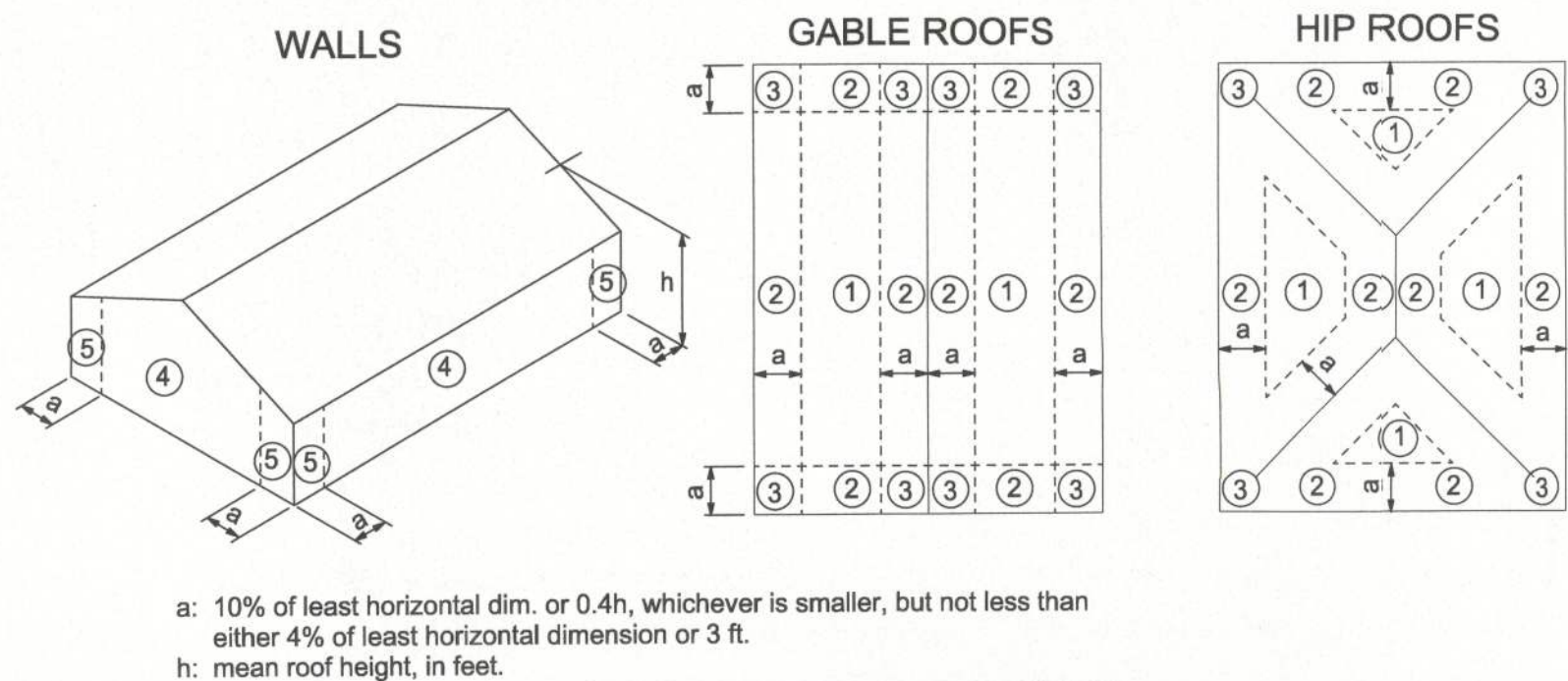


ALL WIND LOADS ARE IN ACCORDANCE WITH SECTION 1609, FLORIDA BUILDING CODE, 2010, WITH REVISIONS		
FLOOR AND ROOF LIVE LOADS		
UNINHABITABLE ATTICS:		20 PSF
HABITABLE ATTICS, BEDROOM:		30 PSF
ALL OTHER ROOMS:		40 PSF
GARAGE:		40 PSF
ROOFS:		20 PSF UNIFORM
WIND DESIGN DATA		
ULTIMATE WIND SPEED:		120 MPH
NOMINAL (BASIC) WIND SPEED:		93 MPH
RISK CATEGORY:		II
WIND EXPOSURE:		B
ENCLOSURE CLASSIFICATION:		ENCLOSED
INTERNAL PRESSURE COEFFICIENT:		0.18 +/-
COMPONENTS AND CLADDING		
ROOFING ZONE 1:	16.0 PSF MAX.	-16.0 PSF MIN.
ROOFING ZONE 2:	16.0 PSF MAX.	-24.9 PSF MIN.
ROOFING ZONE 3:	16.0 PSF MAX.	-36.7 PSF MIN.
ROOFING AT ZONE 2 OVERHANGS:		-29.1 PSF MIN.
ROOFING AT ZONE 3 OVERHANGS:		-48.9 PSF MIN.
STUCCO, CLADDING, DOORS AND WINDOWS		
ZONE 4:	16.0 PSF MAX.	-16.9 PSF MIN.
ZONE 5:	16.0 PSF MAX.	-20.9 PSF MIN.
9' WIDE O/H DR.:	16.0 PSF MAX.	-16.0 PSF MIN.
16' WIDE O/H DR.:	16.0 PSF MAX.	-16.0 PSF MIN.



COMPONENTS AND CLADDING

STRUCTURAL DESIGN CRITERIA

CODES:	FLORIDA BUILDING CODE, 2010 EDITION WITH SUPPLEMENTS BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-05) SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDINGS (ACI 301-05) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-05) NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 2001 EDITION APA PLYWOOD DESIGN SPECIFICATION	
LIVE LOADS:	ROOF	20 PSF (REDUCIBLE)
	RESIDENTIAL FLOOR, UNLESS OTHERWISE INDICATED	40 PSF
	BALCONIES	40 PSF
	STAIRS	40 PSF
	LIGHT PARTITIONS (DEAD LOAD), U.N.O.	20 PSF
WIND LOADS: (F.B.C.)	WIND LOADS BASED ON FBC, SECTION 1609 WIND VELOCITY: 120 M.P.H., USE FACTOR: 1.0	
CONCRETE STRENGTH @ 28 DAYS	ALL CONCRETE UNLESS OTHERWISE INDICATED PEA GRAVEL CONCRETE FOR MASONRY CELLS ONLY (DO NOT USE FOR CONCRETE COLUMNS OR TIE BEAMS)	
		2500 PSI 3000 PSI
REINFORCING:	WELDED WIRE FABRIC SHALL CONFORM TO	ASTM A185
	ALL REINFORCING BARS	ASTM A615-40 40,000 PSI
	ALL STIRRUPS AND TIES	ASTM A615-40 40,000 PSI
CONCRETE MASONRY UNITS:	ASTM C90-99b, STANDARD WEIGHT UNITS, fm=1500 PSI MORTAR TYPE "S" 1800 PSI CONCRETE GROUT 3000 PSI CONTINUOUS MASONRY INSPECTION IS REQUIRED DURING CONSTRUCTION	
	ALL STRUCTURAL AND MISCELLANEOUS STEEL A36 36,000 PSI, U.N.O SHOP AND FIELD WELDS: E70XX ELECTRODES ALL BOLTS CAST IN CONCRETE: ASTM A36 OR ASTM A-307	
	BEAMS, RAFTERS, JOIST, PLATES, ETC. U.N.O. NO. 2 SOUTHERN YELLOW PINE (19% M.C.) ROOF DECK: PLYWOOD C-C/C-D, EXTERIOR, or OSB FLOOR SHEATHING: T&G A-C GROUP 1 APA RATED (48/24) WALL SHEATHING: PLYWOOD C-C/C-D, EXTERIOR OR OSB VERSA LAM BEAM Fb = 2900 PSI (2.0E) WOOD COLS. PARALLAM 2.0E U.N.O.	
	DESIGN LOADS:	
	TOP CHORD LIVE AND DEAD LOAD:	30 PSF
WOOD ROOF TRUSSES:	BOTTOM CHORD DEAD LOAD:	10 PSF
	TOTAL:	40 PSF
SOIL BEARING VALUE:	SEE DRAWINGS FOR SPECIAL CONCENTRATED LOADS, DESIGN FOR NEW WIND UPLIFT AS PER SPECIFIED CODES, DEDUCTING A MAXIMUM OF 5 P.S.F. DEAD LOAD, BUT NOT EXCEEDING ACTUAL DEAD LOAD.	
	ASSUMED ALLOWABLE SOIL BEARING PRESSURE AFTER COMPACTION: 1,500 PSF SEE SOILS REPORT AND SPECIFICATIONS FOR COMPACTION REQUIREMENTS IF SOIL CONDITIONS IN THE PROJECT DO NOT MEET OR EXCEED THE CAPACITY THE GENERAL CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO FOUNDATION POUR FOR VERIFICATION OF FOUNDATION DESIGN.	



GLENN GARAGE ADDITION

GENERAL NOTES:

1. THE CONTRACTOR SHALL INDEMNIFY THE OWNER AGAINST ALL CLAIMS, WHETHER FROM PERSONAL INJURY OR PROPERTY DAMAGE, ARISING FROM EVENTS ASSOCIATED WITH THE WORK PERFORMED UNDER THE CONTRACT FOR THIS PROJECT.
2. THE CONTRACTOR AND/OR SUB-CONTRACTORS SHALL WARRANT ALL WORK FOR A PERIOD OF ONE YEAR FOLLOWING THE WORK DATE OF FINAL COMPLETION AND ACCEPTANCE BY THE OWNER DEFECTS IN MATERIALS, EQUIPMENT, COMPONENTS AND WORKMANSHIP SHALL BE CORRECTED AT NO FURTHER COST TO THE OWNER DURING THE ONE YEAR WARRANTY PERIOD.
3. AT THE OWNER'S OPTION, A WARRANTY INSPECTION SHALL BE PERFORMED DURING THE ELEVENTH MONTH FOLLOWING THE COMMENCEMENT OF THE WARRANTY PERIOD, FOR THE PURPOSE OF DETERMINING ANY WARRANTY WORK THAT MAY BE REQUIRED. THE CONTRACTOR SHALL BE PRESENT DURING THIS INSPECTION IF REQUESTED BY THE OWNER.
4. THE CONTRACTOR SHALL PAY FOR ALL PERMITS, LICENSES, TESTS AND THE LIKE THAT MAY BE REQUIRED BY THE VARIOUS AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT BE THEY CITY, COUNTY, STATE OR FEDERAL.
5. THE OWNER SHALL FILE A "NOTICE OF COMMENCEMENT" PRIOR TO THE BEGINNING OF THE PROJECT AND THE CONTRACTOR(S) SHALL FILE "NOTICE TO OWNER" AND PROVIDE "RELEASE OF LIEN" FOR ALL PAYMENT REQUESTS PRIOR TO DISBURSEMENT OF ANY FUNDS.
6. ANY AND ALL DISPUTES ARISING FROM EVENTS ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT BETWEEN THE OWNER, CONTACTOR(S) AND SUPPLIERS SHALL BE RESOLVED THROUGH BINDING ARBITRATION.
7. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CODES AND LOCAL REGULATIONS, INCLUDING APPLICABLE ENERGY CODES. ALL COMPONENTS OF THE BUILDING SHALL MEET WITH THE MINIMUM ENERGY REQUIREMENTS OF THE BUILDING CODE. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING PRIOR TO THE COMMENCEMENT OF THE WORK.
8. ALL INSULATION SHALL BE LEFT EXPOSED AND ALL LABELS LEFT INTACT ON THE WINDOWS AND DOORS UNTIL INSPECTED BY THE BUILDING OFFICIAL.
9. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.

CONSTRUCTION DOCUMENTS:

THE CUSTOMER IS RESPONSIBLE FOR DELIVERING THE REQUIRED SETS OF CONSTRUCTION DOCUMENTS TO THE PERMIT ISSUING AUTHORITY FOR THE ISSUANCE OF CONSTRUCTION PERMITS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR REVIEWING THE PLANS AND VERIFYING ALL EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION INCLUDING FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION.

DO NOT SCALE THESE PLANS:

AMPLE DIMENSIONS ARE SHOWN ON THE PLANS TO LOCATE ALL ITEMS. SIMPLE ARITHMATIC MAY BE USED TO DETERMINE THE LOCATION OF THOSE ITEMS NOT DIMENSIONED.

CHANGES TO PLAN SETS:

PLEASE DO NOT MAKE ANY STRUCTURAL CHANGES TO THES PLANS WITHOUT CONSULTING WITH THE ARCHITECT/ENGINEER. THE OWNER SHALL ASSUME ANY AND ALL LIABILITY FOR STRUCTURAL DAMAGE RESULTING FROM CHANGES MADE TO THE PLANS OR BY SUBSTITUTION OF MATERIALS DIFFERENT FROM SPECIFICATIONS ON THE PLANS.

