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LEE

PROFESSIONAL SEAL

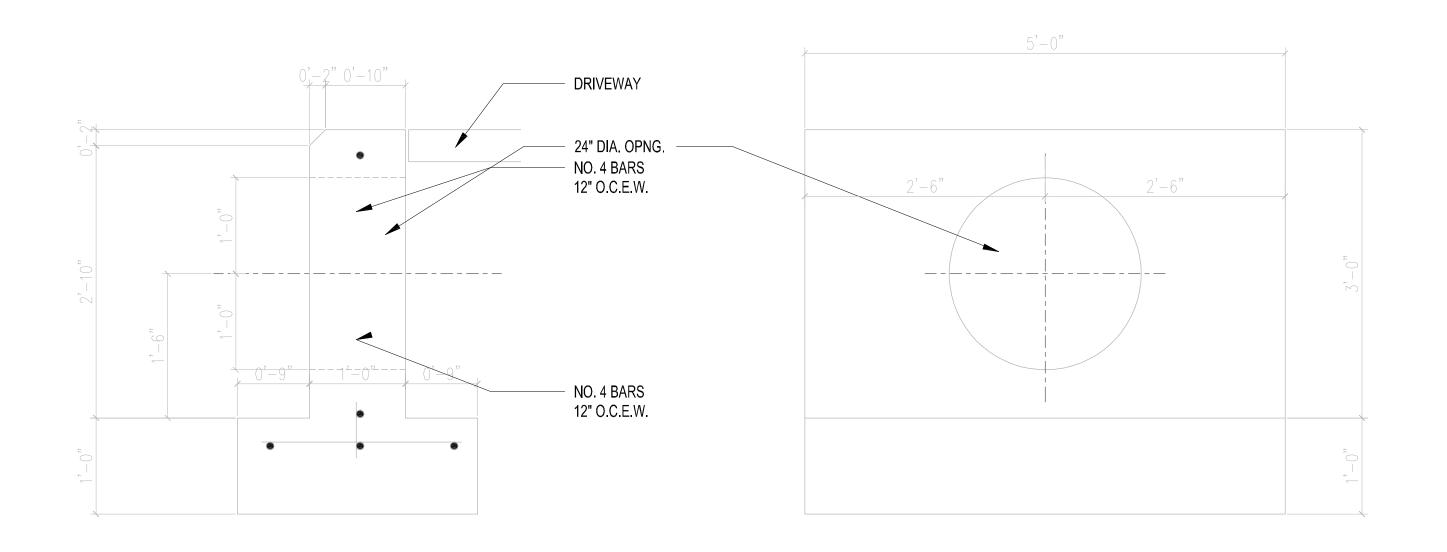
MARK	DATE	DESCRIPTION
1	7 MAY 21	ISSUED FOR PERMIT

PROJECT NO:	122150
CAD DWG FILE:	8606 LEE_OTIS.DWG
DRAWN BY:	SEM
CHK'D BY:	JVM

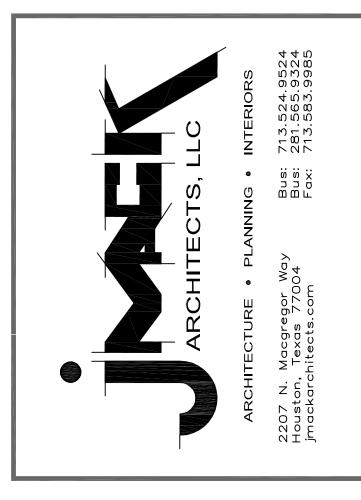
AS NOTED

SHE PLAN, GENERAL NOTES & CODE ANALYSIS

SHEET 1 OF 10 TOTAL SHEETS

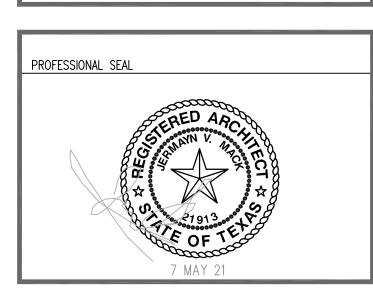


HEADWALL DETAIL
NTS



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E FAMILY RESIDENCE
E OTIS STREET
A TEXAS 77051

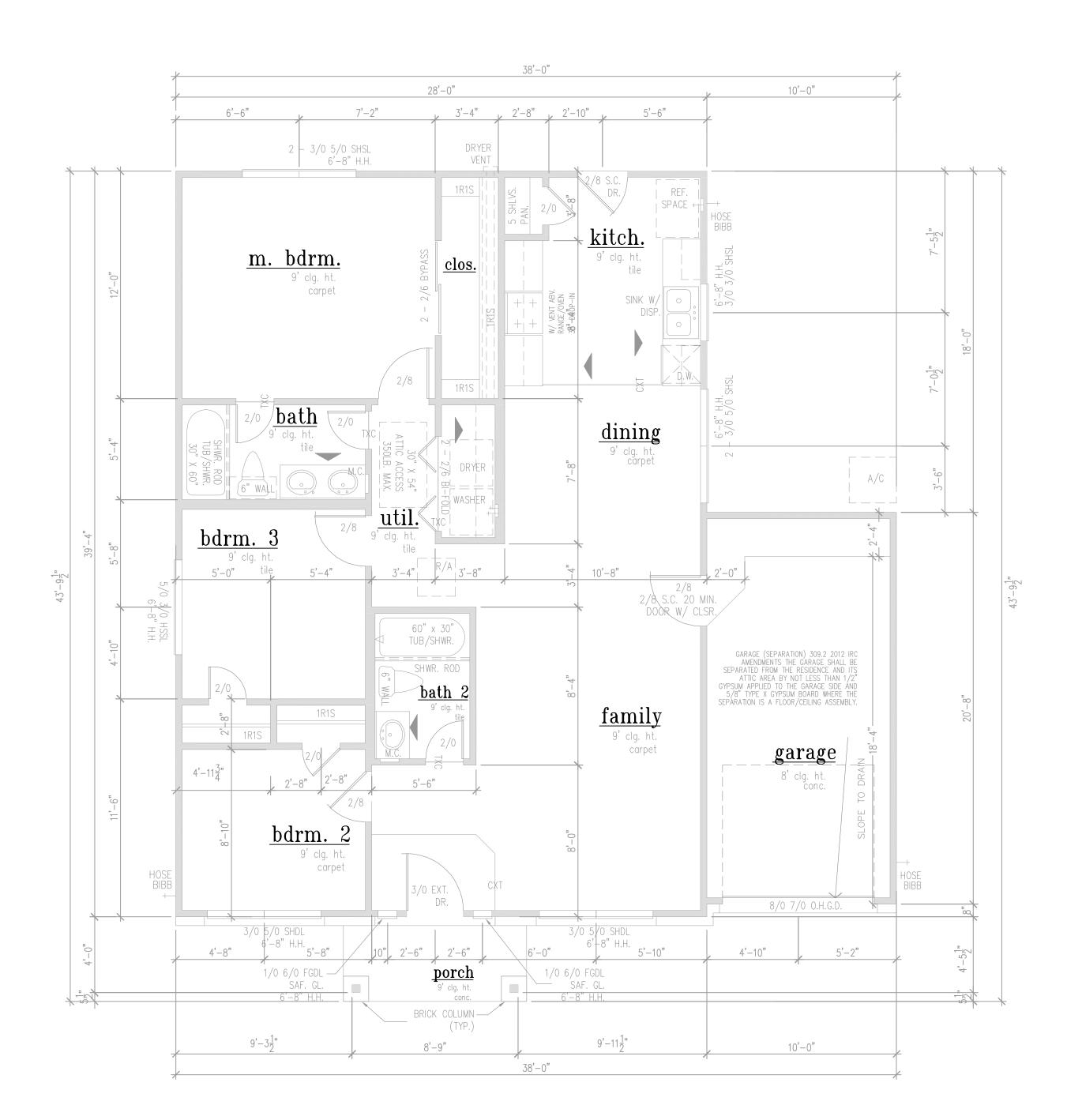


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CAD DWG FILE:	8606 LEE_OTIS.DWG
DRAWN BY:	SEM
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	SCALE	
	AS NOTED	
	SHEET TITLE	
	TRAFFIC STANDARD	DRAWINGS

