4552 TRAFALGAR DRIVE

PROJECT # 03.01.2119

PROJECT TEAM

ENGINEERING

ACC & ENGINEERING
768 N ETHAN WAY, ANAHEIM, CA
92805 United States

MAGDY REZK, P.E
BEN HAMED

STRUCTURAL AF
1010 RALEIGH ST., APT 107 GLENDALE, CA 91205

ARSEN ADZHEMYAN, PE

OWNER

4552 TRAFALGAR DRIVE LA PALMA CA 90623 UNITED STATES

MARGRETTE CLAIRE SIBELL AND MARIE CLAIRE HALL.

CONTRACTOR

M L HARMON CONSTRUCTION
CSLB# 585649

4552 TRAFALGAR DRIVE LA PALMA CA 90623 UNITED STATES

PROJECT INFORMATION

SUMMARY OF SCOPE:

1-SINGLE STORY ADDITION TO ENTRY 67 GSF.

2-RELOCATING HVAC EQUIPMENTS TO THE GARAGE. (ONLY POINT OF CONNECTION TO BE CHANGED. ALL DUCT REMAIN THE SAME)

3-RELOCATING THE STAIRS SYSTEM.

4-INTERIOR ALTERATION TO (E) GUEST BATHROOM.

5- NEW DOOR OPENING TO LAUNDRY ROOM.

PROJECT ADDRESS:

4552 TRAFALGAR DRIVE LA PALMA CA 90623 UNITED STATES

LEGAL JURISDICTION:

CITY OF LA PALMA

EXITING BUILDING CONSTRUCTION TYPE:

TYPE V – NON – RATED

OCCUPANCY CLASSIFICATION:

GROUP R-1

HANDICAP ACCESSIBILITY:
THIS PROJECT HAS BEEN DESIGNED TO BE COMPLAISANCE WITH THE STATE OF CALIFORNIA TITLE 24ACCESSIBILITY REQUIREMENTS.

SHEET INDEX

NOTE

DIMENSIONS TO BE VERIFIED IN FIELD FOR CODE COMPLIANCE

STAIRWAYS

1. EXTERIOR STAIR STRINGERS MUST BE NATURALLY RESISTANT TO DECAY OR PRESSURE TREATED. (CRC R317.1)
2. RISE SHALL BE MAXIMUM 7.75"; RUN SHALL BE 10" MINIMUM; HEADROOM 6'-8" MINIMUM; WIDTH 36" MINIMUM, 31.5" BETWEEN A HANDRAIL ON ONE SIDE AND 27" WITH HANDRAILS ON TWO SIDES. VARIATION BETWEEN RISER HEIGHTS 3/8" MAXIMUM. A NOSING NOT LESS THAN .75 INCHES BUT NOT MORE THAN 1.25 INCHES SHALL BE PROVIDED ON STAIRWAYS WITH SOLID RISERS WHERE THE TREAD DEPTH IS LESS THAN 11 INCHES. THE LEADING EDGE OF TREADS SHALL PROJECT NOT MORE THAN 1.25 INCHES BEYOND THE TREAD BELOW. OPEN RISERS ARE PERMITTED, PROVIDED THE OPENING BETWEEN THE TREADS DOES NOT PERMIT THE PASSAGE OF A 4" SPHERE. (OPENINGS ARE NOT LIMITED WHEN THE STAIR HAS A RISE OF 30" OR LESS). (CRC R311.7)
3. STAIRWAYS WITH 4 OR MORE RISERS SHALL HAVE A HANDRAIL ON ONE SIDE 34" TO 38" ABOVE THE TREAD NOSING. CIRCULAR HANDRAILS SHALL HAVE AN OUTSIDE DIAMETER OF 1.25"-2"; IF NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF 4"-6.25" WITH A MAXIMUM CROSS SECTIONAL DIMENSION OF 2.25". SEE R311.7.8.3 ITEM# 2 FOR TYPE II HANDRAILS WITH A PARAMETER OVER 6.25". A MINIMUM CLEARANCE OF 1.5" SHALL BE MAINTAINED FROM THE WALL OR OTHER SURFACE. HANDRAILS SHALL BE RETURNED, TERMINATE IN NEWEL POSTS, OR SAFETY TERMINALS. (CRC R311.7.8.2)
4. GUARDS SHALL BE 42" MINIMUM HEIGHT (UNLESS ACTING AS A HANDRAIL/GUARD FOR A STAIRWAY; THE GUARD HEIGHT MAY BE 34"-38" IN HEIGHT), WITH OPENINGS LESS THAN 4" INCHES CLEAR (GUARDS ON THE OPEN SIDES OF STAIRS MAY HAVE 4 3/8" OPENINGS). (CRC R312)
5. PROVIDE LANDINGS AT THE TOP/BOTTOM OF THE STAIRWAY THE WIDTH OF THE STAIRWAY. THE DEPTH OF THE LANDING SHALL BE 36" MINIMUM. (SEE CRC R311.7.6 FOR EXCEPTIONS).
6. USABLE SPACES UNDERNEATH ENCLOSED/UNENCLOSED STAIRWAYS SHALL BE PROTECTED BY A MINIMUM OF ½" GYPSUM BOARD. (CRC R302.7)

WALLS

1. POSITIVE POST TO BEAM CONNECTION SHALL BE PROVIDED TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT. (CRC R502.9 & CBC 2304.9.7)
2. ALL FASTENERS USED FOR ATTACHMENT OF SIDING & INTO PRESSURE TREATED LUMBER SHALL BE OF A CORROSION RESISTANT TYPE (CRC R317.3).
3. FIRE-BLOCK IN CONCEALED SPACES OF STUD WALLS/PARTITIONS, VERTICALLY AT CEILING/FLOOR LEVELS, & HORIZONTALLY AT 10FT. INTERVALS. FIRE-BLOCK AT SOFFITS, DROP CEILINGS/SIMILAR LOCATIONS & IN CONCEALED SPACES AT THE TOP/BOTTOM OF STAIR STRINGERS. (CRC R302.11)
4. PROVIDE APPROVED BUILDING PAPER UNDER THE BUILDING SIDING AND APPROVED FLASHING AT EXTERIOR OPENINGS (CRC R703.2). SPECIFY A MINIMUM OF 2 LAYERS OF GRADE D PAPER UNDER STUCCO AND 2 LAYERS OF 15LB FELT (OR EQUIVALENT) UNDER STONE VENEER.
5. STUCCO SHALL HAVE A MINIMUM CLEARANCE TO EARTH OF 4 INCHES AND 2 INCHES TO PAVED SURFACES WITH AN APPROVED WEEP SCREED. (CRC R703.7.2.1) MASONRY STONE VENEER SHALL BE FLASHED BENEATH THE FIRST COURSE OF MASONRY AND PROVIDED WITH WEEP HOLES IMMEDIATELY ABOVE THE FLASHING. (CRC R703.8.5 AND R703.8.6)

ENERGY CODE

1. 1. ALL DUCTS IN CONDITIONED SPACES MUST INCLUDE R-4.2 INSULATION. (CALIFORNIA ENERGY CODE 150.1(C)9)
2. 2. INSULATE THE FIRST 5' OF HOT/COLD WATER LINES, ALL LINES ¾ INCH IN DIAMETER OR LARGER, ALL RECIRCULATION PIPING, PIPING TO STORAGE TANKS AND ALL HOT WATER PIPES TO KITCHEN FIXTURES FROM THE WATER HEATER. (CALIFORNIA ENERGY CODE 150(J)(2))
3. 3. ISOLATION WATER VALVES REQUIRED FOR INSTANTANEOUS WATER HEATERS 6.8KBTU/HR AND ABOVE. VALVES SHALL BE INSTALLED ON BOTH COLD AND HOT WATER LINES. EACH VALVE WILL NEED A HOSE BIB OR OTHER FITTING ALLOWING FOR FLUSHING THE WATER HEATER WHEN THE VALVES ARE CLOSED. (CEC 110.3(C)7)
4. 4. PROJECT SHALL MEET THE MINIMUM VENTILATION AND ACCEPTABLE INDOOR AIR QUALITY REQUIREMENTS PER ASHRAE STANDARD 62.2. WINDOW OPERATION IS NOT A PERMISSIBLE METHOD OF PROVIDING THE WHOLE BUILDING VENTILATION AIRFLOW REQUIRED. THIS IS SUBJECT TO HERS TESTING. THE FOLLOWING LABEL MUST BE ATTACHED TO THE FAN SWITCH: "TO MAINTAIN MINIMUM LEVELS OF OUTSIDE AIR VENTILATION REQUIRED FOR GOOD HEALTH, THE FAN CONTROL SHOULD BE ON AT ALL TIMES WHEN THE BUILDING IS OCCUPIED, UNLESS THERE IS SEVERE OUTDOOR AIR CONTAMINATION." (CALIFORNIA ENERGY CODE 150.0(O))
5. WILDLAND URBAN INTERFACE (WUI)
6. BUILDINGS CONSTRUCTED AFTER JANUARY 1, 2008
7. 1. EXTERIOR WALL COVERINGS SHALL BE NONCOMBUSTIBLE, IGNITION RESISTANT, HEAVY TIMBER, LOG WALL OR FIRE RESISTIVE CONSTRUCTION. (CRC R337.7)
8. 2. EXTERIOR WALL COVERINGS SHALL EXTEND FROM THE FOUNDATION TO THE ROOF AND TERMINATE AT
9. 2 INCH NOMINAL SOLID BLOCKING BETWEEN RAFTERS AND OVERHANGS. (CRC R337.7.3.1)
10. 3. OPEN/ENCLOSED ROOF EAVES AND SOFFITS, EXTERIOR PORCH CEILINGS, FLOOR PROJECTIONS, UNDER-FLOOR AREAS AND UNDERSIDES OF APPENDAGES TO COMPLY WITH IGNITION RESISTANT CONSTRUCTION REQUIREMENTS. (CRC R337.5-9) (SHOW COMPLIANCE ON THE PLANS).
11. 4. SPACES CREATED BETWEEN ROOF COVERINGS AND ROOF DECKING SHALL BE FIRE STOPPED BY APPROVED MATERIALS OR HAVE ONE LAYER OF MINIMUM 72LB MINERAL SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D 3909. (CRC R337.5.2)
12. 5. VALLEY FLASHING SHALL BE NOT LESS THAN 26AWG AND INSTALLED OVER NOT LESS THAN ONE LAYER OF MINIMUM 72LB MINERAL SURFACED NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D 3909 AND AT LEAST 36 INCHES WIDE RUNNING THE FULL LENGTH. (CRC R337.5.3)
13. 6. ATTIC GABLE AND EAVES ABOVE 12FT AND UNDER-FLOOR VENTILATION SHALL BE PROVIDED WITH FULLY COVERED METAL WIRE MESH, VENTS, OR OTHER MATERIALS THAT HAVE A MINIMUM 1/16 INCH AND MAXIMUM 1/8 INCH OPENINGS, NON-COMBUSTIBLE AND CORROSION RESISTANT. ALL OTHER EAVE VENTS SHALL BE LISTED/APPROVED TO RESIST THE INTRUSION OF FLAME AND BURNING EMBERS. (CRC R337.6)
14. 7. EXTERIOR DOORS INCLUDING GARAGE DOORS SHALL BE NONCOMBUSTIBLE, IGNITION RESISTANT MATERIAL, MINIMUM 1 3/8 INCH SOLID CORE, MINIMUM 20 MINUTE FIRE RESISTIVE RATING OR SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-1. (CRC R337.8.3)
15. 8. THE WALKING SURFACE MATERIAL OF DECKS, PORCHES, BALCONIES AND STAIRS WITHIN 10FT OF GRADE LEVEL SHALL BE IGNITION RESISTANT MATERIAL, EXTERIOR FIRE RETARDANT TREATED WOOD OR NONCOMBUSTIBLE MATERIAL. (CRC R337.9)

EXISTING LOT AREA	4843 SF
EXISTING LOT COVERAGE (RESIDENCE)	
(E) 1ST STORY	1290 SF
(E) 2ND STORY	1027 SF
(GARAGE)	500 SF
TOTAL EXISTING	2162 SF
NEW FLOOR AREA COVERAGE (RESIDENCE)	
(N) 1ST STORY	70 SF
TOTAL PROPOSED	70 SF
TOTAL	2232 SF

APPLICABLE CODES

- 2019 CALIFORNIA BUILDING CODE (CBC) / 2018 INTERNATIONAL BUILDING CODE (IBC)
- 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC) / 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
- 2019 CALIFORNIA HISTORICAL BUILDING CODE (CHBC)
- 2019 CALIFORNIA RESIDENTIAL CODE (CRC) / 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC) / 2017 NATIONAL ELECTRICAL CODE (NEC)
- 2019 CALIFORNIA MECHANICAL CODE (CMC) / 2018 UNIFORM MECHANICAL CODE (UMC)
- 2019 CALIFORNIA PLUMBING CODE (CPC) / 2018 UNIFORM PLUMBING CODE (UPC)
- 2019 CALIFORNIA GREEN BUILDINGS STANDARDS CODE (CALGREEN)
- 2019 CALIFORNIA ENERGY CODE

VICINITY MAP

PROJECT SITE

N

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4552 TRAFALGAR DRIVE
LA PALMA CA 90623 UNITED STATES

SCALE : AS NOTED

DATE 03/25/2021

REGISTERED PROFESSIONAL ENGINEER
M39074
MAGDY SALEH HAMED REZK
SIGNATURE.jpg
EXPIRATION DATE SEPTEMBER 30 ,2022
MECHANICAL
STATE OF CALIFORNIA

SHEET TITLE

INDEX SHEET

TS-1

SITE PLAN
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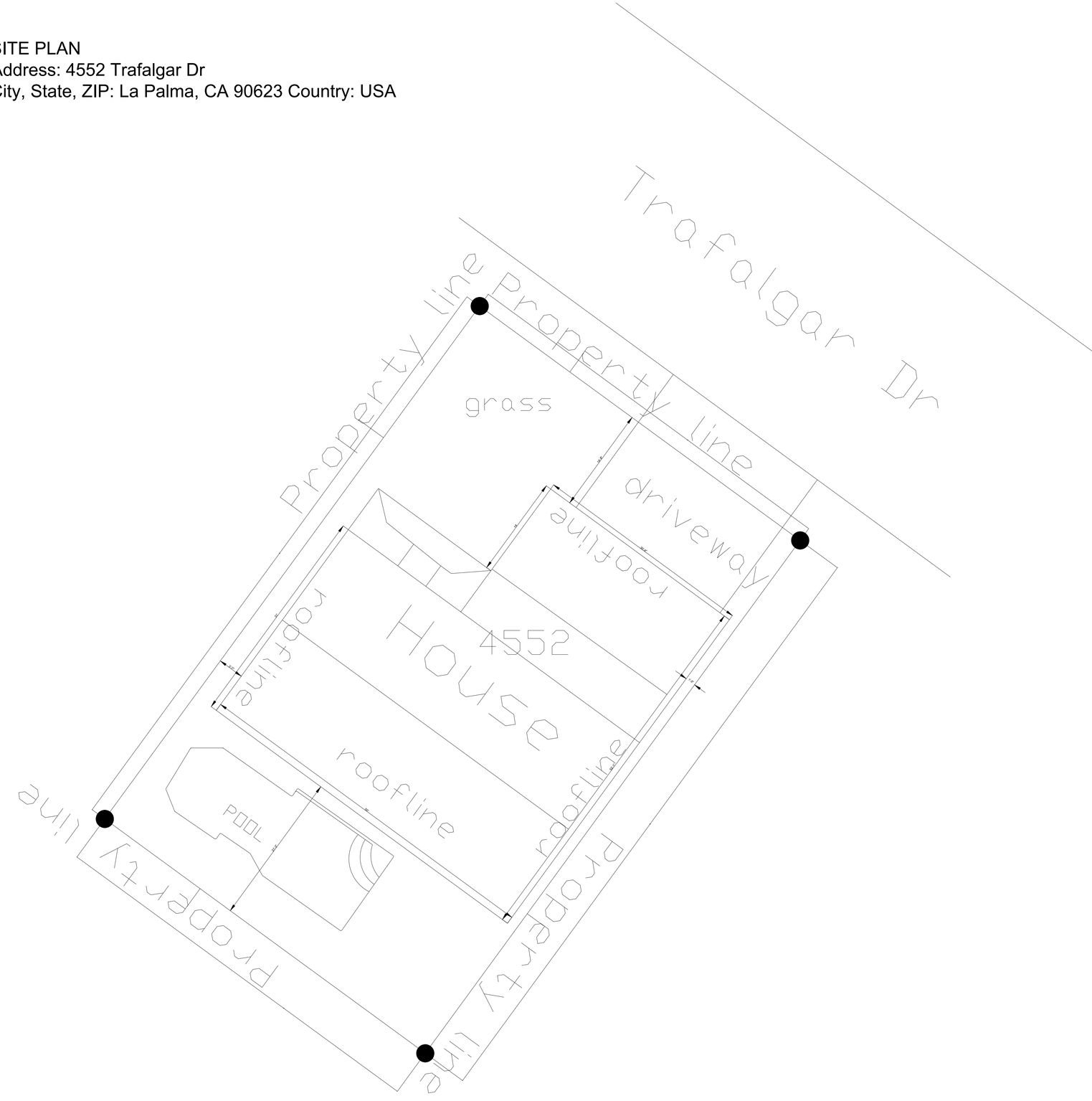
City, State, ZIP: La Palma, CA 90623 Country: USA