INDEX OF SHEETS

SHEET	DESCRIPTION
A-1	COVER SHEET
A-2	FLOOR AND ROOF PLAN
A-3	FOUNDATION AND STRUCTURAL
A-4	FRAMING AND SHEARWALL



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



CERTIFICATE OF AUTHORIZATION
NO. 28022
P.O. BOX 970
LAKE CITY, FL 32056
PHONE: 386.754.4085

Brett A. Crews
2-11-2014
Brett A. Crews, P.E. 65592

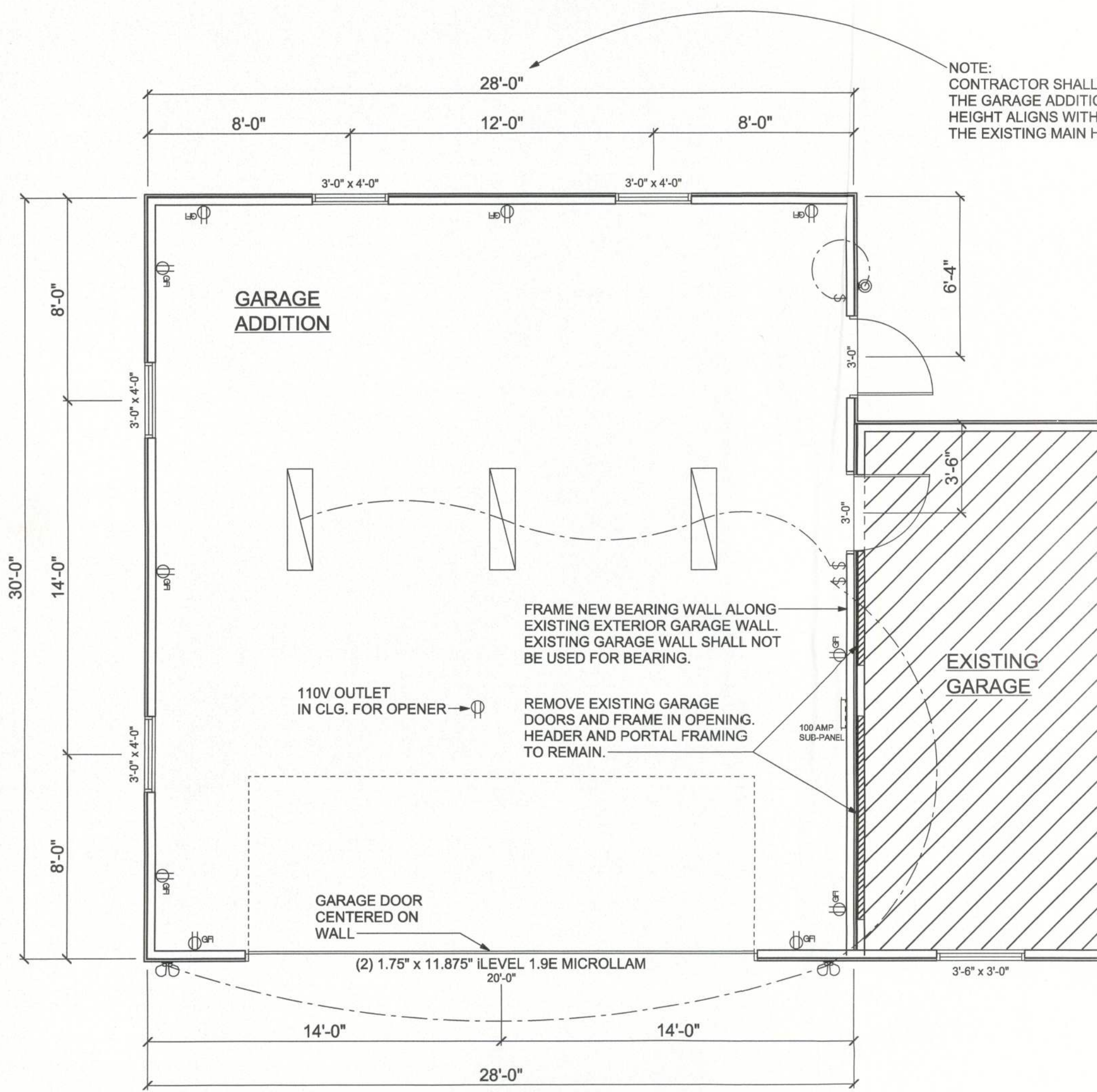
DRAWN BY:
TM
APPROVED BY:
BC

GLENN GARAGE ADDITION

CES PROJECT NO.:
2013-069

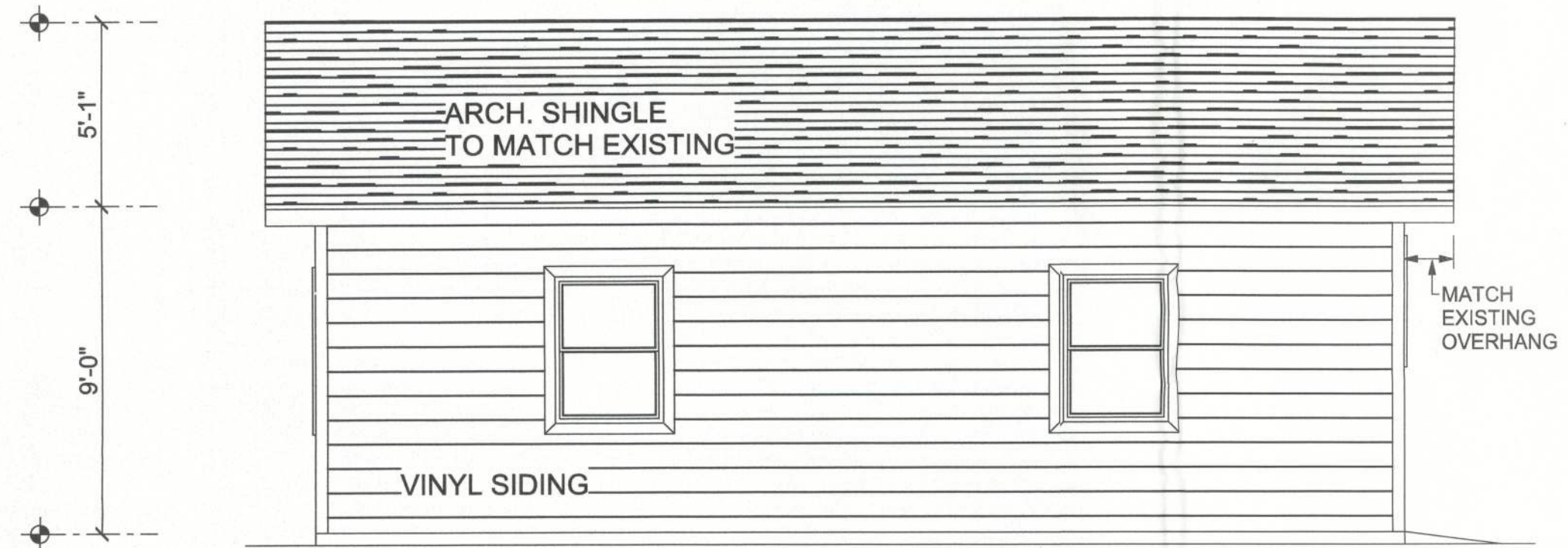
COVER SHEET

SHEET:
A-1

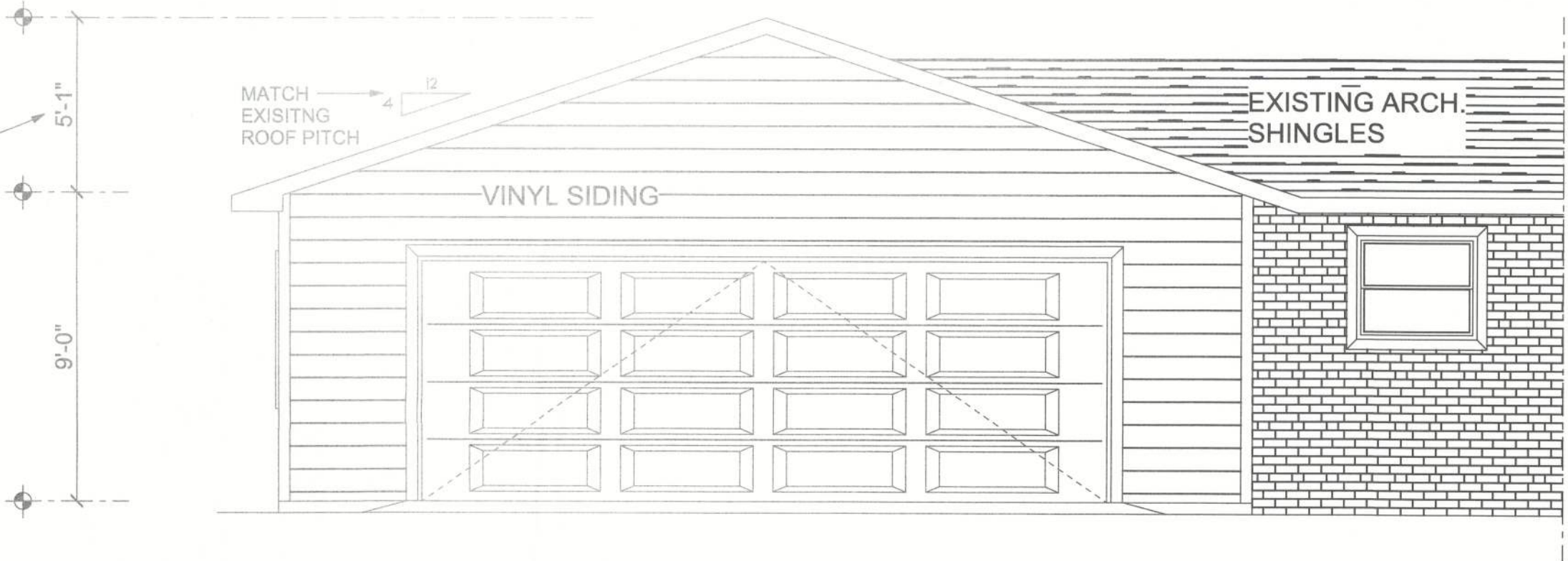


FLOOR PLAN
SCALE: 1/4" = 1'-0"

ELECTRICAL	COUNT	SYMBOL
FLUORESCENT LIGHT 1'x4'	3	
DOUBLE FLOOD LIGHT	2	
WALL SCONCE	1	
ELECTRICAL PANEL	1	
OUTLET	1	
OUTLET GFI	10	
SWITCH	3	



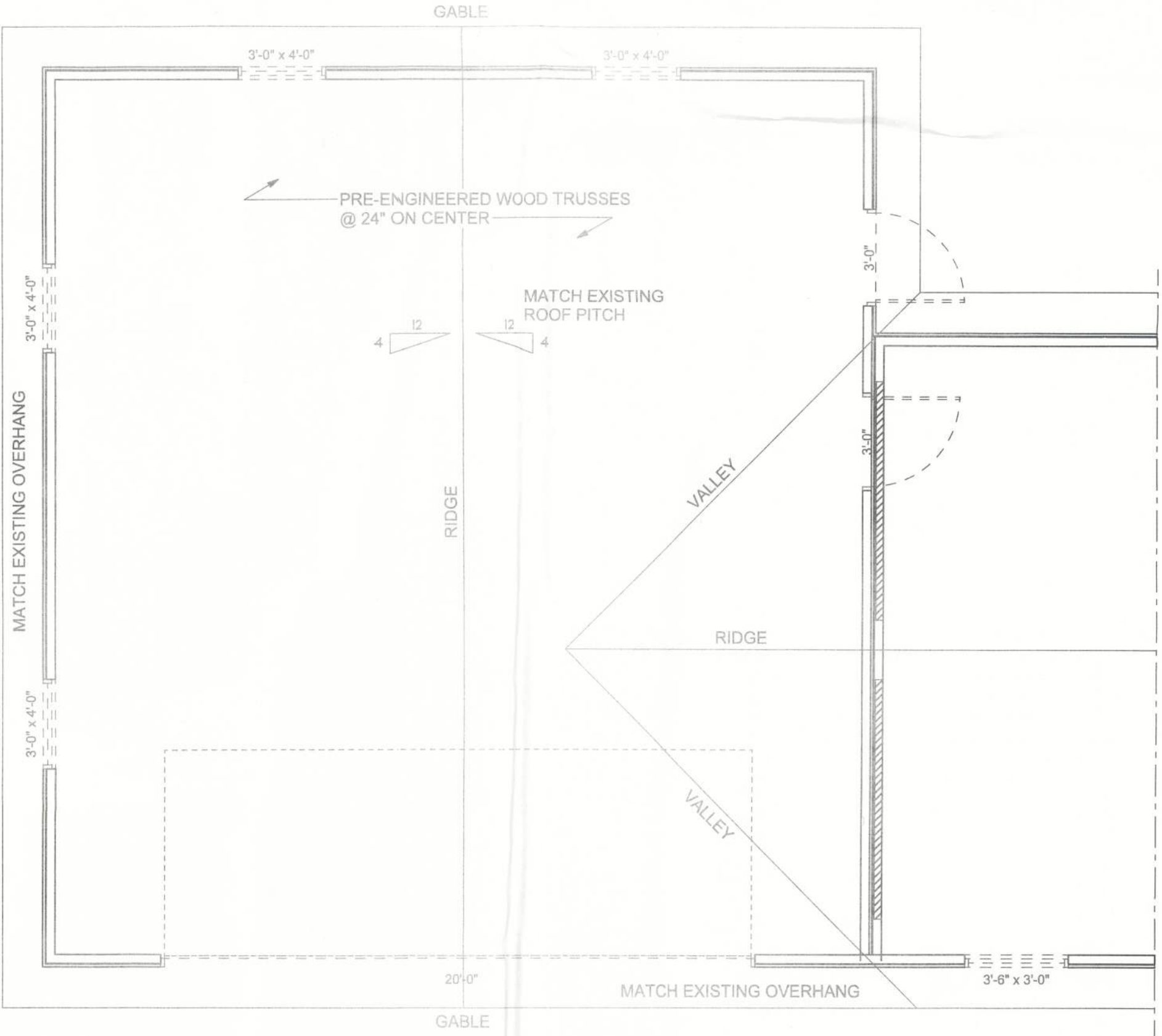
SIDE ELEVATION
SCALE: 1/4" = 1'-0"



