

### PLANS DESIGNED TO THE **2018 NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE**

MEAN ROOF HEIGHT 25'-8'	HEIGHT TO RIDGE 30'-0"		
CLIMATE ZONE	ZONE 3A	ZONE 4A	ZONE 5A
FENESTRATION U-FACTOR	0.35	0.35	0.35
SKYLIGHT U-FACTOR	0.55	0.55	0.55
GLAZED FENESTRATION SHGC	0.30	0.30	0.30
CEILING R-VALUE	38 or 30ci	38 or 30ci	38 or 30ci
WALL R-VALUE	15	15	19
FLOOR R-VALUE	19	19	30
* BASEMENT WALL R-VALUE	5/13	10/15	10/15
** SLAB R-VALUE	0	10	10
* CRAWL SPACE WALL R-VALUE	5/13	10/15	10/19

\* "10/13" MEANS R-10 SHEATHING INSULATION OR R-13 CAVITY INSULATION \*\* INSULATION DEPTH WITH MONOLITHIC SLAB 24" OR FROM INSPECTION GAP TO BOTTOM OF FOOTING; INSULATION DEPTH WITH STEM WALL SLAB 24" OR TO BOTTOM OF FOUNDATION WALL DESIGNED FOR WIND SPEED OF 120 MPH, 3 SECOND GUST (93 FASTEST MILE) EXPOSURE "B"

COMPONENT								
MEAN ROOF								TO 45'
ZONE 1	14.2	-15.0	14.9	-15.8	15.5	-16.4	15.9	-16.8
ZONE 2	14.2	-18.0	14.9	-18.9	15.5	-19.6	15.9	-20.2
ZONE 3	14.2	-18.0	14.9	-18.9	15.5	-19.6	15.9	-20.2
ZONE 4	15.5	-16.0	16.3	-16.8	16.9	-17.4	17.4	-17.9
ZONE 5	15.5	-20.0	16.3	-21.0	16.9	-21.8	17.4	-22.4
DESIGNED FOR WIND SPEED OF 130 MPH, 3 SECOND GUST (101 FASTEST MILE) EXPOSURE "B"								

DESIGNED FOR WIND SPEED OF 130 MPH, 3 SECOND GUST (101 FASTEST MILE) EXPOSURE "B"								
COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS								
MEAN ROOF	UP T	O 30'	30'-1"	TO 35'	35'-1"	TO 40'	40'-1"	TO 45'
ZONE 1	16.7	-18.0	17.5	-18.9	18.2	-19.6	18.7	-20.2
ZONE 2	16.7	-21.0	17.5	-22.1	18.2	-22.9	18.7	-23.5
ZONE 3	16.7	-21.0	17.5	-22.1	18.2	-22.9	18.7	-23.5
ZONE 4	18.2	-19.0	19.1	-20.0	19.8	-20.7	20.4	-21.3
70NF 5	18.2	-24.0	19.1	-25.2	19.8	-26.2	20.4	-26.9

# **AIR LEAKAGE**

#### Section N1102.4

N1102.4.1 Building thermal envelope. The building thermal envelope shall be durably sealed with an air barrier system to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. For all homes, where present, the following shall be caulked, gasketed, weather stripped or otherwise sealed with an air barrier material or solid material consistent with Appendix E-2.4 of this code:

- 1. Blocking and sealing floor/ceiling systems and under knee walls open to unconditioned or exterior space.
- 2. Capping and sealing shafts or chases, including flue shafts. 3. Capping and sealing soffit or dropped ceiling areas.

## **ROOF VENTILATION**

**R806.1 Ventilation required.** Enclosed *attics* and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

**R806.2 Minimum area.** The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling. **Exceptions:** 

- 1. Enclosed attic/rafter spaces requiring less than 1 square foot (0.0929 m2) of ventilation may be vented with continuous soffit ventilation only.
- 2. Enclosed attic/rafter spaces over unconditioned space may be vented with continuous soffit vent only.

SQUARE FOOTAGE OF ROOF TO BE VENTED = 1558 SQ.FT. NET FREE CROSS VENTILATION NEEDED:

WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 10.39 SQ.FT. WITH 50% TO 80% OF VENTING 3'-0" ABOVE EAVE; OR WITH CLASS I OR II VAPOR RETARDER ON WARM-IN-WINTER SIDE OF CEILING = 5.16 SO.FT.

#### **GUARD RAIL NOTES**

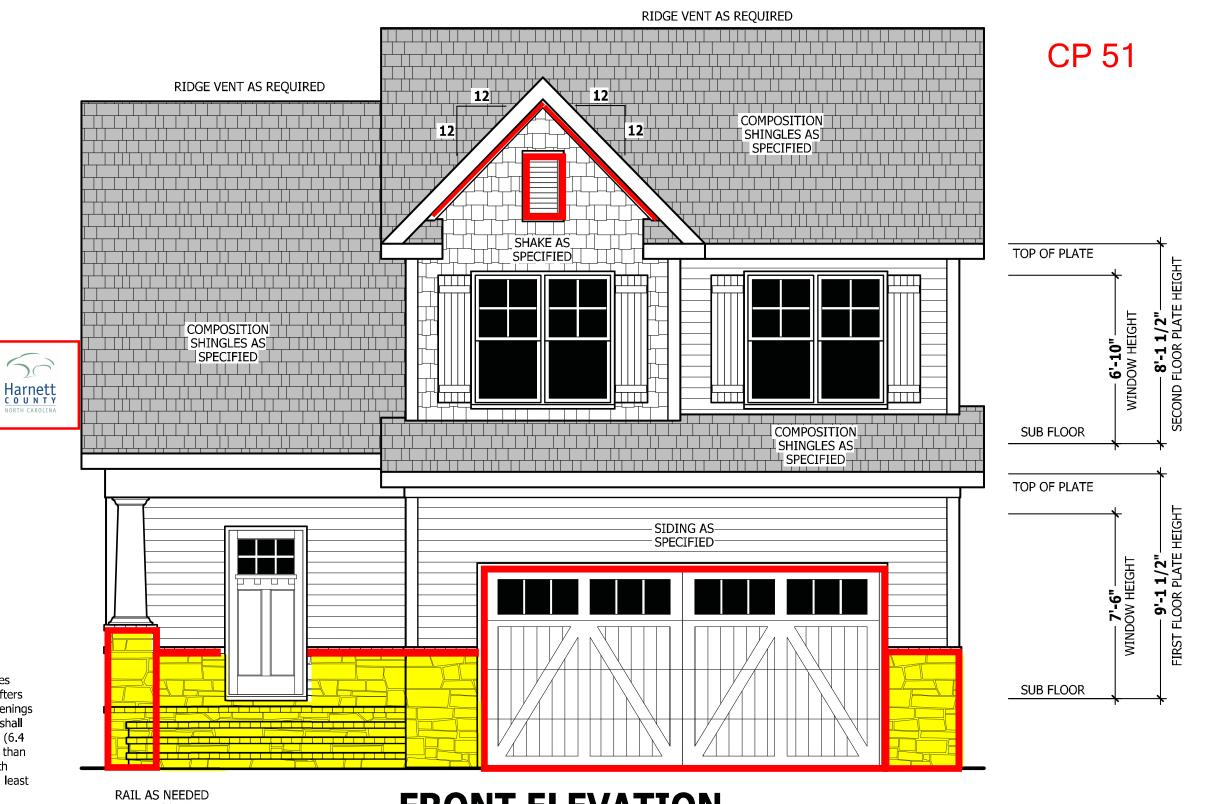
**R312.1 Where required.** Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

