BENSON II

CEDAR POINTE
LOT 1

PLAN ID 110122.0101

SMITH DOUGLAS HOMES

QUALITY | INTEGRITY | VALUE

110 VILLAGE TRAIL SUITE 215
WOODSTOCK, GA. 30188

DRAWING INDEX

A0.0	COVER SHEET
A1.1	FRONT ELEVATION
A2.1	SIDE & REAR ELEVATIONS
A3.1	SLAB FOUNDATION
A5.1	FIRST FLOOR PLAN & DETAILS
A5.2	SECOND FLOOR PLAN & DETAILS
A6.1	ROOF PLAN
A7.2-A7.3	ELECTRICAL PLANS
A8.1	TRIM LOCATION LAYOUTS

AREA TABULATION	
FIRST FLOOR	726
SECOND FLOOR	1087
TOTAL	1813
GARAGE	672
FRONT PORCH (COVERED)	76
REAR PATIO	200

GOVERNMENTAL CODES & STANDARDS

HOME TO BE BUILT TO CONFORM TO ALL APPLICABLE LOCAL CODES, PRACTICES AND STANDARDS

BUILDING CODE ANALYSIS / DESIGN CRITERIA

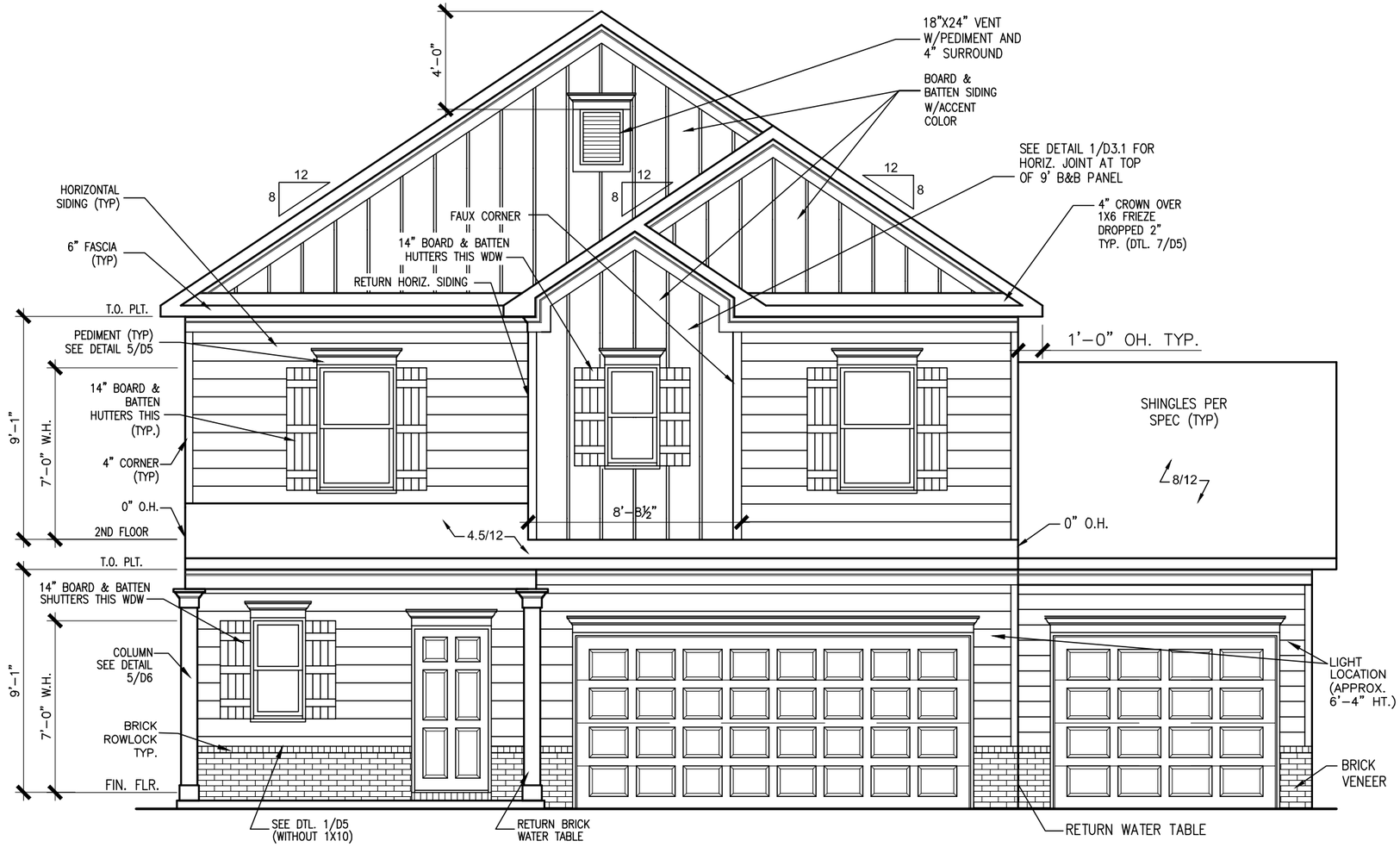
HOME TO BE BUILT TO MEET OR EXCEED ALL LOCAL CODES AND DESIGN CRITERIA

PLAN REVISIONS			
DATE	BY	REVISION	PAGE #
12/9/2022	AW	Prototype walk revisions - see revision sheet	A5.1, A5.2, A5.2.1,A7.2, A7.3, A7.3.1
9/21/2023	BB	Removed tub and shower sizes from all affected pages	A5.2, A5.2.1

ALL NON-MASONRY RETURNS TO BE HORIZONTAL SIDING

SEE SHEET D3 OF SDH TYPICAL DETAILS FOR SOFFIT DETAILS PER SOFFIT MATERIAL

CEDAR POINTE
LOT 1



FRONT ELEVATION "B"

SCALE: 3/16"=1'-0"

BY	REVISION	DATE
#	#	#
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#	#	#
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#	#	#

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ELEVATIONS
FRONT ELEVATION
BENSON II

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
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PLAN ID:	
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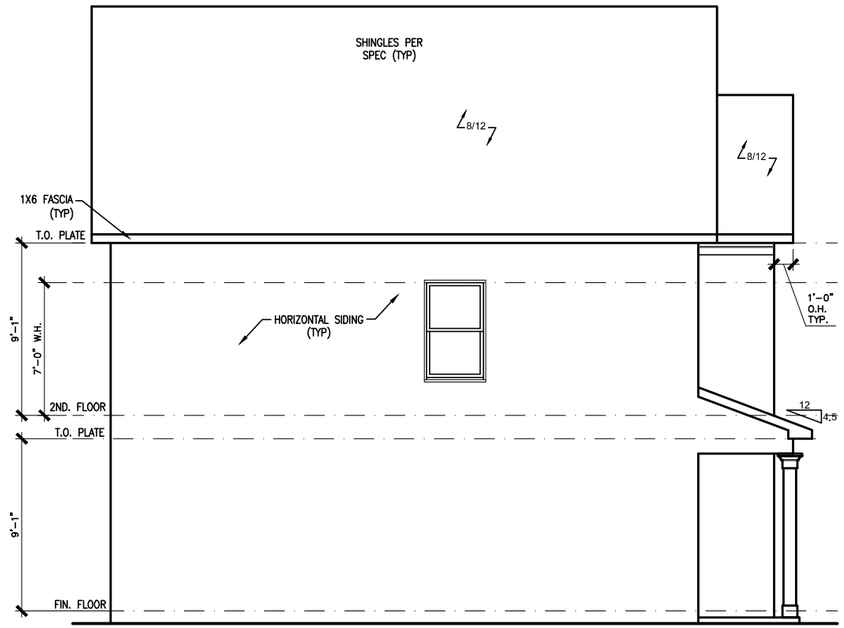
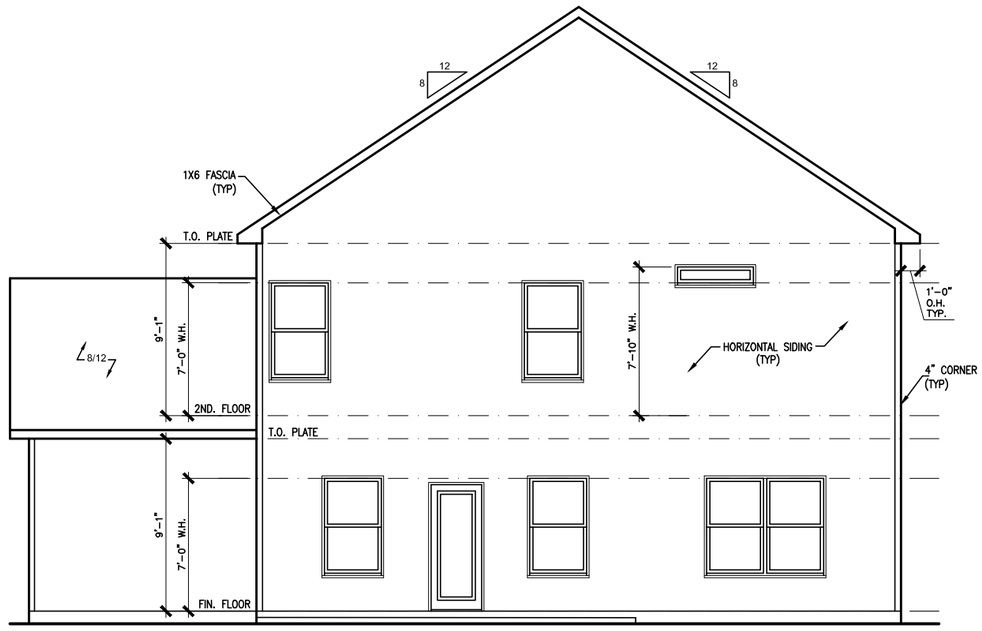
PAGE NO: A1.1	

CEDAR POINTE
LOT 1



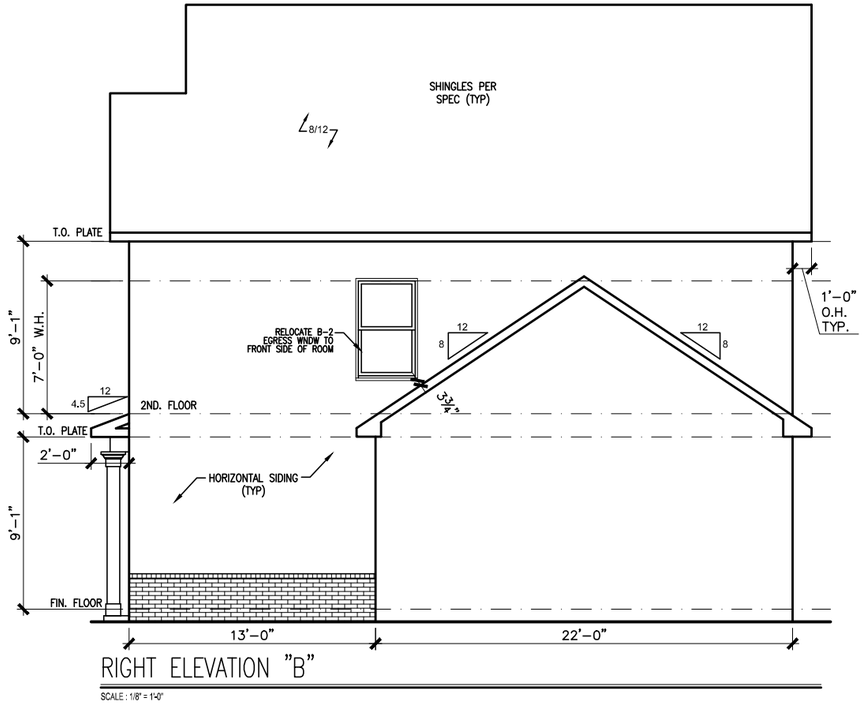
LEFT ELEVATION "B"

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



REAR ELEVATION "B"

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



RIGHT ELEVATION "B"

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

REVISION	DATE	BY
#	#	#
#	#	#
#	#	#
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#	#	#

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ELEVATIONS
SIDES AND REAR
BENSON II

SMITH DOUGLAS HOMES
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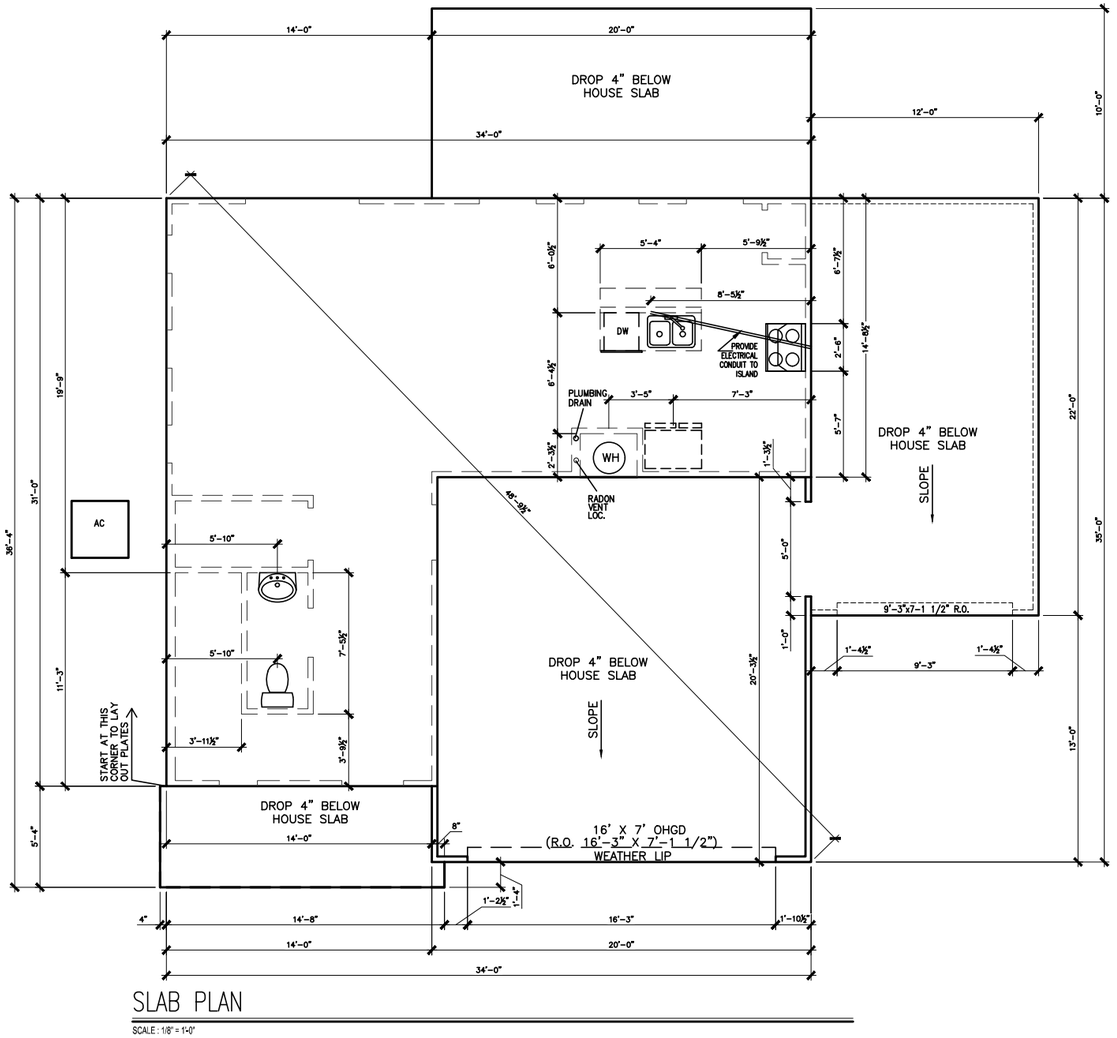
PAGE NO: A2.1	

CEDAR POINTE
LOT 1



SLAB PLAN

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

*RADON VENT PROVIDED PER LOCAL CODE

REFER TO DETAIL 3/D1 FOR BRICK LEDGE DETAIL WHEN BRICK VENEER IS CHOSEN

BY	REVISION	DATE
#	#	#
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SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

FOUNDATION PLAN
SLAB PLAN
BENSON II

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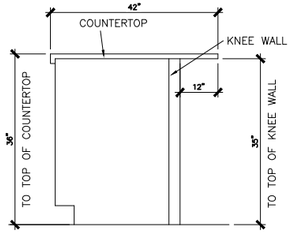
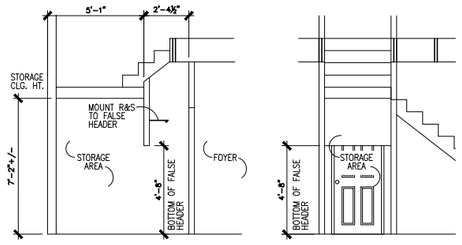
PLAN ID:	
FND: ALL	ELEV: B
PAGE NO: A3.1	

CEDAR POINTE
LOT 1

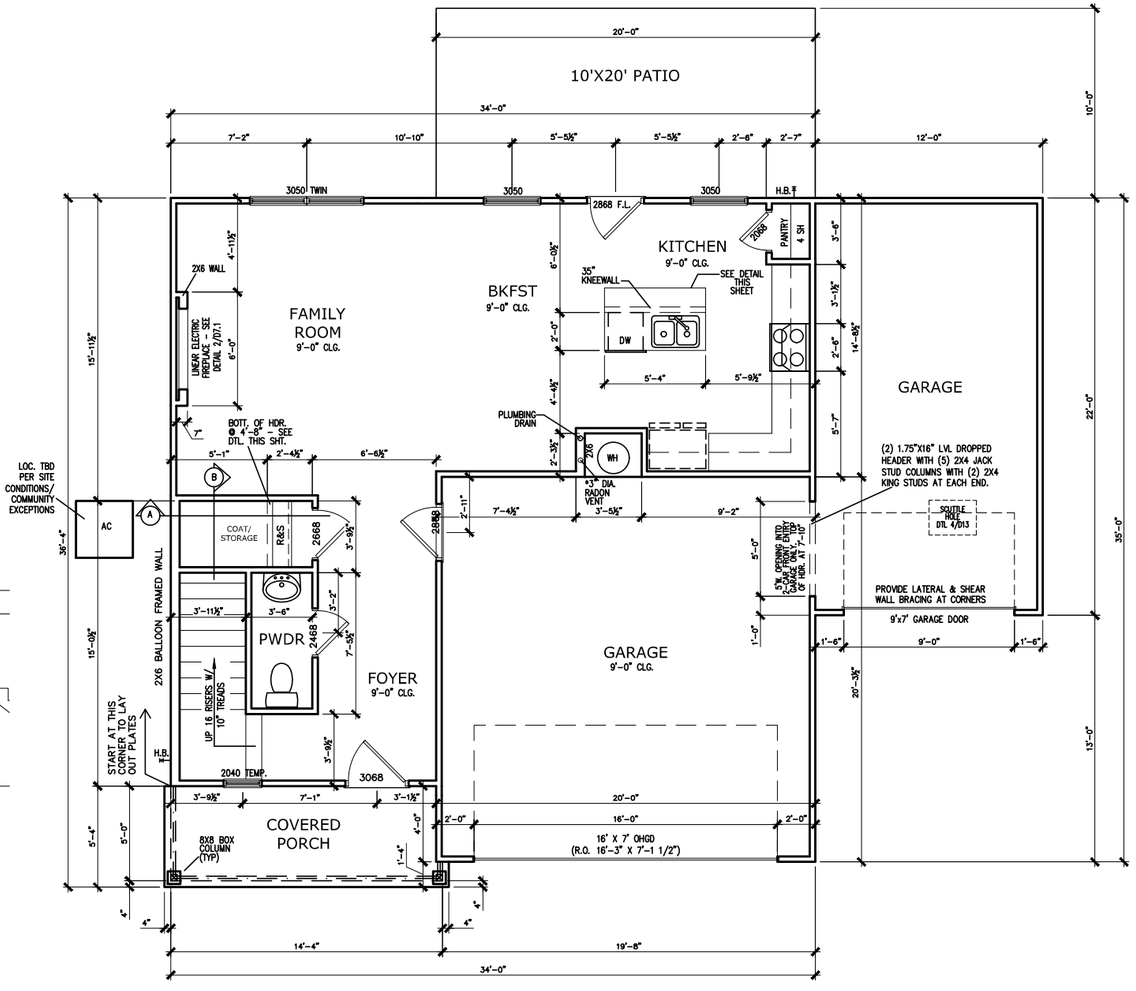


SECTION @ KITCHEN
ISLAND KNEE WALL



VIEW A VIEW B

SECTIONS AT COAT/STORAGE CLOSET



FIRST FLOOR PLAN

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

*RADON VENT PROVIDED
PER LOCAL CODE

BY	REVISION	DATE
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

FLOOR PLAN
FIRST FLOOR
BENSON II

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110 VILLAGE TRAIL
SUITE 115
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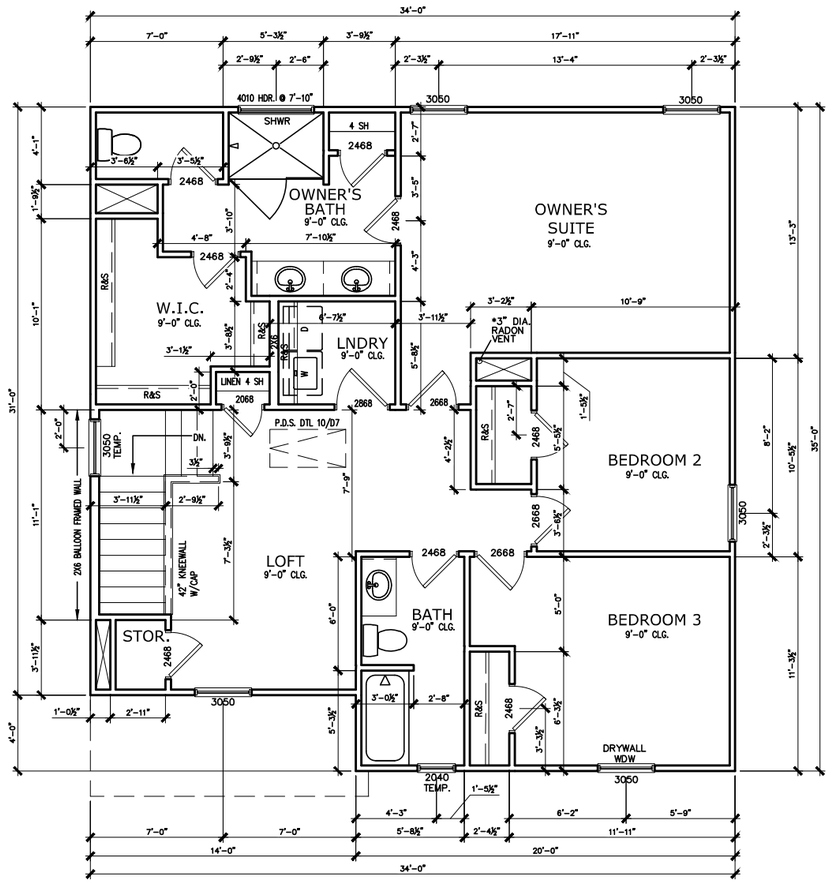
PLAN ID:	
FND: ALL	ELEV: B
PAGE NO: A5.1	

