# THE MADISON

SUBDIVISION >

LOT # >

GARAGE >
LEFT RIGHT

ELEVATION # >

FIRE WALL REQUIREMENT NOTE:
THESE PLANS WILL NOT BE BUILT INSIDE THE MINIMUM FIRE SEPARATION

These construction documents are in full compliance with the requirements of the North Carolina Residential Building Code - 2012 Edition including all amendments by the North Carolina Building Code Council adopted and effective as of the date of this issue of these documents.

| AREA | SQ FT |
|---|---|
| 1ST FLOOR | 1205 |
| 2ND FLOOR | 1600 |
| TOTAL LIVING | 2805 |
| GARAGE | 395 |
| PORCHES | 80 |
| TOTAL | 3280 |

SUMMIT
ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

## Revisions

| | |
|---|---|
| Revision #1 04/30/17 | WINSTON SALEM VERSION |
| Revision #2 05/11/17 | |
| Revision #3 __/__/__ | |
| Revision #4 __/__/__ | |
| Revision #5 __/__/__ | |
| Revision #6 __/__/__ | |
| Revision #7 __/__/__ | |
| Revision #8 __/__/__ | |

INDEX OF SHEETS



GENERAL NOTES:

1) DO NOT SCALE DRAWINGS; DIMENSIONS SHOWN SHALL BE USED IN PREFERENCE TO MEASUREMENTS BY SCALE
2) CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT SITE BEFORE PROCEEDING WITH ANY WORK
3) NOTES INDICATING TYPICAL CONDITIONS SHALL APPLY TO ALL LIKE AREAS UNLESS NOTED OTHERWISE
4) CONTRACTOR SHALL VERIFY AND COMPLY TO ALL LOCAL AND NATIONAL BUILDING CODES
5) ALL SUB-CONTRACTORS SHALL BE RESPONCIBLE FOR THEIR DAMAGE TO OTHER TRADES

ELECTRICAL NOTES

1) ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL CODES
2) LOCATION OF EXISTING UNDERGROUND UTILITY LINES AND STRUCTURES SHALL BE DETERMINED AND VERIFIED IN THE FIELD PRIOR TO COMMENCING WORK. ELECTRICAL CONTRACTORS SHALL BE RESPONSIBLE FOR THEIR DAMAGE TO OTHER TRADES
3) ELECTRICAL BOXES INSTALLED IN FLOORS, WALLS, OR CEILINGS SHALL BE MOUNTED FLUSH WITH FINISHED SURFACE AND CONDUITS AND/OR CABLES SHALL BE CONCEALED UNLESS OTHERWISE NOTED
4) EXTERIOR OUTLETS ARE WP /GFI
5) OUTLETS IN GARAGE OR WITHIN 6' OF A WATER SOURCE ARE GFI

## Design Specifications

Use Group > One and two family dwelling
Construction Class > Unprotected
Height & Area Limit > 35 feet maximum 2 story height
Emergency Escape > Egress or rescue windows from sleeping rooms shall have minimum of 4.0 sq ft net clear opening. Min width 20"; min height 22"; & max sill height 44".
Garage > House ceiling > House assembly > 1/2" gypsum board wall & 5/8" type X gypsum board ceiling where living is above w/ 20 minute garage/house door.

Design Loads > Live Load >
- Sleeping = 30 psf
- Non-sleeping = 40 psf

Dead Load > 10 psf
Decks > 40 psf
Wind Speed > 90 mph
Stair Load > 40 psf
Roof Live Load > 20 psf
Assumed Lateral Soil Pressure > 30 psf

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

STRUCTURAL MEMBERS ONLY

Attic Ventalation > Total attic sq ft / 300 = sq ft free area req'd
- Ridge Vent > Linear feet of vent X .085 free area / linear feet of vent = sq ft provided
- Soffit Vent > Linear feet of vent X .045 free area / linear feet of vent = sq ft provided

Crawl Space Ventalation > Total crawl space sq ft / 300 = sq ft free area req'd
- Foundation Vents > Free space provided by vent = F
  - Free area req'd / F = number of vents req'd

LGI HOMES

THE MADISON

REV 05/11/17

COVER SHEET

PAGE #1

19 PAGES

DESIGN LOADS:

1. Design loads are all dead loads plus:

| | | | |
|---|---|---|---|
| A. | Sleeping Rooms | | 30 PSF |
| B. | All other floors | | 40 PSF |
| C. | Balconies | | 40 PSF |
| D. | Attic floor (ceiling joists) live loading with the following: | | |
| | i.) | Area accessible by stairs | 40 PSF |
| | ii.) | Roof slopes > 3:12 | 20 PSF |
| | iii.) | Roof slopes < 3:12 | 10 PSF |
| E. | Roof live load | | 20 PSF or as required by Code. |
| F. | Wind load | | 90 MPH, Exposure B |
| G. | Snow load | | 10 PSF or as required by Code |

1. All designs are in accordance with the 2012 North Carolina Residential Building Code, and the 2012 International Residential Code (IRC). Refer to the relevant Code for any additional information not covered in these notes or the designs.
2. Engineering design is for structural information only. The Engineer of Record does not accept responsibility for dimension errors, architectural errors, detailing of waterproofing, plumbing, electrical, or mechanical information or any part of the plan not relevant to the structural information.

RESIDENTIAL FOUNDATIONS:

1. All continuous wall footings are to be installed as noted on the plans and per the standard details package. Reinforcing is to be as noted on plans and per the standrad details package.
2. All interior piers are 8"x16" CMU up to a maximum height of 32". All piers over 32" high must be filled solid with Type S mortar. Maximum height for 8"x16" filled pier is 5'-0". Piers larger than 8"x16" are noted on plans and must be filled with Type S mortar. For one-story structures, pier caps are to be 4" solid masonry. For two-story structures, pier caps are to be 8" of solid masonry.
3. Footings for 8"x16" piers are as noted on plans and per standard details package. Reinforcing is to be as noted on plans and per the standard details package.
4. Interior thickened slab footings which occur in basements and "slab on grade" floors are 10" deep by 16" wide unless noted otherwise. Thickened footings are required under all bearing walls.
5. All rebar splices shall be a minimum of 2'-0" unless otherwise noted.
6. Shallow foundations are designed for an assumed soil bearing capacity of 2,000 psf. The contractor is responsible for notifying the Engineer of Record if any soils are found to be unsuitable for this bearing capacity. The contractor is responsible obtaining soil testing to ensure that the bearing capacity of the soil meets or exceeds this value. All fill is to be compacted to 95% density as measured by the Standard Proctor Test (ASTM D-1557).
7. All soils and fill under floors within and/or under buildings shall have preconstruction soil treatment for protection against termites. Certification of Compliance shall be issued to the Building Department by a licensed pest control company.
8. All footing excavations shall be neat, straight, and level in the proper elevations to receive the concrete. Excessive variations in the dimensions of footings or slab will not be permitted. Reinforcing steel and mesh shall be accurately placed and supported to maintain their position during the concrete pouring. Edge forms shall be used for concrete that will be exposed.
9. All slab penetrations are to be the responsibility of the contractor. Penetrations interfering with reinforcing shall be approved by the Engineer of Record prior to the placement of concrete.
10. Elevation difference between the bottom of adjacent footings shall be a maximum of one foot less than the minimum horizontal footing distance - for stepped footings. Differential heights between footings can become excessive usually where a pier footing in a crawlspace or garage footing is next to a basement wall footing.

SPECIAL FOUNDATION CONSIDERATIONS:

1. Waffle slabs are self-supporting slabs reinforced according to details and do not require firm soil for support. Soil must only be capable of supporting concrete until it hardens and develops strength.
2. Caisson foundations shall be a minimum of 12" diameter drilled unreinforced concrete caissons. Caissons shall extend to a minimum depth providing 2' penetrations into good original ground. A caisson cannot be used if water rises immediately into a drilled hole. Piles will have to be used in such cases. (6'-0" MIN.)
3. Treated wood piles with a minimum diameter of 8" and a minimum design load of six tons are used for all foundations with unsuitable soil deeper than 13' or with water in drilled caisson holes. Drive per North Carolina or South Carolina Code.
4. Sizes and reinforcing for footing caps over caissons or piles shall be as shown on plans.
5. Chimney footings are to be 12" larger than the chimney footprint by 12" thick.
6. Foundation walls backfilled with dirt which support structural framing shall be constructed as follows:
   A. For earth fill up to a maximum height of 4': Use 8" Solid Grouted CMU or 8" brick with Bituthene membrane waterproofing on exterior. Footings are to be 8"x16" or 8"x24" as noted on the plan.
   B. For earth fill 4' to a maximum height of 9': Use 8"x24" footing with #4 @ 16" dowels hooked in footing and projecting 18" above footings. Use 12" CMU walls with #4 @ 16" vertical bars located 4" from non-dirt fill face, lap all splices 12" and use Dur-o-wall horizontal reinforcing every 8" in CMU joints. Install 1-#3 L-bar with 24" legs in every other joint horizontally at all corners; i.e., #3 corner bars @ 16" o/c vertically. Fill all open cells of CMU with either type S or M mortar or fill with 2,500 psi concrete. Install waterproof Bituthene membrane or equal.
   C. In lieu of the preceding design, basement walls may be constructed in accordance with R404.1 of the Code. However, 24"x24", #3 corner bars shall be installed at 16" o/c vertically regardless of the wall height. ***ERECT ALL FRAMING BEFORE BACKFILLING***
7. When floor joists are parallel to basement walls, block between joists @ 24" o/c for three joist spacings. For retaining walls without framing see special designs on drawings.

FRAMING CONSTRUCTION - OTHER THAN ROOF:

1. See Table R602.3(1) of the Code for a fastener schedule for structural members.
2. Wood beams shall be supported by metal hangers of adequate capacity where framing into beams or ledgers. The following hanger schedule may be used unless noted otherwise on the plan:

| Member Size | Simpson® Hangers |
|---|---|
| (2) 2x8 | HUS 28-2 |
| (2) 2x10 | HU 210-2 (Max) |
| (2) 2x12 | HU 212-2 (Max) |
| (2) 1 3/4" x 9 1/4" LVL | HU 410 (Max) |
| (2) 1 3/4" x 11 7/8" LVL | HU 412 (Max) |
| (2) 1 3/4" x 14" LVL | HHUS 410 |
| All Triple LVL Members | HHUS 5.50/10 |

Note: This table shows Simpson® face hangers. Other hangers may be used so long as they are equal to or stonger than those listed.

Note: Provide Grade #1 for SYP girders and headers per January 1, 2015 amendment to 2012 NC Residential Code Table 502.2 footnote B

3. Crawl girders and bands with 4" curtain wall and pier construction shall be 2-2x10 Southern Yellow Pine #1 unless noted otherwise. Maximum clear spans are to be 4'-8" (6'-0" o/c spacing of piers). To avoid objectionable cracking in finished hardwood floors over any girders, use the following procedure:
   A. Nailing
   i.) All floor joists must be toenailed to their support girders with a minimum of 3-8d nails at each end. Larger nails will split and render the toenail ineffective. No end nailing through the girder or band is permitted.
   ii.) If dropped girders are used, end lap all joists and side nail each with a minimum of 3-16d nails at each end of each joist. If flush girders are used, support joists at girder with hangers or ledger strip.
   iii.) Nail multiple member built-up girders with two rows of 16d nails staggered at 32" o/c, 2" down from the top and 2" up from the bottom with 3-16d nails at each end of each piece in the joist through the members making up the multiple girder.
   iv.) This nailing pattern will ensure a tight floor from the outside of the house to the outside so that when the framing shrinks during the first heating season, the shrinkage will be uniformly distributed over the entire floor. If the girder-nailing pattern is omitted, then the shrinkage will accumulate over the girders and an objectionable crack will develop in the finished hardwood floor over the girder line.
   B. At all girders where the joists change direction, install bridging at 6' o/c for a minimum of six joist spacings beyond any joist direction change. This will insure shrinkage distribution over the floor and not let it accumulate at the girder.
   C. There must be wood blocking thru bolted to the steel beam with joists toenailed or attached to the beam with metal hangers under any hardwood floors that pass over a steel beam supporting floor joists. This condition often exists over basement areas.
4. All other lumber may be Spruce #2 unless noted otherwise.
5. Steel beams must have (5)-2x4 or (4)-2x6 studs under each end U.N.O. The top flange shall be covered with wood blocking fastened with 2 rows 1/2"dia. lag-screws 12" o/c staggered, or powder-actuated fasteners, Simpson TB Screws, or an approved method.
6. "Lam" beams must have (3)-2x4 or (2)-2x6 studs under each end U.N.O.
7. Masonry lintels:
   A. For openings up to 6': Use 3" x 3" x 1/4" steel angles.
   B. For openings from 6' to 10': Use 5" x 3 1/2" x 5/16" steel angles.
   C. For openings from 10' to 18': Fasten 6" x 4" x 5/16" steel angle to wood header with (2) 1/2"dia. lag screws staggered @ 16" O.C. Extend angle 6" past opening to bear on masonry veneer at ends
   D. When structural steel beams with bottom plates are used to support masonry, the bottom plate must extend the full length of the steel beam. Provide a minimum 4" bearing at the end of all steel headers. This supports the ends of the plate by bearing on the adjacent masonry jambs. The beam should be temporarily shored prior to laying the masonry. The shoring may be removed five days after laying the masonry.
8. All brick veneer over lower roofs (brick climbs) must have a structural angle lag screwed to an adjacent stud wall in accordance with detail, with steel brick stops to prevent sliding of brick.
9. All rafter braces must have two studs from plate through all floors to the foundation or supporting beam below. No braces shall be attached to top wall plate without studs directly under them.
10. Where non-load bearing partitions fall between floor joists or trusses, 2x4 ladders @ 16" o/c must be placed perpendicular to the trusses to support the plywood decking. The ladders shall be supported with a Simpson "Z" clip or similar device. A double joist can also be used and is allowed to be separated 4" Max. to allow for plumbing and wiring.
11. All wood I-joists and open joists must be braced in accordance with the manufacturer's directions plus details shown on plans. Load-bearing partitions, jacks, beams and column supports must be solid blocked through floor. Trusses and plywood cannot carry concentrated point loads. I-joist material should not be used as blocking under concentrated point loads. All point loads must be carried to foundations with adequate blocking and/or beams.
12. All steel columns shall bear on concrete, masonry, or steel only. Beams that bear on top of steel columns shall be welded to the column. Where steel columns bear on concrete or masonry, unless otherwise noted, a 5/8" x 6 1/2" x 6 1/2" or 5/8" x 3 1/2" x 10" base plate shall be used to spread the column load across the bearing surface. Base plates shall be bolted with at least two 1/2"dia. anchor bolts or expansion bolts to concrete or masonry.
13. Unless noted otherwise on the plans, all exterior facing stud walls taller than 10' shall be constructed as follows:
A. Walls 10' to 11' high: Balloon frame 2x4 SPF#2 studs at 12" o/c with 1/2" OSB sheathing and 3 king studs on each side of each opening nailed securely to the header.

FRAMING CONSTRUCTION - OTHER THAN ROOF: (Continued)

14. Continuous 2x6 bridging shall be nailed to diagonal or vertical web members of all open-web floors trusses over 10' long. They shall be installed near mid-span as a load distribution member. If the 2x6 bridging is not continuous, lap ends of bridging one truss space.

15. Lower stud walls for buildings over two stories, but not more than three stories:
   A. Interior walls
      i.) Load bearing 2x4 @ 12" o/c for up to 10-0", or 2x6 @ 16" o/c if taller than 10'-0"
      ii.) Non load bearing 2x4 @ 16" o/c under 12'-6"
   B. Exterior walls
      Use 2x6 @ 16" o/c with 1#2" plywood sheathing solid on walls.
16. Headers shall be as follows unless noted differently on plans:
   A. Interior and exterior:
      i) Spans up to 2'-6" 2-2x6's - 1 Jack Stud Each Side
      ii) Spans 2'-6" to 3'-6" 2-2x8's - 1 Jack Stud Each Side
      iii) Spans 3'-6" to 6'-6" 2-2x10's - 2 Jack Stud Each Side
      iv) Spans 6'-6" or more See Plan - See Plan
   B. Number Of 2x4* King Studs Required At Each End For A Given Wall Height And Opening Width

| Wall Height \ Wall Opening Width | 2'-6" | 3'-6" | 4'-0" | 5'-6" | 6'-0" | 8'-0" |
|---|---|---|---|---|---|---|
| 8' | 1 | 1 | 1 | 1 | 1 | 2 |
| 9' | 1 | 1 | 1 | 2 | 2 | 2 |
| 10' | 1 | 2 | 2 | 2 | 3 | 3 |
| 11' | 2 | 2 | 3 | 3 | - | - |
| 12' | 2 | 3 | 3 | - | - | - |

*See plans for king-stud requirements at openings in 2x6 framed walls.

17. When ceiling joists are parallel to an exterior wall, tie the rafters near the top plate to ceiling joists with a 2x6 strongback a minimum of 6' long at 4' o/c across the top of the ceiling joists. 2x4 rafter ties shall be fastened to the side of the rafter and the strongback.
18. At all exterior diagonal wall panels (i.e. bay windows), each panel shall be nailed to each adjacent panel with 5-16d nails or tied together with metal strapping nailed at four locations between floors with a minimum of 2-16d nails into each panel at each strap. This will avoid vertical cracking in panel joints due to horizontal oscillating panels.
19. At all stairs, every stud at each stringer must be nailed to each stringer with a minimum of 2-16d nails. This will avoid cracking between wallboard and top of base molding due to vertical oscillation of stair stringers.
20. Roof trusses that have non-bearing partitions passing under them should be nailed to the partition plates to avoid ceiling-wall cracking.
21. Roof trusses close to side walls framing and used as dead wood for sheetrock boards should be nailed to the wall framing to prevent ceiling-wall cracking.
22. All structural framing lumber exposed directly to the weather or bearing directly on exterior masonry piers or concrete shall be treated. All wood in contact with the ground is to be ground-contact approved. All wood exposed directly to the weather shall be protected to prevent the occurrence of rot.
23. Unless otherwise detailed, all stick-built chimneys shall be constructed with 2x4 studs at 12" o/c, balloon-framed from attic ceiling or floor. Fasten 15/32" CDX plywood on all sides of the chimney along the full length of the studs. Fasten each stud to the supporting beam or ceiling joist with a 1 1/2"x24", 18-gauge metal strap, or a similar connector. Fasten beam down to support studs with (2) similar straps.
24. All point loads from roof braces, jack studs, beam supports -whether wood or steel-cannot bear on sheathing alone. Blockingequal to or better than the point load supports above must be carried through all construction to the foundation.
25. Note to apply for all hard coat stucco exterior finishes:
   A. Joints are necessary at the following locations:
      i) Horizontally at each floor line.
      ii) No areas larger than 144 S.F. surface exposed.
      iii) No dimension longer than 18'.
      iv) No dimension longer than 2½ times the shortest dimension
   B. Drip screed required at the bottom of all walls 2" above paved areas and 4" above grade.
   C. See ASTM 926 and 1063 for further information.

