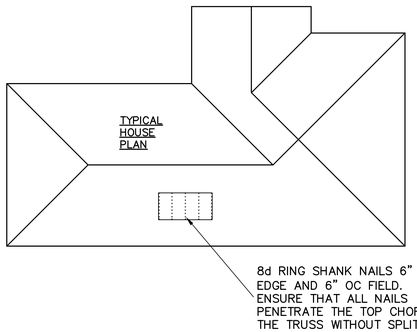


1 ROOF DECK NAILING PATTERN
SCALE: NTS

SHEATHING SCHEDULE

EXTERIOR STUD WALL	FLOOR
7/16" ZIP SYSTEM WALL SHEATHING BY HUBER ENGINEERED WOODS LLC, NAILED W/ 8d COMMON WIRE @ 6" O.C. EDGE AND 6" O.C. FIELD. PROVIDE 2x4 BLOCKING AT ALL JOINTS. INSTALL SHEATHING AND SEAM TAPE IN STRICT ACCORDANCE WITH MFR. WRITTEN INSTRUCTIONS.	N/A
ROOF	**EXTERIOR CEILING AND SOFFIT**
A.P.A. RATED SHEATHING, EXPOSURE 1, SPAN RATING 24/16 OR BETTER. FASTEN WITH 8d RING SHANK NAILS @ 6" O.C. EDGE AND 6" O.C. FIELD. (WHEN 1/2" ZIP BRAND ROOF SHEATHING IS USED, H-CLIPS ARE NOT REQUIRED) (RING SHANK NAILS PER R803.2.3.1: 0.113" NOMINAL SHANK DIAMETER, RING DIA. OF 0.012" OVER SHANK DIAMETER, 16 TO 20 RINGS PER INCH, 0.280" DIAMETER FULL ROUND HEAD, 2" NAIL LENGTH)	OPTIONS: 1) 1x4 STRIPPING @ 16"OC w/ 2-8d NAILS TO EACH TRUSS, 5/8" EXTERIOR GYPBOARD CEILING, FASTEN w/8d NAILS OR 1 5/8" DRYWALL SCREWS @ 6"OC EDGE & FIELD. 2) 3/8" BC PLYWOOD NAILED w/ 6d COMMON @ 6" OC EDGE & FIELD. 3) VINYL OR ALUMINUM PERFORATED SOFFIT INSTALLED PER MANUFACTURER INSTRUCTIONS TO MEET WIND PRESSURES PER R703.1.2.1.

NOTE: EXTERIOR CEILINGS AND SOFFITS 1) AND 2) SPECIFIED HERE MEET THE DESIGN WIND PRESSURES PER R703.1.2.1.

2

WINDOW/DOOR/SOFFIT DESIGN WIND PRESSURES

WIND PRESSURES PER ASCE7-10, 160 MPH, EXPOSURE C, AND CONVERTED TO ALLOWABLE STRESS DESIGN PRESSURES USING 0.6W LOAD FACTOR. (Vasd=124 MPH, RISK CAT II, ENCLOSED, kd=0.85, h=15')

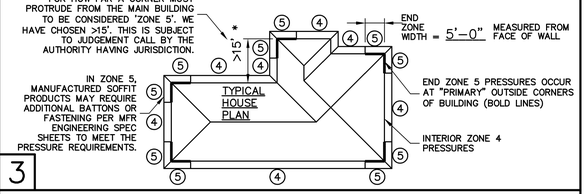
TYPE	INTERIOR ZONE 4	END ZONE 5
SOFFIT	+33.5 -36.3	+33.5 -44.8
TYPICAL WINDOWS & DOORS	+33.5 -36.3	+33.5 -44.8
8' OR 9' GARAGE DOORS	+29.4 -33.3	
16' OR 18' GARAGE DOORS	+28.2 -31.5	

(SEE PLAN FOR OTHER SPECIFIC PRESSURES)

1) TABLE MAY BE USED FOR ANY SIZE WINDOW OR DOOR IN EACH TYPE.
2) USE "INTERIOR ZONE 4" PRESSURES UNLESS WINDOW OR DOOR IS LOCATED WITHIN THE "END ZONE 5" (SEE DIAGRAM BELOW), THEN USE THE HIGHER PRESSURES UNDER THE "END ZONE 5" COLUMN.
3) ALL GLASS / GLAZING SHALL BE IMPACT RATED OR USE IMPACT RATED SHUTTERS.
4) SUBMIT PRODUCT APPROVALS TO THE BUILDING DEPARTMENT AS REQUIRED BY THE LOCAL JURISDICTION.
5) MANUFACTURED SOFFIT PRODUCTS SHALL BE INSTALLED PER MFR ENGINEERING SPEC SHEETS.

