City of Hutto

Agenda

Historic Preservation Commission

Meeting Wednesday, December 2, 2020 at 6:30 PM

Executive Conference Room

In accordance with the Texas Open Meetings Act this meeting agenda is posted for public information, continuously, for at least 72 hours prior to the scheduled time of the meeting on the bulletin board located on the exterior wall of the City Hall building at 500 West Live Oak, Hutto, Texas. This meeting agenda is also accessible via the Internet at www.huttotx.gov

Page

1. CALL SESSION TO ORDER

2. ROLL CALL

3. PUBLIC COMMENT

3.1. Dial in numbers
Toll: 1-512-717-4201
Toll Free: 1-800-717-4201
Conference ID:
242-3288
Once you are in the conference call press *5 to signal that you are requesting to speak during public comment.

Any citizen wishing to speak during public comment may do so after completing the required registration form. The purpose of this item is to allow the residents of Hutto and other interested persons an opportunity to address the Historic Preservation Commission on agenda issues and on non-agenda issues (i.e., City policy or legislative issues). Non-agenda issues regarding daily operational or administrative matters should be first dealt with at the administrative level by calling City Hall at (512) 759-4839 during business hours. Each person providing public comment will be limited to 3 minutes.

[Note: The Texas Open Meetings Act, Texas Government Code, Chapter 551, prohibits advisory boards, commissions and committees created by local governmental bodies from fully discussing, debating, or considering subjects for which public notice has not been given on the agenda. Issues that cannot be referred to the City Staff for action may be placed on the agenda of a future meeting.]

4. AGENDA ITEMS

4.1. Consideration and possible action on the meeting minutes from the regular scheduled Historic Preservation Commission meeting held on October 27, 2020. 3 - 5

Historic Preservation Commission - 27 Oct 2020 - Minutes (1)

4.2. Consideration and possible action on a Certificate of Appropriateness for 306 Church Street. 6 - 32

Agenda Item Report - AIR-20-426 - Pdf

4.3. Discussion and possible action on moving the Historic Preservation Commission meetings to another day of the week.

5. ADJOURNMENT

6. CERTIFICATION

I certify that this notice of the **December 2, 2020** Historic Preservation Commission meeting was posted on the City of Hutto website and the City Hall bulletin board of the City of Hutto on **November 25, 2020** at 3**:00 P.M.**

Angel Kavanaugh, Management Assistant

The City of Hutto is committed to comply with the Americans Disability Act. The Hutto City Council Chamber is wheelchair accessible. Request for reasonable special accommodations must be made 48 hours prior to the meeting. Please email the City Secretary's office at City.Secretary@huttox.gov or call (512) 759-4033 for assistance.

MINUTES
Historic Preservation Commission Meeting

7:00 PM - Tuesday, October 27, 2020
City Council Chambers

The Historic Preservation Commission of the City of Hutto was called to order on Tuesday, October 27, 2020, at 7:00 PM, in the City Council Chambers, with the following members present:

PRESENT: Commissioner Curtis Orton, Commissioner Travis Allen, Commissioner Robert Lykins, and Commissioner DeAnne Worley

EXCUSED:

1 CALL SESSION TO ORDER

Chair Robert Lykins called meeting to order at 7:00pm

2 ROLL CALL

Members of City staff in attendance: Ashley Lumpkin, Executive Director Development Services, Ashby Grundman, Development Services Director, Council Member Tanner Rose

3 PUBLIC COMMENT

No public Comment

a) Dial in numbers
Toll: 1-512-717-4201
Toll Free: 1-800-717-4201
Conference ID:
242-3288

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4 AGENDA ITEMS

a) Consideration and possible action on the meeting minutes from the regular Historic Preservation Commission meeting held on July 28, 2020

A motion was made to accept the meeting minutes from the regular Historic Preservation Commission meeting held on July 28, 2020 as written by Commissioner Travis Allen, seconded by Commissioner Curtis Orton. Motion passed 4 Ayes to 0 Nays.

b) Consideration and possible action on the meeting minutes from the regular Historic Preservation Commission meeting held on September 9, 2020

A motion was made to accept the meeting minutes from the regular Historic Preservation Commission meeting held on September 9, 2020 as amended by Commissioner Travis Allen, Seconded by Commissioner DeAnne Worley. Motion Passed 4 Ayes to 0 Nays.

c) Consideration and possible action on a Certificate of Appropriateness for a New Garage at 615 FM 1660 North.

A motion was made to accept staff recommendation on a Certificate of Appropriateness for a New Garage at 615 FM 1660 North as written by Commissioner Curtis Orton, Seconded by Commissioner DeAnne Worley. Motion passed 4 Ayes to 0 Nays.

d) Discussion regarding the Big Silo at the Co-Op District.

Staff and Commission discussed the Big Silo at the Co-Op District. No action

e) Discussion regarding the Railroad Depot currently located at 200 College Street.

Staff and Commission discussed the Railroad Depot currently located at 200 College Street. No Action

f) Historic Preservation Commission Annual Report.

No Action, Commissioners recommended to add 305 West street to annual report. a motion was made by Commissioner Travis Allen, Seconded by Commissioner Curtis Orton. Motion passed 4 Ayes to 0 Nays.

5 ADJOURNMENT

Having no further business meeting was adjourned at 7:40 pm.

6 CERTIFICATION

I certify that this notice of the **October 27, 2020** Historic Preservation Commission meeting was posted on the City of Hutto website and the City Hall bulletin board of the City of Hutto on October **23, 2020** at **3:00 P.M.**

Angel Kavanaugh, Management Assistant

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Historic Preservation Commission

AGENDA ITEM REPORT

To:	Historic Preservation Commission
Subject:	Consideration and possible action on a Certificate of Appropriateness for 306 Church Street.
Meeting:	Historic Preservation Commission - 02 Dec 2020
Department:	Development Services
Staff Contact:	Ashby Grundman

BACKGROUND INFORMATION:

The applicant is requesting a Certificate of Appropriateness to construct a new residence at 306 Church Street. The subject property is zoned OT-3 (Residential).

The proposed new residence is 920 square feet. All new construction in Old Town is subject to review by the Historic Preservation Commission.

Staff finds that the request is consistent with the standards of the Unified Development Code. Therefore, staff recommends approval of the Certificate of Appropriateness for the new residence to be located at 306 Church Street.

ATTACHMENTS:

306 Church St for Packet

MASTER APPLICATION

Must accompany all application types unless otherwise indicated

City of Hutto Development Services 210
500 W. Live Oak St Hutto TX 78634
512-759-3479 Planning
512-846-2640 Permits & Inspections
512-759-4038 Engineering
512-759-5962 Fax
planning@huttotx.gov
building@huttotx.gov
www.huttotx.gov

PROJECT NAME: Cathy Residence APPLICATION TYPE New Residential Construction

APPLICANT INFORMATION (*property owner or authorized agent*) this will be the City's official contact.

Name: Jason Kahle

Company Name: Small House Solutions, LLC

Address: 1400 Westinghouse Rd. #4317

Phone: (512) 696-7684 Email: [redacted]

PROPERTY INFORMATION

Address: 306 Church St. Hutto, TX.

Legal Description: Deed Lot(s) 12 Block _____ Subdivision Megee Second Addition

Reference: Volume _____ Page(s) _____ or Document No. 2020071233

City Limits [X] ETJ [ ] Current Zoning District: Residential OT-3

PROPERTY OWNER INFORMATION

Name: Cathy Bowen

Company Name: _____

Address: 209 LUTHER DR GEORGETOWN, TX 78628

Phone: (832) 331-8834 Email: [redacted]

PROPERTY OWNER CONSENT/AGENT AUTHORIZATION

By my signature I hereby affirm that I am the property owner of record, or if the applicant is an organization or business entity, that authorization has been granted to represent the owner, organization or business in this application. I certify that the preceding information is complete and accurate, and it is understood that I agree to the submittal of this application. Additionally, my signature below indicates my awareness of the fee(s) required at the time of application submittal and that this fee(s) is non-refundable even in the event of application withdrawal or if reviewed and denied.

By signing this form, the owner of the property authorizes the City of Hutto to begin proceedings in accordance with the process for the type of application indicated on page one of this application. The owner further acknowledges that submittal of an application does not in any way obligate the City to approve the application and that although City staff may make certain recommendations regarding this application, the City Council may not follow that recommendation and may make a final decision that does not conform to the staff's recommendation.

Cathy Bowen — Property Owner Signature

Cathy Bowen — Property Owner Printed Name

9/28/2020 — Date

THE STATE OF TEXAS

COUNTY OF Williamsm

Before me, the undersigned authority, on this day personally appeared Cathy Bowen, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed.

Given under my hand and seal of office this 28th day of September, 2020

K. Juliet Bangs — Notary Public Signature

K. Juliet Bangs — Notary Public Printed Name

K JULIET BANGS
NOTARY PUBLIC STATE OF TEXAS
MY COMM. EXP. 12/14/2022
NOTARY ID 13002495-3

(Seal)

If there are multiple property owners attach separate page(s) with notarized signature(s)

Planning	Date	Building	Date	Notes

PICKET FENCE DETAILS

PROPOSED SITE PLAN

SCALE 1" = 20'

PROJECT:
DATE:
DESIGNER:

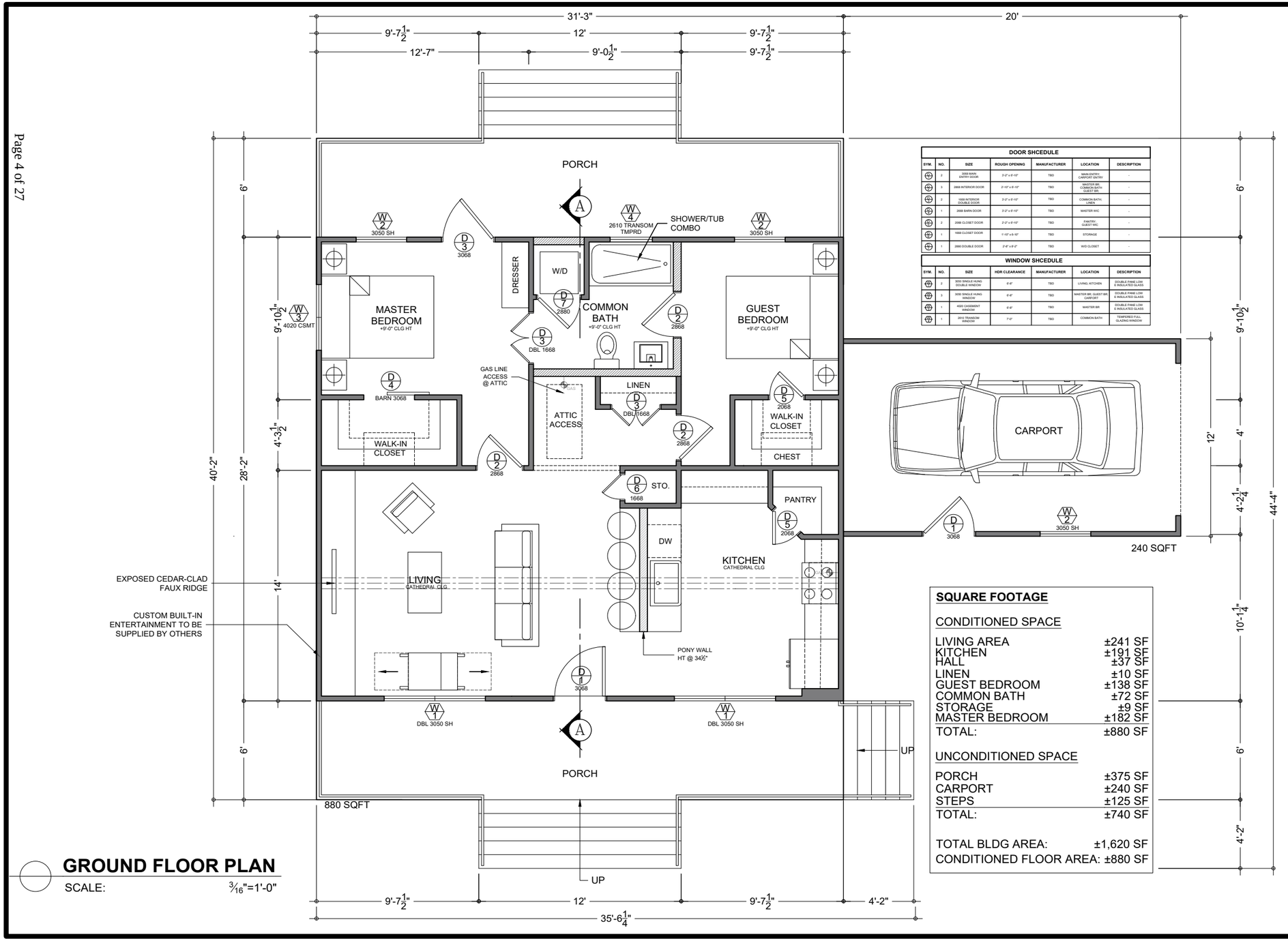
PROJECT TITLE:
PROPOSED 880 SQFT ONE STORY
SINGLE FAMILY RESIDENTIAL
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
PROPOSED SITE PLAN

SCALE:
1" = 20'

SHEET NO:
A-00



DOOR SHCEDULE

SYM.	NO.	SIZE	ROUGH OPENING	MANUFACTURER	LOCATION	DESCRIPTION
D1	1	3068 MAIN ENTRY DOOR	3'-0" x 6'-10"	TBD	MAIN ENTRY/ CARPORT ENTRY	-
D2	5	2868 INTERIOR DOOR	2'-10" x 6'-10"	TBD	MASTER BR, COMMON BATH, GUEST BR1	-
D3	2	1668 INTERIOR DOUBLE DOOR	3'-2" x 6'-10"	TBD	COMMON BATH, LINEN	-
D4	1	2668 BARN DOOR	3'-2" x 6'-10"	TBD	MASTER WIC	-
D5	2	2068 CLOSET DOOR	2'-2" x 6'-10"	TBD	PANTRY, GUEST WIC	-
D6	1	1668 CLOSET DOOR	1'-10" x 6'-10"	TBD	STORAGE	-
D7	1	2680 DOUBLE DOOR	2'-8" x 6'-2"	TBD	W/D CLOSET	-

WINDOW SHCEDULE

SYM.	NO.	SIZE	HDR CLEARANCE	MANUFACTURER	LOCATION	DESCRIPTION
W2	4	3050 SINGLE HUNG DOUBLE WINDOW	6'-8"	TBD	LIVING, KITCHEN	DOUBLE PANE LOW E INSULATED GLASS
W3	3	3050 SINGLE HUNG WINDOW	6'-8"	TBD	MASTER BR, GUEST BR, CARPORT	DOUBLE PANE LOW E INSULATED GLASS
W4	1	4020 CASEMENT WINDOW	6'-8"	TBD	MASTER BR	DOUBLE PANE LOW E INSULATED GLASS
W1	1	2610 TRANSOM WINDOW	7'-0"	TBD	COMMON BATH	TEMPERED FULL GLAZING WINDOW

SQUARE FOOTAGE

CONDITIONED SPACE

LIVING AREA	±241 SF
KITCHEN	±191 SF
HALL	±37 SF
LINEN	±10 SF
GUEST BEDROOM	±138 SF
COMMON BATH	±72 SF
STORAGE	±9 SF
MASTER BEDROOM	±182 SF
TOTAL:	±880 SF

UNCONDITIONED SPACE

PORCH	±375 SF
CARPORT	±240 SF
STEPS	±125 SF
TOTAL:	±740 SF

TOTAL BLDG AREA:	±1,620 SF
CONDITIONED FLOOR AREA:	±880 SF

GROUND FLOOR PLAN

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

PROJECT:
DATE:
DESIGNER:

PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
GROUND FLOOR PLAN

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

SHEET NO:
A-01

FRONT ELEVATION (NORTH-WEST)

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

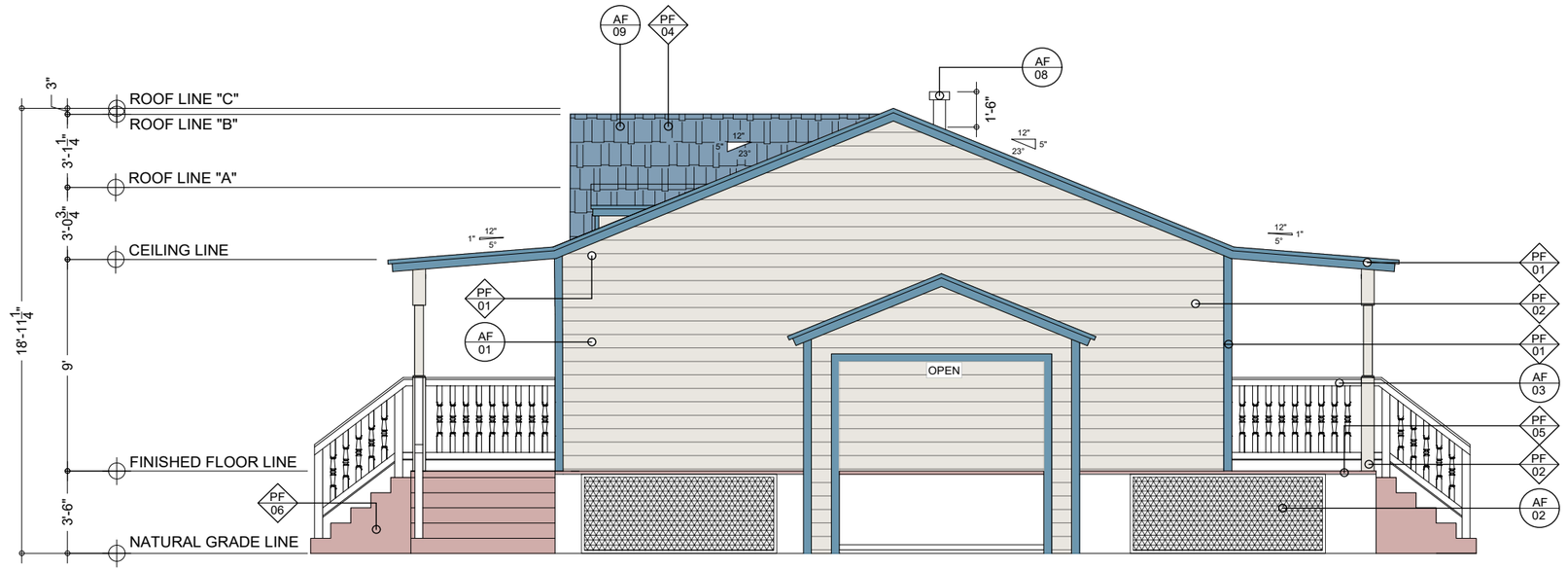
ARCHITECTURAL FINISH SCHEDULE	
AF 01	JAMES HARDIE 8.25" (7" EXPOSED) CEDARMILL LAP SIDING
AF 02	VINYL LATTICE
AF 03	PAINTED CUSTOM WOOD RAILS
AF 04	WHITE VINYL WINDOWS
AF 05	36" x 80" RIGHT HAND INSWING WOOD TEXAS DOOR TTB626R21 (WOOD DOOR)
AF 06	36" x 80" LEFT HAND INSWING BMTTSFG113DLN (FIBERGLASS BACK DOOR)
AF 07	6" DIAMETER WATER HEATER FLUE PIPE THRU ROOF WITH CAP
AF 08	6" DIAMETER FURNACE FLUE PIPE THRU ROOF WITH CAP
AF 09	OWENS CORNING TRUDEFINITION DURATION 32.8-SQ FT HARBOR BLUE LAMINATED ARCHITECTURAL ROOF SHINGLES

PAINT/COLOR FINISH SCHEDULE		
PF 01	SCHOONER AF-520 (FOR EXTERIOR FASCIA, SOFFIT, WINDOW AND DOOR TRIMS)	
PF 02	MASCARPONE AF-20 (FOR COLUMNS AND EXTERIOR LAP SIDING)	
PF 03	CALIENTE AF-290 (FOR EXTERIOR DECK DOOR)	
PF 04	ROOF MATERIAL COLOR: HARBOR BLUE (AS PER CHOSEN MATERIAL)	
PF 05	#HDG-ST-52 NAVAJO RED SRD EXTERIOR SEMI-TRANSPARENT MATTE WOOD FINISH (FOR EXTERIOR STAIRS AND DECK/PORCH)	
PF 06	EXTERIOR FRONT DOOR COLOR: DARK ELM	

FACADE AREAS

FRONT ELEVATION:	684 SQFT
REAR ELEVATION:	684 SQFT
RIGHT ELEVATION:	606 SQFT
LEFT ELEVATION:	684 SQFT

OVERALL GLAZED AREA: 114 SQFT



RIGHT ELEVATION (SOUTH-WEST)

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

PROJECT:
DATE:
DESIGNER:

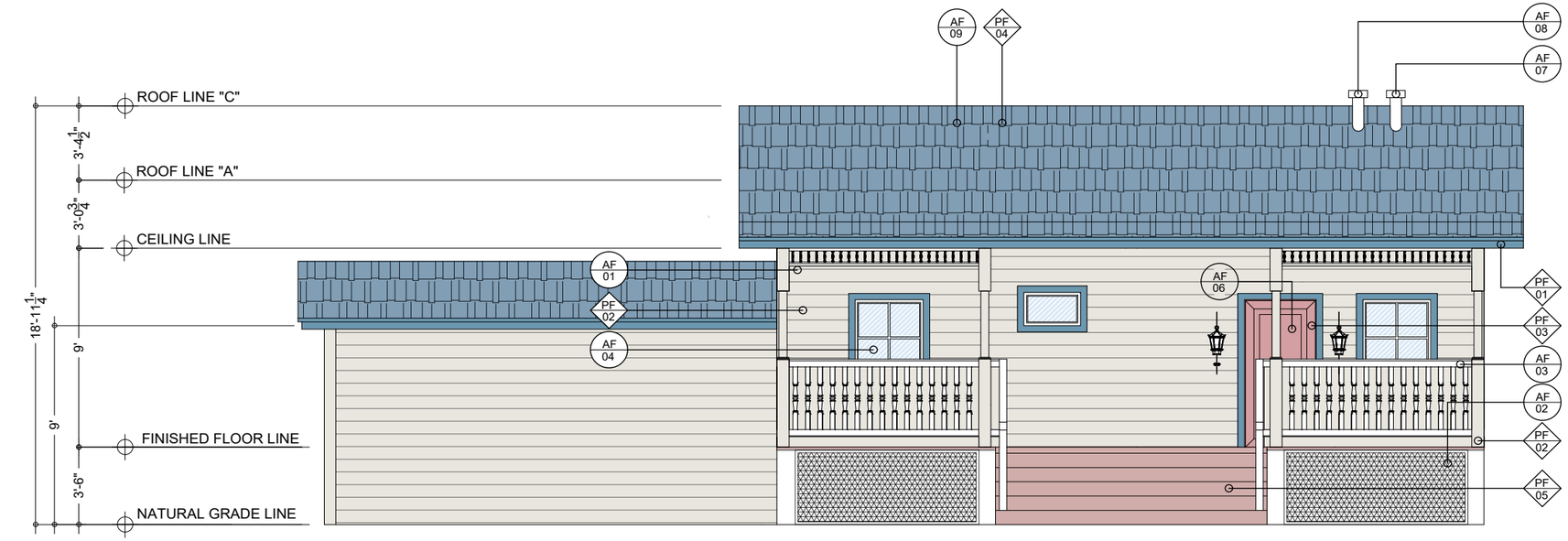
PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
FRONT ELEVATION
RIGHT ELEVATION

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

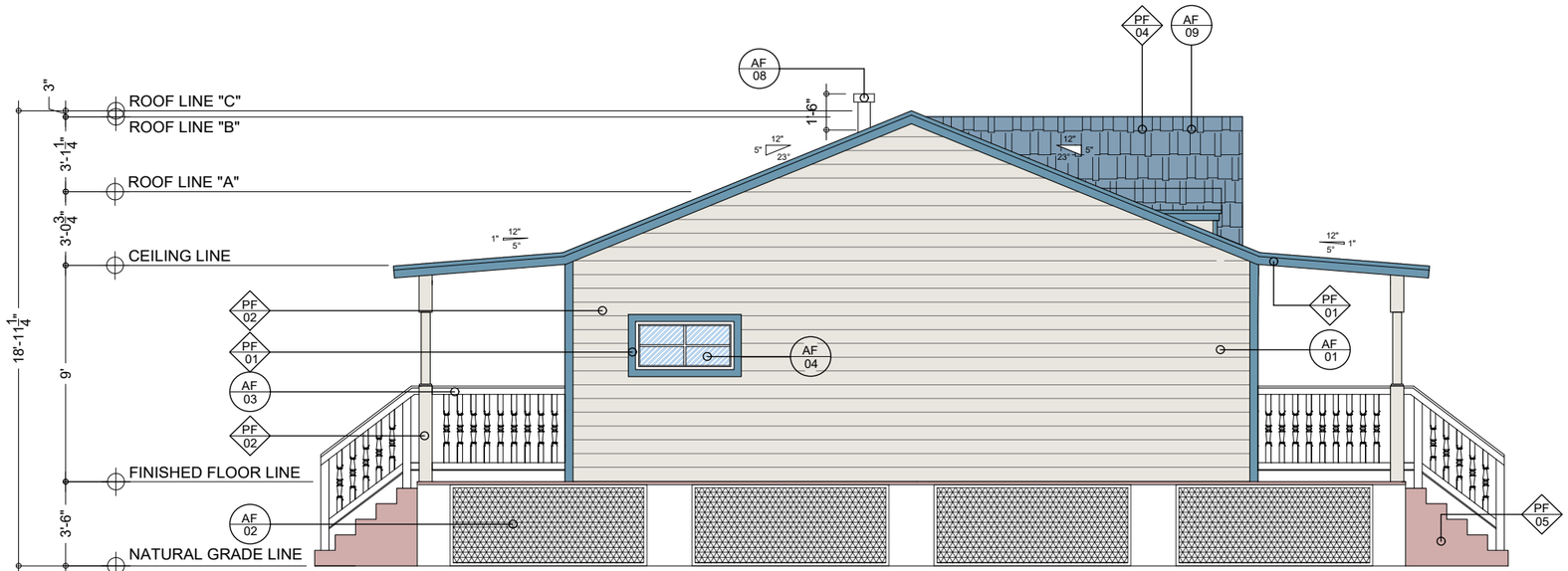
SHEET NO:
A-02



REAR ELEVATION (SOUTH-EAST)

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

ARCHITECTURAL FINISH SCHEDULE	
AF 01	JAMES HARDIE 8.25" (7" EXPOSED) CEDARMILL LAP SIDING
AF 02	VINYL LATTICE
AF 03	PAINTED CUSTOM WOOD RAILS
AF 04	WHITE VINYL WINDOWS
AF 05	36" x 80" RIGHT HAND INSWING WOOD TEXAS DOOR TTB620921 (WOOD DOOR)
AF 06	36" x 80" LEFT HAND INSWING BMTTSFG1130LN (FIBERGLASS BACK DOOR)
AF 07	6" DIAMETER WATER HEATER FLUE PIPE THRU ROOF WITH CAP
AF 08	6" DIAMETER FURNACE FLUE PIPE THRU ROOF WITH CAP
AF 09	OWENS CORNING TRUDEFINITION DURATION 32.8-SQ FT HARBOR BLUE LAMINATED ARCHITECTURAL ROOF SHINGLES



LEFT ELEVATION (NORTH-EAST)

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

PROJECT:
DATE:
DESIGNER:

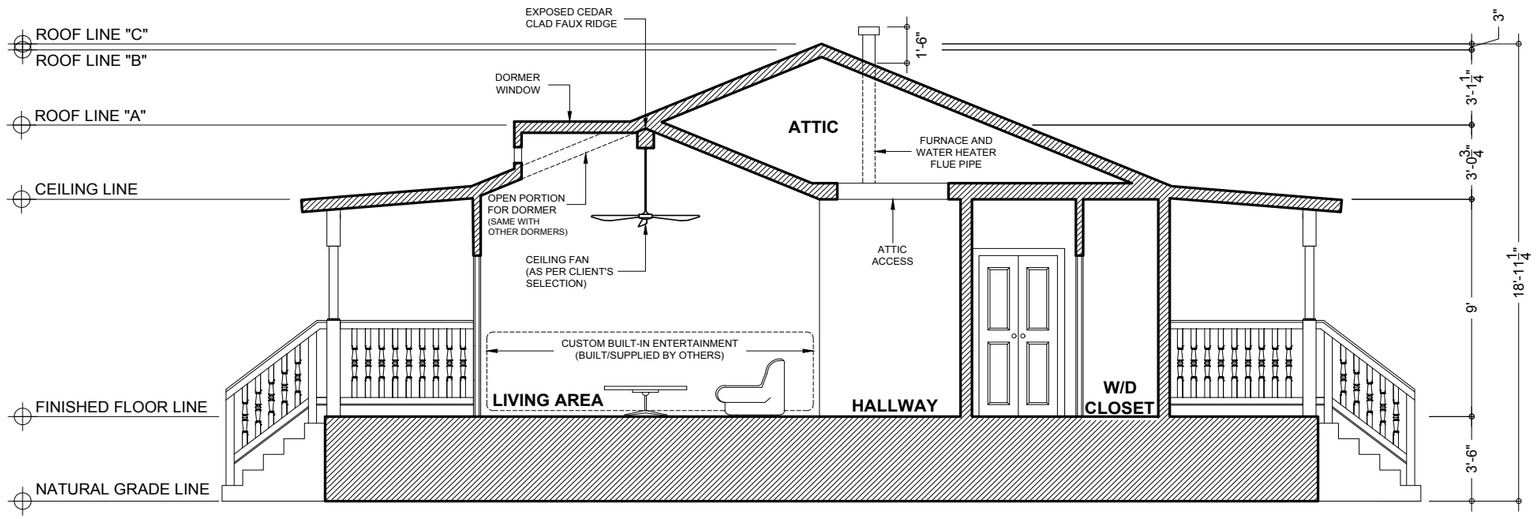
PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
REAR ELEVATION
LEFT ELEVATION

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

SHEET NO:
A-03



SECTION PLAN THRU A'A'

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

PROJECT:
DATE:
DESIGNER:

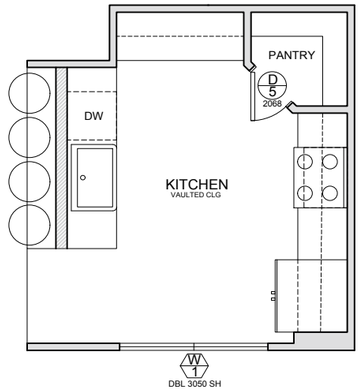
PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

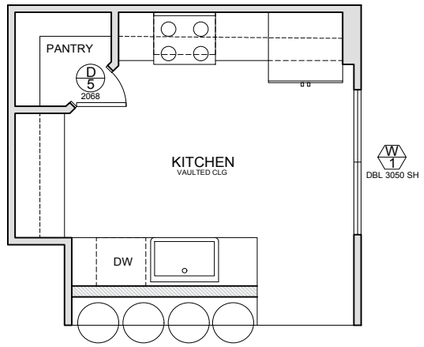
SMALL HOUSE SOLUTIONS

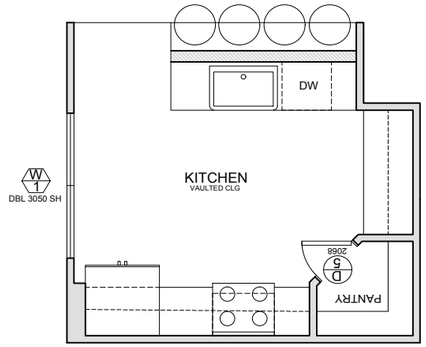
SHEET TITLE:
SECTION PLAN

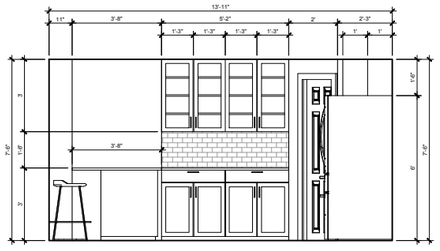
SCALE:
3/16" = 1'-0"

SHEET NO:
A-04

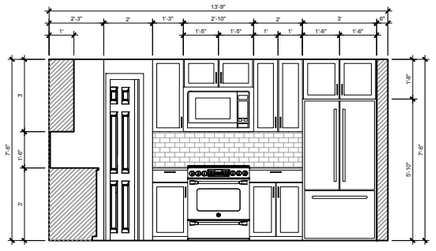




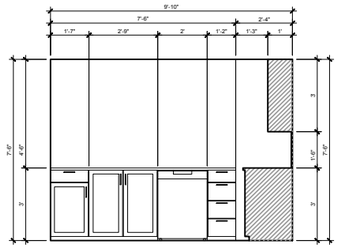




KITCHEN
FRONT ELEVATION
SCALE: ¼"=1'-0"



KITCHEN
LEFT ELEVATION
SCALE: ¼"=1'-0"



KITCHEN
RIGHT ELEVATION
SCALE: ¼"=1'-0"

PROJECT:
DATE:
DESIGNER:

PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
KITCHEN ELEVATIONS

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

SHEET NO:
A-05

COMMON BATHROOM
FRONT ELEVATION
SCALE: ¼"=1'-0"

COMMON BATHROOM
LEFT ELEVATION
SCALE: ¼"=1'-0"

COMMON BATHROOM
REAR ELEVATION
SCALE: ¼"=1'-0"

PROJECT:
DATE:
DESIGNER:

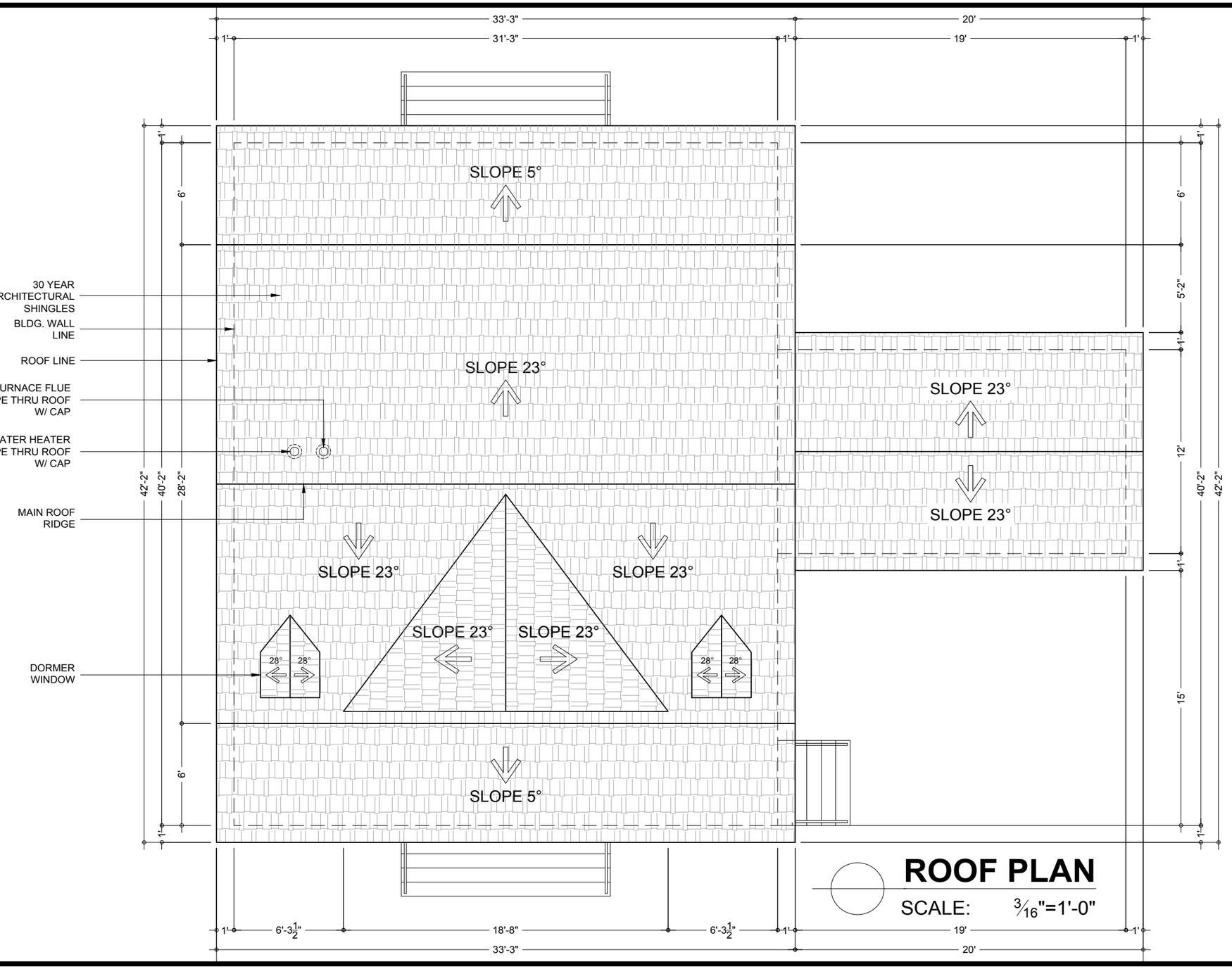
PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
BATH ELEVATIONS

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

SHEET NO:
A-06



ROOF PLAN

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

PROJECT:
DATE:
DESIGNER:

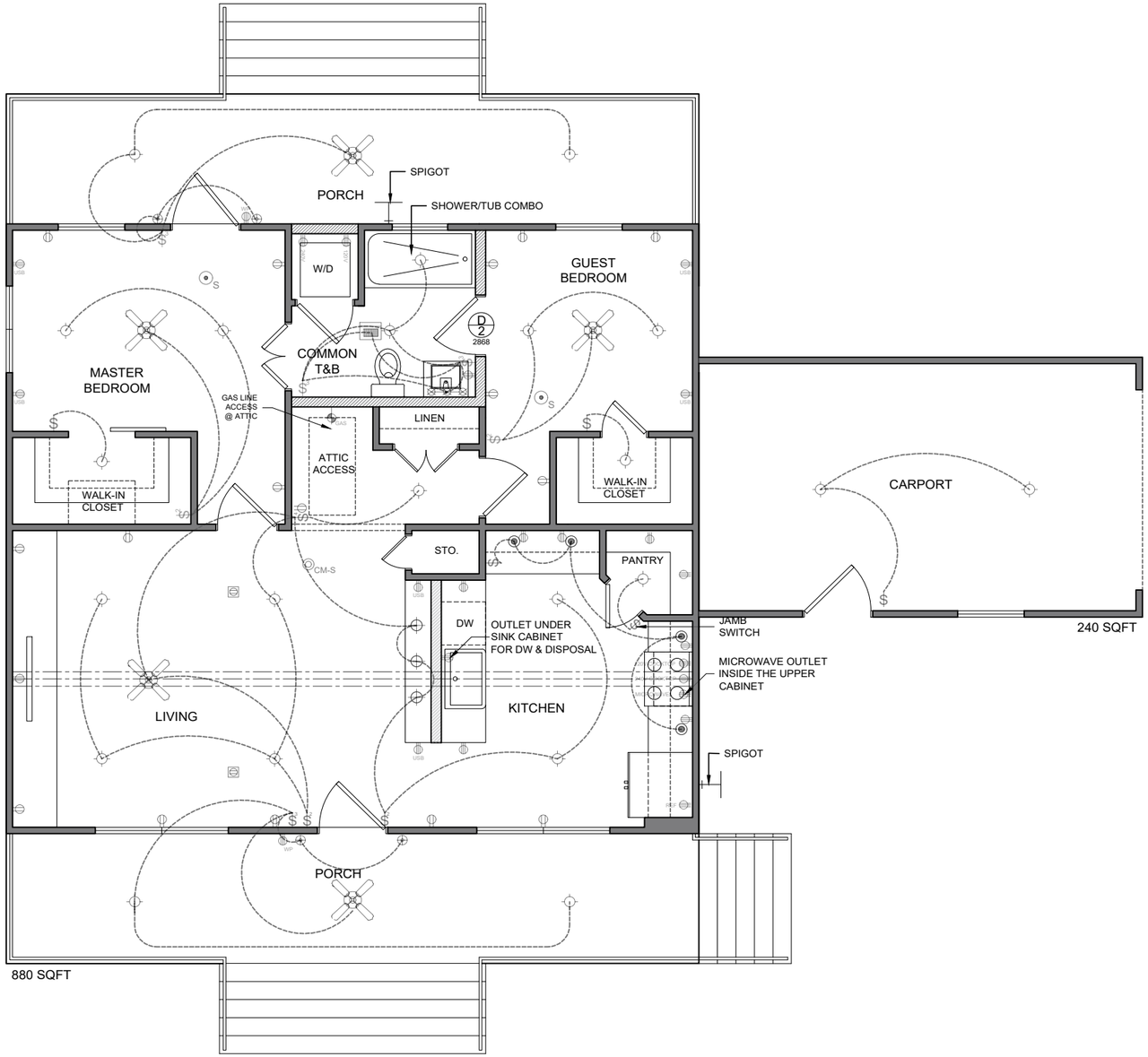
PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
ROOF PLAN

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

SHEET NO:
A-07



GROUND FLOOR PLAN

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

ELECTRICAL LEGEND

- MOUNTED LED LIGHT
- COACH LIGHT
- VANITY LIGHT
- PENDANT
- 120V OUTLET - AFCI
- 120V OUTLET - GFCI
- 120V OUTLET - WP GFCI
- 120V OUTLET W/ USB PORT
- FOUR-RECEPTACLE FLOOR OUTLET
- BATHROOM EXHAUST FAN
- CEILING FAN
- SINGLE POLE SWITCH
- DOUBLE GANG SWITCH
- THREE GANG SWITCH
- FOUR GANG SWITCH
- CARBON MONOXIDE ALARM
- SMOKE ALARM
- UNDER-CABINET LIGHTING