FRAMING CONSTRUCTION - OTHER THAN ROOF: (Continued on page 3)

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

STRUCTURAL MEMBERS ONLY

SUMMIT ENGINEERING LABORATORY TESTING

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

LGI HOMES

THE MADISON

REV 05/11/17

Residential Standard Notes Page 1

PAGE #2

19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com

FRAMING CONSTRUCTION - OTHER THAN ROOF: (Continued)

26. All "Self Supporting Stairs" must be connected to adequate framing to support the load of the stair case. It is the stair manufacturer's responsibility to provide the E.O.R. with all point loads prior to construction.
27. All studs, which support the bearing ends of steel or LVL beams, greater than four plies (i.e. 7-2x4 or 5-2x6 studs etc.) are to be fastened with adhesive or equivalent nailed per R602.3(1). This adhesive is to be applied to the wide face of each stud.

28. Openings in garage wall shall comply with Section R302.5. This provision does not apply to garage walls that are perpendicular to the adjacent dwelling unit wall.

## TABLE R302.6 DWELLING/GARAGE SERARATION

| SEPARATION | MATERIAL |
|---|---|
| From the residence and attic | Not less than 1/2-inch gypsum board or equivalent applied to the garage side |
| From all habitable rooms above the garage | Not less than 5/8-inch Type X gypsum board or equivalent |
| Structure (s) supporting floor/ceiling assemblies used for separation required by this section | Not less than 1/2-inch gypsum board or equivalent |
| Garages located less than 3 feet from a dwelling unit on the same lot | Not less than 1/2-inch gypsum board or equivalent applied to the interior side of the exterior walls that are within this area |

ROOF CONSTRUCTION:

1. All roof trusses must be built in accordance with truss manufacturers' requirements. Tie-down connections to resist uplift shall be installed where required. When roof truss manufacturers do not provide the required connectors, it is the responsibility of the contractor to notify the roof truss engineer or the Engineer of Record to provide an adequate connector.
2. Roof trusses and stick framed rafters are to be tied down to the top plates of walls, headers and beams/ girder trusses with a Simpson H2.5A as follows (per Table R802.11 for 90 mph Basic Wind Speed; 30' mean roof height; Exposure B, if site conditions are found to be above that specified, contact SUMMIT Engineering Laboratory & Testing, Inc. for further consultation):

   - Roof span 0 to 22' => Simpson H2.5A @ 48" on center (per manufacturer's specifications)
   - Roof span 22'-1" to 40'-0" => Simpson H2.5A @ 32" on center (per manufacturer's specifications)

3. Rafters shall be 2x6 SYP#2 @ 16" o/c for shingles with 7/16" OSB sheathing with one layer of 15# felt unless noted otherwise. They are to be cut into hips, ridges, etc., unless noted otherwise. Tile, slate and other heavy roof coverings shall use 2x8 SYP#2 @ 16" o/c with 5/8" minimum OSB sheathing with (2) layers of 15# felt, unless noted otherwise.
4. Collar ties shall be 2x6 @ 48" o/c at all ridges unless noted otherwise and located a nominal 3' below the ridge. Vaulted ceilings require special collar tie or ridge beam details. See the end of Table R802.5.1 in the Code unless otherwise detailed on the plan.
5. A minimum of three collar ties shall be used at all ridges even if two ties must be put on one set of rafters.
6. All hips and ridges are 2x10 SYP#2 unless noted otherwise.
7. All "HOGS" shall be composed of two 2x6's or a 2x6 nailed to a 2x8, as indicated on the plan. The boards shall be fastened together at their ends with 16d nails at 4" on center to form an "L" shape (See detail at lower right this page). All hogs on ceiling joists or rafters are 12' long 2x6's unless noted otherwise. Rafters may be spliced over hogs. Splice rafter hogs only at a roof brace.
8. Gable end framing must be braced parallel to ridges with a minimum of 2x6 diagonal braces @ 6' o/c along the gable wall to interior ceiling joists. Braces to bear on 2x6 hogs and to the gable wall at approximately mid-height of gable walls. Braces shall be at an angle of approximately 45°. Other bracing may be used with the design engineer's approval.
9. Ceiling joists when erected parallel to rafters must be sistered to rafters and nailed with 3-16d nails at each rafter. If a kneewall is used and ceiling joists do not intersect with rafters, then the rafters must be tied to the ceiling joists using 2x4 kikers or rafter ties spaced no more than 48" o/c or every third rafter.
10. Roof Plan Legend:

A. ⊗ Indicates location of roof brace point at rafter level.
B. ⊗→ Arrow away from the brace point indicates direction of roof brace to partition, beam, or other brace point below.
C. ⊗← Arrow into brace point indicates a vertical or almost vertical roof brace to partition, beam, or other brace point below.
D. Roof braces under 7'-0" are 2-2x4 nailed with 16 penny nails @ 9" o/c vertically from top to bottom.
Braces longer than 7'-0" are (2)-2x6 T-braces. Braces longer than 10' must be braced horizontally in two directions at mid-height.
E. Maximum spacing of roof braces are to be as follows (unless noted otherwise on plans):
i) For (2) 2x6 Hog . . . . . .6'-0" o/c
ii) For (2) 2x8 Hog . . . . . 7'-6" o/c

MATERIALS SPECIFICATIONS:

Concrete General Notes:

1. Except where otherwise noted, for all concrete, the proportions of cement, aggregate, and water to attain required plasticity and compressive strength shall be in acocrdance with ACI 318 Code. Concrete shall be 2,500 PSI in 28 days for footings and 3,000 PSI for walls, beams and columns, unless noted otherwise.
2. Before placing concrete, all debris, water and other deleterious material shall be removed from the places to be occupied by the concrete. The placing of all concrete shall be in accordance with ACI 318 and ASTM C94 requirements. Pumping of concrete will be permitted only with the Engineer of Record's approval of proposed concrete mix and method of pumping. Concrete shall be rapidly handled from the mixer to forms and deposited as nearly as possible to its final position to avoid segregation due to rehandling. Concrete to be spaded and worked by hand and vibrated to assure close contact with all surfaces of forms and reinforcing steel and leveled off at proper grade to receive finish. All concrete shall be placed upon clean, damp surfaces. Vibration shall be applied directly to the concrete and shall be sufficient to cause flow of settlement but not long enough to cause segregation of the mix.
3. Construction joints shall be located in accordance with ACI 301. All reinforcing steel shall be continuous across joints. In slabs on grade, saw contraction joints shall not be over 20 feet center to center each way. Joints shall be sawn a depth of one-third of the slab thickness. Sawing of the joints shall commence as soon as the concrete has hardened sufficiently to permit sawing without excessive raveling. Fill the saw cuts with approved joint filler after the concrete has cured.
4. Concrete, when deposited, shall have a temperature not below 50° F and not above 90° F. The methods and recommended practices as described in ACI 306 shall be followed for cold weather concreting and ACI 305 for hot weather concreting.
5. Freshly placed concrete shall be protected from premature drying by one of the following methods:
   A. Ponding or continuous sprinkling.
   B. Absorptive mat or fabric kept continuously wet.
   C. Waterproof paper conforming to ASTM C171.
   D. Application of an approved chemical curing compound.

   The curing shall continue until the cumulative number of days when the ambient temperature above 50° F has totaled seven. During curing, the concrete shall be protected from any mechanical injury, load stresses, shock, vibration, or damage to finished surfaces.
6. Reinforcing steel bars shall be deformed in accordance with ASTM A305 and or A408 and formed of ASTM A615-78 Grade 60 steel. Welded wire fabric reinforcing to be ASTM A185 steel wire. Accessories shall conform to the CRSI "Manual of Standard Practice." The following minimum concrete cover shall be provided over reinforcing bars:
   A. Exposed to Earth . . . . . .3"
   B. Exposed to Weather . . . . . 1 1/2"
   C. Slabs not Exposed to Weather 8". . . . . 3/4"
   D. Beams and columns . . . . . .1 1/2"

Masonry General Notes:

1. Masonry walls are to be of the sizes and in the locations shown on the plans and shall be constructed in accordance with the provisions of ACI 530.
2. Hollow Load Bearing Units: ASTM C90 made with lightweight or normal weight aggregates. Grade N-I units shall be provided for exterior and foundation walls. Grade N-I or S-I units shall be provided for other load-bearing walls or partitions.
3. Concrete Building Brick: ASTM C55 made with lightweight or normal aggregates, Grade N-I or S-I except that brick exposed to weather shall be N-I.
4. Mortar: ASTM C270-95, Type S prepackaged mortar mix which shall not contain any non-cementitious fillers combined with not more than three parts sand per one part mix.
5. Reinforcing Steel: ASTM A615 Grade 60 steel deformed bars where indicated on the plans. Where reinforcing bars are installed in the cells of concrete masonry units, they shall be secured with wire ties at intervals not exceeding 24" o/c to maintain the bars location in the cell. The tolerance for spacing of vertical bars is ±2 inches along the length of the wall. The tolerance for the distance between the face of the concrete masonry unit and the center of the bar shall not exceed ±1/2".
6. Mortar protrusion shall be less than 1/2". A protrusion of 1/2" or greater must be removed before grouting.
7. Horizontal Joint Reinforcement: ASTM A82 fabricated from cold drawn steel wire and hot dip zinc coated (ASTM A153). It shall consist of two or more parallel, longitudinal wires 0.1875" in diameter with weld-connected cross wires 0.1483" in diameter at a maximum of 16" o/c. Joint reinforcement is to be installed in every other course and in the first two courses at the bottom and top of wall openings and shall extend not less than 24" past the opening. Splices shall overlap not less than 12".
8. Execution: Masonry units shall be laid in a running band pattern unless noted otherwise. The walls shall be carried up level and plumb within the tolerances specified in ACI 530.1-88, Section 2.3.3.2. If nonstandard dimensions are encountered, block shall be cut with a masonry saw to fit, not by stretching or shrinking joints. Unfinished work shall be stepped back for joining with new work. Toothing will not be permitted except where specifically approved. Damaged units are to be cut out and new units set in place.
9. The filled cells and bond-beam blocks of reinforced masonry walls are to be filled with ASTM C476-91 Grout for Masonry with minimum compressive stress of 2,000 psi and slump range of 8" to 11". The outside face of the bottom block of each cell is to be broken out for inspection of reinforcing and clean out of mortar droppings in cell. The grout is to be placed in cells in maximum 5' lifts and immediately vibrated to minimize voids within the grout. Reconsolidate each lift by vibrating several inches into the preceding lift before plasticity is lost. Reconsolidate the top lift and fill with grout any spaces left by settlement or shrinkage.

Lumber General Notes:

1. All common framing lumber is to meet the following minimum specifications at 19% moisture content:

| MATERIAL | Fb (psi) | Ft (psi) | Fc (psi)(Perp.) | E (psi) |
|---|---|---|---|---|
| #2 Spruce Pine Fir | 875 | 450 | 425 | 1,400,000 |
| #2 Southern Yellow Pine | 750 | 450 | 565 | 1,600,000 |

2. All Structural Composite Lumber (LVL, LSL, PSL) is to meet the following minimum specifications:

| APPLICATION | Fb (psi) | Fc (psi)(Parallel) | Fc (psi)(Perp.) | E (psi) |
|---|---|---|---|---|
| Girders & Beams (LVL, PSL) | 2,600 | 2,510 | 750 | 1,900,000 |
| Columns (LSL) & Rimboards | 1,700 | 1,400 | 400 | 1,300,000 |

3. All Glue Laminated Timber (Glu-lam) is to meet the following minimum specifications:

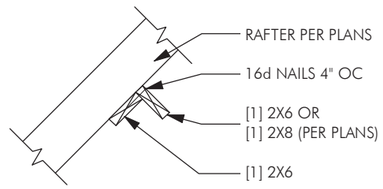
| APPLICATION | Fb (psi) | Fc (psi)(Parallel) | Fc (psi)(Perp.) | E (psi) |
|---|---|---|---|---|
| Girders & Beams | 2,400 | 1,700 | 740 | 1,700,000 |
| Columns | 1,600 | 1,550 | 560 | 1,500,000 |

4. Three-ply side-loaded (joists frame into the side at the outside plies) or four-ply LVL beams: fasten all plies together with two rows of 1/2"dia. bolts at 12" o/c. The bolts shall be located a minimum of 2 1/2" and a maximum of 3 1/2" from the top or bottom of the beam.
5. Built-up wood columns consisting of multiple studs shall have each lamination nailed with 16d nails at 9" o/c.

Steel General Notes:

1. All steel wide flange beams shall conform to ASTM A572 having a minimum yield stress of 50,000 psi.
2. All steel pipes shall be Schedule 40 or better with a minimum yield stress of 35,000 psi.
3. All steel tubes shall conform to ASTM A500, Grade B, having a minimum yield stress of 46,000 psi.
4. All other shapes not listed above shall conform to ASTM A36 having a minimum yield stress of 36,000 psi.
5. Unless otherwise noted, all welds shall be fillet type with a minimum 3/16" leg. Welding electrodes shall be E70xx type having a minimum yield strength of 70,000 psi. Welding work and materials shall conform to the American Welding Society Welding Code (AWS D.1).

   Bolted connections shall include high strength bolts conforming to ASTM A325. Foundation anchor bolts or tie rods shall conform to ASTM A36 having a minimum yield strength of 36,000 psi.




2X6 OR 2X8 HOG @ RAFTERS


2X4 ROOF BRACE

NORTH CAROLINA PROFESSIONAL SEAL 048823 ENGINEER WESLEY A. JONES 5/12/17

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

STRUCTURAL MEMBERS ONLY

SUMMIT ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

LGI HOMES

THE MADISON

REV 05/11/17

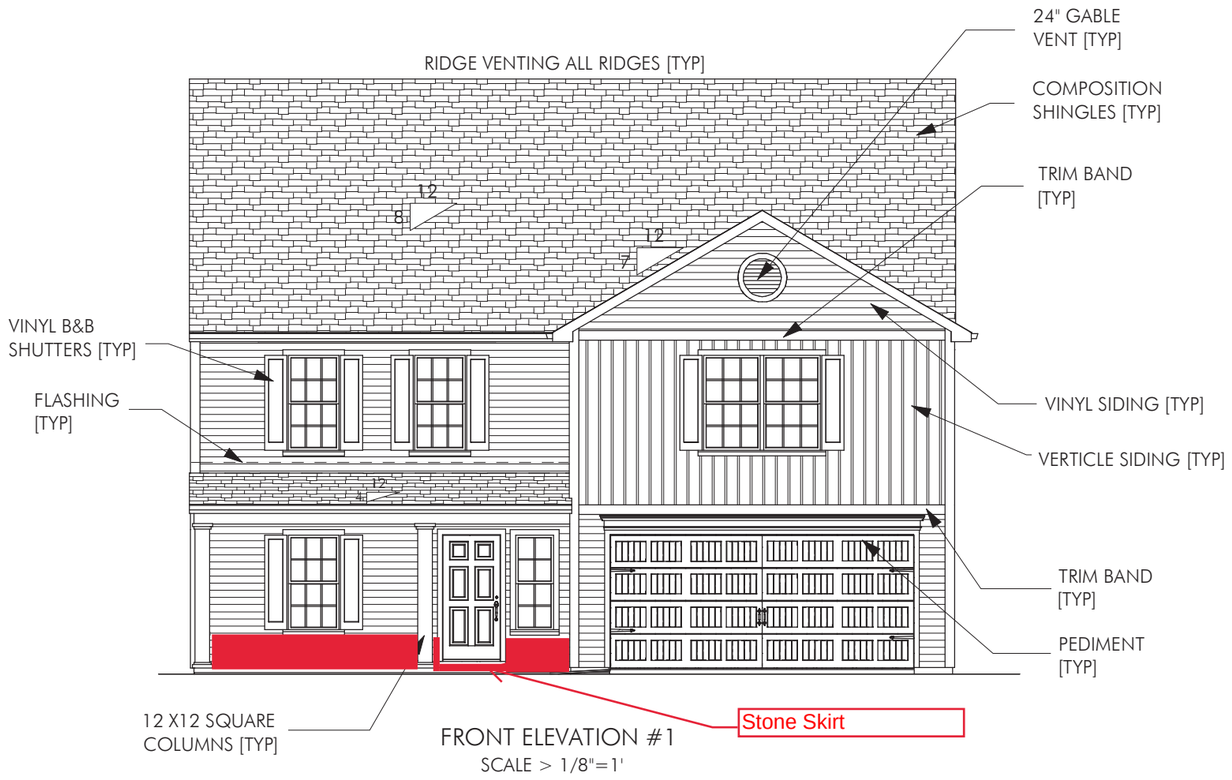
Residential Standard Notes Page 2

PAGE #3

19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com

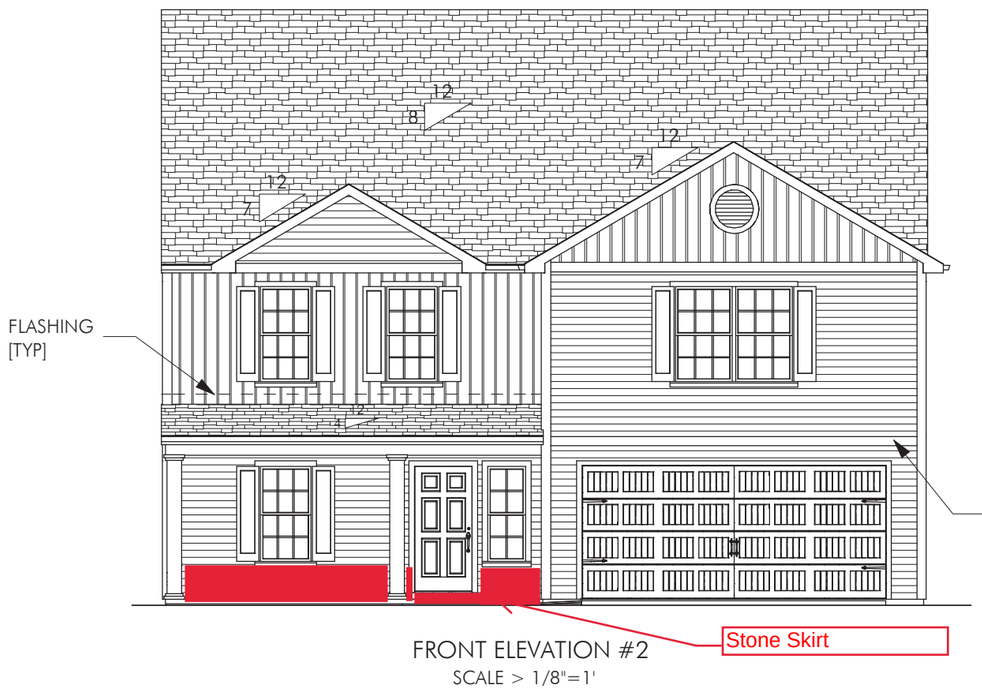



FRONT ELEVATION #1

SCALE > 1/8"=1'

