INDEX TO DRAWINGS

GENERAL NOTES:

1. ALL WORK IS TO BE DONE IN STRICT ACCORDANCE WITH NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE, 2018 EDITION (HEREWITH SHOWN AS N.C.S.R.B.C.).
2. DIMENSIONS SHOWN ON DRAWINGS GOVERN OVER SCALE.
3. STUD WALL DESIGN SHALL CONFORM TO ALL N.C.S.R.B.C. REQUIREMENTS.
4. CONTRACTOR SHALL USE TEMPERED SAFETY GLASS IN ALL LOCATIONS AS REQUIRED BY N.C.S.R.B.C., SECTION R308.4.
5. ANY HABITABLE ROOM SHALL MEET ALL LIGHT/VENTILATION AND EGRESS AS REQUIRED BY N.C.S.R.B.C., SECTIONS R-303.1 AND R-310.1.
6. ALL WALLS SHOWN ON FLOOR PLANS ARE 2x4 FRAME UNLESS NOTED OTHERWISE.
7. ALL ANGLED WALLS SHOWN ON FLOOR PLANS ARE 45° UNLESS NOTED OTHERWISE.
8. ALL WINDOWS SHALL HAVE A MINIMUM DPI RATING OF 25. BUILDER SHALL VERIFY WITH WINDOW MANUFACTURER THAT UNITS INSTALLED MEET THESE REQUIREMENTS AS PER N.C.S.R.B.C., TABLE 301.2(6).
9. ENERGY EFFICIENCY REQUIREMENTS FOR THE SPECIFIC CLIMATE ZONE WHERE STRUCTURE IS BEING BUILT SHALL BE IN ACCORDANCE WITH CHAPTER 11 OF THE N.C.S.R.B.C., AS SHOWN IN TABLES N1101.2 AND N1102.1.

MATERIALS LEGEND:

EARTH/COMPACT FILL	FINISH WOOD
CONCRETE	ROUGH WOOD
BRICK	BLOCKING
CONCRETE BLOCK/STONE	PLYWOOD
STEEL	BATT INSULATION
ALUMINUM	RIGID INSULATION

TOILET ACCESSORIES LEGEND:

PROVIDE 2x4 BLOCKING IN THE WALL FOR THE FOLLOWING:

TB	TOWEL BAR
TP	TOILET PAPER HOLDER
TR	TOWEL RING
MC	MEDICINE CABINET
MR	MAGAZINE RACK

THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE INTENT OF THE DESIGN AND CONSTRUCTION OF THIS HOME. ANY ERRORS AND/OR OMISSIONS FOUND IN THIS SET SHOULD IMMEDIATELY BE REPORTED TO HOMES UNIQUE FOR CLARIFICATION OR CORRECTION. THE CONTRACTOR SHOULD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ONCE A PERMIT HAS BEEN ISSUED FOR CONSTRUCTION, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY TO THE ACCURACY OF THE PLANS AND TO ANY CHANGES MADE BY THE CONTRACTOR AND/OR THE OWNER DURING CONSTRUCTION.

DUE TO VARYING LOCAL AND STATE CODES, HOMES UNIQUE CANNOT BE HELD RESPONSIBLE FOR ANY REQUIREMENTS THAT EXISTING SITE CONDITIONS MAY CREATE.

RESIDENTIAL BUILDING CODE SUMMARY:

1. PLANS ARE DESIGNED TO THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
2. HOUSE IS DESIGNED FOR 115 MPH, 3 SECOND GUST (89 MPH FASTEST WIND), EXPOSURE B.
3. ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER AND SHALL EXTEND 7" MIN. INTO MASONRY OR CONCRETE. BOLTS TO BE NO MORE THAN 6' O.C. AND WITHIN 12" OF THE CORNER.
4. MEAN ROOF HEIGHT: 24'-9"
5. COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS:

MEAN ROOF HGT:	UP TO 30'	30'-1"TO 35'	35'-1"TO 40'	40'-1"TO 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

6. MINIMUM VALUES FOR ENERGY COMPLIANCE: ZONE 4
7. MAXIMUM GLAZING U-FACTOR: .35
8. INSULATING VALUES: CEILING: R-30* / WALLS: R-15 / FLOOR: R-19 / SLABS: R-10. CODE REFERENCE: TABLE N1102.1 (*R-30 ONLY IF UNCOMPRESSED, R-38 REQUIRED IF COMPRESSED.

AREA CALCULATIONS:

HEATED:		UNHEATED:	
1ST FLOOR:	1098	FRONT PORCH:	172
2ND FLOOR:	1385	SCREEN PORCH:	239
TOTAL:	2483	GARAGE:	589
		TOTAL:	1000

OVERALL DIMENSIONS:
54'-10" X 51'-11"

FOUNDATION VENTING CALCULATIONS:

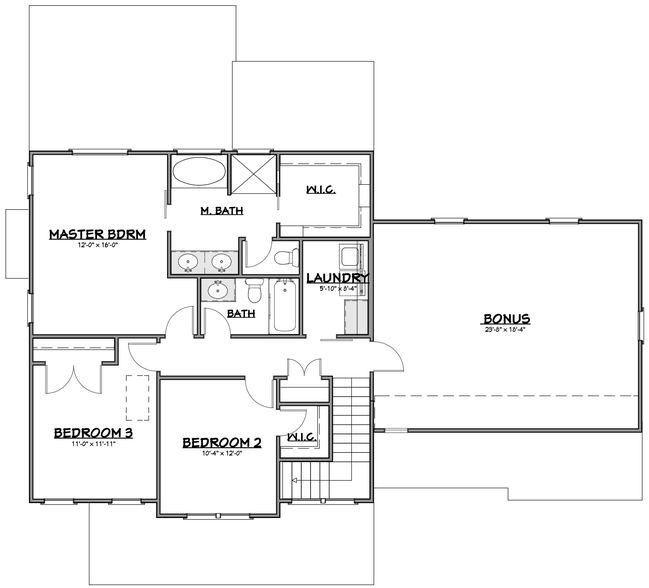
(NOT NEEDED WITH SLAB FOUNDATION)

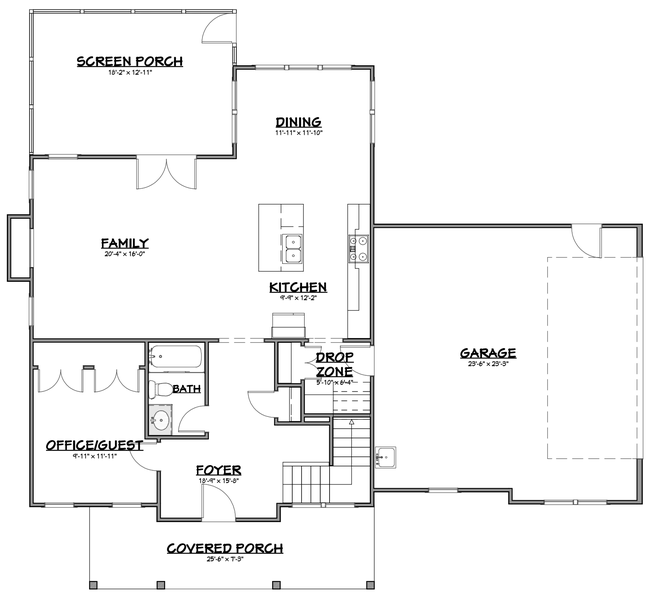
ATTIC VENTILATION REQUIREMENTS:

NATURAL ROOF VENTILATION
2098 SF/ 150 = 13.99 SF VENT REQ'D.

MECHANICAL ROOF VENTILATION
2098 SF/ 300 = 6.99 SF VENT REQ'D.

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE

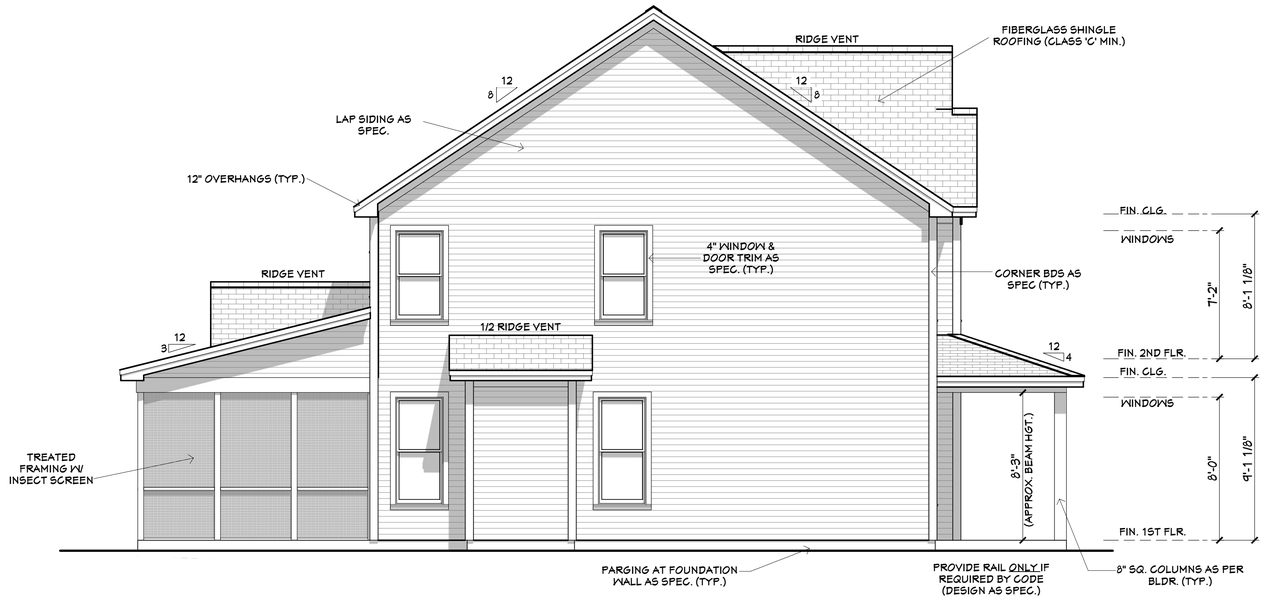




Homes Unique Residential Design Inc.
1027 Hwy 70 West, Suite 223
Garner, NC 27529
919-779-6005
www.homesunique.com

BQuest Homes

Douglas Residence
#4427



Left Side Elevation Scale: 1/4"=1'-0"

SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE

Front Elevation Scale: 1/4"=1'-0"

SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE

homes unique inc
residential design
1027 Hwy 70 West
Suite 223
Garner, NC 27529
919-779-6005
www.homesunique.com

The purpose of these drawings is to show the intent of the design and construction of this home. Contractor should verify all conditions and dimensions prior to construction. Once a permit has been issued, contractor shall assume all responsibility to the accuracy of the plans and any changes made during construction.

