Plan 2

50' SERIES

Hartwell

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PLAN 2 SQUARE FOOTAGES

AREA	ELEV 'C'
1st FLOOR	1872 SF
2nd FLOOR	1240 SF
TOTAL LIVING	3112 SF
GARAGE	454 SF
PORCH	182 SF
COVERED PATIO	96 SF
OPT. BASEMENT	
UNFINISHED SPACE	1789 SF

BASEMENT AREA IS TAKEN TO INSIDE OF CONCRETE WALL

Eagle Creek
Lot 23
12 Greenwillow Drive
Fuquay Varina, NC 27526

D·R·HORTON America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE: **TITLE SHEET / COVER SHEET**

PRINT DATE: May 13, 2022

SHEET NO: **0**

ABBREVIATIONS

ABV	ABOVE
A/C	AIR CONDITIONING
A.D.	AREA DRAIN
ADJ	ADJUSTABLE
ALT	ALTERNATE
ALUM	ALUMINUM
ARCH.	ARCHITECTURAL
BA	BATHROOM
BD	BOARD
BF	BI-FOLD (DOOR)
BLDG	BUILDING
BLK	BLOCK (CMU)
BLW	BELOW
BM	BEAM
BP	BI-PASS (DOOR)
BOT	BOTTOM
BTWN	BETWEEN
CAB	CABINET
CER	CERAMIC
C.J.	CONTROL JOINT OR CONSTRUCTION JOINT
CL	CLOSET OR CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
C	CARPET
CR	CORROSION RESISTANT
CSMT	CASEMENT
C.T.	CERAMIC TILE
D	DRYER
DBL	DOUBLE
DH	DOUBLE HUNG
DIM	DIMENSION
DISP	DISPOSAL
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DW	DISH WASHER
DWG	DRAWING
E	EAST
EA	EACH
ELEV	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
EXT	EXTERIOR
FAU	FORCED AIR UNIT
F.C.	FLOOR CHANGE
F.D.	FLOOR DRAIN
FFL	FINISH FLOOR LINE
F.G.	FINISHED GRADE
FLR	FLOOR(ING)
FL	FLOURESCENT (LIGHT)
FND	FOUNDATION
F.O.S.	FACE OF STUD
FTG	FOOTING
FX	FIXED GLASS
GALV	GALVANIZED
GAR	GARAGE
G.B.	GYPSUM BOARD
GD	GRADE OR GRADING
G.D.O.	GARAGE DOOR OPENER
GFI	GROUND FAULT INTERRUPTER
GL	GLASS OR GLAZING
GYP BD	GYPSUM BOARD
HB	HOSE BIBB
HD	HEAD OR HARD
HDR	HEADER
HGT	HEIGHT
HVAC	HEATING/VENTILATING/AIR COND.
HWD	HARDWOOD
INT	INTERIOR
JST	JOIST
JT	JOINT
KIT	KITCHEN
L	LENGTH
LA	LAUNDRY
LAV	LAVATORY
LVR	LOUVER
MAX	MAXIMUM
MECH	MECHANICAL
MFR.	MANUFACTURER
MIN	MINIMUM
MISC.	MISCELLANEOUS
N	NORTH
N.T.S.	NOT TO SCALE
O.G.D.	OVERHEAD GARAGE DOOR
OH	OVERHEAD
OPT.	OPTIONAL
PAR	PARALLEL
P.B.	PUSH BUTTON
PDR	POWDER
PED	PEDESTAL
PL	PLATE
PR	PAIR
P.T.	PRESSURE TREATED WOOD
PVC	POLYVINYL CHLORIDE PIPE
PVMT	PAVEMENT
P.W.	PRE-WIRE
PWD	PLYWOOD
R	RISER
RAG	RETURN AIR GRILL
REF	REFERENCE
REFR	REFRIGERATOR
REQ	REQUIRED
S	SOUTH
SD	SMOKE DETECTOR
S.F.	SQUARE FEET
S.G.D.	SLIDING GLASS DOOR
SH	SINGLE HUNG OR SHELF
SIM	SIMILAR
SL	SLOPE / SLIDING
S&P	SHELF AND POLE
SPEC	SPECIFICATIONS
STD	STANDARD
STR	STRUCTURAL
SQ	SQUARE
SYM	SYMBOL
S4S	SMOOTH FOUR SIDES
T	TREAD (AT STAIRS) OR TILE
T.B.	TOWEL BAR
TEMP.	TEMPERED (GLASS)
T&G	TONGUE & GROOVE
T.O.C.	TOP OF CURB
TV	TELEVISION
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
V.B.	VAPOR BARRIER
VERT	VERTICAL
V.T.R.	VENT THRU ROOF
W	WASHING MACHINE
WD	WOOD
WDW	WINDOW
WH	WATER HEATER
WI	WROUGHT IRON
WIC	WALK-IN CLOSET
W/ W/O	WITH OR WITHOUT
WP	WATERPROOF(ING)
WWM	WELDED WIRE MESH
P.	PROPERTY LINE
Ø	ROUND / DIAMETER
&	AND
℄	CENTERLINE
#	POUND / NUMBER

BUILDING CODE COMPLIANCE / PROJECT INFORMATION 2018 NCRC

ALL CONSTRUCTION TO COMPLY WITH LOCAL CODES AND ORDINANCES CURRENTLY IN USE WITH THE LOCAL JURISDICTION.

APPLICABLE CODES:
FOLLOW ALL APPLICABLE STATE AND LOCAL CODES.
2018 NORTH CAROLINA STATE SUPPLEMENTS AND AMENDMENTS

CONTRACTOR AND BUILDER SHALL REVIEW ENTIRE PLAN TO VERIFY CONFORMANCE WITH ALL CURRENT APPLICABLE CODES IN EFFECT AT TIME OF CONSTRUCTION. BY USING THESE DRAWINGS FOR CONSTRUCTION IT IS UNDERSTOOD THAT CONFORMANCE WITH ALL APPLICABLE CODES IS THE RESPONSIBILITY OF THE BUILDER AND CONTRACTOR.

REFER TO STRUCTURAL PLANS FOR INFO NOT CALLED OUT HERE.

PRODUCT:
SINGLE FAMILY RESIDENCE / 3 STORY TOWNHOMES

OCCUPANCY CLASSIFICATION
RESIDENTIAL R-3

CONSTRUCTION TYPE:
TYPE VB (2 HOUR DWELLING SEPARATION BETWEEN UNITS.)

CONSULTANTS:

LOCAL JURISDICTION:	BUILDER:	DESIGNER:	STRUCTURAL ENGINEER:
		GMD DESIGN GROUP 1845 SATELLITE BLVD. STE 850 SUWANEE, GA. 30097 PHONE: (770) 375-7351 CONTACT: DONALD J. MCGRATH EMAIL: DONNIE@GMDDESIGNGROUP.COM	

GENERAL NOTES DESIGNER: NCRC

THESE DOCUMENTS ARE THE PROPERTY OF THE DESIGNER AND SHALL NOT BE COPIED, DUPLICATED, ALTERED, MODIFIED OR REVISED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN APPROVAL OF THE DESIGNER.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE AND ALL INCONSISTENCES SHALL BE BROUGHT TO THE ATTENTION OF THE DEVELOPER AND THE DESIGNER BEFORE PROCEEDING WITH WORK.

ANY ERRORS OR OMISSIONS FOUND IN THESE DRAWINGS SHALL BE BROUGHT TO DEVELOPERS AND DESIGNERS ATTENTION IMMEDIATELY.

DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.

ALL DIMENSIONS ARE TO FACE OF STUD OR TO FACE OF FRAMING UNLESS OTHERWISE NOTED.

ALL TRUSS DRAWINGS TO BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO ISSUANCE OF BUILDING PERMIT.

ALL OR EQUAL SUBSTITUTIONS MUST BE SUBMITTED TO AND APPROVED BY CITY BUILDING OFFICIAL PRIOR TO INSTALLATION.

ALL ANGLED PARTITIONS ARE 45 DEGREES UNLESS OTHERWISE NOTED.

PROVIDE FIREBLOCKING. (PER NCRC SECTION R302.11)

ALL ELECTRICAL AND MECHANICAL EQUIPMENT AND METERS ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS, CONTRACTOR TO VERIFY.

PROVIDE BLOCKING AND/OR BACKING AT ALL TOWEL BAR, TOWEL RING AND/OR TOILET PAPER HOLDER LOCATIONS, AS SHOWN PER PLAN. TYPICAL AT ALL BATHROOMS AND POWDER ROOMS. VERIFY LOCATIONS AT FRAMING WALK.

ELASTOMERIC SHEET WATERPROOFING: FURNISH AND INSTALL ALL WATERPROOFING COMPLETE. A 40 MIL. SELF-ADHERING MEMBRANE OF RUBBERIZED ASPHALT INTEGRALLY BONDED TO POLYETHYLENE SHEETING, OR EQUAL. INSTALL PER MANUFACTURE'S AND TRADE ASSOCIATION'S PRINTED INSTALLATION INSTRUCTIONS. 6" MINIMUM LAP AT ALL ADJACENT WALL SURFACES.

TO THE BEST OF THE DESIGNER'S KNOWLEDGE THESE DOCUMENTS ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE BUILDING AUTHORITIES HAVING JURISDICTION OVER THIS TYPE OF CONSTRUCTION AND OCCUPANCY.

SHOP DRAWING REVIEW AND DISTRIBUSTION, ALONG WITH PRODUCT SUBMITTALS, REQUESTED IN THE CONSTRUCTION DOCUMENTS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR, UNLESS DIRECTED OTHERWISE UNDER A SEPARATE AGREEMENT.

DEVIATIONS FROM THESE DOCUMENTS IN THE CONSTRUCTION PHASE SHALL BE REVIEWED BY THE DESIGNER AND THE OWNER PRIOR TO THE START OF WORK IN QUESTION. ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT PRIOR REVIEW, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS REPRESENTED ON THESE DOCUMENTS INCLUDING THE WORK AND MATERIALS FURNISHED BY SUBCONTRACTORS AND VENDORS.

THE BUILDER SHALL FURNISH ANY AND ALL REPORTS RECEIVED FROM THE GEOTECHNICAL ENGINEER (SOILS REPORT), ON THE STUDY OF THE PROPOSED SITE, TO THE DESIGNER, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR. IN THE EVENT THE GEOTECHNICAL REPORTS DO NOT EXIST, THE SOILS CONDITION SHALL BE ASSUMED TO BE A MINIMUM DESIGN SOIL PRESSURE STATED BY THE STRUCTURAL ENGINEER OF RECORD FOR THE PURPOSE OF STRUCTURAL DESIGN. GENERAL CONTRACTOR SHALL ASSURE THE SOIL CONDITIONS MEET OR EXCEED THE CRITERIA.

ALL WORK PERFORMED BY THE GENERAL CONTRACTOR SHALL COMPLY AND CONFORM WITH LOCAL AND STATE BUILDING CODES, ORDINANCES AND REGULATIONS, ALONG WITH ALL OTHER AUTHORITIES HAVING JURISDICTION. THE GENERAL CONTRCATOR IS RESPONSIBLE TO BE AWARE OF THESE REQUIREMENTS AND GOVERNING REGULATIONS.

PROVIDE AN APPROVED WASHER DRAIN PAN AT SECOND FLOOR ONLY THAT DRAINS TO EXTERIOR.

WINDOW SUPPLIER TO VERIFY AT LEAST ONE WINDOW IN ALL BEDROOMS TO HAVE A CLEAR EGRESS OPENING OF 5.7 SQ FT WITH MIN. DIMENSION OF 24" IN HEIGHT AND 20" IN WIDTH: SILL HEIGHT NOT GREATER THAN 44" ABOVE FLOOR. (PER LOCAL CODES)

ALL HANDRAIL BALLUSTERS TO BE SPACED SUCH THAT A 4" SPHERE CANNOT PASS BETWEEN BALLUSTERS. (PER LOCAL CODES)

PROVIDE STAIR HANDRAILS AND GUARDRAILS (PER LOCAL CODES)

BUILDER SET:

THE SCOPE OF THIS SET OF PLANS IS TO PROVIDE A "BUILDER'S SET" OF CONSTRUCTION DOCUMENTS AND GENERAL NOTES HEREINAFTER REFERRED TO AS "PLANS". THIS SET OF PLANS IS SUFFICIENT TO OBTAIN A BUILDING PERMIT; HOWEVER, ALL MATERIALS AND METHODS OF CONSTRUCTION NECESSARY TO COMPLETE THE PROJECT ARE NOT NECESSARILY DESCRIBED. THE PLANS DELINEATE AND DESCRIBE ONLY LOCATIONS, DIMENSIONS, TYPES OF MATERIALS, AND GENERAL METHODS OF ASSEMBLING OR FASTENING. THEY ARE NOT INTENDED TO SPECIFY PARTICULAR PRODUCTS OR OTHER METHODS OF ANY SPECIFIC MATERIALS, PRODUCT OR METHOD. THE IMPLEMENTATION OF THE PLANS REQUIRES A CLIENT / CONTRACTOR THOROUGHLY KNOWLEDGEABLE WITH THE APPLICABLE BUILDING CODES AND METHODS OF CONSTRUCTION SPECIFIC TO THIS PRODUCT TYPE AND TYPE OF CONSTRUCTION.

CONSTRUCTION REQUIREMENTS AND QUALITY: PROVIDE WORK OF THE SPECIFIC QUALITY; WHERE QUALITY LEVEL IS NOT INDICATED, PROVIDE WORK OF QUALITY CUSTOMARY IN SIMILAR TYPES OF WORK. WHERE THE PLANS AND SPECIFICATIONS, CODES, LAWS, REGULATIONS, MANUFACTURER'S RECOMMENDATIONS OR INDUSTRY STANDARDS REQUIRE WORK OF HIGHER QUALITY OR PERFORMANCE, PROVIDE WORK COMPLYING WITH THOSE REQUIREMENTS AND QUALITY. WHERE TWO OR MORE QUALITY PROVISIONS OF THOSE REQUIREMENTS CONFLICT WITH THE MOST STRINGENT REQUIREMENT; WHERE REQUIREMENTS ARE DIFFERENT BUT APPARENTLY EQUAL, AND WHERE IT IS UNCERTAIN WHICH REQUIREMENT IS MOST STRINGENT, OBTAIN CLARIFICATION FROM THE GMD DESIGN GROUP BEFORE PROCEEDING.

D·R·HORTON® America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:

50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE: **TECHNICAL INFORMATION**

PRINT DATE: May 13, 2022

SHEET NO: **0.1**

Front Elevation 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

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NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:

50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE: **QUICK VIEW - 'C'**

PRINT DATE:

May 13, 2022

SHEET NO:

0.2 C

NOTES: NCRC

- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS.
  1ST FLOOR = 8'-0" U.N.O. ON ELEVATIONS.
  2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.
  3RD FLOOR = 7'-0" U.N.O. ON ELEVATIONS.
- ROOFING: PITCHED SHINGLES PER DEVELOPER.
- WINDOWS: MANUFACTURER PER DEVELOPER. DIVIDED LITES AS SHOWN ON THE EXTERIOR ELEVATIONS
- ENTRY DOOR: AS SELECTED BY DEVELOPER.
- GARAGE DOORS: AS SELECTED BY DEVELOPER, RAISED PANEL AS SHOWN.
- CHIMNEY AS OCCURS: TOP OF CHIMNEYS TO BE A MINIMUM OF 24" ABOVE ANY ROOF WITHIN 10'-0" OF CHIMNEY.
- ALL EXTERIOR MATERIALS TO BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- PROTECTION AGAINST DECAY.
  (ALL PORTIONS OF A PORCH, SCREEN PORCH OR DECK FROM THE BOTTOM OF THE HEADER DOWN, INCLUDING POST, RAILS, PICKETS, STEPS AND FLOOR STRUCTURE.)
- SHINGLED ROOF PITCHES FROM 2/12 TO 4/12 TO HAVE (2) LAYERS OF UNDERLAYMENT APPLIED AND OVERLAPPED PER TABLE R905.1.1(2)

KEY NOTES:

MASONRY:

1. ADHERED STONE VENEER AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
2. MASONRY FULL BRICK AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
3. MASONRY FULL STONE AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
4. 8" SOLDIER COURSE.
5. ROWLOCK COURSE
6. DECORATIVE KEY. SEE DETAIL.

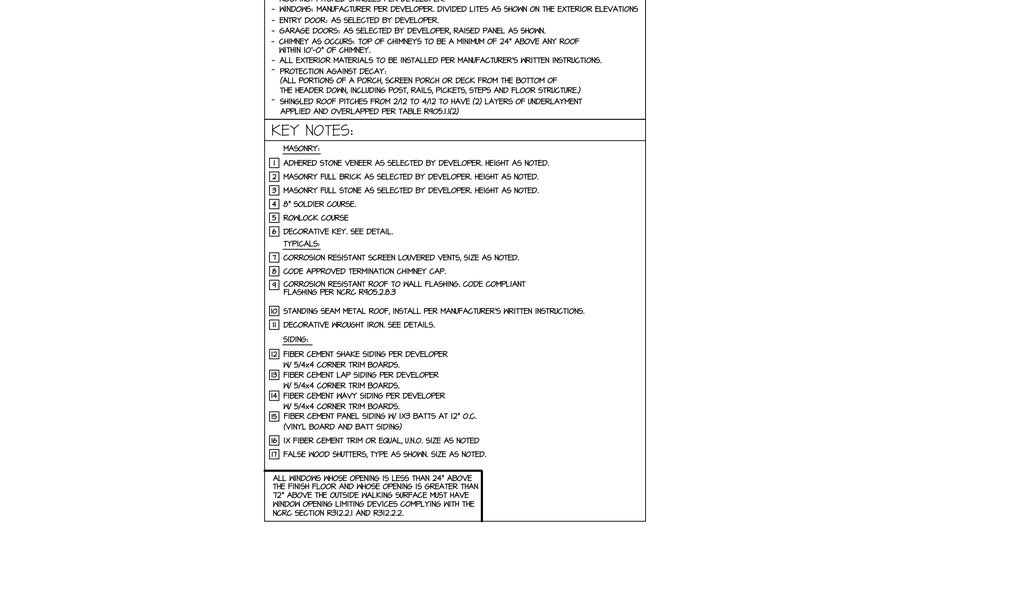
TYPICALS:

7. CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
8. CODE APPROVED TERMINATION CHIMNEY CAP.
9. CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NCRC R905.2.8.3
10. STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
11. DECORATIVE WROUGHT IRON. SEE DETAILS.

SIDING:

12. FIBER CEMENT SHAKE SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS.
13. FIBER CEMENT LAP SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS.
14. FIBER CEMENT WAVY SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS.
15. FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 12" O.C. (VINYL BOARD AND BATT SIDING)
16. 1X FIBER CEMENT TRIM OR EQUAL, U.N.O. SIZE AS NOTED
17. FALSE WOOD SHUTTERS, TYPE AS SHOWN. SIZE AS NOTED.

ALL WINDOWS WHOSE OPENING IS LESS THAN 24" ABOVE THE FINISH FLOOR AND WHOSE OPENING IS GREATER THAN 72" ABOVE THE OUTSIDE WALKING SURFACE MUST HAVE WINDOW OPENING LIMITING DEVICES COMPLYING WITH THE NCRC SECTION R312.2.1 AND R312.2.2.



4" Trim All Rear Windows

Rear Elevation 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

Front Elevation 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

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NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE: **FRONT ELEVATION 'C'**

PRINT DATE: May 13, 2022

SHEET NO: **1 C**

ATTIC VENT CALCULATION FOR PLAN 'PLAN 2': 1:150 RATIO.

THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED.

GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.

ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY PER LOCAL CODE.

PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

(PER SECTION R806.2)

1 SQUARE INCH VENT FOR EVERY 150 SQUARE INCHES OF CEILING
*144 SQ. IN. = 1 SQ. FT.
BLDG. CEILING (SF) X 144 = BLDG (SQ. IN.)
BLDG. (SQ. IN.) / 150 = SQ. IN. OF VENT REQUIRED

ROOF AREA 1; = 1309 SF
1309 SQ. FT. X 144 = 188496 SQ. IN.
188496 SQ. IN. / 150 = 1256.64 SQ. IN. OF VENT REQ'D

ROOF AREA 2; = 1113 SF
1113 SQ. FT. X 144 = 160272 SQ. IN.
160272 SQ. IN. / 150 = 1068.48 SQ. IN. OF VENT REQ'D

ROOF AREA 3; = 182 SF
182 SQ. FT. X 144 = 26208 SQ. IN.
26208 SQ. IN. / 150 = 174.72 SQ. IN. OF VENT REQ'D

BUILDER TO PROVIDE ATTIC VENTING MINIMUM AREA PER LOCAL CODE WITH THE AMOUNT/NUMBER VENTS AND TYPE OF VENTING USED PER THE WRITTEN MANUFACTURER'S SPECIFICATIONS PRIOR TO THE FINISH OF ROOFING MATERIAL.

NOTES:

- ALL ROOF DRAINAGE SHALL BE PIPED TO STREET OR APPROVED DRAINAGE FACILITY.
- DASHED LINES INDICATE WALL BELOW.
- LOCATE GUTTER AND DOWNSPOUTS PER BUILDER.
- PITCHED ROOFS AS NOTED.
- TRUSS MANUFACTURER SHALL SUBMIT STRUCTURAL CALCS AND SHOP DRAWINGS TO THE BUILDER'S GENERAL CONTRACTOR AND BUILDING DEPARTMENT FOR REVIEW PRIOR TO FABRICATIONS.
- ALL PLUMBING VENTS SHALL BE COMBINED INTO A MINIMUM AMOUNT OF ROOF PENETRATIONS. ALL ROOF PENETRATIONS SHALL OCCUR TO THE REAR OF THE MAIN RIDGE.

ATTIC VENT CALCULATION FOR PLAN 'PLAN 2': 1:300 RATIO.

AS AN ALTERNATE TO THE 1/150 RATIO LISTED ABOVE, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 PER SECTION R806.2

GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.

ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY PER LOCAL CODE.

PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

(PER SECTION R806.2)

1 SQUARE INCH VENT FOR EVERY 300 SQUARE INCHES OF CEILING
*144 SQ. IN. = 1 SQ. FT.
BLDG. CEILING (SF) X 144 = BLDG (SQ. IN.)
BLDG. (SQ. IN.) / 300 = SQ. IN. OF VENT REQUIRED
SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

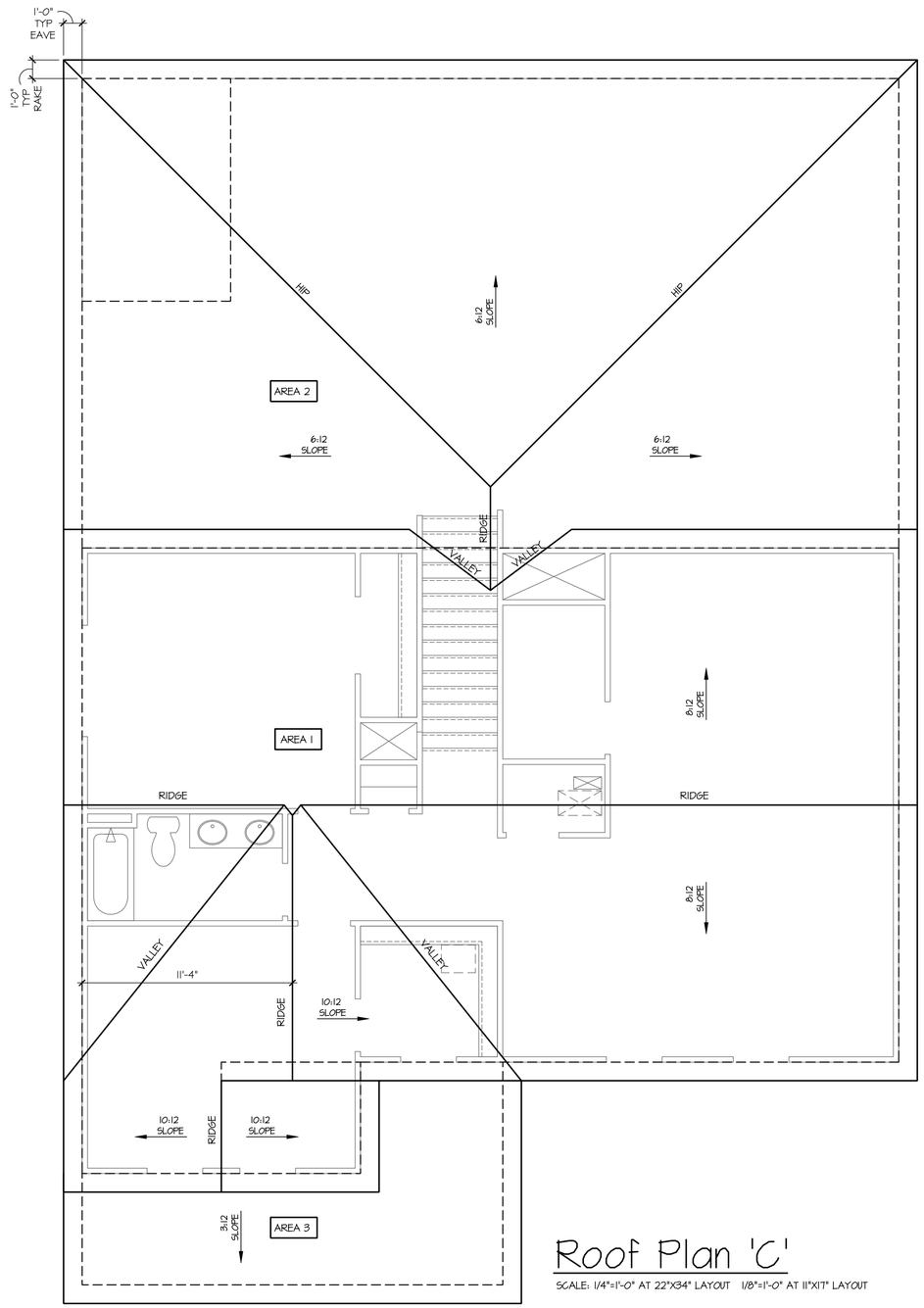
ROOF AREA 1; = 1309 SF
1309 SQ. FT. X 144 = 188496 SQ. IN.
188496 SQ. FT. / 300 = 628.32 SQ. IN. OF VENT REQ'D
628.32 SQ. IN. / 2 = 314.16 SQ. IN.
314.16 SQ. IN. OF VENT AT HIGH & 314.16 SQ. IN. OF VENT AT LOW REQUIRED.

ROOF AREA 2; = 1113 SF
1113 SQ. FT. X 144 = 160272 SQ. IN.
160272 SQ. FT. / 300 = 534.24 SQ. IN. OF VENT REQ'D
534.24 SQ. IN. / 2 = 267.12 SQ. IN.
267.12 SQ. IN. OF VENT AT HIGH & 267.12 SQ. IN. OF VENT AT LOW REQUIRED.

ROOF AREA 3; = 182 SF
182 SQ. FT. X 144 = 26208 SQ. IN.
26208 SQ. FT. / 300 = 87.36 SQ. IN. OF VENT REQ'D
87.36 SQ. IN. / 2 = 43.68 SQ. IN.
43.68 SQ. IN. OF VENT AT HIGH & 43.68 SQ. IN. OF VENT AT LOW REQUIRED.

BUILDER TO PROVIDE (2) LAYERS OF UNDERLAYMENT AT ANY ROOF W/ A SLOPE FROM 2:12 TO LESS THAN 4:12

BUILDER TO PROVIDE ATTIC VENTING MINIMUM AREA PER LOCAL CODE WITH THE AMOUNT/NUMBER VENTS AND TYPE OF VENTING USED PER THE WRITTEN MANUFACTURER'S SPECIFICATIONS PRIOR TO THE FINISH OF ROOFING MATERIAL.



Roof Plan 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

D·R·HORTON® America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE: **ROOF PLAN 'C'**

PRINT DATE:
May 13, 2022

SHEET NO:
2 C

NOTES: NCRC

- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS:
  1ST FLOOR = 8'-0" U.N.O. ON ELEVATIONS.
  2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.
  3RD FLOOR = 7'-0" U.N.O. ON ELEVATIONS.
- ROOFING: PITCHED SHINGLES PER DEVELOPER.
- WINDOWS: MANUFACTURER PER DEVELOPER. DIVIDED LITES AS SHOWN ON THE EXTERIOR ELEVATIONS
- ENTRY DOOR: AS SELECTED BY DEVELOPER.
- GARAGE DOORS: AS SELECTED BY DEVELOPER, RAISED PANEL AS SHOWN.
- CHIMNEY AS OCCURS: TOP OF CHIMNEYS TO BE A MINIMUM OF 24" ABOVE ANY ROOF WITHIN 10'-0" OF CHIMNEY.
- ALL EXTERIOR MATERIALS TO BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- PROTECTION AGAINST DECAY:
  (ALL PORTIONS OF A PORCH, SCREEN PORCH OR DECK FROM THE BOTTOM OF THE HEADER DOWN, INCLUDING POST, RAILS, PICKETS, STEPS AND FLOOR STRUCTURE.)
- SHINGLED ROOF PITCHES FROM 2/12 TO 4/12 TO HAVE (2) LAYERS OF UNDERLAYMENT APPLIED AND OVERLAPPED PER TABLE R905.1.1(2)

KEY NOTES:

MASONRY:

1 ADHERED STONE VENEER AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
2 MASONRY FULL BRICK AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
3 MASONRY FULL STONE AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
4 8" SOLDIER COURSE.
5 ROWLOCK COURSE
6 DECORATIVE KEY. SEE DETAIL.

