CITY OF LA VERNE FIRE STATION 1

LA VERNE, CALIFORNIA

DEFERRED SUBMITTAL

SUBMITTAL DOCUMENTS FOR DEFERRED ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

ITEMS TO HAVE DEFERRED/ SEPARATED SUBMITTAL INCLUDE:
STATION DORMITORY FIRE SPRINKLER SYSTEM MODIFICATIONS.

PROJECT DIRECTORY

OWNER
CITY OF LA VERNE
3660 D STREET
LA VERNE, CA 91750

ARCHITECT
CEDG, INC.
401 E. COLUMBIA AVE.
POMONA, CA 91709
PHONE: 909.625.3916

ELECTRICAL ENGINEER
YOWANTO ENGINEERING
2705 N TOWNE AVENUE
POMONA, CA 01767
PHONE: 626-626-6291

MECHANICAL & PLUMBING ENGINEERING
MN ENGINEERING GROUP, INC
8322 MYRTLEWOOD CIR
WESTMINSTER, CA. 92683
PHONE: 714.487.2726

GENERAL NOTES

1. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL THE LABOR MATERIALS AND NECESSARY SERVICES TO EXECUTE THE WORK AS SHOWN, DESCRIBED, OR REASONABLY IMPLIED BUT NOT LIMITED TO THAT EXPLICITLY INDICATED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL TAKE ALL POSSIBLE CARE TO PROTECT PERSONAL AND ADJACENT PROPERTY AND TO INSURE THE SAFETY OF THOSE INVOLVED DIRECTLY OR INDIRECTLY WITH THE WORK.
3. IN THE WORK OF ALL TRADES, THE CONTRACTOR SHALL PERFORM ANY AND ALL CUTTING, PATCHING, REPAIRING, RESTORING, AND THE LIKE NECESSARY TO RETURN ALL SURFACES AFFECTED BY THE WORK TO THEIR ORIGINAL CONDITION.
4. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AS TO NOT INTERFERE WITH OTHER TRADES.
5. ALL MATERIALS AND FINISHES SHALL BE NEW MATERIALS UNLESS SPECIFICALLY NOTED OTHERWISE.
6. WRITTEN DIMENSIONS IN SCHEDULES AND DRAWING SHALL TAKE PRECEDENCE OVER SCALE DRAWINGS. DO NOT SCALE THE DRAWINGS. BRING ALL DISCREPANCIES IN DIMENSIONS TO THE ATTENTION OF THE ARCHITECT AND AWAIT FURTHER INSTRUCTIONS.
7. IN THE WORK OF ALL TRADES, THE CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEIR SELF WITH THE EXISTING FIELD CONDITIONS AND VERIFYING CONSISTENCY WITH DESIGN DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL REPORT ANY DISCREPANCY TO THE ARCHITECT IMMEDIATELY AND AWAIT FURTHER INSTRUCTIONS.
8. WHEN A DETAIL IS IDENTIFIED AS TYPICAL OR BY THE ABBREVIATION "TYP." ON DRAWINGS, NOTES, OR SCHEDULES, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATION AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT REFERENCE IS REPEATED IN EVERY INSTANCE.
9. NO HAZARDOUS MATERIALS WILL BE RESTORED AND/OR USED WITHIN THE BUILDING WHICH EXCEED THE QUANTITIES LISTED IN UBC TABLES 3-D AND 3-E.
10. ALL EXITS ARE TO BE OPENABLE FROM INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE.
11. ALL WEATHER-EXPOSED SURFACES SHALL HAVE A WEATHER-RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING AND THAT EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM WEATHERPROOF. SECTION 1402 UBC.
12. SUSPENDED CEILINGS SHALL COMPLY WITH UBC TABLES 25-A.
13. ALL WATER CLOSETS AND ASSOCIATED FLUSH METER VALVES, IF ANY, SHALL USE NO MORE THAN 1.6 GALLONS PER FLUSH AND SHALL MEET PERFORMANCE STANDARDS ESTABLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE STANDARD A112.19.2, H&S CODE, SECTION 17921.3(b).
14. HANDICAPPED PARKING SIGNAGE: A SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF STREET PARKING FACILITIES, OR IMMEIDATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE. THE SIGN SHALL BE 17" x 22" OR GREATER WITH LETTERING NOT LESS THAN 1" IN HEIGHT, PER SECTION 1129B.F. REQUIRED WORDING IS AS FOLLOWS: "UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES MAY BE TOWED AWAY AT OWNER'S EXPENSE. TOWED VEHICLES MAY BE RECLAIMED AT _____ OR BY TELEPHONING _____
15. SIGNAGE REQUIREMENTS OF SECTIONS 1117B.5 WILL BE SATISFIED.
16. SOILS REPORT IS PART OF THE CONSTRUCTION DOCUMENTS AND IS SEPARATELY BOUND.
17. A COMPLETED SPECIAL INSPECTION 'PROGRAM' IS REQUIRED AND MUST BE SUBMITTED TO THE BUILDING OFFICIAL PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE PROJECT. (PER UBC SECTION 106.3.5).
18. CONTRACTOR WILL VERIFY LOCATION AND SIZE OF ALL OPENINGS WITH ALL DRAWINGS, AND MANUFACTURED ITEMS WHERE APPLICABLE.
19. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY LOCATE ALL INSERTS AND EMBEDDED ITEMS PRIOR TO POURING CONCRETE.
20. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IN AREA OF NEW CONSTRUCTION PRIOR TO EXCAVATION OR CONSTRUCTION.
21. PROVIDE ALL NECESSARY BACKING AND FRAMING FOR WALL MOUNTED ITEMS, HANDRAILS, LIGHT FIXTURES, AND ALL OTHER ITEMS REQUIRING THE SAME.
22. PROVIDE BLOCKING AS REQUIRED FOR ALL SIGNAGE.
23. PLUMBING FIXTURES SHALL BE PROVIDED IN ACCORDANCE WITH TABLE 4-1, SECTION 413 OF THE COUNTY OF LOS ANGELES PLUMBING CODE.

BUILDING DATA/ CODE ANALYSIS

PROJECT ADDRESS:	2011 3RD STREET, LA VERNE, CA 91750
ASSESSOR'S PARCEL NUMBER:	8377-011-905
OWNER:	CITY OF LA VERNE
ADDRESS:	3660 D STREET, LA VERNE, CA 91750
GOVERNING AGENCY:	CITY OF LA VERNE

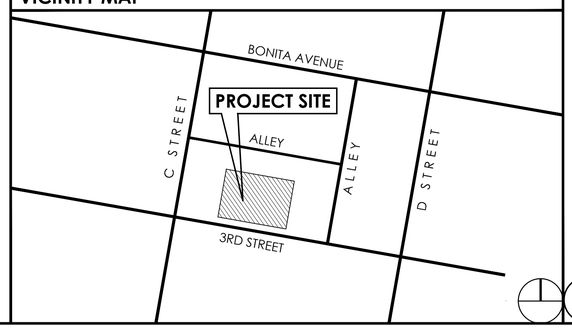
SHEET INDEX

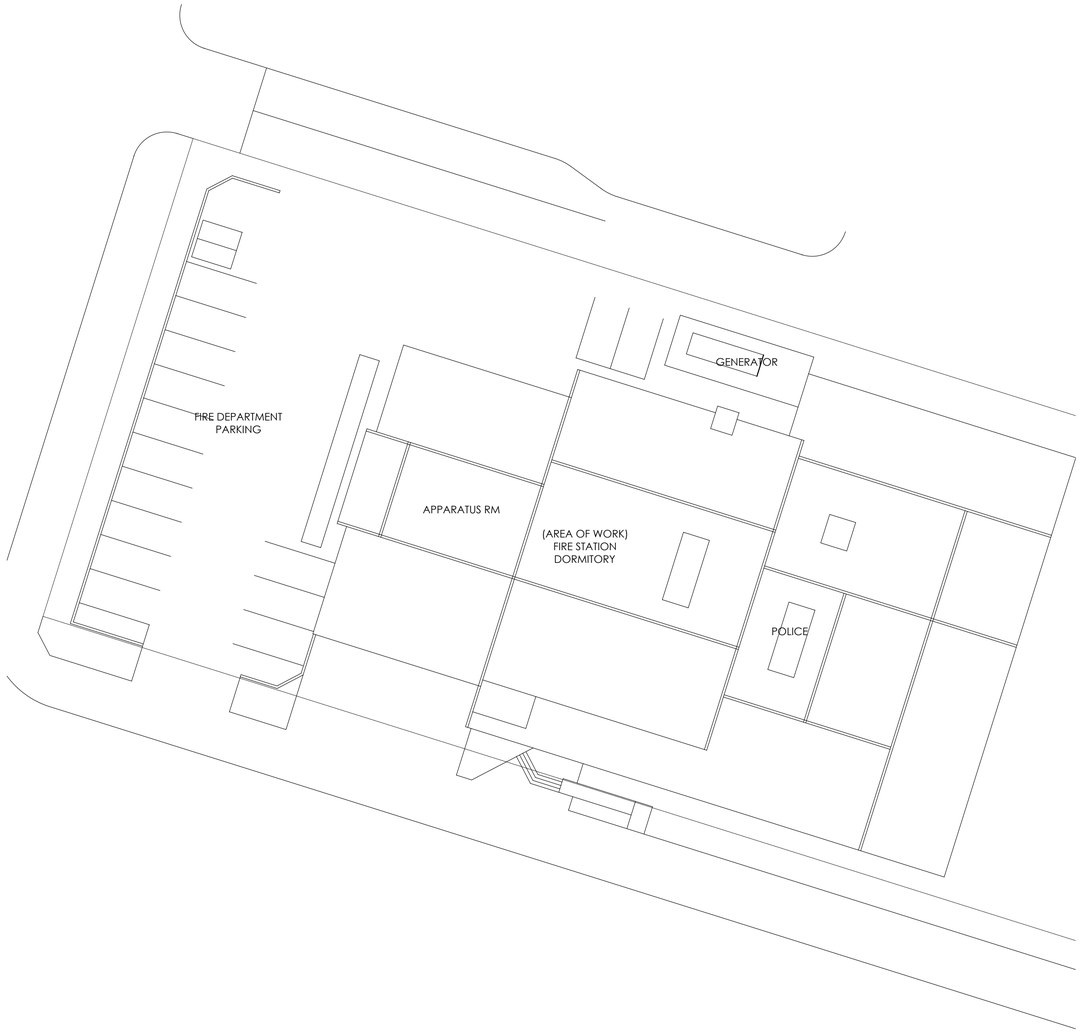
APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:

- TITLE 24, PART 1 & 2 OF THE CODE OF REGULATIONS
- 2022 WITH CALIFORNIA AMENDMENTS
- 2022 CALIFORNIA BUILDING CODE
- 2022 NATIONAL ELECTRICAL CODE W/ CALIFORNIA AMENDMENTS
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA FIRE CODE
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

VICINITY MAP





1 FIRE STATION/POLICE STATION SITE PLAN
1" = 20'-0"

CEDG ARCHITECTS
ARCHITECTURE //
BUILD //
LANDSCAPE //

// 401 e. columbia ave.
pomona, ca 91767

// 909.625.3916
// cedgarchitects.com
// info@cedgarchitects.com

STAMP

LICENSED ARCHITECT
ERIK G. PETERSEN
No. C-25289
REN. 10-31-2025
STATE OF CALIFORNIA

CONSULTANTS

PROJECT

CITY OF LA VERNE FIRE STATION 1
2061 3RD STREET
LA VERNE, CA 91750

COVER SHEET
SITE PLAN

REVISIONS

1	--
2	--
3	--
4	--

DATE:	7 / 24 / 2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

G0.00

GENERAL NOTES

DIVISION 1

GENERAL REQUIREMENTS

1.1 WORK PERFORMED SHALL COMPLY WITH THE FOLLOWING:

A. THESE GENERAL NOTES UNLESS OTHERWISE NOTED ON PLANS OR SPECIFICATIONS.
B. COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS.

1.2 ON SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL AND SUB-CONTRACTORS. NOTED DIMENSIONS TAKE PRECEDENT OVER SCALE. ARCHITECT TO BE NOTIFIED IMMEDIATELY BY CONTRACTOR SHOULD ANY DISCREPANCY OR OTHER QUESTION ARISE PERTAINING TO THE WORKING DRAWINGS BEFORE PRECEDING WITH THE WORK.

1.3 THE GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR:

A. ALL CONTRACT DOCUMENTS, GENERAL NOTES, AND ALL ATTACHED OR REFERENCED REPORTS
B. OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS.
C. ALL DIMENSIONS AND CONDITIONS AT THE SITE. (DIMENSIONS TAKE PRECEDENT OVER SCALE)
D. ANY CONDITION WHICH IN HIS OPINION MIGHT THE STABILITY OF THE STRUCTURE, PROVIDE STRUCTURAL STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
E. ENSURING PROPER ALIGNMENT AND TEMPORARY BRACING AND SHORING TO THE STRUCTURE.
F. SECURING FINAL CERTIFICATE OF OCCUPANCY.
G. SECURE MISCELLANEOUS SUBCONTRACTS AS REQUIRED FOR COMPLETION OF THE JOB.

1.4 ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK, i.e., STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY AND CAL/OSHA, ETC. AND CONFORM TO THE BEST PRACTICE PREVAILING IN THE VARIOUS TRADES COMPRISING THE WORK. ASTM DESIGNATIONS SHALL BE AMENDED TO DATE.

DIVISION 2

SITE WORK

N/A

DIVISION 3

FOUNDATIONS AND CONCRETE

N/A

DIVISION 4

MASONRY

N/A

DIVISION 5

METALS

5.1 ALL REINFORCING STEEL SHALL BE NEW STOCK

5.2 ALL BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIALS LIKELY TO IMPAIR BOND.

5.3 ALL BENDS SHALL BE MADE COLD.

5.4 ALL REINFORCING BARS SHALL BE ACCURATELY AND SECURELY PLACED BEFORE POURING CONCRETE OR APPLYING MORTAR OR GROUT.

DIVISION 6

CARPENTRY

6.1 SEE ARCHITECTURAL DRAWINGS FOR ROUGH FRAMING.

DIVISION 7

THERMAL AND MOISTURE PROTECTION

7.1 ALL SHEET METAL TO BE 26 GA. GALVANIZED IRON UNLESS OTHERWISE NOTED.

7.2 FLASH AND COUNTER FLASH AT ALL ROOF TO WALL CONDITIONS.

7.3 N/A

7.4 FLASH ALL EXTERIOR OPENING WITH APPROVED WATERPROOF BUILDING PAPER TO EXTEND AT LEAST 3" UNDER THE BUILDING PAPER BEHIND THE WALL COVERING.

7.5 N/A

7.6 ALL RANGE VENTS TO BE INSTALLED PER 2019 CBC AND MANUFACTURER'S INSTRUCTIONS.

7.7 ALL VENTS AND DUCTS PENETRATING THE ROOF SHALL EXTEND A MINIMUM OF 12" ABOVE THE ROOF SURFACE OR PER 2019 CBC, WHICHEVER IS MORE CONSERVATIVE.

7.8 PROVIDE FLASHING AT THE TOP OF ALL EXPOSED TRELLIS BEAMS AND RAFTERS.

7.9 N/A

7.10 PROVIDE EXHAUST DUCTS AS REQUIRED FOR WATER HEATER(S), RANGE HOOD AND VENTILATION FANS.

7.11 ENERGY INSULATION REQUIREMENTS:

A. ALL EXTERIOR WALLS SHALL BE INSULATED WITH BLANKET TYPE MINERAL FIBER OR GLASS FIBER INSULATION CONFORMING TO FEDERAL SPECIFICATION HH-I-521E WITH A THERMAL RESISTANCE (R) OF NOT LESS THAN 11.
B. ALL ROOF-CEILING ASSEMBLIES SHALL BE INSULATED WITH EITHER:
   1. BLANKET TYPE MINERAL OR GLASS FIBER INSULATION CONFORMING TO FEDERAL SPECIFICATION HH-I-521E, TITLE 24 ENERGY MANDATES.
C. ALL FLOOR ASSEMBLIES OVER NON INSULATED SPACE SHALL BE INSULATED WITH BLANKET TYPE MINERAL FIBER OR GLASS FIBER INSULATION CONFORMING TO FEDERAL SPECIFICATION HH-I-521E WITH A THERMAL RESISTANCE (R) OF NOT LESS THAN 19.
D. ALL HEATING OR COOLING DUCTS LOCATED OUTSIDE THE BUILDING ENERGY ENVELOPE SHALL HAVE ALL JOINTS AND SEAMS SEALED AND SHALL BE INSULATED TO MEET THE CURRENT TITLE 24 REQUIREMENTS.
E. SEE DIVISION 8, DIV. 15 FOR ADDITIONAL ENERGY REQUIREMENTS.
F. MINERAL FIBER INSULATION SHALL BE INSTALLED IN JOIST SPACES WHENEVER A PLUMBING PIPE OR DUCT PENETRATES A FLOOR-CEILING ASSEMBLY FROM WITHIN A WALL. THE INSULATION SHALL BE INSTALLED TO A POINT 12" BEYOND THE PIPE OR DUCT.
G. UPON COMPLETION OF INSULATION INSTALLATION BOTH THE BUILDER AND THE INSULATION APPLICATOR SHALL EXECUTE A CARD CERTIFYING THAT THE INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH CHAPTERS 2-53 OF TITLE 24 OF CALIFORNIA ADMINISTRATIVE CODE, AND THAT THE MATERIALS INSTALLED CONFORM WITH THE REQUIREMENTS OF TITLE 20, CHAPTER 2, SUBCHAPTER 4, ARTICLE 3. THE CARD MUST BE POSTED IN A CONSPICUOUS LOCATION WITHIN THE BUILDING.
H. ALL INSULATION MATERIALS SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.
I. A R-12 EXTERIOR BLANKET SHALL BE PROVIDED FOR HOT WATER HEATER.
J. INSULATE HOT WATER PIPING PER TITLE 24 REQUIREMENTS.

7.12 ENERGY REQUIREMENTS (GENERAL)

A. ALL WATER HEATING AND SPACE CONDITIONING EQUIPMENT AND FAUCETS SHALL BE C.E.C. CERTIFIED.

7.13 WALL/CEILING FINISHES

A. ALL INTERIOR WALLS SHALL BE 5/8" GYPSUM BOARD EACH SIDE, NAILED WITH 6d COOLER NAILS AT 7"O.C. UNLESS NOTED ON PLANS. (UNBLOCKED W/ LEVEL V SMOOTH FINISH).
B. PROVIDE ONE HOUR FIRE SEPARATION UNDER ENCLOSED STAIRWAYS WITH 5/8" GYPSUM BOARD EACH SIDE OF WALLS AND ON CEILINGS. (LEVEL V, SMOOTH FINISH). USE TYPE "X" GYPSUM BOARD.
C. INSPECTION IS REQUIRED PRIOR TO TAPING AND FINISHING (ALL JOINTS) WALLBOARDS.
D. INSPECTION IS REQUIRED FOR ALL INTERIOR AND EXTERIOR IN-PLACE LATH AND WALLBOARD BEFORE ANY PLASTERING IS APPLIED.

7.14 FLOORING SHALL BE COMMERCIAL GRADE VINYL PLANK THROUGHOUT AS SELECTED BY OWNER'S REPRESENTATIVE.

7.15 ROOFING -
A. EXISTING ROOF MEMBRANE SHALL BE REPAIRED AS NEEDED FOR CONTRACTOR TO PROVIDE A MIN. 10 YEAR WARRANTY.

7.19 FIRE BLOCKING SHALL BE INSTALLED AT:

A. CONCEALED SPACES OF STUD WALLS AND PARTITIONS, FLOOR AND CEILING AT 10'-0" MAXIMUM INTERVALS BOTH VERTICALLY AND HORIZONTALLY.
B. INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES.
C. CONCEALED SPACE BETWEEN STAIR STRINGERS AT TOP AND BOTTOM RUN.
D. AT OPENINGS AROUND VENTS, PIPES, DUCTS, AND CHIMNEYS NON-COMBUSTIBLE MATERIALS).
E. AT OPENINGS BETWEEN ATTIC AND CHIMNEY CHASE FOR FACTORY-BUIL CHIMNEYS.

DIVISION 8

DOORS, WINDOWS, AND GLASS

8.1 ALL GLASS AND GLAZING SHALL COMPLY WITH APPLICABLE CODES AND MUST BE LABELED SAFETY GLAZING FOR IMPACT WHERE APPLICABLE.

8.2 ALL GLASS LESS THAN 18" ABOVE ADJACENT WALKING SURFACE SHALL BE TEMPERED.

8.3 TITLE 24 REQUIREMENTS: (SEE TITLE 24 ENERGY COMPLIANCE SHEETS).

8.4 GLAZING IN DOORS AND FIXED GLAZED PANELS OF MORE THAN 9 SQ. FT. SHALL HAVE CATEGORY II CLASSIFICATION PER C.B.C. STD.

8.6 GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS SHALL HAVE CATEGORY II CLASSIFICATION PER 2019 C.B.C.

8.7 THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING. GLAZING IN THESE LOCATIONS MUST BE TEMPERED:

A. GLAZING IN INGRESS AND EGRESS DOORS EXCEPT JALOUSIES.
B. GLAZING IN FIXED AND SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANELS IN SWINGING DOORS OTHER THAN WARDROBE DOORS.
C. GLAZING IN STORM DOORS.
D. GLAZING IN ALL UNFRAMED SWINGING DOORS.
E. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE A STANDING SURFACE AND DRAIN INLET.
F. GLAZING IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60-INCHES ABOVE THE WALKING SURFACE.
G. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL, OTHER THAN LOCATIONS DESCRIBED IN ITEMS 'E' AND 'F', THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
   1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATHER THAN 9 SQ. FT.
   2. EXPOSED BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.
   3. EXPOSED TOP EDGE GREATER THAN 36 INCHES ABOVE THE FLOOR.
   4. ONE OR MORE WALKING SURFACES WITHIN 36 INCHES HORIZONTALLY OF THE PLANE OF THE GLAZING.
H. GLAZING IN RAILING REGARDLESS OF HEIGHT ABOVE A WALKING SURFACE. INCLUDED ARE STRUCTURAL BALUSTER PANELS AND NON-STRUCTURAL IN-FILL PANELS.
I. GLAZING IN WALLS AND FENCES USED AS THE BARRIER FOR INDOOR AND OUTDOOR SWIMMING POOLS AND SPAS WHEN ALL OF THE FOLLOWING CONDITIONS ARE PRESENT:
   1. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE POOL SIDE OF THE GLAZING.
   2. THE GLAZING IS WITHIN 5 FEET OF A SWIMMING POOL OR SPA WATER'S EDGE.
J. GLAZING IN WALLS ENCLOSING STAIRWAY LANDINGS OR WITHIN 5 FEET OF THE BOTTOM AND TOP OF THE STAIRWAYS WHERE THE BOTTOM EDGE OF THE GLASS IS LESS THAN 60 INCHES ABOVE A WALKING SURFACE.

8.8 ENERGY INSULATION STANDARD

A. SWINGING DOORS OR WINDOWS TO THE EXTERIOR OR TO UNCONDITIONED SPACES SUCH AS GARAGES SHALL BE FULLY WEATHER-STRIPPED, GASKETED OR OTHERWISE TREATED TO LIMIT AIR INFILTRATION.

DIVISION 9

FINISHES

9.1 DRYWALL NAILING SHALL BE ACCORDING TO APPLICABLE BUILDING CODE REQUIREMENTS FOR THE TYPES AND THICKNESS BEING USED (SEE DIVISION 7).

9.2 ALL DRYWALL APPLICATIONS TO BE INSPECTED AND APPROVED PRIOR TO TAPING.

9.3 N/A

9.4 DRYWALL TO BE "U.S. GYPSUM" SHEET ROCK OR EQUAL.

9.5 ALL DRYWALL TO BE INSTALLED IN A ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

9.6a ALL INTERIOR WALLS AND CEILINGS TO BE SHEATHED IN 5/8" SHEET ROCK TYPE X (SEE DIVISION7).

9.6b N/A

9.6c N/A

9.6d N/A

9.7 ALL TILE MUST BE SET BY A FIRST-CLASS TILE SETTER.

9.8 ALL TILE SHALL BE FIRMLY SECURED IN PLACE WITH FILLED JOINTS AT LEAST 1/16" WIDE.

9.9 LINES SHALL BE KEPT STRAIGHT AND TRUE AND ALL FINISH SURFACES BROUGHT TO LEVEL PLANES.

9.10 TILE WORK SHALL BE "CERAMIC TILE" (AS SELECTED BY ARCHITECT) AND CEMENT MORTAR PER SPECIFICATIONS OF "CERAMIC TILE INSTITUTE."

9.11 N/A

9.12 ALL PAINT SHALL BE DUNN EDWARDS OR EQUAL, READY MIXED PAINT. ALL PAINTED SURFACES SHALL BE PRIMED AND FINISHED WITH TWO COLOR COATS. OWNER TO SELECT COLORS AND SHEEN FOR EACH ROOM OR PORTION OF ROOM.

9.13 PAINTING CONTRACTOR SHALL APPROVE CONDITION OF PLASTER AND ANY SURFACES PAINTED AND TO SEAL ALL SURFACES.

9.14 ALL COLORS SHALL BE SELECTED BY OWNER.

9.15 PROTECT ALL ADJACENT SURFACES AGAINST PAINT SPATTERING.

9.16 PAINT-GRADE DOORS SHALL RECEIVE 2-COATS ENAMEL (SEMI-GLOSS) OVER PRIMER.

9.17 INTERIOR WOODWORK TO RECEIVE 2-COATS ENAMEL (SEMI-GLOSS) OVER PRIMER, IF NOT STAINED.

9.18 N/A

9.19 N/A

9.20 PUTTY ALL NAIL HOLES AFTER FIRST COAT.

9.21 REMOVE ALL PAINT SPOTS AND LEAVE IN A CLEAN AND ACCEPTABLE MANNER, READY FOR OCCUPANCY.

9.22 PAINTER TO SUBMIT A COLOR SAMPLE OF AREA TO BE PAINTED FOR OWNER'S APPROVAL PRIOR TO COMMENCEMENT OF WORK.

9.23 PAINTER TO RETURN AFTER ALL TRADES HAVE COMPLETED WORK AND TOUCH UP ALL PAINTED AREAS AS REQUIRED.

DIVISION 15

MECHANICAL

15.1 EQUIPMENT SHALL BEAR A PERMANENT AND LEGIBLE NAMEPLATE ON WHICH SHALL APPEAR: THE MANUFACTURER'S NAME AND RATING OF THE APPLIANCE; A MODEL DESIGNATION; INSTRUCTIONS FOR THE OPERATION OF THE APPLIANCE; A SEAL OF APPROVAL OF THE APPLIANCE BY AN APPROVED TESTING LABORATORY.

15.2 EACH UNIT SHALL BEAR A METAL NAME PLATE SECURELY FIXED TO THE APPLIANCE AND READILY ACCESSIBLE FOR INSPECTION, IDENTIFYING THE NAME AND ADDRESS OF THE INSTALLER, IF OTHER THAN THE OWNER.

15.3 CHECK FRAMING FOR ALL DUCTS, ETC., INTERFERING WITH STRUCTURAL MEMBERS.

15.4 N/A

15.5 THE AIR CIRCULATION SYSTEM SHALL INCORPORATE AN AIR FILTRATION SYSTEM.

15.6 ALL HEATING AND COOLING DUCTS LOCATED OUTSIDE THE BUILDING ENERGY ENVELOPE SHALL HAVE ALL JOINTS AND SEEMS SEALED, BE INSULATED PER TITLE 24.

15.7 N/A

15.8 NO PIPES, CONDUIT OR DUCTS SHALL BE EMBEDDED INTO STRUCTURAL MEMBERS OR FOOTINGS UNLESS SO SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.