CEDAR POINTE
LOT 1



SECOND FLOOR PLAN

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

*RADON VENT PROVIDED PER LOCAL CODE

REFER TO MANUFACTURER'S SPECS. FOR DRAIN LOCATIONS ON DETAIL SHEETS D12, D12.1, D12.2 & D12.3

DATE	REVISION	BY
#	#	#
#	#	#
#	#	#
#	#	#
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SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

FLOOR PLAN
SECOND FLOOR
BENSON II

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SUITE 115
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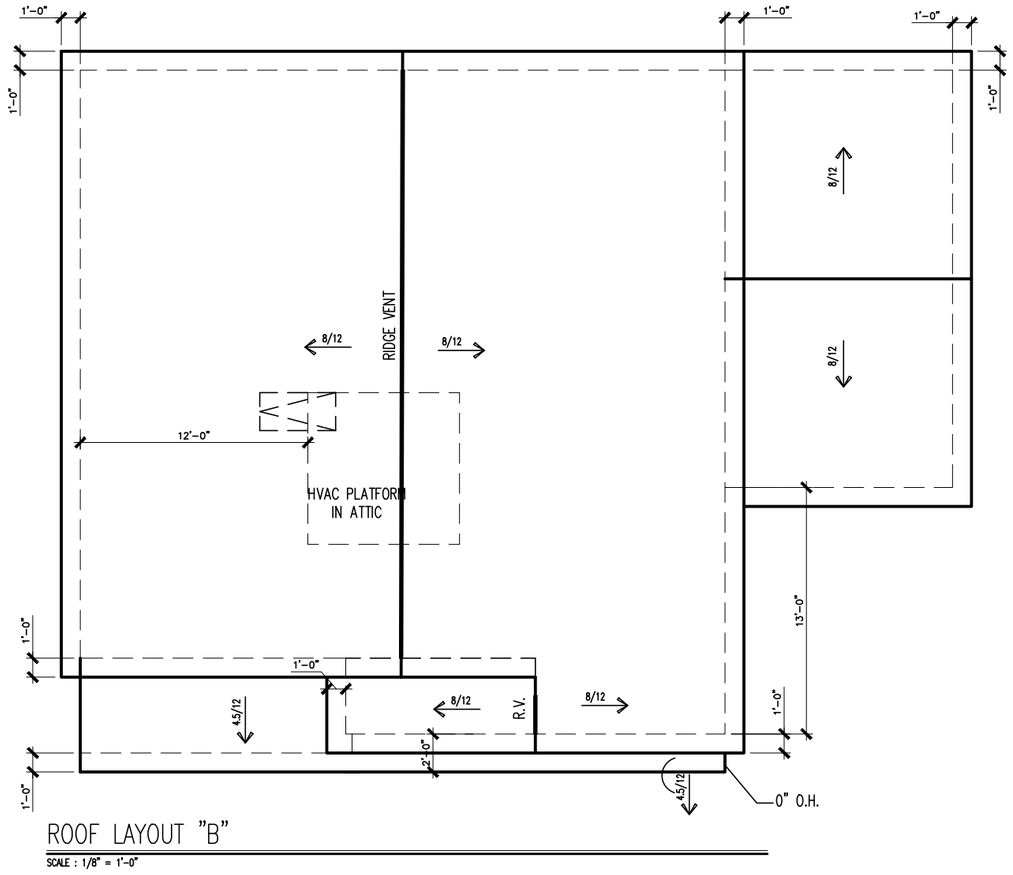
PLAN ID:	
FND: ALL	ELEV: B
PAGE NO: A5.2	

CEDAR POINTE
LOT 1



ROOF LAYOUT "B"

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

BY	REVISION	DATE
#	#	#
#	#	#
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SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ROOF PLAN
ROOF PLAN
BENSON II

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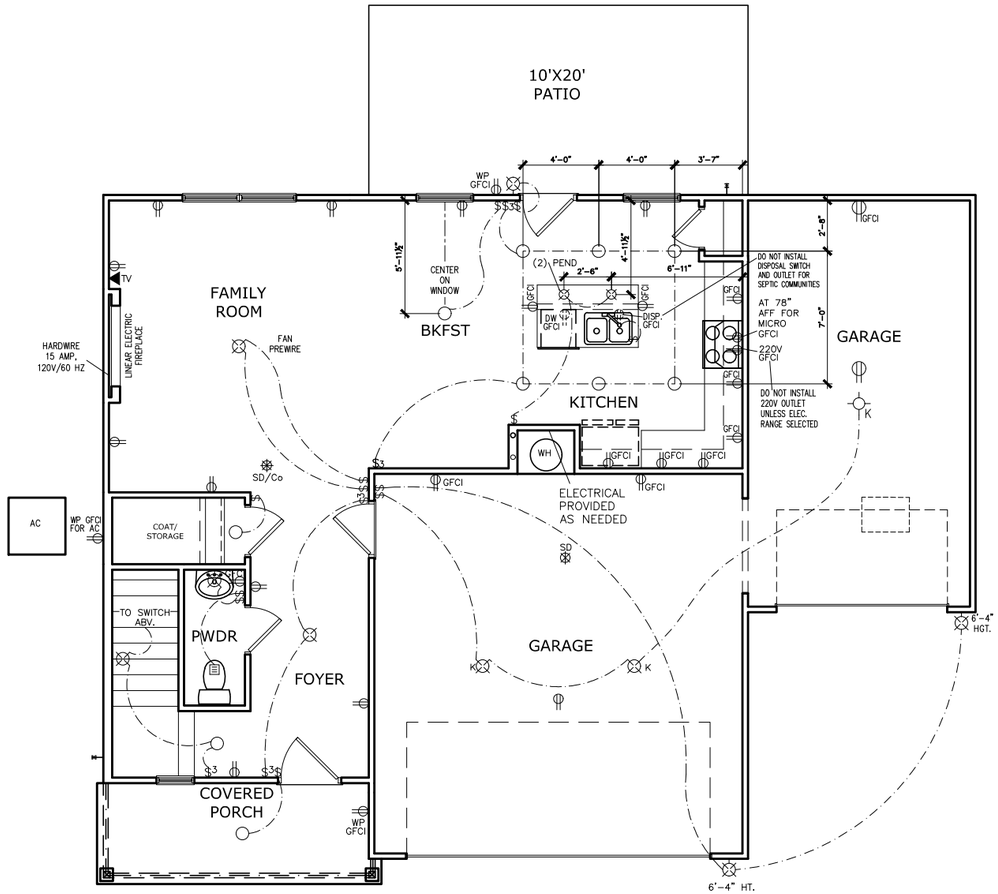
PLAN ID:	
FND: ALL	ELEV: B
PAGE NO: A6.1	

CEDAR POINTE
LOT 1



FIRST FLOOR ELECTRICAL PLAN

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

ELECTRICAL LEGEND

$	SWITCH	TV	TV
$3	3 WAY SWITCH		120V RECEPTACLE
$4	4 WAY SWITCH		120V SWITCHED RECEPTACLE
	CEILING FIXTURE		220V RECEPTACLE
K	KEYLESS	GFCI	GFCI OUTLET
	WALL MOUNT FIXTURE	AFCI	ARCH FAULT CIRCUIT INTERRUPTER
	CEILING FIXTURE	GL	GAS LINE
	FLEX CONDUIT	WL	WATER LINE
CH	CHIMES		HOSE BIBB
PH	TELEPHONE		FLOOD LIGHT
SD/Co	SMOKE DETECTOR & CARBON MONOXIDE		1x4 LUMINOUS FIXTURE
SO	SECURITY OUTLET		CEILING FAN
	GARAGE DOOR OPENER		
	EXHAUST FAN		ELECTRICAL WIRING
	FAN/LIGHT		CEILING FIXTURE

ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

APPROX. FIXTURE HGTS (MEASURED FROM BOTTOM OF FIXTURE)

BREAKFAST/DINING ROOM	63" ABOVE FINISHED FLOOR
KITCHEN PENDANT LIGHTS	33" ABOVE COUNTER TOP
TWO STORY FOYER FIXTURE	96" ABOVE FINISHED FLOOR
CEILING FAN	96" ABOVE FINISHED FLOOR
FLOOD LIGHT	10' MAX. ABOVE FIN. FLOOR

NOTE: FINAL PLACEMENT OF PHONE/CABLE T.B.D. ON SITE BY THE BUILDER

BY	REVISION	DATE
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ELECTRICAL PLAN
FIRST FLOOR
BENSON II

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
WOODSTOCK, GA 30188
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PLAN ID:	
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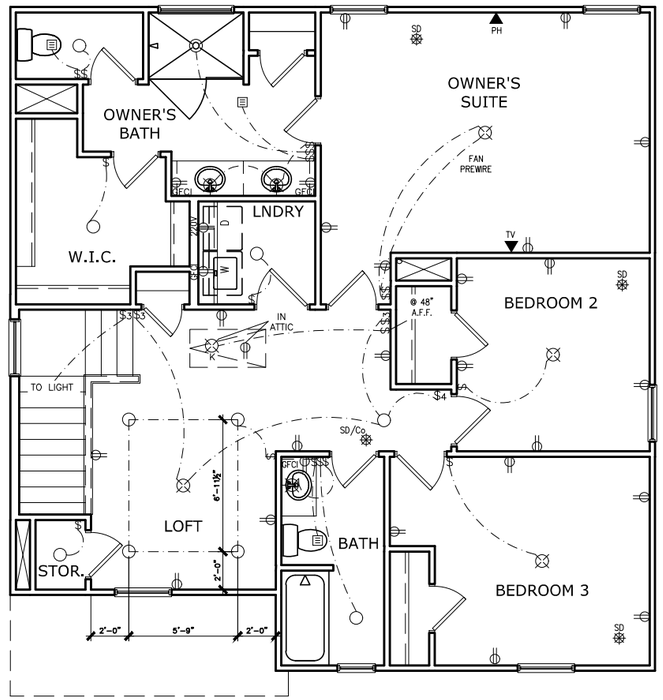
PAGE NO: A7.2	

CEDAR POINTE
LOT 1



SECOND FLOOR ELECTRICAL PLAN

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

ELECTRICAL LEGEND

$	SWITCH	TV	TV
$3	3 WAY SWITCH		120V RECEPTACLE
$4	4 WAY SWITCH		120V SWITCHED RECEPTACLE
	CEILING FIXTURE		220V RECEPTACLE
K	KEYLESS	GFCI	GFCI OUTLET
	WALL MOUNT FIXTURE	AFCI	ARCH FAULT CIRCUIT INTERRUPTER
	CEILING FIXTURE	GL	GAS LINE
	FLEX CONDUIT	WL	WATER LINE
CH	CHIMES		HOSE BIBB
PH	TELEPHONE		FLOOD LIGHT
SD/Co	SMOKE DETECTOR & CARBON MONOXIDE		1x4 LUMINOUS FIXTURE
SO	SECURITY OUTLET		CEILING FAN
	GARAGE DOOR OPENER		
	EXHAUST FAN		ELECTRICAL WIRING
	FAN/LIGHT		CEILING FIXTURE

ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

APPROX. FIXTURE HGTS (MEASURED FROM BOTTOM OF FIXTURE)

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NOTE: FINAL PLACEMENT OF PHONE/CABLE T.B.D. ON SITE BY THE BUILDER

REVISION	BY	DATE
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ELECTRICAL PLAN
SECOND FLOOR
BENSON II

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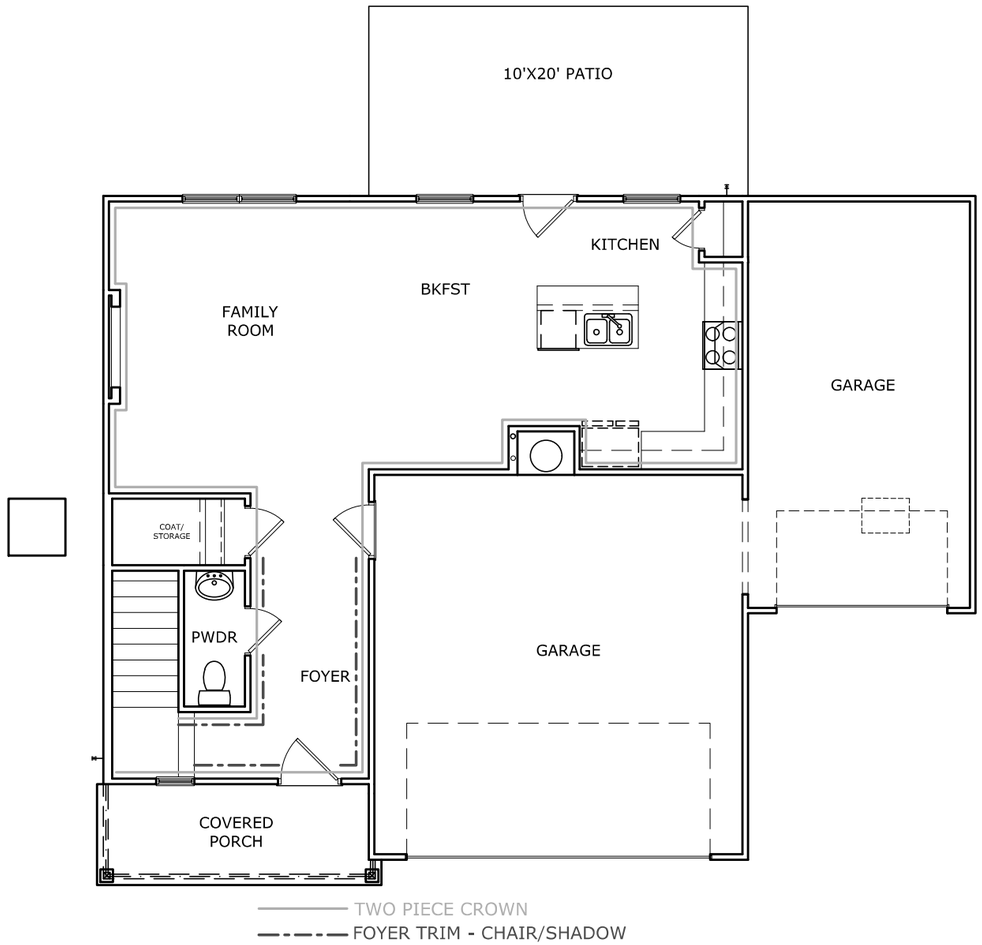
PAGE NO: A7.3	

CEDAR POINTE
LOT 1



TRIM LAYOUT FIRST FLOOR PLAN

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

BY	DATE	REVISION
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

FLOOR PLAN
TRIM LAYOUT
BENSON II

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
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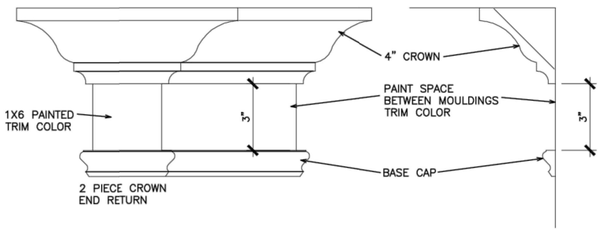
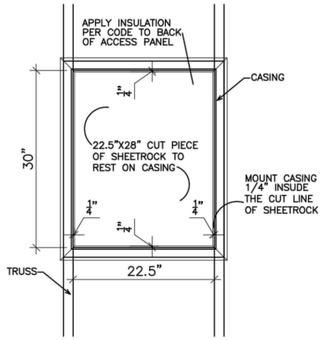
PLAN ID:	
FND: ALL	ELEV: B
PAGE NO: A8.1	

REFER TO LOT SPECIFIC PLAN TO DETERMINE WHICH DETAILS APPLY



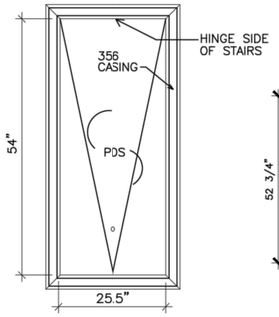
TYPICAL TWO PIECE CROWN

N.T.S



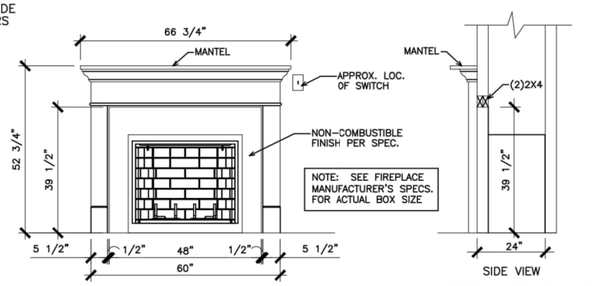
SCUTTLE HOLE DETAIL

N.T.S



PDS TRIM DETAIL

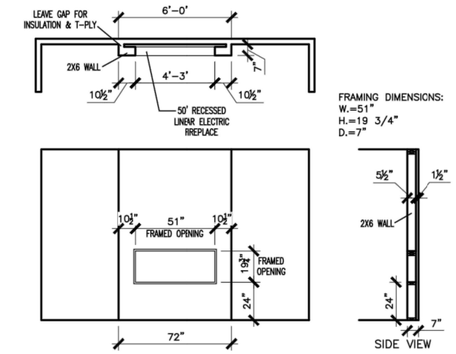
N.T.S



GAS/ELECTRIC FIREPLACE DETAIL WITH WESCOTT WOOD MANTEL

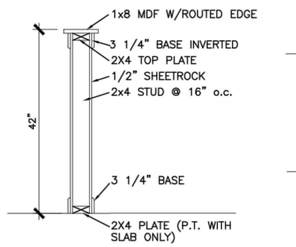
N.T.S

ELECTRIC FRAMING DIMENSIONS:	GAS FRAMING DIMENSIONS:
W.=37"	W.=37"
D.=24"	D.=24"
H.=31 1/4"	H.=34 3/4"



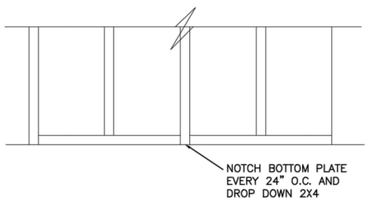
LINEAR ELECTRIC FIREPLACE DETAIL

N.T.S



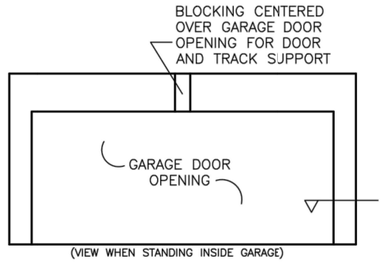
TYP. KNEEWALL SECTION

N.T.S



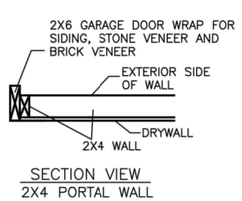
TYP. 2ND FLOOR KNEE WALL STABILITY

N.T.S

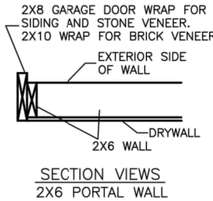


TYP. GARAGE WRAP & BLOCKING

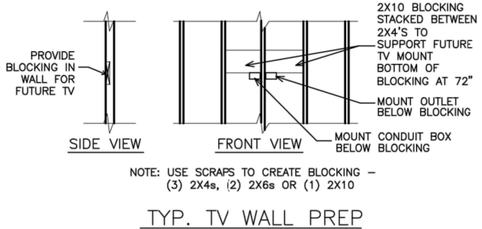
N.T.S



SECTION VIEW
2X4 PORTAL WALL



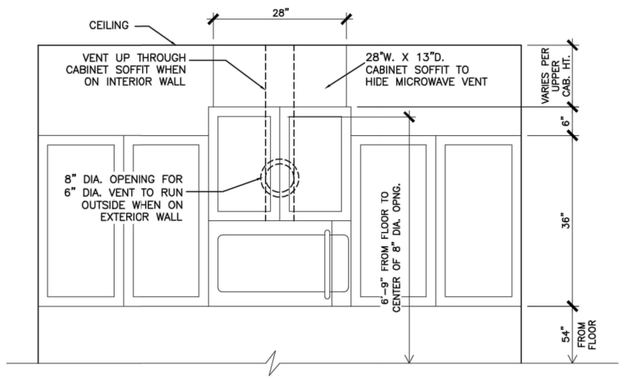
SECTION VIEWS
2X6 PORTAL WALL



NOTE: USE SCRAPS TO CREATE BLOCKING – (3) 2X4s, (2) 2X6s OR (1) 2X10

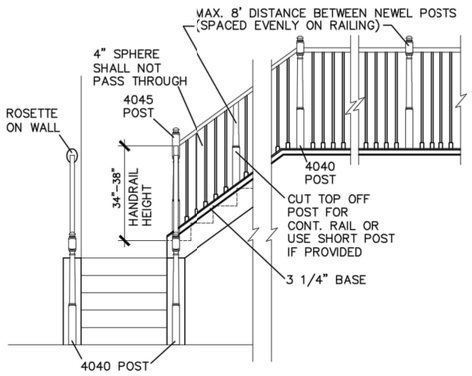
TYP. TV WALL PREP

N.T.S



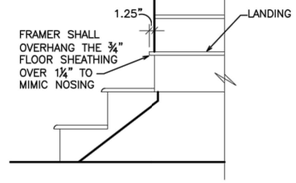
CABINET SOFFIT DETAIL ABOVE VENTED MICROWAVE W/CABINET ABOVE RANGE BUMPED UP & OUT

N.T.S



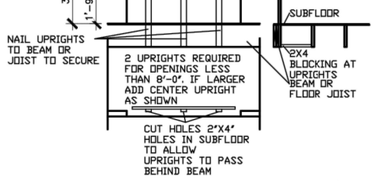
HANDRAIL/POST DETAIL @ STAIRS

N.T.S



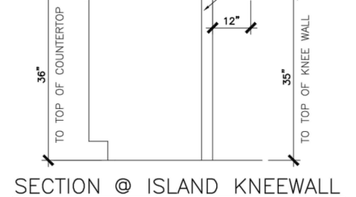
BOX STEP OVERHANG

N.T.S



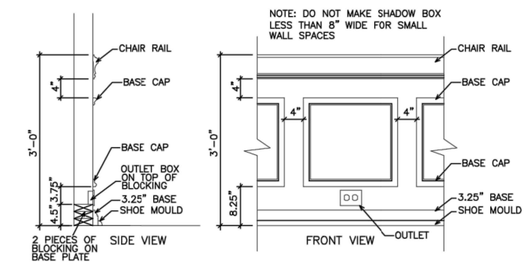
GUARD RAIL DTL. AS REQ'D

N.T.S.