**R312.2 Height.** Required *guards* at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads. Exceptions:

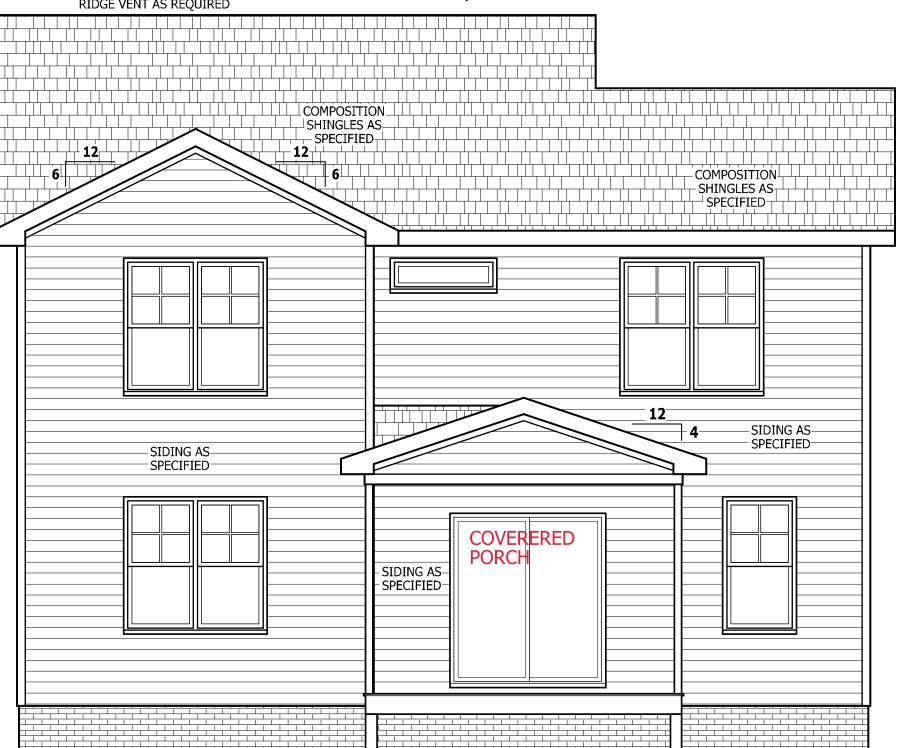
- 1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
- 2. Where the top of the *guard* also serves as a handrail on the open sides of stairs, the top of the *guard* shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

R312.3 Opening limitations. Required *guards* shall not have openings from the walking surface to the required *guard* height which allow passage of a sphere 4 inches (102 mm)in diameter

- Exceptions: 1. The triangular openings at the open side of a stair, formed by the riser, tread
- and bottom rail of a *guard*, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
- 2. *Guards* on the open sides of stairs shall not have openings which allow passage of a sphere 4 3/8 inches (111 mm) in diameter.



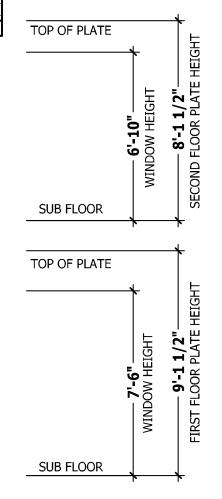
FRONT ELEVATION PER CODE SCALE 1/4" = 1'-0" RIDGE VENT AS REQUIRED



**SQUARE FOOTAGE** 

HEATED FIRST FLOOR 776 SQ.FT. 764 SQ.FT. SECOND FLOOR PLAYROOM 280 SQ.FT. 1820 SQ.FT. UNHEATED FRONT PORCH

101 SQ.FT. 466 SQ.FT. 152 SQ.FT. 719 SQ.FT. GARAGE REAR PORCH TOTAL



**REAR ELEVATION** SCALE 1/4" = 1'-0"

181035B

© Copyright 2016

PAGE 1 OF 8

IMENSIONS AND CONDITIONS

EFORE CONSTRUCTION BEGINS HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND

PROCEDURES.

VARY WITH LOCATION, A LOCAL

DESIGNER, ARCHITECT OR IGINEER SHOULD BE CONSULTE BEFORE CONSTRUCTION.

THESE DRAWING ARE

NSTRUMENTS OF SERVICE AND

STON

⋖

5

뿓

AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER

S

**ELEVATION** 

REAR

Ø

**FRONT** 

CODES AND CONDITIONS MAY

**SQUARE FOOTAGE** HEĂTED FIRST FLOOR SECOND FLOOR PLAYROOM 776 SQ.FT. 764 SQ.FT. 280 SQ.FT. 1820 SQ.FT.

UNHEATED 101 SQ.FT. 466 SQ.FT. 152 SQ.FT. 719 SQ.FT. FRONT PORCH GARAGE REAR PORCH

Haynes Home Plans, Inc. 5/19/2020

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS. HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES.

CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR NGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWING ARE

INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

**ELEVATIONS GASTON RIGHT** 품

 SQUARE FOOTAGE

 HEATED
 776 SQ.FT.

 FIRST FLOOR
 764 SQ.FT.

 SECOND FLOOR
 280 SQ.FT.

 PLAYROOM
 280 SQ.FT.

 TOTAL
 1820 SQ.FT.

 UNHEATED
 FRONT PORCH
 101 SQ.FT.

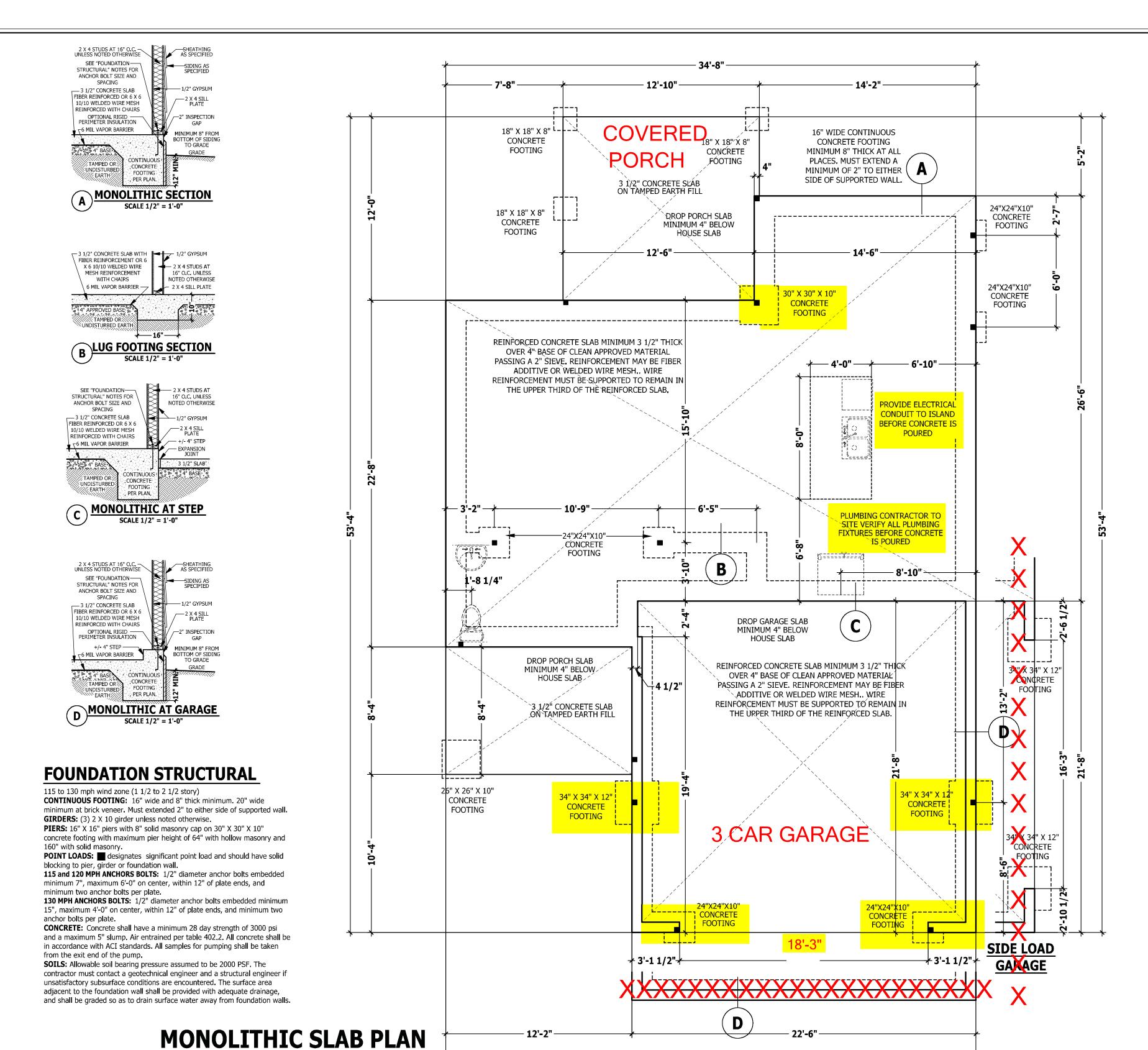
 GARAGE
 466 SQ.FT.

 REAR PORCH
 152 SQ.FT.

 TOTAL
 719 SQ.FT.