FRONT ELEVATION
SCALE: 1/4" = 1'-0"



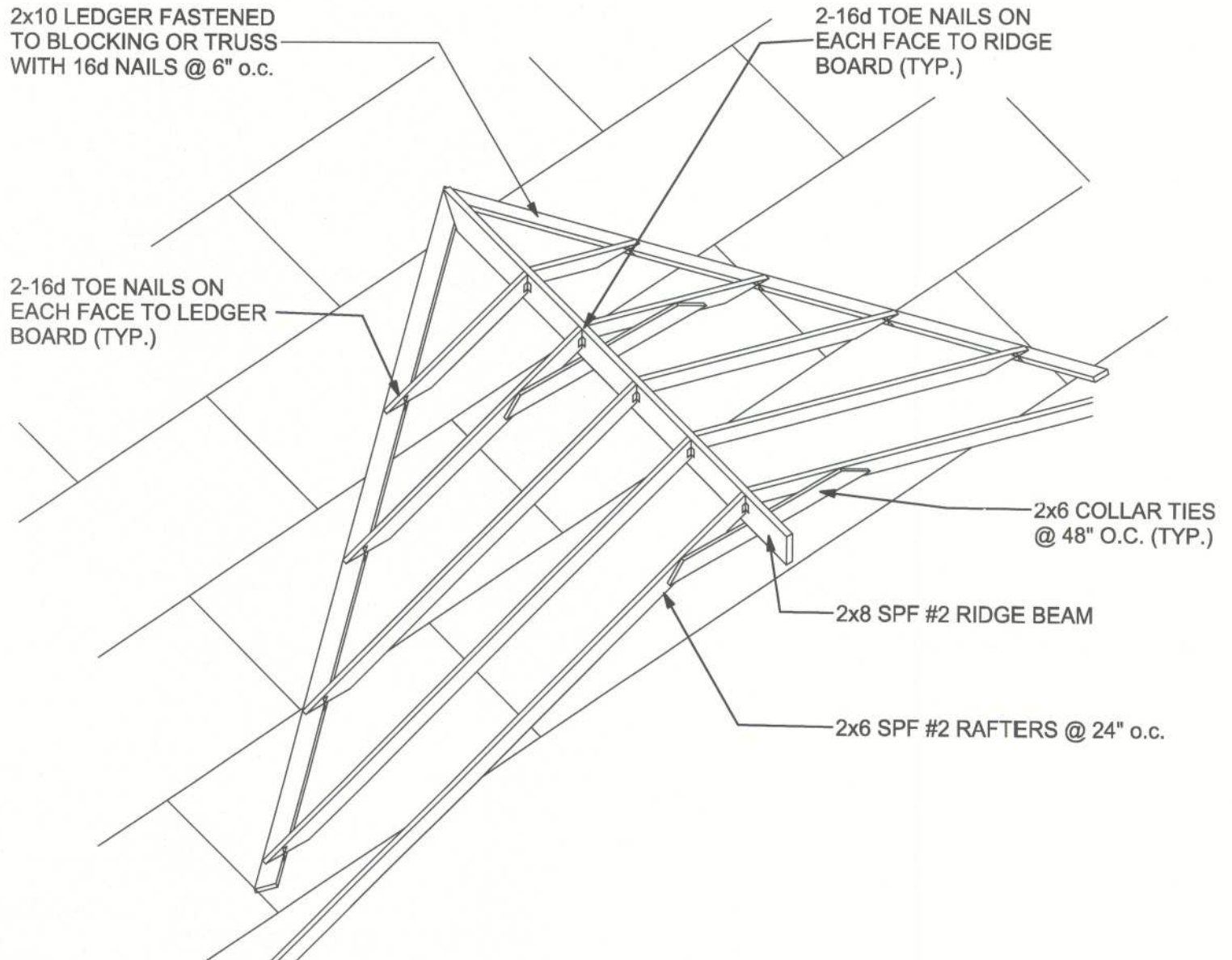
REAR ELEVATION
SCALE: 1/4" = 1'-0"



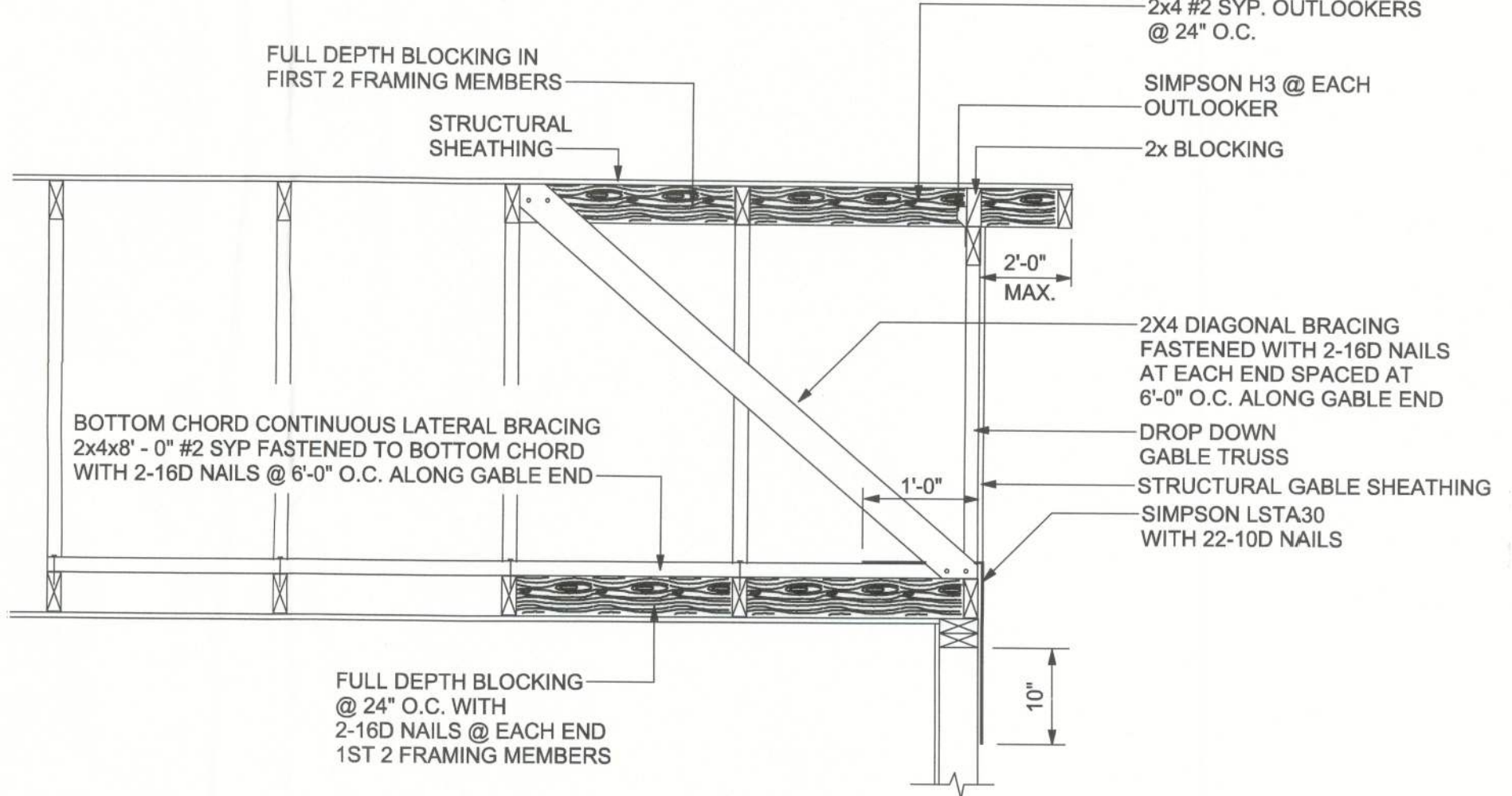
ROOF PLAN
SCALE: 1/4" = 1'-0"

FIREBLOCKING NOTES:

- FIREBLOCKING SHALL BE INSTALLED IN WOOD FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:
1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS INCLUDING FURRED SPACES AT CEILING AND FLOOR LEVELS.
 2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, COVE CEILINGS, ETC.
 3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN.
 4. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS AND FIREPLACES AT CEILING AND FLOOR LEVELS WITH PYROPANEL MULTIFLEX SEALANT
 5. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL STUD WALL OR PARTITION SPACES AND CONCEALED SPACES CREATED BY AN ASSEMBLY OF FLOOR JOISTS, FIREBLOCKING SHALL BE PROVIDED FOR THE FULL DEPTH OF THE JOISTS AT THE ENDS AND OVER THE SUPPORTS.