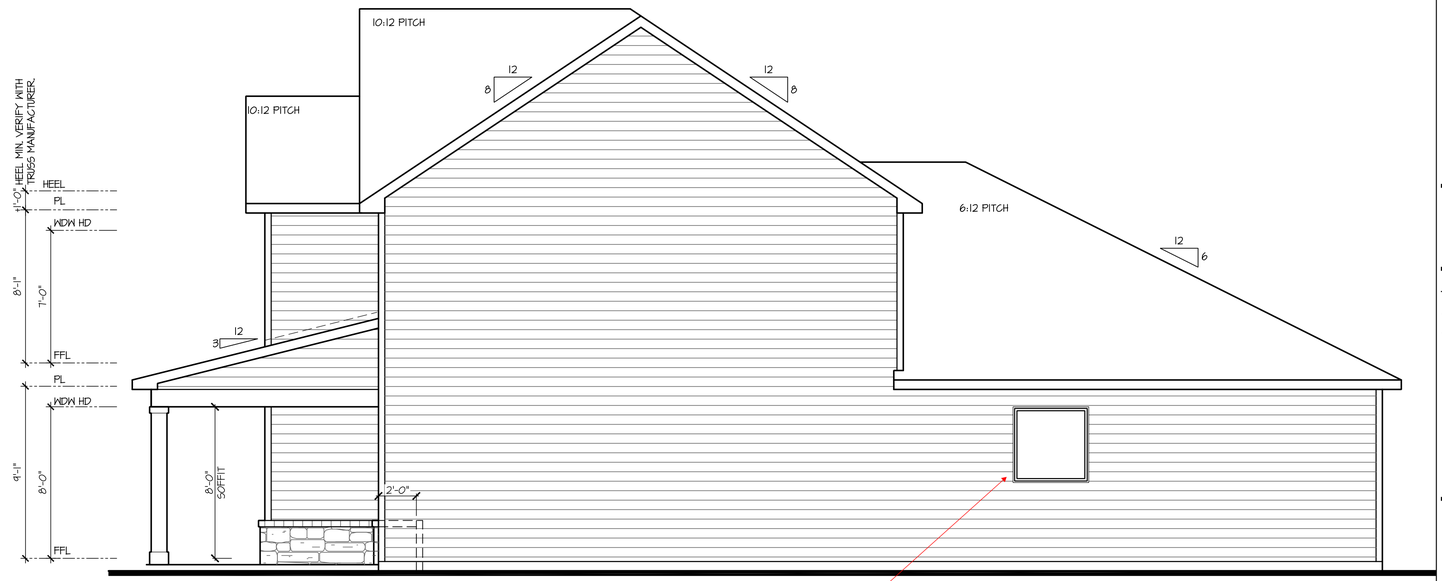
TYPICALS:

7 CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
8 CODE APPROVED TERMINATION CHIMNEY CAP.
9 CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NCRC R905.2.8.3
10 STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
11 DECORATIVE WROUGHT IRON. SEE DETAILS.

SIDING:

12 FIBER CEMENT SHAKE SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS.
13 FIBER CEMENT LAP SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS.
14 FIBER CEMENT WAVY SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS.
15 FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 12" O.C. (VINYL BOARD AND BATT SIDING)
16 1X FIBER CEMENT TRIM OR EQUAL, U.N.O. SIZE AS NOTED
17 FALSE WOOD SHUTTERS, TYPE AS SHOWN. SIZE AS NOTED.

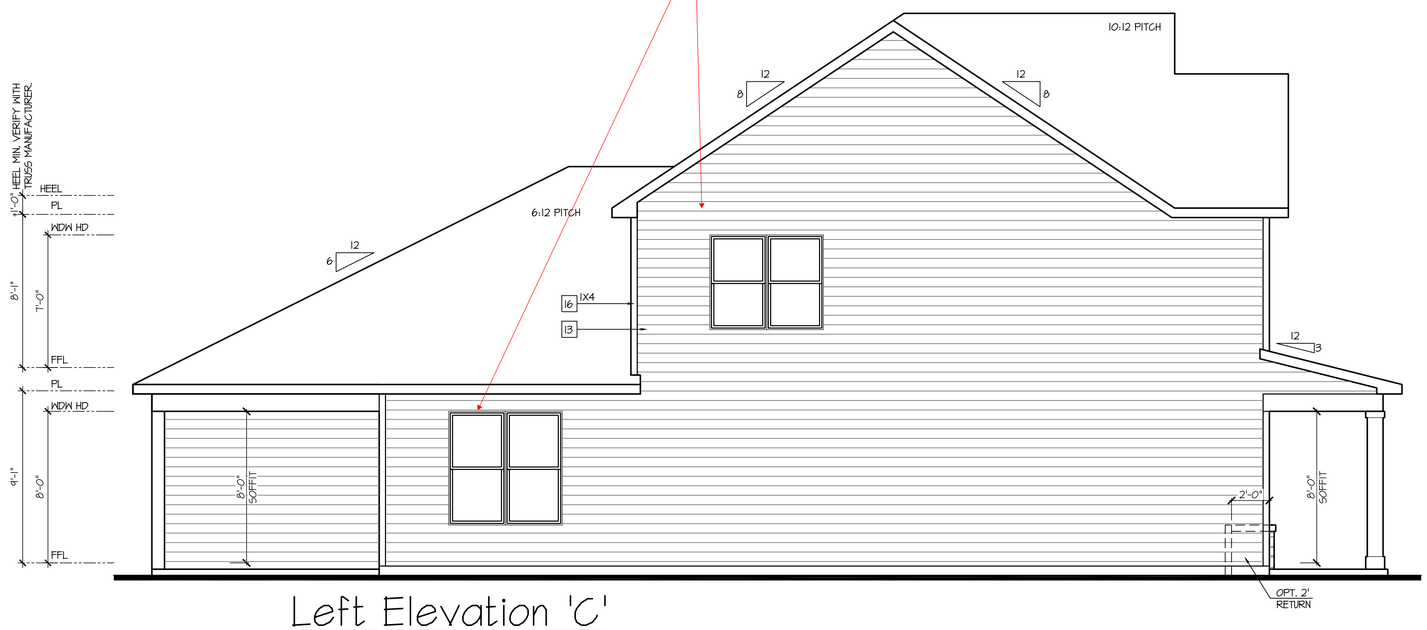
ALL WINDOWS WHOSE OPENING IS LESS THAN 24" ABOVE THE FINISH FLOOR AND WHOSE OPENING IS GREATER THAN 72" ABOVE THE OUTSIDE WALKING SURFACE MUST HAVE WINDOW OPENING LIMITING DEVICES COMPLYING WITH THE NCRC SECTION R312.2.1 AND R312.2.2.



Right Elevation 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

4" Trim All Side Windows



Left Elevation 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

D·R·HORTON America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE:
SIDE AND REAR ELEVATIONS 'C'

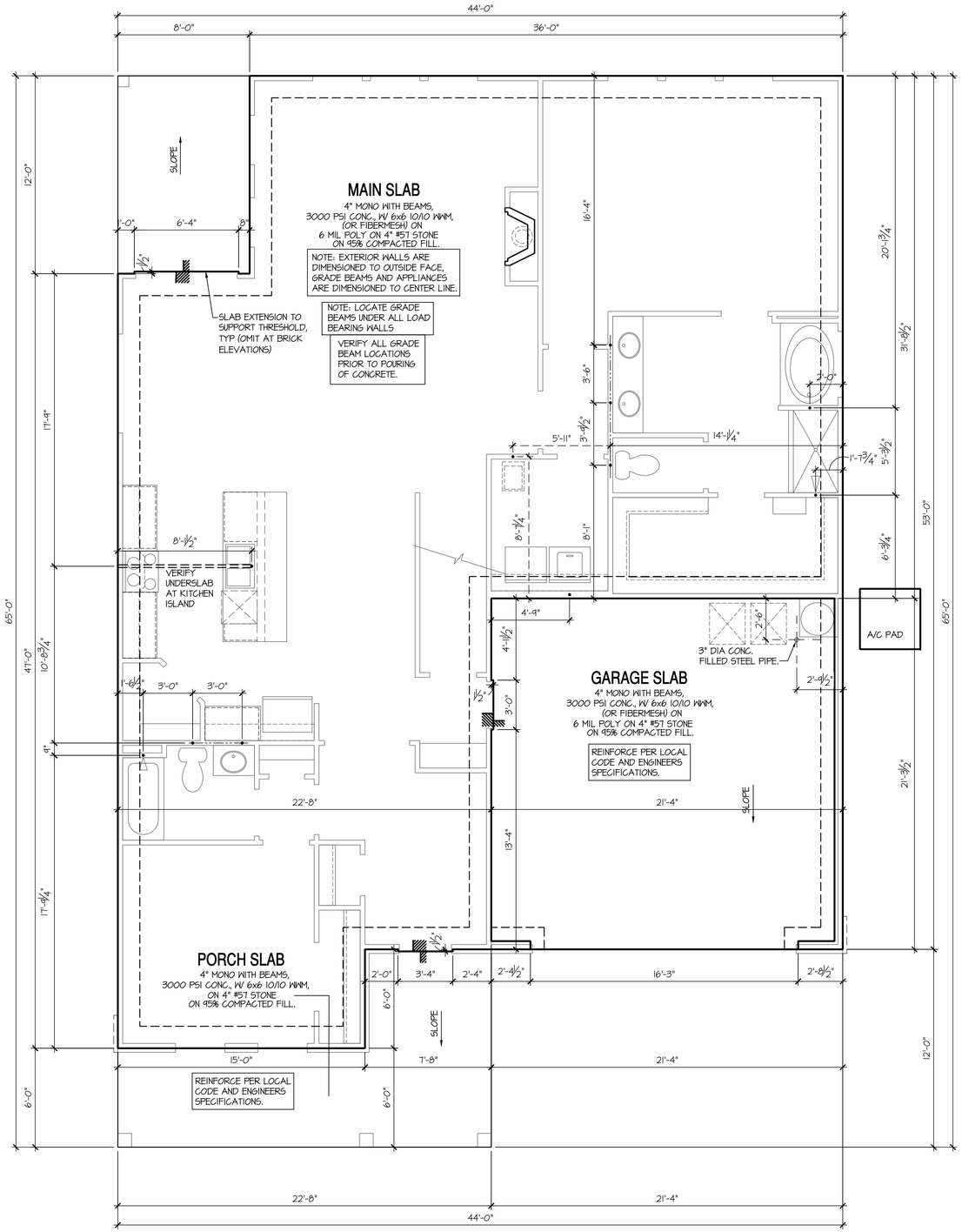
PRINT DATE:
May 13, 2022

SHEET NO:
3 C

NOTES: NCRC

- IRRIGATION SYSTEM SHALL BE DESIGNED TO PREVENT THE SATURATION OF SOIL ADJACENT TO BUILDING.
- THIS PERIMETER DIMENSION PLAN IS FOR DIMENSIONAL INFORMATION ONLY.
- SLOPE ALL STOOPS AND HARDSCAPE MATERIAL AWAY FROM BUILDING - TYPICAL.
- SLOPE GARAGE FLOOR 1/8" PER FOOT TO GARAGE DOOR OPENING.
- VERIFY CURB CUT BLOCKOUT WITH GARAGE DOOR MANUFACTURER.
- REFER TO CIVIL DRAWINGS FOR FINISH SURFACE ELEVATIONS.
- FINISH GRADE SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING. REFER TO SOILS REPORT FOR ANY SPECIFIC REQUIREMENTS.
- REFER TO STRUCTURAL DRAWINGS FOR HOLDDOWNS, FOOTING DETAILS, CURB THICKNESS, AND INFORMATION NOT SHOWN ON THIS PLAN.
- PLUMBING FIXTURES, VENT LOCATIONS, ETC. ARE APPROXIMATE. CONTRACTOR TO VERIFY COUNT AND LOCATION.
- VERIFY THE SUPPLY FOR SEPARATE CONDUITS TO ANY ISLAND FOR GAS, WATER OR ELECTRIC.
- VERIFY ALL DOOR THRESHOLD HEIGHTS TO HARD SURFACES. 8 1/4" MAX AT INSWING DOORS. (PER NCRC SECTION R311.3.1.)
- TYP STOOP AT INSWING/SLIDER DOORS: 36" DEEP BY THE WIDTH OF THE DOOR SERVED, MINIMUM. (PER NCRC SECTION R311.3.) PROVIDE A SLIP-RESISTANT FINISH.
- FOR THE USE OF EXPOSED GAS WATER HEATERS IN THE GARAGE, PROTECT THE WATER HEATER WITH 3" DIA CONCRETE FILLED STEEL PIPE EMBEDDED INTO CONCRETE FOOTING.

- SOILS TREATMENT.
  BORACARE TERMITE TO BE APPLIED TO FRAMING PER PRODUCT SPECIFICATIONS. (PROVIDE CHEMICAL TREATMENT FOR PROTECTION FROM TERMITE INVESTATION ACCORDING TO LOCAL CODES.)
- WOOD CONTACTING CONCRETE OR MASONRY OR LESS THAN CODE REQUIRED SEPARATION TO GRADE SHALL BE PRESSURE TREATED OR FOUNDATION GRADE REDWOOD. SET ALL EXTERIOR WALL SILLS IN MASTIC.



Monolithic Slab Plan 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

D·R·HORTON® America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE:
MONOLITHIC SLAB PLAN 'C'

PRINT DATE:
May 13, 2022

SHEET NO:
4 MS C

- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.
- WINDOW HEAD HEIGHTS:
  1ST FLOOR = 8'-0" U.N.O. ON ELEVATIONS.
  2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.

ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO CENTERLINE.

WALL LEGEND:

- FULL HEIGHT 2X4 WOOD STUD PARTITION
- FULL HEIGHT 2X6 WOOD STUD PARTITION
- BRICK / STONE VENEER
- STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED
- LOW GYPSUM BOARD WALL HEIGHT AND STUD SIZE AS NOTED
- DRYWALL OPENING. HEIGHT AS NOTED ON PLAN.

KEY NOTES: NCRC

FIRE PROTECTION:

1. HOUSE TO GARAGE FIRE SEPARATION. GARAGE/HOUSE SEPARATION AT VERTICAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 1/2" GYPSUM BOARD. (PER NCRC SECTION R302.6)
   GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER NCRC SECTION R302.6)
2. HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER NCRC SECTION R302.5.1)
3. BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER NCRC SECTION R302.7)
   IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11
   MEP'S
4. FOR THE USE OF EXPOSED GAS WATER HEATERS IN THE GARAGE, INSTALL PER LOCAL CODES.
5. FAU 8'X8' PLATFORM. VERIFY WITH TRUSS MANUFACTURER. (6'-6" MIN. CLEAR HEIGHT TO HORIZONTAL MEMBERS, 2"X6" OVER 2"X4" BOTTOM CHORD. OF TRUSS, VERIFY W/ TRUSSES.)
6. A/C CONDENSER PAD. (VERIFY)
7. PRE-FABRICATED METAL FIREPLACE. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. ATTIC ACCESS LARGE ENOUGH TO REMOVE LARGEST PIECE OF EQUIPMENT BUT NOT LESS THAN 30"x22". FIRE RATED ACCESS AS NOTED. (PER NCRC 807.1)
   ATTIC ACCESS LADDER. VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE) FOR GARAGE TO ATTIC SEPARATION PER NCRC 302.5.1 EXCEPTION.
   ACCESS PANEL SHALL BE WEATHERSTRIPPED AND INSULATED TO AN R-10 MINIMUM VALUE PER LOCAL CODES.

TYPICALS:

9. TEMPERED SAFETY GLASS. (PER NCRC SECTION R308.4)
10. PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
11. HALF WALL, HEIGHT AS NOTED.
12. INTERIOR SOFFITS: FFL = 8'-1" U.N.O. SFL = 7'-6" U.N.O.

BATHS:

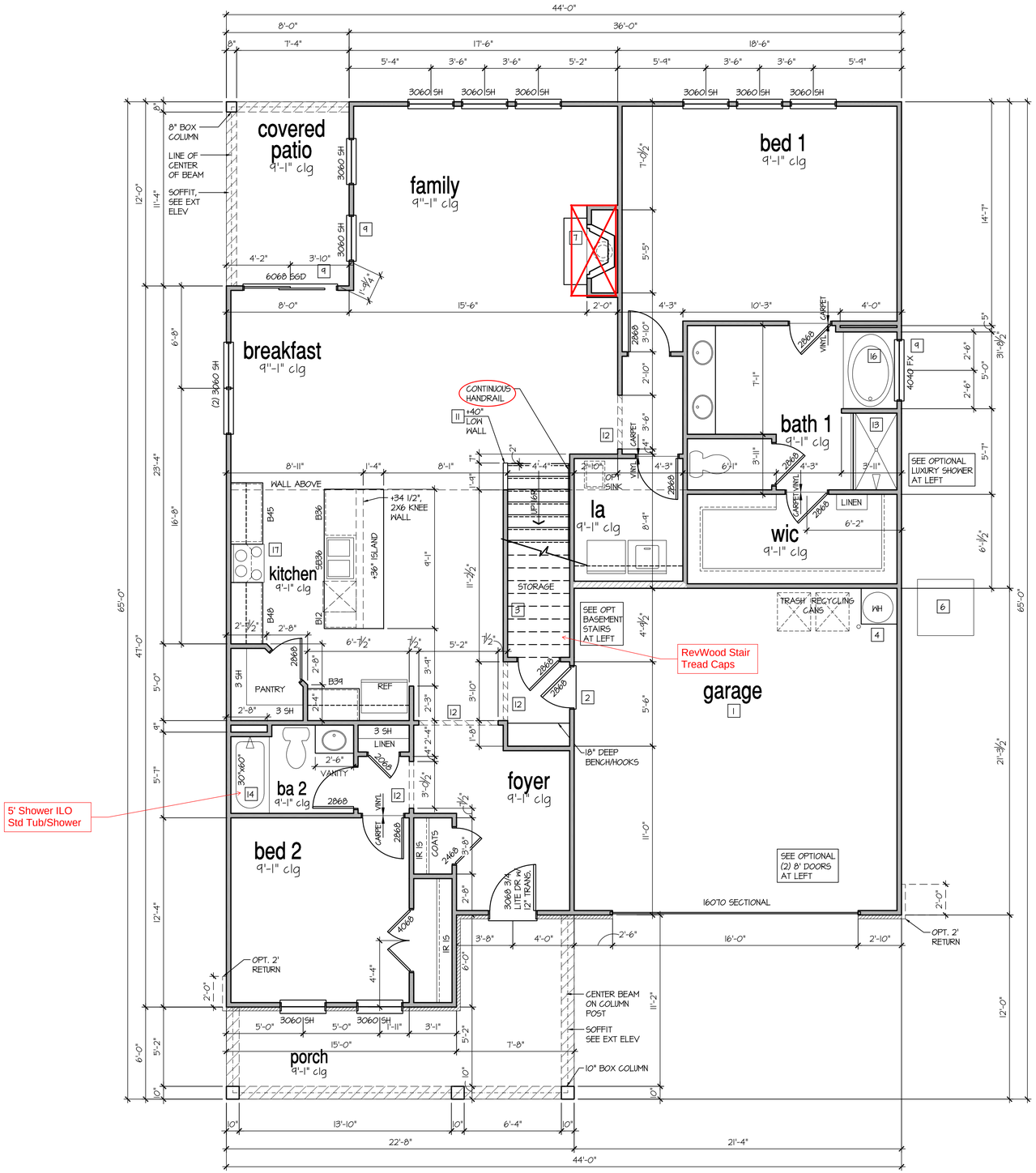
13. SHOWER. TEMPERED GLASS ENCLOSURE.
14. TUB-SHOWER COMBO. TEMPERED GLASS ENCLOSURE.
15. CERAMIC TILE SHOWER AND FLOOR. TEMPERED GLASS ENCLOSURE.
16. ACRYLIC TUB W/ CERAMIC PLATFORM

KITCHEN:

17. 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
18. 30" GAS COOKTOP AND HOOD. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
19. ELECTRIC OVEN WITH MICROWAVE OVEN.
20. LAUNDRY CLOSETS, AN OPENING HAVING AN AREA NOT LESS THAN 100 SQ IN SHALL BE PROVIDED IN THE CLOSET ENCLOSURE OR MAKEUP AIR SHALL BE PROVIDED BY OTHER APPROVED MEANS PER LOCAL CODES. LOUVERED DOORS OR PROVIDING A TRANSFER GRILLE ABOVE THE DOOR OR THE DOOR MAY BE UNDERCUT TO PROVIDE ADDITIONAL VENTILATION

9'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
15 TREADS AT 10" EACH VERIFY
16 RISERS AT +/- 7.75" = 123 3/4" TOTAL RISE VERIFY

8'-9 1/2" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
15" TREADS AT 10" EACH VERIFY
16 RISERS AT +/- 7.5" = 120 1/4" TOTAL RISE VERIFY



1st Floor Plan 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

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NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE: **1ST FLOOR PLAN 'C'**

PRINT DATE: May 13, 2022

SHEET NO: **5 C**

- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.
- WINDOW HEAD HEIGHTS:
  1ST FLOOR = 8'-0" U.N.O. ON ELEVATIONS.
  2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.

ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO CENTERLINE.

WALL LEGEND:

FULL HEIGHT
2X4 WOOD STUD PARTITION

FULL HEIGHT
2X6 WOOD STUD PARTITION

BRICK / STONE VENEER

STUD WALL BELOW
HEIGHT AND STUD SIZE AS NOTED

LOW GYPSUM BOARD WALL
HEIGHT AND STUD SIZE AS NOTED

DRYWALL OPENING. HEIGHT
AS NOTED ON PLAN.

KEY NOTES: NCRC

FIRE PROTECTION:

1. HOUSE TO GARAGE FIRE SEPARATION. GARAGE/HOUSE SEPARATION AT VERTICAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 1/2" GYPSUM BOARD. (PER NCRC SECTION R302.6)
   GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER NCRC SECTION R302.6)
2. HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER NCRC SECTION R302.5.1)
3. BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER NCRC SECTION R302.7)
   IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11

MEP'S

4. FOR THE USE OF EXPOSED GAS WATER HEATERS IN THE GARAGE, INSTALL PER LOCAL CODES.
5. FAU 8'X8' PLATFORM. VERIFY WITH TRUSS MANUFACTURER. (6'-6" MIN. CLEAR HEIGHT TO HORIZONTAL MEMBERS, 2"X6" OVER 2"X4" BOTTOM CHORD. OF TRUSS, VERIFY W/ TRUSSES.)
6. A/C CONDENSER PAD. (VERIFY)
7. PRE-FABRICATED METAL FIREPLACE. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. ATTIC ACCESS LARGE ENOUGH TO REMOVE LARGEST PIECE OF EQUIPMENT BUT NOT LESS THAN 30"x22". FIRE RATED ACCESS AS NOTED. (PER NCRC R07.1)
   ATTIC ACCESS LADDER. VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE.) FOR GARAGE TO ATTIC SEPARATION PER NCRC 302.5.1 EXCEPTION.
   ACCESS PANEL SHALL BE WEATHERSTRIPPED AND INSULATED TO AN R-10 MINIMUM VALUE PER LOCAL CODES.

TYPICALS:

9. TEMPERED SAFETY GLASS. (PER NCRC SECTION R308.4)
10. PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
11. HALF WALL, HEIGHT AS NOTED.
12. INTERIOR SOFFITS: FFL = 8'-1" U.N.O. SFL = 7'-6" U.N.O.

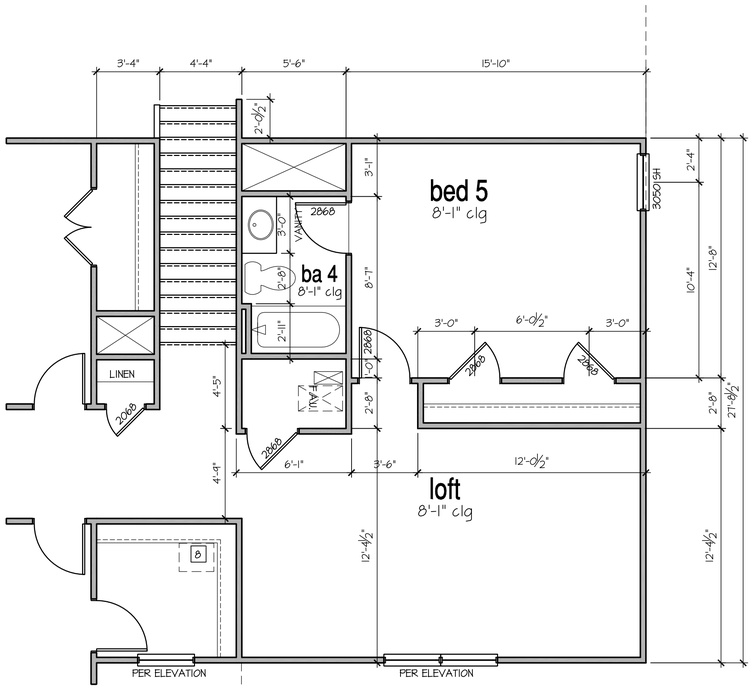
BATHS:

13. SHOWER. TEMPERED GLASS ENCLOSURE.
14. TUB-SHOWER COMBO. TEMPERED GLASS ENCLOSURE.
15. CERAMIC TILE SHOWER AND FLOOR. TEMPERED GLASS ENCLOSURE.
16. ACRYLIC TUB W/ CERAMIC PLATFORM

KITCHEN:

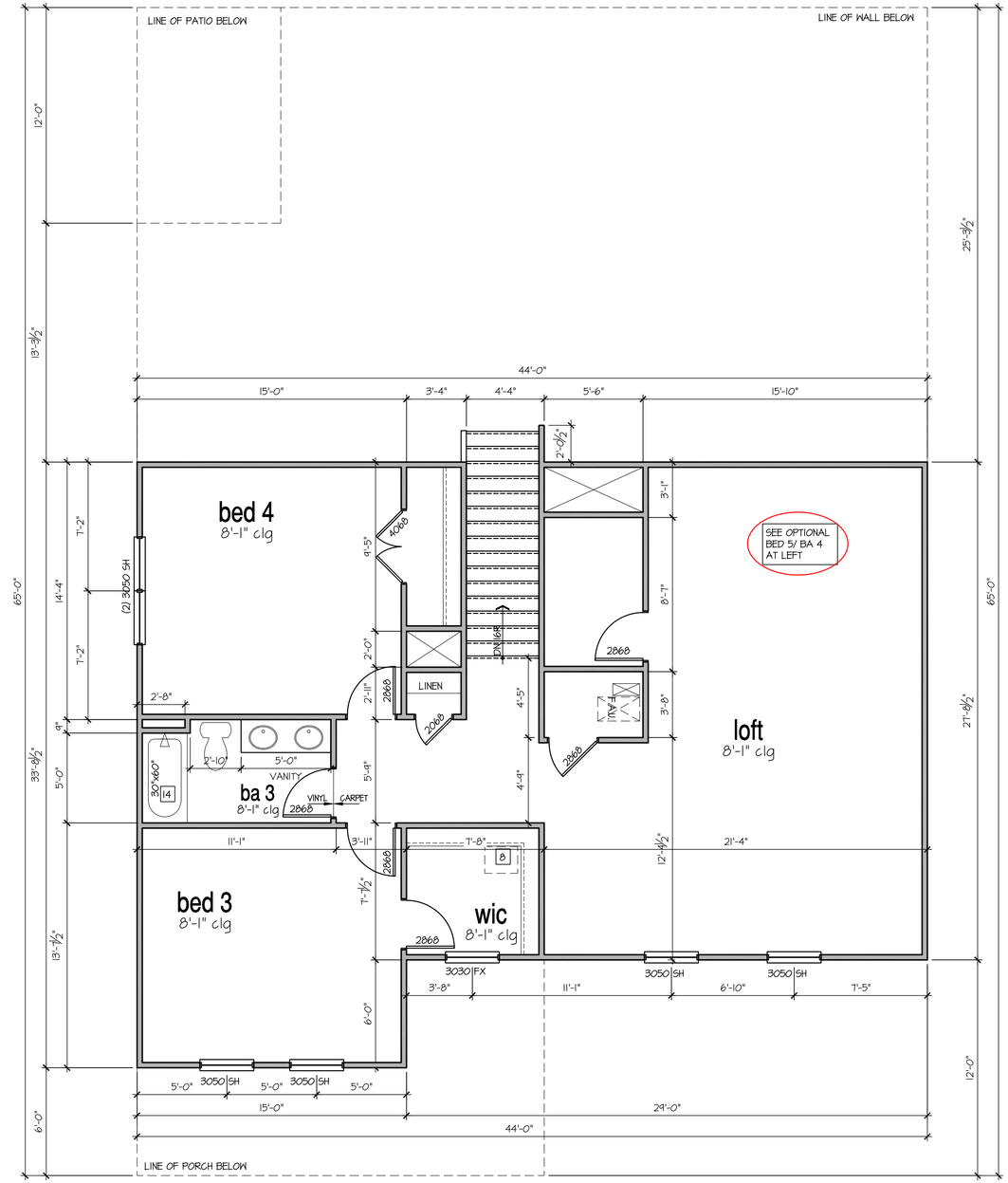
17. 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
18. 30" GAS COOKTOP AND HOOD. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
19. ELECTRIC OVEN WITH MICROWAVE OVEN.
20. LAUNDRY CLOSETS, AN OPENING HAVING AN AREA NOT LESS THAN 100 SQ IN SHALL BE PROVIDED IN THE CLOSET ENCLOSURE OR MAKEUP AIR SHALL BE PROVIDED BY OTHER APPROVED MEANS PER LOCAL CODES. LOUVERED DOORS OR PROVIDING A TRANSFER GRILLE ABOVE THE DOOR OR THE DOOR MAY BE UNDERCUT TO PROVIDE ADDITIONAL VENTILATION

