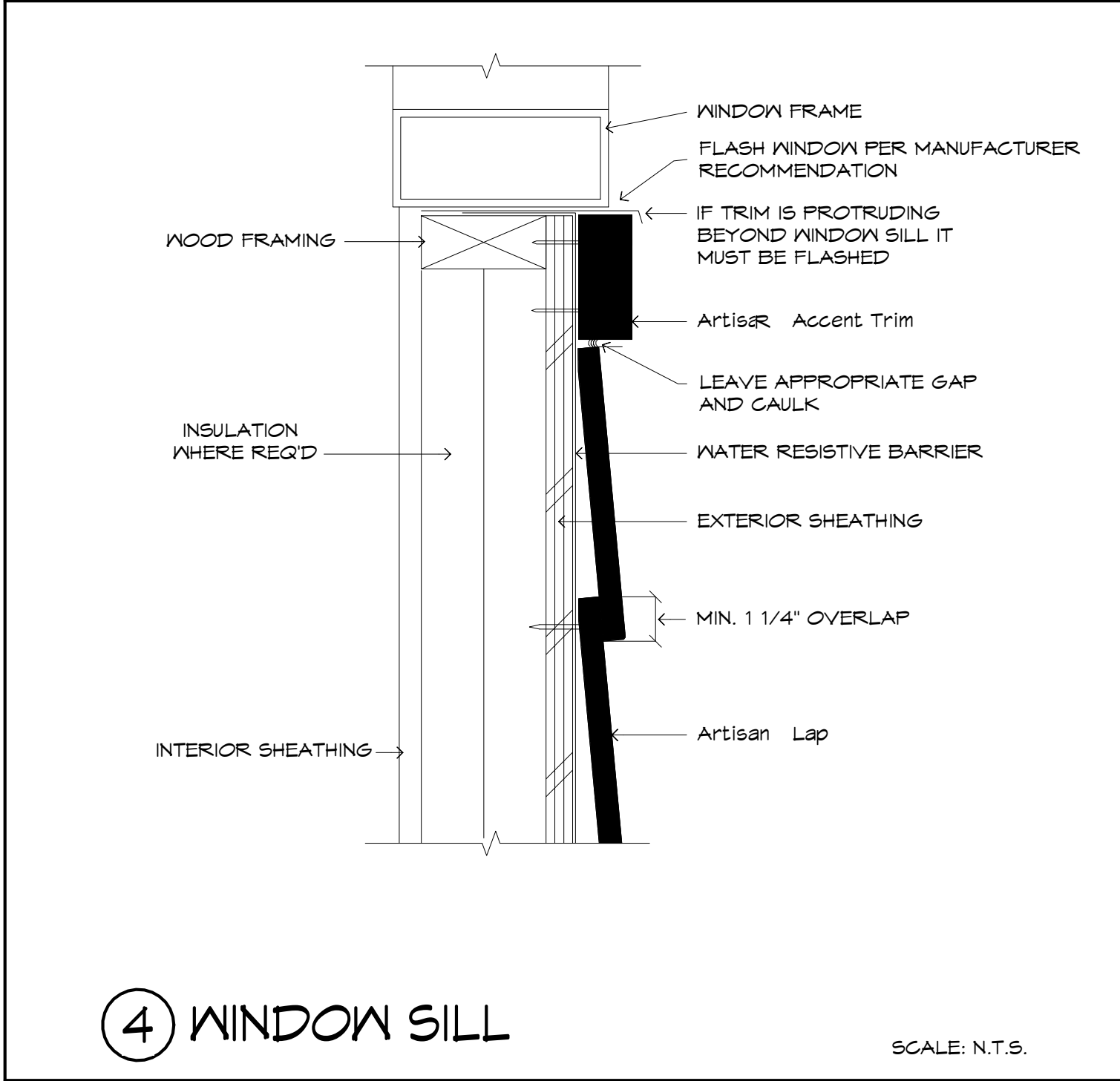
② HORIZONTAL LAP VIEW

SCALE: N.T.S.