© Copyright 2016 Haynes Home Plans, Inc. 5/19/2020 181035B

PAGE 2 OF 8



SCALE 1/4" = 1'-0"

DIMENSIONS AND CONDITIONS EFORE CONSTRUCTION BEGINS HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL

DESIGNER, ARCHITECT OR IGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWING ARE NSTRUMENTS OF SERVICE AND

AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

PLAN

 $\mathbf{\omega}$ SLA 0 ONOLITHI 5

SQUARE FOOTAGE HEATED 776 SQ.FT. 764 SQ.FT. 280 SQ.FT. 1820 SQ.FT. FIRST FLOOR SECOND FLOOR PLAYROOM TOTAL UNHEATED 101 SQ.FT. 466 SQ.FT. 152 SQ.FT. 719 SQ.FT.

Garage Rear Porch

© Copyright 2016

Haynes Home Plans, Inc. 5/19/2020 181035B

PAGE 3 OF 8

### **ATTIC ACCESS**

#### **SECTION R807**

R807.1 Attic access. An attic access opening shall be provided to attic areas that exceed 400 square feet (37.16 m2) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

#### **Exceptions:**

1. Concealed areas not located over the main structure including porches, areas behind knee walls, dormers, bay windows, etc. are not required to have access.

2. Pull down stair treads, stringers, handrails, and hardware may protrude into the net clear opening.

#### **WALL THICKNESSES**

Exterior walls and walls adjacent to a garage area are drawn as 4" or as noted 2 X 6 are drawn as 6" to include 1/2" sheathing or gypsum. Subtract 1/2" for

**Interior walls** are drawn as 3 1/2" or as noted 2 X 6 are drawn as 5 1/2", and do not include gypsum.

#### **DWELLING / GARAGE SEPARATION**

#### **REFER TO SECTIONS R302.5, R302.6, AND R302.7**

**WALLS.** A minimum 1/2" gypsum board must be installed on all walls supporting floor/ceiling assemblies used for separation required by this section.

**STAIRS.** A minimum of 1/2" gypsum board must be installed on the underside and exposed sides of all stairways.

**CEILINGS.** A minimum of 1/2" gypsum must be installed on the garage ceiling if there are no habitable room above the garage. If there are habitable room above the garage a minimum of 5/8" type X gypsum board must be installed on the garage ceiling. **OPENING PENETRATIONS.** Openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute

**DUCT PENETRATIONS.** Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other *approved* material and shall have no openings

**OTHER PENETRATIONS.** Penetrations through the separation required in Section R302.6 shall be protected as required by Section R302.11, Item 4.

#### **EXTERIOR WINDOWS AND DOORS**

**R612.1 General.** This section prescribes performance and construction requirements for exterior windows and doors installed in walls. Windows and doors shall be installed and flashed in accordance with the fenestration manufacturer's written installation instructions. Window and door openings shall be flashed in accordance with Section R703.8. Written installation instructions shall be provided by the fenestration manufacturer for each window

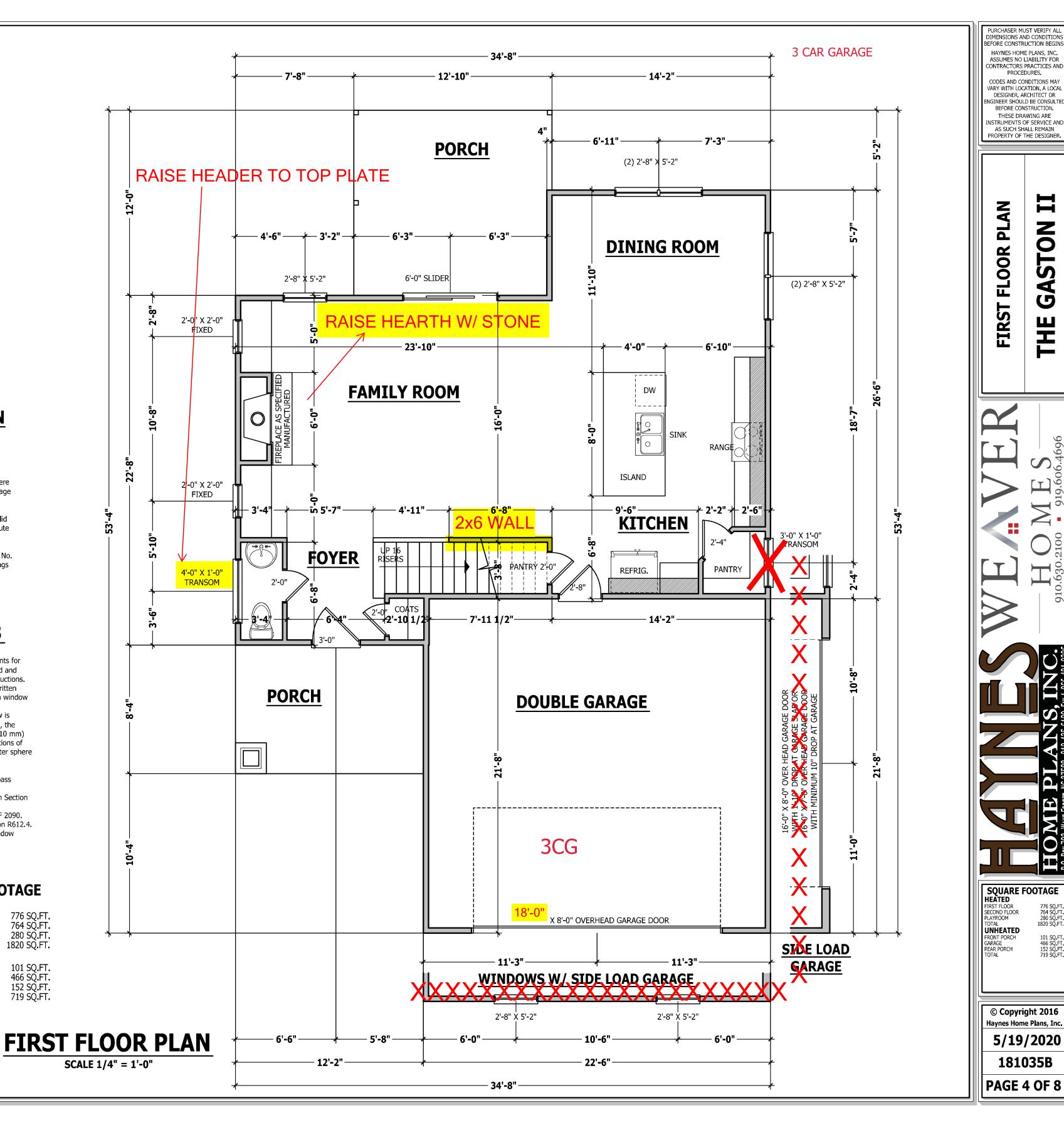
**R612.2 Window sills.** In *dwelling* units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished *grade* or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (610 mm) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4 inch (102 mm) diameter sphere where such openings are located within 24 inches (610 mm) of the finished floor. Exceptions:

1. Windows whose openings will not allow a 4-inch diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position. 2. Openings that are provided with window fall prevention devices that comply with Section

3. Openings that are provided with fall prevention devices that comply with ASTM F 2090. 4. Windows that are provided with opening limiting devices that comply with Section R612.4. **R612.3 Window fall prevention devices.** Window fall prevention devices and window guards, where provided, shall comply with the requirements of ASTM F 2090.

#### **SQUARE FOOTAGE** HEATED

776 SQ.FT. 764 SQ.FT. FIRST FLOOR SECOND FLOOR PLAYROOM 280 SQ.FT. 1820 SQ.FT. UNHEATED 101 SQ.FT. 466 SQ.FT. FRONT PORCH GARAGE REAR PORCH 152 SQ.FT. TOTAL 719 SQ.FT.



DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND

PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR
NGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.

THESE DRAWING ARE NSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

**PLAN** STON FLOOR GA **FIRST** 뿔

**SQUARE FOOTAGE** FIRST FLOOR SECOND FLOOR PLAYROOM UNHEATED

© Copyright 2016 Haynes Home Plans, Inc. 5/19/2020

181035B

## **STRUCTURAL NOTES**

All construction shall conform to the latest requirements of the 2018 North Carolina Residential Building Code, plus all local codes and regulations. This document in no way shall be construed to supersede the code.

JOB SITE PRACTICES AND SAFETY: Haynes Home Plans, Inc. assumes no liability for contractors practices and procedures or safety program. Haynes Home Plans, Inc. takes no responsibility for the contractor's failure to carry out the construction work in accordance with the contract documents. All members shall be framed, anchored, and braced in accordance with good construction practice and the building code.