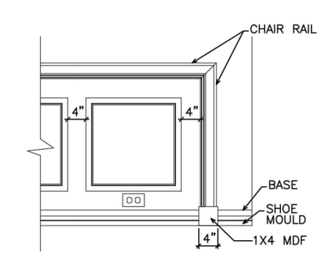
SECTION @ ISLAND KNEEWALL

N.T.S



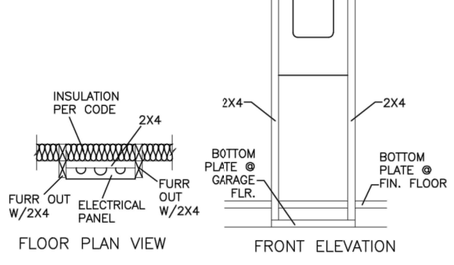
TYPICAL CHAIR RAIL & SHADOW BOX DETAIL

N.T.S



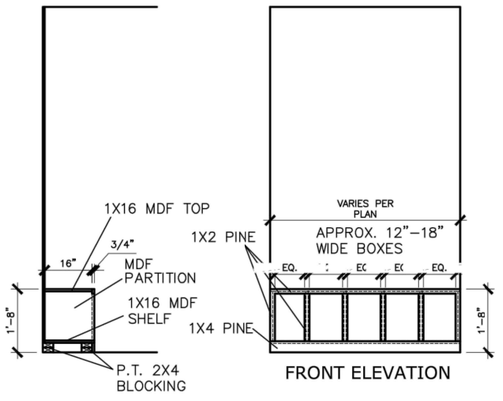
CHAIR RAIL END TRIM DETAIL

N.T.S



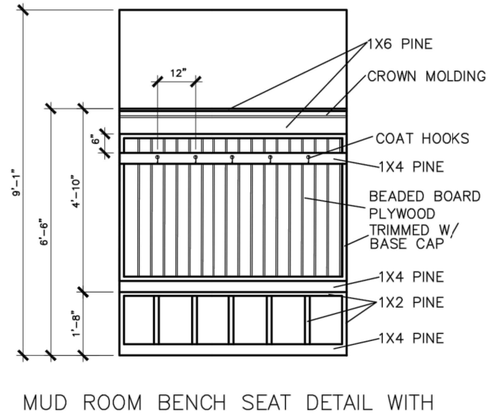
ELECTRICAL PANEL DETAIL

N.T.S



MUD ROOM BENCH SEAT DETAIL

N.T.S



MUD ROOM BENCH SEAT DETAIL WITH BEADED BOARD, HOOKS, & CROWN

N.T.S

(IF TRIM CHOSEN WITHOUT BENCH CONTINUE TO FLOOR)

BY	REVISION	DATE

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

INTERIOR TRIM DETAILS

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 215
WOODSTOCK, GA 30188
www.smithdouglas.com

BY:	CH:
DATE: 6/13/23	
FACADE OPT:	
PLAN ID:	
END:	ELEV:
PAGE NO: D1.1	

CONNECTION SPECIFICATIONS (TYP. U.N.O.)

DESCRIPTION OF BLDG. ELEMENT	3"x0.131" NAILS	3"x0.120" NAILS
JOIST TO SOLE PLATE	(3) TOENAILS	(3) TOENAILS*
SOLE PL. TO JOIST/RIM OR BLK'G	NAILS @ 4" o.c.	NAILS @ 4" o.c.
STUD TO PLATE	(4) TOENAILS/ (3)END NAILS	(4) TOENAILS/ (4)END NAILS*
RIM TO TOP PLATE	TOENAILS @ 6" o.c.	TOENAILS @ 4" o.c.*
BLK'G. BTWN. JOISTS TO TOP PL.	(3) TOENAILS EA. END	(3) TOENAILS EA. END*
DOUBLE STUD	NAILS @ 16" o.c.	NAILS @ 16" o.c.
DOUBLE TOP PLATE	NAILS @ 12" o.c.	NAILS @ 8" o.c.
DOUBLE TOP PLATE LAP SPLICE	(12) NAILS IN LAPPED AREA (24" MIN.)	(15) NAILS IN LAPPED AREA (24" MIN.)
TOP PLATE LAP @ CORNERS & INTERSECTING WALLS	(3) NAILS	(3) NAILS
RAFTER/TRUSS TO TOP PLATE	(4) TOENAILS + (1) SIMPSON H2.5T	(4) TOENAILS + (1) SIMPSON H2.5T
GAB. END TRUSS TO DBL. TOP PL.	TOENAILS @ 8" o.c.	TOENAILS @ 6" o.c.
R.T. W/ HEEL HT. 9 1/4" TO 12"	2x10 BLK EVERY 3RD BAY FASTENED TO DBL. TOP PLATE W/ TOENAILS @ 6" O.C.	2x10 BLK EVERY 3RD BAY FASTENED TO DBL. TOP PLATE W/ TOENAILS @ 4" O.C.
R.T. W/ HEEL HT. 12" TO 16"	2x12 BLK EVERY 3RD BAY FASTENED TO DBL. TOP PLATE W/ TOENAILS @ 6" O.C.	2x12 BLK EVERY 3RD BAY FASTENED TO DBL. TOP PLATE W/ TOENAILS @ 4" O.C.
R.T. W/ HEEL HT. UP TO 24"	LAP WALL SHTG. W/ DBL. TOP PL. & INSTALL ON TRUSS VERT. - FASTEN W/ NAILS @ 6" O.C.	LAP WALL SHTG. W/ DBL. TOP PL. & INSTALL ON TRUSS VERT. - FASTEN W/ NAILS @ 6" O.C.*
R.T. W/ HEEL HT. 24" TO 48"	LAP WALL SHTG. W/ DBL. TOP PL. & INSTALL ON TRUSS VERT. - FASTEN W/ NAILS @ 6" O.C. PROVIDE 2x BLK @ EA. BAY AT TOP OF HEEL	LAP WALL SHTG. W/ DBL. TOP PL. & INSTALL ON TRUSS VERT. - FASTEN W/ NAILS @ 6" O.C. PROVIDE 2x BLK @ EA. BAY AT TOP OF HEEL.*
WALL TO FOUNDATION	WALL SHTG. LAP W/ SILL PL. & FASTENED PER SHEAR WALL FASTENING SPEC.	

* 2½"x0.113 IS AN ACCEPTABLE ALTERNATIVE TO A 3"x0.120", SAME SPACING OR NUMBER OF NAILS. (ONLY ACCEPTABLE WHERE * ARE SHOWN)

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

ROOF TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DEFLECTION CRITERIA BELOW, UNLESS NOTED OTHERWISE ON PLAN. MULHERN & KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO M&K FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.

TRUSSES/JOISTS SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES/JOISTS OR GIRDER TRUSSES/FLUSH BEAMS DO NOT EXCEED THE FOLLOWING:

A. ROOF TRUSSES:
   1/4" DEAD LOAD
B. ATTIC TRUSSES, & I-JOISTS:
   1/8" DEAD LOAD

ABSOLUTE DEAD LOAD DEFECTION OF ATTIC TRUSSES WHEN ADJACENT TO FLOOR FRAMING BY OTHERS SHALL BE LIMITED TO 3/16". (NOT DIFFERENTIAL DEFLECTION)

VENEER LINTEL SCHEDULE

SPAN (MAX)	HEIGHT OF VENEER ABOVE LINTEL	STEEL ANGLE SIZE
3'-0"	20 FT. MAX	L3"x3"x¼"
6'-0"	8 FT. MAX	L3"x3"x¼"
	12 FT. MAX	L4"x3"x¼"
	20 FT. MAX	L5"x3½"x⅜"
8'-0"	8 FT. MAX	L4"x4"x¼" *
	12 FT. MAX	L5"x3½"x⅜"
	16 FT. MAX	L6"x3½"x⅜"
9'-6"	12 FT. MAX	L6"x3½"x⅜"

ALL LINTELS:
- SHALL SUPPORT 2 ⅝" - 3 ½" VENEER w/ 40 psf MAXIMUM HEIGHT.
- < 16' SHALL HAVE 4" MIN. BEARING
- >= 16' SHALL HAVE 8" MIN. BEARING
- < 16' SHALL NOT BE FASTENED BACK TO HEADER.
- >= 16' SHALL BE FASTENED BACK TO WOOD HEADER IN WALL @48"o.c. w/ ½" DIA. x 3 ½" LONG LAG SCREWS IN 2" LONG VERTICALLY SLOTTED HOLES.
- MAX. VENEER HT. APPLIES TO ANY PORTION OF BRICK OVER THE OPENING.
- ALL LINTELS SHALL BE LONG LEG VERTICAL.
- WHEN SUPPORTING VENEER < 3" WIDE THE EXTERIOR TOE OF THE HORIZONTAL LEG MAY BE CUT IN THE FIELD TO BE 3 ½" WIDE OVER THE BEARING LENGTH ONLY. THIS IS TO ALLOW FOR MORTAR JOINT FINISHING.
- SEE STRUCTURAL PLANS FOR ANY LINTEL CONDITION NOT ENCOMPASSED BY THE ABOVE PARAMETERS.
- * FOR QUEEN VENEER USE L4x3½".

M&K STND. - MAY 2016

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2018 NCSBC-RESIDENTIAL CODE & 2018 IRC WITH SOUTH CAROLINA AMENDMENTS
- FOOTING DESIGN - 2,000 PSF NET ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED. BUILDER/CONTRACTOR MUST VERIFY.
- FASTEN 2x4/6 SILL PLATES TO CONC FND WITH A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAX. FROM PLATE ENDS - UTILIZING:
  - 1/2" DIA. ANCHOR BOLTS @ 6'-0" O.C.,7" MIN. EMBEDMENT
  - FA4 ANCHOR STRAPS @ 6'-0" O.C.
- FASTEN 2x10 SILL PLATES TO PRECAST BSMT WALLS WITH A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAX. FROM PLATE ENDS - UTILIZING:
  - 1/2" DIA. BOLTS @ 2'-0" O.C
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ PERIMETER FOUNDATION SHALL BE PRESERVATIVE TREATED SOUTHERN PINE #2.
- BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT W/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD.
- FOUNDATION WALLS & FOOTINGS SHALL BE PLAIN CONCRETE, U.N.O.
- CONCRETE DESIGN BASED ON ACI 318. CONCRETE SHALL ATTAIN THE FOLLOWING MIN. COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.:
  - f'c = 4,000 psi: ..... FOUNDATION WALLS
  - 3,000 psi: ..... FOOTINGS & INTERIOR SLABS ON GRADE
  - 3,500 psi: ..... GARAGE & EXTERIOR SLABS ON GRADE
  - fy = 60,000 psi
- BASEMENT FOUNDATION WALL DESIGN BASED ON:
  - 8' OR 9' HEIGHT (AS NOTED ON PLANS)
  - TALLER WALLS MUST BE ENGINEERED.
- BASEMENT WALL DESIGN IS BASED ON 30 OR 45 PCF BACKFILL SOIL TYPE CLASSIFICATIONS:
  - 30 PCF TYPE (GW, GP, SW, SP)
  - 45 PCF TYPE (GM, GC, SM, SM-SC, ML)
  - IMPORTANT - IF 60 PCF SOIL TYPE (SC, ML-CL, OR CL) IS UTILIZED FOR BACKFILL, CONTACT MULHERN & KULP FOR FURTHER EVALUATION OF FOUNDATION DESIGN.
- BASEMENT WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY ADEQUATE TEMPORARY BRACING OR INSTALL 1st FLOOR DECK.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- ALL FOOTINGS SHALL BEAR BELOW FROST LINE (TYP.) OR 12" MIN IN REGIONS WHERE CODE FROST DEPTH IS NOT APPLICABLE. CONSULT SOILS REPORT OR BUILDING DEPT. FOR MINIMUM DEPTH BELOW GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP.
  - JOINTS SHALL BE LOCATED @ 10'-0" O.C. (RECOMMENDED) OR 15'-0" O.C. (MAXIMUM)
  - JOINT GRID PATTERN SHALL BE AS CLOSE TO SQUARES AS POSSIBLE (1:1 RATIO), WITH A MAXIMUM OF 1:1.5 RATIO
  - CONTROL JOINTS SHALL NOT BE INSTALLED IN STRUCTURAL SLABS
- TYPICAL REINFORCEMENT DETAILS: PROVIDE 3" MIN. CLEAR COVER WHERE CAST AGAINST EARTH, 1 1/2" MIN. CLEAR COVER AGAINST FORMS. LAP ALL REBAR 48 BAR DIAMETERS MIN. (24" FOR #4 BARS) & BEND BARS AND LAP AT CORNERS. PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT.
- DIMENSIONS BY OTHERS, BUILDER TO VERIFY.

M&K STND. - MAY 202

LEGEND

- R.T. — INDICATES ROOF TRUSSES @ 24" O.C. PER ROOF. MANUF. (TYP. U.N.O.)
- O.F. — INDICATES TRUSS OVERFRAMING @ 24" O.C. (TYP. U.N.O.)
- F.J. — INDICATES 14" DEEP FLOOR I-JOISTS @ 24" O.C. MAX. JOIST SERIES AND SPACING SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER NOTE: 14" FLOOR TRUSSES @ 24" O.C. MAX. IS AN ACCEPTABLE ALTERNATE FLOOR SYSTEM
- INDICATES LOCATIONS OF POTENTIAL TILE FLOOR. JOIST MANUFACTURER SHALL DESIGN FLOOR SYSTEM FOR ADD'L 10 PSF DEAD LOAD AT THESE LOCATIONS.
- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.)
- BEAM/HEADER
- METAL HANGER
- INDICATES POST ABOVE (P.A.) PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.

LATERAL/WALL BRACING & WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:

120MPH WIND IN 2018 NCSBC:RC
& 120MPH WIND IN 2018 IRC
(120 MPH WIND SPEED IN ASCE 7 WIND MAP, PER IRC R301.2.1.1)
EXP. B, RISK CAT. 2 & SEISMIC CAT. A/B.

THE DESIGN WAS COMPLETED PER 2015 & 2018 IBC (SECTION 1609) & ASCE 7, AS PERMITTED BY R301.1.3 OF THE 2018 NCSBC:RC & 2018 IRC. ACCORDINGLY, THIS MODEL, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES.

DESIGN WIND UPLIFT LOADS HAVE BEEN CALCULATED UTILIZING ASCE 7 (ACCEPTED ENGINEERING PRACTICE) AS ALLOWED PER 2018 NCSBC:RC & 2018 IRC SECTION R802.11.1.1. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PATH PER SECTIONS R602.3.5& R802.11.

EXT. WALL SHEATHING SPECIFICATION

- 7/16" OSB OR 15/32" PLYWOOD:
  FASTEN SHEATHING W/ 2 ¾"x0.113 NAILS @ 6" O.C. AT EDGES & @ 12" O.C. IN THE PANEL FIELD. (TYP, U.N.O.)
- ALL SHEATHING PANELS SHALL BE ORIENTED VERTICALLY (LONG DIRECTION PARALLEL TO STUDS) AND INSTALLED FULL HEIGHT OF SHEAR WALL - OR - 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT ALL UNSUPPORTED PANEL EDGES & EDGE FASTENING.
- ALL EXT. WALLS SHALL BE CONTINUOUSLY SHEATHED AND ARE CONSIDERED SHEAR WALLS.
- ALT. STAPLE CONNECTION SPEC.: 1 ¾" 16 GA STAPLES (⅞" CROWN) @ 3" O.C. AT EDGES & @ 6" O.C IN FIELD.

3" O.C. EDGE NAILING

- AT DESIGNATED AREAS - FASTEN PANEL EDGES OF WOOD STRUCTURAL WALL SHEATHING TO FRAMING W/ 2 ¾" x 0.113" NAILS @ 3" O.C. AND 12" O.C. IN THE PANEL FIELD NO STAPLE ALTERNATIVE AVAILABLE AT THIS SPEC. ALL SHEATHING PANELS SHALL BE ORIENTED VERTICALLY (LONG DIRECTION PARALLEL TO STUD) AND INSTALLED FULL HEIGHT OF SHEAR WALL - OR - 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT UNSUPPORTED PANEL EDGES AND 3" O.C. EDGE FASTENING.

NOTES

- SEE CONNECTION SPECIFICATIONS CHART FOR STANDARD SHEAR TRANSFER DETAILING. IF ADDITIONAL CAPACITY IS REQUIRED BY DESIGN, IT WILL BE SPECIFICALLY NOTED ON PLAN.
- DESIGN ASSUMES 16" O.C MAX. STUD SPACING, U.N.O.
- ALL STRUCTURAL PANELS ARE TO BE DIRECTLY APPLIED TO STUD FRAMING.
- PRE-MANUFACTURED PANELIZED WALLS: FASTEN TOGETHER END STUDS OF WALL PANELS SHEATHED W/ OSB OR PLYWOOD W/ 3" x 0.120" NAILS @ 4" O.C. (THRU ONE SIDE ONLY)

INDICATES EXTENT OF INT. OSB SHEARWALL, AND/OR 3" O.C. EDGE NAILING

INDICATES HOLDOWN

M&K STND. - MAR 2016

NON-BEARING HEADER SCHEDULE

SPAN	2x4 NON-BEARING PARTITION WALL	2x6 NON-BEARING PARTITION WALL
UP TO 3'-0"	(1)2x4 FLAT	(1)2x6 FLAT
UP TO 6'-0"	(2)2x4	(3)2x4
UP TO 8'-0"	(2)2x6	(3)2x6

NOTES:
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x 'STUD' GRADE MEMBERS SPACED @ 24" O.C. (MAX.)

FLOOR FRAMING

- I-JOISTS SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA. (EXCLUDES STONE/MARBLE OR WET BED CONSTRUCTED FLOORS - CONTACT M&K FOR EXCLUDED FLOOR DESIGNS)
- PER THE GUIDELINES OF THE TILE COUNCIL OF NORTH AMERICA (TCNA HANDBOOK), IT SHALL BE THE FLOOR FINISH INSTALLER'S RESPONSIBILITY TO VERIFY THAT THE FINISHES TO BE INSTALLED MATCH THE DESIGN CRITERIA NOTED ABOVE (UNDER "DESIGN LOADS") .
- FLOOR SYSTEMS & SHEATHING HAVE BEEN DESIGNED TO SUPPORT ADDITIONAL DEAD LOAD FROM CERAMIC TILE (EXCLUDING MARBLE OR STONE). HOWEVER, IT SHALL BE THE FLOOR FINISH INSTALLER'S RESPONSIBILITY TO PROVIDE PROPER UNDERLAYMENT, UNCOUPLING MEMBRANE AND MORTAR/GROUT PER THE ASSEMBLY DESIGNATIONS IN THE TCNA HANDBOOK (TILE COUNCIL OF NORTH AMERICA).
- AT I-JOIST FLOORS, PROVIDE 1" MIN. OSB RIM BOARD.
- METAL HANGERS SHALL BE SPECIFIED BY MANUFACTURER, U.N.O.
- I-JOIST SHOP DWGS. SHALL BE SUBMITTED TO ARCH. & ENG. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STURD-I-FLOOR' 24" O.C, EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND
  - 2 ½" x 0.131" NAILS @ 6"o.c. @ PANEL EDGES & @ 12"o.c. FIELD.
  - 2 ⅜" x 0.120" NAILS @ 4" O.C. @ PANEL EDGES & @ 8" O.C. FIELD.
  - 2 ⅜" x 0.113" NAILS @ 3" O.C. @ PANEL EDGES & @ 6" O.C. IN FIELD.

ROOF FRAMING

- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS
  - W/ 2 ½" x 0.131" NAILS @ 6"o.c. @ PANEL EDGES & @ 12" O.C. FIELD.
  - W/ 2 ⅜" x 0.120" NAILS @ 4"o.c. @ PANEL EDGES & @ 8" O.C. FIELD.
  - W/ 2 ⅜" x 0.113" NAILS @ 3"o.c. @ PANEL EDGES & @ 6" O.C. FIELD.
- WITHIN 48" OF ALL ROOF EDGES, RIDGES, & HIPS FASTEN ROOF SHEATHING FIELDS PER EDGE NAILING SPEC.
- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ USP RTTA CLIP (OR APPROVED EQUAL) @ ALL BEARING POINTS. PROVIDE (2) RTTA CLIPS AT 2-PLY GIRDER TRUSSES, (3) RTTA CLIPS AT 3-PLY GIRDER TRUSSES & ROOF BEAMS - AT ALL BEARING POINTS.
- METAL HANGERS SHALL BE SPECIFIED BY THE MANUFACTURER, U.N.O.
- ROOF TRUSS SHOP DWGS. SHALL BE SUBMITTED TO ARCH & ENG. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BCSI 1 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- SUPPORT SHORT SPAN ROOF TRUSSES W/2x4 LEDGER FASTENED TO FRAMING W/(2) 3" x 0.120" NAILS @ 16" O.C. (UP TO 7' SPAN).

