CITY OF IRVINE
COMMUNITY DEVELOPMENT
APPROVED

This set of plans and specification must be kept on the job site at all times. It is unlawful to make any changes or alterations on the plans without written permission from the City of Irvine Community Development Department. The stamping of this plan and specification SHALL NOT be held to permit or be an approval of the violation of any provisions of any City Ordinance or State Law, as may be found during field inspection.

APPROVED BY: JOEL B. & JONATHAN L.
DATE : 3/31/2026

CITY OF IRVINE
BUILDING AND SAFETY DIVISION
APPROVAL OF HEATING VENTILATION
AIR CONDITIONING REFRIGERATION PLANS

The heating and ventilating, air conditioning refrigeration as submitted upon these plans and proposed for installation have been reviewed and found to meet the minimum requirements of applicable California Mechanical Code. This approval does not constitute authority to violate any provisions of said code not does it prevent further corrections of errors, as my be found during field inspection.

APPROVED BY: VICTOR MURO
DATE : 3/31/2026

THE CITY OF IRVINE

BUILDING PLANS

CITY OF IRVINE
BUILDING AND SAFETY DIVISION
APPROVAL OF ELECTRICAL PLANS

The proposed installation of power and of lighting as submitted upon your plans have been reviewed and found to meet the minimum requirements of the California Electrical Code. This approval does not constitute authority to violate any provision of said code nor does it prevent further corrections of errors, as may be found during field inspection.

APPROVED BY: SETAREH AFSHAR
DATE : 3/31/2026

CITY OF IRVINE
BUILDING AND SAFETY DIVISION
APPROVAL OF PLUMBING PLANS

The plumbing system has been reviewed, and as submitted upon your plans has been determined to meet the minimum requirements of the California Plumbing Code. This approval does not constitute authority to violate any provision of said code nor does it prevent further corrections of errors, as may be found during field inspections.

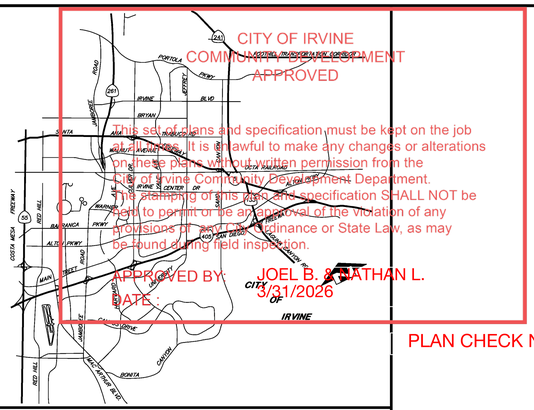
APPROVED BY: VICTOR MURO
DATE : 3/31/2026

PLAN CHECK NO.: 00961347-CTIS (B5)

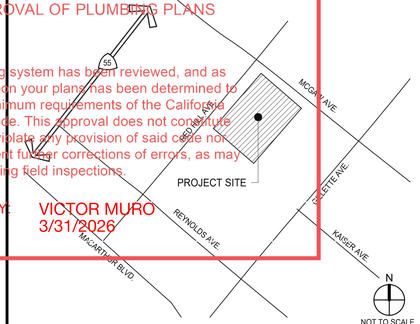
NOTE: DESIGNER TO PROVIDE PROJECT SPECIFIC INPUT WHERE INDICATED BY INSTRUCTIONS IN BOLD AND BRACKETED BY THE FOLLOWING SYMBOL <>

(VERSION 2022.1 EFFECTIVE JANUARY 2025)

VICINITY MAP



LOCATION MAP



PROJECT INFORMATION

PROJECT LOCATION: *17300 RED HILL AVE., IRVINE, CA 92614*

PROJECT DESCRIPTION: *THE SCOPE OF THIS PROJECT IS A 1ST GEN TENANT IMPROVEMENT FOR THE CITY OF IRVINE RECREATION CENTER. SCOPE OF WORK INCLUDES NEW KITCHEN WITH GREASE INTERCEPTOR, FULL BUILDING COMMISSIONING, EXTERIOR FENCE ENCLOSURE (40 LINEAL FT), AND NEW INTERIOR PARTITIONS, CEILINGS, FIXTURES, AND FINISHES. MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURAL WORK TO SUIT NEW LAYOUT. CORE AND SHELL SCOPE COVERED UNDER PLAN CHECK 00944992-CNEW. EXTERIOR ACCESSIBLE PATH OF TRAVEL ELEMENTS SERVING THE TENANT SPACE HAVE BEEN IMPROVED UNDER A SEPARATE PLAN CHECK. SEE APPROVED 00942132-GPRE FOR COMPLIANCE. RESTROOM ELEMENTS SERVING THE TENANT SPACE HAVE BEEN IMPROVED UNDER A SEPARATE PLAN CHECK. SEE APPROVED 00944992-CNEW PLANS FOR COMPLIANCE.*

SPECIAL CONDITIONS OF LAND USE APPROVAL: SPECIAL CONDITIONS RELATING TO THIS PROJECT ARE ESTABLISHED IN < *SUBDIVISION COMMITTEE RESOLUTION NO. 23-1073.* SEE PLAN CHECK 00944992-CNEW.

USE/OCCUPANCY/FLOOR AREA: A-4 - ASSEMBLY

ASSEMBLY (A-4)	96,857 S.F.
ASSEMBLY (A-2)	3,582 S.F.
ASSEMBLY (A-3)	1,197 S.F.
OFFICE (B)	1,318 S.F.
STORAGE (S-1)	4,560 S.F.
TOTAL	107,514 S.F.

NUMBER OF STORIES: *1*
MEZZANINES: *N/A*

TYPE OF CONSTRUCTION: *III-B*

FIRE RESISTANCE RATED ASSEMBLIES CONSTRUCTED OR ALTERED IN SCOPE OF WORK:
EXTERIOR WALLS: NO
FIRE WALLS: NO
FIRE BARRIERS: NO
FIRE PARTITIONS: YES, 1 HOUR AT EXIT CORRIDOR
HORIZONTAL ASSEMBLIES: *NO*

SEE SHEETS I121 AND I131 FOR FIRE-RESISTANCE RATED ASSEMBLY LEGEND, PROVIDING UNIQUE SYMBOLS FOR EACH RATED ASSEMBLY TYPE/RATING AND CALL-OUTS TO CONSTRUCTION DETAILS DEMONSTRATING COMPLIANCE WITH ASSEMBLY LISTINGS.

AUTOMATIC FIRE SPRINKLERS: *YES - NFPA - EXISTING TO REMAIN. AND MODIFIED AS NEEDED PER NEW CONSTRUCTION.*

ALLOWABLE HEIGHT/AREA ANALYSIS (CBC CHAPTER 5):
N/A - NO CHANGE - EXISTING TO REMAIN.

PARKING SUMMARY:
FOR PARK*ING INFORMATION REFER TO SHEET I100*

APPLICABLE STATE CODES (WITH CITY OF IRVINE AMENDMENTS):

CALIFORNIA BUILDING CODE	2022
CALIFORNIA ELECTRIC CODE	2022
CALIFORNIA MECHANICAL CODE	2022
CALIFORNIA PLUMBING CODE	2022
CALIFORNIA ENERGY EFFICIENCY CODE	2022
CALIFORNIA GREEN BUILDING STANDARDS CODE	2022
CALIFORNIA FIRE CODE	2022

WATER CONSERVING PLMB. FIXTURE VERIFICATION/RETROFIT

BUILDINGS FOR WHICH AN INITIAL FINAL INSPECTION WAS RECEIVED ON OR BEFORE JANUARY 1, 1994 SHALL COMPLY WITH THE CITY OF IRVINE'S INFORMATION BULLETIN # 321. WAS THE INITIAL FINAL INSPECTION ON THE PROPERTY UNDERGOING THE PROPOSED TENANT IMPROVEMENT RECEIVED PRIOR TO JANUARY 1, 1994: *NO*

CALIFORNIA GREEN BUILDING STANDARDS CODE

PROVISIONS OF THE CALIFORNIA GREEN BUILDING STANDARDS CODE APPLY TO ALL NEW LOW-RISE RESIDENTIAL BUILDINGS (THREE STORIES AND LESS INCLUDING HOTELS AND MOTELS) AND ALL NON-RESIDENTIAL TENANT IMPROVEMENT WITH VALUATION EQUAL OR GREATER THAN $200,000 AND ADDITIONS EQUAL OR GREATER THAN 1,000 SQUARE FEET.

SEE SHEET *I034* FOR COMPLETED CITY OF IRVINE GREEN BUILDING STANDARDS NOTES.

CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS

PROVISIONS OF THE CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARD APPLY TO THIS PROJECT, SEE THE FOLLOWING FOR COMPLETE COMPLIANCE DOCUMENTATION:

1. NRCC-ENV-E: I040
2. NRCC-ELC-E: ET400
3. NRCC-LTI-E: ET400-ET402
4. NRCC-MCH-E: MT600-MT603
5. NRCC-PLB-E: PT500
6. NRCC-CXR-E: I141 (5)

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

THIS PROJECT IS SUBJECT TO BOTH SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATION PER CALIFORNIA BUILDING CODE (CBC) CHAPTER 17 AND SHALL FOLLOW THE REQUIREMENTS AS DEFINED IN **CITY OF IRVINE INFORMATION BULLETINS NO. 278 AND 251.**

SEE SHEET *SD-0.0* FOR COMPLETED PROJECT SPECIFIC CITY OF IRVINE SPECIAL INSPECTION PROGRAM FORM.

SEE SHEET *N/A* FOR COMPLETED PROJECT SPEACIFIC CITY OF IRVINE SPECIAL OBSERVATION PROGRAM FORM.

CITY OF IRVINE MUNICIPAL CODE

[NOTE: COMPLETE IMC TEXT IS AVAILABLE ON THE INTERNET AT WWW.MUNICODE.COM]
THE DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH ALL APPLICABLE IRVINE MUNICIPAL CODE PROVISIONS INCLUDING BUT NOT LIMITED TO:

CONSTRUCTION WORK HOURS [IMC SECT. 6-8-205]
MON-FRI 7 AM TO 7 PM
SAT 9 AM TO 6 PM
NO WORK ON SUNDAYS OR FEDERAL HOLIDAYS

SECURITY DESIGN STANDARDS [IMC SECT. 5-9-517 AND 5-9-528]
SEE SHEET N/A FOR APPLICABLE COMPLETED SECURITY CODE PROVISIONS.

ROOFING [IMC 5-9-401 F. & 5-9-402 M.]

ROOF COVERING CLASSIFICATION SHALL MEET MINIMUM CLASS A.

ATTIC AND UNDERFLOOR VENT COVERS [IMC 5-9-401 E. & 5-9-402 K.]

ROOF AND UNDERFLOOR VENT OPENINGS SHALL BE COVERED WITH NON-COMBUSTIBLE, CORROSION RESISTANT, METAL WIRE MESH OR OTHER MATERIALS HAVING OPENINGS OF 1/16 INCH MINIMUM TO 1/8 INCH MAXIMUM. (CBC 706A.2) SEE DETAIL N/A

OFF-SITE FABRICATION

ALL OFF-SITE FABRICATION OF STRUCTURAL STEEL COMPONENTS INCLUDING STEEL STAIRS AND PRE-CAST CONCRETE SHALL BE DONE IN AN APPROVED FABRICATOR SHOP AS REQUIRED BY CITY OF IRVINE INFORMATION BULLETIN NO. 311. SEE BULLETIN FOR DETAILS AND REQUIRED DOCUMENTATION REQUIRED AT THE RECEIPT OF ANY SHIPMENT OF OFF-SITE FABRICATED ITEMS.

PRE-CONSTRUCTION MEETING REQUIREMENT

ALL CONSTRUCTION PROJECTS INVOLVING ADDITIONS TO NON-RESIDENTIAL STRUCTURES AND PARKING LOT MODIFICATIONS SHALL NOT COMMENCE UNTIL A PRE-CONSTRUCTION MEETING HAS BEEN HELD. THESE MEETINGS, WHILE NOT REQUIRED BY CITY CODE FOR TENANT IMPROVEMENTS NOT ADDING AREA, ARE BENEFICIAL FOR MAJOR TENANT IMPROVEMENTS OR ANY RESTAURANT INSTALLATIONS. TO SCHEDULE A PRE-CONSTRUCTION MEETING CONTACT COMMERCIAL BUILDING INSPECTOR SUPERVISOR AT (949) 724-6139 FOR BUILDING INSPECTIONS AND GRADING INSPECTOR SUPERVISOR AT (949) 724-6329 FOR PARKING LOT MODIFICATIONS INSPECTIONS.

DEFERRED SUBMITTALS

THIS PROJECT HAS BEEN PERMITTED WITHOUT REVIEW AND/OR APPROVAL OF THE FOLLOWING DEFERRED SUBMITTALS. PLANS APPROVED BY THE CITY SHALL BE OBTAINED FOR EACH DEFERRED ITEM LISTED BELOW PRIOR TO COMMENCING ANY WORK WITHIN THE SCOPE OF SUCH DEFERRAL. DEFERRALS MUST BE REVIEWED AND ACCEPTED BY THE ARCHITECT OR ENGINEER OF RECORD PRIOR TO SUBMITTING FOR REVIEW WITH THE CITY.

1. DROP DOWN BASKETBALL HOOPS STRUCTURAL SUPPORT AND ANCHORAGE
2. DROP DOWN VOLLEYBALL NETS STRUCTURAL SUPPORT AND ANCHORAGE
3. DIVIDER NETS STRUCTURAL SUPPORT AND ANCHORAGE
4. SCOREBOARD STRUCTURAL SUPPORT AND ANCHORAGE
5. WALK-IN COOLER/FREEZER
6. AUTOMATIC FIRE SPRINKLERS SYSTEM MODIFICATIONS (5)
7. FIRE UNDERGROUND MODIFICATIONS (SEE PLANS FOR SCOPE)
8. FIRE ALARM: FIRE ALARMS WITH EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM MODIFICATIONS
9. HOOD FIRE SUPPRESSION SYSTEM
10. FENCE ENCLOSURE
11. SUSPENDED CEILING STRUCTURAL SUPPORT AND ENGINEERING AS IDENTIFIED ON THE PLANS
12. INTERIOR GLAZING AND STOREFRONT SYSTEMS (5)
13. HEALTH DEPARTMENT APPROVAL (MUST BE PROVIDED PRIOR TO PERMIT ISSUANCE)

ADDITIONS AND ALTERATIONS:

PRIOR TO USE, OCCUPANCY OR FINAL INSPECTION, EXISTING OR RETROFITTED ADDRESSING MEETING THE HEIGHT, CONTRAST AND FONT REQUIREMENTS OF SECTION 5-9-517 ITEM L OF THE CITY OF IRVINE MUNICIPAL CODE SHALL BE VERIFIED BY THE CITY INSPECTOR.

CONTRACTOR SHALL RESTORE ALL ORIGINAL AND REQUIRED FIRE PROTECTION ON STRUCTURAL ELEMENTS AND RATED ASSEMBLIES.

PRIOR TO FINAL INSPECTION, THE OPENING FORCE FOR DOORS SERVING THE DESIGNATED ACCESSIBLE PATH OF TRAVEL SHALL BE VERIFIED TO COMPLY WITH CBC 11B-404.2.9. POWERED EXTERIOR DOORS, PER EXCEPTION 2, SERVING A SPACE WITH AN OCCUPANCY OF 150 OR MORE ARE REQUIRED TO BE EQUIPPED WITH BACK-UP POWER.

FIRE DEPARTMENT NOTES:

11. FOR ASSISTANCE WITH FIRE-RELATED PLAN REVIEW ISSUES OR TECHNICAL QUESTIONS, PLEASE CALL (714) 573-6108. FOR FIRE-RELATED INSPECTION QUESTIONS OR ISSUES, PLEASE CONTACT YOUR OCFA INSPECTOR DIRECTLY OR OCFA INSPECTION SCHEDULING AT (714) 573-6150 FOR ASSISTANCE.
12. THE PROJECT SHALL COMPLY WITH THE CURRENTLY ADOPTED CALIFORNIA BUILDING CODE, CALIFORNIA FIRE CODE, AND OTHER CODES, STANDARDS, REGULATIONS AND REQUIREMENTS AS ENFORCED BY THE ORANGE COUNTY FIRE AUTHORITY. APPROVAL OF THESE PLANS SHALL NOT PERMIT THE VIOLATION OF ANY CODE OR LAW.
13. FOR PROJECTS INVOLVING NEW STRUCTURES, ADDITIONS TO EXISTING STRUCTURES, INSTALLATION OF GATES/WALLS/FENCES, OR ALTERATION OF VEHICULAR ACCESS, A FIRE MASTER PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE OCFA PRIOR TO SUBMITTAL OF ARCHITECTURAL PLANS. AN APPROVED FIRE MASTER PLAN SHALL BE SUBMITTED WITH THE ARCHITECTURAL PLANS.
14. ALL WEATHER FIRE ACCESS ROADS SHALL BE APPROVED BY THE OCFA AND BE IN PLACE BEFORE ANY COMBUSTIBLE MATERIALS ARE PLACED ON THE SITE. ACCESS ROADS SHALL BE MAINTAINED CLEAR OF OBSTRUCTIONS DURING AND AFTER CONSTRUCTION.
15. ADDRESS NUMBERS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS, BE A MINIMUM SIX INCHES HIGH, CONTRAST WITH THEIR BACKGROUND, AND BE PLAINLY VISIBLE FROM THE ROADWAY THE BUILDING IS ADDRESSED ON OR AS OTHERWISE ALLOWED BY OCFA GUIDELINE B-09.
16. BUILDINGS UNDER CONSTRUCTION OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 33. NO SMOKING OR COOKING IS ALLOWED IN STRUCTURES WHERE COMBUSTIBLE MATERIALS ARE EXPOSED OR WITHIN 25' OF COMBUSTIBLE MATERIALS STORAGE AREAS. CUTTING, WELDING, OR OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 35.
17. LOCATIONS AND CLASSIFICATIONS OF EXTINGUISHERS SHALL BE IN ACCORDANCE WITH THE CFC AND CCR TITLE 19. AT LEAST ONE EXTINGUISHER SHALL BE PROVIDED DURING CONSTRUCTION ON EACH FLOOR AT EACH STAIRWAY, IN EACH STORAGE AND CONSTRUCTION SHED, IN LOCATIONS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED, OR WHERE SIMILAR HAZARDS ARE PRESENT. BEFORE FINAL OCCUPANCY, AT LEAST ONE 2A:10B:C EXTINGUISHER SHALL BE PROVIDED SO THAT NO POINT IS MORE THAN 75' TRAVEL DISTANCE FROM THE EXTINGUISHER. EXTINGUISHERS SHALL BE LOCATED ALONG THE PATH OF EGRESS TRAVEL AND IN A READILY VISIBLE AND ACCESSIBLE LOCATION, WITH THE BOTTOM OF THE EXTINGUISHER AT LEAST 4" ABOVE THE FLOOR. ADDITIONAL EXTINGUISHERS MAY BE REQUIRED BY THE INSPECTOR AND FINAL PLACEMENT IS SUBJECT TO APPROVAL.
18. WALL, FLOOR AND CEILING FINISHES AND DECORATIVE MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CBC/CFC CHAPTER 8. DECORATIVE MATERIALS SHALL BE PROPERLY TREATED BY A PRODUCT OR PROCESS APPROVED BY THE STATE FIRE MARSHAL. SUCH ITEMS SHALL BE APPROVED AND INSPECTED PRIOR TO INSTALLATION.
19. KNOX BOXES/KEY CABINETS SHALL BE PROVIDED FOR ALL POOL ENCLOSURES, GATES IN THE PATH OF FIREFIGHTER TRAVEL TO STRUCTURES, SECURED PARKING LEVELS, DOORS GIVING ACCESS TO ALARM PANELS AND/OR ANNUNCIATORS, AND ANY OTHER STRUCTURES OR AREAS WHERE IMMEDIATE ACCESS IS REQUIRED OR IS UNDULY DIFFICULT.
20. DUMPSTERS AND TRASH CONTAINERS EXCEEDING 1.5 CUBIC YARDS SHALL NOT BE STORED IN BUILDINGS OR PLACED WITHIN 5 FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF EAVE LINES UNLESS PROTECTED BY AN APPROVED SPRINKLER SYSTEM OR LOCATED IN A TYPE I OR IIA STRUCTURE SEPARATED BY 10 FEET FROM OTHER STRUCTURES. CONTAINERS LARGER THAN 1 CUBIC YARD SHALL BE OF NON- OR LIMITED-COMBUSTIBLE MATERIALS OR SIMILARLY PROTECTED OR SEPARATED. CFC 304.3
21. EXITS, EXIT SIGNS, FIRE ALARM PANELS, HOSE CABINETS, FIRE EXTINGUISHER LOCATIONS, AND STANDPIPE CONNECTIONS SHALL NOT BE CONCEALED BY CURTAINS, MIRRORS, OR OTHER DECORATIVE MATERIAL. THE EGRESS PATH SHALL REMAIN FREE AND CLEAR OF ALL OBSTRUCTIONS AT ALL TIMES. NO STORAGE IS PERMITTED IN AISLES.
22. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. DOORS SHALL NOT BE PROVIDED WITH THUMB-TURN LOCKS OR DEADBOLTS THAT DO NOT UNLATCH IN TANDEM WITH THE NORMAL OPERATING LEVER. RATED DOORS SHALL BE SELF-CLOSING AND LATCHING; SUCH DOORS SHALL NOT BE EQUIPPED WITH DOOR STOPS OR OTHERWISE PROPPED OPEN.
23. SPRINKLER AND ALARM SYSTEMS SHALL BE PROVIDED WHEN REQUIRED BY CBC/CFC CHAPTER 9 AND LOCAL ORDINANCE. IN STRUCTURES OF UNDETERMINED USE, THE MINIMUM FIRE SPRINKLER DESIGN DENSITY REQUIRED SHALL BE FOR ORDINARY HAZARD (GROUP 2) WITH A DESIGN AREA OF 3000 SQUARE FEET.
24. EXISTING SPRINKLER AND ALARM SYSTEMS IN SPACES UNDERGOING REMODELING SHALL BE EVALUATED BY A LICENSED CONTRACTOR KNOWLEDGEABLE IN SUCH SYSTEMS TO DETERMINE WHETHER CHANGES WILL BE NECESSARY TO MAINTAIN THESE SYSTEMS IN CONFORMANCE WITH APPLICABLE STANDARDS. IF MODIFICATIONS ARE NECESSARY, PLANS SHALL BE SUBMITTED TO THE OCFA FOR REVIEW AND APPROVAL PRIOR TO MODIFICATION OF THE SYSTEM. SPRINKLER AND ALARM SYSTEMS SHALL BE SUPERVISED BY A UL-LISTED CENTRAL ALARM STATION.
25. WHERE COMMERCIAL-TYPE FOOD HEATING OR COOKING EQUIPMENT THAT PRODUCES GREASE-LADEN VAPORS IS PRESENT, AN AUTOMATIC EXTINGUISHING SYSTEM SHALL BE PROVIDED AND SHALL COMPLY WITH CFC, CMC, AND NFPA 17A. REVIEW AND APPROVAL OF A HOOD AND DUCT EXTINGUISHING SYSTEM PLAN BY THE OCFA IS REQUIRED PRIOR TO INSTALLATION, MODIFICATION, REARRANGEMENT, OR USE OF COOKING EQUIPMENT
26. HAZARDOUS MATERIALS EQUIPMENT, PROCESSES, STORAGE, DISPENSING, OR USE SHALL COMPLY WITH CBC AND CFC REGULATIONS AND SHALL BE REVIEWED AND APPROVED BY THE OCFA PRIOR TO SUCH MATERIALS OR EQUIPMENT BEING BROUGHT ON SITE.
27. STORAGE AREAS GREATER THAN 500 SQ.FT. WITH HIGH HAZARD MATERIALS STORED HIGHER THAN SIX FEET AND OTHER MATERIALS STORED HIGHER THAN TWELVE FEET ARE NOT PERMITTED WITHOUT FIRST SUBMITTING PLANS TO AND OBTAINING APPROVAL FROM THE OCFA.
28. A NEW HVAC UNIT EXCEEDING A 2,000 CFM CAPACITY SHALL BE PROVIDED WITH A DUCT SMOKE DETECTOR. THIS DETECTOR SHALL SHUT DOWN ONLY THE AFFECTED INDIVIDUAL HVAC UNIT UPON SMOKE DETECTION. THIS DETECTOR MUST ALSO BE INTERFACED TO AN EXISTING FIRE ALARM SYSTEM. THE DETECTOR SHALL ONLY PROVIDE A SUPERVISORY SIGNAL AT THE FIRE ALARM PANEL UPON SMOKE DETECTION.

STORM WATER POLLUTION PREVENTION NOTES

STORMWATER POLLUTION PREVENTION DEVICES AND PRACTICES SHALL BE INSTALLED AND/OR INSTITUTED AS NECESSARY TO ENSURE COMPLIANCE TO THE CITY OF IRVINE WATER QUALITY STANDARDS CONTAINED IN CHAPTER 3. WATER, OF DIVISION 8 OF TITLE 6 OF THE IRVINE MUNICIPAL CODE AND ANY EROSION CONTROL PLAN ASSOCIATED WITH THIS PROJECT. ALL SUCH DEVICES AND PRACTICES SHALL BE MAINTAINED, INSPECTED AND/OR MONITORED TO ENSURE ADEQUACY AND PROPER FUNCTION THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT.

COMPLIANCE TO THE WATER QUALITY STANDARDS AND ANY EROSION AND SEDIMENT CONTROL PLAN ASSOCIATED WITH THIS PROJECT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING REQUIREMENTS:

1. AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROL MEASURES (BMPs) SHALL BE IMPLEMENTED TO PROTECT THE EXPOSED PORTIONS OF THE SITE FROM EROSION AND TO PREVENT SEDIMENT DISCHARGES.
2. SEDIMENTS AND OTHER POLLUTANTS SHALL BE RETAINED ON SITE UNTIL PROPERLY DISPOSED OF, AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS SHALL BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND AND WATER FLOW.
4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS SHALL 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, NOR BE ALLOWED TO SETTLE OR INFILTRATE INTO SOIL.
5. 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 WASTES.
6. TRASH AND CONSTRUCTION SOLID WASTES SHALL BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICULAR TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITS SHALL BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. STORMWATER POLLUTION PREVENTION DEVICES AND/OR PRACTICES SHALL BE MODIFIED AS NEEDED AS THE PROJECT PROGRESSES TO ENSURE EFFECTIVENESS.

PARKING LOT MODIFICATION INSPECTION NOTES

1. PRIOR TO THE START OF ANY WORK, A PRE-GRADING MEETING AT THE SITE IS REQUIRED WITH THE OWNER, CONTRACTOR, GEOTECHNICAL ENGINEER (IF APPLICABLE), OR THEIR AGENTS, AND THE CITY GRADING INSPECTOR. THE PERMITTEE SHALL CONTACT GRADING INSPECTION TO SCHEDULE (949) 724-6329.
2. THE REQUIREMENTS FOR DEPUTY INSPECTION AND PERMIT CLOSE-OUT DOCUMENTATION WILL BE DETERMINED BY THE CITY GRADING INSPECTOR AT THE PRE-GRADE MEETING. THE REQUIRED GRADING INSPECTIONS WILL BE DEFINED AT THE PRE-GRADING MEETING.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF
   A. THE IRVINE GRADING AND EXCAVATION REGULATIONS AND GRADING MANUAL
   B. THE CITY OF IRVINE STANDARD PLANS
   C. SPECIAL REQUIREMENTS OF THE GRADING OR PARKING LOT MODIFICATION PERMIT
   D. THE CALIFORNIA BUILDING CODE
   E. STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK)
   F. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUCTD)
   G. THE CITY OF IRVINE CONSTRUCTION SITE SECURITY ORDINANCE.
4. CONSTRUCTION OPERATIONS SHALL OCCUR ONLY BETWEEN THE HOURS OF 7:00 A.M. AND 7:00 P.M., MONDAY THROUGH FRIDAY, AND BETWEEN THE HOURS OF 9:00 A.M. AND 6:00 P.M. SATURDAYS. NO CONSTRUCTION ACTIVITIES SHALL BE PERMITTED OUTSIDE OF THESE PERMITTED HOURS OR ON SUNDAYS AND FEDERAL HOLIDAYS, UNLESS A TEMPORARY WAIVER HAS BEEN GRANTED BY THE CHIEF BUILDING OFFICIAL. ANY WAIVERS SHALL TAKE INTO ACCOUNT THE IMPACT UPON THE COMMUNITY (IRVINE MUNICIPAL CODE SEC. 6-8-205).
5. ACCESSIBLE STALLS AND PATHS OF TRAVEL SHALL BE TEMPORARILY RELOCATED, AS NEEDED, TO MAINTAIN COMPLIANT ACCESSIBILITY, TO BE DETERMINED AT THE PRE-GRADING MEETING TO THE SATISFACTION OF THE GRADING INSPECTOR.
6. ALL ACCESSIBLE STALL STRIPING AND SIGNAGE SHALL BE PER THE CURRENT EDITION OF THE CALIFORNIA BUILDING CODE. ALL STANDARD PARKING STALL STRIPING SHALL BE PER CITY OF IRVINE STANDARD PLAN NO. 411.

EPA RENOVATION, REPAIR, AND PAINTING (RRP) RULE:

EPA REGULATIONS REQUIRE THAT ANY CONTRACTOR OR MAINTENANCE STAFF WHO DISTURBS LEAD-BASED PAINT IN A PRE-1978 RESIDENCE OR CHILD-CARE FACILITY MUST BE LEAD-SAFE CERTIFIED AND TRAINED IN LEAD-SAFE WORK PRACTICES.

RECYCLING:

CONSTRUCTION WASTE MATERIAL SHALL BE RECYCLED PER APPROVED CONSTRUCTION WASTE REDUCTION COMPLIANCE REPORT.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ADVISORY:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULE 1403 GOVERNS WORK PRACTICE REQUIREMENTS FOR ASBESTOS IN ALL RENOVATION AND DEMOLITION ACTIVITIES. PLEASE REFER TO RULE 1403 (HTTP://WWW.AQMD.GOV/DOCS/DEFAULT-SOURCE/RULE-BOOK/REG-XIV/RULE-1403.PDF) FOR ALL CURRENT REQUIREMENTS.

CALIFORNIA HEALTH AND SAFETY CODE 19827.5 REQUIRES THAT EVIDENCE OF DEMOLITION NOTIFICATION SUBMITTED TO THE SOUTH COAST AQMD BE PROVIDED TO CITY OF IRVINE BUILDING AND SAFETY PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT INCLUDING DEMOLITION WORK,

ACCESSIBILITY COMPLIANCE:

CALIFORNIA BUILDING CODE, CHAPTER 11B REQUIRES COMPLIANCE WITH ALL PATH OF TRAVEL REQUIREMENTS. IS THE PROFESSIONAL OF RECORD USING CODE EXCEPTIONS FOR COMPLIANCES NO

WHEN USING CODE EXCEPTIONS ONLY, REFER TO SHEET ___N/A___ FOR JUSTIFICATION.

SHEET INDEX:

SEE SHEET *G010* FOR SHEET INDEX.

APPROVED BY:
CITY ENGINEER

CITY OF IRVINE
PUBLIC WORKS & SUSTAINABILITY
APPROVED
These plans and/or specifications are signed by the City of Irvine Public Works & Sustainability Department for administrative approval only as prescribed in California Government Code 8537.3. Approval does not imply that the plans are free of errors. The City is not responsible for the design, assumptions, or accuracy. All revisions must receive City approvals prior to construction.
Lincoln Lo, P.E.
City Engineer

LINCOLN LO R.C.E. NO. 66116 DATE

NO.	DATE	REVISIONS
7		
6		
5	12/19/2025	ISSUE FOR CONSTRUCTABILITY REVIEW
4	10/15/2025	PLAN CHECK CORRECTIONS 2
3	09/22/2025	PLAN CHECK CORRECTIONS
2	07/09/2025	ISSUE FOR PLAN CHECK
1	06/24/2024	ISSUE FOR PLAN CHECK

DESIGNED: WARE MALCOMB
DRAWN: WARE MALCOMB
CHECKED: WARE MALCOMB
DATE: 06/24/2024
SCALE: SEE PLANS

DEVELOPER:
CITY OF IRVINE
1 CIVIC CENTER PLAZA
P.O. BOX 19575
IRVINE, CALIFORNIA 92623-9575

SOILS ENGINEER:
NOVA SERVICES, INC.
9340 CLAIREMONT MESA BLVD., SUITE B
SAN DIEGO, CALIFORNIA 92123

REPORT # 302205 DATE 06/24/2024

ARCHITECT A.CERVANTES LICENSE NO. C-40329 EXP. DATE 11/30/2027

PLANS PREPARED BY:
WARE MALCOMB
17 CORPORATE PLAZA, SUITE 200
IRVINE, CA 92618.
P. 949.660.9128

CITY OF IRVINE
COMMUNITY DEVELOPMENT DEPARTMENT

03/30/2026 - PLAN CHECK CORRECTIONS 4

PLAN CHECK : 00961347-CTIS

CIP: 362502

SHEET G001
OF 1

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

RESPONSIBILITY MATRIX

REQ'D (REQUIRED): NEEDED FOR THE PROJECT | WM: WARE MALCOMB | TT: OWNER | GC: GENERAL CONTRACTOR

REQ'D Y	REQ'D N	ARCHITECTURE, ENGINEERING, DESIGN	CONTRACTED BY WM	GC	TT	COMMENTS
	X	ARCHITECTURE - EXTERIOR				
X		ARCHITECTURE - INTERIOR			X	
X		STRUCTURAL ENGINEERING	X			
		3RD PARTY INSPECTION				
X		MECHANICAL ENGINEERING	X			
X		PLUMBING ENGINEERING	X			
X		ELECTRICAL ENGINEERING	X			
	X	CIVIL ENGINEERING				
	X	LANDSCAPE ARCHITECT AND DESIGN				
	X	LIGHTING DESIGNER				
X		ENVIRONMENTAL GRAPHICS			X	
X		FIRE SPRINKLER		X		
X		FIRE ALARM		X		
X		INFORMATION TECHNOLOGY DESIGN			X	
X		STRUCTURED CABLING CONSULTANT			X	
X		AUDIO / VISUAL CONSULTANT			X	
X		SECURITY DESIGN			X	
	X	COMMISSIONING AGENT (MEP SYSTEM)				
	X	ENVIRONMENTAL / ASBESTOS CONSULTANT				
	X	HAZARDOUS MATERIALS CONSULTANT				
	X	ACOUSTICAL ENGINEER / DESIGNER				
	X	LEED OR WELL DESIGN AND ADMINISTRATIONS				
X		KITCHEN CONSULTANT	X			

REQ'D Y	REQ'D N	VENDORS / INSTALLERS	CONTR'D BY GC	TT	LL	COMMENTS / CONTACTS
X		FURNITURE		X		
	X	OFFICE FRONTS (GLAZING SYSTEMS)		X		
X		I.T. SYSTEMS		X		
X		I.T. CABLING		X		
X		AUDIO / VISUAL EQUIPMENT		X		
X		SECURITY DESIGN / INSTALL		X		
X		INTERIOR SIGNAGE (NON-CODE)	X			
X		INTERIOR GRAPHICS	X			
	X	SOUND MASKING				
	X	HIGH-PILE STORAGE				
X		SPECIALTY EQUIPMENT / MOVING / INSTALL	X	X		SOME ITEMS PROVIDED BY CITY OF IRVINE AND INSTALLED BY GC
X		ARTWORK		X		

PROJECT DIRECTORY

ARCHITECT

WARE MALCOMB
10 EDELMAN
IRVINE, CALIFORNIA 92618
P 949.660.9128

PRIMARY CONTACT: STEPHANIE FOX
PH: 949.788.4048
EMAIL: sfox@waremalcomb.com
ALTERNATE CONTACT: RACHEL BOTTEN
PH: 949.788.4082
EMAIL: RABOTTEN@waremalcomb.com

ARCHITECT'S CONSULTANTS

STRUCTURAL ENGINEER
HSA & ASSOCIATES, INC.
1906 W. GARVEY AVE. S. STE. 200
WEST COVINA, CALIFORNIA 91790
(626) 521-9931

PRIMARY CONTACT: KYLE LI
PH: (626) 521-9931 x68
EMAIL: kyle@hsaassociates.com

MECHANICAL & PLUMBING ENGINEER
RTM ENGINEERING CONSULTANT
9035 WADSWORTH PARKWAY STE. 3200
WESTMINSTER, COLORADO 80021
(303) 297-1038

PRIMARY CONTACT: MIKE BEST
PH: (303) 297-1038
EMAIL: mike.best@rtmec.com

ELECTRICAL ENGINEER
RTM ENGINEERING CONSULTANT
9035 WADSWORTH PARKWAY STE. 3200
WESTMINSTER, COLORADO 80021
(303) 297-1038

PRIMARY CONTACT: MIKE BEST
PH: (303) 297-1038
EMAIL: mike.best@rtmec.com

KITCHEN CONSULTANT
CINNI LITTLE
533 N. BRAND BLVD.
SUITE 710
GLENDALE, CALIFORNIA 91203
(626) 441-7700

PRIMARY CONTACT: JONATHON TURNBULL
PH: (747) 228-4224
EMAIL: JTURNBULL@CINILITTLE.COM

BUILDING OWNER

CITY OF IRVINE
1 CIVIC CENTER PLAZA,
IRVINE, CALIFORNIA 92606

PRIMARY CONTACT: COLLUM MCLAUGHLIN
EMAIL: cmclaughlin@cityofirvine.org
PH: (949) 724-6662
SENIOR PROJECT MANAGER: BOBBY GHAEMI
EMAIL: BGhaemi@cityofirvine.org
PH: (949) 724-6445

CONSTRUCTION MANAGER

GRIFFIN STRUCTURES
GRIFFIN STRUCTURES
1 TECHNOLOGY DR.
STE 1829
IRVINE, CALIFORNIA 92618
(949) 324-8880

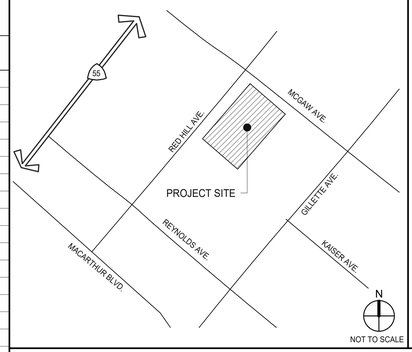
PRIMARY CONTACT: KENNETH J. ASPIS
PH: (213) 703-9908
EMAIL: KASPIS@GRIFFINSTRUCTURES.COM

GENERAL CONTRACTOR

TBD
COMPANY NAME
ADDRESS LINE 1
ADDRESS LINE 2

PRIMARY CONTACT: CONTACT
PH:
EMAIL:
ALTERNATE CONTACT:
PH:
EMAIL:

LOCATION MAP



IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

(For City Improvement Permit Only)

PROJECT DESCRIPTION & SCOPE

PROJECT DESCRIPTION:

THE SCOPE OF THIS PROJECT IS A 1ST GEN TENANT IMPROVEMENT FOR THE CITY OF IRVINE RECREATION CENTER. SCOPE OF WORK INCLUDES NEW KITCHEN WITH GREASE INTERCEPTOR, FULL BUILDING COMMISSIONING, EXTERIOR FENCE ENCLOSURE (40 LINEAL FT), AND NEW INTERIOR PARTITIONS, CEILINGS, FIXTURES, AND FINISHES. MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURAL WORK TO SUIT NEW LAYOUT. CORE AND SHELL SCOPE COVERED UNDER PLAN CHECK 00944992-CNEW. EXTERIOR ACCESSIBLE PATH OF TRAVEL ELEMENTS SERVING THE TENANT SPACE HAVE BEEN IMPROVED UNDER A SEPARATE PLAN CHECK. SEE APPROVED 00942132-GPRE FOR COMPLIANCE. RESTROOM ELEMENTS SERVING THE TENANT SPACE HAVE BEEN IMPROVED UNDER A SEPARATE PLAN CHECK. SEE APPROVED 00944992-CNEW PLANS FOR COMPLIANCE.

OCC. CLASSIFICATION:

ASSEMBLY (A-4)	96,857 S.F.
ASSEMBLY (A-2)	3,582 S.F.
ASSEMBLY (A-3)	1,197 S.F.
OFFICE (B)	1,318 S.F.
STORAGE (S-1)	4,560 S.F.
TOTAL	107,514 S.F.

CHANGE IN USE: ☐YES ☒NO

BUILDING & CODE INFORMATION

BUILDING DEPARTMENT:	IRVINE, CALIFORNIA	
APPLICABLE BUILDING CODES:	2022 CALIFORNIA BUILDING CODE 2022 CALIFORNIA MECHANICAL CODE 2022 CALIFORNIA ELECTRICAL CODE 2022 CALIFORNIA PLUMBING CODE 2022 CALIFORNIA FIRE CODE (WITH LOCAL AMENDMENTS) 2022 CALIFORNIA ENERGY CODE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE 2022 CALIFORNIA BUILDING CODE - ACCESSIBILITY	
BUILDING TYPE:	III-B	**CBC 602**
NUMBER OF STORIES:	1	
YEAR BUILT:	2026	
OCCUPANCY CLASS:	A-4	**CBC CHAPTER 3**
SEPARATIONS:	☐YES ☒NO	**CBC TABLE 508.4**
FIRE SPRINKLERS:	☒YES ☐NO	
FIRE ALARM:	☒YES ☐NO	
ACCESSOR'S PARCEL #:	PARCEL 1 OF PARCEL MAP NO. 93-149, IN THE CITY OF IRVINE, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 301, PAGES 25, 26 AND 27 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.	
LEGAL DESCRIPTION:	EXCEPT ALL OIL, OIL RIGHTS, MINERALS, MINERAL RIGHTS, NATURAL GAS, NATURAL GAS RIGHTS AND OTHER HYDROCARBONS BY WHATSOEVER NAME KNOWN THAT MAY BE WITHIN OR UNDER THE PARCEL OF LAND HEREINABOVE DESCRIBED, TOGETHER WITH THE PERPETUAL RIGHT OF DRILLING, MINING, EXPLORING AND OPERATING THEREFORE AND STORING IN AND REMOVING THE SAME FROM SAID LAND OR ANY OTHER LAND, INCLUDING THE RIGHT TO WHIPSTOCK OR DIRECTIONALLY DRILL AND MINE FROM LANDS OTHER THAN THOSE HEREINABOVE DESCRIBED, OIL OR GAS WELLS, TUNNELS AND SHAFTS INTO, THROUGH OR ACROSS THE SUBSURFACE OR THE LAND HERINABOVE DESCRIBED AND TO BOTTOM SUCH WHIPSTOCKED OR DIRECTIONALLY DRILLED WELLS, TUNNELS, SHAFTS UNDER AND BENEATH OR BEYOND THE EXTERIOR LIMITS THEREOF, AND TO REDRILL, RETUNNEL, EQUIP, MAINTAIN, REPAIR DEEPEN AND OPERATE ANY SUCH WELLS OR MINES, WITHOUT, HOWEVER, THE RIGHT TO DRILL, MINE, STORE, EXPLORE AND OPERATE THROUGH THE SURFACE OR THE UPPER 500 FEET OF THE SUBSURFACE OF THE LAND HEREINABOVE DESCRIBED, AS RESERVED BY IRVINE INDUSTRIAL COMPLEX, BY DEED DATED AUGUST 29, 1968 AND RECORDED SEPTEMBER 06, 1968 IN BOOK 8713, PAGE 147, OFFICIAL RECORDS.	
LEED CERTIFIED	☒YES ☐NO	

DEFERRED SUBMITTALS

REFER TO SHEET G001

SHEET INDEX

SHEET ISSUED ON DATE INDICATED, WITH MODIFICATIONS ●
SHEET ISSUED ON DATE INDICATED, NO MODIFICATIONS ○

		ISSUANCE 07/09/2025	09/22/2025	10/15/2025	12/19/2025	01/26/2026	02/04/2026	03/06/2026
ARCHITECTURAL								
G001	IRVINE TITLE SHEET	●	●	●	○	○	●	●
G010	TITLE SHEET	●	●	●	○	○	●	●
I000	PROJECT DATA	●	●	○	○	○	○	○
I010	GENERAL NOTES	●	●	○	○	○	○	○
I020	ACCESSIBILITY NOTES & DETAILS	●	○	●	○	○	○	○
I030	CALGREEN NOTES	●	○	○	○	○	○	○
I031	CALGREEN NOTES	●	○	○	○	○	○	○
I032	CALGREEN NOTES	●	○	○	○	○	○	○
I033	CALGREEN NOTES	●	○	○	○	○	○	○
I034	CALGREEN NOTES	●	●	○	○	○	○	○
I040	BUILDING COMPLIANCE FORMS			●	○	○	●	○
I041	BUILDING COMPLIANCE FORMS						●	○
I042	BUILDING COMPLIANCE FORMS						●	○
I043	BUILDING COMPLIANCE FORMS						●	○
I044	BUILDING COMPLIANCE FORMS						●	○
I045	BUILDING COMPLIANCE FORMS						●	○
I100	SITE PLAN	●	●	●	○	○	●	○
ID01	NORTH - DEMOLITION FLOOR PLAN			●	●	○	○	●
ID02	SOUTH - DEMOLITION FLOOR PLAN					●	○	○
I110	OVERALL OCCUPANCY AND EGRESS PLAN	●	●	●	○	○	○	●
I111	OFFICE - OCCUPANCY AND EGRESS PLAN	●	●	●	○	○	●	●
I120	OVERALL FLOOR PLAN	●	●	●	○	○	○	○
I121	NORTH - FLOOR PLAN	●	●	●	○	○	●	●
I122	SOUTH - FLOOR PLAN	●	○	●	○	○	○	○
I131	NORTH - POWER & SIGNAL PLAN	●	●	●	○	○	○	○
I132	SOUTH - POWER & SIGNAL PLAN	●	●	○	○	○	○	○
I141	NORTH - REFLECTED CEILING PLAN	●	●	●	○	●	●	●
I142	SOUTH - REFLECTED CEILING PLAN	●	●	●	○	○	●	●
I143	ENLARGED REFLECTED CEILING PLANS	●	○	○	○	○	●	●
I151	NORTH - FINISH PLAN	●	○	○	○	○	○	●
I152	SOUTH - FINISH PLAN	●	●	○	○	○	○	●
I160	ENLARGED PLANS	●	●	●	○	●	●	●
I161	ENLARGED RESTROOM PLAN (FOR REFERENCE ONLY)					●	○	○
I162	ENLARGED RESTROOM ELEVATIONS (FOR REFERENCE ONLY)					●	○	○
I170	ROOF PLAN					○	●	●
I430	MILLWORK ELEVATIONS	●	●	●	○	○	○	○
I431	MILLWORK ELEVATIONS	●	●	●	○	○	○	○
I432	MILLWORK ELEVATIONS	●	●	●	○	○	○	○
I433	MILLWORK ELEVATIONS			●	○	○	○	○
I434	MILLWORK ELEVATIONS	●	●	●	○	●	○	○
I435	INTERIOR ELEVATIONS				○	●	○	○
I510	DETAILS	●	●	●	○	○	●	●
I511	DETAILS	●	○	●	○	○	○	○
I520	DETAILS	●	●	●	○	○	●	●
I530	DETAILS	●	●	○	○	○	●	●
I531	DETAILS	●	○	○	○	○	●	●
I532	DETAILS					○	○	○
I610	DOOR SCHEDULE AND DETAILS	●	●	○	○	●	●	●
I611	DOOR SPECIFICATIONS					●	○	○
I612	DOOR SPECIFICATIONS					○	●	○
I620	EQUIPMENT SCHEDULES	●	●	○	○	○	●	○
I630	FINISH SCHEDULE	●	●	○	○	●	●	○
I631	FINISH SCHEDULE						●	○
I710	INTERIOR RENDERINGS	●	○	○	○	○	○	○
ARCHITECTURAL SHEET COUNT: 54								
MECHANICAL								
MT000	MECHANICAL LEGEND	●	●	○	○	○	●	○
MT001	MECHANICAL NOTES	●	●	○	○	○	●	○
MT002	MECHANICAL SPECIFICATIONS	●	●	○	○	○	●	○
MT201	OVERALL MECHANICAL PLAN	●	●	○	○	○	●	○
MT202	ENLARGED MECHANICAL PLAN	●	●	○	○	○	●	○
MT204	MECHANICAL ROOF PLAN	●	●	○	○	○	●	○
MT300	MECHANICAL SCHEDULES	●	●	○	○	○	●	○
MT400	MECHANICAL DETAILS	●	●	○	○	○	●	○
MT500	RESTAURANT EQUIPMENT	●	●	○	○	○	●	○
MT501	RESTAURANT EQUIPMENT	●	●	○	○	○	●	○
MT600	T24 COMPLIANCE DOCS	●	●	○	○	○	●	○
MT601	T24 COMPLIANCE DOCS	●	●	○	○	○	●	○
MT602	T24 COMPLIANCE DOCS	●	●	○	○	○	●	○
MT603	T24 COMPLIANCE DOCS	●	●	○	○	○	●	○
MT701	MECHANICAL CONTROLS & SEQUENCE OF OPERATIONS	●	●	○	○	○	●	○
MT702	MECHANICAL CONTROLS & SEQUENCE OF OPERATIONS	●	●	○	○	○	●	○
MT703	MECHANICAL CONTROLS & SEQUENCE OF OPERATIONS	●	●	○	○	○	●	○
MECHANICAL SHEET COUNT: 17								
PLUMBING								
PT000	PLUMBING LEGEND	●	●	○	○	○	○	○
PT001	PLUMBING SPECIFICATIONS	●	●	○	○	○	○	○
PT201	PLUMBING FLOOR PLAN	●	●	○	○	●	●	○
PT202	PLUMBING ROOF PLAN	●	●	○	○	○	○	○
PT301	ENLARGED PLUMBING PLANS	●	●	●	○	●	●	●
PT302	SANITARY RISER DIAGRAM	●	●	●	○	●	●	●
PT303	DOMESTIC WATER SUPPLY RISER DIAGRAM	●	●	○	●	○	○	○
PT400	PLUMBING SCHEDULES AND DETAILS	●	●	○	○	●	●	●
PT500	T24 COMPLIANCE DOCS	●	●	○	○	○	○	○
PLUMBING SHEET COUNT: 9								
ELECTRICAL								
ET000	ELECTRICAL LEGEND AND GENERAL NOTES	●	●	○	○	○	●	○
ET001	ELECTRICAL SPECIFICATIONS	●	●	○	○	○	○	○
ET100	OVERALL ELECTRICAL POWER PLAN	●	●	○	○	○	●	○
ET101	ELECTRICAL ENLARGED POWER PLAN	●	●	○	○	○	●	○
ET102	ELECTRICAL ROOF PLAN	●	●	○	○	○	○	○
ET200	OVERALL ELECTRICAL LIGHTING PLAN	●	●	○	○	○	○	○
ET201	ELECTRICAL ENLARGED LIGHTING PLAN	●	●	●	○	○	○	○
ET201P	ELECTRICAL ENLARGED LIGHTING PLAN - EGRESS PHOTOMETRIC	●	●	○	○	○	●	○
ET300	ELECTRICAL ONE LINE DIAGRAM AND SCHEDULES	●	●	○	○	○	○	○
ET301	ELECTRICAL SCHEDULES	●	●	○	○	○	●	○
ET302	ELECTRICAL PANEL SCHEDULES	●	●	○	○	○	●	●
ET400	ELECTRICAL T24 COMPLIANCE DOCS	●	●	●	○	○	○	○
ET401	ELECTRICAL T24 COMPLIANCE DOCS	●	●	●	○	○	●	○
ET402	ELECTRICAL T24 COMPLIANCE DOCS	●	●	●	○	○	●	○
ET500	HOLOPHANE LIGHITNG BADMINTON COURTS PLAN	●	●	○	○	○	○	○
ET501	HOLOPHANE LIGHTING BASKETBALL COURTS PLAN	●	●	○	○	○	○	○
ETF10	OVERALL ELECTRICAL FIRE ALARM PLAN (REFERENCE ONLY)						●	○
ETF11	ELECTRICAL ENLARGED FIRE ALARM PLAN (REFERENCE ONLY)						●	●
ETF12	ELECTRICAL ROOF FIRE ALARM PLAN (REFERENCE ONLY)						●	●
ELECTRICAL SHEET COUNT: 19								

		ISSUANCE 07/09/2025	09/22/2025	10/15/2025	12/19/2025	01/26/2026	02/04/2026	03/06/2026
STRUCTURAL								
ST-1.1	FOUNDATION PLAN	●	●	○	○		●	●
ST-1.2	FOUNDATION PLAN	●	●	●	○		●	●
ST-1.3	FOUNDATION PLAN	●	●	●	○		●	●
ST-2.2	ROOF FRAMING PLAN	●	●	●	○		●	●
SD-0.0	GENERAL NOTES	●	●	●	○		●	●
SD-1	FOOTING DETAILS	●	●	●	○		●	●
SD-1.1	FOUNDATION DETAILS			●	○		●	●
SD-2	METAL STUD DETAILS	●	●	●	○		●	●
SD-3	T-BAR CEILING DETAILS	●	●	●	○		●	●
SD-4	MISCELLANEOUS DETAILS	●	●	●	○		●	●
STRUCTURAL SHEET COUNT: 10								
FOOD SERVICE								
QF000	FOOD SERVICE COVER SHEET	●	○	○	●	○	○	●
QF101	FOOD SERVICE EQUIPMENT PLAN AND SCHEDULE	●	○	○	●	○	○	●
QF102	FOOD SERVICE MECHANICAL SPOT CONNECTION PLAN	●	○	○	●	○	○	●
QF103	FOOD SERVICE ELECTRICAL SPOT CONNECTION PLAN	●	○	○	●	○	○	●
QF104	FOOD SERVICE SPECIAL CONDITIONS PLAN	●	○	○	●	○	○	●
QF105	FOOD SERVICE EQUIPMENT UTILITY LOAD SCHEDULE	●	○	○	●	○	○	●
QF106	FOOD SERVICE EQUIPMENT UTILITY LOAD SCHEDULE	●	○	○	●	○	○	●
QF107	FOOD SERVICE EQUIPMENT ELEVATIONS					●	○	●
QF201	FOOD SERVICE EQUIPMENT VENTILATOR DRAWING	●	○	○	●	○	○	●
QF301	FOOD SERVICE EQUIPMENT WALK-IN DRAWING	●	○	○	●	○	○	●
QF302	FOOD SERVICE EQUIPMENT WALK-IN DRAWING	●	○	○	●	○	○	●
QF401	FOOD SERVICE EQUIPMENT REFRIGERATION DRAWING	●	○	○	●	○	○	●
FOOD SERVICE SHEET COUNT: 12								
TECHNOLOGY								
T000	TECHNOLOGY LEGEND AND ABBREVIATIONS	●	○	○	○	○	○	○
TN001	TELECOM SCHEDULES	●	○	○	○	○	○	○
TN100	TELECOM SITE PLAN	●	○	○	○	○	○	○
TN120	OVERALL TELECOM FLOOR PLAN - SPORTS BUILDING 100 TELECOM PLAN	●	○	○	○	○	○	○
TN121	OFFICE TELECOM FLOOR PLAN	●	○	○	○	○	○	○
TN122	STORAGE AND ELECTRICAL ROOM - TELECOM FLOOR PLAN	●	○	○	○	○	○	○
TN220	OVERALL TELECOM RCP PLAN - CABLE TRAY PLAN	●	○	○	○	○	○	○
TN221	OFFICE TELECOM RCP PLAN	●	○	○	○	○	○	○
TN222	STORAGE AND ELECTRICAL ROOM - TELECOM RCP PLAN	●	○	○	○	○	○	○
TN501	TELECOM DIAGRAMS	●	○	○	○	○	○	○
TN601	ENLARGED PLANS	●	○	○	○	○	○	○
TN901	TELECOM DETAILS	●	○	○	○	○	○	○
TY001	SECURITY SCHEDULES	●	○	○	○	○	○	○
TY100	SECURITY SITE PLAN	●	○	○	○	○	○	○
TY120	OVERALL SECURITY FLOOR PLAN	●	○	○	○	○	○	○
TY121	OFFICE SECURITY FLOOR PLAN	●	○	○	○	○	○	○
TY122	STORAGE AND ELECTRICAL ROOM - SECURITY FLOOR PLAN	●	○	○	○	○	○	○
TY123	SECURITY FLOOR PLAN - AREA A & B	●	○	○	○	○	○	○
TY124	SECURITY FLOOR PLAN - AREA C & D	●	○	○	○	○	○	○
TY125	SECURITY FLOOR PLAN - AREA E & F	●	○	○	○	○	○	○
TY126	SECURITY FLOOR PLAN - AREA G & H	●	○	○	○	○	○	○
TY501	SECURITY DIAGRAMS	●	○	○	○	○	○	○
TY901	CAMERA DETAILS	●	○	○	○	○	○	○
TY902	ACCESS CONTROL DETAILS	●	○	○	○	○	○	○
TY903	ACCESS CONTROL PANEL AND ELEVATION	●	○	○	○	○	○	○
TY904	ACCESS CONTROL DOOR DETAIL	●	○	○	○	○	○	○
TA001	AUDIOVISUAL SCHEDULES	●	○	○	○	○	○	○
TA120	OVERALL AUDIOVISUAL FLOOR PLAN	●	○	○	○	○	○	○
TA121	OFFICE AUDIOVISUAL FLOOR PLAN	●	○	○	○	○	○	○
TA601	ENLARGED PLANS	●	○	○	○	○	○	○
TA602	ENLARGED PLANS	●	○	○	○	○	○	○
TA603	ENLARGED PLANS	●	○	○	○	○	○	○
TA604	AV DIAGRAMS	●	○	○	○	○	○	○
TA901	AUDIOVISUAL DETAILS	●	○	○	○	○	○	○
TECHNOLOGY SHEET COUNT: 34								
VIMS								
V1.0	VIMS NOTES						●	○
V1.1	VIMS DETAILS						●	○
VIMS SHEET COUNT: 2								

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LICENSED ARCHITECT ANA L. CERVANTES C-44205 EXPIRATION 12/31/2027 RENEWAL PENDING STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

TITLE SHEET

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/26/2026	PLAN CHECK CORRECTIONS 3
4	03/06/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

CITY OF IRVINE
BUILDING & SAFETY DIVISION

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
G010

03/30/2026 - PLAN CHECK CORRECTIONS 4

3/30/2026 2:33:33 PM

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CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

PRE-CONSTRUCTION NOTES

1. PRIOR TO START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS TO BE HELD INCLUDING A RESPONSIBLE REPRESENTATIVE OF THE ARCHITECT, THE OWNER AND THE GENERAL CONTRACTOR. THE DISCUSSION WILL BE IN REGARDS TO THE ARCHITECT-OWNER-CONTRACTOR (AOC) CORRESPONDENCE PROCESSES AND PROCEDURES. AT A MINIMUM, THE FOLLOWING IS TO BE DISCUSSED:

2. AOC REGULARLY SCHEDULED MEETINGS
   - 2.1. WHEN
   - 2.2. WHERE
   - 2.3. HOW OFTEN
   - 2.4. IN PERSON VERSUS CONFERENCE CALLS
   - 2.5. APPROXIMATE ALLOTTED TIME PER MEETING

3. CONSTRUCTION MEETING MINUTES
   - 3.1. FORMAT FOR THE MINUTES
   - 3.2. CONTRACTOR TO AUTHOR THE MINUTES

4. FORMAL CHANGES IN THE WORK
   - 4.1. ADDENDA AND BULLETINS ISSUED BY THE ARCHITECT
   - 4.2. CHANGE ORDER REQUESTS ISSUED BY THE CONTRACTOR
   - 4.3. CHANGE ORDERS ISSUED BY THE CONTRACTOR
   - 4.4. TRACKING MECHANISMS

5. REQUESTS FOR INFORMATION PROCESS
   - 5.1. TRACKING MECHANISM
   - 5.2. DEFINE Cc: RECIPIENT LIST
   - 5.3. STANDARD RESPONSE TIMES (2-5 WORKING DAYS IS STANDARD)

6. SUBMITTAL PROCESS
   - 6.1. TRACKING MECHANISM
   - 6.2. ISSUANCE SCHEDULE BY THE CONTRACTOR
   - 6.3. DEFINE Cc RECIPIENT LIST
   - 6.4. STAMPED REVIEWED AND APPROVED BY CONTRACTOR PRIOR TO SUBMISSION
   - 6.5. NON-REQUESTED SUBMITTALS MAY NOT BE REVIEWED
   - 6.6. STANDARD RESPONSE TIMES (7-10 WORKING DAYS IS STANDARD)

7. SUBSTITUTIONS
   - 7.1. REQUEST FORMS WITH REASONS AND BENEFIT FOR SUBSTITUTION

8. PAYMENT APPLICATIONS
   - 8.1. PROCESS
   - 8.2. SUBMITTAL DATE
   - 8.3. ANTICIPATED TURN-AROUND

9. PUNCH LISTS
   - 9.1. ONLY ONE PUNCH WALK TO BE PROVIDED BY DESIGN TEAM
   - 9.2. CONTRACTOR TO PUNCH AND MAKE CORRECTIONS OR CREATE A MINIMAL LIST OF CORRECTIONS PRIOR TO DESIGN TEAM PUNCH
   - 9.3. A FINAL WALK WILL OCCUR ONLY IF THE ARCHITECT IS CONTRACTED TO DO SO.

G.C. INSTRUCTIONS

SUBMITTALS

1. AT THE START OF JOB PROVIDE A SCHEDULE OF ALL ANTICIPATED SUBMITTALS AND DATES. FLAG SUBMITTALS WHICH ARE OR COULD BE CRITICAL PATH. FLAG SUBMITTALS THAT WILL BE REQUESTED TO BE EXPEDITED FASTER THAN THE STANDARD 7-10 DAYS.
2. A SUBMITTAL LOG IS TO BE MAINTAINED BY THE GENERAL CONTRACTOR AND A CURRENT COPY IS TO BE INCLUDED WITH EACH SUBMISSION.
3. ALL SUBMITTALS MUST BE REVIEWED AND APPROVED WITH A STAMP AND SIGNATURE BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION. THE REVIEW WILL INCLUDE BUT NOT BE LIMITED TO:
   - 3.1. CONFIRMING THAT THE SUBMITTAL MEETS THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
   - 3.2. COORDINATION HAS TAKEN PLACE WITH ALL INTERCONNECTING TRADES
   - 3.3. THE SUBMITTAL IS COMPLETE AND COMPREHENSIVE
   - 3.4. REQUESTS ON SUBMITTALS FOR DIMENSIONS WHICH CAN BE DISCERNIBLE THROUGH MATHEMATICAL MEANS FROM INFORMATION ALREADY PROVIDED ON THE CONTRACT DOCUMENTS WILL NOT BE PROVIDED.
   - 3.5. SUBMITTALS SHALL BE IN ELECTRONIC FORMAT UNLESS PHYSICAL SAMPLES ARE REQUESTED.
4. SUBMITTALS NOT REQUESTED BY THE CONTRACT DOCUMENTS MAY OR MAY NOT BE REVIEWED AT THE DESIGN TEAM'S DISCRETION.
5. SUBMITTALS ARE TO BE ROUTED THROUGH THE ARCHITECT AND ARE NOT TO BE SENT DIRECTLY TO ARCHITECT'S CONSULTANTS UNLESS SPECIFICALLY AUTHORIZED BY THE ARCHITECT.
6. MINOR CHANGES IN THE WORK MAY OCCUR AS A RESULT OF THE DESIGN TEAM'S REVIEW. IF A CHANGE RESULTS IN MODIFICATIONS TO THE CONTRACT PRICE OR SCHEDULE, THE CONTRACTOR WILL ISSUE A CHANGE ORDER REQUEST FOR REVIEW AND APPROVAL BY THE OWNER AND ARCHITECT PRIOR TO PROCEEDING.

REQUESTS FOR INFORMATION (RFI's)

1. THE GENERAL CONTRACTOR IS TO REVIEW ALL PROSPECTIVE RFI's AND MAKE EVERY EFFORT TO ANSWER THEM BEFORE SUBMITTING TO THE DESIGN TEAM.
2. MINOR CHANGES IN THE WORK MAY OCCUR AS A RESULT OF THE DESIGN TEAM'S REVIEW. IF A CHANGE RESULTS IN MODIFICATIONS TO THE CONTRACT PRICE OR SCHEDULE, THE CONTRACTOR WILL ISSUE A CHANGE ORDER REQUEST FOR REVIEW AND APPROVAL BY THE OWNER AND ARCHITECT PRIOR TO PROCEEDING.
3. AN RFI LOG IS TO BE MAINTAINED BY THE GENERAL CONTRACTOR AND A CURRENT COPY IS TO BE INCLUDED WITH EACH RFI SUBMISSION ALONG WITH ANY CRITICAL RESPONSE DUE DATES.
4. RFI's REGARDING METHODS AND MEANS OF CONSTRUCTION WILL NOT BE REVIEWED AND WILL BE REMOVED FROM THE RFI LOG.

CHANGE ORDERS

1. A COMPLETE SCHEDULE OF VALUES OF THE BASE CONTRACT IS TO BE PROVIDED TO THE OWNER AND ARCHITECT PRIOR TO THE START OF ANY WORK.
2. ALL CHANGE ORDER REQUESTS ARE TO BE REVIEWED AND APPROVED BY THE OWNER AND ARCHITECT PRIOR TO SUBMISSION OF A CHANGE ORDER.
3. CHANGE ORDER REQUESTS ARE TO INCLUDE A COMPLETE BREAKDOWN BY TRADE ALONG WITH TRADE BACK-UP AND UNIT PRICING WHERE APPLICABLE.
4. A CHANGE ORDER REQUEST AND CHANGE ORDER LOG IS TO BE MAINTAINED BY THE GENERAL CONTRACTOR AND SUBMITTED ALONG WITH EACH CHANGE ORDER REQUEST.

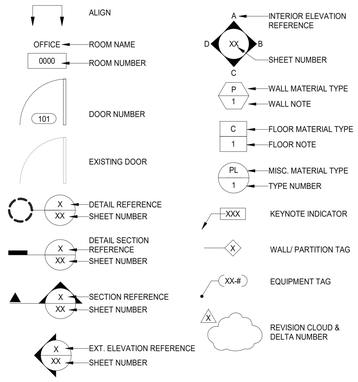
PROJECT SCHEDULE

1. A COMPLETE CONSTRUCTION SCHEDULE OF ALL PORTIONS OF THE WORK TO BE PROVIDED TO THE OWNER AND ARCHITECT PRIOR TO START OF ANY WORK.
2. THE SCHEDULE SHALL NOT EXCEED TIME LIMITS CURRENT UNDER THE CONTRACT DOCUMENTS.
3. THE SCHEDULE SHALL BE REVISED AT APPROPRIATE INTERVALS AS REQUIRED BY THE CONDITIONS OF THE WORK AND PROJECT AND THE CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IF FOR ANY REASON THE SCHEDULE IS EXTENDED.
4. A THREE WEEK LOOK-AHEAD SHALL BE REVIEWED REGULARLY AT EACH AOC MEETING WHICH WILL BE IN-LINE WITH THE OVERALL CONSTRUCTION SCHEDULE.

ABBREVIATIONS

∠	ANGLE	FL.	FLOOR	SUSP.	SUSPENDED
℄	CENTERLINE	FLASH.	FLASHING	SYMM.	SYMMETRICAL
#	POUND or NUMBER	FLUOR.	FLUORESCENT		
&	AND	FT.	FOOT or FEET	T&G	TONGUE AND GROOVE
(E)	EXISTING	FTG.	FOOTING	T.	TREAD
@	AT	FURR.	FURRING	T.B.	TOWEL BAR
~	DIAMETER or ROUND	FUT.	FUTURE	T.B.D.	TO BE DETERMINED
Ø	DIAMETER			T.C.	TOP OF CURB
		G.B.	GRAB BAR	T.O.C.	TOP OF CONCRETE
A.D.	AREA DRAIN	G.C.	GENERAL CONTRACTOR	T.O.CMU.	TOP OF CONCRETE MASONRY UNIT
ACOUS.	ACOUSTICAL	GA.	GAUGE	T.O.M.	TOP OF MULLION
ACT.	ACOUSTICAL TILE	GALV.	GALVANIZED	T.O.P.	TOP OF PARAPET
AGGR.	AGGREGATE	GL.	GLASS	T.O.R.	TOP OF REVEAL
AL.	ALUMINUM	GND.	GROUND	T.O.REC.	TOP OF RECESS
APPROX.	APPROXIMATE(LY)	GR.	GRADE	T.O.W.	TOP OF WALL
ASPH.	ASPHALT	GYP.	GYPSUM	T.P.	TOP OF PAVEMENT
				T.P.D.	TOILET PAPER DISPENSER
B.O.C.	BOTTOM OF CONCRETE	H.B.	HOSE BIBB	T.V.	TELEVISION
B.O.CMU.	BOTTOM OF CONCRETE MASONRY UNIT	H.C.	HOLLOW CORE	TEL.	TELEPHONE
		H.M.	HOLLOW METAL	TER.	TERRAZZO
B.O.D.	BOTTOM OF DECK	HDWD.	HARDWOOD	THK.	THICK
B.O.M.	BOTTOM OF MULLION	HDWE.	HARDWARE		
B.O.P.	BOTTOM OF PANEL	HORIZ.	HORIZONTAL	UNF.	UNFINISHED
B.O.R.	BOTTOM OF REVEAL	HR.	HOUR	UR.	URINAL
B/S.	BUILDING STANDARD	HT.	HEIGHT		
BD.	BOARD			VERT.	VERTICAL
BITUM.	BITUMINOUS	I.D.	INSIDE DIMENSION	VEST.	VESTIBULE
BLDG.	BUILDING	INSUL.	INSULATION or INSULATED		
BLK.	BLOCK	INT.	INTERIOR	W.	WEST
BLKG.	BLOCKING			W.C.	WATER CLOSET
BM.	BEAM	JAN.	JANITOR	WD.	WOOD
BOT.	BOTTOM	JT.	JOINT	WP	WATERPROOF
				WSCT.	WAINSCOT
C.B.	CATCH BASIN	K.O.	KNOCK-OUT	WT.	WEIGHT
C.G.	CORNER GUARD	KIT.	KITCHEN		
C.I.	CAST IRON				
C.O.	CASED OPENING	LAB.	LABORATORY		
C.O.M.	CENTER OF MULLION	LAM.	LAMINATE(D)		
C.O.R.	CENTER OF REVEAL	LAV.	LAVATORY		
C.W.	COLD WATER	LKR.	LOCKER		
CAB.	CABINET	LT.	LIGHT		
CEM.	CEMENT(ITIOUS)				
CER.	CERAMIC	M.C.	MEDICINE CABINET		
CFCI.	CONT. FURNISHED / CONT. INSTALLED	M.O.	MASONRY OPENING		
		MEMB.	MEMBRANE		
CFOI.	CONT. FURNISHED / OWNER. INSTALLED	MET.	METAL		
		MH.	MANHOLE		
CLG.	CEILING	MIN.	MINIMUM		
CLKG.	CAULKING	MIR.	MIRROR		
CLO.	CLOSET	MTD.	MOUNTED		
CNTR.	COUNTER	MUL.	MULLION		
COL.	COLUMN				
CONC.	CONCRETE	N.	NORTH		
CONN.	CONNECTION	NO.	NUMBER		
CONSTR.	CONSTRUCTION	NOM.	NOMINAL		
CONT.	CONTINUOUS				
CONTR.	CONTRACTOR	O.A.	OVERALL		
CORR.	CORRIDOR	O.D.	OUTSIDE DIAMETER		
CPT.	CARPET	OBS.	OBSCURE		
CTR.	CENTER	OFCI.	OWNER FURNISHED / CONT. INSTALLED		
CTSK.	COUNTER-SUNK				
		OFF.	OFFICE		
D.	DEEP	OFOI.	OWNER FURNISHED / OWNER INSTALLED		
D.F.	DRINKING FOUNTAIN				
D.O.	DOOR OPENING	OPNG.	OPENING		
D.S.	DOWNSPOUT				
D.S.P.	DRY STANDPIPE	P.C.	PRECAST		
DBL.	DOUBLE	P.J.	PANEL JOINT		
DEPT.	DEPARTMENT	P.LAM.	PLASTIC LAMINATE		
DET.	DETAIL	P.T.R.	PAPER TOWER RECEPTACLE		
DIAG.	DIAGNONAL				
DIFF.	DIFFUSER	PL.	PLATE		
DISP.	DISPENSER	PLAS.	PLASTER		
DN.	DOWN	PLYWD.	PLYWOOD		
DR.	DOOR	PR.	PAIR		
DWG.	DRAWING	PT.	POINT		
DWR.	DRAWER	PTN.	PARTITION		
		Q.T.	QUARRY TILE		
E.	EAST				
E.J.	EXPANSION JOINT	R.	RISER		
E.P.	ELECTRIC PANELBOARD	R.D.	ROOF DRAIN		
E.W.C.	ELECTRIC WATER COOLER	R.O.	ROUGH OPENING		
		R.W.L.	RAIN WATER LEADER		
EA.	EACH	RAD.	RADIUS		
EL.	ELEVATION	REF.	REFERENCE		
ELEV.	ELEVATOR	REFR.	REFRIGERATOR		
EMER.	EMERGENCY	REINF.	REINFORCE(D)		
ENCL.	ENCLOSED or ENCLOSURE	RESIL.	RESILIENT		
		RGTR.	REGISTER		
EXP.	EXPANSION	RM.	ROOM		
EXPO.	EXPOSED	RWD.	REDWOOD		
EXST.	EXISTING				
EXT.	EXTERIOR	S.	SOUTH		
		S.C.	SOLID CORE		
F.A.	FIRE ALARM	S.C.D.	SEAT COVER DISPENSER		
F.B.	FLAT BAR				
F.E.C.	FIRE EXTINGUISHER CABINET	S.D.	SOAP DISPENSER		
		S.N.D.	SANITARY NAPKIN DISPENSER		
F.F.E.	FLOOR FINISH ELEVATION				
		S.N.R.	SANITARY NAPKIN RECEPTACLE		
F.H.C.	FIRE HOSE CABINET				
F.O.C.	FACE OF CONCRETE	S.S.	STAINLESS STEEL		
F.O.CMU.	FACE OF CONCRETE MASONRY UNIT	S.SK.	SERVICE SINK		
		SCHED.	SCHEDULE		
F.O.F.	FACE OF FINISH	SECT.	SECTION		
F.O.IMP.	FACE OF INSULATED METAL PANEL	SH.	SHELF		
		SHR.	SHOWER		
F.O.M.	FACE OF MULLION	SHT.	SHEET		
F.O.SH.	FACE OF SHEATHING	SQ.	SQUARE		
F.P.	FIREPROOF	STA.	STATION		
F.S.	FULL SIZE	STOR.	STORAGE		
FDN.	FOUNDATION	STRL.	STRUCTURE or STRUCTURAL		
FIN.	FINISH(ED)				

SYMBOLS



FIRE AUTHORITY NOTES

1. FINAL INSPECTION BY FIRE DEPARTMENT IS REQUIRED - SCHEDULE 72 HOURS IN ADVANCE.
2. THE PROJECT ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY PER LOCAL FIRE DEPARTMENT STANDARDS.
3. AN UNOBSTRUCTED ALL-WEATHER FIRE APPARATUS ACCESS ROAD SHALL BE IN PLACE PRIOR TO DELIVERY OF COMBUSTIBLE BUILDING MATERIALS TO THE SITE.
4. FIRE PREVENTION WATER SERVICE SHALL BE IN SERVICE PRIOR TO DELIVERY OF COMBUSTIBLE BUILDING MATERIALS TO THE SITE.
5. ACCESS GATES SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE IN COMPLIANCE WITH LOCAL FIRE AUTHORITY.
6. FIRE SPRINKLER SYSTEM(S) SHALL MEET STATE & LOCAL FIRE CODES AND BE PROVIDED TO PROTECT ENTIRE BUILDING INCLUDING PROJECTIONS OVER 4'-0".
7. FIRE SPRINKLER SYSTEM(S) AND ALL CONTROL VALVES, INCLUDING EXTERIOR SHALL BE SUPERVISED BY A U.L. LISTED CENTRAL ALARM STATION OR PER STATE & LOCAL FIRE CODES.
8. ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEMS AND WATER-FLOW SWITCHES ON ALL SPRINKLER SYSTEMS SHALL BE ELECTRICALLY MONITORED WHERE THE NUMBER OF SPRINKLERS IS (100) OR MORE.
9. ELECTRICAL SUBCONTRACTORS TO INSTALL WIRING FOR FIRE SPRINKLER, ALARM BELL AND TELEPHONE WARNING AS REQUIRED BY FIRE DEPARTMENT.
10. INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE IN ACCORDANCE WITH STATE & LOCAL FIRE CODES.
11. COMPLETE PLANS AND SPECIFICATIONS FOR ALL FIXED FIRE PROTECTION EQUIPMENT INCLUDING AUTOMATIC SPRINKLERS AND OTHER FIRE-PROTECTION SYSTEMS, SHALL BE SUBMITTED BY INSTALLING CONTRACTOR. SUCH PLANS SHALL BE APPROVED BY LOCAL FIRE AUTHORITY PRIOR TO INSTALLATION.
12. LOCATIONS AND CLASSIFICATIONS OF FIRE EXTINGUISHERS SHALL BE IN ACCORDANCE WITH STATE & LOCAL FIRE CODES AND PLACEMENT IS SUBJECT TO THE APPROVAL OF THE FIRE INSPECTOR. VERIFY QUANTITY & EXACT LOCATION FROM FIRE DEPARTMENT PRIOR TO ORDERING.
13. AT OFFICE AREAS PROVIDE MULTIPURPOSE DRY CHEMICAL PORTABLE FIRE EXTINGUISHERS RATED 4-A:80-B:C AT THE RATE OF ONE EXTINGUISHER PER 11,250 SF MAXIMUM AS INDICATED ON PLANS; SUBJECT TO FIRE DEPARTMENT INSPECTION AND FINAL APPROVAL. TRAVEL DISTANCE FROM REMOTE LOCATIONS TO THE NEAREST EXTINGUISHER SHALL BE 75' MAXIMUM. EACH EXTINGUISHER SHALL BE SIZED AS REQUIRED TO PROTECT MAXIMUM FLOOR AREAS LISTED IN NFPA 10, TABLE 6.3.5. LIGHT HAZARD OCCUPANCY ASSUMED. FINAL DETERMINATION OF LIGHT, ORDINARY AND EXTRA HAZARD CLASSIFICATION REQUIRES FIRE DEPARTMENT REVIEW AND APPROVAL.
14. STORAGE, DISPENSING OR USE OF ANY FLAMMABLE AND COMBUSTIBLE LIQUIDS, FLAMMABLE AND COMPRESSED GASES, AND OTHER HAZARDOUS MATERIALS SHALL COMPLY WITH STATE & LOCAL FIRE CODES. THE STORAGE AND USE OF HAZARDOUS MATERIALS SHALL BE APPROVED BY THE FIRE AUTHORITY PRIOR TO ANY MATERIALS BEING STORED OR USED ON SITE. A SEPARATE PLAN SUBMITTAL IS REQUIRED PRIOR TO THE STORAGE AND USE OF HAZARDOUS MATERIALS.
15. BUILDING(S) NOT APPROVED FOR HIGH-PILED STOCK (MATERIALS IN CLOSELY PACKED PILES OR ON PALLETS, OR IN RACKS WHERE THE TOP OF STORAGE EXCEEDS 12'-0" IN HEIGHT, AND 6'-0" FOR GROUP "A" PLASTICS AND CERTAIN OTHER HIGH-HAZARD COMMODITIES). HIGH-PILED STOCK SHALL BE APPROVED BY THE FIRE AUTHORITY PRIOR TO MATERIALS BEING STORED ON SITE. A SEPARATE PLAN SUBMITTAL IS REQUIRED FOR HIGH-PILED STORAGE IN ACCORDANCE WITH STATE & LOCAL FIRE CODES.
16. A LETTER OF INTENDED USE MAY BE REQUIRED BY THE FIRE INSPECTOR.
17. ALL REQUIRED FIRE DOORS SHALL BEAR A LABEL FROM A RECOGNIZED AGENCY SHOWING THE SPECIFIC RATING.
18. EXIT SIGNS AND ILLUMINATION SHALL CONFORM TO ALL APPLICABLE BUILDING AND FIRE CODES.
19. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
20. PROVIDE OR MODIFY AS NEEDED SPRINKLER ALARM AND SMOKE DETECTION SYSTEM PER APPLICABLE CODES INCLUDING IF NECESSARY FOR HORNS, STROBE LIGHTS, CONTROL PANEL CONNECTIONS, SMOKE DETECTORS, AUDIO VISUAL ALARMS. SUBMIT SHOP DRAWINGS TO THE FIRE MARSHAL FOR APPROVAL.