PROJECT INFO:
BQuest Homes
Douglas Residence

TITLE:
Elevations

PROJECT NUMBER:
4427

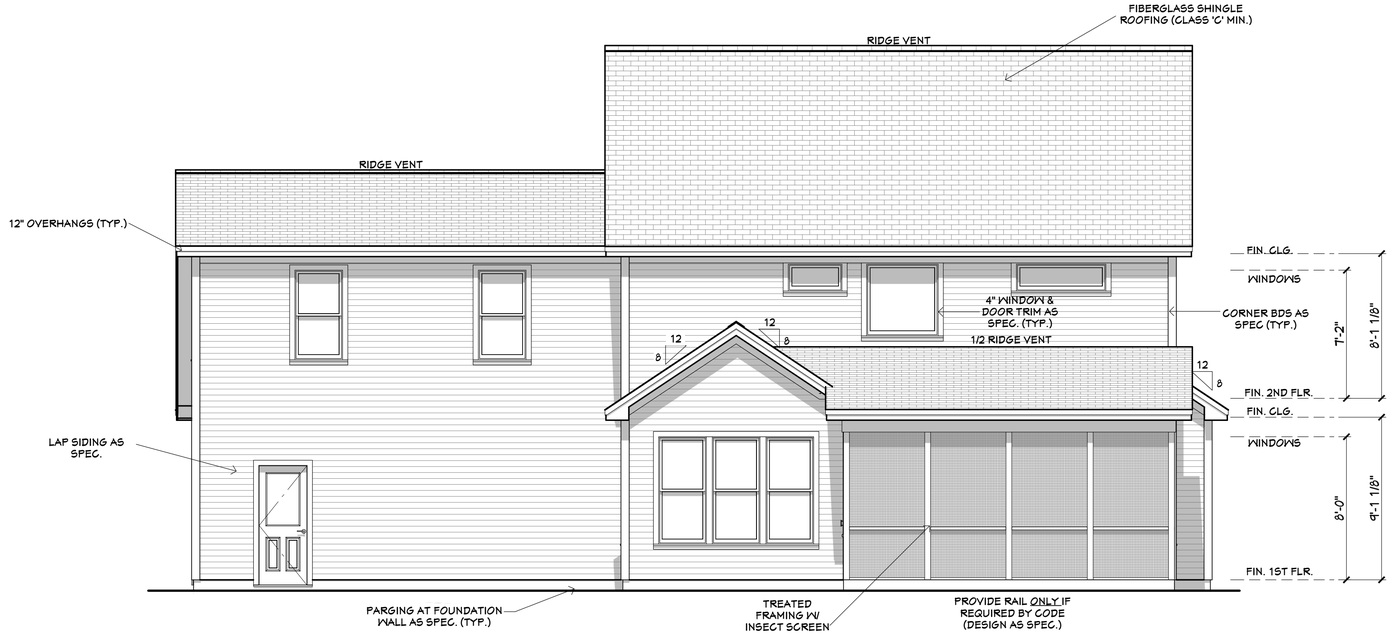
DRAWN BY:
J.A.D.

CHECKED BY:
J.T.S.

REVISIONS:

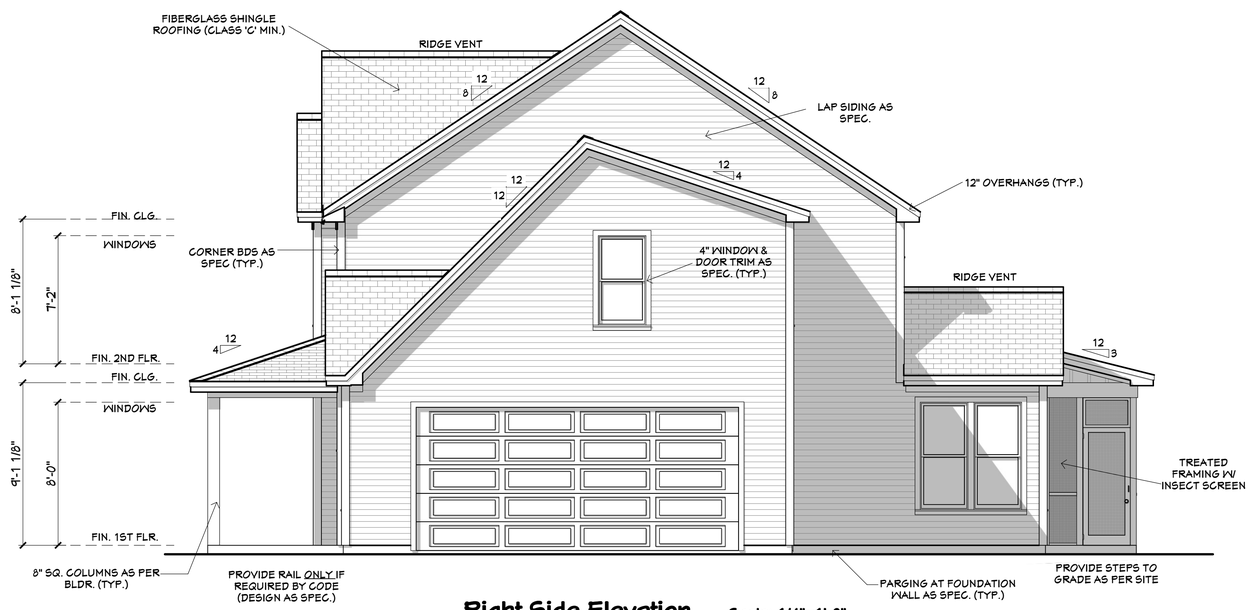
DATE:
6/19/2020

SHEET:
1.1



Rear Elevation Scale: 1/4"=1'-0"

SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE



Right Side Elevation Scale: 1/4"=1'-0"

SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE

homes unique inc
residential design
1027 Hwy 70 West
Suite 223
Garner, NC 27529
919-779-6005
www.homesunique.com

The purpose of these drawings is to show the intent of the design and construction of this home. Contractor should verify all conditions and dimensions prior to construction. Once a permit has been issued, contractor shall assume all responsibility to the accuracy of the plans and any changes made during construction.

PROJECT INFO:
BQuest Homes
Douglas Residence

TITLE:
Elevations

PROJECT NUMBER:
4427

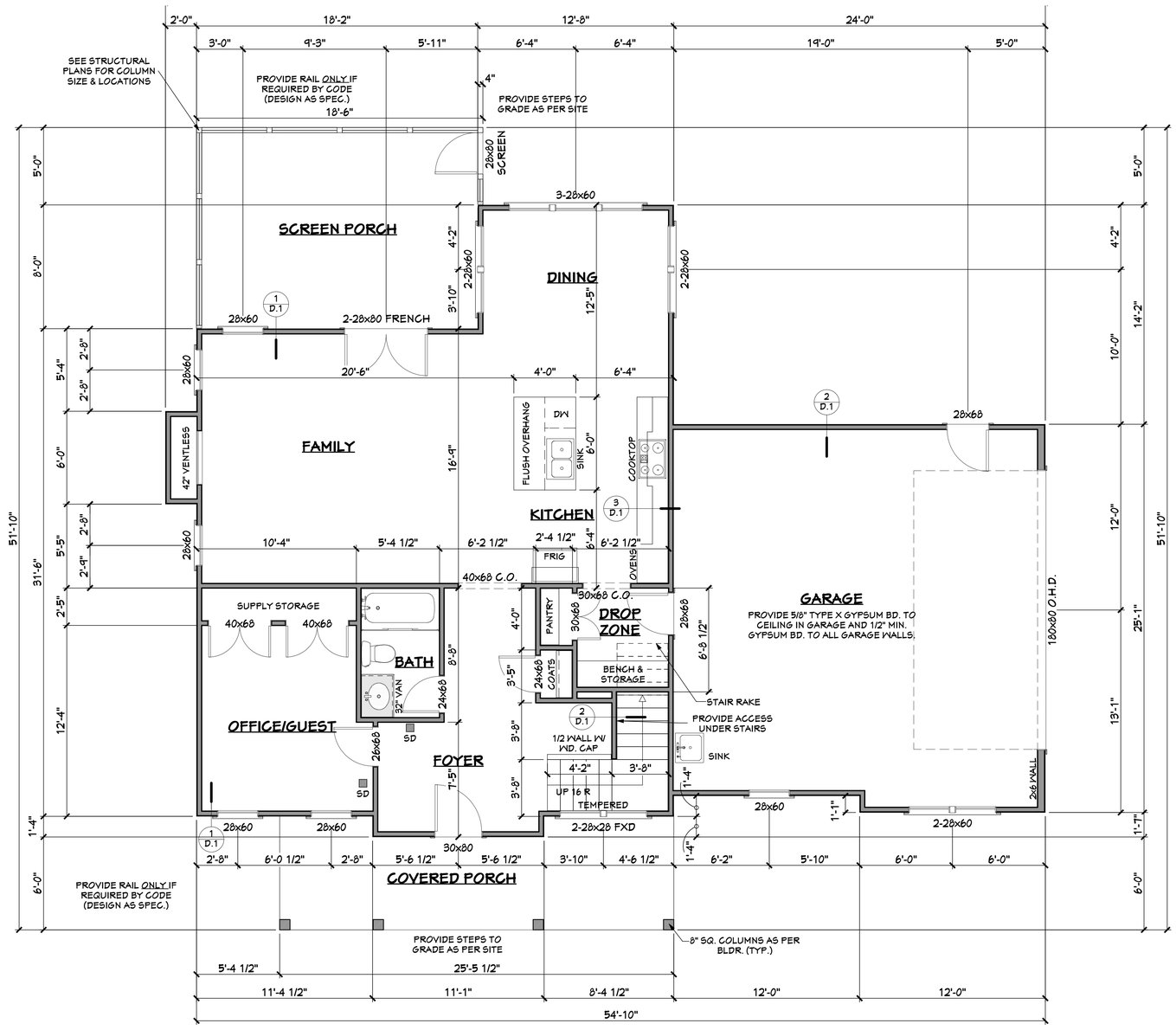
DRAWN BY:
J.A.D.

CHECKED BY:
J.T.S.

REVISIONS:

DATE:
6/19/2020

SHEET:
1.2



PLAN NOTES:

DOOR/WINDOW SYMBOL 28x68 REPRESENTS A 2'-8" WIDE X 6'-8" TALL DOOR.

ROUGH FRAME ALL CASED OPENINGS 2" BIGGER THAN FINISHED OPENINGS CALL FOR.

ALL WALLS 2x4 UNLESS NOTED OTHERWISE.

ALL EXTERIOR DIMENSIONS ARE TO THE OUTSIDE OF SHEATHING. INTERIOR DIMENSIONS ARE FROM FACE OF STUD.

