EXPRESS HOMES
40' SERIES
MODEL 'HAYDEN' - LH

WOODGROVE LOT 230
RED CEDAR WAY PIN 0653-65-9954.000
FUQUAY VARINA, NC 27526

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

Reviewed for Code Compliance

10/12/2021

Harnett COUNTY NORTH CAROLINA

Shall provide accessible parking and access to accessible restroom.

MODEL HOME

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.G.	FLOOR GRANGE
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.H.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.H.	PRE-HUNG
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
W/	WALK-IN CLOSET
W/O	WITH OR WITHOUT
WP	WATERPROOF(ING)
WWM	WELDED WIRE MESH
P.L.	PROPERTY LINE
@	ROUND / DIAMETER
&	AND
℄	CENTERLINE
#	POUND / NUMBER

BUILDING CODE COMPLIANCE / PROJECT INFORMATION

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.

PRODUCT:
SINGLE FAMILY RESIDENCE

OCCUPANCY CLASSIFICATION
RESIDENTIAL R-3

CONSTRUCTION TYPE:
TYPE VB

INDEX

MODEL 'HAYDEN'

ALL CONSULTANT DRAWINGS ACCOMPANYING THESE ARCHITECTURAL DRAWINGS HAVE NOT BEEN PREPARED BY OR UNDER THE DIRECTION OF GMD DESIGN GROUP, INC. GMD DESIGN GROUP INC. THEREFORE ASSUMES NO LIABILITY FOR THE COMPLETENESS OR CORRECTNESS OF THESE DRAWINGS.

PLAN CHANGES:

DATE:	DESCRIPTION:
02.22.21	INITIAL PLAN RELEASE
03.10.21	CLIENT REVISIONS
04.14.21	CLIENT REVISIONS
04.15.21	CLIENT REVISIONS

CONSULTANTS:

GENERAL NOTES DESIGNER NORTH CAROLINA:

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 INCONSISTENCIES 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 LOCAL CODES.)

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 DISTRIBUTION, 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 OPENABLE AREA OF 4.0 SQ FT. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 22" AND THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20". GLAZING TOTAL AREA OF NOT LESS THAN 5.0 SQ FT IN THE CASE OF A GROUND WINDOW AND NOT LESS THAN 5.7 SQ FT IN THE CASE OF AN UPPER STORY WINDOW. (PER NCRC SECTION R310.1.1)

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.

AREA CALCULATIONS:

MODEL 'HAYDEN' SQUARE FOOTAGES

AREA	ELEV . 'K'
1st FLOOR	1066 SF
2nd FLOOR	1445 SF
TOTAL LIVING	2511 SF
GARAGE	422 SF
PORCH	104 SF
OPT. COVERED PORCH	
OPT. BASEMENT	

BASEMENT AREA IS TAKEN TO INSIDE OF CONCRETE WALL

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:
40' Series

FOR CONSTRUCTION

CLIENTS NAME:
Express HOMES

PROJECT NO: GMD17049

SHEET TITLE:
TITLE SHEET

PRINT DATE:
January 22, 2021

SHEET NO:
0

AVAILABLE WITH OPTIONAL
9'-1" FIRST FLOOR PLATE

NOTES AT OPT 9'-1" PLT:
- ~~WDW HT SET AT 7'-6"~~
- INTERIOR SOFFITS AT 8'-0"
- EXTERIOR SOFFITS AT 8'-0"

NOTES:

- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS:
  1ST FLOOR = 6'-8" U.N.O. ON ELEVATIONS.
  2ND 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.
- 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.)
- INSULATION PER TABLE N1102.1.2.
  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-19 BATTS MINIMUM, VERIFY

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] N/A

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 MANUFCATURER'S WRITTEN INSTRUCTIONS.
[11] DECORATIVE WROUGHT IRON, SEE DETAILS.

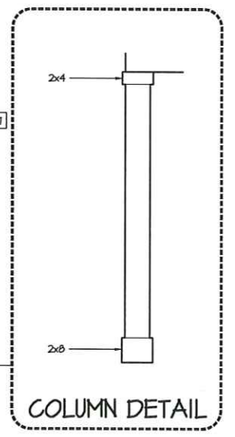
SIDING:

[12] VINYL SHAKE SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS:
FIBER CEMENT SHAKE SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
[13] VINYL LAP SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS:
FIBER CEMENT LAP SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
[14] VINYL WAVY SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS:
FIBER CEMENT WAVY SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
[15] VINYL BOARD AND BATT SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS:
FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 12" O.C. PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
[16] VINYL TRIM SIZE AS NOTED (AT SPECIFIC LOCATIONS:
1X FIBER CEMENT TRIM OR EQUAL, U.N.O. SIZE AS NOTED
[17] FYPON SHUTTERS, TYPE AS SHOWN, SIZE AS NOTED. (AT SPECIFIC LOCATIONS: FALSE VINYL 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.

Front Elevation 'K'

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



COLUMN DETAIL

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

Express HOMES

PROJECT NO: 6MDI7049

SHEET TITLE:

'HAYDEN'
EXTERIOR ELEVATIONS
'4EPF-K'

PRINT DATE:

January 22, 2021

SHEET NO:

1K

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

THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED, PROVIDED THAT AT LEAST 50 PERCENT AND NOT MORE THAN 80 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE THE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS.

EXCEPTIONS:

1. ENCLOSED ATTIC/RAFTER SPACES REQUIRING LESS THAN 1 SQ FT OF VENTILATION MAY BE VENTED WITH CONTINUOUS SOFFIT VENTILATION ONLY.
2. ENCLOSED ATTIC/RAFTER SPACES OVER UNCONDITIONED SPACE MAY BE VENTED WITH CONTINUOUS SOFFIT VENT ONLY.

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 TO CBC REQUIREMENTS.

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: = 1488 SF
1488 SQ. FT. X 144 = 214272 SQ. IN.
214272 SQ. IN. / 150 = 1428.48 SQ. IN. OF VENT REQ'D

ROOF AREA 2: = 39 SF
39 SQ. FT. X 144 = 5616 SQ. IN.
5616 SQ. IN. / 150 = 37.44 SQ. IN. OF VENT REQ'D

ROOF AREA 3: = 180 SF
180 SQ. FT. X 144 = 25920 SQ. IN.
25920 SQ. IN. / 150 = 172.80 SQ. IN. OF VENT REQ'D

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 'HAYDEN': 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 WHEN A CLASS 1 OR II VAPOR RETARDER IS INSTALLED ON THE WARM - IN - WINTER SIDE OF THE CEILING.

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 TO CBC REQUIREMENTS.

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.

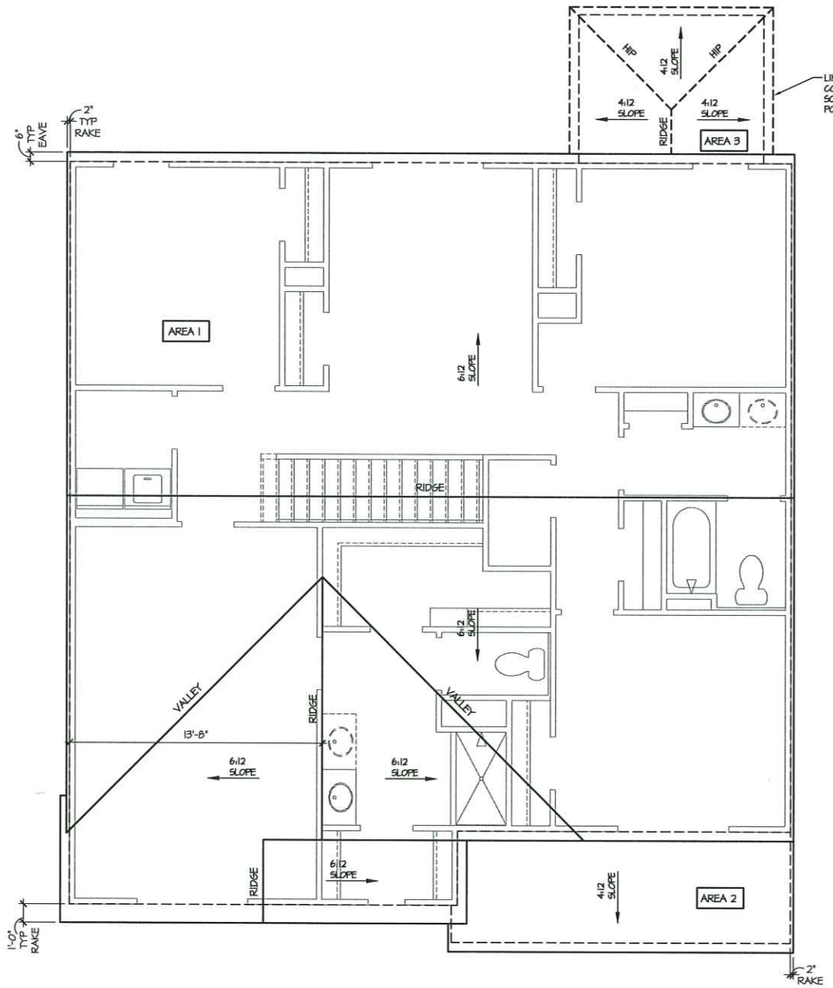
ROOF AREA 1: = 1488 SF
1488 SQ. FT. X 144 = 214272 SQ. IN.
214272 SQ. FT. / 300 = 714.24 SQ. IN. OF VENT REQ'D
714.24 SQ. IN. / 2 = 357.12 SQ. IN.
357.12 SQ. IN. OF VENT AT HIGH & 357.12 SQ. IN. OF VENT AT LOW REQUIRED.

ROOF AREA 2: = 39 SF
39 SQ. FT. X 144 = 5616 SQ. IN.
5616 SQ. FT. / 300 = 18.72 SQ. IN. OF VENT REQ'D
18.72 SQ. IN. / 2 = 9.36 SQ. IN.
9.36 SQ. IN. OF VENT AT HIGH & 9.36 SQ. IN. OF VENT AT LOW REQUIRED.

ROOF AREA 3: = 180 SF
180 SQ. FT. X 144 = 25920 SQ. IN.
25920 SQ. FT. / 300 = 86.40 SQ. IN. OF VENT REQ'D
86.40 SQ. IN. / 2 = 43.20 SQ. IN.
43.20 SQ. IN. OF VENT AT HIGH & 43.20 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

AT SINGLE FAMILY DETACHED PLANS:
PREFINISHED VENTED
SOFFIT AT EAVE PER MANUFACTURER.
(VERIFY FIRE SEPARATION DISTANCE FOR SOFFIT PROTECTION PER NCRC SECTION R302.1.1 AND TABLE R302.1)



Roof Plan 'K'

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

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:
40' Series

FOR CONSTRUCTION

CLIENTS NAME:
Express Homes

PROJECT NO: GMDI7049

SHEET TITLE:
'HAYDEN'
ROOF PLAN
'4EPF-K'

PRINT DATE:
January 22, 2021

SHEET NO:
1.1 K

NOTES:

- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS:
  1ST FLOOR = 6'-8" U.N.O. ON ELEVATIONS.
  2ND 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.
- 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)
- INSULATION: PER TABLE N1102.1.2.
  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-19 BATTS MINIMUM. VERIFY

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. N/A

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 MANUFCATURER'S WRITTEN INSTRUCTIONS.
11. DECORATIVE WROUGHT IRON. SEE DETAILS.

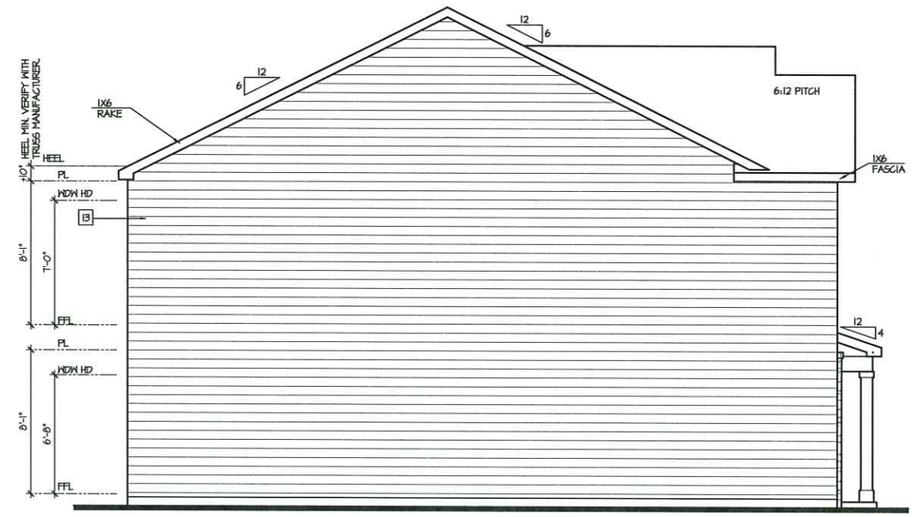
SIDING:

12. VINYL SHAKE SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT SHAKE SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
13. VINYL LAP SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT LAP SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
14. VINYL HAVY SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT HAVY SIDING PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
15. VINYL BOARD AND BATT SIDING PER DEVELOPER WITH VINYL CORNER TRIM PER DEVELOPER. (AT SPECIFIED LOCATIONS: FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 12" O.C. PER DEVELOPER W/ 1X4 CORNER TRIM BOARD.)
16. VINYL TRIM SIZE AS NOTED (AT SPECIFIC LOCATIONS: 1X FIBER CEMENT TRIM OR EQUAL, U.N.O. SIZE AS NOTED
17. FYPON SHUTTERS, TYPE AS SHOWN, SIZE AS NOTED. (AT SPECIFIC LOCATIONS: FALSE VINYL 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.

