







COVER SHEET

SINGLE FAMILY HOUSE REMODEL

AARON CELIOUS

3612 6TH AVENUE, LOS ANGELES, CA 90018

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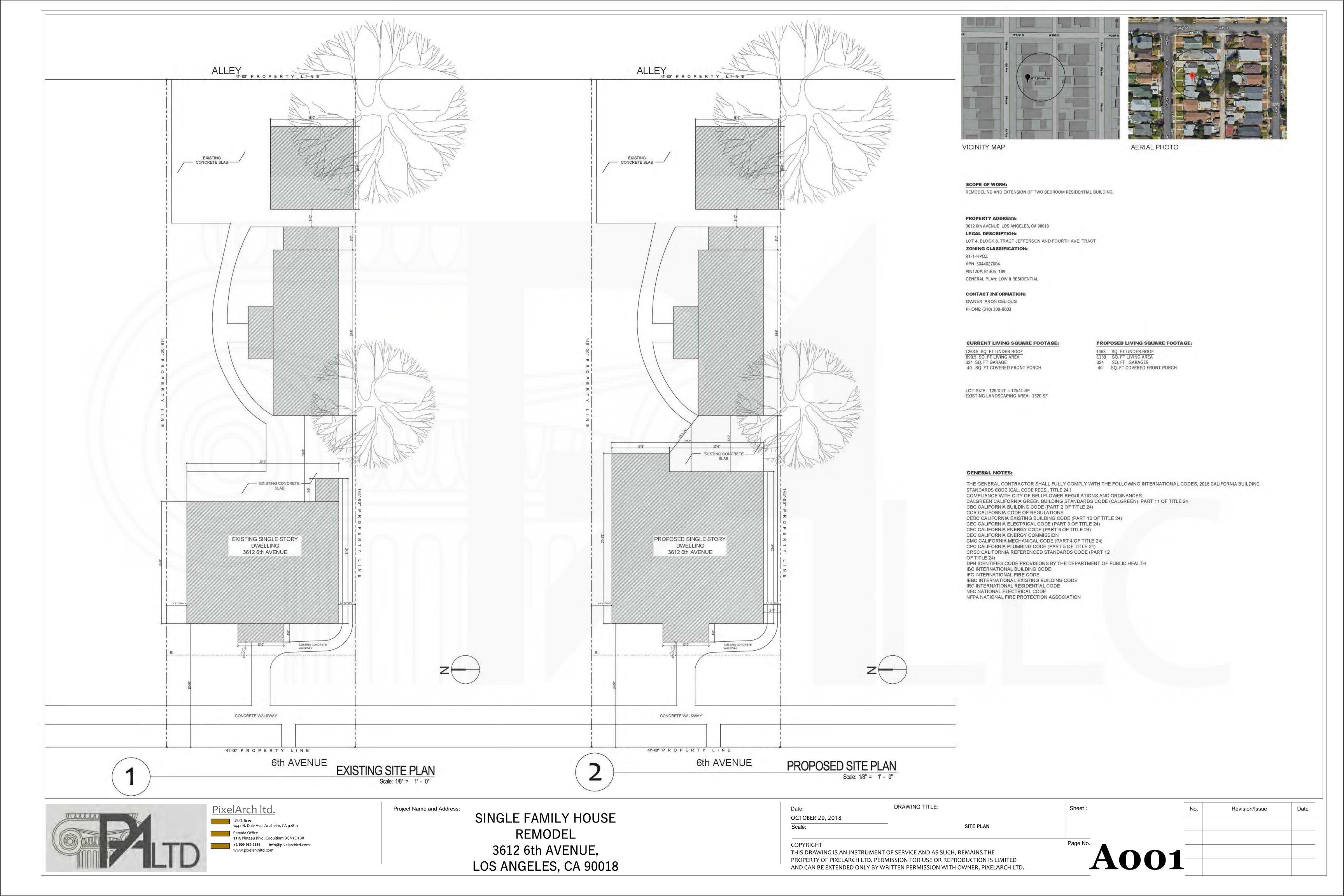
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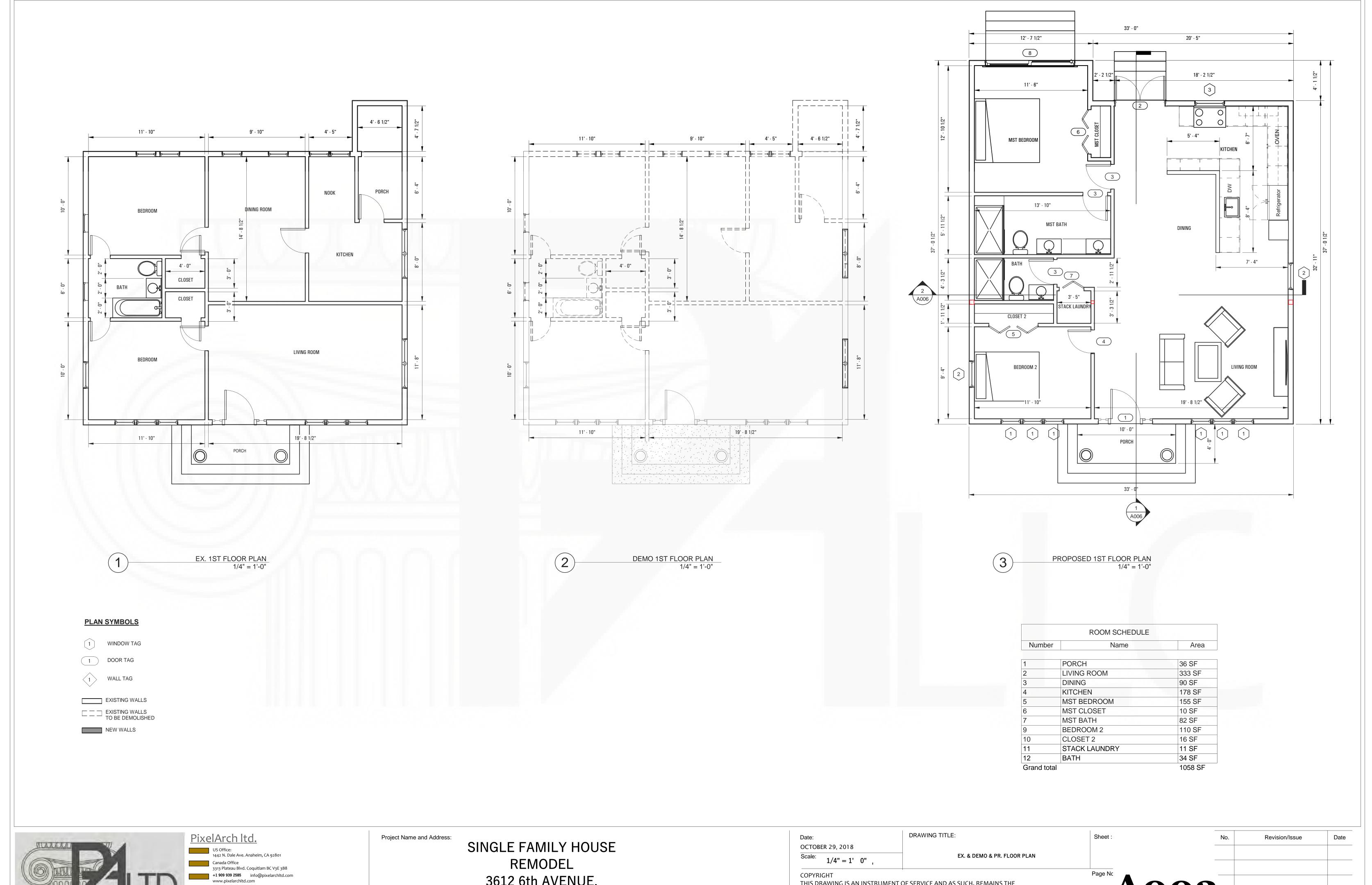
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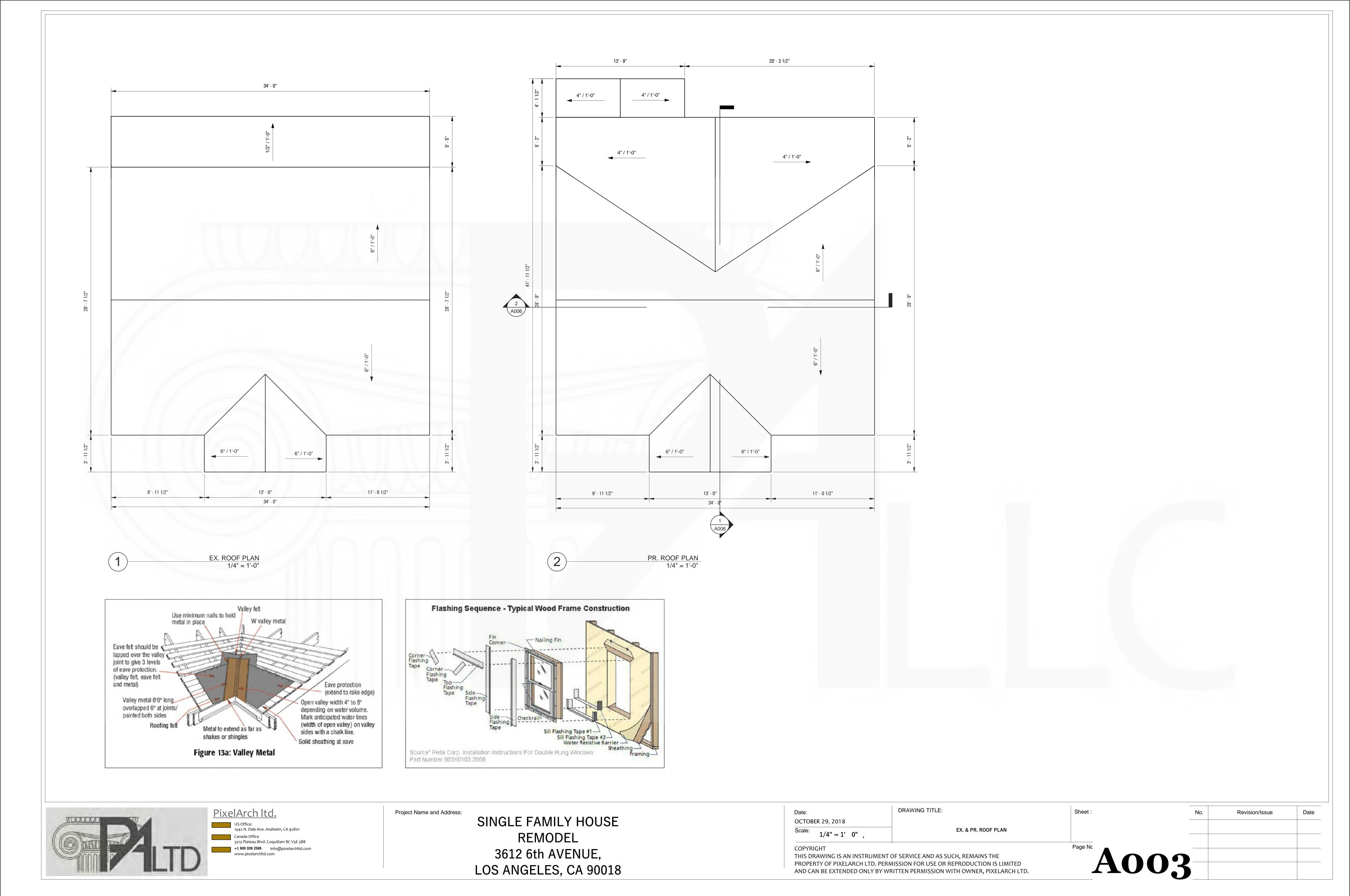




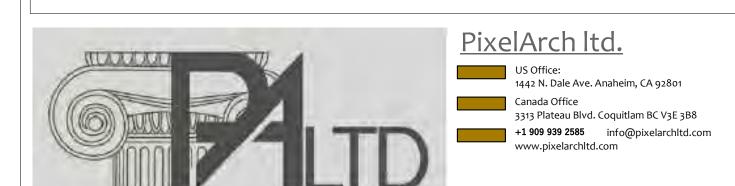


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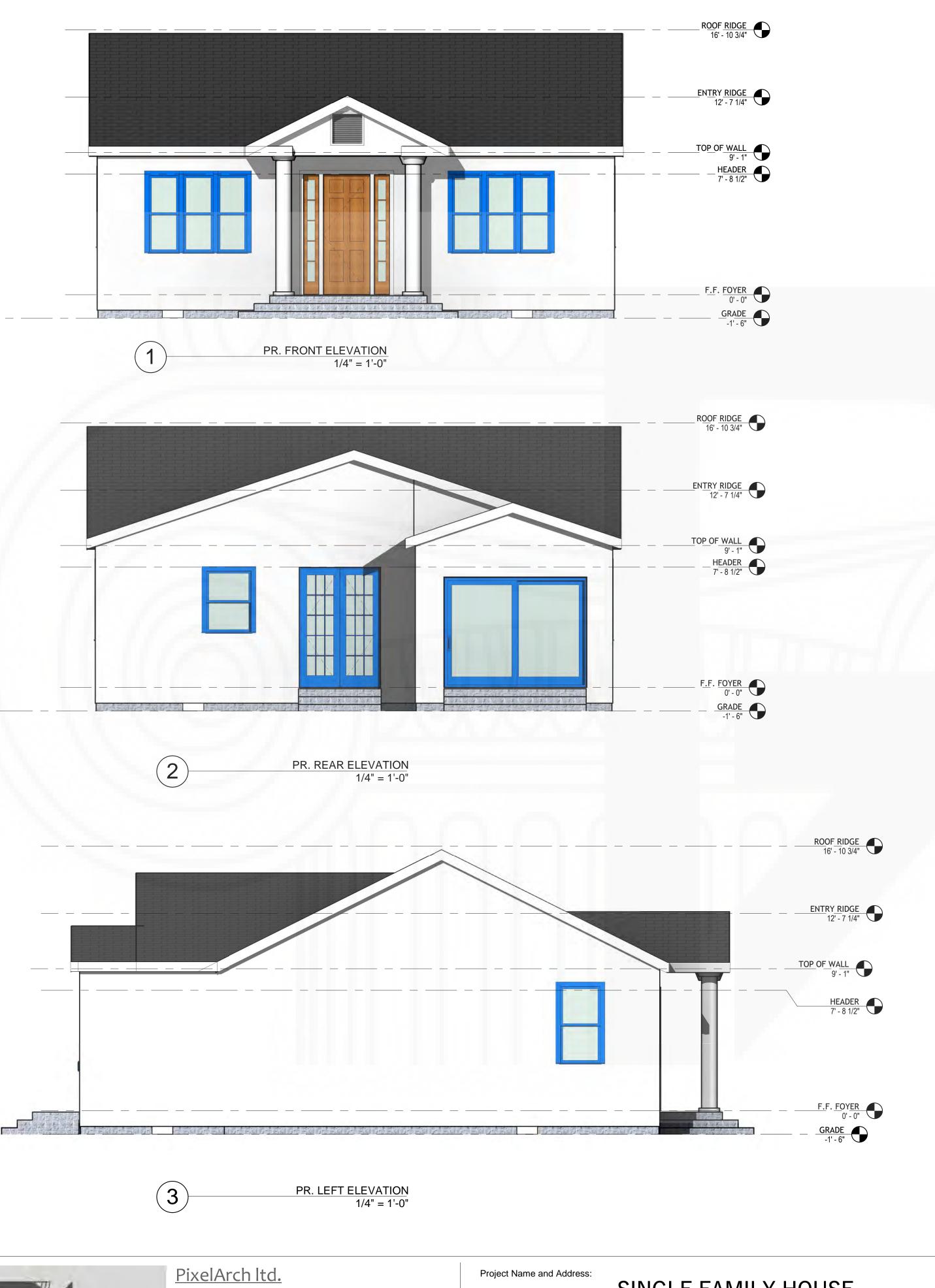
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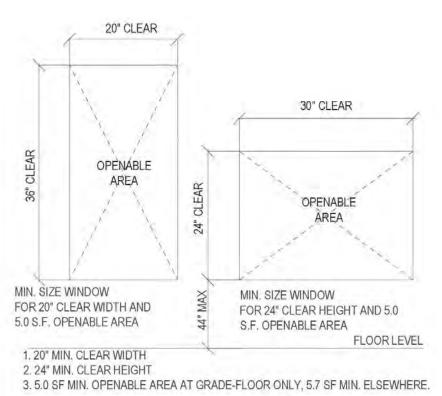




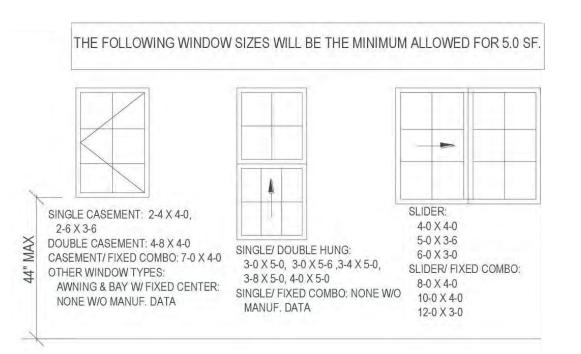


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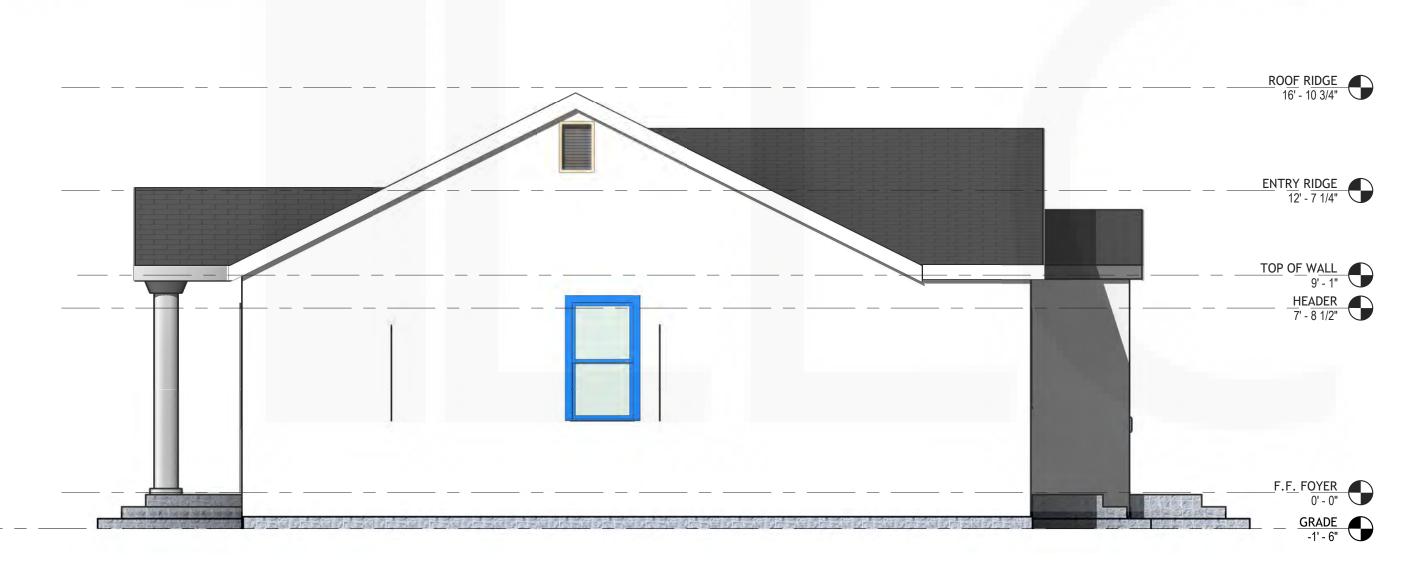




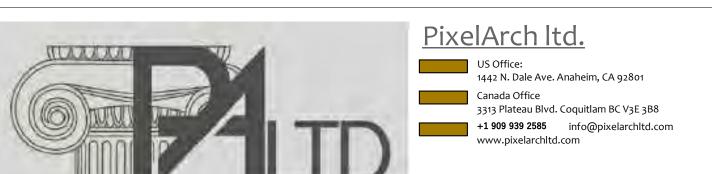
EMERGENCY ESCAPE/ RESCUE OPENING (R310)



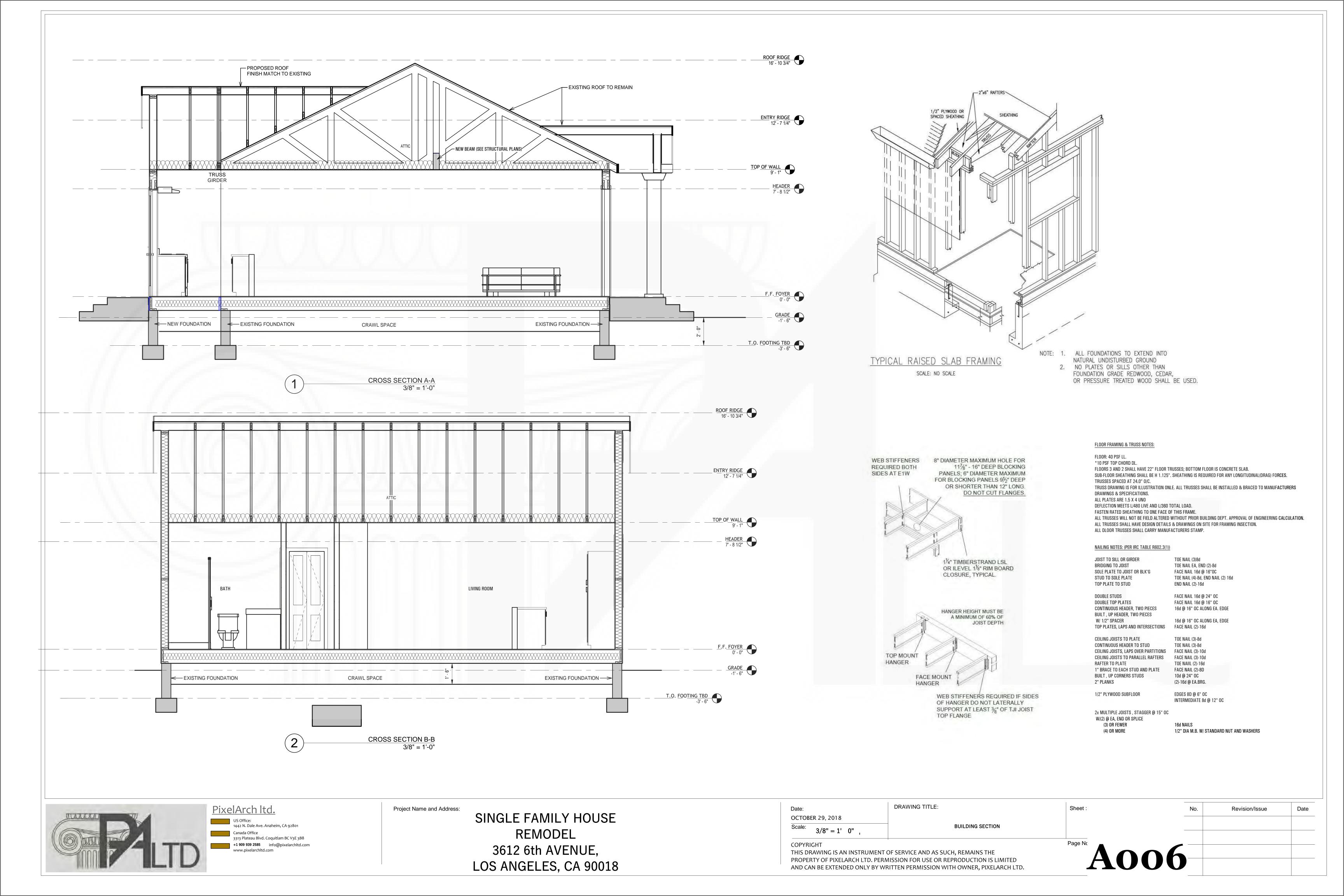
NOTE: SIZES ARE TAKEN FROM DATA SUPPLIED BY WINDOW MANUFACTURERS. HOWEVER, THESE ARE GENERAL DIMENSIONS AND MUST BE VERIFIED WITH ACTUAL WINDOWS INSTALLED TO MEET MINIMUM EGRESS REQUIREMENTS.