R703.11.3 WHERE THE PROPERTY LINE IS LESS THAN 10' FROM THE BUILDING FACE AND THE SOFFIT MATERIAL IS VINYL OR ALUMINUM, THE SOFFIT MATERIAL SHALL BE SECURELY ATTACHED TO THE FRAMING MEMBERS AND SHALL USE UNDERLAYMENT MATERIAL OR EITHER FIRE RETARDANT TREATED WOOD; 23/32" WOOD SHEATHING, OR 5/8" GYPSUM BOARD. VENTING REQUIREMENTS SHALL APPLY TO BOTH SOFFIT AND UNDERLAYMENT AND SHALL BE PER SECTION R806

ROOF NOTE:
DOUBLE UNDERLAYMENT OF 15# FELT ON 4/12 AND LOWER ROOF SLOPE




FRONT ELEVATION #2

SCALE > 1/8"=1'

THE MADISON

REV 05/11/17

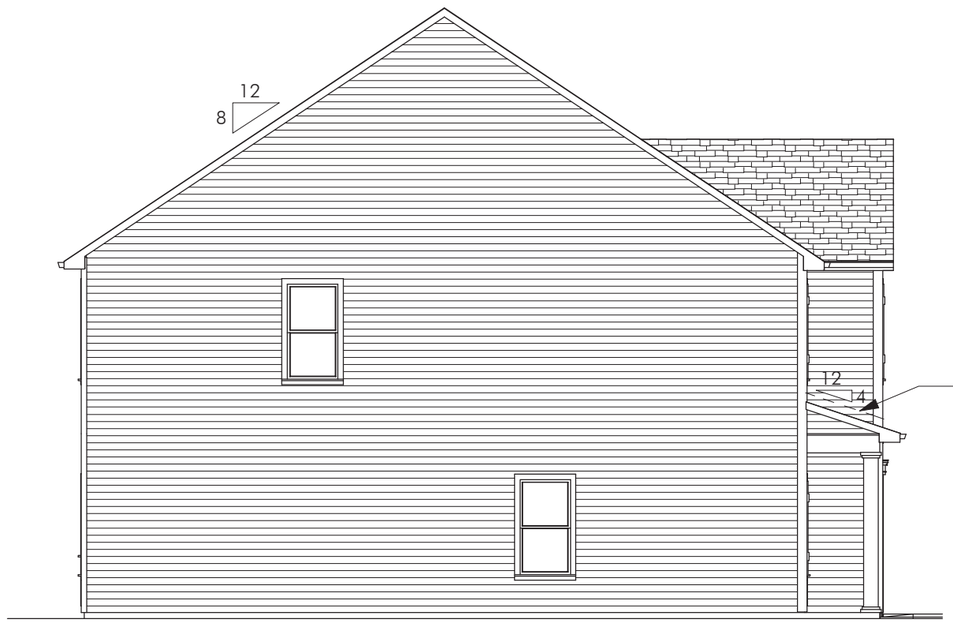
FRONT ELEVATIONS

PAGE #4

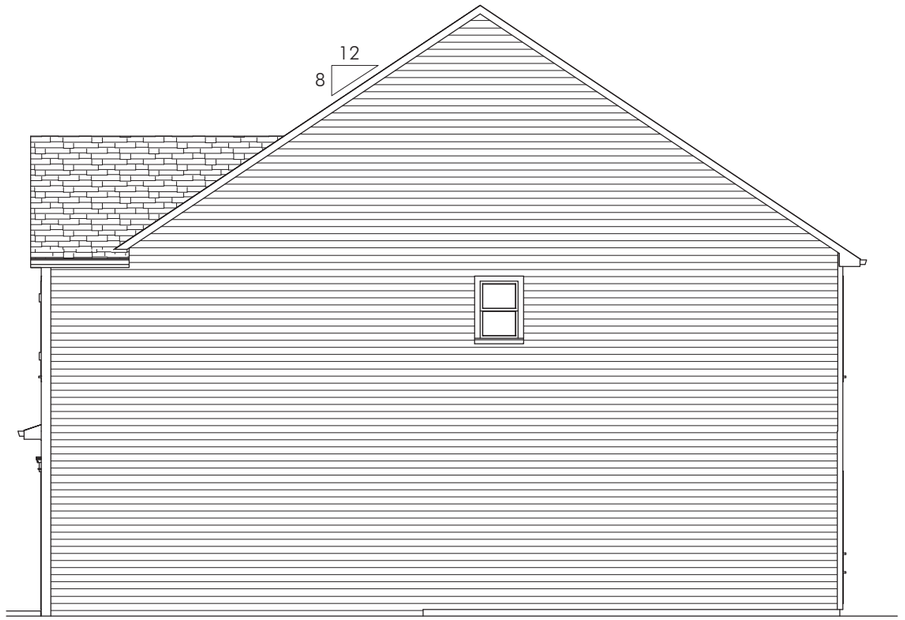
19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com



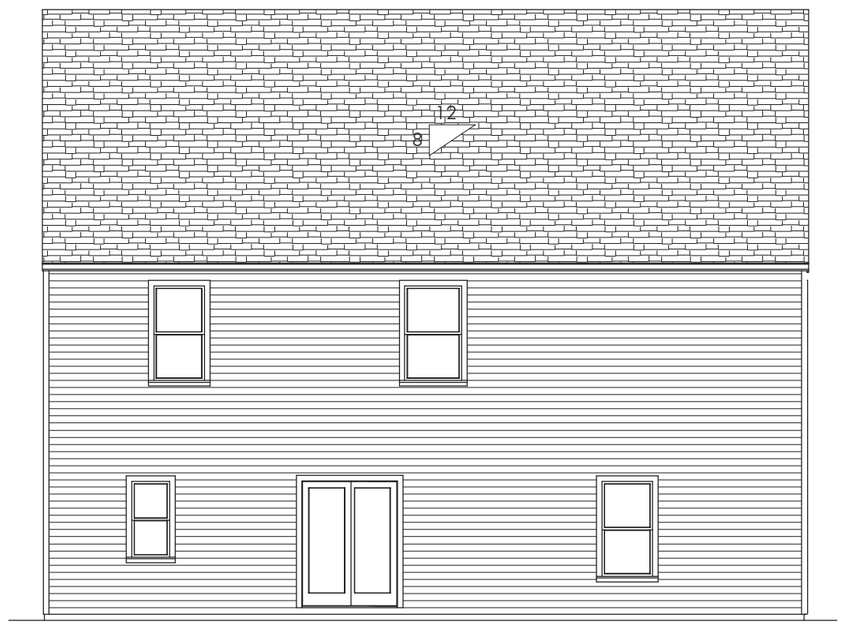

LEFT ELEVATION
SCALE > 1/8"=1'




RIGHT ELEVATION
SCALE > 1/8"=1'

ROOF NOTE:
DOUBLE UNDERLAYMENT
OF 15# FELT ON 4/12 AND
LOWER ROOF SLOPE

R703.11.3 WHERE THE PROPERTY LINE IS LESS THAN 10' FROM THE BUILDING FACE AND THE SOFFIT MATERIAL IS VINYL OR ALUMINUM, THE SOFFIT MATERIAL SHALL BE SECURELY ATTACHED TO THE FRAMING MEMBERS AND SHALL USE UNDERLAYMENT MATERIAL OR EITHER FIRE RETARDANT TREATED WOOD; 23/32" WOOD SHEATHING, OR 5/8" GYPSUM BOARD. VENTING REQUIREMENTS SHALL APPLY TO BOTH SOFFIT AND UNDERLAYMENT AND SHALL BE PER SECTION R806




REAR ELEVATION
SCALE > 1/8"=1'

LGI HOMES

THE MADISON

REV 05/11/17

SIDE/ REAR ELEVATIONS

PAGE #5

19 PAGES

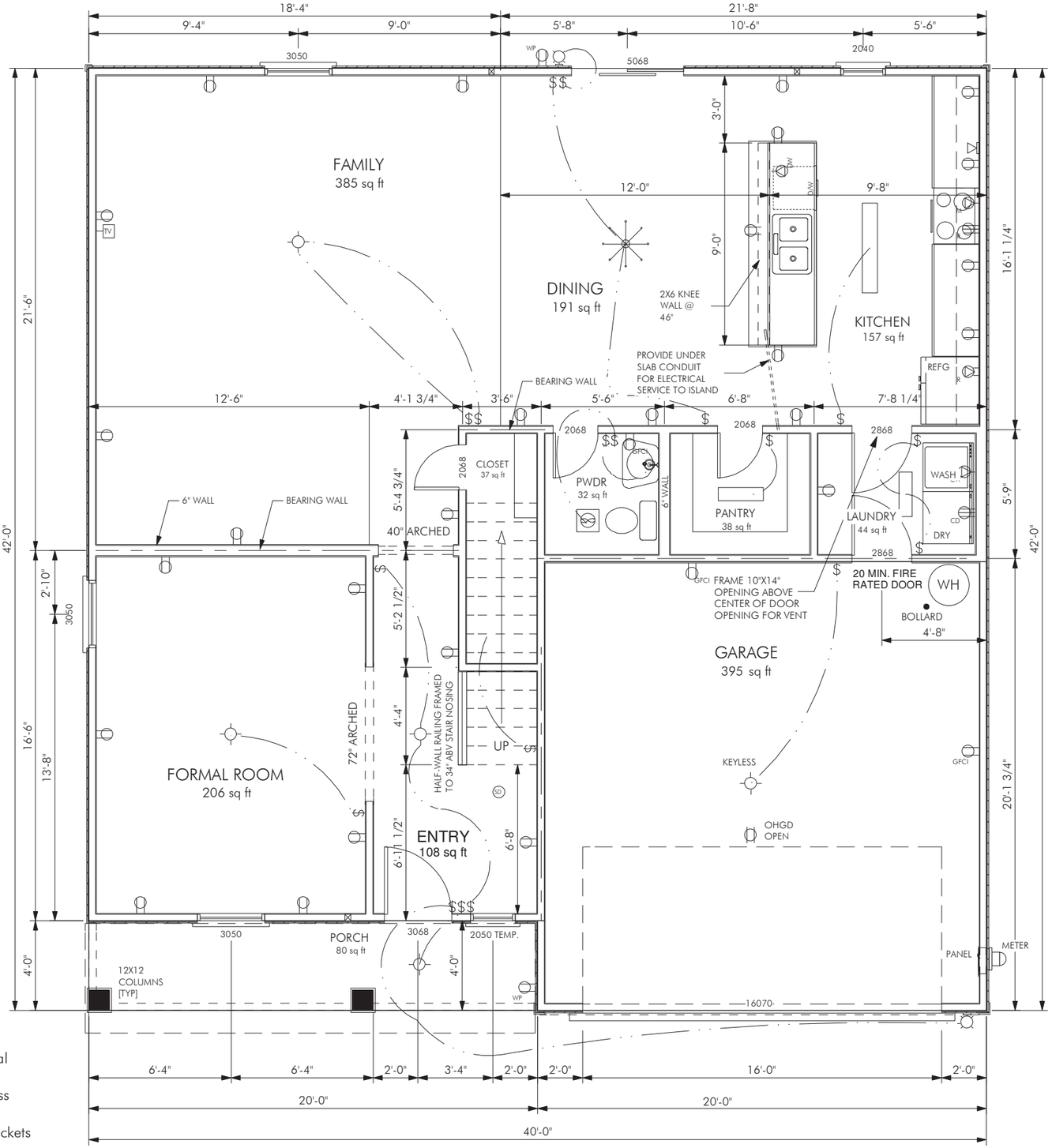
Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com

| ELECTRICAL SYMBOL LEGEND | |
|---|---|
| SWITCH | $ |
| 3-WAY SWITCH | 3 $ |
| DIMMER SWITCH | DM $ |
| WATER PROOF SWITCH | WP $ |
| 110V OUTLET | |
| 220V OUTLET | |
| GFI OUTLET | GFCI |
| WATER PROOF OUTLET | WP |
| TELEPHONE JACK | |
| CAT5 NETWORK | CAT5 |
| JUNCTION BOX | J |
| DOORBELL | |
| INTERCOM | |
| THERMOSTAT | T |
| SMOKE DETECTOR | SD |
| CHIMES | |

| ELECTRICAL SYMBOL LEGEND 2 | |
|---|---|
| STANDARD LIGHT FIXTURE | |
| WALL MOUNTED LIGHT FIXTURE | |
| RECESSED CAN LIGHT | |
| CEILING PULL CHAIN FIXTURE | |
| SPOT LIGHT | |
| DECORATIVE VANITY LIGHT FIXTURE | |
| VANITY LIGHT BAR | |
| FLOURESCENT FIXTURE | |
| RECESSED FLOURESCENT | R |
| TRACK LIGHT FIXTURE | |
| VENT WITH LIGHT | |
| VENT NO LIGHT | |

| ELECTRICAL SYMBOL LEGEND 3 |
|---|
| DECORATIVE PENDANT FIXTURE |
| CHANDELIER |
| FAN |
| DECORATIVE LIGHT FIXTURE |




1ST FLOOR PLAN
SCALE > 3/16"=1'

## COLUMN NOTE:

Columns to be: AFCO or column of equal bearing capacity.
Top connection: [2] #8- 1/4" x 3" stainless steel screws per side inserted into beam.
Bottom connection: [3] UBS-#18043 brackets fastened with [2] 1/4" x 1 1/4" screws into column and [2] 1/4" x 3 3/4" concrete screws through fastener into concrete.

LGI HOMES

# THE MADISON

REV 05/11/17

1ST FLOOR PLAN

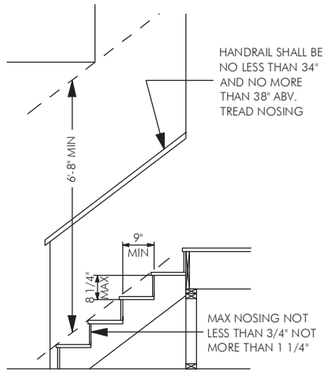
PAGE #6

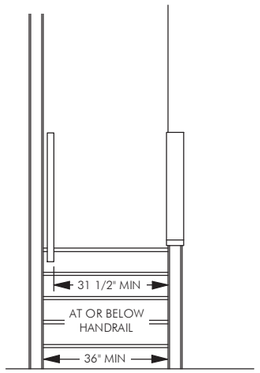
19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

# STAIR WAYS

SCALE: 1/4" =1'
COMPLY WITH SECTION R-311, R-312



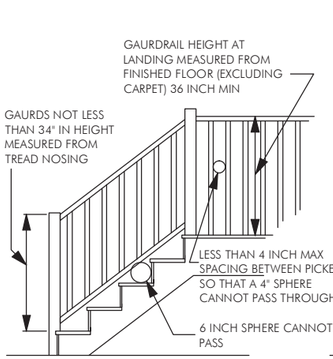



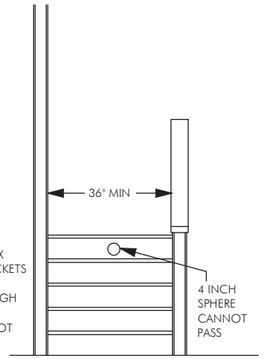

27" AT OR BELOW WHEN HANDRAILS ARE PROVIDED ON BOTH SIDES

NOTES:
1. THE GREATEST TREAD DEPTH OR THE GREATEST HEIGHT SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 OF AN INCH.
2. THE TOP AND BOTTOM RISER OF INTERIOR STAIRS SHALL NOT EXCEED THE SMALLEST RISER WITHIN THAT STAIR RUN BY MORE THAN 3/4 OF AN INCH.
3. THE HEIGHT OF THE TOP AND BOTTOM RISER OF THE INTERIOR STAIRS SHALL BE MEASURED FROM PERMANENT FINISHED SURFACE TO PERMANENT FINISHED SURFACE (CARPET EXCLUDED).
4. WHERE THE BOTTOM RISER OF AN EXTERIOR STAIR ADJOINS AN EXTERIOR WALK, PORCH, DRIVEWAY, PATIO, OR FINISH GRADE, THE HEIGHT OF THE RISER MAY BE LESS THAN THE HEIGHT OF THE ADJACENT RISER.

