



COMMUNITY DEVELOPMENT DEPARTMENT

45175 Ten Mile Road
Novi, MI 48375
(248) 347-0415 Phone
(248) 735-5600 Facsimile
www.cityofnovi.org

ZONING BOARD OF APPEALS STAFF REPORT

FOR: City of Novi Zoning Board of Appeals **ZONING BOARD APPEALS DATE:** November 15, 2016

REGARDING: 1217 East Lake Drive, Parcel # 50-22-02-127-018
BY: Larry Butler, Deputy Director Community Development

I. GENERAL INFORMATION:

Applicant
ALAN DEZELL

Variance Type
DIMENSIONAL VARIANCE

Property Characteristics
Zoning District: R-4 (Single Family Residential)
Location: SOUTH OF FOURTEEN MILE ROAD AND WEST OF NOVI ROAD
Parcel #: 50-22-02-127-018

Request
The applicant is requesting a variance from the CITY OF NOVI Code of Ordinance Section 3.1.5 to allow for a 5 foot side yard setback, 25 total feet is allowed. This property is zoned R-4 (Single Family Residential).

II. STAFF COMMENTS:

Proposed Changes
Request is for deck 5 foot setback variance 10 feet minimum is allowed.

III. RECOMMENDATION:

The Zoning Board of Appeals may take one of the following actions:

1. I move that we grant the variance in Case No. **PZ16-0048**, sought by _____, for _____ because Petitioner has shown practical difficulty requiring _____.

 - (a) Without the variance Petitioner will be unreasonably prevented or limited with respect to use of the property because _____.
 - (b) The property is unique because _____.

- (c) Petitioner did not create the condition because _____
_____.
- (d) The relief granted will not unreasonably interfere with adjacent or surrounding properties because _____
_____.
- (e) The relief is consistent with the spirit and intent of the ordinance because _____
_____.
- (f) The variance granted is subject to:
 - 1. _____.
 - 2. _____.
 - 3. _____.
 - 4. _____.

2. I move that we **deny** the variance in Case No. **PZ16-0048**, sought by _____,
for _____ because Petitioner has not shown practical difficulty requiring _____.

- (a) The circumstances and features of the property including _____ are not unique because they exist generally throughout the City.
- (b) The circumstances and features of the property relating to the variance request are self-created because _____
_____.
- (c) The failure to grant relief will result in mere inconvenience or inability to attain higher economic or financial return based on Petitioner's statements that _____.
- (d) The variance would result in interference with the adjacent and surrounding properties by _____.
- (e) Granting the variance would be inconsistent with the spirit and intent of the ordinance to _____
_____.

Should you have any further questions with regards to the matter please feel free to contact me at (248) 347-0417.

Larry Butler
Deputy Director Community Development
City of Novi



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ZONING BOARD OF APPEALS APPLICATION

APPLICATION MUST BE FILLED OUT COMPLETELY

I. PROPERTY INFORMATION (Address of subject ZBA Case)				Application Fee: _____	
PROJECT NAME / SUBDIVISION Roof Covered Patio (no subdivision)				Meeting Date: _____	
ADDRESS 1217 E. Lake Dr., Novi, MI 48377		LOT/SUITE/SPACE # 57		ZBA Case #: PZ _____	
SIDWELL # 50-22-02 - 127 - 018		May be obtain from Assessing Department (248) 347-0485			
CROSS ROADS OF PROPERTY Between 13 Mile Rd. and 14 Mile Rd. on E. Lake Dr.					
IS THE PROPERTY WITHIN A HOMEOWNER'S ASSOCIATION JURISDICTION? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			REQUEST IS FOR: <input checked="" type="checkbox"/> RESIDENTIAL <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> VACANT PROPERTY <input type="checkbox"/> SIGNAGE		
DOES YOUR APPEAL RESULT FROM A NOTICE OF VIOLATION OR CITATION ISSUED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
II. APPLICANT INFORMATION					
A. APPLICANT		EMAIL ADDRESS adezell@yahoo.com		CELL PHONE NO. 248-705-8573	
NAME Alan DeZell		TELEPHONE NO. 248-960-9839			
ORGANIZATION/COMPANY Homeowner		FAX NO. n/a			
ADDRESS 1217 E. Lake Dr.		CITY Novi	STATE MI	ZIP CODE 48377	
B. PROPERTY OWNER <input checked="" type="checkbox"/> CHECK HERE IF APPLICANT IS ALSO THE PROPERTY OWNER					
Identify the person or organization that owns the subject property:		EMAIL ADDRESS		CELL PHONE NO.	
NAME Same as above		TELEPHONE NO.			
ORGANIZATION/COMPANY		FAX NO.			
ADDRESS		CITY	STATE	ZIP CODE	
III. ZONING INFORMATION					
A. ZONING DISTRICT					
<input type="checkbox"/> R-A <input type="checkbox"/> R-1 <input type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input checked="" type="checkbox"/> R-4 <input type="checkbox"/> RM-1 <input type="checkbox"/> RM-2 <input type="checkbox"/> MH <input type="checkbox"/> I-1 <input type="checkbox"/> I-2 <input type="checkbox"/> RC <input type="checkbox"/> TC <input type="checkbox"/> TC-1 <input type="checkbox"/> OTHER _____					
B. VARIANCE REQUESTED					
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:					
1. Section <u>3.1.5</u> Variance requested <u>Requesting 5' sideyard setback, 10' is standard.</u>					
2. Section _____ Variance requested _____					
3. Section _____ Variance requested _____					
4. Section _____ Variance requested _____					
IV. FEES AND DRAWINGS					
A. FEES					
<input checked="" type="checkbox"/> Single Family Residential (Existing) \$200 <input type="checkbox"/> (With Violation) \$250 <input type="checkbox"/> Single Family Residential (New) \$250					
<input type="checkbox"/> Multiple/Commercial/Industrial \$300 <input type="checkbox"/> (With Violation) \$400 <input type="checkbox"/> Signs \$300 <input type="checkbox"/> (With Violation) \$400					
<input type="checkbox"/> House Moves \$300 <input type="checkbox"/> Special Meetings (At discretion of Board) \$600					
B. DRAWINGS 1-COPY & 1 DIGITAL COPY SUBMITTED AS A PDF					
• Dimensioned Drawings and Plans		• Existing & proposed distance to adjacent property lines			
• Site/Plot Plan		• Location of existing & proposed signs, if applicable			
• Existing or proposed buildings or addition on the property		• Floor plans & elevations			
• Number & location of all on-site parking, if applicable		• Any other information relevant to the Variance application			



ZONING BOARD OF APPEALS APPLICATION

V. VARIANCE

A. VARIANCE (S) REQUESTED

DIMENSIONAL USE SIGN

There is a five-(5) hold period before work/action can be taken on variance approvals.

B. SIGN CASES (ONLY)

Your signature on this application indicates that you agree to install a **Mock-Up Sign** ten-(10) days before the schedule ZBA meeting. Failure to install a mock-up sign may result in your case not being heard by the Board, postponed to the next schedule ZBA meeting, or cancelled. A mock-up sign is **NOT** to be actual sign. Upon approval, the mock-up sign must be removed within five-(5) days of the meeting. If the case is denied, the applicant is responsible for all costs involved in the removal of the mock-up or actual sign (if erected under violation) within five-(5) days of the meeting.

C. ORDINANCE

City of Novi Ordinance, Section 3107 – Miscellaneous

No order of the Board permitting the erection of a building shall be valid for a period longer than one-(1) year, unless a building permit for such erection or alteration is obtained within such period and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

No order of the Board permitting a use of a building or premises shall be valid for a period longer than one-hundred and eighty-(180) days unless such use is establish within such a period; provided, however, where such use permitted is dependent upon the erection or alteration or a building such order shall continue in force and effect if a building permit for such erection or alteration is obtained within one-(1) year and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

D. APPEAL THE DETERMINATION OF THE BUILDING OFFICIAL


PLEASE TAKE NOTICE:

The undersigned hereby appeals the determination of the Building Official / Inspector or Ordinance made

CONSTRUCT NEW HOME/BUILDING ADDITION TO EXISTING HOME/BUILDING SIGNAGE
 ACCESSORY BUILDING USE OTHER _____

VI. APPLICANT & PROPERTY SIGNATURES

A. APPLICANT



Applicant Signature

9/16/2016

Date

B. PROPERTY OWNER

If the applicant is not the owner, the property owner must read and sign below:

The undersigned affirms and acknowledges that he, she or they are the owner(s) of the property described in this application, and is/are aware of the contents of this application and related enclosures.