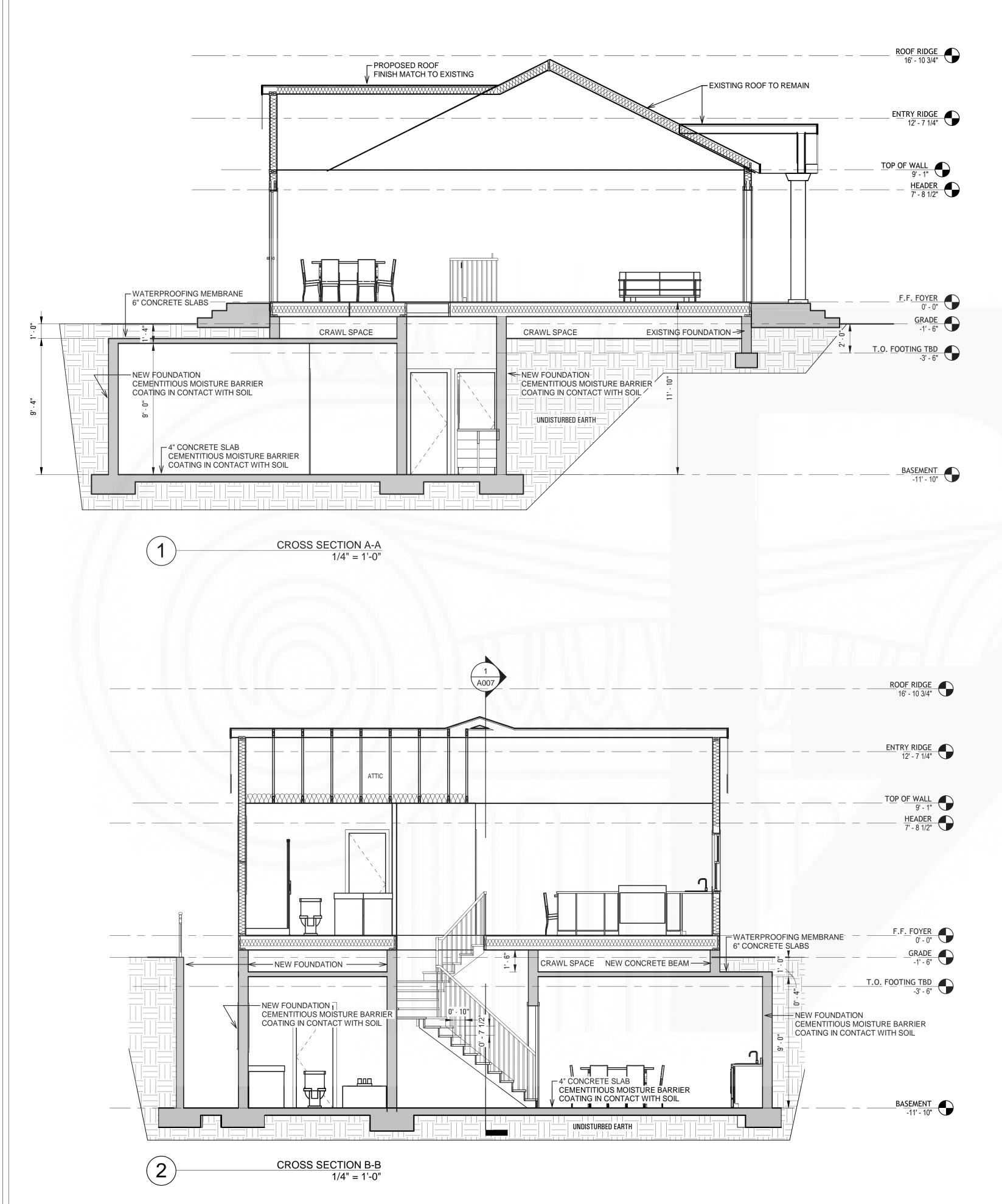


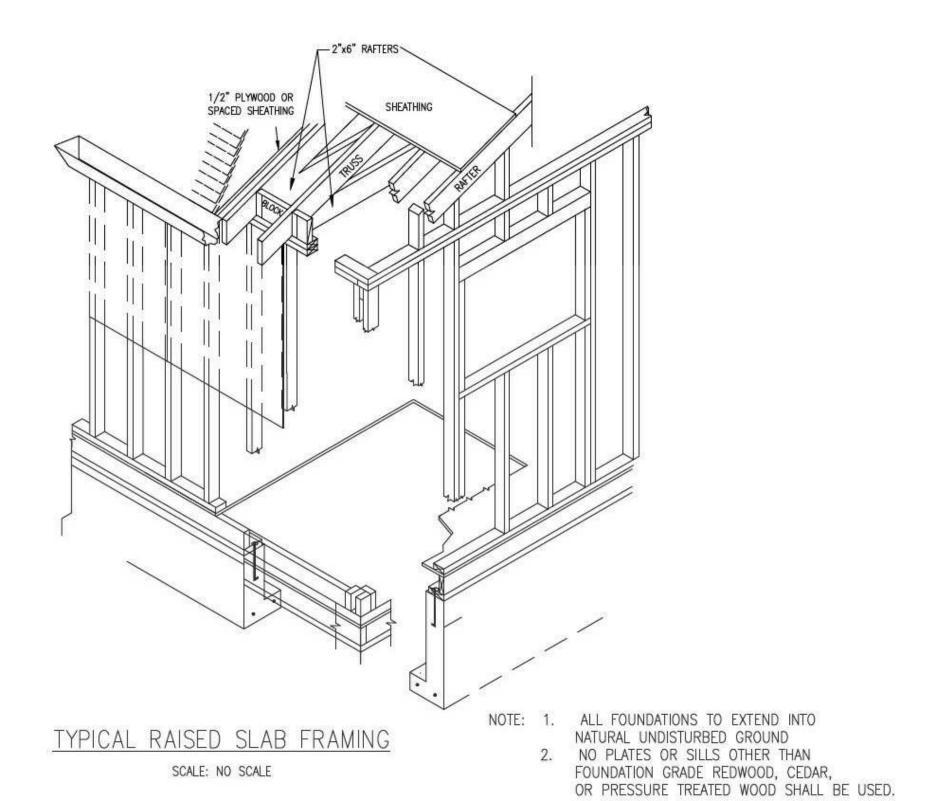
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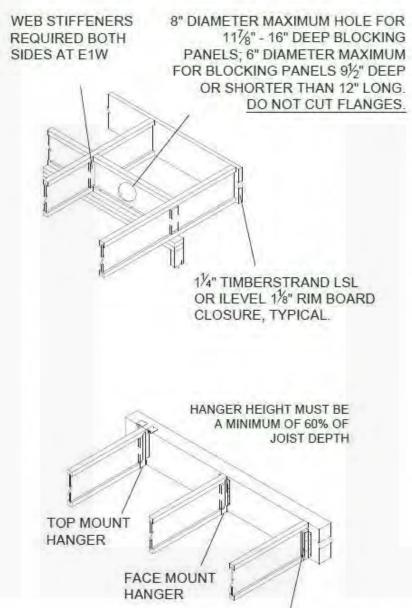


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WEB STIFFENERS REQUIRED IF SIDES OF HANGER DO NOT LATERALLY SUPPORT AT LEAST 3/8" OF TJI JOIST TOP FLANGE

FLOOR FRAMING & TRUSS NOTES:

FLOOR: 40 PSF LL.

*10 PSF TOP CHORD DL.
FLOORS 3 AND 2 SHALL HAVE 22" FLOOR TRUSSES; BOTTOM FLOOR IS CONCRETE SLAB.

SUB-FLOOR SHEATHING SHALL BE H 1.125". SHEATHING IS REQUIRED FOR ANY LONGITUDINAL(DRAG) FORCES.

TRUSSES SPACED AT 24.0" O/C.

TRUSS DRAWING IS FOR ILLUSTRATION ONLE. ALL TRUSSES SHALL BE INSTALLED & BRACED TO MANUFACTURERS DRAWINGS & SPECIFICATIONS.

ALL PLATES ARE 1.5 X 4 UNO

DEFLECTION MEETS L/480 LIVE AND L/360 TOTAL LOAD.
FASTEN RATED SHEATHING TO ONE FACE OF THIS FRAME.

ALL TRUSSES WILL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPT. APPROVAL OF ENGINEERING CALCULATION.

ALL TRUSSES SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSECTION.

NAILING NOTES: (PER IRC TABLE R602.3(1))

JOIST TO SILL OR GIRDER

BRIDGING TO JOIST

SOLE PLATE TO JOIST OR BLK'G

STUD TO SOLE PLATE

TOP PLATE TO STUD

DOUBLE STUDS

DOUBLE TOP PLATES

TOE NAIL (3)8d

TOE NAIL EA, END (2)-8d

FACE NAIL 16d @ 16"0C

TOE NAIL (4)-8d, END NAIL (2) 16d

END NAIL (2)-16d

FACE NAIL 16d @ 24" OC

FACE NAIL 16d @ 16" OC

ALL DLOOR TRUSSES SHALL CARRY MANUFACTURERS STAMP.

CONTINUOUS HEADER, TWO PIECES
BUILT , UP HEADER, TWO PIECES
W/ 1/2" SPACER
TOP PLATES, LAPS AND INTERSECTIONS

CEILING JOISTS TO PLATE
CONTINUOUS HEADER TO STUD

TAGE NAIL (30 TO SO STATE TO ENAIL (3)-8d
TOE NAIL (3)-8d

CONTINUOUS HEADER TO STUD

CEILING JOISTS, LAPS OVER PARTITIONS
CEILING JOISTS TO PARALLEL RAFTERS
RAFTER TO PLATE

TOE NAIL (3)-10d
FACE NAIL (3)-10d
TOE NAIL (2)-16d
TOE NAIL (2)-16d
TOE NAIL (2)-8D
TOE NAIL (2)-16d @ 24" OC
TOE NAIL (2)-16d @ EA.BRG.

1/2" PLYWOOD SUBFLOOR EDGES 8D @ 6" OC INTERMEDIATE 8d @ 12" OC

INTERMEDIAT

2x MULTIPLE JOISTS , STAGGER @ 15" OC W/(2) @ EA, END OR SPLICE (3) OR FEWER (4) OR MORE

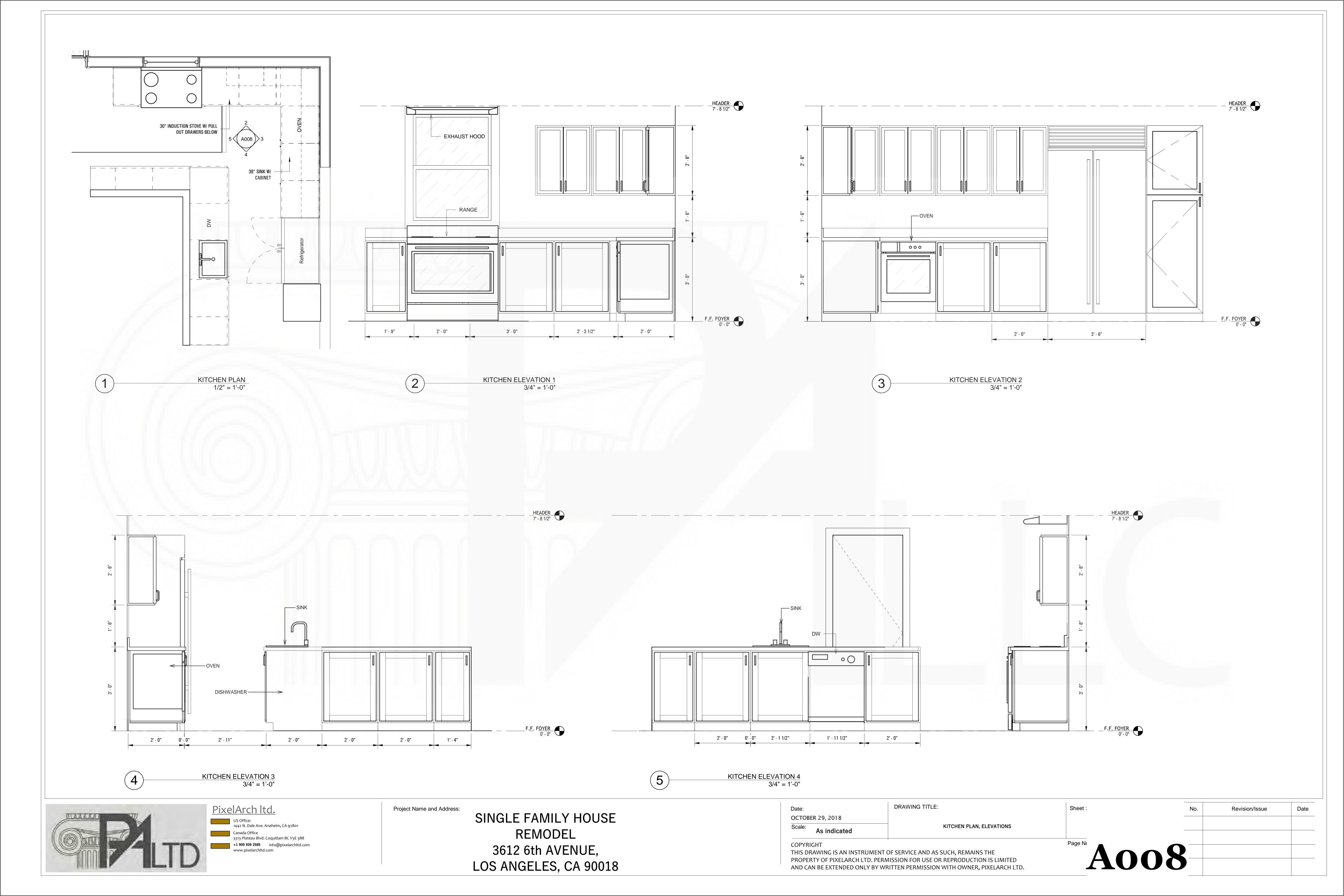
16d NAILS 1/2" DIA M.B. W/ STANDARD NUT AND WASHERS

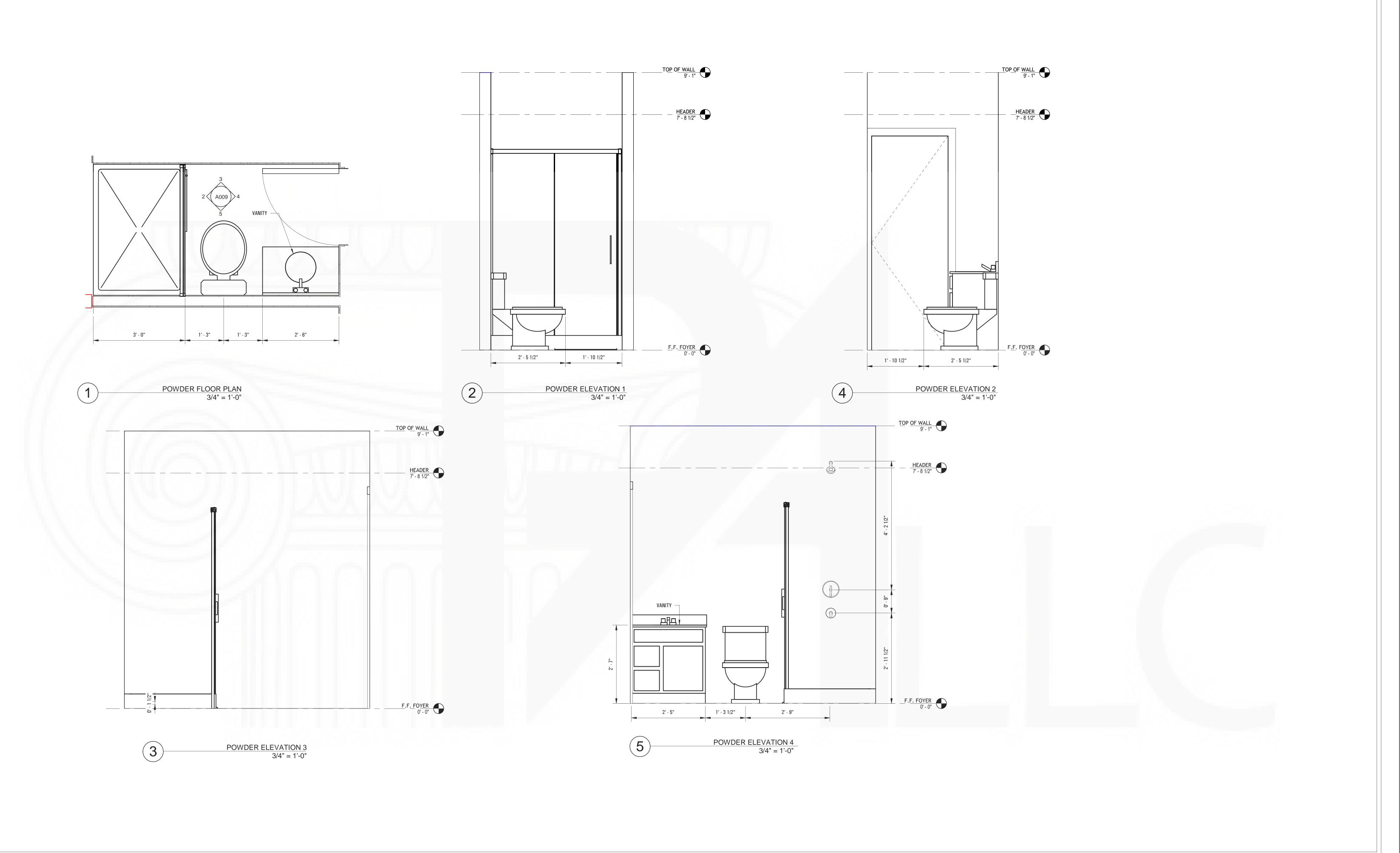


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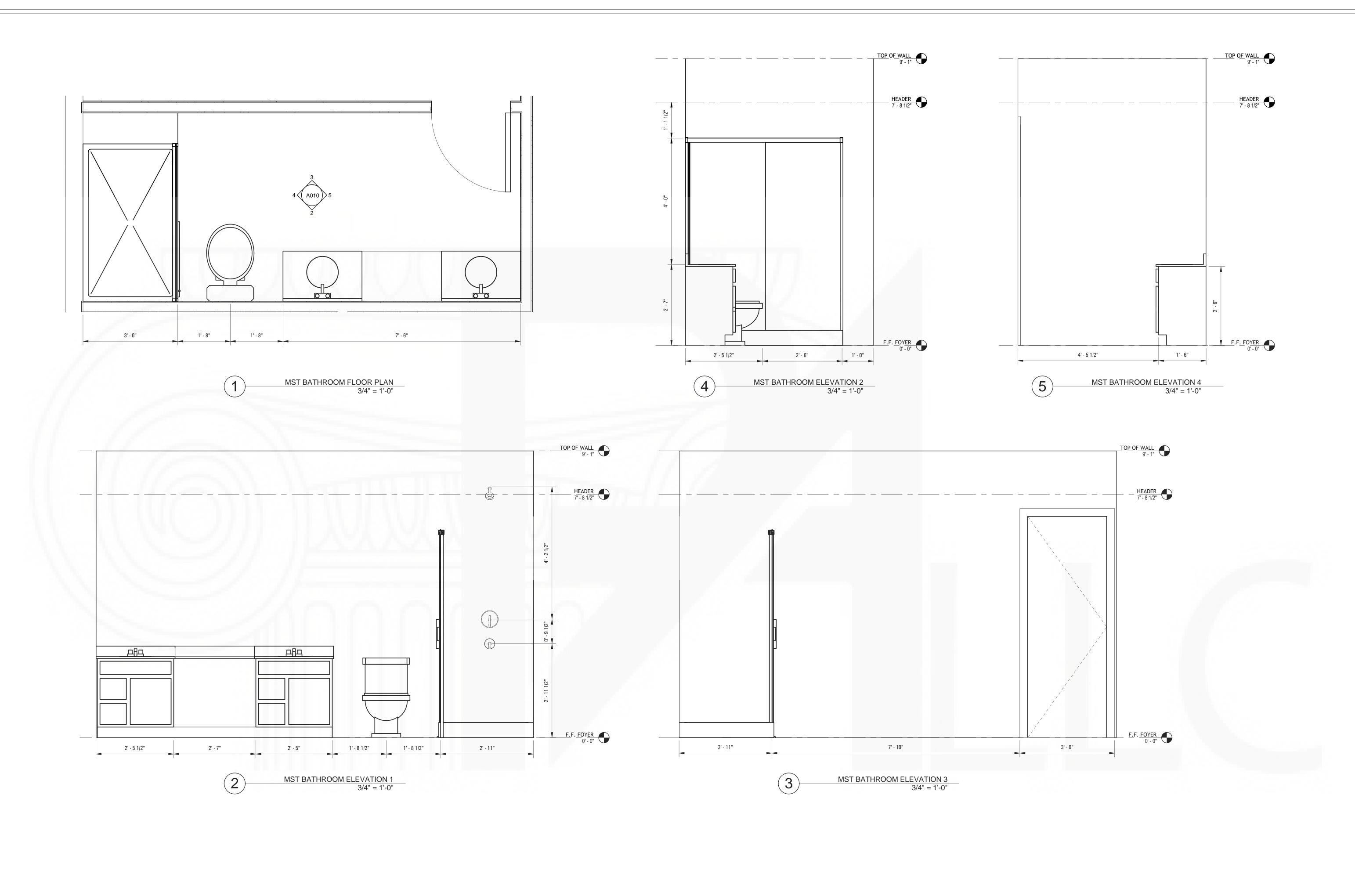






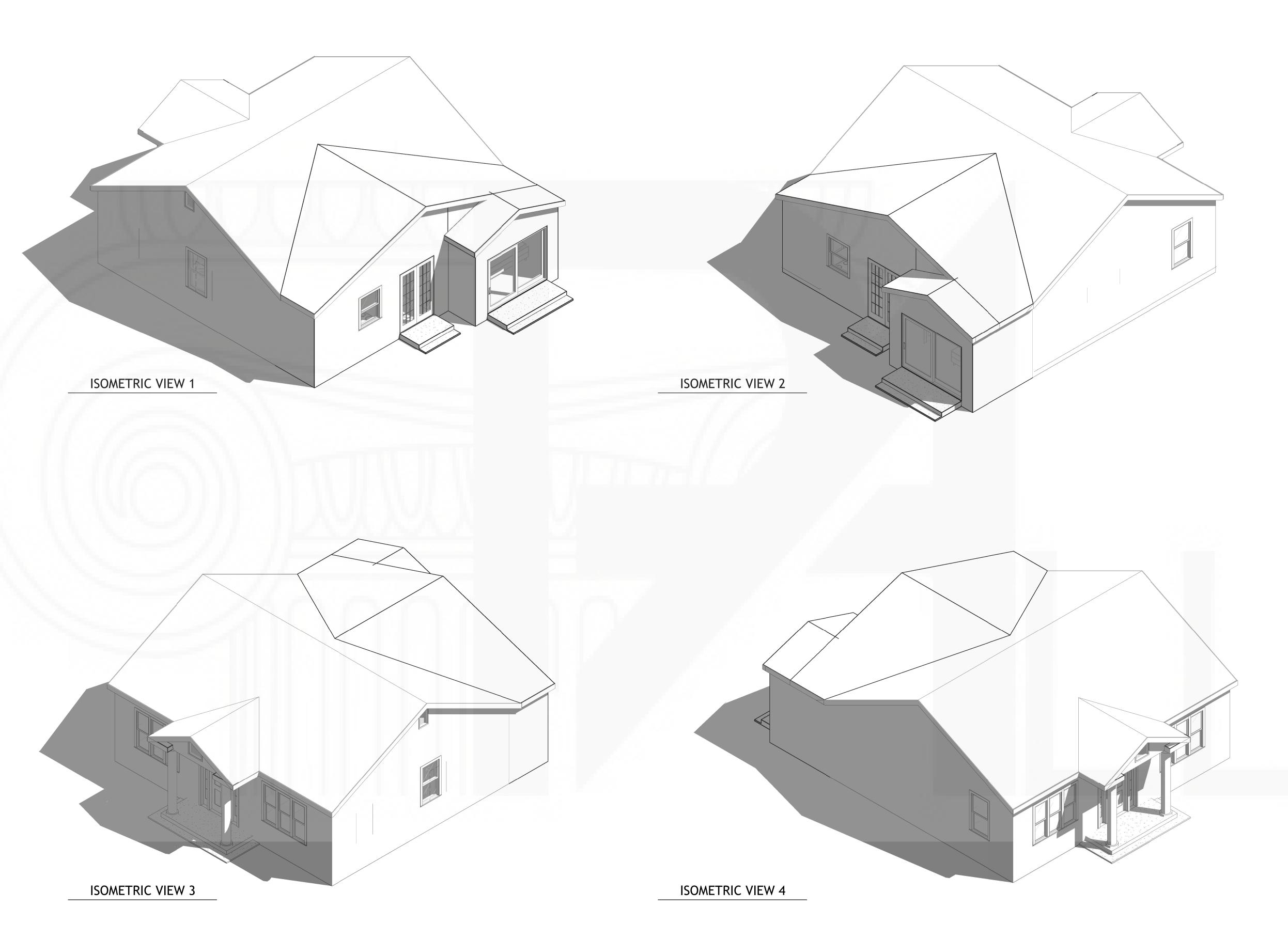


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Revision/Issue

	SHEAR WALL SCHEDULE C.B.C.				
S.W. TYPE	SHEAR PANEL DESCRIPTION	ALLOWABLE SHEAR (PLF)	SILL BOLT'G @ FOUNDATION	TOP PL. TO BLK'G.	SILL NAILING UPPER STORIES
1	15/32" APA RATED PLYWOOD SHT'G. STRUCT I WITH 8d COMMON NAILS @ 6" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1 CBC) SEE NOTES 1,2,8,9, AND 10 BELOW.	280 *560	5/8" @ 32" O.C. 5/8" @ 16" O.C.	A35 @ 16" A35 @ 8"	16d @ 6" O.C. 16d @ 3" O.C.
2	15/32" APA RATED PLYWOOD SHT'G. STRUCT I WITH 8d COMMON NAILES @ 4" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1. CBC) SEE NOTES 1,2,4,5,8,9, AND 10 BELOW.	430 *860	5/8" @ 24" O.C. 5/8" @ 14" O.C.	A35 @ 8" LTP4 @ 6"	16d @ 4" O.C. 16d @ 2" O.C.
<u>/</u> 3	15/32" APA RATED PLYWOOD SHT'G STRUCT I WITH 8d COMMON NAILS @ 3" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1. CBC) SEE NOTES 1,2,4,5,8,9, AND 10 BELOW.	550 *1100	5/8" @ 20" O.C. 3/4" @ 16" O.C.	A35 @ 8" LTP4 @ 6"	16d @ 3" O.C. 1/4"□ X 3-1/2" LAG SC. @ 2" O.C.
<u></u>	15/32" APA RATED PLYWOOD SHT'G. STRUCT I WITH 8d COMMON NAILS @ 2" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1. CBC) SEE NOTES 1,2,4,5,8,9, AND 10 BELOW.	730 *1460	5/8" @ 16" O.C. 3/4" @ 16" O.C.	A35 @ 8" LTP4 @ 6"	16d @ 2-1/2" O.C. 1/4" □ X 3-1/2" LAG SC. @ 2" O.C.
<u></u>	15/32" APA RATED STRUCT. I SHT'G. WITH 10d COMMON NAILS @ 2" O.C. AT EDGES & 12" O.C. FIELD OVER 3 X STUDS (TABLE 2306.4.1 CBC) SEE NOTES 1,4,5,8,9, AND 10 BELOW.	870 *1740	3/4" @ 16" O.C. 3/4" @ 8" O.C.	A35 @ 6" LTP4 @ 4-1/2"	#12 X 3-1/2" WD. SC. @ 2" O.C. 1/4" X 3-1/2" LAG SC. @ 1-1/2" O.C.