# HANDRAILS AND GUARDRAILS

SCALE: 1/4" =1'
COMPLY WITH SECTION R-311, R-312



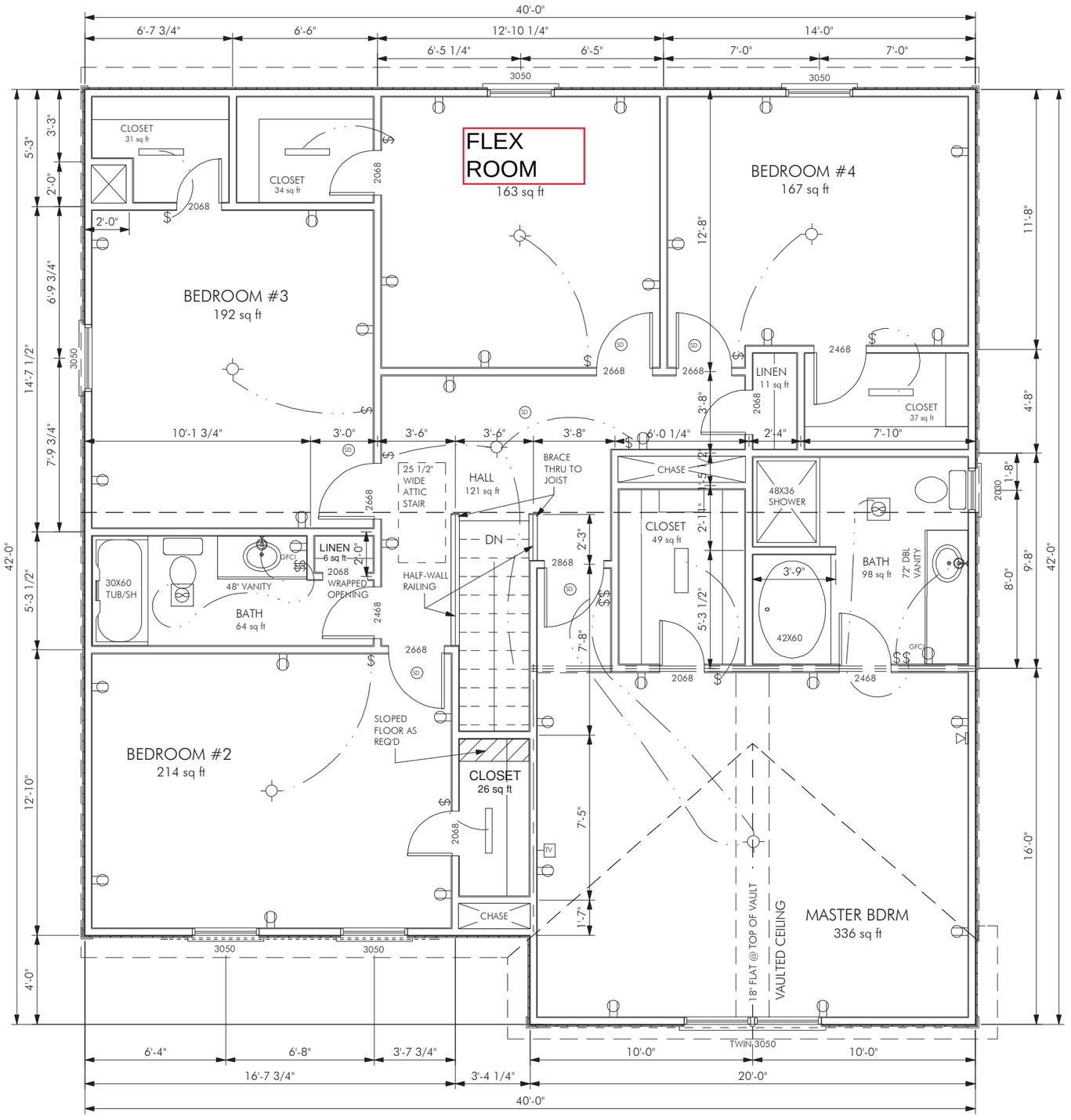




STAIRS WITH FOUR (4) OR MORE RISERS REQUIRE A HANDRAIL

GUARDRAILS/HANDRAILS: REQUIRED ON ALL PORCHES, BALCONIES, OR RAISED FLOOR SURFACES LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW. GUARDRAILS SHALL NOT BE LESS THAN 36 INCHES IN HEIGHT. OPEN SIDES OF STAIRS WITH A TOTAL RISE OF MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAILS NOT LESS THAN 34 INCHES NOR MORE THAN 38 INCHES IN HEIGHT MEASURED FROM NOSING OF THE TREADS.

HANDRAIL GRIP SIZE: THE HANDGRIP PORTION OF THE HANDRAILS SHALL NOT BE MORE THAN 2 INCHES IN CROSS-SECTIONAL DEMENSION, OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. THE HANDGRIP PORTION SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS.

PICKET SPACING: ON OPEN SIDE OF STAIR TREADS ONLY, PICKETS CAN BE SPACED SUCH THAT A 4 3/8" SPHERE CANNOT PASS THROUGH AS PER R312.3 OF THE 2012 CODE.




2ND FLOOR PLAN
SCALE > 3/16"=1'

LGI HOMES

THE MADISON

REV 05/11/17

2ND FLOOR PLAN

PAGE #7

19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com

FOUNDATION SCHEDULE

| MARK | DESCRIPTION | REBAR REQ'D |
|---|---|---|
| 1 | 16"W X 20"D MONO | (2)#3 CONT. |
| 2 | 24"SQ X 10"D | NONE |
| 3 | 16"W X 10"D LUG | (2)#3 CONT. |
| 4 | 30"SQ X 10"D | NONE |
| 5 | 36"SQ X 12"D | (5)#4 BD |
| 6 | 16"SQ X 10"D | NONE |
| 7 | PLAN SPECIFIC | NONE |
| A | 4" THK. POURED CONC. SLAB W/ FIBER MESH ON 6 MIL POLY ON COMPACTED SOIL. | |
| B | 4" THK. POURED CONC. SLAB ON COMPACTED SOIL. | |

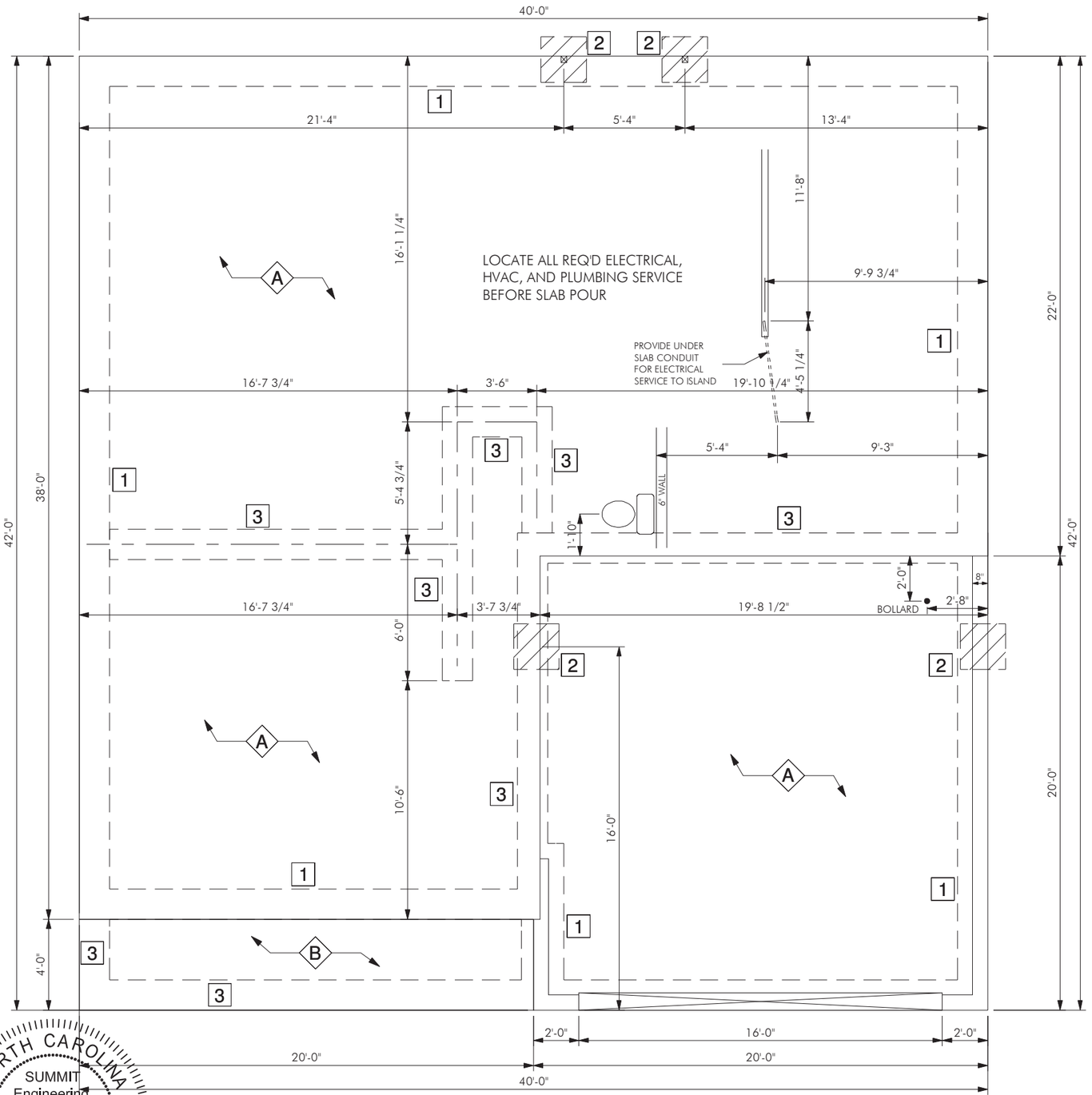
GENERAL NOTES

1. DIMENSIONS ARE FRAME TO FRAME AND DO NOT INCLUDE BRICK VENEER
2. W=WIDTH D=DEPTH SQ=SQUARE BD=BOTH DIRECTIONS CONT=CONTINUOUS MONO=MONOLITHIC SLAB FOOTING
3. REFER TO SPECIFICATIONS SHEET FOR SLAB ON GRADE CONC. CONSTRUCTION NOTES.
4. ALL SLABS TO BE ON SOIL COMPACTED TO 95% OF MIN STD PROCTOR DENSITY

WALL ANCHOR OPTION SCHEDULE FOR MONO SLAB

| ANCHORS | MIN CONC EMBEDMENT | SPACING | INTERIOR WALL | EXTERIOR WALL |
|---|---|---|---|---|
| 1/2"ø A307 BOLTS W/STD. 90° BEND | 7" | 6'-0" | YES | YES |
| 1/2" HILTI KWIK BOLT, SST WEDGE-ALL, OR EQUIVALENT WEDGE ANCHOR | 4" | 6'-0" | YES | YES |
| 1/2" THREADED ROD W/ SST SET EPOXY | 4" | 6'-0" | YES | YES |

NOTE: 1) INSTALL ALL ANCHORS 12" (MAX) FROM ALL BOTTOM WALL PLATE ENDS/JOINTS
2) MINIMUM CONCRETE EMBEDMENT AND SPACINGS SHOWN ARE TYPICAL. IF DIFFERENT EMBEDMENTS OR SPACINGS ARE EXPLICITLY CALLED FOR ON THE PLAN ITSELF OR DETAILS, DEFER TO THOSE.




MONOLITHIC SLAB FOUNDATION PLAN
SCALE > 3/16"=1'


SUMMIT
ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353


NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/11/17
STRUCTURAL MEMBERS ONLY

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

LGI HOMES

THE MADISON

REV 05/11/17

MONOLITHIC FOUNDATION PLAN

PAGE #8

19 PAGES

# SEE PAGE 19 - 2012 NCRC FIGURE R602.10.5.3 - MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

STRUCTURAL MEMBERS ONLY

WAJ 5/12/17

SUMMIT ENGINEERING LABORATORY TESTING

120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

WALL ANCHOR OPTION SCHEDULE FOR STEM-WALL

| ANCHORS | MIN CONC EMBEDMENT | SPACING | INTERIOR WALL | EXTERIOR WALL |
|---|---|---|---|---|
| 1/2"ø A307 BOLTS W/STD. 90° BEND | 15" | 6'-0" | YES | YES |
| 1/2" THREADED ROD W/ SST SET EPOXY | 15" | 6'-0" | YES | YES |

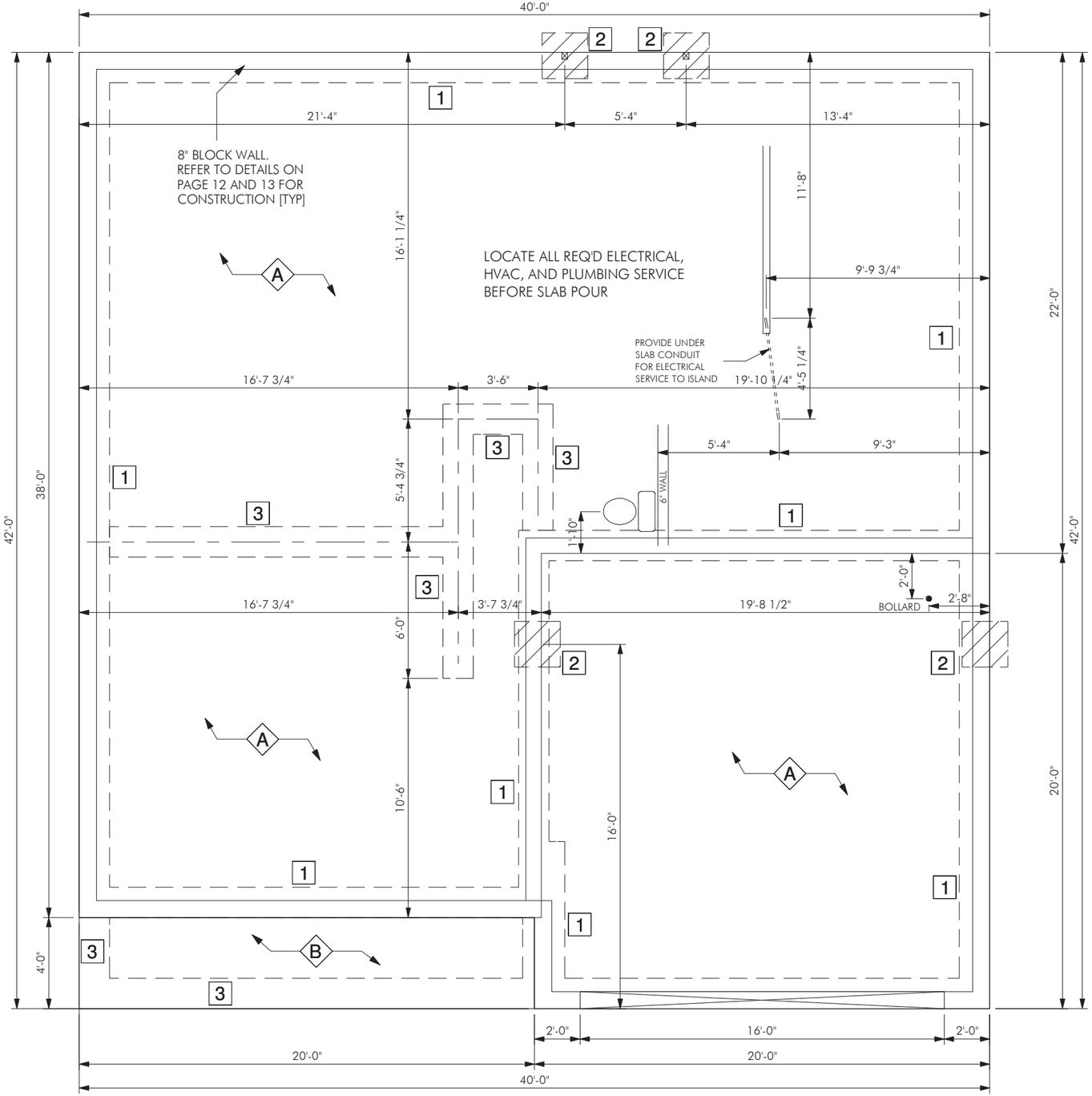
NOTE: 1) INSTALL ALL ANCHORS 12" (MAX) FROM ALL BOTTOM WALL PLATE ENDS/JOINTS
2) MINIMUM CONCRETE EMBEDMENT AND SPACINGS SHOWN ARE TYPICAL. IF DIFFERENT EMBEDMENTS OR SPACINGS ARE EXPLICITLY CALLED FOR ON THE PLAN ITSELF OR DETAILS, DEFER TO THOSE.

FOUNDATION SCHEDULE

| MARK | DESCRIPTION | REBAR REQ'D |
|---|---|---|
| 1 | 20"W X 8"D CONT. | (2)#3 CONT. |
| 2 | 24"SQ X 10"D | NONE |
| 3 | 16"W X 10"D LUG | (2)#3 CONT. |
| 4 | 30"SQ X 10"D | NONE |
| 5 | 36"SQ X 12"D | (5)#4 BD |
| 6 | 16"SQ X 10"D | NONE |
| 7 | PLAN SPECIFIC | NONE |
| A | 4" THK. POURED CONC. SLAB W/ FIBER MESH ON 6 MIL POLY ON COMPACTED SOIL. | |
| B | 4" THK. POURED CONC. SLAB ON COMPACTED SOIL. | |

GENERAL NOTES

1. DIMENSIONS ARE FRAME TO FRAME AND DO NOT INCLUDE BRICK VENEER
2. W=WIDTH D=DEPTH SQ=SQUARE BD=BOTH DIRECTIONS CONT=CONTINUOUS MONO=MONOLITHIC SLAB FOOTING
3. REFER TO SPECIFICATIONS SHEET FOR SLAB ON GRADE CONC. CONSTRUCTION NOTES.
4. ALL SLABS TO BE ON SOIL COMPACTED TO 95% OF MIN STD PROCTOR DENSITY




STEM WALL FOUNDATION PLAN
SCALE > 3/16"=1'

LGI HOMES

THE MADISON

REV 05/11/17

STEM WALL FOUNDATION PLAN

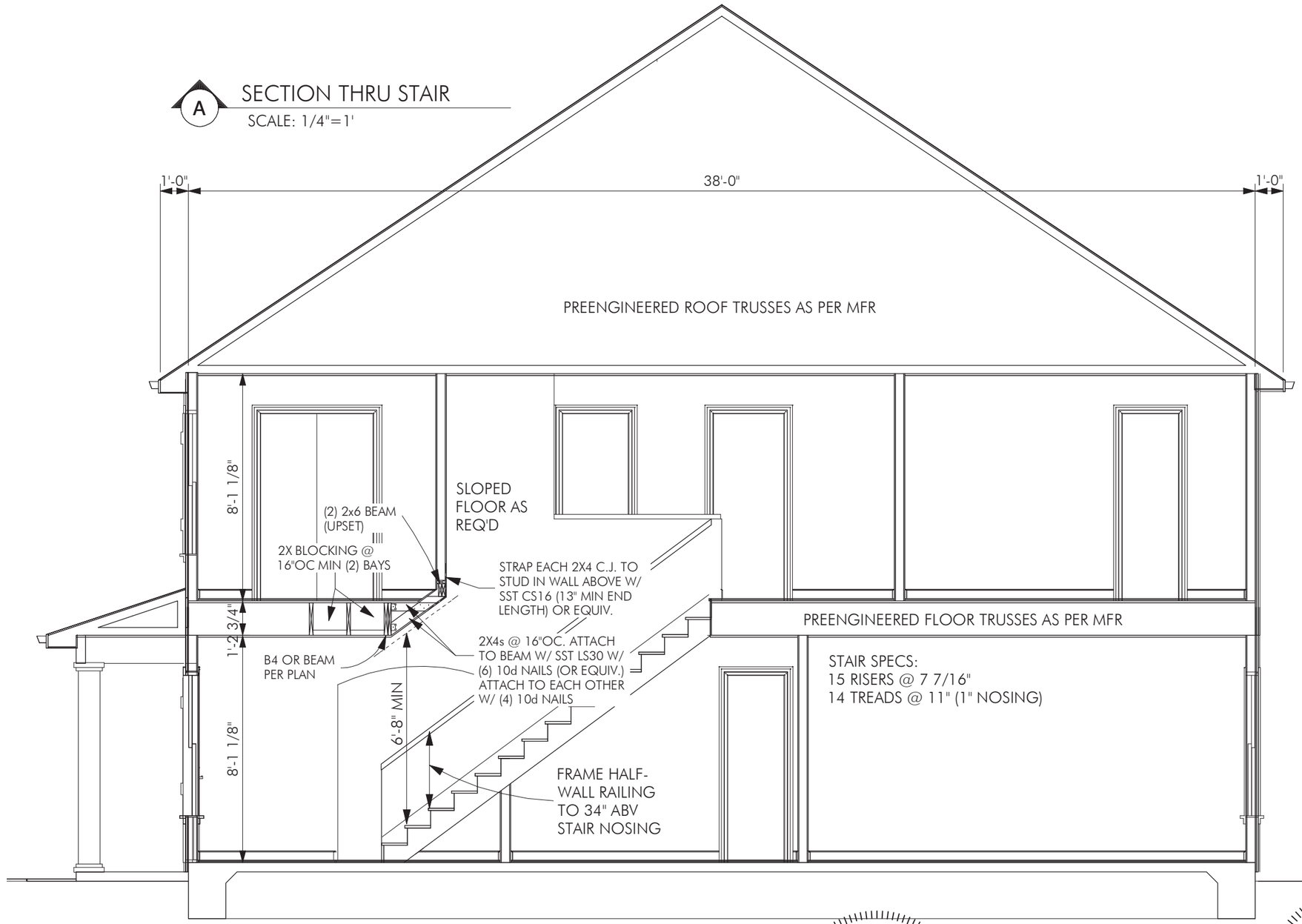
PAGE #9

19 PAGES

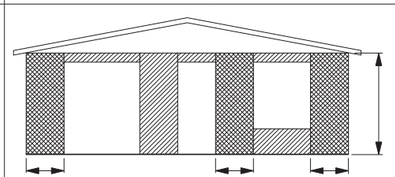
Call (423) 946-7306
www.customizedhomeplans.com