15.9 ALL PLUMBING VENTS SHALL GO THROUGH ROOF A MINIMUM OF 10'-0" FROM ANY PROPERTY LINE.

15.10 MINERAL FIBER INSULATION WILL BE INSTALLED IN JOIST SPACES WHENEVER A PLUMBING PIPE OR DUCT PENETRATES A FLOOR-CEILING ASSEMBLY OR WHERE SUCH A UNIT PASSES THROUGH THE PLANE OF THE FLOOR-CEILING ASSEMBLY FROM WITHIN A WALL. THE INSULATION SHALL BE TO A POINT 12" BEYOND THE PIPE OR DUCTS.

15.11 WATER HEATERS SHALL BE STRAPPED FOR LATERAL SUPPORT. FRAME SHALL BE A MINIMUM OF 2'-0" FROM FINISH FLOOR.

ATTACHMENT A: BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES

STORM WATER POLLUTION CONTROL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES MINIMUM WATER QUALITY PROTECTION REQUIREMENTS FOR ALL DEVELOPMENT CONSTRUCTION

PROJECTS/CERTIFICATION STATEMENT

THE FOLLOWING IS INTENDED AS MINIMUM NOTES OR AS AN ATTACHMENT FOR BUILDING AND GRADING PLANS AND REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING THAT MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES REGARDLESS OF SIZE. (APPLIES TO ALL PERMITS)

- ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
- STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
- 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.
- NON-STORMWATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.
- 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.
- TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- 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.
- ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
- OTHER: _____

AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, I HAVE READ AND UNDERSTAND THE REQUIREMENTS LISTED ABOVE, NECESSARY TO CONTROL STORM WATER POLLUTION FROM SEDIMENTS, EROSION, AND CONSTRUCTION MATERIALS, AND I CERTIFY THAT I WILL COMPLY WITH THESE REQUIREMENTS.

PRINT NAME _____
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

SIGNATURE _____ DATE _____
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

NOTES

1. REINFORCED WALLS FOR GRAB BARS. A BATHTUB INSTALLED WITHOUT SURROUNDING WALLS SHALL PROVIDE REINFORCED AREAS FOR THE INSTALLATION OF FLOOR-MOUNTED GRAB BARS. WHERE A BATHTUB IS INSTALLED WITH SURROUNDING WALLS. GRAB BAR REINFORCEMENT SHALL BE LOCATED ON EACH END OF THE BATHTUB, 32 INCHES TO 38 INCHES (813 MM TO 965 MM) ABOVE THE FLOOR, EXTENDING A MINIMUM OF 24 INCHES (610 MM) FROM THE FRONT EDGE OF THE BATHTUB TOWARD THE BACK WALL OF THE BATHTUB. THE GRAB BAR REINFORCEMENT SHALL BE A MINIMUM OF 6 INCHES (152.4 MM) NOMINAL IN HEIGHT. (SEE FIGURE 11A-9G).

2. GRAB BAR REINFORCEMENT SHALL BE INSTALLED ON THE BACK WALL OF THE BATHTUB A MAXIMUM OF 6 INCHES (152.4 MM) ABOVE THE BATHTUB RIM EXTENDING UPWARD TO AT LEAST 38 INCHES (965 MM) ABOVE THE FLOOR. GRAB BAR BACKING SHALL BE INSTALLED HORIZONTALLY TO PERMIT THE INSTALLATION OF A 48-INCH (1219 MM) GRAB BAR WITH EACH END A MAXIMUM OF 6 INCHES (152.4 MM) FROM THE END WALLS OF THE BATHTUB. THE GRAB BAR REINFORCEMENT SHALL BE A MINIMUM OF 6 INCHES (152.4 MM) NOMINAL IN HEIGHT.

3. BATHTUB CONTROLS. FAUCET CONTROLS AND OPERATION MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUND-FORCE (22.2 N). LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS.

4. SHOWER UNIT. A SHOWER SPRAY UNIT IS NOT REQUIRED IN BATHTUBS.

5. BATHTUB ENCLOSURES. DOORS AND PANELS OF BATHTUB ENCLOSURES SHALL BE SUBSTANTIALLY CONSTRUCTED FROM APPROVED, SHATTER-RESISTANT MATERIALS. HINGED DOORS SHALL OPEN OUTWARD. GLAZING USED IN DOORS AND PANELS OF BATHTUB ENCLOSURES SHALL BE FULLY TEMPERED, LAMINATED SAFETY GLASS OR APPROVED PLASTIC. WHEN GLASS IS USED, IT SHALL HAVE MINIMUM THICKNESS OF NOT LESS THAN 1/8 INCH (3.17 MM) WHEN FULLY TEMPERED, OR 1/4 INCH (6.35 MM) WHEN LAMINATED, AND SHALL PASS THE TEST REQUIREMENTS OF THIS PART, CHAPTER 24, GLASS AND GLAZING. PLASTICS USED IN DOORS AND PANELS OF BATHTUB ENCLOSURES SHALL BE OF A SHATTER-RESISTANT TYPE.

6. WATER CLOSETS SHALL BE LOCATED WITHIN BATHROOMS IN A MANNER THAT PERMITS A GRAB BAR TO BE INSTALLED ON ONE SIDE OF THE FIXTURE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 17 INCHES (432 MM) MINIMUM TO 18 INCHES (457 MM) MAXIMUM FROM A GRAB BAR WALL OR PARTITION, IN LOCATIONS WHERE WATER CLOSETS ARE ADJACENT TO NON-GRAB BAR WALLS, VANITIES, LAVATORIES OR BATHTUBS, THE CENTERLINE OF THE FIXTURE SHALL BE A MINIMUM OF 18 INCHES (457 MM) FROM THE OBSTACLE.

7. REINFORCED WALLS FOR GRAB BARS. WHERE THE WATER CLOSET IS NOT PLACED ADJACENT TO A SIDE WALL CAPABLE OF ACCOMMODATING A GRAB BAR, THE BATHROOM SHALL HAVE PROVISIONS FOR INSTALLATION OF FLOOR-MOUNTED, FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BARS.

8. WHERE THE WATER CLOSET IS PLACED ADJACENT TO A SIDE WALL, REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDES OR ONE SIDE AND THE BACK. IF REINFORCEMENT IS INSTALLED AT THE BACK, IT SHALL BE INSTALLED BETWEEN 32 INCHES (813 MM) AND 38 INCHES (965 MM) ABOVE THE FLOOR. THE GRAB BAR REINFORCEMENT SHALL BE A MINIMUM OF 6 INCHES (152.4 MM) NOMINAL IN HEIGHT. THE BACKING SHALL BE A MINIMUM OF 40 INCHES (1016 MM) IN LENGTH.

9. REINFORCEMENT INSTALLED AT THE SIDE OF THE WATER CLOSET SHALL BE INSTALLED 32 INCHES TO 38 INCHES (813 MM TO 965 MM) ABOVE THE FLOOR. THE REINFORCEMENT SHALL BE INSTALLED A MAXIMUM OF 12 INCHES (305 MM) FROM THE REAR WALL AND SHALL EXTEND A MINIMUM OF 26 INCHES (660 MM) IN FRONT OF THE WATER CLOSET. THE GRAB BAR REINFORCEMENT SHALL BE A MINIMUM OF 6 INCHES (152.4 MM) NOMINAL IN HEIGHT.

10. SEAT HEIGHT. THE MINIMUM HEIGHT OF WATER CLOSET SEATS SHALL BE 15 INCHES (381 MM) ABOVE THE FLOOR.

11. WATER CLOSET CONTROLS. WATER CLOSET CONTROLS SHALL BE MOUNTED NO MORE THAN 44 INCHES (1118 MM) ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS (22.2 N).

12. LAVATORY FAUCET CONTROLS. FAUCET CONTROLS AND OPERATION MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.

THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS (22.2 N). LEVER OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

1136A.1 RECEPTACLE HEIGHTS. ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES (1219 MM) MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX NOR LESS THAN 15 INCHES (381 MM) MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX TO THE LEVEL OF THE FINISHED FLOOR OR WORKING PLATFORM. IF THE REACH IS OVER A PHYSICAL BARRIER OR AN OBSTRUCTION (FOR EXAMPLE, A KITCHEN BASE CABINET), RECEPTACLES SHALL BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN SECTION 1138A.3. PHYSICAL BARRIERS AND OBSTRUCTIONS SHALL NOT EXTEND MORE THAN 25 INCHES (635 MM) FROM THE WALL BENEATH THE RECEPTACLE.

RECEPTACLE OUTLETS THAT DO NOT SATISFY THESE SPECIFICATIONS ARE ACCEPTABLE PROVIDED THAT COMPARABLE RECEPTACLE OUTLETS, THAT PERFORM THE SAME FUNCTIONS, ARE PROVIDED WITHIN THE SAME AREA AND ARE ACCESSIBLE.

EXCEPTIONS:

1. RECEPTACLE OUTLETS INSTALLED AS PART OF PERMANENTLY INSTALLED BASEBOARD HEATERS ARE EXEMPT.
2. REQUIRED RECEPTACLE OUTLETS SHALL BE PERMITTED IN FLOORS WHEN ADJACENT TO SLIDING PANELS OR WALLS.
3. ELECTRICAL CONVENIENCE FLOOR OUTLETS ARE NOT SUBJECT TO THE MINIMUM HEIGHT REQUIREMENTS.

1136A.2 SWITCH AND CONTROL HEIGHTS. CONTROLS OR SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES, ALARMS OR COOLING, HEATING AND VENTILATING EQUIPMENT SHALL BE LOCATED NO MORE THAN 48 INCHES (1219 MM) MEASURED FROM THE TOP OF THE OUTLET BOX NOR LESS THAN 15 INCHES (381 MM) MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISHED FLOOR OR WORKING PLATFORM. IF THE REACH IS OVER A PHYSICAL BARRIER OR AN OBSTRUCTION (FOR EXAMPLE, A KITCHEN BASE CABINET) SWITCHES AND CONTROLS SHALL BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN SECTION 1138A.3. PHYSICAL BARRIERS OR OBSTRUCTIONS SHALL NOT EXTEND MORE THAN 25 INCHES (635 MM) FROM THE WALL BENEATH A CONTROL.

SWITCHES AND CONTROLS THAT DO NOT SATISFY THESE SPECIFICATIONS ARE ACCEPTABLE PROVIDED THAT COMPARABLE CONTROLS OR OUTLETS, THAT PERFORM THE SAME FUNCTIONS, ARE PROVIDED WITHIN THE SAME AREA AND ARE ACCESSIBLE.

EXCEPTION: APPLIANCES (E.G., KITCHEN STOVES, DISHWASHERS, RANGE HOODS, MICROWAVE OVENS AND SIMILAR APPLIANCES) WHICH HAVE CONTROLS LOCATED ON THE APPLIANCE.

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PROJECT

CITY OF LA VERNE FIRE STATION 1
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GENERAL NOTES

REVISIONS

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2	--
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DATE:	7 / 24 / 2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

G1.01

2022 CALGREEN NONRESIDENTIAL MANDATORY MEASURES CHECKLIST (EFFECTIVE JAN 1, 2023)

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
GREEN BUILDING			
301.3	Application	- Applies to nonresidential projects that meet one of the following: new construction, building additions of 1,000 square feet or greater, or building alterations with a permit valuation of $200,000 or more. - Requirements for additions and alterations only apply to the portion of the building being added or altered.	G-0.0
PLANNING AND DESIGN (SITE DEVELOPMENT)			
5.106.1	Storm Water Pollution Prevention Plan	Newly constructed projects and additions which disturb less than one acre of land and are not part of larger common plan of development or sale shall prevent the pollution of stormwater runoff from the construction activities through local ordinance in Section 5.106.1.1 or Best management practices (BMP) in Section 5.106.1.2.	N/A
5.106.2		For projects that disturb one or more acres of land or disturb less than or more land but are part of a larger common plan of development or sale comply with the postconstruction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General Permit.	N/A
5.106.4	Bicycle Parking	Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet local ordinance, whichever is stricter. 5.106.4.1.1 Short-Term bicycle parking. If the new project or addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 ft of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. Exception: Additions or alterations which add 9 or fewer visitor vehicular parking spaces. 5.106.4.1.2 Long-Term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupants vehicular parking spaces with a minimum of one space. 5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular parking spaces, provide secure bicycle parking for 5% of the tenant-occupants vehicular parking spaces being added, with a minimum of one bicycle parking facility. 5.106.4.1.4 For new shell buildings in phased projects, provide secure bicycle parking for 5% of the anticipated tenant-occupants vehicular parking spaces with a minimum of one bicycle parking facility. 5.106.4.1.4 Acceptable parking facilities shall be convenient from the street and shall meet one of the following: 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks; or 3. Lockable, permanently anchored bicycle lockers.	A-1.0
5.106.5.2	Designated Parking	5.106.5.2 Designated parking for clean air vehicles. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel efficient, and carpool/van pool vehicles per Table 5.106.5.2. 5.106.5.2.1 Parking stall marking. Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: CLEAN AIR/ VANPOOL/EV Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.	A-1.0
5.106.5.3	Electric Vehicle (EV) Charging	New Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). 5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following: 1. The type and location of the EVSE. 2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. 3. The raceway shall not be less than trade size 1". 4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent. 5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE. 5.106.5.3.2 Multiple charging spaces requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following: 1. The type and location of the EVSE. 2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent. 3. Plan design shall be based upon 40-ampere minimum branch circuits. 4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage. 5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE. 5.106.5.3.3 EV charging space calculation. [N] Use Table 5.106.5.3.3 to determine if single or multiple charging space requirements apply for the future installation of EVSE. 5.106.5.3.4 Identification [N]. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE." 5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.	A-1.0
5.106.8	Light Pollution Reduction	New outdoor lighting systems shall be designed and installed to comply with the following: 1. The minimum requirements in the California Energy Code for Lighting Zones 0–4 as defined in Chapter 10, section 10-14 of the California Administrative Code; and 2. Backlight (B) rating as defined in IES TM-15-11 (shown in table A-1 in Chapter 8); 3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8) and 4. Allowable BUG ratings not exceeding those shown in Table 5.106.8[N], or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent. Exceptions: 1. Luminaires that qualify as exceptions in Section 140.7 of California Energy Code 2. Emergency lighting 3. Building façade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6. 4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.	E-0.3
5.106.10	Grading and Paving	Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales. 2. Water collection and disposal systems. 3. French drains. 4. Water retention gardens. 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. Exceptions: Additions and alterations not altering the drainage path.	CIVIL SHEET 3 OF 7
ENERGY EFFICIENCY			
5.201.1	Scope	Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.	M-1.1 - M-1.2

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
WATER EFFICIENCY AND CONSERVATION (INDOOR WATER USE)			
5.303.1	Meters	Separate meters shall be installed for the uses described in Sections 5.303.1.1 and 5.303.1.2. 5.303.1.1 New buildings or additions in excess of 50,000 square feet. Separate submeters shall be installed as follows: 1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop. 2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems: a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s) b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s) c. Steam and hot-water boilers with energy input more than 500,000 Btu/h (147 kW) 5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or an addition that is projected to consume more than 1,000 gal/day (3800 L/day).	N/A
5.303.3	Water Conserving Plumbing Fixtures and Fittings	Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following: **PLUMBING FIXTURES & FITTINGS** / **MAXIMUM** WATER CLOSETS: 1.28 GALLONS/FLUSH SHOWERHEADS: 1.8 GPM @ 80 PSI KITCHEN FAUCETS: 1.8 GPM @ 60 PSI NONRESIDENTIAL LAVATORY FAUCETS: 0.5 GPM @ 60 PSI WASH FOUNTAINS: 1.8 GPM/20" RIM SPACE @ 60 PSI METERING FAUCETS: 0.20 GALLONS/CYCLE METERING FAUCETS FOR WASH FOUNTAIN: 0.20 GALLONS/CYCLE PRE-RINSE SPRAY VALVE (WITH AN INTEGRAL AUTOMATIC SHUT OFF): 1.6 GPM @ 60 PSI URINALS: 0.125 GALLONS/FLUSH FOR WALL-MOUNTED TYPE AND 0.5 GALLONS/FLUSH FOR FLOOR-MOUNTED OR OTHER TYPE COMMERCIAL FOOD WASTE DISPOSER: 1 GPM NO LOAD OR 10 MINUTES AUTO OFF, 8 GPM MAX.	A-1.2 - A-1.3
WATER EFFICIENCY AND CONSERVATION (INDOOR WATER USE)			
5.303.4	Commercial Kitchen Equipment	5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.	A-1.2 - A-1.3
5.303.5	Areas of Additions or Alteration	For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alterations to the building.	A-1.2 - A-1.3
5.303.6	Standards for Plumbing Fixtures and Fittings	Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code and in Chapter 6 of this code.	A-1.2 - A-1.3
WATER EFFICIENCY AND CONSERVATION (Outdoor Water Use)			
5.304.1	Outdoor Potable Water Use in Landscape Areas	Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO).	A-1.2 - A-1.3
MATERIAL CONSERVATION & RESOURCE EFFICIENCY (WEATHER RESISTANCE AND MOISTURE MANAGEMENT)			
5.407.1	Weather Protection	Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code, Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.	A-3.1
5.407.2	Moisture Control	Employ moisture control measures by the following methods: 5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent irrigation spray on structures. 5.407.2.2 Entries and openings. Design exterior entries and openings to prevent water intrusion into buildings as follows: 5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: 1. An installed awning at least 4 feet in depth. 2. The door is protected by a roof overhang at least 4 feet in depth. 3. The door is recessed at least 4 feet. 4. Other methods which provide equivalent protection. 5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.	A-3.1
MATERIAL CONSERVATION & RESOURCE EFFICIENCY (CONSTRUCTION WASTE REDUCTION, DISPOSAL & RECYCLING)			
5.408.1	Construction Waste Management	Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.	G0.01
5.408.1.1	Construction Waste Management Plan	Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that complies with Items 1 through 4 of this section.	G0.01
5.408.1.2	Waste Management Company	Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section. Exceptions to Sections 5.408.1.1 and 5.408.1.2: 1. Excavated soil and land-clearing debris 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist. 3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets	G0.01
5.408.1.3	Waste Stream Reduction Alternative	The combined weight of new construction disposal that does not exceed 2 lbs/sqft of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.	G0.01
5.408.1.4	Documentation	Provide documentation of the waste management plan that meets the requirements listed in Sections 5.408.1.1 through 5.408.1.3, and the plan is accessible to the enforcement authority.	G0.01
5.408.2	Universal Waste	Additions and alterations to a building or tenant space shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents. Note: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/upload/OEARA_REGS_UWR_FinalText.pdf	N/A
5.408.3	Excavated Soil and Land Clearing Debris	100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. Exception: Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.	G0.01

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REN. 10-31-2025
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CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 1

REVISIONS
1 --
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3 --
4 --

DATE: 7 / 24 / 2025
SCALE: AS NOTED
JOB NO: 24101
DWN BY: CCW
CHK BY: EGP

SHEET NO.
G2.01

2022 CALGREEN NONRESIDENTIAL MANDATORY MEASURES CHECKLIST (EFFECTIVE JAN 1, 2023)

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
MATERIAL CONSERVATION & RESOURCE EFFICIENCY (BUILDING MAINTENANCE AND OPERATION)			
5.410.1	Recycling by Occupants	Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling. 5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site. Exception: addition within a tenant space resulting in less than a 30% increase in the tenant space floor area.	G0.01
5.410.2	Commissioning	New buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, Part 6, process systems and renewable energy systems shall be included in the design and construction processes of the building project. Commissioning requirements shall include items listed in Section 5.410.2. Exceptions: 1. Unconditioned warehouses of any size 2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses 3. Tenant improvements less than 10,000 sqft as described in Section 303.1.1. 4. Open parking garages of any size, or open parking garage areas of any size, within a structure. 5.410.2.1 Owner's Project Requirements (OPR). [N] Documented before the design phase of the project begins the OPR shall include items listed in Section 5.410.2.1. 5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project to cover the systems listed in Section 5.410.2.2. 5.410.2.3 Commissioning Plan. [N] A commissioning plan describing how the project will be commissioned shall include items listed in Section 5.410.2.3. 5.410.2.4 Functional Performance Testing. [N] Functional performance testing shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. 5.410.2.5 Documentation and Training. [N] A Systems manual and systems operations training are required. 5.410.2.5.1 Systems manual. [N] The systems manual shall be delivered to the building owner or representative and facilities operator and shall include the items listed in Section 5.410.2.5.1. 5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and shall include items listed in Section 5.410.2.5.2. 5.410.2.6 Commissioning Report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.	N/A
5.410.4	Testing and Adjusting	Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1. 5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project, the systems listed in Section 5.410.4.2. 5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with applicable standards on each system as determined by the enforcing agency. 5.410.4.3.1 HVAC balancing. Before a new space-conditioning system serving a building or space is operated for normal use, balance in accordance with the procedures defined by national standards listed in Section 5.410.4.3.1 or as approved by the enforcing agency. 5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services. 5.410.4.5 Operation and maintenance manual. Provide the building owner with detailed operating and maintenance instructions and copies of guaranties/warranties for each system prior to final inspection. 5.410.4.5.1 Inspection and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.	N/A
ENVIRONMENTAL QUALITY (FIREPLACES)			
5.503.1	General	Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150.	N/A
5.503.1.1	Woodstoves	Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable.	N/A

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
ENVIRONMENTAL QUALITY (POLLUTANT CONTROL)			
5.504.1.3	Temporary Ventilation	If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if building is occupied during alteration, at the conclusion of construction. Applies to additions or alterations.	N/A
5.504.3	Covering of Duct Openings and Protection of Mechanical Equipment During Construction	At the time of rough installation and during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system	G0.01
5.504.4	Finish Material Pollutant Control	Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.	G0.01
5.504.4.1	Adhesives, Sealants and Caulks	Adhesives and sealants used on the project shall meet the requirements of the following standards. 1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. 2. Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.	G0.01
5.504.4.3	Paints and Coatings	Architectural paints and coatings shall comply with Table 5.504.4.3 unless more stringent local limits apply. 5.504.4.3.1 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances (CCR, Title 17, Section 94520 et seq). 5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency.	G0.01
5.504.4.4	Carpet Systems	All carpet installed in the building interior shall meet the testing and product requirements of one of the standards listed in Section 5.504.4.4. 5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program. 5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.	G0.01
5.504.4.5	Composite Wood Products	Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in Table 5.504.4.5. 5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following. 1. Product certifications and specifications 2. Chain of custody certifications 3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.) 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards. 5. Other methods acceptable to the enforcing agency.	G0.01
5.504.4.6	Resilient Flooring Systems	For 80% of floor area receiving resilient flooring, install resilient flooring which meets one of the following: 1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; 2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for Testing and Evaluation Chambers, Version 1.1, February 2010; 3. Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 7.0 and 7.1 (formerly Eq 2.2) dated July 2012 and listed in the CHPS High Performance product Database; or 4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & School Program). 5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.	G0.01
5.504.5.3	Filters	In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a MERV of 13. MERV 13 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. Exceptions: Existing mechanical equipment. 5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.	G0.01
5.504.7	Environmental Tobacco Smoke (ETS) Control	Prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows where outdoor areas are provided for smoking and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University or campus of the University of California, whichever are more stringent.	G0.01
ENVIRONMENTAL QUALITY (INDOOR MOISTURE CONTROL)			
5.505.1	Indoor Moisture Control	Buildings shall meet or exceed the provisions of 2019 California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls).	G0.01
ENVIRONMENTAL QUALITY (INDOOR AIR QUALITY)			
5.506.1	Outside Air Delivery	For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 of the California Energy Code and Chapter 4 of CCR, Title 8 or the applicable local code, whichever is more stringent.	G0.01
5.506.2	Carbon Dioxide	For buildings or additions equipped with demand control ventilation, CO2 sensors and ventilation controls shall be specified (CO2) Monitoring and installed in accordance with the requirements of the California Energy Code, Section 120.1(c)(4).	G0.01
ENVIRONMENTAL QUALITY (ENVIRONMENTAL COMFORT)			
5.507.4	Acoustical Control 5.507.4.2.	Employ building assemblies and components with STC values determined in accordance with ASTM E90 and ASTM E413 or OITC determined in accordance with ASTM E1332, using either the prescriptive or performance method in Section 5.507.4.1 or	G0.01
5.507.4.1	Prescriptive Method	Wall and floor-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations: 1. Within the 65 CNEL noise contour of an airport. 2. Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan. Also applies to addition envelope or altered envelope. 5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB Leq-1Hr during any hour of operation shall have building, addition, or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30). Also applies to addition or alteration exterior wall.	G0.01
5.507.4.2	Performance Method	For buildings located as defined in Sections A5.507.4.1 or A5.507.4.1.1, wall and roof-ceiling assemblies making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1Hr) of 50 dBA in occupied areas during any hour of operation. Also applies to addition envelope or altered envelope. 5.507.4.2.1 Site features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior. Also applies to addition envelope or altered envelope. 5.507.4.2.2 Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record. 5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.	G0.01

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CITY OF LA VERNE FIRE STATION 1
2061 3RD STREET
LA VERNE, CA 91750

CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 2

REVISIONS

1	--
2	--
3	--
4	--

DATE:	7 / 24 / 2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

G2.02

2022 CALGREEN NONRESIDENTIAL MANDATORY MEASURES CHECKLIST (EFFECTIVE JAN 1, 2023)

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
ENVIRONMENTAL QUALITY (OUTDOOR AIR QUALITY)			
5.508.1	Ozone Depletion and Greenhouse Gas Reductions	Installations of HVAC, refrigeration, and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2. 5.508.1.1 Chlorofluorocarbons (CFCs). Install HVAC, refrigeration & fire suppression equipment that do not contain CFCs. 5.508.1.2 Halons. Install HVAC, refrigeration & fire suppression equipment that do not contain Halons.	G0.01
5.508.2	Supermarket Refrigerant Leak Reduction	New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 sqft or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facility and the replacement of existing refrigeration systems in existing facilities. Exception: refrigeration systems containing low-global-warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO2), and potentially other refrigerants.	N/A
5.508.2.1	Refrigerant Piping	Piping compliant with the California Mechanical code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than ¼", flared tubing connection and short radius elbows shall not be used in refrigerant systems except as noted below. 5.508.2.1.1 Treaded pipe. Threaded connections are permitted at the compressor rack. 5.508.2.1.2 Copper pipe. Copper tubing with an OD less than ¼" may be used in systems with a refrigerant charge of 5 pounds or less. 5.508.2.1.2.1 Anchorage. ¼" OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils. 5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil. Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations. 5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.	G0.01
5.508.2.2	Valves	Valves and fittings shall comply with the California Mechanical Code and as follows: 5.508.2.2.1 Pressure relief valves. For vessel containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet the pressure relief valve. 5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve. 5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use. 5.508.2.2.2.1 Valves caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic. 5.508.2.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place. 5.508.2.2.2.2.1 Chain tethers. Chain tethers to fit over the stem are required for valves designed to have seal caps. Exceptions: Valves with seal caps that are not removed from the valve during stem operation.	G0.01
5.508.2.3	Refrigerated Service Cases	Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances. 5.508.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.	G0.01
5.508.2.4	Refrigerant	Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicates the level of Receivers refrigerant in the receiver.	G0.01
5.508.2.5	Pressure Testing	The systems shall be pressure tested during installation prior to evacuation & charging. 5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum. 5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge. 5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.	G0.01
5.508.2.6	Evacuation	The system shall be evacuated after pressure testing prior to charging. 5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold down for 30 minutes. 5.508.2.6.2 Second vacuum. Pull a system vacuum to a minimum of 500 microns and hold for 30 minutes. 5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.	G0.01

NOTES:

- [N]: INDICATES CODE SECTION APPLIES ONLY TO NEWLY CONSTRUCTED BUILDINGS.
- THIS CHECK LIST IS INTENDED ONLY AS AN AID TO THE USER AND MAY NOT CONTAIN COMPLETE CODE LANGUAGE. REFER TO 2019 CALGREEN CHAPTER 5 FOR COMPLETE CODE LANGUAGE.