9'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
15 TREADS AT 10" EACH VERIFY
16 RISERS AT +/- 7.75" = 123 3/4" TOTAL RISE VERIFY



Optional Bed 5 / Bath 4

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT



2nd Floor Plan 'C'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

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NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

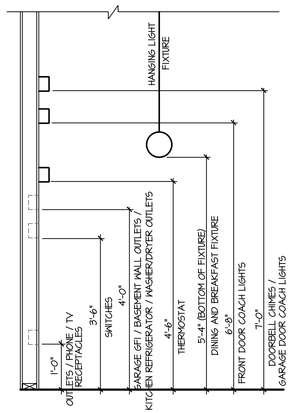
PROJECT TITLE:
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

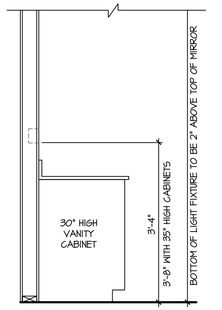
SHEET TITLE:
1ST FLOOR PLAN 'C'

PRINT DATE:
May 13, 2022

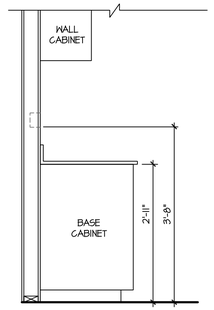
SHEET NO:
5.1 C



STANDARD ELECTRICAL BOX HEIGHTS



SWITCH AND RECEPTACLE BOXES OVER BATH CABINETS



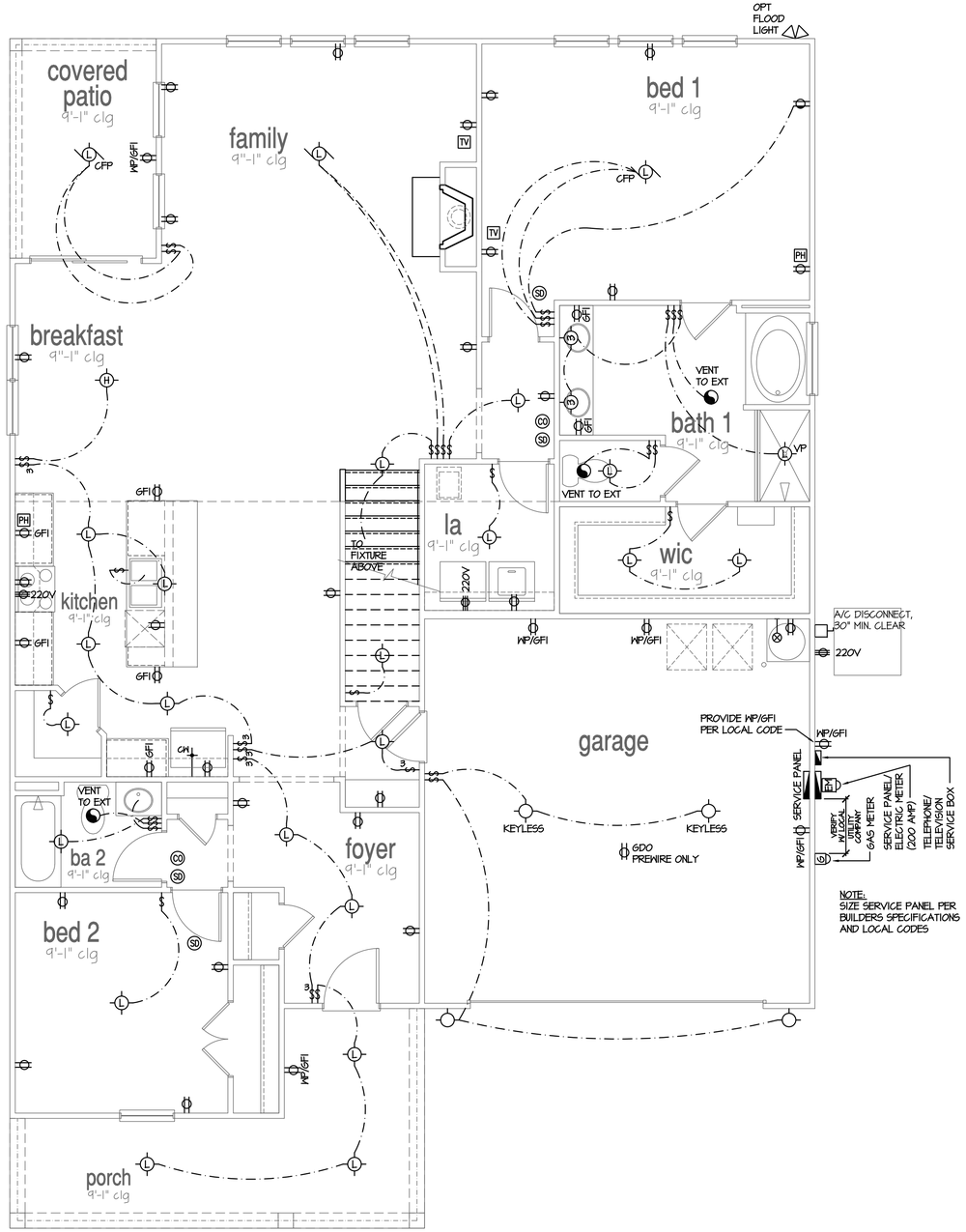
SWITCH AND RECEPTACLE BOXES OVER KITCHEN CABINETS

NOTES:

- PROVIDE GROUNDING ELECTRICAL ROD PER LOCAL CODES.
- PROVIDE AND INSTALL ARC FAULT CIRCUIT-INTERRUPTERS (AFCI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ALL EXHAUST FANS SHALL HAVE BACKDRAFT DAMPERS.
- FAN/LIGHTS IN WET/DAMP LOCATIONS SHALL BE LABLED "SUITABLE FOR WET OR DAMP LOCATIONS."
- ELECTRICAL SYSTEMS ARE SHOWN FOR INTENT ONLY. THESE SYSTEMS SHALL BE ENGINEERED BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND PLACEMENT.
- PROVIDE AND INSTALL LOCALLY CERTIFIED SMOKE DETECTORS AND CO2 DETECTORS AS REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- PROVIDE AND INSTALL GROUND FAULT CIRCUIT-INTERRUPTERS (GFI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ELECTRICAL CONTRACTOR TO PROVIDE REQUIRED DIRECT HOOK-UPS/CUTOFFS.
- HVAC CONTRACTOR TO VERIFY THERMOSTAT LOCATIONS.
- ALL ELECTRICAL AND MECHANICAL EQUIPMENT (FURNACES, A/C UNITS, ELECTRICAL PANELS, SANITARY SUMP PITS, DRAIN TILE SUMP, AND WATER HEATERS) ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS.
- PROVIDE POWER, LIGHT AND SWITCH AS REQUIRED FOR ATTIC FURNACE PER CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

LEGEND:

DUPLEX OUTLET	UNDERCOUNTER FLUORESCENT LIGHT FIXTURE
WP/GFI WEATHERPROOF GFI DUPLEX OUTLET	CEILING MOUNTED INCANDESCENT LIGHT FIXTURE
GFI GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET	WALL MOUNTED INCANDESCENT LIGHT FIXTURE
HALF-SWITCHED DUPLEX OUTLET	LED LIGHT FIXTURE (VP) = VAPOR PROOF
220V 220 VOLT OUTLET	EXHAUST FAN (VENT TO EXTERIOR)
REINFORCED JUNCTION BOX	EXHAUST FAN/LIGHT COMBINATION (VENT TO EXTERIOR)
WALL SWITCH	FLUORESCENT LIGHT FIXTURE
3 THREE-WAY SWITCH	TECH HUB SYSTEM
4 FOUR-WAY SWITCH	CEILING FAN (PROVIDE ADEQUATE SUPPORT)
CH CHIMES	
PUSHBUTTON SWITCH	
SD 110V SMOKE DETECTOR W/ BATTERY BACKUP; S/D COMBO COMBO UNIT	CEILING FAN WITH INCANDESCENT LIGHT FIXTURE (PROVIDE ADEQUATE SUPPORT)
CO CO2 DETECTOR	
T THERMOSTAT	GAS SUPPLY WITH VALVE
PH TELEPHONE	HB HOSE BIBB
TV TELEVISION	GN 1/4" WATER STUB OUT
ELECTRIC METER	WALL SCONCE
ELECTRIC PANEL	
DISCONNECT SWITCH	



1st Floor Plan 'A'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

D·R·HORTON America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:

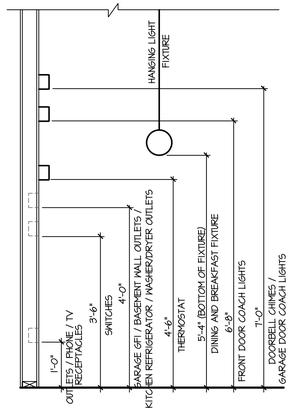
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

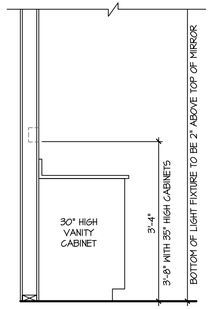
SHEET TITLE: 1ST FLOOR UTILITY PLAN

PRINT DATE: May 13, 2022

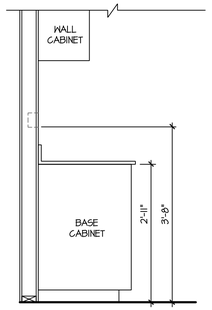
SHEET NO: 7



STANDARD ELECTRICAL BOX HEIGHTS



SWITCH AND RECEPTACLE BOXES OVER BATH CABINETS



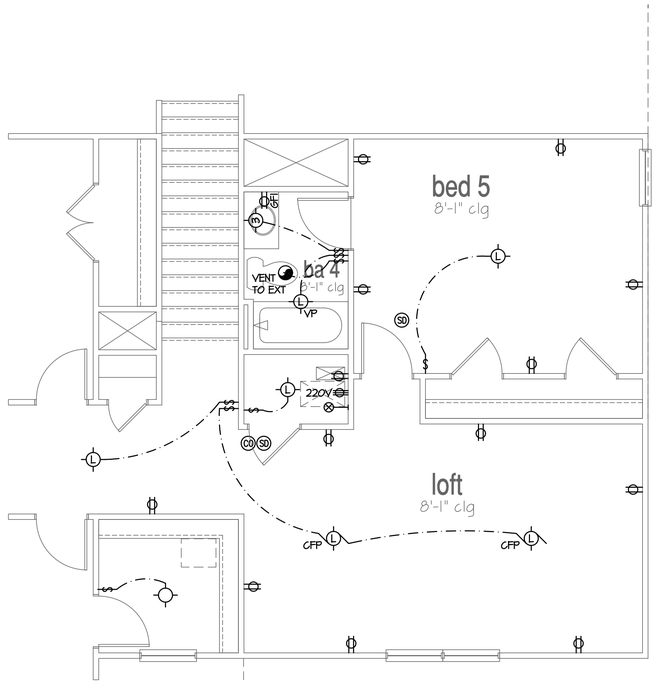
SWITCH AND RECEPTACLE BOXES OVER KITCHEN CABINETS

NOTES:

- PROVIDE GROUNDING ELECTRICAL ROD PER LOCAL CODES.
- PROVIDE AND INSTALL ARC FAULT CIRCUIT-INTERRUPTERS (AFCI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ALL EXHAUST FANS SHALL HAVE BACKDRAFT DAMPERS.
- FAN/LIGHTS IN WET/DAMP LOCATIONS SHALL BE LABLED "SUITABLE FOR WET OR DAMP LOCATIONS."
- ELECTRICAL SYSTEMS ARE SHOWN FOR INTENT ONLY. THESE SYSTEMS SHALL BE ENGINEERED BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND PLACEMENT.
- PROVIDE AND INSTALL LOCALLY CERTIFIED SMOKE DETECTORS AND CO2 DETECTORS AS REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- PROVIDE AND INSTALL GROUND FAULT CIRCUIT-INTERRUPTERS (GFI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ELECTRICAL CONTRACTOR TO PROVIDE REQUIRED DIRECT HOOK-UPS/CUTOFFS.
- HVAC CONTRACTOR TO VERIFY THERMOSTAT LOCATIONS.
- ALL ELECTRICAL AND MECHANICAL EQUIPMENT (FURNACES, A/C UNITS, ELECTRICAL PANELS, SANITARY SUMP PITS, DRAIN TILE SUMP, AND WATER HEATERS) ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS.
- PROVIDE POWER, LIGHT AND SWITCH AS REQUIRED FOR ATTIC FURNACE PER CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

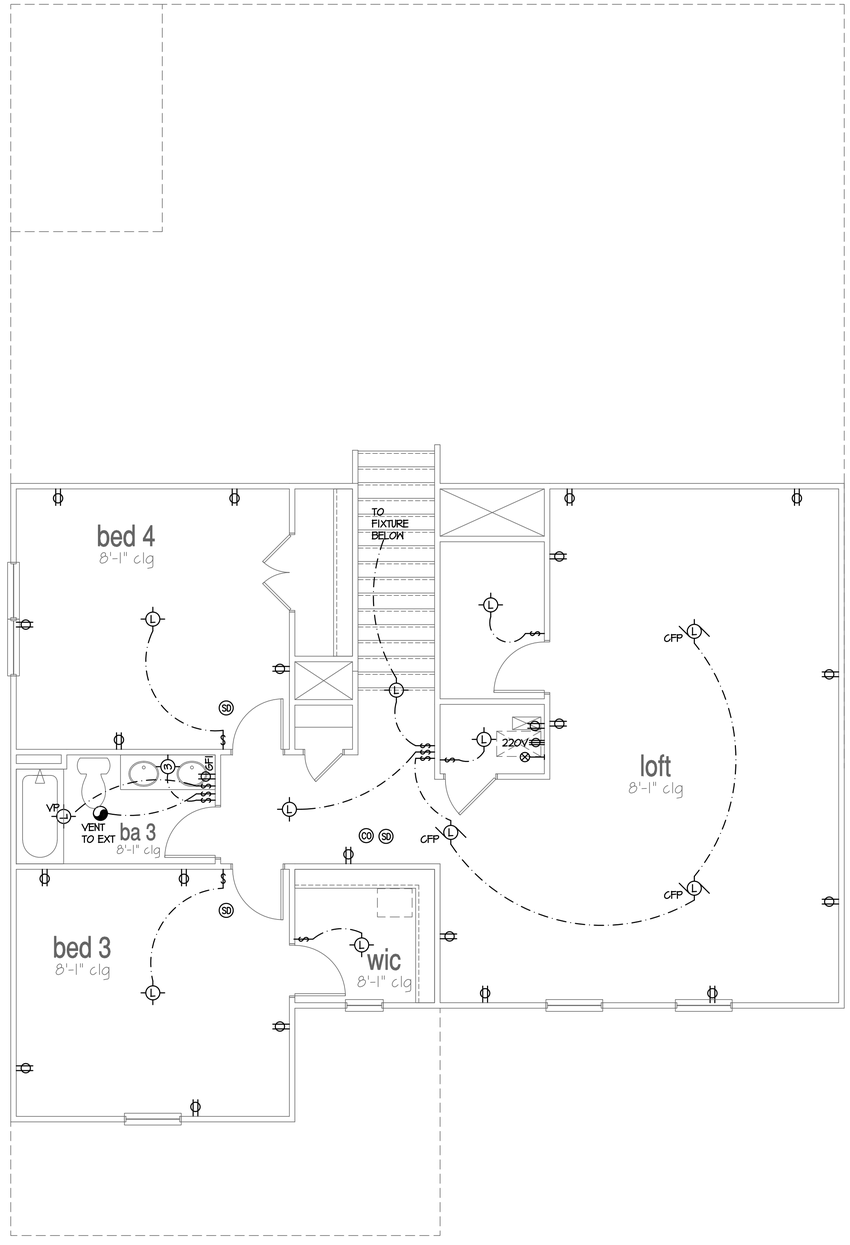
LEGEND:

DUPLEX OUTLET	UNDERCOUNTER FLUORESCENT LIGHT FIXTURE
WP/GFI WEATHERPROOF GFI DUPLEX OUTLET	CEILING MOUNTED INCANDESCENT LIGHT FIXTURE
GFI GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET	WALL MOUNTED INCANDESCENT LIGHT FIXTURE
HALF-SWITCHED DUPLEX OUTLET	LED LIGHT FIXTURE (VP) = VAPOR PROOF
220V 220 VOLT OUTLET	EXHAUST FAN (VENT TO EXTERIOR)
REINFORCED JUNCTION BOX	EXHAUST FAN/LIGHT COMBINATION (VENT TO EXTERIOR)
WALL SWITCH	FLUORESCENT LIGHT FIXTURE
3 THREE-WAY SWITCH	TECH HUB SYSTEM
4 FOUR-WAY SWITCH	CEILING FAN (PROVIDE ADEQUATE SUPPORT)
CH CHIMES	CEILING FAN WITH INCANDESCENT LIGHT FIXTURE (PROVIDE ADEQUATE SUPPORT)
PB PUSHBUTTON SWITCH	GAS SUPPLY WITH VALVE
SD 110V SMOKE DETECTOR W/ BATTERY BACKUP (S/D COMBO UNIT)	HB HOSE BIBB
CO CO2 DETECTOR (S/D COMBO UNIT)	GH 1/4" WATER STUB OUT
T THERMOSTAT	WALL SCONCE
PH TELEPHONE	
TV TELEVISION	
ELECTRIC METER	
ELECTRIC PANEL	
DISCONNECT SWITCH	



Optional Bed 5 / Bath 4

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT



2nd Floor Plan 'A'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

D·R·HORTON America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:

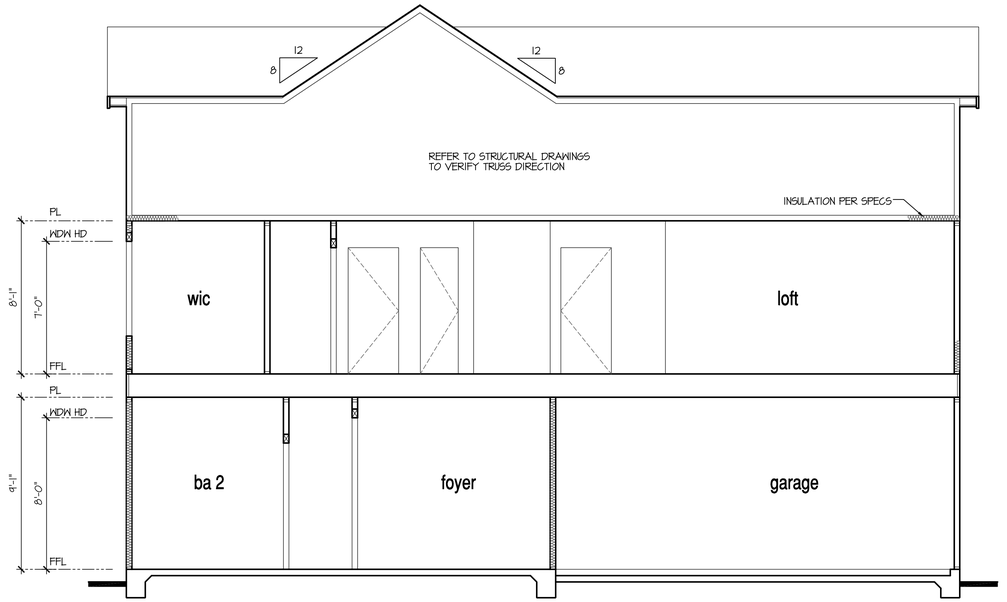
50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE: 1ST FLOOR UTILITY PLAN OPT

PRINT DATE: May 13, 2022

SHEET NO: **7.1**



Building Section 2

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

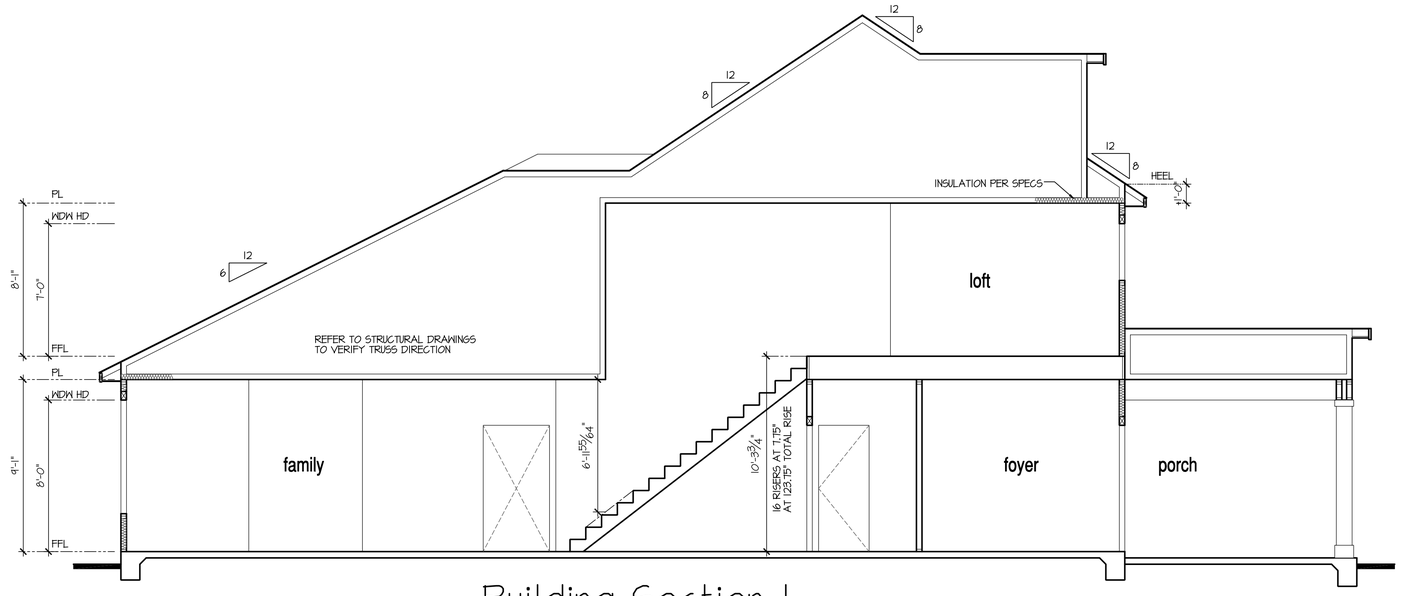
9'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
15 TREADS AT 10" EACH VERIFY
16 RISERS AT +/- 7.75" = 123 3/4" TOTAL RISE VERIFY

NOTES: NCRC TABLE N1102.1.2

- REFER TO FLOOR PLAN NOTES FOR TYPICAL FIRE PROTECTION NOTES AND LOCATIONS.
- THESE BUILDING SECTIONS MAY VARY AT ALTERNATE ELEVATION STYLES AND AT "PLAN OPTION" CONDITIONS. REFER TO MAIN FLOOR PLAN AND ALTERNATE FLOOR PLANS FOR INFORMATION NOT SHOWN HERE.
- BUILDING SECTIONS SHOWN HERE DEPICT VOLUMN SPACES WITHIN THE STRUCTURE. REFER TO STRUCTURAL DRAWINGS, TRUSS DRAWINGS, STRUCTURAL DETAILS AND CALCULATIONS BY OTHER FOR ALL STRUCTURAL INFO.
- ROOFING: PITCHED SHINGLE ROOF. REFER TO ROOF PLAN FOR TYPICALS.
- WOOD FLOORS: FLOOR SHEATHING OVER FLOOR JOIST. REFER TO STRUCTURAL AND TRUSS DRAWINGS BY OTHERS.
- VERIFY STAIRS MINIMUM AND MAXIMUM REQUIREMENTS FOR CONSTRUCTION CLEARANCES WITH LOCAL CODES.
- INSULATION: PER TABLE N1102.1.2. NCRC 2018 ZONE 3 AND 4:

EXTERIOR WALLS:	R-15 BATTS MINIMUM. VERIFY
CEILING WITH ATTIC ABOVE:	R-38 BATTS MINIMUM. VERIFY
FLOOR OVER GARAGE:	R-19 BATTS MINIMUM. VERIFY
ATTIC KNEEWALL:	R-19 BATTS MINIMUM. VERIFY
CRAWL SPACE FLOORING:	R-10/15 MINIMUM. VERIFY
SLAB VALUE:	R-10 MINIMUM. VERIFY

PER STATE RESIDENTIAL CODE COMPLIANCE METHOD TO BE DETERMINED BY BUILDER.



Building Section 1

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

D·R·HORTON® America's Builder

NO:	DATE:	REVISION:
1	08.15.24	
2	05.01.25	ADDED CRAWL SPACE

PROFESSIONAL SEAL:

PROJECT TITLE:

50' Series Hartwell

PROJECT NO: GMD-GA22008.01

SHEET TITLE:

PRINT DATE: May 13, 2022

SHEET NO: **7 MS**

SHEET INDEX:

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S-0.1	GENERAL STRUCTURAL NOTES	
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S 3MS B	MONOLITHIC SLAB FOUNDATION PLANS	ELEVATION B & OPTION
S 3MS C	MONOLITHIC SLAB FOUNDATION PLANS	ELEVATION C & OPTION
S 3MS D	MONOLITHIC SLAB FOUNDATION PLANS	ELEVATION D & OPTION
S 3MS E	MONOLITHIC SLAB FOUNDATION PLANS	ELEVATION E & OPTION
S 3MS F	MONOLITHIC SLAB FOUNDATION PLANS	ELEVATION F & OPTION
S 3CS A	CRAWL SPACE FOUNDATION PLANS	ELEVATION A & OPTION
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S 3CS D	CRAWL SPACE FOUNDATION PLANS	ELEVATION D & OPTION
S 3CS E	CRAWL SPACE FOUNDATION PLANS	ELEVATION E & OPTION
S 3CS F	CRAWL SPACE FOUNDATION PLANS	ELEVATION F & OPTION
S 3 A	BASEMENT FOUNDATION PLANS	ELEVATION A & OPTION
S 3 B	BASEMENT FOUNDATION PLANS	ELEVATION B & OPTION
S 3 C	BASEMENT FOUNDATION PLANS	ELEVATION C & OPTION
S 3 D	BASEMENT FOUNDATION PLANS	ELEVATION D & OPTION
S 3 E	BASEMENT FOUNDATION PLANS	ELEVATION E & OPTION
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S 4 D	SECOND FLOOR FRAMING PLANS	ELEVATION D & OPTION
S 4 E	SECOND FLOOR FRAMING PLANS	ELEVATION E & OPTION
S 4 F	SECOND FLOOR FRAMING PLANS	ELEVATION F & OPTION
S 5 A	ROOF FRAMING PLAN	ELEVATION A
S 5 B	ROOF FRAMING PLAN	ELEVATION B
S 5 C	ROOF FRAMING PLAN	ELEVATION C
S 5 D	ROOF FRAMING PLAN	ELEVATION D
S 5 E	ROOF FRAMING PLAN	ELEVATION E
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KSE ENGINEERING

1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

www.kse-eng.com (215) 804-4449

HARTWELL - RH

NORTH CAROLINA

THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH AND COORDINATED WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. THIS COORDINATION IS NOT THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD (SER). SHOULD ANY DISCREPANCIES BECOME APPARENT, THE CONTRACTOR SHALL NOTIFY KSE ENGINEERING, P.C. BEFORE CONSTRUCTION BEGINS. IT IS THE INTENT OF THE ENGINEER LISTED ON THESE DOCUMENTS THAT THESE DOCUMENTS BE ACCURATE, PROVIDING LICENSED PROFESSIONALS CLEAR INFORMATION. EVERY ATTEMPT HAS BEEN MADE TO PREVENT ERROR. THE BUILDER AND ALL SUBCONTRACTORS ARE REQUIRED TO REVIEW ALL OF THE INFORMATION CONTAINED IN THESE DOCUMENTS PRIOR TO THE COMMENCEMENT OF ANY WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ANY PLAN ERRORS, OMISSIONS, OR MISINTERPRETATIONS UNDETECTED AND NOT REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION. ALL CONSTRUCTION MUST BE IN ACCORDANCE TO THE INFORMATION FOUND IN THESE DOCUMENTS.