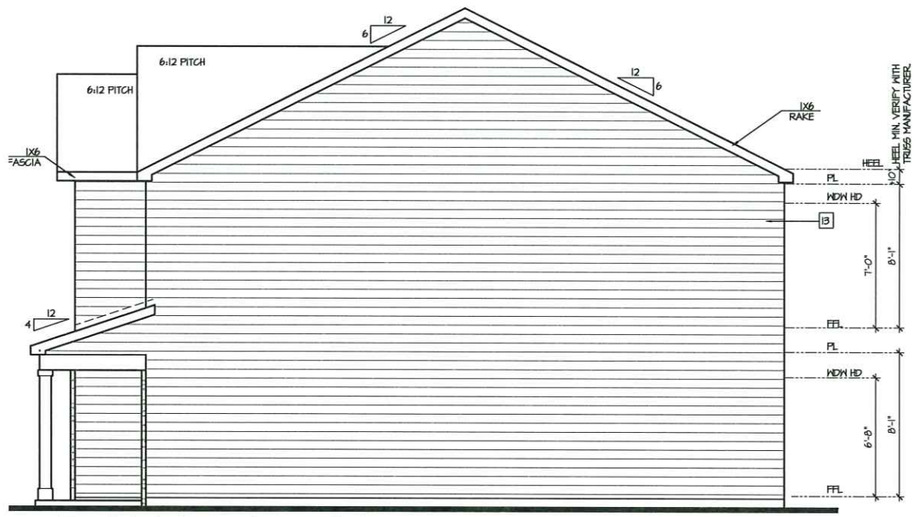
AVAILABLE WITH OPTIONAL 9'-1" FIRST FLOOR PLATE

NOTES AT OPT 9'-1" PLT.
- WDW HT SET AT 7'-6"
- INTERIOR SOFFITS AT 8'-0"
- EXTERIOR SOFFITS AT 8'-0"



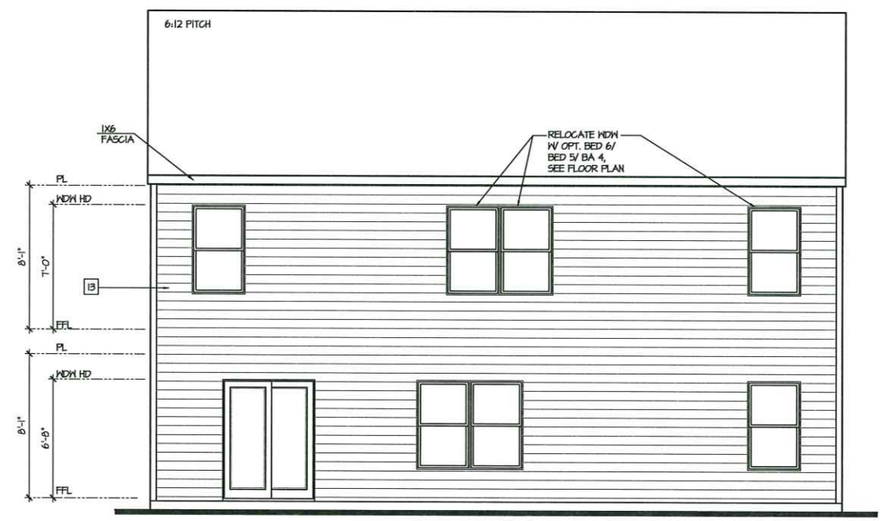
Left Elevation 'K'

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



Right Elevation 'K'

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



Rear Elevation 'K'

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

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

Express HOMES

PROJECT NO: GMD171049

SHEET TITLE:

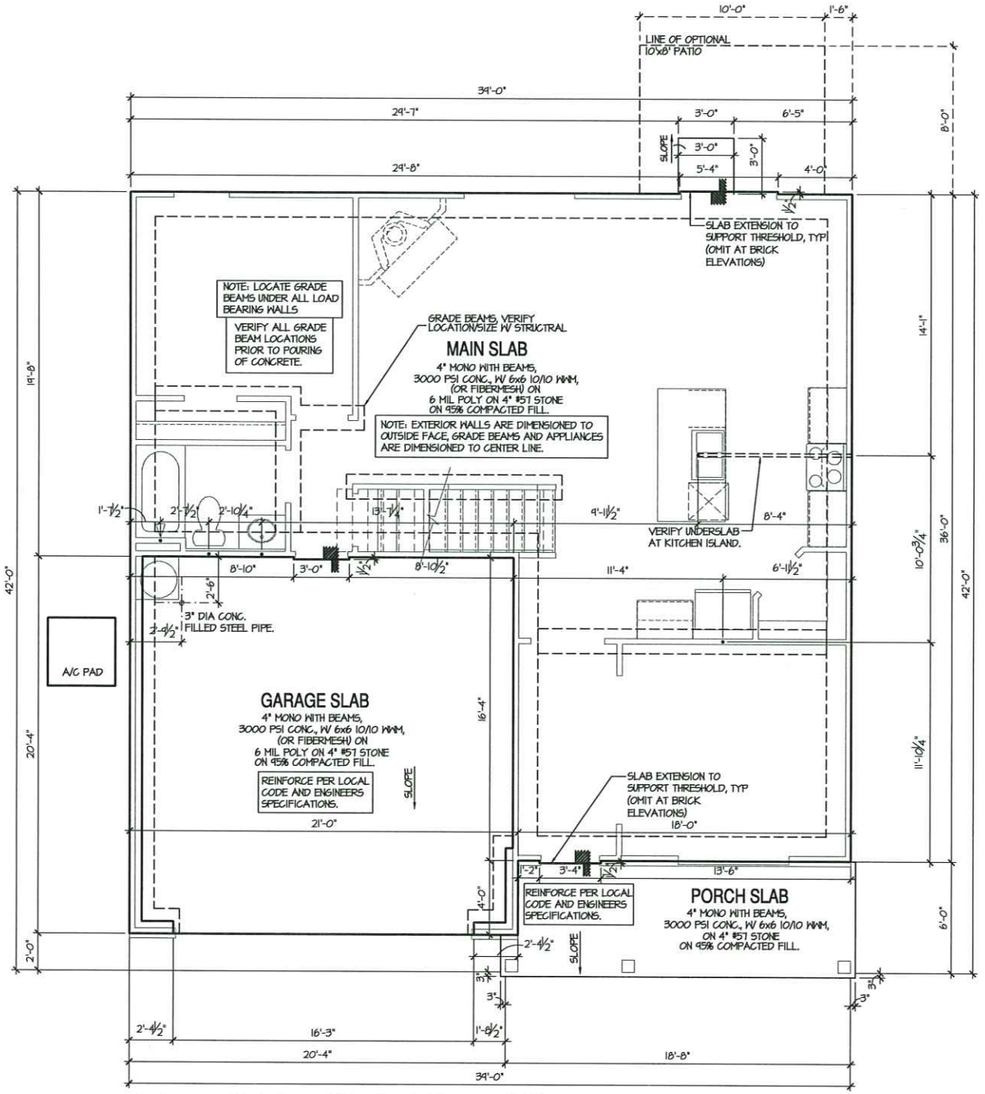
'HAYDEN'
EXTERIOR ELEVATIONS '4EPF-K'

PRINT DATE:

January 22, 2021

SHEET NO:

2 K



Monolithic Slab Plan 'K'

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

NOTES FOR NORTH CAROLINA:

- 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 THE STANDARDS OF THE NC DEPT OF AGRICULTURE.)
- 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.

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

Express Homes

PROJECT NO: GMD17049

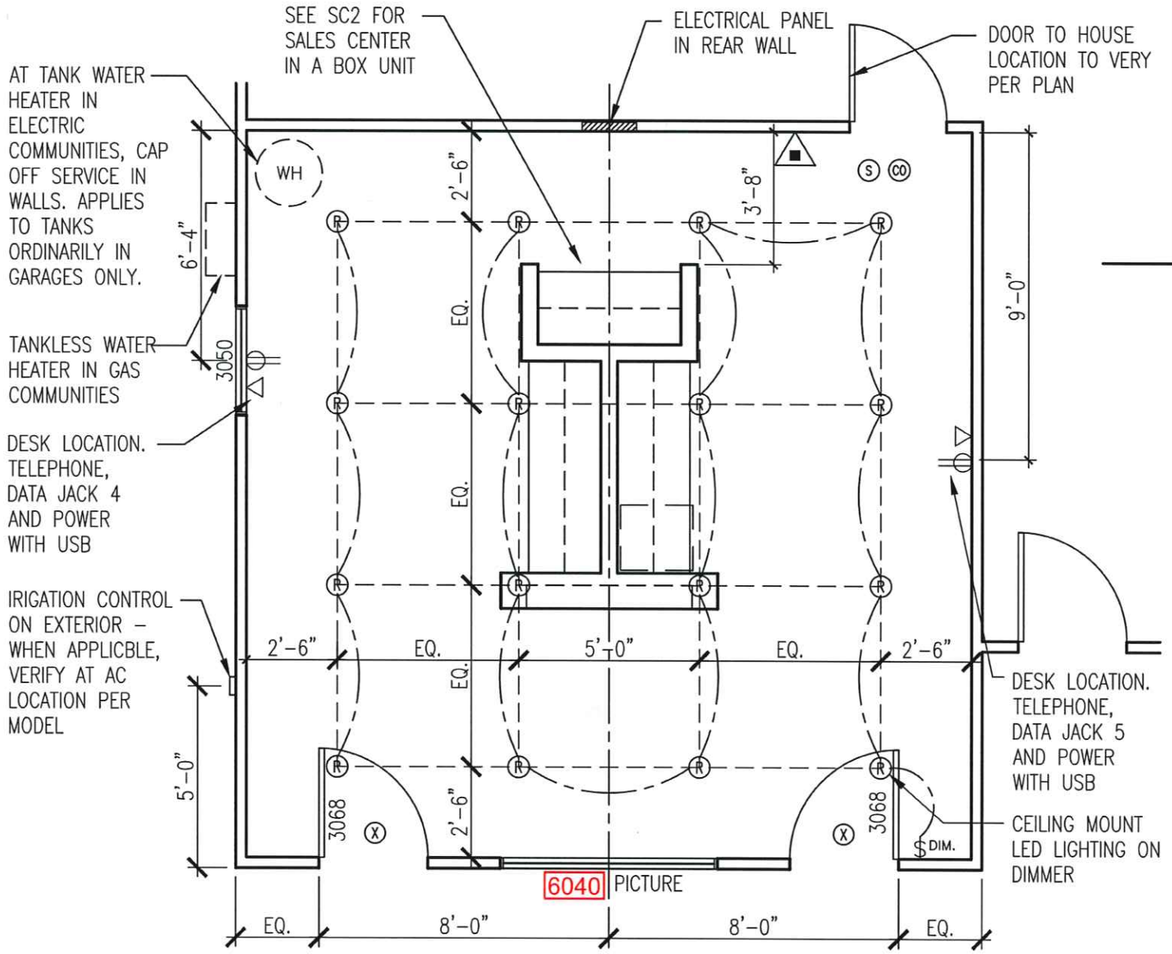
SHEET TITLE:

'HAYDEN' MONOLITHIC SLAB PLAN '4EPF-K'

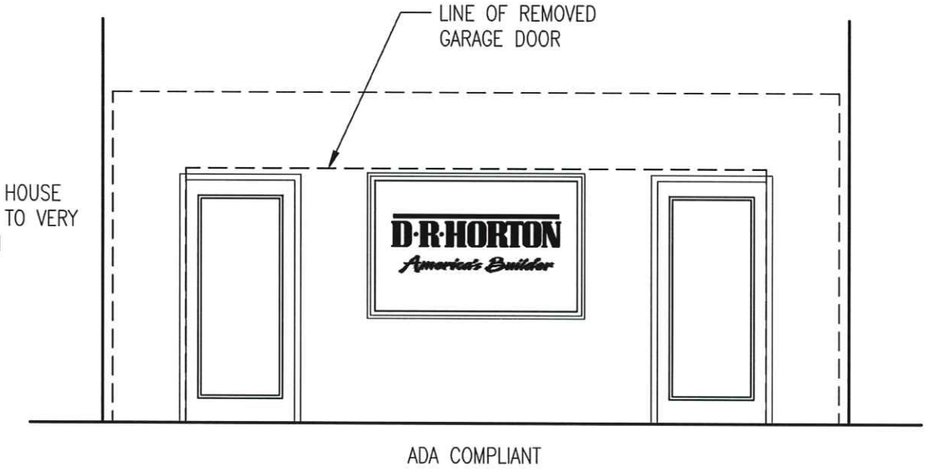
PRINT DATE: January 22, 2021

SHEET NO:

3 MS K



SALES CENTER PLAN



ADA COMPLIANT

SALES CENTER FRONT ELEVATION

$DIM.	DIMABLE SWITCH
	DUPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE
	DATA JACK
	COAXIAL JACK
X	EXIT SIGN
S	SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
R	CEILING LIGHT RECESSED
	ELECTRICAL WIRE
	FIRE EXTINGUISHER

(2) 120V 15A Curcuits
(1) CAT 6 connector for internet –run to outside of home
(1) COAX connector for internet – run to outside of home
(2) CAT 6 connectors for phones – run to outside of home

Sales Center Finishes

Flooring and Sales Center in a Box LVT
loscations: Shaw
Hampton Plus
Specs: 8 mm/ 12 mils
Installation method: Ridged Click with pad
Color: Peconrino #157

Paint:
PT–1 – Accent wall as noted – Rear Garage Wall
D R Horton and Freedom – Granite Peak (SW 6250)
Express – Kendal Green (SW 6467)
Emerald – Cityscape (SW7067)

Counter Tops:
White Fantasy Granite or Equal

Cabinets:
Grey

All Trim:
Sherwin Williams, Trim White

Ceiling:
Sherwin Williams, Ceiling White

D·R·HORTON America's Builder
1371 Dogwood Road Conyers, Ga 30012

SALES CENTER | STANDARD

APPROVAL	DATE:
DESIGNER	DATE:
GLH	

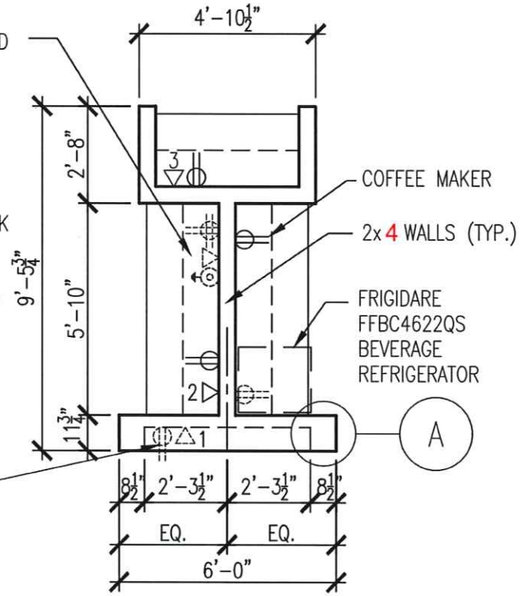
SHEET NO.
C1.1

SCALE: NONE

PRIMARY IT DEMARC AREA LOCATED INSIDE THE CABINET.

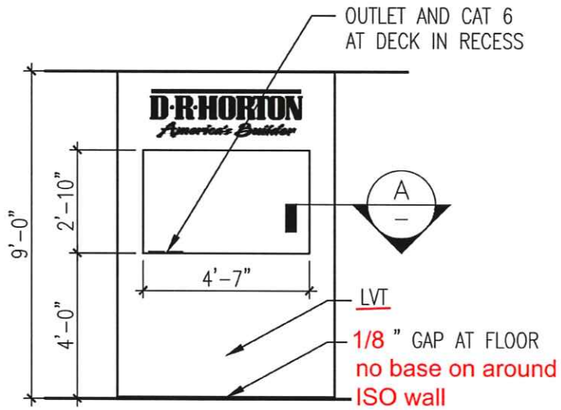
- ELECTRICAL QUAD
- CAT6 DROPS FROM OUTSIDE WITH RJ45 JACK
- COAXIAL CABLE DROP FROM OUTSIDE WITH COAXIAL JACK
- TERMINATION FOR...
  - >DATA JACK 1 ISO
  - >DATA JACK 2 DEBIT CARD READER
  - >DATA JACK 3 PRINTER
  - >DATA JACK 4 IP TELEPHONE
  - >DATA JACK 5 IP TELEPHONE

ON DECK AT BOTTOM OF RECESS FOR ISO



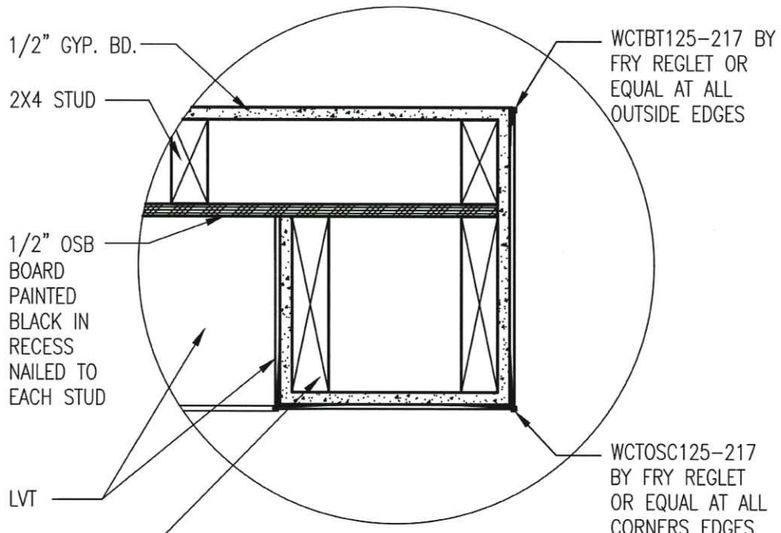
FIELD MADE
SALES CENTER IN A BOX UNIT

NOTE:
ALL DATA AND TELEPHONE LOCATIONS ARE RJ45 JACKS.