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LICENSED ARCHITECT ANN L. GERVANTES C-40905 EXPIRATION DATE: 11/30/2027 RENEWAL REQUIRED STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

PROJECT DATA

REMARKS	DATE
ISSUE FOR PLAN CHECK	07/09/2025

CITY OF IRVINE
BUILDING & SAFETY DIVISION

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I000

03/30/2026 - PLAN CHECK CORRECTIONS 4

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FINISH NOTES

1. NO FINISH SUBSTITUTIONS MAY BE MADE UNLESS APPROVED BY ARCHITECT.
2. CONTRACTOR MUST NOTIFY THE ARCHITECT OF ANY DISCREPANCY IN PLANS. FINISH ITEMS CLEARLY SHOWN IN PLANS, BUT OMITTED FROM SCHEDULES OR LEGENDS MUST STILL BE PROVIDED AND INSTALLED BY CONTRACTOR. CONTRACTOR TO VERIFY OMITTED FINISHED WITH ARCHITECT PRIOR TO ORDERING PRODUCTS.
3. INSTALL MATERIALS ACCORDING TO MANUFACTURER'S SUGGESTED INSTALLATION AND PREPARATION/MAINTENANCE SPECIFICATIONS OR BETTER, UNLESS OTHERWISE APPROVED OR NOTED.
4. APPLICATION OF CONTROLLED INTERIOR FINISHES SHALL BE IN CONFORMANCE WITH STATE & LOCAL CODES.
5. DECORATIVE MATERIALS SHALL BE MAINTAINED IN FLAME-RETARDANT CONDITION.
6. SUBMIT THE FOLLOWING SAMPLES FOR ARCHITECT'S APPROVAL:
   A. THREE (3) 12" X 12" SAMPLES FOR ALL PAINT, WALL COVERING FINISHES AND COLORS APPLIED TO A SUBSTRATE WHICH IS REPRESENTATIVE OF THE SURFACE TO BE FINISHED. SUBMIT PAINT SAMPLES FROM THE PAINT LOT OR LOTS INTENDED FOR APPLICATION.
   B. ONE (1) 24" X 24" MOCK-UP WITH SAMPLE SEAM (CENTERED) OF ALL WALL COVERING FINISHES AND COLOR.
   C. THREE (3) 12" X 12" SAMPLES OF ALL FLOOR COVERING.
   D. SUBMIT ACTUAL CUTTINGS OF EACH PRODUCT FOR COLOR/QUALITY CONTROL.
7. WHERE MATERIALS ARE NOT RETURNABLE, SUBMIT SAMPLES TO ARCHITECT AND SECURE APPROVAL BEFORE PLACING FULL ORDERS.
8. SUBMIT SEAMING PLAN FOR CARPET TO ARCHITECT FOR APPROVAL PRIOR TO CARPET ORDER.
9. NOTIFY ARCHITECT IMMEDIATELY OF ITEMS WITH LONG LEAD TIMES.
10. ALL PAINT FINISH OF METAL PARTS OF DOORS, HANDRAILS, PERIMETER ENCLOSURES, ETC. , SHALL BE SEMI-GLOSS, UNLESS NOTED OTHERWISE.
11. WHERE PAINT COLORS CHANGE, CORNERS ARE TO BE CUT-IN FREE OF OVERLAPPING.
12. PRIOR TO THE INSTALLATION OF WALL COVERINGS, SURFACES SHALL BE PROPERLY PREPARED WITH SEALER PER MANUFACTURER'S RECOMMENDATIONS.
13. CONTRACTOR TO VERIFY CONDITION AND LEVEL OF FLOOR SO AS TO RECEIVE NEW FINISHES WITHOUT BOWING AT FLOOR OR WALL BASE. CONTRACTOR IS RESPONSIBLE FOR ALL FLOOR PREPARATION.
14. ALL CARPETING SHALL BE INSTALLED WITH GLUE DOWN METHOD, UNLESS NOTED OTHERWISE.
15. ALL RESILIENT FLOORING TO BE INSTALLED WITH FULL TILE FROM THRESHOLD STRIP AND FULL TILE FROM PARTITION ADJACENT TO DOOR SWING, U.N.O.
16. PROVIDE AND INSTALL SPECIFIED BASE FOR ALL AREAS TO RECEIVE FLOORING.
17. CONTRACTOR SHALL PROVIDE PRE-FORMED RUBBER BASE CORNERS. DO NOT CUT OR BEND STRAIGHT BASE TO MAKE CORNERS.
18. MILLWORK LOWER CABINETS ARE NOT TO RECEIVE WALL BASE UNLESS INDICATED ON MILLWORK DETAILS.
19. FLOOR FINISHES TO CONTINUE UNDERNEATH "OPEN FLOOR" AREAS OF MILLWORK, INCLUDING SINK AREA AND AT ALL UNDER-COUNTER EQUIPMENT AREAS WHICH ARE OPEN TO THE FLOOR.
20. FLOORS SHALL BE SLOPED TO FLOOR DRAINS. COORDINATE WITH PLUMBING AND STRUCTURAL DRAWINGS. IN RATED FLOOR CONDITIONS, CONFIRM REMAINING FLOOR THICKNESS STILL CONFORMS TO MINIMUM RATING REQUIREMENT.
21. CONTRACTOR TO RUN CALCIUM CHLORIDE TEST ON ALL EXISTING OR NEW CONCRETE SLABS PRIOR TO INSTALLING ANY FLOORING AND COMPARE RESULTS WITH FLOORING MANUFACTURE'S RECOMMENDED MAXIMUM CONTENT FOR WARRANTIES AND ADHESIVE PRODUCTS.
22. PRIOR TO NEW FLOORING INSTALLATION REMOVE EXISTING FLOOR FINISHES. PATCH AND REPAIR SUB-FLOOR AS REQUIRED. PREPARE FLOORS AND TRANSITIONS AS REQUIRED FOR SMOOTH AND LEVEL FINISH PER APPLICABLE BUILDING CODES.
23. ALL FLOORING TRANSITIONS AMONG DIFFERING FLOORING MATERIAL ARE TO BE A FLUSH TRANSITION, U.O.N.
24. FEATHER SUB-FLOOR UP FOR TILE FLOORING TO CARPET CONDITIONS AND RESILIENT FLOORING TO CARPET CONDITIONS FOR FLUSH INSTALLATION.
25. INSTALL METAL TRANSITION STRIPS WHERE TILE MEETS ALL OTHER FLOORING TYPES. PROVIDE LOW PROFILE TRANSITION STRIP WHERE ALL OTHER DIFFERENT FLOOR TYPES MEET, VERIFY COLOR WITH ARCHITECT, U.O.N.
26. FLOOR COVERING INSTALLER TO FOLLOW MANUFACTURER'S SPECIFIED CARPET INSTALLATION INSTRUCTIONS, USING ADHESIVES AND INSTALLATION METHOD TO MAINTAIN PRODUCT'S WARRANTY. CONTACT CARPET SALES REPRESENTATIVE WITH QUESTIONS PRIOR TO PROCEEDING.
27. FLOOR COVERING INSTALLER TO FOLLOW MANUFACTURER'S SPECIFIED CONTOURED RUBBER BASE INSTALLATION INSTRUCTIONS USING ADHESIVES AND INSTALLATION METHODS REQUIRED TO MAINTAIN PRODUCT'S WARRANTY.
28. FLOOR COVERING INSTALLER REQUIRED TO PROVIDE MINIMAL SEAMS/JOINTS AT ALL LOCATIONS FOR FLOOR AND WALL BASE MATERIAL INSTALLATION. PROVIDE LOW VOC, BUT HEAVY DUTY ADHESIVES TO ENDURE HEAVY FOOT TRAFFIC, CARTS AND TO MAINTAIN PRODUCT'S WARRANTY.
29. PRIOR TO PAINTING, PARTITIONS MUST BE PATCHED AND REPAIRED, CLEAN AND DRY AS TO LEAVE NO EVIDENCE OF PATCHING OR REPAIRS. ALL SCREW AND NAIL HEADS MUST BE SET AND SPACKLED. ALL JOINTS MUST BE TAPED AND COVERED WITH JOINT COMPOUND. JOINTS THAT ARE FILLED TO BE SANDED SMOOTH AND DUST REMOVED PRIOR TO RECEIVING NEW PAINT FINISH APPLICATION.
30. PRIOR TO PAINTING OVER WALL COVERING, SECURELY GLUE DOWN ANY LIFTING OR BUCKLING AND HIDE ALL SEAMING OR BUMPS.
31. PARTITIONS TO HAVE AT LEAST ONE COAT OF COLORED PRIMER AND TWO COATS OF SPECIFIED PAINT FINISH TYPE. PAINT TO BE A LOW VOC UNLESS U.O.N. HIGH TRAFFIC/WEAR ABILITY WITH GOOD SCRUB AND CLEANING ABILITY. VERIFY ALL WITH TENANT OR OWNER PRIOR TO PURCHASING PAINT.
32. PAINT ANY UNFINISHED SPEAKER COVERS AND HVAC GRILLS IN GYPSUM BOARD PARTITIONS AND CEILINGS TO MATCH ADJACENT PAINT COLOR AS SPECIFIED.
33. ALL EXPOSED MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DUCTWORK AND PIPING IS TO BE PAINTED TO MATCH THE CEILING.
34. ALL NEWLY INSTALLED, PATCHED WORK AND ALL AFFECTED AREAS SHALL BE PAINTED. ALL PAINTING WORK SHALL BE PERFORMED TO COVER THE ENTIRE HORIZONTAL OR VERTICAL SURFACE TO THE CLOSEST CORNER IN ALL FOUR DIRECTIONS.
35. PRIOR TO INSTALLING WALL TILES AND WALL BASE TILE, PARTITIONS MUST BE PATCHED AND REPAIRED, CLEAN AND DRY AND BE PROPERLY MEMBERED AND ALIGNED, SO, AS TO LEAVE NO EVIDENCE OF PATCHING OR REPAIRS. ALL SCREW AND NAIL HEADS MUST BE SET AND SPACKLED. ALL JOINTS MUST BE TAPED AND COVERED WITH JOINT COMPOUND. JOINTS THAT ARE FILLED ARE TO BE SANDED SMOOTH AND BUMP FREE WITH DUST REMOVED PRIOR TO RECEIVING MORTAR BED/BOND COAT AND WALL TILES.
36. ALL WALL TILES ARE TO HAVE A MORTAR BED/BOND COAT THICKNESS TO ACCOMMODATE THE VARYING THICKNESSES OF ALL MATERIAL TYPES OF TILE SPECIFIED FOR PARTITION INSTALLATION WITH A FLUSH FRONT FACE.
37. ALL TRANSLUCENT GLASS TILE SPECIFIED ARE TO RECEIVE UNIFORM COVERAGE BY BACK BUTTERING TILES AND TROWEL RIDGES FLATTENED PRIOR TO SETTING.
38. FLOORS OF TOILETS, BATHING AND SHOWER ROOMS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE. THE INTERSECTION OF SUCH FLOORS WITH PARTITIONS SHALL HAVE A SMOOTH, HARD, NONABSORBENT VERTICAL BASE AS SPECIFIED IN FINISH PLANS OR RESTROOM ELEVATIONS. BASE SHALL EXTEND UPWARD ONTO THE PARTITIONS NOT LESS THAN 4 INCHES.
39. WALLS AND PARTITIONS WITHIN 2 FEET OF DRINKING FOUNTAINS, SERVICE SINKS, URINALS AND WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE TO A HEIGHT OF NOT LESS THAN 4 FEET ABOVE THE FLOOR.
40. CHECK THE SOG FOR MOISTURE CONTENT BEFORE INSTALLING WOOD SPORTS FLOORING.

CEILING NOTES

1. SEE ELECTRICAL ENGINEERING DRAWINGS FOR SPECIFICATIONS OF LIGHT FIXTURES, SWITCHES, EXIT SIGNS, ETC.
2. CONTRACTOR TO VERIFY COMPATIBILITY OF LIGHT FIXTURES WITH THE CEILING SYSTEM.
3. ALL REPLACEMENT FLUORESCENT LAMPS TO MATCH BUILDING STANDARD OR ADJACENT EXISTING CONSTRUCTION - SAME COLOR AND MANUFACTURER.
4. FIELD VERIFY EXISTING CEILING GRID LOCATION AND NOTIFY ARCHITECT OF ANY DISCREPANCIES ON PLANS.
5. CONTRACTOR TO PROVIDE APPROPRIATE SIZED CUTOUTS ABOVE CEILINGS WHERE NON-RATED PARTITIONS EXTEND TO SLAB ABOVE AS NECESSARY FOR RETURN AIR CIRCULATION.
6. WHERE DISCREPANCIES IN LOCATION OF LIGHT FIXTURES, AIR DIFFUSERS, GRILLES, ETC. OCCUR ON THE ELECTRICAL PLANS, THE ARCHITECTURAL PLANS SHALL GOVERN. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOR CLARIFICATIONS.
7. FIELD VERIFY ALL CLEARANCES OF DUCTS, PIPES, SPRINKLERS, ETC. AND NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION OF LIGHTS ETC.
8. PLACEMENT OF LIGHT FIXTURES IN AREAS WHERE MAIN DUCTS MAY CAUSE INTERFERENCE MUST BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
9. CONDUIT ABOVE CEILING MUST BE A MINIMUM OF 12" ABOVE THE CEILING GRID.
10. NO COMBUSTIBLE MATERIALS SHALL BE USED IN THE PLENUM SPACE, INCLUDING ALUMINUM FLEX, ALUMINUM CONDUIT AND POT METAL CONNECTORS.
11. ALL JUNCTION BOXES AND MECHANICAL EQUIPMENT REQUIRING ACCESS FOR SERVICE SHALL BE LOCATED OVER ACOUSTICAL CEILINGS. NO ACCESS HATCHES SHALL BE INSTALLED IN GYPSUM BOARD CEILINGS WITHOUT PRIOR APPROVAL BY ARCHITECT. (NO EXCEPTION).
12. ALL SPRINKLER HEADS AT HARD-LID CEILINGS ARE TO BE FULLY RECESSED AND CONCEALED. HEADS ARE TO BE CENTERED BETWEEN LIGHTS IN A UNIFORM ARCHITECTURAL PATTERN, G.C TO PROVIDE A SUBMITTAL WITH SPRINKLER HEAD LOCATIONS FOR ARCHITECT'S APPROVAL PRIOR TO INSTALLATION.
13. ALL SPRINKLER HEADS PLACED IN WHITE CEILING TILE OR WHITE GYPSUM BOARD TO BE WHITE. ALL SPRINKLER HEADS IN COLORED CEILINGS ARE TO BE CUSTOM COLOR TO MATCH ADJACENT CEILING.
14. LOCATE RECESSED DOWN LIGHTS, WALL WASHERS, SMOKE DETECTORS, EXIT SIGNS, SPEAKERS, FIRE SPRINKLERS, ETC. IN CENTER OF 24"x24" CEILING TILES OR IN CENTER OF 24"x24" PORTION OF 24"x48" CEILING TILES. UNLESS OTHERWISE NOTED.
15. PROVIDE SWITCHES AND LIGHT SENSORS FOR OPEN AREAS AND PRIVATE OFFICES. ACTUAL LOCATION OF ALL SWITCHES TO BE DETERMINED BY ARCHITECT.
16. PROVIDE FIRE DAMPERS AT ALL SUPPLY AND RETURN AIR OUTLETS, INLETS OR DUCTS PENETRATING FIRE RATED ASSEMBLIES, ENCLOSURES, PARTITIONS, FLOORS OR SURFACES, AS REQUIRED BY LOCAL CODES AND FIRE DEPARTMENT. REFER TO MECHANICAL ENGINEERING DOCUMENTS FOR SPECIFIC REQUIREMENTS.
17. CONTRACTOR SHALL PROVIDE EMERGENCY LIGHTING, STROBE LIGHTS, AUDIO-VISUAL ALARMS AND OCCUPANCY SENSORS TO MEET ALL APPLICABLE CODES.
18. CONTRACTOR SHALL PROVIDE LAMPS WITH TYPE IC RATED HOUSING WHERE FIXTURES COME IN DIRECT CONTACT WITH INSULATION.
19. ALL EXIT SIGN LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT.
20. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED AT ALL TIMES AND SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM (BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR) THAT WILL AUTOMATICALLY ILLUMINATE THE EXIT SIGNS FOR A DURATION OF NOT LESS THAN 90 MINUTES.

MILLWORK NOTES

1. CONTRACTOR MUST NOTIFY ARCHITECT OF ANY DISCREPANCY IN PLANS. FINISH ITEMS CLEARLY SHOWN IN PLANS, BUT OMITTED FROM SCHEDULES OR LEGENDS MUST STILL BE PROVIDED AND INSTALLED BY CONTRACTOR. CONTRACTOR TO VERIFY OMITTED FINISHES WITH ARCHITECT PRIOR TO ORDERING PRODUCTS.
2. SHOP DRAWINGS MUST BE PROVIDED FOR APPROVAL PRIOR TO FABRICATION ANY SUBSTITUTIONS MUST BE APPROVED BY THE ARCHITECT PRIOR TO FABRICATION.
3. MILLWORKER TO COORDINATE & VERIFY WITH CONTRACTOR FINAL LOCATION FOR CANTILEVERED COUNTERS FOR IN-WALL SUPPORT BRACKETS, PRIOR TO GYPSUM BOARD FINISHING OF PARTITIONS. ALL FINAL INSTALLATION HEIGHTS FOR IN-WALL SUPPORT BRACKETS MUST MEET ALL APPLICABLE ACCESSIBILITY CODES AND STANDARDS WITH COUNTERTOP MATERIAL THICKNESS INCLUDED.
4. MATERIAL COLORS NOT LISTED SHALL BE REQUESTED FROM THE ARCHITECT ON SHOP DRAWING SUBMITTALS OR VIA RFIs.
5. ALL UPPERS TO BE LAMINATED TO MATCH BASE CABINETS. BOTH UPPERS & LOWER CABINETS IN WET AREAS TO HAVE MATCHING PVC EDGE, ALL OTHERS TO HAVE PLASTIC LAMINATE EDGE BANDING U.O.N.
6. ALL CABINETS AND DOORS SHALL BE CONSTRUCTED FROM 3/4" THICK MATERIAL, U.O.N. ON DETAILS.
7. BASE CABINETS ARE NOT TO RECEIVE WALL BASE UNLESS INDICATED ON FINISH PLANS OR ELEVATIONS.
8. ALL INTERIORS OF CLOSED CABINETS TO BE WHITE MELAMINE/POLYESTER OR APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED.
9. ALL OPEN CABINETS OR SHELVES TO HAVE PLASTIC LAMINATE TO MATCH EXTERIORS.
10. NO 3/4" THICK SHELF SHALL SPAN LONGER THAN 32" WITHOUT SUPPORT.
11. ALL SHELVING TO BE ADJUSTABLE UNLESS OTHERWISE SPECIFIED.
12. ALL FILE PEDESTALS ARE TO BE CONFIGURED FOR "FRONT TO BACK" FILING AND BE ABLE TO ACCEPT METAL HANGERS TO ACCEPT PENDAFLEX TYPE FILE FOLDERS, UNLESS NOTED AS LATERAL.
13. ALL COUNTER TOPS TO BE 24" DEEP, UNLESS OTHERWISE SPECIFIED. WHERE NO BACKSPLASH IS SPECIFIED, COUNTER TOPS TO BE SCRIBED TIGHTLY TO BACK & SIDE WALLS.
14. ALL BACKSPLASHES TO BE SCRIBED TO PARTITIONS, AND MUST BE FLUSH TO EDGE OF BASE, UNLESS OTHERWISE SPECIFIED. ALL COUNTER TRANSITION SEAMS MUST BE CAULKED SEALED, VERIFY EITHER MATCHING COLOR CAULK OR CLEAR SILICONE.
15. PROVIDE SIDE SPLASHES AT LOCATIONS ADJACENT TO PARTITIONS OR WINDOWS, ESPECIALLY FOR SINKS U.O.N.
16. FACES OF PIGEONHOLES TO MATCH WORK SURFACE LAMINATE. COLOR OF EDGE BANDING ON ALL DOORS TO MATCH FACE MATERIAL.
17. IF PROVIDED, SEE SPECIFICATIONS/PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
18. COUNTERTOPS SHALL HAVE A NOSING OF COUNTERTOP MATERIAL AT LEAST 3" DEEP, WHEREBY THE COUNTER MATERIAL EXTENDS INTO THE INSIDE OF THE CABINET, I.E. OVER THE DOOR (WHEN PRESENT).
19. END PANELS AND FRONT EDGES OF EDGE PANELS WHICH ARE PROUD OF THE INTERIOR CABINET SHALL BE FACED TO MATCH DOOR FRONTS.
20. ALL HINGED DOORS TO HAVE CLEAR SILENCERS TOP AND BOTTOM ON DOOR (NOT CABINET).
21. ALL DRAWERS GLIDES SHALL HAVE SILENCERS BUILT INTO THE GLIDE AND NOT INSTALLED ON THE DRAWER OR DRAWER FRONT.
22. ALL DRAWER GLIDES SHALL BE FULL EXTENSION.
23. PROVIDE FULL OVERLAY HINGES THAT OPEN ±105°, EXCEPT WHERE CABINETS ARE ADJACENT TO THE PARTITIONS. PROVIDE HINGES WHICH LIMIT THE DOOR SWING TO KEEP THE DOOR PULL FROM DAMAGING THE PARTITION.

FLOOR PLAN NOTES

1. CONTRACTOR AND ARCHITECT TO REVIEW & APPROVE CHALK LINES OF PARTITION LAYOUT PRIOR TO COMMENCEMENT OF PARTITION CONSTRUCTION.
2. CONTRACTOR TO VERIFY DIMENSIONS FOR ALL PLUMBING PARTITIONS.
3. EXTEND ALL STUDS AND PARTITION MATERIALS TO CONSTRUCTION ABOVE, U.O.N.
4. ALL CONDUIT PIPING TO BE CONCEALED WITHIN THE PARTITION CONSTRUCTION.
5. DOOR OPENINGS IN PARTITIONS NOT DIMENSIONED ARE TO BE LOCATED WITHIN 4" OF ADJACENT PERPENDICULAR PARTITION.
6. CONTRACTOR SHALL USE 6" METAL STUDS MINIMUM AT ALL PLUMBING PARTITIONS. CONTRACTOR TO VERIFY ACTUAL DEPTH REQUIRED, ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT.
7. USE WATER RESISTANT GYPSUM BOARD AT ALL AREAS SUBJECT TO MOISTURE OR WHERE TILE IS USED.
8. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH LOCAL AND NATIONAL CODES.
9. ALL HOT WATER LINES SHALL BE PROPERLY INSULATED. SEE PLUMBING DRAWINGS.
10. ALL PLUMBING CLEAN-OUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. CONTRACTOR SHALL COORDINATE ALL CLEAN-OUT LOCATIONS WITH EQUIPMENT, AND CABINETS. SUBMIT A PLAN OF ALL PROPOSED LOCATIONS TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
11. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ARCHITECT AND TENANT APPROVAL PRIOR TO MANUFACTURE OF ANY CABINET WORK, MILLWORK AND ANY OTHER SPECIAL ITEMS REQUIRING CUSTOM SHOP PREFABRICATION WORK.
12. PROVIDE AND INSTALL ALL NECESSARY PARTITION BACKING, STIFFENERS, BRACING, BACK-UP PLATES AND/ OR SUPPORTING BRACKETS AS REQUIRED FOR THE INSTALLATION OF WALL-MOUNTED OR SUSPENDED EQUIPMENT OR BUILT-IN ITEMS. VERIFY REQUIREMENTS WITH MANUFACTURERS PRIOR TO INSTALLATION. SUPPLY CATALOG CUT SHEETS FOR ARCHITECT'S APPROVAL.
13. PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL CONNECTIONS AND PLUMBING SUPPLY, FITTINGS & CONNECTORS TO COMPLETE INSTALLATION OF APPLIANCES & EQUIPMENT INDICATED ON PLAN. VERIFY REQUIREMENTS WITH MANUFACTURERS PRIOR TO INSTALLATION. SUPPLY CATALOG CUT SHEETS FOR ARCHITECT'S APPROVAL.
14. EXACT LOCATION OF FIRE EXTINGUISHER CABINETS TO BE CONFIRMED WITH ARCHITECT BEFORE INSTALLATION. PROVIDE ADDITIONAL FIRE EXTINGUISHERS & CABINETS AS REQUIRED BY THE FIRE DEPARTMENT FIELD INSPECTORS.
15. UNLESS OTHERWISE NOTED, ALL GYPSUM BOARD SURFACES, PARTITIONS, AND CEILINGS SHALL BE TAPED, SANDED SMOOTH TO A "LEVEL 4" FINISH, SO AS TO RECEIVE PAINT OR WALL COVERING MATERIAL.
16. PROVIDE SOUND INSULATION AT PERIMETER PARTITIONS OF RESTROOMS, LOBBY, STAIRS, AND ACROSS CEILING OF RESTROOMS TO CREATE AN ACOUSTIC ENVELOPE, U.O.N.
17. PATCH AND FILL OPENINGS AT EXISTING GYPSUM BOARD PARTITIONS AND SOFFITS FOLLOWING REMOVAL OR INSTALLATION OF ANY SURFACE MOUNTED OR RECESSED FURNISHINGS, RECEPTACLES, UTILITY PIPING, SHELF STANDARDS & ALL OTHER SIMILAR ELEMENTS INDICATED TO BE REMOVED DURING THE DEMOLITION PHASE OR INSTALLED DURING THE CONSTRUCTION PHASE. TAPE AND SEAL ALL SEAMS WITH JOINT COMPOUND. APPLY NEW FINISH TO MATCH EXISTING FINISH AT ADJACENT GYPSUM BOARD SURFACES AND FEATHER NEW FINISH WITH EXISTING FINISH TO PROVIDE CONSISTENT & CONTINUOUS FINISH.
18. THE MAXIMUM CONTROL JOINT SPACING FOR PARTITIONS AND CEILINGS WITHOUT PERIMETER RELIEF IS TO BE 30 LINEAR FEET OR 900 SQUARE FEET OF SURFACE AREA, WITH PERIMETER RELIEF IS TO BE 50 LINEAR FEET OR 2,500 SQUARE FEET OF SURFACE AREA. EXTERIOR JOINT SPACING IS TO BE 30 LINEAR FEET OR 900 SQUARE FEET OF SURFACE AREA.
19. CONSTRUCTION SEALANT JOINTS ARE REQUIRED AT CONTINUOUS GYPSUM BOARD SURFACES WITH DISSIMILAR PARTITION STRUCTURE.
20. PROVIDE DOUBLE STUDS AT BOTH JAMBS OF DOOR FRAMES AND HEADER.
21. PARTITIONS SHALL NOT BE FASTENED NOR BRACED TO DUCTWORK, CONDUIT OR PIPING.
22. DO NOT MECHANICALLY SECURE NEW STUD FRAMING TO EXISTING WINDOW FRAMES.

POWER & SIGNAL NOTES

1. COORDINATE TELEPHONE/DATA INSTALLATION WITH APPROPRIATE SUB-CONTRACTOR.
2. ALL EXISTING ELECTRICAL DEVICES ARE TO REMAIN, UNLESS NOTED OTHERWISE. REPLACE DEVICE AND PLATE TO MATCH NEW AS REQUIRED.
3. ALL OUTLETS TO BE INSTALLED AT LOCATIONS SHOWN BY DIMENSIONS ON THE POWER & SIGNAL PLAN OR REFERENCED ELEVATIONS. DIMENSION ALL OUTLETS FROM THE CENTERLINE OF THE OUTLET BOX. NON-DIMENSIONED OUTLETS ARE TO BE LOCATED AT THE NEAREST PARTITION METAL STUD.
4. WHEN OUTLETS ARE GROUPED TOGETHER (2 OR MORE), THEY ARE TO BE SPACED NO MORE THAN 2" APART.
5. ALL ELECTRICAL OUTLETS OF 30 AMPERES OR LESS SHALL BE MOUNTED BETWEEN +15" TO BOTTOM RECEPTACLE AND +48" TO TOP OF RECEPTACLE FROM FINISH FLOOR. SEE NOTE 6, BELOW, FOR GENERAL MOUNTING HEIGHT.
6. ALL NEW WALL-MOUNTED 15, 20, AND 30 AMP OUTLETS/RECEPTACLES TO BE CENTERED AT 18" A.F.F., U.O.N.
7. NO RECEPTACLES OR JUNCTION BOXES WITHIN A PARTITION/WALL ARE TO BE BACK-TO-BACK SERVING OPPOSITE SIDES OF THE PARTITION. RECEPTACLES MUST BE STAGGERED, SET APART BY AT LEAST 4" TO ALLOW FOR INSULATION.
8. ANY NEW VOICE/DATA AND ELECTRICAL OUTLETS TO BE INSTALLED IN EXISTING DRYWALL PARTITIONS TO BE FLUSH MOUNTED WITH THE FINISHED WALL-SURFACE AND WALL-PATCHED AS REQUIRED. SHOULD THE PARTITION DEPTH NOT BE ADEQUATE, COORDINATE WITH THE ARCHITECT AN ALTERNATE LOCATION.
9. LOCATIONS OF FURNITURE POWER FEEDS SHALL ACCOMMODATE CIRCUITS AND WIRE PER ELECTRICAL DRAWINGS. TENANT SHALL BE RESPONSIBLE FOR PROVIDING FURNITURE POWER FEED, GENERAL CONTRACTOR SHALL INSTALL THE POWER FEED.
10. WHERE DEDICATED ELECTRICAL OUTLETS ARE NOTED WITHIN THE FURNITURE PANEL SYSTEM, THE PANEL SYSTEM SHALL ACCOMMODATE THIS REQUIREMENT.
11. WHERE ELECTRICAL WORK IS SPECIFIED IN CONJUNCTION WITH MILLWORK, LAMPS AND FIXTURES ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR.
12. CUT-OUTS FOR SWITCHES, OUTLETS, ETC. AS REQUIRED BY THE MILLWORKER ARE TO BE COORDINATED WITH THE ELECTRICAL CONTRACTOR, U.O.N. ALL RECEPTACLES WHERE MILLWORK OCCURS SHALL BE LOCATED PER ELEVATIONS OF THE MILLWORK ITEM IN QUESTION.
13. ALL WALL COVER PLATES SHALL BE WHITE, U.O.N.
14. ALL SEPARATE CIRCUIT RECEPTACLES TO BE ORANGE COLOR WITH BUILDING STANDARD COLOR COVER PLATE.
15. ALL/ANY FLOOR CORE DRILL LOCATIONS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO DRILLING. ALL UNUSED CORE DRILLS SHALL BE PLUGGED AND CAPPED AS REQUIRED TO MAINTAIN FLOOR FIRE RATING.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO COMPLETE CORE DRILLING AND ELECTRICAL HOOKUP INCLUDING WORK IN LANDLORD'S OR OTHER TENANT'S SPACE.
17. PRIOR TO CUTTING OPENINGS IN THE FLOOR, CONTRACTOR TO PROVIDE SURVEY/X-RAYS TO VERIFY BEAM, JOISTS, REBAR AND EXISTING CONDUIT LOCATIONS. MARK ALL CORE DRILL LOCATIONS AND RECEIVE STRUCTURAL ENGINEER AND/OR BUILDING OWNER'S APPROVAL PRIOR TO DRILLING.
18. ALL NEW PARTITION OUTLETS ABOVE COUNTERTOP TO BE MOUNTED HORIZONTALLY 6" ABOVE COUNTER U.O.N.
19. TEMPORARY LIGHTING TO BE PROVIDED AS REQUIRED DURING CONSTRUCTION.
20. REFER TO REFLECTED CEILING PLANS FOR LIGHT FIXTURES UNDER OVERHEADS AT MILLWORK AND CUSTOM FURNITURE.
21. REFER TO POWER PLAN FOR LIGHT FIXTURES MOUNTED IN SYSTEMS FURNITURE.
22. CONTRACTOR TO PROVIDE BACKBOXES AND CONDUIT TO ABOVE CEILING ONLY FOR LOW VOLTAGE DEVICES LOCATED IN PARTITIONS AND HARD CEILINGS. DEVICES AND CABLING ARE BY OTHERS. COORDINATE WITH LOW VOLTAGE CONTRACTOR FOR LOCATIONS AND REQUIREMENTS.

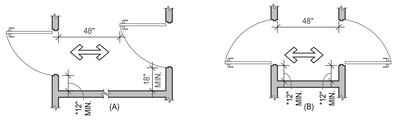
GENERAL PROJECT NOTES

GENERAL NOTES

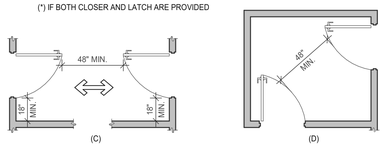
1. ALL WORK SHALL BE PERFORMED SO AS TO COMPLY WITH ALL LEGAL, INDUSTRY AND PROJECT-SPECIFIC REQUIREMENTS AND STANDARDS INCLUDING WITHOUT LIMITATION OF THE FOLLOWING:
   A. ALL APPLICABLE BUILDING CODES
   B. ALL APPLICABLE SPECIALTY CODES INCLUDING THE MOST CURRENT ISSUES AND SUPPLEMENTS
   C. THE PROJECT MANUAL AND ASSOCIATED SPECIFICATIONS WHEN PROVIDED
   D. THE MANUFACTURER'S REQUIREMENTS OR RECOMMENDATIONS
   E. ALL APPLICABLE LANDLORD BUILDING STANDARDS
2. IN USING THESE PLANS FOR BIDDING OR CONSTRUCTION PURPOSES, ALL CONTRACTORS ARE REQUIRED TO REVIEW AND TREAT THEM AS A WHOLE IN ORDER TO IDENTIFY ALL REQUIREMENTS THAT DIRECTLY OR INDIRECTLY AFFECT THEIR PORTION OF THE WORK, EVEN REQUIREMENTS LOCATED IN SECTIONS DESIGNATED AS APPLICABLE TO OTHER TRADES OR IN DOCUMENTS PROVIDED BY OTHER MEMBERS OF THE PROJECT DESIGN TEAM. UNLESS EXPRESSLY PROVIDED OTHERWISE, THE INTENT IS TO INCLUDE ALL LABOR, MATERIALS, PRODUCTS AND SERVICES NECESSARY OR APPROPRIATE FOR THE COMPLETED PROJECT AS CALLED FOR OR REASONABLY IMPLIED FROM THE PLANS AND SPECIFICATIONS PROVIDED BY THE PROJECT'S DESIGN TEAM. IN CASE OF CONFLICTS OR OMISSIONS, THE AFFECTED CONTRACTOR IS REQUIRED TO EITHER OBTAIN DIRECTION FROM AN APPROPRIATE REPRESENTATIVE OF THE OWNER, OR OTHERWISE TO APPLY THE MORE STRINGENT OR COSTLY STANDARD.
3. IN INTERPRETING THESE PLANS, THE FOLLOWING GENERAL RULES APPLY:
   A. WRITTEN DIMENSIONS SHALL GOVERN. DO NOT SCALE THE DRAWINGS. LARGE SCALE DRAWINGS AND DETAILS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
   B. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS
   C. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK IN THE SAME BUILDING.
   D. WORK SHOWN AS "NIC" IS FOR REFERENCE ONLY AND THE RESPONSIBILITY OF THE CONTRACTOR ONLY TO THE EXTENT THAT THIS WORK MAY REQUIRE SOME REASONABLE PROTECTION OR COORDINATION EFFORTS.
4. THESE PLANS AND SPECIFICATIONS ARE INTENDED TO REPRESENT ONLY THE FINISHED CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES INCLUDING ANY AND ALL SAFETY PRECAUTIONS AND PROGRAMS, AND SHALL INDEMNIFY TO THE FULLEST EXTENT ALLOWED BY LAW THE OWNER AND THE PROJECT DESIGN TEAM FROM AND AGAINST ANY AND ALL RELATED CLAIMS AND LIABILITY.
5. THESE PLANS AND SPECIFICATIONS ARE INTENDED TO SET FORTH THE REQUIREMENTS FOR CONSTRUCTION IN ONLY AN INDUSTRY-STANDARD LEVEL OF QUALITY AND DETAIL, AND THEY ARE INTENDED TO BE SUPPLEMENTED BY APPROPRIATE REQUESTS FOR INFORMATION (RFIs). ERRORS AND OMISSIONS ARE TO BE EXPECTED AND ANTICIPATED, AND ALL CONTRACTORS ARE REQUIRED TO CAREFULLY REVIEW THESE PLANS FOR ERRORS AND OMISSIONS AND TO BRING THESE ERRORS AND OMISSIONS TO THE ATTENTION OF AN APPROPRIATE OWNER REPRESENTATIVE IN A TIMELY MANNER; AND ANY CONTRACTOR WHO FAILS TO DO SO BEFORE BIDDING OR OTHERWISE PROCEEDING ASSUMES THE RISK OF ANY CONSEQUENCES.
6. DIMENSIONS SCALED FROM DRAWINGS ARE CONSIDERED APPROXIMATE. CONTRACTORS THAT FAIL TO FIELD MEASURE AND VERIFY DISTANCES, CLEARANCE AND FIT ARE PROCEEDING AT TH

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

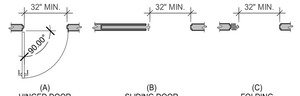
NOTES:
1. FLOOR OR GROUND SURFACE WITHIN REQUIRED MANEUVERING CLEARANCES SHALL COMPLY WITH [FLOOR OR GROUND SURFACES & CHANGES IN LEVEL] DETAIL AND SHALL HAVE A SLOPE NOT STEEPER THAN 1:48. CHANGES IN LEVEL ARE NOT PERMITTED AT DOOR LANDINGS.
2. THRESHOLDS, IF PROVIDED AT DOORWAYS SHALL BE 1/2" HIGH MAX. RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH [FLOOR OR GROUND SURFACES & CHANGES IN LEVEL] DETAIL.
3. HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OR THE WRIST.
4. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 LBS (22.5 N) MAX.
5. OPERABLE PARTS OF DOOR HARDWARE SHALL BE 34" MIN. AND 44" MAX. ABOVE THE FINISH FLOOR OR GROUND.
6. WHEN SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
7. DOOR AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90° THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12° FROM THE LATCH IS 5 SECONDS MIN.
8. DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70° THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MIN.
9. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE SHALL BE AS FOLLOWS:
   9.1. INTERIOR HINGED DOORS AND GATES: 5 LBS (22.5 N) MAX.
   9.2. SLIDING OR FOLDING DOORS: 5 LBS (22.5 N) MAX.
   9.3. REQUIRED FIRE DOORS: THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS (66.7N).
   9.4. EXTERIOR HINGED DOORS: 5 LBS (22.5 N) MAX.
10. SWINGING DOOR AND GATE SURFACES WITHIN 10" OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACE SHALL BE WITHIN 1/16" OF THE SAME PLANE AS THE OTHER AND BE FREE OF SHARP OR ABRASIVE EDGES. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED.
11. WHERE AUTOMATIC AND POWER-ASSISTED DOORS AND GATES WITHOUT STANDBY POWER ARE PART OF A MEANS OF EGRESS THE CLEAR BREAK OUT OPENING AT SWINGING OR SLIDING DOORS AND GATES SHALL BE 32" MIN. WHEN OPERATED IN EMERGENCY MODE.



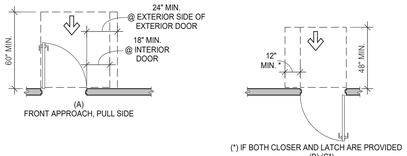
(*) IF BOTH CLOSER AND LATCH ARE PROVIDED

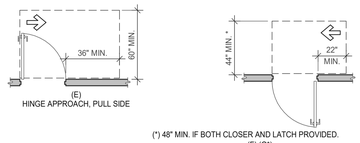


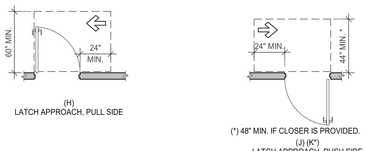
DOORS IN SERIES AND GATES IN SERIES



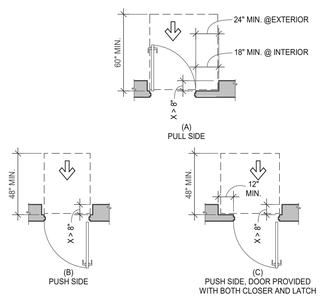
CLEAR WIDTH OF DOORWAYS





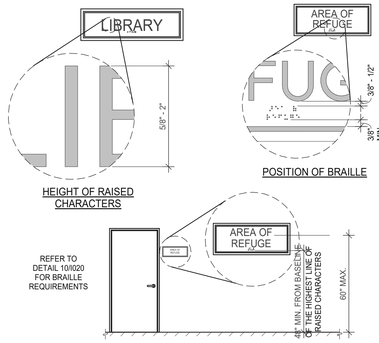


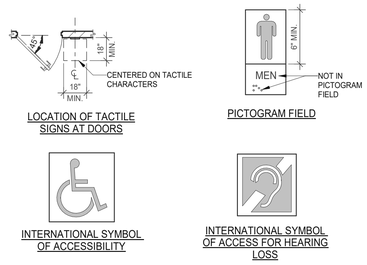
MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS AND GATES



MANEUVERING CLEARANCE AT RECESSED DOORS AND GATES

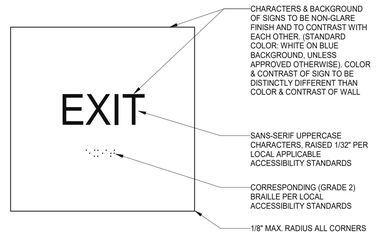
DOORS, DOORWAYS & GATES
SCALE: 1/4" = 1'-0" (25)



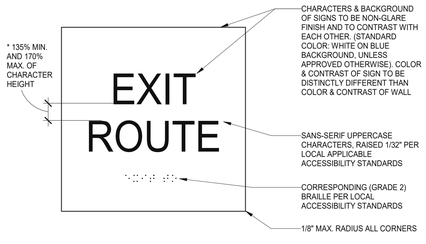


1. RAISED CHARACTER FOR THE TEXT DESCRIPTORS TO BE AT A MAXIMUM HEIGHT OF 1/32" IN ACCORDANCE WITH CBC 703.2.1.
2. ALL CHARACTERS SHALL BE UPPERCASE IN ACCORDANCE WITH CBC 11B-703.2.2.
3. ALL CHARACTERS SHALL BE STANDARD SANS SERIF FONT STYLE IN HORIZONTAL FORMAT IN ACCORDANCE WITH CBC 11B-703.2.3 AND 11B-703.2.9.
4. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT IN ACCORDANCE WITH CBC 11B-703.2.8.
5. THE CHARACTER STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER IN ACCORDANCE WITH CBC 11B-703.2.6.
6. CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I" IN ACCORDANCE WITH CBC 11B-703.2.4.
7. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES. WHERE CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8" MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM. WHERE CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/16" MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8" MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDERS AND DECORATIVE ELEMENTS 3/8" MINIMUM IN ACCORDANCE WITH CBC 11B-703.2.
8. SIGNAGE THICKNESS TO BE 1/8" THICK MINIMUM.

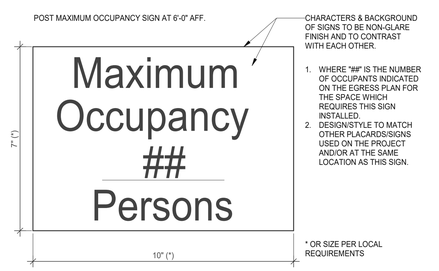
SIGNS
SCALE: 1/4" = 1'-0" (17)



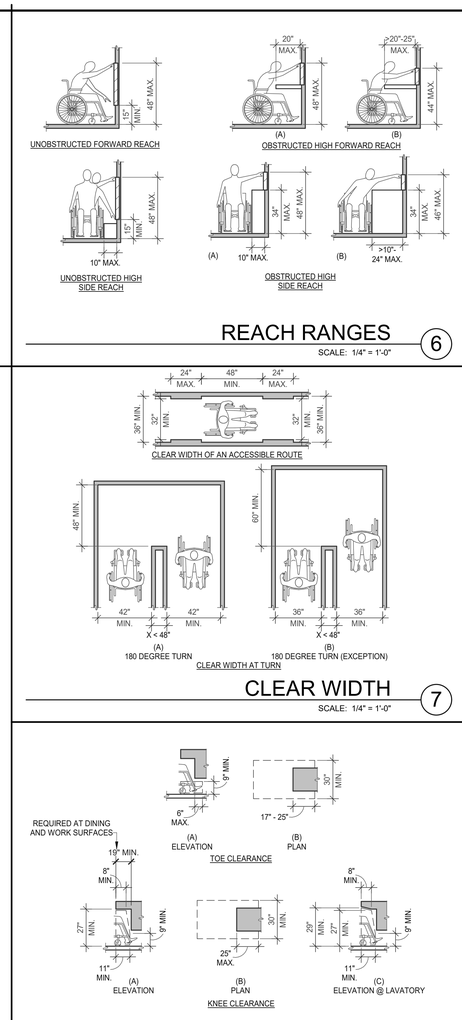
TACTILE "EXIT" SIGN
SCALE: 3" = 1'-0" (18)



TACTILE "EXIT ROUTE" SIGN
SCALE: 3" = 1'-0" (19)



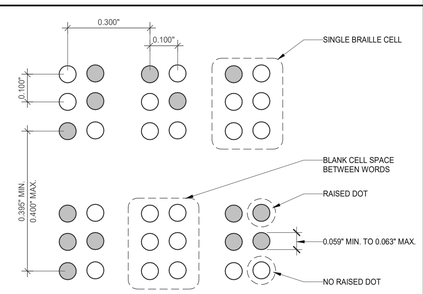
"MAXIMUM OCCUPANCY" SIGN
SCALE: 3" = 1'-0" (16)



REACH RANGES
SCALE: 1/4" = 1'-0" (6)

CLEAR WIDTH
SCALE: 1/4" = 1'-0" (7)

KNEE AND TOE CLEARANCE
SCALE: 1/4" = 1'-0" (8)



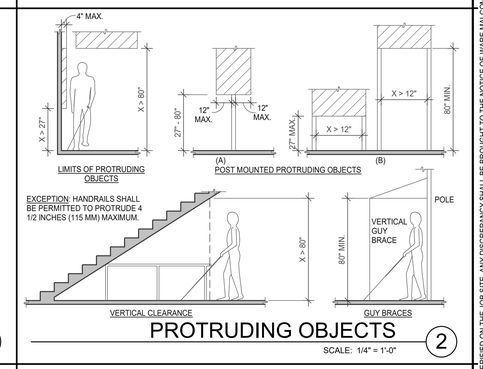
BRAILLE MEASUREMENT
SCALE: 3/8" = 1'-0" (10)

ACCESSIBILITY NOTES

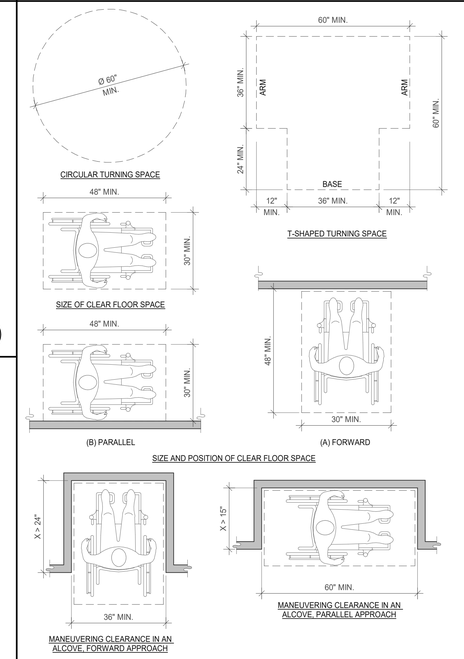
1. "THE ACCESSIBILITY GUIDELINES AND CODES" MENTIONED BELOW REFER TO ALL APPLICABLE LOCAL/STATE BUILDING CODES REFERENCED ON THE PROJECT DATA SHEET OF THIS SET IN ADDITION TO THE FEDERAL REQUIREMENTS OF THE ADA (THE AMERICANS WITH DISABILITIES ACT).
2. DETAILS ON THIS SHEET ARE FOR REFERENCE ONLY. REFER TO THE ACCESSIBILITY GUIDELINES AND CODES FOR ALL ACCESSIBILITY REQUIREMENTS.
3. THE GENERAL CONTRACTOR SHALL BECOME FAMILIAR WITH THE ACCESSIBILITY GUIDELINES AND CODES.
4. ANY DISCREPANCY CONTAINED HEREIN DOES NOT RELIEVE THE GENERAL CONTRACTOR OR OWNER FROM COMPLYING WITH THE ACCESSIBILITY GUIDELINES AND CODES.

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR BRINGING TO THE ARCHITECT'S ATTENTION PRIOR TO COMMENCING WORK ANY CONDTION THAT WOULD PRECLUDE STRICT COMPLIANCE WITH ALL ACCESSIBILITY REQUIREMENTS SET FORTH HEREIN, AND SHALL BEAR THE COST OF CORRECTING ALL NON COMPLIANT OR DEFECTIVE WORK.

*THE SIGNAGE SHOWN ON THIS PAGE IS FOR PLAN CHECK PURPOSES AND TO SHOW SIGN REQUIREMENTS, IT IS NOT THE FINAL DESIGN. FINAL DESIGN PACKAGE (FOR BIDDING PURPOSES) TO BE PROVIDED BY WARE MALCOMB.



PROTRUDING OBJECTS
SCALE: 1/4" = 1'-0" (2)



CLEAR FLOOR OR GROUND SPACE
SCALE: 1/2" = 1'-0" (4)

CITY OF IRVINE
BUILDING & SAFETY DIVISION

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY AND COPYRIGHT OF WARE MALCOMB AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY AGREEMENT WITH WARE MALCOMB. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF WARE MALCOMB PRIOR TO THE COMMENCEMENT OF ANY WORK

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANN L. CERVANTES C-44566 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

ACCESSIBILITY NOTES & DETAILS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I020

03/30/2026 - PLAN CHECK CORRECTIONS 4

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CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE - NON-RESIDENTIAL MANDATORY MEASURES

5.106.4.2.2 STAFF BICYCLE PARKING.

PROVIDE PERMANENT, SECURE BICYCLE PARKING CONVENIENTLY ACCESSED WITH A MINIMUM OF TWO STAFF BICYCLE PARKING SPACES PER NEW BUILDING. ACCEPTABLE BICYCLE PARKING FACILITIES SHALL BE CONVENIENT FROM THE STREET OR STAFF PARKING AREA 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.

5.106.5.3 ELECTRIC VEHICLE (EV) CHARGING

[N] CONSTRUCTION TO PROVIDE ELECTRIC VEHICLE INFRASTRUCTURE AND FACILITATE ELECTRIC VEHICLE CHARGING SHALL COMPLY WITH SECTIONS 5.106.5.3.1 AND SHALL BE PROVIDED IN ACCORDANCE WITH REGULATIONS IN THE CALIFORNIA BUILDING CODE AND THE CALIFORNIA ELECTRICAL CODE.

EXCEPTIONS:

1. ON A CASE-BY-CASE BASIS WHERE THE LOCAL ENFORCING AGENCY HAS DETERMINED COMPLIANCE WITH THIS SECTION IS NOT FEASIBLE BASED UPON ONE OF THE FOLLOWING CONDITIONS:
   A. WHERE THERE IS NO LOCAL UTILITY POWER SUPPLY.
   B. WHERE THE LOCAL UTILITY IS UNABLE TO SUPPLY ADEQUATE POWER.
   C. WHERE THERE IS EVIDENCE SUITABLE TO THE LOCAL ENFORCEMENT AGENCY SUBSTANTIATING THAT ADDITIONAL LOCAL UTILITY INFRASTRUCTURE DESIGN REQUIREMENTS, DIRECTLY RELATED TO THE IMPLEMENTATION OF SECTION 5.106.5.3, MAY ADVERSELY IMPACT THE CONSTRUCTION COST OF THE PROJECT.
2. PARKING SPACES ACCESSIBLE ONLY BY AUTOMATED MECHANICAL CAR PARKING SYSTEMS ARE NOT REQUIRED TO COMPLY WITH THIS CODE SECTION.

5.106.5.3.1 EV CAPABLE SPACES.

[N] EV CAPABLE SPACES SHALL BE PROVIDED IN ACCORDANCE WITH TABLE 5.106.5.3.1 AND THE FOLLOWING REQUIREMENTS:

1. RACEWAYS COMPLYING WITH THE CALIFORNIA ELECTRICAL CODE AND NO LESS THAN 1-INCH (25 MM) DIAMETER SHALL BE PROVIDED AND 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 EV CAPABLE SPACE AND INTO A SUITABLE LISTED CABINET, BOX, ENCLOSURE OR EQUIVALENT. A COMMON RACEWAY MAY BE USED TO SERVE MULTIPLE EV CAPABLE SPACES.
2. A SERVICE PANEL OR SUBPANEL(S) SHALL BE PROVIDED WITH PANEL SPACE AND ELECTRICAL LOAD CAPACITY FOR A DEDICATED 208/240 VOLT, 40-AMPERE MINIMUM BRANCH CIRCUIT FOR EACH EV CAPABLE SPACE, WITH DELIVERY OF 30-AMPERE MINIMUM TO AN INSTALLED EVSE AT EACH EVCS.
3. THE ELECTRICAL SYSTEM AND ANY ON-SITE DISTRIBUTION TRANSFORMERS SHALL HAVE SUFFICIENT CAPACITY TO SUPPLY FULL RATED AMPERAGE AT EACH EV CAPABLE SPACE.
4. THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE RESERVED OVERCURRENT PROTECTIVE DEVICE SPACE(S) AS "EV CAPABLE", THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE."

NOTE: A PARKING SPACE SERVED BY ELECTRIC VEHICLE SUPPLY EQUIPMENT OR DESIGNED AS A FUTURE EV CHARGING SPACE SHALL COUNT AS AT LEAST ONE STANDARD AUTOMOBILE PARKING SPACE ONLY FOR THE PURPOSE OF COMPLYING WITH ANY APPLICABLE MINIMUM PARKING SPACE REQUIREMENTS ESTABLISHED BY AN ENFORCEMENT AGENCY. SEE VEHICLE CODE SECTION 22511.2 FOR FURTHER DETAILS.

TABLE
5.106.5.3.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)[2]
0-9	0	0
10-25	4	0
26-50	8	2
51-75	13	3
76-100	17	4
101-150	25	6
151-200	35	9
201 AND OVER	20 PERCENT OF TOTAL[1]	25 PERCENT OF EV CAPABLE SPACES

1. CALCULATION FOR SPACES SHALL BE ROUNDED UP TO THE NEAREST WHOLE NUMBER.
2. THE NUMBER OF REQUIRED EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE) IN COLUMN 3 COUNT TOWARD THE TOTAL NUMBER OF REQUIRED EV CAPABLE SPACES SHOWN IN COLUMN 2.

373 TOTAL, 70 REQUIRED, 373 PROVIDED
SEE PLANS FOR THE LOCATIONS OF LOW-EMITTING, FUEL-EFFICIENT AND CARPOOL/VAN PARKING STALLS.

SEE SHEET I100 FOR DESIGNATED PARKING MARKING LOCATIONS

SECTION 305 [OSHPD 1] CALGREEN TIER 1 AND CALGREEN TIER 2

305.1

CALGREEN TIER 1 AND CALGREEN TIER 2 BUILDINGS CONTAIN VOLUNTARY GREEN BUILDING MEASURES NECESSARY TO MEET THE THRESHOLD OF EACH LEVEL.

305.1.1 CALGREEN TIER 1.

TO ACHIEVE CALGREEN TIER 1, BUILDINGS MUST COMPLY WITH THE LATEST EDITION OF "SAVINGS BY DESIGN, HEALTHCARE MODELING PROCEDURES" FOUND ONLINE AT http://www.energysoft.com/main/page_downloads_ sbd_healthcare.html.

305.1.2 CALGREEN TIER 2.

TO ACHIEVE *CALGREEN TIER 2*, BUILDINGS MUST EXCEED THE LATEST EDITION OF "SAVINGS BY DESIGN, HEALTHCARE MODELING PROCEDURES" BY A MINIMUM OF 15 PERCENT.

SECTION 306 [DSA-SS] VOLUNTARY MEASURES

306.1 PURPOSE.

FOR PUBLIC SCHOOLS AND COMMUNITY COLLEGES, VOLUNTARY MEASURES FURTHER ENCOURAGE BUILDING PRACTICES THAT IMPROVE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE BY PROMOTING THE USE OF BUILDING CONCEPTS WHICH MINIMIZE THE BUILDING'S IMPACT ON THE ENVIRONMENT AND PROMOTE A MORE SUSTAINABLE DESIGN.

306.1.1

APPENDIX A5, DIVISIONS A5.1 THROUGH A5.5, OUTLINE MEANS OF ACHIEVING ENHANCED SUSTAINABLE DESIGN AND CONSTRUCTION BY INCORPORATING VOLUNTARY MEASURES THAT EXCEED THE MANDATORY MEASURES.

306.1.2

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES THAT ARE NOT ADOPTED AS MANDATORY MEASURES BY DSA-SS ARE VOLUNTARY MEASURES RECOMMENDED AND ENCOURAGED FOR THE DESIGN, CONSTRUCTION, VERIFICATION AND MAINTENANCE OF NON-ENERGY SYSTEMS.

NOTE: THE BUILDING COMMISSIONING REQUIREMENTS FOR ENERGY EFFICIENCY SPECIFIED IN THE CALIFORNIA ENERGY CODE ARE REQUIRED.

CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.1 – PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101.1 SCOPE.

THE PROVISIONS OF THIS CHAPTER OUTLINE PLANNING, DESIGN AND DEVELOPMENT METHODS THAT INCLUDE ENVIRONMENTALLY RESPONSIBLE SITE SELECTION, BUILDING DESIGN, BUILDING SITING AND DEVELOPMENT TO PROTECT, RESTORE AND ENHANCE THE ENVIRONMENTAL QUALITY OF THE SITE AND RESPECT THE INTEGRITY OF ADJACENT PROPERTIES.

SECTION 5.102 DEFINITIONS

5.102.1 DEFINITIONS.

THE FOLLOWING TERMS ARE DEFINED IN CHAPTER 2.
CUTOFF LUMINAIRES. LUMINAIRES WHOSE LIGHT DISTRIBUTION IS SUCH THAT THE CANDELA PER 1000 LAMP LUMENS DOES NOT NUMERICALLY EXCEED 25 (2.5 PERCENT) AT AN ANGLE OF 90 DEGREES ABOVE NADIR, AND 100 (10 PERCENT) AT A VERTICAL ANGLE OF 80 DEGREES ABOVE NADIR. THIS APPLIES TO ALL LATERAL ANGLES AROUND THE LUMINAIRE.

TENANT-OCCUPANTS. BUILDING OCCUPANTS WHO INHABIT A BUILDING DURING ITS NORMAL HOURS OF OPERATION AS PERMANENT OCCUPANTS, SUCH AS EMPLOYEES, AS DISTINGUISHED FROM CUSTOMERS AND OTHER TRANSIENT VISITORS.

ZEV. [BSC-CG, DSA-SS] ANY VEHICLE CERTIFIED TO ZERO-EMISSION STANDARDS.

5.106.2 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF LAND.

COMPLY WITH ALL LAWFULLY ENACTED STORMWATER DISCHARGE REGULATIONS FOR PROJECTS THAT (1) DISTURB ONE ACRE OR MORE OF LAND, OR (2) DISTURB LESS THAN ONE ACRE OF LAND BUT ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE.

NOTE: PROJECTS THAT (1) DISTURB ONE ACRE OR MORE OF LAND, OR (2) DISTURB LESS THAN ONE ACRE OF LAND BUT ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE MUST COMPLY WITH THE POSTCONSTRUCTION REQUIREMENTS DETAILED IN THE APPLICABLE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES ISSUED BY THE STATE WATER RESOURCES CONTROL BOARD OR THE LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD (FOR PROJECTS IN THE LAKE TAHOE HYDROLOGIC UNIT).

THE NPDES PERMITS REQUIRE POSTCONSTRUCTION RUNOFF (POSTPROJECT HYDROLOGY) TO MATCH THE PRECONSTRUCTION RUNOFF (PRE-PROJECT HYDROLOGY) WITH THE INSTALLATION OF POSTCONSTRUCTION STORMWATER MANAGEMENT MEASURES. THE NPDES PERMITS EMPHASIZE RUNOFF REDUCTION THROUGH ON-SITE STORMWATER USE, INTERCEPTION, EVAPOTRANSPIRATION AND INFILTRATION THROUGH NONSTRUCTURAL CONTROLS, SUCH AS LOW IMPACT DEVELOPMENT (LID) PRACTICES AND CONSERVATION DESIGN MEASURES. STORMWATER VOLUME THAT CANNOT BE ADDRESSED USING NONSTRUCTURAL PRACTICES IS REQUIRED TO BE CAPTURED IN STRUCTURAL PRACTICES AND BE APPROVED BY THE ENFORCING AGENCY.

REFER TO THE CURRENT APPLICABLE PERMITS ON THE STATE WATER RESOURCES CONTROL BOARD WEBSITE AT: www.waterboards.ca.gov/constructionstormwater. CONSIDERATION TO THE STORMWATER RUNOFF MANAGEMENT MEASURES SHOULD BE GIVEN DURING THE INITIAL DESIGN PROCESS FOR APPROPRIATE INTEGRATION INTO SITE DEVELOPMENT.

5.106.4 BICYCLE PARKING

FOR BUILDINGS WITHIN THE AUTHORITY OF CALIFORNIA BUILDING STANDARDS COMMISSION AS SPECIFIED IN SECTION 103, COMPLY WITH SECTION 5.106.4.1. FOR BUILDINGS WITHIN THE AUTHORITY OF THE DIVISION OF THE STATE ARCHITECT PURSUANT TO SECTION 105, COMPLY WITH SECTION 5.106.4.2.

SEE ARCHITECTURAL SHEET I100

5.106.4.1 BICYCLE PARKING.

[BSC-CG] COMPLY WITH SECTIONS 5.106.4.1.1 AND 5.106.4.1.2; OR MEET THE APPLICABLE LOCAL ORDINANCE, WHICHEVER IS STRICTER.

5.106.4.1.1 SHORT-TERM BICYCLE PARKING

IF THE NEW PROJECT OR AN ADDITION OR ALTERATION IS ANTICIPATED TO GENERATE VISITOR TRAFFIC, PROVIDE PERMANENTLY ANCHORED BICYCLE RACKS WITHIN 200 FEET 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 NINE OR LESS 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 PERCENT OF THE TENANT-OCCUPANT VEHICULAR PARKING SPACES WITH A MINIMUM OF ONE BICYCLE PARKING FACILITY.

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 PERCENT OF THE TENANT 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 PERCENT OF THE ANTICIPATED TENANT-OCCUPANT VEHICULAR PARKING SPACES WITH A MINIMUM OF ONE BICYCLE PARKING FACILITY.

5.106.4.1.5.

ACCEPTABLE BICYCLE PARKING FACILITY FOR SECTIONS 5.106.4.1.2, 5.106.4.1.3 AND 5.106.4.1.4 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.

NOTE:
ADDITIONAL INFORMATION ON RECOMMENDED BICYCLE ACCOMMODATIONS MAY BE OBTAINED FROM SACRAMENTO AREA BICYCLE ADVOCATES.

5.106.4.2 BICYCLE PARKING.

[DSA-SS] FOR PUBLIC SCHOOLS AND COMMUNITY COLLEGES, COMPLY WITH SECTIONS 5.106.4.2.1 AND 5.106.4.2.2.

5.106.4.2.1 STUDENT BICYCLE PARKING.

PROVIDE PERMANENTLY ANCHORED BICYCLE RACKS CONVENIENTLY ACCESSED WITH A MINIMUM OF FOUR TWO-BIKE CAPACITY RACKS PER NEW BUILDING.

SECTION103 BUILDING STANDARDS COMMISSION

103.1 BSC-CG.

SPECIFIC SCOPE OF APPLICATION OF THE AGENCY RESPONSIBLE FOR ENFORCEMENT. THE ENFORCEMENT AGENCY, AND THE SPECIFIC AUTHORITY TO ADOPT AND ENFORCE SUCH PROVISIONS OF THIS CODE, UNLESS OTHERWISE STATED.

1. **APPLICATION**—ALL OCCUPANCIES WHERE NO STATE AGENCY HAS THE AUTHORITY TO ADOPT GREEN BUILDING STANDARDS APPLICABLE TO THOSE OCCUPANCIES.
   ENFORCING AGENCY—STATE OR LOCAL AGENCY SPECIFIED BY THE APPLICABLE PROVISIONS OF LAW.
   AUTHORITY CITED—*HEALTH AND SAFETY CODE* SECTIONS 18930.5(A), 18938 AND 18940.5.
   REFERENCE—*HEALTH AND SAFETY CODE*, DIVISION 13, PART 2.5, COMMENCING WITH SECTION 18901.
2. **GRAYWATER SYSTEMS**. THE CONSTRUCTION, INSTALLATION AND ALTERATION OF GRAYWATER SYSTEMS FOR INDOOR AND OUTDOOR USES IN NONRESIDENTIAL OCCUPANCIES.
   APPLICATION—ALL OCCUPANCIES WHERE NO STATE AGENCY HAS THE AUTHORITY TO ADOPT GREEN BUILDING STANDARDS APPLICABLE TO THOSE OCCUPANCIES.
   ENFORCING AGENCY—STATE OR LOCAL AGENCY SPECIFIED BY THE APPLICABLE PROVISIONS OF LAW.
   AUTHORITY CITED—*HEALTH AND SAFETY CODE* SECTION 18941.8.
   REFERENCE—*HEALTH AND SAFETY CODE* SECTION 18941.8.

103.1.1 ADOPTING AGENCY IDENTIFICATION.

THE PROVISIONS OF THIS CODE APPLICABLE TO BUILDINGS IDENTIFIED IN THIS SECTION WILL BE IDENTIFIED IN THE MATRIX ADOPTION TABLES UNDER THE ACRONYM BSC-CG.

SECTION 105 DIVISION OF THE STATE ARCHITECT

105.1

SPECIFIC SCOPE OF APPLICATION OF THE AGENCY RESPONSIBLE FOR ENFORCEMENT, THE ENFORCEMENT AGENCY, AND THE SPECIFIC AUTHORITY TO ADOPT AND ENFORCE SUCH PROVISIONS OF THIS CODE, UNLESS OTHERWISE STATED.

105.1.2 APPLICABLE ADMINISTRATIVE STANDARDS.

1. **TITLE 24, PART 1, CALIFORNIA CODE OF REGULATIONS:** SECTIONS 4-301 THROUGH 4-355, GROUP 1, CHAPTER 4, FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, AND COMMUNITY COLLEGES.
2. **TITLE 24, PART 2, CALIFORNIA CODE OF REGULATIONS:** 2.1 SECTIONS 1.1 AND 1.9.2 OF CHAPTER 1, DIVISION I. 2.2 SECTIONS 102.1, 102.2, 102.3, 102.4, 102.5, 104.9, 104.10 AND 104.11 OF CHAPTER 1, DIVISION II.

105.1.3 APPLICABLE BUILDING STANDARDS.

CALIFORNIA BUILDING STANDARDS CODE, TITLE 24, PARTS 2, 3, 4, 5, 6, 9, 11 AND 12, CALIFORNIA CODE OF REGULATIONS, FOR SCHOOL BUILDINGS AND COMMUNITY COLLEGES.

CHAPTER 3
GREEN BUILDING

SECTION 301 GENERAL

301.1 SCOPE.

BUILDINGS SHALL BE DESIGNED TO INCLUDE THE GREEN BUILDING MEASURES SPECIFIED AS MANDATORY IN THE APPLICATION CHECKLISTS CONTAINED IN THIS CODE. VOLUNTARY GREEN BUILDING MEASURES ARE ALSO INCLUDED IN THE APPLICATION CHECKLISTS AND MAY BE INCLUDED IN THE DESIGN AND CONSTRUCTION OF STRUCTURES COVERED BY THIS CODE, BUT ARE NOT REQUIRED UNLESS ADOPTED BY A CITY, COUNTY, OR CITY AND COUNTY AS SPECIFIED IN SECTION 101.7.

301.1.1 ADDITIONS AND ALTERATIONS.

[HCD] THE MANDATORY PROVISIONS OF CHAPTER 4 SHALL BE APPLIED TO ADDITIONS OR ALTERATIONS OF EXISTING RESIDENTIAL BUILDINGS WHERE THE ADDITION OR ALTERATION INCREASES THE BUILDING'S CONDITIONED AREA, VOLUME OR SIZE. THE REQUIREMENTS SHALL APPLY ONLY TO AND/OR WITHIN THE SPECIFIC AREA OF THE ADDITION OR ALTERATION.

THE MANDATORY PROVISIONS OF SECTION 4.106.4.2 MAY APPLY TO ADDITIONS OR ALTERATIONS OF EXISTING PARKING FACILITIES OR THE ADDITION OF NEW PARKING FACILITIES SERVING EXISTING MULTIFAMILY BUILDINGS. SEE SECTION 4.106.4.3 FOR APPLICATION.

NOTE: REPAIRS INCLUDING, BUT NOT LIMITED TO, RESURFACING, RESTRIPING, AND REPAIRING OR MAINTAINING EXISTING LIGHTING FIXTURES ARE NOT CONSIDERED ALTERATIONS FOR THE PURPOSE OF THIS SECTION.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS.

[BSC-CG] THE PROVISIONS OF INDIVIDUAL SECTIONS OF CHAPTER 5 APPLY TO NEWLY CONSTRUCTED BUILDINGS, BUILDING ADDITIONS OF 1,000 SQUARE FEET OR GREATER, AND/OR BUILDING ALTERATIONS WITH A PERMIT VALUATION OF $200,000 OR ABOVE (FOR OCCUPANCIES WITHIN THE AUTHORITY OF CALIFORNIA BUILDING STANDARDS COMMISSION). CODE SECTIONS RELEVANT TO ADDITIONS AND ALTERATIONS SHALL ONLY APPLY TO THE PORTIONS OF THE BUILDING BEING ADDED OR ALTERED WITHIN THE SCOPE OF THE PERMITTED WORK.

A CODE SECTION WILL BE DESIGNATED BY A BANNER TO INDICATE WHERE THE CODE SECTION ONLY APPLIES TO NEWLY CONSTRUCTED BUILDINGS [N] OR TO ADDITIONS AND/OR ALTERATIONS [A]. WHEN THE CODE SECTION APPLIES TO BOTH, NO BANNER WILL BE USED.

301.3.1 NONRESIDENTIAL ADDITIONS AND ALTERATIONS THAT CAUSE UPDATES TO PLUMBING FIXTURES ONLY:

NOTE: ON AND AFTER JANUARY 1, 2014, CERTAIN COMMERCIAL REAL PROPERTY, AS DEFINED IN CIVIL CODE SECTION 1101.3, SHALL HAVE ITS NONCOMPLIANT PLUMBING FIXTURES REPLACED WITH APPROPRIATE WATER-CONSERVING PLUMBING FIXTURES UNDER SPECIFIC CIRCUMSTANCES. SEE CIVIL CODE SECTION 1101.1 ET SEQ. FOR DEFINITIONS, TYPES OF COMMERCIAL REAL PROPERTY AFFECTED, EFFECTIVE DATES, CIRCUMSTANCES NECESSITATING REPLACEMENT OF NONCOMPLIANT PLUMBING FIXTURES, AND DUTIES AND RESPONSIBILITIES FOR ENSURING COMPLIANCE.

301.3.2 WASTE DIVERSION.

THE REQUIREMENTS OF SECTION 5.408 SHALL BE REQUIRED FOR ADDITIONS AND ALTERATIONS WHENEVER A PERMIT IS REQUIRED FOR WORK.

SECTION 303 PHASED PROJECTS

303.1 PHASED PROJECTS.

FOR SHELL BUILDINGS AND OTHERS CONSTRUCTED FOR FUTURE TENANT IMPROVEMENTS, ONLY THOSE CODE MEASURES RELEVANT TO THE BUILDING COMPONENTS AND SYSTEMS CONSIDERED TO BE NEW CONSTRUCTION (OR NEWLY CONSTRUCTED) SHALL APPLY.

303.1.1 INITIAL TENANT IMPROVEMENTS.

THE PROVISIONS OF THIS CODE SHALL APPLY ONLY TO THE INITIAL TENANT IMPROVEMENTS TO A PROJECT. SUBSEQUENT TENANT IMPROVEMENTS SHALL COMPLY WITH THE SCOPING PROVISIONS IN SECTION 301.3 NON-RESIDENTIAL ADDITIONS AND ALTERATIONS.

SECTION 304 VOLUNTARY TIERS

304.1 PURPOSE.

VOLUNTARY TIERS ARE INTENDED TO FURTHER ENCOURAGE BUILDING PRACTICES THAT IMPROVE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE BY PROMOTING THE USE OF BUILDING CONCEPTS WHICH MINIMIZE THE BUILDING'S IMPACT ON THE ENVIRONMENT AND PROMOTE A MORE SUSTAINABLE DESIGN.

304.1.1 TIERS.

THE PROVISIONS OF DIVISIONS A4.6 AND A5.6 OUTLINE MEANS, IN THE FORM OF VOLUNTARY TIERS, FOR ACHIEVING ENHANCED CONSTRUCTION LEVELS BY INCORPORATING ADDITIONAL MEASURES FOR RESIDENTIAL AND NONRESIDENTIAL NEW CONSTRUCTION. VOLUNTARY TIERS MAY BE ADOPTED BY LOCAL GOVERNMENTS AND, WHEN ADOPTED, ENFORCED BY LOCAL ENFORCING AGENCIES. BUILDINGS COMPLYING WITH TIERS SPECIFIED FOR EACH OCCUPANCY CONTAIN ADDITIONAL PREREQUISITE AND ELECTIVE GREEN BUILDING MEASURES NECESSARY TO MEET THE THRESHOLD OF EACH TIER. SEE SECTION 101.7 OF THIS CODE FOR PROCEDURES AND REQUIREMENTS RELATED TO LOCAL AMENDMENTS, ADDITIONS OR DELETIONS, INCLUDING CHANGES TO ENERGY STANDARDS.

[BSC & HCD] WHERE THERE ARE PRACTICAL DIFFICULTIES INVOLVED IN COMPLYING WITH THE THRESHOLD LEVELS OF A TIER, THE ENFORCING AGENCY MAY GRANT MODIFICATIONS FOR INDIVIDUAL CASES. THE ENFORCING AGENCY SHALL FIRST FIND THAT A SPECIAL INDIVIDUAL REASON MAKES THE STRICT LETTER OF THE TIER IMPRACTICAL AND THAT MODIFICATION IS IN CONFORMANCE WITH THE INTENT AND PURPOSE OF THE MEASURE. THE DETAILS OF ANY ACTION GRANTING MODIFICATION SHALL BE RECORDED AND ENTERED IN THE FILES OF THE ENFORCING AGENCY.

101.7 CITY, COUNTY, OR CITY AND COUNTY AMENDMENTS, ADDITIONS OR DELETIONS.

THIS CODE IS INTENDED TO SET MANDATORY MINIMUM GREEN BUILDING STANDARDS AND INCLUDES OPTIONAL TIERS THAT MAY, AT THE DISCRETION OF ANY CITY, COUNTY, OR CITY AND COUNTY, BE APPLIED.

THIS CODE DOES NOT LIMIT THE AUTHORITY OF CITY, COUNTY, OR CITY AND COUNTY GOVERNMENTS TO MAKE NECESSARY CHANGES TO THE PROVISIONS CONTAINED IN THIS CODE PURSUANT TO SECTION 101.7.1. THE EFFECTIVE DATE OF AMENDMENTS, ADDITIONS OR DELETIONS TO THIS CODE FOR CITIES, COUNTIES, OR CITIES AND COUNTIES FILED PURSUANT TO SECTION 101.7.1 SHALL BE THE DATE ON WHICH IT IS FILED, HOWEVER, IN NO CASE SHALL THE AMENDMENTS, ADDITIONS OR DELETIONS TO THIS CODE BE EFFECTIVE ANY SOONER THAN THE EFFECTIVE DATE OF THIS CODE.

LOCAL MODIFICATIONS SHALL COMPLY WITH HEALTH AND SAFETY CODE SECTION 18941.5(B) FOR BUILDING STANDARDS LAW, HEALTH AND SAFETY CODE SECTION 17958.5 FOR STATE HOUSING LAW OR HEALTH AND SAFETY CODE SECTION 13869.7 FOR FIRE PROTECTION DISTRICTS.