THIS PLAN HAS BEEN DESIGNED PER THE 2018 EDITION OF THE NC RESIDENTIAL CODE. WHERE FRAMING, FOUNDATION, OR OTHER STRUCTURAL ITEMS DO NOT COMPLY WITH THE PRESCRIPTIVE METHODS OF THE CODE, THOSE ITEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE PER NCRC R301.1.3.

DESIGN SPECIFICATIONS:

DESIGN BUILDING CODE (REFERRED TO HEREIN AS 'THE BUILDING CODE'):
- 2018 NORTH CAROLINA RESIDENTIAL CODE AND ENGINEERED DESIGN

DESIGN LIVE LOADS:
- ROOF = 20 PSF (LOAD DURATION FACTOR=1.25)
- UNINHABITABLE ATTICS WITH LIMITED STORAGE = 20 PSF (WHERE SPECIFIED ON PLANS)
- HABITABLE ATTICS AND ATTICS SERVED WITH FIXED STAIRS = 30 PSF
- FLOOR = 40 PSF
- FLOOR (SLEEPING AREAS) = 30 PSF
- DECK = 40 PSF
- BALCONY = 40 PSF
- STAIRS = 40 PSF

DESIGN DEAD LOADS:
- ROOF TRUSS = 17 PSF (TC=7, BC=10)
- FLOOR TRUSS = 15 PSF (TC=10, BC=5)
- FLOOR JOIST = 10 PSF
- STANDARD BRICK = 40 PSF
- QUEEN ANNE BRICK = 25 PSF
- TILE = 10 PSF (WHERE NOTED ON PLANS)

NOTE: STRUCTURAL FRAMING HAS NOT BEEN DESIGNED FOR GRANITE, MARBLE OR OTHER MATERIALS HEAVIER THAN THE ABOVE LOADING UNLESS SPECIFICALLY NOTED ON PLANS..

DESIGN WIND LOADS:
- ULTIMATE WIND SPEED = 115 MPH
- EXPOSURE CATEGORY = B

ASSUMED SOIL BEARING CAPACITY = 2000 PSF

ASSUMED LATERAL SOIL PRESSURE = 60 PCF

FROST DEPTH = 12"

SEISMIC DESIGN CATEGORY = B

ENGINEERED LUMBER SHALL HAVE THE FOLLOWING MINIMUM DESIGN VALUES:
- PRI-40s SERIES (DEPTH, SERIES AND SPACING PER PLANS)
- LVL: E=2,000,000 PSI, F_B=3,100 PSI, F_V=285 PSI, F_C=750 PSI

NORTH CAROLINA PROFESSIONAL SEAL 051215 4/28/25 ENGINEER LINDSAY REHL

KSE ENGINEERING
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D·R·HORTON® America's Builder

Cover Sheet
'Hartwell' - RH
115 M.P.H.
North Carolina

Project #:	088-22010
Designed By:	JPS
Checked By:	
Issue Date:	6/23/22
Re-Issue:	4/28/25
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

S-0

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 CONSENT OF KSE ENGINEERING, P.C. OR THE SER. FOR THE PURPOSES OF THESE CONSTRUCTION DOCUMENTS, THE SER AND KSE ENGINEERING 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. THE SER DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF GEOMETRY. THE SER ASSUMES NO LIABILITY FOR CHANGES MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THE PLANS. THE SER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION IF ANY DISCREPANCIES ARE NOTED ON THE PLANS.
5. 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 KSE ENGINEERING 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 KSE ENGINEERING, P.C.
6. 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 KSE ENGINEERING, P.C. BEFORE CONSTRUCTION BEGINS.
7. THE SER IS NOT RESPONSIBLE FOR ANY SECONDARY STRUCTURAL ELEMENTS OR NON-STRUCTURAL ELEMENTS, EXCEPT FOR THE ELEMENTS SPECIFICALLY NOTED ON THE STRUCTURAL DRAWINGS.
8. THIS STRUCTURE AND ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE BUILDING CODE AND ANY LOCAL CODES OR RESTRICTIONS.
9. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. ALL DIMENSIONS ARE TO FACE OF STUD OR TO FACE OF FRAMING UNLESS OTHERWISE NOTED.
10. PROVIDE MOISTURE PROTECTION AND FLASHING PER ARCHITECTURAL DETAILS.

FOUNDATIONS:

1. FOUNDATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE BUILDING CODE.
2. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. THE BUILDER SHALL FURNISH ANY AND ALL REPORTS RECEIVED FROM THE GEOTECHNICAL ENGINEER ON THE STUDY OF THE PROPOSED SITE TO THE DESIGNER, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR.
3. MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN THE BUILDING CODE.
4. THE SER HAS NOT PERFORMED A SUBSURFACE INVESTIGATION. VERIFICATION OF THE 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, BUT NOT LESS THAN A MINIMUM OF 12" BELOW GRADE. ALL FOOTINGS TO HAVE A MINIMUM PROJECTION OF 2" ON EACH SIDE OF FOUNDATION WALLS. MAXIMUM FOOTING PROJECTION SHALL NOT EXCEED THE THICKNESS OF THE FOOTING.
6. WOOD SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH ½" ANCHOR BOLTS WITH MINIMUM 7" EMBEDMENT, SPACED A MAXIMUM OF 6'-0" O.C. INSTALL MINIMUM 2 ANCHOR BOLTS PER SECTION, 12" MAXIMUM FROM CORNERS. ½" DIAMETER x 8" LONG SIMPSON TITEN HD OR USP SCREW-BOLT+ SCREWS MAY BE SUBSTITUTED ON A 1 FOR 1 BASIS.
7. 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.
8. 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.
9. NO CONCRETE SHALL BE PLACED AGAINST ANY SUBGRADE CONTAINING WATER, ICE, FROST, OR LOOSE MATERIAL.
10. PROVIDE FOUNDATION WATERPROOFING AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS (SEE ARCHITECTURAL PLANS AND DETAILS).
11. NONE OF THE FOUNDATION DESIGNS IN THESE DOCUMENTS ARE SUITABLE FOR INSTALLATION IN SHRINK/SWELL CONDITIONS. REFER TO GEOTECHNICAL ENGINEER FOR APPROPRIATE DESIGN.
12. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS. THE GRADE SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE FIRST TEN FEET.
13. CRAWL SPACE TO BE GRADED LEVEL AND CLEAR OF ALL DEBRIS.
14. PROVIDE MINIMUM 6 MIL APPROVED VAPOR BARRIER. ALL JOINTS TO BE LAPPED MINIMUM 12" AND SEALED.

CONCRETE & REINFORCING

1. CONCRETE DESIGN BASED ON ACI 318 AND ACI 318.1 OR ACI 332. CONCRETE SHALL HAVE A NORMAL WEIGHT AGGREGATE AND A MINIMUM COMPRESSIVE STRENGTH ($f'c$) = 3,000 PSI MINIMUM AT 28 DAYS PER CODE (VARIES W/ WEATHER), 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 5% FOR FOOTINGS AND EXTERIOR SLABS.
4. NO ADMIXTURES SHALL BE ADDED TO ANY STRUCTURAL CONCRETE WITHOUT WRITTEN PERMISSION OF THE SER. WATER ADDED TO CONCRETE ON SITE SHALL NOT EXCEED THAT ALLOWED BY THE MIX DESIGN.
5. CONCRETE SLABS-ON-GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302.1R: "GUIDE FOR CONCRETE SLAB AND SLAB CONSTRUCTION".
6. CONTROL OR SAW CUT JOINTS (CUT OR TOOLED) 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. CARE SHALL BE TAKEN TO AVOID RE-ENTRANT CORNERS.
7. CONTROL OR SAW CUT JOINTS SHALL BE PRODUCED USING CONVENTIONAL CUT OR TOOLED PROCESSES WITHIN 4 TO 12 HOURS AFTER THE SLAB HAS BEEN FINISHED.
8. 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. FIBROUS CONCRETE REINFORCEMENT, OR POLYPROPYLENE FIBERS MAY BE USED IN LIEU OF W.W.F. APPLICATION OF POLYPROPYLENE FIBERS PER CUBIC YARD OF CONCRETE SHALL BE PER MANUFACTURER AND COMPLY WITH ASTM C1116, ANY LOCAL BUILDING CODE REQUIREMENTS AND SHALL MEET OR EXCEED CURRENT INDUSTRY STANDARD.
9. POLYPROPYLENE REINFORCING TO BE 100% VIRGIN, CONTAINING NO REPROCESSED OLEFIN MATERIALS AND SPECIFICALLY MANUFACTURED FOR USE AS CONCRETE SECONDARY REINFORCEMENT.
10. STEEL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.
11. 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".
12. 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.
13. PROVIDE REINFORCEMENT LAP AS NOTED BELOW, UNLESS NOTED OTHERWISE:
    #4 BARS – 30" LENGTH
    #5 BARS – 38" LENGTH
    #6 BARS – 45" LENGTH
14. 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. SEE KSE FOUNDATION DETAILS.
15. WHERE FOOTING BOTTOMS ARE TO BE STEPPED AT SLOPING GRADE CONDITIONS, PROVIDE CONTINUOUS REINFORCING WITH Z BARS (TO MATCH FOOTING REINFORCING) AS REQUIRED.
16. BAR SUPPORT ACCESSORIES SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, EXCEPT THAT REINFORCING SHALL BE CHAIRED ON THE BOTTOM AND/OR THE SIDES ON BOLSTERS SPACED NOT MORE THAN 4 FEET ON CENTER. NO ROCKS, CMU, CLAY TILE, OR BRICK SHALL BE USED TO SUPPORT REINFORCING.
17. FOR GRADE SUPPORTED SLABS, SLAB REINFORCING SHALL BE HELD IN PLACE BY BAR SUPPORTS AND ACCESSORIES AS DESCRIBED IN THE CRSI MANUAL OF STANDARD PRACTICE. BAR SUPPORTS SHALL BE SPACED A MAXIMUM OF 4'-0" O.C. BOTH WAYS IN STRAIGHT LINES ON THE MESH GRID.

MASONRY

1. ALL MASONRY SHALL CONFORM TO ASTM C-90, $F'm$=1500 PSI. ALL BRICK SHALL CONFORM TO ASTM C-216, $F'm$=1500 PSI. ALL MORTAR SHALL BE TYPE 'S' (TYPE 'M' BELOW GRADE) AND CONFORM TO ASTM C-270. COARSE GROUT SHALL CONFORM TO ASTM C-476 WITH A MAXIMUM AGGREGATE SIZE OF ⅜" AND A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
2. ALL MASONRY WORK SHALL BE IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530/ASCE 5/TMS 402 AND "SPECIFICATIONS FOR MASONRY STRUCTURES" ACI 530.1/ ASCE 6/TMS 602.
3. THE UNSUPPORTED HEIGHT OF SOLID MASONRY PIERS SHALL NOT EXCEED TEN TIMES THEIR LEAST DIMENSION. UNFILLED HOLLOW PIERS MAY BE USED IF THE UNSUPPORTED HEIGHT IS NOT MORE THAN FOUR TIMES THEIR LEAST DIMENSION.
4. EACH CRAWL SPACE PIER SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING AND EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS. PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
5. TOP COURSE OF MASONRY SHALL BE GROUTED SOLID.
6. HORIZONTAL WALL JOINT REINFORCEMENT SHALL BE STANDARD 9 GAGE GALVANIZED LADDER OR TRUSS TYPE SPACED AT 16" O.C., UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
7. SPLICED WIRE REINFORCEMENT SHALL BE LAPPED AT LEAST 6" AND CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT WITHIN THE 6". LAP WITH STANDARD 'T' AND 'L' SHAPED PIECES AT INTERSECTIONS AND CORNERS.

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) WITH THE FOLLOWING MINIMUM DESIGN VALUES:
   E=1,400,000 PSI, F_b=875 PSI, F_v=135 PSI
   1.1. FRAMING: SPF #2.
   1.2. PLATES: SPF #2.
   1.3. STUDS: SPF STUD GRADE.
2. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED SOUTHERN YELLOW PINE #2 OR BETTER.
3. ANCHOR SILL PLATES IN ACCORDANCE W/ GENERAL STRUCTURAL NOTES.
4. ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY. LARGER MEMBERS MAY BE SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION.
5. NAILS SHALL BE COMMON WIRE NAILS UNLESS OTHERWISE NOTED.
6. BOLT HOLES AND LEAD HOLES FOR LAG SCREWS SHALL BE IN ACCORDANCE WITH NDS SPECIFICATIONS.
7. INDIVIDUAL STUDS FORMING A COLUMN SHALL BE ATTACHED WITH (2) ROWS 10d NAILS @ 6" O.C. STAGGERED. THE STUD COLUMN SHALL BE FULLY BLOCKED AT ALL FLOOR LEVELS TO ENSURE PROPER LOAD TRANSFER. WALL SHEATHING SHALL BE NAILED TO EDGE OF EACH STUD.
8. FACE NAIL ALL MULTI-PLY BEAMS AND HEADERS WITH (2) ROWS 16d COMMON NAILS @ 16" O.C., STAGGERED, OR PER MANUFACTURER'S SPECIFICATIONS FOR ENGINEERED LUMBER. APPLY NAILING FROM BOTH FACES FOR (3) OR MORE PLIES.
9. FASTEN 4-PLY BEAMS WITH (1) ½" DIAMETER THROUGH BOLT W/ NUTS AND WASHERS AT 12" O.C. STAGGERED TOP AND BOTTOM, 1½" MINIMUM EDGE DISTANCE. (UNLESS OTHERWISE NOTED)
10. ALL BEAMS AND HEADERS SHALL HAVE (1)2x JACK STUD & (1)2x KING STUD UNLESS OTHERWISE NOTED. THE NUMBER OF STUDS INDICATED ON PLANS ARE THE TOTAL NUMBER OF JACK STUDS REQUIRED, UNLESS OTHERWISE NOTED.
11. PROVIDE KING STUDS AT EACH END OF HEADERS AS NOTED BELOW.
    (1) STUD UP TO 6' OPENING
    (2) STUDS UP TO 8' OPENING
    (3) STUDS UP TO 9' OPENING
12. ALL BEAMS TO BE CONTINUOUSLY SUPPORTED LATERALLY AND SHALL BEAR FULL WIDTH ON THE SUPPORTING WALLS OR COLUMNS INDICATED WITH A MINIMUM OF TWO STUDS, UNLESS OTHERWISE NOTED. ALL BEAM SPLICES SHALL OCCUR OVER SUPPORTS.
13. SOLID BLOCKING TO BE PROVIDED AT ALL POINT LOADS THROUGH FLOOR LEVELS TO THE FOUNDATION OR TO OTHER STRUCTURAL COMPONENTS.
14. ALL LUMBER SPECIFIED ON DRAWINGS IS INTENDED FOR DRY USE ONLY (MOISTURE CONTENT <19%) UNLESS OTHERWISE NOTED.
15. ALL WATERPROOFING AND FIRE SAFETY SYSTEMS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE DESIGNED AND DETAILED BY OTHERS.
16. ANY WOOD FRAME INTERIOR BEARING WALL STUDS THAT HAVE HOLES IN THE CENTER OF THE STUD UP TO 1" DIAMETER SHALL HAVE STUD PROTECTION SHIELDS. ALL HOLES OVER 1" IN DIAMETER FOR PLUMBING LINES, ETC. SHALL BE REPAIRED WITH SIMPSON HSS2 OR USP STS1 STUD SHOES, TYPICAL, UNLESS OTHERWISE NOTED.
17. BEARING WALLS SHALL BE SHEATHED ON NOT LESS THAN ONE SIDE WITH OSB OR GYPSUM BOARD. BRIDGING SHALL BE INSTALLED NOT GREATER THAN 4 FEET APART MEASURED VERTICALLY FROM EITHER END OF THE STUD IN LIEU OF SHEATHING.
18. DIAGONAL BRACING SHALL BE INSTALLED AT EACH END OF BASEMENT BEARING WALLS AND NOT MORE THAN 20' ON CENTER.

EXTERIOR WOOD FRAMED DECKS:

1. DECKS ARE TO BE FRAMED IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND AS REFERENCED ON THE STRUCTURAL PLANS, EITHER THROUGH CODE REFERENCES OR CONSTRUCTION DETAILS.
2. PRESERVATIVE TREATED WOOD FRAMING TO BE SOUTHERN YELLOW PINE #2 OR BETTER.
3. GUARD RAILS REQUIRED AT DECKS. DESIGN BY OTHERS TO MEET MINIMUM CODE REQUIREMENTS.
4. PROVIDE DECK LATERAL LOAD AND BRACING CONNECTIONS PER BUILDING CODE.

RAFTER FRAMED ROOF CONSTRUCTION:

1. PROVIDE 2x4x4'-0" RAFTER TIES AT 48" O.C.
2. RAFTERS SHALL BE SUPPORTED BY PURLINS AND PURLIN BRACES AS SHOWN ON THE PLAN. PURLIN BRACES SHALL NOT BEAR ON ANY CEILING JOIST, STRONGBACK OR HEADER UNLESS SPECIFICALLY SHOWN ON PLAN. RAFTERS MAY BE SPLICED AT PURLIN LOCATIONS.
3. CEILING JOISTS SHALL HAVE LATERAL SUPPORT W/ 1x4 FLAT BRACING ON TOP EDGE OF JOIST AT LOOSE JOIST ENDS (WHERE JOISTS NOT FASTENED TO RAFTERS) OR FULL DEPTH BLOCKING. FASTEN END OF BRACING TO RAFTER OR GABLE END FRAMING.
4. FASTEN RAFTER AND CEILING JOIST WITH (6) 12d NAILS UNLESS OTHERWISE NOTED.
5. PROVIDE VERTICAL 2x6 STRONGBACKS AT CEILING JOISTS @ 8'-0" O.C. TIE STRONGBACK ENDS TO GABLE STUDS OR RAFTERS WHERE POSSIBLE. PROVIDE BLOCKING BETWEEN TOP PLATES AND STRONGBACKS. PROVIDE 2x4 FLAT FASTENED TO EACH JOIST WITH (2) 12d NAILS. FASTEN STRONGBACK TO 2x4 FLAT WITH 12d NAILS @ 12" O.C. AND FASTENED TO EACH JOIST WITH (1) 12d TOENAIL.

WOOD TRUSSES (FLOOR & ROOF):

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 (5) DAYS FOR REVIEW. THE REVIEW BY THE SER SHALL BE FOR OVERALL COMPLIANCE OF THE DESIGN DOCUMENTS. THE SER SHALL ASSUME NO RESPONSIBILITY FOR THE CORRECTNESS OF 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), 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 ANSI/TPI 1: "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION".
4. THE TRUSS MANUFACTURER SHALL PROVIDE ADEQUATE BRACING INFORMATION IN ACCORDANCE WITH "BUILDING COMPONENT SAFETY INFORMATION GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" (BCSI). 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. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING TEMPORARY BRACING AND SHORING FOR THE FLOOR AND ROOF TRUSSES AS REQUIRED DURING CONSTRUCTION. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF THE LATEST BCSI. THE CONTRACTOR SHALL KEEP A COPY OF THE BCSI SUMMARY SHEETS ON SITE.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL PERMANENT TRUSS BRACING SHOWN IN THE STRUCTURAL DRAWINGS AND IN THE TRUSS DESIGNS. ALL CONTINUOUS LATERAL BRACING OF WEBS REQUIRES BRACES. REFER TO BCSI SUMMARY SHEET B3 FOR TYPES OF DIAGONAL BRACES TO PROVIDE AT EACH CONTINUOUS LATERAL BRACE LINE. SUCH DIAGONAL BRACES SHALL NOT BE SPACED MORE THAN 20 FEET O.C. DIAGONAL BRACES SHALL BE FASTENED TO EACH TRUSS WEB WITH A MINIMUM OF TWO 10d FACE NAILS. WHERE CONTINUOUS LATERAL BRACING CANNOT BE INSTALLED, DUE TO A MINIMUM OF THREE ADJACENT TRUSSES NOT BEING IDENTICAL, THE CONTRACTOR SHALL COORDINATE WITH THE TRUSS SPECIALTY ENGINEER/MANUFACTURER TO DETERMINE WHAT TYPE OF ALTERNATE BRACE (I.E., T OR L BRACE, ETC.) IS REQUIRED.
7. 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.
8. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN ON THE SEALED STRUCTURAL DRAWINGS. TRUSS PROFILES TO BE SEALED BY THE TRUSS MANUFACTURER. TRUSS PLANS TO BE COORDINATED WITH THE SEALED STRUCTURAL DRAWINGS.
9. TRUSS MANUFACTURER TO PROVIDE REQUIRED UPLIFT CONNECTORS FOR ALL TRUSSES.
10. PROVIDE SIMPSON H2.5A, USP RT7 OR EQUIVALENT AT EACH TRUSS TO TOP PLATE CONNECTION, UNLESS OTHERWISE NOTED.

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 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. EXTERIOR WALLS TO BE FULLY SHEATHED USING 7/16" OSB OR PLYWOOD MINIMUM. AT BRACED WALL PANELS, PROVIDE BLOCKING AT ALL SHEET EDGES NOT FALLING ON STUDS OR PLATES.
4. ROOF SHEATHING SHALL BE APA RATED SHEATHING EXPOSURE 1 OR 2. ROOF SHEATHING SHALL BE CONTINUOUS OVER TWO SUPPORTS MINIMUM AND ATTACHED TO ITS SUPPORTING ROOF FRAMING WITH 8d NAILS 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. PROVIDE SUITABLE EDGE SUPPORT BY USE OF PLYWOOD CLIPS OR LUMBER BLOCKING UNLESS OTHERWISE NOTED. PANEL END JOINTS SHALL OCCUR OVER FRAMING. ROOF SHEATHING TO BE 7/16" OSB MINIMUM.
5. WOOD FLOOR SHEATHING SHALL BE APA RATED SHEATHING EXPOSURE 1 OR 2. ATTACH SHEATHING TO ITS SUPPORTING FRAMING WITH (1) 10d 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. PROVIDE SUITABLE EDGE SUPPORT BY USE OF T&G PLYWOOD OR LUMBER BLOCKING UNLESS OTHERWISE NOTED. PANEL END JOINTS SHALL OCCUR OVER FRAMING.
6. SHEATHING SHALL HAVE A ⅛" GAP AT PANEL ENDS AND EDGES AS RECOMMENDED IN ACCORDANCE WITH THE APA.

STRUCTURAL FIBERBOARD PANELS:

1. STRUCTURAL FIBERBOARD SHEATHING SHALL ONLY BE USED WHERE SPECIFICALLY NOTED ON THE STRUCTURAL PLANS.
2. FABRICATION AND PLACEMENT OF STRUCTURAL FIBERBOARD SHEATHING SHALL BE IN ACCORDANCE WITH THE APPLICABLE AFA STANDARDS.
3. SHEATHING SHALL HAVE A ⅛" GAP AT PANEL ENDS AND EDGES AS RECOMMENDED IN ACCORDANCE WITH THE AFA.

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 (F_y) OF 50 KSI UNLESS OTHERWISE NOTED.
3. WELDING SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE AWA D1.1. ELECTRODES FOR SHOP AND FIELDING WELDING SHALL BE CLASS E70XX. ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER PER THE ABOVE STANDARDS.
4. ALL STEEL BEAMS TO BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3½" AND FULL FLANGE WIDTH UNLESS OTHERWISE NOTED. BEAMS MUST BE ATTACHED AT EACH END WITH A MINIMUM OF FOUR 16d NAILS OR (2) ½" x 4" LAG SCREWS UNLESS OTHERWISE NOTED.
5. INSTALL 2x WOOD PLATE ON TOP OF STEEL BEAMS, RIPPED TO MATCH BEAM WIDTH. FASTEN PLATE TO BEAM W/ HILTI X-DNI 52 P8 PINS AT 12" O.C. STAGGERED OR ½" DIAMETER BOLTS AT 24" O.C.

MECHANICAL FASTENERS:

1. ALL METAL HARDWARE AND FASTENERS TO BE SIMPSON STRONG-TIE OR APPROVED EQUIVALENT.
2. ALL HARDWARE AND FASTENERS IN CONTACT WITH PRESERVATIVE PRESSURE AND/OR FIRE RETARDANT TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A 153, G-185.
3. MANY OF THE NEW PRESSURE TREATED WOODS USE CHEMICALS THAT ARE CORROSIVE TO STEEL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE TYPE OF WOOD TREATMENT AND SELECT APPROPRIATE CONNECTORS THAT WILL RESIST THE APPLICABLE CORROSIVE CHEMICALS.

LEGEND:

- ⟹ PROVIDE SOLID BLOCKING WITHIN FLOOR SYSTEM TO MATCH POST SIZE ABOVE.
- ⟹ INTERIOR BEARING WALL ABOVE
- ⟹ INTERIOR BEARING WALL
- ⟹ WALL BRACING/SHEAR WALL
- HTP2, HT4, HTT5 ⟹ SEE HOLD DOWN SCHEDULE AND DETAILS FOR TYPICAL INSTALLATION
- ⟹ AREA OF OVERFRAMING

BRICK VENEER LINTEL SCHEDULE

SPAN	LINTEL SIZE	END BEARING
UP TO 3'-0"	3½"x3½"x¼"	4"
UP TO 6'-3"	5"x3½"x5/16" L.L.V.	8"
UP TO 9'-6"	6"x3½"x5/16" L.L.V.	12"

LINTELS ARE NOT DESIGNED TO BE BOLTED TO HEADERS UNLESS SPECIFIED ON UNIT PLANS.
SPANS OVER 4'-0" SHALL BE SHORED UP UNTIL CURED.