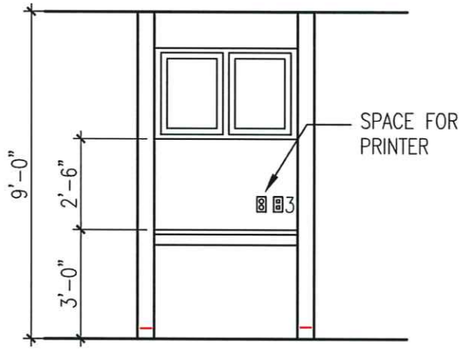


FRONT ELEVATION

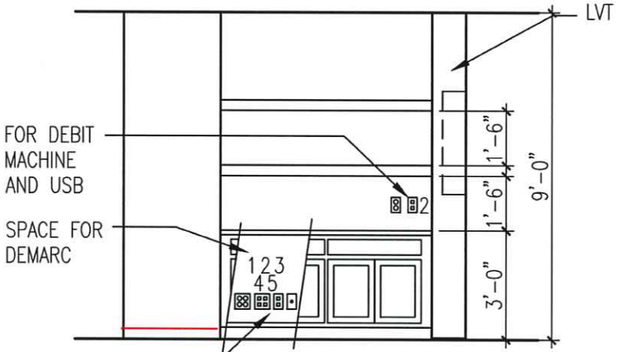
RIGHT ELEVATION



A DETAIL



REAR ELEVATION



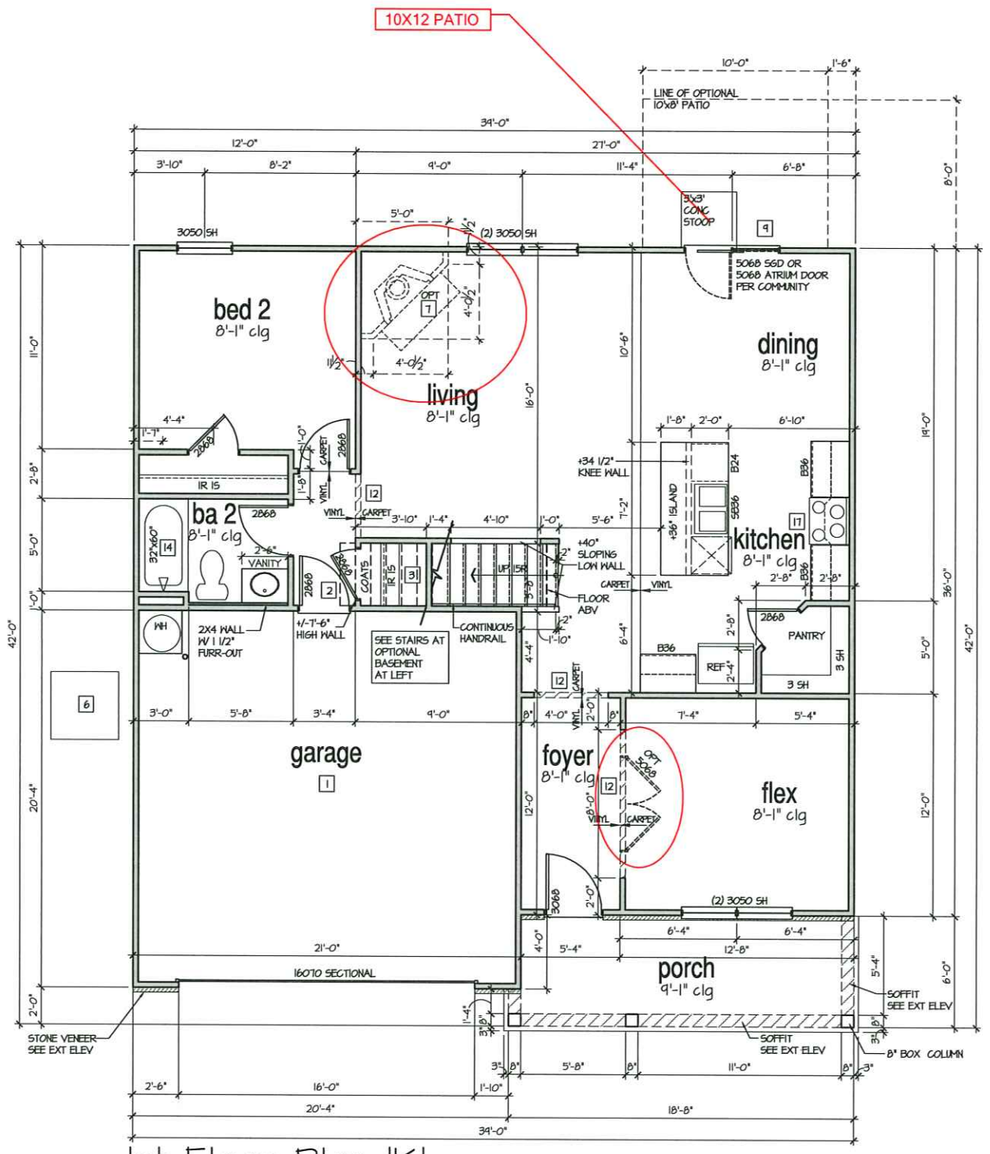
LEFT ELEVATION

D·R·HORTON America's Builder
1371 Dogwood Road Conyers, Ga 30012

SALES CENTER
STANDARD

APPROVAL	DATE:
DESIGNER	DATE:
GLH	

SHEET NO.
C1.1
SCALE: NONE



1st Floor Plan 'K'

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

8'-9 1/2" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
15 TREADS AT 10" EACH VERIFY
16 RISERS AT +/- 7.50" = 120 1/4" TOTAL RISE VERIFY

9'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
16 TREADS AT 10" EACH VERIFY
17 RISERS AT +/- 7.27" = 123 3/4" TOTAL RISE VERIFY

8'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
14 TREADS AT 10" EACH VERIFY
15 RISERS AT +/- 7.45" = 111 3/4" TOTAL RISE VERIFY

- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.
- WINDOW HEAD HEIGHTS:
  1ST FLOOR = 6'-8" 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 FOR NORTH CAROLINA:

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 TABLE R302.6.)
   GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER NCRC TABLE 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. GAS WATER HEATER ON 18" HIGH PLATFORM. (PER CHAPTER 5 NCRC-PLUMBING)
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.

TYPICALS:

9. TEMPERED SAFETY GLASS. (PER NCRC SECTION 308.4)
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.

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

Express HOMES

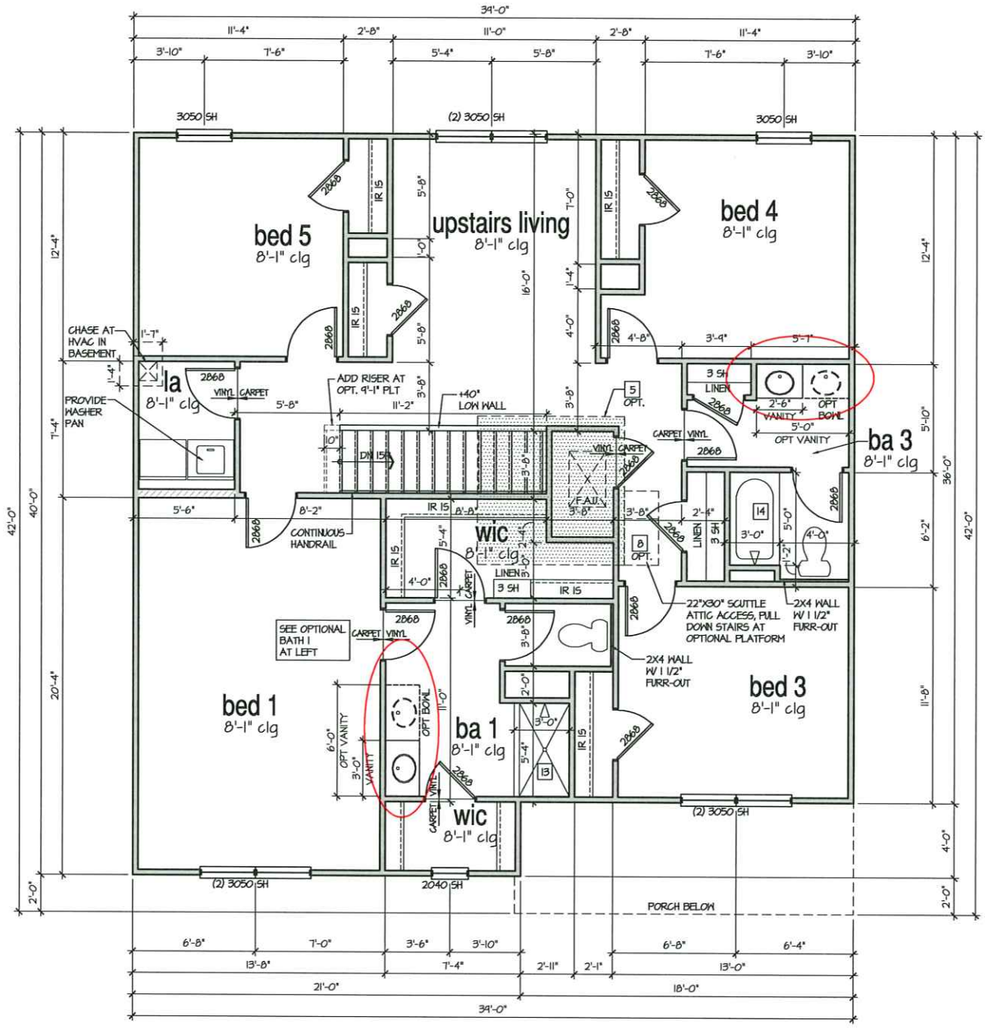
PROJECT NO: GMD17049

SHEET TITLE:

'HAYDEN'
1st FLOOR PLAN '4EPF-K'

PRINT DATE: January 22, 2021

SHEET NO: **4 K**



2nd Floor Plan 'K'

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)
16 TREADS AT 10" EACH VERIFY
17 RISERS AT +/- 7.21" = 123 3/4" TOTAL RISE VERIFY

8'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
14 TREADS AT 10" EACH VERIFY
15 RISERS AT +/- 7.45" = 111 3/4" TOTAL RISE VERIFY

- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.
- WINDOW HEAD HEIGHTS:
  1ST FLOOR = 6'-8" 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 FOR NORTH CAROLINA:

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 TABLE R302.6.)
   GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER NCRC TABLE 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

MEPS:

4. GAS WATER HEATER ON 18" HIGH PLATFORM. (PER CHAPTER 5 NCRC-PLUMBING)
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.

TYPICALS:

9. TEMPERED SAFETY GLASS. (PER NCRC SECTION 308.4)
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.

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

Express Homes

PROJECT NO: GMDI7049

SHEET TITLE:

'HAYDEN'
2nd FLOOR PLAN '4EPF-K'

PRINT DATE: January 22, 2021

SHEET NO: **5 K**

9'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
16 TREADS AT 10" EACH VERIFY
17 RISERS AT +/- 7.27" = 123 3/4" TOTAL RISE VERIFY

8'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
14 TREADS AT 10" EACH VERIFY
15 RISERS AT +/- 7.45" = 111 3/4" TOTAL RISE VERIFY

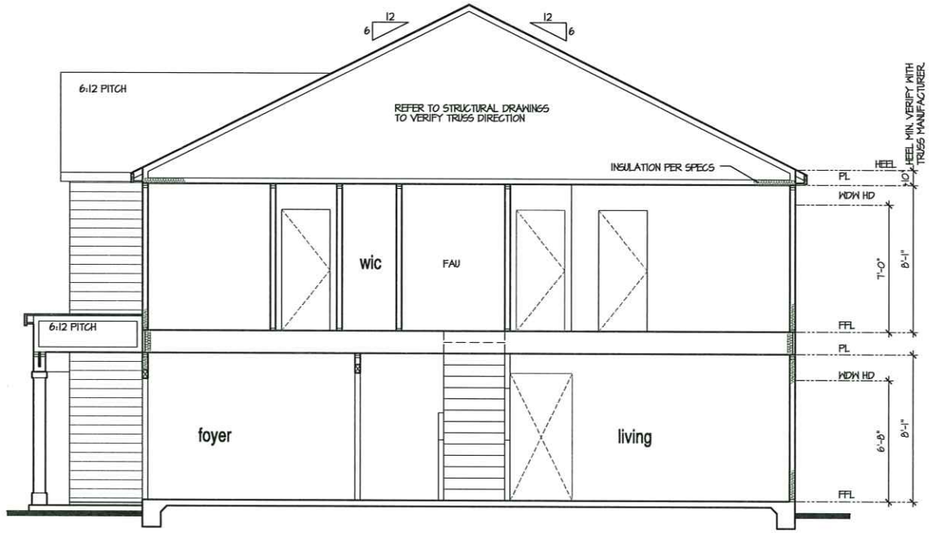
NOTES:

- 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:

EXTERIOR WALLS ZONE 3:	R-13 BATTS MINIMUM. VERIFY
EXTERIOR WALLS ZONE 4:	R-15 BATTS MINIMUM. VERIFY
CEILING WITH ATTIC ABOVE COMPRESSED INSULATION:	R-38 BATTS MINIMUM. VERIFY
CEILING WITH ATTIC ABOVE UNCOMPRESSED INSULATION (HEELS IN TRUSSES):	R-30 BATTS MINIMUM. VERIFY
FLOOR OVER GARAGE:	R-19 BATTS MINIMUM. VERIFY
ATTIC KNEEWALL:	R-19 BATTS MINIMUM. VERIFY
CRAWL SPACE FLOORING:	R-19 BATTS MINIMUM. VERIFY

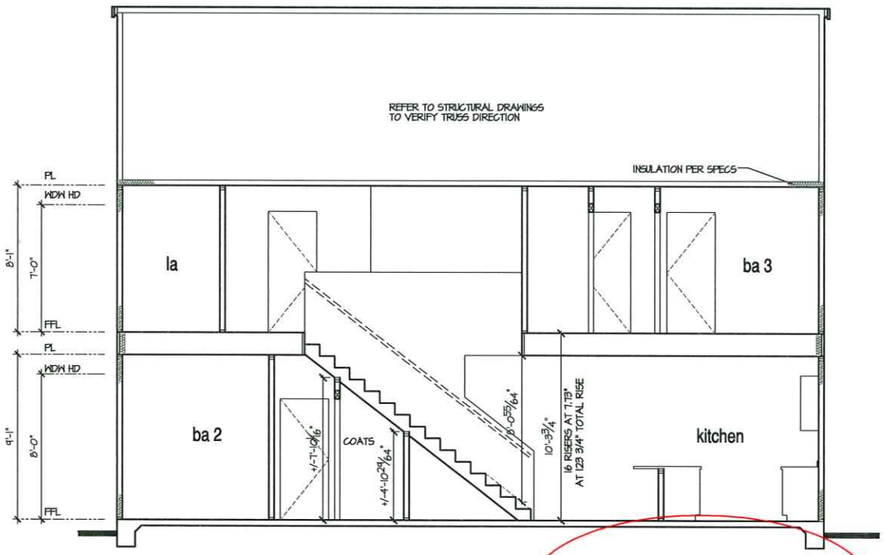
PER STATE RESIDENTIAL CODE COMPLIANCE METHOD TO BE DETERMINED BY BUILDER.