FOOTNOTES:

1. INDICATE N/A IF NOT APPLICABLE.

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CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 3

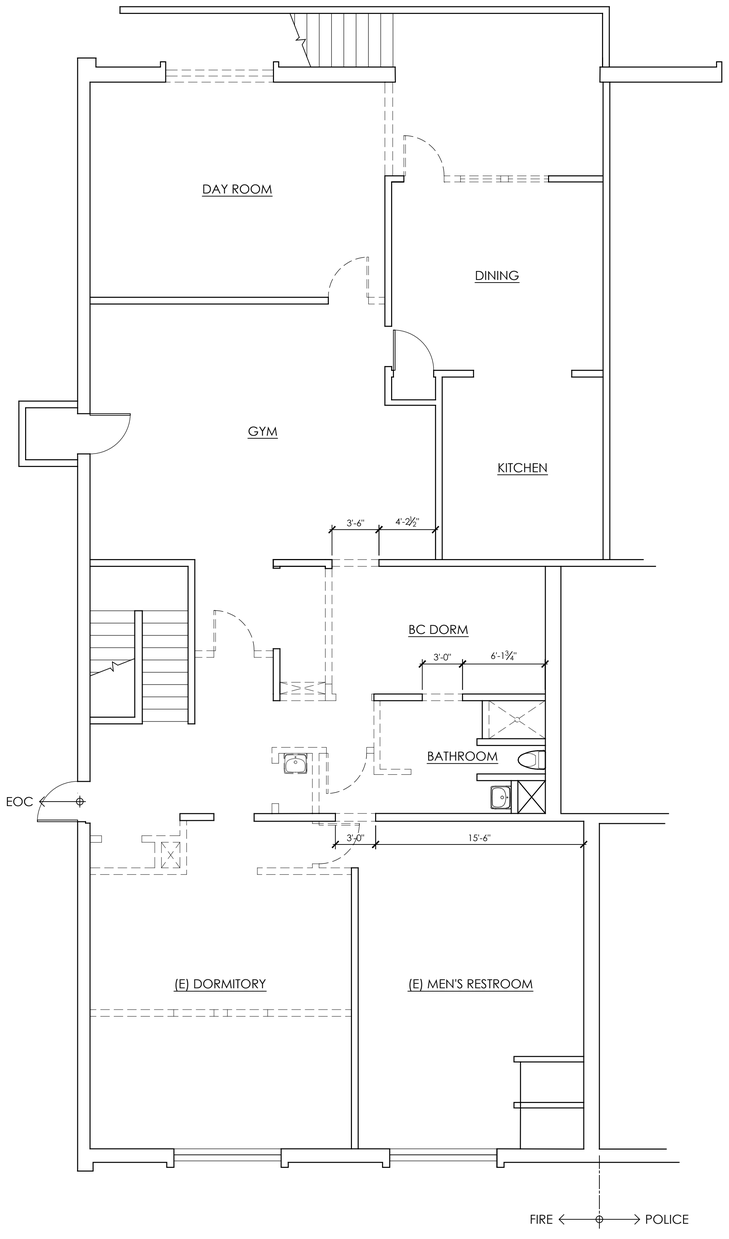
REVISIONS

1	--
2	--
3	--
4	--

DATE:	7 / 24 / 2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

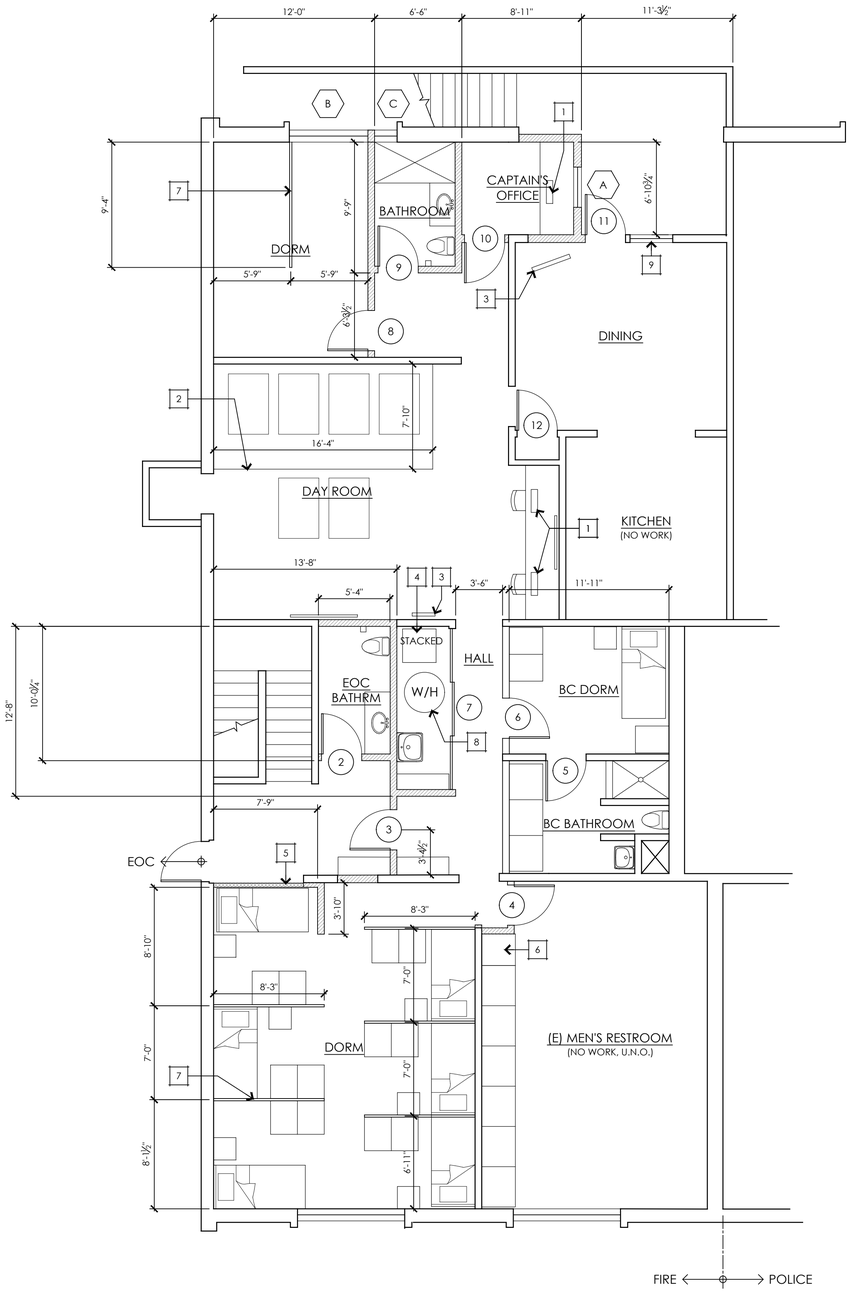
SHEET NO.

G2.03



2 EXISTING DORMITORY FLOOR PLAN & DEMOLITION PLAN
3/16" = 1'-0"

0 2 4 8 (FT)



1 REMODEL DORMITORY FLOOR PLAN
3/16" = 1'-0"

0 2 4 8 (FT)

DEMOLITION PLAN WALL LEGEND

- EXISTING WALL TO REMAIN
- EXISTING TO BE REMOVED

FLOOR PLAN KEYNOTES

1. COMPUTER WORK STATION (CONNECT TO SCU)
2. 7" HIGH RAISED SEATING PLATFORM
3. CALL MONITOR
4. STACKED LAUNDRY
5. 2X3 STUD WALL
6. MODIFY (E) CABINET TO ALLOW FOR (N) WALL
7. 2" THICK X 7'-0" HIGH PARTITION, TYP.
8. (E) WATER HEATER
9. MODIFY (E) STOREFRONT TO ACCOMMODATE NEW WALL FOR CAPTAIN'S OFFICE
10. R-21 INSULATION FOR NEW WALLS

FLOOR PLAN WALL LEGEND

- EXISTING WALL TO REMAIN
- NEW CONSTRUCTION

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REMODEL FLOOR PLAN AND DEMOLITION FLOOR PLAN

REVISIONS

1	--
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DATE:	7 / 24 / 2025
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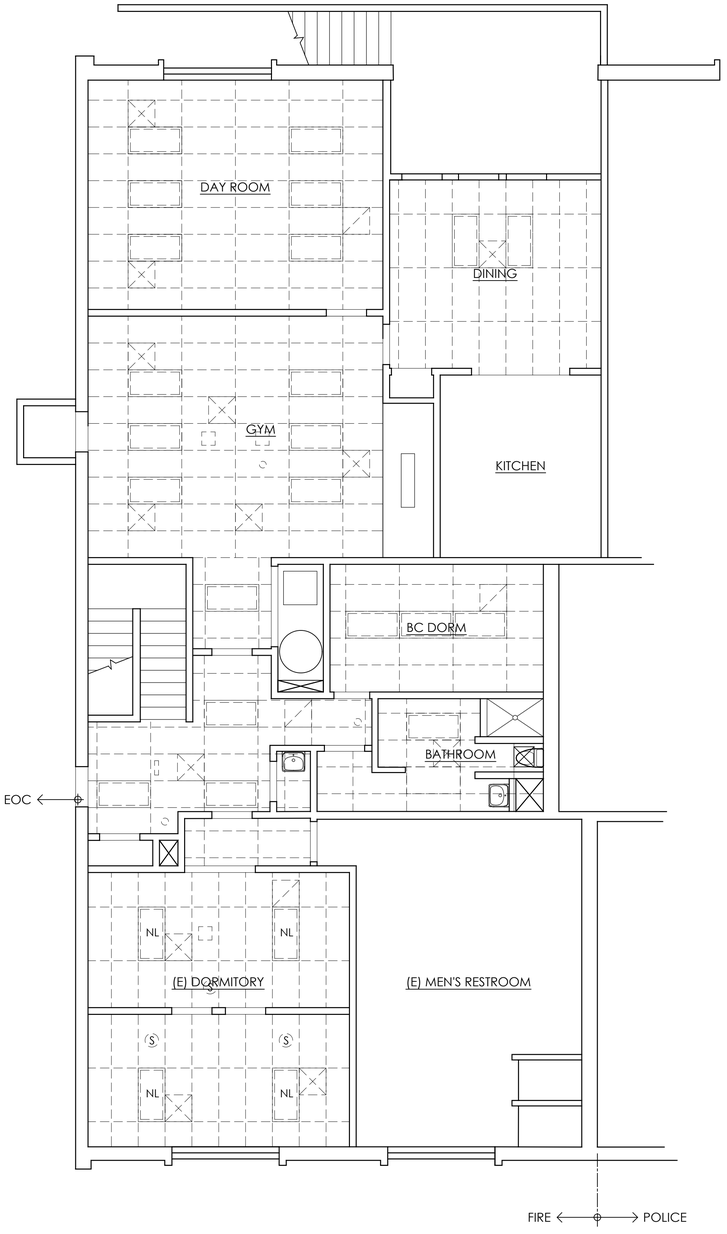
SHEET NO.

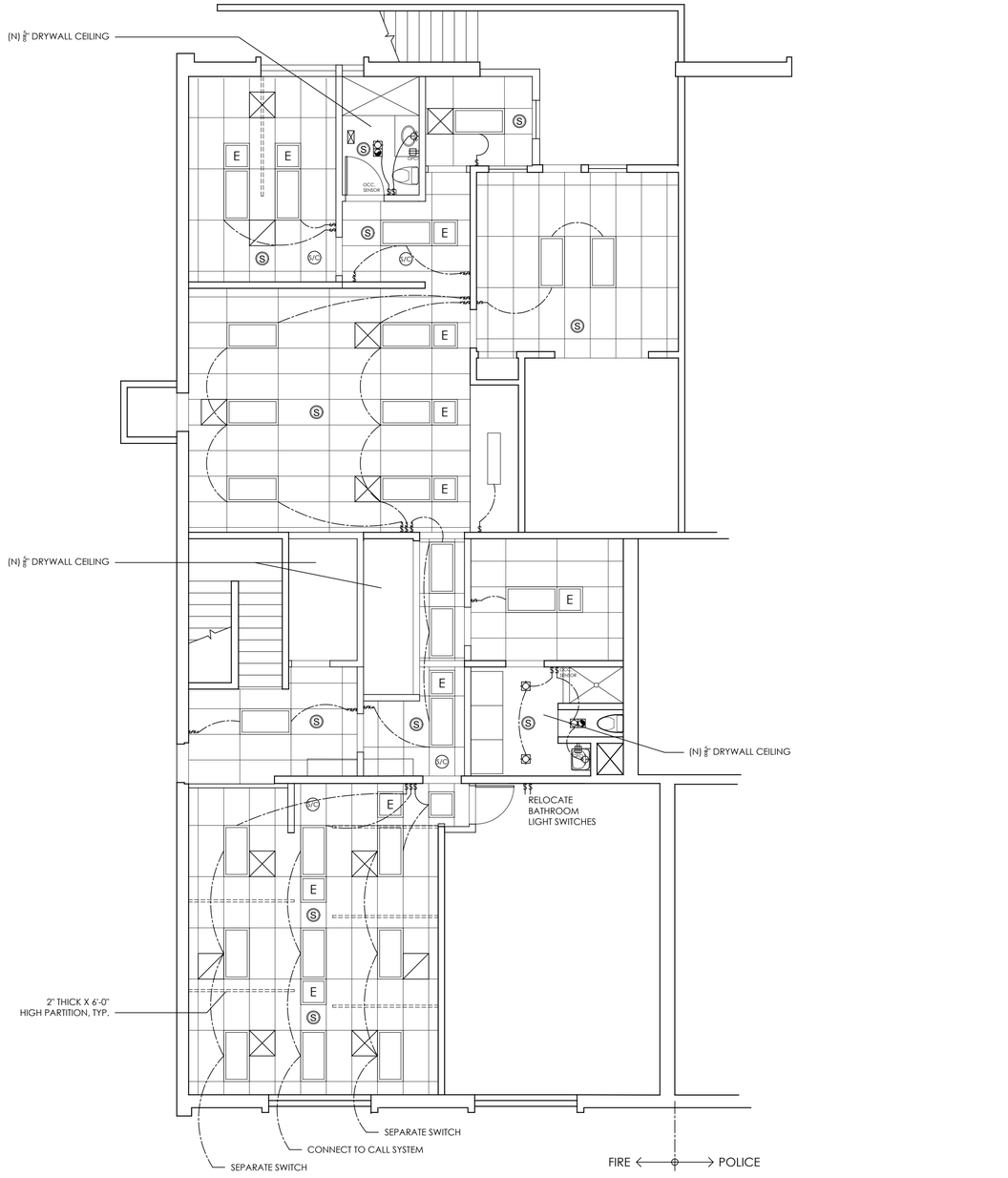
A1.01



2 DEMO DORMITORY REFLECTED CEILING PLAN

3/16" = 1'-0"

0 2 4 8 (FT)



1 REMODEL DORMITORY REFLECTED CEILING PLAN

3/16" = 1'-0"

0 2 4 8 (FT)

DEMOLITION RCP WALL LEGEND

- EXISTING WALL TO REMAIN
- EXISTING TO BE REMOVED

REFLECTED CEILING PLAN LEGEND

	24 x 48 LIGHT FIXTURE, SUSPENDED CEILING, LED		HARDWIRED LISTED SMOKE ALARMS AND CARBON MONOXIDE DETECTORS WITH BATTERY BACKUP COMMPLYING WITH UL 217	E	RED EMERGENCY CALL NIGHT LIGHT CONNECT TO ALARM RELAY & SWITCH OVERRIDE
	24 x 24 LIGHT FIXTURE, SUSPENDED CEILING, LED	GFI	110 VOLT GROUND FAULT INTERRUPT DUPLEX RECEPTACLE @ 24" A.F.F. U.N.O.	S	70V SPEAKERS W/ VOLUME CONTROL
	CEILING LIGHT FIXTURE, RECESSED, LED	$	SWITCH		
	CEILING EXHAUST FAN, LED LIGHT, RECESSED	$3	3-POLE SWITCH		

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REFLECTED CEILING PLAN AND DEMO REFLECTED CEILING PLAN

REVISIONS

1	--
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3	--
4	--

DATE:	**7 / 24 / 2025**
SCALE:	**AS NOTED**
JOB NO:	**24101**
DWN BY:	**CCW**
CHK BY:	**EGP**

SHEET NO.

A1.02

ROOM FINISH SCHEDULE

ROOM#	ROOM NAME	FLR FIN	BASE	NORTH		EAST		SOUTH		WEST		CEILING		CLG HT	REMARKS
				MATL	FIN	MATL	FIN	MATL	FIN	MATL	FIN	MATL	FIN		
100	LOBBY	A	B	C	G	C	G	C	G	C	G		D	10'-0"	
101	HALLWAY	A	B	C	G	C	G	C	G	C	G		D	9'-0"	
102	EOC BATH ROOM	A	B	C	E	C	E	C	E	C	E	C	E	10'-0"	
103	DORMITORY 1	A	B	C	E	C	E	C	E	C	E		D	10'-0"	
104	MEN'S BATHROOM	A	B	C	E	C	E	C	E	C	E	C	E	9'-0"	
105	BC DORM	A	B	C	E	C	E	C	E	C	E		D	9'-0"	
106	BC BATHROOM	A1	B	C	E	C	E	C	E	C	E	C	E	8'-0"	
107	DAY ROOM/ OPEN OFFICE	A1	B	C	E	C	E	C	E	C	E		D	9'-0"	
108	HALL 2	A1	B	C	E	C	E	C	E	C	E		D	8'-0"	
109	DORMITORY 2	A	B	C	E	C	E	C	E	C	E		D	9'-0"	
110	DORMITORY 2 BATHROOM	A	B	C	F	C	F	C	F	C	F	C	E	9'-0"	
111	CAPTAINS OFFICE	A	B	C	F	C	F	C	F	C	F		D	9'-0"	
112	DINING ROOM	A	B	C	F	C	F	C	F	C	F		D	9'-0"	
113	KITCHEN (NO WORK)	A	B	C	E	C	E	C	E	C	E	C	E	9'-0"	

FLOORING

A. COMMERCIAL GRADE VINYL PLANK FLOORING
A1. 12" x 24" CERAMIC TILE

BASE

B. 4" RUBBER BASE

WALL/ CEILING MATERIAL

C. 5/8" TYPE "X" GYPSUM BOARD
PROVIDE $\frac{5}{8}$" MOISTURE RESISTANT GYPSUM BOARD ON RESTROOM WALLS AND BEHIND SINKS.

WALL/ CEILING FINISH

D. SUSPENDED CEILING @ 9'-0" A.F.F.
E. 3 COATS SEMI-GLOSS LATEX PAINT (LOW V.O.C.)
F. 3 COATS FLAT LATEX PAINT (LOW V.O.C.)
G. 3 COATS SATIN LATEX PAINT (LOW V.O.C.)

REMARKS

NOTES

a. SEE GENERAL NOTES.
b. SEE REFLECTED CEILING PLAN AND INTERIOR ELEVATIONS FOR CEILING FINISHES AND HEIGHTS.
c. SEE PLANS FOR ALL INFORMATION NOT NOTED.
d. SCHEDULES ARE INTENDED AS GUIDES. VERIFY ALL FINISHES WITH OWNER PRIOR TO INSTALLATION.
e. CONTRACTOR TO VERIFY CONFIGURATIONS, OPERATIONS, DIMENSIONS, FINISHES, ETC. IF DISCREPANCIES OCCUR, CONTACT ARCHITECT FOR CLARIFICATION. INSTALLATION OF FINISHES TO BE PER MANUFACTURER'S INSTRUCTIONS.
f. COORDINATE DIMENSIONS WITH VARYING FINISHES.

ROOM FINISH SCHEDULE NOTES

a. ALL INTERIOR FINISHES SHALL HAVE CLASS A FIRE RATING.

b. ANY DISCREPANCIES, OMISSIONS, AMBIGUITIES, OR CONFLICTS ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER BEFORE PROCEEDING WITH ANY WORK IN QUESTION.

c. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES, OMISSIONS, AMBIGUITIES, OR CONFLICTS ON THE DOCUMENTS, THEY SHOULD BRING THE ITEMS TO THE ATTENTION OF THE ARCHITECT BEFORE ORDERING MATERIALS AND/OR PROCEEDING WITH ANY WORK IN QUESTION.

d. PAINT FOR GYPSUM BOARD PARTITIONS SHALL BE SATIN LATEX ENAMEL UNLESS NOTED OTHERWISE. PAINT FOR ALL ABUSE-RESISTANT GYPSUM BOARD PARTITIONS SHALL BE SATIN FINISH ALKYD, UNLESS NOTED OTHERWISE.

e. PAINTED METAL / WOOD DOORS AND DOOR FRAMES SHALL BE SEMI-GLOSS OIL BASE ENAMEL UNLESS NOTED OTHERWISE.

f. PAINTED SURFACES SHALL RECEIVE ONE PRIME COAT AND TWO FINISH COATS (MINIMUM) OR AS REQUIRED FOR UNIFORM COVERAGE.

g. ALL FLOOR FINISH CHANGES SHALL OCCUR UNDER CENTERLINE OF DOOR IN CLOSED POSITION OR AT THE CENTERLINE OF AN OPENING WHERE NO DOOR OCCURS, UNLESS NOTED OTHERWISE.

h. CONTRACTOR SHALL FILL VOIDS AT ANY EXPOSED COLUMNS IN PREPARATION FOR FINISH MATERIALS UNLESS NOTED OTHERWISE.

i. ALL FINISHES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR THE SPECIFIC SUBSTRATE.

j. RESILIENT BASE MATERIAL SHALL BE INSTALLED FLUSH ON FINISHED FLOOR SURFACE UNLESS NOTED OTHERWISE.

k. ALL PORCELAIN TILE GROUT JOINTS SHALL BE 1/8"; AND ALL PORCELAIN TILE SHALL BE CENTERED WITHIN A SPACE UNLESS NOTED OTHERWISE.

l. NO WALL FINISH SHALL TERMINATE ON AN OUTSIDE CORNER, UNLESS NOTED OTHERWISE.

m. PAINTED CEILINGS SHALL RECEIVE A SEMI GLOSS LATEX FINISH, UNLESS NOTED OTHERWISE.

n. GROUT LINES OF SAME SIZE FLOOR AND WALL TILES ARE TO ALIGN.

o. WALLS SPECIFIED TO BE PAINTED WITHIN CATERING, RESTROOMS, JANITORS, OR ANY OTHER WET AREAS TO HAVE EPOXY/ HIGH PERFORMANCE COATING FINISH.

DOOR SCHEDULE

DOOR#	DOOR TYPE	OPENING		DOOR PANEL				DOOR FRAME		DETAILS			FIRE RATING	U-FACTOR	SHGC	VT	REMARKS
		WIDTH	HEIGHT	THCKNSS	CORE	MATERIAL	FINISH	MATERIAL	FINISH	HEAD	JAMB	THRESHOLD					
1	RELOCATE (E) DORM ENTRY DOOR			-	SC	WD	-	HM	-	-	-	ALUM	--	--	--	--	--
2	TYPE I	3'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
3	TYPE I	3'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
4	RELOCATE (E) STOREFRONT DOOR																
5	TYPE I	3'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
6	TYPE I	3'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
7	BYPASS (3 PANE)	12'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
8	TYPE I	3'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
9	TYPE I	3'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
10	TYPE I	3'-0"	6'-8"	1 $\frac{3}{4}$"	SC	WD	-	HM	-	-	-	-	--	--	--	--	--
11	RELOCATE (E) STOREFRONT DOOR																
12	EXISTING DOOR TO REMAIN																

ABBREVIATIONS

CORE
SC = SOLID CORE
HM = HOLLOW METAL
STL= STEEL
GL = GLASS (T = TEMPERED)
INS = INSULATED CORE

DOOR PANEL/ FRAME MATERIAL
GL = GLASS (T = TEMPERED)
AL = ALUMINUM
WD = WOOD
HM = HOLLOW METAL
STL= STEEL

DOOR PANEL/ FRAME FINISH
PT = PAINT
WV = WOOD VENEER PER SPECS
ST =STAIN

REMARKS
PH = PANIC HARDWARE
HO = HOLD OPEN

DOOR SCHEDULE NOTES

A. ALL REQUIRED EXIT DOORS SHALL BE OPERABLE FROM INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.

B. ALL REQUIRED EXIT DOORS SHALL BE SIZED NOT LESS THAN 3'-0" WIDE AND NOT LESS THAN 6'-8" HIGH, CAPABLE OF OPENING 90 DEGREES AND MOUNTED SO THAT THE CLEAR WIDTH OF THE EXIT WAY IS A MINIMUM 32 INCHES, U.N.O.

C. CLOSER EFFORT TO BE 5 LBS AT INTERIOR & EXTERIOR DOORS, GATES, AND INTERIOR DOORS PER 11B-404.2.9 AND SHALL HAVE HINGES ADJUSTED SO THAT FROM THE OPEN POSITION OF 90°, THE DOOR OR GATE SHALL MOVE TO WITHIN 12° OF THE LATCH IN 5 SECONDS MINIMUM PER 11B-404.2.8.2. WHERE FIRE DOORS ARE REQUIRED, THE AUTHORITY HAVING JURISDICTION, MAY INCREASE THE MAXIMUM EFFORT TO OPERATE FIRE DOORS TO ACHIEVE POSITIVE LATCHING, BUT NOT TO EXCEED 15 LBS MAX.

D. LATCHING AND LOCKING DOORS THAT ARE HAND-ACTIVATED AND WHICH ARE IN PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVERTYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATED BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE.

E. PROVIDE WALL MOUNTED OR FLOOR MOUNTED DOOR STOPS FOR ALL DOORS.

F. INTERIOR AND EXTERIOR THRESHOLDS SHALL BE 1/2" MAXIMUM ABOVE THE FLOOR LEVEL. EXPOSED EDGE SHALL BE SLOPED OR BEVELED TO MAXIMUM 1:2 SLOPE WITH MAXIMUM 1/4" CHANGE IN VERTICAL ELEVATION.

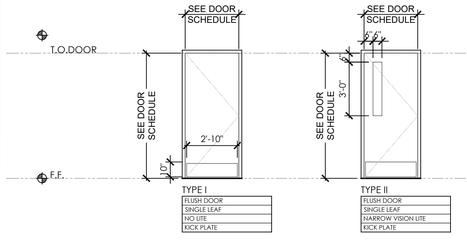
G. THE BOTTOM 10" OF ALL DOORS AND GATES, EXCEPT AUTOMATIC AND SLIDING, SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST.

H. DOORS IN CORRIDORS SHALL COMPLY WITH C.B.C. SECTION 716.5.3.

I. SAFETY GLAZING SHALL COMPLY WITH CBC SECTION 2406.

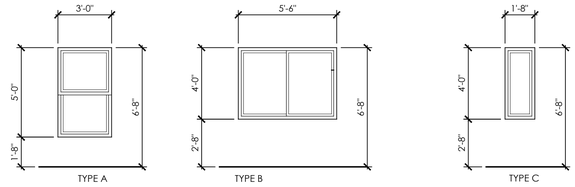
J. DOOR SIGNAGE FOR ACCESSIBLE RESTROOMS: PROVIDE REQUIRED SIGNS AND SYMBOLS AT APPROPRIATE TOILET DOORS INDICATING ACCESSIBLE TOILET FACILITY, RE: 08/A5.00 FOR ADDITIONAL INFORMATION.