BOTTOM OF WINDOW CLEAR OPENINGS SHALL BE MORE THAN 24" ABOVE FINISH FLOOR OR A FALL PREVENTION DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION R612.3 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.

First Floor Plan — Scale: 1/4"=1'-0"

9'-0" CLG. HGT. — SET WINDOWS @ 8'-0" A.F.F.

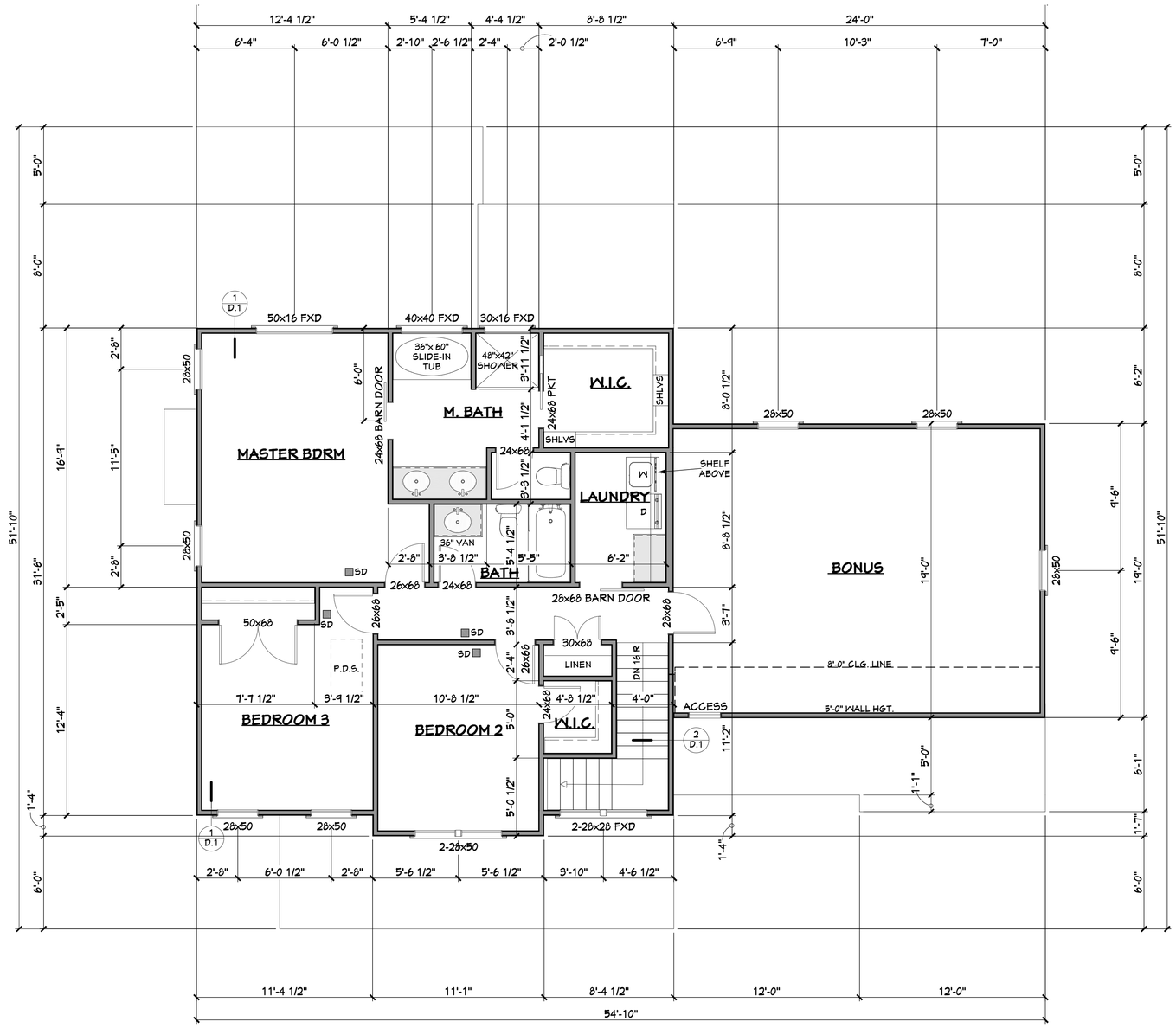
homes unique inc
residential design
1027 Hwy 70 West
Suite 223
Garner, NC 27529
919-779-6005
www.homesunique.com

The purpose of these drawings is to show the intent of the design and construction of this home. Contractor should verify all conditions and dimensions prior to construction. Once a permit has been issued, contractor shall assume all responsibility to the accuracy of the plans and any changes made during construction.

PROJECT INFO:
BQuest Homes
Douglas Residence

TITLE:
Floor Plan

PROJECT NUMBER: 4427
DRAWN BY: J.A.D.
CHECKED BY: J.T.S.
REVISIONS:
DATE: 6/19/2020
SHEET: 2.1



PLAN NOTES:

DOOR/WINDOW SYMBOL 28x68 REPRESENTS A 2'-8" WIDE X 6'-8" TALL DOOR.

ROUGH FRAME ALL CASED OPENINGS 2" BIGGER THAN FINISHED OPENINGS CALL FOR.

ALL WALLS 2x4 UNLESS NOTED OTHERWISE.

ALL EXTERIOR DIMENSIONS ARE TO THE OUTSIDE OF SHEATHING. INTERIOR DIMENSIONS ARE FROM FACE OF STUD.

BOTTOM OF WINDOW CLEAR OPENINGS SHALL BE MORE THAN 24" ABOVE FINISH FLOOR OR A FALL PREVENTION DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION R612.3 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.

Second Floor Plan

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

8'-0" CLG. HGT. SET WINDOWS @ 7'-2" A.F.F.

homes unique inc
residential design
1027 Hwy 70 West
Suite 223
Garner, NC 27529
919-779-6005
www.homesunique.com

The purpose of these drawings is to show the intent of the design and construction of this home. Contractor should verify all conditions and dimensions prior to construction. Once a permit has been issued, contractor shall assume all responsibility to the accuracy of the plans and any changes made during construction.

PROJECT INFO:

BQuest Homes
Douglas Residence

TITLE:

Floor Plan

PROJECT NUMBER: 4427

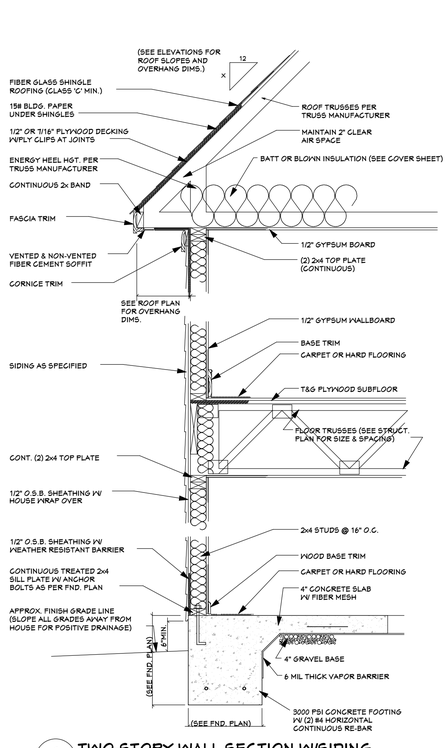
DRAWN BY: J.A.D.

CHECKED BY: J.T.S.

REVISIONS:

DATE: 6/19/2020

SHEET: 2.2

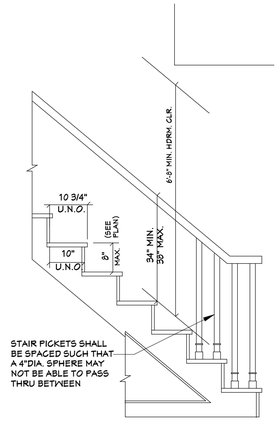


1 TWO-STORY WALL SECTION W/SIDING

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

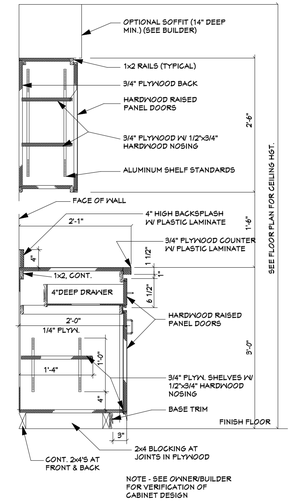
MONO SLAB FOUNDATION

NOTE - PERIMETER SLAB INSULATION MAY BE DELETED IF CONSTRUCTION IS LOCATED IN CLIMATE ZONE 3.



2 TYPICAL STAIR DETAIL

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



3 CABINET DETAIL

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

NOTE - SEE OWNER/BUILDER FOR VERIFICATION OF CABINET DESIGN

homes unique inc
residential design
1027 Hwy 70 West
Suite 223
Garner, NC 27529
919-779-6005
www.homesunique.com

The purpose of these drawings is to show the intent of the design and construction of this home. Contractor should verify all conditions and dimensions prior to construction. Once a permit has been issued, contractor shall assume all responsibility to the accuracy of the plans and any changes made during construction.