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SEPTEMBER 30 ,2080
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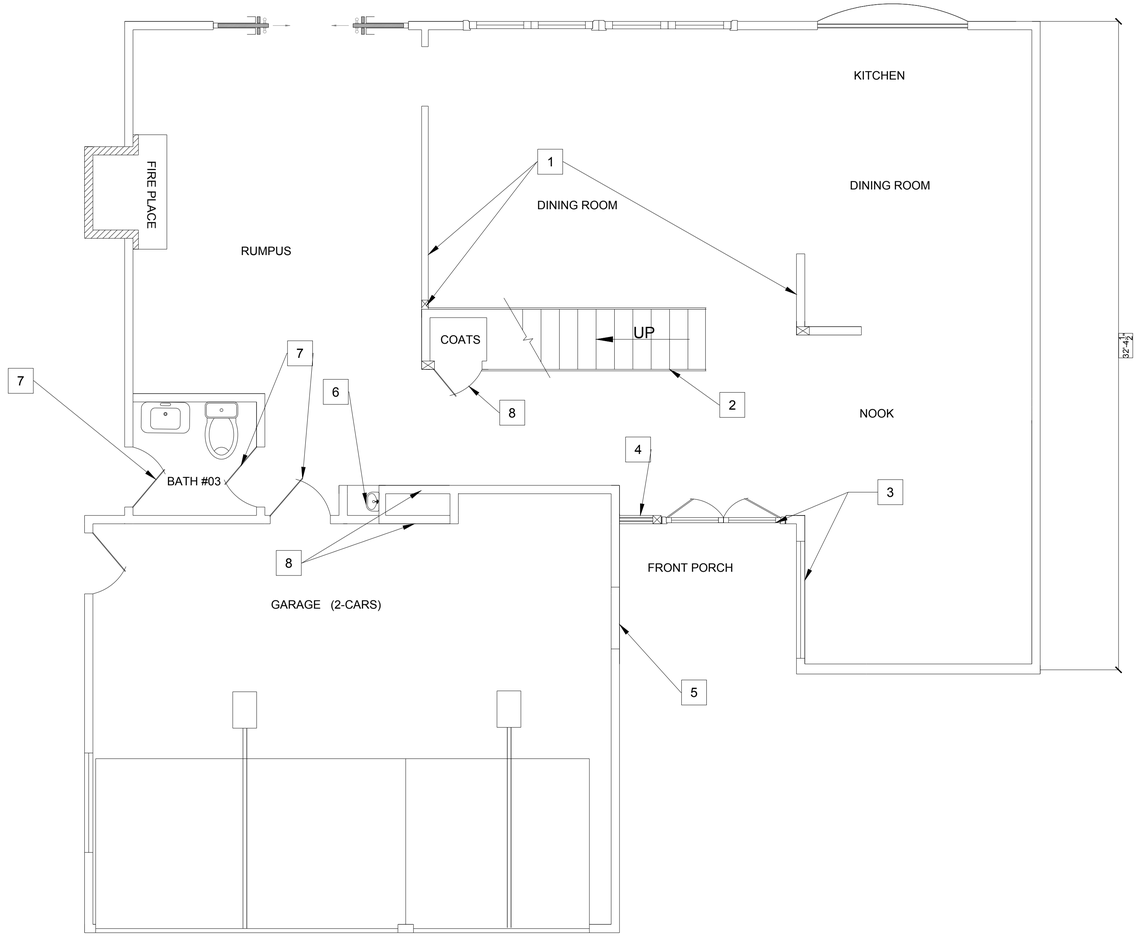
STATE OF CALIFORNIA

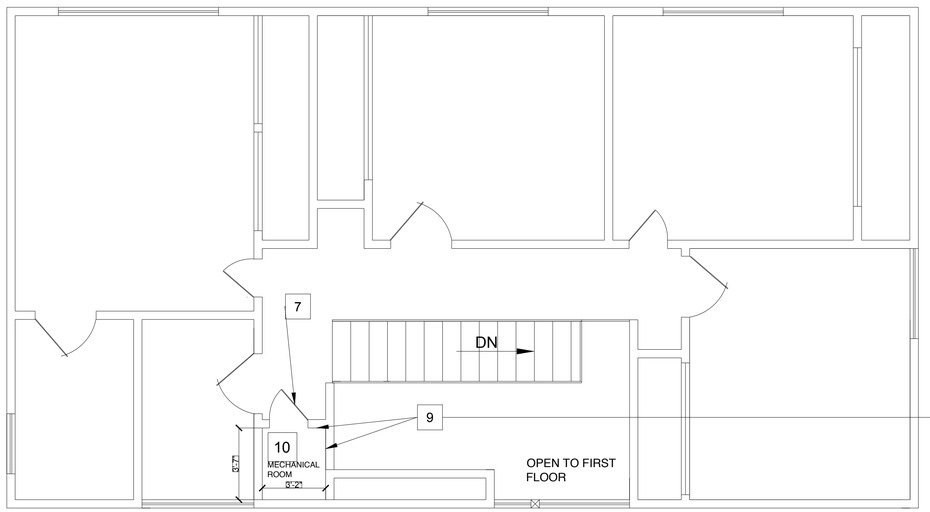
SHEET TITLE

SITE PLAN

ST-1



LOWER FLOOR DEMO PLAN



UPPER FLOOR DEMO PLAN

GENERAL NOTES

1.ALL FLOOR PLAN ITEMS ARE EXISTING U.N.O.

2. PRIOR TO CONSTRUCTION CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING SITE AND VERIFY EXISTING CONDITIONS.

3. PRIOR TO DEMOLITION OF THE STAIR SYSTEM, CONTRACTOR TO BUILD (N) NEW STAIR SYSTEM PER STRUCTURAL DRAWINGS.

DEMOLITION NOTES

1. EXISTING TO REMAIN, PROTECT IN PLACE DURING REMODELING.
2. REMOVE EXISTING WOOD STAIR SYSTEM
3. REMOVE EXISTING MAIN ENTRY DOUBLE DOOR & EXISTING WINDOW
4. REMOVE GLASS SIDELITE
5. REMOVE PORTION OF THE EXISTING WALL (34"x84") TO ALLOW FOR NEW DOOR FRAMING
6. REMOVE EXISTING HAND SINK, RE-USE PLUMBING PIPES FOR SHOWER WATER.
7. REMOVE EXISTING DOOR
8. REMOVE WALLS TO ALLOW FOR (R) MECHANICAL EQUIPMENTS
9. REMOVE WALL UP TO CEILING JOISTS
10. RELOCATE MECHANICAL EQUIPMENTS TO NEW LOCATION

PICTURE OF THE MECHANICAL EQUIPMENTS TO BE RELOCATED, ALL DUCT WORK TO REMAIN THE SAME.
FOR REFERENCE

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BAGGY SALEH HAMED REZA
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EXPIRATION DATE
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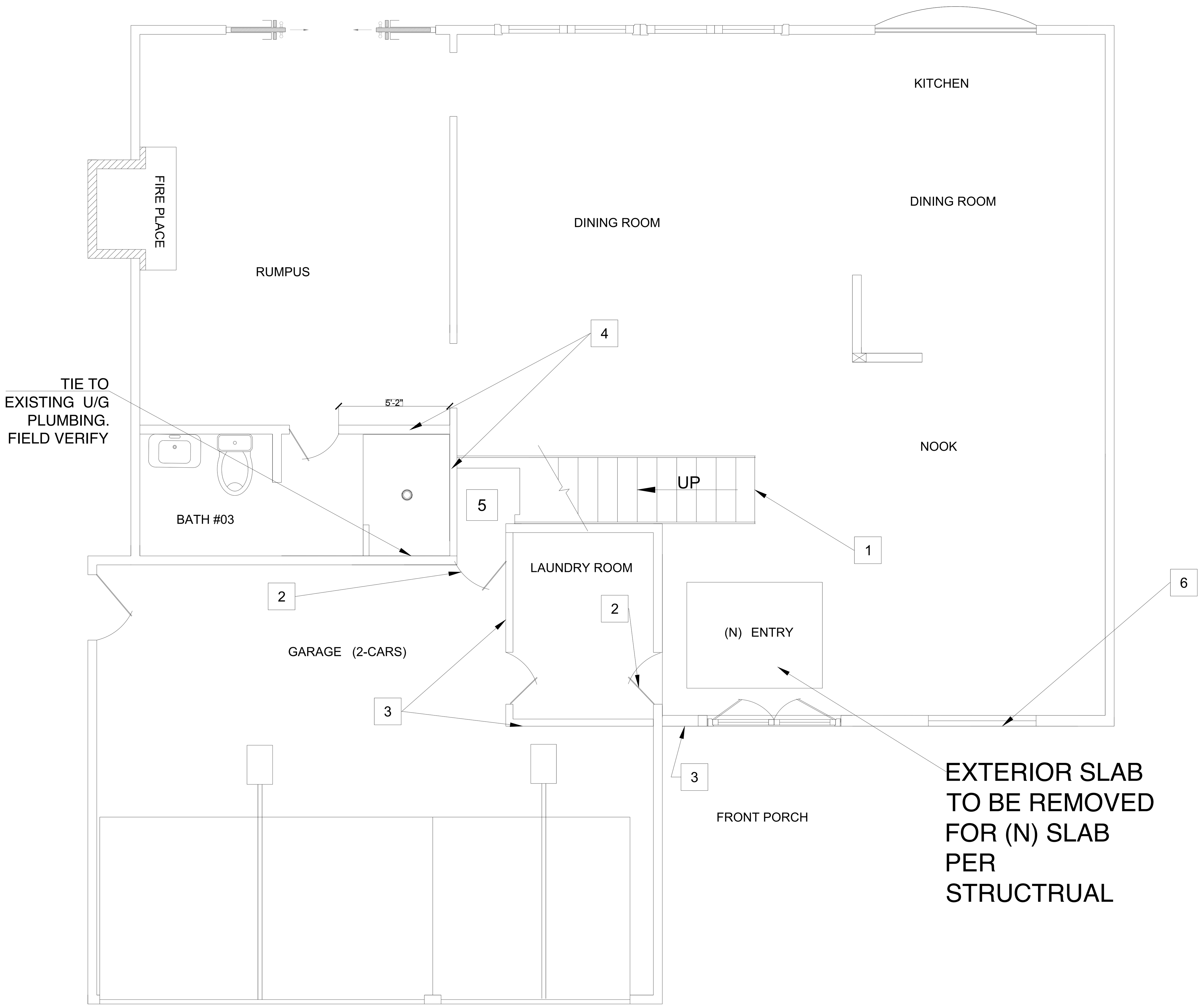
MECHANICAL
STATE OF CALIFORNIA

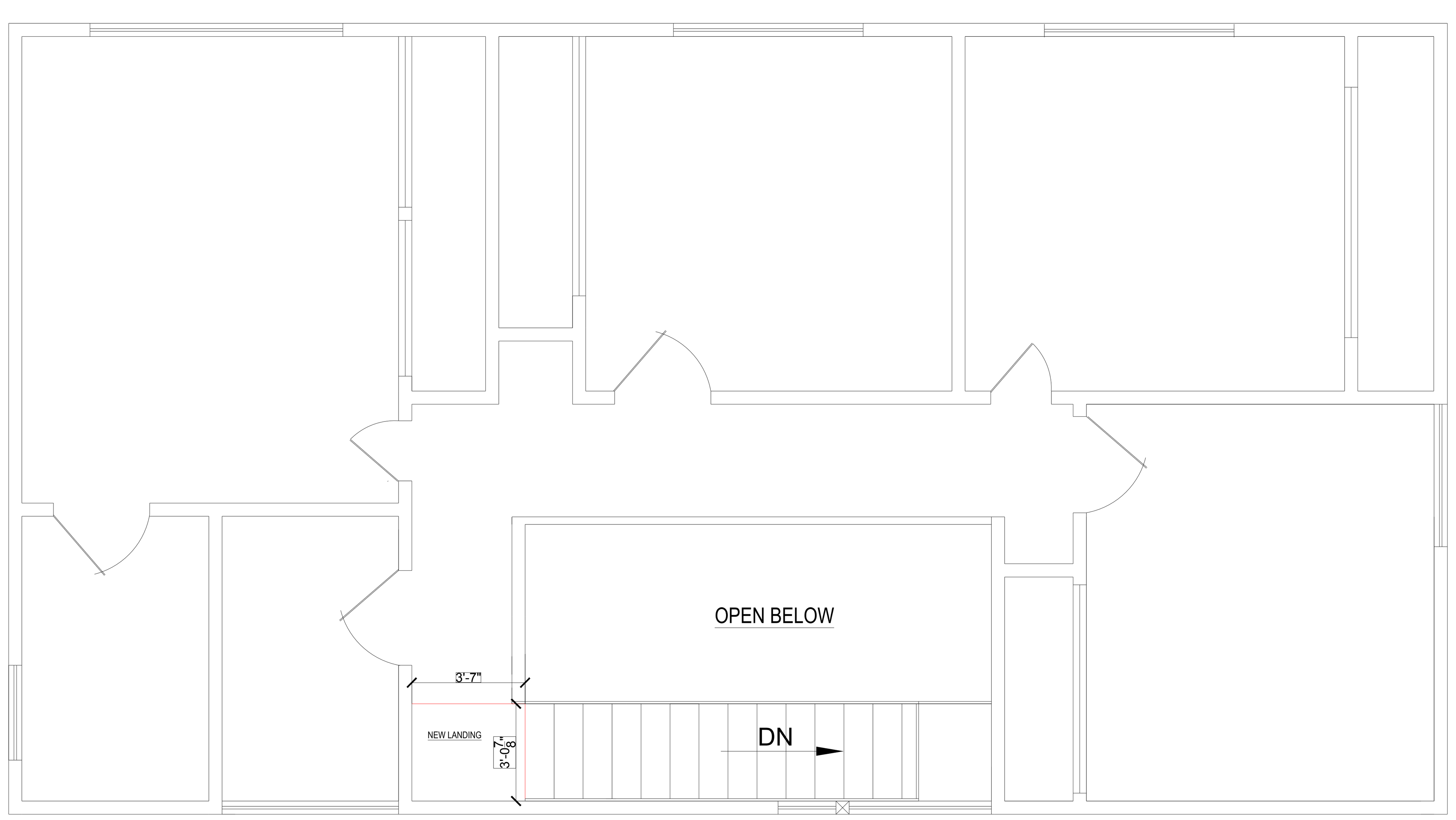
SHEET TITLE

TITLE SHEET

DT-1



LOWER PROPOSED FLOOR PLAN



UPPER PROPOSED FLOOR PLAN

GENERAL NOTES

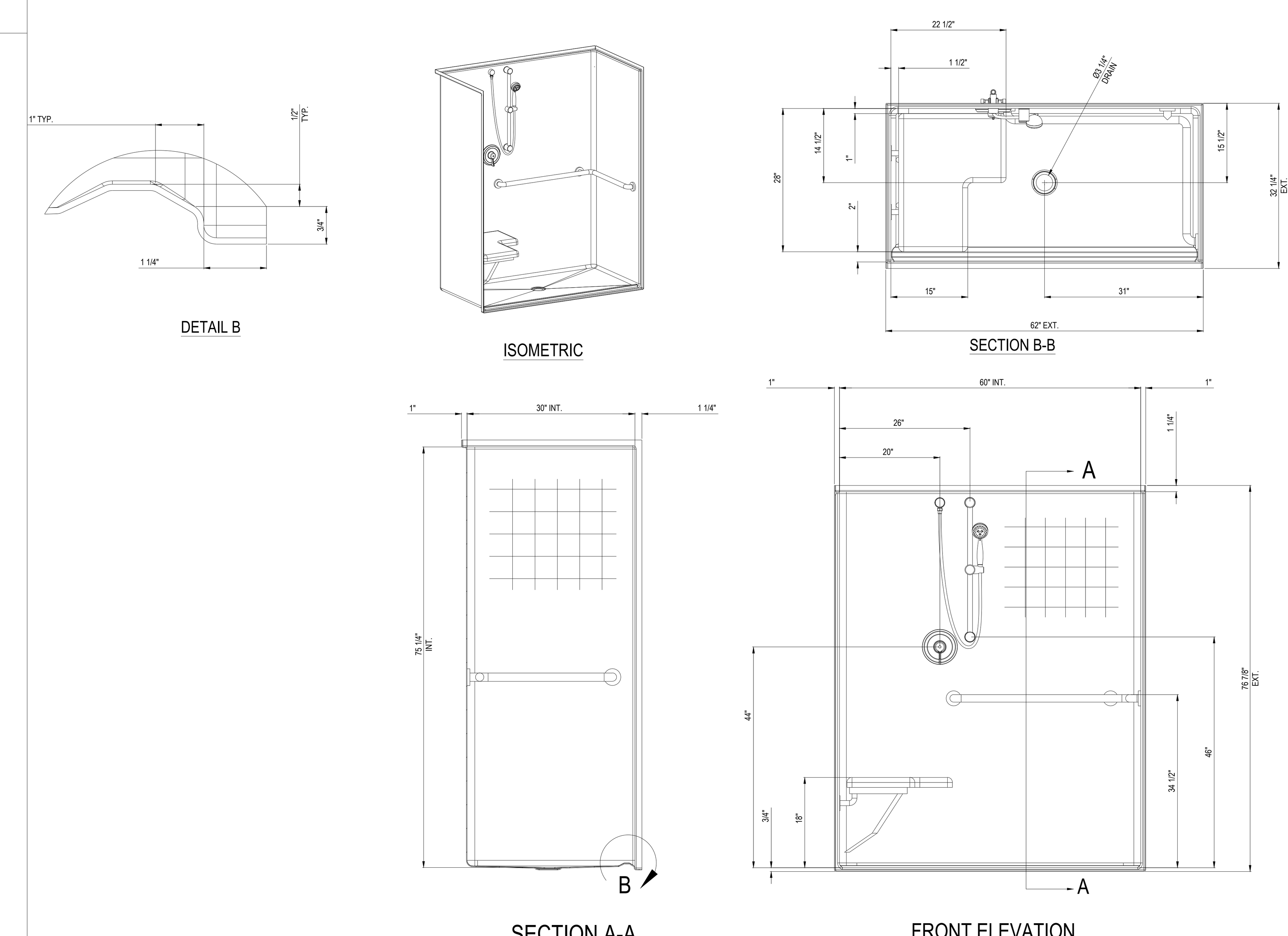
1.ALL FLOOR PLAN ITEMS ARE EXISTING U.N.O.

