SINGLE FAMILY RESIDENCE

2849 N. ADKINS AVENUE, LOS ANGELES, CA 90032



ADMINISTRATION REQUIREMENTS

1) THE PROJECT SITE SHALL BE KEPT CONTINUOUSLY FENCED IN ACCORDANCE UNTIL THE PROJECT IS FINALIZED OR APPROVAL TO REMOVE THE FENCE HAS BEEN OBTAINEDFROM THE CITY BUILDING DIVISION. 24 HOUR SECURITY SHALL BE PROVIDED ANY TIME THE FENCE CANNOT BE MAINTAINED INTACT.

2) THE NFRC TEMPORARY LABEL DISPLAYED ON WINDOWS MUST REMAIN ON THE UNIT UNTIL FINAL INSPECTION HAS BEEN COMPLETED.

3) THE ENTIRE DWELLING (NEW CONSTRUCTION OR ADDITIONS GREATER THAN 1,000 SQ.-FT. IN AREA) SHALL MEET THE REQUIREMENTS OF ANSI/ASHRAE STANDARD 62.2-2007 VENTILATION AND ACCEPTABLE INDOOR AIR QUALITY IN LOW-RISE RESIDENTIAL BUILDINGS.

4) THE ISSUANCE OF A PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ERRORS ON THESE PLANS OR FROM PREVENTING ANY VIOLATION OF THE CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.

5) SEPARATE PERMIT SHALL BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO PLACEMENT OF ANY CONSTRUCTION MATERIALS OR EQUIPMENT IN THE PUBLIC WAY.

TITLE-24 ENERGY REQUIREMENTS:

1) A MINIMUM OF 50% OF THE LUMINARIES IN A KITCHEN MUST BE FLUORESCENT OR HIGH EFFICACY.

2) BATHROOMS, GARAGES, LAUNDRY OR UTILITY ROOMS MUST HAVE FLUORESCENT OR HIGH EFFICACY LIGHTING, AND AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES MUST BE CONTROLLED BY A VACANCY SENSOR.

3) BEDROOMS, LIVING ROOMS, FAMILY ROOMS, AND OTHER ROOMS USED FOR LIVING AND SLEEPING MUST HAVE FLUORESCENT OR HIGH EFFICACY LIGHTING, OR AN OCCUPANT SENSOR, OR DIMMERS MAY BE INSTALLED.

4) EXTERIOR LIGHTING MUST BE FLUORESCENT OR HIGH EFFICACY, OR AN OCCUPANT SENSOR WITH AN INTEGRAL PHOTO CONTROL MAY BE INSTALLED.

5) USE 2X6 STUDS WITH R-21 INSULATION FOR ALL EXTERIOR WALLS PER ENERGY CALCULATIONS.

6) USE ENERGYPRO 7.2 COMPUTER PROGRAM IN THE ENERGY CALCULATIONS.

ADMINISTRATIVE REQUIREMENTS:

1. THE ISSUANCE OF A PERMIT SHALL NOT PREVENT THE BUILDING OFFICIALFROM REQUIRING THE CORRECTION OF ERRORS ON THESE PLANS OR FROM PREVENTING ANY VIOLATION OF THE CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.

2. THE PROJECT SITE SHALL BE KEPT CONTINUOUSLY FENCED IN ACCORDANCE UNTIL THE PROJECT ISFINALED OR APPROVAL TO REMOVE THE FENCE HAS BEEN OBTAINED FROM THE CITY BUILDING DIVISION. 24 HOUR SECURITY SHALL BE PROVIDED ANY TIME THE FENCE CANNOT BE MAINTAINED INTACT.

WINDOW NOTES:

OPERABLE WINDOWS WITH SILLS LOCATED MORE THAN 72 INCHES ABOVE FINISHED GRADE, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE AT A HEIGHT NOT LESS THAN 36 INCHES ABOVE THE FINISHED FLOOR SURFACE OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4-INCH-DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 36 INCHES OF THE FINISHED FLOOR. (CBC 1015.8)

FIRE SPRINKLER NOTES:

1. THE BUILDING SHALL BE EQUIPPED WITH A FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH CRC R313.3 OR NFPA 13D.

STATE REQUIREMENTS

1) AT TIME OF PERMIT ISSUANCE, CONTRACTOR SHALL SHOW THEIR VALID WORKERS' COMPENSATION INSURANCE CERTIFICATE.

2) ALL WORK SHALL CONFORM TO ALL REQUIREMENTS OF STATE OF CALIFORNIA TITLE 24 REGARDLESS OF THE INFORMATION INDICATED ON THESE PLANS. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL SUPERVISING THE CONSTRUCTION TO ENSURE THAT THE WORK IS DONE IN ACCORDANCE WITH CODE REQUIREMENTS PRIOR TO REQUESTING INSPECTION.

3) EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.

4) SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT(SCAQMD) SHALL BE NOTIFIED IN ACCORDANCE WITH CALIFORNIA STATE LAW PRIOR TO START OF ANY DEMOLITION, ADDITION, AND/OR REMODEL WORK. THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT OFFICE IS LOCATED AT 21865 COPLEY DRIVE IN DIAMOND BAR, PHONE NO. (909)396-2000.BE ADVISED, SCAQMD MAY REQUIRE A 10 DAY WAIT PERIOD TO START OF WORK.

5) SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.

6) STOCKPILES OR EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.

7) TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.

8) FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.

FIRE DEPARTMENT NOTES:

1) FIRE DEPARTMENT VEHICULAR ACCESS ROADS MUST BE INSTALLED AND MAINTAINED IN A SERVICEABLE MANNER PRIOR TO AND DURING THE TIME OF CONSTRUCTION. FIRE CODE 501.4.

2) APPROVED BUILDING ADDRESS NUMBERS, BUILDING NUMBERS OR APPROVED BUILDING IDENTIFICATION SHALL BE PROVIDED AND MAINTAINED SO AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET FRONTING THE PROPERTY. THE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND, BE ARABIC NUMERALS OR ALPHABET LETTERS, AND BE A MINIMUM OF 4 INCHES HIGH WITH A MINIMUM STROKE WIDTH OF 0.5 INCH. FIRE CODE 505.1

3) PROVIDE AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM AS SET FORTH BY BUILDING CODE 903 AND FIRE CODE 903. PLANS SHALL BE SUBMITTED TO THE SPRINKLER PLAN CHECK UNIT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

4) AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WITHIN WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. REQUIRED CARBON MONOXIDE ALARMS SHALL BE EQUIPPED WITH A BATTERY BACK-UP. WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN THE DWELLING UNIT OR WITHIN SLEPPING UNIT THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVITE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. RESIDENTIAL CODE R315.1.2, BUILDING CODE 420.4.1.

5) WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING OR SLEEPING UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT RESIDENTIAL CODE R314.5.

6) AN AUTOMATIC RESIDENTIAL FIRE SPRINKLERS SYSTEM FOR ONE- AND TWO-FAMILY DWELLINGS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SECITON R313.3 OR NFPA 13D.

7) THE REQUIRED FIRE FLOW FOR FIRE HYDRANTS AT THIS LOCATION IS 1250 GPM, AT 20 PSI RESIDUAL PRESSURE, FOR A DUARATION OF 2 HOURS OVER AND ABOVE MAXIMUM DAILY DOMESTIC DEMAND. FIRE 507.3.

8) ALL FIRE HYDRANTS SHALL MEASURE 6"X4"X2-1/2", BRASS OR BRONZE, CONFORMING TO AMERICAN WATER WORKS ASSOCIATION STANDARD C503, OR APPROVED EQUAL, AND SHALL BE INSTALLED IN COMPLIANCE WITH THE COUNTY OF LOS ANGELES FIRE DEPARTMENT REGULATION 8. FIRE CODE 507.5 AND REGULATION 8.

NOTES

NEWLY CONSTRUCTED ONE AND TWO FAMILY DWELLINGS AND TOWNHOUSES SHALL INSTALL AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION R313.3 OR NFPA 13D.

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OWNER

HERMAN LEE
9241 SPARKLETT ST.,
TEMPLE CITY, CA 91780
TEL: (626)673-6350

DESIGNER

CL DESIGN / BUILDERS, INC.
1704 E. CORTEZ ST.,
WEST COVINA, CA 91791
TEL: (626)255-9336

STRUCTURAL ENGINEER

M.S. CONSULTING ENGINEERING
12631 IMPERIAL HWY SUITE F-230,
SANTA FE SPRINGS, CA 90670
TEL: (562)863-9999
FAX: (562)863-9991

CIVIL ENGINEER

CALLAND ENGINEERING, INC.
576 E. LAMBERT ROAD,
BREA, CA 92821
TEL: (714) 671-1050
FAX: (714) 671-1090

GEOTECHNICAL ENGINEER

CALLAND ENGINEERING, INC.
576 E. LAMBERT ROAD,
BREA, CA 92821
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FAX: (714) 671-1090

ENERGY / TITLE-24

PERFECT DESIGN
2416 W. VALLEY BLVD.
ALHAMBRA, CA 91803
TEL: (626)289-8808
FAX:

LANDSCAPE ARCHITECT

TWO TREES DESIGN, INC.
1832 SAN DIEGO ST.,
WEST COVINA, CA 91790
TEL: (626)278-2766
EMAIL: 2treesdesign@gmail.com

PROJECT DATA:

OWNER:	HERMAN LEE
DESIGNER:	CL DESIGN 626-255-9336
A.P.N.:	5217-015-019
ZONING:	[Q]R-1-10 (RESIDENTIAL)
LOT AREA:	5,573 S.F.
FIRST FLOOR AREA:	854 S.F.
SECOND FLOOR AREA:	1,304 S.F.
TOTAL FLOOR AREA:	2,158 S.F.
GARAGE AREA:	412 S.F.
PORCH:	50 S.F.
PATIO:	0 S.F.
BALCONY:	130 S.F.
NUMBER OF STORY:	2 (TWO)
LOT COVERAGE:	854+412+50=1,316/5,573=23.61%<30% MAX. OR 1,400 S.F. MAX.
FLOOR AREA RATIO:	854+1,304+412-400=2,170 < 2,173.86 S.F.
FRONT YARD SETBACK:	NEED NOT TO EXCEED 20' OR NOT LESS THAN 20% OF LOT DEPTH 15'-6" PROVIDED > 14'-11" MIN. REQUIRED (20% OF LOT DEPTH (74.53'X.20=14.91' OR 14'-11") FRONT YARD SETBACK 4
REAR YARD SETBACK	25.00' PROVIDED > 15.00' MIN. REQUIRED
SIDE YARD SETBACK:	6.00' PROVIDED = 6.00' MIN. REQUIRED
TOTAL PARKING SPACES PROVIDED:	2 CAR GARAGE
TOTAL PARKING SPACES REQUIRE:	2 CAR GARAGE
OCCUPACY:	(DWELLING=2,158 S.F.) R-3 / U (GARAGE AREA=412 S.F.)
TYPE OF CONSTRUCTION:	V-B
FIRE SPRINKLER:	YES, NFPA-13D SPRINKLER THRU OUT

SCOPE OF WORK:

CONSTRUCT NEW TWO STORY SINGLE FAMILY RESIDENCE. W/ 2-CAR GARAGE.

CODE DATA:

2019 CRC CALIFORNIA RESIDENTIAL CODE
2019 CBC CALIFORNIA BUILDING CODE
2019 CPC CALIFORNIA PLUMBING CODE
2019 CMC CALIFORNIA MECHANICAL CODE
2019 CEC CALIFORNIA ELECTRICAL CODE
2019 CALGREEN CALIFORNIA GREEN BUILDING STANDARDS CODE
2019 CALIFORNIA ENERGY CODE (T-24)
WITH LOCAL CITY OF LOS ANGELES AMENDMENTS

LEGAL DESCRIPTION:

LOT 68 OF TRACT 5629, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 99, PAGES 43 TO 45, OF MAPS, IN THE COUNTY RECORDER OFFICE OF SAID COUNTY.

APN: 5217-015-019

VICINITY MAP
N.T.S.

SUBJECT PROPERTY



CL DESIGN / BUILDERS, INC.
1704 E. CORTEZ ST.
W. COVINA, CA 91791
TEL: (626)255-9336
cldesign93@gmail.com
LIC. #943533
EXP. 2-28-2022
CHRISTOPHER LOH

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REVISIONS:

NO.	DATE
1	06/09/2020

PROJECT

SINGLE FAMILY RESIDENCE

2849 N. ADKINS AVE
LOS ANGELES, CA
90032

SHEET TITLE:

TITLE SHEET / PROJECT SUMMARY

DATE: 03/29/2021
SCALE: AS NOTED
DRAWN: CL
JOB:

SHEET

A-0.1

OF SHEET

FORMS AND AFFIDAVITS:

1. Summary Clearance Worksheet
2. Structural Observation

PART I: GENERAL REQUIREMENTS

A. PERMIT APPLICATION

5. The permit application must be signed by the property
owner or licensed contractor or authorized agent at the time the permit is to be issued:
a. For owner-builder permits: Owner's signature can be verified with owner's driver license. Owner's representatives must present owners approval with a notarized letter from the owner.
b. For contractor building permits: Prior to the issuance of a building permit, the contractor shall have the following:
i. Notarized letter of authorization for agents.
ii. Certificate of workers Compensation Insurance made out to the Contractors State License Board.
iii. Copy of Contractor's State License or pocket ID.
iv. Copy of City of Los Angeles business tax registration certificate (BTRC) or a newly paid receipt for one.

B. CLEARANCES

1. Obtain all clearances as noted on the attached Clearance Summary Worksheet. It is necessary to apply immediately for the signoff as it can take months for some departments to review the project. Comply with all conditions given
during approval prior to the permit issuance.

10. The grading bond is required to be posted for projects
involving over 250 cubic yards of soil in "Hillside Grading Areas". (7006.5.1)

13. Low Impact Development (LID) Signoff from Watershed Protection Division, Bureau of Sanitation, Department of Public Works is required for:
a. New construction (>500 sq.ft. of impervious area)

14. Obtain Clearance from the Green Building Division of
LADBS

16. Obtain clearance from Los Angeles Fire Department (LAFD) for the Automated Parking Garage or Mechanical Car Lift.

C. ADMINISTRATION

1. Each sheet of the architectural and structural plans must bear the signatures and registration of an architect or engineer registered in the State of California

2. The address of the building, the name/address of the owner, and names/addresses of the consultants are required on their plans.

3. (One) (Two) sets of plans will be required during permit
issuanc-106.3.2.2 & R106.3.3) Plans must be:
a. Quality blue or black line drawings with uniform and
light background color

b. Max. 36'x 48" size with minimum 1/8" lettering size. J'1
c. Sticky back details must produce prints without
contrasting shades of background color.

4. For new buildings and additions, one additional copy of only the architectural set is required for the County Tax Assessor. (California Revenue and Taxation Section 72).

5. The final set of plans must be stamped by:
City Planning Dept. / Fire Dept. / Sanitation Dept.

7. Provide a fully dimensioned plot plan to scale. Show the legal description, building lines, easements, lot size, zone boundaries, highway dedication lines, street center line, alley, building dimensions and setbacks, location and dimensions of new work, and parking spaces and locations. Show number of stories and the use of all buildings. (R106.3.2.1)

9. show on site plans the natural and finish grade elevations around the perimeter of the building. Show elevations for all floors and top of roof. Provide Survey Map signed by a licensed Surveyor or Civil Engineer. (R106.4.3.3)

8. Show the building area, use, number of stories, fire zone, lot size, lot area and height on the first sheet or title sheet of plans.

PART III: BUILDING CODE REQUIREMENTS

A. GENERAL REQUIREMENTS
2. Add notes on plans:

a. The construction shall not restrict a five- foot clear and unobstructed access to any water or power distribution facilities (Power poles, pull-boxes, transformers, vaults, pumps, valves, meters, appurtenances, etc.) or to the location of the hookup. The construction shall not be within ten feet of any power lines-whether or not the lines are located
on the property. Failure to comply may cause
construction delays and/or additional expenses.

b. An approved Seismic Gas Shutoff Valve will be installed on the fuel gas line on the downstream side of the utility meter and be rigidly connected to the exterior of the building or structure containing the
fuel gas piping. (Per Ordinance 170,158) (Separate plumbing permit is required).

c. Plumbing fixtures are required to be connected to a sanitary sewer or to an approved sewage disposal system. *R306.3*

d. Kitchen sinks, lavatories, bathtubs, showers, bidets, laundry tubs and washing machine outlets shall be provided with hot and cold water and connected to
an approved water supply. *R306.4*

e. bathtub and shower floors, walls above bathtubs
with a showerhead, and shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 eet above the floor. *R307.2*

f. provide ultra-low flush water closets for all new
construction. Existing shower heads and at must
be adapted for low water consumption.

g. Unit Skylights shall be labeled by a LA City Approved Labeling Agency. Such label shall state the approved labeling agency name, product designation and performance grade rating. (Research Report not required). *R308.6.9*

h. Water heater must be strapped to wall.
Sec. 507.3, LAPC

k. Automatic garage door openers, if provided, shall be ljsted in accordance with UL 325. *R309.4*

l. Smoke detectors shall be provided for all dwelling units intended for human occupancy, where a permit is required for alterations, repairs, or additions.
R314.2

m. where a permit is required for alterations, repairs or additions, existing dwellings or sleeping units that have attached garages or fuel-burning appliances shall be provided with a carbon monoxide alarm in accordance with Section R315.2. Carbon monoxide alarms shall only be required in the specific dwelling
0
unit or sleeping unit for which the permit was obtained. *R315.2*

n. Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings in accordance with Section R303.1 or shall be provided with artificial light that is adequate to provide an average illumination of 6
.
foot-candles over the area of the room at a height of 30 inches above the floor level. *R303. I*

o. A copy of the evaluation report and/or conditions of listing shall be made available at the job site

B. OCCUPANCY CLASSIFICATION
2. Garage / Carports

d. The garage shall be separated from the dwelling and attic area in accordance with Table R302.6. *R302.6*

e. Ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage sheet steel or other approved
Of material and shall not have openings into the garage.
R302.5.2

f. Other penetrations of garage/dwelling ceilings and
walls shall be protected as required by Section
R302.11, Item 4. *R302.5.3*

g. Garage floor surfaces shall be of an approved
noncombustible material, and the area used to park vehicles shall be sloped to a drain or toward the main vehicle entry doorway R309.1

C. BUILDING HEIGHT LIMITATION
2. Show maximum height of the structure (in feet and story) from Average height of highest roof surface to grade plane on all elevation views. *P202*

E. FIRE PROTECTION
1. The building shall be equipped with an automatic residential fire sprinkler system in accordance with section R313.3 or *NFPA13D. P313, 12.21A17(d). 12.21C10(h)*

2. Add note on plans: The Sprinkler System shall be approved by Plumbing Division prior to installation.

3. An approved smoke alarm shall be installed in each sleeping room & hallway or area giving access to a sleeping room, and on each story and basement for dwellings with more than one story. Smoke alarms shall be interconnected so that actuation of one alarm will activate all the alarms within the individual dwelling unit. In new construction smoke alarms shall receive their primary power source from the building wiring and shall be equipped with battery back\ expndtw-6 up and low battery signal. *P314*

4. An approved carbon monoxide alarm shall be installed in dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units that have attached garages. Carbon monoxide alarm shall be provided outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s) and on every level of a dwelling unit including basements. *P315*

F. MEAN OF EGRESS
4. Provide emergency egress from sleeping rooms and basements. Show details on plans. Minimum - 24" clear height, 20" clear width, 5.7 sf minimum area (5.0 sf at grade level) & 44" maximum to sill. *P310.2.1*

7. Provide 32" wide doors to all interior accessible rooms. *6304.1*

8. Show on plans that the entry/exit door must open over a landing not more than 1.5" below the threshold. Exception: Providing the door does not swing over the landing. Landing shall be not more than 7.75' below the threshold. Storm and screen doors are permitted to swing over all exterior stairs and landings. *P311.3.1, P311.3.3*

9. Landing at a door shall have a length measured in the direction of travel of no less than 36". *P311.3*

10. A landing shall be provided at the top and bottom of stairways. *P311.7.6*

11. Show the following stairway details on plans:
a. 7.75' maximum rise & minimum 10' run. *R311.7.5*
b. Minimum 6-8" headroom clearance. *P311.7.2*
c. Minimum 36' clear width. *P311.7.1*
d. Handrails 34' to 38' high above tread nosing *P311.7.8.1*
e. Handgrip portion of handrail shall not be less than
1.25 and no more than 2' cross- sectional dimension having a smooth surface with no sharp corners. *P311.7.8.5*
f. Maximum 4' clear spacing opening between rails.
P312.1.3

15. Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with 1/2 inch gypsum board. *P302.7*

16. All interior and exterior stairways shall be illuminated.
P303.7 & P303.8

G. INTERIOR ENVIRONMENT
12. Provide 15' minimum between the center of water closet to *any side wall. Calif. Plumb. Code 402.5*

13. Provide 24' clear space in front of any water closet. *Calif. Plumb. Code 402.5*

H. BUILDING ENVELOPE
8. Buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. (R319.1)

9. Protection of wood and wood based products from decay shall be provided in the locations specified per Section R317.1 by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA Ui.

10. Provide anti-Graffiti finish within the first 9 feet, measured from grade, at exterior walls and doors. Exception: Maintenance of building affidavit is recorded by the owner to covenant and agree with the City of Los Angeles to remove any graffiti within 7-days of the graffiti being applied. (6306).

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LIC. #943533
EXP. 2-28-2022
CHRISTOPHER LOH

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REVISIONS:

NO.	DATE
1	

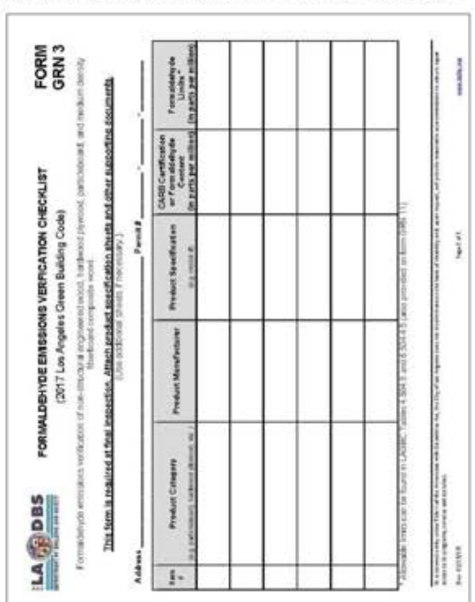
PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE
LOS ANGELES, CA 90032

SHEET TITLE:
GENERAL NOTES

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-0.1A
OF SHEET

CALIFORNIA GREEN CODE:

1. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering the building. Contour lines, elevation points, and/or slope arrows may be used to show compliance with this requirement. (4.106.3)
2. For future installation electric vehicle supply equipment (EVSE) in each one- and two-family dwellings and townhouses:
a. Show on plans that a minimum 1" (inside diameter) listed raceway is installed for each unit to accommodate a dedicated 208/240 volt branch circuit. The raceway shall originate at the main service or a subpanel and terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or enclosure.
b. "The panel or subpanel shall provide capacity to install 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device."
c. "The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as EV CAPABLE. The raceway termination location shall be permanent and visibly marked EV CAPABLE." (4.106.4.1)
3. Plans shall identify the type of roofing, manufacturer, product, and color used. Incorporate the material specifications for the roofing product used and show that it meets the following minimum SRI value or both solar reflectance and thermal emittance values:
a. For roof slopes <2:12: 3-year aged SRI value of at least 75 or both a 3-year aged solar reflectance of at least 0.63 and a thermal emittance of at least 0.75.
b. For roof slopes > 2:12: 3-year aged SRI value of at least 16 or both a 30-year aged solar reflectance of at least 0.20 and thermal emittance of at least 0.75 (4.106.5)
4. Provide computations showing that at least 50% of the pathways, patios, driveways and other paved areas comply with one or a combination of the following:
a. Shade provided by trees or plantings
Include plants fact sheet justifying crown spread at 15 years maturity
b. Hardscape material with an initial solar reflectance of at least 0.30
Include manufacturer's specs for pavers or specify uncolored concrete with smooth cement finish.
c. Open grid or permeable pavement systems
Include open grid and/or permeable paver detail
d. Shade provided by a canopy shade system consisting of solar panel arrays (4.106.7)
5. For one- and two-family dwelling, comply wit the following:
a. Designate on the roof plan solar zone area(s) with total area equal to or greater than 250 sq. ft. the solar zone shall be comprised of areas that have no dimension less than 5 feet and each area shall not be less than:
i. 80 sq. ft. for roof areas of 10,000sq. ft. or less
ii. 160 sq. ft. for roof area over 10,000 sq. ft.
b. For roof slopes >2:12 (9.5 degrees from horizontal), show that the solar zone is oriented between 90 degrees and 300 degrees of true north.
c. The solar zone shall be free of obstructions and be setback at least two times the height of any obstruction, including but not limited to, vents chimneys, equipment, parapets, and stairwells.
d. For roof slopes < 2:12, the solar zone shall maintain a 3-foot-wide access pathway (measured from the load bearing wall to the perimeter of the solar zone) around the perimeter edges of the roof.
e. For roof slopes > 2:12, the solar zone shall not be located higher than (18-inches)(3-feet) below the ridge and shall not be located closer than18 inches to a hip or valley if placed on both sides of the hip or valley.
f. For roof slopes > 2:12, provide a minimum 3-foot wide clear access pathway (measure from the load bearing wall to the solar zone) to the ridge on all side of each roof slope where the solar zones are located.
g. Plans shall indicate a location for inverters and metering equipment and a pathway for routing from the solar zone to the main service panel.
h. Plans shall indicate a pathway for routing of plumbing from the solar zone to the water-heating system.
i. The main service panel shall have a minimum busbar rating of 200 amps.
j. The main electrical service panel shall have a reserved space to allow for installation of a double pole circuit breaker for a future solar electric installation. The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location and shall be permanently marked as "For Future Solar Electric".
(4.211.4, Energy Code 110.10, LAFD Requirement No. 96)
6. The flow rates for all plumbing fixtures shall comply with the maximum flow rates specified in section 4.303.1 (4.303.1)
7. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80psi, or the shower shall be designed to only allow one showerhead th be in operation at a time. (4.303.1.3.2)
8. Multi-family dwellings not exceeding three stories and containing 50 units or less shall install a separate meter or submeter within common areas and within each individual dwelling unit. (4.303.3)
9. Comply with (GRN16) the listed maximum flow rates or provide computations demonstrating a 20 percent reduction in the building's "water use baseline" as established in Table 4.303.4.1 (4.303.4)
10. Project with new landscape areas of 500 square feet or more are subject to the Model Water Efficient Landscape Ordinance (MWELO). Refer to the MWELO supplemental correction sheet for additional comments. (4.304.1)
11. Show location of irrigation controller(s) on plans. Irrigation controller(s) shall be either weather- or soil-based under any of the following conditions:
a. Any newly-installed irrigation controller(s); or
b. On sites with 500 square feet or more of cumulative irrigated landscape areas. (4.304.2)
12. For projects that include landscape work, the *Landscape Certification*, Form GRN 12 shall be completed prior to final inspection approval. (State Assembly Bill No. 1881)
13. Building on site with 500 square feet or more of cumulative landscape area shall have separate meters or submeters for outdoor water use. (4.304.3)
14. Locks shall be installed on all publicly accessible exterior faucets and hose bibs. (4.304.4)
15. For one- and two-family dwellings, any permanently installed outdoor in-ground swimming pool or spa shall be equipped with a cover having a manual or power-operated reel system. For irregular-shaped pools where it is infeasible to cover 100 percent of the pool due to its irregular shape, a minimum of 80 percent of the pool shall be covered. (4.304.5)
16. For sites with over 500 square feet of landscape area, waste piping shall be arranged to permit discharge from the clothes washer, bathtub, showers, and bathroom/restrooms wash basins to be used for future graywater irrigation system. (4.305.1)
17. Water used in the building for water closets, urinals, floor drains, and process cooling and heating shall come from city-recycle water if available for use within 200 feet or the property line. (4.305.2)
18. Building not exceeding 25 stories shall have cooling towers with minimum of 6 cycles of concentration (blowdown) or have a minimum of 50% of makeup water supply to cooling towers come from non-potable water sources. (4.305.3.1)
19. Where groundwater is being extracted and discharged, a system for onsite reuse of the groundwater shall be developed and constructed if the groundwater will not be discharged to the sewer. (4.305.4)
20. The hot water system shall not allow more than 0.6 gallons of water to be delivered to any fixture before hot water arrives or shall comply with either Los Angeles Plumbing Code Section 610.4.1.2 or 610.4.1.3.
21. Annular spaces around pipes, electric cables, conduits or other openings in the sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry, or metal plates. Piping prone to corrosion shall be protected in accordance with Section313.0 of the Los Angeles Plumbing Code. (4.406.1)
22. Provide flashing details for roof valleys, around windows and doors and at chimney to roof intersections of the building plans. (4.407.3)
23. Materials delivered to the construction site shall be protected from rain or other sources of moisture. (4.407.4)
24. Construction waste shall be reduced in accordance with LAMC Section 66.32 et seq. Indicate waste will be handled:
a. City of Los Angeles certified hauler.
25. Form GRN16 and an operation and maintenance manual, including, at a minimum, the items listed in Section 4.410.1, shall be completed and placed in the building at the time of final inspection. (4.410.1)
26. All duct and other related air distribution component openings shall be covered with tape, plastic, or sheet metal until the final startup of the heating, cooling and ventilating equipment. (4.504.1)
27. Architectural paints and coatings, adhesives, caulks and sealants shall comply with the Volatile Organic Compound (VOC) limits listed in Tables 4.504.1-4.504.3. (4.504.2.1 - 4.504.2.3)
28. The *VOC Content Verification Checklist*, Form GRN2, shall be completed and verified prior to final inspection approval. The manufacturer's specifications showing VOC content for all applicable products shall be readily available at the job site and be provided to the field inspector for verification (4.504.2.4)
29. All new carpet installed in the building interior shall meet the testing and product requirements of one of the following: (4.504.3)
i. Carpet and Rug Institute's Green Label Plus Program
ii. California Department of Public Health's Specification 01350
iii. NSF/ANSI 140 at the Gold Level
iv. Scientific Certifications Systems Indoor Advantage Gold
30. All new carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label Program. (4.504.3.1)
31. 80% of the total area receiving resilient flooring shall comply with one or more of the following: (4.504.4)
i. Certified as a CHPS Low-Emitting Material in the CHPS High Performance Products Database
ii. Certified under UL GREENGUARD Gold
iii. Certified under the Resilient Floor Covering Institute (RFCI)FloorScore program
iv. Meet the California Department of Public Health's Specification 01350
32. New hardwood plywood, particle board, and medium density fiberboard composite wood products used in the interior or exterior of the building shall meet the formaldehyde limits listed in Table 4.504.5. (4.504.5)
33. The *Formaldehyde Emissions Verification Checklist*, Form GRN 3, shall be completed prior to final inspection approval. The manufacturer's specifications showing formaldehyde content f or all applicable wood products shall be readily available at the job site and be provided to the field inspector for verification. (4.504.5)
34. New mechanically ventilated buildings shall provide regularly occupied areas of the building with a MERV 13 filter for outside and return air. Filters shall be installed prior to occupancy and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual (4.504.6)
35. Building materials with visible signs of water damage shall not be installed. Wal and floor framing shall not be enclosed until it is inspected and found to be satisfactory by the building inspector. (4.505.3)
36. The heating and air-conditioning systems shall be sized and designed using ANSI/ACCA Manual J-2011, ANSI/ACCA 29-D-2014 or ASHRAD handbooks and have their equipment selected in accordance with ANSI/ACCA 3 Manual S-2014. (4.507.2)
37. A vapor barrier shall be provided indirect contact with concrete for the proposed slab on grade construction. (4.505.2.1)
38. Fans shall be ENERGY STAR compliant and be ducted to terminate to the outside of the building. (4.506.1)


FORM GRN 3

FORMALDEHYDE EMISSIONS VERIFICATION CHECKLIST

(2017 Los Angeles Green Building Code)

Formaldehyde emissions verification of: nulti-structural engineered wood, hardwood plywood, particleboard, and medium density fiberboard composite wood.

This form is required at final inspection. Attach product specification sheets and other supporting documents.

(Use additional sheets if necessary.)

Address _____ Permit # _____

Item #	Product Category (e.g. particleboard, hardwood plywood, etc.)	Product Manufacturer	Product Specification (e.g. model #)	CA/OB Certification or Formaldehyde Emissions (in parts per million)	Formaldehyde Emissions (in parts per million)

Authorized Signature (not required for LA/DBS) (Items 4, 5 and 6 and/or EXCEPTIONS must be initialed by applicant.)

I hereby certify that the above information and the supporting documentation are true and correct to the best of my knowledge and that I am the owner or authorized agent acting on the owner's behalf. I understand that any misrepresentation may be grounds for revocation of any permit issued.

Print Name _____ Date _____

Signature _____

Page 1 of 1

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FORM GRN 4

2020 Los Angeles Green Building Code

MANDATORY REQUIREMENTS CHECKLIST

NEWLY CONSTRUCTED RESIDENTIAL BUILDINGS

(COMPLETE AND INCORPORATE THIS FORM INTO THE PLANS)

Permit # 20010 10000 02121 Date 6-18-2020

ITEM #	CODE SECTION	REQUIREMENTS	REFERENCE SHEET (Sheet # or N/A)	COMMENTS (e.g. note #, detail # or reason for N/A
		PLANNING AND DESIGN		
1	4.106.2	Storm water drainage and retention during construction	A-0.2	NOTE #1
2	4.106.3	Grading and paving	n/a	NOTE #1
3	4.106.4	Electric vehicle (EV) charging	n/a	NOTE #2
4	4.106.5	Cool roof for reduction of heat island effect	n/a	NOTE #3
5	4.106.7	Reduction of heat island effect for non-roof areas	A-0.2	NOTE #4
		ENERGY EFFICIENCY		
6	4.211.4	Solar ready buildings	n/a	NOTE #5
		WATER EFFICIENCY & CONSERVATION		
7	4.303.1	Water conserving plumbing fixtures and fittings	A-0.2	NOTE #6
8	4.303.1.3.2	Multiple showerheads serving one shower	n/a	NOTE #7
9	4.303.3	Water submeters	n/a	NOTE #8
10	4.303.4	Water use reduction	n/a	NOTE #9
11	4.304.1	Outdoor water use in landscape areas	A-0.2	NOTE #11
12	4.304.2	Irrigation controllers	n/a	NOTE #15
13	4.304.3	Metering outdoor water use	n/a	NOTE #14
14	4.304.4	Exterior faucets	n/a	NOTE #15
15	4.304.5	Swimming pool covers	n/a	NOTE #16
16	4.305.1	Graywater ready	n/a	NOTE #17
17	4.305.2	Recycled water supply to fixtures	n/a	NOTE #18
18	4.305.3.1	Cooling towers (buildings < 25 stories)	yes	N/A
19	4.305.3.2	Cooling towers (buildings > 25 stories)	n/a	NOTE #19
20	4.305.4	Groundwater discharge	n/a	
		MATERIAL CONSERVATION & RESOURCE EFFICIENCY		
21	4.406.1	Rodent proofing	n/a	NOTE #21
22	4.407.3	Flashing details	n/a	NOTE #22


FORM GRN 4

2020 Los Angeles Green Building Code

ITEM #	CODE SECTION	REQUIREMENTS	REFERENCE SHEET (Sheet # or N/A)	COMMENTS (e.g. note #, detail # or reason for N/A
23	4.407.4	Material protection	A-0.2	NOTE #23
24	4.408.1	Construction waste reduction	A-0.2	NOTE #24
25	4.410.1	Operation and maintenance manual	A-0.2	NOTE #25
		ENVIRONMENTAL QUALITY		
26	4.503.1	Fireplaces and woodstoves	N/A	N/A
27	4.504.1	Covering of duct openings and protection of mechanical equipment during construction	A-0.2	NOTE #26
28	4.504.2	Finish material pollutant control	n/a	NOTE #27
29	4.504.2.1	– Adhesives, sealants, caulks	A-0.2	NOTE #27, #28
30	4.504.2.2	– Paints and coatings		
31	4.504.2.3	– Aerosol paints and coatings		
32	4.504.2.4	– Verification	n/a	NOTE #28
33	4.504.3	Carpet systems	n/a	NOTE #29
34	4.504.3.1	Carpet cushion	n/a	NOTE #30
35	4.504.4	Resilient flooring systems	n/a	NOTE #31
36	4.504.5	Composite wood products	n/a	NOTE #32 & #33
37	4.504.6	Filters	n/a	NOTE #34
38	4.505.2.1	Capillary break	n/a	N/A
39	4.505.3	Moisture content of building materials	n/a	NOTE #35
40	4.506.1	Bathroom exhaust fans	n/a	NOTE #36
41	4.507.2	Heating and air-conditioning systems design	n/a	NOTE #36


VOC AND FORMALDEHYDE LIMITS

FORM GRN 11

2020 Los Angeles Green Building Code

(Incorporate this form into the plans)


PLUMBING FIXTURE FLOW RATES

FORM GRN 16

Residential Occupancies

2020 Los Angeles Green Building Code

(Incorporate this form into the plans)

SECTION 4.303.1

WATER REDUCTION FIXTURE FLOW RATES

FIXTURE TYPE	MAXIMUM ALLOWABLE FLOW RATE
Showerheads	1.8 gpm @ 80 psi
Lavatory faucets, residential	1.2 gpm @ 60 psi [1,2]
Lavatory faucets, nonresidential	0.4 gpm @ 60 psi [1,2]
Kitchen faucets	1.5 gpm @ 60 psi [1,2]
Metering Faucets	0.2 gallons/cycle
Gravity tank type water closets	1.28 gallons/flush [3]
Flushometer tank water closets	1.28 gallons/flush [3]
Flushometer valve water closets	1.28 gallons/flush [3]
Urinals	0.125 gallons/flush
Clothes Washers	ENERGY-STAR certified
Dishwashers	ENERGY-STAR certified

[1] Lavatory Faucets shall not have a flow rate less than 0.8 gpm at 20 psi.
[2] Kitchen faucets may temporarily increase flow above the maximum rate, but not above 2.2 gpm @ 60psi and must default to a maximum flow rate of 1.8 gpm @ 60psi.
[3] Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.
[4] Kitchen faucets with a maximum 1.5 gpm flow rate may be installed in buildings that have water closets with a maximum flush rate of 1.06 gallon/flush installed throughout.
[5] Includes single and dual flush water closets with an effective flush of 1.28 gallons or less.
Single Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.2/3.2
Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes shall be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

Rev. 10/10/2020 Page 1 of 1 www.ladbs.org

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EXP. 2-28-2022
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REVISIONS:

NO.	DATE
1	

PROJECT

SINGLE FAMILY RESIDENCE

2849 N. ADKINS AVE
LOS ANGELES, CA
90032

SHEET TITLE:

RESIDENTIAL GREEN BUILDING STANDARDS CODE

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:

SHEET

A-0.2

OF SHEET

LA DBS
DEPARTMENT OF BUILDING AND SAFETY

SUPPLEMENTAL PLAN CHECK CORRECTION SHEET FOR SECURITY REQUIREMENTS
(2020 LABC)

Plan Check #: B20LA11048 Permit Application Number: 20014-10000-02121

Job Address: 2849 N. ADKINS AVE., LOS ANGLES, CA 90032

Plan Check Engineer: CRYSTEL MALOUF Phone: (213)675-4473

E-mail: thebeane.osemame@ladbs.org

Your feedback is important, please visit our website to complete a Customer Survey at www.ladbs.org/LADBSWebsitecustomer-survey.pdf

This is a supplemental correction sheet. Please see the master correction sheet for instructions and additional information.

If you have any questions or need clarification on any plan check matters, please contact your plan check engineer and/or his or her supervisor.

Italicized numbers refer to Code Sections of the 2020 Los Angeles Building Code.

PART I: GENERAL SECURITY REQUIREMENTS

1. All entry doors to dwelling units or guest rooms shall be arranged so that the occupant has a view of the area immediately outside the door without opening the door. Such view may be provided by a door viewer, through windows located in the vicinity of the door or through view ports in the door or adjoining wall. 8708
2. Screens, barricades, or fences made of a material which would preclude human climbing shall be provided at every portion of every roof, balcony, or similar surface which is within 6 ft. of the utility pole or access structures. 8707
3. Wood flush-type doors shall be 1 3/8" thick minimum with solid core construction. Door stops of in-swinging doors shall be of one-piece construction with the jamb, or joined by rabbet to the jamb. 8709.1, 8709.4
4. Every door in a security opening for an apartment house shall be provided with incandescent light bulb (BE) wall mtd., at a maximum height of 8 feet on the exterior side of the unit. 8709
5. All pin-type door hinges accessible from outside shall have non-removable hinge pins. Hinges shall have min. 1/4" dia. steel pamb shall with 1/4" min. projection. The strike plate for latches and holding device for projecting dead bolts in wood construction shall be secured to the jamb and the wall framing with screws no less than 2-1/2" long. 8709.3, 8709.7
6. Provide dead bolts with hardened inserts, deadlocking latch with key-operated bolts on exterior. Doors must be operable from the inside without a key, special knowledge, or special effort (latch not required in B, F, M and S occupancies). 8709.2
7. Straight dead bolts shall have a min. throw of 1" and an embodiment of not less than 5/8", and a hook-shaped or an expanding lug deadbolt shall have a minimum throw of 3/4". 8709.2
8. Wood panel type doors must have panels at least 9/16 inch thick with shaped portions of the panels not less than 1/4 inch thick, and individual panels must be no more than 300 sq. in. in area. Mullions shall be considered a part of adjacent panels except mullions not over 18 inches long may have an overall width of not less than 2 inches. Stiles and rails shall be of solid lumber in thickness with overall dimensions of not less than 1 3/8 inches and 3 inches in width. 8708.1 Item 2
9. Sliding glass doors shall be provided with a device in the upper channel of the moving panel to prohibit raising and removal of the moving panel from the track while in the closed position. 8712
10. Sliding glass doors shall be equipped with locking devices and shall be so constructed and installed that they remain intact and engaged when subjected to the tests specified in Sec. 8717.1
11. Metal or wooden overhead and sliding doors shall be secured with a cylinder bolt, padlock with a min. 9/32" diameter hardened steel shackle bolted, hardened steel hasps, metal slide board, bolt or equivalent device unless secured electronically operated. 8711
12. Provide metal guides at top and bottom of metal accordion grate or gate-type doors and cylinder locks or padlocks. Cylinder guards shall be installed on all cylinder locks whenever the cylinder projects beyond the face of the door or is otherwise accessible to gripping tools. 8712
13. In Group B, F, M, and S occupancies, panes of glazing with at least one dimension greater than 6 in. but less than 48 in., shall be constructed of tempered or approved burglary-resistant material or protected with metal bars or grilles. 8714
14. Glazed openings within 40" of the door lock when the door is in the closed and locked position, shall be fully tempered glass or approved burglary-resistant material, or shall be protected by metal bars, screens or grilles having a maximum opening of 2". The provisions of this section shall not apply to view ports or windows which do not exceed 2" in their greatest dimensions. 8713
15. Louvered windows shall be protected by metal bars or grilles with openings that have at least one dimension of 6" or less when are constructed to provide human entry. 8715.3
16. Other operable windows shall be provided with substantial locking devices. In Group B, F, M and S occupancies, such devices shall be glide bars, bolts, cross-bars, and/or padlocks with maximum 9/32" hardened steel shackles and bolted, hardened steel hasps. 8715.2
17. Sliding windows shall be provided with locking device in the upper channel of the moving panel to prohibit raising and removal of the moving panel in the closed or partially open position. 8715.1
18. Sliding windows shall be equipped with locking devices and shall be so constructed and installed that they remain intact and engaged when subjected to the tests specified in Sec. 8717.2
19. Any release for metal bars, grilles, grates or similar devices constructed to preclude human entry that are installed shall be located on the inside of the adjacent room and at least 24 inches from the closest opening through such metal bars, grilles, grates or similar devices that exceeds two inches in any dimension. 8715.4
20. All other openings must be protected by metal bars or grilles with openings of not less than 6 inches in one dimension. 8716

ADDITIONAL CORRECTIONS:

LA DBS
DEPARTMENT OF BUILDING AND SAFETY

LANDSCAPE CERTIFICATION
2020 Los Angeles Green Building Code
(This form is required at final inspection)

FORM GRN 12

LANDSCAPING

Section A: Landscape Designer

a. I certify that I am qualified by the State of California to perform landscape design services; the landscape design and water use calculations for this project were prepared by me or under my supervision; the landscape design and water use calculations comply with the requirements of the Model Water Efficient Landscape Ordinance; and the Landscape Documentation Package is complete; **OR**

b. Interior T.I., no landscape work performed **(do not complete sections B or C below); OR**

c. This project is not subject to the Model Water Efficient Landscape Ordinance **(do not complete sections B or C below).**

Name: Chaisseng Perng Relationship to Project: Landscape Architect

Company Name (if applicable): Tino Trees Design, Inc. State License # (if applicable): 5840

Signature: C. Perng Date: 12-23-2020

Section B: Landscape Installer

a. I certify that (a) I am qualified by the State of California to provide landscape design services; the landscape project for this project was installed by me or under my supervision; (b) the landscaping for the identified property has been installed in substantial conformance with the approved Landscape Documentation Package and complies with the requirements of the Model Water Efficient Landscape Ordinance; (c) a diagram of the irrigation plan showing hydrozones is kept with the irrigation controllers; (d) the Certificate of Completion has been completed in compliance with the requirements of the Model Water Efficient Landscape Ordinance and shall be implemented.

Name: _____ Relation to Project: _____

Company Name (if applicable): _____ State License # (if applicable): _____

Signature: _____ Date: _____

Section C: Owner/Representative

a. I certify that I am the property owner or an authorized representative and have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is my responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule.

Signature: _____ Date: _____

Qualified irrigation service provider: *The following individuals are authorized to provide services required by the Irrigation Guidelines in the State of California: Landscape Architects, Landscape Contractors, Landscape Designers and Irrigation Consultants. Personal property owners may design and sign plans for work on any property they own. (Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5642.1, 5641.4, 5641.5, 5641.6, 8700 - 7027.5 of the Business and Professions Code. Section 832.27 of Title 16 of the California Code of Regulations; and Section 6721 of the Food and Agricultural Code.)*

LA DBS
DEPARTMENT OF BUILDING AND SAFETY

STORM WATER POLLUTION CONTROL
(2020 Los Angeles Green Building Code)

FORM GRN 1

Storm Water Pollution Control Requirements for Construction Activities
Minimum Water Quality Protection Requirements for All Construction Projects

The following notes shall be incorporated in the approved set of construction/grading plans and represents the minimum standards of good housekeeping which must be implemented on all construction projects.

Construction means constructing, cleaning, grading or excavation that result in soil disturbance. Construction includes structure teardown (demolition). It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, emergency construction activities required to immediately protect public health and safety, interior remodeling with no outside exposure of construction material or construction waste to storm water, mechanical permit work, or sign permit work. (Order No. 01-182, NPDES Permit No. CA0064031 – Part 5 Definitions)

1. Eroded sediments and pollutants shall be retained on site and shall not be transported from the site via sheet flow, swales, area drains, natural drainage or wind.
2. Stockpiles of earth and other construction-related materials shall be covered and be protected from being transported from the site by wind or water.
3. Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and shall not contaminate the soil or the surface waters. All approved toxic storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of properly and shall not be washed into the drainage system.
4. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained on the project site.
5. Excess or waste concrete may not be washed into the public way or any drainage system. Provision must shall be made to retain concrete waste on-site until it can be appropriately disposed of or recycled.
6. Trash and construction-related solid wastes must be deposited into a covered receptacle to prevent contamination of storm water and dispersal by wind.
7. Sediments and other materials shall not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the streets/public ways. Accidental depositions must be swept up immediately and may not be washed down by rain or by any other means.
8. Retention basins of sufficient size shall be provided to retain storm water runoff on-site and shall be properly designed to collect all tributary site runoff.
9. Where retention of storm water runoff on-site is not feasible due to site constraints, runoff may be conveyed to the street and the storm drain system provided that an approved filtering system is installed and maintained on-site during the construction duration.

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EXP. 2-28-2022
CHRISTOPHER LOH

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REVISIONS:

NO.	DATE
1	

PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE
LOS ANGELES, CA 90032

SHEET TITLE:
RESIDENTIAL GREEN BUILDING STANDARDS CODE

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-0.2A
OF SHEET

ICC-ES Evaluation Report

ESR-2201

Reissued July 2020
Revised December 2020
This report is subject to renewal July 2022.

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 18 13—Pedestrian Traffic Coatings

REPORT HOLDER:

WESTCOAT

EVALUATION SUBJECT:

WESTCOAT ALX STANDARD, ALX CUSTOM, ALX PRO STANDARD, AND ALX PRO CUSTOM SYSTEMS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code®* (IBC)
- 2021, 2018, 2015, 2012, 2009 and 2006 *International Residential Code®* (IRC)
- 2013 *Los Angeles International Building Code (LADBC)*[1]

[1]The LADBC is based on the 2009 IBC, 2006 IBC with sections referenced in this report as the same sections in the LADBC.

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see ESR-2201 LABC and LARC Supplement.

Properties evaluated:

- Durability
- Wind resistance
- Fire classification
- Fire resistance

2.0 USES

Westcoat ALX Standard, ALX Custom, ALX Pro Standard and ALX Pro Custom Systems are cementitious coating systems for use as walking deck and classified roof covering systems over plywood substrates. The systems, as described in Section 4.4 of this report, provide a Class A roof covering fire classification. The systems, as described in Section 4.5 of this report, are used as a component of a one-hour fire-resistance-rated assembly.

3.0 DESCRIPTION

3.1 General:

The ALX Standard, ALX Custom, ALX Pro Standard, and ALX Pro Custom Systems are cementitious coating systems applied over plywood. The ALX Standard and ALX Pro Standard Systems consist of the materials described in Section 4.0 and the ALX Custom and ALX Pro Custom Systems consist of the material described in Section 4.0.

3.2 Materials:

3.2.1 Plywood Substrate: Plywood substrates must be exterior grade, ½-inch-thick (15.9 mm) plywood complying with U.S. DOC PS-1 or PS-2.

3.2.2 Metal Lath: The metal lath must be 2.5 lb/yd² (1.36 kg/m²), hot-dipped galvanized, expanded metal lath, complying with ASTM C847. The threaded pan number is WP-25 Metal Lath.

3.2.3 Staples: Staples must be corrosion-resistant, minimum No. 19 gauge staples with 1-inch-wide (25 mm) crowns and ¾-inch-long (19.9 mm) legs, complying with ASTM F1667. The threaded pan number is WP-19 Staples.

3.2.4 WP-40 Sheet Membrane: The WP-40 Sheet Membrane is a self-adhering, nominally 40-mil-thick (0.04 inch (1.02 mm)) membrane recognized in ESR-2585.

3.2.5 WP-47H Fiberlath (For use with ALX Pro Standard and ALX Pro Custom Systems only): WP-47H Fiberlath is a glass fiber lath reinforcing mesh with 0.4 yarn/inch warp and, 6 yarn /inch weft, four/ time weave with a nominal 2.0/19-inch thickness (0.46 mm) and a nominal weight of 9.8 ounces/square yard (195 g/m2). The product comes in rolls measuring 36 inches (685 mm) wide by 150 feet (45.7 m) in length.

3.2.6 WP-91 Cement Modifier: The WP-91 Cement Modifier is a liquid admixture that is used with TC-1 Basecoat Cement, TC-2 Smooth Texture Cement, TC-3 Medium Texture Cement, and TC-5 Grout Texture Cement. Shelf life is two years when stored at temperatures between 40°F and 100°F (4.4°C and 37.8°C) and in a dry place.

3.2.7 WP-95 Waterproofing Resin (For use with ALX Pro Standard and ALX Pro Custom Systems only): The WP-90 Waterproofing Resin is a blend of acrylic resins that are formulated to be used as an admixture with TC-1 Basecoat Cement. Shelf life is two years when stored at temperatures between 40°F and 100°F (4.4°C and 37.8°C) in a dry place.

3.2.8 TC-1 Basecoat Cement: The TC-1 Basecoat Cement is a proprietary dry-blend mixture including portland cement and silica sand. The product is packaged in 50-pound (22.5 kg) bags. Shelf life is one year when stored in dry conditions.

3.2.9 TC-2 Smooth Texture Cement: The TC-2 Smooth Texture Cement is a proprietary dry-blend mixture including portland cement and silica sand. The product is packaged in 50-pound (22.5 kg) bags. Shelf life is one year when stored in dry conditions.

4.3 ALX Custom and ALX Pro Custom Systems (Following Installation in accordance with Section 4.5):

4.3.1 Grout Coat: The grout coat mixture consists of one 50-pound (22.5 kg) bag of TC-5 Grout Texture Cement combined with 1 gallon (3.78 L) of WP-91, and up to ½ gallon (1.89 L) of water, then mixed until uniform consistency is achieved. The mixture results in a 4.5-gallon (3.78 L) batch. The grout coat mixture must be applied onto the slurry coat at a rate of 150 to 200 square feet (13.9 to 18.6 m²) per 4.5-gallon (17.0 L) batch. The minimum dry thickness of the grout coat must be 0.047 inch (1.2 mm). Prior to application of the texture coat, the grout coat must be smoothed with a trowel and allowed to cure until firm.

4.3.2 Texture Coat: The texture coat mixture consists of one bag of TC-3 Smooth Texture Cement combined with 1 gallon (3.78 L) of WP-91 Cement Modifier and up to ½ gallon (1.89 L) of water mixed until uniform consistency is achieved. Up to 4 ounces (0.118 L) of TC-40 Liquid Colorant may be added and mixed until color is uniform. The mixture results in a 4.5-gallon (17.0 L) batch. The color coat mixture must be applied onto the grout coat at a rate of 150 to 200 square feet (13.9 to 18.6 m²) per 4.5- gallon (17.0 L) batch. The minimum dry thickness of the texture coat must be 0.047 inch (1.2 mm). Prior to the application of the stain, the texture coat must be smoothed with a trowel and allowed to cure until firm.

4.3.3 Stain: SC-35 Water-Based Stain must be applied over the texture coat with a sprayer, brush, or broom at a coverage rate of 200 to 400 square feet (18.6 to 37.2 m²) per gallon (3.78 L). The SC-35 Water-Based Stain must be allowed to completely dry before application of the next coat.

4.3.4 Sealer: The top coat consists of SC-70 Acrylic Lacquer Sealer that must be applied over the stain with a sprayer. Coverage rate is 400 to 600 square feet (37.2 to 55.7 m²) per gallon (3.78 L). The top coat must be allowed to cure overnight.

4.4 Class A Roof Covering over Plywood Deck:

When the Westcoat ALX Standard, ALX Custom, ALX Pro Standard, and ALX Pro Custom Systems are applied over a minimum ⅝-inch-thick (15.9 mm) plywood substrate with all edges blocked and installed in accordance with Section 4.0 at a maximum roof slope of ¼ inch per 1 foot (2% slope), the system provides a Class A roof classification.

4.5 One-hour Fire-resistance-rated Construction:

4.5.1 ALX Standard and ALX Custom Systems: When the Westcoat ALX Standard and ALX Custom systems are installed in accordance to Section 4.0 over ⅝-inch-thick (15.9 mm) exterior-grade plywood complying with PS-1, with nominally 2-by-6 wood joists spaced at a maximum of 16 inches (406 mm) on center, and all plywood joists blocked, the assembly can be recognized as an alternative for the double wood floor described in item 13 of Table 721.1(3) of the 2018 IBC and 2012 IBC (Table 720.1(3) of the 2009 and 2006 IBC). The design bending stress must be limited to 75 percent of the code prescribed design values for the wood joist.

4.5.2 ALX Pro Standard and ALX Pro Custom Systems: When the Westcoat ALX Pro Standard and ALX Pro Custom Systems are installed in accordance to Section 4.0 over ⅝-inch-thick (15.9 mm) exterior-grade plywood complying with PS-1, with nominally 2-by-12 wood joists spaced at a maximum of 19 inches (406 mm) on center, and all plywood joists blocked, the assembly can be recognized as an alternative for the double wood floor described in item 13.1.4 of Table 721.1(3) of 2018 IBC and 2012 IBC (Table 720.1(3) of the 2009 and 2006 IBC), except that the ⅝-inch-thick Type X gypsum wallboard must be replaced with ⅝-inch-thick Type X gypsum wallboard. The design bending stress must be limited to 75 percent of the code prescribed design values for the wood joist.

4.6 Wind Resistance:

Installation must be limited to buildings with a maximum height of 40 feet (12.2 m) above grade in Exposure B areas, with (either a basic wind speed of 130 mph (209 km/hr) under the 2021 IBC and 2018 IBC an ultimate design wind speed of 130 mph (209 km/hr) under the 2021 IRC, 2018 IRC, 2015 IBC, 2015 IRC, and 2012 IBC or a maximum 3-second-gust basic wind speed of 100 miles per hour (161 km/h) under the 2009 and 2006 IBC and the 2012, 2009 and 2006 IRC. The plywood and its attachment to support framing must be adequate to resist the required wind load.

4.7 Method of Repair:

The damaged area must be completely removed, including the base coat and lath. New metal lath must be stapled to the clean, dry substrate, and the system reapplied as described in Sections 4.1 through 4.6 of this report. If substrate damage occurs, the retention of the strength properties of the system must be investigated.