- . ALL EDGES OF PLYWOOD SHEAR WALLS MUST BE BLOCKED WITH 2X SOLID BLOCKING.
- 2. DESIGNATES SILL BOLTING OR NAILING WHERE SHEAR WALL PANELS ARE TO BE APPLIED TO BOTH SIDES OF
- B. PAPER BACKED SELF-FURRING EXPANDED METAL OR WOVEN WIRE LATH AND PORTLAND CEMENT PLASTER.
- 4. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3-INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED. (USE 3X SILL PLATE @ FOUND., FOR SHEAR LOADS LESS THAN 350 PLF 2X SILL PLATE MAY BE USED.)
- 5. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAILS SPACING IS LESS THAN 6" O.C. ON EITHER SIDE. PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3" NOMINAL OR THICKER & NAILS ON EACH SIDE SHALL BE STAGGERED. (USE 3 X SILL

PLATE @ FOUND.)

- 6. ALL CONTINUOUS EXTERIOR AND INTERIOR SHEAR/BEARING WALL FOOTINGS TO HAVE 5/8" A.B.'S @ 48" O.C. WITH 3" X 3" X 1/4" PLATE WASHERS U.N.O.
- MINIMUM OF TWO BOLTS PER EACH PIECE OF SILL PLATE AT 4" TO 12" CLEARANCE TO THE END AND 7" MINIMUM EMBEDMENT.(FOR TWO POUR SYSTEM,BOLTS SHALL BE EMBEDDED 4 INCH MIN. INTO FIRST POUR.)
- 7. ALL INTERIOR NON-BEARING FTGS TO HAVE 3/16" ☐ SHOT PINS AT 32" O.C., I.E., HILTI SHOT PINS (ICC ESR-1663).

8. USE APA RATED PLYWOOD SHEATHING, OR O.S.B. PANEL, ALL PLYWOOD	
SHALL BE DOUGLAS FIR. 4-PLY MIN. OTHER SPECIES MAY REQUIRE	
CHANGES.	
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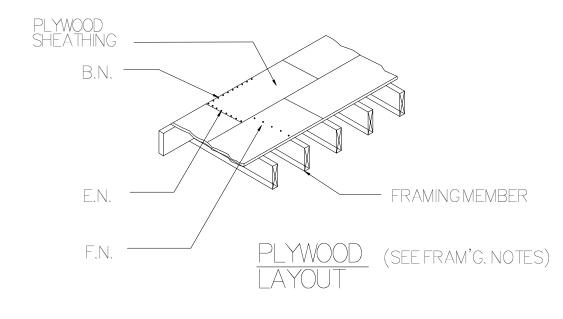
10. AT EXISTING FOOTINGS, USE THREADED RODS W/ SIMPSON "SET-XP" EPOXY 7" MIN. EMB. W/MIN. EDGE DIST. OF 1-7/8" (ICC ESR-2508) (SPECIAL

9. USE 3 X 3 X 1/4 PLATE WASHERS WITH 5/8" A.B. AT ALL SHEAR WALLS. USE

3 X 3 X 5/16 PLATE WASHERS WITH 3/4"□ A.B. AT ALL SHEAR WALLS.

11. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM A-307 U.N.O.

INSPECTION REQ'D.)



NAILING: (EXCEPT WHERE NOTED OTHERWISE)

	ROOF NAIL'G	FLOOR NAIL'G
B.N. = BOUNDARYNAILING	8d @ 6" O.C.	10d @ 6" O.C.
E.N. = EDGE NAILING	8d @ 6" O.C.	10d @ 6" O.C.
F.N. = FIELD NAILING	8d @ 12" O.C.	10d @ 10" O.C.

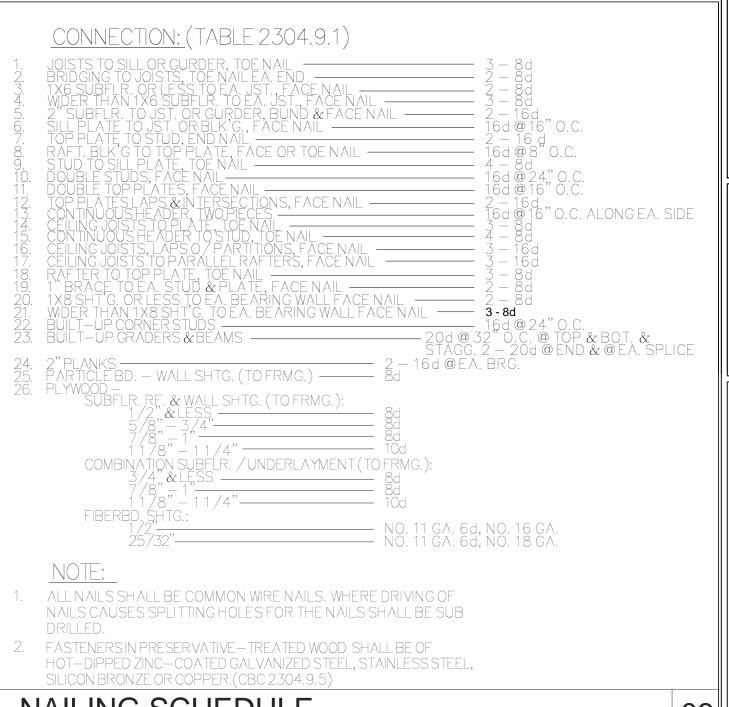
1. NAILS SHALL BE GALV. COMMON(HOT-DIPPED OR TUMBLED), PLACED NOT LESS THAN 3/8" FROM PANEL EDGES AND SHALL BE FIRMLY DRIVEN.

2. NO UNBLOCKED PIECE LESS THAN 12" SHALL BE USED.

3. WOOD STRUCTURAL PANELS SHALL COMPLY WITH 2010 CBC STANDARD AND SHALL BE APA

4. WOOD STRUCTURAL PANELS, WHEN USED, SHALL COMPLY WITH THE REQUIREMENTS FOR THEIR TYPE IN DOC PSI-95 OR PS2-92.

5. ALL PANELS SHALL BE IDENTIFIED BY TRADE MARK OF AN APPROVED TESTING & GRADING AGENCIES, APA, TECO OR PITTSBURG.



SHEAR WALL SCHEDULE

DESIGN DATA:
APPLICABLE DESIGN LOADS: PER ASCI/SEI 7-10
FLOOR DEAD LOAD: 15PSF FLOOR LIVE LOAD: 40 PSF ROOF LIVE LOAD: 20 PSF BASIC WIND SPEED: 85 MPH EXPOSURE: D STRUCTURAL CATEGORY: II SEISMIC DESIGN CATEGORY = D L PRESSURES SHOWN ARE BASED ON ASD DESIGN ,

GENERAL NOTES:

- . CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ABIDING TO ALL APPLICABLE CALIFIORNIA BUILDING CODES LOCAL CITY ORDINANCES, ZONING REQUIREMENTS, AND LICENSING/PERMIT REQUIREMENTS. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES INCLUDING WITHOUT LIMITATION TO DEMOLITION, EXCAVATION AND ERECTION PROCEDURES
- THE CONTRACTOR SHALL EXAMINE THE CONSTRICTION DOCUMENTS AND NOTIFY THE PROJECT ENGINEER & ARCHITECT OF ANY DISCREPANCIES, ERRORS, OR OMISSIONS SHE/HE MAY FIND BEFORE PROCEEDING WITH THE
- . NOTIFY THE PROJECT ENGINEER OF ANY DESIGN CHANGES PROPOSED BY OWNER OR THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION. SUCH CHANGES AFFECTING ROOM ADDITION DESIGN MAY ALSO AFFECT STRUCTURAL DESIGN.
- . ANY SUBCONTRACTOR WHICH AGREES TO CONSTRUCT THE PROJECT PURSUANT TO THESE PLANS FULLY ASSUMES THE RISK OF ALL ERRORS AND OMISSIONS WHICH SHOULD HAVE BEEN DETECTED BY A CAREFUL REVIEW BY A KNOWLEDGEABLE LICENSED CONTRACTOR. THAT WHICH FOR ANY REASON WERE NOT RESOLVED DURING THE THE WORK PROGRESSES IN ORDER TO IDENTIFY ANY SIGNIFICANT ERRORS AND OMISSIONS AND TO ASCERTAIN ALL NECESSARY INFORMATION BEFORE PROCEEDING WITH THE AFFECTED WORK, AND ASSUMES THE RISK OF ANY AND ALL LOSS, INCLUDING DELAY, WHICH MAY BE CAUSED OR CONTRIBUTED TO BY THE FAILURE TO ASCERTAIN CORRECT OR NECESSARY INFORMATION IN A TIMELY MANNER

ALL TRADES SHALL. AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR

- RUBBISH CAUSED BY THEIR WORK, AND AT THE COMPLETION OF THE WORK SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE JOBSITE AND ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS, AND SHALL LEAVE THE JOB BROOM CLEAN, INCLUDING REMOVING ALL LABELS, STICKERS, PAINT SMEARS, ETC..., FROM LIGHTING
- 6. EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED OR SHOWN ON THE PLANS, WORKMANSHIP & MATERIALS SHALL CONFORM. TO THE LATEST EDITION OF THE C.B.C. OR LOCAL CODE.
- 7. THE PLANS SHALL BE REVIEWED FOR DIMENSIONAL & EXISTING SITE CONFORMANCE WITH THE PLANS BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE ARCHITECT & ENGINEER SHALL BE NOTIFIED OF ANY
- 3. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD: AND ALL QUESTIONS AS TO DIMENSIONS AND FIELD CONDITIONS SHALL BE RESOLVED BEFORE THE AFFECTED WORK PROCEEDS. NO DIMENSIONS SHALL BE OBTAINED BY SCALING THESE PLANS.
- 3. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR DIMENSIONS AND CONDITIONS OF THE JOB.
- 10. THE PRECISE DIMENSIONS AND LOCATIONS OF ALL DOOR, WINDOW AND ROOF OPENINGS SHALL BE DETERMINED FROM DRAWINGS AND OTHER FLOOR, WALL OPENING REQUIRED BY MECHANICAL OR ELECTRICAL SHALL BE VERIFIED FROM SHOP DRAWINGS, EQUIPMENT DATA SHEETS, ETC. AS REQUIRED.
- 11. ITEMS IDENTIFIED BY TRADE NAMES MAY BE SUBSTITUTED BY APPROVED EQUALS. 12. NOTES & DETAILS ON DRAWINGS SHALL PRECEDE THESE GENERAL NOTES.
- 13. PROVIDE ANY SHORING & OR BRACING PRIOR TO REMOVING EXISTING WALLS. BEAMS, OR SUPPORTS FOR CONSTRUCTION. REMOVE SHORING ONLY WHEN NEW SUPPORTS ARE IN PLACE AND SECURED.
- 14. PROVIDE RED HEADS INTO EXISTING CONCRETE AT ALL SHEAR WALLS PER MFG. SPECIFICATIONS. SEE SHEAR WALL SCHEDULE FOR SIZE AND SPACING.
- 15. PROVIDE SIMPSON ST-6224 BETWEEN NEW WALLS AND EXISTING WALLS AT THE DOUBLE TOP PLATE. 16. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON DRAWINGS AND PROTECT
- THEM FROM DAMAGE 17. DO NOT CUT POST TENSION SLABS. CONTRACTOR TO DETERMINE EXISTING CONDITIONS PRIOR TO START OF
- CONSTRUCTION.
- 18. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS FOR FOOTING, BEAMS AND JOISTS, SIZES, LOCATIONS, ETC., AND SHALL NOTIFY THE ARCHITECT & ENGINEER OF ANY DISCREPANCIES.
- 19. DOWEL NEW INTO EXISTING SLABS W/#4 REBAR @ 24" O.C. AND FOOTINGS W/ DOWELS TO MATCH NEW REINF. SIZE/

ENGINEERING NOTES

- CONCRETE SLABS ON GRADE HAVE NOT BEEN DESIGNED BY THE STRUCTURAL ENGINEER
- . THE VIBRATIONAL EFFECTS OF MECHANICAL EQUIPMENT HAVE NOT BEEN CONSIDERED BY THE STRUCTURAL

THE DESIGN, ADEQUACY AND SAFETY OF ERECTION, BRACING SHORING, TEMPORARY SUPPORTS ETC., IS THE

SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER.

- HE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING THE ENTIRE COURSE OF CONSTRUCTION. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR FIELD INSPECTION/OBSERVATION OF ALLOWARI F SOILS PRESSURE TO BE A MINIMUM OF 1500 PSF UNLESS A SOILS REPORT IS PROVIDED. SOILS IN THE
- BUILDING AREA & 5 FEET BEYOND SHALL BE COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION PER

REFER TO SOIL REPORT BY

JOB NUMBER

STRUCTURAL SYMBOLS

INDICATES SHEAR WALL. SEE FOUNDATION, FRAMING PLAN AND SHEAR WALL SCHEDULE FOR TYPE, SILL BOLTING, SHTG.. ETC. NOTE: FOR SILL BOLTING AT EXISTING FOOTINGS, USE 5/8"

THREADED RODS W/ SIMPSON "SET-XP" EPOXY 7" MIN. EMB. PER ICC ESR-2508 THE SAME SIZE & SPACING AS CALLED FOR ON PLANS

INDICATES POST (BELOW BEAM) MIN. POST SIZE/TYPE AS FOLLOWS U.N.O

4 X 12 & SMALLER 2-2X4 W/16d NAILS @ 12" O.C. 4 X 14 & LARGER

6 X 12 & LARGER 6X6 SEE HOLDDOWN DETAILS AND TYPICAL WALL FRAMING FOR FURTHER POST SIZE REQUIREMENTS. POSTS ARE TO CONTINUE DOWN TO FOUNDATION

FOUNDATION NOTES GENERAL

(SEE NOTE 12 FOR A.B. LENGTH.)

- . SOIL BENEATH FOOTINGS AND SLABS SHALL BE COMPACTED PER 2010 C.B.C. (90%) RELATIVE COMPACTION
- DRAWINGS BELOW UNDISTURBED SOIL OR COMPACTED EARTH. PROVIDE 1-#4 HORIZONTAL BARS ON TOP AND BOTTOM U.N.O. ON FOUND. PLAN. 3. ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED TO BE 1500. PSF IF NO SOILS REPORT IS PROVIDED.

2. CONTINUOUS FOOTINGS AND GRADE BEAMS SHALL BE EXCAVATED TO THE DEPTH SHOWN ON THE

- I. SLAB ON GRADE: 4 INCH. NET CONCRETE SLAB WITH #3 BARS @ 18" O.C. EACH @ CENTER OF SLAB OVER 2 INCH. OF SAND OVER 6 MIL. VISQUEEN OVER 2" SAND BED OVER COMPACTED SOIL. U.N.O. 5. NO TRENCHES OR EXCAVATIONS FIVE FEET IN DEPTH OR GREATER INTO WHICH A PERSON SHALL BE REQUIRED TO DESCEND SHALL BE MADE WITHOUT PROPER PERMIT.
- S. THE MINIMUM BOLTING FOR SILL PLATES TO FOUNDATION SHALL BE AS FOLLOWS: 5/8" DIAMETER ANCHOR BOLTS WITH 7" MIN EMBEDMENT IN CONCRETE WITH SPACING. NO GREATER THAN 4 FEET O.C. NOR FURTHER THAN 12" FROM CORNERS (MIN 2 BOLTS PER PIECE). SEE THE FOUNDATION PLAN & SHEAR WALL SCHEDULE FOR FURTHER BOLTING REQUIREMENTS. (FOR TWO POUR SYSTEMS, BOLTS SHALL BE EMBEDDED 4 INCH MIN. INTO FIRST POUR.)
- 7. PIPES OR DUCTS THAT EXCEED ONE THIRD THE SLAB OR CONC. WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONC. UNLESS SPECIFICALLY DETAILED. SEE MECHANICAL AND/OR ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES, ETC.
- R PIPES MAY PASS THRU STRUCTURAL CONC. IN SLEEVES, BUT SHALL NOT BE. EMBEDDED THEREIN 9. PROVIDE 3/4" CAMBERS AT ALL EXPOSED CORNERS.
- 0. SEE ARCHITECTURAL PLANS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE CAST IN CONCRETE, AND FOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS 1. LOCATION OF POUR JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.

- 1. UNLESS OTHERWISE NOTED ON PLANS, CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI IN 28 DAYS
- 2. FINE & COURSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, USE 3000 P.S.I. CONC. @ GRADE BEAMS, CEMENT SHALL CONFORM TO A.S.T.M. C-150 (STANDARD BRAND PORTLAND CEMENT) TYPE II (USE TYPE V CEMENT IF NOTED IN SOILS REPORT)
- 3. CONCRETE SHALL BE MACHINE-MIXED USING A MAXIMUM OF '7' GALLONS OF WATER PER SACK OF CEMENT. READY MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94 MIXED AT A RATE OF 5 SACKS OF CEMENT PER CUBIC YARD MAXIMUM SI LIMP SHALL BE 4 INCH AS MEASURED BY THE ASTM "STANDARD METHOD OF TESTING FOR SLUMP OF PORTLAND CEMENT
- 4. DRY PACK SHALL CONSIST OF 1 PART CEMENT, 4 PARTS SAND. BASED ON DRY LOOSE VOLUMES AND NOT LESS THAN 1/4 PART, NOR MORE THAN 1/2 PART, LINE PUTTY OR DRY HYDRATED LIME. DRY PACK SHALL OBTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. 5. ADDING CALCIUM CHLORIDE TO CONCRETE OR GROUT IS NOT PERMITTED.
- 6. CONC. SHALL BE KEPT MOIST FOR 10 DAYS FOR PROPER CURING.

EQUIREMENTS FOR CONCRETE EXPOSED TO SULFATE-CONTAINING SOLUTIONS (ACI 4.3 WATER-CEMENT

STRENGTH NEGLIGIBLE NOT REGULATED 2500 psi MODERATE 4000 psi

CONCRETE BLOCK MASONRY

- I. CONCRETE BLOCK SHALL CONFORM TO A.S.T.M. C-90 MED. WT. GRADE N UNITS. WITH MIN. COMP STRENGTH OF 1500 PSI. ALL CMU BLOCKS SHALL BE LAID UP IN RUNNING OR COMMON BOND
- 2. MORTAR SHALL CONFORM TO ASTM C-270, TYPE S, WITH MINIMUM COMPRESSIVE STRENGTH OF 2000. PSI AT 28 DAYS.

MIX: 1 PART PORTLAND CEMENT 1/2 PART LIME PUTTY. BY VOLUME 4 PARTS SAND.

3. GROUT SHALL CONFORM TO ASTM C-476, WITH MINIMUM COMPRESIVE STRENGTH OF 2000. PSI AT

MIX: 1 PART PORTLAND CEMENT. BY VOLUME 3 PARTS SAND 2 PARTS PEA GRAVEL

WATER SUFFICIENT TO ALLOW GROUT TO FLOW INTO ALL JOINTS.

STOPPING GROUT 1-1/2 INCH BELOW THE TOP OF THE BLOCK.

- 4. CELLS SHALL BE IN VERTICAL ALIGNMENT TO PROVIDE A MIN. UNOBSTRUCTED CORE OF 3" X 3" DOWELS FROM FOOTINGS SHALL BE SET TO ALIGN WITH CORE REINFORCING. 5. ALL CELLS BELOW FINISHED GRADE AND ALL CELLS WITH REINFORCING, ANCHORS OR INSERTS SHALL BE FILLED SOLID WITH GROUT.
- 6. CONCRETE SURFACES SHALL BE CLEANED OF ALL LAITANCE PRIOR TO SETTING OF BLOCKS. 7. PROVIDE VERTICAL CONSTRUCTION JOINTS AT 40 FT. O.C.
- 3. MINIMUM LAP FOR ALL STEEL IS 40 BAR DIAMETER, OR 24 INCHES, WHICHEVER IS GREATER. eta. IF WORK IS STOPPED FOR ONE HOUR OR LONGER, PROVIDE HORIZONTAL CONSTRUCTION $\;\;$ JOINTS BY
- IO. CLEANOUT OPENINGS MUST BE PROVIDED IN CMU WALLS WHICH ARE TO BE HIGH LIFT GROUTED. (OVER 4 FEET).AT BOTTOM COURSE. IN SOLIÓ GROUTED WALLS CLEANOUTS MUST BE PROVIDED AT NO MORE THAN 32 INCHES ON CENTER FOR PARTIALLY GROUTED WALLS CLEANOUTS SHALL BE PROVIDED NO MORE THAN 48 INCHES O.C. WHEN

CLEANOUTS ARE REQUIRED, THEY SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.

REINFORCING STEEL

1. REINFORCING STEEL, #3 AND #4 GRADE 40, #5 AND LARGER GRADE 60 PER A.S.T.M. A615.

2. LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS. 3. BARS NOTED AS "CONT" TYPICAL WALL REINFORCING AND VERTICAL COLUMN REINFORCING SHALL HAVE A

12. ANCHOR BOLT SPEC.

3X SILL

BOLT LENGTH

12" 16"

14"

SINGLE POUR DOUBLE POUR

- MINIMUM SPLICE OF 50 BAR DIAMETERS LAP IN MASONRY OR 40 BAR DIAMETERS MINIMUM IN CONCRETE. 4. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. OTHER SPLICES SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
- 5. SPLICES IN ADJACENT HORIZONTAL WALL REINFORCING BARS SHALL BE STAGGERED 4 FEET UNLESS OTHERWISE NOTED.
- 6. PROVIDE DOWELS IN FOOTINGS AND/OR GRADE BEAMS THE SAME SIZE AND NUMBER AS VERTICAL WALL OR COLUMN REINFORCING. DOWELS SHALL HAVE A MINIMUM PROJECTION EQUAL TO STANDARD LAP SPLICE
- 7. ALL REINFORCING, ANCHOR BOLTS, AND OTHER INSERTS SHALL BE SECURED IN PLACE PRIOR TO PLACEMENT OF CONCRETE OR GROUTING OF MASONR
- 8. PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVERING OF CONCRETE: BELOW GRADE (UNFORMED) 3" CLEAR BELOW GRADE (FORMED) 2" CLEAR COLUMNS 1.5" CLEAR BEAMS AND GIRDERS 1.5" CLEAR

STRUCTURAL SLAB

(ABOVE GRADE) 3/4" CLEAR 9. #5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL OF THE STRUCTURAL

GRADING NOTES

1. A GRADING PERMIT SHALL BE OBTAINED PRIOR TO ANY GRADING

2. ALL FILL ONE FOOT & GREATER SHALL BE CERTIFIED AND TESTED AS TO RELATIVE COMPACTION PER U.B.C. 3. ALL FILL SHALL BE COMPACTED IN ACCORDANCE WITH ASTM D-1557, TO MAXIMUM OF 90% DENSITY. 4. ALL UTILITY TRENCH BACKFILLS SHALL BE IN ACCORDANCE WITH THE SOILS ENGINEER'S

STRUCTURAL STEEL

- I. STRUCTURAL STEEL SHALL CONFORM TO ASTM A36,(Fy=36.KSI) FOR PLATES AND TO ASTM A992,(Fy=50.KSI) FOR W-SHAPE STEEL SECTIONS.
- 2. CORTEN STEEL SHALL CONFORM TO ASTM A588, Fy=50. KSI.

TENSILE BOLTS SHALL CONFORM TO ASTM A325 OR A490.

- 3. STAINLESS STEEL SHALL CONFORM TO ASTM A276 TYPE 304-HOT ROLLED, Fy=18. KSI. 4. FABRICATION, ERECTION & PAINTING SHALL COMPLY WITH THE AISC SPECS. CHAPTER M.
- 5. ALL BOLTS FOR STEEL MEMBERS SHALL CONFORM TO ASTM A325 OR A490, UNLESS OTHERWISE NOTED. 6. HIGH TENSILE BOLTS WHERE INDICATED ON THE PLANS OR DETAILS SHALL BE THE FRICTION TYPE AND HERE SHALL BE NO PAINT, OIL, LAQUER, OR GALVANIZING BETWEEN THE CONTACT SURFACES. HIGH
- . HIGH STRENGTH BOLTS SHALL HAVE LOAD INDICATOR WASHERS TO SERVE AS A DIRECT TENSION INDICATOR INSTALLATION FOR HIGH STRENGTH BOLTS SHALL REQUIRE INSPECTION BY A DEPUTY
- 3. ANCHOR RODS SHALL BE ASTM F-1554 GRD. 55 KSI U.N.O. ALL ANCHOR RODS SHALL BE. HEADED RODS.ANCHOR ROD WASHER SHALL BE ASTM A436. NUTS SHALL BE ASTM A563. 9. PIPE COLUMNS SHALL CONFORM TO ASTM A-53 GRADE B.
- 10. STEEL TUBE SHAPED MEMBERS SHALL CONFORM TO ASTM A-501 OR OR A-500 GRADE B. I1. WHERE FINISH IS ATTACHED TO STRUCTURAL STEEL, PROVIDE HOLES FOR 1/2" WELDED STUDS AT 4 FEET O.C. FOR THE ATTACHMENT OF NAILERS. SEE ARCHITECTURAL DRAWINGS FOR FINISHES.
- 12. OPEN WEB JOISTS SHALL COMPLY WITH THE STANDARDS OR "THE STEEL JOIST INSTITUTE". 13. STEEL STUDS. JOIST, TRACKS & BRIDGING:
- ASTM A-570 GRADE "E" Fy = 50 KSI 12, 14 & 16 GA. ASTM A-570 GRADE "C" Fy = 33 KSI 18 & 20 GA.

AUTHORITY USING ARC PROCESS WITH E70XX ELECTRODES.

4. SPECIAL INSPECTION OF HIGH-STRENGTH A325 AND A490 BOLTS SHALL BE IN ACCORDANCE WITH APPROVED NATIONALLY RECOGNIZED STANDARDS AND REQUIREMENT OF SECTION 1701. 15. SHOP DRAWINGS SHALL BE PROVIDED TO ENGINEER OR ARCHITECT OF RECORD FOR REVIEW PRIOR TO FABRICATION.