WINDOW GLAZING "U" FACTOR: 0.35



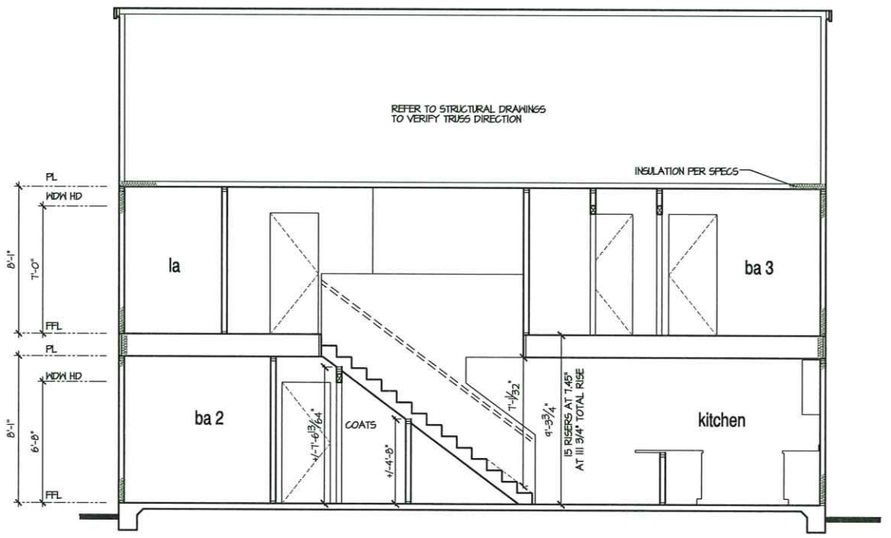
Building Section 1 at Monolithic Slab

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



Building Section 2 at Optional 9' Plt

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



Building Section 2 at Monolithic Slab

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

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:
40' Series

FOR CONSTRUCTION

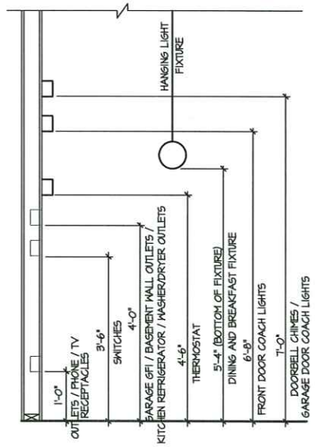
CLIENTS NAME:
Express Homes

PROJECT NO: GMDI7044

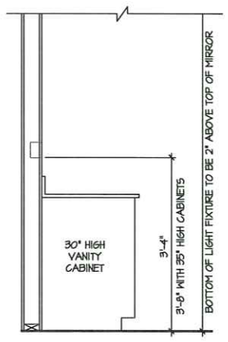
SHEET TITLE:
'HAYDEN' BUILDING SECTIONS

PRINT DATE:
January 22, 2021

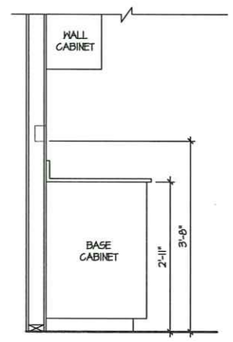
SHEET NO:
1A S



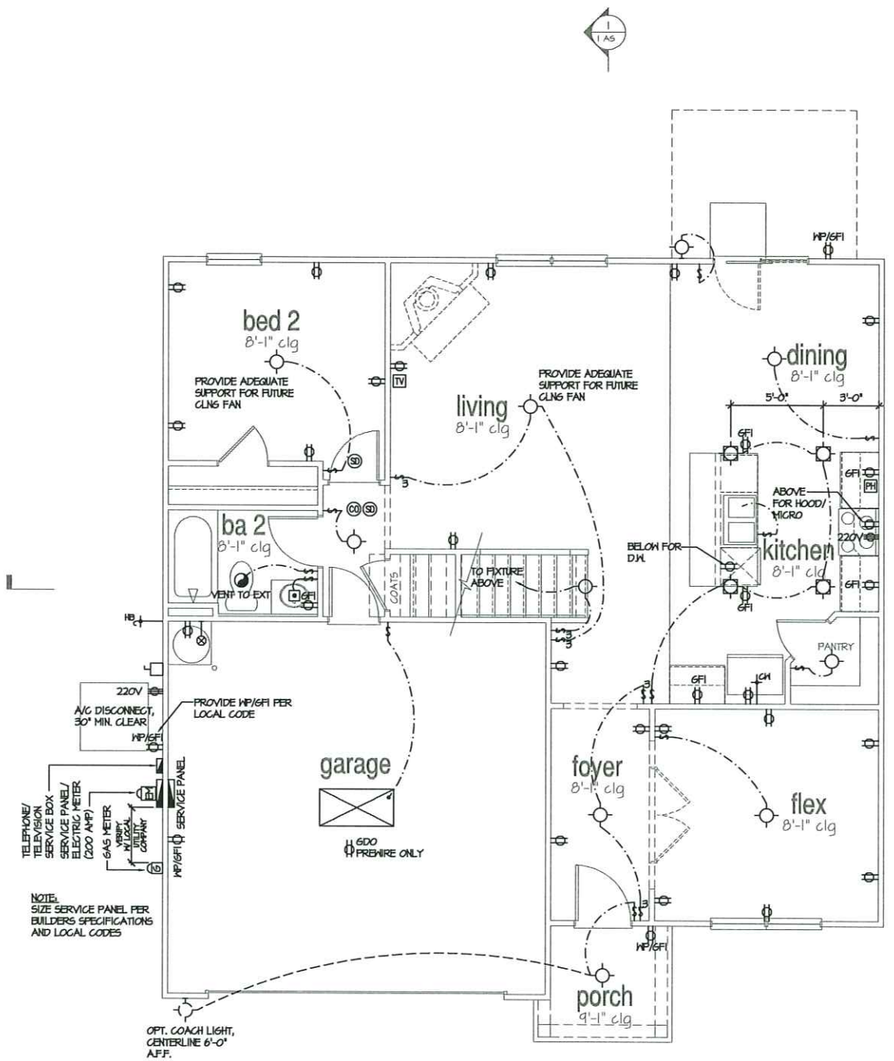
STANDARD ELECTRICAL BOX HEIGHTS



SWITCH AND RECEPTACLE BOXES OVER BATH CABINETS



SWITCH AND RECEPTACLE BOXES OVER KITCHEN CABINETS



1st Floor Plan 'A'

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

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		FLUSH-MOUNT LED CEILING FIXTURE	CH	CHIMES
HP/GFI	WEATHERPROOF GFI DUPLEX OUTLET		HANGING FIXTURE	PB	PUSHBUTTON SWITCH
GFI	GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET	GFCI	FLUSH-MOUNT LED CEILING FIXTURE (PROVIDE CEILING FAN SUPPORT)	SD	110V SMOKE DETECTOR W/ BATTERY BACKUP
	HALF-SWITCHED DUPLEX OUTLET		2-LIGHT VANITY FIXTURE	CO	CO2 DETECTOR
220V	220 VOLT OUTLET		3-LIGHT VANITY FIXTURE	T	THERMOSTAT
	REINFORCED JUNCTION BOX		4-LIGHT VANITY FIXTURE	TEL	TELEPHONE
	WALL SWITCH		WALL MOUNT FIXTURE	TV	TELEVISION
3	THREE-WAY SWITCH		EXHAUST FAN (VENT TO EXTERIOR)		ELECTRIC METER
4	FOUR-WAY SWITCH				ELECTRIC PANEL
					DISCONNECT SWITCH
					CEILING FAN (PROVIDE ADEQUATE SUPPORT)
				GAS	GAS SUPPLY WITH VALVE
				HB	HOSE BIBB
				CH	1/4" WATER STUB OUT
					WALL SCONCE

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

Express HOMES

PROJECT NO: GMDI7049

SHEET TITLE:

'HAYDEN'

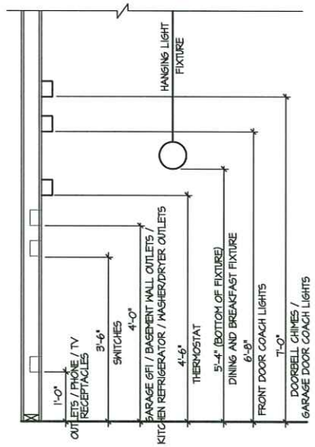
1st FLOOR UTILITY PLAN

PRINT DATE:

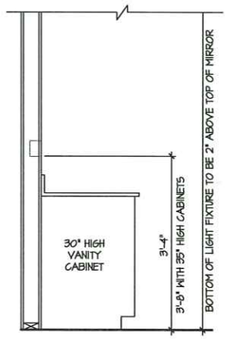
January 22, 2021

SHEET NO:

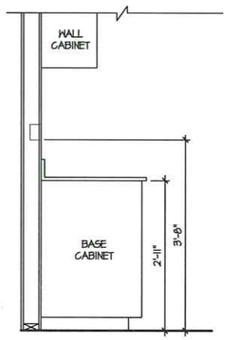
7



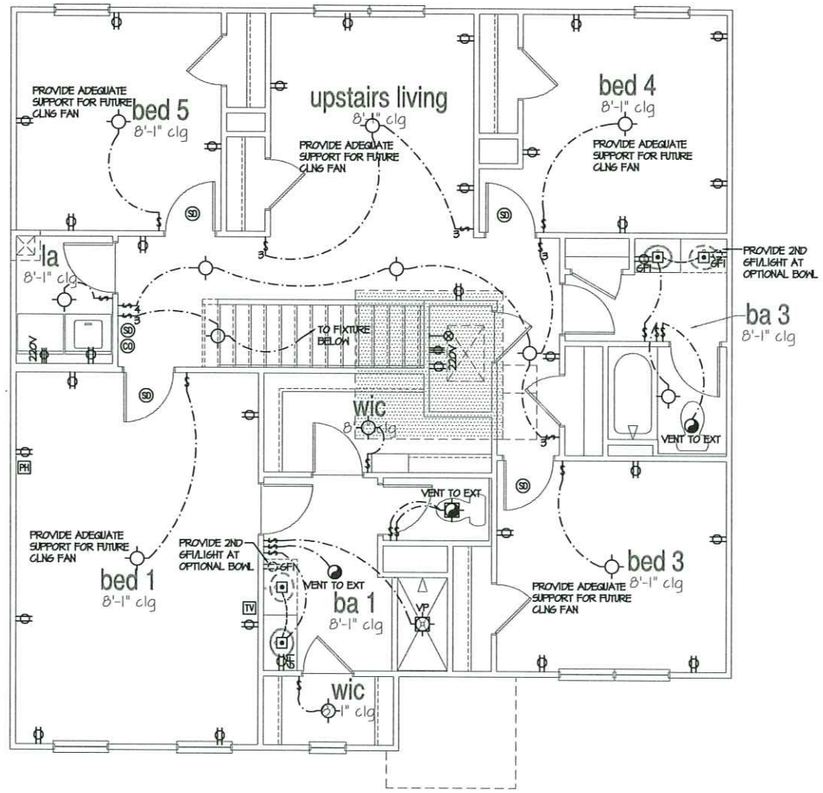
STANDARD ELECTRICAL BOX HEIGHTS



SWITCH AND RECEPTACLE BOXES OVER BATH CABINETS



SWITCH AND RECEPTACLE BOXES OVER KITCHEN CABINETS



2nd Floor Plan 'A'

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

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.
- FANLIGHTS 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		FLUSH-MOUNT LED CEILING FIXTURE		CHIMES
WP/GFI	WEATHERPROOF GFI DUPLEX OUTLET		HANGING FIXTURE		PUSHBUTTON SWITCH
GFI	GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET	CFP	FLUSH-MOUNT LED CEILING FIXTURE (PROVIDE CEILING FAN SUPPORT)	SD	110V SMOKE DETECTOR W/ BATTERY BACKUP
	HALF-SWITCHED DUPLEX OUTLET		2-LIGHT VANITY FIXTURE	CD	CO2 DETECTOR
220V	220 VOLT OUTLET		3-LIGHT VANITY FIXTURE	T	THERMOSTAT
	REINFORCED JUNCTION BOX		4-LIGHT VANITY FIXTURE	PH	TELEPHONE
	WALL SWITCH		WALL MOUNT FIXTURE	TV	TELEVISION
3	THREE-WAY SWITCH		EXHAUST FAN (VENT TO EXTERIOR)		ELECTRIC METER
4	FOUR-WAY SWITCH				ELECTRIC PANEL
					DISCONNECT SWITCH
					CEILING FAN (PROVIDE ADEQUATE SUPPORT)
				HB	GAS SUPPLY WITH VALVE
				CH	HOSE BIBB
					1/4" WATER STUB OUT
					WALL SCONCE

NO:	DATE:	REVISION:
1	04.15.21	

PROFESSIONAL SEAL:

PROJECT TITLE:

40' Series

FOR CONSTRUCTION

CLIENTS NAME:

Express HOMES

PROJECT NO: GMDI7049

SHEET TITLE:

'HAYDEN'

2nd FLOOR UTILITY PLAN

PRINT DATE:

January 22, 2021

SHEET NO:

8

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 Design Wind Speed (3 sec. gust) _____ 130 MPH
   - 6.1. Exposure _____ B
   - 6.2. Importance Factor _____ 1.0
   - 6.3. Wind Base Shear
     - 6.3.1 Vx =
     - 6.3.2 Vy =
7. Component and Cladding (in PSF)

MEAN ROOF HT.	UP TO 30'	30'1"-35'	35'1"-40'	40'1"-45'
ZONE 1	16.1,-18.0	17.6,-18.9	18.3,-19.7	18.8,-20.2
ZONE 2	16.1,-21.0	17.6,-22.1	18.3,-22.9	18.8,-23.6
ZONE 3	16.1,-21.0	17.6,-22.1	18.3,-22.9	18.8,-23.6
ZONE 4	18.2,-19.0	19.2,-20.0	19.9,-20.8	20.4,-21.3
ZONE 5	18.2,-24.0	19.2,-25.2	19.9,-26.2	20.4,-26.9

8. Seismic
   - 8.1. Site Class _____ D
   - 8.2. Design Category _____ C
   - 8.3. Importance Factor _____ 1.0
   - 8.4. Seismic Use Group _____ I
   - 8.5. Spectral Response Acceleration
     - 8.5.1 Sms = %g
     - 8.5.2 Sm1 = %g
   - 8.6. Seismic Base Shear
     - 8.6.1 Vx =
     - 8.6.2 Vy =
   - 8.7. Basic Structural System (check one)
     - ☒ Bearing Wall
     - ☐ Building Frame
     - ☐ Moment Frame
     - ☐ Dual w/ Special Moment Frame
     - ☐ Dual w/ Intermediate R/C or Special Steel
     - ☐ Inverted Pendulum
   - 8.8. Arch/Mech Components Anchored _____ No
   - 8.9. Lateral Design Control: Seismic ☐ Wind ☒
9. Assumed Soil Bearing Capacity _____ 2000psf

summit
engineering laboratory testing

HAYDEN

PROJECT ADDRESS:
TBD

OWNER:
DR Horton, Inc.
8001 Arcuridge Blvd.
Charlotte, NC 28213

DESIGNER:
GMD Design Group
102 Fountain Brook Circle
Suite C
Cary, NC 27511

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

PLAN ABBREVIATIONS:

AB	ANCHOR BOLT	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 SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) 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 SUMMIT immediately.

SHEET LIST:

REVISION LIST:

Revision No.	Date	Project No.	Description
1	4.13.21	T0117	Updated elevation names
			Added Stem Wall, Crawlspace, and Basement Foundations

DR HORTON PROJECT SIGN-OFF:

Manager	Signature
Operations	
Operations System	
Operations Product Development	

summit
engineering laboratory testing
3070 HAMMOND BUSINESS PLACE, SUITE 171
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering Laboratory & Testing, Inc.
No. F-1454

DR Horton, Inc.
8001 Arcuridge Blvd.
Charlotte, NC 28213

Hayden LH
Coversheet

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046048 BRIAN C. PHILBRICK JR
STRUCTURAL MEMBERS ONLY

DATE: 4.20.21
SCALE: 22x34 1/4"=1'-0"
8x11 1/8"=1'-0"
PROJECT #: 190-0005, 22005
DRAWN BY: JCP
CHECKED BY: BCP

22005 8/8/18

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
CS1

GENERAL STRUCTURAL NOTES:

1. The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
4. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
5. Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the International residential code.
8. This structure and all construction shall conform to all applicable sections of 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 (WWF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WWF 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 C116, any local building code requirements, and shall meet or exceed the current industry standard.
5. Steel reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
6. Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 315: "Manual of Standard Practice for Detailing Concrete Structures"
7. Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
8. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.
9. Where reinforcing dowels are required , they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

1. Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Southern-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. Fb = 2600 psi
   - 2.3. Fv = 285 psi
   - 2.4. Fc = 700 psi
3. Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA standard C-2
4. Nails shall be common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
6. All beams shall have full bearing on supporting framing members unless otherwise noted.
7. Exterior and load bearing stud walls are to be 2x4 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. Four and five ply beams shall be bolted together with (1) row of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise.