ROOF INTERSECTION CONNECTION DETAIL
NTS



END WALL BRACING FOR CEILING DIAPHRAGM
NTS

NOTE: ALL WOOD TO BE NUMBER 2 GRADE SOUTHERN YELLOW PINE

REVISIONS			REVISIONS		
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

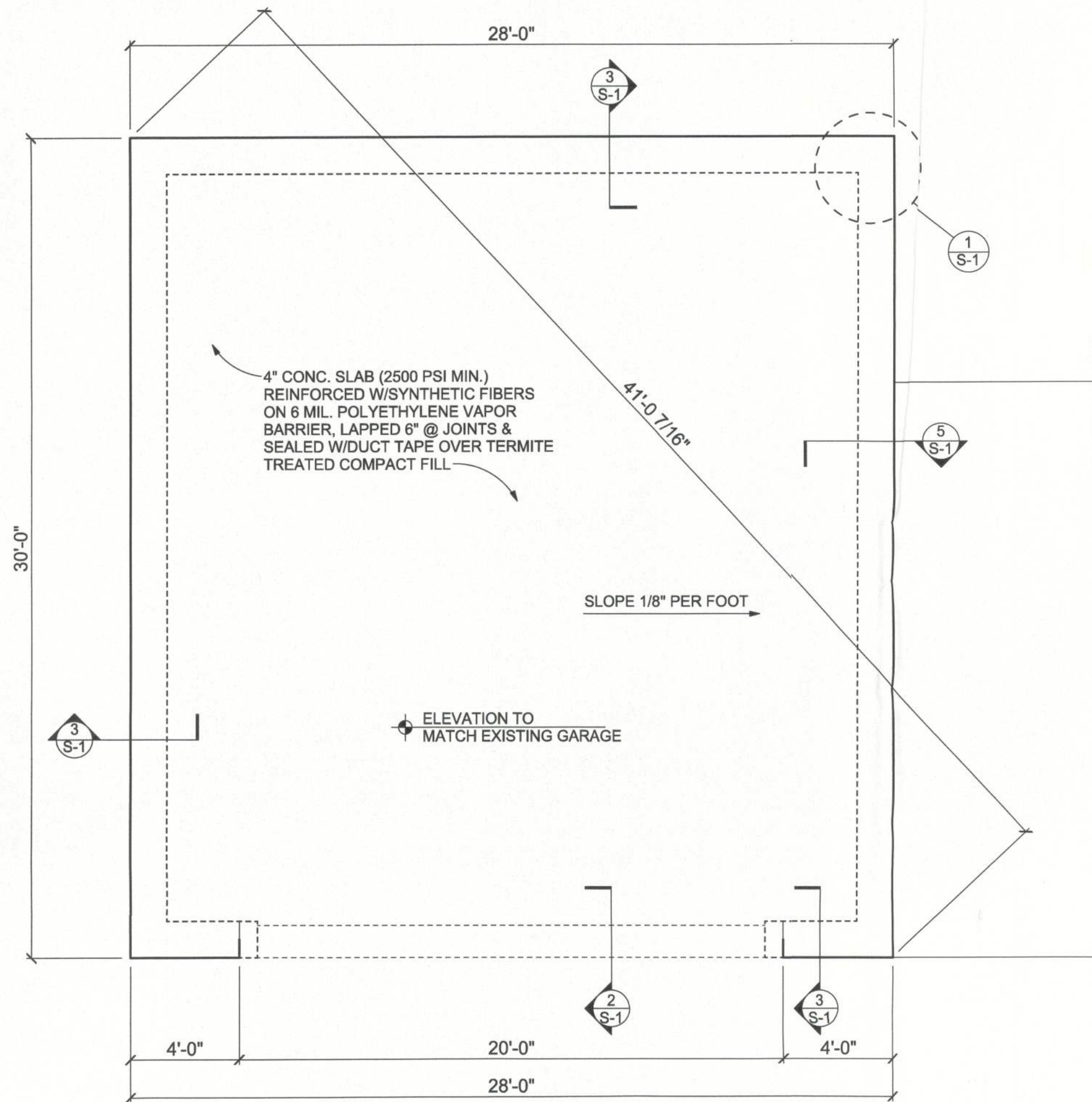


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TM
APPROVED BY:
BC

GLENN GARAGE ADDITION		CES PROJECT NO.: 2013-069
FLOOR AND ROOF PLAN		SHEET: A-2



FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

FOUNDATION NOTES

CONCRETE:
CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.

REINFORCING STEEL:
THE REINFORCING STEEL SHALL BE MINIMUM GRADE 40.

COVER OVER REINFORCING STEEL
FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE:
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER AND 1 1/2 INCHES ELSEWHERE. REINFORCING BARS EMBEDDED IN GROUTED CELLS SHALL HAVE A MINIMUM CLEAR DISTANCE OF 1/4 INCH FOR FINE GROUT OR 1/2 INCH FOR COARSE GROUT BETWEEN REINFORCING BARS AND ANY FACE OF A CELL. REINFORCING BARS USED IN MASONRY WALLS SHALL HAVE A MASONRY COVER (INCLUDING GROUT) OF NOT LESS THAN 2 INCHES FOR MASONRY UNITS WITH FACE EXPOSED TO EARTH OR WEATHER 1 1/2 INCHES FOR MASONRY UNITS NOT EXPOSED TO EARTH OR WEATHER.

REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

- ALL REINFORCEMENT IS BENT COLD.
 - THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS AND
 - REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.
- EXCEPTION: WHERE BENDING IS NECESSARY TO ALIGN DOWEL BARS WITH A VERTICAL CELL, BARS PARTIALLY EMBEDDED IN CONCRETE SHALL BE PERMITTED TO BE BENT AT A SLOPE OF NOT MORE THAN 1 INCH OF HORIZONTAL DISPLACEMENT TO 6 INCHES OF VERTICAL BAR LENGTH.

GALVANIZATION:

METAL ACCESSORIES FOR USE IN EXTERIOR WALL CONSTRUCTION AND NOT DIRECTLY EXPOSED TO THE WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153, CLASS B-2. METAL PLATE CONNECTORS, SCREWS, BOLTS AND NAILS EXPOSED DIRECTLY TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.

CONCRETE SLABS ON GRADE:

- ALL INTERIOR AND EXTERIOR SLABS AND WALKWAYS AS SHOWN ON THE STRUCTURAL OR ARCHITECTURAL PLANS, SHALL BE FOUR INCHES THICK MINIMUM REINFORCED WITH 6 X 6 - W1.4 X W1.4 WELDED WIRE FABRIC (UNLESS OTHERWISE NOTED).
- ALL SLABS ON GRADE TO BE CONSTRUCTED IN ACCORDANCE WITH LATEST A.C.I. - "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (A.C.I. - 302.1R).
- JOINTS SHALL BE PROVIDED IN ALL INTERIOR SLABS ON GRADE AT COLUMN CENTER-LINES DIVIDING THE SLAB INTO SQUARE PANELS NOT TO EXCEED 20 X 20 FT. IN SIZE. CAST SLAB IN LONG ALTERNATE STRIPS. PROVIDE A CONTRACTION JOINT BETWEEN EACH STRIP. SEE PLAN FOR SAW-CUT, CONTRACTION AND ISOLATION JOINT DETAILS.
- PROVIDE SAW-CUT JOINTS AT ALL SIDEWALKS AT A MAXIMUM SPACING OF FIVE FEET ON CENTERS AND ISOLATION JOINTS AT 20 FEET O.C. (U.O.N.).
- FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 12" AND COMPACTED TO 98 % MODIFIED PROCTOR (ASTM D-1557) WITHIN A DISTANCE OF 3 FEET BEYOND ALL FOOTING EDGES. TAKE AT LEAST ONE DENSITY TEST FOR EACH 1,600 SQ. FT. OF AREA AND 12" BELOW SURFACE. SEND RESULTS OF THE TEST TO OWNER, ARCHITECT AND ENGINEER.
- ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT AND EMBEDDED FIXTURES AND ALL FORMS AND KEYWAYS.

TERMITE PROTECTION NOTES:

SOIL CHEMICAL BARRIER METHOD:

- A PERMANENT SIGN WHICH IDENTIFIES THE TERMITE TREATMENT PROVIDER AND NEED FOR REINSPECTION AND TREATMENT CONTRACT RENEWAL SHALL BE PROVIDED. THE SIGN SHALL BE POSTED NEAR THE WATER HEATER OR ELECTRIC PANEL. FBC 104.2.6
- CONDENSATE AND ROOF DOWNSPOUTS SHALL DISCHARGE AT LEAST 1'-0" AWAY FROM BUILDING SIDE WALLS. FBC 1503.4.4
- IRRIGATION/SPRINKLER SYSTEMS INCLUDING ALL RISERS AND SPRAY HEADS SHALL NOT BE INSTALLED WITHIN 1'-0" FROM BUILDING SIDE WALLS. FBC 1503.4.4
- TO PROVIDE FOR INSPECTION FOR TERMITE INFESTATION, BETWEEN WALL COVERINGS AND FINAL EARTH GRADE SHALL NOT BE LESS THAN 6". EXCEPTION: PAINT AND DECORATIVE CEMENTIOUS FINISH LESS THAN 5/8" THICK ADHERED DIRECTLY TO THE FOUNDATION WALL. FBC 1403.1.6

INITIAL TREATMENT SHALL BE DONE AFTER ALL EXCAVATION AND BACKFILL IS COMPLETE. FBC 1816.1.1

SOIL DISTURBED AFTER THE INITIAL TREATMENT SHALL BE RETREATED INCLUDING SPACES BOXED OR FORMED. FBC 1816.1.2

BOXED AREAS IN CONCRETE FLOOR FOR SUBSEQUENT INSTALLATION OF TRAPS, ETC., SHALL BE MADE WITH PERMANENT METAL OR PLASTIC FORMS. PERMANENT FORMS MUST BE OF A SIZE AND DEPTH THAT WILL ELIMINATE THE DISTURBANCE OF SOIL AFTER THE INITIAL TREATMENT. FBC 1816.1.3

MINIMUM 6 MIL VAPOR RETARDER MUST BE INSTALLED TO PROTECT AGAINST RAINFALL DILUTION. IF RAINFALL OCCURS BEFORE VAPOR RETARDER PLACEMENT, RETREATMENT IS REQUIRED. FBC 1816.1.4

CONCRETE OVERPOUR AND MORTAR ALONG THE FOUNDATION PERIMETER MUST BE REMOVED BEFORE EXTERIOR SOIL TREATMENT. FBC 1816.1.5

SOIL TREATMENT MUST BE APPLIED UNDER ALL EXTERIOR CONCRETE OR GRADE WITHIN 1'-0" OF THE STRUCTURE SIDEWALLS. FBC 1816.1.6

AN EXTERIOR VERTICAL CHEMICAL BARRIER MUST BE INSTALLED AFTER CONSTRUCTION IS COMPLETE INCLUDING LANDSCAPING AND IRRIGATION. ANY SOIL DISTURBED AFTER THE VERTICAL BARRIER IS APPLIED, SHALL BE RETREATED. FBC 1816.1.6

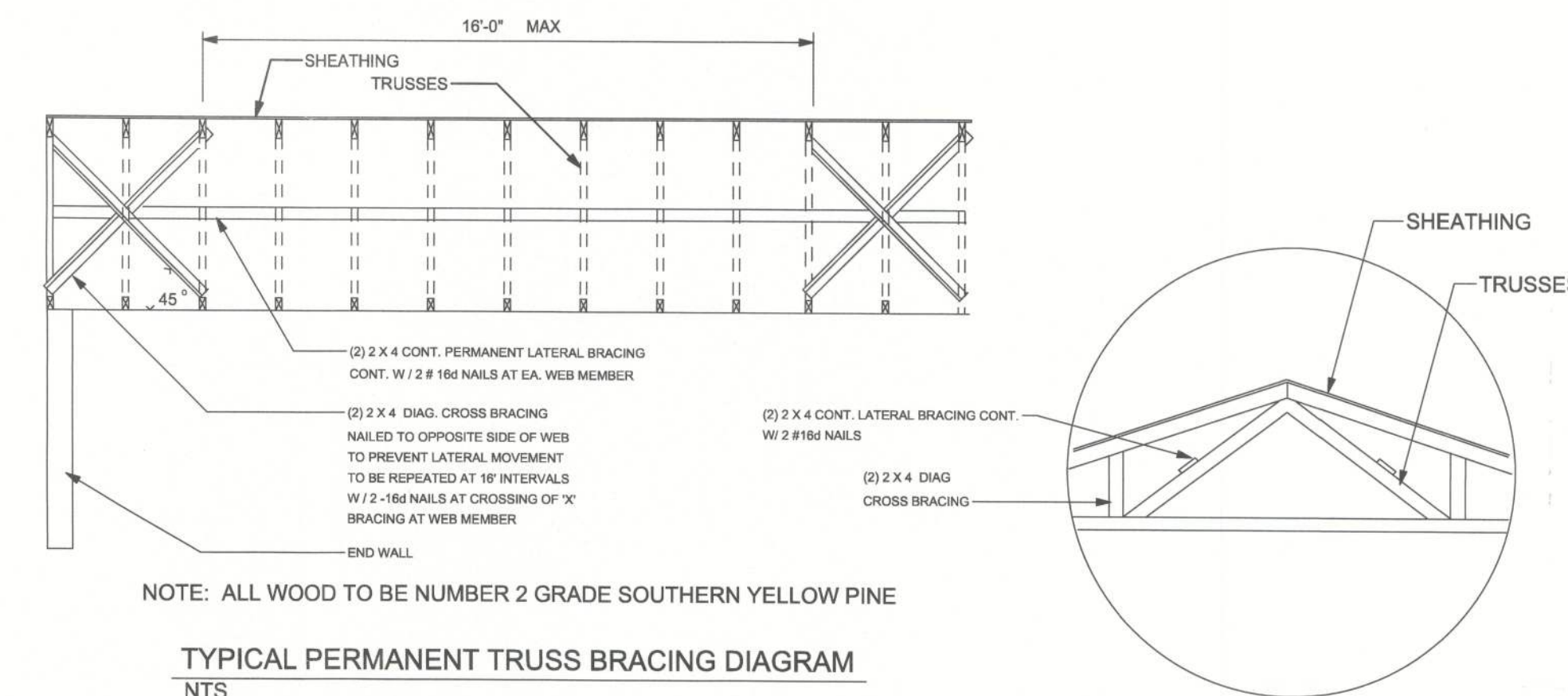
ALL BUILDINGS ARE REQUIRED TO HAVE PER-CONSTRUCTION TREATMENT. FBC 1816.1.7

A CERTIFICATE OF COMPLIANCE MUST BE ISSUED TO THE BUILDING DEPARTMENT BY # LICENSED PEST CONTROL COMPANY BEFORE A CERTIFICATE OF OCCUPANCY WILL BE ISSUED. THE CERTIFICATE OF COMPLIANCE SHALL STATE: "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. THE TREATMENT IS IN ACCORDANCE WITH THE RULES AND LAWS OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES". FBC 2303.1.7