K. PROVIDE SECURITY GLAZING AT ALL DOOR VISION PANEL LITES.



WINDOW SCHEDULE

WINDOW#	WINDOW TYPE	SIZE		SILL HT.	Q'TY	DETAILS			U-FACTOR	SHGC	VT	REMARKS
		WIDTH	HEIGHT			HEAD	JAMB	SILL				
A	SINGLE HUNG	SEE TYPE A BELOW			1				0.36	0.25	0.5	--
B	SLIDER	SEE TYPE B BELOW			1	--		--	0.36	0.25	0.5	--
C	FIXED	SEE TYPE C BELOW			1				0.36	0.25	0.5	--



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LA VERNE, CA 91750

FINISH SCHEDULE AND DOOR SCHEDULE

REVISIONS

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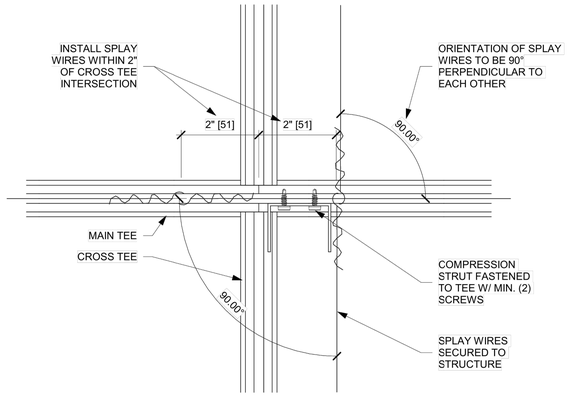
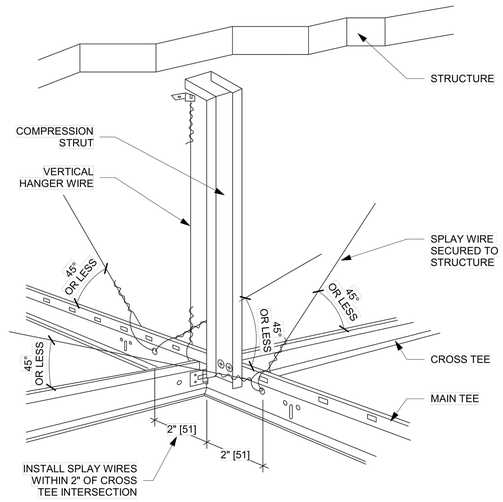
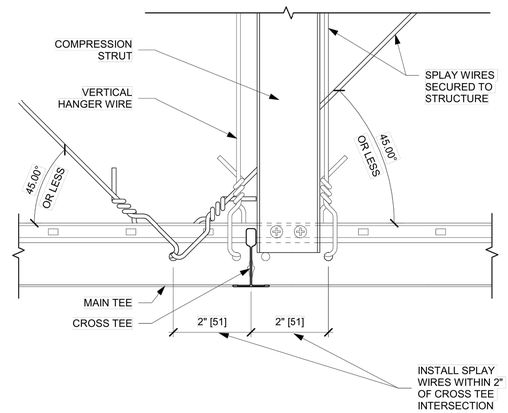
A1.03



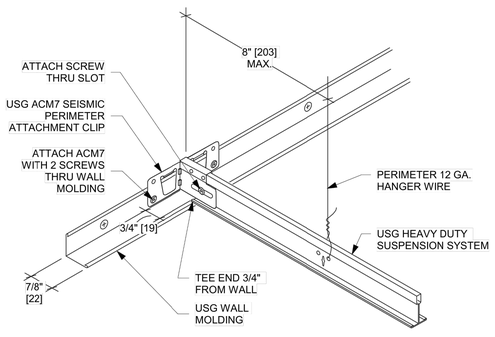
5 SUSPENDED CEILING: LATERAL BRACING PLAN
N.T.S.



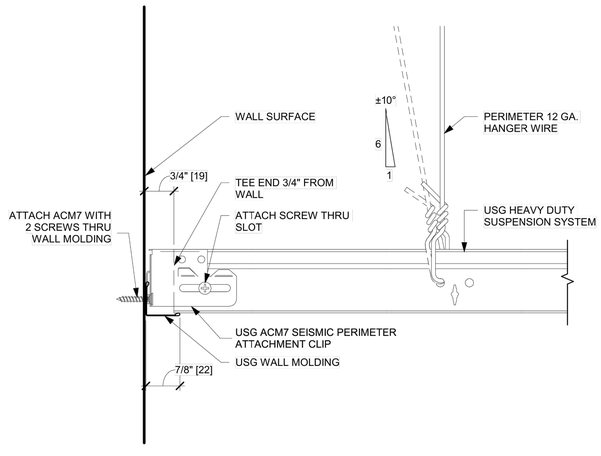
3 SUSPENDED CEILING: LATERAL BRACING ISOMETRIC
N.T.S.



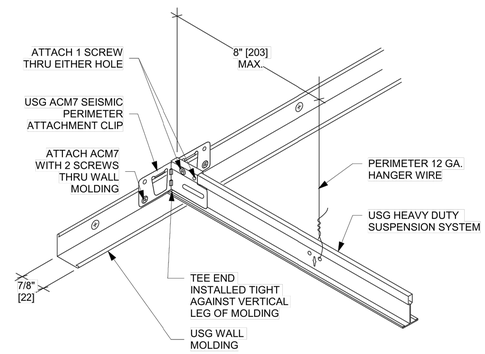
1 SUSPENDED CEILING: LATERAL BRACING ELEVATION
N.T.S.



6 SUSPENDED CEILING: WALL MLDG FLOATING ISO
N.T.S.



4 SUSPENDED CEILING: WALL MLDG FLOATING-FIXED ELEVATION
N.T.S.



2 SUSPENDED CEILING: WALL MLDG-FIXED ISOMETRIC
N.T.S.

MINIMUM INSTALLATION REQUIREMENTS FOR SUSPENDED CEILINGS AND LIGHTING SYSTEMS

1. VERTICAL SUPPORT

   HANGER WIRES SUPPORTING A MAXIMUM TRIBUTARY CEILING AREA OF 16 SQUARE FEET SHALL BE A MINIMUM OF 12 GAUGE IN DIAMETER. THE SIZE OF WIRES SUPPORTING A TRIBUTARY CEILING AREA OF GREATER THAN 16 SQUARE FEET SHALL BE SUBSTANTIATED BY DESIGN CALCULATIONS.

   a. HANGER ATTACHMENT DEVICES USED IN CEILING SYSTEMS NOT EXCEEDING FOUR POUNDS PER SQUARE FOOT SHALL BE CAPABLE OF SUPPORTING A MINIMUM ALLOWABLE LOAD OF 100 POUNDS.
   b. HANGER ATTACHMENT DEVICES USED IN CEILING SYSTEMS EXCEEDING FOUR POUNDS PER SQUARE FOOT SHALL BE CAPABLE OF SUPPORTING THE DESIGN LOAD AND SHALL BE SUBSTANTIATED BY DESIGN CALCULATIONS.
   c. HANGERS SHALL BE PLUMB AND SHALL NOT ATTACH TO OR BEND AROUND INTERFERING DUCT PIPES OR SIMILAR OBSTRUCTIONS. IF HANGERS MUST BE SPLAYED MORE THAN ONE HORIZONTAL TO SIX VERTICAL THE RESULTING HORIZONTAL FORCE SHALL BE OFFSET BY BRACING, COUNTER-SPLAYING OR OTHER ACCEPTABLE MEANS AND SUBSTANTIATED BY DESIGN CALCULATIONS.
   d. PERIMETER HANGERS, THE TERMINAL END OF EACH CROSS RUNNER OR MAIN RUNNER SHALL BE INDEPENDENTLY SUPPORTED AND WITHIN EIGHT INCHES OF A WALL.

2. LATERAL SUPPORT

   LATERAL SUPPORT FOR THE CEILING SYSTEM MAY BE PROVIDED BY FOUR WIRES OF MINIMUM NO. 12 GAUGE SPLAYED IN FOUR DIRECTIONS 90 DEGREES APART AND CONNECTED TO THE MAIN RUNNER WITHIN TWO INCHES OF THE CROSS RUNNER AND TO THE STRUCTURE ABOVE AT AN ANGLE NOT EXCEEDING 45 DEGREES FROM THE PLANE OF THE CEILING. THESE LATERAL SUPPORT POINTS SHALL BE PLACED 12 FEET O.C. IN EACH DIRECTION WITH THE FIRST POINT WITHIN FOUR FEET FROM EACH WALL.

3. ATTACHMENT OF MEMBERS TO THE PERIMETER

   ALLOWANCE SHALL BE MADE FOR LATERAL MOVEMENT OF THE SYSTEM. MAIN RUNNERS AND CROSS RUNNERS MAY BE ATTACHED AT TWO ADJACENT WALLS WITH CLEARANCE BETWEEN THE WALL AND THE RUNNERS MAINTAINED AT THE OTHER TWO WALLS.

4. LIGHTING FIXTURE AND AIR DIFFUSER SUPPORTS

   LIGHTING FIXTURES AND AIR DIFFUSERS SHALL BE SUPPORTED DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
   EXCEPTIONS:

   a. RECESSED LIGHTING FIXTURES NOT OVER 56 POUNDS IN WEIGHT AND SUSPENDED AND INDEPENDENTLY HUNG FIXTURES NOT OVER 20 POUNDS IN WEIGHT MAY BE SUPPORTED AND ATTACHED DIRECTLY TO THE CEILING SYSTEM RUNNERS BY A POSITIVE ATTACHMENT SUCH AS SCREWS OR BOLTS.
   b. AIR DIFFUSERS WHICH WEIGH NOT MORE THAN 20 POUNDS AND WHICH RECEIVE NO TRIBUTARY LOADING FROM DUCT WORK MAY BE POSITIVELY ATTACHED TO AND SUPPORTED BY THE CEILING RUNNERS.

5. PERIMETER MEMBERS

   A MINIMUM WALL ANGLE SIZE OF AT LEAST A TWO INCH (51 MM) HORIZONTAL LEG SHALL BE USED AT PERIMETER WALLS AND INTERIOR FULL HEIGHT PARTITIONS. THE FIRST CEILING TILE SHALL MAINTAIN 3/4-INCH (19 MM) CLEAR FROM THE FINISH WALL SURFACE. AN EQUIVALENT ALTERNATIVE DETAIL THAT WILL PROVIDE SUFFICIENT MOVEMENT DUE TO ANTICIPATED LATERAL BUILDING DISPLACEMENT MAY BE USED IN LIEU OF THE LONG LEG ANGLE SUBJECT TO THE APPROVAL OF THE SUPERINTENDENT OF BUILDING.

   APPLICATION:
   THIS PROVISION SHALL BE REQUIRED ONLY WHEN THE SPAN OF THE PROPOSED SUSPENDED CEILING SYSTEM BETWEEN PERIMETER WALLS EXCEEDS 25 FEET IN BOTH DIRECTIONS. PERIMETER WALLS SHALL BE CONSIDERED AS THOSE EXISTING/PROPOSED INTERIOR PARTITIONS THAT ARE LATERALLY BRACED.

6. BRACING AT DISCONTINUITY
   POSITIVE BRACING TO THE STRUCTURE SHALL BE PROVIDED AT THE CHANGES IN THE CEILING PLANE ELEVATION OR AT DISCONTINUITIES IN THE CEILING GRID SYSTEM.

7. SUPPORT FOR WIRING SYSTEMS
   ELECTRICAL WIRING SYSTEMS, INCLUDING CABLE TRAYS, CONDUITS, JUNCTION BOXES, AND OTHER APPURTENANCES SHALL BE INDEPENDENTLY SUPPORTED AND INDEPENDENTLY BRACED FROM THE STRUCTURE.

8. SPRINKLER HEADS
   ALL SPRINKLER HEADS (DROPS) EXCEPT FLOOR-CEILING OR ROOF-CEILING FIRE-RESISTIVE ASSEMBLIES, SHALL HAVE A 2 INCH (50 MM) OVERSIZE RING, SLEEVE, OR ADAPTOR THROUGH THE CEILING TILE TO ALLOW FOR FREE MOVEMENT OF AT LEAST 1 INCH (25 MM) IN ALL HORIZONTAL DIRECTIONS. ALTERNATIVELY, A SWING JOINT THAT CAN ACCOMMODATE 1 IN. (25 MM) OF CEILING MOVEMENT IN ALL HORIZONTAL DIRECTIONS IS PERMITTED TO BE PROVIDED AT THE TOP OF THE SPRINKLER HEAD EXTENSION.

C. SPECIAL REQUIREMENT FOR MEANS OF EGRESS

1. GENERAL
   CEILING SUSPENSION SYSTEMS SHALL BE CONNECTED AND BRACED DIRECTLY TO THE STRUCTURE AT THE MEANS OF EGRESS SERVING AN OCCUPANT LOAD OF 30 OR MORE AND AT LOBBIES ACCESSORY TO GROUP A OCCUPANCIES. SPACING OF VERTICAL HANGERS SHALL NOT EXCEED 2 FEET (610 MM) ON CENTER ALONG THE ENTIRE LENGTH OF THE MEANS OF EGRESS OR LOBBY.
   APPLICATION:
   THESE PROVISIONS SHALL BE REQUIRED ONLY WHEN THE DISTANCE BETWEEN THE STRUCTURAL DECK AND THE SUSPENDED CEILING EXCEEDS 4 FEET.

2. ASSEMBLY DEVICE
   ALL LAY-IN PANELS SHALL BE SECURED TO THE SUSPENSION SYSTEM WITH TWO HOLD-DOWN CLIPS MINIMUM FOR EACH TILE WITHIN A 4-FOOT (1219 MM) RADIUS OF THE EXIT LIGHTS AND EXIT SIGNS.
   APPLICATION:
   THIS REQUIREMENT SHALL APPLY ONLY IN FIRE-RATED EXIT CORRIDORS AND WITHIN A, E, AND M OCCUPANCIES. FOR PURPOSES OF THIS SECTION, EXIT STROBE LIGHTS SHALL NOT BE CONSIDERED EXIT SIGNS.

3. EMERGENCY SYSTEMS
   INDEPENDENT SUPPORTS AND BRACES SHALL BE PROVIDED FOR LIGHT FIXTURES REQUIRED FOR EXIT ILLUMINATION.

4. SUPPORTS FOR APPENDAGE
   SEPARATE SUPPORT FROM THE STRUCTURE SHALL BE PROVIDED FOR ALL APPENDAGES, SUCH AS LIGHT FIXTURES, AIR DIFFUSERS, EXIT SIGNS AND SIMILAR ELEMENTS.

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2061 3RD STREET
LA VERNE, CA 91750

SUSPENDED CEILING NOTES & DETAILS

REVISIONS

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2	--
3	--
4	--

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JOB NO:	24101
DWN BY:	CCW
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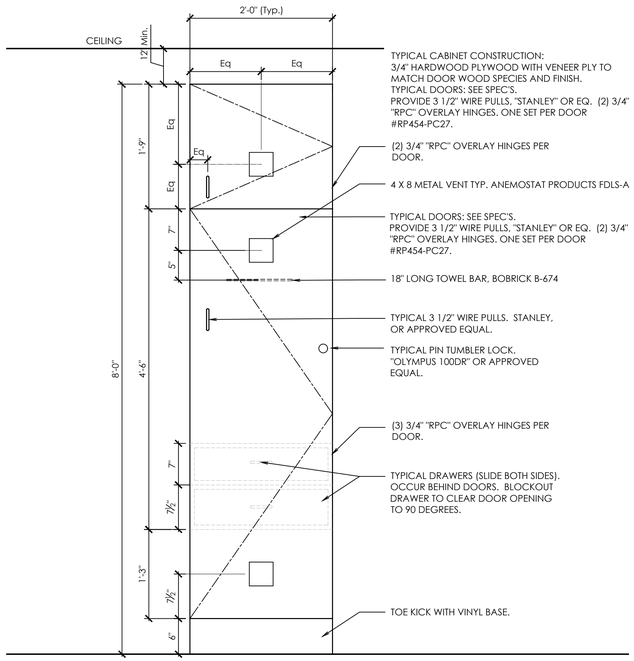
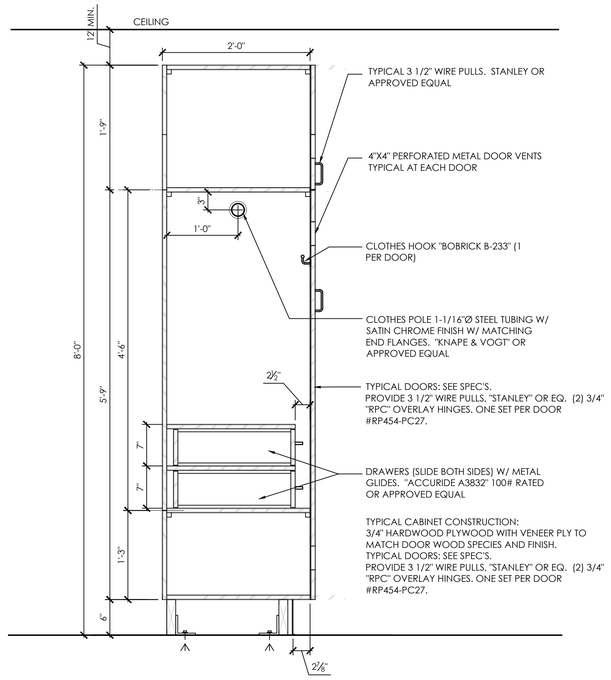
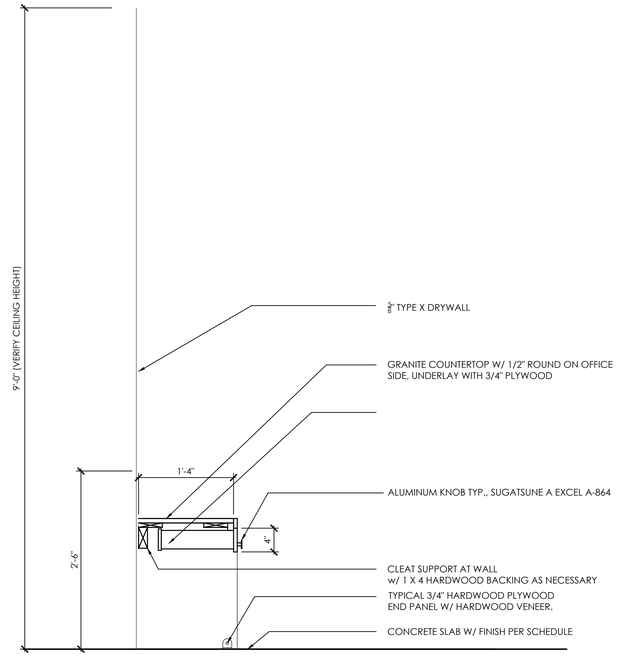


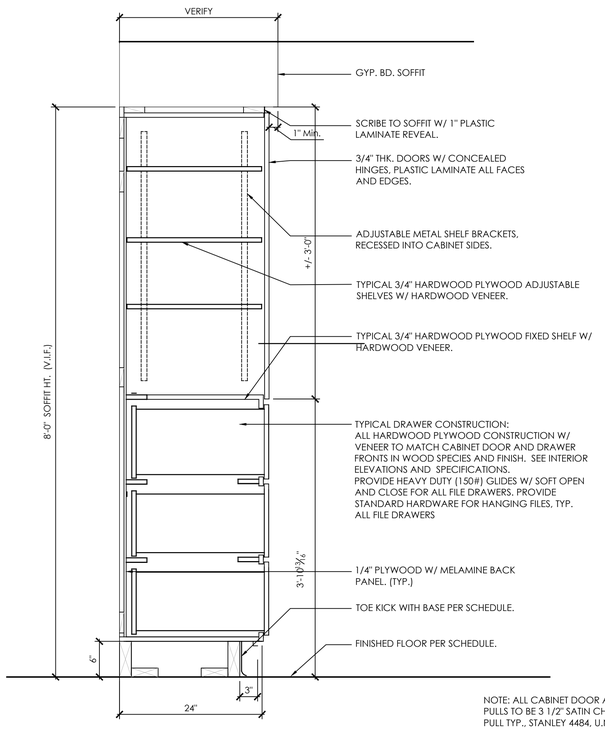
5 TYPICAL DORM LOCKER ELEVATION
1"=1'-0"



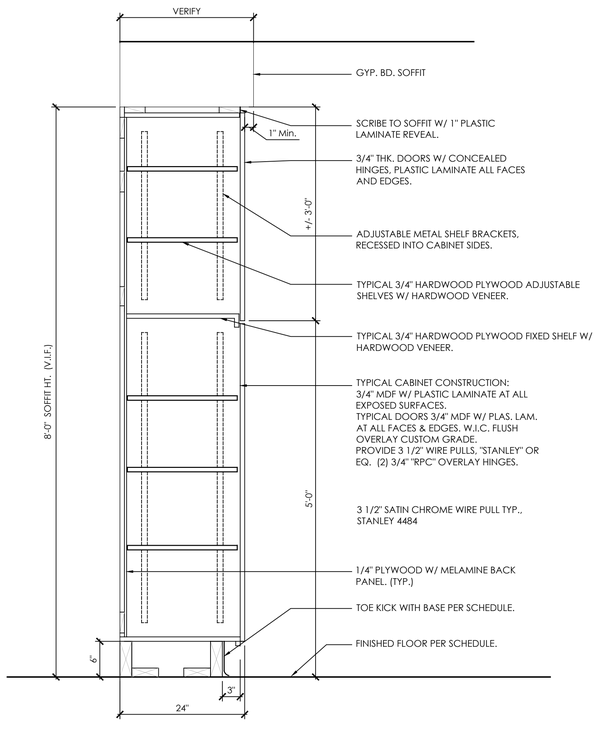
3 TYPICAL DORM LOCKER SECTION
1"=1'-0"



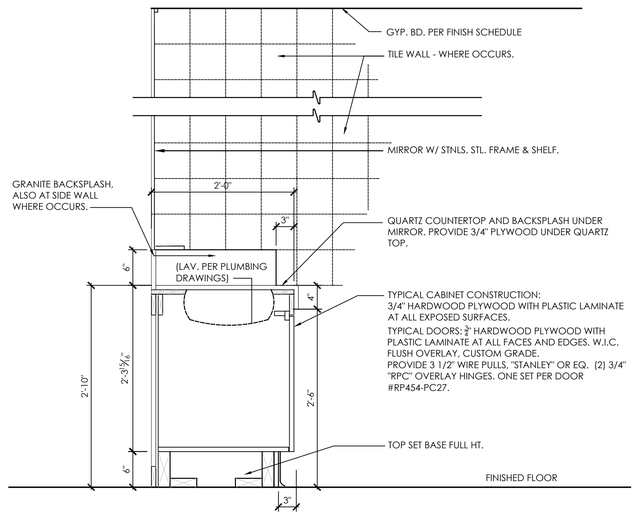
1 TYPICAL BEDSIDE DESK/TABLE
1"=1'-0"



6 TYPICAL STORAGE CABINET SECTION
1"=1'-0"



4 TYPICAL STORAGE CABINET SECTION
1"=1'-0"



2 LAVATORY CABINET
1"=1'-0"

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TYPICAL DETAILS

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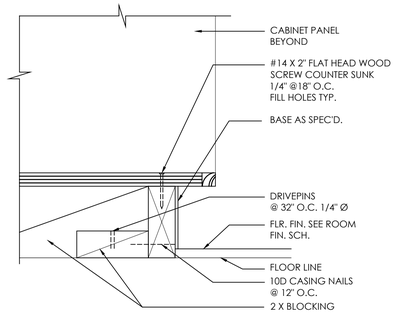
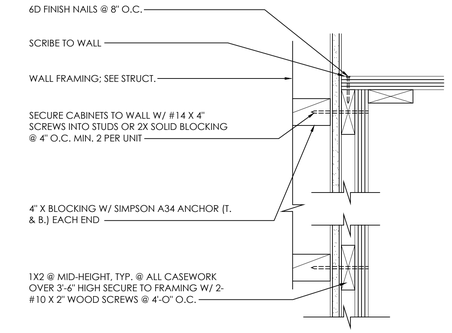


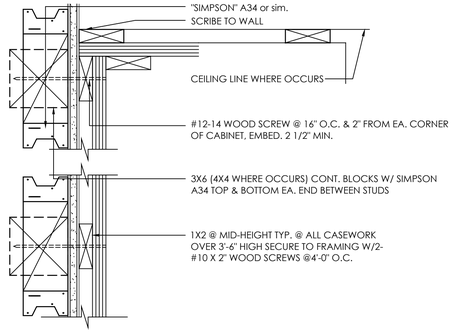
4 TYP. CABINET BASE DETAIL
3"=1'-0"

GENERAL CABINET NOTES

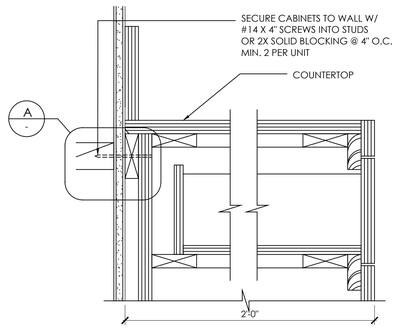
1. ALL CABINET DOOR AND DRAWER PULLS TO BE 3 1/2" SATIN CHROME WIRE PULL, STANLEY 4484, TYP.
2. PROVIDE 2 X D.F. BLOCKING IN THE STUD WALLS AS NEEDED TO SUPPORT CABINETRY.
3. ALL EXPOSED HARDWOOD VENEER PLYWOOD TO MATCH HARDWOOD DOOR AND DRAWERS IN BOTH SPECIES AND FINISH, TYP. ALL CABINETRY.



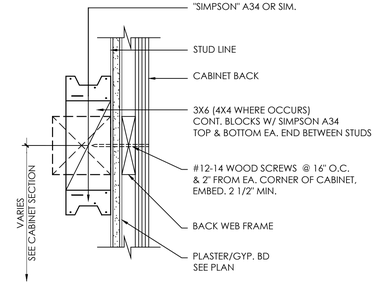
5 TYP. CASEWORK WALL ANCHORAGE
3"=1'-0"



1 TYP. CASEWORK WALL ANCHORAGE
3"=1'-0"



2 TYP. COUNTERTOP ANCHORAGE
3"=1'-0"



3 TYP. CASEWORK WALL ANCHORAGE
3"=1'-0"

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CHK BY:	EGP

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A5.02

ROOF MOUNTED HEAT PUMP UNIT SCHEDULE (R-454B)

SYMBOL	MANUFACTURER & MODEL NO.	AREA SERVED	GROSS COOLING CAPACITY MBH(AT 95° AMB.)			HEATING CAPACITY MBH		C.F.M.	ESP	SUPPLY AIR EAT (° F)		SUPPLY AIR LAT (° F)		ELECTRICAL										OPERATING WEIGHT	MINIMUM OSA CFM	REMARKS
			TOTAL	SENSIBLE	EFF.	OUTPUT	HSPF			DB	WB	DB	WB	VOLTAGE	COMPRESSOR QTY.	COMPRESSOR RLA/ea	COMPRESSOR LRA/ea	OUTDOOR FAN QTY.	OUTDOOR FAN FLA/ea	INDOOR FAN QTY.	INDOOR FAN FLA	MIN. CKT. AMPS	MOCP			
HP 1	CARRIER 50GEQM05A2A5-0A0A (4.0 TON)	SEE FLOOR PLAN	50.11	37.83	SEER 17.00	44.80	7.2	1,600	1.0	80.0	67.0	59.4	56.9	230/3/60	1	15.4	112	1	1.3	1	7.1	28	40	760	150	PROVIDE WALL MOUNTED FULLY PROGRAMMABLE THERMOSTAT. PROVIDE AND INSTALL FACTORY FABRICATED 10" HIGH ROOF CURB, CURB TO MATCH ROOF SLOPE TO PROVIDE LEVEL MOUNTING. INDOOR FAN SHALL BE WIRED FOR CONTINUOUS OPERATION DURING OCCUPANCY. MERV-13 FILTER KIT
HP 1	CARRIER 50GEQM05A2A5-0A0A (4.0 TON)	SEE FLOOR PLAN	50.11	37.83	SEER 17.00	44.80	7.2	1,600	1.0	80.0	67.0	59.4	56.9	230/3/60	1	15.4	112	1	1.3	1	7.1	28	40	760	150	

EXHAUST FAN SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	TYPE	AREA SERVED	DRIVE	C.F.M.	QTY	E.S.P. (IN.)	SOUND SONES	AMPS	ELECTRICAL V/PH/HZ	OPER. WT. (LBS.)	REMARKS
EF 1	"BROAN" XB80	CEILING MOUNTED CENTRIFUGAL VENTILATOR	RESTROOM 1	DIRECT	80	1	0.25	<0.3	1.2	115/1/60	12.2	UNIT SHALL PROVIDED WITH ULTRA GREEN ENERGY SAVING DC MOTOR, ULTRASILENT SOUND TECHNOLOGY, ULTRASMART CONTROL TECHNOLOGY TO PROVIDE ADJUSTABLE CFM, AND ULTRA HUMIDITY SENSING TECHNOLOGY. RATED FOR CONTINUOUS OPERATION, WITH FACTORY INSTALLED BACK-DRAFT DAMPER.
EF 2	"BROAN" XB80	CEILING MOUNTED CENTRIFUGAL VENTILATOR	STAFF RESTROOM	DIRECT	80	1	0.25	<0.3	1.2	115/1/60	12.2	
EF 3	"BROAN" XB80	CEILING MOUNTED CENTRIFUGAL VENTILATOR	STAFF RESTROOM	DIRECT	80	1	0.25	<0.3	1.2	115/1/60	12.2	

GENERAL NOTES

1-ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 CALIFORNIA MECHANICAL CODE, 2022 CALIFORNIA BUILDING CODE, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.