Property Owner Signature

Date

VII. FOR OFFICIAL USE ONLY

DECISION ON APPEAL:

GRANTED

DENIED

The Building Inspector is hereby directed to issue a permit to the Applicant upon the following and conditions:

Chairperson, Zoning Board of Appeals

Date



Community Development Department

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**REVIEW STANDARDS
DIMENSIONAL VARIANCE**

The Zoning Board of Appeals (ZBA) will review the application package and determine if the proposed Dimensional Variance meets the required standards for approval. In the space below, and on additional paper if necessary, explain how the proposed project meets each of the following standards. (Increased costs associated with complying with the Zoning Ordinance will not be considered a basis for granting a Dimensional Variance.)

Standard #1. Circumstances or Physical Conditions.

Explain the circumstances or physical conditions that apply to the property that do not apply generally to other properties in the same zoning district or in the general vicinity. Circumstances or physical conditions may include:

- a. **Shape of Lot.** Exceptional narrowness, shallowness or shape of a specific property in existence on the effective date of the Zoning Ordinance or amendment.

Not Applicable Applicable If applicable, describe below:

Our house lot is only 50' wide with an 18' wide easement for a shared driveway with our neighbor. This necessitated the original approved request for a variance to build 5' from the lot line in year 2000; prior to construction of our house in 2001. The house and existing deck are 5' from the lot line. The requested variance is to remove the existing deck and add a single story roof covered patio at the existing deck site location. The variance requested would allow the covered patio to line up with the house, just like the existing deck does today. The existing 5' side yard variance and this request for the same variance is less than that standard lot size width of 80' for this zoning district.

and/or

- b. **Environmental Conditions.** Exceptional topographic or environmental conditions or other extraordinary situations on the land, building or structure.

Not Applicable Applicable If applicable, describe below:

and/or

- c. **Abutting Property.** The use or development of the property immediately adjacent to the subject property would prohibit the literal enforcement of the requirements of the Zoning Ordinance or would involve significant practical difficulties.

Not Applicable Applicable If applicable, describe below:

Standard #2. Not Self-Created.

Describe the immediate practical difficulty causing the need for the Dimensional Variance, that the need for the requested variance is not the result of actions of the property owner or previous property owners (i.e., is not self-created).

Without the variance, the covered patio would be too narrow and not align with the house like the current deck. This would both be impractical and unsightly. A covered patio is desirable to allow for shade, prevention of nearby debris from pine trees and other foliage from dropping on the surface, and the prevention of animals boring and sheltering underneath. Over the course of many years we had numerous woodchucks and other animals bore dens under our current deck, undermining the soil, and aggressively trying to attack our children and other family members. They have been trapped and released elsewhere every year for the past six years. Additionally, some animals died under our deck that caused decay, stench, and a health hazard. There is no way to access the concern under the deck when this occurs. +

Standard #3. Strict Compliance.

Explain how the Dimensional Variance in strict compliance with regulations governing area, setback, frontage, height, bulk, density or other dimensional requirements will unreasonably prevent the property owner from using the property for a permitted purpose, or will render conformity with those regulations unnecessarily burdensome.

The existing 5' side yard variance and this request for variance is less than that standard lot size width of 80' for this zoning district.

Standard #4. Minimum Variance Necessary.

Explain how the Dimensional Variance requested is the minimum variance necessary to do substantial justice to the applicant as well as to other property owners in the district.

The variance requested would allow the covered patio to line up with the house, just like the existing deck does today. Anything less would be both unsightly and would make the covered patio more analogous to a hallway.

Standard #5. Adverse Impact on Surrounding Area.

Explain how the Dimensional Variance will not cause an adverse impact on surrounding property, property values, or the use and enjoyment of property in the neighborhood or zoning district.

There would be no adverse impact to surrounding properties and values. There will actually be a value increase to the area by proceeding with this addition. Being in the back yard with surrounding large trees would not be visible to neighbors. This addition is a natural extension to the existing house. Most houses in this area have variances due to the lot sizes including many of the nearby neighbors. The next door neighbor immediately adjacent to our proposed addition has a variance of 5 feet from the lot line for a large garage. This is attached to their home with an attached breezeway. Note: this neighbors lot is 100' wide and ours is only 50' wide with an unbuildable 18' wide easement.



1217 East Lake Drive

E Lake Rd

E Lake Rd

E Lake Rd

E Lake Rd

E Lake Rd

GENERAL NOTES

WOOD TRUSS SPECIFICATIONS

- Designs shall conform with the latest versions of (NDS), National Design Specification for Wood Construction by the American Forest & Paper Association, and Design Standard for Metal Plate Connected Wood Truss Construction by the American Institute of Steel Construction (AISC) and the local code jurisdiction.
- Trusses shall be spaced as indicated on the plans unless the designer determines that different spacing is required to meet deflection requirements.
- Maximum deflection of floor trusses shall be limited to 1/360 for total load and 1/480 for live load. Maximum deflection of roof trusses shall be limited to 1/240 for total loads and 1/360 for live load u.n.o.
- Adequate care shall be built into floor and parallel chord roof trusses to compensate for normal dead load deflection.
- Design loads:

ROOF TRUSS LOADING CRITERIA

TOP CHORD LIVE LOAD 20 P.S.F.
DEAD LOAD 1 P.S.F.

BOTT. CHORD LIVE LOAD 10 P.S.F.
(UNINHABITABLE ATTIC) W/O STORAGE

LIVE LOAD 20 P.S.F.
(UNINHABITABLE ATTIC) WITH STORAGE)

DEAD LOAD 10 P.S.F.
WIND LOAD 90 MPH OR AS REQUIRED BY CODE

- A 15% increase on allowable stresses for short term loading is allowed. Drift loading shall be accounted for per the current Michigan Residential Code requirements.
- Add additional attic storage live loads per the current Michigan Residential Code requirements.

SOIL REQUIREMENTS & EARTH WORK AND CONCRETE

- All top soil, organic and vegetative material should be removed prior to construction. Any required fill shall be clean, granular material compacted to at least 95% of maximum dry density as determined by ASTM D-1557.
 - Foundations bearing on existing soils have been designed for a minimum allowable soil bearing capacity of 3000 psf, u.n.o.
 - Notify the engineer/architect if the allowable soil bearing capacity is less than 3000 psf so that the foundations can be redesigned for the new allowable bearing capacity.
- R404.1.1 Backfill placement.
Backfill shall not be placed against the wall until the wall has sufficient strength and has been anchored to the floor above or has been sufficiently braced to prevent damage by the backfill.

R506.2.1. Fill.
Fill material shall be free of vegetation and foreign material. The fill shall be compacted to assure uniform support of the slab and, except where approved, the fill depths shall not exceed 24 inches for clean sand or gravel and 8 inches for earth.

R506.2.3 Vapor retarder.
A 6 mil polyethylene or approved vapor retarder with joints lapped not less than 6 inches shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists.

- Concrete work shall conform to the requirements of ACI 301-96, "Specifications for Structural Concrete for Buildings", except as modified as supplemental requirements.
- Concrete shall have a minimum of 3000 psi, 28 day compressive strength, unless noted otherwise. (4 sacks) 4 water/cement ratio not to exceed 6 gallons per sack). Exterior concrete slabs shall have a minimum of 4000 psi, 28 day compressive strength, 4 4% air entrainment.
- The use of additives such as fly ash or calcium chloride is not allowed without prior review from the architect.

R405.1 Concrete or masonry foundations.
Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend at least 1 foot beyond the outside edge of the footing and 6 inches above the top of the footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper, and the drainage tiles or perforated pipe shall be placed on a minimum of 2 inches of washed gravel or crushed rock at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches of the same material.
Exception:
A drainage system is not required when the foundation is installed on well-drained ground or sand-gravel mixture soils according to the Unified Soil Classification System, Group T soils, as detailed in Table R405.1.