- 1. WELDING SHALL BE DONE BY THE ELECTRIC SHIELDED ARC PROCESS W/E70-XX ELECTRODES AND SHALL COMPLY WITH A.W.S. SPECIFICATIONS FOR WELDING AND FABRICATION. 2. WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS WHO ARE APPROVED BY THE LOCAL
- 3. ALL FIELD WELDS SHALL HAVE CONTINUOUS INSPECTION PER CBC (1701) UNLESS OTHERWISE NOTED. 4. ALL BUTT WELDS SHALL BE FULL PENETRATION U.N.O.
- 5. A CERTIFICATE OF FABRICATION FROM THE SHOP PERFORMING WELDING OR A REPORT FROM THE SPECIAL INSPECTOR MUST BE FURNISHED TO THE JOB INSPECTOR PRIOR TO FRAMING APPROVAL 6. WELDED, FULLY RESTRAINED CONNECTION BETWEEN MEMBERS OF ORDINARY MOMENT FRAMES OR

SPECIAL MOMENT-RESISTING FRAMES SHALL HAVE SPECIAL CONTINUOUS INSPECTION AND

CONNECTION TESTED BY NONDESTRUCTIVE METHODS PER SECTION 1703.

7. FIELD WELDING OF REINFOCING STEEL SHALL BE DONE BY WELDERS SPECIFICALLY CERTIFIED FOR REINFORCING STEEL WELDING .BEFORE WELDING, THE "CARBON EQUIVALENT" (CE) OF STEEL SHALL BE DETERMINED. IF THE (CE) OF STEEL IS MORE THAN 0.75%, THEY SHALL NOT BE WELDED.

01 PLYWOOD DIAPHRAGM

1. FRAMING SHALL COMPLY WITH CHAPTER 23 OF THE 2010 CBC

FRAMING-GENERAL

- 1. USE SIMPSON U-HANGERS ON ALL JOIST/BEAM/BEAM CONNECTIONS UNLESS NOTED ON PLANS.
- 2. ALL POSTS SHALL HAVE SIMPSON "PC" CONNECTORS AT TOP AND SIMPSON "BC" OR "BCO" CONNECTORS AT 3. ALL CONNECTING HARDWARE, JOIST HANGERS, TIE STRAPS, ETC., SHALL BE SIMPSON "STRONG TIE" UNLESS
- 4. FRAMING @ CHIMNEY ENCLOSURE SHALL BE 2x6 STUDS BALLOON FRAMED W/APPROVED STRAPS TO ROOF AND FLOOR DIAPHRAGMS.

FRAMING - WALL

- 1. SIZE, SPACING & HEIGHT LIMITS FOR WOOD STUDS ARE AS FOLLOWS (UNLESS OTHERWISE NOTED ON
- 2X4 @ 16" OC (BEARING WALL) SUPPORTING A MAXIMUM OF ONE FLOOR AND ONE ROOF SHALL HAVE A 2X4 @ 16" OC (NON-BEARING WALL) SHALL HAVE A MAXIMUM HEIGHT OF 14 FEET 2X6 @ 16" OC (BEARING WALL) SUPPORTING A MAXIMUM OF TWO FLOORS AND A ROOF SHALL HAVE A MAXIMUM
- 2X6 @ 16" OC (NON-BEARING WALL) MAXIMUM HEIGHT IS 20 FEET 2. RAKE WALLS ADJACENT TO SLOPED CEILINGS SHALL BE BALLOON FRAMED. DOUBLE TOP PLATES SHALL
- ALWAYS BE SUPPORTED BY A ROOF OR CEILING DIAPHRAGM 3. SHEAR WALL PANELS MUST BE CONTINUOUS TO THE TOP PLATE AT ROOF FRAMING. SHEATHING SHALL HAVE ALL EDGES BLOCKED & THE APPROPRIATE SHEAR TRANSFER THRU CEILING OR SOFFIT FRAMING.
- 4. BORING AND NOTCHING OF WALL STUDS SHALL BE PER CBC (2308.9) NOTCHING MAXIMUM: 25% OF WIDTH OF STUDS ON BEARING WALLS
- 40% OF WIDTH OF STUDS ON NON-BEARING WALLS BORING MAXIMUM: 40% OF WIDTH OF STUDS ON BEARING WALLS 60% OF WIDTH OF STUDS ON NON-BEARING WALLS
- NOTE: A MIN. 5/8" CLEARANCE FROM EDGE OF STUD TO HOLE SHALL BE PROVIDED. 5. DOUBLE 2X TOP PLATE SHALL BE LAPPED 48" AT ALL SPLICES AND SHALL OVERLAP AT CORNERS.
- 6. WALL BRACING SHALL BE PROVIDED PER CBC (2308.9.3) 7. HARDY FRAMES INSTALLATION PER MFR. SPECIFICATION (ICC ESR-2089)
- 8. STRONG WALL INSTALLATION PER MFR. SPECIFICATION (ICC-ESR-1267)

- I. FLOOR SHEATHING (MIN) 5/8" STRUCTURAL I T & G PLYWOOD PANEL INDEX NO. 32/16 WITH EXTERIOR GLUE. USE 10d COMMON NAIL'S AT 6" OC AT ALL EDGES, BOUNDARIES, AND 10" O.C. FIELD. NO BLOCKING IS REQUIRED
- UNLESS NOTED ON PLAN. ALL EDGES BLOCKED AT DECKS. 2. PROVIDE DOUBLE FLOOR JOISTS UNDER ALL PARALLEL NON- BEARING PARTITIONS.
- 3. PROVIDE CONTINUOUS BLOCKING BETWEEN FLOOR JOISTS UNDER BEARING WALLS WHICH ARE 4. FRAMING AROUND OPENINGS: TRIMMER AND HEADER JOISTS SHALL BE DOUBLED AND SUPPORTED BY HANGERS PER (CBC 2320.12.5).

- . ROOF SHEATHING (MIN) 15/32" STRUC. I PLYWOOD SHEATHING PANEL INDEX NO. 32/16 WITH EXTERIOR GLUE. USE 8d COMMON NAILS AT 6" OC AT ALL EDGES, BOUNDARIES, AND 12" OC FIELD. NO BLOCKING IS REQUIRED UNLESS NOTED ON PLAN
- 2. FRAMING AROUND OPENINGS: TRIMMER AND HEADER JOISTS SHALL BE DOUBLED AND SUPPORTED BY HANGERS PER CODE FRAMING - CEILING (PER TABLE 2308.10.2)
- 1. CEILING JOISTS SHALL BE 2X6 @ 16" O.C. (MAX SPAN= 17'-8") 2. CEILING JOISTS SHALL BE 2X8 @ 16" O.C. (MAX SPAN= 23'-0") FRAMING - JOISTS/RAFTERS

SHALL NOT EXCEED 1/6 OF THE JOIST DEPTH.

1. BORING AND NOTCHING OF JOISTS SHALL BE AS FOLLOWS: (CBC 2308.10) 2010 EDITION BORING- MAX DIA OF HOLE SHALL NOT EXCEED 1/3 OF DRESSED DEPTH OF JOIST WITH A MINIMUM EDGE CLEARANCE OF TWO INCHES.

NOTCHING- MAX NOTCH AT ENDS SHALL NOT EXCEED 1/4 OF DEPTH. NO NOTCHING IS ALLOWED IN

THE CENTER THIRD OF THE JOIST SPAN. MAX NOTCH IN TOP OR BOTTTOM OF THE JOIST

- 2. WHERE THREE OR MORE (MULTI JOISTS) ARE USED, THE JOISTS SHALL BE BOLTED TOGETHER WITH 1/2" DIA. MACHINE BOLTS W/ WASHERS AT 24" OC STAGGERED. BOLTS SHALL BE RETIGHTENED PRIOR TO
- 3. JOISTS/RAFTERS SHALL LAP AT SPLICES A MIN. OF 4 INCHES WITH 3-16d NAILS OR USE SIMPSON ST 2115 @ 4. CROSS BRIDGING OR 2X BLDG. SHALL BE PROVIDED @ 8'-0" O.C. MAX. FOR ALL JOISTS AND RAFTERS MORE THAN 8" IN DEPTH.
- 5. 2X SOLID BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS. 1. MINIMUM GRADIENTS ARE AS FOLLOWS: EARTH= 2%, PAVING= .5%
- 2. POSITIVE DRAINAGE AWAY FROM STRUCTURES SHALL BE AS FOLLOWS: 2% MIN. TO 21% MAX SWALES TO BE 3 FEET MIN. AWAY FROM STRUCTURES.

02 NAILING SCHEDULE

- FRAMING-BOLTING 1. ALL BOLTS BEARING ON WOOD SHALL HAVE WASHERS UNDER HEAD OR NUT. SEE S.W. SCHEDULE. 2. ALL BOLTS SHALL BE RETIGHTENED, PRIOR TO APPLICATION OF PLYWOOD, PLASTER, ETC.
- 4. FASTENERS IN PRESSURE-TREATED AND FIRE-RETARDANT, TREATED WOOD SHALL BE OF HOT-DIPPED.ZINC-COATED GALVANIZED STEEL.STAINLESS STEEL.SILICON BRONZE OR COPPER.
- I. ALL LUMBER SHALL BE DOUGLAS FIR-LARCH OR THE FOLLOWING GRADES UNLESS OTHERWISE NOTED (MAX MOISTURE CONTENT SHALL NOT EXCEED 19% & GRADED IN ACCORDANCE WITH THE

3. HOLES FOR BOLTS SHALL BE BORED 1/32" TO 1/16" LARGER THAN NOMINAL BOLT DIAMETER

- (WEST COAST LUMBERMAN'S ASSOCIATION.) REPETITIVE USE MEMBERS
- STUDS & PLATES NO. 2 JOISTS & RAFTERS: 2X4 TO 4X4 INCLUSIVE
- 2X6 TO 3X16 INCLUSIVE SINGLE USE MEMBERS
- 6X OR LARGER No. 1 POSTS & MULLION: 4X4 & SMALLER 6X6 & LARGER
- BLOCKING, FURRING, ETC. No. 3 **DECKING & SHEATHING** 2X, 3X, 4X CONST. GRADE
- 2. ALL WOOD BEARING ON CONCRETE OR MASONRY IF LESS THAN 4 FEET FROM GRADE SHALL BE PRESSURE TREATED DOUG. FIR. GLUED-LAMINATED WOOD BEAMS SHALL BE DOUGLAS FIR COMB. 24F-V4 (*) DF/DF (Fb=2400 PSI, Fv=165 PSI, E=180,000 PSI) INDUSTRIAL APPEARANCE WITH EXTERIOR GLUE UNLESS OTHERWISE NOTED ON PLANS, A CERTIFICATE OF INSPECTION FOR EACH GLU-LAM BEAM FROM AN APPROVED TESTING
- AGENCY TO BE SUBMITTED AND APPROVED BY THE BUILDING DEPT. PRIOR TO ERECTION. (*) USE V8 FOR CANT. BEAMS AND V4 FOR SIMPLE SPANS BEAMS] 4. SHOP DRAWING SHALL BE PROVIDED TO ENGINEER OR ARCHITECT OF RECORD FOR REVIEW PRIOR
- 5. ALL STRUCTURAL PLYWOOD SHALL BE IN ACCORDANCE WITH (PS 1-95)

PARALLAM PSL PER TRUS JOIST MACMILLAN (ICC ESR-1387) (Fb= 2900 PSI, Fv=290 PSI, E= 2,000,000 PSI)

TJI JOISTS INSTALLATION PER MANUFACTURE SPECIFICATION (ICC ES ESR-1153 AND ICC ES ESR-1387)

6. INSPECTION OF LATERAL FORCE RESISTING ELEMENTS.

AND THEIR POSITION(S) IN THE ORGANIZATION."

SPECIAL INSPECTION (PER CBC SECTION 1704,1706 & 1707) . SPECIAL INSPECTION BY A REGISTERED DEPUTY BUILDING INSPECTOR, APPROVED BY THE ARCHITECT AND THE CHECKING AGENCY, SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS. SPECIAL INSPECTIONS SHALL NOT BE REQUIRED WHEN THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND

APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

ITEMS REQUIRE SPECIAL INSPECTION AS MARKED:

- VERIFICATION & INSPECTION CONTINUOUS PERIODIC STRUCTURAL EPOXY BOLTING 2a: FIELD WELDING OF MOMENT RESISTING STEEL FRAMES. ___ 2b: STRUCTURAL STEEL OR REINFORCING 2c: STEEL DECKING. 2d: SHEAR CONNECTORE PLACEMENT OF REINFORCING STEEL IN CMU WALL. 4. HIGH STRENGTH BOLTING . EXPANSION TYPE ANCHOR BOLTS 6. HIGH STRENGTH BOLTIN CONCRETE WHERE CONCRETE STRENGTH OF 3000 PSI OR GREATER IS SPECIFIED D. WOOD SHEAR WALLS AND WOOD DIAPHRAGMS NAILING. . WOOD STRUCTURAL PANEL SHEATHING . NOMINAL SIZE OF FRAMING MEMBERS AT PANEL EDGES . NAIL OR STAPLE DIAMETER AND LENGTH. 5. FOUNDATION -ANCHOR BOLT AND HOLD DOWN
- "CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR OR SUB-CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE WIND AND/OR SEISMIC RESISTING SYSTEM THAT IS LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK REQUIRING SPECIAL INSPECTION.
- THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING 1) ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL;
 3) PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS; B) PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS;

4) IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL

CONTINUOUS FOOTING CEILING JOIST COLUMN CONCRETE CONTINUOUS CEILING DOUBLE DOUGLAS FIR DIAMETER DITTO EXISTING FACH WAY EXPANSION JOIN EDGE NAIL EQUAL FLOOR BEAM FINISH GRADE FLOOR JOIST FACE OF CONCRETE FACE OF MASONRY FACE OF STUDS FULL PENETRATION FOOTING GALVANIZED GLUE-LAMINATED BEAM GRADE BEAM GYPSUM WALLBOARD HEADER

ANCHOR BOLT

BOUNDARY NAIL

BOTH WAYS

ABOVE REINF. BAR

BOARD

BELOW

BEAM

BLOCKING

ABV. BAR BD BLKG. BLW.

B.W. CONT.FTG.

FTG

GRD. BM.

GWB

HNGR. HORIZ.

REQ'D.

HANGER HORIZONTAL

KING POST

LIGHT WEIGHT

MACHINE BOLT

ON CENTER

POST ABOVE

RIDGE BEAM

REQUIRED

ROOF

TYPICAL

THESE DRAWINGS AND SPECIFICATIONS AS

NOT INTENDED TO, NOR DO THEY, DETAIL ALL

TO PROVIDE ENOUGH INFORMATION ABOVE AND BEYOND THESE DRAWINGS, TO

COMPLETE THE PROJECT IN CONFORMANCE

INSTRUMENT OF SERVICE ARE PROVIDED

COMBINED WITH OTHER PLANS AND

SPECIFICATIONS TO OBTAIN BUILDING

CONDITIONS, IDENTIFY ALL MATERIALS

THE BUILDER ASSUMES RESPONSIBILITY

TO SELECT ALL MATERIAL AND ALL

WITH ALL GOVERNING AGENCIES.

REINFORCING

ROOF RAFTER

THREADED ROD

PI YWOOD

MICRO=LAM BEAM

NATURAL GRADE

PARALLAM PSL BEAM

PRESSURE TREATED

LAMINATED VENEER LUMBER

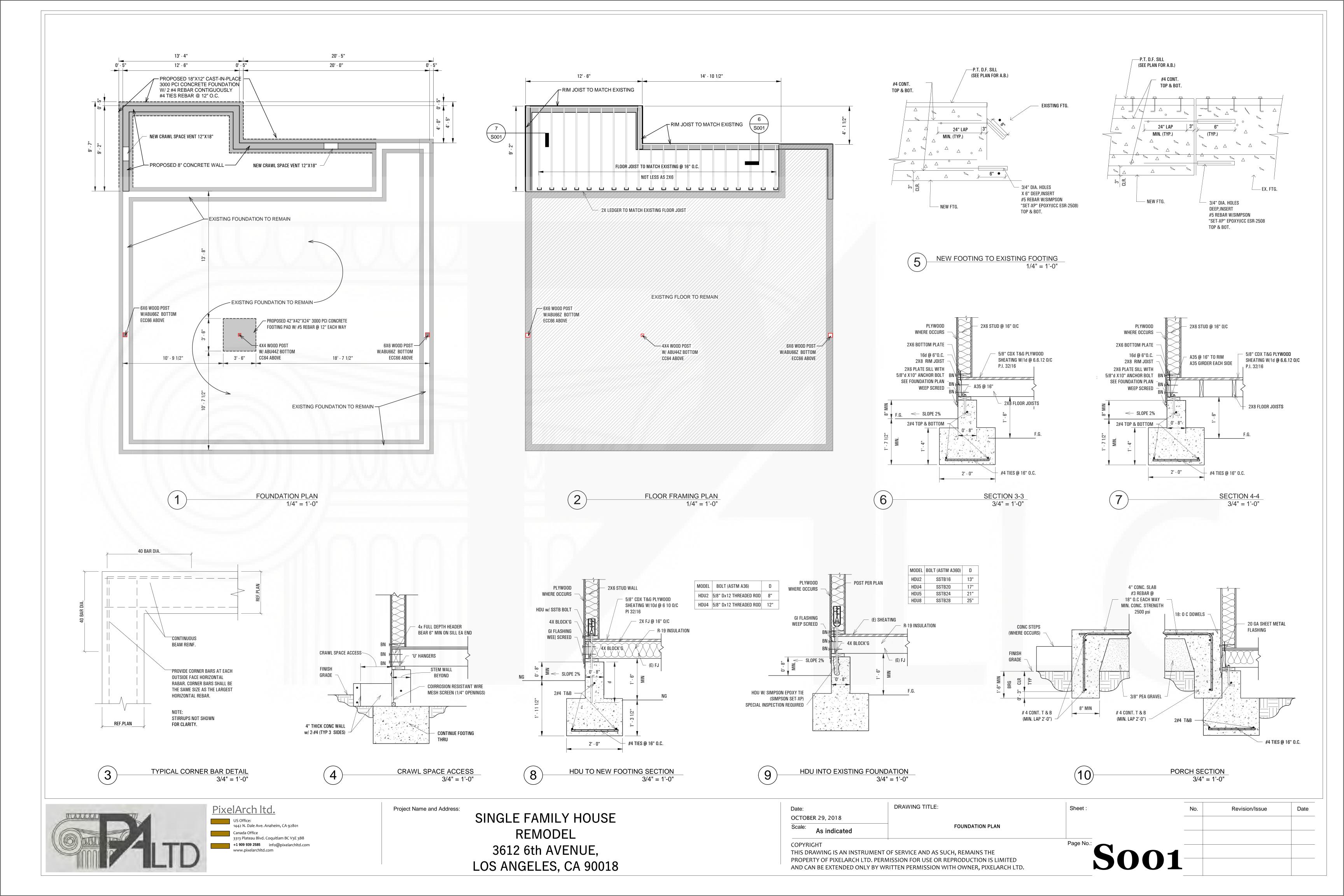
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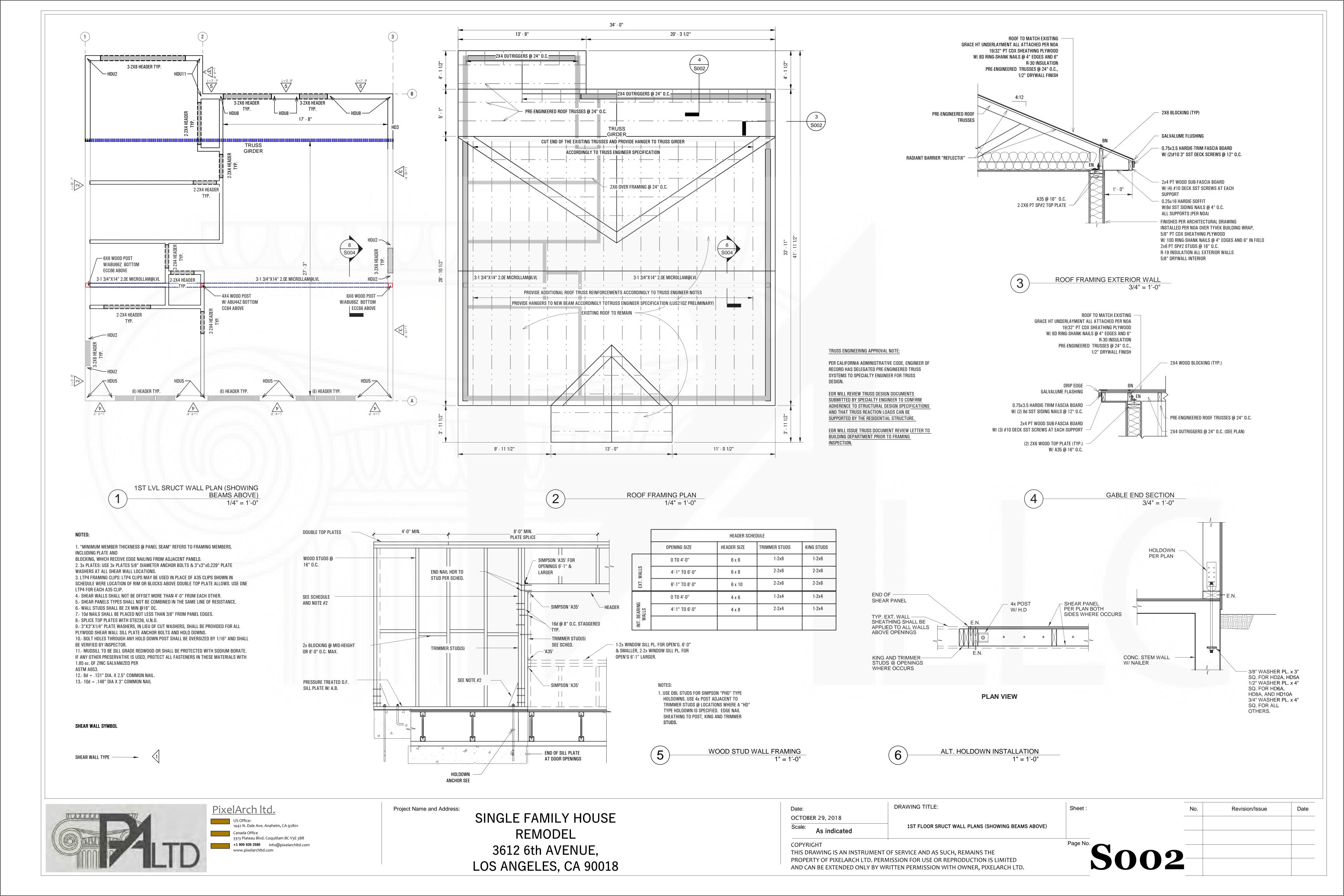
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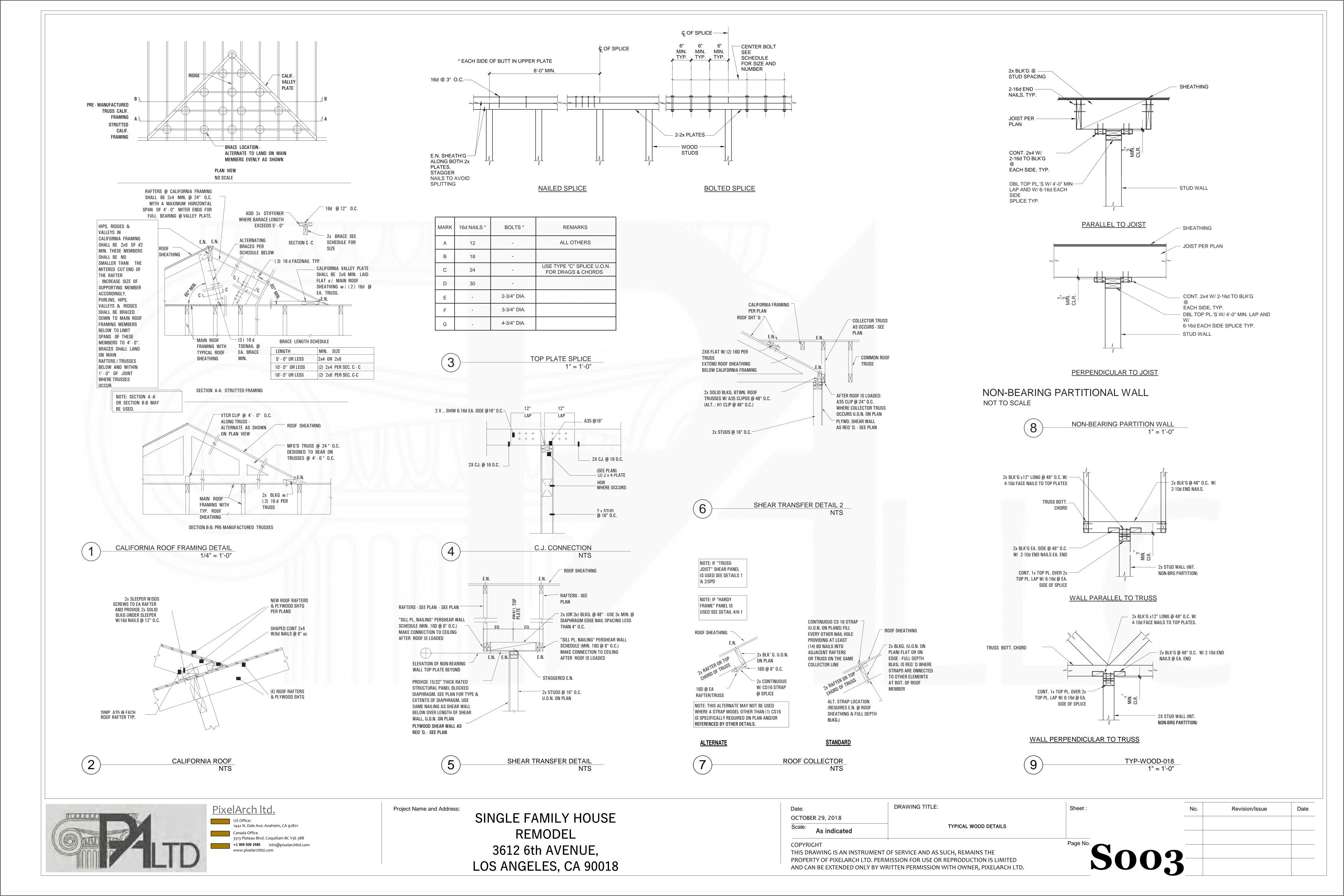
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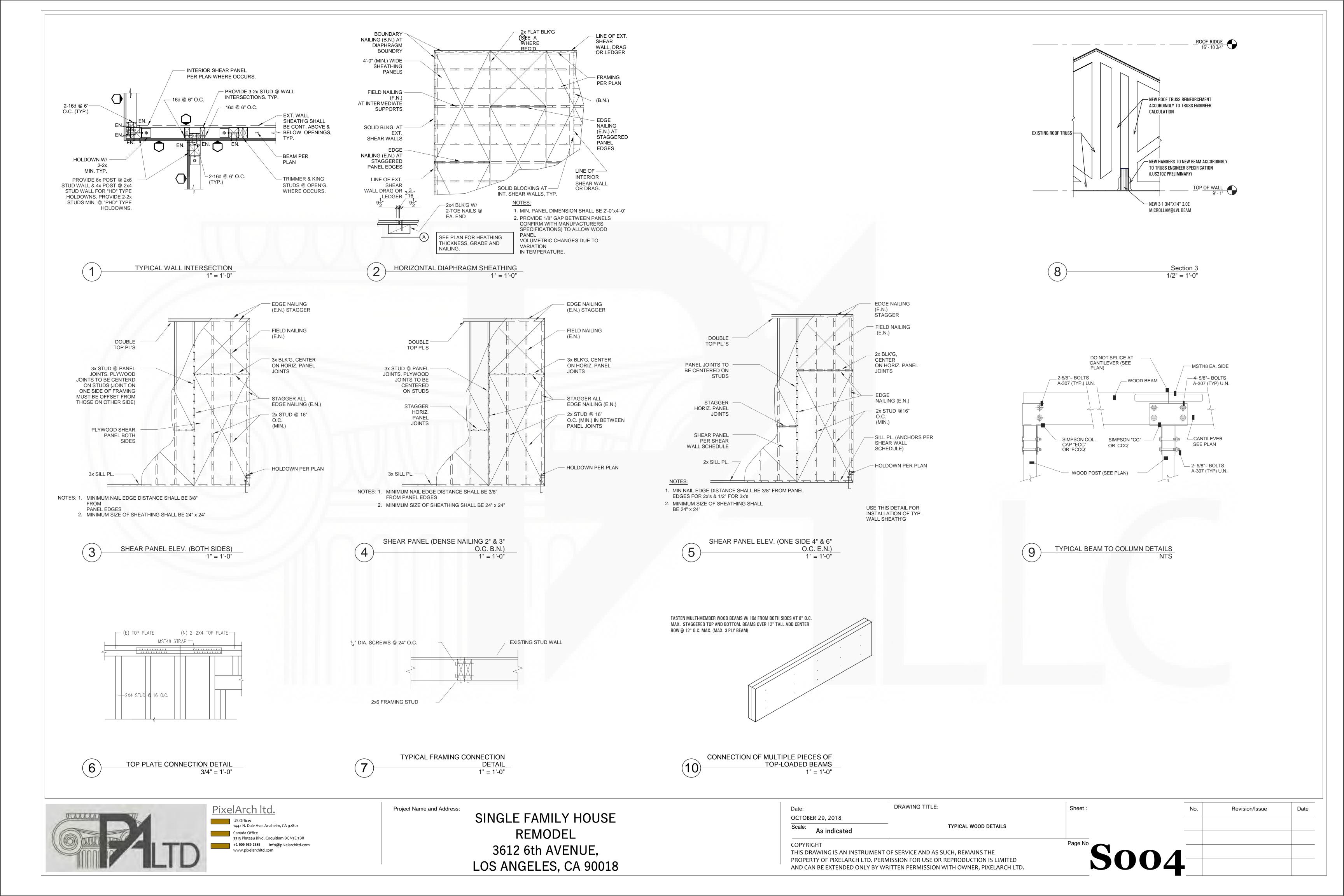
SHEET TITLE:

GENERAL NOTES









MEP DESIGNS

SINGLE FAMILY HOUSE REMODEL

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NEC considerations:

- 210.12Arc-Fault Circuit-Interrupter Protection. Arc fault circuit—interrupter protection shall be provided as required in (210.12A) and (B). The arc-fault circuit interrupter shall be installed in a readily accessible location
- (A) Dwelling Units. All -120volt, single phase -15, and -20ampere branch circuits supplying outlets or devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected as described by), 3), (2), (1(or)4(
-)1(A listed combination type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit.
-)2(A listed outlet branch circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit where all of the following conditions are met:
- a. The branch circuit over current protection device shall be a listed circuit breaker having an instantaneous trip not exceeding 300 amperes
- The branch circuit wiring shall be continuous from the branch circuit overcurrent device to the outlet branch circuit arc-fault circuit interrupter
- The maximum length of the branch circuit wiring from the branch circuit overcurrent device to the first outlet shall not exceed 15.2m 50(ft) for a 14AWG or 21.3m 70(ft) for a 12AWG conductor— d. The first outlet box in the branch circuit shall be identified
- (1) A listed outlet branch circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit where the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet is installed using RMC, IMC, EMT, Type MC, or steel armored Type AC cables meeting the requirements of
- 250.118 and using metal outlet and junction boxes.
- (2) A listed outlet branch circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit where the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet is installed using a listed metal or nonmetallic conduit or tubing encased in not less than 50mm 2(in.) of concrete.

NEC considerations:

- 406.12 Tamper Resistant Receptacles.
- (A) Dwelling Units. In all areas specified in , 210.52all non-locking-type -125volt-15, and -20ampere receptacles shallbe listed tamper-resistant receptacles.
- Guest Rooms and Guest Suites of Hotels and Motels. All non-locking-type -125volt- 15, and -20ampere receptacles located in guest rooms and guest suites of hotels and motels shall be listed tamper—resistant receptacles.
- Child Care Facilities. In all child care facilities, all non-locking-type -125volt-15, and -20ampere receptacles shall be listed tamper-resistant receptacles.
- Exception to (A), (B), and (C): Receptacles in the following locations shall not be required to be tamper-resistant
- (1) Receptacles located more than 1.7m 1/2 5(ft) above the floor.
- Receptacles that are part of a luminaire or appliance.
- A single receptacle or a duplex receptacle for two appliances located within dedicated space for each appliance that, in normal use, is not easily moved from one place to another and that is cord-and-plug connected in accordance with (400.7A), (6)(A), 7)(or (A) 4). (8)(Non-grounding receptacles used for replacementsas permitted in (406.4D) (2) (a).

	Electrical plans
Sheet No.	Issue
E00	Legends, symbols and NEC codes
E01	Appliances and Wiring
E02	Lighting circuits
E03	Photometric Data
E04	Photometric studies and FC levels
E05	MDB and DB panel schematics
E06	Grounding service and protections
E07	Data and CATV
E08	Fire Alarm
E09	
E10	
E11	

Note:

- 1. All receptacles are TAMPER RESISTANT RECEPTACLES
- 2. The main disconnector in DP is AFCI
- 3. receptacles in bathrooms are all GFI type

		. —
SYMBOL	DEFINITION	NOTES
	125V DUTLET	20 AMP SINGLE POLE
	110∨ DUTLET	20 AMP two POLE
GFI	110∨ DUTLET	EQUIPED WITH GROUND FAULT INTERRUPTER (TAMPER RESISTANT TYPE)
	220V DUTLET	4 WIRE CONNECTION
WP GFI	EXTERIOR WATERPROOF OUTLET	GROUND FAULT INTERRUPTER
\$	SWITCH	
	WALL MOUNTED LIGHT	
	CEILING LIGHT	
	PANEL	
	METER	
• S.D.	SMOKE DETECTOR	
⊗ _{s/co}	CARBON MONOXIDE/ SMOKE DETECTOR COMBO	BATT, BACK-UP W/ HARDWIRE INTER-CONNECTED SHALL BE A DISTANCE OF NOT LESS THEN 4' FROM WALL
₩ EF	Exhaust fan JACK	
₩H	WATER HEAT. DISCONNECT	IGNITION SOURCE TO BE ELEVATED MIN. 18" AFF.
X	Light mounted Fan	
TV.	TELEVISION JACK	

ELECTRICAL LEGEND

- * LOCATION OF TV JACKS & PHONE OUTLETS & FANS TO BE VERIFIED @ HOMEOWNER PRE-CONSTRUCTION MEETING.
- * ALL RECEPTACLES IN ALL HABITABLE ROOMS TO BE ARC FAULT PROTECTED PER ELECTRICAL PROVISIONS OF FBCR 5TH EDITION (2011).

External water proof

- BATHROOM EXHAUST FAN TO HAVE MIN. CAPACITY OF 50 CFM INTERMITTENT PER ELECTRICAL PROVISIONS OF SECTION M1507.3 FBCR 5TH EDITION (2011).
- LAUNDRY ROOM RECEPTACLE SHALL BE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL ON FEEDERS WIRING METHOD SHALL BE NON METALLIC CABLE PER ELECTRICAL PROVISIONS OF FBCR 5TH ED (2011).
- ' ALL RECEPTACLES TO BE TAMPER-RESISTANT TYPE
- *ALL WORK TO COMPLY WITH ELECTRICAL PROVISIONS OF THE FBCR 5TH ED (2011).

TITLE 24 NOTES

VACANCY SENSOR.

LOW-EFFICACY LUMINAIRES ARE

APPROVED VACANCY SENSOR.

E283 COMPLIANCE LABEL, AND

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SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND CEILING.

10. ALL EXHAUST FANS SHALL BE SWITCHES SEPARATELY FROM LUMINAIRES.

11. NO SWITCH SHALL BYPASS DIMMER OR CEC APPROVED VACANCY SENSOR.

Project Name and Address:

2. HIGH-EFFICACY LUMINAIRES SHALL CONSTITUTE MIN. 50% OF TOTAL WATTAGE IN KITCHEN LIGHTING. ADDITIONAL 50-WATTS OF

7. ALL LOW EFFICACY LUMINAIRES LOCATED IN GARAGE, LAUNDRY ROOM, CLOSETS, AND UTILITY ROOMS SHALL BE CONTROLLED BY CEC

8. ALL LOW EFFICACY LUMINAIRES IN AREAS OTHER THAN THOSE LISTED ABOVE SHALL BE CONTROLLED BY DIMMERS OR CEC APPROVED

9. ALL FIXTURES INSTALLED IN INSULATED CEILINGS MUST BE C-RATED & LABELED, AND OF AIR-TIGHT CONSTRUCTION BEARING AN ASTM

1. ALL HIGH EFFICACY LUMINAIRES SHALL BE SWITCHED SEPARATELY FROM LOW EFFICACY LUMINAIRES.

PERMITTED FOR DWELLING UNIT UNDER 2,500-SF AND ADDITIONAL 100-WATTS ALLOWED FOR OVER 2,500-SF.

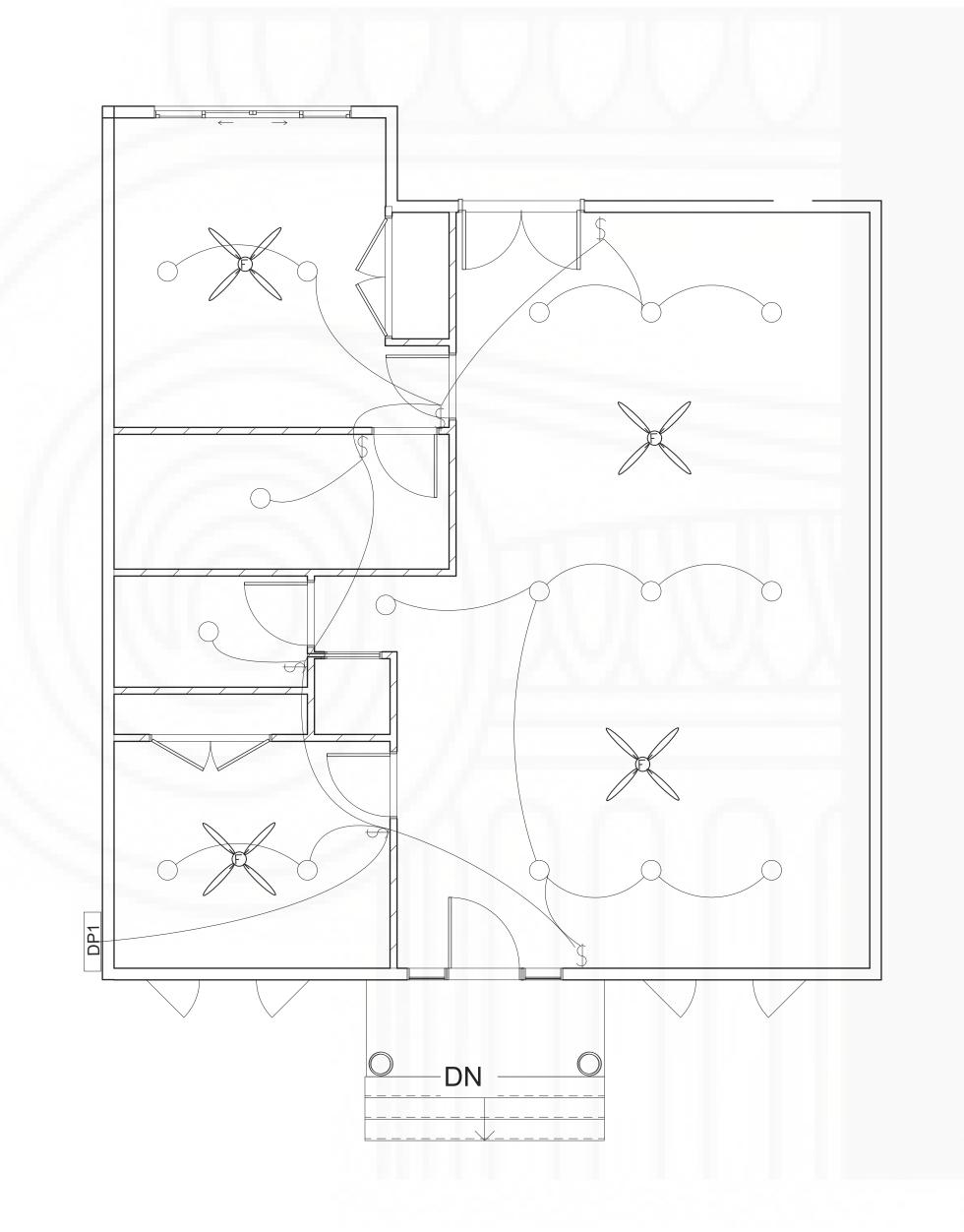
3. ALL LOW-EFFICACY KITCHEN LUMINAIRES SHALL BE CONTROLLED BY CEC APPROVED VACANCY SENSOR OR DIMMER.

4. NO MORE THAN 20-WATTER PER LINEAR FOOT OF PERMANENTLY INSTALLED INTERNAL CABINET LIGHTING IS PROHIBITED.

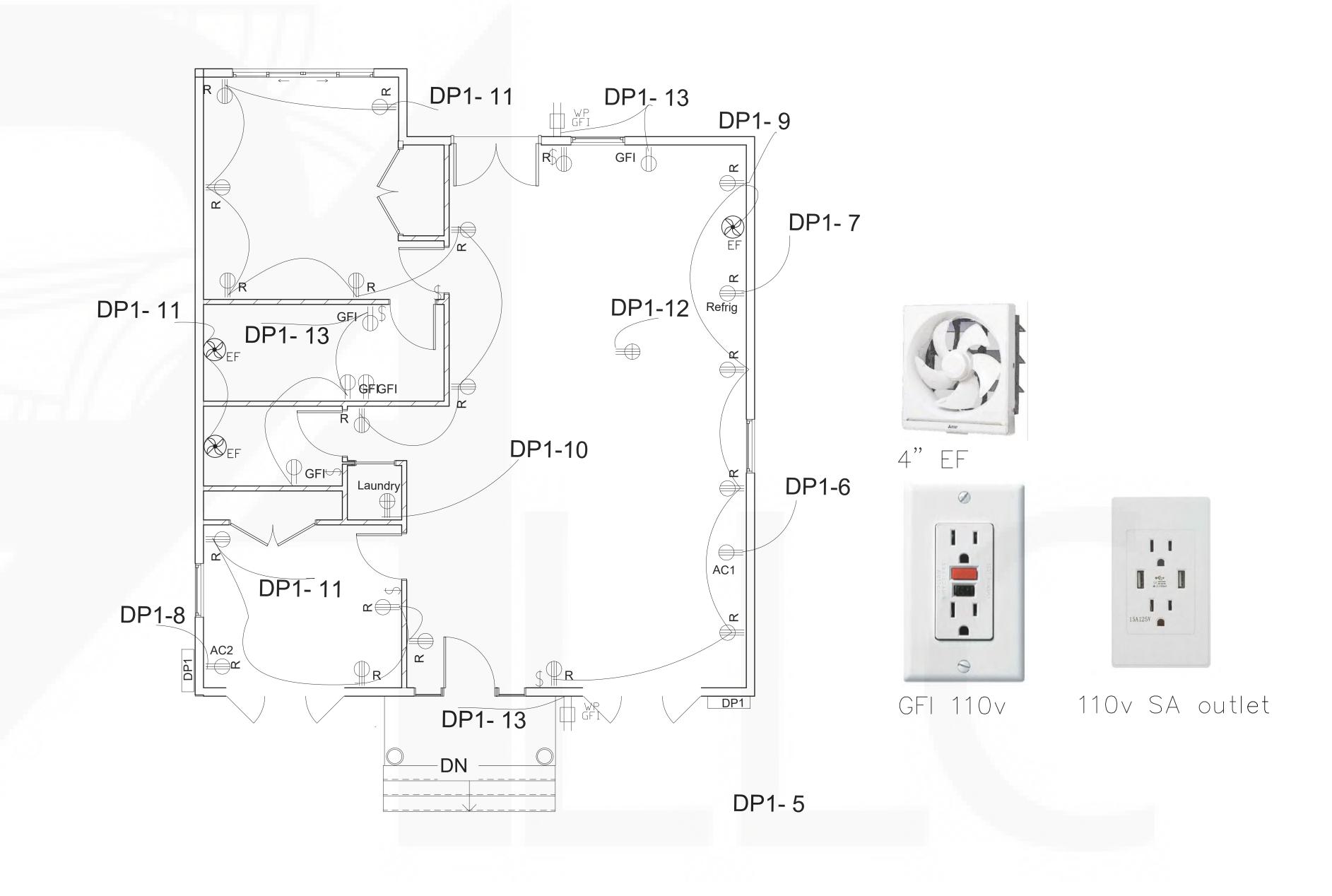
5. ALL LOW-EFFICACY BUILDING MOUNTED EXTERIOR LUMINAIRES SHALL BE CONTROLLED BY PHOTOCELL & MOTION SENSOR.

6. ALL LOW-EFFICACY LUMINAIRES IN BATHROOMS MUST BE CONTROLLED BY CEC APPROVED VACANCY SENSOR OR TIMER.

Date:	DRAWING TITLE:	Sheet :		No.	Revision/Issue	Date
	Legends and Symbols	1 of 9	-			
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SINGLE FAMILY HOUSE REMODEL



Lighting Plan

scale: 1/4" = 1'

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Appliances Plan

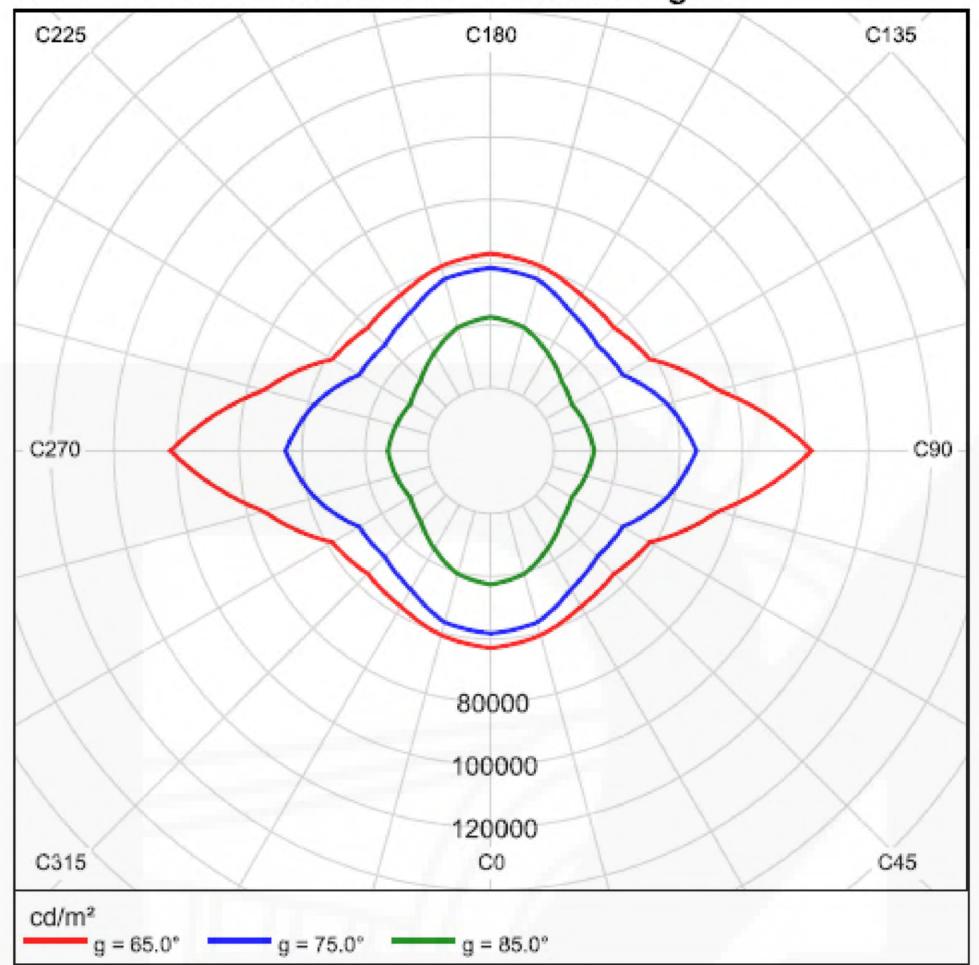
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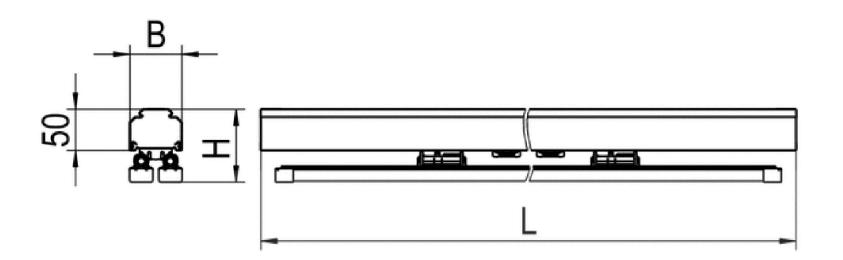
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Scale: 1/4" = 1'-00"	Appliances and Wirings & lights	2 OF 9			
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Luminous emittance 1 / UGR diagram

Glare	evalu	ıatioı	n acc	ordir	ng to	UGF	₹					
ρ Ceilir	ng	70	70	50	50	30	70	70	50	50	30	
ρ Walls	S	50	30	50	30	30	50	30	50	30	30	
ρ Floor	r	20	20	20	20	20	20	20	20	20	20	
Room X	n size Y	Viewi		ction at lamp a	right ar xis	ngles	Viewing direction parallel to lamp axis					
2H	2H 3H	25.6 27.4	26.8 28.4	25.9 27.7	27.0 28.7	27.2 29.0	28.8 30.0	30.0 31.0	29.1 30.3	30.2 31.3	30.4 31.6	
	4H 6H 8H 12H	28.1 28.7 28.8 29.0	29.1 29.6 29.7 29.8	28.5 29.0 29.2 29.3	29.4 29.9 30.0 30.1	29.7 30.2 30.4 30.5	30.4 30.7 30.7 30.8	31.4 31.6 31.6 31.6	30.7 31.0 31.1 31.1	31.7 31.9 31.9 31.9	32.2 32.2 32.2 32.3	
4H		26.3 28.2 29.1 29.7 30.0 30.1	27.3 29.0 29.8 30.4 30.6 30.7	26.6 28.6 29.5 30.2 30.4 30.6	27.5 29.4 30.2 30.8 31.0 31.1	27.8 29.7 30.5 31.2 31.4 31.5	28.9 30.3 30.8 31.2 31.3 31.4		29.3 30.6 31.2 31.6 31.8 31.8	30.2 31.4 31.9 32.2 32.3 32.3	30.5 31.8 32.3 32.6 32.7 32.8	
8H	4H 6H 8H 12H	29.3 30.1 30.4 30.7	29.9 30.6 30.9 31.0	29.7 30.6 30.9 31.1	30.3 31.0 31.3 31.5	30.7 31.5 31.8 32.0	30.9 31.4 31.6 31.7	31.5 31.9 32.0 32.0	31.9	31.9 32.3 32.4 32.5	32.3 32.8 32.9 33.0	
12H	4H 6H 8H	29.3 30.2 30.5	29.9 30.6 30.9	29.8 30.6 31.0	30.3 31.0 31.3	30.7 31.5 31.8	30.9 31.4 31.6	31.5 31.8 32.0	31.4 31.9 32.1	31.9 32.3 32.4	32.3 32.8 32.9	

Luminous emittance 1 / Luminance diagram





Light output ratio: 86.27%
Lamp luminous flux: 10200 lm
Luminaire luminous flux: 8800 lm