PROJECT INFO:

BQuest Homes
Douglas Residence

TITLE:

Sections

PROJECT NUMBER: 4427

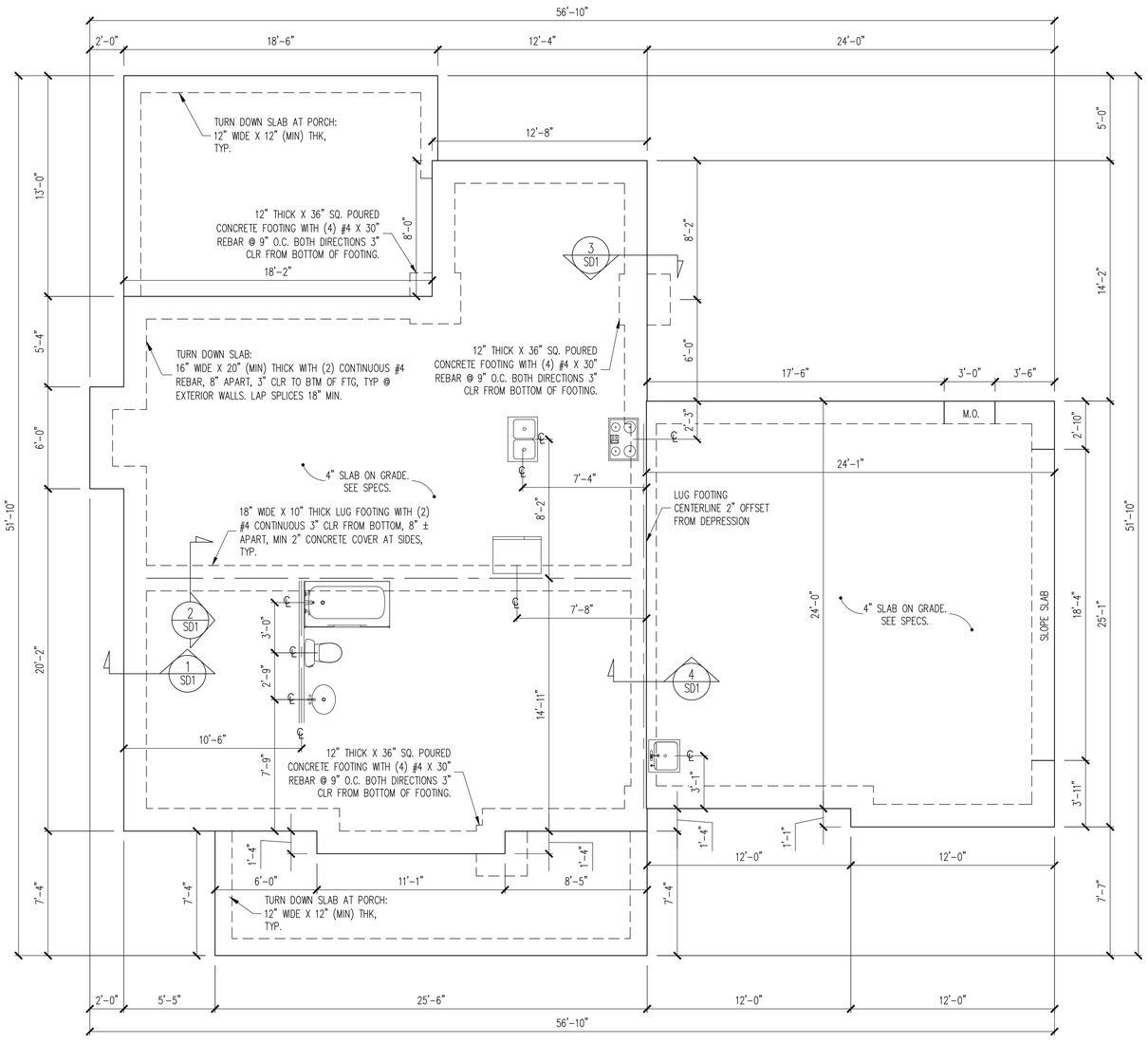
DRAWN BY: J.A.D.

CHECKED BY: J.T.S.

REVISIONS:

DATE: 6/19/2020

SHEET: **D.1**



PLAN DESIGNED UNDER
2018 NORTH CAROLINA
RESIDENTIAL CODE

NOTES:
- HEIGHT AND BACKFILL LIMITATIONS FOR FOUNDATION WALLS ARE TO BE GOVERNED BY THE NCSBC, LATEST EDITION. REINFORCEMENT AND GROUTING SHALL BE DETERMINED BY FINAL SITE CONDITIONS.
- PLUMBING SHOWN FOR REFERENCE ONLY. BUILDER VERIFY FINAL FIXTURE LOCATIONS, SIZES AND REQUIREMENTS PRIOR TO INSTALLATION.

FOUNDATION PLAN

1/4" = 1'-0"

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046734 NATHANIEL B. GRAY

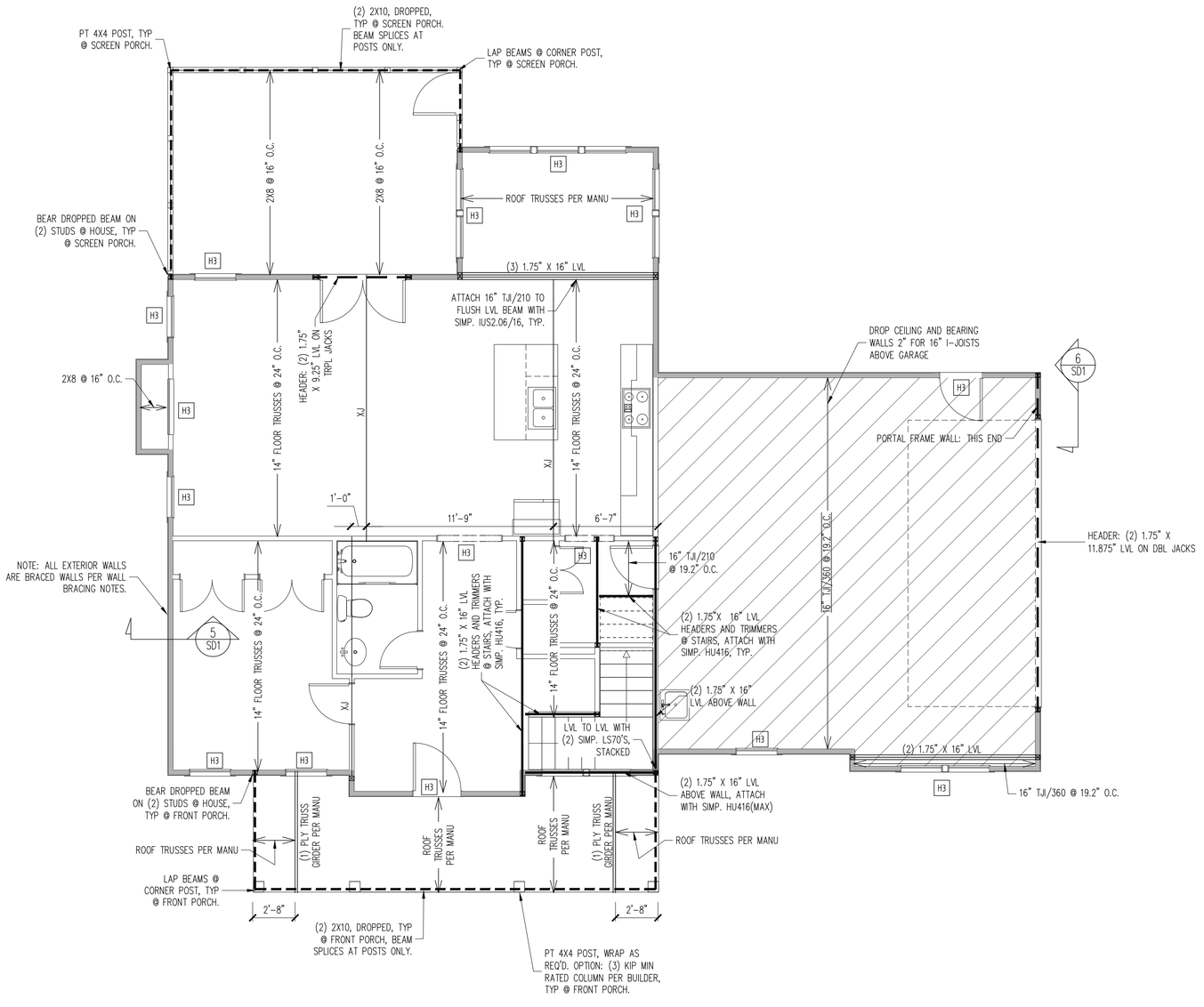
Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
183 Wind Chime Ct, Ste 100
Raleigh, North Carolina 27615
Phone (919) 844-1661

BQUEST HOMES
STRUCTURAL ADDENDUM
SCOPE:
LOC: 1070 W STRICKLAND RD
DOUGLAS RESIDENCE

ENG: NBG/MEB
DATE: 6-19-2020

PROJECT NO.
20-18-207

SHEET NO.
S1
1 of 5



CONSTRUCTION SPECIFICATIONS

INSTANT REFERENCES

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE

PART 14: STUD SUPPORT FOR BEAMS

PART 17: KING STUDS FOR EXTERIOR WALLS

SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

WALL BRACING

SHADED WALLS:

ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

NOTES:
PROVIDED CONTINUOUS SHEATHING = 197' MIN.

REFERENCE PART 16.02 OF CONSTRUCTION SPECIFICATIONS FOR GENERAL WIND BRACING INFORMATION.

HEADER SCHEDULE

H1 SINGLE 2X4 TURNED FLAT (A)

H2 (2) 2X4'S ON SINGLE JACKS (B)

H3 (2) 2X10'S ON SINGLE JACKS (C)

H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS

H5 (3) 2X10'S ON SINGLE JACKS

(A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.

(B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.

(C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:
-HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

1ST FLOOR FRAMING PLAN

WALLS AND CEILING

1/4" = 1'-0"

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046734 NATHANIEL B. GRAY

Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
183 Wind Chime Ct, Ste 100
Raleigh, North Carolina 27615
Phone (919) 844-1661

