

## GENERAL NOTES

**Division #1 - GENERAL REQUIREMENTS**  
**DO NOT SCALE DRAWINGS.** Follow written dimensions only. Superintendent shall check and verify all written dimensions prior to commencing construction.

These architectural drawings convey design concept. The Superintendent remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly and for performing the work in a safe manner.

Prior to beginning work, the Superintendent shall review all plans and details, elevation restrictions and site conditions at the jobsite and notify the Architect of any drawing errors or inconsistencies.

## 01400 - QUALITY CONTROL

All construction work shall meet the requirements of the 2018 International Residential Code as adopted by the governing municipality.

## Division #2 - SITE WORK

### 02500 - SITE DRAINAGE

- Downspouts, basement area drains or foundation drain tiles shall not be connected to the sanitary sewer system.
- All grades shown on drawings are assumed. Site surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lots shall be graded so as to drain surface water away from foundation walls. The grade adjacent to foundation walls shall fall a minimum of 6 inches within the first 10 feet. Impervious surfaces within 10' of the building foundation shall be sloped a minimum of 2% away from building. Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within the first 10 feet, drains or swales shall be provided to ensure drainage away from the structure. Finished grade shall be 6" minimum below top of foundation. All areas shall be sloped to lower elevations or drainage structures on or near the site. Superintendent shall make on-site lot inspections & check all grades and contact Architect prior to making necessary adjustments.
- Provide splash blocks at all downspouts. Downspouts shall direct water away from the foundation so as to prevent soil erosion.
- It is the responsibility of the Superintendent or their subcontractors to determine the subsurface characteristics at the building site. Soils must provide a minimum bearing pressure of 2000 pounds per square foot. The Superintendent will employ a soils engineer to determine soil characteristics and provide a soils report to the Architect.
- Existing pitched slopes and drainage (after rough grading) and finish grading per Code.

### Division #3 - CONCRETE

#### 03300 - CAST-IN-PLACE CONCRETE

- All concrete footings & piers shall extend a minimum of 36" into undisturbed soil. Extend footing below elevation shown only as needed to obtain adequate bearing into undisturbed soil. Extend the footing below elevation only as needed to obtain bearing into undisturbed soil. It shall be the Superintendent's responsibility to confirm soil-bearing pressure of the site.
- Concrete-encased electrode. An electrode encased by at least 2" of concrete, located within and near the bottom of a footing and with joints in members lapped a minimum of 6". Walls shall be dampedroofed with a bituminous material, 3lbs/sq yd of acrylic modified cement, 1/8" coat of surface bonding mortar or by any of the materials permitted for wall waterproofing.
- Ground water present - Provide drain tile, perforated pipe, or other approved foundation drainage system both inside and outside of the foundation. Drainage system shall be installed by gravity to daylight or be connected to an approved sump (18"dia x 18" deep with fitted cover). A sump pump shall be provided if basement is finished or partially finished with pump discharge by an approved method. Provide Damproofing of floor slab with a 6 mil polyethylene film below slab, with joints in members lapped a minimum of 6". Walls shall be dampedroofed with a bituminous material, 3lbs/sq yd of acrylic modified cement, 1/8" coat of surface bonding mortar or by any of the materials permitted for wall waterproofing.
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- Sump pump discharge and roof drainage shall be piped to a storm drain or to an approved water course. Discharging to or within 10' of a sidewalk, driveway, street or to create a nuisance to adjoining properties is prohibited.

### Division #4 - CONCRETE FOOTINGS & FOUNDATIONS

- The frost wall shall be set in the middle of the footing. The footing thickness shall be a minimum of 6" but not less than the distance the footing extends horizontally past the face of the frost wall.
- The bottom of all footings must be a minimum of 36" below finished grade and bear directly on undisturbed soil or soil prepared under the supervision of a licensed Soils Engineer.

## Division #5 - METALS

### 05100 - STRUCTURAL METAL FRAMING

- All steel beams & columns shall be prime-painted.
- Beam splices shall be grafted solid.
- Steel beam splices shall be welded or bolted together.

### Division #6 - WOOD AND PLASTICS

#### 06100 - ROUGH CARPENTRY

- All framing lumber shall be at least #2 yellow pine KD 19 unless noted otherwise.
- Use (3) 8d or (2) 16d nails per joist into plates, joists spliced over beams shall be nailed together with (3)-16d nails.
- All framing lumber and sheathing shall be nailed in place in accordance with the fastening schedule found in Table R602.3 of the 2018 International Residential Code.
- All unsupported stair stringers shall have metal stringer straps.
- All girder trusses shall be in compliance with the National Forest Products Manual for house framing.
- Join and install Microlams and Parallams per manufacturer's instructions.
- All nailing shall comply with the 2018 IRC.
- Cutting, notching and/or boring holes in wood beams, joists, rafters or studs shall not exceed the limitations of the 2018 IRC.
- Provide dropped soffits over all wall-hung cabinets.
- Firestop all stud walls at top and bottom of wall. Firestop all stud walls over 8'-0" tall and the midpoint.
- All soffits and dropped ceilings shall be firestopped as per code.
- Truss design shall be provided by the truss fabricator. Trusses shall comply with NfPA NDS-91 and TPI-95 and the 2018 IRC.
- All roof framing shall be designed to support the following minimums:
  - Top chord - live load 20 lb per sq ft
  - Bottom chord - dead load 10 lb per sq ft or 20 lb when the area above the horizontal (not vaulted) bottom chord has a clear height of 42" or greater and the area is accessible by a pull down stair
- Truss manufacturer shall verify knee heights and roof configuration and shall notify the Architect of any inconsistencies prior to fabrication.
- Time-down anchors shall be used on all roof trusses where they meet bearing walls.
- All floor framing members shall be designed to support the following minimums:
  - Floor areas other than sleeping rooms shall be designed for a live load of 40lbs/sf
  - Sleeping rooms shall be designed for a live load of 30lbs/sf
- Trusses shall be nailed to the top plate of the wall w/ 16d nails, toe nailed without splitting the end of the truss.
- Minimum size exterior entry door shall be 36" in width.
- Keyed locks are not permitted on the inside of doors. Locks with thumb turns on the inside are permitted.
- Minimum clear opening of an interior egress door leaf for bathrooms and habitable spaces (spaces used for living, sleeping, eating or cooking) is 20" unless specified differently in local ordinances.
- Minimum clear width of doors to and from stairways within the dwelling is 29.34" unless specified differently in local ordinances.
- Minimum clear headroom in stairways is 6'-8" measured vertically from the tread nosing and from the floor surface of a landing or platform.
- Note: maximum number and spacing of 1/2" minimum diameter and material used for treads. Stairs shall be designed for 40psf live load or 300 lb concentrated load on 4 sq inches at mid span of the tread; whichever produces the greater stress and deflection.
- Risers must be solid.
- Stair treads have one continuous handrail mounted at 34" to 38" above nosing for stairs with 4 or more risers. The handrail ends must return to the wall. Handrails must not project into the required stair width more than 4.1/2". Stair handrails must have a circular cross section with a minimum diameter of 1.1/4" but no larger than 2" diameter, or else be an approved shape having a maximum allowable horizontal cross section of 2.1/4" maximum graspable perimeter dimension of 6.1/4" and a minimum graspable perimeter of 4".
- 32 Guards along stair openings shall be solid or have intermediate vertical balusters no more than 4" apart and be a minimum height of 36" above the finish floor.
- All interior stairways shall have a minimum riser height of 7.3/4" and a minimum tread depth of 10". Solid risers must have a 1" nosing.
- All exterior stairways shall have a maximum riser height of 7" and a minimum tread depth of 11".
- Spaces between solid floor joists and suspended ceilings in finished areas must be draft-stopped at 500 square feet intervals parallel to joists.
- Use (2) 8d nail driven at an angle 1.5" from end of joist into bearing plates, one on each side of flange per joist into plates, joists spliced over beams shall be butted together and blocked.
- Firestop all areas as required by the 2018 IRC, including all dropped soffits, ceiling areas and at floor & roof levels within fireplace fuel chases.
- 38 Stairways shall be installed per 2018 IRC Section R311.7.
- Building corners shall be laterally reinforced for 4'-0", minimum, in each direction with 1/2" plywood or OSB sheathing or with equivalent APA narrow braced wall per APA's "Whole House Wall Bracing" publication.
- See sheet 5 for number of full height studs next to exterior openings per 2018 IRC Code Table 602.5.7

### 06170 - PREFABRICATED STRUCTURAL WOOD

- Unless noted directly on these plans, engineered lumber shall not be cut or notched without prior approval from Trust-Just MacMillan field representative, and the Architect/ Structural Engineer of record.
- 2000 - FINISH CARPENTRY  
All exposed materials for porches, gables, soffits, overhangs, trim etc. shall be of approved exterior grade materials.
- 06400 - ARCHITECTURAL WOODWORK  
1. Guardrails (where occurring) shall be installed at 36" high, minimum above finished floor per 2018 International Residential Code.  
2. Stair handrails (where occurring) shall be installed per 2018 International Residential Code.  
3. Handrail cross section shall not exceed 2.1/4" or 6.1/4" circumference. Mount handrail 34" above stair nosing.  
4. All open stairways and guardrails (where occurring) shall have balusters or intermediate spindles spaced such that no opening exceeds 4".  
5. At least one continuous handrail running the full length of the stair run.  
6. The required handrail CANNOT dead-end into a wall, ceiling, newel post or any other object. A stair is defined as having four or more risers. The required minimum stair width is 36" with projections into that width not greater than 4.1/2" on each side at or below handrail height.
- 07100 - THERMAL & MOISTURE PROTECTION  
1. All required underlayment shall be a minimum of Type 1 per ASTM D226-96 AND 2018 IRC  
2. Corrosion resistant metal flashing shall be installed on all roof intersections, roof and wall intersections, etc. Rolled roofing or two layers of Type 14 asphalt saturated felt or adhesive ice and water shield may be substituted for flashing at roof valleys provided the shingles are interlaced  
3. 15# roofing felts are required under all asphalt roof shingles.  
4. Caulking and Sealants: Exterior joints around windows and door frames, between wall and foundation, between wall and roof, between wall panels at penetrations of utility services through floors, walls and roofs and all other openings in the exterior envelope shall be sealed in an approved manner.  
5. An ice shield of two layers of underlayment cemented together or a waterproof membrane shall be provided from the edge of the eave to a point at least 24" inside the exterior wall line and/or where roof pitch is less than 4/12 .
- 07200 - WATERPROOFING & DAMPROOFING  
1. Wall or portions thereof that retain earth and enclose interior spaces and floors below grade shall be waterproofed or dampproofed depending on the presence or absence of groundwater.  
2. An evaluation of the presence or absence of groundwater is required. The evaluation report shall be based on either a subsurface soil investigation or satisfactory data from adjacent areas together with an inspection of the excavation prior to pouring concrete.  
3. No Ground water present - Provide drain tile, perforated pipe, or other approved foundation drainage system around the perimeter of the outside of the foundation or inside the foundation. Drain discharge shall be by gravity to daylight or be connected to a basement floor sump. An approved filter membrane shall be placed over the top of the joints /pipe perforations. The tile/pipe shall be placed on 2" minimum gravel or crushed stone and have 6" minimum cover. Drainage system shall discharge by gravity to daylight or be connected to an approved sump (18"dia x 24" deep with fitted cover). A sump pump shall be provided if basement is finished or partially finished with pump discharge by an approved method. Provide Damproofing of floor slab with a 6 mil polyethylene film below slab, with joints in members lapped a minimum of 6". Walls shall be dampedroofed with a bituminous material, 3lbs/sq yd of acrylic modified cement, 1/8" coat of surface bonding mortar or by any of the materials permitted for wall waterproofing.  
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5. Downspout discharge shall be directed away from foundation.  
6. Sump pump discharge and roof drainage shall be piped to a storm drain or to an approved water course. Discharging to or within 10' of a sidewalk, driveway, street or to create a nuisance to adjoining properties is prohibited.
- 07600 - FLASHING AND SHEET METAL  
Corrosion resistant flashing is required at the top and sides of all exterior window & door openings and at the intersection of concrete, masonry and frame walls. Flashing is not required where approved water-resistant sheathing & caulking is used at the top & sides of openings so as to be leak-proof.
- 07200 - ROOFING  
1. All underlayment shall be a minimum of Type 1 per ASTM D 226-06 or Type 1 per ASTM D4869-05e01 (Type I is commonly called No. 15 asphalt felt).  
2. Indicate corrosion-resistant flashing at all wall and roof intersections, changes in roof slope or direction, around all roof openings, etc. Valley flashing shall be installed per 2018 IRC.  
3. Underlayment for asphalt shingles - for slopes equal to or exceeding 4/12 shall be protected with one layer of underlayment. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2", fastened sufficiently to hold in place. End laps shall be offset 6".
- 07400 - ENERGY CONSERVATION  
1. Energy compliance path - Projects shall comply with one of the 3 following methods:  
A. Sections N1101.14 through N1104 as amended.  
B. Section N1105 and the provisions of Sections N1101.14 through N1104 labeled "Mandatory."  
C. An energy rating index (ERI) approval in Section N1106.  
2. Certificate (Mandatory) Unless otherwise presented to the home owner and building official in writing, a permanent certificate shall be completed by the builder or registered design professional and posted on all wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service or other required labels. The certificate shall list the predominant R-values, surface installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawl space, wall and/or floor) and ducts outside conditioned spaces. U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration, and the results from any required duct system and building envelope air leakage testing done on the building. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters.  
3. Insulation and fenestration requirements by component - The minimum insulation R-value within attics to be R-38 using an average computation method. The average computation method (for example) will allow lighter attic spaces near the truss heel to have R30 and other open areas with R-49 to provide an overall average of R-38 throughout the attic. Exterior wall insulation R-values shall remain R-13 throughout wall run unless there is a significantly increased caulking and sealing program to lighten the perimeter thermal envelope. Low expansive foam shall be used around doors and windows. Foam insulations shall be applied around all exterior wall penetrations and electrical boxes, and caulking shall be applied at the top and bottom of wall plates. Unfinished basements may have up to a maximum of 20 percent of the total basement wall area exposed above the outside finished grade/ground level as uninsulated concrete foundation walls. The foundation wall area above the outside ground/level that may be uninsulated is determined by the formula 1/20 times the basement wall height of all walls (including insulated exterior frame walls for walkout basements and walls common to the basement and attached garages) times the perimeter of these basement walls). In unfinished areas, the basement foundation wall insulation shall extend down to the basement floor slab or to a minimum of 24 inches below outside finished grade when the grade is above the floor slab elevation. Basement insulation blankets will be required only to depth of the frost line. Exhaust systems shall be installed in the home and designed to have the capacity to exhaust a minimum air flow rate of 50 cfm intermittent or 20 cfm continuous to help provide outside air through typical home use and passive air infiltration.  
4. Recessed Lighting - Recessed luminaires penetrating the building thermal envelope shall be sealed with a gasket or caulking to limit air leakage.  
5. All windows shall be wood clad, double glazed with 1/2" thick insulated glass (overall thickness) Energy Conservation and a thermal break. Window maximum U-value of 0.36  
6. Note: maximum number and spacing of 1/2" minimum diameter and material used for treads. Stairs shall be designed for 40psf live load or 300 lb concentrated load on 4 sq inches at mid span of the tread; whichever produces the greater stress and deflection.  
7. Risers must be solid.  
8. Stair treads have one continuous handrail mounted at 34" to 38" above nosing for stairs with 4 or more risers. The handrail ends must return to the wall. Handrails must not project into the required stair width more than 4.1/2". Stair handrails must have a circular cross section with a minimum diameter of 1.1/4" but no larger than 2" diameter, or else be an approved shape having a maximum allowable horizontal cross section of 2.1/4" maximum graspable perimeter dimension of 6.1/4" and a minimum graspable perimeter of 4".  
9. 32 Guards along stair openings shall be solid or have intermediate vertical balusters no more than 4" apart and be a minimum height of 36" above the finish floor.  
10. All interior stairways shall have a minimum riser height of 7.3/4" and a minimum tread depth of 10". Solid risers must have a 1" nosing.  
11. All doors except overhead garage doors shall have a maximum U-factor of 0.40
- 07500 - FIREBLOCKING  
1. Top and bottom of all conventional, double studied, furred spaces and staggered stud frame walls shall be fireblocked vertically at the ceiling and floor levels and horizontally at intervals not exceeding 10'.  
2. Fireblocking required at all soffits and dropped ceilings  
3. Fireblocking required between stairway stringers at the top and bottom of the run. Enclosed accessible spaces under stairs shall have walls, under stair surface and any soffits protected on the exposed side with 1/2" drywall.  
4. Fireblocking required around vent, pipe and duct penetrations of ceilings and floors.
- 07600 - FLASHING AND SHEET METAL  
Corrosion resistant flashing is required at the top and sides of all exterior window & door openings and at the intersection of concrete, masonry and frame walls. Flashing is not required where approved water-resistant sheathing & caulking is used at the top & sides of openings so as to be leak-proof.