2-COORDINATE ENTIRE INSTALLATION OF THE HVAC SYSTEM WITH THE WORK OF ALL OTHER TRADES PRIOR TO CARRYING OUT ANY CONSTRUCTION.

3-COORDINATE THE LOCATION OF ALL ROOF PENETRATIONS AND THE LOCATION WITH STRUCTURAL MEMBERS.

4-PLATFORMS, CURBS, AND FLASHING FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE MECHANICAL DESIGN DRAWINGS.

5-FURNISH AND INSTALL AC EQUIPMENT MAKE AND MODEL PER SCHEDULE OR APPROVED EQUAL.

6-PROVIDE WALL MOUNTED FULLY PROGRAMMABLE THERMOSTAT T-24 COMPLAINT WITH ADR CAPABILITY AND LISTED ON CEC APPROVED LIST.

7-INDOOR AC EQUIPMENT SHALL BE WIRED FOR CONTINUOUS OPERATION DURING OCCUPANCY.

8-FURNISH AND INSTALL WHERE INDICATED DUCT DETECTOR INSTALLED AT FAN DISCHARGE TO SHUT DOWN A/C UNIT. DETECTOR "SYSTEM SENSOR" MNo: D4240 OPERATING VOLTAGE 240VAC 50-60Hz. DUCT SMOKE DETECTOR SHALL BE LABELED BY AN APPROVED AGENCY, APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHALL AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S APPROVED INSTALLATION INSTRUCTIONS.

9-ALL HVAC UNITS WITH 2,000 CFM OR MORE OR SERVING A COMMON AIR SPACE MUST BE INTERCONNECTED TO SHUT DOWN IMMEDIATELY UPON ALARM CONDITION FROM DUCT DETECTORS.

10-ALL AREAS OF THE BUILDING THAT ARE MECHANICALLY VENTILATED, PROVIDE FILTERS OF MINIMUM MERV-13 FOR ALL OUTSIDE AND RETURN AIR.

11-ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.

12-MAINTENANCE LABEL SHALL BE AFFIXED TO ALL MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNER'S USE.

13-ALL LINE AND LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT AND LINE VOLTAGE WIRING, INCLUDING FINAL CONNECTIONS, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN THE ELECTRICAL SECTION OF THE SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS OF ALL GOVERNING BODIES HAVING JURISDICTION THEREOF.

12-E INDICATES ITEMS FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS SHOWN ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN THE ELECTRICAL SECTIONS OF THE SPECIFICATIONS.

13-M INDICATES ITEMS FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR AS SHOWN ON THE MECHANICAL DRAWINGS OR SPECIFIED IN THE MECHANICAL SECTIONS OF THE SPECIFICATIONS.

14-ALL THERMOSTATS SHALL BE OF THE ELECTRONIC, PROGRAMMABLE, AUTOMATIC CHANGEOVER TYPE TO SEQUENCE HEATING OR COOLING. SET POINT RANGE SHALL BE 10 DEGREES F. BETWEEN FULL HEATING AND COOLING. THEY SHALL HAVE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70 DEGREES F., AND COOLING AT A TEMPERATURE NOT LESS THAN 78 DEGREES F. ADJUSTABLE TEMPERATURE DIFFERENTIAL SHALL BE 1½ DEGREES F. CONTROL LIMITS SHALL BE FROM 55 DEGREES F. TO 85 DEGREES F. MOUNT AT 48 INCHES ABOVE FLOOR OR AS REQUIRED BY LOCAL AUTHORITIES OR HANDICAP CODES.

15-BEFORE BIDDING ON THIS WORK, THE CONTRACTOR SHALL MAKE A CAREFUL EXAMINATION OF THE PREMISES. HE SHALL DEFINITELY DETERMINE IN ADVANCE, THE METHODS OF INSTALLING AND CONNECTING THE EQUIPMENT WITH ITS ASSOCIATED DUCTWORK, THE MEANS TO BE PROVIDED FOR GETTING THE EQUIPMENT AND MATERIALS INTO PLACE AND SHALL MAKE HIMSELF THOROUGHLY FAMILIAR WITH ALL OF THE REQUIREMENTS OF THE PROJECT.

16-ALL DIMENSIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND MUST BE CONFIRMED ON SITE.

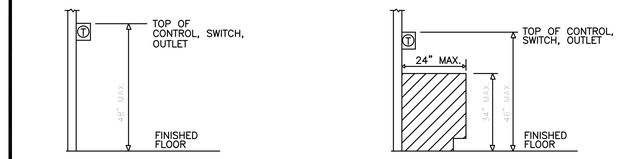
17-ALL EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES.

18-ALL HVAC EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY.

19-MATERIALS DELIVERED TO THE CONSTRUCTION SITE SHALL BE PROTECTED FROM RAIN OR OTHER SOURCES OF MOISTURE.

20-ALL DUCTS 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.

21-AN OPERATION AND MAINTENANCE MANUAL INCLUDING AT A MINIMUM.



THERMOSTAT MOUNTING

THERMOSTATS ARE TO BE LOCATED NO MORE THAN 48" ABOVE FINISHED FLOOR.
(46" MAXIMUM HEIGHT IF LOCATED OVER A COUNTER)
(24" MAXIMUM REACH DEPTH @ COUNTER)

AIR DISTRIBUTION SCHEDULE

TYPE	SIZE	CAPACITY (C.F.M.)	MAX. NECK VEL	MAX. N.C.	MAX. S.P. DROP	REMARKS
ADJUSTABLE MODULAR CORE S-1	8x8	0-180	400	13	0.06	PROVIDE WITH OPPOSED BLADE VOLUME DAMPERS. MOUNTING FRAME TO BE COMPATIBLE W/ CEILING TYPE. COMPLETE WITH FILLER PLATE
	10x10	181-280		13	0.06	
	12x12	281-400		16	0.06	
	14x14	401-550		17	0.06	
	16x16	551-720		18	0.06	
	18x18	721-910		19	0.06	
	20x20	911-1120		20	0.06	
	22x22	1121-1370		21	0.06	
ALUMINUM EGGCRATE R-1, E-1, G-1, T-1	8x8	0-180	400	15	0.03	PROVIDE WITH OPPOSED BLADE VOLUME DAMPERS. MOUNTING FRAME TO BE COMPATIBLE W/ CEILING TYPE
	10x10	181-280		15	0.03	
	12x12	281-400		15	0.03	
	14x14	401-550		15	0.03	
	16x16	551-720		15	0.03	
	18x18	721-910		15	0.03	
	20x20	911-1120		15	0.03	
	22x22	1121-1370		15	0.03	
	22x46	1801-2800		15	0.03	
ALUMINUM ROUND DIFFUSERS S-2	8"ø	0-140	400	<20	0.01	FOR SUPPLY PROVIDE WITH EQUALIZING GRID AND VOLUME DAMPER. FOR RETURN PROVIDE WITH VOLUME DAMPER
	10"ø	141-220		<20	0.01	
	12"ø	221-310		<20	0.01	
	14"ø	311-428		<20	0.02	
	16"ø	429-559		<20	0.02	
	18"ø	560-707		<20	0.02	
	20"ø	708-873		<20	0.02	
	24"ø	874-1257		<20	0.02	
	30"ø	1258-1963		<20	0.02	

LEGEND

- S-1 / 000 — CEILING DIFFUSER DESIGN SUPPLY CFM
- R-1 / 000 — CEILING RETURN REGISTER DESIGN RETURN CFM
- T-1 / 000 — CEILING TRANSFER REGISTER DESIGN TRANSFER CFM
- E-1 / 000 — CEILING EXHAUST REGISTER DESIGN EXHAUST CFM

LEGEND & ABBREVIATIONS

SYMBOL	ABB.	DESCRIPTION	SYMBOL	ABB.	DESCRIPTION
	SAD	AIR SUPPLY DUCT		AC	AIR CONDITIONING UNIT
	RAD	RETURN AIR DUCT		AP	ACCESS PANEL
	OSA	OUTSIDE AIR		B.D.D.	BACK DRAFT DAMPER
	EAD	EXHAUST AIR DUCT		BHP	BRAKE HORSEPOWER
	CA	COMBUSTION AIR		CFM	CUBIC FEET PER MINUTE
	(L)	LINED DUCTWORK		CONC.	CONCRETE
	CD	CEILING DIFFUSER		COND.	CONDENSATE
	RAR	RETURN AIR REGISTER		D.B.	DRY BULB
	EAR	EXHAUST AIR REGISTER		ENT.	ENTERING
	MVD	MANUAL VOLUME DAMPER		EF	EXHAUST FAN
DL	DL	DOOR LOUVER		E.S.P.	EXTERNAL STATIC PRESSURE
UC	UC	UNDERCUT DOOR		F.P.I.	FINS PER INCH
T	STAT	THERMOSTAT		FIN. FLR.	FINISH FLOOR
BT	BT	BY-PASS TIMER		FLA.	FULL LOAD AMPS
	S.A.	SUPPLY AIR		FT.	FEET
	R.A.	RETURN AIR		GC	GENERAL CONTRACTOR
	E.A.	EXHAUST AIR		HP	HORSEPOWER
	T.A.	TRANSFER AIR		IN.	INCHES
	O.A.	OUTSIDE AIR		CU	CONDENSING UNIT
	TYP.	TYPICAL		L.R.A.	LOCKED ROTOR AMPS
FD	FD	COMBO. SMOKE AND FIRE DAMPER		M.C.A.	MINIMUM CIRCUIT AMPS
FD	FD	FUSIBLE LINK FIRE DAMPER		MIN.	MINIMUM
	TG	TRANSFER GRILLE		M.O.C.A.	MAX. OVER CURRENT PROTEC. AMPS
SD	SD	S.A. DUCT DETECTOR		PH	PHASE
	S/M	SHEET METAL		PRESS.	PRESSURE
	P.O.R.	POINT OF REMOVAL		PSI	POUNDS PER INCH
	P.O.C.	POINT OF CONNECTION		RPM	REVOLUTIONS PER MINUTE
	SD	SMOKE DETECTOR		R.L.A.	RATED LOAD AMPS
	CM	CARBON MONOXIDE DETECTOR			
	DN.	DOWN			

M-1.0 MECHANICAL GENRAL NOTES & LEGEND
N.T.S.

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STAMP

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No. C25289
REN. 10-31-2025
STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD ARIFUDDIN IRFAN
No. 37,868
Exp. 09/30/2026
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PROJECT

CITY OF LA VERNE
FIRE STATION 1
2061 3rd Street
La Verne, CA 91750

REVISIONS
1 -
2 -
3 -
4

DATE: 5/8/2025
SCALE: AS NOTED
JOB NO: 24101
DWN BY: CCW
CHK BY: EGP

SHEET NO.
M-1.0

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
This document is used to demonstrate compliance with mandatory requirements in 110.8(g) and 120.7(b)/ 160.1 for newly constructed nonresidential, hotel/ motel, multifamily and mixed-use buildings, and 141.0(b)1/ 180.2 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in 140.3/ 170.2 for newly constructed buildings, and 141.0/ 180.1/ 180.2 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.		
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 1 of 7)**
Project Address: 2061 3rd St	**Date Prepared:**	6/29/2025

A. GENERAL INFORMATION

01	Project Location (city)	La Verne	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	91750	06	Total Conditioned Floor Area (ft²)	2620
03	Climate Zone	9	07	Total Unconditioned Floor Area (ft²)	0
04	Occupancy Types Within Project: (select all that apply): If one occupancy constitutes >= 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per 100.0(f).		08	☐ Project includes unconditioned enclosed space(s) > 5,000 ft² under a roof with a ceiling height of at least 15 ft.[1]	

● Office

[1] FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15 ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in 140.3(c)/ 170.2(b). Compliance with 140.3(c)/ 170.2(b) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.

B. PROJECT SCOPE

This table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/ 170.2 and 141.0(a)1/ 180.1 and 141.0(b)1 and 2/ 180.2 for additions and alterations.

My project consists of (check all that apply)		Component Types					
01			02				
☐	New Construction or Newly Conditioned Space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐	One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐	Addition of conditioned space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐	One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐	Addition is <=700 ft²						
☐	Addition is >700 ft²						
☒	Alteration of conditioned space	☐	Roof Assembly	☒	Walls		
☐	One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐	Roofing Material[2]	☒	Floors	☒	Fenestration

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 2 of 7)**
	Date Prepared:	6/29/2025

B. PROJECT SCOPE

[1] FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration.
[2] Roof recovers and replacements must also check "Roof Assembly" box and document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable table referenced below.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000ft²	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	COMPLIES
Yes	Yes	Yes	Yes	Yes	Yes		

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. ROOF ASSEMBLY SCHEDULE

This section does not apply to this project.

G. RATED ROOFING MATERIAL (COOL ROOF)

This section does not apply to this project.

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	6/29/2025

H. WALL ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/ 170.2(a) for new constructions, 141.0(a)/ 180.1 for additions and 141.0(b)1B/ 180.2 for alterations.

01	Indicate wall types included in the project:[1]	☐ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPS	☐ ICF (new only)
		☐ Metal Panels	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

I. FLOOR ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive floor assembly requirements in 140.3(a)4/ 170.2(a)5 for new construction, 141.0(a)/ 180.1 for additions, or mandatory floor assembly requirements in 141.0(b)1C/ 180.2 for alterations.

01	Indicate floor types included in the project:[1]	☐ Framed	☐ SIPS (new only)	☐ Raised Mass	☐ Heated Slab-on-grade (new only)

[1] FOOTNOTES: Floor types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

J. EXTERIOR DOOR SCHEDULE

This table demonstrates compliance with prescriptive exterior door requirements in 140.3(a)7/ 170.2(a)4 for new construction or additions. Doors which are being replaced (alterations) do not need to be documented in this table because there are no Title 24, Part 6 requirements that apply. Exterior doors separate conditioned space from unconditioned space or from ambient air. Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on Table K with fenestration per Table 8.

01	02	03	04	05	06	07
Tag/Plan Detail ID	Name/Description	Occupancy Type	Door Type	Door Insulation	Maximum Allowed U-factor	U-factor per Design

K. FENESTRATION AND GLAZED DOOR SCHEDULE

This table demonstrates compliance with prescriptive fenestration requirements in 140.3(a)5/ 170.2(a)3 for new constructions, 141.0(a)/ 180.1 for additions, or 141.0(b)2A/ 180.2 for alterations. Exterior doors that are more than 25% glass in area are considered Glazed Doors and should be documented on this table with fenestration.

01	Indicate fenestration types included in the project:[1]	☒ Vertical (alterations)	☐ Vertical (new)	☐ Skylights	☐ Glazed Doors (new only)

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 4 of 7)**
	Date Prepared:	6/29/2025

K. FENESTRATION AND GLAZED DOOR SCHEDULE

[1] FOOTNOTES: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

01	☒	Calculate Area-Weighted Average U-factor for Vertical Fenestration and Glazed Doors[1]
02	☒	Calculate Area-Weighted Average (R)SHGC for Vertical Fenestration and Glazed Doors[1]
03	☒	Calculate Area-Weighted Average VT for Vertical Fenestration and Glazed Doors[1]

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

04	05	06	07	08	09	10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	U-factor/ (R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]	Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft²
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New			NFRC Certified	U-factor (max)	0.71	0.71	45
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.6	0.6	
						VT (min)	0.5	0.5	
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New			NFRC Certified	U-factor (max)	0.71	0.71	40
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.6	0.6	
						VT (min)	0.5	0.5	

[1] FOOTNOTES: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculation shown in separate area-weighted table below.
[2] The NA6 Default Calculation can only be used for alterations or dwelling units in buildings with <= 3 habitable stories. Alterations are limited to 200ft² of site built glazing and dwelling units are limited to 250ft² or 5% of conditioned floor area. If the fenestration does not meet these conditions, the only options for determining fenestration values are NFRC Certification or the Default Tables in 110.6.
[3] Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.
[4] Projecting includes casement and awning windows.

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 5 of 7)**
	Date Prepared:	6/29/2025

K. FENESTRATION AND GLAZED DOOR SCHEDULE

Area-Weighted Average U-factor, SHGC, VT Compliance Calculation for Vertical Fenestration And Glazed Doors

01	02	03	04	05
Product Performance Unit	Total Area of Fenestration (ft²)	Area-weighted Calculation for Fenestration		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
U-Factor	85	0	0	COMPLIES
(R)SHGC	85	0	0	COMPLIES
VT	85	0	0	COMPLIES

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This section does not apply to this project.

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ENV-01-E - Must be submitted for all buildings

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1

Form/Title	Systems/Spaces To Be Field Verified
NRCA-ENV-02-F must be submitted for all new, added or altered site built fenestration.	Fenestration;

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 6 of 7)**
	Date Prepared:	6/29/2025

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

CEDGARCHITECTS
ARCHITECTURE //
BUILD //
LANDSCAPE //

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pomona, ca 91767

// 909.625.3916
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STAMP

LICENSED ARCHITECT
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No. C25289
REN. 10-31-2025
STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER
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PROJECT

CITY OF LA VERNE
FIRE STATION 1
2061 3rd Street
La Verne, CA 91750

REVISIONS

1	-
2	-
3	-
4	

DATE:	5/8/2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.1

M-1.1 | TITLE-24 DOCOMENTS
N.T.S.

STATE OF CALIFORNIA

Envelope Component Approach

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: La Verne Fire Station 1- Offices	Report Page:	(Page 7 of 7)
Project Address: 2061 3rd St	Date Prepared:	6/29/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Krishna Kumar P.E.	Documentation Author Signature:
Company: KK Engg.	Signature Date: 06-26-2025
Address: 3877 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. 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.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mohammad Irfan P.E	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-06-29
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951.532.7377

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined In 140.4, or 141.0(b)2 for alterations.		
Project Name: La Verne Fire Station 1- Offices	Report Page:	(Page 1 of 10)
Project Address: 2061 3rd St	Date Prepared:	6/29/2025

A. GENERAL INFORMATION

01 Project Location (city)	La Verne	04 Total Conditioned Floor Area	2620
02 Climate Zone	9	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1

• Office

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01 Air System(s)	02 Wet System Components	03 Dry System Components
☒ Heating Air System	☐ Water Economizer	☐ Air Economizer
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☒ Fan Systems
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☒ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	Report Page:	(Page 2 of 10)
	Date Prepared:	6/29/2025

C. COMPLIANCE RESULTS

Table C will Indicate if the project data Input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)										COMPLIES					

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat
Second Floor- (2) 4 Ton Heat Pump	2	Single zone	New/ Addition		☐

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	Report Page:	(Page 3 of 10)
	Date Prepared:	6/29/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
Second Floor- (2) 4 Ton Heat Pump	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	64.94	48	0	77.82	36.5	84.78	80.52

[1] FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are exceptted.
[2] It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
[3] If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
[4] Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
Second Floor- (2) 4 Ton Heat Pump	<65,000		HSPF2	7.5	9	SEER2	14.3	14

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	Report Page:	(Page 4 of 10)
	Date Prepared:	6/29/2025

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included In Table H.

System Name	Second Floor- (2) 4 Ton Heat Pump	Quantity	2	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	3,200	Site Elevation	1,235	Economizer	NA: Special OA filtration
01	02	03	04				05	06	07	08	09			10	11
									Allowance		Design				
Fan Name or Item Tag	Fan Type	Qty	Component				Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	2	Base Allowance for system serving spaces <=6 floors away				100		371		Manufacturer provided				0.49
			MERV 13-16 Filter upstream of thermal conditioning equipment				100		222						
			Hydronic/DX cooling coil or heat pump coil				100		222						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1.63		Fan System Electrical Output (kW)		0.99

[1] FOOTNOTES: Fans serving spaces with design background noise goals below NC35
[2] Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.
[3] Fan system allowance includes fan system base allowance.
[4] Filter pressure loss can only be counted once per fan system.

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	Report Page:	(Page 5 of 10)
	Date Prepared:	6/29/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

[3] Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.
[4] Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document..

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11
Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI
Second Floor- (2) 4 Ton Heat Pump	Altered Fan System	

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls In 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
Second Floor- (2) 4 Ton Heat Pump	Single zone	<= 25,000 ft²	EMCS	4 Hour Timer	NA: 7 day per 120.2(e)1	EMCS	NA: Alteration	NA: Alteration Project

[1] FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

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STAMP

LICENSED ARCHITECT — BRIAN G. PETERSON — No. C26269 — REN. 10-31-2025 — STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER — MOHAMMAD ARIFUDDIN IRFAN — No. 32,868 Exp. 09/30/2026 — MECHANICAL — STATE OF CALIFORNIA

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PROJECT

CITY OF LA VERNE FIRE STATION 1
2061 3rd Street
La Verne, CA 91750

REVISIONS

1	-
2	-
3	-
4	

DATE:	5/8/2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.2

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 5 of 10)**
	Date Prepared:	6/29/2025

I. SYSTEM CONTROLS

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and dt24refnolnk/]160.2, 160.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05			06			07
System Name	Second Floor- (2) 4 Ton Heat Pump	System Design OA CFM Airflow[1]		786	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3				Exh. Vent per 120.1(c)4 & 160.2(c)4			DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[4] 160.2(c)5D 160.2(c)5E 160.2(c)5D
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
Second Floor	Office space	2620			393	0	0	DCV: NA: Not required per 5120.1(d)3
								Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				393	18	Ventilation for this System Complies?	Yes

[1] FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system

[2] Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 6 of 10)**
	Date Prepared:	6/29/2025

J. VENTILATION AND INDOOR AIR QUALITY

[2] Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

[4] See Standards Tables 120.1-A and 120.1-B.

[5] For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.

[6] 120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	Second Floor- (2) 4	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 7 of 10)**
	Date Prepared:	6/29/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

	Ton Heat Pump	**Dwelling Units:** Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
		Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes

11	No	The scope of the project includes only duct systems serving healthcare facilities
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18		All ductwork is an extension of an existing duct system
19		Ductwork serving Individual dwelling unit
20		< 25 ft of new or replacement space conditioning ducts installed
21	R-0.0	Duct Insulation R-value
22		
23		

M. COOLING TOWERS

This section does not apply to this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 9 of 10)**
	Date Prepared:	6/29/2025

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	4 Ton Heat Pump;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	4 Ton Heat Pump;
NRCA-MCH-11-A Automatic Demand Shed Controls	4 Ton Heat Pump;
NRCA-MCH-18-A Energy Management Control Systems	4 Ton Heat Pump;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location: M-Sheets

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: La Verne Fire Station 1- Offices	**Report Page:**	**(Page 10 of 10)**
Project Address: 2061 3rd St	**Date Prepared:**	6/29/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Krishna Kumar P.E.	Documentation Author Signature:
Company: KK Engg.	Signature Date: 06-29-2025
Address: 3877 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. 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.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mohammad Irfan P.E.	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-06-29
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951.532.7337

CEDGARCHITECTS
ARCHITECTURE //
BUILD //
LANDSCAPE //

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STAMP

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CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER
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PROJECT

CITY OF LA VERNE
FIRE STATION 1
2061 3rd Street
La Verne, CA 91750

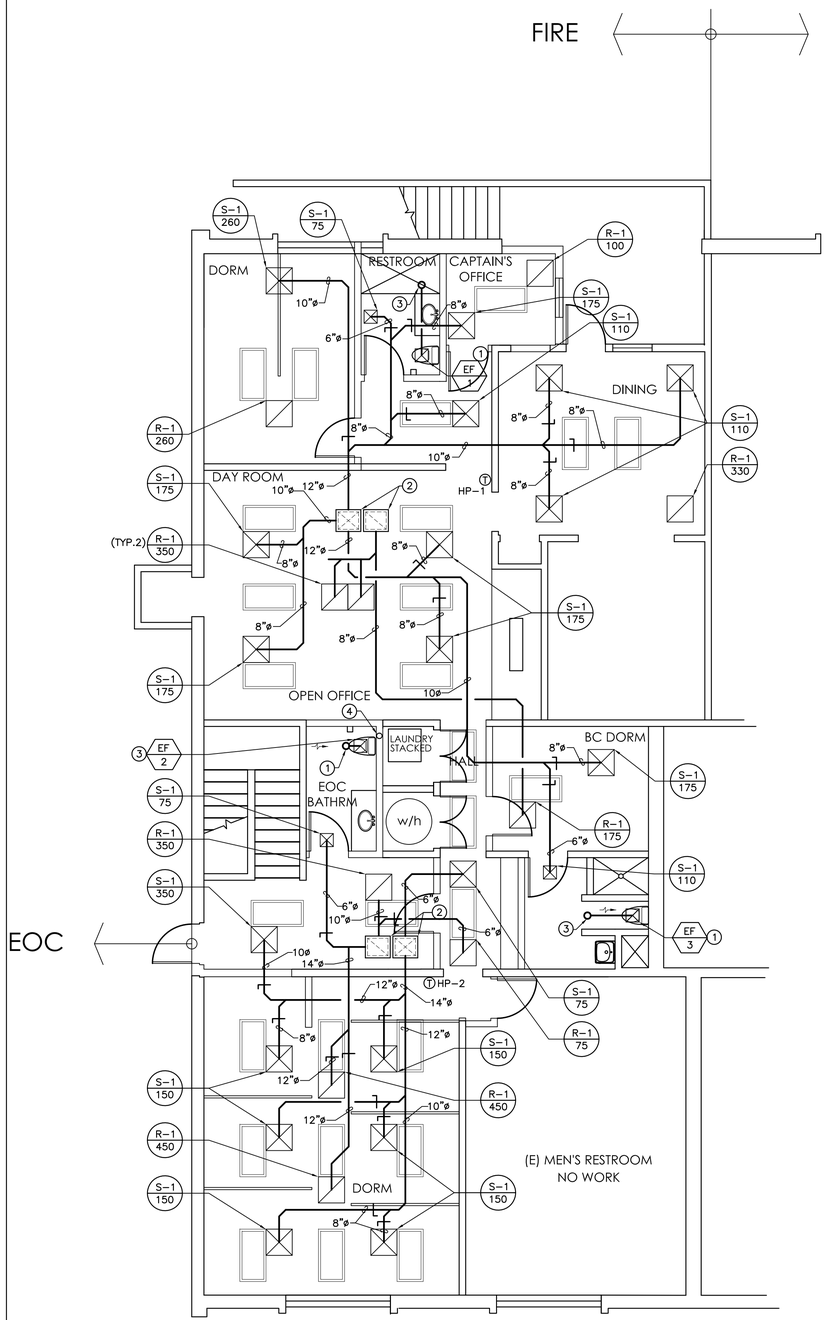
REVISIONS

1	-
2	-
3	-
4	

DATE:	5/8/2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.3



CONSTRUCTION KEYNOTES

EF 1 / EF 2 / EF 3

1. FURNISH AND INSTALL CEILING MOUNTED EXHAUST FAN, MAKE AND MODEL PER MECHANICAL SCHEDULE.
2. 22"x20" INTERNALLY LINED SUPPLY AND RETURN AIR DUCTS DOWN THRU ROOF.
3. 6"ø EXHAUST AIR DUCT UP THRU ROOF TERMINATING 12" ABOVE ROOF LEVEL.