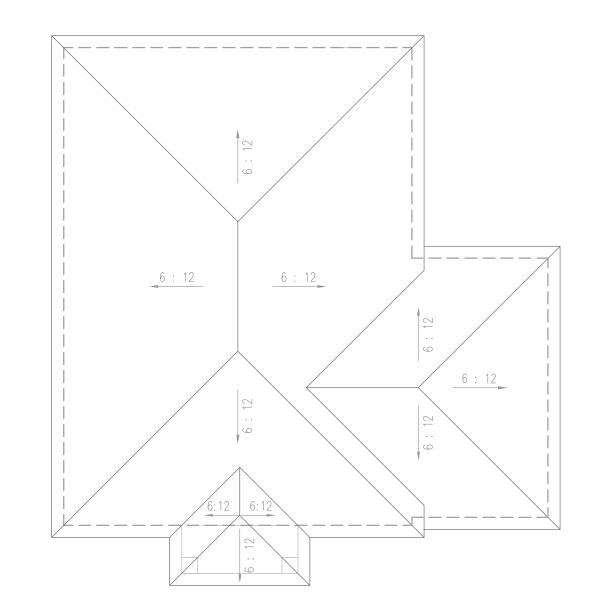
		A1	. 01			
SHEET	2	OF	10	TOTAL	SHEETS	



AREAS	
FIRST FLOOR:	1114 SQ. FT.
TOTAL LIVING:	1114 SQ. FT.
FRONT PORCH:	39 SQ. FT.
REAR PORCH:	NA
GARAGE:	211 SQ. FT.
TOTAL COVERED:	1364 SQ FT

- FLOOR PLAN NOTES
- 1. SPRINGLINES OF ALL ARCHES TO BE 7'-0" A.F.F. U.N.O.
- 2. 9' CEILING HTS. UNLESS NOTED OTHERWISE.
- 3. SEE PLAN FOR HEADER HTS. @ WINDOWS AND DOORS.
- 4. 2 X 4 STUDS @ 16" O.C. FOR AS SPECIFIED. U.N.O.
- 5. TYP. INT. WALLS TO BE 2 X 4'S U.N.O. W/ 1/2" GYP. BOARD TYP. TYPE "X" AT WET AREAS.
- 6. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NON-ABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6FT ABOVE THE FLOOR.
- 7. PROVIDE ATTIC ACCESS WITH A MIN. CLEAR OPENING OF 30" X 54" PROVIDE MIN. HEAD CLEARANCE OF 30" WHERE SERVICING MECH. EQUIP. THE MIN. SIZE OF PULL DOWN STAIR IS 30" X 54" AND TO HAVE A MIN. LOAD CAPACITY OF 350 LBS. LARGE ENOUGH TO ALLOW REMOVAL OF LARGEST APPLIANCE SEE IRC 2012 SEC R807
- AND SEC. M1305.1.3. ATTIC ACCESS APPLIANCES (CATWALK) M1305.1.3 2012 AMENDMENTS PROVIDE AN UNOBSTRUCTED PASSAGEWAY NOT MORE THAN 20 FEET IN LENGTH WHEN MEASURED ALONG THE CENTERLINE OF THE PASSAGE WAY FROM THE OPENING TO THE APPLIANCE WITH A MIN. HEADROOM HEIGHT OF 30 INCHES AND A MIN. WIDTH
- OF 30 INCHES. ATTIC ACCESS APPLIANCES (CLEARANCE) M1305.1.3 2012 AMENDMENTS A LEVEL SURFACE SPACE AT LEAST 30 INCHES DEEP AND 30 INCHES WIDE SHALL BE PRESENT ALONG ALL SIDES OF THE APPLIANCE WHERE ACCESS IS REQUIRED.
- 8. PROVIDE 24" WIDE PLYWOOD WALKWAY TO ACCESS ALL MECH. EQUIP.
 LOCATED IN ATTIC. MAX. DIST. FROM ATTIC ACCESS TO EQUIP. SHALL NOT
 EXCEED 20'-0." PROVIDE A 30" WIDE SERVICE PLATFORM AT SERVICE SIDE OF ALL EQUIP. IN ATTIC.
- 9. PROVIDE (1) GAL. WATER HEATER (GAS FIRED) IN ATTIC TO SET IN METAL PAN AND DRAIN TO OUTSIDE OR STORM SEWER LINE. INSTALLATION TO CONFORM W/ IRC 2012.
- 10. MIN EGRESS ROUTE @ WINDOWS TO BE 20" W X 24" H W/ SILL HT. LESS THAN 44" A.F.F. PER R310.1 AND 5.7 S.F.NET OPENING. 11. ALL GAS VALVES= 1/4 TURN BEFORE THE APPLIANCE.
- 12. ALL SIDE LITES, AND SHOWER DOORS SHALL HAVE TEMPERED GLASS
- 13. ALL INSULATION SHALL HAVE A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY RATING NOT TO EXCEED 450.
- ALL SMOKE DETECTORS SHALL BE HARD-WIRED, INTERCONNECTED AND WITH BATTERY BACK-UP.
- 15. OFFSET ALL DOOR JAMBS 4" FROM THE WALL UNLESS NOTED OTHERWISE. 16. FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS WITHIN WHICH FUEL-FIRE APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT

HAVE ATTACHED GARAGE.



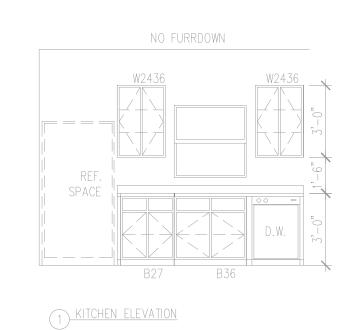
ATTIC VENTILATION

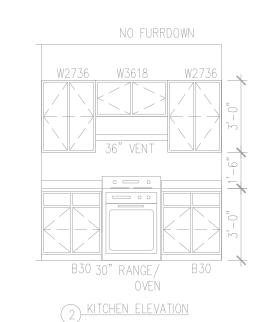
TOTAL ATTIC SPACE SQ. FT. = 1364 SQ. FT. 1364 SQ. FT./ 150 SQ. FT. = <u>9 SQ. FT.</u> OF TOTAL NET FREE VENTILAT**IN**G AREA 9 SQ. FT. X 144 = 1296 SQ. IN.

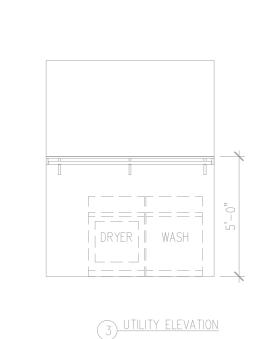
1296 SQ. IN. X 0.60 = 778 SQ. IN. (SOFFIT & EAVES VENTILATION) 1296 SQ. IN. X 0.40 = 518 SQ. IN. (EXHAUST VENTS)

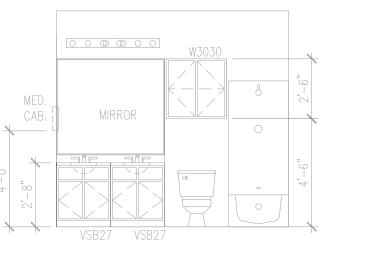
ROOF PLAN

1/8" = 1'-0"

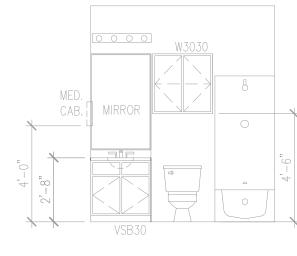








MASTER BATH ELEVATION



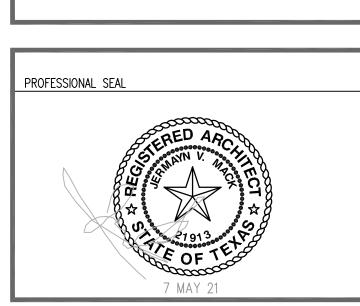
5 BATH 2 ELEVATION



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SIDENCE

SNS



DATE	DESCRIPTION	
7 MAY 21	ISSUED FOR PERMIT	

PROJECT NO:	122105
CAD DWG FILE:	8606 LEE OTIS.DWG
DRAWN BY:	SEM
CHK'D BY:	JVM

L	SCALE
	1/4" = 1'-0"
Г	SHEET TITLE
	FLOOR PLAN, INTERIOR
	ELEVATIONS & CROSS
	SECTION

SHEET 3 OF 10 TOTAL SHEETS

A1	FLOOR PLAN A2 INTERIOR ELEVATIONS	
1/4" = 1'-0"	1/4" = 1'-0"	