### 07900 - SEALANTS

Exterior joints around window & door frames, between wall cavities & door frames, between wall & foundation, between wall & roof, between wall panels, at all penetrations & utility services through walls, floors & roofs, and all other openings in the exterior envelope shall be sealed with caulking and/or sealant in an approved, workmanlike manner.

### 08100 - ATTIC ACCESS

1. A 22" x 30" minimum access opening is required for attic areas which exceed 30 sq ft. and have a clear height of over 30". The access shall be installed in a hallway or other accessible location. 30" minimum headroom is required at some point vertically above the access opening. Access doors in draft stopping shall be self-closing and made of approved materials.

### 08400 - GLAZING

- Glazing in exterior doors, sidelights, windows within 24" of doors, windows greater than 9 square feet with sillers and less than 16" above the adjacent floor, and all glazing in tub & shower enclosures shall be tempered or laminated safety glass.
- General Contractor & window manufacturer representative shall verify the size, fit and proper installation requirements of all windows and sliding glass doors prior to manufacture and notify the Architect in writing of any drawing errors or inconsistencies.
- Glass area in habitable and occupiable rooms shall not be less than 8% of the floor area being served. One half of this area must be operable for unobstructed ventilation with screens including. All 4 basements and each bedroom must have one window for emergency escape meeting the following minimum requirements:
  - Maximum height to bottom of clear opening - 44"
  - Minimum clear opening width - 20"
  - Minimum net clear opening height - 24"
  - Minimum net clear opening area - 5.7 sq ft (the net clear opening dimension shall be obtained by subtracting the height of the sill from the height of the head). Exception: Grade floor windows are permitted to have a minimum net clear area of 5.0 sq ft.
- Attic and enclosed rafter space ventilation (net free) area is to be at least 1/150 of the area served. Two remote vents are required for each attic space (minimum). Exception: required ventilation area may be reduced to 1/300 if a vapor retarder having a transmission rate not exceeding 1 perm is provided on the conditioned side on the insulation, or if the gable or ridge vents are located in the upper third of the attic or enclosed rafter space and provide 50% to 80% of the total clear vent area with the balance of the required area being supplied by gable vents.
- A 1" clear space is required between the top of the insulation and the bottom of the roof sheathing when ventilation is provided by eave vents.
- Foundation crawl spaces shall have a minimum height of 18" and shall be provided with vent opening located at the perimeter of the outside of the foundation or inside the foundation. The total vent area shall be at least 1/150 of the area served. Exception: when an approved vapor barrier is provided over the surface of the ground the required vent area may be reduced 10% of the above and the vents may have operable louvers. Clear heights may be reduced when preservative-treated or naturally durable wood is used for framing and subflooring.
- Unfinished basements and utility rooms require natural ventilation (net operable area) at the ratio of 1% of the square footage floor area served. Mechanical ventilation with outdoor area (not calculated air) in accordance with the 2018 IRC may be substituted at a rate of .05 cfm/sq ft of area.

### Division #9 - FINISHES

Maximum flame-spread rating on all interior finish materials shall be 200 or less. Exposed insulation shall have a flame-spread not greater than 25 and a smoke-developing rating of 450 or less.

#### 09250 - GYPSUM WALL BOARD

- Gypsum wallboard shall be installed in accordance with the Gypsum Association's recommended practice as to thickness (walls minimum 1/2" thick, ceilings minimum 5/8" thick with nails spaced to be spaced at no greater than 12" o.c. and screws should be spaced at no greater than 16" o.c.), screwed & lapped over framing at specified spacing. All fire-rated gypsum wallboard assemblies shall be installed in accordance with the specifications of the approving authority.
- Green board gypsum wallboard shall be used behind one-piece tub/shower & shower enclosures.
- Mold-resistant gypsum wallboard shall be used behind multi-piece tub/shower & shower enclosures.
- Duramax or approved equivalent shall be used beneath all tile wall & floors.

### Division #15 - MECHANICAL

#### 15000 - GENERAL PROVISIONS

All mechanical work shall meet the requirements of the 2018 International Mechanical Code.

#### 15010 - HEATING VENTILATING AND AIR CONDITIONING

- Heating and air conditioning contractor shall furnish plans shall indicating furnace location, type, source of combustion air, fuel sizes, duct layout, diffuser locations and at least one programmable thermostat. A section detail shall be provided showing all gas appliances, fuel sizes, connectors, lengths, heights and clearance dimensions. Supply ductwork outside of building envelope shall be insulated to a minimum of R-6.
- Approved vent systems for appliances shall be sized, installed and terminated per manufacturers written installation instructions. Unvented appliances that require an open window are prohibited.
- Metal flues shall extend above the roof that they penetrate at least a minimum of 36". Flue outlets shall be at least 24" higher than any portion of the building within a radius of 10'-0" horizontally.
- Gas appliances located in rooms or spaces whose volume is less than 50 cubic feet/1000Btu/hr input rating shall have combustion and dilution air provided in accordance with the following:
  - Using inside air: 1sq in of free area shall be provided per 1000 Btu/hour at each opening. Openings shall not be less than 100 sq in of free area. One opening shall be provided within 12" minimum of the ceiling and one within 12" of the floor, no common ducts permitted. Combustion air may not be obtained from bedrooms.
  - Using outside air: One opening shall be provided within 12" of the ceiling with a net free area of 1 sq in/300 Btu/hour total input rating of all appliances located in the enclosure.
- Certificate (Mandatory) Unless otherwise presented to the home owner and building official in writing, a permanent certificate shall be completed by the builder or registered design professional and posted on all wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service or other required labels. The certificate shall list the predominant R-values, surface installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawl space, wall and/or floor) and ducts outside conditioned spaces. U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration, and the results from any required duct system and building envelope air leakage testing done on the building. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters.

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- Recessed Lighting - Recessed luminaires penetrating the building thermal envelope shall be sealed with a gasket or caulking to limit air leakage.
- All windows shall be wood clad, double glazed with 1/2" thick insulated glass (overall thickness) Energy Conservation and a thermal break. Window maximum U-value of 0.36  
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- 15400 - PLUMBING  
1. All plumbing work shall meet the requirements of the 2018 International Plumbing Code.  
2. No lead or lead-free solder is required on all copper water supply piping.  
3. Plumbing contractor shall install pressure-balance valves, individual mixing temperature control valves on all showerheads set at 120 degrees Fahrenheit, maximum.  
4. Return air ducts shall be sealed with foam sealing tape meeting burn test requirements of the 2018 International Residential Code.
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4. Return air ducts shall be sealed with foam sealing tape meeting burn test requirements of the 2018 International Residential Code.
- 15400 - PLUMBING  
1. All plumbing work shall meet the requirements of the 2018 International Plumbing Code.  
2. No lead or lead-free solder is required on all copper water supply piping.  
3. Plumbing contractor shall install pressure-balance valves, individual mixing temperature control valves on all showerheads set at 120 degrees Fahrenheit, maximum.  
4. Return air ducts shall be sealed with foam sealing tape meeting burn test requirements of the 2018 International Residential Code.

12. Window awestay drains less than 10 sq ft in area shall be served by a 2" pipe drained to daylight or a sump pit served by an approved pump installation. Window awestay drains 10 sq ft or greater but less than 100 sq ft in area shall be served by a 3" pipe drained in the same manner. Arasways greater than 100 sq ft require that the drain be sized in accordance with Table 11-2 of the Plumbing Code. The presence of a cover over the areaway does not negate the need for a drain.
13. Provide continuous drainage from sump or daylight under the basement floor slab. Sump must be 18 inches minimum diameter by 24 inches deep and fitted with a cover. Sump shall discharge to an approved storm sewer or a swale at least 10' away from a property line, driveway or sidewalk.
14. CSST piping electrical bonding - CSST electrical bonding jumper must be a minimum of 6AWG of copper wire or equivalent.
15. Drain, waste and vent system testing - The head pressure for a water test on drain, waste and vent (DWV) systems shall be 10'.
16. Protection against physical damage - Piping installed through bored holes or in notches shall be protected against physical damage from the concealed piping to the edge of the framing member of 1/4".
17. Sink & dishwasher - The dishwasher waste discharge pipe/ hose shall be elevated and securely attached to the bottom side of the countertop before connecting to the head of the food-waste disposer or to a wye fitting in the sink drain. This method is intended to reduce the potential for dishwasher waste material from potential backflow into the dishwasher.
18. Water heater relief valve discharge pipe - The temperature and pressure relief valve discharge pipe termination is considered a potable water outlet and therefore must be protected against backflow potential. The discharge pipe must have all roof penetrations protected with a minimum of 2 times the discharge pipe diameter size with a maximum of 6" above it.
19. Trap seal protection - Trap seal protection of basement floor drains shall allow a deep seal trap as per city ordinance amendment of this code section.

### 15000 - POWER OR HEAT GENERATION

Fuel sizes & types must meet all applicable codes and manufacturer's specifications.