PROJECT:
DATE:
DESIGNER:

PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
ELECTRICAL PLAN

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

SHEET NO:
E-01

GROUND FLOOR PLAN

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

PROJECT:
DATE:
DESIGNER:

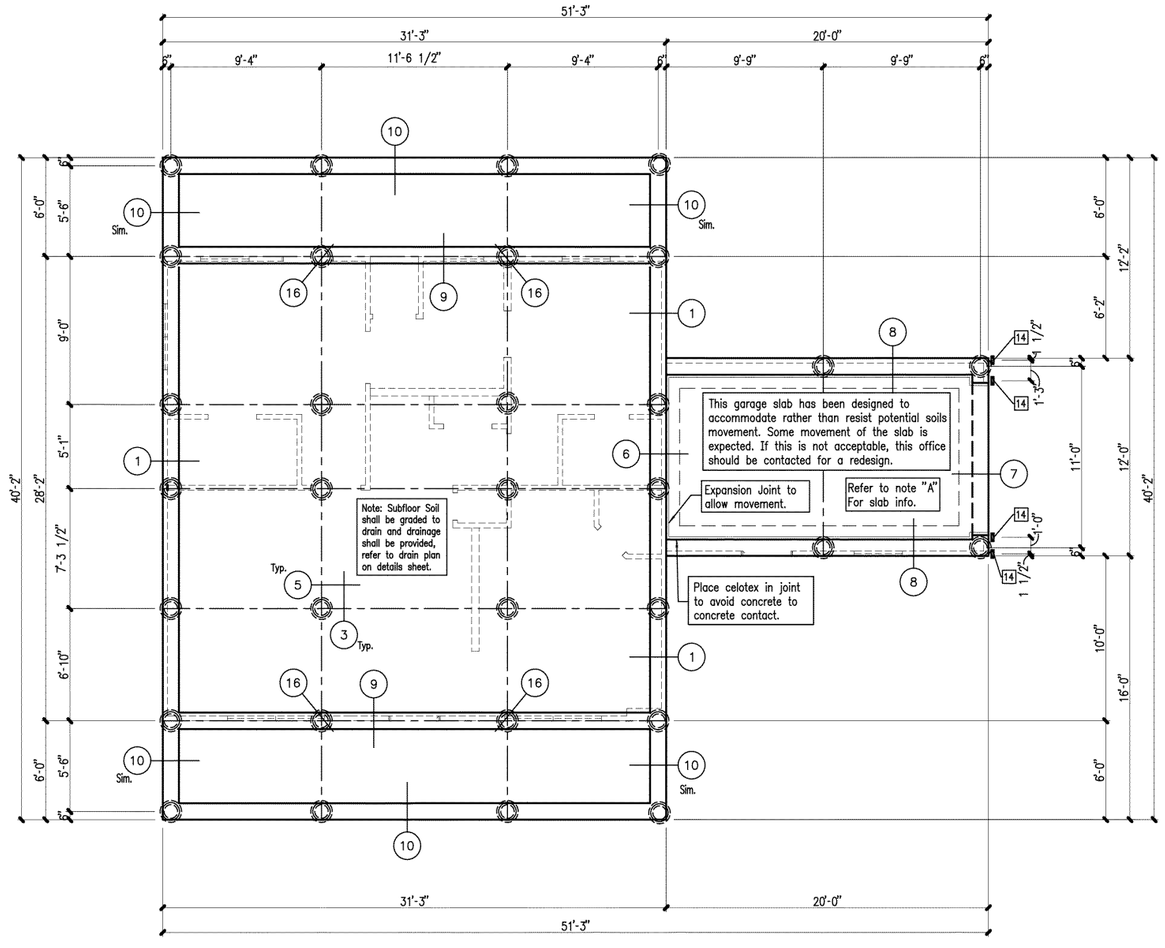
PROJECT TITLE:
PROPOSED 880 SQFT
ONE STORY HOME
306 Church St, Hutto, TX

SMALL HOUSE SOLUTIONS

SHEET TITLE:
DRAIN LOCATIONS

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

SHEET NO:
P-01



Foundation Plan

Foundation Notes:

1) Concrete shall be 3,000 PSI at 28 days.
2) Reinforcing steel size #4 and above shall be grade 60; #3 stirrups grade 40.
3) Grade beams shall be min. 12" wide x 24" deep U.N.O. reinf. with 2-#5 bars top and 2-#5 bottom and #3 stirrups at 24" O.C.. Corner bars shall be provided top and bottom. Overlap corner bars and splices 24" minimum.
4) Piers shall be 12" diameter straight shaft piers, founded 7' into firm grey limestone. This may translate into piers extending approximately 14' below existing grade. Rebar shall be 3- #4s, bundled and extending the entire depth of the pier.
5) Grade beams shall have a min. 8" void below formed with a waxed void carton or equivalent means.
6) Anchor base plate to concrete beam with 1/2"Ø steel anchors bolts at 60" O. C. max., 6" from corners and min. 7" embedment into concrete.
7) Contractor shall verify all dimensions prior to construction.
8) Engineer assumes no responsibility for the inspection of the foundation.
9) This plan is for use only on the lot and block specified in the title block or in documentation accompanying the plans.
10) ✱ on plan denotes dimension to be verified or furnished by contractor, builder or architect.

Lab: Terradyne
Report No.: A201243
Date: 9/24/2020

NOTE:
The architectural plans are the controlling document for all dimensions. It is the sole responsibility of the concrete contractor to verify that the foundation is formed in compliance with the architectural plans. Any dimensional discrepancies between this plan and the architectural plans shall be brought to the engineer's attention prior to trenching and setting forms.

NOTE:
Potential soils movements will increase if building pads are allowed to dry out prior to construction. This office recommends procedures be used to maintain at least a "normal" or "average" soil moisture content.

NOTE:
Grading plan shall ensure that positive drainage is maintained away from the foundation. This office recommends a 5 percent slope for the first 10 feet from the building pad. Failure to maintain drainage may allow water to pond or collect around the foundation, causing potential heave far in excess of that predicted in the geotechnical report.

NOTE:
It is understood that compaction testing was performed during grading operations. A 79G compaction certification letter should be issued by the engineering and testing laboratory of record certifying that fill soils within the building pads were placed in compacted lifts per specification requirements. This design assumes that adequate compaction was achieved for all fill placed in building pads. If adequate compaction was not achieved this office should be contacted to determine if a redesign is required.

TOTAL NUMBER OF PIERS
32

Note "A":

5" concrete slab reinforced with #4's @ 16" O.C. each way, placed in middle of slab. A minimum of 24" select fill with moderate compaction shall be placed beneath the slab in this area.

Note:

No interior hold downs are required.

Embedded Holdowns	Qty.
14 = STHD-14/STAD-14	4

Dimensions for holdowns are to center of holdown location. Field verify all dimensions to holddowns with architectural plans prior to installation.

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STATE OF TEXAS
ESTUS C. WILSON III
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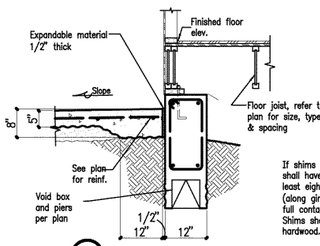
LICENSED
PROFESSIONAL ENGINEER

BUILDER Small House Solutions LLC
SUBD. Private Residence
LOT BLOCK
ADDRESS 306 Church Street
CITY Hutto, Texas
PLAN VER.

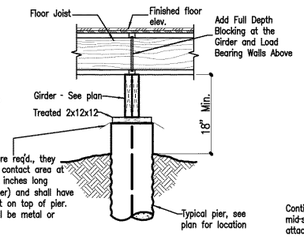
DATE 10/06/20
SCALE 1/8"=1'-0"
DR'N B.N.

FD1

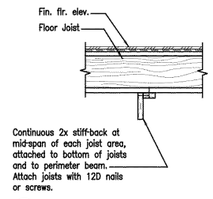
STRAND 2040915



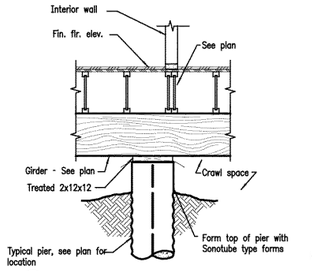
6 Garage Slab At House



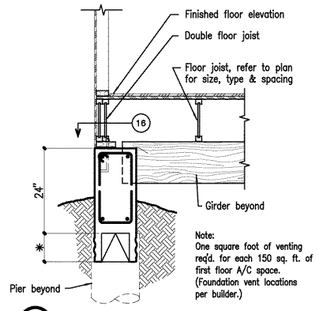
5 Interior Girder At Pier



4 Typical Stiff-Back

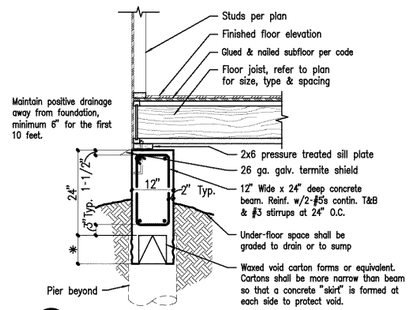


3 Joist At Interior Wall Location



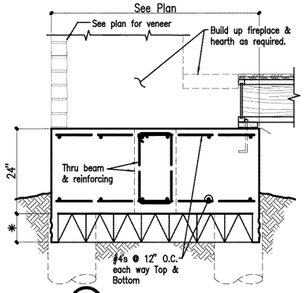
2 Alternate Perimeter Beam

(Joists running parallel to beam)

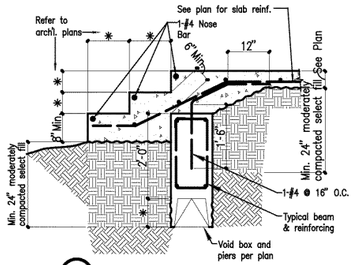


1 Alternate Perimeter Beam

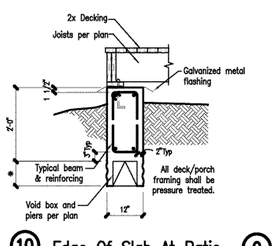
Refer to this detail for information not shown in other details



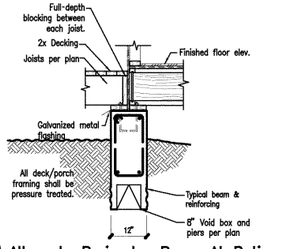
12 Fireplace Pad



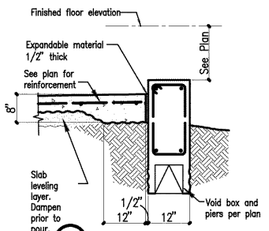
11 Steps At Patio



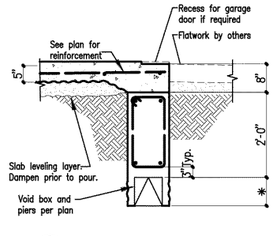
10 Edge Of Slab At Patio



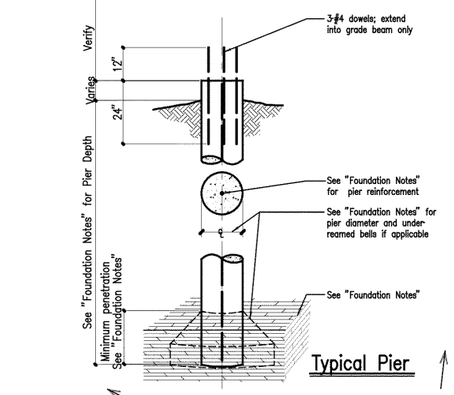
9 Alternate Perimeter Beam At Patio



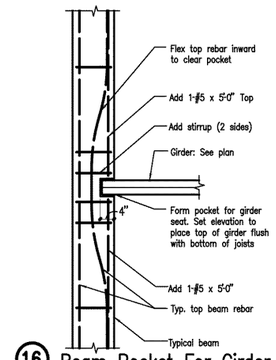
8 Garage Perimeter Beam



7 Beam At Garage Door

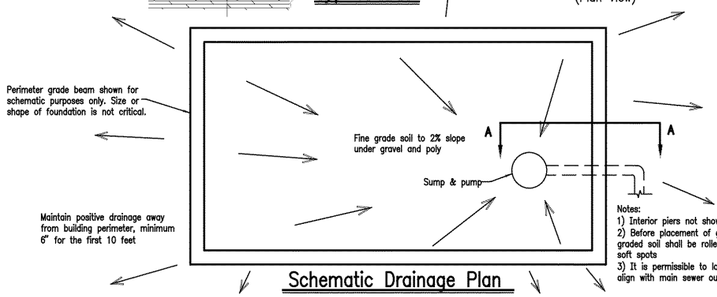


Typical Pier

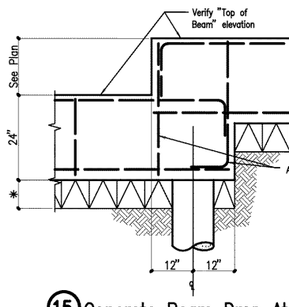


16 Beam Pocket For Girder

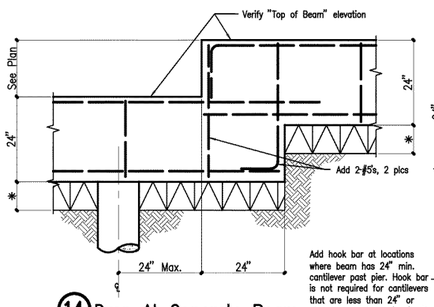
(Plan View)



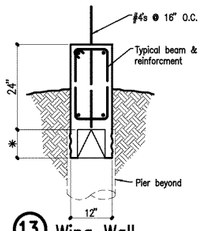
Schematic Drainage Plan



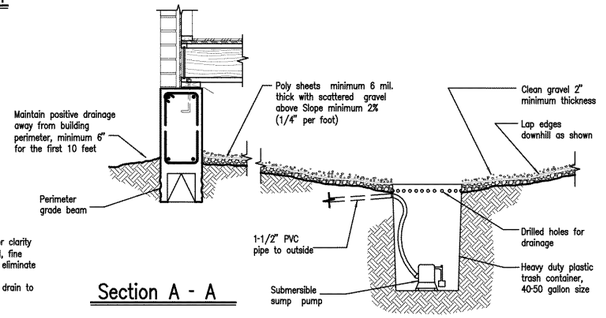
15 Concrete Beam Drop At Pier



14 Drop At Concrete Beam

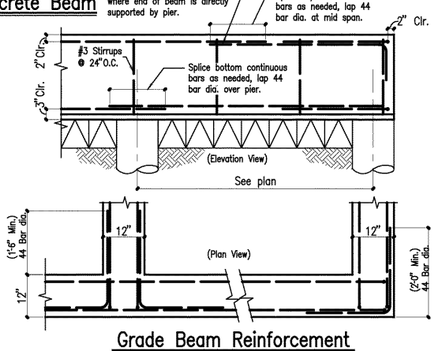


13 Wing Wall



Section A - A

Add hook bar at locations where beam has 24" min. cantilever past pier. Hook bar is not required for cantilevers that are less than 24" or where end of beam is directly supported by pier.



Grade Beam Reinforcement

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PROFESSIONAL ENGINEER

BUILDER	Small House Solutions LLC
SUBD.	Private Residence
LOT	BLOCK
ADDRESS	306 Church Street
CITY	Hutto, Texas
PLAN	VER.

DATE 10/06/20
SCALE 1/8"=1'-0"
DR'N B.N.

FD2

STRAND 2040915

1st Floor Total Hold Downs	
Number of STHD-14/STAD-14	4
Number of STHD-10RJ/STAD-10RJ	2
TOTAL NUMBER OF HOLD DOWNS	6

Hold downs shall be fastened as follows:

STHD10/STHAD10	28-16d sinkers (.148" x 3-1/4") /28-16d sinkers (.148" x 3-1/4")
STHD14/STAD14	38-16d sinkers (.148" x 3-1/4") /38-16d sinkers (.148" x 3-1/4")
HTT4/HTT45	18-16dx2-1/2 (.162" x 2-1/2") /18-16dx2-1/2 (.162" x 2-1/2")
HTT5/HTT45	26-16dx2-1/2 (.162" x 2-1/2") /26-16dx2-1/2 (.162" x 2-1/2")
HTT5-KT/HTT45-KT	26-Strong-Drive SD10212 screws (#10 x 2-1/2") /26-LL930 Lumberlok screws(9x2-7/8")

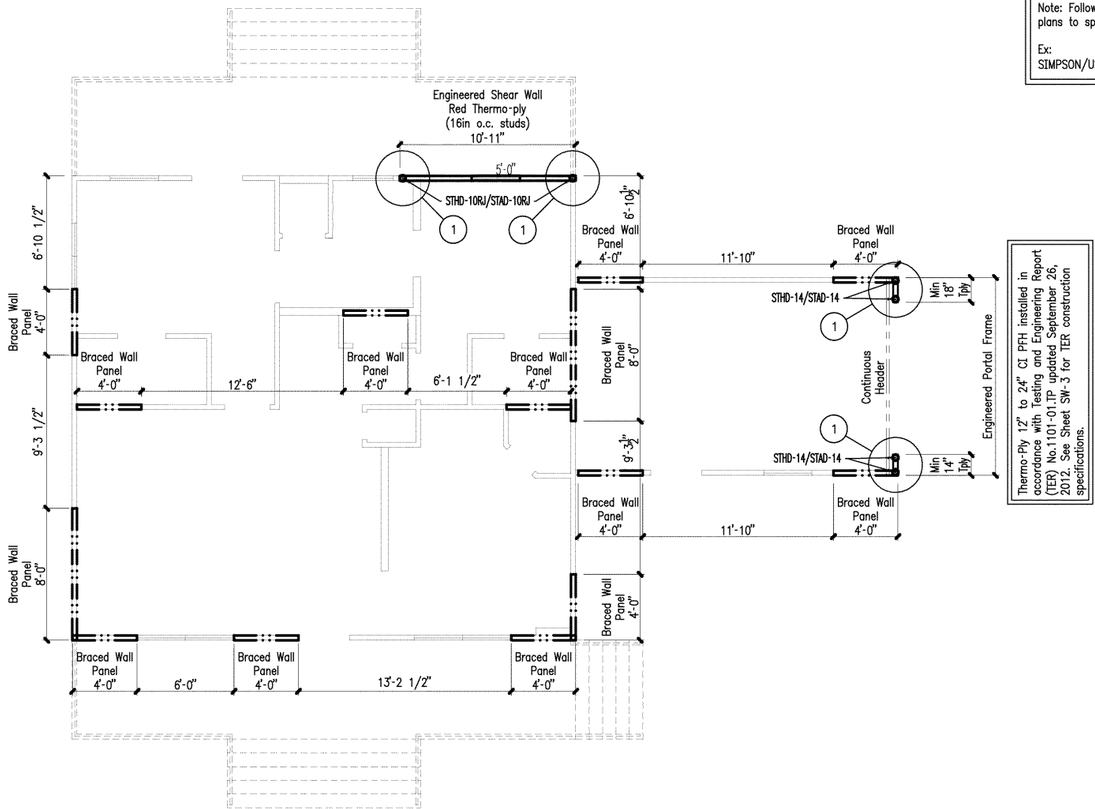
Note: Alternate fasteners with equal length and shank diameter are permitted. No other substitutions are permitted. All other connectors shall be installed in accordance with the manufacturer's specifications.

See DTL0901.1 for typical notes and details.

Shear Wall Notes
1. At cantilevered floor supporting a braced wall line above, add solid blocking between trusses and joists at bearing wall. As an alternate for cantilevers less than or equal to 24", a continuous full height rim joist may be provided at the end of the cantilever in lieu of the solid blocking.
2. All engineered or braced wall panel sheathing shall extend from plate to plate.
3. If alternate braced wall Single Sided Gyp method is specified on plan, it shall be installed as shown on the plan and used for the entire braced wall line. (ie. Bracing methods on the braced wall line shall not be mixed)
4. Braced wall panels located below a platform framed gable end wall shall have the structural sheathing extend all the way up to the top plate of the gable end. If let-in bracing is allowed and installed, an additional let-in brace shall be installed at the same location on the gable end wall.

Hardware Callout Key
Note: Following formats may be used on plans to specify SIMPSON and USP hardware.

Ex: SIMPSON/USP or SIMPSON USP



Thermo-Ply 12" to 24" OC PFH installed in accordance with Testing and Engineering Report (TER) No.1101-01.TP updated September 26, 2012. See Sheet SW-3 for TER construction specifications.