DESIGN LOADS	LIVE LOAD	DEAD LOAD	DEFLECTION
USE	(PSF)	(PSF)	(LL)
Attics without storage	10		L/240
Attics with limited storage	20	10	L/360
Attics with fixed stairs	40	10	L/360
Balconies and decks	40	10	L/360
Fire escapes	40	10	L/360
Guardrails and handrails	200		
Guardrail in-fill components	50		
Passenger vehicle garages	50	10	L/360
Rooms other than sleeping	40	10	L/360
Sleeping rooms	30	10	L/360
Stairs	40		L/360
Snow	20		

**FRAMING LUMBER:** All non treated framing lumber shall be SPF #2 (Fb = 875 PSI) or SYP #2 (Fb = 750 PSI) and all treated lumber shall be SYP #2 (Fb = 750 PSI) unless noted other wise.

#### **ENGINEERED WOOD BEAMS:**

Laminated veneer lumber (LVL) = Fb=2600 PSI, Fv=285 PSI, E= $1.9x10^6$  PSI Parallel strand lumber (PSL) = Fb=2900 PSI, Fv=290 PSI, E= $2.0x10^6$  PSI Laminated strand lumber (LSL) Fb=2250 PSI, Fv=400 PSI, E= $1.55x10^6$  PSI Install all connections per manufacturers instructions.

TRUSS AND I-JOIST MEMBERS: All roof truss and I-joist layouts shall be prepared in accordance with this document. Trusses and I-joists shall be installed according to the manufacture's specifications. Any change in truss or I-joist layout shall be coordinated with Haynes Homes Plans, Inc. LINTELS: Brick lintels shall be 3 1/2" x 3 1/2" x 1/4" steel angle for up to 6'-0" span. 6" x 4" x 5/16" steel angle with 6" leg vertical for spans up to 9'-0" unless noted otherwise. 3 1/2" x 3 1/2" x 1/4" steel angle with 1/2" bolts at 2'-0" on center for spans up to 18'-0" unless noted otherwise. FLOOR SHEATHING: OSB or CDX floor sheathing minimum 1/2" thick for 16" on center joist spacing, minimum 5/8" thick for 19.2" on center joist spacing, and minimum 3/4" thick for 24" on center joist spacing. ROOF SHEATHING: OSB or CDX roof sheathing minimum 3/8" thick. CONCRETE AND SOILS: See foundation notes.

### **ROOF TRUSS REQUIREMENTS**

**TRUSS DESIGN.** Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plan, Inc. attention before construction begins. **KNEE WALL AND CEILING HEIGHTS.** All finished knee wall heights and ceiling heights are shown furred down 10" from roof decking for insulation. If for any reason the truss manufacturer fails to meet or exceed designated heel heights, finished knee wall heights, or finished ceiling heights shown on these drawings the finished square footage may vary. Any discrepancy must be brought to Haynes Home Plans, Inc. attention, so a suitable solution can be reached before construction begins. Any variation due to these conditions not being met is the reasonability of the truss manufacturer.

**ANCHORAGE.** All required anchors for trusses due to uplift or bearing shall meet the requirements as specified on the truss schematics. **BEARING.** All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.

**Plate Heights & Floor Systems.** See elevation page(s) for plate heights and floor system thicknesses.

#### **EXTERIOR HEADERS**

- (2) 2 X 6 WITH 1 JACK STUD EACH END UNLESS NOTED OTHERWISE - KING STUDS EACH END PER TABLE BELOW |HEADER SPAN | < 3' | 3'-4' | 4'-8' | 8'-12' | 12'-16' |

# INTERIOR HEADERS

- LOAD BEARING HEADERS (2) 2 X 6 WITH 1 JACK STUD AND 1 KING STUD EACH END UNLESS NOTED OTHERWISE

- NON LOAD BEARING HEADERS TO BE LADDER FRAMED

## **BRACE WALL PANEL NOTES**

**EXTERIOR WALLS:** All exterior walls to be sheathed with CS-WSP or CS-SFB in accordance with section R602.10.3 unless noted otherwise.

**GYPSUM:** All interior sides of exterior walls and both sides interior walls to have 1/2" gypsum installed. When not using method GB gypsum to be fastened per table R702.3.5. Method GB to be fastened per table R602.10.1.

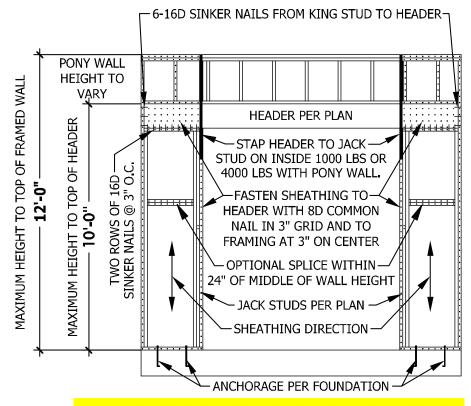
**REQUIRED LENGTH OF BRACING:** Required brace wall length for each side of the circumscribed rectangle are interpolated per table R602.10.3. Methods CS-WSP and CS-SFB contribute their actual length. Method GB contributes 0.5 it's actual length. Method PF contributes 1.5 times its actual length. **HD:** 800 lbs hold down hold down device fastened to the edge

of the brace wall panel closets to the corner.

#### Methods Per Table R602.10.1

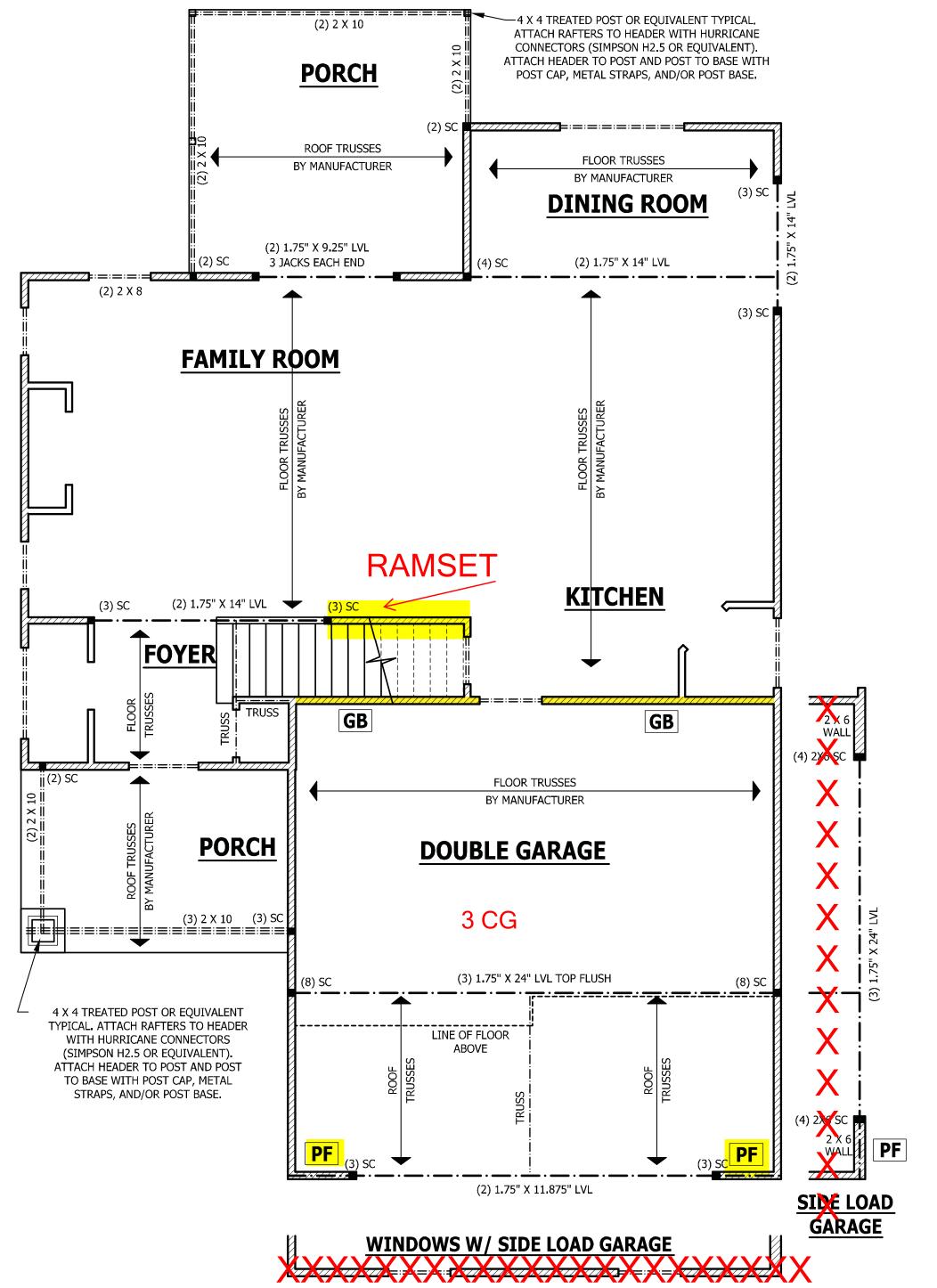
**CS-WSP**: Shall be minimum 3/8" OSB or CDX nailed at 6" on center at edges and 12" on center at intermediate supports with 6d common nails or 8d(2 1/2" long x 0.113" diameter). **CS-SFB:** Shall be minimum 1/2" structural fiber board nailed at 3" on center at edges and 3" on center at intermediate supports with 1 1/2" long x 0.12" diameter galvanized roofing nails.