#### 15000 - AIR DISTRIBUTION

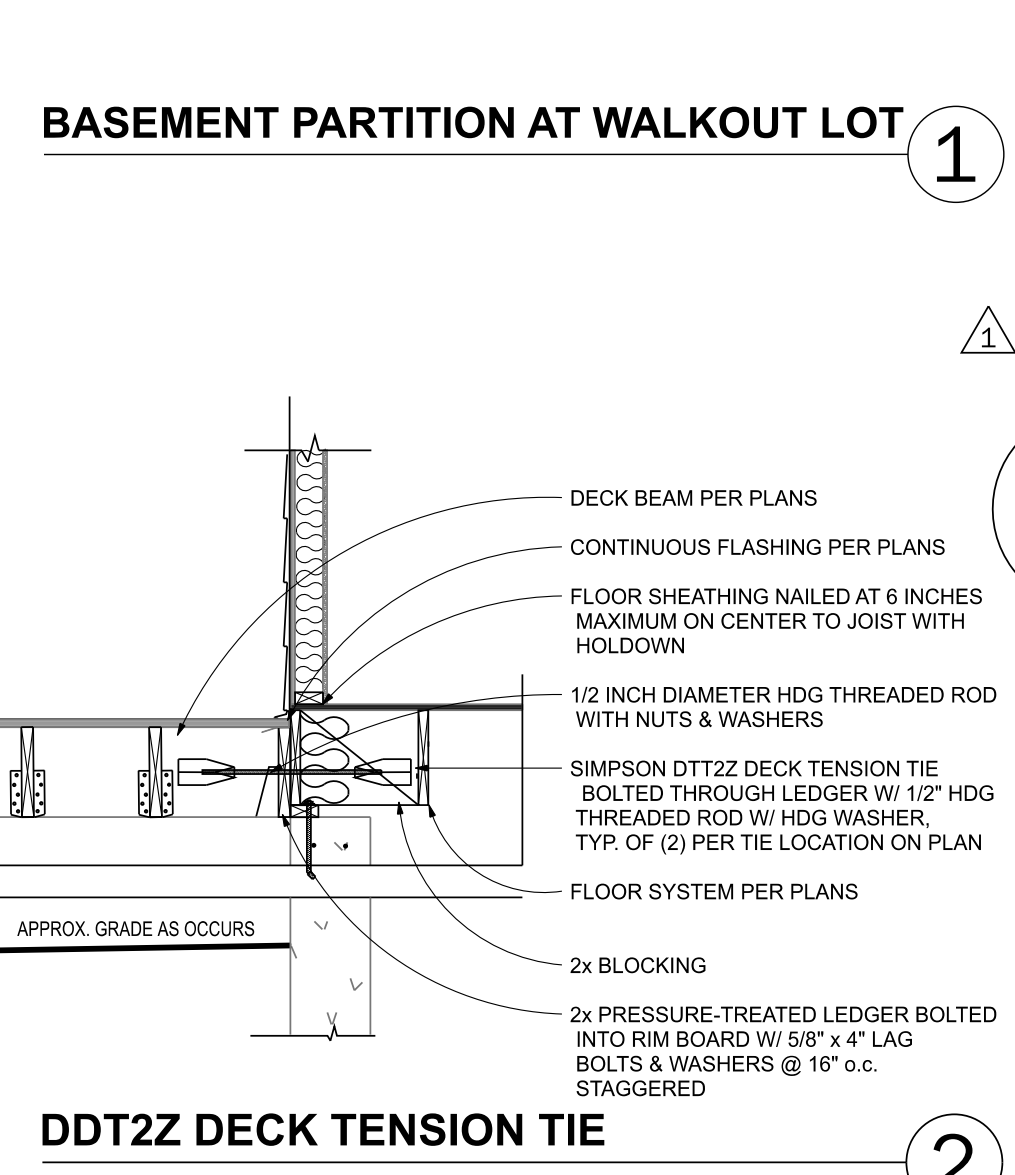
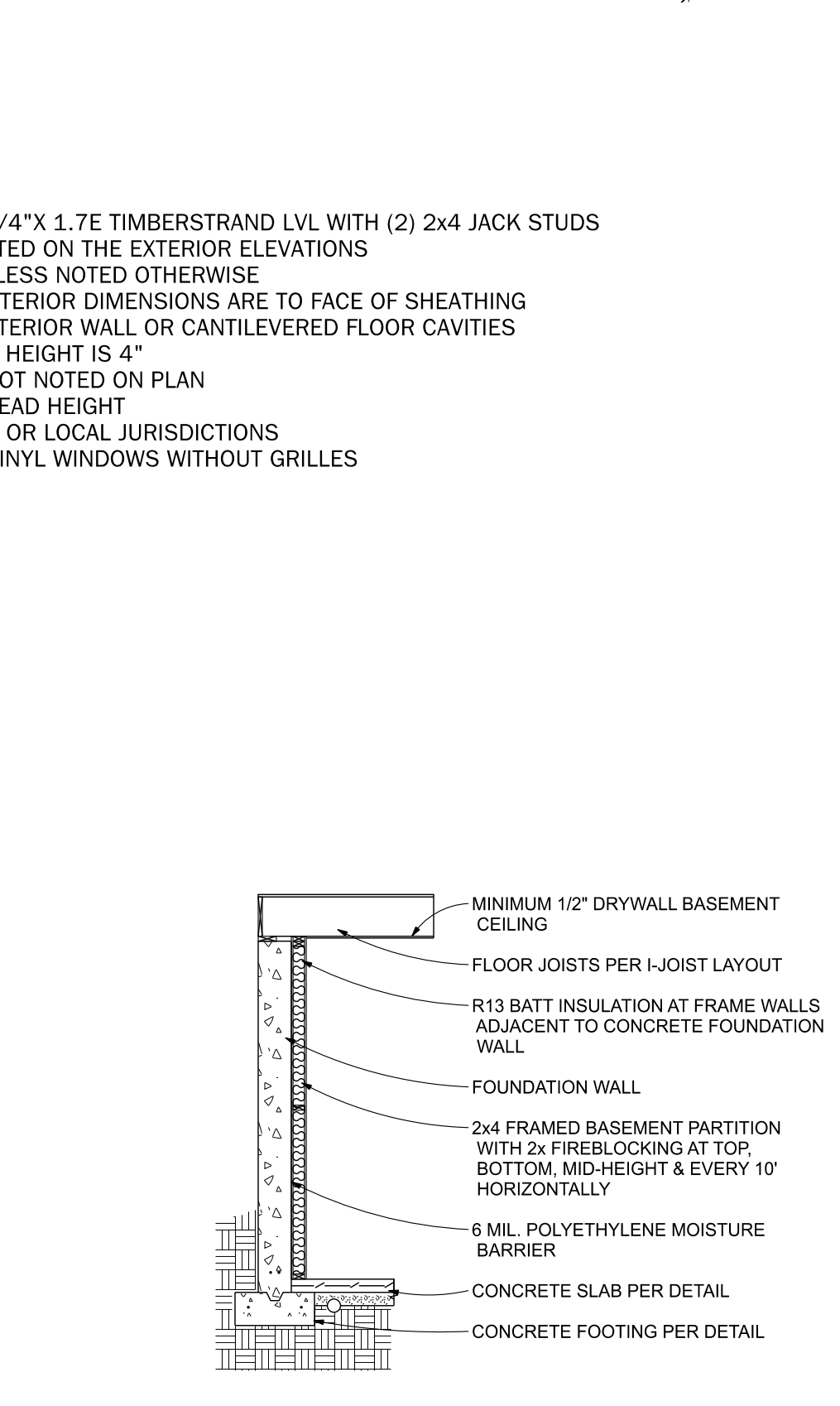
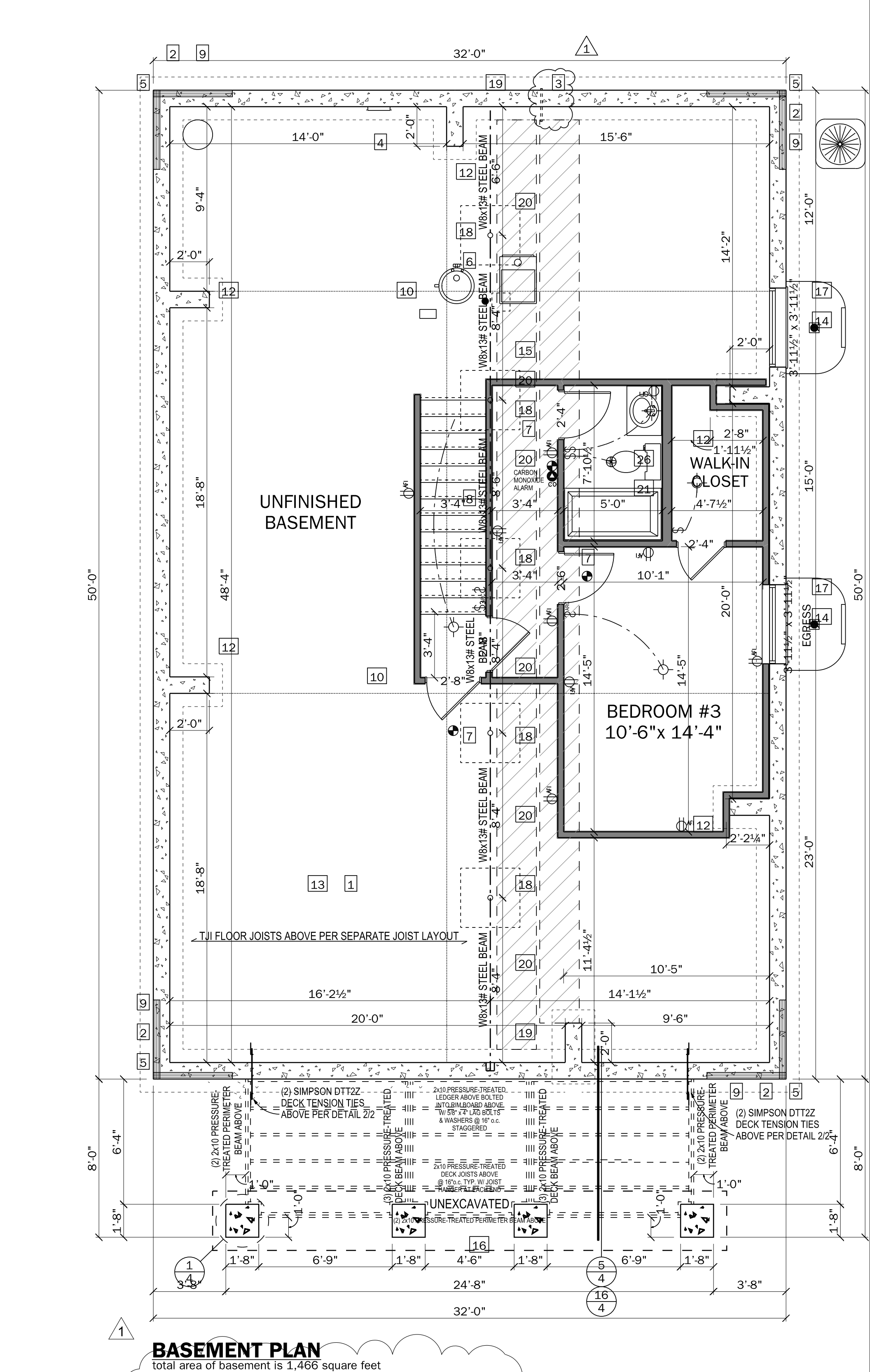
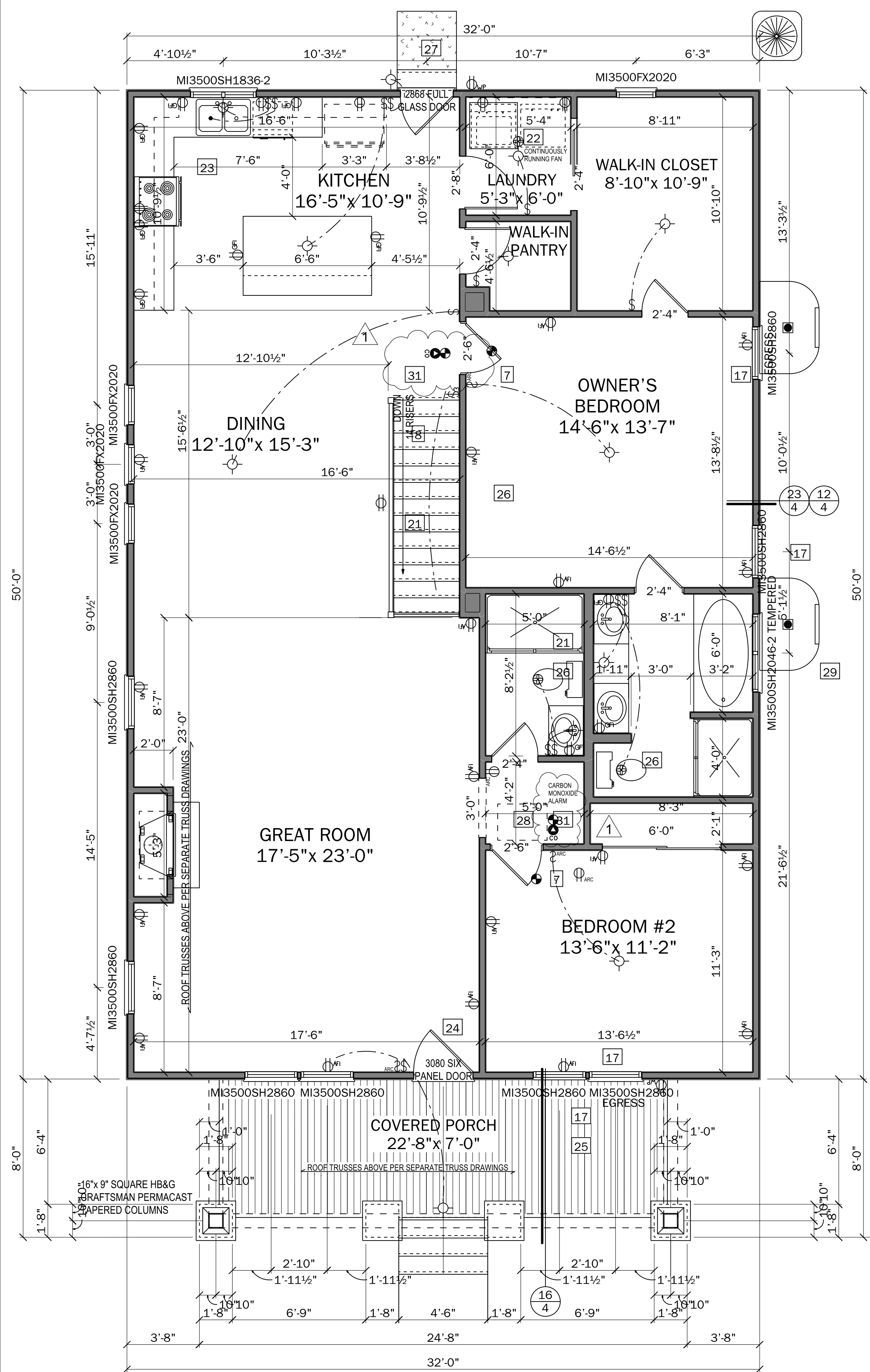
- Sub-contractor shall furnish HVAC layout and specifications.
- Bathroom exhaust fans shall be vented to the exterior.

## Division #16 - ELECTRICAL

### 16100 - GENERAL PROVISIONS

- All electrical work shall meet the requirements of the 2017 NEC (National Electrical Code) and related codes adopted by the municipality.
- Electrical service shall be 200 amps.
- Electrical panels:
  - A. Electrical panels shall not be installed in bathrooms or clothes closets
  - B. Lighting is required in the vicinity of the electrical panel.
  - C. Electrical panels shall not be installed in areas with less than 6'-6" headroom
  - D. A minimum clearance of 36" and 30" wide is required in front of electrical panels. Counters shall be installed in accordance with the specifications of the approving authority.
- Grounding: Receptacle outlets for ranges and clothes dryers must be a 3-pole with ground type. 1. If the underground metal water pipe is used and the grounding electrode, the connection must be made to the pipe within 10' of the water meter. A supplemental grounding electrode shall be provided as specified in NEC Sections 250-50 and 250-53.
- All electrical service wiring, cable television service wiring and telephone wiring shall be installed underground.
- Anti-static wiring is prohibited from the load side of the service equipment to any outlet.
- Interstream terminal bonding shall be provided for grounding communication systems (cable television and satellite dishes).
- Voltage drop for branch circuits exceeding fifty feet may require one or more increases in wire size.