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General Structural Notes

'Hartwell' – RH
115 M.P.H.
North Carolina

Project #:	088-22010
Designed By:	JPS
Checked By:	
Issue Date:	6/23/22
Re-Issue:	10/30/23
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

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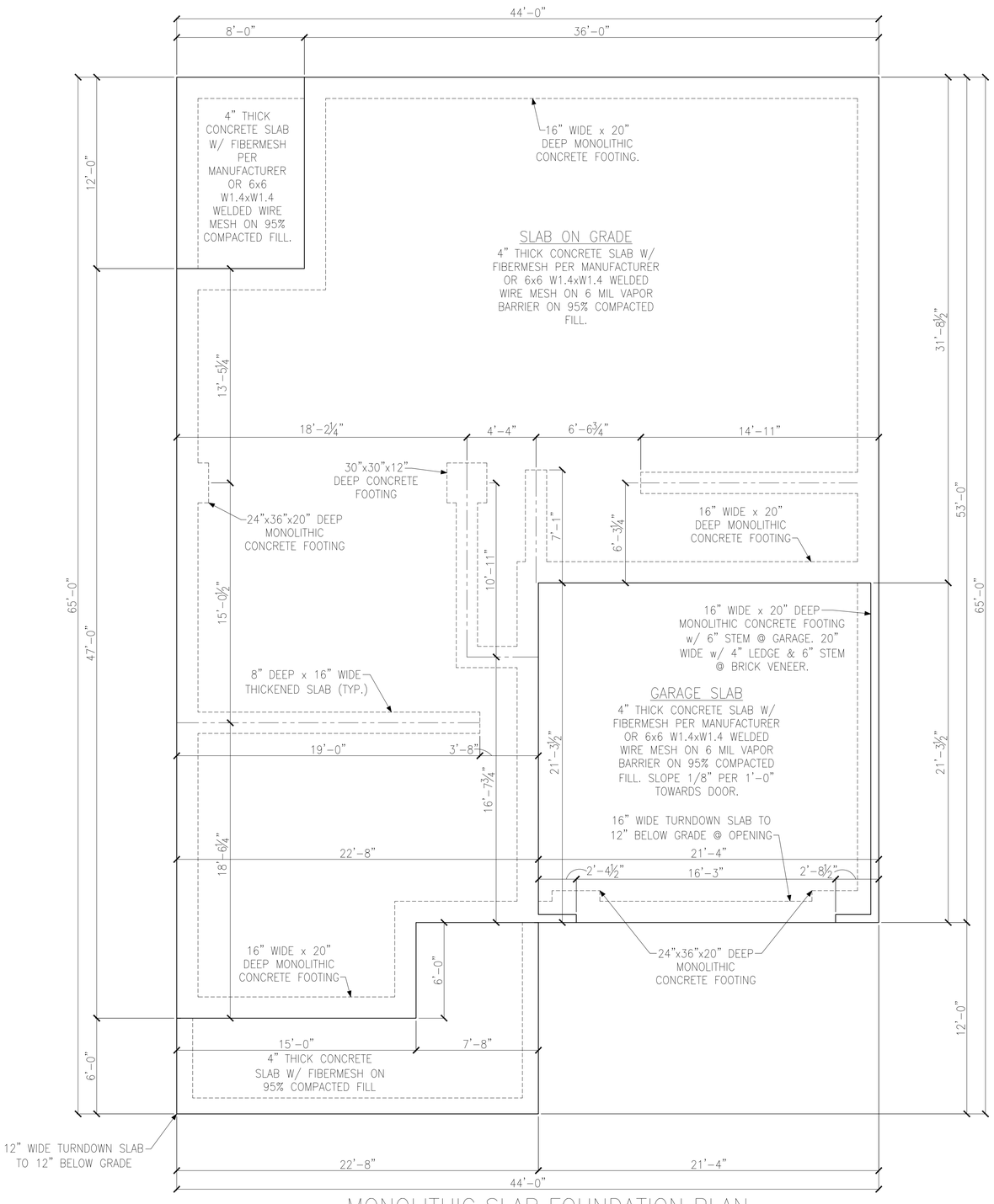

MONOLITHIC SLAB FOUNDATION PLAN
ELEVATION C

LEGEND

- ★ ■ ⟹ PROVIDE SOLID BLOCKING WITHIN FLOOR SYSTEM TO MATCH POST SIZE ABOVE.
- ⟹ BEARING WALL ABOVE
- ⟹ INTERIOR BEARING WALL
- 48" WSP ⟹ BRACED WALL PANEL (SEE KSE STRUCTURAL DETAILS SET FOR BRACED WALL PANEL SHEATHING FASTENING & BLOCKING DETAILS)

REFER TO KSE STRUCTURAL DETAILS SET FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS

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Monolithic Slab Foundation Plans
Elevation C & Option
'Hartwell' – RH
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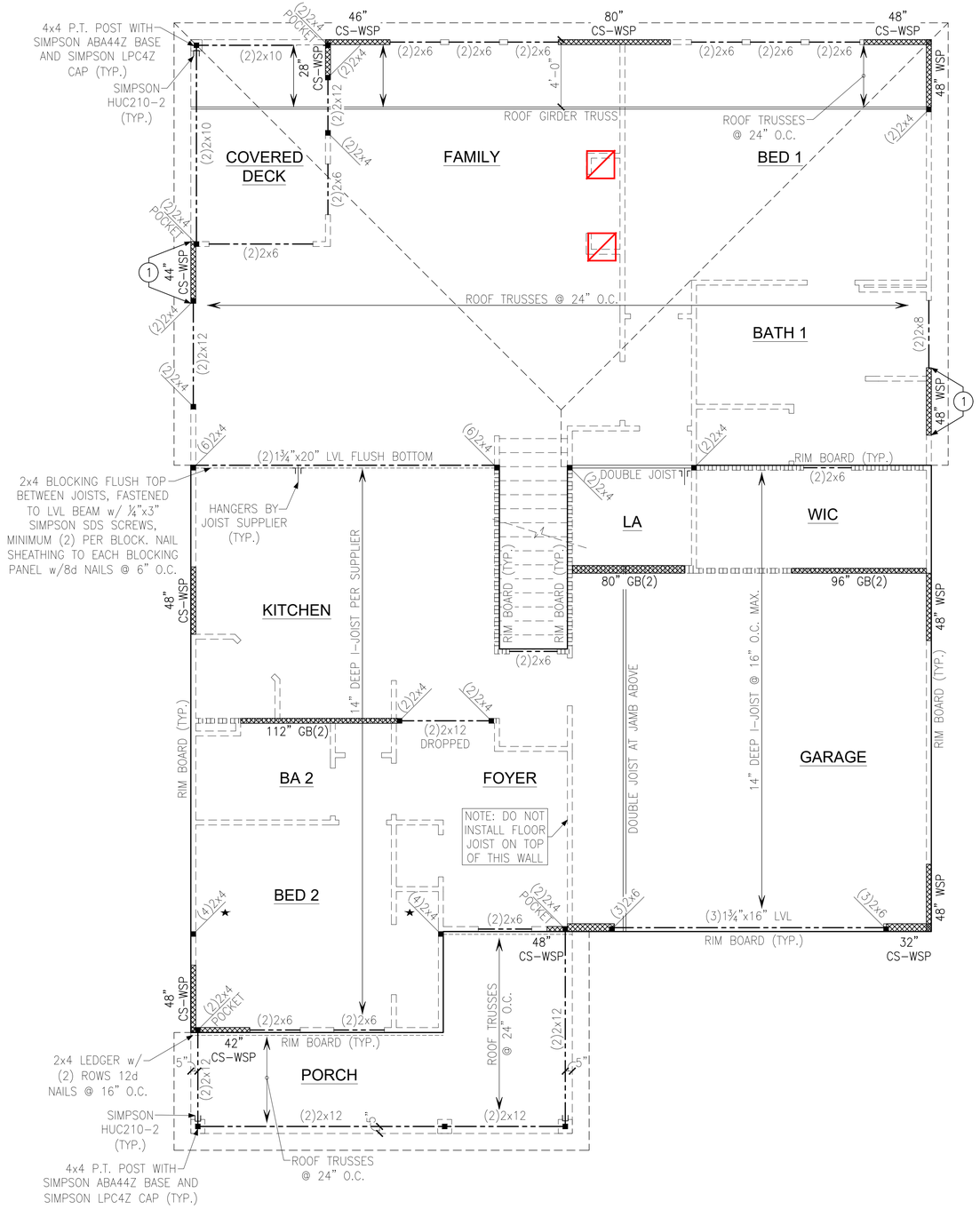

SECOND FLOOR FRAMING PLAN
ELEVATION C

LEGEND

- ★ ⟹ PROVIDE SOLID BLOCKING WITHIN FLOOR SYSTEM TO MATCH POST SIZE ABOVE.
- ⟹ BEARING WALL ABOVE
- ⟹ INTERIOR BEARING WALL
- 48" WSP ⟹ BRACED WALL PANEL (SEE KSE STRUCTURAL DETAILS SET FOR BRACED WALL PANEL SHEATHING FASTENING & BLOCKING DETAILS)

REFER TO KSE STRUCTURAL DETAILS SET FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS

PLAN DESIGNED WITH 9' NOMINAL WALL PLATE HEIGHT

FLOOR FRAMING TO BE 14" DEEP PRI-40s, SPACING PER SUPPLIER. RIM BOARD TO BE 1"x14" VERSA-LAM 1.4 1800, U.N.O.

KEYNOTES:

(1) IF WOOD FLOOR BELOW, CONNECT STUD AT END OF BRACED WALL PANEL TO FRAMING BELOW WITH A 30" LONG SIMPSON CS20 COIL STRAP WITH MIN 8-10d NAILS EACH END.
OR
IF SLAB FOUNDATION BELOW, CONNECT STUD TO FOUNDATION w/ SIMPSON DTT1Z w/ SIMPSON ⅜"x6" TITEN HD SCREW ANCHOR AND 3½" MINIMUM EMBEDMENT.

(4) INSTALL ONE PANEL CS-PF PORTAL FRAME PER DETAIL A OR B/DS-4.

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Second Floor Framing Plans
Elevation C & Option
'Hartwell' - RH
115 M.P.H.
North Carolina

Project #:	088-22010
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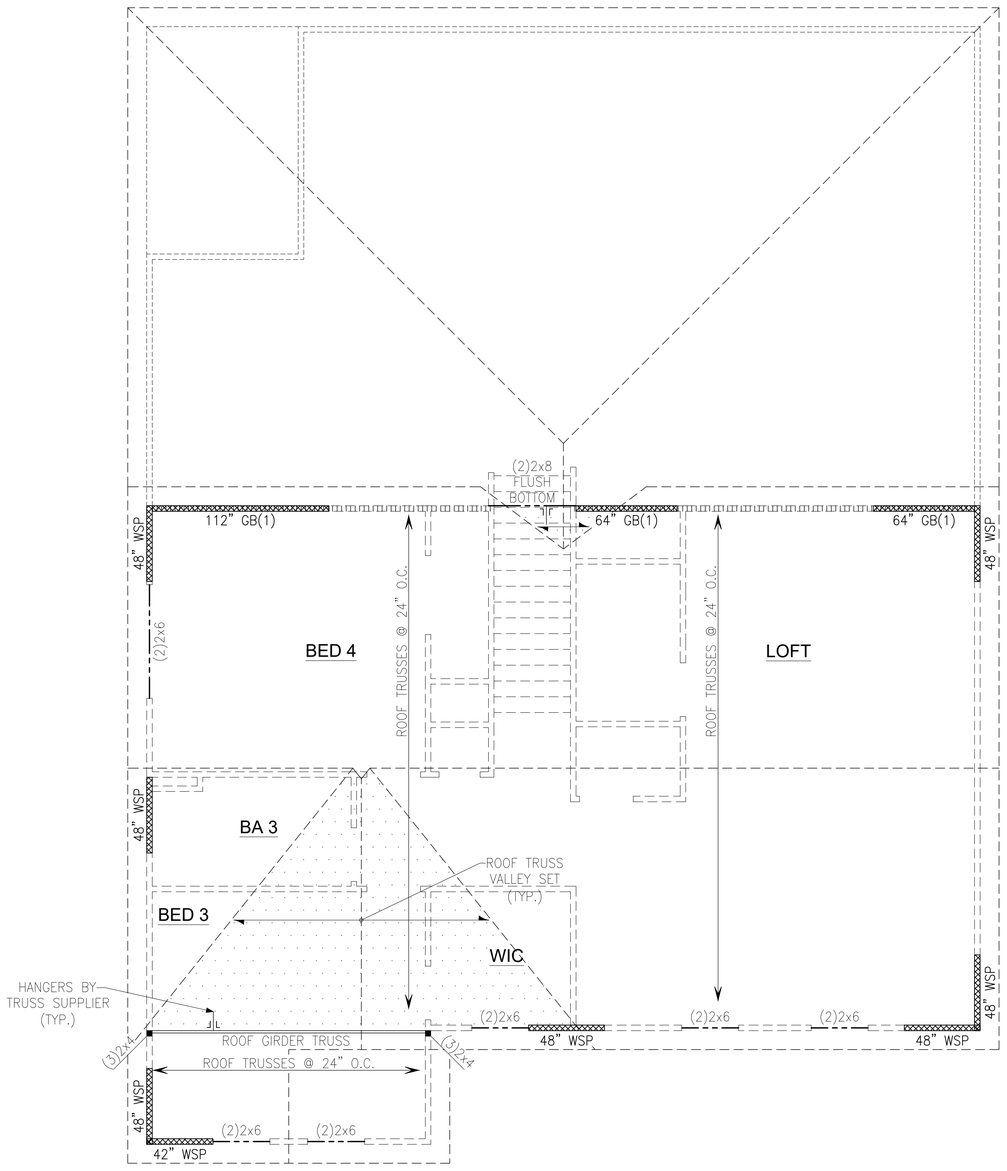
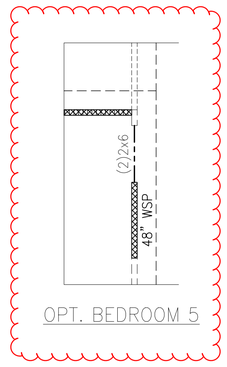
S 4 C



ROOF FRAMING PLAN
ELEVATION C



LEGEND

- ★ ⟹ PROVIDE SOLID BLOCKING WITHIN FLOOR SYSTEM TO MATCH POST SIZE ABOVE.
- ⟹ BEARING WALL ABOVE
- ⟹ INTERIOR BEARING WALL
- 48" WSP ⟹ BRACED WALL PANEL (SEE KSE STRUCTURAL DETAILS SET FOR BRACED WALL PANEL SHEATHING FASTENING & BLOCKING DETAILS)

REFER TO KSE STRUCTURAL DETAILS SET FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS

PLAN DESIGNED WITH 8' NOMINAL WALL PLATE HEIGHT

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Roof Framing Plan
Elevation C
'Hartwell' – RH
115 M.P.H.
North Carolina

Project #:	088-22010
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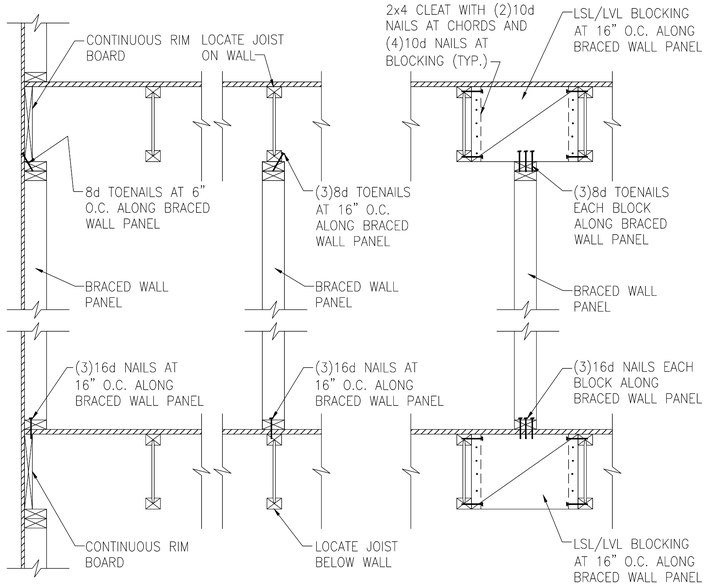
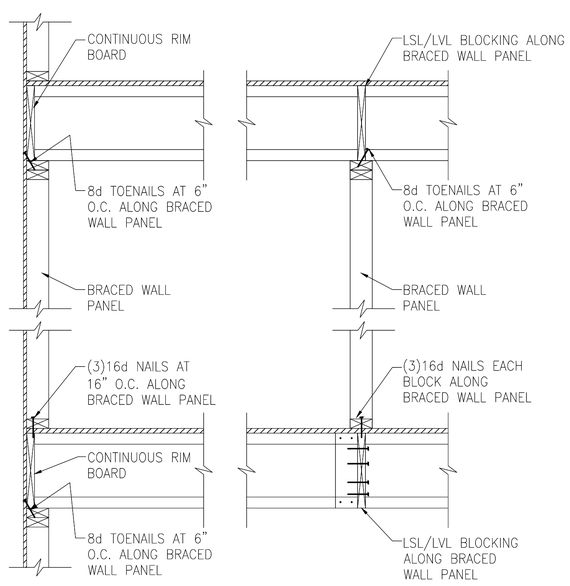
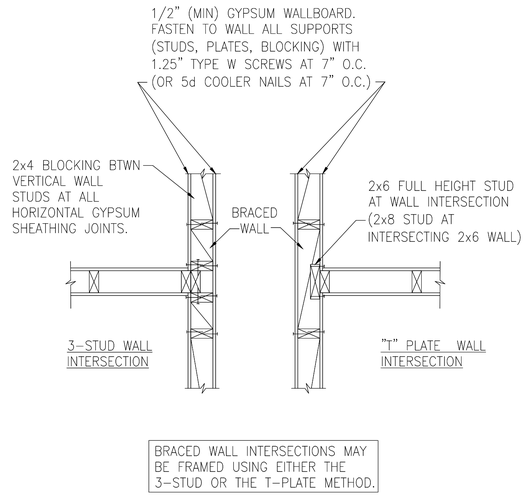


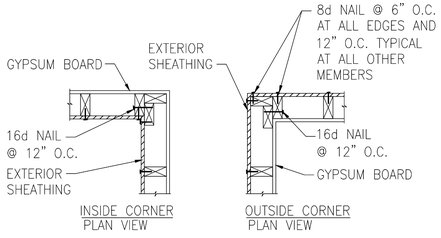
A TYPICAL BRACED WALL PANEL TO FLOOR/CEILING CONNECTION
BRACED WALL PANELS PARALLEL TO I-JOISTS



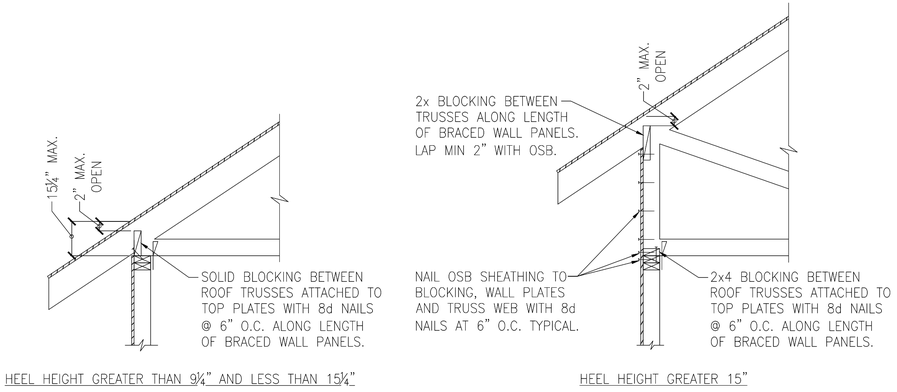
B TYPICAL BRACED WALL PANEL TO FLOOR/CEILING CONNECTION
BRACED WALL PANELS PERPENDICULAR TO I-JOISTS



C METHOD GB(1) AND GB(2) INTERSECTION DETAILS



D TYPICAL EXTERIOR CORNER WALL FRAMING



E ROOF TRUSS BEARING/BLOCKING AT BRACED WALL PANELS
ONLY REQUIRED AT BRACED WALL PANELS

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Braced Wall Details
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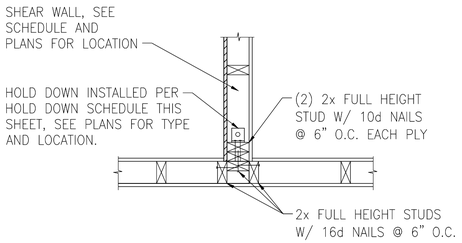
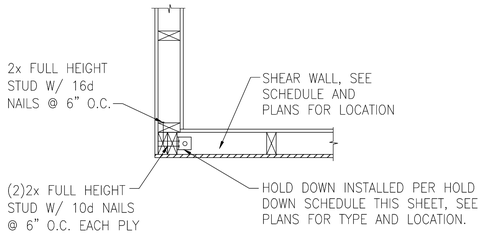
NORTH CAROLINA PROFESSIONAL SEAL 051215 ENGINEER LINDSAY RECHL

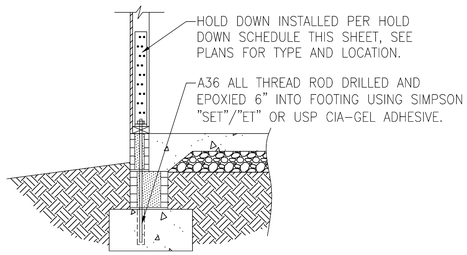
DS-1J



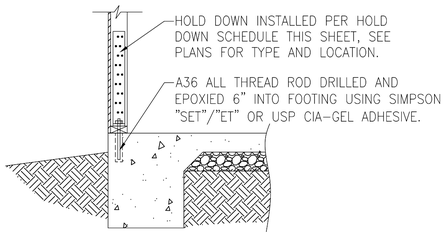
A TYPICAL HOLD DOWN DETAIL



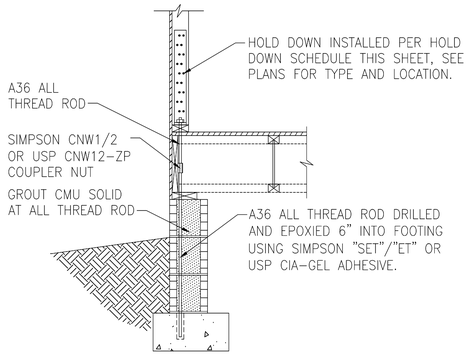
B TYPICAL HOLD DOWN DETAIL



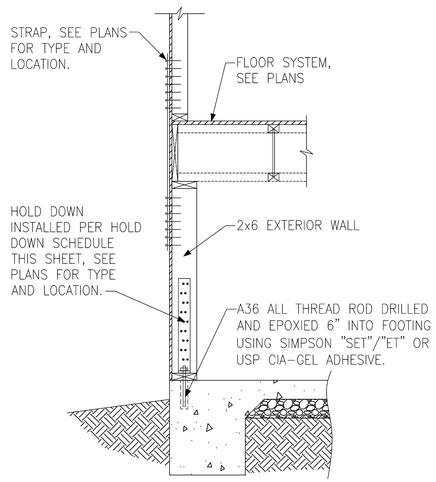
C HOLD DOWN AT STEM WALL SLAB FOUNDATION



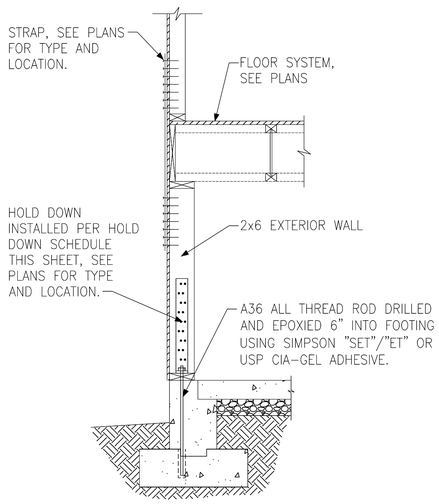
D HOLD DOWN AT MONOLITHIC SLAB FOUNDATION



E HOLD DOWN AT CRAWL SPACE FOUNDATION



F HOLD DOWN AT BASEMENT FOUNDATION
MONOLITHIC TURN-DOWN



G HOLD DOWN AT BASEMENT FOUNDATION
STEM WALL

HOLD DOWN SCHEDULE			
HOLD DOWN		ALL THREAD ROD	FASTENERS
SIMPSON	USP		
LTTP2	LTS20B	½" DIA.	(12)10dx1½" LONG NAILS
HTT4	HTT16	⅝" DIA.	(18)16dx2½" LONG NAILS
HTT5	HTT45	⅝" DIA.	(26)16dx2½" LONG NAILS

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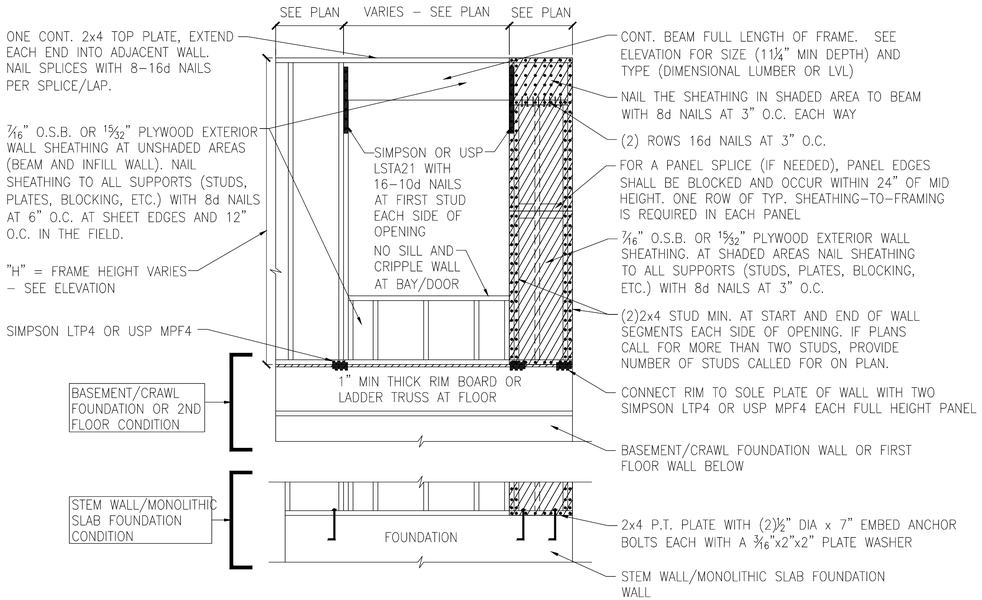
NORTH CAROLINA PROFESSIONAL SEAL 051215 ENGINEER LINDSAY REHL

Hold Down Details
'Hartwell' - RH
115 M.P.H.
North Carolina

Project #: 088-22010
Designed By: JPS
Checked By:
Issue Date: 6/23/22
Re-Issue: 10/30/23
Scale: 1/8"=1'-0" @ 11x17
1/4"=1'-0" @ 22x34

DS-2J

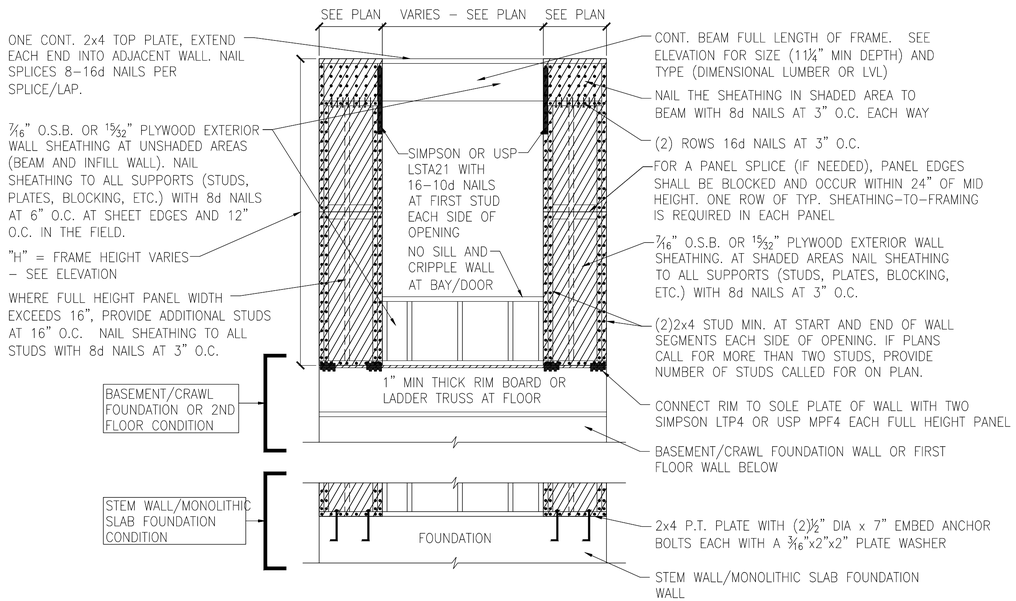


A METHOD CS–PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
ONE BRACED WALL SEGMENT

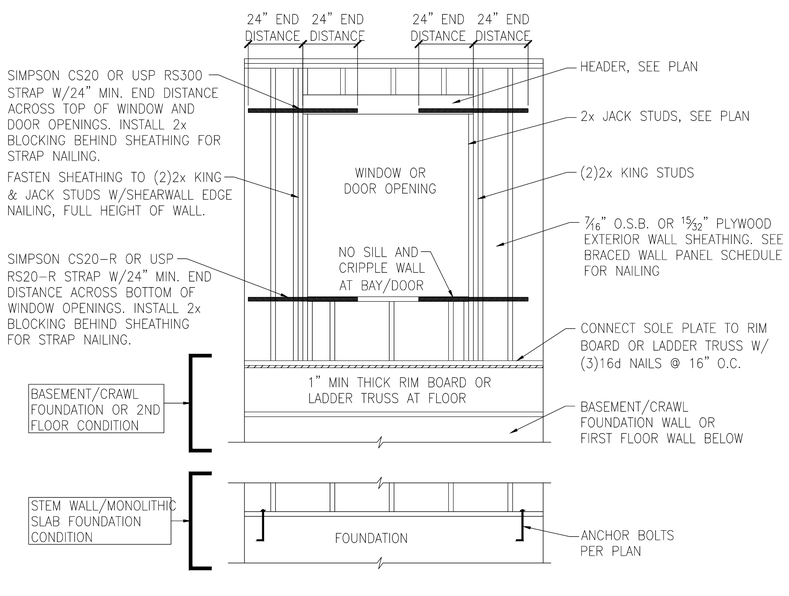
BRACED WALL PANEL AND ENGINEERED SHEAR WALL SCHEDULE			
PANEL TYPES	PANEL TYPE	MATERIAL	FASTENERS
WSP	INTERMITTENT WOOD STRUCTURAL PANEL	7/16" OSB	6D OR 8D COMMON NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. ENGINEERED ALTERNATIVE: 16 GAGE BY 1.75" LONG STAPLES AT 3" O.C. AT SHEET EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS
GB(1)	INTERMITTENT GYPSUM BOARD (SHEATHING ONE FACE OF WALL)	1/2" GYPSUM	1.5" LONG GALV. ROOFING NAILS, 6d COMMON NAILS, OR 1.25" LONG TYPE W DRYWALL SCREWS AT 7" O.C. AT SHEET EDGES AND INTERMEDIATE SUPPORTS.
GB(1)–4	INTERMITTENT GYPSUM BOARD (SHEATHING ONE FACE OF WALL)	1/2" GYPSUM	1.5" LONG GALV. ROOFING NAILS, 6d COMMON NAILS, OR 1.25" LONG TYPE W DRYWALL SCREWS AT 4" O.C. AT SHEET EDGES AND INTERMEDIATE SUPPORTS.
GB(2)	INTERMITTENT GYPSUM BOARD (SHEATHING BOTH FACES OF WALL)	1/2" GYPSUM	1.5" LONG GALV. ROOFING NAILS, 6d COMMON NAILS, OR 1.25" LONG TYPE W DRYWALL SCREWS AT 7" O.C. AT SHEET EDGES AND INTERMEDIATE SUPPORTS.
CS–WSP	CONTINUOUS SHEATHED WOOD STRUCTURAL PANEL	7/16" OSB	6D OR 8D COMMON NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. ENGINEERED ALTERNATIVE: 16 GAGE BY 1.75" LONG STAPLES AT 3" O.C. AT SHEET EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS
CS–PF	CONTINUOUS SHEATHED PORTAL FRAME	7/16" OSB	NAILING PER DETAIL
PFH	PORTAL FRAME WITH HOLD DOWNS	7/16" OSB	NAILING PER DETAIL
CS–ESW(1)	ENGINEERED SHEAR WALL, TYPE 1	7/16" OSB	8D COMMON NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. CONTINUOUS OSB AROUND DOOR/WINDOW OPENINGS
CS–ESW(2)	ENGINEERED SHEAR WALL, TYPE 2	7/16" OSB	8D COMMON NAILS AT 4" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. CONTINUOUS OSB AROUND DOOR/WINDOW OPENINGS
CS–ESW(3)	ENGINEERED SHEAR WALL, TYPE 3	7/16" OSB	8D COMMON NAILS AT 3" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. CONTINUOUS OSB AROUND DOOR/WINDOW OPENINGS

BRACED WALL PANEL NOTES:

1. ALL BRACED WALL PANELS, EXCEPT GB(1) & GB(2), SHALL HAVE 2x BLOCKING BETWEEN WALL STUDS AT ALL HORIZONTAL SHEET EDGES.
2. PROVIDE NAILING/BLOCKING ABOVE AND BELOW ALL BRACED WALL PANELS PER KSE BRACED WALL DETAILS.
3. SHEATH ALL EXTERIOR WALLS OF THE HOUSE WITH 7/16" O.S.B., OR 15/32" PLYWOOD, FASTENED PER NCRC. AT EXTERIOR CORNERS, SHEATHING SHALL BE FASTENED PER KSE BRACED WALL DETAILS. AT INTERIOR WALL INTERSECTIONS, FASTEN STUDS & WALL BRACING PER KSE BRACED WALL DETAILS.