**GB:** Interior walls show as GB are to have minimum 1/2" gypsum board on both sides of the wall fastened at 7" on center at edges and 7" on center at intermediate supports with minimum 5d cooler nails or #6 screws. **PF:** Portal fame per figure R602.10.1



# PF PORTAL FRAME AT OPENING ( METHOD PF PER FIGURE AND SECTION R602.10.1 )

SCALE 1/4" = 1'-0"



FIRST FLOOR STRUCTURAL

SCALE 1/4" = 1'-0"

DIMENSIONS AND CONDITIONS
IEFORE CONSTRUCTION BEGINS
HAYNES HOME PLANS, INC.
ASSUMES NO LIABILITY FOR
CONTRACTORS PRACTICES AND
PROCEDURES.
CODES AND CONDITIONS MAY

VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTEI BEFORE CONSTRUCTION. THESE DRAWING ARE

THESE DRAWING ARE
INSTRUMENTS OF SERVICE AND
AS SUCH SHALL REMAIN
PROPERTY OF THE DESIGNER.

FIRST FLOOR STRUCTURAL
THE GASTON II

HOME S - 910.630.2100 • 919.606.4696

HAT IN ESTABLISHES

 SQUARE FOOTAGE

 HEATED
 776 SQ.FT.

 FIRST FLOOR
 776 SQ.FT.

 SECOND FLOOR
 764 SQ.FT.

 PLAYROOM
 280 SQ.FT.

 TOTAL
 1820 SQ.FT.

 UNHEATED
 FRONT PORCH
 101 SQ.FT.

 GARAGE
 466 SQ.FT.

 REAR PORCH
 152 SQ.FT.

 TOTAL
 719 SQ.FT.

© Copyright 2016
Haynes Home Plans, Inc.
5/19/2020
181035B

PAGE 5 OF 8

### **STRUCTURAL NOTES**

All construction shall conform to the latest requirements of the 2018 North Carolina Residential Building Code, plus all local codes and regulations. This document in no way shall be construed to supersede the code.

JOB SITE PRACTICES AND SAFETY: Haynes Home Plans, Inc. assumes no liability for contractors practices and procedures or safety program. Haynes Home Plans, Inc. takes no responsibility for the contractor's failure to carry and and

out the construction work in accordance with the contr documents. All members shall be framed, anchored, a							
braced in accordance with good construction practice at the building code.							
DESIGN LOADS	LIVE LOAD	DEAD LOAD	DEFLECT				
USE	(PSF)	(PSF)	(LL)				
Attics without storage	10	10	L/240				

DESIGN LUADS	LIVE LOAD	DEAD LOAD	IDEFLECTIO
USE	(PSF)	(PSF)	(LL)
Attics without storage	10	10	L/240
Attics with limited storage	20	10	L/360
Attics with fixed stairs	40	10	L/360
Balconies and decks	40	10	L/360
Fire escapes	40	10	L/360
Guardrails and handrails	200		
Guardrail in-fill components	50		
Passenger vehicle garages	50	10	L/360
Rooms other than sleeping	40	10	L/360
Sleeping rooms	30	10	L/360
Stairs	40		L/360
Snow	20		

FRAMING LUMBER: All non treated framing lumber shall be SPF #2 (Fb = 875 PSI) or SYP #2 (Fb = 750 PSI) and all treated lumber shall be SYP #2 (Fb = 750 PSI) unless noted other wise.

#### **ENGINEERED WOOD BEAMS:**

Laminated veneer lumber (LVL) = Fb=2600 PSI, Fv=285 PSI, E=1.9x106 PSI Parallel strand lumber (PSL) = Fb=2900 PSI, Fv=290 PSI, E=2.0x106 PSI Laminated strand lumber (LSL) Fb=2250 PSI, Fv=400 PSI, E=1.55x106 PSI Install all connections per manufacturers instructions.

TRUSS AND I-JOIST MEMBERS: All roof truss and I-joist layouts shall be prepared in accordance with this document. Trusses and I-joists shall be installed according to the manufacture's specifications. Any change in truss or I-joist layout shall be coordinated with Haynes Homes Plans, Inc. **LINTELS:** Brick lintels shall be 3 1/2" x 3 1/2" x 1/4" steel angle for up to 6'-0" span, 6" x 4" x 5/16" steel angle with 6" leg vertical for spans up to 9'-0" unless noted otherwise. 3 1/2" x 3 1/2" x 1/4" steel angle with 1/2" bolts at 2'-0" on center for spans up to 18'-0" unless noted otherwise.

**FLOOR SHEATHING:** OSB or CDX floor sheathing minimum 1/2" thick for 16" on center joist spacing, minimum 5/8" thick for 19.2" on center joist spacing, and minimum 3/4" thick for 24" on center joist spacing. **ROOF SHEATHING:** OSB or CDX roof sheathing minimum

**CONCRETE AND SOILS:** See foundation notes.

#### **ATTIC ACCESS**

#### **SECTION R807**

**R807.1 Attic access.** An attic access opening shall be provided to attic areas that exceed 400 square feet (37.16 m2) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located **Exceptions:** 

1. Concealed areas not located over the main structure including porches, areas behind knee walls, dormers, bay windows, etc. are not required to have access.

2. Pull down stair treads, stringers, handrails, and hardware may protrude into the net clear opening.

#### **EXTERIOR HEADERS**

- (2) 2 X 6 WITH 1 JACK STUD EACH END **UNLESS NOTED OTHERWISE** 

- KING STUDS EACH END PER TABLE BELOW HEADER SPAN < 3' 3'-4' 4'-8' 8'-12' 12'-16' KING STUD(S) 1 2 3 5 6

### **INTERIOR HEADERS**

- LOAD BEARING HEADERS (2) 2 X 6 WITH 1 JACK STUD AND 1 KING STUD EACH END **UNLESS NOTED OTHERWISE**
- NON LOAD BEARING HEADERS TO BE **LADDER FRAMED**

#### **ROOF TRUSS REQUIREMENTS**

TRUSS DESIGN. Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plan, Inc. attention before construction begins. KNEE WALL AND CEILING HEIGHTS. All finished knee wall heights and ceiling heights are shown furred down 10" from roof decking for insulation. If for any reason the truss manufacturer fails to meet or exceed designated heel heights, finished knee wall heights, or finished ceiling heights shown on these drawings the finished square footage may vary. Any discrepancy must be brought to Haynes Home Plans, Inc. attention, so a suitable solution can be reached before construction begins. Any variation due to these conditions not being met is the reasonability of the truss manufacturer.

**ANCHORAGE.** All required anchors for trusses due to uplift or bearing shall meet the requirements as specified on the truss schematics. **BEARING.** All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.

Plate Heights & Floor Systems. See elevation page(s) for plate heights and floor system thicknesses.

#### **WALL THICKNESSES**

are drawn as 4" or as noted 2 X 6 are drawn as 6" to include 1/2" sheathing or gypsum. Subtract 1/2" for

are drawn as 5 1/2", and do not include gypsum.