STRUCTURAL STEEL SPECIFICATIONS

- Structural steel shapes, plates, bars, etc. are to be ASTM A-36 (unless noted other wise) designed and constructed per the 1989 AISC "Specifications For The Design, Fabrication, And Erection Of Steel For Buildings", and the latest edition of the AISC "Manual Of Steel Construction".
- Steel columns shall be ASTM A-501, Fy36 KSI. Structural tubing shall be ASTM A500 grade B, Fy46 KSI.
- Welds shall conform with the latest AWS D11 "Specifications For Welding In Building Construction", And shall utilize E70XX electrodes unless noted otherwise.
- Bolted connections shall utilize ASTM A-325 bolts tightened to a " snug fit " condition (unless noted otherwise).

REINFORCING STEEL SPECIFICATIONS

- Reinforcing bars, devals and ties shall conform to ASTM-615 grade 60 requirements and shall be free of rust, dirt, and mud.
- Welded wire fabric shall conform to ASTM A-185 and be positioned at the mid height of slabs U.N.O.
- Reinforcing shall be placed and securely tied in place sufficiently ahead of placing of concrete to allow inspection and correction, if necessary without delaying the concrete placement.
- Extended reinforcing bars a minimum of 36" around corners and lap bars at splices a minimum of 24" U.N.O.
- Welding of reinforcing steel is not allowed.

STAIRWAYS AND HANDRAILS

R311.1.1 Width.
Stairways shall not be less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches (114 mm) on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 3'-7" (781 mm) where a handrail is installed on one side and 2'1 inches (688 mm) where handrails are provided on both sides. The width of spiral stairways shall be in accordance with Section R311.1.3.1.
Exception: The width of spiral stairways shall be in accordance with Section R311.1.3.1.

R311.1.1 Handrails.
Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

R311.1.1 Height.
Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

- Exceptions:
- The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
 - When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

SMOKE ALARMS

- R314.3 Smoke Alarms
Smoke alarms shall be installed in the following locations:
- In each sleeping room.
 - Outside each separate sleeping area in the immediate vicinity of the bedrooms.
 - On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

FLASHING AND WEEPHOLES

R703.1.5 Flashing.
Flashing shall be located beneath the first course of masonry above finished ground level above the foundation wall or slab and at other points of support, including structural floors, shell angles and lintels when masonry veneers are designed in accordance with Section R703.1. See Section R703.8 for additional requirements.

R703.1.6 Weepholes.
Weepholes shall be provided in the outside wythe of masonry walls at a maximum spacing of 33 inches (838 mm) on center. Weepholes shall not be less than 3/16 inch (5 mm) in diameter. Weepholes shall be located immediately above the flashing.

R703.8 Flashing.
Approved corrosion-resistant flashing shall be applied shingle-fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. Self-adhered membranes used as flashing shall comply with ASTM T-11. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations:

- Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainages.
- At the intersection of chimneys or other masonry construction with frame or stucco 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, I.T. At built-in gutters.

TABLE R404.1.2(1)
MINIMUM HORIZONTAL REINFORCEMENT FOR CONCRETE BASEMENT WALLS^{a,b}

MAXIMUM UNSUPPORTED HEIGHT OF BASEMENT WALL (feet)	LOCATION OF HORIZONTAL REINFORCEMENT
> 8	One N. 4 bar within 12 inches of the top of the wall story and one No. 4 bar near third points in the wall story

For Sl: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square inch = 6.895 kPa.
a. Horizontal reinforcement requirements are for reinforcing bars with a minimum yield strength of 40,000 psi and concrete with a minimum concrete compressive strength 2,500 psi.
b. See Section R404.1.2.2 for minimum reinforcement required for foundation walls supporting above-grade concrete walls.

TABLE R404.1.2(B)
MINIMUM VERTICAL REINFORCEMENT FOR 6-, 8-, 10-, 12 INCH NOMINAL FLAT CONCRETE BASEMENT WALLS^{a,c,d,e,f,g,h,i}

MAXIMUM WALL HEIGHT (feet)	MAXIMUM UNBALANCED BACKFILL HEIGHT ^a (feet)	MINIMUM VERTICAL REINFORCEMENT - BAR SIZE AND SPACING (INCHES)											
		Soil classes ^b and design lateral soil (psf per foot of depth)											
		GW, GP, SW, SP 30				GM, GC, SM, SM-SC and ML 45				SC, ML-CL and Inorganic CL 60			
		Minimum nominal wall thickness (inches)											
5	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
6	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	4 @ 35	NR	NR	NR
7	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	5 @ 42	NR	NR	NR
8	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	5 @ 43	NR	NR	NR
9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	5 @ 37	NR	NR	NR
10	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	4 @ 33	NR	NR	NR
11	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
12	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
13	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
14	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
15	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
16	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
17	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
18	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
19	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR
20	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	6 @ 34	6 @ 43	NR	NR

- For Sl: 1 foot = 304.8 mm, 1 inch = 25.4 mm, 1 pound per square foot per foot = 0.1571 kPa²/m, 1 pound per square inch = 6.895 kPa/mmm.
- Soil classes are in accordance with the Unified Soil Classification System. Refer to Table R405.1.
 - Table values are based on reinforcing bars with a minimum yield strength of 40,000 psi concrete with a minimum specified compressive strength of 2,500 psi and vertical reinforcement being located at the centerline of the wall. See Section R404.1.2.3.2.
 - Vertical reinforcement with a yield strength of less than 40,000 psi and/or bars of a different size than specified in the table are permitted in accordance with Section R404.1.2.3.7.a and Table R404.1.2(9).
 - NR indicates no vertical reinforcement is required, except for 4-inch nominal walls formed with stay-in-place forming systems in which case vertical reinforcement shall be #4@48 inches on center.
 - Allowable deflection criterion is L/240, where L is the unsupported height of the basement wall in inches. Interpretation is not permitted.
 - Where walls will retain 4 feet or more of unbalanced backfill, they shall be laterally supported at the top and bottom before backfilling.
 - Vertical reinforcement shall be located to provide a cover of 1.25 inches measured from the inside face of the wall. The center of the steel shall not vary from the specified location by more than the greater of 10 percent of the wall thickness or 3/8-inch.
 - Concrete cover for reinforcement measured from the inside face of the wall shall not be less than 3/4-inch. Concrete cover for reinforcement measure from the outside face of the wall shall not be less than 1 1/2 inches for No. 5 bars and smaller, and not less than 2 inches for larger bars.
 - DR means design is required in accordance with the applicable building code, or where there is no code in accordance with ACI 318.
 - Concrete shall have a specified compressive strength, f_c , of not less than 2,500 psi at 28 days, unless a higher strength is required by footnote or m.
 - The minimum thickness is permitted to be reduced 2 inches, provided the minimum specified compressive strength of concrete, f_c , is 4,000 psi.
 - A plain concrete wall with a minimum nominal thickness of 12 inches is permitted, provided minimum specified compressive strength of concrete, f_c , is 3,500 psi.
 - See Table R411.3 for tolerance from nominal thickness permitted for flat walls.

TABLE R602.10.6.4
TENSION STRAP CAPACITY FOR RESISTING WIND PRESSURES PERPENDICULAR TO METHODS PFH, PFG AND CS-PF BRACED WALL PANELS