This plan was designed based on a windspeed of :
115 mph (V_{ult})
90 mph (V_{asd})
Exposure: B

Refer to IRC FIGURE R301.2(4)A, Note 2

This level was designed in accordance with the prescriptive provisions of Section R602.10 of the International Residential Code (IRC) and engineered alternatives, as applicable.

1st Floor Plan - Shear Wall Plan

Engineered Panels
Engineered shearwall continuously sheathed and installed as specified on the plans. No sheathing substitutions are allowed without approval from this office.

Braced Wall Panels
Braced wall panel sheathed with 7/16" OSB, Red or Blue T-ply or DOW SIS, U.N.O.
Braced wall panel sheathed with 7/16" OSB, Red or Blue T-ply, DOW SIS, or Let-in-Bracing
Alternate Single Sided Gyp (SSG)
* See Standard Notes and Details Sheathing Schedule for engineered and braced wall panel specifications.

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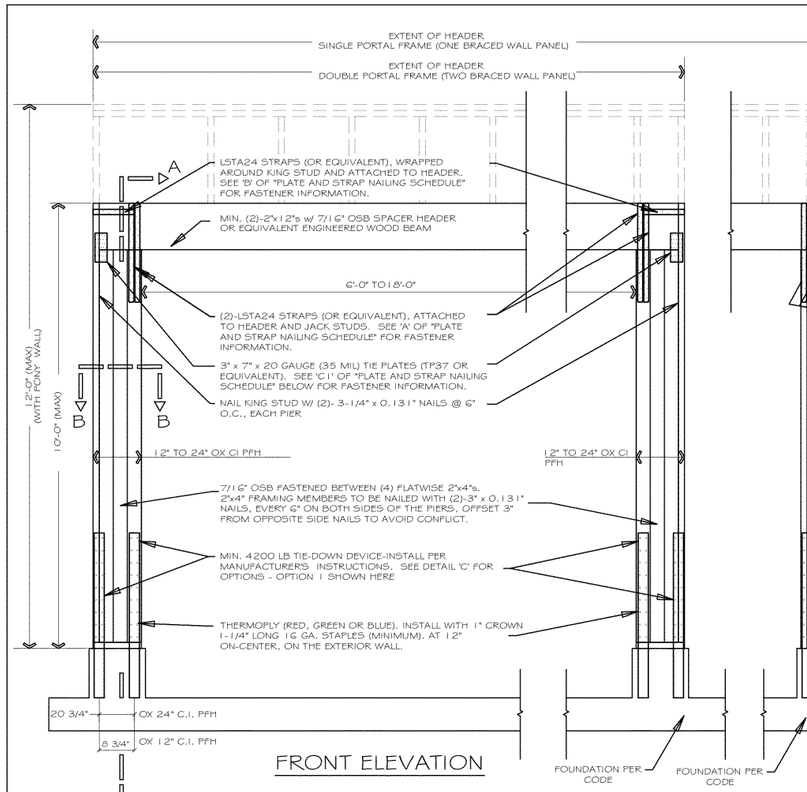
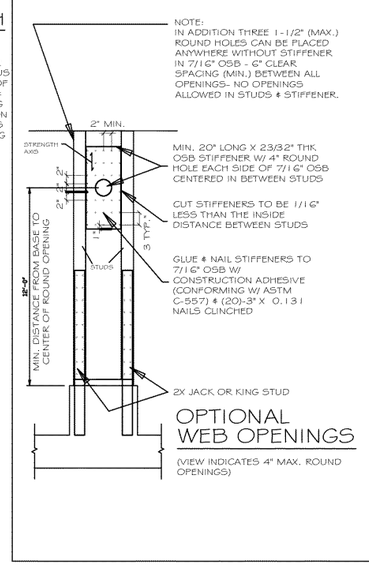
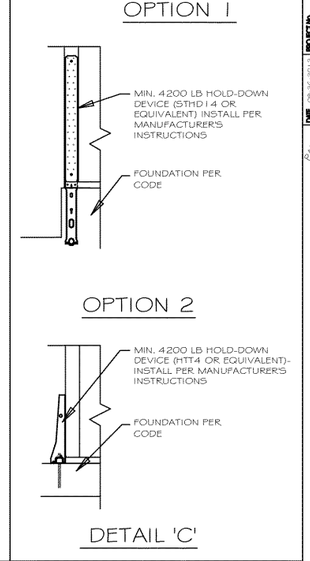
SCALE 1/8"=1'-0"
DR'N D.D.D.

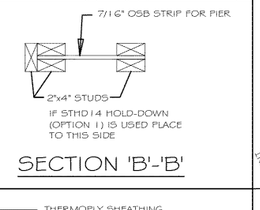
SW1

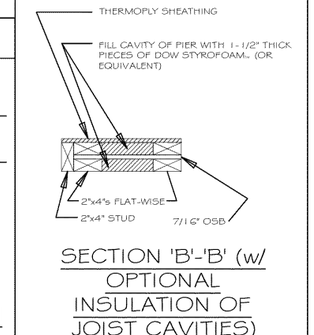
STRAND 2040915

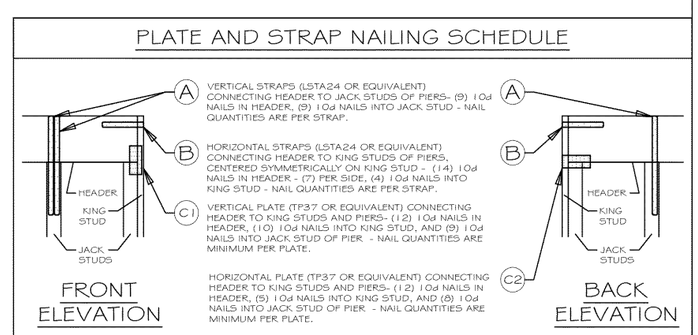












SCALE: 3/8" = 1'-0"

DATE	No.	REMARKS	PROJECT No.
08.26.2013			

PATENT PENDING

THERMO-PLY 12" TO 24" (CI) PORTAL FRAME HOLD-DOWN

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PLAN	VER.

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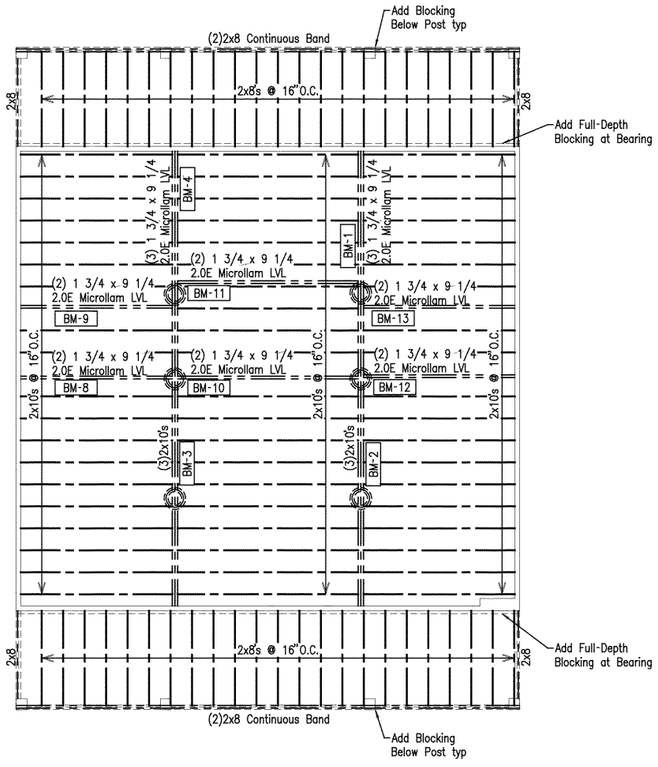
SCALE 1/8"=1'-0"
DR'N D.D.D.

SW2

STRAND 2040915



First Floor Ceiling Framing Plan

See DTL0901.1 for typical notes and details.

Structural Composite Lumber and Hangers				
BeamID	Length	Member	QTY.	Hangers
BM-1	10'	1 3/4 x 7 1/4 2.0E Microllam LVL	3	
BM-4	10'	1 3/4 x 7 1/4 2.0E Microllam LVL	3	
BM-8	11'	1 3/4 x 7 1/4 2.0E Microllam LVL	2	
BM-9	11'	1 3/4 x 7 1/4 2.0E Microllam LVL	2	
BM-10	12'	1 3/4 x 7 1/4 2.0E Microllam LVL	2	
BM-11	12'	1 3/4 x 7 1/4 2.0E Microllam LVL	2	
BM-12	11'	1 3/4 x 7 1/4 2.0E Microllam LVL	2	
BM-13	11'	1 3/4 x 7 1/4 2.0E Microllam LVL	2	
BM-19	32'	1 3/4 x 24 2.0E Microllam LVL	3	

This plan was designed based on a windspeed of :
115 mph (V_{ult})
90 mph (V_{asd})
Exposure: B
Refer to IRC FIGURE R301.2(4)A, Note 2

Key Plan:

Floor system

Ceiling Framing Notes (v1):

1. Ceiling framing assumes limited attic storage loading (10psf DL, 20psf LL).
2. All ceiling joists shall be 2x6 SYP No.2 @ 16" OC UNO.
3. All beams and headers shall be SYP No.2 UNO.
4. All walls shall be SPF stud grade studs @ 16" OC UNO. Studs greater than 12' shall be No.2 grade.
5. Built-up posts under beams shall provide full bearing (ie. 3.5" wide 2-ply manufactured beam requires (3) stud built-up post. 2-ply 2x conventional lumber beams require (2) stud built up post.) UNO. Grade and species of built up post shall match wall framing.
   Exceptions:
   - 3-ply 2x6 & 2x8 beams only require double stud pack.
6. Stud packs with (2) or more studs at upper floors shall be continued through lower floors to the foundation. Squash blocks shall be added in the subfloor to provide a continuous load path.
7. All lintels shall be loose (not bolted to header) UNO.
8. Exterior/interior dropped headers require (1)Jack and (1)King Stud (1J/1K) UNO.
9. Refer to the Nailing Schedule on sheet FR0.2 for any framing fastening requirements including the rafter to plate connection.
10. All hardware is noted as Simpson / USP.

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DR'N K.F.G.

FR1

STRAND 2040915

Second Floor Ceiling Framing Plan

D1 Section-Ridge @ End Support

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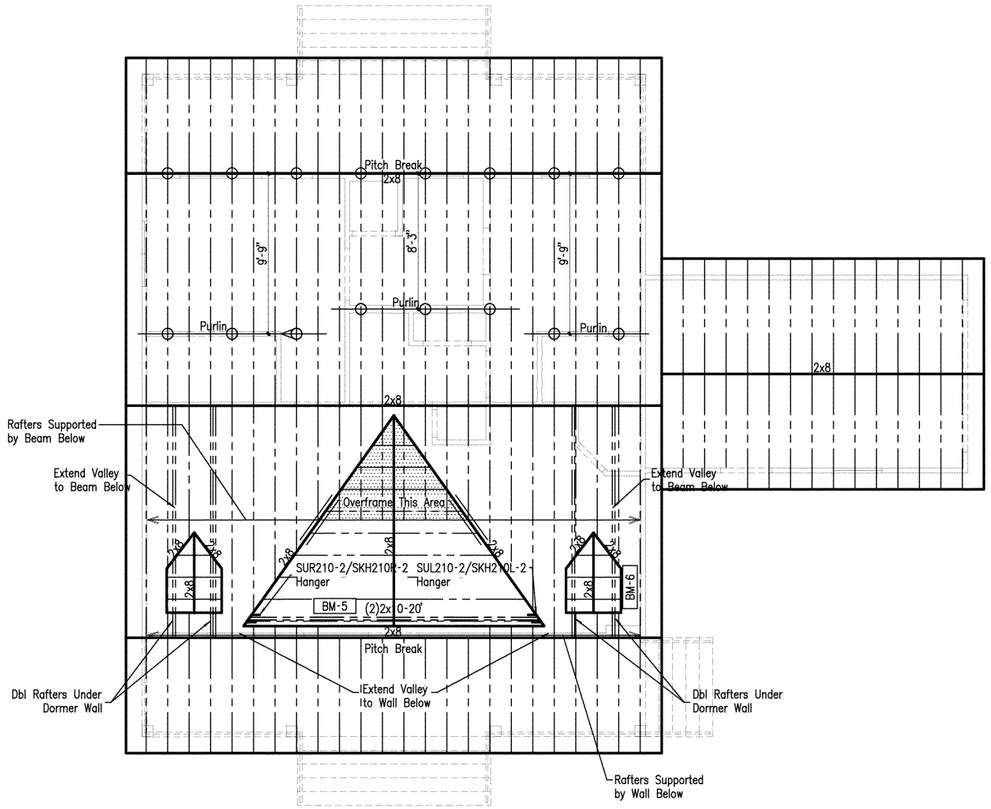
LOT	1 BLOCK X
ADDRESS	306 Church Street
CITY	Hutto, Texas
PLAN	VER.

DATE	10/20/20
SCALE	1/8"=1'-0"
DR'N	K.F.G.

FR2

STRAND 2040915



Roof Rafter Framing Plan

Roof Framing Notes (v1):

1. All rafters shall be 2x6 SYP No.2 @ 16" OC UNO.
2. Hips, valleys, and ridges shall be No.2 grade SYP, UNO.
3. Rafter splices shall occur over supports and shall have a 2'-0" overlap at each side of the support.
4. Dimensions shown for purlin locations represent horizontal distance.
5. All hardware is noted as Simpson / USP.

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FR3

STRAND 2040915

General Structural Notes

1.0 Applicable Design Codes and Loads

1.1 Codes and standards: International Residential Code (IRC).
International Building Code (IBC).

		LL	DL
1.2	Design Loads [1]		
	Roof (Rafters)	16 psf [2]	10 psf [3]
	Ceiling joists		
	Limited storage	20 psf	10 psf
	No storage	10 psf	5 psf
	Floors	40 psf	10 psf [4,5]
	Balconies	60 psf	10 psf [4,5]
1.3	Wind Speed (3 sec gust)		Per Plan
1.4	Ground Snow Load [6]		5 psf
1.5	Seismic Design Category		B
1.6	Special Loads		
	HVAC/Water heaters		300 lbs/unit
	Exterior/Interior Walls		100 plf
	Gypcrete		8.5 psf/in
	Lightweight Concrete		10.5 psf/in
	Normalweight Concrete		12.5 psf/in
	Brick		40 psf
1.7	Deflection Limits (based on live load, except masonry)		
	Rafters greater than 3:12		L/180
	Ceilings		L/240
	Floors		L/360
	Masonry veneer		L/600

[1] References: IRC Chapter 3 or IBC Chapter 16 and ASCE 7.
[2] For pitches less than 4:12 use 20 psf.
[3] Assumes composition shingles or equivalent, unless noted otherwise. Additional load may be required for heavier roof coverings.
[4] Trusses shall have tabulated DL distributed on top chord and an additional 5 psf on bottom chord.
[5] Assumes nominal floor covering (such as wood flooring, carpet, or thinset tile), unless noted otherwise. Additional load may be required for heavier floor coverings.
[6] Snow load to be applied nonconcurrently with live load, unless noted otherwise.

2.0 General Conditions

2.1 The Engineer's basic responsibility is for member size and strength, not dimension control or fit and finish. Special conditions or loads must be brought to the attention of the Architect and/or Engineer.
2.2 These structural plans are based on information provided to this office. The Engineer shall be entitled to rely on the accuracy and completeness of this information in the preparation of the construction documents.
2.3 These plans, notes, and details are based on the minimum code requirements and accepted local standard of care for typical single family construction practices. More stringent installation may be required by a local jurisdiction or increased performance expectations. All special or non-standard conditions should be brought to the attention of the Architect and/or Engineer. Where applicable, installation shall comply with all Texas Department of Insurance requirements.
2.4 The contractor and all subcontractors/trades are responsible for reviewing the entire set of plans and specifications, to include dimensions and sections. Any discrepancies must be reported to the Architect and/or Engineer prior to fabrication or installation of structural members.
2.5 The contractor is responsible for all temporary bracing and/or supports that may be required as the result of the contractor's construction methods or sequences.
2.6 The contractor shall comply with all applicable safety requirements.
2.7 The contractor is responsible for the timely scheduling of all required product submittals, inspections, and any other construction documentation.
2.8 Notes, details, and schedules herein are typical and may apply to similar conditions unless otherwise noted or shown. Not all sections, schedules or notes may apply to each project.
2.9 Information on the structural plans may supercede general notes and details.

3.0 Materials

3.1 Wood
1. Dimensional lumber shall conform to the National Design Specification (NDS), latest edition.
2. All lumber shall be Spruce-Pine-Fir (SPF), Southern Yellow Pine (SYP), or Douglas Fir-Larch (DF-L), UNO. Refer to plans for grade and species of structural members.
   Bracing/blocking: Utility grade
   Wall studs: Stud grade (#2 grade at balloon framing)
   Plates: #3 grade
3. All wood framing members to have 19% or less moisture content.
4. All sills on concrete slabs shall be treated lumber.
5. All wood framing in direct contact with concrete, masonry, or exposed to weather shall be treated lumber or otherwise protected.
6. Finger-jointed lumber may be used for studs (same grade and species), except for balloon framing. All other finger jointed lumber shall be rated for horizontal use.
7. Dimensional lumber shall conform to the following minimum design values. Values are for nominal 12" depth. Refer to manufacturer for conversions to alternate grades and sizes

	SPF	SYP		DF-L
	#2	#3	#2	#2
Bending (psi)	875	450	750	900
Compression parallel to grain (psi)	1150	725	1250	1350
Tension parallel to grain (psi)	450	250	450	575
Horizontal shear (psi)	135	175	175	180
Compression perpendicular to grain (psi)	425	565	565	425
Modulus of Elasticity (10^6 psi)	1.4	1.3	1.4	1.6
Specific Gravity	0.42	0.55	0.55	0.50

8. Manufactured wood products (including, but not limited to, structural wood beams and I-joists) shall be fabricated, handled, and installed in accordance with the manufacturer's instructions.
9. Plywood, Oriented-Strand Board (OSB), or waferboard shall comply with US Department of Commerce Voluntary Product Standard (PS2).
10. All wood products shall be grade marked for identification.
11. Alternate materials are acceptable if they have equivalent structural capacity and performance, as established by applicable code evaluation reports.

3.2 Steel
1. Structural steel components shall comply with the following specifications and standards:
   General: American Institute of Steel Construction (AISC)
   Manual of Steel Construction
   American National Design Standards: ASCE 5-99/TMS 602-99
2. Structural Steel Rolled Shapes (Wide Flange): ASTM A992
3. Structural Steel Tubes: ASTM A500 Grade B
4. Steel Pipe: ASTM A53, Schedule 40
5. Other Structural Steel: ASTM A36
6. High Strength Bolts: ASTM A325N
7. Anchor Bolts: ASTM A307

3.3 Connectors
1. All nails, lag screws, and bolts shall comply with NDS, Chapters 10 and 11.
2. All nails shall be common nails, UNO. Pneumatic fasteners are permitted, provided they have the same length and shank diameter, or otherwise have equivalent structural capacity.
3. Specified hold-downs, hangers, straps, etc. are by Simpson Strong-Tie, UNO. Products by other manufacturers may be used, provided they have equivalent structural capacity and have a valid ICC report. All products shall be installed per the manufacturer's instructions.
4. All connectors exposed to weather or used in conjunction with fire-retardant lumber shall be galvanized or otherwise protected from corrosion.

4.0 Conventional Wood Framing

4.1 Framing shall conform with the IRC or the IBC and the Wood Frame Construction Manual (WFCM), published by the American Forest & Paper Association (AF&PA).
4.2 Framing shall be adequate to provide a continuous load path to transfer all vertical and lateral loads from the roof, wall, and floor systems to the foundation.
4.3 Roof-Ceiling Construction
1. Rafters shall be sized and spaced per the Rafter Span Schedule.
2. Provide purlins same size as rafters and brace with min 2x4 brace at not more than 48 inches on center to wall, header, or elevated beam below. The slope of struts shall not be less than 45 degrees from horizontal. Struts longer than 8' shall be 2x4 T-brace or 2x6. At wind speeds greater than 100 mph, use 2x4 T-brace. Struts larger than 8' shall be 2x6 T-brace.
3. Ridge straps or collar ties installed in the upper ⅓ of the attic space shall not be spaced more than 48 inches on center U.N.O.
4. Hips, valleys, and ridges shall provide full end-cut bearing for supported rafters, not less than one dimensional size larger.
5. Roof sheathing shall be minimum 7/16" thickness sheathing with 24/16 span rating. For roof coverings weighing more than 1000 pounds per square (100 sq.ft.), roof framing spacing shall be limited to not more than 16 inches on center. Refer to Sheathing and Cladding Attachment Schedule for fastening requirements.
6. Ceiling joists shall be sized and spaced per the Ceiling Joist Span schedule.
7. All ceilings are designed for limited attic storage unless noted otherwise, except for cathedral type ceilings where no attic storage is permitted. Ceilings are not designed for future rooms, unless noted otherwise.
8. Rafters and ceiling joists shall have minimum 1 1/2 inches of bearing and opposing ceiling joists shall be lapped a minimum of 3 inches at interior bearing walls. Rafters and joists shall be face nailed together and both shall be toe nailed to the plate. At vaulted ceilings, cripple rafters shall be added, to achieve full bearing and toe nailing at the plate.
9. Where ceiling joists run perpendicular to rafters or where ceiling joists do not tie into rafters, rafter ties or some other method of resisting out thrust shall be installed. Refer to Typical Rafter Tie Detail. Cripple joists and rafters shall be added to allow full bearing and toe nailing at the top plate.
10. Rafter and ceiling joists with a depth:thickness ratio greater than 5:1 shall have lateral blocking at bearing points to prevent rotation. Where solid sawn rafters and joists are parallel and face nailed together, the combined thickness may be used.
11. Rafters and ceiling joists with a depth:thickness ratio greater than 6:1 shall have intermediate blocking at intervals not exceeding 8 feet.
12. Notches in sawn lumber rafters and joists shall not exceed one-sixth the depth of the member, shall not be longer than one-third the depth of the member, and shall not be located in the middle one-third of the span. Notches at the ends shall not exceed one-fourth the depth of the member.
13. Holes in sawn lumber rafters and joists shall not exceed one-third the depth of the member and shall not be within 2 inches of the top or bottom edge of the member, a notch, or another hole.