Exterior walls and walls adjacent to a garage area

**Interior walls** are drawn as 3 1/2" or as noted 2 X 6

#### 2'-8" X 5'-2" TWIN RAISE HEADER TO TOP PLATE **ROOF TRUSSES** BY MANUFACTURE **MASTER BEDROOM** 4'-0" X 1'-0" 2'-8" X 5'-2" TWIN TRANSOM (2) 2 X 10 (2) 2 X 10 **GIRDER TRUSS** 2 JACKS ÉACH END 2 JACKS EACH END BY MANUFACTURER (4) SC 14'-2" 14'-2" **PLAY ROOM** W.I.C. 2 X 6 WALL 4'-0" X 1'-0" MASTER TRANSOM SET AT 7'-5" **BATH HEADER HEIGHT** RAIL OR HALF WALL TRANSOM SET AT 7'-5" HEADER HEIGHT **STORAGE** 2'-6" HATCHED WALLS — INDICATED LOAD - 3'-0" <del>| |</del>+ 2'-4" <del>| |</del> 2'-6" <del>| |</del> BEARING AND EXTERIOR 6'-6 1/2"-WALLS WHERE HEADERS 2'-3 1/2" MUST BE INSTALLED. BEDROOM #2 BEDROOM #3 - 10'-10" GIRDER TRUSS (3) SC BY MANUFACTURER -ROOF TRUSSES-2'-8" X 5'-2" TWIN 2'-8" X 5'-2" TWIN (2) 2 X 12 2 JACKS EACH END **BRACING NOT SHOWN ON UPPER STORY PER** R602.10.3.2 (5) & (6) · 12'-2" -

**∤** 2'-10"

DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES.

CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR GINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.

THESE DRAWING ARE NSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

PLAN STON FLOOR U SECOND 뿟

**SQUARE FOOTAGE** FIRST FLOOR SECOND FLOOR PLAYROOM UNHEATED

Garage Rear Porch

© Copyright 2016 Haynes Home Plans, Inc 5/19/2020 181035B

PAGE 6 OF 8

# **EXTERIOR WINDOWS AND DOORS**

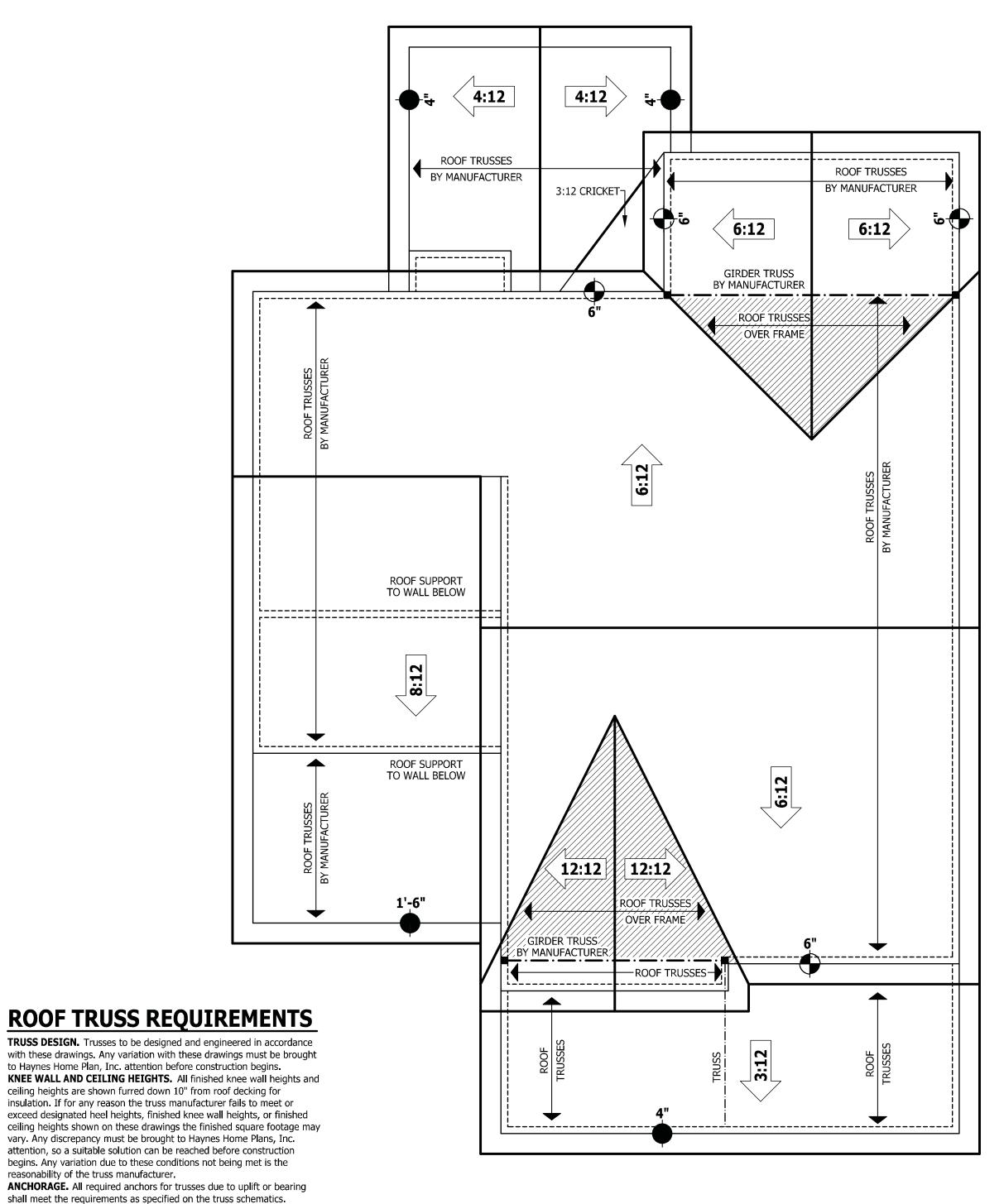
**R612.1 General.** This section prescribes performance and construction requirements for exterior windows and doors installed in walls. Windows and doors shall be installed and flashed in accordance with the fenestration manufacturer's written installation instructions. Window and door openings shall be flashed in accordance with Section R703.8. Written installation instructions shall be provided by the fenestration manufacturer for each window

**R612.2 Window sills.** In *dwelling* units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (610 mm) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4 inch (102 mm) diameter sphere where such openings are located within 24 inches (610 mm) of the finished floor. Exceptions:

1. Windows whose openings will not allow a 4-inch diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position. 2. Openings that are provided with window fall prevention devices that comply with Section

3. Openings that are provided with fall prevention devices that comply with ASTM F 2090. 4. Windows that are provided with opening limiting devices that comply with Section R612.4. **R612.3 Window fall prevention devices.** Window fall prevention devices and window guards, where provided, shall comply with the requirements of ASTM F 2090.

**SECOND FLOOR PLAN** SCALE 1/4" = 1'-0"



reasonability of the truss manufacturer.

ledgers unless noted otherwise.

HEEL HEIGHT ABOVE

FIRST FLOOR PLATE

and floor system thicknesses.

**BEARING.** All trusses shall be designed for bearing on SPF #2 plates or

Plate Heights & Floor Systems. See elevation page(s) for plate heights

HEEL HEIGHT ABOVE SECOND FLOOR PLATE

**ROOF PLAN** SCALE 1/4" = 1'-0"

DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR NGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.

THESE DRAWING ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

**ROOF PLAN** 

GASTON 罪

 SQUARE FOOTAGE

 HEATED
 776 SQ.FT.

 FIRST FLOOR
 764 SQ.FT.

 SECOND FLOOR
 764 SQ.FT.

 PLAYROOM
 280 SQ.FT.

 TOTAL
 1820 SQ.FT.

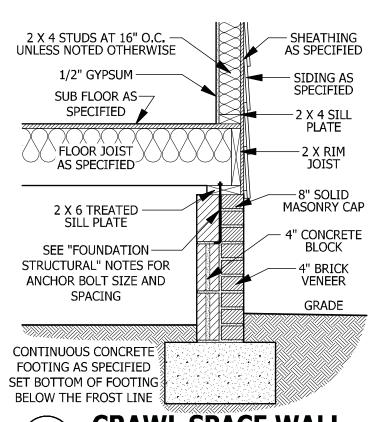
 UNHEATED
 101 SQ.FT.

Garage Rear Porch

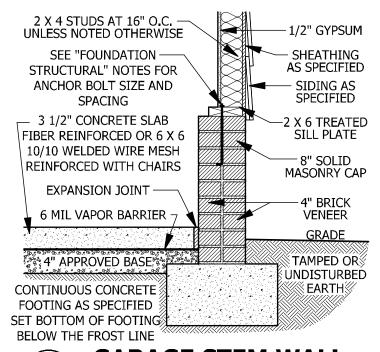
101 SQ.FT. 466 SQ.FT. 152 SQ.FT. 719 SQ.FT.