101.7.1 FINDINGS AND FILINGS.

1. THE CITY, COUNTY, OR CITY AND COUNTY SHALL MAKE EXPRESS FINDINGS FOR EACH AMENDMENT, ADDITION OR DELETION BASED UPON CLIMATIC, TOPOGRAPHICAL OR GEOLOGICAL CONDITIONS. FOR THE PURPOSE OF THIS SECTION, CLIMATIC, TOPOGRAPHICAL OR GEOLOGICAL CONDITIONS INCLUDE LOCAL ENVIRONMENTAL CONDITIONS AS ESTABLISHED BY THE CITY, COUNTY, OR CITY AND COUNTY.
2. THE CITY, COUNTY, OR CITY AND COUNTY SHALL FILE THE AMENDMENTS, ADDITIONS OR DELETIONS EXPRESSLY MARKED AND IDENTIFIED AS TO THE APPLICABLE FINDINGS. CITIES, COUNTIES, CITIES AND COUNTIES, AND FIRE DEPARTMENTS SHALL FILE THE AMENDMENTS, ADDITIONS OR DELETIONS AND THE FINDINGS WITH THE CALIFORNIA BUILDING STANDARDS COMMISSION AT 2525 NATOMAS PARK DRIVE, SUITE 130, SACRAMENTO, CA 95833.
3. FINDINGS PREPARED BY FIRE PROTECTION DISTRICTS SHALL BE RATIFIED BY THE LOCAL CITY, COUNTY, OR CITY AND COUNTY AND FILED WITH THE CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT AT 9342 TECH CENTER DRIVE, SUITE 500, SACRAMENTO, CA 95826.
4. THE CITY, COUNTY, OR CITY AND COUNTY SHALL OBTAIN CALIFORNIA ENERGY COMMISSION APPROVAL FOR ANY ENERGY-RELATED ORDINANCES CONSISTENT WITH PUBLIC RESOURCES CODE SECTION 25402.1(H)(2) AND TITLE 24, PART 1, SECTION 10-106. LOCAL GOVERNMENTAL AGENCIES MAY ADOPT AND ENFORCE ENERGY STANDARDS FOR NEWLY CONSTRUCTED BUILDINGS, ADDITIONS, ALTERATIONS AND REPAIRS, PROVIDED THE CALIFORNIA ENERGY COMMISSION FINDS THAT THE STANDARDS WILL REQUIRE BUILDINGS TO BE DESIGNED TO CONSUME NO MORE ENERGY THAN PERMITTED BY PART 6. SUCH LOCAL STANDARDS INCLUDE, BUT ARE NOT LIMITED TO, ADOPTING THE REQUIREMENTS OF PART 6 BEFORE THEIR EFFECTIVE DATE, REQUIRING ADDITIONAL ENERGY CONSERVATION MEASURES, OR SETTING MORE STRINGENT ENERGY BUDGETS.

101.8 ALTERNATE MATERIALS, DESIGNS AND METHODS OF CONSTRUCTION.

THE PROVISIONS OF THIS CODE ARE NOT INTENDED TO PREVENT THE USE OF ANY ALTERNATE MATERIAL, APPLIANCE, INSTALLATION, DEVICE, ARRANGEMENT, METHOD, DESIGN OR METHOD OF CONSTRUCTION NOT SPECIFICALLY PRESCRIBED BY THIS CODE, PROVIDED THAT ANY SUCH ALTERNATIVE HAS BEEN APPROVED. AN ALTERNATE SHALL BE APPROVED ON A CASE-BY-CASE BASIS WHERE THE ENFORCING AGENCY FINDS THAT THE PROPOSED ALTERNATE IS SATISFACTORY AND COMPLIES WITH THE INTENT OF THE PROVISIONS OF THIS CODE AND IS AT LEAST THE EQUIVALENT OF THAT PRESCRIBED IN THIS CODE IN PLANNING AND DESIGN, ENERGY, WATER, MATERIAL CONSERVATION AND RESOURCE EFFICIENCY, ENVIRONMENTAL AIR QUALITY, PERFORMANCE, SAFETY AND THE PROTECTION OF LIFE AND HEALTH. CONSIDERATION AND COMPLIANCE PROVISIONS FOR OCCUPANCIES REGULATED BY ADOPTING STATE AGENCIES ARE FOUND IN THE SECTIONS LISTED BELOW.

1. SECTION 1.2.3 IN THE CALIFORNIA BUILDING CODE (CBC) FOR THE CALIFORNIA BUILDING STANDARDS COMMISSION.
2. SECTION 104.11 OF CHAPTER 1, DIVISION II FOR THE DIVISION OF THE STATE ARCHITECT.
3. SECTION 1.8.7, CHAPTER 1, DIVISION I, OF THE 2022 CALIFORNIA BUILDING CODE; AND SECTION 1.8.7, CHAPTER 1, DIVISION I, OF THE 2022 CALIFORNIA RESIDENTIAL CODE FOR THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT.
4. SECTION 7-104, 2022 CALIFORNIA ADMINISTRATIVE CODE FOR THE OFFICE OF THE STATEWIDE HEALTH PLANNING AND DEVELOPMENT.

101.9 EFFECTIVE DATE OF THIS CODE.

ONLY THOSE STANDARDS APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION THAT ARE EFFECTIVE AT THE TIME AN APPLICATION FOR A BUILDING PERMIT IS SUBMITTED SHALL APPLY TO THE PLANS AND SPECIFICATIONS FOR, AND TO THE CONSTRUCTION PERFORMED UNDER, THAT PERMIT. FOR THE EFFECTIVE DATES OF THE PROVISIONS CONTAINED IN THIS CODE, SEE THE APPROPRIATE APPLICATION CHECKLIST AND THE HISTORY NOTE PAGE OF THIS CODE.

101.10 MANDATORY REQUIREMENTS.

THIS CODE CONTAINS BOTH MANDATORY AND VOLUNTARY GREEN BUILDING MEASURES. MANDATORY AND VOLUNTARY MEASURES ARE IDENTIFIED IN THE APPROPRIATE APPLICATION CHECKLIST CONTAINED IN THIS CODE.

101.11 EFFECTIVE USE OF THIS CODE.

THE FOLLOWING STEPS SHALL BE USED TO ESTABLISH WHICH PROVISIONS OF THIS CODE ARE APPLICABLE TO A SPECIFIC OCCUPANCY:

1. ESTABLISH THE TYPE OF OCCUPANCY.
2. VERIFY WHICH STATE AGENCY HAS AUTHORITY FOR THE ESTABLISHED OCCUPANCY BY REVIEWING THE AUTHORITIES LIST IN SECTIONS 103 THROUGH 106.
3. ONCE THE APPROPRIATE AGENCY HAS BEEN IDENTIFIED, FIND THE CHAPTER WHICH COVERS THE ESTABLISHED OCCUPANCY.
4. THE MATRIX ADOPTION TABLES AT THE BEGINNING OF CHAPTERS 4 AND 5 IDENTIFY THE MANDATORY GREEN BUILDING MEASURES NECESSARY TO MEET THE MINIMUM REQUIREMENTS OF THIS CODE FOR THE ESTABLISHED OCCUPANCY.
5. VOLUNTARY TIER MEASURES ARE CONTAINED IN APPENDIX CHAPTERS A4 AND A5. A CHECKLIST CONTAINING EACH GRE

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE - NON-RESIDENTIAL MANDATORY MEASURES

5.410.2.3 COMMISSIONING PLAN

[N] PRIOR TO PERMIT ISSUANCE A COMMISSIONING PLAN SHALL BE COMPLETED TO DOCUMENT HOW THE PROJECT WILL BE COMMISSIONED. THE COMMISSIONING PLAN SHALL INCLUDE THE FOLLOWING:

1. GENERAL PROJECT INFORMATION.
2. COMMISSIONING GOALS.
3. SYSTEMS TO BE COMMISSIONED. PLANS TO TEST SYSTEMS AND COMPONENTS SHALL INCLUDE:
   - A. AN EXPLANATION OF THE ORIGINAL DESIGN INTENT.
   - B. EQUIPMENT AND SYSTEMS TO BE TESTED, INCLUDING THE EXTENT OF TESTS.
   - C. FUNCTIONS TO BE TESTED.
   - D. CONDITIONS UNDER WHICH THE TEST SHALL BE PERFORMED.
   - E. MEASURABLE CRITERIA FOR ACCEPTABLE PERFORMANCE.
4. COMMISSIONING TEAM INFORMATION.
5. COMMISSIONING PROCESS ACTIVITIES, SCHEDULES AND RESPONSIBILITIES. PLANS FOR THE COMPLETION OF COMMISSIONING SHALL BE INCLUDED.

SEE COMMISSIONING PLAN.

5.410.2.4 FUNCTIONAL PERFORMANCE TESTING.

[N] FUNCTIONAL PERFORMANCE TESTS SHALL DEMONSTRATE THE CORRECT INSTALLATION AND OPERATION OF EACH COMPONENT, SYSTEM AND SYSTEM- TO-SYSTEM INTERFACE IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. FUNCTIONAL PERFORMANCE TESTING REPORTS SHALL CONTAIN INFORMATION ADDRESSING EACH OF THE BUILDING COMPONENTS TESTED, THE TESTING METHODS UTILIZED, AND INCLUDE ANY READINGS AND ADJUSTMENTS MADE.

SEE MEP SPECIFICATIONS.

5.410.2.5 DOCUMENTATION AND TRAINING.

[N] A SYSTEMS MANUAL AND SYSTEMS OPERATIONS TRAINING ARE REQUIRED, INCLUDING OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) REQUIREMENTS IN CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.

5.410.2.5.1 SYSTEMS MANUAL.

[N] DOCUMENTATION OF THE OPERATIONAL ASPECTS OF THE BUILDING SHALL BE COMPLETED WITHIN THE SYSTEMS MANUAL AND DELIVERED TO THE BUILDING OWNER OR REPRESENTATIVE. THE SYSTEMS MANUAL SHALL INCLUDE THE FOLLOWING:

1. SITE INFORMATION, INCLUDING FACILITY DESCRIPTION, HISTORY AND CURRENT REQUIREMENTS.
2. SITE CONTACT INFORMATION.
3. BASIC OPERATIONS AND MAINTENANCE, INCLUDING GENERAL SITE OPERATING PROCEDURES, BASIC TROUBLESHOOTING, RECOMMENDED MAINTENANCE REQUIREMENTS, SITE EVENTS LOG.
4. MAJOR SYSTEMS.
5. SITE EQUIPMENT INVENTORY AND MAINTENANCE NOTES.
6. A COPY OF VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.
7. OTHER RESOURCES AND DOCUMENTATION, IF APPLICABLE.

SEE MEP SPECIFICATIONS.

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 DOCUMENTED IN THE COMMISSIONING REPORT AND SHALL INCLUDE THE FOLLOWING:

1. SYSTEM/EQUIPMENT OVERVIEW (WHAT IT IS, WHAT IT DOES AND WITH WHAT OTHER SYSTEMS AND/OR EQUIPMENT IT INTERFACES).
2. REVIEW AND DEMONSTRATION OF SERVICING/PREVENTIVE MAINTENANCE.
3. REVIEW OF THE INFORMATION IN THE SYSTEMS MANUAL.
4. REVIEW OF THE RECORD DRAWINGS ON THE SYSTEM/EQUIPMENT.

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.

5.410.4 TESTING AND ADJUSTING. NEW BUILDINGS LESS THAN 10,000 SQUARE FEET.

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.

SEE COMMISSIONING PLAN.

5.410.4.1 (RESERVED)

NOTE: FOR ENERGY-RELATED SYSTEMS UNDER THE SCOPE (SECTION 100) OF THE CALIFORNIA ENERGY CODE, INCLUDING HEATING, VENTILATION, AIR CONDITIONING (HVAC) SYSTEMS AND CONTROLS, INDOOR LIGHTING SYSTEM AND CONTROLS, AS WELL AS WATER HEATING SYSTEMS AND CONTROLS, REFER TO CALIFORNIA ENERGY CODE SECTION 120.8 FOR COMMISSIONING REQUIREMENTS AND SECTIONS 120.5, 120.6, 130.4 AND 140.9(B)3 FOR ADDITIONAL TESTING REQUIREMENTS OF SPECIFIC SYSTEMS.

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:

1. RENEWABLE ENERGY SYSTEMS.
2. LANDSCAPE IRRIGATION SYSTEMS.
3. WATER REUSE SYSTEMS.

SEE MEP SPECIFICATIONS.

5.410.4.3 PROCEDURES.

PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.

SEE MEP SPECIFICATIONS.

5.410.4.3.1 HVAC BALANCING.

IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS; THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS; ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS OR AS APPROVED BY THE ENFORCING AGENCY.

SEE MEP SPECIFICATIONS.

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.

SEE MEP SPECIFICATIONS.

5.410.4.5 OPERATION AND MAINTENANCE (O & M) MANUAL.

PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.

SEE MEP SPECIFICATIONS.

5.410.4.5.1 INSPECTIONS AND REPORTS.

INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.

CONTRACTOR TO PROVIDE.

SECTION 5.501 GENERAL

5.501.1 SCOPE.

THE PROVISIONS OF THIS CHAPTER SHALL OUTLINE MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS THAT ARE ODOROUS, IRRITATING AND/OR HARMFUL TO THE COMFORT AND WELL-BEING OF A BUILDING'S INSTALLERS, OCCUPANTS AND NEIGHBORS.

SECTION5.503 FIREPLACES

5.503.1 FIREPLACES.

INSTALL ONLY A DIRECT-VENT SEALED-COMBUSTION GAS OR SEALED WOOD-BURNING FIREPLACE, OR A SEALED WOOD-STOVE OR PELLET STOVE, AND REFER TO RESIDENTIAL REQUIREMENTS IN THE CALIFORNIA ENERGY CODE, TITLE 24, PART 6, SUBCHAPTER 7, SECTION 150. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL COMPLY WITH APPLICABLE LOCAL ORDINANCES.

5.503.1.1 WOODSTOVES.

WOODSTOVE AND PELLET STOVES SHALL COMPLY WITH US EPA NEW SOURCE PERFORMANCE STANDARDS (NSPS) EMISSION LIMITS AS APPLICABLE, AND SHALL HAVE A PERMANENT LABEL INDICATING THEY ARE CERTIFIED TO MEET THE EMISSION LIMITS.

N/A

5.408.2 UNIVERSAL WASTE.

[A] ADDITIONS AND ALTERATIONS TO A BUILDING OR TENANT SPACE THAT MEET THE SCOPING PROVISIONS IN SECTION 301.3 FOR NONRESIDENTIAL ADDITIONS AND ALTERATIONS, 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 OF 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: https://dtsc.ca.gov/universalwaste/

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. FOR A PHASED PROJECT, SUCH MATERIAL MAY BE STICKPILED ON SITE UNTIL THE STORAGE SITE IS DEVELOPED.

EXCEPTION: REUSE, EITHER ON-OR OFF-SITE, OF VEGETATION OR SOIL CONTAMINATED BY DISEASE OR PEST INFESTATION.

NOTES:
1. IF CONTAMINATION BY DISEASE OR PEST INFESTATION IS SUSPECTED, CONTACT THE COUNTY AGRICULTURAL COMMISSIONER AND FOLLOW ITS DIRECTION FOR RECYCLING OR DISPOSAL OF THE MATERIAL. (www.cdfa.ca.gov/exec/county/county_contacts.html)

2. FOR A MAP OF KNOWN PEST AND/OR DISEASE QUARANTINE ZONES, CONSULT WITH THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE. (www.cdfa.ca.gov)

CONTRACTOR TO DEVELOP CONSTRUCTION WASTE MANAGEMENT PLAN AND SUBMIT IT TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

SECTION 5.410 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 NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS, ORGANIC WASTE AND METALS, OR MEET A LAWFULLY ENACTED LOCAL RECYCLING ORDINANCE, IF MORE RESTRICTIVE.

EXCEPTION: RURAL JURISDICTIONS THAT MEET AND APPLY FOR THE EXEMPTION IN PUBLIC RESOURCES CODE 42649.82 (A)(2)(A) ET SEQ. SHALL ALSO BE EXEMPT FROM THE ORGANIC WASTE PORTION OF THIS SECTION.

5.410.1.1 ADDITIONS.

ALL ADDITIONS CONDUCTED WITHIN A 12-MONTH PERIOD UNDER SINGLE OR MULTIPLE PERMITS, RESULTING IN AN INCREASE OF 30 PERCENT OR MORE IN FLOOR AREA, SHALL PROVIDE RECYCLING AREAS ON SITE.

EXCEPTION:
ADDITIONS WITHIN A TENANT SPACE RESULTING IN LESS THAN A 30-PERCENT INCREASE IN THE TENANT SPACE FLOOR AREA.

5.410.1.2 SAMPLE ORDINANCE.

SPACE ALLOCATION FOR RECYCLING AREAS SHALL COMPLY WITH CHAPTER 18, PART 3, DIVISION 30 OFTHE CALIFORNIA PUBLIC RESOURCES CODE. CHAPTER 18 IS KNOWN AS THE CALIFORNIA SOLID WASTE REUSE AND RECYCLING ACCESS ACT OF 1991 (ACT).

NOTE:
A SAMPLE ORDINANCE FOR USE BY LOCAL AGENCIES MAY BE FOUND IN APPENDIX A OF THE DOCUMENT AT THE CALRECYCLE'S WEB SITE.

SEE ARCHITECTURAL DRAWINGS.

5.410.2 COMMISSIONING.

[N] NEW BUILDINGS 10,000 SQUARE FEET AND OVER. FOR NEW BUILDINGS 10,000 SQUARE FEET AND OVER, BUILDING COMMISSIONING SHALL BE INCLUDED IN THE DESIGN AND CONSTRUCTION PROCESSES OF THE BUILDING PROJECT TO VERIFY THAT THE BUILDING SYSTEMS AND COMPONENTS MEET THE OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS. COMMISSIONING SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION BY TRAINED PERSONNEL WITH EXPERIENCE ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. FOR I-OCCUPANCIES THAT ARE NOT REGULATED BY OSHPD OR FOR I-OCCUPANCIES AND L-OCCUPANCIES THAT ARE NOT REGULATED BY THE CALIFORNIA ENERGY CODE SECTION 100.0 SCOPE, ALL REQUIREMENTS IN SECTIONS 5.410.2 THROUGH 5.410.2.6 SHALL APPLY.

NOTES:
FOR ENERGY-RELATED SYSTEMS UNDER THE SCOPE (SECTION 100) OF THE CALIFORNIA ENERGY CODE, INCLUDING HEATING, VENTILATION, AIR CONDITIONING (HVAC) SYSTEMS AND CONTROLS, INDOOR LIGHTING SYSTEMS AND CONTROLS, AS WELL AS WATER HEATING SYSTEMS AND CONTROLS, REFER TO CALIFORNIA ENERGY CODE SECTION 120.8 FOR COMMISSIONING REQUIREMENTS.

COMMISSIONING REQUIREMENTS SHALL INCLUDE:
1. OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS.
2. BASIS OF DESIGN.
3. COMMISSIONING MEASURES SHOWN IN THE CONSTRUCTION DOCUMENTS.
4. COMMISSIONING PLAN.
5. FUNCTIONAL PERFORMANCE TESTING.
6. DOCUMENTATION AND TRAINING.
7. COMMISSIONING REPORT.

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 SQUARE FEET 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.

NOTE: FOR THE PURPOSES OF THIS SECTION, UNCONDITIONED SHALL MEAN A BUILDING, AREA OR ROOM WHICH DOES NOT PROVIDE HEATING AND OR AIR CONDITIONING.

INFORMATIONAL NOTES:
1. IAS AC 476 IS AN ACCREDITATION CRITERIA FOR ORGANIZATIONS PROVIDING TRAINING AND/OR CERTIFICATION OF COMMISSIONING PERSONNEL. AC 476 IS AVAILABLE TO THE AUTHORITY HAVING JURISDICTION AS A REFERENCE FOR QUALIFICATIONS OF COMMISSIONING PERSONNEL. AC 476 DOES NOT CERTIFY INDIVIDUALS TO CONDUCT FUNCTIONAL PERFORMANCE TESTS OR TO ADJUST AND BALANCE SYSTEMS.

2. FUNCTIONAL PERFORMANCE TESTING FOR HEATING, VENTILATION, AIR CONDITIONING SYSTEMS AND LIGHTING CONTROLS MUST BE PERFORMED IN COMPLIANCE WITH THE *CALIFORNIA ENERGY CODE*.

SEE COMMISSIONING PLAN.

5.410.2.1 OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS (OPR).

THE EXPECTATIONS AND REQUIREMENTS OF THE BUILDING APPROPRIATE TO ITS PHASE SHALL BE DOCUMENTED BEFORE THE DESIGN PHASE OF THE PROJECT BEGINS. THIS DOCUMENTATION SHALL INCLUDE ITEMS 1 THROUGH 6 LISTED IN THIS SECTION.
[N] THE EXPECTATIONS AND REQUIREMENTS OF THE BUILDING APPROPRIATE TO ITS PHASE SHALL BE DOCUMENTED BEFORE THE DESIGN PHASE OF THE PROJECT BEGINS. THIS DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

1. ENVIRONMENTAL AND SUSTAINABILITY GOALS.
2. BUILDING SUSTAINABLE GOALS.
3. INDOOR ENVIRONMENTAL QUALITY REQUIREMENTS.
4. PROJECT PROGRAM, INCLUDING FACILITY FUNCTIONS AND HOURS OF OPERATION, AND NEED FOR AFTER HOURS OPERATION.
5. EQUIPMENT AND SYSTEMS EXPECTATIONS.
6. BUILDING OCCUPANT AND OPERATION AND MAINTENANCE (O&M) PERSONNEL EXPECTATIONS.

SEE BASIS OF DESIGN DOCUMENT.

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. THE BASIS OF DESIGN DOCUMENT SHALL COVER THE FOLLOWING SYSTEMS:

1. RENEWABLE ENERGY SYSTEMS.
2. LANDSCAPE IRRIGATION SYSTEMS.
3. WATER REUSE SYSTEMS.

SEE BASIS OF DESIGN DOCUMENT.

5.304.6 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.

FOR PUBLIC SCHOOLS AND COMMUNITY COLLEGES, LANDSCAPE PROJECTS AS DESCRIBED IN SECTIONS 5.304.6.1 AND 5.304.6.2 SHALL COMPLY WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) COMMENCING WITH SECTION 490 OF CHAPTER 2.7, DIVISION 2, TITLE 23, CALIFORNIA CODE OF REGULATIONS, EXCEPT THAT THE EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) SHALL BE 0.65 WITH AN ADDITIONAL WATER ALLOWANCE FOR SPECIAL LANDSCAPE AREAS (SLA) OF 0.35.

EXCEPTION: ANY PROJECT WITH AN AGGREGATE LANDSCAPE AREA OF 2,500 SQUARE FEET OR LESS MAY COMPLY WITH THE PRESCRIPTIVE MEASURES CONTAINED IN APPENDIX D OF THE MWELO.

5.304.6.1 NEWLY CONSTRUCTED LANDSCAPES.

NEW CONSTRUCTION PROJECTS WITH AN AGGREGATE LANDSCAPE AREA EQUAL TO OR GREATER THAN 500 SQUARE FEET.

5.304.6.2 REHABILITATED LANDSCAPES.

REHABILITATED LANDSCAPE PROJECTS WITH AN AGGREGATE LANDSCAPE AREA EQUAL TO OR GREATER THAN 1,200 SQUARE FEET.

SECTION 5.305 WATER REUSE SYSTEMS (RESERVED)

DIVISION 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401 GENERAL

5.401.1 SCOPE.

THE PROVISIONS OF THIS CHAPTER SHALL OUTLINE MEANS OF ACHIEVING MATERIAL CONSERVATION AND RESOURCE EFFICIENCY THROUGH PROTECTION OF BUILDINGS FROM EXTERIOR MOISTURE, CONSTRUCTION WASTE DIVERSION, EMPLOYMENT OF TECHNIQUES TO REDUCE POLLUTION THROUGH RECYCLING OF MATERIALS, AND BUILDING COMMISSIONING OR TESTING AND ADJUSTING.

SECTION 5.407 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.

SEE ARCHITECTURAL PLANS AND DETAILS.

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 SPRAY ON STRUCTURES.

SEE LANDSCAPE DRAWINGS.

5.407.2.2 ENTRIES AND OPENINGS

DESIGN EXTERIOR ENTRIES AND/OR OPENINGS SUBJECT TO FOOT TRAFFIC OR WIND-DRIVEN RAIN TO PREVENT WATER INTRUSION INTO BUILDINGS AS FOLLOWS:

SEE SHEETS ___ THROUGH ___; AND SHEETS ___ AND ___

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.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 CONSTRUCTION WASTE MANAGEMENT.

RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NON-HAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH SECTION 5.408.1.1, 5.408.1.2 OR 5.408.1.3; OR MEET LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE, WHICHEVER IS MORE STRINGENT.

CONTRACTOR TO DEVELOP CONSTRUCTION WASTE MANAGEMENT PLAN AND SUBMIT IT TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

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

1. IDENTIFIES THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS TO BE DIVERTED FROM DISPOSAL BY EFFICIENT USAGE, RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE.
2. DETERMINES IF CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE SORTED ON-SITE (SOURCE-SEPARATED) OR BULK MIXED (SINGLE STREAM).
3. IDENTIFIES DIVERSION FACILITIES WHERE CONSTRUCTION AND DEMOLITION WASTE MATERIAL COLLECTED WILL BE TAKEN.
4. SPECIFIES THAT THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH.

CONTRACTOR TO DEVELOP CONSTRUCTION WASTE MANAGEMENT PLAN AND SUBMIT IT TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

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

NOTE: THE OWNER OR CONTRACTOR SHALL MAKE THE DETERMINATION IF THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE DIVERTED BY A WASTE MANAGEMENT COMPANY.

EXCEPTIONS TO SECTION 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.

CONTRACTOR TO DEVELOP CONSTRUCTION WASTE MANAGEMENT PLAN AND SUBMIT IT TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

5.408.1.3 WASTE STREAM REDUCTION ALTERNATIVE.

THE COMBINED WEIGHT OF NEW CONSTRUCTION DISPOSAL THAT DOES NOT EXCEED TWO POUNDS PER SQUARE FOOT OF BUILDING AREA MAY BE DEEMED TO MEET THE 65 PERCENT MINIMUM REQUIREMENT AS APPROVED BY THE ENFORCING AGENCY.

CONTRACTOR TO DEVELOP CONSTRUCTION WASTE MANAGEMENT PLAN AND SUBMIT IT TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

5.408.1.4 DOCUMENTATION.

DOCUMENTATION SHALL BE PROVIDED TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE WITH SECTIONS 5.408.1.1 THROUGH 5.408.1.3. THE WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE ACCESSIBLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY.

NOTES:
1. SAMPLE FORMS FOUND IN "A GUIDE TO THE CALIFORNIA GREEN BUILDING STANDARDS CODE (NONRESIDENTIAL)" LOCATED AT https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-CommissionResources-List-Folder/CALGreen MAY BE USED TO ASSIST IN DOCUMENTING COMPLIANCE WITH THE WASTE MANAGEMENT PLAN.

2. MIXED CONSTRUCTION AND DEMOLITION DEBRIS (C&D) PROCESSORS CAN BE LOCATED AT THE CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY (CALRECYCLE).

CONTRACTOR TO DEVELOP CONSTRUCTION WASTE MANAGEMENT PLAN AND SUBMIT IT TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

5.303.1.2 EXCESS CONSUMPTION.

A SEPARATE SUBMETER OR METERING DEVICE SHALL BE PROVIDED FOR ANY TENANT WITHIN A BUILDING OR WITHIN AN ADDITION THAT IS PROJECTED TO CONSUME MORE THAN 1,000 GAL/DAY.

SEE PLUMBING DRAWINGS.

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.

5.303.3.1 WATER CLOSETS.

THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS.

NOTE: THE EFFECTIVE FLUSH VOLUME OF DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

SEE PLUMBING DRAWINGS.

5.303.3.2 URINALS.

5.303.3.2.1 WALL-MOUNTED URINALS.

THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH

5.303.3.2.2 FLOOR-MOUNTED URINALS.

THE EFFECTIVE FLUSH VOLUME OF ALL FLOOR-MOUNTED URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

SEE PLUMBING DRAWINGS.

5.303.3.3 SHOWERHEADS.

5.303.3.3.1 SINGLE SHOWERHEADS.

SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEADS.

5.303.3.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER.

WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME.

NOTE: A HAND-HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.

SEE PLUMBING DRAWINGS.

5.303.3.4 FAUCETS AND FOUNTAINS.

5.303.3.4.1 NONRESIDENTIAL LAVATORY FAUCETS.

LAVATORY FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 0.5 GALLONS PER MINUTE AT 60 PSI.

5.303.3.4.2 KITCHEN FAUCETS.

KITCHEN FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 60PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

5.303.3.4.3 WASH FOUNTAINS.

WASH FOUNTAINS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE/20 [RIM SPACE (INCHES) AT 60 PSI].

5.303.3.4.4 METERING FAUCETS

METERING FAUCETS SHALL NOT DELIVER MORE THAN 0.20 GALLONS PER CYCLE.

5.303.3.4.5 METERING FAUCETS FOR WASH FOUNTAINS

METERING FAUCETS FOR WASH FOUNTAINS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 0.20 GALLONS PER CYCLE/20 [RIM SPACE (INCHES) AT 60 PSI].

NOTE:
WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.

5.303.3.4.6 PRE-RINSE SPRAY VALVE.

WHEN INSTALLED, SHALL MEET THE REQUIREMENTS IN THE CALIFORNIA CODE OF REGULATIONS, TITLE 20 (APPLIANCE EFFICIENCY REGULATIONS), SECTION 1605.1(H)(4) TABLE H-2, SECTION 1605.3(H)(4)(A), AND SECTION 1607(D)(7), AND SHALL BE EQUIPPED WITH AN INTEGRAL AUTOMATIC SHUTOFF.

FOR REFERENCE ONLY: THE FOLLOWING TABLE AND CODE SECTION HAVE BEEN REPRINTED FROM THE CALIFORNIA CODE OF REGULATIONS, TITLE 20 (APPLIANCE EFFICIENCY REGULATIONS), SECTION 1605.1 (H)(4) AND SECTIONS 1605.3 (H)(4)(A).

TABLE H2
STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [SPRAY FORCE IN OUNCE FORCE (OZF)]	MAXIMUM FLOW RATE (GPM)
PRODUCT CLASS 1 (≤ 5.0 OZF)	1.00
PRODUCT CLASS 2 (> 5.0 OZF AND ≤ 8.0 OZF)	1.20
PRODUCT CLASS 1 (> 8.0 OZF)	1.28

TITLE 20 SECTION

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE - NON-RESIDENTIAL MANDATORY MEASURES

5.507.4.1.1 NOISE EXPOSURE WHERE NOISE CONTOURS ARE NOT READILY AVAILABLE

BUILDINGS EXPOSED TO A NOISE LEVEL OF 65 DB LEQ-1-HR 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).

SEE N/A.

5.507.4.2 PERFORMANCE METHOD

FOR BUILDINGS LOCATED AS DEFINED IN SECTION 5.507.4.1 OR 5.507.4.1.1, WALL AND ROOF-CEILING ASSEMBLIES EXPOSED TO THE NOISE SOURCE 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 (L eq - 1-Hr) OF 50 DBA IN OCCUPIED AREAS DURING ANY HOUR OF OPERATION.

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.

SEE N/A.

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.

SEE N/A.

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.
NOTE: EXAMPLES OF ASSEMBLIES AND THEIR VARIOUS STC RATINGS MAY BE FOUND AT THE CALIFORNIA OFFICE OF NOISE CONTROL: HTTP://WWW.TOOLBASE.ORG/PDF/CASESTUDIES/STC_ICC_RATINGS.PDF.

SEE N/A.

SECTION 5.508 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.

SEE MECHANICAL SHEETS

5.508.1.1 CHLOROFLUOROCARBONS (CFCs).

INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCS.

SEE MECHANICAL SHEETS

5.508.1.2 HALONS.

INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.

SEE MECHANICAL SHEETS

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

SECTION 702 QUALIFICATIONS

702.1 INSTALLER TRAINING.

HVAC SYSTEM INSTALLERS SHALL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS INCLUDING DUCTS AND EQUIPMENT BY A NATIONALLY OR REGIONALLY RECOGNIZED TRAINING OR CERTIFICATION PROGRAM. UNCERTIFIED PERSONS MAY PERFORM HVAC INSTALLATIONS WHEN UNDER THE DIRECT SUPERVISION AND RESPONSIBILITY OF A PERSON TRAINED AND CERTIFIED TO INSTALL HVAC SYSTEMS OR CONTRACTOR LICENSED TO INSTALL HVAC SYSTEMS. EXAMPLES OF ACCEPTABLE HVAC TRAINING AND CERTIFICATION PROGRAMS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

1. STATE CERTIFIED APPRENTICESHIP PROGRAMS.
2. PUBLIC UTILITY TRAINING PROGRAMS.
3. TRAINING PROGRAMS SPONSORED BY TRADE, LABOR OR STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATIONS.
4. PROGRAMS SPONSORED BY MANUFACTURING ORGANIZATIONS.
5. OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

702.2 SPECIAL INSPECTION [HCD].

[HCD] WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION TO OTHER CERTIFICATIONS OR QUALIFICATIONS ACCEPTABLE TO THE ENFORCING AGENCY, THE FOLLOWING CERTIFICATIONS OR EDUCATION MAY BE CONSIDERED BY THE ENFORCING AGENCY WHEN EVALUATING THE QUALIFICATIONS OF A SPECIAL INSPECTOR:

1. CERTIFICATION BY A NATIONAL OR REGIONAL GREEN BUILDING PROGRAM OR STANDARD PUBLISHER.
2. CERTIFICATION BY A STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATION, SUCH AS HERS RATERS, BUILDING PERFORMANCE CONTRACTORS AND HOME ENERGY AUDITORS.
3. SUCCESSFUL COMPLETION OF A THIRD PARTY APPRENTICE TRAINING PROGRAM IN THE APPROPRIATE TRADE.
4. OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

NOTES:
1. SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.
2. HERS RATERS ARE SPECIAL INSPECTORS CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION (CEC) TO RATE HOMES IN CALIFORNIA ACCORDING TO THE HOME ENERGY RATING SYSTEM (HERS).

[BSC-CG] WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION, THE SPECIAL INSPECTOR SHALL HAVE A CERTIFICATION FROM A RECOGNIZED STATE, NATIONAL OR INTERNATIONAL ASSOCIATION, AS DETERMINED BY THE LOCAL AGENCY. THE AREA OF CERTIFICATION SHALL BE CLOSELY RELATED TO THE PRIMARY JOB FUNCTION, AS DETERMINED BY THE LOCAL AGENCY.

NOTE: SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.

SECTION 703 VERIFICATIONS

703.1 DOCUMENTATION.

DOCUMENTATION USED TO SHOW COMPLIANCE WITH THIS CODE SHALL INCLUDE BUT IS NOT LIMITED TO, CONSTRUCTION DOCUMENTS, PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION, INSPECTION REPORTS OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY WHICH DEMONSTRATE SUBSTANTIAL CONFORMANCE. WHEN SPECIFIC DOCUMENTATION OR SPECIAL INSPECTION IS NECESSARY TO VERIFY COMPLIANCE, THAT METHOD OF COMPLIANCE WILL BE SPECIFIED IN THE APPROPRIATE SECTION OR IDENTIFIED IN THE APPLICATION CHECKLIST.

5.504.4.6.1 VERIFICATION OF COMPLIANCE.

DOCUMENTATION SHALL BE PROVIDED VERIFYING THAT RESILIENT FLOORING MATERIALS MEET THE POLLUTANT EMISSION LIMITS.

SEE N/A.

5.504.4.7 THERMAL INSULATION.

COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.7.1 VERIFICATION OF COMPLIANCE.

DOCUMENTATION SHALL BE PROVIDED VERIFYING THAT THERMAL INSULATION MATERIALS MEET THE POLLUTANT EMISSION LIMITS.

5.504.4. 8 ACOUSTICAL CEILINGS AND WALL PANELS.

COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.8.1 VERIFICATION OF COMPLIANCE.

DOCUMENTATION SHALL BE PROVIDED VERIFYING THAT ACOUSTICAL FINISH MATERIALS MEET THE POLLUTANT EMISSION LIMITS.

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 MINIMUM EFFICIENCY REPORTING VALUE (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.

EXCEPTION: EXISTING MECHANICAL EQUIPMENT.

SEE MECHANICAL DRAWINGS.

5.504.5.3.1 LABELING.

INSTALLED FILTERS SHALL BE CLEARLY LABELED BY THE MANUFACTURER INDICATING THE MERV RATING.

5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL.

WHERE OUTDOOR AREAS ARE PROVIDED FOR SMOKING, PROHIBIT SMOKING WITHIN 25 FEET OF BUILDING ENTRIES, OUTDOOR AIR INTAKES AND OPERABLE WINDOWS 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. WHEN ORDINANCES, REGULATIONS OR POLICIES ARE NOT IN PLACE, POST SIGNAGE TO INFORM BUILDING OCCUPANTS OF THE PROHIBITATIONS.

SEE N/A.

SECTION 5.505 INDOOR MOISTURE CONTROL

5.505.1 INDOOR MOISTURE CONTROL

BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF CALIFORNIA BUILDING CODE, CCR, TITLE 24, PART 2, SECTIONS 1202 (VENTILATION) AND CHAPTER 14 (EXTERIOR WALLS). FOR ADDITIONAL MEASURES, SEE SECTION 5.407.2 OF THIS CODE.

SEE MECHANICAL SHEETS

SECTION 5.506 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 (REQUIREMENTS FOR VENTILATION) OF THE CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8.

SEE MECHANICAL SHEETS

5.506.2 CARBON DIOXIDE (CO2) MONITORING.

FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA ENERGY CODE, SECTION 120.1(c)(4).

SEE MECHANICAL SHEETS

5.506.3 CARBON DIOXIDE (CO2) MONITORING IN CLASSROOMS.

(DSA-SS) EACH PUBLIC K-12 SCHOOL CLASSROOM, AS LISTED IN TABLE 120.1-A OF THE CALIFORNIA ENERGY CODE, SHALL BE EQUIPPED WITH A CARBON DIOXIDE MONITOR OR SENSOR THAT MEETS THE FOLLOWING REQUIREMENTS:

1. THE MONITOR OR SENSOR SHALL BE PERMANENTLY AFFIXED IN A TAMPER-PROOF MANNER IN EACH CLASSROOM BETWEEN 3 AND 6 FEET (914 MM AND 1829 MM) ABOVE THE FLOOR AND AT LEAST 5 FEET (1524 MM) AWAY FROM DOORS AND OPERABLE WINDOWS.
2. WHEN THE MONITOR OR SENSOR IS NOT INTEGRAL TO AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS), THE MONITOR OR SENSOR SHALL DISPLAY THE CARBON DIOXIDE READINGS ON THE DEVICE. WHEN THE SENSOR IS INTEGRAL TO AN EMCS, THE CARBON DIOXIDE READINGS SHALL BE AVAILABLE TO AND REGULARLY MONITORED BY FACILITY PERSONNEL.
3. A MONITOR SHALL PROVIDE NOTIFICATION THROUGH A VISUAL INDICATOR ON THE MONITOR WHEN THE CARBON DIOXIDE LEVELS IN THE CLASSROOM HAVE EXCEEDED 1,100 PPM. A SENSOR INTEGRAL TO AN EMCS SHALL PROVIDE NOTIFICATION TO FACILITY PERSONNEL THROUGH A VISUAL AND/OR AUDIBLE INDICATOR WHEN THE CARBON DIOXIDE LEVELS IN THE CLASSROOM HAVE EXCEEDED 1,100 PPM.
4. THE MONITOR OR SENSOR SHALL MEASURE CARBON DIOXIDE LEVELS AT MINIMUM 15- MINUTE INTERVALS AND SHALL MAINTAIN A RECORD OF PREVIOUS CARBON DIOXIDE MEASUREMENTS OF NOT LESS THAN 30 DAYS DURATION.
5. THE MONITOR OR SENSOR USED TO MEASURE CARBON DIOXIDE LEVELS SHALL HAVE THE CAPACITY TO MEASURE CARBON DIOXIDE LEVELS WITH A RANGE OF 400 PPM TO 2000 PPM OR GREATER.
6. THE MONITOR OR SENSOR SHALL BE CERTIFIED BY THE MANUFACTURER TO BE ACCURATE WITHIN 75 PPM AT 1,000 PPM CARBON DIOXIDE CONCENTRATION AND SHALL BE CERTIFIED BY THE MANUFACTURER TO REQUIRE CALIBRATION NO MORE FREQUENTLY THAN ONCE EVERY 5 YEARS.

SECTION 5.507 ENVIRONMENTAL COMFORT

5.507.4 ACOUSTICAL CONTROL

EMPLOY BUILDING ASSEMBLIES AND COMPONENTS WITH SOUND TRANSMISSION CLASS (STC) VALUES DETERMINED IN ACCORDANCE WITH ASTM E 90 AND ASTM E 413 OR OUTDOOR-INDOOR SOUND TRANSMISSION CLASS (OITC) AS DETERMINED IN ACCORDANCE WITH ASTM E 1332, USING EITHER THE PRESCRIPTIVE OR PERFORMANCE METHOD IN SECTION 5.507.4.1 OR 5.507.4.2.

EXCEPTION: BUILDINGS WITH FEW OR NO OCCUPANTS OR WHERE OCCUPANTS ARE NOT LIKELY TO BE AFFECTED BY EXTERIOR NOISE, AS DETERMINED BY THE ENFORCEMENT AUTHORITY, SUCH AS FACTORIES, STADIUMS, STORAGE, ENCLOSED PARKING STRUCTURES AND UTILITY BUILDINGS.

EXCEPTION: [DSA-SS] FOR PUBLIC SCHOOLS AND COMMUNITY COLLEGES, THE REQUIREMENTS OF THIS SECTION AND ALL SUBSECTIONS APPLY ONLY TO NEW CONSTRUCTION.

SEE N/A.

5.507.4.1 EXTERIOR NOISE TRANSMISSION, PRESCRIPTIVE METHOD

WALL AND ROOF-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.

EXCEPTIONS:
1. LDN OR CNEL FOR MILITARY AIRPORTS SHALL BE DETERMINED BY THE FACILITY AIR INSTALLATION COMPATIBLE LAND USE ZONE (AICUZ) PLAN.
2. LDN OR CNEL FOR OTHER AIRPORTS AND HELIPORTS FOR WHICH A LAND USE PLAN HAS NOT BEEN DEVELOPED SHALL BE DETERMINED BY THE LOCAL GENERAL PLAN NOISE ELEMENT.

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.

SEE N/A.

TABLE 5.504.4.3 [2,3]
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS
GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS

COATING CATEGORY	CURRENT VOC LIMIT
FLAT COATINGS	50
NONFLAT COATINGS	100
NONFLAT HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALITY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/ MASONARY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ART COATINGS (SIGN PAINTS)	500
HIGH-TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS [1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLORS COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS AND UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALITY PRIMERS, SEALERS AND UNDERCOATERS:	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOLS COATING	340
TRAFFIC MARKING COATINGS	100
TUB AND TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER AND INCLUDING EXEMPT COMPOUNDS.
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEBRUARY 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

SEE PROJECT SPECIFICATIONS.

5.504.4.4 CARPET SYSTEMS.

ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.1 CARPET CUSHION.

ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.2 CARPET ADHESIVE.

ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 5.504.4.1.

SEE: N/A

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 ARB'S AIR TOXICS CONTROL MEASURE (ATCM) FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.) THOSE MATERIALS NOT EXEMPTED UNDER THE ATCM MUST MEET THE SPECIFIED EMISSION LIMITS, AS SHOWN IN TABLE 5.504.4.5.

TABLE 5.504.4.5
FORMALDEHYDE LIMITS [1]
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION.

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD [2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCH (8 MM).

SEE ARCHITECTURAL SPECIFICATIONS.

5.504.4.5.1 EARLY COMPLIANCE.

RESERVED.

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 ITEMS 1 THROUGH 5 LISTED IN SECTION 5.504.4.5.3.

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.

DOCUMENTATION AVAILABLE UPON REQUEST.

5.504.4.6 RESILIENT FLOORING SYSTEMS.

WHERE RESILIENT FLOORING IS INSTALLED AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PULBIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIROMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

DIVISION 5.5 – ENVIRONMENTAL QUALITY

SECTION 5.504 POLLUTANT CONTROL

5.504.1 TEMPORARY VENTILATION.

THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF ADDITION OR ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. 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 PERCENT BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION.

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, SHEETMETAL, OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.

5.504.4 FINISH MATERIAL POLLUTANT CONTROL.

FINISH MATERIALS SHALL COMPLY WITH SECTIONS 5.504.4.1 THROUGH 5.504.4.6.

5.504.4.1 ADHESIVES, SEALANTS AND CAULKS.

ADHESIVES, SEALANTS AND CAULKS 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. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS AS SPECIFIED IN SUBSECTION 2, BELOW.
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.

TABLE 5.504.4.1
ADHESIVE VOC LIMIT [1,2]
LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILES ADHESIVES	65
VCT AND ASPHALTS TILE ADHESIVES	50
DRYWALL AND PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVE NOT SPECIFICALLY USED	50
SPECIALITY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBRANE ADHESIVE	140
TOP AND TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168, http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF.

TABLE 5.504.4.2
SEALANT VOC LIMIT
LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER

SEALANTS	CURRENT VOC LIMIT.
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE - PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

5.504.4.3 PAINTS AND COATINGS.

ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIM

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE - NON-RESIDENTIAL MANDATORY MEASURES

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS.

BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19 PERCENT MOISTURE CONTENT. MOISTURE CONTENT SHALL BE VERIFIED IN COMPLIANCE WITH THE FOLLOWING:

1. MOISTURE CONTENT SHALL BE DETERMINED WITH EITHER A PROBE-TYPE OR CONTACT-TYPE MOISTURE METER. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS CODE.
2. MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET (610 MM) TO 4 FEET (1219 MM) FROM THE GRADE STAMPED END OF EACH PIECE VERIFIED.
3. AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY PROVIDED AT THE TIME OF APPROVAL TO ENCLOSE THE WALL AND FLOOR FRAMING.

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTENT SHALL BE REPLACED OR ALLOWED TO DRY PRIOR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURERS' DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE.

SECTION 4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 BATHROOM EXHAUST FANS.

EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:

1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
   A. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE LESS THAN OR EQUAL TO 50% TO A MAXIMUM OF 80%. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.
   B. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E., BUILT-IN)

NOTES:
1. FOR THE PURPOSES OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION.
2. LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE *CALIFORNIA ENERGY CODE*.

SEE MEP SPECIFICATIONS.

SECTION 4.507 ENVIRONMENTAL COMFORT

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN.

HEATING AND AIR CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS:

1. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J - 2016 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
2. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D - 2016 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S - 2014 (RESIDENTIAL EQUIPMENT SELECTION), OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEM FUNCTIONS ARE ACCEPTABLE.

SEE MEP SPECIFICATIONS.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

SECTION 702 QUALIFICATIONS

702.1 INSTALLER TRAINING.

HVAC SYSTEM INSTALLERS SHALL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS INCLUDING DUCTS AND EQUIPMENT BY A NATIONALLY OR REGIONALLY RECOGNIZED TRAINING OR CERTIFICATION PROGRAM. UNCERTIFIED PERSONS MAY PERFORM HVAC INSTALLATIONS WHEN UNDER THE DIRECT SUPERVISION AND RESPONSIBILITY OF A PERSON TRAINED AND CERTIFIED TO INSTALL HVAC SYSTEMS OR CONTRACTOR LICENSED TO INSTALL HVAC SYSTEMS. EXAMPLES OF ACCEPTABLE HVAC TRAINING AND CERTIFICATION PROGRAMS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

1. STATE CERTIFIED APPRENTICESHIP PROGRAMS.
2. PUBLIC UTILITY TRAINING PROGRAMS.
3. TRAINING PROGRAMS SPONSORED BY TRADE, LABOR OR STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATIONS.
4. PROGRAMS SPONSORED BY MANUFACTURING ORGANIZATIONS.
5. OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

702.2 SPECIAL INSPECTION [HCD].

[HCD] WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION TO OTHER CERTIFICATIONS OR QUALIFICATIONS ACCEPTABLE TO THE ENFORCING AGENCY, THE FOLLOWING CERTIFICATIONS OR EDUCATION MAY BE CONSIDERED BY THE ENFORCING AGENCY WHEN EVALUATING THE QUALIFICATIONS OF A SPECIAL INSPECTOR:

1. CERTIFICATION BY A NATIONAL OR REGIONAL GREEN BUILDING PROGRAM OR STANDARD PUBLISHER.
2. CERTIFICATION BY A STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATION, SUCH AS HERS RATERS, BUILDING PERFORMANCE CONTRACTORS AND HOME ENERGY AUDITORS.
3. SUCCESSFUL COMPLETION OF A THIRD PARTY APPRENTICE TRAINING PROGRAM IN THE APPROPRIATE TRADE.
4. OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

NOTES:
1. SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.
2. HERS RATERS ARE SPECIAL INSPECTORS CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION (CEC) TO RATE HOMES IN CALIFORNIA ACCORDING TO THE HOME ENERGY RATING SYSTEM (HERS).

[BSC-CG] WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION, THE SPECIAL INSPECTOR SHALL HAVE A CERTIFICATION FROM A RECOGNIZED STATE, NATIONAL OR INTERNATIONAL ASSOCIATION, AS DETERMINED BY THE LOCAL AGENCY. THE AREA OF CERTIFICATION SHALL BE CLOSELY RELATED TO THE PRIMARY JOB FUNCTION, AS DETERMINED BY THE LOCAL AGENCY.

NOTE: SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.

SECTION 703 VERIFICATIONS

703.1 DOCUMENTATION.

DOCUMENTATION USED TO SHOW COMPLIANCE WITH THIS CODE SHALL INCLUDE BUT IS NOT LIMITED TO, CONSTRUCTION DOCUMENTS, PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION, INSPECTION REPORTS OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY WHICH DEMONSTRATE SUBSTANTIAL CONFORMANCE. WHEN SPECIFIC DOCUMENTATION OR SPECIAL INSPECTION IS NECESSARY TO VERIFY COMPLIANCE, THAT METHOD OF COMPLIANCE WILL BE SPECIFIED IN THE APPROPRIATE SECTION OR IDENTIFIED IN THE APPLICATION CHECKLIST.

TABLE 4.504.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALITY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALITY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATING (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALITY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB AND TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER AND INCLUDING EXEMPT COMPOUNDS.
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

SEE PROJECT SPECIFICATIONS.

4.504.4 RESILIENT FLOORING SYSTEMS.

WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

SEE _____.

4.504.5 COMPOSITE WOOD PRODUCTS.

HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDINGS SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4.504.5.

TABLE 4.504.5
FORMALDEHYDE LIMITS
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS MAXIMUM THICKNESS OF 5/16" (8 MM).

SEE ARCHITECTURAL SPECIFICATIONS.

4.504.5.1 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, EUROPEAN 636 3S, AND CANADIAN CSA O121, CSA O151, CSA O153 AND CSA O325 STANDARDS.
5. OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

DOCUMENTATION AVAILABLE UPON REQUEST.

SECTION 4.505 INTERIOR MOISTURE CONTROL

4.505.1 GENERAL.

BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF THE *CALIFORNIA BUILDING STANDARDS CODE*.

4.505.2 CONCRETE SLAB FOUNDATIONS.

CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY CALIFORNIA BUILDING CODE, CHAPTER 19, OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA RESIDENTIAL CODE, CHAPTER 5, SHALL ALSO COMPLY WITH THIS SECTION.

4.505.2.1 CAPILLARY BREAK.

A CAPILLARY BREAK SHALL BE INSTALLED IN COMPLIANCE WITH AT LEAST ONE OF THE FOLLOWING:

1. A 4-INCH (101.6 MM) THICK BASE OF 1/2 INCH (12.7MM) OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR BARRIER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED. FOR ADDITIONAL INFORMATION, SEE AMERICAN CONCRETE INSTITUTE, ACI 302.2R-06.
2. OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY.
3. A SLAB DESIGN SPECIFIED BY A LICENSED DESIGN PROFESSIONAL.

SEE N/A .

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]
LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALITY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

SEE PROJECT SPECIFICATIONS.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL.

FINISH MATERIALS SHALL COMPLY WITH THIS SECTION.

TABLE 4.504.2
SEALANT VOC LIMIT
LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER

SEALANT	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	450
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

4.504.2.1 ADHESIVES, SEALANTS AND CAULKS.

ADHESIVES, SEALANT AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS UNLESS MORE STRINGENT LOCAL OR REGIONAL AIR POLLUTION OR AIR QUALITY MANAGEMENT DISTRICT RULES APPLY:

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 TABLE 4.504.1 OR 4.504.2, AS APPLICABLE. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED IN SUBSECTION 2 BELOW.
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 1 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.

4.504.2.2 PAINTS AND COATINGS.

ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN TABLE 1 OFTHE ARB ARCHITECTURAL SUGGESTED CONTROL MEASURE, AS SHOWN IN TABLE 4.504.3, UNLESS MORE STRINGENT LOCAL LIMITS APPLY. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3 SHALL APPLY.

4.504.2.3 AEROSOL PAINTS AND COATINGS.

AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(E)(1) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520, AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.

4.504.2.4 VERIFICATION.

VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:

1. MANUFACTURER'S PRODUCT SPECIFICATION.
2. FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.

4.504.3 CARPET SYSTEMS.

ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.
https://www.cdph.ca.gov/programs/ccdphp/deodc/ehlb/laq/pages/voc.aspx

SEE N/A .

4.504.3.1 CARPET CUSHION.

ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

SEE N/A .

4.504.3.2 CARPET ADHESIVE.

ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.

SEE N/A .

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE.

PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED OF IN LANDFILLS, WHICH DO NOT EXCEED 2 POUNDS PER SQUARE FOOT OF THE BUILDING AREA, SHALL MEET THE MINIMUM 65% CONSTRUCTION WASTE REDUCTION REQUIREMENT IN SECTION 4.408.1

DOCUMENTATION SHALL BE PROVIDED TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE WITH SECTION 4.408.2, ITEMS 1 THROUGH 5, SECTION 4.408.3 OR SECTION 4.408.4.

NOTES:
1. SAMPLE FORMS FOUND IN "A GUIDE TO THE CALIFORNIA GREEN BUILDING STANDARDS CODE (RESIDENTIAL)" LOCATED AT http://www.hcd.ca.gov/building-standards/calgreen/cal-green-forms.shtml MAY BE USED TO ASSIST IN DOCUMENTING COMPLIANCE WITH THIS SECTION.
2. MIXED CONSTRUCTION AND DEMOLITION DEBRIS (C & D) PROCESSORS CAN BE LOCATED AT THE CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY (CALRECYCLE).

CONTRACTOR TO DEVELOP CONSTRUCTION WASTE MANAGEMENT PLAN AND SUBMIT IT TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

SECTION 4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL.

AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE OR OTHER MEDIA ACCEPTABLE TO THE ENFORCING AGENCY WHICH INCLUDES ALL OF THE FOLLOWING SHALL BE PLACED IN THE BUILDING:

1. DIRECTIONS TO THE OWNER OR OCCUPANT THAT THE MANUAL SHALL REMAIN WITH THE BUILDING THROUGHOUT THE LIFE CYCLE OF THE STRUCTURE.
2. OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING:
   A. EQUIPMENT AND APPLIANCES, INCLUDING WATER-SAVING DEVICES AND SYSTEMS, HVAC SYSTEMS, PHOTOVOLTAIC SYSTEMS, ELECTRIC VEHICLE CHARGERS, WATER-HEATING SYSTEMS AND OTHER MAJOR APPLIANCES AND EQUIPMENT.
   B. ROOF AND YARD DRAINAGE, INCLUDING GUTTERS AND DOWNSPOUTS.
   C. SPACE CONDITIONING SYSTEMS, INCLUDING CONDENSERS AND AIR FILTERS.
   D. LANDSCAPE IRRIGATION SYSTEMS.
   E. WATER REUSE SYSTEMS.
3. INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS.
4. PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA.
5. EDUCATIONAL MATERIAL ON THE POSITIVE IMPACTS OF AN INTERIOR RELATIVE HUMIDITY BETWEEN 30-60 PERCENT AND WHAT METHODS AN OCCUPANT MAY USE TO MAINTAIN THE RELATIVE HUMIDITY LEVEL IN THAT RANGE.
6. INFORMATION ABOUT WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER.
7. INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUTS AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION.
8. INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC.
9. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
10. A COPY OF ALL SPECIAL INSPECTIONS VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.
11. INFORMATION FROM THE DEPARTMENT OF FORESTRY AND FIRE PROTECTION ON MAINTENANCE OF DEFENSIBLE SPACE AROUND RESIDENTIAL STRUCTURES.
12. INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENTS.

SEE _____.

4.410.2 RECYCLING BY OCCUPANTS.

WHERE 5 OR MORE MULTIFAMILY DWELLING UNITS ARE CONSTRUCTED ON A BUILDING SITE, PROVIDE READILY ACCESSIBLE AREA(S) THAT SERVES ALL BUILDINGS ON THE SITE AND ARE IDENTIFIED FOR THE DEPOSITING, STORAGE AND COLLECTION OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS, ORGANIC WASTE AND METALS, OR MEET A LAWFULLY ENACTED LOCAL RECYCLING ORDINANCE, IF MORE RESTRICTIVE.

EXCEPTION: RURAL JURISDICTIONS THAT MEET AND APPLY FOR THE EXEMPTION IN PUBLIC RESOURCES CODE SECTION 42649.82 (A)(2)(A) ET SEQ. ARE NOTE REQUIRED TO COMPLY WITH THE ORGANIC WASTE PORTION OF THIS SECTION.

SEE N/A .

DIVISION 4.5
ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 SCOPE

THE PROVISIONS OF THIS CHAPTER SHALL OUTLINE MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS THAT ARE ODOROUS, IRRITATING AND/OR HARMFUL TO THE COMFORT AND WELL BEING OF A BUILDING'S INSTALLERS, OCCUPANTS AND NEIGHBORS.

5.102.1 DEFINITIONS

THE FOLLOWING TERMS ARE DEFINED IN CHAPTER 2 *(AND ARE INCLUDED HERE FOR REFERENCE)*

AGRIFIBER PRODUCTS. AGRIFIBER PRODUCTS INCLUDE WHEATBOARD, STRAWBOARD, PANEL SUBSTRATES AND DOOR CORES, NOT INCLUDING FURNITURE, FIXTURES AND EQUIPMENT (FF&E) NOT CONSIDERED BASE BUILDING ELEMENTS.

COMPOSITE WOOD PRODUCTS. COMPOSITE WOOD PRODUCTS INCLUDE HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD. "COMPOSITE WOOD PRODUCTS" DOES NOT INCLUDE HARDBOARD, STRUCTURAL PLYWOOD, STRUCTURAL PANELS, STRUCTURAL COMPOSITE LUMBER, ORIENTED STRAND BOARD, GLUED LAMINATED TIMBER, PREFABRICATED WOOD I-JOISTS OR FINGER-JOINTED LUMBER, ALL AS SPECIFIED IN CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 17, SECTION 93120.1 (a).

DIRECT-VENT APPLIANCE. A FUEL-BURNING APPLIANCE WITH A SEALED COMBUSTION SYSTEM THAT DRAWS ALL AIR FOR COMBUSTION FROM THE OUTSIDE ATMOSPHERE AND DISCHARGES ALL FLUE GASES TO THE OUTSIDE ATMOSPHERE.

MAXIMUM INCREMENTAL REACTIVITY (MIR). THE MAXIMUM CHANGE IN WEIGHT OF OZONE FORMED BY ADDING A COMPOUND TO THE "BASE REACTIVE ORGANIC GAS (ROG) MIXTURE" PER WEIGHT OF COMPOUND ADDED, EXPRESSED TO HUNDREDTHS OF A GRAM (G O'G ROC). NOTE: MIR VALUES FOR INDIVIDUAL COMPOUNDS AND HYDROCARBON SOLVENTS ARE SPECI

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

OUTDOOR WATER USE- MWELO (CGBSC Section 5.304)

N/A This project is subject to MWELO requirements. See plan sheet: _____ for completed City of Irvine Model Water Efficiency Landscape Ordinance work sheet, Form 40-81.

WATER RESISTANCE AND MOISTURE MANAGEMENT (CGBSC Section 5.407)

[E] Applicable to any new entry or opening which is part of an addition of 1,000 or more square feet or any tenant improvement having a valuation of $200,000 or more.

ENTRIES

To prevent water intrusion into exterior entries and/or openings subject to foot traffic or wind-driven rain, the following features have been incorporated into the design for **primary exterior entries:**

X Door is protected by an awning or roof overhang 4 feet or more in depth, or is recessed 4 feet or more, see plan sheet: SEE 00944992-CNEW

X Flashings integrated with a drainage plane, see plan sheet: SEE 00944992-CNEW

X Non-absorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings, see plan sheet: SEE 00944992-CNEW

MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING (CGBSC Section 5.408)

Recycling of materials for new construction, additions, and remodels shall conform to the Construction and Demolition Materials Recycling Requirements of the City of Irvine Municipal Code, Sections 6-7-901 through 6-7-912.

LIFE CYCLE ASSESSMENT (CGBC Section 5.409)

[E] Applicable to newly constructed building with floor area of 100,000 square feet or greater or additions/alterations of existing buildings where the combined altered or added floor area is 100,000 square feet or greater. Shall comply with one of the following:

N/A Building reuse analysis for existing buildings (CGBC 5.105.2). See sheet _____ for compliance summary.

N/A Whole Building life cycle assessment (CGB 5409.2). See sheet _____ for summary of the Global Warming Potential (GWP) analysis.

N/A Prescriptive path - Product GWP compliance (CGBC 5.409.3). See sheet 030 for compliance summary.

BUILDING MAINTENANCE AND OPERATION (CGBSC Section 5.410)
RECYCLING BY OCCUPANTS

[E] Applicable to an addition that adds 1,000 square feet or more or has a valuation of $200,000, that **also increases** total floor area by at least 30% of existing floor area.

X **[P]** Designated recycling areas shall be provided as required by City of Irvine Zoning Ordinance (ZO) Sections 3-23-1 through 3-23-4 of the . See plan sheet: I100 .

X **[N] COMMISSIONING** Building Commissioning is **only** required for new buildings or initial tenant improvements greater than 10,000 square feet. (Exceptions: Unconditioned warehouses of any size, conditioned areas less than 10,000 square feet and accessory to unconditioned warehouses, open parking garages, open parking garage areas associated with a larger structure.)

DESIGN

- Completed and signed Owner's Project Requirements (OPR) including all items as specified in CGBSC section 5.410.2.1, see sheet: I044 .

- Completed and signed Basis of Design (BOD) including all items as specified in CGBSC section 5.410.2.2, see sheet: I044-I045 .
- Completed and signed Commissioning Plan, as specified in CGBSC section 5.410.2.3, see sheet: I042 .

CONSTRUCTION - PRIOR TO FINAL INSPECTION APPROVAL

- A completed Commissioning Report shall be provided to the City Inspector prior to final inspection approval. Contents, pursuant to CGBSC Section 5.410.2.6, shall include a description of the commissioning process activities undertaken through the design, construction, and reporting recommendations for post construction phases. In addition, all required functional performance testing reports shall be included.
- A completed Systems Manual shall be made available for review by the City Inspector prior to final inspection approval. Contents shall include a completed and signed "Systems Manual" as specified in CGBSC section 5.410.2.5.1.

N/A **TESTING AND ADJUSTING** For buildings not exceeding 10,000 square feet, **[E]** and any new system serving an addition of 1,000 or more square feet or a tenant improvement having a valuation of $200,000, testing and adjusting are required.

DESIGN

See sheet N/A for procedures for testing and adjusting systems, which includes:

- HVAC systems and controls
- HVAC balancing per the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; or Associated Air Balance Council National Standards or approved equal.
- Indoor and outdoor lighting and controls
- Water heating systems
- Renewable energy systems
- Landscape irrigation systems
- Water reuse systems

CONSTRUCTION - PRIOR TO FINAL INSPECTION APPROVAL

Completed testing, adjusting, and balancing reports shall be provided to the City Inspector prior to final inspection approval. Contents shall match those specified in the procedures section above and be signed by the responsible parties.

ENVIRONMENTAL QUALITY

N/A **FIREPLACES** Wood burning devices including fireplaces are not permitted under SCAQMD Rule 445. Any installed gas fireplace shall be a direct-vent sealed-combustion type. (CGBSC Section 5.503)

MECHANICAL EQUIPMENT AND DUCT PROTECTION

To reduce the amount of dust, water, and debris collected in mechanical equipment and ducts, all duct openings and other related air distribution equipment component openings shall be covered from the time of delivery at the jobsite through the construction until final start up. (CGBSC Section 5.504.3)

FINISH MATERIAL POLLUTANT CONTROL

- **Adhesives, sealants and caulks** shall meet the applicable standards of CGBSC Section 5.504.4.1 and Tables 5.504.4.1 and 5.504.4.2 for VOC limits and content prohibitions.
- **Paints and coatings** shall meet the applicable standards of CGBSC Section 504.4.3 and Table 5.504.4.3 for VOC limits.

- **Aerosol paints and coatings** shall meet the applicable standards of CGBSC Section 5.504.4.3.1.
- **Carpet systems** shall meet the applicable standards of CGBSC Section 5.504.4.4 including CGBSC Section 5.504.4.4.1 for **carpet cushions** and CGBSC Section 5.504.4.4.2 for **carpet adhesives**.
- **Resilient flooring** shall meet the applicable standards of CGBSC Section 5.504.4.6.
- **Composite wood products** shall meet the applicable standards of CGBSC Section 5.504.4.5 and Table 5.504.4.5.

ENVIRONMENTAL TOBACCO SMOKE CONTROL (CGBSC Section 5.504.7)

N/A See plan sheet _____ for designated outdoor smoking area which shows a minimum of 25 feet from building entries, outdoor ventilation intakes, and operable windows.

FILTERS (CGBC Section 5.504.5.3)

X **Ventilation filtration** (CGBSC Section 5.504.5.3) - For new HVAC systems outside and return air shall pass through filtration media having a rating of:

X MERV 13 or better, see plan sheet M001 M002 for specifications.

N/A Equipment is existing and exempt from this requirement.

ENVIRONMENTAL COMFORT (CGBSC Section 5.507)

Exterior Noise Wall and roof assemblies making up the building envelope and exposed to the noise source as follows shall meet a composite STC rating of 50 or a composite OITC rating of 40, and exterior windows within said walls shall meet an STC of 40 or an OITC of 30.

Prescriptive Method (Using Sound Transmission Class (STC) Map - 2012 from the City's online form directory.)

N/A 1. A portion or the entire building is within the 65 CNEL contour for a freeway or expressway therefore exterior wall assemblies and roof or roof-ceiling assemblies shall meet the specified exterior wall assemblies and roof or roof-ceiling assemblies requirements stated above. For details and specifications see plan sheets _____.

N/A 2. A portion or the entire building is within the 65 CNEL contour for John Wayne Airport therefore exterior wall assemblies and roof or roof-ceiling assemblies shall meet the specified exterior wall assemblies and roof or roof-ceiling assemblies requirements stated above. For details and specifications see plan sheets _____ .

N/A 3. The project site fronts a street identified as producing 65 CNEL contours extending beyond the right of way therefore that portion of the building that is the contour shall meet the specified exterior wall assemblies and roof or roof-ceiling assemblies requirements stated above. For details and specifications see plan sheets _____.

N/A This building is a factory, storage facility, utility building, enclosed parking structure, or stadium therefore no STC assemblies are required.

Performance Method

N/A Pursuant to CGBSC Section 5.507.4.2, site and building mitigations have been defined based on a noise study prepared by an acoustical engineer. For a summary of features see plan sheets _____. For construction details see sheets _____.

Prior to final inspection, an acoustical report shall be provided to the City Inspector which demonstrates complying interior noise sound levels. Said report shall be signed and stamped by an acoustical engineer.

Interior Sound

N/A Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40. Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control at https://www.tsib.org/files/STC_IIC_Ratings.pdf. For details and specifications see plan sheets _____ .

No interior walls separate tenant spaces or occupant spaces and public areas.

CITY OF IRVINE

COMMUNITY DEVELOPMENT
Building and Safety

STANDARD NOTES NON-RESIDENTIAL CONSTRUCTION 2022 CALIFORNIA GREEN BUILDING STANDARDS (4.1)

[Effective July 1, 2024]
Applies to ***Newly Constructed Non-residential Buildings and associated site development, initial tenant improvements regardless of valuation, and any subsequent addition of 1,000 square feet or more, or tenant improvement having a valuation of $200,000 and associated site development***. The following standard notes shall be completed and incorporated into the approved plans and all effected design features and specifications shall be made to conform.

INSTRUCTIONS: Designer to place an "**X**" preceding each applicable section and complete the notes or indicate "**N/A**" if not applicable. Building plan check shall be responsible for verification except for those items preceded by a **[P]** which will be verified by Planning. All provisions generally apply to new construction and additions of 1,000 square feet or more, or tenant improvements having a valuation of $200,000. An **[N]**, however, indicates a provision applies only to new construction, an **[E]** indicates a provision that applies to new construction and provides additional qualifiers for when the provision applies to an addition or tenant improvement.

STANDARDS

BICYCLE PARKING CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSC) Section 5.106.4

[E] Short term bicycle parking applies to new or existing facilities if the project is expected to generate visitor traffic and adds 10 or more vehicular parking spaces.
Check the appropriate box and provide complete input for each selection as applicable:

N/A **[P]** Short-term bicycle parking (bicycle racks) are provided to accommodate anticipated visitor traffic. The total number provided is:_____. These racks are located within 200 feet of the visitor's entrance as depicted on plan sheet:_____.

[E] Long term bicycle parking applies to new shell buildings, and to existing facilities if the project adds 10 or more vehicular parking spaces.

N/A This project will accommodate over 10 tenant-occupants, therefore long term bicycle parking is provided. The total number (minimum one) provided equal to 5% of vehicular parking spaces: _____ . The method(s) selected to satisfy this requirement is (are):

_____ Covered, lockable enclosures with permanently anchored racks for bicycles, the total number provided is:_____ , see plan sheet:_____ .

_____ Lockable bicycle rooms with permanently anchored racks, the total number provided is:_____ , see plan sheet:_____ .

_____ Lockable, permanently anchored bicycle lockers, the total number provided is:_____ , see plan sheet:_____.

ELECTRIC VEHICLE (EV) CHARGING (CGBSC 5.106.5.3)

LONG TERM BICYCLE PARKING NOT REQUIRED SINCE TENANT OCCUPANT COUNT DOES NOT EXCEED 10

[E] The following applies to this project:

N/A New construction where the total number of parking spaces is 10 or more.

N/A Addition or alteration to existing parking facility being modified by one of the following:

_____ Increase in power supply to an electric service panel as part of a parking facility addition or alteration.

_____ New Photovoltaic system is installed covering existing parking spaces.

_____ Scope of work is triggered per CGBC section 301.3 and includes increase in power supply to an electric service panel.

EV Charging Space Calculation (CGBSC 5.106.5.3.3)

N/A Total parking spaces for the project or total parking spaces added/altered is _____, therefore pursuant to Table 5.106.5.3.1 a total of _____EV charging space(s) and a total of _____EV Capable space(s) are provided. See plan sheet: _____ .

N/A Project has parkings spaces accessible by automated car parking system. This provision is not applicable.

N/A Project is an existing remote parking facility that do not have access to the building service panel. This provision is not applicable.

N/A Project is for an existing parking area lighting upgrades with no trenching. This provision is not applicable.

1. EV Capable Spaces:
   - A parking stall width of 108 inches and a length as required by the City of Irvine Zoning Code.
   - A listed raceway not less than 1 inch diameter to accommodate a future dedicated 208/240-volt branch circuit originating at the main service or subpanel, and terminating in a listed cabinet, box, or other enclosure in close proximity to the proposed EV capable space. A common raceway may be used to serve multiple EV capable spaces.
   - Service panel or subpanel sized to accommodate original design load plus an added dedicated 40 amp minimum branch circuit for each EV capable space with delivery of 30 amp minimum to an installed EV supply equipment (EVSE).
   - The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
   - The service panel or subpanel circuit directory shall identify the reserved overcurrent protective device space(s) as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".
2. Electric Vehicle Charging Stations (EVCS):
   - EVCS can be any combination of Level 2 and Direct Current Fast Charging (DCFC), except that at least one Level 2 charger shall be provided.
   - One EV charger with multiple connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required for each EV capable space is accumulatively supplied to the EV charger.
   - The installation of each DCFC EVSE shall be permitted to reduced the minimum number of required EV capable spaces without EVSE by five and reduced proportionally the required electrical load capacity to he service panel or subpanel.
   - When EV chargers are installed, accessible EVCS shall be provided.
   - Accessible EVCS shall be located either on an accessible route or adjacent to an accessible parking space to allow use of the EV charger from the accessible parking.
   - EV space serving an accessible EVCS shall be 18 feet minimum length
   - EV space serving an accessible EVCS shall be 9 feet wide for standard accessible and 12 ft. wide for van accessible. A 5-foot aisle shall be provided on the side of the vehicle space.
   - Surface slope for EV space and the aisle shall not exceed 1:48 in any direction.
   - Refer to California Building Code Chapter 11B for applicable requirements to EV space serving accessible EVCS.

Electric Vehicle (EV) Charging: Medium-Duty and Heavy-Duty (CGBC 5.106.5.4)

[N] The following is applicable to construction of new warehouses, grocery stores, office buildings, manufacturing facilities, and retail stores with planned off-street loading spaces.

N/A EV supply and distribution equipment, spare raceway(s)or busway(s) and adequate capacity for transformer(s), service panel(s) or subpanel (s) for medium and heavy duty is provided. See_____ plan sheet.

LIGHT POLLUTION REDUCTION [N](CGBSC Section 5.106.8)

N/A **[P]** Outdoor lighting designed to comply with the City of Irvine Security Code, Section 3-16-1 of the City of Irvine Zoning Code, which requires all direct rays to be confined to the site and that adjacent properties are protected from glare, and allowable BUG rating limitations of CGBSC Table 5.106.8 are depicted on plan sheet: _____ along with photometrics.

Refer to CGBC Section 5.106.8.1 and 5.106.8.2 for facing requirements and more stringent backlight and glare ratings for luminaries located in proximity to property lines.

WATER EFFICIENCY AND CONSERVATION (CGBSC Section 5.303)

Separate Submeters or metering devices
Applicable to new buildings exceeding 50,000 square feet and **[E]** additions of 50,000 square feet or more made to existing buildings, and to any tenant of a new building or addition, regardless of size, which is projected to consume more than 1,000 gallons/day CGBSC Sections 5.303.1.1and 5.303.1.2.

N/A A separate meter or metering device is provided for the following spaces: _____ , See plan sheet:_____ for details and specifications defining metering design.

X This project consists of a single tenant building with a dedicated meter.

N/A Separate meters or metering devices are not required as the new building or addition is less than 50,000 square feet, and no tenant usage is projected to exceed 1,000 gallons/day.

N/A Separate meters or metering devices are not required as no tenant usage is projected to consume more than 100 gallons/day.

NOTES: (1) Tenants of new multi-tenant buildings or additions exceeding 50,000 square feet and that are not provided with a separate metering device must be shown to use less than 100 gallons/day via worksheet WS-1 found in chapter 8 of the CGBSC and any necessary addendum worksheet to reflect process water or other uses not represented on the worksheet. (2) For new buildings or additions having a total floor area less than 50,000 square feet, all its spaces not having a separate metering device must be shown to have a projected consumption of less than 1,000 gallons/day via worksheet WS-1 found in chapter 8 of the CGBSC and any necessary addendum worksheet to reflect process water or other uses not represented on the worksheet.

INDOOR WATER USE (CGBSC 5.303.3)

[E] Applicable to any newly installed plumbing fixture within new construction, the area of remodel or addition.

X All new plumbing fixtures meet the requirements of CGBSC Section 5.303.3, see modified table below for flow rates.

TABLE FIXTURE FLOW RATES

FIXTURE TYPES	MAXIMUM FLOW RATE
SHOWERHEADS	1.8 gpm @ 80 psi
LAVATORY FAUCETS	0.5 gpm @ 60 psi
KITCHEN FAUCETS	1.8 gpm @ 60 psi*
WASH FOUNTAIN	1.8(rim space (in.)/20 gpm @ 60 psi)
METERING FAUCET	0.2 gallons/cycle
METERING FAUCET FOR WASH FOUNTAINS	0.2(rim space (in.)/20 gpm @ 60 psi)
WATER CLOSETS	1.28 gallons/flush*
FLOOR-MOUNTED URINAL	0.5 gallons/flush
WALL-MOUNTED URINAL	0.125 gallons/flush

*Includes single and dual flush water closets with an effective flush rate of 1.28 gallons or less:
Dual flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush.

When a pre-rinse spray valve is installed, it shall meet requirements in the California Code of Regulations, Title 20, Section 1605.1(h)(4) Table H-2, Section 1605.3(h)(4)(A), and Section 1607(d)(7), and shall be equipped with an integral automatic shutoff.

NOTE: The combined flow of multiple showerheads serving a single shower shall not exceed maximum allowable flow rate for a single fixture shower or the control valves shall be arranged to only allow one showerhead to operate at a time.