5.0 CONDITIONS OF USE

The Westcoat ALX Standard, ALX Custom, ALX Pro Standard and ALX Pro Custom Systems described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Materials must be manufactured and applied in accordance with this report, the applicable code, and the manufacturer's published installation instructions. In the event of conflict between this report and the manufacturer's installation instructions, this report governs.

5.2 The WP-91 Cement Modifier, WP-90 Cement Modifier, WP-47H Fiberlath, TC-1 Basecoat Cement, TC-2 Smooth Texture Cement, TC-3 Medium Texture Cement, TC-5 Grout Texture Cement, SC-10 Acrylic Topcoat, SC-35 Water-Based Stain, TC-40 Liquid Colorant and SC-70 Acrylic Lacquer Sealer products are produced under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Walking Decks (AC98), dated June 2017 (Editorially revised November 2020).

7.0 IDENTIFICATION

7.1 The WP-91 Cement Modifier, WP-90 Cement Modifier, WP-47H Fiberlath, TC-1 Basecoat Cement, TC-2 Smooth Texture Cement, TC-3 Medium Texture Cement, TC-5 Grout Texture Cement, SC-10 Acrylic Topcoat, SC-35 Water-Based Stain, TC-40 Liquid Colorant and SC-70 Acrylic Lacquer Sealer products must be labeled with the Westcoat name and address, the date of manufacture, the shelf life, and the lot number or production number. In addition to the above, the products are labeled with the ICC-ES report number (ESR-2201).

7.2 The report holder's contact information is the following:

WESTCOAT
4007 LOCKRIDGE STREET
SAN DIEGO, CALIFORNIA 92103
(800) 280-4616
www.westcoat.com

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packaged in 50-pound (22.5 kg) bags. Shelf life is one year when stored in dry conditions.

3.2.10 TC-3 Medium Texture Cement: The TC-3 Medium Texture Cement is a proprietary dry-blend mixture including portland cement and silica sand. The product is packaged in 50-pound (22.5 kg) bags. Shelf life is one year when stored in dry conditions.

3.2.11 TC-5 Grout Texture Cement: The TC-5 Grout Texture Cement is a proprietary dry-blend mixture including portland cement and silica sand. The product is packaged in 50-pound (22.5 kg) bags. Shelf life is one year when stored in dry conditions.

3.2.12 SC-10 Acrylic Topcoat: The SC-10 Acrylic Topcoat is a proprietary, water-based liquid sealant used as the topcoat of the Westcoat ALX system. This product is packaged in 1- or 5-gallon pails (3.78 or 18.9 L). Shelf life is two years when stored at temperatures between 40°F and 100°F (4.4°C and 37.8°C) and in a dry place.

3.2.13 SC-35 Water-Based Stain: The SC-35 Water-Based Stain is a proprietary blend of water-based acrylic and pigments, used to stain the TC-2 Smooth Texture Cement. The product is packaged in 1- or 5-gallon pails (3.78 or 18.9 L). Shelf life is three years when stored in dry conditions.

3.2.14 TC-40 Liquid Colorant: TC-40 Liquid Colorant is a proprietary iron oxide slurry formulated with high pigment levels used in the ALX Custom system to integrally color the TC-2 Smooth Texture Cement. The product is packaged in 16-ounce bottles. The shelf life is one year when stored at temperatures between 40°F and 100°F (4.4°C and 37.8°C) in a dry place.

3.2.15 SC-75 Acrylic Lacquer Sealer: The SC75 Acrylic Lacquer is a proprietary acrylic lacquer sealant. The product is packaged in 1- or 5-gallon pails (3.78 or 18.9 L). The shelf life is five years when stored at temperatures between 40°F and 100°F (4.4°C and 37.8°C) in a dry place.

4.0 INSTALLATION

4.1 General:

Installation of the Westcoat ALX Standard, ALX Custom, ALX Pro Standard and ALX Pro Custom Systems must be in accordance with the manufacturer's published installation instructions, the applicable code and this report. The manufacturer's installation instructions must be available on the jobsite during application. The system must be installed only when the ambient temperature is between 50°F and 90°F (10°C and 32°C). Materials must not be applied if precipitation is occurring or expected.

4.1.1 Preparation of Plywood Substrate: Plywood must be clean, dry, and free from dirt or foreign materials that may prevent adhesion of the base coat, and must be installed in framing in accordance with the requirements of the applicable code at a maximum framing spacing of 16 inches (406 mm) on center. All plywood edges must be blocked with nominally 2-by-4 wood members, or panel edges must be tongued and grooved. All through-penetrations and terminations of the sheathing must be protected with metal flashing in accordance with the applicable code. Adequate drainage must be provided in accordance with the applicable code.

4.1.2 WP-40 Sheet Membrane: The WP-40 Sheet Membrane must be applied over all plywood joints in 9-inch-wide (152 mm) strips or may be applied over the entire plywood deck with the sheet membrane roll measuring 36 inches by 75 feet (914.4 mm by 22.8 m).

4.1.3 Metal Lath: The metal lath, as described in Section 3.2.2, must be installed with lath edges parallel to plywood substrate joints and offset from the substrate joints by a minimum of 2 inches (51 mm). The lath must be hand back ½ inch (12.7 mm) from all deck edges and stapled to the plywood substrate with no less than 18 staples per square foot (174 staples per square meter). Lath must be lapped 1 to 2 inches (25 to 51 mm) at seams and stapled to the plywood substrate every 1 to 3 inches (25.4 to 50.8 mm).

4.1.4 Base Coat: The base coat mixture consists of one 50-pound (22.5 kg) bag of TC-1 Basecoat Cement combined with 1½ gallons (4.73 L) of WP-91 Cement Modifier and up to 1 quart of water (946.4 mL), then mixed until uniform consistency is achieved. The mixture results in a 4.5-gallon (17 L) batch. The base coat mixture must be applied onto the lath at a rate of 40 square feet (3.7 square meters) per 4.5-gallon (17 L) batch. The minimum dry thickness of the base coat must be 0.142 inch (3.6 mm). Prior to the application of the slurry coat, the base coat must be smoothed with a trowel and allowed to cure until firm.

4.1.5 ALX Pro Standard and ALX Pro Custom Systems (Optional): To upgrade from the ALX Standard or ALX Custom System to the ALX Pro Standard or ALX Pro Custom System, lay out WP-47H Fiberlath reinforcing mesh on the dried Base Coat (applied as specified in Section 4.1.4 of this report), overlapping the seams approximately 2 inches (51 mm). Combine one bag of TC-1 Basecoat Cement with 5 gallons of WP-90 Waterproofing Resin. Mix with a mechanical mixer until uniform. Pour the mixture onto the WP-47H Fiberlath, trowel thin and smooth at an approximate coverage rate of 225 to 250 square feet (20.9 to 23.2 m²) per batch. Use a paintbrush to spread the base coat on the flashing, making sure to get the mixture into the seams and corners. Using a brush, wet with water and feather all outside edges. Allow surface to dry for 1-4 hours at 70°F (21.1°C). Scrape off any high spots or ridges that may inhibit application of a smooth texture coat. Trim any mesh that is showing, on perimeters after the material has hardened.

4.1.6 Slurry Coat:

The slurry coat mixture consists of one bag of TC-1 Basecoat Cement, 1 gallon (3.78 L) of WP-91 Cement Modifier, and up to ½ gallon (1.89 L) of water, mixed until uniform consistency is achieved. The slurry coat mixture must be applied onto the cured base coat at a rate of 100 to 150 square feet (9.3 to 13.9 m²) per 4.5-gallon (17.0 L) batch, to result in a minimum dry thickness of the slurry coat of 0.063 inch (1.60 mm). The slurry coat must be smoothed with a trowel and allowed to cure until firm.

4.2 ALX Standard and ALX Pro Standard Systems (Following Installation in accordance with Section 4.1):

4.2.1 Texture Coat: The texture coat mixture consists of one bag of TC-3 Medium Texture Cement, 1 gallon (3.78L) of WP-91 Cement Modifier and up to ½ gallon (1.89 L) of water, mixed until uniform consistency is achieved. The texture coat must be applied with a trowel gun onto the slurry coat at a rate of 150 to 200 square feet (13.9 to 18.6 m²) per batch, to result in a minimum dry thickness of 0.047 inch (1.2 mm). The texture coat must be leveled with a trowel and allowed to cure until firm.

4.2.2 Top Coat: The SC-10 Acrylic Topcoat must be applied over the cured texture coat with a roller in one to two applications, for a total coverage rate of 125 square feet per gallon (3.04 m²/L), to a minimum thickness of 6 mils (0.152 mm). The coating must be allowed to cure until dry.

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ICC-ES Evaluation Report

ESR-2201 LABC and LARC Supplement

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Revised December 2020
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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 18 13—Pedestrian Traffic Coatings

REPORT HOLDER:

WESTCOAT

EVALUATION SUBJECT:

WESTCOAT ALX STANDARD, ALX CUSTOM, ALX PRO STANDARD, AND ALX PRO CUSTOM SYSTEMS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Westcoat ALX Standard, ALX Custom, ALX Pro Standard, and ALX Pro Custom Systems, described in ICC-ES evaluation report ESR-2201, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2020 *City of Los Angeles Building Code* (LABC)
- 2020 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Westcoat ALX Standard, ALX Custom, ALX Pro Standard, and ALX Pro Custom Systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-2201, comply with the LABC and the LARC, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Westcoat ALX Standard, ALX Custom, ALX Pro Standard, and ALX Pro Custom Systems described in this evaluation report must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-2201.
- The design, installation, conditions of use and identification of the Westcoat ALX Standard, ALX Custom, ALX Pro Standard, and ALX Pro Custom Systems walking deck and roof covering are in accordance with the 2018 *International Building Code®* (IBC) provisions noted in the evaluation report ESR-2201.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- The installation of Westcoat ALX Standard, ALX Custom, ALX Pro Standard, and ALX Pro Custom Systems must comply with the City of Los Angeles Information Bulletin P/BC 2020-16, "Dwellings in High Wind Velocity Areas (HWA)."

This supplement expires concurrently with the evaluation report, reissued July 2020 and revised December 2020.

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ICC-ES Evaluation Report

ESR-2201 CBC and CRC Supplement

Issued December 2020
This report is subject to renewal July 2022.

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 18 13—Pedestrian Traffic Coatings

REPORT HOLDER:

WESTCOAT

EVALUATION SUBJECT:

WESTCOAT ALX STANDARD, ALX CUSTOM, ALX PRO STANDARD, AND ALX PRO CUSTOM SYSTEMS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Westcoat ALX Standard, ALX Custom, ALX Pro Standard and ALX Pro Custom Systems, recognized in ICC-ES evaluation report ESR-2201, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below:

- 2019 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Westcoat ALX Standard, ALX Custom, ALX Pro Standard and ALX Pro Custom Systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-2201, comply with CBC Chapter 16, provided the design and installation are in accordance with the 2018 *International Building Code®* (IBC) provisions noted in the evaluation report and the additional requirements of Chapters 16, 16 and 17, as applicable.

2.1.1 OSHPD: The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Westcoat ALX Standard, ALX Custom, ALX Pro Standard and ALX Pro Custom Systems described in Sections 2.0 through 7.0 of the evaluation report ESR-2201, complies with CRC Chapter 9, provided the design and installation are in accordance with the 2018 *International Residential Code®* (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 9, as applicable.

This supplement expires concurrently with the evaluation report, reissued July 2020 and revised December 2020.

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REVISIONS:

NO.	DATE
⚠	

PROJECT

SINGLE FAMILY RESIDENCE

2849 N. ADKINS AVE.
LOS ANGELES, CA 90032

SHEET TITLE:

DECK /BALCONY WATERPROOFING SPECIFICATION

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET

A-0.3

OF SHEET

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1-800-498-1411 CONTACT A REP

Fusion UV Waterproofing Membrane



A building's waterproofing membrane is the final line of defense between the destructive power of water and the vulnerable material of its foundation. When the integrity of an entire structure depends on a dry foundation, investing in a high-quality waterproofing membrane is a wise

choice. FUSION UV Waterproofing Membrane, Mar-flex's top-of-the-line residential waterproofing product, sets the global standard for strength and dependability. Mar-flex is so confident in the durability and protective power of FUS ON UV that we offer a 20-year warranty on the product, even when it is not paired with a drainage board. When FUSION UV is installed as part of an approved drainage system, Mar-flex guarantees its integrity with a limited lifetime warranty.

Advantages:

- Combines UV protection and waterproofing into one product
- Resists water absorption
- Protects foundation waterproofing
- Easy to handle
- Easy to install
- Can be used in any geographical area
- LEED Certification

FUSION UV Waterproofing Membrane is so powerful because it is made of 100% virgin polymer, meaning the waterproof polymer in FUSION UV has never been used in another product. Virgin polymer improves FUSION UV's performance and product consistency when compared to membranes made of recycled polymer. This premium membrane resists acid rain, salt spray, freeze-thaw cycles and all types of weathering. What makes FUSION UV unique, however, is its resistance to ultraviolet radiation and lasting color stability.

Fusion UV Ultraviolet Radiation Resistant Waterproofing Membrane, unlike other waterproofing membranes, FUSION UV can be applied above-grade as well as below grade, lending durable waterproofing and UV resistance to an entire structure.

Remember, although FUSION UV is a waterproofing membrane of incredible strength, it is still more effective as a component of a waterproofing system. Pairing FUSION UV with an approved Mar-flex drainage board extends the membrane's warranty from 20 years to "limited lifetime." Use the chart below to determine your ideal level of protection.

Product Details

Product Details

Product Information

Fusion UV Water Based Available In:

Part# - WWI-02-05 - 5 Gallon Bucket Each or 42/Pallet
Part# - WWI-02-55 - 55 Gallon Drum Each or 4/Pallet

Properties

Total Solids - 59%
Application Method - Spray, brush or roller
Elongation at 70 degrees F - 1800% min
Application Range - 50-130 Degrees F
Weight/Gallon - 8.8 lbs./ 3.99 kg./ Gal
Total Cure Time - 24 hrs.
Tensile Strength - 350 psi min
Coverage Rate - 2.5 gal/100 ft.
Spray and Board - 60 mil dry thickness
Spray Only App. - 40 mil dry thickness

Warranty Details

Related Products

Product Downloads

PROS: IMPROVE YOUR BOTTOM LINE

WITH THE BEST WATERPROOFING PRODUCTS IN THE INDUSTRY

Find Out How

https://news2.bentonsoftware.com/t/r/s/xiuiyk/l/ejfxiw/3903/4E1F4/sv/2A1/l/sitemap (https://mar-flex.com/sitemap/)

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 11 00—Dampproofing
Section: 07 13 00—Sheet Waterproofing
Section: 07 14 00—Fluid-Applied Waterproofing

REPORT HOLDER:

MAR-FLEX WATERPROOFING AND BUILDING PRODUCTS

EVALUATION SUBJECT:

MAR-FLEX 5000™, MAR-FLEX 5000 WB™, QUICK SEAL™ AND QUICK SEAL WB™ LIQUID-APPLIED WATERPROOFING MEMBRANES; AND GEO-MAT AND GEO-MAT PLUS™ DAMPPROOFING AND WALL WATERPROOFING MEMBRANE SYSTEM

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2018, 2015, 2012, 2009 and 2006 International Building Code® (IBC)
- 2018, 2015, 2012, 2009 and 2006 International Residential Code® (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)*

*The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Foundation waterproofing
- Foundation dampproofing

1.2 Evaluation to the following green standards:

2015, 2012 and 2009 ICC 700 National Green Building Standard™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 2.1

2.0 USES

2.1 Mar-flex 5000™, MAR-FLEX 5000 WB™, QuickSeal™ and QuickSeal WB™:

The liquid-applied dampproofing and waterproofing membranes are applied to the exterior of foundation walls of parged concrete masonry units or cast-in-place concrete construction. The membranes are alternates to the dampproofing materials specified in 2018, 2015, 2012 and 2009 IBC Section 1805.2.2, 2006 IBC Section 1807.2.2 and IRC Section R406.1. The membranes are also alternates to the waterproofing specified in 2018, 2015, 2012 and 2009 IBC Section 1805.3.2, 2006 IBC Section 1807.3.2 and IRC R406.2.

The attributes of the liquid-applied waterproofing membranes have been verified as conforming to the provisions of ICC 700-2015 and ICC 700-2012 Section 502.1.2 and ICC 700-2008 Section 602.11 for foundation waterproofing. Note that limitations on compliance for these areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

2.2 Geo-Mat and Geo-Mat Plus™:

The below-grade, exterior wall, sheet membrane systems are used as foundation wall dampproofing materials on cast-in-place concrete, concrete masonry, insulated concrete forms (ICFs) or treated wood foundations. In those jurisdictions adopting the IRC, the membrane systems may be considered as a foundation wall waterproofing material for use in applications of low hydrostatic pressure.

3.0 DESCRIPTION

3.1 Mar-flex 5000™:

Mar-flex 5000™ is a solvent-based, fluid-applied, polymer-modified-asphalt and rubber polymer coating that has a resistance to hydrostatic pressure of 1 psi. (6.7 kPa) over a ½-inch-wide (1.6 mm) crack, when applied in accordance with Section 4.0 and tested in accordance with ASTM D5385. The coating is supplied in 55-gallon (208L) drums and in bulk form. The product has an unlimited shelf life when stored in unopened containers. The manufacturer's recommended storage temperature range is between 40°F and 100°F (4.4°C and 38°C).

3.2 MAR-FLEX 5000 WB™:

Mar-flex 5000™ is a water-based, fluid-applied, polymer-modified-asphalt and rubber polymer coating that has a resistance to hydrostatic pressure of 1 psi. (6.7 kPa) over a ½-inch-wide (1.6 mm) crack, when applied in accordance with Section 4.0 and tested in accordance with ASTM D5385. The coating is supplied in 55-gallon (208 L) drums and in bulk form. The product has a six-month shelf life when stored in unopened containers. The manufacturer's recommended storage temperature range is from 40°F to 100°F (4.4°C to 38°C).

dampleof) or other critical points to create continuous coverage of the wall.

The Geo-Mat membrane must be installed tightly around any foundation penetrations and sealed at the entire intersection between the membrane and the penetration. The membrane must be placed flush to the penetration and the membrane cut vertically, fastening with Geo Clips.

If repairs are needed, a patch piece large enough to overlap the surrounding areas by 6 inches (152 mm) is used. Sealant must be applied around the damaged area and the patch piece installed to interlock with adjacent dimples.

5.0 CONDITIONS OF USE

The Mar-flex 5000™, MAR-FLEX 5000 WB™, QuickSeal™, QuickSeal WB™ exterior foundation waterproofing membranes and the Geo-Mat and Geo-Mat Plus™ membrane system described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.

5.2 Mar-flex 5000™, MAR-FLEX 5000 WB™, Quickseal™ and QuickSeal WB™:

5.2.1 The coatings are limited to applications on the exterior vertical surfaces of below-grade foundation walls.

5.2.2 Joints and penetrations of the walls to which the coatings are to be applied must be made watertight in accordance with the requirements of the applicable code.

5.2.3 This report is limited to an evaluation of the coatings applied to the thicknesses stated in Section 4.0.

5.2.4 Application of the coatings on unsound ("green") concrete is outside the scope of this report.

5.2.5 When used in in dampproofing applications, a subsurface soil investigation of the level of ground water at the construction site must be performed to verify the nonexistence of hydrostatic pressure.

5.3 Geo-Mat and Geo-Mat Plus™:

5.3.1 The backfill of the foundation must be clean soil free of rocks or any other deleterious materials and placed (for jurisdictions adopting the IBC, the backfill must be placed in lifts and compacted) so as not to damage the foundation of the membrane system. The design and construction of the foundation is outside the scope of this report. For jurisdictions adopting the IRC, local backfilling requirements must be followed. Caution must be taken so as not to damage the foundation of the membrane system.

5.3.2 Geo-Mat and Geo-Mat Plus™ membranes must be backfilled within 10 days of installation to protect the membrane from prolonged exposure to UV rays from sunlight.

5.3.3 Geo-Mat and Geo-Mat Plus™ may be used as dampproofing under the IBC. Use of the membrane under the IBC as waterproofing is outside the scope of this report.

5.3.4 Geo-Mat and Geo-Mat Plus™ may be used as dampproofing and wall waterproofing under the IRC.

5.3.5 The design and installation of the foundation drainage system is outside the scope of this report. The foundation drainage system must be installed in accordance with 2018, 2015, 2012 and 2009 IBC Section 1805.4 (2006 IBC Section 1807.4) or IRC Section R405, as applicable.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Cold, Liquid-applied, Below-grade, Exterior Dampproofing and Waterproofing Materials (AC288), dated June 2011 (editorially revised March 2015).

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Rigid, Polyurethane, Below-grade, Dampproofing and Wall Waterproofing Material (AC10), dated March 2012 (editorially revised April 2018).

7.0 IDENTIFICATION

7.1 Containers of the liquid-applied membranes as described in this report must be identified by a label bearing the manufacturer's name (Mar-Flex Waterproofing & Building Products) and address, the product name (Mar-flex 5000™, MAR-FLEX 5000 WB™, QuickSeal™, QuickSeal WB™, Geo-Mat or Geo-Mat Plus™) and the evaluation report number (ESR-3062).

7.2 The report holder's contact information is the following:

MAR-FLEX WATERPROOFING AND BUILDING PRODUCTS
550 BUSINESS PARKWAY
CARLISLE, OHIO 45005
(513) 422-7355
www.mar-flex.com
info@mar-flex.com

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 11 00—Dampproofing
Section: 07 13 00—Sheet Waterproofing
Section: 07 14 00—Fluid-Applied Waterproofing

REPORT HOLDER:

MAR-FLEX WATERPROOFING AND BUILDING PRODUCTS

EVALUATION SUBJECT:

MAR-FLEX 5000™, MAR-FLEX 5000 WB™, QUICK SEAL™ AND QUICK SEAL WB™ LIQUID-APPLIED WATERPROOFING MEMBRANES; AND GEO-MAT AND GEO-MAT PLUS™ DAMPPROOFING AND WALL WATERPROOFING MEMBRANE SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Mar-flex 5000™, Mar-flex 5000 WB™, Quick Seal™, Quick Seal WB™ Liquid-applied Waterproofing Membranes; and Geo-Mat and Geo-Mat plus™ Dampproofing and Wall Waterproofing Membrane System, described in ICC-ES evaluation report ESR-3062, have also been evaluated for compliance with the codes noted below:

Applicable code edition(s):

- 2018 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 3.1.1 and 3.1.2 below.

- 2018 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Mar-flex 5000™, Mar-flex 5000 WB™, Quick Seal™, Quick Seal WB™ Liquid-applied Waterproofing Membranes; and Geo-Mat and Geo-Mat plus™ Dampproofing and Wall Waterproofing Membrane System, described in Sections 2.0 through 7.0 of the evaluation report ESR-3062, comply with CBC Chapter 18, provided the design and installation are in accordance with the 2018 *International Building Code®* (IBC), as applicable provisions noted in the evaluation report and the additional requirements of the CBC Chapter 18, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Mar-flex 5000™, Mar-flex 5000 WB™, Quick Seal™, Quick Seal WB™ Liquid-applied Waterproofing Membranes; and Geo-Mat and Geo-Mat plus™ Dampproofing and Wall Waterproofing Membrane System, described in Sections 2.0 through 7.0 of the evaluation report ESR-3062, comply with CRC Chapter 4, provided the design and installation are in accordance with the 2018 *International Residential Code®* (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued October 2020.

2.3 Quick Seal™:

Quick Seal™ is a solvent-based, fluid-applied, one-coat polymer-asphalt coating that has a resistance to hydrostatic pressure of 2 psi (13.8 kPa) over a ½-inch-wide (1.6 mm) crack when applied in accordance with Section 4.0 and tested in accordance with ASTM D5385. The coating is supplied in 55-gallon (208L) drums and in bulk form. The product has an unlimited shelf life when stored in unopened containers. The manufacturer's recommended storage temperature range is between 40°F and 100°F (4.4°C and 38°C).

2.4 QUICK SEAL WB™:

Quick Seal™ is a water-based, fluid-applied, one-coat polymer-asphalt coating that has a resistance to hydrostatic pressure of 2.5 psi (17.2 kPa) over a ½-inch-wide (1.6 mm) crack when applied in accordance with Section 4.0 and tested in accordance with ASTM D5385. The coating is supplied in 55-gallon (208 L) drums and in bulk form. The product has a six-month shelf life when stored in unopened containers. The manufacturer's recommended storage temperature range is from 40°F to 100°F (4.4°C to 38°C).

2.5 Geo-Mat and Geo-Mat Plus™:

Geo-Mat and Geo-Mat Plus™ membranes are high-density polyethylene (HDPE), sextrigid, thermally formed sheets that are smooth on one side and "dimpled" on the other side to provide an air gap between the membrane and the wall surface. Geo-Mat Plus™ has an attached polypropylene geotextile mat on the dimpled side. The Geo-Mat membrane is available in 48-inch-wide (1219 mm), 81-inch-wide (2057 mm), and 96-inch-wide (2438 mm) rolls, 50 feet (15.24 m) in length. The Geo-Mat Plus™ membrane is available in 48-inch-wide (1219 mm), 72-inch-wide (1829 mm), and 96-inch-wide (2438 mm) rolls, 50 feet (15.24 m) in length. The membranes must be stored in areas protected from ultraviolet light.

The membrane system includes the Geo-Mat or Geo-Mat Plus™ membrane, Geo-Clips to help distribute the weight of the membrane and speed up installation; Mar-flex Profiles to prevent soil and water penetration between the wall and the membrane along any below grade cut such as at windows, walkouts, or vertical terminations; and the Mar-flex Adhesive Bond to seams between sheets.

3.0 INSTALLATION

3.1 Installation of Mar-flex 5000™, MAR-FLEX 5000 WB™ QuickSeal™ and QuickSeal WB™ Liquid-Applied Waterproofing Membranes:

Installation of the liquid-applied waterproofing membranes must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

The surface to which the coatings are applied must be structurally sound, clean, dry, and free of dust, mud, loose mortar, sand, soil, frost or loose materials. Additionally, there must be no fins, metal projections or any substances that will prevent bonding of the membrane to the surface. Voids in concrete or concrete masonry, fin holes and honeycombed areas in the foundation wall must be filled with nonshrinking grout or an asphalt-based mastic. Where nonshrinking grout is used to fill voids, the grout must be allowed to cure before the membrane is applied. Concrete and parged masonry surfaces must be cured and dry prior to application of the membranes.

The ambient air temperature during application must be in the range of 0° to 150° F (-17.8° to 65.6° C) for Mar-flex 5000 5000™ and QuickSeal 5000™ and 20° to 120° F (-6.7° to 54.7° C) for the Mar-flex 5000 WB™ and QuickSeal WB™. The membranes may be brush- rolled- or spray-applied in one coat, to a nominal wet film thickness of 60 mils (0.065 inch (1.40 mm)), to the exterior vertical surfaces of below-grade foundation walls of parged concrete masonry units or cast-in-place concrete construction. Once applied, the membranes will cure to a nominal film thickness of 40 mils (0.040 inch (1.0 mm)).

The membranes are required to cure for a period of 24 hours before any backfill is placed against the wall. Protection boards must be placed against the wall to protect the membrane and the backfill contains angular stone or other sharp objects.

3.2 Installation of Geo-Mat and Geo-Mat Plus™ Membranes:

Installation of the sheet membranes must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

Surfaces to receive the membrane must be structurally sound and free of loose mortar, fins, and sharp projections. Wall ties must be removed and the tops of the footers swept. A chase line must be made on the foundation wall at final grade to ensure an adequate attachment of the top of the membrane and the profile. Except for concrete block that must be parged, there are no additional repairs prior to the application of the Geo-Mat or Geo-Mat Plus™.

The Geo-Mat and the Geo-Mat Plus™ membrane is unrolled right to left. The top of the roll has a protective edge. The dimples on the Geo-Mat will be facing inward towards the foundation wall. The Geo-Mat Plus™ is installed with the filter fabric facing outward. The membrane may be unrolled and cut into 10-foot (3048 mm) sections to create an easier piece to work with.

The membrane must be mechanically fastened with fasteners approved by the report holder. Geo Clips are installed first along the sole edge to hold the sheet in place. The clips may be placed every 12 to 16 inches (305 to 406 mm) horizontally along the wall and over the seams sufficient to hold the membrane in place. The prongs are placed into the dimples of the sheet and fastened or fastened into the preformed center hat hold to attach the membrane to the wall. On walls greater than 8 feet (2438 mm) in height, the bottom course must be installed first and the top course overlap onto the bottom course by at least 6 inches (152 mm). A utility knife or similar tool can be used to cut the roll to the correct height.

Mar-flex Profiles must be installed across the top edge of the membrane to prevent soil and water from entering between wall and membrane. The profile is placed along the top edge of the wall to overlap the top roll of dimples, and is attached with fasteners in the pre-drilled holes. Excess material may be cut with a utility knife or similar tool if needed.

When installing membrane around corners, the membrane must be pressed in as tightly as possible, then the Geo Clips are installed along the seam at 12-inch (305 mm) intervals.

At seams, the dimples must be overlapped 6 inches (152 mm) and connected either with Geo Clips every 12 to 16 inches (305 to 391 mm) or with the Mar-flex Adhesive Bond applied between the two layers on the flat side (not

CL DESIGN / BUILDERS, INC.
1704 E. CORTEZ ST.
W. COVINA, CA 91791
TEL: (626)255-9336
cldesign93@gmail.com
LIC. #943533
EXP. 2-28-2022
CHRISTOPHER LOH

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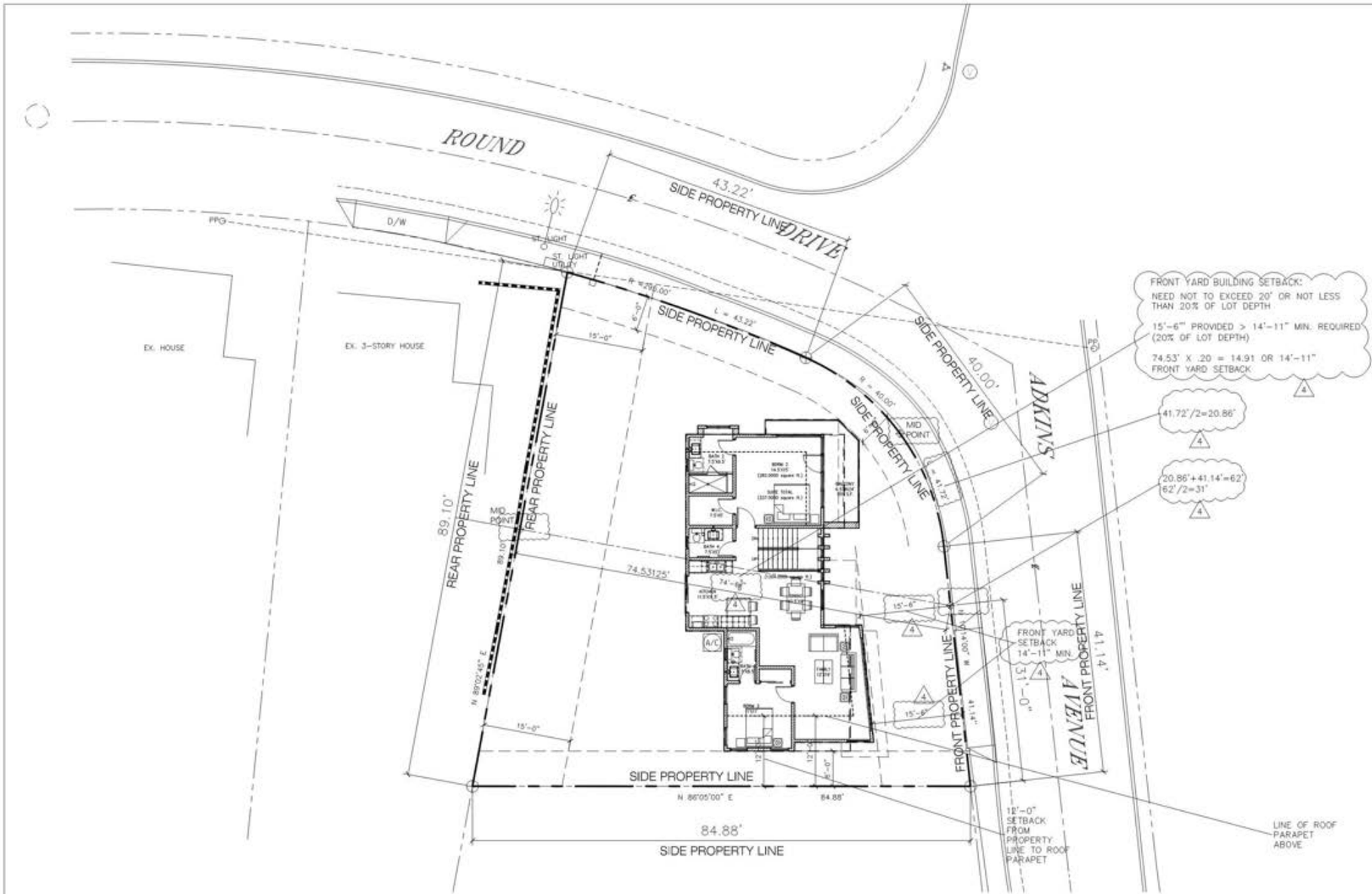
NO.	DATE
1	

PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE
LOS ANGELES, CA 90032

SHEET TITLE:
RETAINING WALL BELOW GRADE WATERPROOFING SPECIFICATIONS

NO. 93058
EXP. 06-30-21
CIVIL
STATE OF CALIFORNIA

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-0.4
OF SHEET



BUILDING SETBACKS DIAGRAM
1/8" = 1'-0"

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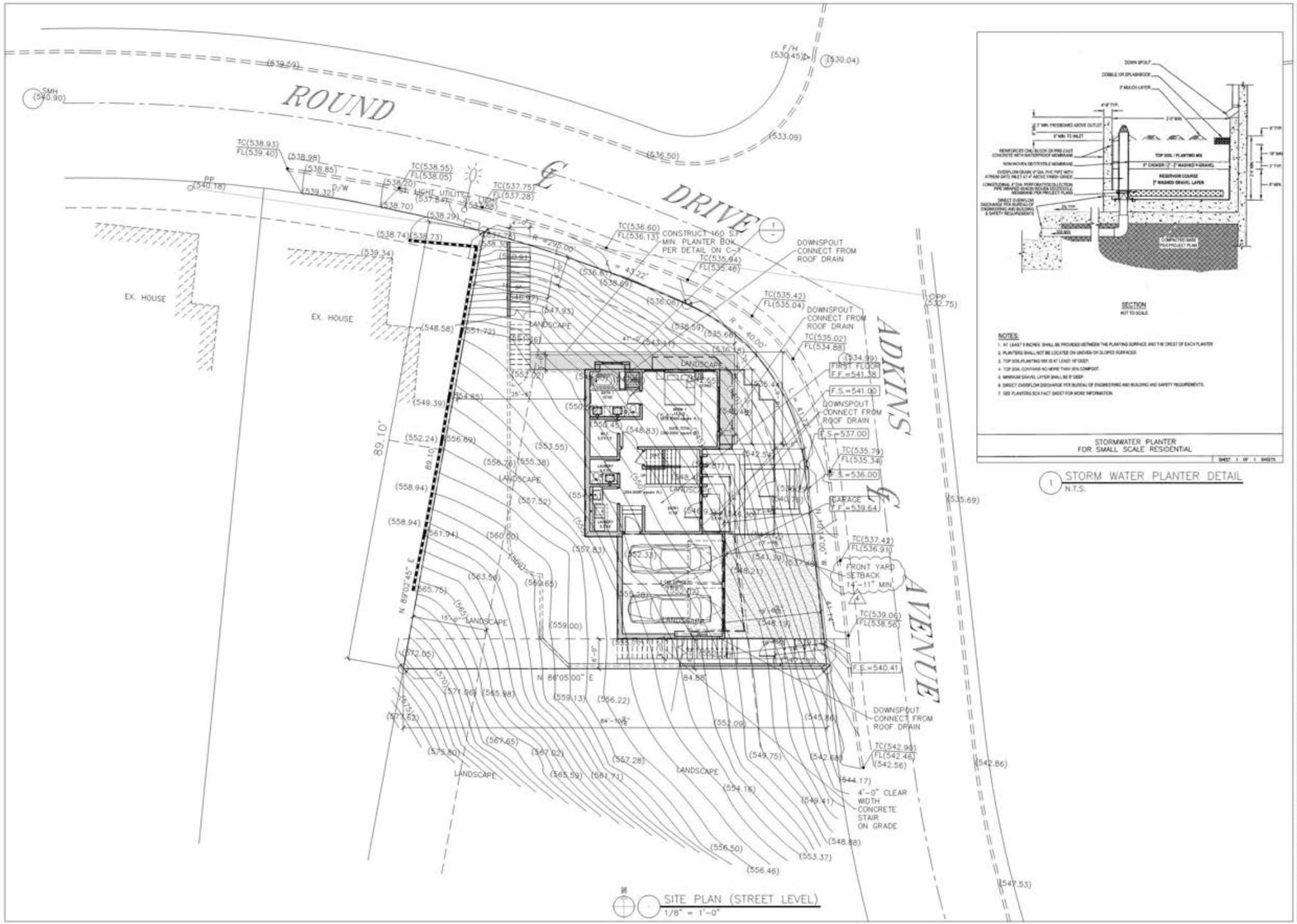
REVISIONS:

NO.	DATE
	06/09/2019

PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE.
LOS ANGELES, CA 90032

SHEET TITLE:
BUILDING SETBACKS DIAGRAM

DATE: 03/29/2021
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-1.0
OF SHEET



SITE PLAN (STREET LEVEL)
1/8" = 1'-0"

SECTION
NOT TO SCALE

NOTES:
1. AT LEAST 3 INCHES SHALL BE PROVIDED BETWEEN THE PLANTING SURFACE AND THE CREST OF EACH PLANTER
2. PLANTERS SHALL NOT BE LOCATED ON UNEVEN OR SLOPED SURFACES
3. TOP SOIL/PLANTING MIX IS AT LEAST 18" DEEP.
4. TOP SOIL CONTAINS NO MORE THAN 30% COMPOST.
5. MINIMUM GRAVEL LAYER SHALL BE 8" DEEP.
6. DIRECT OVERFLOW DISCHARGE PER BUREAU OF ENGINEERING AND BUILDING AND SAFETY REQUIREMENTS.
7. SEE PLANTERS BOX FACT SHEET FOR MORE INFORMATION.

STORMWATER PLANTER
FOR SMALL SCALE RESIDENTIAL
SHEET 1 OF 1 SHEETS

1 STORM WATER PLANTER DETAIL
N.T.S.

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REVISIONS:

NO.	DATE
	06/19/2019

PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE.
LOS ANGELES, CA 90032

SHEET TITLE:
SITE PLAN
LOWER LEVEL
(STREET LEVEL)

DATE: 03/29/2021
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-1.1
OF SHEET



CL DESIGN / BUILDERS, INC.

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REVISIONS:

NO.	DATE
1	06/19/2019

PROJECT

SINGLE FAMILY RESIDENCE

2849 N. ADKINS AVE.
LOS ANGELES, CA 90032

SHEET TITLE:

SITE PLAN UPPER LEVEL

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER LOH
NO. 55008
EXP. 06/30/22
STATE OF CALIFORNIA

DATE: 03/29/2021
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-1.2
OF SHEET

ELECTRICAL SYMBOLS

LIGHTING

- SURFACE MOUNTED INCANDESCENT LIGHT
- HIGH EFFICACY SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY SURFACE MOUNTED LED LIGHT FIXTURE
- RECESSED LIGHT
- HIGH EFFICACY FLUORESCENT RECESSED LIGHT
- HIGH EFFICACY LED RECESSED LIGHT
- WALL MOUNTED FIXTURE
- HIGH EFFICACY WALL MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY WALL MOUNTED LED LIGHT FIXTURE
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (MOTION SENSOR)
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (TIMER CONTROL)
- HIGH EFFICACY SURFACE-MOUNTED FLUORESCENT
- HIGH EFFICACY SURFACE-MOUNTED LED

SWITCHES

- SINGLE POLE
- THREE WAY
- DIMMER
- DOOR
- WEATHERPROOF
- VACANCY SENSOR SWITCH
- OCCUPANCY SENSOR SWITCH

OUTLETS

- DUPLEX CONVENIENCE OUTLET
- DUPLEX W/ TOP HALF SWITCHED
- 220 VOLT
- COUNTERTOP DUPLEX
- DUPLEX WITH GROUND FAULT INTERRUPTER
- WEATHERPROOF DUPLEX
- FLOOR OUTLET
- ARC-FAULT CIRCUIT INTERRUPTER(S)
- CARBON MONOXIDE DETECTOR HARD WIRED W/ BATTERY BACKUP INTERCONNECTED
- CEILING OUTLET

ALL RECEPTACLES IN DWELLING UNITS SHALL BE TAMPER-RESISTANT RECEPTACLES PER CEC ARTICLE 406.11.

MISC.

- POWER PANEL
- TELEPHONE JACK
- DOOR CHIMES
- PUSH BUTTON
- CABLE T.V.
- EXHAUST FAN 50-CFM INTERMITTENT OR 25 CFM CONTINUOUS VENTILATION
- DISPOSAL
- RANGE EXHAUST
- THERMOSTAT (5'-0" A.F.F.)
- SMOKE DETECTOR (HARD WIRED) WITH BATTERY BACKUP INTERCONNECTED
- DOOR BELL
- GAS LINE
- PHONE BRIDGE CONNECTOR
- JUNCTION BOX
- HOSE BIBS
- LOCK KEY

ELECTRICAL NOTES

ALL POWER AND LIGHTING OUTLETS IN BEDROOM TO BE PROTECTED BY AN ARC-FAULT INTERRUPTER(S) CIRCUIT (CEC 210.12(B))

ROOM CONTAINING BATHTUBS, SHOWERS, SPAS AND SIMILAR FIXTURES SHALL BE PROVIDED WITH AN EXHAUST FAN WITH A MINIMUM CAPACITY OF 50 CFM OUTLETED TO THE OUTDOOR, UNLESS EQUIPPED WITH HUMIDISTAT AND CAPABLE OF AN AIR EXCHANGE RATE OF 3 AIR CHANGES PER HOUR (CMC 402.5, CEC 150(b)).

WHEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS IN THE INDIVIDUAL UNIT.

52 ROOF EAVES (RECREATION ROOM) THAT ARE LOCATED LESS THAN 5 FEET FROM THE PROPERTY LINE SHALL HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING ON THE UNDERSIDE. (CRC TABLE R302.1 (1))

53 PROVIDE A MINIMUM 22"X30" ATTIC ACCESS AT 30" MINIMUM CLEAR HEADROOM AT 2-CAR GARAGE. (CRC R807.1)

54 SMOKE ALARMS AND CARBON MONOXIDE DETECTORS SHALL BE INTERCONNECTED. (CRC R314, R315) TYP.

55 CONNECTION DETAILS OF GUARDRAIL AND/OR HANDRAIL ADEQUATE TO SUPPORT A CONCENTRATED LOAD OF 200 POUNDS APPLIED AT THE TOP. (REFER TO STRUCTURAL DETAILS)

56 THE ENTIRE PROJECT SHALL COMPLY WITH WHOLE-BUILDING VENTILATION PER ASHRAE 62.2-2007.

57 BATHROOM, GARAGES, LAUNDRY OR UTILITY ROOMS MUST HAVE FLUORESCENT OR HIGH EFFICACY LIGHTING, AND AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES MUST BE CONTROLLED BY A VACANCY SENSOR

58 USE 2X6 STUDS WITH R-19 INSULATION FOR ALL EXTERIOR WALLS PER ENERGY CALCULATIONS

59 ENERGY CALCULATIONS IS BASE ON ENERGY PRO 7.2 COMPUTER PROGRAM.

60 ATTACHED PRIVATE GARAGES SHALL PROVIDE CONDUIT, WIRING, ETC. NECESSARY FOR ELECTRIC VEHICLE (EV) CHARGER INSTALLATIONS. (CRC R309.8)

25 THE HANDGRIP PORTION OF THE HANDRAIL SHALL BE EITHER TYPE I OR TYPE II AS IN DESCRIBED IN CRC R311.7.7.3 OR PROVIDE EQUIVALENT GRASPABILITY.

26 FIRE BLOCKING IS REQUIRED IN SPACES 10' O.C. HORIZONTAL AND VERTICALLY AT THE CEILING AND FLOOR LEVELS, CONNECTIONS BETWEEN HORIZONTAL AND VERTICAL SPACES, CONCEALED SPACES BETWEEN STAIR AND LANDING, OPENINGS AROUND VENTS, PIPES DUCTS, CABLES, WIRES, CHIMNEYS AND FIREPLACES. (CRC R302.11)

27 IN COMBUSTIBLE CONSTRUCTION WHERE THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE (ATTICS) DRAFTSTOPPING SHALL BE INSTALLED. (R302.12 CRC)

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32.1 1-3/8" THICK SOLID WOOD DOOR WITH SELF CLOSER OR 20 MINUTE FIRE ASSEMBLIES PER CRC SECTION R302.5.1.

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42 FOR LIGHTING INTEGRAL TO EXHAUST FANS IN BATHROOM PROVIDE SEPARATE SWITCHES FOR THE EXHAUST FAN AND THE LIGHT PER CEnrgC 150(K)1.B.

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45 HEAT SOURCE PROVIDED – 68 DEGREES AT 3' ABOVE FLOOR LEVEL IN HABITABLE ROOMS (CRC 303.8). REFER TO SHEET CF-1R,MF-1R (68,000 BTU)

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49 12"X12" (MINIMUM) PLUMBING ACCESS FOR TUBS (CPC 404.2)

50 GLAZING WITHIN 24 INCHES OF A DOOR, WHEN THE BOTTOM EDGE IS WITHIN 18 INCHES OF THE FLOOR, WITHIN 60 INCHES OF TUB OR SHOWER FLOOR, SHALL BE TEMPERED. (CRDC R308.4)

51 EAVE BEYOND THE EXTERIOR WALL (3-CAR GARAGE) SHALL NOT EXTEND TO A POINT CLOSER THAN 2 FEET FROM THE PROPERTY LINE. (CRC 302.1)

PLAN NOTES:

1 LANDINGS AT DOORS SHALL HAVE A LENGTH MEASURED IN DIRECTION OF TRAVEL OF NOT LESS THAN 36 INCHES. CRC R311.3

2 A DOOR MAY SWING OVER LANDING THAT IS NOT MORE THAN 5 INCH BELOW THRESHOLD AND .75 INCH FOR SLIDING DOORS. CBC 1008.1.7

3 PROVIDE ONE HOUR FIRE RESISTIVE MATERIALS (ON GARAGE SIDE) ON ALL WALLS, CEILINGS, POSTS, AND BEAMS ADJACENT TO OR SUPPORTING THE DWELLING. SPECIFY 5/8" 'X' GYPSUM BOARD, 7/8" STUCCO, OR OTHER 1-HOUR MATERIALS.

4 PROVIDE ONE HOUR FIRE RESISTANT CONSTRUCTION WITH 5/8" TYPE 'X' GYPSUM BOARD AT WALLS & CEILING AT ENCLOSED SPACE UNDER STAIRWAY.

5 ALL SHOWERS AND TUB-SHOWERS SHALL HAVE A PRESSURE BALANCE, THERMOSTATIC MIXING VALVE, OR A COMBINATION PRESSURE BALANCE/THERMOSTATIC MIXING TYPE VALVE.

6 THE FOLLOWING GLAZING SHALL BE TEMPERED: CRC R308.4

A. ALL GLAZING LESS THAN 60" ABOVE A SHOWER OR TUB FLOOR.

B. ALL GLAZING WHERE THE NEAREST EXPOSED EDGE OF THE GLASS IS WITHIN 24" ARC OF EITHER VERTICAL EDGE OF A DOOR

7 30 INCH CLEAR WITH CLEAR WIDTH FOR WATER CLOSET COMPARTMENT AND 24 INCH CLEARANCE IN FRONT OF THE WATER CLOSET FOR BATHROOM. CRC R307.1 AND CPC 407.5

8 WALL COVERING SHALL BE CEMENT PLASTER, TILE OR APPROVED EQUAL TO 72 INCHES ABOVE DRAIN AT SHOWERS OR TUB WITH SHOWERS. MATERIALS OTHER THAN STRUCTURAL ELEMENTS TO BE MOISTURE RESISTANT. CRC R307.2

9 A MIN. 4 INCH DIA. MOISTURE EXHAUST DUCT MUST BE PROVIDED FOR CLOTH DRYER TO THE OUTSIDE AND EQUIP WITH A BACK-DRAFT DAMPER. A FLEXIBLE DUCT CANNOT EXTEND MORE THAN 6 FEET AND CANNOT BE CONCEALED. DRYER EXHAUST DUCT LENGTH IS LIMITED TO 14 FT. WITH A MAXIMUM OF TWO 90 DEGREE ELBOWS. THE DUCT LENGTH SHALL BE REDUCED BY 2=FT. FOR EVERY ELBOW IN EXCESS OF TWO. (CMC 504.3.2).

10 PROVIDE 100 SQ. IN. OF MAKEUP AIR TO LAUNDRY ROOM PER CMC 2015 AND 504.3.2 (FAN TO PROVIDE MIN. 50 CFM.)

11 AT BEDROOMS, AND BASEMENT PROVIDE ONE OPERABLE ESCAPE WINDOW OR DOOR MEETING ALL OF THE FOLLOWING:
AN OPENABLE AREA OF NOT LESS THAN 5.7 SQ.FT. (5 SQ.FT. AT GRADE LEVEL), A MINIMUM CLEAR 24 INCH HEIGHT AND 20 INCH WIDTH, AND A SILL HEIGHT NOT OVER 44 INCHES ABOVE THE FLOOR. CRC 310.1.

12 HARD WIRE SMOKE DETECTORS. CRC R314.
A. IN EACH SLEEPING ROOM.

B. OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.

C. ON EACH ADDITIONAL STORY OF THE DWELLING,INCLUDING BASEMENTS AND HABITABLE ATTICS, BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS.

D. SMOKE ALARM SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA72.

13 HARD WIRE CARBON MONOXIDE ALARM CRC R315.1.
A. OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.

B. ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS.

A. CARBON MONOXIDE ALARM SHALL BE INTERCONNECTED HARD WIRED WITH BATTERY BACK UP.

15 COMPLIANCE WITH THE FOLLOWING LIGHTING MEASURES:
A. LIGHTING IN BATHROOMS, GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS: ALL LUMINAIRES SHALL EITHER BE HIGH EFFICACY AND SHALL BE CONTROLLED BY A MANUAL-ON OCCUPANT SENSOR

B. OTHER ROOMS, ALL LUMINAIRES SHALL EITHER BE HIGH EFFICACY AND SHALL BE CONTROLLED BY A MANUAL-ON OCCUPANT SENSOR OR DIMMER. CLOSETS, 9447 ARE LESS THAN 70 SQUARE FOOT ARE EXEMPT FROM THIS REQUIREMENT.

16 HIGH EFFICACY LUMINAIRES MUST BE PIN BASED.

17 200 AMP ELECTRICAL SERVICE AND PANELS.

18 MECHANICAL UNIT FILTERS MUST BE MERV-6 OR BETTER

19 ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE PHASE, 15 AND 20 AMPERE OUTLETS INSTALLED IN DWELLING UNITS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER(S). CEC 210.12. THAT REQUIREMENTS IS FOR ENTIRE CIRCUIT, NOT JUST THE OUTLETS.

20 FOR ROOF COVERING PER CRC CH 9 MAXIMUM DEAD LOAD FOR TILE ROOFING : 9.7 PSF

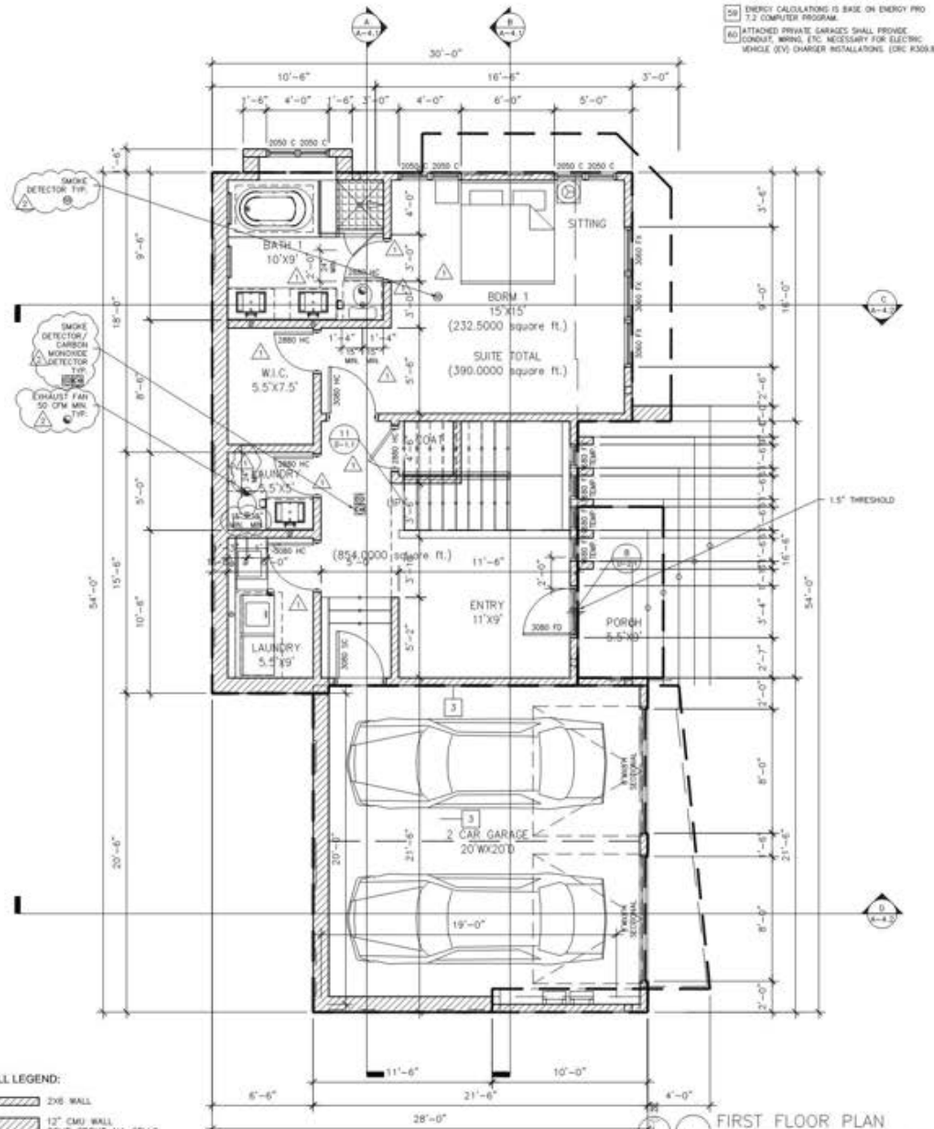
21 PROVIDE ONE HOUR FIRE RESISTANT CONSTRUCTION WITH 5/8" TYPE 'X' GYPSUM BOARD AT WALLS & CEILING AT ENCLOSED SPACE UNDER STAIRWAY.

21A ENCLOSED ACCESSIBLE SPACE UNDER STAIRS (ON GARAGE SIDE) ON ALL WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2-INCH GYPSUM BOARD. BUILDING CODE 1009.6.3

22 AUTOMATIC GARAGE DOOR OPENERS, IF PROVIDED, SHALL BE LISTED IN ACCORDANCE WITH UL325. (CRC 309.4)

23 PROVIDE ONE HOUR FIRE RESISTIVE MATERIALS (ON GARAGE SIDE) ON ALL WALLS, CEILINGS, POSTS, AND BEAMS ADJACENT TO OR SUPPORTING

THE DWELLING. 5/8" 'X' GYPSUM BOARD, 7/8" STUCCO, OR OTHER 1-HOUR MATERIALS.



WALL LEGEND:

- 2X6 WALL
- 12" CMU WALL SOLID GROUT ALL CELLS

FIRST FLOOR PLAN
1/4" = 1'-0" 854 S.F./ GAR. 412 S.F.