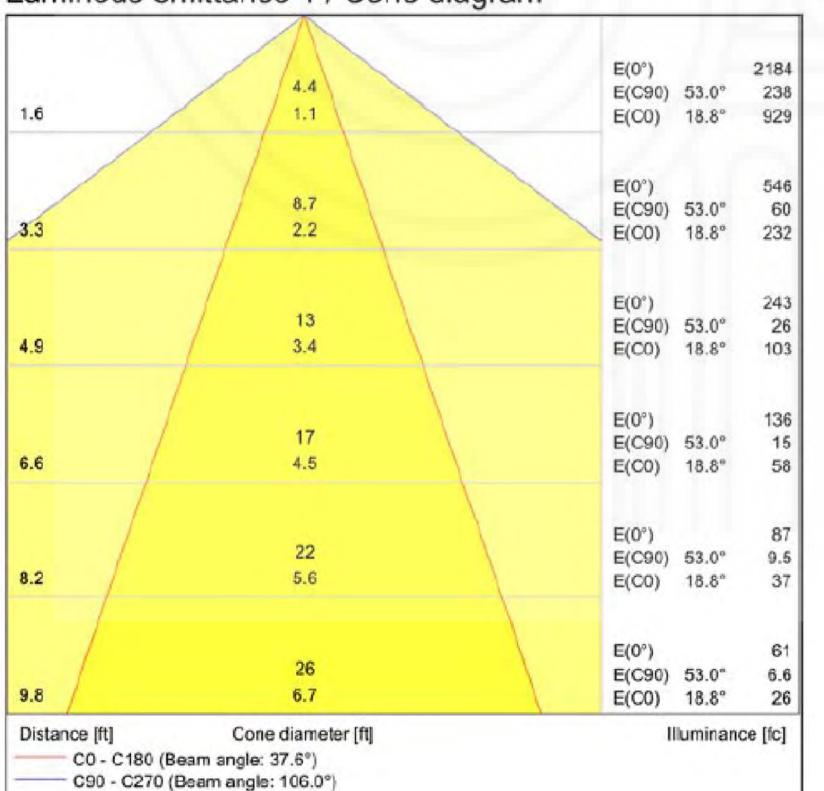
Power: 68.0 W

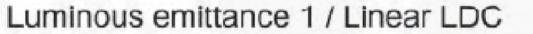
Luminous efficacy: 129.4 lm/W

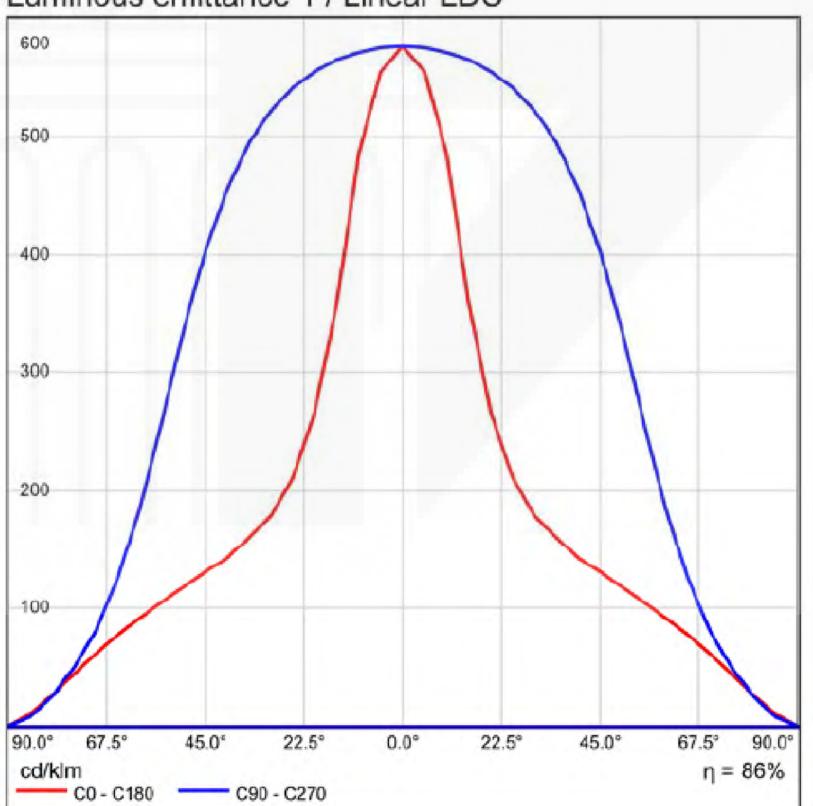
Colorimetric data

1xL-TUBE-TF2 60W GF: CCT 4000 K, CRI 80

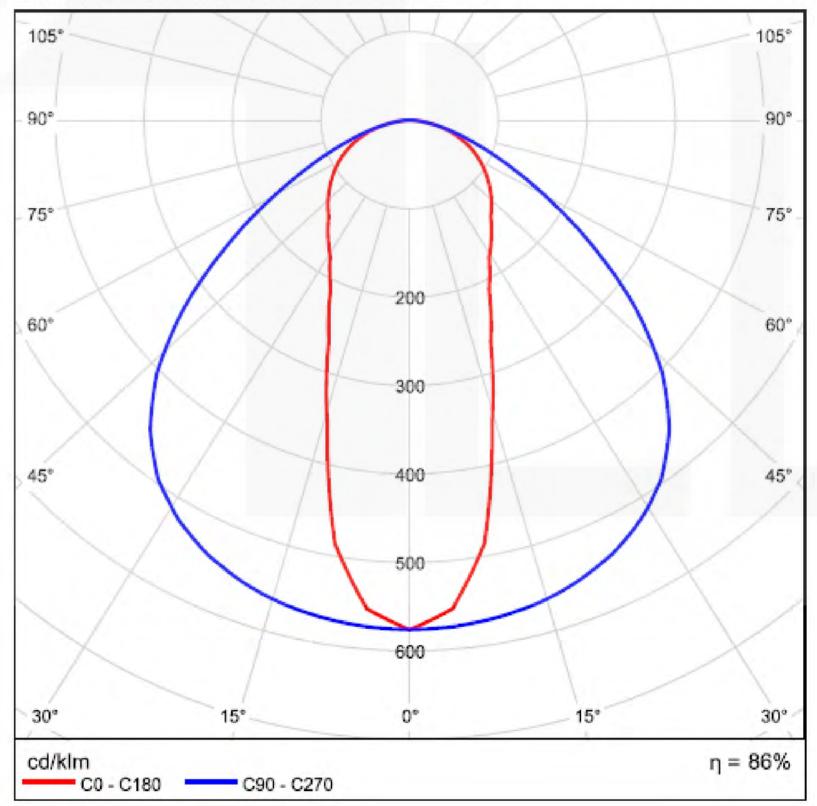
Luminous emittance 1 / Cone diagram







Luminous emittance 1 / Polar LDC



Lamps: 1xL-TUBE-TF2 66 W

Lamp type: L-TUBE-TF2

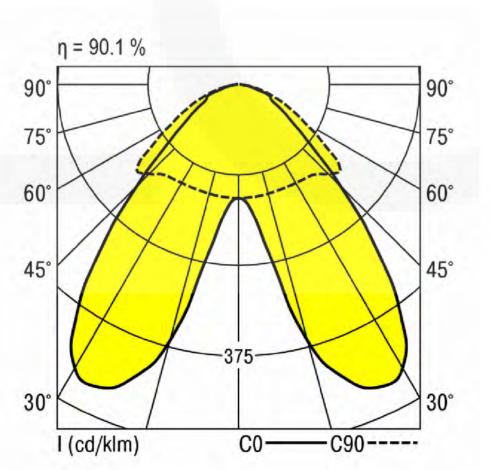
Number of lamps: 1 Wattage: 66 W Luminous colour: 840

LED system values

Luminaire luminous flux: 9190 lm

Luminaire output: 68 W

Luminaire efficiency: 135 lm/W



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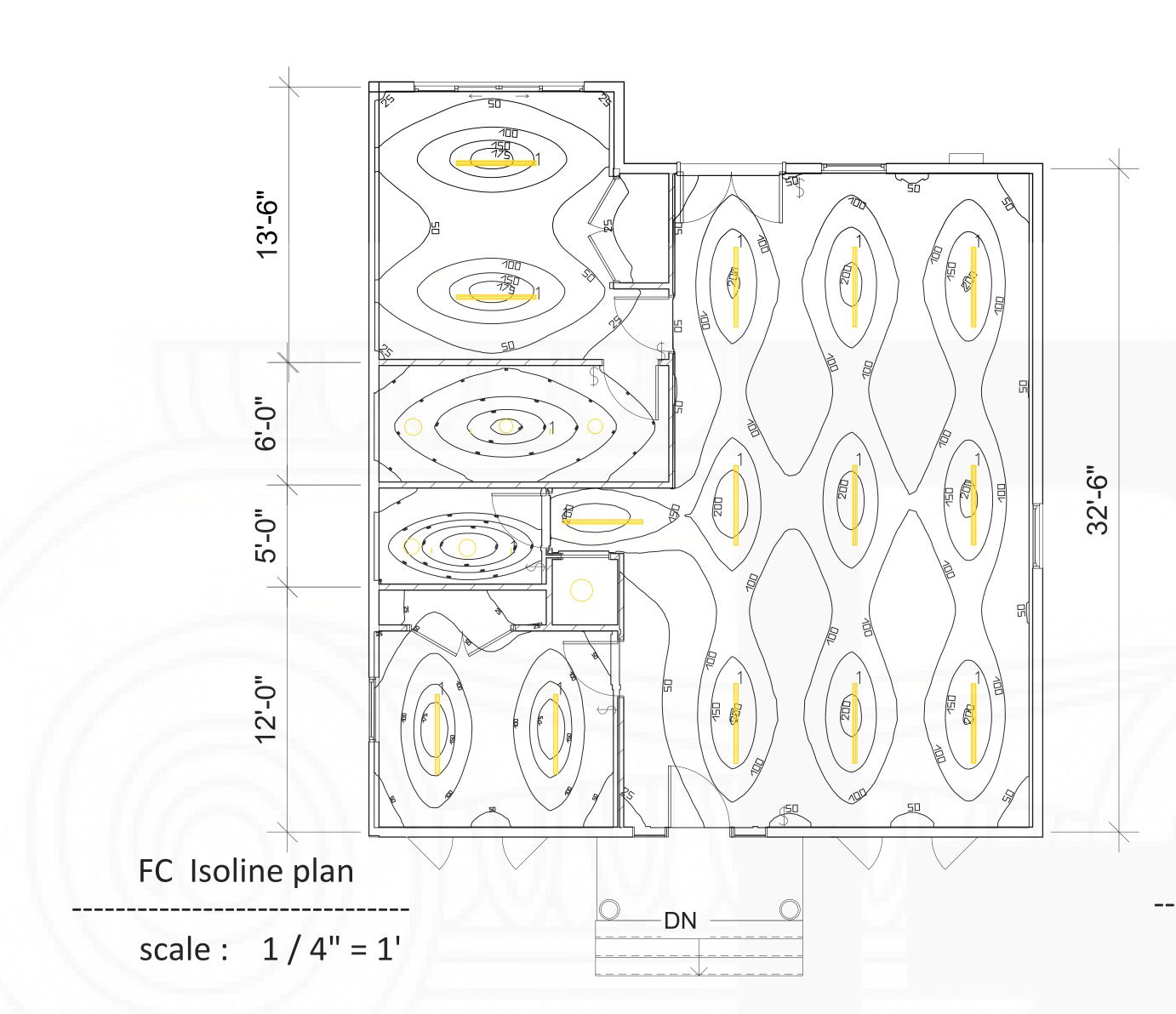
SINGLE FAMILY HOUSE REMODEL



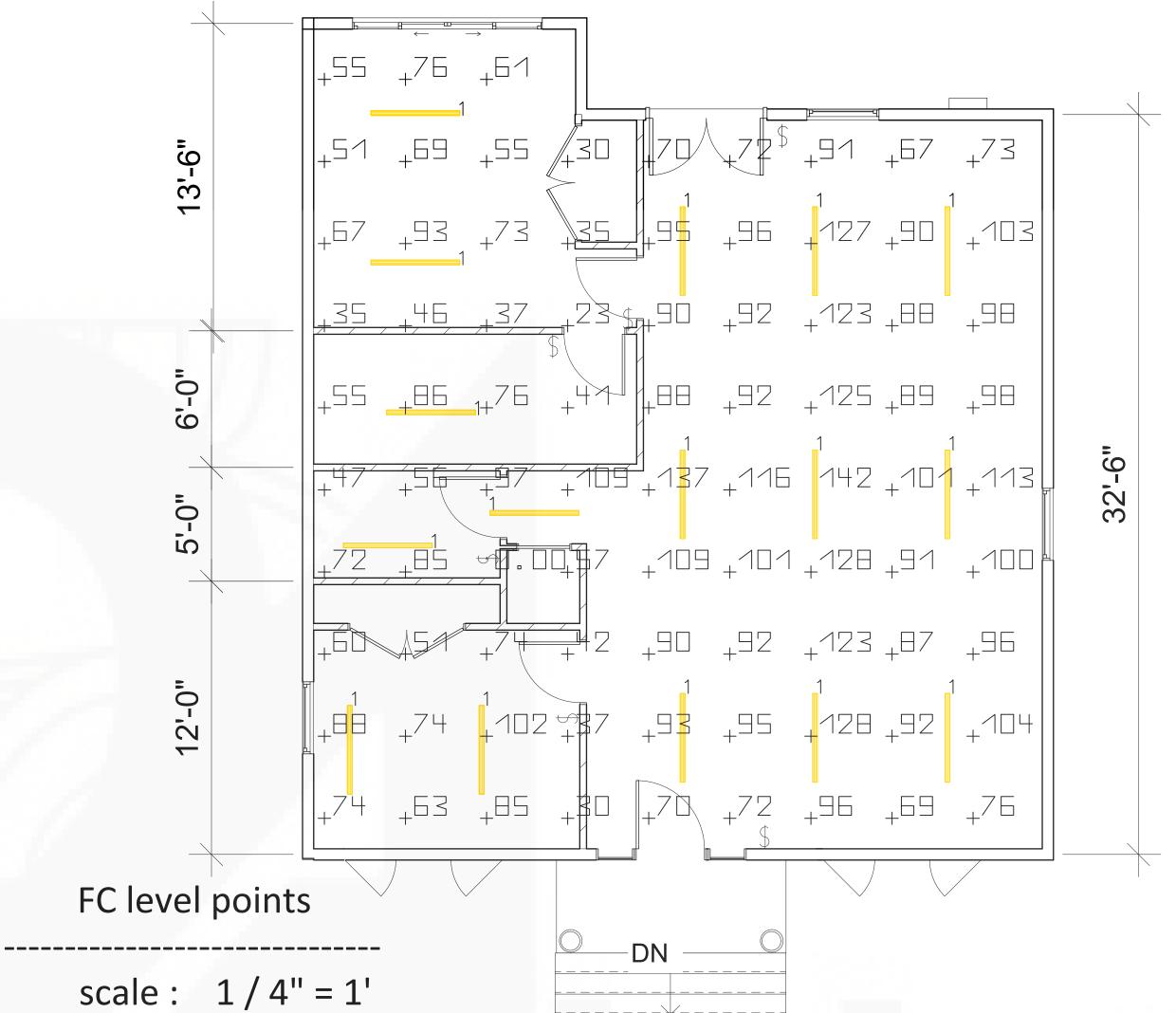
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#	Name	Parameter	Min	Max	Average	Min/average	Min/max
1	Calculation surface	Perpendicular illuminance	0.00 fc	142 fc	80.4 fc	0.00	0.00
2	Workplane 1	Perpendicular illuminance (Adaptive)	11.2 fc	186 fc	68.2 fc	0.164	0.060
3	Workplane 2	Perpendicular illuminance (Adaptive)	14.5 fc	181 fc	64.5 fc	0.224	0.080
4	Workplane 3	Perpendicular illuminance (Adaptive)	38.3 fc	192 fc	106 fc	0.360	0.200
5	Workplane 4	Perpendicular illuminance (Adaptive)	6.90 fc	194 fc	85.8 fc	0.080	0.036
6	Workplane 5	Perpendicular illuminance (Adaptive)	22.7 fc	230 fc	107 fc	0.213	0.099
7	Workplane 6	Perpendicular illuminance (Adaptive)	0.00 fc	0.000 fc	0.00 fc	/	/



			Lumino	aire parts list				
Index	Manufacturer	Luminaire type	ltem number	Fitting	Luminous flux	Light loss factor	Connected load	Quantity
1	RIDI	VLG-TF254-5ND-1 020E840	0250177	1×L-TUBE-T F2 60W GF	10200 lm	0.80	68 W	16



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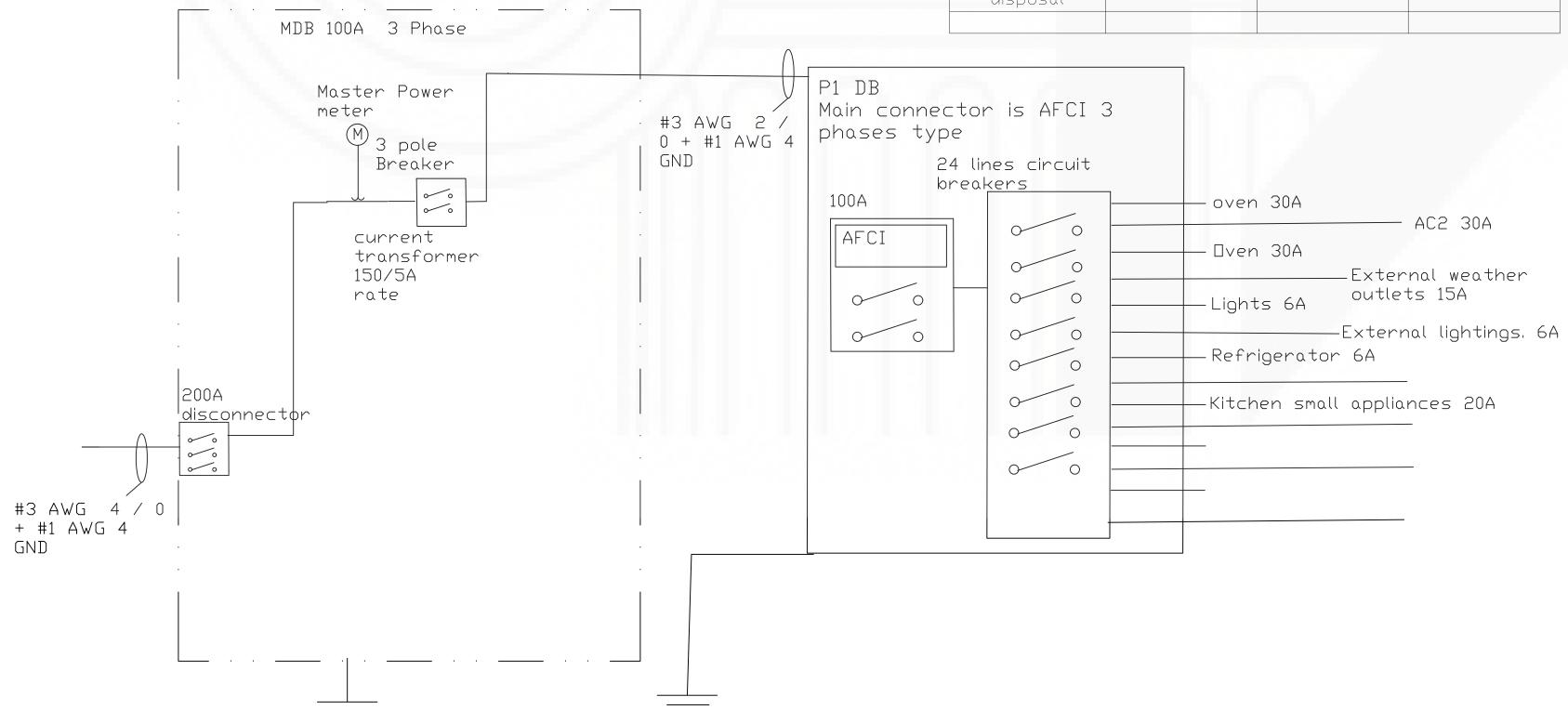
	MAIN:	100A MCB	GR FI	OOR					1	VC	LTAGE:	240/12	0	PHAS	SE:3	WIRE	∃: 4	MOUN	TING: SURFACE AIC:	22,000	
CKT	TRIP				LOAD	(KVA)			·	Pł	HASE			LOAE) (KVA)				TRIP	CK
#	POLE	DESCRIPTION	LTG	REC	MTR	A/C	HTG	KIT [*]	MISCA	В	С	LTG	REC	MTR	A/C	HTG	KIT [*]	MISC	DESCRIPTION	POLE	#
1	30/2	Oven					5.0									3.0			Water Heater	30/1	2
3	30/2	Oven																	vvalei i lealei	30/1	4
5	15/1	Lightings	1.1												1.0				AC1	30/1	6
7	15/1	Refrigerator		0.8											1.0				AC2	30/1	8
9	20/1	Kitchen Appliances		1.8									0.5						laundry	20/1	10
11	20/1	Small Appliances		1.8									2.0						Dish washer	20/1	12
13	20/1	GFIs		0.9										1.2					Garbage dispose	15/1	14
15	20/1																				16
17	20/1																				18
19	20/1	\/\\.	1 1	<i>F</i> 2	0.0		F 0		0.0				2.5	1.0	2.0	2.0		0.0		. 00	20
	TING (K	,	1.1	5.3	0.0	0.0	5.0	0.0	0.0			0.0	2.5	1.2	2.0	3.0	0.0	0.0	CONNECTED LOAD (KVA)	: 20 20	
		.ES (KVA): 7.8 ump Pumps (KVA 1.2				<u> </u>		PHAS	SE A	1	4.5	1	20.8						DEMAND LOAD (KVA):	20	<i>)</i> . I
	KVA):	2.0						PHAS			4.3 5.6		1 6.3						CONNECTED LOAD (AMP	S) 83	3.5
`	ING (K					_		PHAS			1		0.0						DEMAND LOAD (AMPS):		3.5
	HEN (K)	,								k	(VA		MPS								
		EOUS (KVA): 0.0																	AMPACITY REQUIRED:	84	.7

Table 326.80 Ampacity of Type IGS Cable

Size (kcmil)	Amperes	Size (kcmil)	A mperes		
250	119	2500	376		
500	168	3000	412		
750	206	3250	429		
1000	238	3500	445		
1250	266	3750	461		
1500	292	4000	476		
1750	315	4250	491		
2000	336	4500	505		
2250	357	4750	519		

CONDUCTORS ARE SIMULTANEOUSLY DISCONNECTED PER NEC 240.15.

	House load	schedule	
load	Power (KW.)	Qty	Description
Oven	5	1	kitchen stuff
lights	1.1	As mentioned in photometric plan	3W/sq.ft
refrigerator	0,8	1	Kitchen Stuff
Kitchen appliances	1.8	considered for small appliances	Kitchen stuff
Water heater	3	2	instant Water heater one installed in bath room and another one installed in the kitchen
A/C unit	1	2	for living room and bed room
Laundry	0.5	1	4 cu ft capacity
Dishwasher	2	1	
Garbage disposal	1.2	1	





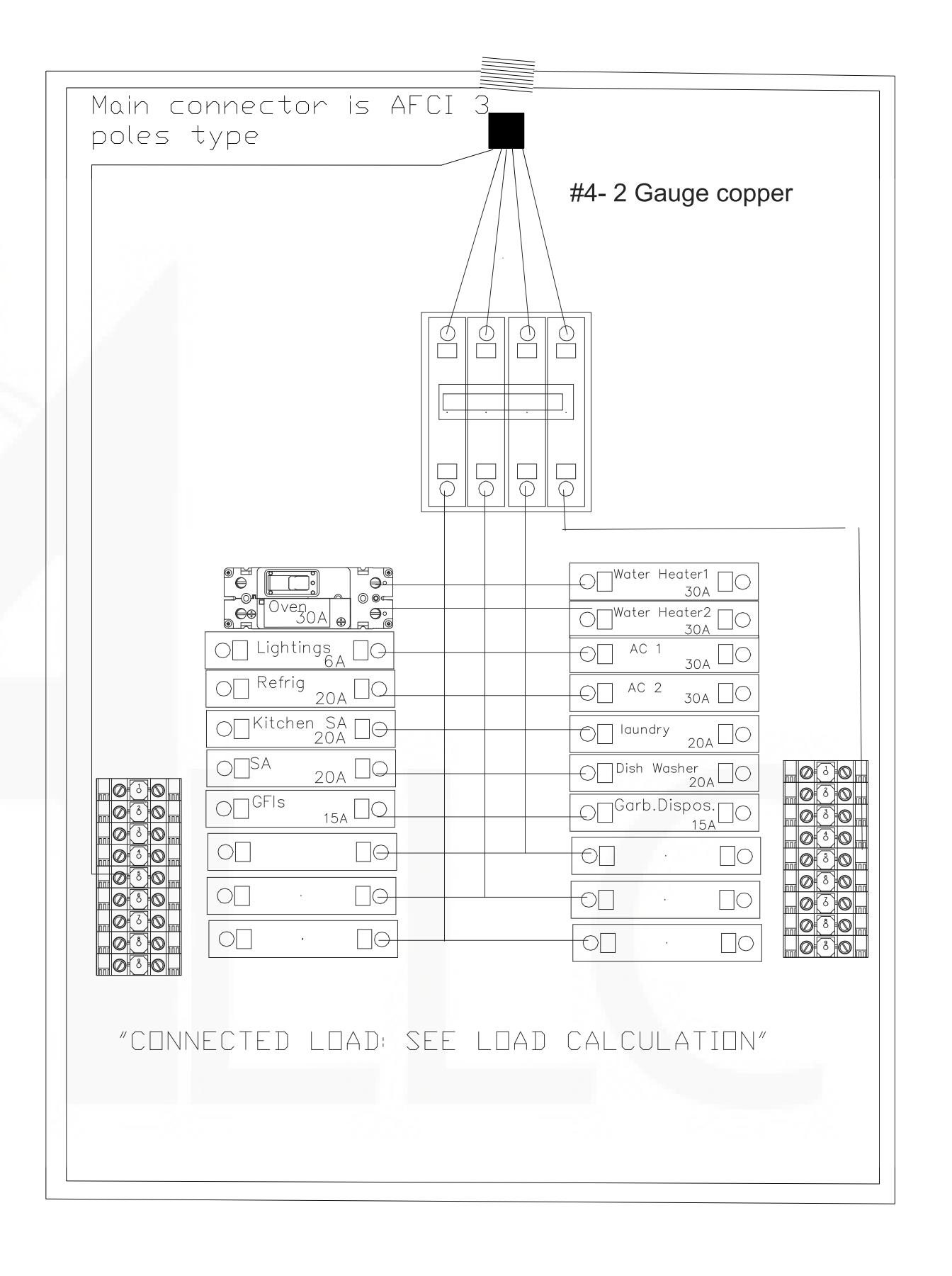
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CEC Notes:

CEC Section 250.50 Grounding Electrode System and Grounding Electrode Conductor

250.50 Grounding Electrode System. All grounding electrodes as described in 250.52(A)(1)

through (A)(7) that are present at each building or structure served shall be bonded together to

form the grounding electrode system. Where none of these grounding electrodes exist, one or

more of the grounding electrodes specified in 250.52(A)(4) through (A)(8) shall be installed and used.