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SINGLE FAMILY RESIDENCE
8606 LEE OTIS STREET
HOUSTON, TEXAS 77051

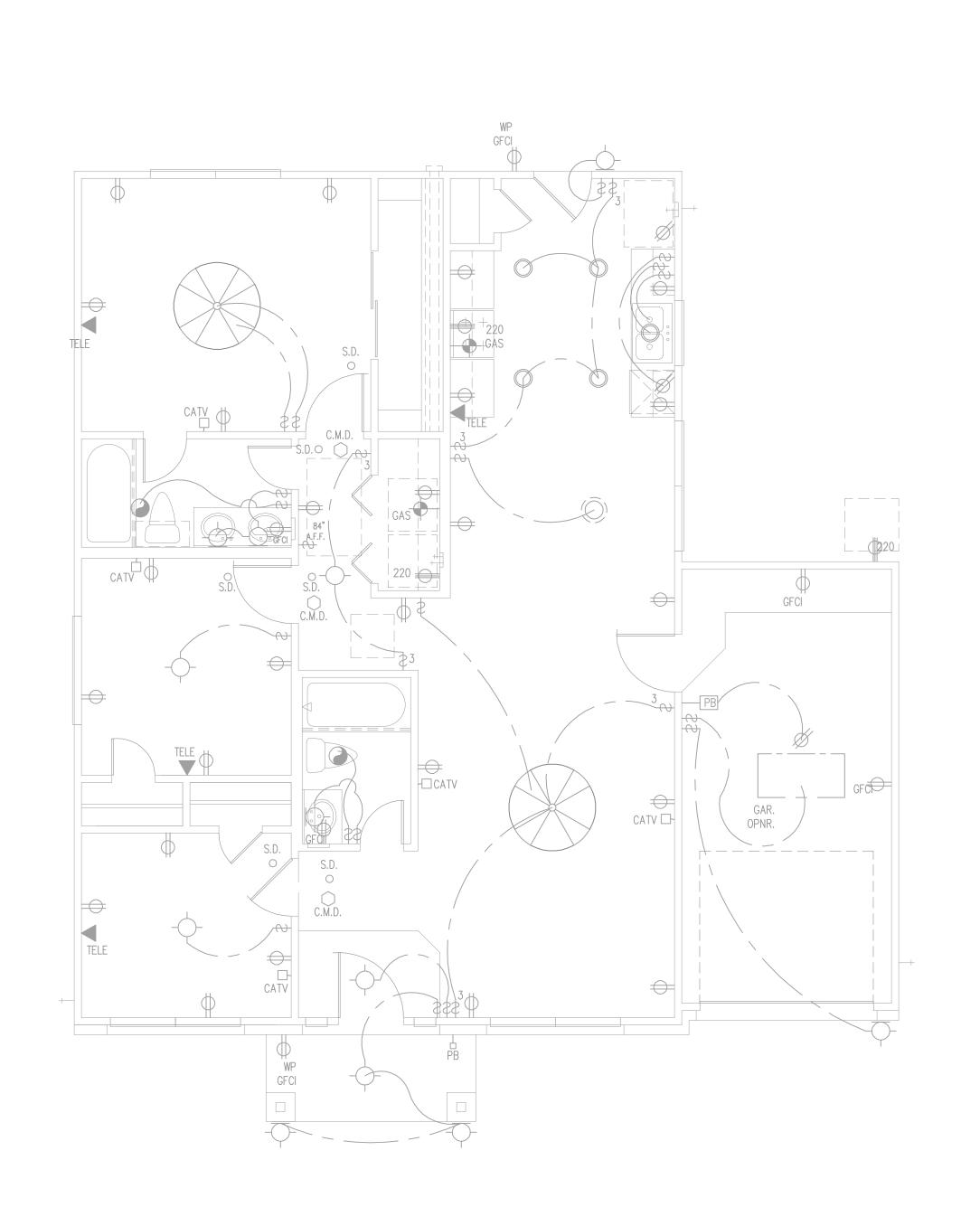


MARK	DATE	DESCRIPTION
1	7 MAY 21	ISSUED FOR PERMIT

PROJECT NO:	122150
CAD DWG FILE:	8606 LEE_OTIS.DWG
DRAWN BY:	SEM
CHK'D BY:	JVM

SCALE	0.11
1/4" = 1'-	-0"
EXTERIOR	ELEVATIONS

		A1.	03	
SHEET	4	OF	10	TOTAL SHEETS



LEGEND

FLOOR PLUG, BELOW COUNTER, OR GARAGE DOOR OPENER

110 VOLT DUPLEX OUTLET 220 VOLT OUTLET OR CONNECTION

110 VOLT OUTDOOR WATER PROOF WP DUPLEX ON GROUND FAULT INTERCEPTOR

110 VOLT INDOOR DUPLEX ON

GFCI GROUND FAULT INTERCEPTOR CABLE OR ANTENNA CONNECTION

TELEPHONE CONNECTION — — FLUORESCENT STRIP OR ABOVE AND

BELOW CABINET LIGHTING

2 X 4 FLUORESCENT FIXTURE

| 4 X 4 FLUORESCENT BOX

FLOOD LAMP (OR HALOGEN)

-()- CEILING MOUNTED FIXTURE (STANDARD)

— WALL MOUNTED FIXTURE / COACH LAMP HANGING FIXTURE

RECESSED CAN

RECESSED DIRECTIONAL

PIN LIGHTS (RECESSED)

EXHAUST FAN (6 AIR EX./HR.)

S.D. SMOKE DETECTOR HARDWIRED INTERCONNECTED O W/ BATTERY BACKUP

CEILING FAN (W/ OR WITHOUT LIGHT KIT)

(EXT LAMP)

ELECTRICAL NOTES

- 1. ALL FLOOR OUTLETS TO BE MOUNTED VERTICALLY 14" A.F.F.
- 2. ALL SLEEPING QUARTERS TO BE ARC-FAULT PROTECTED.
- 3. PROVIDE G.F.C.I. PROTECTION AS REQUIRED.
- 4. SMOKE DETECTORS REQUIRE 110V CONNECTION TO HOUSE WIRING, BATTERY BACK-UP & INTERCONNECTED. ALL SMOKE DETECTORS SHALL BE HARD-WIRED, INTERCONNECTED AND WITH BATTERY BACK-UP.
- 5. VENT ALL EXHAUST FANS TO OUTSIDE.
- 6. PROVIDE LIGHT FIXTURE AND SMOKE DETECTOR AT EACH WATER HEATER AND A/C UNIT IN ATTIC.
- 7. PROVIDE ELEC. DISCONNECT AT EACH A/C UNIT.
- 8. PROVIDE LOW VOLTAGE CIRCUIT FOR ALARM SYSTEM.
- 9. PROVIDE LOW VOLTAGE CIRCUIT FOR INTERCOM / PHONE

10. ALLOW FOR 1 A/C UNITS.

- 11. PROPOSED ELECTRICAL SERVICE TO CONNECT TO EXISTING ELECTRICAL SERVICE OR CONNECT TO UNDERGROUND SERVICE AS REQUIRED.
- 12. FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS WITHIN WHICH FUEL-FIRE APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGE.



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AM



DESCRIPTION	
1 ISSUED FOR PERMIT	
2	

PROJECT NO:	122150
CAD DWG FILE:	8606 LEE_OTIS.DWG
DRAWN BY:	SEM
CHK'D BY:	JVM

SCALE	
	1/8" = 1'-0"
SHEET	TITLE
	ELECTRICAL PLAN & SYMBOL LEGEND

		A1.	04	
SHEET	5	OF	10	TOTAL SHEETS

A1

1/4" = 1'-0"