B METHOD CS–PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
TWO BRACED WALL SEGMENTS



C WINDOW OR DOOR REINFORCEMENT IN ENGINEERED SHEAR WALL
ONLY REQUIRED WHERE SPECIFIED ON PLANS

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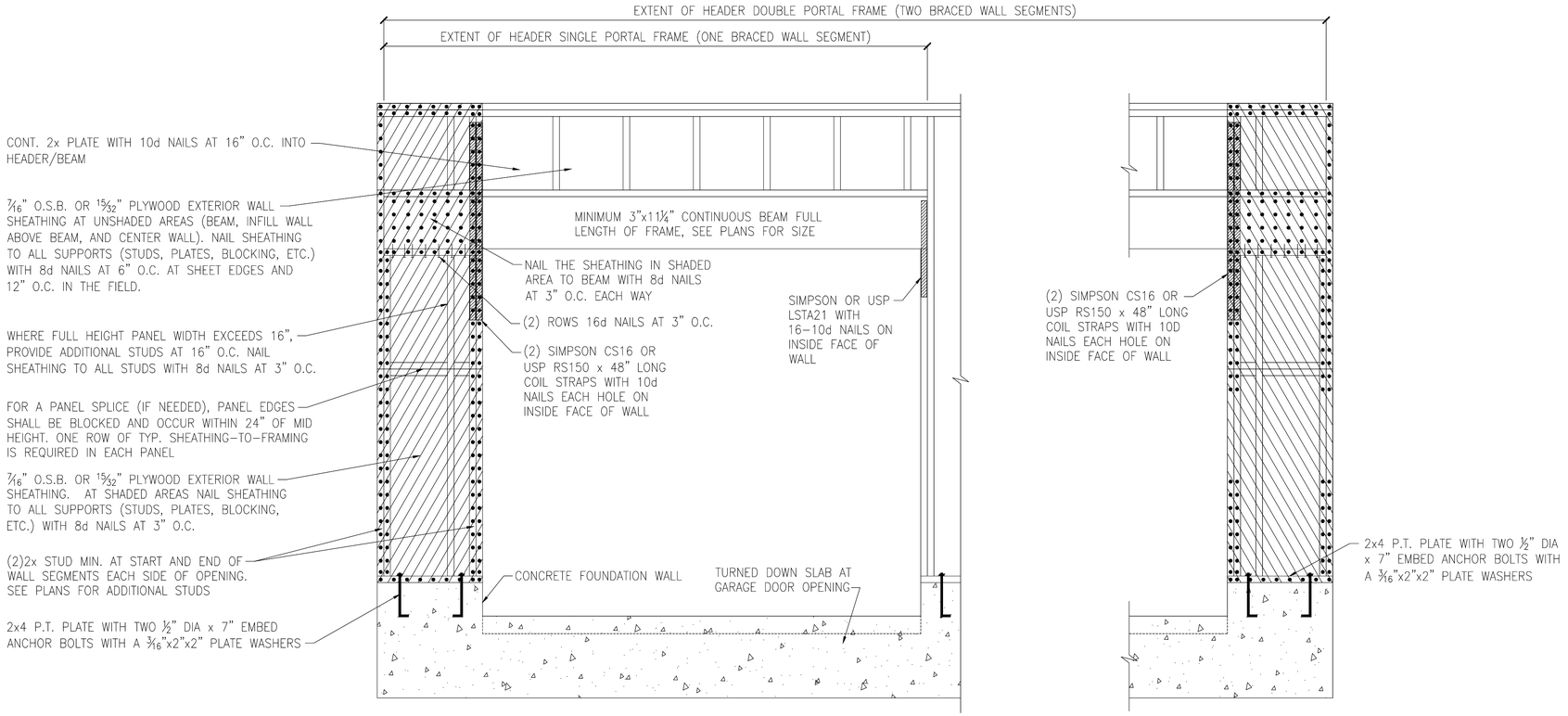
Braced Wall Notes & Details

'Hartwell' – RH
115 M.P.H.
North Carolina

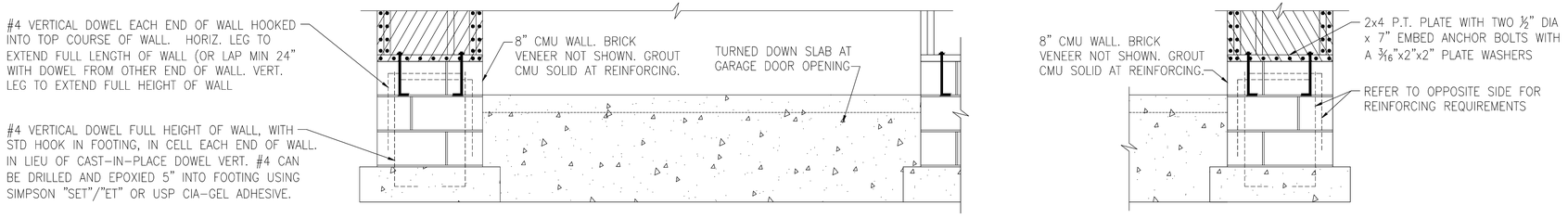
Project #:	088–22010
Designed By:	JPS
Checked By:	
Issue Date:	6/23/22
Re–Issue:	10/30/23
Scale:	1/8"=1'–0" @ 11x17 1/4"=1'–0" @ 22x34

NORTH CAROLINA PROFESSIONAL SEAL 051215 ENGINEER LINDSAY REHL

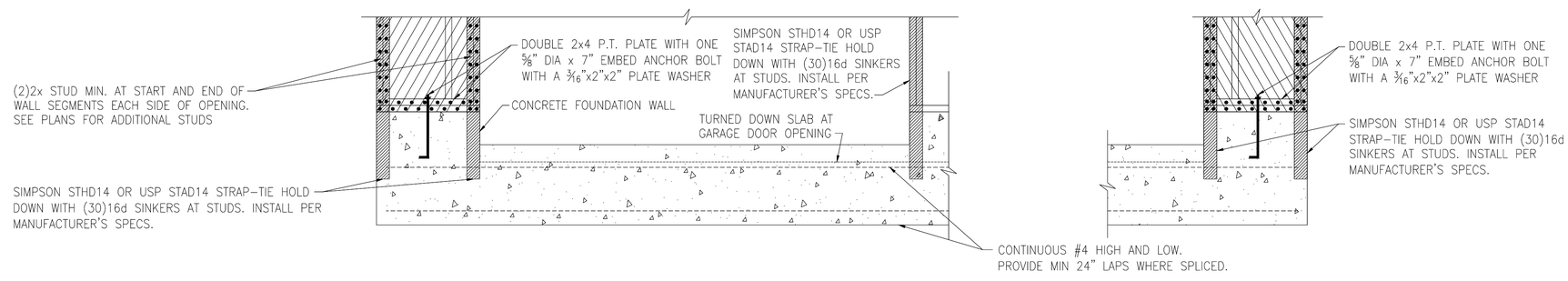
DS–3



A METHOD CS-PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
MONOLITHIC SLAB OR BASEMENT FOUNDATION



B METHOD CS-PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
STEM WALL SLAB OR CRAWL SPACE FOUNDATION



C METHOD CS-EPF: ENGINEERED PORTAL FRAME WITH HOLD-DOWNS

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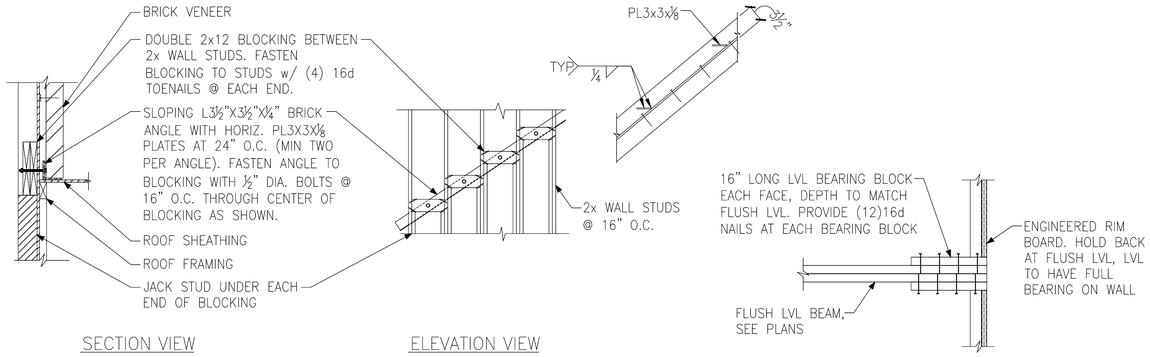
Portal Frame Details
'Hartwell' - RH
115 M.P.H.
North Carolina

Project #:	088-22010
Designed By:	JPS
Checked By:	
Issue Date:	6/23/22
Re-Issue:	10/30/23
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

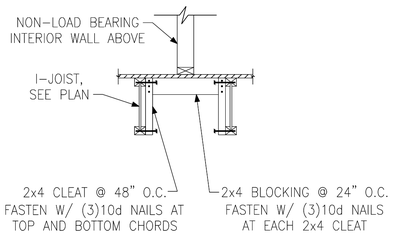
NORTH CAROLINA PROFESSIONAL SEAL 051215 ENGINEER LINDSAY REHL

DS-4

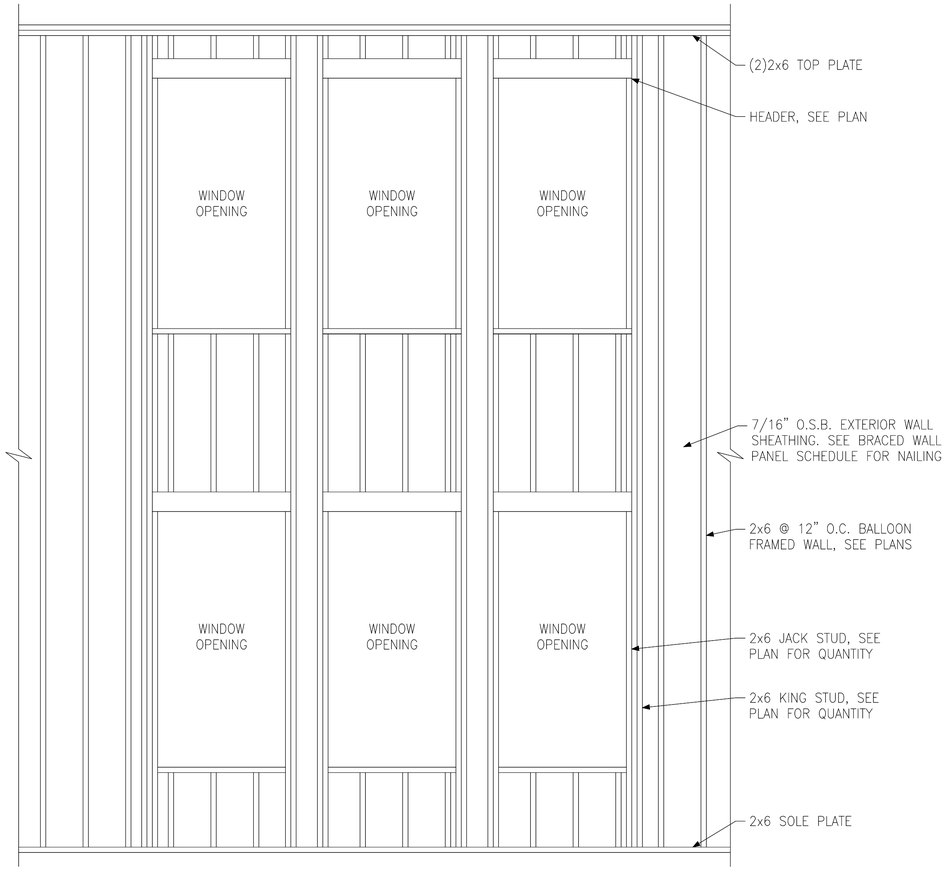


A BRICK LEDGER CONNECTION DETAIL

B BEARING ENHANCER
FLUSH LVL



C I-JOIST LADDER BLOCKING
AS REQUIRED @ PARALLEL WALLS



D BALLOON FRAMED WALL DETAIL
N.T.S.

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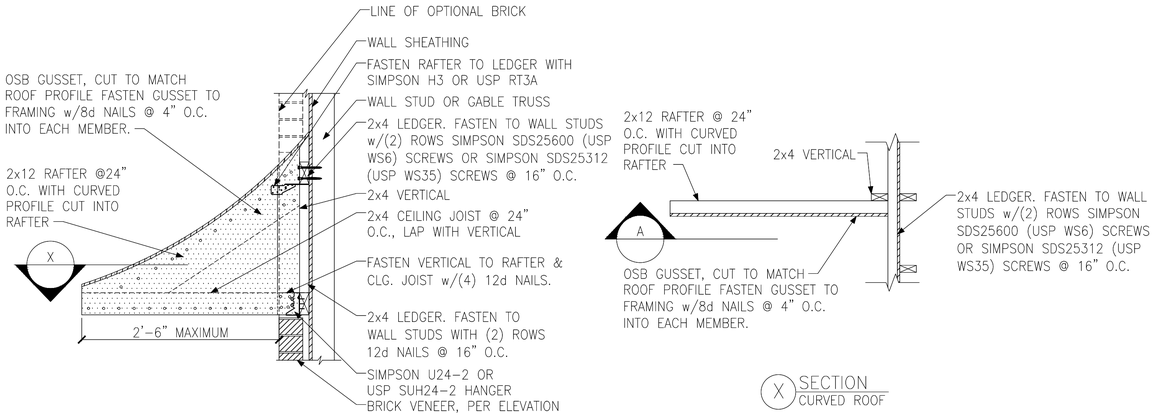
Miscellaneous Framing Details

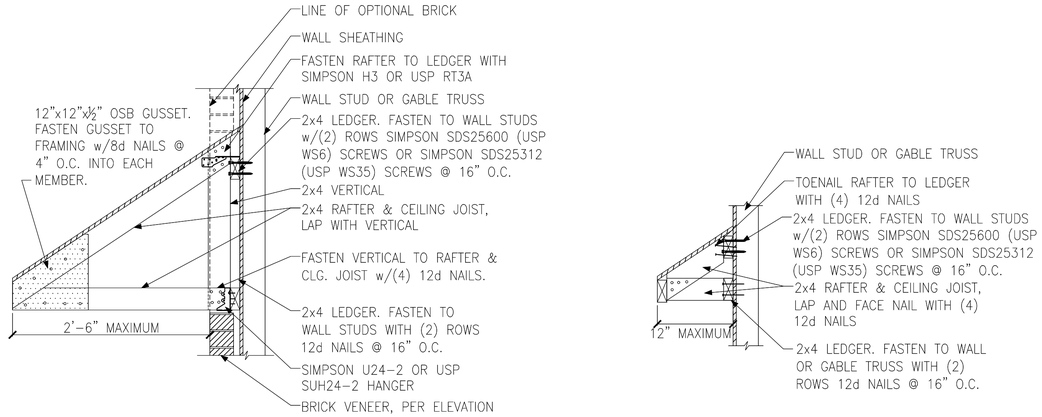
'Hartwell' - RH
115 M.P.H.
North Carolina

Project #:	088-22010
Designed By:	JPS
Checked By:	
Issue Date:	6/23/22
Re-Issue:	10/30/23
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

DS-5

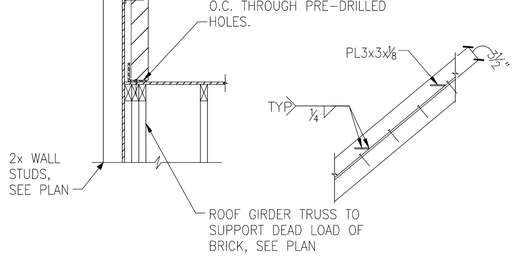


A PENT ROOF DETAIL
CURVED ROOF

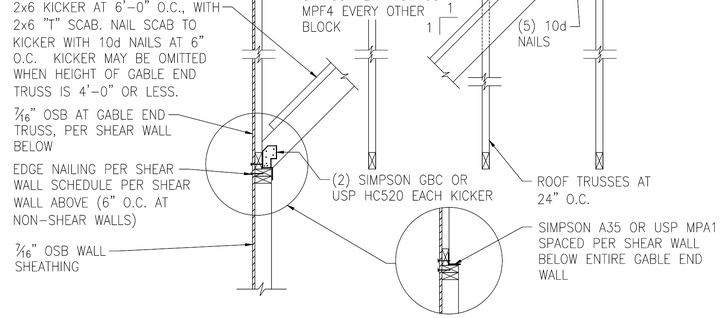


B PENT ROOF DETAIL
STRAIGHT ROOF

C EYEBROW ROOF DETAIL
STRAIGHT ROOF



D TRUSS DETAIL



E GABLE END WALL DETAIL

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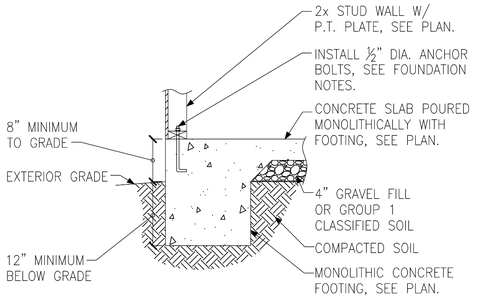
Miscellaneous Framing Details

'Hartwell' - RH
115 M.P.H.
North Carolina

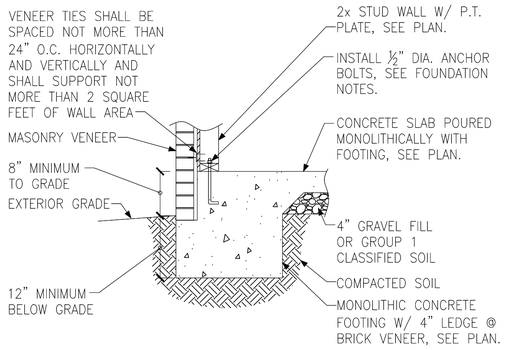
Project #:	088-22010
Designed By:	JPS
Checked By:	
Issue Date:	6/23/22
Re-Issue:	10/30/23
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

NORTH CAROLINA PROFESSIONAL SEAL 051215 ENGINEER LINDSAY REHL

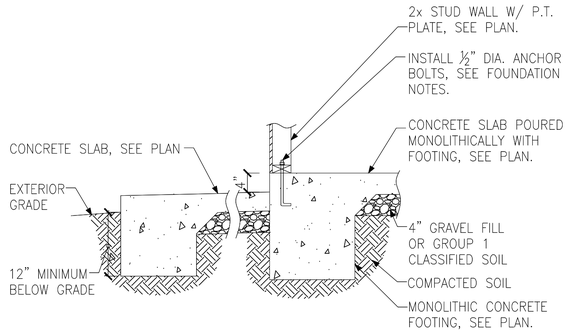
DS-6



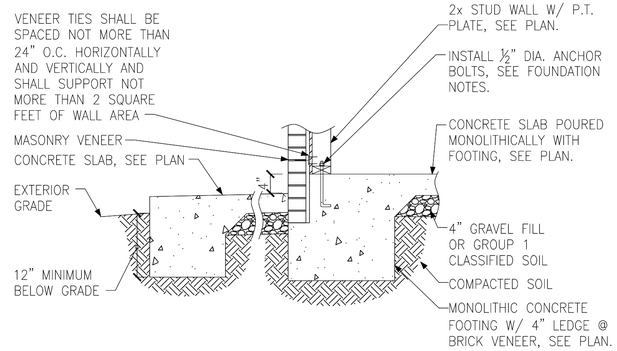
A FOUNDATION SECTION
EXTERIOR WALL



B FOUNDATION SECTION
EXTERIOR WALL @ MASONRY VENEER



C FOUNDATION SECTION
EXTERIOR WALL AT PORCH



D FOUNDATION SECTION
EXTERIOR WALL AT PORCH W/ MASONRY VENEER

E FOUNDATION SECTION
EXTERIOR GARAGE WALL

F FOUNDATION SECTION
EXTERIOR GARAGE WALL @ MASONRY VENEER

G FOUNDATION SECTION
GARAGE DOOR

H FOUNDATION SECTION
INTERIOR GARAGE WALL

J FOUNDATION SECTION
THICKENED SLAB

K FOUNDATION SECTION
ISOLATED PAD FOOTING

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Monolithic Slab Foundation Details

'Hartwell' - RH
115 M.P.H.
North Carolina

Project #:	088-22010
Designed By:	JPS
Checked By:	
Issue Date:	6/23/22
Re-Issue:	10/30/23
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

NORTH CAROLINA PROFESSIONAL SEAL 051215 ENGINEER LINDSAY REHL

DS-7

DESIGN SPECIFICATIONS:

Construction Type: Commerical ☐ Residential ☒

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

Design Loads:
1. Roof Live Loads
   - 1.1. Conventional 2x ..... 20 PSF
   - 1.2. Truss ..... 20 PSF
     - 1.2.1. Attic Truss ..... 60 PSF
2. Roof Dead Loads
   - 2.1. Conventional 2x ..... 10 PSF
   - 2.2. Truss ..... 20 PSF
3. Snow ..... 15 PSF
   - 3.1. Importance Factor 1.0
4. Floor Live Loads
   - 4.1. Typ. Dwelling ..... 40 PSF
   - 4.2. Sleeping Areas ..... 30 PSF
   - 4.3. Decks ..... 40 PSF
   - 4.4. Passenger Garage ..... 50 PSF
5. Floor Dead Loads
   - 5.1. Conventional 2x ..... 10 PSF
   - 5.2. I-Joist ..... 15 PSF
   - 5.3. Floor Truss ..... 15 PSF
6. Ultimate Wind Speed (3 sec. gust) ..... PER PLAN
7. Exposure ..... B
   - 7.1. Importance Factor 1.0
8. 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

9. Seismic
   - 9.1. Site Class ..... D
   - 9.2. Design Category C
   - 9.3. Importance Factor 1.0
   - 9.4. Seismic Use Group 1
   - 9.5. 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
   - 9.6. Arch/Mech Components Anchored ..... No
   - 9.7. Lateral Design Control: Seismic ☐ Wind☒
10. Assumed Soil Bearing Capacity 2000psf

UES

UES PROFESSIONAL SOLUTIONS 29, INC

FORMERLY SUMMIT ENGINEERING, LABORATORY, & TESTING INC.

STRUCTURAL PLANS PREPARED FOR:

STANDARD DETAILS (OX-IS)

PROJECT ADDRESS:
TBD

OWNER:
DR Horton Carolinas Division
8001 Arrowridge Blvd
Charlotte, NC 28273

ARCHITECT/DESIGNER:
GMD Design Group
1845 Satellite Blvd.
Duluth, GA 30097

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 UES Professional Solutions 29, Inc. (UES) before construction begins.

PLAN ABBREVIATIONS:

AB	ANCHOR BOLT	PT	PRESSURE TREATED
AFF	ABOVE FINISHED FLOOR	RS	ROOF SUPPORT
CJ	CEILING JOIST	SC	STUD COLUMN
CLR	CLEAR	SJ	SINGLE JOIST
DJ	DOUBLE JOIST	SPF	SPRUCE PINE FIR
DSP	DOUBLE STUD POCKET	SST	SIMPSON STRONG-TIE
EE	EACH END	SYP	SOUTHERN YELLOW PINE
EW	EACH WAY	TJ	TRIPLE JOIST
NTS	NOT TO SCALE	TSP	TRIPLE STUD POCKET
OC	ON CENTER	TYP	TYPICAL
PSF	POUNDS PER SQUARE FOOT	UNO	UNLESS NOTED OTHERWISE
PSI	POUNDS PER SQUARE INCH	WWF	WELDED WIRE FABRIC

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to UES Professional Solutions 29, Inc. (UES) prior to the initial design. Therefore, truss and joist directions were assumed based on the information provided by DR Horton, Inc. Subsequent plan revisions based on roof truss and floor joist layouts shall be noted in the revision list, indicating the date the layouts were provided. Should any discrepancies become apparent, the contractor shall notify UES immediately.

SHEET LIST:

Sheet No.	Description
CS1	Cover Sheet, Specifications, Revisions
D1m	Monolithic Slab Foundation Details
D1s	Stem Wall Foundation Details
D1c	Crawl Space Foundation Details
D1b	Basement Foundation Details
D1f	Framing Details

REVISION LIST:

Revision No.	Date	Project No.	Description
1	5.11.17		Added box bay detail (2/D2f). Added deck options with basement. Revised deck options with stem wall and crawl space foundations
2	7.12.17		Revised stem wall insulation note.
3	2.15.18		Revised garage door detail, NC only
4	2.28.18		Added high-wind foundation details
5	12.19.18		Revised per 2018 NCRC
6	2.19.19		Revised per Mecklenburg County Comments
7	3.1.19		Revised stem wall deck attachment and roof sheathing on wall sections.
8	3.6.19		Corrected dimensions at perimeter footings
9	3.2.20		Added tall turndown detail
10	3.18.20		Added balloon framing detail
11	10.20.20		Added alternate two-pour detail for slab and added note for crawl girder above grade
12	3.1.21		Added OX-IS Standard Details
13	5.18.21		Updated OX-IS Standard Details
14	02.14.23		Added 4/D2m - Tall Slab Detail w/ Siding
15	08.10.23		Updated (Hit HY150 Adhesive) for HY200 Adhesive
16	04.01.24		Added Hilti Kwik Bolt KBI 1/2-5 TO Wall Anchor Schedule
17	4.26.24		Update Wall Anchor Schedule
18	5.06.24		Update Wall Anchor Schedule

DR HORTON PROJECT SIGN-OFF:

Manager	Signature
Operations	
Operations System	
Operations Product Development	

UES
UES PROFESSIONAL SOLUTIONS 29, INC.
FORMERLY SUMMIT ENGINEERING, LABORATORY, & TESTING, INC.
10121 Fineville Distribution St
Pineville, NC 28134
Office: 704.504.1717
Fax: 704.504.1725
www.heatues.com

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
UES PROFESSIONAL SOLUTIONS 29, INC.
No. F-1454

CLIENT:
DR Horton Carolina Division
8001 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Standard Details (OX-IS)
Coversheet

05.06.2024
NORTH CAROLINA PROFESSIONAL SEAL 020222 ENGINEER GEORGE W. SANFORD
STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 05/06/2024
SCALE: 22x34 1/4"=1'-0"
11x17 1/8"=1'-0"
PROJECT #: A21117.00066.000
DRAWN BY: MGC
CHECKED BY: GWS

ORIGINAL INFORMATION
PROJECT # DATE: 1/31/2017

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 UES Professional Solutions 29, Inc. (UES) or the SER. For the purposes of these construction documents the SER and UES 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 UES 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 UES.
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 UES 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 local building codes.
9. All structural assemblies are to meet or exceed to requirements of the current local building code.