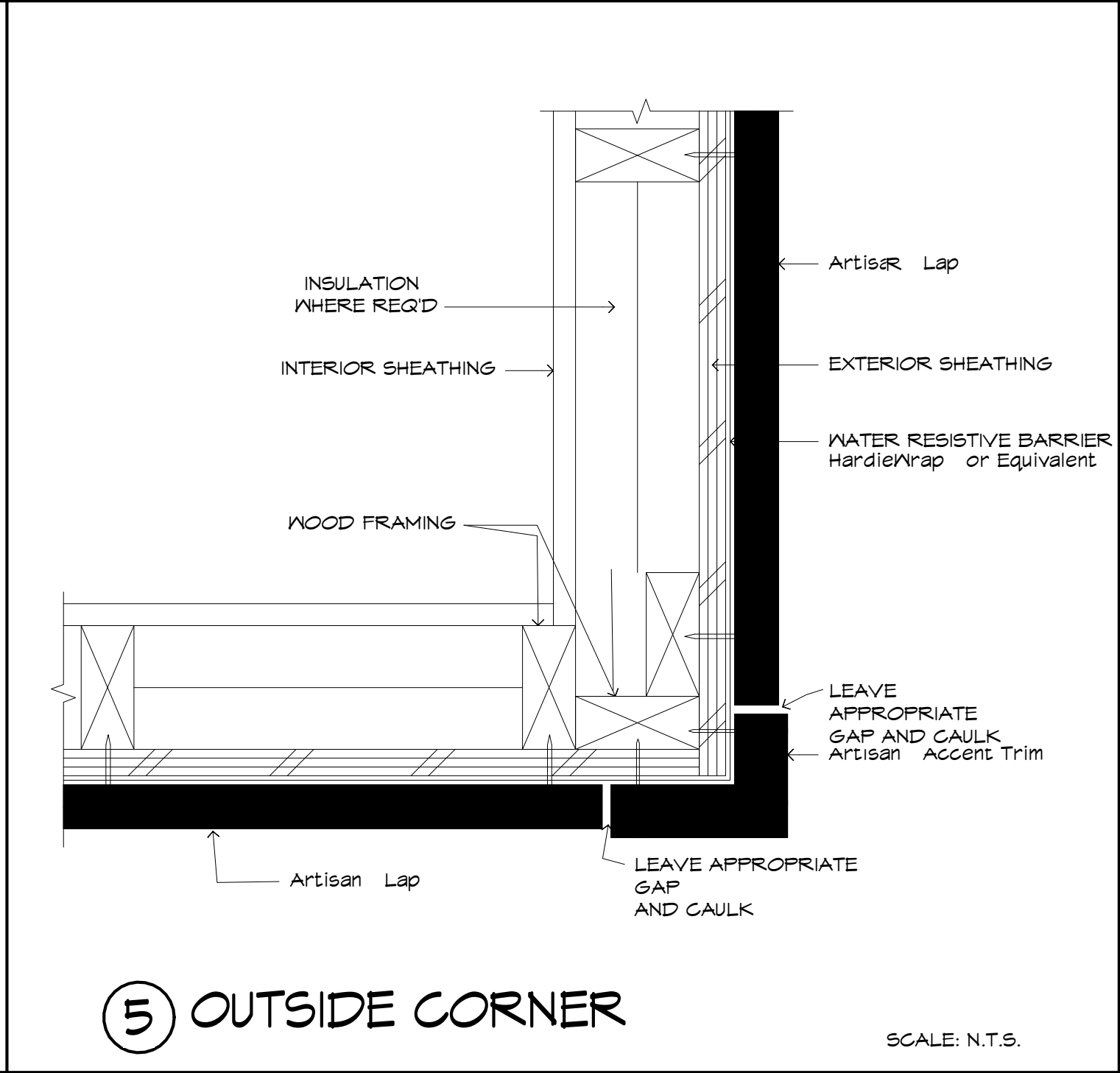
③ PORCHES, PATIOS, WALKWAYS, ROOFS, ETC.

SCALE: N.T.S.