WOOD TRUSSES:

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

EXTERIOR WOOD FRAMED DECKS:

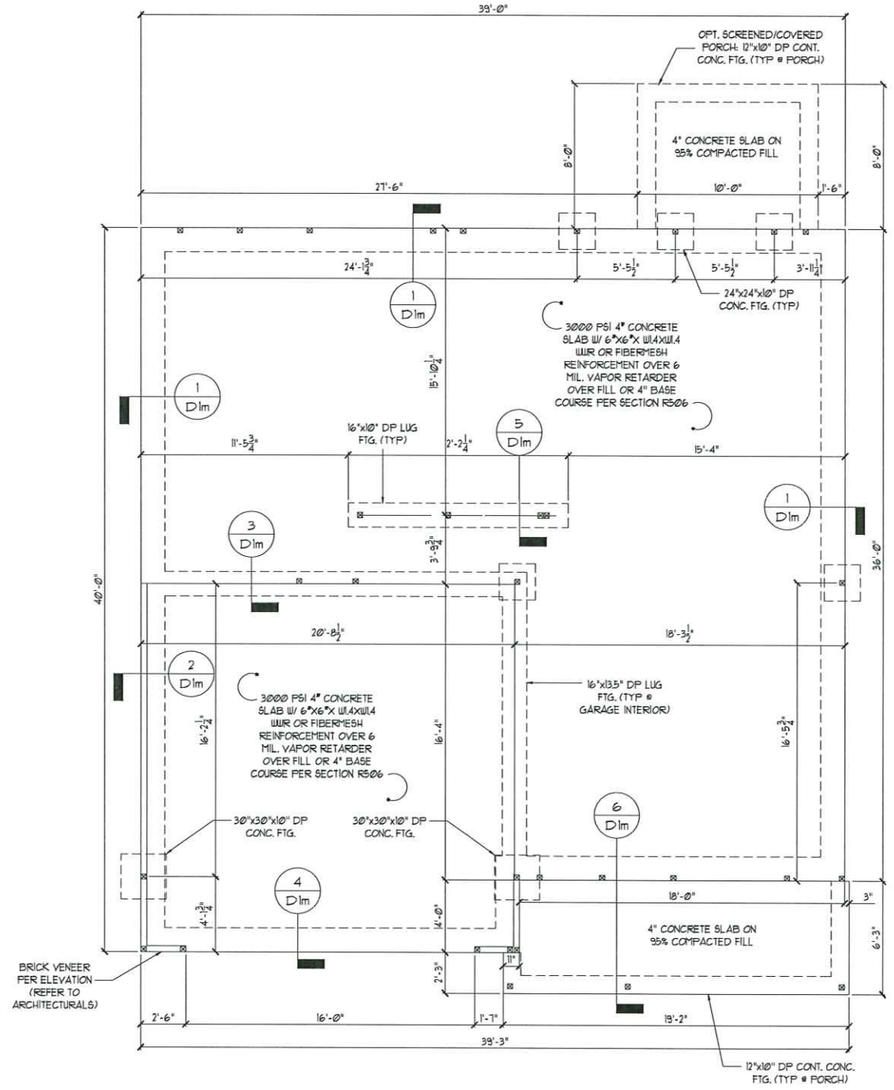
1. Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

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.

STRUCTURAL FIBERBOARD PANELS:

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



ELEVATION B.F.K

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

MONOLITHIC SLAB FOUNDATION PLAN

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

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SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

DR Horton, Inc.
8601 Arrowridge Blvd.
Charlotte, NC 28273

Hayden LH

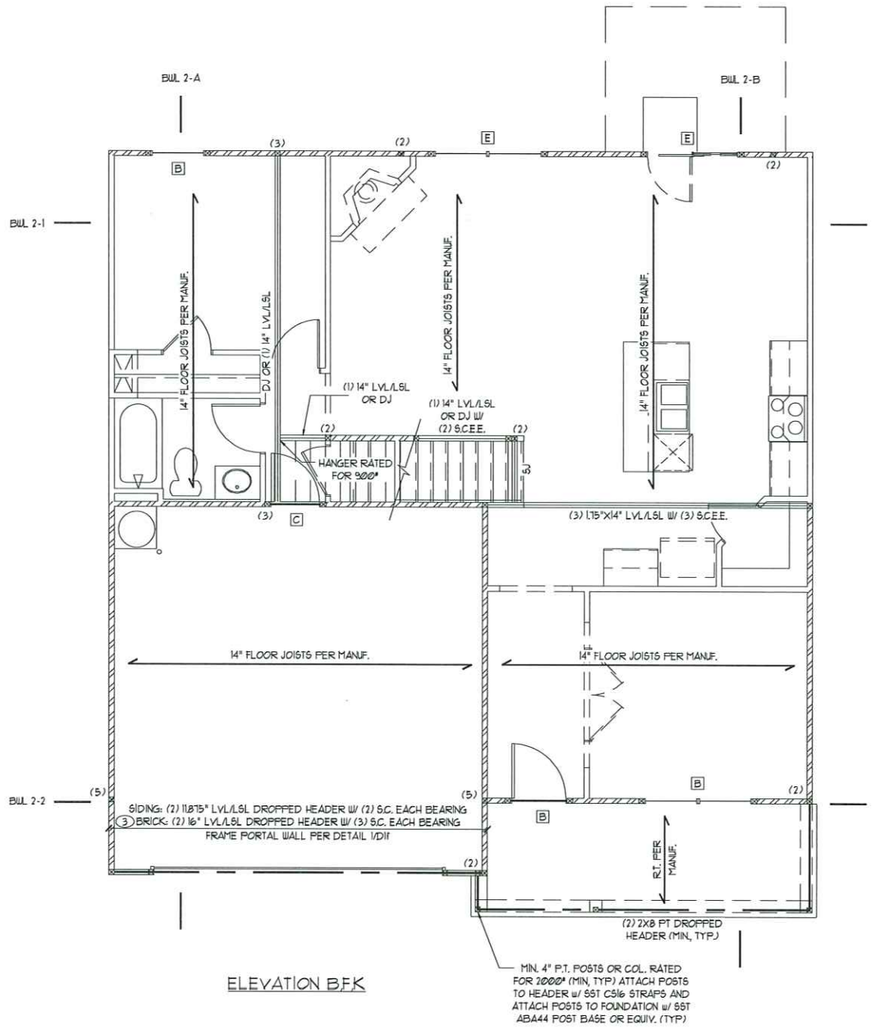
Monolithic Slab Foundation

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046048 BRIAN C. PHILBRICK, JR.
STRUCTURAL MEMBERS ONLY

DATE: 4/28/20
SCALE: 3/64" = 1'-0" 3/41" = 1'-0"
PROJECT #: 19-2949, 2949A
DRAWN BY: JCEP
CHECKED BY: BCP

2/28/19 B/B/19
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S1.1m



ELEVATION B.F.K

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR FRAMING PLAN

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

FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
BUL 1-1	11.6	24.8
BUL 1-2	11.6	15.0
BUL 1-A	11.3	40.0
BUL 1-B	11.3	36.0

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No. F-1454

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Charlotte, NC 28273

Hayden LH

First Floor Framing Plan

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
SEAL 046048
BRIAN C. PHILBRICK, JR.
12/2/22

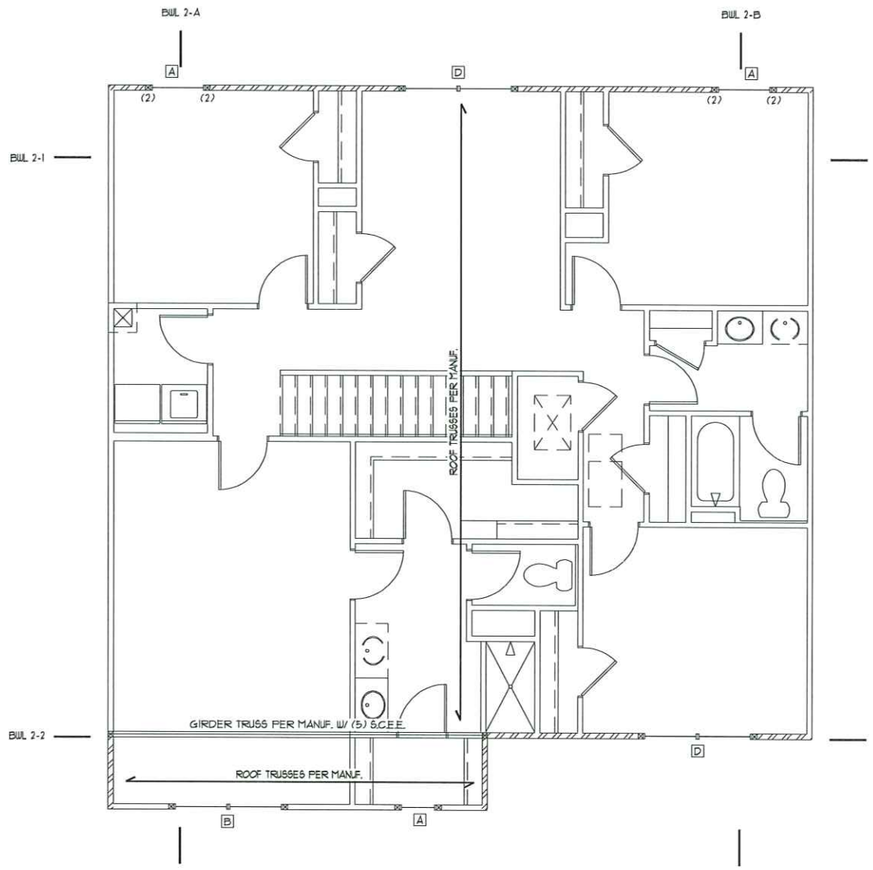
STRUCTURAL MEMBERS ONLY

DATE: 4/2022
SCALE: 22x34 1/4"=1'-0"
11x17 1/8"=1'-0"
PROJECT #: 202-2565, 22005
DRAWN BY: JCEP
CHECKED BY: BCP

2205 8/8/22

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

S3.1



ELEVATION B.F.K.

STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR FRAMING PLAN

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

SECOND FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
BWL 2-1	6.0	27.0
BWL 2-2	6.0	25.0
BWL 2-A	5.8	40.0
BWL 2-B	5.8	36.0

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No. F-1454

DR Horton, Inc.
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Charlotte, NC 28273

Hayden LH

Second Floor Framing Plan

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046048 BRIAN C. PHILBRICK, JR. 11/21/22
STRUCTURAL MEMBERS ONLY

DATE: 4/28/22
SCALE: 22x34 1/4"=1'-0"
8x11 1/8"=1'-0"
PROJECT #: 19-0149-2019/S
DRAWN BY: JCP
CHECKED BY: BCP

2/28/19 B-BWB

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S4.1

TRUSS UPLIFT CONNECTOR SCHEDULE			
MAX. UPLIFT	ROOF TO WALL	FLOOR TO FLOOR	FLOOR TO FND
600 LBS	H2.5A	PER WALL SHEATHING & FASTENERS	
1200 LBS	(2) H2.5A	CS16 (END = 11")	DTT2Z
1450 LBS	HTS20	CS16 (END = 11")	DTT2Z
2000 LBS	(2) HTS20	(2) CS16 (END = 11")	DTT2Z
2300 LBS	(2) HTS20	(2) CS16 (END = 11")	HTT4
3685 LBS	LGT3-SDS25	MSTC52	HTT4

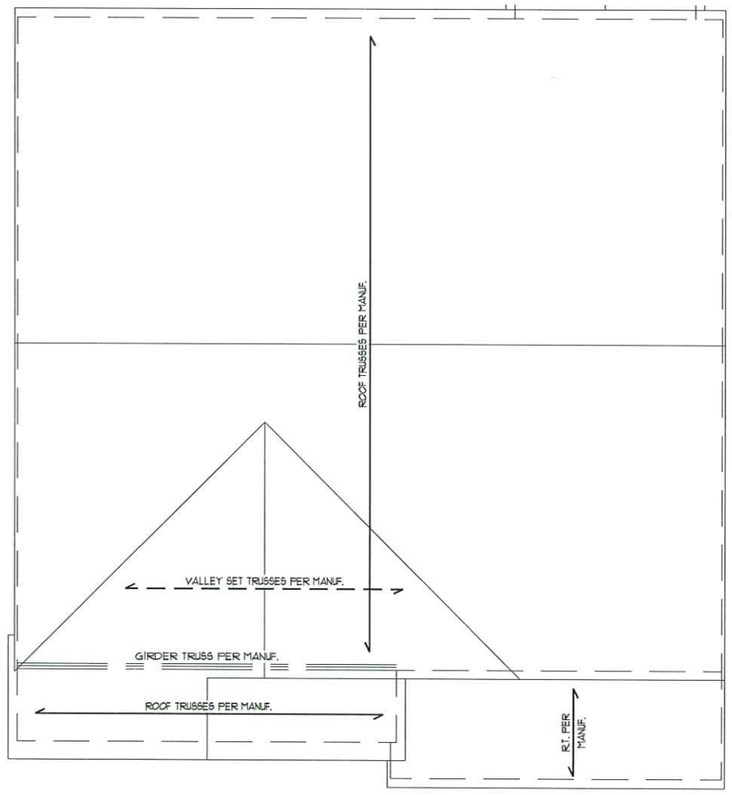
1. ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIVALENT PRODUCTS MAY BE USED PER MANUFACTURER'S SPECIFICATIONS.
2. UPLIFT VALUES LISTED ARE FOR SYP #2 GRADE MEMBERS.
3. REFER TO TRUSS LAYOUT PER MANUF. FOR UPLIFT VALUES AND TRUSS TO TRUSS CONNECTIONS. CONNECTORS SPECIFIED BY TRUSS MANUFACTURER OVERRIDE THOSE LISTED ABOVE.
4. CONTACT SUMMIT FOR REQUIRED CONNECTORS WHEN LOADS EXCEED THOSE LISTED ABOVE.

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

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

REFER TO DETAIL 5/D3F FOR EYEBROW, RETURN OR SHED ROOF FRAMING REQUIREMENTS. (TYP FOR ROOFS PROTRUDING MAXIMUM 24" FROM STRUCTURE)

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



ELEVATION B.F.K

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 1/22/21. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

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

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Charlotte, NC 28273

Hayden LH

Roof Framing Plan

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046048 BRIAN C. PHILBRICK, JR. 1/22/21
STRUCTURAL MEMBERS ONLY

DATE: 4/28/20
SCALE: 22x34 1/4"=1'-0"
11x17 1/8"=1'-0"
PROJECT #: 20-0428.20005
DRAWN BY: JCP
CHECKED BY: BCP

2/26/21 B/S/S

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S5.1

DESIGN SPECIFICATIONS:

Construction Type: Comerical ☐ 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
   - 6.1. Exposure ____ B
   - 6.2. Importance Factor ____ 1.0
   - 6.3. Wind Base Shear
     - 6.3.1. Vx =
     - 6.3.2. Vy =
7. Component and Cladding (in PSF)

MEAN ROOF HT.	UP TO 30'	30'1"-35'	35'1"-40'	40'1"-45'
ZONE 1	16.1,-18.0	17.5,-18.9	18.2,-19.6	18.7,-20.2
ZONE 2	16.1,-21.0	17.5,-22.1	18.2,-22.9	18.7,-23.5
ZONE 3	16.1,-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

8. Seismic
   - 8.1. Site Class ____ D
   - 8.2. Design Category ____ C
   - 8.3. Importance Factor ____ 1.0
   - 8.4. Seismic Use Group ____ I
   - 8.5. Spectral Response Acceleration
     - 8.5.1. Sms = %g
     - 8.5.2. Sm1 = %g
   - 8.6. Seismic Base Shear
     - 8.6.1. Vx =
     - 8.6.2. Vy =
   - 8.7. Basic Structural System (check one)
     - ☒ Bearing Wall
     - ☐ Building Frame
     - ☐ Moment Frame
     - ☐ Dual w/ Special Moment Frame
     - ☐ Dual w/ Intermediate R/C or Special Steel
     - ☐ Inverted Pendulum
   - 8.8. Arch/Mech Components Anchored ____ No
   - 8.9. Lateral Design Control: Seismic ☐ Wind ☒
9. Assumed Soil Bearing Capacity ____ 2000psf

SUMMIT
ENGINEERING LABORATORY TESTING

STRUCTURAL PLANS PREPARED FOR:

STANDARD DETAILS

PROJECT ADDRESS:
TBD

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

ARCHITECT/DESIGNER:

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

PLAN ABBREVIATIONS:

AB	ANCHOR BOLT	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 SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) 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 SUMMIT immediately.