FOUNDATIONS:

1. 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.
2. 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.
3. Any fill shall be placed under the direction or recommendation of a licensed professional engineer.
4. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
5. 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.
6. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

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 the manual of Steel Construction "Load Resistance Factor Design" latest editions.
2. Structural steel shall receive one coat of shop applied rust-inhibitive paint.
3. All steel shall have a minimum yield stress (F_y) of 36 ksi unless otherwise noted.
4. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

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.

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.
11. Unless otherwise specified, concrete reinforcing is not required.

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-Yellow-Pine (SYP) #2.
2. LVL or PSL engineered wood shall have the following minimum design values:
   - 2.1. E = 1,900,000 psi
   - 2.2. F_b = 2600 psi
   - 2.3. F_v = 285 psi
   - 2.4. F_c = 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 SYP #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 properly blocked at all floor levels to ensure proper load transfer.
9. Multi-ply beams shall have each ply attached with (3) 10d nails @ 24" O.C.
10. Flitch beams, 4-ply beams and 3-ply side loaded beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 24" O.C. per schedule unless noted otherwise. Min. edge distance shall be 2" and (2) bolts shall be located a min. 6" from each end of the beam.

WOOD TRUSSES:

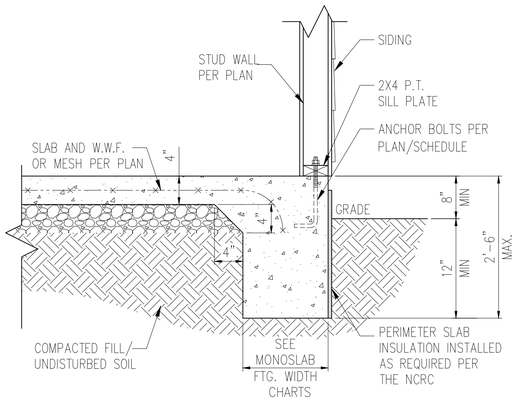
1. The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance 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 7-05), 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.

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.

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.



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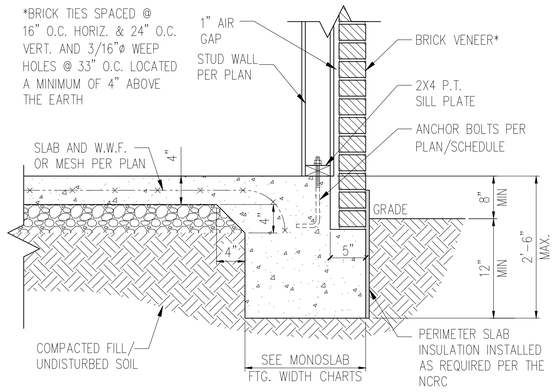
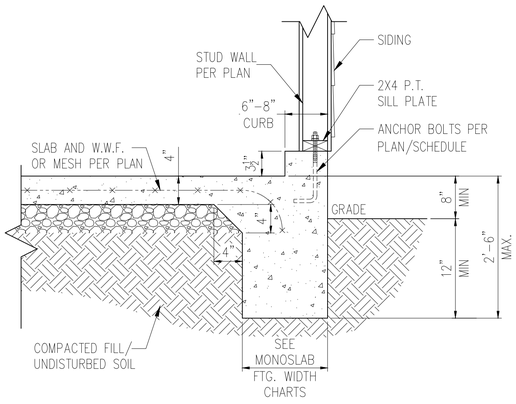


STANDARD – BRICK

1 D1m TYP. SLAB DETAIL
N.T.S.



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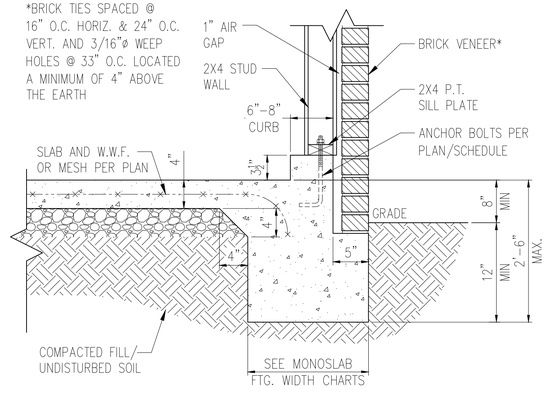
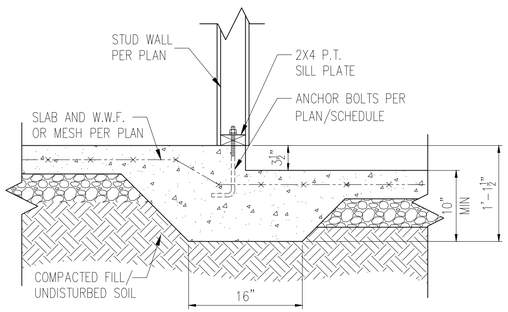
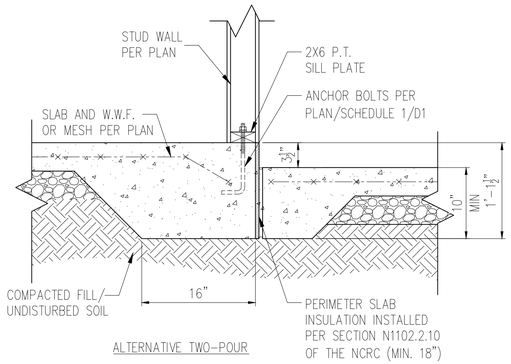


STANDARD – BRICK

2 D1m TYP. GARAGE CURB DETAIL
N.T.S.

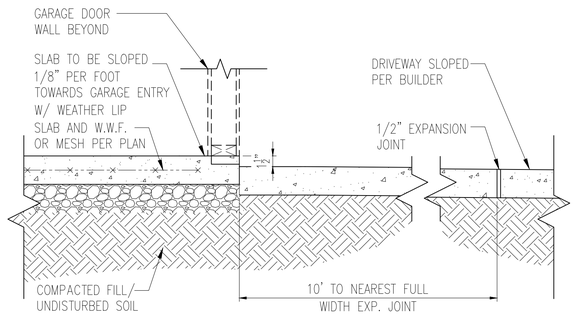




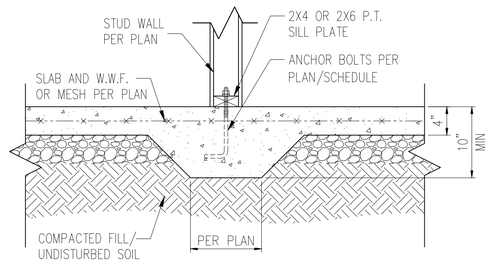
ALTERNATIVE TWO-POUR

3 D1m STEP IN GARAGE
N.T.S.

3A D1m ALTERNATE TWO-POUR DETAIL
N.T.S.



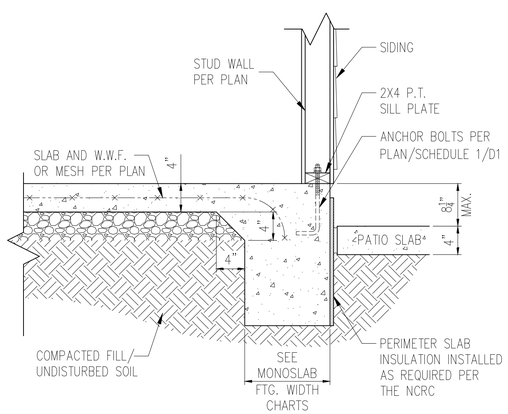
4 D1m SLAB AT GARAGE DOOR
N.T.S.



5 D1m TYP. THICKENED SLAB DETAIL
N.T.S.

MONOLITHIC FOOTING WIDTH

# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY		
	1500 PSF	2000 PSF	2500 PSF
1 STORY – STD.	16"	16"	16"
1 STORY – BRICK VENEER	21"*	21"*	21"*
2 STORY – STD.	16"	16"	16"
2 STORY – BRICK VENEER	21"*	21"*	21"*
3 STORY – STD.	23"	18"	18"
3 STORY – BRICK VENEER	32"*	24"*	24"*
*5" BRICK LEDGE HAS BEEN ADDED TO THE MONOLITHIC FOOTING WIDTH FOR BRICK SUPPORT			



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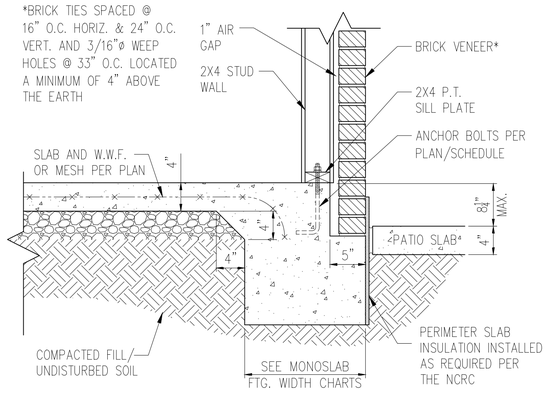
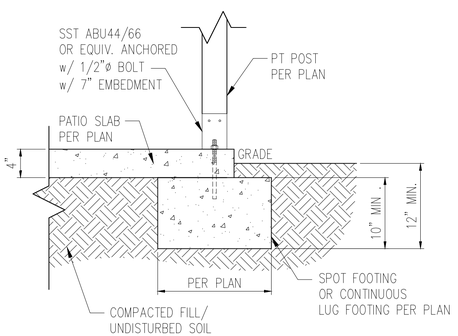


STANDARD – BRICK

6 D1m PATIO SLAB DETAIL
N.T.S.



6A D1m COVERED PATIO DETAIL
N.T.S.

WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING	INTERIOR WALL	EXTERIOR WALL
1/2"ø A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST – MAS	4"	5'-0"	NO	YES
SIMPSON TITEN HD 1/2"ø – 8"	6-1/2"	6'-0"	YES	YES
1/2"ø HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES
1/2"ø HILTI KWIK BOLT, SST WEDGE-ALL, OR EQUIVALENT WEDGE ANCHORE	7"	6'-0"	YES	YES -2

NOTE: 1. INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.
2. EXPANSION ANCHORS MAY BE INSTALLED ONLY AS ALLOWED PER MANUFACTURE SPECIFICATIONS.

NOTES:
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
5. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
6. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRC

UES PROFESSIONAL SOLUTIONS 29, INC.
FORMERLY SUMMIT ENGINEERING, LABORATORY, & TESTING, INC.
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NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
UES PROFESSIONAL SOLUTIONS 29, INC.
No. F-1454

CLIENT:
DR Horton Carolina Division
8001 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Standard Details (OX-IS)
Monolithic Slab Foundation Details

05.06.2024
NORTH CAROLINA PROFESSIONAL SEAL 020222 ENGINEER GEORGE W. SANFORD
STRUCTURAL MEMBERS ONLY

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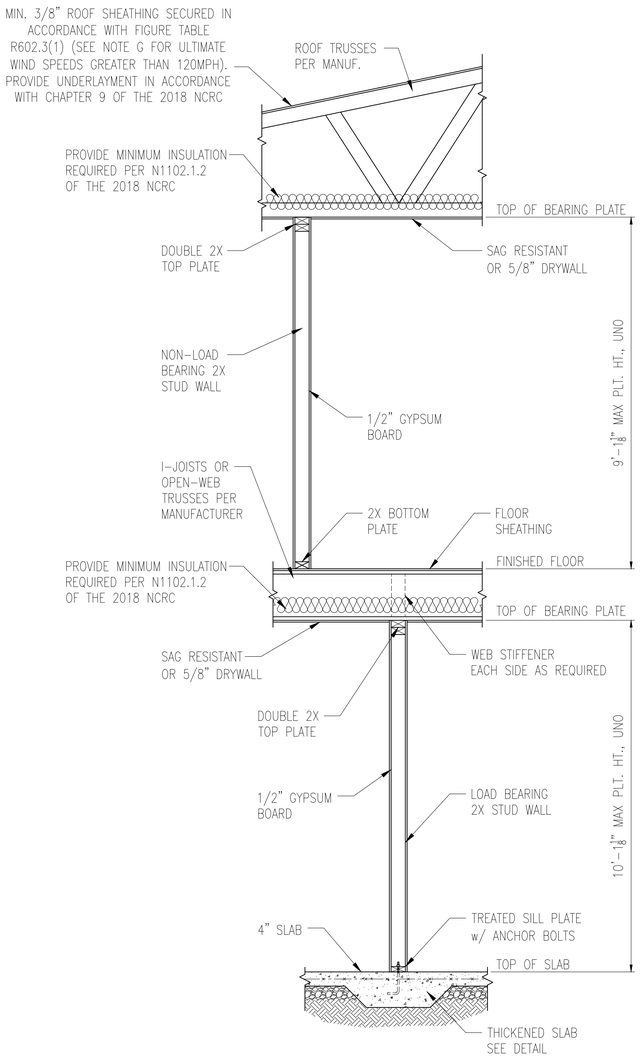
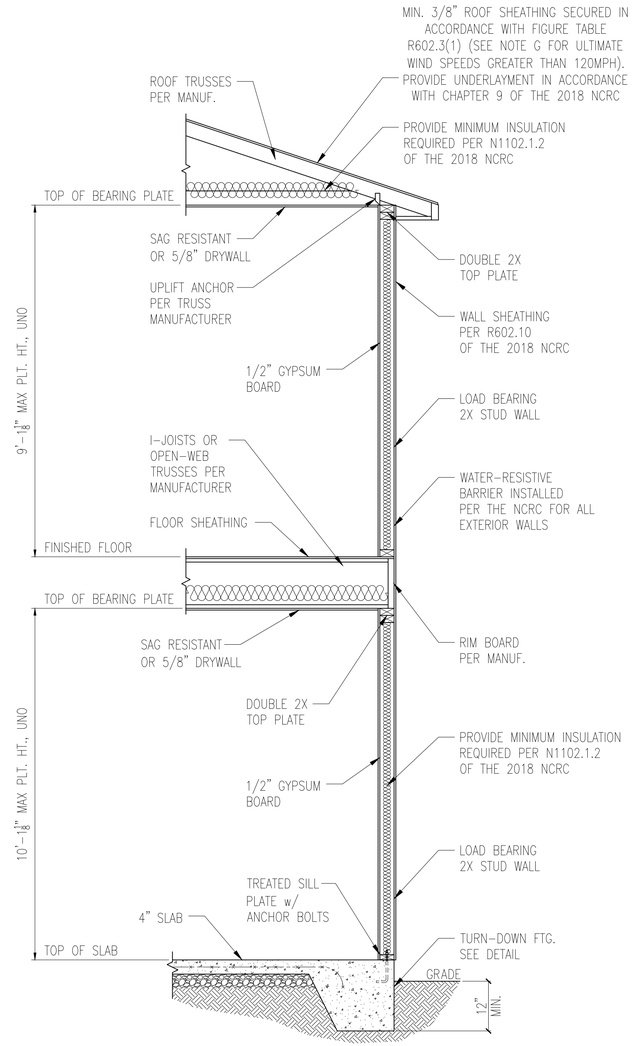
D1m



1 D2m TYP. INTERIOR LOAD BEARING WALL SECTION

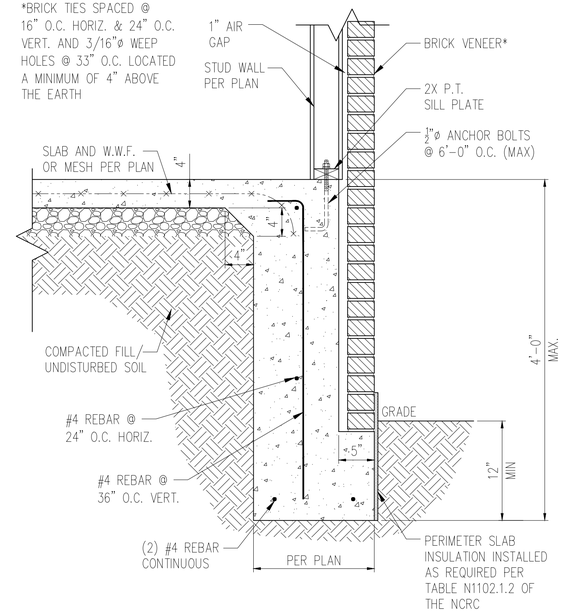
N.T.S.



2 D2m TYP. EXTERIOR LOAD BEARING WALL SECTION

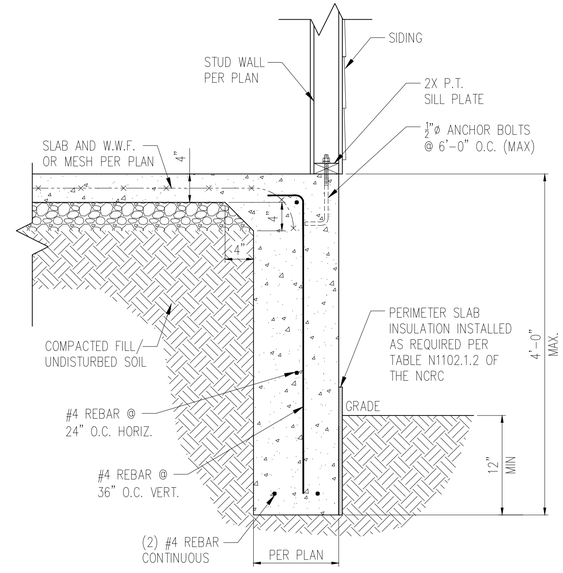
N.T.S.

-SIMILAR w/ BRICK AND STONE
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
-MIN. 3/16"ø WEEP HOLES @ 33" O.C.



3 D2m TALL SLAB DETAIL w/ BRICK VENEER

N.T.S.



4 D2m TALL SLAB DETAIL w/ SIDING

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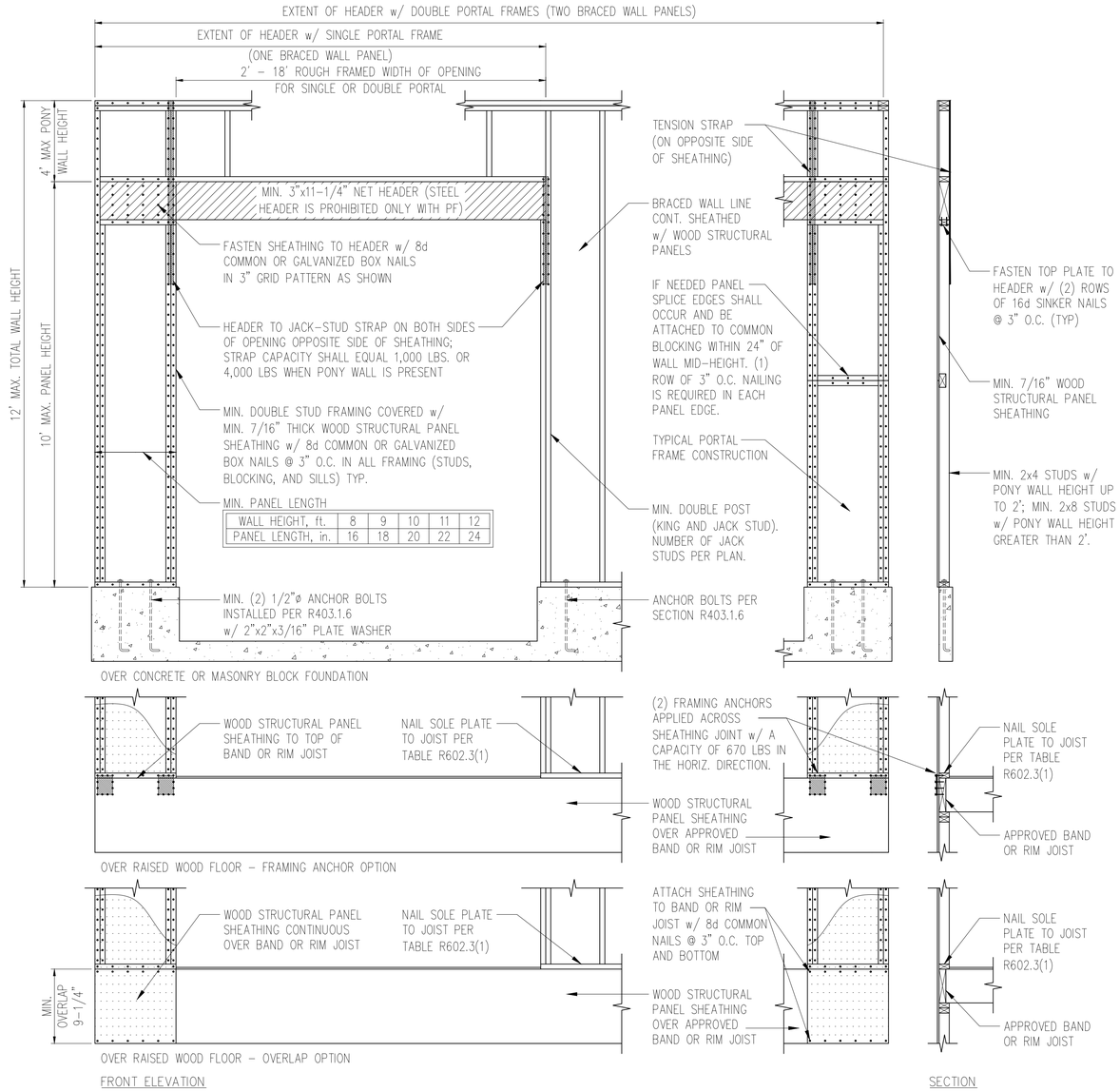
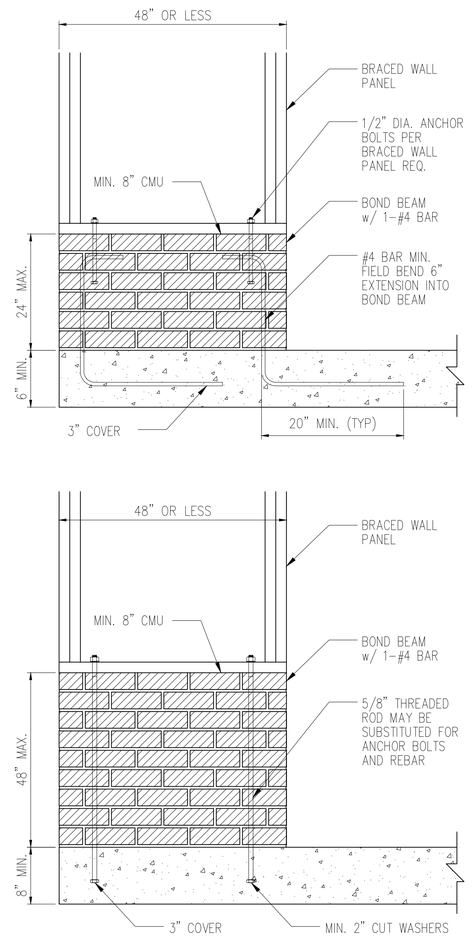
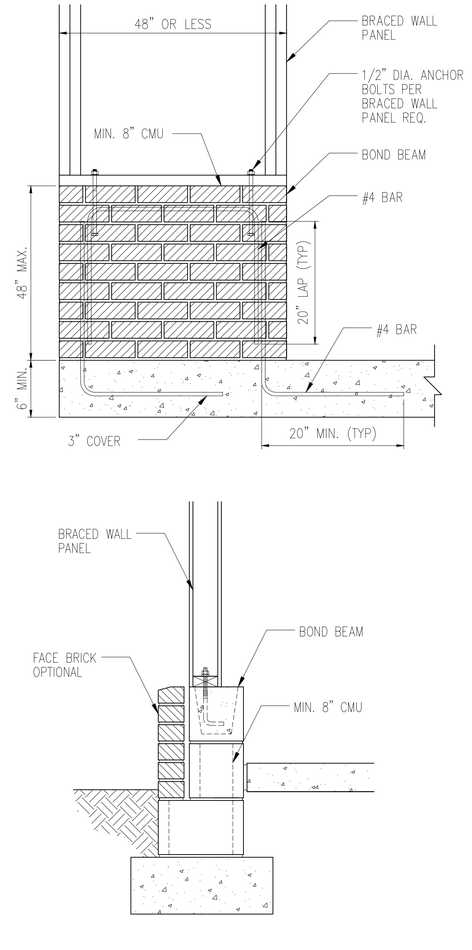


1 D1f METHOD PF: PORTAL FRAME DETAIL
3/8" = 1'-0"





2 D1f MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS
NTS

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

UES
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NORTH CAROLINA UES PROFESSIONAL SOLUTIONS 29, INC. No. F-1454 CERTIFICATE OF AUTHORIZATION

CLIENT:
DR Horton Carolina Division
8001 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Standard Details (0X-IS)
Framing Details

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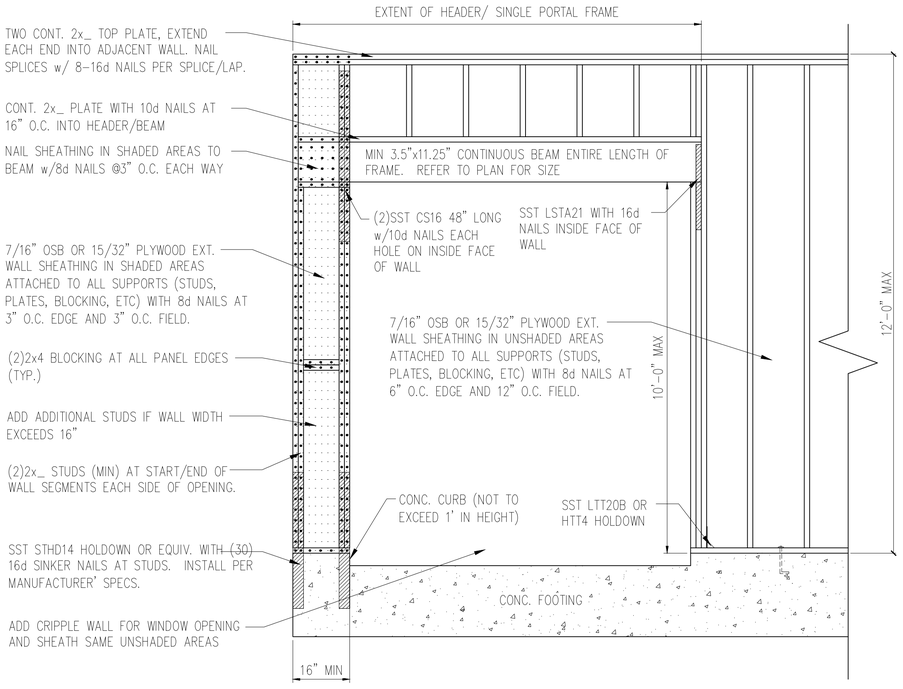
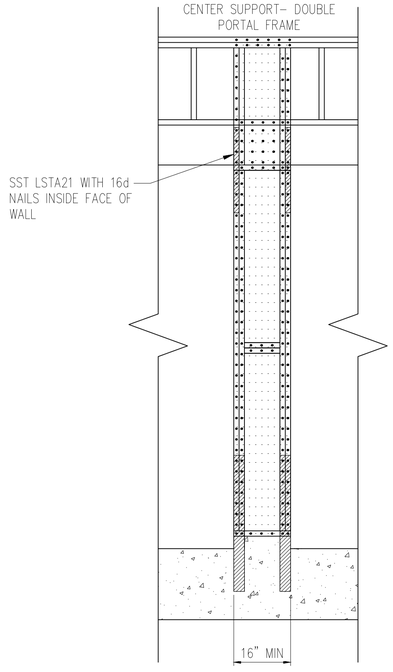
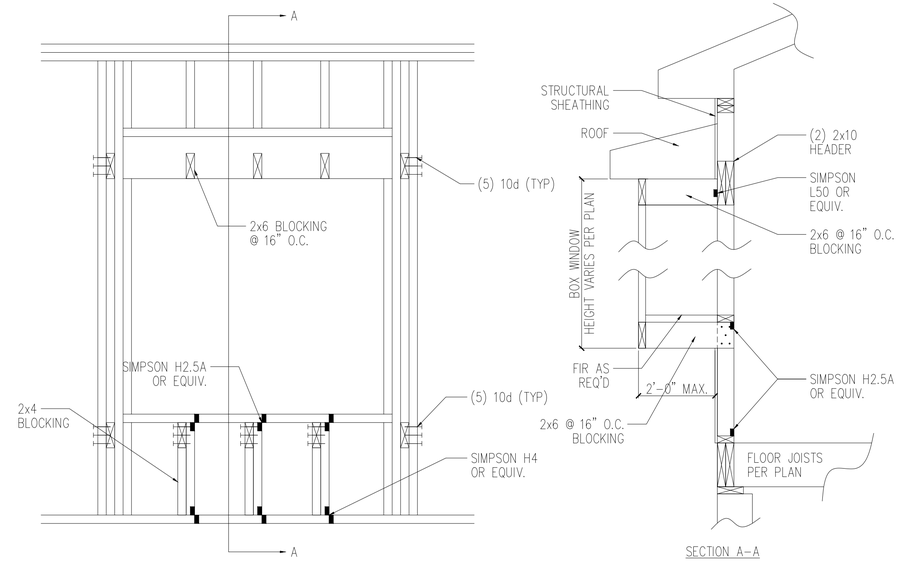