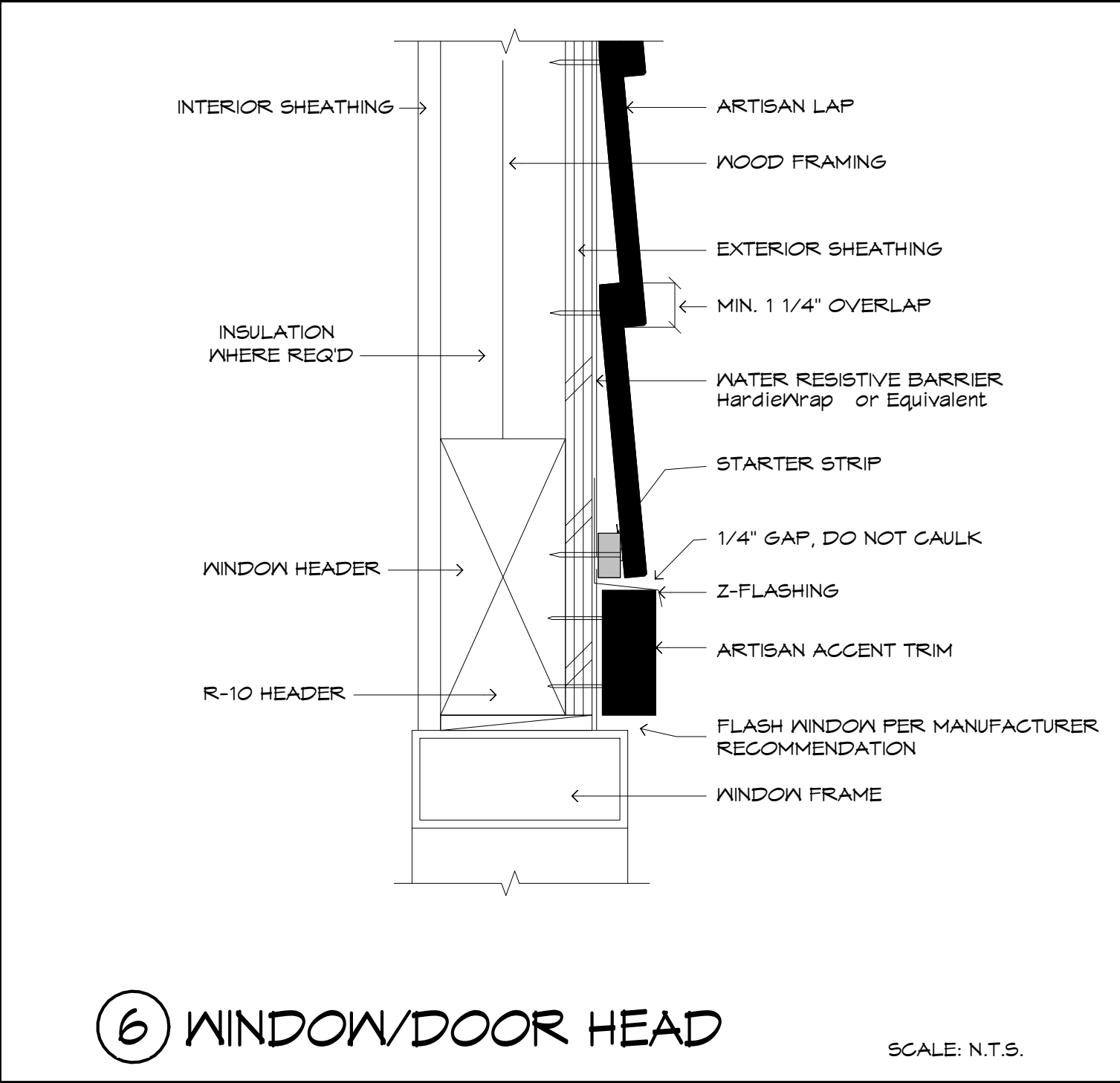
④ WINDOW SILL

SCALE: N.T.S.