2. PRIOR TO CONSTRUCTION CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING SITE AND VERIFY EXISTING CONDITIONS.

NOTES

1	(N) WOOD STAIR SYSTEM SEE STRUCTURAL SHEETS
2	(N) DOOR MATCH EXISTING SIZE & FINISH SEE HEADER SCHEDULE
3	(N) 2X4 WOOD STUD WALL SEE STRUCTURAL SHEETS
4	ENLARGE EXISTING BATHROOM SIZE, SEE MECHANICAL SHEET FOR PLUMBING
5	(N) MECHANICAL ROOM, REFER TO MECHANICAL SHEETS
6	(N) WINDOW (SEE STRUCTURAL)

PICTURE OF THE STAIRS SYSTEM TO BE RELOCATED FOR REFERENCE



ADA - WALK IN SHOWER DETAIL

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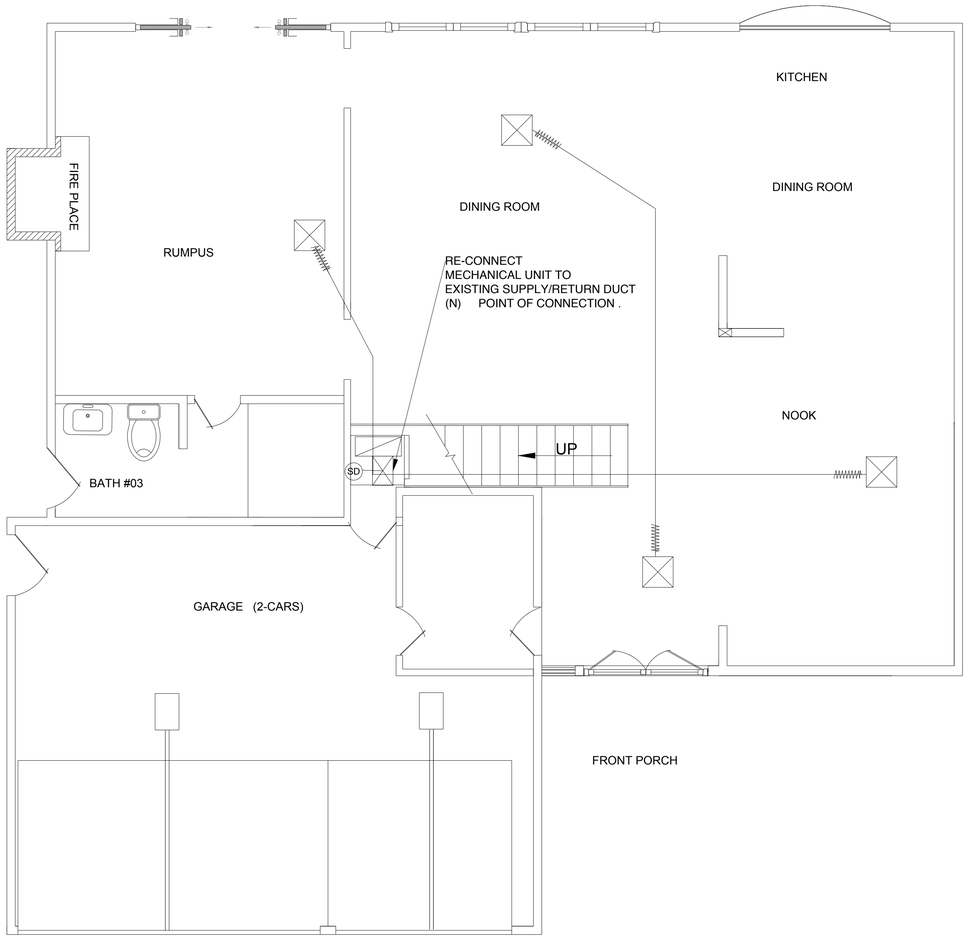
SHEET TITLE

(N) FLOOR PLAN

A-1



PROPOSED MECHANICAL FLOOR PLAN

MECHANICAL, PLUMBING, ELECTRICAL GENERAL NOTES

1. Smoke detectors shall be installed in each sleeping room, outside each separate sleeping area in the immediately vicinity of the bedrooms and on each additional story of the dwelling, including basements. In dwellings with split levels, a smoke detector need to be installed only on the upper level provided the lower level is less than 1 full story below the upper level,unless there is a doorseparating the levels, in which case s detector is required on both levels. All detectors shall be interconnected such that the actuation of one alarm will actuate all the alarms in the individual unit providing an alarm which will be audible in all sleeping areas. Required smoke detectors shall receive their primary power from the building wiring when such wiring is served from a commercial source and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Sec. 316.1.

2. Required smoke detectors shall not be located within kitchens or garages. Ionization smoke detectors shall not be located closer than 3' horizontally from the door to a kitchen; the door to a bathroom containing a tub or shower; or the supply register of a force air heating or cooling system. A smoke detector installed within 20' (direct linear path) of a cooking appliance shall be photoelectric or the detector shall have an approved alarm silencing means. Sec. 316.1

3. For any additional or alteration requiring a building permit, the entire building shall be provided with smoke detectors located as required for new buildings. Smoke detectors installed under this provision need not be interconnected unless other remodeling considerations require removal of the appropriate wall and ceiling coverings to facilitate conceled interconnected. Sec 316.1 Sec. 1001.

4. Heating: Each thermostat shall be capable of being let from 55degrees F--75 degrees F. Cooling equipment: Each thermostat shall be capable of being set for 70 degrees F--85 degrees F only. Sec. C501.3.1

5. Free standing or built-in ranges require a vertical clearance above the cooking top not less than 30" to unprotected combustiables or 24" if protected by noncombustible material. Vented ranges hoods shall be vented to the outside by a single-wall pipe constructed of galvanized steel, stainless, copper or other approved material. The duct shall have a smooth interior surface, be substantially airtight and shall be equipped with a back-draft damper. Open top btoler units shallbe provided with a hood complying with Sec. 1804 or incorporate an integral exhaust system listed for use without a hood. Self venting ranges or unvented hoods shall be installed in accordance with their listings. Sec. 1802.1. 2201.1, 2202.

6. Clothes dryer exhaust vents shall convey products of combustion and moisture to the exterior. They shall not be connected with sheet-metal screws or other fastening means extending into the vent. They shall be equipped with back-draft dampers. Ducts shall be constructed of minimum .016" ridid metal with joints running in the direction of airflow. Transition ducts shall not be concealed within construction. Ducts shall terminate with a full opening exhaust hood. The maximun length of a 4" vent shall not exceed 25' from the dryer location to wall or roof termination. Length reductions of 2.5' for 45 degree bends and 5' for 90 degree bends are required. Installations when this length is exceeded shall be installed in accordance with the MFG's installation instructions. Sec. 1801.

7. Wood stoves must be installed as per their installation instructions and must be labled indicating they meet emissions requirements. Wood stoves installed in an alcove must be specifically approved for such installation. Used wood staves must comply with Sec. 1307.5

8. Fireplaces and masonry chenneys shall be installed per Chapter 10. A minimun 2" clearance to combustible wood framinf is

9. Gas water heaters shall not be installed in a bedroom, closet, bathroom or utility room unless is a direct vent appliance or complies with Sec 2307.

MECHANICAL GENERAL NOTES

1. THE TOTAL INSTALLATION SHALL COMPLY WITH ANY AND ALL REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING 2019 CBC (CALIFORNIA BUILDING CODE), 2019 CMC/CPC (CALIFORNIA MECHANICAL AND PLUMBING CODE) AND THE 2019 TITLE 24 ENERGY CODE.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS UNDER WHICH HE WILL BE REQUIRED TO WORK.
3. ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK THIS CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK OF OTHER TRADES. DUCT DIMENSIONS SHOWN ON PLANS ARE NET INSIDE CLEAR.
4. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTINGS AND LOCATIONS ARE NOT EXACTLY LOCATED. ALL DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE NET INSIDE DIMENSIONS. DO NOT FABRICATE DUCTWORK FROM THESE DRAWINGS. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SUPPLYING SHOP DRAWINGS WHICH REFLECT THE PROPOSED INSTALLATION. THE SHOP DRAWINGS MUST BE APPROVED BY THE ENGINEER PRIOR TO ANY SHEET METAL FABRICATION. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCURATE AS-BUILT DRAWINGS AT THE COMPLETION OF THE PROJECT AND SUBMITTING THEM TO THE ENGINEER AND OWNER.
5. IN THE PREPARATION OF THESE DOCUMENTS, CERTAIN ASSUMPTIONS ARE MADE REGARDING EXISTING CONDITIONS. SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY OR DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF EXISTING BUILDINGS AND/OR EQUIPMENT. THEREFORE, THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR ANY CHANGES OR ADDITIONAL COSTS INCURRED DUE TO EXISTING CONDITIONS.
6. THE CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS IN LAYING OUT HIS WORK AND EQUIPMENT. HE SHALL COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER TRADES AND ALL JOB CONDITIONS.
7. PROVIDE MANUAL VOLUME DAMPERS AT UPSTREAM PORTION OF ALL TERMINAL AIR BRANCHES. THESE SHALL BE OF THE LOCKING QUADRANT TYPE, WHERE LOCATED OVER SLOPED OR HARD CEILINGS. PROVIDE DURO-DYNE ANGLE GEAR DRIVE OR BOWDEN CABLE CONTROL SYSTEM OR PROVIDE UNITED ENERTECH POWER/BALANCE SYSTEM. REMOTE PLATE LOCATIONS TO BE LOCATED AS DETERMINED BY ARCHITECT.
8. PROVIDE MINIMUM 1" ACOUSTICAL LINING IN ALL DUCTWORK WITHIN 10 FEET OF ALL AIR MOVING EQUIPMENT. PROVIDE DURO-DYNE FLEXIBLE CONNECTION AT ALL DUCT AT EQUIPMENT LOCATIONS.
9. DUCTS IN AN UNCONDITIONED SPACE OR EXTERIOR DUCT WORK SHALL HAVE A MIN. OF R-8 INSULATION. DUCTS WITHIN THE CONDITIONED ENVELOPE ABOVE A CEILING SHALL HAVE A MIN. OF R-4.2 INSULATION. EXTERIOR DUCTWORK SHALL NOT HAVE INSULATION EXPOSED TO THE ENVIRONMENT.
10. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, ALL DUCTWORK AND EQUIPMENT SHALL BE SUPPORTED PER THE SMACNA GUIDELINES FOR SEISMIC RESTRAINT AND CURRENT APPLICABLE UNIFORM MECHANICAL CODE.
11. TESTING, ADJUSTING, AND BALANCING (TAB) OF THE AIR CONDITIONING SYSTEMS AND RELATED ANCILLARY EQUIPMENT WILL BE PERFORMED BY A CERTIFIED, INDEPENDENT THIRD PARTY, AABC AGENCY PROCURED BY THE MECHANICAL CONTRACTOR. A COMPLETE AIR BALANCE REPORT TO BE SUBMITTED TO THE ADMINISTRATIVE AUTHORITY AND TO THE MECHANICAL ENGINEER AND APPROVED PRIOR TO FINAL PAYMENT.
12. AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED AND INSULATED AS PROVIDED IN CHAPTER 6 OF 2019 CMC.
13. MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 (2019 CMC SECTION 602.2).
14. UNLESS OTHERWISE STATED, MAXIMUM LENGTH FOR FLEXIBLE DUCTWORK SHALL NOT EXCEED FIVE FEET (5'-0"). ALUMINUM FLEX DUCTWORK WILL NOT BE ALLOWED ON ANY PORTION OF THE DUCTWORK SYSTEM.
15. ANY SUBSTITUTION MADE BY THE CONTRACTOR THAT IS DIFFERENT FROM WHAT IS SPECIFIED ON THE DRAWINGS SHALL BE CLEARLY INDICATED ON THE SUBMITTAL AS TO ALL THAT IS BEING SUBSTITUTED.

HVAC LEGEND

SYMBOL	ABBREVIATIONS	DESCRIPTION
		SQ., RECT. OR ROUND DUCT AS NOTED
		DUCT WITH ACOUSTICAL LINER
		EXIST. DUCT OR EQUIP. TO REMAIN
		EXIST. DUCT OR EQUIP. TO BE REMOVED
		FLEXIBLE DUCT
		CEILING DIFFUSER, SUPPLY
	CR / CE	CEILING REGISTER, RETURN & EXHAUST
		SECTION THROUGH DUCT
		DUCT DOWN
		SQUARE TO ROUND TRANSITION
		DUCT ACCESS DOOR
		DUCT WITH TURNING VANES
DETAIL No. SHEET No.		DETAIL REFERENCE
EQUIPMENT ID. No.		EQUIPMENT REFERENCE
	MVD	MANUAL VOLUME DAMPER
S		SWITCH
T		THERMOSTAT
	CFM	CUBIC FEET OF AIR PER MINUTE
	O.S.A.	OUTSIDE AIR
	(N)	NEW
	(E) OR EXIST.	EXISTING
	30X10	INDICATES SQUARE DUCT (INCHES)
	10ø	INDICATES ROUND DUCT (INCHES)
	P.O.C	POINT OF CONNECTION
	P.O.D.	POINT OF DEMOLITION

ANCHORAGE AND BRACING NOTES

1. PIPES, DUCTS AND CONDUITS SHALL BE SUPPORTED AND BRACED PER THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING SYSTEMS", THE "SUPERSTRUT SEISMIC RESTRAINT SYSTEM" FOR PIPES AND CONDUITS ONLY.

AIR DISTRIBUTION SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NO.	FINISH	REMARKS
	CEILING DIFFUSER	-	-	EXISTING SUPPLY

APPLICABLE CODES

1. 2019 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2. 2019 CALIFORNIA BUILDING CODE (CBC),PART 2, TITLE 24 C.C.R. (IBC WITH AMENDMENTS)
3. 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)
4. 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (UMC WITH AMENDMENTS)
5. 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (UPC WITH AMENDMENTS)
6. 2019 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (IFC WITH AMENDMENTS)
7. 2019 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
8. 2019 TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
9. 2019 CALIFORNIA ENERGY CODE (PART 6, TITLE 24 C.C.R.)
10. 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSG), PART 11, TITLE 24 C.C.R.
11. 2018 INTERNATIONAL BUILDING CODE (IBC)
12. 2018 INTERNATIONAL MECHANICAL CODE (IMC)
13. 2018 INTERNATIONAL PLUMBING CODE (IPC)

MECHANICAL BASIS OF DESIGN

A. CALIFORNIA VENTILATION CRITERIA:
1. COMPLY WITH CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARD.
A. GREATER OF 15 CFM/PERSON OR 0.15 CFM/SF

B. EXHAUST TO OUTDOORS (MINIMUM RATES).

C. BUILDING ENVELOPE:
1. REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ENVELOPE REQUIREMENTS
2. ALL ENVELOPE COMPONENTS SHALL MEET CALIFORNIA ENERGY CODE MINIMUM PRESCRIPTIVE CRITERIA.

D. DUCTWORK DESIGN CRITERIA (MAXIMUM ALLOWABLE AIR PRESSURE DROPS AND AIR VELOCITIES) TO MEET HIGH EFFICIENCY OPERATION WITH MINIMAL ACOUSTICAL NOISE. DUCT STATIC PRESSURE FRICTION LOSS SHALL NOT EXCEED 0.2" PER 100 FEET IN MECHANICAL ROOMS AND SHAFTS. LOW PRESSURE SUPPLY AND EXHAUST DUCT STATIC PRESSURE FRICTION LOSS BASED ON A MAXIMUM OF 0.08" PER 100 FEET. LOW PRESSURE RETURN DUCT STATIC PRESSURE FRICTION LOSS BASED ON A MAXIMUM OF 0.05" PER 100 FEET.
1. IN ADDITION, MAXIMUM SUPPLY AND EXHAUST DUCT AIR FLOW VELOCITIES, REGARDLESS OF PRESSURE DROP, SHALL NOT EXCEED THE FOLLOWING CRITERIA:
A. MAINS ABOVE CEILING: 1750 FPM
B. MAINS ABOVE OPEN OCCUPIED SPACES: 1450 FPM
C. BRANCHES ABOVE CEILING: 1400 FPM
D. BRANCHES ABOVE OPEN OCCUPIED SPACES: 1150 FPM
E. RUN-OUTS TO DIFFUSERS: 725 FPM
F. IN SHAFTS: 2500 FPM
G. IN MECHANICAL ROOMS: 3000 FPM

H. SEISMIC:
1. ANCHORAGE AND RESTRAINTS ARE A DEFERRED SUBMITTAL BY THE CONTRACTOR AND MUST BE COORDINATED WITH STRUCTURAL ENGINEER AND AUTHORITY HAVING JURISDICTION.

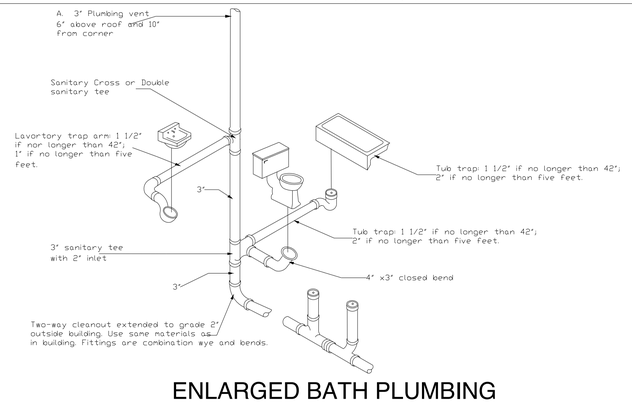
DUCT SUPPORT SCHEDULE

RECTANGULAR DUCT			ROUND DUCT		
MAX. OF DUCT PERIMETER/IN.	STRAP	MAX. LOAD EACH HANGER/LBS.	DIAMETER /INCHES	STRAP	MAX. LOAD EACH HANGER/LBS.
P/2 =72	1"X 20 GA.	20	UP TO 20"	1"X 20 GA.	20
P/2 =96	1"X 18 GA.	30	21" TO 36"	1"X 18 GA.	30

NOTE:
1. NO BRACING REQUIRED IF DUCT IS SUSPENDED 12 INCHES OR LESS IN LENGTH.
2. FOR TRANSVERSE AND LONGITUDINAL BRACING, FOLLOW 2008 "SMACNA" SEISMIC RESTRAINT MANUAL GUIDELINES (TABLE 8)

DIFFUSER RUNOUT SCHEDULE

DIFFUSER NECK SIZE	CFM RANGE MIN.	
6	0	
8	111	
10	201	
12	401	
14	501	
22x22	701	



ENLARGED BATH PLUMBING

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4552 TRAFALGAR DRIVE
LA PALMA CA 90623 UNITED STATES