AFTER ALL WORK IS COMPLETED, LOOSE WOOD AND FILL MUST BE REMOVED FROM BELOW AND WITHIN 1'-0" OF THE BUILDING. THIS INCLUDES ALL GRADE STAKES, TUB TRAP BOXES, FORMS, SHORING OR OTHER CELLULOSE CONTAINING MATERIAL. FBC 2303.1.3

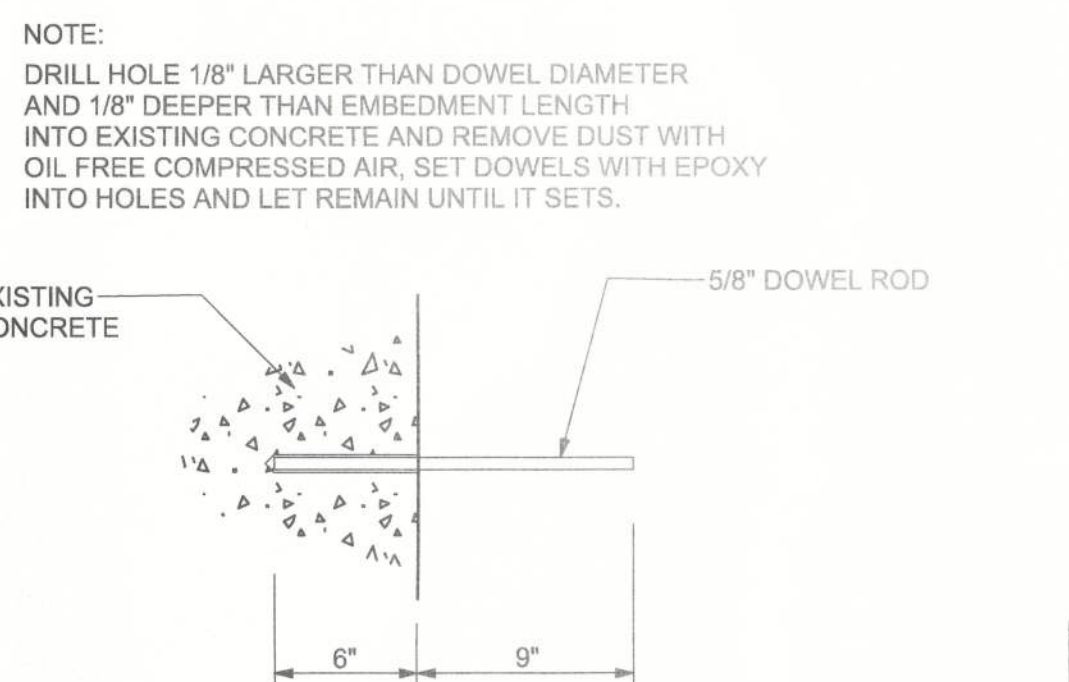
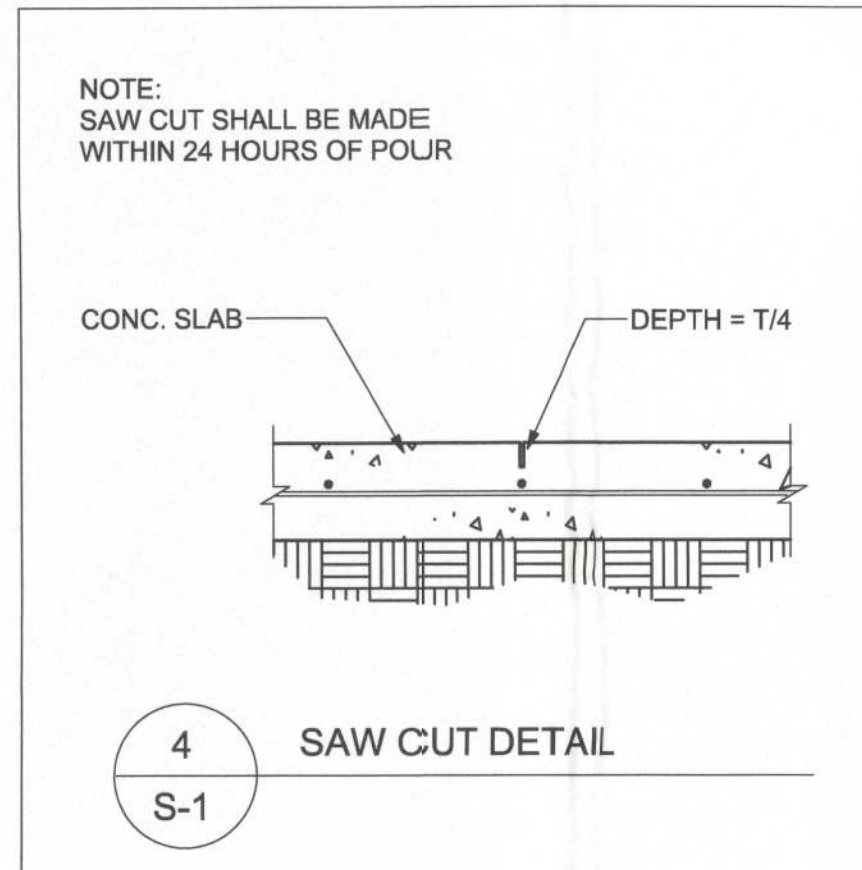
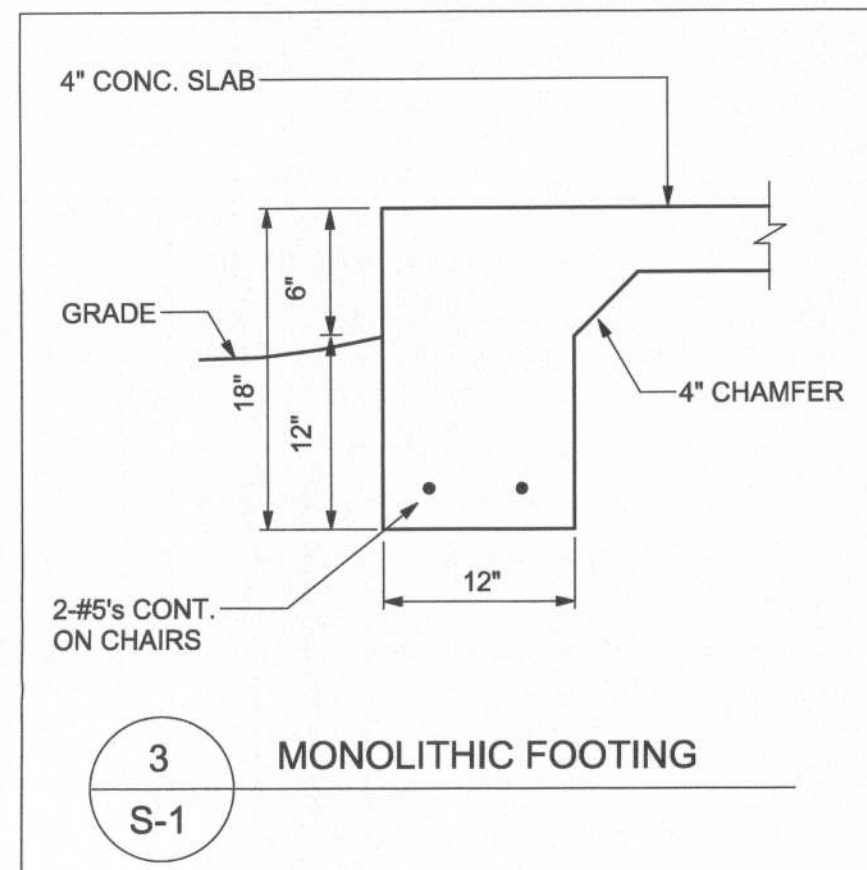
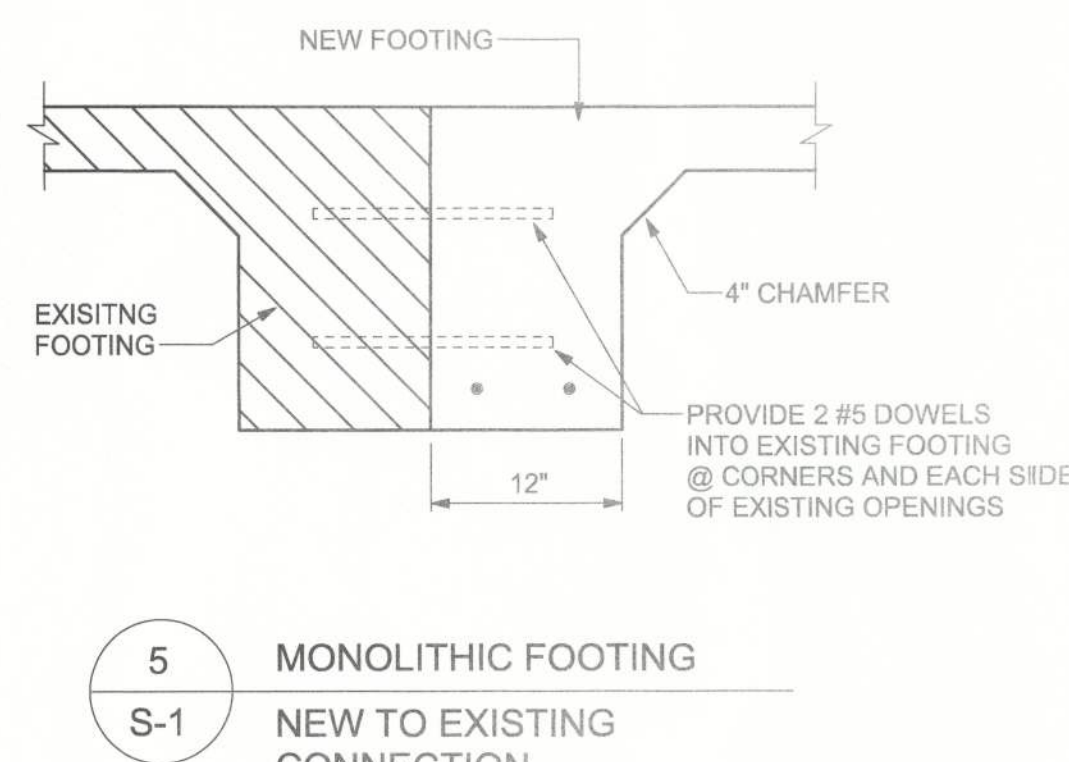
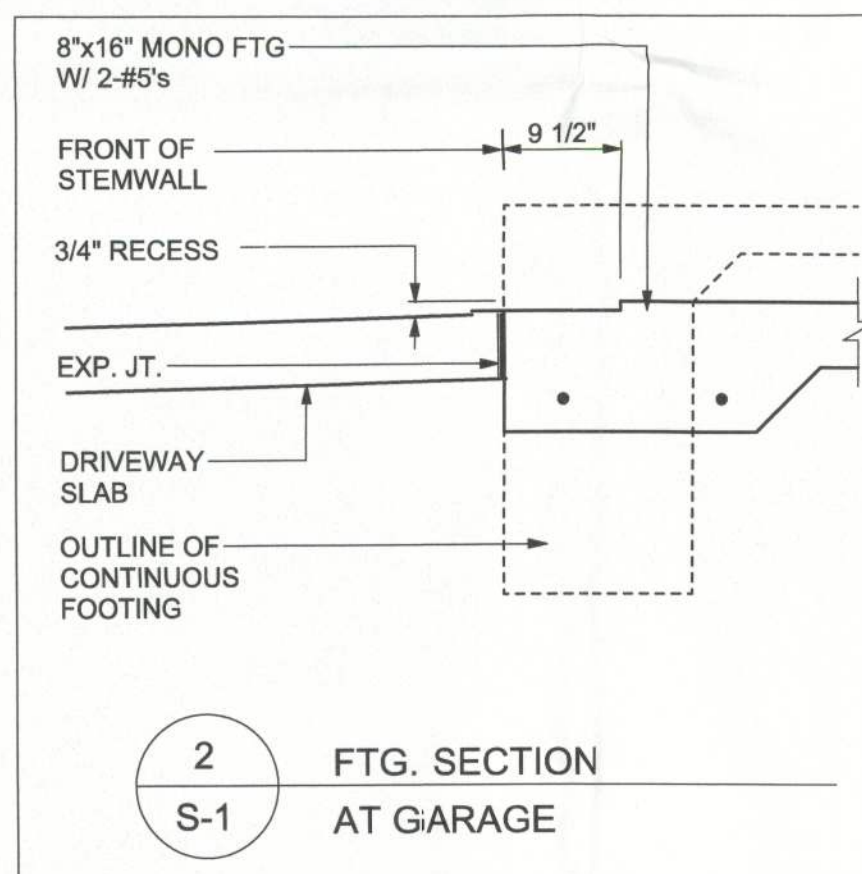
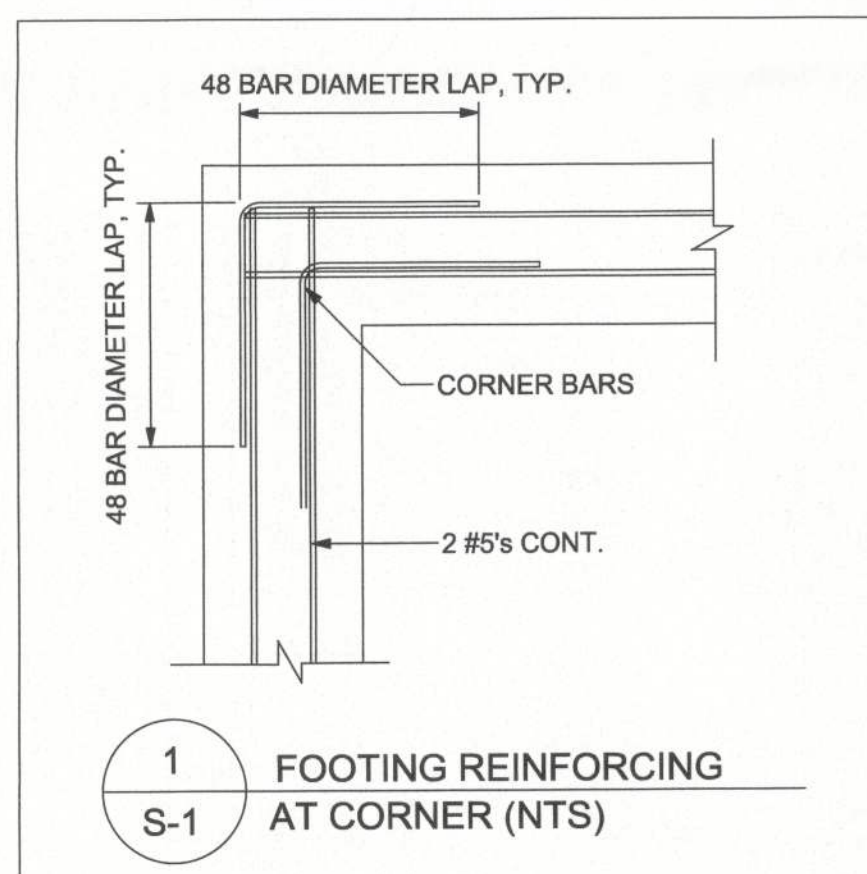
NO WOOD, VEGETATION, STUMPS, CARDBOARD, TRASH, ETC., SHALL BE BURIED WITHIN 15'-0" OF ANY BUILDING OR PROPOSED BUILDING. FBC 2303.1.4