CITY OF IRVINE BUILDING & SAFETY DIVISION

WARE MALCOMB
10 Edelman
Irvine, CA 92618
P 949.660.9128
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. GERVANTES 40000 LICENSE# 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

CALGREEN NOTES

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
3	02/04/2026	PLAN CHECK CORRECTIONS 3

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I034

03/30/2026 - PLAN CHECK CORRECTIONS 4

3/30/2026 2:33:41 PM

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY AND COPYRIGHT OF WARE MALCOMB AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY AGREEMENT WITH WARE MALCOMB. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF WARE MALCOMB PRIOR TO THE COMMENCEMENT OF ANY WORK

Autodesk Docs://AADFI-0174-02_-17300 Red Hill - Rec Center/BIM360_ARCH_C1.rvt

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

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	615	0.36	0.36	COMPLIES
(R)SHGC	615	0.25	0.25	COMPLIES
VT	615	0.42	0.42	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 at

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;

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Benjamin Lieberman	Documentation Author Signature:
Company: RTM Engineering Consultants	Signature Date: 2025-05-21
Address: 74770 Highway 111, Ste 203	CEA/ HERS Certification Identification (if applicable): n/a
City/State/Zip: Indian Wells CA 92210	Phone: 720-588-1514

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: Aria Cervantes	Responsible Designer Signature:
Company: Ware Malcomb	Date Signed: 10/16/2025
Address: 10 Edelman	License: C-40329
City/State/Zip: Irvine, CA 92618	Phone: 949.788.4112

H. WALL ASSEMBLY SCHEDULE

Mass Walls (new walls only)

01 ☑ Calculate Area-Weighted Average U-factor for Mass Walls[1]

02	03	04	05	06	07	08	09	10	11		12
Tag/Plan Detail ID	Occupancy Type	How Design U-factor was determined	Mass Information			Additional Insulation Information		Maximum U-factor Allowed[2]	U-factor per Design		Net Area[3] ft²
			Mass Material	Fill Options	Thickness (in)	Frame Material & Thickness	Cavity Insulation per Design				
Front Wall	Nonresidential/ Relocatable 1 CZ	JA4 Tables	Concrete	Solid Unit	9 in	Metal- 3.5 in	10	0.69	per JA4		2047
									per Software/ Other	0.175	
Right Wall	Nonresidential/ Relocatable 1 CZ	JA4 Tables	Concrete	Solid Unit	9 in	Metal- 3.5 in	10	0.69	per JA4		4758
									per Software/ Other	0.175	
Right Wall	Nonresidential/ Relocatable 1 CZ	JA4 Tables	Concrete	Solid Unit	9 in	No frame type- any Thick 0.50 in	0	0.69	per JA4		5356
									per Software/ Other	0.71	
Rear Wall	Nonresidential/ Relocatable 1 CZ	JA4 Tables	Concrete	Solid Unit	9 in	No frame type- any Thick 0.50 in	0	0.69	per JA4		12554
									per Software/ Other	0.71	
Left Wall	Nonresidential/ Relocatable 1 CZ	JA4 Tables	Concrete	Solid Unit	9 in	No frame type- any Thick 0.50 in	0	0.69	per JA4		10557
									per Software/ Other	0.71	

[1] *FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Mass walls are combined with concrete sandwich panel, log and ICF wall types. Mass walls must meet mandatory requirements in 120.7(b), but may area-weight to comply with prescriptive requirements in Table 140.3 for new construction.*
[2] *Mass walls are defined as "light" or "heavy" depending on their Heat Capacity. Heat Capacity is determined in Tables 4.3.5 and 4.3.6 in Joint Appendix 4. Walls with Heat Capacity of 15 or greater are "heavy" while walls with Heat Capacity from 7 to less than 15 are "light". Walls with heat capacity less than 7 would be categorized as "Wood Framed and Other" for compliance purposes.*
[3] *Wall area minus any fenestration area*

Area-Weighted Average U-factor Compliance Calculation for Mass/ Concrete Sandwich Panel/ Log/ ICF Walls

01	02	03	04		05	06
Wall Type	Total Area of Wall Type (ft²)	Mandatory U-factor Required	Area-weighted U-factor for Wall Type		Area-weighted U-factor for Wall Type	Compliance Results Using Area-Weighted Calculation Option
			Required		Designed	
Light Mass	0	0.44	0		0	COMPLIES
Heavy Mass	45652	0.69	0.69		0.63	COMPLIES

I. FLOOR ASSEMBLY SCHEDULE

This section does not apply to this project.

H. WALL ASSEMBLY SCHEDULE

02	03	04	05	06	07	08	09	10	11		12
Tag/Plan Detail ID	Occupancy Type	How Design U-factor was determined	Mass Information			Additional Insulation Information		Maximum U-factor Allowed[1]	U-factor per Design		Net Area[3] ft²
			Mass Material	Fill Options	Thickness (in)	Frame Material & Thickness	Cavity Insulation per Design				
Front Wall	Nonresidential/ Relocatable 1 CZ	JA4 Tables	Concrete	Solid Unit	9 in	No frame type- any Thick 0.50 in	0	0.69	per JA4		10380
									per Software/ Other	0.71	

[1] *FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Mass walls are combined with concrete sandwich panel, log and ICF wall types. Mass walls must meet mandatory requirements in 120.7(b), but may area-weight to comply with prescriptive requirements in Table 140.3 for new construction.*
[2] *Mass walls are defined as "light" or "heavy" depending on their Heat Capacity. Heat Capacity is determined in Tables 4.3.5 and 4.3.6 in Joint Appendix 4. Walls with Heat Capacity of 15 or greater are "heavy" while walls with Heat Capacity from 7 to less than 15 are "light". Walls with heat capacity less than 7 would be categorized as "Wood Framed and Other" for compliance purposes.*
[3] *Wall area minus any fenestration area*

Area-Weighted Average U-factor Compliance Calculation for Mass/ Concrete Sandwich Panel/ Log/ ICF Walls

01	02	03	04		05	06
Wall Type	Total Area of Wall Type (ft²)	Mandatory U-factor Required	Area-weighted U-factor for Wall Type		Area-weighted U-factor for Wall Type	Compliance Results Using Area-Weighted Calculation Option
			Required		Designed	
Light Mass	0	0.44	0		0	COMPLIES
Heavy Mass	45652	0.69	0.69		0.63	COMPLIES

I. FLOOR ASSEMBLY SCHEDULE

This section does not apply to this project.

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
	Metal Door	Nonresidential	Swinging	Any other wood door	0.7	per JA4 0.7

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)

[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- Total Building & West Facing Area (New Construction & Additions Only)

01	02	03	04		05	
Elevation Item Tag/ Description	Orientation (Azimuth)[1]	Gross Exterior Wall Area[2] (ft²)	Display Perimeter Length[2] (ft)		Vertical Fenestration Area per Design[3] (ft²)	
North	North Facing	10570	0		352	
East	East Facing	12810	0		263	
South	South Facing	10605	0		0	
West	West Facing	12810	0		0	
06	Maximum Allowed Vertical Fenestration (ft²)- All Orientations	18506.8	07	Total Vertical Fenestration (ft²) per design- All Orientations	615	
08	Maximum Allowed Vertical Fenestration (ft²)- West Facing	5124	09	Total Vertical Fenestration (ft²) per design- West Facing	0	

[1] *FOOTNOTES: Orientation between 226 deg and 315 deg are considered "West Facing". A diagram has been provided in the Nonresidential Compliance Manual for visual reference.*
[2] *Do not include demising walls per 140.3(a)5 .*
[3] *Includes glazed door fenestration area .*

K. FENESTRATION AND GLAZED DOOR SCHEDULE

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[3]
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New			NFRC Certified		U-factor (max)	0.36	0.36	263
					☐	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.25	0.25	
							VT (min)	0.42	0.42	
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New			NFRC Certified		U-factor (max)	0.36	0.36	352
					☐	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.25	0.25	
							VT (min)	0.42	0.42	

[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.*

A. GENERAL INFORMATION

01	Project Location (city) Irvine	05	# of Stories (Habitable Above Grade) 1
02	Zipcode 92614	06	Total Conditioned Floor Area (ft²) 110000
03	Climate Zone 8	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]

● Gymnasium ● 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					
☑	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								
☐	Addition is <=700 ft²			☐	Floors	☐	Fenestration/ Glazed Doors[1]		
☐	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		

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		

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 table demonstrates compliance for prescriptive roof assembly requirements in 140.3(a)1B/ 170.2(a)1B for new construction, 141.0(a)/ 180.1 for additions, or 141.0(b)2Bii/ 180.2 for alterations.

01 Indicate roof types included in the project: ☑ Framed ☐ Framed-Multifamily ☐ SIPS ☐ Span Deck & Concrete ☐ Metal Panels ☐ Metal Building

Framed Roof Assemblies

01	02	03	04	05	06
	☑	Include Framed Roof Assemblies in Area-Weighted Average U-factor Calculation[1]			

F. ROOF ASSEMBLY SCHEDULE

Framed Roof Assemblies

Tag/Plan Detail ID	Name/Description	Status	Exception to Roof Insulation Requirements in §141.0(b)2Biii (Alts. Only)	Occupancy Type
R-0 Roof No Attic	Roof	New		Nonresidential/ Relocatable 1 CZ
R-0 Roof No Attic	Roof	New		Nonresidential/ Relocatable 1 CZ

07	08	09	10	11	12	13	14	15		16
Tag/Plan Detail ID	How Design U-factor was determined	Roof Type & Frame Material	Frame Spacing Depth	Cavity Insulation per Design[2]	Continuous Insulation per Design[2]	Thermal Performance Unit	Required Thermal Performance[3]	U-factor per Design		Net Area[4] ft²
Roof	JA4 Tables	Wood		0	30	U-factor	0.049	per JA4 per Software/ Other	0.03	5900
Roof	JA4 Tables	Wood		0	30	U-factor	0.049	per JA4 per Software/ Other	0.03	104100

[1] *FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-8 values in Table 141.0-C.*
[2] *For alterations using U-factor as the Thermal Performance Unit, at least R-10 insulation must be above deck.*
[3] *If "R-value" is shown in cell 13 as the Thermal Performance Unit, the R-value shown here is for continuous insulation per Table 141.0-C.*
[4] *Roof area minus any fenestration/ skylight area*

Area-Weighted Average U-factor Compliance Calculation for Framed/ SIPs/ Span Deck & Concrete/ Metal Panel Roofs

01	02	03	04	05
Roof Type	Total Area of Roof Type (ft²)	Area-weighted U-factor for Roof Type		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
Framed	110000	0.049	0.03	
Total for all Roof Types:	**110000**	**0.049**	**0.03**	**COMPLIES**

G. RATED ROOFING MATERIAL (COOL ROOF)

This table demonstrates compliance with prescriptive roof material requirements in 140.3(a)1A/ 170.2(a)1A for new construction, 141.0(a)/ 180.1 for additions, and 141.0(b)2B/ 180.2 for alterations. Roof recovers and replacements must also document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.

01	02	03	04	05	06	07	08		09		10
Tag/Plan Detail ID	Name/ Description/ Location	Status	Occupancy Type	Roof Slope	Roof Material	Compliance Method	Required Minimum Material Performance		Designed Material Performance		U-factor / R-value of Assembly
R-0 Roof No Attic	Roof	New	Nonresidential	Low slope	To Be Determined	Aged solar reflectance and thermal emittance	Reflectance	0.63	Reflectance[1]	0.66	
							Emittance	0.75	Emittance	0.85	
							SRI		SRI		

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	☐ Steel Joist	☐ 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.*

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12/31/2027
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STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

BUILDING COMPLIANCE FORMS

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK
10/15/2025	PLAN CHECK CORRECTIONS 2
2	

PA/PM: S. FOX
DRAWN BY.: K.L./I.L.
JOB NO.: IRV24-6050-00

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STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Irvine Fieldhouse	**Report Page:**	**(Page 5 of 7)**
	Date Prepared:	2/3/2026

K. FUNCTIONAL PERFORMANCE TESTING

The table below is completed to demonstrate compliance with functional performance testing requirements per 120.8(g).

By checking this box, the responsible party[1] certifies that functional performance testing will be executed to demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the acceptance test requirements in 120.5, 130.4 and 140.9. The functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.	01 ☒

The following acceptance tests have been identified as applicable to the project scope:[2]

02	03	04	05
System/ Equipment to be Tested	Brief description of functional performance test	Applicable Reference Appendix	Certified Acceptance Test Technician Required?
RTUS-17	Constant Volume System Outdoor Air Acceptance	NA7.5.1	No
RTUS-17	Constant Volume, Single zone, Air conditioners and heat pumps	NA 7.5.2	No
Lighting	Automatic Daylighting Controls Acceptance Tests	NA7. 6.1	Yes
Lighting	Shut-off Controls Acceptance Tests	NA7. 6.2	Yes

The acceptance tests required by Title 24, Part 6 outline the minimum functional performance testing scope to be conducted for compliance. However, the commissioning scope may include additional functional performance tests on systems or equipment not having acceptance tests required by Title 24 Part 6.

The following additional functional performance tests have been requested by the owner or owner's representative:

06	07
System/ Equipment to be Tested	Brief description of functional performance test

[1] FOOTNOTE: See the signature block on the last page of this compliance document for the responsible party.
[2] Required acceptance tests can be determined by reviewing the "Certificates of Acceptance" table on each Certificate of Compliance submitted for permit application.

L. DOCUMENTATION AND TRAINING

The table below is completed to demonstrate compliance with documentation and training requirements per 120.8(h)

By checking this box, the responsible party[1] certifies that a systems manual will be provided to the building owner or representative per 120.8(h)1.	01 ☒

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CALIFORNIA ENERGY COMMISSION

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L. DOCUMENTATION AND TRAINING

By checking this box, the responsible party[1] certifies that a training of the appropriate maintenance staff for each equipment and system will be completed and documented in the commissioning report per 120.8(h)2. Training requirements should be included in the contract document in the specifications.	02 ☒

[1] FOOTNOTE: See the signature block on the last page of this compliance document for the responsible party.

M. COMMISSIONING REPORT

The table below is completed to demonstrate compliance with commissioning report requirements per 120.8(i)

By checking this box, the responsible party[1] certifies that a complete report of commissioning process' activities undertaken through the design, construction and reporting recommendations for post-construction phases of the building project shall be completed and provided to the owner or owner's representative.	01 ☒

[1] FOOTNOTES: See the signature block on the last page of this compliance document for the responsible party.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

There are no forms required for this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Irvine Fieldhouse	**Report Page:**	**(Page 7 of 7)**
Project Address: 17300 Red Hill Ave.	**Date Prepared:**	2/3/2026

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Ji Kim	Documentation Author Signature:
Company: Southern California Commissioning	Signature Date: 2026-02-03
Address: 102 Discovery	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Irvine, CA 92618	Phone: 949-450-1229

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: Ji Kim	Responsible Designer Signature:
Company: Southern California Commissioning	Date Signed: 2026-02-03
Address: 102 Discovery	License: : M.34948
City/State/Zip: Irvine, CA 92618	Phone: 949-450-1229

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Irvine Fieldhouse	**Report Page:**	**(Page 1 of 7)**
Project Address: 17300 Red Hill Ave.	**Date Prepared:**	2/3/2026

This document is used to demonstrate compliance with mandatory commissioning requirements in 120.8 for nonresidential buildings and hotel/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.

A. GENERAL INFORMATION

01	Project Location (city)	Irvine	04	Building Size (ft²)	107514
02	Occupancy Type	Nonresidential	05		50,000 ft² or greater
03	Project Type	Newly constructed	06		Unitary or packaged equipment each serving one zone
			07	Climate Zone	8

B. PROJECT SCOPE

Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per 120.8. Table B is not editable by the user.

Commissioning Requirements per 120.8

01	Table F: Design Review Kickoff	120.8(d)1 and 120.8(d)2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.
02	Table G: Owner's Project Requirements (OPR)	120.8(b)	The owner's project requirements establish the owner's goals, requirements and expectations for everything related to energy consumption and operation. This should be completed during schematic design.
03	Table H: Basis of Design (BOD)	120.8(c)	The basis of design documents the design elements such as calculations and product selections that meet the owner's project requirements and applicable regulatory requirements. This should be completed during schematic design.
04	Table I: Design Review	120.8(d) and 120.8(e)	The design reviewer(s) reviews the construction documents for clarity, completeness, and adherence to the owner's goals. Commissioning measures must be included in the construction documents to facilitate the design review and commissioning process. For projects with >= 10,000 ft² of nonresidential conditioned floor area, the design review is for adherence with the Owner's Project Requirements (OPR) and Basis of Design (BOD). This should be conducted during design.
05	Table J: Commissioning Plan	120.8(f)	The commissioning plan is developed by the commissioning provider with input from the designer and defines the scope of commissioning the project. This should be drafted during design and completed during early construction.
06	Table K: Functional Performance Testing	120.8(g)	Functional performance testing is conducted on building systems to demonstrate correct installation and operation.
07	Table L: Documentation and Training	120.8(h)	Documentation of the operational aspects of the building shall be completed within the Systems Manual and delivered to the building owner or representative and facilities operator.

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CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
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B. PROJECT SCOPE

08	Table M: Commissioning Report	120.8(i)	A complete report of commissioning process activities undertaken through the design, construction and reporting recommendations for post-construction phases of the building project shall be completed and provided to the owner or representative.

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with commissioning requirements per 120.8. This table is not editable by the user. If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09
Design Kickoff Review	Owner's Project Requirements	Basis of Design	Design Review	Commissioning Plan	Functional Performance Testing	Documentation and Training	Commissioning Report	
Table F	Table G	Table H	Table I	Table J	Table K	Table L	Table M	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	COMPLIES
10				Ji Hoon Kim				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.

STATE OF CALIFORNIA
Nonresidential Building Commissioning
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Irvine Fieldhouse	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	2/3/2026

F. DESIGN REVIEW KICKOFF MEETING

This table indicates that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and demonstrates compliance with design review kickoff requirements per 120.8(d)2. This meeting should occur during the Schematic Design phase of the project.

Design Review Kickoff Meeting Details

01	Date of Design Review Kickoff Meeting			0001-01-01
02	Meeting Attendees: (one person may play multiple roles)			
☒	Owner/Facility Manager:	Collum McLaughlin	☒ Design Reviewer(s)	Ji Hoon Kim
☒	Project Manager:	Kenneth J. Aspis	☒ Design Architect/ Engineer(s):	Stephanie Fox
☒	Contractor:	TBD	☒ Certified Acceptance Test Tech(s):	TBD
☒	Commissioning Provider:	Ji Hoon Kim	☒ Energy/ T24 Part 6 Consultant:	TBD

Design Reviewer Qualifications per Title 24 Part 1 Section 10-103(a)1

	The design reviewer(s) must be licensed professional engineers or licensed architects, or licensed contractors representing services performed by or under the direct supervision of a licensed engineer or architect, as specified in the provisions of Division 3 of the Business and Professions Code.	Do the Design Reviewer(s) meet these qualifications?	
03	In addition, for buildings with >= 10,000 ft² but < 50,000², the design reviewer(s) shall be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect, or contractor	Yes ●	No ○
04	The design reviewer(s) for this project will be:	Ji Hoon Kim	

[1] FOOTNOTE: Complex Mechanical Systems are systems that include 1) fan systems each serving multiple thermostatically controlled zones, or 2) built-up air handler systems (non-unitary or non-packaged HVAC equipment), or 3) hydronic or steam heating systems, or 4) hydronic cooling systems.

Preliminary Construction Schedule

		Start Date	Completion Date
05	Schematic Design	2023-11-29	2024-05-02
06	Design Development	2024-05-03	2024-07-26
07	Construction Documents	2024-07-27	2025-05-29
08	Construction	2025-07-07	2026-12-31
09	Building Turnover	2027-01-01	2027-01-14

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G. OWNER'S PROJECT REQUIREMENTS (OPR)

This table is only completed if an OPR document is not attached to permit application to demonstrate compliance with 120.8(b). If a specific field is not applicable to the project scope, "NA" is indicated in the table. Per 120.8(b), the OPR is to be completed before design begins. This may be done at the Design Review Kickoff Meeting (see Table F)

		YES	NO
01	Attaching Completed Owner's Project Requirements Document?	●	○
02	Owner's Project Requirements Document Authors and Roles	Stephanie Fox	

H. BASIS OF DESIGN (BOD)

This table is only completed if a BOD document is not attached to the permit application to demonstrate compliance with 120.8(c). If a specific field is not applicable to the project scope, "NA" is indicated in the table. Per 120.8(c), the BOD should be completed and updated during the design phase.

		YES	NO
01	Attaching Completed Basis of Design Document?	●	○
02	Basis of Design Document Authors and Roles	Mike Best	

I. CONSTRUCTION DOCUMENT DESIGN REVIEW CHECKLIST

This table is only completed if a design review document is not attached to permit application to demonstrate compliance with 120.8(d) and 120.8(e) for buildings with >= 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the Owner's Project Requirements (Table G.) and the Basis of Design Documents (Table H.). For buildings with < 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the goals documented in Table I during the Design Review Kickoff.

		YES	NO
01	Attaching Completed Design Review Documentation?	●	○

J. COMMISSIONING PLAN

This table is only completed if a Commissioning Plan document is not attached to permit application to demonstrate compliance with 120.8(f). Per 120.8(f), the Commissioning Plan is to be started during the design phase and a completed draft must be submitted with permit application

		YES	NO
01	Attaching Completed Commissioning Plan?	●	○
02	Commissioning Plan Authors and Roles	Ji Hoon Kim	

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CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

BUILDING COMPLIANCE FORMS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	02/04/2026	PLAN CHECK CORRECTIONS 3

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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SOUTHERN CALIFORNIA COMMISSIONING
commissioning & energy services

Project: IRVINE FIELDHOUSE

Equipment Name/Tag: RTU- Location: ROOF
Service:

Item		Comments
Pre-Start-Up Inspection		
Commissioning lock-out procedures reviewed		
Operation and maintenance information		
Mounting/support system and vibration isolation		
Seismic restraints		
Equipment guards		
Alignment & V-belt tension		
Freedom of rotation		
Lubrication		
Plenums clean and free of loose material		
Temporary Start-up filters		
Fire & balance dampers positioned		
Access doors, insulation and interior lights		
Local valving piping		
Motorized dampers		
D/X expansion (cooling) coil and compressor		
D/X condensing coil and fans		
Regulatory authority approved installation and burner control		
Building cleanliness		
Electrical wiring complete		
Overload protection (sized correctly)		
Disconnect switch (tested)		
Local heating/cooling control		
Control system - point to point checks complete		
Economizer operation		
Start-up		
Start-up by manufacturer's representative with report		
and certificate or log provided		
Direction of rotation		
Electrical interlocks-stop/start		
Fan speed selector switch		
No water or condensate leakage		
Local air leakage acceptable		
Vibration & noise level acceptable		
Final operation filters installed		
Pre-start checks by:	Date:	
Start-up checks by:	Date:	

SOUTHERN CALIFORNIA COMMISSIONING
commissioning & energy services

Project: IRVINE FIELDHOUSE

Equipment Name/Tag: DOAS- Location: ROOF
Service:

Item		Comments
Pre-Start-Up Inspection		
Commissioning lock-out procedures reviewed		
Operation and maintenance information		
Mounting/support system and vibration isolation		
Seismic restraints		
Equipment guards		
Alignment & V-belt tension		
Freedom of rotation		
Lubrication		
Plenums clean and free of loose material		
Temporary Start-up filters		
Fire & balance dampers positioned		
Access doors, insulation and interior lights		
Local valving piping		
Motorized dampers		
D/X expansion (cooling) coil and compressor		
D/X condensing coil and fans		
Regulatory authority approved installation and burner control		
Building cleanliness		
Electrical wiring complete		
Overload protection (sized correctly)		
Disconnect switch (tested)		
Local heating/cooling control		
Control system - point to point checks complete		
Economizer operation		
Start-up		
Start-up by manufacturer's representative with report		
and certificate or log provided		
Direction of rotation		
Electrical interlocks-stop/start		
Fan speed selector switch		
No water or condensate leakage		
Local air leakage acceptable		
Vibration & noise level acceptable		
Final operation filters installed		
Pre-start checks by:	Date:	
Start-up checks by:	Date:	

SOUTHERN CALIFORNIA COMMISSIONING
commissioning & energy services

Project: IRVINE FIELDHOUSE

Equipment Name/Tag: EF- Location:
Service:

Item		Comments
Pre-Start-Up Inspection		
Commissioning lock-out procedures reviewed		
Operation and maintenance information		
Mounting/support system and vibration isolation		
Flexible connections		
Seismic restraints		
Equipment Guards		
Alignment & V-belt tension		
Freedom of rotation		
Lubrication		
Plenum/volute clean and free of loose material		
Duct system tested and cleaned		
Fire & balance dampers positioned		
Gravity or motorized damper		
Building cleanliness		
Electrical Wiring		
Overload protection (sized correctly)		
Disconnect switch (tested)		
Control system		
Start-up		
Start-up by manufacturer's representative with report		
and certificate or log provided		
Direction of rotation		
Electrical interlocks-stop/start		
Local air leakage acceptable		
Vibration & noise level acceptable		
Safety Switch		
Pre-start checks by:	Date:	
Start-up checks by:	Date:	

SOUTHERN CALIFORNIA COMMISSIONING
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5. OCCUPANCY PHASE

A final commissioning report will be compiled which summarizes all of the tasks, findings, and documentation of the commissioning process. The summary report should include confirmation from the commissioning agent indicating whether individual systems meet the requirements of the OPR, BOD, and Contract Documents. The summary commissioning report should include the following:

- Executive summary of the process and the results of the commissioning program including observations, conclusions and any outstanding items
- A history of any system deficiencies identified and how they were resolved including any outstanding issues or seasonal testing scheduled for a later date
- Systems performance test results and evaluation

System manual including major equipment O&M manual shall be prepared and submitted to the owner. Also, general contractor is responsible for scheduling the facility operator and maintenance staff training.

SOUTHERN CALIFORNIA COMMISSIONING
commissioning & energy services

APPENDIX A

System Verification & Start-up Checklist

Note: Completed SVCs will be provided in Final Commissioning Report.

System	Equipment ID	Location	Quantity	Service
HVAC	RTU-5	ROOF	1	FOOD COURT/VENDING
	RTU-6	ROOF	1	MULTIPURPOSE
	RTU-7~17	ROOF	11	PLAYCOURTS/BADMINTON
	EF-4	ROOF	1	STORAGE
	KEF-1	ROOF	1	KITCHEN
	DOAS-1	ROOF	1	KITCHEN
PLUMBING	EWH-2	KITCHEN	1	KITCHEN HW FIXTURES
	RCP-2	KITCHEN	1	
ELECTRICAL	INT. LIGHTING	ALL INTERIOR		ALL INTERIOR
	EXT. LIGHTING	EXTERIOR		EXTERIOR

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3. DESIGN PHASE

During the design phase, the Owner's Project requirements and the Basis of Design shall be prepared and documented to ensure that the design and operational intent of the system is clearly stated. The Commissioning agent shall review the design documentation and provide comments as necessary. Lastly, the commissioning agent shall attend periodic design meetings and will regularly update the commissioning plan, schedule, and comments log.

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4. CONSTRUCTION PHASE

The Commissioning Plan will be prepared by the CxA and submitted to the Owner for review and approval. The Commissioning plan is updated during the course of a project to reflect changes in planning, schedule, or other supplemental information added as warranted. The CxA will coordinate commissioning activities with the GC and incorporate those activities into the construction schedule. Also during the construction phase, the CxA will perform site observations to insure the construction of the system is in conjunction with appropriate standards and practices. The general contractor provides the commissioning agent with information regarding substitutions or change orders that may affect commissioned equipment or the commissioning schedule.

A pre-functional inspection checklist are developed and completed for all mechanical equipment being commissioned. The checklist captures equipment nameplate and characteristics data, and confirms the as-built status of the equipment or system. The checklists ensure that the systems are complete and operational and document the installation of components and completion of systems. The checklists are prepared by the commissioning agent from manufacturer's data, drawings and specification to include the required installation, checkout, and start up procedures.

The installing subcontractors date and initial the checklists as the construction and start-up is completed. Pre-functional testing is not meant to replace the recommended manufacturers start-up procedures or checklists. The start-up checklists are to be used to augment and work in conjunction with documenting the manufacturers recommended procedures. Observation by the GC and/or CxA will be provided as needed. The commissioning agent reviews and verifies the completed checklists before scheduling the functional performance testing. Also, the commissioning agent will coordinate installation observations with the contractor and approve the completed pre-functional test reports.

Functional performance testing verifies the intended operation of individual components and system interactions under various conditions and modes of operation. The systems are run through all of the sequences of operation and the response of components verified. Testing proceeds from components to subsystems to systems, and finally to interlocks and connections between systems.

The commissioning agent review and approve functional performance test checklist so that the complete sequence of operations is included. If necessary, the commissioning agent may request clarifications from contractors and the design team regarding sequences and operation.

Contractor is responsible for functional testing of all equipment and systems. Under the supervision of the commissioning agent, the installing subcontractor performs the hardware and/or software manipulations required for the testing. Owner maintenance staff may also be present in order to assist in system observations. The commissioning agent witnesses and records the results of functional performance testing.

Any deficiencies found from functional performance testing will be documented in the

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Deficiency Report. The report will include all details of the components or systems found to be non-compliant with the parameters of the functional performance test plans and design documents. The commissioning agent schedules any required retesting through the general contractor.

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2. INTRODUCTION

A. General Building Information
1. Project Name: Irvine Fieldhouse
2. Location: 17300 Red Hill, Irvine, CA 92614
3. Building Type: Assembly, Office, Storage
   a. A-4 Assembly Occupancy
   b. Square Footage: 107,514 SF
   c. Stories: 1
4. Client: City of Irvine
5. Tenant: Irvine Fieldhouse
6. Scheduled Completion Date: 2026

B. Commissioning Goals and Objectives
1. The purpose of the commissioning plan is to provide direction for the commissioning process during construction, providing resolution for issues such as scheduling, roles and responsibilities, lines of communication and reporting, approvals, and coordination. Also, commissioning is required per the Los Angeles Green Building Code and California Energy Code.
2. Commissioning is a systematic process of ensuring that the building systems perform according to the design intent and the owner's operational requirements.
3. All equipment and systems should be installed according to manufacturer's recommendations and the best practices and standards of the industry.
4. Commissioning will include documenting the design intent, followed by activities in the design, construction, and occupancy phases of the project.
5. The participation of the contractors in commissioning activities will follow the requirements defined in the specifications.
6. Facilitate the final acceptance of the project at the earliest possible date.
7. Facilitate the transfer of the project to the owner's maintenance staff.
8. Ensure that the comfort systems meet the requirements of the occupants.
9. Documentation
   i. Equipment is installed and started per manufacturer's recommendations.
   ii. Equipment and systems receive complete operational checkout by installing contractors.
   iii. System performance with thorough functional performance testing and monitoring.
   iv. Completeness of operations and maintenance materials.
   v. Ensure that the owner's operating personnel are adequately trained on the operation and maintenance of building equipment.

C. Commissioning Scope
1. HVAC Systems
   i. HVAC Packaged Rooftop Units
   ii. Exhaust fans
   iii. HVAC Controls
2. Electrical
   i. Interior & exterior lighting
3. Plumbing
   i. Hot water system

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D. Commissioning Team Members

Function	Company	Contact Name	Phone/email
Owner	City of Irvine	Collum McLaughlin	(949)724-6662 cmclaughlin@cityofirvine.org
Construction Manager	Griffin Structures	Kenneth J. Aspis	(213)703-9908 kaspis@griffinstructures.com
General Contractor	TBD	TBD	TBD
Architect	WareMalcomb	Stephanie Fox	(949)788-4048 sfox@waremalcomb.com
Commissioning Authority 1	Southern California Commissioning	Jay Kim	(949) 880-2503 jay@sccxa.com
Commissioning Authority 2	Southern California Commissioning	Allan Phua	(949) 880-2523 allan@sccxa.com
Mechanical Engineer	RTM Engineering Consultant	Mike Best	(303)297-1038 Mike.best@rtmec.com
Plumbing Designer	RTM Engineering Consultant	Mike Best	(303)297-1038 Mike.best@rtmec.com
Electrical Engineer	RTM Engineering Consultant	Mike Best	(303)297-1038 Mike.best@rtmec.com

E. General Management Plan and Protocols
1. Commissioning agent coordinates the commissioning activities and reports to the owner's construction representative. Written reports, meeting requests, discrepancies, requests for information, and any other issues shall be communicated between the commissioning agent and the project team through the Owner Representative. The Owner Representative is Collum McLaughlin.

F. Commissioning Tasks by Phase
1. Design Phase
   a. Review design documents such as the Owner's Project Requirement (OPR) and the Basis of Design (BOD) from MEP engineers to become familiar with the job for development of the commissioning scope and plan.
   b. Documenting the Owner's Project Requirements and the Basis of Design
2. Construction Phase
   a. Prepare the Commissioning Plan
   b. Coordinate commissioning activities with the GC and incorporate those activities into the construction schedule.
   c. Perform site observations to ensure the construction of the system is in conjunction with appropriate standards and practices in order to facilitate and complete the commissioning process.
   d. Perform pre-functional inspections to commission the equipment installations.
   e. Prepare and distribute functional performance testing for review.
   f. Observe TAB field operations sufficient to be confident that the designated procedures were followed.
   g. Review the TAB report and comment.
   h. Any discrepancies or deficiencies shall be reported to the owner and team to find an appropriate resolution.
   i. Perform Functional Performance Testing in conjunction with the contractors and others as required.

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   j. Generate a list of corrective actions needed for re-test and acceptance.

3. Occupancy Phase
   a. Provide final commissioning report.
   b. Provide system manual.
   c. Ensure staff training.

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COMMISSIONING PLAN

IRVINE FIELDHOUSE
17300 Red Hill
Irvine, CA 92614

Commissioning Agent:
Jay Kim, P.E., CxA, LEED AP

Prepared by:
Southern California Commissioning

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1. ABBREVIATIONS AND DEFINITIONS

Abbreviations and Definitions	
A/E	Architect and design engineers
AC	Air conditioning unit
BAS	Building Automation System
BOD	Basis of Design
CxA	Commissioning Agent
CU	Condensing Unit
D/X	Direct Expansion
EF	Exhaust Fan
FC	Fan coil Unit
FPTs	Functional Performance Test
GC	General Contractor
HP	Heatpump unit
O	Owner
OPR	Owner's Project Requirement
SVCs	System Verification/Start-up Checklists
TAB	Test and Balance
Staff	Maintenance Staff
WH	Water Heater

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. GERVANTES C-40 LICENSE 12/31/2027 RENEWAL STATE OF CALIFORNIA

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

BUILDING COMPLIANCE FORMS

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK
10/15/2025	PLAN CHECK CORRECTIONS 2
02/04/2026	PLAN CHECK CORRECTIONS 3
2	
3	

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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03/30/2026 - PLAN CHECK CORRECTIONS 4

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Project: IRVINE FIELDHOUSE		
Equipment Name/Tag: Lighting	Location: Interior / Exterior	
Service:		
Item	**√**	**Comments**
Verify components have been burned in at the factory		
Panels and components UL listed under UL916		
Relay panels installed in correct locations		
Relay panels installed securely		
Relay panel power wiring correctly installed, terminated and marked		
Relays numbered per shop drawings.		
Low voltage wiring installed per Class 2/2P requirements		
Low voltage wiring correctly, color coded, installed, terminated and marked		
Class 2 power supply(s) correct voltages and capacity. (Doesn't exceed class 2 maximum VA)		
Automation Module installed per shop drawings.		
Automation Module installed securely.		
Automation Module wiring correctly installed, terminated and marked.		
Switches installed in correct locations per plans.		
Switches correct type.		
Switch and device plate colors, mounting height, and installation correct.		
Switch wiring correctly color coded, installed, terminated and marked.		
Occupancy sensors installed in correct locations per plans.		
Correct occupancy sensor types installed in appropriate locations.		
Occupancy sensor wiring correctly installed, terminated and marked.		
Photocells installed in correct locations per plans		
Photocell wiring correctly installed, terminated and marked		
Correct Type of fixture installed		
Correct lamp(s) installed		
Fixtures shall be installed plumb and be in vertical and horizontal alignment		
Fixtures mounting secure		
All fixtures cleaned		
Lens installed properly.		
Correct temperature wire used.		
Lighting control is installed per manufacturer recommendations		
Lighting control is calibrated per manufacturer checklist		

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Pre-start checks by:		Date:
Start-up checks by:		Date:

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Project: IRVINE FIELDHOUSE		
Equipment Name/Tag: EWH-	Location: MECH	
Service:		
Item		**Comments**
Pre-Start-Up Inspection		
Commissioning lock-out procedures reviewed		
Operation and maintenance information		
Mounting/support system and vibration isolation		
Seismic restraints		
Pressure relief installed		
Access doors and insulation		
Recirculation line installed (if needed)		
Recirculation pump installed (if needed)		
Timer for recirculation pump installed (if needed)		
Strainer, isolation and balance valve(s)		
Insulation installed on piping complete		
Drain piping		
Drain pan		
Building cleanliness		
Electrical wiring complete		
Disconnect installed to code and tested		
Start-up		
Start-up by manufacturer's representative with report and certificate or log provided		
Tank Purged of air and full of water		
Thermostat setting and operation satisfactory		
No water leakage		
Start Circulating pump		
Temperature of water leaving tank		
Pre-start checks by:		Date:
Start-up checks by:		Date:

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Project: IRVINE FIELDHOUSE [Functional Performance Test FPT-5]		
Equipment Name/Tag: DOAS-	Location:	
Service:		
Item	*Pass/Fail*	**Notes**
Thermostat Location Verification		
Local Operator's Terminal and Connections for Customer web based access:		
Listing of all HVAC units and all control points per unit		
Cooling Mode:		
Verify that the unit is scheduled as per owner schedule		
Verify the fan operation		
Verify that compressor cycles on and off to maintain space temperature set point		
Verify set points as per tenant documentation		
DAT: ____ F		
Heat Mode:		
Verify fan is on		
Verify refrigerant valve reverses and compressor cycles to maintain space temp. Verify gas heating operation if gas heating.		
DAT: ____ F		
Start-up		
Verify that fan starts per owner schedule.		
Air Balance		
Review air balance report		
Shut Down		
Verify unit stops per time schedule		
Override		
Verify unit operates as per conditions		
Verify unit stops at the end of override period.		
Economizer		
Verify economizer operation during free cooling		
Verify power exhaust setpoint and verify operation if applicable		
Checks Performed by:		Date:

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Project: IRVINE FIELDHOUSE [Functional Performance Test FPT-6]		
Equipment Name/Tag: WATER HEATER	Location: Janitor's Closet	
Service:		
Item	*Pass/Fail*	**Notes**
EWH-2 / RCP-2		
Verify water heater has been inspected and started up by personnel authorized by the equipment manufacturer		
Verify that all gauges operate properly.		
Verify operation of the pressure relief valve.		
Inspect for flammables around the water heater.		
Check and report any unusual noise, vibration.		
Heater Set point		
Delivery time to furthest fixture		
Verify circulating pump operation		
All fixtures function and flow rate adjusted		

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E. Internal Heat Gain Assumptions:

Space	Lighting Load	Plug Load	Occupant Load
Lounge, Break, or Waiting	0.55 W/ft²	1 W/ft²	275 BTU/hr-occ [15 ft²/occ]
Exhibit	0.6 W/ft²	1.5 W/ft²	250 BTU/hr-occ [15 ft²/occ]
Office Area	0.65 W/ft²	1.5 W/ft²	250 BTU/hr-occ [100 ft²/occ]
Library	0.8 W/ft²	1.5 W/ft²	250 BTU/hr-occ [50 ft²/occ]
Electrical/Server Room	0.4 W/ft²	3 W/ft²	250 BTU/hr-occ [333 ft²/occ]
Breakroom	0.55 W/ft²	1 W/ft²	275 BTU/hr-occ [15 ft²/occ]
Electrical	0.4 W/ft²	1 W/ft²	250 BTU/hr-occ [100 ft²/occ]
Conference	0.75 W/ft²	1 W/ft²	245 BTU/hr-occ [15 ft²/occ]
Storage	0.6 W/ft²	0.5 W/ft²	275 BTU/hr-occ [200 ft²/occ]
Restroom	0.4 W/ft²	1 W/ft²	250 BTU/hr-occ [100 ft²/occ]
Food/Kitchen Prep	0.95 W/ft²	1.5 W/ft²	275 BTU/hr-occ [200 ft²/occ]

F. Calculated cooling loads and system size:

System/Air Handler ID	Calculated Peak Cooling Load	Selected System Cooling Capacity	Reasons for difference between calculated load and selected system capacity
RTU's 7 thru 17	2,346,000 BTU/hr	2,497,000 BTU/hr	Small factor of Safety given assumptions.
RTU-1	75,000 BTU/hr	82,000 BTU/hr	Unit selection based on peak cooling load plus 15% safety factor and size of area served.
RTU-2	N/A	N/A	DOAS to make-up exhaust air in from restrooms.
RTU-3	12,000 BTU/hr	25,000 BTU/hr	3-Tons is the smallest RTU they make. Can turn down to meet load.
RTU-4	14,000 BTU/hr	25,000 BTU/hr	3-Tons is the smallest RTU they make. Can turn down to meet load.
RTU-5	201,000 BTU/hr	219,000 BTU/hr	Unit selection based on peak cooling load plus 15% safety factor and size of area served.
RTU-6	42,000 BTU/hr	52,000 BTU/hr	Unit selection based on peak cooling load plus 15% safety factor and size of area served.

Sequence of Operations:

Reference Controls Sheets MT701-703.

LIGHTING SYSTEM PREPARED BY RTM Engineering Consultants

Narrative Description:

A. Fixture type (refer to lighting fixture schedules on sheet E300 & ET301).
- Electrical room, Storage/Fire riser room have pendants (Type F-20)
- Storage room have pendants (Type F-17)
- Offices have recessed (Type F-2)
- Conference Room, Open office have recessed (Type F-1).
- Restrooms have recessed (Type F-13) and cove lighting (Type F-12).
- Janitor, Laundry and First Aid have recessed (Type F-14).
- Cafeteria has pendants (Type F-6, F-8 & F-9)
- Kitchen has recessed (Type F-18 & F-19)
- Multipurpose room has pendants (Type F-6) and recessed (Type F-13)
- Corridors have recessed (Types F-13, F-10 & F-3)
- Basketball courts have pendant (Type F-22)
- Badminton Courts have pendant (F-21)

B. Lamp and ballast type
- All fixtures will be LED type.
- All fixtures will be equipped with a 0-10v driver.

C. Control type
- All fixtures are controlled via motion sensors
- Courts Lighting will be controlled through a Lighting control panel via a touchscreen.
- All fixtures will have switch (for rooms less than 100 sq.ft. or less than 0.5 w/sf lighting density) and dimmer control (all other rooms)
- Light fixtures in daylit zones will be have controls integrated with photo sensors.

D. Describe how system meets any special requirements listed in the Owner's Project Requirements document
- No specific owner's requirements were presented at the design. Title24 is the minimum requirement for this project.
- Lighting layout was given by architect.

Reasons for system selection:
- All fixture types were chosen as LED due to the LPD and control requirements of Title 24.

Lighting design criteria & Lighting Power Design Target:

Space Type	Illumination Design Target (footcandles)
CORRIDOR	15
CONFERENCE	30-50
OFFICE	30-50
RESTROOM	10-30
CAFETERIA	20-30

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1. HVAC, lighting and water heater design shall meet California Title 24-2022.
2. HVAC equipment shall meet California Title 24 requirements.
3. High performance glazing shall be used as required to meet Title 24 and energy saving requirements.

Indoor Environmental Quality Requirements:

1. Project is designed to meet the mandatory code-required lighting levels.
2. The HVAC design temperature of the conditioned space shall be 75 degrees F dry bulb and 50% relative humidity.
3. The impact of exterior acoustics is minimized with the use of batt insulation in all exterior wall cavities plus the 7/8" exterior cement plaster. Batt insulation is also specified at the bottom of the roof trusses. These provisions also address the need for temperature control throughout the building.
4. Sound attenuating batt insulation is specified within all interior partition walls to minimize the impact of noise levels within the building.
5. An air filter with a minimum efficiency reporting value (MERV) of 13 shall be installed in the mechanical system for outside and return air prior to occupancy.
6. The building shall meet or exceed the provisions for mechanical ventilation of section 1203 of the California Building code.
7. Title 24 compliant 7 day programmable thermostats shall be used to control the HVAC units.
8. Override controls are available for all lighting for after-hours use.

Equipment & Systems Expectations:

1. The building equipment shall be in compliance with the efficiencies listed above. The design team shall notify the owner of alternate options for energy efficient equipment.
2. HVCA unit shall meet California Title 24 requirements.
3. Building management system shall be used to control the proposed HVAC units.
4. Timeclocks are specified for proposed exhaust fans or interlock with light switch.
5. All areas of the building shall have lighting controls per applicable requirements of the California Green Building Code and Title 24.

Building Occupant and O&M Personnel Expectations:

1. The building will be maintained by the building owner, who shall maintain the building systems and equipment per warranty requirements. The

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tenant will operate the systems on a day-to-day basis and notify the building owner of needed maintenance.

2. The systems installer will educate the building owner and any other appropriate personnel on the designed systems and provide an operation manual. The level of training and orientation supplied by the systems installer will be tailored to the specific needs of the designated maintenance personnel.
3. Building operation will be directed by the user, and maintenance will be directed by the building owner. All systems maintenance will be reviewed and approved by the building owner in accordance with the operations manual.

Commissioning Agent Information:

Name of Commissioning Agency:
SOUTHERN CALIFORNIA COMMISSIONING

Address of Agency:
102 DISCOVERY
IRVINE CA 92618
(949)450-1229 X208

Contact:
JI HOON (JAY) KIM, P.E., CxA, LEED AP

Irvine Fieldhouse
17300 Red Hill Ave., Irvine, CA 92614
Basis of Design
February 4, 2026

HVAC SYSTEM AND CONTROLS PREPARED BY RTM Engineering Consultants

This project was designed and constructed in two phases. This BOD covers the MEP systems in both phases, as they will be commissioned at one time to obtain a CO at the end of Phase 2 construction. All RTU's have been specified as Single Zone Variable Air volume units to modulate fan and conditioning to match thermostatic set points.

Narrative Description & Reasons for System Selection:

A. The building has different systems as follows:
   a. Lobby: Rooftop packaged heat pump units with MERV 13 filters and economizers – 8.5 tons nominal.
   b. Office Area: Two rooftop packaged heat pump units with MERV 13 filters and economizers – 3 tons nominal.
   c. Toilet Rooms: Rooftop packaged heat pump DOAS unit with MERV 13 filters and economizer.
   d. Playcourt Areas: Rooftop packaged heat pump units with MERV 13 filters and economizers – 25 tons nominal.
   e. Electrical room: Roof mounted exhaust fan controlled by local thermostat.
   f. Restroom Exhaust: Roof mounted exhaust fan controlled by BMS (on during occupied hours).
   g. Janitor's Closet: Ceiling mounted exhaust fan interlocked to the restroom's light switch.
   h. Kitchen Area: DOAS to Condition Kitchen space. Transfer remaining OA from other areas of the building to be exhausted from two Kitchen Hoods.
   i. Storage Room: Roof mounted exhaust fan with wall louvers to provide ventilation rate at 4 air changes per hour.

Reasons for System Selection

A. Single Zone Variable air volume rooftop packaged heat pump air conditioning units are an industry standard. This building was designed to accommodate large units to condition the playcourt areas.
B. Utilizing Barometric Relief rather than power exhaust for the playcourt area allows for a natural relief of building pressure without using excess energy. Also, we have a ton of OA from food court/playcourt areas that we are "re-using" to make-up air being exhausted from kitchen hoods.

Load Calculations:

A. Load calculation method/software: Hourly Analysis Program (HAP) 6.1
B. Summer outdoor design conditions: 86°F drybulb, 68°F wetbulb
C. Winter outdoor design conditions: 37°F drybulb
D. Indoor design conditions:
   a. Conditioned Areas: 75°F Cooling; 72°F heating
   b. Electrical Room: 85°F T-stat setpoint for EF

SOUTHERN CALIFORNIA COMMISSIONING
Commissioning & Energy Services

Commissioning Activity Summary

Task No.	Commissioning Task	Due Date	Responsibility	Notes/Comments
	Design Phase			
1	Commissioning Meeting		All	
2	Site Observation		CxA	
3	OPR		O	
4	BOD		A/E	
5	Design Drawings		A/E	
6	Design & Specification Review		CxA	
	Construction Phase			
7	Commissioning Plan		CxA	
8	Equipment Start-up Plan		GC	
9	SVCs Preparation		CxA	
10	SVCs Completion		GC	
11	Equipment Start-up		GC/CxA	
12	FPTs Preparation		CxA	
13	TAB		GC/CxA	
14	TAB Review		CxA	
15	FPTs Execution		GC/CxA	
16	Commissioning Comments Log		CxA	
	Occupancy Phase			
17	Commissioning Report		CxA	

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Commissioning & Energy Services

APPENDIX E

Owner's Project Requirement & Basis of Design

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Owner's Project Requirements

Project: **Irvine Fieldhouse**
Location: 17300 Red Hill Ave. Irvine, California

Project Program:

1. The USGBC LEED Certified project located on a 7.31-acre lot at the corner of Redhill Blvd. and McGaw consists of a new 107,514 sf. indoor athletic facility with office and storage. The proposed structure is Type III-B construction utilizing approximately 10" thick concrete tilt-up full-height walls. This project is designed in accordance with the 2022 State Codes along with the City of Irvine Amendments to accommodate Occupancy Types: A-2, A-3, A-4, S-1, B. The roof consists of a single-ply roof over rigid insulation over metal deck. There will be 373 surface parked stalls, along with 19 day one, Type 2 EV chargers.
2. It is The City of Irvine's objective to offer a safe facility for the residents of Irvine and their guests that is compliant with the applicable building and energy codes.
3. Building materials and features: Double height lobby with moss wall feature. Concrete floors for durability and longevity.
4. The facility includes 10 Badminton courts and 10 Basketball courts along with a food court.
5. The base project budget is consistent with current Southern California construction costs for this building type.

Environmental & Sustainability Goals:

1. The project is designed to meet the mandatory measures of the California Green Building Code.
2. Where possible, high efficiency HVAC equipment, LED lighting, and hot water systems are used. Low water-use plumbing fixtures are specified for both flush and flow fixtures to reduce the amount of water usage. Lighting systems will offer cost effective energy savings potential, and base level lighting controls will be implemented to control lighting depending upon the level of daylighting.

Energy Efficiency Goals:

SOUTHERN CALIFORNIA COMMISSIONING
Commissioning & Energy Services

COMMISSIONING ISSUES LOG

ISSUE DATE: 11/11/25

PROJECT: IRVINE FIELDHOUSE

LEGEND

O: Owner
AOR: Architect of Record
MOR: Mechanical Engineer of Record
EOR: Electrical Engineer of Record
POR: Plumbing Engineer of Record
LA: Landscape Architect
M: Mechanical contractor
E: Electrical contractor
P: Plumbing contractor
GC: General contractor

ITEM	SYSTEM	LOCATION	DATE	DESCRIPTION OF ISSUE AND ACTIVITY	ACTION BY	RESOLUTION	DATE RESOLVED
1				Provide owner's project requirement (OPR)	O/A		
2				Provide mechanical basis of design (BOD)	MOR		
3				Provide electrical basis of design (BOD)	EOR		
4				Provide plumbing basis of design (BOD)	POR		
5							
				CONSTRUCTION PHASE			
6	M			HVAC, MERV-13 filters required	M	Noted on schedule	
7	P			Aquastat required for Circulating Pump	P	Noted on schedule	

SOUTHERN CALIFORNIA COMMISSIONING
Commissioning & Energy Services

8				Provide smoke detectors for unit over 2000 cfm	M	Noted on equipment schedule	

SOUTHERN CALIFORNIA COMMISSIONING
Commissioning & Energy Services

APPENDIX D

Schedule

- Schedule of Commissioning Task

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

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LICENSED ARCHITECT ANA L. GERVANTES C-44080 LICENSE EXPIRES 12/31/2027 RENEWAL REQUIRED STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

BUILDING COMPLIANCE FORMS

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK
10/15/2025	PLAN CHECK CORRECTIONS 2
02/04/2026	PLAN CHECK CORRECTIONS 3

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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KITCHEN	50
LOBBY	20-30
TECHNICAL ROOMS	20-50
STORAGE	20
BASKETBALL COURTS	50
BADMINTON COURTS	50

PLUMBING SYSTEM PREPARED BY

Codes and Standards:

The Plumbing systems will be designed to conform, at a minimum to the following codes and standards.
California Plumbing Code 2022
California Building Code 2022
California Green Building Code 2022

A. Water Heating Systems:

I. Type of water systems:

- Domestic hot water hot water is provided by Tank type electric water heater and is controlled by an adjustable thermostat which has a range from 110 to 170 degrees Fahrenheit. There are three heating element, which is controlled by the thermostat. The heater meets or exceeds the standby loss requirements of the US Department of Energy and the current edition of ASHRAE/ISNA 90.1.
- One EWH at janitor's closet and one above ceiling in kitchen. See plumbing drawings.
- The hot water system meets the owner's requirement to furnish hot water to all the required fixtures. No other requirements from the owner were made.

II. Reasons for System Selection
This system type was selected as electricity is the preferred source for the equipment. Electricity is readily available on the project site. Using electric water heaters also allow for a preferable location for the water heater without any requirements for atmospheric venting to be installed.

III. Procedure for the testing and adjustment of the system
Domestic hot water heater and distribution system testing and adjustment procedure:

1. Plumbing Subcontractor to start -up and document domestic water heater and distribution system under the observation of the CA using a start-up plan prepared by the contractor.
2. Plumbing subcontractor to perform functional testing under the observation of the commission authority who will record the results of the functional test procedures.
3. Equipment and components to be tested:
   (a) Domestic water heaters (tank type)
   (b) Domestic hot water re-circulating system (pumps, aqua-stat, and timer).
4. Functions, modes, and testing conditions:
   (a) The test shall be performed with water heaters fully operational. The water temperature shall be measured and compared to the water temperature setting. Various settings will be measured.
   (b) Verify the re-circulating pump is installed properly & is controlled according to the design intent document. Verify that the aqua-stat and/or timer are installed and operating.

B. Plumbing fixtures:

I. Type of plumbing fixtures:

- Exposed battery sensor flush valves with 1.28 gallons per flush are provided for all water closet toilets. The flush valves meet and comply with California Plumbing Code 2022 and California Green Low Flow requirements.
- Exposed battery sensor flush valves with 0.125 gallons per flush are provided for all urinals. The flush valves meet and comply with California Plumbing Code 2022 and California Green Low Flow requirements.
- Touch-free operating faucets with 0.5 gallons per minute of flow are provided for the lavatory faucets. The faucets meet and comply with California Plumbing Code 2022 and California Green Low Flow requirements.
- Deck-mounted manual faucets with 1.8 gallons per minute of flow are provided for the breakroom sink faucets. The faucet meets and complies with California Plumbing Code 2022 and California Green Low Flow requirements.

II. Reasons for Plumbing Fixture Selection
The flush valves provided for the water closet toilets and urinals were selected due to their compliance with California Plumbing Code 2022 and California Green Low Flow requirements. The touch-free operating faucets with 0.5 gallons per minute of flow were selected because they comply with the California Plumbing code 2022 and California Green Standards Code. Lastly, the deck-mounted manual faucets with 1.8 gallons per minute of flow were also selected due to their compliance with the California Plumbing code 2022 and California Green Standards Code. Plumbing fixtures can be easily maintained by a professional plumber.

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INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. CERVANTES 44045 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

BUILDING COMPLIANCE FORMS

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1	07/09/2025	ISSUE FOR PLAN CHECK
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	02/04/2026	PLAN CHECK CORRECTIONS 3

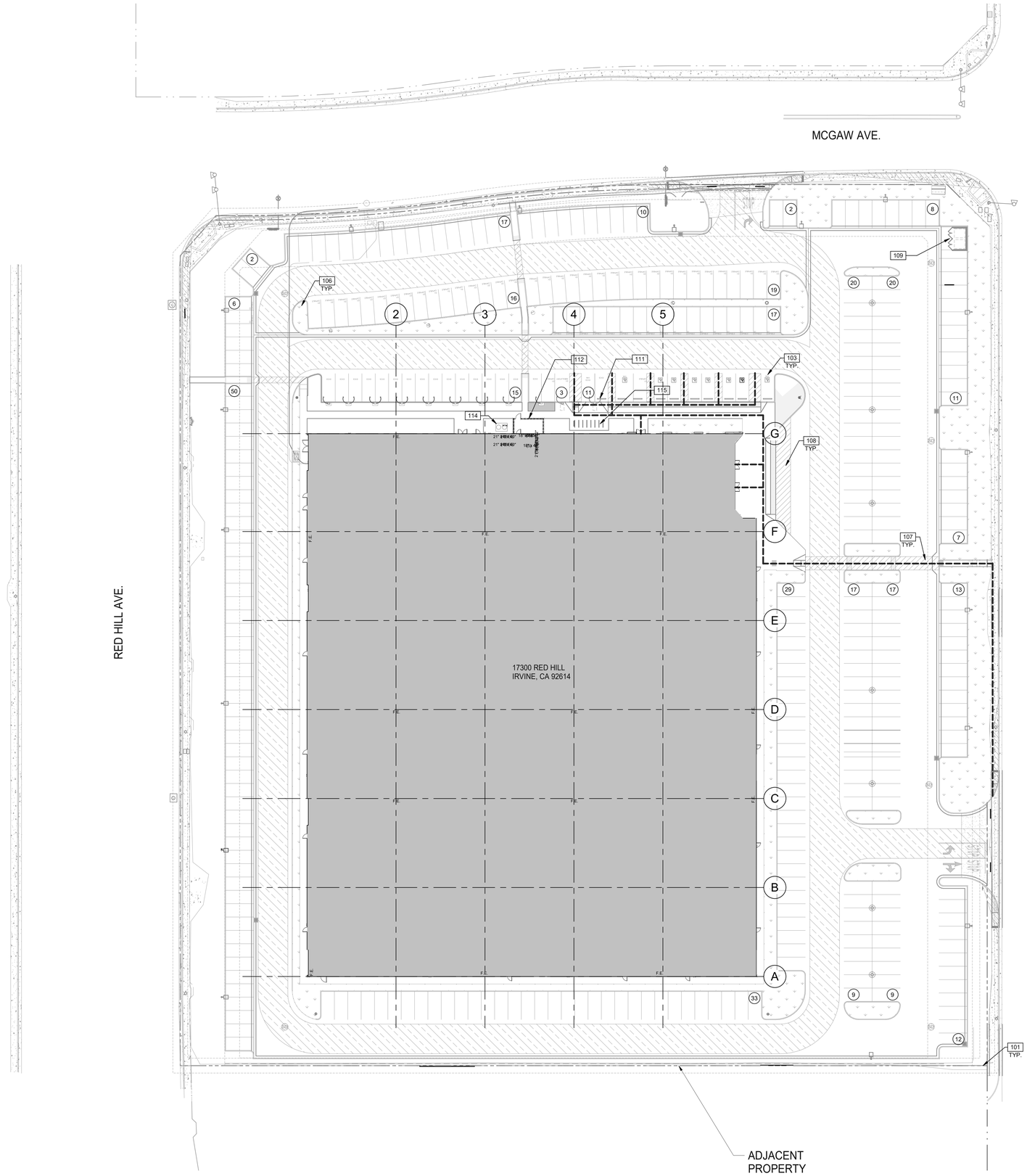
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KEYNOTES:

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

101 PROPERTY LINE.
103 VAN ACCESSIBLE PARKING STALL WITH SIGNAGE REFERENCE CORE AND SHELL.
106 LANDSCAPE AREA. REFERENCE CORE AND SHELL SEE APPROVED 00942132-GPRE.
107 CROSSWALK STRIPING REFERENCE CORE AND SHELL SEE APPROVED 00942132-GPRE.
108 ACCESSIBLE LOADING ZONE REFERENCE CORE AND SHELL SEE APPROVED 00942132-GPRE.
109 TRASH ENCLOSURE WITH RECYCLE BIN PER CITY STANDARDS REFERENCE CORE AND SHELL SEE APPROVED 00942132-GPRE.
111 EV CHARGING SCOPE COVERED UNDER PLANS CHECK 00944992-CNEW AND 00942132-GPRE; NO CHARGES ARE BEING PROPOSED.
112 NEW FENCE ENCLOSURE, 6'-0" TALL VINYL FENCE (VINYL COLOR TO MATCH HOMBURG GRAY - SW7622) WITH 42" DOOR.
114 GREASE INTERCEPTOR, SEE CIVIL DRAWINGS UNDER PLAN CHECK 00942132-GPRE (CIVIL PERMIT) AND PLUMBING DRAWINGS.
115 (15) SHORT TERM BIKE RACKS.

PARKING SUMMARY

PARKING WAS COVERED UNDER 00944992-CNEW & 00942132-GPRE

PARKING REQUIRED

ACCESSIBLE PARKING	8 STALLS
ACCESSIBLE STANDARD PARKING	6 STALLS
ACCESSIBLE VAN PARKING	2 STALLS
EVSEPARKING	19 STALLS
EVSE STANDARD PARKING	16 STALLS
EV ACCESSIBLE PARKING	3 STALLS
EV ACCESSIBLE STANDARD PARKING	1 STALLS
EV ACCESSIBLE VAN PARKING	1 STALLS
EV ACCESSIBLE AMBULATORY PARKING	1 STALLS
EV CAPABLE PARKING	56 STALLS
PARKING FOR PROPOSED AND FUTURE OFFICE: 1/250	13 STALLS
PARKING FOR ATHLETIC COURT FACILITIES	57 STALLS
TOTAL PARKING REQUIRED	70 STALLS

PARKING PROVIDED

TOTAL PARKING PROVIDED	373 STALLS
STANDARD PARKING STALLS	289 STALLS
ACCESSIBLE PARKING	9 STALLS
EVSE PARKING	19 STALLS
EV CAPABLE PARKING	56 STALLS
EV ACCESSIBLE PARKING	3 STALLS

LEGEND

- ACCESSIBLE PATH OF TRAVEL. 1:20 MAX. SLOPE, 2% MAX. CROSS SLOPE.
- PROPERTY LINE.
- EXISTING LANDSCAPE AND IRRIGATION AREA. (REFERENCE C/S)
- FIRE LANE (HATCHED)
- (1) PARKING STALL COUNT TOTAL
- FIRE HYDRANT EXISTING (REFERENCE C/S)
- EXISTING SITE WALL, REFERENCE CORE AND SHELL
- SITE POLE TYPE 5, REFERENCE CORE AND SHELL
- EXTERIOR WALL PACK, SEE ELEC DRAWINGS REFERENCE CORE AND SHELL
- SITE POLE TYPE 2, REFERENCE CORE AND SHELL
- NEW VINYL FENCE

CITY OF IRVINE
BUILDING & SAFETY DIVISION

1"=60'
0 30' 60' 150' 300'

SITE PLAN
SCALE: 1" = 30'-0"

TRUE NORTH PROJECT NORTH

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LICENSED ARCHITECT ANA L. CERVANTES GALVEZ C-44002 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

SITE PLAN

	DATE	REMARKS
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	02/04/2026	PLAN CHECK CORRECTIONS 3

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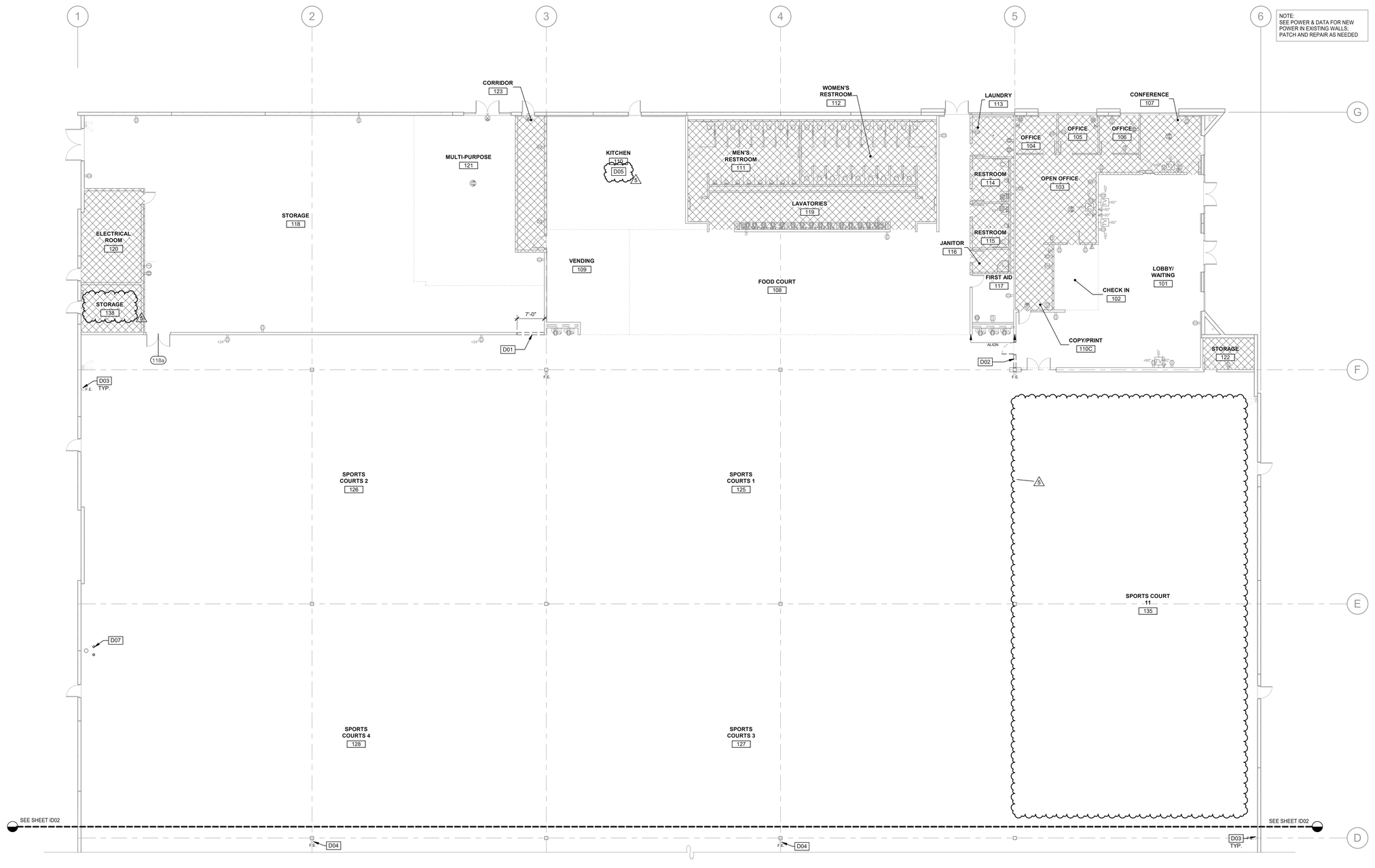
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3/32"=1'-0"

0 4' 8' 16' 24' 48'

NORTH - FLOOR PLAN

SCALE: 3/32" = 1'-0"

RATED CONSTRUCTION NOTES

1. ALL EXISTING RATED WALLS SHALL BE PATCHED AND REPAIRED AS NEEDED TO MATCH EXISTING RATED CONSTRUCTION.
2. ALL THROUGH AND MEMBRANE PENETRATIONS IN FIRE RATED WALL AND FLOOR/CEILING ASSEMBLIES SHALL BE IN ACCORDANCE WITH CBC 714, SEE PLAN SHEET I532 FOR TYPICAL RATED PENETRATIONS. ALL RATED PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. WHERE A SPECIFIC LISTED PENETRATION SYSTEM HAS NOT BEEN COVERED BY THE ARCHITECTURAL DRAWINGS, THE AOR SHALL BE NOTIFIED IMMEDIATELY AND A LISTED FIRE STOPPING SYSTEM SHALL BE PROVIDED AND MADE AVAILABLE ON SITE AT TIME OF CITY INSPECTIONS.

LEGENDS

INDICATES AREA NOT IN CONTRACT (N.I.C.)
(COVERED UNDER CORE & SHELL PERMIT)

KEYNOTES: [-]

D01 DEMO EXISTING FULL-HEIGHT WALL UP TO 8' FOR NEW CORRIDOR. PATCH AND REPAIR ADJACENT SURFACES.

D02 DEMO EXISTING FULL-HEIGHT WALL UP TO 11'-6" FOR NEW PASS-THROUGH. PATCH AND REPAIR ADJACENT SURFACES.

D03 REMOVE EXISTING BASE BUILDING FIRE EXTINGUISHERS TEMPORARILY TO ALLOW INSTALLATION OF NEW FINISHES. AFTER FINISH INSTALLATION, INSTALL NEW SURFACE MOUNTED FEC IN ITS ORIGINAL LOCATION PER CODE REQUIREMENTS.

D04 REMOVE EXISTING BASE BUILDING FIRE EXTINGUISHERS TEMPORARILY TO ALLOW INSTALLATION OF NEW WALL FURRING AND FINISHES. AFTER FINISH INSTALLATION, INSTALL NEW SEMI-RECESSED FEC PER OCCUPANCY PLANS.

5 D05 EXISTING TEMPORY SACRIFICIAL SLAB WITHIN THE KITCHEN AREA TO BE DEMOLISHED. PROTECT IN PLACE THE EXISTING REINFORCING AND VIMS MEMBRANE.

D07 EXISTING BOLLARDS TO BE REMOVED. PATCH AND REPAIR CONCRETE SLAB AS REQUIRED TO RECEIVE NEW FLOOR FINISH IN ACCORDANCE WITH THE WOOD FLOORING MANUFACTURER'S INSTALLATION SPECIFICATIONS.

DEMO PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

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LICENSED ARCHITECT ANA L. CERVANTES C-44000 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

NORTH - DEMOLITION FLOOR PLAN

REMARKS	DATE
ISSUE FOR PLAN CHECK	07/09/2025
PLAN CHECK CORRECTIONS	09/22/2025
PLAN CHECK CORRECTIONS 4	03/06/2026
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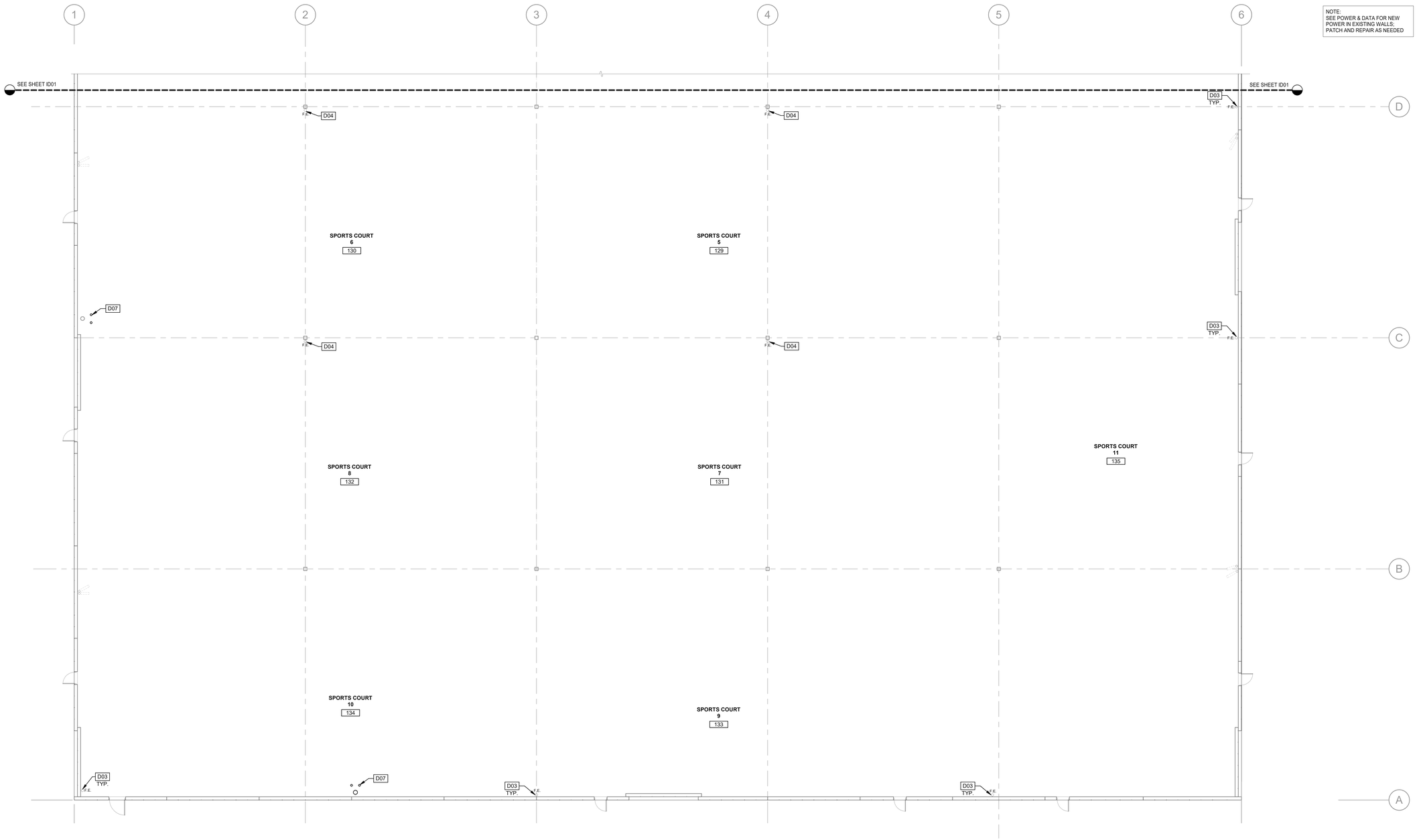
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NOTE:
SEE POWER & DATA FOR NEW POWER IN EXISTING WALLS; PATCH AND REPAIR AS NEEDED

3/32"=1'-0"

0 4' 8' 16' 24' 48'

SOUTH - FLOOR PLAN

SCALE: 3/32" = 1'-0"

RATED CONSTRUCTION NOTES

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LEGENDS

INDICATES AREA NOT IN CONTRACT (N.I.C.)
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KEYNOTES: -

D03 REMOVE EXISTING BASE BUILDING FIRE EXTINGUISHERS TEMPORARILY TO ALLOW INSTALLATION OF NEW FINISHES. AFTER FINISH INSTALLATION, INSTALL NEW SURFACE MOUNTED FEC IN ITS ORIGINAL LOCATION PER CODE REQUIREMENTS.

D04 REMOVE EXISTING BASE BUILDING FIRE EXTINGUISHERS TEMPORARILY TO ALLOW INSTALLATION OF NEW WALL FURRING AND FINISHES. AFTER FINISH INSTALLATION, INSTALL NEW SEMI-RECESSED FEC PER OCCUPANCY PLANS.

D07 EXISTING BOLLARDS TO BE REMOVED. PATCH AND REPAIR CONCRETE SLAB AS REQUIRED TO RECEIVE NEW FLOOR FINISH IN ACCORDANCE WITH THE WOOD FLOORING MANUFACTURER'S INSTALLATION SPECIFICATIONS.

DEMO PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

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LICENSED ARCHITECT
ANA L. CERVANTES
C-44000
EXPIRATION DATE
12/31/2027
RENEWAL PENDING
STATE OF CALIFORNIA

CITY OF IRVINE
1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

SOUTH - DEMOLITION FLOOR PLAN

	DATE	REMARKS
	07/08/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2

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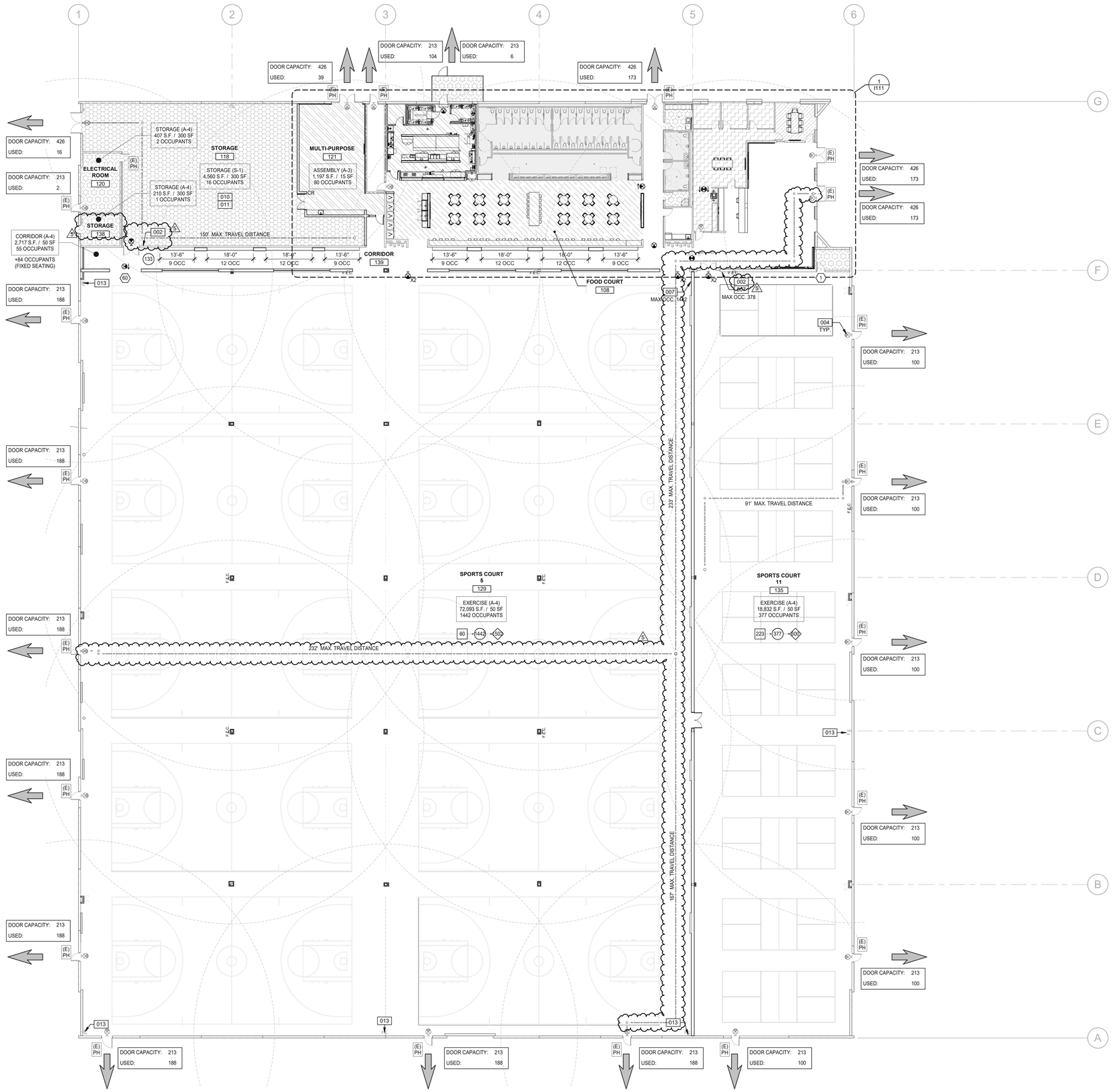
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EGRESS PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

1. POSTED SIGNS IN AN ASSEMBLY OCCUPANCY SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT.
2. REFER TO SHEET I020 FOR ACCESSIBILITY DETAILS.
3. PER CBC 1005.3.2 EXCEPTION #1, MEANS OF EGRESS CAPACITY IS CALCULATED AT A FACTOR OF 0.15 INCH (3.8 mm) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2 SINGLE DOORS HAVE A CLEAR WIDTH OF 32" WITH A DOOR CAPACITY OF 213; DOUBLE DOORS HAVE A CLEAR WIDTH OF 64" WITH A DOOR CAPACITY OF 426.