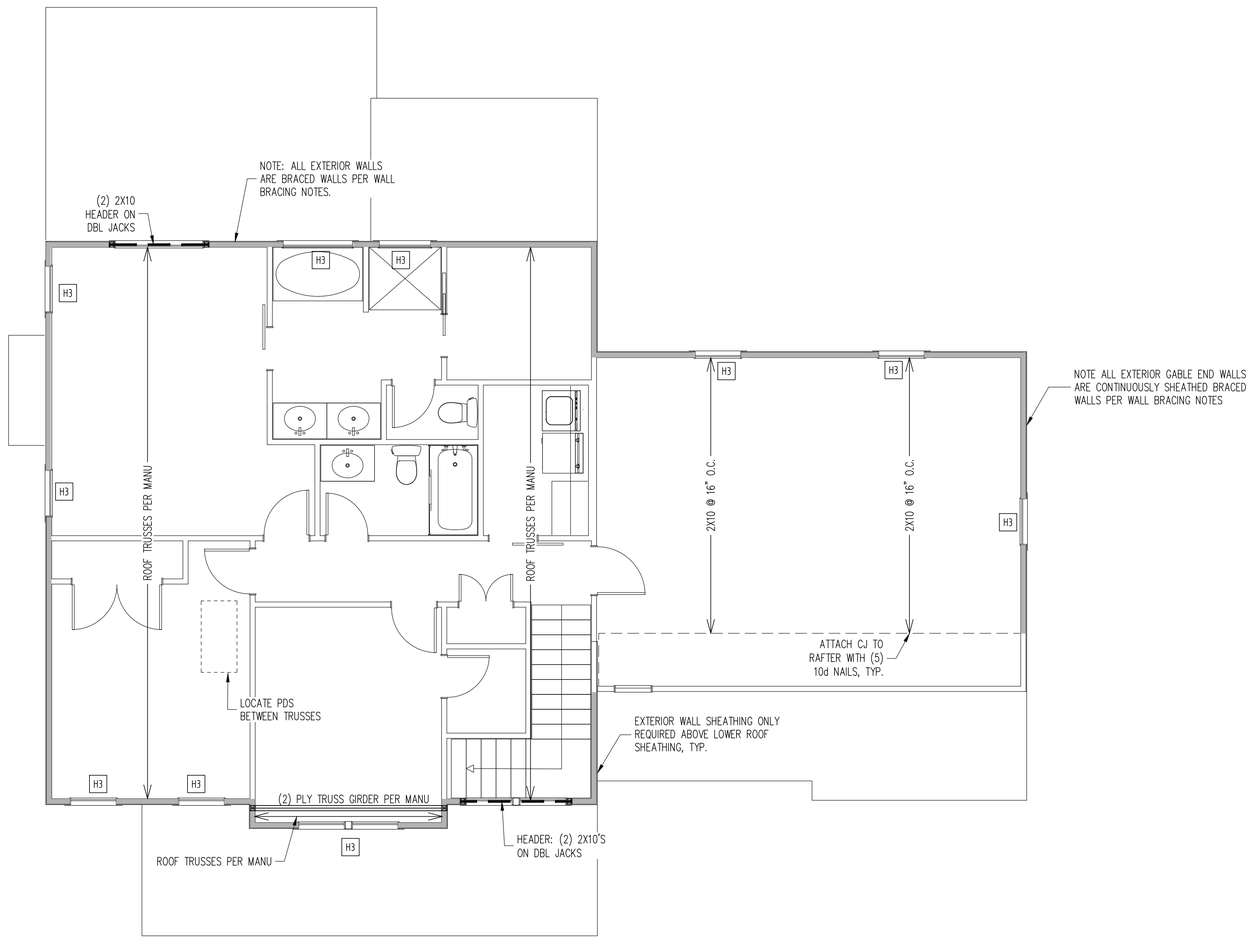
SCOPE: BQUEST HOMES
STRUCTURAL ADDENDUM

LOC: 1070 W STRICKLAND RD
DOUGLAS RESIDENCE

ENG: NBG/MEB
DATE: 6-19-2020

PROJECT NO.
20-18-207

SHEET NO.
S2
2 of 5



CONSTRUCTION SPECIFICATIONS

INSTANT REFERENCES

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE

PART 14: STUD SUPPORT FOR BEAMS

PART 17: KING STUDS FOR EXTERIOR WALLS

SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

WALL BRACING

SHADED WALLS:

ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

NOTES:
PROVIDED CONTINUOUS SHEATHING = 127' MIN.

REFERENCE PART 16.02 OF CONSTRUCTION SPECIFICATIONS FOR GENERAL WIND BRACING INFORMATION.

HEADER SCHEDULE

H1 SINGLE 2X4 TURNED FLAT (A)

H2 (2) 2X4'S ON SINGLE JACKS (B)

H3 (2) 2X10'S ON SINGLE JACKS (C)

H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS

H5 (3) 2X10'S ON SINGLE JACKS

(A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.

(B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.

(C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:
-HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

2ND FLOOR FRAMING PLAN

WALLS AND CEILING

1/4" = 1'-0"

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046784 NATHANIEL B. GRAY

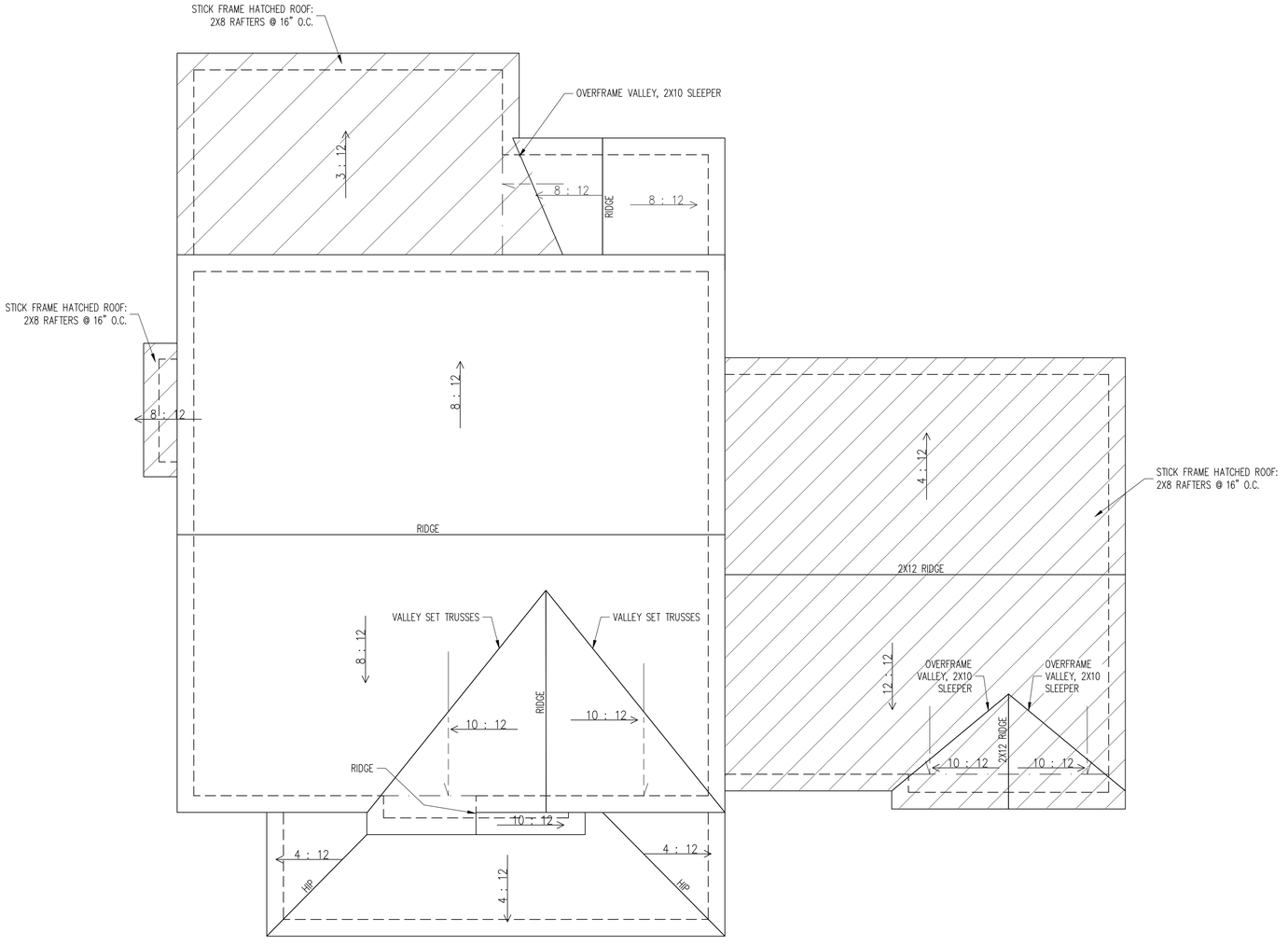
Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
183 Wind Chime Ct, Ste 100
Raleigh, North Carolina 27615
Phone (919) 844-1661

BQUEST HOMES
SCOPE: STRUCTURAL ADDENDUM
LOC: 1070 W STRICKLAND RD
DOUGLAS RESIDENCE

ENG: NBG/MEB
DATE: 6-19-2020

PROJECT NO.
20-18-207

SHEET NO.
S3
3 of 5



FRAMING NOTES

ROOF ONLY

- COMMON RAFTERS 2X8 @ 16" O.C. TYP U.N.O.
- COLLAR TIES 2X4 EVERY 3RD SET OF RAFTERS TYP U.N.O.
- ROOF PITCHES 12:12 TYP U.N.O.

- VERIFY ROOF PITCHES, OVERHANG LENGTHS, AND KNEEWALL FRAMING HGTS WITH ARCHITECTURAL DRAWINGS, TYPICAL.

TRUSS UPLIFT CONNECTORS

EXPOSURE B, 120 MPH, ANY PITCH

24" O.C. MAX ROOF TRUSS SPACING

TRUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS, KNEEWALLS OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE BELOW.

ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.

ROOF SPAN	CONNECTOR
UP TO 18'	NAILING PER TABLE 602.3(1) NCRBC 2018 EDITION
OVER 18'	(1) SIMPSON H2.5A HURRICANE CLIP TO DBL TOP PLATE OR BEAM

FRAMING NOTES

ROOF ONLY

- ROOF TRUSSES PER MANU. TYPICAL U.N.O.

- VERIFY ALL KNEEWALL HEIGHTS, ROOF PITCHES, AND ARCHITECTURAL OVERHANGS PRIOR TO CONSTRUCTION

ROOF FRAMING PLAN

1/4" = 1'-0"

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046784 NATHANIEL B. GRAY

Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
183 Wind Chime Ct, Ste 100
Raleigh, North Carolina 27615
Phone (919) 844-1661

BQUEST HOMES
SCOPE: STRUCTURAL ADDENDUM
LOC: 1070 W STRICKLAND RD
DOUGLAS RESIDENCE

ENG: NBG/MEB
DATE: 6-19-2020

PROJECT NO.
20-18-207

SHEET NO.
S4
4 of 5

CONSTRUCTION SPECIFICATIONS

PART 1: GENERAL

1.01 CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.

1.02 DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.

1.05 METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

PART 2: DESIGN LOADS

2.01 DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW:

USE	LIVE LOAD (PSF)	DEAD LOAD (PSF)
BALCONIES, DECKS, ATTICS WITH FIXED STAIR ACCESS, DWELLING UNITS INCLUDING ATTICS WITH FIXED STAIR ACCESS, STAIRS, FIRE ESCAPES	40	10
GARAGES (PASSENGER CARS ONLY)	50	--
ATTICS (NO STORAGE, LESS THAN 5' HEADROOM)	10	10
ATTICS (WITH STORAGE)	20	10
ROOF	20	10 (15 FOR VAULTS)

NOTES: – INDIVIDUAL STAIR TREADS ARE TO BE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LIVE LOAD OF 40 PSF OR A 300 LB. CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQ. WHICHEVER PRODUCES THE GREATER STRESS.
– BUILDER TO VERIFY DEAD LOAD DOES NOT EXCEED 10 PSF WHEN HEAVY FLOOR OR ROOF FINISHES SUCH AS TILE OR SLATE ARE UTILIZED. NOTIFY ENGINEERING UNDER THESE CONDITIONS

2.02 INTERIOR WALLS: 5 PSF LATERAL.

2.03 BASIC WIND DESIGN VELOCITY OF 120 MPH.

2.04 SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).

PART 5: CONCRETE AND SLABS ON GRADE

5.01 CAST IN PLACE CONCRETE SHALL BE OF NORMAL WEIGHT, 6% AIR ENTRAINMENT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS TYP UNO. ALL CONCRETE, INCLUDING CONCRETE FOR FOOTINGS, IS TO BE CAST IN PLACE, TYP UNO.