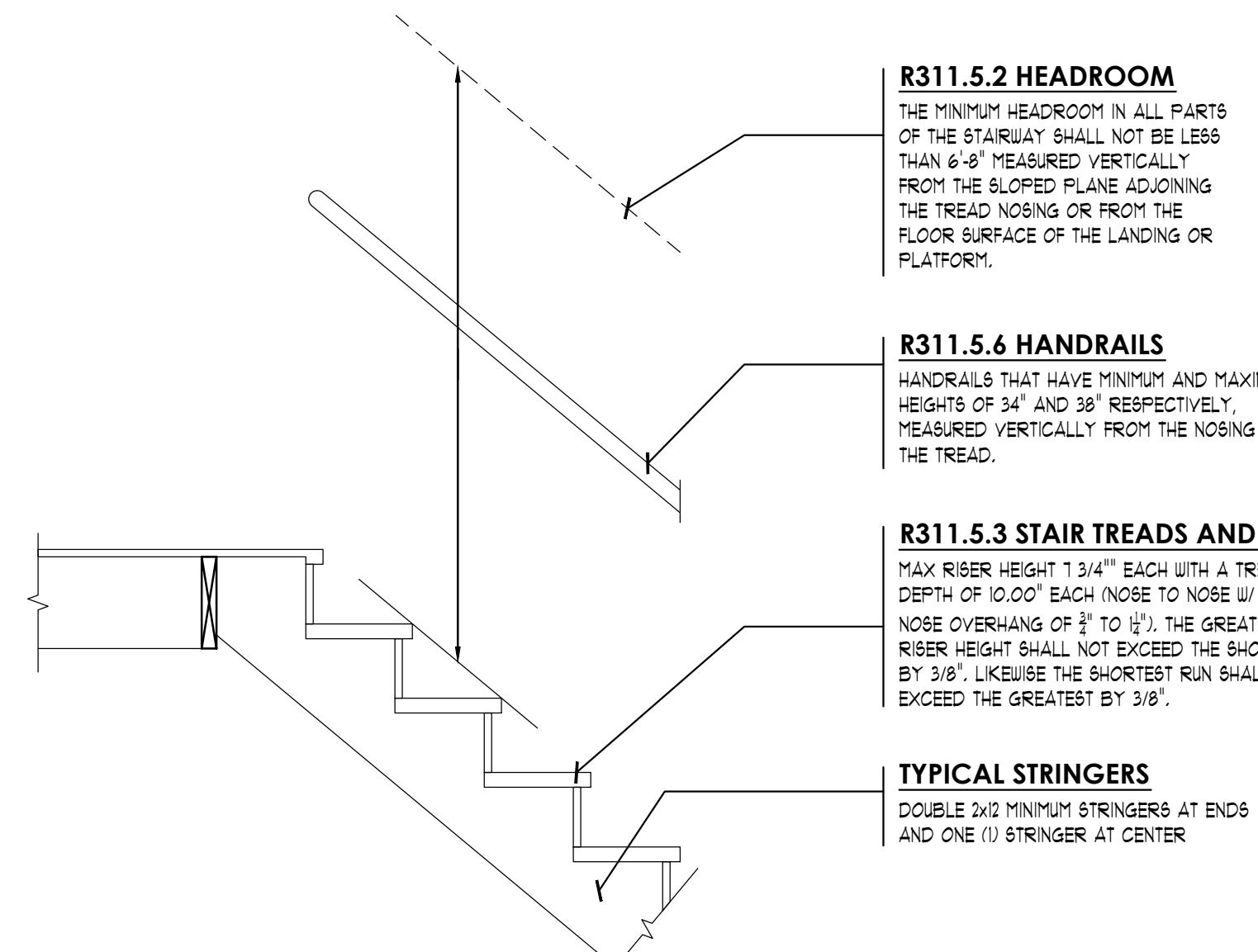
MINIMUM WALL STUD FRAMING NOMINAL SIZE AND GRADE	MAXIMUM PONY WALL HEIGHT (feet)	MAXIMUM TOTAL WALL HEIGHT (feet)	MAXIMUM OPENING WALL HEIGHT (feet)	TENSION STRAP CAPACITY REQUIRED (pounds) ^a						
				Ultimate Design Wind Speed V_w (mph)			Exposure			
				110	115	130	110	115	130	
2 x 4 No. 2 Grade	0	10	18	1,000	1,000	1,000	1,000	1,000	1,000	1,050
				1,000	1,000	1,000	1,000	1,000	1,750	
				1,000	1,025	2,050	2,075	2,500	3,950	
	1	10	10	16	1,000	1,275	2,375	2,400	2,850	DR
					1,000	1,000	1,475	1,500	1,875	3,125
					1,000	1,000	1,475	1,500	1,875	3,125
	2	10	10	16	1,775	2,175	3,525	3,550	4,125	DR
					2,075	2,500	3,950	3,975	DR	DR
					2,075	2,500	3,950	3,975	DR	DR
	2	12	12	16	2,875	3,375	DR	DR	DR	DR
					3,425	3,975	DR	DR	DR	DR
					2,275	2,750	DR	DR	DR	DR
4	12	12	12	3,225	3,775	DR	DR	DR	DR	
				1,000	1,000	1,700	1,700	2,025	3,050	
				1,825	2,150	3,225	3,225	3,675	DR	
2	12	12	18	2,200	2,550	3,725	3,750	DR	DR	
				9	1,450	1,750	2,700	2,725	3,125	DR
				1,6	2,050	2,400	DR	DR	DR	DR
4	12	12	18	3,350	3,800	DR	DR	DR	DR	

For Sl: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.
a. DR = Design Required.
b. Straps shall be installed in accordance with manufacturer's recommendations.

TABLE R403.1
MINIMUM WIDTH OF CONCRETE PRECAST OR MASONRY FOOTINGS (INCHES)^a

	LOAD BEARING VALUE OF SOIL (PSF)			
	1,500	2,000	3,000	$\geq 4,000$
CONVENTIONAL LIGHT FRAME CONSTRUCTION				
1-STORY	12	12	12	12
2-STORY	15	12	12	12
3-STORY	23	17	12	12
4-INCH BRICK VENEER OVER LIGHT FRAME OR 8-INCH HOLLOW CONCRETE MASONRY				
1-STORY	12	12	12	12
2-STORY	21	16	12	12
3-STORY	32	24	16	12
8-INCH SOLID OR FULLY GROUTED MASONRY				
1-STORY	16	12	12	12
2-STORY	29	21	14	12
3-STORY	42	32	21	16

For Sl: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square inch = 6.895 kPa.
a. Horizontal reinforcement requirements are for reinforcing bars with a minimum yield strength of 40,000 psi and concrete with a minimum concrete compressive strength 2,500 psi.



TYPICAL STAIR DETAIL

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



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CONTRACTOR TO VERIFY ALL DRAWING APPLICABLE CONSTRUCTION DISCREPANCIES AND DESIGN CHANGES SHALL BE REPORTED TO THE DESIGNER IMMEDIATELY.
CALL METRO AT 800-487-2727 24 HOURS PRIOR TO ANY EXCAVATION CONSTRUCTION TO BE THE SOLE RESPONSIBILITY OF THE OWNER/HOLDER.

CLIENT / PROJECT
DEZELL RESIDENCE COVERED PATIO

JOB No. 16-213
DRAWN: ECT
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REVIEW 8-16-16
FINAL: 8-18-16
REVISION 8-19-16

SCALE:
PER PLAN

SHEET #
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DEMOLITION NOTES

- EXTERIOR GRADE SHALL BE INSPECTED AND LOCATIONS WHERE THE GRADE IS WITHIN 8' OF THE SILL PLATE, INSPECT CLOSELY FOR SIGNS OF ROT. ANY ROTTED WOOD SHALL BE REMOVED AND REPLACED AND THEN SPOT TREATED WITH TIMBOR OR AN EQUIVALENT PRESERVATIVE.
- NEW SILICONE SEALANT SHALL BE APPLIED AROUND ANY OPENINGS THROUGH THE FOUNDATION (PIPES, WIRES, ETC).
- ALL VERTICAL CRACKS NOTED SHALL BE TUCK POINTED WITH AN EPOXY MORTAR.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL SUB-TRADES.
- ALL WORK IS TO BE DONE BY LICENSED CONTRACTORS
- CONTRACTOR SHALL VERIFY ALL ON SITE CONDITIONS & DIMENSIONS AND TO NOTIFY TK DESIGN & ASSOCIATES OF ANY DISCREPANCIES OR OMISSIONS PRIOR TO CONSTRUCTION/DEMOLITION.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL CONSTRUCTION RELATED DEBRIS, TRASH, RUBBISH ETC. AND TO DISPOSE OF ALL MATERIALS IN A LEGAL MANNER. CONTRACTOR IS TO KEEP THE PROJECT AREA CLEAN AT ALL TIMES.
- CONTRACTOR SHALL NOTIFY, COORDINATE, AND SCHEDULE ANY AND ALL DISCONNECTIONS OF EXISTING UTILITY SERVICE WITH THE OWNER PRIOR TO THE WORK BEING DONE.
- REPAIR DEMOLITION PERFORMED IN EXCESS OF THAT REQUIRED. RETURN STRUCTURES AND SURFACES TO REMAIN TO CONDITION EXISTING PRIOR TO COMMENCEMENT OF SELECTIVE DEMOLITION WORK. REPAIR ADJACENT CONSTRUCTION OR SURFACES SOILED OR DAMAGED BY SELECTIVE DEMOLITION WORK.
- MAINTAIN EXISTING UTILITY SERVICES AND PROTECT AGAINST DAMAGE DURING ALL PHASES OF CONSTRUCTION.
- RELOCATE ALL PLUMBING AND HVAC PIPING AS NECESSARY PER OWNER'S SPEC
- IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION OPERATIONS, COMPLY WITH APPLICABLE REGULATIONS, LAWS, AND ORDINANCES CONCERNING REMOVAL, HANDLING, AND PROTECTION AGAINST EXPOSURE OR ENVIRONMENTAL POLLUTION.
- ALL DRAWINGS ARE SCHEMATIC. EXTENT OF DEMOLITION SHOWN IS APPROXIMATE. FIELD VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL STRUCTURAL MEMBERS ARE TO REMAIN (TYP. UNLESS NOTED OTHERWISE)