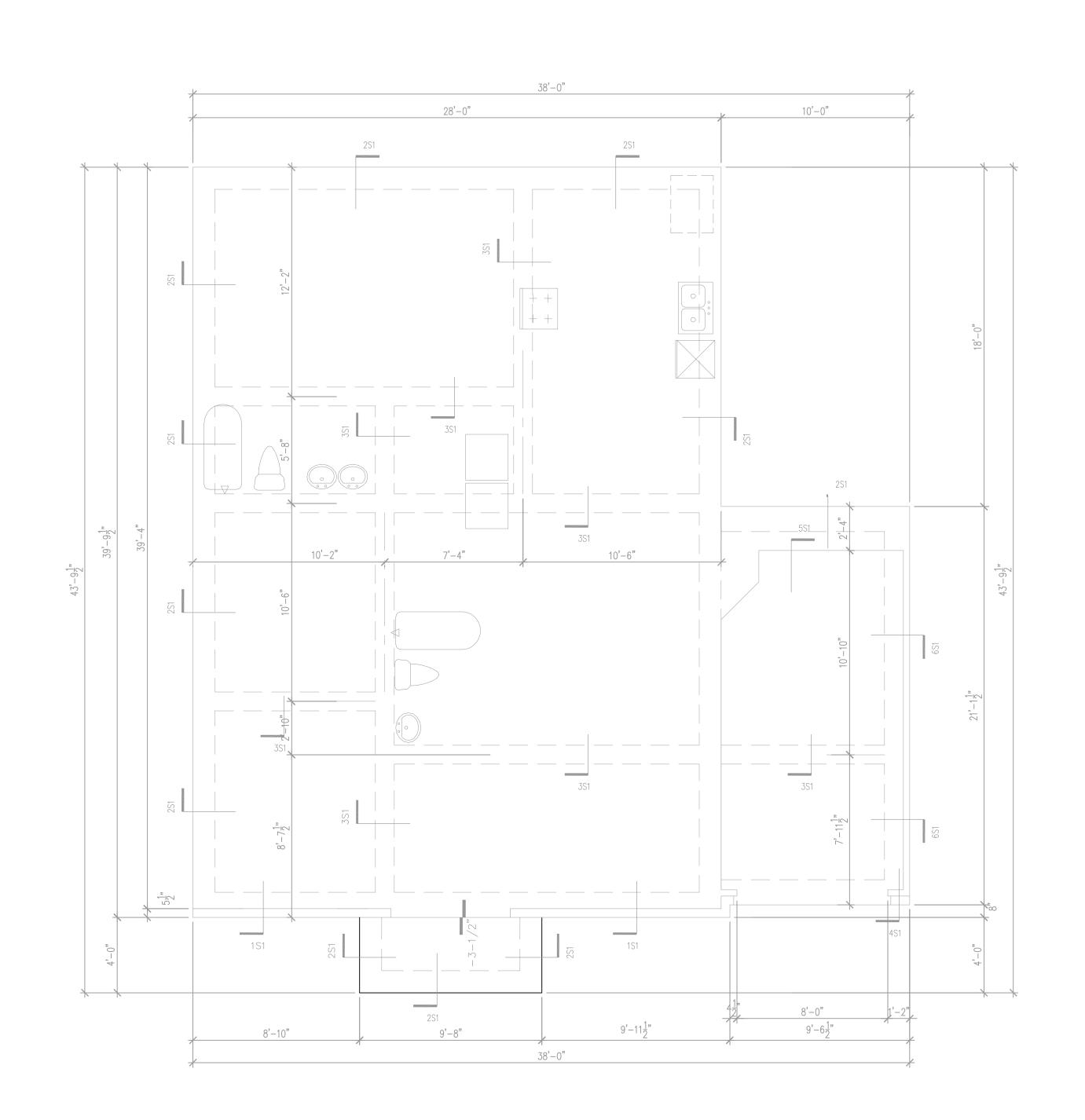


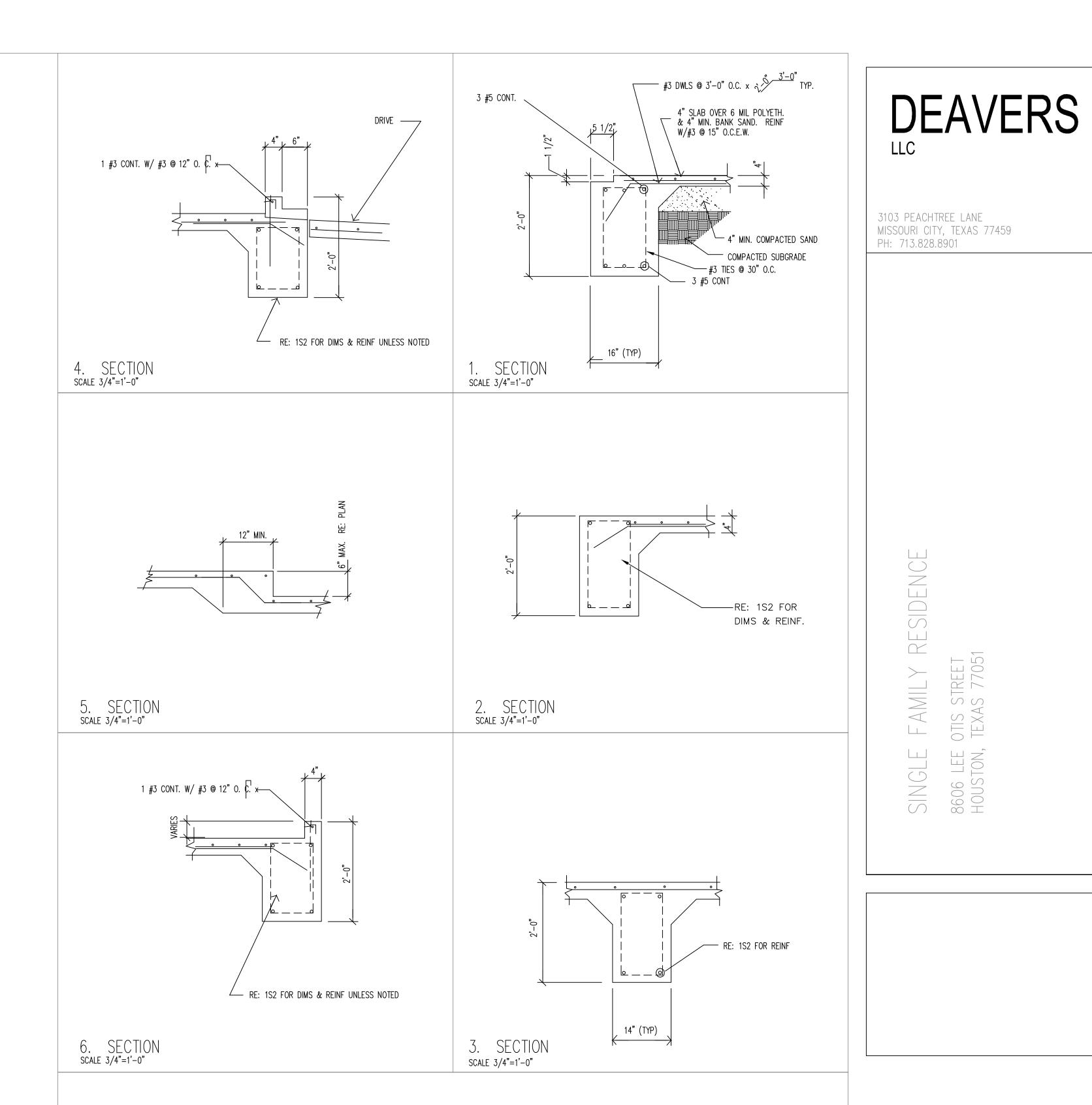
TABLE R401.4.1 PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATION MATERIALS

CLASS OF MATERIAL	LOAD BEARING PRESSURE (pound per square foot)
CRYSTALLINE BEDROCK	12,000
SEDIMENTARY AND FOLIATED ROCK	4,000
SANDY GRAVEL AND/ OR GRAVEL (GW AND GP)	3,000
SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL AND CLAYEY GRAVEL (SW, SP, SM, SC, GM and GC)	2,000
CLAY, SANDY CLAY, SILTY CLAY, CLAYEY SILT, SILT AND SANDY SILT (CL, ML, MH, and CH)	1,500 ^b

NOTE: SHADED AREA DENOTES BEARING PRESSURED USED FOR THIS PROJECT.

For SI: 1 pound per square foot = 0.0479 Kpa

- a. When soil tests are required by section R401.4, the allowable bearing capacities of the soil shall be part pf the recommendations.
- Where the building official determines that in-pace soils with an allowable bearing capacity of less than 1,500 psf are likely to be present at the site, the allowable bearing capacity shall be determined by a soil investigation.



GENERAL NOTES

- 1. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
- 2. STRIP SOIL AND VEGETATION WITHIN BUILDING AREA TO A MINIMUM DEPTH OF 6" OR TO UNDISTIRBED SOIL. REPLACE WITH STRUCTURAL FILL WITH A MINIMUM PLASTICITY INDEX OF BETWEEN 8 AND 20. COMPACT IN 8" LIFTS TO 95% OF DRY UNIT DENSITY WEIGHT AS DETERMINED BY ASTM D1557 METHOD C.
- 3. ALL STRUCTURAL FILL WITHIN BUILDING AREA SHALL HAVE A PLASTICITY INDEX OF LESS THAN 20.
- 4. COMPACT SUBGRADE AND STRUCTURAL FILL WITHIN BUILDING AREA TO 95% OF DRY UNIT WEIGHT AS DETERMINED BY ASTM D1557 METHOD C.
- 5. ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. FLY ASH NOT PERMITTED.
- 6. CONCRETE MIX SHALL BE DESIGNED FOR PROPER
- STRENGTH AND PLACED IN ACCORDANCE WITH ACI 318. 7. REIFORCING BARS SHALL CONFORM TO ASTM A615. ALL REINFORCING BARS SHALL BE GRADE 60.
- STIRRUPS AND TIES SHALL BE GRADE 40. 8. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- 9. REINFORCEMENT SHALL BE FABRICATED IN ACCORDANCE
- WITH ACI 318. 10. REINFORCING BARS SHALL NOT BE WELDED.
- 11. PROVIDE CORNER BARS AT TOP & BOTTOM OF MATCHING
- SIZE AND NUMBER AT ALL GRADE BEAM INTERSECTIONS. 12. SPLICE TOP BARS OF GRADE BEAM @ MID-SPAN & BOTTOM BARS @ SUPPORT.