M&K STND. - MAR 2016

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

GENERAL STRUCTURAL NOTES

- DESIGN IS BASED ON 2018 NCSBC-RESIDENTIAL CODE & 2018 IRC WITH SOUTH CAROLINA AMENDMENTS
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.
- DESIGN LOADS:
  - ROOF: LIVE = 20 PSF; DEAD = 7 PSF T.C., 10 PSF B.C.; LOAD DURATION FACTOR = 1.25
  - FLOOR: LIVE = 40 PSF (30 PSF @ SLEEPING AREAS); DEAD = 10 PSF (I-JOISTS); ADD'L 10 PSF @ CERAMIC TILE IN BATHS & LAUND.
  - SOIL: 2,000 PSF ASSUMED ALLOWABLE BEARING PRESSURE (TO BE VERIFIED BY BUILDER)

GENERAL FRAMING

- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN STANDARD CONNECTIONS TABLE (IRC TABLE R602.3(1)) OR ON PLANS. ALL NAILS SPECIFIED ARE MIN DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- EXT. & INT. BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. SPF/SP "STUD" GRADE LUMBER, OR BETTER, U.N.O..
  - WALLS OVER 12' TALL SHALL BE PER PLAN.
- ALL INTERIOR BEARING WALLS ARE ASSUMED TO BE SHEATHED W/ GYP WALL BOARD (ONE SIDE MIN.) OR PROVIDE MID HT. BLOCKING.
- ALL HEADERS, BEAMS & OTHER STRUCTURAL MEMBERS SHALL BE SPRUCE-PINE-FIR #2 (SPF) OR SOUTHERN PINE #2 (SP) LUMBER, OR BETTER. SUPPORT ALL HEADERS/ BEAMS W/ (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.
  - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, U.N.O..
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x 'STUD' GRADE MEMBERS SPACED @ 24" O.C. (MAX., U.N.O.)
  - HEADERS IN NON-LOAD BEARING WALLS SHALL BE: (1)2x4/6 FLAT @ OPENINGS UP TO 4', (2)2x4/6 FLAT UP TO 8'.
- ALL FRAMING LUMBER SHALL BE DRIED TO 15% MC (KD-15).
- ENGINEERED LUMBER BEAMS TO MEET OR EXCEED THE FOLLOWING:
  - 'LVL' - Fb=2600 psi; Fv=285 psi; E=2.0x10^6 psi
- ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
  - 'LVL' - Fb=2400 psi; Fc⊥=2500 psi; E=1.8x10^6 psi
- FOR 2 & 3 PLY BEAMS OF EQUAL 13¾" MAX. WIDTH, FASTEN PLIES TOGETHER WITH 3 ROWS OF 3"x0.120" NAILS @ 8" O/C OR 2 ROWS USP WS35 SCREWS (OR 3½" TRUSSLOK SCREWS) @ 16" O/C. USE A MINIMUM OF 4 ROWS FOR BEAM DEPTHS OF 14" OR GREATER. APPLY FASTENING AT BOTH FACES FOR 3-PLY CONDITION. LOCATE TOP & BOTTOM NAILS/SCREWS 2" FROM EDGE. SOLID 3 ½" OR 5 ¼" BEAMS ARE ACCEPTABLE. USE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- FOR 4 PLY BEAMS OF EQUAL 13¾" MAX. WIDTH, FASTEN PLIES TOGETHER WITH 3 ROWS OF USP WS6 SCREWS (OR 6 ¾" TRUSSLOK SCREWS) @ 16" O/C. USE A MINIMUM OF 4 ROWS FOR BEAM DEPTHS OF 14" OR GREATER. APPLY FASTENING AT BOTH FACES (ONE SIDE ONLY FOR TRUSSLOK SCREWS). LOCATE TOP AND BOTTOM SCREWS 2" FROM EDGE. A SOLID 1" BEAM IS ACCEPTABLE.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS CONTINUOUS TO FND./BEARING. BLOCKING TO MATCH POST ABOVE.
- ALL EXTERIOR 4x4 WOOD POSTS SHALL HAVE USP BCS22-4 CAP & PA44E BASE, U.N.O.
- CORROSION NOTES:
  - BUILDER RESPONSIBLE TO DETERMINE CORROSION-RESISTANCE REQUIREMENTS AND COMPATIBILITY OF HARDWARE, FASTENERS AND CONNECTORS FOR ENVIRONMENTAL EXPOSURE AND IN CONTACT W/ PRESERVATIVE-TREATED WOOD OF ACTUAL FINAL CONDITIONS AND SOURCED MATERIALS. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD.
  - ALL FASTENERS AND CONNECTORS EXPOSED TO SALT WATER (WITHIN 300' OF SALT WATER SHORELINE, INCLUDING VENTED SPACES) SHALL BE STAINLESS STEEL.

M&K STND. - MAR 2016

Cedar Pointe
Lot 1

seal: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 47622 JOSHUA KREGER — 7/14/23

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Mulhern+Kulp project number: 256-22019

project mgr: SMK
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issue date: 01.13.2023

REVISIONS:

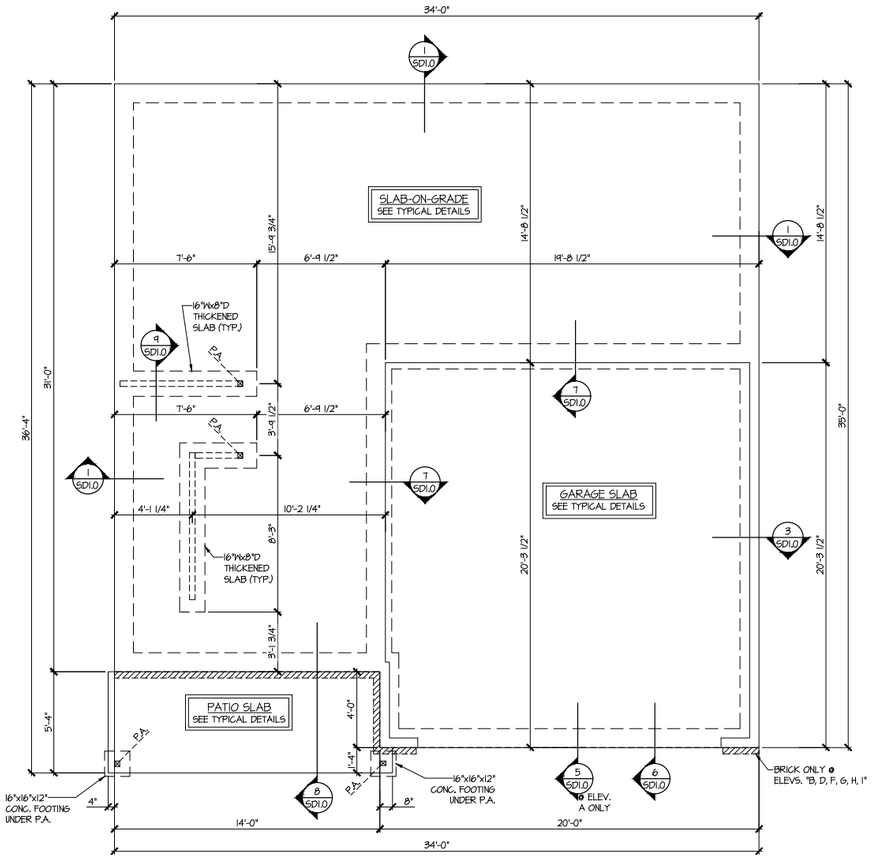
date:	initial:

SMITH DOUGLAS HOMES

BENSON II MODEL
120 MPH WIND ZONE
NORTH CAROLINA

GENERAL STRUCTURAL NOTES

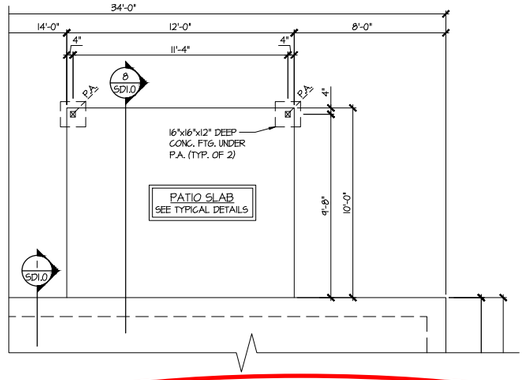
sheet: S0.0



1 MONO-SLAB FOUNDATION PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

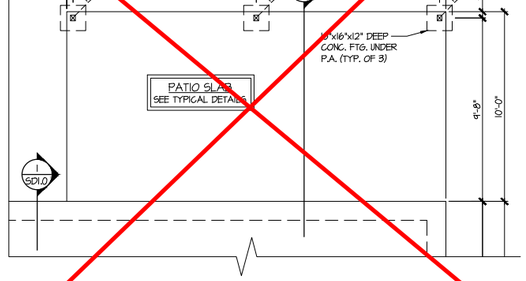
ALL ELEVS. SIM.



2 PARTIAL MONO-SLAB FOUNDATION PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

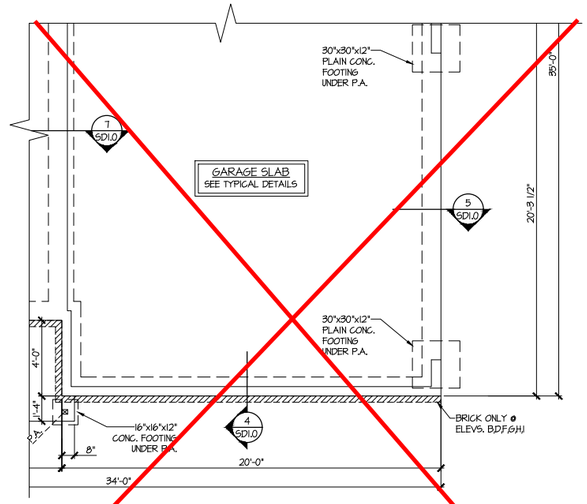
OPT. COVERED PATIO
ALL ELEVS. SIM.
SEE BASE ELEV. FOR ADD'L INFO.



3 PARTIAL MONO-SLAB FOUNDATION PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

OPT. LARGE COVERED PATIO
ALL ELEVS. SIM.
SEE BASE ELEV. FOR ADD'L INFO.



4 PARTIAL MONO-SLAB FOUNDATION PLAN OPT. SIDE ENTRY GARAGE

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

ALL ELEV. SIM.

Cedar Pointe
Lot 1

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

LEGEND

- R.T. — INDICATES ROOF TRUSSES @ 24" O.C. PER ROOF MANUF. (TYP. U.N.O.)
- O.F. — INDICATES TRUSS OVERFRAMING @ 24" O.C. (TYP. U.N.O.)
- F.J. — INDICATES 14" DEEP FLOOR I-JOISTS @ 24" O.C. MAX. JOIST SERIES AND SPACING SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. NOTE: 14" FLOOR TRUSSES @ 24" O.C. MAX. IS AN ACCEPTABLE ALTERNATE FLOOR SYSTEM
- INDICATES LOCATIONS OF POTENTIAL TILE FLOOR. JOIST MANUFACTURER SHALL DESIGN FLOOR SYSTEM FOR ADD'L 10 PSF DEAD LOAD AT THESE LOCATIONS.
- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.)
- BEAM/HEADER
- METAL HANGER
- INDICATES POST ABOVE (P.A.) PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.

seal: 7/14/23

NORTH CAROLINA PROFESSIONAL SEAL 047622 ENGINEER SHAUN KREIDER

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Mulhern+Kulp project number:
256-22019

project mgr: SMK
drawn by: RAP
issue date: 01.13.2023

REVISIONS:

date:	initial:

SMITH DOUGLAS HOMES

MONO-SLAB FOUNDATION

BENSON II MODEL

120 MPH WIND ZONE
NORTH CAROLINA

sheet:
S1.0

FOUNDATION NOTES:

1. FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
2. STRUCTURAL CONCRETE TO BE F_c = 3000 PSI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.
3. FOOTINGS TO BE PLACED ON UNDISTURBED EARTH, BEARING A MINIMUM OF 12" BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE ENFORCEMENT OFFICIAL.
4. FOOTING SIZES BASED ON A PRESUMPTIVE SOIL BEARING CAPACITY OF 2000 PSF. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION.
5. FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS, PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
6. MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
7. PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
8. PROVIDE FOUNDATION WATERPROOFING, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS.
9. PROVIDED PERIMETER INSULATION FOR ALL FOUNDATIONS PER 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
10. CORBEEL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.
11. CRAWL SPACE TO BE GRADED LEVEL, AND CLEARED OF ALL DEBRIS.
12. FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA BOLTS SPACED AT 6'-0" ON CENTER WITH A 7" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
13. ABBREVIATIONS:

DJ = DOUBLE JOIST	SJ = SINGLE JOIST
GT = GIRDER TRUSS	FT = FLOOR TRUSS
SC = STUD COLUMN	DR = DOUBLE RAFTER
EE = EACH END	TR = TRIPLE RAFTER
TJ = TRIPLE JOIST	OC = ON CENTER
CL = CENTER LINE	PL = POINT LOAD

14. ALL PIERS TO BE 16"x16" MASONRY AND ALL PILASTERS TO BE 8"x16" MASONRY, TYPICAL (UNO).
15. WALL FOOTINGS TO BE CONTINUOUS CONCRETE, SIZES PER STRUCTURAL PLAN.
16. A FOUNDATION EXCAVATION OBSERVATION SHOULD BE CONDUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER, OR HIS QUALIFIED REPRESENTATIVE. IF ISOLATED AREAS OF YIELDING MATERIALS AND/OR POTENTIALLY EXPANSIVE SOILS ARE OBSERVED IN THE FOOTING EXCAVATIONS AT THE TIME OF CONSTRUCTION, SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. MUST BE PROVIDED THE OPPORTUNITY TO REVIEW THE FOOTING DESIGN PRIOR TO CONCRETE PLACEMENT.
17. ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.

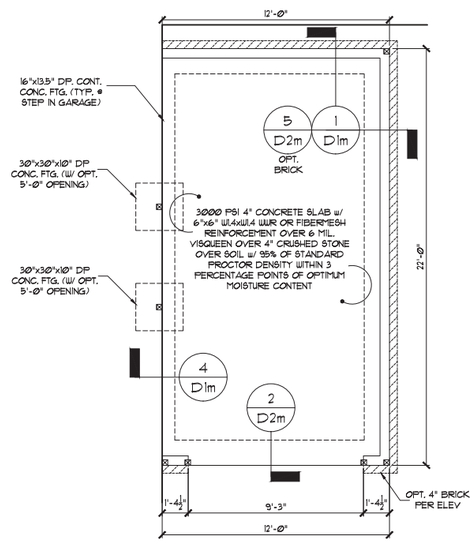
REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLDOWNS. ADDITIONAL INFO. PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND NOT BRICK VENEER, UNO

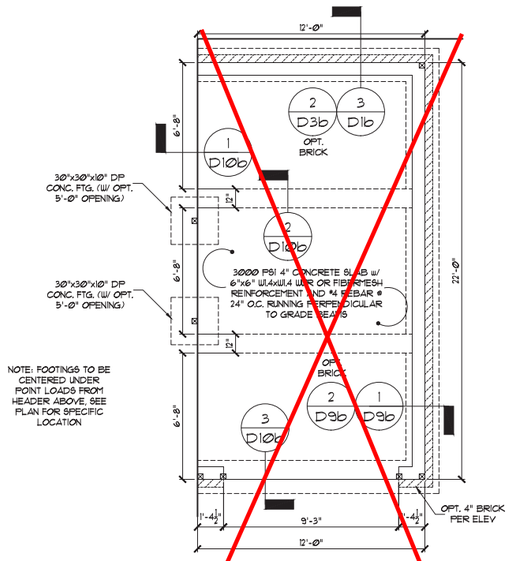
NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP I PER TABLE R405.1

REINFORCE GARAGE PORTAL WALLS PER FIGURE R602.10.4.3 OF THE 2018 NCRC.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 9/23/16. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.



MONOSLAB FOUNDATION PLAN

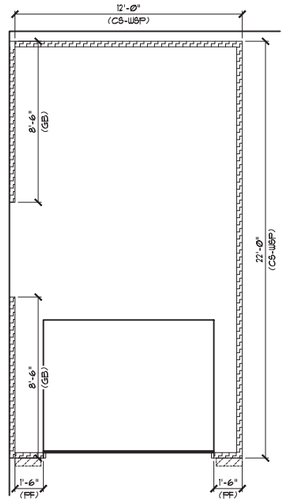


NOTE: FOOTINGS TO BE CENTERED UNDER POINT LOADS FROM HEADER ABOVE. SEE PLAN FOR SPECIFIC LOCATION

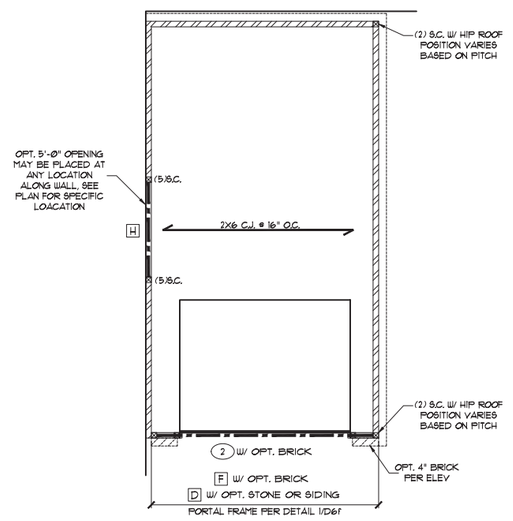
BASEMENT FOUNDATION PLAN

NOTE: SEE PLAN FOR SPECIFIC LOCATION

NOTE: REFER TO BASE PLAN FOR REQ'D FND. FRAMING @ HOUSE



FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD: ELEV A,D,G,J & C,F,I,L		
	REQUIRED	PROVIDED
FRONT SIDE	4.0	4.5
LEFT SIDE	4.0	8.5
REAR SIDE	4.0	17.0
RIGHT SIDE	4.0	22.0



1ST FLOOR FRAMING PLAN

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION @ PANEL EDGES	REQUIRED CONNECTION @ 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 NAILS** @ 7" O.C.	5d COOLER NAILS** @ 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"	PER FIGURE R602.10.1	PER FIGURE R602.10.1
**OR EQUIVALENT PER TABLE R1703.3.5				

REAR
LEFT HOUSE RIGHT
FRONT

BRACED WALL NOTES:

1. WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE.
2. WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
3. REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
4. BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.
5. ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 19 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
6. MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.1.
7. THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
8. 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.
9. FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
10. A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
11. THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
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 R602.10.3.3 OF THE 2018 NCRC.
13. BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4
14. BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5
15. CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6
16. PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (UNO)
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 FRAME	PF-ENG = ENG. PORTAL FRAME

INSTALL HOLD-DOWNS PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.

HEADER/BEAM SCHEDULE			
HEADER TAG	BEAM TAG	SIZE	JACKS (EACH END)
-	B1	(1) 14" FLOOR JOIST	(2)
-	B2	(2) 14" FLOOR JOIST	(2)
A	B3	(2) 2x6	(1)
B	B4	(2) 2x8	(2)
C	B5	(2) 2x10	(2)
D	B6	(2) 2x12	(2)
E	B7	(2) 9-1/4" LVL	(3)
F	B8	(2) 11-7/8" LVL	(3)
G	B9	(2) 14" LVL	(3)
H	B10	(2) 16" LVL	(3)
I	B11	(2) 18" LVL	(3)
J	B12	(2) 24" LVL	(4)
K	B13	(3) 9-1/4" LVL	(3)
L	B14	(3) 11-7/8" LVL	(3)
M	B16	(3) 14" LVL	(3)
N	B17	(3) 16" LVL	(3)
O	B18	(3) 18" LVL	(3)
P	B19	(3) 24" LVL	(4)

HEADER/BEAM SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER/BEAM SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. ALL BEAMS TO BE FLUSH UNLESS NOTED OTHERWISE.

STUD COLUMN (S.C.) CALLOUTS ON PLAN OVERRIDE JACK STUD COUNT SHOWN IN BEAM/HEADER SCHEDULE. KING STUDS TO BE INSTALLED PER APPLICABLE BUILDING CODE.

STRUCTURAL MEMBERS ONLY

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FOUNDATION & FIRST FLOOR FRAMING PLANS

SCALE: 1/8"=1'

NORTH CAROLINA PROFESSIONAL SEAL 048218 ENGINEER ANTHONY T. SHEPHERD

STRUCTURAL MEMBERS ONLY

SUMMIT
ENGINEERING LABORATORY TESTING
3070 HAMMOND BUSINESS PLACE, SUITE 171
RALEIGH, NC 27603
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FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM

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

PROJECT
Third Car Add On Garage
Foundation & First Floor Framing Plans

CLIENT
Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

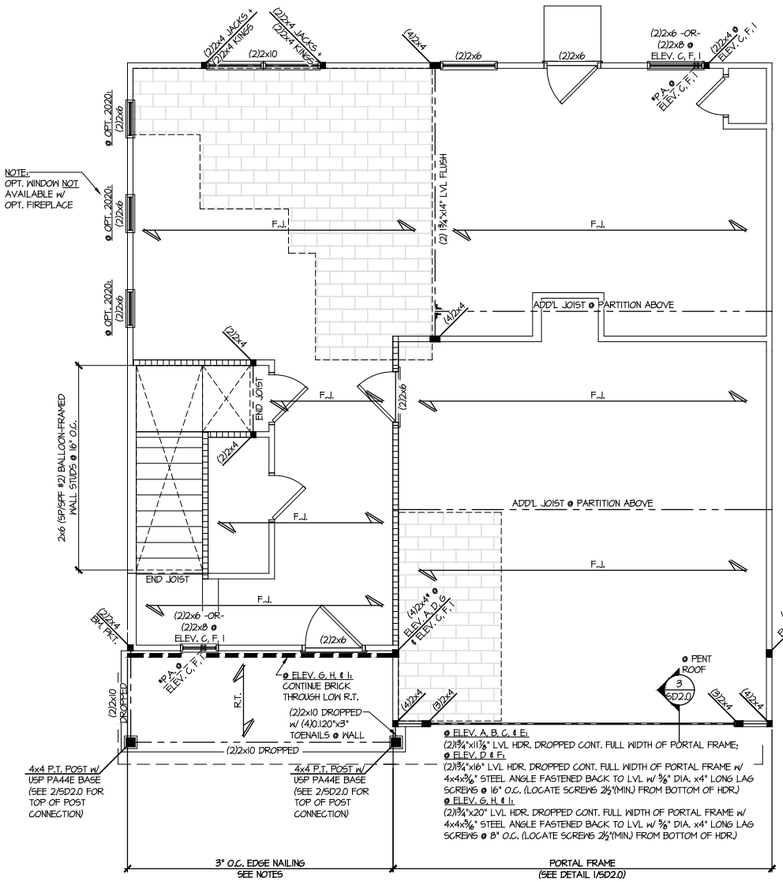
CURRENT DRAWING
DATE: 2/14/19
SCALE: 1/8"=1'-0"
PROJECT #: 3832.221
DRAWN BY: ZTS
CHECKED BY: WAJ

ORIGINAL DRAWING

DATE	PROJECT#
10/27/16	3832.27

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

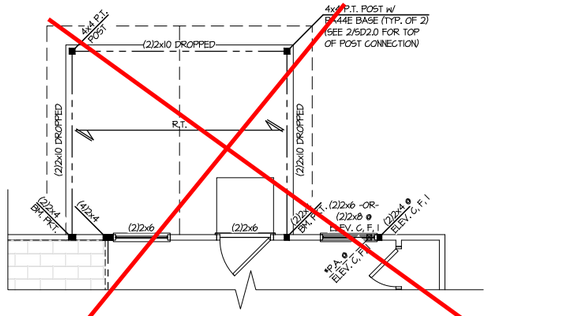
SHEET
S1.0m



1 2ND FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

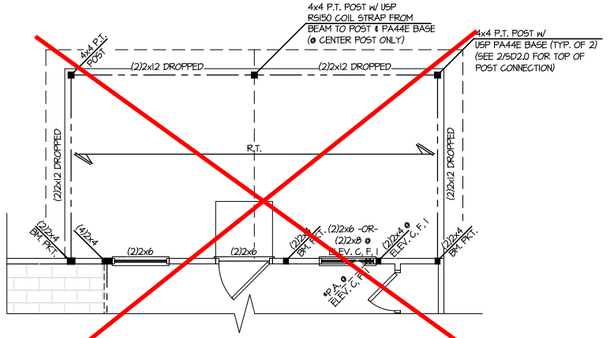
ALL ELEVS. SIM.