NOTE:

GROUT ALL CONCRETE BLOCK CORES SOLID THAT SUPPORT POINT LOADS FROM ABOVE (TYPICAL)

NOTE:

WOOD BEAM
STEEL BEAM
BRG. WALL
BRG. WALL ABOVE
BRG. WALL & BRG. WALL ABOVE
POINT LOAD
POINT LOAD FROM ABOVE

NOTE:

VERIFY FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO:
1. EXTERIOR WALL THICKNESS
2. ROOF PITCH
3. EXISTING HEEL HEIGHT
4. OVERHANG DIMENSIONS
5. OVERALL DIMENSIONS ACROSS TOP PLATES PRIOR TO MATERIAL TAKEOFF

FIRE SEPARATION NOTE

FIRE SEPARATION (R302.6)
GARAGE SPACE BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT. ALL OTHER GARAGE SPACE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE. DROP CLG. UNDER FLR. ABV. (ENCLOSE MECHANICAL AND STRUCTURAL ELEMENTS) VERIFY W/ BLDR.

AREA SUMMARY:

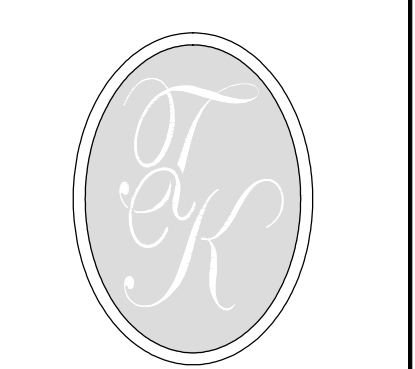
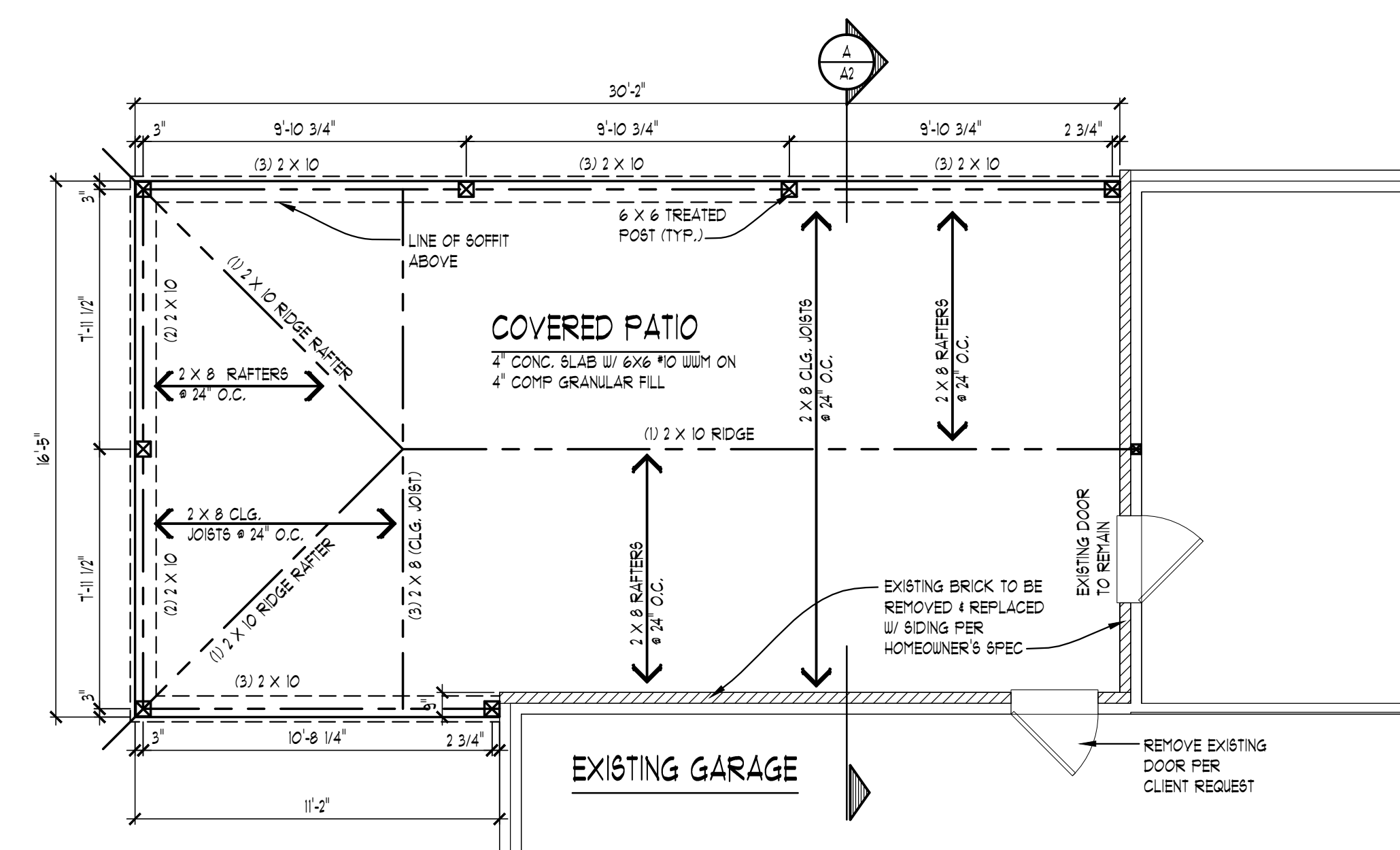
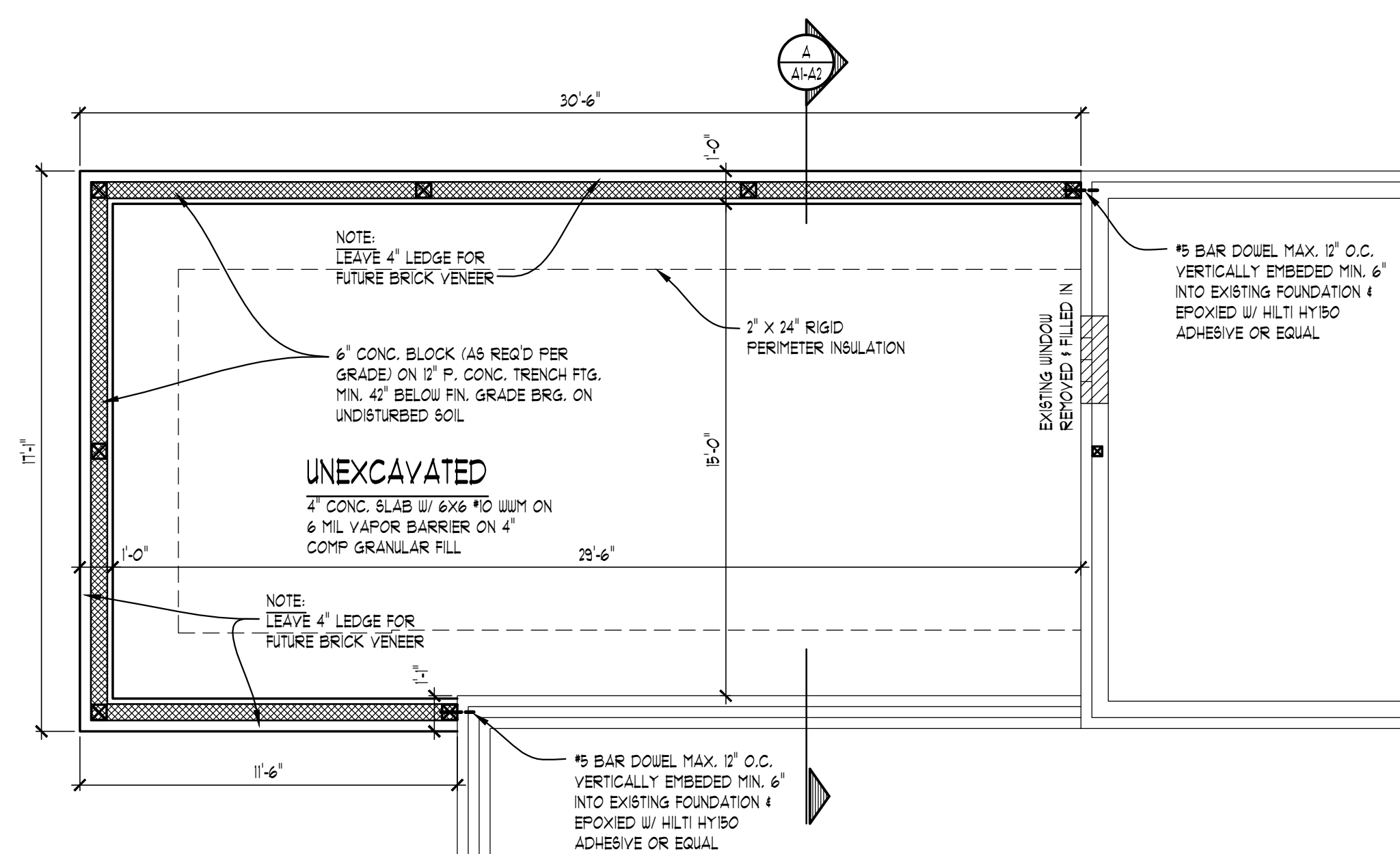
COVERED PATIO 488 S.F.