FOUNDATION PLAN, DETAILS & NOTES

FAMILY RESIDENCE

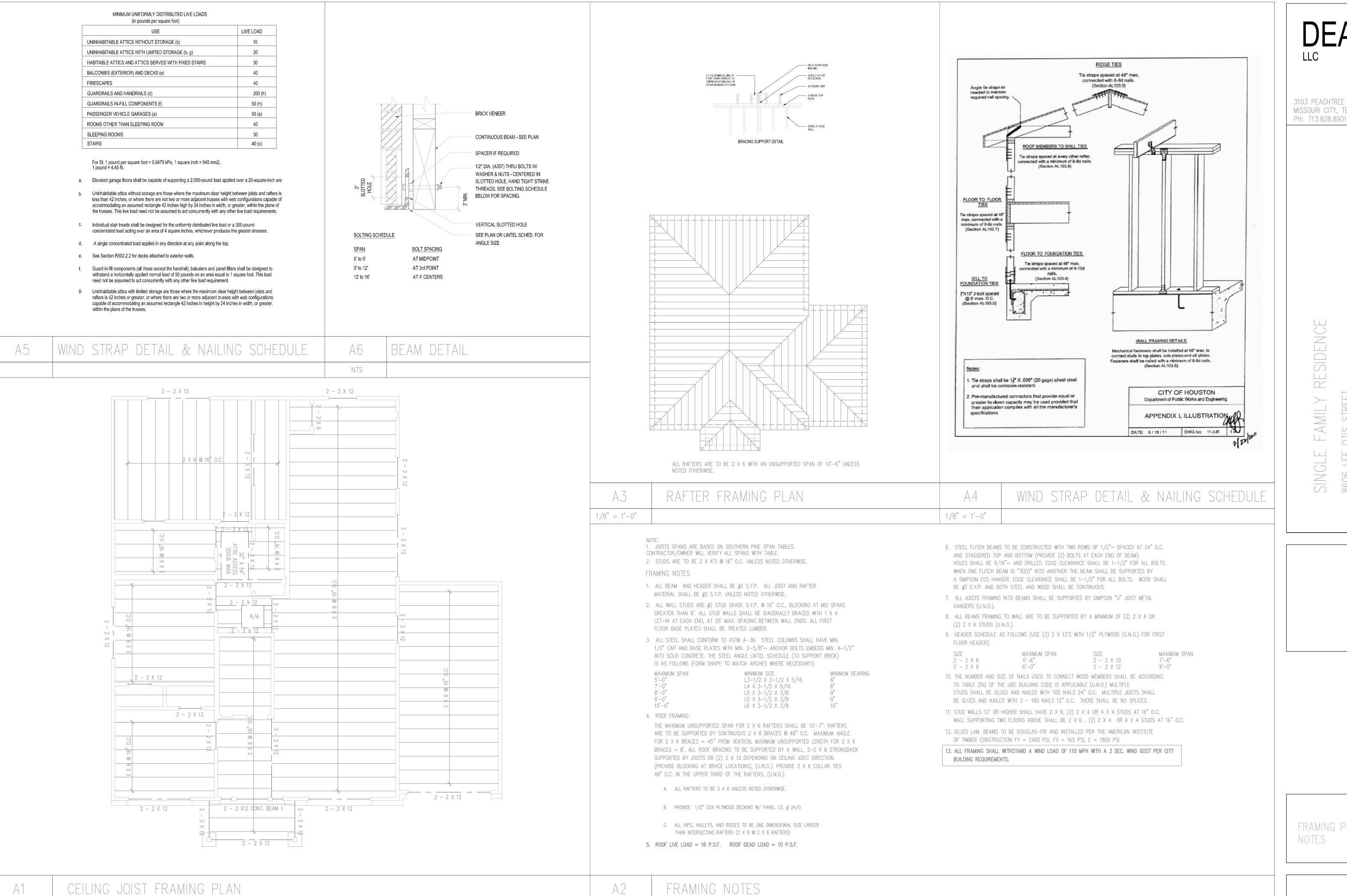
SINGLE FAMILY R 8606 LEE OTIS STREET HOUSTON, TEXAS 77051

FOUNDATION PLAN

A1

1/4" = 1'-0"

SECTION DETAILS



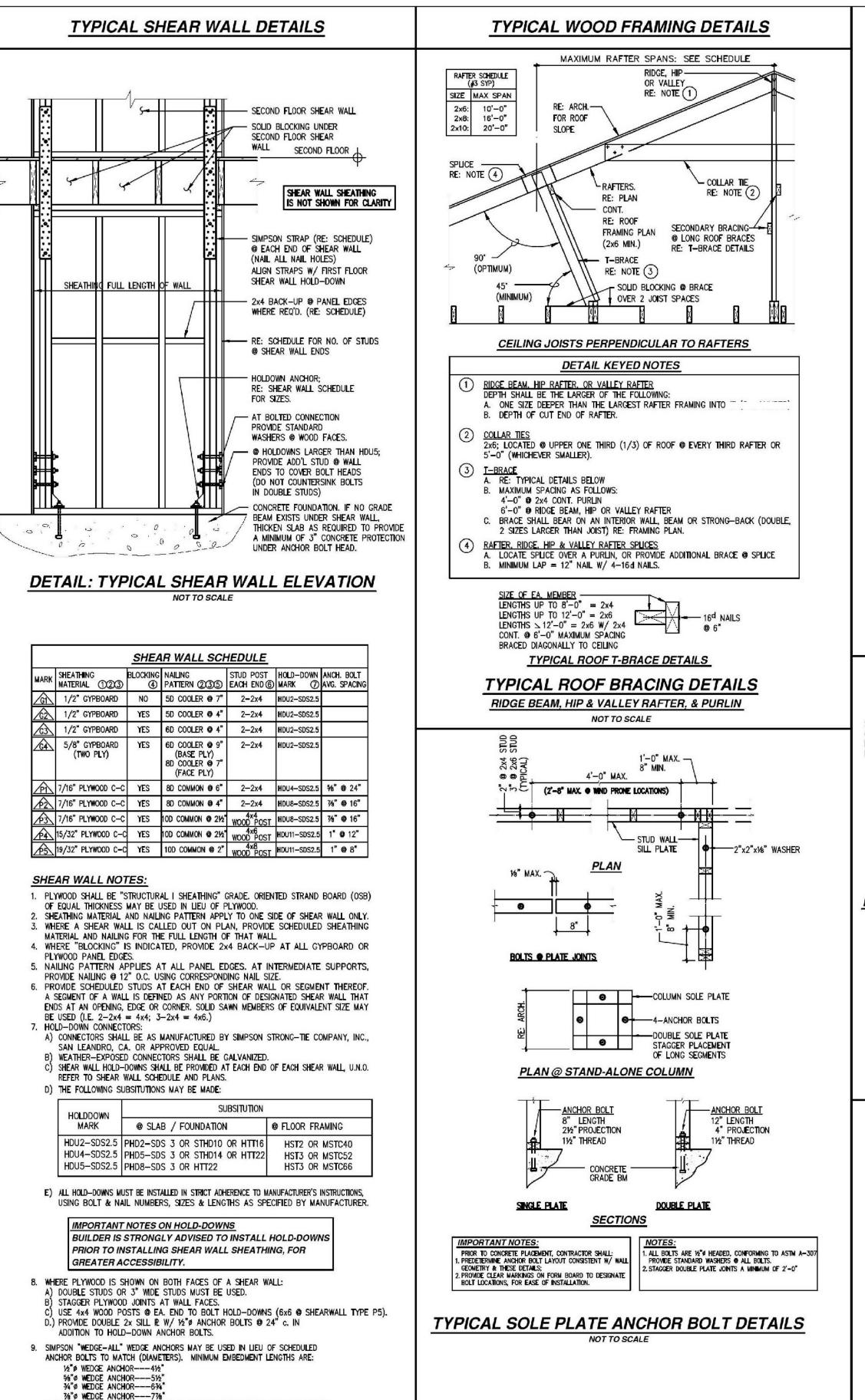
1/4" = 1'-0"

DEAVERS

3103 PEACHTREE LANE MISSOURI CITY, TEXAS 77459

FAMILY RESIDENCE

FRAMING PLANS & FRAMING NOTES



WEDGE ANCHORS MUST BE INSTALLED IN STRICT ADHERENCE TO MANUFACTURER'S

- A. ALL BOLTS SHALL CONFORM TO ASTM-A307, INSTALLED WITH STANDARD NUTS AND
- B. MAINTAIN A MINIMUM DISTANCE OF 1 1/2 TIMES BOLT DIAMETER TO EDGE OF CONNECTED STEEL MEMBER. C. BOLT HOLE DIAMETER SHALL NOT EXCEED BOLT DIAMETER BY MORE THAN 1/16".