GENERAL CONSTRUCTION NOTES

ALL EXHAUST AND PLUMBING VENTS SHALL TERMINATE MINIMUM 10' FROM ANY OUTSIDE AIR INTAKE.

M-2 | MECHANICAL SECOND FLOOR PLAN

3/16"=1'-0"

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ARCHITECTURE //
BUILD //
LANDSCAPE //

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Email: mohammad.a.irfan@sbcglobal.net

PROJECT

CITY OF LA VERNE
FIRE STATION 1
2061 3rd Street
La Verne, CA 91750

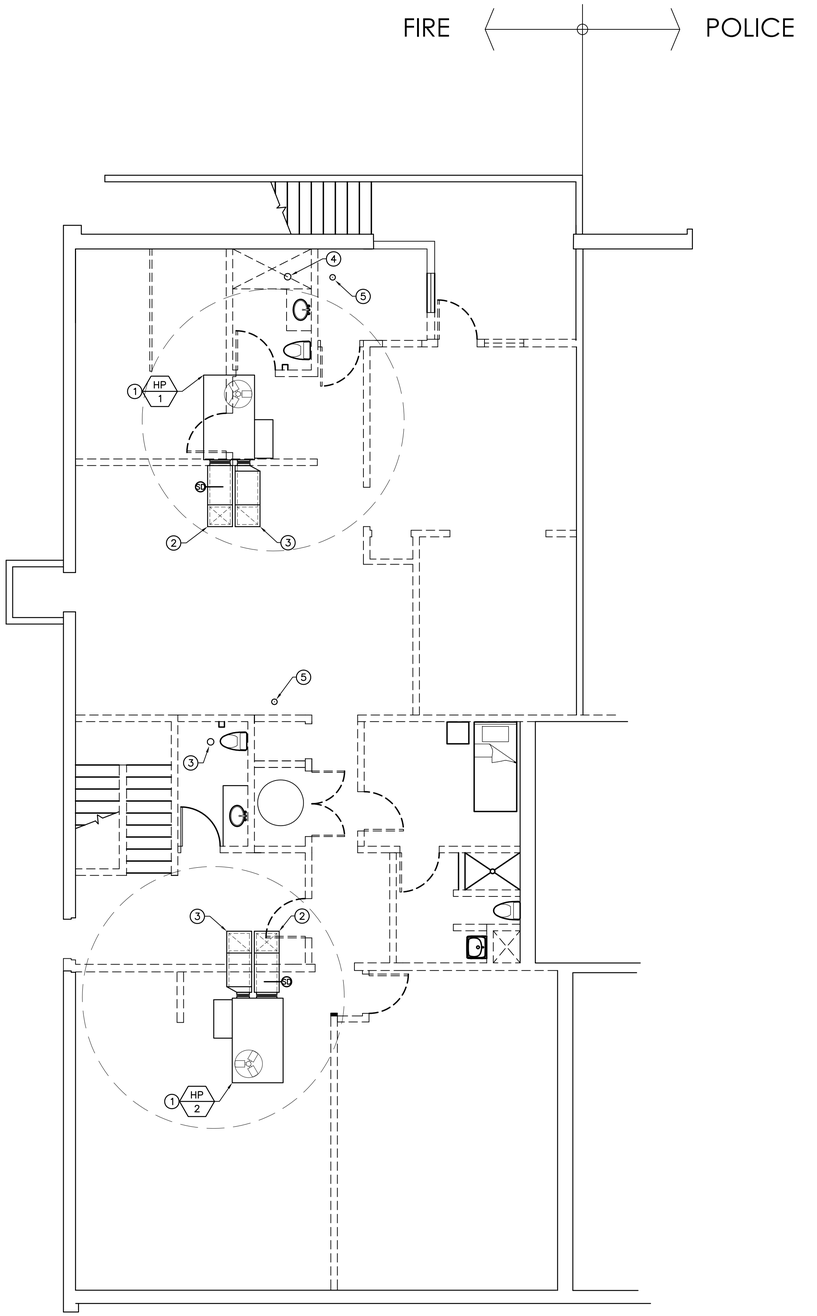
REVISIONS

1	-
2	-
3	-
4	

DATE:	5/8/2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-2



CONSTRUCTION KEYNOTES:

HP 1 / HP 2

1. FURNISH AND INSTALL ROOF MOUNTED PACKAGED HEAT PUMP. MAKE AND MODEL PER MECHANICAL SCHEDULE. UNITS SHALL BE INSTALLED ON FACTORY FABRICATED ROOF CURB, THE CURB TO MATCH ROOF SLOPE TO PROVIDE LEVEL MOUNTING.
2. 22"x20" INTERNALLY LINED SUPPLY DUCTS DOWN THRU PURPOSE MADE OPENINGS IN THE EXISTING ROOF.
3. 22"x20" INTERNALLY LINED RETURN DUCTS DOWN THRU PURPOSE MADE OPENINGS IN THE EXISTING ROOF.
4. 6"ø EXHAUST UP FROM CEILING MOUNTED EXHAUST FAN, TERMINATING MINIMUM 12" ABOVE ROOF LINE.
5. 2"ø PLUMBING VENT PIPE UP THRU ROOF FROM FLOOR BELOW TERMINATING 12" ABOVE ROOF LEVEL.

GENERAL CONSTRUCTION NOTES:

ALL PLUMBING AND EXHAUST VENTS SHALL TERMINATE AT LEAST 10' FROM ANY OUTSIDE AIR INTAKE.

M-3 | MECHANICAL REMODEL ROOF PLAN

3/16"=1'-0"

CEDGARCHITECTS

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REN. 10-31-2025
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REGISTERED PROFESSIONAL ENGINEER
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PROJECT

CITY OF LA VERNE
FIRE STATION 1
2061 3rd Street
La Verne, CA 91750

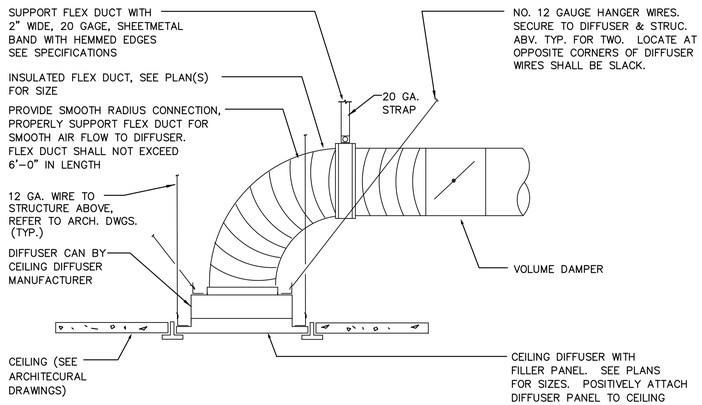
REVISIONS

1	-
2	-
3	-
4	

DATE:	5/8/2025
SCALE:	AS NOTED
JOB NO:	24101
DWN BY:	CCW
CHK BY:	EGP

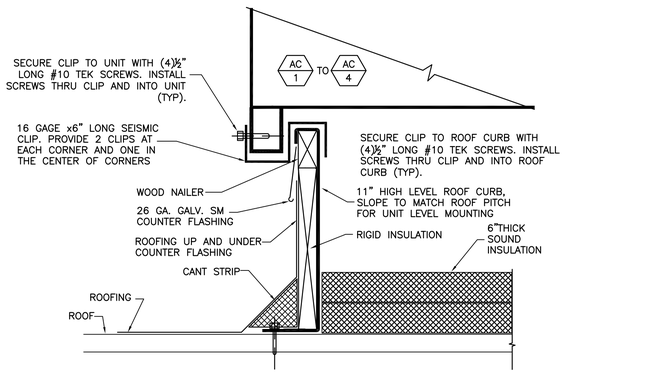
SHEET NO.

M-3



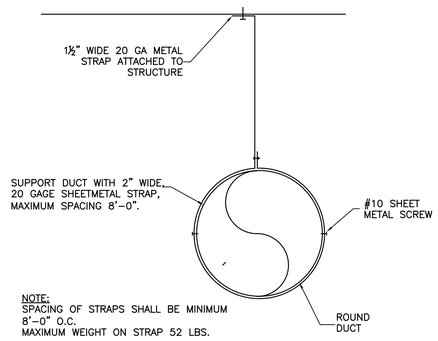
CEILING DIFFUSER MOUNTING DETAIL 4/M-4

SCALE : NONE



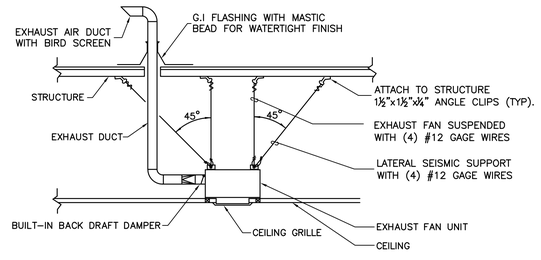
ROOFTOP PKG HEAT PUMP MNTG DETAIL 1/M-4

SCALE : NONE



SPIRAL ROUND DUCT BRACING DETAIL 2/M-4

SCALE : NONE



EXHAUST FAN MOUNTING DETAIL 3/M-4

SCALE : NONE

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SHEET NO.

M-4

PART 1 – GENERAL

1.01 THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, TESTING AND SERVICES NECESSARY FOR THE PROPER AND SATISFACTORY INSTALLATION OF THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. WORK, MATERIALS AND EQUIPMENT NOT INDICATED OR SPECIFIED WHICH IS NECESSARY FOR THE COMPLETE AND PROPER OPERATION OF THE WORK OF THIS SECTION IN ACCORDANCE WITH THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS SHALL BE PROVIDED AND INCORPORATED AT NO ADDITIONAL COST TO THE OWNER.

1.02 CODE REQUIREMENTS: ALL WORK COVERED BY THIS SECTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF ALL LEGALLY CONSTITUTED AUTHORITIES AND CODES HAVING JURISDICTION.

1.03 THE CONTRACTOR SHALL BE CURRENTLY LICENSED IN THE MECHANICAL TRADE WITH THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL MAINTAIN WORKMAN'S COMPENSATION INSURANCE. THE FOLLOWING ARE APPLICABLE REGULATIONS:

1. NATIONAL FIRE PROTECTION ASSOCIATION.
2. STATE DIVISION OF INDUSTRIAL SAFETY.
3. CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
4. 2022 CALIFORNIA MECHANICAL CODE.
5. 2022 CALIFORNIA PLUMBING CODE.
6. UNIFORM FIRE CODE WITH CALIFORNIA AMENDMENTS.
7. ANY OTHER LEGALLY CONSTITUTED BODY HAVING JURISDICTION THEREOF.

1.04 NOTHING IN THE SPECIFICATIONS OR DRAWINGS SHALL BE CONSTRUED TO PERMIT DEVIATION FROM THE REQUIREMENTS OF GOVERNING CODES UNLESS APPROVAL FOR SAID DEVIATION HAS BEEN OBTAINED FROM THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION AND FROM THE OWNER'S REPRESENTATIVE.

1.05 DRAWINGS

A. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES, WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE CONDITIONS SURROUNDING THE INSTALLATION OF HIS WORK, FURNISHING THE NECESSARY DUCTWORK AND FITTINGS, WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION. THE CONTRACTOR SHALL VERIFY THAT ADEQUATE SPACE IS AVAILABLE FOR THE INSTALLATION OF THE DUCTWORK AS INDICATED, PRIOR TO DETAILING AND FABRICATION.

B. THE GENERAL ARRANGEMENT INDICATED ON THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. COORDINATE WITH THE ARCHITECTURAL, STRUCTURAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL DRAWINGS PRIOR TO INSTALLATION OF DUCTWORK, PIPING AND EQUIPMENT TO VERIFY ADEQUATE SPACE IS AVAILABLE FOR INSTALLATION OF THE WORK SHOWN. IN THE EVENT A FIELD CONDITION ARISES WHICH MAKES IT IMPOSSIBLE TO INSTALL THE WORK AS INDICATED, SUBMIT, IN WRITING, THE PROPOSED DEPARTURES TO THE ARCHITECT/ENGINEER FOR HIS ACCEPTANCE PRIOR TO THE INSTALLATION. ONLY WHEN ACCEPTANCE IS GIVEN, IN WRITING, SHALL CONTRACTOR PROCEED WITH INSTALLATION OF THE WORK.

C. IN CASE OF A DIFFERENCE IN THE SPECIFICATIONS BETWEEN THE SPECIFICATIONS AND THE DRAWINGS, OR IN THE DRAWINGS, THE CONTRACTOR SHALL INCLUDE THE COST OF THE MOST EXPENSIVE ALTERNATE IN THE BID PROPOSAL. THE CONTRACTOR SHALL SECURE DIRECTION FROM THE ARCHITECT BEFORE THE START OF ANY CONSTRUCTION.

1.06 PROTECTION

ALL WORK, EQUIPMENT AND MATERIALS SHALL BE PROTECTED AT ALL TIMES. CONTRACTOR SHALL MAKE GOOD ALL DAMAGE CAUSED EITHER DIRECTLY OR INDIRECTLY BY HIS OWN WORKMEN. CONTRACTOR SHALL ALSO PROTECT HIS OWN WORK FROM DAMAGE. HE SHALL CLOSE ALL DUCT AND PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. HE SHALL PROTECT ALL HIS EQUIPMENT AND MATERIALS AGAINST DIRT, WATER, CHEMICAL AND MECHANICAL INJURY. UPON COMPLETION, ALL WORK SHALL BE THOROUGHLY CLEANED AND DELIVERED IN A NEW CONDITION. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO EQUIPMENT AND MATERIALS UNTIL HE HAS RECEIVED WRITTEN NOTICE FROM THE ARCHITECT THAT HIS WORK HAS BEEN ACCEPTED.

1.07 LOCATIONS

A. THE LOCATIONS OF DUCTWORK AND EQUIPMENT INDICATED ON THE DRAWINGS ARE APPROXIMATE. DUCTS, PIPING, AND EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID ALL OBSTRUCTIONS.

B. CLEARANCE AND OPENINGS: CONTRACTOR SHALL COOPERATE AND COORDINATE HIS WORK WITH ALL OTHER TRADES TO AVOID CONFLICTION AND PERMIT FOR A NEAT AND ORDERLY APPEARANCE OF THE ENTIRE INSTALLATION.

1.08 UNINSPECTED WORK

A. CONTRACTOR SHALL NOT ALLOW OR CAUSE ANY OF HIS WORK TO BE COVERED UP BEFORE IT HAS BEEN DULY INSPECTED, TESTED AND ACCEPTED BY THE ARCHITECT, ENGINEER OR ANY OTHER AUTHORIZED INSPECTORS HAVING LEGAL JURISDICTION OVER HIS WORK. SHOULD HE FAIL TO OBSERVE THE ABOVE, HE SHALL UNCOVER THE WORK AND, AFTER IT HAS BEEN INSPECTED, TESTED AND ACCEPTED, COVER IT AT HIS OWN EXPENSE.

1.09 SUBMITTAL DATA

A. FURNISH, ALL AT ONE TIME, PRIOR TO ANY INSTALLATION, WITHIN THE TIME NOTED BELOW, VALID SUBMITTAL DATA ON ALL MATERIAL, EQUIPMENT AND DEVICES. EACH SUBMITTED ITEM SHALL BE INDEXED AND REFERENCED TO THESE SPECIFICATIONS AND HAVE IDENTIFICATION NUMBERS AS NOTED ON THE EQUIPMENT SCHEDULES. SUBMITTALS NOT COMPLYING WITH THIS PARAGRAPH SHALL BE REJECTED.

B. SUBMITTALS WILL BE CHECKED FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT BUT THE REVIEW DOES NOT GUARANTEE QUANTITIES SHOWN AND DOES NOT SUPERSEDE REQUIREMENTS OF THIS DIVISION TO PROPERLY INSTALL WORK.

1.10 RECORD DRAWINGS

CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE "AS-BUILT" RECORD SET OF PRINTS, WHICH SHALL SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND THE EXACT "AS-BUILT" LOCATIONS, AND SIZES OF THE WORK PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS. ON COMPLETION OF THE WORK, ALL "AS-BUILT" INFORMATION WILL BE INCORPORATED ON TO A SET OF DRAWINGS AND GIVEN TO THE ARCHITECT FOR DISTRIBUTION.

1.11 GUARANTEES

A. CONTRACTOR SHALL GUARANTEE THE ENTIRE HVAC INSTALLATION UNCONDITIONALLY FOR A MINIMUM PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE BY OWNER EXCEPT WHERE NOTED OTHERWISE. IF, DURING THIS PERIOD, ANY MATERIALS, EQUIPMENT, OR ANY PART OF THE SYSTEMS FAIL TO FUNCTION PROPERLY, CONTRACTOR SHALL MAKE GOOD THE DEFECTS PROMPTLY AND WITHOUT ANY EXPENSE TO THE OWNER. CONTRACTOR SHALL ALSO GUARANTEE BEFORE FINAL ACCEPTANCE THAT THE SPECIFIC QUANTITIES OF AIR ON THE DRAWINGS SHALL BE SUPPLIED AS INDICATED; ALSO THAT EACH APPARATUS SHALL DELIVER THE CAPACITIES SPECIFIED.

B. THE WORK SHALL BE INSTALLED OF SUCH MATERIALS AND EQUIPMENT AND IN SUCH MANNER THAT THE OPERATION OF ALL PARTS OF THE SYSTEMS COVERED BY THE PLANS AND SPECIFICATIONS SHALL BE NOISELESS TO THE EXTENT THAT NO SOUND OF OPERATION WILL BE HEARD INSIDE THE ROOMS SERVED BY THE SYSTEM'S EQUIPMENT.

C. ALL EQUIPMENT SHALL CARRY MANUFACTURER'S WARRANTY AGAINST DEFECTIVE PARTS OR POOR WORKMANSHIP, AND SHALL NOT BE LESS THAN ONE (1) YEAR.

D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSED BY EQUIPMENT FURNISHED AND INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE OF HIS WORK.

E. CONTRACTOR SHALL AGREE TO PROVIDE FOR EMERGENCY REPAIR SERVICE WITHIN 24 HOURS OF CALL DURING THE ONE-YEAR GUARANTEE PERIOD. SHOULD THE CONTRACTOR NOT RESPOND WITHIN THE 24 HOUR PERIOD, THE CLIENT, AT ITS OWN DISCRETION, MAY ORDER THE NECESSARY WORK TO BE DONE AND PASS ON THE COST TO THE CONTRACTOR AND NOT IMPAIR THE ONE YEAR GUARANTEE REQUIREMENT.

PART 2 – PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. GENERAL: PROVIDE ALL MATERIALS AND EQUIPMENT AS SPECIFIED ON THE SCHEDULE SHEET, NEW AND FREE FROM DEFECTS AND IMPERFECTIONS.

2.02 DUCTWORK:

A. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL DUCTWORK INDICATED ON THE DRAWINGS. SUPPLY AIR DUCTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST SMACNA. DUCTS FOR EXHAUST AIR SHALL BE AS INDICATED ON PLANS.

B. ROUND DUCT AND FITTINGS: ROUND AND OVAL DUCTWORK WHERE INDICATED ON DRAWINGS SHALL BE SPIRAL LOCK SEAM LOW PRESSURE TYPE AS MANUFACTURED BY UNITED MCGILL CORPORATION OR APPROVED EQUIVALENT, AND SHALL BE CONSTRUCTED OF GALVANIZED STEEL MEETING ASTM-A-653 REQUIREMENTS. ROUND DUCT SHALL BE OF GAUGE THICKNESS AS INDICATED ON SCHEDULE AND ALL FITTINGS SHALL HAVE A WALL THICKNESS NOT LESS THAN SPECIFIED FOR STRAIGHT DUCT (MINIMUM 26 GAUGE).

C. FLEXIBLE DUCT NOT TO EXCEED 5 FEET IN LENGTH.

2.03 EQUIPMENT

A. THE MANUFACTURER OF THE HEATING AND AIR CONDITIONING EQUIPMENT AS SPECIFIED HEREIN OTHER THAN WHAT IS CALLED FOR ON THE SCHEDULE SHALL CERTIFY THAT THE EQUIPMENT FURNISHED CAN BE INSTALLED WITHIN THE AREAS DESIGNATED ON THE DRAWINGS WITHOUT EXCEEDING THE OVERALL WIDTH, LENGTH, HEIGHT AND WEIGHT, AND SHALL BE FULLY RESPONSIBLE FOR ANY MODIFICATIONS NECESSARY TO THE STRUCTURAL FRAMING, AND ASSOCIATED OPENINGS THROUGH THE ROOF. THESE SHALL BE PROVIDED FOR BY COORDINATING WITH THE CONTRACTOR WHO SHALL OBTAIN APPROVAL OF THE ARCHITECT PRIOR TO PROCEEDING WITH ANY WORK. ANY ADDITIONAL COST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY ADDITIONAL COSTS THAT MAY BE INCURRED BY THE ELECTRICAL CONTRACTOR SHOULD THE EQUIPMENT PROPOSED EXCEED THE ELECTRICAL DESIGN CAPABILITIES.

B. HEAT PUMPS ROOFTOP PACKAGED UNITS:

1– UNITS SHALL BE OF THE MANUFACTURER, MODEL, SIZE, CAPACITIES, SEER & EER AS INDICATED ON THE DRAWINGS OR APPROVED EQUIVALENT. UNIT SHALL BE PACKAGED HEAT PUMP UNIT COMPLETELY FACTORY ASSEMBLED, WIRED AND TESTED. PROVIDE A ROOM THERMOSTAT THAT SHALL BE CAPABLE OF PROVIDING AUTOMATIC COOLING/HEATING SWITCH OVER. INDOOR FAN SHALL BE WIRED FOR CONTINUOUS OPERATION DURING OCCUPANCY.

2. FACTORY START-UP: CONTRACTOR SHALL PROVIDE FOR THE EQUIPMENT MANUFACTURER OR AUTHORIZED TECHNICIAN TO SUPERVISE START-UP, CHECK, START AND TEST THE UNIT.

C. CEILING MOUNTED EXHAUST FAN:

1– UNITS SHALL BE OF THE MANUFACTURER, MODEL, SIZE, CAPACITIES AS INDICATED ON THE DRAWINGS OR APPROVED EQUIVALENT. UNIT SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND TESTED.

2.04 AIR FILTERS

UNITS SHALL BE FURNISHED WITH FILTERS AS INDICATED ON THE MECHANICAL SCHEDULE.

2.05 CONTROLS

PART 3 – EXECUTION

3.01 INSTALLATION

A. EQUIPMENT INSTALLATION:

1. ALL EQUIPMENT PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. SHOULD THE DRAWINGS OR SPECIFICATIONS INDICATE THE EQUIPMENT IS TO BE INSTALLED IN A MANNER NOT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS; THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE INSTALLATION. IF THE CONTRACTOR PROCEEDS WITH THE INSTALLATION WITHOUT OBTAINING DIRECTION FROM THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO MAKE ALL REQUIRED CORRECTIONS TO THE INSTALLATION AT NO ADDITIONAL COST TO THE CONTRACT.

3.02 TESTING

A. GENERAL: THE CONTRACTOR SHALL PERFORM ALL TESTS TO THE ENTIRE SATISFACTION OF THE ARCHITECT/ENGINEER.

B. CONSTRUCTION FILTERS: CONTRACTOR SHALL PROVIDE 2 SETS OF DISPOSABLE FILTERS FOR USE DURING START UP AND TEST AND BALANCE. UPON COMPLETION OF TEST AND BALANCE THE CONSTRUCTION FILTERS SHALL BE REPLACED WITH NEW FILTERS.

C. REGULATING AND ADJUSTING AIR SYSTEMS:

1. BEFORE TESTING AND BALANCING IS STARTED, CLEAN EXTERIOR SURFACES OF COIL TUBES AND FINS TO INSURE FREE OPERATION AND ACTIVATION BY THE CORRECT THERMOSTAT.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CERTIFYING, IN WRITING, TO THE ENGINEER AND TEST & BALANCE CO., THAT THE SYSTEMS, AS SCHEDULED FOR BALANCING ARE OPERATIONAL AND COMPLETE. COMPLETENESS SHALL INCLUDE NOT ONLY THE PHYSICAL INSTALLATION, BUT THE CONTRACTOR'S CERTIFICATION THAT THE A/C UNITS ARE INSTALLED IN GOOD WORKING ORDER, AND THAT THE FULL LOAD PERFORMANCE HAS BEEN PRELIMINARILY TESTED. THE CONTRACTOR SHALL HAVE AN EXPERIENCED, INDEPENDENT TESTING & BALANCING COMPANY

3. TESTING PROCEDURE: THE FOLLOWING TEST DATA SHALL BE TAKEN AND SIX (6) COPIES SUBMITTED IN TABULATED FORM TO THE ARCHITECT FOR APPROVAL OF EACH SYSTEM.

a. TEST AND ADJUST ALL SUPPLY RETURN AND EXHAUST FAN RPM TO DESIGN REQUIREMENTS.

b. TEST AND RECORD ALL MOTOR FULL LOAD AMPERES.

c. MAKE PITOT TUBE TRANSVERSE OF MAIN SUPPLY RETURN AND EXHAUST DUCTS AND OBTAIN DESIGN CFM AT FANS.

d. TEST AND RECORD SYSTEM TOTAL STATIC PRESSURES, (SUCTION AND DISCHARGE).

e. TEST AND ADJUST SYSTEM FOR DESIGN CFM OUTSIDE AIR.

f. TEST AND RECORD ENTERING AND LEAVING AIR TEMPERATURES (D.B. AND W.B. FOR COOLING), (D.B. FOR HEATING).

g. ADJUST ALL MAIN SUPPLY AND RETURN AIR DUCTS TO PROPER DESIGN CFM.

h. IN COOPERATION WITH THE CONTROL MANUFACTURER'S REPRESENTATIVE, SET ADJUSTMENTS OF AUTOMATICALLY OPERATED CONTROLS TO OPERATE AS SPECIFIED, INDICATED, AND/OR NOTED. TESTING AGENCY SHALL CHECK ALL CONTROLS FOR PROPER CALIBRATIONS AND LIST ALL CONTROLS REQUIRING ADJUSTMENT BY CONTROL INSTALLERS, AND SHALL VERIFY THAT THE ROOM THERMOSTATS ARE CONTROLLING THE PROPER UNIT. WITH THE AIR CONDITIONING EQUIPMENT OPERATING, ALL ROOM THERMOSTATS SHALL BE SET TO THE FULL HEATING POSITION WITH HOT PLENUM TEMPERATURE RECORDED AND THE SUPPLY AIR TEMPERATURE AT ONE (1) OUTLET IN EACH ZONE MEASURED AND RECORDED. IN SEQUENCE, EACH THERMOSTAT SHALL BE SET TO THE FULL COOL POSITION WITH COLD PLENUM TEMPERATURE RECORDED, AND AFTER A FIVE (5) MINUTE INTERVAL, THE SUPPLY AIR TEMPERATURE AT ONE (1) OUTLET IN EACH ZONE MEASURED AND RECORDED. RECORDS OF TEMPERATURE READINGS FOR EACH ZONE SHALL BE SUBMITTED WITH THE TEST AND BALANCE REPORT.