CL DESIGN / BUILDERS, INC.
1704 E. CORTEZ ST.
W. COVINA, CA 91791
TEL: (626)255-9336
cldesign93@gmail.com
LIC. #943533
EXP. 2-28-2022
CHRISTOPHER LOH

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REVISIONS:

NO.	DATE
1	

PROJECT

SINGLE FAMILY RESIDENCE

2849 N. ADKINS AVE
LOS ANGELES, CA
90032

SHEET TITLE:

FIRST FLOOR PLAN

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-2.1
OF SHEET

ELECTRICAL SYMBOLS

LIGHTING
- SURFACE MOUNTED INCANDESCENT LIGHT
- HIGH EFFICACY SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY SURFACE MOUNTED LED LIGHT FIXTURE
- RECESSED LIGHT
- HIGH EFFICACY FLUORESCENT RECESSED LIGHT
- HIGH EFFICACY LED RECESSED LIGHT
- WALL MOUNTED FIXTURE
- HIGH EFFICACY WALL MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY WALL MOUNTED LED LIGHT FIXTURE
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (MOTION SENSOR)
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (TIMER CONTROL)
- HIGH EFFICACY SURFACE-MOUNTED FLUORESCENT
- HIGH EFFICACY SURFACE-MOUNTED LED

SWITCHES
- SINGLE POLE
- THREE WAY
- DIMMER
- DOOR
- WEATHERPROOF
- VACANCY SENSOR SWITCH
- OCCUPANCY SENSOR SWITCH

OUTLETS
- DUPLEX CONVENIENCE OUTLET
- DUPLEX W/ TOP HALF SWITCHED
- 220 VOLT
- COUNTERTOP DUPLEX
- DUPLEX WITH GROUND FAULT INTERRUPTER
- WEATHERPROOF DUPLEX
- FLOOR OUTLET
- ARC-FAULT CIRCUIT INTERRUPTER(S)
- CARBON MONOXIDE DETECTOR HARD WIRED W/ BATTERY BACKUP INTERCONNECTED
- CEILING OUTLET

ALL RECEPTACLES IN DWELLING UNITS SHALL BE TAMPER-RESISTANT RECEPTACLES PER CEC ARTICLE 406.11

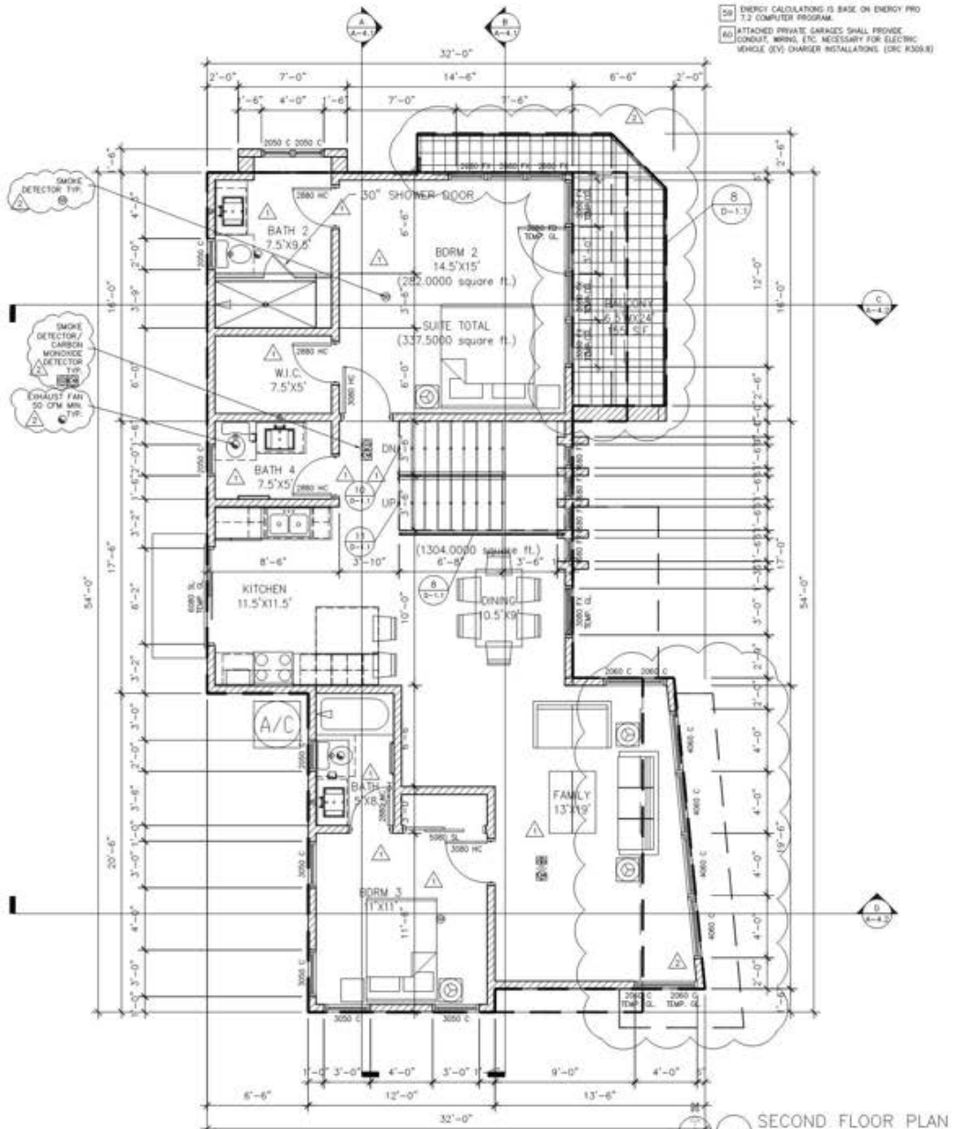
MISC.
- POWER PANEL
- TELEPHONE JACK
- DOOR CHIMES
- PUSH BUTTON
- CABLE T.V.
- EXHAUST FAN 50-CFM INTERMITTENT OR 25 CFM CONTINUOUS VENTILATION
- DISPOSAL
- RANGE EXHAUST
- THERMOSTAT (5'-0" A.F.F.)
- SMOKE DETECTOR (HARD WIRED) WITH BATTERY BACKUP INTERCONNECTED
- DOOR BELL
- GAS LINE
- PHONE BRIDGE CONNECTOR
- JUNCTION BOX
- HOSE BIBS
- LOCK SET

ELECTRICAL NOTES

ALL POWER AND LIGHTING OUTLETS IN BEDROOM TO BE PROTECTED BY AN ARC-FAULT INTERRUPTER(S) CIRCUIT (CEC 210.12(B))

ROOM CONTAINING BATHTUBS, SHOWERS, SPAS AND SIMILAR FIXTURES SHALL BE PROVIDED WITH AN EXHAUST FAN WITH A MINIMUM CAPACITY OF 50 CFM. OUTLETS FANS ARE UNACCEPTABLE. (1505.4.2.1, MC 7-1-4)

WHEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS IN THE INDIVIDUAL UNIT



52 ROOF EAVES (RECREATION ROOM) THAT ARE LOCATED≤2 FEET TO 5 FEET FROM THE PROPERTY LINE SHALL HAVE A MINIMUM 1-HOUR FIRE-RESISTANCE RATING ON THE UNDERSIDE. (CRC TABLE R302.1 (1))

53 PROVIDE A MINIMUM 22"X30" ATTIC ACCESS AT 30" MINIMUM CLEAR HEADROOM AT 2-CAR GARAGE. (CRC R807.1)

54 SMOKE ALARMS AND CARBON MONOXIDE DETECTORS SHALL BE INTERCONNECTED. (CRC R314, R315) TYP.

55 CONNECTION DETAILS OF GUARDRAIL AND/OR HANDRAIL ADEQUATE TO SUPPORT A CONCENTRATED LOAD OF 200 POUNDS APPLIED AT THE TOP. (REFER TO STRUCTURAL DETAILS)

56 THE ENTIRE PROJECT SHALL COMPLY WITH ANSI/ASHRAE-BUILDING VENTILATION PER ASHRAE 62.2-2007.

57 BATHROOM, GARAGES, LAUNDRY OR UTILITY ROOMS MUST HAVE FLUORESCENT OR HIGH EFFICACY LIGHTING, AND AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES MUST BE CONTROLLED BY A VACANCY SENSOR

58 USE 2X6 STUDS WITH R-19 INSULATION FOR ALL EXTERIOR WALLS PER ENERGY CALCULATIONS

59 ENERGY CALCULATIONS IS BASE ON ENERGY PRO 7.2 COMPUTER PROGRAM.

60 ATTACHED PRIVATE GARAGES SHALL PROVIDE CONDUIT, WIRING, ETC. NECESSARY FOR ELECTRIC VEHICLE (EV) CHARGER INSTALLATIONS. (CRC R309.8)

25 THE HANDGRIP PORTION OF THE HANDRAIL SHALL BE EITHER TYPE I OR TYPE II AS IN DESCRIBED IN CRC R311.7.7.3 OR PROVIDE EQUIVALENT GRASPABILITY.

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D. SMOKE ALARM SHALL BE INTERCONNECTED HARD-WIRED WITH BATTERY BACKUP AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA72.

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B. OTHER ROOMS, ALL LUMINAIRES SHALL EITHER BE HIGH EFFICACY AND SHALL BE CONTROLLED BY A MANUAL-ON OCCUPANT SENSOR OR DIMMER. CLOSETS, 9'447 ARE LESS THAN 70 SQUARE FOOT ARE EXEMPT FROM THIS REQUIREMENT.

16 HIGH EFFICACY LUMINAIRES MUST BE PIN BASED.

17 200 AMP ELECTRICAL SERVICE AND PANELS.

18 MECHANICAL UNIT FILTERS MUST BE MERV-6 OR BETTER

19 ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE PHASE, 15 AND 20 AMPERE OUTLETS INSTALLED IN DWELLING UNITS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER(S). CEC 210.12. THAT REQUIREMENTS IS FOR ENTIRE CIRCUIT, NOT JUST THE OUTLETS.

20 FOR ROOF COVERING PER CRC CH 9 MAXIMUM DEAD LOAD FOR TILE ROOFING : 9.7 PSF

21 PROVIDE ONE HOUR FIRE RESISTANT CONSTRUCTION WITH 5/8" TYPE 'X' GYPSUM BOARD AT WALLS & CEILING AT ENCLOSED SPACE UNDER STAIRWAY.

21A ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SYSTEM IN ACCORDANCE WITH CRC R313.3 OR NFPA 130. WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2-INCH GYPSUM BOARD. BUILDING CODE 1009.6.3

22 AUTOMATIC GARAGE DOOR OPENERS, IF PROVIDED, SHALL BE LISTED IN ACCORDANCE WITH UL325. (CRC 309.4)

23 PROVIDE ONE HOUR FIRE RESISTIVE MATERIALS (ON GARAGE SIDE) ON ALL WALLS, CEILINGS, POSTS, AND BEAMS ADJACENT TO OR SUPPORTING THE DWELLING; 5/8" 'X' GYPSUM BOARD, 7/8" STUCCO, OR OTHER 1-HOUR MATERIALS.

CL DESIGN / BUILDERS, INC.
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EXP. 2-28-2022
CHRISTOPHER LOH

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REVISIONS:

NO.	DATE
1	

PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE
LOS ANGELES, CA 90032

SHEET TITLE:
SECOND FLOOR PLAN

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-2.2
OF SHEET

EXTERIOR DOOR SECURITY NOTES

1. SWING DOORS SHALL CONFORM TO ONE OF THE FOLLOWING TYPES OF CONSTRUCTION:
   A. WOOD FLUSH TYPE DOOR 1¾" THICK MIN. WITH A SOLID CORE OF WOOD OR PARTICLE BOARD OF 25 PCF DENSITY.
   B. WOOD PANEL TYPE DOOR 1¾" THICK MIN. WITH ALL PANELS ARE NOT LESS THAN ½" THICK.
   C. FRENCH TYPE GLASS DOOR 1¾" THICK MIN. WITH TEMPERED CLEAR GLASS NOT LESS THAN ⅛" THICK.
2. A SINGLE SWINGING DOOR AND THE ACTIVE LEAF OF A PAIR OF DOORS SHALL BE EQUIPPED WITH A DEAD BOLT AND A DEAD LOCKING LATCH. DEAD BOLTS SHALL CONTAIN HARDEND INSERTS TO REPEL CUTTING TOOLS. THE LATCH SHALL BE KEY OPERATED FROM THE EXTERIOR AND OPENABLE FROM THE INTERIOR SIDE BY A DEVICE WHICH DOES NOT REQUIRE A KEY, SPECIAL KNOWLEDGE OR SPECIAL EFFORT TO OPERATE.
3. THE STRIKE PLATE FOR LATCHES AND THE HOLDING DEVICE FOR PROTECTING DEAD BOLTS IN WOOD CONSTRUCTION SHALL BE SECURED TO THE JAMB AND WALL SCREWS NOT LESS THAN 2½" IN LENGTH.
4. STRAIGHT DEAD BOLTS SHALL HAVE A MIN. THROW OF 1" AND AN EMBEDMENT OF NOT LESS THAN ⅝".
5. A HOOK-SHAPPED OR AN EXPANDING LUG DEAD BOLT SHALL HAVE A MIN. THROW OF ¾".

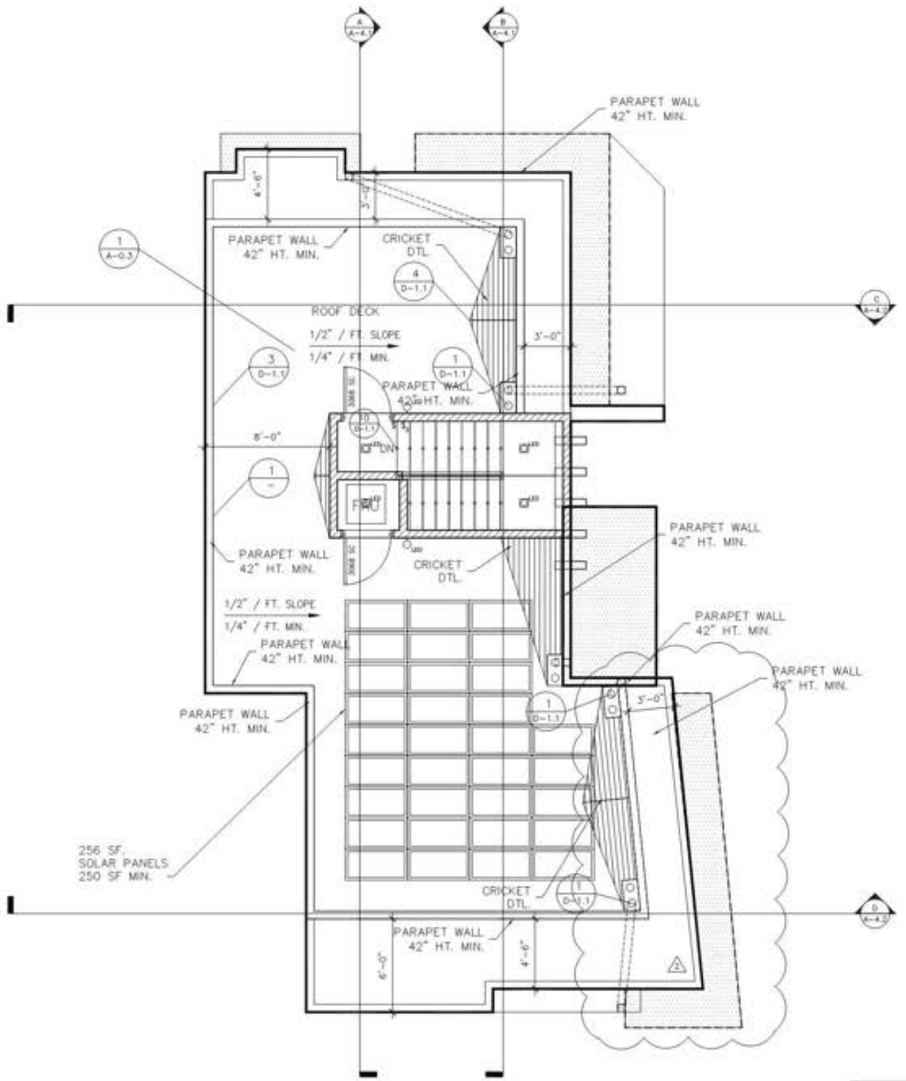
ALL WINDOW SHALL BE DUAL GLAZE AND
U-FACTOR: 0.30
SHGC: 0.23

WINDOW NOTES

1. SLEEPING ROOMS MUST HAVE A WINDOW OR EXTERIOR DOOR FOR EMERGENCY EXIT, SILL HEIGHT NOT OVER 44 INCHES ABOVE FLOOR, 5.0 AT GRADE LEVEL AND 5.7 SQUARE FEET AT 2ND. FLOOR LEVEL OF OPENABLE AREA, 24 INCH CLEAR OPENING HEIGHT, 20 INCH CLEAR OPENING WIDTH.
2. MINIMUM WINDOW AREA TO BE 1/8 OF FLOOR AREA (NOT LESS THAN 10 SQUARE FEET) AND 50% OPENABLE. 2016 CRC
3. GLAZING WITHIN 24 INCHES OF A DOOR, WITHIN 60 INCHES OF TUB OR SHOWER FLOOR, SHALL BE TEMPERED. (CRC R308.4
4. OPERABLE WINDOWS WITH SILLS LOCATED MORE THAN 72 INCHES ABOVE FINISHED GRADE, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE AT A HEIGHT NOT LESS THAN 36 INCHES ABOVE THE FINISHED FLOOR SURFACE OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4-INCH-DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 36 INCHES OF THE FINISHED FLOOR. (CBC 1013.8)
5. THE NFRC TEMPORARY LABEL DISPLAYED ON WINDOWS MUST REMAIN ON THE UNIT UNTIL FINAL INSPECTION HAS BEEN COMPLETED.
   U-FACTOR: 0.30; SHGC: 0.21

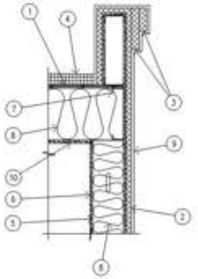
* REFER TO EXTERIOR ELEVATIONS FOR LOCATION AND APPEARANCE OF WINDOW MULLIONS AND TEMPERED GLASS LOCATIONS. ALL WINDOWS TO BE GLAZED TRUE DIVIDED LITE, UNLESS NOTED OTHERWISE.

* PROVIDE TEMPERED SAFETY GLAZING AT ALL MIRRORED WARDROBE DOORS WHERE GLASS IS INDICATED.



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

PLAN NOTES REFER TO A-2.1



1. 5/8" A.P.A. RATED SHEATHING.
2. 1" STYROFOAM.
3. 1 1/2" STYROFOAM.
4. BUILT-UP ROOFING.
5. 6" METAL STUD WALL.
6. 1/2" GYPSUM BOARD.
7. ROOF JOISTS - SEE STRUCTURAL.
8. BATT INSULATION.
9. 1/2" STUCCO.
10. 5/8" GYPSUM BOARD.

1 PARAPET WALL
1" = 1'-0"
07A-4005

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PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE.
LOS ANGELES, CA 90032

SHEET TITLE:
ROOF PLAN

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:

SHEET
A-2.3
OF SHEET

CARBON MONOXIDE ALARM REQUIREMENTS:
1) CO ALARM SHALL BE LISTED FOR COMPLIANCE WITH UL2034, UL 2075, AND/OR NFPA 720. (CRC R315.3)
2) CO ALARMS SHALL BE INSTALLED ON THE FIRST LEVEL. (CRC R315.3)

TITLE 24 ENERGY REQUIREMENTS:

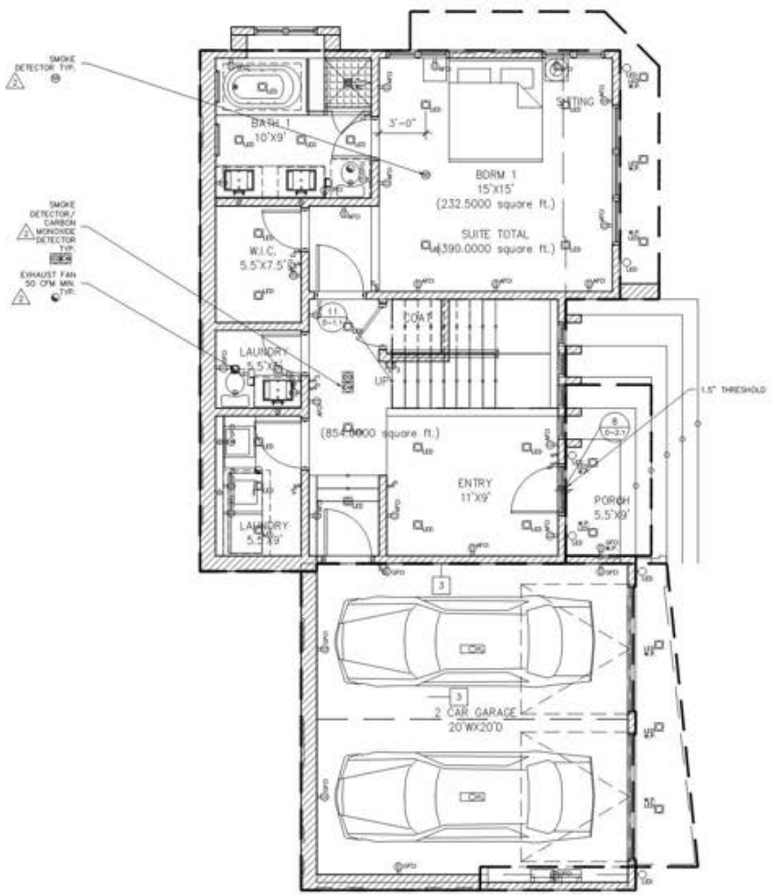
1) A MINIMUM OF 50% OF THE LUMINARIES IN A KITCHEN MUST BE FLUORESCENT OR HIGH EFFICACY.

2) BATHROOMS SHALL BE MINIMUM ONE FLUORESCENT OR HIGH EFFICACY LIGHTING. ALL OTHER LIGHTINGS SHALL BE HIGH EFFICACY, OR CONTROLLED BY AN VACANCY SENSOR.

3) GARAGES, LAUNDRY OR UTILITY ROOMS MUST HAVE FLUORESCENT OR HIGH EFFICACY LIGHTING, AND ALL CONTROLLED BY AN VACANCYT SENSOR.

4) BEDROOMS, LIVING ROOMS, FAMILY ROOMS, AND OTHER ROOMS USED FOR LIVING AND SLEEPING MUST HAVE FLUORESCENT OR HIGH EFFICACY LIGHTING, OR AN VACANCY SENSOR, OR DIMMERS MAY BE INSTALLED.

5) EXTERIOR LIGHTING MUST BE FLUORESCENT OR HIGH EFFICACY, OR AN VACANCY SENSOR WITH AN INTEGRAL PHOTO CONTROL MAY BE INSTALLED.



FIRST FLOOR LIGHTING LAYOUT / REFLECTIVE CEILING PLAN
1/4" = 1'-0"

PLAN NOTES REFER TO A-2.1



ELECTRICAL SYMBOLS

LIGHTING
- SURFACE MOUNTED INCANDESCENT LIGHT
- HIGH EFFICACY SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY SURFACE MOUNTED LED LIGHT FIXTURE
- RECESSED LIGHT
- HIGH EFFICACY FLUORESCENT RECESSED LIGHT
- HIGH EFFICACY LED RECESSED LIGHT
- WALL MOUNTED FIXTURE
- HIGH EFFICACY WALL MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY WALL MOUNTED LED LIGHT FIXTURE
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (MOTION SENSOR)
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (TIMER CONTROL)
- HIGH EFFICACY SURFACE-MOUNTED FLUORESCENT
- HIGH EFFICACY SURFACE-MOUNTED LED

SWITCHES
- SINGLE POLE
- THREE WAY
- DIMMER
- DOOR
- WEATHERPROOF
- VACANCY SENSOR SWITCH
- OCCUPANCY SENSOR SWITCH

OUTLETS
- DUPLEX CONVENIENCE OUTLET
- DUPLEX W/ TOP HALF SWITCHED
- 220 VOLT
- COUNTERTOP DUPLEX
- DUPLEX WITH GROUND FAULT INTERRUPTER
- WEATHERPROOF DUPLEX
- FLOOR OUTLET
- ARC-FAULT CIRCUIT INTERRUPTER(S)
- CARBON MONOXIDE DETECTOR HARD WIRED W/ BATTERY BACKUP INTERCONNECTED
- CEILING OUTLET

ALL RECEPTACLES IN DWELLING UNITS SHALL BE TAMPER-RESISTANT RECEPTACLES PER CEC ARTICLE 406.11.

MISC.
- POWER PANEL
- TELEPHONE JACK
- DOOR CHIMES
- PUSH BUTTON
- CABLE T.V.
- EXHAUST FAN 50-CFM INTERMITTENT OR 25 CFM CONTINUOUS VENTILATION
- DISPOSAL
- RANGE EXHAUST
- THERMOSTAT (5'-0" A.F.F.)
- SMOKE DETECTOR (HARD WIRED) WITH BATTERY BACKUP, INTERCONNECTED
- DOOR BELL
- LIGHT LINE
- PHONE BRIDGE CONNECTOR
- JUNCTION BOX
- HOSE BIBB
- LOOSE KEY

ELECTRICAL NOTES

ALL POWER AND LIGHTING OUTLETS IN BEDROOM TO BE PROTECTED BY AN ARC-FAULT INTERRUPTER(S) CIRCUIT (CEC 210.12(B))

ROOM CONTAINING BATHTUBS, SHOWERS, SPAS AND SIMILAR FIXTURES SHALL BE PROVIDED WITH AN EXHAUST FAN WITH A MINIMUM CAPACITY OF 50 CFM. DUCTLESS FANS ARE UNACCEPTABLE. (CEC 4.21, MC 7-4-4)

WHEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS IN THE INDIVIDUAL UNIT.

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REVISIONS:

NO.	DATE
	06/10/2019

PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE
LOS ANGELES, CA 90032

SHEET TITLE:
FIRST FLOOR LIGHTING LAYOUT PLAN / REFLECTIVE CEILING PLAN

DATE: 03/29/2021
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-2.4
OF SHEET

CARBON MONOXIDE ALARM REQUIREMENTS:
1) CO ALARM SHALL BE LISTED FOR COMPLIANCE WITH UL2034, UL 2075, AND/OR NFPA 720. (CRC R315.3)
2) CO ALARMS SHALL BE INSTALLED ON THE FIRST LEVEL. (CRC R315.3)

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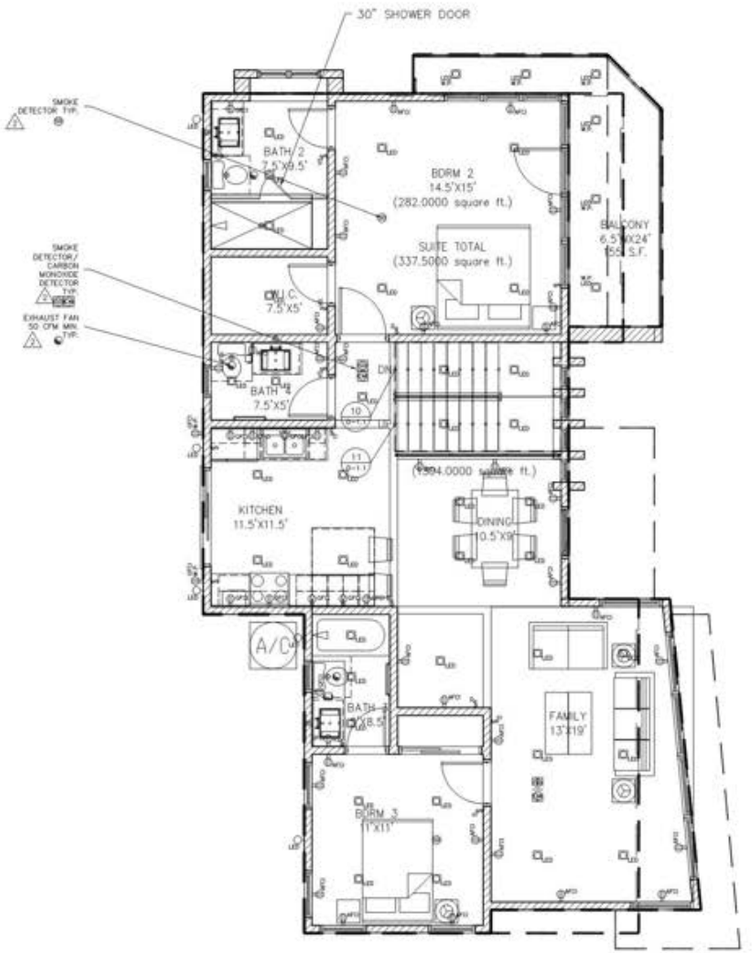
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5) EXTERIOR LIGHTING MUST BE FLUORESCENT OR HIGH EFFICACY, OR AN VACANCY SENSOR WITH AN INTEGRAL PHOTO CONTROL MAY BE INSTALLED.



SECOND FLOOR LIGHTING LAYOUT / REFLECTIVE CEILING PLAN
1/4" = 1'-0"

PLAN NOTES REFER TO A-2.1

ELECTRICAL SYMBOLS

LIGHTING
- SURFACE MOUNTED INCANDESCENT LIGHT
- HIGH EFFICACY SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY SURFACE MOUNTED LED LIGHT FIXTURE
- RECESSED LIGHT
- HIGH EFFICACY FLUORESCENT RECESSED LIGHT
- HIGH EFFICACY LED RECESSED LIGHT
- WALL MOUNTED FIXTURE
- HIGH EFFICACY WALL MOUNTED FLUORESCENT LIGHT FIXTURE
- HIGH EFFICACY WALL MOUNTED LED LIGHT FIXTURE
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (MOTION SENSOR)
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE (TIMER CONTROL)
- HIGH EFFICACY SURFACE-MOUNTED FLUORESCENT
- HIGH EFFICACY SURFACE-MOUNTED LED

SWITCHES
- SINGLE POLE
- THREE WAY
- DIMMER
- DOOR
- WEATHERPROOF
- VACANCY SENSOR SWITCH
- OCCUPANCY SENSOR SWITCH

OUTLETS
- DUPLEX CONVENIENCE OUTLET
- DUPLEX W/ TOP HALF SWITCHED
- 220 VOLT
- COUNTERTOP DUPLEX
- DUPLEX WITH GROUND FAULT INTERRUPTER
- WEATHERPROOF DUPLEX
- FLOOR OUTLET
- ARC-FAULT CIRCUIT INTERRUPTER(S)
- CARBON MONOXIDE DETECTOR HARD WIRED W/ BATTERY BACKUP INTERCONNECTED
- CEILING OUTLET

ALL RECEPTACLES IN DWELLING UNITS SHALL BE TAMPER-RESISTANT RECEPTACLES PER CEC ARTICLE 406.11.

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- DOOR CHIMES
- PUSH BUTTON
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- DISPOSAL
- RANGE EXHAUST
- THERMOSTAT (5'-0" A.F.F.)
- SMOKE DETECTOR (HARD WIRED) WITH BATTERY BACKUP, INTERCONNECTED
- DOOR BELL
- SIGNAL LINE
- PHONE BRIDGE CONNECTOR
- JUNCTION BOX
- HOSE BIBB
- LOOSE KEY

ELECTRICAL NOTES

ALL POWER AND LIGHTING OUTLETS IN BEDROOM TO BE PROTECTED BY AN ARC-FAULT INTERRUPTER(S) CIRCUIT (CEC 210.12(B))

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ENERGY STAR

ENERGY STAR

CL DESIGN / BUILDERS, INC.
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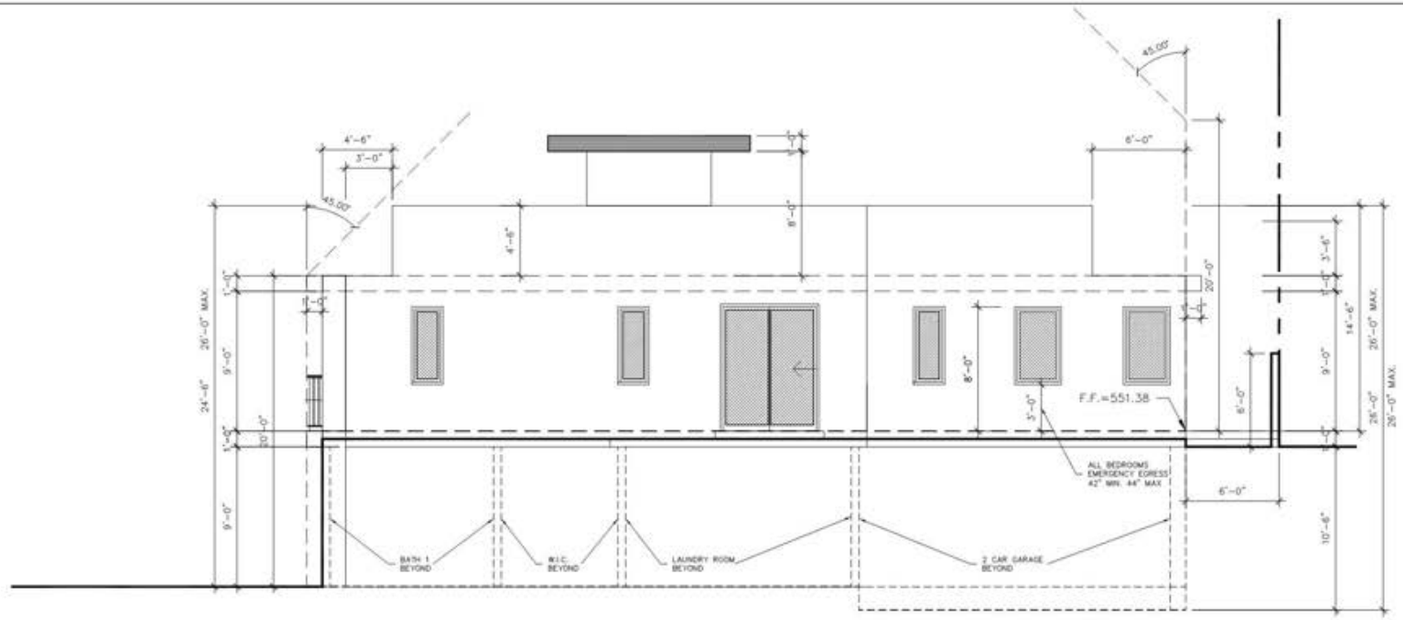
REVISIONS:

NO.	DATE
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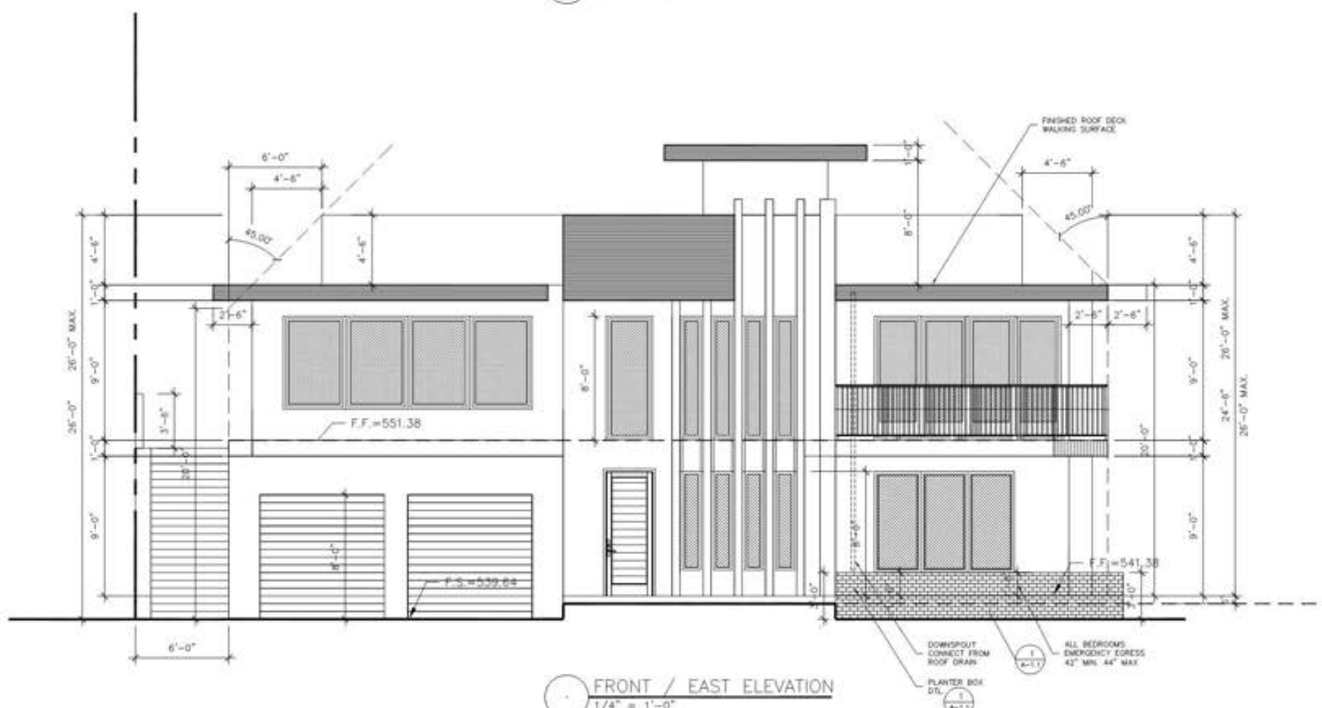
PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE
LOS ANGELES, CA 90032

SHEET TITLE:
SECOND FLOOR LIGHTING LAYOUT PLAN / REFLECTIVE CEILING PLAN

DATE: 03/29/2021
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-2.5
OF SHEET



REAR / WEST ELEVATION
1/4" = 1'-0"



FRONT / EAST ELEVATION
1/4" = 1'-0"



1 STUCCO:
MANUF.: LA HABRA STUCCO
TYPE: SAND FLOAT 20/30 CEMENT FINISHES
COLOR: ASPEN X-23 (60) BASE 200



2 WINDOW:
MANUF.: MILGARD MANUFACTURE, INC
TYPE: VINYL
COLOR: CLAY



3 ENTRY DOOR:
MANUF.: SIMPSON DOOR COMPANY
MODEL: 7410 IG
COLOR: WALNUT



4 GARAGE DOOR:
MANUF.: AMARR GARAGE DOORS
TYPE: LINCOLN / RIBBED PANEL
COLOR: SANDSTONE



5 LIGHT FIXTURE:
MANUF.: ARTIKA LIGHTING
TYPE: MEDIUM SCINTILLY
COLOR: LIGHT GRAY

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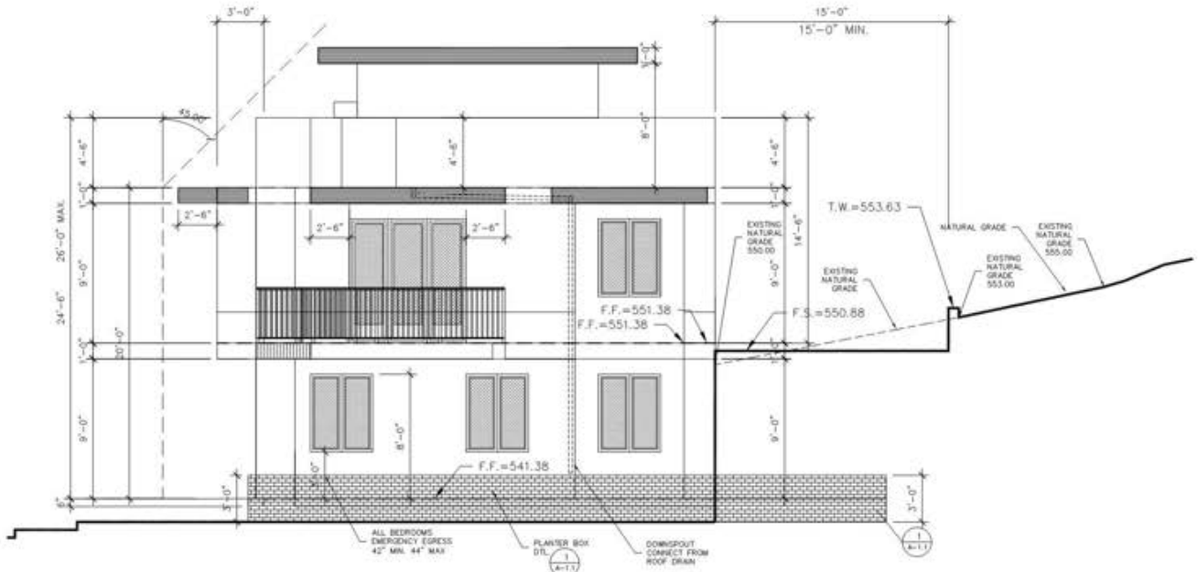
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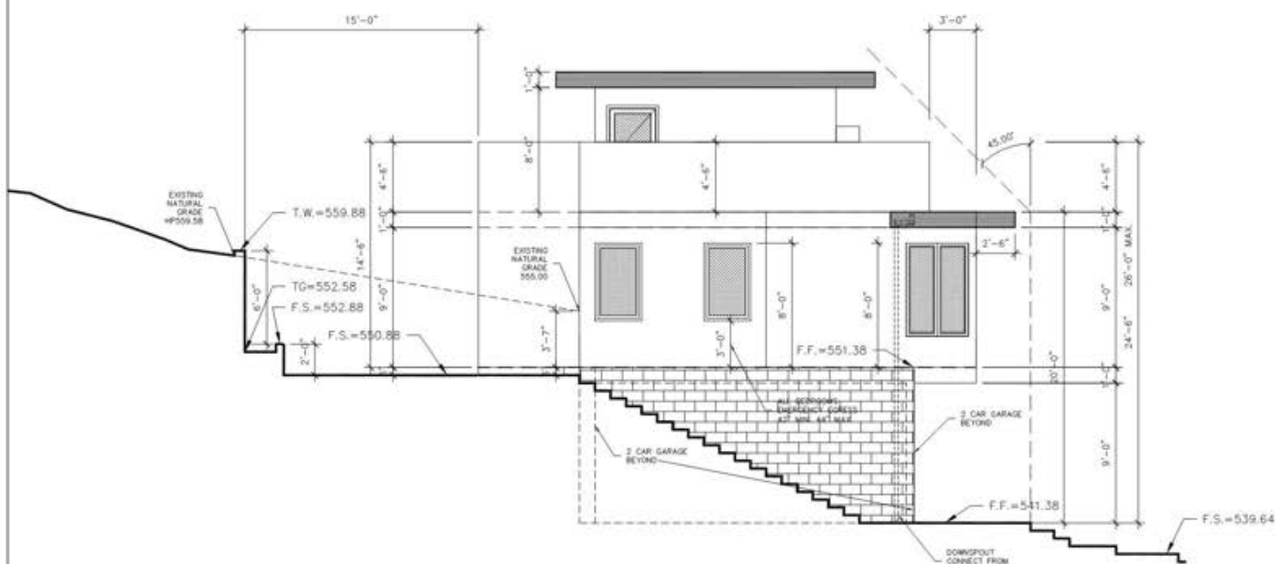
PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE.
LOS ANGELES, CA 90032

SHEET TITLE:
ELEVATIONS

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-3.1
OF SHEET



RIGHT SIDE / NORTH ELEVATION
1/4" = 1'-0"



LEFT SIDE / SOUTH ELEVATION
1/4" = 1'-0"

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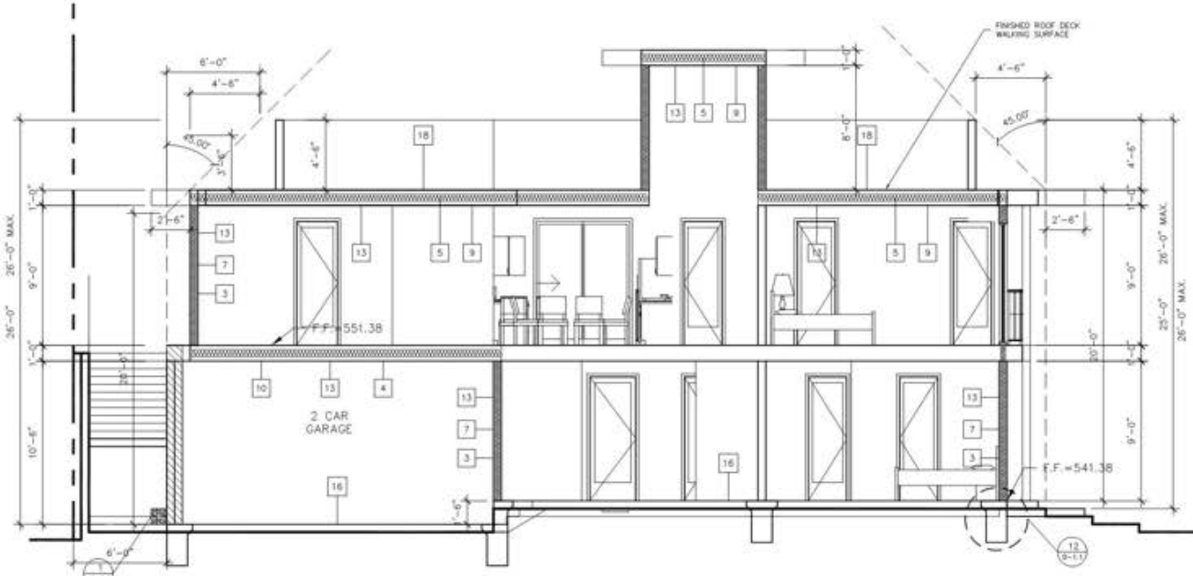
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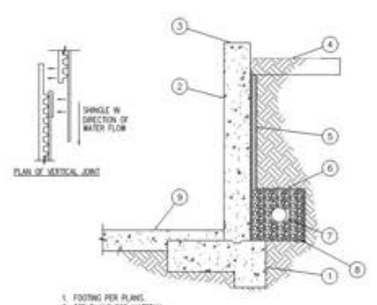
A REAR / WEST ELEVATION
1/4" = 1'-0"



B FRONT / EAST SECTION
1/4" = 1'-0"

SECTION NOTES:

1. CONCRETE ROOF TILE
2. BUILT-UP ROOF
3. R-21 WALL INSULATION
4. R-19 FLOOR INSULATION
5. R-38 ROOF INSULATION
6. 7/8" STUCCO
7. 2X STUD WALL
8. 2X ROOF RAFTER
9. 2X CEILING JOIST
10. 2X FLOOR JOIST
11. 3/4" GYPCRETE
12. STONE VENEER
13. 5/8" TYPE "X" GYPSUM BD.
14. EAVE FACIA BOARD
15. RAIN GUTTER
16. CONCRETE SLAB
17. CONCRETE FOOTING
18. RADIANT BARRIER SHEATHING



1 FOOTING DRAINAGE
SCALE: 1/2" = 1'-0"

07A-1001

CL DESIGN / BUILDERS, INC.
1704 E. CORTEZ ST.
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TEL: (626)255-9336
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LIC. #943533
EXP. 2-28-2022
CHRISTOPHER LOH

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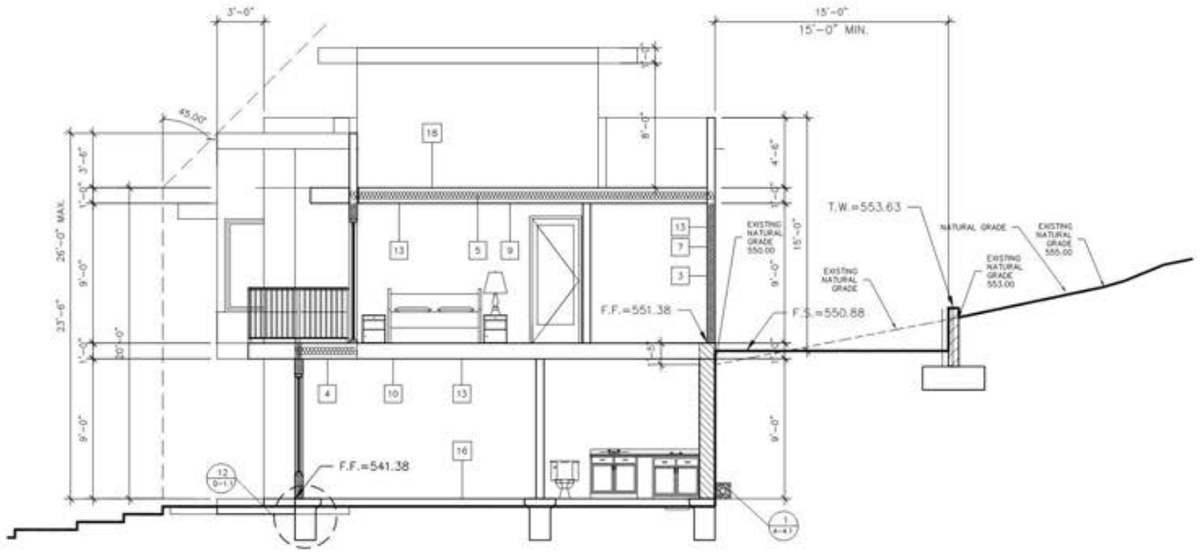
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NO.	DATE
1	

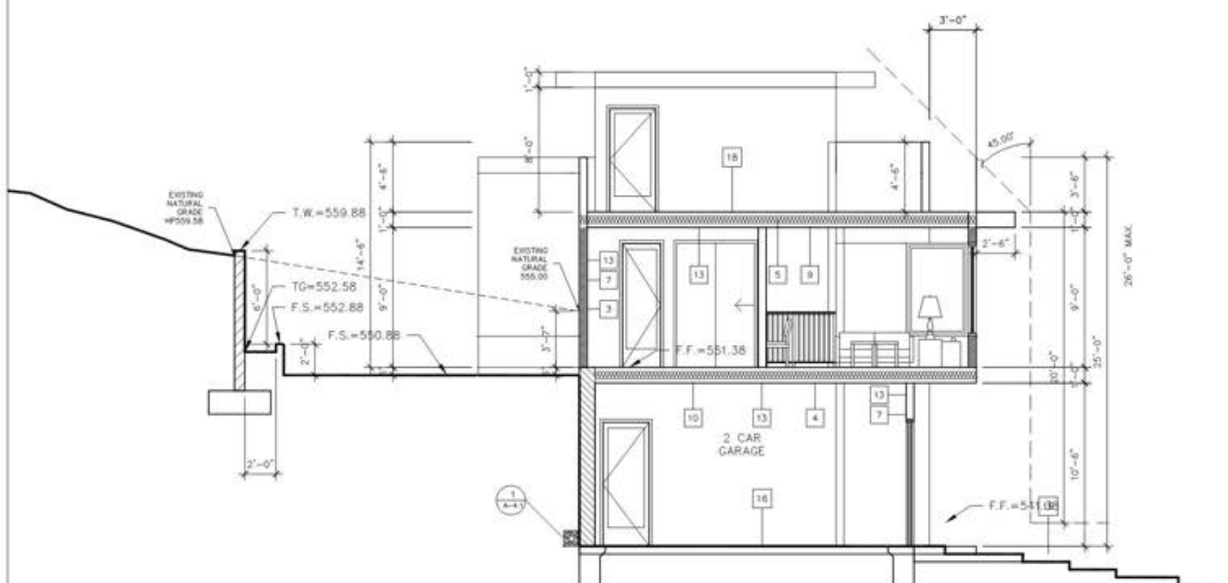
PROJECT
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE.
LOS ANGELES, CA
90032

SHEET TITLE:
SECTIONS

DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-4.1
OF SHEET



C RIGHT SIDE / NORTH SECTION
1/4" = 1'-0"



D LEFT SIDE / SOUTH SECTION
1/4" = 1'-0"

SECTION NOTES:

1. CONCRETE ROOF TILE
2. BUILT-UP ROOF
3. R-21 WALL INSULATION
4. R-19 FLOOR INSULATION
5. R-38 ROOF INSULATION
6. 7/8" STUCCO
7. 2X STUD WALL
8. 2X ROOF RAFTER
9. 2X CEILING JOIST
10. 2X FLOOR JOIST
11. 3/4" GYPCRETE
12. STONE VENEER
13. 5/8" TYPE "X" GYPSUM BD.
14. EAVE FACIA BOARD
15. RAIN GUTTER
16. CONCRETE SLAB
17. CONCRETE FOOTING
18. RADIANT BARRIER SHEATHING

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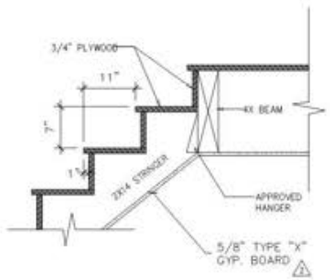
REVISIONS:

NO.	DATE
1	

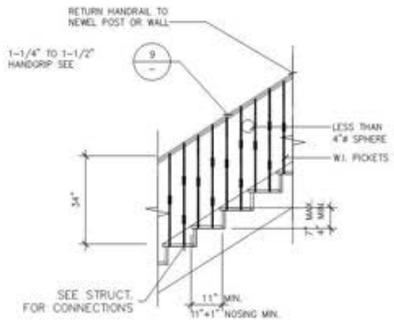
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SECTIONS

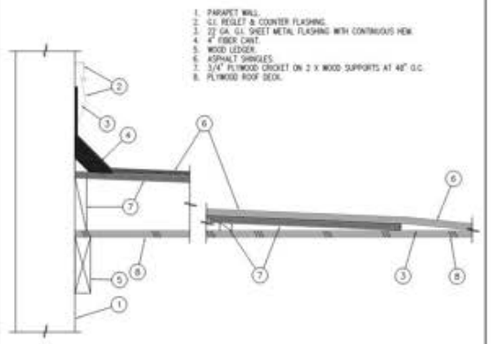
DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
A-4.2
OF SHEET



10 STAIR TOP
N.T.S.

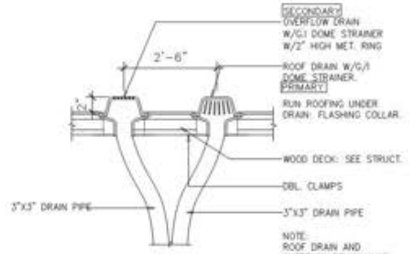


7 STAIR HANDRAIL
N.T.S.

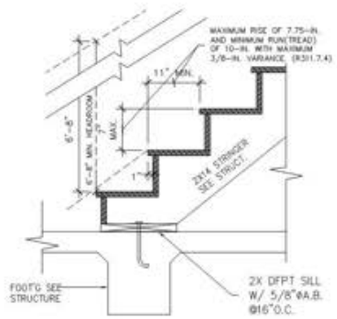


4 PLYWOOD CRICKET
SCALE: 1 1/2" = 1'-0"

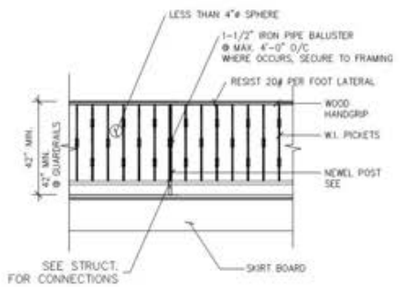
3.5X 06A-1015



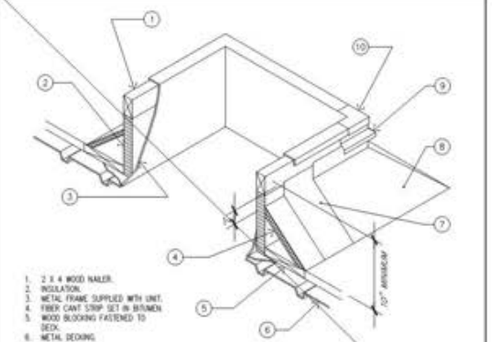
1 ROOF / OVERFLOW DRAIN
N.T.S.



11 STAIR BASE
N.T.S.

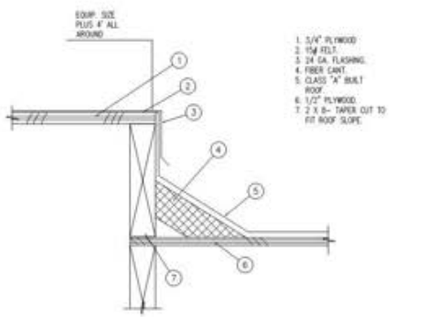


8 GUARDRAIL
N.T.S.



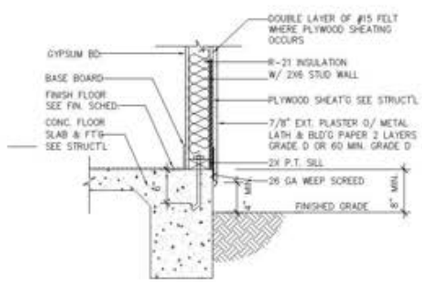
5 EQUIPMENT CURB
1" = 1'-0"

3X 07D-1069

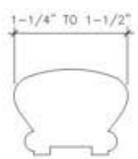


2 EQUIPMENT BASE
SCALE: 3" = 1'-0"

4.5X 07D-3007



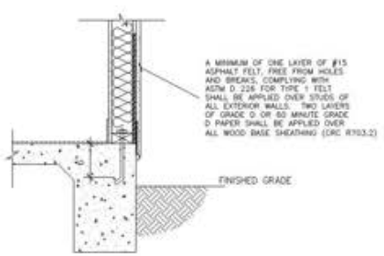
12 WEEP SCREED
N.T.S.



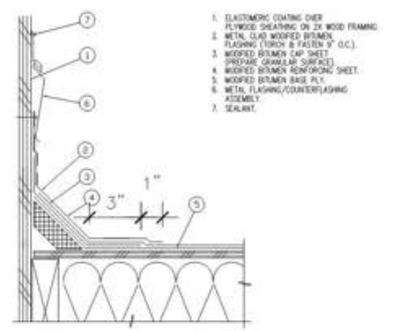
THE HANDGRIP PORTION OF HANDRAIL SHALL BE NOT LESS THAN 1-1/4" NOR MORE THAN 1-1/2" IN CROSS SECTIONAL DIMENSION

THE HANDGRIP PORTION OF HANDRAILS SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS.

9 HANDGRIP
N.T.S.



6 EXTERIOR WALL DETAIL
N.T.S.



3 REGLET FLASHING
SCALE: 3" = 1'-0"

4.5X 06A-1020

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PROJECT
SINGLE FAMILY RESIDENCE
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LOS ANGELES, CA 90032

SHEET TITLE:
CONSTRUCTION DETAILS

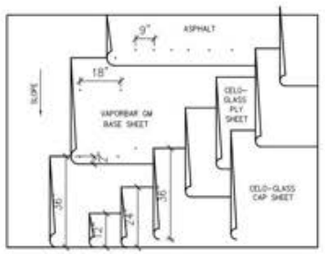
DATE: 06/09/2020
SCALE: AS NOTED
DRAWN: CL
JOB:
SHEET
D-1.1
OF SHEET

BUILT-UP ROOF DETAIL

FIVE-PLY MINERAL SURFACE

FOR USE DIRECTLY OVER WOOD, PLYWOOD, GYPSUM AND STRUCTURAL WOOD FIBER OR OTHER APPROVED NAILABLE DECKS.