4.4 Floors
1. Floor joists shall be sized and spaced per IRC Table R502.3.1(2) or IBC Table 2308.8(2). Manufactured floor systems (such as I-joists) shall be sized and spaced per the manufacturer's specifications. Manufactured floor trusses shall be designed for the applicable loads.
2. Floor joists or trusses shall be doubled under parallel walls or otherwise provide full bearing, unless noted otherwise. Joists or trusses under perpendicular walls shall be designed for the additional loads.
3. Floor joists or trusses shall have minimum 1 1/2 inches bearing and opposing members shall lap minimum 3 inches at interior bearing walls.
4. Floor joists or trusses shall be supported at the ends by full depth 2x blocking, full depth beam, band or rim joist. Blocking is also required for continuous floor joists or trusses at perpendicular load bearing walls above or below.
5. Floor joists or trusses with a depth:thickness ratio greater than 6:1 shall have intermediate blocking or bracing at intervals not exceeding 8 feet.
6. Floor sheathing shall be minimum 23/32" thickness T&G sheathing with 48/24 span rating. Refer to Sheathing and Cladding Attachment Schedule for fastening requirements.
7. Allowances for notches and holes in sawn lumber floor joists are the same as for rafters and ceiling joists. For manufactured products, notches and holes are prohibited except where permitted by the manufacturer's installation guide or where the effects of the alterations are specifically considered in the design of the member by a registered engineer.

4.5 Wall Construction
1. Load bearing studs shall be sized and spaced per the Wall Stud Schedules, unless otherwise noted on the plans. Interior non-load bearing walls may be 2x4s @ 24 inches on center up to 14' height and 2x6s @ 24 inches on center up to 20' height.
2. Notching in any stud in a nonbearing wall shall not exceed 40 percent of its width. Notching of any stud in an exterior or load bearing wall shall not exceed 25 percent of its width.
3. Holes in any stud in a nonbearing wall shall not exceed 60 percent of its width. Holes in any stud in an exterior or load bearing wall shall not exceed 40 percent of its width. Hole diameter may be increased to 60 percent of the stud width if the studs are doubled and not more than two successive studs are so bored. Holes may not be located within 5/8 inch of the edge of the stud or in the same section as a notch. Approved stud shoes may also be used.
4. Load bearing walls shall have minimum one bottom plate and two top plates, having a width at least equal to the width of the studs. The double top plate shall overlap at corners and intersections of bearing walls. End joints and splices shall be offset at least 24 inches, unless noted otherwise.
5. The sill plate at exterior walls shall be anchored to the foundation with anchor bolts spaced per the Sill Plate Anchorage Schedule, with at least two bolts in each section of sill plate spaced not more than 12" or less than 7 bolt diameters from the end. Bolts shall be at least 1/2" diameter and shall extend at least 7 inches into the foundation. The sill plate at interior bearing walls shall be positively connected to the foundation with approved fasteners. Additional bolts may be required per the Sheathing Schedule or other connections. At wind speeds in excess of 100 mph in hurricane prone regions, all anchor bolts shall have a 2 x 2 x ¼ thick plate washer or (2) 2 x 2 x 1/8 plate washers. At wind speeds less than or equal to 100 mph, all anchors bolts shall have a standard washer. Equivalent fasteners are permitted.
6. Single top plates may be used, except that 3" x 6" 20ga galvanized steel plates shall be used at corners, intersections, and joints. Rafters or joists shall be centered over studs with a tolerance of not more than 1 inch.
7. If drilling or notching of the top plate exceeds 50 percent of its width, a 1-1/2" x 16ga galvanized metal tie shall be used across the opening.
8. Headers or beams at openings shall be per IRC Table R502.5 or IBC Tables 2308.9.5 and 2308.9.6 and WFCM Table 3.23, unless otherwise noted on the plans.
9. The ends of flush beams and girders bearing on the top plate shall be supported by a full-height stud pack. Dropped headers shall be supported by jack studs. For conventional lumber, stud pack or jack studs shall be not less than 1 for 2x6 and 2x8 members and not less than 2 for 2x10 and 2x12 members. For manufactured lumber and trusses, studs shall provide full bearing and shall be not less than 1 for up to 7 1/4 depth and 2 for up to 11 7/8 depth. These are minimums - additional studs may be required based on actual loads. At upper floors, stud packs and jack studs with 2 or more studs shall be continued at lower floors to the foundation, to include blocking through subfloor as necessary.
10. At dropped headers, all jack studs shall have not less than one full-height king stud. Additional king studs may be required at exterior walls subject to wind loads. Refer to WFCM Tables 3.23C and 3.23D. King studs may replace required jack studs if a mechanical connector is used to fasten the header to the king stud.
11. Wall bracing shall be per the IRC Section R602.10 or IBC Section 2308.9.3. Framing perpendicular to braced wall lines shall be blocked in the plane of the wall as required by the IRC/IBC. Framing parallel to braced wall lines shall have a structural member in the plane of the wall. All braced wall lines shall be anchored to the concrete foundation. These plans may contain a layout of braced wall lines and panels, including portions of the structure which have been designed per IRC Section R602.10.10 or IBC Section 2308.4. Refer to the Sheathing Schedule/Shear Connection Schedule.

4.6 Coverings, Openings and Veneers
1. Wall coverings shall comply with IRC Chapter 7. Roof coverings shall comply with IRC Chapter 9. Coverings, windows and other openings shall be rated for the components and cladding loads of IRC Table R301.2(2) or IBC Table 1609.6.2.1(2)
2. Windows and other openings in wind borne debris regions shall be protected per IRC Table R301.2.1.2 or IBC Table 1609.1.2, or per the TDI as applicable
3. Masonry veneers shall not exceed 30' in height or 40psf in weight, unless noted otherwise on the plans. Brick ties shall be minimum 22ga corrugated sheet metal, spaced not more than 24 inches on center horizontally and supporting not more than 2.67 square feet of masonry. In high wind areas where the basic wind speed is greater than or equal to 110 mph but does not exceed 130 mph, space anchors a maximum of 16"o.c. in either direction. Add additional anchors around perimeter of opening at a maximum of 24" o.c. and place anchors within 12" of opening. Flashing is required beneath the first course of masonry and at other points of support. Weepholes located immediately above the flashing shall be minimum 3/16 inch diameter, spaced not more than 33 inches on center.
4. Steel lintels supporting only dead load from masonry shall be per Schedule or plans. Lintels shall have bearing length not less than 4 inches and shall not be fastened to the wood framing, unless noted otherwise.
5. Brick veneer not exceeding 12'-8" in height may be supported on wood framing per IRC Section R703.7.2.

4.7 Connections
1. Connections and fasteners shall be per IRC Table R602.3 or IBC Table 2304.9.1.
2. Where joists or beams frame into a flush beam or girder, the connection shall consist of a metal hanger or other framing angle, except that single ceiling joists spanning not more than 6 feet may be connected with 3-8d common or 3-0.131"x3" toe nails.
3. Framing members consisting of multiple plies of dimensional lumber shall be fastened together with 2 rows of 0.131" x 3" nails at 24 inches on center, except where side-loaded beams shall be fastened together with 2 rows of 0.131" x 3" nails at 12 inches on center.
4. Framing members consisting of multiple plies of engineered wood products shall be fastened per the manufacturer's instructions. Solid members of the same nominal size and capacity may be used in lieu of built up members.

5.0 Construction Documentation

5.1 Submittals. Review of submittals is for general conformance with the structural drawings and project specifications, not for dimension control. The Engineer shall be entitled to rely on the accuracy and completeness of information provided by the contractor, the Architect, or other third party. All materials and systems shall be installed in accordance with the structural plans, project specifications, and manufacturer's installation instructions.
5.2 Site visits. The purpose of site visits is to observe and become generally familiar with the quality and progress of the construction work. Site visits are not intended as detailed inspections. The Engineer makes no warranty or guarantee about work observed during a site visit. Site visits may be conducted by a registered engineer or by other qualified personnel.
5.3 Field Inspections.
1. Inspections are generally conducted by qualified inspectors, representing either the Engineer or a third party. Inspections are to verify materials installation is in substantial conformance with the structural plans and specifications or to verify actual field conditions as the basis for field changes or repairs. The inspection is meant to be representative of the construction and is not meant to ensure or imply complete compliance.
2. A copy of the inspection form will generally be left on site, reflecting the items inspected and discrepancies noted; no other observations are to be implied or inferred. Inspections do not relieve the contractor of the responsibility to comply with the plans, contract documents, or other applicable requirements.

5.4 Revisions, repairs and field changes are authorized only when in writing, signed and sealed by a professional engineer with this office. When so issued, they become incorporated into the plans and contract documents
5.5 Special Documentation. It is the contractor's responsibility to identify any special documentation required by a local jurisdiction or a third party. This includes any program enrollment, including but not limited to, a homebuyer warranty program and the Texas Department of Insurance (TDI). It is the contractor's responsibility to notify the Architect and Engineer of these special requirements in a timely manner.

Wind Borne Debris Protection

Windborn debris protection shall be provided in all areas that are within 1 mile of the coastal mean high water line where the ultimate design wind speed, V_{ult}, is 130 mph or greater; or in areas where the ultimate design wind speed, V_{ult}, is 140 mph or greater. Exterior glazing in buildings located in windborne debris regions shall be protected from windborne debris. Glazed opening protection for windborne debris shall meet the requirements of the Large Missile Test of ASTM E1996 and ASTM E1886. Garage door glazed opening protection for windborne debris shall meet the requirements of an approved impact-resisting standard or ANSI/DASMA 115.

As an alternate to the above requirements, wood structural panels with a thickness of not less than 7/16" and a span of not more than 8 feet shall be permitted for opening protection. Panels shall be precut and attached to the framing surrounding the opening containing the product with the glazed opening. Panels shall be predrilled as required for the anchorage method and shall be secured with the attachment hardware provided. In addition, Installation instructions and a panel location map shall be provided. Attachments shall be designed to resist the component and cladding loads determined with either IRC Table R401.2(2) or ASCE 7 with corrosion-resistant attachment hardware. For buildings with a mean roof height of 45 feet or less attachment per Table R301.2.1.2 (reproduced below) is permitted.

IRC Table R301.2.1.2, IBC Table 1609.1.2
Wind Borne Debris Protection Fastening Schedule For Wood Structural Panels

Fastener Type	Fastener Spacing		
	Panel span ≤ 4 foot	4 foot < panel span ≤ 6 foot	6 foot < panel span ≤ 8 foot
#8 Wood screws w/ 2" min. embedment	16"	10"	8"
#10 Wood screws w/ 2" min. embedment	16"	12"	9"
1/4"ϕ lag screws w/ 2" min. embedment	16"	16"	16"

1. Fasteners shall be installed at opposing ends of the wood structural panel. Fasteners shall be located not less than 1 inch from the edge of the panel.
2. Anchors shall penetrate through the exterior wall covering with an embedment length of not less than 2 inches into the building frame. Fasteners shall be located not less than 2 1/2" inches from the edge of concrete block or concrete.
3. Panels attached to masonry or masonry/stucco shall be attached using vibration-resistant anchors having an ultimate withdrawal capacity of not less than 1,500 pounds.

Corrosion Resistance

Metal connectors and fasteners shall be corrosion resistant in accordance with the following plan designations

Designation	Open Areas[1]	Vented/Enclosed Areas[2]	Conditioned Areas[3]
Seaward	Stainless steel (ASTM A167) Hot-dip galvanized -prior to fabrication (ASTM A653) -after fabrication (ASTM A123/A153)	Any method meeting the requirements of Open Areas Galvanized or electrogalvanized (ASTM A641) Mechanically deposited zinc (ASTM B695) Electrodeposited zinc (ASTM B633)	Not Required
Inland I	Stainless steel (ASTM A167) Hot-dip galvanized -prior to fabrication (ASTM A653) -after fabrication (ASTM A123/A153) Mechanically deposited zinc (ASTM B695) Electrodeposited zinc (ASTM B633) Galvanized or electrogalvanized (ASTM A641)	Any method meeting the requirements of Open Areas Epoxy coating (ASTM A899)	Not Required
Inland II	Stainless steel (ASTM A167) Hot-dip galvanized -prior to fabrication (ASTM A653) -after fabrication (ASTM A123/A153) Mechanically deposited zinc (ASTM B695) Electrodeposited zinc (ASTM B633) Galvanized or electrogalvanized (ASTM A641)	Not Required	Not Required

1. Open Areas include porches, exterior coverings, roof coverings, and the underside of elevated structures.
2. Vented/Enclosed Areas include attics, exterior wall stud cavities, and crawl spaces.
3. Conditioned Areas include heated and cooled living areas.
4. Exception: 1/2" Ø or greater steel bolts are not required to be corrosion resistant except in Open Areas of the Seaward Area.

STRAND
10003 Technology Blvd. West
Dallas, TX. 75220
972-620-8204

STATE OF TEXAS
ESTUS C. WILSON III
92582
11/18/20
LICENSED
PROFESSIONAL ENGINEER

BUILDER Small House Solutions LLC
SUBD. Private Residence
LOT 1 BLOCK X
ADDRESS 306 Church Street
CITY Hutto, TX
PLAN VER.

DATE
SCALE 3/8" = 1'-0"
DR'N

FR0.1

STRAND DTL0901.1

Components and Cladding Wind Pressures

Roof Pitch	(sf)	Components and Cladding Wind Pressures (psf)																	
		Exposure B - less than 25' MRH						Exposure C - less than 15' MRH						Exposure C - less than 25' MRH					
		140 mph V_{ult}		145 mph V_{ult}		150 mph V_{ult}		140 mph V_{ult}		145 mph V_{ult}		150 mph V_{ult}		140 mph V_{ult}		145 mph V_{ult}		150 mph V_{ult}	
Flat - 1.5:12	10	+10.0	-53.0	+10.0	-57.0	+9.9	-61.0	+12.1	-64.1	+12.1	-69.0	+12.0	-73.8	+13.5	-71.6	+13.4	-77.0	+13.4	-82.4
	20	+10.0	-44.0	+10.0	-47.0	+9.2	-50.0	+12.1	-53.2	+12.1	-56.9	+11.1	-60.5	+13.5	-59.4	+12.4	-63.5	+12.4	-67.5
	50	+10.0	-32.0	+9.3	-34.0	+8.5	-36.0	+12.1	-38.7	+11.3	-41.1	+10.3	-43.6	+13.5	-43.2	+11.5	-45.9	+11.5	-48.6
	100	+10.0	-22.0	+8.9	-24.0	+7.8	-26.0	+12.1	-26.6	+10.8	-29.0	+9.4	-31.5	+13.5	-29.7	+10.5	-32.4	+10.5	-35.1
1.5 - 6:12	10	+12.2	-49.0	+13.1	-53.0	+14.0	-57.0	+14.8	-59.3	+15.9	-64.1	+16.9	-69.0	+16.5	-66.2	+18.9	-71.6	+18.9	-77.0
	20	+11.1	-46.0	+12.0	-49.5	+12.8	-53.0	+13.4	-55.7	+14.5	-59.9	+15.5	-64.1	+15.0	-62.1	+17.3	-66.8	+17.3	-71.6
	50	+10.0	-42.0	+10.6	-45.0	+11.1	-48.0	+12.1	-50.8	+12.8	-54.5	+13.4	-58.1	+13.5	-56.7	+15.0	-60.8	+15.0	-64.8
	100	+10.0	-39.0	+10.0	-41.5	+9.9	-44.0	+12.1	-47.2	+12.1	-50.2	+12.0	-53.2	+13.5	-52.7	+13.4	-56.0	+13.4	-59.4
6 - 12:12	10	+19.4	-24.0	+20.8	-26.0	+22.2	-28.0	+23.5	-29.0	+25.2	-31.5	+26.9	-33.9	+27.0	-32.4	+30.0	-35.1	+30.0	-37.8
	20	+18.8	-23.0	+20.2	-25.0	+21.6	-27.0	+22.7	-27.8	+24.4	-30.3	+26.1	-32.7	+25.4	-31.1	+29.2	-33.8	+29.2	-36.5
	50	+18.1	-22.0	+19.5	-23.5	+20.8	-25.0	+21.9	-26.6	+23.6	-28.4	+25.2	-30.3	+24.4	-29.7	+28.1	-31.7	+28.1	-33.8
	100	+17.6	-21.0	+18.9	-22.5	+20.2	-24.0	+21.3	-25.4	+22.9	-27.2	+24.4	-29.0	+23.8	-28.4	+27.3	-30.4	+27.3	-32.4
Wall	10	+21.2	-28.0	+22.8	-30.0	+24.3	-32.0	+25.7	-33.9	+27.6	-36.3	+29.4	-38.7	+28.6	-37.8	+32.8	-40.5	+32.8	-43.2
	20	+20.2	-26.0	+21.7	-28.0	+23.2	-30.0	+24.4	-31.5	+26.3	-33.9	+28.1	-36.3	+27.3	-35.1	+31.3	-37.8	+31.3	-40.5
	50	+19.0	-23.0	+20.4	-25.0	+21.7	-27.0	+23.0	-27.8	+24.7	-30.3	+26.3	-32.7	+25.7	-31.1	+29.3	-33.8	+29.3	-36.5
	100	+18.0	-22.0	+19.3	-23.5	+20.6	-25.0	+21.8	-26.6	+23.4	-28.4	+25.0	-30.3	+24.3	-29.7	+27.8	-31.7	+27.8	-33.8
	500	+15.8	-17.0	+17.6	-18.5	+18.1	-20.0	+19.1	-20.6	+21.3	-22.4	+22.0	-24.2	+21.3	-23.0	+24.4	-25.0	+24.4	-27.0

1. Reference: IRC 2018 table R301.2(2). Pressures in the above table have been derived from Vult wind speeds, but have been factored to allowable stress design (ASD)
2. Plus and minus signs signify pressures acting toward and away from the building surfaces. Pressures shall not be taken as less than 10 psf Vasd.
3. Pressures are taken from Zone 3 for roofs and Zone 5 for walls.
4. Linear interpolation is allowed for effective wind area only. For intermediate wind speeds, use the higher wind speed. For other conditions, contact this office.