CONNECTOR SCHEDULE FOR TRUSS ANCHORAGE				
CONNECTOR	TRUSS	TOP PLATE	UPLIFT PROVIDED	MANUFACTURER
H2.5	5-8d NAILS	5-8d NAILS	365 LBS	SIMPSON
H10	8-8d NAILS	8-8d NAILS	850 LBS	SIMPSON
MTS12	7-10d NAILS	7-10d NAILS	1,000 LBS	SIMPSON
H16	2-10d NAILS	10-10d NAILS	1,300 LBS	SIMPSON
(2)HTS20	10-10d NAILS	10-10d NAILS	2 x 1,450 = 2,900 LBS	SIMPSON

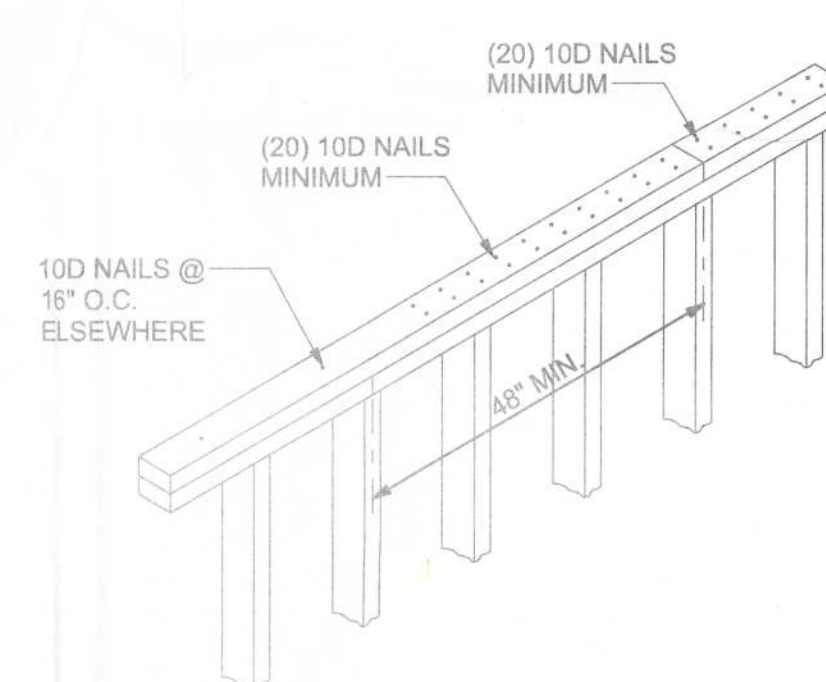


NOTE: ALL WOOD TO BE NUMBER 2 GRADE SOUTHERN YELLOW PINE

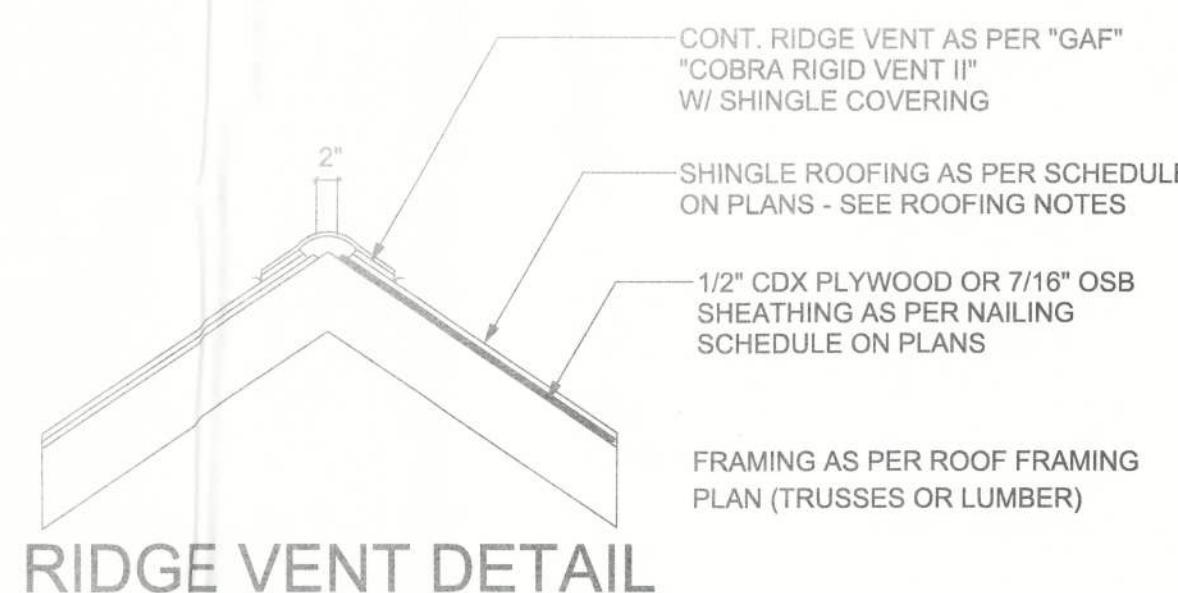
TYPICAL PERMANENT TRUSS BRACING DIAGRAM
NTS



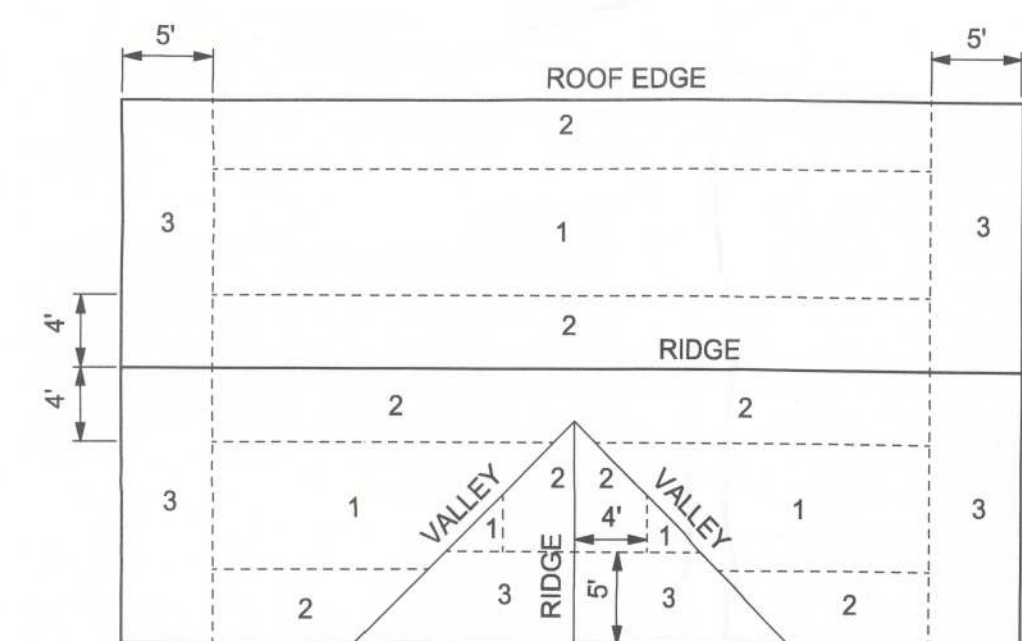
DOWEL DETAIL
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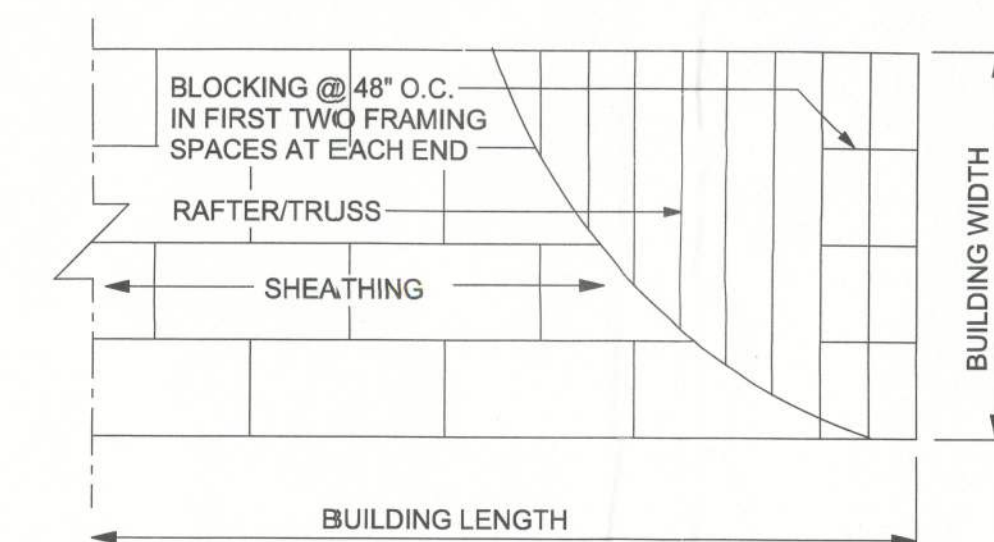
TOP PLATE SPLICE DETAILS
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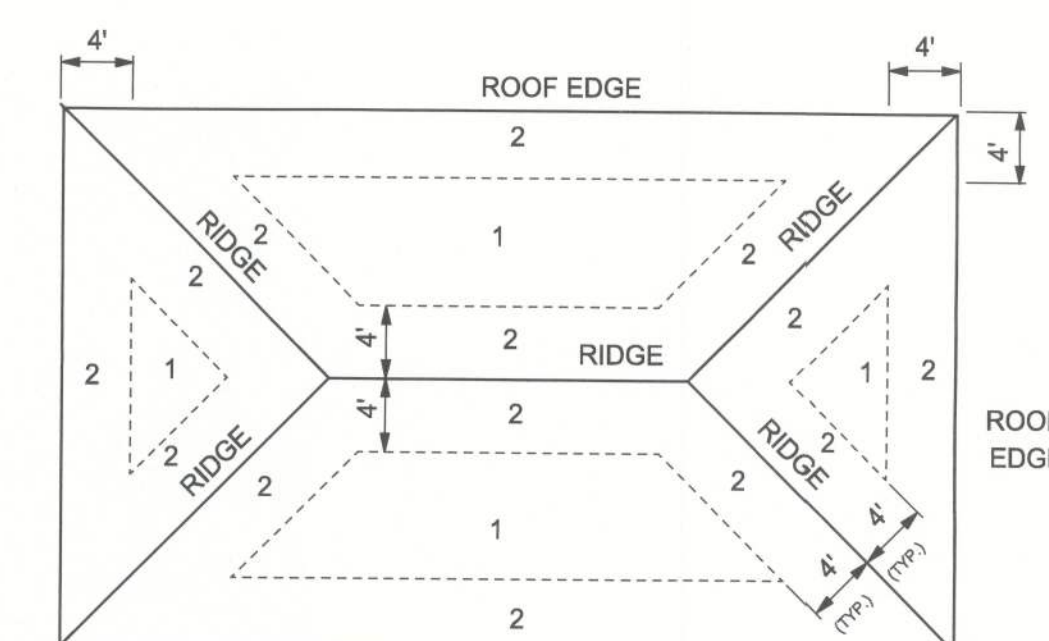
RIDGE VENT DETAIL