KEYNOTES:

002	WALL-MOUNTED TACTILE SIGN, INDICATING "EXIT ROUTE" (DET 19/1020).
004	EXISTING EXTERIOR DOOR; VERIFY IN FIELD REQUIRED ILLUMINATED EXIT SIGN AND "EXIT" TACTILE SIGNAGE (DET 18/1020).
007	WALL-MOUNTED SIGN, INDICATING "MAXIMUM OCCUPANCY" (DET 16/I020). SEE PLAN FOR MAXIMUM OCCUPANCY QUANTITIES.
010	STORAGE ROOM MUST ADHERE TO THE FOLLOWING CRITERIA: 1) CLEAR EGRESS ROUTES, FROM ALL AREAS WITHIN THE STORAGE SPACE, SHALL BE MAINTAINED ALLOWING IMMEDIATE ACCESS TO THE DEFINED EXISTS AT ALL TIMES; 2) THE EGRESS PATH SHALL BE MAINTAINED AT 36" WIDE MIN IN ACCORDANCE WITH CBC TABLE 1020.3. WHERE STORAGE SPACE HAS AISLES THAT SERVE ELEMENTS ON TWO SIDES, A 44" WIDE EGRESS WIDTH SHALL BE PROVIDED AND MAINTAINED; 3) STORGE LAYOUTS SHALL AT NO TIME CREATE EXIT TRAVEL DISTANCES OUTSIDE THE THRESHOLDS DEFINED ON THESE PLANS.
011	WHERE PROVIDED, STEEL SHELVING MUST ADHERE TO THE FOLLOWING CRITERIA: 1) STEEL SHELVING SHALL BE INSTALLED IN SUCH A MANNER AS TO MAINTAIN THE MIN REQUIRED EGRESS WIDTHS DEFINED ON THESE PLANS; 2) SHELVING UNDER 7FT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS; 3) SHELVING BETWEEN 7FT AND 8FT WILL REQUIRE PERMITTING AND ENGINEERING FOR THE STRUCTURAL ANCHORAGE ONLY; 4) SHELVING OVER 8FT WILL REQUIRE PERMITTING AND FULL ENGINEERING FOR THE ENTIRE SHELVING SYSTEM.
013	REMOVE EXISTING BASE BUILDING FIRE EXTINGUISHER TEMPORARILY TO ALLOW INSTALLATION OF NEW FINISH. AFTER FINISH INSTALLATION, INSTALL SURFACE MOUNTED FEC IN ITS ORIGINAL LOCATION PER CODE REQUIREMENTS. WALL PADDING TO CUT AROUND FEC.

OCC. TYPE PATTERN LEGEND

- (A-2) ASSEMBLY WITH LOAD FACTOR OF 15 (CBC 311.1.1)
- (A-2) ASSEMBLY WITH LOAD FACTOR OF 200 (CBC 303.1.2)
- (A-3) ASSEMBLY WITH LOAD FACTOR OF 15
- (A-4) ASSEMBLY WITH LOAD FACTOR OF 50 (CBC 311.1.1)
- (A-4) STORAGE WITH LOAD FACTOR OF 300
- (B) BUSINESS WITH LOAD FACTOR 15
- (B) BUSINESS WITH LOAD FACTOR 150
- (S-1) STORAGE WITH LOAD FACTOR OF 300
- NOTE: RESTROOMS TO FOLLOW CPC SECTION 422.1

MAX. TRAVEL DISTANCE TO EXITS

MAXIMUM TRAVEL DISTANCE TO EXITS (1017.2 SPRINKLERED BUILDING)

A/ASSEMBLY	250 FEET MAX.
B/BUSINESS (OFFICE)	300 FEET MAX.
S-1/STORAGE (MODERATE-HAZARD WAREHOUSE)	200 FEET MAX.

*1017.2.2 GROUPS F-1 AND S-1 INCREASE

MAX. COMMON PATH OF TRAVEL

MAX. COMMON PATH OF TRAVEL DISTANCE (1006.2.1 SPRINKLERED BUILDING)

A/ASSEMBLY	75 FEET MAX.
B/BUSINESS (OFFICE)	100 FEET MAX.
S-1/STORAGE (MODERATE-HAZARD WAREHOUSE)	100 FEET MAX.

LEGEND

- INDICATES AREA NOT IN CONTRACT (N.I.C.) (COVERED UNDER CORE & SHELL PERMIT)
- REQUIRED EXIT
- DIRECTION OF TRAVEL
- MAXIMUM TRAVEL DISTANCE
- COMMON PATH OF EGRESS TRAVEL (C.P.E.T.)
- 0 ORIGINATING OCCUPANT LOAD
- 0 CUMULATIVE OCCUPANT LOAD FROM ADJOINING ROOMS
- 0 AGGREGATE OCCUPANT LOAD AT DESIGNATED POINT
- 0 AGGREGATE OCCUPANT LOAD AT DOOR
- F.E. EXISTING FIRE EXTINGUISHER
- F.E.C. NEW RECESSED FIRE EXTINGUISHER CABINET
- F.E.C. NEW SEMI-RECESSED FIRE EXTINGUISHER CABINET
- EXISTING CEILING-MOUNTED EXIT SIGN
- EXISTING WALL-MOUNTED EXIT SIGN
- X1 CEILING-MOUNTED EXIT SIGN WITH BATTERY BACKUP, SHADED QUADRANT INDICATES FACE OF LETTERING, SIGN TO INCLUDE DIRECTIONAL ARROW AS INDICATED
- X2 WALL-MOUNTED EXIT SIGN WITH BATTERY BACKUP, SHADED QUADRANT INDICATES FACE OF LETTERING, SIGN TO INCLUDE DIRECTIONAL ARROW AS INDICATED

  NOTE: ADDITIONAL DIRECTIONAL EXIT SIGNS MAY BE REQUIRED PRIOR TO FINAL INSPECTION AND SUBJECT TO BUILDING INSPECTOR.

  EXIT SIGN TO BE CENTERED WITH THE DOOR.
- PH PANIC HARDWARE
- (E) PH EXISTING PANIC HARDWARE
- VINYL FENCE

CITY OF IRVINE BUILDING & SAFETY DIVISION

1/16"=1'-0"
0 8' 16' 32' 64'

OVERALL OCCUPANCY AND EGRESS PLAN
SCALE: 1/16" = 1'-0"

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT
ANA L. CERVANTES
C-44045
LICENSE EXPIRES 12/31/2027
RENEWAL PENDING
STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

OVERALL OCCUPANCY AND EGRESS PLAN

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
4	09/22/2025	PLAN CHECK CORRECTIONS
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	
JOB NO.:	IRV24-6050-00

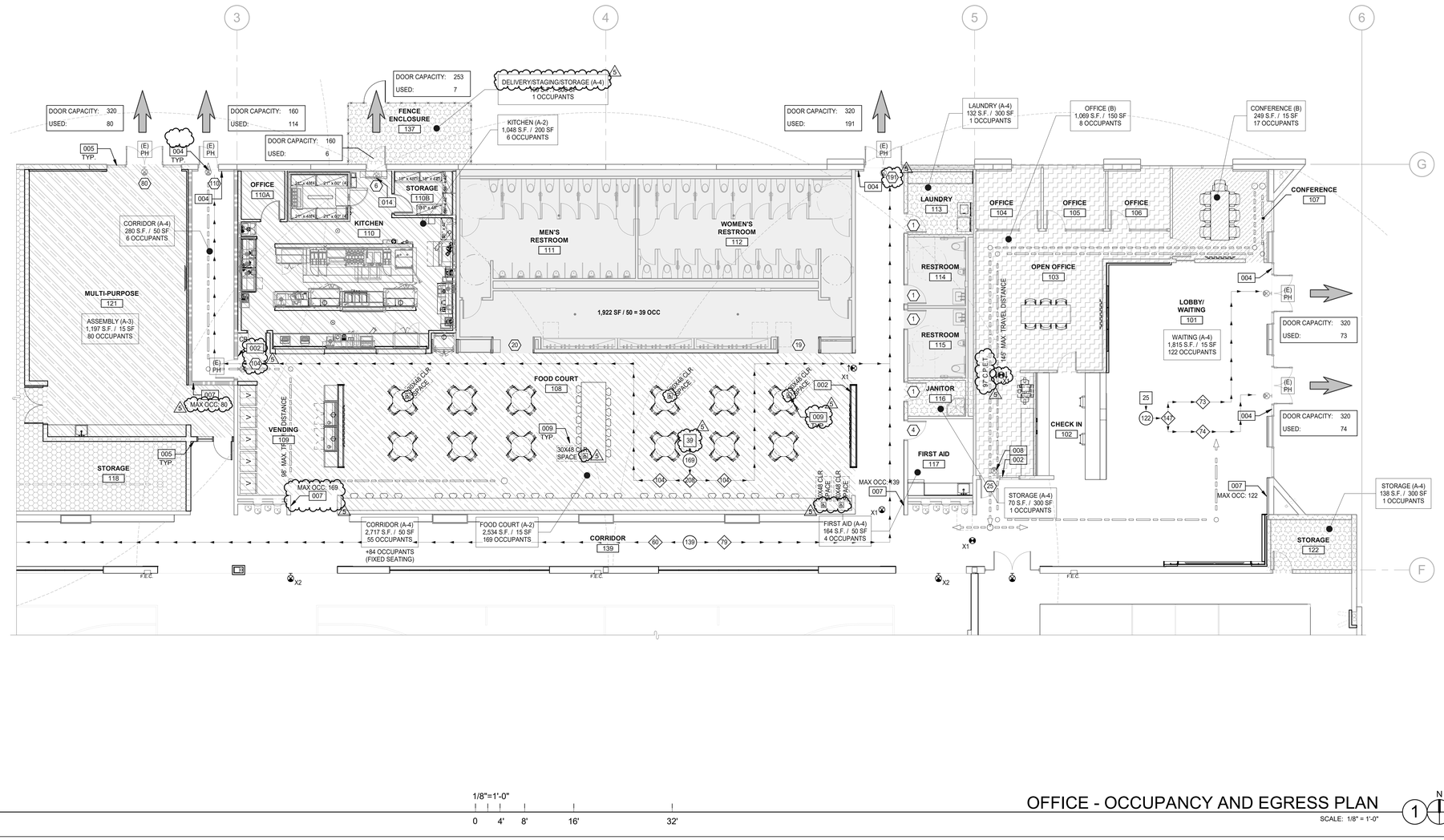
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03/30/2026 - PLAN CHECK CORRECTIONS 4

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1/8"=1'-0"

0 4' 8' 16' 32'

OFFICE - OCCUPANCY AND EGRESS PLAN

SCALE: 1/8" = 1'-0"

N

EGRESS PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

1. POSTED SIGNS IN AN ASSEMBLY OCCUPANCY SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT.
2. REFER TO SHEET I020 FOR ACCESSIBILITY DETAILS.
3. PER CBC 1005.3.2 EXCEPTION #1, MEANS OF EGRESS CAPACITY IS CALCULATED AT A FACTOR OF 0.15 INCH (3.8 mm) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2 SINGLE DOORS HAVE A CLEAR WIDTH OF 32" WITH A DOOR CAPACITY OF 213; DOUBLE DOORS HAVE A CLEAR WIDTH OF 64" WITH A DOOR CAPACITY OF 426.

KEYNOTES:

002	WALL-MOUNTED TACTILE SIGN, INDICATING "EXIT ROUTE" (DET 19/1020).
004	EXISTING EXTERIOR DOOR; VERIFY IN FIELD REQUIRED ILLUMINATED EXIT SIGN AND "EXIT" TACTILE SIGNAGE (DET 18/1020).
005	PERMANENT ROOM SIGNAGE; REFER TO ACCESSIBILITY SIGNAGE DETAILS (17/1020).
007	WALL-MOUNTED SIGN, INDICATING "MAXIMUM OCCUPANCY" (DET 16/1020). SEE PLAN FOR MAXIMUM OCCUPANCY QUANTITIES.
008	EXISTING "ILLUMINATED EXIT" SIGNAGE.
009	AT LEAST 5% OF EACH TYPE OF DINING SURFACE SHALL BE ACCESSIBLE. REFER TO DET 8/I1020 FOR KNEE AND TOE CLEARANCE REQUIREMENTS. EACH ACCESSIBLE DINING SURFACE SHALL BE IDENTIFIED WITH AN ISA.
014	REPLACE EXISTING WALL MOUNTED EXIT SIGN WITH CEILING MOUNTED EXIT SIGN, COORDINATE LOCATION WITH AIR CURTAIN.

OCC. TYPE PATTERN LEGEND

- (A-2) ASSEMBLY WITH LOAD FACTOR OF 15
- (A-2) ASSEMBLY WITH LOAD FACTOR OF 200
- (A-3) ASSEMBLY WITH LOAD FACTOR OF 15
- (A-4) ASSEMBLY WITH LOAD FACTOR OF 50 (CBC 311.1.1)
- (A-4) STORAGE WITH LOAD FACTOR OF 300 (CBC 303.1.2)
- (B) BUSINESS WITH LOAD FACTOR 15
- (B) BUSINESS WITH LOAD FACTOR 150 (CBC 311.1.1)
- (S-1) STORAGE WITH LOAD FACTOR OF 300
- NOTE: RESTROOMS TO FOLLOW CPC SECTION 422.1

MAX. TRAVEL DISTANCE TO EXITS

MAXIMUM TRAVEL DISTANCE TO EXITS (1017.2 SPRINKLERED BUILDING)

A/ASSEMBLY	250 FEET MAX.
B/BUSINESS (OFFICE)	300 FEET MAX.
S-1/STORAGE (MODERATE-HAZARD WAREHOUSE)	200 FEET MAX.

*1017.2.2 GROUPS F-1 AND S-1 INCREASE

MAX. COMMON PATH OF TRAVEL

MAX. COMMON PATH OF TRAVEL DISTANCE (1006.2.1 SPRINKLERED BUILDING)

A/ASSEMBLY	75 FEET MAX.
B/BUSINESS (OFFICE)	100 FEET MAX.
S-1/STORAGE (MODERATE-HAZARD WAREHOUSE)	100 FEET MAX.

LEGEND

- INDICATES AREA NOT IN CONTRACT (N.I.C.) (COVERED UNDER CORE & SHELL PERMIT)
- REQUIRED EXIT
- DIRECTION OF TRAVEL
- MAXIMUM TRAVEL DISTANCE
- COMMON PATH OF EGRESS TRAVEL (C.P.E.T.)
- ORIGINATING OCCUPANT LOAD
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- (E) PH EXISTING PANIC HARDWARE
- VINYL FENCE

REVIEWED FOR CODE COMPLIANCE
CITY OF IRVINE
BUILDING & SAFETY DIVISION

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LICENSED ARCHITECT
ANA L. CERVANTES
C-44466
LICENSURE 12/31/2027
RENEWAL DATE
STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

OFFICE - OCCUPANCY AND EGRESS PLAN

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
3	09/22/2025	PLAN CHECK CORRECTIONS
4	02/04/2026	PLAN CHECK CORRECTIONS 3
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	
JOB NO.:	IRV24-6050-00

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LICENSED ARCHITECT
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C-40328
11/30/2027
STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

OVERALL FLOOR PLAN

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK

PA/PM: S. FOX
DRAWN BY: K.L./I.L.
JOB NO.: IRV24-6069-00

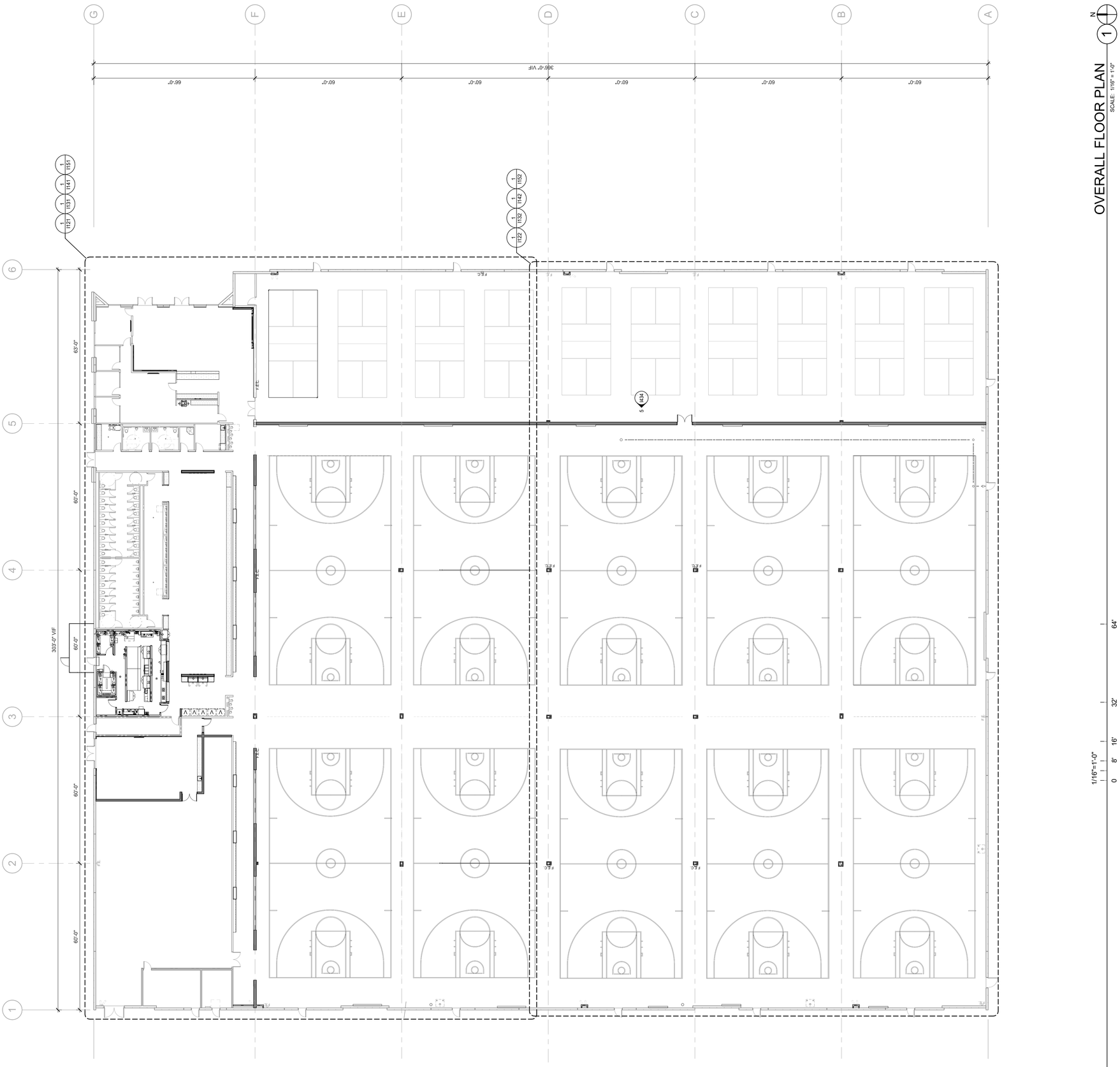
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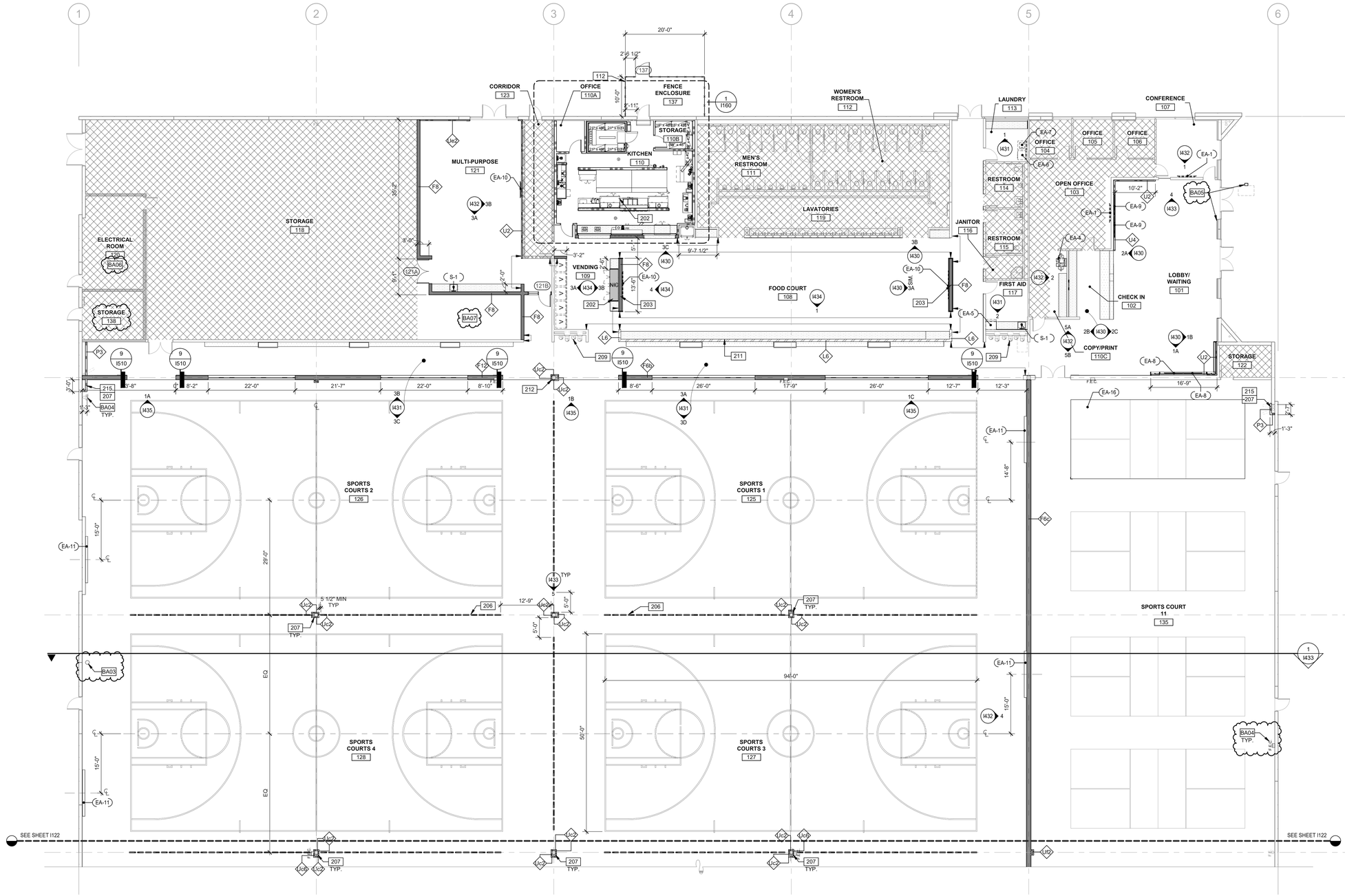
CITY OF IRVINE
BUILDING & SAFETY DIVISION

OVERALL FLOOR PLAN

SCALE: 1/16" = 1'-0"


G
F
E
D
C
B
A
366'-0" VIF
66'-0"
60'-0"
60'-0"
60'-0"
60'-0"
60'-0"
60'-0"
1121
1131
1141
1151
1122
1132
1142
1152
6
5
4
3
2
1
63'-0"
60'-0"
60'-0"
60'-0"
60'-0"
303'-0" VIF
F.E.C.
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NORTH - FLOOR PLAN

SCALE: 3/32" = 1'-0"

BID ALTERNATE KEYNOTES

THE CONTRACTOR SHALL SUBMIT A BASE BID ENCOMPASSING THE FULL SCOPE OF WORK AS DETAILED IN THE CONTRACT DOCUMENTS. THIS BASE BID MUST REFLECT THE COMPLETE EXECUTION OF THE PROJECT AS DESIGNED, INCLUDING ALL MATERIALS, LABOR, EQUIPMENT, AND SERVICES NECESSARY FOR A FULLY OPERATIONAL AND CODE-COMPLIANT FACILITY.

IN ADDITION TO THE BASE BID, THE CONTRACTOR IS REQUIRED TO PROVIDE ALTERNATE PRICING BREAKOUTS FOR EACH OF THE SPECIFIC CATEGORIES OUTLINED BELOW. THESE ALTERNATES SHALL REPRESENT THE POTENTIAL INCREASES IN PROJECT SCOPE AND CORRESPONDING COST TO IMPLEMENT SUCH SCOPE, SHOULD THE OWNER CHOOSE TO IMPLEMENT ANY OF THESE ALTERNATIVES.

A BRIEF DESCRIPTION OF EACH ALTERNATE CATEGORY IS INCLUDED IN THIS SECTION. THE LISTED ALTERNATES ARE PROVIDED FOR REFERENCE ONLY FOR PROJECT BIDDING PURPOSES. IF CHOSEN, THE PLANS SHALL BE REVISED TO INCORPORATE ALL CHANGES WITH FULL COMPREHENSIVE CONSTRUCTION REQUIREMENTS AND TECHNICAL DETAILS PERTAINING TO EACH ALTERNATE. ALL CHANGES SHALL BE SUBMITTED TO THE CITY'S BUILDING & SAFETY FOR REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE OR AS A POST PERMIT REVISION.

BA03 EXISTING FIRE RISER TO BE ENCLOSED WITH NEW FURRED WALLS USING WALL TYPE 'P'. OPTIONAL RADIUSED WALL EDGES SHALL BE CONSIDERED. WALLS SHALL BE SIZED TO ACCOMODATE A 48"X48" ACCESS OPENING. ACCESS OPENING SHALL BE PROVIDED WITH DOUBLE DOORS, PADDING, EASY ACCESS HARDWARE AND COMPLETE IDENTIFICATION SIGNAGE APPROVED BY OCFA. THESE MODIFICATIONS SHALL BE SUBMITTED TO OCFA FOR REVIEW AND APPROVAL AS PART OF THE REVISED FIRE SPRINKLER SUBMITTAL.

BA04 RELOCATE ALL PROTRUDING FIRE EXTINGUISHERS TO BE RECESSED IN NEW FURRED WALLS USING WALL TYPE 'P'.

BA05 PROVIDE ADA PUSH CONTROLS AT THE EXTERIOR AND INTERIOR OF THE BUILDING INCLUDING NEW POWERED DOOR HARDWARE IN ACCORDANCE WITH CBC 11B-404.3 AND BHMA A156.19. FULL POWER SHALL BE ACCOUNTED FOR AND PROVIDED TO EACH ACCESS CONTROL BUTTON AND POWERED DOOR HARDWARE. SCOPE SHALL ALSO INCLUDE ALL NECESSARY CONDUIT, WALL MODIFICATIONS AND POTENTIAL EXTERIOR MODIFICATIONS NEEDED TO INSTALL THE HARDWARE AND POWER. SCOPE SHALL ALSO INCLUDE POTENTIAL CUSTOM PEDESTALED EXTERIOR PUSH BUTTONS OR CUSTOM BOLLARDS EQUIPPED WITH TEH ACCESS CONTROLS. EXTERIOR CONTROLS SHALL BE LOCATED TO ALLOW FOR A 30"X48" CLEAR FLOOR SPACE FOR PARALLEL APPROACH THAT CLEARS THE DOOR SWING IN ACCORDANCE WITH CBC 11B-404.3.5. AS PART OF THE BID SCOPE, PROVIDE AN ADDITIONAL LINE ITEM FOR PRICING THE INSTALLATION OF JUST THE CONDUIT AND ELECTRICAL INFRASTRUCTURE TO SUPPORT THE FUTURE INSTALLATION OF THIS SCOPE.

BA06 PROVIDE NEW ELECTRICAL METER AT THE EXISTING MSA TO SERVE THE EV CHARGING EQUIPMENT. SCOPE SHALL INCLUDE FULL POWER MODIFICATIONS NEEDED TO ACCOMMODATE THE NEW METERING EQUIPMENT. SCOPE SHALL ALSO INCLUDE ALL NECESSARY MODIFICATIONS AND RETROFITTING NEEDING TO BE DONE TO EXISTING MSA CABINET TO ACCOMMODATE THE NEW METERING EQUIPMENT.

BA07 PROVIDE NEW STANDALONE COOLING SYSTEM FOR THE PROPOSED FUTURE IT ROOM. SCOPE SHALL COMPLETE EQUIPMENT PROCUREMENT AND INSTALLATION AS WELL AS THE FULL POWER MODIFICATIONS NEEDED TO ACCOMMODATE THE NEW EQUIPMENT. SCOPE SHALL ALSO INCLUDE ANY POTENTIAL STRUCTURAL SUPPORT AND ENGINEERING NEEDS FOR THE PROPOSED EQUIPMENT.

RATED CONSTRUCTION NOTES

1. ALL EXISTING RATED WALLS SHALL BE PATCHED AND REPAIRED AS NEEDED TO MATCH EXISTING RATED CONSTRUCTION.
2. ALL THROUGH AND MEMBRANE PENETRATIONS IN FIRE RATED WALL AND FLOOR/CEILING ASSEMBLIES SHALL BE IN ACCORDANCE WITH CBC 714, SEE PLAN SHEET I032 FOR TYPICAL RATED PENETRATIONS. ALL RATED PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. WHERE A SPECIFIC LISTED PENETRATION SYSTEM HAS NOT BEEN COVERED BY THE ARCHITECTURAL DRAWINGS, THE AOR SHALL BE NOTIFIED IMMEDIATELY AND A LISTED FIRE STOPPING SYSTEM SHALL BE PROVIDED AND MADE AVAILABLE ON SITE AT TIME OF CITY INSPECTIONS.

LEGENDS

INDICATES AREA NOT IN CONTRACT (N.I.C.)
(COVERED UNDER CORE & SHELL PERMIT)

PARTITION TYPES

1. INTERIOR GYPSUM BOARD PARTITION SHALL CONFORM TO ICC REPORT ESR-1338. MIN. FASTENER: #6 1-1/4" SCREW. SPACING: 12" FIELD, 8" EDGES.
2. SEE DETAIL SHEET **I510** FOR PARTITION TYPE DETAILS.

A
9
PARTITION TAG
STUD SIZE, PER DETAIL
PARTITION TYPE

WALL/ PARTITION

- EXISTING WALL/ PARTITION
- EXISTING EXTERIOR WALL. EXISTING INTERIOR PARTITON WALL, OR EXISTING STEEL COLUMN WITH NEW FURRING PARTITION. SEE DETAILS UI510, Ue510, Uc510, UfI510 FOR PARTITION HEIGHT.
- FULL HEIGHT NON-RATED PARTITION TO STRUCTURE WITH BATT INSULATION. SEE DETAILS Fc/I510 AND Fb/I510
- PARTITION TO 6" ABOVE CEILING. SEE DETAILS AI510.
- LOW WALL PARTITION. SEE DETAIL L/I510
- PARTIAL WALL PARTITION AT 10' HIGH. SEE DETAIL P/I510

KEYNOTES:

112 NEW FENCE ENCLOSURE, 6'-0" TALL VINYL FENCE (VINYL COLOR TO MATCH HOMBURG GRAY - SW7622) WITH 42" DOOR.
202 REFER TO FOOD SERVICE DRAWINGS FOR EQUIPMENT INFORMATION & LAYOUT .
203 NO INSULATION REQUIRED ON THIS WALL.
206 CEILING-MOUNTED GYM COURT DIVIDER NETS STRUCTURAL SUPPORT AND ANCHORAGE UNDER DEFERRED SUBMITTAL.
207 FURRING IN THE COURTS TO STOP AT 10'-0" AFF, TYP.
209 EXISTING DRINKING FOUNTAINS COVERED UNDER CORE AND SHELL.
211 LOW WALL PARTITION AT 48".REFERENCE DETAIL L/I510.
212 FURRING AT THIS COLUMN ONLY TO GO TO UNDERSIDE OF CEILING.
215 PROVIDE ALTERNATE: SEMI-CIRCLE GYP SURROUND AT ALL EXTERIOR ROOF DRAINS.

- NEW 6'-0" TALL VINYL FENCE. IRVINE FENCE INC, PRIVACY FENCE OR SIM (DEFERRED SUBMITTAL).
- EXISTING 1HR FIRE-RATED PARTITION "IN ACCORDANCE WITH UL U419.
- DOOR TAG - REFER TO SHEET I610.

FLOOR PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

1. CONTRACTOR SHALL NOTIFY ARCHITECT TO PERFORM AN ON-SITE REVIEW ONCE ALL PARTITIONS HAVE BEEN LAID OUT, PRIOR TO ERECTING THE PARTITIONS, AND ADDRESS ANY DISCREPANCIES WITH DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS.
2. ALL PARTITION METAL STUDS TO BE 3-5/8" DEPTH - GAUGE AND SPACING PER U/240 - UNIT TABLE, ON TYP. FRAMING DETAILS SHEET, U.O.N.
3. ALL NEW INTERIOR PARTITIONS TO BE FULLY INSULATED WITH A MINIMUM OF R-11 UNFACED FIBERGLASS INSULATION (OR EQUIVALENT), U.O.N.
4. DRYWALL GYPSUM BOARD SHALL BE FINISHED AS FOLLOWS, U.O.N. REFER TO GYPSUM ASSOCIATION PUBLICATION, GA-214 (https://www.certainteed.com/drywall/what-are-recommended-levels-finish-214)
   a. FOR PLENUM AND NON-VISIBLE AREAS – LEVEL-1, AREAS WITH CON-CEILINGS OR CLOUDS TO BE FINISHED AS FOR VISIBLE PARTITIONS.
   b. BEHIND WALL TILE – LEVEL-2
   c. ALL VISIBLE PARTITION SURFACES – LEVEL-4, UNLESS NOTED AS LEVEL-5 BY OTHER NOTES OR KEYED NOTE.
5. PROVIDE DRYWALL EXPANSION & CONTROL JOINTS PER "WALL AND CEILING BUREAU" (WCB) STANDARDS. PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
6. ALL DRYWALL CORNERS AND COLUMN EDGES TO BE FINISHED WITH CORNER-A-BEAD.
7. DIMENSIONS OF COLUMN FURRING IN A COMMON AREA ARE TO BE EQUAL & CONSISTENT.
8. ACCESS PANELS IN PARTITIONS/CEILINGS FOR PLUMBING, MECHANICAL, AND ELECTRICAL ACCESS SHALL BE FLUSH FRAMELESS GYPSUM BOARD PANELS.
9. ALL BLOCKING IN PARTITION TO BE FIRE RETARDANT TREATED SOLID WOOD BLOCKING, OR CONTINUOUS METAL STRAPPING. COORDINATE EXACT LOCATIONS AND EXTENT IN FIELD. GC TO PROVIDE BLOCKING FOR ALL OWNER SUPPLIED MILLWORK, IN ADDITION TO MILLWORK SUPPLIED BY THE GC, AND WALL-HUNG EQUIPMENT.
10. FOR WALL-MOUNTED TELEVISIONS, PROVIDE BLOCKING IN PARTITIONS AS APPROPRIATE FOR MOUNTING TYPE. COORDINATE WITH A/V SPECIFICATIONS & REQUIREMENTS.

CITY OF IRVINE BUILDING & SAFETY DIVISION

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. GERVANTES C-40405 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

NORTH - FLOOR PLAN

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK
09/22/2025	PLAN CHECK CORRECTIONS
10/15/2025	PLAN CHECK CORRECTIONS 2
01/06/2026	PLAN CHECK CORRECTIONS 3
03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

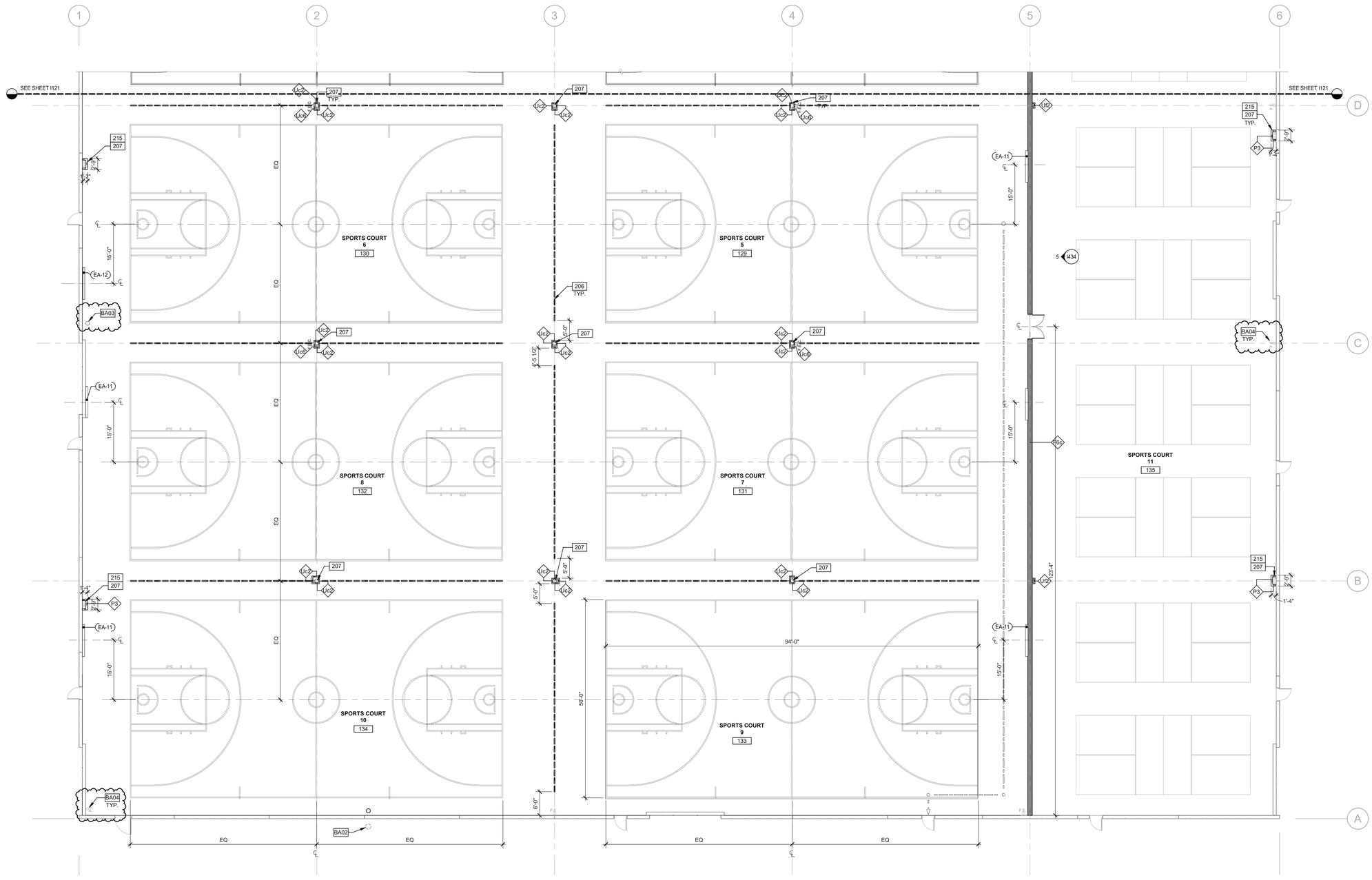
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0 4' 8' 16' 24' 48'

SOUTH - FLOOR PLAN

SCALE: 3/32" = 1'-0"

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A BRIEF DESCRIPTION OF EACH ALTERNATE CATEGORY IS INCLUDED IN THIS SECTION. THE LISTED ALTERNATES ARE PROVIDED FOR REFERENCE ONLY FOR PROJECT BIDDING PURPOSES. IF CHOSEN, THE PLANS SHALL BE REVISED TO INCORPORATE ALL CHANGES WITH FULL COMPREHENSIVE CONSTRUCTION REQUIREMENTS AND TECHNICAL DETAILS PERTAINING TO EACH ALTERNATE. ALL CHANGES SHALL BE SUBMITTED TO THE CITY'S BUILDING & SAFETY FOR REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE OR AS A POST PERMIT REVISION.

BA02 EXISTING FIRE RISER TO BE RELOCATED TO EXERIOR OF BUILDLING FACE. EXISTING UNDERGROUND RISER PIPING TO BE ABANDONED IN PLACE AS TO NOT DISTURB THE EXISTING UNDER SLAB VAPOR MITIGATION SYSTEM. SLURRY FILL PIPE AND PREP FLOOR SLAB TO RECEIVE NEW FLOOR FINISH IN ACCORDANCE WITH THE WOOD FLOORING MANUFACTURER'S INSTALLATION SPECIFICATIONS. G.C. TO SUBMIT UPDATED FIRE UNDERGROUND AND FIRE SPRINKLER PLANS TO OCFA FOR PROPOSED MODIFICATION. FIRE RISER SHALL BE EQUIPPED WITH TAMPER RESISTANT LOCKING HARDWARE APPROVED AND COMPLETE IDENTIFICATION SIGNAGE APPROVED BY OCFA.

BA03 EXISTING FIRE RISER TO BE ENCLOSED WITH NEW FURRED WALLS USING WALL TYPE 'F'. OPTIONAL RADIUSED WALL EDGES SHALL BE CONSIDERED. WALLS SHALL BE SIZED TO ACCOMODATE A 48"X48" ACCESS OPENING. ACCESS OPENING SHALL BE PROVIDED WITH DOUBLE DOORS, PADDING, EASY ACCESS HARDWARE AND COMPLETE IDENTIFICATION SIGNAGE APPROVED BY OCFA. THESE MODIFICATIONS SHALL BE SUBMITTED TO OCFA FOR REVIEW AND APPROVAL AS PART OF THE REVISED FIRE SPRINKLER SUBMITTAL.

BA04 RELOCATE ALL PROTRUDING FIRE EXTINGUISHERS TO BE RECESSED IN NEW FURRED WALLS USING WALL TYPE 'F'.

RATED CONSTRUCTION NOTES

1. ALL EXISTING RATED WALLS SHALL BE PATCHED AND REPAIRED AS NEEDED TO MATCH EXISTING RATED CONSTRUCTION.
2. ALL THROUGH AND MEMBRANE PENETRATIONS IN FIRE RATED WALL AND FLOOR/CEILING ASSEMBLIES SHALL BE IN ACCORDANCE WITH CBC 714, SEE PLAN SHEET I632 FOR TYPICAL RATED PENETRATIONS. ALL RATED PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. WHERE A SPECIFIC LISTED PENETRATION SYSTEM HAS NOT BEEN COVERED BY THE ARCHITECTURAL DRAWINGS, THE AOR SHALL BE NOTIFIED IMMEDIATELY AND A LISTED FIRE STOPPING SYSTEM SHALL BE PROVIDED AND MADE AVAILABLE ON SITE AT TIME OF CITY INSPECTIONS.

LEGENDS

INDICATES AREA NOT IN CONTRACT (N.I.C.)
(COVERED UNDER CORE & SHELL PERMIT)

PARTITION TYPES

1. INTERIOR GYPSUM BOARD PARTITION SHALL CONFORM TO ICC REPORT ESR-1338. MIN. FASTENER: #6 1-1/4" SCREW. SPACING: 12" FIELD, 8" EDGES.
2. SEE DETAIL SHEET **I510** FOR PARTITION TYPE DETAILS.

A
P
PARTITION TAG
STUD SIZE, PER DETAIL
PARTITION TYPE

WALL/ PARTITION

EXISTING WALL/ PARTITION

EXISTING EXTERIOR WALL, EXISTING INTERIOR PARTITON WALL, OR EXISTING STEEL COLUMN WITH NEW FURRING PARTITION. SEE DETAILS U/I510, Ue/510, Uc/510, Uf/510 FOR PARTITION HEIGHT.

FULL HEIGHT NON-RATED PARTITION TO STRUCTURE WITH BATT INSULATION. SEE DETAILS Fc/I510 AND Fb/I510

PARTITION TO 6" ABOVE CEILING. SEE DETAILS A/I510.

LOW WALL PARTITION. SEE DETAIL L/I510

PARTIAL WALL PARTITION AT 10' HIGH. SEE DETAIL P/I510

NEW 6'-0" TALL VINYL FENCE. IRVINE FENCE INC, PRIVACY FENCE OR SIM (DEFERRED SUBMITTAL).

EXISTING 1HR FIRE-RATED PARTITION "IN ACCORDANCE WITH UL U419.

DOOR TAG - REFER TO SHEET I610.

KEYNOTES:

206 CEILING-MOUNTED GYM COURT DIVIDER NETS STRUCTURAL SUPPORT AND ANCHORAGE UNDER DEFERRED SUBMITTAL.
207 FURRING IN THE COURTS TO STOP AT 10'-0" AFF, TYP.
215 PROVIDE ALTERNATE: SEMI-CIRCLE GYP SURROUND AT ALL EXTERIOR ROOF DRAINS.

FLOOR PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

1. CONTRACTOR SHALL NOTIFY ARCHITECT TO PERFORM AN ON-SITE REVIEW ONCE ALL PARTITIONS HAVE BEEN LAID OUT, PRIOR TO ERECTING THE PARTITIONS, AND ADDRESS ANY DISCREPANCIES WITH DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS.
2. ALL PARTITION METAL STUDS TO BE 3-5/8" DEPTH - GAUGE AND SPACING PER U.240 SCHEDULE TABLE, ON T-FRAMING DETAILS SHEET, U.O.N.
3. ALL NEW INTERIOR PARTITIONS TO BE FULLY INSULATED WITH A MINIMUM OF R-11 UNFACED FIBERGLASS INSULATION (OR EQUIVALENT), U.O.N.
4. DRYWALL GYPSUM BOARD SHALL BE FINISHED AS FOLLOWS, U.O.N. REFER TO GYPSUM ASSOCIATION PUBLICATION, GA-214 (https://www.certainteed.com/drywall/what-are-recommended-levels-finish)
   a. FOR PLENUM AND NON-VISIBLE AREAS – LEVEL 1
   b. BEHIND WALL TILE – LEVEL-2
   c. ALL VISIBLE PARTITION SURFACES – LEVEL 4, UNLESS NOTED AS LEVEL-5 BY OTHER NOTES OR KEYED NOTE.
5. PROVIDE DRYWALL EXPANSION & CONTROL JOINTS PER "WALL AND CEILING BUREAU" (WCB) STANDARDS. PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
6. ALL DRYWALL CORNERS AND COLUMN EDGES TO BE FINISHED WITH CORNER "L" BEAD.
7. DIMENSIONS OF COLUMN FURRING IN A COMMON AREA ARE TO BE EQUAL & CONSISTENT.
8. ACCESS PANELS IN PARTITIONS/CEILINGS FOR PLUMBING, MECHANICAL, AND ELECTRICAL ACCESS SHALL BE FLUSH FRAMELESS GYPSUM BOARD PANELS.
9. ALL BLOCKING IN PARTITION TO BE FIRE RETARDANT TREATED SOLID WOOD BLOCKING, OR CONTINUOUS METAL STRAPPING. COORDINATE EXACT LOCATIONS AND EXTENT IN FIELD. GC TO PROVIDE BLOCKING FOR ALL OWNER SUPPLIED MILLWORK, IN ADDITION TO MILLWORK SUPPLIED BY THEMSELVES AND WALL-HUNG EQUIPMENT.
10. FOR WALL-MOUNTED TELEVISIONS, PROVIDE BLOCKING IN PARTITIONS AS APPROPRIATE FOR MOUNTING TYPE. COORDINATE WITH A/V SPECIFICATIONS & REQUIREMENTS.

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. GERVANTES C-44705 LICENSE EXPIRATION DATE 12/31/2027 RENEWAL PENDING STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

SOUTH - FLOOR PLAN

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	12/10/2025	PLAN CHECK CORRECTIONS 3
4	03/06/2026	PLAN CHECK CORRECTIONS 4
5		

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

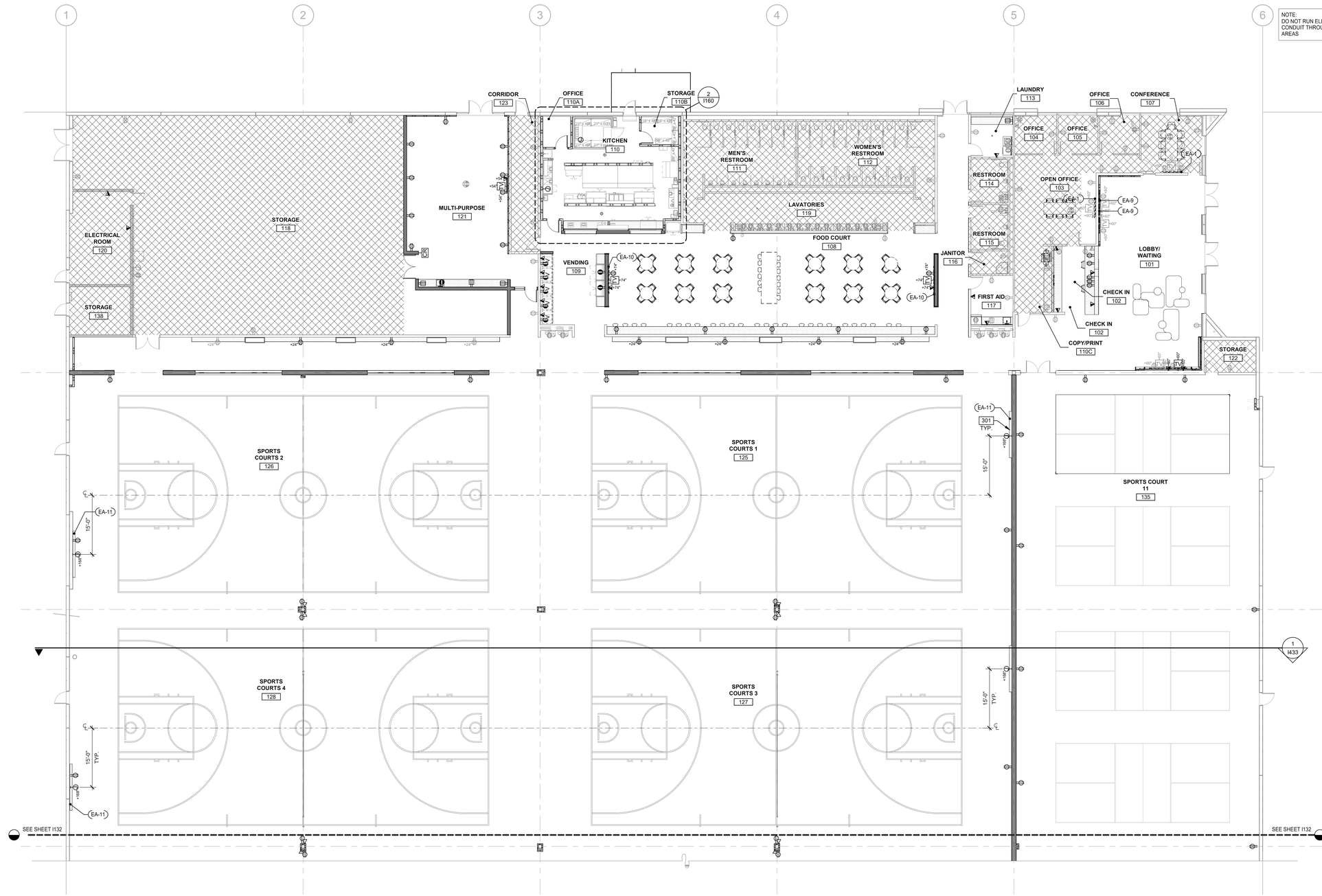
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I122

03/30/2026 - PLAN CHECK CORRECTIONS 4

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NOTE:
DO NOT RUN ELECTRICAL AND CONDUIT THROUGH OPEN CEILING AREAS



(LOW VOLTAGE IS NOT PART OF PLAN CHECK, PERMIT ONLY)

NORTH - POWER & SIGNAL PLAN

SCALE: 3/32" = 1'-0"

3/32"=1'-0"

0 4' 8' 16' 24' 48'

RATED CONSTRUCTION NOTES

1. ALL EXISTING RATED WALLS SHALL BE PATCHED AND REPAIRED AS NEEDED TO MATCH EXISTING RATED CONSTRUCTION.
2. ALL THROUGH AND MEMBRANE PENETRATIONS IN FIRE RATED WALL AND FLOOR/CEILING ASSEMBLIES SHALL BE IN ACCORDANCE WITH CBC 714. SEE PLAN SHEET I132 FOR TYPICAL RATED PENETRATIONS. ALL RATED PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. WHERE A SPECIFIC LISTED PENETRATION SYSTEM HAS NOT BEEN COVERED BY THE ARCHITECTURAL DRAWINGS, THE AOR SHALL BE NOTIFIED IMMEDIATELY AND A LISTED FIRE STOPPING SYSTEM SHALL BE PROVIDED AND MADE AVAILABLE ON SITE AT TIME OF CITY INSPECTIONS.

LEGEND

- INDICATES AREA NOT IN CONTRACT (N.I.C.) (COVERED UNDER CORE & SHELL PERMIT)
- COMBINATION TELEPHONE/DATA OUTLET MUD RING, WALL-MOUNTED AT 18" A.F.F., U.O.N. PROVIDE PULL ROPE TO ABOVE ACCESSIBLE CEILING SPACE.
- EXISTING COMBINATION TELEPHONE/DATA OUTLET MUD RING, WALL-MOUNTED AT 18" A.F.F., U.O.N. PROVIDE PULL ROPE TO ABOVE ACCESSIBLE CEILING SPACE.
- COMBINATION DUPLEX RECEPTACLE/DATA OUTLET, MOUNTED FLUSH IN FLOOR BOX WITH FITTINGS. PROVIDE RATING AS REQUIRED. "P" DESIGNATES PEDESTAL TYPE.
- JUNCTION BOX, WALL-MOUNTED.
- EXISTING JUNCTION BOX, WALL-MOUNTED.
- NEW SINGLE COAX JACK. PROVIDE CONDUIT FOR HDMI CABLE FROM CABLE BOX TO MONITOR, MOUNTED AT +18" A.F.F., U.O.N.
- EXISTING SINGLE COAX JACK. PROVIDE CONDUIT FOR HDMI CABLE FROM CABLE BOX TO MONITOR, MOUNTED AT +18" A.F.F., U.O.N.
- LED SCOREBOARD (EA-11 & EA-12)
- DUPLEX RECEPTACLE, MOUNTED VERTICALLY AT +18" A.F.F., U.O.N. "C" DESIGNATES RECESSED TYPE SOCKET.
- EXISTING DUPLEX RECEPTACLE, MOUNTED VERTICALLY AT +18" A.F.F., U.O.N. "C" DESIGNATES RECESSED TYPE SOCKET.
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- EXISTING DEDICATED DUPLEX RECEPTACLE, MOUNTED VERTICALLYAT +18" A.F.F., U.O.N.
- SINGLE-PLEX RECEPTACLE, MOUNTED VERTICALLY AT +18" A.F.F., U.O.N. "C" DESIGNATES RECESSED TYPE POCKET.
- DUPLEX RECEPTACLE, MOUNTED 6" ABOVE COUNTER OR SPLASH.
- EXISTING DUPLEX RECEPTACLE, MOUNTED 6" ABOVE COUNTER OR SPLASH.
- DEDICATED DUPLEX RECEPTACLE, MOUNTED 6" ABOVE COUNTER OR SPLASH.
- EXISTING DEDICATED DUPLEX RECEPTACLE, MOUNTED 6" ABOVE COUNTER OR SPLASH.
- FOURPLEX RECEPTACLE, MOUNTED AT +18" A.F.F., U.O.N.
- EXISTING FOURPLEX RECEPTACLE, MOUNTED AT +18" A.F.F., U.O.N.

KEYNOTES: -

301 PROVIDE BACKING AT SCOREBOARD LOCATIONS; REFER TO STRUCTURAL DRAWINGS FOR BACKING REQUIREMENTS. WALL BACKING LENGTHS SHOWN ARE MINIMUM, ALWAYS EXTEND WALLBACKING TO NEXT STUD OVER IN EACH DIRECTION. ALL WORK SHOWN TO BE BY GENERAL CONTRACTOR UNLESS NOTED OTHERWISE. ANCHORAGE OF SCOREBOARDS TO BE PART OF DEFERRED SUBMITTAL.

POWER & SIGNAL PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

1. ARCHITECTURAL DIMENSIONS AND LOCATIONS TAKE PRECEDENCE. SEE ELECTRICAL DRAWINGS FOR COORDINATION, IF INCONSISTENCIES OCCUR CONTACT ARCHITECT FOR CLARIFICATION.
2. INDICATED DIMENSIONS ARE TO CENTERLINE OF DEVICE OR CLUSTER UNLESS OTHERWISE NOTED.
3. OUTLETS ON OPPOSITE SIDES OF A PARTITION SHALL NOT BE BACK TO BACK, OFFSET TO ALLOW INSULATION BETWEEN.
4. VERIFY POWER REQUIREMENTS FOR USER PROVIDED EQUIPMENT.
5. ALL FURNITURE TO BE PROVIDED AND INSTALLED BY TENANT. LAYOUT SHOWN FOR REFERENCE. VERIFY EXACT LOCATIONS OF FLOOR CONNECTIONS/DEVICES WITH FURNITURE DEALER PRIOR TO INSTALLATION OF RELATED POWER AND SIGNAL CONNECTIONS.
6. COORDINATE EXACT OUTLET LOCATIONS IN FIELD WITH SECURITY, AUDIO-VISUAL, INFORMATION TECHNOLOGY, AND EQUIPMENT VENDORS RESPECTIVELY.
7. GANG MULTIPLE ADJACENT OUTLETS AND SWITCHES TOGETHER WITH MULTI-OUTLET COVER PLATE, U.O.N.
8. ALL SWITCHES/MOTION SENSORS SHALL NOT BE PLACED BEHIND DOORS WHEN IN OPEN POSITION.
9. PROVIDE CONDUIT(S) IN CONFERENCE AND TRAINING ROOMS BETWEEN FLOOR OUTLETS/DATA/HDMI AND ASSOCIATED EQUIPMENT ON PARTITION AND/OR CEILING SUCH AS TV'S, RECESSED SCREENS, AND PROJECTORS. GC TO PROVIDE A MINIMUM OF TWO CONDUITS BETWEEN EACH FLOOR OUTLET AND PIECE OF EQUIPMENT. VERIFY FINAL SIZES WITH A/V VENDOR AND CLIENT FOR POWER CONDUIT AND DATA CONDUIT.
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BUILDING & SAFETY DIVISION

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LICENSED ARCHITECT ANA L. GERVANTES C-44005 LICENSURE RENEWAL 08/31/2027 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

NORTH - POWER & SIGNAL PLAN

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK
09/22/2025	PLAN CHECK CORRECTIONS
10/15/2025	PLAN CHECK CORRECTIONS 2
1	
2	

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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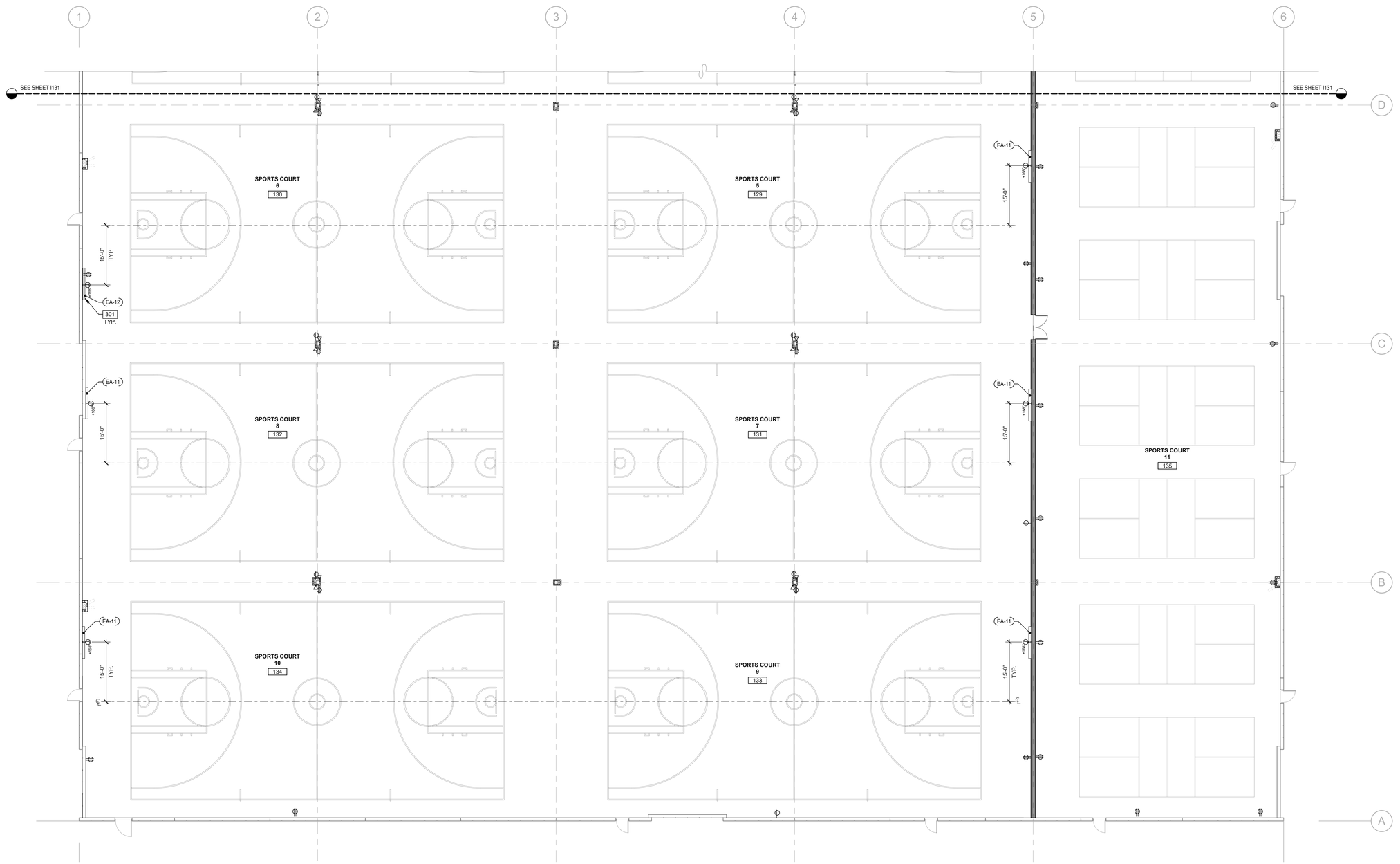
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SOUTH - POWER & SIGNAL PLAN

SCALE: 3/32" = 1'-0"

3/32"=1'-0"

0 4' 8' 16' 24' 48'

N

LEGEND

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POWER & SIGNAL PLAN NOTES

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CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
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SOUTH - POWER & SIGNAL PLAN

NO.	DATE	REMARKS
1	07/08/2025	ISSUE FOR PLAN CHECK
	09/22/2025	PLAN CHECK CORRECTIONS

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

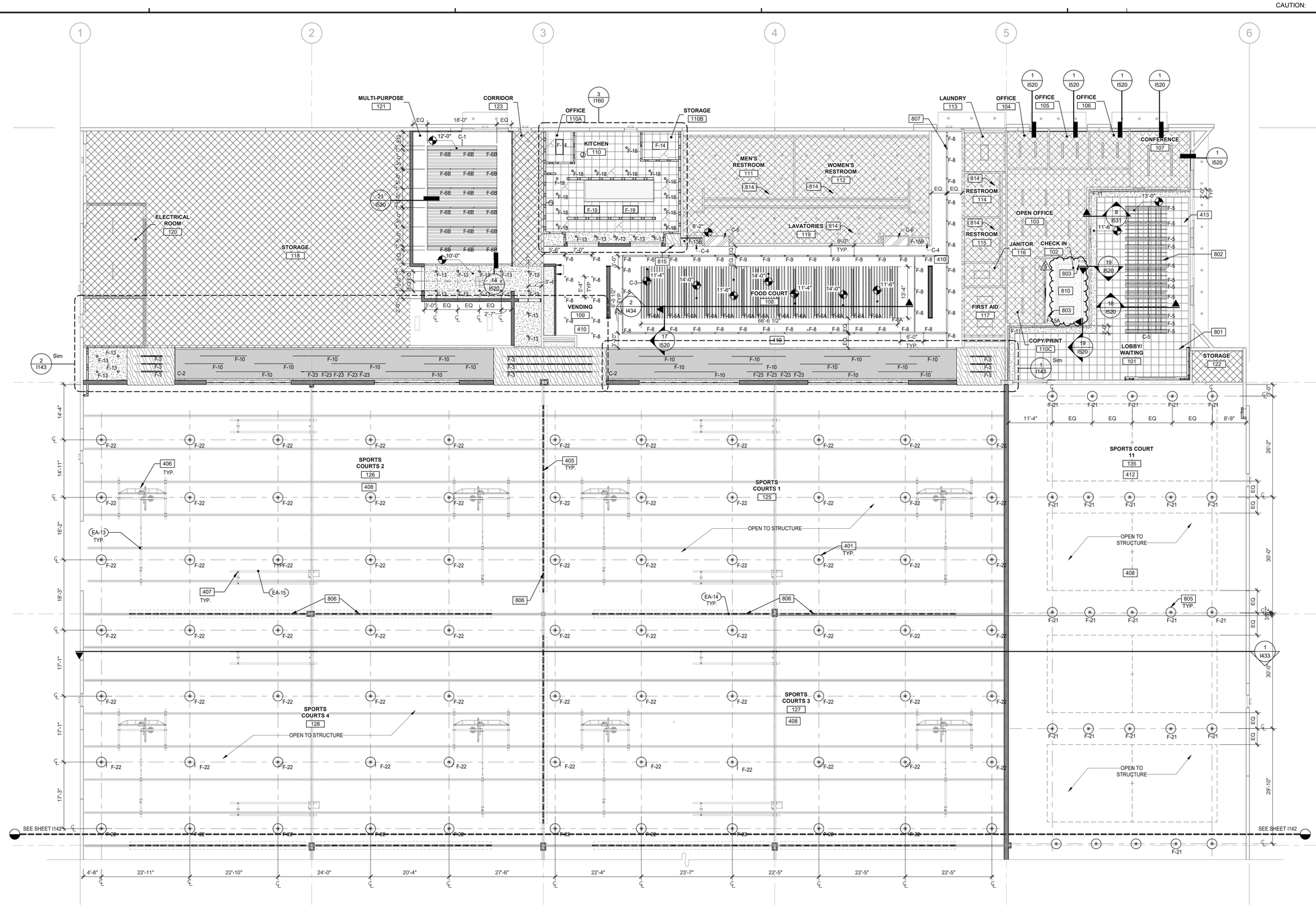
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NORTH - REFLECTED CEILING PLAN

SCALE: 3/32" = 1'-0"

LEGEND

- INDICATES AREA NOT IN CONTRACT (N.I.C.) (COVERED UNDER CORE & SHELL PERMIT)
- SUSPENDED CEILING SYSTEM TO BE ARMSTRONG 24X24 "CLEAN ROOM VL" WHITE TILE, SQUARE LAY-IN 15/16". REFER TO DETAILS ON 25/I520. ICC ESR 1308
- EXISTING HARD LID/CEILING SOFFIT
- 5/8" GYPSUM BOARD CEILING OR SOFFIT. REFER TO STRUCTURAL FOR METAL STUD CEILING FRAMING AND CONNECTION DETAILING REQUIREMENTS
- OPEN TO STRUCTURE
- C-1 ACOUSTICAL CEILING UNDER DEFERRED SUBMITTAL
  MFG: ACOUFELT
  COLLECTION: BEAM CEILING BAFFLES
  COLORS: MARINE & WHITE
  SIZE: 18'L X 4"W X 6"H, 8" SPACING
  NOTE: LENGTH PER PLANS, RIGID INSTALLATION
  FIRE TEST METHOD: EN1351-1 : 2019
  CLASSIFICATION B S-1, D0
- C-2 METAL MESH CEILING
  MFG: ARMSTRONG
  COLLECTION: METAL WORKS MESH TORSION SPRING
  SERIES: 5433W24L24D02
  COLORS: BLACK
  OPEN AREA: 82"
  FIRE PERFORMANCE: CLASS A
  ICC ESR 1308
- C-3 ACOUSTICAL CEILING: WOVEN IMAGE ARRAY-TURRET 24MM UNDER DEFERRED SUBMITTAL
  MFG: WOVEN IMAGE
  COLLECTION: ARRAY
  SERIES: VALLEY ECHOPANEL, 24 MM BAFFLE, 6" SPACING
  COLORS: 633, 365, 500
  NOTE: MOUNTING HEIGHTS VARY, LENGTH PER PLANS, RIGID INSTALLATION
  FIRE TEST RESULT:
  ISO 9705: GROUP 1
  BS EN 13501.1: CLASSIFICATION B - S1, D0
  ASTM E84 UNADHERED: CLASS 1 OR A
- C-4 PLASTIC LAMINATE ON STABLE SUBSTRATE ATTACHED TO CEILING; SEE L-4 ON FINISH LEGEND
  FIRE TEST DATA: ASTM E- 84
  ISO-4586 - 3:2018 (E)
- C-5 TURF CUSTOM BEAM BAFFLE WITH THREADED ROD TO UNISTRUT & FELTLOCK; TURF PROJECT #PRO-255283 UNDER DEFERRED SUBMITTAL.
  RIGID INSTALLATION
  2"W X 6"D
- C-6 ALUMINUM LAMINATE ON STABLE SUBSTRATE ATTACHED TO CEILING; SEE WP-4 ON FINISH LEGEND
  FIRE RATING: ASTM CLASS A
- F-3 LINEAR LED RECESSED
- F-5 PENDANT LIGHT FIXTURE
- F-6A 144" LINEAR PENDANT
- F-6B 72" LINEAR PENDANT
- F-8* PENDANT DOWN LIGHT
- F-9* PENDANT ASYMMETRIC LIGHT
- F-10 SURFACE MOUNTED LINEAR
- F-10a SURFACE MOUNTED TRACK
- F-11 WALL WASHER
- F-13 3" RECESSED DOWN LIGHT
- F-14 RECESSED LED 2x4
- F-15A LED TAPE LIGHT
- F-15B LED TAPE LIGHT
- F-18 6" RECESSED DOWN LIGHT, WET RATED
- F-19 2 X 4 RECESSED TROFFER
- F-20 HIGH-BAY LIGHT FIXTURE.
- F-21 HIGH-BAY LIGHT FIXTURE.
- EXISTING WALL-MOUNTED EXIT SIGN WITH BATTERY BACKUP, SHADED QUADRANT INDICATES FACE OF LETTERING, SIGN TO INCLUDE DIRECTIONAL ARROW AS INDICATED.
- EXIT SIGN CEILING OR WALL MOUNTED WITH BATTERY BACKUP, SHADED QUADRANT INDICATES FACE OF LETTERING, SIGN TO INCLUDE DIRECTIONAL ARROW AS INDICATED.

  NOTE: ADDITIONAL DIRECTIONAL EXIT SIGNS MAY BE REQUIRED PRIOR TO FINAL INSPECTION AND SUBJECT TO BUILDING INSPECTOR.

  EXIT SIGN TO BE CENTERED WITH THE DOOR.

KEYNOTES:

401 COORDINATE COURT LIGHTING LAYOUT WITH CEILING MOUNTED EQUIPMENT.
405 GYM DIVIDER CONNECTIONS DETAILS AND ENGINEERING TO BE PART OF DEFERRED SUBMITTAL.
406 BASKETBALL HOOP CONNECTIONS DETAILS AND ENGINEERING TO BE PART OF DEFERRED SUBMITTAL.
407 VOLLEYBALL NET CONNECTIONS DETAILS AND ENGINEERING TO BE PART OF DEFERRED SUBMITTAL.
408 SEE ELECTRICAL SHEETS FOR LIGHTING POWER DENSITY CONFIRMING AREAS MEET CENC 140.3, EXCEPTION 3.
410 THIS AREA IS OPEN TO STRUCTURE ABOVE. PROVIDE GALVANIZED RIGID ROUND DUCTS WITH INTERIOR INSULATION WHERE REQUIRED, ROUND DIFFUSERS AND RIGID CONDUITS. ALL MEP, AV AND TELECOMM COMPONENTS TO BE INSTALLED NEATLY. STRUCTURE ABOVE, CONDUITS AND PIPES TO RECEIVE PAINT AS NOTED.
412 CEILING AND CEILING MOUNTED EQUIPMENT TO BE PAINTED P-9B.
413 CEILING, WALLS, AND EQUIPMENT ABOVE GRID TO BE PAINTED P-8.
801 EXISTING LIGHT FIXTURES AND EXISTING GRID TO REMAIN.
802 THIS FEATURE CEILING TO BE PART OF DEFERRED SUBMITTAL.
803 SEE ELEVATION AND DETAILS FOR LOCATION OF THIS LIGHT.
805 COORDINATE FINAL LIGHTING LOCATION WITH BADMINTON COURTS AND MAT PLACEMENT.
806 CEILING-MOUNTED GYM COURT DIVIDER NETS, STRUCTURAL SUPPORT AND ANCHORAGE UNDER DEFERRED SUBMITTAL.
807 BLACK PAINTED UNISTRUT MOUNTED AT 20'-0"; DOWNLIGHTS TO BE SUSPENDED FROM UNISTRUT SUPPORT.
810 PAINT EXISTING GYP CEILING P-3.
814 EMPLOYEE AND CUSTOMER RESTROOM CEILINGS TO BE PAINTED P-1C.
815 NEW FULL HEIGHT WALL FROM 8'-2" TO DECK.

CEILING PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

SEE SHEET **I620** FOR FINISH, PLUMBING FIXTURES, RESTROOM ACCESSORIES, EQUIPMENT AND LIGHT FIXTURE SCHEDULES

- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

1. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS BEFORE PROCEEDING WITH INSTALLING THE WORK.
2. SEE FIXTURE SCHEDULE FOR FIXTURE TYPE DESIGNATIONS, AND TYPICAL MOUNTING HEIGHTS (U.O.N). COORDINATE MOUNTING OPTIONS WITH OWNER'S REPRESENTATIVE & ARCHITECT. NOTIFY OWNER/ARCHITECT OF ANY CONFLICTS WITH OTHER ELEMENTS PRIOR TO INSTALLATION.
3. ALL MATERIALS USED WITHIN CEILING PLENUM SHALL BE NON-COMBUSTIBLE.
4. IN GYPSUM BOARD CEILINGS THE LIGHTS, HVAC ELEMENTS, FIRE DEVICES, ETC. ARE TO ALIGN IN A NEAT AND REGULAR PATTERN. REVIEW LAYOUT WITH ARCHITECT PRIOR TO ROUGH-IN.
5. DEVICES IN ACOUSTICAL CEILING TILES TO BE CENTERED IN A 2'X2' TILE, OR 2'X2' PORTION OF A 2'X4' TILE, U.O.N.
6. GENERAL CONTRACTOR TO IDENTIFY QUANTITY AND LOCATIONS OF ALL ACCESS PANELS TO CEILING PLENUM SPACES IN GYPSUM BOARD CEILINGS. ACCESS PANELS TO BE AVOIDED WHERE POSSIBLE. IF ANY ACCESS PANEL IS REQUIRED, COORDINATE LOCATION WITH ARCHITECT. CEILING ACCESS PANELS TO BE FLUSH FRAMELESS GYPSUM-BOARD INFILL PANELS.
7. SEE KEYNOTE INFORMATION FOR ANY REQUIRED CEILING INSULATION.
8. ALL ACOUSTICAL CEILING GRIDS ARE TO BE CENTERED WITHIN A ROOM, U.O.N.
9. WHERE LIGHTING IS WITHIN MILLWORK OR PARTITION ELEMENTS SUCH AS MIRRORS, GC IS RESPONSIBLE TO COORDINATE WITH ALL ELECTRICAL TRADES.
10. GANG MULTIPLE ADJACENT OUTLETS AND SWITCHES TOGETHER WITH MULTI-OUTLET COVER PLATE, U.O.N.
11. ALL SWITCHES/MOTION SENSORS SHALL NOT BE PLACED BEHIND DOORS WHEN IN OPEN POSITION.
12. SOUND BOOTS: PROVIDE AT ALL R/A DIFFUSERS AT ALL OFFICES, TRAINING ROOMS AND CONFERENCE ROOMS.