AGS-5-W-M (SPECIFICATION WARRANTY UP TO 20 YRS.)
C/A-5-W-M (ROOFING SYSTEMS LIMITED WARRANTY UP TO 20 YRS.)



CELOTEX MATERIALS PER SQUARE OF ROOF AREA

VAPORBAR GB BASE SHEET	1 PLY
CELO-GLASS AGS PLY SHEET TYPE VI	3 PLIES
OR CELO-GLASS IV PLY SHEET	
CELO-GLASS CAP SHEET	1 PLY
ASPHALT (45kg)	APPROX. 100lbs.

MEMBRANE SYSTEM COMPLIANCE

a. UL CLASS "A" TO 2 INCHES (51mm) PER FOOT (305mm) ON NON-COMBUSTIBLE DECKS.
b. UL CLASS "A" TO ½ INCH (13mm) PER FOOT (305mm) ON COMBUSTIBLE DECKS (INCLUDING 15/32 INCH (12mm PLYWOOD)
c. FM CLASS 1 CONSTRUCTION (GYPSUM DECKS ONLY)

APPLICATION

"GENERAL REQUIREMENTS" AND "ROOF DECK REQUIREMENTS" ARE PART OF THESE SPECIFICATIONS.

1. STARTING AT THE LOW POINT, APPLY 1 PLY OF VAPORBAR GB BASS SHEET OVER THE ENTIRE SURFACE, LAPPING EACH SHEET 2 INCHES (51mm) MIN. OVER THE UNDERLYING SHEET LAP ENDS 3 INCHES (76mm) MIN. NAIL ALONG THE LAP AT MAX. 9 INCHES (229mm) INTERVALS AND STAGGER NAIL DOWN THE CENTER OF THE SHEET IN 2 ROWS WITH NAILS SPACED AT 18 INCHES (457mm) INTERVALS IN EACH ROW (APPROX. 90 NAILS PER SQUARE).

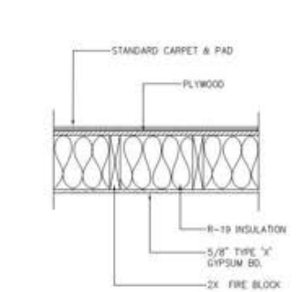
2. STARTING AT THE LOW POINT, EMBED 3 PILES OF CELO-GLASS PLY SHEET IN UNIFORM MOPPING OF HOT ASPHALT (18-30 lbs. (8.2-14kg) PER PLY PER SQUARE). USE STARTING STRIPS CUT 12 INCHES (305mm) AND 24 INCHES (610mm) WIDE FOLLOWED BY FULL WIDTH SHEETS. LAP EACH SHEET 24-¾ INCHES (627mm) OVER THE PRECEDING SHEET AND EMBED FULL WIDTH OF SHEET IN A COATING OF ASPHALT (18-30lbs. (8.2-14kg) PER SQUARE) SO THAT FELT DOES NOT TOUCH FELT. LAP ENDS 3 INCHES (76mm) MIN. BROOM IN PLY SHEETS WITH A SOFT BROOM OR SQUEEGEE.

3. STARTING AT THE LOW POINT, EMBED 1 PLY OF CELO-GLASS CAP SHEET IN A UNIFORM MOPPING OF HOT ASPHALT (18-30lbs.(8.2-14kg) PER SQUARE). LAP EACH SHEET 2 INCHES (51mm) MIN. OVER UNDERLYING SHEET. LAP ENDS 3 INCHES (76mm) MIN. KEEP END LAPS OF SUCCESSIVE COURSES AT LEAST 12 INCHES (305mm) APART.

4. EXTEND ROOFING SHEETS UP FACE OF CANT AND CUT OFF ABOVE CANT.

5. ON INCLINES 1 INCH (25mm) PER FOOT (305mm) OR MORE, BACKNAIL ALL PLIES.

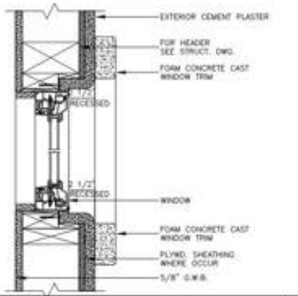
(13) ROOF DETAIL
N.T.S.



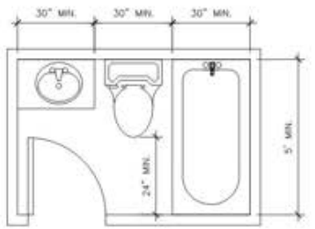
FIRE BLOCK @ FLOOR N.T.S. 9



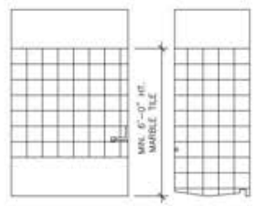
EMERGENCY EGRESS DETAIL N.T.S. 5



RECESSED WINDOW DETAIL N.T.S. 1

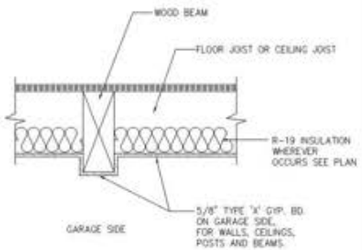


TYPICAL BATH ROOM N.T.S. 10

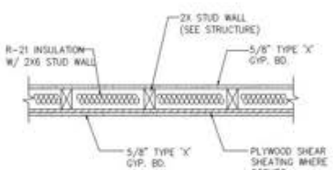


807.1.3 SHOWERS. SHOWERS IN ALL OCCUPANCIES SHALL BE FINISHED AS SPECIFIED IN SECTIONS 807.1.1 AND 807.1.2 TO A HEIGHT OF NOT LESS THAN 70 INCHES (1778MM.) ABOVE THE DRAIN INLET. MATERIALS OTHER THAN STRUCTURAL ELEMENTS USED IN SUCH WALLS SHALL BE OF A TYPE THAT IS NOT ADVERSELY AFFECTED BY MOISTURE. SEE SECTION 2512 FOR OTHER LIMITATIONS.

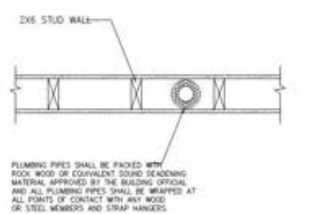
TUB SHOWER N.T.S. 6



FIRE PROTECTION DETAIL N.T.S. 2

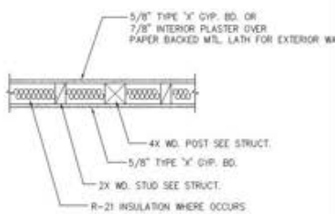


INTERIOR WALL (1-HR) (PLAN VIEW) N.T.S. 11

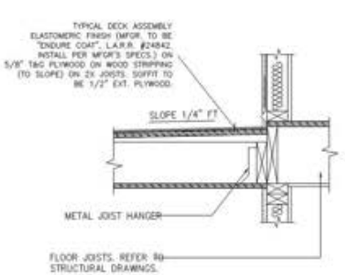


PLUMBING PIPES SHALL BE PACKED WITH ROCK WOOL OR EQUIVALENT SOUND DEADENING MATERIAL APPROVED BY THE BUILDING OFFICIAL AND ALL PLUMBING PIPES SHALL BE WRAPPED AT ALL POINTS OF CONTACT WITH ANY WOOD OR STEEL MEMBERS AND STRAP HANGERS.

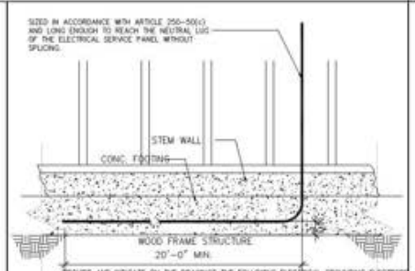
PLUMBING WALL (PLAN VIEW) N.T.S. 7



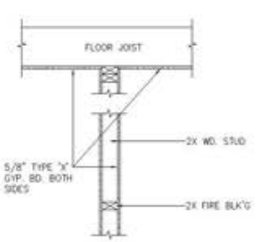
1-HR FIRE RATED WD. POST @ GARAGE N.T.S. 3



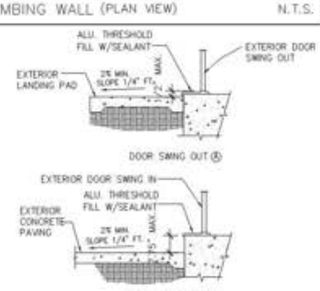
DECK / HOUSE CONNECTION N.T.S. 20



ELECTRICAL GROUNDING N.T.S. 16

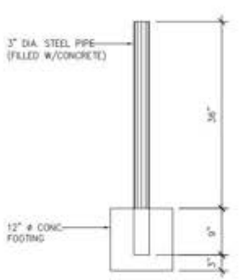


FIRE BLOCK @ WALL N.T.S. 12



LANDING WITH A WIDTH NOT LESS THAN THE WIDTH OF DOOR AND LENGTH IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 36 INCHES, WILL BE PROVIDED AT EXTERIOR DOORS. THE ELEVATION OF LANDING SHALL NOT EXCEED 1/2 INCH DIFFERENCE THAN THE THRESHOLD OF THE DOORWAY (7.75" IF DOOR DOES NOT SWING OVER THE LANDING).

CONC. PAD DETAIL N.T.S. 8



PIPE BOLLARD N.T.S. 4

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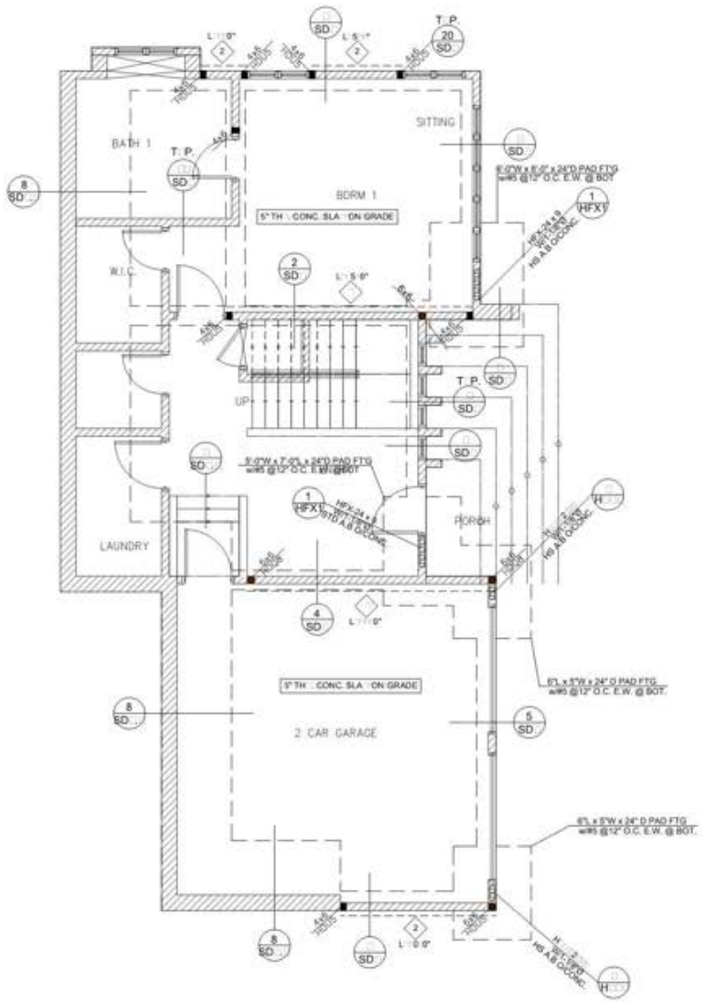
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SHEET TITLE:
CONSTRUCTION DETAILS

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SHEET
D-2.1
OF SHEET



FOUNDATION PLAN

1/4" = 1'-0"

FOUNDATION NOTES:

1. REFER TO SHEET SN AND SD1 FOR GENERAL NOTE AND TYPICAL DETAILS
2. SLAB ON GRADE 5" THICK CONCRETE SLAB WITH #4 REBARS AT 16" O.C. EACH WAY AT MID-DEPTH OVER 10-MIL POLYVINYL CHLORIDE PLASTIC FILM VAPOR BARRIER OVER 4" CLEAR GRAVEL AT LIVING SPACE. VAPOR BARRIER CAN BE ELIMINATED AT GARAGE AREA
3. SEE ARCHITECTURE AND CIVIL DRAWINGS FOR SLOPE, STEPS, AND DRAINAGE REQUIREMENTS.
4. ALL SILL PLATE SHALL BE SBX/DOT AND ZINC BORATE PRESERVATIVE-TREATED LUMBER, U.N.O.

SHEAR WALL ANCHOR BOLT SCHEDULE

S.W. TYPE	A.B. DIAMETER	SILL PLATE & A.B. SPACING	PLF
6	5/8" DIAMTER	2x PLATE W/ A.B. AT 48" O.C.	200
4	5/8" DIAMTER	2x PLATE W/ A.B. AT 40" o/c	350
3	5/8" DIAMTER	3x PLATE W/ A.B. AT 24" o/c	460
2	5/8" DIAMTER	3x PLATE W/ A.B. AT 24" o/c	600
1	5/8" DIAMTER	3x PLATE W/ A.B. AT 16" o/c	870

NOTES:
1. PROVIDE 3" x 3" x 0.229" STEEL PLATE WASHER AT EACH ANCHOR BOLT.
2. SEE DETAIL 11/SD1 FOR ANCHOR BOLT SPECIFICATION & NON-SHEAR WALL A.B. SPACING
3. ALL SILL PLATE SHALL BE PRESSURE TREATED DOUGLAS FIR-LARCH

SHEAR WALL SCHEDULE
2020 LABC/ 2019 CBC (SDC C, D, E & F)

S.W. TYPE	DESCRIPTION	TOP SILL PLATE & A.B. SPACING	PLF	INTERIOR 2ND & 3RD FLOOR SPN
6	3/8" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 6" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 48" o/c	200	(1) ROW OF 16d's AT 4" o/c
4	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 4" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 40" o/c	350	(2) ROWS OF 16d's AT 6" o/c
3	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 3" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	460	(2) ROWS OF 16d's AT 4" o/c
2	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	600	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREWS AT 4" o/c
1	15/32" STRUCTURAL WOOD STRUCTURAL PANEL W/ 10d AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 16" o/c	870	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREWS AT 3" o/c w/ 3x PLATE

NOTES:
A. WOOD STRUCTURAL PANEL SHALL MEET THE REQUIREMENTS OF STANDARD 23-2 OR 23-3. THESE VALUES ARE FOR DOUGLAS FIR-LARCH AND A STUD SPACING OF 16" o/c. OTHER LUMBER SPECIES MAY DIFFER IN SHEAR CAPACITIES.
B. ALL PANEL EDGES TO BE BACKED WITH 2x OR WIDER FRAMING MEMBER. ALL TOP PLATE NAILING TO BE INTO "UPPER" TOP PLATE ONLY.
C. WHERE PANELS ARE APPLIED TO BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" o/c. PANEL JOISTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3x OR WIDER AND NAILS STAGGERED ON EACH SIDE. PROVIDE 3x FOUNDATION SILL AT ALL DOUBLE SIDED SHEAR WALLS.
D. FOR SHEAR WALL TYPE 1, PROVIDE A SINGLE 3x MINIMUM MEMBER FOR FOUNDATION SILL PLATES. FOR SHEAR WALL TYPES 2, 3, AND 4, PROVIDE MINIMUM 3x POST OR BLOCKING AT ADJOINING PANEL EDGES AND STAGGER NAILS.
E. PROVIDE 3" x 3" x 0.229" STEEL PLATE WASHER AT EACH ANCHOR BOLT.
F. ALL NAILING LISTED ABOVE SHOULD CONFORM TO THE NAILING SPECIFIED IN THE HARDWARE AND NAIL SCHEDULE LOCATED ON SHEET SN. NAILING AT ADJOINING PANELS EDGES, SILL PLATE, AND TOP PLATES SHALL BE STAGGERED FOR SHEAR WALL TYPE 2, AND 1.
G. ALL EXTERIOR 2ND AND 3RD FLOOR WALLS ARE TO LAP PLYWOOD SHEAR TO RIM AND BE NAILED WITH (2) ROWS OF EDGE NAILING DIRECTLY TO RIM. THIS ELIMINATES THE NEED FOR ADDITIONAL SOLE PLATE NAILING & BLOCKING.

PAD FOOTING SCHEDULE

FTG MARK	SIZE(LxWxD)	REINFORCEMENT	REMARK
P	24"SQ.x12"	4-#4 EA WAY AT BOT.	--
P2	30"SQ.x18"	4-#4 EA WAY AT BOT.	--
P	36"SQ.x18"	5-#4 EA WAY AT BOT.	--
P4	42"SQ.x18"	6-#4 EA WAY AT BOT.	--
P5	48"SQ.x18"	7-#4 EA WAY AT BOT.	--

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REGISTERED PROFESSIONAL ENGINEER — MANUEL SOLORIO — S 5246 — EXP. 6/30/22 — STRUCTURAL — STATE OF CALIFORNIA

REVISIONS

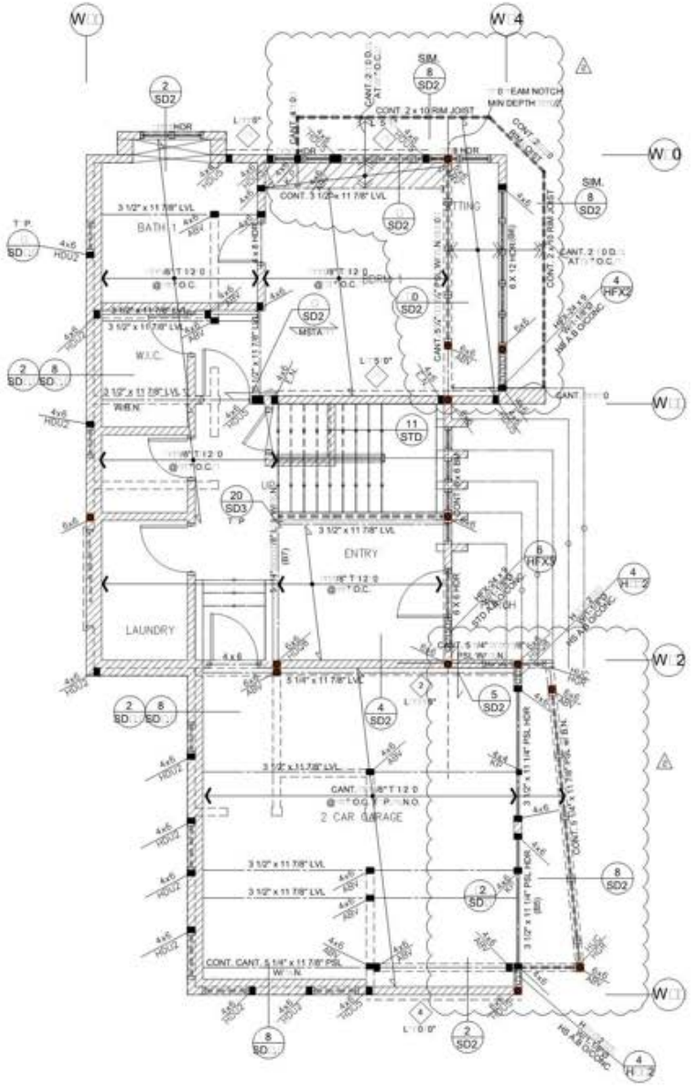
No.	DATE	DESCRIPTION
1.	12-9-2020	PC CORR.
2.	3-5-2021	ARCH REVISION

SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

FOUNDATION PLAN

JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No.

S□.0



FLOOR FRAMING PLAN

1/4" = 1'-0"

FRAMING LEGEND

- INDICATES SPAN AND DIRECTION OF ROOF JOISTS AND RAFTERS
- INDICATES SPAN AND DIRECTION OF TRUSSES AT 24" o/c
- INDICATES SPAN AND DIRECTION OF FLOOR JOISTS
- INDICATES SPAN AND DIRECTION OF DECK JOISTS
- INDICATES SPAN AND DIRECTION OF CEILING JOISTS
- (#) INDICATES SHEAR WALL TYPE. REFER TO S.W. SCHEDULE
- POST TYP. U.N.O.

ROOF AND FLOOR DIAPHRAGM
2020 LABC/ 2019 CBC (SDC C, D, E & F)

MAX. SPACING	DESCRIPTION
ROOF 24" o/c	15/32" WOOD STRUCTURAL PANEL, PS 32/16, WITH 8d NAILS (BLUE) AT 6" o/c AT EDGES AND BOUNDARIES, 12" o/c AT FIELD.
FLOOR 16" o/c	23/32" WOOD STRUCTURAL PANEL, T&G SHEATHING PS 48/24, WITH 10d NAILS (LIME) AT 6" o/c AT EDGES AND BOUNDARIES, 10" o/c AT FIELD.
FLOOR 20" o/c	23/32" WOOD STRUCTURAL PANEL, T&G SHEATHING PS 48/24, WITH 10d NAILS (LIME) AT 6" o/c AT EDGES AND BOUNDARIES, 10" o/c AT FIELD.
FLOOR 24" o/c	23/32" WOOD STRUCTURAL PANEL, T&G SHEATHING PS 48/24, WITH 10d NAILS (LIME) AT 6" o/c AT EDGES AND BOUNDARIES, 10" o/c AT FIELD.

NOTES:

A. ALL ROOF AND FLOOR SHEATHING TO BE EXPOSURE I OR EXTERIOR PER TABLES 2304.7 AND 2306.3.1 7/16" SHEATHING IS NOT STRUCTURALLY ACCEPTABLE FOR ROOF SHEATHING.

B. FOR FLOOR SHEATHING, WOOD STRUCTURAL PANEL SHALL BE UNDERLAYMENT GRADE. ALL FLOOR SHEATHING SHALL BE GLUED TO FRAMING.

C. ALL ROOF NAILS TO BE 8d (BLUE). ALL FLOOR NAILS TO BE 10d (PURPLE) IN LIEU OF 10d NAILS AT FLOOR SHEATHING #8 x 2" LONG SCREWS MAY BE USED.

D. FOR ALL FLOOR SHEATHING, PANEL EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH BLOCKING. NOT REQUIRED WHEN LIGHTWEIGHT CONCRETE IS PLACED OVER SUBFLOOR.

SHEAR WALL SCHEDULE
2020 LABC/ 2019 CBC (SDC C, D, E & F)

S.W. TYPE	DESCRIPTION	TOP, SILL PLATE & A.B. SPACING	PLF	INTERIOR 2ND & 3RD FLOOR SPN
6	3/8" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 6" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 48" o/c	200	(1) ROW OF 16d's AT 4" o/c
4	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 4" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 48" o/c	350	(2) ROWS OF 16d's AT 6" o/c
3	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 3" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	490	(2) ROWS OF 16d's AT 4" o/c
2	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	660	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREWS AT 4" o/c
1	15/32" STRUCTL WOOD STRUCTURAL PANEL W/ 10d AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 16" o/c	870	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREW AT 2" o/c w/ 2x PLATE

NOTES:

A. WOOD STRUCTURAL PANEL SHALL MEET THE REQUIREMENTS OF STANDARD 23-2 OR 23-3. THESE VALUES ARE FOR DOUGLAS FIR-LARCH AND A 32/16 SPACING OF 16" o/c. OTHER LUMBER SPECIES MAY DIFFER IN SHEAR CAPACITIES

B. ALL PANEL EDGES TO BE BACKED WITH 2x OR WIDER FRAMING MEMBER. ALL TOP PLATE NAILING TO BE INTO "UPPER" TOP PLATE ONLY.

C. WHERE PANELS ARE APPLIED TO BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" o/c. PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3x OR WIDER AND NAILS STAGGERED ON EACH SIDE. PROVIDE 3x FOUNDATION SILL AT ALL DOUBLE SIDED SHEAR WALLS.

D. FOR SHEAR WALL TYPE 1, PROVIDE A SINGLE 3x MINIMUM MEMBER FOR FOUNDATION SILL PLATES. FOR SHEAR WALL TYPES 3, 2, AND 1, PROVIDE MINIMUM 3x POST OR BLOCKING AT ADJOINING PANEL EDGES AND STAGGER NAILS.

E. PROVIDE 3" x 3" x 0.229" STEEL PLATE WASHER AT EACH ANCHOR BOLT. FOR DOUBLE SIDED ANCHOR BOLTS SPACING SHOULD BE KEPT HALF OF THAT FOR SINGLE SIDED SHEAR WALLS.

F. ALL NAILING LISTED ABOVE SHOULD CONFORM TO THE NAILING SPECIFIED IN THE HARDWARE AND NAIL SCHEDULE LOCATED ON SHEET S1. NAILING AT ADJOINING PANELS EDGES, SILL PLATE, AND TOP PLATES SHALL BE STAGGERED FOR SHEAR WALL TYPE 2, AND 1.

G. ALL EXTERIOR 2ND AND 3RD FLOOR WALLS ARE TO LAP PLYWOOD SHEAR TO RIM AND BE NAILED WITH (2) ROWS OF EDGE NAILING DIRECTLY TO RIM. THIS ELIMINATES THE NEED FOR ADDITIONAL SOLE PLATE NAILING & BLOCKING.

FRAMING NOTE:

1. REFER TO DETAILS ON SHEET ST0 FOR NAILING SCHED., STUDS / PLATE NOTCH, TRIMMER & KING POST SCHD.
2. PROVIDE "HU" HANGER FROM FLUSH BEAM TO FLUSH BEAM CONNECTION U.N.O. ON PLAN.
3. PORVIDE NUMBER OF STUDS THAT MATCH THE PLY OF GIRDER TRUSSES FROM FT'G TO TOP PLATE OR SOLID BLK'G BETWEEN THE TOP OF HDR & BOT OF THE TOP PLATES AT ALL GIRDER TRUSS LOCATIONS U.N.O.

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REVISIONS

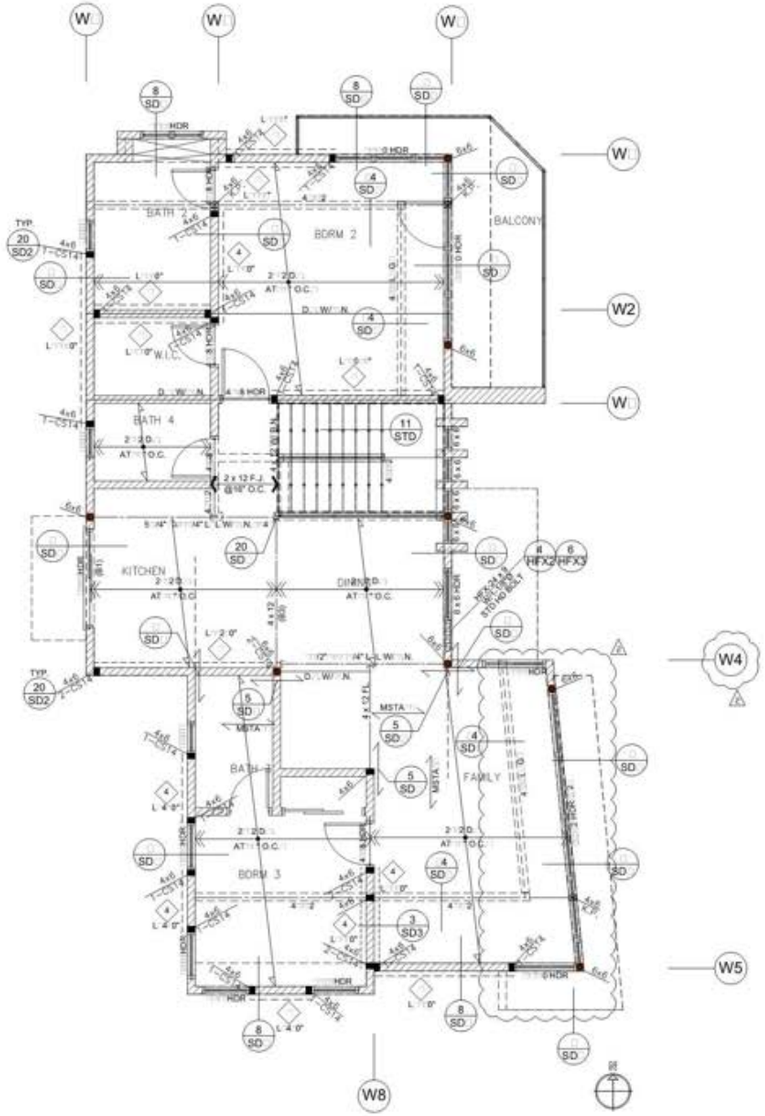
No.	DATE	DESCRIPTION
1	12-9-2020	PC CORR.
2	3-5-2021	ABCE REVISION

SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

FLOOR FRAMING PLAN

JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No.

S2.0



ROOF FRAMING PLAN

1/4" = 1'-0"

FRAMING LEGEND

- INDICATES SPAN AND DIRECTION OF ROOF JOISTS AND RAFTERS
- INDICATES SPAN AND DIRECTION OF TRUSSES AT 24" o/c
- INDICATES SPAN AND DIRECTION OF FLOOR JOISTS
- INDICATES SPAN AND DIRECTION OF DECK JOISTS
- INDICATES SPAN AND DIRECTION OF CEILING JOISTS
- (#) INDICATES SHEAR WALL TYPE. REFER TO S.W. SCHEDULE
- POST TYP. U.N.O.

ROOF AND FLOOR DIAPHRAGM
2020 LABC/ 2019 CBC (SDC C, D, E & F)

MAX. SPACING	DESCRIPTION
ROOF 24" o/c	15/32" WOOD STRUCTURAL PANEL, PR 32/16, WITH 8d NAILS (BLUE) AT 6" o/c AT EDGES AND BOUNDARIES, 12" o/c AT FIELD
FLOOR 16" o/c	23/32" WOOD STRUCTURAL PANEL,T&G SHEATHING PR 48/24, WITH 10d NAILS (LIME) AT 6" o/c AT EDGES AND BOUNDARIES, 12" o/c AT FIELD
FLOOR 20" o/c	23/32" WOOD STRUCTURAL PANEL,T&G SHEATHING PR 48/24, WITH 10d NAILS (LIME) AT 6" o/c AT EDGES AND BOUNDARIES, 12" o/c AT FIELD
FLOOR 24" o/c	23/32" WOOD STRUCTURAL PANEL,T&G SHEATHING PR 48/24, WITH 10d NAILS (LIME) AT 6" o/c AT EDGES AND BOUNDARIES, 12" o/c AT FIELD

NOTES:

A. ALL ROOF AND FLOOR SHEATHING TO BE EXPOSURE 1 OR EXTERIOR PER TABLES 2304.7 AND 2304.3.1 7/16" SHEATHING IS NOT STRUCTURALLY ACCEPTABLE FOR ROOF SHEATHING.

B. FOR FLOOR SHEATHING, WOOD STRUCTURAL PANEL SHALL BE UNDERLAYMENT GRADE. ALL FLOOR SHEATHING SHALL BE GLUED TO FRAMING.

C. ALL ROOF NAILS TO BE 8d (BLUE). ALL FLOOR NAILS TO BE 10d (PURPLE) IN LIEU OF 10d NAILS AT FLOOR SHEATHING #8 x 2" LONG SCREWS MAY BE USED.

D. FOR ALL FLOOR SHEATHING, PANEL EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH BLOCKING. NOT REQUIRED WHEN LIGHTWEIGHT CONCRETE IS PLACED OVER SUBFLOOR.

SHEAR WALL SCHEDULE
2020 LABC/ 2019 CBC (SDC C, D, E & F)

S.W. TYPE	DESCRIPTION	2SPL SAL PLATE & A.B. SPACING	PLF	INTERIOR 2ND & 3RD FLOOR SPN.
6	3/8" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 6" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 48" o/c	200	(1) ROW OF 16d's AT 4" o/c
4	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 4" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 40" o/c	350	(2) ROWS OF 16d's AT 4" o/c
3	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 3" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	490	(2) ROWS OF 16d's AT 4" o/c
2	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	600	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREWS AT 4" o/c
1	15/32" STRUCTURAL WOOD STRUCTURAL PANEL W/ 10d AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 16" o/c	870	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREWS AT 3" o/c w/ 2x PLATE.

NOTES:

A. WOOD STRUCTURAL PANEL SHALL MEET THE REQUIREMENTS OF STANDARD 23-2 OR 23-3. SHEAR VALUES ARE FOR DOUGLAS FIR-LARCH AND A STUD SPACING OF 16" o/c. OTHER LUMBER SPECIES MAY DIFFER IN SHEAR CAPACITIES.

B. ALL PANEL EDGES TO BE BACKED WITH 2x OR WIDER FRAMING MEMBER. ALL TOP PLATE NAILING TO BE INTO "UPPER" TOP PLATE ONLY.

C. WHERE PANELS ARE APPLIED TO BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" o/c, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3x OR WIDER AND NAILS STAGGERED ON EACH SIDE. PROVIDE 3x FOUNDATION SILL AT ALL DOUBLE SIDED SHEAR WALLS.

D. FOR SHEAR WALL TYPE 1, PROVIDE A SINGLE 3x MINIMUM MEMBER FOR FOUNDATION SILL PLATES. FOR SHEAR WALL TYPES 2, 3, AND 4, PROVIDE MINIMUM 3x POST OR BLOCKING AT ADJOINING PANEL EDGES AND STAGGER NAILS.

E. PROVIDE 3" x 3" x 0.229" STEEL PLATE WASHER AT EACH ANCHOR BOLT. FOR DOUBLE SIDED ANCHOR BOLTS SPACING SHOULD BE KEPT HALF OF THAT FOR SINGLE SIDED SHEAR WALLS.

F. ALL NAILING LISTED ABOVE SHOULD CONFORM TO THE NAILING SPECIFIED IN THE HARDWARE AND NAIL SCHEDULE LOCATED ON SHEET S0. NAILING AT ADJOINING PANELS EDGES, SILL PLATE, AND TOP PLATES SHALL BE STAGGERED FOR SHEAR WALL TYPE 2, AND 1.

G. ALL EXTERIOR 2ND AND 3RD FLOOR WALLS ARE TO LAP PLYWOOD SHEAR TO RIM AND BE NAILED WITH (2) ROWS OF EDGE NAILING DIRECTLY TO RIM. THIS ELIMINATES THE NEED FOR ADDITIONAL SOLE PLATE NAILING & BLOCKING.

FRAMING NOTE:

1. REFER TO DETAILS ON SHEET S1D FOR NAILING SCHED., STUDS / PLATE NOTCH, TRIMMER & KING POST SCHD.
2. PROVIDE "HU" HANGER FROM FLUSH BEAM TO FLUSH BEAM CONNECTION U.N.O. ON PLAN.
3. PORVIDE NUMBER OF STUDS THAT MATCH THE PLY OF GIRDER TRUSSES FROM FT'G TO TOP PLATE OR SOLID BLK'G BETWEEN THE TOP OF HDR & BOT OF THE TOP PLATES AT ALL GIRDER TRUSS LOCATIONS U.N.O.

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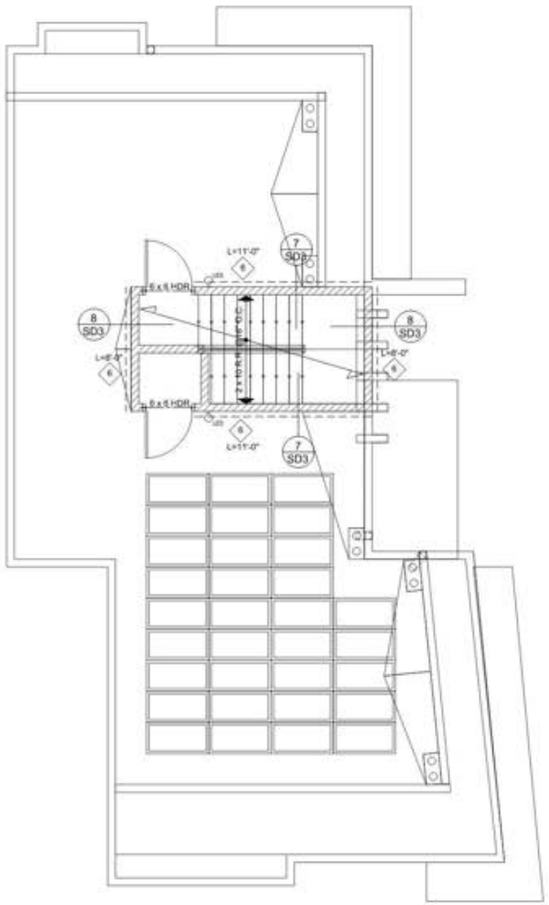
REVISIONS

No.	DATE	DESCRIPTION
1	12-9-2020	PC COMM.
2	3-5-2021	ABOVE REVISION

SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

ROOF FRAMING PLAN

JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No. S□.0



ROOF DECK FRAMING PLAN

1/4" = 1'-0"

FRAMING LEGEND

- INDICATES SPAN AND DIRECTION OF ROOF JOISTS AND RAFTERS.
- INDICATES SPAN AND DIRECTION OF TRUSSES AT 24" o/c
- INDICATES SPAN AND DIRECTION OF FLOOR JOISTS
- INDICATES SPAN AND DIRECTION OF DECK JOISTS
- INDICATES SPAN AND DIRECTION OF CEILING JOISTS
- (#) INDICATES SHEAR WALL TYPE. REFER TO S.W. SCHEDULE
- POST TYP. U.N.O.

ROOF AND FLOOR DIAPHRAGM
2020 LABC/ 2019 CBC (SDC C, D, E & F)

MAX. SPACING	DESCRIPTION
ROOF 24" o/c	15/32" WOOD STRUCTURAL PANEL, PX 32/16, WITH 8d NAILS (BLUE) AT 6" o/c AT EDGES AND BOUNDARIES, 12" o/c AT FIELD.
FLOOR 16" o/c	23/32" WOOD STRUCTURAL PANEL T&G SHEATHING PX 48/24, WITH 10d NAILS (LINE) AT 6" o/c AT EDGES AND BOUNDARIES, 10" o/c AT FIELD.
FLOOR 20" o/c	23/32" WOOD STRUCTURAL PANEL T&G SHEATHING PX 48/24, WITH 10d NAILS (LINE) AT 6" o/c AT EDGES AND BOUNDARIES, 10" o/c AT FIELD.
FLOOR 24" o/c	23/32" WOOD STRUCTURAL PANEL T&G SHEATHING PX 48/24, WITH 10d NAILS (LINE) AT 6" o/c AT EDGES AND BOUNDARIES, 10" o/c AT FIELD.

NOTES:

A. ALL ROOF AND FLOOR SHEATHING TO BE EXPOSURE I OR EXTERIOR PER TABLES 2304.7 AND 2306.1.1 7/16" SHEATHING IS NOT STRUCTURALLY ACCEPTABLE FOR ROOF SHEATHING.

B. FOR FLOOR SHEATHING, WOOD STRUCTURAL PANEL SHALL BE UNDERLAYMENT GRADE. ALL FLOOR SHEATHING SHALL BE GLUED TO FRAMING.

C. ALL ROOF NAILS TO BE 8d (BLUE). ALL FLOOR NAILS TO BE 10d (PURPLE) IN LIEU OF 10d NAILS AT FLOOR SHEATHING gft a 2" LONG SCREWS MAY BE USED.

D. FOR ALL FLOOR SHEATHING, PANEL EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH BLOCKING. NOT REQUIRED WHEN LIGHTWEIGHT CONCRETE IS PLACED OVER SUBFLOOR.

SHEAR WALL SCHEDULE
2020 LABC/ 2019 CBC (SDC C, D, E & F)

S.W. TYPE	DESCRIPTION	TOP, SILL PLATE & H.D. SPACING	PLF	EXTERIOR 2ND & 3RD FLOOR SPN.
6	3/8" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 6" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 48" o/c	220	(1) ROW OF 16d's AT 4" o/c
4	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 4" o/c AT EDGES AND 12" o/c AT FIELD	2x PLATE A.B. AT 40" o/c	350	(2) ROWS OF 16d's AT 4" o/c
3	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 3" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	490	(2) ROWS OF 16d's AT 4" o/c
2	15/32" WOOD STRUCTURAL PANEL W/ 8d NAILS AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 24" o/c	608	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREWS AT 4" o/c
1	15/32" STRUCT.I WOOD STRUCTURAL PANEL W/ 10d AT 2" o/c AT EDGES AND 12" o/c AT FIELD	3x PLATE A.B. AT 16" o/c	870	(1) ROW OF 1/4" x 3-1/2" LONG SDS SCREWS AT 3" o/c w/ 2x PLATE.

NOTES:

A. WOOD STRUCTURAL PANEL SHALL MEET THE REQUIREMENTS OF STANDARD 23-2 OR 23-3. THESE VALUES ARE FOR DOUGLAS FIR-LARCH AND A STUD SPACING OF 16" o/c., OTHER LUMBER SPECIES MAY DIFFER IN SHEAR CAPACITIES.

B. ALL PANEL EDGES TO BE BACKED WITH 2x OR WIDER FRAMING MEMBER. ALL TOP PLATE NAILING TO BE INTO "UPPER" TOP PLATE ONLY.

C. WHERE PANELS ARE APPLIED TO BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" o/c. PANEL JOISTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3x OR WIDER AND NAILS STAGGERED ON EACH SIDE. PROVIDE 3x FOUNDATION SILL AT ALL DOUBLE SIDED SHEAR WALLS.

D. FOR SHEAR WALL TYPE 1, PROVIDE A SINGLE 3x MINIMUM MEMBER FOR FOUNDATION SILL PLATES. FOR SHEAR WALL TYPES 3, 2, AND 1, PROVIDE MINIMUM 3x POST OR BLOCKING AT ADJOINING PANEL EDGES AND STAGGER NAILS.

E. PROVIDE 3" x 3" x 0.229" STEEL PLATE WASHER AT EACH ANCHOR BOLT FOR DOUBLE SIDED ANCHOR BOLTS SPACING SHOULD BE KEPT HALF OF THAT FOR SINGLE SIDED SHEAR WALLS

F. ALL NAILING LISTED ABOVE SHOULD CONFORM TO THE NAILING SPECIFIED IN THE HARDWARE AND NAIL SCHEDULE LOCATED ON SHEET S1. NAILING AT ADJOINING PANELS EDGES, SILL PLATE, AND TOP PLATES SHALL BE STAGGERED FOR SHEAR WALL TYPE 2, AND 1.

G. ALL EXTERIOR 2ND AND 3RD FLOOR WALLS ARE TO LAP PLYWOOD SHEAR TO RIM AND BE NAILED WITH (2) ROWS OF EDGE NAILING DIRECTLY TO RIM. THIS ELIMINATES THE NEED FOR ADDITIONAL SOLE PLATE NAILING & BLOCKING.

FRAMING NOTE:

1. REFER TO DETAILS ON SHEET ST0 FOR NAILING SCHED., STUDS / PLATE NOTCH, TRIMMER & KING POST SCHD.
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3. PORVIDE NUMBER OF STUDS THAT MATCH THE PLY OF GIRDER TRUSSES FROM FT'G TO TOP PLATE OR SOLID BLK'G BETWEEN THE TOP OF HDR & BOT OF THE TOP PLATES AT ALL GIRDER TRUSS LOCATIONS U.N.O.

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REGISTERED PROFESSIONAL ENGINEER — PRAVIN KHANAL — S 5246 — EXP. 6/30/22 — STRUCTURAL — STATE OF CALIFORNIA

REVISIONS

No.	DATE	DESCRIPTION
1	12-9-2020	PC CORR.
2	3-5-2021	ABCE REVISION

SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

PENTHOUSE FRAMING PLAN

JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No. S4.0

GENERAL NOTES

ALL WORK TO CONFORM TO THE 2019 CBC AS AMENDED BY CITY OF LOS ANGELES, CA

[illegible]

CONCRETE

[illegible]

REINFORCING STEEL

[illegible]

SOILS AND FOUNDATION

[illegible]

ICC ESR / LARR REFERENCE LIST

A COPY OF THE ICC ESR / LARR REPORT AND/OR CONDITIONS OF THE LISTING SHALL BE MADE AVAILABLE AT THE JOBSITE.

- -A.B. ICC ESR-2611 / LARR#25209
- -HOLD-DOWNS ICC ESR-2330 / LARR#25720
- -STRAPS ICC ESR-2105 / LARR#25713
- -FTA ICC ESR-2613 / LARR#25718
- -A35 / LTP4 ICC ESR-2606 / LARR#25910
- -HANGERS ICC ESR-2553 / LARR#25807
- -HFX HARDY SHEAR PANEL: ICC ESR-2508 / LARR#25759
- -PARALLAM ICC ESR-1387 / LARR#25202
- -STEEL STRONGWALL ICC ESR-1679 / LARR#25625
- -STRONGWALL ICC ESR-1267 / LARR#25427
- -TJI WOOD JOIST ICC ESR-1153 / LARR#25538
- -STRAP TIE HOLD-DOWNS ICC ESR-2920
- -SSTB & SB ICC ESR-2611

WOOD ROUGH FRAMING

[illegible]

GLUED LAMINATED LUMBER

[illegible]

HARDWARE AND WOOD CONNECTORS

[illegible]

STRUCTURAL STEEL

[illegible]

MANUFACTURED WOOD TRUSSES

1. MANUFACTURER SHALL SUPPLY TO THE ENGINEER AND THE BUILDING DEPARTMENT CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. ALL CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED BY A CALIFORNIA REGISTERED PROFESSIONAL ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER TO OBTAIN BUILDING DEPARTMENT APPROVAL OF CALCULATIONS AND SHOP DRAWINGS.
2. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST LOCAL ADOPTED BUILDING CODE FOR ALL LOADS IMPOSED, INCLUDING LATERAL LOADS AND MECHANICAL EQUIPMENT LOADS.
3. ALL CONNECTORS SHALL BE ICC APPROVED AND OF ADEQUATE STRENGTH TO RESIST STRESSES DUE TO THE LOADING INVOLVED.
4. DEAD LOAD DEFLECTIONS SHALL BE LIMITED TO L/240.
5. CROSS BRIDGING AND/OR BRACING SHALL BE PROVIDED AND DETAILED BY THE TRUSS MANUFACTURER AS REQUIRED TO ADEQUATELY BRACE ALL TRUSSES.
6. CONTRACTOR SHALL HAVE BUILDING DEPARTMENT APPROVED TRUSS PLAN ON JOB SITE PRIOR TO FOUNDATION INSPECTION AND THROUGHOUT CONSTRUCTION PHASE. THESE TRUSS PLANS SHALL CONFORM TO THE FRAMING PLANS PREPARED BY THE ENGINEER OF RECORD. TRUSS PLANS SHALL BEAR WET SIGNATURE OF TRUSS DESIGN ENGINEER AND SHALL HAVE BEEN REVIEWED BY ENGINEER OF RECORD.
7. APPROVED FINAL TRUSS DRAWINGS SHALL BECOME PART OF CONSTRUCTION DOCUMENTS.
8. EACH TRUSS SHALL BE LEGIBLY BRANDED, MARKED OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED WITHIN 2 FEET OF THE CENTER OF THE SPAN ON THE FACE OF THE BOTTOM CHORD PER IBC 2303.4:
   A. IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS.
   B. THE DESIGN LOAD.
   C. THE SPACING OF THE TRUSSES.
9. TRUSS MANUFACTURER TO DESIGN TRUSSES PER FRAMING PLANS WITH THE FOLLOWING REQUIREMENTS:
   A. ALIGN ALL TOPS OF TRUSS CHORDS.
   B. AT ATTIC ACCESS PROVIDE 30" TRUSS BAY SPACING WITH LADDER BLOCKING AT 24" o/c. REFER TO DETAIL 1/SD2 FOR SPAN RATING.
   C. PROVIDE ADDITIONAL SUPPORT AT MECHANICAL UNITS, WHERE OCCURS.
   D. PROVIDE CONVENTIONAL FURRING AT INTERIOR COFFERED CEILING AREAS U.N.O.
   E. TRUSS HANGERS TO BE DESIGNED BY TRUSS MANUFACTURER.
   F. PROVIDE SOLID BEARING AT MULTIPLE GIRDER TRUSS(ES).
10. TRUSS SHOP DRAWING TO BE DEFERED SUBMITTAL.

SHOP DRAWINGS

1. THE SHOP DRAWING SUBMITTALS FROM THE VARIOUS TRADES WILL BE REVIEWED BY THE ENGINEER OF RECORD AND/OR ARCHITECT ONLY AFTER SUCH DRAWINGS HAVE BEEN:
   A. INITIALLY REVIEWED AND ACCEPTED AS CONFORMING WITH THE STRUCTURAL CONSTRUCTION DRAWINGS BY THE RESPONSIBLE SUPERVISOR AND DRAWINGS CHECKER WITH THEIR SIGNATURES.
   B. APPROVED AND ACCEPTED WITH A STAMP FROM THE GENERAL CONTRACTOR AS CONFORMING TO THE CONSTRUCTION DOCUMENTS.

1. Hold-down connector bolts into wood framing requires approved washers; and hold-downs shall be finger tight and 1/2 wrench turn just prior to covering the wood framing. Connector bolts into wood framing require steel plate washers in accordance with Table 2305.5 of the Building Code.
2. Roof diaphragm nailing to be inspected before covering. Face grain plywood shall be Perpendicular to supports. Floor shall have tongue and groove or blocked edges. Plywood span shall conform with Table 2304.7.
3. All diaphragm and shear wall nailing shall utilize common nails or galvanized box.
4. All bolts hole shall be drilled 1/32" to 1/16" oversized.
5. Hold-down hardware must be secured in place prior to foundation inspection.

STRUCTURAL OBSERVATION

[illegible]

STRUCTURAL OBSERVATION PROGRAM AND DESIGNATION OF THE STRUCTURAL OBSERVER

[illegible]

SPECIAL INSPECTION MATERIALS TESTING PROGRAM

[illegible]

DESIGN LOADS

[illegible]

STRUCTURAL ABBREVIATIONS

[illegible]

ENGINEERED WOOD PRODUCTS:

EQUIVALENT I-JOISTS		
MANF	TYPE	SIZE - DEPTH (IN)
TJI	110 230	9-1/2, 11-7/8, & 14 16
LP	20W 32W	9-1/2, 11-7/8, & 14 16
BCI	5000 6000 6500	9-1/2, 11-7/8 14 16
ABI	40	ALL
RFPI	20 400	9-1/2, 11-7/8, 14 16
GP	40 65	9-1/2, 11-7/8, 14 16
WI	40 60	9-1/2, 11-7/8, 14 16

EQUIVALENT I-JOISTS		
MANF	TYPE	SIZE - DEPTH (IN)
TJI	210 230	9-1/2, 11-7/8, & 14 16
LP	20W 32W	9-1/2, 11-7/8, & 14 16
BCI	5000 6000	9-1/2, 11-7/8, & 14 16
ABI	40	ALL
RFPI	400 20	9-1/2, 11-7/8, 16 14
GP	40 65	9-1/2, 11-7/8, & 14 16
WI	40 60	9-1/2, 11-7/8, & 14 16

EQUIVALENT I-JOISTS		
MANF	TYPE	SIZE - DEPTH (IN)
TJI	230	ALL
LP	32W	ALL
BCI	6500	ALL
ABI	60	ALL
RFPI	400	9-1/2, 11-7/8 14 & 16
GP	40 65	9-1/2, 11-7/8, 14 16
WI	40 60	9-1/2, 11-7/8 14, 16

EQUIVALENT I-JOISTS		
MANF	TYPE	SIZE - DEPTH (IN)
TJI	360	11-7/8, 14, 16
LP	32W	11-7/8, 14, 16
BCI	6500	11-7/8, 14, 16
ABI	80	11-7/8, 14, 16
RFPI	70	11-7/8, 14 & 16
GP	65	11-7/8, 14, 16
WI	60 80	11-7/8 14 & 16

I-JOIST ICC ESR NUMBERS
TJI ESR-1153
LP ESR-1305
BCI ESR-1336
ABI ESR-1262
RFPI ESR-1251
WI ESR-1262
GPI ESR-1262

MANUFACTURERS
TJI = WEYERHAEUSER
LP = LOUISIANA PACIFIC
BCI = BOISE CASCADE
ABI = ANTHONY POWER JOISTS
RFPI = ROSEBURG FOREST PRODUCTS
GP = GEORGIA PACIFIC
WI = GEORGIA PACIFIC

"EWB" - ENGINEERED WOOD BEAM WIDTH GREATER THAN 3.5"*			
"EWB" DESIGN VALUES	Fb (psi)	Fv (psi)	E (x10^6 psi)
BEAM WIDTH > 3.5"	2900	285	2.0
BCI VERSA-LAM 3100 - LVL	3000	285	2.0
2.0E LP GANG-LAM - LVL	2950	290	2.0
TJ PARALLAM - PSL	2900	290	2.0
2.0E ROSEBURG RIGIDLAM - LVL	2900	285	2.0
ANTHONY POWER BEAM - LSL	3000	290	2.1
2.0E WELDWOOD - LVL	3000	285	2.0
CALVERT GL 3000 1JC GLU-LAM	3000	300	2.1
GP LAM - LVL	2900	285	2.0

"EWB" - ENGINEERED WOOD BEAM WIDTH LESS THAN OR EQUAL TO 3.5"*			
"EWB" DESIGN VALUES	Fb (psi)	Fv (psi)	E (x10^6 psi)
BEAM WIDTH UP TO 3.5"	2325	285	1.55
BCI VERSA-LAM 2800 - LVL	2800	285	2.0
BCI VERSA-LAM 3100 - LVL	3000	285	2.0
BCI VERSA-LAM 2650 - LVL	2650	285	1.7
BCI VERSA-LAM 2600 - LVL	2600	285	1.9
1.9E LP GANG-LAM - LVL	2650	285	1.9
2.0E LP GANG-LAM - LVL	2950	290	2.0
TJ PARALLAM - PSL	2900	290	2.0
TJ TIMBERSTRAND - LSL	2325	310	1.55
1.8E ROSEBURG RIGIDLAM - LVL	2600	285	1.8
2.0E ROSEBURG RIGIDLAM - LVL	2900	285	2.0
ANTHONY POWER BEAM - LSL	3000	290	2.1
2.0E WELDWOOD - LVL	3000	285	2.0
1.8E WELDWOOD - LVL	2850	285	1.8
CALVERT GL 3000 1JC GLU-LAM	3000	300	2.1
GP LAM - LVL	2900	285	2.0

*ALL BEAMS SHALL BE ACTUAL WIDTH NOTED ON PLANS. MULTIPLY BEAMS ARE NOT ACCEPTABLE.

GLULAM BEAMS - "GLB" OR "GLU-LAM"	
BEAM TYPE	SPECIFICATION
SIMPLY SUPPORTED	24F-V4 DF/DF
CANTILEVERED	24F-V8 DF/DF
CONTINUOUS OVER SUPPORTS	24F-V8 DF/DF

TYPICAL HANGERS, U.N.O. PER PLAN

FRAMING	CONDITION	SIMPSON	CAPACITY	
MFR ROOF TRUSSES	TO GIRDER TO BEAM TO 2x LEDGER	PER MFR LUS26 LUS26	PER MFR 1115 1115	
CONV. JOIST	TO BEAM TO 2x LEDGER	LUS* LUS46*	VARIES VARIES	
I-JOIST	TO BEAM TO 2x LEDGER	LUS* LUS*	VARIES VARIES	
MFR FLOOR TRUSSES	TO FLR GIRDER TO BEAM TO 2x LEDGER	PER MFR LUS46 LUS46	PER MFR 1000 1000	

NOTES: * HANGER DEPTH TO MATCH SUPPORTED MEMBER DEPTH

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REGISTERED PROFESSIONAL ENGINEER S 5368 EXP. 6/30/22 STRUCTURAL STATE OF CALIFORNIA

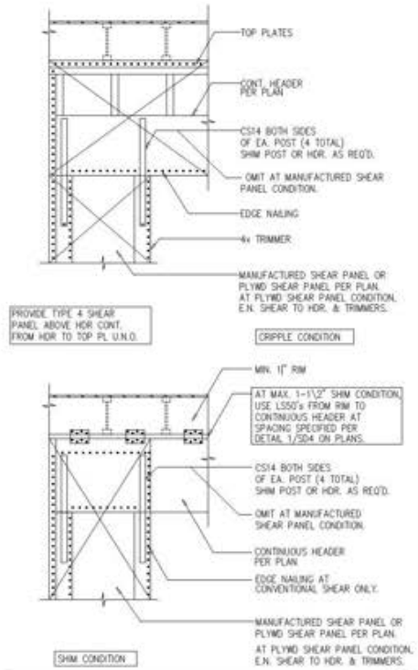
REVISIONS		
No.	DATE	DESCRIPTION
1.	11-9-2020	PC CORR.
2.	3-5-2021	ARCH. REVISION

SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

STRUCTURAL MATERIAL SPECIFICATIONS & GENERAL NOTES

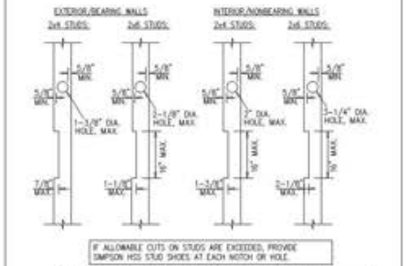
JOB No. 20017
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SCALE
SHEET No.