D. PROVIDE 56" x 0'-10" LONG ANCHOR BOLTS @ 4'-0" O.C. AT ALL EXTERIOR WALL SILL PLATES, WITH 2" PROJECTION AND 1" THREAD. 2. ADHESIVE ANCHORS:

- SHALL BE HILTI-HIT RE500 SERIES,
- 3. POWDER-ACTUATED PINS SHALL BE: A. HILTI X-EDNI SERIES (0.145" KNURLED-SHANK W/ DOME HEAD).
- B. ITW RAMSET SP SERIES (.150" SMOOTH-SHANK) 4. WELDED HEADED STUDS:
- SHALL BE NELSON STUD WELDING, INC., TYPE H4L HEADED CONCRETE ANCHOR (HCA) W/ DIAMETER & LENGTH AS NOTED ON PLANS,

STUD WALLS

- 1. STUDS SHALL BE AS FOLLOWS: 2x4 OR 2x6 @ 16" AT ALL FLOORS IN ONE— OR TWO— STORY STRUCTURES. DBL 2x4 OR 2x6 @ 16" AT ALL STUD WALLS AT FIRST FLOOR AREAS DIRECTLY
- BELOW A THIRD FLOOR. 2. PROVIDE A MINIMUM OF TWO (2) STUDS AT EACH SIDE OF OPENINGS LARGER THAN 4'-0", FULL HEIGHT OF WALL (KING STUDS). MAXIMUM STUD WALL HEIGHT SHALL BE AS FOLLOWS:
- 2x4 STUDS @ 16" o.c. 10'-0" 2x6 STUDS @ 16" o.c. 13'-0" 2x8 STUDS @ 16" o.c. 16'-0"
- 4. BLOCKING & LATERAL BRACING: A. PROVIDE BLOCKING AND/OR TEMPORARY CROSS BRACING AS REQUIRED TO ENSURE STUD STRAIGHTNESS ACCORDING TO SPECIFIED TOLERANCES.
- B. MAXIMUM TOLERANCE FOR STUD STRAIGHTNESS IN EITHER DIRECTION IS 1/4 INCH PER TEN (10) FEET OF STUD HEIGHT.
- C. MINIMUM BLOCKING:
- 1 ROW FOR STUD HEIGHT UP TO 9'-0"; 2 ROWS FOR STUD HEIGHT UP TO 15'-0"; 3 ROWS FOR STUD HEIGHT OVER 15'-0".

HURRICANE CLIPS:

ROOF DECK:

PROVIDE HURRICANE CLIPS @ FIRST FIVE RAFTERS FROM EACH ROOF CORNER, THEN AT EVERY OTHER RAFTER (SIMPSON H2.5T).

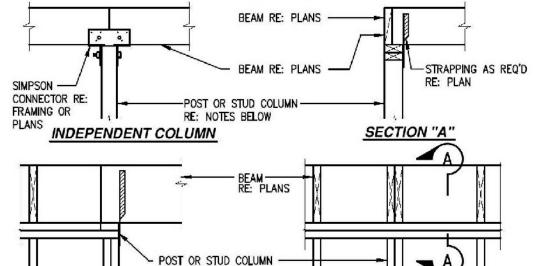
MISCELLANEOUS: all wood in contact with concrete or masonry shall be pressure—treated lumber. PLYWOOD FLOOR DECK:

- 1. PLYWOOD SHALL BE 1 1/8" THICKNESS AND SHALL BE RATED STURD-I-FLOOR (2-4-1) EXPOSURE 1.
- 2. LAY PANELS IN A STAGGARED PATTERN. . PANEL EDGES SHALL BE TONGUE-AND-GROVE. OTHERWISE, BLOCK ALL EDGES W/ 2-2x4 BLOCKING 4. GLUE & NAIL TO FRAMING MEMBERS AS FOLLOWS:
- A. GLUE SHALL CONFORM TO APA SPECIFICATION AF6-01, APPLIED IN A CONTINUOUS BEAD & IN ACCORDANCE WITH THE MANUFATURER'S RECOMMENDATIONS. B. ALL NAILS SHALL BE 8D RING OR SCREW SHANK. NAIL SPACING SHALL BE 4" O.C. @ PANEL EDGES & 12" O.C. @ INTERMEDIATE SUPPORTS.
- MINIMUM THICKNESS SHALL BE 1/2". MATERIAL SHALL BE CDX PLYWOOD. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD.

PSCL, TO MATCH CORRESPONDING PLYWOOD THICKNESS.

RE: NOTES BELOW

MINIMUM NAILING SHALL BE AS REQUIERD BY THE BUILDING CODE. PLYWOOD CLIPS SHALL BE INSTALLED @ ROOF DECKING TO RESULT IN A 1/8" GAP BETWEEN ALL PANEL EDGES. PROVIDE 1 CLIP PER SPAN (JOIST SPACING). CLIPS SHALL BE SIMPSON



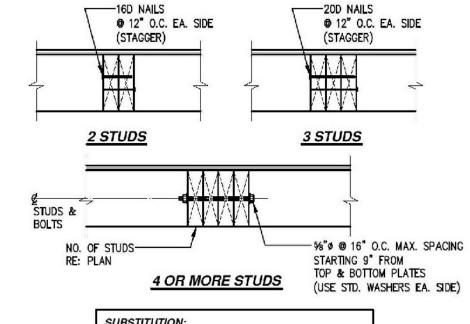
INTEGRAL COLUMN @ WALL END (BEAM PARALLEL W/ WALL)

INTEGRAL COLUMN @ WALL (REAM PERPENDICULAR TO WALL)

- 1. ALL BEAMS MADE UP OF MULTIPLE 2x MEMBERS SHALL BE SUPPORTED @ EA. END BY A POST EQUAL IN THICKNESS TO THE BEAM (MIN.) I.E. 2-2x12 BEAM SHALL REQUIRE 2-2x STUD POST (MIN.) SOLID SAWN LUMBER MAY BE SUBSTITUTED FOR BUILT-UP POSTS. 2. COLUMNS MADE UP OF MULTIPLE 2x MEMBERS SHALL BE GLUED & FASTENED TO ACT AS A UNIT AS
- DETAILED BELOW. 3. UNLESS NOTED OTHERWISE, PARALLEL STRAND LUMBER (PSL) AND LAMINATED LUMBER (LSL & LVL) BEAMS & HEADERS SHALL BE SUPPORTED AT EACH END AS FOLLOWS: 31/2" WIDE MEMBERS......
- 514" WIDE MEMBERS UP TO 14" DEPTH......4-2x STUDS OR 4x6 POST 514" WIDE MEMBERS OVER 14" DEPTH......5-2x STUDS OR 4x8 POST 7" WIDE MEMBERS......5—2x STUDS OR 4x8 POST MAX. COLUMN OR POST HEIGHT: 10'-0". RE: PLANS OR CONSULT ENGINEER FOR LARGER HEIGHTS.

TYPICAL WOOD COLUMN DETAILS

(FLUSH BEAM SHOWN, DROP BEAM SIMILAR)



SUBSTITUTION: IF STUDS ARE FASTENED AS SHOWN HEREIN, THE FOLLOWING SUBSTITUTIONS MAY BE MADE:

DETAIL: MULTIPLE-STUD COLUMNS NOT TO SCALE

3 STUDS IN LIEU OF 4x4 OR 4x6 POST 4 STUDS IN LIEU OF 6x6 POST

GENERAL NOTES: WOOD FRAMING SYSTEM (THESE NOTES SHALL CONTROL UNLESS OTHERWISE NOTED ON PLANS AND DETAILS.)

ROOF RAFTERS:---CEILING JOISTS: NO. 3 SOUTHERN YELLOW PINE (SYP), KD, S4S. FLOOR JOISTS: NO. 2 SOUTHERN YELLOW PINE (SYP), KD, S4S. BEAMS & HEADERS: NO. 2 SOUTHERN YELLOW PINE (SYP), KD, S4S. STUDS: _____STUD GRADE, SYP, KD. S4S. WOOD POSTS: NO. 2 SYP, SURFACE GREEN.

BEAMS AND HEADERS

AT BEAMS MADE UP OF A NUMBER OF 2x JOISTS, EACH JOIST WILL BEAR ON A WALL STUD (I.E. NUMBER OF WALL STUDS SHALL MATCH NUMBER OF JOISTS BEARING ON THESE STUDS). THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS. . ALL BEAMS MADE UP OF A NUMBER OF 2x JOISTS SHALL BE FASTENED AS FOLLOWS:

ALL DOOR AND WINDOW HEADERS (OR HEADERS AT ANY OTHER OPENING) THAT ARE NOT

2-2x
3-2x
4-2x (OR MORE)

16 d NAILS © 12" TOP & BOTTOM, STAGGER, EA. FACE
20 d NAILS © 12" TOP & BOTTOM, STAGGER, EA. FACE
56" Ø BOLTS © 12" TOP & BOTTOML;
BOLTS SHALL BE LOCATED 2" MINIMUM FROM BEAM EDGES AND
SHALL BE STAGGERED IN TOP AND BOTTOM ROWS; PROVIDE STANDARD WASHERS @ EACH FACE.