- All receptacle outlets, switches, thermostats to be 15" min. above finished floor and 48" maximum above finished floor.
- Receptacle outlets serving a dedicated use.
  - B. Floor receptacle outlets.
  - C. HVAC diffusers.
  - D. Controls mounted on ceiling fans.
  - E. Controls or switches mounted on appliances.
  - F. Plumbing fixture controls
- Receptacles are required to be installed in the following locations:
  - A. All habitable rooms except bathrooms shall have a receptacle in wall more than 72" from a receptacle. All wall spaces 24" or wider require receptacles. Fixed panels of glass doors, fixed room dividers such as free standing bar-type counters or railings shall be included in the 72" measurement.
  - B. Hallways of 10' or more in length (Foyer is considered an entry hallway)
  - C. Kitchen and dining area. Receptacles shall be supplied by at least two different 20 amp circuits. Receptacles shall be installed so that no point along the counter is more than 24" from a receptacle. All countertop areas 12" wide or greater separated by sinks, ranges or refrigerators shall be provided with receptacles. Receptacles installed face-up on counter work surfaces shall be provided with tamper resistant receptacles installed separate circuit on each island or peninsula space that is 24"x 12" or greater.
  - D. bathrooms at least one wall mounted receptacle installed within 36" of each basin.
  - E. outdoor receptacles (weather-proof types) installed at the front and back of the house, accessible to grade level and not more than the 6'-6" above grade level.
  - F. at least one receptacle in laundry areas supplied by a dedicated 20 ampere branch circuit
  - G. At least one receptacle in unfinished basement areas and the garage in addition to the laundry receptacle.
  - H. required receptacle outlets located in floors shall be within 18" of wall or fixed room divider and shall be installed in boxes listed for that purpose
  - I. at least one communication outlet shall be installed within the dwelling and cabled to the telephone service entrance.
12. Arc-fault circuit interruption protection shall be provided by an arc-fault circuit interrupter listed to provide protection of the entire branch circuit for all circuits supplying power to 120 volt, single phase 15 and 20 ampere receptacles in bedrooms.
13. Appliances shall not be installed in a bedroom, bathroom or storage closet unless a receptacle shall be provided for all 120 volt, single phase, 15 and 20 ampere receptacles installed in the following locations:
  - A. Bathrooms
  - B. All receptacles within 6' of a sink. Basin receptacles shall be on a 20 amp circuit and can only be used for other required GFCI bathroom receptacles.
  - C. Garages, unfinished portions of accessory buildings at or below grade level.
  - Exceptions: 1. Ceiling mounted receptacles for garage door opener.
  - 2. A single or double duplex receptacle for appliances located in a dedicated space for normal use
- C. Outdoors
- D. Unfinished basement areas and crawl spaces except for laundry circuit, opt. freezer circuit and utility receptacle dedicated to sump pump
- E. Receptacle intended to serve kitchen countertop surfaces
- F. Receptacles intended to serve the countertop surfaces of a wet bar that are located within 72" of the outside edge of the wall bar sink
- G. Balconies, decks and porches
- H. Less than 25' from an air conditioning condensing unit
14. Receptacles shall not be installed within a bathtub or shower space.
15. Provide a GFI duplex outlet in the basement next to the electrical panel.
16. Provide duct runs & termination per the plans. The maximum developed length of the duct run shall be 25' from the clothes dryer to the wall or roof termination (calculated by adding 5' for each 90 degree bend and 2.5' for each 45 degree bend to the overall length of the straight runs).
17. Bathrooms and toilet rooms shall exhaust 50cfm/min to the exterior.
12. Thermostats used for heating and cooling shall be capable of being set from 55 degrees F to 85 degrees F and shall be capable of operating the systems heating and cooling sequence.
13. HVAC equipment shall be installed in accordance with the manufacturer's instructions.
20. Kitchen receptacles - 125 volt, single phase, 15 and 20 ampere receptacles that serve kitchen countertop surfaces shall have GFCI protection. Exception - Fastened in-place appliances or outlets designated for refrigerators/freezers.
21. All 125 volt 15 and 20 ampere receptacles located within 6' horizontally of the outside edge of bathtubs or shower stalls shall be GFCI protected.
22. All 125 volt 15 and



- KEYED PLAN NOTES**
- 4" CONCRETE SLAB WITH 6x6, 10/10 WELDED WIRE FABRIC OVER 6 MIL MOISTURE BARRIER AND 4" OF COMPACTED FILL
  - 10" WIDE CONCRETE FOUNDATION WALL WITH 10" x 24" CONCRETE FOOTING
  - PROVIDE SOLID PIPE FROM OUTSIDE DIRECTLY TO RETURN AIR DUCT TO SUPPLY MAKEUP AIR FOR CONTINUOUS RUNNING FAN
  - 200 AMP ELECTRICAL SERVICE - LOCATION OF PANEL DEPENDENT ON LOCATION OF SUPPLY
  - 2 - #4 REBARS 48" LONG VERTICALLY @ 12" o.c., LAPPED & TIED AT ALL CORNERS, TYPICAL
  - MECHANICAL SYSTEMS AREA - 40 GALLON MIN. WATER HEATER, FLOOR DRAIN & GAS FORCED AIR FURNACE
  - SMOKE DETECTOR - 120V INTERWIRED WITH BATTERY BACKUP
  - WOOD STAIR W/ HANDRAIL AT 36" ABOVE NOSING - CARPET ENTIRE TREAD. HALF WALL OR SPINDLE & GUARDRAIL REQUIRED AT EXPOSED STAIR 36" MINIMUM ABOVE FLOOR & RISERS
  - LINE OF 2x4 PRESSURE-TREATED SILL PLATE ABOVE
  - CONCRETE CONTROL JOINT - 20'-0" MAXIMUM ON CENTER SPACING, EACH WAY
  - 18" DIA. SUMP PIT w/ FITTED CAP w/ PUMP PIPED TO EXTERIOR AND SINGLE, DEDICATED OUTLET
  - BUTTRESS WALL - RETURN 10" FOUNDATION WALL & FOOTING 24"
  - 1.1/8" x 7/8" TIMBERSTRAND FLOOR JOISTS AND 3/4" T&G PLYWOOD SUBFLOOR ABOVE
  - 48" WIDE x 48" TALL VINYL UNIT (16 S.F.) W/ GALVANIZED STEEL EGRESS WELL W/ BAKED ON ENAMEL FINISH ON FACE, EGRESS LADDER, AND SAFETY GRATE - DRAIN TO INTERIOR DRAIN TILE TO SUMP
  - HVAC MAIN TRUNK LINE
  - 16" SQUARE CONCRETE PORCH PIER OVER A 32" x 21'-0" x 8" DEEP FOOTING. SET BOTTOM OF FOOTING AT LEAST 24" INTO UNDISTURBED SOIL & AT LEAST 36" BELOW ADJACENT GRADE. REDUCE PIER TO 12" SQUARE IF CULTURED STONE PIER IS OPTIONED
  - WINDOW MEETS EGRESS REQUIREMENTS
  - 3" DIAMETER, 11GA, PRIME PAINTED STEEL TELEPOST SET DIRECTLY ON A 36" x 36" x 12" DEEP CONCRETE FOOTING W/ (3) #5 BARS EACH WAY AT BOTTOM
  - BEAM POCKET - STEEL BEAM SHALL BE SHIMMED & SOLIDLY GROUTED INTO BEAM POCKET WITH CEMENT
  - STEEL BEAM PER PLAN - PRIME PAINTED & ALL JOINTS SHALL BE BOLTED OR WELDED TOGETHER
  - 2x6 WALL FRAMING
  - WASHER & DRYER - 120V ELECTRICAL SERVICE SUPPLY, HOT & COLD WATER, 2" ROUND LAUNDRY DRAIN, 220V ELECTRICAL SERVICE SUPPLY, VENTED ROUTE TO EXTERIOR THROUGH BANDBOARD ABOVE, NOT TO EXCEED 25'-0". PROVIDE SHEET METAL OR FIBERGLASS PAN WITH DRAIN BELOW WASHER
  - UPPER & LOWER CABINETS
  - 36" INSULATED STEEL OR FIBERGLASS THERMATRU DOOR UNIT
  - EXTERIOR GRADE HGB BEAD BOARD PORCH CEILING
  - EXHAUST FAN - MINIMUM 50 C.F.M. VENTED TO EXTERIOR
  - MAX. 2 RISERS FROM FINISHED FLOOR TO CONCRETE PATIO SLAB. IF MORE THAN 2 RISERS, LANDING SHALL BE REQUIRED 7.3/4" MAX. BELOW THRESHOLD OF DOOR
  - 22" x 30" SCUTTLER PLACE SCUTTLER TO PROVIDE 36" HEADROOM ABOVE
  - CONCRETE SLAB FOR AIR CONDITIONING CONDENSER
  - WHERE COMBINING SPACES ON THE SAME STORY, EACH OPENING SHALL HAVE A MINIMUM FREE AREA OF 1 SQUARE INCH PER 1,000BTU/h OF THE TOTAL INPUT RATING OF ALL APPLIANCES IN THE SPACE, BUT NOT LESS THAN 100 SQUARE INCHES. ONE PERMANENT OPENING SHALL COMMENCE WITHIN 12 INCHES OF THE TOP AND ONE PERMANENT OPENING SHALL COMMENCE WITHIN 12 INCHES OF THE BOTTOM OF THE ENCLOSURE. THE MINIMUM DIMENSION OF THE AIR OPENINGS SHALL NOT BE LESS THAN 3 INCHES. IRC SECTION G2407.5.3.2.
  - COMBINATION CARBON MONOXIDE/SMOKE ALARM

# RESUBMITTAL

**ANY STRUCTURAL OR EXTERIOR MATERIAL FIELD CHANGES MUST BE APPROVED BY ARCHAEOs LLC IN WRITING**

Proposed residence, 1600-32 model  
 Permit #PRRES20231517  
 Lot #6, 500 NW Main Street  
 Lee's Summit, Jackson County, Missouri 64063  
 for Walker Custom Homes LLC

**STUDIO ARCHAEOs**  
 433 BLUFF STREET, ALTON, IL 62002 314-280-3855  
 MISSOURI STATE CERTIFICATE OF AUTHORITY #2011021199

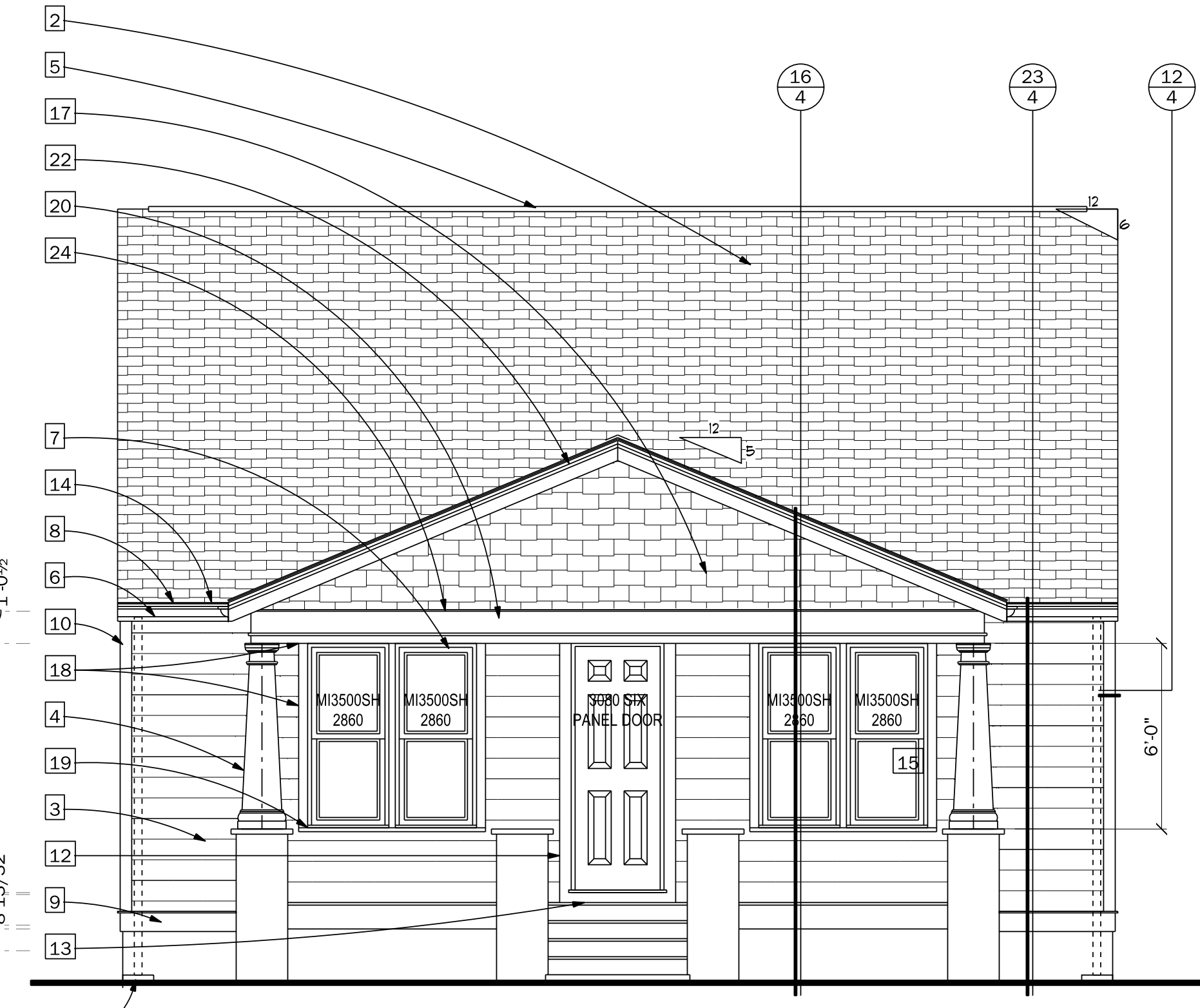
revised	by	chkd	issued for	date
revised	Tim	Tim	building permit application	8/27/2023
revised	Tim	Tim	building permit approval	8/19/2023
revised	Tim	Tim	building department	8/27/2023

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Timothy Louis Busse - Architect  
 MO# A-007231