5. REPORTS:

THE TEST AND BALANCE AGENCY SHALL PREPARE AND SUBMIT SIX (6) COPIES OF THE TEST AND BALANCE ANALYSIS REPORT TO THE OWNER WITHIN FIVE (5) WORKING DAYS OF COMPLETION. THIS REPORT SHALL CONTAIN, AT A MINIMUM:

a) PROJECT COVER SHEET.

b) PROJECT SUMMARY/GENERAL COMMENTS.

c) LOG, DATA AND REFERENCE RECORDS.

d) CALIBRATION CERTIFICATES FOR ALL TEST EQUIPMENT USED ON PROJECT INCLUDING MODEL AND SERIAL NUMBER.

e) DRAWINGS. THE AIR BALANCE AGENCY SHALL PREPARE A COMPLETE SET OF FULL SCALE DRAWINGS SHOWING ACTUAL DUCT RUNS. DRAWINGS SHALL BE KEYED TO AND FURNISHED WITH THE AIR BALANCE REPORT. THE MECHANICAL PLANS ARE NOT ACCEPTABLE FOR THIS PURPOSE. DRAWINGS SHALL BE IN LATEST VERSION OF AUTOCAD.

3.03 JOB COMPLETION

A. EQUIPMENT IDENTIFICATION:

1. ALL EQUIPMENT FURNISHED UNDER THIS SECTION SHALL BE PROVIDED WITH THE MANUFACTURER'S METAL IDENTIFICATION LABELS SECURELY ATTACHED AND SHOWING ALL PERTINENT DATA, INCLUDING PERFORMANCE CHARACTERISTICS, SIZE, MODEL, AND SERIAL NUMBER. LABELS SHALL NOT BE OBSCURED IN ANY MANNER.

2. IDENTIFICATION NAME PLATES SHALL BE PROVIDED ON ALL EQUIPMENT AND CONTROL COMPONENTS, INCLUDING ROOM THERMOSTAT OR ROOM SENSOR NUMBERS CODED TO THEIR RESPECTIVE AUTOMATIC ZONE DAMPER, VALVE, OR AIR CONDITIONING UNIT.

B. CLEAN-UP:

1. AFTER ALL HEATING, VENTILATING AND AIR CONDITIONING WORK HAS BEEN TESTED AND ACCEPTED, THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL PARTS OF THE EQUIPMENT INSTALLATION. EXPOSED PARTS TO BE PAINTED ARE TO BE THOROUGHLY CLEANED OF CEMENT PLASTER AND OTHER MATERIALS AND ALL GREASES AND OIL SPOTS REMOVED WITH SOLVENT. EXPOSED ROUGH METAL WORK TO BE CAREFULLY BRUSHED DOWN WITH STEEL BRUSHES TO REMOVE RUST AND OTHER SPOTS AND LEFT IN PROPER CONDITION TO RECEIVE PAINTER'S FINISH.

2. REMOVE ALL DEBRIS FROM THE JOB SITE, ALL CARTONS, BOXES, PACKING CRATES, EXCESS MATERIALS NOT USED OCCASIONED BY THE WORK AND TO THE SATISFACTION OF THE OWNER.

3. IF THE ABOVE REQUIREMENTS OF CLEAN-UP ARE NOT TO THE SATISFACTION OF THE OWNER, THE OWNER RESERVES THE RIGHT TO ORDER THE WORK DONE AND THE COST OF WHICH SHALL BE BORNE BY THE CONTRACTOR.

4. THE CONTRACTOR SHALL REMOVE ON A DAILY BASIS ALL DEBRIS FROM THE JOB SITE, TO THE SATISFACTION OF THE OWNER.

5. IF THE ABOVE REQUIREMENTS OF CLEAN-UP ARE NOT TO THE SATISFACTION OF THE OWNER, THE OWNER RESERVES THE RIGHT TO ORDER THE WORK DONE BY A THIRD PARTY AND THE COST OF WHICH SHALL BE BORNE BY THE CONTRACTOR.

3.05 CONSTRUCTION:

A. PROTECTION:

1. PROVIDE ALL SAFEGUARDS, INCLUDING WARNING SINGS AND LIGHTS, BARRICADES, AND THE LIKE DURING DEMOLITION.

2. NOISE, DUST AND WATER CONTROLS: CONTAINMENT SHALL BE PROVIDED AS REQUIRED.

3. SAFETY: IF AT ANY TIME SAFETY OF CONSTRUCTION APPEARS TO BE ENDANGERED, CONTRACTOR SHALL TAKE IMMEDIATE MEASURES TO SUPPORT SUCH ENDANGERED CONSTRUCTION; OPERATIONS AND IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE.

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M-5

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	DESCRIPTION	DESCRIPTION			
			WASTE	VENT	CW	HW
WC 1	FLOOR MOUNTED TANK TYPE WATER CLOSET	"AMERICAN STANDARD" CADET FLOOR MOUNTED TANK TYPE WATER CLOSET, @1.28 GPF, WHITE COLOR VITREOUS CHINA WITH ELONGATED BOWL COMPLETE WITH SEAT COVER.	4"ø	2"ø	½"ø	–
L 1	LAVATORY	"AMERICAN STANDARD" AQUALYIN DROP IN SINK MNo: 0475.047, WHITE COLOR VITREOUS CHINA COMPLETE WITH "AMERICAN STANDARD" INNSBROOK SELECTRONIC TOUCHLESS 0.5 GPM.	2"ø	1½"ø	½"ø	½"ø
SHWR 1	SHOWER CONTROL VALVE & SHOWER HEAD.	"DELTA" SHOWER CONTROL VALVE COMPLETE WITH SHOWER HEAD.	2"ø	1½"ø	¾"ø	¾"ø
TTV 1	THERMOSTATIC TEMPERING VALVE	"WATTS" SAFETY THERMOSTATIC TEMPERING VALVE, MODEL "LFUSG-B-QC-M2", COMPLETE WITH REQUIRED FITTINGS. SET @120°F.	–	–	½"ø	½"ø
WH 1	WATER HEATER	"RHEEM" MNo: XE40T10HS45U1 HEAT PUMP TYPE WATER HEATER, 40 GALLONS CAPACITY. 4,500 ELEMENT 30 AMP BREAKER SIZE. DIMENSIONS 20¾"ø x 63"H. UNIT WEIGHT 166LBS.	–	–	¾"ø	¾"ø
W/D 1	WASHER DRYER	WASHER DRYER FURNISHED BY CLIENT.	2"ø	1½"ø	¾"ø	¾"ø

FIXTURE UNIT CALCULATION

BASED ON 2022 CALIFORNIA PLUMBING CODE

FIXTURES	QTY	CW FU	TOTAL CW	HW FU	TOTAL HW	WASTE FU	TOTAL
WATER CLOSET TANK TYPE	3	2.5	7.5	–	–	4.0	12.0
LAVATORY	3	1.0	3.0	1.0	3.0	1.0	3.0
SHOWER TRAY	2	4.0	8.0	4.0	8.0	2.0	4.0
WASHER DRYER	1	4.0	4.0	4.0	4.0	2.0	2.0
TOTAL UNITS			22.5		15.0		23.0

COPPER PIPE SIZING SCHEDULE

SIZE	DOMESTIC WATER PIPE SIZING FU		DOMESTIC WATER PIPE SIZING FLUSH VALVE
	HOT WATER	COLD WATER	COLD WATER
½"	3	3	0
¾"	8	10	0
1"	16	23	0
1¼"	28	51	12
1½"	46	103	35
2"	119	254	132

LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	W	WASTE ABOVE CEILING
	W	WASTE BELOW FLOOR
	V	VENT
	CW	COLD WATER
	HW	HOT WATER
		ITEMS TO BE REMOVED
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
	SOV	SHUT-OFF VALVE (SECTIOAL VA.)
		RISER UP
		DROP DOWN
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
(E)	EXIST	EXISTING
	CO	CLEANOUT
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
	GW	GREASE WASTE
	BEL	BELOW
	EL	ELEVATION
	CLG	CEILING
	DN	DOWN
	FLR	FLOOR
	SCD	SECONDARY CONDENSATE DRAIN
	PRV	PRESSURE REDUCING VALVE
	SV	SOLENOID VALVE
⊗	SOV	SHUT-OFF VALVE IN YARDBOX

PIPE SCHEDULE

SERVICE	LOCATION	MATERIAL
DOMESTIC WATER	COLD WATER	TYPE "L" COPPER PIPING WITH WROUGHT COPPER SWEAT FITTINGS
	HOT WATER	SAME AS ABOVE INSULATED PER SPECIFICATIONS
SANITARY WASTE /	ABOVE FLOOR	PVC SCHEDULE 40
	BELOW FLOOR	PVC SCHEDULE 40
SANITARY VENT	CONCEALED	PVC SCHEDULE 40
	EXPOSED	PVC SCHEDULE 40
INDIRECT WASTE		TYPE "L" COPPER TUBING W/ WROUGHT COPPER SWEAT FITTINGS
GAS PIPE		BLACK STEEL

GENERAL NOTES

1-BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR PROBLEMS.

2-EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS.

3-SEE ARCHITECTURAL DRAWINGS FOR HANDICAP FIXTURE LOCATIONS AND MOUNTING HEIGHTS. FURNISH ALL EXPOSED WATER AND DRAIN PIPING BELOW ALL LAVATORIES AND SINKS WITH McGUIRE PROWRAP PRE-WRAPPED TAILPIECES AND P-TRAPS. ALL WATER CLOSET FLUSHING LEVERS SHALL BE TO THE WIDE SIDE OF THE STALL.

4-TRAPS FOR ALL LAVATORIES AND SINKS SHALL TRAP STRAIGHT BACK TO WALL WITH ALL REQUIRED OFFSETS HAPPENING WITHIN THE WALL.

5-ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING.

6-ALL CLEANOUTS SHALL BE INSTALLED WHERE EASILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH ALL EQUIPMENT, CABINETS, ETC., AND THE ARCHITECT PRIOR TO ANY INSTALLATION.

7-ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS PIPE UNLESS INDICATED ON DRAWINGS.

8-UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH VALVE AND AND PRIOR TO ALL EQUIPMENT CONNECTIONS.

9-ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THIS PROJECT:

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.

10-BEFORE FABRICATION OR INSTALLATION THIS CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED UNDER ANOTHER SECTION OF SPECIFICATIONS. EXACT ROUGH-IN LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED IN THE FIELD.

11-ALL LAVATORIES AND SINKS SHALL SHALL HAVE SHUT-OFF VALVES FOR BOTH HOT AND COLD WATER SUPPLY LINES ABOVE CEILING, LAVATORIES IN COMMUNITY AND RECREATION BUILDINGS SHALL BE PROVIDED WITH THERMOSTATIC TEMPERING VALVES SET @120°F.

12-ALL WASTE AND VENT PIPING SHALL SLOPE AT 2% UNLESS OTHERWISE INDICATED ON THE PLANS.

13-ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTERS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL.

14-ALL PLUMBING FIXTURES AND EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA STATE ENERGY COMMISSION TO COMPLY WITH EFFICIENCY STANDARDS PER AUTHORITY WITH JURISDICTION.

15-INSULATION SHALL BE PROVIDED ON ALL HOT WATER PER SPECIFICATIONS.

16-ALL BRACING OF PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES AS APPROVED BY AUTHORITY WITH JURISDICTION.

17-WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND THE FIELD ENGINEER.

18-THE FLOW RATES FOR ALL PLUMBING FIXTURES SHALL COMPLY WITH THE MAXIMUM FLOW SPECIFIED IN SECTION 4.303.1.

19-THE HOT WATER SYSTEM SHALL NOT ALLOW MORE THAN 0.6 GALLONS OF WATER TO BE DELIVERED TO ANY FIXTURE BEFORE HOT WATER ARRIVES.

20-PRIOR TO USE OF POTABLE WATER, THE SYSTEM SHALL BE DISINFECTED ACCORDING TO THE PROCEDURE SET IN SECTION 609.9 OF THE CALIFORNIA PLUMBING CODE 2019.

21-WATER SUPPLY AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE BE CONFIGURED TO PROTECT AGAINST CONTACT. PROTECTORS, INSULATORS, OR BOTH SHALL COMPLY WITH ASME A112.18.9.

22-WATER PIPE AND FITTINGS WITH A LEAD CONTENT WHICH EXCEED 0.25% SHALL BE PROHIBITED IN SYSTEMS CONVEYING POTABLE WATER. (CPC 604.2 & CALIFORNIA HEALTH & SAFETY CODE 116875).

23-ALL FIXTURES IN HANDICAP RESTROOMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA HANDICAP CODE AND LOCAL HANDICAP CODES HAVING JURISDICTION.

24-ALL FIXTURES, EQUIPMENT, PIPING, AND MATERIALS SHALL BE LISTED. (CPC 301.1)

25-ALL PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED THOSE SHOWN IN CPC TABLE 313.1.

26-EACH PLUMBING FIXTURE SHALL BE INDEPENDENTLY VALVED PER CODE.

27-INSTALL ALL PLUMBING TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING. NO WATER OR DRAIN LINES PERMITTED OVER OR UNDER ELECTRICAL PANELS.

28-ALL REQUIRED CLEANOUTS SHOULD BE INSTALLED AS PER CPC SEC. 707.0 & 719.0.

29-BUILDING REVIEW MUST BE APPROVED PRIOR TO OBTAINING SEPARATE MECHANICAL/ELECTRICAL/PLUMBING PERMITS ASSOCIATED WITH THIS PROJECT.

30-ALL EXPOSED GAS PIPING SHALL BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL APPROVED FOR SUCH APPLICATIONS SECTION 1210.2 AS PER CALIFORNIA PLUMBING CODE.

31-NO GAS PIPING SHALL BE INSTALLED IN OR ON THE GROUND UNDER ANY BUILDING, STRUCTURE, OR FOUNDATION UNLESS INSTALLED IN GAS TIGHT CONDUIT IF PROTECTION TERMINATES OUTSIDE, SECTION 1210.1 AS PER CALIFORNIA PLUMBING CODE.

32- ALL HORIZONTAL SEWER AND WASTE WATER PIPES SHALL RUN @ MINIMUM 2% SLOPE.

NOTES -- ACCESSIBILITY

1. WATER CLOSET CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. CONTROLS FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREA, NO MORE THAN 44 INCHES ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE SHALL BE NO GREATER THAN 5 LBS.
2. ALL ROUGH SURFACES AND PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
3. THE HEIGHT OF ACCESSIBLE WATER CLOSETS SHALL BE MINIMUM 17 INCHES AND A MAXIMUM OF 19 INCHES TO THE TOP OF THE TOILET SEAT.
4. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER OPERATED, PUSH TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF FAUCETS REMAIN OPEN FOR AT LEAST 10 SECONDS.
5. URINAL FLUSH VALVES ARE TO BE 44 INCHES MAXIMUM ABOVE FINISHED FLOOR.

P-1 | PLUMBING SCHEDULE, GENRAL NOTES & LEGEND
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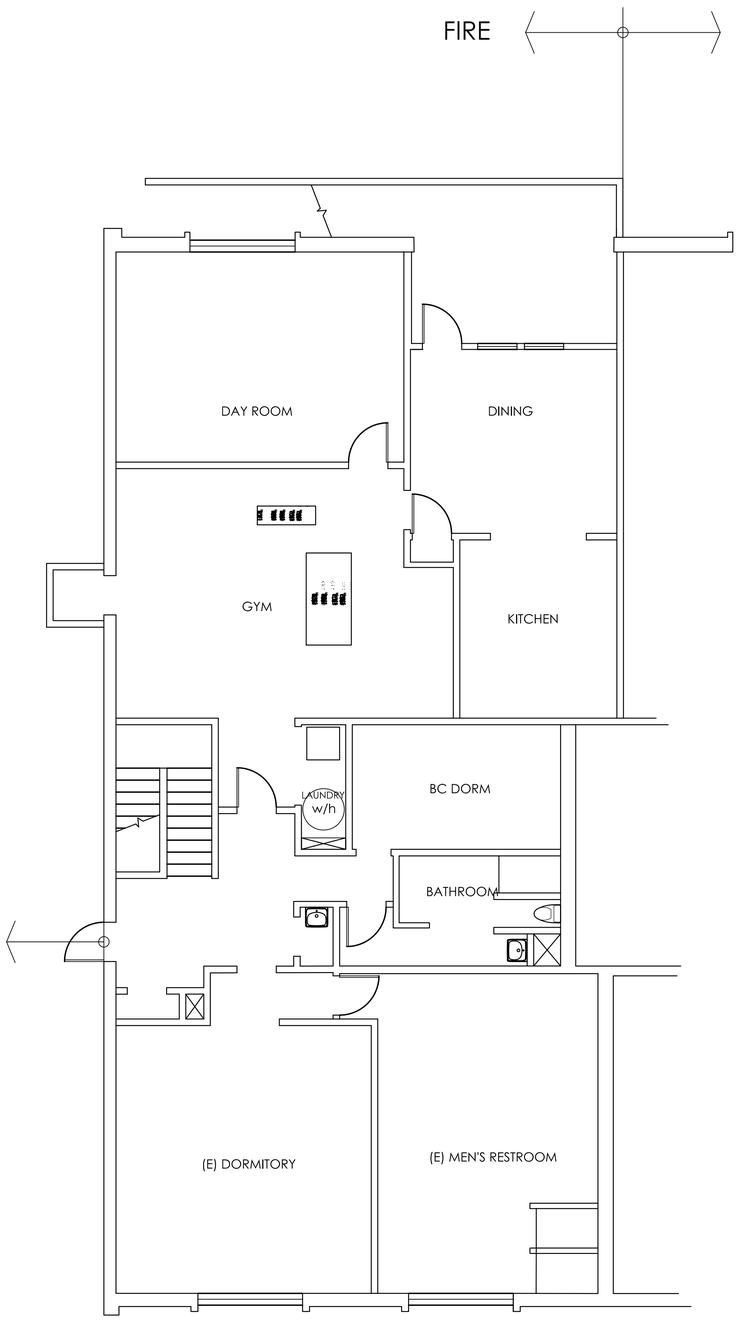

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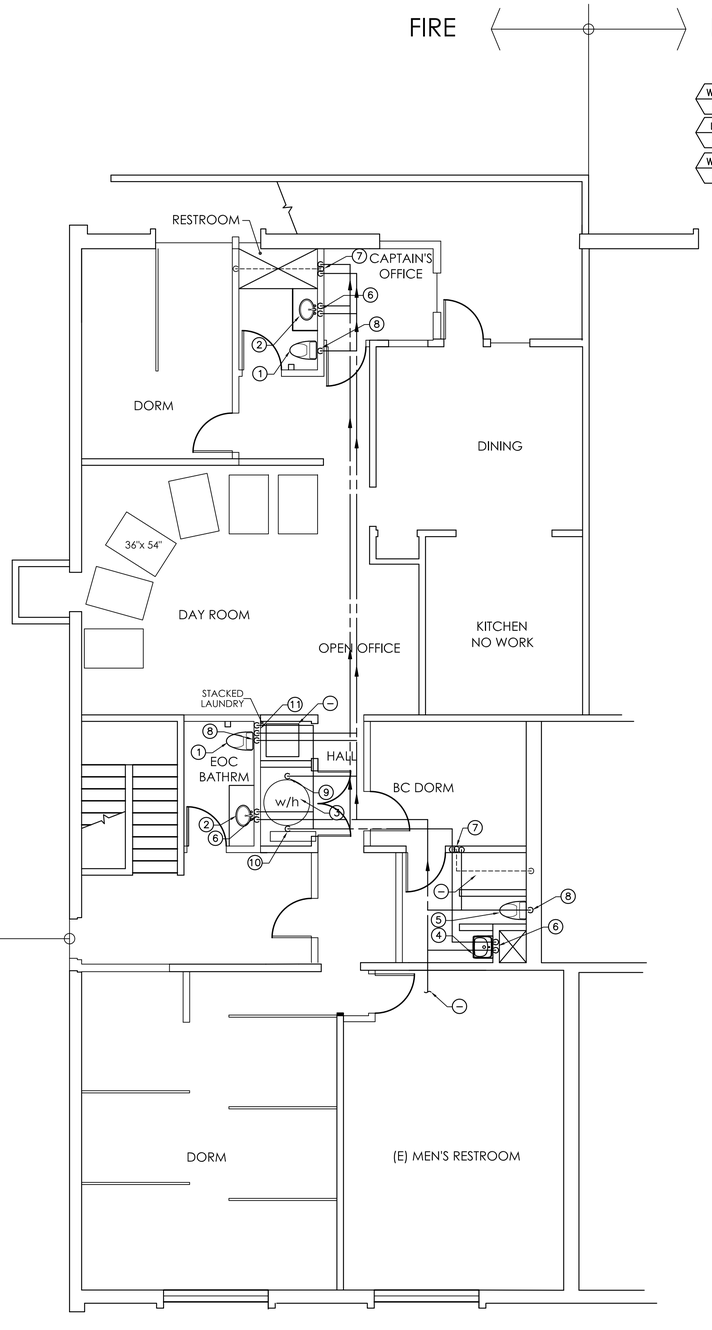

CONSTRUCTION KEYNOTES

WC 1 — (1) FURNISH AND INSTALL WATER CLOSET, MAKE AND MODEL PER PLUMBING SCHEDULE.

L 1 — (2) FURNISH AND INSTALL LAVATORY, MAKE AND MODEL PER PLUMBING SCHEDULE.

WH 1 — (3) FURNISH AND INSTALL WATER HEATER, MAKE AND MODEL PER PLUMBING SCHEDULE.

(4) EXISTING LAVATORY.

(5) EXISTING WATER CLOSET.

(6) ½"ø HOT AND COLD WATER PIPES DOWN IN WALL TO LAVATORY'S FAUCET THRU THERMOSTATIC TEMPERING VALVE.

(7) ¾"ø HOT AND COLD WATER PIPES DOWN IN WALL TO WALL MOUNTED CONTROL VALVE, WITH ¾"ø TEMPERED WATER PIPE UP IN WALL TO ABOVE CEILING LEVEL AND DOWN IN WALL TO SHOWER HEAD.

(8) ¾"ø COLD WATER PIPE DOWN IN WALL TO WATER CLOSET'S INLET CONNECTION.

(9) 1"ø COLD WATER DON TO WATER HEATER'S INLET CONNECTION.

(10) 1"ø HOT WATER PIPE DOWN TO WATER HEATER'S OUTLET CONNECTION.

(11) ¾"ø HOT AND COLD WATER PIPE DOWN IN WALL TO WASH BOX'S CONNECTION.

GENERAL CONSTRUCTION NOTES

1–RUN ALL HORIZONTAL COLD AND HOT WATER PIPES BELOW EXISTING CEILING..

2–ON COMPLETION OF ALL WORKS, CONTRACTOR SHALL ARRANGE TO CLOSE/SEAL CEILING OPENINGS, FINISH TO MATCH EXISTING.

P–2 | PLUMBING CW LAYOUT SECOND FLOOR LAYOUT

3/16"=1'–0"

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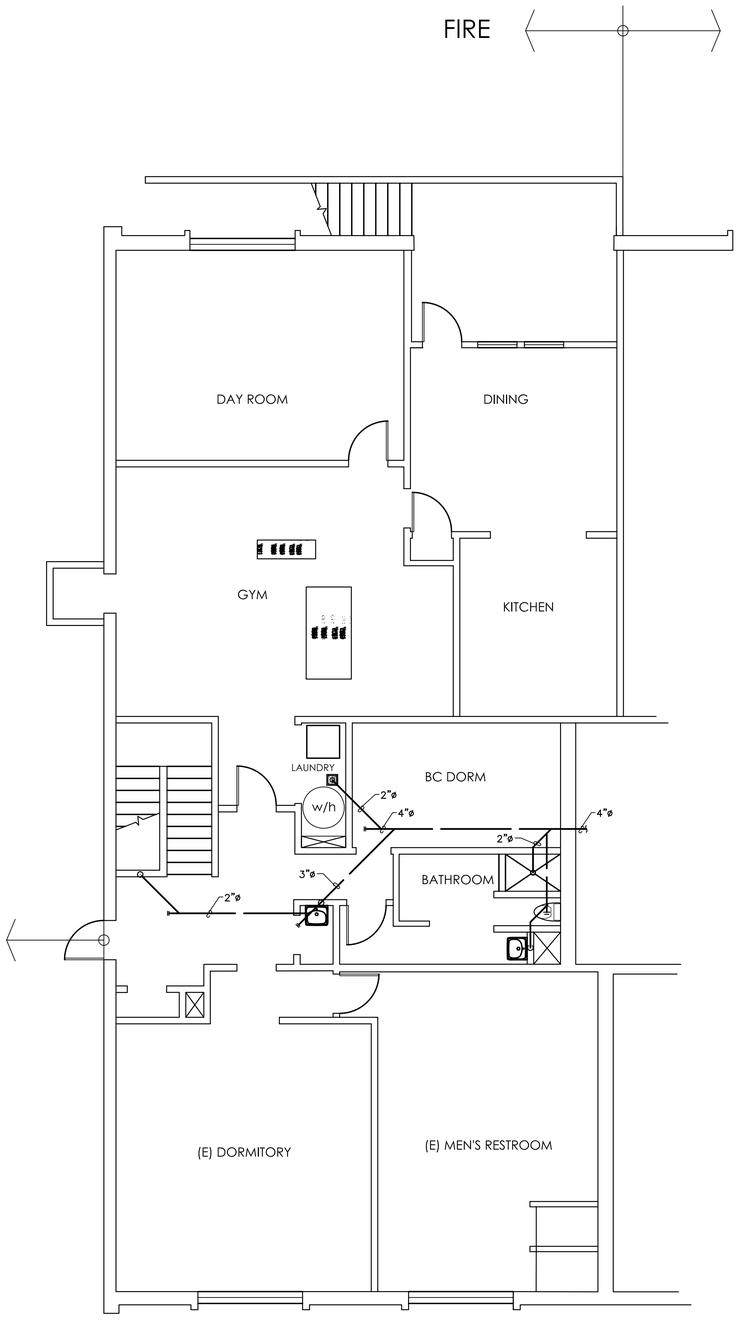

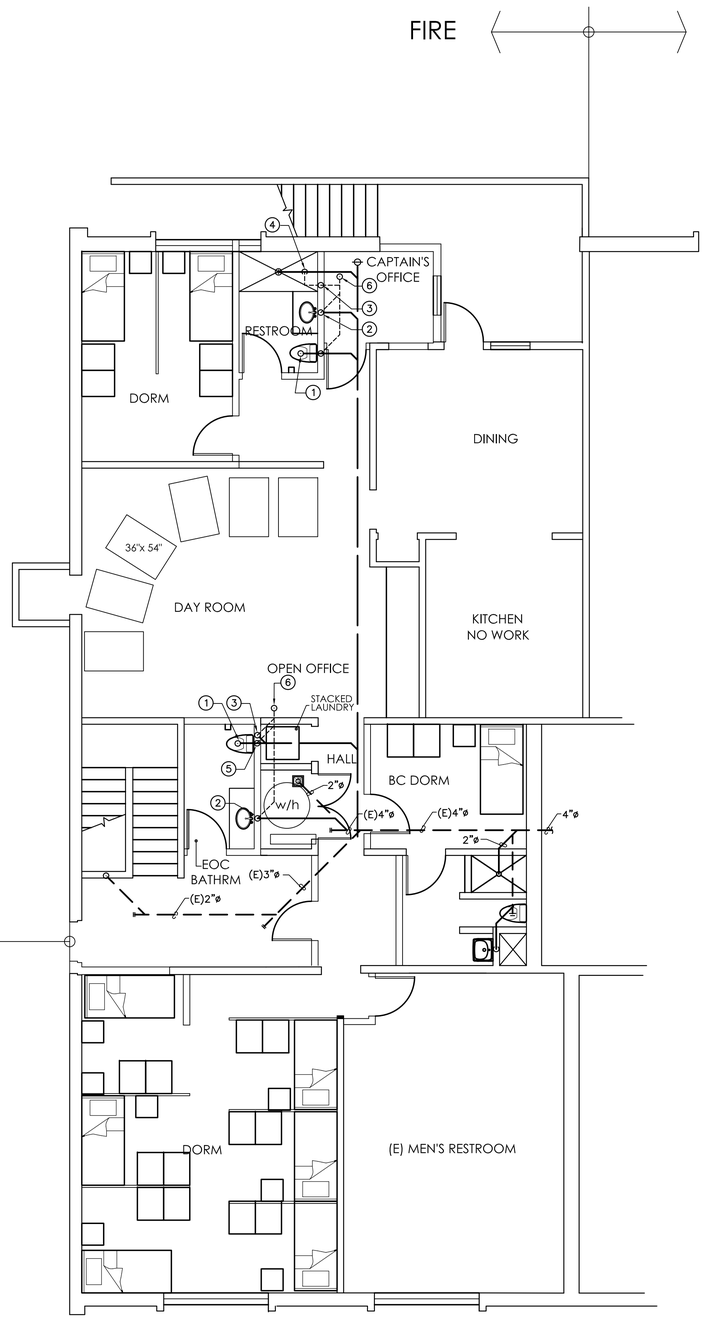

CONSTRUCTION KEYNOTES:

1. 4"ø SEWER FROM TOILET DOWN THRU FLOOR TO ABOVE FIRST FLOOR LEVEL CEILING LEVEL.
2. 2"ø WASTE PIPE DOWN IN WALL TO ABOVE FIRST FLOOR CEILING LEVEL.
3. 1½"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
4. 2"ø WASTE PIPE RUNNING HORIZONTALLY WITH 1½"ø VENT PIPE RUNNING HORIZONTALLY AND UP IN WALL TO ABOVE CEILING LEVEL.
5. 2"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
6. 2"ø VENT PIPE UP THRU ROOF TERMINATING 15" ABOVE ROOF LEVEL.