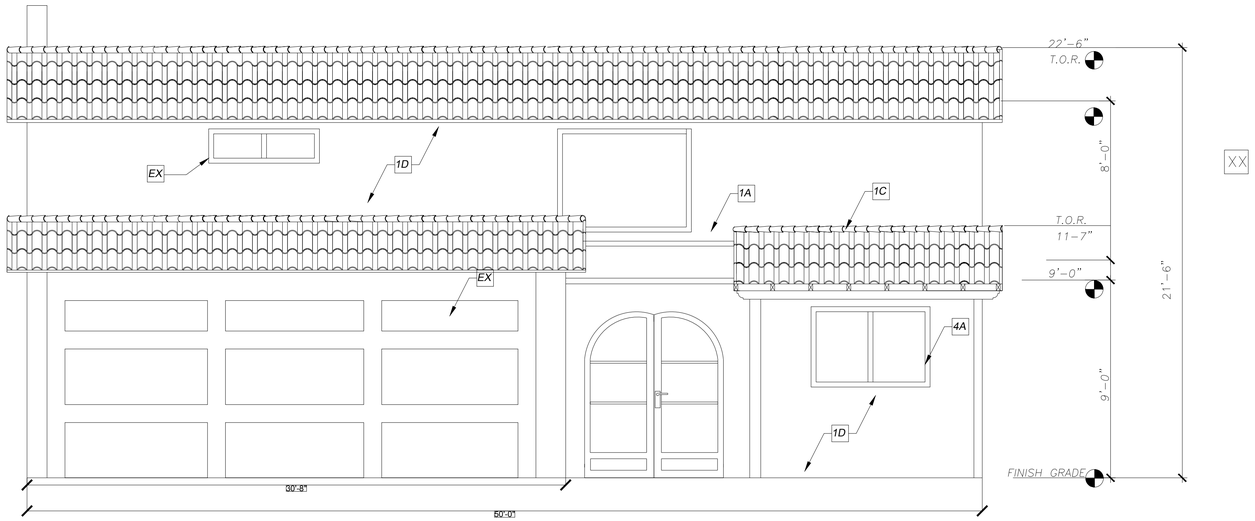
SCALE : AS NOTED

DATE 03/25/2021

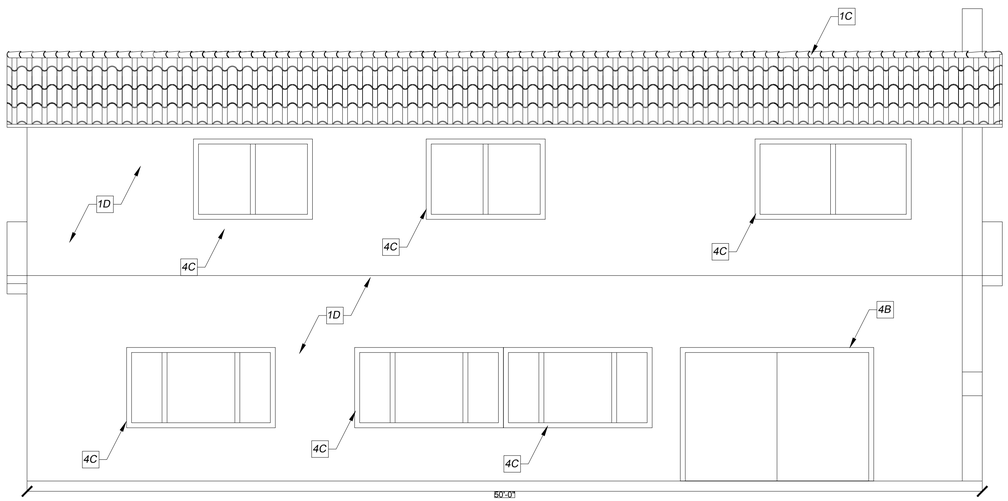
REGISTERED PROFESSIONAL ENGINEER
M39074
HAGOP SALEH HAMES REZK
NATURE.jpg
EXPIRATION DATE SEPTEMBER 30 2020
MECHANICAL
STATE OF CALIFORNIA

SHEET TITLE
MECHANICAL FLOOR PLAN

M-1



PROPOSED FRONT ELEVATION

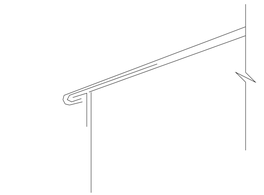


REAR ELEVATION

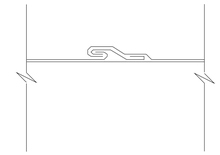
SHEET METAL ROOFING:

TYPICAL FRAMED ROOF(METAL)
SEE STRUCTURAL SHEET S-0.30 FOR ATTACHMENT DETAIL

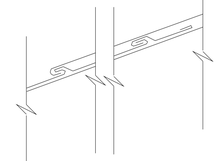
ROOF: CUSTOMER CHOICE OF METAL ROOF,
WITH #15 LB ROOFING PAPER OR BETTER BEFORE INSTALLING ROOF.



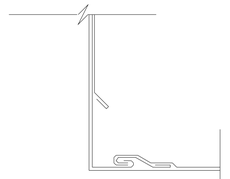
SHEET METAL ROOF
Flat Seam @ Eave



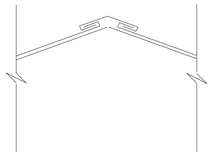
SHEET METAL ROOF
Flat Seam



SHEET METAL ROOF
Flat Seam



SHEET METAL ROOF
Flat Seam @ Parapet



SHEET METAL ROOF
Flat Seam @ Ridge

NOTATION CHECKLIST,
SAMPLE NOTES

FLAT SEAM	ROOF CONSTRUCTION
BATTEN	PREFAB RIDGE PIECE
FLASHING	METAL ROOFING HIP COVER
STANDING SEAM	PLYWOOD SHEATHING
SNAP CAP ANCHOR CLIP	MTL. ROOFING, 1-1/2" W. X 2" H. BATTEN @ 24" O.C.
CLEAT	TYPE "W" VALLEY CONT. FLASH. BY MTL.
METAL ROOFING	ROOFING MFR.
ROOFING FELT	CLOSURE BY MTL. ROOFING MFR.
ROOF DECK/INSULATION	PEAK LAP BY MTL. ROOFING MFR.
	26 GA. GALV. MTL. ROOFING, CLIP & SEAM

EXTERIOR ELEVATION KEY NOTES:

MATERIALS, FINISHES AND COLORS TO MATCH EXISTING

1. EXTERIOR FINISHES:

1A	*MATCH EXISTING ROOFING MATERIALS*
1C	*EXISTING CLASS "A"ROOFING TO REMAIN*
1D	*EXISTING STUCCO* TO REMAIN.

4. WINDOWS & DOORS:

4A	*SLIDER WINDOW DUAL PANE*
4B	*EXISTING SLIDING PATIO DOOR* TO REMAIN
4C	*EXISTING WINDOW* TO REMAIN

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4552 TRAFALGAR DRIVE
LA PALMA CA 90623 UNITED STATES

SCALE : AS NOTED

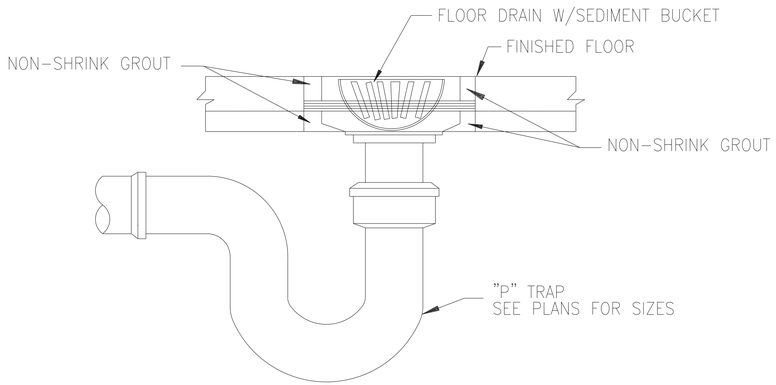
DATE 03/25/2021

REGISTERED PROFESSIONAL ENGINEER
M39074
HAIDY SALIH HAMED MEZH
NATURE.jpg
EXPIRATION DATE
SEPTEMBER 30, 2022
MECHANICAL
STATE OF CALIFORNIA

SHEET TITLE

ELEVATION

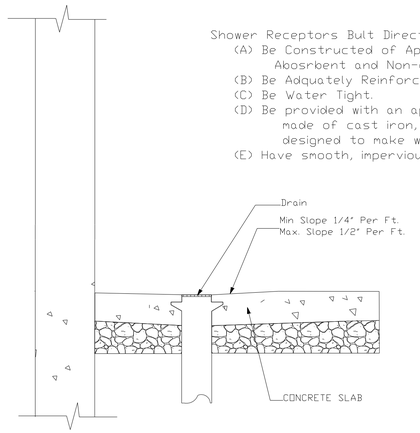
A-2



FLOOR DRAIN DETAIL 1

N.T.S.

Shower Receptors Bult Directly On Ground Shall:
(A) Be Constructed of Approved Type Dense, Non-Absorbent and Non-corrosive.
(B) Be Adquately Reinforced.
(C) Be Water Tight.
(D) Be provided with an approved flanged floor drain made of cast iron, brass or other approved material designed to make watertight joint in floor.
(E) Have smooth, impervious and durable surfaces.



FLOOR DRAIN DETAIL 2

N.T.S.

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REGISTERED PROFESSIONAL ENGINEER
M39074
NATURE.jpg
EXPIRATION DATE SEPTEMBER 30 2003
MECHANICAL
STATE OF CALIFORNIA

SHEET TITLE
CONSTRUCTION DETAILS

M-2

ABBREVIATIONS

AB.	ANCHOR BOLT
ADJ.	ADJACENT
ALLOW.	ALLOWABLE
ALT.	ALTERNATE
APPROX.	APPROXIMATE
BDRY.	BOUNDARY
BL	BOTTOM LAYER
BOT.	BOTTOM
B.S.	BOTH SIDES
BT.	BENT
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
CSK	COUNTERSUNK
CJ	CEILING JOIST
CB	CEILING BEAM
DBL.	DOUBLE
DEPR.	DEPRESSION
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
DS	DOUBLE STIRRUPS
DWLS.	DOWELS
EA.	EACH
E.F.	EACH FACE
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.W.	EACH WAY
E.	EXISTING
EXT.	EXTERIOR
FB.	FLOOR BEAM
FDN.	FOUNDATION
F.F.	FINISH FLOOR
FG.	FLOOR GIRDER
FJ.	FLOOR JOIST
FLG.	FLANGE
FLR.	FLOOR
F.O.S.	FACE OF STUD
F.P.	FULL PENETRATION
F.S.	FAR SIDE
FTG.	FOOTING
GA.	GAGE
GALV.	GALVANIZED
GLB	GLUE LAMINATED BEAM
GR.	GRADE
HORIZ.	HORIZONTAL
H.S.	HIGH STRENGTH
HSS.	HOLLOW STRUCT.SECTION
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
INT.	INTERIOR
JST.	JOIST
JT.	JOINT
K.P.	KING POST
LG.	LONG
LGTH.	LENGTH
LTWT.	LIGHTWEIGHT
MECH.	MECHANICAL
MFR.	MANUFACTURER
N.I.C.	NOT IN CONTRACT
NLB.	NON-LOAD BEARING
NO.	NUMBER
N-S	NORTH-SOUTH
N.T.S.	NOT TO SCALE
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OPNG.	OPENING
OPP.	OPPOSITE
P.L.	PROPERTY LINE
P.P.	PARTIAL PENETRATION
QTY.	QUANTITY
REG.	REGULAR
REINF.	REINFORCEMENT
REQ'D	REQUIRED
RB.	ROOF BEAM
RC	REINFORCED CONC.
RR	ROOF RAFTER
SCHED.	SCHEDULE
SECT.	SECTION
SHTG.	SHEATHING
S.O.G.	SLAB ON GRADE
SPCG.	SPACING SQUARE
STAG.	STAGGERED
STD.	STANDARD
STIRR.	STIRRUPS
STL.	STEEL
STR.	STRAIGHT
STRUCT.	STRUCTURAL
SUPPT.	SUPPORT
SW	SHEAR WALL
SYM.	SYMMETRICAL
T & B	TOP AND BOTTOM
T.C.	TOP OF CURB
TEMP.	TEMPERATURE
T.S.	TOP OF STEEL
TOW.	TOP OF WALL
TOR.	TOP OF RAILING
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
WWM	WELDED WIRE MESH

General:

1. The Contractor shall verify all contract documents, site dimensions, and conditions prior to starting work and shall notify the Engineer of any discrepancies or inconsistencies.
2. Unless shown or noted otherwise, typical details and general notes shall be used whenever applicable.
3. Unless specifically detailed on these drawings, contractor shall furnish adequate shoring, bracing, etc. as required to safely execute all work, and shall be fully responsible for same.
4. Copies of all inspection reports, test results, etc. shall be sent to the engineer.
5. Any conflict between architectural and structural drawings must be verified with engineer before construction can proceed.
6. Drawings shall not be scaled for construction purposes.

Design Criteria:

Dead Loads		Live Loads	
Roof DL =	15 psf	Roof LL =	20 psf
Attic DL =	15 psf	Attic LL =	20 psf
Floor DL =	20 psf	Floor LL =	40 psf
Ext Wall DL =	20 psf	**Geotechnical**	
Int Wall DL =	10 psf	Soil Bearing	1500 psf

Concrete:

1. Cast-in-place concrete shall be regular weight stone aggregate concrete. Unless noted otherwise, minimum 28-day compressive strength shall be as follows:
   a. Footings and slabs: 2500 psi.
   b. Grade beams, and piles: 3000 psi.
   c. All other concrete: 2500 psi.
2. Cylinder tests shall be made for all concrete greater than 2500 psi and test results shall be submitted to the Engineer for review and approval. All concrete greater than 2500 psi shall be subject to continuous inspection in conformance with the Bldg. Code.
3. Cement shall conform to ASTM C150 TYPE II, unless Alkaline soils are present.
4. Aggregates shall conform to ASTM C33 with proven shrinkage characteristics of less than 0.005.
5. Ready mix concrete shall comply with ASTM C94.
6. Unless noted otherwise, all detailing, fabrication, and erection of reinforcing bars shall conform to the latest adopted edition of the A.C.I "Manual of Standard Practice for Detailing Concrete Structures."
7. Unless noted otherwise, on the drawings., min. concrete protection for reinforcing steel shall be as follows:
   a. Concrete cast against earth: 3"
   b. Formed concrete exposed to earth or weather:
   i. #5 bars and smaller: 1-1/2"
   ii. All bars larger than #5: 2"
   c. Formed concrete not exposed to weather or in contact with earth:
   i. Slabs and walls: 3/4"
   ii. Beams and columns: 1-1/2"
11. Minimum anchor bolt size and spacing shall be 5/8" dia. AB @ 48" o.c., with 7" embedment, and 3"x3"x1/4" plate washers. Anchor bolts shall be located a maximum of 12" and 4 1/2" minimum from the end of plate (CBC 1905.1.8)
12. Refer to architectural, mechanical and electrical drawings for miscellaneous items to be cast into concrete and masonry. Do not cut or deform primary reinforcing bars without consent of the engineer.
13. Hot dip galvanize or provide 3" minimum concrete cover around all structural steel below grade. Structural steel embedded in concrete or masonry shall be unpainted.

Reinforcing Steel:

1. Reinforcing steel for ties and stirrups shall be ASTM A615 Grade 60; all other reinforcing steel shall be ASTM A615 Grade 60, U.N.O.
2. All welded reinforcement shall comply with ASTM A706, U.N.O.
3. Welded wire fabric shall comply with ASTM A185.
4. Min. reinforcing steel lap splice shall be larger of values in reinforcement schedule on detail 10 sheet S-0.2, 40 bar dia., or 1'-8".
5. Reinforcement development length shall be per reinforcement schedule on detail 10 sheet S-0.2
6. All reinforcement shall be securely tied and braced in place prior to pouring concrete or grouting masonry.
7. Where continuous bars are called out, splices may be used. Splice length shall be per reinforcement schedule on detail 10 sheet S-0.2.
8. All reinforcing bar bends shall be made cold.

Foundation:

1. Report prepared by:
2. Contractor is responsible to review and comply with all recommendations found in soils report for this project.
3. If adverse soil conditions are encountered, a soils investigation report may be required unless already provided for this project.
4. Minimum footing reinforcement shall be (2) #4 bar top and bottom (CBC 1905.1.6)
5. Foundation design is based on recommendations contained in soils report. If soils report is not available for this project foundation design shall be in accordance with California Building Code Table 1806.2 and as follows U.N.O. on plans. (recommendations in soils report shall govern over table below):
   a. Soil Type: Per soils report. If soils report is not available, assume expansive soils.
   b. Maximum vertical bearing: 1,500 psf
   c. Maximum lateral bearing: 100 psf/ft below natural grade
   d. Coefficient of Friction: 0.25
6. Minimum footing dimensions shall be as follows U.N.O. on plans.(recommendations in soils report shall govern over table below):
   a. Continuous footings width: 18"
   b. Continuous footing embedment: 24"
   c. Pad footing width: 24"
   d. Pad footing embedment: 24"
7. Contractor is responsible to obtain minimum 95% compaction U.N.O. in soils report.
8. Notify engineer if superimposed loading from foundation, etc. exists on adjacent property within a distance defined by a 45 degree imaginary line projected upward from top of footing.
9. Footing depths shown are a minimum and may be increased by contractor or per geotechnical engineer's recommendations.
10. Geotechnical engineer shall verify in writing to the engineer that the site grading work complies with all of the recommendations and conclusions of the geotechnical report, if such report is present.
11. The footing excavations shall be kept free from loose material and standing water and shall be neat and true to line before any concrete is placed. Excavations shall be checked and approved by a qualified geotechnical engineer to insure compliance with the requirements of the geotechnical report, if such report is provided.
12. All abandoned footings, utilities, etc. that interfere with new construction shall be removed.
13. Dowels between footing and walls shall be the same grade, size, and spacing as vertical reinforcement, U.N.O.