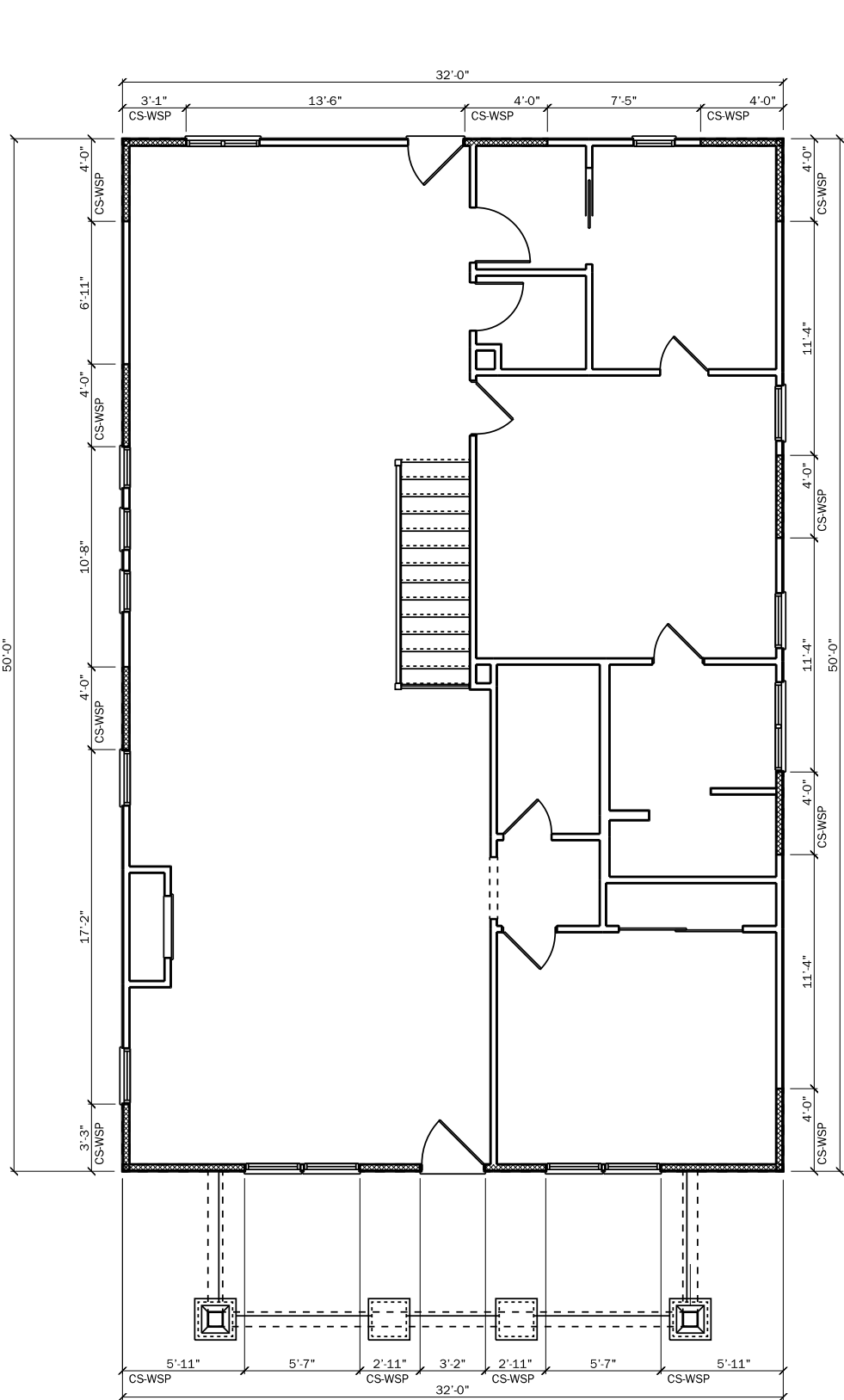
**LEFT SIDE ELEVATION**



**FRONT ELEVATION**

OPT. 9'-1" HIGH FIRST FLOOR WALLS  
 ALL HEADERS SHALL BE 3.1/2"x 9.1/2"x 1.7E TIMBERSTRAND MATERIAL UNLESS NOTED ON THE EXTERIOR ELEVATIONS  
 KEYED NOTES SHOWN ON ELEVATIONS ARE TYPICAL FOR ENTIRE BUILDING

- KEYED ELEVATION NOTES**
1. APPROXIMATE FINISH GRADE - SLOPE AWAY FROM HOUSE AT 1" PER FOOT FOR 10'-0"
  2. 220# FIBERGLASS SHINGLES WITH SEAL DOWN TABS, INTERLACE SHINGLES AT VALLEYS, TYPICAL - INSTALL PER MANUFACTURERS SPECIFICATIONS
  3. 8 3/4" LP SMARTSIDE SIDING, 7" EXPOSURE
  4. 16" x 9" SQUARE HB&G CRAFTSMAN PERMACAST TAPERED COLUMNS
  5. CONTINUOUS RIDGE VENT FOR CONCEALED ATTIC SPACES
  6. S-400 STRIP COR-A-VENT IN EAVE
  7. MI WINDOWS 3500 SERIES VINYL WINDOW UNIT, TYP.
  8. PREFINISHED ALUMINUM "OGEE" STYLE GUTTER & DOWNSPOUT
  9. 1x8 AZEK BANDBOARD WITH 1.5/8" x 11/16" TALL DRIP CAP
  10. 5/4x 4 AZEK CORNERS
  11. WOOD OR CONCRETE STEPS TO PATIO SLAB, NUMBER OF STEPS IS DETERMINED IN FIELD BY ACTUAL DISTANCE FROM GRADE TO FINISHED FLOOR - PROVIDE HANDRAIL ON STAIRS WITH MORE THAN 3 RISERS
  12. DOOR TRIM - 5/4" x 4" AZEK (1" THICK)
  13. 1 5/8" DRIP CAP ON TOP OF PORCH DECKING AT SIDING, INSTALL 5/4"x 6" AZEK KICK BOARD UNDER DOOR
  14. MAIN HOUSE FASCIA BOARD - 5/4" x 8" AZEK (1" THICK)
  15. WINDOW MEETS EGRESS REQUIREMENTS. PROVIDE MANUFACTURERS SAFETY LOCK WHEN WINDOW SILL IS LESS THAN 24" ABOVE FINISH FLOOR
  16. SPLASH BLOCK
  17. PREFINISHED SHINGLE STYLE FIBER CEMENT SIDING PAINTED TO MATCH TRIM
  18. WINDOW TRIM - 5/4" x 4" NOMINAL AZEK AT HEAD AND JAMBS OF MI WINDOWS, TYPICAL
  19. WINDOW SILL TRIM - 5/4" x 1.1/2" NOMINAL AZEK AT SILL OF MI WINDOWS, TYPICAL
  20. WRAP PORCH BEAM WITH 5/8"x 7.1/4" AZEK TRIM
  21. FRIEZE BOARD - 5/4" x 6" AZEK (1" THICK)
  22. SHINGLE MOLDING - #212 PVC
  23. DRYER VENT COVER
  24. 1.5/8" x 11/16" TALL DRIP CAP



**FIRST FLOOR BRACED WALL PLAN**

3/16" x 1/2" x 1/2" TYP. FIRST FLOOR WALLS  
 CSWSP = CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL (NAILING 6 INCHES EDGES, 12 INCHES FIELD) PER 2015 IRC TABLE R602.3.5

**MINIMUM LENGTH OF BRACED WALL PANELS**

ADJACENT CLEAR OPENING HEIGHT	MINIMUM WALL PANEL LENGTH
64 INCHES OR LESS	27 INCHES
68 INCHES	27 INCHES
72 INCHES	27 INCHES
84 INCHES	32 INCHES
96 INCHES	41 INCHES

**WALL BRACING NOTES**

1. WALL BRACING SHALL MEET 2018 IRC CODE SECTION R602.3
2. MAXIMUM SPACING OF BRACED WALL LINES IS 8 FEET
3. THE EXTERIOR WALLS OF THE DRIVING STRUCTURE SHALL BE CONTINUOUSLY SHEATHED AND BRACED WITH 1/2" MINIMUM THICKNESS CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL (NAILING 6 INCHES EDGES, 12 INCHES FIELD) PER 2015 IRC TABLE R602.3.5
4. WALL BRACING SHALL BE 1/2" x 4" x 1/2" OR 2x4 OR 2x6 COMMON NAILS WITH 15 INCH PENETRATION @ 6" o.c. EDGES, 12" o.c. FIELD



**RIGHT SIDE ELEVATION**



**REAR ELEVATION**

**ATTIC VENTILATION CALCULATIONS**

REQUIRED:  
 MINIMUM: 1600 sq. ft. x 1/300 = 5.33 sq. ft.  
 PROVIDED:  
 High Ventilation (ridge vent):  
 30.33 lineal feet x 15.0 sq. in./lineal foot of vent = 3.15 sq. ft.  
 Low Ventilation (soffit vent):  
 50.16 lineal feet x 10.0 sq. in./lineal feet of soffit = 3.48 sq. ft.

TOTAL OVERALL ATTIC VENTILATION PROVIDED:  
 6.63 sq. ft.

**RESUBMITTAL**

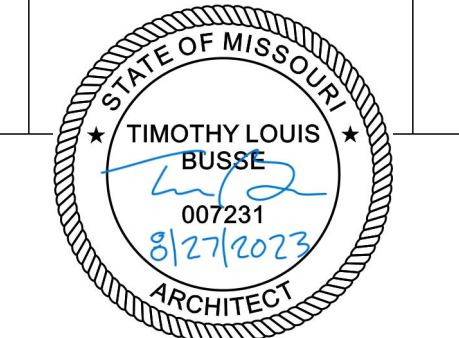
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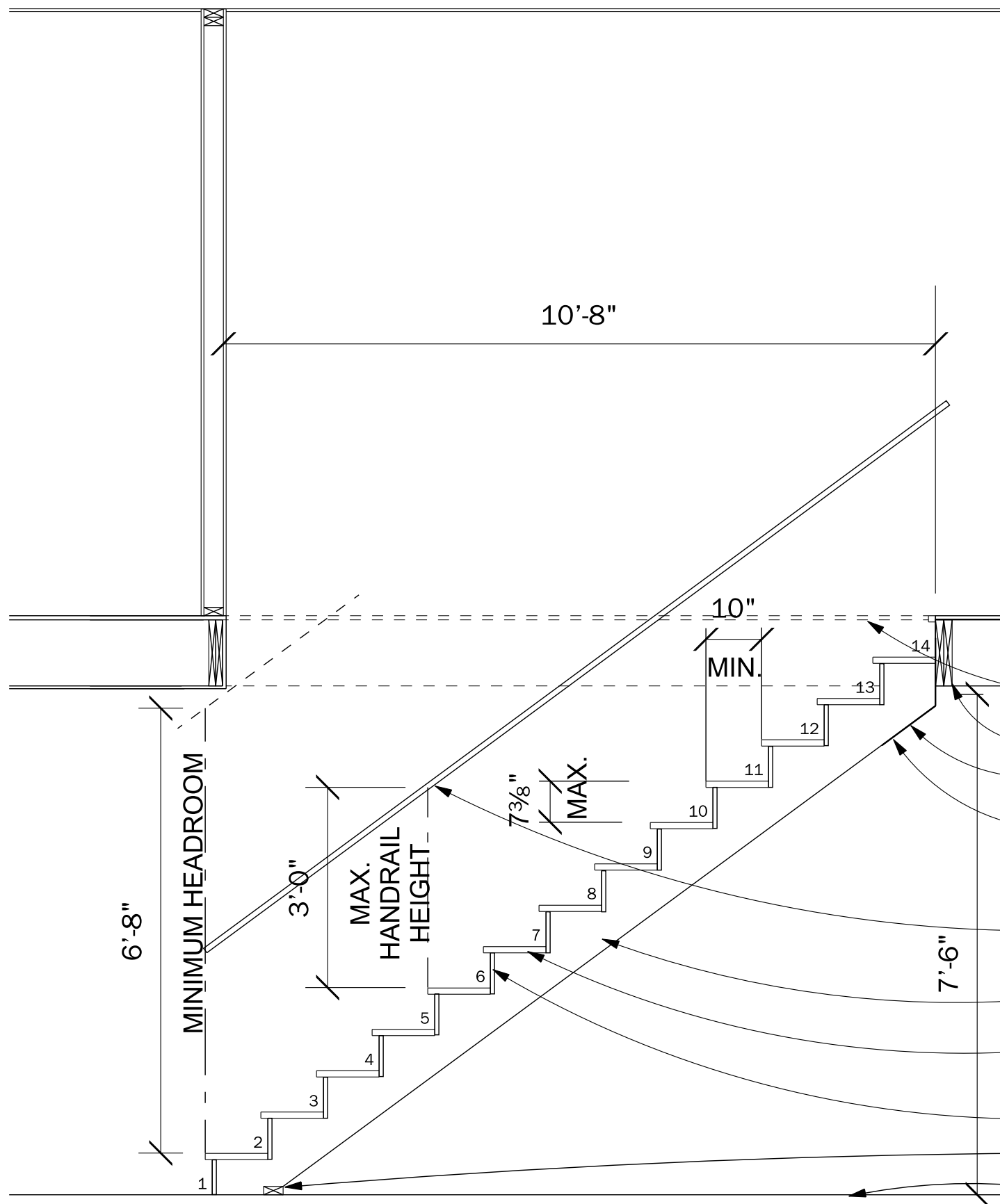
**STUDIO ARCHAEOUS**  
 433 BLUFF STREET, ALTON, IL 62002 314-280-3855  
 MISSOURI STATE CERTIFICATE OF AUTHORITY #2011021199

revised	by	chkd	issued for	date
per building plan review revision request	Tim	Tim	building permit application	8/27/2023
reduced finished basement area & reversed plan	Tim	Tim	building permit approval	8/27/2023
			building department	8/27/2023