SPECIFIED ON PLANS SHALL BE AS FOLLOWS: FLOOR FRAMING: 2-2X12 CEILING FRAMING: 2-2XB

- MINIMUM BEARING OF ANY BEAM OR HEADER AT A STUD WALL IS 31/2"

- JOIST BLOCKING
 A) JOISTS SHALL BE LATERALLY SUPPORTED AT EACH END AND AT EACH SUPPORT BY SOLID BLOCKING EXCEPT WHERE THE ENDS OF JOISTS ARE NAILED INTO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD. SOLID BLOCKING SHALL NOT BE LESS THAN TWO INCHES IN THICKNESS AND SHALL MATCH THE DEPTH OF THE JOIST.
- OF THE JOISTS. C) PROVIDE DOUBLE JOISTS UNDER ALL BEARING WALLS PARALLEL TO THE DIRECTION OF THE JOISTS.

B) PROVIDE SOLID BLOCKING UNDER ALL BEARING WALLS PERPENDICULAR TO THE DIRECTION

PROVIDE BRIDGING AT ALL FLOOR JOISTS AT SPACING NOT TO EXCEED 8'-0".

APPROVED BY THE ENGINEER.

JOIST HOLES AND NOTCHES A) NOTCHES IN TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE SIXTH (1/6) THE JOIST DEPTH AND SHALL NOT BE LOCATED WITHIN MIDDLE THIRD OF THE SPAN. B) HOLES SHALL NOT BE CLOSER THAN 2" TO TOP OR BOTTOM OF JOIST. THE DIAMETER

OF ANY HOLE SHALL NOT EXCEED ONE FOURTH (1/4) THE JOIST DEPTH UNLESS

PARALLEL STRAND LUMBER (PSL), LAMINATED STRUCTURAL LUMBER (LSL), & LAMINATED VENEER LUMBER (LVL)

WHERE SHOWN ON DRAWINGS, THESE PRODUCTS SPECIFICATIONS SHALL CONFORM TO THE FOLLOWING SCHEDULE:

PRODUCT NAME			_ STRAND IB e r SL)	LAMINATED LUME (LS		LAMINATE LUM (LV	BER
TRADE NAME MANUFACTURER		McMLLAN (ATHENS,	ALLAM" N BLOEDEL GA. 30601) IST.CA.COM)	ANTHONY FOR (WWW.ANTHON "CALVERT CO		BOISE	
FLEXURAL STRESS:	(Fb)	2,900	PSI	3,000	PSI	2,640	PSI
HORIZ. SHEAR STRESS:	(Fv)	290	PSI	290	PSI	285	PSI
MODULUS OF ELASTICITY:	(E)	2,000,0	00 PSI	2,100,00 (W/ CAMBER TO D	O PSI PESET DEFLECTION)	2,000,00	₀₀ PSI

IMPORTANT NOTE ABOUT PSL, LSL & LVL BEAMS:

ENGINEERED WOOD BEAMS ARE DESIGNED FOR SERVICE IN DRY CONDITIONS ONLY. THESE BEAMS MAY NOT BE USED WHEN EXPOSED TO MOISTURE. OR TO WETTING & DRYING CYCLES.

CONNECTORS

- CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC.,
- 2. CONNECTORS SHALL BE THE MANUFACTURER-DESIGNATED SIZE FOR FRAMED MEMBERS, AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. 3. ALL NAIL & BOLT HOLES SHALL BE ENGAGED. WITH MANUFACTURER-DESIGNATED
- 4. CONNECTORS SHALL BE INSTALLED AT THE ENDS OF ALL JOISTS & BEAMS FRAMING INTO OTHER (SUPPORTING) MEMBERS (UNLESS OTHERWISE NOTED).

 5. THE FOLLOWING CONNECTORS SHALL BE PROVIDED AND SHALL BE CONSIDERED THE MINIMUM:

MEMBER DESCRIPTION	CONNECTOR SERIES
SAWN-LUMBER JOISTS	U
I-JOISTS	IUS
MULTIPLE-JOIST/BEAMS	HUS
PSL & LVL BEAMS	LBV
LSL (GLU-LAM) BEAMS	HGUS
WOOD TRUSSES	(BY TRUSS

NOTE: ENGINEER SHALL APPROVE ANY CHANGES MADE TO CONNECTORS

NOTE: FOR ALL CONNECTIONS LABELLED AS "EQUAL" SHALL BE APPROVED BY THE ENGINEER ON RECORD IF CONNECTORS DIFFERS FROM THE SPECIFIED CONNECTORS

MANUFACTURER /

STANDARD STRUCTURAL DETAILS & NOTES

DEAVERS

3103 PEACHTREE LANE MISSOURI CITY. TEXAS 77459 PH: 713.828.8901 FIRM # 16777

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DEAVERS

3103 PEACHTREE LANE MISSOURI CITY, TEXAS 77459 PH: 713.828.8901

FAMILY RESIDENCE

NAILING SCHEDULE

TYPICAL NAILING AND FASTENING TABLES PER IRC 2012

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a,b,c} Roof	SPACING OF FASTENER
1	Blocking between joists or rafters to top	3-8d $(2^{1}/2" \times 0.113")$	
2	plate, toe nail	3-8d $(2\frac{1}{2} \times 0.113^{\circ})$ 3-8d $(2^{1}/2^{\circ\prime\prime} \times 0.113^{\circ\prime\prime})$	_
1000	Ceiling joists to plate, toe nail Ceiling joists not attached to parallel		_
3	rafter, laps over partitions, face nail	3-10d	_
4	Collar tie to rafter, face nail or $1^{1/4}$ " × 20 gage ridge strap	3-10d (3" × 0.128")	_
5	Rafter or roof truss to plate, toe nail	3-16d box nails (3 ¹ / ₂ " × 0.135") or 3-10d common nails	2 toe nails on one side and 1 toe nail on opposite side of
		(3" × 0.148")	each rafter or truss ^j
6	Roof rafters to ridge, valley or hip rafters:	$4-16d (3^{1}/2" \times 0.135")$	
6	toe nail face nail	$3-16d (3^1/2'' \times 0.135'')$	
		Wall	_
7	Built-up studs-face nail	10d (3" × 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	$16d (3^{1}/2" \times 0.135")$	12" o.c.
9	Built-up header, two pieces with ¹ / ₂ " spacer	$16d (3^{1}/2'' \times 0.135'')$	16" o.c. along each edge
10	Continued header, two pieces	$16d (3^1/2'' \times 0.135'')$	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d $(2^{1}/2" \times 0.113")$	_
12	Double studs, face nail	10d (3" × 0.128")	24" o.c.
13	Double top plates, face nail	$10d (3" \times 0.128")$	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d $(3^{1}/2'' \times 0.135'')$	
15	Sole plate to joist or blocking, face nail	$16d (3^{1}/2" \times 0.135")$	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	$3-16d (3^{1}/2'' \times 0.135'')$	16" o.c.
17	Stud to sole plate, toe nail	3-8d $(2^{1}/2" \times 0.113")$ or 2-16d $(3^{1}/2" \times 0.135")$	——
18	Top or sole plate to stud, end nail	2-16d $(3^1/2'' \times 0.135'')$	_
19	Top plates, laps at corners and intersections, face nail	2-10d (3" × 0.128")	
20	1" brace to each stud and plate, face nail	2-8d $(2^{1}/_{2}" \times 0.113")$ 2 staples $1^{3}/_{4}" \times$	
21	$1'' \times 6''$ sheathing to each bearing, face nail	2-8d $(2^{1}/_{2}" \times 0.113")$ 2 staples $1^{3}/_{4}"$	
22	1" × 8" sheathing to each bearing, face nail	2-8d $(2^{1}/2'' \times 0.113'')$ 3 staples $1^{3}/4$	
23	Wider than 1" × 8" sheathing to each bearing, face nail	3-8d $(2^{1}/_{2}" \times 0.113")$ 4 staples $1^{3}/_{4}"$	
24	Joist to sill or girder, toe nail	3-8d $(2^{1}/2'' \times 0.113'')$	_
25	Rim joist to top plate, toe nail (roof applications also)	$8d (2^{1}/2'' \times 0.113'')$	6" o.c.
26	Rim joist or blocking to sill plate, toe nail	8d (2 ¹ / ₂ " × 0.113")	6" o.c.
27	1" × 6" subfloor or less to each joist, face nail	2-8d $(2^{1}/_{2}" \times 0.113")$ 2 staples $1^{3}/_{4}"$	
28	2" subfloor to joist or girder, blind and face nail	2-16d $(3^{1}/2'' \times 0.135'')$	_
29	2" planks (plank & beam - floor & roof)	2-16d $(3^1/2'' \times 0.135'')$	at each bearing
30	Built-up girders and beams, 2-inch lumber layers	10d (3" × 0.128")	Nail each layer as follows: 3. o.c. at top and bottom and staggered. Two nails at ends and at each splice.