FOUNDATION NOTES

NOTE:

FOOTINGS ARE DESIGNED FOR 3000 P.S.F. SOIL BRG. CAPACITY.

- GROUT SOLID * BEARING CONDITIONS WHERE BLOCK IS USED.



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CONTRACTOR IS THE SOLE RESPONSIBILITY OF THE FUTURE HOLDER.

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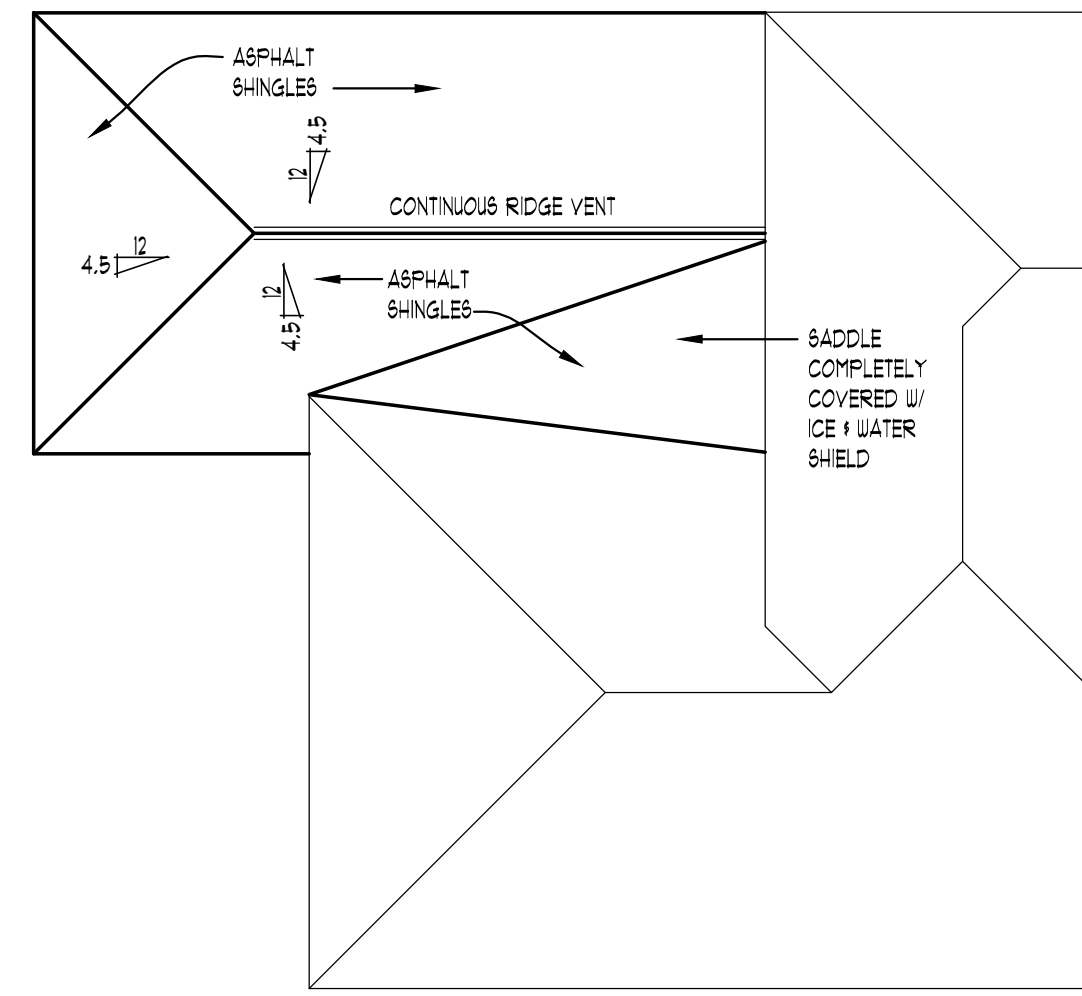
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ELEVATION NOTES

1. ALL ROOF SADDLES TO BE PLYWOOD SHEATHED WITH ICE & WATER SHIELD AND SHINGLES.
2. PROVIDE ICE & WATER SHIELD MIN. 6'-0" COVERAGE AT ALL VALLEYS
3. METAL FLASHING AS REQUIRED BY CODE.
4. ROOF & SOFFIT VENTS AS REQUIRED BY CODE.
5. PROVIDE GUTTERS & DOWNSPOUTS FOR DRAINAGE OF ROOF WATER. DOWNSPOUTS ARE TO BE LOCATED SO THAT THE DISCHARGE WILL NOT SPILL ON OR FLOW ACROSS ANY PORCHES, WALKS OR DRIVES.

NOTE:
 VERIFY FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO:
 1. EXTERIOR WALL THICKNESS
 2. ROOF PITCH
 3. EXISTING HEEL HEIGHT
 4. OVERHANG DIMENSIONS
 5. OVERALL DIMENSIONS ACROSS TOP PLATES PRIOR TO MATERIAL TAKEOFF