## A SECTION THRU STAIR

SCALE: 1/4"=1'




PER TABLE R602.10.1
BRACING METHODS

| METHOD | MATERIAL | MINIMUM THICKNESS | FIGURE | CONNECTION CRITERIA |
|---|---|---|---|---|
| CS-WSP | WOOD STRUCTURAL PANEL | 3/8" |  | 6d common nail or 8d(2 1/2" long x 0.113" diameter) nail<br><br>Spacing = 6" edges and 12" field |

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

STRUCTURAL MEMBERS ONLY

SUMMIT
ENGINEERING LABORATORY TESTING

NORTH CAROLINA CERTIFICATE OF LICENSURE
SUMMIT Engineering, Laboratory & Testing, P.C.
C-4361


120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

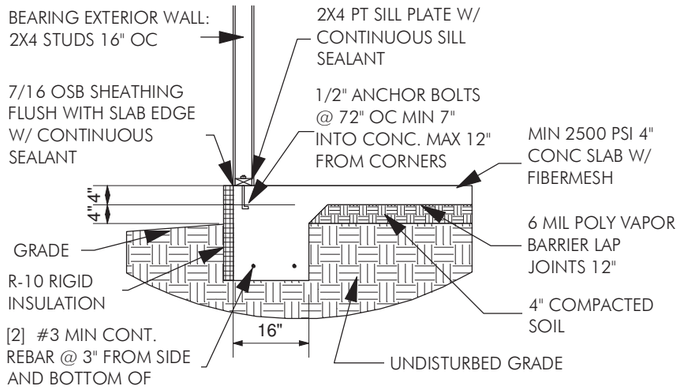

LGI HOMES

THE MADISON

REV 05/11/17

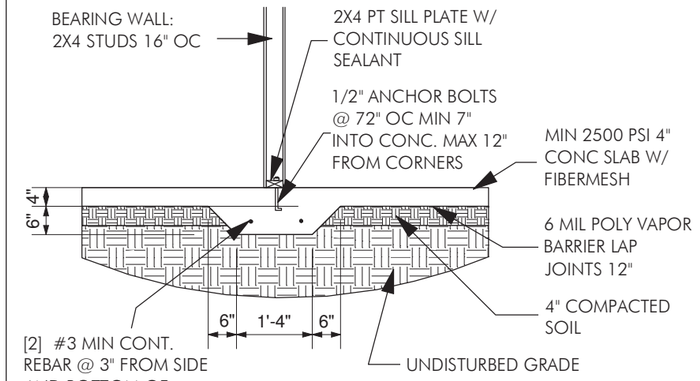
SECTION THROUGH STAIR

PAGE #10 | 19 PAGES



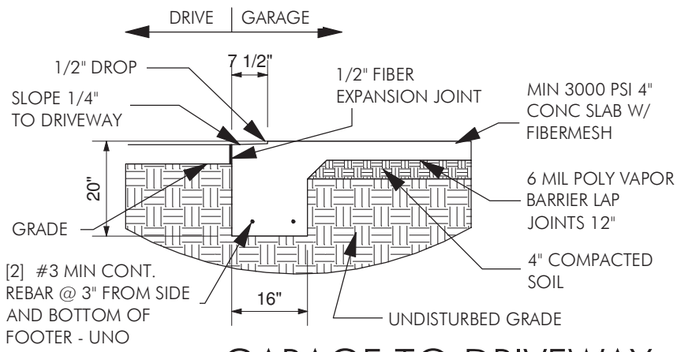

# TYP FOUNDATION [SIDING]

SCALE > 3/8"=1'



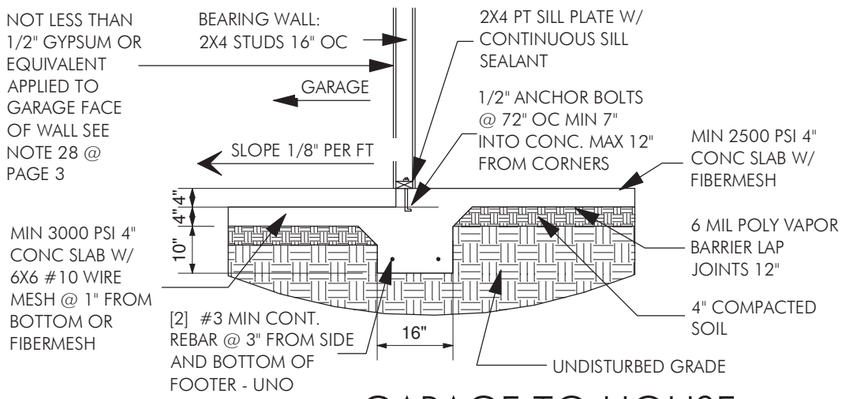

# GRADE BEAM SECTION

SCALE > 3/8"=1'



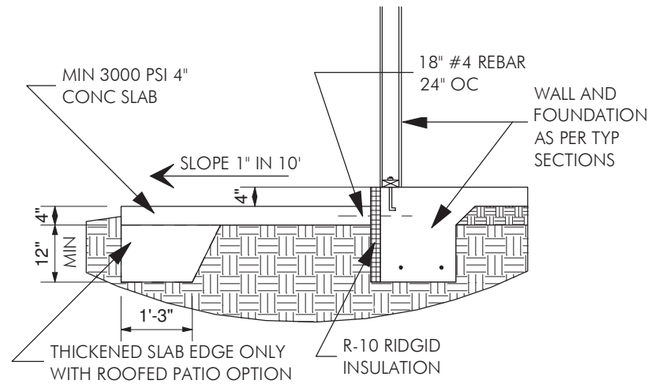

# GARAGE TO DRIVEWAY

SCALE > 3/8"=1'



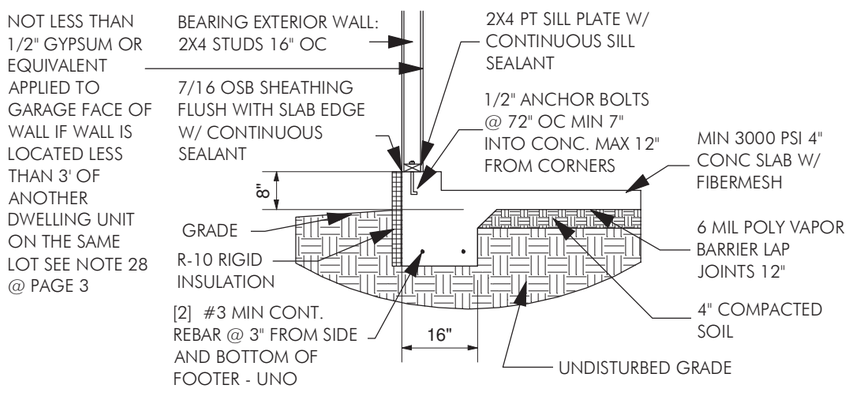

# GARAGE TO HOUSE

SCALE > 3/8"=1'




# HOUSE TO PATIO

SCALE > 3/8"=1'




# GARAGE FOUNDATION [SIDING]

SCALE > 3/8"=1'

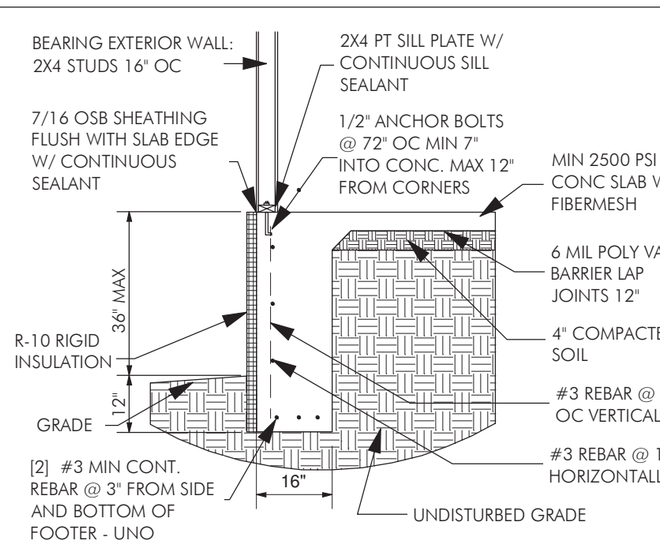
NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

STRUCTURAL MEMBERS ONLY

SUMMIT
ENGINEERING LABORATORY TESTING

120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353




# TURNDOWN SLAB SECTION

SCALE > 3/8"=1'

LGI HOMES

THE MADISON

REV 05/11/17

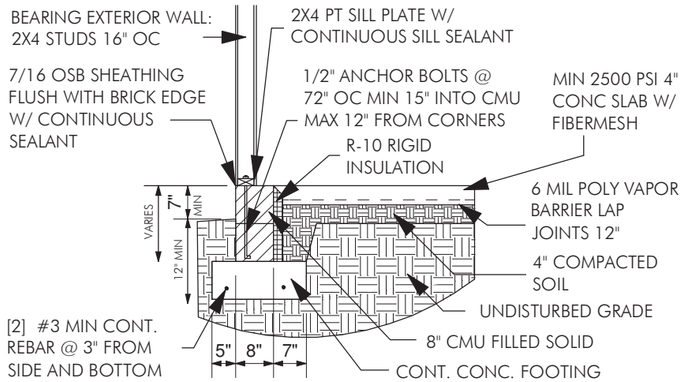
STANDARD MONOLITHIC FOUNDATION DETAILS

PAGE #11

19 PAGES

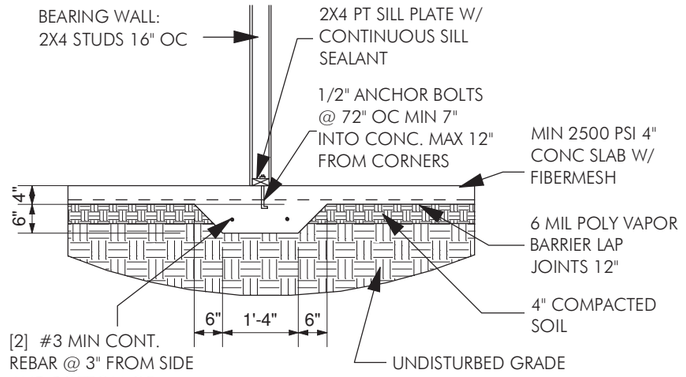
Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com



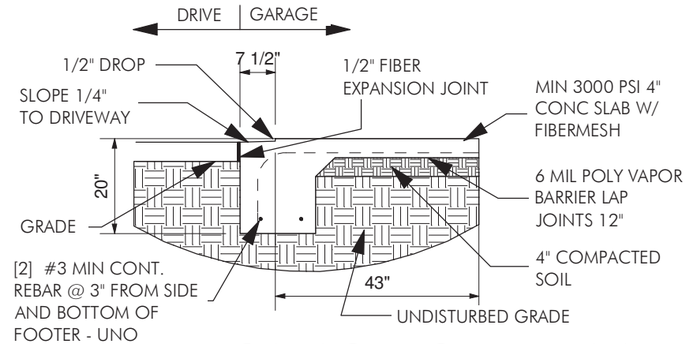

# TYP FOUNDATION [SIDING]

SCALE > 3/8"=1'



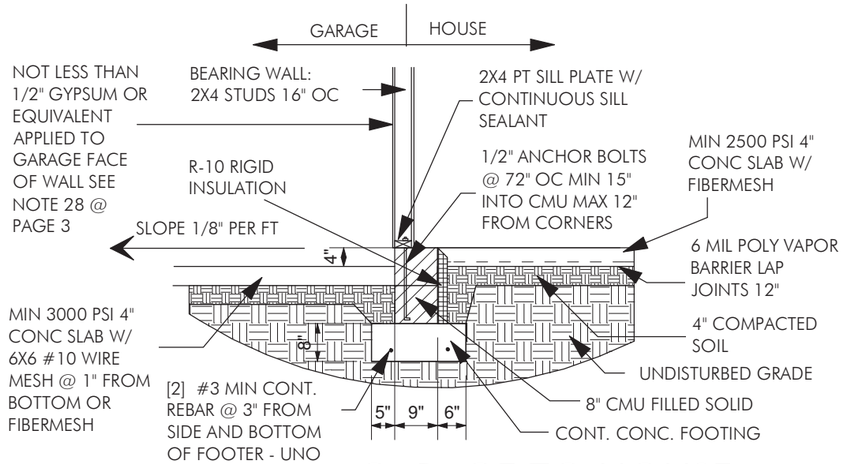

# GRADE BEAM SECTION

SCALE > 3/8"=1'



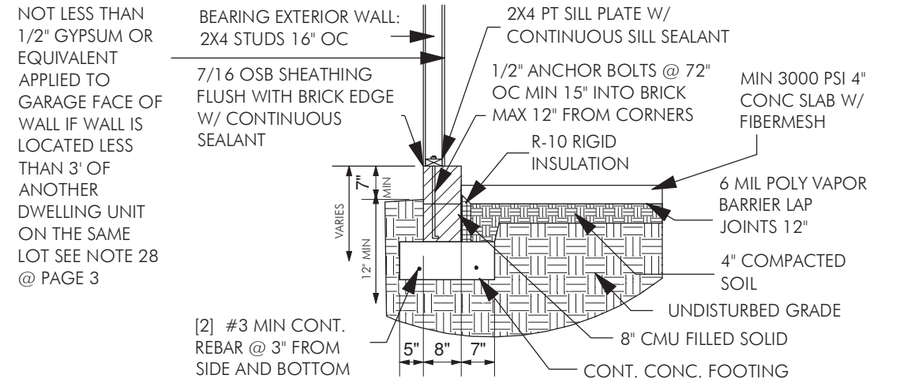

# GARAGE TO DRIVEWAY

SCALE > 3/8"=1'



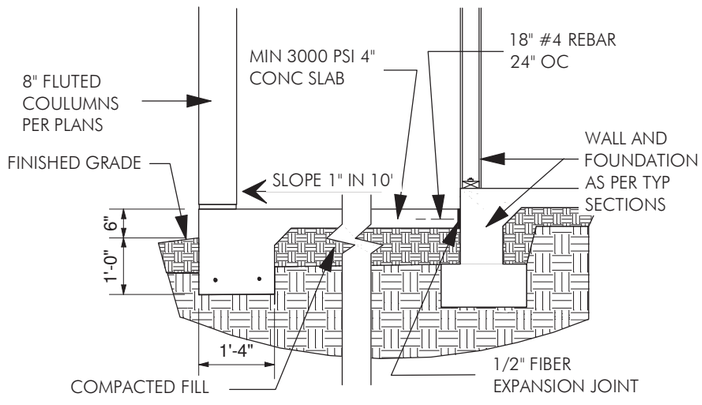

# GARAGE TO HOUSE

SCALE > 3/8"=1'



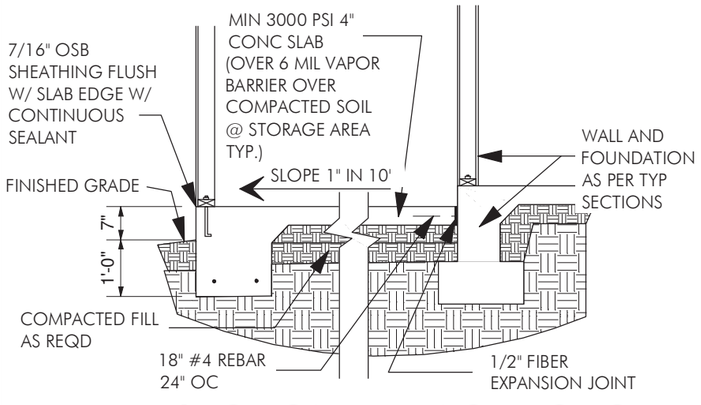

# GARAGE FOUND. [SIDING]

SCALE > 3/8"=1'




# SECTION @ FRONT PORCH

SCALE > 3/8"=1'




# SECTION @ BACK PORCH

SCALE > 3/8"=1'