SHEET LIST:

REVISION LIST:

Revision No.	Date	Project No.	Description
1	5.11.17		Added box bay detail (7/D7). 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	2.19.18		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	3.22.19		Added tall turndown detail

DR HORTON PROJECT SIGN-OFF:

Manager	Signature
Operations	
Operations System	
Operations Product Development	

SUMMIT
ENGINEERING LABORATORY TESTING
120 PENMARC DR., SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
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NORTH CAROLINA CERTIFICATE OF LICENSURE
SUMMIT Engineering, Laboratory & Testing, P.C.
C-4361

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

PROJECT:
Standard Details
Coversheet

NORTH CAROLINA PROFESSIONAL SEAL 043923 ENGINEER WESLEY A. JONES
STRUCTURAL MEMBERS ONLY

DRAWN
DATE: 3/5/19
SCALE: 1/4"=1'-0" 3/4"=1'-0"
PROJECT #: PUMP1-HR
DRAWN BY: LAS
CHECKED BY: WAJ

ORIGINAL INFORMATION
PROJECT # DATE 1/15/2017

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 SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
4. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
5. Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the international residential code.
8. This structure and all construction shall conform to all applicable sections of 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 (WWF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WWF. 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 splices.
8. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.
9. Where reinforcing dowels are required , they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

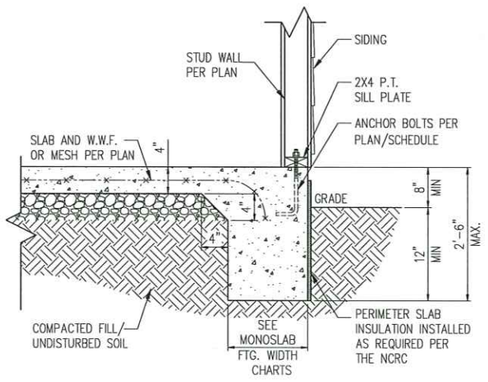
WOOD FRAMING:
1. Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Spruce-Yellow-Pine (SYP) #2.
2. LVL or PSL engineered 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 B182.1-1981. 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 @ 16" O.C. 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.

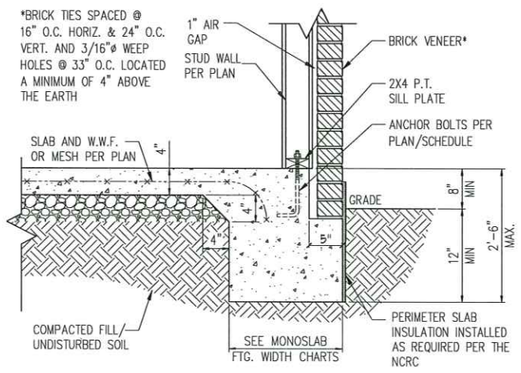
EXTERIOR WOOD FRAMED DECKS:
1. Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

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.

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

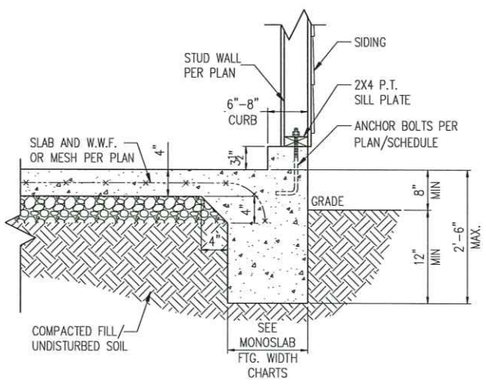


STANDARD – SIDING



STANDARD – BRICK

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



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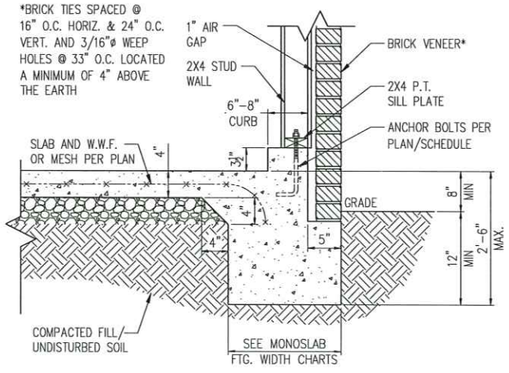
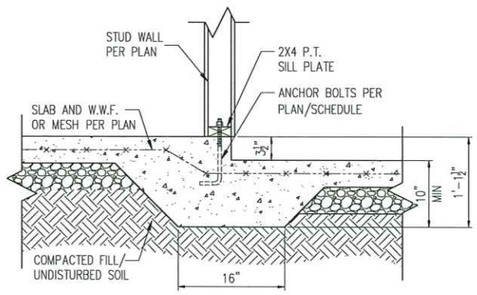
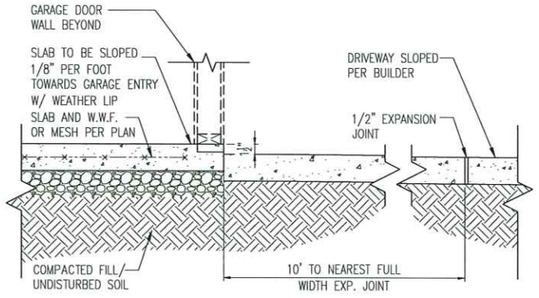


STANDARD – BRICK

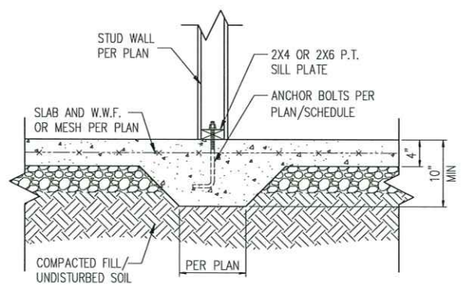
2 D1m TYP. GARAGE CURB DETAIL
N.T.S



3 D1m STEP IN GARAGE
N.T.S.



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



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

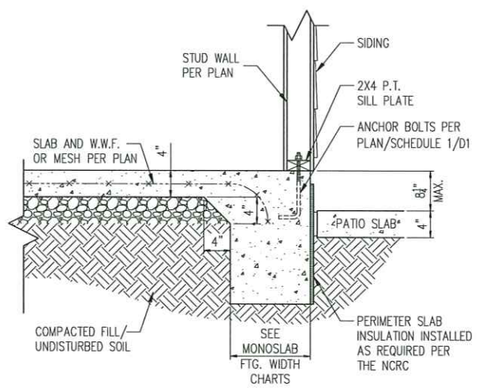
MONOLITHIC FOOTING WIDTH

# 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			

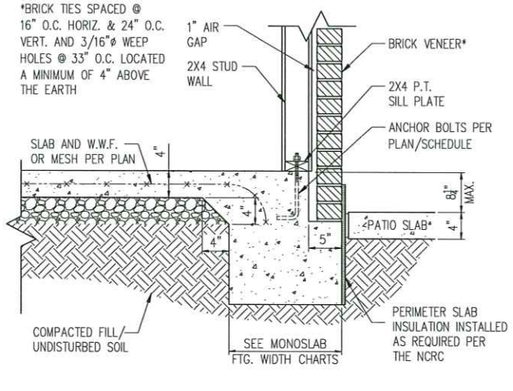
WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	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
HILTI KWIK BOLT KBI 1/2–2–3/4	2–1/4"	6'–0"	YES	NO
1/2"ø HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'–0"	YES	YES

NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.



STANDARD – SIDING



STANDARD – BRICK

6 D1m PATIO SLAB DETAIL
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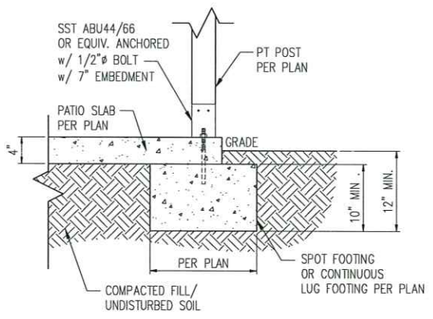

6A D1m COVERED PATIO DETAIL
N.T.S.

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

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

CLIENT:
DR Horton Carolina Division
9807 Ameridge Blvd.
Charlotte, NC 28213

PROJECT:
Standard Details

Monolithic Slab Foundation Details

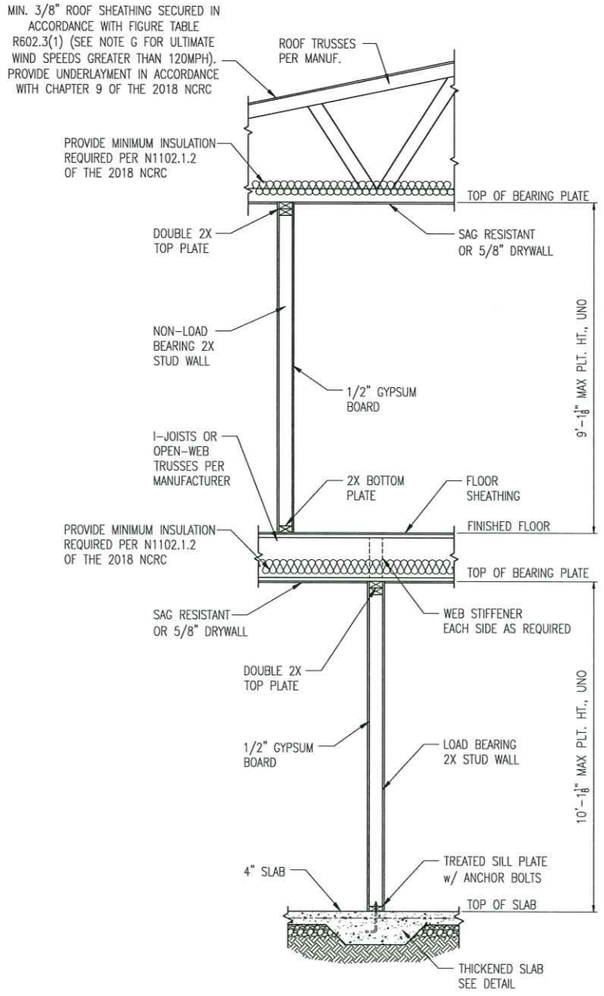
NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES
STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 3/2/20
SCALE: 22x34 1/4"=1'-0" 1x1 1/2"=1'-0"
PROJECT #: P-19971-HIR
DRAWN BY: LAG
CHECKED BY: WAJ

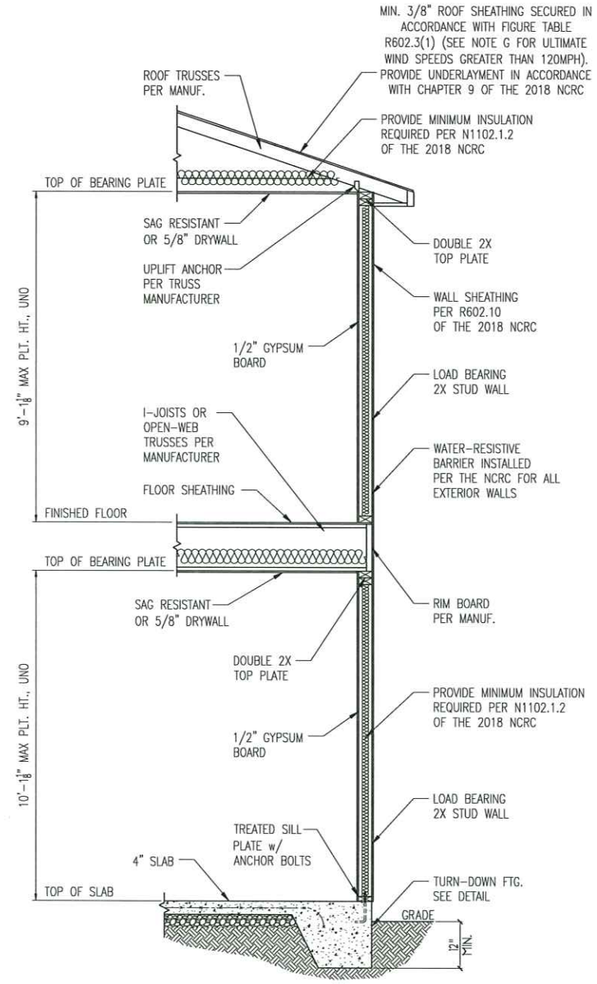
ORIGINAL INFORMATION
PROJECT # DATE 1/31/2011

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D1m

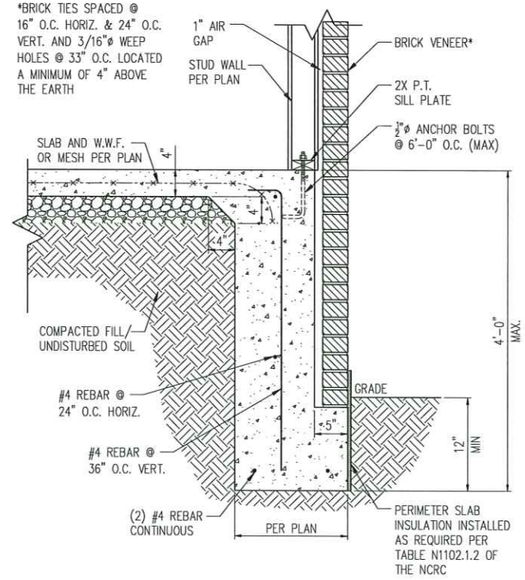


1 D2m TYP. INTERIOR LOAD BEARING WALL SECTION
N.T.S.



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
N.T.S.