2 PARTIAL 2ND FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

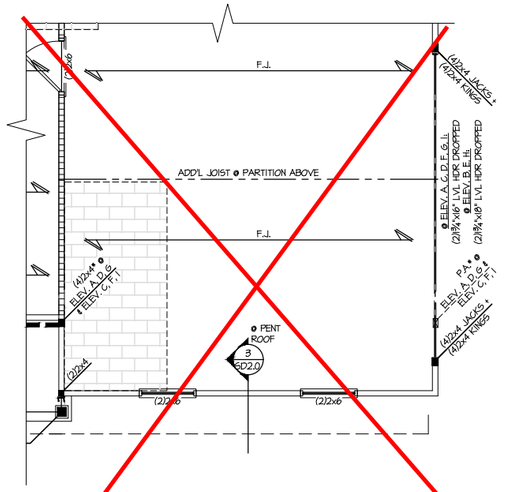
OPT. COVERED PATIO
ALL ELEVS. SIM.
SEE BASE ELEV. FOR ADD'L INFO.



3 PARTIAL 2ND FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

OPT. LARGE COVERED PATIO
ALL ELEVS. SIM.
SEE BASE ELEV. FOR ADD'L INFO.



4 PARTIAL 2ND FLOOR FRAMING PLAN OPT. SIDE ENTRY GARAGE

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

ALL ELEV. SIM.

Cedar Pointe
Lot 1

THIS LEVEL HAS BEEN DESIGNED FOR 9'-1" PLATE HEIGHT

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

LEGEND

- R.T. — INDICATES ROOF TRUSSES @ 24" O.C. PER ROOF. MANUF. (TYP. U.N.O.)
- O.F. — INDICATES TRUSS OVERFRAMING @ 24" O.C. (TYP. U.N.O.)
- F.J. — INDICATES 14" DEEP FLOOR I-JOISTS @ 24" O.C. MAX. JOIST SERIES AND SPACING SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER NOTE: 14" FLOOR TRUSSES @ 24" O.C. MAX. IS AN ACCEPTABLE ALTERNATE FLOOR SYSTEM
- INDICATES LOCATIONS OF POTENTIAL TILE FLOOR. JOIST MANUFACTURER SHALL DESIGN FLOOR SYSTEM FOR ADD'L 10 PSF DEAD LOAD AT THESE LOCATIONS.
- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.)
- BEAM/HEADER
- METAL HANGER
- INDICATES POST ABOVE (P.A.) PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.

seal: 7/14/23

NORTH CAROLINA PROFESSIONAL SEAL 047622 ENGINEER SHAUN KREIDER

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Mulhern+Kulp project number: 256-22019

project mgr: SMK
drawn by: RAP
issue date: 01.13.2023

REVISIONS:

date:	initial:

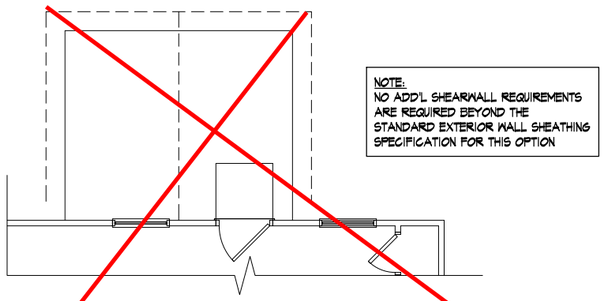
SMITH DOUGLAS HOMES

BENSON II MODEL

120 MPH WIND ZONE
NORTH CAROLINA

2ND FLOOR FRAMING PLAN

sheet: S2.0

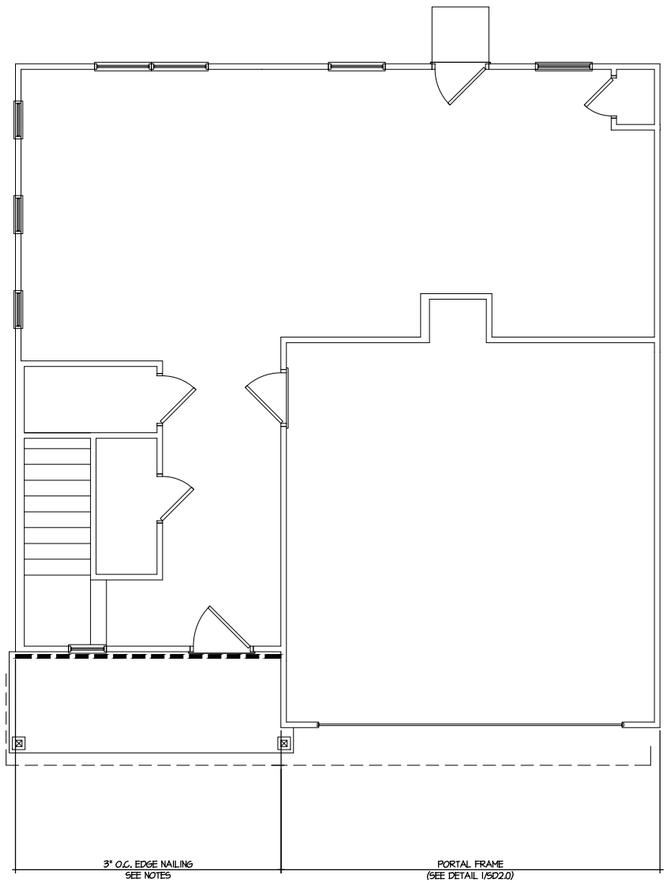


NOTE:
NO ADD'L SHEARWALL REQUIREMENTS ARE REQUIRED BEYOND THE STANDARD EXTERIOR WALL SHEATHING SPECIFICATION FOR THIS OPTION

2 PARTIAL 1ST FLOOR WALL BRACING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

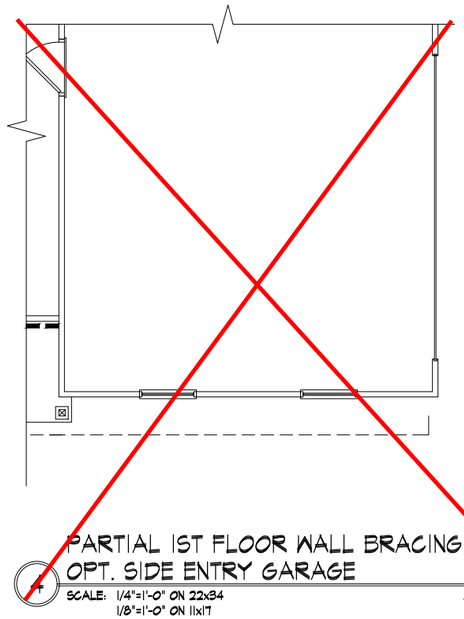
OPT. COVERED PATIO
ALL ELEVS. SIM.
SEE BASE ELEV. FOR ADD'L INFO.



1 1ST FLOOR WALL BRACING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

ALL ELEVS. SIM.

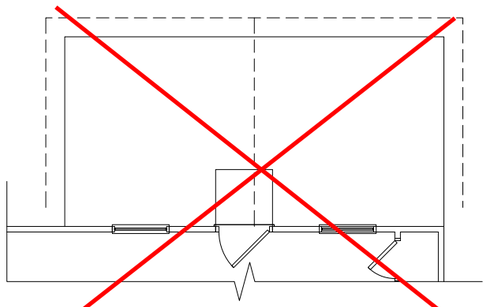


NOTE:
NO ADD'L SHEARWALL REQUIREMENTS ARE REQUIRED BEYOND THE STANDARD EXTERIOR WALL SHEATHING SPECIFICATION FOR THIS OPTION

4 PARTIAL 1ST FLOOR WALL BRACING PLAN OPT. SIDE ENTRY GARAGE

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

ALL ELEV. SIM.



NOTE:
NO ADD'L SHEARWALL REQUIREMENTS ARE REQUIRED BEYOND THE STANDARD EXTERIOR WALL SHEATHING SPECIFICATION FOR THIS OPTION

3 PARTIAL 1ST FLOOR WALL BRACING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

OPT. LARGE COVERED PATIO
ALL ELEVS. SIM.
SEE BASE ELEV. FOR ADD'L INFO.

LATERAL/WALL BRACING & WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:

120MPH WIND IN 2018 NCSBC:RC
& 120MPH WIND IN 2018 IRC
(120 MPH WIND SPEED IN ASCE 7 WIND MAP, PER IRC R301.2.1.1)
EXP. B, RISK CAT. 2 & SEISMIC CAT. A/B.

THE DESIGN WAS COMPLETED PER 2015 & 2018 IBC (SECTION 1609) & ASCE 7, AS PERMITTED BY R301.1.3 OF THE 2018 NCSBC:RC & 2018 IRC. ACCORDINGLY, THIS MODEL, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES.

DESIGN WIND UPLIFT LOADS HAVE BEEN CALCULATED UTILIZING ASCE 7 (ACCEPTED ENGINEERING PRACTICE) AS ALLOWED PER 2018 NCSBC:RC & 2018 IRC SECTION R802.11.1.1. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PATH PER SECTIONS R602.3.5& R802.11.

MIK STND. - MAR 2016

EXT. WALL SHEATHING SPECIFICATION

- 7/16" OSB OR 15/32" PLYWOOD:
  FASTEN SHEATHING W/ 2 3"x0.113 NAILS @ 6" O.C. AT EDGES & @ 12" O.C. IN THE PANEL FIELD. (TYP. U.N.O.)
- ALL SHEATHING PANELS SHALL BE ORIENTED VERTICALLY (LONG DIRECTION PARALLEL TO STUDS) AND INSTALLED FULL HEIGHT OF SHEAR WALL - OR - 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT ALL UNSUPPORTED PANEL EDGES & EDGE FASTENING.
- ALL EXT. WALLS SHALL BE CONTINUOUSLY SHEATHED AND ARE CONSIDERED SHEAR WALLS.
- ALT. STAPLE CONNECTION SPEC: 1 3/4" 16 GA STAPLES (7/16" CROWN) @ 3" O.C. AT EDGES & @ 6" O.C IN FIELD.

3" O.C. EDGE NAILING

- AT DESIGNATED AREAS - FASTEN PANEL EDGES OF WOOD STRUCTURAL WALL SHEATHING TO FRAMING W/ 2 3/4" x 0.113" NAILS @ 3" O.C. AND 12" O.C. IN THE PANEL FIELD NO STAPLE ALTERNATIVE AVAILABLE AT THIS SPEC. ALL SHEATHING PANELS SHALL BE ORIENTED VERTICALLY (LONG DIRECTION PARALLEL TO STUD) AND INSTALLED FULL HEIGHT OF SHEAR WALL - OR - 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT UNSUPPORTED PANEL EDGES AND 3" O.C. EDGE FASTENING.

NOTES

- SEE CONNECTION SPECIFICATIONS CHART FOR STANDARD SHEAR TRANSFER DETAILING. IF ADDITIONAL CAPACITY IS REQUIRED BY DESIGN, IT WILL BE SPECIFICALLY NOTED ON PLAN.
- DESIGN ASSUMES 16" O.C MAX. STUD SPACING, U.N.O.
- ALL STRUCTURAL PANELS ARE TO BE DIRECTLY APPLIED TO STUD FRAMING.
- PRE-MANUFACTURED PANELIZED WALLS:
  FASTEN TOGETHER END STUDS OF WALL PANELS SHEATHED W/ OSB OR PLYWOOD W/ 3" x 0.120" NAILS @ 4" O.C. (THRU ONE SIDE ONLY)

INDICATES EXTENT OF INT. OSB SHEARWALL, AND/OR 3" O.C. EDGE NAILING

INDICATES HOLDOWN

MIK STND. - MAR 2016

Cedar Pointe
Lot 1

THIS LEVEL HAS BEEN DESIGNED FOR 9'-1" PLATE HEIGHT

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

LEGEND

- R.T. INDICATES ROOF TRUSSES @ 24" O.C. PER ROOF MANUF. (TYP. U.N.O.)
- O.F. INDICATES TRUSS OVERFRAMING @ 24" O.C. (TYP. U.N.O.)
- F.J. INDICATES 14" DEEP FLOOR I-JOISTS @ 24" O.C. MAX. JOIST SERIES AND SPACING SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. NOTE: 14" FLOOR TRUSSES @ 24" O.C. MAX. IS AN ACCEPTABLE ALTERNATE FLOOR SYSTEM
- INDICATES LOCATIONS OF POTENTIAL TILE FLOOR. JOIST MANUFACTURER SHALL DESIGN FLOOR SYSTEM FOR ADD'L 10 PSF DEAD LOAD AT THESE LOCATIONS.
- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.)
- BEAM/HEADER
- JL METAL HANGER
- INDICATES POST ABOVE (P.A.) PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.

seal: 7/14/23

NORTH CAROLINA PROFESSIONAL SEAL 17622 ENGINEER SHAUN KREIDER

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
3255 Shamrock Parkway, Suite 105 • Alpharetta, GA 30022
p 770.777.4874 • mulhernkulp.com
NC License # C-3825

Mulhern+Kulp project number:
256-22019

project mgr: SMK
drawn by: RAP
issue date: 01.13.2023

REVISIONS:

date:	initial:

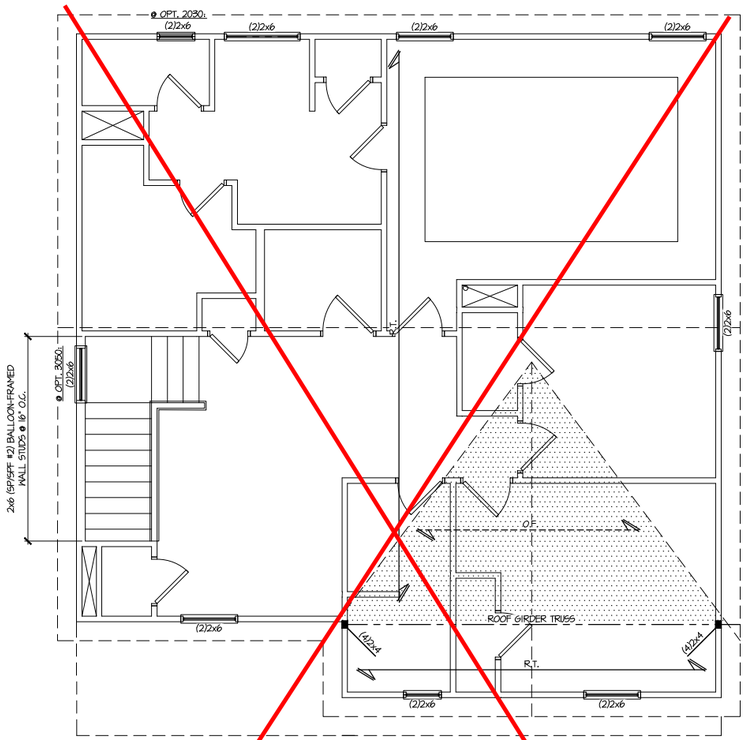
SMITH DOUGLAS HOMES

1ST FLOOR WALL BRACING PLAN

BENSON II MODEL

120 MPH WIND ZONE
NORTH CAROLINA

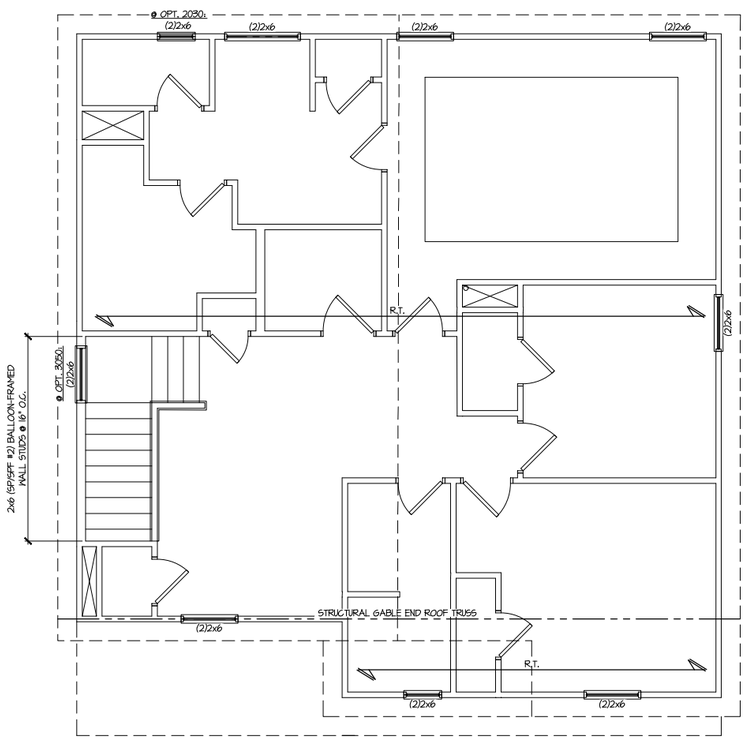
sheet:
S2.0L



1 ROOF FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

ELEV. A
ELEVS. D & G SIM.



2 ROOF FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17

ELEV. B
ELEVS. E & H SIM.

Cedar Pointe
Lot 1

THIS LEVEL HAS BEEN DESIGNED FOR 9'-1" PLATE HEIGHT

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

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seal: 7/14/23

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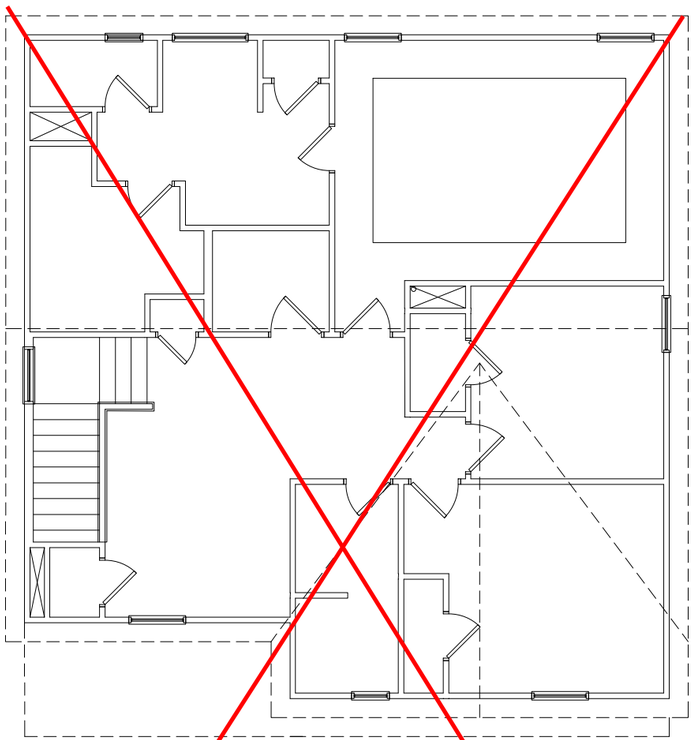
SMITH DOUGLAS HOMES

ROOF FRAMING PLAN

BENSON II MODEL

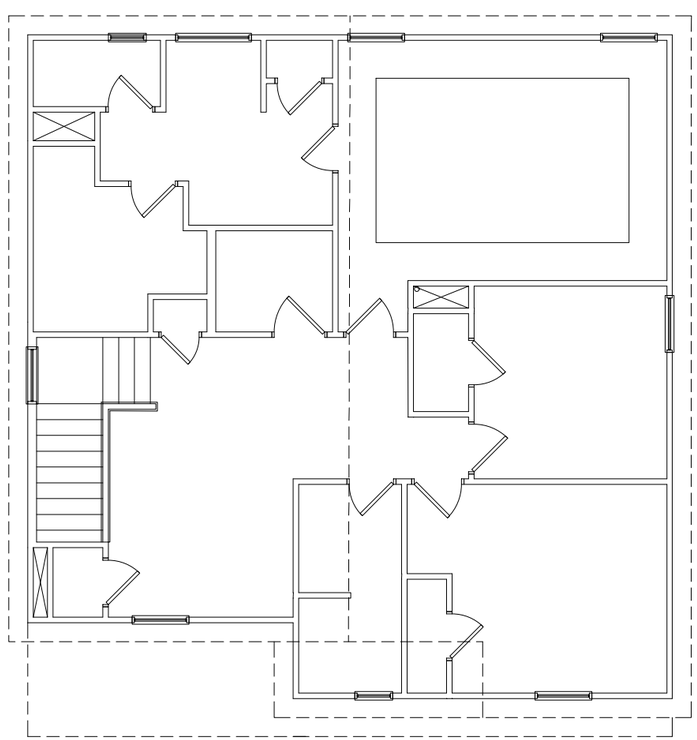
120 MPH WIND ZONE
NORTH CAROLINA

sheet:
S3.0



NOTE:
NO ADD'L SHEARWALL REQUIREMENTS ARE REQUIRED BEYOND THE STANDARD EXTERIOR WALL SHEATHING SPECIFICATION FOR THIS ELEVATION

1 2ND FLOOR WALL BRACING PLAN
SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17
ELEV. A
ELEVS. D & G SIM.



NOTE:
NO ADD'L SHEARWALL REQUIREMENTS ARE REQUIRED BEYOND THE STANDARD EXTERIOR WALL SHEATHING SPECIFICATION FOR THIS ELEVATION

2 2ND FLOOR WALL BRACING PLAN
SCALE: 1/4"=1'-0" ON 22x34
1/8"=1'-0" ON 11x17
ELEV. B
ELEVS. E & H SIM.

LATERAL/WALL BRACING & WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:

120MPH WIND IN 2018 NCSBC:RC
& 120MPH WIND IN 2018 IRC
(120 MPH WIND SPEED IN ASCE 7 WIND MAP, PER IRC R301.2.1.1)
EXP. B, RISK CAT. 2 & SEISMIC CAT. A/B.

THE DESIGN WAS COMPLETED PER 2015 & 2018 IBC SECTION 1609) & ASCE 7, AS PERMITTED BY R301.1.3 OF THE 2018 NCSBC:RC & 2018 IRC. ACCORDINGLY, THIS MODEL, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES.

DESIGN WIND UPLIFT LOADS HAVE BEEN CALCULATED UTILIZING ASCE 7 (ACCEPTED ENGINEERING PRACTICE) AS ALLOWED PER 2018 NCSBC:RC & 2018 IRC SECTION R802.11.1.1. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PATH PER SECTIONS R602.3.5& R802.11.

MBK STND. - MAR 2016

EXT. WALL SHEATHING SPECIFICATION

- 7/16" OSB OR 15/32" PLYWOOD:
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- ALT. STAPLE CONNECTION SPEC: 1 3/4" 16 GA STAPLES (7/16" CROWN) @ 3" O.C. AT EDGES & @ 6" O.C IN FIELD.