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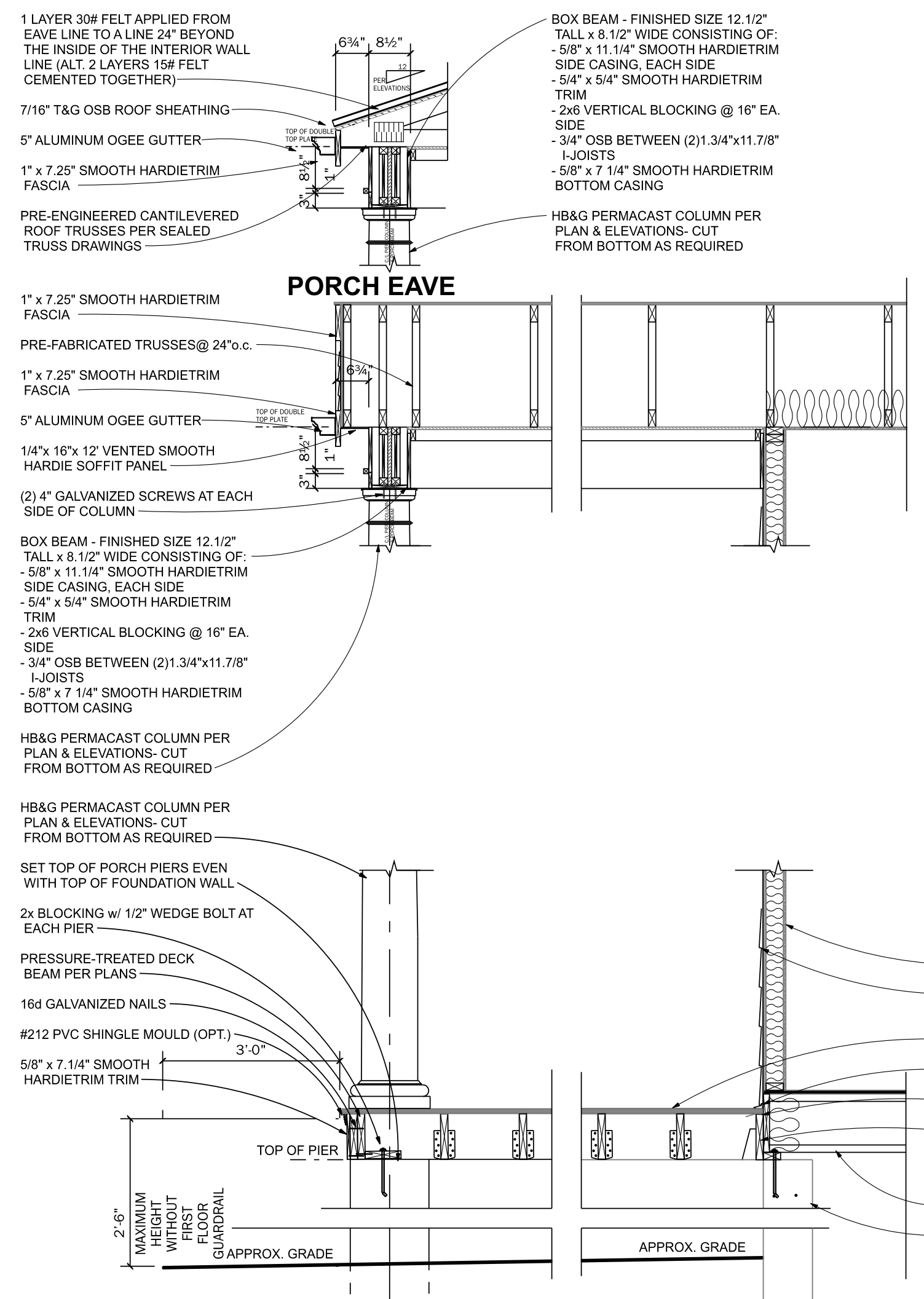