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

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NORTH CAROLINA CERTIFICATE OF LICENSURE C-4361

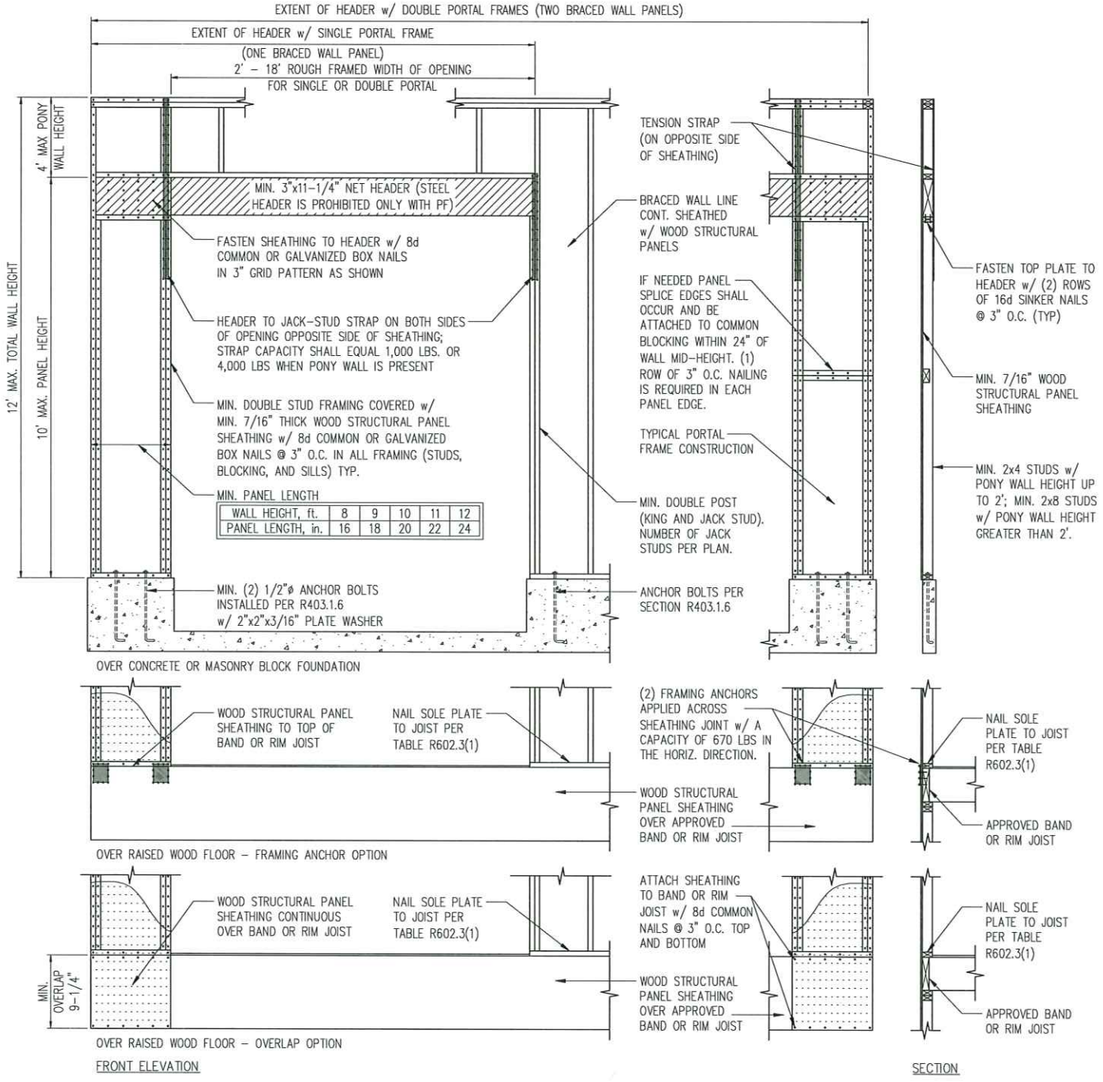
CLIENT:
DR Horton Carolina Division
9801 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Standard Details
Monolithic Slab Foundation Details

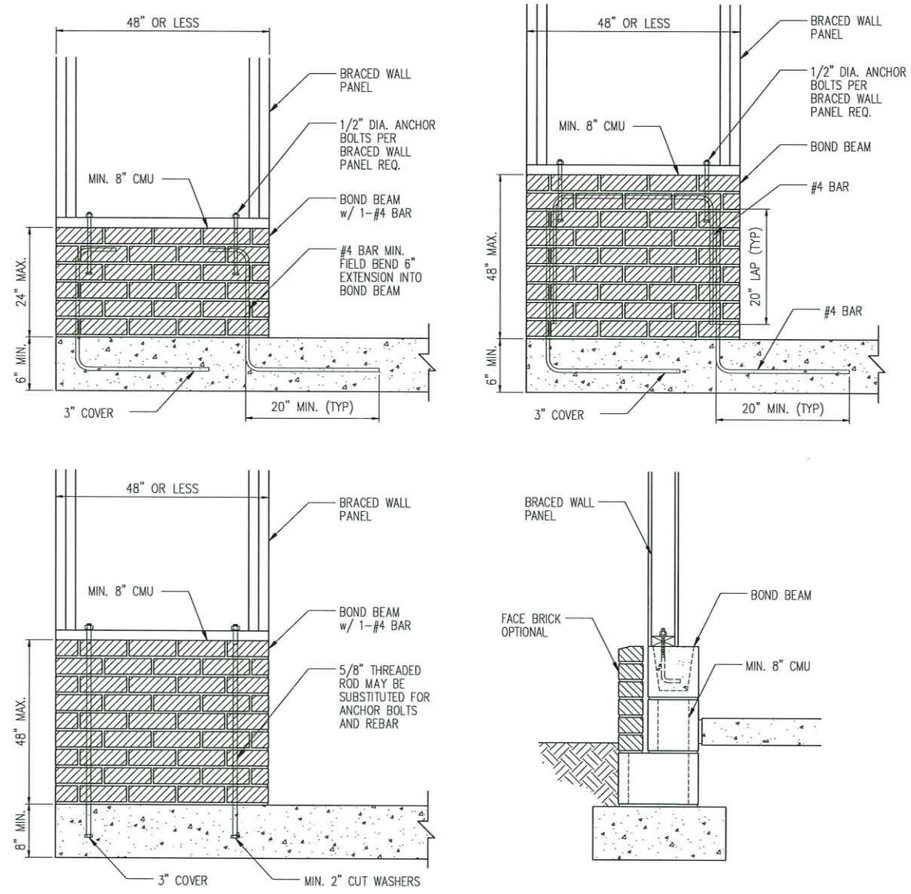
NORTH CAROLINA PROFESSIONAL SEAL 049823 ENGINEER WESLEY A. JONES
STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 3/1/22
SCALE: 22x34 1/4"=1'-0" 8x11 1/8"=1'-0"
PROJECT #: P-2021-1121
DRAWN BY: LAS
CHECKED BY: WAJ
ORIGINAL INFORMATION
PROJECT # DATE 1/30/2021
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D2m



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

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C-4361

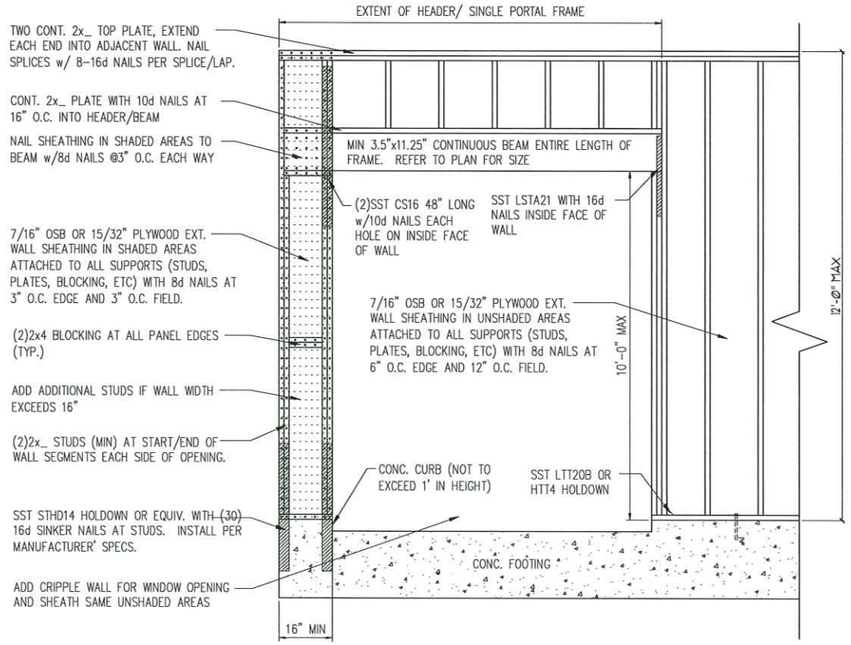
CLIENT:
DR Horton Carolina Division
8601 Arrowridge Blvd.
Charlotte, NC 28273

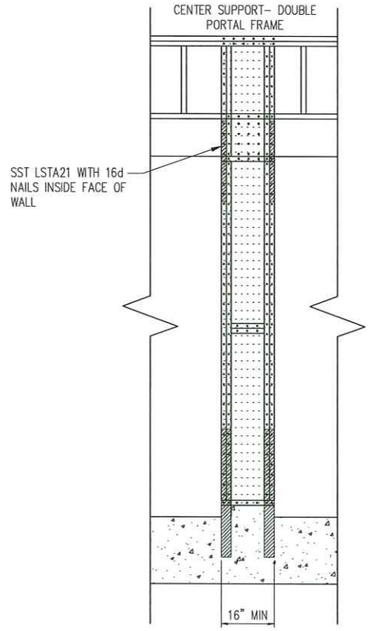
PROJECT:
Standard Details
Framing Details

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049823 WESLEY A. JONES
STRUCTURAL MEMBERS ONLY

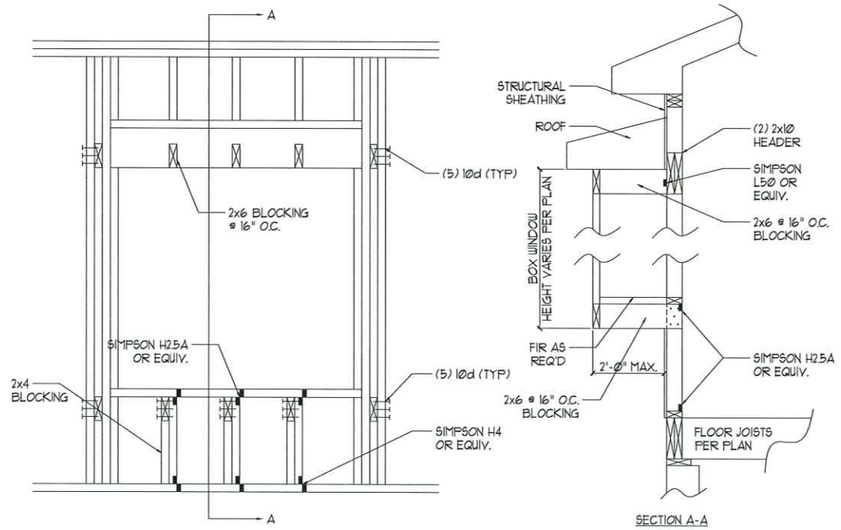
DRAWING
DATE: 1/1/20
SCALE: 22x34 1/4"=1'-0"
8x11 1/8"=1'-0"
PROJECT #: P-1587-18R
DRAWN BY: LAS
CHECKED BY: WAJ
ORIGINAL INFORMATION
PROJECT # DATE 1/30/2017
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D1f

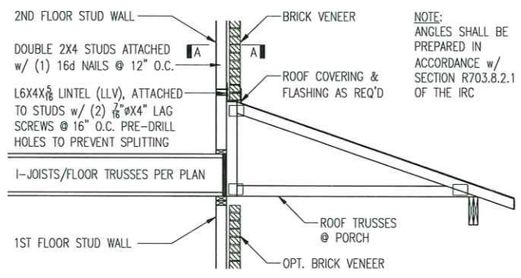




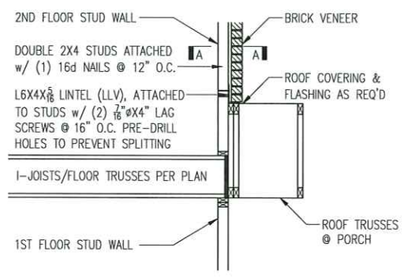
1 D2f METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS
3/4" = 1'-0"



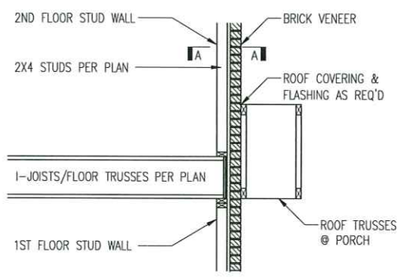
2 D2f BOX WINDOW DETAIL
N.T.S



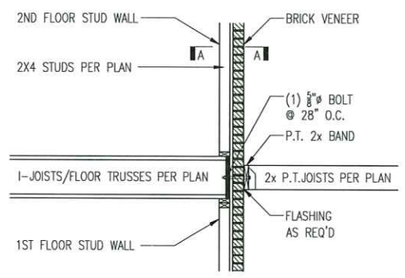
TRUSSES PERPENDICULAR TO STUD WALL



TRUSSES PARALLEL TO STUD WALL

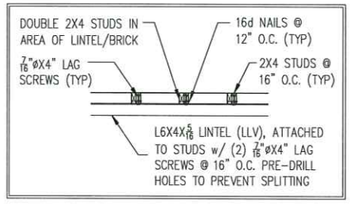


TRUSSES PARALLEL TO STUD WALL w/ CONTINUOUS BRICK VENEER



4 D2f BALCONY JOIST ATTACHMENT
NTS

3 D2f BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL
NTS



SECTION A-A
NTS

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C-4361

CLIENT:
D.R. Horton Carolina Division
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Charlotte, NC 28273

PROJECT:
Standard Details
Framing Details

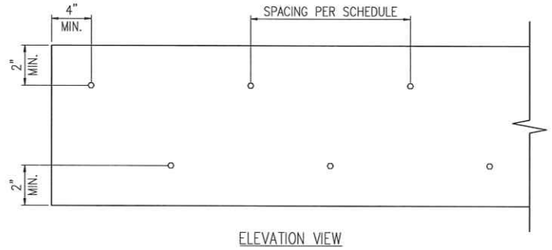
NORTH CAROLINA PROFESSIONAL SEAL 043523 ENGINEER WESLEY A. JONES
STRUCTURAL MEMBERS ONLY

DRAWN
DATE: 3/1/18
SCALE: 22x34 1/4"=1'-0"
8x11 1/8"=1'-0"
PROJECT #: PMNT-18R
DRAWN BY: LAG
CHECKED BY: WAJ

ORIGINAL INFORMATION
PROJECT # DATE 1/30/2017

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D2f



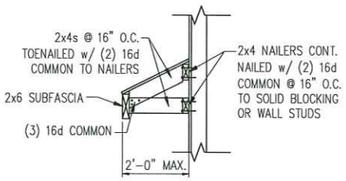
ELEVATION VIEW

MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS

		3½" WIDE	5¼" WIDE		7" WIDE		
FASTENER TYPE	LVL DEPTH	2-Ply 1¾"	3-Ply 1¾"	1¾" + 3½"	4-Ply 1¾"	2-Ply 1¾" + 3½"	2-Ply 3½"
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.		

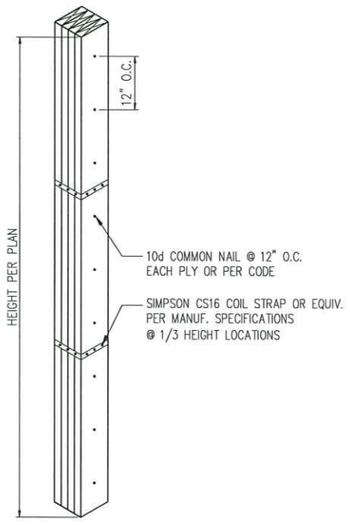
NOTES:

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).

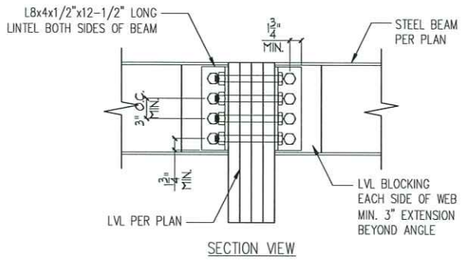


5 / D3f GABLE ROOF RETURN
N.T.S.