Sheathing and Cladding Attachment Schedule

	Max Framing Spacing	Min Sheathing Thickness	APA Span Rating	Interior Zone (Edge/Field)	Perimeter Edge Zone - Fastener Spacing (Edge/Field)							
					115 mph V_{ult}/ 90 mph V_{asd}		130 mph V_{ult}/ 100 mph V_{asd}		140 mph V_{ult}/ 110 mph V_{asd}		150 mph V_{ult}/ 120 mph V_{asd}		168 mph V_{ult}/ 130 mph V_{asd}	
					B	C	B	C	B	C	B	C	B	C
Roof Sheathing[12]	16" O.C.	7/16"	24/16	6/12	6/12	6/12[7]	6/12[7]	6/6	6/12[7]	6/6	6/6	6[8]/6[8]	6/6	6[8]/6[8]
	24" O.C.	7/16"	24/16	6/12[5]	6/12[7]	6/6	6/6	6[8]/6[8]	6[8]/6[8]	6[8]/6[8]	6[8]/6[8]	4[9]/4[9]	6[8]/6[8]	4[9]/4[9]
Gable Endwall Rake		7/16"	24/16		6[8]/6[8]	4/4	6[8]/6[8]	4[9]/4[9]	6[8]/6[8]	4[9]/4[9]	4/4	4[9]/4[9]	4[9]/4[9]	3[10]/3[10]
Exterior Wall Sheathing	16" O.C.	7/16"	24/16	6/12[8]	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12[7]	6/12	6/12[7]
Floor Sheathing[13]	24" O.C.	23/32"	48/24	6/12										

1. Perimeter Edge Zone shall be used at roofs within 4 feet of either the roof edge or roof peak. It shall also be used at walls within 4 feet of outside or re-entrant corners.
2. Sheathing shall be OSB or APA Rated sheathing. Alternate sheathing materials may be used, provided they have code approval for suitability for the anticipated wind pressures.
3. These are minimum requirements for cladding loads. Refer to notes and plans for wall bracing or shear wall requirements.
4. Refer to WFCM Tables 3.10 through 3.14
5. Reduce field spacing to 6" oc for 120 mph Exp C, and 130 mph Exp C for framing members with specific gravity between 0.42 and 0.49 (referenced wind speeds are Vasd)
6. Reduce field spacing to 6" oc for 110 mph, Exp C, 120 mph Exp C, and 130 mph Exp C for framing members with specific gravity between 0.42 and 0.49 (referenced wind speeds are Vasd)
7. Reduce spacing to 6" oc for framing members with specific gravity between 0.42 and 0.49
8. Reduce spacing to 4" oc for framing members with specific gravity between 0.42 and 0.49
9. Reduce spacing to 3" oc for framing members with specific gravity between 0.42 and 0.49
10. Reduce spacing to 2" oc for framing members with specific gravity between 0.42 and 0.49
11. For intermediate wind speeds, use the higher wind speed.
12. Roof sheathing shall be fastened with 8d common nails or equivalent.
13. Floor sheathing shall be fastened with 10d common nails or equivalent.

Rafter Span Schedule

Maximum Rafter Spans (Excerpt WFCM Table 3.26A)

Species	Grade	Rafter Size	10 psf		20 psf	
			16" o.c.	24" o.c.	16" o.c.	24" o.c.
SYP	#2	2x6	13'-6"	11'-0"	11'-8"	9'-6"
		2x8	17'-1"	13'-11"	14'-9"	12'-1"
		2x10	20'-3"	16'-6"	17'-6"	14'-4"
	#3	2x6	10'-2"	8'-4"	8'-10"	7'-3"
		2x8	12'-10"	10'-6"	11'-2"	9'-1"
		2x10	15'-7"	12'-9"	13'-6"	11'-0"
SPF	#2	2x6	14'-4"	11'-9"	12'-5"	10'-2"
		2x8	18'-2"	14'-10"	15'-9"	12'-10"
		2x10	22'-3"	18'-2"	19'-3"	15'-8"
DF-L	#2	2x6	14'-4"	11'-9"	12'-5"	10'-2"
		2x8	18'-2"	14'-10"	15'-9"	12'-10"
		2x10	22'-3"	18'-2"	19'-3"	15'-8"

1. Where ceiling joists are not located at the bottom of the attic space, refer to footnote a in the span tables for adjustment factor
2. For hurricane winds of 100 mph or more or non hurricane winds of 110 mph or more refer to adjustment factors below

Pitch	Rafter Span Adjustment Factor for Wind Loads (Excerpt from footnotes of WFCM Tables 3.26A-H)							
	130 mph V_{ult}/ 100 mph V_{asd}		140 mph V_{ult}/ 110 mph V_{asd}		150 mph V_{ult}/ 120 mph V_{asd}		168 mph V_{ult}/ 130 mph V_{asd}	
	B	C	B	C	B	C	B	C
4:12	1.07	0.86	0.96	0.77	0.87	0.70	0.79	0.63
6:12	1.00	0.80	0.89	0.72	0.81	0.65	0.75	0.60
8:12	1.23	0.98	1.09	0.87	0.98	0.79	0.90	0.72
10:12	1.12	0.90	1.00	0.80	0.91	0.73	0.83	0.66
12:12	1.02	0.81	0.91	0.73	0.83	0.66	0.76	0.61

1. For other pitches, refer to the WFCM. Adjustment factor may not be greater than 1.00

Wall Stud Schedules

Load Bearing Walls (Excerpt IRC Table R602.3(5)
Maximum Allowable Length & Spacing of Load Bearing Wall Studs

Stud Height (10 feet)	Roof + Ceiling	Roof, Ceiling and one floor	Roof, Ceiling and two floors
2x4	24" o.c.	16" o.c.	—
2x6	24" o.c.	24" o.c.	16" o.c.

1. Assumes SPF stud grade or better.
2. Balloon frames or tall walls (greater than 12' max) shall be #2 grade or better.
3. For exterior walls exposed to wind, stud lengths shall be limited by the following.

Maximum Exterior Stud Length
(Excerpt from WFCM Table 3.20A)

		Maximum Stud Length 16" O.C.				
		115 mph V_{ult}/ 90 mph V_{asd}	130 mph V_{ult}/ 100 mph V_{asd}	140 mph V_{ult}/ 110 mph V_{asd}	150 mph V_{ult}/ 120 mph V_{asd}	168 mph V_{ult}/ 130 mph V_{asd}
2x4	Stud	11'-2"	10'-3"	9'-7"	8'-9"	8'-2"
	#2	11'-10"	10'-10"	10'-2"	9'-8"	9'-1"
2x6	Stud	18'-0"	16'-0"	14'-7"	13'-2"	12'-1"
	#2	19'-0"	17'-5"	16'-4"	15'-5"	14'-6"

This table assumes SPF or equivalent. For other material, size, or spacing combinations, refer to the WFCM.
† - Allowable stud length exceeds 20 feet.

Where exterior walls are sheathed with wood structural panels, max stud lengths shall be per the following.

Maximum Exterior Stud Length
(for walls with wood structural sheathing)
(Excerpt from WFCM Table 3.20B)

		Maximum Stud Length 16" O.C.				
		115 mph V_{ult}/ 90 mph V_{asd}	130 mph V_{ult}/ 100 mph V_{asd}	140 mph V_{ult}/ 110 mph V_{asd}	150 mph V_{ult}/ 120 mph V_{asd}	168 mph V_{ult}/ 130 mph V_{asd}
2x4	Stud	12'-11"	11'-10"	11'-1"	10'-2"	9'-3"
	#2	13'-7"	12'-6"	11'-8"	11'-1"	10'-5"
2x6	Stud	19'-10"	17'-5"	16'-2"	14'-5"	13'-2"
	#2	†	19'-4"	18'-2"	17'-2"	16'-1"

This table assumes SPF or equivalent. For other material, size, or spacing combinations, refer to the WFCM.
† - Allowable stud length exceeds 20 feet.

Ceiling Joist Span Schedule

Maximum Ceiling Joist Spans (Excerpt WFCM Tables 3.25A and 3.25B)

Species	Grade	Joist Size	Limited Attic Storage		Without Attic Storage	
			16" o.c.	24" o.c.	16" o.c.	24" o.c.
SYP	#2	2x6	12'-0"	9'-10"	16'-11"	13'-11"
		2x8	15'-3"	12'-6"	21'-7"	17'-7"
		2x10	18'-1"	14'-9"	25'-7"	20'-11"
	#3	2x6	9'-2"	7'-5"	12'-11"	10'-6"
		2x8	11'-6"	9'-5"	16'-3"	13'-3"
		2x10	14'-0"	11'-5"	19'-9"	16'-1"
SPF	#2	2x6	12'-10"	10'-6"	16'-11"	14'-9"
		2x8	16'-3"	13'-3"	22'-4"	18'-9"
		2x10	19'-10"	16'-3"	26'-0"	22'-11"
DF-L	#2	2x6	12'-10"	10'-6"	17'-8"	14'-10"
		2x8	16'-3"	13'-3"	23'-0"	18'-9"
		2x10	19'-10"	16'-3"	26'-0"	22'-11"

Nailing Schedule

Fastening Location	IRC Table R602.3(1)	IBC Table 2304.9.1
Joist to Sill or Girder	3 - 8d (Toenail)	3-3" x 0.131" nails (Toenail)
Bridging to Joist	2 - 8d (Toenail each end)	2-3" x 0.131" nails (Toenail each end)
Sole Plate to Joist or Blocking	3 - 16d @ 16" oc (Facenail)	3" x 0.131" nails @ 8" oc (facenail)
Top Plate to Stud	2 - 16d (Endnail)	3-3" x 0.131" nails (Endnail)
Stud to Sole Plate	3 - 8d or 2 - 16d (Toenail)	4-3" x 0.131" nails (Toenail) or 2-3" x 0.131" (Endnail)
Double Studs	10d @ 24" oc (Facenail)	3" x 0.131" nails @ 8" oc (Facenail)
Doule Top Plates	10d @ 24" oc (Facenail)	3" x 0.131" nails @ 12" oc (Facenail)
Top Plates Laps & Intersections	2 - 10d (Facenail)	3-3" x 0.131" nails (Facenail)
Continuous Header, Two Pieces	16d @ 16" oc along each edge	----------
Ceiling Joist to Plate	3-8d (Toenail)	5-3" x 0.131" nails (Toenail)
Continuous Header to Stud	4 - 8d (Toenail)	----------
Ceiling Joist, Laps over Partitions	3 - 10d (Facenail)	4-3" x 0.131" nails (Facenail)
Ceiling Joists to Parallel Rafters	3 - 10d (Facenail)	4-3" x 0.131" nails (Facenail)
Built - Up Corner Studs	10d @ 24" oc	3" x 0.131" nails @16" oc
Built - Up girders & beams	10d @ 32" oc Top, Bot & Staggered - 2 nails @ ends & each splice	3" x 0.131" nails @ 24" oc (Face nail) at Top and Bottom and Staggered 3- 3" x 0.131" nails (Face nail) at Ends and at each splice
Built - up Wood Columns	16d @ 8" oc (2x4's); 2 rows 16d @ 8" oc for 2x6 or greater	----------
Roof or Floor Truss to Plate	3 - 8d (Toenail)	3-3" x 0.131" nails (Toenail)
Ledger Strip	3 - 16d (Facenail)	4-3" x 0.131" nails
Blocking @ joists/rafters to Top Plate	3 - 8d (Toenail)	3-3" x 0.131" nails (Toenail)
Rim Joist to Top Plate	8d @ 6" oc (Toenail)	3" x 0.131" nails @ 6" oc (Toenail)
Rafter to Plate	2 - 16d (Toenail)	3-3" x 0.131" nails (Toenail)
Collar Tie to Rafter	3 - 10d (Facenail)	4-3" x 0.131" nails (Facenail)
Jack Rafter to Hip	4 - 16d (Toenail)/3 - 16d (Facenail)	4-3" x 0.131" nails (Toenail) & 3-3" x 0.131" nails (Facenail)
Roof Rafter to 2x Ridge Brn	4 - 16d (Toenail)/3 - 16d (Facenail)	3-3" x 0.131" nails (Toenail) & 3-3" x 0.131" nails (Facenail)
Rafter Ties to Rafters	3 - 8d (Facenail)	----------
Joist to Band Joist	3 - 16d (Facenail)	4-3" x 0.131" nails

1. On shear walls and diaphragms, nails shall be placed not less than 3/8 inch from the panel edge.

Loose Lintels for Masonry Support

Masonry Weight/Width (NTE)	Opening Width	Height of Masonry Veneer				Arch Action
		12"	24"	36"	48"	
32 psf (3" Max Width)[6]	≤ 6'	3 x 3 x 1/4	3 x 3 x 1/4	3 x 3 x 1/4	3 x 3 x 1/4	3 x 3 x 1/4
	≥6' - <8'-3"	3 x 3 x 1/4	3 1/2 x 3 1/2 x 1/4	4 x 3 x 1/4	4 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4
	>8'-3" - ≤12'	4 x 3 x 1/4	5 x 3 1/2 x 1/4	5 x 3 1/2 x 5/16	6 x 4 x 5/16	6 x 4 x 5/16
	>12' - ≤16'-3"	5 x 3 1/2 x 5/16	6 x 4 x 3/8	7 x 4 x 1/2	7 x 4 x 1/2	8 x 4 x 1/2
40 psf (4" Max Width)[6]	≤ 6'	3 1/2 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4
	>6' - ≤8'-3"	3 1/2 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4	4 x 3 1/2 x 1/4	5 x 3 1/2 x 1/4	4 x 3 1/2 x 1/4
	>8'-3" - ≤12'	4 x 3 1/2 x 1/4	5 x 3 1/2 x 1/4	6 x 4 x 5/16	6 x 4 x 3/8	6 x 4 x 5/16
	>12' - ≤16'-3"	5 x 3 1/2 x 3/8	7 x 4 x 1/2	7 x 4 x 1/2	8 x 4 x 1/2	8 x 4 x 1/2
60 psf (4" Max Width)[6]	≤ 6'	3 1/2 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4	4 x 3 1/2 x 1/4	3 1/2 x 3 1/2 x 1/4
	>6' - ≤8'-3"	3 1/2 x 3 1/2 x 1/4	4 x 3 1/2 x 1/4	5 x 3 1/2 x 1/4	5 x 3 1/2 x 1/4	5 x 3 1/2 x 1/4
	>8'-3" - ≤12'	5 x 3 1/2 x 1/4	6 x 4 x 5/16	6 x 4 x 3/8	7 x 4 x 1/2	7 x 4 x 1/2
	>12' - ≤16'-3"	6 x 4 x 5/16	7 x 4 x 1/2	8 x 4 x 1/2	—	—

Steel Lintel:
1. All lintels shall be A36 steel, oriented in the strong direction (longer leg vertical).
2. All lintels shall extend at least 4 inches beyond each end of the opening.
3. The arching action assumes that the weight of the masonry load is transferred around the opening at a 45 degree angle. This assumption is valid when there is sufficient masonry on both sides of the opening to carry the load from above and when no openings interrupt the arch action.
4. Deflection is limited to L/600 or 0.30", whichever is less.
5. Lintels are designed for supporting non-structural masonry veneer only. Other gravity loads shall be carried by other structural members. Lintels shall not be attached to header/beams U.N.O.
6. Table based on typical sizes and weights. Builder to verify. Contact this office for alternate materials.
7. Masonry shall not extend more than 1/2" past the edge of the horizontal leg.
8. Reference: Brick Industry Association and IRC R703.7.3 .

STRAND
10003 Technology Blvd. West
Dallas, TX. 75220
972-620-8204

STATE OF TEXAS
ESTUS C. WILSON III
92582
LICENSED
11/18/20
PROFESSIONAL ENGINEER

BUILDER Small House Solutions LLC
SUBD. Private Residence
LOT 1 BLOCK X
ADDRESS 306 Church Street
CITY Hutto, TX
PLAN VER.

DATE
SCALE 3/8" = 1'-0"
DR'N

FR0.2

STRAND DTL0901.1

Uplift Connection Schedule

	130 mph V_{ult}/ 100 mph V_{asd}	131 V_{ult} to 148 V_{ult} Exp. B or 101 V_{asd} to 115 V_{asd} Exp. B	140 V_{ult} to 144 V_{ult} Exp. C or 110 V_{asd} to 115 V_{asd} Exp. C	145 V_{ult} to 168 V_{ult} Exp. C or 116 V_{asd} to 130 V_{asd} Exp. C
Rafter to exterior wall	Connections governed by IRC or IBC prescriptive guidelines. Refer to Nailing Schedule for connection requirements.	(3) 0.131"x3" toenails	H2.5A + (3) 0.131"x3" toenails	H2.5A + (3) 0.131"x3" toenails
- Plate to stud		-	H2.5A (every third stud)	H2.5A (every other stud)
- Through sub-floor		-	CS22 w/8" Lap (every third stud)	CS22 w/8" Lap (every third stud)
- Stud to bottom plate		-	H2.5A (every third stud)	H2.5A (every other stud)
Rafter to ceiling joist		(4) 0.131"x3" face nails	(6) 0.131"x3" face nails	(8) 0.131"x3" face nails
Brace to rafter		(6) 0.131"x3" face nails	(6) 0.131"x3" face nails	(6) 0.131"x3" face nails
Purlin to brace		(3) 0.131"x3" face nails	(3) 0.131"x3" face nails	(3) 0.131"x3" face nails
Brace to top plate of interior wall or perpendicular beam		H2.5A	H2.5A	H2.5A
Brace to ceiling joist/beam		(7) 0.131"x3" toe nails	(4) 0.131"x 3" toe nails + LSTA9 strap	(4) 0.131"x 3" toe nails + LSTA9 strap
Typical ceiling joist to wall connection		(5) 0.131"x3" toe nails	(5) 0.131"x3" toe nails	(5) 0.131"x3" toe nails
Ceiling joist/beam to top plate of interior wall (supporting 1 brace)		H2.5A	H2.5A	H2.5A
- Top plate to stud		-	-	-
- Through sub-floor		-	-	-
- Stud to bottom plate		-	-	-
Ceiling joist/beam to top plate of interior and exterior wall (supporting 2 braces)		H2.5A	H2.5A	(2) H2.5A
- Plate to stud		H2.5A	H2.5A	(2) H2.5A
- Through sub-floor		CS22 w/8" Lap	CS22 w/8" Lap	CS22 w/8" Lap or FSC
- Stud to bottom plate		H2.5A	(2) H2.5A	(2) H2.5A
- Bottom plate to foundation		(2) Hilti X-CP 72	(4) Hilti X-CP 72	(5) Hilti X-CP 72
Ceiling joist/beam to top plate of interior and exterior wall (supporting 3+ braces)		(2) H2.5A	(3) H2.5A	(3) H2.5A
- Plate to stud		(2) H2.5A	(3) H2.5A	(3) H2.5A
- Through sub-floor		CS22 w/8" Lap	CS16 w/12" Lap	CS16 w/12" Lap or FSC
- Stud to bottom plate		(2) H2.5A	(4) H2.5A	(4) H2.5A
- Bottom plate to foundation		(4) Hilti X-CP 72	(7) Hilti X-CP 72	(7) Hilti X-CP 72

1. Hilti X-CP 72 "Shots" or equivalent shall have min. allowable tension capacity of 165 lbs. Shots shall be spaced at 2-3/4" O.C. with the first fastener spaced 2" from stud or post. Split total number of shots equally on both sides of stud or post where possible. Shots called for in this table shall be in addition to other anchorage called for in other notes, schedules, tables, or details in the structural drawings.
2. CS22 w/8" lap may be substituted for LSTA9 and (2)CS22 w/ 8" lap may be substituted for CS16 w/ 12" lap.
3. Refer to Detail 11 connection notes for connector substitutions at 45 degree angle connections

Uplift Connections at Openings Schedule

Connection Type		Hardware Option 1	Hardware Option 2	Hardware Option 3	Hardware Option 4
Top Plate to Jack Stud(s)		CS22 w/8" Lap	CS22 w/8" Lap	CS18 w/12" Lap	CS16 w/14" Lap
Through Subfloor		CS22 w/8" Lap	CS22 w/8" Lap	CS18 w/12" Lap	CS16 w/14" Lap
Jack Stud(s) to Sill Plate		H2.5A	(2) H2.5A	(3) H2.5A	(4) H2.5A
Sill Plate to Foundation		(2) Hilti X-CP 72	(4) Hilti X-CP 72	(6) Hilti X-CP 72	3/8"ø THD w/2x2x1/4" thick washer[5]
Wind Speed	Exp.	Opening Width	Opening Width	Opening Width	Opening Width
≤130 mph V_{ult}/ 100 mph V_{asd}	B	-	-	-	-
	C	5ft - 9ft	> 9ft - 18ft	> 18ft - 26ft	-
135 mph V_{ult}/ 105 mph V_{asd}	B	7ft - 13ft	> 13ft - 25ft	-	-
	C	5ft - 7ft	> 7ft - 15ft	> 15ft - 23ft	-
140 mph V_{ult}/ 110 mph V_{asd}	B	6ft - 11ft	> 11ft - 21ft	> 21ft - 31ft	-
	C	4ft - 7ft	> 7ft - 14ft	> 14ft - 21ft	> 21ft - 28ft
144 mph V_{ult}/ 115 mph V_{asd}	B	5ft - 9ft	> 9ft - 18ft	> 18ft - 27ft	-
	C	3ft - 6ft	> 6ft - 12ft	> 12ft - 19ft	> 19ft - 25ft
150 mph V_{ult}/ 120 mph V_{asd}	B	4ft - 8ft	> 8ft - 16ft	> 16ft - 24ft	> 24ft - 32ft
	C	0ft - 5ft	> 5ft - 11ft	> 11ft - 17ft	> 17ft - 23ft
160 mph V_{ult}/ 125 mph V_{asd}	B	4ft - 7ft	> 7ft - 14ft	> 14ft - 21ft	> 21ft - 28ft
	C	0ft - 4ft	> 4ft - 10ft	> 10ft - 15ft	> 15ft - 21ft
168 mph V_{ult}/ 130 mph V_{asd}	B	3ft - 6ft	> 6ft - 12ft	> 12ft - 19ft	> 19ft - 26ft
	C	0ft - 4ft	> 4ft - 10ft	> 10ft - 15ft	> 15ft - 20ft

1. Hilti X-CP 72 "Shots" or equivalent shall have min. allowable tension capacity of 165 lbs. Shots shall be spaced at 2-3/4" O.C. with the first fastener spaced 2" from stud or post. Split total number of shots equally on both sides of stud or post where possible. Shots called for in this table shall be in addition to other anchorage called for in other notes, schedules, tables, or details in the structural drawings.
2. For uplift connection requirements at covered patios refer to Covered Patio Post Uplift Connection Table.
3. Uplift connections per Table above not required for headers in portal frames. Portal frame detail requirements resolve uplift forces.
4. Uplift connections from top plate down to header(through cripple studs) shall be per the uplift connection schedule.
5. (2)CS22 w/ 8" lap may be substituted for CS16 w/ 14" lap.
6. (2)2x2x1/8 washers may be used as an alternate.