ROOF SHEATHING
NAILING ZONES (GABLE)



ROOF SHEATHING LAYOUT
AND ENDWALL ROOF BRACING



ROOF SHEATHING
NAILING ZONES (HIP)

ROOF SHEATHING FASTENERS			
NAILING ZONE	SHEATHING TYPE	FASTENER	SPACING
1			6" O.C. EDGE 12" O.C. FIELD
2	7/16" OSB & 15/32" CDX	8D GALV. RING SHANK NAILS	6" O.C. EDGE 6" O.C. FIELD
3			4" O.C. @ GABLES 6" O.C. EDGE 6" O.C. FIELD

ROOF SHEATHING
FASTENING

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CES
Crews Engineering Services, LLC

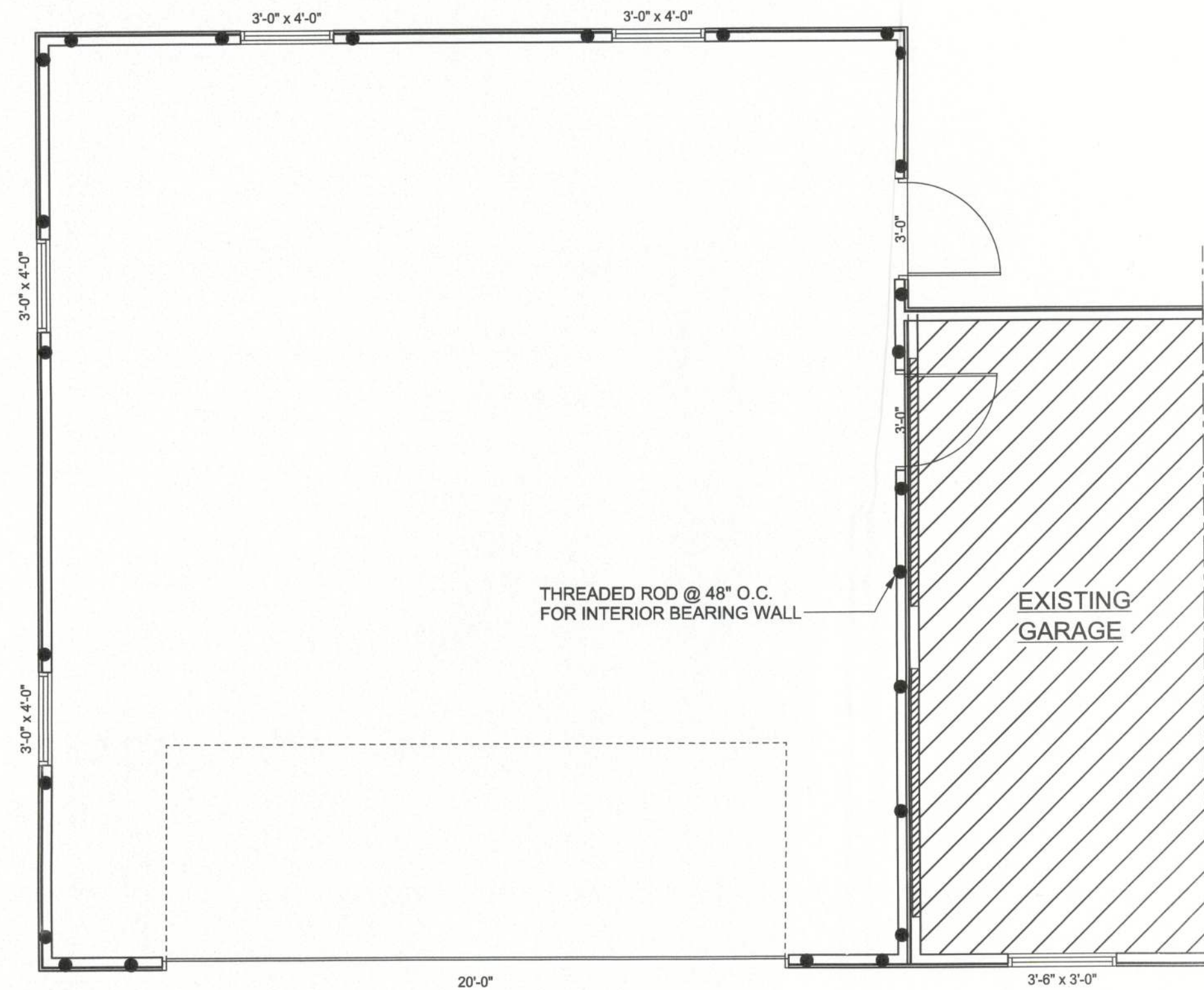
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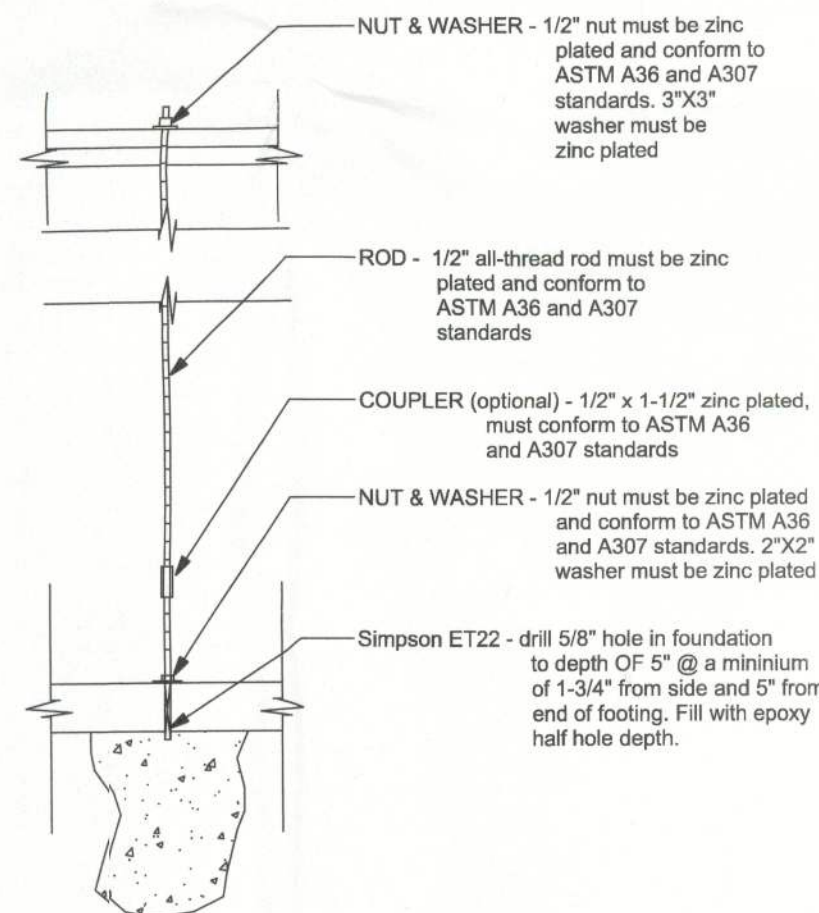
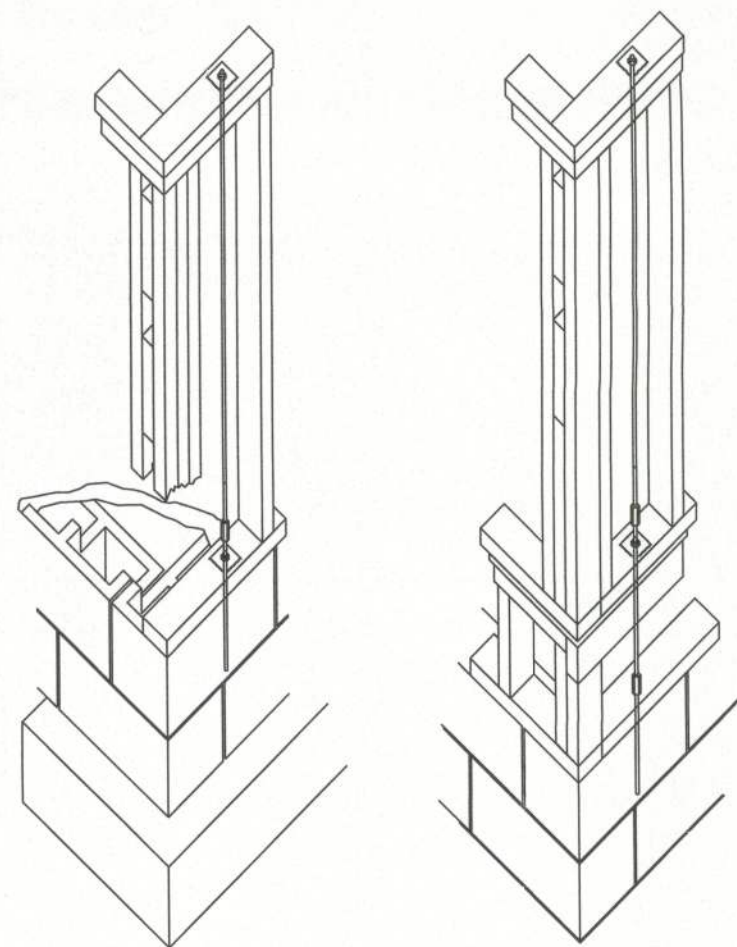
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GLENN GARAGE ADDITION
FOUNDATION AND STRUCTURAL
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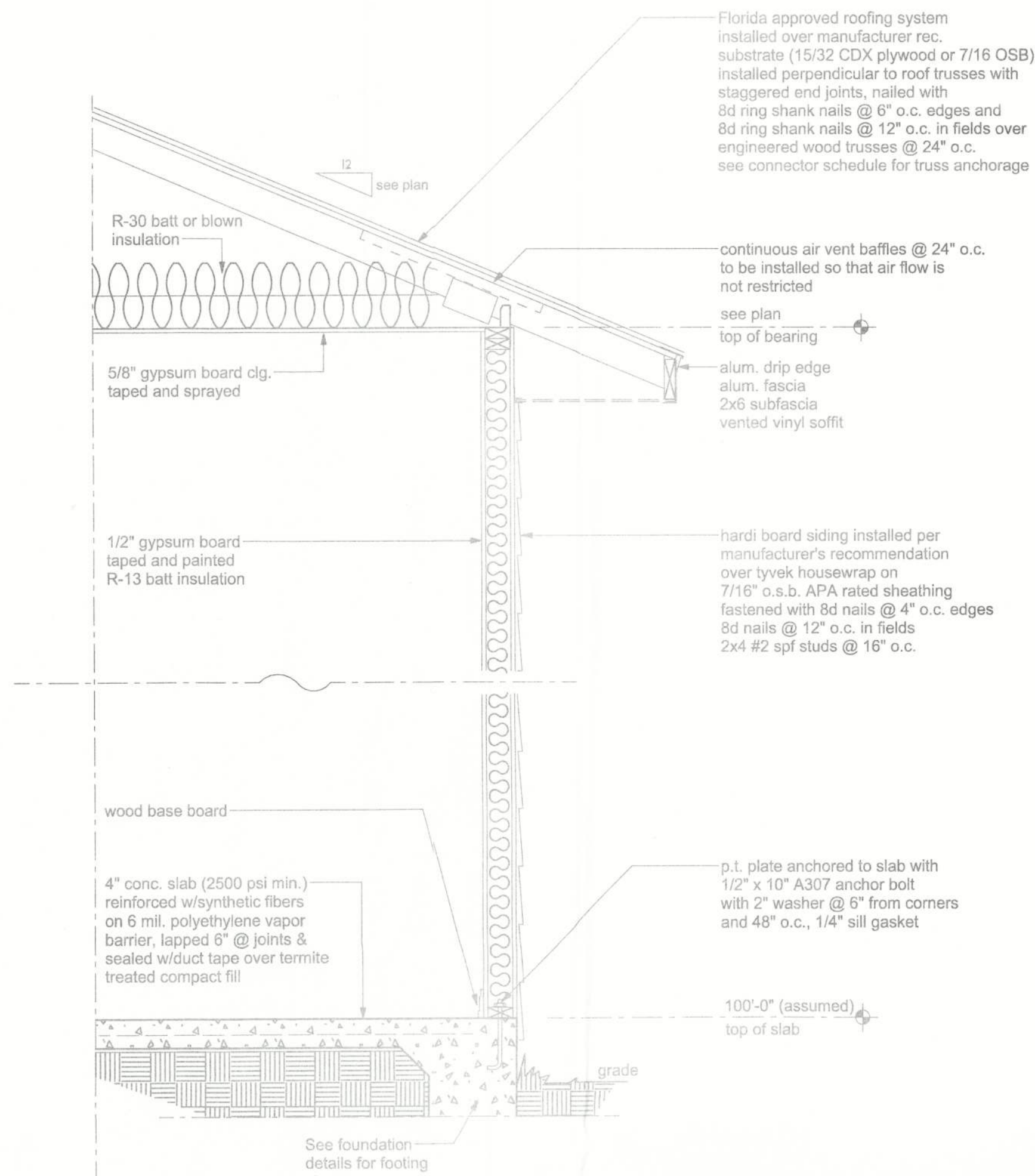
CES PROJECT NO.:
2013-069
SHEET:
A-3