* ON IRREGULAR SHAPED BUILDINGS, THERE IS NO GUIDANCE IN THE CODE FOR HOW FAR A CORNER MUST PROTRUDE FROM THE MAIN BUILDING TO BE CONSIDERED 'ZONE 5'. WE HAVE CHOSEN >15'. THIS IS SUBJECT TO JUDGEMENT CALL BY THE AUTHORITY HAVING JURISDICTION.

IN ZONE 5, MANUFACTURED SOFFIT PRODUCTS MAY REQUIRE ADDITIONAL BATTONS OR FASTENING PER MFR ENGINEERING SPEC SHEETS TO MEET THE PRESSURE REQUIREMENTS.



3

DESIGN CRITERIA:

DESIGN IN ACCORDANCE WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE 6th EDITION (2017) RESIDENTIAL

1. FLOOR & ROOF UNIFORM LOADS:
   ELEVATED FLOORS: LIVE LOAD 40 PSF, DEAD LOAD 20 PSF
   ROOF: LIVE TOP CHORD 20 PSF
   LIVE BOTTOM CHORD 10 PSF (NON-CONCURRENT w/ TCLL)
   CEMENT ROOF TILE DEAD LOAD 25 PSF TOTAL
   SHINGLE/METAL ROOFING DEAD LOAD 15 PSF TOTAL
   MINIMUM DEAD LOAD FOR WIND: TC 5 PSF, BC 5 PSF
   DEFLECTION CRITERIA:
   FLOOR L/480 LIVE, L/360 TOTAL
   ROOF L/240 LIVE, L/180 TOTAL

2. WIND LOADS:
   WIND DESIGN PER, ASCE7-10
   BASIC WIND SPEED (ASCE7-10) 160 MPH
   NOMINAL WIND SPEED (Vasd TABLE R301.2.1.3) 124 MPH
   BUILDING CATEGORY II
   IMPORTANCE FACTOR 1.00
   EXPOSURE C
   MEAN ROOF HEIGHT = 15 FT
   ROOF PITCH 5/12
   ENCLOSURE CLASS. ENCLOSED
   INTERNAL PRES. COEFF. +/- 0.18
   WINDOW/DOOR DESIGN WIND PRESSURE, SEE TABLE IN DETAIL 3.
   SOFFITS - PER R703.1.2.1, ALL SOFFITS SHALL BE CAPABLE OF RESISTING THE DESIGN PRESSURES SPECIFIED IN TABLE R301.2(2) FOR WALLS.

3. REINFORCED CONCRETE:
   DESIGN AS PER ACI 318-14
   REQUIRED COMPRESSIVE STRENGTH AT 28 DAYS:
   SLAB ON GRADE f'c = 2500 PSI
   3½" MINIMUM THICKNESS REINFORCED WITH 6x6 w1.4xw1.4 WWF OR FIBERMESH.
   CONVENTIONAL SHALLOW FOOTINGS f'c = 2500 PSI
   BEAMS AND COLUMNS f'c = 3000 PSI
   ALL OTHER CONCRETE (U.N.O.) f'c = 3000 PSI
   UNLESS OTHERWISE SHOWN ON DRAWINGS, MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE AS FOLLOWS:
   FOOTINGS 3"
   SLAB ON GRADE CENTERED
   BEAMS 1½"
   COLUMNS 1½"
   ALL REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAMS AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. ALL REINFORCING STEEL SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES DURING PLACING OF CONCRETE.
   REINFORCING STEEL - ASTM A615 GRADE 40 FOR #3
   GRADE 60 FOR #4 TO #11
   WELDED WIRE FABRIC - ASTM A185
   SPLICES IN REINFORCING, SHALL BE 40 BAR DIAMETERS. NON-CONTACT LAP SPLICES MAY BE USED PROVIDED REINFORCING IS NOT SPACED MORE THAN 5" APART FOR #5 BARS.
   FORMWORK AND SHORING SHALL REMAIN IN PLACE UNTIL CONCRETE HAS REACHED AT LEAST 2/3 OF THE REQUIRED 28 DAY STRENGTH.