SN



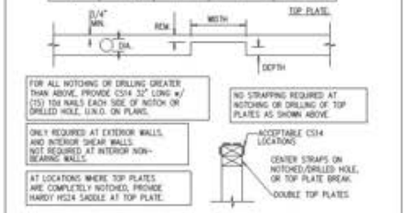
GARAGE HEADER CONNECTION

8



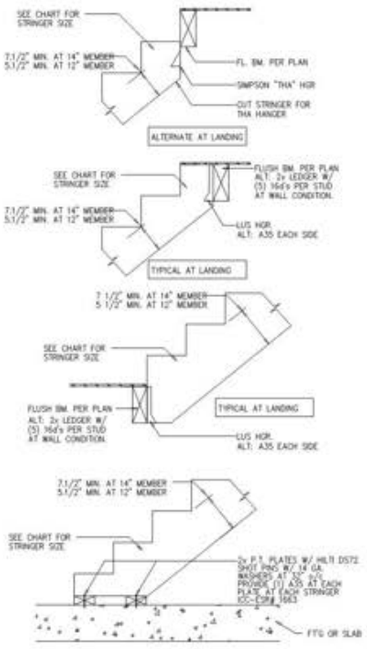
ALLOWABLE HOLES AND NOTCHES IN TOP PLATES

PLATE SIZE	DEPTH	WIDTH	REMAINING	DIAMETER
2x4	2"	16"	1-1\2"	2"
2x6	3-1\2"	16"	2"	3-1\2"



NOTCHED OR DRILLED STUDS & TOP PLATES

4



SPACING	20" o.c.	16" o.c.	12" o.c.
STRINGER	MAX SPAN	MAX SPAN	MAX SPAN
2 x 12	7'-0"	8'-0"	9'-0"
2 x 14	10'-0"	11'-0"	12'-0"
1.1/2"x11.7/8"	7'-0"	8'-0"	9'-0"
1.1/2"x14"	11'-0"	11'-0"	13'-0"

STAIRS FRAMING AND CONNECTIONS

1

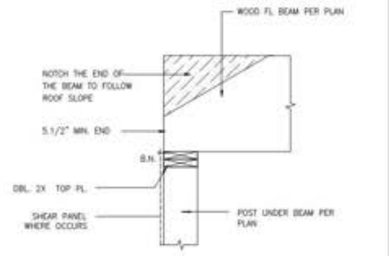
TRIMMER SCHEDULE - OPENING HT. UP TO 8'-1" MAX.			
HDR SIZE	TRIMMERS REQ'D	HDR. SIZE	TRIMMER REQ'D
4x6	1-2x4	6x6	1-2x6
4x8	2-2x4	6x8	1-2x6
4x10	2-2x4	6x10	2-2x6
4x12	2-2x4	6x12	2-2x6

KING STUD TABLE

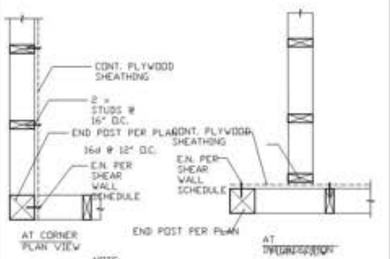
STUDS/ POST	MAX. ALLOW OPN'G 8'-1" >	9'-1" >	STUDS/ POST	MAX. ALLOW OPN'G 8'-1" >	9'-1" >	FOUR. HT. >
(1) 2x4	4'-0"	2'-0"	(1) 2x6	15'-0"	11'-0"	n/a
(2) 2x4/4x4	10'-0"	7'-0"	(2) 2x6/4x6	31'0"	24'-0"	n/a
(3) 2x4/6x4	16'-0"	11'-0"	(3) 2x6/6x6	40'-0"	36'-0"	3'-0"
(4) 2x4/8x4	22'-0"	15'-0"	(4) 2x6/8x6	n/a	n/a	5'-0"
(5) 2x4/8x4	28'-0"	19'-0"	(5) 2x6	n/a	n/a	6'-0"

KING POST & TRIMMER SCHEDULE

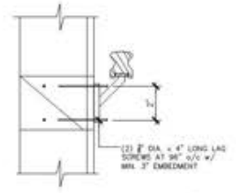
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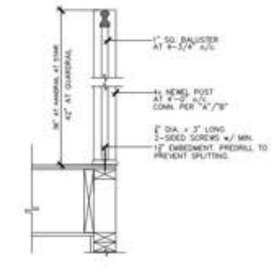


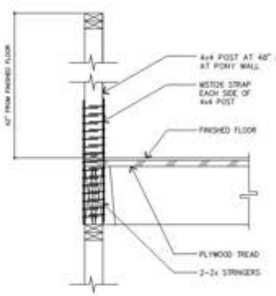
BEAM END NOTCH

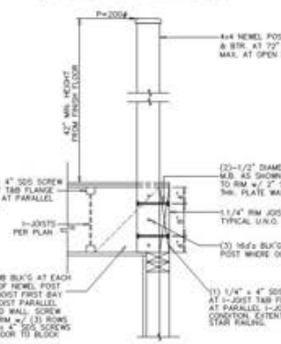


SHEAR WALL INTERSECTION DETAIL



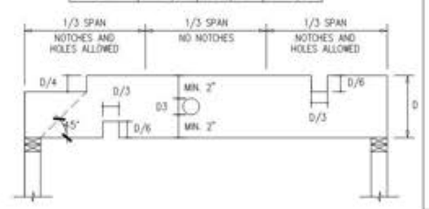






HANDRAIL/GUARDRAIL

4



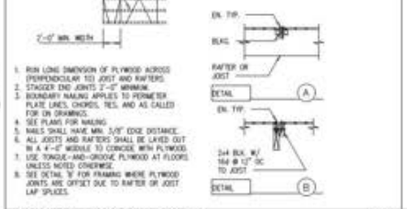
JOIST SIZE	MAX. NOTCH WIDTH: D/3	MAX. NOTCH DEPTH: D/6	MAX. SIZE HOLE: D/3
2x6	1-3/4"	7/8"	1-3/4"
2x8	2-3/8"	1-1/8"	2-3/8"
2x10	3"	1-1/2"	3"
2x12	3-3/4"	1-7/8"	3-3/4"
2x14	4-3/8"	2-1/8"	4-3/8"

THIS DETAIL IS NOT APPLICABLE TO I-JOISTS OR ANY MANUFACTURED LUMBER.

NOTES:
1. HOLES MAYBE DRILLED IN ANY 1/3 SPAN. HOLES MUST BE A MIN. 12" FROM ANY NOTCH.
2. DO NOT NOTCH BOTH TOP AND BOTTOM SURFACES WITHIN THE SAME 1/3 SPAN.
3. MAX ALLOWED IS A COMBINATION OF TWO NOTCHES AND/OR HOLES PER 1/3 SPAN.
4. THIS DETAIL DOES NOT APPLY TO NOTCHES AND HOLES IN STRUCTURAL BEAMS, THEY MUST BE SPECIFICALLY DETAILED.
5. NOTCHES AND HOLES ARE NOT ALLOWED IN CATILEVERED JOISTS.
6. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR HOLES IN MANUFACTURER'S I-JOIST. DO NOT NOTCH I-JOIST.
7. REFER TO DETAIL 9/SD4 FOR "SOLID JOIST"
8. PER UBC 2320.8.3 AND NDS 4.4.3

NOTCHED OR DRILLED CONVENTIONAL JOISTS

20



1. RUN LONG DIMENSION OF PLYWOOD ACROSS (PERPENDICULAR TO) JOIST AND RAFTERS.
2. STAGGER END JOINTS 2'-0" MINIMUM.
3. BOUNDARY NAILING APPLIES TO PERIMETER PLATE LINES, CHORDS, RES. AND AS CALLED FOR ON DRAWINGS.
4. SEE PLANS FOR NAILING.
5. NAILS SHALL HAVE MIN. 3/8" EDGE DISTANCE.
6. ALL JOISTS AND RAFTERS SHALL BE LAYED OUT IN A 4'-0" MODULE TO COINCIDE WITH PLYWOOD.
7. USE TONGUE-AND-GROOVE PLYWOOD AT FLOORS UNLESS NOTED OTHERWISE.
8. SEE DETAIL 'B' FOR FRAMING WHERE PLYWOOD JOINTS ARE OFFSET DUE TO RAFTER OR JOIST LAP SPLICES.

PLYWOOD DIAPHRAGM DETAIL

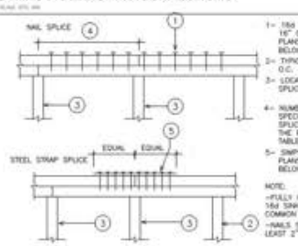
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CBC TABLE 2304.9.1

CONNECTION	NAILING
JOIST TO SILL OR GIRDER, TOENAIL	(3) 8d
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
1" x 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	(2) 8d
WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST, FACE NAIL	(3) 8d
2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	(2) 16d
SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d @ 16" o/c
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANELS	(3) 16d @ 16" o/c
TOP PLATE TO STUD, END NAIL	(2) 16d
STUD TO SOLE PLATE	(4) 8d TOENAIL OR (2) 16d END NAIL
DOUBLE STUDS, FACE NAIL	16d @ 24" o/c
DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d @ 16" o/c
DOUBLED TOP PLATES, LAP SPLICE AND PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	(8) 16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATES, TOENAIL	(3) 8d
RIM JOIST TO TOP PLATE, TOENAIL	8d AT 6" o/c
TOP PLATES, LAP AND INTERSECTIONS, FACE NAIL	(2) 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16" o/c ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	(3) 8d
CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL PARTITION, FACE NAIL	(3) 16d
RAFTER TO PLATE, TOENAIL	(3) 8d
1" x 6" BRACE TO EACH STUD AND PLATE, FACE NAIL	(2) 8d
1" x 8" BRACING OR LESS TO EACH BEARING, FACE NAIL	(3) 8d
WIDER THAN 1" x 8" BRACING TO EACH BEARING, FACE NAIL	(4) 8d
BUILT-UP CORNER STUDS	10d @ 24" o/c
BUILT-UP GIRDER AND BEAMS	20d AT 32" o/c AT TOP AND BOTTOM STAGGERED
	(2) 10d AT ENDS AND AT EACH SPLICE
2" PLANKS	(2) 16d AT EACH BEARING

NAILING SCHED. TABLE 2304.9.1

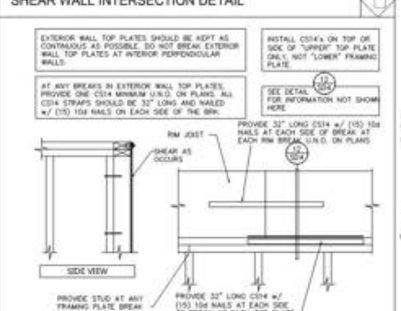
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	A	B	C	D	E	F
# OF 16d SINKER	12	18	24	30	36	42
MIN. PLATE LAP	4 FT.	4 FT.	4 FT.	6 FT.	8 FT.	8 FT.
ALT STRAP W/ 16d SINKER	ST22	ST6224	ST62/36	MST37	MST48	MST60

TOP PLATE SPLICE

2



TOP PLATE SPLICES AT BREAKS

8

M.S. CONSULTING ENGINEERING
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REGISTERED PROFESSIONAL ENGINEER — STRUCTURAL — STATE OF CALIFORNIA
S 5266
EXP. 6/30/22

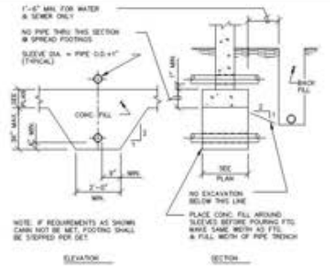
REVISIONS

No.	DATE	DESCRIPTION
1.	11-9-2020	PC CORR.
2.	3-5-2021	ARCH. REVISIONS

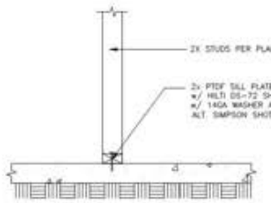
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

STRUCTURAL DETAILS

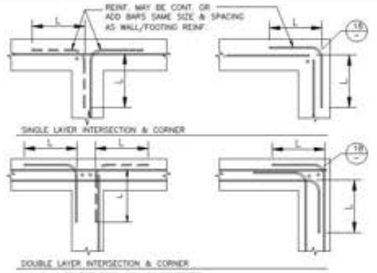
JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No. STD



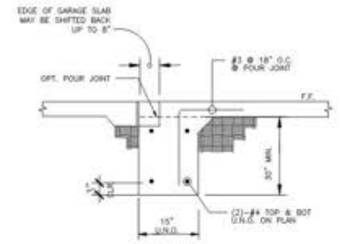
PIPE AND TRENCH LOCATION



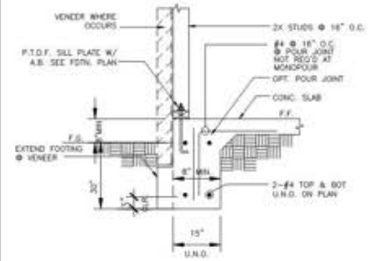
NON-BEARING/NON-SHEAR WALL FT'G



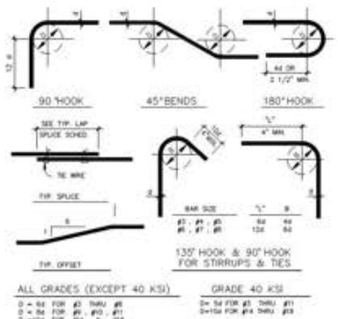
REINFORCE @ INTERIOR CORNER



FOOTING AT GARAGE DOOR

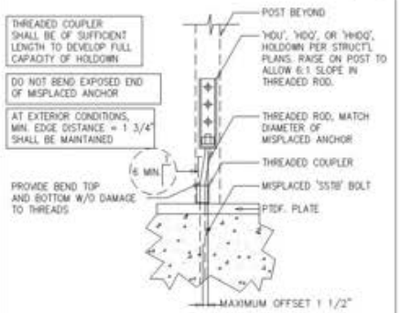


EXTERIOR FOOTING DETAIL



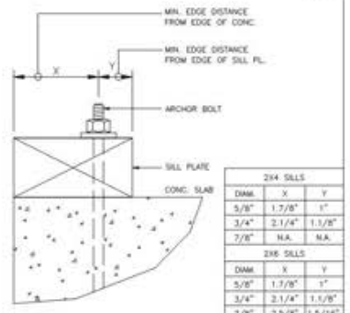
REINFORCE HOOKS & BEND

8



MISPLACED HOLDOWN REPAIR

4

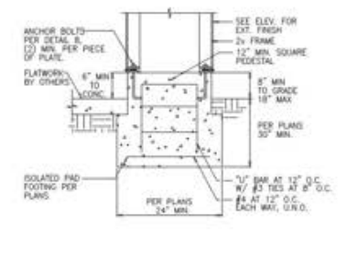


2X4 SILLS		
DIAM.	X	Y
5/8"	1.7/8"	1"
3/4"	2.1/4"	1.1/8"
7/8"	N.A.	N.A.

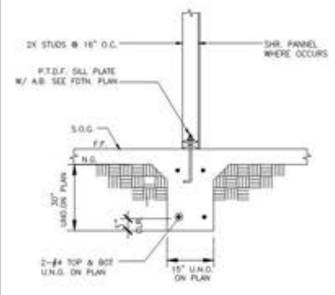
2X6 SILLS		
DIAM.	X	Y
5/8"	1.7/8"	1"
3/4"	2.1/4"	1.1/8"
7/8"	2.5/8"	1.5/16"

MIN. A.B. EDGE DISTANCE AT SILL PLATE

0

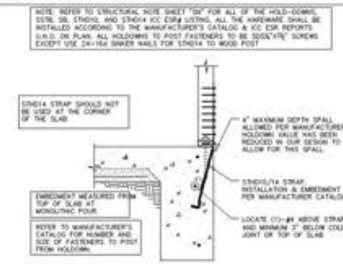


COLUMN FOOTING

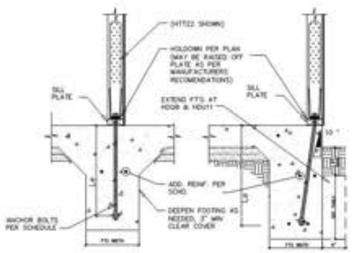


INTERIOR FOOTING DETAIL

2

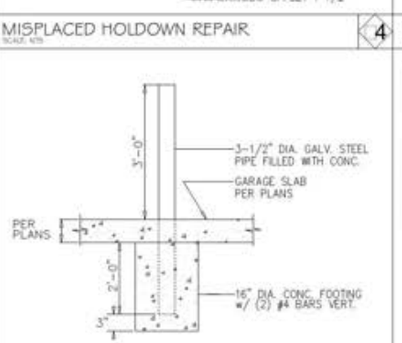


MINIMUM HOLDOWN REINFORCEMENT					
HD	REINF. AND LENGTH	ADD. FOOTING REQ.	A.B.	Le	PLATE WASHER
HDU2/4	(1)#4 TIES x 1'-0"	N/A	SSTB24	20.5/8"	N/A
HDU5	(1)#4 TIES x 1'-0"	N/A	SSTB24	20.5/8"	N/A
HDQ8	(1)#5 TIES x 1'-0"	EXTEND FTG 8"W x 24"D MIN.	SSTB28	24.7/8"	N/A
HHDQ10 / HDQ10	(2)#5 TIES x 1'-0"	EXTEND FTG 8"W x 24"D MIN.	SSTB30	24"	PER CAT.
HHDQ14 / HDQ14	(2)#5 TIES x 1'-0"	30"WIDE-0"-24"DP FTG (4'-0" PAST HD)	THB8	20"	PER CAT.



HOLDOWN ANCHOR BOLT

20



PIPE BOLLARD

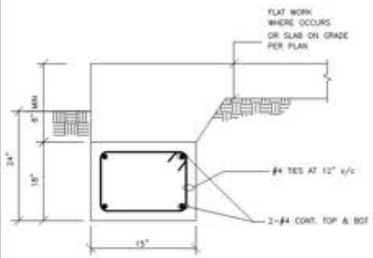
5

ANCHOR BOLT LOCATIONS:		EXTERIOR WALLS	INTERIOR WALLS	
			BEARING	NON-BEARING
ANCHOR BOLT DIAMETER:		5/8" DIA.	5/8" DIA.	SHOT PINS PER 14/SD1
BOLT LENGTH AT MONOPOUR:	W/ 2x SILL	10"	10"	---
	W/ 3x SILL	12"	12"	---
BOLT LENGTH AT DUALPOUR	W/ 2x SILL	14"	14"	---
	W/ 3x SILL	16"	16"	---
MAX. ANCHOR BOLT SPACING U.N.O. PER SHEAR WALL SCH.		4'-0" O.C.	4'-0" O.C.	PER 14/SD1

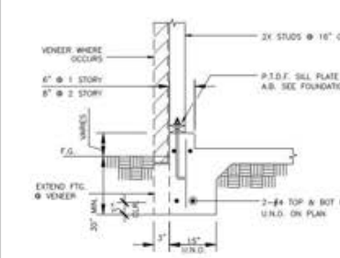
1. ALL ANCHOR BOLTS SHALL ACHIEVE 7" EMBEDMENT INTO CONCRETE. EMBEDMENT SHALL BE FROM TOP OF SLAB AT MONOPOUR CONDITION OR BELOW COLD JOINT AT DUAL POUR CONDITION. AT CURB/WALL CONDITION, EMBEDMENT SHALL BE FROM TOP OF CURB/WALL.
2. THE ANCHOR BOLTS SHALL SECURE THE SILL PLATE IN PLACE WITH A PROPERLY SIZED NUT &3"SQ.x3/16" THK WASHER W/ DIAGONALLY SLOTTED HOLE.
3. MINIMUM (2) ANCHOR BOLTS PER PIECE OF SILL PLATE. THE ANCHOR BOLTS SHALL BE LOCATED WITHIN 7" MIN. OR 12" MAX. FROM THE END OF ANY SILL PLATE BREAK.
4. BOLT SHALL MAINTAIN 1-3/4" EDGE OF CONCRETE DISTANCE & 1" EDGE OF SILL PLATE DISTANCE.

ANCHOR BOLT SPECIFICATION

1



TIE BEAM DETAIL



EXTERIOR CURB FOOTING

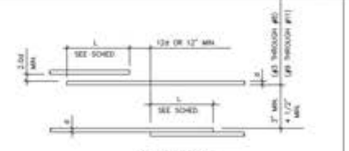


NOTES:

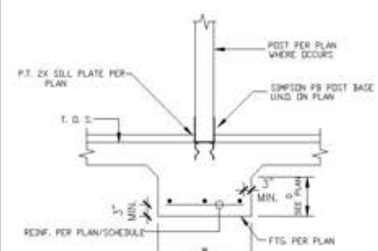
1. USE CLASS 'B' SPLICES FOR VERTICAL & HORIZONTAL BARS TYP. U.N.O.
2. TENSION BARS ARE HORIZONTAL BARS WITH 12" OR MORE OF CONCRETE CAST BELOW THEM. MULTIPLE HORIZONTAL BARS IN SINGLE VERT. PLANE SUCH AS COLUMN TIES OR HORIZ. BARS IN WALLS NEED NOT BE CONSIDERED TOP BARS.
3. * VALUES SHOWN ARE FOR GRADE 60 BARS IN NORMAL WEIGHT CONCRETE. FOR LIGHT WEIGHT CONCRETE MULTIPLY VALUES OF TABLE BY 1.3

CONC. REINF. MIN. LAP SPLICE

2

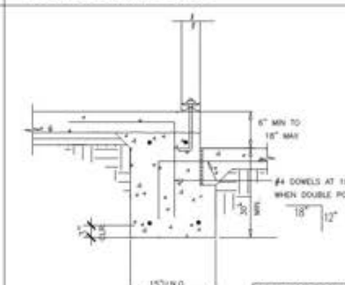


SPLICE DETAIL



COLUMN BASE / PAD FTNG. AT INTERIOR

8



REFER TO DETAIL 1 & 2 FOR FOUNDATION SIZE & SPECIFICATIONS

HOUSE TO GARAGE STEP FOOTING

4

M.S. CONSULTING ENGINEERING
Residential Commercial Industrial
12631 Imperial HWY. #F-230, Santa Fe Springs, CA 90670
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REGISTERED PROFESSIONAL ENGINEER JAMES MICHAEL SHEA No. S 5264 EXP. 6/30/22 STRUCTURAL STATE OF CALIFORNIA

REVISIONS

No.	DATE	DESCRIPTION
1	11-9-2020	PC COMM
2	3-5-2021	ARCH. REVISION

SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

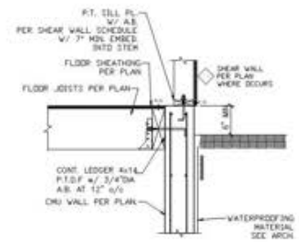
STRUCTURAL DETAILS

JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No. SD1

VOID

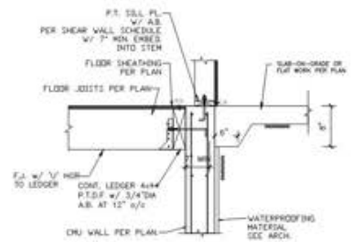
VOID

VOID



F.J. TO R.W. CONN. DETAIL

5

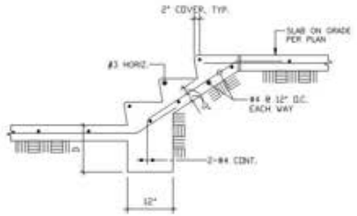


F.J. PERPENDICULAR w/ R.W. CONN. DETAIL

VOID

VOID

VOID

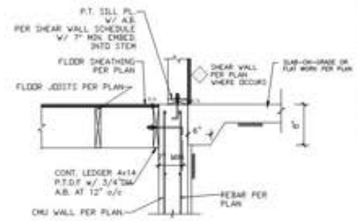


CONCRETE STEPS

8

4

0

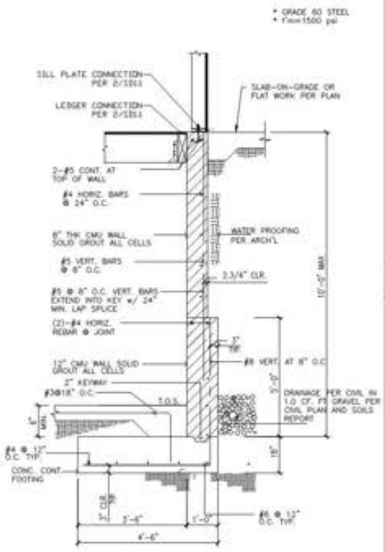


F.J. PARALLEL w/ R.W. CONN. DETAIL

VOID

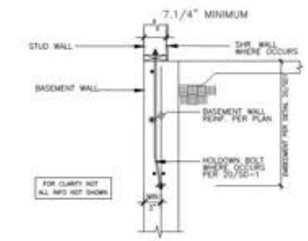
VOID

VOID



BASEMENT WALL DETAIL

8



HD AT BASEMENT WALL

VOID

VOID

VOID

VOID

20

4

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REVISIONS

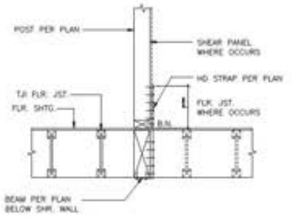
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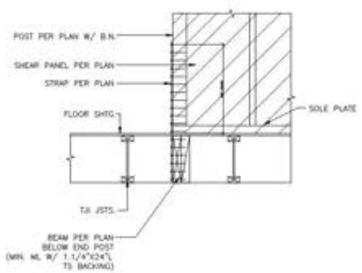
STRUCTURAL DETAILS

JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No. SD1.1

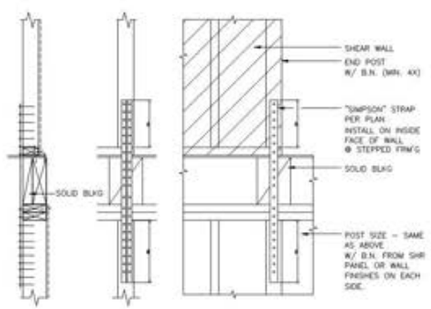
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CS16	11" /(13")	(10)-10d / (11)-8d	1280
CS14	15" /(16")	(13)-10d / (15)-8d	1868
CMST14	28" /(30")	(28)-16d / (33)-10d	4888
CMST12	33" /(39")	(37)-16d / (43)-10d	6910



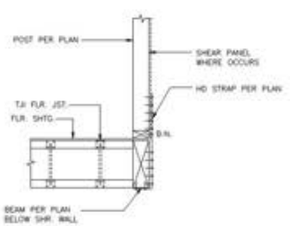
STRAP @ S.W. II TO □LR. □RMG.



STRAP @ S.W. □ TO □LR. □RMG.



HOLDOWN STRAP @ WALL

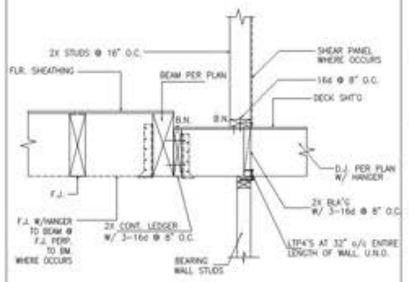


HOLDOWN STRAP TO □LOOR

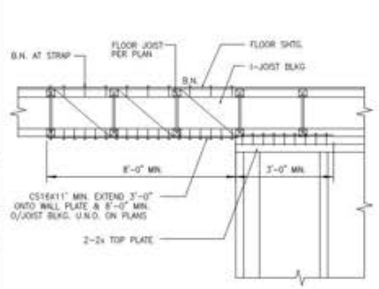
HOLDOWN STRAP AT □LOOR 20

VOID

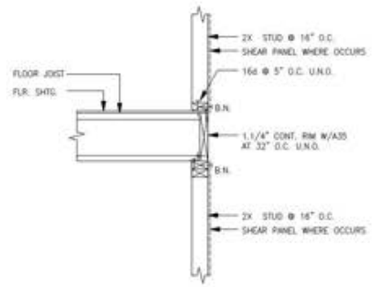
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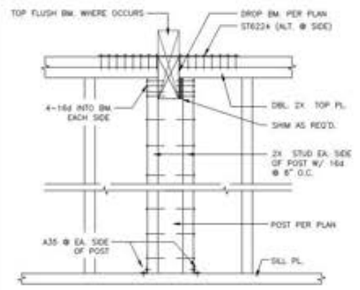
□EC□ AT STEPPED □LOOR CONN.



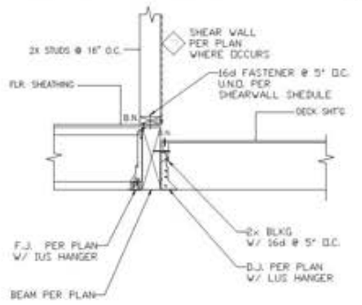
DRAG STRAP O/□L□G AT □LOOR 5



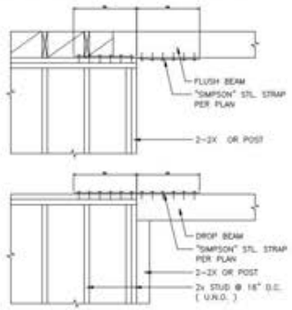
□LOOR □OIST PERP. TO E□TERIOR WALL



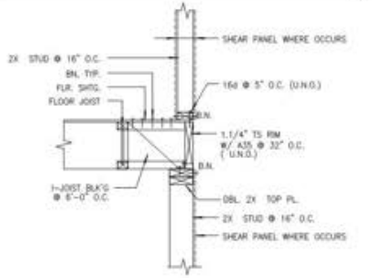
□EAM POC□ET 4



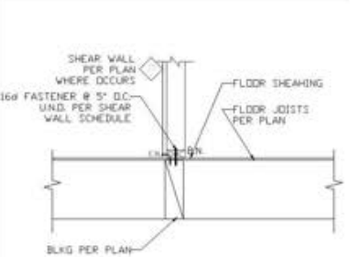
DEC□ AT STEPPED □LOOR CONN. 0



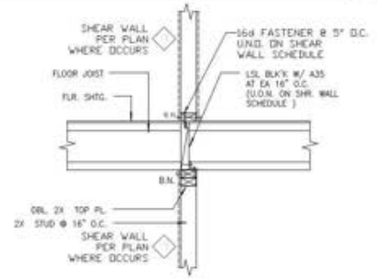
□EAM TO WALL DRAG CONN.



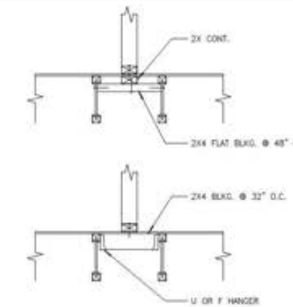
□LOOR □OIST PARALLEL TO E□TERIOR WALL 2



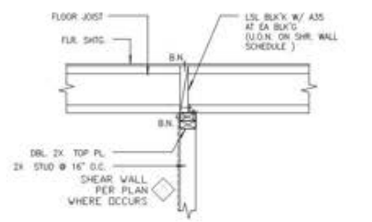
□EARING WALL O/□□ DETAIL 5



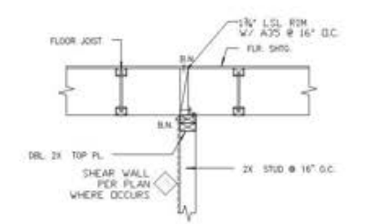
□LOOR TO □LOOR DETAIL 1



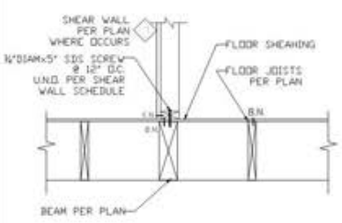
INTERIOR NON □EARING WALL O/□□



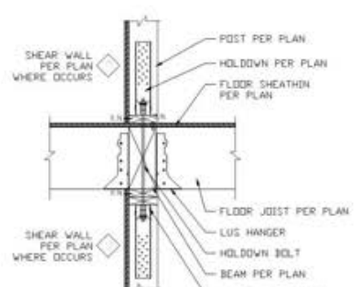
□□PERPENDIC□LAR W/ WALL A



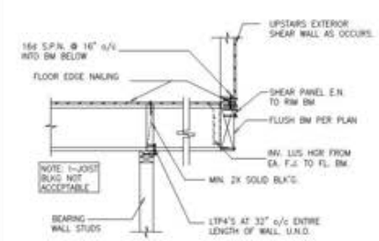
□□PARALLE W/ WALL □



WALL A□□ TO □EAM DETAIL 1



□LOOR TO □LOOR HOLDOWN DETAIL 2



CANT. □LOOR □OIST 8

□□ TO INTERIOR SHEAR / □EARING WALL 4

M.S. CONSULTING ENGINEERING
Residential Commercial Industrial
12631 Imperial HWY #F-230, Santa Fe Springs, CA 90670
(562) 863-9991 FAX (562) 863-9991
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REGISTERED PROFESSIONAL ENGINEER — PRAVIN S. KHANAL — S 5266 — EXP. 6/30/22 — STRUCTURAL — STATE OF CALIFORNIA

REVISIONS

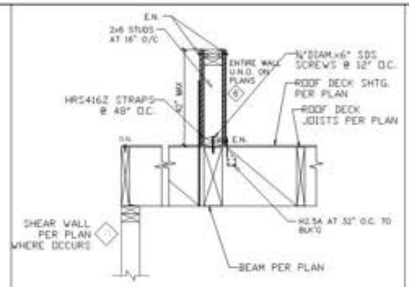
No.	DATE	DESCRIPTION
1	11-9-2020	PC COMM.
2	3-5-2021	ARCH. REVISION

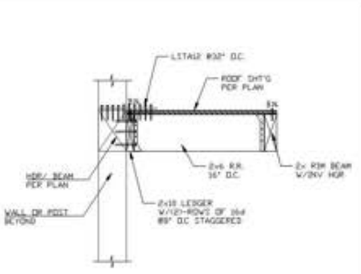
SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

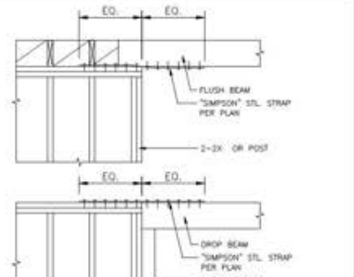
STRUCTURAL DETAILS

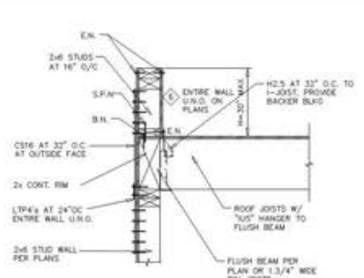
JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No. SD2

VOID









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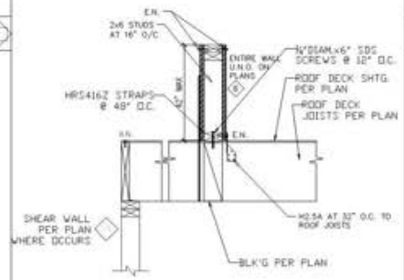
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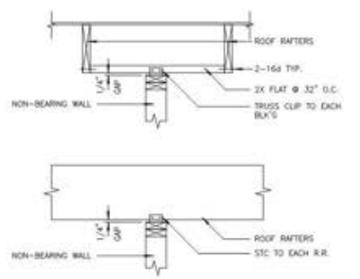
REGISTERED PROFESSIONAL ENGINEER
PRAVIN KHANAL
S 5266
EXP. 6/30/22
STRUCTURAL
STATE OF CALIFORNIA

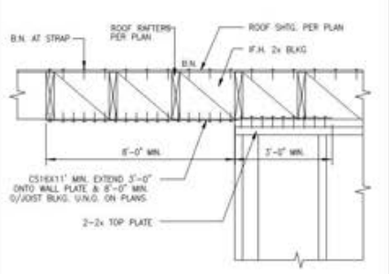
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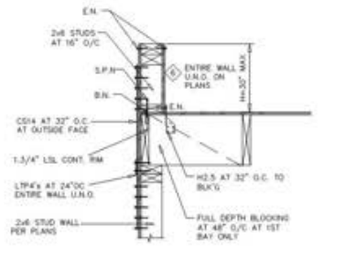
No.	DATE	DESCRIPTION
1	11-9-2020	PC COMM.
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VOID









SINGLE FAMILY RESIDENCE
2849 N. ADKINS AVE. LOS ANGELES, CA 90032

STRUCTURAL DETAILS

JOB No. 20017
DRAWN BY P. Khanal
DATE 3-5-2021
SCALE
SHEET No.
SD3

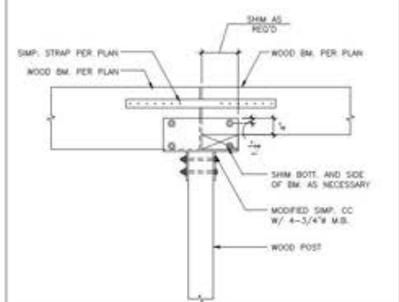
8 PARAPET WALL OVER DECK JOISTS

4 TYP. ROOF RAFTERS AT NON-BRG. WALL

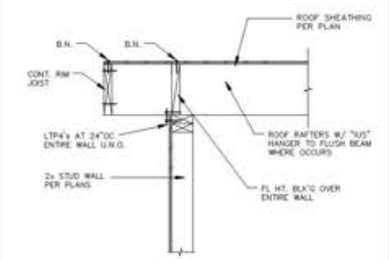
0 DRAG STRAP O/ L G AT ROO

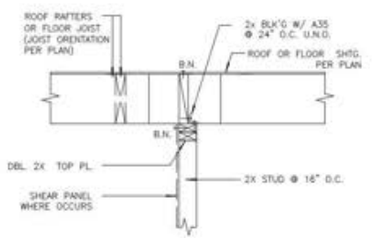
ROO PARAPET AT R. PARALLEL W/ WALL 2

VOID



VOID

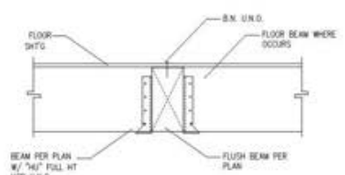


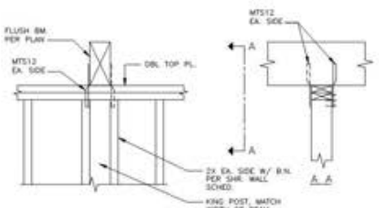


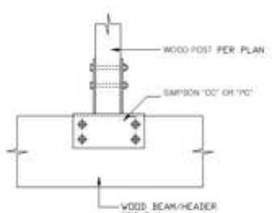
POST TO EAM CONN. 5

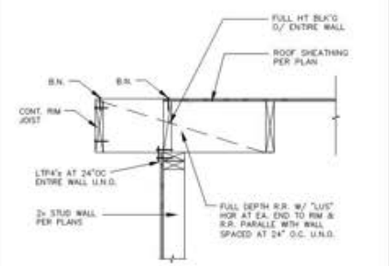
ROOF FRM'G CONN. AT R.R. PERP. WITH WALL

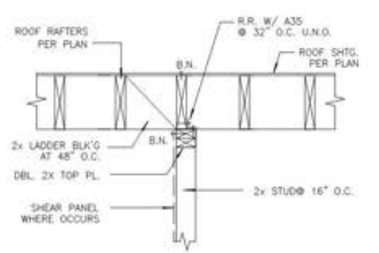
ROOF RAFTERS TO INT. SHEAR WALL











BEAM TO BEAM CONN. 20

TYP. FLUSH BEAM O/ WALL CONN. 1

WOOD POST TO BM 2

ROOF FRM'G CONN. @R.R. PARALLE W/ WALL 8

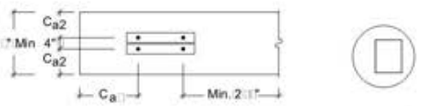
ROOF RAFTERS TO INT. SHEAR / BRG WALL 4

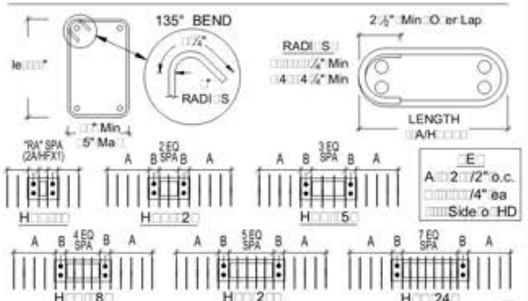
AC TO AC REIN ORCED ANCHORAGE RA

Model	Panel Width in	Anchorage	Rod Dia in	Rod Grade	BB-RA le4 in	BB-RA Ca5 in	BB-RA Ca2 in	Stirrups in	Shear Ties
H		/8 STD RA	/8	STD	5	/4		8 4	min @ /4" OC
H 2	2	/8 STD RA		STD				4	min @ 4" OC
		/8 HS RA		HS					
H 5	5	/8 STD RA		STD				4 4	
		/8 HS RA		HS					
H 8	8	/8 STD RA		STD				5 4	
		/8 HS RA		HS					
H 2	2	/8 STD RA		STD				4	
		/8 HS RA		HS					
H 24	24	/8 STD RA		STD				8 4	
		/8 HS RA		HS					

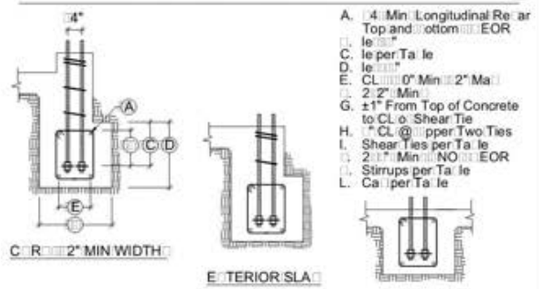
AC TO AC REIN ORCED ANCHORAGE NOMENCLAT RE

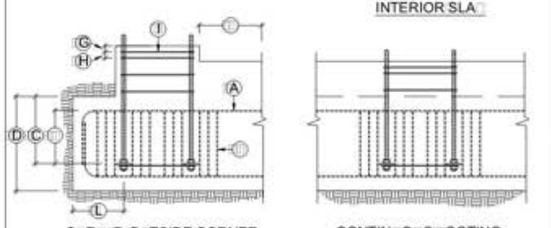
/8 STD RA
- REIN ORCED ANCHORAGE
- AC TO AC INSTALLATION
- ROD GRADE
- ROD DIAMETER





RA SHEAR TIES STIRR PS — A





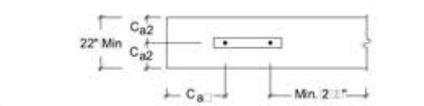
RA SECTIONS ELE ATIONS — 1

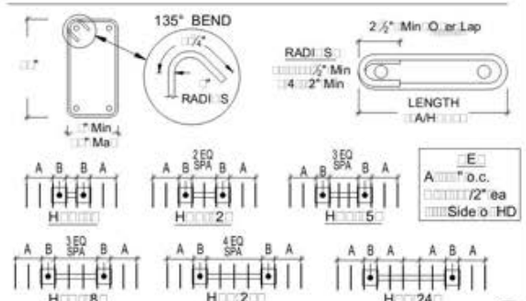
REIN ORCED ANCHORAGE RA

Model	Panel Width in	Anchorage	Rod Dia in	Rod Grade	RA le4 in	RA Ca5 in	RA Ca2 in	Stirrups in	Shear Ties
H		/8 STD RA	/8	STD	5	/4		8 4	min @ /4" OC
H 2	2	/8 STD RA		STD				4	
		/8 HS RA		HS					
H 5	5	/8 STD RA		STD		20 5/8		0 4	min @ 4" OC
		/8 HS RA		HS					
H 8	8	/8 STD RA		STD					
		/8 HS RA		HS					
H 2	2	/8 STD RA		STD				4	
		/8 HS RA		HS					
H 24	24	/8 STD RA		STD				2 4	4 min @ 4" OC
		/8 HS RA		HS					

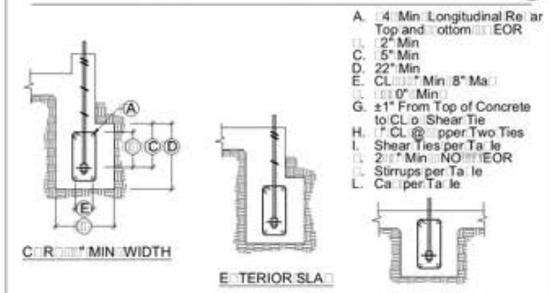
REIN ORCED ANCHORAGE NOMENCLAT RE

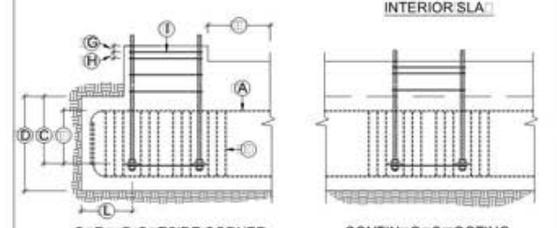
/8 STD RA
- REIN ORCED ANCHORAGE
- ROD GRADE
- ROD DIAMETER





RA SHEAR TIES STIRR PS — 2A





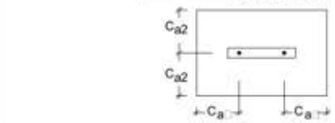
RA SECTIONS ELE ATIONS — 2

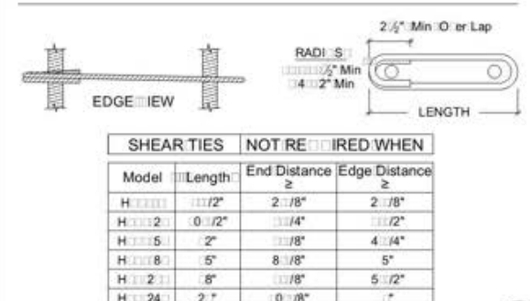
NREIN ORCED ANCHORAGE A

Model	Panel Height	Anchorage	Rod Dia in	Rod Grade	UA le4 in	UA Ca5 in	UA Ca2	Shear Ties 8
H	5" 8	/8 STD		STD				
H 2	8" 0							
		/8 HS 20 0		HS	20	0		
H 5 8	8"	/8 STD 4 20	/8	STD	4	20		
H 5 8 alloon	4 20	/8 HS 20 0		HS	20	0		
H 2 24	8"	/8 STD 4 20		STD	4	20		
		/8 HS 2 4			2	4		
H 2 24 alloon	4 20	/8 HS 20 0		HS	20	0		2

NREIN ORCED ANCHORAGE NOMENCLAT RE

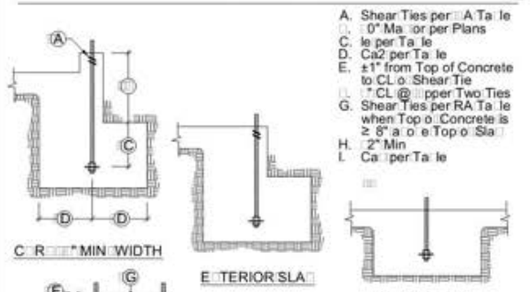
/8 STD 4 20
- END EDGE DISTANCE Ca Ca2
- EM EDMENT DEPTH le
- ROD GRADE
- ROD DIAMETER

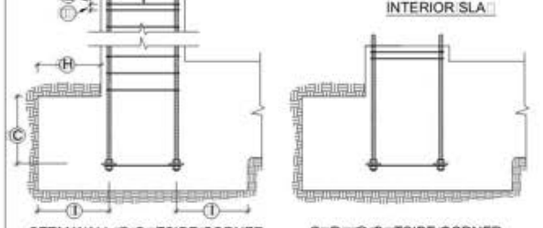




SHEAR TIES		NOT RE IRED WHEN	
Model	Length	End Distance ≥	Edge Distance ≥
H	/2"	2 /8"	2 /8"
H 2	0 /2"	/4"	/2"
H 5	2"	/8"	4 /4"
H 8	5"	8 /8"	5"
H 2	8"	/8"	5 /2"
H 24	2 "	0 /8"	"

A SHEAR TIES — A

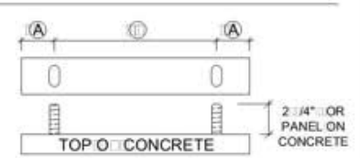




A SECTIONS ELE ATIONS — 1

TA LE NOTES

1. DESIGNS ARE TO RESIST LOADING PER ACI 17.2.3.4.3.
2. STD INDICATES ANCHORS COMPLYING WITH ASTM F1554 GRADE 36 WITH A HARDY FRAME BOLT BRACE (HFXBB) INSTALLED WITH DOUBLE NUTS ON THE EMBED END.
3. HS INDICATES ANCHORS COMPLYING WITH ASTM A193 GRADE B7 WITH A 1/2"X3"X3"(MIN) HFPW PLATE WASHER INSTALLED WITH DOUBLE NUTS ON THE EMBED END (HFXBB NOT REQUIRED).
4. LE = LENGTH OF EMBEDMENT FROM THE TOP OF FOOTING OR GRADE BEAM TO THE TOP OF THE HFXBB BOLT BRACE (TOP OF THE EMBEDDED HFPW PLATE WASHER @ HS ANCHORS)
5. CA1 = DISTANCE FROM HD CENTERLINE TO THE END OF THE FOOTING OR GRADE BEAM.
6. CA2 = DISTANCE FROM HD CENTERLINE TO BOTH THE FRONT AND THE BACK FACE OF THE FOOTING OR GRADE BEAM.
7. SHEAR TIES ARE GRADE 60 (MIN) REBAR AND REQUIRED FOR NEAR EDGE DISTANCE CONDITIONS PER ACI-318-14, F'C = 2,500 PSI. CURBS AND STEM WALLS MUST BE 6 INCH (MIN) WIDTH FOR UA AND RA, 12 INCH (MIN) WIDTH FOR BB-RA.
8. FOR UA APPLICATIONS, ADDITIONAL TIES MAY BE REQUIRED AT STEM WALLS. SHEAR TIES ARE NOT REQUIRED FOR INSTALLATION AWAY FROM EDGE (SEE DETAIL 1A), INSTALLATION ON WOOD FRAMING, OR FOR IRC BRACED WALL PANEL APPLICATIONS.
9. STIRRUPS ARE GRADE 60 (MIN) REBAR. SEE TABLE FOR SIZE AND SPACING. SEE "STIRRUP LAYOUT" DIAGRAMS AND "KEY" FOR LAYOUT PATTERNS.
10. CONCRETE EDGE DISTANCES MUST COMPLY WITH ACI 318-14, SECTION 17.7.1



Model	Width	Ⓐ	Ⓒ
H	"	/4"	5 /2"
H 2	2"		8 /2"
H 5	5"	2 5/8"	/4"
H 8	8"		2 /4"
H 2	2 "		5 /4"
H 24	24"		8 /4"

H ANCHOR CENTERLINES — A

IMPORTANT

1. ANCHORAGE IS DESIGNED OR TENSION AND SHEAR TRANS ER ONL O NDATION DESIGN PER EOR.
2. REIN ORCEMENT SHOWN IS THE MINIM M RE IREMENT AND IS NOT INTENDED TO REPLACE REIN ORCEMENT DESIGNED THE EOR.
3. OR RA AND RA INSTALLATIONS THE H OLT RACE MA E PLACED ON TOP O THE STIRR PS WITH DO LE N TS INSTALLED AT EM ED END O STANDARD GRADE ANCHOR RODS. NOTE ½" " MIN. H PW PLATE WASHERS ARE RE IRED TO E DO LE N TTED AT EM ED END O HIGH STRENGTH ANCHOR RODS.
4. HIGH STRENGTH ALL THREAD RODS PRO IDED HARD RAMES ARE STAMPED ON OTH ENDS. H

IMPORTANT NOTES

ANCHORAGE DETAILS H PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH *HARDY FRAME* PRODUCTS

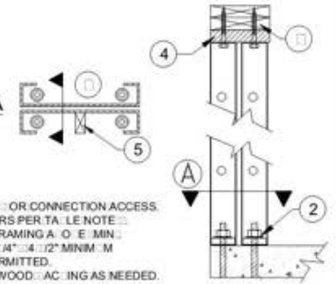
HARDY FRAME
SHEAR WALL SYSTEM
1732 PALMA DRIVE, SUITE 200, VENTURA, CA 93003
TELEPHONE: 800 754-3030 / www.hardyframe.com

MiTek

DATE 20 8

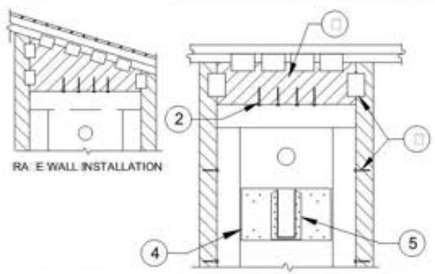
H

SECTION A



1. CA IT ORIENTED OR CONNECTION ACCESS.
2. N TS AND WASHERS PER TA LE NOTE
3. NOMINAL 8 INCH RAMING A O E MIN.
4. A 2 ILLER WITH /4" 4 /2" MINIM M WS SCREWS IS PERMITTED.
5. IELD INSTALLED WOOD AC ING AS NEEDED.

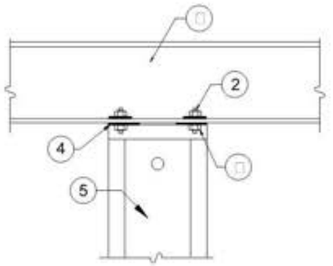
AC TO AC INSTALLATION



RA E WALL INSTALLATION

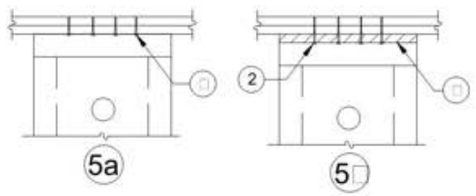
1. WOOD ILLER WITH SP MP4 CONNECTORS OTH SIDES ANTIT ILDING DESIGN PRO ESSIONAL.
2. /4" " MINIM M WS SCREWS ANTIT PER TA LES
3. AD ACENT RAMING WITH /4" DIAMETER SCREWS INSTALLED THRO GH PRE P NCHED HOLES IN PANEL EDGES RE IRED WHEN INSTALLING A ILLER GREATER THAN /2" A O E TO RACE O T O PLANE HINGE OR WHEN SPECI IED THE DESIGN PRO ESSIONAL.
4. PRE DRILL /4" " DIA HOLES E ENL SPACED IN ACE O PANEL NO LESS THAN 2 /4" OC AND INSTALL /4" DIA WOOD SCREWS INTO 2 MIN WOOD "LEDGER" IN PANEL CA IT.
5. CONNECTOR AND ATTACHMENT ILDING DESIGN PRO ESSIONAL.

ILLER GREATER THAN /2 IN.



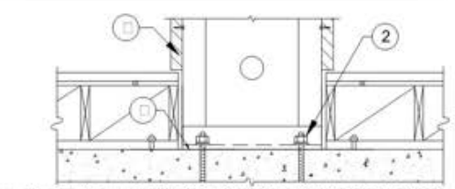
1. STEEL EAM PER PLANS
2. ALL THREAD RODS THR OLTED TO STEEL EAM ILDING DESIGN PRO ESSIONAL.
3. N TS AND WASHERS PER TA LE NOTE
4. *HARDY FRAME*® STAC ING WASHERS H SW RE IRED TO E WELDED INSIDE TOP CHANNEL O LOWER PANEL.
5. *HARDY FRAME*® "ST " PANEL WITH STAC ING WASHERS WELDED INSIDE THE TOP CHANNEL MAN ACT RER.

STEEL EAM A O E THR OLT 2



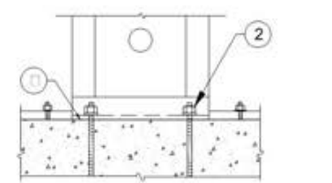
1. /4" " MINIM M WS SCREWS ANTIT PER TA LES
2. /4" 4 /2" MINIM M WS SCREWS ANTIT PER TA LES
3. 2 WOOD ILLER.

TOP PLATE CONNECTIONS 5



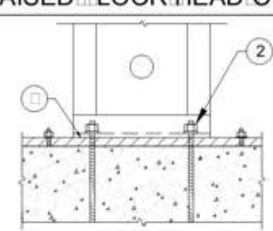
1. 5 ELT OR E I ALENT MOIST RE ARRIER RECOMMENDED ETWEEN PANEL ASE AND CONCRETE.
2. N TS AND WASHERS PER TA LE NOTE
3. AD ACENT RAMING WITH /4" DIAMETER SCREWS INSTALLED AT THE PANEL EDGES WHEN INSTALLING A ILLER GREATER THAN /2" A O E OR WHEN SPECI IED DESIGN PRO ESSIONAL.