ALL THREAD LAYOUT
● THREAD ROD LOCATION



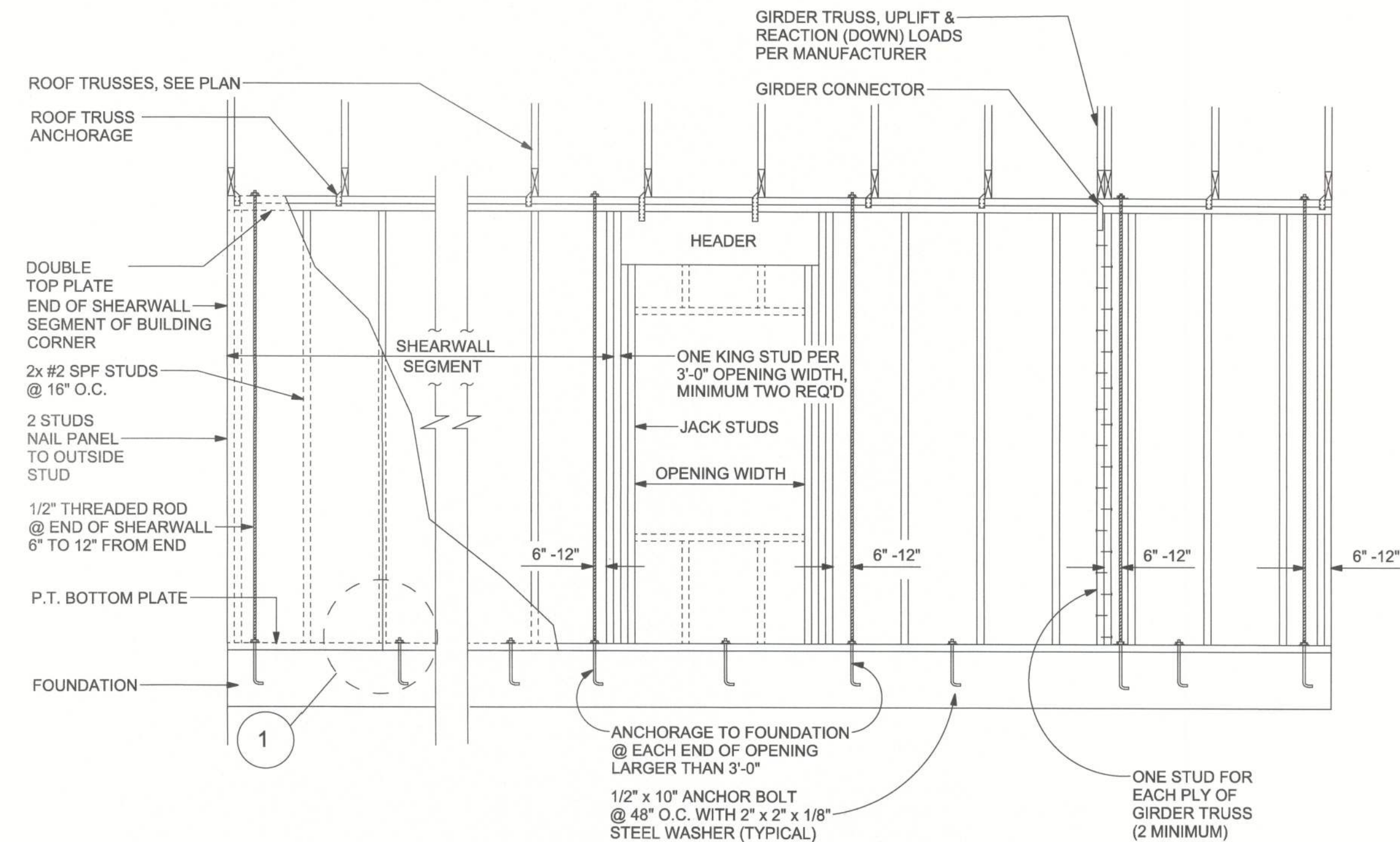
OPENING CONNECTION REQUIREMENTS				
CLEAR OPENING WIDTH	HEADER SIZE #2 GRADE OR BETTER	END BEARING	CONNECTOR AT EACH END OF OPENING	ANCHORAGE TO FOUNDATION @ EACH END OF OPENING
0' - 3'	(2) 2x8	1.5"	N/A	N/A
>3' - 6'	(2) 2x10	3"	1/2" ALL. THREAD ROD	1/2" ALL. THREAD ROD
>6' - 9'	(2) 2x12	3"	1/2" ALL. THREAD ROD	1/2" ALL. THREAD ROD
>9' - 12'	(2) 1 3/4" x 11 1/4" LVL - 2.0E	3"	1/2" ALL. THREAD ROD	1/2" ALL. THREAD ROD
>12' - 15'	(2) 1 3/4" x 11 1/4" LVL - 2.0E	3"	1/2" ALL. THREAD ROD	1/2" ALL. THREAD ROD
>15' - 18'	(2) 1 3/4" x 11 1/4" LVL - 2.0E	4.5"	1/2" ALL. THREAD ROD	1/2" ALL. THREAD ROD



TYPICAL WALL SECTION
NTS

ALLOWABLE DEFLECTION OF STRUCTURAL MEMBERS

STRUCTURAL MEMBER	ALLOWABLE DEFLECTION
rafters having slopes greater than 2/12 with no finished ceiling attached to rafters	L/180
interior walls and partitions	H/180
floors and plastered ceilings	L/360
all other structural members	L/240
exterior walls with plaster or stucco finish	H/360
exterior walls - wind loads with brittle finishes	L/240
exterior walls - wind loads with flexible finishes	L/120



SHEARWALL DETAILS
NTS

NOTE:
VERIFY GIRDER TRUSS LOCATION
ON TRUSS LAYOUT FOR REQ'D
ALL THREAD AT GIRDER LOCATION

RULES:

- One all-thread rod at each corner.
- One all-thread rod at each end of shearwalls.
- One all-thread rod at each end of opening headers greater than 3'-0"
- Check sub-sheathing to top plate connection for horizontal transfer capability.
- If necessary, add all-thread rods to girders individually to exclude the from average uplift plf.
- Check sole plate to slab connection, additional anchors may be required for lateral and shear load transfer.

ALLOWABLE VALUES	
Connection Type	Allowable Value
Foundation / S.Y.P. Top Plate	3840 lbs.
Foundation / Spruce-Pine-Fir Top Plate	3840 lbs.
Lintel or Bond Beam / S.Y.P. Top Plate	3840 lbs.
Lintel or Bond Beam / Spruce-Pine-Fir Top Plate	3840 lbs.

Placement at slab level:

Corners

When presetting the all-thread rod at a building corner, the rod should be placed 8 to 12 inches away from the corner so it does not set under the corner framing members. When a all-thread rod is specified at a building corner, it may be placed on either side of the corner.

Header ends

When presetting the all-thread rod at a header end, the rod should be placed 8 to 12 inches away from the header end so it does not fall under the stud pack framing members.

Top Connections

Top connections made at corners and header ends shall be made within 2 inches of the framing pack. A nut and 3X3 washer shall be applied to the top plates and tightened securely.

Intermediate Coupler Connections

When using the rod coupler, care should be taken to ensure full and equal thread engagement. This is easily achieved by threading the coupler all the way onto the rod, then standing the two rods end to end, then threading the coupler back over the rod joint so each rod is halfway into the coupler.

Retro-fits

In the case of an all thread rod misplacement, the rod may be epoxied into the concrete.

Sole plate to slab connection:

The slab level sole plate shall be connected to the slab with the connectors specified and at the spacing specified within the design documents. All-thread rods shall be placed as per the design specifications. All-thread rods with a nut and washer at the sole plate will qualify as a sole plate connection but may require other anchors intermediate of the all-thread rod locations to qualify the specified spacing requirements.

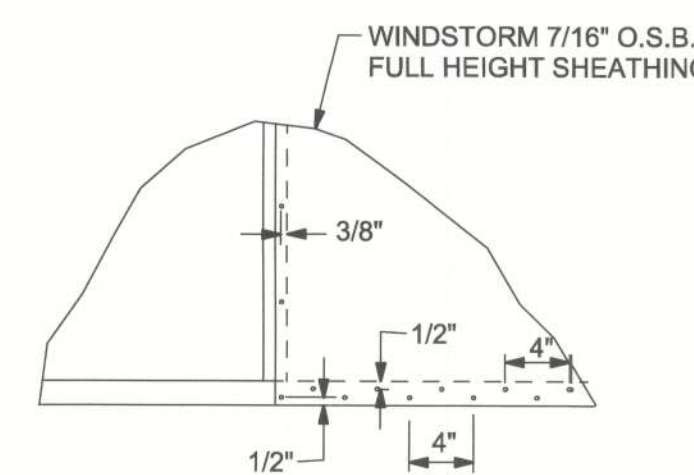
System Tightening:

On multiple story applications, the all-thread rod system shall be rechecked for proper tension just before the walls are veneered. This will allow the all-thread rod system to compensate for the buildings dead load compression.

SHEARWALL NOTES:

- ALL SHEARWALLS SHALL BE TYPE 2 SHEARWALLS AS DEFINED BY STD 10-99 305.4.3.
- THE WALL SHALL BE ENTIRELY SHEATHED WITH 7/16" O.S.B. INCLUDING AREAS ABOVE AND BELOW OPENINGS.
- ALL SHEATHING SHALL BE ATTACHED TO FRAMING ALONG ALL FOUR EDGES WITH JOINTS FOR ADJACENT PANELS OCCURRING OVER COMMON FRAMING MEMBERS OR ALONG BLOCKING.
- NAIL SPACING SHALL BE 6" O.C. EDGES AND 12" O.C. IN THE FIELD.
- TYPE 2 SHEARWALLS ARE DESIGNED FOR THE OPENING IT CONTAINS. MAXIMUM HEIGHT OF OPENING SHALL BE 5/6 TIMES THE WALL HEIGHT. THE MINIMUM DISTANCE BETWEEN OPENINGS SHALL BE THE WALL HEIGHT/3.5 ie. FOR 8'-0" WALLS - (2'-3").

OPENING WIDTH	SILL PLATES	16d TOE NAILS EACH END
UP TO 6'-0"	(1) 2x4 OR (1) 2x6	1
> 6' TO 9'-0"	(3) 2x4 OR (1) 2x6	2
> 9' TO 12'-0"	(5) 2x4 OR (2) 2x6	3



1 DOUBLE NAIL EDGE SPACING
TOP AND BOTTOM PLATE
UPLIFT CAPACITY = 474 plf

NOTE:
ALL WALL SHEATHING SHALL BE WINDSTORM
1 1/8" FULL HEIGHT SHEATHING-
SEE DETAIL 1 FOR NAILING

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



CERTIFICATE OF AUTHORIZATION
NO. 28022

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2-11-2014
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TM

APPROVED BY:

BC

GLENN GARAGE ADDITION

FRAMING AND SHEARWALL

CES PROJECT NO.:

2013-069

SHEET:

A-4