4. REINFORCED MASONRY:
   DESIGN PER ACI 530-13
   REQUIRED COMPRESSIVE STRENGTHS:
   MASONRY WALLS f'm = 1500 PSI
   REINFORCING STEEL - ASTM A615 GRADE 60.
   SPLICES IN REINFORCING, SHALL BE 48 BAR DIAMETERS.
   ALL CONCRETE MASONRY UNITS SHALL BE COMPOSED OF ASTM C90, GRADE N-1 HOLLOW CONCRETE MASONRY UNITS WITH TYPE "S" MORTAR. GROUT ALL CELLS CONTAINING VERTICAL REINFORCEMENT WITH 3000 PSI PEA ROCK CONCRETE GROUT. ALL CELLS BELOW FINISHED GRADE SHALL BE GROUTED SOLID. ALL EXTERIOR WALLS SHALL BE REINFORCED FULL HEIGHT AT DOT LOCATIONS ON PLAN. PROVIDE HORIZONTAL JOINT REINFORCEMENT IN WALLS AT 16" OC VERTICALLY, UNLESS NOTED OTHERWISE. IN ADDITION, INSTALL JOINT REINFORCING IN THE FIRST TWO MORTAR JOINTS ABOVE AND BELOW OPENINGS, EXTENDING AT LEAST 24" BEYOND THE OPENING. LAP JOINT REINFORCING 6" MINIMUM.

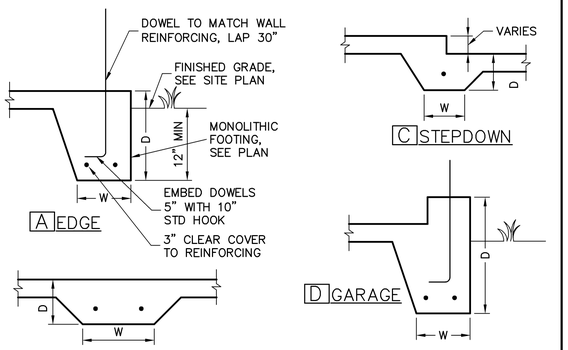
5. DELEGATED-ENGINEERED WOOD ROOF & FLOOR TRUSSES:
   ALL WOOD ROOF AND FLOOR TRUSSES SHALL BE DESIGNED BY A DELEGATED TRUSS ENGINEER PER RULE 61G15-31.003 OF THE FLORIDA ADMINISTRATIVE CODE. ALL TRUSSES SHALL HAVE TEMPORARY BRACING PER "COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES, HIB-91." FOR OTHER BRACING REQUIREMENTS, NOTIFY ENGINEER. PROVIDE PERMANENT BRACING PER TRUSS MFR. SHOP DRAWINGS. IF PERMANENT BRACING IS NOT SPECIFIED, CONTACT ENGINEER.

6. FOUNDATION:
   CONVENTIONAL SHALLOW CONCRETE FOOTINGS
   SOIL BEARING CAPACITY 2000 PSF
   THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL CONDITIONS FOR THE INTENDED STRUCTURE AND ASSUMED SOIL BEARING CAPACITY. IT IS RECOMMENDED THAT A GEOTECHNICAL FIRM BE HIRED TO PERFORM A SITE EVALUATION.

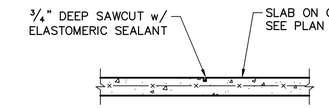
7. DIMENSIONS: VERIFY ALL DIMENSIONS WITH HOUSE PLANS. SEE HOUSE PLANS, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EMBEDS, OPENINGS, SLEEVES, ETC. WHICH ARE NOT SHOWN ON STRUCTURAL DRAWINGS.

8. MEANS AND METHODS: THE STRUCTURAL ENGINEER SHALL NOT HAVE CONTROL OR BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, OR SEQUENCES TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO SUPPORT STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, OR ANY OTHER PERSONS PERFORMING THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

9. SHOP DRAWINGS: SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE ENGINEER FOR REVIEW FOR ALL STRUCTURAL ELEMENTS UTILIZING PREFABRICATED COMPONENTS. ONE SET OF SIGNED & SEALED TRUSS ENGINEERING SHALL BE DELIVERED TO THE ENGINEER OF RECORD FOR THE STRUCTURE PER FLORIDA ADMINISTRATIVE CODE 61G15-30.005 AND 61G15-31.003.