3" O.C. EDGE NAILING

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NOTES

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INDICATES HOLDOWN

MBK STND. - MAR 2016

Cedar Pointe
Lot 1

THIS LEVEL HAS BEEN DESIGNED FOR 9'-1" PLATE HEIGHT

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seal: 7/14/23
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date:	initial:

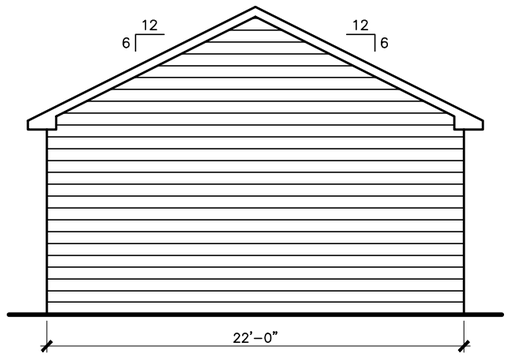
SMITH DOUGLAS HOMES

2ND FLOOR WALL BRACING PLAN

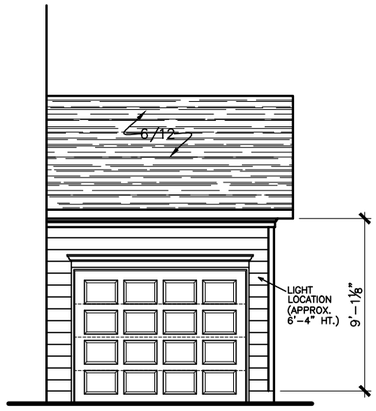
BENSON II MODEL

120 MPH WIND ZONE
NORTH CAROLINA

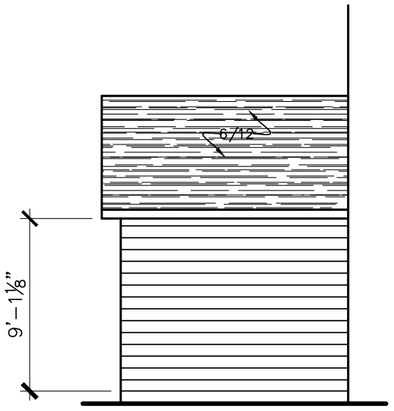
sheet:
S3.0L



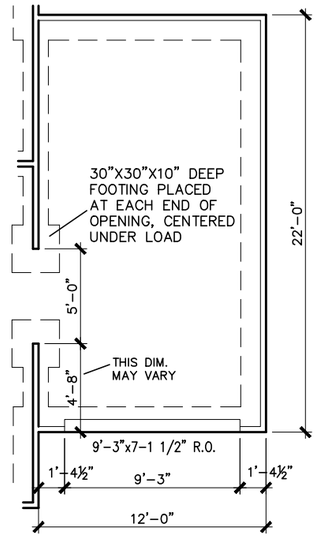
SIDE ELEVATION



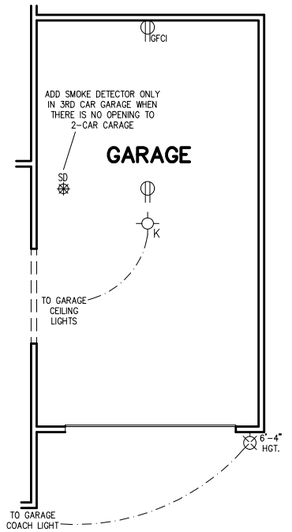
FRONT ELEVATION



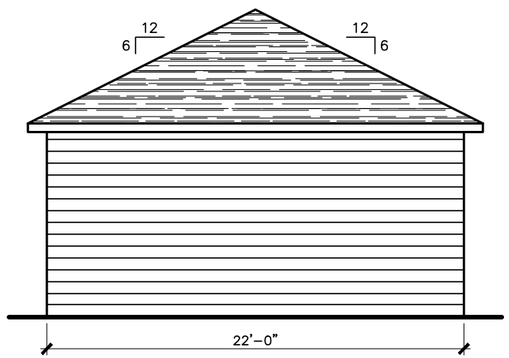
REAR ELEVATION



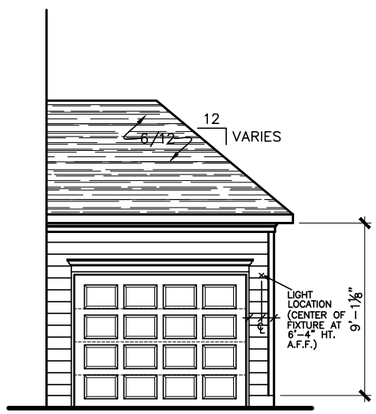
SLAB PLAN



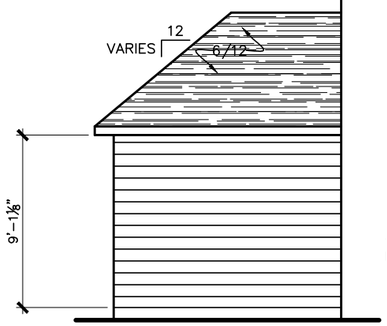
ELECTRICAL PLAN



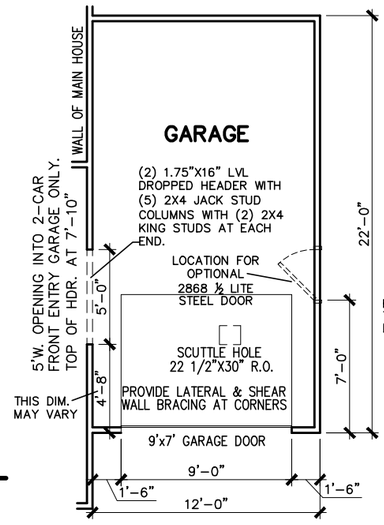
SIDE ELEVATION



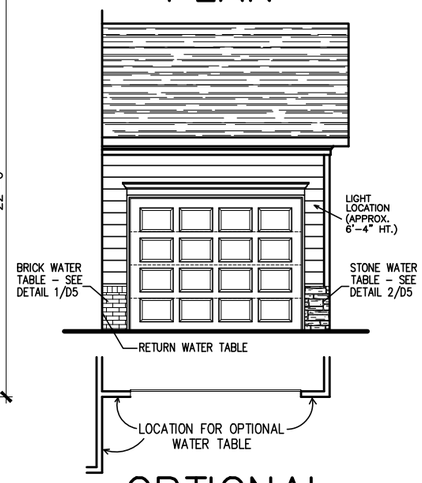
FRONT ELEVATION



REAR ELEVATION



FLOOR PLAN



OPTIONAL WATER TABLE

REVISION	DATE	BY
Noted location for light at right of O.H.G.D.	9/12/16	AW
Added opening between garages	5/3/18	AW

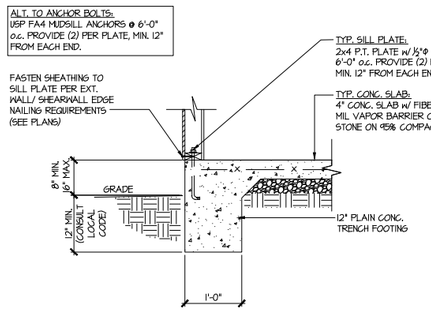
SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

PLANS
ADD ON GARAGE

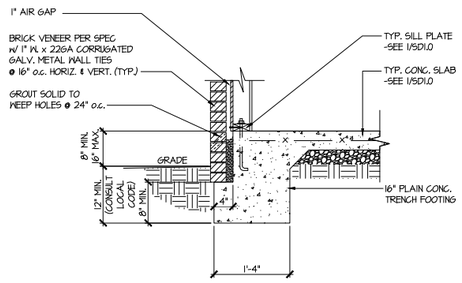
SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
WOODSTOCK, GA 30188
www.smithdouglas.com

BY:	CH:
BB	AW

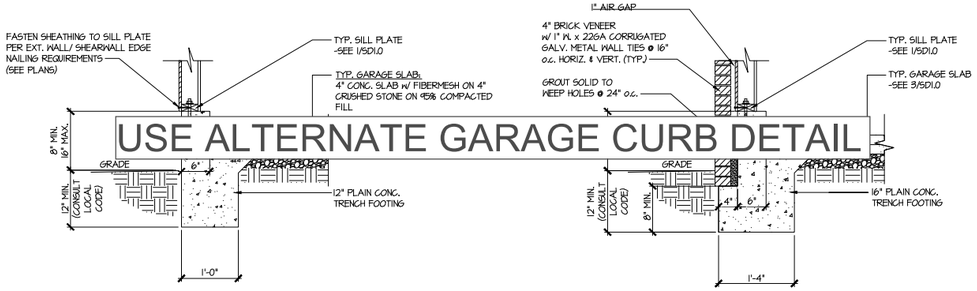
DATE: 6/17/16
FACADE OPT:
PLAN ID: ALL
FND: ALL
ELEV:
PAGE NO: D11



1 TYPICAL SLAB ON GRADE PERIMETER FOOTING

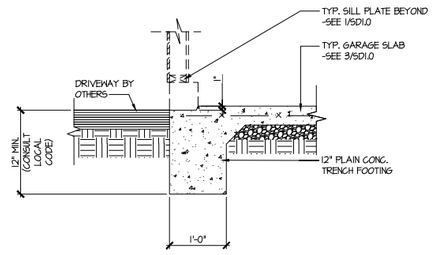


2 TYPICAL SLAB ON GRADE PERIMETER FOOTING
w/ BRICK VENEER

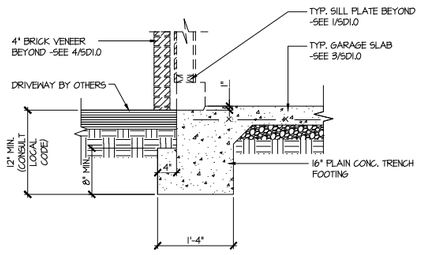


3 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING

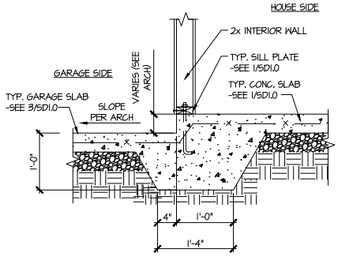
4 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING
w/ BRICK VENEER



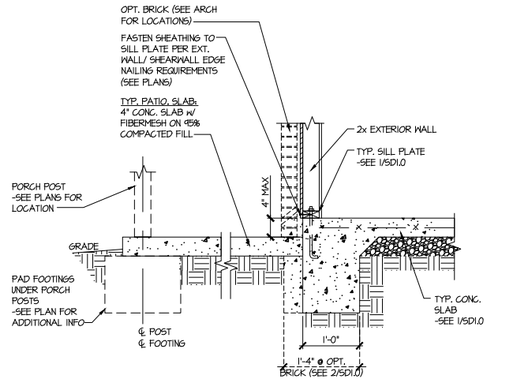
5 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING



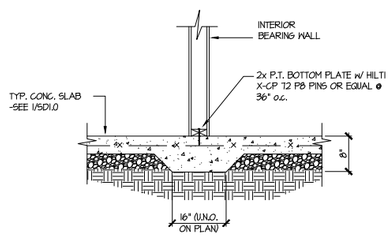
6 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING
w/ BRICK VENEER



7 TYPICAL MONOLITHIC INTERIOR GARAGE FOOTING



8 TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO



9 TYPICAL THICKENED SLAB @ INTERIOR BEARING WALL

Cedar Pointe
Lot 1

seal:
7/14/23
NORTH CAROLINA PROFESSIONAL SEAL 17622 ENGINEER SHAUN KREIDER

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SMITH DOUGLAS HOMES

FOUNDATION DETAILS

BENSON II MODEL

120 MPH WIND ZONE
NORTH CAROLINA

sheet:
SD1.0

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

3625 Brookside Parkway, Suite 165, Alpharetta, GA 30022 ▸ p 770-777-0074 ▸ *mulhernkulp.com*

August 18, 2023

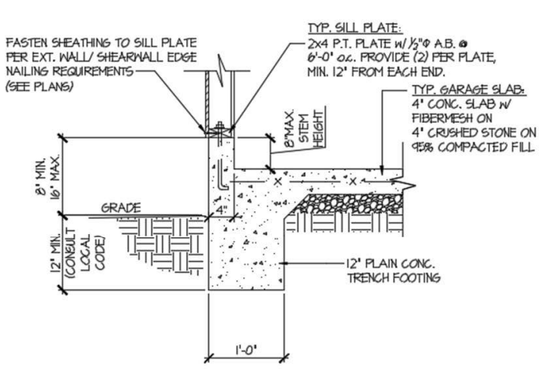
Jody Hunt
Director of Product Development
SMITH DOUGLAS HOMES
110 Village Trail, Suite 215
Woodstock, GA 30188

ALTERNATE GARAGE CURB DETAIL
Smith Douglas Homes

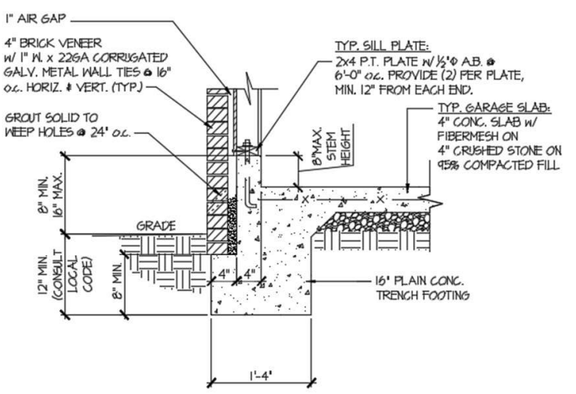
Reference
Current Structural Plans prepared by Mulhern & Kulp

Jody:

Pursuant to your request, we have prepared this letter to address the "*Alternate Garage Curb Details*", prepared by Mulhern & Kulp for Smith Douglas Homes shown below. The foundation details shown below call for a 4" wide curb with a maximum of 8" stem wall height; these are an acceptable alternative to the 6" wide curb at the garage per M&K foundation details 3 & 4 on sheet SD-1.0 at 2x4 garage wall locations.



TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING
A



TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING w/ BRICK VENEER
B

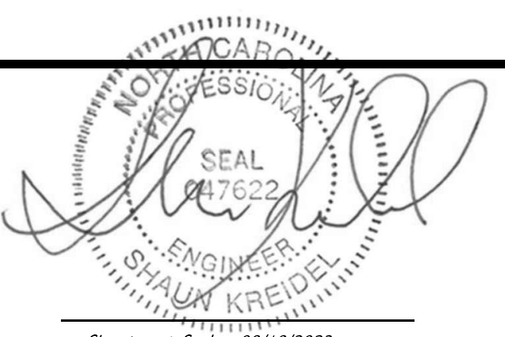
Please feel free to call if you have any questions.

Respectfully,

MULHERN & KULP STRUCTURAL ENGINEERING, INC.

NC License # C-3825

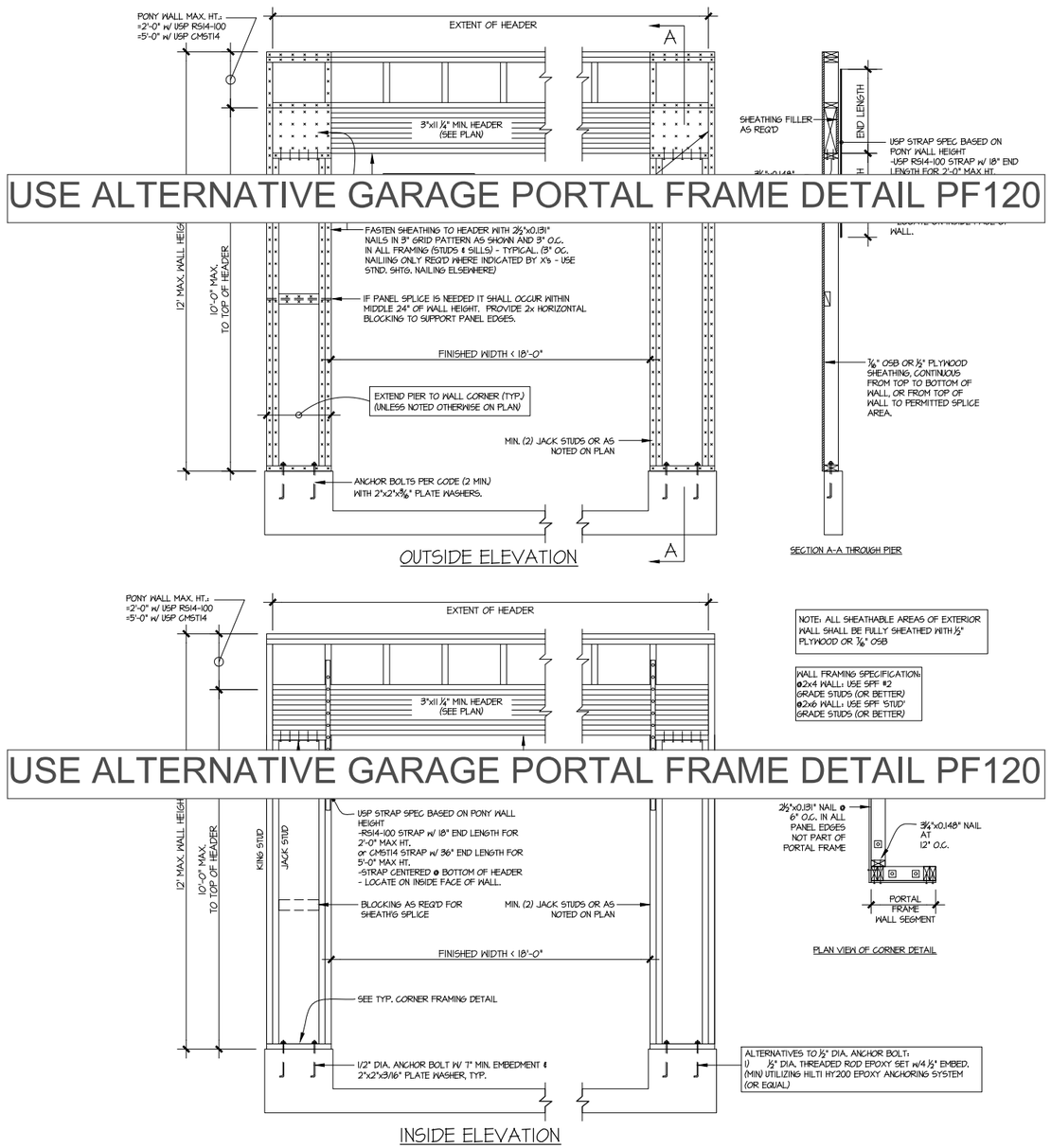
Shaun M. Kreidel, P.E. *Project Manager + Atlanta Office Director*



Signature + Seal *08/18/2023*

P:\Client Files\256 - Smith Douglas Homes\2023\23000 - 2023 Client Admin\2023-08-17 - 4in Garage Curb Letter\Alternate Garage Curb Detail - Letter - NC.docx

Cedar Pointe
Lot 1



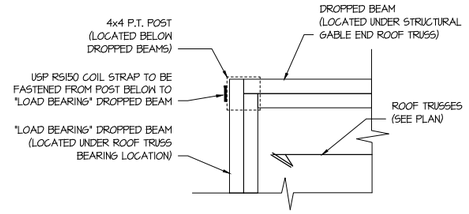
USE ALTERNATIVE GARAGE PORTAL FRAME DETAIL PF120

USE ALTERNATIVE GARAGE PORTAL FRAME DETAIL PF120

1 GARAGE PORTAL FRAME BRACING ELEVATION

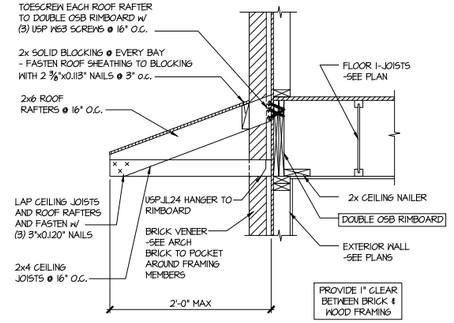
SCALE: N.T.S.

BOTH SIDES OF GARAGE DOOR
115 MPH WIND SPEED (ULT)



2 COVERED PORCH CONNECTION DETAIL

SCALE: 1 1/2"=1'-0"



3 DETAIL @ PENT ROOF

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

Cedar Pointe
Lot 1

seal: 7/14/23

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
3525 Ramblin Parkway, Suite 205 • Alpharetta, GA 30022
p 770.777.4874 • mulhernkulp.com
NC License # C-3825

Mulhern+Kulp project number: 256-22019

project mgr: SMK
drawn by: RAP
issue date: 01.13.2023

REVISIONS:

date:	initial:

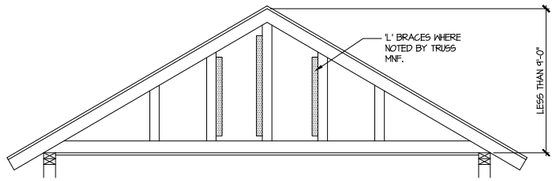
SMITH DOUGLAS HOMES

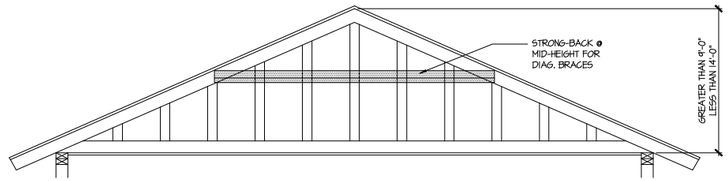
FRAMING DETAILS

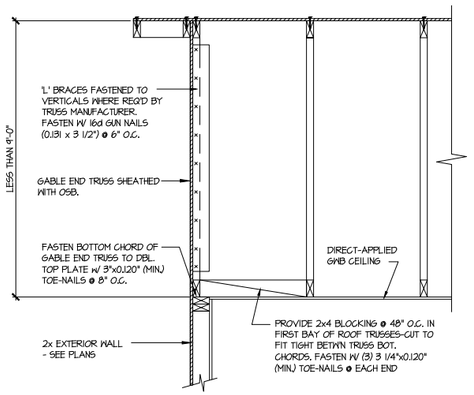
BENSON II MODEL

120 MPH WIND ZONE
NORTH CAROLINA

sheet: SD2.0

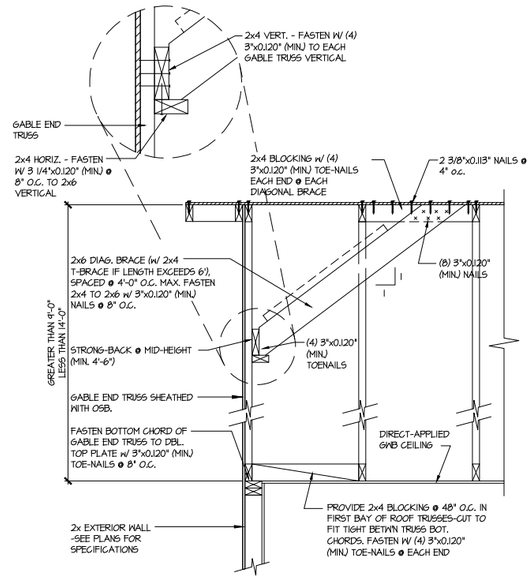






A TYPICAL GABLE END BRACING DETAIL
SCALE: NONE
REQ'D @ GABLE END TRUSS HEIGHT UP TO 9'-0"

BRACE GABLE END TRUSSES PER ABOVE DETAIL WHEN GABLE HEIGHT IS LESS THAN 9'-0". 'L' BRACES REQUIRED WHERE NOTED BY TRUSS MANUFACTURER.