NOT FOR CONSTRUCTION - FOR PLANNING & PERMITTING PURPOSES ONLY

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LICENSED ARCHITECT ANA L. GERVANTES C-44082 LICENSED 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

NORTH - REFLECTED CEILING PLAN

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/06/2026	PLAN CHECK CORRECTIONS 3
4	03/06/2026	PLAN CHECK CORRECTIONS 4
5	03/06/2026	OC HEALTH DEPT 2
6		

PA/PM: S. FOX
DRAWN BY.: K.L./I.L.
JOB NO.: IRV24-6050-00

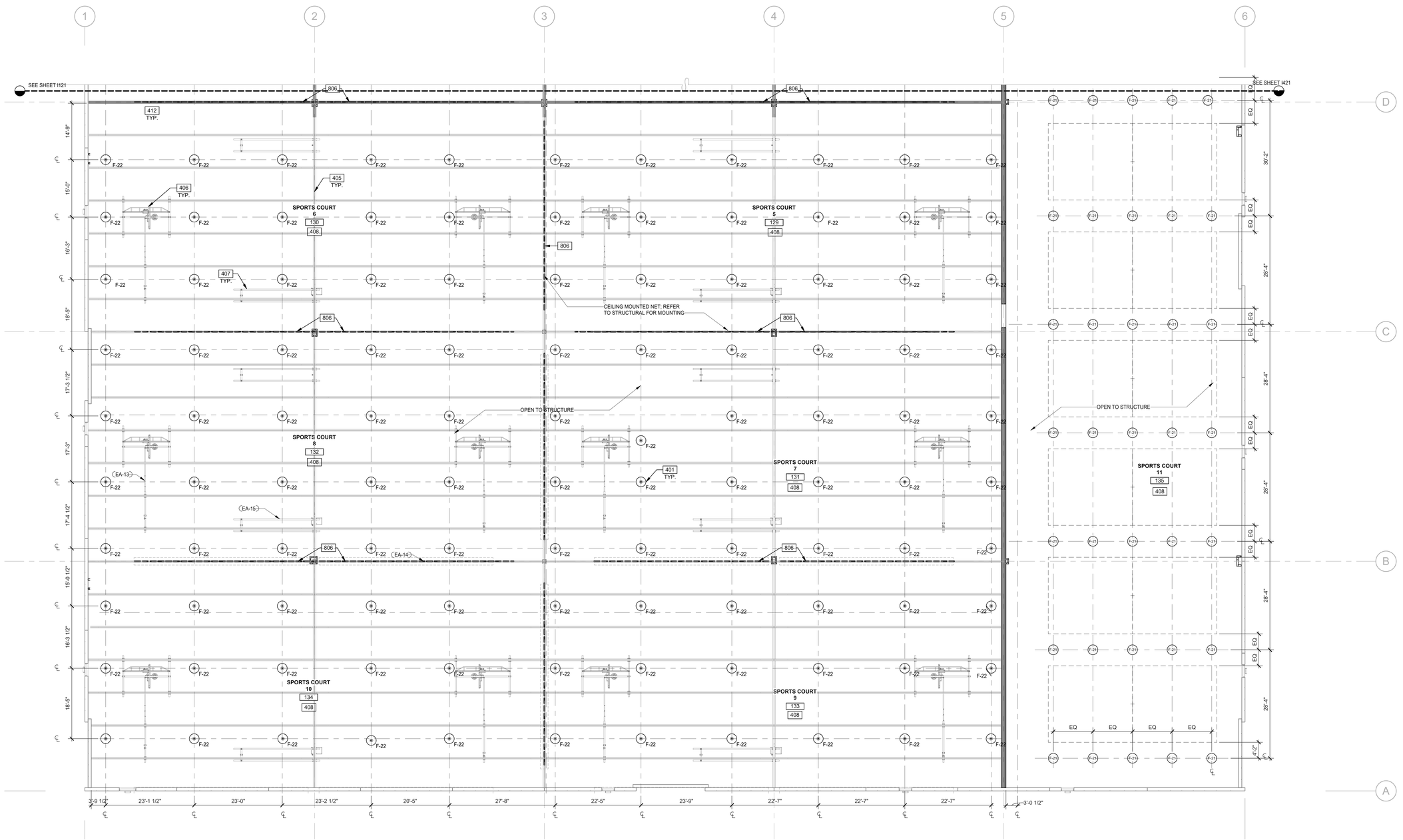
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03/30/2026 - PLAN CHECK CORRECTIONS 4

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3/32"=1'-0"

0 4' 8' 16' 24' 48'

SOUTH - REFLECTED CEILING PLAN

SCALE: 3/32" = 1'-0"

N

LEGEND

- INDICATES AREA NOT IN CONTRACT (N.I.C.) (COVERED UNDER CORE & SHELL PERMIT)
- SUSPENDED CEILING SYSTEM TO BE ARMSTRONG 24X24 "CLEAN ROOM VL" WHITE TILE, SQUARE LAY-IN 15/16". REFER TO DETAILS ON 25/I520. ICC ESR 1308
- EXISTING HARD LID/CEILING SOFFIT
- 5/8" GYPSUM BOARD CEILING OR SOFFIT. REFER TO STRUCTURAL FOR METAL STUD CEILING FRAMING AND CONNECTION DETAILING REQUIREMENTS
- OPEN TO STRUCTURE
- C-1 ACOUSTICAL CEILING UNDER DEFERRED SUBMITTAL
  MFG: ACOUFELT
  COLLECTION: BEAM CEILING BAFFLES
  COLORS: MARINE & WHITE
  SIZE: 16'L X 4"W X 6"H, 8" SPACING
  NOTE: LENGTH PER PLANS, RIGID INSTALLATION
  FIRE TEST METHOD: EN13501-1 : 2019
  CLASSIFICATION B S-1, D0
- C-2 METAL MESH CEILING
  MFG: ARMSTRONG
  COLLECTION: METAL WORKS MESH TORSION SPRING
  SERIES: 5433W24L24D02
  COLORS: BLACK
  OPEN AREA: 82"
  FIRE PERFORMANCE: CLASS A
  ICC ESR 1308
- C-3 ACOUSTICAL CEILING: WOVEN IMAGE ARRAY-TURRET 24MM UNDER DEFERRED SUBMITTAL
  MFG: WOVEN IMAGE
  COLLECTION: ARRAY
  SERIES: VALLEY ECHOPANEL, 24 MM BAFFLE, 6" SPACING
  COLORS: 633, 365, 500
  NOTE: MOUNTING HEIGHTS VARY, LENGTH PER PLANS, RIGID INSTALLATION
  FIRE TEST RESULT:
  ISO 9705: GROUP 1
  BS EN 13501.1: CLASSIFICATION B - S1, D0
  ASTM E84 UNADHERED: CLASS 1 OR A
- C-4 PLASTIC LAMINATE ON STABLE SUBSTRATE ATTACHED TO CEILING; SEE L-4 ON FINISH LEGEND
  FIRE TEST DATA: ASTM E- 84
  ISO-4586 - 3:2018 (E)
- C-5 TURF CUSTOM BEAM BAFFLE WITH THREADED ROD TO UNISTRUT & FELTLOCK; TURF PROJECT #PRO-255283 UNDER DEFERRED SUBMITTAL
  RIGID INSTALLATION
  2"W X 6"D
- C-6 ALUMINUM LAMINATE ON STABLE SUBSTRATE ATTACHED TO CEILING; SEE WP-4 ON FINISH LEGEND
  FIRE RATING: ASTM CLASS A
- F-3 LINEAR LED RECESSED
- F-5 PENDANT LIGHT FIXTURE
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KEYNOTES:

- 401 COORDINATE COURT LIGHTING LAYOUT WITH CEILING MOUNTED EQUIPMENT.
- 405 GYM DIVIDER CONNECTIONS DETAILS AND ENGINEERING TO BE PART OF DEFERRED SUBMITTAL.
- 406 BASKETBALL HOOP CONNECTIONS DETAILS AND ENGINEERING TO BE PART OF DEFERRED SUBMITTAL.
- 407 VOLLEYBALL NET CONNECTIONS DETAILS AND ENGINEERING TO BE PART OF DEFERRED SUBMITTAL.
- 408 SEE ELECTRICAL SHEETS FOR LIGHTING POWER DENSITY CONFIRMING AREAS MEET CEnC 140.3, EXCEPTION 3.
- 412 CEILING AND CEILING MOUNTED EQUIPMENT TO BE PAINTED P-9B.
- 806 CEILING-MOUNTED GYM COURT DIVIDER NETS, STRUCTURAL SUPPORT AND ANCHORAGE UNDER DEFERRED SUBMITTAL.

CEILING PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

SEE SHEET **I620** FOR FINISH, PLUMBING FIXTURES, RESTROOM ACCESSORIES, EQUIPMENT AND LIGHT FIXTURE SCHEDULES

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LICENSED ARCHITECT ANA L. CERVANTES C-44000 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

SOUTH - REFLECTED CEILING PLAN

	DATE	REMARKS
1	07/08/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	02/04/2026	PLAN CHECK CORRECTIONS 3

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

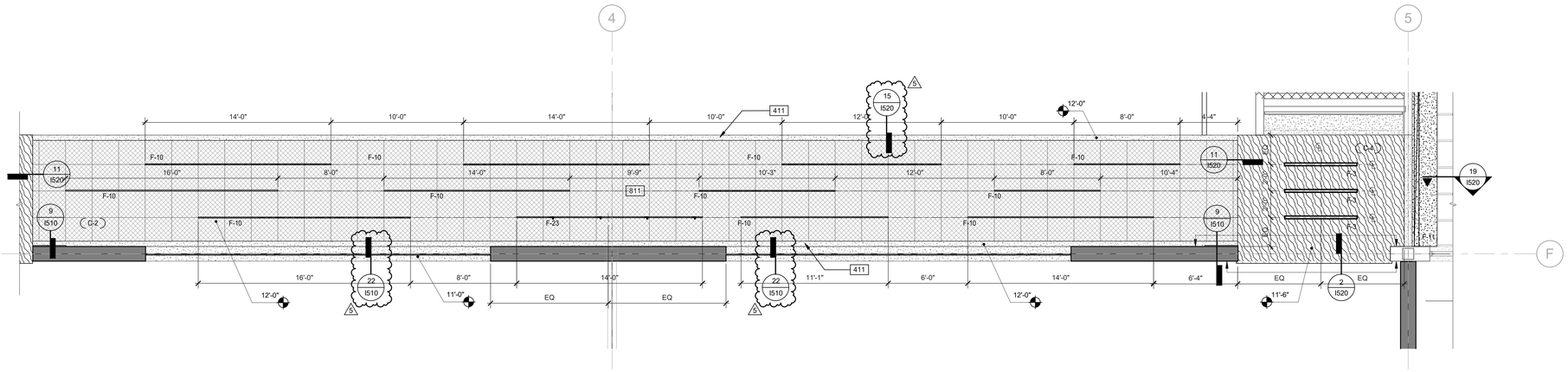
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03/30/2026 - PLAN CHECK CORRECTIONS 4

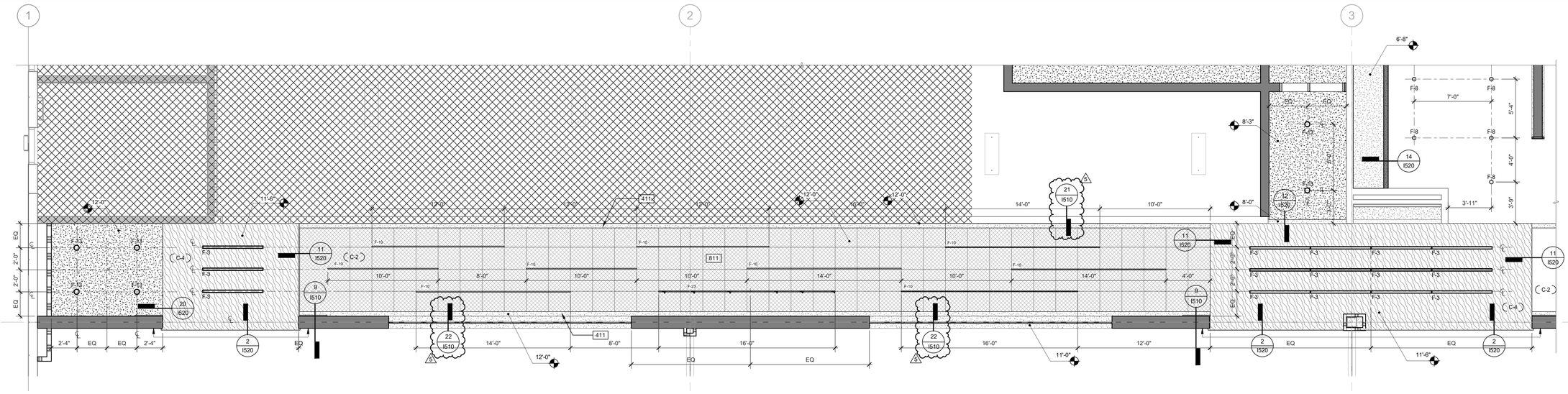
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ENLARGED REFLECTED CEILING PLAN (1)
SCALE: 1/4" = 1'-0"



3/32"=1'-0"
0 4' 8' 16' 24' 48'

ENLARGED REFLECTED CEILING PLAN (2)
SCALE: 1/4" = 1'-0"

LEGEND

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- EXISTING HARD LID/CEILING SOFFIT
- 5/8" GYPSUM BOARD CEILING OR SOFFIT. REFER TO STRUCTURAL FOR METAL STUD CEILING FRAMING AND CONNECTION DETAILING REQUIREMENTS
- OPEN TO STRUCTURE
- C-1 ACOUSTICAL CEILING UNDER DEFERRED SUBMITTAL
  MFG: ACOUFELT
  COLLECTION: BEAM CEILING BAFFLES
  COLORS: MARINE & WHITE
  SIZE: 16'L X 4"W X 6"H, 8" SPACING
  NOTE: LENGTH PER PLANS, RIGID INSTALLATION
  FIRE TEST METHOD: EN13501-1 : 2019
  CLASSIFICATION B S-1, D0
- C-2 METAL MESH CEILING
  MFG: ARMSTRONG
  COLLECTION: METAL WORKS MESH TORSION SPRING
  SERIES: 5433W24L24D02
  COLORS: BLACK
  OPEN AREA: 82"
  FIRE PERFORMANCE: CLASS A
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  SERIES: VALLEY ECHOPANEL, 24 MM BAFFLE, 6" SPACING
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  NOTE: MOUNTING HEIGHTS VARY, LENGTH PER PLANS, RIGID INSTALLATION
  FIRE TEST RESULT:
  ISO 9705: GROUP 1
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  ASTM E84 UNADHERED: CLASS 1 OR A
- C-4 PLASTIC LAMINATE ON STABLE SUBSTRATE ATTACHED TO CEILING; SEE L-4 ON FINISH LEGEND
  FIRE TEST DATA: ASTM E- 84
  ISO-4586 - 3:2018 (E)
- C-5 TURF CUSTOM BEAM BAFFLE WITH THREADED ROD TO UNISTRUT & FELTLOCK; TURF PROJECT #PRO-255283 UNDER DEFERRED SUBMITTAL
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- F-5 PENDANT LIGHT FIXTURE
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EXIT SIGN TO BE CENTERED WITH THE DOOR.

KEYNOTES:

411 PAINT UNDERSIDE OF GYP. P-8 (BLACK).
811 PAINT WALLS AND MEP ABOVE CEILING P-8.

CEILING PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES
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LICENSED ARCHITECT ANA L. CERVANTES C-44002 LICENSURE RENEWAL 08/31/2027 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

ENLARGED REFLECTED CEILING PLANS

	DATE	REMARKS
	07/08/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS 2
2	10/15/2025	PLAN CHECK CORRECTIONS 3
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4	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
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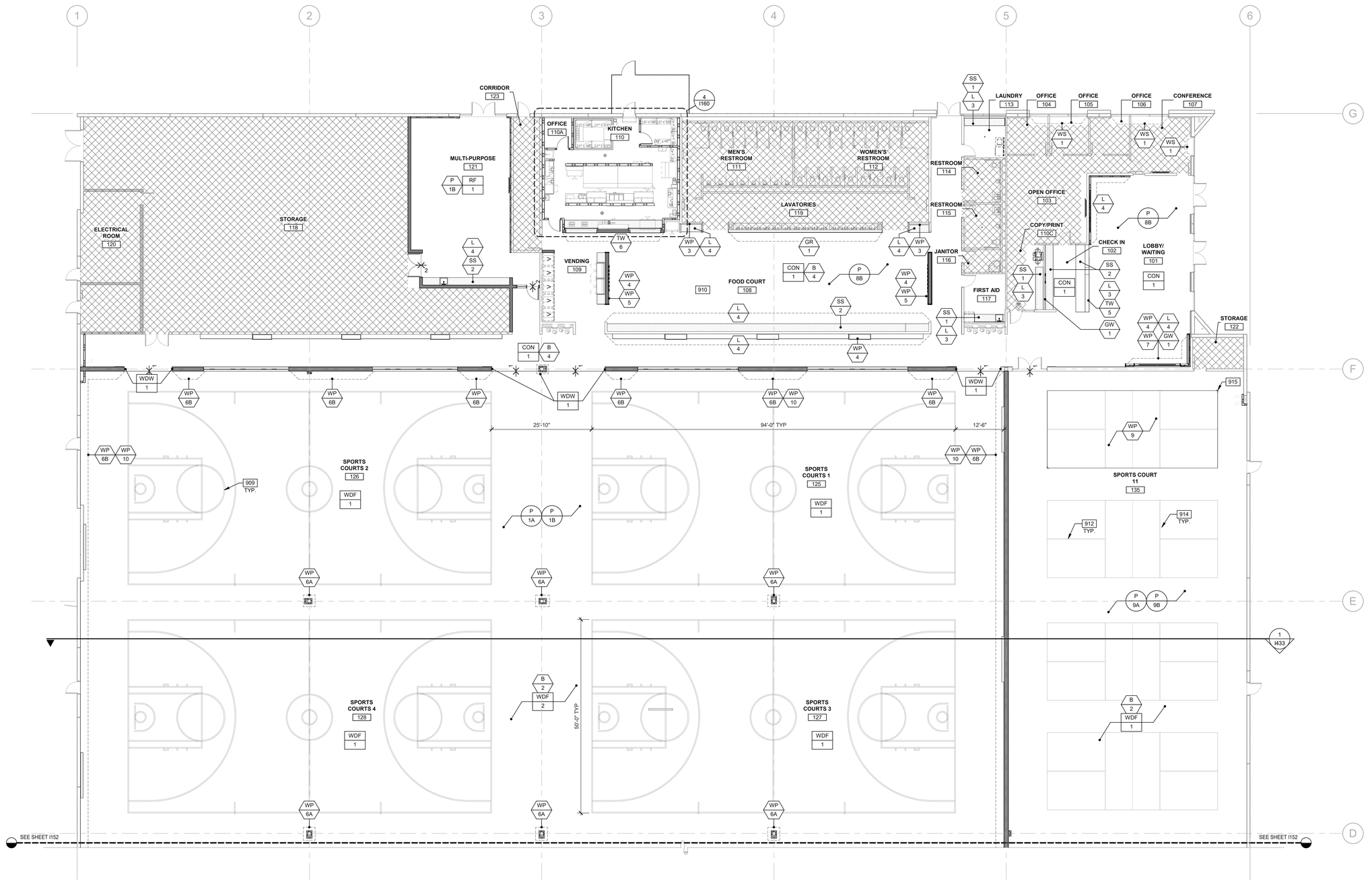
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03/30/2026 - PLAN CHECK CORRECTIONS 4

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3/32"=1'-0"

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NORTH - FINISH PLAN

SCALE: 3/32" = 1'-0"

LEGEND

INDICATES AREA NOT IN CONTRACT (N.I.C.) (COVERED UNDER CORE & SHELL PERMIT)

FINISHES

SEE SHEET **I620** FOR FINISHES

INDICATES LINE OF FLOOR TRANSITION
NUMBER REFERENCES TRANSITION ACCESSORY (TR-#) LOCATED ON FINISH SCHEDULE

INDICATES LOCATION OF NON-TYPICAL WALL FINISH

INDICATES DIRECTION OF FLOORING INSTALLATION

INDICATES WALL FINISHES

INDICATES FLOOR FINISHES

INDICATES MISCELLANEOUS FINISHES

KEYNOTES:

909 FINAL BASKETBALL COURT STRIPING AND DIMENSIONS TO BE BY GC VENDOR AND FOR APPROVAL BY CITY.

910 P-1 PAINTED TO 20'-6"; P-8 PAINTED 20'-6" TO DECK; EXPOSED STRUCTURE CEILING AND MECHANICAL TO BE PAINTED P-8.

912 FINAL COURT STRIPING AND DIMENSIONS TO BE COORDINATED BY VENDOR FOR APPROVAL.

914 BADMINTON LAYOUT IS GRAPHICAL, SURFACE MARKINGS AND MAT BY OTHERS.

915 6"X6" VINYL MARKER, (2) PER BADMINTON COURT. ALT: 6"X6" PAINTED MARKER.

FINISH PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

SEE SHEET **I620** FOR FINISH, PLUMBING FIXTURES, RESTROOM ACCESSORIES, EQUIPMENT AND LIGHT FIXTURE SCHEDULES

- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

1. CONTRACTOR TO INCLUDE ALL FLOOR PREPARATIONS IN BASE BID.
2. SEE ENLARGED PLANS, ELEVATIONS AND DETAILS FOR ADDITIONAL FINISH INFORMATION.
3. PREPARE PARTITIONS TO RECEIVE (2) COATS EGGSHELL PAINT, U.O.N.
4. PROVIDE LEVEL 5 FINISH FOR PARTITIONS AT WALL-WASH LIGHT FIXTURES AND AREAS TO RECEIVE VINYL WALL GRAPHICS.
5. COORDINATE WITH OTHER TRADES AT LOCATIONS OF SPECIALTY WALL FINISHES, BRANDING OR SIGNAGE FOR SPECIFIC PARTITION PREP.
6. ALL AREAS WITHIN PROJECT BOUNDARY TO RECEIVE PAINT (**P-1A**), AND RUBBER BASE (**B-1**), U.O.N. INCLUDING ALL EXPOSED COLUMNS.
7. ALL GYPSUM BOARD CEILINGS AND SOFFITS TO RECEIVE PAINT (**P-1B**), U.O.N.
8. PAINT DECK ABOVE AND ALL EXPOSED MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DUCTWORK AND PIPING IN OPEN CEILING AREAS.
9. ALL FINISHES TO BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.
10. ALL FINISH TRANSITIONS AT DOORS TO BE LOCATED CENTERED UNDER THE DOOR, U.O.N.
11. PROVIDE FLOORING TRANSITIONS AS FOLLOWS, U.O.N.:
    a. RUBBER REDUCING STRIP AT ALL TRANSITIONS BETWEEN CARPET AND RESILIENT FLOORING OR CONCRETE.
    b. STAINLESS STEEL TRIM BY SCHLUTER OR EQUAL, AT ALL TRANSITIONS BETWEEN TILE/STONE AND OTHER FINISHES.

DOJ PLAN CHECK SET - 3RD REVISION

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. CERVANTES C-44000 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

NORTH - FINISH PLAN

DATE	REMARKS
07/08/2025	ISSUE FOR PLAN CHECK
09/22/2025	PLAN CHECK CORRECTIONS
	1

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

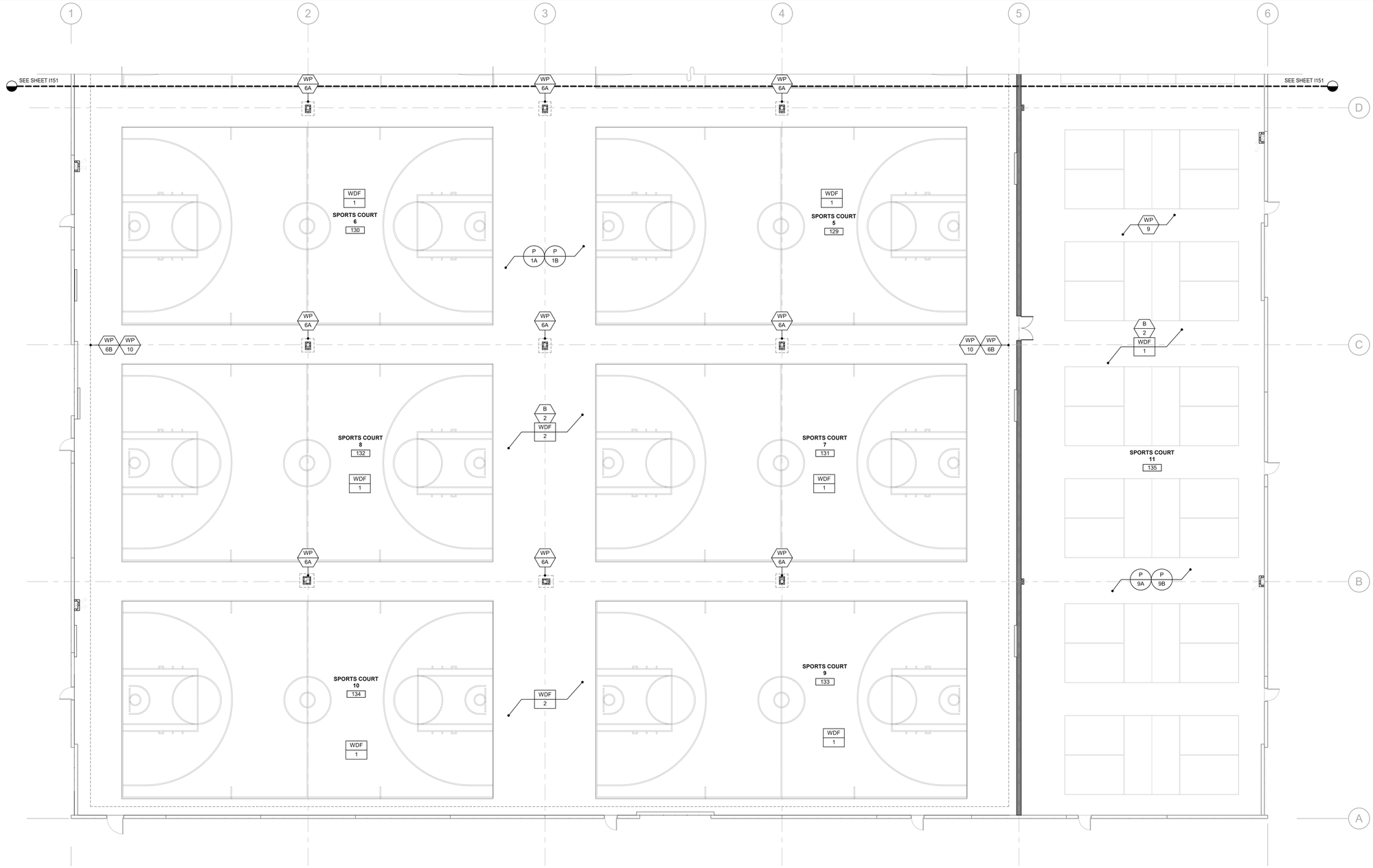
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3/32"=1'-0"

0 4' 8' 16' 24' 48'

SOUTH - FINISH PLAN

SCALE: 3/32" = 1'-0"

N

LEGEND

INDICATES AREA NOT IN CONTRACT (N.I.C.)
(COVERED UNDER CORE & SHELL PERMIT)

FINISHES

SEE SHEET **I620** FOR FINISHES

INDICATES LINE OF FLOOR TRANSITION
NUMBER REFERENCES TRANSITION ACCESSORY
(TR-#) LOCATED ON FINISH SCHEDULE

INDICATES LOCATION OF NON-TYPICAL WALL FINISH

INDICATES DIRECTION OF FLOORING INSTALLATION

INDICATES WALL FINISHES

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INDICATES MISCELLANEOUS FINISHES

KEYNOTES: -

FINISH PLAN NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

SEE SHEET **I620** FOR FINISH, PLUMBING FIXTURES, RESTROOM ACCESSORIES, EQUIPMENT, AND LIGHT FIXTURE SCHEDULES

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DSA OC REVIEW - SAFE-T DIVISION

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LICENSED ARCHITECT ANA L. GERVANTES 44400 LIC#C-36002 RENEWAL 08/31/2027 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

SOUTH - FINISH PLAN

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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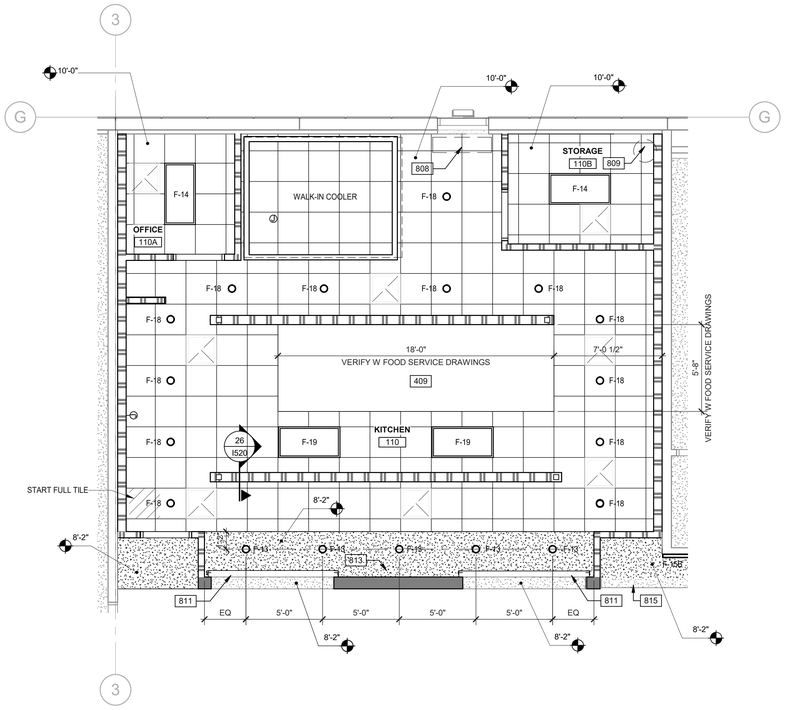
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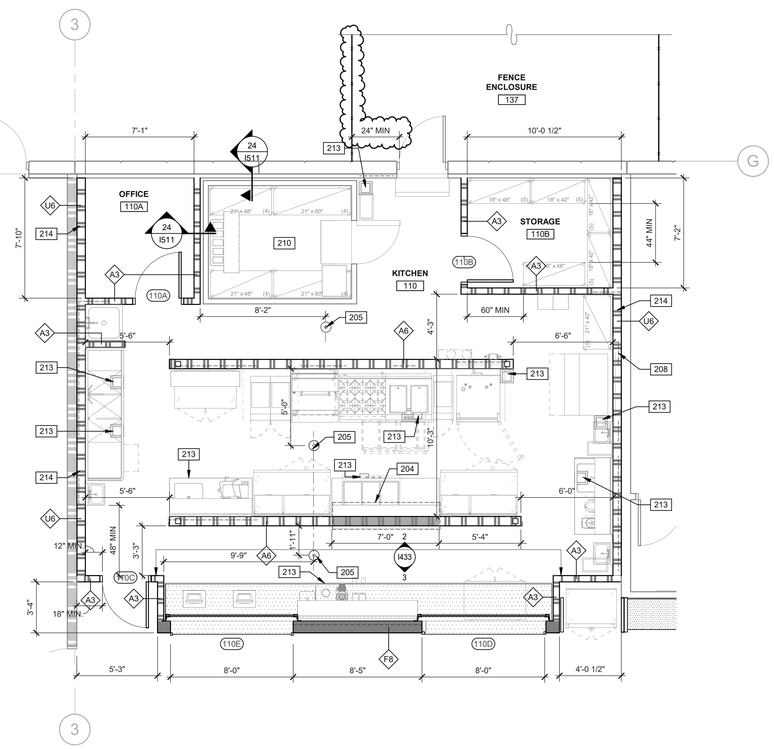
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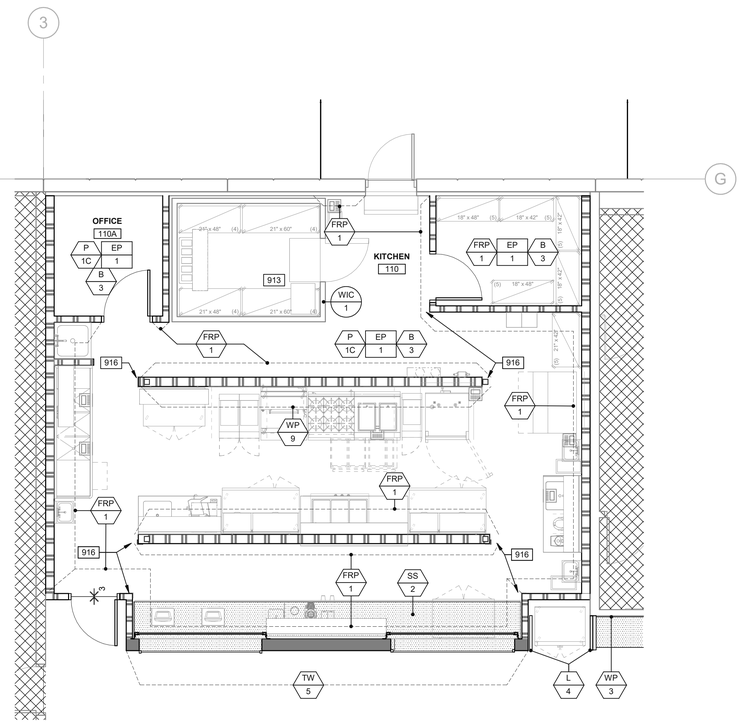
ENLARGED KITCHEN PLAN - CEILING PLAN 3

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



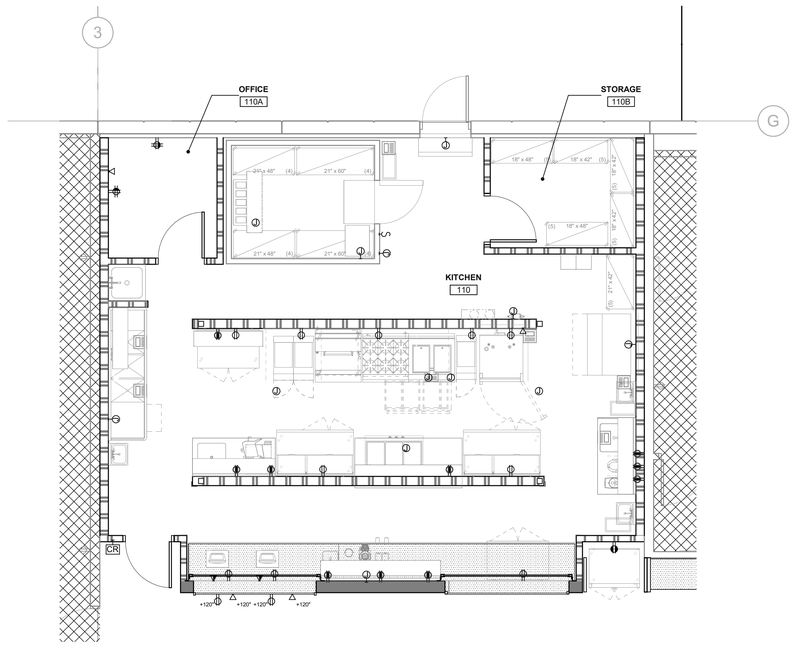
ENLARGED KITCHEN PLAN - FLOOR PLAN 1

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



ENLARGED KITCHEN PLAN - FINISH PLAN 4

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



ENLARGED KITCHEN PLAN - POWER & DATA 2

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

KEYNOTES:

204	CONTRACTOR SHALL PROVIDE CLEAR OPENING IN WALL TO RECEIVE FOOD SERVICE EQUIPMENT BY KEC. CONTRACTOR TO ALLOW 1/4" (6MM) CLEARANCE ON EACH SIDE AND TOP(S) OF UNIT(S). KEC TO PROVIDE ALL NECESSARY S/S TRIM FOR BOTH SIDES OF WALL.
205	FLOOR DRAIN TO BE INSTALLED. SEE PLUMBING DRAWINGS.
208	INSTALL WALL BACKING. WALL BACKING TO BE 16 G.A. (1MM) GALVANIZED METAL OR 3/4" (20MM) PLYWOOD, SECURELY ATTACHED TO WALL FRAMING. SEE STRUCTURAL DRAWINGS. SEE SHEET 11/SD-4.
210	WALK-IN FREEZER, SEE FOOD SERVICE DRAWINGS (DEFERRED SUBMITTAL).
213	FLOOR SINK, SEE PLUMBING DRAWINGS.
214	STUDS FOR THIS WALL TO GO TO 13'AFF TO SUPPORT STRUCTURAL SYSTEM. REFER TO STRUCTURAL DRAWINGS FOR MORE INFO.
409	EXHAUST HOODS. CONTRACTOR TO PROVIDE A MINIMUM OF 18" (457MM) OF NON COMBUSTIBLE CEILING MATERIAL AROUND TYPE I EXHAUST HOODS TO COMPLY TO NFPA 96, SECTION 4.2.1. REFERENCE STRUCTURAL DRAWINGS FOR SUPPORT. SEE SHEET ST1.2.
808	AIR CURTAIN MOUNTED ABOVE DOOR; SEE FOOD SERVICE DRAWINGS FOR MORE INFORMATION. RELOCATE EXIT SIGN.
809	ELECTRIC WATER HEATER MOUNTED ABOVE CEILING. SEE STRUCTURAL DETAIL 8/SD-1.1.
811	PAINT WALLS AND MEP ABOVE CEILING P-8.
813	GYPSUM BOARD CEILING ABOVE FRONT COFFEE COUNTER AREA MUST BE PAINTED AND MUST HAVE A "GLOSS" OR "SEMI-GLOSS" FINISH.
815	NEW FULL HEIGHT WALL FROM 8'-2" TO DECK.
913	WALK-IN FREEZER, FLOOR: ALUMINUM WITH INTEGRAL COVE BASE, WALLS: ALUMINUM, CEILING: ALUMINUM; REFER TO FOOD SERVICE DRAWINGS FOR FINISH INFORMATION.
916	CORNER GUARD, SEE FOOD SERVICE DRAWING.

FLOOR PLAN LEGEND

PARTITION TYPES

1. INTERIOR GYPSUM BOARD PARTITION SHALL CONFORM TO ICC REPORT ESR-1338. MIN. FASTENER: #6 1-1/4" SCREW. SPACING: 12" FIELD, 8" EDGES.
2. SEE DETAIL SHEET **I610** FOR PARTITION TYPE DETAILS.

- EXISTING WALL/ PARTITION
- EXISTING EXTERIOR WALL, EXISTING INTERIOR PARTITON WALL, OR EXISTING STEEL COLUMN WITH NEW FURRING PARTITION. SEE DETAILS U/I510, Ue/510, U/c510, U/I510 FOR PARTITION HEIGHT.
- PARTITION TO 6" ABOVE CEILING. SEE DETAILS A/I510.
- NEW 6'-0" TALL VINYL FENCE. IRVINE FENCE INC. PRIVACY FENCE OR SIM (DEFERRED SUBMITTAL).
- EXISTING 1HR FIRE-RATED PARTITION "IN ACCORDANCE WITH UL U419.
- DOOR TAG - REFER TO SHEET I610.

POWER & DATA LEGEND

- 110v. DUPLEX RECEPTACLE, MOUNTED VERTICALLY AT +18" A.F.F., U.O.N. "C" DESIGNATES RECESSED TYPE SOCKET.
- DEDICATED 110v./20 AMP DUPLEX RECEPTACLE, MOUNTED VERTICALLY AT +18" A.F.F., U.O.N.
- GFCI 110v./20 AMP DUPLEX RECEPTACLE, MOUNTED VERTICALLY AT +18" A.F.F., U.O.N.
- 110v. FOURPLEX RECEPTACLE, MOUNTED AT +18" A.F.F., U.O.N.
- DEDICATED 110v./20 AMP FOURPLEX RECEPTACLE, MOUNTED AT +18" A.F.F., U.O.N.
- DATA OUTLET MUD RING, WALL-MOUNTED AT 18" A.F.F., U.O.N. PROVIDE PULL ROPE TO ABOVE ACCESSIBLE CEILING SPACE.
- COMBINATION TELEPHONE/DATA OUTLET MUD RING, WALL-MOUNTED AT 18" A.F.F., U.O.N. PROVIDE PULL ROPE TO ABOVE ACCESSIBLE CEILING SPACE.
- JUNCTION BOX, WALL-MOUNTED.

RCP LEGEND

- SUSPENDED CEILING SYSTEM TO BE ARMSTRONG 24X24 "CLEAN ROOM VL" WHITE TILE, SQUARE LAY-IN 15/16". REFER TO DETAILS ON 25/I520. ICC ESR 1308
- 5/8" GYPSUM BOARD CEILING OR SOFFIT.
- 2'x4' LED LIGHT FIXTURE.
- RECESSED LED DOWNLIGHT.

FINISH LEGEND

FOR MORE INFORMATION SEE FINISH LEGEND ON SHEET I630

P 1C PAINT
LOCATION: KITCHEN
MFG: SHERWIN WILLIAMS
COLOR: SW7005 PURE WHITE
FINISH: SEMI-GLOSS

P 2 PAINT
LOCATION: KITCHEN
MFG: SHERWIN WILLIAMS
COLOR: SW7005 PURE WHITE
FINISH: SEMI-GLOSS

L 4 PLASTIC LAMINATE
LOCATION: FOOD COURT
MFG: FORMICA
STYLE: 5784 BEIGE ELM

SS 1 SOLID SURFACE
LOCATION: KITCHEN
MFG: CAESARSTONE
STYLE: 1141 PURE WHITE

FRP 1 REINFORCED FIBERGLASS PANELS
LOCATION: KITCHEN
MFG: MARLITE
STYLE: BRIGHT WHITE
SIZE: 4'W X 8'H

WP 3 METAL WALL PANEL
LOCATION: FOOD COURT
MFG: FORMS+SURFACES
STYLE: FUSED METAL
COLOR: FUSED GRAPHITE

WP 9 STAINLESS STEEL
LOCATION: KITCHEN
NOTES: FURNISHED AND INSTALLED BY KITCHEN EQUIP. VENDOR

B 3 SELF-COVED WALL BASE
LOCATION: KITCHEN
MFG: SHERWIN WILLIAMS
STYLE: RESUFLOR
COLOR: 3746
SIZE: 6"H
NOTES: SMOOTH, GLASS FINISH WITH 3/8" RADIUS COVE AT THE JUNCTURE OF THE WALL AND FLOOR.

EP 1 EPOXY W/INTEGRAL COVE BASE
LOCATION: KITCHEN
MFG: SHERWIN WILLIAMS
STYLE: RESUFLOR
COLOR: 3746
SIZE: MINIMUM THICKNESS IS 3/16"
FINISH: SMOOTH, GLASS FINISH
INSTALLATION METHOD: TROWELED ON
NOTES:
1) FLOORING MUST BE SEALED TO BE IMPERVIOUS, GREASE, & ACID RESISTENT; 2) MATERIAL MUST BE INSTALLED UNDER ALL EQUIP & EQUIP LEGS; 3) MUST BE SELF-COVED UP THE WALLS 6" WITH A MINIMUM 3/8" SMOOTH RADIUS COVE AT JUNCTION OF WALL AND FLOOR; 4) NONSKID AGENTS CAN BE ADDED ONLY TO FLOORING IN HIGH TRAFFIC AREAS, FLOORING UNDER EQUIP AND COVED BASES MUST BE SMOOTH; 5) NONSKID TILES MAY BE USED IF FLOOR DRAINS ARE PROVIDED, DEPENDING ON AMOUNT OF NONSKID AGENT USED, A HIGH-PRESSURE CLEANING SYSTEM MAY ALSO BE REQUIRED.

WIC 1 WALK-IN COOLER
MFG: RMI
REFER TO SHEET QF301 FOR INTERIOR AND EXTERIOR WALK-IN COOLER FINISHES

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ANA L. CERVANTES
C-44046
12/31/2027
RENEWAL DATE
STATE OF CALIFORNIA

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

ENLARGED PLANS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/12/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT.
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

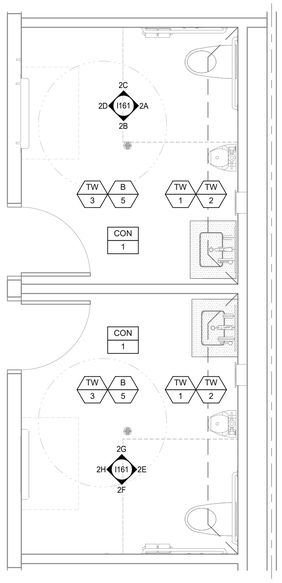
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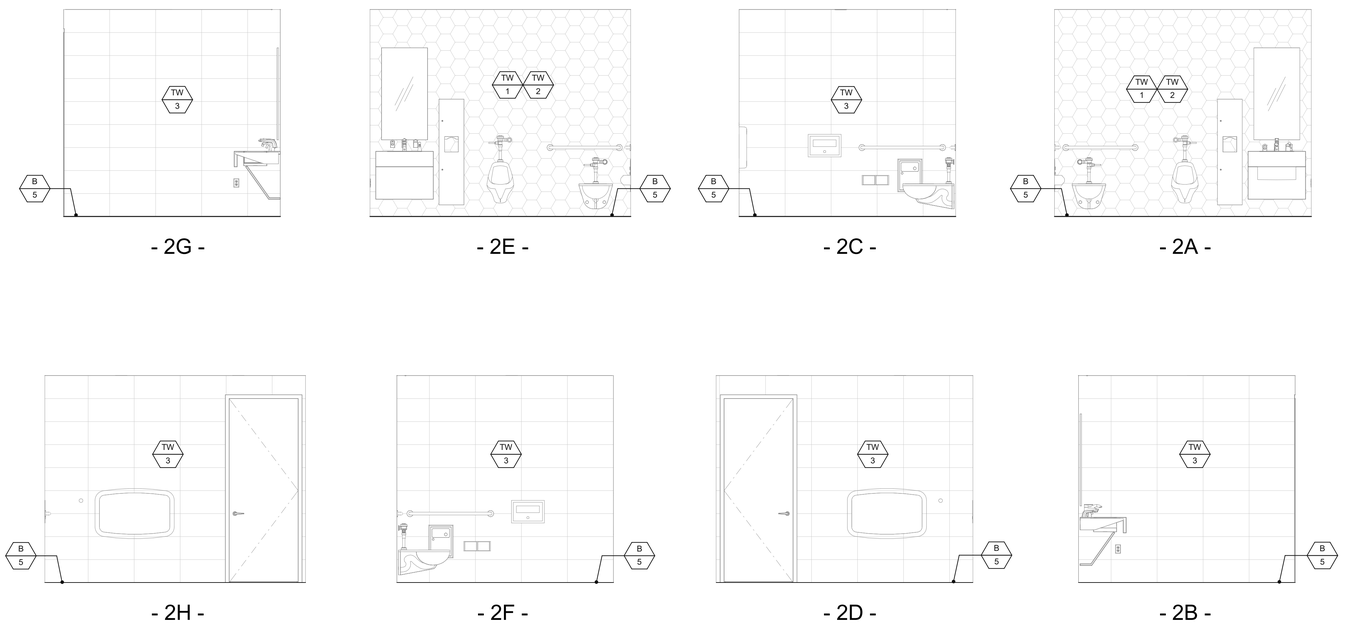
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(FOR REFERENCE ONLY)
ENLARGED EMPLOYEE RESTROOM PLAN 3
SCALE: 3/8" = 1'-0"

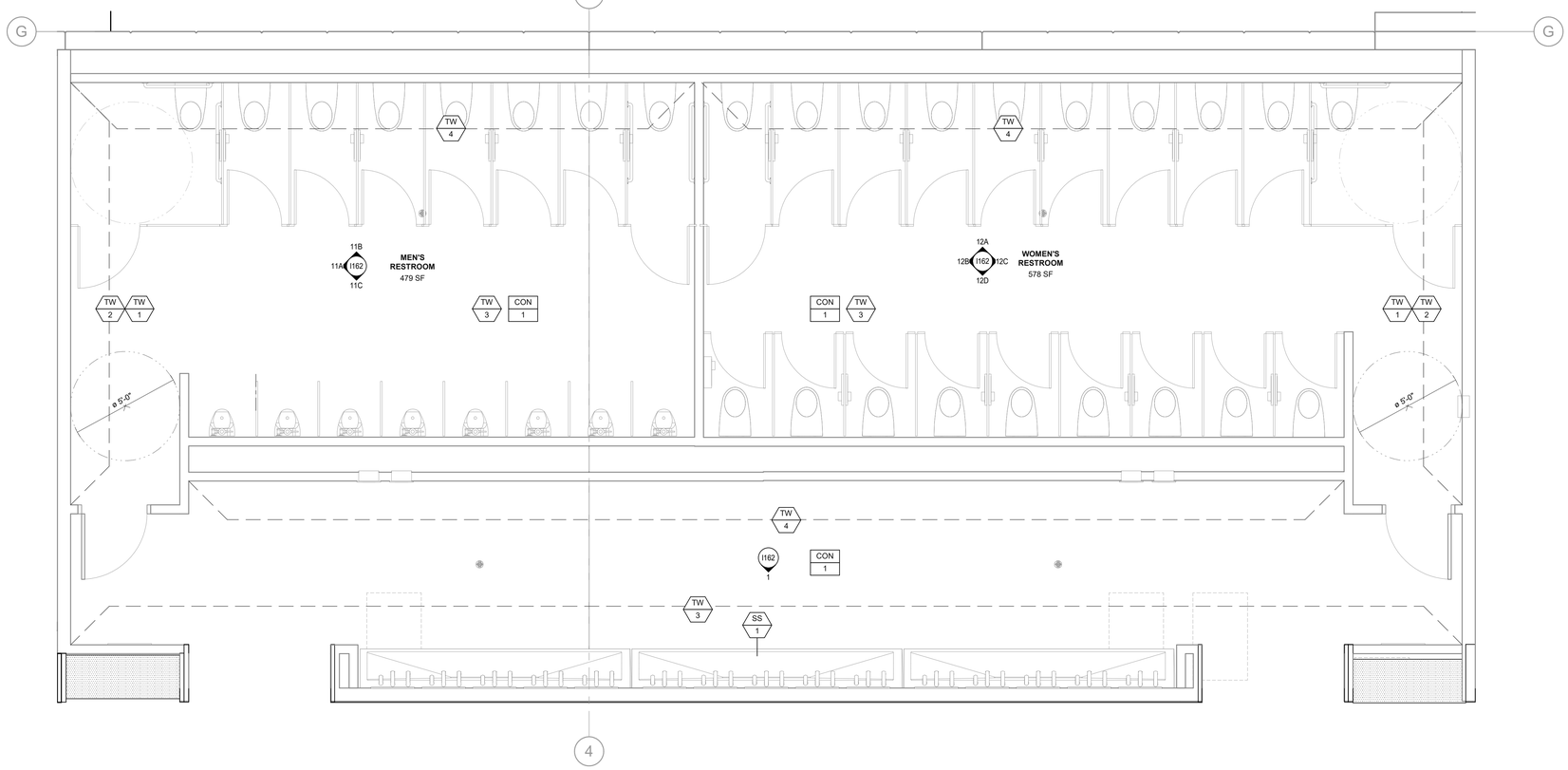


3/8"=1'-0"
0 1' 2' 4' 6' 12'

EMPLOYEE RESTROOM ELEVATIONS (FOR REFERENCE ONLY) 2
SCALE: 3/8" = 1'-0"

NOTE: EXISTING RESTROOM SCOPE WAS BUILT OUT UNDER PLAN CHECK # 00944992-CNEW. THIS SHEET IS FOR REFERENCE ONLY PER OC HEALTH DEPT.

KEYNOTES: -



3/8"=1'-0"
0 1' 2' 4' 6' 12'

ENLARGED RESTROOM PLAN (FOR REFERENCE ONLY) 1
SCALE: 3/8" = 1'-0"

FINISH LEGEND

EXISTING RESTROOM FINISHES - FOR REFERENCE ONLY. FOR NEW FINISHES SEE FINISH LEGEND ON SHEET I630

P 1C — PAINT
LOCATION: RESTROOM
MFG: SHERWIN WILLIAMS
COLOR: 7005 PURE WHITE
FINISH: SEMI-GLOSS

SS 1 — QUARTS SLAB
LOCATION: RESTROOM
MFG: CAESERSTONE
COLOR: 1141 PURE WHITE

TW 1 — PORCELAIN TILE
LOCATION: RESTROOM
MFG: TILEBAR
COLLECTION: HEXART
COLOR: POP TURQUOISE
FINISH: MATTE

TW 2 — PORCELAIN TILE
LOCATION: RESTROOM
MFG: TILEBAR
COLLECTION: HEXART
COLOR: TURQUOISE
FINISH: MATTE

TW 3 — CERAMIC TILE
LOCATION: RESTROOM
MFG: DALTILE
COLLECTION: MULTITUDE
COLOR: ORIGAMI WHITE

TW 4 — PORCELAIN TILE
LOCATION: RESTROOM
MFG: DALTILE
COLLECTION: EMERSON WOOD
COLOR: BUTTER PECAN
FINISH: MATTE

B 5 — COVE BASE
LOCATION: EMPLOYEE RESTROOM (UNISEX)
MFG: SCHLUTER
COLLECTION: DILEX - AHKA
COLOR: BRUSHED CHROME ANODIZED
HEIGHT: 10MM

CON 1 — POLISHED CONCRETE SLAB FINISH
LOCATION: TYP. THROUGHOUT U.O.N.
FINISH: HIGH GLOSS

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LICENSED ARCHITECT
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LICENSE NO. C-40000
12/31/2027
RENEWAL DATE
STATE OF CALIFORNIA

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17300 RED HILL
IRVINE, CALIFORNIA 92614

ENLARGED RESTROOM PLAN (FOR REFERENCE ONLY)

	DATE	REMARKS
4	01/26/2026	OC HEALTH DEPT

PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

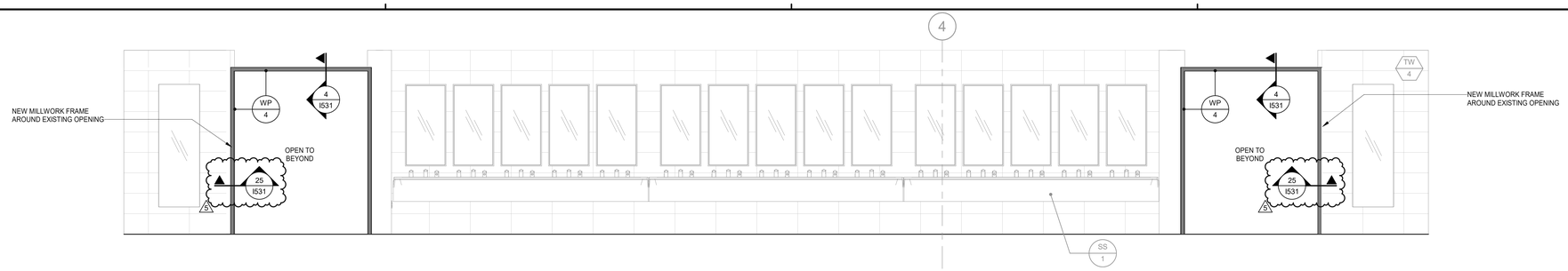
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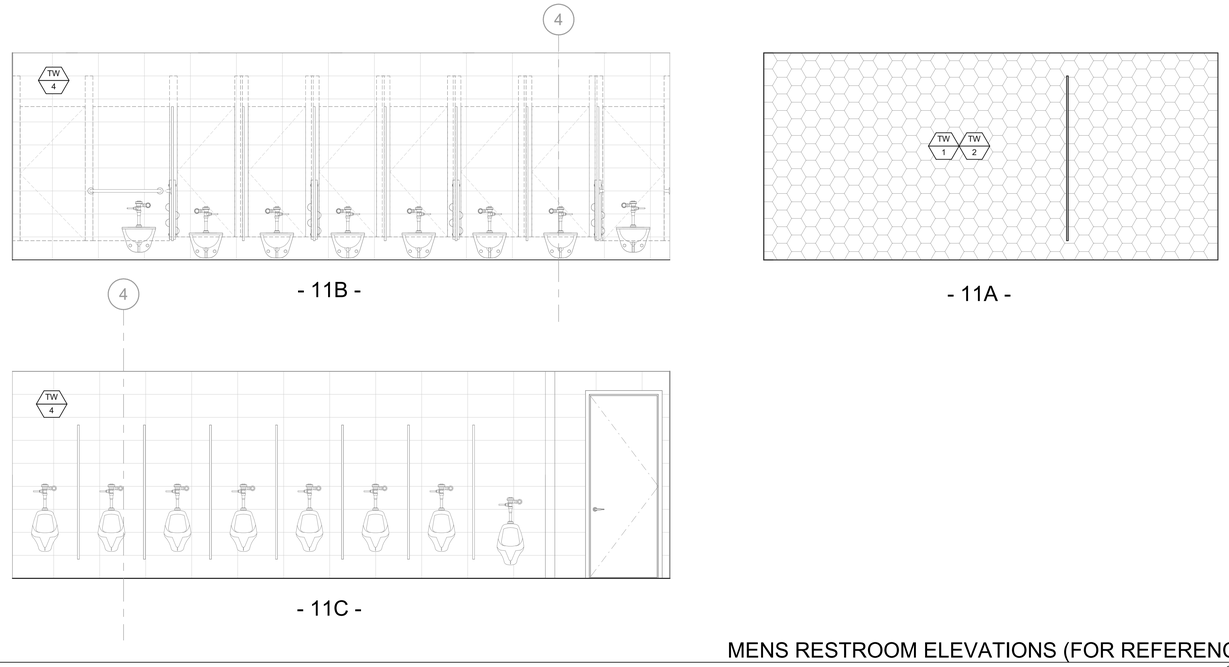
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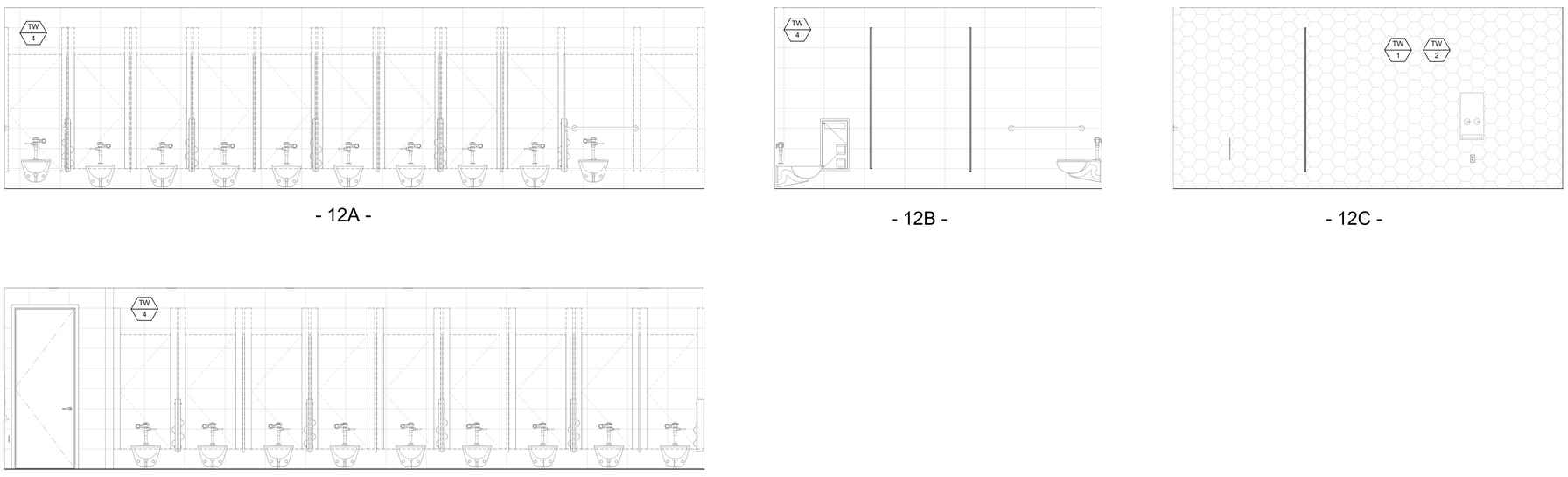
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MENS RESTROOM ELEVATIONS (FOR REFERENCE ONLY) 2

SCALE: 3/8" = 1'-0"



WOMENS RESTROOM ELEVATIONS (FOR REFERENCE ONLY) 1

SCALE: 3/8" = 1'-0"

NOTE: EXISTING RESTROOM SCOPE WAS BUILT OUT UNDER PLAN CHECK # 00944992-CNEW. THIS SHEET IS FOR REFERENCE ONLY PER OC HEALTH DEPT.

KEYNOTES: -

FINISH LEGEND

EXISTING RESTROOM FINISHES - FOR REFERENCE ONLY. FOR NEW FINISHES SEE FINISH LEGEND ON SHEET I630

P / 1C	PAINT LOCATION: RESTROOM MFG: SHERWIN WILLIAMS COLOR: 7005 PURE WHITE FINISH: SEMI-GLOSS
SS / 1	QUARTS SLAB LOCATION: RESTROOM MFG: CAESERSTONE COLOR: 1141 PURE WHITE
TW / 1	PORCELAIN TILE LOCATION: RESTROOM MFG: TILEBAR COLLECTION: HEXART COLOR: POP TURQUOISE FINISH: MATTE
TW / 2	PORCELAIN TILE LOCATION: RESTROOM MFG: TILEBAR COLLECTION: HEXART COLOR: TURQUOISE FINISH: MATTE
TW / 3	CERAMIC TILE LOCATION: RESTROOM MFG: DALTILE COLLECTION: MULTITUDE COLOR: ORIGAMI WHITE
TW / 4	PORCELAIN TILE LOCATION: RESTROOM MFG: DALTILE COLLECTION: EMERSON WOOD COLOR: BUTTER PECAN FINISH: MATTE
B / 5	COVE BASE LOCATION: EMPLOYEE RESTROOM (UNISEX) MFG: SCHLUTER COLLECTION: DILEX - AHKA COLOR: BRUSHED CHROME ANODIZED HEIGHT: 10MM
CON / 1	POLISHED CONCRETE SLAB FINISH LOCATION: TYP. THROUGHOUT, U.O.N. FINISH: HIGH GLOSS

CITY OF IRVINE
BUILDING & SAFETY DIVISION

WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT
10 Edelman
Irvine, CA 92618
P 949.660.9128

LICENSED ARCHITECT ANN L. GERVANTES C-40000 LICENSE EXPIRATION DATE 12/31/2027 RENEWAL DATE 12/31/2025 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

ENLARGED RESTROOM ELEVATIONS (FOR REFERENCE ONLY)

	DATE	REMARKS
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I162

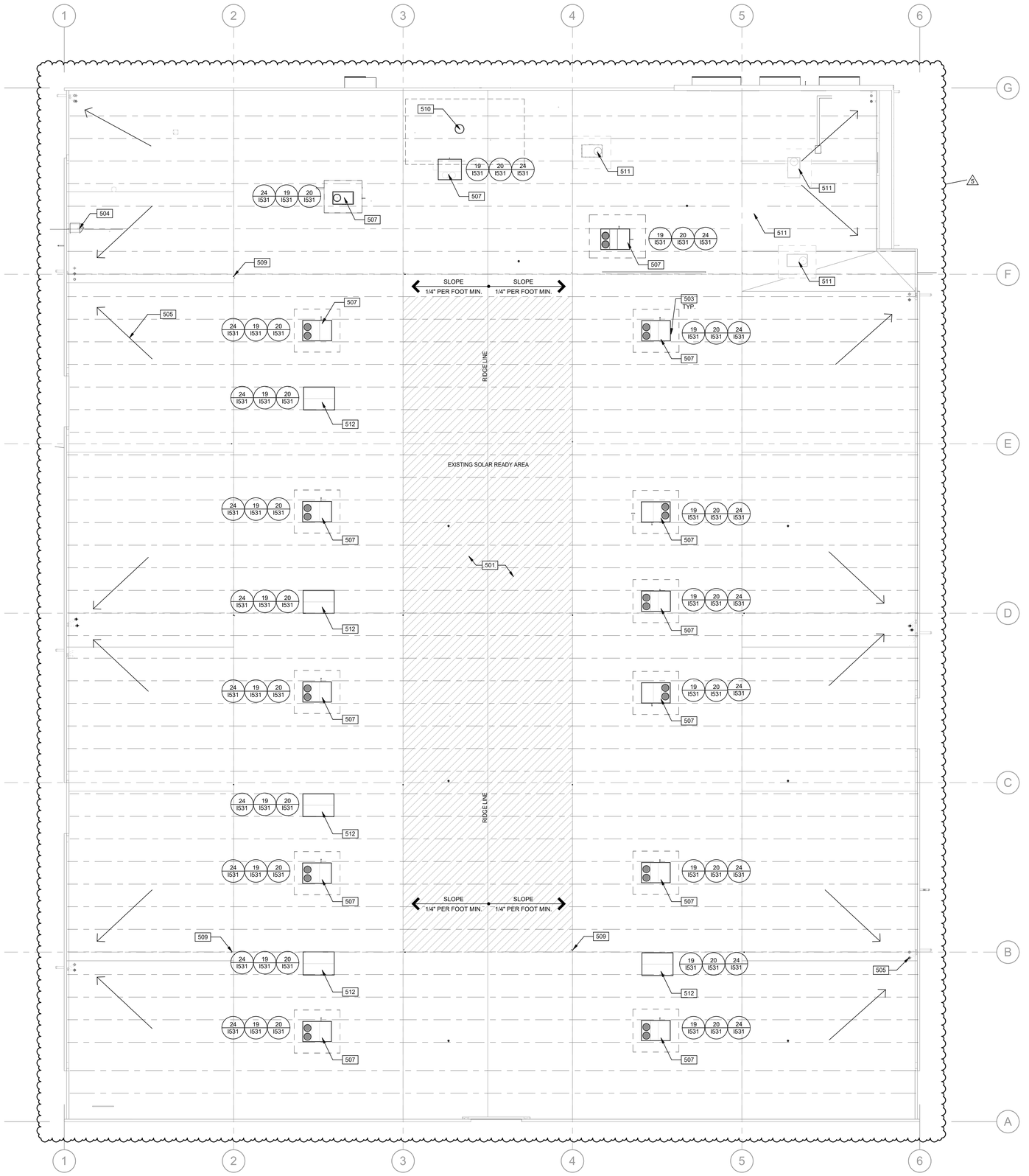
03/30/2026 - PLAN CHECK CORRECTIONS 4

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3/30/2026 2:34:51 PM

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT



1/16"=1'-0"

0 8' 16' 32' 64'

ROOF PLAN

SCALE: 1/16" = 1'-0"

KEYNOTES:

SEE SHEET **A010** FOR GENERAL NOTES

501 EXISTING SINGLE-PLY ROOFING OVER RIGID INSULATION OVER METAL DECK.

503 NEW CRICKET

504 EXISTING ROOF HATCH.

505 EXISTING PRIMARY AND SECONDARY DRAINS.

507 RTU EQUIPMENT - REFER TO MECHANICAL DRAWINGS.

509 EXISTING VENT TO ROOF FOR VIMS SYSTEM - REFER TO VIMS PLANS.

510 KITCHEN EXHAUST FAN - REFER TO MECHANICAL PLANS.

511 EXISTING RTU EQUIPMENT.

512 GRAVITY RELIEF - REFER TO MECHANICAL DRAWINGS.

LEGENDS

- EXISTING VENT TO ROOF FOR VIMS SYSTEM

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LICENSED ARCHITECT ANN L. GERVAIRES LICENSE NO. C-26002 RENEWAL 08/31/2027 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

ROOF PLAN

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK
03/06/2026	PLAN CHECK CORRECTIONS 4
5	

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET

I170

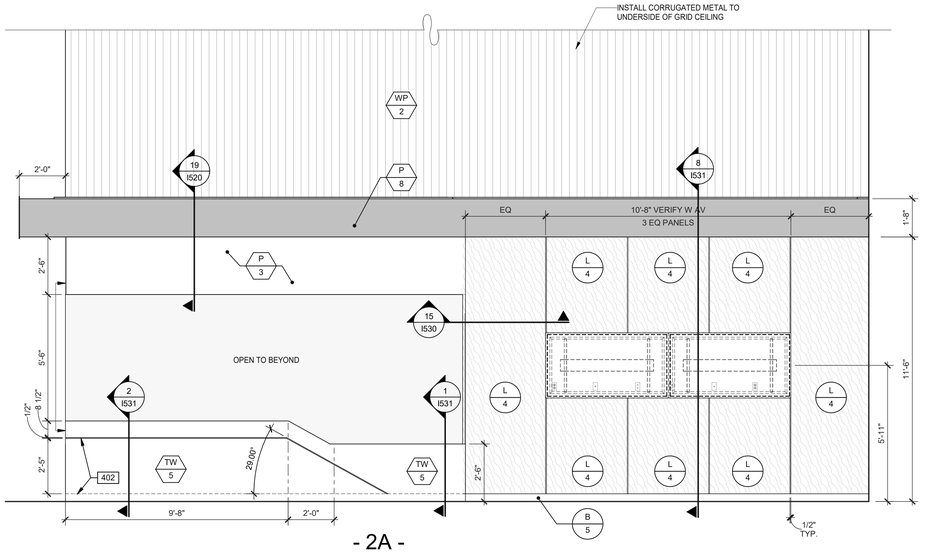
03/30/2026 - PLAN CHECK CORRECTIONS 4

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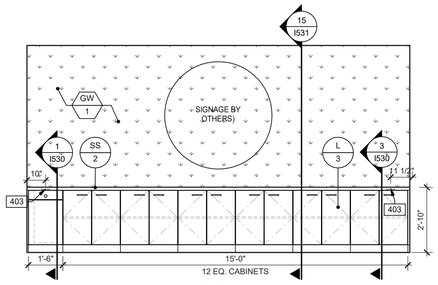
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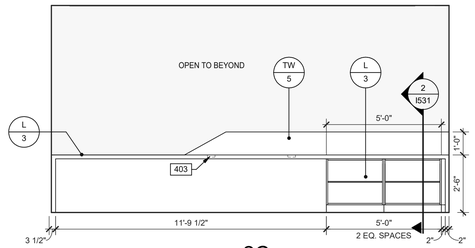
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- 2A -



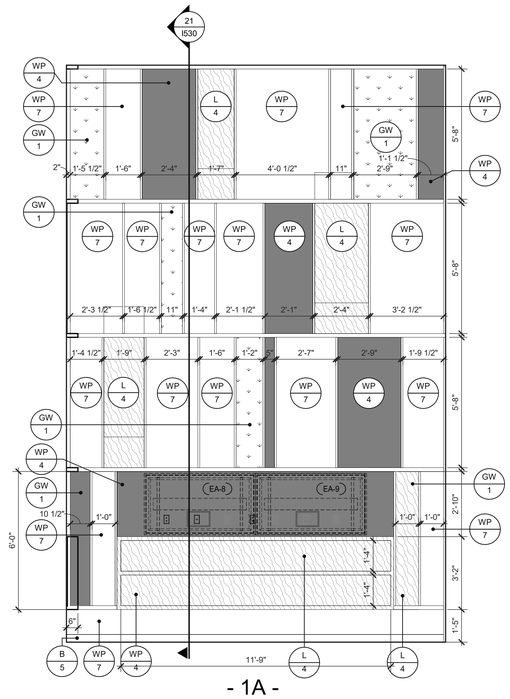
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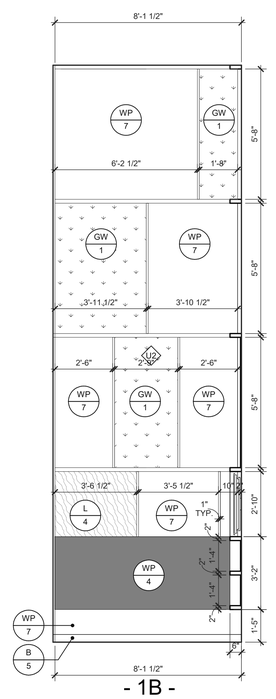
- 2C -

RECEPTION / TV WALL ELEVATIONS (2)

SCALE: 3/8" = 1'-0"



- 1A -



- 1B -

LOBBY FEATURE WALL ELEVATIONS (1)

SCALE: 3/8" = 1'-0"

3/8"=1'-0"
0 1' 2' 4' 6' 12'

GENERAL NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

1. SEE PLUMBING DRAWINGS FOR PLUMBING FIXTURE INSTALLATIONS AND SEE **I020** FOR MOUNTING AND CLEARANCES.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

MILLWORK/CABINETRY NOTES

5 MILLWORK SHOP DRAWINGS SHALL BE PROVIDED TO THE AOR AND CITY FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

1. ALL MILLWORK SHALL CONFORM TO THE CURRENT WOODWORK INSTITUTE STANDARDS PREMIUM GRADE.
2. SHOP DRAWINGS FOR ALL CABINETRY AND MILLWORK ARE REQUIRED TO BE SUBMITTED TO ARCHITECT AND OWNER FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
3. SEE FINISH SCHEDULE FOR FINISH SPECIFICATIONS.
4. DOOR PULLS SHALL BE DOUG MOCKET: DP128 SERIES - ROUND TOP DRAWER PULL (BLACK)
5. COUNTERTOPS SHALL HAVE BACK-SPLASHES ONLY WHERE SHOWN ON ELEVATION.
6. CABINET INTERIORS SHALL BE WHITE MELAMINE, INCLUDING EDGES.
7. INTERIOR SHELVING SHALL BE COVERED IN WHITE MELAMINE.
8. DOORS SHALL BE OF FLUSH OVERLAY CONSTRUCTION.
9. DOORS EDGES SHALL BE EDGE BANDED TO MATCH THE FRONTS.
10. INTERIOR OF DOOR SHALL BE FACED WITH SAME MATERIAL AS THE FRONTS.
11. ALL DRAWERS TO HAVE ACCURRIDE (OR APPROVED EQUAL) - FULL EXTENSION GLIDES.
12. EACH CABINET DOOR TO BE NO LESS THAN 12" WIDE AND NO GREATER THAN 18" WIDE U.O.N.
13. (*) VERIFY ALL EQUIPMENT CLEARANCES. SEE **I020 - I021** ACCESSIBILITY DETAILS FOR ADDITIONAL CLEARANCE INFORMATION.
14. PROVIDE SOFT CLOSE ACCURIDE OR EQUAL HARDWARE ON ALL CABINETS AND DRAWERS.
15. MILLWORK DOORS AND DRAWINGS TO HAVE LOCKING CAPABILITIES.