Sheathing Schedule / Shear Connection Schedule

Engineered Sheathing	Orientation	At sheathing joints, blocking req'd at panel edges	Fastening (Fastener, Spacing [in-o.c.] Edge : Field)	Sill Plate Anchorage	Joist to Plate Attachment (Fastener Spacing) Options include one of the following: (0.131"x3" nails or LPT4 clip or Ladder Blocking) Top Plate	Bottom Plate
7/16" Oriented Strand Board[4] (OSB) or APA Rated Sheathing	Vertical or Horizontal	Yes	8d, 3:*[3]	A	3"[2]/9"/16"	2"/9"/-
			8d, 4:*[3]	B	2"[2]/10"/18"	2"/10"/-
			8d, 6:*[3]	C	6"/24"/48"	6"/24"/-
0.113" Red or Blue Thermo-ply on exterior face and 1/2" Gypsum Wall Board on interior face	Thermo-ply: Vertical Gypsum: Vertical or Horizontal	Yes	Thermo-ply: 1"x1-1/4"x16ga staples, 3:3 Gypsum: 5d cooler nails. 8:8 1-1/4" drywall screws: 12:12	D	3"/16"/30"	3"/16"/-
1/2" or 1" DOW Styrofoam SIS Structural Insulated Sheathing with 1/2" Gypsum Wall Board on interior face	Vertical or Horizontal	Yes	DOW SIS: 1/2" or 1" crown x 16ga staples, 3:3 Gypsum: 5d cooler nails, 7:7 1-1/4" drywall screws, 12:12	D	3"/16"/30"	3"/16"/-
Double Sided ½" Gypsum Wall Board	Vertical or Horizontal	No	5d cooler or wallboard nails, 4:4 or 1-1/4" drywall screws, 4:12	E	4"/24"/48"	6"/24"/-
Single Sided ½" Gypsum Wall Board	Vertical or Horizontal	No	5d cooler or wallboard nails, 4:4 or 1-1/4" drywall screws, 4:12	F	10"/48"/96"	8"/48"/-
Portal Frame- 7/16" Oriented Strand Board (OSB) and min. dbl. 2x12 header	Vertical	Yes	8d, 3:3	See Detail 8	See Detail 8	See Detail 8

Prescriptive Wall Panel Sheathing (Bracing Method per IRC Section 602.10.3)	Orientation	Blocking req'd at panel edges	Fastening (Fastener, Spacing [in-o.c.] Edge : Field)	Bottom Plate anchorage at Foundation	Joist to Plate Attachment (Fastener Spacing) Options include one of the following: (0.131"x3" nails/LPT4 clip/Ladder Blocking) Top Plate	Bottom Plate
Nominal 1" by 4" continuous diagonal braces let in to the top and bottom plates and the intervening studs or approved metal strap devices (Method 1)	angled ≤ 60° & ≥ 45° from the horizontal.	No	2-8d (2 1/2" x 0.131") nails or 2-16ga. wire staples (1 3/4" long, min. 7/16"Ø crown width), each stud	F	6"/48"/48"	6"/48"/-
7/16" Oriented Strand Board (OSB) or APA Rated Sheathing (Method 3)	Vertical	Yes	8d, 6:12	F	6"/48"/48"	6"/48"/-
1/2" or 25/32" thick structural fiberboard sheathing (1/2" FiberBrace or 1/2" QuietBrace acceptable) (Method 4)	Vertical or Horizontal	Yes	1 1/2" galvanized roofing nails, 8d common (2 1/2" x 0.131") nails, or 16ga. corrosion resistant staples (1 1/2" long, min. 7/16"Ø crown width), 3:6	F	6"/48"/48"	6"/48"/-
1/2" Gypsum Wall Board (Interior Application) (Method 5)	Vertical or Horizontal	No	5d cooler or wallboard nails, 7:7 or 1-1/4" drywall screws, 12:12	F	6"/48"/48"	6"/48"/-
1/2" Gypsum Sheathing (Exterior Application) (Method 5)	Vertical	Yes	1-1/4" Type W or S Screws, 7:7	F	6"/48"/48"	6"/48"/-
0.113" Red or Blue Thermo-ply on exterior face and 1/2" Gypsum Wall Board on interior face (ICC approved prescriptive alternate material)	Vertical or Horizontal	Yes	Thermo-ply: 1"x1-1/4"x16ga staples, 3:3 Gypsum: 5d cooler nails. 8:8 1-1/4" drywall screws: 12:12	F	6"/48"/48"	6"/48"/-
1/2" or 1" DOW Styrofoam SIS Structural Insulated Sheathing with 1/2" Gypsum Wall Board on interior face (ICC approved prescriptive alternate material)	Vertical or Horizontal	Yes	DOW SIS: 1/2" or 1" crown x 16ga staples, 3:3 Gypsum: 5d cooler nails, 7:7 1-1/4" drywall screws, 12:12	F	6"/48"/48"	6"/48"/-

1. Braced wall panels shall be a minimum of 48" wide, except for Method 1 which shall be a continuous diagonal brace from top to bottom plate and Method 5 single sided gypsum which shall be a minimum of 96" wide, U.N.O.
2. Per Details 18A and 20A only; in addition to toe-nails add A35 @ 24" O.C. for Condition A. As an alternate for Condition B nails may be spaced at 3" O.C. with an A35 @ 48" O.C.
3. For exterior walls, the edge:field nailing requirements in this schedule must be compared to the general edge:field nailing requirements in the Sheathing and Cladding Attachment Schedule on Sheet FR-0.2. The most strict requirement shall govern.
4. Gable end wall rakes shall be fastened with the more restrictive edge:field nailing per this table or the Sheathing and Cladding Attachment Schedule on Sheet FR-0.2.

Sill Plate Anchorage Schedule

Anchorage Options	Shear Wall A	B	C	D	E	F	Non-Shear Wall 115 mph V_{ult}/ 90 mph V_{asd} B	C	130 mph V_{ult}/ 100 mph V_{asd} B	C	135 mph V_{ult}/ 105 mph V_{asd} B	C	140 mph V_{ult}/ 110 mph V_{asd} B	C	144 mph V_{ult}/ 115 mph V_{asd} B	C	150 mph V_{ult}/ 120 mph V_{asd} B	C	160 mph V_{ult}/ 125 mph V_{asd} B	C	168 mph V_{ult}/ 130 mph V_{asd} B	C
½" ø anchor bolts [5]	28"	34"	72"	46"	72"	72"	72"	72"	72"	68"	72"	60"	72"	56"	70"	50"	64"	48"	58"	44"	54"	40"
MASA anchors [5]	15"	18"	34"	24"	32"	32"	72"	72"	72"	58"	72"	50"	66"	46"	60"	42"	52"	38"	48"	36"	44"	34"
Hilti X-CP 72(exterior walls [4])	5"	7"	48"	14"	48"	48"[6]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hilti X-CP 72 (interior walls)	4"	5"	12"	7"	12"	18"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

1. Refer to Note 5 in Section 4.5 of the General Notes on Sheet FR-0.1 for anchor bolt installation requirements.
2. Hilti X-CP 72 "shots" or equivalent shall have a min. allowable shear value of 250 lbs. Begin spacing fasteners 2" from end studs of shear wall.
3. Interior shear walls are assumed to have powder actuated sill anchorage. If 1/2" Ø bolts or other embedded connection will be used, either due to builder preference or local code, the builder shall contact this office prior to concrete placement. This is necessary to ensure minimum concrete coverage for required embedment depth of alternate anchorages.
4. Hilti X-CP 72 "shots" at exterior shear walls are required in addition to 1/2" Ø anchor bolts or MASA specified for "non-shear wall" installation.
5. Sill plate anchorage shall be the more restrictive of the applicable shear wall and non-shear wall requirements.
6. For sill plates anchored with MASA anchors, (2) Hilti X-CP 72 "shots" shall be placed for each 4'-0" braced wall panel specified on the plans.

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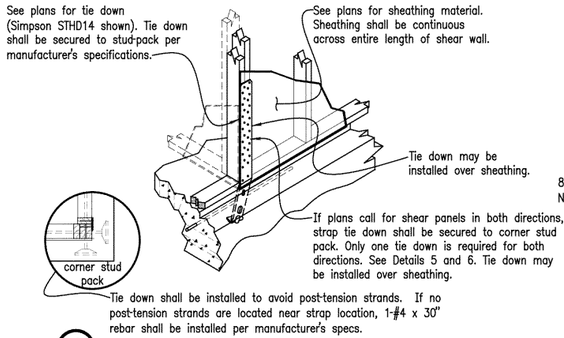
PROFESSIONAL ENGINEER

BUILDER Small House Solutions LLC
SUBD. Private Residence
LOT 1 BLOCK X
ADDRESS 306 Church Street
CITY Hutto, TX
PLAN VER.

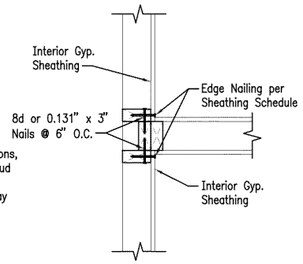
DATE
SCALE 3/8" = 1'-0"
DR'N

FR0.3

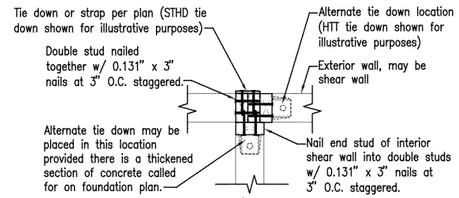
STRAND DTL0901.1



1 Tie Strap Shear Wall Anchor

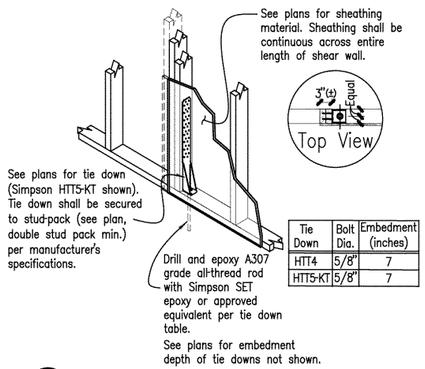


B Continuity Blocking for Interior Shear Wall



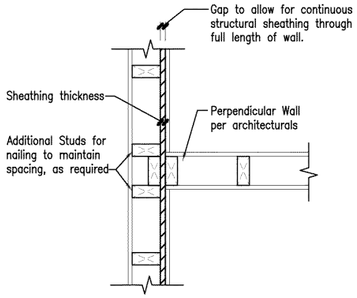
5 Interior/Exterior Shear Wall w/Shared Holdown

These details may be used at a shared tie down condition.



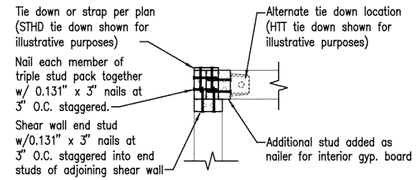
Tie Down	Bolt Dia.	Embedment (inches)
HTT4	5/8"	7
HTT5-KT	5/8"	7

2 Bolted Tie Down Shear Wall Anchor



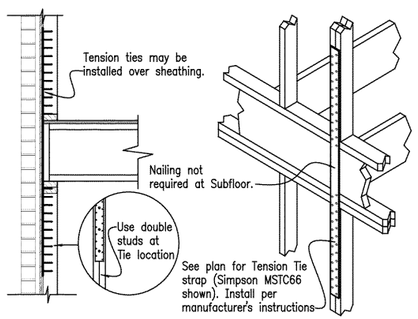
A Continuous Shear Wall

4 Sheathing at Perpendicular Wall

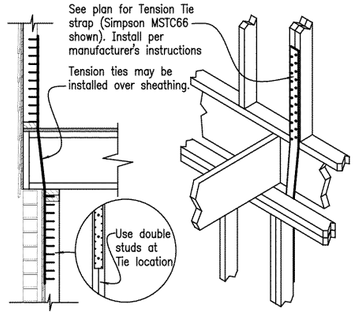


6 Shear Walls w/Shared Holdown at Corner

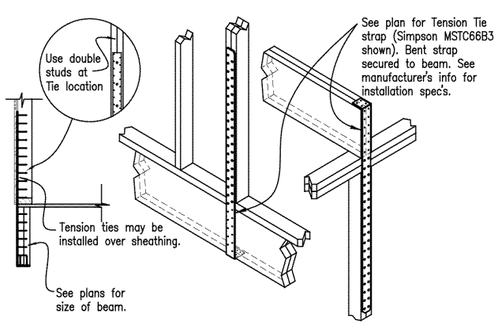
These details may be used at a shared tie down condition.



A Typical Shear Wall Strapping Detail

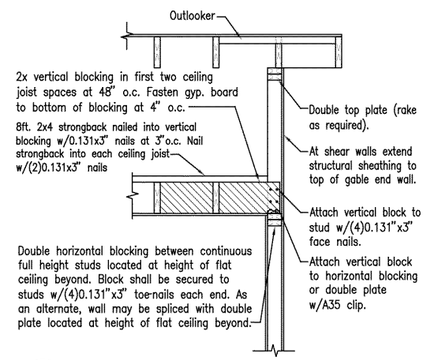


B Alternate Offset Shear Wall Strapping Detail



C Alternate Wall Strapping to Beam Detail

3 Shear Wall Strapping Detail



7 Gable End Framing

Note: This detail required for wind speeds greater than 100mph only. For gable end walls longer than 24ft. in 130mph Exp.C wind areas, refer to plan for bracing requirements.

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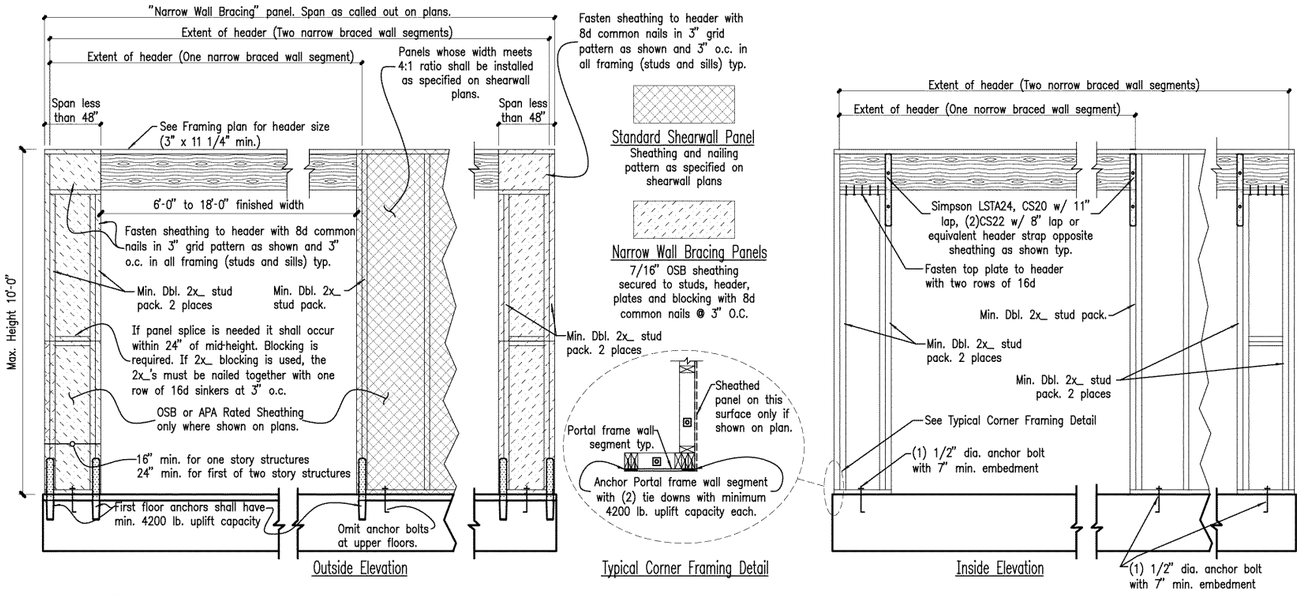
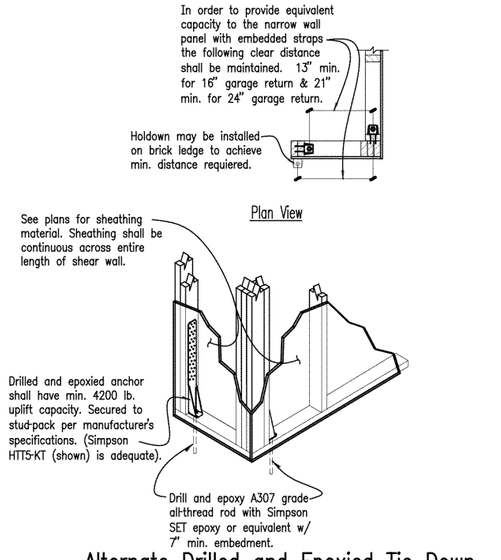


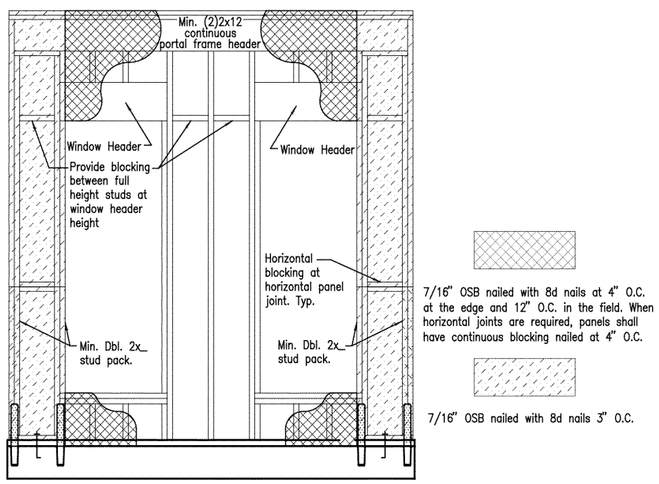
8 Narrow Wall Bracing (Portal Frame)

This detail is per Section R602.10.6.2 of the IRC. For engineered portal frames minimum widths shall be specified on plans and do not need to meet the minimum prescriptive widths specified above.



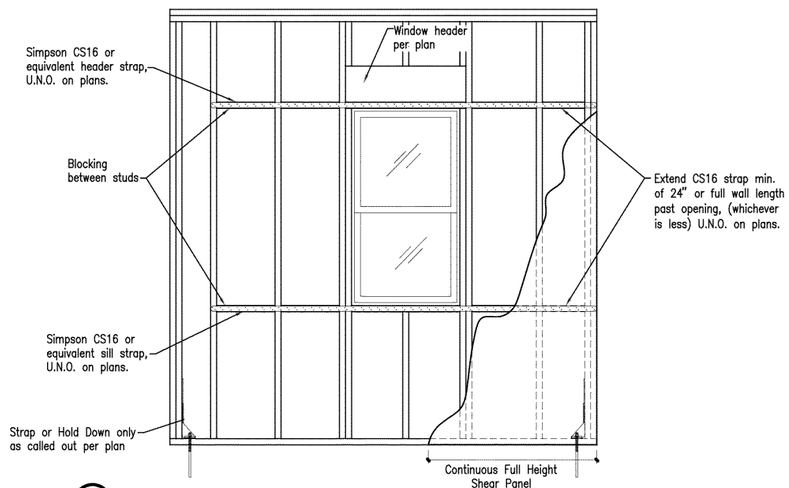
Alternate Drilled and Epoxied Tie Down Installation for Narrow Wall Bracing

(Details 8 and 9)



9 Narrow Wall Bracing (Portal Frame) Over Window Opening

See detail 8 for detailed installation information not shown here and inside elevation installation



10 Shearwall Segment w/Force Transfer Around Opening

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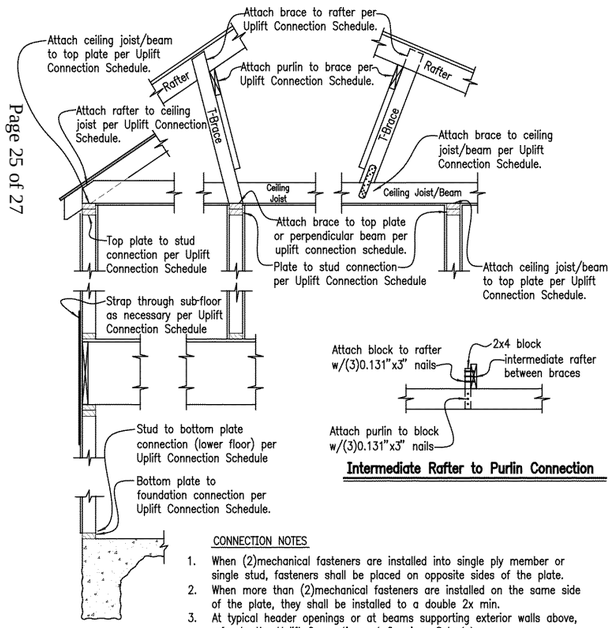
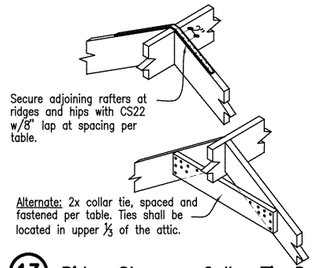


Intermediate Rafter to Purlin Connection

CONNECTION NOTES

1. When (2)mechanical fasteners are installed into single ply member or single stud, fasteners shall be placed on opposite sides of the plate.
2. When more than (2)mechanical fasteners are installed on the same side of the plate, they shall be installed to a double 2x min.
3. At typical header openings or at beams supporting exterior walls above, refer to the Uplift Connections at Openings Schedule.
4. An LTS12 or MTS12 twist strap may be used in place of an H2.5A or LSTA9 at condition where connecting elements are at a 45 degree angle.
5. T-Brace shall be constructed w/ 2x4's or 2x6's fastened together w/0.131"x3" nails at 12"o.c.