GENERAL CONSTRUCTION NOTES:

ALL HORIZONTAL SEWER AND WASTE PIPE SHALL RUN AT MINIMUM 2% SLOPE.

ALL VENTS UP THRU ROOF SHALL TERMINATE MINIMUM 10 FEET FROM ANY OUTSIDE AIR INTAKE,

P–3 | PLUMBING SW LAYOUT SECOND FLOOR LAYOUT

3/16"=1'–0"

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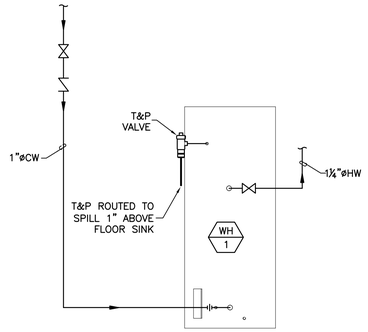
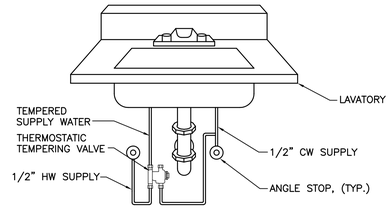


WATER HEATER SCHEMATIC PIPING DIAGRAM

SCALE : NONE

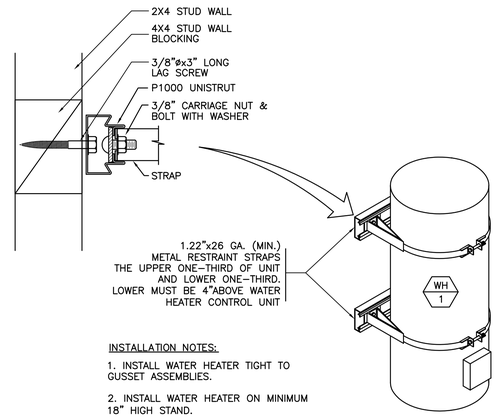
4 / P-4



THERMOSTATIC TEMPERATURE VALVE DETAIL

SCALE : NONE

1 / P-4



INSTALLATION NOTES:

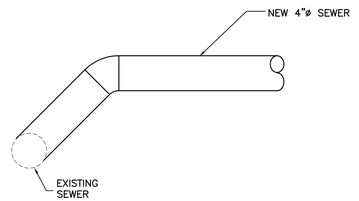
1. INSTALL WATER HEATER TIGHT TO GUSSET ASSEMBLIES.

2. INSTALL WATER HEATER ON MINIMUM 18" HIGH STAND.

WATER HEATER MOUNTING DETAIL

SCALE : NONE

2 / P-4



SEWER CONNECTION TO EXISTING

SCALE : NONE

3 / P-4

P-4 | PLUMBING DETAILS

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P-4

PLUMBING SPECIFICATION

1.01 WORK INCLUDED

A. FURNISH ALL LABOR, MATERIALS, SERVICES, AND EQUIPMENT NECESSARY FOR THE COMPLETION OF ALL PLUMBING WORKS. WORK, MATERIALS AND EQUIPMENT NOT INDICATED OR SPECIFIED WHICH ARE NECESSARY FOR THE COMPLETE AND PROPER OPERATION OF THE WORK OF THIS SECTION IN ACCORDANCE WITH THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS SHALL BE PROVIDED AND INCORPORATED AT NO ADDITIONAL COST TO THE OWNER.

1.02 QUALITY ASSURANCE

CODE REQUIREMENTS: ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES.
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.

A. ACCESS PLUMBING FIXTURES SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF CBC.

B. HEIGHTS AND LOCATION OF ALL FIXTURES SHALL BE ACCORDING TO CBC TABLE 1115B–1.

C. FIXTURE CONTROLS SHALL COMPLY WITH CBC SECTION 1118B.

1.03 DRAWINGS

BECAUSE OF THE SMALL SCALE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES. THE GENERAL ARRANGEMENT INDICATED ON THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. THE WORK AND THE INSTALLATION IS IN ACCORDANCE WITH ALL GOVERNING AUTHORITIES.

1.04 PERMITS, INSPECTIONS AND LICENSES

ALL PERMITS; INSPECTIONS AND LICENSES REQUIRED BY THE LEGALLY CONSTITUTED AUTHORITIES FOR INSTALLATION OF THE WORK ACCORDING TO THE PLANS AND SPECIFICATIONS SHALL BE OBTAINED AND PAID AS A PART OF THE WORK OF THIS SECTION.

1.05 UTILITIES

SEE DRAWINGS FOR POINTS OF CONNECTION.

A. GAS SERVICE AND METER ASSEMBLY: THE CONTRACTOR SHALL ARRANGE WITH THE SERVING UTILITY COMPANY FOR THE ADJUSTMENT EXISTING GAS METER AND REGULATOR FOR GAS DEMAND AS INDICATED AND IN THE LOCATION AS SHOWN ON THE SITE PLAN.

B. WATER SERVICE FOR DOMESTIC: THE CONTRACTOR SHALL ARRANGE WITH THE SERVING UTILITY COMPANY FOR THE REPLACEMENT OF EXISTING ⅝"ø WATER METER WITH 1"ø WATER METER. AND ANY REQUIRED APPURTENANCES, IN ACCORDANCE WITH SERVING UTILITY STANDARDS AND SHALL PAY ALL COSTS INCURRED.

1.06 EXAMINATION OF PREMISES

A. BEFORE BIDDING ON THIS WORK, CONTRACTORS SHALL MAKE A CAREFUL EXAMINATION OF THE PREMISES AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE REQUIREMENTS OF THE CONTRACT. BY THE ACT OF SUBMITTING A PROPOSAL FOR THE WORK INCLUDED IN THIS CONTRACT, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION, AND THAT HE IS FAMILIAR WITH AND ACCEPTS ALL CONDITIONS OF THE SITE.

1.07 PROTECTION

ALL WORK, EQUIPMENT AND MATERIALS SHALL BE PROTECTED AT ALL TIMES. CONTRACTOR SHALL MAKE GOOD ALL DAMAGE CAUSED EITHER DIRECTLY OR INDIRECTLY BY HIS OWN WORKMEN. HE SHALL CLOSE ALL PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION.

1.08 SUBMITTAL DATA:
FURNISH, ALL AT ONE TIME, PRIOR TO ANY INSTALLATION, VALID SUBMITTAL DATA ON ALL FIXTURES, MATERIAL, EQUIPMENT AND DEVICES. A LIST OF NAMES IS NOT A VALID SUBMITTAL.

1.09 UNINSPECTED WORK:

CONTRACTOR SHALL NOT ALLOW OR CAUSE ANY OF HIS WORK TO BE COVERED UP BEFORE IT HAS BEEN DULY INSPECTED, TESTED AND APPROVED BY INSPECTOR OF RECORD.

1.13 GUARANTEES:

CONTRACTOR SHALL GUARANTEE THE ENTIRE PLUMBING AND PIPING SYSTEMS UNCONDITIONALLY FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE.

2.01 MATERIALS AND EQUIPMENT:

A. PROVIDE ALL MATERIALS AND EQUIPMENT AS SPECIFIED OR REQUIRED IN THE WORK, NEW AND FREE FROM DEFECTS AND IMPERFECTIONS.

B. PIPE AND FITTINGS:

a. SOIL AND WASTE PIPING WITHIN THE BUILDING AND OUTSIDE REFER TO PIPE SCHEDULE.
b. DOMESTIC WATER PIPE REFER TO PIPE SCHEDULE.
c. VENT PIPING REFER TO PIPE SCHEDULE.
d. GAS PIPING REFER TO PIPE SCHEDULE.

C. GAS PIPING:

NO GAS PIPE SHALL RUN BELOW BUILDING.

F. VALVES:

1. GENERAL:

a. PIPING SYSTEMS SHALL BE SUPPLIED WITH VALVES ARRANGED SO AS TO GIVE COMPLETE AND REGULATING CONTROL OF THE BUILDING AND PIPING SYSTEMS THROUGHOUT THE BUILDING, AND LOCATED SO ALL PARTS ARE EASILY ACCESSIBLE AND MAINTAINED.

b. VALVE DESIGN: RISING STEM OR OUTSIDE SCREW AND YOKE STEMS. NON–RISING STEM VALVES MAY BE USED WHERE SPACE CONDITIONS PREVENT FULL EXTENSION OF RISING STEMS.

c. SIZES: SAME SIZE AS UPSTREAM PIPE, UNLESS OTHERWISE INDICATED.

2. PROVIDE CLASS 150 VALVES MEETING THE VALVE SPECIFICATIONS WHERE CLASS 125 VALVES ARE SPECIFIED BUT ARE NOT AVAILABLE.

3. VALVES:

a. ALL GATE, CHECK, BALL, SHALL BE CAST BRONZE BODY.

3. VALVES: (FOR GAS SERVICE)

a. HAMMOND BALL VALVE, 8901 UL, FM, 2–INCH AND SMALLER: MSS–SP110, RATED AT 150 WSP–600 WOG, UL LISTED, BRASS BODY, STAINLESS STEEL BALL, AND THREADED ENDS. VALVE SHALL BE C.S.A. CERTIFIED.

b. WALWORTH #1797F PLUG VALVES, 2–1/2 INCH AND LARGER: MSS SP–67; RATED AT 200 PSI CWP; LUBRICATED PLUG TYPE, WITH CAST IRON BODY, SINGLE GLAND, WRENCH OPERATED, AND FLANGED ENDS.

6. GLOBE VALVES:

a. GLOBE VALVES (HAMMOND IB 418), 2–INCH AND SMALLER: MSS SP–80; CLASS 125; ND CAP CONFORMING TO ASTM B 62; HORIZONTAL OR ANGLE PATTERN, LIFT–TYPE VALVE, WITH STAINLESS STEEL SPRING, BRONZE DISC HOLDER WITH RENEWABLE "TEFLON" DISC. PROVIDE VALVES CAPABLE OF BEING REFITTED AND GROUND WHILE THE VALVE REMAINS IN THE LINE.

7. HOSE BIBBS: SHALL BE ACORN OR APPROVED EQUAL.

a. HOSE BIBBS SHALL BE BRONZE BODY WITH CHROME OR NICKEL PLATED FINISH, WITH RENEWABLE COMPOSITION DISC, HAVE LOOSE KEY 3/4" HOSE END WITH 3/4" FEMALE INLET AND VACUUM BREAKER. VACUUM BREAKER SHALL CONFORM TO ASSE STANDARD 1011 WITH FINISH TO MATCH HOSE BIBB

8. COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVES: SHALL BE MCDONALD, WATTS, OR APPROVED EQUAL, BRONZE BODY, TEST LEVER, THERMOSTAT, COMPLYING WITH ANSI Z21.22 LISTING REQUIREMENTS FOR TEMPERATURE DISCHARGE CAPACITY. RELIEF VALVES SHALL BE FACTORY SET FOR 210 DEGREE F. AND 150 P.S.I. PRESSURE. RELIEF VALVES SHALL BE TYPE AS RECOMMENDED BY WATER HEATER MANUFACTURER.

9. FLOOR CLEANOUTS: SHALL J.R. SMITH, ZURN OR AS SPECIFIED IN THE SCHEDULE.

10. WALL CLEANOUTS: ZURN NO. Z–1468 FOR STEEL PIPE AND ZURN NO. Z–1446–NH FOR CAST IRON PIPE.

11. CLEANOUTS TO GRADE: ZURN HEAVY DUTY CLEAN–OUT HOUSING Z–1474–SG–IN WITH BRONZE PLUG SET FLUSH WITH SURFACE FOR CONCRETE AREAS. ASPHALT OR NON–SURFACED AREAS SHALL BE INSTALLED WITH RING OF CONCRETE POURED AROUND THE BOTTOM FLANGE SIX INCHES (6") BELOW SURFACE. USE CAST IRON SOIL PIPE ON CLEANOUT RISERS. FOR CLEANOUTS IN NON–TRAFFIC AREAS, TERMINATE CLEANOUT PLUG IN CONCRETE YARD BOX.

12. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MISCELLANEOUS IRON WORK INCLUDING ANGLES, CHANNELS, ETC., REQUIRED TO APPROPRIATELY SUPPORT THE VARIOUS PIPING SYSTEMS. HANGER SPACING AND LOCATION SHALL CONFORM TO CALIFORNIA PLUMBING CODE REQUIREMENTS.

13. ALL HORIZONTAL RUNS OF PIPING WITHIN THE BUILDING, EXCEPT FOR COPPER WATER SUPPLY STUB–OUTS AT FIXTURES AND COPPER SUPPLY HEADERS WITHIN WALLS, TO BE SUPPORTED FROM THE STRUCTURAL FRAMING WITH STEEL RODS, TOLCO, OR APPROVED EQUAL. COPPER STUB–OUTS AND COPPER HEADERS WITHIN WALLS TO BE SUPPORTED FROM THE WALL FRAMING WITH HOLDRITE PIPE HANGERS AND SUPPORTS.

14. HANGER RODS AND SPACING SHALL CONFORM TO THE FOLLOWING TABLE:

PIPE SIZES	SPACING	RODS
2 INCH AND SMALLER	6 FEET	3/8 INCH
2–1/2 INCH TO 3 INCH	8 FEET	1/2 INCH
4 INCH AND LARGER	8 FEET	5/8 INCH

15. SHIELDS: PROVIDE 20 GAUGE GALVANIZED SHEET METAL SHIELDS AT PIPING HANGERS FOR ALL INSULATED PIPING. SIZE SHIELDS FOR EXACT FIT TO MATE WITH PIPE INSULATION.

16. INSULATION:

INSULATION SHALL BE PROVIDED ON ALL HOT WATER AND CIRCULATING PIPING AND FIRST 5' ON THE COLD WATER FROM THE HOT WATER HEATER PER CALIFORNIA PLUMBING CODE.

a) INSULATION WALL THICKNESS FOR PIPE UPTO 1"ø SHALL BE 1" THICK PER TITLE 24 PART 6, 120.4.

b) INSULATION WALL THICKNESS FOR 1½"ø PIPE SHALL BE 1½" THICK PER TITLE 24 PART 6, 120.4.

c) INSULATION WALL THICKNESS SHALL NOT BE LESS THAN 2" FOR A PIPE FOR A PIPE 2" OR MORE IN DIAMETER. CPC 609.11.2.

d) INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50. ALL INSULATION SHALL BE CONTINUOUS THROUGH SUPPORTS AND HANGERS.

17. EQUIPMENT AND FIXTURES: REFER TO SCHEDULE ON DRAWINGS.

PART 3 – EXECUTION

3.01 INSTALLATION – GENERAL

A. LOCATIONS AND ACCESSIBILITY: INSTALL EQUIPMENT FOR EASE OF MAINTENANCE AND REPAIR. IF CHANGES IN THE INDICATED LOCATIONS OR ARRANGEMENTS ARE MADE BY THE CONTRACTOR, THEY SHALL BE MADE WITHOUT ADDITIONAL CHARGES.

B. OPENINGS: FURNISH INFORMATION TO THE OTHER TRADES ON SIZE AND LOCATION OF OPENINGS WHICH ARE REQUIRED IN WALLS, SLABS, ROOF, FOR PIPING AND EQUIPMENT AT THE PROPER TIMES.

C. CLOSING–IN OF UNINSPECTED WORK: DO NOT ALLOW OR CAUSE ANY OF THE WORK TO BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE ARCHITECT. ANY WORK ENCLOSED OR COVERED PRIOR TO SUCH INSPECTION AND TEST SHALL BE UNCOVERED AND, AFTER IT HAS BEEN INSPECTED, TESTED, AND APPROVED, MAKE ALL REPAIRS WITH SUCH MATERIALS AS MAY BE NECESSARY TO RESTORE ALL WORK, INCLUDING THAT OF OTHER TRADES, TO ITS ORIGINAL AND PROPER CONDITION.

D. BEFORE LAYING OF ANY PIPE OR DIGGING OF ANY TRENCHES, CONTRACTOR SHALL DETERMINE BY ACTUAL EXCAVATION AND MEASUREMENT EXACT LOCATIONS AND DEPTH OF EXISTING UTILITY AND SERVICE LINES TO WHICH HE IS GOING TO CONNECT. SHOULD EXISTING CONDITIONS PREVENT FOR INSTALLATION OF PIPING AS DETAILED ON DRAWINGS OR TO MAKE CONNECTION IN MANNER INDICATED, CONTRACTOR SHALL CONFER WITH THE ARCHITECT, OWNER'S REPRESENTATIVE AND ENGINEER FOR DIRECTION.

E. EXCAVATION, TRENCHING AND BACKFILL: DO ALL NECESSARY TRENCH EXCAVATION, SHORING, BACKFILLING AND COMPACTION REQUIRED FOR THE PROPER LAYING OF THE PIPE LINES. REMOVE ALL SURPLUS EARTH MATERIALS FROM SITE.

1. BACKFILL SHALL BE CLEAN SOIL FREE FROM ROCKS AND DEBRIS. COMPACT TO NINETY PERCENT (90%) OF SURROUNDING SOIL. ALL PIPING BOTH INSIDE AND OUTSIDE OF BUILDING SHALL BE INSTALLED IN A MINIMUM 6" SAND BED AND COVERED WITH 6" OF SAND PRIOR TO BACKFILL. CONTINUE BACKFILL WITH MATERIALS FREE OF ROCKS AND DEBRIS, PROPERLY MOISTENED AND MECHANICALLY TAPERED AND COMPACTED TO 90% OF SURROUNDING SOIL. COMPACTION BY FLOODING OR JETTING IS EXPRESSLY PROHIBITED.

2. WATER, SOIL AND WASTE PIPING SHALL HAVE TWENTY FOUR (24") OF COVER MINIMUM, EXCEPT ALL PVC PIPE MATERIAL AND ALL GAS PIPING SHALL HAVE THIRTY (30") OF COVER MINIMUM AND FIRE LINES 36 INCHES OF COVER MINIMUM. ALL OTHER PIPE SHALL HAVE NOT LESS THAN EIGHTEEN INCHES (18") OF COVER, UNLESS OTHERWISE NOTED ON THE DRAWINGS. OFFSET GAS AND WATER PIPING AS REQUIRED TO PERMIT CROSSOVER OF UNDERGROUND PIPING SYSTEMS, AND ELECTRICAL CONDUIT SYSTEMS.

3. WATER PIPING SHALL NOT BE RUN IN THE SAME TRENCH WITH SEWER OR DRAINAGE PIPING UNLESS SEPARATED AS REQUIRED BY CPC AS FOLLOWS. THE BOTTOM OF WATER PIPE AT ALL POINTS SHALL BE AS LEAST TWELVE (12) INCHES ABOVE THE TOP OF THE SEWER OR DRAIN LINE. THE WATER PIPE SHALL BE PLACED ON A SOLID SHELF EXCAVATED AT ONE SIDE OF THE COMMON TRENCH WITH A MINIMUM CLEAR HORIZONTAL DISTANCE OF AT LEAST TWELVE (12) INCHES FROM THE SEWER OR DRAIN LINE.

4. NO PIPING SHALL RUN IN, THROUGH OR ABOVE ANY ELECTRICAL EQUIPMENT ROOMS OR SPACES AT ANY TIME.

5. HORIZONTAL SOIL AND WASTE PIPING SHALL BE INSTALLED TO A UNIFORM GRADE OF NOT LESS THAN ONE–FOURTH INCH (1/4") PER FOOT, UNLESS OTHERWISE INDICATED OR DIRECTED.

F. PIPING INSTALLATION:

1. ALL PIPING SHALL BE CONCEALED IN FINISHED PORTION OF THE BUILDING EXCEPT WHERE OTHERWISE INDICATED OR DIRECTED AT THE TIME THE WORK IS DONE. ALL PIPING SHALL BE INSTALLED TO CLEAR ALL FRAMING MEMBERS AND BEAMS, EVEN IF DRAWINGS DO NOT INDICATE SAME. CONTRACTOR SHALL CONSTANTLY CHECK THE WORK OF OTHER TRADES SO AS TO PREVENT ANY INTERFERENCE WITH THE INSTALLATION OF THIS WORK.

2. CONNECTIONS BETWEEN COPPER TUBING AND EQUIPMENT SHALL BE WITH MUELLER BRASS COMPANY, OR APPROVED EQUAL, BRASS STREAM LINE COPPER TO P.P.S. GROUND JOINT UNIONS.

3. CORROSION PROTECTION:

A. ALL UNDERGROUND METALLIC PIPING INCLUDING CAST IRON (SOIL & STORM DRAIN), COPPER (WATER) OR STEEL (GAS) LOCATED BOTH INSIDE AND OUTSIDE OF THE BUILDING SHALL BE ENCASED WITHIN A MINIMUM OF 8 MIL POLYETHYLENE PLASTIC SLEEVE.

B. ALL UNDERGROUND METALLIC VALVES, UNIONS, FITTINGS, FLANGES, BOLTS & APPURTENANCES THAT ARE UNABLE TO BE ENCASED WITHIN SLEEVE AS NOTED ABOVE SHALL BE PROTECTED AS FOLLOWS.

1) PROVIDE HEAVY COATING OF "HENRYS" OIL BASE ROOF MASTIC OVER ENTIRE EXPOSED SURFACE.

2) AFTER MASTIC COATING IS COMPLETED AND INSPECTED, WRAP ENTIRE METALLIC COMPONENT WITH A MINIMUM OF 8 MIL POLYETHYLENE WRAP OVERLAPPED 50% OF THE CIRCUMFERENCE AND EXTENDED BEYOND ENDS OF COMPONENT AS REQUIRED FOR POLYETHYLENE TO BE SECURED TO PIPING. THE OVERLAP SEAM SHALL BE LOCATED TO AVOID BACKFILL MATERIAL FROM ENTERING THE ENCAPSULATED AREA. THE ENDS AND SEAM OF THE OF THE POLYETHYLENE MATERIAL SHALL BE SECURED TO THE PIPING AND SEALED WITH 3M SCOTCH/WRAP N. 50, 8 MIL., 2" WIDE, PRINTED, PIPE WRAP SEALING TAPE.

b. SOLDER JOINTS FOR COPPER SHALL BE MADE WITH 95/5 LEAD FREE SOLDER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR THE SERVICE INTENDED AND SHALL BE NSF/61 CERTIFIED APPROVED.

c. USE THREADED ADAPTERS ON COPPER TUBING WHERE THREADED CONNECTIONS ARE REQUIRED.

2. WELDED JOINTS: ALL WELDING TO BE PERFORMED BY WELDERS CERTIFIED AS PASSING ASME BOILER AND PRESSURE CODE (SECTION IX) AND SHALL COMPLY WITH ASME STD. B31.1.0 AND THE AMERICAN WELDING SOCIETY, WELDING HANDBOOK.

C. ALL CLOSET BENDS SHALL BE ADEQUATELY BLOCKED AND SECURED. TRAP ARMS AND SIMILAR CONNECTIONS INSTALLED BELOW THE FLOOR LEVEL OR UNDER CONCRETE SLABS SHALL BE ADEQUATELY SUPPORTED AND ANCHORED TO PREVENT MOTION IN ANY DIRECTION. ALL PIPING INSTALLED ABOVE GRADE WITHIN BUILDINGS SHALL BE SECURED TO STRUCTURAL FRAMING WITH UNISTRUT OR PIPE CLAMPS TO PROVIDE A RIGID INSTALLATION. PIPING UTILIZING GASKETS AS A SEAL SHALL BE GIVEN PRIME CONSIDERATION TO PROVIDING ADEQUATE STABILITY THROUGH PROPER SUPPORTS AND ANCHORS BECAUSE OF ITS FLEXIBLE NATURE.

D. FLEXIBLE PIPING OF ANY KIND WILL NOT BE PERMITTED EXCEPT WHEN INDICATED ON DRAWINGS PROVIDE HOSE MASTER INC., FLEXIBLE PIPE APPLIANCE CONNECTOR, MALE NIPPLE AND PLASTIC COVER, FOR KITCHEN EQUIPMENT ONLY.

E. INSTALLATION OF PLUMBING FIXTURES:

1. INSTALL EACH FIXTURE AT THE EXACT HEIGHT AND LOCATION SHOWN ON THE ARCHITECTURAL DRAWINGS.

2. SET FIXTURES, SUPPLIES, TRAP AND TRAP OUTLET SQUARE WITH THE WALL, IN LINE WITH FIXTURE OUTLETS WITHOUT ANY OFFSETS, ANGLES, OR BENDS.

4. STERILIZATION OF DOMESTIC WATER LINES

STERILIZE WATER LINES BY FILLING WITH A SOLUTION CONTAINING FIFTY (50) PARTS OF CHLORINE PER MILLION PARTS WATER AND HOLDING THE SOLUTION THEREIN FOR AT LEAST TWENTY–FOUR (24) HOURS WITH A WATER HEAD OF AT LEAST FIVE FEET (5') ABOVE THE HIGHEST POINT IN THE SYSTEM. UNLESS OTHERWISE DIRECTED, THOROUGHLY FLUSH EACH LINE PRIOR TO STERILIZATION. INTRODUCTION OF STERILIZING SOLUTION OR MATERIALS INTO THE LINES SHALL BE SUCH AS TO PROVIDE THOROUGH AND UNIFORM DISTRIBUTION THROUGHOUT THE SYSTEM.

5. TESTING

NO PIPING WORK SHALL BE CONCEALED OR COVERED UNTIL PIPING HAS BEEN TESTED, INSPECTED AND APPROVED BY THE INSPECTOR. ALL PIPING FOR PLUMBING SYSTEMS SHALL BE COMPLETELY INSTALLED AND TESTED AS REQUIRED BY THE CALIFORNIA PLUMBING CODE. TEST PRESSURES AND TIMES INDICATED ARE A MINIMUM ONLY. ALL TESTS SHALL BE AS REQUIRED BY THE GOVERNING AUTHORITY AS WELL.

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DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

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