Structural Steel:

1. Structural steel shall conform to A992, Grade 50. structural steel pipe shall be ASTM A53 B. Structural steel square and/or rectangular tubing shall be grade b, conforming to ASTM A500. steel plates shall conform to ASTM A36.
2. Fabrication and erection shall be in compliance with current AISC specifications for buildings. shop drawings shall be submitted to the engineer for review and approval prior to fabrication, including the commentary and supplements.
3. Structural steel fabricator's qualification: structural steel fabricator must be on the city's pre approved list or participate in the AISC certification program described in AISC certified plant. catagory standard.
4. Materials shall conform to the following standards, unless noted otherwise on drawings:
   A. W-shapes - ASTM A992, Fy=50 ksi
   B. Plates for w-shape members and structural tubes - ASTM A572 Gr 50
   C. Other rolled sections (angles, channels, plates, etc.) - ASTM A36, Fy=36 ksi
   D. Where noted 50 ksi on drawings - ASTM A572, Fy=50 ksi
   E. Steel pipe - ASTM A53, TYPE E, Gr.B, Fy=35ksi
   F. Structural round (HSS) - ASTM A500, Gr.C, Fy=46ksi
   G. Structural tubes (HSS) - ASTM A500, Gr C, Fy=50ksi
   H. Structural bolts U.N.O. - ASTM A325 (type N connection)
   I. Anchor rods/bolts - ASTM F1554, Grade 36,
   J. Sheet steel - ASTM A1011 Gr36
   K. Welding rods - e-70xx series low hydrogen
5. Anchor Rods
   A. Provide headed or threaded and nutted anchor rods. hooked anchor rods are not acceptable.
   B. For threaded anchor rods, provide a single heavy hex nut. tack weld the bottom of the nut to the rod at the embedded end, unless noted otherwise. the top of the embedded head or nut is the basis for measurement of embedment. provide a rigid temporary steel template to locate anchor rods during concrete placement.
   C. Do not heat or bend anchor rods.
6. Headed Anchor Studs (HAS)/Shear Connector Studs
   A. Nelson headed studs type-b icc-es evaluation report #ESR-2856 (fy=65 ksi) or approved equal. studs shall be automatically end welded with suitable stud welding equipment.
   B. Use 3/4" minimum diameter studs. studs shall be at least 3" long, and shall extend at least 1 1/2" above the top flute of the adjacent metal deck. studs shall be equally spaced across beam or spaced as shown on drawings. studs may be hammer tested by bending 15 degrees from the vertical.
   C. Welding and inspection shall be in accordance with AWS d1.1.
   D. Contractor to verify sound welds by 100% acoustical testing. contractor to replace studs or repair deficient welds in accordance with AWS D1.1.
7. Deformed bar anchors shall be nelson deformed anchors icc-es evaluation report esr-2907 or approved equal. anchors shall be automatically end welded with suitable nelson stud welding equipment. all welds shall be made in accordance with recommendations of the nelson stud welding company.
8. Finishes
   A. Steel completely encased in concrete shall not be painted and at the time the concrete is placed, shall be clean and free from any substance that might impair the bond between the steel and the concrete. if expansion anchors are used in masonry, all anchors shall be 3/4 inch min. install in solid grouted cells and submit product data sheets and icc-es evaluation report for approval.
   B. Submit shop drawings and include the structural calculations per requirements for deferred submittals.
   C. Welding shall conform to the following AMERICAN WELDING SOCIETY (AWS) structural welding codes as applicable.
   i) AWS D1.1 structural welding code-steel.
   ii) AWS D1.3 structural welding code-sheet steel
   iii) AWS D1.4 structural welding code-reinf'g steel
   iii) AWS D1.6 structural welding code-stainless steel
   v) AWS D1.7 guide for strengthening and repairing existing structures
   vi) AWS D1.8 structural welding code seismic supplement
   B. Welders shall hold valid certificates issued by an accepted testing agency.
   C. It is the contractor's responsibility to coordinate the use of shop and field welds. splices of steel members not shown on the drawings shall be approved by the engineer prior to the start of work.
   D. Grind smooth all exposed welds and cut edges. final approval is by the architect.
   E. Welding shall be by either the shielded metal arc welding (SMAW) method or shall conform to AWS code for arc and gas welding construction.
   i) Mechanical properties for the in-place weld (filler material) shall have charpy v-notch impact toughness of at least 20 foot-pounds at 0 degrees.
   ii) Field welds may not be applied over shop welds unless a manufacturer approved compatible electrode is used in both the shop and field.
   iii) Contractor shall be responsible for the joint preparation and welding procedures, but not limited to: required root openings, root face dimensions, groove angles, backing bars, copes, surface roughness values, and tapers and transitions of unequal parts.
   G. Provide minimum weld sizes per AISC specifications for general provisions for connections, joints and fasteners unless shown otherwise on drawings.
9. Nondestructive testing (NDT):
   A. Visual inspection will be performed on all welding prior to completion or prior to shipment of shop welding.
   B. Periodic welding inspections require that the materials, welding procedures and qualifications of welders are verified prior to the start of work; periodic inspections are made during the work; and all welds receive a final visual inspection.
   C. Magnetic particle testing
   i) Test ends of full penetration welds after removing run-off tabs and grinding smooth, and prior to ultrasonic testing.
   ii) Test fillet welds in accordance with project specifications.
   D. ultrasonic testing
   i) Test base metal thicker than 1.5 inches in thickness and corner joints for discontinuities behind and adjacent to welds after joint completion.
   ii) Test entire length of full penetration welds.
10. Bolting:
   A. Manufacturer certifications of bolting for fastener components used in the fastener assemblies shall be made available to the engineer of record and inspector prior to assembly or erection of structural steel.
   B. The use of full tension torque control bolt assemblies in snug tight bearing connections shall be approved by the engineer prior to installation.

Concrete Masonry Units:

1. Hollow concrete block masonry units shall be medium weight Grade N, f'm=2000 psi. conforming to ASTM C90.
2. Cement shall conform to ASTM C150.
3. Reinforcing steel shall be deformed bars conforming to ASTM A615 Grade 60, U.N.O.
4. All welded reinforcement shall comply with ASTM A706, U.N.O.
5. Aggregate for masonry grout shall conform to ASTM C404 and shall be 2500 psi at 28 days.
6. All cells shall be filled solidly with grout.
7. CMU walls shall be reinforced w/ #4 rebar @ 12" O.C. hor.&ver., U.N.O. on plan.
8. Provide cleanout openings at the bottom of all vertically grouted cells if grout lift exceeds 4'-0".
9. No pipes or ducts shall be placed in masonry walls unless specifically noted or detailed.
10. Dowels in masonry walls shall be the same size and spacing as vertical wall reinforcing U.N.O..
11. All vertical reinforcing in masonry walls not retaining earth shall be located in center of the walls U.N.O.
12. Min. edge distance of embedded anchor bolt shall be 2" U.N.O.
13. Min. embedment length of anchor bolt shall be 4 times bolt dia. U.N.O.

Lumber:

1. Unless noted otherwise, lumber shall be Douglas Fir Larch, S4S, seasoned and grade marked.
2. Unless noted otherwise on the drawings, lumber grades shall be as follows:
   a. Vertical Framing Members 2x & 3x studs - No. 2.
   b. All other vertical members - No. 1.
   c. Horizontal Framing Members Thickness 2" & 3" - No. 1.
   d. All other horizontal members - No. 1
3. Plywood shall be Douglas Fir and shall comply with U.S. Product Standard PS 1-09. Grades and sizes shall be as specified on plans.
4. Nails shall be common wire nails. Unless noted otherwise on the plans, nailing shall comply with nailing schedules prescribed by the Building Code having jurisdiction. Installation shall comply with ASTM F1667.
5. Wood connector designations specified on the drawings refer to "Simpson Strong-Tie Connectors" as manufactured by the Simpson Co. and as listed in Simpson Catalog No.C-C-2019 substitutions shall be subject to review and approval by the Engineer.
6. Sill plates and other wood members bearing directly on concrete or masonry shall be pressure treated lumber.
7. Bolts shall comply with ASTM A307. Bolt holes shall not be more than 1/32" oversize. All bolts heads and nuts bearing on wood shall have steel washers.
8. All floor plywood sheathing shall have tongue and groove joints glue-nailed to joists, blocks, nailers and beams. Use approved construction type glue. Tongue & groove joints must also be glued.
9. Timber moisture content shall be less than 16%.
10. Cutting: structural members shall not be cut for pipes, etc. unless specifically noted or detailed.
11. Nailing shall be per fastening schedule on sheet S-0.21.
12. Parallam PSL:
   a. Shall be fabricated and provided by Trus Joist
   b. Parallam beams shall not be cut, notched or drilled without prior specific written approval of Trus Joist
   c. Lateral Support of beams at bearing points is required. Additionally, lateral support of beams compression edge is required at intervals of 24" o.c. or closer
   d. Beam widths as indicated on the plans are for single piece members.
   e. Parallam bearing 3 1/2" minimum at ends and 7 1/2 " minimum at intermediate supports of continuous spans. Bearing shall be provided for full width of beam.
   f. Nailing in parallam beams shall not be spaced any closer than 3" o.c. for 8d, 4" o.c. for 10d , and 6"o.c. for 16 d, for a single row of nails. If more than one row of nails is used, the row must be offset at least 1/2" and staggered.
13. TJI/Pro:
   a. Shall be fabricated and provided by Trus Joist MacMillan. No substitutions without the prior written consent of the Engineer.
   b. TJI joists shall not be cut, notched, or drilled without prior specific written approval of Trus Joist MacMillan.
   c. TJI minimum bearing at end supports is 1-3/4" and at intermediate supports is 3-1/2", unless noted otherwise. Lateral support of joists at bearing points is required, per Trus Joist MacMillan. Provide web stiffeners to TJI's as required per Trus Joist MacMillan specifications.
   d. Rim boards shall be minimum 1-1/4" TimberStrand LSL as recommended by Trus Joist MacMillan, unless noted otherwise. Install per manufacturer requirements and specifications.
   e. Provide bridging to TJI's as required per Truss Joist Mac Millan.
   f. Provide shop drawings approval by Trus Joist Mac Millan.

Material Specifications:

1. Continuous Special Inspection by a registered deputy inspector is required for field welding, concrete strength f'c> 2500 psi, high strength bolting, sprayed-on fireproofing, engineered masonry, high-lift grouting, pre-stressed concrete, high load diaphragms and special moment-resisting concrete frames.
2. Foundation sills shall be naturally durable or preservative-treated wood.
3. Field Welding to be done by certified welders for (structural steel)(reinforcing steel)(light gauge steel). Continuous inspection by a deputy inspector is required.
4. Shop welds must be performed in a licensed fabricator's shop.
5. Licensed fabricator is required for Structural Steel.
6. Glue lam beams must be fabricated in a licensed shop. Identify grade symbol and lamination species per T 5-A, 2018 NDS Supp.
7. Provide lead hole 40%-70% of threaded shank dia. and full dia. for smooth shank portion." *2015NDS*
8. Periodic Special Inspection is required for wood shear walls, shear panels, and diaphragms, including nailing, bolting, anchoring, and other fastening to components of the seismic force resisting system. *Special inspection by a deputy inspector is required where the fastener spacing of the sheathing is 4 inches on center or less.*
9. Special Activity inspection is required for (buildings over 5 stories or 60' in height) (buildings over 50,000 sq ft of ground floor area) (buildings over 200,000 sq ft of floor area)
10. A copy of the valid ICC/ESR Report and/or conditions of listing shall be made available at the job site.

Shear Walls:

1. Hold-down connector bolts into wood framing require 0.229" x 3" x 3" plate washers on the post opposite the hold-down; and hold-downs shall be finger tight and ½ wrench turn just prior to covering the wall framing. Connector bolts into wood framing require steel plate washers in accordance with Section 2305 of the CA Building Code.
2. Roof diaphragm nailing to be inspected before covering". Face grain of plywood shall be Perpendicular to supports. Floor shall have tongue and groove or blocked panel edges. Plywood spans shall conform with Section 2304.
3. All diaphragm and shear wall nailing shall utilize common nails or galvanized box.
4. All bolt holes shall be drilled 1/32 to 1/16" oversized. *(12.1.3.2, "18 NDS)*
5. Shear wall anchor bolts and hold-down hardware must be secured in place prior to foundation inspection.

ADDITIONAL NOTES:

1. Nuts of the primary and secondary anchors fasteners shall be finger tight with 2 wrench turn prior to inspection and covering.
2. Power driven fasteners shall not be used to anchor sill plates except at interior non bearing walls not designed as shear walls.
3. Exterior anchor bolts and post bases shall be galvanized and each anchor bolts shall have at least two galvanized nuts above the base plate.
4. The top of exterior pedestals must be sloped for positive drainage.
5. All main footing and grade beam reinforcement steel shall be bent into the intersecting footing and fully developed around each corner and intersection.
6. Continuous inspection by a licensed Deputy Inspector is required for all structural connections, footings, grade beams and retaining walls during installation.
7. Fasteners in preservative treated wood or fire retardant treated wood shall be of hot dipped zinc coated galvanized steel or stainless steel. (ASTM A153)
8. All hardware shall be installed per manufacturer specifications and recommendations.

ATTENTION OWNERS / CONTRACTORS

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE ALL PLANS AND SPECIFICATIONS PRIOR TO STARTING THE CONSTRUCTION WORK. CONTRACTOR SHALL VERIFY ALL DISCREPANCIES AND OMISSIONS. CONTRACTOR MAY CONTACT ARCHITECT/ENGINEER FOR ANY QUESTIONS DETAILS, SPECIFICATIONS AND CLARIFICATIONS. THE ARCHITECT/ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY SHORTCOMING ON THE PART OF THE CONTRACTOR OR ANY ERROR CAUSED BY THE CONTRACTOR AS A RESULT OF LACK OF PLANNING AND/OR FORESIGHT. EACH CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS, GRADES AND CONDITIONS AT THE SITE BEFORE COMMENCING WORK AND REPORT ALL DISCREPANCIES AND MODIFIED FIELD CONDITIONS TO THE ARCHITECT/ENGINEER IN WRITING. CONTRACTOR MAY PROVIDE ONLY PRELIMINARY BIDS BASED ON THIS PLAN, IF THIS IS NOT APPROVED AND STAMPED BY THE CITY. FINAL BIDS SHALL BE BASED ON APPROVED PLANS ONLY. IF NO GENERAL CONTRACTOR IS RETAINED FOR THE JOB, KNOWLEDGEABLE PROJECT MANAGER, JOB SUPERVISOR TO ACT AS HIS AGENT AND ASSUME ALL RESPONSIBILITIES.

Applicable Codes:

Work shall comply with:

- 2019 California Building Code
- 2019 California Residential Code
- 2019 California Electric Code
- 2019 California Plumbing Code
- 2019 California Mechanical Code
- 2019 California Fire Code
- 2019 California Green Building Standards
- 2019 California Energy Code
- Amendments per local City ordinance
- American Institute of Steel Construction, 2016
- N.D.S. Wood Design Manual, 2018
- ASCE-7, 2016

PROJECT DIRECTORY
CIVIL ENGINEER:
ARSEN ADZHEMYAN

PROJECT ADDRESS:
4552 TRAFALGAR DR.
LA PALMA, CA
90623

SCOPE OF WORK
EXISTING SINGLE-FAMILY DWELLING ADDITION

SHEET INDEX

HOLD HARMLESS / INDEMNIFICATION CLAUSES

I. SUBJECT: EXCLUDING CONSTRUCTION REVIEW

IT IS AGREED THAT THE PROFESSIONAL SERVICES OF THE ENGINEER DO NOT EXTEND TO OR INCLUDE THE REVIEW OR SITE OBSERVATION OF THE CONTRACTOR'S WORK OR PERFORMANCE. IT IS FURTHER AGREED THAT THE OWNER WILL DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIM OR SUIT OR SUIT WHATSOEVER, INCLUDING BUT NOT LIMITED TO ALL PAYMENTS, EXPENSES OR COSTS INVOLVED, ARISING FROM OR ALLEGED TO HAVE ARISEN FROM THE CONTRACTOR'S PERFORMANCE OR FAILURE OF THE CONTRACTOR'S WORK TO CONFORM TO THE DESIGN INTENT AND THE CONTRACT DOCUMENTS. THE ENGINEER AGREES TO BE RESPONSIBLE FOR HIS OWN OR HIS EMPLOYEE'S NEGLIGENT ACTS, ERRORS OR OMISSIONS.

II. SUBJECT: REMODELING AND REHABILITATION

INASMUCH AS THE REMODELING AND / OR REHABILITATION OF AN EXISTING BUILDING REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED WITHOUT EXPENDING GREAT SUMS OF ADDITIONAL MONEY, OR DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING, THE OWNER AGREES THAT, EXCEPT FOR NEGLIGENCE ON THE PART OF THE ENGINEER, THE OWNER WILL HOLD HARMLESS AND INDEMNIFY THE ENGINEER FROM AND AGAINST ANY AND ALL CLAIMS DAMAGES, AWARDS, AND COSTS OF DEFENSE ARISING OUT OF THE PROFESSIONAL SERVICES PROVIDED UNDER THIS AGREEMENT.

III. SUBJECT: OWNERSHIP OF DOCUMENTS

THE OWNER ACKNOWLEDGES THAT THE ENGINEER'S PLANS AND SPECIFICATIONS ARE INSTRUMENTS OF PROFESSIONAL SERVICES. NEVERTHELESS, THE PLANS AND SPECIFICATIONS PREPARED UNDER THIS AGREEMENT SHALL BECOME THE PROPERTY OF THE OWNER AGREES TO HOLD HARMLESS AND INDEMNIFY THE ENGINEER AGAINST ALL DAMAGES, CLAIMS AND LOSSES ARISING OUT OF ANY REUSE OF THE PLANS AND SPECIFICATIONS WITHOUT THE AUTHORIZATION OF THE ENGINEER.

STRUCTURAL OBSERVATION PROGRAM
AND DESIGNATION OF THE
STRUCTURAL OBSERVER

PROJECT ADDRESS: 4552 TRAFALGAR DR., LA PALMA, CA 90623 PERMIT APPL. NO.:_____

Description of Work: EXISTING SINGLE-FAMILY DWELLING ADDITION

Owner:_____ Architect:_____ Engineer: STRUCTURAL AF

STRUCTURAL OBSERVATION
(only checked items are required)

Firm or Individual to be responsible for the Structural Observation: STRUCTURAL AF
Name: ARSEN ADZHEMYAN Phone: (818) 455-6667 Calif. Registration: C89103

FOUNDATION	WALL	FRAME	DIAPHRAGM
☒ Footing, Stem Walls, Piers	☐ Concrete	☐ Steel Moment Frame	☐ Concrete
☐ Mat Foundation	☐ Masonry	☐ Steel Braced Frame	☐ Steel Deck
☐ Caisson, Piles, Grade Beams	☒ Wood	☐ Concrete Moment Frame	☒ Wood
☐ Stepp' g/Retain' g Foundation, Hillside Special Anchors	☐ Others:	☐ Masonry Wall Frame	☐ Others:
☐ Others:		☒ Others: FRAMING	

DECLARATION BY OWNER
I, the Owner of the project, declare that the above listed firm or individual is hired **by me** to be the Structural Observer.

_____
Signature Date

DECLARATION BY ARCHITECT OR ENGINEER OF RECORD (required if the Structural Observer is different from the Architect or Engineer of Record)

I, the Architect or Engineer of record for the project, declare that the above listed firm or individual is designated by me to be responsible for the Structural Observation.