B TYPICAL GABLE END BRACING DETAIL
SCALE: NONE
REQ'D @ GABLE END TRUSS HEIGHT BETWN 9'-0" TO 14'-0"

BRACE GABLE END TRUSSES PER ABOVE DETAIL WHEN GABLE HEIGHT EXCEEDS 9'-0". 'L' BRACES NOT REQUIRED.

LETTERED DETAILS ARE TYPICAL FOR THIS HOME & SHALL BE IMPLEMENTED IN ALL APPLICABLE AREAS. THESE DETAILS ARE NOT "CUT" ON THE PLANS.	NUMBERED DETAILS ARE PLAN SPECIFIC AND ARE ONLY REQUIRED WHERE SPECIFICALLY INDICATED ("CUT") ON THE PLANS.

Cedar Pointe
Lot 1

seal: 7/14/23

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Mulhern+Kulp project number: 256-22019

project mgr: SMK
drawn by: RAP
issue date: 01.13.2023

REVISIONS:

date:	initial:

SMITH DOUGLAS HOMES

FRAMING DETAILS

BENSON II MODEL

120 MPH WIND ZONE
NORTH CAROLINA

sheet: SD2.1

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

3625 Brookside Parkway, Suite 165, Alpharetta, GA 30022 ▸ p 770-777-0074 ▸ *mulhernkulp.com*

July 28, 2023

Jody Hunt
Director of Product Development
SMITH DOUGLAS HOMES
110 Village Trail, Suite 215
Woodstock, GA 30188

ALTERNATE GARAGE PORTAL FRAME DETAIL
Smith Douglas Homes

Reference
"Alternate Garage Portal Frame Detail" on sheet PF-120 & PF-130, prepared by Mulhern & Kulp dated 07/28/2023 - attached

Jody:

Pursuant to your request, we have prepared this letter to address the "*Alternate Garage Portal Frame Detail*", prepared by Mulhern & Kulp for Smith Douglas Homes.

The "*Alternate Garage Portal Frame Detail*" on sheet "PF-120" is an acceptable alternative portal frame design for anywhere in North Carolina with a wind speed less than or equal to 120mph ultimate wind speed per ASCE 7-16. The "*Alternate Garage Portal Frame Detail*" on sheet "PF-130" is an acceptable alternative portal frame design for anywhere in North Carolina with a wind speed less than or equal to 130mph ultimate wind speed per ASCE 7-16. These details only apply to structural plans that have been designed by Mulhern& Kulp. It is the responsibility of "SDH" to provide the correct "*Alternate Garage Portal Frame Detail*", to the building department that matches the jurisdiction's wind speed requirements.

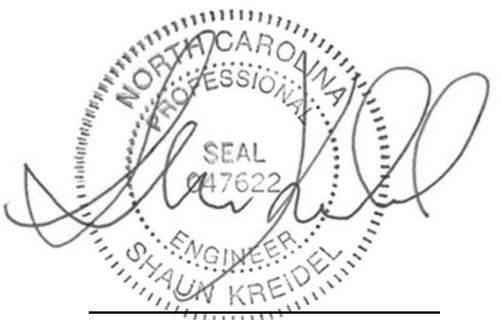
Please feel free to call if you have any questions.

Respectfully,

MULHERN & KULP STRUCTURAL ENGINEERING, INC.

NC License # C-3825

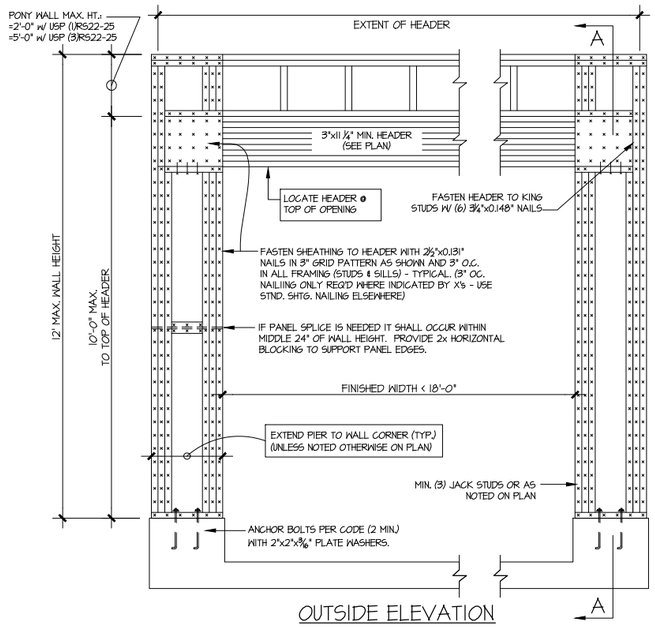
Shaun M. Kreidel, P.E. *Project Manager + Atlanta Office Director*



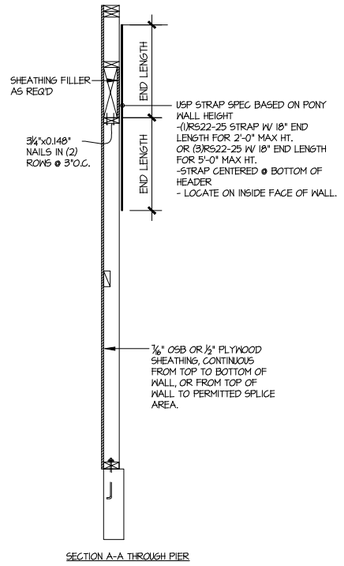
Signature + Seal *07/28/2023*

P:\Client Files\256 - Smith Douglas Homes\2023\23000 - 2023 Client Admin\2023-07-28 - Alternate Portal Frame Letter\Alternate Garage Portal Frame Detail - Letter - RLH.docx

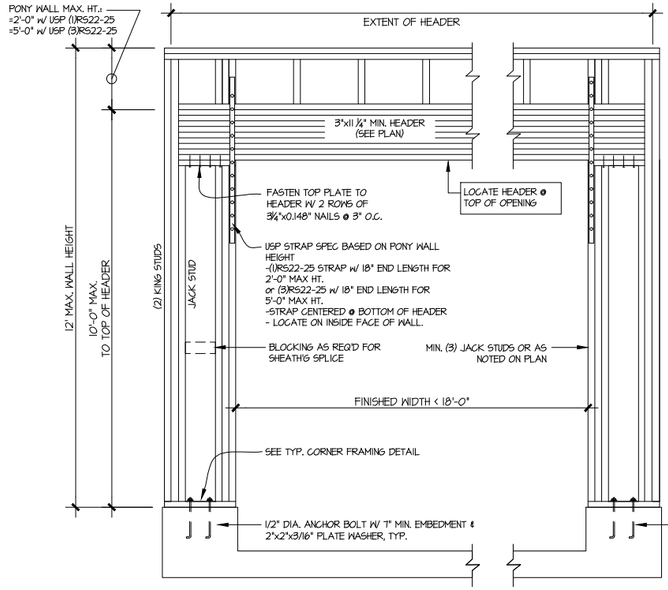
Cedar Pointe
Lot 1



OUTSIDE ELEVATION



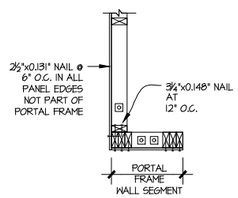
SECTION A-A THROUGH PIER



INSIDE ELEVATION

NOTE: ALL SHEATHABLE AREAS OF EXTERIOR WALL SHALL BE FULLY SHEATHED WITH ½" PLYWOOD OR ⅞" OSB

WALL FRAMING SPECIFICATION:
@2x4 WALL: USE SPF #2 GRADE STUDS (OR BETTER)
@2x6 WALL: USE SPF STUD GRADE STUDS (OR BETTER)



PLAN VIEW OF CORNER DETAIL

ALTERNATIVES TO ½" DIA. ANCHOR BOLT:
1) ½" DIA. THREADED ROD EPOXY SET W/4 ½" EMBED. (MIN) UTILIZING HILTI HY200 EPOXY ANCHORING SYSTEM (OR EQUAL)

A ALTERNATE GARAGE PORTAL FRAME BRACING ELEVATION

SCALE: N.T.S.

BOTH SIDES OF GARAGE DOOR
120 MPH WIND SPEED (ULT)

Cedar Pointe
Lot 1

seal:

7/31/23

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 - Ambler, PA 19002
P 215-646-8887 - mulhernkulp.com

Mulhern+Kulp project number:
256-23000

project mgr: SMK
drawn by: RAP
issue date: 07.28.2023

REVISIONS:

date:	initial:

SMITH DOUGLAS HOMES

ALTERNATE PORTAL FRAME

PORTAL FRAME

sheet:
PF-120

DESIGN SPECIFICATIONS:

Construction Type: Commerical ☐ Residential ☒

Applicable Building Codes:
- 2018 North Carolina Residential Building Code
- ASCE 7–10: Minimum Design Loads for Buildings and Other Structures

Design Loads:

1. Roof
   - 1.1 Live..... 20 PSF
   - 1.2 Dead..... 10 PSF
   - 1.3 Snow..... 15 PSF
     - 1.3.1 Importance Factor..... 1.0
2. Floor Live Loads
   - 2.1 Typ. Dwelling..... 40 PSF
   - 2.2 Sleeping Areas..... 30 PSF
   - 2.3 Balconies (exterior) and Decks..... 40 PSF
   - 2.4 Garage Parking..... 50 PSF
3. Floor Dead Loads
   - 3.1 Conventional 2x_..... 10 PSF
   - 3.2 I–Joist..... 15 PSF
   - 3.3 Floor Truss..... 15 PSF
4. Ultimate Wind Speed (3 sec. gust)..... 130 MPH
   - 4.1 Exposure..... B
   - 4.2 Importance Factor..... 1.0
   - 4.3 Wind Base Shear
     - 4.3.1 Vx =
     - 4.3.2 Vy =
5. Component and Cladding (in PSF)

MEAN ROOF HT.	UP TO 30'	30'1"–35'	35'1"–40'	40'1"–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	19.2,–20.0	19.9,–20.7	20.4,–21.3
ZONE 5	18.2,–24.0	19.2,–25.2	19.9,–26.1	20.4,–26.9

6. Seismic
   - 6.1 Site Class.....D
   - 6.2 Design Category.....C
   - 6.3 Importance Factor.....1.0
   - 6.4 Seismic Use Group.....1
   - 6.5 Spectral Response Acceleration
     - 6.5.1 Sms = %g
     - 6.5.2 Sm1 = %g
   - 6.6 Seismic Base Shear
     - 6.6.1 Vx =
     - 6.6.2 Vy =
   - 6.7 Basic Structural System (check one)
     - ☒ Bearing Wall
     - ☐ Building Frame
     - ☐ Moment Frame
     - ☐ Dual w/ Special Moment Frame
     - ☐ Dual w/ Intermediate R/C or Special Steel
     - ☐ Inverted Pendulum
   - 6.8 Arch/Mech Components Anchored?.....No
   - 6.9 Lateral Design Control: Seismic ☐ Wind ☒
7. Assumed Soil Bearing Capacity.....2000psf

SUMMIT
ENGINEERING LABORATORY TESTING

STRUCTURAL PLANS PREPARED FOR:

THIRD CAR ADD ON GARAGE

PROJECT ADDRESS:
TBD

OWNER:
Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

ARCHITECT/DESIGNER:
Smith Douglas Homes
110 Village Trail, Suite 215
Woodstock, GA 30188

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory & Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

AB	Anchor Bolt	OC	On Center
ACI	American Concrete Institute	PCF	Pounds per Cubic Foot
ASCE	American Society of Civil Engineers	PCI	Pounds per Cubic Inch
AFA	American Fiberboard Association	PSF	Pounds per Square Foot
AFF	Above Finished Floor	PSI	Pounds per Square Inch
AISC	American Institute for Steel Construction	PT	Pressure Treated
APA	American Plywood Association	SC	Stud Column
AWS	American Welding Society	SER	Structural Engineer of Record
CJ	Ceiling Joist	SJ	Single Joist
CLR	Clear	SPF	Spruce Pine Fir
DBL	Double	SST	Simpson Strong Tie
DJ	Double Joist	ST	Single Truss
DSP	Double Stud Pocket	STD	Standard
EA	Each	TJ	Triple Joist
EE	Each End	TOF	Top of Footing
EOS	Edge of Slab	TSP	Triple Stud Pocket
EW	Each Way	TYP	Typical
HDG	Hot Dipped Galvanized	UNO	Unless Noted Otherwise
NDS	Nation Design Spec. for Wood	WWF	Welded Wire Fabric
NTS	Not to Scale		

SHEET LIST:

Sheet No.	Description
CS1	Cover Sheet, Specifications, Revisions
CS2	Specifications Continued
S1.0m	Monolithic Slab Foundation
S1.0s	Stem Wall Foundation
S1.0c	Crawl Space Foundation
S1.0b	Basement Foundation
S2.0	Basement Framing Plan
S3.0	First Floor Framing Plan
S4.0	Second Floor Framing Plan
S5.0	Roof Framing Plan
S6.0	Basement Bracing Plan
S7.0	First Floor Bracing Plan
S8.0	Second Floor Bracing Plan

REVISION LIST:

Revision No.	Date	Project No.	Description
1	2/14/19	3832.221	Revised per 2018 NCRC and added optional 5'–0" opening.

NORTH CAROLINA PROFESSIONAL SEAL 048218 ENGINEER ZACHARY T. SHEPHERD 2/14/19

STRUCTURAL MEMBERS ONLY

SUMMIT
ENGINEERING LABORATORY TESTING
3070 HAMMOND BUSINESS PLACE, SUITE 171
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM

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

PROJECT
Third Car Add On Garage

Coversheet

CLIENT
Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

CURRENT DRAWING
DATE: 2/14/19
SCALE: 1/8"=1'–0"
PROJECT #: 3832.221
DRAWN BY: ZTS
CHECKED BY: WAJ

ORIGINAL DRAWING

DATE	PROJECT#
10/27/16	3832.27

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
CS1

GENERAL STRUCTURAL NOTES:

1. The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
4. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
5. Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the international residential code.
8. This structure and all construction shall conform to all applicable sections of the 2018 North Carolina Residential Code (NCRC) and any local codes or restrictions

FOUNDATIONS:

1. Foundations shall be constructed in accordance with chapter 4 of the 2018 NC Residential Building Code (Special consideration shall be given to Chapter 45 in wind zones above 130mph)
2. Footing sizes based on a presumptive soil bearing capacity of 2000 PSF. Contractor is solely responsible for verifying the suitability of the site soil conditions at the time of construction
3. Maximum depth of unbalanced fill against masonry walls to be as specified in section R404.1 of the 2018 NCRC
4. The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.
5. The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
6. Any fill shall be placed under the direction or recommendation of a licensed professional engineer. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
7. Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
8. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.
9. Each crawl space pier shall bear in the middle third of its respective footing and each girder shall bearing in the middle third of the piers. Pilasters to be bonded to perimeter foundation wall
10. Crawl spaced to be graded level and clear of all debris
11. Provide foundation waterproofing and drain with positive slope to outlet as required by site conditions
12. Energy efficiency compliance and insulation of the structure to be in accordance with chapter 11 of the 2018 NCRC

CONCRETE:

1. Concrete shall have a normal weight aggregate and a minimum compressive strength (f'c) at 28 days of 3000 psi, unless otherwise noted on the plan.
2. Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
3. Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within −1% to +2% of target values as follows:
   3.1. Footings: 5%
   3.2. Exterior Slabs: 5%
4. No admixtures shall be added to any structural concrete without written permission of the SER
5. Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
6. The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
7. Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted.
8. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished
9. Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
10. All welded wire fabric (W.W.F.) for concrete slabs-on-grade shall be placed at mid-depth of slab. The W.W.F. shall be securely supported during the concrete pour. Fibermesh may be used in lieu of W.W.F.

CONCRETE REINFORCEMENT:

1. Fibrous concrete reinforcement, or fibermesh, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
2. Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
3. Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (1.5 pounds per cubic yard)
4. Fibermesh shall comply with ASTM C1116, any local building code requirements, and shall meet or exceed the current industry standard.
5. Steel Reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
6. Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 315: "Manual of Standard Practice for Detailing Concrete Structures"
7. Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
8. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.
9. Where reinforcing dowels are required , they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

1. Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Spruce-Pine-Fir (SPF) #2.
2. LVL or PSL engineered wood shall have the following minimum design values:
   2.1. E = 1,900,000 psi
   2.2. Fb = 2600 psi
   2.3. Fv = 285 psi
   2.4. Fc = 700 psi
3. Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA standard C-2
4. Nails shall be common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
6. All beams shall have full bearing on supporting framing members unless otherwise noted.
7. Exterior and load bearing stud walls are to be 2x4 SPF#2 @16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
8. Individual studs forming a column shall be attached with one 10d nail @6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be fully blocked at all floor levels to ensure proper load transfer.
9. Multi-ply beams shall have each ply attached wth (3)10d nails @ 24" O.C.
10. Flitch beams and four and five ply beams shall be bolted together with (2) rows of 1/2" dia. through bolts staggered @24" O.C. w/ 2" edge distance and (2) bolts located at 6" from each end, unless noted otherwise.

WOOD TRUSSES:

1. The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
2. The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures." (ASCE 7-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
3. The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction." (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
4. The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-91). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
5. Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

WOOD STRUCTURAL PANELS:

1. Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
2. All structurally required wood sheathing shall bear the mark of the APA.
3. Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
4. Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
5. Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
6. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

STRUCTURAL FIBERBOARD PANELS:

1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
3. Sheathing shall have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.

EXTERIOR WOOD FRAMED DECKS:

1. Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

STRUCTURAL STEEL:

1. Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and of the manual of Steel Construction "Load Resistance Factor Design" latest editions.
2. All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
3. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shopt and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

NORTH CAROLINA PROFESSIONAL SEAL 048218 ENGINEER ZACHARY T. SHEPHERD 2/14/19

STRUCTURAL MEMBERS ONLY

SUMMIT
ENGINEERING LABORATORY TESTING
3070 HAMMOND BUSINESS PLACE, SUITE 171
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM

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

PROJECT
Third Car Add On Garage
Coversheet
CLIENT
Smith Douglas Homes - Raleigh
2520 Reliance Ave.
Apex, NC 27539

CURRENT DRAWING
DATE: 2/14/19
SCALE: 1/8"=1'-0"
PROJECT #: 3832.221
DRAWN BY: ZTS
CHECKED BY: WAJ

ORIGINAL DRAWING

DATE	PROJECT#
10/27/16	3832.27

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
CS2

TRUSS UPLIFT CONNECTOR SCHEDULE

MODEL *	MAX. UPLIFT (LBS)
H1	585
H2A	575
H2.5A	600
H6	950
H10A*	1340
H14*	1465

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

MODEL *	MAX. UPLIFT (LBS)	PLY *
LGT2*	2050	2
LGT3-SDS2.5*	3685	3
LGT4-SDS3*	4060	2
HGT-2*	10980	2
HGT-3*	10530	3
HGT-4*	9250	4

1. ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIV. PRODUCTS MAY BE USED PER MANUF. SPECIFICATIONS. 2. VALUES LISTED ARE FOR A SINGLE ANCHOR. DOUBLE ANCHORS MAY BE USED TO DOUBLE THE UPLIFT CAPACITIES SHOWN ABOVE, PROVIDED A MINIMUM 2-1/2" MEMBER THICKNESS. ITEMS DENOTED WITH "*" MAY NOT BE DOUBLED TO INCREASE LOAD CAPACITY. 3. UPLIFT VALUES SHOWN ABOVE ARE FOR SYP #2 GRADE OR BETTER MEMBERS. PLEASE CONTACT EOR OR TRUSS MANUF. IF SPECIES OR GRADE VARIES. 4. TRUSS TO TRUSS CONNECTIONS ARE TO BE SPECIFIED AND SUPPLIED BY THE TRUSS MANUF. THE EOR IS NOT RESPONSIBLE FOR THESE CONNECTIONS.

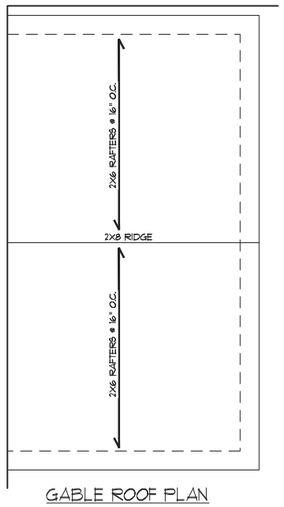
NOTE: 1ST PLY OF ALL SHOWN GIRDER TRUSSES TO ALIGN WITH INSIDE FACE OF WALL (TYP. UNO)

NOTE: ROOF TRUSSES SHALL BE SPACED TO SUPPORT FALSE FRAMED DORMER WALLS (TYP. UNO)

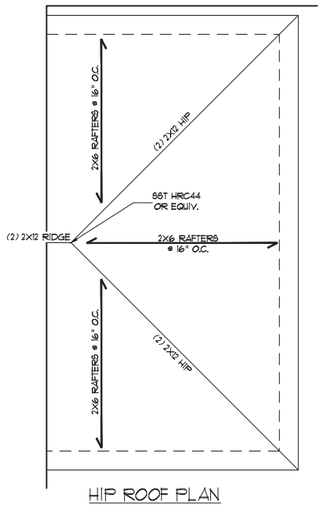
THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS NOTES COMPLETED/REVISED ON 9/23/16. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

REFER TO TRUSS LAYOUT PER MANUFACTURER FOR UPLIFT CONNECTIONS FROM TRUSS TO TOP PLATE (TYP. UNO)

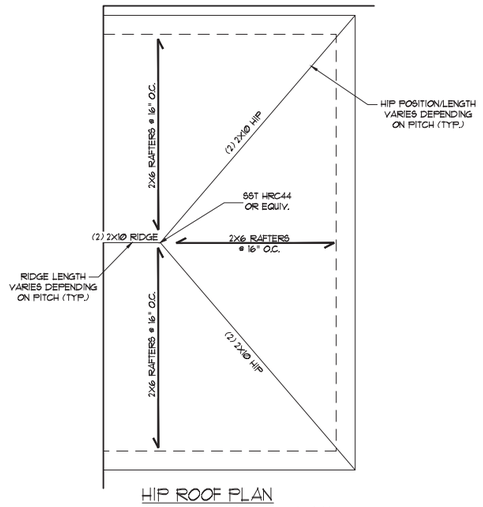
NOTE: TRUSS UPLIFT LOADS SHALL BE DETERMINED PER TRUSS MANUFACTURER IN ACCORDANCE WITH SECTION R802.11.1. WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCRC. REFER TO BRACED WALL PLANS FOR SHEATHING AND FASTENER REQUIREMENTS.