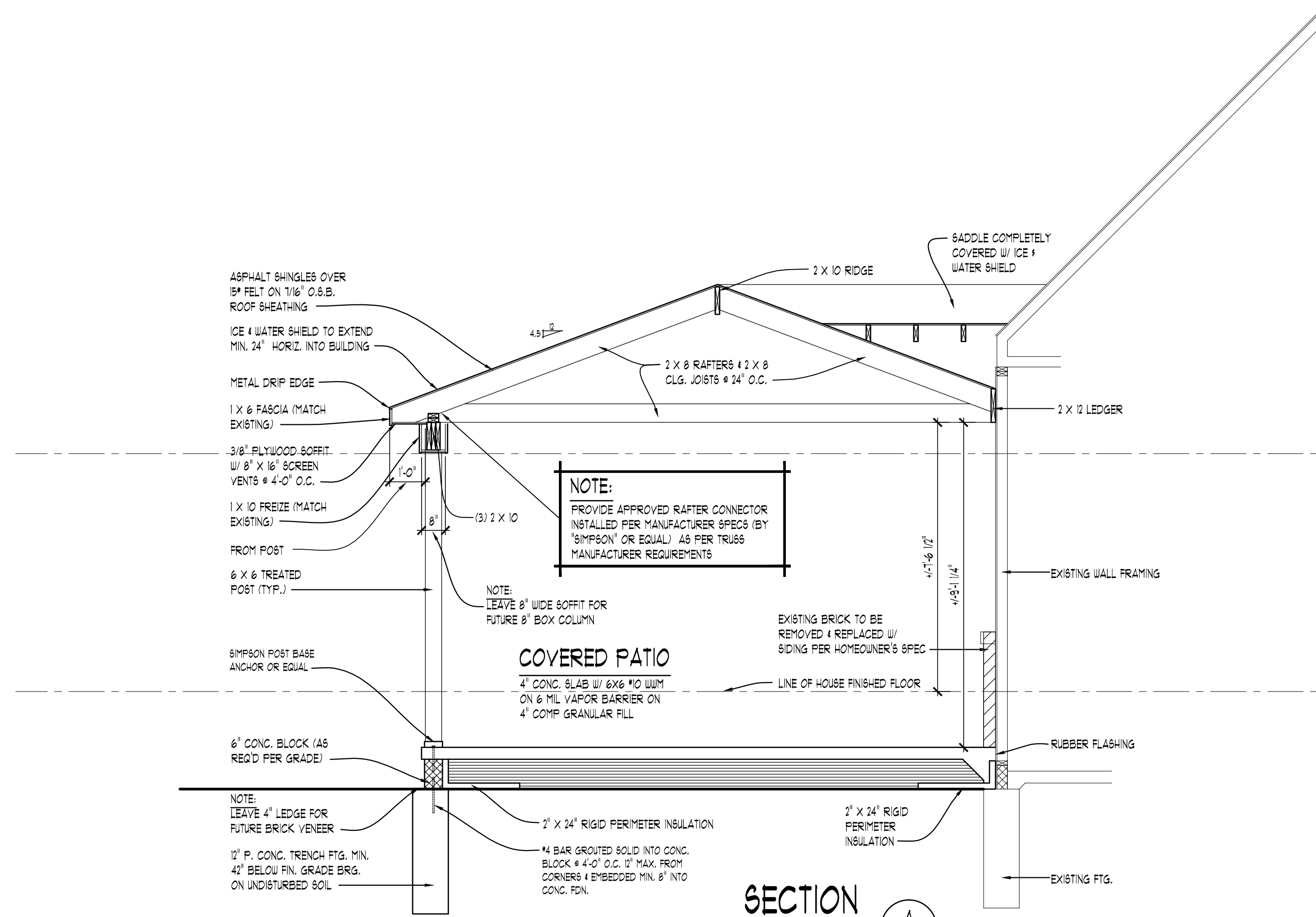


ROOF PLAN

SCALE: 1/8" = 1'-0"

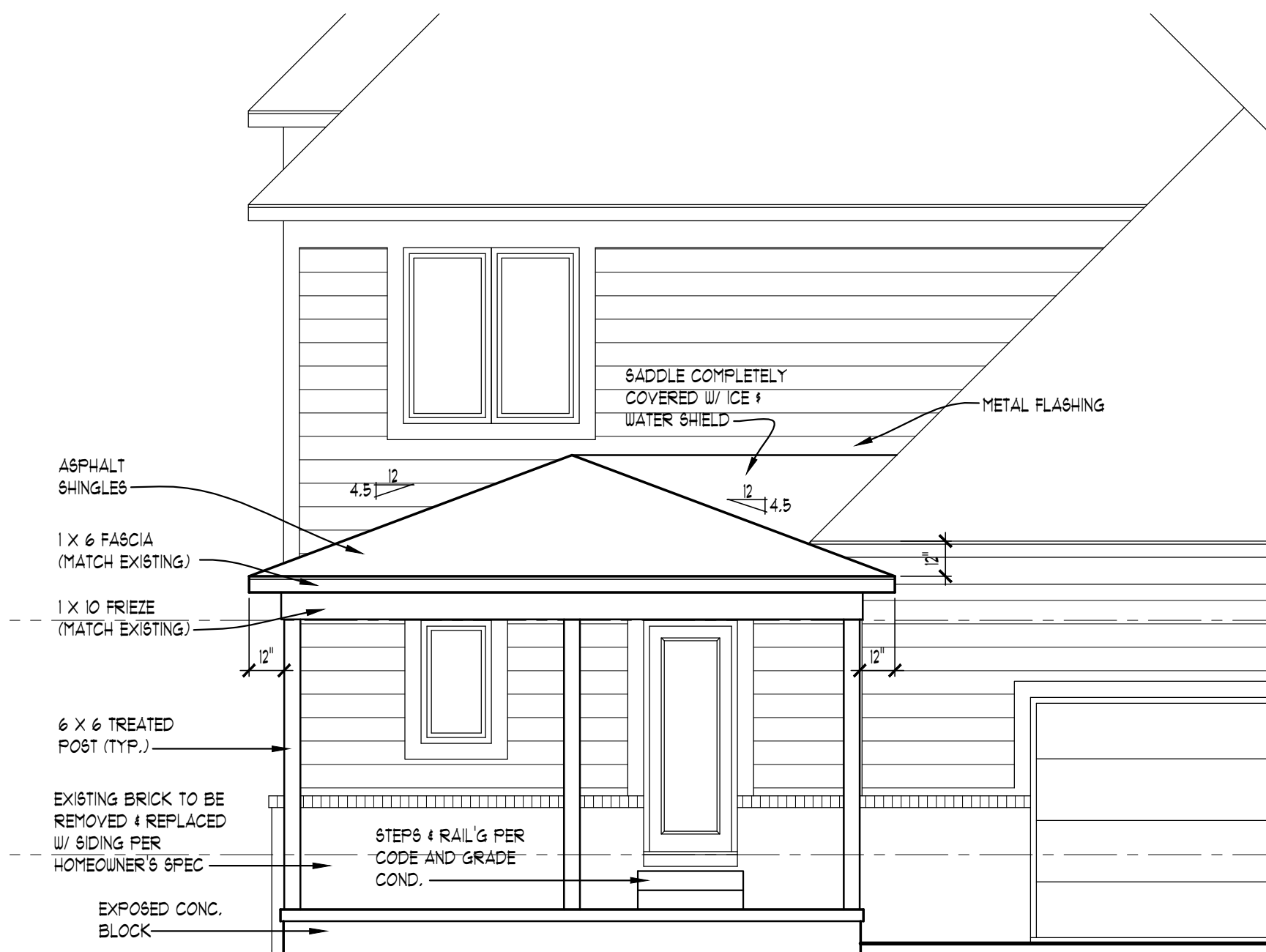
**ATTIC VENTILATION CALCULATIONS:
 FOR RIDGE VENTING**

AREA OF ATTIC SPACE = 488 SQ. FT.
 488/50 = 9.76 (SQ. FT. REQ'D)
 3.26 X 144" = 469" (SQ. INCH CONVERSION)
 469" X 0.49 = 230" (SQ. INCHES REQ'D)
 230" / 18" = 12.78 (LINEAR FT. OF RIDGE VENT REQ'D)