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

STRUCTURAL MEMBERS ONLY

SUMMIT
ENGINEERING LABORATORY TESTING

120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

LGI HOMES

THE MADISON

REV 05/11/17

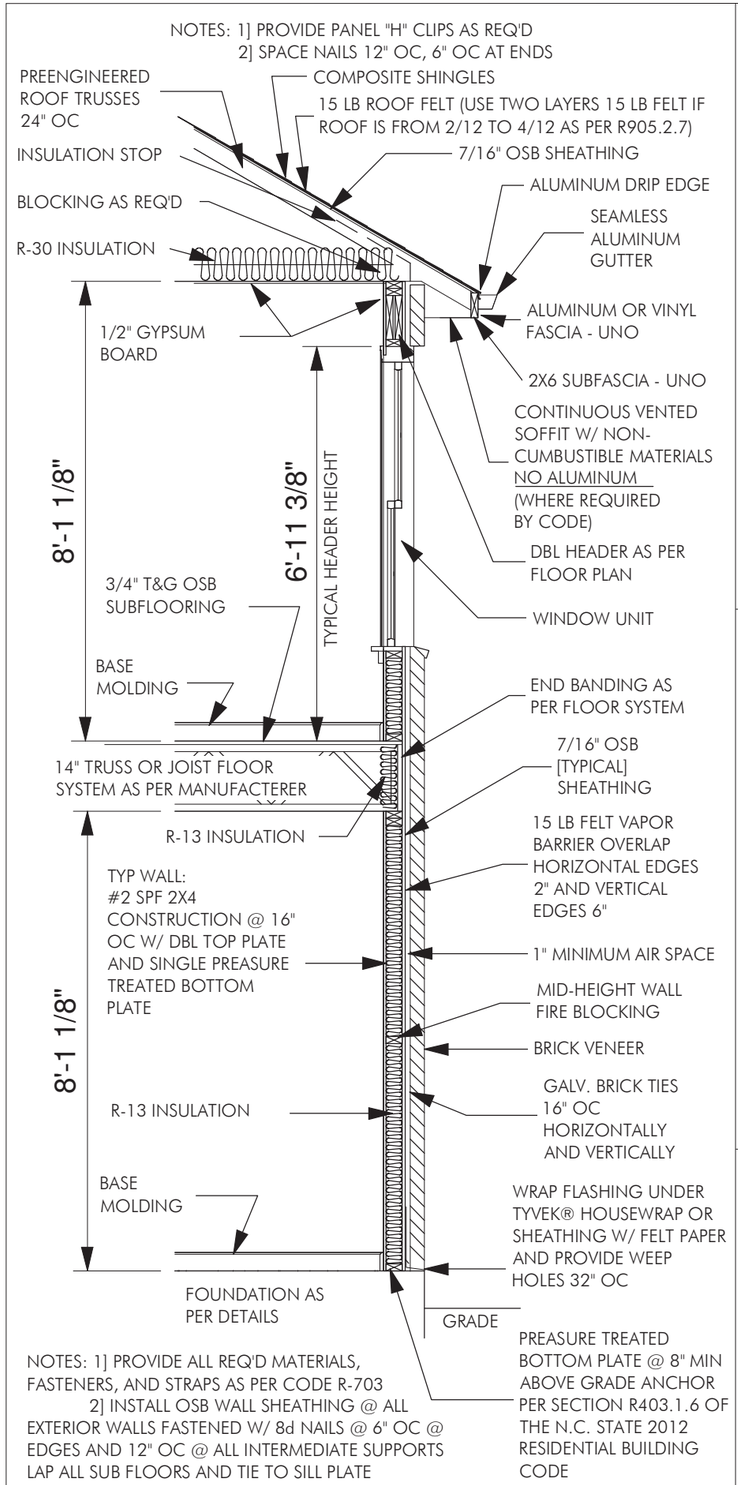
STANDARD STEM WALL FOUNDATION DETAILS

PAGE #12

19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

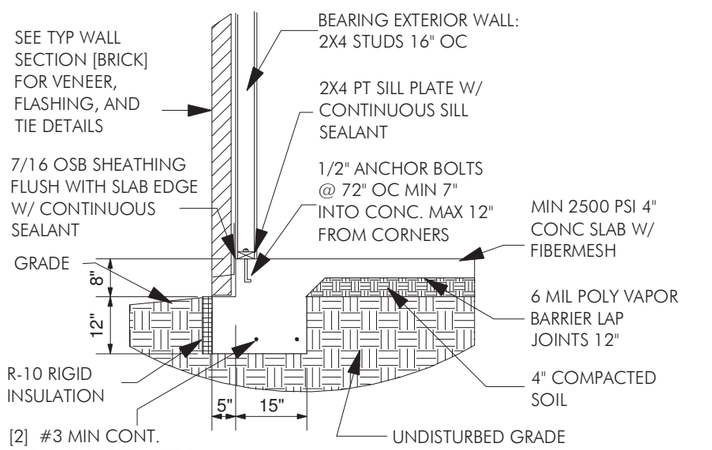
CustomizedHomePlans.com




NOTES: 1] PROVIDE ALL REQ'D MATERIALS, FASTENERS, AND STRAPS AS PER CODE R-703
2] INSTALL OSB WALL SHEATHING @ ALL EXTERIOR WALLS FASTENED W/ 8d NAILS @ 6" OC @ EDGES AND 12" OC @ ALL INTERMEDIATE SUPPORTS LAP ALL SUB FLOORS AND TIE TO SILL PLATE

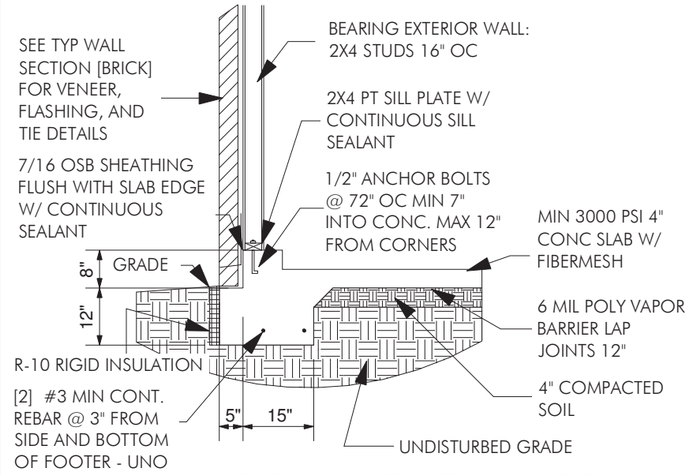
# TYPICAL WALL SECTION [BRICK]

SCALE > 3/8"-1'



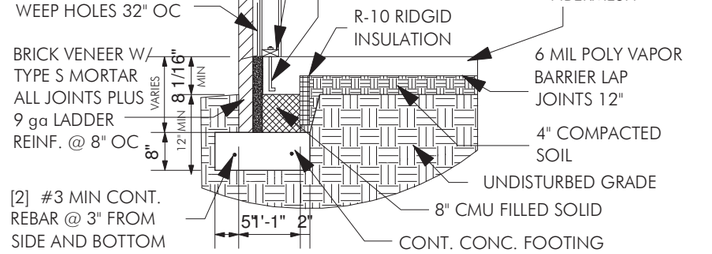

# TYP FOUNDATION [BRICK]

SCALE > 3/8"=1'



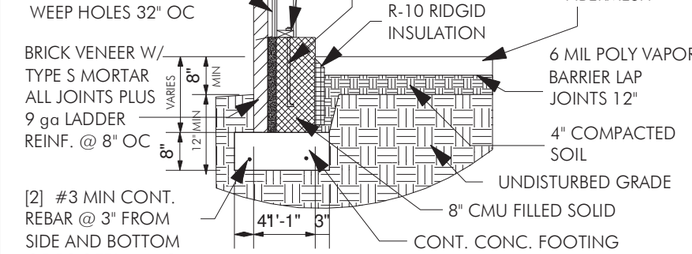

# GARAGE FOUNDATION [BRICK]

SCALE > 3/8"=1'



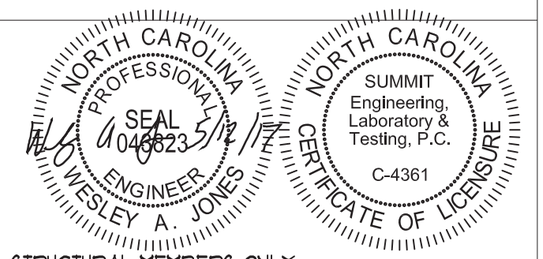

# TYP FOUNDATION [BRICK]

SCALE > 3/8"=1'




# GARAGE FOUND. [BRICK]

SCALE > 3/8"=1'




STRUCTURAL MEMBERS ONLY

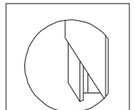
SUMMIT
ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

LGI HOMES

THE MADISON

REV 05/11/17

STANDARD BRICK WALL/ FOUNDATION DETAILS

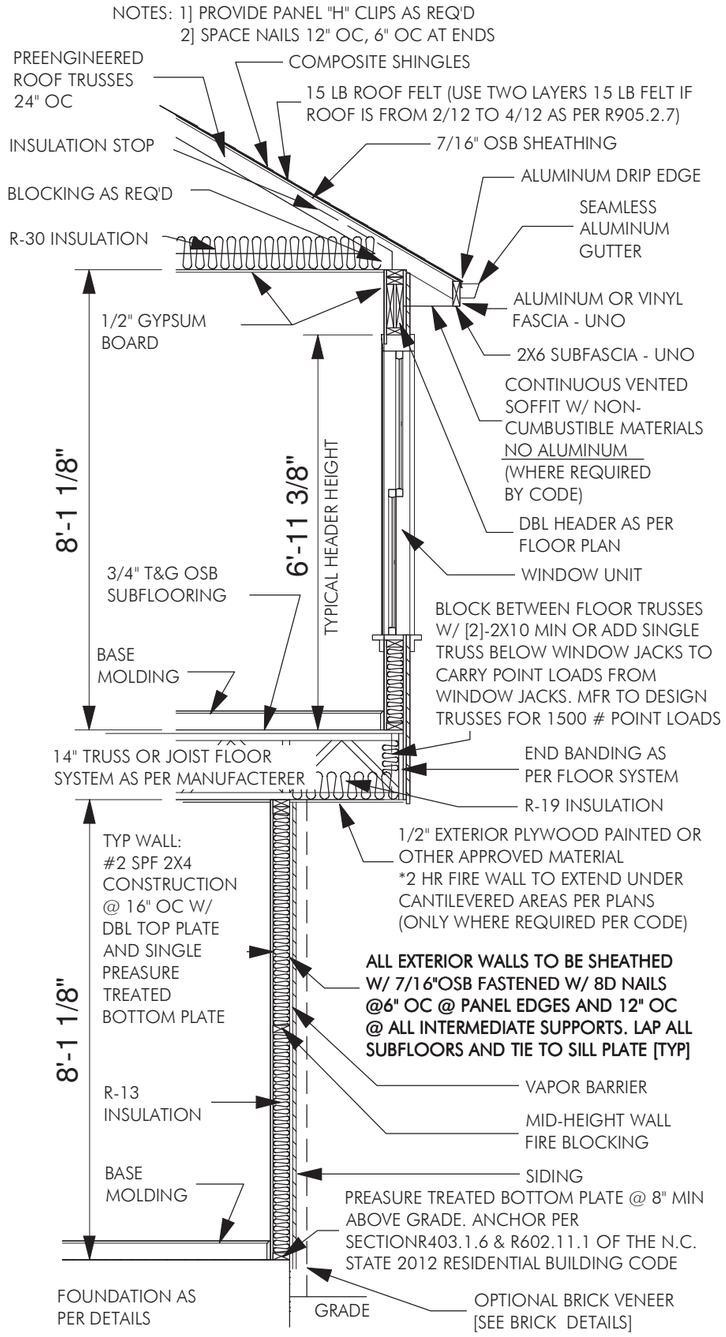


Call (423) 946-7306
www.customizedhomeplans.com

PAGE #13

19 PAGES

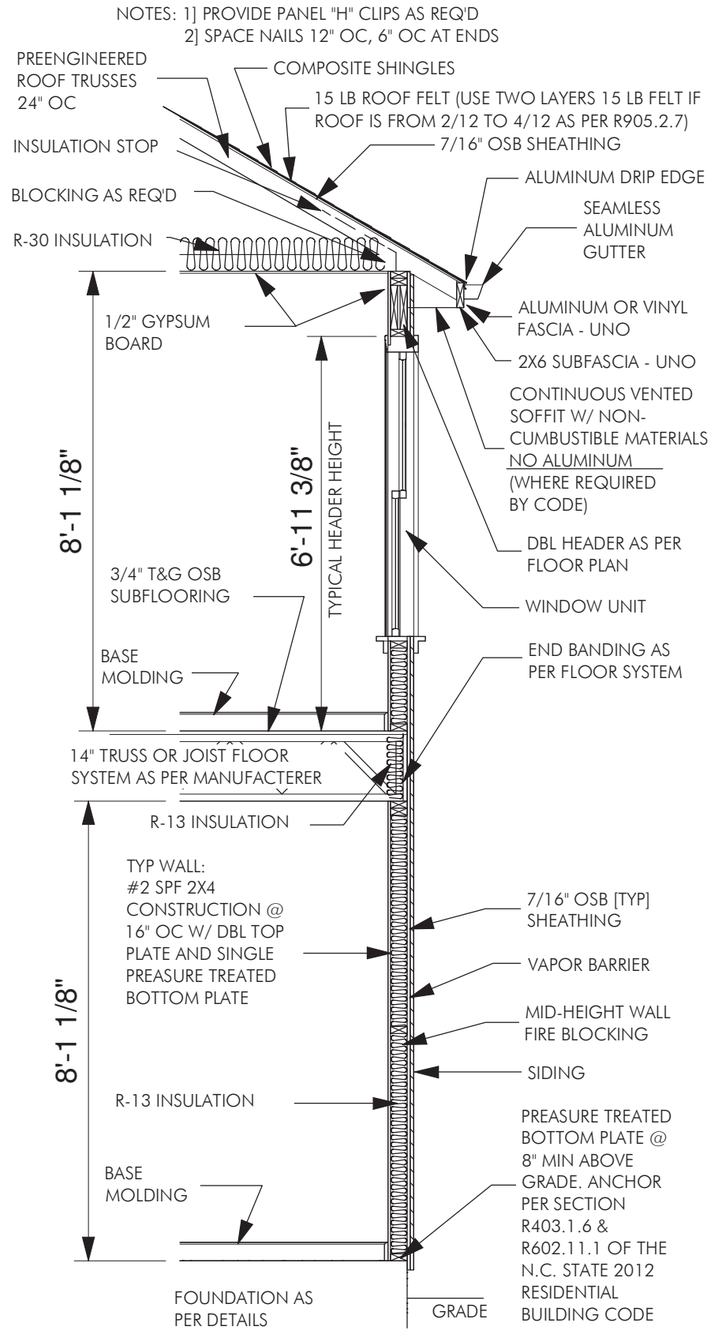
CustomizedHomePlans.com




NOTES: 1] PROVIDE ALL REQ'D MATERIALS, FASTENERS, AND STRAPS AS PER CODE
2] INSTALL OSB WALL SHEATHING @ ALL EXTERIOR WALLS FASTENED W/ 8d NAILS @ 6" OC @ EDGES AND 12" OC @ ALL INTERMEDIATE SUPPORTS
LAP ALL SUB FLOORS AND TIE TO SILL PLATE

# TYPICAL WALL SECTION [CANTILEVER]

SCALE > 3/8"-1'




NOTES: 1] PROVIDE ALL REQ'D MATERIALS, FASTENERS, AND STRAPS AS PER CODE
2] INSTALL OSB WALL SHEATHING @ ALL EXTERIOR WALLS FASTENED W/ 8d NAILS @ 6" OC @ EDGES AND 12" OC @ ALL INTERMEDIATE SUPPORTS
LAP ALL SUB FLOORS AND TIE TO SILL PLATE

# TYPICAL WALL SECTION [SIDING]

SCALE > 3/8"-1'

## TYP SOFFIT NOTE:

R703.11.3 WHERE THE PROPERTY LINE IS LESS THAN 10' FROM THE BUILDING FACE AND THE SOFFIT MATERIAL IS VINYL OR ALUMINUM, THE SOFFIT MATERIAL SHALL BE SECURELY ATTACHED TO THE FRAMING MEMBERS AND SHALL USE UNDERLAYMENT MATERIAL OR EITHER FIRE RETARDANT TREATED WOOD; 23/32" WOOD SHEATHING, OR 5/8" GYPSUM BOARD. VENTING REQUIREMENTS SHALL APPLY TO BOTH SOFFIT AND UNDERLAYMENT AND SHAL BE PER SECTION R806.

PROVIDE FIRE RATED CONSTRUCTION ON THE UNDERSIDE OF SOFFITS AS REFERENCED IN TABLE R302.1

## NOTE: WINDOW OPENINGS:

IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72" ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24" ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF THE WINDOWS SHALL NOT PERMIT THE OPENINGS THAT ALLOW PASSAGE OF A 4 INCH DIAMETER SPHERE WHERE SUCH OPENING ARE LOCATED WITHIN 24 INCHES OF THE FINISHED FLOOR.

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

STRUCTURAL MEMBERS ONLY

SUMMIT ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

LGI HOMES

THE MADISON

REV 05/11/17

TYPICAL WALL SECTIONS

PAGE #14 | 19 PAGES

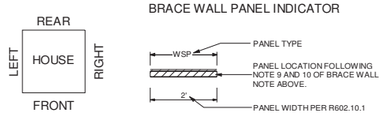
BRACED WALL NOTES:

1. WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2012 NORTH CAROLINA RESIDENTIAL CODE WITH AMENDED PERMANENT RULES (NCRC).
2. WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND MAXIMUM WIND SPEEDS OF 100 MPH.
3. BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH NCRC TABLE R602.10.1.
4. ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
5. REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
6. THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
7. FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
8. FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
9. A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH CORNER OF EACH ELEVATION VIEW OF THE HOUSE OR EACH END OF THE CIRCUMSCRIBED RECTANGLES.
10. THE EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
11. ADEQUATE CONTINUOUS LOAD PATHS FOR TRANSFER OF BRACING LOADS AND UPLIFT LOADS SHALL COMPLY WITH NCRC SECTION R602.10.5.
12. MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.5.3
13. BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.5.4 (SEE SHEET D13 FROM DETAIL PACKAGE).
14. BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.5.5 (SEE SHEET D12 FROM STANDARD DETAIL PACKAGE).
15. CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.5.6
16. BALLOON FRAMED WALLS SHALL DESIGNED IN ACCORDANCE WITH SECTION R602.10.5.8 WITH A MAXIMUM LENGTH OF 20 FEET.
17. ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
18. ABBREVIATIONS:
    GB = GYPSUM BOARD
    WSP = WOOD STRUCTURAL PANEL
    CS-XXX = CONT. SHEATHED
    ENG = ENGINEERED SOLUTION
    PF = PORTAL FRAMED

| REQUIRED BRACED WALL PANEL CONNECTIONS | | | | |
|---|---|---|---|---|
| METHOD | MATERIAL | MIN. THICKNESS | REQUIRED CONNECTION | |
| | | | @ PANEL EDGES | @ INTERMEDIATE SUPPORTS |
| CS-WSP | WOOD STRUCTURAL PANEL | 3/8" | 6d COMMON NAILS @ 6" O.C. | 6d COMMON NAILS @ 12" O.C. |
| GB | GYPSUM BOARD | 1/2" | 5d COOLER NAIL** @ 7" O.C. | 5d COOLER NAIL** @ 7" O.C. |
| WSP | WOOD STRUCTURAL PANEL | 3/8" | 6d COMMON NAILS @ 6" O.C. | 6d COMMON NAILS @ 12" O.C. |
| PF | WOOD STRUCTURAL PANEL | 7/16" | DETAIL 1/D10 OR 1/D12 | DETAIL 1/D10 OR 1/D12 |

**OR EQUIVALENT PER TABLE R702.3.5

BRACE WALL PANEL INDICATOR




HEADER SCHEDULE

| MARK | SIZE | STUDS E.E. |
|---|---|---|
| A | (2) 2X6 | (1) 2X4 |
| B | (2) 2X8 | (2) 2X4 |
| C | (2) 2X10 | (2) 2X4 |
| D | (2) 2X12 | (2) 2X4 |
| E | (2) 1.75" X 9.25" LVL | (3) 2X4 |
| F | (2) 1.75" X 11.875" LVL | (3) 2X4 |
| G | (2) 1.75" X 14" LVL | (3) 2X4 |
| H | PLAN SPECIFIC SIZE | SEE PLAN |

1. HEADER SIZES SHOWN ARE MINIMUM SIZES, LARGER SIZES MAY BE SUBSTITUTED FOR EASE OF CONSTRUCTION.
2. HEADERS ARE TO BE DROPPED UNLESS NOTED OTHERWISE.
3. REFER TO RESIDENTIAL STANDARD NOTES PAGE 1 [PLAN PAGE #2] FOR KING STUD REQIREMENTS.
4. JACK STUDS THAT ARE CALLED OUT DIRECTLY ON THE PLAN SUPERSEED THE JACK STUDS SHOWN IN THIS SCHEDULE.
5. HEADERS CONTAINING MORE THAN 3 PLIES OF LUMBER SHALL HAVE ALL PLIES ATTACHED TOGETHER WITH (2)-1/2"Ø THROUGH BOLTS @12"0/C. MINIMUM EDGE DISTANCE FOR BOLTS IS 2-1/2".