RAISED LOOR HEAD O T 8



1. 5 ELT OR E I ALENT MOIST RE ARRIER RECOMMENDED ETWEEN PANEL ASE AND CONCRETE.
2. N TS AND WASHERS PER TA LE NOTE

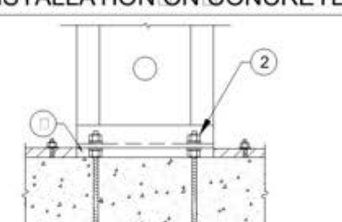
INSTALLATION ON CONCRETE



ALLOWA LE AL ES ON 2 PLATE ARE LESS THAN INSTALLATION ON CONCRETE

1. 5 ELT OR E I ALENT MOIST RE ARRIER RECOMMENDED ETWEEN PANEL ASE AND TREATED PLATE.
2. N TS AND WASHERS PER TA LE NOTE

INSTALLATION ON 2 PLATE

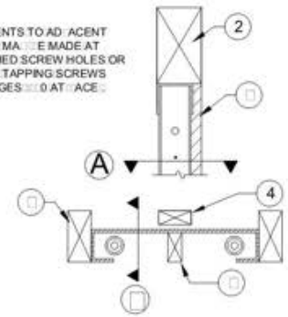


ALLOWA LE AL ES ON N W ARE LESS THAN INSTALLATION ON CONCRETE

1. PL S OR MIN S /2" GAP TO E ILLED WITH 5 000 PSI NON SHRIN GRO T MINIM M.
2. N T AND WASHER GRADES PER TA LE NOTE

INSTALLATION ON N TS WASHERS 0

NOTE
ATTACHMENTS TO AD ACENT TRIMMERS MA E MADE AT PREP NCHED SCREW HOLES OR WITH SEL TAPPING SCREWS 2 AT EDGES 0 AT ACE



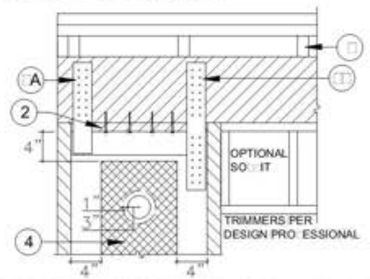
SECTION

SECTION A

1. TRIMMERS PRO IDE LL EARING OR HEADER A O E DESIGN AND CONNECTIONS ILDING DESIGN PRO ESSIONAL.
2. HEADER.
3. WOOD MEM ERS OR AC ING MA E INSERTED ERTICALL OR HORIZONTALL IN THE PANEL CA IT AS NEEDED.
4. WOOD MEM ER L SH TO ACE O WALL OR AC ING AS NEEDED.

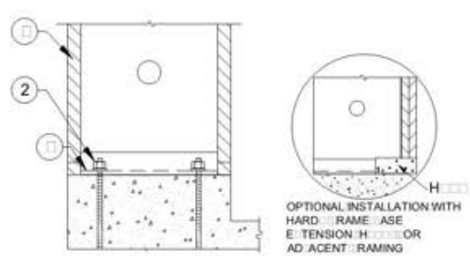
HEADER A O E SECTIONS

NOTE
TO PRE ENT DRILLING ADDITIONAL HOLES ORIENT THE PANEL CA IT TOWARD THE I T RE EING INSTALLED.



1. A PRE WELDED STRAPS ARE PRO IDED ON 8" AND /2" PANEL HEIGHTS. THE ARE A AILA LE OR OTHER HEIGHTS PON RE EST. IELD INSTALLED STRAPS WITH SEL TAPPING SCREWS ARE PERMITTED. THE DESIGN AND CONNECTION IS THE DESIGN PRO ESSIONAL.
2. A 2 WOOD ILLER WITH /4" 4 /2" MIN WS SCREWS IS PERMITTED.
3. WHEN CRIPPLE ST DS OCC R SHEAR TRANS ER DESIGN TO E PER THE ILDING DESIGN PRO ESSIONAL.
4. A " DIA HOLE MA E ADDED IN THE PANEL ACE WHEN IT IS LOCATED IN THE PPER HAL O THE PANEL HEIGHT AND IS 4" MINIM M ROM AN EDGE OR PANELS MORE THAN 2" WIDE ADDITIONAL HOLES M ST E O SET " MINIM M ROM THE " DIA PREP NCHED HOLE OR HOLES LARGER THAN " DIAMETER OR TO ADD MORE THAN ONE HOLE CONTACT MITE HARD RAME TECHNICAL S PPORT AT 800 54 0 0.

TOP CONNECTION TO HEADER 4



OPTIONAL INSTALLATION WITH HARD RAME ASE E TENSION H OR AD ACENT RAMING

1. 5 ELT OR E I ALENT MOIST RE ARRIER RECOMMENDED ETWEEN PANEL ASE AND CONCRETE.
2. N TS AND WASHERS PER TA LE NOTE
3. AD ACENT RAMING OPTIONAL N O ILDING DESIGN PRO ESSIONAL.

INSTALLATION ON C R

H PANELS 8 IN. THRO GH NOMINAL EET

Model Num er	Net Height in	Depth in	Hold Down Diameter in	Top Screw t ² ea	Screw t A aila le at Edges ea
H 2 5 8 2 24 8	8	/2	/8	" Width 5	4
H 5	/2			2" Width	
H 2 5 8 2 24 8	2 /4			5" Width 8	
H 8	/4			8" Width 0	5
H 2 5 8 2 24	04 /4			2 " Width 2	
H 2 5 8 2 24 0	/4			24" Width 4	
H 5 8 2 24	28 /4				
H 5 8 2 24 2	40 /4				
H 5 8 2 24	52 /4				

ALLOON PANELS 4 EET THRO GH 20 EET

Model Num er	Net Height in	Depth in	Hold Down Diameter in	Top Screw t ² ea	Screw t A aila le at Edges ea
H 5 8 2 24 4	4 /4	/2	/8	5" Width 8	8
H 5 8 2 24 5	/4			8" Width 0	
H 5 8 2 24	88 /4			2 " Width 2	
H 5 8 2 24	200 /4			24" Width 4	
H 5 8 2 24 8	2 2 /4				
H 5 8 2 24	224 /4				
H 5 8 2 24 20	2 /4				

1. HOLD DOWN ANCHOR OLTS CONNECT TO THE PANEL ASE WITH HARDENED RO ND WASHERS ELOW GRADE 8 N TS ALTERNATE WASHERS ARE 2 EA RO ND LAT OR 2 EA SAE WASHERS ON EACH OLT ALTERNATE N TS ARE 2H HEA HE
2. /4" DIAMETER MITE "PRO SERIES "WS SCREWS LENGTH IS " MINIM M WHEN ATTACHED DIRECTL TO THE COLLECTOR AND 4 /2" MINIM M WHEN INSTALLING A 2 ILLER A O E THE PANEL.
3. AD ACENT RAMING WITH /4" DIAMETER SCREWS IS RE IRED AT THE PANEL EDGES WHEN INSTALLING A ILLER A O E THE TOP CHANNEL THAT IS GREATER THAN /2" OR WHEN SPECI IED THE DESIGN PRO ESSIONAL.

A

INSTALLATION INSTR CTIONS

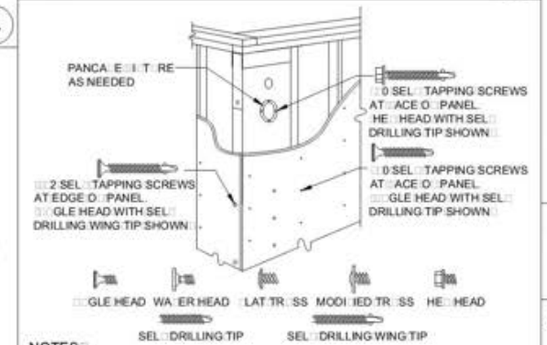
1. WHEN INSTALLING ON CONCRETE CONNECT WITH EA HARDENED RO ND WASHER ELOW EA GRADE 8 N T SEC RE WITH A DEEP SOC ET RECOMMENDED NTIL SN G TIGHT ALTERNATE WASHERS AND N TS ARE PRO IDED IN TA LE NOTE
2. INSTALLATION ON CONCRETE PRO IDES THE HIGHEST ALLOWA LE AL ES CON IRM WITH THE DESIGN PRO ESSIONAL E ORE INSTALLING ON OTHER S PPORTING S R ACES.
3. SE /4" 4 /2" MITE PRO SERIES WS SCREWS AT TOP CONNECTIONS WITH A 2 ILLER I THE TOP O PANEL IS IN DIRECT CONTACT WITH THE COLLECTOR A O E TOP PLATES HEADER EAM ETC SE /4" " MINIM M
4. OR INSTALLATIONS WITH A ILLER GREATER THAN /2" A O E OR WHEN SPECI IED THE DESIGN PRO ESSIONAL AD ACENT ING POSTS TO RACE THE O T O PLANE HINGE CAN E CONNECTED WITH /4" DIA. SCREWS THRO GH PRE P NCHED HOLES AT THE PANEL EDGES.

B

" PANEL 2" PANEL 5" PANEL

8" PANEL 2 " PANEL 24" PANEL

C



NOTES
A S R ACE INISHES CONNECTORS AND I T RES ARE ATTACHED TO THE PANEL ACE WITH 0 SEL TAPPING SCREWS SPACED NO LESS THAN 2 /4" OC.
B ATTACHMENTS TO THE PANEL EDGES ARE MADE WITH 2 SEL TAPPING SCREWS.
C. STR CT RAL CONNECTIONS ARE TO E DESIGNED THE DESIGN PRO ESSIONAL.
D. STR CT RAL HARDWARE SED TO TRANS ER LOADS SHO LD NOT E CEED 2 GA GE.

D

RE ISIONS	DATE

RAMING DETAILS H PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK® *HARDY FRAME*® PRODUCTS

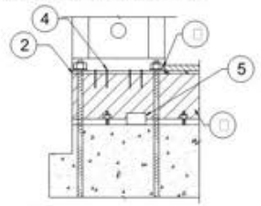
HARDY FRAME®
SHEAR WALL SYSTEM
1732 PALMA DRIVE, SUITE 200, VENTURA, CA 93003
TELEPHONE: 800 754-3030 / www.hardyframe.com

MiTek®

DATE
20 8

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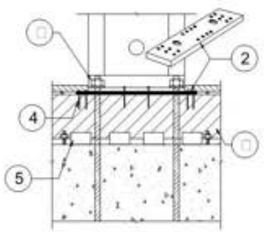
NOTES
A. INSTALLATION WITHO T *HARDY FRAME®* EARING PLATE H P MA INCREASE DE LECTION AND RES LT IN A DECREASE O ALLOWA LE SHEAR AL E ILDING DESIGN PRO ESSIONAL M ST ANAL ZE E ECTS
CO PLERS MA E SED WHEN THREADED ROD IS S ECT TO TENSION LOADS ONL



4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* PANEL DIRECTL ON RIM.
N TS AND WASHERS PER TA LE NOTE
4. /4" 4 /2" MINIM M WS SCREWS THRO GH OTTOM O PANEL MINIM M ANTIT PER TA LE.
5. SP MP4 CONNECTORS ANTIT ILDING DESIGN PRO ESSIONAL.

RAISED OS CORNER 4

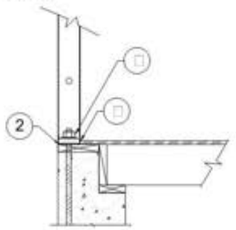
NOTE
CO PLERS MA E SED WHEN THREADED ROD IS S ECT TO TENSION LOADS ONL



4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* EARING PLATE H P AND PANEL PER INSTALLATION NOTES DETAIL /H
N TS AND WASHERS PER TA LE NOTE
4. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.
5. SP MP4 CONNECTORS ANTIT ILDING DESIGN PRO ESSIONAL.

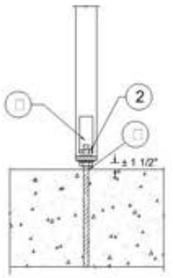
RAISED EARING PLATE

NOTES
A. CHEC WALL HEIGHT *HARDY FRAME®* EARING PLATES ELOW THE PANEL ASE OR C STOM HEIGHT PANELS ARE A AILA LE TO A OID ILLERS GREATER THAN /2".
OR MA IM M ALLOWA LE AL ES INSTALL PANEL ON CONCRETE



LOOR SHEATHING NOTCHED INSTALL PANEL ON WOOD PLATE.
2. 5 ELT OR E I ALENT RECOMMENDED ETWEEN PANEL ASE AND TREATED M DSILL.
N TS AND WASHERS PER TA LE NOTE

RAISED STEM WALL 2



ACCESS HOLE LOCATED AT EDGE O POST.
2. N TS AND WASHERS PER TA LE NOTE
PL S OR MIN S /2" GAP TO E ILLED WITH 5 000 PSI STRENGTH NON SHRIN GRO T MIN

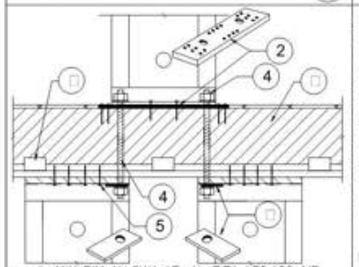
POST ON N W

Model Num er	Net Height in	Depth in	Hold Down Diameter in	Screw uantit Panel	Top² ea	ott ea	Screw t A ailable Edges ea
H 2 5 8 2 24 8	2 /4			2" Width			4
H 2 5 8 2 24	04 /4			5" Width	8	8	
H 2 5 8 2 24 0	/4			8" Width	0	0	
H 5 8 2 24	28 /4	/2	/8	2 " Width	2	2	5
H 5 8 2 24	40 /4			24" Width	4	4	
H 5 8 2 24	52 /4						

NOTE *HARDY FRAME®* STAC ING WASHERS H SW ARE RE IRED IN THE TOP O PANELS WHEN CONNECTING TO TENSION ANCHORS ROM A O E. *HARDY FRAME®* "ST " PANELS" INCL DE H SW WASHERS PRE WELDED IN THE TOP CHANNEL.

HOLD DOWN TENSION ANCHORS SPECI IED AS STANDARD GRADE STD M ST COMPL WITH ASTM 554 GRADE OR E AL HOLD DOWN TENSION ANCHORS SPECI IED AS HIGH STRENGTH HS M ST COMPL WITH ASTM A GRADE OR E AL TENSION ANCHORS OTH GRADES CONNECT TO THE PPER AND LOWER PANELS WITH HARDENED RO ND WASHERS AND GRADE 8 N TS A *HARDY FRAME®* H SW" STAC ING WASHER IS RE IRED IN THE TOP CHANNEL O THE LOWER PANEL A AILA LE PRE WELDED IN A *HARDY FRAME®* "ST " PANEL ALTERNATE WASHERS ARE 2 EA RO ND LAT OR 2 EA SAE WASHERS AT EACH ANCHOR CONNECTION. ALTERNATE N TS ARE 2H HEA HE.
2. /4" DIAMETER MITE ®PRO SERIES ™WS SCREWS. LENGTH IS " MINIM M WHEN ATTACHING DIRECTL TO THE COLLECTOR AND 4 /2" MINIM M WHEN INSTALLING A 2 ILLER A O E THE PANEL.
/4" DIAMETER MITE ®PRO SERIES ™WS SCREWS. LENGTH IS 4 /2" MINIM M AT CONNECTIONS TO LOOR S STEMS AND EAMS ELOW.
4. /4" DIAMETER SCREWS ARE RE IRED AT THE EDGES WHEN INSTALLING A ILLER GREATER THAN /2 INCH A O E OR WHEN SPECI IED THE DESIGN PRO ESSIONAL.

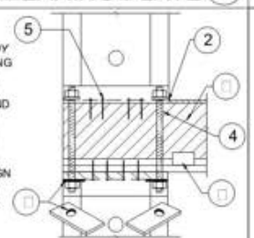
A



4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* EARING PLATE H P AND PANEL PER INSTALLATION NOTES DETAIL /H
3. *HARDY FRAME®* STAC ING WASHER H SW AT TOP O PANEL RE IRED WHEN CONNECTING TO TENSION ANCHOR ROM A O E.
4. /8 IN. DIA HOLD DOWN H SW AND N W PER TA LE NOTE ARE PRO IDED IN *HARDY FRAME®* H TC IT.
5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.
SP MP4 CONNECTORS ANTIT ILDING DESIGN PRO ESSIONAL.

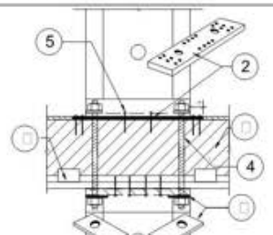
P RAMID STAC 8

NOTE
INSTALLATION WITHO T *HARDY FRAME®* EARING PLATE H P MA INCREASE DE LECTION AND RES LT IN A DECREASE O ALLOWA LE SHEAR AL E ILDING DESIGN PRO ESSIONAL M ST ANAL ZE E ECTS.



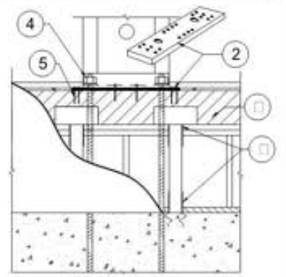
4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* PANEL DIRECTL ON RIM.
3. *HARDY FRAME®* STAC ING WASHER H SW AT TOP O PANEL RE IRED WHEN CONNECTING TO TENSION ANCHOR ROM A O E.
4. /8" DIA. HOLD DOWN H SW AND N W PER TA LE NOTE ARE PRO IDED IN *HARDY FRAME®* H TC IT.
5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.
SP MP4 CONNECTORS ANTIT ILDING DESIGN PRO ESSIONAL.

STAC @ OS CORNER



4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* EARING PLATE H P AND PANEL PER INSTALLATION NOTES DETAIL /H
3. *HARDY FRAME®* STAC ING WASHER H SW AT TOP O PANEL RE IRED WHEN CONNECTING TO TENSION ANCHOR ROM A O E.
4. /8" DIA. HOLD DOWN H SW AND N W PER TA LE NOTE ARE PRO IDED IN *HARDY FRAME®* H TC IT.
5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.
SP MP4 CONNECTORS ANTIT ILDING DESIGN PRO ESSIONAL.

STRAIGHT STAC



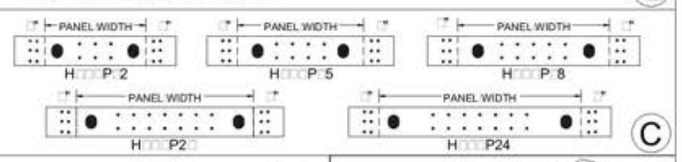
4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* EARING PLATE H P AND PANEL PER INSTALLATION NOTES DETAIL /H
SP POST CAP AND POST ASE THE ILDING DESIGN PRO ESSIONAL.
4. N TS AND WASHERS PER TA LE NOTE
5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.

CRIPPLE WALL 5

INSTALLATION ON LOOR S STEMS WITH *HARDY FRAME®* EARING PLATE H P

WITH HOLES PRE DRILLED OR /8" DIA TENSION ANCHORS INSTALL A SOLID 4 MINIM M RIM IN LOOR S STEM AT PANEL LOCATION ALLOWA LE AL E TA LES ASS ME THE RIM IS ENGINEERED WOOD PROD CT EWP.
2. NOTCH LOOR SHEATHING THEN INSTALL H P ON RIM WITH EACH /4" 4 /2" MIN "WS" SCREWS AT EACH END.
PLACE PANEL ON H P.
4. WHEN STAC ING PANELS INSTALL "H SW" STAC ING WASHERS IN THE TOP CHANNEL O THE LOWER PANEL CONNECT LOWER TO PPER PANELS WITH TENSION ANCHORS GRADE PER PLANS AND SEC RE AT OTH ENDS WITH HARDENED RO ND WASHERS AND GRADE 8 N TS TO E SN G TIGHT. *HARDY FRAME* "ST " PANELS THAT INCL DE "H SW" STAC ING WASHERS PRE WELDED IN THE TOP CHANNEL ARE A AILA LE
5. WHEN MORE THAN 2 SCREWS ARE RE IRED OR THE OTTOM CONNECTION OR OINTS IN RAMING MEM ERS OCC R AT SCREW LOCATIONS INSTALL ADDITIONAL /4" 4 /2" WS SCREWS THRO GH THE ASE O PANEL WHERE THE ALIGN WITH HOLES IN THE H P.
OR STANDARD WALL HEIGHTS INSTALL A 2 ILLER A O E PANEL DTL 5/H 2 OR ILLERS GREATER THAN /2 IN. SEE DETAIL /H 2.

NOTE INSTALLATIONS MA AR WITH O SPECI IC CONDITIONS AND/OR SPECI ICATIONS THE ILDING DESIGN PRO ESSIONAL.



C

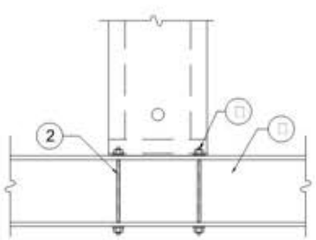
LOAD PATH ROM EAM TO O NDATION AND CHEC THAT PANEL DRI T IS WITHIN CODE LIMIT ILDING DESIGN PRO ESSIONAL.



DROP EAM WITH LOOR OIST A O E PER PLAN.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* EARING PLATE H P AND PANEL PER INSTALLATION NOTES DETAIL /H
HARDY FRAME® EARING PLATE H P OR EARING PLATE WASHER AT NDERSIDE O EAM SIZED PER ILDING DESIGN PRO ESSIONAL TO LIMIT CR SHING ROM TENSION ANCHOR ORCES.
4. N TS AND WASHERS PER TA LE NOTE
5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE. SP CONNECTORS DESIGN PRO ESSIONAL

DROP M L S STEM 4

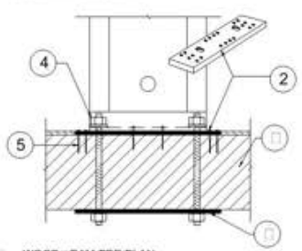
LOAD PATH ROM EAM TO O NDATION AND CHEC THAT PANEL DRI T IS WITHIN CODE LIMIT ILDING DESIGN PRO ESSIONAL.



STEEL EAM PER PLANS
2. HOLD DOWN ALL THREAD RODS THR OLTED TO OTTOM LANGE O STEEL EAM ILDING DESIGN PRO ESSIONAL.
N TS AND WASHERS AT PANEL ASE PER TA LE NOTE

STEEL M THR OLT

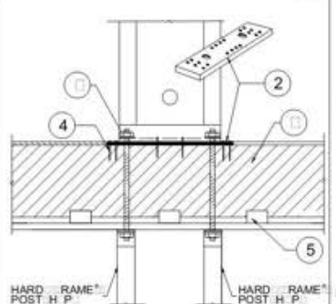
LOAD PATH ROM EAM TO O NDATION AND CHEC THAT PANEL DRI T IS WITHIN CODE LIMIT ILDING DESIGN PRO ESSIONAL.



WOOD EAM PER PLAN.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* EARING PLATE H P AND PANEL PER INSTALLATION NOTES DETAIL /H
3. *HARDY FRAME®* EARING PLATE H P OR EARING PLATE WASHER AT NDERSIDE O EAM SIZED PER ILDING DESIGN PRO ESSIONAL TO LIMIT CR SHING ROM TENSION ANCHOR ORCES.
4. /8" DIA. HOLD DOWN H SW AND N W PER TA LE NOTE ARE PRO IDED IN *HARDY FRAME®* H TC IT.
5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.

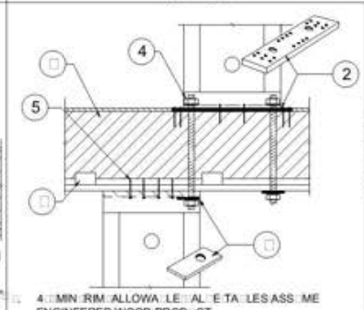
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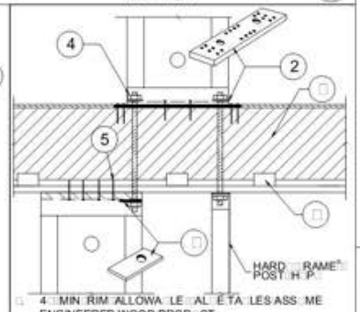
4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
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H P POSTS ELOW



4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
2. NOTCH LOOR SHEATHING THEN INSTALL *HARDY FRAME®* EARING PLATE H P AND PANEL PER INSTALLATION NOTES DETAIL /H
3. *HARDY FRAME®* STAC ING WASHER H SW AT TOP O PANEL RE IRED WHEN CONNECTING TO TENSION ANCHOR ROM A O E.
4. /8" DIA. HOLD DOWN H SW AND N W PER TA LE NOTE ARE PRO IDED IN *HARDY FRAME®* H TC IT.
5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.
SP MP4 CONNECTORS ANTIT ILDING DESIGN PRO ESSIONAL.

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4 MIN RIM ALLOWA LE AL E TA LES ASS ME ENGINEERED WOOD PROD CT.
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5. /4" 4 /2" MIN WS SCREWS ANTIT PER TA LE.
SP MP4 CONNECTORS ANTIT ILDING DESIGN PRO ESSIONAL.

STAGGERED H P POST

RE ISIONS	DATE

FLOOR SYSTEM DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK® *HARDY FRAME®* PRODUCTS

HARDY FRAME®
SHEAR WALL SYSTEM
1732 PALMA DRIVE, SUITE 200, VENTURA, CA 93003
TELEPHONE: 800 754-3030 / www.hardyframe.com

MiTek®

DATE
20 8

H

SPECIAL INSPECTION MATERIALS TESTING PROGRAM

RESPONSIBILITIES OF THE OWNER

A. EMPLOY AND PAY THE SPECIAL INSPECTION AGENCY TO PERFORM INSPECTIONS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.

B. EMPLOY AND PAY THE MATERIALS TESTING LABORATORY TO PERFORM TESTS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
   1) RETESTING – THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR RE-TESTING WHERE RESULTS OF INSPECTIONS AND TESTS PROVE UNSATISFACTORY AND INDICATE NONCOMPLIANCE WITH REQUIREMENTS.

C. EMPLOY AND PAY THE ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN OR ANOTHER ENGINEER DESIGNATED BY THE ENGINEER RESPONSIBLE FOR THE DESIGN TO PERFORM STRUCTURAL OBSERVATION.

DEFINITIONS

A. APPROVED FABRICATOR: A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD, TO PERFORM WORK, OFF SITE, REQUIRING SPECIAL INSPECTION WITHOUT SPECIAL INSPECTION. THE DESCRIPTION IN SECTION 1702 OF THE CURRENT BUILDING CODE IS APPLICABLE.

B. SPECIAL INSPECTION AGENCY: THE ACCREDITED INSPECTION BODIES DESIGNATED HEREIN AND APPROVED BY THE ENGINEER OF RECORD TO PERFORM SPECIAL INSPECTION AS REQUIRED BY THE BUILDING CODE AND THE PROJECT SPECIFICATIONS AND AS DESCRIBED IN SECTION 1701 OF THE CURRENT UNIFORM BUILDING CODE.

C. SPECIAL INSPECTOR: A QUALIFIED PERSON, EMPLOYED BY THE SPECIFIED SPECIAL INSPECTION AGENCY, WHO HAS DEMONSTRATED COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. DUTIES INCLUDE VISUAL INSPECTIONS AND FIELD MEASUREMENTS OF MATERIALS, OBTAINING SPECIMENS FOR TESTS AND RELATED ACTIONS INCLUDING PREPARATION OF REPORTS.

D. TESTING LABORATORY: AN ACCREDITED MATERIALS TESTING LABORATORY, APPROVED BY THE ENGINEER OF RECORD, TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS.

E. CONTINUOUS INSPECTION: ON SITE INSPECTION BY THE SPECIAL INSPECTOR ON A CONTINUOUS BASIS OBSERVING ALL WORK REQUIRING SPECIAL INSPECTION.

F. PERIODIC INSPECTION: INTERMITTENT INSPECTION AS PERMITTED BY THE PLAN, SPECIFIED AT PREDETERMINED INTERVALS OR MORE FREQUENTLY AS WORK PROGRESSES. NO SIGNIFICANT ELEMENTS OR AREAS SHALL BE COVERED BY ADDITIONAL WORK UNTIL APPROVED BY THE MUNICIPAL BUILDING INSPECTOR AND/OR THE SPECIAL INSPECTOR.

G. STRUCTURAL OBSERVATION: THE VISUAL OBSERVATION, BY THE ENGINEER OF RECORD OR HIS DESIGNEE, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL AND MUNICIPAL INSPECTIONS REQUIRED BY CODES AND SPECIFICATIONS.

SPECIAL INSPECTION:

THE SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER, THE ENGINEER OR ARCHITECT OF RECORD, OR AN AGENT OF THE OWNER, BUT NOT THE CONTRACTOR OR ANY OTHER PERSON RESPONSIBLE FOR THE WORK.

THE FOLLOWING CONSTRUCTION PROCEDURES REQUIRE SPECIAL INSPECTION PER SECTION 1704 & 1707 OF THE 2016 CBC

- STRUCTURAL CMU RETAINING WALLS.
- SOILS BY SOILS ENGINEER.

NOTE: THERE SHALL BE NO TRENCHES OR EXCAVATIONS 5 FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, OR OBTAIN PERMIT FROM STATE OF CALIFORNIA, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA). THIS PERMIT AND ANY OTHER SAFETY PERMIT SHALL BE OBTAINED PRIOR TO COMMENCE OF ANY WORK." CONTACT CAL/OSHA AT 714-558-4451 FOR ADDITONAL INFORMATION

BOTTOM OF FOOTING ELEVATION:

FOUNDATION INSPECTION WILL NO BE MADE UNTIL THE EXCAVATION HAS BEEN SURVEYED AND THE DEPTH OF FOOTINGS HAS BEEN DETERMINED TO BE IN ACCORDANCE WITH THE APPROVED PLANS BY LAND SURVEYOR LICENSED BY STATE OF CALIFORNIA

CONCRETE MASONRY CMU

1. CONCRETE MASONRY UNITS SHALL CONFORM TO STANDARD SPECIFICATION FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS ASTM C 90, GRADE N-II.
2. SOLID GROUT ALL CELLS UNLESS NOTED OTHERWISE
3. CLEANOUTS REQUIRED AT BOTTOM OF ALL CELLS CONTAINING VERTICAL REINFORCEMENT, POUR EXCEED 4 FEET IN HEIGHT.
4. MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED AND COMPOSED BY VOLUME OF ONE PART PORTLAND CEMENT, 1/4 TO 1/2 PART LIME PUTTY OR HYDRATED LIME AND DAMP LOOSE SAND EQUAL TO 2-1/4 TO 3 TIMES THE SUM OF THE VOLUME OF CEMENT AND LIME USED.
5. GROUT SHALL BE COMPOSED BY VOLUME OF ONE PART PORTLAND CEMENT, TWO TO THREE PARTS SAND, TWO PARTS PEA GRAVEL TO WHICH MAY BE ADDED NOT MORE THAN 1/10 PART HYDRATED LIME OR LIME PUTTY. SUFFICIENT WATER SHOULD BE ADDED TO PRODUCE A CONSISTENCY FOR POURING WITHOUT SEGREGATION OF GROUT CONSTITUENTS.
6. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2,000 psi AT 28 DAYS.

CONCRETE

1. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150 - TYPE II (USE TYPE V CEMENT WITH APPROPRIATE WATER TO CEMENT RATIO PER SECTION 1904.3 OF THE CBC FOR SOILS WITH SEVERE OR VERY SEVERE SULFATE EXPOSURE)
2. MINIMUM 28-DAY ULTIMATE COMPRESSIVE STRENGTH 2,500 psi, U.N.O. CONTINUOUS INSPECTION BY A DEPUTY INSPECTION IS NOT REQUIRED.
3. AGGREGATES:

LIGHTWEIGHT	ASTM C-330
HARDROCK	ASTM C-33

4. CONCRETE COVERAGE OF REINFORCING STEEL:

   UNFORMED SURFACES CAST DIRECTLY AGAINST EARTH.

SLABS-ON-EARTH	AT C.L. SLAB
ALL OTHER CONCRETE	3 INCHES

   FORMED AND/OR FINISHED SURFACES EXPOSED TO EARTH OR WEATHER.

#5 BAR AND SMALLER	1-1/2 INCHES
#6 BAR AND LARGER	2 INCHES

5. FORMS AND SHORING SHALL REMAIN UNDISTURBED AS FOLLOWS:

VERTICAL SURFACES	7 DAYS
STRUCTURAL SLAB	10 DAYS

6. ALL REINFORCING STEEL, DOWEL, EMBEDDED HARDWARE, HOLD DOWN BOLTS, STRAPS, AND POST BASES MUST BE WELL SECURED IN PROPER LOCATIONS PRIOR TO PLACING CONCRETE.
7. MAXIMUM IN-PLACE DENSITY OF NONSTRUCTURAL LIGHTWEIGHT CONCRETE FLOOR TOPPING IS TO BE 100#/CU. FT.
8. REFER TO SLAB PLAN NOTES FOR ADDITIONAL INFORMATION, U.N.O.

REINFORCING STEEL

1. ALL REINFORCING STEEL:

NOTE: #4 AND SMALLER	ASTM A-615, GRADE 40
#5 AND LARGER	ASTM A-615, GRADE 60

2. WELDED WIRE FABRIC ASTM A-185
3. REINFORCING MARKED CONT. (CONTINUOUS) MAY BE SPLICED WITH LAPS AS SPECIFIED IN THE CODE, UNLESS OTHERWISE SPECIFIED.

SOILS AND FOUNDATION

1. THE FOUNDATION DESIGN IS BASED UPON THE SOILS REPORT BY QUALTECH CONSULTANTS PROJECT NO.: 19-058-003, DATED MAR. 16, 2020 THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIREMENTS THEREIN AND MAINTAIN A COPY ON THE JOBSITE AT ALL TIMES.
2. THE ENGINEER OF RECORD MUST BE INFORMED OF ANY CHANGES IN DESIGN CRITERIA MADE BY THE SOILS ENGINEER IN THE COURSE OF CONSTRUCTION.
3. ALL FOOTINGS AND SLABS SHALL BE FOUNDED ON FIRM UNDISTURBED NATURAL SOILS OR COMPACTED FILL. (PROVIDE BY SOILS ENGINEER)
4. ALL COMPACTED FILL SHALL BE PLACED IN AN APPROVED MANNER WITH A MINIMUM DENSITY OF 90% OF THE MAXIMUM OBTAINABLE IN ACCORDANCE WITH ASTM D 1557.
5. THE SOILS ENGINEER SHALL INSPECT AND APPROVE ALL FOUNDATION ALL RETAINING WALLS SHALL BE PROVIDED WITH STANDARD SURFACE BACKDRAIN TRENCH PRIOR TO PLACING REINFORCING AND/OR CONCRETE.
6. SYSTEM AND ALL DRAINAGE SHALL BE CONDUCTED TO THE STREET IN AN ACCEPTABLE MANNER AND IN A NON-EROSIVE DEVICE.
7. REFER TO FOUNDATION PLANS, NOTES & DETAILS FOR ADDITIONAL INFORMATION.
8. ALLOWABLE SOIL BEARING PRESSURE: SEE SOILS REPORT

M.S. CONSULTING ENGINEERING
Residential Commercial Industrial
12631 Imperial HWY #F-230, Santa Fe Springs, CA 90670
(562) 863-9991 FAX (562) 863-9991
EMAIL: MSPE88@AOL.COM

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL SHAHBAZIAN
S 5266
EXP. 6/30/22
STRUCTURAL
STATE OF CALIFORNIA

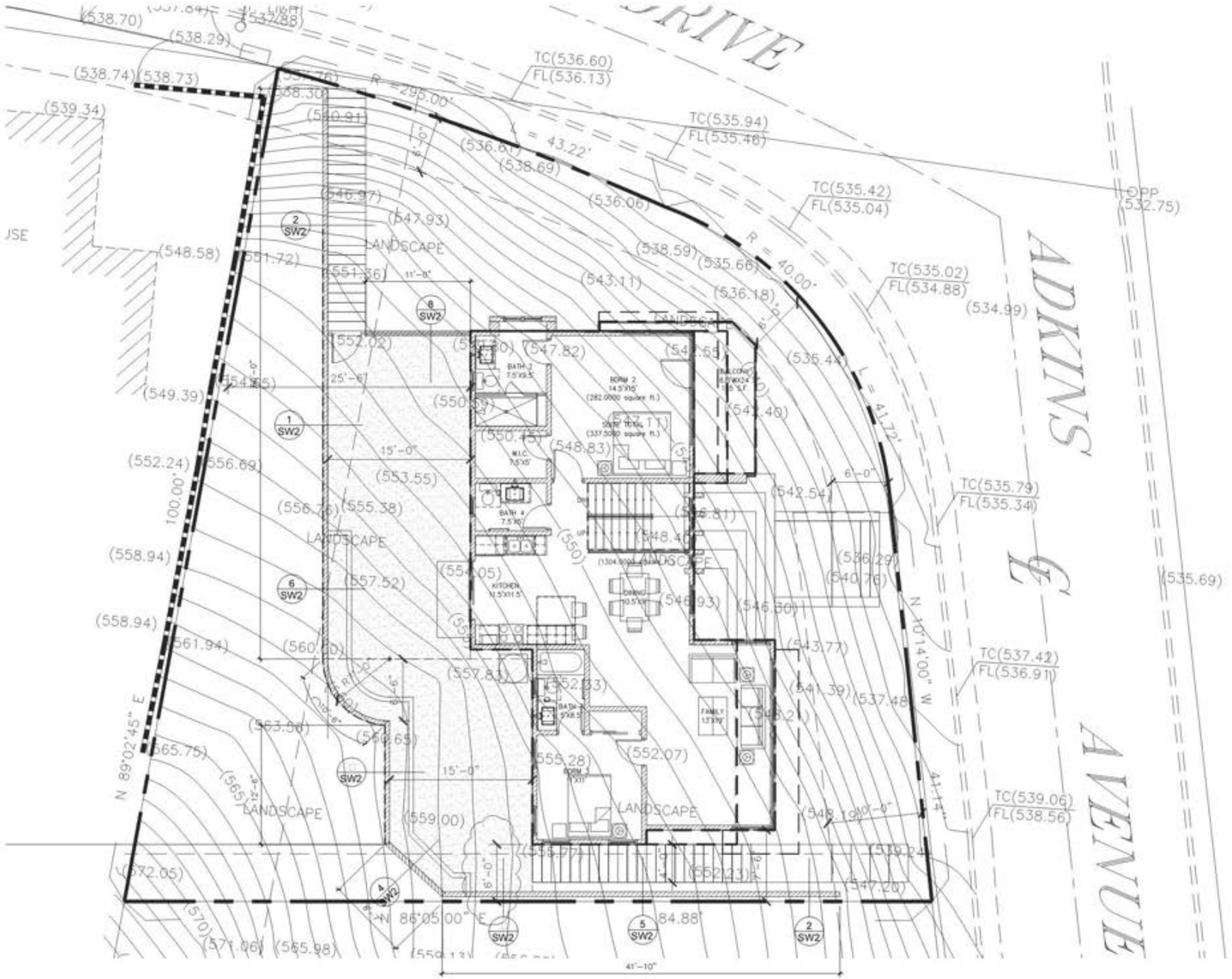
REVISIONS

No.	DATE	DESCRIPTION
1.	11-9-2020	PC ISSUE

SITE RETAINING WALL
2849 N. ADKINS DR. LOS ANGELES, CA 90032

GENERAL NOTES

JOB No. 20017
DRAWN BY P. Khanal
DATE 11-9-2020
SCALE
SHEET No. SN



SITE RETAINING WALL

3/16" = 1'-0"

M.S. CONSULTING ENGINEERING
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EXP 6/30/22
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STATE OF CALIFORNIA

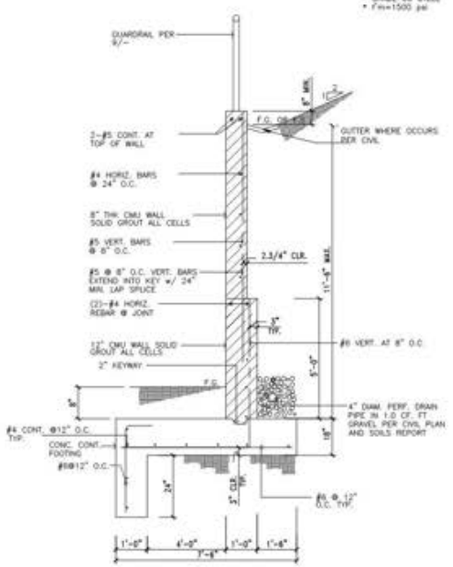
REVISIONS

No.	DATE	DESCRIPTION
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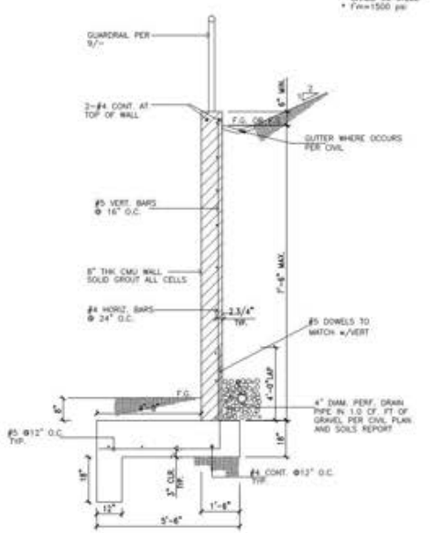
SITE RETAINING WALL
2849 N. ADKINS DR. LOS ANGELES, CA 90032

SITE RETAINING WALL

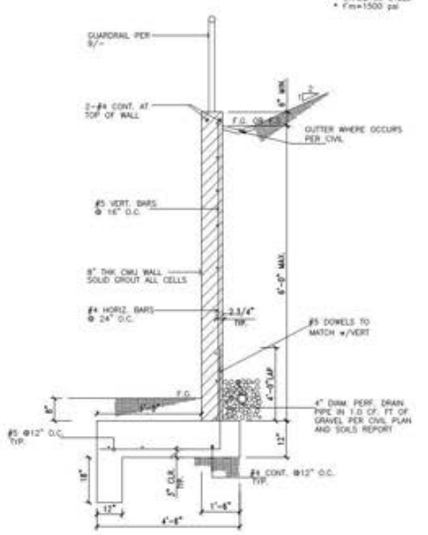
JOB No. 20017
DRAWN BY P. Khanal
DATE 11-9-2020
SCALE
SHEET No. SW-1



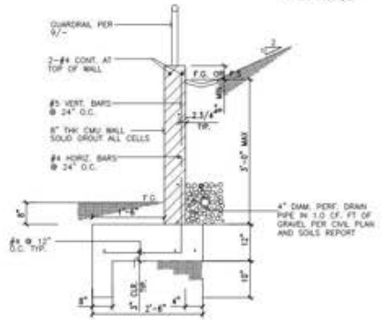
12'-0" MAX. RETAINING WALL (8)



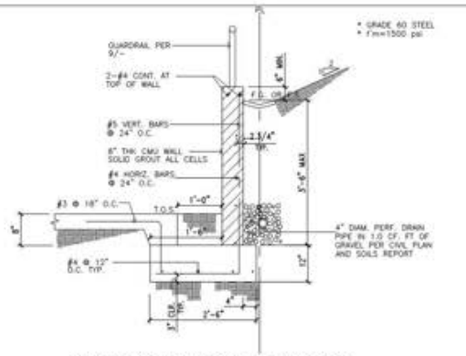
7'-6" MAX. RETAINING WALL (7)



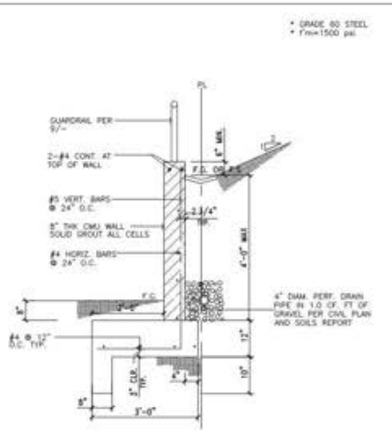
6'-0" MAX. RETAINING WALL (4)



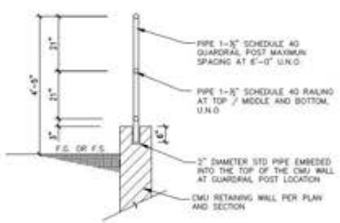
3'-0" MAX. RETAINING WALL (1)

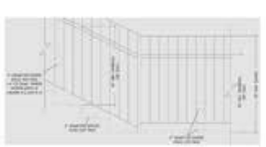


3'-6" MAX. RETAINING WALL W/ S.O.G. (2)

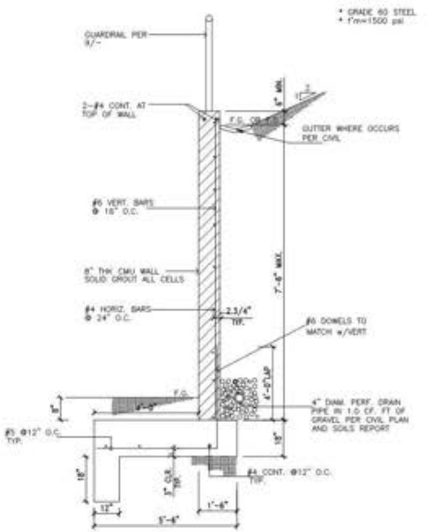


4'-0" MAX. RETAINING WALL (3)

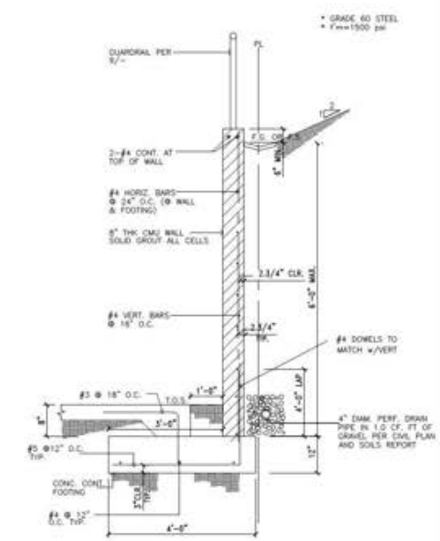




GUARDRAIL O/ RETAINING WALL (9)



8'-0" MAX. RETAINING WALL (6)



6'-0" MAX. RETAINING WALL W/S.O.G. (5)

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL S. SHAHBAZIAN
S 5266
EXP. 6/30/22
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS

No.	DATE	DESCRIPTION
1.	11-9-2020	PC ISSUE

SITE RETAINING WALL
2849 N. ADKINS DR. LOS ANGELES, CA 90032

SITE RETAINING WALL DETAILS

JOB No. 20017
DRAWN BY P. Khanal
DATE 11-9-2020
SCALE
SHEET No. SW2

10. **Administrative Requirements:** The following notes (items) represent the administrative requirements for all buildings and shall appear as notes on the plans.

A) The person in charge of the construction or installation, who is eligible under Division 3 of the Business and Professions Code to accept responsibility for the construction or installation of regulated manufactured devices shall post, or make available with the building permit(s) issued for the building, the Certificate of Installation documentation for manufactured devices regulated by the Appliance Efficiency Regulations or Part 6. Such Certificate of Installation documentation shall be made available to the enforcement agency for all applicable inspections. These certificates shall:

i) Identify features, materials, components, manufactured devices, and system diagnostic results required to verify compliance with the Appliance Efficiency Regulations and Part 6.

ii) State the number of the building permit under which the construction or installation was performed. Sections of the certificate(s), for which submittal to a HERS provider data registry is required, shall display the unique registration number assigned by the HERS data registry.

iii) Include a declaration statement indicating that the constructed or installed features, materials, components, or manufactured devices conform to all applicable codes and regulations, and to the requirements for such devices given in the plans and specifications approved by the local enforcement agency.

iv) Be signed by the documentation author to certify the documentation is accurate and complete.

v) Be signed by the individual eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or installation in the applicable classification for the scope of work specified on the Certificate of Installation document(s). Sec. 10-103 (a) 3 A

B) The builder shall provide the building owner or the person(s) responsible for operation and maintenance of the feature, material, component or mechanical device installed (in case of multi-tenant or centrally operated buildings) with the following at the time of occupancy:

i) Compliance information. The appropriate completed and signed Certificate(s) of Compliance, Certificate(s) of Installation, and if applicable Certificate(s) of Verification documentation submitted.

ii) Operating information. The appropriate Certificate(s) of Compliance and a list of the features, materials, components, and mechanical devices installed in the building and instructions on how to operate them correctly and efficiently.

iii) Maintenance information. Required routine maintenance actions shall be clearly stated and incorporated on a readily accessible label. The label may be limited to identifying the operation and maintenance manual.

iv) Ventilation Information. A description of the quantity of outdoor air that the ventilation system is designed to provide to the building conditioned space, and instructions for proper operation and maintenance. Sec. 10-103 (b)

C) The Enforcement agency shall not issue a Certificate of Occupancy until all required Certificates of Verification are posted and made available to the building department for all applicable inspections, and that all Certificates of Verification conform to the specifications of Section 10-103(a)5. Sec. 10-103 (d).2

11. Mandatory Measures: The following circled items represent the Mandatory Measures for all buildings and **shall appear as notes on the plans**.

A) Manufactured fenestration products and exterior doors shall:
1) Have a clearly visible temporary label meeting the requirements of Sec. 10-111 (a) 1, not to be removed before inspection by the enforcement agency, listing the certified U-factor, the solar heat gains coefficient (SHGC), and Visible Transmittance (VT) certifying that the air leakage requirements of Sec. 110.6 (a) 1 are met for each product line; and
2) Have a permanent label meeting the requirements of Sec. 10-111 (a) 2 if the product is rated using NFRC procedures. Sec. 110.6 (a)

B) Field-fabricated fenestration and field-fabricated exterior doors shall be caulked between the fenestration products or exterior door and the building, and shall be weather stripped. EXCEPTION: Unframed glass doors and fire doors. Sec. 110.6 (b)

C) Joints, penetrations and other openings in the building envelope that are potential sources of air leakage shall be caulked, gasketed, weather stripped, or otherwise sealed to limit infiltration and exfiltration. Sec. 110.7

D) All insulating material shall be installed in compliance with the flamespread rating and smoke density requirements of the CBC. Sec. 110.8 (c)

E) No mechanical equipment nor plumbing vents shall be located within the designated "Solar Zone" areas. Sec 110.10 (b) 1-B

F) Any roofing product used as a cool roof shall be certified and labeled in accordance with the requirements of Sec. 10-113 by the Cool Roof Rating Council (CRRC) and meet conditions set in Sec. 110.8 (i)

G) New space conditioning equipment shall meet the applicable efficiency requirements of Tables 110.2-(A-K). Sec. 110.2 (a)

H) All unitary systems not controlled by EMCS shall have setback thermostats; capable to program temperature setpoints for at least four periods within a 24 hr. period. Sec. 110.2 (2) (c)

I) Heat pumps with supplementary electric resistance heaters shall have controls:
1) That prevent supplementary heater operation when the heating load can be met by the heat pump alone; and
2) Cut-on temperature for compression heating is higher than cut-on temperature for supplementary heating, cut-off temperature for compression heating is higher than the cut-off temperature for supplemental heating. Sec. 110.2 (b)

J) Unfired water tanks (storage tanks or backup storage tanks for solar water heating) shall be externally wrapped with an insulation of R-12 or greater or have internal insulation of R-16 or greater with a label showing the insulation R-value. Sec. 150.0 (j)

K) All factory fabricated duct systems shall comply with UL 181. This includes all ducts, and closure systems such as collars, connections and splices. Labeled, complying to UL 181. Sec. 150.0 (m)2

L) For single family dwellings and townhouses with the ducts connected directly to the air handler, the total leakage of the duct system shall not exceed 5 percent of the nominal system air handler airflow as determined utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.1. If the single-family dwellings and townhouses are in the "rough-in stage of construction" prior to installation and the air-handling unit is not yet installed the leakage shall not exceed 4 percent of the air-handler systems manufactured listed airflow. Sec. 150.0 (m)11-A

M) All air distribution system ducts and plenums, including, but not limited to, building cavities, mechanical closets, air-handler boxes and support platforms used as ducts or plenums, shall be installed, sealed and insulated to meet the requirements of the 2019 California Mechanical Code and ANSI/SMACNA - 006.2006 HVAC Duct Construction Standards Metal and Flexible. Supply-air ducts conveying heated or cooled air shall be insulated to a minimum installed level of R-4.2 (R-6.0 in unconditioned space), unless ducts are in conditioned space. Sec. 150.0 (m)

N) All dwelling buildings shall meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings Sec. 150.0 (o)

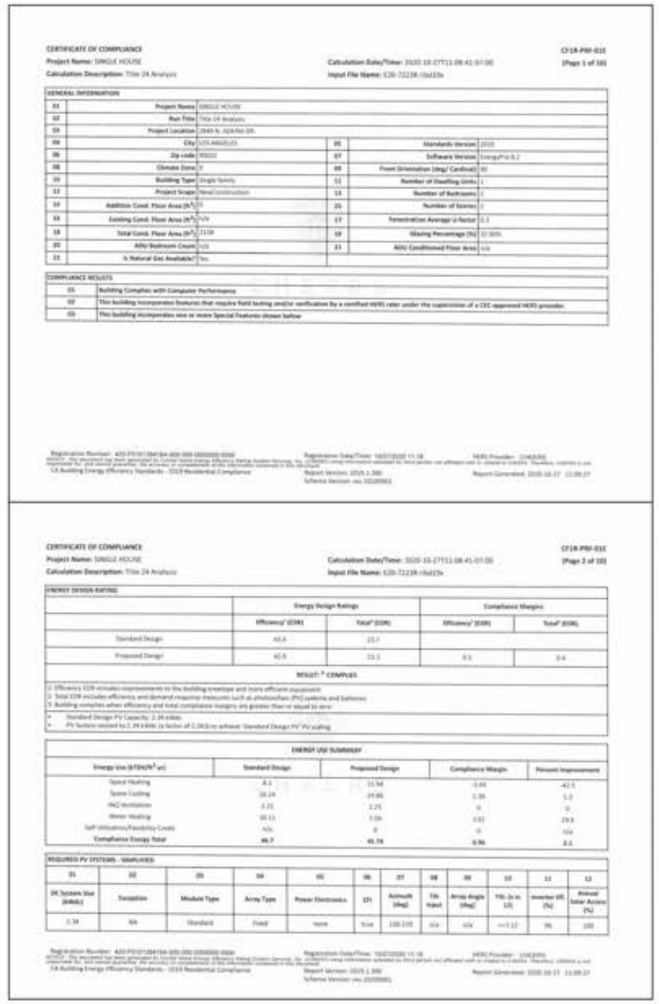
O) The piping for all space conditioning and service water heating systems shall be insulated in accordance with TABLE 120.3 -A.

P) Service water heating systems and equipment shall meet the applicable requirements of the Appliance Efficiency Regulations as required by Sec. 110.1. Sec. 110.3 (b)

Q) Service hot water systems with circulating pumps or with electrical heat trace systems shall be capable of automatically turning off the system. Sec. 110.3 (c) 2

R) Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr. (2 kW) shall have isolation valves on both the cold water supply and the hot water pipe leaving the water heater. Hose bibs or other fittings shall be installed on each valve for flushing the water heater when the valves are closed. Provide detail. Section 110.3 (c) 6

06 - 16 - 2020



CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — [Page 1 of 10]
Project Name: SINGLE HOUSE — Calculation Date/Time: 2020-10-27T11:08:41-07:00
Calculation Description: Title 24 Analysis — Input File Name: E20-7223R-ResEEx

GENERAL INFORMATION

01	Project Name:	SINGLE HOUSE			
02	Run Title:	Title 24 Analysis			
03	Project Location:	2849 N. ADKINS DR.			
04	City:	LOS ANGELES	05	Standards Version:	2019
06	Zip code:	90032	07	Software Version:	EnergyPro 8.2
08	Climate Zone:	9	09	Front Orientation (deg/ Cardinal):	90
10	Building Type:	Single family	11	Number of Dwelling Units:	1
12	Project Scope:	New construction	13	Number of Bedrooms:	2
14	Addition Cond. Floor Area (ft²):	0	15	Number of Stories:	2
16	Existing Cond. Floor Area (ft²):	1,579	17	Fenestration Average U-factor:	0.3
18	Total Cond. Floor Area (ft²):	2,139	19	Glazing Percentage (%):	12.90%
20	ADU Bedroom Count:	n/a	21	ADU Conditioned Floor Area:	n/a
22	Is Natural Gas Available?:	Yes			

COMPLIANCE RESULTS

01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

Registration Number: 420-P5101284154-000-000-0000000-0000 — Registration Date/Time: 10/27/2020 11:18 — HERS Provider: CHEERS
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CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — [Page 2 of 10]
Project Name: SINGLE HOUSE — Calculation Date/Time: 2020-10-27T11:08:41-07:00
Calculation Description: Title 24 Analysis — Input File Name: E20-7223R-ResEEx

ENERGY DESIGN RATING

	Energy Design Ratings		Compliance Margins	
	Efficiency[1] (EDR)	Total[2] (EDR)	Efficiency[3] (EDR)	Total[4] (EDR)
Standard Design	43.6	23.7		
Proposed Design	42.9	23.1	0.5	0.6

RESULT: [5] COMPLIES

1. Efficiency EDR includes improvements to the building envelope and more efficient equipment
2. Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3. Building complies when efficiency and total compliance margins are greater than or equal to zero
4. Standard Design PV Capacity: 2.34 kWdc
5. PV System revised to 2.34 kWdc (a factor of 2.0kW or greater Standard Design PV PV scaling

ENERGY USE SUMMARY

Energy Use (kTh/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	8.1	11.94	-3.84	-47.5
Space Cooling	28.24	24.86	3.38	12
IAQ Ventilation	2.21	2.21	0	0
Water Heating	10.11	7.09	3.02	29.8
Self-Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	48.7	45.74	2.96	6.1

REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	Qty	Azimuth (deg)	Tilt Input	Array Angle (deg)	TSRF (a x b) (%)	Inverter Eff. (%)	Annual Solar Access (%)
2.34	n/a	Standard	Fixed	none	total	180-270	n/a	n/a	>=0.77	96	100

Registration Number: 420-P5101284154-000-000-0000000-0000 — Registration Date/Time: 10/27/2020 11:18 — HERS Provider: CHEERS
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PERFECT DESIGN & INVESTMENT, INC.
Energy & Consulting, Plumbing, Fire Sprinkler System, Air-Conditioning
Rockwell, Title 24 Energy Calculation
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SINGLE HOUSE
2849 N. ADKINS DR.
LOS ANGELES, CA 90032

REVISIONS

Date 10/27/2020
Scale
Drawn
Job # E20-7223R
Sheet 1
RESIDENTIAL T24 SHEET
Of 4 Sheets

CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — (Page 3 of 10)

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — **Input File Name:** E20-7223R-rbd19a

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Cool roof
- Non-standard duct location (any location other than attic)

HERS FEATURE SUMMARY

The following is a summary of the features that must be field verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry.