Timothy Louis Busse - Architect  
 MO# A-007231

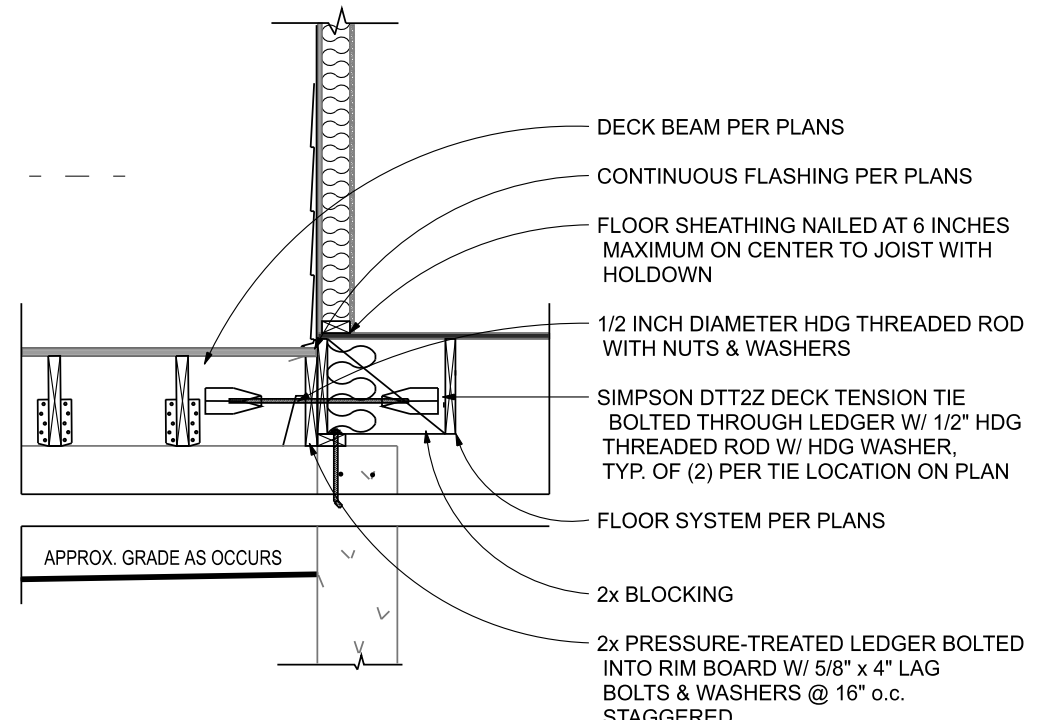


STAIR SECTION

20

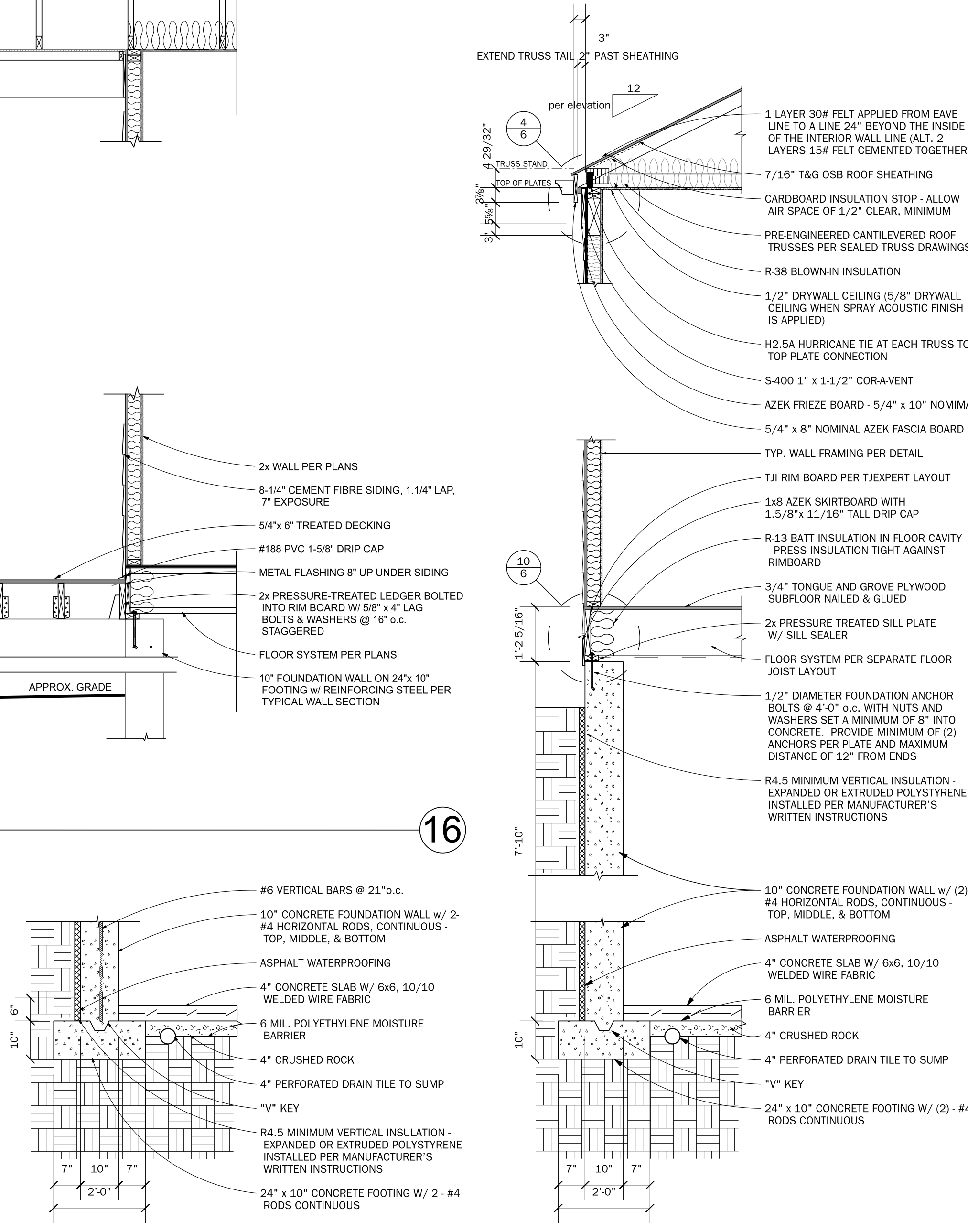


PORCH DETAILS



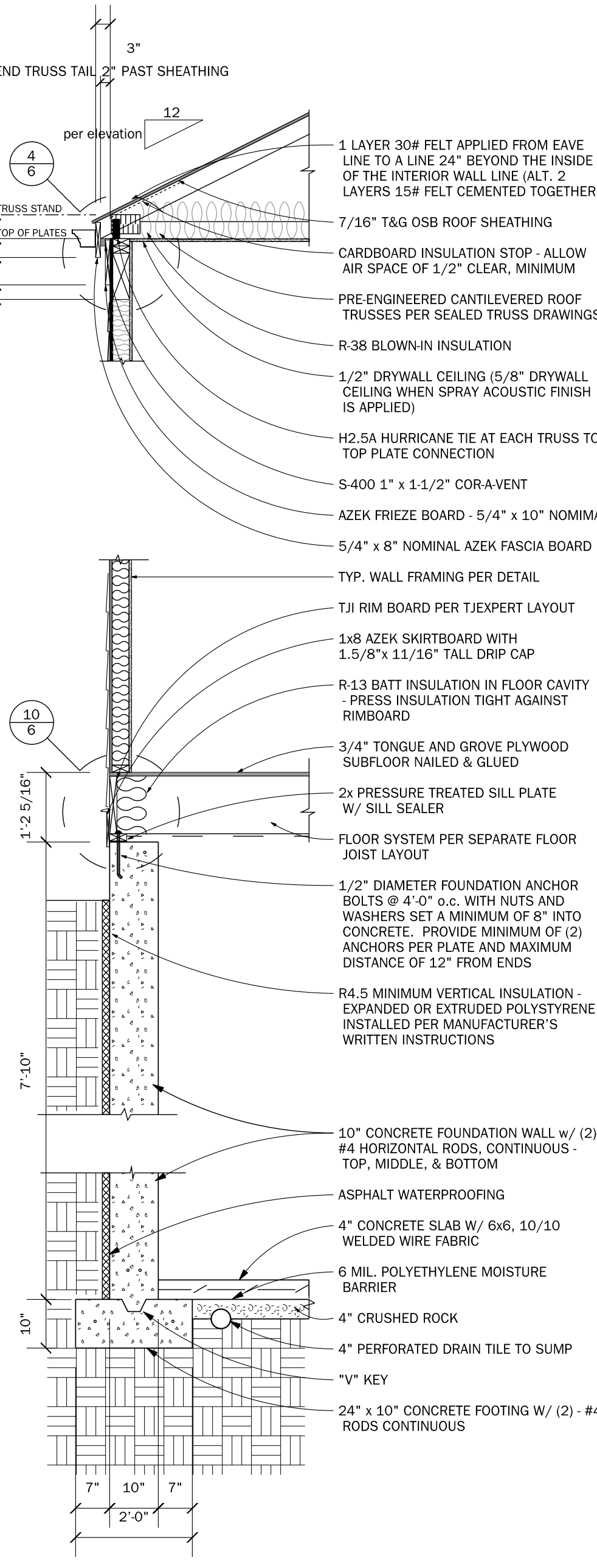
DDT2Z DECK TENSION TIE

21



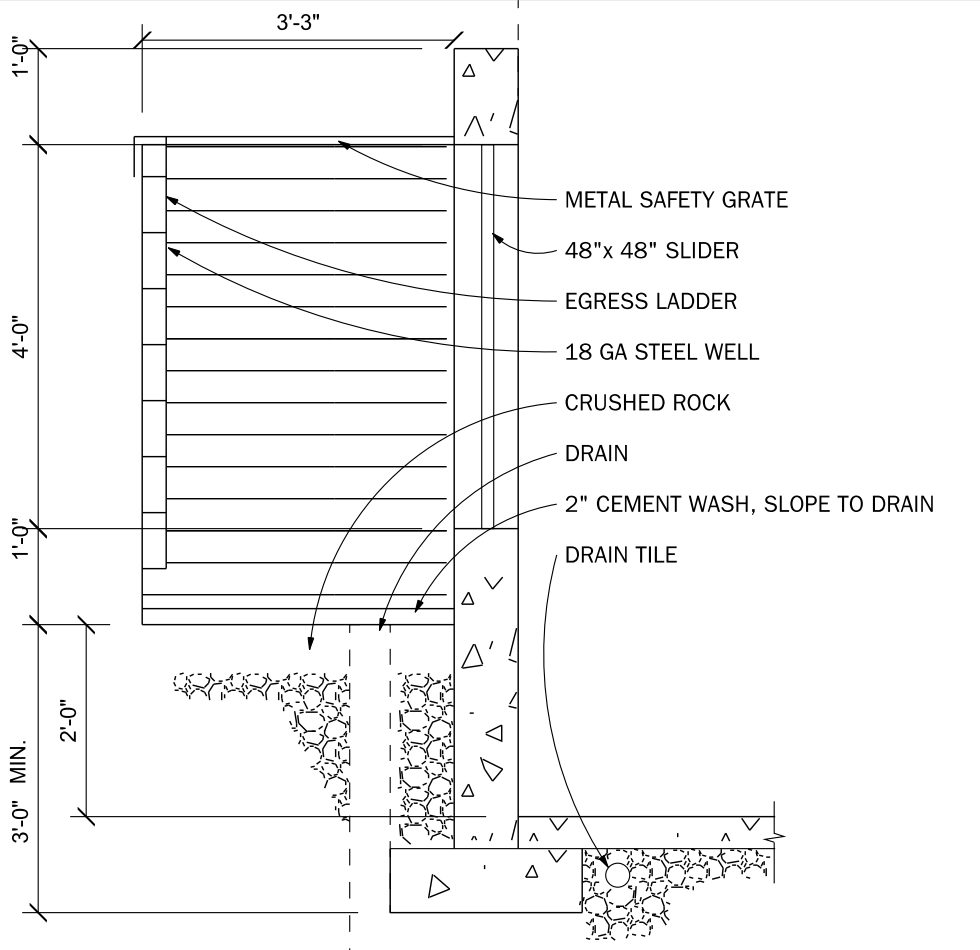
FOOTING - OPTIONAL 10'-0" POUR

22



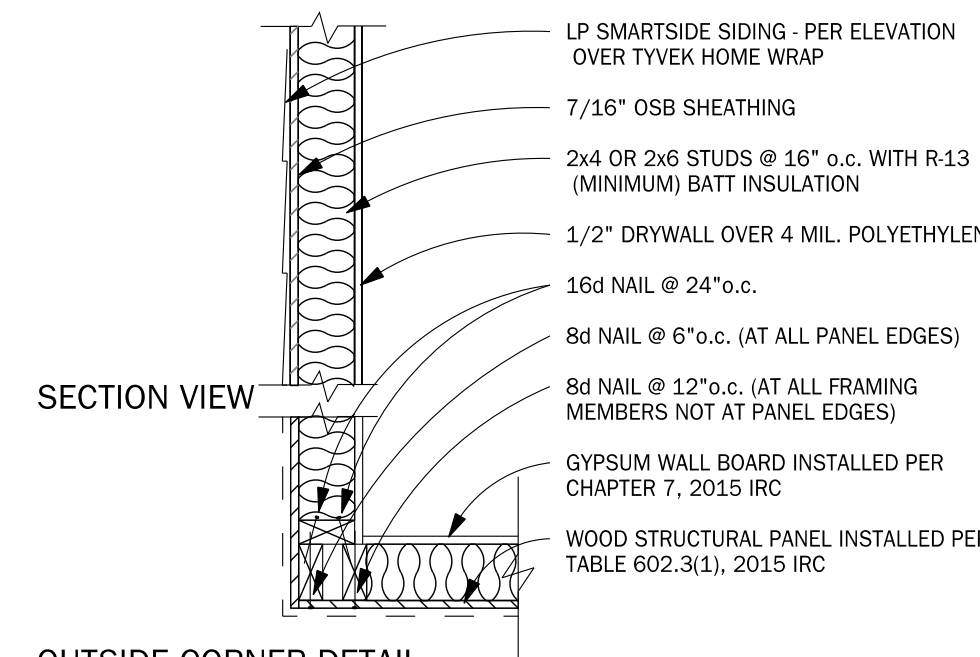
WALL SECTION - STANDARD 7'-10" POUR

23



EGRESS WINDOW WELL

6



SECTION VIEW

TYP. CONTINUOUS STRUCTURAL PANEL SHEATHING @ EXTERIOR FRAME WALL

12

# RESUBMITTAL

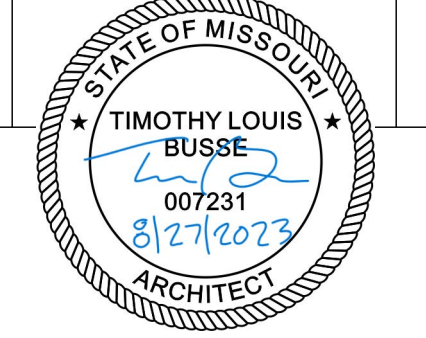
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433 BLUFF STREET ALTON, IL 62802 314-280-3855  
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revised	by	chgd	issued for	date
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RELEASE FOR CONSTRUCTION NOTED ON PLANS REVIEW DEVELOPER'S NAME: T. J. JOIST COMPANY DATE: 08/28/2023 8:57:06

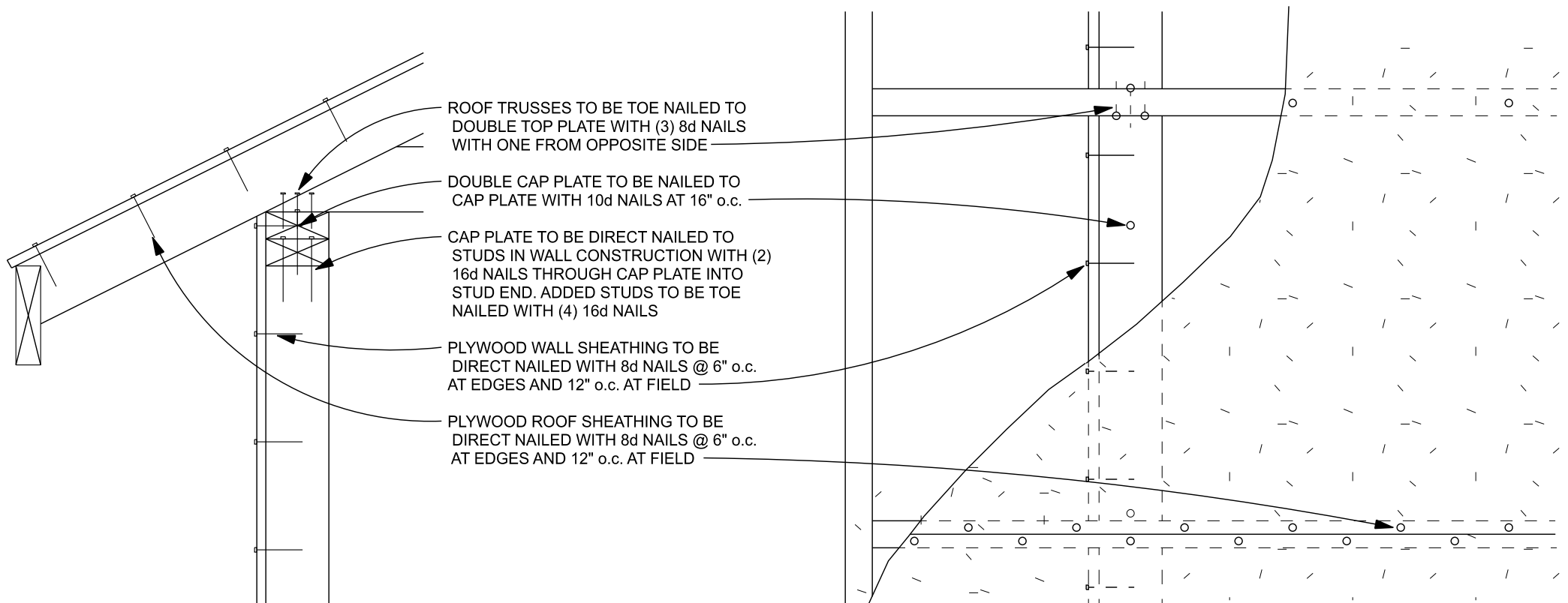
# EXCERPTS FROM IRC FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER	SPACING OF FASTENERS
<b>ROOF</b>		
6 Roof truss to plate	3-16d box nails (31/2" x 0.135"); or 3-10d common nails (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss
<b>WALL</b>		
8 Stud to stud (not at braced wall panels)	10d box (3" x 0.128"); or 3" x 0.131" nails	16" o.c. face nail
9 Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (31/2" x 0.135"); or 3" x 0.131" nails	12" o.c. face nail
10 Built-up header (2.c to 2.c header with 1/2.c.f.nspacer)	16d box (31/2" x 0.135")	12" o.c. each edge face nail
11 Continuous header to stud	5-8d box (21/2" x 0.113"); or 4-8d common (21/2" x 0.131"); or 4-10d box (3" x 0.128")	Toe nail
12 Top plate to top plate	10d box (3" x 0.128"); or 3" x 0.131" nails	12" o.c. face nail
13 Double top plate splice for SDCs A-D2 with seismic braced wall line spacing < 25.5	8-16d common (31/2" x 0.162"); or 12-16d box (31/2" x 0.135"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
14 Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d box (31/2" x 0.135"); or 3" x 0.131" nails	12" o.c. face nail
15 Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (31/2" x 0.135"); or 2-16d common (31/2" x 0.162"); or 4-3" x 0.131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail
16 Top or bottom plate to stud	4-8d box (21/2" x 0.113"); or 3-16d box (31/2" x 0.135"); or 4-8d common (21/2" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails	Toe nail
16 Top or bottom plate to stud	3-16d box (31/2" x 0.135"); or 2-16d common (31/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails	End nail
17 Top plates, laps at corners and intersections	3-10d box (3" x 0.128"); or 2-16d common (31/2" x 0.162"); or 3-3" x 0.131" nails	Face nail
<b>FLOOR</b>		
21 Joist to sill, top plate or girder	4-8d box (21/2" x 0.113"); or 3-8d common (21/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails	Toe nail
22 Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d common (21/2" x 0.131"); or 10d box (3" x 0.128"); or 3" x 0.131" nails	6" o.c. toe nail
23 1" x 6" subfloor or less to each joist	3-8d box (21/2" x 0.113"); or 2-8d common (21/2" x 0.131"); or 3-10d box (3" x 0.128"); or 2 staples, 1" crown, 16 ga., 13/4" long	Face nail
26 Band or rim joist to joist	3-16d common (31/2" x 0.162") 4-10 box (3" x 0.128"), or 4-3" x 0.131" nails; or 4-3" x 14 ga. staples, 7/16" crown	End nail
27 Built-up girders and beams, 2-inch lumber layers	20d common (4" x 0.192"); or	Nail each layer as follows: 32" o.c. at top and bottom and staggered.
27 Built-up girders and beams, 2-inch lumber layers	10d box (3" x 0.128"); or 3" x 0.131" nails	24" o.c. face nail at top and bottom staggered on opposite sides
27 Built-up girders and beams, 2-inch lumber layers	And: 2-20d common (4" x 0.192"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails	Face nail at ends and at each splice
28 Ledger strip supporting joists or rafters	4-16d box (31/2" x 0.135"); or 3-16d common (31/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails	At each joist or rafter, face nail
<b>Wood structural panels, subfloor, roof and interior wall sheathing to framing [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing]</b>		
30 3/8" - 1/2"	6d common (2" x 0.113") nail (subfloor, wall)  8d common (21/2" x 0.131") nail (roof)	6 inch at edge, 12 inch at intermediate supports
31 19/32" - 1"	8d common nail (21/2" x 0.131")	6 inch at edge, 12 inch at intermediate supports
<b>Wood structural panels, combination subfloor underlayment to framing</b>		
37 3/4" and less	6d deformed (2" x 0.120") nail; or 8d common (21/2" x 0.131") nail	6 inch at edge, 12 inch at intermediate supports

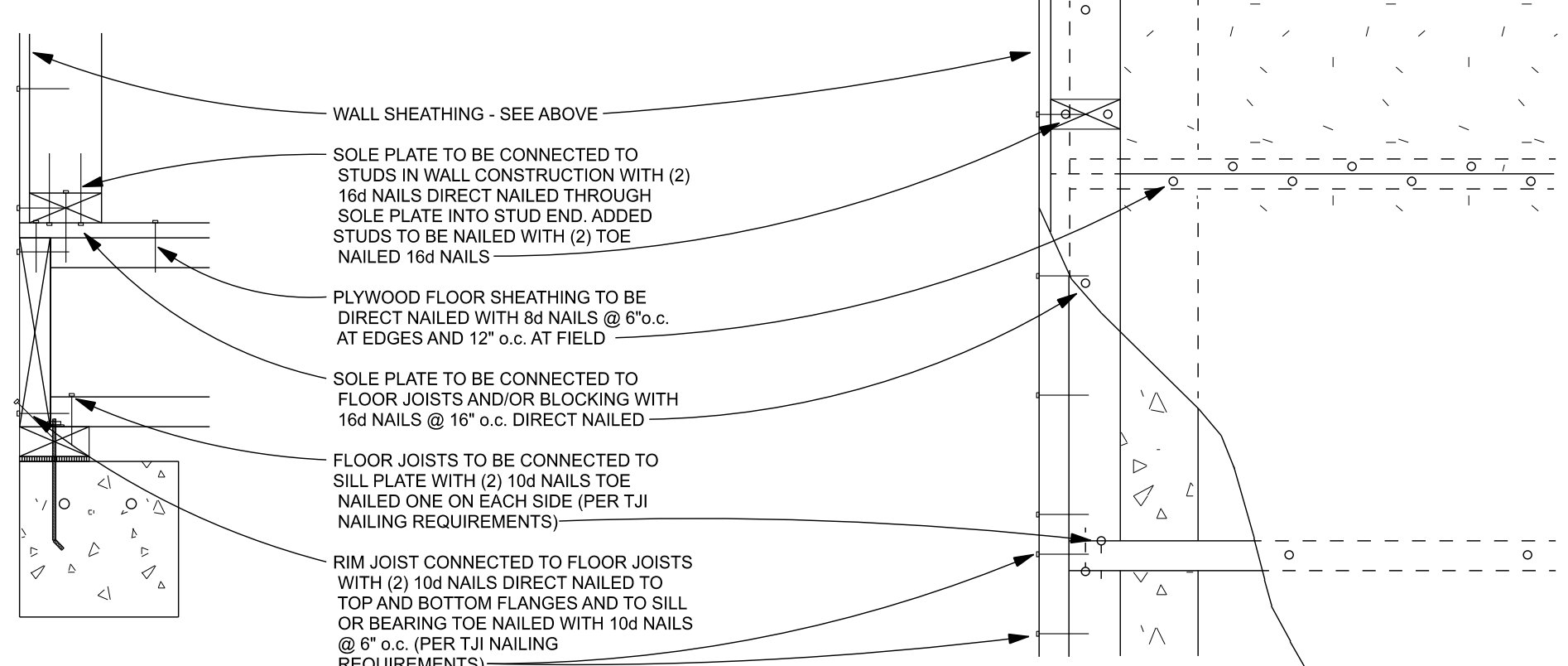
**FASTENING SCHEDULE**  
a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.  
b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.  
c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.  
d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.  
e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).  
f. Where the ultimate design wind speed is 130 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. Where the ultimate design wind speed is greater than 130 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.  
g. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.  
h. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.  
i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