BEAM SCHEDULE

| MARK | SIZE |
|---|---|
| B1 | (1) 11-7/8" FLOOR TRUSS OR JOIST |
| B2 | (2) 11-7/8" FLOOR TRUSSES OR JOISTS |
| B3 | (1) 14" FLOOR TRUSS OR JOIST |
| B4 | (2) 14" FLOOR TRUSS OR JOISTS |
| B5 | (1) 1.75" X 9.25" LVL |
| B6 | (2) 1.75" X 9.25" LVL |
| B7 | (1) 1.75" X 11.875" LVL |
| B8 | (2) 1.75" X 11.875" LVL |
| B9 | (1) 1.75" X 14" LVL |
| B10 | (2) 1.75" X 14" LVL |
| B11 | (2) 2X10 P.T. |

1. BEAM SIZES SHOWN ARE MINIMUM SIZES, LARGER SIZES MAY BE SUBSTITUTED FOR EASE OF CONSTRUCTION.
2. BEAMS ARE TO BE FLUSH WITH TOP OF FLOOR UNLESS NOTED OTHERWISE.
3. BEAMS CONTAINING MORE THAN 3 PLIES OF LUMBER SHALL HAVE ALL PLIES ATTACHED TOGETHER WITH (2)-1/2"ø THROUGH BOLTS @ 12" O/C. MINIMUM EDGE DISTANCE FOR BOLTS IS 2-1/2".


SUMMIT
ENGINEERING LABORATORY TESTING

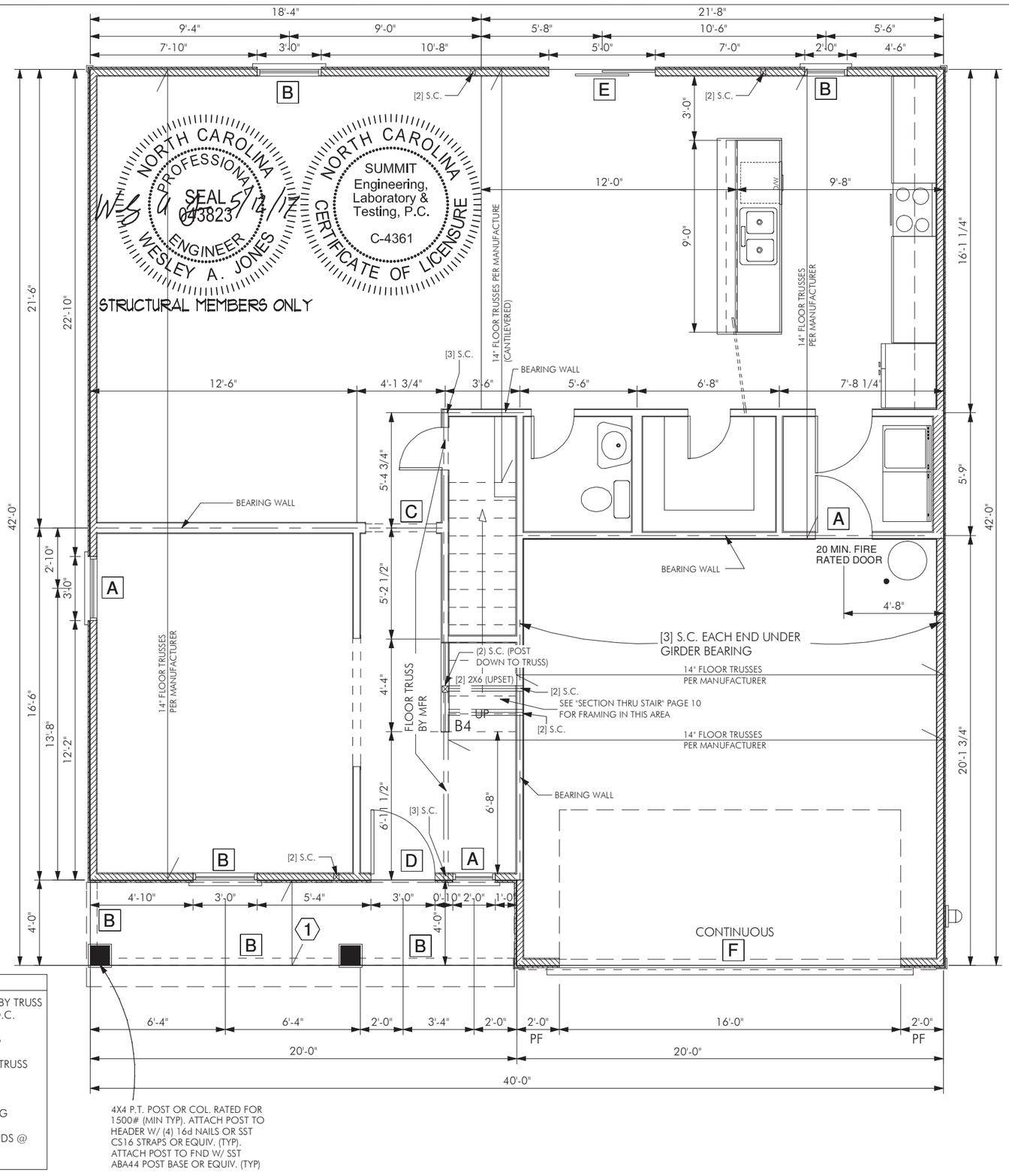
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353


| BRACED WALL SCHEDULE | | |
|---|---|---|
| SIDE | LENGTH REQUIRED (FT) | LENGTH PROVIDED (FT) |
| FRONT | 16.1 | 16.5 |
| REAR | 16.1 | 30.3 |
| RIGHT | 15.4 | 42.0 |
| LEFT | 15.4 | 35.3 |

NOTES: ALL BRACE WALL PANELS TO BE CS-WSP METHOD U.N.O.
ALL PANELS TO BE INSTALLED PER R602.10 AND TABLE R602.10.1 OF THE 2012 NCRC

FLOOR FRAMING SCHEDULE

| MARK | DESCRIPTION |
|---|---|
| 1 | SPAN OF ROOF TRUSSES BY TRUSS MANUFACTURER @ 24" O.C. |
| 2 | GIRDER TRUSS BY OTHERS |
| 3 | BLOCK SOLID AT GIRDER TRUSS BEARING |
| 4 | 2X6 STUDS THIS WALL CONTINUOUS TO CEILING |
| 5 | BALLOON FRAME 2X6 STUDS @ 16" O.C. THIS WALL |




LGI HOMES

THE MADISON

REV 05/11/17

1ST FLOOR ENGINEERING

PAGE #15

19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com

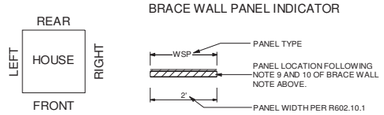
BRACED WALL NOTES:

1. WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2012 NORTH CAROLINA RESIDENTIAL CODE WITH AMENDED PERMANENT RULES (NCRC).
2. WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND MAXIMUM WIND SPEEDS OF 100 MPH.
3. BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH NCRC TABLE R602.10.1.
4. ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
5. REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
6. THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
7. FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
8. FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
9. A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH CORNER OF EACH ELEVATION VIEW OF THE HOUSE OR EACH END OF THE CIRCUMSCRIBED RECTANGLES.
10. THE EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
11. ADEQUATE CONTINUOUS LOAD PATHS FOR TRANSFER OF BRACING LOADS AND UPLIFT LOADS SHALL COMPLY WITH NCRC SECTION R602.10.5.
12. MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.5.3
13. BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.5.4 (SEE SHEET D13 FROM DETAIL PACKAGE).
14. BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.5.5 (SEE SHEET D12 FROM STANDARD DETAIL PACKAGE).
15. CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.5.6
16. BALLOON FRAMED WALLS SHALL DESIGNED IN ACCORDANCE WITH SECTION R602.10.5.8 WITH A MAXIMUM LENGTH OF 20 FEET.
17. ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
18. ABBREVIATIONS:
    GB = GYPSUM BOARD
    WSP = WOOD STRUCTURAL PANEL
    CS-XXX = CONT. SHEATHED
    ENG = ENGINEERED SOLUTION
    PF = PORTAL FRAMED

| REQUIRED BRACED WALL PANEL CONNECTIONS | | | | |
|---|---|---|---|---|
| | | | REQUIRED CONNECTION | |
| METHOD | MATERIAL | MIN. THICKNESS | @ PANEL EDGES | @ INTERMEDIATE SUPPORTS |
| CS-WSP | WOOD STRUCTURAL PANEL | 3/8" | 6d COMMON NAILS @ 6" O.C. | 6d COMMON NAILS @ 12" O.C. |
| GB | GYPSUM BOARD | 1/2" | 5d COOLER NAIL** @ 7" O.C. | 5d COOLER NAIL** @ 7" O.C. |
| WSP | WOOD STRUCTURAL PANEL | 3/8" | 6d COMMON NAILS @ 6" O.C. | 6d COMMON NAILS @ 12" O.C. |
| PF | WOOD STRUCTURAL PANEL | 7/16" | DETAIL 1/D10 OR 1/D12 | DETAIL 1/D10 OR 1/D12 |

**OR EQUIVALENT PER TABLE R702.3.5

BRACE WALL PANEL INDICATOR



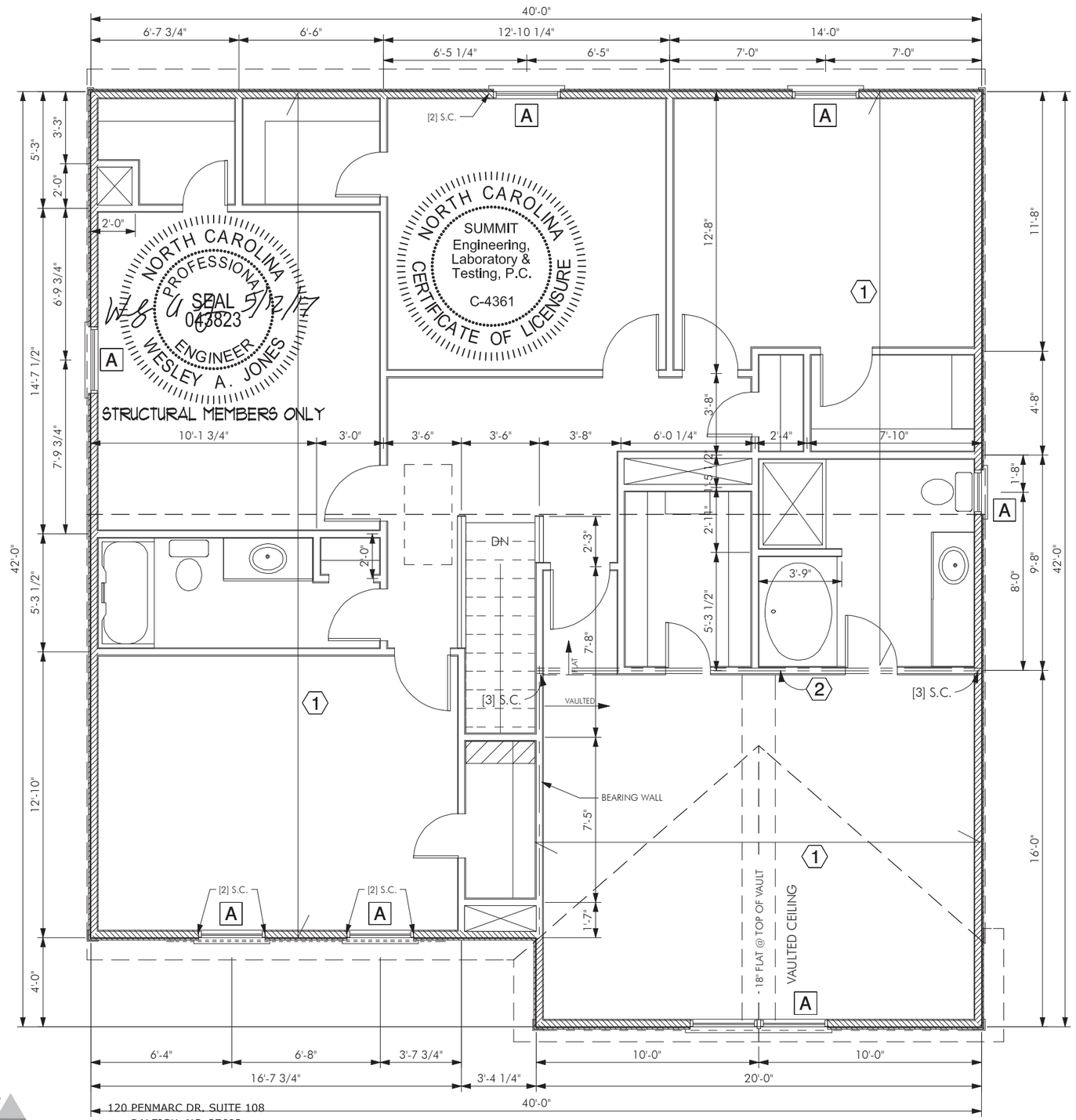

HEADER SCHEDULE

| MARK | SIZE | STUDS E.E. |
|---|---|---|
| A | (2) 2X6 | (1) 2X4 |
| B | (2) 2X8 | (2) 2X4 |
| C | (2) 2X10 | (2) 2X4 |
| D | (2) 2X12 | (2) 2X4 |
| E | (2) 1.75" X 9.25" LVL | (3) 2X4 |
| F | (2) 1.75" X 11.875" LVL | (3) 2X4 |
| G | (2) 1.75" X 14" LVL | (3) 2X4 |
| H | PLAN SPECIFIC SIZE | SEE PLAN |

1. HEADER SIZES SHOWN ARE MINIMUM SIZES, LARGER SIZES MAY BE SUBSTITUTED FOR EASE OF CONSTRUCTION.
2. HEADERS ARE TO BE DROPPED UNLESS NOTED OTHERWISE.
3. REFER TO RESIDENTIAL STANDARD NOTES PAGE 1 [PLAN PAGE #2] FOR KING STUD REQIREMENTS.
4. JACK STUDS THAT ARE CALLED OUT DIRECTLY ON THE PLAN SUPERSEED THE JACK STUDS SHOWN IN THIS SCHEDULE.
5. HEADERS CONTAINING MORE THAN 3 PLIES OF LUMBER SHALL HAVE ALL PLIES ATTACHED TOGETHER WITH (2)-1/2"ø THROUGH BOLTS @12"0/C. MINIMUM EDGE DISTANCE FOR BOLTS IS 2-1/2".

FLOOR FRAMING SCHEDULE

| MARK | DESCRIPTION |
|---|---|
| 1 | SPAN OF ROOF TRUSSES BY TRUSS MANUFACTURER @ 24" O.C. |
| 2 | GIRDER TRUSS BY OTHERS |
| 3 | BLOCK SOLID AT GIRDER TRUSS BEARING |
| 4 | 2X6 STUDS THIS WALL CONTINUOUS TO CEILING |
| 5 | BALLOON FRAME 2X6 STUDS @ 16" O.C. THIS WALL |




BRACED WALL SCHEDULE

| SIDE | LENGTH REQUIRED (FT) | LENGTH PROVIDED (FT) |
|---|---|---|
| FRONT | 8.8 | 28.5 |
| REAR | 8.8 | 34.3 |
| RIGHT | 8.3 | 40.0 |
| LEFT | 8.3 | 35.3 |

NOTES: ALL BRACE WALL PANELS TO BE CS-WSP METHOD U.N.O.
ALL PANELS TO BE INSTALLED PER R602.10 AND TABLE R602.10.1 OF THE 2012 NCRC

COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS: (IN PSF)

| MEAN ROOF HT | UP TO 30' | 30'1"-35' | 35'1"-40' | 40'1"-45' |
|---|---|---|---|---|
| ZONE 1 | 16.5, -18.0 | 17.3, -18.9 | 18.0, -19.6 | 18.5, -20.2 |
| ZONE 2 | 16.5, -21.0 | 17.3, -22.1 | 18.0, -22.9 | 18.5, -23.5 |
| ZONE 3 | 16.5, -21.0 | 17.3, -22.1 | 18.0, -22.9 | 18.5, -23.5 |
| ZONE 4 | 18.0, -19.5 | 18.9, -20.5 | 19.6, -21.3 | 20.2, -21.8 |
| ZONE 5 | 18.0, -24.1 | 18.9, -25.3 | 19.6, -26.3 | 20.2, -27.0 |

BASIC DESIGN WIND VELOCITY = 90MPH, EXPOSURE B


SUMMIT
ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353


LGI HOMES

THE MADISON

REV 05/11/17

2ND FLOOR ENGINEERING

PAGE #16

19 PAGES

TRUSS UPLIFT CONNECTOR SCHEDULE

| MODEL # | MAX UPLIFT (LBS) |
|---|---|
| H1 | 400 |
| H2A | 495 |
| H2.5T | 545 |
| H4 | 235 |
| H10A* | 1015 |
| H16* | 1265 |
| HTS20* | 1245 |

USE BELOW ONLY FOR 2-PLY OR GREATER GIRDER TRUSSES THAT EXCEED THE UPLIFT REQUIREMENTS ABOVE.