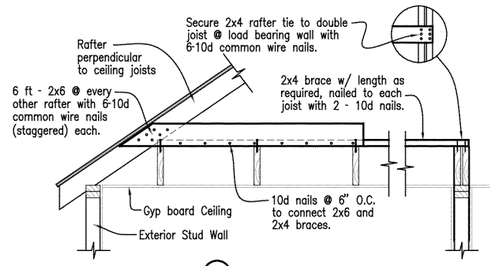
11 Typical Roof Framing and Bracing Details



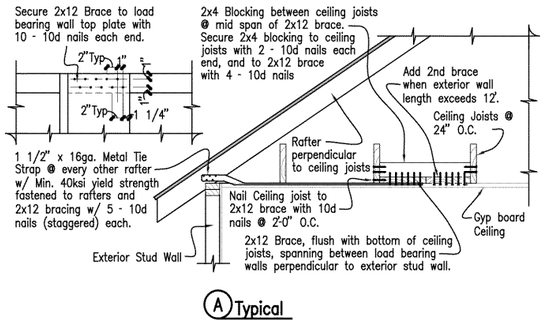
	Wind Speed and Exp.	Strap/Collar Tie Spacing	#0.131x3 Nails per Collar Tie Connection
≤130 mph V_{ult}/ 100 mph V_{asd}	B	48" O.C.	3
	C	24" O.C.	4
140 mph V_{ult}/ 110 mph V_{asd}	B	48" O.C.	4
	C	24" O.C.	6
144 mph V_{ult}/ 115 mph V_{asd}	B	48" O.C.	4
	C	24" O.C.	6
150 mph V_{ult}/ 120 mph V_{asd}	B	24" O.C.	4
	C	24" O.C.	6
160 mph V_{ult}/ 125 mph V_{asd}	B	24" O.C.	5
	C	24" O.C.	8
168 mph V_{ult}/ 130 mph V_{asd}	B	24" O.C.	5
	C[1]	24" O.C.	8

1. At 130 mph exp. C ridge strap shall be upgraded to CS20 w/10" lap.

13 Ridge Strap or Collar Tie Detail

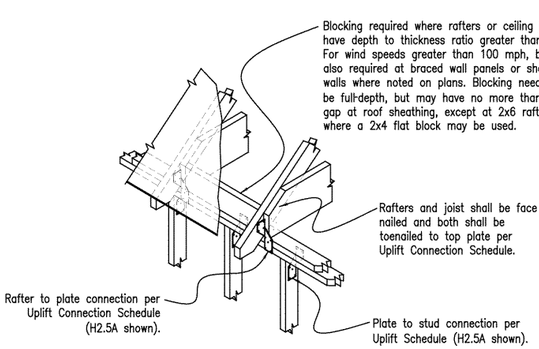


B Alternate

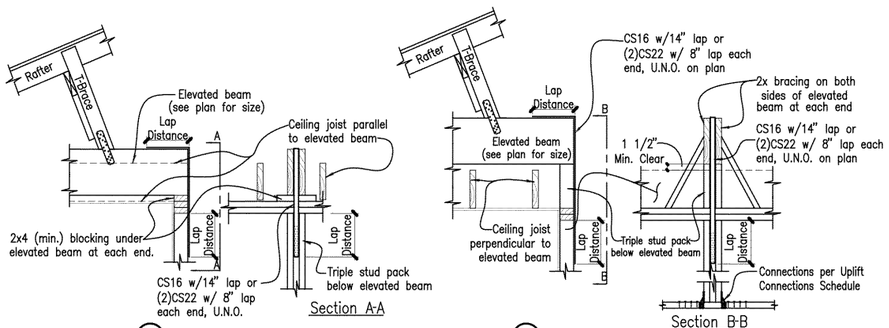


A Typical

15 Typical Rafter Tie Detail



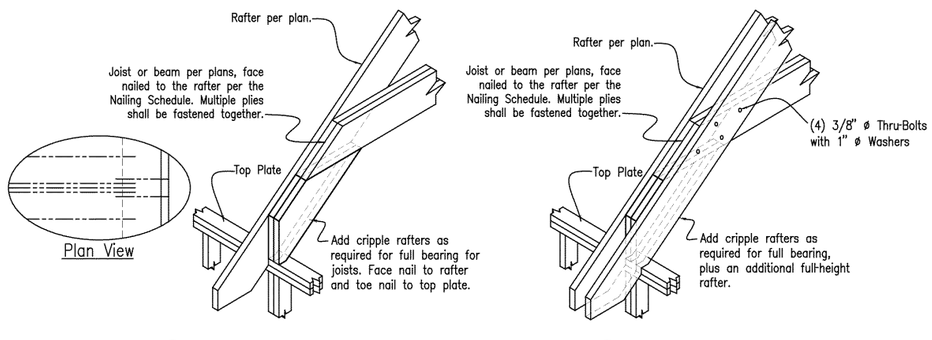
14 Roof Rafter at Exterior Wall



A Parallel to Ceiling Joists **B Perpendicular to Ceiling Joists**

12 Alternate Roof Framing and Bracing Details (Elevated Beam)

Use Alternate Roof Framing and Bracing where purlin brace cannot reach load bearing wall and no deflection is desired in ceiling framing or where specifically called out on plans.



A Typical **B Alternate**

16 Rafter to Joist Connection at Sloped Ceilings

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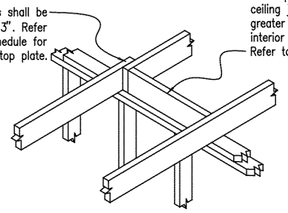
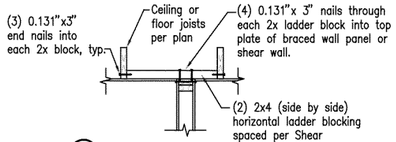
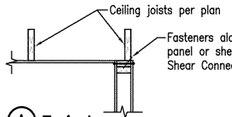


17 Ceiling Joists at Interior Wall

Joists Perpendicular to Wall



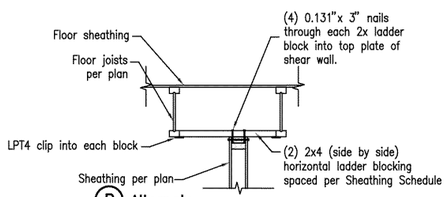
B Alternate



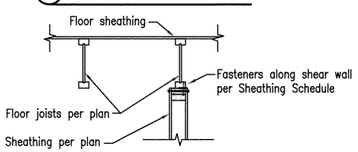
A Typical

18 Ceiling Joists at Interior Shear/Braced Wall Panel

Joists parallel to wall. Ladder blocking only required at braced wall panels and shear walls.



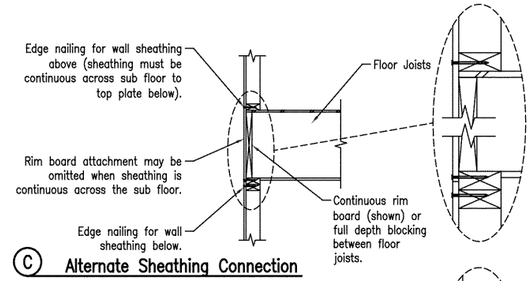
B Alternate



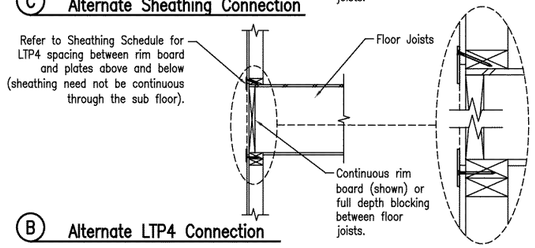
A Typical

19 Floor Joists at Interior Shear/Braced Wall Panel

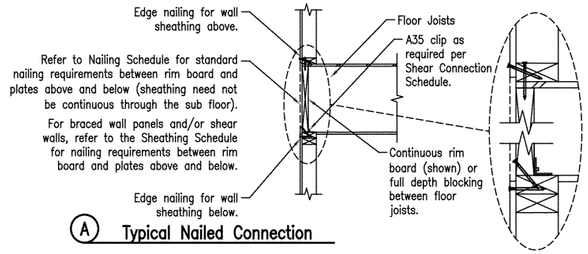
Joists parallel to shear wall



C Alternate Sheathing Connection



B Alternate LTP4 Connection



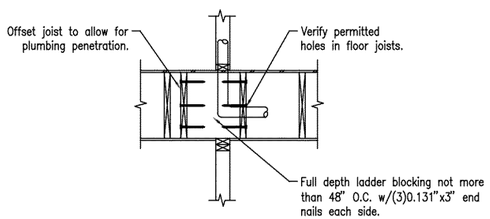
A Typical Nailed Connection

20 Floor Joist at Bearing Wall

Joists Perpendicular to Wall

Where floor system is parallel to wall, installation is similar except that continuous rim board shall be replaced with minimum double joists for full bearing.

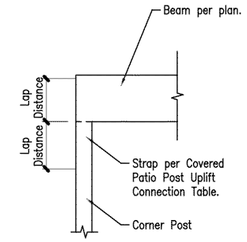
At an interior wall, installation is similar except that sheathing cannot typically be continuous through the sub floor. Where floor system is parallel to wall and joists cannot be installed under the wall, blocking shall be installed per Detail 21.



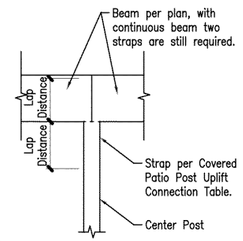
21 Blocking at Plumbing Penetration

Floor Joists Parallel to Wall

1. At shear walls or braced walls install full depth blocking directly on wall between ladder blocking for length of shear wall or braced wall. Fasten blocking per Sheathing Schedule/Shear Connection Schedule.

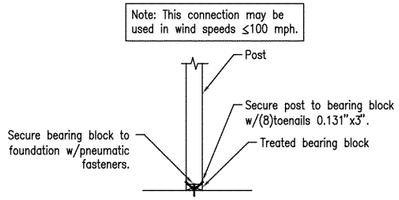


A Beam to Corner Post

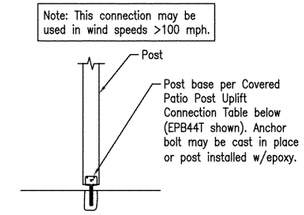


B Beam to Center Post

22 Covered Patio Beam to Post Connection



A Toenailed Connection



B Post Base Connection

23 Covered Patio Post to Foundation Connection

Covered Patio Post Uplift Connection Table												
			≤10ft beam(s)		≤12ft beam(s)		≤15ft beam(s)	
			Corner Post	Center Post	Corner Post	Center Post	Corner Post	Center Post
115 mph V_{ult}/ 90 mph V_{asd}	B	Beam to Post	(4)Toenails	CS22 w/6" Lap	(5)Toenails	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap
		Post to Foundation	(8)Toenails	EPB44T	(8)Toenails	EPB44T	EPB44T	EPB44T
	C	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T
130 mph V_{ult}/ 100 mph V_{asd}	B	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap
		Post to Foundation	(8)Toenails	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T
	C	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/7" Lap	CS22 w/7" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T
140 mph V_{ult}/ 110 mph V_{asd}	B	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T
	C	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/7" Lap	CS22 w/7" Lap	CS22 w/8" Lap	CS22 w/8" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	ABU44
144 mph V_{ult}/ 115 mph V_{asd}	B	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/7" Lap	CS22 w/7" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T
	C	Beam to Post	CS22 w/7" Lap	CS22 w/7" Lap	CS22 w/8" Lap	CS22 w/8" Lap	CS16 w/10" Lap	CS16 w/10" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	ABU44	EPB44T	ABU44
150 mph V_{ult}/ 120 mph V_{asd}	B	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/8" Lap	CS22 w/8" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	ABU44
	C	Beam to Post	CS22 w/8" Lap	CS22 w/8" Lap	CS16 w/10" Lap	CS16 w/10" Lap	CS16 w/10" Lap	CS16 w/10" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	ABU44	EPB44T	ABU44
160 mph V_{ult}/ 125 mph V_{asd}	B	Beam to Post	CS22 w/6" Lap	CS22 w/6" Lap	CS22 w/7" Lap	CS22 w/7" Lap	CS22 w/8" Lap	CS22 w/8" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	ABU44
	C	Beam to Post	CS22 w/8" Lap	CS22 w/8" Lap	CS16 w/10" Lap	CS16 w/10" Lap	CS16 w/10" Lap	CS16 w/10" Lap
		Post to Foundation	EPB44T	ABU44	EPB44T	ABU44	EPB44T	ABU44
168 mph V_{ult}/ 130 mph V_{asd}	B	Beam to Post	CS22 w/7" Lap	CS22 w/7" Lap	CS22 w/8" Lap	CS22 w/8" Lap	CS22 w/10" Lap	CS22 w/10" Lap
		Post to Foundation	EPB44T	EPB44T	EPB44T	EPB44T	EPB44T	ABU44
	C	Beam to Post	CS22 w/8" Lap	CS22 w/8" Lap	CS16 w/10" Lap	CS16 w/10" Lap	CS16 w/10" Lap	CS16 w/10" Lap
		Post to Foundation	EPB44T	ABU44	EPB44T	ABU44	EPB44T	ABU44

1. Toenail connections shall use 0.131"x3" nails or larger.
2. Post bases specified above assume a 4" solid post, for built-up posts or larger posts a connection with equivalent or greater capacity may be used.
3. Post caps with an equivalent capacity as the specified straps are acceptable.
4. The above table assumes min. SPF lumber or equivalent for posts and beams. For cedar or any lumber with design values less than SPF contact the structural engineer.
5. The above table assumes a patio depth of 10ft. in conjunction with the beam lengths specified. If any of these dimensions are exceeded contact the structural engineer.

STRAND
10003 Technology Blvd. West
Dallas, TX. 75220
972-620-8204

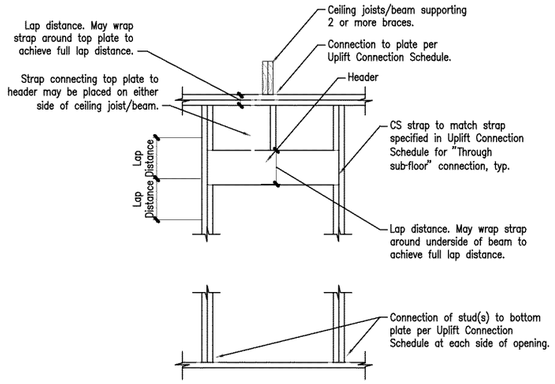
STATE OF TEXAS
ESTUS C. WILSON III
92582
LICENSED
PROFESSIONAL ENGINEER
11/18/20

BUILDER Small House Solutions LLC
SUBD. Private Residence
LOT 1 BLOCK X
ADDRESS 306 Church Street
CITY Hutto, TX
PLAN VER.

DATE
SCALE 3/8" = 1'-0"
DR'N

FR0.7

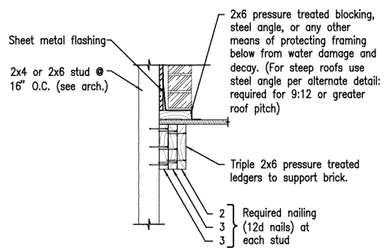
STRAND DTL0901.1



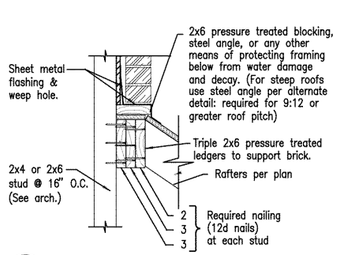
24 Ceiling Joist/Beam Supporting 2 or More Braces Over Header

1. At exterior walls the more strict requirements between this detail and the Uplift Connections at Openings Schedule shall apply.

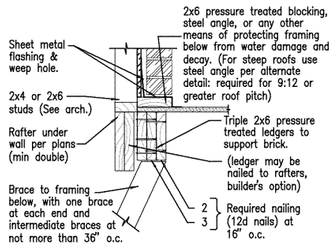
Brick Support Conditions



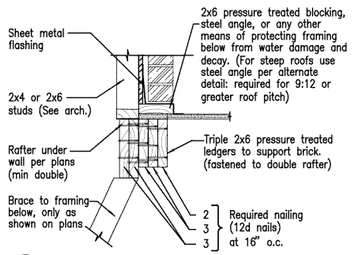
B1 Ledger for Brick Support



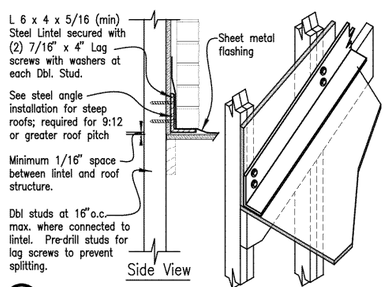
B2 Ledger for Brick Support



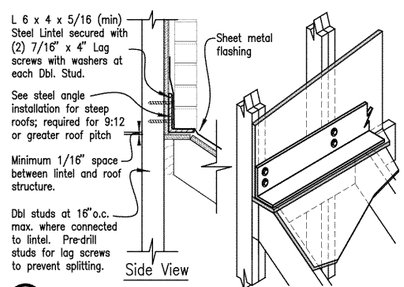
B3 Ledger for Brick Support



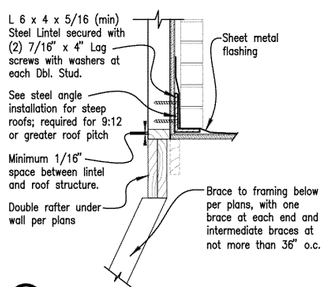
B4 Ledger for Brick Support



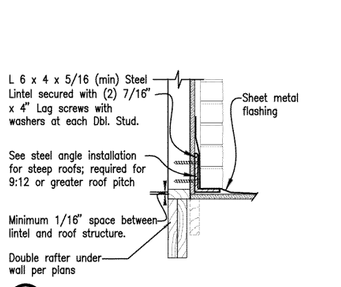
B1 Alt. Lintel for Brick Support



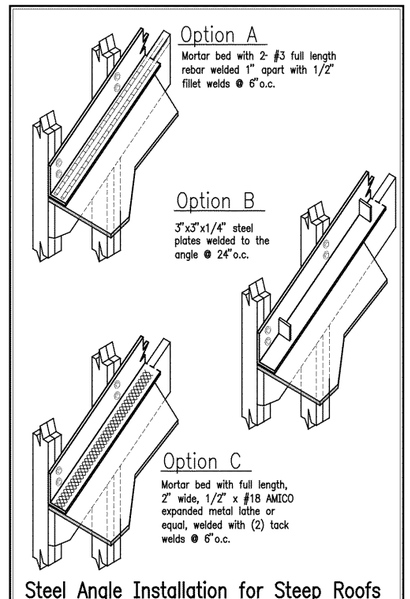
B2 Alt. Lintel for Brick Support



B3 Alt. Lintel for Brick Support



B4 Alt. Lintel for Brick Support



Steel Angle Installation for Steep Roofs

(For 9:12 or greater roof pitch)

Note: The above alternate details with steel angle may be used in lieu of brick on wood support, except that alternate details must be used for conditions at steep roofs (required for 9:12 or greater roof pitch) Refer to IRC Section R703.7.2 for additional information.

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