Exception: Concrete-encased electrodes of existing buildings or structures shall not be

required to be part of the grounding electrode system where the steel reinforcing bars or

rods are not accessible for use without disturbing the concrete. CEC Section 250.104 Bonding of Piping Systems and Exposed Structural Metal.

(A) Metal Water Piping. The metal water piping system shall be bonded as required in (A)(1),

(A)(2), or (A)(3) of this section. The bonding jumper(s) shall be installed in accordance with

250.64 (A), (B), and (E).

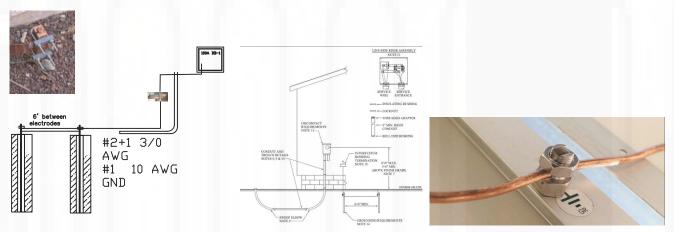
(1) General. Meter water piping system(s) installed in or attached to a building or

structure shall be bonded to the service equipment enclosure, the grounded conductor at

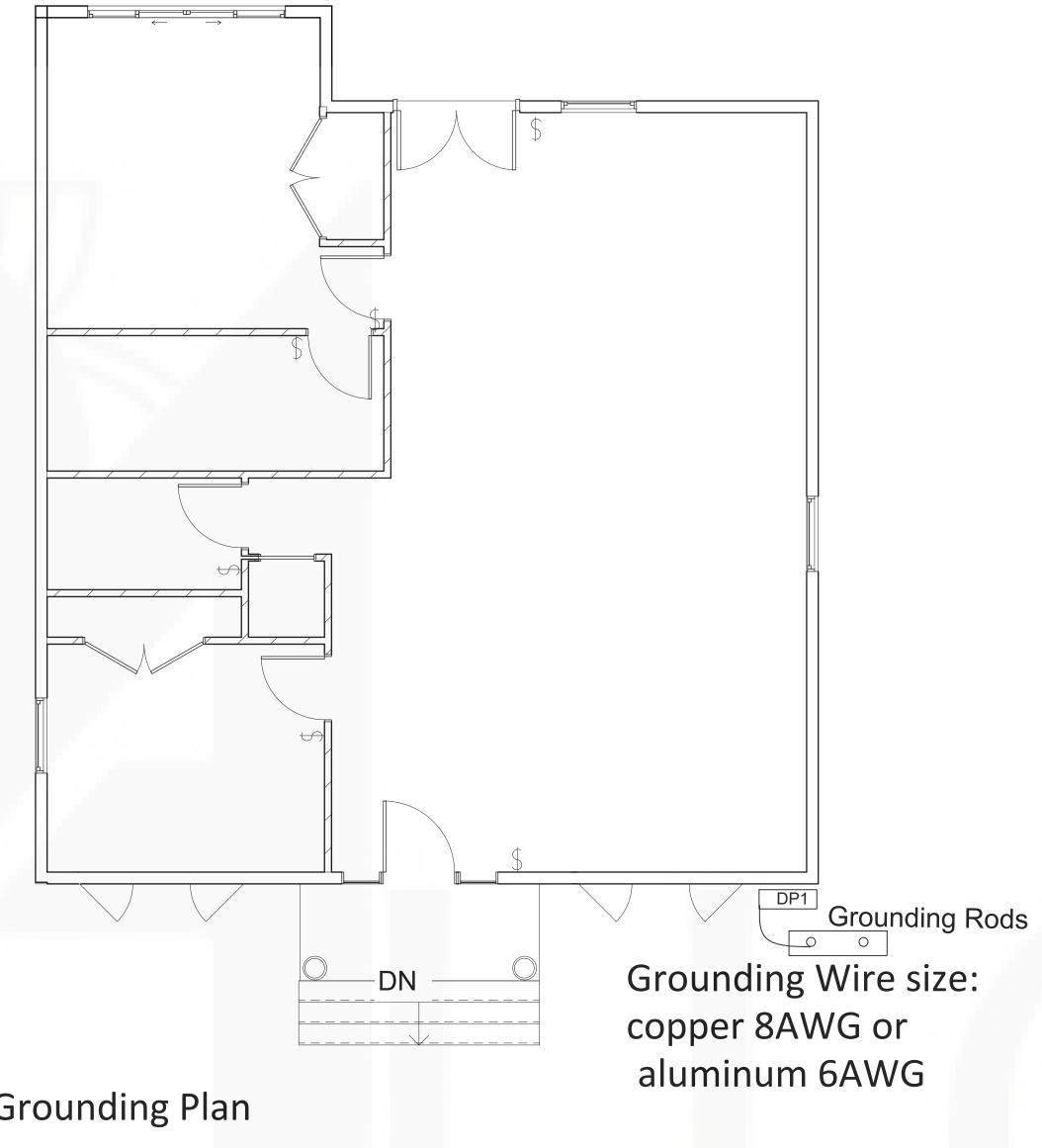
the service, the grounding electrode conductor where of sufficient size, or to the one or

more grounding electrodes used. The bonding jumper(s) shall be sized in accordance

with Table 250.66 except as permitted in 250.104(A)(2) and (A)(3).



2 ground rods must be at least 8 feet buried in the ground with minimum of 6 feet apart. When made of iron or steel, the ground rod must be a minimum 5/8" diameter. Listed stainless steel or nonferrous rods may be 1/2" in diameter. Grounding electrode conductor shall be connected within 5 ft. from the point of entrance to a cold water pipe grounding electrode. (2007 CEC Section 250-30 Item 3)



Grounding Plan

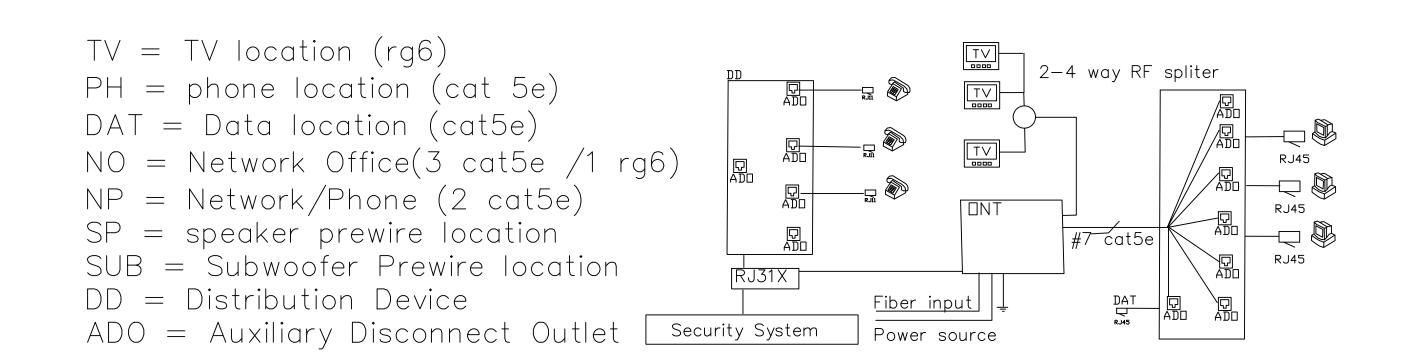
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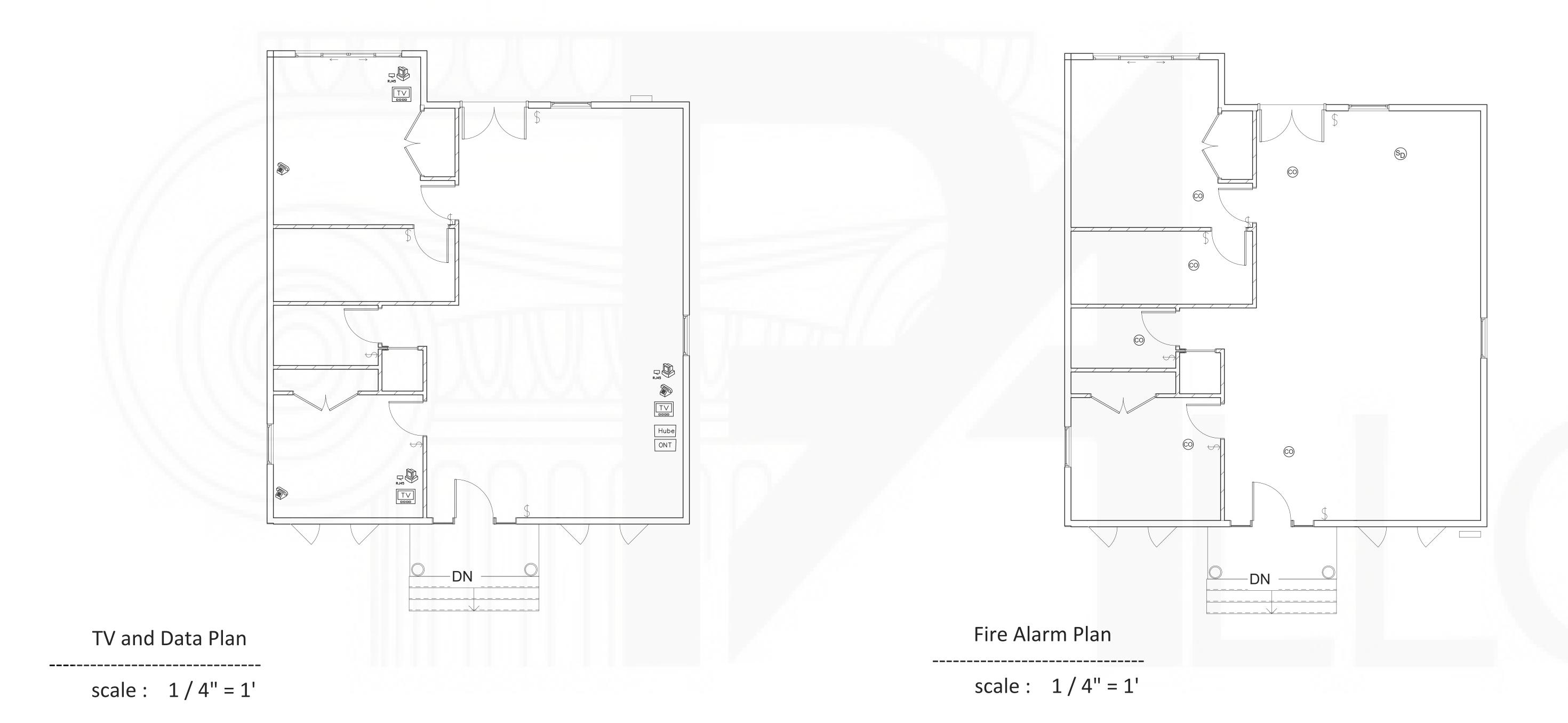


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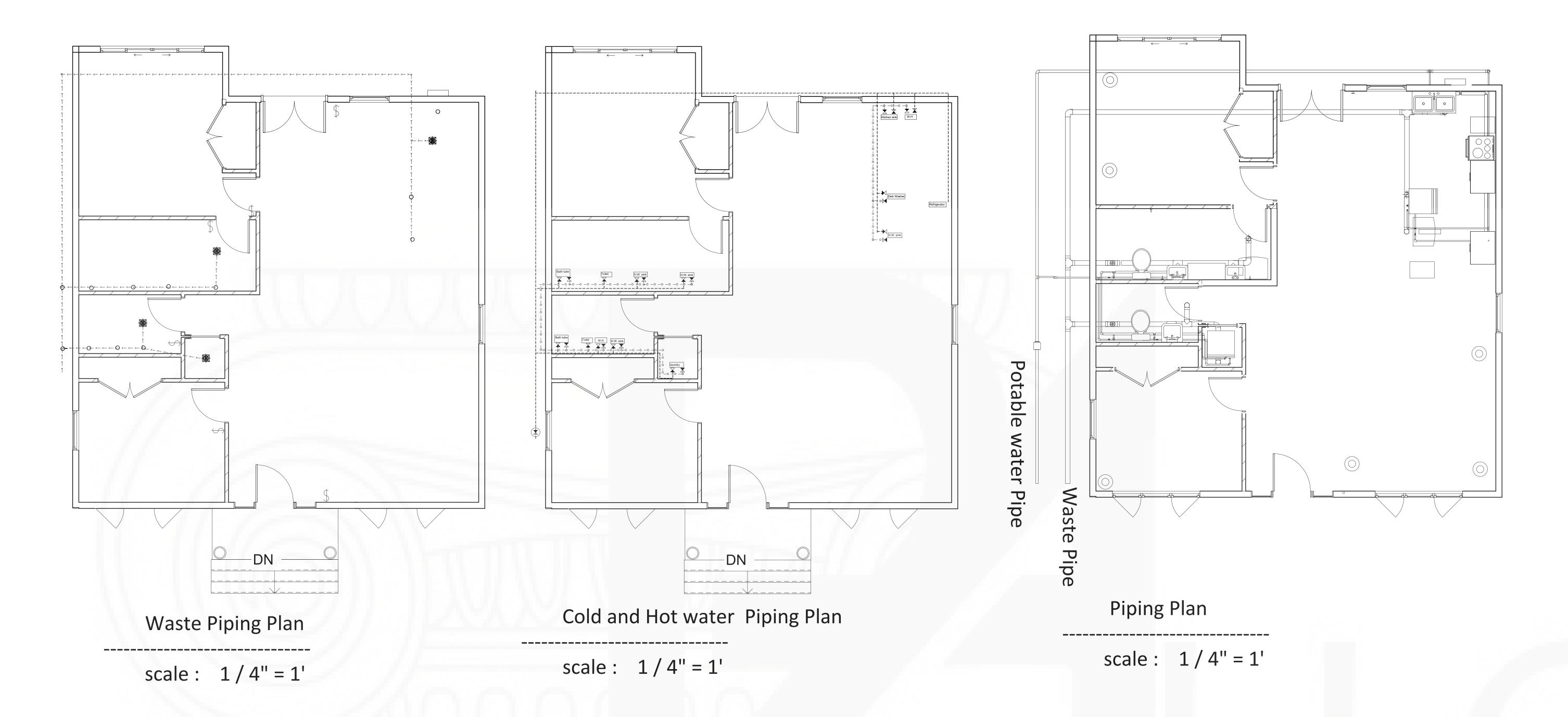








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Scale: 1/4" = 1' 00"	DATA and CATV & Fire Alarm	8 OF 9			
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MECH	ANICAL SYMBOLS AND ABBREVIATIONS
	FLOOR DRAIN
	FUNNEL FLOOR DRAIN
	FLOOR SINK
0- 0- 0-	HOT WATER
	COLD WATER
»— »— »—	Sewer and WASTE
X	Valve
W.H.	Water Heater
H.W.	Hand wash sink

All Outside piping shall be installed under or within 2 feet (610 mm) of a building or structure, or less than 1 foot (305 mm) below the surface of the ground.

according to CPC.609.11 Pipe Insulation, Insulation of domestic hot water piping shall be in accordance with Section 09.11.1 and Section 609.11.2. of CPC.

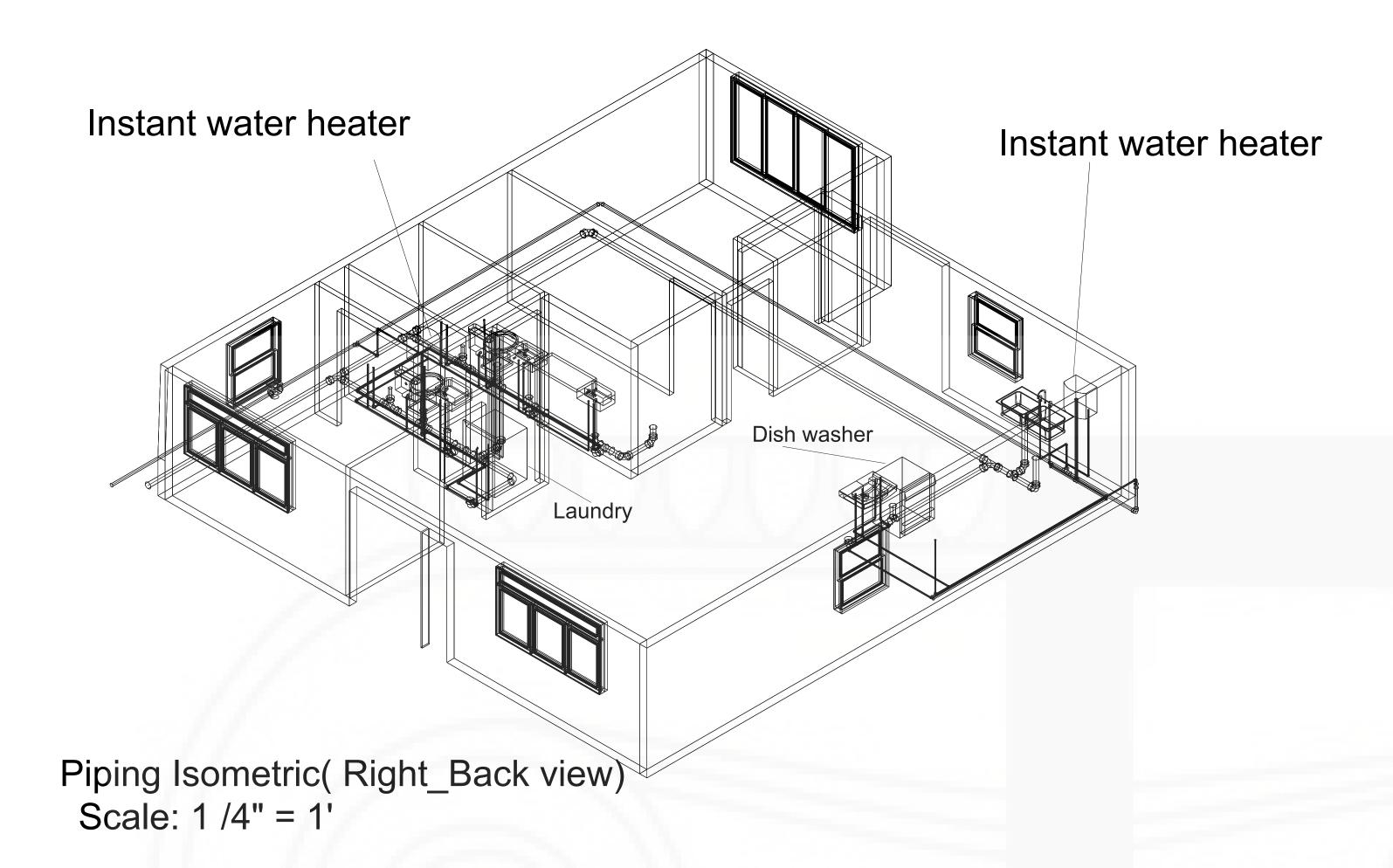
609.11.2 Pipe Insulation Wall Thickness. Hot water pipe insulation shall have a minimum wall thickness of not less than the diameter of the pipe for a pipe up to 2 inches (50 mm) in diameter. Insulation wall thickness shall be not less than 2 inches (51 mm) for a pipe of 2 inches (50 mm) or more in diameter.

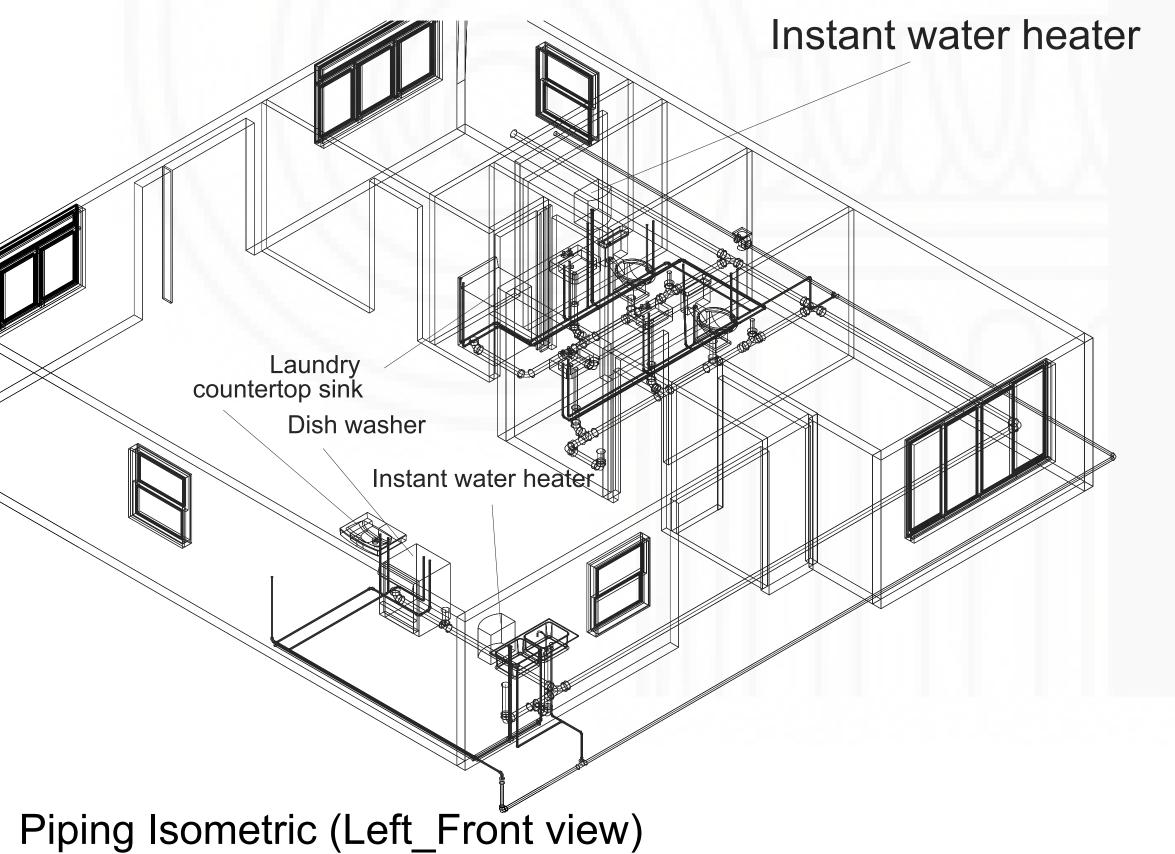


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Date: Scale:	DRAWING TITLE: Plumbing1	Sheet :
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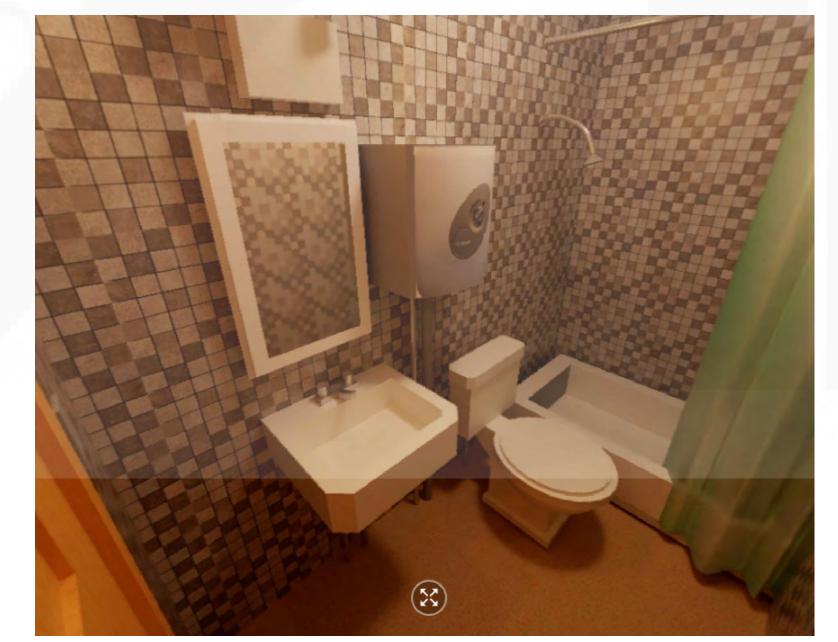
CPC Notes

312.0 Protection of Piping, Materials, and Structures.

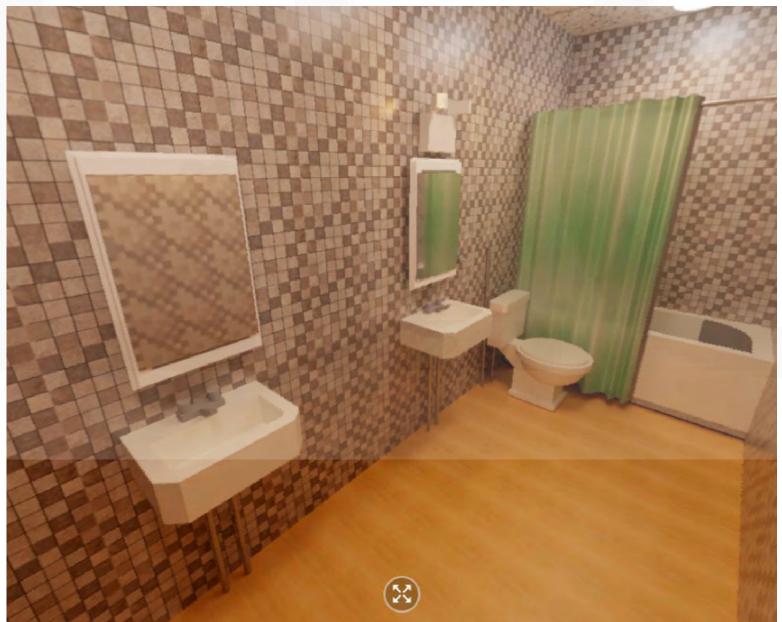
312.1 General. Piping passing under or through walls shall be protected from breakage. Piping passing through or under cinders or other corrosive materials shall be protected from external corrosion in an approved manner. Approved provisions shall be made for expansion of hot water piping. Voids around piping passing through concrete floors on the ground shall be sealed.