_____ C89103 04/19/2021
Signature License No. Date

REGISTERED PROFESSIONAL ENGINEER ARSEN ADZHEMYAN NO. C89103 CIVIL STATE OF CALIFORNIA

PROJECT NO:2021-064
DATE: 04/06/2021

STRUCTURAL

STRUCTURAL AF
ARSEN ADZHEMYAN, P.E. ENV. SP.
(818)455-6667
ARSENADZHEMYAN@STRUCTURALAF.COM

DESIGNED BY: A.A.
CHECKED BY: V.V.

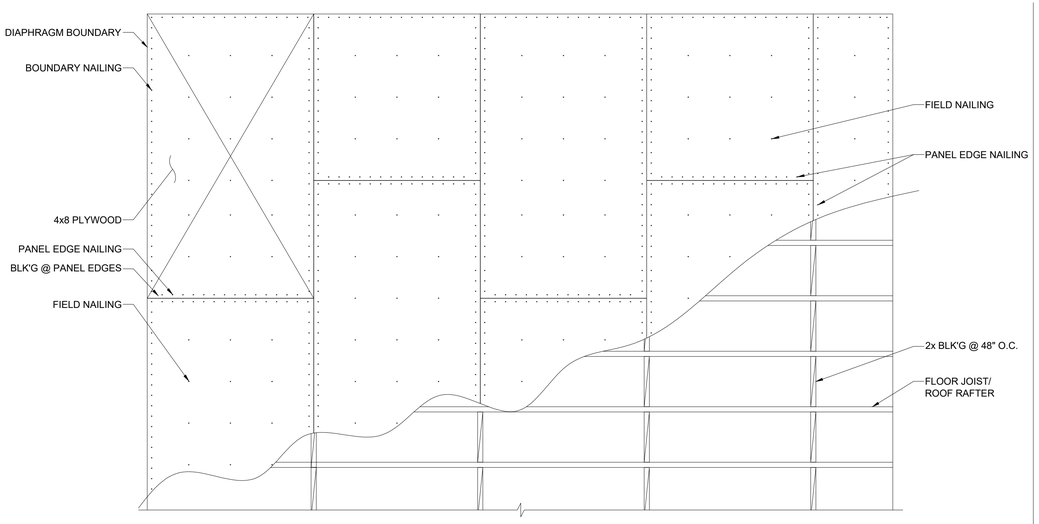
PREPARED FOR:
BEN HAMED

PROJECT ADDRESS:
4552 TRAFALGAR DR.
LA PALMA, CA
90623

REV	DATE	DESCRIPTION	BY
1	06-07-2021	ADDRESS PC COMMENTS	A.A.
2			
3			
4			
5			

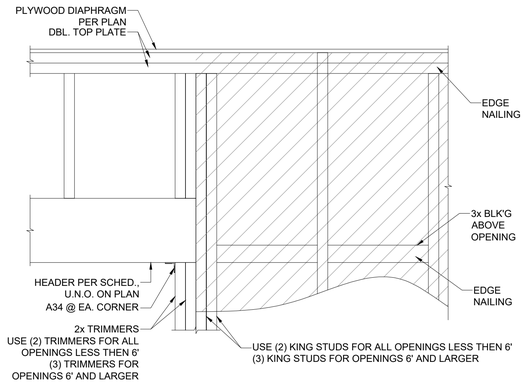
STRUCTURAL NOTES

S-0.1



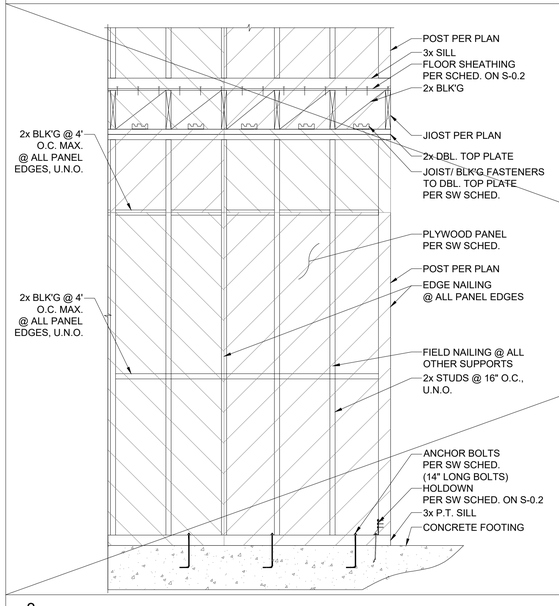
LOCATION	SHEATHING	NAILING
ROOF	EXISTING, NOT A PART.	EXISTING, NOT A PART.
FLOOR	EXISTING, NOT A PART.	EXISTING, NOT A PART.

1 ROOF AND FLOOR DIAPHRAGM DETAIL



HEADER SCHEDULE (WHERE NOT SPECIFICALLY IDENTIFIED ON PLANS)	
4' OPENING	4x4
6' OPENING	4x6
8' OPENING	4x8
10' OPENING	4x10
12' OPENING	4x12

2 TYPICAL HEADER DETAIL AND SCHEDULE



Type	Sheathing/ Nailing	Grade	A35/LTP4 Spacing (in)	1/2" Lag Spacing (in)	5/8" Anchor Bolt Spacing (in)	LRFD Resistance (plf)
Type A	15/32" w/8d nails @6-6-12	Sheathing	24.0	31.0	48.0	300
Type B	15/32" w/8d nails @6-6-12	Sheathing	18.0	23.0	48.0	400
Type C	15/32" w/10d nails @6-6-12	Structural I	14.0	19.0	48.0	500
Type D	15/32" w/8d nails @4-4-12[5]	Sheathing	12.0	15.0	43.0	600
Type E	15/32" w/10d nails @4-4-12[5]	Structural I	10.0	13.0	36.0	700
Type F	15/32" w/10d nails @4-4-12[5]	Structural I	9.0	11.0	32.0	800
Type G	15/32" w/10d nails @3-3-12[5]	Structural I	8.0	10.0	28.0	900
Type H	15/32" w/10d nails @3-3-12[5]	Structural I	6.0	9.0	24.0	1060
Type I	15/32" w/10d nails @3-3-12[4,5]	Structural I	8.0[4]	5.0	16.0	1600
Type J	15/32" w/10d nails @3-3-12[4,5]	Structural I	6.0[4]	4.0	12.0	2000

Notes:

1. Lumber shall be DF-L with Specific Gravity of 0.50 min. All panel edges shall be fastened to 2-inch nominal or wider framing.

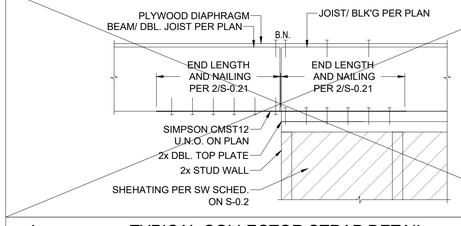
2. Framing at adjoining edges shall be 3 or wider nominal. Nails shall be staggered in two lines along panel edges when nail spacing is 2" o.c., or when 10d common nails spaced 3" o.c. penetrate framing more than 1-5/8".

3. Min two bolts per piece of sill plate and one located within 12" of each end of each sill plate. Placement of lag bolts: Min edge distance shall be 1.5D; Min end distance shall be 7D, Min spacing shall be 4D. Edge distances, end distances and spacing shall be sufficient to prevent splitting of wood. If splitting occurs, notify the engineer for an alternate product. Min lag screw embedment shall be 5".

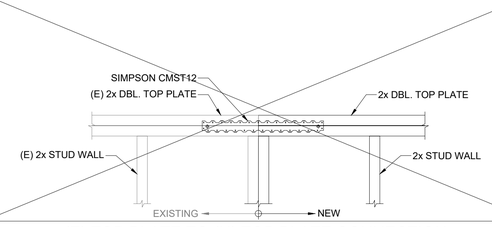
4. Type I and J shearwalls shall have plywood installed on both sides. Install A35/LTP4 staggered on both sides. Blocking and studs at panel edges shall be min 3x in thickness.

5. Type B, C, D, E, F, G, H shearwalls shall have min. 3x studs at panel edges.

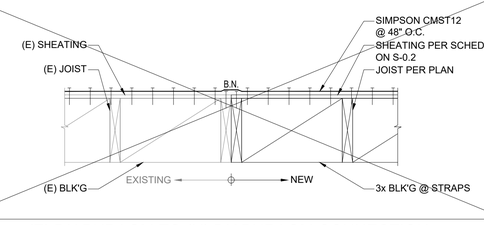
3 SHEARWALL DETAIL AND SCHEDULE



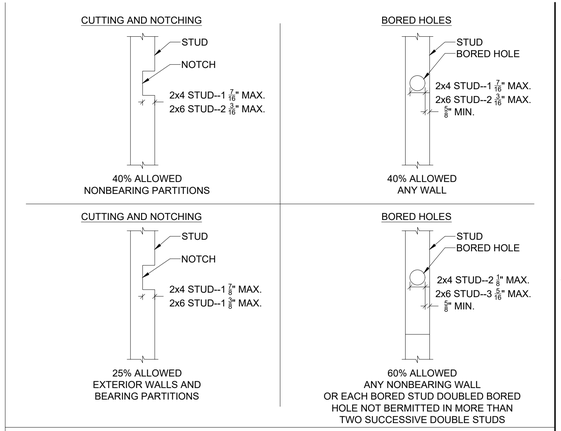
4 TYPICAL COLLECTOR STRAP DETAIL



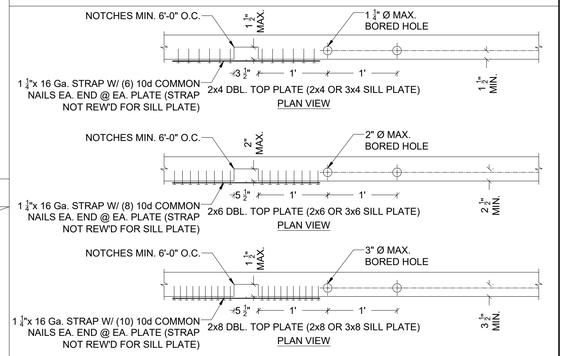
5 (E) TOP PLATE TO (N) TOP PLATE CONNECTION



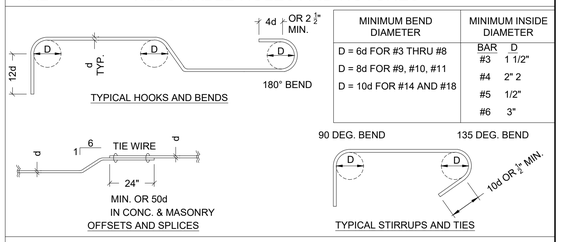
6 (E) DIAPHRAGM TO (N) DIAPHRAGM CONNECTION



7.1 NOTCHING AND BORING LIMITS FOR WOOD STUDS

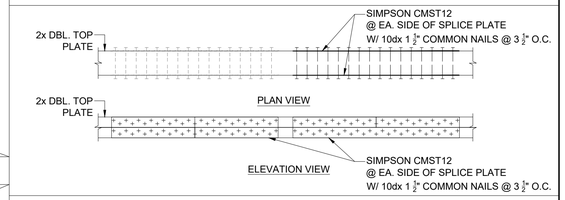


7.2 ALLOWABLE HOLES AND NOTCHES



MINIMUM BEND DIAMETER	MINIMUM INSIDE DIAMETER	
D = 6d FOR #3 THRU #8	BAR	D
D = 8d FOR #9, #10, #11	#3	1 1/2"
D = 10d FOR #14 AND #18	#4	2" 2
	#5	1/2"
	#6	3"

8 TYPICAL REBAR BENDS AND SPLICES



9 TOP PLATE SPLICE DETAIL

Bar	f'c = 2.5 KSI			f'c = 3.0 KSI			f'c = 4.0 KSI		
	Straight Ld (in)	Hooked	Class B Splice	Straight Ld (in)	Hooked Ld (in)	Class B Splice	Straight Ld (in)	Hooked	Class B Splice
#3	18	9	23.5	16.5	8.5	21.5	14.5	7.5	18.5
#4	24	12	31.5	22	11	28.5	19	9.5	25
#5	30	15	39	27.5	14	36	24	12	31
#6	36	18	47	33	16.5	43	28.5	14.5	37
#7	52.5	21	68.5	48	19.5	62.5	42	17	54
#8	60	24	78	55	22	71.5	47.5	19	62
#9	67.5	27	88	62	25	80.5	53.5	21.5	69.5
#10	75	30	97.5	68.5	27.5	89.5	59.5	24	77.5

Note: Clear cover and spacing of reinforcement shall satisfy ACI 318-14 25.4.2.2

10 REBAR DEVELOPMENT AND SPLICE SCHEDULE

REGISTERED PROFESSIONAL ENGINEER ARSEN ADZHEMYAN No. C88103 CIVIL STATE OF CALIFORNIA

PROJECT NO:2021-064
DATE: 04/06/2021

STRUCTURAL

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ARSEN ADZHEMYAN, P.E. ENV. SP.
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ARSENADZHEMYAN@
STRUCTURALAF.COM

DESIGNED BY: A.A.
CHECKED BY: V.V.

PREPARED FOR:
BEN HAMED

PROJECT ADDRESS:
4552 TRAFALGAR DR.
LA PALMA, CA
90623

REV	DATE	DESCRIPTION	BY
1	06-07-2021	ADDRESS PC COMMENTS	A.A.
2			
3			
4			
5			

STRUCTURAL DETAILS

S-0.2

ROOF			
ELEMENT/CONNECTION		FASTENER	LOCATION
1	Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (2 1/2" x 0.131")	Toenail each end
		3-10d common (3" x 0.128")	
	Blocking between rafter to truss not at the wall top plate, to rafter or truss	2-8d common (2 1/2" x 0.131"	Toenail each end
		2-16d common (3 1/2" x 0.162")	End Nail
	Flat blocking to truss and web filler	16d common (3 1/2" x 0.162") @ 6" o.c.	Face Nail
2	Ceiling joist to top plate	3-8d common	Toenail each joist
3	Ceiling joist not attached to parallel rafter, laps over partition (No thrust) (Table and	3-16d common	Face Nail
4	Ceiling joist attached to parallel rafter(heel joint) (Table and section 2308.7.3.1)	table 2308.7.3.1	Face Nail
5	Collar tie to rafter	3-10d common	Face nail
6	Rafter to roof truss to top plate (Table and section 2308.7.5)	3-10d common	Toenail
7	Roof rafter to ridge valley or hip rafters, or roof rafters to 2" ridge beam	2-16d common	End nail
		3-10d common	Toenail
8	Stud to stud (not at braced panel)	16d common	24" o.c. Face Nail
9	Stud to stud and abutting studs at intersecting wall corner(at braced wall panels)	16d common	16" o.c. Face Nail
10	Build-up header	16d common	16" o.c. each edge, Face
11	Continuous header to stud	4-8d common	Toenail
12	Top plate to top plate	16d common	16" o.c. Face Nail
13	Top plate to top plate, at end joint	8-16d common	each side of end joint, face nail(Min. 24" lap splice
14	Bottom plate to joist, band joist or blocking (not at braced wall panels)	16d common	16" o.c. Face Nail
15	Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common	16" o.c. Face Nail
16	Stud to top or bottom plate	4-8d common	Toenail
		2-16d common	End Nail
17	Top or bottom plate to stud	2-16d common	End Nail
18	Top plates, laps at corners and intersections	2-16d common	Face Nail
19	1" brace to each stud and plate	2-8d common	Face Nail
20	1"x6" sheathing to each bearing	2-8d common	Face Nail
21	1"x8" and wider sheathing to each bearing	3-8d common	Face Nail

FLOOR			
ELEMENT/CONNECTION		FASTENER	LOCATION
22	Joist to sill, top plate or girder	3-8d common	Toenail
23	Rim joist, band joist, or blocking to top plate, sill or other framing below	8d common	6" o.c., Toenail
24	1"x6" subfloor or less to each	2-8d common	Face Nail
25	2" sub floor to joist or girder	2-16d common	Face Nail
26	2" plank	2-16d common	each bearing face nail
27	Build-up girders and beams, 2" lumber layers	2d common	32" o.c. Face Nail at top and bottom staggered on opposite sides
		And 2-20d common	Ends at each splice, Face Nail
28	Ledger strip supporting joists or rafters	3-16d common	Each joist or rafter, Face Nail
29	Joist to band joist or rim joist	3-16d common	End Nail
30	Bridging or blocking to joist, rafter or truss	2-8d common	Each eand, Toenail

OTHER EXTERIOR WALL SHEATHING			
ELEMENT/CONNECTION		FASTENER	LOCATION
34	1/2" fiberboard sheathing	1 1/2" galvanized roof nail 1 1/4" 16 gage staples with 7/16" or 1" crown	6" edge 12" intermediate support
35	25/32" fiberboard sheathing	1 3/4" galvanized roof nail 1 1/2" 16 gage staples with 7/16" or 1" crown	6" edge 12" intermediate support

PANEL SIDING TO FRAMING			
ELEMENT/CONNECTION		FASTENER	LOCATION
39	1/2" or less	6d corrosion-resistant siding 6d corrosion-resistant casing	6" edge 12" intermediate support
40	5/8"	8d corrosion-resistant siding 8d corrosion-resistant casing	6" edge 12" intermediate support

INTERIOR PANELING			
ELEMENT/CONNECTION		FASTENER	LOCATION
41	1/4"	4d casing 4d finish	6" edge 12" intermediate support
42	3/8"	6d casing 6d finish	6" edge 12" intermediate support

a. Nails spaced at 6" at intermediate supports where spans are 48" or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing

b. Spacing shall be 6" on center on the edges and 12" on center at intermediate supports for nonstructural applications. Panel supports at 16" (20" If strength axis in the long direction of the panel, unless otherwise

c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafters shall be permitted to be reduced by one nail.

When discrepancies occur between nailing specified on plans and this schedule, larger nailing shall govers. Engineer shall be notified of such discrepancies prior to installation.