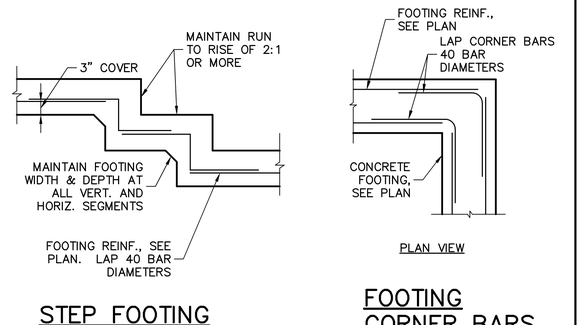


4 MONOLITHIC FOOTINGS
SCALE: 3/4" = 1'-0"



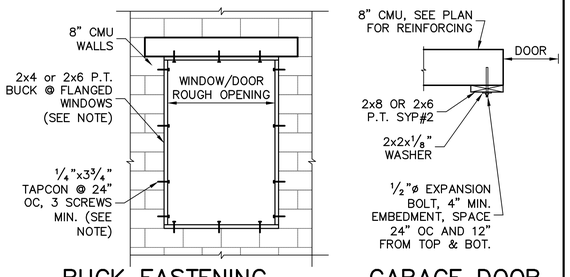
NOTES:
1) PROVIDE SAWCUTS TO CREATE APPROXIMATE 20' X 20' MAXIMUM SQUARES.
2) SAWCUT CONCRETE SLAB WITHIN 4 TO 12 HOURS OF CONCRETE PLACEMENT.

5 SLAB SAWCUT DETAIL
SCALE: NTS



6 STEP FOOTING
SCALE: NTS

FOOTING CORNER BARS
SCALE: NTS

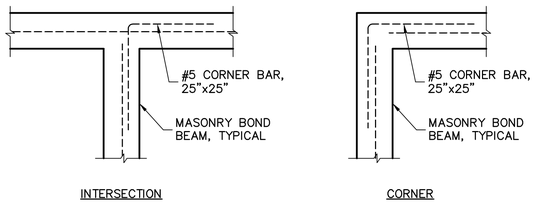


BUCK FASTENING

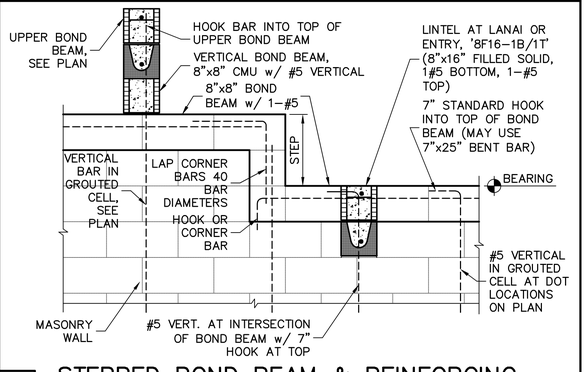
GARAGE DOOR

NOTE: THIS BUCK FASTENING DETAIL IS INTENDED FOR FLANGED WINDOW/DOOR PRODUCTS THAT FASTEN THRU THE FLANGE WITH WOOD SCREWS TO THE BUCK. FOR WINDOW/DOOR PRODUCTS THAT DO NOT HAVE A FLANGE AND FASTEN INSTEAD OUTWARD THRU THE FRAME, USE MASONRY SCREWS PER MFR. THAT ARE LONG ENOUGH TO PENETRATE 2-1/4" INTO THE MASONRY. IN THIS CASE, THE BUCK MATERIAL IS SIMPLY A SPACER AND MAY BE 1x4 OR 1x6 OR OMITTED ENTIRELY AND THE SPACER MAY BE TACKED IN PLACE WITH MASONRY NAILS OR PINS.

7



8 CORNER BAR DETAIL IN BOND BEAMS
SCALE: 3/4" = 1'-0"



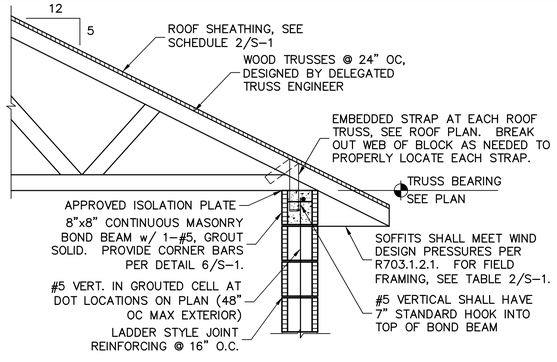
9 STEPPED BOND BEAM & REINFORCING
SCALE: 3/4" = 1'-0"