Building Level Verifications:
- Quality Insulation Installation (QII)
- Indoor air quality ventilation

Cooling System Verifications:
- Minimum Airflow
- Verified EER
- Verified SEER
- Verified Refrigerant Charge
- Fan Efficacy Watts/CFM

Heating System Verifications:
- Verified heat pump rated heating capacity

HVAC Distribution System Verifications:
- Duct leakage testing
- Verified low-leakage ducts in conditioned space (mid-level maximum 25 cfm leakage to outside (RA3.1.4.3.8))

Domestic Hot Water System Verifications:
- – None –

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
SINGLE HOUSE	2158	1	3	2	1	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
1ST FLOOR PLAN	Conditioned	WHOLE HOUSE1	858	9	DHW Sys 1	N/A

CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — (Page 4 of 10)

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — **Input File Name:** E20-7223R-rbd19a

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
2ND FLOOR PLAN	Conditioned	WHOLE HOUSE1	1300	9	DHW Sys 1	N/A

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)
WEST WALL	1ST FLOOR PLAN	12 Concrete Wall w/R-15	270	Back	201.9	0	90
EAST WALL	1ST FLOOR PLAN	R-21 Wall	90	Front	201.9	108	90
NORTH WALL	1ST FLOOR PLAN	R-21 Wall	0	Right	143	10	90
SOUTH WALL	1ST FLOOR PLAN	R-21 Wall	180	Left	143	0	90
WEST WALL 2	2ND FLOOR PLAN	R-21 Wall	270	Back	499.5	108	90
EAST WALL 2	2ND FLOOR PLAN	R-21 Wall	90	Front	499.5	276	90
NORTH WALL 2	2ND FLOOR PLAN	R-21 Wall	0	Right	288	104	90
SOUTH WALL 2	2ND FLOOR PLAN	R-21 Wall	180	Left	288	54	90
Raised Floor	2ND FLOOR PLAN	R-19 Floor W/O Crawlspace	n/a	n/a	304	n/a	n/a
Interior Surface	2ND FLOOR PLAN	Default Floor No Crawlspace	n/a	n/a	800	n/a	n/a

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
R-38 Roof	1ST FLOOR PLAN	R-38 Roof Cathedral	0	Right	54	0	0.2	0.79	0.88	No
R-38 Roof 2	2ND FLOOR PLAN	R-38 Roof Cathedral	0	Right	1304	0	0.3	0.79	0.88	No

CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — (Page 5 of 10)

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — **Input File Name:** E20-7223R-rbd19a

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
WINDOW1	Window	EAST WALL	Front	90			1	108	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOW5.2	Window	NORTH WALL	Right	0			1	60	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOW3.3	Window	WEST WALL 2	Back	270			1	108	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOW3.8	Window	EAST WALL 2	Front	90			3	276	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOW5.5	Window	NORTH WALL 2	Right	0			1	104	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOW5.6	Window	SOUTH WALL 2	Left	180			1	54	0.3	NFRC	0.23	NFRC	Bug Screen

SLAB FLOORS

01	02	03	04	05	06	07	08
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Covered Slab	1ST FLOOR PLAN	858	117	none	0	80%	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
12 Concrete Wall w/R-15	Exterior Walls	Concrete / ICF / Block	None	n/a	R-15 / None	0.063	Inside Finish: Gypsum Board; Insulation/Furring: R-15 / 5 in; wall Mass Layer: 12 in. Concrete; Exterior Finish: 3 Coat Stucco
R-21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R-21	None / None	0.065	Inside Finish: Gypsum Board; Cavity / Frame: R-21 / 2x6; Exterior Finish: 3 Coat Stucco

CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — (Page 6 of 10)

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — **Input File Name:** E20-7223R-rbd19a

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-38 Roof Cathedral	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O.C.	R-38	None / None	0.03	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: R-38 / 2x12 Inside Finish: Gypsum Board
R-19 Floor W/O Crawlspace	Exterior Floors	Wood Framed Floor	2x6 @ 16 in. O.C.	R-19	None / None	0.052	Floor Surface: Carpeted Floor Deck: Wood Siding/Sheathing/Decking Cavity / Frame: R-19 in 5-1/2 in. @ 16 / 2x6
Default Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O.C.	R-0	None / None	0.106	Floor Surface: Carpeted Floor Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFMI50
Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification
DHW Sys 1	Tankless Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a

CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — (Page 7 of 10)

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — **Input File Name:** E20-7223R-rbd19a

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (hr•ft²•°F/Btu)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition
DHW Heater 1	Gas	Commercial Storage	1	50	0.94 FE	199900 Btu/hr	11	0.001083	n/a	n/a	n/a

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW Sys 1 - S/S	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Sizing Condition	Heating Equipment Count	Cooling Equipment Count
WHOLE HOUSE1	Heat pump heating cooling	Heat Pump System 1	Heat Pump System 1	HVAC Fan 1	Air Distribution System 1	Setback	New	Not	1	1

01	02	03	04	05	06	07	08	09	10	11
HVAC - HEAT PUMPS										
Name	System Type	Number of Units	Heating			Cooling		Standby Controlled	Compressor Type	HERS Verification
			HSPF/COP	Cap 47	Cap 17	SEER	EER/CEER			
Heat Pump System 1	Central packaged HP	1	9	60000	54000	19.1	12	Not Zonal	Single Speed	Heat Pump System 1 Hers Rtgsetup

CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E — (Page 8 of 10)

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — **Input File Name:** E20-7223R-rbd19a

HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge	Verified HSPF	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1 Hers Rtgsetup	Required	350	Required	Required	Yes	No	Yes	Yes

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
			Duct No. R-value		Duct Location		Surface Area				
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification
Air Distribution System 1	Verified low-leakage ducts in conditioned space	Non-Verified	R-6	R-6	Conditioned Zone	Conditioned Zone	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1 Hers dist

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Duct Entirely in Conditioned Space
Air Distribution System 1 Hers dist	Yes	See RA3.1.4.3.8	Required	Not Required	Not Required	Credit not taken	Not Required	Yes

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	HVAC Fan 1 Hers Sys

REVISIONS

NO	DESCRIPTION	DATE

PERFECT DESIGN & INVESTMENT, INC.
Energy & Consulting, Plumbing, Fire Sprinkler System, Air-Conditioning
Berdiwal, Title 24 Energy Calculation
2416 W. Valley Blvd.
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E-Mail: perfectdesign1234@gmail.com
Tel: (626) 289-4808
Fax: (626) 289-4913

SINGLE HOUSE
2849 N. ADKINS DR.
LOS ANGELES, CA 90032

Date 10/27/2020

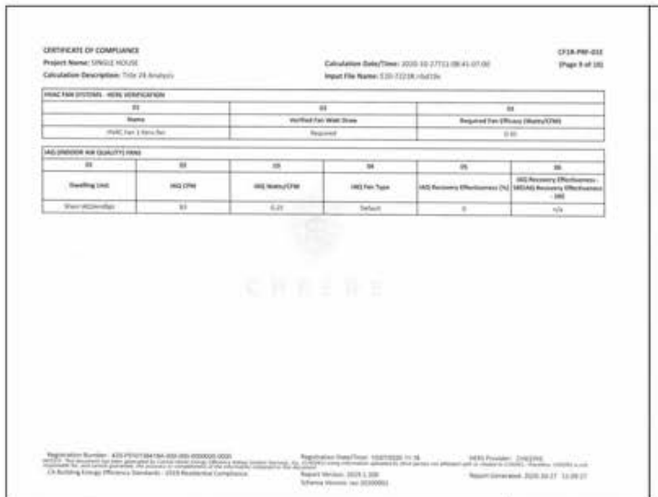
Scale

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Job #E20-7223R

Sheet 2
RESIDENTIAL T24 SHEET

Of 4 Sheets



CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E (Page 9 of 10)

Project Name: SINGLE HOUSE — Calculation Date/Time: 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — Input File Name: E20-7223R.ribd13x

HVAC FAN SYSTEMS - HERS VERIFICATION		
01	03	04
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1 Mini-Split	Required	0.65

IAQ (INDOOR AIR QUALITY) FANS					
03	03	05	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness (%)	IAQ Recovery Effectiveness - MECH/Ag Recovery Effectiveness - HRV
Mini-HE(ventilation	63	0.23	Default	0	n/a

Registration Number: 420-P701913941764-000-000-H000000-0000 — Registration Date/Time: 10/27/2020 11:16 — HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2019 Residential Compliance



CERTIFICATE OF COMPLIANCE — CF1R-PRF-01E (Page 10 of 10)

Project Name: SINGLE HOUSE — Calculation Date/Time: 2020-10-27T11:08:41-07:00

Calculation Description: Title 24 Analysis — Input File Name: E20-7223R.ribd13x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I, I certify that the Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Raymond Zhong	Documentation Author Signature: Raymond Zhong
Company: Perfect Design	Signature Date: 10/27/2020
Address: 2416 W. Valley Boulevard	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Alhambra, CA 91803	Phone: 626-280-8808

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed:
Address:	License:
City/State/Zip:	Phone:

Registration Number: 420-P701913941764-000-000-H000000-0000 — Registration Date/Time: 10/27/2020 11:16 — HERS Provider: CHEERS

Report Version: 2019.1.000 — Schema Version: rev.20200901 — Report Generated: 2020-10-27 11:08:27

CA Building Energy Efficiency Standards - 2019 Residential Compliance

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name	Building Type	Addition/Alteration	Date
SINGLE HOUSE	☒ Single Family ☐ Multi Family	☐ Addition Alone ☐ Existing+ Addition/Alteration	10/27/2020
Project Address	**California Energy Climate Zone**	**Total Cond. Floor Area**	**Addition**	**# of Units**
2849 N. ADKINS DR LOS ANGELES	CA Climate Zone 09	2,158	n/a	1

INSULATION

Construction	Type	Cavity	Area (ft²)	Special Features	Status
Roof	Wood Framed Rafter	R-38	1,308	Cool Roof	New
Wall	Solid Unit Masonry	- no insulation	602	Solid R-21.0	New
Wall	Wood Framed	R-21	1,622		New
Slab	Unheated Slab-on-Grade	- no insulation	854	Perim. = 127'	New
Demising	Wood Framed wall Crawl Space	- no insulation	602		New
Floor	Wood Framed wall Crawl Space	R-19	854		New

FENESTRATION

Total Area: — YOT Glazing Percentage: — 07.9 % — Area-Weighted Average U-Factor: 0.30

Orientation	Area(ft²)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Front (E)	384.0	0.300	0.23	none	none	N/A	New
Right (N)	154.0	0.300	0.23	none	none	N/A	New
Rear (W)	198.0	0.300	0.23	none	none	N/A	New
Left (S)	84.0	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Packaged Heat Pump	8.00 HSPF	Packaged Heat Pump	14.7 SEER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
WHOLE HOUSE	Ducted	Ducted	Conditioned	8.0	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Large Storage Gas	50	0.64	Standard	New

Energy Pro 8.2 by EnergySoft User Number: 1818 — ID: R20-10.0.0 — Page 10 of 10

2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply.

Building Envelope Measures:	
§ 110.6(a)1	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior garage doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC 400, ASTM E283 or ANSI/RESNET/ICC 380.
§ 110.6(a)2	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(a)3	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4 for exterior doors. They must be caulked and/or weather stripped.
§ 110.7	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a)	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g)	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i)	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per § 10-113 when the installation of a pass cool is specified on the CF1R.
§ 110.8(j)	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a)	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-framed ceiling, or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to sloping insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b)	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c)	**Wall Insulation.** Minimum R-15 insulation in 2x6 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.
§ 150.0(d)	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.
§ 150.0(f)	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch, as protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to conditioned earthwork crawl spaces for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air permeable insulation.
§ 150.0(q)	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58, or the weighted average U-factor of all fenestration must not exceed 0.58.
Fireplaces, Decorative Gas Appliances and Gas Log Measures:	
§ 150.0(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least two square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion door.
§ 150.0(e)3	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.
Space Conditioning, Water Heating, and Plumbing System Measures:	
§ 110.0-§ 110.3	**Certification.** Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.0(a)	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.
§ 110.2(b)	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone, and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c)	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
§ 110.2(d)1	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, trainline pressure, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)5.
§ 110.3(c)6	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2.0 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas, fan-type central furnaces, household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour), and pool and spa heaters.
§ 150.0(m)	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook Equipment Volume, Applications Volume, and Fundamentals Volume, the SMACNA Residential Comfort System Installation Standards Manual, or the ACCA Manual J using design conditions specified in § 150.0(m)2.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(m)3	**Clearances.** Air conditioner and heat pump system condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(m)5B	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(p)1	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks; buried below grade; and from the heating source to kitchen fixtures."
§ 150.0(j)3	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water-retardant and protected from UV light and adhesive tapes. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker to the branch circuit and labeled with the words "Future 240V Use". a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is located. a connection drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(n)3	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 609.7 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1	**CMC Compliance.** All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible, 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-8.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.6). Portions of the duct system completely exposed and surrounded by directly conditioned spaces are not required to be insulated. Connections of metal ducts and minor runs of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area."
§ 150.0(m)2	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth backed rubber adhesive duct tape unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings in the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9	**Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or jacketing. Cellular foam insulation must be protected as above or painted with a coating that is water resistant and provides shielding from solar radiation.
§ 150.0(m)10	**Furnace Inner Core Flow Duct.** Furnace inner core flow ducts must have a non-porous layer between the inner core and outer vapor barrier.
§ 150.0(m)11	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to or from within the conditioned space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Prefilters, shape and labeling must meet the requirements in § 150.0(m)12. Filters must be accessible for regular service."
§ 150.0(m)13	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be in 350 CFM per ton of nominal cooling capacity, and air air handling unit fan efficacy is 0.45 watts per CFM for gas furnace air handlers and 0.18 watts per CFM for all others. Small duct high velocity systems must provide air airflow in 250 CFM per ton of nominal cooling capacity, and air air handling unit fan efficacy in 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3."

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REVISIONS

SINGLE HOUSE
2849 N. ADKINS DR.
LOS ANGELES, CA 90032

Date 10/27/2020
Scale
Drawn
Job #E20-7223R
Sheet 3
RESIDENTIAL T24 SHEET
Of 4 Sheets

2019 Low-Rise Residential Mandatory Measures Summary

Requirements for Ventilation and Indoor Air Quality:	
§ 150.0(o)	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C	**Single Family Detached Dwelling Units.** Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1B	**Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units of the building must use the same system type and the dwelling unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.3 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F	**Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G	**Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2	**Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa Systems and Equipment Measures:	
§ 110.4(a)	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.
§ 110.4(b)1	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p)	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.
Lighting Measures:	
§ 110.9	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.
§ 150.0(k)1A	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must have all of the requirements for insulation contact (IC) labeling, air leakage, sealing, maintenance, and socket and light source as described in § 150.0(k)1C.
§ 150.0(k)1D	**Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E	**Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).
§ 150.0(k)1G	**Screw-based luminaires.** Screw-based luminaires must contain lamps that comply with Reference Joint Appendix JA8.
§ 150.0(k)2A	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)3	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinets, or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.
§ 150.0(k)2C	**Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E	**Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2G	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control according to § 110.9, meets the Installation Certificate requirements of § 130.4, meets the EMCS requirements of § 130.0(a), and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k)1A if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2J.
§ 150.0(k)2J	**Interior Switches and Controls.** Luminaires that are in certain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.
§ 150.0(k)2K	**Interior Switches and Controls.** Under-cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirements in item § 150.0(k)3Ai. CRs and OFF switch) and the requirements in either § 150.0(k)3Aii. (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii. (photocell, time clock, or an EMCS).
§ 150.0(k)3B	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches, and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3B or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4	**Internally Illuminated address signs.** Internally illuminated address signs must comply with § 140.8, or must consume no more than 5 watts of power, as determined according to § 130.0(c).
§ 150.0(k)5	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designated paths of ingress and egress.
Solar Ready Buildings	
§ 110.10(a)1	**Single Family Residences.** Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2	**Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(b)1	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building, and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.
§ 110.10(b)2	**Azimuth.** All sections of the solar zone located on sloped sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3a	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3b	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
§ 110.10(b)4	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c)	**Interconnection Pathways.** The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d)	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric"

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: SINGLE HOUSE
System Name: WHOLE HOUSE
Date: 10/27/2020
Floor Area: 2,158

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	40,000
Total Output (Btu/h)	40,000
Output (Btu/h/sqft)	27.3
Cooling System	
Output per System	33,600
Total Output (Btu/h)	33,600
Total Output (Tons)	4.0
Total Output (Btu/h/sqft)	27.3
Total Output (sqft/Ton)	539.5
Air System	
CFM per System	2,000
Airflow (cfm)	2,000
Airflow (cfm/sqft)	0.93
Airflow (cfm/Ton)	428.2
Outside Air (%)	0.0 %
Outside Air (cfm/sqft)	0.00

SYSTEM LOAD

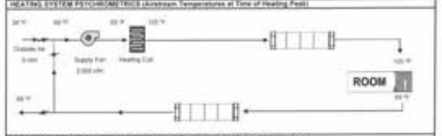
	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	1,928	25,273	1,418	705	20,903
Return Vented Lighting		0			0
Return Air Ducts		0			0
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		0			0
TOTAL SYSTEM LOAD		25,273	1,418		20,903

HVAC EQUIPMENT SELECTION

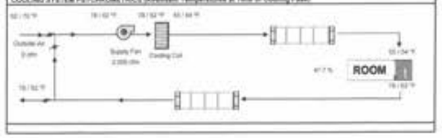
CARRIER 50VT-060		40,000	0.011	50,227
Total Adjusted System Output (Adjusted for Peak Design Conditions)		40,000	0.011	50,227
TIME OF SYSTEM PEAK			Aug 3 PM	Jan 7 AM

Note: values above given at AR conditions

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)

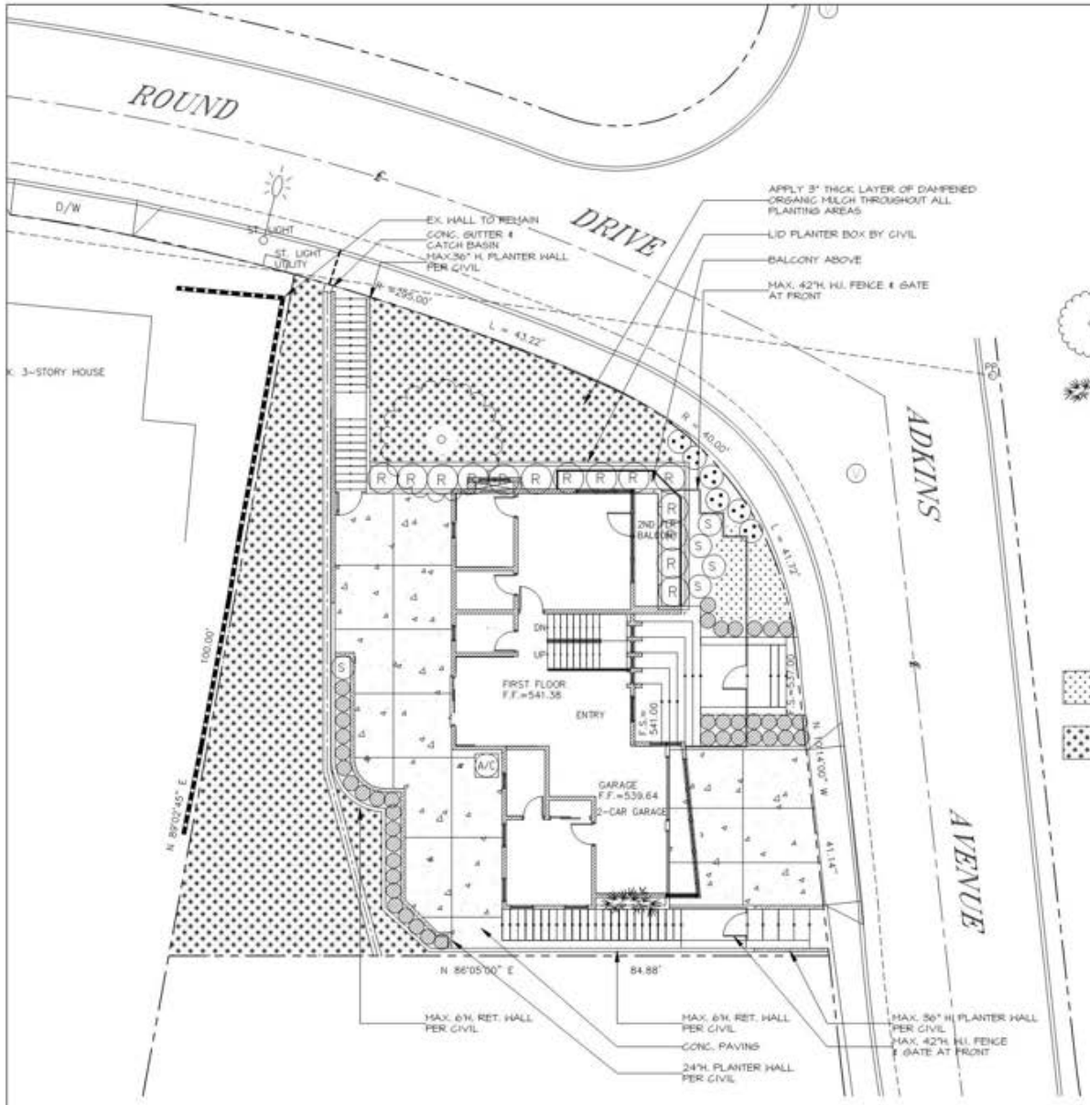


PERFECT DESIGN & INVESTMENT, INC.
Ching-Ho Lee
Air-Conditioning, Plumbing, Fire Sprinkler Systems.
Electrical, Title 24 Energy Calculations.
2416 W. Valley Blvd. Tel: (626) 289-4900
Alhambra, CA 91803 Fax: (626) 289-4913
E-Mail:PERFECTAA@aol.com
E-Mail:perfectaa@gmail.com

SINGLE HOUSE
2849 N. ADKINS DR.
LOS ANGELES, CA 90032

REVISIONS

Date 10/27/2020
Scale
Drawn
Job # E20-7223R
Sheet 4
RESIDENTIAL T24 SHEET
Of 4 Sheets



PLANTING LEGEND

TREES

NO ANY EX. TREES ON THE PROPERTY

	01 / 24" BOX	CERCIS OCCIDENTALIS / WESTERN REDBUD (L)(N)(T)
	05 / 15 GAL.	PHYLLOSTACHYS NIGRA / BLACK BAMBOO (M)(T)

SHRUBS

(R)	14 / 5 GAL.	RHAMNUS CALIFORNICA 'EVE CASE' / EVE CASE COFFEEBERRY (L)(S)(N)
	06 / 5 GAL.	LEYMUS CONDENSATUS 'CANYON PRINCE' / CANYON PRINCE WILD RYE (L)(G)(N)
(S)	05 / 5 GAL.	SALVIA CLEVELANDII 'WINNIFRED GILMAN' / WINNIFRED GILMAN SAGE (L)(S)(N)
	42 / 5 GAL.	LAVANDULA ANGUSTIFOLIA 'HIDCOTE BLUE' / HIDCOTE BLUE ENGLISH LAVENDER (L)(S)

GROUNDCOVERS

	98 / 1 GAL.	ARCTOSTAPHYLOS EDMUNDSII 'CARMEL SUR' / LITTLE SUR MANZANITA (L)(Gc)(N) AT 24" O.C.
	1718 / 1 GAL.	BACCHARIS PILULARIS 'PIGEON POINT' / PROSTRATE COYOTE BRUSH (L)(Gc)(N) AT 48" O.C.

W.U.C.O.L.S REGION 4 PLANT FACTOR:
(L)-LOW, (M)- MODERATE, (H)- HIGH, (T)- TREE, (S)- SHRUB, (G)- GRASS, (Gc)- GROUND COVER, (P)- PERENNIAL, (V)- VINE

LOT CO ERAGE S MMAR

TOTAL LANDSCAPED AREA: 2 S
PERMEA LE LOT CO ERAGE 4 S

S : O MEDI M WATER SE PLANTS 0 4
2 08 S : O LOW WATER SE PLANTS

PLANTING NOTES:

1. DRAWING IS DIAGRAMMATIC; CONTRACTOR TO VERIFY ALL LOCATIONS AND CONDITIONS ON SITE. COUNT ALL PLANT MATERIAL BEFORE BIDDING.
2. CONTRACTOR TO INSPECT ALL EXISTING CONDITIONS ON SITE AND LOCATE ALL EXISTING UTILITIES BEFORE CONSTRUCTION BEGINS.
3. PLANTS SHALL BE OF NO.1 GRADE CONFORMING TO CA. STANDARD GRADING CODE OF NURSERY STOCKS. AVERAGE FOR THE CONTAINER SIZE, HEALTHY, VIGOROUS AND FREE FROM INSECT INFESTATION AND DISEASES.
4. ALL PLANTING AREAS SHALL HAVE A 3" LAYER OF ORGANIC BARK MULCH THROUGHOUT (1-1/2" OF MULCH IN GROUND COVERED AREA). CONTINUOUS UNDER SHRUBS AND TREES. TOP SOIL & MULCH SUPPLIER: CAL BLEND SOIL INC. TEL: 1.800.425.3631
5. SOIL AMENDMENT LISTED IN THESE NOTES IS FOR BIDDING PURPOSE ONLY. AMENDMENT RECOMMENDED BY SOIL ANALYSIS REPORT TAKES PRECEDENCE. OBTAIN SOIL TEST FOLLOWING ROUGH GRADING TO DETERMINE PROPER SOIL AMENDMENTS. ROTO-TILL AMENDMENT TO 6" OF DEPTH:
   (1) 200 LBS GRO-POWER.
   (2) 4 CUBIC YARDS NITROGENIZED, MINERALIZED FIR BARK OR REDWOOD SHAVINGS.
   (3) APPLY COMMERCIAL GRADE PRE-EMERGENT WEED KILLER.
   (4) ADD 8 LBS. OF GRO-POWER CONTROLLED RELEASE 12-8-8 PER CUBIC YARD OF MIX
6. PLANT PITS TO BE TWICE AS WIDE AND DEEP AS THE ROOTBALL. NATIVE SOIL UNDER ROOT ONLY. ROOTBALL SIDES TO BE BACKFILLED AND COMPACTED TO 80%, WITH 80% EXCAVATED NATIVE SITE SOIL, 20% FIR BARK. PROVIDE PLANT TABLETS AT THE FOLLOWING RATES: 1 GAL.- 2, 3 GAL.- 3, 5 GAL.- 6, 15 GAL.- 12, 24" BOX- 15, 36" BOX- 20, 48" BOX- 24, 60" BOX AND UP- 36.
7. INSTALL "ROOT BARRIERS" 5 FT. FROM PAVING EDGES, INSTALL PER MANUFACTURER'S SPECIFICATIONS.
8. INSTALL "BENDABOARD" IN ALL LAWN AREA SEPARATING FROM SHRUBS AND TREES.
9. ALL WALLS TO BE ENGINEERED BY OTHER. APPLY 2X WATERPROOFING LAYER, AND/OR "DIMPLEBOARD" IN ON-DECK PLANTERS.
10. CONTRACTOR TO INSTALL AND MAINTAIN PLANTING IN ACCORDANCE WITH THE GOVERNING AGENCY'S GUIDELINES AND SPECIFICATIONS UNLESS NOTED OTHERWISE IN THESE NOTES OR ON THE PLANS.
11. MAINTENANCE OPERATIONS SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE FOR A PERIOD OF (90) DAYS AFTER THE COMPLETION OF ALL WORKS TO THE SATISFACTION OF THE OWNER OR LANDSCAPE ARCHITECT. CONTRACTOR TO WATER ALL PLANTING AREA LIGHTLY (5) TIMES DAILY, APPLY FERTILIZER EVERY (30) DAYS, APPLY PRE-EMERGENT HERBICIDE (25) DAYS, PEST CONTROL AS NEEDED.
12. AT THE END OF THE MAINTENANCE PERIOD, THE CONTRACTOR SHALL REQUEST A FINAL INSPECTION, IF THE AREA IS NOT MAINTAINED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT, OWNER OR THE GOVERNING AGENCY, CONTRACTOR TO REPAIR OR CORRECTION TO SATISFACTION OF OWNER OR OWNER'S REPRESENTATIVE AT NO COST.
13. CONSTRUCTION AROUND EXISTING TREES MUST BE CAREFULLY CONTROLLED AND LIMITED TO ACCESS IN ORDER TO MAINTAIN PROPER SOIL CONDITIONS. SKILLED PRUNING OF THE TREE CANOPIES AND BRANCHES SHOULD BE DONE AT THE DIRECTION OF A CERTIFIED ARBORIST TO REMOVE ANY DEAD OR BROKEN BRANCHES, AND TO PROVIDE THE NECESSARY CLEARANCE FOR THE CONSTRUCTION EQUIPMENTS.
14. GENERAL TREE PROTECTION NOTES: TEMPORARY PROTECTIVE FENCING SHOULD BE INSTALLED IF NECESSARY, AND CARE TAKEN TO AVOID DAMAGE TO TREE CANOPIES OR ROOT SYSTEMS DURING CONSTRUCTION, GRADING, AND TRENCHING. USE HAND TOOLS WHEN WORKING AROUND ROOTS, AND DO NOT CUT ROOTS 2" DIAMETER OR LARGER. NO WASHING OF CHEMICALS OR EQUIPMENT SHOULD BE ALLOWED UNDER TREE CANOPIES. PROVIDE OCCASIONAL DEEP WATER AS NECESSARY TO KEEP TREES HEALTHY UNTIL THE NEW IRRIGATION SYSTEM IS INSTALLED.

I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.

SIGNATURE: C.N DATE: 2/15/2021

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLANS.

A MINIMUM 3" LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT IN TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED.

FOR SOILS LESS THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL, COMPOST AT A RATE OF A MINIMUN OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL.

A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE SIGNER OF THE LANDSCAPE PLANS, THE SIGNER OF THE IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.

FOR PROJECTS THAT INCLUDE LANDSCAPE WORK, THE LANDSCAPE CERTIFICATION, FORM GRN 12, SHALL BE COMPLETED PRIOR TO FINAL INSPECTION APPROVAL.

0 4 8 16
1/8"=1'-0"

TWO TREES DESIGN, INC.
LANDSCAPE ARCHITECTURAL DESIGN SERVICES
PHONE/FAX
E-mail: phone@gmail.com
www.twotreesdesign.com

LICENSED LANDSCAPE ARCHITECT

LANDSCAPE PLANTING PLAN

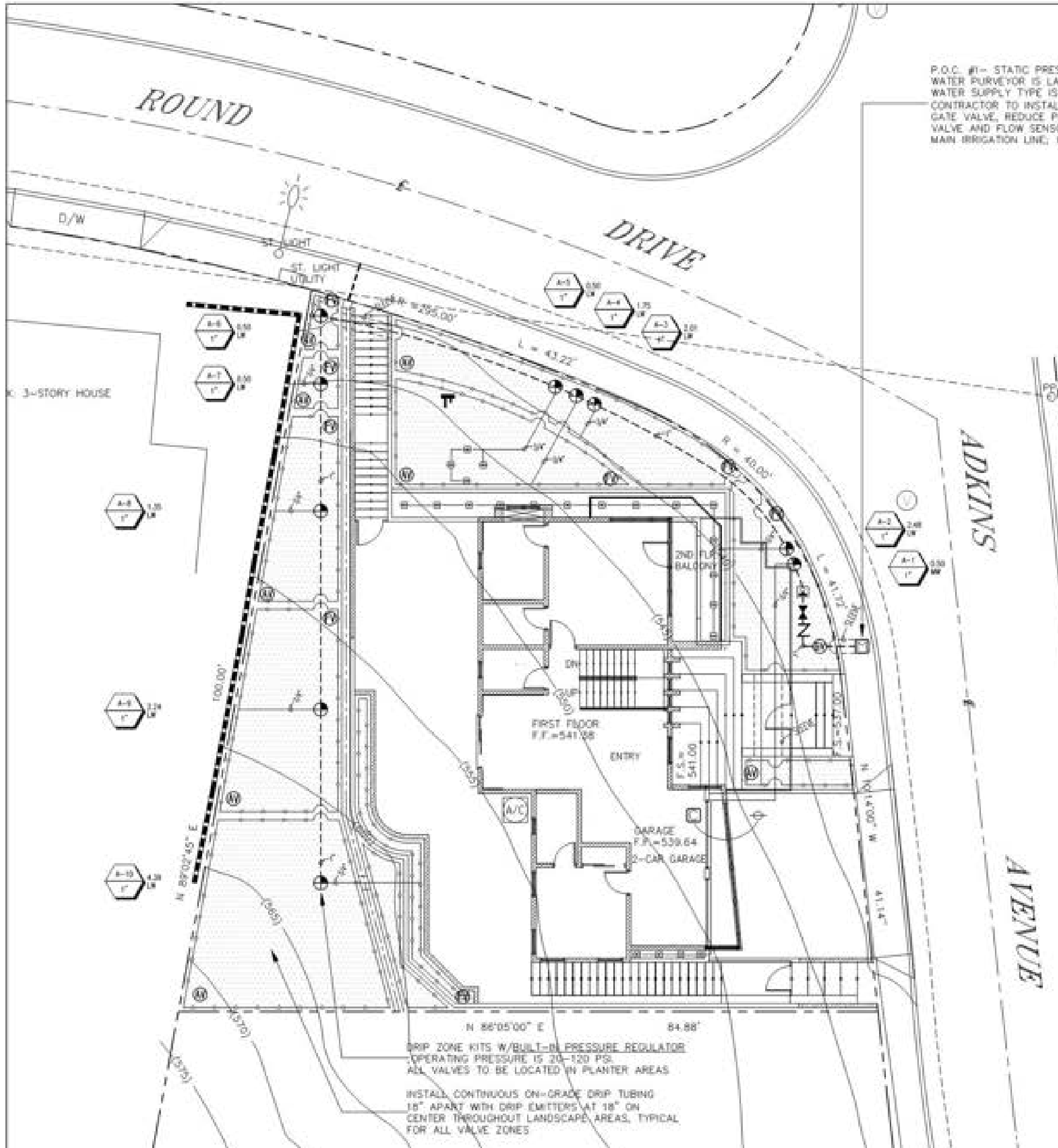
SINGLE FAMILY RESIDENCE
2849 ADKINS AVE.
LOS ANGELES, CA. 90032

DATE	REVISIONS

SCALE	AS SHOWN
DATE	02-15-2021
PROJECT NO.	P1941
DRAWN BY	CP
CHECKED BY	

SHEET NO.
L-1
OF 3 SHEETS

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IRRIGATION LEGEND

SYMBOLS	DESCRIPTION	MFG. & MODEL	DET
P.O.C.	POINT OF CONNECTION		
	1" WATER METER	NEW PER WATER COMPANY	
	1" GATE VALVE	'NIBCO' T-113	L-3/E
	1" R.P. BACKFLOW	'FEBCO' 825Y OR APPROVED EQUAL.	L-3/F
	1" MASTER VALVE	'HUNTER' IBV-101G-FS	L-3/G
	1" 'DRIP ZONE KIT' INLINE WITH PRESS. REGULATOR, Y-FILTER & FITTINGS	'HUNTER' ICZ-101-LF FLOW 0.5-15 GPM	L-3/H
	SMART IRRIGATION CONTROLLER	'HUNTER' I-CORE-600-PL	L-3/I
	WIRELESS WEATHER SENSOR	'HUNTER' SOLAR SYNC	L-3/J
	WIRELESS SOIL MOISTURE SENSOR	'HUNTER' SOIL CLICK	L-3/K
	1" FLOW SENSOR	'HUNTER' FLOW CLICK	L-3/L
	SLEEVE (X2 LINE SIZE)	SCH-40 PVC	L-3/M
	PRESSURE MAINLINE	SCH-40 PVC	
	NON-PRESSURE LATERAL LINE	SCH-40 PVC	
	AIR VACCUM RELIEF VALVE (INSTALL AT HIGH POINT)	'HUNTER' PLD-AVR	L-3/N
	AUTO FLUSH VALVE/CAP (INSTALL AT LOW POINT)	'HUNTER' PLD-BV	L-3/O
	'HUNTER HDL-06-18-CV' 18" x 18" O.C. DRIP LATERAL SPACING FOR SHRUB/GROUND COVER (PR: 0.42"/HR)		L-3/P

	'HUNTER' PRESSURE-COMP. SELF-FLUSHING EMITTERS	GPH	PSI	DET
	'HUNTER' TAN HE-40-B SELF-PIERCING	4.0	20	L-3/Q

A-1 / 1" / 5.00 LW/MW/EST... — STATION NO. / FLOW IN GPM / HYDROZONE / VALVE SIZE

LANDSCAPE ARCHITECT CAMILLE PERNG RLA 5840
TWO TREES DESIGN INC.
2 2 8.2
PRO ECT ADDRESS 284 AD INS A E LOS ANGELES CA 00 2
ASSESSOR PARCEL N M ER 52 0 5 0
PRO ECT APPLICANT HERMAN LEE TEL 2 50

WATER E ICIENT LANDSCAPE WOR SHEET							
RE ERENCE ETO 50					RESIDENTIAL PRO ECT		
H DROZONE	PLANT ACTOR P	IRRIG. METHOD	IRRIG. E ICIENC IE	ETA P IE	H DROZONE AREA HA	ETA AREA	EST TOTAL WATER SE ETW
REG LAR LANDSCAPE AREAS							
LOW WATER	0.2	DRIP	0.8	0.25	2 08	5	22 4
MEDI M WATER	0.5	DRIP	0.8	0 2		5.58	2
				TOTALS	2	582.58	80 00
SPECIAL LANDSCAPE AREA SLA includes areas irrigated with rec cled water							
					0	0	0
					0	0	0
					0	0	0
				TOTALS	0	0	0
						ETW TOTAL	80 00
						MAWA	58 8 0

Total ETA Area	582.58
Total Area	A 2
A erage ETA	A 0.25 4 In Compliance

ETW 50 0 2 582.58

MAWA 50 2 0.55 2 0

Plant actor P MW 0 LW 0.2 MW 0.5 WET 0 HW 0.85
Irrigation Method O erhead Spra or Drip
Irrigation E icienc IE 0 or O erhead Spra 0.8 or Drip
ETW Annual Gallons Re uired ETo 0 2 ETA Area
MAWA Annual Gallons Allowed ETo 0 2 ETA Area ETA SLA
0 2 Con ersion actor
Area is total Reg. Landscape area
SLA is total Special Landscape area
ETA is 0.55 or residential areas and 0.45 or non residential areas

IRRIGATION NOTES:

1. DO NOT WILLFULLY INSTALL THE SYSTEM AS DESIGNED, WHEN IT IS OBVIOUS THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT KNOWN DURING DESIGNING, SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS AUTHORIZED REPRESENTATIVE, OTHERWISE THE IRRIGATION CONTRACTOR MUST ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
2. THIS DESIGN IS DIAGRAMMATIC. EQUIPMENT SHOWN IN PAVED AREAS IS FOR CLARIFICATION ONLY, AND IS TO BE INSTALLED IN PLANTING AREA WHEREVER POSSIBLE.
3. THE SYSTEM IS DESIGNED FOR THE RECOMMENDED OPERATING PRESSURE OF 20 PSI AND A MAXIMUM DEMAND OF 4.39 GPM WITH A STATIC WATER PRESSURE OF 85 PSI OBTAINED ON SITE FROM TEMPORARY HOSE BIB FOR CONSTRUCTION.
4. CONTRACTORS MAY SUBSTITUTE MATERIALS WITH EQUAL PERFORMANCE. CONTRACTOR TO RECORD SUBSTITUTED ITEMS IN "AS-BUILT" DRAWINGS.
5. INSTALL ALL EQUIPMENTS AS SHOWN ON PLAN. CONTRACTOR TO COMPLY WITH ALL LOCAL GOVERNING AGENCY REQUIREMENTS.
6. IRRIGATION CONTRACTOR TO GUARANTEE 100% HEAD-TO-HEAD COVERAGE IN ALL AREAS AS APPROVED BY THE CITY.
7. DRIPLINES TO BE INSTALLED MAXIMUM 12" FROM PAVING AND WILL BE SPACED AT MAXIMUM OF 12" O.C FOR LAWN, 18" O.C. FOR ALL OTHER AREAS. NO "DEAD ENDS". DRIPLINES IN TURF AREAS WILL BE INSTALLED 4" BELOW FINISH GRADE. TUBING AS SHOWN ON PLAN IS DIAGRAMMATIC AND WILL BE INSTALLED AS REQUIRED TO COVER ENTIRE AREA WHERE SHOWN.
8. PROVIDE A MINIMUM OF 18" COVER OVER ALL PRESSURED MAINLINE PIPES AND 12" MIN. COVER OVER ALL NON-PRESSURIZED LATERAL LINES. ALL PIPES UNDER PAVED AREAS ARE TO BE INSTALLED IN A P.V.C SCH-40 SLEEVE WITH 18" MIN. COVER. SLEEVE LOCATIONS TO BE AS SHOWN ON PLANS.
9. 110 V. ELECTRICAL POWER SOURCE IS PROVIDED BY OTHERS TO THE LOCATION FOR THE AUTOMATIC CONTROLLER. CONTRACTOR IS RESPONSIBLE FOR FINAL CONNECTION TO EQUIPMENTS.
10. ALL WIRES FROM CONTROLLER TO AUTOMATIC VALVES TO BE COPPER, DIRECT BURIAL, UF #14 GAUGE. INSTALL IN SAME TRENCH AS MAINLINE WHERE POSSIBLE. MINIMUM BACKFILL OVER WIRE TO BE 18". COMMON WIRE COLOR TO BE WHITE. CONTROL WIRES TO BE IN A DIFFERENT COLOR FOR EACH CONTROLLER USED. BUNDLE AND TAPE WIRE TOGETHER MINIMUM 20' ON CENTER.
11. BACKFLOW PREVENTER WITH WYE STRAINERS AHEAD OF FIRST GATE VALVE WITH NO HOSE BIB, SCREENED FROM VIEW, AND ENCLOSED IN STAINLESS VANDAL PROOF ENCLOSURE. FINAL LOCATIONS FOR BACKFLOW PREVENTER AND CONTROLLER TO BE INSTALLED WITHIN PROPERTY, IN LANDSCAPING AREA AREA NEVER ON HARDSCAPE.
12. CONTRACTOR TO INSTALL SWING OR SPRING-LOADED CHECK VALVES AS REQ'D TO ELIMINATE DRAINAGE FROM LOW SPRINKLERS. THIS WILL BE IN ADDITION TO ANY CHECK VALVES SHOWN ON PLAN.
13. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR ONE YEAR AFTER INSTALLATION AND SHALL REPLACE OR REPAIR ANY DEFECTIVE PARTS CAUSED BY MANUFACTURER OR HIS WORKMANSHIP AT HIS OWN COST.
14. CONTRACTOR TO PROVIDE AS-BUILD DRAWINGS INDICATING LOCATIONS OF ALL MAINLINES, ALL VALVES, CONTROLLERS AND ROUTING OF CONTROL WIRES.
15. CONTRACTOR TO APPLY AND PAY FOR ALL PERMITS REQUIRED FOR THIS PORTION OF THE WORK.
16. THE IRRIGATION SYSTEM SHALL BE FULLY GUARANTEED FOR A PERIOD OF (1) ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER. ANY DEFECTIVE MATERIALS OR POOR WORKMANSHIP SHALL BE REPLACED OR CORRECTED BY LANDSCAPE CONTRACTOR AT NO COST TO OWNER. IRRIGATION INSTALLATION IS COMPLETED UNTIL ALL COMPONENTS SPECIFIED ON IRRIGATION PLAN HAVE BEEN CHECKED AND ADJUSTED TO THE SATISFACTION OF THE OWNER.
17. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIARIZE WITH GRADE DIFFERENCES, LOCATIONS OF WALLS, RETAINING WALLS, ETC. THE CONTRACTOR SHALL COORDINATE ALL WORKS WITH THE GENERAL CONTRACTOR AND OTHER SUBS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVEMENTS, STRUCTURES, ETC.
18. IRRIGATION CLOCK SHALL BE CONNECTED TO A RAIN SHUT-OFF DEVICE (RAIN SENSOR) TO COMPLY WITH LOCAL WATER CONSERVATION ORDINANCES.
19. GENERAL TREE PROTECTION NOTE: TEMPORARY PROTECTIVE FENCING SHOULD BE INSTALLED IF NECESSARY, AND CARE TAKEN TO AVOID DAMAGE TO TREE CANOPIES OR ROOT SYSTEMS DURING CONSTRUCTION, GRADING, AND TRENCHING- USE HAND TOOLS WHEN WORKING AROUND ROOTS, AND DO NOT CUT ROOTS 2" DIAMETER OR LARGER. NO WASHING OF CHEMICALS OR EQUIPMENT SHOULD BE ALLOWED UNDER TREE CANOPIES. PROVIDE OCCASIONAL DEEP WATER AS NECESSARY TO KEEP TREES HEALTHY UNTIL THE NEW IRRIGATION SYSTEM IS INSTALLED.

A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.

PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.

I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.

SIGNATURE: DATE: 2/15/2021

A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE SIGNER OF THE LANDSCAPE PLANS, THE SIGNER OF THE IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLANS.

AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.

1/8"=1'-0"

TWO TREES DESIGN, INC.
LANDSCAPE ARCHITECTURAL DESIGN SERVICES

LANDSCAPE IRRIGATION PLAN

SINGLE FAMILY RESIDENCE
2849 ADKINS AVE.
LOS ANGELES, CA. 90032

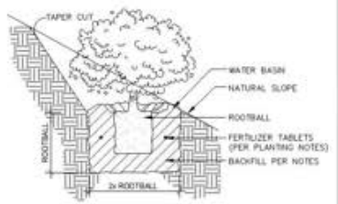
DATE	REVISIONS

SCALE	AS SHOWN
DATE	02-15-2021
PROJECT NO.	P1941
DRAWN BY	CP
CHECKED BY	

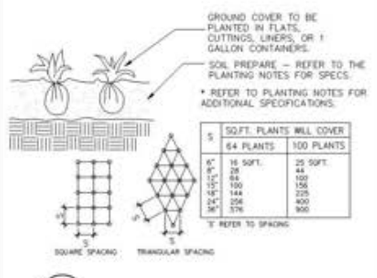
SHEET NO.
L-2



A TREE ON SLOPE



B SHRUB ON SLOPE

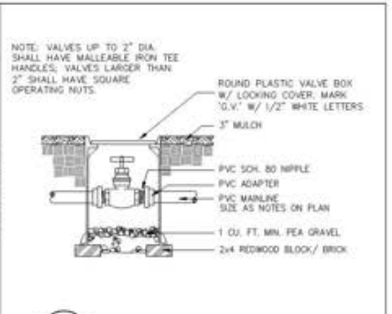


S	SQ.FT. PLANTS WILL COVER	
	64 PLANTS	100 PLANTS
6"	16 SQFT.	25 SQFT.
8"	28	44
10"	64	100
12"	100	156
18"	144	225
24"	256	400
36"	576	900

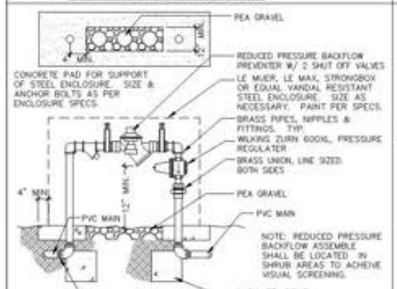
C GROUND COVER



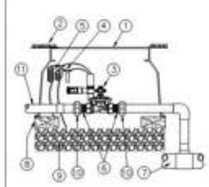
D ROOT BARRIER



E GATE VALVE

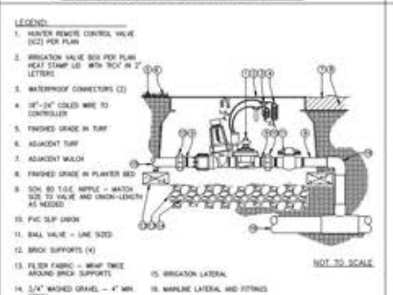


F R.P. BACKFLOW

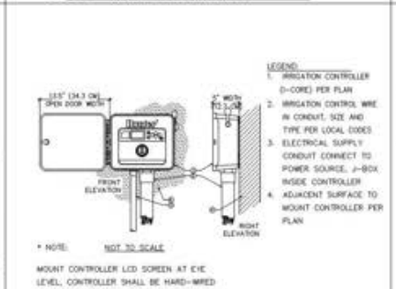


1. STANDARD VALVE BOX
2. FINISH GRADE
3. REMOTE CONTROL VALVE (RBV) ACCU-SYNC-ADJ WITH FILTER SENTRY
4. WATERPROOF CONNECTORS (2)
5. 18-24" COILED WIRE
6. SCH 80 CLOSE NIPPLE
7. MAIN LINE PIPE & FITTINGS
8. BRICK SUPPORTS (4)
9. 3/4" WASHED GRAVEL – 4" MIN. DEPTH
10. PVC SLIP UNIONS
11. IRRIGATION LATERAL

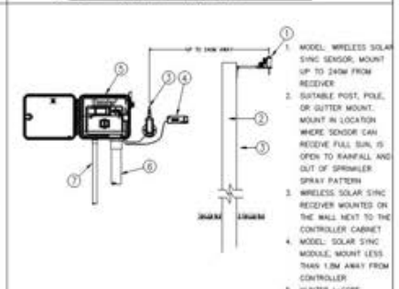
G MASTER VALVE



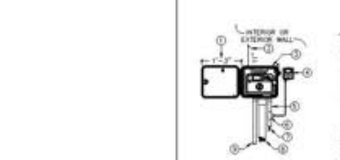
H CONTROL VALVE-DRIP ZONE KIT



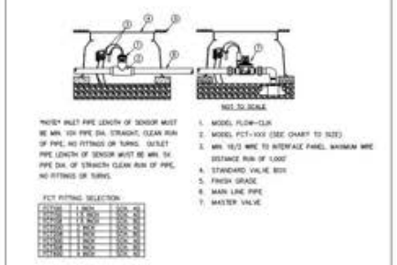
I I-CORE CONTROLLER



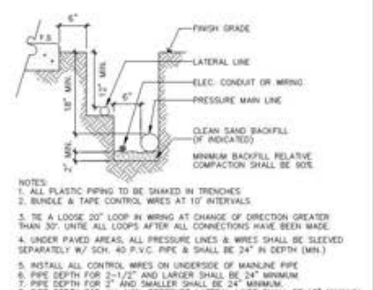
J WIRELESS ET WEATHER SENSOR



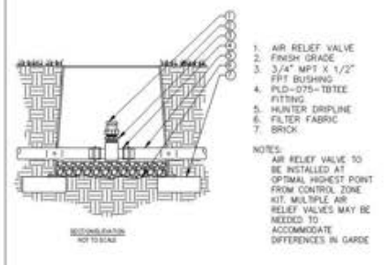
K SOIL-CLIK SOIL SENSOR



L FLOW-CLIK FLOW SENSOR



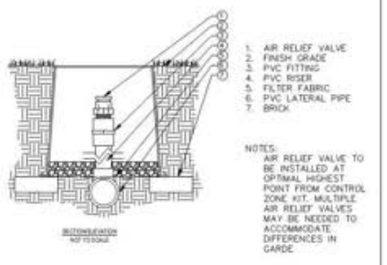
M TRENCHING SECTION



1. AIR RELIEF VALVE
2. FINISH GRADE
3. 3/4" MPT X 1/2" FPT BUSHING
4. PLD-075-TOTEE FITTING
5. HUNTER DRIPLINE
6. FILTER FABRIC
7. BRICK

NOTES:
AIR RELIEF VALVE TO BE INSTALLED AT OPTIMAL HIGHEST POINT FROM CONTROL ZONE KIT. MULTIPLE AIR RELIEF VALVES MAY BE NEEDED TO ACCOMMODATE DIFFERENCES IN GARDE

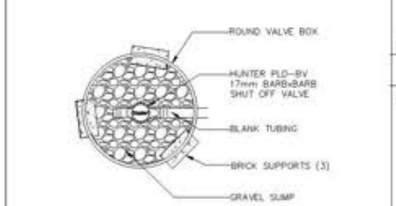
N AIR RELIEF VALVE ON TUBING



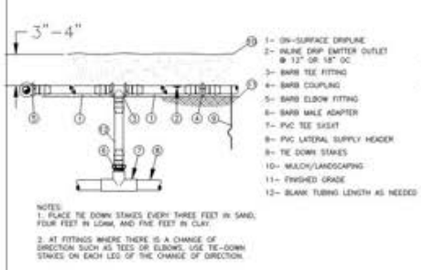
1. AIR RELIEF VALVE
2. FINISH GRADE
3. PVC FITTING
4. PVC RISER
5. FILTER FABRIC
6. PVC LATERAL PIPE
7. BRICK

NOTES:
AIR RELIEF VALVE TO BE INSTALLED AT OPTIMAL HIGHEST POINT FROM CONTROL ZONE KIT. MULTIPLE AIR RELIEF VALVES MAY BE NEEDED TO ACCOMMODATE DIFFERENCES IN GARDE

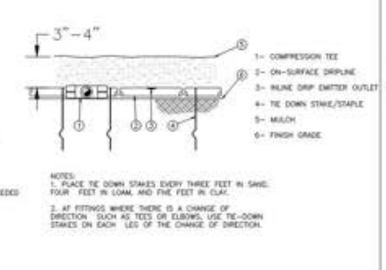
AIR RELIEF VALVE ON PVC RISER



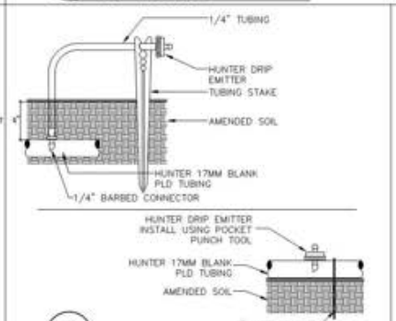
O MANUAL FLUSH VALVE



P ON-SURFACE DRIP W/ RISER



ON-SURFACE DRIP AT GRADE



Q DRIP EMITTERS

TWO TREES DESIGN, INC.
LANDSCAPE ARCHITECTURAL DESIGN SERVICES
2849 ADKINS AVE.
LOS ANGELES, CA. 90032
(323) 222-2784
E-mail: jimmo@gmail.com
www.twotreesdesign.com

LANDSCAPE DETAILS

SINGLE FAMILY RESIDENCE
2849 ADKINS AVE.
LOS ANGELES, CA. 90032

DATE	REVISIONS

SCALE	AS SHOWN
DATE	02-15-2021
PROJECT NO.	P1941
DRAWN BY	CP
CHECKED BY	

SHEET NO.
L-3
OF 3 SHEETS

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GRADING AND DRAINAGE PLAN

1. GENERAL NOTES:

A. ANY MODIFICATIONS OF OR CHANGES IN APPROVED GRADING PLANS MUST BE APPROVED BY THE BUILDING OFFICIAL

B. ALL GRADING AND CONSTRUCTION SHALL CONFORM TO CHAPTERS 70 AND 71 OF THE LOS ANGELES CITY BUILDING CODE UNLESS SPECIFICALLY NOTED ON THESE PLANS.

C. APPROVAL OF THESE PLANS REFLECT SOLELY THE REVIEW OF PLANS IN ACCORDANCE WITH THE LOS ANGELES CITY BUILDING CODE AND DOES NOT REFLECT ANY POSITION BY THE CITY OF LOS ANGELES OR THE DEPORTMENT OF PUBLIC WORKS REGARDING THE STATUS OF ANY TITLE ISSUES RELATING TO THE LAND ON WHICH THE IMPROVEMENTS MAY BE CONSTRUED. ANY DISPUTES RELATING TO TITLE ARE SOLELY A PRIVATE MATTER NOT INVOLVING THE CITY OF LOS ANGELES OR THE DEPARTMENT OF PUBLIC WORKS.

D. ANY EXPORT OF MATERIAL FROM SITE TO OFF-SITE PROPERTY REQUIRES AN APPROVED GRADING PLAN.

E. ALL GRADED SITES MUST HAVE DRAINAGE SWALES, BERMS AND OTHER DRAINAGE DEVICES PRIOR TO APPROVAL OF ROUGH GRADING. (SECTION 7020.3.2 OF BUILDING CODE.)

F. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.