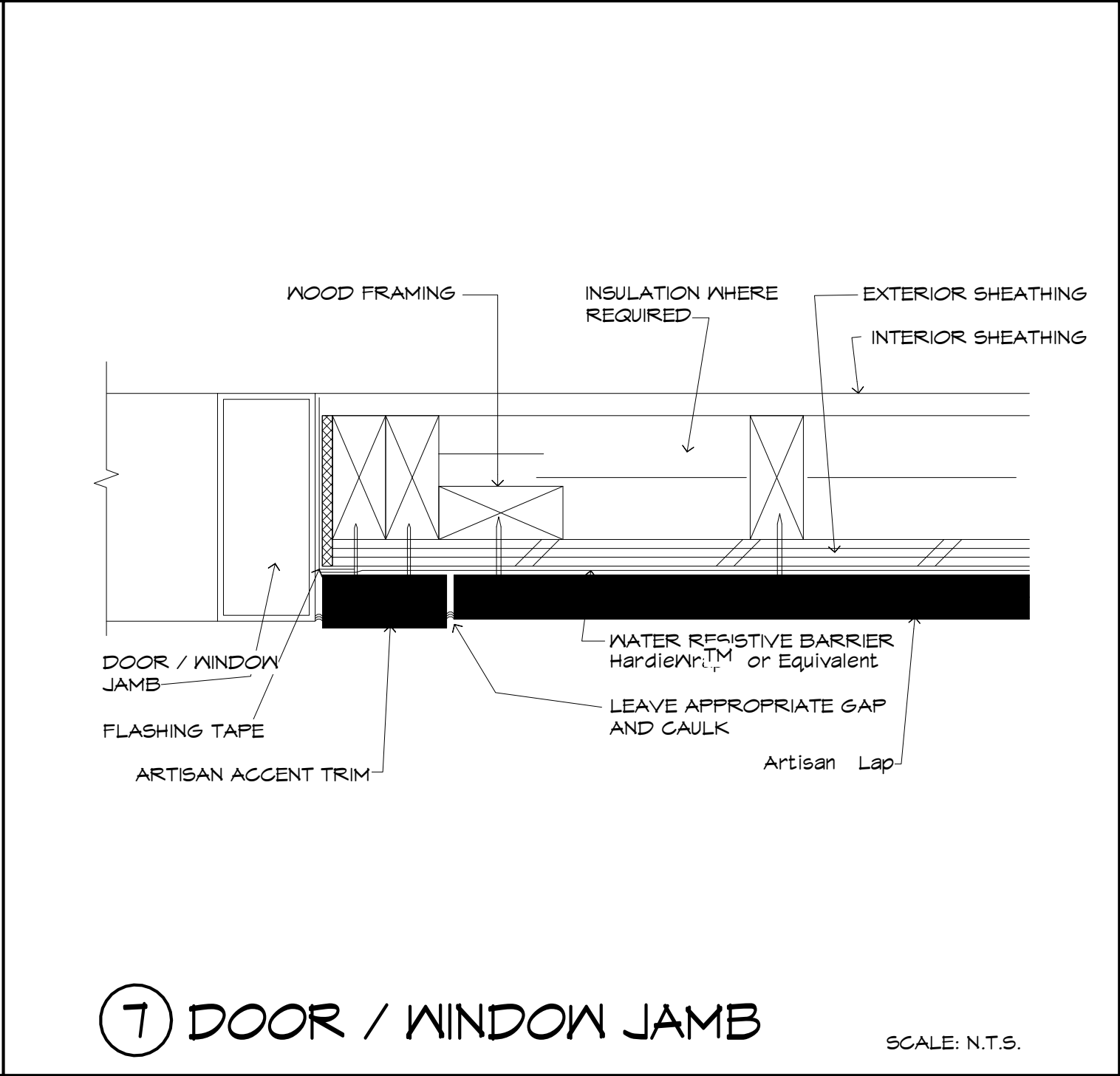
⑤ OUTSIDE CORNER

SCALE: N.T.S.



⑥ WINDOW/DOOR HEAD

SCALE: N.T.S.



⑦ DOOR / WINDOW JAMB

SCALE: N.T.S.

LAP SIDING DETAILS

SCALE: NOT TO SCALE (N.T.S.)