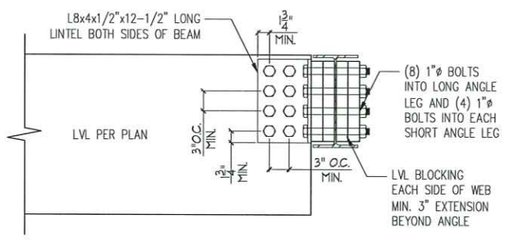
1 / D3f MULTI-PLY BEAM CONNECTION DETAIL
N.T.S



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

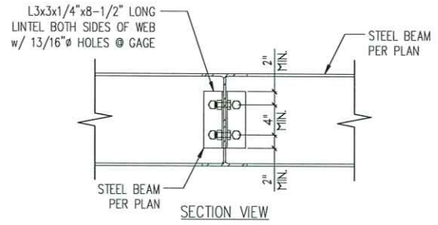


SECTION VIEW

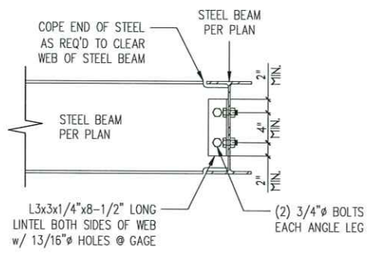


ELEVATION VIEW

3 / D3f LVL TO STEEL DETAIL
N.T.S



SECTION VIEW



ELEVATION VIEW

4 / D3f STEEL TO STEEL DETAIL
N.T.S

SUMMIT
ENGINEERING LABORATORY TESTING
120 PENMARC DR., SUITE 108
RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9992
WWW.SUMMIT-COMPANIES.COM

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

CLIENT:
DR Horton Carolina Division
8600 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Standard Details
Framing Details

NORTH CAROLINA PROFESSIONAL SEAL 043523 ENGINEER WESLEY A. JONES
STRUCTURAL MEMBERS ONLY

DRAWING
DATE: 3/2/26
SCALE: 22x34 1/4"=1'-0"
8x11 1/8"=1'-0"
PROJECT #: P-1501-NR
DRAWN BY: LAS
CHECKED BY: WAJ
ORIGINAL INFORMATION
PROJECT # DATE 1/23/2021
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D3f

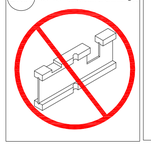
I-JOISTS

NOT FOR CONSTRUCTION

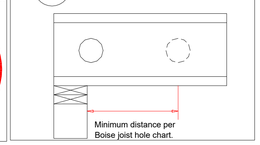
Client: DR HORTON-RALEIGH
Job: 49786-0230 WOODGROVE
Plan Information: 2512-K

NOT TO SCALE
Date: / /
Drawn By: SPA
Job #: 21-5632-J02
Sales Rep: KYLE GIBSON
Phone:

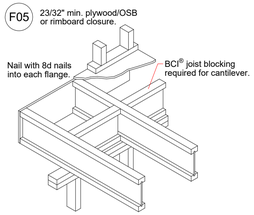
DN01 DO NOT cut, notch or drill flanges



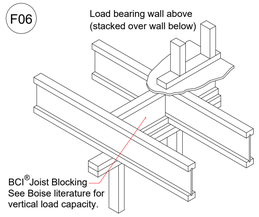
DN04 DO NOT cut holes near bearing support



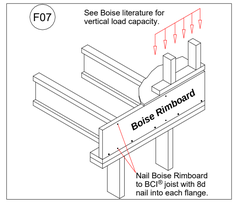
F05 23/32" min. plywood/OSB or rimboard closure.



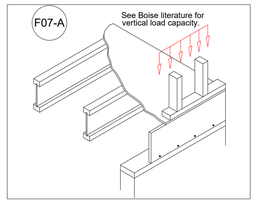
F06 Load bearing wall above (stacked over wall below)



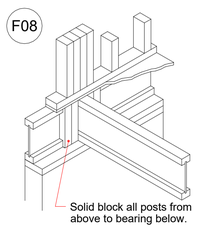
F07 See Boise literature for vertical load capacity.



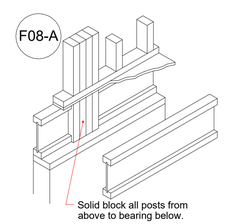
F07-A See Boise literature for vertical load capacity.



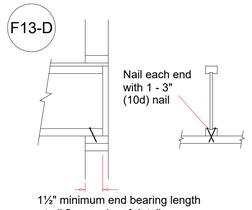
F08



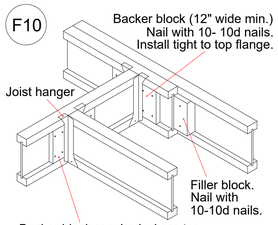
F08-A



F13-D

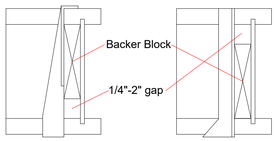


F10



Backer block required where top mount hanger load exceeds 250 lbs.
Install tight to top flange.

F16-D



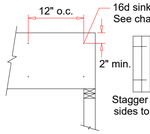
"Top Mount"

Backer block shall be tight to bottom of top flange with 1/4"-2" gap at top of bottom flange.

"Face Mount"

Backer block shall be tight to top of bottom flange with 1/4"-2" gap at bottom of top flange.

B12-A Side Loaded Connection Double & Triple 1-3/4" Versa-Lam® Nail Pattern

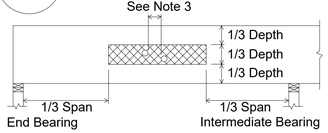


Number of Members	Max. Uniform Load (lbs. per ln. ft.) 2 rows	3 rows
2	470	705
3 (a)	350	525

(a) Nail pattern for 3 - piece member must occur on both sides.

Nail values may be increased by 15% for snow load roofs and by 25% for non - snow load roofs where building code allows.

LVL-AH Allowable Holes in VERSA-LAM® Beams



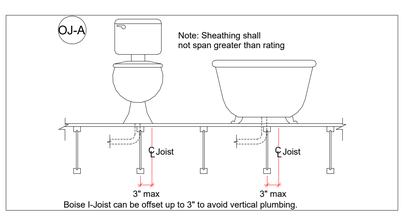
NOTES:

1. Square and rectangular holes are NOT permitted.
2. Round holes may be drilled or cut with a hole saw anywhere within the hatched area of the beam.
3. The horizontal distance between adjacent holes must be at least two times the diameter of the larger hole.
4. Do not drill more than three access holes in any four foot long section of beam.
5. The maximum round hole diameter permitted is:

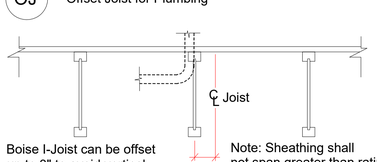
Beam Depth	5 1/2"	7 1/4"	9 1/4" +
Maximum Hole Diameter	3/4"	1"	2"

6. These limitations apply to holes drilled for plumbing or wiring access only. The size and location of holes drilled for fasteners are governed by the provisions of the *National Design Specification® for Wood Construction*.
7. Beams deflect under load. Size holes to provide clearance where required.
8. This hole chart is valid for beams supporting uniform load only. For beams supporting concentrated loads or for beams with larger holes, contact Boise® EWP Engineering.

OJ-A



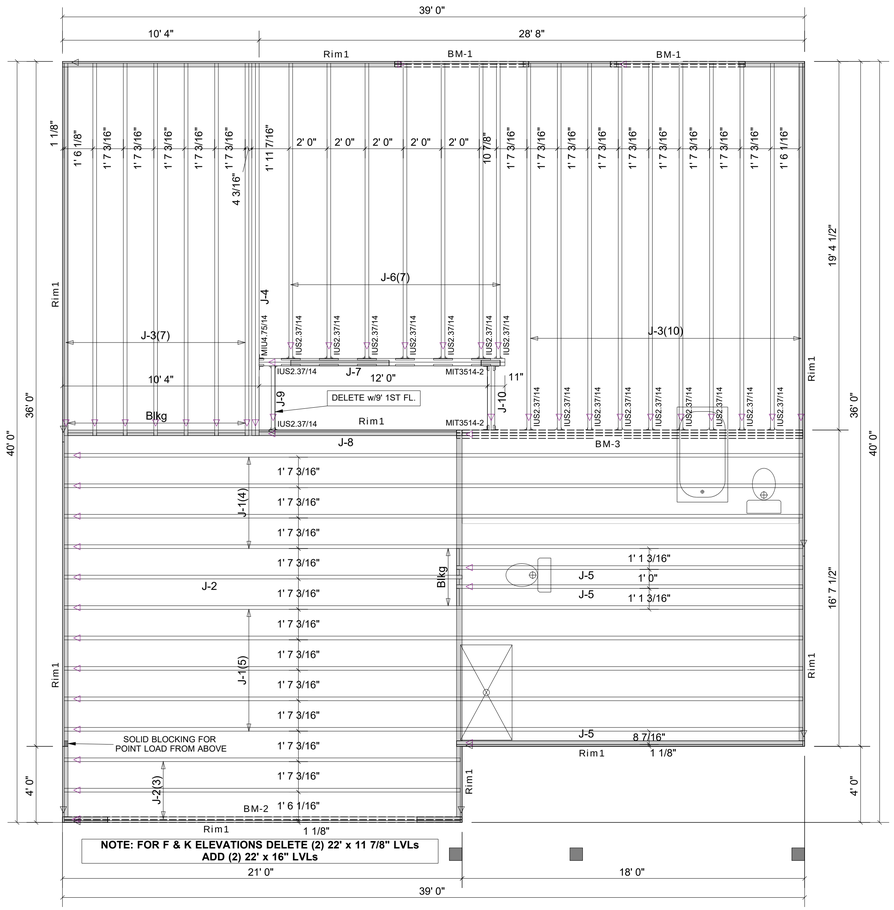
OJ Offset Joist for Plumbing



NOTE PLUMBING DROPS:
PLUMBING SYMBOLS SHOWN ARE APPROXIMATE LOCATIONS ONLY.

BUILDER TO FIELD VERIFY ACTUAL LOCATIONS TO AVOID POSSIBLE CONFLICTS WITH JOISTS.
CLEAR DISTANCE FOR FLOOR DECKING NOT TO EXCEED RATING.

*** I-JOIST FLANGES ARE NEVER TO BE CUT ***



Refer to I-Joist manufacturer's product guide for additional details, such as squash blocks/blocking for concentrated/line loads as required.

SEE NOTE IN THE EASTERN SPECIFIER GUIDE (F10) AND (F58) FOR ANY JOIST TO JOIST, DOUBLE JOIST CONNECTIONS. SEE WEB STIFFENER REQUIREMENTS FOR HANGERS THAT DO NOT LATERALLY SUPPORT THE TOP FLANGE.

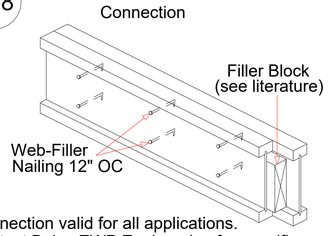
Connector Summary

Qty	Manuf	Product	Flange
18	Simpson	IUS2.37/14	None
2	Simpson	MIT3514-2	None
1	Simpson	MIU4.75/14	None

Products

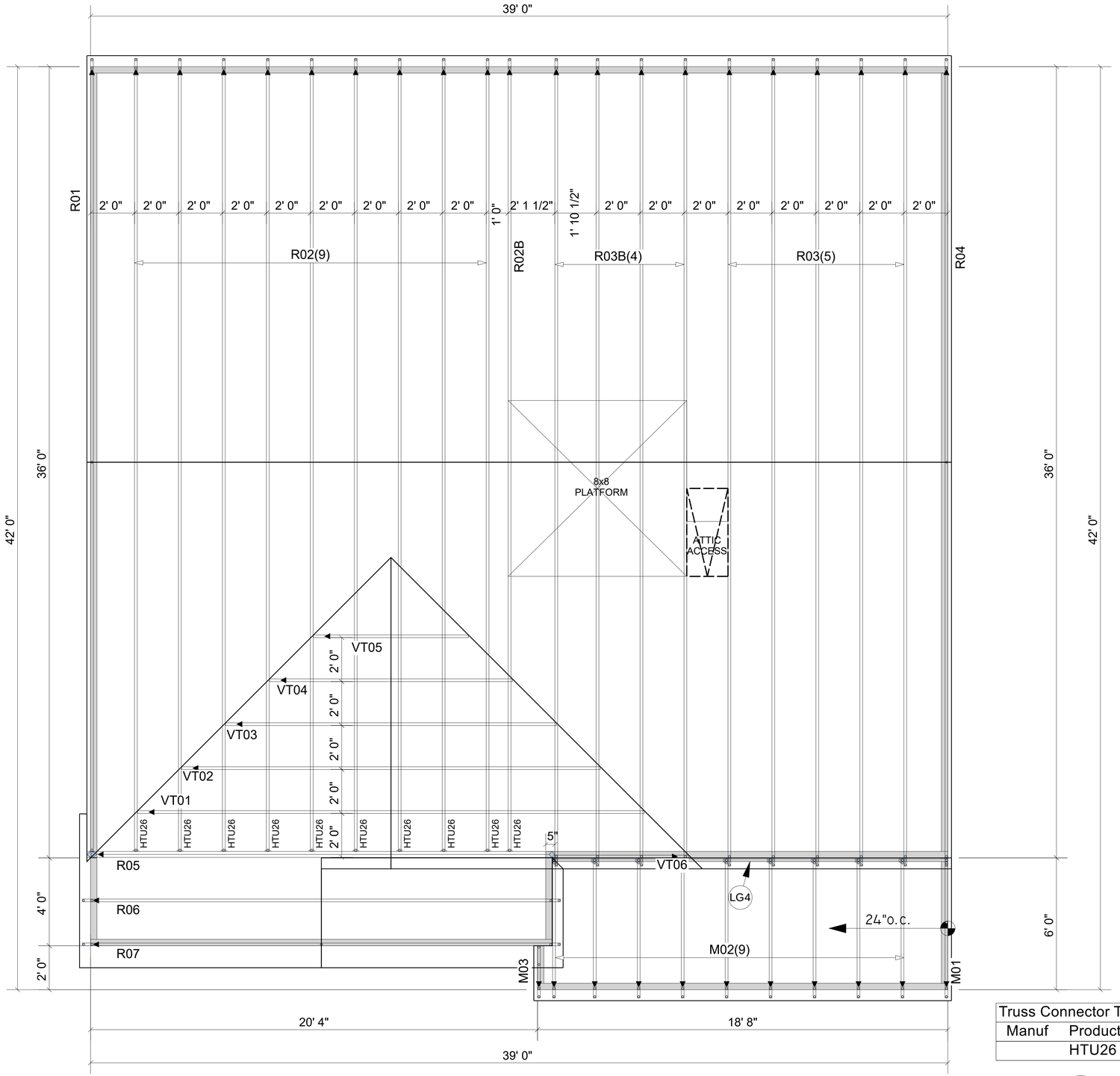
PlotID	Length	Product	Plies	Net Qty
J-1	39' 0"	14" BCI® 6000s-1.8	1	9
J-2	21' 0"	14" BCI® 6000s-1.8	1	4
J-3	20' 0"	14" BCI® 6000s-1.8	1	17
J-4	20' 0"	14" BCI® 6000s-1.8	2	2
J-5	19' 0"	14" BCI® 6000s-1.8	1	3
J-6	16' 0"	14" BCI® 6000s-1.8	1	7
J-7	13' 0"	14" BCI® 6000s-1.8	2	2
J-8	11' 0"	14" BCI® 6000s-1.8	1	1
J-9	4' 0"	14" BCI® 6000s-1.8	1	1
J-10	4' 0"	14" BCI® 6000s-1.8	2	2
BM-1	8' 0"	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
BM-2	22' 0"	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
BM-3	20' 0"	1-3/4" x 14" VERSA-LAM® 2.0 3100 SP	3	3
Rim1	12' 0"	1-1/8" x 14" BC RIM BOARD OSB	1	15
Blkg	2' 0"	14" BLOCKING	1	10

F58 Double BCI® Joist Connection



Connection valid for all applications.
Contact Boise EWP Engineering for specific conditions.

ATLANTIC
1998 Cane Gully Road, Moncks Corner SC 29461
Phone: (800) 475-3999 Fax (843) 565-3193
Web: www.atlanticbcs.com



Truss Connector Total List		
Manuf	Product	Qty
	HTU26	10

LG4

2X4 LEDGER (BY OTHERS) CONNECTED TO STUDS SPACED 16" O.C WITH (3) .128X3.25" NAILS MINIMUM

TRUSS TO TRUSS CONNECTIONS ARE 3-10d TOE-NAILS U.N.O.

WARNING! Long span trusses, 60' or greater in length, require extreme care and experience for proper and safe handling and installation. For general handling and installation guidance, see the "Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), JOINTLY PRODUCED BY SBCA and TPI. For project specific guidance, consult with a registered design professional. ATLANTIC assumes no responsibility for the handling, installation or bracing of trusses.

NOT FOR CONSTRUCTION

◀ = LEFT END OF TRUSS

LEVEL

Client: DR HORTON-RALEIGH

Job: 49786-0230 WOODGROVE

Plan Information: 2512-K OPTIONS

NOT TO SCALE

Drawn By: SPA

Date: DATE

Job #: 21-5632-R01

Sales Rep: KYLE GIBSON

Phone:

REVISIONS:

ATLANTIC
Moncks Corner/Easley, SC (800) 475-3999
Sparta, NC (336) 372-2226