5.02 REINFORCED CAST IN PLACE CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI 318, LATEST EDITION.

5.03 SLABS ON GRADE, IF ANY, SHALL CONTAIN SYNTHETIC POLYPROPYLENE FIBRILLATED MICRO FIBERS, FIBER LENGTH 1 1/2", DOSAGE RATE 1 1/2 LBS/CU YD. SLAB TO BE PLACED ON A 6 MIL VAPOR BARRIER ON 2" MIN GRANULAR FILL ON SOIL WITH 90% MIN STANDARD PROCTOR DENSITY. VAPOR BARRIER MAY BE OMITTED FOR SLABS NOT IN ENCLOSED AREAS

PART 7: MASONRY

7.01 CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND C55, NORMAL WEIGHT, f'M = 1,500 PSI MIN

7.02 CLAY MASONRY UNITS SHALL CONFORM TO ASTM C62-17 GRADE SW

7.03 MORTAR SHALL BE TYPE S. MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.

7.04 MASONRY CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS OF ACI 530

7.05 LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS

PART 8: BOLTS AND LAG SCREWS

8.01 BOLTS SHALL CONFORM TO ASTM A307 MINIMUM GRADE TYP UNO. INSTALL STANDARD STEEL WASHERS (ASTM F844-07a) FOR THE NUT / BOLT HEAD WHEN BOLTING WOOD MEMBERS

8.02 LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. PILOT HOLES SHALL BE USED FOR LAG SCREW INSTALLATION AND SHALL BE BORED ACCORDING TO NDS SPECIFICATIONS. INSTALL STANDARD STEEL WASHERS (ASTM F844-07a) FOR SCREW HEAD

8.03 ANCHOR RODS AND BOLTS SHALL CONFORM TO ASTM F1554-15 GRADE 36 UNO. BENT ANCHOR BOLTS SHALL HAVE A 2" MIN HOOK UNO

PART 9: DRIVEN FASTENERS

9.01 NAILS, SPIKES AND STAPLES SHALL CONFORM TO ASTM F 1667- 05. NAILS ARE TO BE COMMON WIRE OR BOX

PART 10: DIMENSIONAL LUMBER

10.01 SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR OR SYP #2 FOR JOISTS, RAFTERS, GIRDERS, BEAMS, STUDS, ETC.

PART 11: ENGINEERED LUMBER

11.01 LVL OR PSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
E= 1.9 X 10E6 PSI, Fb = 2600 PSI, Fv = 285 PSI, Fc = 750 PSI
LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
E= 1.3 X 10E6 PSI, Fb = 1700 PSI, Fv = 400 PSI, Fc = 680 PSI

11.02 LVL OR PSL MEMBERS MAY BE RIPPED FROM DEEPER MEMBERS TO MATCH THE MEMBER DEPTH SPECIFIED IN THE PLANS

PART 12: PRESSURE TREATED LUMBER

12.01 LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD C-15. ALL OTHER EXPOSED LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD C-2 OR BY ANY METHOD GIVING EQUAL PROTECTION. THE BUILDING CODE OFFICE MAY ALSO APPROVE A NATURAL DECAY RESISTANT WOOD PER SECTION 19-6(A)

PART 14: STUD SUPPORTS FOR BEAMS

14.01 STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

1-WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED AND SHALL BE SUPPORTED BY A MINIMUM OF THREE GANGED STUDS, OR A GANGED STUD COLUMN WITH A NUMBER OF STUDS SUCH THAT THE STUD COLUMN IS AT LEAST AS WIDE AS THE TRUE WIDTH OF THE BEAM BEING SUPPORTED, WHICHEVER IS GREATER, TYP UNO. FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
2-BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 4 1/2" ONTO THE WALL AND BE SUPPORTED BY A TRPL STUD GANGED COLUMN TYP UNO.

14.02 DIMENSIONAL LUMBER BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

1-WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED (LESS 1 1/2" TO ALLOW FOR A CONTINUOUS RIM JOIST WHERE APPLICABLE) AND SHALL BE SUPPORTED BY A GANGED STUD COLUMN THE SAME WIDTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2X10 IS TO BE SUPPORTED BY (3) STUDS). FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
2-BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 3" ONTO THE WALL AND BE SUPPORTED BY A DBL STUD GANGED COLUMN TYP UNO.

14.03 EXTRA JOISTS BEARING ON A STUD WALL PERPENDICULAR TO OR SKEWED RELATIVE TO THE BEAM SHALL BE SUPPORTED BY ONE ADDITIONAL STUD.

14.04 STUDS THAT ARE GANGED TO FORM A COLUMN SHALL HAVE ADJACENT STUDS WITHIN THE COLUMN NAILED TOGETHER WITH ONE ROW OF 10d NAILS AT 8" O.C. (TWO ROWS OF 10d NAILS @ 8" O.C., 3" APART, FOR 2X8 OR 2X10 STUDS) ALL COLUMNS SHALL BE CONTINUOUS DOWN TO THE FOUNDATION OR OTHER PROPERLY DESIGNED STRUCTURAL ELEMENT SUCH AS A BEAM. COLUMNS TRANSFERRING LOADS THROUGH FLOOR LEVELS SHALL BE SOLIDLY BLOCKED FOR THE FULL WIDTH OF THE STUD COLUMN WITHIN THE CAVITY FORMED BY THE FLOOR JOISTS.

PART 15: NAILING OF MULTI PLY WOOD BEAMS

15.01 SOLID SAWN LUMBER JOISTS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM NAILED TOGETHER WITH THREE ROWS OF 10d NAILS @ 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS @ 16" O.C. FOR 2X8, ONE ROW OF 10d NAILS @ 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.

15.02 LVL MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURERS RECOMMENDATIONS, TYP UNO

PART 16: WALL FRAMING AND BRACING

16.01 STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CEILING OR ROOF. NO INTERMEDIATE BANDS OR PLATES SHALL CAUSE DISCONTINUITIES IN A STUD WALL EXCEPT AS REQUIRED FOR DOOR OR WINDOW OPENINGS. THE KING STUDS FOR SUCH OPENINGS SHALL BE CONTINUOUS, TYP UNO

16.02 FOR WALL BRACING THE FOLLOWING SHALL APPLY:
-BLOCKING AT UNSUPPORTED PANEL EDGES IS REQUIRED TYP UNO.
-WALL BRACING IS BY ENGINEERED DESIGN AND NOT PRESCRIPTIVE PER SECTION 602.10 OF THE 2018 NCRC. CONTINUOUS SHEATHING HAS BEEN PROVIDED, ALONG WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10 OF THE 2018 NCRC HAS BEEN MET AND EXCEEDED.
-BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO PROVIDE CONTINUOUS PANEL UPLIFT RESISTANCE AND COMPLIANCE WITH NCRBC R602.3.5 AND R802.11 UNLESS NOTED OTHERWISE ON STRUCTURAL PLANS.
-MAY SUBSTITUTE WSP FOR GB
-SINGLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED ABOVE AND BELOW ALL BRACED WALLS. NAIL BLOCKING ABOVE WALL TO TOP PLATE WITH 16d TOE NAILS @ 6" O.C. NAIL SOLE PLATE OF BRACED WALL TO BLOCKING BELOW WITH (3) 16d NAILS @ 16" O.C. BLOCKING AT HORIZONTAL JOINTS IN BRACED WALL LINES ONLY REQUIRED AT SHADED WALLS, UNO.

PART 17: KING STUDS

17.01 KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS:

	MAX OPENING WIDTH (NUMBER OF KING STUDS)	5'-0"	9'-0"	13'-0"	17'-0"	21'-0"
STUD SIZE	2X4	1	2	3	4	5
	2X6	1	1	2	2	2
	2X8	1	1	1	1	2

PART 18: SUBSTITUTIONS

18.01 MATERIAL OR MEMBER SIZE SUBSTITUTIONS OR PLAN DEVIATIONS REQUIRE THE WRITTEN AUTHORIZATION OF THE DESIGNERS. UNAUTHORIZED DEVIATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PART 19: OWNERSHIP OF STRUCTURAL DESIGN

19.01 THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF ENGINEERING TECH ASSOCIATES (ETA). THESE PLANS ARE FOR THE ONE TIME USE AT THE LOCATION INDICATED AND FOR THE CLIENT LISTED. ETA ASSUMES NO LIABILITY FOR THESE PLANS IF THEY ARE REPRODUCED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM ETA

DECK SPECIFICATIONS

1. A DECK IS AN EXPOSED EXTERIOR WOOD FLOOR STRUCTURE WHICH MAY BE ATTACHED TO A STRUCTURE OR BE FREE STANDING. ROOFED PORCHES, OPEN OR SCREENED IN, MAY BE CONSTRUCTED USING THESE PROVISIONS.

2. SUPPORT POSTS SHALL BE SUPPORTED BY A FOOTING.

3. WHEN ATTACHED TO A STRUCTURE, THE STRUCTURE TO WHICH ATTACHED SHALL HAVE A TREATED WOOD BAND FOR THE LENGTH OF THE DECK, OR CORROSION RESISTANT FLASHING SHALL BE USED TO PREVENT MOISTURE FROM COMING IN CONTACT WITH THE UNTREATED FRAMING OF THE STRUCTURE. THE DECK BAND AND THE STRUCTURE BAND SHALL BE CONSTRUCTED IN CONTACT WITH EACH OTHER EXCEPT AT BRICK VENEER AND WHERE PLYWOOD SHEATHING IS REQUIRED AND PROPERLY FLASHED. SIDING SHALL NOT BE INSTALLED BETWEEN THE STRUCTURE AND THE DECK BAND. IF ATTACHED TO A BRICK STRUCTURE, NEITHER FLASHING NOR A TREATED BAND FOR THE BRICK STRUCTURE IS REQUIRED. IN ADDITION, THE TREATED DECK BAND SHALL BE CONSTRUCTED IN CONTACT WITH THE BRICK

4. WHEN THE DECK IS SUPPORTED AT THE STRUCTURE BY ATTACHING THE DECK TO THE STRUCTURE, THE FOLLOWING ATTACHMENT SCHEDULES SHALL APPLY FOR ATTACHING THE DECK BAND TO THE STRUCTURE:

A. ALL STRUCTURES EXCEPT BRICK STRUCTURES

	JOIST LENGTH	
	UP TO 8' MAX.	UP TO 16' MAX.
REQUIRED FASTENERS	ONE- 5/8" ø BOLT @ 42" O.C. AND (2) ROWS OF 12d NAILS @ 8" O.C. OR TWO ROWS OF SIMPSON SDWS22400DB @ d = 32" O.C. STAGGERED	ONE- 5/8" ø BOLT @ 20" O.C. AND (3) ROWS OF 12d NAILS @ 6" O.C. OR TWO ROWS OF SIMPSON SDWS22400DB @ d = 16" O.C. STAGGERED

A . BRICK VENEER STRUCTURES

	JOIST LENGTH	
	UP TO 8' MAX.	UP TO 16' MAX.
REQUIRED FASTENERS	ONE- 5/8" ø BOLT @ 28" O.C.	ONE- 5/8" ø BOLT @ 16" O.C.