Silent Floor System Nailing Requirements for TJI/Pro 120TS Joists  
Per Trus Joist MacMillan publication JM0399/30M - reorder # 2027  
TJI Joists at bearing: (2) 10d or 12d box nails, 1 1/2" min. from end, one each side.  
Blocking panels, rim joists or rim board to bearing plate:  
TJI blocking panels or rim joists: 10d box nails @ 6" o.c.  
Timberstrand LSL rim board: Toe nail 10d box nails @ 6" o.c., or 16d box nails @ 12" o.c.  
Shear transfer: Connections equivalent to decking nail schedule  
Rim board, rim joist or closure to TJI joist: 1 3/4" width or less: (2) 10d box nails, one each @ top & bottom flange  
2x4 minimum squash blocks: (2) 10d box nails, one each @ top and bottom flange  
TJI/Pro 120TS rim joist: (2) 10d box nails, one each @ top and bottom flange

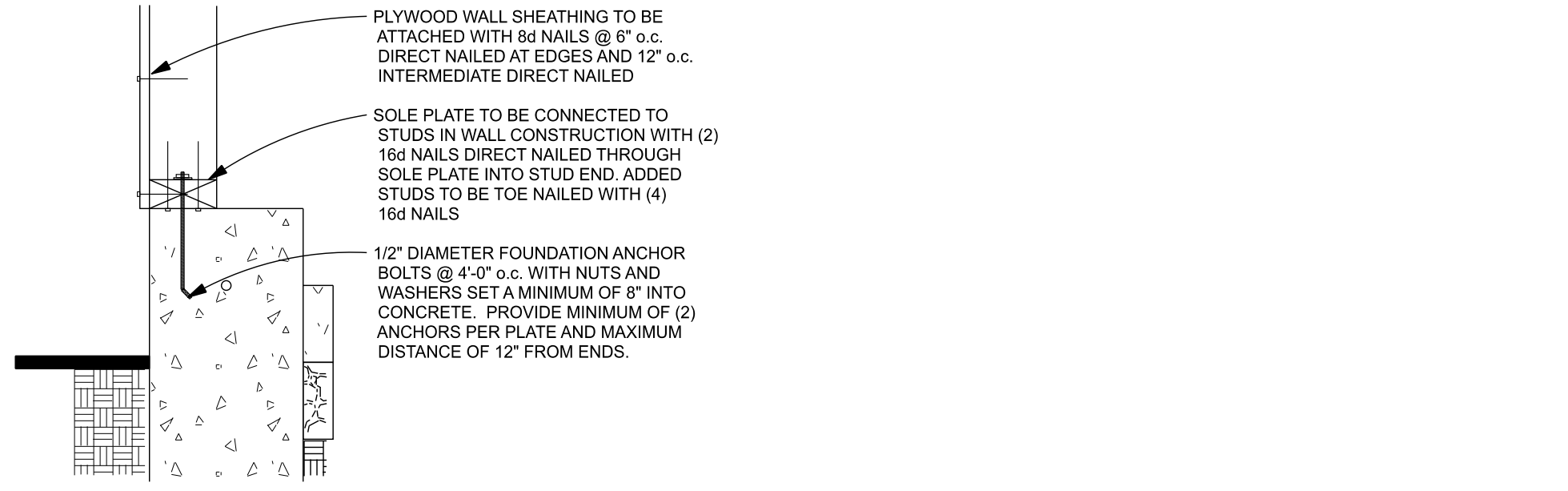
Silent Floor System Nailing Requirements for TJI/Pro 150, 250, 350 & 550 Joists  
Per Trus Joist MacMillan publication NW0798/30M - reorder # 2025  
TJI Joists at bearing: (2) 10d or 12d box nails, 1 1/2" min. from end, one each side  
Blocking panels, rim joists or rim board to bearing plate:  
TJI blocking panels or rim joists: 10d box nails @ 6" o.c.  
Timberstrand LSL or Microllam LVL rim board: Toe nail 10d box nails @ 6" o.c., or 16d box nails @ 12" o.c.  
Shear transfer: Connections equivalent to decking nail schedule  
Rim board, rim joist or closure to TJI joist: 1 3/4" width or less: (2) 10d box nails, one each @ top and bottom flange  
TJI/Pro 350 rim joist: (2) 16d box nails, one each @ top and bottom flange  
TJI/Pro 550 rim joist: Toe nail joist to rim joist with (1) 10d box nail on each side of top flange  
2x4 minimum squash blocks: (2) 10d box nails, one each @ top and bottom flange



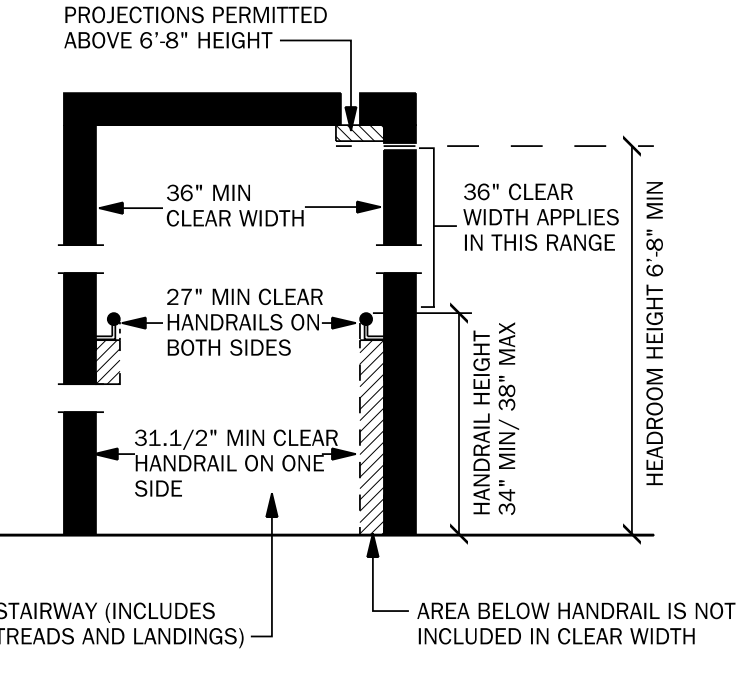
**NAILING @ ROOF AND TOP PLATES**



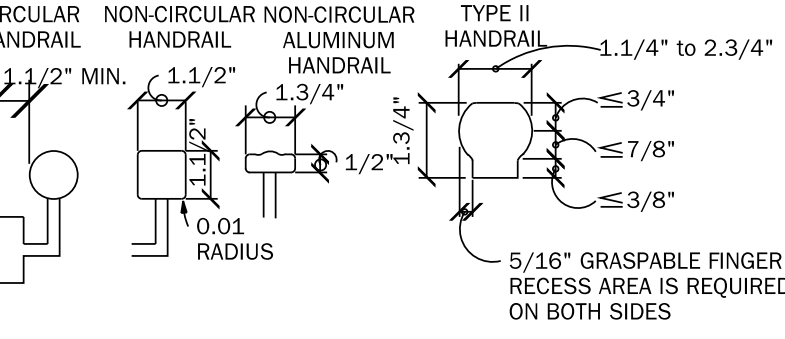
**NAILING @ JOISTS OVER CONCRETE**



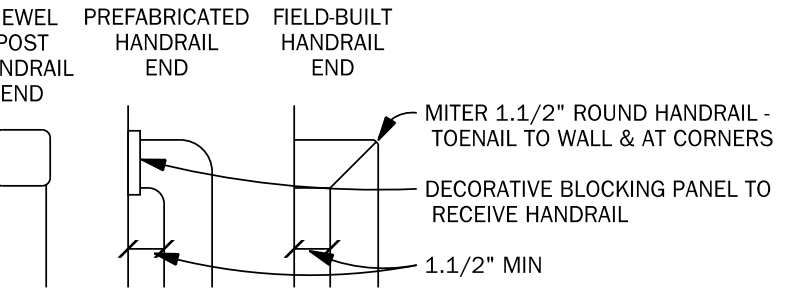
**NAILING @ FRAMING OVER FROST WALL**



**STAIRWAY CROSS SECTIONAL CLEARANCES**



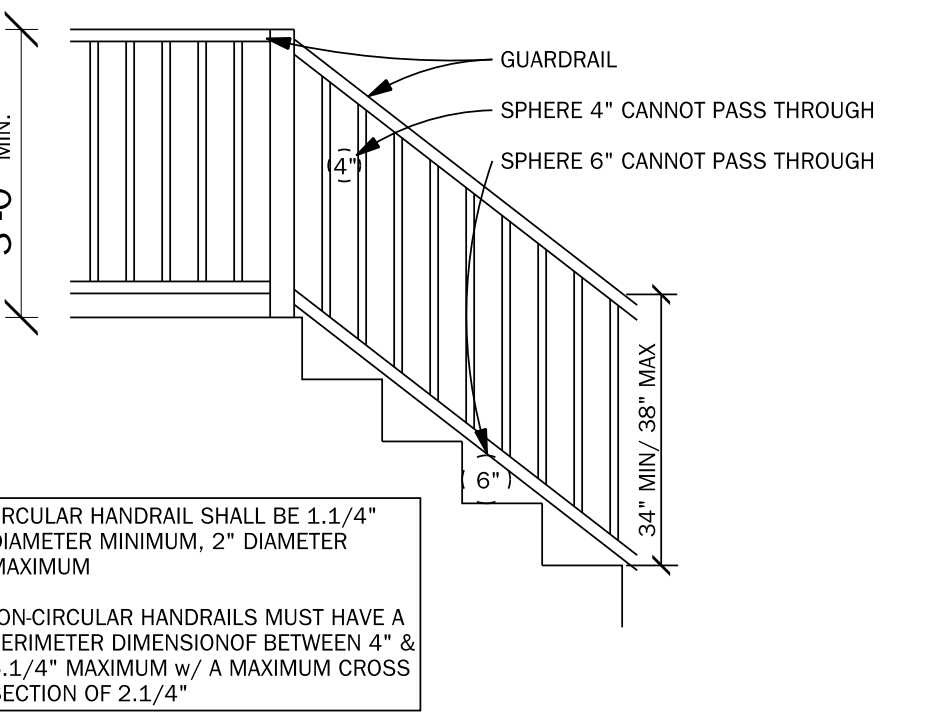
**HANDRAIL CROSS SECTIONS**



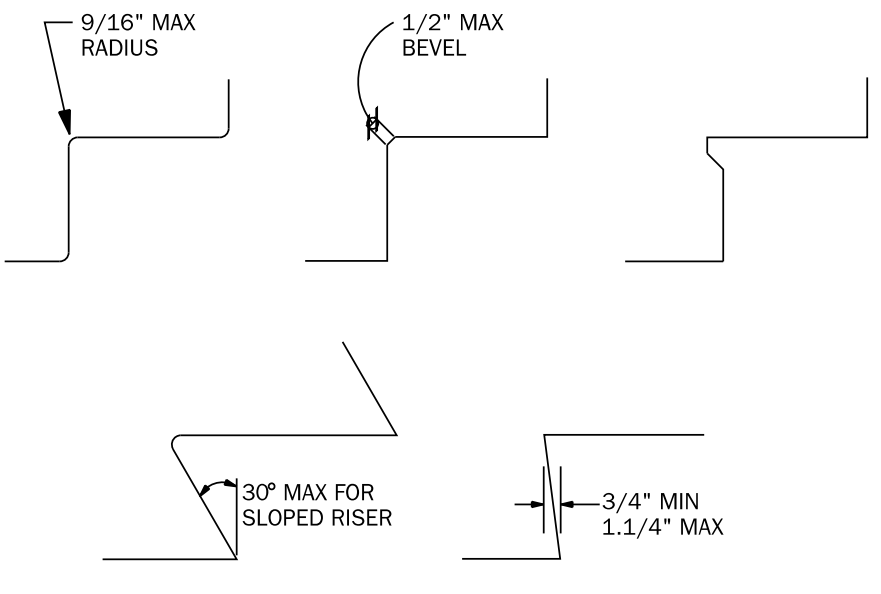
**HANDRAIL TERMINATION - PLAN VIEWS**

**MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS (IRC TABLE R602.7.5)**

HEADER SPAN	16 INCHES MAXIMUM STUD SPACING	24 INCHES MAXIMUM STUD SPACING
3 FEET OR LESS	1	1
4 FEET	2	1
8 FEET	3	2
12 FEET	5	3
16 FEET	6	4



**GUARDRAIL REQUIREMENTS**



**TREAD PROFILES**

# RESUBMITTAL

**Proposed residence, 1600-32 model  
Permit #PPRES20231517  
Lot #6, 500 NW Main Street  
Lee's Summit, Jackson County, Missouri 64063  
for Walker Custom Homes LLC**

**STUDIO ARCHAEO'S**  
433 BLUFF STREET, ALTON, IL 62902 314-280-3855  
MISSOURI STATE CERTIFICATE OF AUTHORITY #2011021199

revised	by	chkd	issued for	date
per building plan review revision request	Tjm	Tim	building permit application	3/27/2023
reduced finished basement area & reversed plan	Tim	Tim	building permit approval	4/17/2023
			building department	8/27/2023

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Actual construction and dimensions may vary in field.  
Exterior elevations shown as artist's concepts only.  
**DO NOT SCALE DRAWINGS.**

Timothy Louis Busse - Architect  
MO# A-007231

sheet **5** of **5**