© Copyright 2016 Haynes Home Plans, Inc. 5/19/2020 181035B

PAGE 7 OF 8







# D

#### **GARAGE STEM WALL** SCALE 3/4" = 1'-0"

#### **DECK STAIR NOTES**

**SECTION AM110** 

AM110.1 Stairs shall be constructed per Figure AM110. Stringer spans shall be no greater than 7 foot span between supports. Spacing between stringers shall be based upon decking material used per AM107.1. Each Stringer shall have minimum 3 1/2 inches between step cut and back of stringer. If used, suspended headers shall shall be attached with 3/8 inch galvanized bolts with nuts and washers to securely support stringers at the top.

#### **DECK BRACING**

SECTION AM109

**AM109.1 Deck bracing.** Decks shall be braced to provide lateral stability. The following are acceptable means to provide lateral stability. **AM109.1.1.** When the deck floor height is less than 4'-0"

above finished grade per Figure AM109 and the deck is

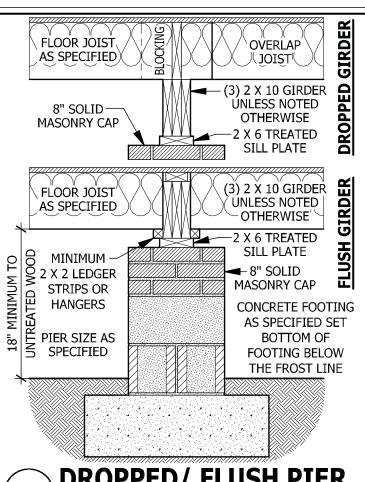
attached to the structure in accordance with Section AM104, lateral bracing is not required. AM109.1.2. 4 x 4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be bolted to the post and the girder/double band with one 5/8 inch hot dipped

galvanized bolt with nut and washer at both ends of the

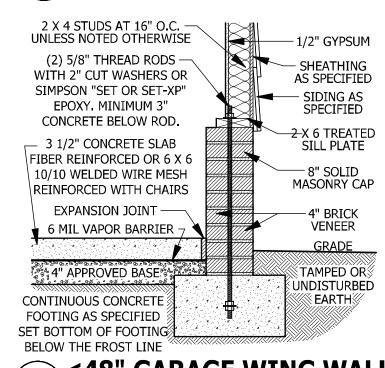
brace per Figure AM109.1 **AM109.1.3.** For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2 and the following:

POST SIZE	MAX TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER		
4 X 4	48 SF	4'-0"	2'-6"	1'-0"		
6 X 6	120 SF	6'-0"	3'-6"	1'-8"		

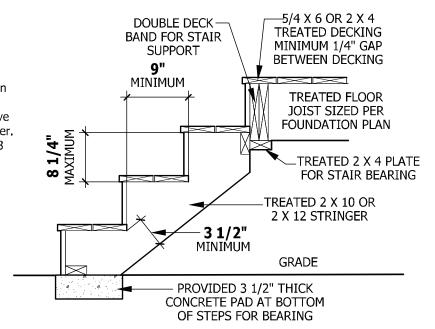
**AM109.1.4.** 2 x 6 diagonal vertical cross bracing may be provided in two perpendicular directions for freestanding decks or parallel to the structure at the exterior column line for attached decks. The 2 x 6's shall be attached to the posts with one 5/8 inch hot dipped galvanized bolt with nut and washer at each end of each bracing member per Figure AM109.3. AM109.1.5. For embedment of piles in Coastal Regions, see Chapter 45.



# DROPPED/ FLUSH PIER



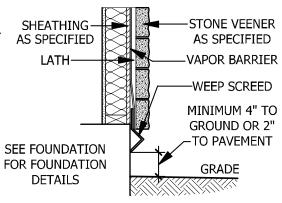
## <48" GARAGE WING WALL SCALE 3/4" = 1'-0"



# FIGURE AM110 TYPICAL DECK STAIR DETAIL

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

# **WEEP SCREEDS**

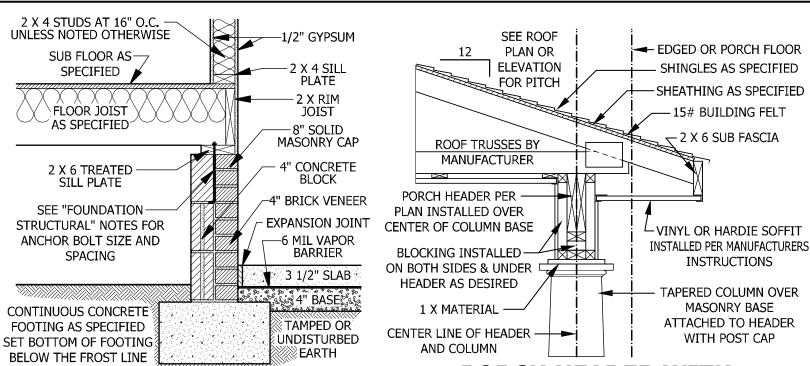


**WEEP SCREED SCALE 3/4" = 1'-0"** 

All weep screeds and stone veneer to be installed per manufactures instructions and per the 2012 North Carolina Residential

Building code. mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 31/2 inches (89 mm) shall be provided at or below the screed shall be placed a minimum of 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the shall cover and terminate on the

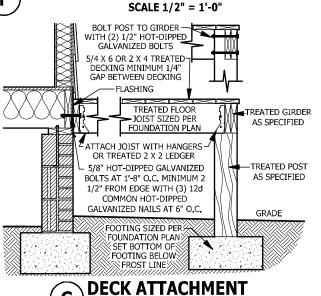
**R703.6.2.1** - A minimum 0.019-inch (0.5 foundation plate line on exterior stud walls in accordance with ASTM C 926. The weep attachment flange of the weep screed.



#### **PORCH HEADER WITH CRAWL SPACE AT GARAGE TAPERED COLUMN** SCALE 3/4" = 1'-0"

2 X TREATED-HOUSE BAND - 2 X 4 SOLE PLATE SUB FLOOR AS COBBLED BRICK SPECIFIED 3 1/2" CONCRETE SLAB FLOOR JOIST AS SPECIFIED ROWLOCK CONCRETE BLOCK 8" SOLID — MASONRY CAP (2) 4" CORRUGATED PIPES 8" CONCRET BLOCK ZAPPROVED FILL; C. 50 S. C. 50 GRADE CONTINUOUS CONCRÈTE FOOTING AS SPECIFIED SET BOTTOM OF FOOTING FILLED PORCH SECTION WITH VENT

SPACING



# **SMOKE ALARMS**

SCALE 1/2" = 1'-0"

**R314.1 Smoke detection and notification.** All smoke alarms shall be listed in accordance with UL 217 and installed in accordance with the provisions of this code and the household fire warning

equipment provisions of NFPA 72. **R314.2 Smoke detection systems.** Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with

**Exception:** Where smoke alarms are provided meeting the requirements of Section R314.4.

R314.3 Location. Smoke alarms shall be installed in the following locations:

1. In each sleeping room.

2. Outside each separate sleeping area in the immediate vicinity of the bedrooms 3. On each additional *story* of the *dwelling*, including *basements* and habitable attics (finished) but not including crawl spaces, uninhabitable (unfinished) attics and uninhabitable (unfinished)

attic-stories. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within in such a manner that the actuation of one alarm will activate all of between the wall and the handrails. the alarms in the individual unit.

**R314.4 Power source.** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a building. The weather-resistant barrier shall commercial source, and when primary power is interrupted, shall lap the attachment flange. The exterior lath receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be interconnected.

# **CARBON MONOXIDE ALARMS**

SCALE 3/4" = 1'-0"

R315.1 Carbon monoxide alarms. In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer.

**R315.2 Where required in existing dwellings.** In existing dwellings, where interior alterations, repairs, fuel-fired appliance replacements, or additions requiring a permit occurs, or where one or more sleeping rooms are added or created, carbon monoxide alarms shall be provided in accordance with Section 315.1.

R315.3 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

## **STAIRWAY NOTES**

**R311.7.2 Headroom.** The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.

**R311.7.4 Stair treads and risers.** Stair treads and risers shall meet the requirements of this section. For the purposes of this section all dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners. R311.7.4.1 Riser height. The maximum riser height shall be 8 1/4 inches (210 mm). The riser shall be measured vertically between leading edges of the adjacent treads.

R311.7.4.2 Tread depth. The minimum tread depth shall be 9 inches (229) mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 9 inches (229 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 4 inches (102 mm) at any point.