GABLE ROOF PLAN



HIP ROOF PLAN
6:12 PITCH



HIP ROOF PLAN
7:12 PITCH AND GREATER
(DO NOT EXCEED 12:12 PITCH)

STRUCTURAL MEMBERS ONLY

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

SCALE: 1/8"=1'

NORTH CAROLINA PROFESSIONAL SEAL 048218 ENGINEER MARY T. SHEPHERD

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Roof Framing Plans
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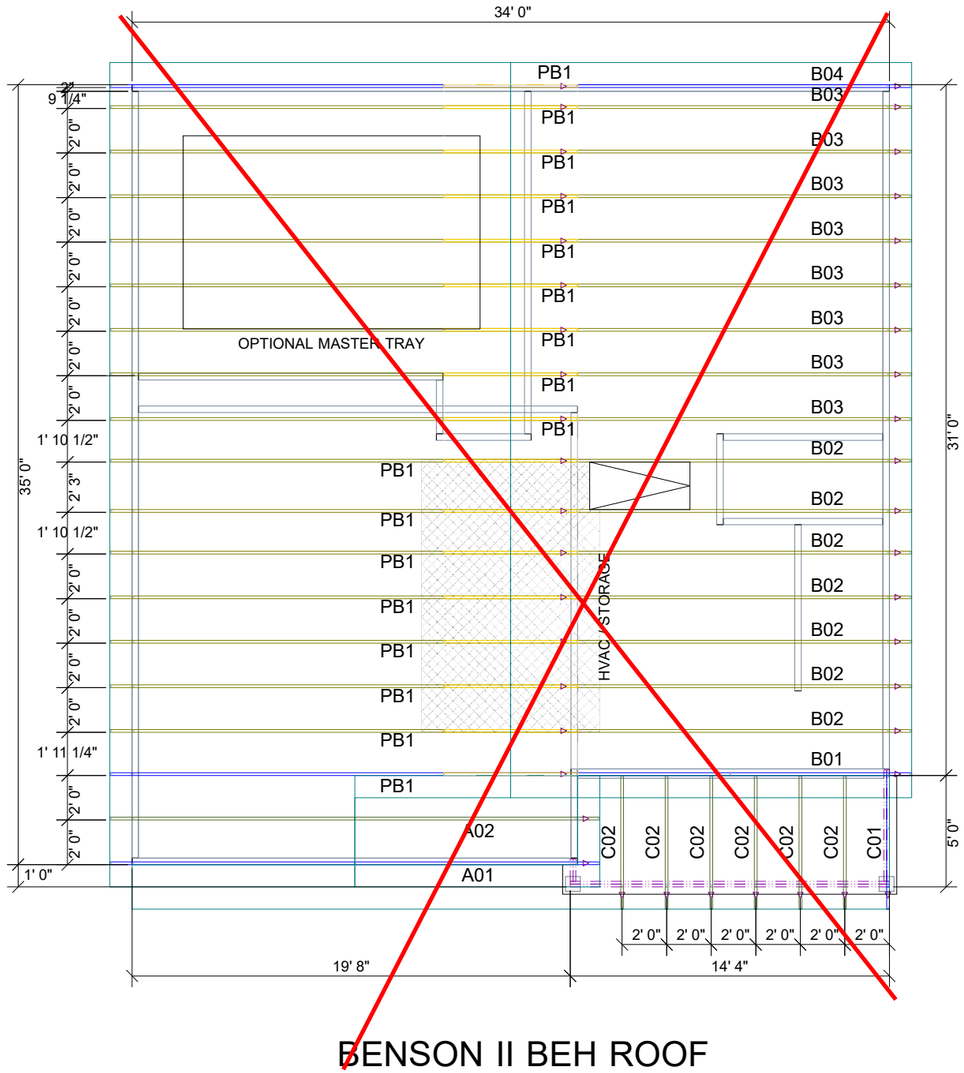
DATE	PROJECT#
10/27/16	3832.27

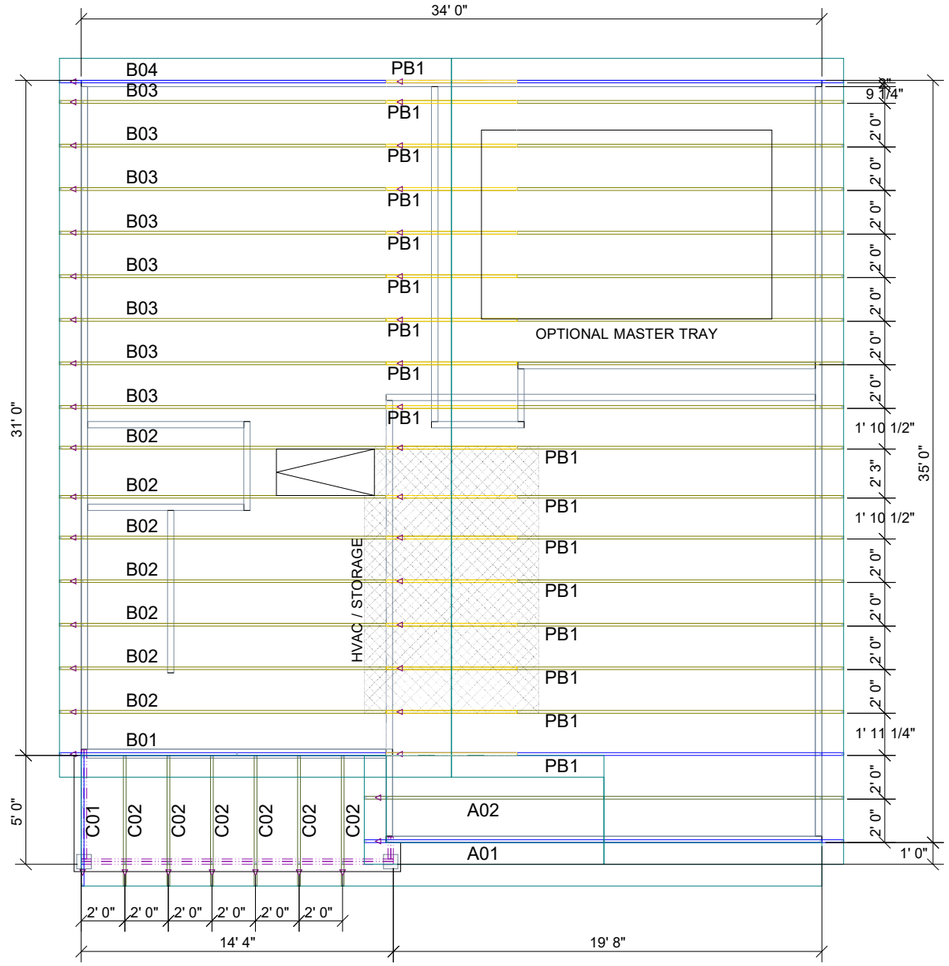
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S1.1m

72412143 1 CEDAR POINTE



BENSON II BEH ROOF



BENSON II BEH ROOF

THIS IS A TRUSS PLACEMENT DIAGRAM (TPD) ONLY; NOT AN ENGINEERED DOCUMENT. Trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual truss design drawings (TDD's) for each truss design identified on the TPD. The Contractor is responsible for the temporary bracing of the roof and floor system, and the building designer is responsible for the permanent bracing of the roof and floor system and the overall structure. The design of the support structure including but not limited to headers, beams, walls, and columns is also the responsibility of the building designer. For general guidance regarding installation and bracing, consult "Building Component Safety Information" (BCSI) available from the SBC Association (www.sbcacomponents.com). It is the responsibility of the General Contractor to verify that the provided component layout matches the final intended construction plans, loading conditions, and use. If they do not, it is the responsibility of the General Contractor to notify UFP and provide plans containing the latest specifications and designs. UFP will not be responsible for plan changes by others after final approval of shop drawings, or for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED PROFESSIONAL DESIGNATED BY UFP. The Framer is responsible to verify all dimensions, including adjusting member spacing within tolerances to allow for the drop and rise of plumbing/HVAC, unless noted otherwise. Truss-to-wall connections, if shown, are for uplift only and do not consider lateral loads. All connectors on this project are to be installed per the connector manufacturer's specifications. All connectors shown that are not truss-to-truss are suggestions only and are to be verified by the Building Designer or Engineer of Record for suitability to this particular project. UFP accepts no responsibility for the specific application or suitability of any connector that is not truss-to-truss as they apply to this specific structure.

PLACEMENT PLAN

△ INDICATES LEFT END OF TRUSS SCALE: N.T.S

UFP SITE BUILT
A UFP INDUSTRIES COMPANY
Burlington, NC Locust, NC
Chesapeake, VA Liberty, NC
Clinton, NC Ooltewah, TN
Conway, SC Pearisburg, VA
Jefferson, GA Stanfield, NC
Customer Service (800) 476-9356
TRUSS TRAX APPLICATIONS
TrussTrax.ufpi.com

-SMITH DOUGLAS -

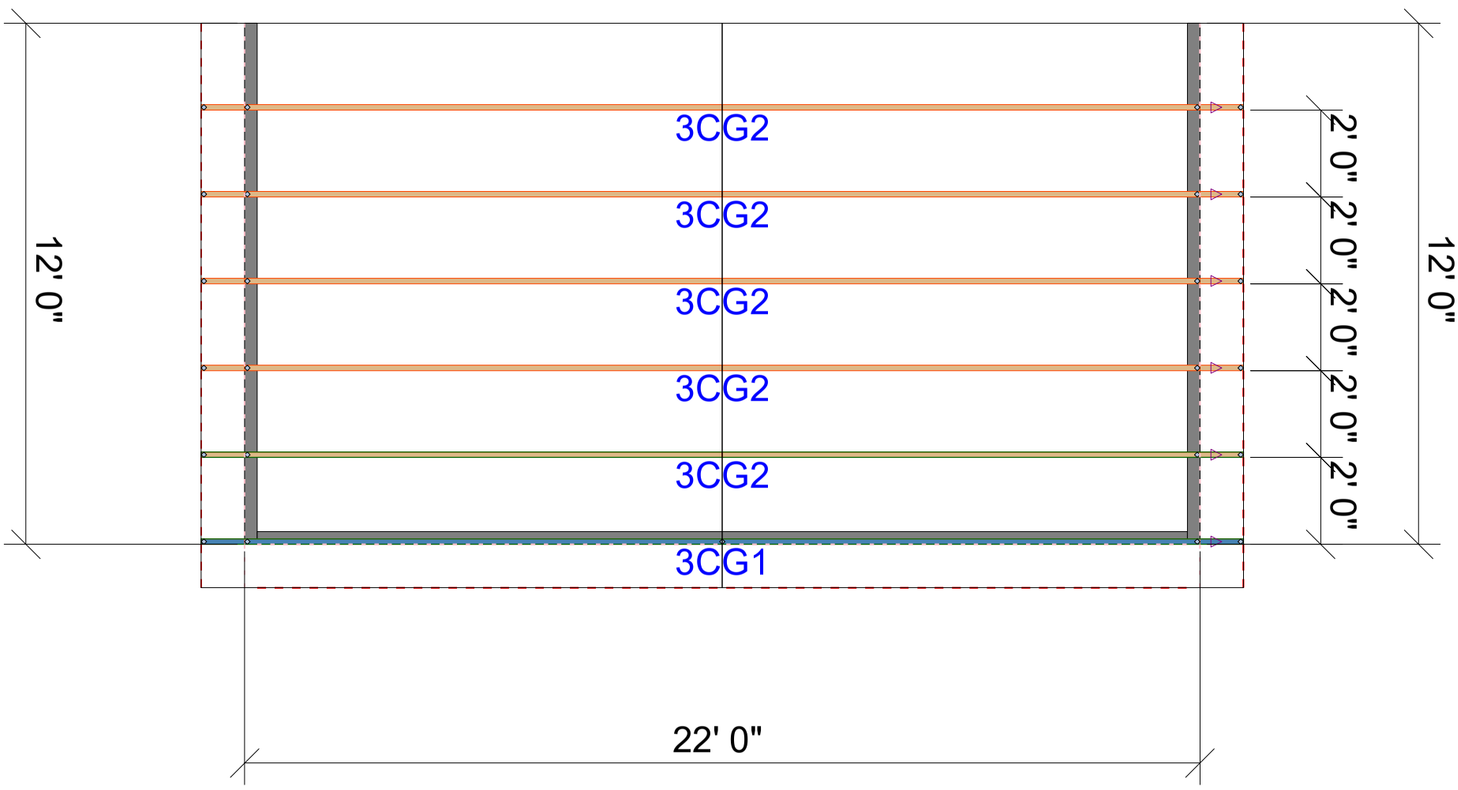
-BENSON II BEH ROOF - -

REVISIONS	DESCRIPTION	DSN
DATE	-	-

DESIGNER HATHCOCK
LAYOUT DATE 04.07.2023
ARCH DATE -
STRUC DATE -

JOB #: -MASTER

PLACEMENT PLAN



△ INDICATES LEFT END OF TRUSS SCALE: N.T.S

ROOF AREA:	348.83 ft² sqft	RIDGE LINE:	13 ft	VALLEY LINES:	0 ft	HIP LINES:	0 ft	THESE VALUES ARE APPROXIMATE ONLY

JOB #: MASTER
DESIGNER JNN
LAYOUT DATE 4/26/24
ARCH DATE -
STRUC DATE -

REVISIONS		
DATE	DESCRIPTION	DSN
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

BENSON II 3CG GABLE

-
-

SMITH DOUGLAS

-

TRUSSTRAX UFPCONSTRUCTION
TrussTrax.ufpi.com

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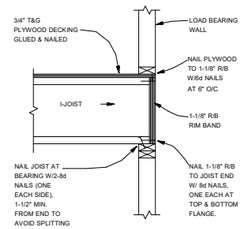
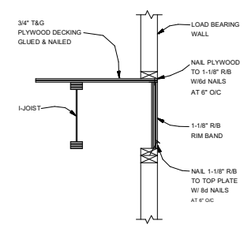
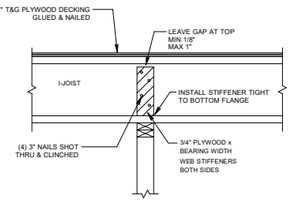
A1 1 1/8" RIMBOARD BAND



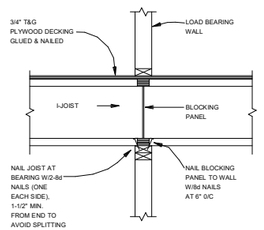
A7 1 1/8" RIMBOARD BAND



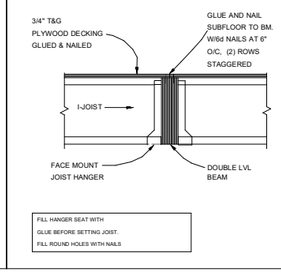
B1 WEB STIFFENER



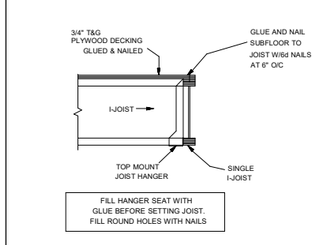
B3 BLOCKING AT LOAD BEARING WALL

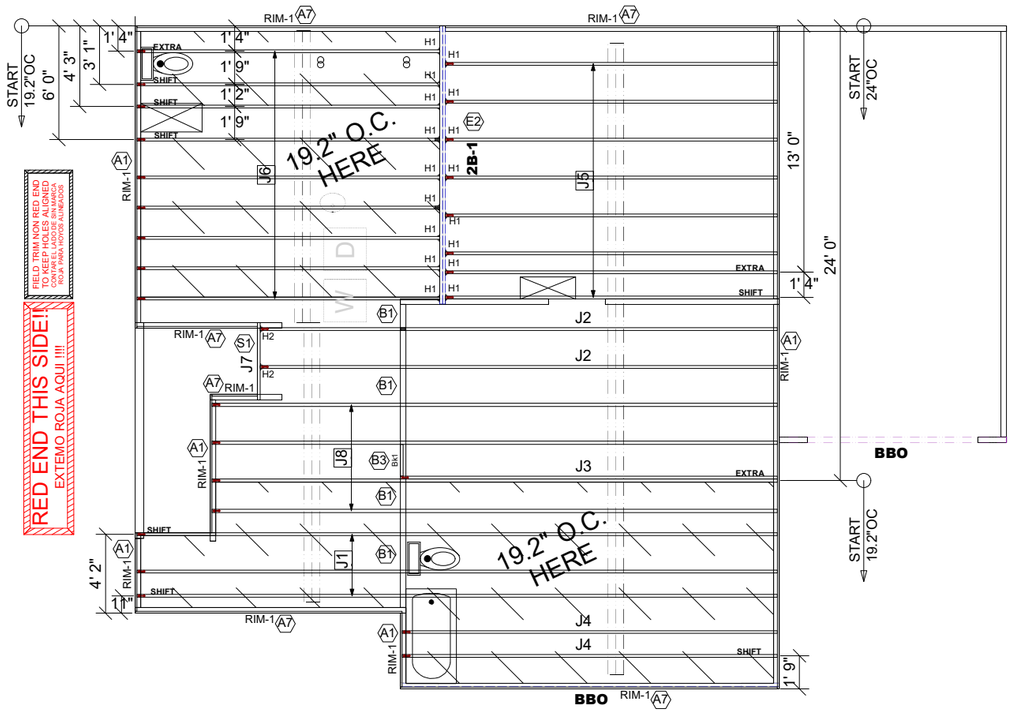


E2 DOUBLE LVL



S1 SINGLE JOIST TO JOIST





Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
J1	34' 0"	14" TJI® 110	1	3	MFD
J2	28' 0"	14" TJI® 110	1	2	MFD
J3	20' 0"	14" TJI® 110	1	1	MFD
J4	20' 0"	14" TJI® 110	1	2	MFD
J5	18' 0"	14" TJI® 110	1	8	MFD
J6	16' 0"	14" TJI® 110	1	9	MFD
J7	5' 0"	14" TJI® 110	1	1	MFD
J8	30' 0"	14" TJI® 210	1	4	MFD
2B-1	15' 0"	1 3/4" x 14" 2.0E Microllam® LVL	2	2	MFD
RIM-1	16' 0"	1 1/8" x 14" TJ® Rim Board	1	9	MFD
Bk1	2' 0"	14" TJI® 110	1	1	MFD

Connector Summary			
PlotID	Qty	Manuf	Product
H1	17	MiTek	IHFL1714
H2	2	MiTek	TFL1714

GENERAL NOTES:

1.) TOP CHORD OF JOISTS ARE PAINTED RED AT NUMBERED END. PLACE PAINTED END AS NOTED ON PLAN.
2.) FOLLOW SPECIAL SPACING AND LOCATION DIMENSIONS FOR EXTRAS OR SHIFTED JOISTS AS SHOWN ON PLAN.
3.) ALL INTERIOR WALL PLATES MUST BE LEVEL WITH OUTSIDE WALL TOP PLATES.
4.) DO NOT STACK CONSTRUCTION LOADS ON UN-BRACED JOISTS.
5.) PROVIDE SOLID SUPPORT BELOW ALL BEAM AND HEADER BEARING POINTS IN WALL AND JOIST SPACES CONTINUOUS DOWN TO THE FOUNDATION.
6.) LOCATE CRIPPLE STUDS IN JOIST SPACE DIRECTLY BELOW HEADER JACKS AT ALL FIRST FLOOR EXTERIOR DOOR LOCATIONS.
7.) INSTALL NAILS IN ALL HOLES PROVIDED IN JOIST HANGERS EXCEPT AT BOTTOM CHORD SEAT. PLACE A DAB OF GLUE IN THE HANGER SEAT BEFORE SETTING JOISTS.
8.) IMPORTANT NOTE! NO STRUCTURAL ANALYSIS OF CONVENTIONAL HEADERS HAS BEEN CONDUCTED IF NOT NOTED. THEY ARE CONSIDERED TO BE ADEQUATE TO SUPPORT THE APPLIED LOADS.

FRAMER NOTE

DENOTES DUCT HOLE RUNS

ALL DIMENSIONS TO CENTERLINE UNLESS OTHERWISE NOTED

● Avoid Plumbing Drops

FRAMER NOTE

1. GLUE AND NAIL PLYWOOD SUBFLOOR TO BEAMS AND GIRDERS AT 6" O/C WHERE NO WALL IS ABOVE.
2. FILL HANGER SEAT WITH GLUE BEFORE SETTING JOIST IN HANGER. FILL ROUND HOLES WITH NAILS.

CRITICAL !!

INSTALL 2X4 SQUASH BLOCKS IN FLOOR TRUSS SPACE BELOW ALL EXTERIOR DOOR HEADER JACKS. CUT 1/16" TALLER THAN TRUSS.

PLAN LEGEND

1B-, 2B- *INDICATES BEAM ABOVE TOP PLATE (FLUSH WITH FLOOR SYSTEM)

H-, 1H-, GDH- INDICATES BEAM BELOW TOP PLATE (DROPPED BELOW FLOOR SYSTEM)

***BEAMS MAY PROTRUDE ABOVE OR BELOW DECKING OR TOP PLATE RESPECTIVELY, REFER TO DETAIL IF BEAM IS A DIFFERENT DEPTH THAN FLOOR SYSTEM**

SINGLE PLY BEAM (ADD LINE FOR EACH ADDITIONAL PLY)

SHIFT SHIFT JOIST TO MISS PLUMBING, ALIGN W/WALL OR SUPPORT FURNITURE

EXTRA A JOIST ADDED TO THE LAYOUT IN ADDITION TO THE ON CENTER JOISTS

DOUBLE TWO JOISTS SIDE BY SIDE (ONLY ASSEMBLED IF NOTED)

FIELD TRIM NON RED END TO KEEP HOLES ALIGNED
CONTAR EL LADO DE SIN MARCA ROJA PARA HOYOS ALINEADOS

FIELD LOCATE PLUMBING DROPS/CAN LIGHTS, ETC... PRIOR TO JOIST SECUREMENT TO AVOID INTERFERENCE.

LAYOUT FOR 19.2" O/C

1= 19-3/16"	9= 172-13/16"
2= 38-3/8"	10= 192"
3=57-5/8"	11= 211-3/16"
4= 76-13/16"	12= 230-3/8"
5= 96"	13= 249-13/16"
6= 115-3/16"	14= 268-13/16"
7= 134-3/8"	15= 288"
8= 153-5/8"	

FIELD VERIFY DIMENSIONS TO JOISTS LOCATED UNDER WALLS!!

2ND FLOOR LAYOUT

2ND FLOOR PLACEMENT PLAN

SCALE: 1/8"=1'

UFP SITE BUILT
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Conway, SC Pearisburg, VA
Jefferson, GA Stanfield, NC
Customer Service (800) 476-9356

TRUSSTRAX MANUFACTURING

Smith Douglas Homes -

Benson II 2nd Floor - -

REVISIONS		
DATE	DESCRIPTION	DSN
.	.	.

DESIGNER PB2
LAYOUT DATE 4/17/2024
ARCH DATE 9/1/2022
STRUC DATE 7/14/2023

JOB #: 24041465F2