RETROFIT STRAPS TO CONCRETE/MASONRY

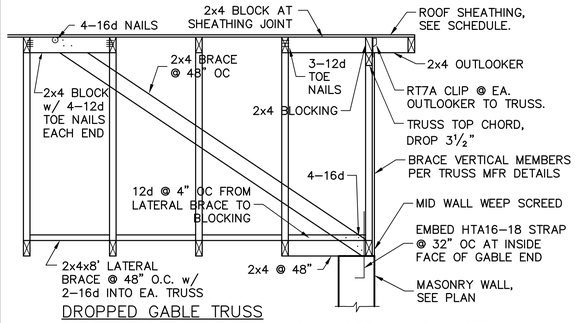
TRUSS UPLIFT (LBS) @ 24" OC	CONNECTOR	
TO 1145	1-HTWM16 or 20	8-10dx1½", 4-¼x2¼ CONCRETE SCREW
TO 1145	1-HTWM16 or 20	8-10dx1½", 4-¼x2¼ CONCRETE SCREW
TO 2290	2-HTWM16 or 20	8-10dx1½", 4-¼x2¼ CONCRETE SCREW
TO 4520	2-LUGT2	16-16d, 7-¼"x2¼" CONCRETE SCREW
TO 3610	HTT16	18-10d, 5/8"ø ALLTHREAD, DRILL & EPOXY 10" EMBED w/ USP SET.
TO 9790	HGT-2/3	TWO ¾"ø ALTHREAD, DRILL & EPOXY 12" EMBED WITH USP SET.

NOTES:
1) WHERE EMBEDDED STRAP IS MISSING OR MIS-LOCATED, PROVIDE A STRAP FROM THE ABOVE LIST AT EACH ROOF TRUSS BEARING POINT, BASED ON THE TRUSS UPLIFT VALUES IN THE SIGNED AND SEALED TRUSS DESIGN PACKAGE.
2) CONNECTORS ARE USP. ALL CONNECTORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH USP PRINTED INSTRUCTIONS.
3) CONCRETE SCREW SHALL BE WEDGE-BOLT+, TITEN, TAPCON OR EQUIVALENT.

10 RETROFIT UPLIFT CONNECTOR SCHEDULE



11 TRUSS STRAP TO BOND BEAM
SCALE: 3/4" = 1'-0"



12 GABLE END BRACING
SCALE: N.T.S.

At Exterior Stud Walls and Gable Ends with Wall Sheathing, apply plaster over metal lath over water resistive barrier as follows:
Plaster R703.7.2: 3-coat 7/8" thick portland cement based plaster per ASTM C926.
Metal Lath R703.7.1: Self furring paper backed 2.5lb diamond mesh metal lath per ASTM C847, G60 galvanized, fastened per ASTM C1063 with 1-1/2" long, 11 gage nails with 7/16" head (roofing nails) at 7" oc, or 1-1/2"long, 16 gage staples at 6" oc, into the framing members (ie, the nails or staples must align with and penetrate 3/4" into the framing studs).
Water Resistive Barrier (WRB) R703.7.3: Water-resistive vapor-permeable barrier with a performance at least equivalent to 2 layers of Grade D paper. The individual layers shall be installed independently. An approved house wrap may be used for the 1st layer and metal lath with approved paper backing may be the 2nd layer (Note: ZIP wall sheathing with seam tape qualifies as the first layer).

REVISIONS	BY

STRUCTURAL ENGINEERING:
STRUCTURAL SYSTEMS OF NORTH FLORIDA
1634 S.E. 47th STREET, SUITE #3
CAPE CORAL, FL 33904
(239) 549-4554
CA# 8829

BUILDER:
D·R·HORTON
America's Builder

DESIGNED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6th EDITION (2017) RESIDENTIAL
FOR PROBUILD TRUSSES, ELEVATION B, JOB # 1554 B, DATED: 01/10/18, REVISED: NONE

STRUCTURAL DETAILS
MODEL 1554 B EXPRESS
MASTER PERMIT
160 MPH, EXPOSURE C
FLORIDA

DESIGN/DRAWN	DWB/DWB
CHECKED	DWB
DATE	01/16/18
SCALE	VARIES
JOB NO.	
SHEET	S-1

SHEET 1 OF 2