312.2 Installation. Piping in connection with a plumbing system shall be so installed that piping or connections will not be subject to undue strains or stresses, and provisions shall be made for expansion, contraction, and structural settlement. No plumbing piping shall be directly embedded in concrete or masonry. No structural member shall be seriously weakened or impaired by cutting, notching, or otherwise, as defined in the California Building Code or California Residential Code.
312.3 Building Sewer and Drainage Piping. No building sewer or other drainage piping or part thereof, constructed of materials other than those approved for use under or within a building, shall be installed under or within 2 feet (610 mm) of a building or structure, or less than 1 foot (305 mm) below the surface of the ground.
312.6 Freezing Protection. No water, soil, or waste pipe shall be installed or permitted outside of a building, in attics or crawl spaces, or in an exterior wall unless, where necessary, adequate provision is made to protect such pipe from freezing.

Bath room view



Master Bath room view





Scale: 1 /4" = 1'

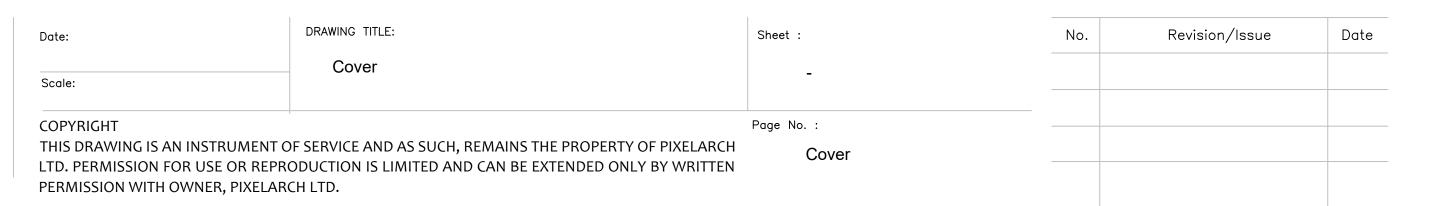
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Project Name and Address:

SINGLE FAMILY HOUSE REMODEL



DESIGN CODE:

1. 2016 CBC

DESIGN LOADS:

Floor live load: 40 psf
 Floor dead load: 15 psf
 Roof dead load: 20 psf

4. Roof live load: 20 psf

5. Wind load : 10 psf roof 24psf wall

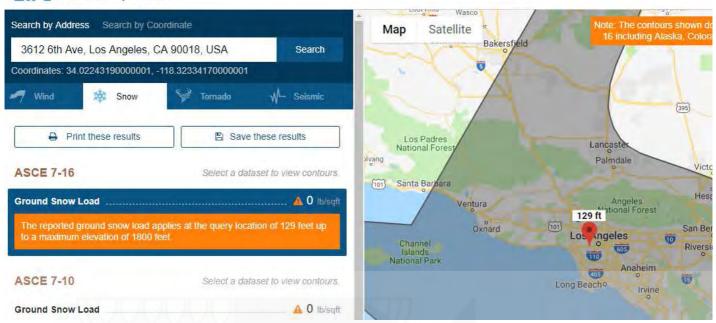
6. Snow load: 0 pdf 6. Ex Wall DD = 12psf 7. In. Wall DD = 8psf

8. Concrete wall 8" – 97psf

9. Concrete 145pcf

ATC Hazards by Location Search by Address Search by Coordinate Castaic ake State Satellite Map 3612 6th Ave, Los Angeles, CA 90018, USA Search Agua Dulce Coordinates: 34.02243190000001, -118.32334170000001 Castaic (14) Snow Wind Forest Park Val Verde (126) Santa Clarita Print these results Save these results 210 **ASCE 7-16** Select a dataset to view contours. San Fernando 66 mph Simi Valley MRI 10-Year (118) 210 71 mph MRI 25-Year 77 mph MRI 50-Year Burbank nousand (170) Calabasas 27 Glenda MRI 100-Year 81 mph Topanga State Park Risk Category I 89 mph Beverly Hills 129 ft 95 mph os An Risk Category II Malibu Santa Monica 102 mph Risk Category III 106 mph Risk Category IV Inglewood

ATC Hazards by Location



Search Information

Address: 3612 6th Ave, Los Angeles, CA 90018, USA

Coordinates: 34.02243190000001, -118.32334170000001

Not specified

Timestamp: 2018-12-25T15:51:08.958Z

Hazard Type: Seismic

Reference Document: ASCE7-16

Risk Category: II

Site Class: D-default

.. -

Report Title:



Text Results

Basic Parameters

Name	Value	Description
SS	1.936	MCE _R ground motion (period=0.2s)
S ₁	0.684	MCE _R ground motion (period=1.0s)
S _{MS}	2.323	Site-modified spectral acceleration value
S _{M1}	* null	Site-modified spectral acceleration value
S _{DS}	1.549	Numeric seismic design value at 0.2s SA
S _{D1}	* null	Numeric seismic design value at 1.0s SA

Additional Information

* See Section 11.4.8

Name	Value	Description
SDC	* null	Seismic design category
Fa	1.2	Site amplification factor at 0.2s
F _v	* null	Site amplification factor at 1.0s
PGA	0.827	MCE _G peak ground acceleration
F _{PGA}	1.2	Site amplification factor at PGA

12/25/2018		ATC Hazards by Location
PGA _M	0.993	Site modified peak ground acceleration
TL	8	Long-period transition period (s)
SsRT	1.936	Probabilistic risk-targeted ground motion (0.2s)
SsUH	2.14	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	2.376	Factored deterministic acceleration value (0.2s)
S1RT	0.684	Probabilistic risk-targeted ground motion (1.0s)
S _{1U} H	0.759	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.795	Factored deterministic acceleration value (1.0s)
PGAd	0.958	Factored deterministic acceleration value (PGA)

^{*} See Section 11.4.8

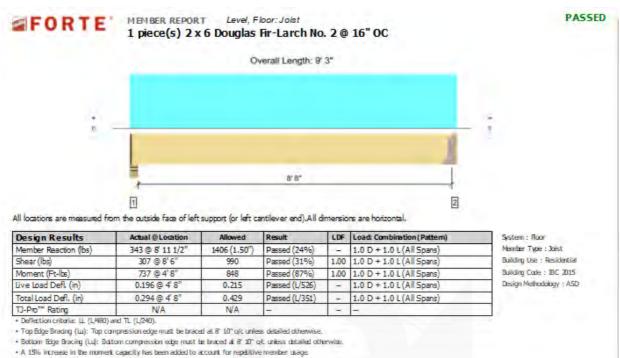
The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the United States Geological Survey Seismic Design Web Services.

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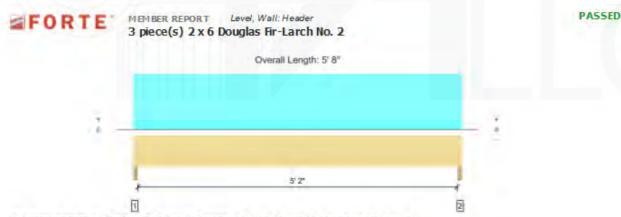
DETERMINATION OF FLOOR JOIST



- · Applicable calculations are based on NDS
- · No composite action between deck and joist was considered in analysis.

We use same as existing but not less as 2x6 DF#2

DETERMINATION OF HEADER ABOVE REAR FRENCH DOOR



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	443 @ 1 1/2"	8438 (3.00")	Passed (5%)	-	1.0 D + 1.0 Lr (All Spans)
Shear (lbs)	332 @ 8 1/2"	3713	Passed (9%)	1.25	1.0 D + 1.0 Lr (All Spans)
Moment (Ft-lbs)	573 @ 2' 10"	2765	Passed (21%)	1.25	1.0 D + 1.0 tr (All Spans)
Live Load Defl. (in)	0.017 @ 2' 10"	0.181	Passed (L/999+)	-	1.0 D + 1.0 Lr (All Spans)
Total Load Defl. (in)	0.030 @ 2' 10"	0.271	Passed (L/999+)	15-4	1.0 D + 1.0 tr (All Spans)

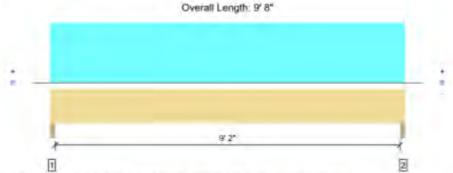
System : Wall Member Type : Header Building Use : Residential Building Code : IBC 2015 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Top Edge Bracing (ω): Top compression edge must be braced at 5° 8" q/c unless detailed differvise.
- Bottom Bige Bracing (Lu): Bdtom compression edge must be braced at 5° 8° o/c unless detailed otherwise.
- . Applicable calculations are based on NDS

DETERMINATION ON HEADER ABOVE REAR SLIDING DOOR







All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1055 @ 1 1/2"	8438 (3.00")	Passed (13%)	. 7-	1.0 D + 1.0 lr (All Spans)
Shear (lbs)	869 @ 10 1/4"	4894	Passed (18%)	1.25	1.0 D + 1.0 Lr (All Spans)
Moment (Ft-lbs)	2419 @ 4' 10"	4435	Passed (55%)	1,25	1.0 D + 1.0 lr (All Spans)
Live Load Defl. (in)	0.070 @ 4' 10"	0.314	Passed (L/999+)	-	1.0 D + 1.0 Lr (All Spans)
Total Load Defl. (in)	0.169 @ 4' 10"	0.313	Passed (L/669)	1-	1.0 D + 1.0 Lr (All Spans)

System : Wall Mamber Type : Header Building Use : Residential Building Code : IBC 2015 Design Methodology : ASD

- Deflection criteria: U. (L/350) and TL (5/16").
- Top Edge Brading (Lu): Top compression edge must be braced at 9° 8" o/c unless detailed ditherwise.
- . Bottom Edge Bracing (Lul): Buttom compression edge must be braced at 9 8" o/c unless detailed otherwise
- · Applicable calculations are based on NDS

DETERMINATION OF BEAM



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	13472 @ 20' 4 1/2"	23625 (6.00")	Passed (57%)	-	1.0 D + 1.0 tr (All Spans)
Shear (lbs)	6691 @ 18' 11 1/2"	17456	Passed (38%)	1.25	1.0 D + 1.0 Lr (All Spans)
Moment (Ft-lbs)	-24347 @ 20' 4 1/2"	45484	Passed (54%)	1.25	1.0 D + 1.0 Lr (All Spans)
Live Load Defl. (in)	0.266 @ 9' 5 7/8"	0.668	Passed (L/906)	11-	1.0 D + 1.0 Lr (Alt Spans)
Total Load Defl. (in)	0.596 @ 9' 4 15/16"	1.002	Passed (L/403)	-	1.0 D + 1.0 Lr (Alt Spans)

System: Floor Mamber Type: Drop Beam Building Use: Residential Building Code: IBC 2015 Design Methodology: ASO

- Deflection criteria: LL (L/350) and TL (L/240).
- . Top Edge Bracing (Lu): Top compression edge must be braced at 15' 8" o/c unless detailed otherwise.
- . Bollom Edge Bracing (Lu): Bollom compression edge must be braced at 13' 3" o/c unless detailed otherwise.

DETERMINATION SIZE OF FOUNDATION

STRUCTURAL CALCULATION

TYPE OF LOAD	TRIBUTARY WIDTH		LOAD		TOTAL
1ST DD=	16,50	х	20	II	330,00
1ST LL=	16,50	х	40	Ш	660,00
ROOF DD=	17,50	х	20	II	350,00
RL=	17,50	х	20	II	350,00
W=	17,50	х	10	П	175,00
S=	17,50	х	0	П	0,00
W wall=	16	х	12	=	192,00
FOUNDATION	1,33	х	145	=	129,21
WALL	1,55	^	143		123,21
FOOTING	1.5X2	Х	145	=	435,00

TOTAL DD 1436,21 LBS

F=	1.2XDD+1.6XLL+0.5LR	2954,45	LBS
F=	1.2XDD+1.6XLR+1XLL	2943,45	LBS
F=	1.2XDD+1.6XLR+0.8XW	2423,45	LBS
F=	1.2XDD+1.6XW+1XL+0.5LR	2838,45	LBS

Fmax/1500

= 1,97 sf

We use 2'-0" x 16"D footing

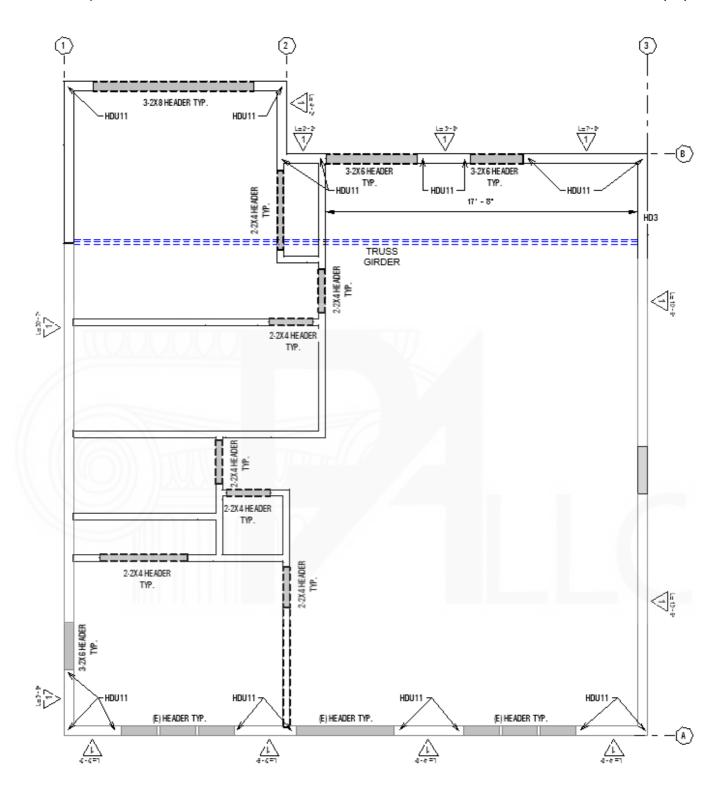
DETERMINATION SIZE OF FOUNDATION UNDER MIDDLE SUPPORT

Reaction - 16365 LBS

16365/1500=10.93 <3.5X3.5=12.25

We use footing pad 42"x42"x24".

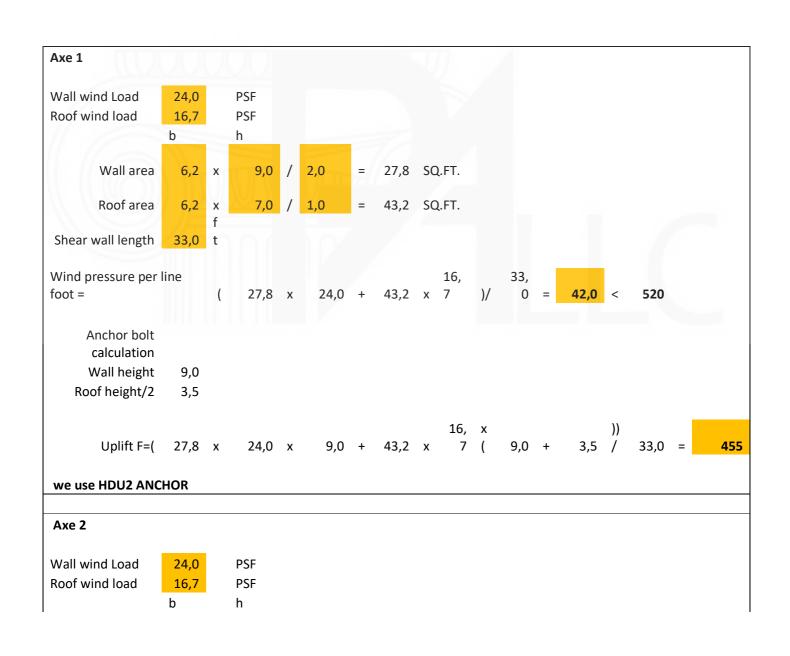
LATERAL ANALYSIS

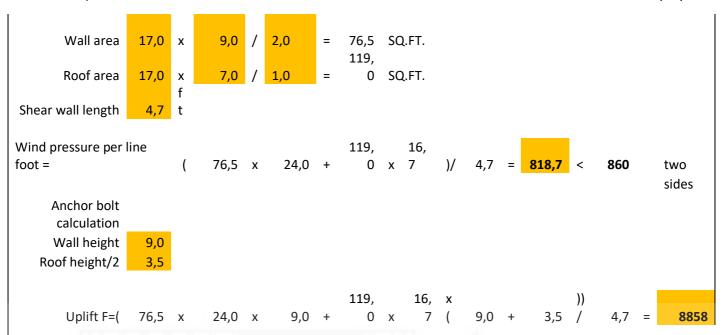


Wind loads analysis

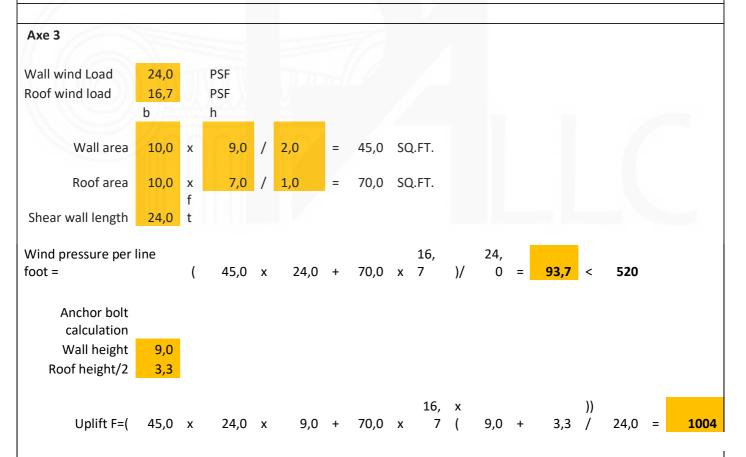
Type of plywood Table 4.3A	Anchor capacity
----------------------------	-----------------

		_		_						
					HDU2	HDU4	HDU5	HDU8	HDU11	HDU14
	6,0	4,0	3,0		SDS2.5	SDS2.5	SDS2.5	SDS2.5	SDS2.5	SDS2.5
15/32 8d 1-3/8	730,	1065,	1370,							10770,
15/32 ou 1-5/6	0	0	0		3075,0	4565,0	5645,0	6765,0	9535,0	0
	365,								11175,	14390,
	0	532,5	685,0					6970,0	0	0
15/32 10d 1-1/2	870,	1290,	1680,							14445,
15/52 100 1-1/2	0	0	0					7870,0		0
	435,									
	0	645,0	840,0							
	950,	1430,	1860,							
10/22 104 1 1/2	0	0	0							
19/32 10d 1-1/2	475,									
	0	715,0	930,0							

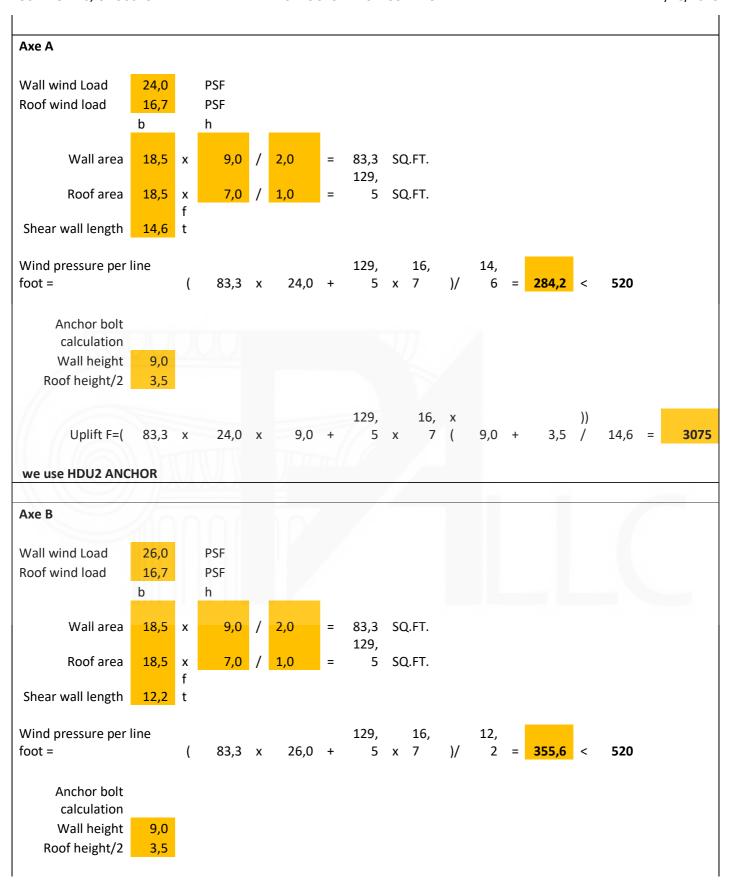




we use HDU11 ANCHOR



STRUCTURAL CALCULATION



REV 1 12/28/2018

```
Uplift F=( 83.3 \times 26.0 \times 9.0 + 5 \times 7  ( 9.0 + 3.5 / 12.2 =
                                                                                3822
we use HDU4 ANCHOR
```

SEISMIC A	<u>ANALYSIS</u>									
FORCE DI	STRIBUTION	<u>N</u>								
ROOF										
	ROOF WI	EIGHT	20	PSF						
	PARTITIC	N WEIGHT	5	PSF						
	W TOTAL	-	25	PSF	WT					
2ND FLO										
	FLOOR V		0	PSF						
		N WEIGHT	5	PSF						
	W TOTAL HEIGHT		25	PSF						
	:		9	FT						
2016 CBC	2 / 2015 IBC	, SEC. 1613; ASCE 7-	10, SE	C. 12.8						
	V 0.7	(6) (1)		D.	1//	1		656	-	
		(C s x W) x ρ		R:	6,5	l:	1	SDC:	D	
	Cs = Sds/	(K/I)		S1:	0,684	Sds: Occ.	2	Sd1: Site	0,727	
	Cs=	0,2979				Cat:	П	Class:	D	
	03	0,2010				out.	ï	Ciuss.		
Check Co	onstraints									
		0.044 * I * S _{DS}								
	Cs max =	= S _{D1} / T (R / I)								
Cs min		,								
=	0,085									
	- 0	0 0/0 # 0								
	For S _{D1} :	S _{D1} = 2/3 * S _{M1}								
	For S _{D1} :	ASCE 7-02 Eq. 9.4.1.2.5-2	!					ı		
	For S _{D1} :	ASCE 7-02 Eq. 9.4.1.2.5-2 S _{M1} = Fv *	!	S ₁ ^a =	0.684	S _{M1} =	1.09			
	For S _{D1} :	ASCE 7-02 Eq. 9.4.1.2.5-2 S _{M1} = Fv * S ₁		S ₁ ^a = Fv ^a =	0,684 1.2	S _{M1} =	1,09			
	For S _{D1} :	ASCE 7-02 Eq. 9.4.1.2.5-2 S _{M1} = Fv *		S ₁ ^a = Fv ^a =	0,684 1,2	S _{M1} =	1,09			
	<u>For S_{D1}:</u> S _{D1} =	ASCE 7-02 Eq. 9.4.1.2.5-2 S _{M1} = Fv * S ₁				S _{M1} =	1,09			
	S _{D1} =	ASCE 7-02 Eq. 9.4.1.2.5-2 S _{M1} = Fv * S ₁ ASCE 7-02 Eq. 9.4.1.2.4-2		Fv ^a =	1,2	S _{M1} =	1,09			
		ASCE 7-02 Eq. 9.4.1.2.5-2 S _{M1} = Fv * S ₁ ASCE 7-02 Eq. 9.4.1.2.4-2					1,09			

Ta = 0,104 T = 0,145

Cs max

Cs FINAL = 0,2979

0,9605

 $V = 0.7 \times (Cs \times W) \times \rho = 0,27108$ V = 13,5538

		W					
		TOTA	Н	WT*H			
wt ht wt*ht % F		L	TOTAL	T	%	F	V TOTAL
ROOF		25	9	225	1,00	13,55	13,55

HOLD DOWN CAPACITIES SHEAR WALL CAPACITIES

HDU

HDU2 HDU4

HDU5 HDU8 11

HDU14 2307 3425 4254 5904 7152 10835 lbs

SHEAR WALL DESIGN

TYPE 2	TYPE 2 TYPE 3		TYPE 5	
280	430	550	730	lbs/ft
560*	860*	1100	1460	

SHEAR WALL DESIGN

Shear Lin	e Level										
		TRIBUTAR		F			WAL		DL/FL	T NET WALL	
	LENGTH	Y AREA	F FLR	ADD	F TOTAL	V/FT	L	T/C	R	DL	HDU
Line A	FT	SQ.FT	LBS	LBS	LBS	PLF	TYPE	LBS			
1ST	14,50	545,00	7386,79		7386,79	509,43	4	4584,91	80,00	4005	HDU5
Line B	_										
1ST	12,17	591,36	8015,15		8015,15	658,78	5	5929,01	80,00	5442	HDU8
Line 1						T					
1ST	33,00	569,00	7712,08		7712,08	233,70	2	2103,30	80,00	783	HDU2
Line 2											
1ST	4,67	26,00	352,40		352,40	75,51	1	679,62	80,00	493	HDU2
Line 3											
1ST	24,00	543,00	7359,69		7359,69	306,65	3	2759,88	80,00	1800	HDU2