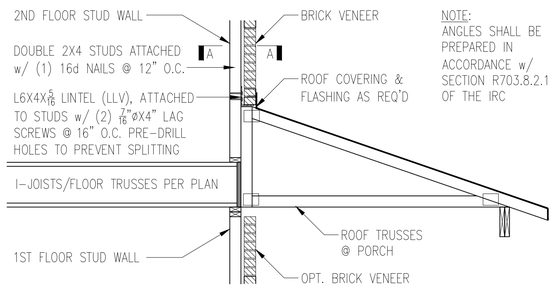
1 D2f METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS

3/4" = 1'-0"

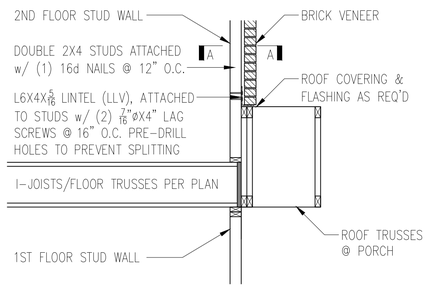


2 D2f BOX WINDOW DETAIL

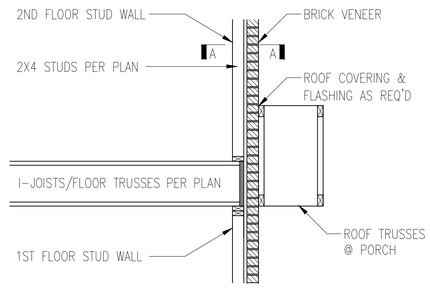
N.T.S



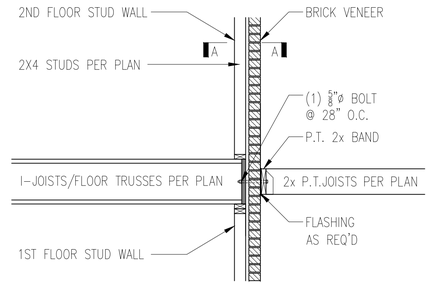
TRUSSES PERPENDICULAR TO STUD WALL



TRUSSES PARALLEL TO STUD WALL



TRUSSES PARALLEL TO STUD WALL w/ CONTINUOUS BRICK VENEER

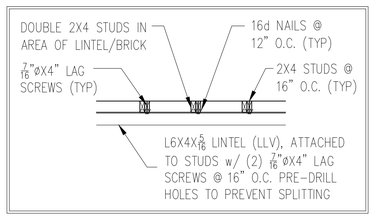


4 D2f BALCONY JOIST ATTACHMENT

NTS

3 D2f BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL

NTS



SECTION A-A

NTS

UES
UES PROFESSIONAL SOLUTIONS 29, INC.
FORMERLY SUMMIT ENGINEERING, LABORATORY, & TESTING, INC.
10121 Fireville Distribution St
Pineville, NC 28134
Office: 704.504.1717
Fax: 704.504.1125
www.hesmues.com

NORTH CAROLINA PROFESSIONAL ENGINEER CERTIFICATE OF AUTHORIZATION
UES PROFESSIONAL SOLUTIONS 29, INC.
No. F-1454

CLIENT:
DR Horton Carolina Division
8001 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Standard Details (0X-1S)
Framing Details

05.06.2024
NORTH CAROLINA PROFESSIONAL SEAL 020222 ENGINEER GEORGE W. SANFORD

STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 05/06/2024
SCALE: 22x34 1/4"=1'-0"
11x17 1/8"=1'-0"
PROJECT #: A21117.00066.000
DRAWN BY: MGC
CHECKED BY: GWS

ORIGINAL INFORMATION
PROJECT # DATE 1/31/2017

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

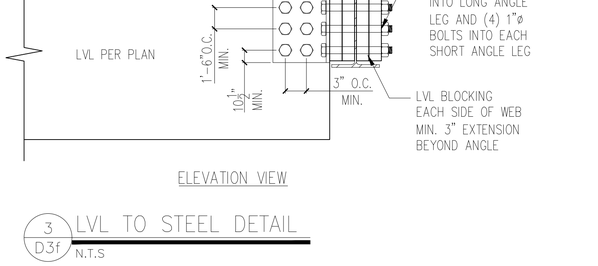
SHEET
D2f

MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS

FASTENER TYPE	LVL DEPTH	3½" WIDE	5¼" WIDE		7" WIDE		
							
10d (0.128" x 3") Nails	7¼"≤d<14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. **(ES)**	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. **(ES)**	-
	d≥14"	4 rows @ 12" o.c.	4 rows @ 12" o.c. **(ES)**	4 rows @ 12" o.c.	-	4 rows @ 12" o.c. **(ES)**	-
16d (0.162" x 3½") Nails	7¼"≤d<14"	2 rows @ 12" o.c.	2 rows @ 12" o.c. **(ES)**	2 rows @ 12" o.c.	-	2 rows @ 12" o.c. **(ES)**	-
	d≥14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. **(ES)**	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. **(ES)**	-
½" Through Bolts	d≥7¼"	2 rows @ 24" o.c.	2 rows @ 24" o.c.		2 rows @ 24" o.c.		
SDS ¼" x 3½", WS35, 3⅜" TrussLok		2 rows @ 24" o.c.	2 rows @ 24" o.c. **(ES)**	2 rows @ 24" o.c.	-	2 rows @ 24" o.c. **(ES)**	-
SDS ¼" x 6", WS6		-	-		2 rows @ 24" o.c. **(ES)**		
5" TrussLok		-	2 rows @ 24" o.c.		-		
6¾" TrussLok		-	-		2 rows @ 24" o.c.		

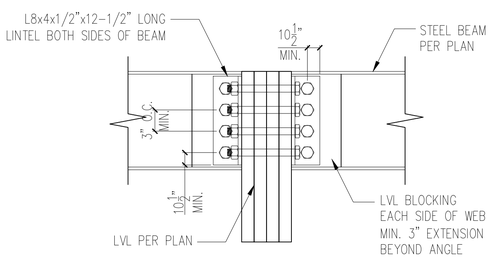
NOTES:

1. All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
2. Minimum fastening requirements for depths less than 7¼" require special consideration. Please contact your technical representative.
3. Three general rules for staggering or offsetting for a certain fastener schedule:
   (1) if staggering or offsetting is not referenced, then none is required;
   (2) if staggering is referenced, then fasteners installed in adjacent rows on the front side are to be staggered up to one-half the o.c. spacing, but maintaining the fastener clearances above; and
   (3) if "**ES**" is referenced, then the fastener schedule must be repeated on each side, with the fasteners on the back side offset up to one-half the o.c. spacing of the front side (whether or not it is staggered).

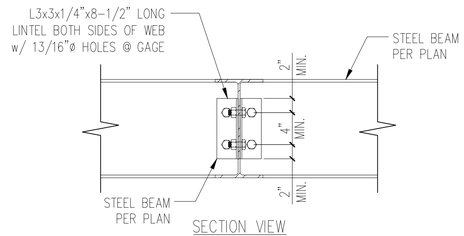


ELEVATION VIEW

1 D3f MULTI-PLY BEAM CONNECTION DETAIL
N.T.S



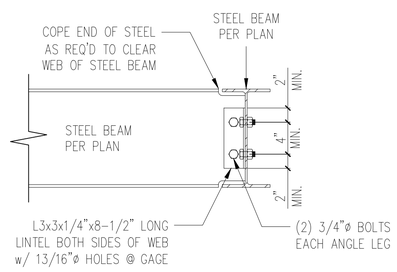
SECTION VIEW



SECTION VIEW

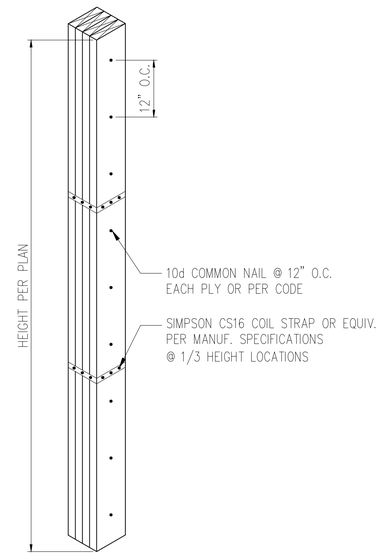
ELEVATION VIEW

3 D3f LVL TO STEEL DETAIL
N.T.S

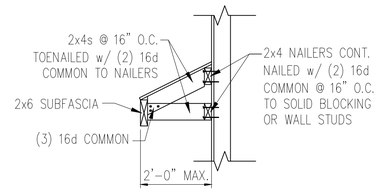


ELEVATION VIEW

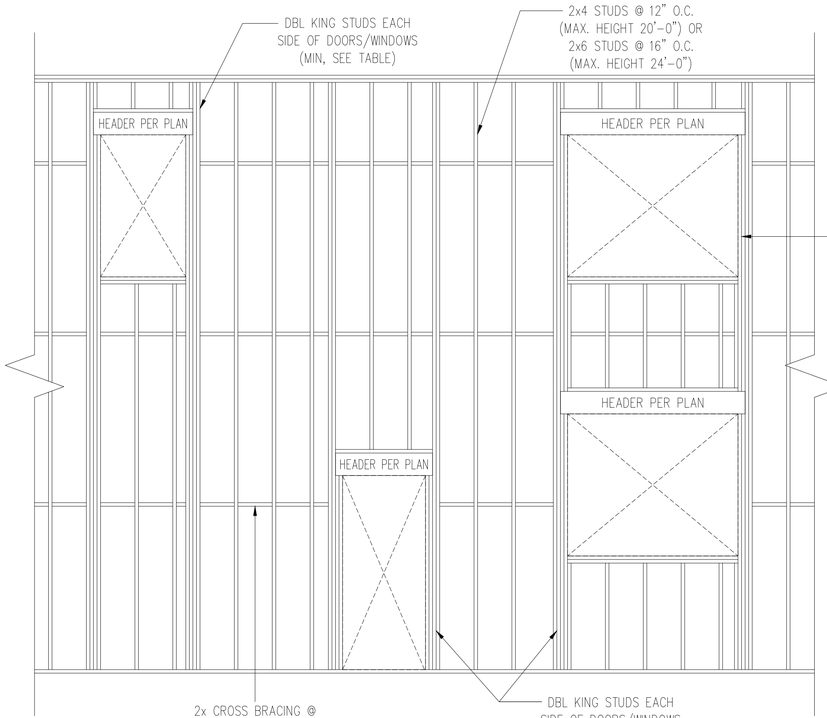
4 D3f STEEL TO STEEL DETAIL
N.T.S



2 D3f MULTI-PLY STUD CONNECTION DETAIL
N.T.S 4+ PLIES



5 D3f GABLE ROOF RETURN
N.T.S.



KING STUDS AT EACH END OF HEADERS	
MAX. HEADER SPAN	STUDS (MIN.)
3'-0"	1
4'-0"	2
8'-0"	3
12'-0"	5
16'-0"	6

NOTES:
1) FOR UP TO 130 MPH, EXPOSURE B
2) KING STUD REQUIREMENTS DO NOT APPLY TO PORTAL FRAMED OPENINGS

6 D3f TYP. BALLOON FRAMING DETAIL
N.T.S

UES
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Fax: 704.504.1725
www.heamues.com

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
UES PROFESSIONAL SOLUTIONS 29, INC.
No. F-1454

CLIENT:
DR Horton Carolina Division
8001 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Standard Details (OX-IS)
Framing Details

05.06.2024
NORTH CAROLINA PROFESSIONAL SEAL 020222 ENGINEER GEORGE W. SANFORD
STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 05/06/2024
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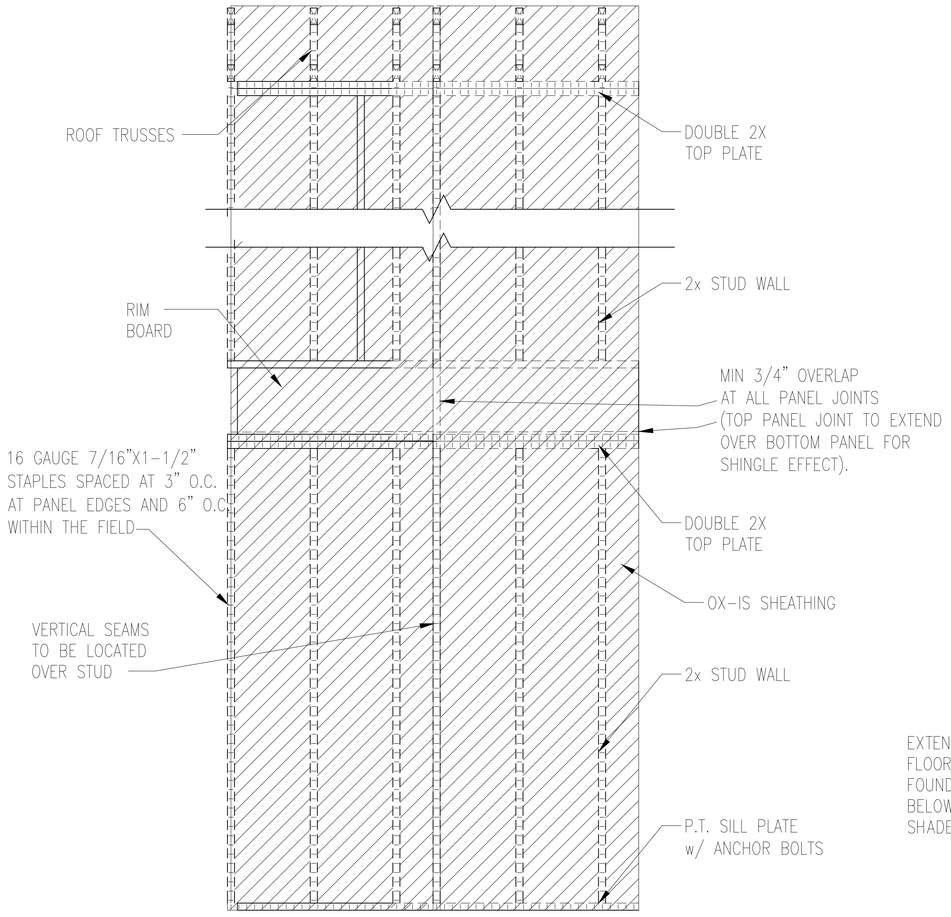
PROJECT #: A21117.00066.000
DRAWN BY: MGC
CHECKED BY: GWS

ORIGINAL INFORMATION
PROJECT # DATE 1/31/2017

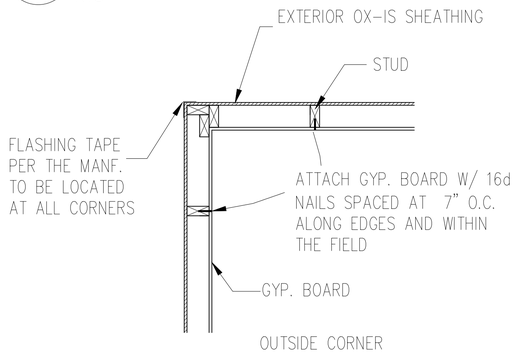
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D3f



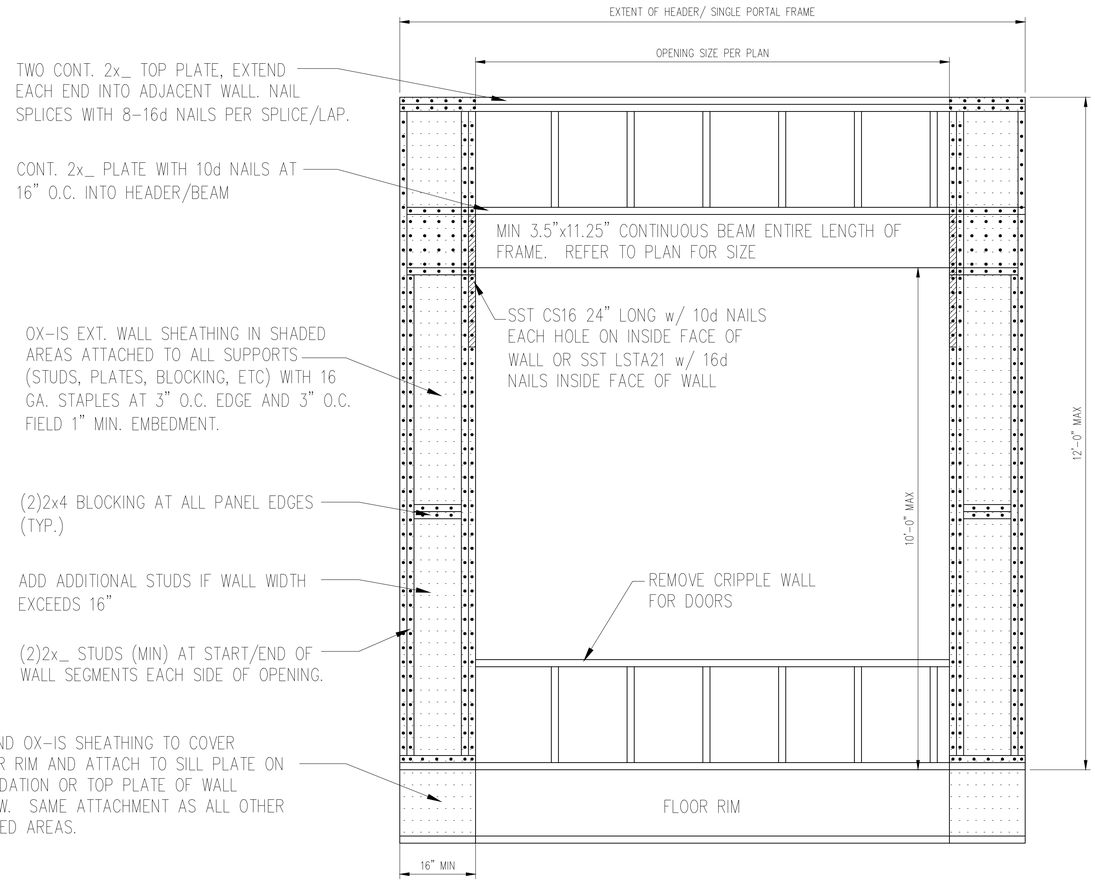
1 D4f TYP. WALL BRACING

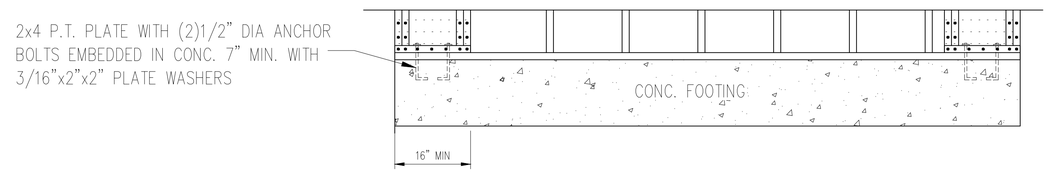
NTS



2 D4f TYP. EXTERIOR CORNER ATTACHMENT

NTS





3 D4f METHOD PF: PORTAL FRAME DETAIL

NTS

NOTES:
- OX-IS MAY BE INSTALLED IN LIEU OF OSB FOR CS-WSP AND CS-PF BRACING METHODS SHOWN ON THE BRACING PLAN. BRACED WALLS SHALL BE INSTALLED PER LENGTHS SHOWN ON THE SEALED PLANS.
- 16 GA. STAPLES MAY BE SUBSTITUTED WITH 0.113-INCH DIAMETER ($\frac{3}{8}$" HEAD OR 2" CAP) NAILS WITH MINIMUM 1" EMBEDMENT.
- STAPLES MAY RUN PARALLEL WITH WOOD GRAIN OF FRAMING STUDS AT SHEATHING SEAMS.
- WHERE 3/4" OVERLAP IS NOT INSTALLED, CONTRACTOR MAY COVER SEAM WITH 5" BUTYL FLASHING TAPE.
- FLASH WINDOWS AND DOORS PER MANF.
- THE DETAILS ABOVE ARE LIMITED TO 130 MPH WIND ZONES.

UES
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PROJECT # A21117.00066.000
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CHECKED BY: GWS

ORIGINAL INFORMATION
PROJECT # DATE 1/31/2017

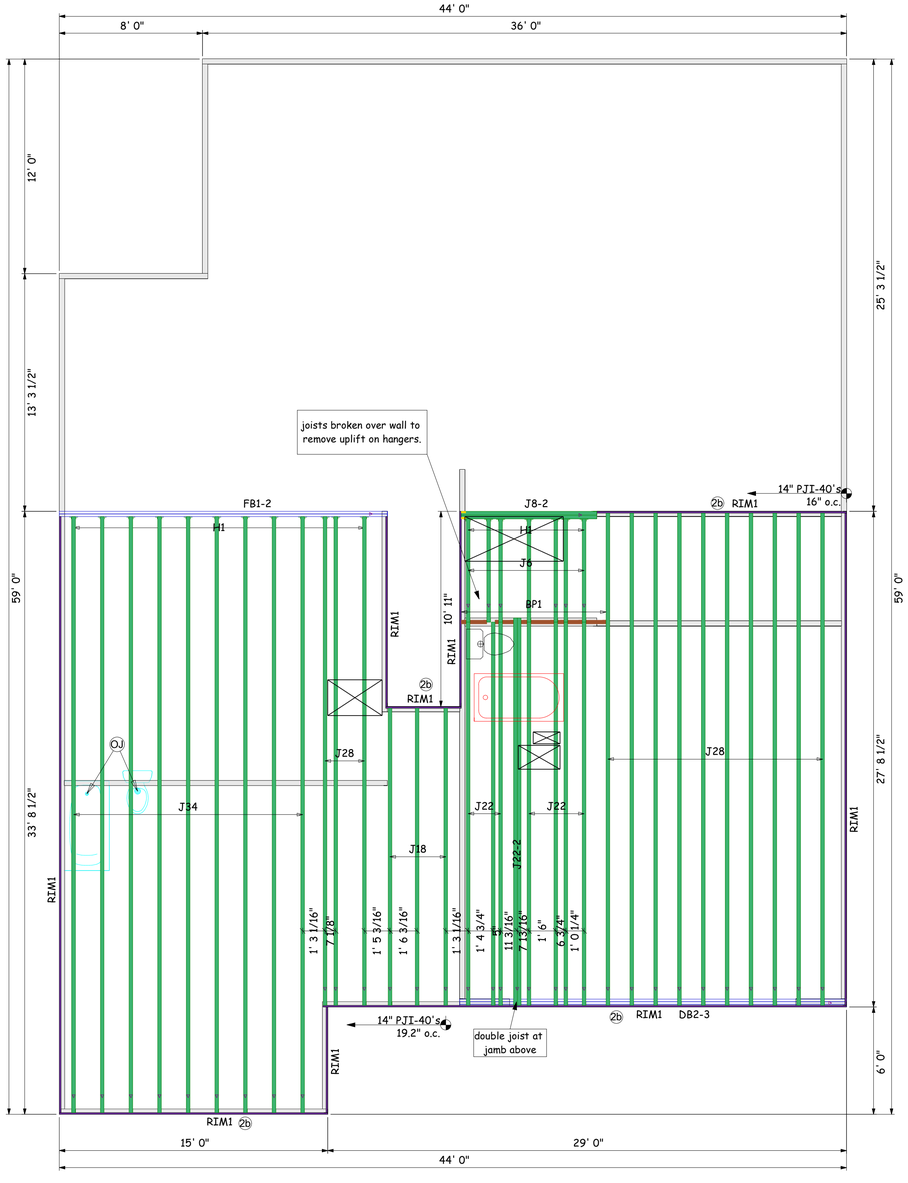
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D4f

General Notes:

** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

** LVL AND JOISTS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.



KEMPSVILLE BUILDING MATERIALS IS NOT RESPONSIBLE FOR THE DESIGN OR CALCULATION OF ANY AND ALL I-JOIST AND LVL/PSL BEAM MATERIAL. ALL ENGINEERING AND INFORMATION FOR THIS MATERIAL IS TO BE PROVIDED BY THE ENGINEER OF RECORD MARKED ON APPROVED SET OF PLANS. ALL BEAM PLACEMENTS ARE PER THE ENGINEERING RECEIVED. ALL CONNECTION DETAILS TO BE PROVIDED BY ENGINEER OF RECORD. REFER TO ENGINEER OR RECORD FOR ALL MULTI-PLY LVL/ I-JOIST CONNECTION PATTERNS. BUILDER TO VERIFY ALL MATERIAL LENGTHS, QUANTITIES, AND SIZES PRIOR TO ORDERING.

Products

Net Qty	Plies	Product	Length	PlotID
9	1	14" PJI-40	34-00-00	J34
13	1	14" PJI-40	28-00-00	J28
7	1	14" PJI-40	22-00-00	J22
2	2	14" PJI-40	22-00-00	J22-2
3	1	14" PJI-40	18-00-00	J18
2	2	14" PJI-40	8-00-00	J8-2
7	1	14" PJI-40	6-00-00	J6
3	3	2.1 RigidLam SP LVL 1-3/4 x 16	22-00-00	DB2-3
2	2	2.1 RigidLam SP LVL 1-3/4 x 20	20-00-00	FB1-2
13	1	1 1/8" x 14" APA Rim Board	12-00-00	RIM1
3	1	14" PJI-40	2-00-00	BP1

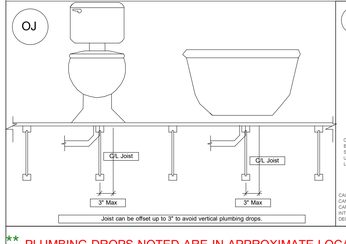
Accessories

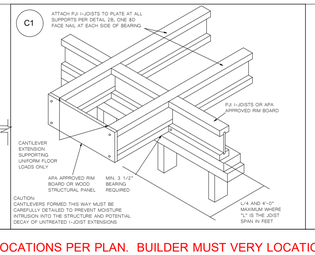
Net Qty	Plies	Product	Length	PlotID
40	1	3/4" 4x8 OSB		

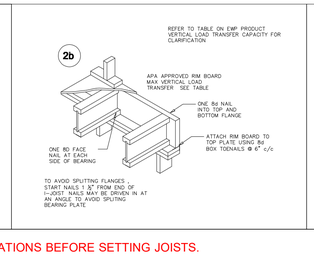
Connector Summary

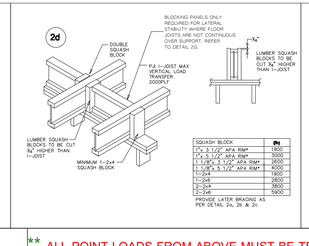
Web Stiff	Backer Blocks	Product	Manuf	Qty	PlotID
No	No	IUS2.56/14	Simpson	19	H1

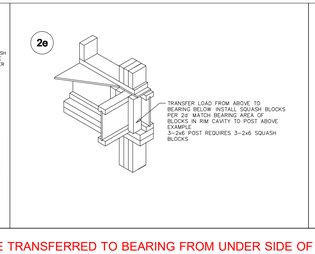
2ND FLOOR LAYOUT

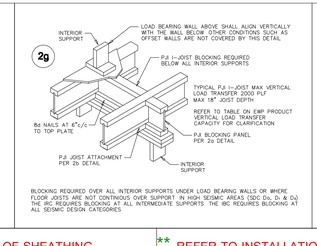


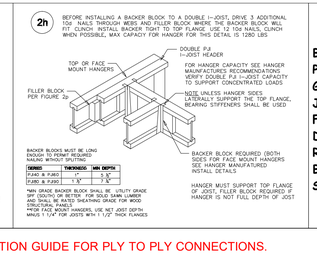












LABEL LEGEND

BBO = Beam by Others
PBO = Post by Others
GBO = Girder by Others
J = I-Joist
FB = Flush Beam
DB = Dropped Beam
RB = Roof Beam
BP = Blocking Panels
SB = Squash Blocks

** PLUMBING DROPS NOTED ARE IN APPROXIMATE LOCATIONS PER PLAN. BUILDER MUST VERY LOCATIONS BEFORE SETTING JOISTS.

** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.

** REFER TO INSTALLATION GUIDE FOR PLY TO PLY CONNECTIONS.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

** DAMAGED FLOOR JOISTS SHOULD NOT BE INSTALLED UNLESS APPROVED BY COMPONENT PLANT.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

This is an I-Joist Placement Plan Only. All designs of I-Joist follow the IBC/IRC Code Requirements along with Manufacturer's guidelines. This is NOT an engineered placement plan. This placement plan is created from plans provided by the customer using Manufactures guidelines. It is the responsibility of the EOR, or builder to review and approve all bearing conditions, connections, spans, loading, product usage, and quantities. Do not notch or drill holes in beams or flanges on joists without prior approval from the manufacturing Representative unless following hole guidlines in the installation guide should. Builder takes full responsibility for doing so and NO Back charge will be accepted.

CARTER Lumber

DR Horton
23 Eagle Creek
Hartwell C

FLOOR JOIST LAYOUT

Scale: **1/4" = 1'-0"**
Date: **// 10/30/25**
Designer: **DW**
Project #: **25100186**
Sheet Number:
1 / 1