Ledger strip supporting joists or rafters $3-16d (3^{1}/2'' \times 0.135'')$ At each joist or rafter

TABLE R602.3(1)—continued FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

	DESCRIPTION OF RUIT DING		SI	PACING OF FASTENERS
ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER ^{b, c, c}	Edges (inches) ⁱ	Intermediate supports ^{c, e} (inches)
	Wood structural panels, subfloor,	roof and interior wall sheathing to framing a	nd particleboard	wall sheathing to framing
32	³ /8" - ¹ / ₂ "	6d common (2" × 0.113") nail (subfloor wall) ^j 8d common (2 ¹ / ₂ " × 0.131") nail (roof) ^f		12 ^g
33	¹⁹ / ₃₂ " - 1"	8d common nail (2 ¹ / ₂ " × 0.131")	6	12 ^g
34	1 ¹ / ₈ " - 1 ¹ / ₄ "	10d common (3" × 0.148") nail or 8d ($2^{1}/_{2}$ " × 0.131") deformed nail	6	12
		Other wall sheathingh		
35	¹ / ₂ " structural cellulosic fiberboard sheathing	$1^{1}/_{2}$ " galvanized roofing nail, $7/_{16}$ " crown or 1" crown staple 16 ga., $1^{1}/_{4}$ " long	3	6
36	²⁵ / ₃₂ " structural cellulosic fiberboard sheathing	$1^{3}/_{4}$ " galvanized roofing nail, $7/_{16}$ " crown or 1" crown staple 16 ga., $1^{1}/_{2}$ " long	3	6
37	1/2" gypsum sheathing ^d	1 ¹ / ₂ " galvanized roofing nail; staple galvanized, 1 ¹ / ₂ " long; 1 ¹ / ₄ screws, Type W or S	7	7
38	⁵ / ₈ " gypsum sheathing ^d	1 ³ / ₄ " galvanized roofing nail; staple galvanized, 1 ⁵ / ₈ " long; 1 ⁵ / ₈ " screws, Type W or S	7	7
Â	Woo	d structural panels, combination subfloor un	derlayment to fra	aming
39	3/4" and less	6d deformed (2" × 0.120") nail or 8d common ($2^{1}/_{2}$ " × 0.131") nail	6	12
40	⁷ / ₈ " - 1"	8d common $(2^{1}/_{2}" \times 0.131")$ nail or 8d deformed $(2^{1}/_{2}" \times 0.120")$ nail	6	12
41	1 ¹ / ₈ " - 1 ¹ / ₄ "	10d common (3" × 0.148") nail or 8d deformed $(2^1/2" \times 0.120")$ nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 Ksi = 6.895 MPa.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum $\frac{7}{16}$ -inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically. e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).

f. For regions having basic wind speed of 110 mph or greater, 8d deformed $(2^{1}/2^{"} \times 0.120)$ nails shall be used for attaching plywood and wood structural panel roof

sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum. g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum

48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing. h. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208. i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only.

panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking. j. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the

ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing

TABLE R602.3(2) ALTERNATE ATTACHMENTS TO TABLE R602.3(1)

NOMINAL MATERIAL	DESCRIPTION ^{a, b} OF FASTENER	SPACING ^c OF FASTENERS		
THICKNESS (inches)	AND LENGTH (inches)	Edges (inches)	Intermediate supports (inches)	
Wood structu	ural panels subfloor, roof ^g and wall sheathin	g to framing and particleboar	d wall sheathing to framing ^f	
Up to $^1/_2$	Staple 15 ga. 1 ³ / ₄	4	8	
	0.097 - 0.099 Nail 2 ¹ / ₄	3	6	
	Staple 16 ga. 1 ³ / ₄	3	6	
$^{19}/_{32}$ and $^{5}/_{8}$	0.113 Nail 2	3	6	
	Staple 15 and 16 ga. 2	4	8	
	0.097 - 0.099 Nail $2^1/_4$	4	8	
$^{23}/_{32}$ and $^{3}/_{4}$	Staple 14 ga. 2	4	8	
	Staple 15 ga. 1 ³ / ₄	3	6	
	0.097 – $0.099~{ m Nail}~2^1/_4$	4	8	

	Staple 16 ga. 2	4	8		
1	Staple 14 ga. $2^{1}/_{4}$	4	8		
	0.113 Nail 2 ¹ / ₄	3	6		
	Staple 15 ga. 2 ¹ / ₄	4	8		
	0.097 - 0.099 Nail 2 ¹ / ₂	4	8		
NOMINAL MATERIAL	DESCRIPTION ^{a,b} OF FASTENER	SPACING ^c OF FASTENERS			
THICKNESS (inches)	AND LENGTH (inches)	Edges (inches)	Body of panel ^d (inches)		
	Floor underlayment; pl	lywood-hardboard-particleboard ^f			
		Plywood			
$^{1}/_{4}$ and $^{5}/_{16}$	$1^{1}/_{4}$ ring or screw shank nail-minimum $12^{1}/_{2}$ ga. (0.099") shank diameter	3	6		
	Staple 18 ga., ⁷ / ₈ , ³ / ₁₆ crown width	2	5		
$^{11}/_{32}$, $^{3}/_{8}$, $^{15}/_{32}$, and $^{1}/_{2}$	$1^{1}/_{4}$ ring or screw shank nail-minimum $12^{1}/_{2}$ ga. (0.099") shank diameter	8e			
$^{19}/_{32}$, $^{5}/_{8}$, $^{23}/_{32}$ and $^{3}/_{4}$	$1^{1}/_{2}$ ring or screw shank nail-minimum $12^{1}/_{2}$ ga. (0.099") shank diameter	6	8		
	Staple 16 ga. 1 ¹ / ₂	6	8		
	I	Hardboard ^f			
0.200	1 ¹ / ₂ long ring-grooved underlayment nail	6	6		
	4d cement-coated sinker nail	6	6		
	Staple 18 ga., ⁷ / ₈ long (plastic coated)	3	6		
	<u> </u>	articleboard			
1/4	4d ring-grooved underlayment nail	3	6		
^/4	Staple 18 ga., $\frac{7}{8}$ long, $\frac{3}{16}$ crown	3	6		
3/8	6d ring-grooved underlayment nail	6	10		
7/8	Staple 16 ga., $1^{1}/_{8}$ long, $^{3}/_{8}$ crown	3	6		
1, 5,	6d ring-grooved underlayment nail	6	10		
$^{1}/_{2}$, $^{5}/_{8}$	Staple 16 ga., $1^5/8$ long, $3/8$ crown	3	6		

For SI: 1 inch = 25.4 mm.

a. Nail is a general description and may be T-head, modified round head or round head.

b. Staples shall have a minimum crown width of $\frac{7}{16}$ -inch on diameter except as noted.

c. Nails or staples shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. Nails or staples shall be spaced at not more

than 12 inches on center at intermediate supports for floors.

d. Fasteners shall be placed in a grid pattern throughout the body of the panel.

e. For 5-ply panels, intermediate nails shall be spaced not more than 12 inches on center each way. f. Hardboard underlayment shall conform to CPA/ANSI A135.4

g. Specified alternate attachments for roof sheathing shall be permitted for windspeeds less than 100 mph. Fasteners attaching wood structural panel roof sheathing to gable end wall framing shall be installed using the spacing listed for panel edges.

TABLE R602.3(3) REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES^{a, b, c}

MINIMUM NAIL		WOOD NOM	NOMINAL		PANEL NAIL SPACING		MAXIMUM WIND SPEED (mph)		
Size Penetration (inches)	Penetration	STRUCTURAL PANEL SPAN	L PANEL THICKNESS (inches)	STUD SPACING (inches)	Edges (inches o.c.)	Field (inches o.c.)	Wind exposure category		
	(inches)	RATING					В	C	D
6d Common (2.0" × 0.113")	1.5	24/0	3/8	16	6	12	110	90	85
8d Common (2.5" × 1.75 0.131")	24/16	⁷ /16	16	6	12	130	110	105	
	1.75	24/16	716	24	6	12	110	90	85

For SI: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.

a. Panel strength axis parallel or perpendicular to supports. Three-ply plywood sheathing with studs spaced more than 16 inches on center shall be applied with panel strength axis perpendicular to supports.

b. Table is based on wind pressures acting toward and away from building surfaces per Section R301.2. Lateral bracing requirements shall be in accordance with Section