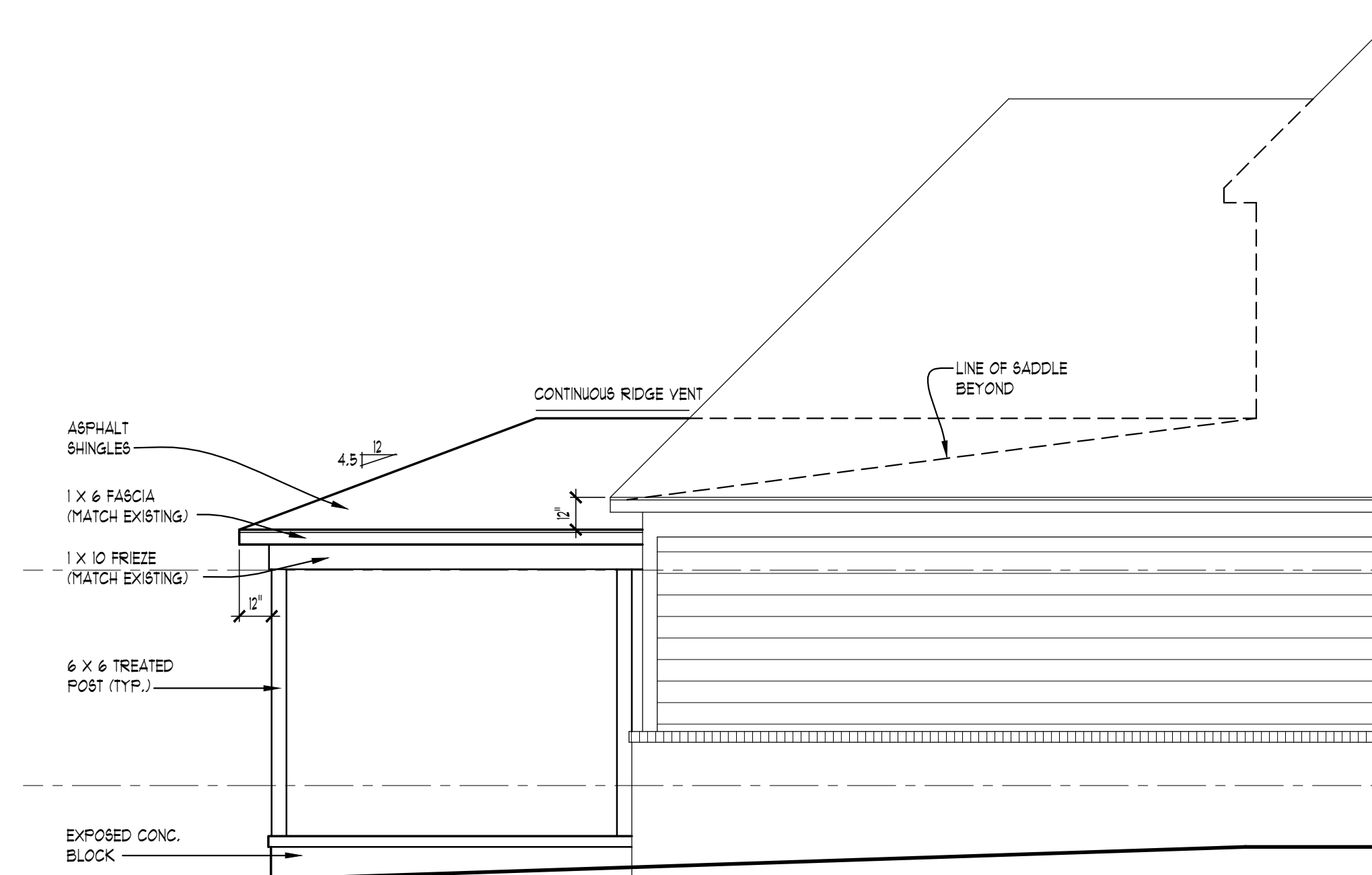
SECTION

SCALE: 3/8" = 1'-0"



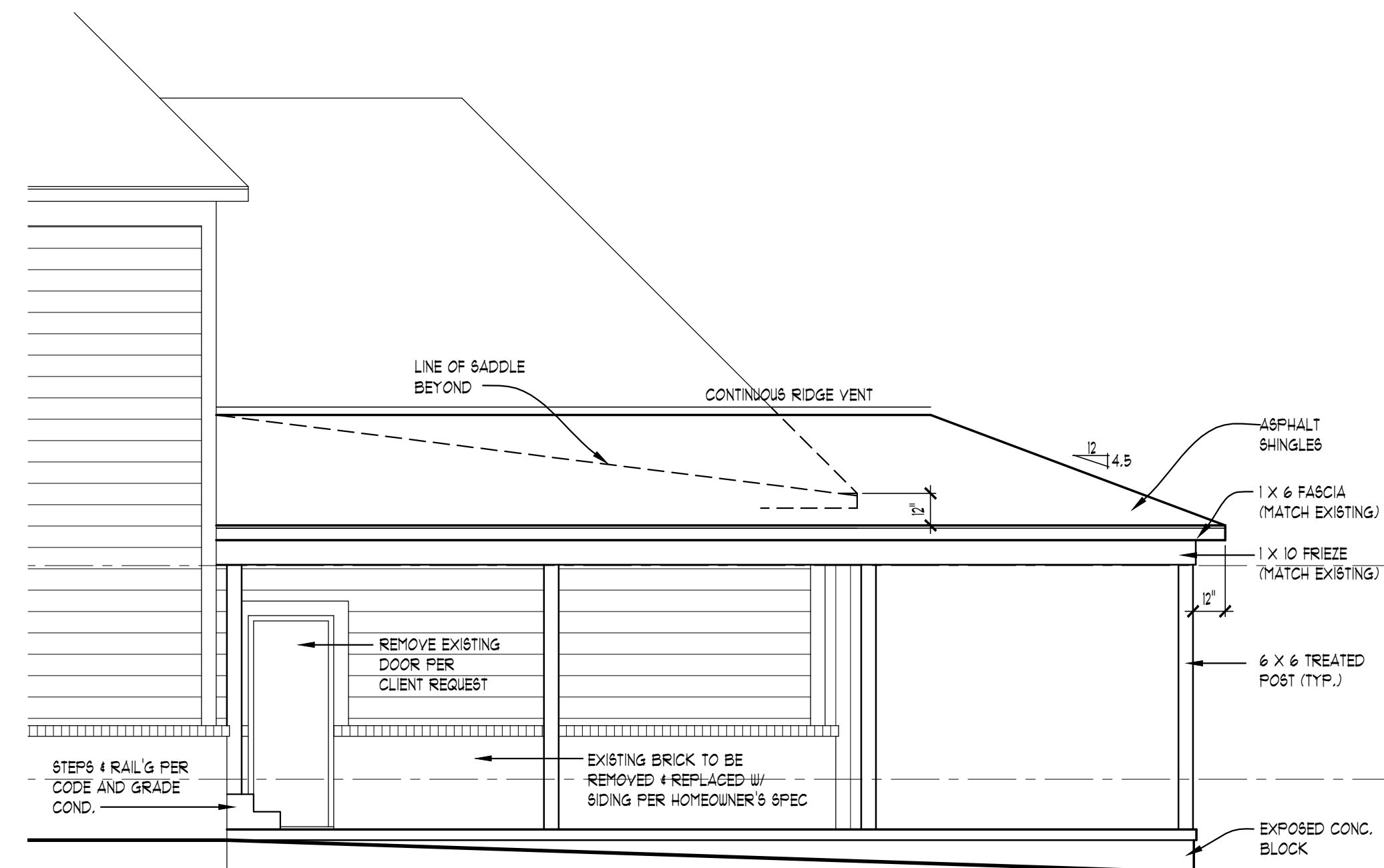
LEFT ELEVATION

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



FRONT ELEVATION

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



REAR ELEVATION

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

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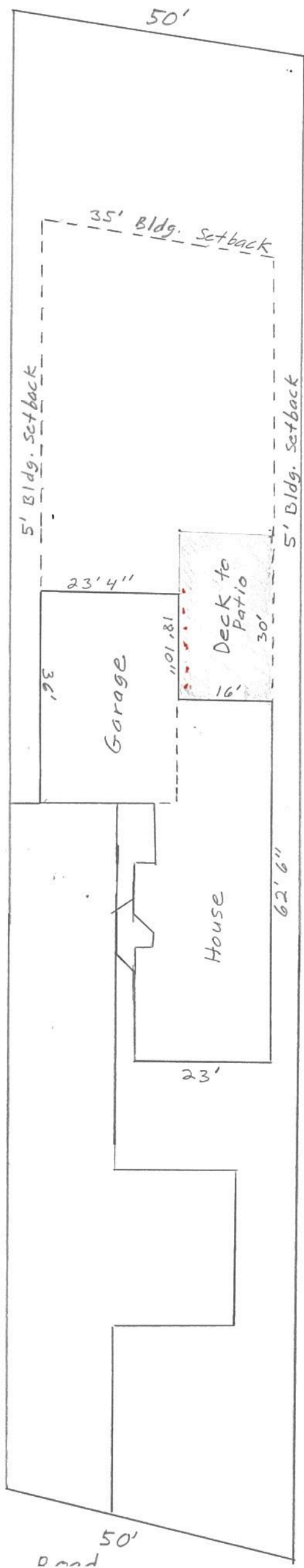
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1082

50'
Road