**R311.7.4.3 Profile.** The radius of curvature at the nosing shall be no greater device(s), it shall become a permanent fixture of the occupancy and than 9/16 inch (14 mm). A nosing not less than 3/4 inch (19 mm) but not more than 1 1/4 inches (32 mm) shall be provided on stairways with solid

> continuous run of treads or flight with four or more risers. R311.7.7.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm)and not more than 38 inches (965 mm). Exceptions:

**R311.7.7 Handrails.** Handrails shall be provided on at least one side of each

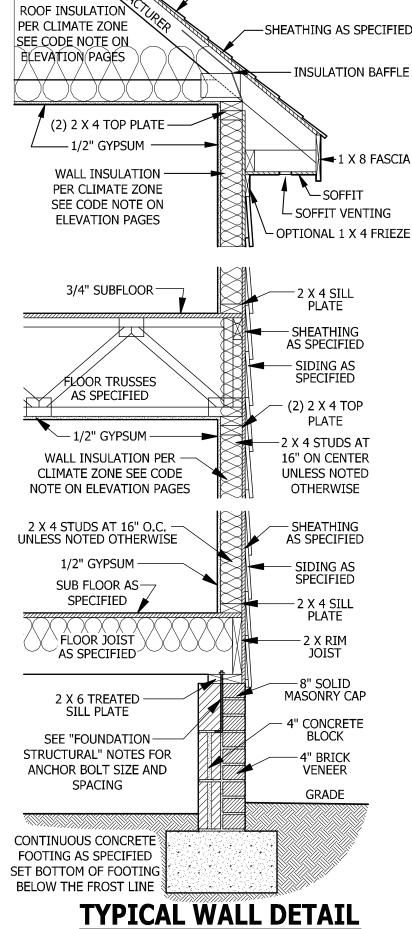
1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.

2. When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

**R311.7.7.2 Continuity.** Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails an individual *dwelling* unit the alarm devices shall be interconnected adjacent to a wall shall have a space of not less than 11/2 inch (38 mm)

> 1. Handrails shall be permitted to be interrupted by a newel post. 2. The use of a volute, turnout, starting easing or starting newel shall be

allowed over the lowest tread. 3. Two or more separate rails shall be considered continuous if the termination of the rails occurs within 6 inches (152 mm) of each other. If transitioning between a wall-mounted handrail and a guardrail/handrail, the wall-mounted rail must return into the wall.

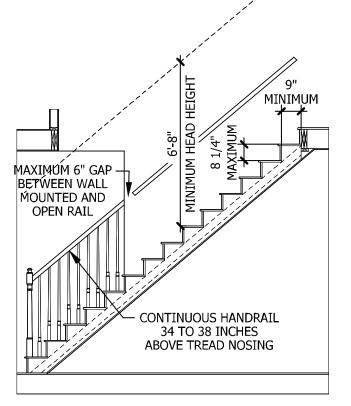


PITCH PER ROOF PLAN

OR ELEVATIONS

SHINGLES AS SPECIFIED

-15# BUILDING FELT



SCALE 3/4" = 1'-0"

TYPICAL STAIR DETAIL

SCALE 1/4" = 1'-0'

© Copyright 2016 laynes Home Plans, Inc. 5/19/2020 181035B PAGE 8 OF 8

**SQUARE FOOTAGE** 

776 SQ FT 764 SQ FT 280 SQ FT 1820 SQ FT

HEĀTED

SECOND FLOOR PLAYROOM

UNHEATED

Garage Rear Porch

IMENSIONS AND CONDITIONS

EFORE CONSTRUCTION BEGIN:

HAYNES HOME PLANS, INC.

ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND

PROCEDURES.

CODES AND CONDITIONS MAY

VARY WITH LOCATION, A LOCAL

DESIGNER, ARCHITECT OR

BEFORE CONSTRUCTION.

THESE DRAWING ARE

NSTRUMENTS OF SERVICE AND

PROPERTY OF THE DESIGNER.

0

ST

5

I

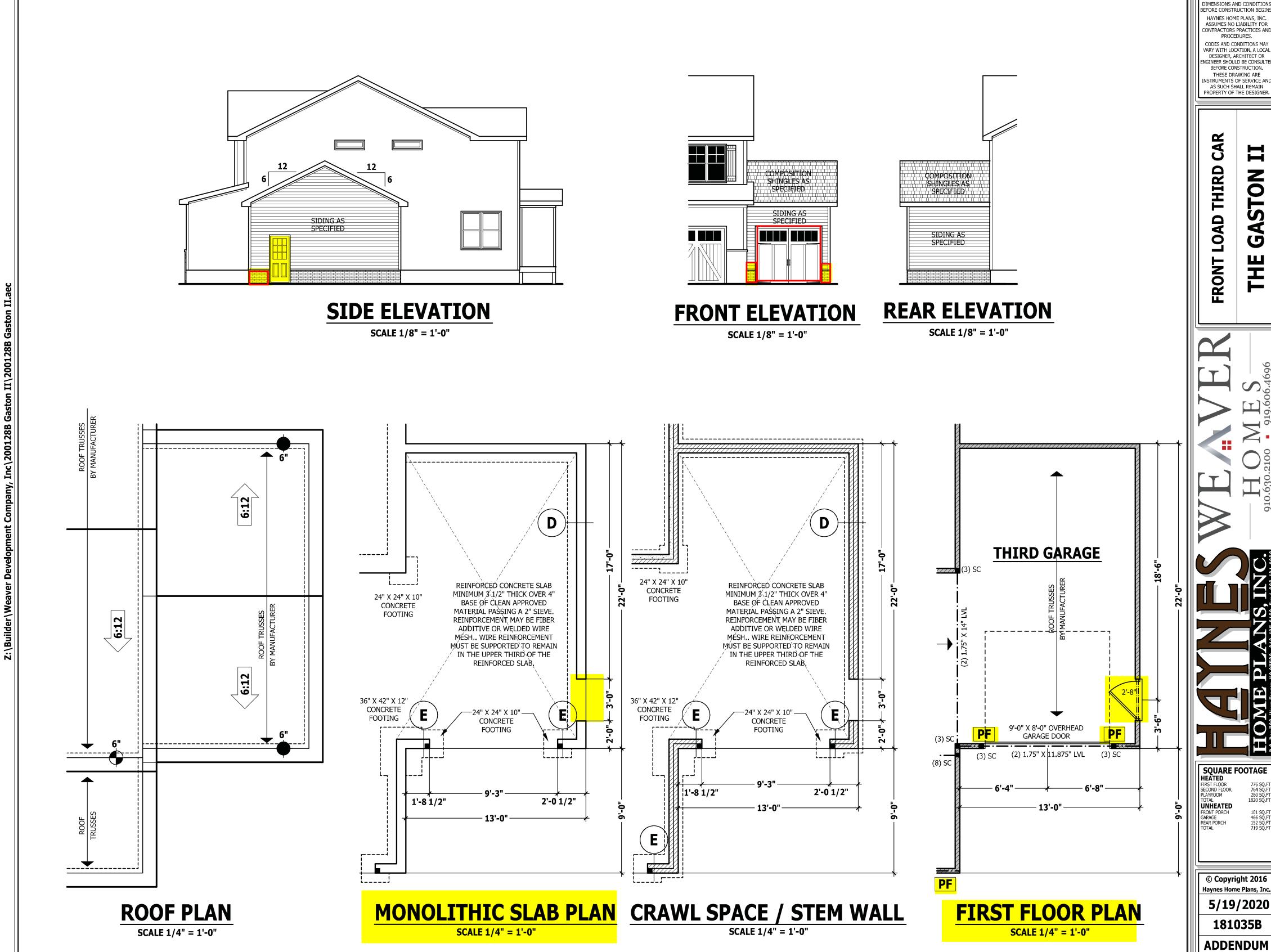
AIL

DET

**TYPICAL** 

AS SUCH SHALL REMAIN

GINEER SHOULD BE CONSULTE



DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND

CODES AND CONDITIONS MAY VARY WITH LOCATION, A LOCAL DESIGNER, ARCHITECT OR IGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWING ARE

AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

CAR **THIRD** LOAD

STON GA 里 **FRONT** 

 
 SQUARE FOOTAGE

 HEATED
 776 SQ.FT.

 FIRST FLOOR
 766 SQ.FT.

 SECOND FLOOR
 764 SQ.FT.

 PLAYROOM
 280 SQ.FT.

 TOTAL
 1820 SQ.FT.

 UNHEATED
 FRONT PORCH
 101 SQ.FT.

 FRONT PORCH
 466 SQ.FT.

 REAR PORCH
 152 SQ.FT.

 TOTAL
 719 SQ.FT.
 101 SQ.FT. 466 SQ.FT. 152 SQ.FT. 719 SQ.FT.

© Copyright 2016 Haynes Home Plans, Inc. 5/19/2020 181035B