5. IF THE DECK BAND IS SUPPORTED BY A 1/2" MINIMUM MASONRY LEDGE ALONG THE FOUNDATION WALL, 5/8" ø BOLTS SPACED @ 48" O.C. MAY BE USED FOR SUPPORT.

6. OTHER MEANS OF SUPPORT, SUCH AS JOIST HANGERS, MAY BE USED TO CONNECT DECK JOISTS TO A TREATED STRUCTURE BAND

7. GIRDERS SHALL BEAR DIRECTLY ON POSTS OR BE BE CONNECTED TO THE SIDES OF POSTS WITH 2- 5/8" ø BOLTS

8. FLOOR DECKING SHALL BE NO. 2 GRADE TREATED SOUTHERN PINE OR EQUIVALENT. THE MINIMUM FLOOR DECKING THICKNESS SHALL BE AS FOLLOWS:

JOIST SPAN	DECKING
12" O.C.	1" S4S
16" O.C.	1" T&G
24" O.C.	1 1/4" S4S
32" O.C.	2" S4S

9. MAXIMUM HEIGHT OF DECK SUPPORT POSTS IS AS FOLLOWS:

POST SIZE	MAX POST HEIGHT
4X4	8'
6X6	20'
ENGINEERED	20' +

NOTES: 1) THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS.
2) THIS TABLE IS BASED ON A MAXIMUM TRIBUTARY AREA OF 128 SQ. FT.
3) POST HEIGHT IS FROM TOP OF FOOTING TO BOTTOM OF GIRDER.

10. DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THE FOLLOWING METHODS:

A. WHEN THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION 4, LATERAL BRACING IS NOT REQUIRED.

B. 4X4 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° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE ATTACHED AT THE ENDS TO THE GIRDER AND THE POST WITH ONE – 5/8"ø BOLT

C. FOR FREE STANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POSTS IN CONCRETE IN ACCORDANCE WITH THE FOLLOWING:

POST SIZE	TRIBUT. AREA	POST HEIGHT	EMB. DEPTH	CONC. DIAM.
4X4	48 SQ. FT.	4'-0"	2'-6"	1'-0"
6X6	120 SQ. FT.	6'-0"	3'-6"	1'-8"

D. 2X6 DIAGONAL VERTICAL CROSS BRACING SHALL BE PROVIDED IN TWO PERPENDICULAR DIRECTIONS FOR FREE STANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE BRACES SHALL BE ATTACHED TO THE POSTS WITH ONE – 5/8" ø BOLT AT EACH END OF THE BRACE.

NOTES: 1) ALL NAILS AND BOLTS ARE TO BE HOT DIPPED GALVANIZED.
2) MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2".
3) NAILS MUST PENETRATE THE SUPPORTING STRUCTURE BAND A MINIMUM OF 1 1/2".

ALLOWABLE I-JOIST SUBSTITUTION

NOTE: MAINTAIN JOIST DEPTH, DIRECTION, AND SPACING SPECIFIED ON PLANS.

MANUFACTURER	DEPTH	SERIES	SIMPSON FACE MOUNT HGR	SIMPSON TOP FLANGE HGR
BLUELINX	16"	BLI 40	IUS2.56/16	ITS2.56/16
BLUELINX	16"	BLI 60	IUS2.56/16	ITS2.56/16
BOISE CASCADE	16"	BCI 5000s	IUS2.06/16	ITS2.06/16
BOISE CASCADE	16"	BCI 6000S	IUS2.37/16	ITS2.37/16
INTERN. BEAMS	16"	IB 600	IUS2.56/16	ITS2.56/16
LP CORP	16"	LPI 20+	IUS2.56/16	ITS2.56/16
NORDIC	16"	NI 40X	IUS2.56/16	ITS2.56/16
ROSEBURG	16"	RFPI 60S	IUS2.56/16	ITS2.56/16
WEYERHAEUSER	16"	TJI 210	IUS2.06/16	ITS2.06/16
BOISE CASCADE	16"	BCI 60s	IUS2.37/16	ITS2.37/16
LP CORP	16"	LP 36	IUS2.37/16	ITS2.37/16
LP CORP	16"	LP 42+	IUS2.56/16	ITS2.56/16
NORDIC	16"	NI 70	IUS2.56/16	ITS2.56/16
ROSEBURG	16"	RFPI 70	IUS2.37/16	ITS2.37/16
WEYERHAEUSER	16"	TJI 360	IUS2.37/16	ITS2.37/16
WEYERHAEUSER	16"	EEI-30	IUS2.37/16	ITS2.73/16

JOISTS NOT LISTED IN THE ABOVE TABLE MAY BE USED PROVIDED THEY MEET OR EXCEED THE PROPERTIES OF THOSE LISTED. SUBSTITUTE USP BRAND HANGERS WITH EQUIVALENT VALUES AS DESIRED.

NOTES

THE BUILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER SHALL IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE FOLLOWING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION:
1) THE WORKING PLANS DO NOT BEAR THE SEAL OF THE EOR
2) THE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION

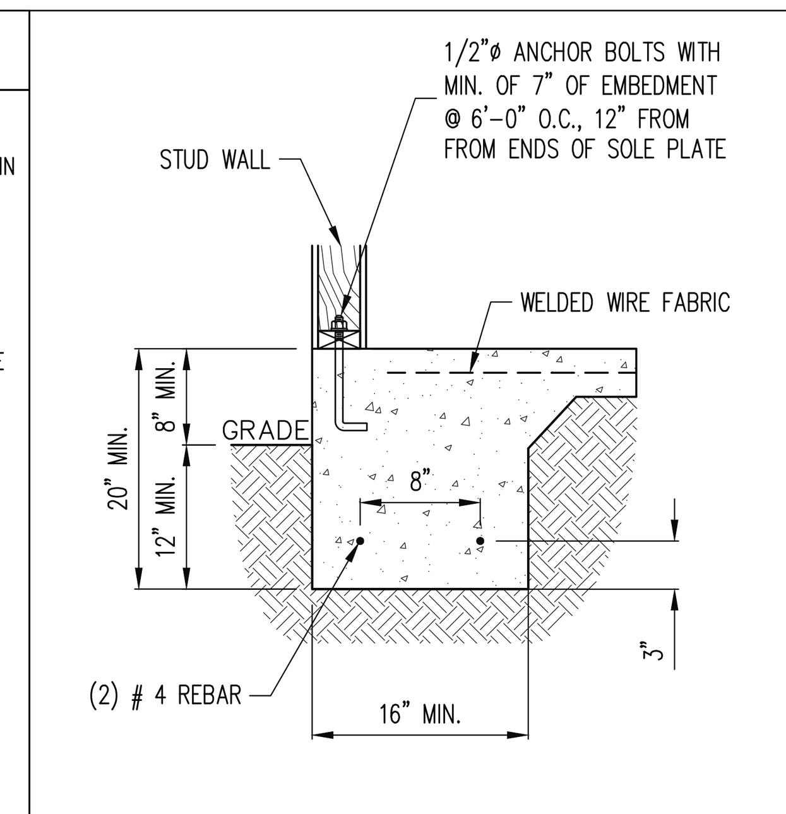
ANY ERRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE RESPONSIBILITY OF THE EOR. FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO ENSURE THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE SUBCONTRACTORS

THE EOR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER CALCULATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING.

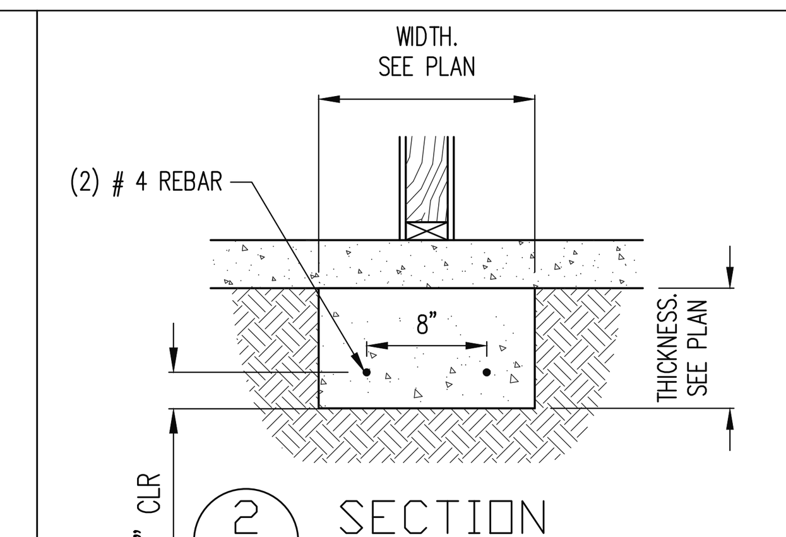
ROOF AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE. FINAL TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

ABBREVIATIONS

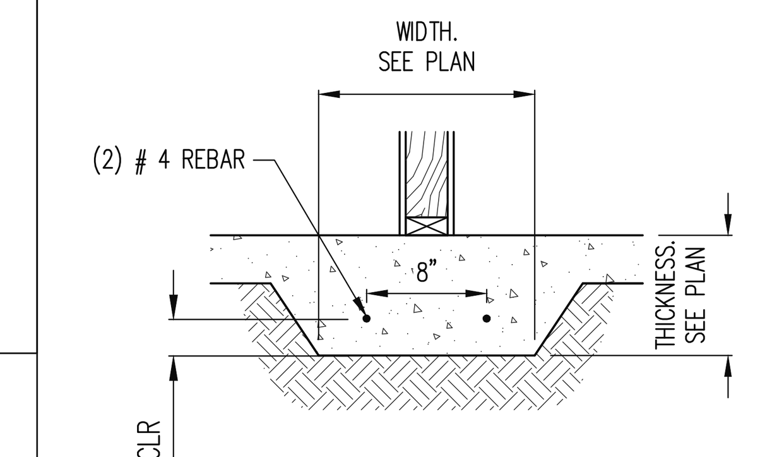
ABV	ABOVE	FND	FOUNDATION	TJ	TRIPLE JOIST
B.	BOTH	FTG	FOOTING	TYP	TYPICAL
B.E.	BOTH ENDS	HDG	HOT DIPPED GALVANIZED	TRPL	TRIPLE
BTWN	BETWEEN	HGR	HANGER	TSP	TRIPLE STUD POCKET
CIP	CAST IN PLACE	LVL	LAMINATED VENEER LUMBER	UNO	UNLESS NOTED OTHERWISE
CONC	CONCRETE	NTS	NOT TO SCALE	XJ	EXTRA JOIST
CS	CONTINUOUS SHEATHING	O.C.	ON CENTER		
DIA	DIAMETER	PSL	PARALLEL STRAND LUMBER		
DBL	DOUBLE	PT	PRESSURE TREATED		
DJ	DOUBLE JOIST	QJ	QUAD JOIST		
DSP	DBL STUD POCKET	SP	STUD POCKET		
EQ	EQUAL	SQ	SQUARE		
EA	EACH				
FLG	FLANGE				
FL PL	FLITCH PLATE				
FLR	FLOOR				