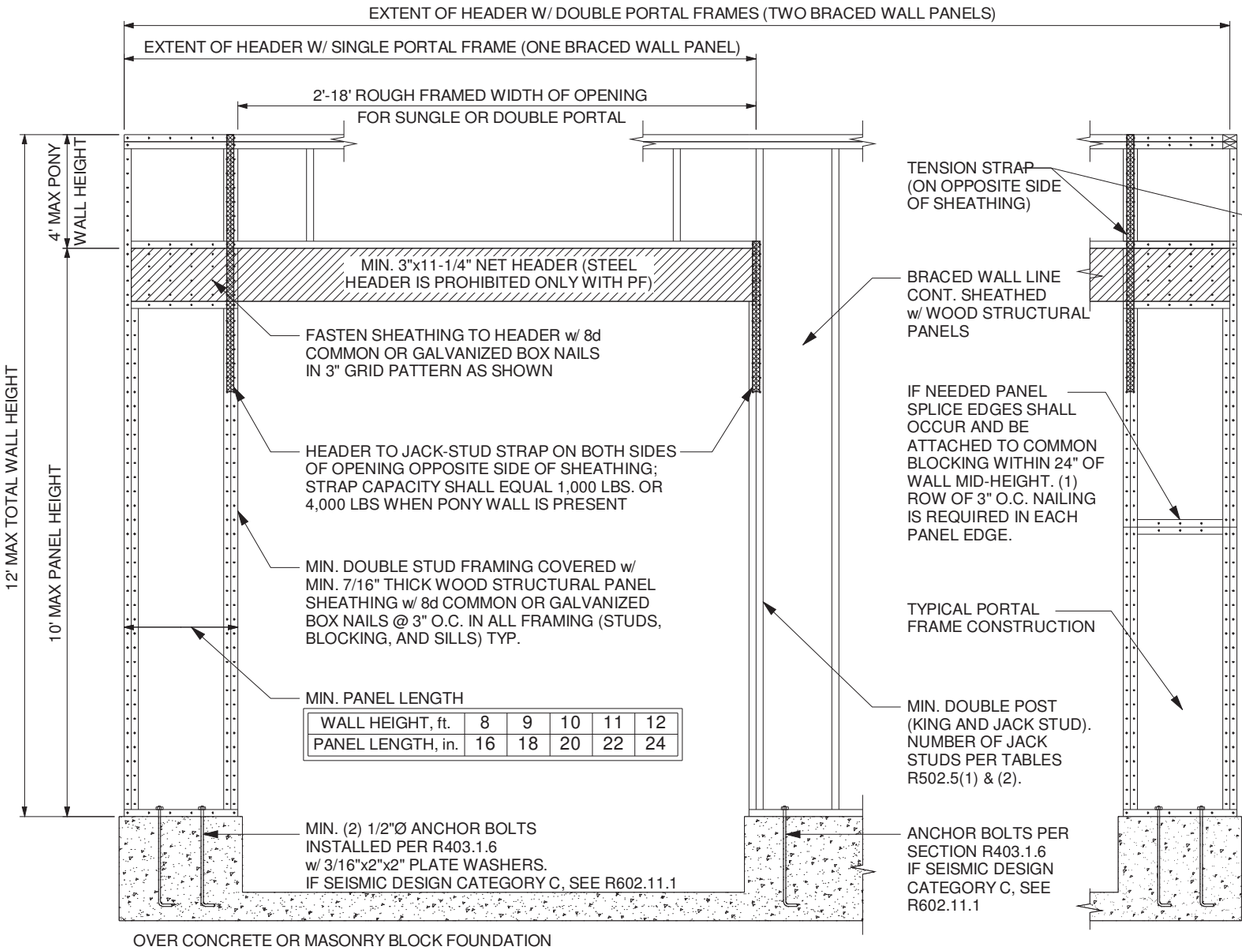
| MODEL # | MAX UPLIFT (LBS) | PLY # |
|---|---|---|
| LGT2* | 1785 | 2 |
| LGT3-SDS2.5* | 2655 | 3 |
| LGT4-SDS3* | 2925 | 4 |
| HGT-2* | 6485 | 2 |
| HGT-3* | 9035 | 3 |
| HGT-4* | 9250 | 4 |

1. SST PRODUCTS SHOWN. EQUIV. PRODUCT MAY BE USED PROVIDING UPLIFT REQUIREMENTS ARE MET.
2. VALUES SHOWN ARE FOR A SINGLE ANCHOR. DOUBLE ANCHORS MAY BE USED TO DOUBLE THE UPLIFT CAPACITY SHOWN ABOVE, ONLY IF THE MEMBER IS A MINIMUM THICKNESS OF 2-1/2".
3. UPLIFT VALUES ARE FOR SPF WOOD SPECIES. PLEASE CONTACT ENGINEER OR TRUSS MANUFACTURER IF USING DIFFERENT.
4. GIRDER TRUSS-GIRDER TRUSS CONNECTIONS ARE TO BE SPECIFIED AND SUPPLIED BY THE TRUSS COMPANY. ENGINEER IS NOT RESPONSIBLE FOR THESE CONNECTIONS.
5. ITEMS DENOTED WITH "*" MAY NOT BE DOUBLED TO INCREASE LOAD CAPACITY.

MAX GIRDER TRUSS REACTIONS (LBS.)

| NO TBE, SPF#2 TOP PLATE | | |
|---|---|---|
| # OF PLYS | 2X4 WALL | 2X6 WALL |
| 2 | 5134 | 7013 |
| 3 | 7702 | 10519 |
| 4 | 10269 | 14025 |
| WITH TBE, SPF#2 TOP PLATE | | |
| 2 | 7045 | 8933 |
| 3 | 9622 | 12439 |
| 4 | 12189 | 15945 |

GIRDER TRUSS PLYS SHOWN ARE FOR ILLUSTRATION ONLY. PLEASE REFER TO TRUSS LAYOUT DRAWINGS PROVIDED BY TRUSS MANUFACTURER FOR ACTUAL NUMBER OF PLYS REQUIRED.




# METHOD PF: PORTAL FRAME DETAIL

1 / D10 — 3/8" = 1'-0"

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

STRUCTURAL MEMBERS ONLY

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE


SUMMIT ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

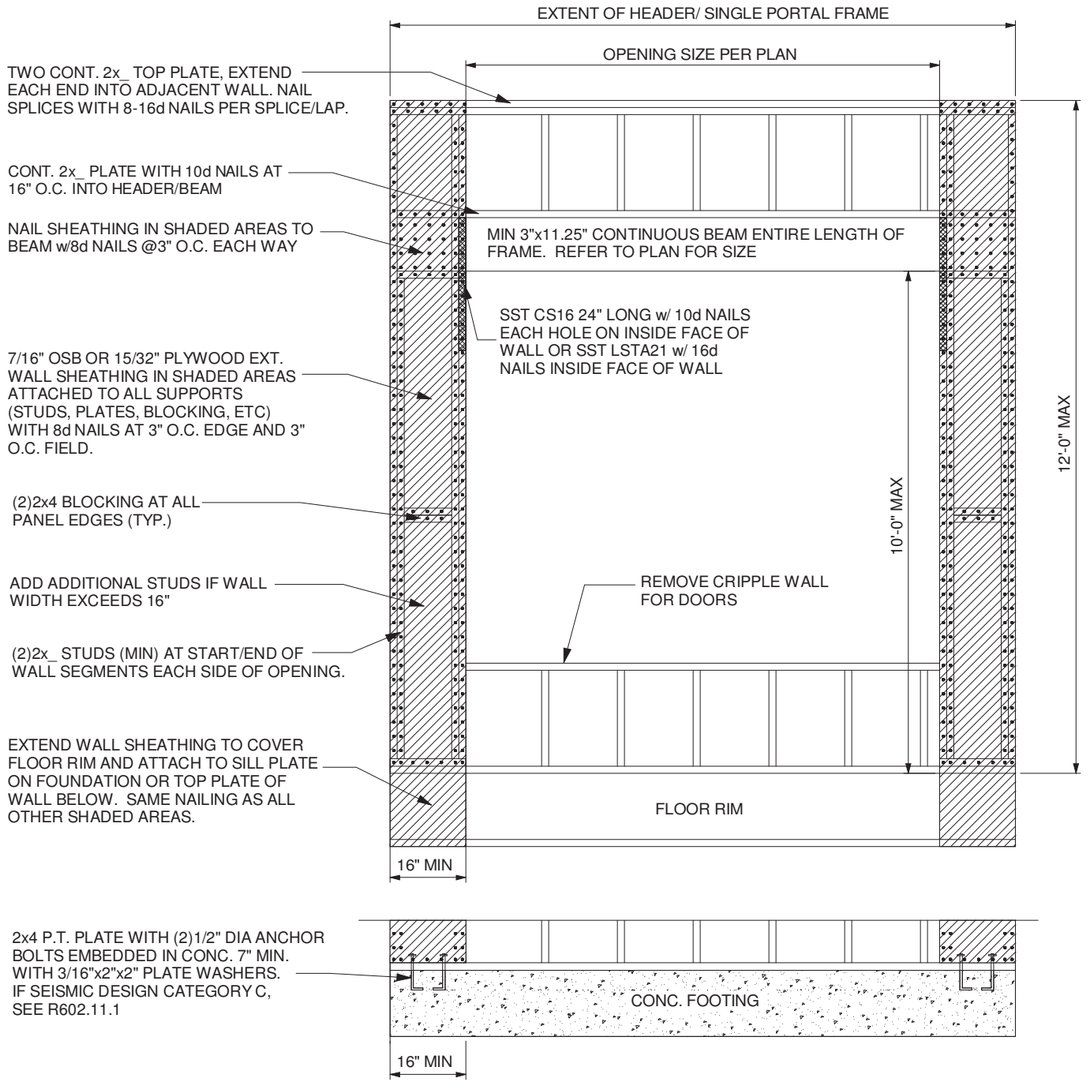

LGT HOMES

THE MADISON

REV 05/11/17

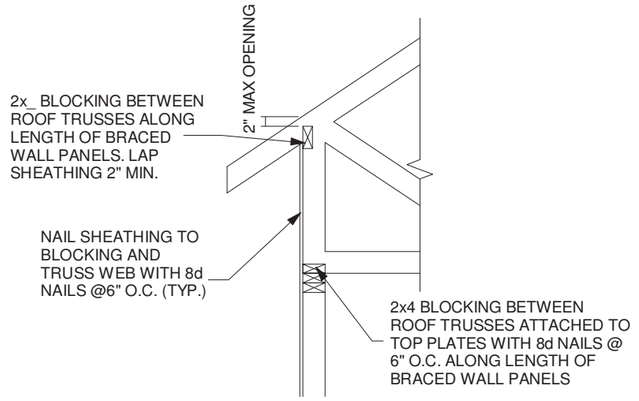
STANDARD ENGINEERING DETAILS

PAGE D10 | 19 PAGES

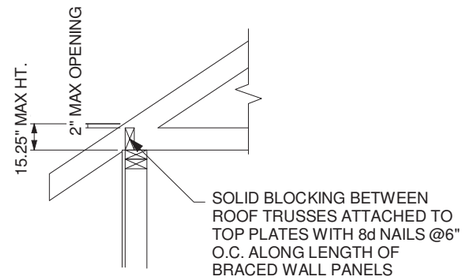



1 / D12 METHOD PF: PORTAL FRAME DETAIL

OPENINGS UNDER 8'-0"




HEEL HEIGHT GREATER THAN 15.25"




HEEL HEIGHT LESS THAN 15.25"

2 / D12 TYP. WALL PANEL TO ROOF TRUSS CONNECTION

1" = 1'-0"

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

STRUCTURAL MEMBERS ONLY

SUMMIT ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

LGI HOMES

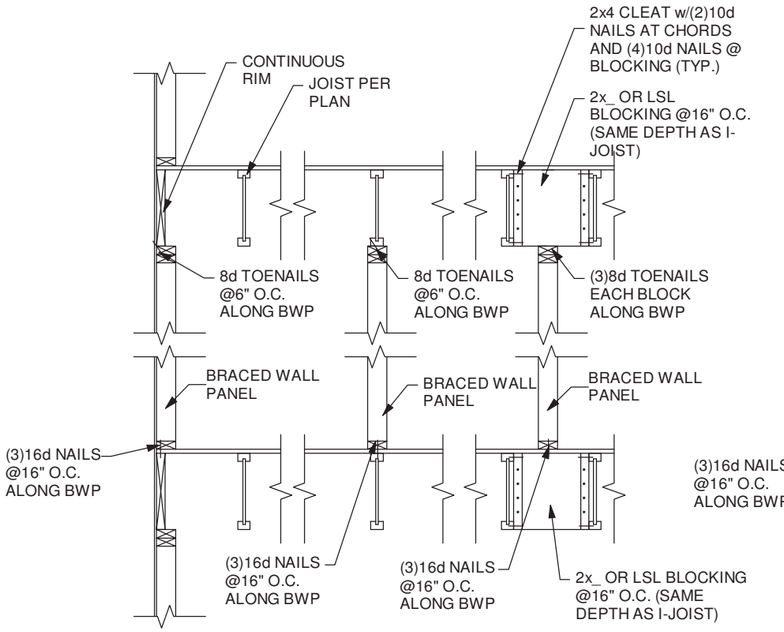
THE MADISON

REV 05/11/17

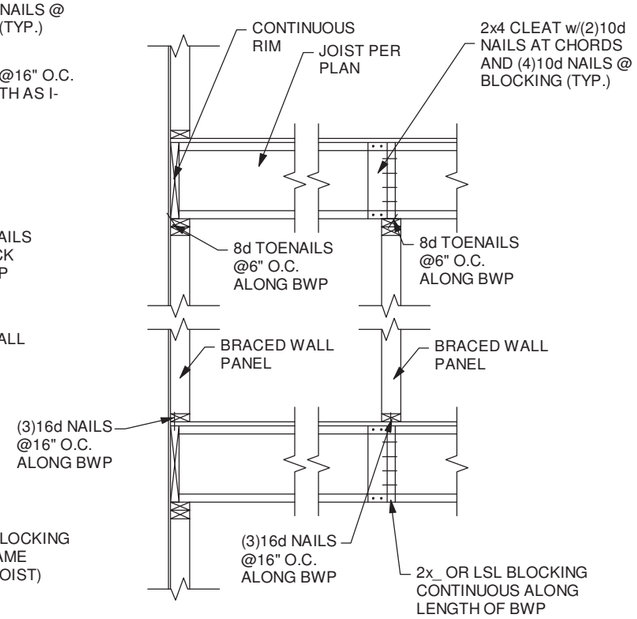
STANDARD ENGINEERING DETAILS

PAGE D12

19 PAGES

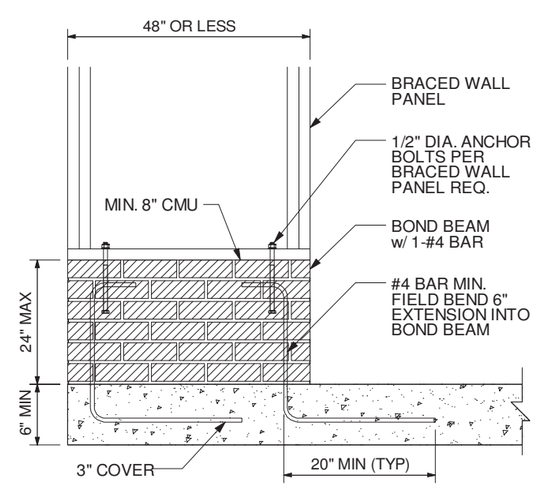



JOISTS PARALLEL TO BRACED WALLS

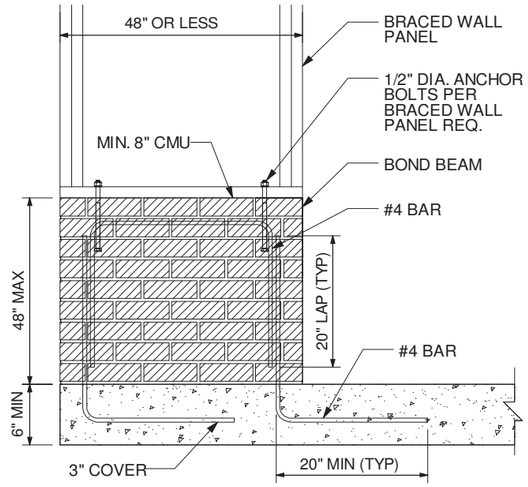



JOISTS PERPENDICULAR TO BRACED WALLS

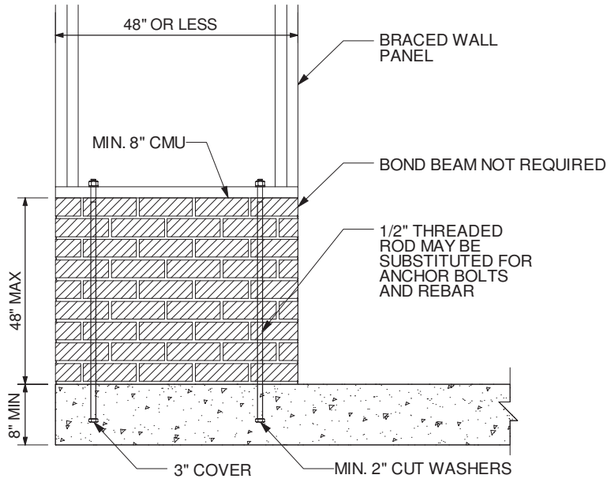
1/D13 TYP. WALL PANEL TO FLOOR/CEILING CONNECTION




SHORT STEM WALL REINFORCEMENT




TALL STEM WALL REINFORCEMENT




RODS MAY BE INSTALLED USING AN ADHESIVE ANCHORING SYSTEM WITH A MINIMUM TENSILE CAPACITY OF 3,750 LBS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS

OPTIONAL STEM WALL REINFORCEMENT

NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS.

# 2012 NCRC FIGURE R602.10.5.3 - MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS

NTS

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 5/12/17

STRUCTURAL MEMBERS ONLY

NORTH CAROLINA SUMMIT Engineering, Laboratory & Testing, P.C. C-4361 CERTIFICATE OF LICENSURE

SUMMIT ENGINEERING LABORATORY TESTING
120 PENMARC DR. SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM
NC COL #: C-4361
PROJECT NO: 1203-08R:13353

LGI HOMES

THE MADISON

REV 05/11/17

STANDARD ENGINEERING DETAILS

PAGE D13

19 PAGES

Call (423) 946-7306
www.customizedhomeplans.com

CustomizedHomePlans.com