1 FASTENING SCHEDULE - CBC TABLE 2304.10.1

STRAP TABLE (SIMPSON CATALOG)					
CS/CMST					
MODEL NO.	TOTAL L	Ga	DF/SP		NAILS PER FOOT
			FASTENERS	END LENGTH(in)	
CMST12	40'	12	(86)10d	39	27
CMST14	52-1/2'	14	(66)10d	30	27
CMSTC16	54'	16	(50)16d Sinker	20	30
CS14	100'	14	(30)8d	16	23
CS16	150'	16	(22)8d	13	21
CS18	200'	18	(18)8d	11	20
CS20	250'	20	(14)8d	9	19
CS22	300'	22	(12)8d	7	21
MS					
MODEL NO.	Ga		FASTENERS		NAILS PER FOOT
			NAILS	LENGTH(in)	
MST27	12		(30)16d	27	14
MST37	12		(42)16d	37 1/2	14
MST48	12		(50)16d	48	13
MST60	10		(68)16d	60	14
MST72	10		(68)16d	72	12

2 STRAP SCHEDULE

FOOTING SIZE	REBAR QTY. & SIZE
X≤18" SQ	(3) #5 EA. WAY
18"<X≤24" SQ	(4) #5 EA. WAY
24"<X≤30" SQ	(5) #5 EA. WAY
30"<X≤36" SQ	(6) #5 EA. WAY
36"<X≤48" SQ	(7) #5 EA. WAY
48"<X≤54" SQ	(8) #5 EA. WAY
54"<X≤60" SQ	(9) #5 EA. WAY

NOTE:
- FOOTING SHALL BE AT LEAST 24" DEEP.
- MINIMUM 3" CLEAR COVER WHEN CAST AGAINST SOIL.
- FOR RECTANGULAR FOOTINGS, USE #5 REBAR @ 6" O.C. EACH WAY.

3 PAD FOOTING REINFORCEMENT SCHEDULE

ESR & LARR		
DESCRIPTION	ESR	LARR
Simpson Strongwall Shear Panels	2652	25730
Simpson ABA, ABU, ABW	1622	-
Simpson CBSQ, PB, CB/LCB, PPBZ, MPBZ	3050	25985
Simpson SD Wood Screws	3096	25910
Simpson LU, U, HU, LUS, MUS, HUS, HHUS, SUR\L, HSUR\L, HTU, LUCZ	2549, 2523	25807
Simpson Top Flange Hangers for Engineered Wood Products and Glulam Beams (GLT, HGLT, GLS, HGLS, EG/MEG/LEG, MSC, ITS/MIT/HIT, LBV/B/HB/BA, EGQ)	2615	25803
Simpson Hangers for composite lumber and prefabricated wood I-joists.(IUS, U, HU/HUC, HUS/HUSC, HHUS, SUR/L, HSUR/L, MIU, HGUS, LGU,MGU,HGU, HHGU, HUCQ)	2552	25801
Simpson SET-XP Epoxy Adhesive Anchors for Cracked and Uncracked Concrete	2508	25744
Simpson Column Caps for wood construction- (1. CC, ECC, CCQ and ECCQ Column Caps) (2. AC, EAC, LPC, PC, EPC, BC, BCS, EPCZ, AND PCZ Post	2604	25714
Simpson Straps- FHA, HST, LSTA, LSTI, MST, MSTA, MSTC, MSTI, and ST Series Straight Tie Straps; CMST and CS Series Coiled Tie Straps; CMSTC16 Coiled Tie Strap; CTS218 Compression/Tension Straps MSTCB3 Series Straps.	2105	25713
Simpson Hold-Down Connectors- HDU, HDQ8, HHDQ, DTT2, and HDC10	2330	25720
Clips and Plates for Wood Framing- A Series, A34, A35, FC, GA, H2A, H2.5T, H8, H10A-2, H10S, H14, HH, L, LCE4, LS, LP4, LTP5, LS, RBC, RBCP, and TJC37 Angles, Z Clips, and FWANZ	3096	25814
Hardy Frame Panels HFX and HFX/S Series Panels and Brace Frames, HFX Series Bearing Plate, HFP Series Post, and Hardy Frame® Saddle	2089	25759
SIMPSON PDPW-300 SHOT PINS	2138	-
SIMPSON Embedded Column Bases in Concrete: CBSQ-SDS2, EPB, PB, PBS, EPS, CB/LCB, PPBZ and MPBZ.	3050	25985
Structural Composite Lumber: TimberStrand® Laminated Strand Lumber(LSL), Parallam® Parallel Strand Lumber (PSL), and Microllam® Laminated Veneer Lumber(LVL); TimberStrand® LSL Rim Board, Microllam LVL Rim Board; and TJ® Rim Board.	1387	25202

4 ESR AND LARR REFERENCES

INSPECTION ITEM	FREQ. OF INSPECTION
INSPECTION OF STEEL CONSTRUCTION (2019 CBC, SEC 1705.2)	
A-HIGH STRENGTH BOLTING	
1.MATERIAL IDENTIFICATION MARKINGS	PERIODIC
2.MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	PERIODIC
3.BEARING-TYPE CONNECTIONS	PERIODIC
4.SLIP-CRITICAL CONNECTIONS	CONTINUOUS
B-WELDING OF STRUCTURAL STEEL :	
1.COMPELTE AND PARTIAL PENETRATION GROOVE WELDS	CONTINUOUS
2.MULTIPASS FILLET WELDS	CONTINUOUS
3.SINGLE-PASS FILLET WELDS > 5/16"	CONTINUOUS
4.SINGLE-PASS FILLET WELDS < 5/16"	PERIODIC
5.FLOOR AND ROOF DECKS WELDS	PERIODIC
C-WELDING OF REINFORCING STEEL:	
1.MATERIAL VERIFICATION OF REINFORCING STEEL	PERIODIC
2.REINFORCING STEEL PART OF LATERAL FORCE RESISTING SYS.	CONTINUOUS
3.SHEAR REINFORCEMENT	CONTINUOUS
4.OTHER REINFORCING STEEL	PERIODIC
D-STRUCTURAL STEEL FRAMING:	
1.COMPLIANCE WITH CONSTRUCTION DOCUMENT DETAILS AND SPECIFICATIONS	PERIODIC
2.MATERIALS IDENTIFICATION	PERIODIC
INSPECTION OF POST-INSTALLED ANCHORS AND DOWELS	
A- ADHESIVE ANCHORS AND REINFORCEMENT DOWELS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURE	CONTINUOUS
3. PRODUCT DESCRIPTION INCLUDING NAME, ROD TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. ADHESIVE EXPIRATION DATE	CONTINUOUS
5. PROPER INSTALLATION TECHNIQUE FOR ADHESIVE ANCHORS	CONTINUOUS
B- MECHANICAL ANCHORS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURE	CONTINUOUS
3. PRODUCT DESCRIPTION INCLUDING NAME, ANCHOR TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. PROPER INSTALLATION TECHNIQUE FOR MECHANICAL ANCHORS AND TIGHTENING TORQUE	CONTINUOUS
C- UNDERCUT ANCHORS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PRODEDURE	CONTINUOUS
3. PRODUCT DISCRIPTION INCLUDING NAME, ANCHOR TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. PROPER INSTALLATION TECHNIQUE FOR UNDERCUT ANCHORS AND TIGHTENING TORQUE	CONTINUOUS
SCREW ANCHORS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURES	CONTINUOUS
3. PRODUCT DESCRIPTION INCLUDING NAME, ANCHOR TYPE, DIAMETER AND LENGTH	CONTINUOUS
4. PROPER INSTALLATION TECHNIQUE FOR SCREW ANCHORS AND TIGHTENING TORQUE	CONTINUOUS
INSPECTION OF CONCRETE CONSTRUCTION (2019 CBC SEC 1705.3)	
A- STRUCTURAL CAST-IN-PLACE CONCRETE:	
1. REINFORCING STEEL MATERIALS AND PLACEMENT	PERIODIC
2. BOLTS INSTALLED IN CONCRETE PRIOR TO AND DURING CONCRETE PLACEMENT	CONTINUOUS
3. VERIFY USE OF REQUIRED MIX DESIGN	PERIODIC
4. SAMPLING OF FRESH CONCRETE	CONTINUOUS
5. CONRETE AND SHOTCRETE PLACEMENT TECHNIQUE	CONTINUOUS
6. MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC
7. FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS	PERIODIC
INSPECTION OF POST-INSTALLED ANCHORS AND DOWELS	
A- ADHESIVE ANCHORS AND REINFORCEMENT DOWELS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURE	CONTINUOUS
3. PRODUCT DESCRIPTION INCLUDING NAME, ROD TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. ADHESIVE EXPIRATION DATE	CONTINUOUS
5. PROPER INSTALLATION TECHNIQUE FOR ADHESIVE ANCHORS	CONTINUOUS
B- MECHANICAL ANCHORS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURE	CONTINUOUS
3. PRODUCT DESCRIPTION INCLUDING NAME, ANCHOR TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. PROPER INSTALLATION TECHNIQUE FOR MECHANICAL ANCHORS AND TIGHTENING TORQUE	CONTINUOUS
C- UNDERCUT ANCHORS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PRODEDURE	CONTINUOUS
3. PRODUCT DISCRIPTION INCLUDING NAME, ANCHOR TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. PROPER INSTALLATION TECHNIQUE FOR UNDERCUT ANCHORS AND TIGHTENING TORQUE	CONTINUOUS
SCREW ANCHORS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURES	CONTINUOUS
3 PRODUCT DESCRIPTION INCLUDING NAME, ANCHOR TYPE, DIAMETER AND LENGTH	CONTINUOUS
4. PROPER INSTALLATION TECHNIQUE FOR SCREW ANCHORS AND TIGHTENING TORQUE	CONTINUOUS
INSPECTION OF MASONRY CONSTRUCTION (2019 CBC SEC 1705.4)	
A- STRUCTURAL REINFORCED MASONRY:	
1. PROPORTIONS OF SITE-PREPARED MORTAR	PERIODIC
2. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS	PERIODIC
3. LOCATION OF REINFORCEMENT, CONNECTOR, AND ANCHORAGE	PERIODIC
4. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	PERIODIC
5. TYPE, SIZE, AND LOCATION OF ANCHORS	PERIODIC
6. REINFORCEMENT SIZE, GRADE, AND TYPE	PERIODIC
7. WELDING OF REINFORCING BARS	CONTINUOUS
8. PROTECTION OF MASONRY DURING COLD WEATHER OR HOT WEATHER	PERIODIC
9. GROUT SPACE IS CLEAN	PERIODIC
10. GROUT PLACEMENT	CONTINUOUS
11. OBSERVE PREPARATION OF REQUIRED GROUT SPECIMENS, MORTAR SPECIMENT, AND/OR PRISMS	CONTINUOUS
12. VERIFY COMPLIANCE WITH THE REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS.	PERIODIC
INSPECTION OF WOOD CONSTRUCTION (2019 CBC SEC 1705.5)	
SHOP FABRICATED STRUCTURAL ELEMENTS:	
A. MAINTENANCE AND ADHERENCE TO FABRICATION AND QUALITY CONTROL PROCEDURES.	PERIODIC
B. FABRICATION TOLERANCE	PERIODIC
SITE-FABRICATION WOOD CONSTRUCTION:	
A. WOOD STRUCTURAL PANEL SHEATHING (HIGH-LOAD DIAPHRAGMS)	PERIODIC
B. NOMINAL SIZE, GRADE, AND TYPE OF FRAMING MEMBERS	PERIODIC
C. FASTENER DIAMETER, LENGTH, QUALITY, LOCATION, EDGE DISTANCE AND SPACING.	PERIODIC
D. CONNECTOR TYPE, MANUFACTURE, AND FASTENERS	PERIODIC
INSPECTION OF SOILS (2019 CBC SEC 1705.6)	
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONTINUOUS
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	PERIODIC

5 INSPECTION SCHEDULE

GENERAL NOTES:

1. Notes provided on structural plans shall take precedence over these general notes and specifications.
2. Dimensions: Written dimensions shall have precedence over scale dimensions. Contractor shall check all dimensions against architectural plans prior to construction.
3. Codes and specifications: All work and construction shall comply with IBC2018, CBC2019 and LABC2020 building codes, specifications, regulations and safety requirements.
4. Safety: During the construction period the contractor shall be responsible for the safety of the building. The contractor shall provide adequate shoring, bracing and guys in accordance with all national, state and local safety ordinances.
5. Erection: All erection procedures shall conform to OSHA standards. Any deviation must be approved by OSHA prior to erection.
6. Earth work: The contractor shall be solely responsible for all excavation procedures including lagging, shoring and protection of adjacent property, structures, streets and utilities in accordance with all national, state and local safety ordinance.
7. Other trades: The contractor shall be responsible for coordinating the work of all trades and shall check all dimensions and conditions of the job. All discrepancies shall be called to the attention of the architect or engineer and be resolved before proceeding with work.
8. Shop drawings: Shop drawings required by the specifications shall be submitted to the architect or engineer for review prior to fabrication.
9. Details: Drawings indicate general and typical details and notes of instruction, where conditions are not specifically indicated but are of similar character to details shown, similar details of construction shall be used subject to review by the architect or engineer.
10. Openings: See architectural drawings for size and location of all floor and wall openings, floor finishes, etc.
11. Other trades: See mechanical, plumbing and electrical drawings for size and location of all openings required for ducts, pipes and all pipe sleeves, electrical conduits and other items to be embedded in concrete or otherwise incorporated in structural work.
12. Special details: Provide openings and supports, as required per special details for heaters, mechanical equipment, vents, ducts, piping, etc. All suspended mechanical equipment to be stayed or laterally braced.
13. Modifications: All information shown on the drawings, relative to existing conditions is given as the best present knowledge, but without guarantee of accuracy, where actual conditions conflict with the drawings they shall be reported to the architect or engineer so that proper revisions may be made. Modification of details of construction shall not be made without written approval of the architect and engineer.
14. Other plans: Architectural and mechanical plans are considered as part of the structural design drawings and are to be used to define detail configurations including, but not limited to relative location of members, elevations, location of all openings, etc.
15. Other items: Skylight, storefront stair fabricator, etc. shall submit structural design calculations and drawings for all framing members and connections (including connections to structural members) to structural engineer and building department for their approval prior to fabrication. Calculations and drawings shall comply with all requirements of latest applicable building code. These drawings shall be designed and signed by a registered engineer.
16. Mechanical: Mechanical equipment must be firmly attached to the structure, isolators, fasteners, and any other elements providing stability for mechanical equipment must be approved by an engineer or equivalent to at least 0.3 x operating weight of equipment.
17. Stairs: All stairs are to be steel stairs per architectural drawings except where concrete or wooden stairs are specifically shown. Structural calculations and drawings signed by a licensed civil engineer in the state are to be submitted to the engineer. drawings are to include connections to the structure. Engineer will approve the drawings as to their compliance with the intent of the structural drawings and specifications.
18. Shoring: It shall be the contractor's sole responsibility to design and provide adequate shoring. bracing and formwork, etc., as required for the protection of life and property during the construction of this building. Post-tensioned or reinforced concrete slabs may carry shoring loads equivalent to their design superimposed loads include live load, partition load, and any other load not in place at time of shoring.
19. Backfill: Backfill around the exterior perimeter of walls shall not be placed until after the walls are supported by the completion of interior floor system. Do not proceed with backfill until 7 days (minimum) after the completion of interior floor systems unless walls are adequately braced. Backfill shall not be placed until after the completion and inspection of damp proofing.
20. Bracing: Do all temporary bracing as required to hold the various elements in place until final support is securely anchored.
21. The drawings and specifications represent the finished structure and do not indicate the method of construction. The contractor shall supervise and direct the work and shall be solely responsible for construction means, methods, techniques, sequences and procedures, including, but not limited to bracing and shoring. Observation visits to the site by the engineer shall not include inspections of the protective measures or the construction procedures. Any support services performed by the engineer during the construction shall be distinguished from continuous and detailed inspection services. These support services performed by the engineer, whether of material of work, and whether performed prior to, during or after completion of construction, are performed solely for the purpose of assisting in quality control and in achieving conformance with contract documents, but do not guarantee contractor's performance and shall not be construed as supervision of construction.
22. Where construction materials are temporarily stored on roof or floor framing, they shall be distributed so that the load does not exceed design live load. Adequate shoring and/or bracing shall be provided where structural members have not attained design strength.
23. ASTM designations and all standards refer to the latest amendments.

GENERAL NOTES

REGISTERED PROFESSIONAL ENGINEER
ARSEN ADZHEMYAN
No. C89103
CIVIL
STATE OF CALIFORNIA

PROJECT NO:2021-064
DATE: 04/06/2021

STRUCTURAL

STRUCTURAL AF
ARSEN ADZHEMYAN, P.E. ENV. SP.
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DESIGNED BY: A.A.
CHECKED BY: V.V.

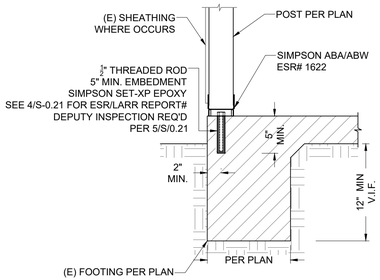
PREPARED FOR:
BEN HAMED

PROJECT ADDRESS:
4552 TRAFALGAR DR.
LA PALMA, CA
90623

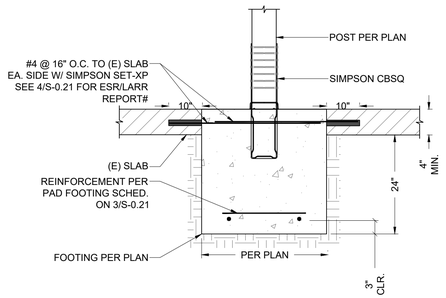
REV	DATE	DESCRIPTION	BY
1	06-07-2021	ADDRESS PC COMMENTS	A.A.
2			
3			
4			
5			

STRUCTURAL NOTES AND SCHEDULES

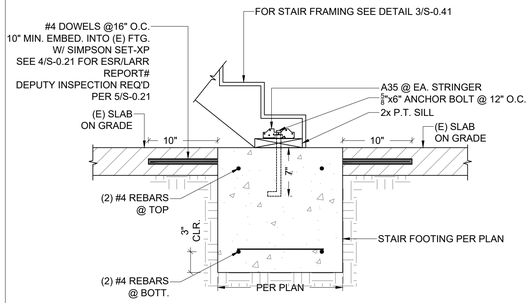
S-0.21



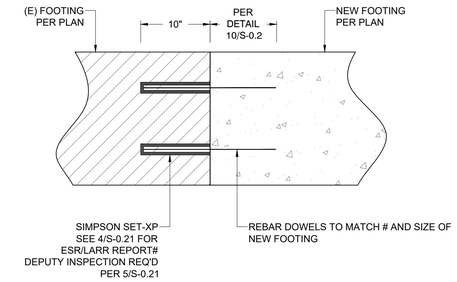
1 NEW POST ON EXISTING FOOTING (ABA/ABW)



2 NEW POST FOOTING



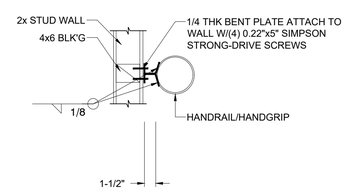
3 STAIR DETAIL

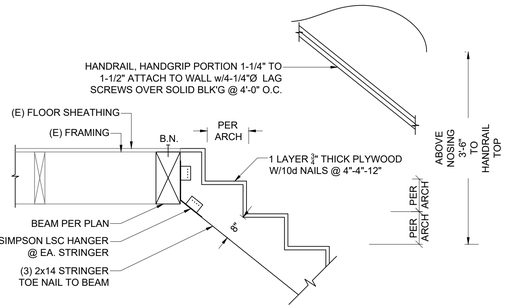


PLAN VIEW

NOTE:
- NEW FOOTING REINFORCEMENTS ARE NOT SHOWN FOR CLARITY.