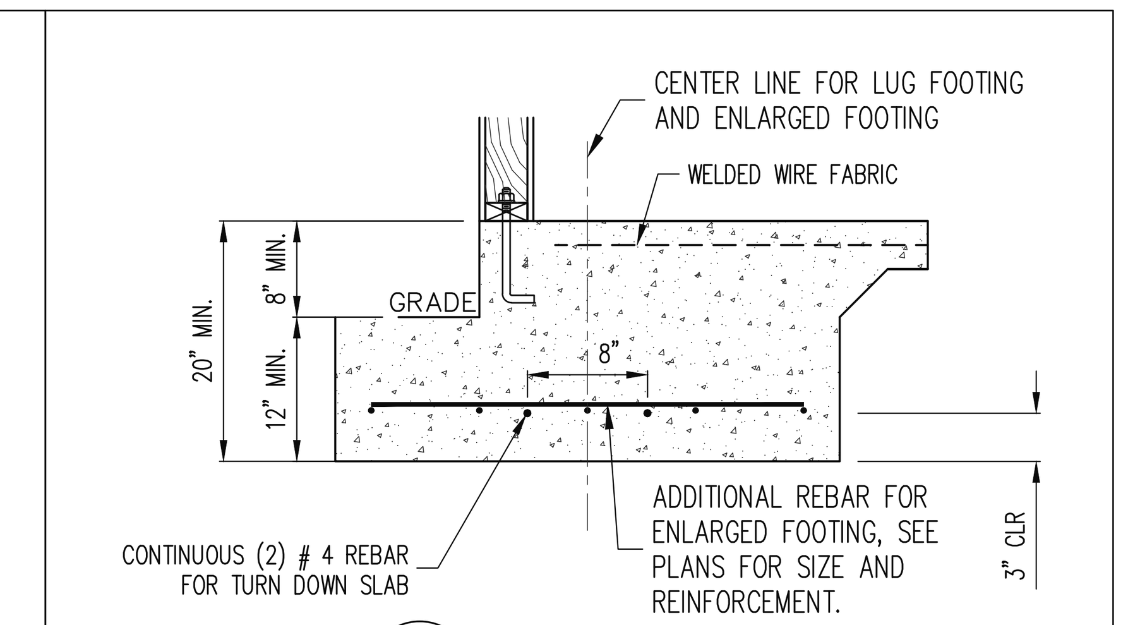
1 SECTION S1 TURN DOWN SLAB 3/4" = 1'-0"



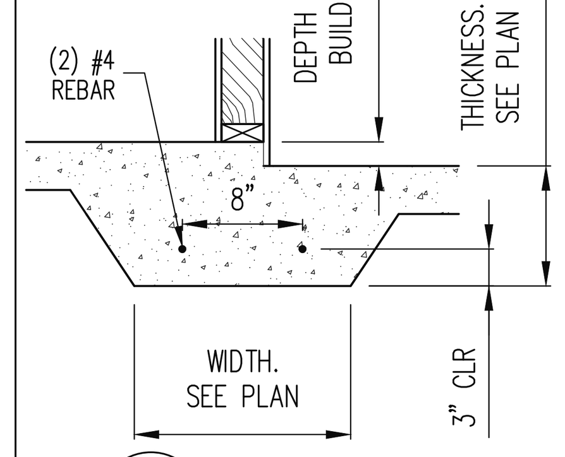
2 SECTION S1.0 LUG FOOTING, COLD JOINT OPTION 1/2" = 1'-0"



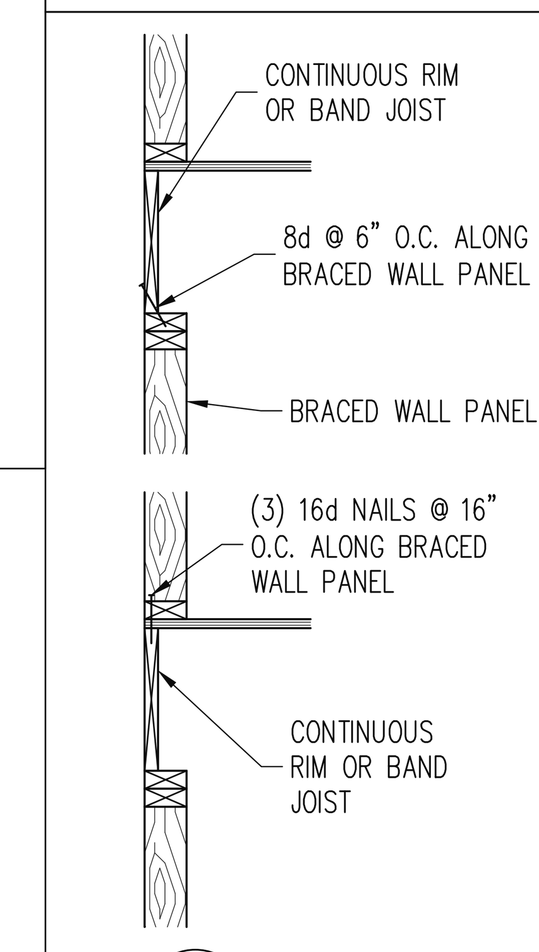
2 SECTION S1 LUG FOOTING, MONOLITHIC OPTION 3/4" = 1'-0"



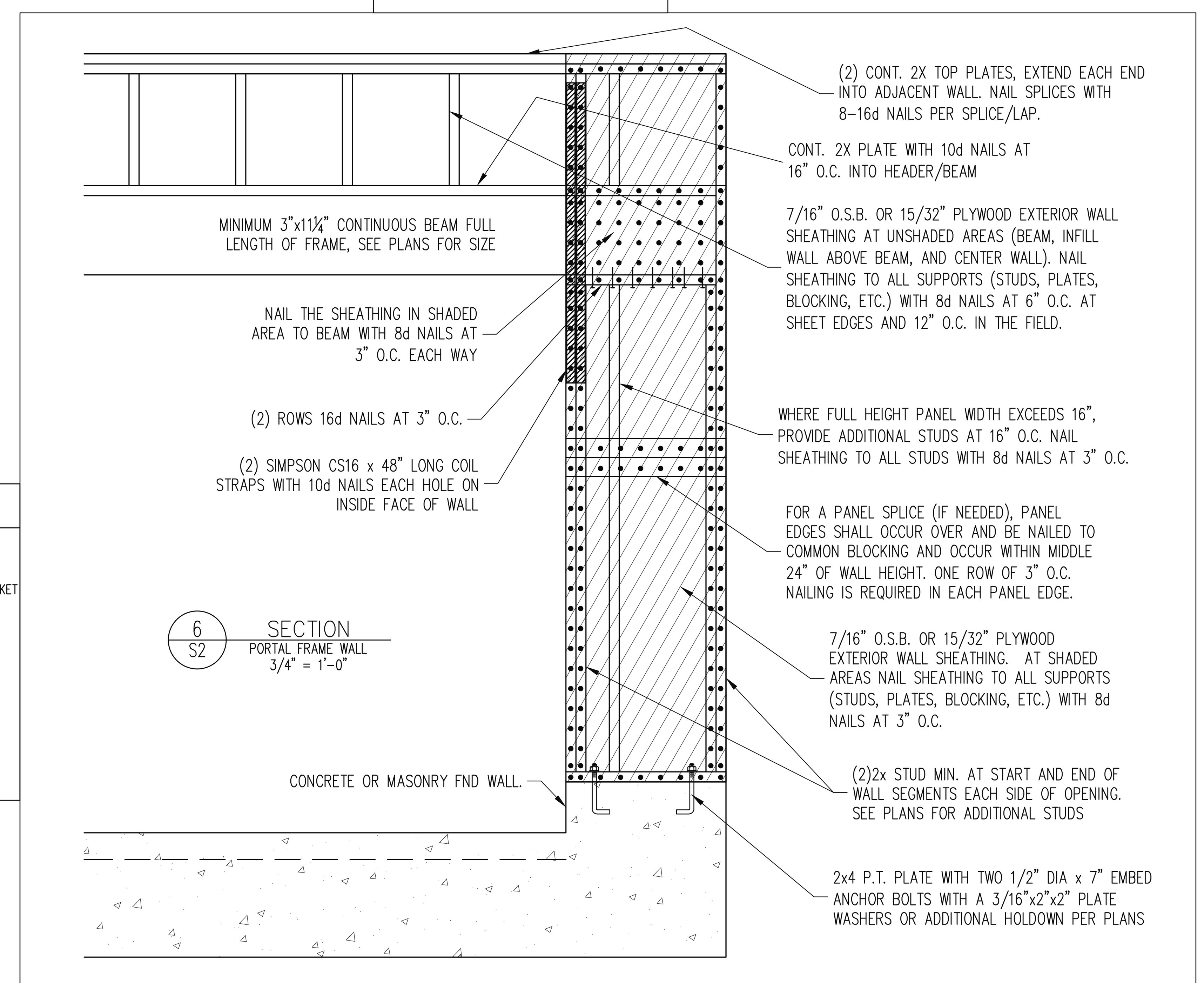
3 SECTION S1 TYPICAL ENLARGED FOOTING AT EXTERIOR TURN DOWN SLAB 3/4" = 1'-0"



4 SECTION S1 MONOLITHIC LUG FOOTING 3/4" = 1'-0"



5 SECTION S2 TYPICAL BRACED WALL PANEL CONNECTION AT EXTERIOR WALL, JOISTS PERPENDICULAR OR PARALLEL. 3/4" = 1'-0"



6 SECTION S2 PORTAL FRAME WALL 3/4" = 1'-0"

Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
183 Wind Chime Ct, Ste 100
Raleigh, North Carolina 27615
Phone (919) 844-1661

BOQUEST HOMES

SCOPE: STRUCTURAL ADDENDUM

1070 W STRICKLAND RD

LOC: DOUGLAS RESIDENCE

ENG: NBG/MEB

DATE: 6-19-2020

PROJECT NO. 20-18-207

SHEET NO. SD1