G. THE FIELD ENGINEER MUST SET DRAINAGE STAKES FOR ALL DRAINAGE DEVICES.

H. ALL STORM DRAIN WORK IS TO BE DONE UNDER CONTINUOUS INSPECTION BY THE FIELD ENGINEER. WEEKLY STATUS REPORTS SHALL BE SUBMITTED BY THE FIELD ENGINEER TO THE LOCAL BUILDING AND SAFETY DISTRICT OFFICE.

I. FINAL GRADING MUST BE APPROVED BEFORE OCCUPANCY OF BUILDING WILL BE ALLOWED. (SECTION 7021 OF BUILDING CODE)

J. COMPLY WITH CHAPTER 22.56 OF PLANNING AND ZONING CODE BY SHOWING LOCATIONS AND SIZES OF ALL OAK TREES ON THE GRADING PLAN AND OBTAINING THE APPROPRIATE PERMIT.

K. THE RETAINING WALL DETAILS SHOWN ON THE PLANS ARE NOT CHECKED BY GRADING SECTION. SUBMIT A BUILDING PLAN APPLICATION AND PLAN CHECK FEE TO THE BUILDING AND SAFETY DISTRICT OFFICE.

L. SEPARATE PLANS FOR TEMPORARY DRAINAGE AND STORM WATER POLLUTION (EROSION CONTROL) MEASURES TO E USED DURING THE RAINY SEASON MUST BE SUBMITTED PRIOR TO OCTOBER 1. THAN NOVEMBER 1 AND MAINTAINED IN OPERABLE CONDITION UNTIL APRIL 15 OF THE FOLLOWING YEAR, AND BEFORE ANY ANTICIPATED RAIN.

M. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NONSTORMWATER FROM THE PROJECT SITE AT ALL TIMES.

N. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.

O. A PREVENTIVE PROGRAM TO PROTECT THE SLOPES FROM POTENTIAL DAMAGE FROM BURROWING RODENTS AND A FIRST EVIDENCE OF THEIR EXISTENCE SHALL EMPLOY AN EXTERMINATOR FOR THEIR REMOVAL. (SECTION 7019.5 OF THE BUILDING CODE)

P. ROOF DRAINAGE MUST BE DIVERTED FROM GRADING SLOPES (SECTION 7048.6 OF BUILDING CODE)

Q. ALL CONSTRUCTION AND GRADING WITHIN A STORM DRAIN EASEMENT ARE TO BE DONE PER PRIVATE DRAIN NO. _____. ALL SUBDRAIN OUTLETS ARE TO BE SURVEYED FOR LINE AND ELEVATION. THIS CAN BE SHOWN ON AN AS-BUILD GRADING PLAN.

2. AGENCY NOTES

A. OBTAIN A PERMIT FROM CONSTRUCTION DIVISION, PERMITS SECTION, LOS ANGELES CITY DEPARTMENT OF PUBLIC WORKS FOR ANY WORK WITHIN OR AFFECTING PUBLIC MAINTAINED FACILITIES INCLUDING, BUT NOT LIMITED TO, PUBLIC STREET RIGHT OF WAY AND STORM DRAINS.

B. PERMISSION TO OPERATE IN FIRE ZONE 4 MUST BE OBTAINED FROM THE LOCAL FIRE DEPARTMENT PRIOR TO COMMENCING WORK.

C. SECURE PERMISSION FROM THE CORPS OF ENGINEERS TO PERFORM WORK IN THE STREAM BED.

D. OBTAIN A CALIFORNIA STATE FISH AND GAME PERMIT TO PERFORM WORK IN THE STREAM BED.

E. SECURE PERMISSION FROM CALTRANS FOR CONSTRUCTION AND/OR DISCHARGE OR DRAINAGE IN THEIR RIGHT OF WAY.

3. FILL NOTES

A. FILL SHALL BE COMPACTED THROUGHOUT THEIR FULL EXTENT TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY AS DETERMINED BY A.S.T.M. SOIL COMPACTING TEST D1557.91 METHOD "D" WHERE APPLICABLE. WHERE NOT APPLICABLE, A TEST ACCEPTABLE TO THE BUILDING OFFICIAL SHALL BE USED (SECTION 7016.1 OF THE BUILDING CODE)

B. FIELD DENSITY SHALL BE DETERMINED BY A METHOD ACCEPTABLE TO THE BUILDING 10R OF THE REQUIRED DENSITY TEST, UNIFORMLY DISTRIBUTED, SHALL BE OBTAINED BY THE SAND CONE METHOD.

C. SUFFICIENT TESTS OF THE FILL SOILS SHALL BE MADE TO DETERMINE THE RELATIVE COMPACTION OF THE FILL IN ACCORDANCE WITH THE FOLLOWING MINIMUM GUIDELINES:
(1)ONE TEST FOR EACH TWO-FOOT VERTICAL LIFT.
(2)ONE TEST FOR EACH 1,000 CUBIC YARDS OF MATERIAL PLACED.
(3)ONE TEST AT THE LOCATION OF THE FINAL FILL SLOPE FOR EACH BUILDING SITE (LOT) IN EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.
(4)ONE TEST IN THE VICINITY OF EACH BUILDING PAD FOR EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.

D. SUFFICIENT TESTS OF FILL SOILS SHALL BE MADE TO VERIFY THAT THE SOIL PROPERTIES COMPLY WITH THE DESIGN REQUIREMENTS, AS DETERMINED BY THE GEOTECHNICAL ENGINEER INCLUDING SOIL TYPES, SHEAR STRENGTHS PARAMETERS AND CORRESPONDING UNIT WEIGHTS IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:

(1) PRIOR AND SUBSEQUENT TO PLACEMENT THE FILL, SHEAR TESTS SHALL BE TAKEN ON EACH TYPE OF SOIL OR SOIL MIXTURE TO BE USED FOR ALL FILL SLOPES STEEPER THAN THREE (3) HORIZONTAL TO ONE VERTICAL.

(2) SHEER TEST RESULTS FOR THE PROPOSED FILL MATERIAL MUST MEET OR EXCEED THE DESIGN VALUES USED IN THE GEOTECHNICAL REPORT TO DETERMINE SLOPE STABILITY REQUIREMENTS, OTHERWISE, THE SLOPE MUST BE REEVALUATED USING, THE ACTUAL SHEER TEST VALUE OF THE FILL MATERIAL THAT IS IN PLACE.

(3) FILL SOILS SHALL BE FREE OF DELETERIOUS MATERIALS.

(4) THE RESULTS OF SUCH TESTING SHALL BE INCLUDED IN THE REPORTS REQUIRED BY SECTION 7016.8 OF BUILDING CODE.

E. FILL SHALL NOT BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS, AND INSTALLATION OF SUBDRAIN (IF ANY) HAVE BEEN INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER, THE BUILDING OFFICIAL MAY REQUIRE A "STANDARD TEST METHOD FOR MOISTURE, ASH, ORGANIC MATTER, PEAT OR OTHER ORGANIC SOILS" ASTM D-2974-87 ON ANY SUSPECT MATERIAL. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS SOIL CONTAINING SMALL AMOUNTS OF ROOTS MAY BE ALLOWED PROVIDING THAT THE ROOTS ARE IN A QUANTITY AND DISTRIBUTED IN A MANNER THAT WILL NOT BE DETRIMENTAL TO THE FUTURE USE OF THE SITE AND THE USE OF SUCH MATERIAL IS APPROVED BY THE SOIL ENGINEERS.

F. ROCK OR SIMILAR MATERIAL GREATER THAN 12 INCHES IN DIAMETER SHALL NOT BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE GEOTECHNICAL ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL.

G. CONTINUOUS INSPECTION BY THE GEOTECHNICAL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL FILL PLACEMENT AND COMPACTION OPERATIONS WHERE FILLS HAVE DEPTH GREATER THAN 30 FEET OR SLOPE SURFACE STEEPER THAN 2:1. (7016.7)

H. CONTINUOUS INSPECTION BY THE GEOTECHNICAL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL SUBDRAIN INSTALLATIONS. (7016.2)

I. FILL SLOPES IN EXCESS OF 2:1 STEEPNESS RATIO ARE TO BE CONSTRUCTED BY THE PLACEMENT OF SOIL AT SUFFICIENT DISTANCE BEYOND THE PROPOSED FINISH SLOPE TO ALLOW COMPACTION EQUIPMENT TO BE OPERATED AT THE OUTER LIMITS OF THE FINAL SLOPE SURFACE. THE EXCESS FILL IS TO BE REMOVED PRIOR TO COMPLETION OF ROUGH GRADING. OTHER CONSTRUCTION PROCEDURES MAY BE USED WHEN IT IS DEMONSTRATED TO THE SATISFACTION OF THE BUILDING OFFICIAL THAT THE ANGLE OF SLOPE, CONSTRUCTION METHOD AND OTHER FACTORS WILL HAVE EQUIVALENT EFFECT. (SECTION 7016.1 OF THE BUILDING CODE.)

J. THE GEOTECHNICAL ENGINEER SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS

K. THE GRADING CONTRACTOR SHALL SUBMIT THE STATEMENT REQUIRED BY SECTION 7021 OF THE BUILDING CODE AT THE COMPLETION OF ROUGH GRADING.

4. INSPECTION NOTES

A. THE PERMIT TEE OR HIS AGENT SHALL NOTIFY THE BUILDING OFFICIAL AT LEAST ONE WORKING DAY IN ADVANCE OF REQUIRED INSPECTIONS AT FOLLOWING STAGES OF THE WORK. (SECTION 7020 OF THE BUILDING CODE)

(1) INITIAL WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNPROVED FILL HAS BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL, FILL SHALL NOT HAVE BEEN PLACED PRIOR TO THIS INSPECTION.

(2) ROUGH WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED; DRAINAGE TERRACES, SWALES AND BERMS INSTALLED AT THE TOP OF THE SLOPE, AND THE STATEMENTS REQUIRED IN THIS SECTION HAVE BEEN RECEIVED.

(3) FINAL WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES INSTALLED; SLOPE PLANTING ESTABLISHED, IRRIGATION SYSTEMS INSTALLED AND THE AS-BUILT PLANS, REQUIRED STATEMENTS, AND REPORTS HAVE BEEN SUBMITTED.

B. ADD THE FOLLOWING NOTE IF THERE IS ENGINEERING GRADING.

IN ADDITION TO THE INSPECTION REQUIRED OF THE BUILDING OFFICIAL FOR REGULAR GRADING, REPORTS AND STATEMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL IN ACCORDANCE WITH SECTION 7020 AND 7021 OF THE BUILDING CODE.

C. ADD THE FOLLOWING NOTE IF REQUIRED AS CONDITION OF APPROVAL:

(1) ALL RECOMMENDATIONS INCLUDED IN THE CONSULTANT'S GEOTECHNICAL REPORT(S) MUST BE COMPLIED WITH AND ARE A PART OF THE GRADING PLANS AND SPECIFICATIONS.
(2) GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC GEOLOGICAL INSPECTIONS WITH MONTHLY INSPECTION REPORTS TO BE SUBMITTED TO THE GEOLOGY AND SOILS SECTION.
(3) THE CONSULTING GEOLOGIST AND GEOTECHNICAL ENGINEER MUST STATE IN A FINAL REPORT, PRIOR TO THE APPROVAL OF ROUGH GRADING BY THE MATERIAL ENGINEERING DESIGNATED AS "RESTRICTED USE AREAS", THE FINAL REPORT MUST BE SUBMITTED TO THE MATERIALS ENGINEERING DIVISION FOR THEIR REVIEW AND APPROVAL AND MUST INCLUDE ON AS-BUILT GEOTECHNICAL MAP.
(4) FOUNDATION, WELL AND POLL EXCAVATION MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND GEOTECHNICAL ENGINEER, PRIOR TO THE PLACING STEEL OR CONCRETE.
(5) BUILDING PADS LOCATED IN CUT/FILL TRANSITION AREAS SHALL BE OVER EXCAVATED A MINIMUM OF THREE (3) FEET BELOW THE PROPOSED BOTTOM OF FOOTING.

D. ADD THE FOLLOWING PLANTING AND IRRIGATION NOTES IF REQUIRED:

(1) THE PLANS OF A DESIGNED IRRIGATION SYSTEM FOR FULL COVERAGE OF ALL PORTIONS OF THE SLOPES SHALL BE SUBMITTED AND APPROVED PRIOR TO ROUGH GRADING APPROVAL BY THE CITY INSPECTOR. (SECTION 4019.1 OF BUILDING CODE.)
(2) ALL CUT SLOPES OVER FIVE (5) FEET AND FILL SLOPES OVER THREE (3) FEET SHALL BE PLANTED WITH AN APPROVED GROUND COVER AND PROVIDED WITH AN IRRIGATION SYSTEM AS SOON AS PRACTICAL OFFER ROUGH GRADING. (SECTION 7009.2 OF THE BUILDING CODE.)
(3) PLANTING AND IRRIGATION PLANS FOR SLOPES GREATER THAN 20 FEET IN HEIGHT MUST BE PREPARED AND SIGNED BY A LICENSED LANDSCAPE ARCHITECT OR REGISTERED CIVIL ENGINEER.

E. STORM WATER POLLUTION PLAN NOTES (ATTACHMENTS A AND B) TO BE ADDED TO ALL GRADING PLANS

ATTACHMENT A NOTES

a. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSE OR WIND.
b. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FRO BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
c. FUELS, OIL, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND IMPOSITE OF IN A PROPER MANNER. SPILL MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.QUIRED.
d. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
e. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIN.
f. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEAN.
g. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO IN HIBIT EROSION BY WIND AND WATER.

ATTACHMENT B NOTES

THE FOLLOWING BMPS AS OUTLINED IN, BUT NOT LIMITED TO, THE BEST MANAGEMENT PRACTICE HANDBOOK, CALIFORNIA STORM WATER QUALITY TASK FORCE, SACRAMENTO, CALIFORNIA 1993, OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATED BY CITY INSPECTOR'S).

ESC01 – SCHEDULING	ESC53 – BRUSH OR ROCK FILTER
ESC02 – PRESERVATION OF EXISTING VEGETATION	ESC54 – STORM DRAIN INLET PROTECTION
ESC10 – SEEDING AND PLANTING	ESC55 – SEDIMENT TRAP
ESC11 – MULCHING	ESC56 – SEDIMENT BASIN
ESC20 – GEOTEXTILES AND MATS	CA001 – DEWATERING OPERATIONS
ESC21 – DUST CONTROLS	CA002 – PAVING OPERATIONS
ESC22 – TEMPORARY STREAM CROSSING	CA003 – STRUCTURE CONSTRUCTION AND PAINTING
ESC23 – CONSTRUCTION ROAD STABILIZATION	CA010 – MATERIAL DELIVERY AND STORAGE
ESC24 – STABILIZED CONSTRUCTION ENTRANCE	CA011 – MATERIAL USE
ESC30 – EARTH DIKE	CA012 – SPILL PREVENTION AND CONTROL
ESC31 – TEMPORARY DRAINS AND SWALES	CA020 – SOLID WASTE MANAGEMENT
ESC32 – SLOPE DRAIN	CA021 – HAZARDOUS WASTE MANAGEMENT
ESC40 – OUTLET PROTECTION	CA022 – CONTAMINATED SOIL MANAGEMENT
ESC41 – CHECK DAMS	CA023 – CONCRETE WASTE MANAGEMENT
ESC42 – SLOPE ROUGHENING/TERRACING	CA030 – VEHICLE AND EQUIPMENT CLEANING
ESC50 – SILT FENCE	CA031 – VEHICLE AND EQUIPMENT FUELING
ESC51 – STRAW BALE BARRIERS	CA032 – VEHICLE AND EQUIPMENT MAINTENANCE
ESC52 – SAND BAG BARRIER	CA040 – EMPLOYEE/SUBCONTRACTOR TRAINING

NOTES:

REGISTERED DEPUTY GRADING INSPECTOR IS REQUIRED ON GRADING AND FOUNDATION EARTHWORK WHERE (SITE EXCEEDS 60,000SF.) (CUT OR FILL SLOPES EXCEED 2:1) (CUTS EXCEED 40FT. IN HEIGHT AND WITHIN 20 FT. OF A PROPERTY LINE)(FOUNDATION EXCAVATION BELOW A 1 :1 PLANE FROM PROPERTY LINE) (PROJECTS INVOLVE UNUSUAL HAZARDS) (SHORING WORK INCLUDING SLOT-CUTS)(1704).

A. ALL GRADING SLOPES SHALL BE PLANTED AND SPRINKLERED.(7012.1)
B. STANDARD 12 INCH HIGH BERM IS REQUIRED AT TOP OF ALL GRADED SLOPES.(7013.3)
C. NO FILL TO BE PLACED, UNTIL THE CITY GRADING INSPECTOR HAS INSPECTED AND APPROVED THE BOTTOM EXCAVATION.
D. MAN-MADE FILL SHALL BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 90% MAX. DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE AND 93% OF MAX. DRY DENSITY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90% OF MAX. DRY DENSITY) IS JUSTIFIED BY THE SOILS ENGINEER.
E. TEMPORARY EROSION CONTROL TO BE INSTALLED BETWEEN OCTOBER 1 AND APRIL 15. OBTAIN GRADING INSPECTOR'S AND DEPARTMENT OF PUBLIC WORKS APPROVAL OF PROPOSED PROCEDURES. [>200CY](7007.1)

NO GRADING PERMIT CAN BE ISSUED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS WHEN SITE IS LOCATED WITHIN AREA DESIGNATED AS GRADING ORDINANCE HILLSIDE(7005.1)

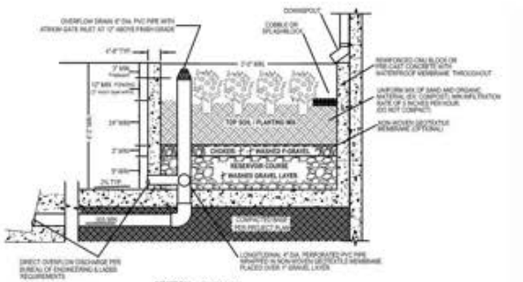
RETAINING WALLS LOCATED CLOSER TO THE PROPERTY LINE THAN THE HEIGHT OF THE WALL SHALL BE BACKFILLED NOT LATER THAN 10 DAYS AFTER CONSTRUCTION OF THE WALL AND NECESSARY STRUCTURAL SUPPORTING MEMBERS UNLESS RECOMMENDED OTHERWISE BY RESPONSIBLE ENGINEER.

LEGEND:

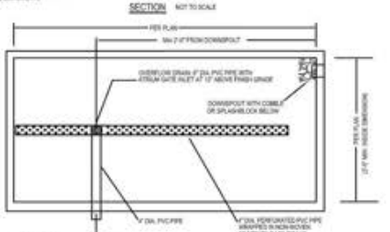
(527.63).....EXISTING ELEVATION
520.00.....PROPOSED ELEVATION
-(530)-.....EXISTING COUNTOUR
.....DRAINAGE PATTERN
.....PROPOSED STRUCTURE
.....PROPOSED 6' BLOCK WALL
SW.....SIDE WALK
○.....LIGHT
.....CENTER LINE
.....PROPERTY LINE
(8).....CONSTRUCTION NOTES
.....SANDBAG LINE
.....PLANTER BOX AREA
.....OVER-EXCAVATION LINE

T.C.....TOP OF CURB
F.L.....FLOW LINE
F.G.....FINISH GRADE
F.S.....FINISH SURFACE
F.F.....FLOOR FINISH
H.P.....HIGH POINT
P.P.....POWER POLE
D/W.....DRIVEWAY
W.M.....WATER METER
INV.....INVERT ELEVATION
T.G.....TOP OF GRATE
D.S.....DOWN SPOUT





SECTION NOT TO SCALE



PLAN NOT TO SCALE

NOTES:
1. 6" LEAST TO INCHES, SHALL BE PROVIDED BETWEEN THE PLANTING SURFACE AND THE CREST OF EACH PLANTER
2. PLANTERS SHALL NOT BE LOCATED ON UNEVEN OR SLOPED SURFACES
3. TOP SOIL/PLANTING MIX IS AT LEAST 24" DEEP.
4. TOP SOIL CONTAINS NO MORE THAN 30% COMPOST.
5. MINIMUM GRAVEL LAYER SHALL BE 12" DEEP.
6. DIRECT OVERFLOW DISCHARGE PER BUREAU OF ENGINEERING AND BUILDING AND SAFETY REQUIREMENTS.
7. PLANTING IS REQUIRED. CONSULT LANDSCAPE ARCHITECT FOR SPECIFIC PLANT TYPES.

⑰ PLANTER BOX A DETAIL

Low Impact Development (LID)
Post Construction Stormwater Mitigation
Best Management Practices (BMPs)

STORMWATER BMP(S) VERIFICATION

Upon LADBS Inspector Verification that approved stormwater BMPs are in place, a Stormwater Observation Report (SOR) Form shall be submitted to Department of Public Works, Bureau of Sanitation, 201 N. Figueroa, 3rd floor, station 18.

Project Address: 2849 Adkins Avenue, Los Angeles

RESIDENTIAL (4 UNITS OR LESS, <10,000 SF, <2,500 SF within a ESA)

Item #	Stormwater BMP	Description (Units, total)	Reference Sheet(s)* (Sheet #)
1	Rain Tank(s) – 50 to 129 gal each		
2	Rain Tank(s) – > 130 gal min		
3	Shade Tree - min 15 gal		
4	Flow thru Planter(s)		
5	Permeable pavers / Porous concrete (min 10% open space)	☐ Residence: _____ total SF ☐ Infiltration: _____ total SF	
6	Rain Garden	☐ # _____ - Lined: _____ total SF ☐ # _____ - Unlined: _____ total SF	
7	Dry Well		
8	SUMP Pump (notification was not required)		

ALL OTHER DEVELOPMENT

(Residential: 5 ≥ units, 10,000 ≥ SF, within a ESA and ≥2,500SF)

	Item #	Stormwater BMP	Description (Units, total)	Reference Sheet(s)* (Sheet #)
Infiltration	1	Infiltration Basin / Trench		
	2	Dry Well		
	3	Permeable pavers / Porous concrete (min 10% open space)	☐ Incidental: _____ total SF ☐ Infiltration: _____ total SF	
Capture & Use	4	Rain Tank(s) – 550 gal min		
	5	Cistern	☐ Above Grade ☐ Below Grade	
Treat & Discharge	6	Flow thru Planter(s)	1-160 S.F.	See plan C-2
	7	Biofiltration	☐ # _____ - Lined: _____ total SF ☐ # _____ - Unlined: _____ total SF	
	8	Vegetative Swale / Filter Strip		
	9	Catch Basin Filter(s)		
	10	Trench Drain Filter(s)		
	11	Down Spout Filter(s)		
	12	SUMP Pump (notification was not required)		

* At a minimum: Site Plan, Architectural Elevations, Roof Plan, Civil Sheets and Detail

THIS PLAN HAS BEEN REVIEWED AND CONFORMS TO RECOMMENDATIONS OF SOIL ENGINEERING/GEOLOGIC REPORTS DATED MARCH 16, 2020

SIGNATURE 02/12/2021 DATE

EARTH WORK QUANTITIES:

CUT: 828 CU.YD.
FILL: 0 CU.YD.
EXPORT DIRT: 828 CU.YD.

NOTE:
THE YARDAGE SHOWN HEREON IS FOR PERMIT AND BONDING PURPOSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING OF THE QUANTITIES.

OWNER/CLIENT:

MR. HERMAN LEE
9241 SPARKLETT ST,
TEMPLE CITY, CA 91780
626-673-6350

BENCHMARK:

CITY BENCHMARK NO. 11-04720

SPK NW CURB ALHAMBRA AVENUE; 7.5 FT. NE OF BCR NE OF HAVEN STREET.

ELEVATION: 446.362'

LEGAL DESCRIPTION:

LOT 68 OF TRACT 5629, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 99, PAGES 43 TO 45, OF MAPS, IN THE COUNTY RECORDER OFFICE OF SAID COUNTY.

APN: 5217-015-019

SOILS ENGINEER:
JACK C. LEE, GE 2153
EXP. DATE: 3-31-2021
CALLAND ENGINEERING, INC
dba QUARTECH CONSULTANTS
576 E. LAMBERT ROAD
BREA, CA 92821
TEL. NO. (714) 671-1050

CIVIL ENGINEER:
JACK C. LEE, R.C.E. 40870
EXP. DATE: 3-31-2021
CALLAND ENGINEERING INC.,
576 E. LAMBERT ROAD,
BREA, CA 92821
TEL. (714)-671-1050
FAX.(714)-671-1090

REGISTERED PROFESSIONAL ENGINEER JACK C. LEE 40870 Exp. 3-31-21 CIVIL STATE OF CALIFORNIA

CALLAND ENGINEERING, INC.
dba QUARTECH CONSULTANTS
576 E. LAMBERT ROAD, BREA, CA. 92821
TEL: (714) 671-1050 FAX: (714) 671-1090

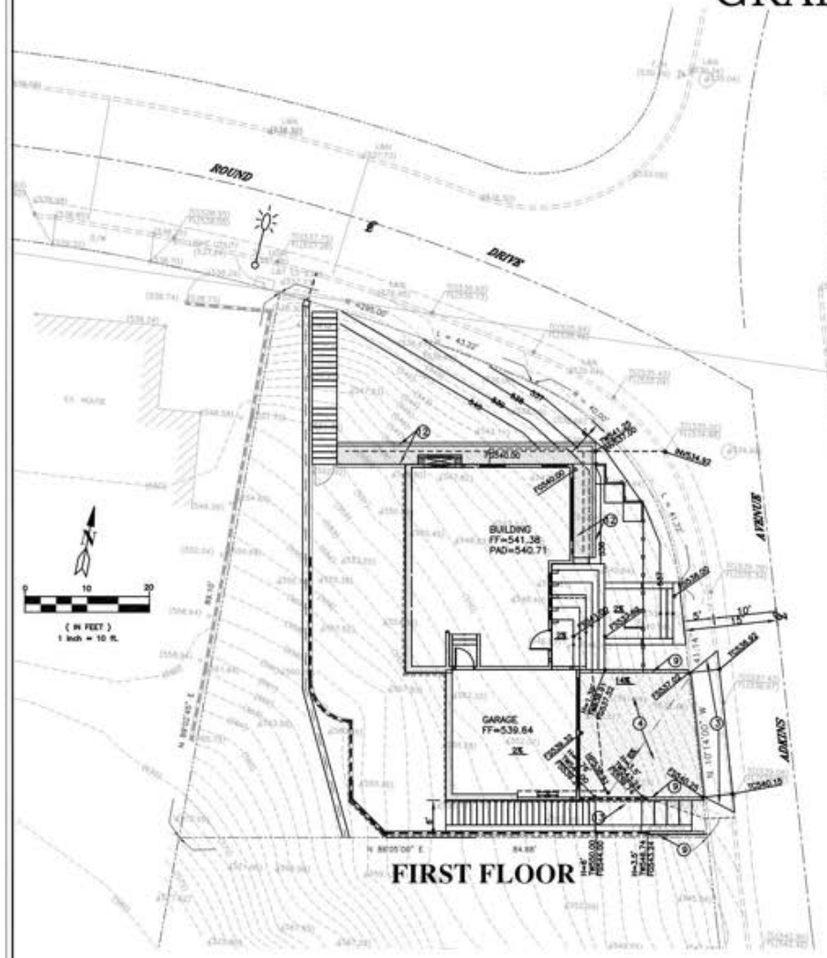
PROJECT LOCATION:
2849 ADKINS AVENUE,
LOS ANGELES, CA 90032

DRAWN: X.Y.
CHECKED:
DATE: 02/12/2021
JOB. NO.: 19-058-003
SCALE: 1" = 10'
FILE NAME: Grading.dwg

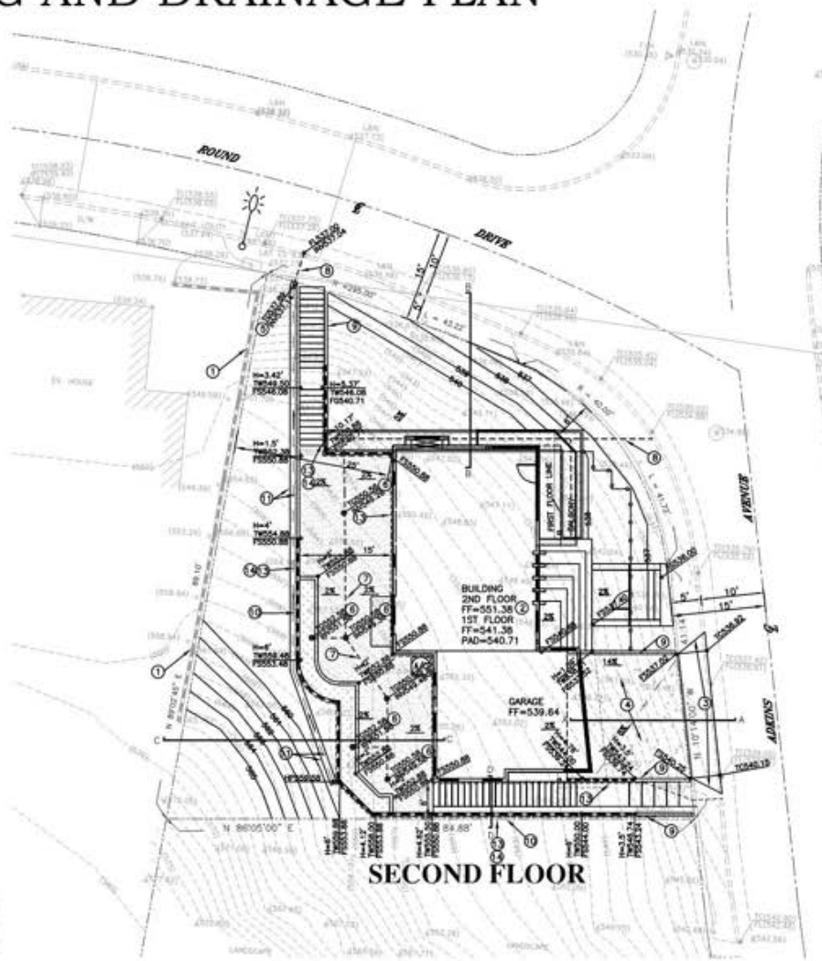
C-1

SHEET 1 OF 3

GRADING AND DRAINAGE PLAN



FIRST FLOOR

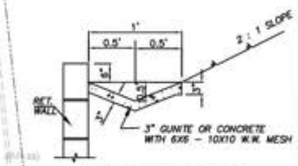


SECOND FLOOR

LEGEND:

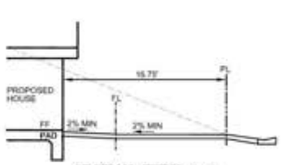
- (527.63)..... EXISTING ELEVATION
- 520.00..... PROPOSED ELEVATION
- -(530)-..... EXISTING COUNTOUR
- ..... DRAINAGE PATTERN
- ..... PROPOSED STRUCTURE
- ..... PROPOSED 6' BLOCK WALL
- SW..... SIDE WALK
- ☼ ..... LIGHT
- ..... CENTER LINE
- ..... PROPERTY LINE
- (9)..... CONSTRUCTION NOTES
- ..... SANDBAG LINE
- ..... PLANTER BOX AREA
- ..... OVER-EXCAVATION LINE

- T.C..... TOP OF CURB
- F.L..... FLOW LINE
- F.G..... FINISH GRADE
- F.S..... FINISH SURFACE
- F.F..... FLOOR FINISH
- H.P..... HIGH POINT
- P.P..... POWER POLE
- D/W..... DRIVEWAY
- W.M..... WATER METER
- INV..... INVERT ELEVATION
- T.G..... TOP OF GRATE
- D.S..... DOWN SPOUT

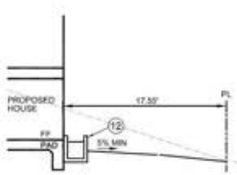


① TYPICAL CONCRETE GUTTER
NOT TO SCALE

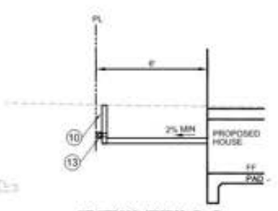
GRADING AMOUNT		
IMPORT	0	C.Y.
EXPORT	828	C.Y.
CUT	828	C.Y.
FILL	0	C.Y.



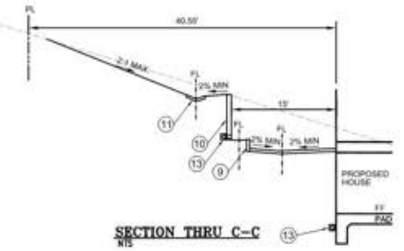
SECTION THRU A–A
NTS



SECTION THRU B–B
NTS



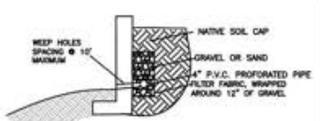
SECTION THRU D–D
NTS



SECTION THRU C–C
NTS

CONSTRUCTION NOTES:

1. EXISTING WALL TO REMAIN
2. CONSTRUCT NEW BUILDING PER ARCHITECTURAL PLAN
3. CONSTRUCT NEW DRIVEWAY APPROACH PER SPPWC STD. NO.110-2
4. CONSTRUCT NEW PCC DRIVEWAY
5. CONSTRUCT 12"X12" CATCH BASIN
6. INSTALL 6" AREA DRAIN
7. INSTALL 4" PVC SCH. 40 PIPE
8. INSTALL 4" CURB DRAIN PER SPPWC STD. 150-3
9. CONSTRUCT 3' H MAX. PLANTER WALL
10. CONSTRUCT 6' H MAX. RETAINING WALL PER RETAINING WALL PLAN
11. CONSTRUCT 1' GUTTER DETAIL HEREON
12. CONSTRUCT PLANTER BOX PER DETAIL ON C-1
13. INSTALL SUBDRAIN FOR RETAINING WALL AND BASEMENT PER SEPARATE PLAN
14. INSTALL WEEP HOLES SPACING @ 10' MAXIMUM FOR RETAINING WALL DETAIL HEREON



⑭ RETAINING WALLS WEEP HOLE

LID SUMMARY TABLE				
	AREA	BMP	AREA Req.	Area Provide
IMPERVIOUS AREA	3136 S.F.	PLANTER BOX	156.8 S.F.	160 S.F.

EARTH WORK QUANTITIES:

CUT: 828 CU.YD.
FILL: 0 CU.YD.
EXPORT DIRT: 828 CU.YD. IMPORT DIRT: 0 CU.YD.

NOTE:
THE YARDAGE SHOWN HEREON IS FOR PERMIT AND BONDING PURPOSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING OF THE QUANTITIES.

OWNER/CLIENT:

MR. HERMAN LEE
9241 SPARKLETT ST,
TEMPLE CITY, CA 91780
626-673-6350

BENCHMARK:

CITY BENCHMARK NO. 11-04720

SPK NW CURB ALHAMBRA AVENUE; 7.5 FT. NE OF BCR NE OF HAVEN STREET.

ELEVATION: 446.362'

LEGAL DESCRIPTION:

LOT 68 OF TRACT 5629, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 99, PAGES 43 TO 45, OF MAPS, IN THE COUNTY RECORDER OFFICE OF SAID COUNTY.

APN: 5217-015-019

CALLAND ENGINEERING, INC.
dba QUANTECH CONSULTANTS
576 E. LAMBERT ROAD, BREA, CA. 92821
TEL: (714) 671-1050 FAX: (714) 671-1090

PROJECT LOCATION:
2849 ADKINS AVENUE,
LOS ANGELES, CA 90032

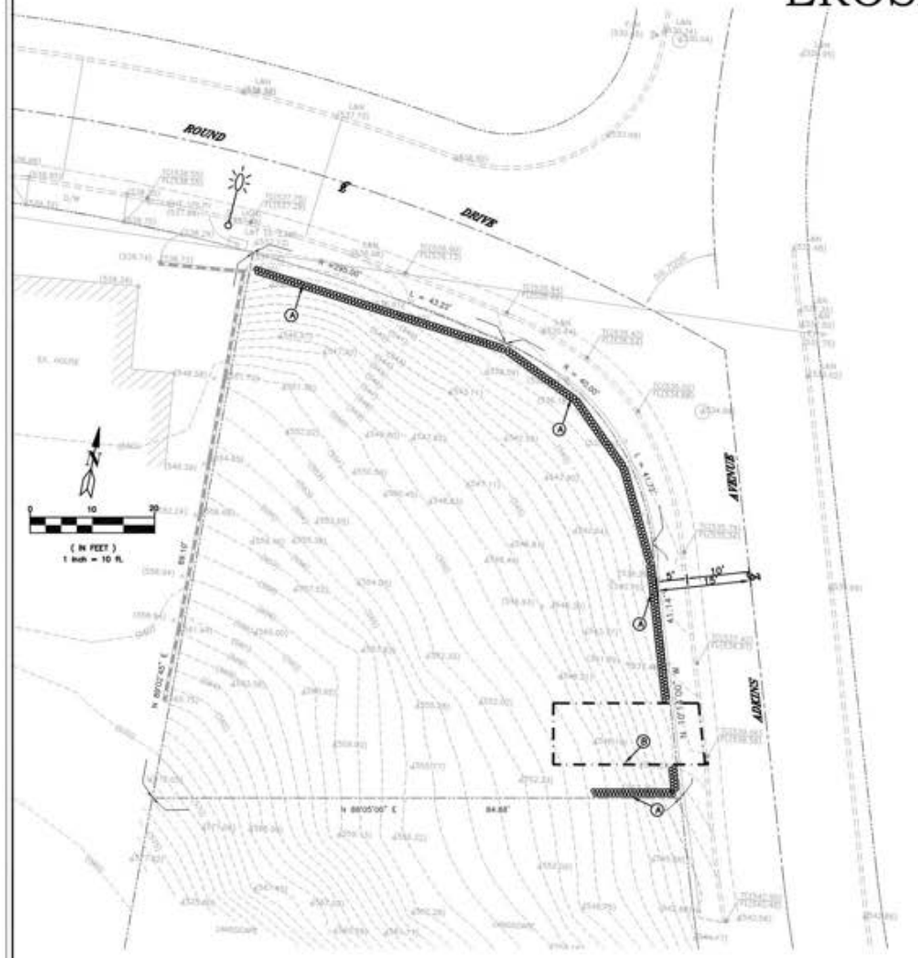
DRAWN: X.Y.
CHECKED:
DATE: 02/12/2021
JOB. NO.: 19-056-003
SCALE: 1" = 10'
FILE NAME: Grading.dwg

REGISTERED PROFESSIONAL ENGINEER
JOHN S. LEE
69570
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

C-2

SHEET 2 OF 3

EROSION CONTROL PLAN



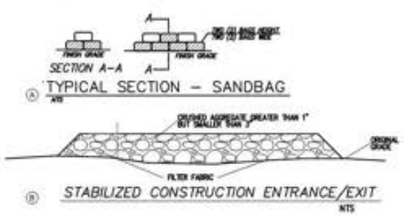
EROSION CONTROL PLAN:

1. IN CASE OF EMERGENCY, CALL HERMAN LEE AT (626) 673-6350.
2. A STAND-BY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (NOVEMBER 1 TO APRIL 15). NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF EMERGENCY DEVICES WHEN RAIN IS IMMINENT.
3. EROSION CONTROL DEVICES SHOWN ON THIS PLAN MAY BE REMOVED WHEN APPROVED BY THE BUILDING OFFICIAL IF THE GRADING OPERATION HAS PROGRESSED TO THE POINT WHERE THEY ARE NO LONGER REQUIRED.
4. GRADED AREAS ADJACENT TO FILL SLOPES LOCATED AT THE SITE PERIMETER MUST DRAIN AWAY FROM THE TOP OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY. ALL LOOSE SOILS AND DEBRIS THAT MAY CREATE A POTENTIAL HAZARD TO OFF-SITE PROPERTY SHALL BE STABILIZED OR REMOVED FROM THE SITE ON A DAILY BASIS.
5. ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINSTORM AND BE DISPOSED OF PROPERLY.
6. A GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN ANY DEVICE EXCEEDS TWO FEET. THE DEVICE SHALL BE DRAINED OR PUMPED DRY WITHIN 24 HOURS AFTER EACH RAINSTORM. PUMPING AND DRAINING OF ALL BASINS AND DRAINAGE DEVICES MUST COMPLY WITH THE APPROPRIATE BMP FOR DEWATERING OPERATIONS.
7. THE PLACEMENT OF ADDITIONAL DEVICES TO REDUCE EROSION DAMAGE AND CONTAIN POLLUTANTS WITHIN THE SITE IS LEFT TO THE DISCRETION OF THE FIELD ENGINEER. ADDITIONAL DEVICES AS NEEDED SHALL BE INSTALLED TO RETAIN SEDIMENTS AND OTHER POLLUTANTS ON SITE.
8. DESILTING BASINS MAY NOT BE REMOVED OR MADE INOPERABLE BETWEEN NOVEMBER 1 AND APRIL 15 OF THE FOLLOWING YEAR WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL.
9. STORM WATER POLLUTION AND EROSION CONTROL DEVICES ARE TO BE MODIFIED, AS NEEDED, AS THE PROJECT PROGRESSES. THE DESIGN AND PLACEMENT OF THESE DEVICES IS THE RESPONSIBILITY OF THE FIELD ENGINEER. PLANS REPRESENTING CHANGES MUST BE SUBMITTED FOR APPROVAL IF REQUESTED BY THE BUILDING OFFICIAL.
10. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NONSTORM WATER FROM THE PROJECT SITES AT ALL TIMES.
11. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
12. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
13. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOILS AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
14. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
15. DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO INSPECT ALL EROSION CONTROL DEVICES AND BMP'S ARE INSTALLED AND FUNCTIONING PROPERLY IF THERE IS A 40% CHANCE OF 0.25 INCHES OR GREATER OF PREDICTED PRECIPITATION, AND AFTER ACTUAL PRECIPITATION. A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOG SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY THE BUILDING OFFICIAL (COPIES OF THE SELF-INSPECTION CHECK LIST AND INSPECTION LOGS ARE AVAILABLE UPON REQUEST).
16. TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
17. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
18. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

EROSION CONTROL NOTES:

(A) PROVIDE SAND BAGS FOR EROSION CONTROL ALONG PROPERTY LINE EXCEPT DRIVEWAY APPROACHES. THE SAND BAGS WILL BE 2 BAGS WIDE AND 2 BAGS HIGH.

(B) STABILIZED CONSTRUCTION ENTRANCE PER BMP# TC-1 (PROVIDE 12" MIN OF 1" TO 3" AGGREGATE)





LEGEND:

(527.63)	EXISTING ELEVATION
520.00	PROPOSED ELEVATION
-(530)-	EXISTING COUNTOUR
←	DRAINAGE PATTERN
	PROPOSED STRUCTURE
	PROPOSED 6' BLOCK WALL
SW	SIDE WALK
☼	LIGHT
	CENTER LINE
	PROPERTY LINE
(A)	CONSTRUCTION NOTES
	SANDBAG LINE
	PLANTER BOX AREA
	OVER-EXCAVATION LINE

T.C.	TOP OF CURB
F.L.	FLOW LINE
F.G.	FINISH GRADE
F.S.	FINISH SURFACE
F.F.	FLOOR FINISH
H.P.	HIGH POINT
P.P.	POWER POLE
D/W	DRIVEWAY
W.M.	WATER METER
INV.	INVERT ELEVATION
T.G.	TOP OF GRATE
D.S.	DOWN SPOUT

CALLAND ENGINEERING, INC.
dba QUARTECH CONSULTANTS
576 E. LAMBERT ROAD, BREA, CA. 92821
TEL: (714) 671-1050 FAX: (714) 671-1090

PROJECT LOCATION:
2849 ADKINS AVENUE,
LOS ANGELES, CA 90032

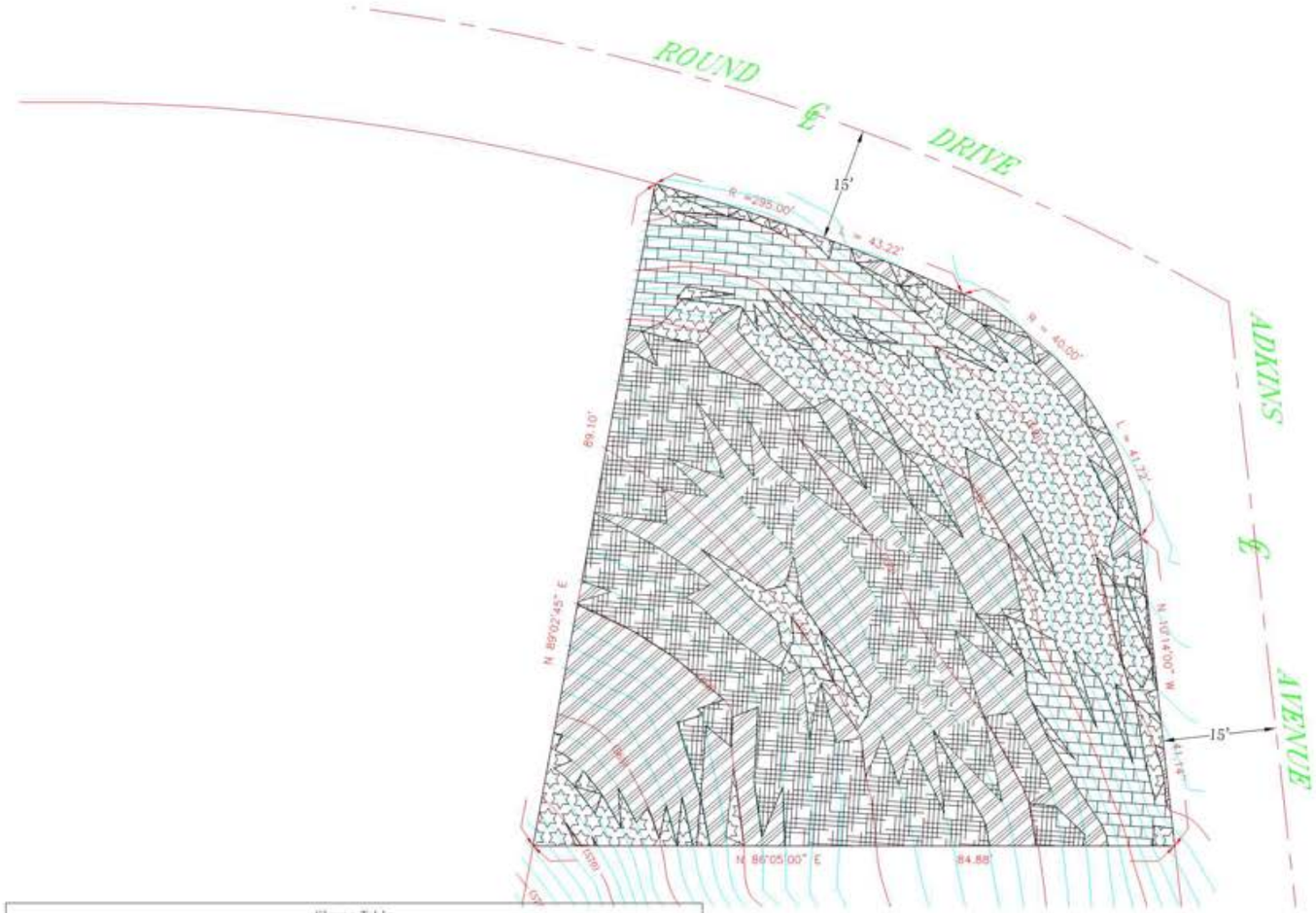
DRAWN:	X.Y.
CHECKED:	
DATE:	02/12/2021
JOB. NO.:	19-056-003
SCALE:	1" = 10'
FILE NAME:	Grading.dwg

PROFESSIONAL ENGINEER — JOHN E. LEE — 40870 — Exp. 3-31-21 — CIVIL — STATE OF CALIFORNIA

C-3

SHEET 3 OF 3

SLOPE DENSITY ANALYSIS



Slopes Table						
Lot Area	5573 S.F. (0.128 ACRES)					
Zone	R1-1					
Number	Minimum Slope	Maximum Slope	Legend	Area	Floor Area Ratio	Max Floor Area
1	0.00%	15.00%		3.19	0.45	1.44
2	15.00%	30.00%		1685.67	0.45	758.55
3	30.00%	45.00%		1832.75	0.40	733.10
4	45.00%	60.00%		1308.33	0.35	457.91
5	60.00%	100.00%		742.87	0.30	222.86
6	100.00%	–		0.00	0	0
Max. Floor Area						2173.86 S.F.

LEGAL DESCRIPTION:

LOT 68 OF TRACT NO. 5629, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 99, PAGES 43 TO 45, OF MAPS, IN THE COUNTY RECORDER OFFICE OF SAID COUNTY.

APN: 5217-015-019

BASIS OF BEARING:

CENTERLINE OF ADKINS AVENUE N 10°14'00" W AS PER TRACT NO. 5629 M.B. 99-43-45

BENCHMARK:

CITY BENCHMARK NO. 11-04720

SPK NW CURB ALHAMBRA AVENUE; 7.5 FT. NE OF BCR NE OF HAVEN STREET.

ELEVATION: 446.362'

PROFESSIONAL LAND SURVEYOR
JACK C. LEE
EXP. 6-30-2020
NO. 8407
STATE OF CALIFORNIA

N

0 8 16
1"=8'

CALLAND ENGINEERING, INC.
dba QUARTECH CONSULTANTS
576 E. LAMBERT ROAD, BREA, CA 92821
TEL: (714) 671-1050 FAX: (714) 671-1090

RELEASED

REVISIONS

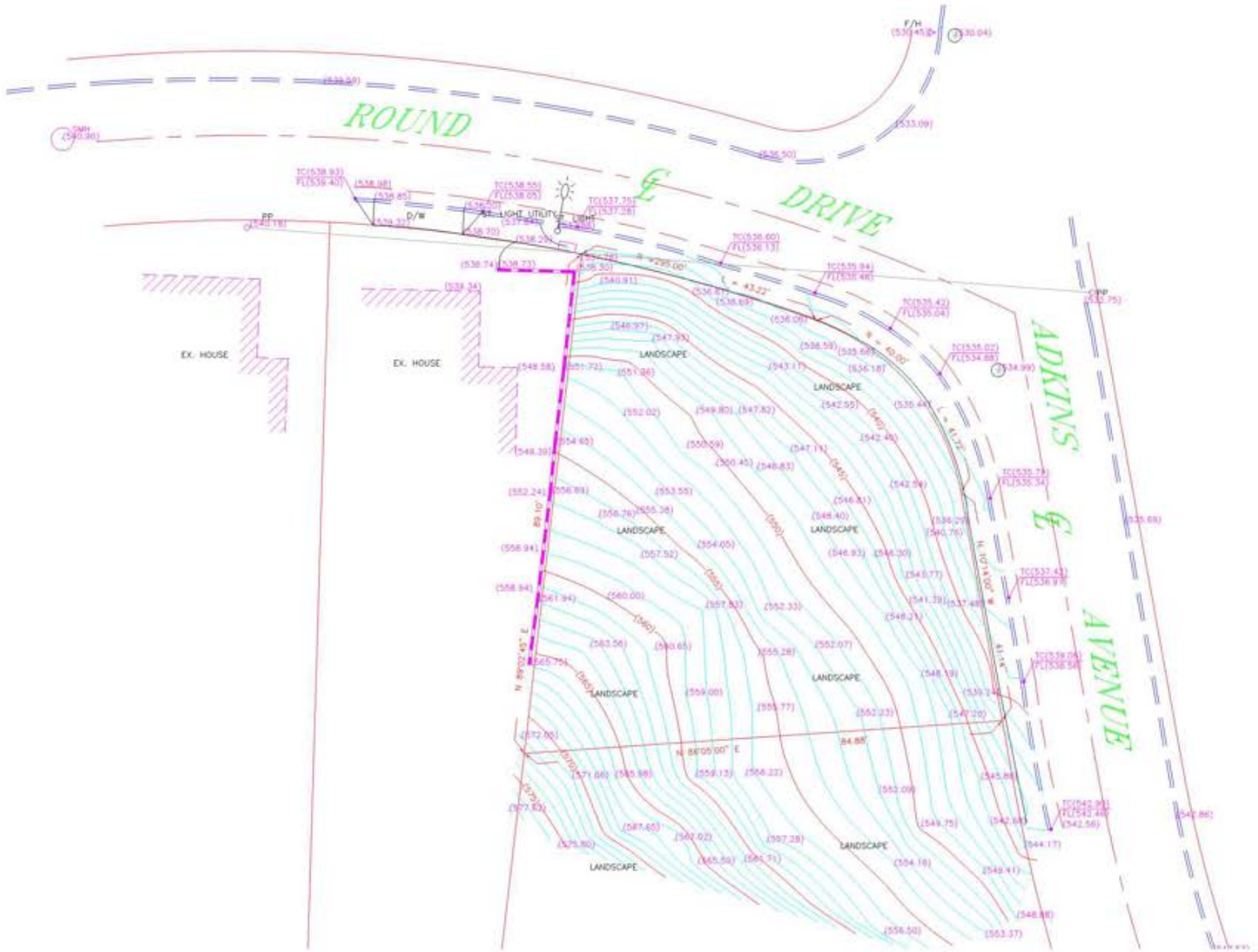
PROJECT LOCATION:
Vacant Lot Round Drive,
LOS ANGELES

DRAWN: JY
CHECKED: FL
DATE: 10-09-2019
JOB NO.: 19-058-003
SCALE: 1"=8'
FILE NAME: Round Vacant Slope.dwg

S-1

SHEET 1 OF 1 SHT.

TOPOGRAPHIC MAP



ABBREVIATIONS/LEGEND:

CATV	:	CABLE T.V. PULLBOX
C/B	:	CATCH BASIN
CBW/RW	:	CONC. BLOCK/RETAINING WALL
C&G	:	CURB AND GUTTER
CF	:	CHAIN LINK FENCE
DWY	:	DRIVEWAY
D/A	:	DRIVEWAY APPROACH
EX	:	EXISTING
FF	:	FINISH FLOOR
FS	:	FINISHED SURFACE
FL	:	FLOW LINE
GM	:	GAS METER
I/F	:	IRON FENCE
HP	:	HIGH POINT
PP	:	POWER POLE
P/L	:	PROPERTY LINE
RW	:	RETAINING WALL
S/W	:	SIDEWALK
S/D	:	STORM DRAIN
TC	:	TOP OF CURB
W/M	:	WATER METER
WF	:	WOODEN FENCE
○	:	STORM DRAIN MANHOLE
○	:	SEWER MANHOLE
○	:	WATER VALVE
⋈	:	FDC / FIRE DEPT. CONNECTION
	:	FIRE HYDRANT
E	:	EDISON PULL BOX
S	:	STREET LIGHT PULL BOX
T	:	TRAFFIC SIGNAL PULL BOX
U	:	UTILITY PULL VOX
TV	:	TV CABLE PULL BOX
H.V	:	HIGH VOLTAGE BOX
TEL	:	TELEPHONE PULL BOX
S.T	:	SEPTIC TANK
(532.00)	:	EXISTING ELEVATION 532.00'
--(532)--	:	EXISTING CONTOUR LINE
-W--W--	:	WATER LINE
-S--S--	:	SEWER LINE
	:	STREET LIGHT
	:	WF/ WOOD FENCE OR IF/ IRON FENCE
	:	CF/ CHAIN LINK FENCE
	:	EXISTING TREE
	:	CONC. BLOCK WALL/ RETAINING WALL
	:	WOOD POST
	:	IRON POST
	:	DRAIN HOLE
	:	VENT

SURVEYOR'S NOTES:

1. ALL INFORMATION SHOWN ON THE DRAWINGS IS GIVEN AS THE BEST PRESENT KNOWLEDGE AND PERFORMED WITHIN GENERALLY ACCEPTED ENGINEERING PRACTICE BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ENGINEER SO THAT THE PROPER REVISIONS MAY BE MADE.

2. ESTABLISHMENT OF CONTOUR: CONTOURING IS THE GRAPHICAL REPRESENTATION OF CONSTANT ELEVATION LINES THAT ARE INTERPOLATED OR EXTRAPOLATED BETWEEN ACTUAL FIELD MEASURED ELEVATIONS OR MAP ELEVATIONS, AND SHOULD NOT BE INTERPRETED AS PRECISE GROUND CONDITIONS. ONLY AN INFINITE NUMBER OF FIELD MEASUREMENTS WOULD REPRESENT SUCH PRECISE CONDITIONS, WHICH OBVIOUSLY ARE NOT POSSIBLE. THE NUMBER OF SUCH FIELD MEASUREMENTS ARE THEREFORE LIMITED TO THE SCOPE AND INTENT OF THE RESULTING MAP.

3. THE BOUNDARY SHOWN HEREON HAS BEEN ESTABLISHED BASED ON THE RECORD DATA.

LEGAL DESCRIPTION:

LOT 68 OF TRACT 5629, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 99, PAGES 43 TO 45, OF MAPS, IN THE COUNTY RECORDER OFFICE OF SAID COUNTY.

APN: 5217-015-019

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ELEVATION: 446.362'

JACK C. LEE
LAND SURVEYOR
PROFESSIONAL
No. 8407
STATE OF CALIFORNIA

N

0 10 20

1"=10'

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dba QUARTECH CONSULTANTS
576 E. LAMBERT ROAD, BREA, CA 92821
TEL: (714) 671-1050 FAX: (714) 671-1090

RELEASED

REVISIONS

PROJECT LOCATION:
Vacant Lot Round Drive,
Los Angeles, CA

DRAWN:	JS
CHECKED:	
DATE:	7-19-2019
JOB NO.:	19-058-003
SCALE:	1"=10'
FILE NAME:	Round Vacant Topo.dwg

T-1

SHEET 1 OF 1 SHT.