KEYNOTES:

402 LED STRIP LIGHT.
403 GROMMETS.

LEGEND

GLASS:

CLEAR, TEMPERED GLASS (1" THICK) PER CBC 2408.3, GLAZING IN MULTIPURPOSE GYMNASIUMS, BASKETBALL COURTS AND SIMILAR ATHLETIC FACILITIES SUBJECT TO HUMAN IMPACT LOADS SHALL COMPLY WITH CATEGORY II OF CPSC 16 CFR PART 1201 OR CLASS A OF ANSI Z97.1

EXISTING GLASS

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10 Edelman
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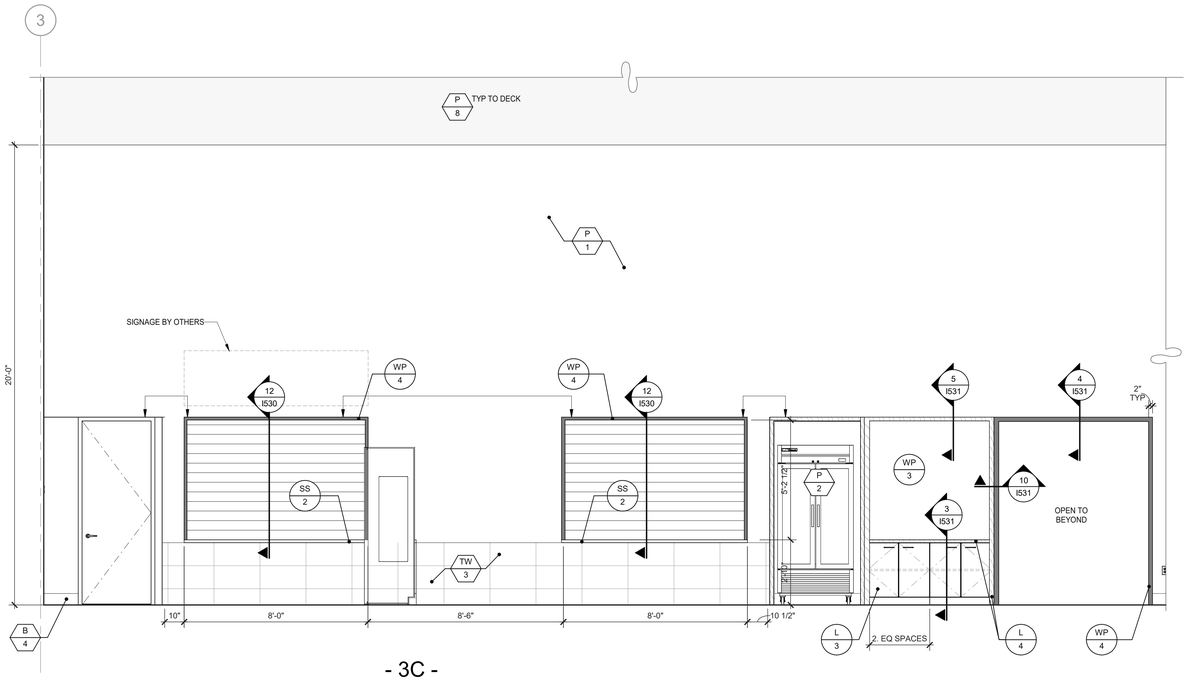
LICENSED ARCHITECT ANA L. GERVANTES 44508 LICENSE 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

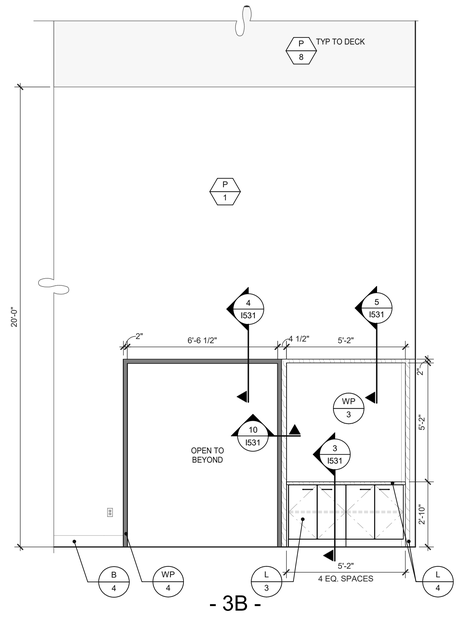
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IRVINE FIELDHOUSE

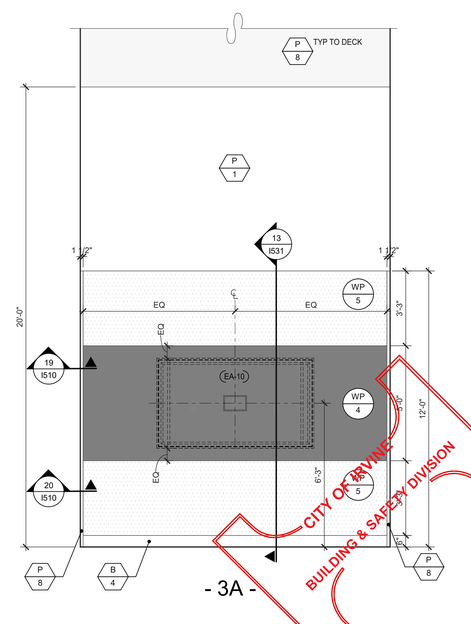
17300 RED HILL
IRVINE, CALIFORNIA 92614



- 3C -



- 3B -



- 3A -

FOOD COURT ELEVATIONS (3)

SCALE: 3/8" = 1'-0"

MILLWORK ELEVATIONS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

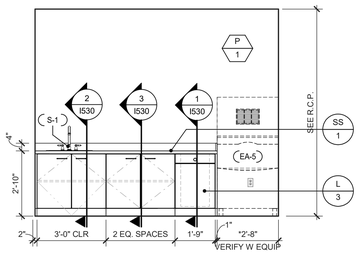
SHEET
I430

03/30/2026 - PLAN CHECK CORRECTIONS 4

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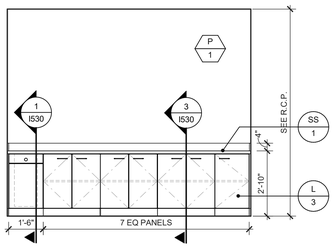
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FIRST AID ROOM 2

SCALE: 3/8" = 1'-0"



LAUNDRY ROOM 1

3/8"=1'-0"
0 1' 2' 4' 6' 12'
SCALE: 3/8" = 1'-0"

LEGEND

GLASS:

CLEAR, TEMPERED GLASS (1" THICK) PER CBC 2408.3, GLAZING IN MULTIPURPOSE GYMNASIUMS, BASKETBALL COURTS AND SIMILAR ATHLETIC FACILITIES SUBJECT TO HUMAN IMPACT LOADS SHALL COMPLY WITH CATEGORY II OF CPSC 16 CFR PART 1201 OR CLASS A OF ANSI Z97.1

EXISTING GLASS

GENERAL NOTES

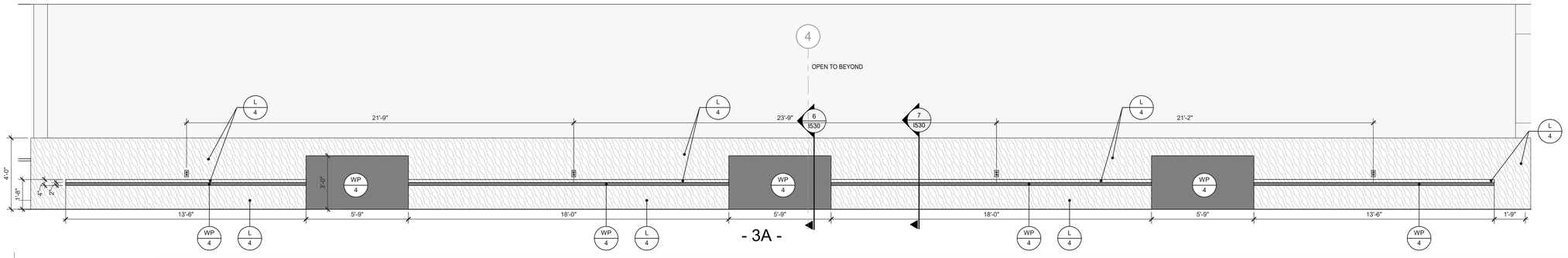
SEE SHEETS **G010 - I010** FOR GENERAL NOTES

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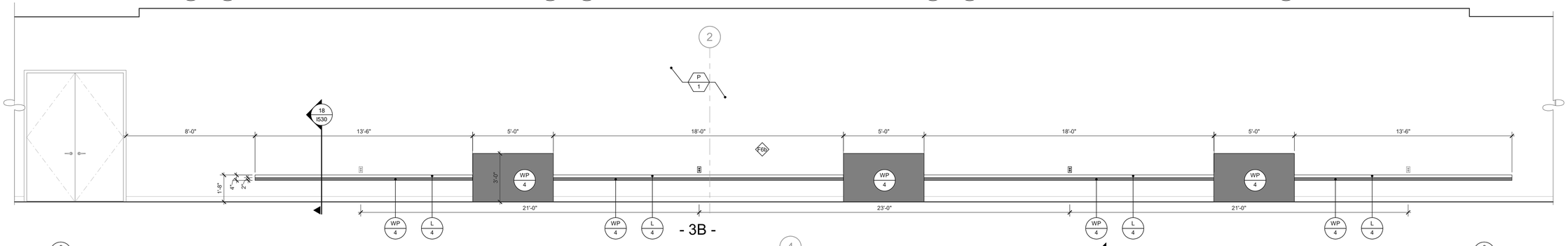
MILLWORK/CABINETRY NOTES

5 MILLWORK SHOP DRAWINGS SHALL BE PROVIDED TO THE AOR AND CITY FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

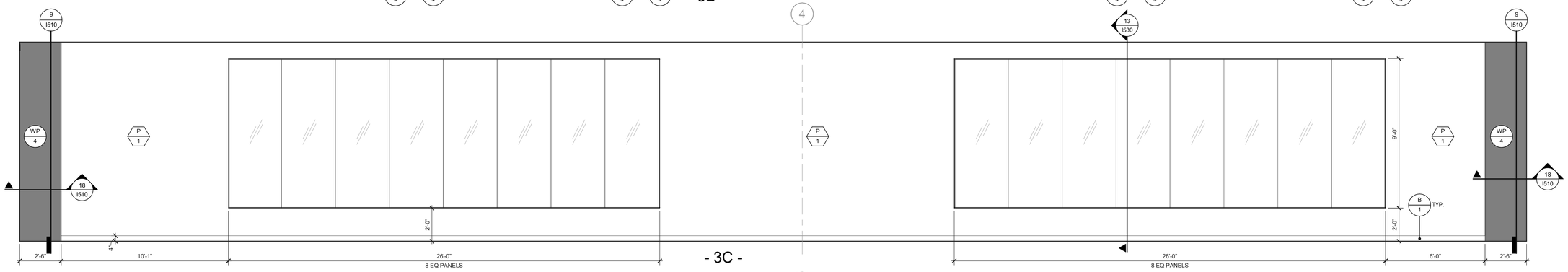
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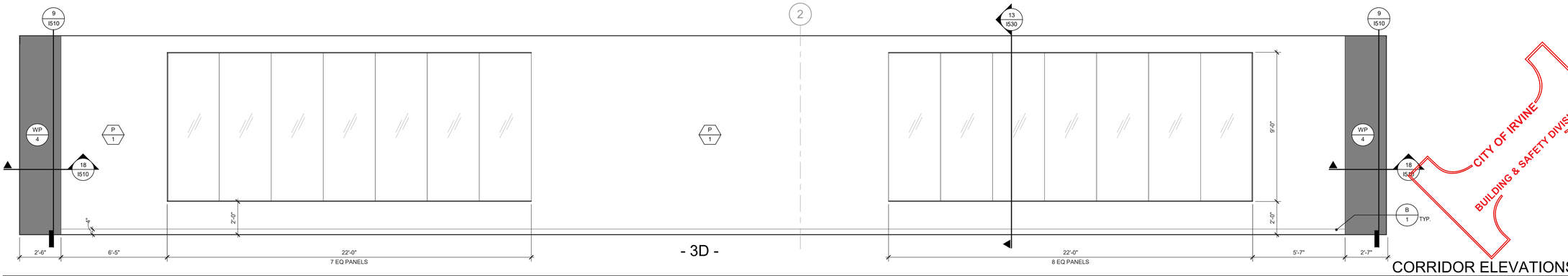
- 3A -



- 3B -



- 3C -



- 3D -

CORRIDOR ELEVATIONS 3

SCALE: 3/8" = 1'-0"

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. CERVANTES C-44008 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

MILLWORK ELEVATIONS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I431

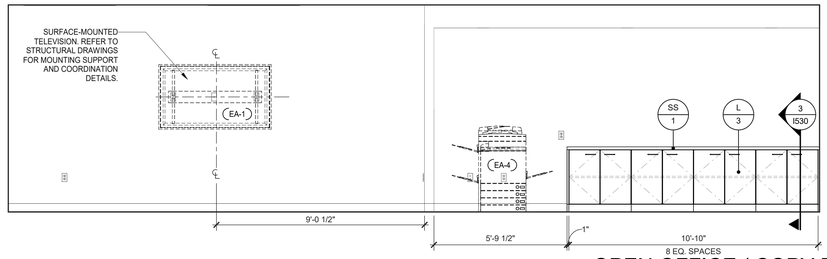
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03/30/2026 - PLAN CHECK CORRECTIONS 4

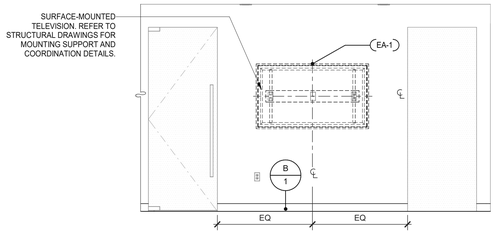
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OPEN OFFICE / COPY PRINT (2)
SCALE: 3/8" = 1'-0"



3/8"=1'-0"
0 1' 2' 4' 6' 12'

CONFERENCE ROOM (1)
SCALE: 3/8" = 1'-0"

GENERAL NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

1. SEE PLUMBING DRAWINGS FOR PLUMBING FIXTURE INSTALLATIONS AND SEE **I020** FOR MOUNTING AND CLEARANCES.
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MILLWORK/CABINETRY NOTES

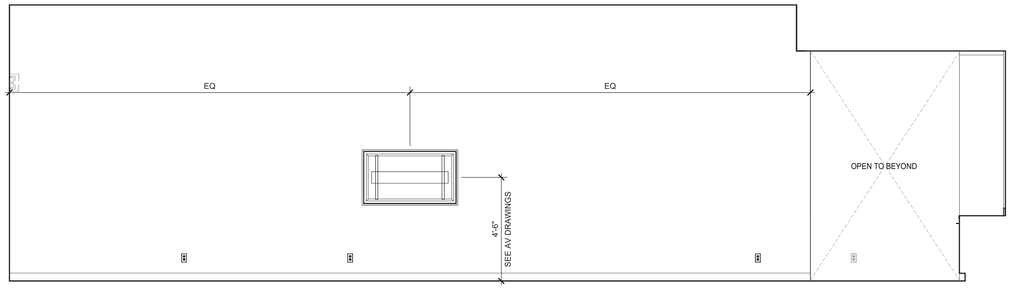
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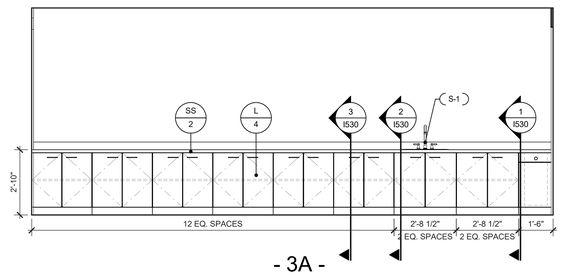
LEGEND

GLASS:

EXISTING GLASS

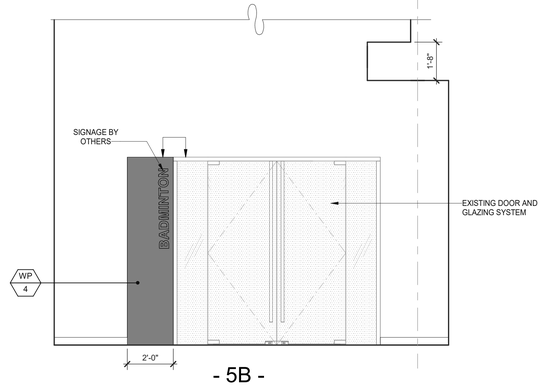


- 3B -

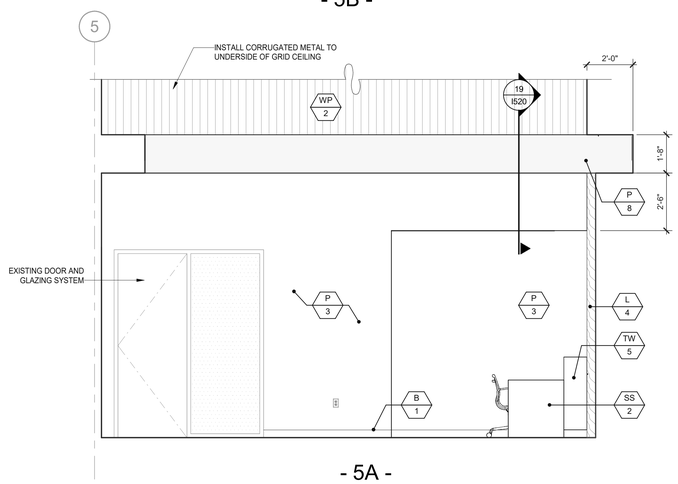


- 3A -

MULTIPURPOSE ROOM ELEVATIONS (3)
SCALE: 3/8" = 1'-0"

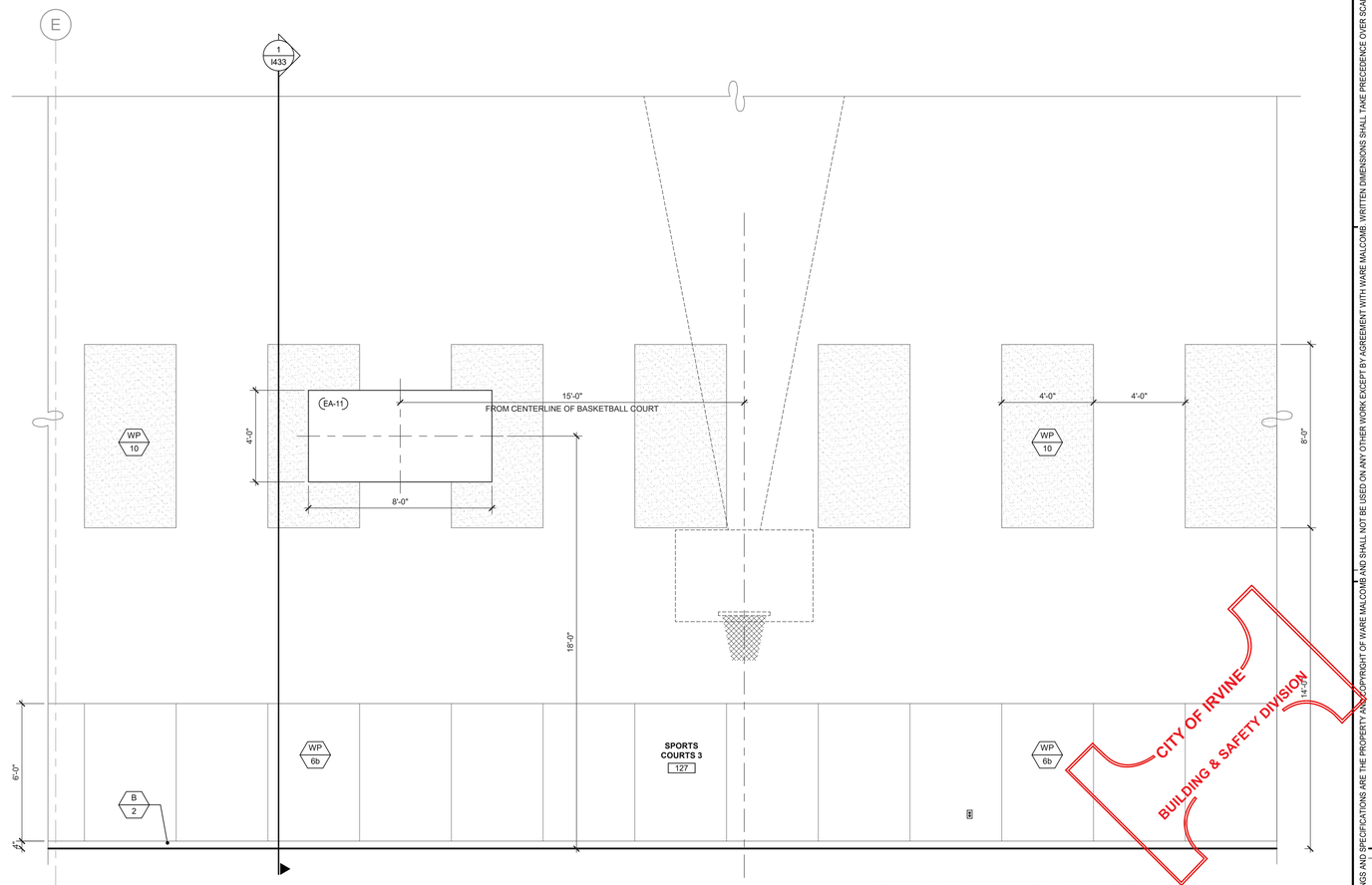


- 5B -



- 5A -

LOBBY ELEVATIONS (5)
SCALE: 3/8" = 1'-0"



TYPICAL SPORTS COURTS ELEVATION (4)
SCALE: 3/8" = 1'-0"

WARE MALCOMB
10 Edelman
Irvine, CA 92618
P 949.660.9128
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. CERVANTES C-46400 12/31/2027 RENEWAL 08/31/25 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

MILLWORK ELEVATIONS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
2	10/15/2025	PLAN CHECK CORRECTIONS 2
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I432

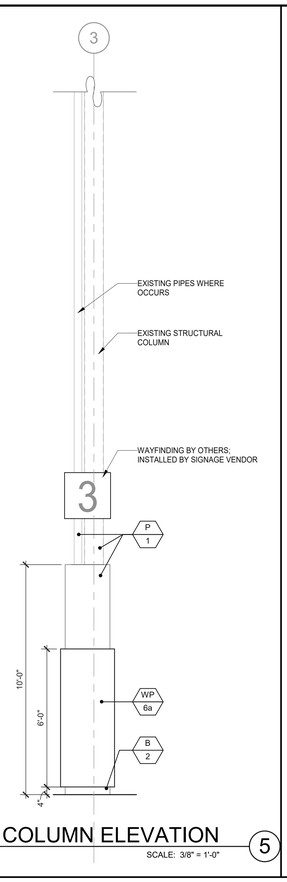
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3/30/2026 - PLAN CHECK CORRECTIONS 4

3/30/2026 2:35:05 PM

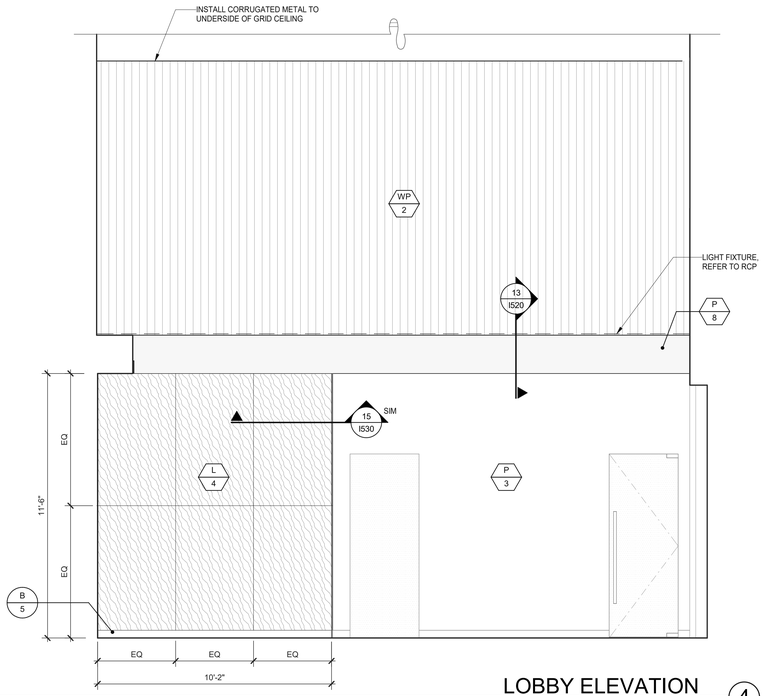
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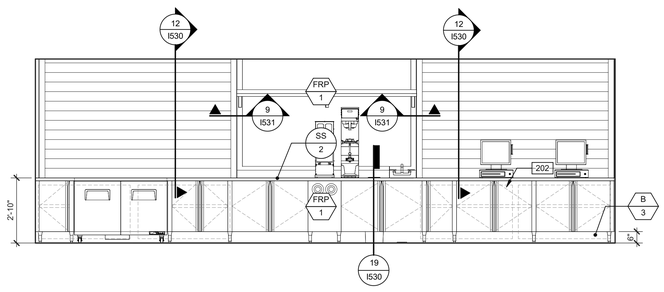
TYP COLUMN ELEVATION 5

SCALE: 3/8" = 1'-0"



LOBBY ELEVATION 4

SCALE: 3/8" = 1'-0"

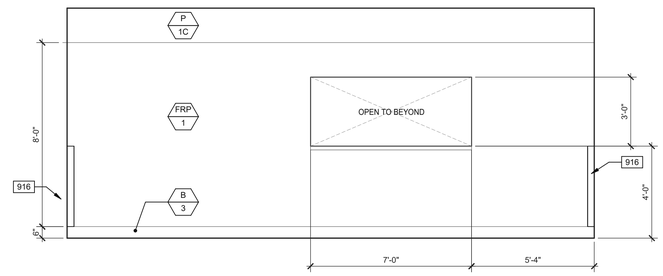


3/8"=1'-0"

0 1' 2' 4' 6' 12'

KITCHEN POS COUNTER 3

SCALE: 3/8" = 1'-0"



KITCHEN PASS-THROUGH 2

SCALE: 3/8" = 1'-0"

GENERAL NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

1. SEE PLUMBING DRAWINGS FOR PLUMBING FIXTURE INSTALLATIONS AND SEE **I020** FOR MOUNTING AND CLEARANCES.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

MILLWORK/CABINETRY NOTES

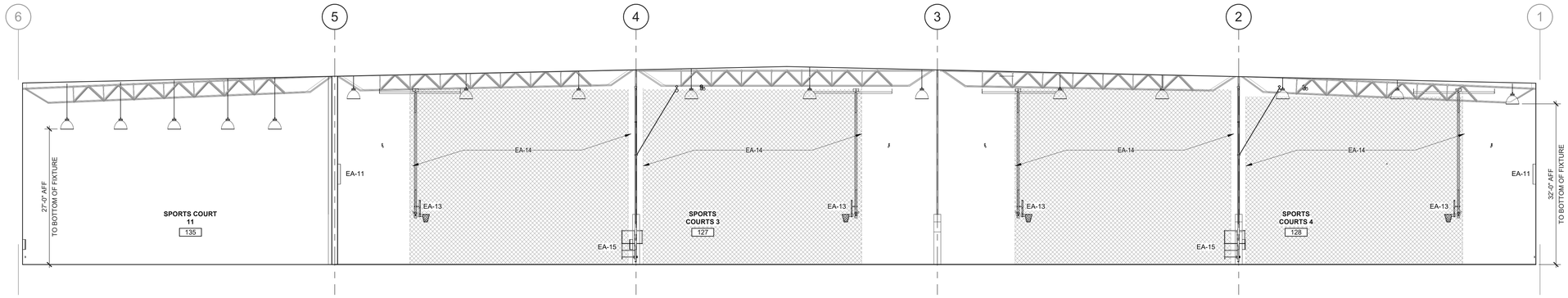
MILLWORK SHOP DRAWINGS SHALL BE PROVIDED TO THE AOR AND CITY FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

1. ALL MILLWORK SHALL CONFORM TO THE CURRENT WOODWORK INSTITUTE STANDARDS PREMIUM GRADE.
2. SHOP DRAWINGS FOR ALL CABINETRY AND MILLWORK ARE REQUIRED TO BE SUBMITTED TO ARCHITECT AND OWNER FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
3. SEE FINISH SCHEDULE FOR FINISH SPECIFICATIONS.
4. DOOR PULLS SHALL BE DOUG MOCKET: DP128 SERIES - ROUND TOP DRAWER PULL (BLACK)
5. COUNTERTOPS SHALL HAVE BACK-SPLASHES ONLY WHERE SHOWN ON ELEVATION.
6. CABINET INTERIORS SHALL BE WHITE MELAMINE, INCLUDING EDGES.
7. INTERIOR SHELVING SHALL BE COVERED IN WHITE MELAMINE.
8. DOORS SHALL BE OF FLUSH OVERLAY CONSTRUCTION.
9. DOORS EDGES SHALL BE EDGE BANDED TO MATCH THE FRONTS.
10. INTERIOR OF DOOR SHALL BE FACED WITH SAME MATERIAL AS THE FRONTS.
11. ALL DRAWERS TO HAVE ACCURRIDE (OR APPROVED EQUAL) - FULL EXTENSION GLIDES.
12. EACH CABINET DOOR TO BE NO LESS THAN 12" WIDE AND NO GREATER THAN 18" WIDE U.O.N.
13. (*) VERIFY ALL EQUIPMENT CLEARANCES. SEE **I020 - I021** ACCESSIBILITY DETAILS FOR ADDITIONAL CLEARANCE INFORMATION.
14. PROVIDE SOFT CLOSE ACCURIDE OR EQUAL HARDWARE ON ALL CABINETS AND DRAWERS.
15. MILLWORK DOORS AND DRAWINGS TO HAVE LOCKING CAPABILITIES.

LEGEND

GLASS:

EXISTING GLASS



SPORTS COURTS SECTION W EQUIPMENT (IN 'DOWN' POSITION) 1

SCALE: 1" = 10'-0"

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. GERVANTES 44466 LICENSE 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

MILLWORK ELEVATIONS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	02/04/2026	PLAN CHECK CORRECTIONS 3
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET

I433

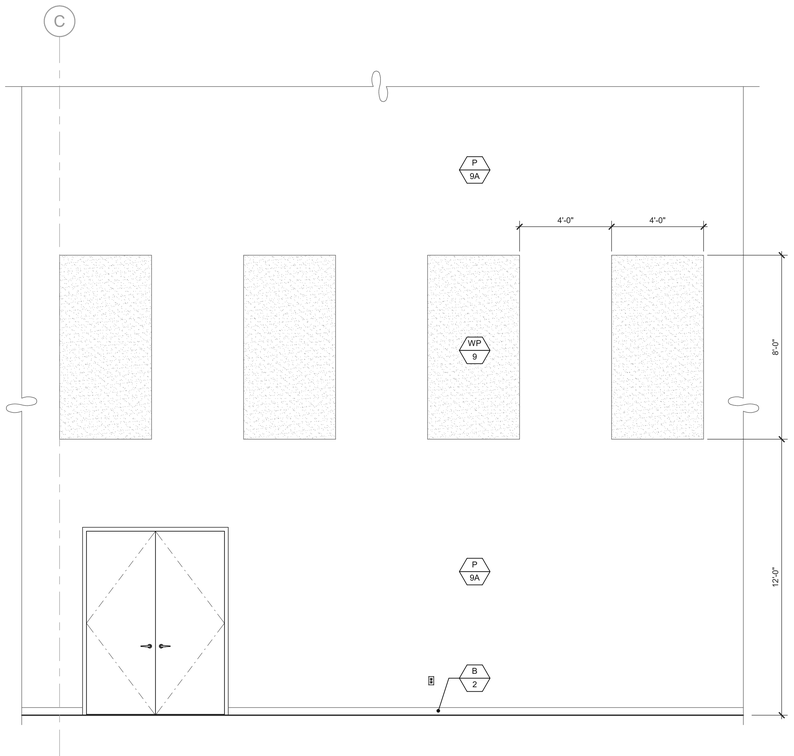
03/30/2026 - PLAN CHECK CORRECTIONS 4

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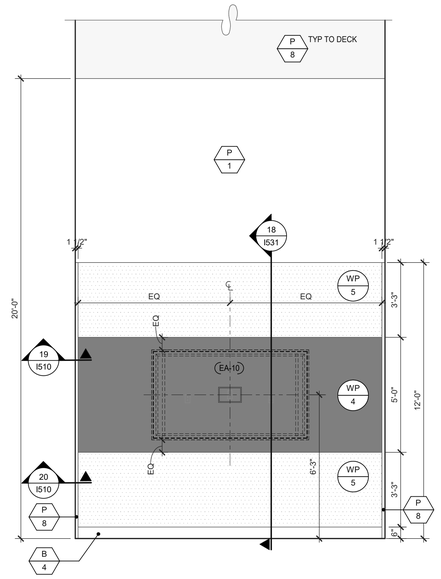
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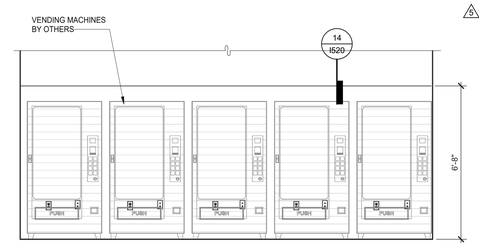
BADMINTON COURT

SCALE: 3/8" = 1'-0" 5

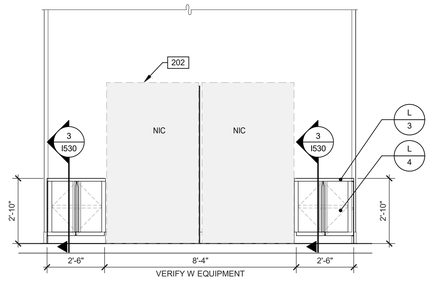


FOOD COURT TV WALL WEST

SCALE: 3/8" = 1'-0" 4



- 3A -



- 3B -

VENDING

SCALE: 3/8" = 1'-0" 3

GENERAL NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

1. SEE PLUMBING DRAWINGS FOR PLUMBING FIXTURE INSTALLATIONS AND SEE **I020** FOR MOUNTING AND CLEARANCES.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE.

MILLWORK CABINETRY NOTES:

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12. EACH CABINET DOOR TO BE NO LESS THAN 12" WIDE AND NO GREATER THAN 16" WIDE U.O.N.
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14. PROVIDE SOFT CLOSE ACCURIDE OR EQUAL HARDWARE ON ALL CABINETS AND DRAWERS.
15. MILLWORK DOORS AND DRAWINGS TO HAVE LOCKING CAPABILITIES.

KEYNOTES: -

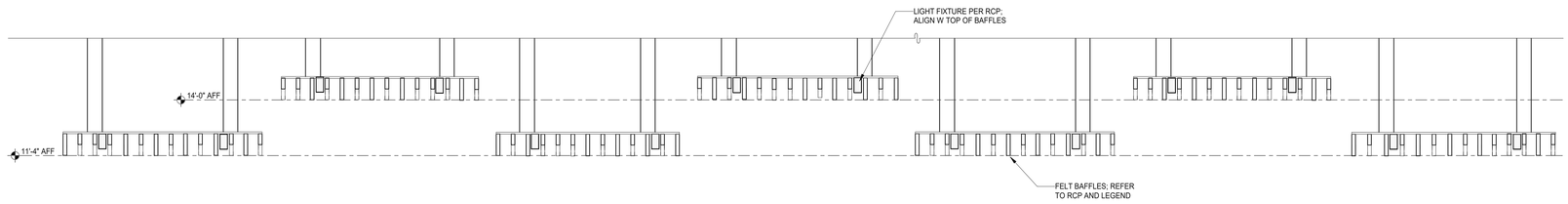
202 REFER TO FOOD SERVICE DRAWINGS FOR EQUIPMENT INFORMATION & LAYOUT .

LEGEND

GLASS:

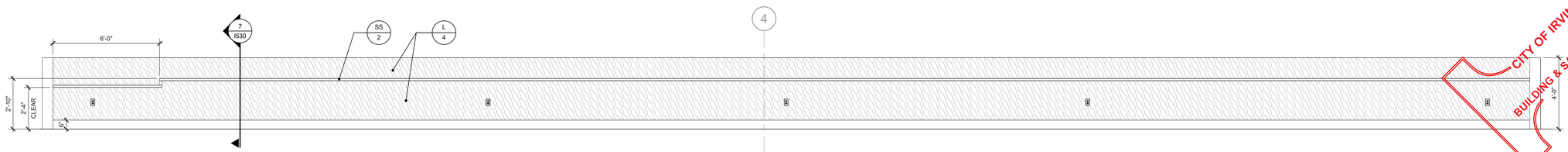
CLEAR, TEMPERED GLASS (1" THICK) PER CBC 2408.3, GLAZING IN MULTIPURPOSE GYMNASIUMS, BASKETBALL COURTS AND SIMILAR ATHLETIC FACILITIES SUBJECT TO HUMAN IMPACT LOADS SHALL COMPLY WITH CATEGORY II OF CPSC 16 CFR PART 1201 OR CLASS A OF ANSI Z97.1

EXISTING GLASS



FOOD COURT BAFFLES

SCALE: 3/8" = 1'-0" 2



FOODCOURT

SCALE: 3/8" = 1'-0" 1

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. CERVANTES C-44000 12/31/2027 RENEWAL 08/31 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

MILLWORK ELEVATIONS

	DATE	REMARKS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
5	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	Approver
DRAWN BY.:	
JOB NO.:	IRV24-6050-00

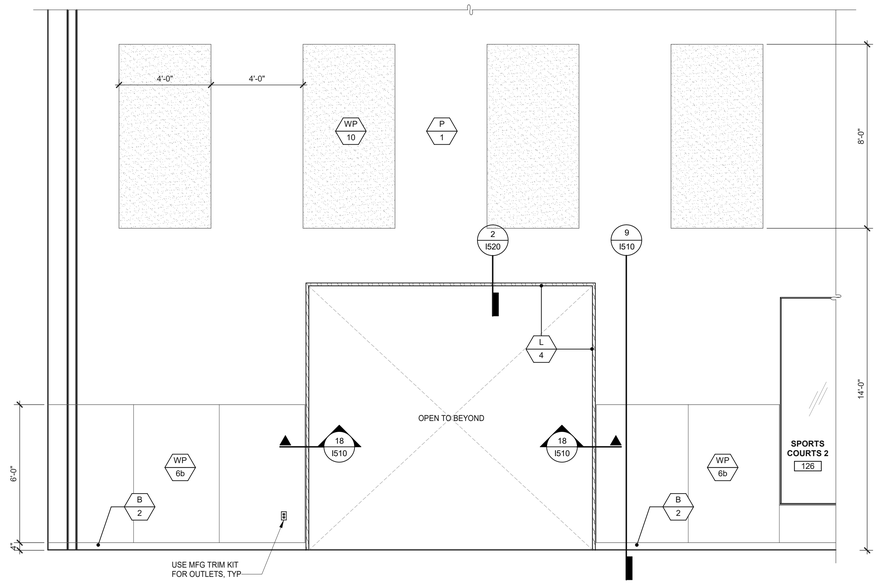
SHEET
I434

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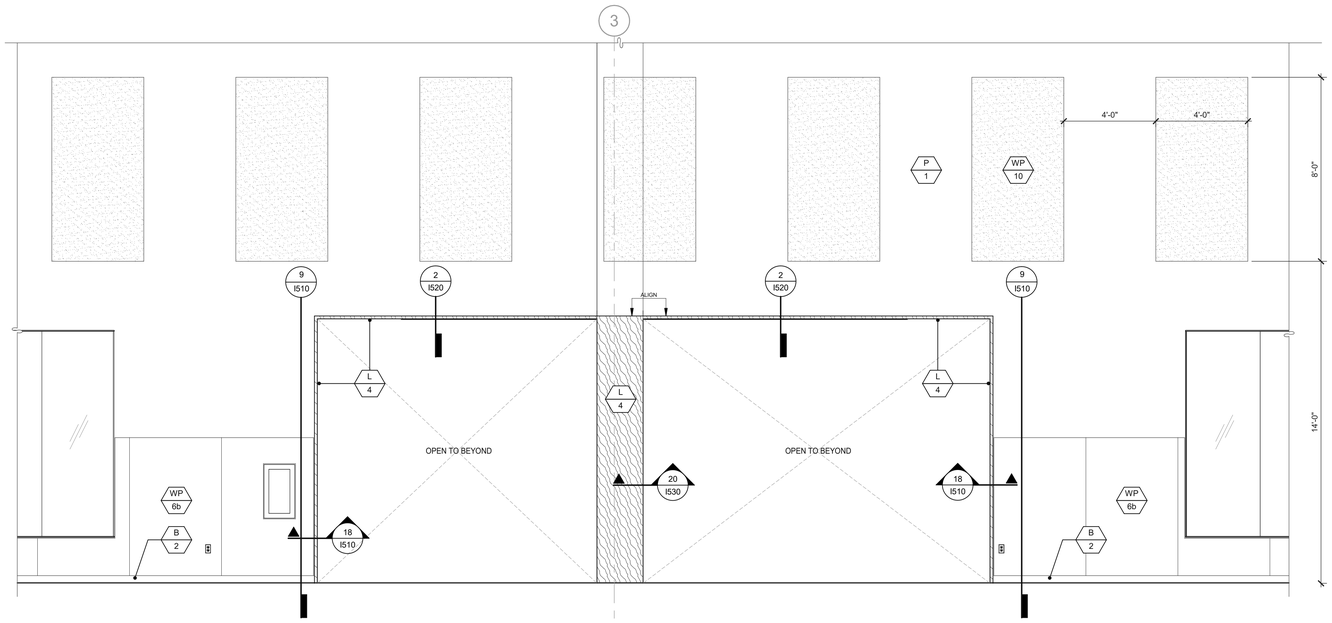
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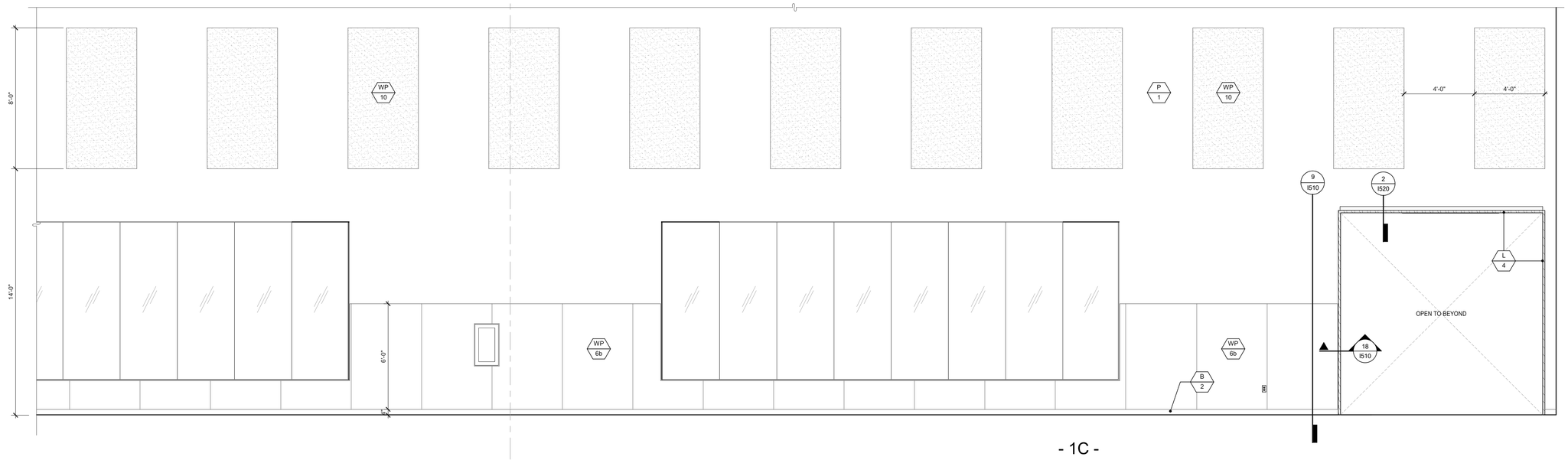
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- 1A -



- 1B -



- 1C -

3/32"=1'-0"

0 4' 8' 16' 24' 48'

SPORTS COURT ELEVATIONS (1)

SCALE: 3/8" = 1'-0"

LEGEND

GLASS:

CLEAR, TEMPERED GLASS (1" THICK) PER CBC 2408.3, GLAZING IN MULTIPURPOSE GYMNASIUMS, BASKETBALL COURTS AND SIMILAR ATHLETIC FACILITIES SUBJECT TO HUMAN IMPACT LOADS SHALL COMPLY WITH CATEGORY II OF CPSC 16 CFR PART 1201 OR CLASS A OF ANSI Z97.1

EXISTING GLASS

GENERAL NOTES

SEE SHEETS **G010 - I010** FOR GENERAL NOTES

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KEYNOTES:

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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LICENSED ARCHITECT ANA L. CERVANTES C-44000 LICENSE EXPIRATION 12/31/2027 RENEWAL DATE 12/31/2025 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

INTERIOR ELEVATIONS

DATE	REMARKS

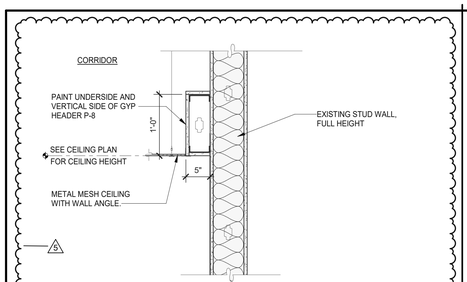
PA/PM:	S. FOX
DRAWN BY.:	A.R.
JOB NO.:	IRV24-6050-00

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I435

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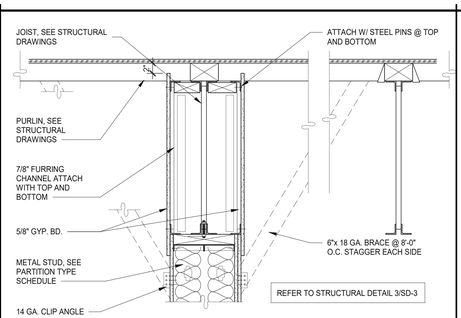
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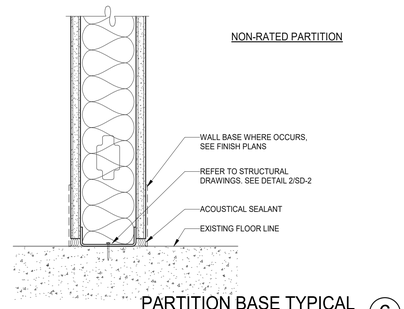
COORIDOR CEILING DETAIL 21

SCALE: 1" = 1'-0"



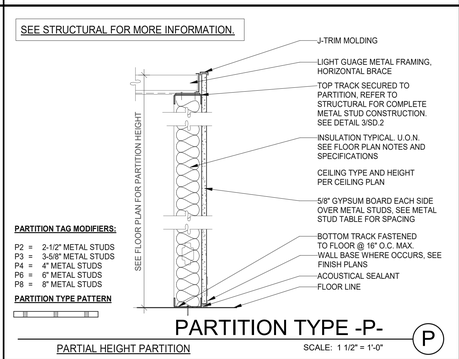
PARTITION AT ROOF JOIST 16

SCALE: 1" = 1'-0"



PARTITION BASE TYPICAL 6

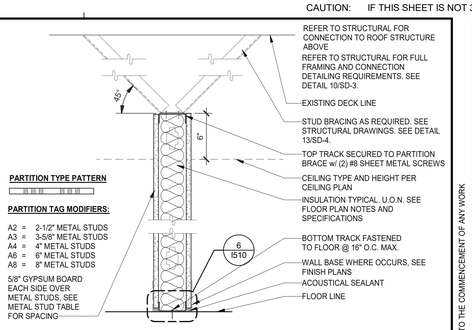
SCALE: 3" = 1'-0"



PARTITION TYPE -P- P

PARTIAL HEIGHT PARTITION

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



PARTITION TYPE -A- A

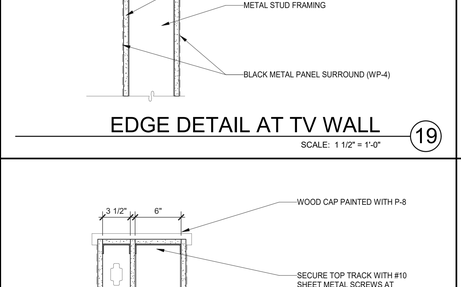
PARTITION TO 6" ABOVE CEILING

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



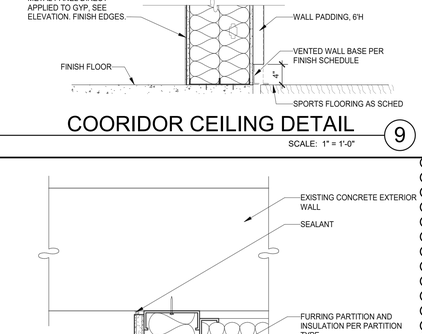
COORIDOR CEILING DETAIL 22

SCALE: 1" = 1'-0"



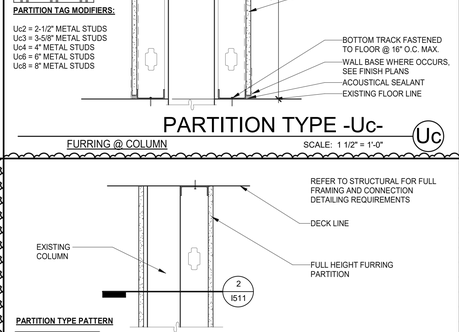
PARTITION AT GIRDER 17

SCALE: 1" = 1'-0"



PARTITION BASE 7

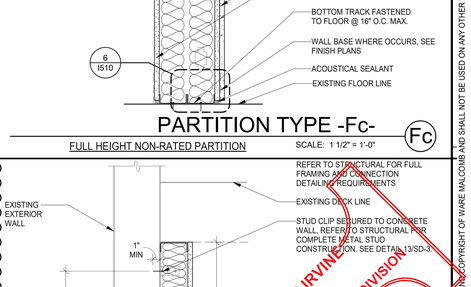
SCALE: 3" = 1'-0"



PARTITION TYPE -L- L

LOW PARTITION

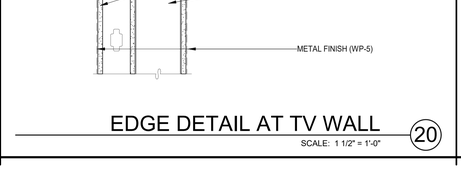
SCALE: 3" = 1'-0"



PARTITION TYPE -F- F

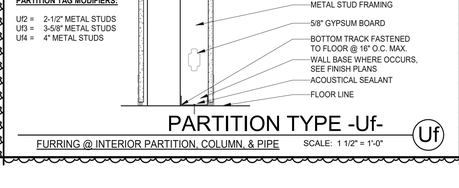
FULL HEIGHT NON-RATED PARTITION

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



METAL SIGNAGE WALL PANEL 18

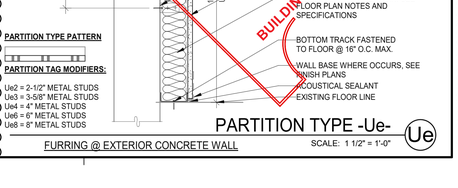
SCALE: 1 1/2" = 1'-0"



PARTITION TYPE -U- U

FURRING @ INTERIOR PARTITION

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



PARTITION TYPE -Fb- Fb

FULL HEIGHT NON-RATED PARTITION

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

EDGE DETAIL AT TV WALL 19

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

COORIDOR CEILING DETAIL 9

SCALE: 1" = 1'-0"

PARTITION TYPE -Uc- Uc

FURRING @ COLUMN

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

PARTITION TYPE -Fc- Fc

FULL HEIGHT NON-RATED PARTITION

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

EDGE DETAIL AT TV WALL 20

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

PARTITION JT. FURRING AT PERIMETER 10

SCALE: 3" = 1'-0"

PARTITION TYPE -Uf- Uf

FURRING @ INTERIOR PARTITION, COLUMN, & PIPE

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

PARTITION TYPE -Ue- Ue

FURRING @ EXTERIOR CONCRETE WALL

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

WARE MALCOMB
10 Edelman
Irvine, CA 92618
P 949.660.9128
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANN L. CERVANTES C-44000 LICENSE/EXPIRATION 12/31/2027 RENEWAL STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

DETAILS

DATE	REMARKS
07/09/2025	ISSUE FOR PLAN CHECK
09/22/2025	PLAN CHECK CORRECTIONS
10/15/2025	PLAN CHECK CORRECTIONS 2
12/05/2025	PLAN CHECK CORRECTIONS 3
01/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I510

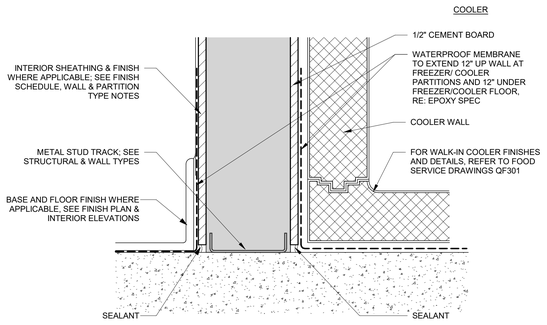
03/30/2026 - PLAN CHECK CORRECTIONS 4

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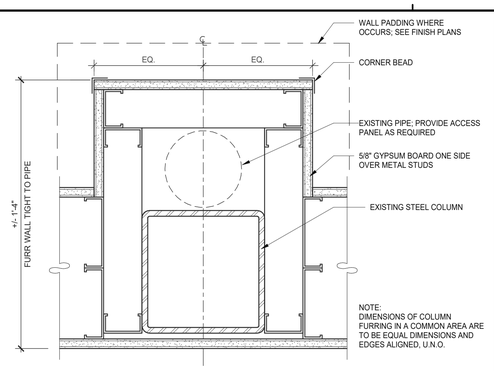
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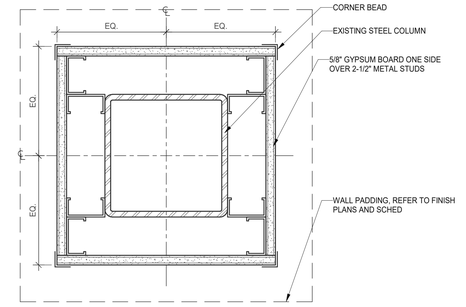
BASE DETAIL @ WALK-IN COOLER 24

SCALE: 3" = 1'-0"

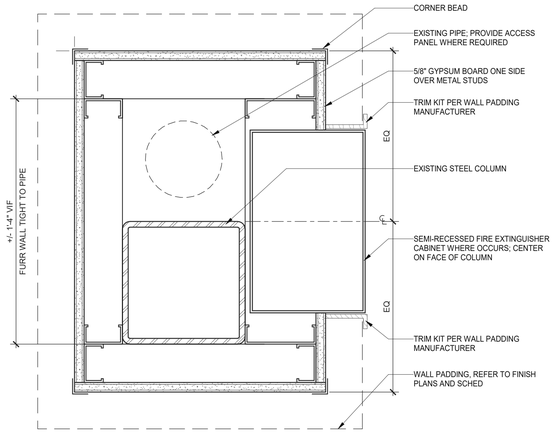


TYP PIPE FURRING AT DOUBLE STUD WALL 2

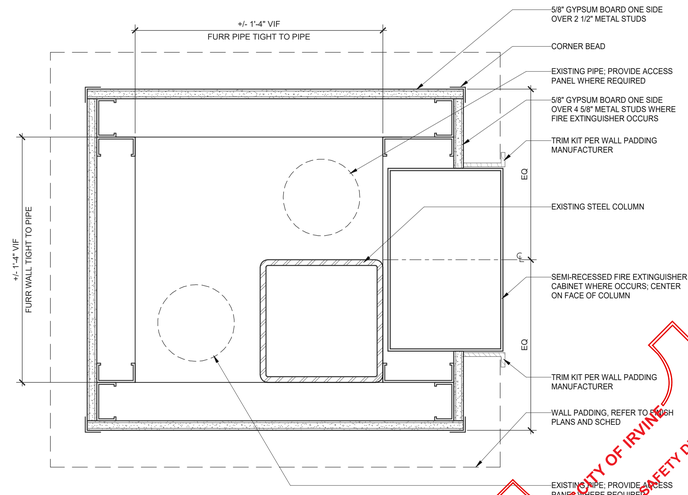
SCALE: 3" = 1'-0"



COLUMN WITH NO PIPES



COLUMN WITH ONE PIPE



COLUMN WITH TWO PIPES

NON-RATED COLUMN FURRING CONDITIONS 1

SCALE: 3" = 1'-0"

CITY OF IRVINE BUILDING & SAFETY DIVISION

WARE MALCOMB
10 Edelman
Irvine, CA 92618
P 949.660.9128
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED ARCHITECT ANA L. CERVANTES C-44400 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

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DRAWN BY.:	K.L./I.L.
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03/30/2026 - PLAN CHECK CORRECTIONS 4

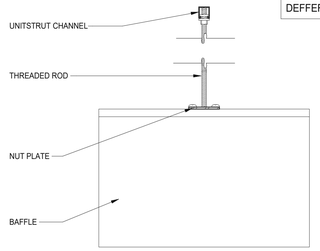
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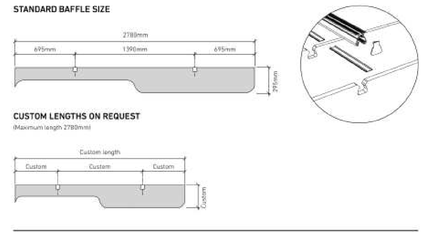
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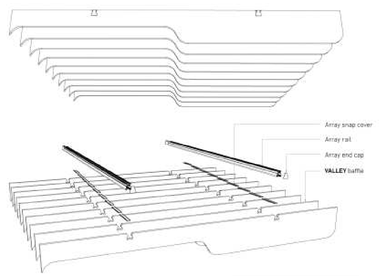
ENGINEERING FOR THIS CEILING TO BE PART OF DEFFERED SUBMITTAL



BAFFLE DETAIL 21

SCALE: 3" = 1'-0"

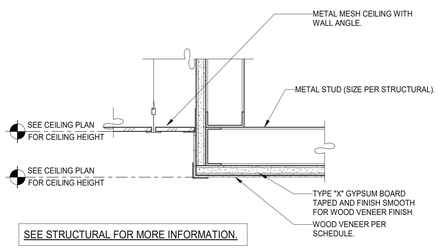




ENGINEERING FOR THIS CEILING TO BE PART OF DEFFERED SUBMITTAL

CEILING BAFFLE DETAILS 17

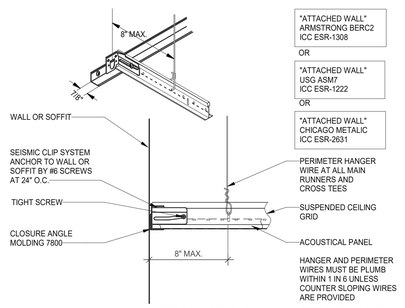
SCALE: 3" = 1'-0"



SEE STRUCTURAL FOR MORE INFORMATION.

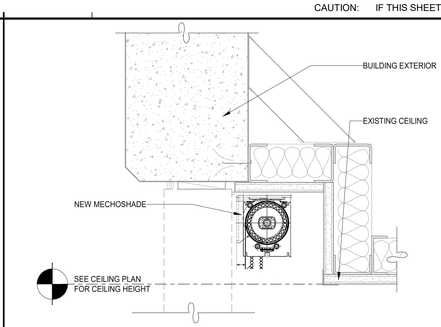
CEILING TRANSITION 11

SCALE: 3" = 1'-0"



ATTACHED CLOSURE ANGLE 6

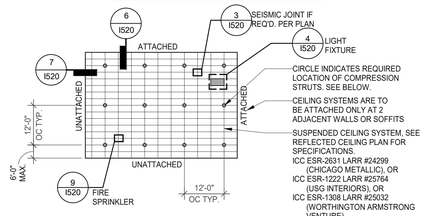
SCALE: 3" = 1'-0"



SOFFIT AT EXISTING PERIMETER WALL 1

SCALE: 3" = 1'-0"

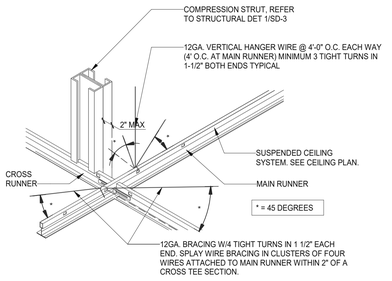
ACOUSTICAL CEILING SUSPENSION SYSTEM



LATERAL FORCE BRACING AND SUSPENSION

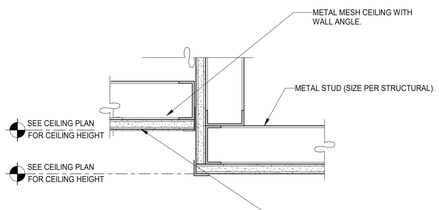
LATERAL FORCE BRACING: A STRUT FASTENED TO THE MAIN RUNNER SHALL BE EXTENDED TO THE STRUCTURAL MEMBERS SUPPORTING THE ROOF OR FLOOR ABOVE. LATERAL FORCE BRACING SHALL BE 12 FEET ON CENTER (MAXIMUM) AND BEGIN NO FARTHER THAN 6 FEET FROM WALLS. LATERAL FORCE BRACING MEMBERS MUST BE SPACED A MINIMUM OF 6" FROM ALL HORIZONTAL PIPING OR DUCT WORK THAT IS NOT PROVIDED WITH BRACING RESTRAINTS FOR HORIZ. FORCES. BRACING WIRES MUST BE ATTACHED TO THE GRID AND TO THE STRUCTURE IN SUCH A MANNER THAT THEY CAN SUPPORT A DESIGN LOAD OF NOT LESS THAN 200 POUNDS OR THE ACTUAL LOADS, WHICHEVER IS GREATER, WITH A SAFETY FACTOR OF 2.

THE FOLLOWING INSTALLATION DETAILS ARE TO BE CONSIDERED TO BE COMPLYING WITH THE ABOVE REQUIREMENTS.
NOTES:
1. WHERE THE ROOF SYSTEM IS COMPOSED OF WOOD BEAMS, PURLINS, AND SUB-PURLINS, THE 2 X 4 SUB-PURLINS ARE NOT TO BE CONSIDERED AS STRUCTURAL MEMBERS SUPPORTING THE ROOF.
2. CEILING SUSPENSION SYSTEM SHALL COMPLY WITH 808 AND 2506.2.1. COMPONENTS SHALL BE ASTM "HEAVY DUTY" CLASS.
3. THE COMPRESSION STRUT SHALL BE VERTICAL, AND SHALL NOT HANG MORE THAN 1 IN 6 OUT-OF-PLUMB.



SUSPENDED CEILING 25

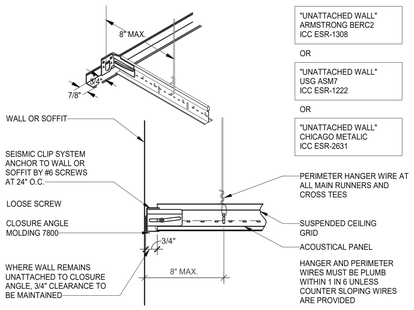
SCALE: 12" = 1'-0"



SEE STRUCTURAL FOR MORE INFORMATION.

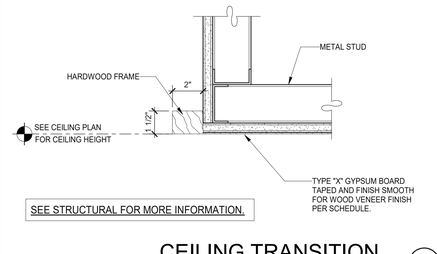
CEILING TRANSITION 12

SCALE: 3" = 1'-0"



UNATTACHED CLOSURE ANGLE 7

SCALE: 3" = 1'-0"



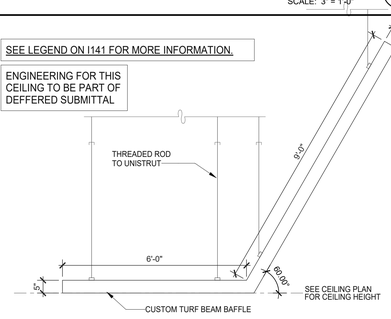
SEE STRUCTURAL FOR MORE INFORMATION.

CEILING TRANSITION 2

SCALE: 3" = 1'-0"

SEE LEGEND ON I141 FOR MORE INFORMATION.

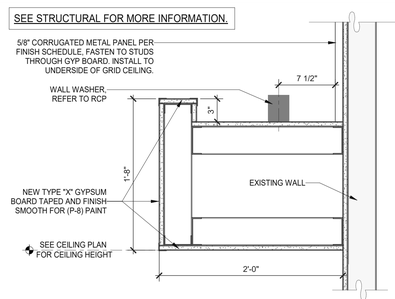
ENGINEERING FOR THIS CEILING TO BE PART OF DEFFERED SUBMITTAL



LOBBY CEILING BAFFLES 18

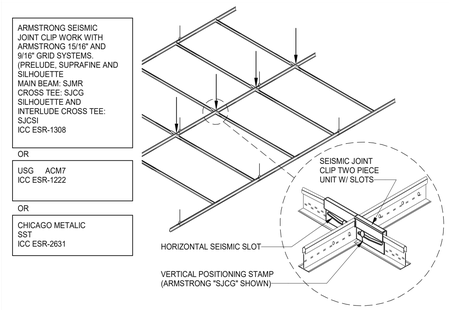
SCALE: 1/2" = 1'-0"

SEE STRUCTURAL FOR MORE INFORMATION.



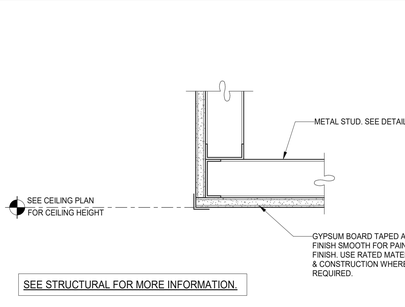
CEILING TRANSITION @ LOBBY 13

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



SEISMIC JOINT CLIP 3

SCALE: 12" = 1'-0"



CEILING TRANSITION @ LOBBY 19

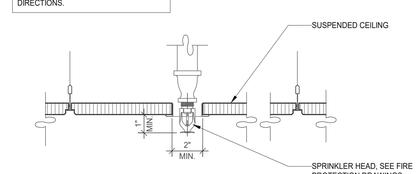
SCALE: 1 1/2" = 1'-0"

SEE STRUCTURAL FOR MORE INFORMATION.

CEILING TRANSITION 14

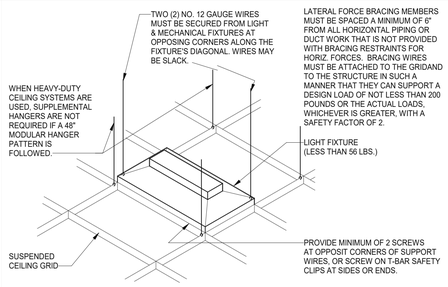
SCALE: 3" = 1'-0"

NOTE:
PROVIDE 2 INCHES OVER SIZED TRIM RINGS FOR SPRINKLERS (AND OTHER PENETRATIONS) TO ALLOW FOR AT LEAST 1" OF MOVEMENT IN ALL DIRECTIONS.



SPRINKLER CEILING PENETRATION 9

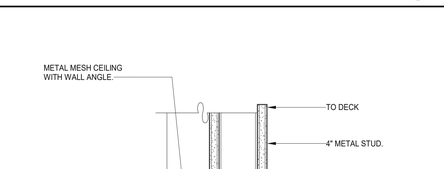
SCALE: 3" = 1'-0"



LIGHT FIXTURE@SUSPENDED CLNG. 4

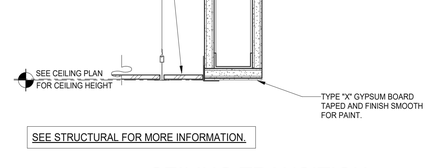
SCALE: 12" = 1'-0"

SEE STRUCTURAL FOR MORE INFORMATION.



CEILING TRANSITION 20

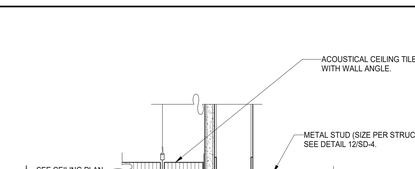
SCALE: 3" = 1'-0"



SEE STRUCTURAL FOR MORE INFORMATION.

CEILING TRANSITION 15

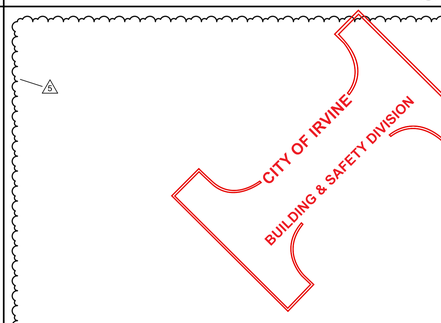
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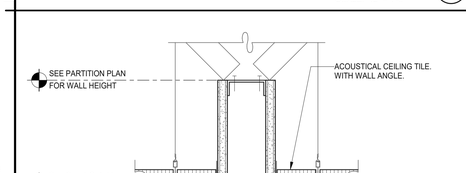


SEE STRUCTURAL FOR MORE INFORMATION.

CEILING TRANSITION 10

SCALE: 3" = 1'-0"





SEE STRUCTURAL FOR MORE INFORMATION.

CEILING TRANSITION 26

SCALE: 3" = 1'-0"

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LICENSED ARCHITECT VIRGINIA ANN L. CERVANTES 040402 LICENSED RENEWAL 12/31/2027 STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
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PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

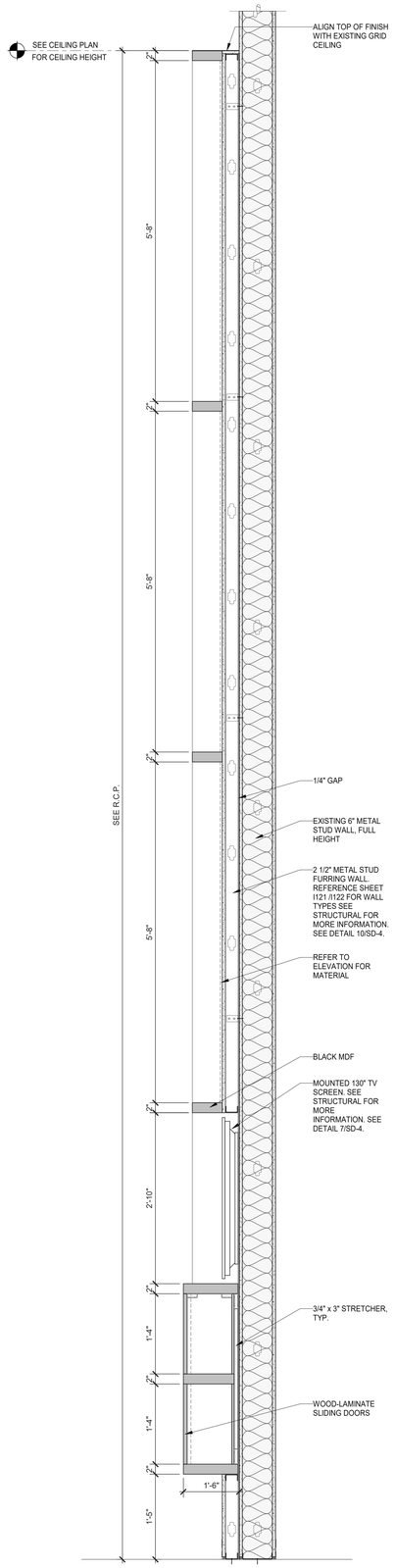
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03/30/2026 - PLAN CHECK CORRECTIONS 4

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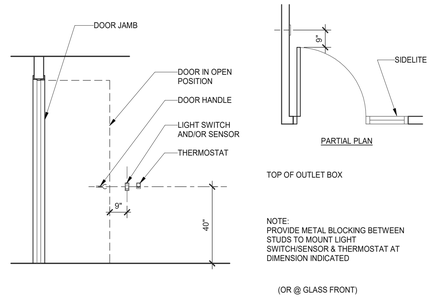
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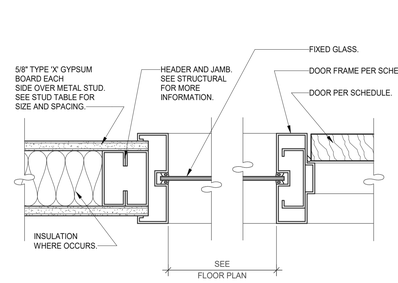
RECESSED SCREEN WALL DETAIL (21)

SCALE: 1" = 1'-0"



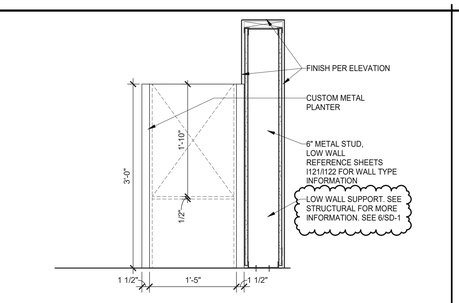
LT. SWITCH / T-STAT @ SIDELITE (16)

SCALE: 3/8" = 1'-0"



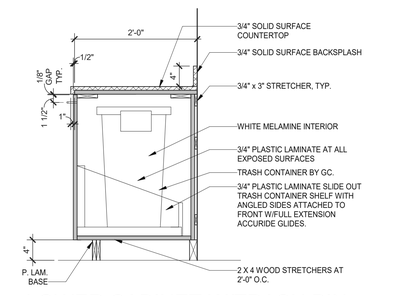
INTEGRAL DOOR & WINDOW JAMB (11)

SCALE: 3" = 1'-0"



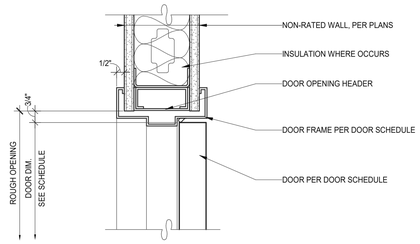
PLANTER DETAIL (6)

SCALE: 1" = 1'-0"



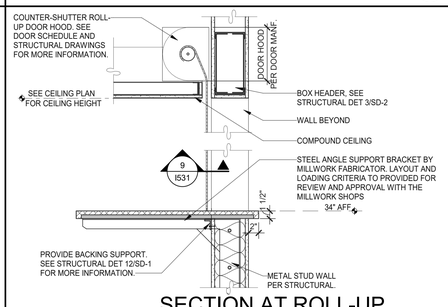
LOWER CABINET W/TRASH BIN (1)

SCALE: 1" = 1'-0"



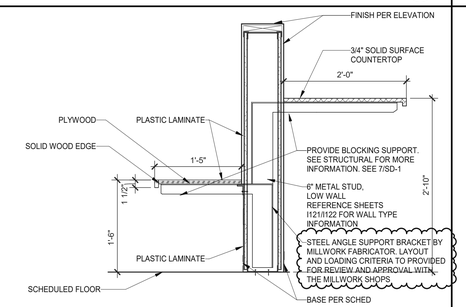
DOOR HEAD (JAMB SIM.) (17)

SCALE: 3" = 1'-0"



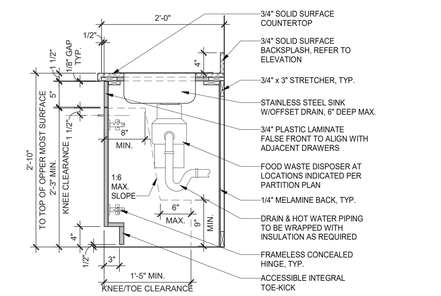
SECTION AT ROLL-UP WINDOW AND COUNTER (12)

SCALE: 1" = 1'-0"



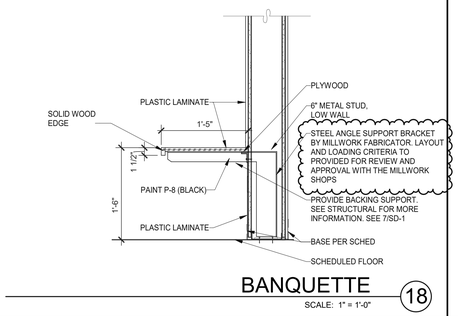
BANQUETTE (7)

SCALE: 1" = 1'-0"



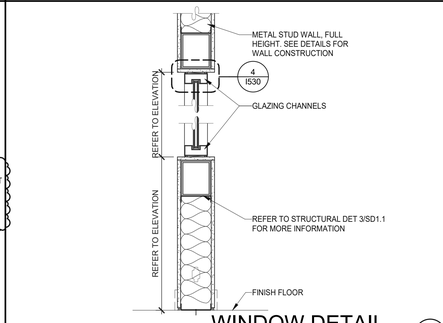
LOWER CABINET AT SINK (2)

SCALE: 1" = 1'-0"



BANQUETTE (18)

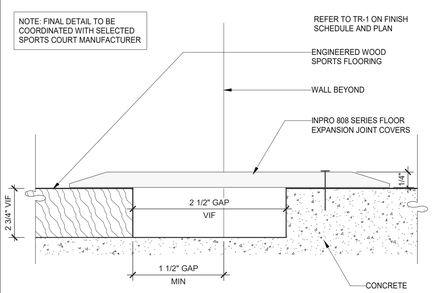
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WINDOW DETAIL (13)

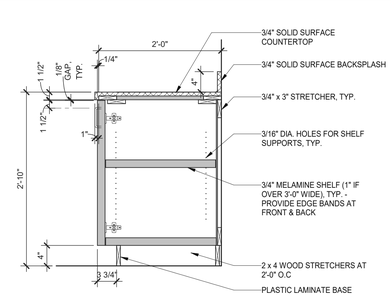
SCALE: 1" = 1'-0"

NOTE: FINAL DETAIL TO BE COORDINATED WITH SELECTED SPORTS COURT MANUFACTURER



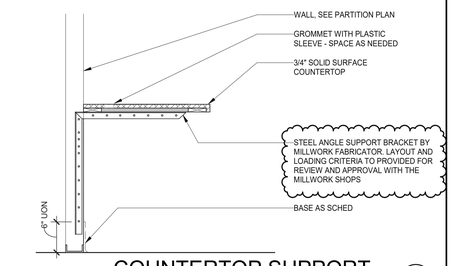
WOOD FLOORING TO CONCRETE (8)

SCALE: 12" = 1'-0"



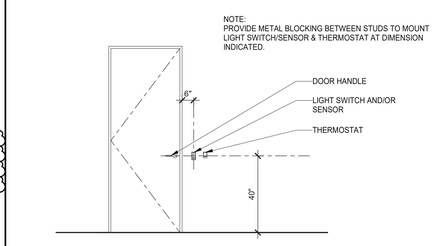
LOWER CABS w/o DRAWERS (3)

SCALE: 1" = 1'-0"



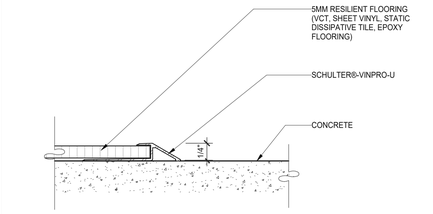
COUNTERTOP SUPPORT (19)

SCALE: 1" = 1'-0"



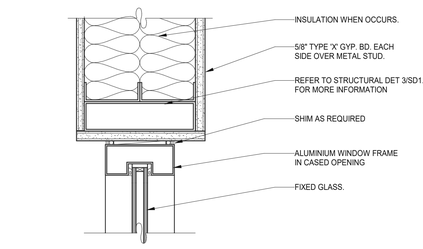
L.T. SWITCH/T-STAT INSTALLATION (14)

SCALE: 3/8" = 1'-0"



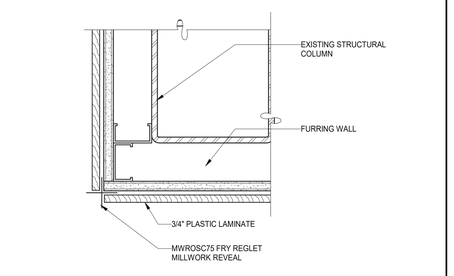
RESILIENT FLOORING TO CONC (9)

SCALE: 12" = 1'-0"



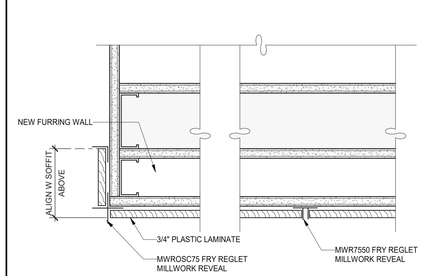
WINDOW HEAD (JAMB & SILL SIM) (4)

SCALE: 3" = 1'-0"



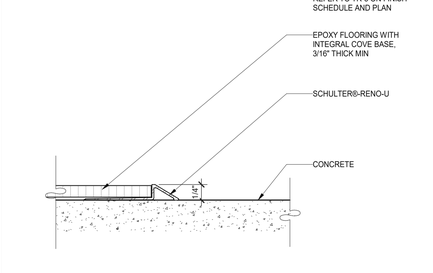
MILLWORK COLUMN CORNER (20)

SCALE: 3" = 1'-0"



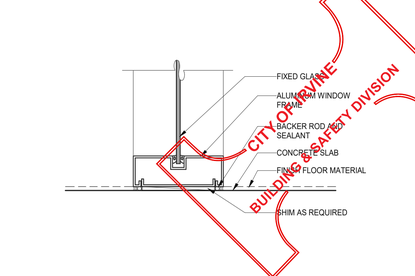
MILLWORK CORNER @ OPENING (15)

SCALE: 3" = 1'-0"



EPOXY FLOORING TO CONC (10)

SCALE: 12" = 1'-0"



WINDOW SILL (5)

SCALE: 3" = 1'-0"

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5	03/06/2026	PLAN CHECK CORRECTIONS 4

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DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

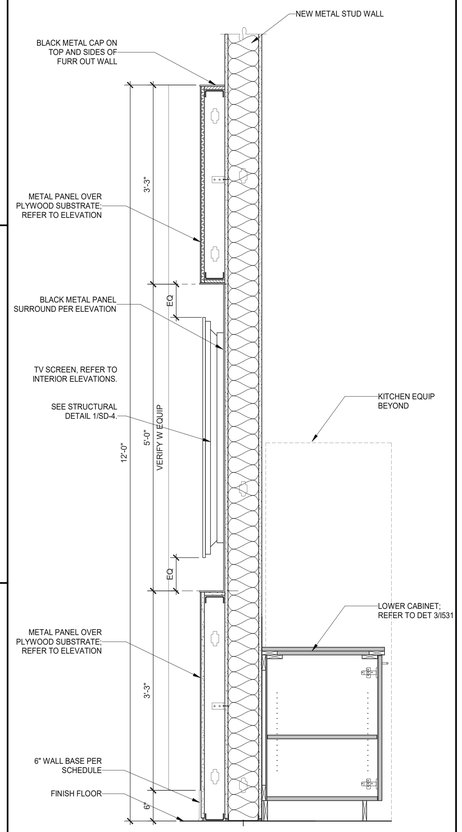
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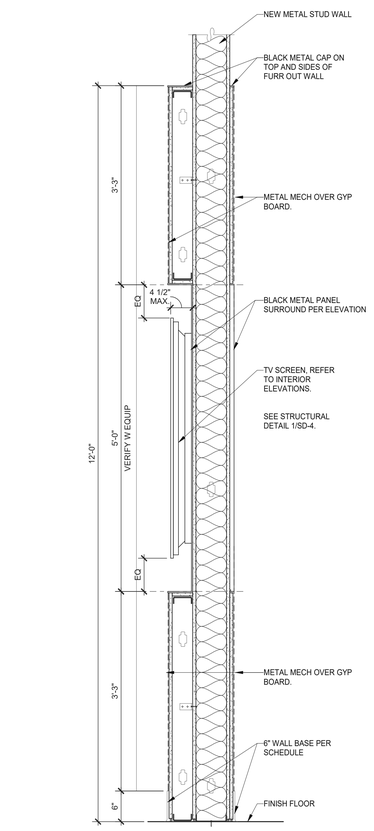
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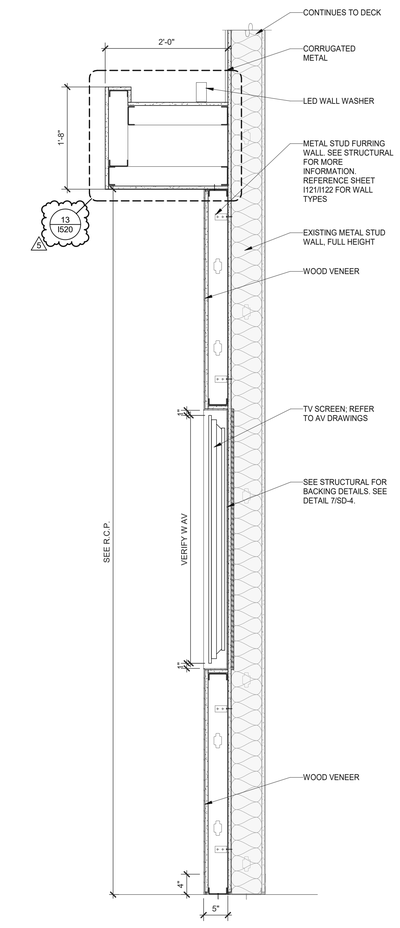
TV SCREEN - FOOD COURT WEST 18

SCALE: 1" = 1'-0"



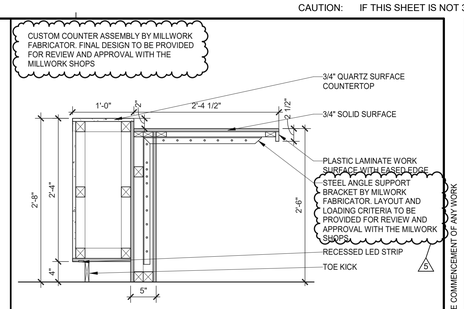
TV SCREEN - FOOD COURT EAST 13

SCALE: 1" = 1'-0"



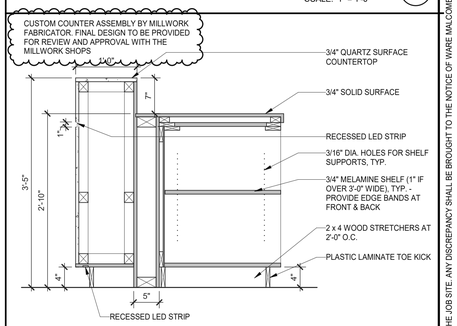
RECESSED SCREEN WALL DETAIL 8

SCALE: 1" = 1'-0"



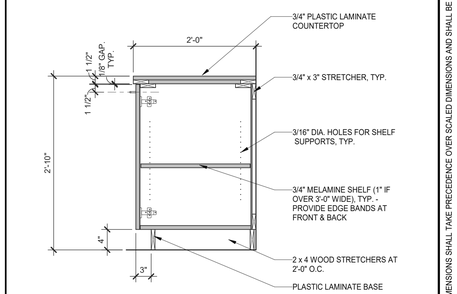
COUNTERTOP SUPPORT 1

SCALE: 1" = 1'-0"



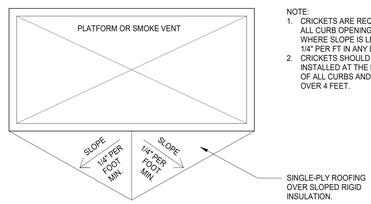
FILE/FILE AT RECEPTION DESK 2

SCALE: 1" = 1'-0"



LOWER CABINETS 3

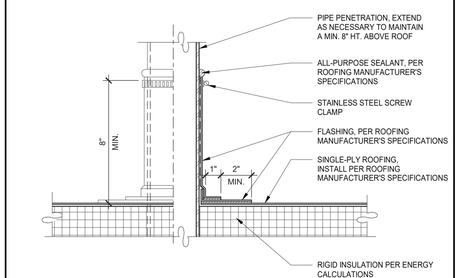
SCALE: 1" = 1'-0"



NOTE:
1. CRICKETS ARE REQUIRED AT ALL CURB OPENING AND WHERE SLOPE IS LESS THAN 1/4" PER FT IN ANY DIRECTION.
2. CRICKETS SHOULD BE INSTALLED AT THE HIGH SIDE OF ALL CURBS AND PLATFORMS OVER 4 FEET.