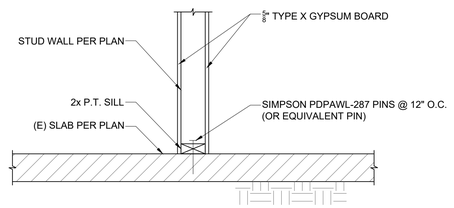
4 NEW FOOTING TO EXISTING CONNECTION



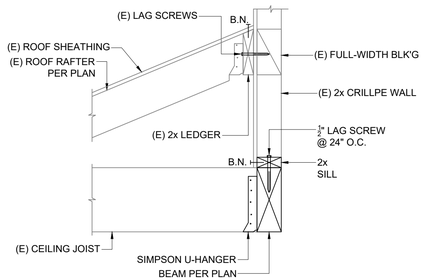


PROVIDE MIN. 6'-8" HEAD ROOM

5 STAIR DETAIL



6 INTERIOR NON-LOAD-BEARING WALL ON (E) SLAB



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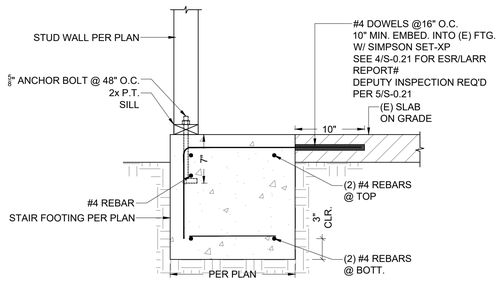

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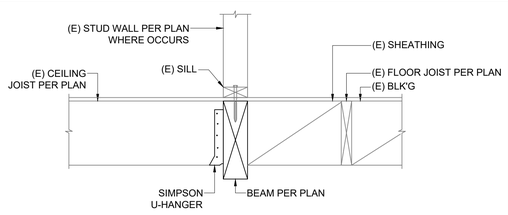
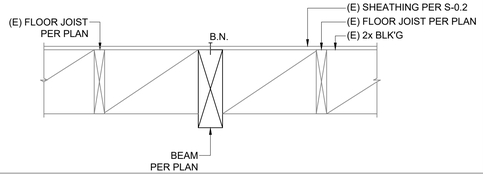
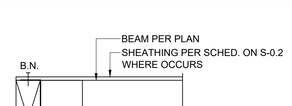


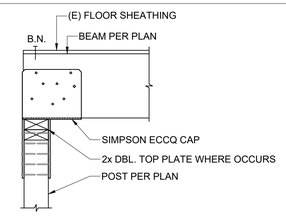
9.1



9.2 FLOOR JOIST AT BEAM



10.1 WOOD BEAM TO WOOD BEAM CONNECTION (HGLT)



10.2 END COLUMN CAP DETAIL (ECCQ)

11

PROFESSIONAL ENGINEER ARSEN ADZHEMYAN No. C69103 CIVIL STATE OF CALIFORNIA

PROJECT NO:2021-064
DATE: 04/06/2021

STRUCTURAL

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DESIGNED BY: A.A.
CHECKED BY: V.V.

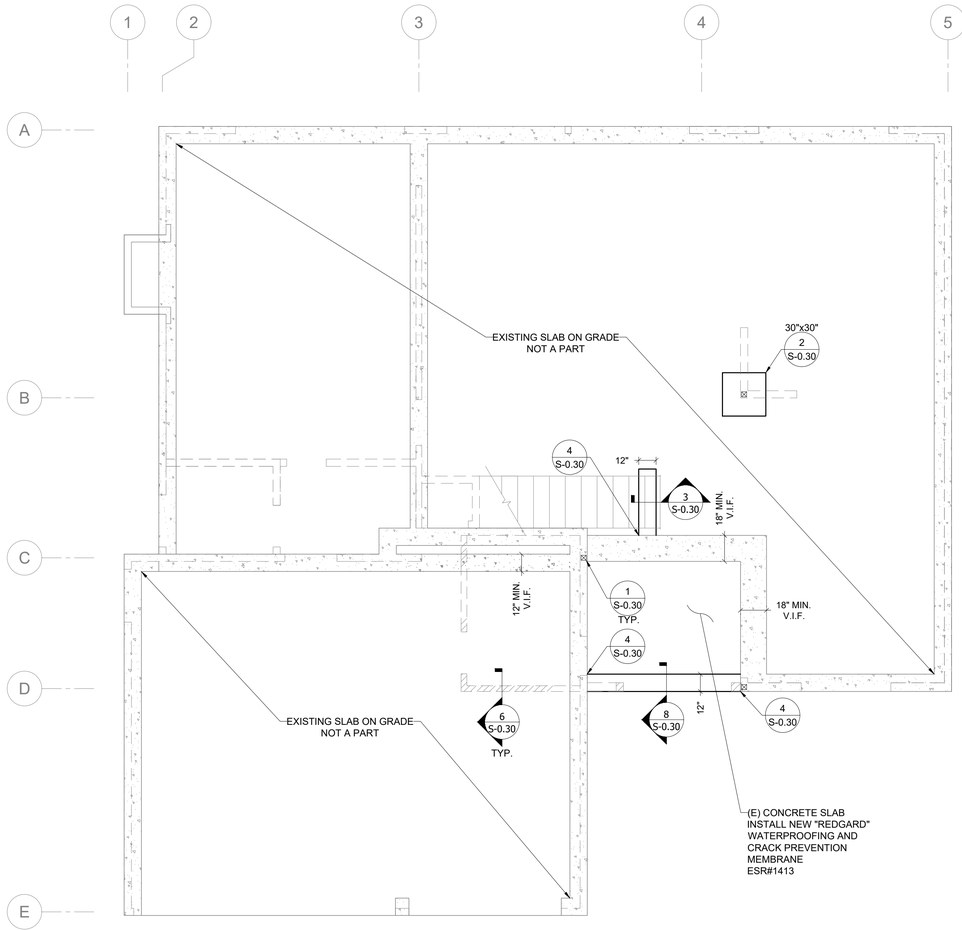
PREPARED FOR: BEN HAMED

PROJECT ADDRESS: 4552 TRAFALGAR DR. LA PALMA, CA 90623

REV	DATE	DESCRIPTION	BY
1	06-07-2021	ADDRESS PC COMMENTS	A.A.
2			
3			
4			
5			

STRUCTURAL DETAILS

S-0.30



FOUNDATION PLAN

Scale: 1/4"=1'-0"

LEGEND	
	NEW FOUNDATION
	EXISTING FOUNDATION
	NEW WALL ABOVE
	EXISTING WALL ABOVE
⊠	NEW POST ABOVE

NOTE:
1. EXISTING FRAMING AND FOUNDATION SHALL REMAIN IN PLACE, U.N.O. ON PLAN.
2. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
3. CENTER POST ON FOOTING.
4. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STARTING WORK.
5. FOR LARR AND ESR REPORTS SEE DETAIL 4 ON SHEET S-0.21.
6. UNDERPIN SIZE SHALL BE PER DETAILS.
7. PAD REINFORCEMENT SHALL BE PER 3/S-0.21.

REGISTERED PROFESSIONAL ENGINEER ARSEN ADZHEMYAN NO. C89160 CIVIL STATE OF CALIFORNIA

PROJECT NO:2021-064
DATE: 04/06/2021

STRUCTURAL

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DESIGNED BY: A.A.
CHECKED BY: V.V.

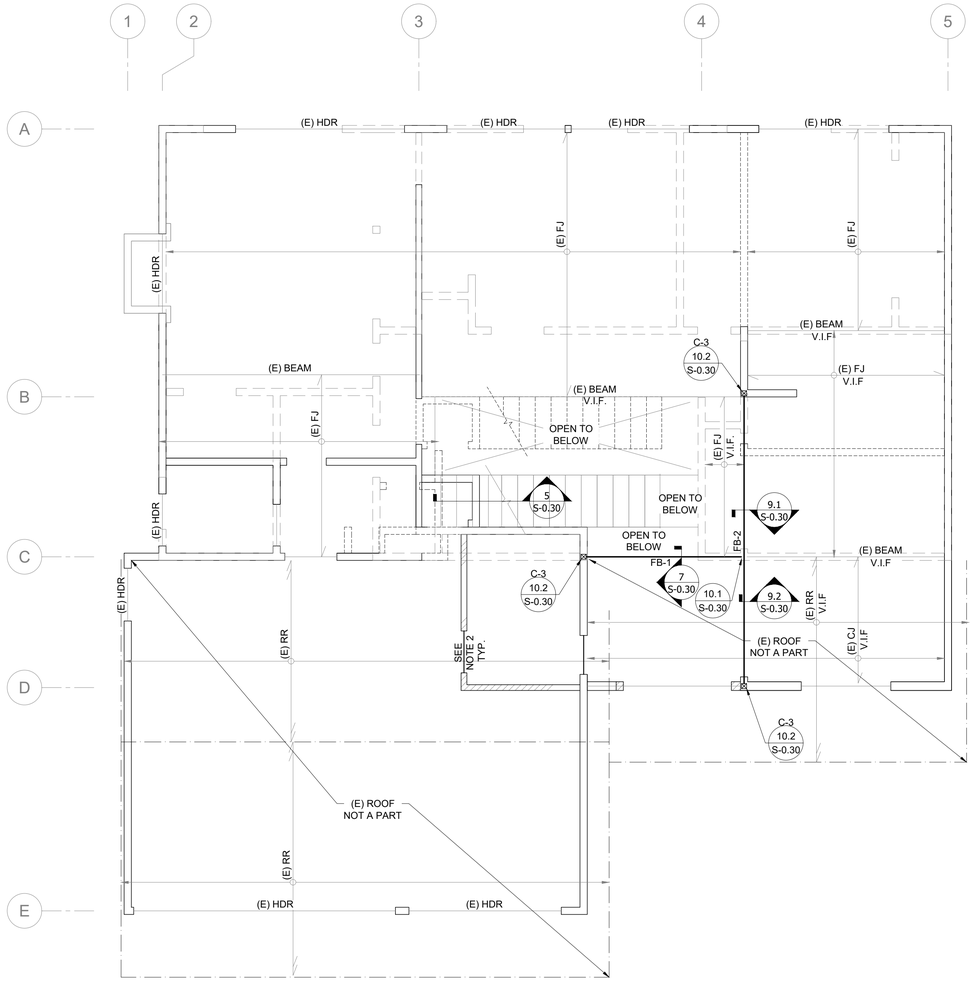
PREPARED FOR:
BEN HAMED

PROJECT ADDRESS:
4552 TRAFALGAR DR.
LA PALMA, CA
90623

REV	DATE	DESCRIPTION	BY
1	06-07-2021	ADDRESS PC COMMENTS	A.A.
2			
3			
4			
5			

FOUNDATION PLAN

S-1



2ND FLOOR FRAMING PLAN

Scale: 1/4"=1'-0"

MEMBER SCHEDULE		
Designation	**Size**	**Species and Grade**
FB-1	3.5x9.25	Parallam PSL 2.0E
FB-2	7x11.25	Parallam PSL 2.0E
C-2	4x4	DF-L No.2
C-3	4x6	DF-L No.2

LEGEND	
	WALL BELOW
	NEW WALL BELOW
	WALL ABOVE
	WALL TO BE DEMOLISHED
⊠	POST BELOW

NOTES:
1. FOR SHEATHING INFORMATION SEE SHEET S-0.2.
2. ALL HEADERS SHALL BE PER HEADER SCHEDULE ON SHEET S-0.2, U.N.O. ON PLAN.
3. IF ANY DISCREPANCIES IN MEMBER SIZES OCCUR, LARGER SIZE SHALL GOVERN.
4. FOR LARR AND ESR REPORTS SEE DETAIL 4 ON SHEET S-0.21.
5. FOR STRAPS AND END-LENGTH INFORMATION SEE STRAP SCHEDULE ON DETAIL 2 ON SHEET S-0.21.
6. FOR TYPICAL DETAILS SEE SHEETS S-0.2 AND S-0.30.
7. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
8. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STARTING WORK.
9. CONTRACTOR SHALL VERIFY THAT NONE OF THE WALLS TO BE DEMOLISHED IS SHEAR WALL OR CONNECTED TO THE ROOF DIAPHRAGM.
10. ALL INTERIOR NON-LOAD BEARING WALLS ARE 2x4 STUD WALLS.
11. ALL NEW EXTERIOR WALLS AND PLUMBING WALLS ARE 2x6.

REGISTERED PROFESSIONAL ENGINEER ARSEN ADZHEMYAN NO. C89160 CIVIL STATE OF CALIFORNIA

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PREPARED FOR:
BEN HAMED

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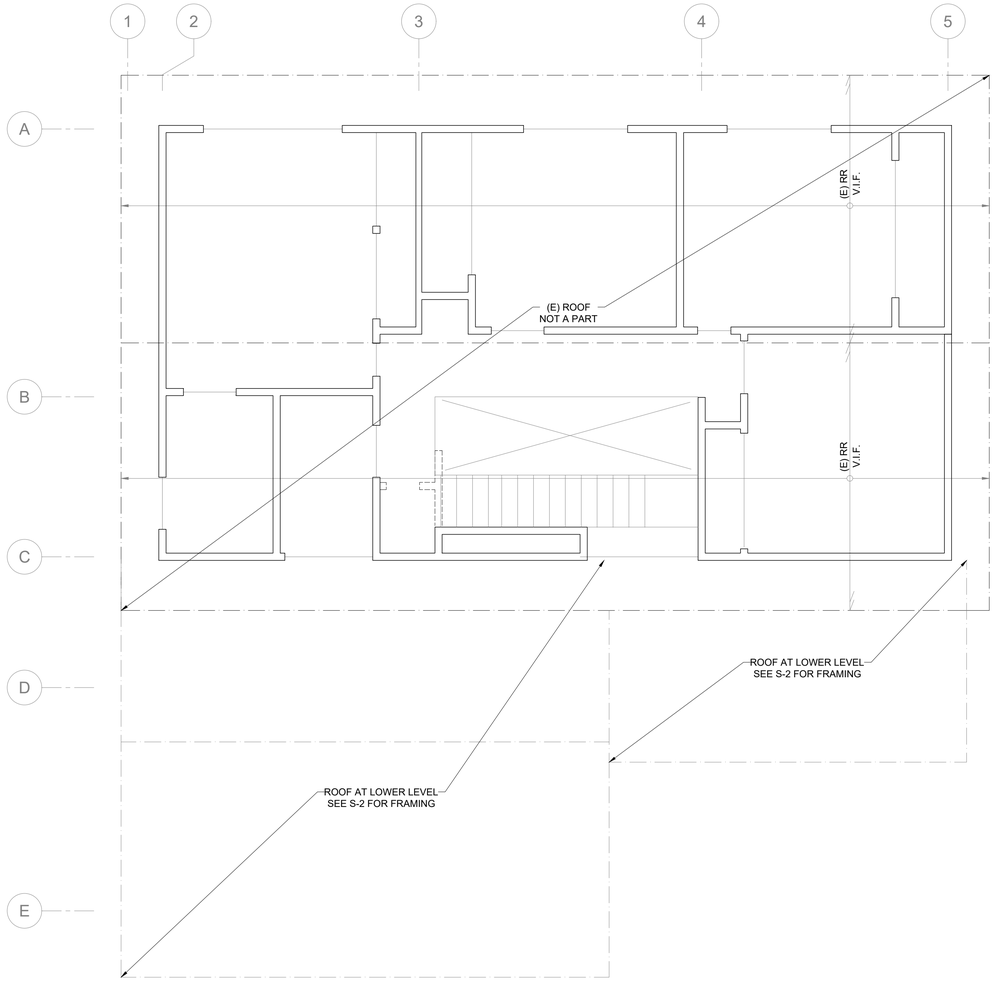
LA PALMA, CA
90623

REV	DATE	DESCRIPTION	BY
1	06-07-2021	ADDRESS PC COMMENTS	A.A.
2			
3			
4			
5			

2ND FLOOR FRAMING PLAN

S-2



ROOF FRAMING PLAN

Scale: 1/4"=1'-0"

LEGEND	
———	WALL BELOW
- - - - -	WALL TO BE DEMOLISHED
—— · —— · ——	ROOF LINE

NOTES:
1. FOR SHEATHING INFORMATION SEE SHEET S-0.2
2. ALL HEADERS SHALL BE PER HEADER SCHEDULE ON SHEET S-0.2, U.N.O. ON PLAN.
3. IF ANY DISCREPANCIES IN MEMBER SIZES OCCUR, LARGER SIZE SHALL GOVERN.
4. ROOF RAFTERS AND CEILING JOISTS SHALL BE SPACED @ 16" O.C., U.N.O. ON PLAN.
5. FOR LARR AND ESR REPORTS SEE DETAIL 4 ON SHEET S-0.21.
6. FOR STRAPS AND END-LENGTH INFORMATION SEE STRAP SCHEDULE ON DETAIL 2 ON SHEET S-0.21.
7. FOR TYPICAL DETAILS SEE SHEETS S-0.2 AND S-0.30.
8. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
9. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STARTING WORK.
10. PROTECT EXISTING FRAMING AND FOUNDATION IN PLACE, U.N.O.

REGISTERED PROFESSIONAL ENGINEER
ARSEN ADZHEMYAN
No. C89100
CIVIL
STATE OF CALIFORNIA

PROJECT NO:2021-064
DATE: 04/06/2021

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REV	DATE	DESCRIPTION	BY
1	06-07-2021	ADDRESS PC COMMENTS	A.A.
2			
3			
4			
5			

ROOF FRAMING PLAN

S-3