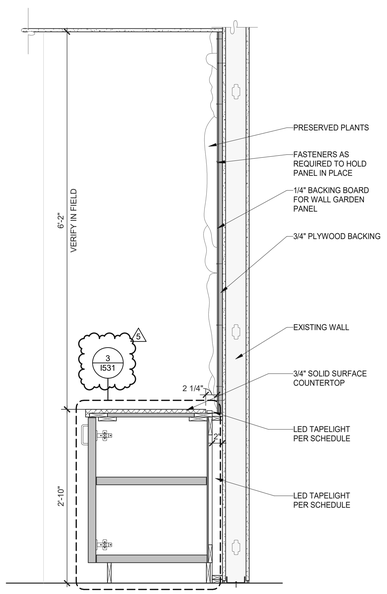
CRICKET 24

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



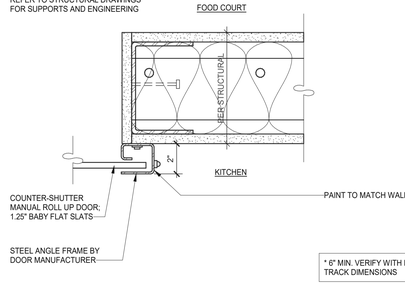
ROOF PENETRATION FLASHING 19

SCALE: 3" = 1'-0"



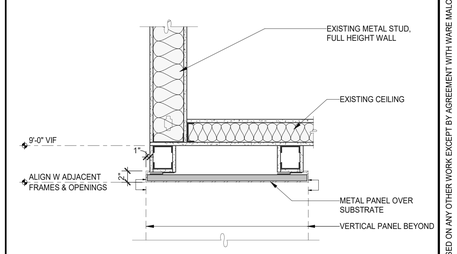
GARDEN ON THE WALL 15

SCALE: 1" = 1'-0"



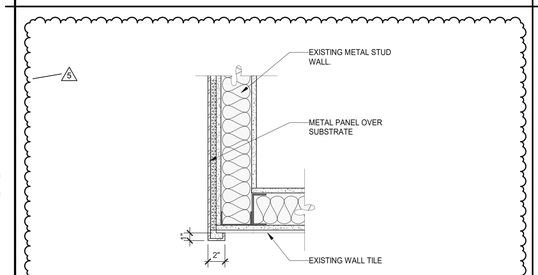
ROLL-UP WINDOW GUIDE 9

SCALE: 3" = 1'-0"



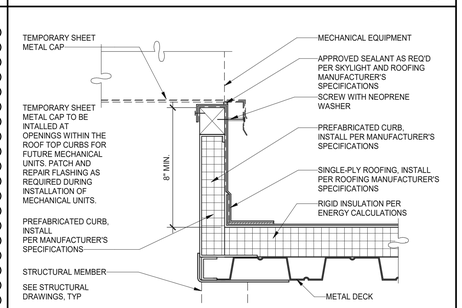
METAL FRAME DETAIL 4

SCALE: 1" = 1'-0"



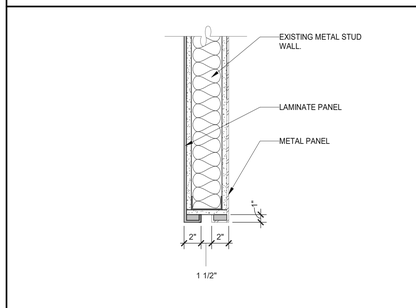
WOOD FRAME DETAIL 25

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



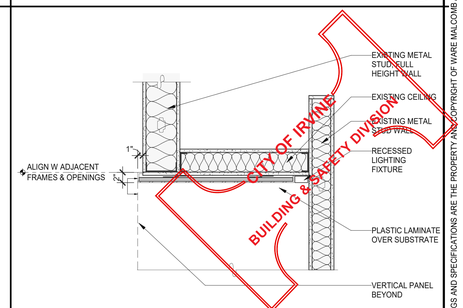
ROOFING @ PREFAB CURB 20

SCALE: 3" = 1'-0"



WOOD TO METAL FRAME DETAIL 10

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



WOOD FRAME DETAIL 5

SCALE: 1" = 1'-0"

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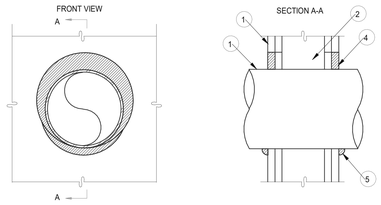
UL/CUL SYSTEM NO. W-L-3065
CABLE BUNDLE THROUGH GYPSUM WALL ASSUMBLY
F-RATING = 1-HR. OR 2-HR.
T-RATING = 0-HR, OR 3/4-HR.

1. GYPSUM WALL ASSEMBLY (UL/CUL CLASSIFIED U300, U400, OR V400) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
2. [NOT SHOWN] WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 2-1/2" WIDE.
3. [OPTIONAL] MAXIMUM 4" NOMINAL DIAMETER EMT, STEEL PIPE (SCHEDULE 5 OR HEAVIER) OR 28 GA. GALVANIZED STEEL SLEEVE (SEE NOTE NO.6 BELOW).
4. CABLE BUNDLE TO CONSIST OF ANY COMBINATION OF THE FOLLOWING (SEE NOTE NO. 5 BELOW):
   A. MAXIMUM 7/C" NO. 12 AWG POWER CABLE WITH PVC JACKET.
   B. MAXIMUM 25 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
   C. MAXIMUM 1/2" DIAMETER RG/U COAXIAL CABLE WITH PVC JACKET.
   D. MAXIMUM 3/C NO. 8 AWG METAL-CLAD CABLE.
   E. MAXIMUM 3/C (+GROUND) NO. 8 AWG COPPER CONDUCTOR CABLE (ROMEX).
   F. MAXIMUM 5/8 DIAMETER FIBER-OPTIC CABLE WITH PVC JACKET.
   G. MAXIMUM ½" DIAMETER COPPER GROUND CABLE WITH OR WITHOUT PVC JACKET.
   H. MAXIMUM 1-1/4" DIAMETER SINGLE OR MULTIPLE CONDUCTOR TYPE MI CABLE (SEE NOTE NO.4 BELOW).
   I. ANY CABLES, METAL-CLAD CABLES, OR ARMORED CABLES CURRENTLY LISTED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.
   J. MAXIMUM 4/C (+GRND) NO. 300 KCMIL ALUMINUM SER CABLE.
   K. MAXIMUM RG 6/U COAXIAL CABLE WITH FLUORINATED ETHYLENE JACKET.
5. MINIMUM 5/8" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT, CP 601S ELASTOMERIC FIRESTOP SEALANT, CP 606 FLEXIBLE FIRESTOP SEALANT OR CP 618 FIRESTOP PUTTY STICK.
6. MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT, CP 601S ELASTOMERIC FIRESTOP SEALANT, CP 606 FLEXIBLE FIRESTOP SEALANT OR CP 618 FIRESTOP PUTTY STICK APPLIED AT WALL/SLEEVE INTERFACE WHEN STEEL SLEEVE EXTENDS BEYOND ONE OR BOTH SIDES OF WALL.

NOTES:
1. MAXIMUM DIAMETER OF OPENING WITH SLEEVE=5-1/2".
2. MAXIMUM DIAMETER OF OPENING WITHOUT SLEEVE=4".
3. ANNULAR SPACE = MINIMUM 0",MAXIMUM 1".
4. A MINIMUM 1/8" SEPARATION SHOULD BE MAINTAINED BETWEEN MI CABLES AND ANY OTHER TYPES OF CABLE.
5. CABLES TO FILL MAXIMUM 45% OF CROSS-SECTIONAL AREA OF OPENING.
6. WHEN SCHEDULE 5 STEEL PIPE OR EMT IS USED, OPEN ENDED SLEEVE MAY WXTEND UP TO 18" BEYOND WALL SURFACE. AS AN OPTION, SCGEDULE 5 STEEL PIPE OR EMT SLEEVE MAY EXTEND CONTINUOUSLY BEYOND ONE WALL SURFACE.
7. WHEN NO SLEEVE IS USED, CABLES MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 FROM PERPENDICULAR.

FIRESTOP SYSTEMS 13
SCALE: 1 1/2" = 1'-0"

UL/CUL SYSTEM NO. W-L-1054
METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY
F-RATING = 1-HR. OR 2-HR.
T-RATING = 0-HR.
L-RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L-RATING AT 400 DIGREE F = 4 CFM/SQ. FT.

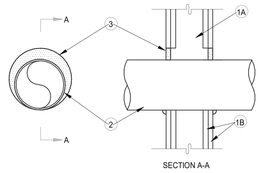


1. GYPSUM WALL ASSEMBLY (UL/ULC CLASSIFIED U300 OR U400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
2. (NOT SHOWN). WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 2-1/2" WIDE.
3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   A. MAXIMUM 30" DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
   B. MAXIMUM 30" DIAMETER CAST IRON PIPE.
   C. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
   D. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
   E. MAXIMUM 4" NOMINAL DIAMETER EMT.
4. MINIMUM 5/8" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
5. MINIMUM ½" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT.

NOTES:
1. MAXIMUM DIAMETER OF OPENING:
   A. 32-1/4" FOR STEEL STUD WALLS.
   B. 14-1/2" FOR WOOD STUD WALLS.
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 2-1/4".
3. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT OF CONTACT.
4. PIPE MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREE FROM PERPENDICULAR.

FIRESTOP SYSTEMS 10
SCALE: 1 1/2" = 1'-0"

SYSTEM NO. W-L-1054
F RATINGS-1 AND 2 HR (SEE ITEMS 1 AND 3)
T RATING - 0 HR.
L RATING AT AMBIENT - LESS THAN 1 CFM/ SQ FT

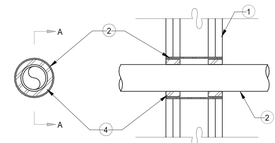


SECTION A-A

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. (64 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC. WHEN STEEL STUDS ARE USED AND THE DIAM OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4 TO 6 IN. (102 TO 152 MM) WIDER AND 4 TO 6 IN. (102 TO 152 MM) HIGHER THAN THE DIAM OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2 TO 3 IN. (51 TO 76 MM) CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE FRAMING ON ALL FOUR SIDES.
   B. GYPSUM BOARD* — 5/8 IN. (16 MM) THICK, 4 FT (122 CM) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 32-1/4 IN. (819 MM) FOR STEEL STUD WALLS. MAX DIAM OF OPENING IS 14-1/2 IN. (368 MM) FOR WOOD STUD WALLS. THE F AND FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY.
2. THROUGH-PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 IN. TO MAX 2-1/4 IN. (57 MM). PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 30 IN. (762 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 30 IN. (762 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. (152 MM) . DIAM STEEL CONDUIT.
   D. COPPER TUBING — NOM 6 IN. (152 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 6 IN .(152 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 5/8 IN. (16 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. (13 MM) DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT

FIRESTOP SYSTEMS 7
SCALE: 1 1/2" = 1'-0"

SYSTEM NO. W-L-1054
F RATING — 1 AND 2 HR (SEE ITEM 1)
T RATING — 0 HR



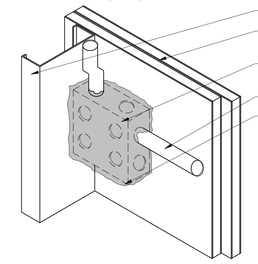
SECTION A-A

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. (64 MM) WIDE AND SPACED MAX 24 IN. OC.
   B. GYPSUM BOARD* — 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 3-1/2 IN.
2. METALLIC SLEEVE OPTIONAL — NOM 3-1/2 IN. (OR SMALLER) CYLINDRICAL SLEEVE FABRICATED FROM MIN 0.016 IN. THICK (28 GAUGE) GALV SHEET STEEL AND HAVING A MIN 1-1/4 IN. LAP SALONG LONGITUDINAL SEAM. LENGTH OF SLEEVE TO BE INSTALLED FLUSH WITH WALL SURFACES.
3. THROUGH PENETRANTS — ONE NONMETALLIC PIPE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE SPACE BETWEEN PIPE AND PERIPHERY OF OPENING SHALL BE MIN 1/4 IN. TO MAX 11/16 IN. THE FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES MAY BE USED:
   A. POLYVINYL CHLORIDE (PVC) PIPE — NOM 2 IN. DIAM (OR SMALLER) SCHEDULE 40 PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
   B. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE — NOM 2 IN. DIAM (OR SMALLER) SDR13.5 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.
4. FILL, VOID OR CAVITY MATERIALS* — SEALANT — FOR 1 HR F RATING, MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. FOR 2 HR F RATING, MIN 1-1/4 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.
HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC — FS-ONE SEALANT

*BEARING THE UL CLASSIFICATION MARK

FIRESTOP SYSTEMS 4
SCALE: 1 1/2" = 1'-0"

WALL OPENING PROTECTIVE MATERIALS (CLIV)



WALL OPENING PROTECTIVE MATERIALS (CLIV)

THIS CATEGORY COVERS PROPRIETARY COMPOSITIONS WHICH ARE USED TO MAINTAIN THE HOURLY RATINGS OF FIRE RESISTIVE WALLS AND PARTITIONS CONTAINING FLUSH MOUNTED DEVICES SUCH AS OUTLET BOXES, ELECTRICAL CABINETS AND MECHANICAL CABINETS. THE INDIVIDUAL CLASSIFICATIONS INDICATE THE SPECIFIC APPLICATIONS AND THE METHOD OF INSTALLATION FOR WHICH THE MATERIALS HAVE BEEN EVALUATED. THE BASIC STANDARD USED TO INVESTIGATE PRODUCTS IN THIS CATEGORY IS ANSI/UL 263, "FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS

LOOK FOR CLASSIFICATION MARKING ON PRODUCT

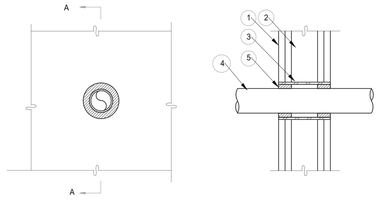
THE CLASSIFICATION MARKING OF UNDERWRITERS LABORATORIES INC (SHOWN BELOW) ON THE PRODUCT CONTAINER IS THE ONLY METHOD PROVIDED BY UNDERWRITERS LABORATORIES INC. TO IDENTIFY WALL OPENING PROTECTIVE MATERIALS PRODUCED UNDER ITS CLASSIFICATION AND FOLLOW-UP SERVICE.

UNDERWRITERS LABORATORIES INC.
CLASSIFIED
WALL OPENING PROTECTIVE MATERIAL
FIRE RESISTANCE CLASSIFICATION
SEE PRODUCT CATEGORY
IN UL RESISTANCE DIRECTORY

SPECIFIED TECHNOLOGIES INC. R14288
SUITE 2 200 EVANS WAY, SOMERVILLE NJ. 08876
MINNESOTA MINING & MFG CO. R9700 (N)
3M CENTER, ST. PAUL, MN 55144
TYPE MPP-4S+ MOLDABLE PUTTY PADS FOR USE WITH MAX 4-11/16" FLUSH DEVICE UL LISTED METALLIC OUTLET BOXES IN FIRE RATED GYPSUM WALLBOARD WALL ASSEMBLIES FRAMED WITH MIN. 3-1/2" WIDE WOOD OR STEEL STUDS AND CONSTRUCTED AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE FIRE RESISTANCE DIRECTORY. MOLDABLE PUTTY PADS ARE TO BE INSTALLED TO COMPLETELY COVER THE EXTERIOR SURFACES OF THE BOX WITHIN THE STUD CAVITY WITH A BALL OF THE PUTTY MATERIAL USED TO PLUG THE END OF EACH ELECTRICAL METALLIC TUBE OR CONDUIT AT ITS CONNECTION TO THE BOX. A MIN. 1/8" THICKNESS OF PUTTY MATERIAL IS REQUIRED ON THE EXTERIOR SURFACES OF FLUSH DEVICE BOXES IN 1 AND 2 HR FIRE RATED WALL AND PARTITION DESIGNS. WHEN THE MOLDABLE PUTTY PAD OUTLET BOX PROTECTIVE MATERIAL IS USED AS DIRECTED, THE HORIZONTAL SEPARATION BETWEEN OUTLET BOXES ON OPPOSITE SIDES OF THE WALL MAY BE LESS THAN 24 IN. PROVIDED THAT THE OUTLET BOXES ARE NOT INSTALLED BACK TO BACK.

WALL OPENING 1
SCALE: 12" = 1'-0"

UL SYSTEM NO. W-L-2128
PLASTIC PIPE THROUGH GYPSUM WALL ASSUMBLY
F-RATING = 1-HR. OR 2-HR.
T-RATING = 0-HR.

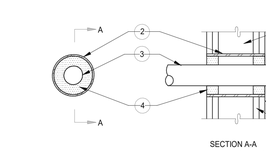


1. GYPSUM WALL ASSEMBLY (UL CLASSIFIED U300 OR U400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
2. [NOT SHOWN] WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 2-1/2" WIDE.
3. [OPTIONALSHEET METAL PIPE SLEEVE (MAXIMUM3-1/2" DIAMETER, MINIMUM 28 GA. THICKNESS, WITH MINIMUM 1-1/4" LAP ALONG LONGITUDINAL SEAM).
4. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
   A. MAXIMUM 2" NORMAL DIAMETER PVC LASTIC PIPE (SCHEDULE 40)(CELLULAR OR SOLID CORE) (CLOSED OR VENTED PIPING SYSTEM).
   B. MAXIMUM 2" NORMAL DIAMETER CPVC LASTIC PIPE (SDR 13.5)(CLOSED PIPING SYSTEM ONLY).
5. HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT :
   A. MINIMUM 5/8" DEPTH OF SEALANT FOR 1-HR. FIRE-RATING.
   B. MINIMUM 1-1/4" DEPTH OF SEALANT FOR A 2-HR. FIRE-RATING.

NOTES:
1. MAXIMUM DIAMETER OF OPENING =3-1/2".
2. ANNULAR SPACE = MINIMUM 1/4",MAXIMUM 11/16".
3. PIPE MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 FROM PERPENDICULAR.

FIRESTOP SYSTEMS 11
SCALE: 1 1/2" = 1'-0"

SYSTEM NO. W-L-2075
F RATINGS-1 AND 2 HR (SEE ITEMS 4)
T RATING - 0 AND 2 HR (SEE ITEMS 4)
L RATING AT AMBIENT - LESS THAN 1 CFM/ SQ FT
L RATING AT 400F - 4 CFM/SQ FT



SECTION A-A

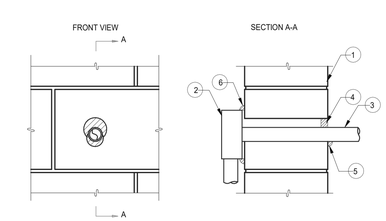
1. FLOOR OR WALL ASSEMBLY – THE FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS – WALL FRAMING MAY CONSIST OF EITHER WOOK STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC.
   B. GYPSUM BOARD* – NOM 5/8 IN. THICK GYPSUM WALLBOARD, AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 4 IN.
2. METALLIC SLEEVE – (OPTIONAL) – NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 (OR THINNER) STEEL PIPE CAST INTO WALL ASSEMBLY WITH JOINT COMPOUND AND INSTALLED FLUSH WITH WALL SURFACES.
3. ELECTRICAL NONMETALLIC TUBING+ –NOM 2 IN. DIAM (OR SMALLER) CORRUGATED WALL ELECTRICAL NINMETALLIC TUBING (ENT) CONSTRUCTED OF POLYVINYL CHLORIDE (PVC). TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. A NOM ANNULAR SPACE OF ¼ IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM. SEE ELECTRICAL NONMETALLIC TUBING (FKHU) CATEGORY IN THE ELECTRICAL CONSTRUCTION MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS.
4. FILL, VOID OR CAVITY MATERIAL* – SEALANT – INSTALLED SYMMETRICALLY ON BOTH SIDES OF THE WALL. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH EACH END OF THE STEEL SLEEVE AT THE THICKNESS SHOWN IN THE TABLE BELOW:

F RATING HR	T RATING HR	FILL MTL DEPTH IN.
1	0	5/8
1	2	1-1/4

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI ING – FS-ONE SEALANT
+BEARING THE UL LISTING MARK
+BEARING THE UL CLASSIFICATION MARKING

FIRESTOP SYSTEMS 8
SCALE: 1 1/2" = 1'-0"

UL/CUL SYSTEM NO. W-L-1214
METAL PIPE THROUGH CONCRETE WALL OR BLOCK WALL ASSEMBLY
F-RATING = 2-HR.
T-RATING = 0-HR.

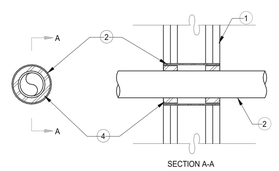


1. CONCRETE WALL ASSEMBLY (2-HR,FIRE-RATING):
   A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL(MINIMUM 5-5/8" THICK).
   B. ANY UL/CUL CLASSIFIED CONCRETE BLOCK WALL.
2. STEEL PULL OR JUNCTION BOX (MIN. 16 GA.) MOUNTED FLUSH OR MAXIMUM 1/4"FROM WALL SURFACE.
3. MAXIMUM 1" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
4. MINIMUM 5/8" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
5. MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.
6. MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AROUND ENTIRE PERIMETER OF PULL OR JUNCTION BOX, OVERAPPING MINIMUM 1/2" ONTO WALL AND PULL OR JUNCTION BOX.

NOTES: 1. DIAMETER OF OPENING TO BE MINIMUM 1/2" LARGER THAN OUTSIDE DIAMEETER OF PENETRANT,WITH A MAXIMUM DIAMETER OF 2-1/4".
2 ANNULAR SPACE = MINIMUM 0", MAXIMUM 1-1/8".

FIRESTOP SYSTEMS 5
SCALE: 1/4" = 1'-0"

SYSTEM NO. W-L-2128
F RATING — 1 AND 2 HR (SEE ITEM 1)
T RATING — 0 HR



SECTION A-A

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC.
   B. GYPSUM BOARD** — 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 3-1/2 IN.
2. METALLIC SLEEVE OPTIONAL — NOM 3-1/2 IN. (OR SMALLER) CYLINDRICAL SLEEVE FABRICATED FROM MIN 0.016 IN. THICK (28 GAUGE) GALV SHEET STEEL AND HAVING A MIN 1-1/4 IN. LAP SALONG LONGITUDINAL SEAM. LENGTH OF SLEEVE TO BE INSTALLED FLUSH WITH WALL SURFACES.
3. THROUGH PENETRANTS — ONE NONMETALLIC PIPE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE SPACE BETWEEN PIPE AND PERIPHERY OF OPENING SHALL BE MIN 1/4 IN. TO MAX 11/16 IN. THE FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES MAY BE USED:
   A. POLYVINYL CHLORIDE (PVC) PIPE — NOM 2 IN. DIAM (OR SMALLER) SCHEDULE 40 PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
   B. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE — NOM 2 IN. DIAM (OR SMALLER) SDR13.5 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.
4. FILL, VOID OR CAVITY MATERIALS* — SEALANT — FOR 1 HR F RATING, MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. FOR 2 HR F RATING, MIN 1-1/4 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.
HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC — FS-ONE SEALANT

*BEARING THE UL CLASSIFICATION MARK

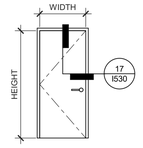
FIRESTOP SYSTEMS 2
SCALE: 1 1/2" = 1'-0"

SYSTEM NO. W-L-5029

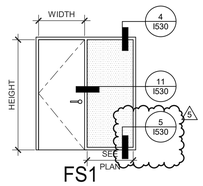
1. WALL ASSEMBLY — THE 1, 2 OR 3 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 2-1/2 IN. (64 MM) WIDE FOR 1 AND 2 HR F AND FH RATING AND 3-1/2 IN. (89 MM) WIDE FOR 3 HR F AND FH RATING AND SPACED MAX 24 IN. (610 MM) OC.
   B. GYPSUM BOARD* — MIN 5/8 IN. (16 MM) THICK WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 18-5/8 IN. (473 MM). THE HOURLY F AND FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 12 IN. (305 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 12 IN. (305 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. COPPER TUBING — NOM 6 IN. (152 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING. WHEN THE HOURLY F OR FH RATING OF THE FIRESTOP SYSTEM IS 3 HR, THE NOM DIAM OF COPPER TUBE SHALL NOT EXCEED 4 IN. (102 MM).
   D. COPPER PIPE — NOM 6 IN. (152 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE. WHEN THE HOURLY F OR FH RATING OF THE FIRESTOP SYSTEM IS 3 HR, THE NOM DIAM OF COPPER PIPE SHALL NOT EXCEED 4 IN. (102 MM).
3. PIPE COVERING* — NOM 1, 1-1/2 OR 2 IN. (25, 38 OR 51 MM) THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF OR 56 KG/M3) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT. FOR 1 AND 2 HR F AND FH RATINGS, THE ANNULAR SPACE BETWEEN INSULATED PENETRANT AND PERIPHERY OF OPENING SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1-7/8 IN. (48 MM). FOR 3 HR F AND FH RATINGS, THE ANNULAR SPACE SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1-1/4 IN. (32 MM). SEE PIPE AND EQUIPMENT COVERING — MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIAL DIRECTORY FOR THE NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED. THE HOURLY T, FT, FTH RATINGS OF THE FIRESTOP SYSTEM ARE 1/2 HR FOR 1 HR RATED WALLS AND 1 HR FOR 2 HR RATED WALLS. FOR 3 HR RATED WALLS, THE HOURLY T, FT AND FTH RATINGS WHEN STEEL AND IRON PIPES ARE USED ARE 1 HR. FOR 3 HR RATED WALLS, THE HOURLY T, FT AND FTH RATINGS WHEN COPPER PENETRANTS ARE USED ARE 1-1/4 HR FOR 2 IN. (51 MM) THICK PIPE COVERING AND 0 HR FOR PIPE COVERING THICKNESS LESS THAN 2 IN. (51 MM).
   3A. PIPE COVERING* — (NOT SHOWN) — AS AN ALTERNATE TO ITEM 3, MAX 2 IN. (51 MM) THICK CYLINDRICAL CALCIUM SILICATE (MIN 14 PCF) UNITS SIZED TO THE OUTSIDE DIAM OF THE PIPE OR TUBE MAY BE USED. PIPE INSULATION SECURED WITH STAINLESS STEEL BANDS OR MIN 18 AWG STAINLESS STEEL WIRE SPACED MAX 12 IN. (305 MM) OC. WHEN THE ALTERNATE PIPE COVERING IS USED, THE T AND FT RATING SHALL BE AS SPECIFIED IN ITEM 3 ABOVE.
   SEE PIPE AND EQUIPMENT COVERING — MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WIT

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

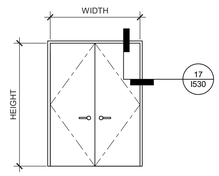
DOOR TYPES



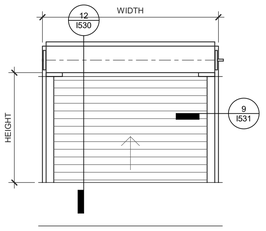
F1
SOLID FLUSH



FS1
SOLID FLUSH
WITH SIDELIGHT



F2
DOUBLE FLUSH



RU1
ROLL UP WINDOW

VF1
VINYL FENCE DOOR

DOOR SCHEDULE

DOOR NO.	ROOM NAME	DOOR TYPE ELEVATION	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR SPECIFICATION	FRAME SPECIFICATION	FIRE RATING (MINUTES)	HARDWARE GROUP	OPERATING HARDWARE	DOOR COMPONENTS PANIC DEVICE	CARD READER	CLOSER S. SURFACE X. CONCEALED	DOUBLE DOORS COORD.	DOUBLE DOORS ASTRAGAL	SEALS A. ACOUSTIC S. SMOKE W. WEATHER	DOOR BOTTOM	HOLD OPENS	DOOR STOP FLOOR O. OVERHEAD W. WALL	KICKPLATES	COAT HOOK	DOOR KEYNOTES
110A	OFFICE	F1	3'-0"	8'-0"	D1	FR1		B1	1b											X	X	
110B	STORAGE	F1	3'-0"	8'-0"	D1	FR1		B1	1a											X		
110C	KITCHEN	F1	3'-0"	8'-0"	D1	FR1		B1	1a		X	X						F		X		
110D	KITCHEN	RU1	8'-0"	5'-4"	D2	FR3							SEE DOOR HARDWARE GROUPINGS ON I611 AND I612									1
110E	KITCHEN	RU1	8'-0"	5'-4"	D2	FR3																1
121A	MULTI-PURPOSE	F2	6'-0"	8'-0"	D1	FR1		B1	1a		X	S										
121B	MULTI-PURPOSE	FS1	3'-0"	8'-0"	D1	FR1		B1	1b			X						F				
135	SPORTS COURT 5	F2	6'-0"	8'-0"	D1	FR2		B1	3b			X										
137	FENCE ENCLOSURE	VF1	3'-6"	6'-0"	D3					PH										X		2

PER HARDWARE SPECIFICATIONS SECTION BELOW, U.O.N.

NOTE: AT EXISTING DOORS WHICH REMAIN, HARDWARE INDICATED IN THIS SCHEDULE IS NEW AND TO BE ADDED TO THE EXISTING ASSEMBLY.

(X) LETTER IN PARENTHESIS INDICATES EXISTING COMPONENT.

DOOR KEYNOTES

DOOR HARDWARE SPECIFICATIONS

DOOR HARDWARE SPECIFICATIONS ON SHEET I612

HARDWARE GROUPS

SEE DOOR HARDWARE GROUPS ON SHEET I611

DOOR AND FRAME SPECIFICATIONS

D1 DOOR: WOOD
MANUFACTURER: MARSHFIELD
STYLE/SERIES: SIGNATURE SERIES
CONSTRUCTION: SOLID CORE 5-PLY STAINGRADE WOOD VENEER.
FACE MATERIAL: WHITE MAPLE, QUARTERED, SLIP MATCHED
FINISH: SLIP MATCHED
THICKNESS: 1 3/4"

D2 DOOR: ROLL UP DOOR
MANUFACTURER: ALPINE
STYLE/SERIES: COUNTER-SHUTTER
CONSTRUCTION: STEEL
FINISH: EXOSHIELD, COLOR T.B.D.
SLATS: 1 1/4" BABY FLAT SLATS

D3 DOOR: VINYL FENCE
MANUFACTURER: IRVINE FENCE INC.
STYLE/SERIES: PRIVACY FENCE
CONSTRUCTION: VINYL
FINISH: VINYL COLOR TO MATCH SW7622 HOMBURG GRAY

FR1 FRAME: ALUMINUM
MANUFACTURER: WESTERN INTEGRATED
MATERIAL: CLEAR ANODIZED ALUMINUM

FR2 FRAME: STEEL
MANUFACTURER: TIMELY
MATERIAL: STEEL
FINISH: ALUMITONE # SC108

FR3 FRAME: STEEL
MANUFACTURER: ALPINE, COUNTER-SHUTTER
MATERIAL: STEEL
FINISH: MATCH ADJACENT WALL

DOOR KEYNOTES

1. LOCKING MECHANISM PER ROLL UP DOOR MFG
2. LOCKING MECHANISM PER FENCE MFG

GENERAL NOTES

1. SEE SHEET I010 FOR GENERAL DOOR NOTES.
2. ALL HARDWARE SHALL MEET ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES.
3. REFER TO THE FLOOR PLANS AND SPECIFICATIONS (IF PROVIDED) FOR ADDITIONAL DOOR INFORMATION.
4. ALL DOOR FRAMES TO BE FACTORY FINISHED, U.O.N.
5. RATED DOORS SHALL HAVE AUTOMATIC CLOSERS AND COMPLY WITH REQUIREMENTS OF ALL GOVERNING CODES AND STANDARDS.
6. ALL NEW DOORS AND FRAMES SHALL MATCH EXISTING, U.O.N.
7. HOLLOW METAL DOORS TO BE PAINTED SAME COLOR AS THE ADJACENT WALL; FINISH TO BE SEMI-GLOSS, U.O.N.
8. HOLLOW METAL DOOR FRAMES TO BE PAINTED SAME COLOR AS THE ADJACENT WALL; FINISH TO BE SEMI-GLOSS, U.O.N.
9. HOLLOW METAL FRAMES TO BE WELDED TYPE, U.O.N.
10. WOOD AT DOORS TO BE STAINED TO MATCH ARCHITECT'S SAMPLE.
11. DOOR FRAMES TO BE WESTERN INTEGRATED/TIMELY.
12. TENANT TO PROVIDE KEYING AFTER OCCUPANCY

SEE SHEET A010 FOR GENERAL DOOR NOTES

1. REFER TO THE FLOOR PLAN AND SPECIFICATIONS (IF PROVIDED) FOR ADDITIONAL DOOR INFORMATION.
2. SOLID CORE TO BE LAMINATED WITH WOOD VENEER.
3. DOOR FRAMES TO BE WESTERN INTEGRATED/TIMELY.
4. HOLLOW METAL DOORS TO BE PAINTED SAME COLOR AS THE ADJACENT WALL; FINISH TO BE SEMI-GLOSS. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
5. PROVIDE RATED WIRE GLASS IN RATED ASSEMBLIES, U.O.N.
6. FIELD VERIFY OPENING WIDTH AND HEIGHT FOR ALL NEW DOORS IN EXISTING OPENINGS.
7. ALL HOLLOW METAL FRAMES TO BE WELDED TYPE, U.O.N.
8. RATED DOORS SHALL HAVE AUTOMATIC CLOSERS AND COMPLY WITH REQUIREMENTS OF ALL GOVERNING CODES & STANDARDS.
9. THE MAXIMUM OPENING FORCE ON ALL FIRE DOORS SHALL BE 15 POUNDS. (CBC 11B-404.2.9)
10. MAXIMUM OPENING FORCE ON ALL DOORS SHALL BE 5 LBS. (CBC 11B-404.2.9)
11. ALL SIDE HINGED FIRE DOOR AND FRAME ASSEMBLIES SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C. FIRE DOOR AND FRAME ASSEMBLIES SHALL BE LABELED IN ACCORDANCE WITH CBC 716.1(2) BASED ON THE TYPE AND HOUR RATING OF THE WALL ASSEMBLY. FIRE DOOR ASSEMBLIES SHALL BE LABELED BY AN APPROVED AGENCY IN ACCORDANCE WITH NFPA 80 AND CBC TABLE 716.1(2). THE LABEL SHALL BE PERMANENT AND SHALL IDENTIFY THE NAME OF THE MANUFACTURER, THE TEST STANDARD AND THE RATED MARKING. FIRE DOOR FRAMES SHALL BE APPROVED FOR THE INTENDED APPLICATION AND SHALL MATCH THE FIRE RATING FOR ONE OF THE DOOR ASSEMBLY REQUIRED BY CBC TABLE 716.1(2)
12. ALL EXTERIOR DOORS ARE SELF-CLOSING AND ALL WINDOWS ARE RATED AND NON-OPENING.

CITY OF IRVINE BUILDING & SAFETY DIVISION

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WARE MALCOMB
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ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

REGISTERED ARCHITECT ANA L. CERVANTES C-44008 12/31/2027 RENEWAL DATE STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

DOOR SCHEDULE AND DETAILS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
3	09/22/2025	PLAN CHECK CORRECTIONS
4	02/04/2026	PLAN CHECK CORRECTIONS 3
5	02/20/2026	CITY SET ISSUANCE
6	03/06/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I610

03/30/2026 - PLAN CHECK CORRECTIONS 4

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Set #1.0
Doors: 110A

4.0	Hinge	FBB179 (NRP as Req'd)	26D	BES
1.0	Mortise Lock	45H 7 AB 3 H CORMAX (Offc/Entry)		BES
1.0	Protection Plate	PP0050 10" x 2" LDW B4E CSK	US32D	ABH
4.0	Coat Hook	A2016	S4/BSP	ABH
4.0	Silencers	AB608CA	Clear	ABH

Set #2.0
Doors: 110B

4.0	Hinge	FBB179 (NRP as Req'd)	26D	BES
1.0	Mortise Lock	45H 7 D 3 H CORMAX (Storeroom)	630	BES
1.0	Protection Plate	PP0050 10" x 2" LDW B4E CSK	US32D	ABH
4.0	Silencers	AB608CA	Clear	ABH

Set #3.0
Doors: 110C

4.0	Hinge	FBB179 (NRP as Req'd)	26D	BES
1.0	Mortise Lock	45H 7 D 3 H CORMAX (Storeroom)	630	BES
1.0	Electric Strike	F2164 F2LM	32D	RCI
1.0	Overhead Concealed Closer	RTS 30	689	DKA
1.0	Protection Plate	PP0050 10" x 2" LDW B4E CSK	US32D	ABH
1.0	Floor Stop	AB441H	US26D	ABH
4.0	Silencers	AB608CA	Clear	ABH
1.0	Power Supply	DKPS-2A		DKA
1.0	Door Position Switch	9540	B	RCI
1.0	Wiring Harness	WH-192P Electric Strike to Power Supply		BES
1.0	Card Reader	By access Control Integrator		

NOTE: DESCRIPTION OF OPERATION: Door(s) normally closed and locked. Access by valid credential at card reader or by mechanical key override. Free egress at all times.

Set #4.0
Doors: 137, 110D, 110E

REMOVED FROM PROJECT

NOTE: Verify cylinder requirement with roll-up / fencing mfg.

Set #5.0
Doors: 121A

7.0	Hinge	FBB179 (NRP as Req'd)	26D	BES
1.0	Hinge	CE FBB179 12C (Electric)	26D	BES
1.0	Flushbolt	1864P (Semi-Auto)	US26D	ABH
1.0	Dust Proof Strike	1870	US26D	ABH
1.0	Mortise Lock	45H 7 D 3 H CORMAX (Storeroom)	630	BES
1.0	Electric Strike	F2164 F2LM	32D	RCI
1.0	Coordinator	3722	US28	ABH
1.0	Door Closer	EHD90 16 AF90P (Tri-pac)	689	BES
1.0	Door Closer	EHD90 16 SIS90 (Reg Stop Arm)	689	BES
2.0	Protection Plate	PP0050 10" x 1" LDW B4E CSK	US32D	ABH
1.0	Wall Stop	AB402 / AB404	US26D	ABH
2.0	Silencers	AB608CA	Clear	ABH
1.0	Power Supply	DKPS-2A		DKA
2.0	Door Position Switch	9540	B	RCI
1.0	Wiring Harness	WH-LAR Power Transfer to Electric Strike		BES
1.0	Wiring Harness	WH-192P Power Transfer to Power Supply		BES
1.0	Card Reader	By access Control Integrator		

NOTE: DESCRIPTION OF OPERATION: Door(s) normally closed and locked. Access by valid credential at card reader or by mechanical key override. Free egress at all times.

Set #6.0
Doors: 121B

4.0	Hinge	FBB179 (NRP as Req'd)	26D	BES
1.0	Exit Device	99 L 996L 03 (Classroom)	US26D	VON
1.0	Rim Cylinder	12E 7 2 CORMAX	626	BES
1.0	Overhead Concealed Closer	RTS 30	689	DKA
1.0	Protection Plate	PP0050 10" x 2" LDW B4E CSK	US32D	ABH
1.0	Wall Stop	AB402 / AB404	US26D	ABH
4.0	Silencers	AB608CA	Clear	ABH

Set #7.0
Doors: 135

8.0	Hinge	FBB179 (NRP as Req'd)	26D	BES
1.0	Mullion	KR 9954	689	VON
1.0	Exit Device	99 L 996L 03 (Classroom)	US26D	VON
1.0	Exit Device	99 EO (Exit Only)	US26D	VON
1.0	Rim Cylinder	12E 7 2 CORMAX	626	BES
1.0	Mortise Cylinder	1E 7 4 CORMAX	626	BES
2.0	Overhead Concealed Closer	RTS 30	689	DKA
2.0	Protection Plate	PP0050 10" x 2" LDW B4E CSK	US32D	ABH
1.0	Gasketing	5100N Mullion		NGP

END OF SECTION

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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LICENSED ARCHITECT ANA L. CERVANTES C-44000 12/31/2027 RENEWAL STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

DOOR SPECIFICATIONS

	DATE	REMARKS
3	07/09/2025	ISSUE FOR PLAN CHECK
	02/04/2026	PLAN CHECK CORRECTIONS 3

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
I611

03/30/2026 - PLAN CHECK CORRECTIONS 4

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d. Construction Control Keys: 2 each.
e. Control Keys if New System: 2 each.
8. Provide key collection envelopes, receipt cards, and index cards in quantity suitable to manage number of keys.
9. Deliver keys with identifying tags to Owner by security shipment direct from manufacturer.
10. Permanent Keys and Cores: Stamped with applicable key marking for identification. Do not include actual key cuts within visual key control marks or codes. Stamp permanent keys "Do Not Duplicate."
11. Include installation of permanent cores and return construction cores to hardware supplier. Construction cores and keys to remain property of hardware supplier.

C. Products:
1. Patented:
a. CORMAX.

2.17 FINISHES

A. Finishes: Identified in Hardware Sets.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.
B. Correct all defects prior to proceeding with installation.
C. Verify that electric power is available to power operated devices and of correct characteristics.

3.02 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and applicable codes.
B. Install hardware using the manufacturer's fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.
C. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80.
D. Install hardware for smoke and draft control doors in accordance with NFPA 105.
E. Use templates provided by hardware item manufacturer.
F. Do not install surface mounted items until application of finishes to substrate are fully completed.
G. Wash down masonry walls and complete painting or staining of doors and frames.
H. Complete finish flooring prior to installation of thresholds.
I. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
1. Mounting heights in compliance with ADA Standards:
a. Locksets: 40-5/16 inch (1024 mm).
b. Push Plates/Pull Bars: 42 inch (1067 mm).
c. Deadlocks (Deadbolts): 48 inch (1219 mm).
d. Exit Devices: 40-5/16 inch (1024 mm).
e. Door Viewer: 43 inch (1092 mm); standard height 60 inch (1524 mm).

3.03 FIELD QUALITY CONTROL

A. Perform field inspection and testing under provisions of Section 014000 - Quality Requirements.
B. Provide an Architectural Hardware Consultant (AHC) to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.04 ADJUSTING

A. Adjust work under provisions of Section 017000 - Execution and Closeout Requirements.
B. Adjust hardware for smooth operation.
C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.05 CLEANING

A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.

3.06 HARDWARE SETS

Manufacturer list

ABH	Architectural Builders Hardware
BES	Best
DKA	dormakaba Architectural
NGP	National Guard Products
RCI	Rutherford Controls Inc
VON	VON DUPRIN

Option list

Code:	Name:
2" LDW	2" Less Door Width
PC90	PC90 Full Size Plastic
D	Storeroom Function
1" LDW	1" Less Door Width
AVB	AVB Advanced Variable Backchk
EHD90	EHD9000 Series Closer
10" x	10" tall
30	Hinge Hung, Single Acting, Wood Door and Aluminum Frame (Non-Handed)
CORMAX	CORMAX
EHD9016AF90P689	EHD9016AF90P689
SIS90	SIS90 HD regTJ comp
FBB179	FBB179>8LL BRNG FL MRT STD WT
Mullion	Provide at the mullion
CHW	CHW>COMMERCIAL HINGES
16	16 adjustable size 1-6
AF90P	AF90P Stard flat m tri-pack
2	Standard Length
7	7 Pin
4SX45	4.5X4.5>
KR	Keyed Removeable
4	Standard Mortise
3	No label saved for the current or all languages
EHD9016SIS90689	EHD9016SIS90689
EO	Exit Only
03	03 Lever Style
996L	Lever
AB	Office Function
F2LM	Plug in Latch Monitor
NRP	NRP>NON-REMOVABLE PINS
L	Lever, 06 Standard

Finish list

Code:	Name:
	Gray Silicone
689	689 Aluminum
US26D	Satin Chrome
8	Black
630	Satin stainless steel
626	Satin chromium plated
Clear	Clear
US26D	Chrome, Satin
S4/BSP	Black Suede Powder Coat
689	Powder-Coated Aluminum
689	Painted Aluminum
26D	26D>CHROMIUM PLATED SATIN
US28	Clear Anodized Aluminum
US32D	Satin Stainless Steel

2. Electrified Locks: Same properties as standard locks, and as follows:
a. Voltage: 24 VDC.
b. Function: Electrically locked (Fail Safe) or unlocked (Fail Secure), as indicated for each lock in Door Hardware Schedule.

C. Finishes: See Door Hardware Schedule.
1. Core Faces: Match finish of lockset.

D. Grades:
1. Comply with BHMA A156.13, Grade 1, Security; Grade 2.

E. Products: Mortise locks, including standard and electrified types.
1. BEST, 45H Series.

2.10 COORDINATORS

A. Manufacturers:
1. Architectural Builders Hardware Manufacturing, Inc (ABH): www.abhmfg.com/#sle.
2. Ives.
3. Rockwood.

B. Properties:
1. General: Non-handed devices, with field-selectable active door leaf.
2. Coordinators: Devices on pairs of doors with closers and self-latching or automatic flush bolts installed.
a. Coordinator Operation: Only when inactive door is opened.

C. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.
1. Meet UL 10C for Positive Pressure.

D. Installation:
1. Mounting: Provide necessary mounting brackets and filler bars to ensure proper installation of coordinator and related hardware.
2. Coordination: Properly sequence installation of other door hardware affected by placement of coordinators and carry bars.

2.11 CLOSERS

A. Manufacturers:
1. dormakaba: www.dormakaba.com/#sle.
2. LCN.
3. Substitutions: Not permitted.

B. Properties:
1. Surface Mounted Closers: Manufacturer's standard.
a. Hydraulic Fluid: All-weather type.
b. Arm Assembly: Standard for product specified.
1) Include hold-open, integral stop, or spring-loaded stop feature, as specified in Door Hardware Schedule.
2) Parallel arm to be a *heavy-duty rigid* arm.
3) Where "IS" or "S-IS" arms are specified in hardware sets, if manufacturer does not offer this arm provide a regular arm mount closer in conjunction with a heavy-duty overhead stop equal to a dormakaba 900 Series.
c. Covers:
1) Type: Standard for product selected.
(a) Full.
2) Material: Plastic.
3) Finish: Painted.
4) Attachment: Two-point flange mounting, dual-clamp friction fit closer cover.
2. Closers Concealed in Frame: Manufacturer's standard.
a. Separate valves for latch speed and sweep speed.
b. Built-in pressure relief valve.
c. Hold-open functionality as specified in Door Hardware Schedule.
d. Brackets as required to ensure proper installation.
e. Auxiliary stop.

f. Non-handed units.

C. Grades:
1. Closers: Comply with BHMA A156.4, Grade 1.
a. Underwriters Laboratories Compliance:
1) Product Listing: UL (DIR) and ULC for use on fire-resistance-rated doors.
(a) UL 228 - Door Closers-Holders, With or Without Integral Smoke Detectors.

D. Installation:
1. Mounting: Includes surface mounted and concealed, overhead mounted installations.
2. Mount closers on non-public side of door and stair side of stair doors unless otherwise noted in hardware sets.
3. At outswinging exterior doors, mount closer on interior side of door.
4. Provide adapter plates, shim spacers, and blade stop spacers as required by frame and door conditions.
5. Where an overlapping astragal is included on pairs of swinging doors, provide coordinator to ensure door leaves close in proper order.

E. Products:
1. Surface Mounted:
a. EHD9000
2. Concealed - Overhead:
a. dormakaba, Architectural Hardware RTS88 Series.

2.12 PROTECTION PLATES

A. Manufacturers:
1. Architectural Builders Hardware Manufacturing, Inc (ABH): www.abhmfg.com/#sle.
2. Ives.
3. Rockwood.

B. Properties:
1. Plates:
a. Kick Plates: Provide along bottom edge of push side of every wood door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated.
1) Size: 10 inches (254 mm) high by 2 inch (51 mm) less door width (LDW) on push side of door.
b. Edges: Beveled, on four (4) unless otherwise indicated.

C. Grades: Comply with BHMA A156.6.

D. Material: As indicated for each item by BHMA material and finish designation.
1. Metal Properties: Stainless steel.
a. Metal, Standard Duty: Thickness 0.050 inch (1.27 mm), minimum.

E. Installation:
1. Fasteners: Countersunk screw fasteners

2.13 STOPS AND HOLDERS

A. Manufacturers:
1. Architectural Builders Hardware Manufacturing, Inc (ABH): www.abhmfg.com/#sle.
2. Ives.
3. Rockwood.

B. General: Provide overhead stop/holder when wall or floor stop is not feasible.

C. Grades:
1. Wall Bumpers and Floor Stops: Comply with BHMA A156.16 and Resilient Material Retention Test as described in this standard.

2.14 MISCELLANEOUS ITEMS

A. Manufacturers:
1. Architectural Builders Hardware Manufacturing, Inc (ABH): www.abhmfg.com/#sle.
2. Burns Manufacturing, Inc: www.burnsmfg.com/#sle.
3. Don-Jo Manufacturing, Inc: www.don-jo.com/#sle.

B. Properties:
1. Coat Hooks: Provide on room side of door, screw fastened.

a. Material: Brass.
2. Silencers: Provide at equal locations on door frame to mute sound of door's impact upon closing.
a. Single Door: Provide three on strike jamb of frame.
b. Pair of Doors: Provide two on head of frame, one for each door at latch side.
c. Material: Rubber, Clear color.

C. Products:
1. Coat Hooks
2. Silencers

2.15 ELECTRIFIED HARDWARE

A. Manufacturers:
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. dormakaba: www.dormakaba.com/#sle.
3. Securitron,

B. Properties:
1. Door Position Switches: Recessed devices with balanced magnetic contacts.
a. Power Requirement: 50mA Max, 100 VDC.
b. SPDT configuration with magnetic tamper.
2. Power Supply Units: Manufacturer's standard.
a. Enclosures: NEMA Type 1, with hinged cover and knockouts.
b. Power: 24 VAC, 10 Amp; field-selectable.
1) Incoming Power Voltage: 120 VAC.
c. Emergency Release Terminals: Designed to release devices upon activation of fire alarm system.
d. Auxiliary contacts for remote signaling.
e. User-selectable time delay from 0 to 4 minutes.
f. Fire Alarm System Interface: Standard.
g. Output Distribution Board with indicator LEDs.
h. On/Off LED power indicator.
3. Wire Harnesses: Of sufficient length, with quick connectors.
a. Wire Harness End Connection to Power Supply or Junction Box: One end with bare leads.

C. Products:
1. Door Position Switches.
a. RCI 9540 Recessed Magnetic Contact/Door Position Switch
2. Power Supplies:
a. dormakaba Architectural Hardware DKPS Series
b. RCI DKPS Series
3. Wire Harnesses:
a. BEST Wire Harnesses

2.16 KEYS AND CORES

A. Manufacturers:
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. Substitutions: Not permitted.

B. Properties: Complying with guidelines of BHMA A156.28.
1. Provide small format interchangeable core.
2. Provide Patented CORMAX keys and cores.
3. Provide keying information in compliance with DHI (KSN) standards.
4. Keying Schedule: Arrange for a keying meeting, with Architect, Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying complies with project requirements.
5. Keying: Master keyed.
6. Include construction keying and control keying with removable core cylinders.
7. Supply keys in following quantities:
a. Master Keys: 4 each.
b. Construction Master Keys: 6 each.
c. Construction Keys: 15 each.

2. Accessibility: ADA Standards and ICC A117.1.
3. Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115.
4. Hardware Preparation for Wood Doors with Wood or Steel Frames: BHMA A156.115W.
5. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.

2.03 HINGES

A. Manufacturers: Conventional butt hinges.
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. McKinney.
3. Ives.

B. Properties:
1. Butt Hinges: As applicable to each item specified.
a. Standard Weight Hinges: Minimum of two (2) permanently lubricated non-detachable bearings.
b. Template screw hole locations.
c. Bearing assembly installed after plating.
d. Bearings: Exposed fully hardened bearings.
e. Bearing Shells: Shapes consistent with barrels.
f. Pins: Easily seated, non-rising pins.
1) Fully plate hinge pins.
2) Non-Removable Pins: Slotted stainless steel screws.
g. UL 10C listed for fire-resistance-rated doors.

C. Sizes: See Door Hardware Schedule.
1. Sufficient size to allow 180 degree swing of door.

D. Finishes: See Door Hardware Schedule.
1. Fully polish hinges; front, back, and barrel.

E. Grades:
1. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.

F. Material: Base metal as indicated for each item by BHMA material and finish designation.

G. Types:
1. Butt Hinges: Include full mortise hinges.

H. Quantities:
1. Butt Hinges: Three (3) hinges per leaves up to 90 inches (2286 mm) in height. Add one (1) for each additional 30 inches (762 mm) in height or fraction thereof.
a. Hinge weight and size unless otherwise indicated in hardware sets:
1) For doors up to 36 inches (914 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.134 inch (3.4 mm) and a minimum of 4-1/2 inches (114 mm) in height.
2) For doors from 36 inches (914 mm) wide up to 42 inches (1067 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.145 inch (3.7 mm) and a minimum of 4-1/2 inches (114 mm) in height.
3) For doors from 42 inches (1067 mm) wide up to 48 inches (1219 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm) in height.
4) For doors greater than 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm) in height.

I. Applications: At swinging doors.
1. Provide non-removable pins at out-swinging doors with locking hardware and all exterior doors.

2.04 BOLTS

A. Manufacturers:
1. Architectural Builders Hardware Mfg (ABH): www.abhmfg.com#sle.
2. McKinney.
3. Ives.

B. Properties:

1. Flush Bolts:
a. Self-Latching Flush Bolts: Automatically latching upon closing of door; manually retracted; located on inactive leaf of pair.
1) Bolt Throw: 3/4 inch (19 mm), minimum.
2. Dustproof Strikes: For bolting into floor, provide except at metal thresholds.

2.05 EXIT DEVICES

A. Manufacturers:
1. Von Duprin.
2. Substitutions: Not permitted.

B. Properties.
1. Actuation: Full-length touchpad.
2. Touchpads: "I" style metal touchpads and rail assemblies with matching chassis covers end caps.
3. Latch Bolts: Stainless steel deadlocking with 3/4 inch (19 mm) projection using latch bolt.
4. Lever Design: Match project standard lockset trims.
5. Cylinder: Include where cylinder dogging or locking trim is indicated.
6. Strike as recommended by manufacturer for application indicated.
7. Sound dampening on touch bar.
8. Dogging:
a. Non-Fire-Resistance-Rated Devices: Cylinder 1/4 inch (6 mm) hex key dogging.
b. Fire-Resistance-Rated Devices: Manual dogging not permitted.
9. Touch bar assembly on wide style exit devices to have a 1/4 inch (6.3 mm) clearance to allow for vision frames.
10. All exposed exit device components to be of architectural metals and "true" architectural finishes.
11. Handing: Field-reversible.
12. Fasteners on Back Side of Device Channel: Concealed - exposed fasteners not allowed.
13. Vertical Latch Assemblies' Operation: Gravity, without use of springs.

C. Grades: Complying with BHMA A156.3, Grade 1.
1. Provide exit devices tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.

D. Standards Compliance:
1. UL Listed for Panic and Fire for Class II Circuitry.

E. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.

2.06 REMOVABLE MULLIONS

A. Manufacturers:
1. Von Duprin.
2. Substitutions: Not permitted.

B. Grades: Comply with BHMA A156.3.

C. Materials: Manufacturer's standard for items specified.
1. Top and Bottom Brackets: Investment-cast steel.

D. Options:
1. Furnish Keyed Removable "KR" feature and corresponding cylinders as specified.
a. Mullions capable of being installed without physical key present.
b. Physical key required to operate.

2.07 ELECTRIC STRIKES

A. Manufacturers:
1. dormakaba: www.dormakaba.com/#sle.
2. Securitron.
3. Von Duprin.

B. Properties:
1. Provide UL (DIR) listed burglary-resistant devices.
2. Provide UL 1034 compliant devices.

3. Provide UL 10C compliant devices.
4. Non-handed devices suitable for door frame material and scheduled lock configuration.
5. Include transformer and rectifier as necessary for complete installation.
6. Holding Force: 1,500 lbs (680.4 kg).
7. Accommodating latch projections of 1/2 inch (12.7 mm), 5/8 inch (16 mm), or 3/4 inch (19 mm).

C. Grades: Complying with BHMA A156.31, Grade 1.

D. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.

E. Options: As applicable to each item specified.
1. Voltage: 24 VDC.
2. Latch bolt monitor.

F. Installation: Connect electric strikes into fire alarm where non-rated doors are scheduled to release with fire or sprinkler alarm condition.

2.08 LOCK CYLINDERS

A. Manufacturers:
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. Substitutions: No permitted.

B. Properties:
1. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
a. Provide cylinders from same manufacturer as locking device.
b. Provide cams and/or tailpieces as required for locking devices.
c. Provide cylinders with appropriate format interchangeable cores where indicated.

C. Grades:
1. Standard Security Cylinders: Comply with BHMA A156.5.

D. Material:

E. Types: As applicable to each item specified.
1. Standard security small format interchangeable core (SFIC) type cylinders, with six-pin, 1C - 7-pin cores.

F. Applications: At locations indicated in hardware sets, and as follows
1. As required for items with locking devices provided by other sections, including at elevator controls and cabinets.
a. When provisions for lock cylinders are referenced elsewhere in the Project Manual to this Section, provide compatible type of lock cylinder, keyed to building keying system, unless otherwise indicated.

2.09 MORTISE LOCKS

A. Manufacturers:
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. Substitutions: Not permitted.

B. Properties:
1. Mechanical Locks: Manufacturer's standard.
a. Fitting modified ANSI A115.1 door preparation.
b. Door Thickness Coordination Fitting 1-3/4 inch (44 mm) to 2-1/4 inch (57 mm) thick doors.
c. Latch: Solid, one-piece, anti-friction, self-lubricating stainless steel.
1) Latchbolt Throw: 3/4 inch (19 mm), minimum.
d. Auxiliary Deadlatch: One piece stainless steel, permanently lubricated.
e. Backset: 2-3/4 inch (70 mm).
f. Lever Trim:
1) Functionality: Allow the lever handle to move up to 45 degrees from horizontal position prior to engaging the latchbolt assembly.
2) Strength: Locksets outside locked lever designed to withstand minimum 1,400 inch-lbs (158.2 Nm) of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still operate lockset.
3) Spindle: Designed to prevent forced entry from attacking of lever.
4) Independent spring mechanism for each lever.
(a) Trim to be self-aligning and thru-bolted.

SECTION 087100
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Hardware for hollow metal and wood doors.
B. Electrically operated and controlled hardware.

1.02 RELATED REQUIREMENTS

A. Section 081416 - Flush Wood Doors.
B. Section 083323 - Overhead Coiling Doors: Door hardware, except cylinders.
C. Section 281000 - Access Control: Electronic access control devices.

1.03 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
B. BHMA A156.1 - Standard for Butts and Hinges; 2021.
C. BHMA A156.3 - Exit Devices; 2025.
D. BHMA A156.4 - Door Closers and Pivots; 2024.
E. BHMA A156.5 - Cylinders and Input Devices for Locks; 2020.
F. BHMA A156.6 - Standard for Architectural Door Trim; 2021.
G. BHMA A156.7 - Template Hinge Dimensions; 2022.
H. BHMA A156.16 - Standard for Auxiliary Hardware; 2023.
I. BHMA A156.28 - Standard for Recommended Practices for Mechanical Keying Systems; 2023.
J. BHMA A156.31 - Electric Strikes and Frame Mounted Actuators; 2024.
K. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016.
L. BHMA A156.115W - Hardware Preparation in Wood Doors with Wood or Steel Frames; 2006.
M. DHI (H&S) - Sequence and Format for the Hardware Schedule; 2019.
N. DHI (KSN) - Keying Systems and Nomenclature; 2019.
O. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
P. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
Q. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
R. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
S. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
T. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2025.
U. UL (DIR) - Online Certifications Directory; Current Edition.
V. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
W. UL 294 - Access Control System Units; Current Edition, Including All Revisions.
X. UL 1034 - Standard for Safety Burglary-Resistant Electrical Locking Mechanisms; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
B. Sequence installation to ensure facility services connections are achieved in an orderly and expeditious manner.

C. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; require attendance by affected installers and the following:
1. Installer's Architectural Hardware Consultant (AHC).
2. Hardware Installer.
3. Owner's Security Consultant.

D. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.

E. Keying Requirements Meeting:
1. Schedule meeting at project site prior to Contractor occupancy.
2. Attendance Required:
a. Contractor.
b. Owner.
c. Installer's Architectural Hardware Consultant (AHC).
d. Owner's Security Consultant.
3. Agenda:
a. Establish keying requirements.
b. Verify locksets and locking hardware are functionally correct for project requirements.
c. Verify that keying and programming complies with project requirements.
d. Establish keying submittal schedule and update requirements.
4. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
a. Access control requirements.
5. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
6. Deliver established keying requirements to manufacturers.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.
B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
C. Shop Drawings - Door Hardware Schedule: A detailed listing that includes each item of hardware to be installed on each door.
1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
2. Comply with DHI (H&S) using door numbering scheme and hardware set numbers as indicated in Contract Documents.
a. Submit in vertical format.
3. List groups and suffixes in proper sequence.
4. Include complete description for each door listed.
5. Include manufacturer's and product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
6. Include account of abbreviations and symbols used in schedule.
D. Manufacturer's Instructions: Indicate special procedures and perimeter conditions requiring special attention.
E. Operation and Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
1. Include manufacturer's parts lists and templates.
2. Bitting List: List of combinations as furnished.
F. Keying Schedule:
1. Submit three copies of Keying Schedule complying with requirements established during Keying Requirements Meeting unless otherwise indicated.

1.06 DELIVERY, STORAGE, AND HANDLING

A. See Section 017419 - Construction Waste Management and Disposal for packaging waste requirements.
B. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

1.07 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.
B. Manufacturer Warranty: Provide manufacturer warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer.
1. Closers: Thirty five years.
2. Exit Devices:
3. Locksets:
a. Mechanical: Limited Lifetime.
4. Cylinders: Three years.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
B. Provide individual items of single type, of same model, and by same manufacturer.
C. Locks: Provide a lock for each door, unless it's indicated that lock is not required.
1. Lock Function: Provide lock and latch function numbers and descriptions of manufacturer's Series. As indicated in hardware sets.
2. Trim: Provide lever handle or pull trim on outside of each lock, unless otherwise indicated.
3. Strikes:
a. Finish: To match lock or latch.
b. Curved-Lip Strikes: Provide as standard, with extended lip to protect frame, unless otherwise indicated.
c. Aluminum-Frame Strike Box: Provide strike box fabricated for use with aluminum framing.
d. Center Strike At Pairs of Doors: 7/8 inch (22.2 mm) lip.
D. Closers:
1. Provide door closer on each exterior door, unless otherwise indicated.
2. Provide door closer on each fire-rated and smoke-rated door.
3. Spring hinges are not an acceptable self-closing device, unless otherwise indicated.
E. Electrically Operated and/or Controlled Hardware: Provide necessary power supplies, power transfer hinges, relays, and interfaces as required for proper operation; provide wiring between hardware and control components and to building power connection in compliance with NFPA 70.
F. See Section 281000 for additional access control system requirements.
G. Fasteners:
1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
a. Aluminum fasteners are not permitted.
b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.
2. Provide machine screws for attachment to reinforced hollow metal and aluminum frames.
a. Self-drilling (Tek) type screws are not permitted.
3. Provide stainless steel machine screws and lead expansion shields for concrete and masonry substrates.
4. Provide wall grip inserts for hollow wall construction.
5. Fire-Resistance-Rated Applications: Comply with NFPA 80.
a. Provide wood or machine screws for hinges mortised to doors or frames, strike plates to frames, and closers to doors and frames.
b. Provide steel through bolts for attachment of surface mounted closers, hinges, or exit devices to door panels unless proper door blocking is provided.

2.02 PERFORMANCE REQUIREMENTS

A. Provide door hardware products that comply with the following requirements:
1. Applicable provisions of federal, state, and local codes.
a. ICC (IBC).
b. NFPA 101.

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RENEWAL
12/31/2027
STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

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IRVINE, CALIFORNIA 92614

DOOR SPECIFICATIONS

	DATE	REMARKS
3	07/09/2025	ISSUE FOR PLAN CHECK
	02/04/2026	PLAN CHECK CORRECTIONS 3

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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PLUMBING FIXTURES

#	FIXTURE TYPE	MANUFACTURER	MODEL NUMBER	FINISH	DESCRIPTION / NOTES
FC-1	FAUCET	SLOAN	EBF-415	BRUSHED STAINLESS	
S-1	FIRST AID ROOM / MPR SINK	ELKAY	CROSSTOWN 25"x22"x6", ECTSRAD25226TBG	STAINLESS STEEL	UNDERCOUNTER-MOUNTED, ACCESSIBLE. PROVIDE COMPLETE WITH 0.4 GPM FLOW RESTRICITOR, GRID DRAIN, P-TRAP, HOT/COLD WATER CONNECTIONS, STOPS & ESCUTCHEONS. PROVIDE "PLUMBERS HAND SHEILDS" SAFETY COVERS (COLOR TO BE DETERMINED FOR P-TRAP, TAILPIECE & ANGLE VAL

LIGHT FIXTURES

F-#	GENERAL TYPE	MOUNTING TYPE	NAME	MANUFACTURER	HOUSING/FINISHES/LENS DESCRIPTION	COLOR TEMP	CRI	NOTES
F-3	LINEAR	RECESSED	SQUERO RECESSED	LUMENWERX	SQUR-D-HLO-BK-SW-90CRI-500LMF-30K-SEE PLAN-UNV-D1-1C-DTL-B	3000K	90	MAIN CORRIDOR
F-5	LINEAR	PENDANT	BIONIC PRO 3	PRUDENTIAL	BPRO3-LIN-FLSH-LED3-SO-PER PLAN-TMW-SAL-NU-UNV-RSC-X1-DM01-C8O-60	3000K	90	LOBBY; 13'-0" AFF TO BOTTOM OF FIXTURE
F-6A	LINEAR	PENDANT	VIA 3 PENDANT DIRECT, 144"L	LUMENWERX	VIA3P-D-HLO-FH-NA-SW-90CRI-500LMF-NA-30K-160-UNV-D1-1C-STS-W	3000K	90	FOOD COURT FEATURE CEILING ELEMENT; SEE ELEVATION FOR MOUNTING HEIGHTS
F-6B	LINEAR	PENDANT	VIA 3 PENDANT DIRECT, 72"L	LUMENWERX	VIA3P-D-HLO-FH-NA-SW-90CRI-500LMF-NA-30K-72-UNV-D1-1C-STS-W	3000K	90	MULTIPURPOSE ROOM; 12'-0" AFF TO BOTTOM OF FIXTURE
F-8	DOWNLIGHT	PENDANT	AREA 4" CYLINDER DIRECT 12"	LUMENWERX	AE4CYP-D-12IN-FTMB-BVL-FTMB-NOL-SW-50DEG-2STP-90CRI-30K-NA-UNV-20W-NA-D1-1C-FLR-FTMB-BPC-BKS	3000K	90	FOOD COURT; 15'-0" AFF TO BOTTOM OF FIXTURE
F-9	DOWNLIGHT	PENDANT	AREA 4" CYLINDER ASYMMETRIC DIRECT 12"	LUMENWERX	AE4CYASYP-D-12IN-FTMB-BVL-FTMB-NOL-SW-50DEG-2STP-90CRI-30K-NA-UNV-20W-NA-D1-1C-FLR-FTMB-BPC-BKS	3000K	90	FOOD COURT (GRAPHIC WALL); 15'-0" AFF TO BOTTOM OF FIXTURE
F-10	LINEAR	SURFACE-MOUNTED	1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT	ALCON LIGHTING	12525-PER PLAN-30K-TB15	3000K	90	MAIN CORRIDOR
F-11	WALL-WASHER	SURFACE-MOUNTED	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	BOLD LIGHTING	BIW-S-PER PLAN-B-V-U-B-B-W-9-30-0	3000K	90	LOBBY (AT CORRUGATED WALL)
F-13	DOWNLIGHT	RECESSED	AREA 3" DOWNLIGHT ROUND (AE3RR)	LUMENWERX	AE3RR-TRM-SW-OF-ASB-UNV-10W-D1 / AE3RRB-SW-10W-60DEG-2STP-90CRI-30K-TRM-FTMW-FTMW-NA	3000K	90	THROUGHOUT U.N.O.
F-14	DOWNLIGHT	RECESSED	MELLOW LIGHT IV LED 2X4 SPLIT DIFFUSER	ZUMTOBEL	MLIV-24-RF-HE-SD-935-DU	3500K	90	THROUGHOUT
F-15A	LINEAR	RECESSED	LED TAPE LIGHT (PDS-NK EXTRUSION), 16'-6"L	KLUS INSPIRING SOLUTIONS	A01588L10OD_2	3000K	90	LOBBY RECEPTION DESK; VERIFY LENGTH IN FIELD
F-15B	LINEAR	RECESSED	LED TAPE LIGHT (PDS-NK EXTRUSION), 60' L	KLUS INSPIRING SOLUTIONS	A01588L10OD_2	3000K	90	FOOD COURT MILLWORK; VERIFY LENGTH IN FIELD
F-16	LINEAR	RECESSED	LED TAPE LIGHT	KLUS INSPIRING SOLUTIONS	K-HEHD-0960-24 LED STRIP	3000K	90	LOBBY RECEPTION DESK; VERIFY LENGTH IN FIELD
F-18	DOWNLIGHT	RECESSED	RONDO R86 6" DOWNLIGHT (FOR WET LOCATION)	OPUS	RB6-RDW-SW90-30K-30LM-DIMA1-BW-AHZ-AMI	3000K	90	KITCHEN
F-19	DOWNLIGHT	RECESSED	2X4 WET RATED TROFFER, EMERGENCY	LITHONIA	2WRTL G L48 5000LM AFL MD MVOLT GZ1 30K 80CRI IE10WLCP	3000K	80	KITCHEN
F-21	DOWNLIGHT	PENDANT	HOLOBAY LED HIGH BAY - INVERTED	HOLOPHANE	HOLO1-15000LM-WD-50K-80CRI-PM	5000K	80	BADMINTON COURTS; 27'-0" AFF TO BOTTOM OF FIXTURE
F-22	DOWNLIGHT	PENDANT	HOLOBAY LED HIGH BAY	HOLOPHANE	HOLO1-30000LM-WD-50K-80CRI-PM-WGXSS	5000K	80	BASKETBALL COURTS; 32'-0" AFF TO BOTTOM OF FIXTURE
F-23	LINEAR	SURFACE-MOUNTED	SQUERO SURFACE PATTERN	LUMENWERX	SQUCOMSPAT-D-HLO-BK-SW-90CRI-500LMF-30K-PER PLAN-UNV-D1-1C-GRD-B-5MS50	3000K	90	MAIN CORRIDOR

EQUIPMENT / APPLIANCES

EA-#	OFOI	OFCI	CFCI	TYPE	MANUFACTURER	DESCRIPTION/FINISHES	MODEL NUMBER	NOTES
EA-1	X			TV MONITOR	TBD	TBD	TBD	REFER TO AV DRAWINGS
EA-4	X			COPIER/PRINTER	TBD	TBD	TBD	
EA-5		X		ICE MACHINE	TBD	TBD	TBD	
EA-6	X			CLOTHING DRYER	LG	GRAPHITE STEEL	DLEX3370V ELECTRIC	240V, 30 AMPS (ELECTRIC)
EA-7	X			WASHING MACHINE	LG	GRAPHITE STEEL	WM3670HVA WASHER	
EA-8	X			TV MONITOR	TBD	TBD	TBD	REFER TO AV DRAWINGS
EA-9	X			TV MONITOR	TBD	TBD	TBD	REFER TO AV DRAWINGS
EA-10	X			TV MONITOR	TBD	TBD	TBD	REFER TO AV DRAWINGS
EA-11			X	SCOREBOARD	DAKTRONICS	TUFF SPORT PANAVIEW BASKETBALL/VOLLEYBALL/WRESTLING SCOREBOARD	BB-2153-RA-PV (6'X8')	REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION.
EA-12			X	SCOREBOARD	DAKTRONICS	VIDEO DISPLAY SCOREBOARD	LVN-2010-512X896-3.9MN-MA-C NTLRM-SR-LT (6'-10"X11'-9")	REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION.
EA-13			X	BASKETBALL BACKSTOP	DRAPER	SIDE-FOLDING BRACED OFFSET MAST BACKSTOP	TF20S	REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION.
EA-14			X	GYM DIVIDER CURTAIN	DRAPER	FOLD UP CURTAIN 45' L X 32' H		REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION.
EA-15			X	VOLLEYBALL EQUIPMENT	DRAPER	OVERHEAD VOLLEYBALL SYSTEM	OVS3212	REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION.
EA-16			X	BADMINTON COURT MAT	YONEX	COURT MAT BWF APPROVED (4 PIECES)		TO BE INSTALLED ON TOP OF FINISHED WOOD FLOORING.

CITY OF IRVINE
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EXPIRES 12/31/2027
RENEWAL PENDING
STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE
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IRVINE, CALIFORNIA 92614

EQUIPMENT SCHEDULES

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
	09/22/2025	PLAN CHECK CORRECTIONS

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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FINISH SCHEDULE

FLOORING FINISHES

WOOD FLOORING

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	SERIES	GRADE/SPECIES	SIZE	STAIN/ COLOR	INSTALLATION LAYOUT	INSTALLATION METHOD	THICKNESS	NOTES	MARK
WDF-1	ENGINEERED WOOD FLOOR	SPORTS COURT	TARKETT	CLUTCH COURT, LP SLEEPER	SECOND GRADE, MAPLE		NATURAL		PER MANUFACTURERS INSTRUCTIONS	2 3/4"	USE WITH TARKETT VENTED COVE BASE (B-2); LEAVE 1 1/2" GAP BETWEEN FLOORING AND WALL, MUST WITHSTAND ROLLING LOAD OF 7500 LBS	WDF-1
WDF-2	ENGINEERED WOOD FLOOR	SPORTS COURT	TARKETT	CLUTCH COURT, LP SLEEPER	SECOND GRADE, MAPLE		STAINED		PER MANUFACTURERS INSTRUCTIONS	2 3/4"	USE WITH TARKETT VENTED COVE BASE (B-2); LEAVE 1 1/2" GAP BETWEEN FLOORING AND WALL, MUST WITHSTAND ROLLING LOAD OF 7500 LBS	WDF-2
WDF-1 (ALT 1)	ENGINEERED WOOD FLOOR	SPORTS COURT	CONNOR SPORT	VIP	MAPLE		NATURAL		PER MANUFACTURERS INSTRUCTIONS	2 3/4"	USE WITH CONNOR REZILLBASE (B-2 ALT); MUST WITHSTAND ROLLING LOAD OF 7500 LBS	WDF-1 (ALT 1)
WDF-1 (ALT 2)	ENGINEERED WOOD FLOOR	SPORTS COURT	JUNCKERS	HARMONY	BEECH		NATURAL		PER MANUFACTURERS INSTRUCTIONS	2 3/4"	USE WITH TARKETT VENTED COVE BASE (B-2) OR MANUFACTURER RECOMMENDATION; MUST WITHSTAND ROLLING LOAD OF 7500 LBS	WDF-1 (ALT 2)

RESILIENT FLOORING

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	COLLECTION/ STYLE/ #	COLOR/ COLOR #	SIZE	PROFILE/ TEXTURE	INSTALLATION LAYOUT	INSTALLATION METHOD	SEAMING	NOTES	MARK
RF-1	VINYL PLANK	FIRST AID / MULTI-PURPOSE ROOM	MOHAWK GROUP	SECOYA 5.0 C2104	838 TOFFEE OAK	10"X59"	-	BRICK ASHLAR	GLUE DOWN			RF-1
RF-2	STATIC DISSIPATIVE VINYL TILE	SERVER RM	TARKETT	IQ GRANIT SD	0949 DARK GREY	24"X24"		MONOLITHIC	GLUE DOWN			RF-2
EP-1	EPOXY W INTEGRAL COVE BASE	KITCHEN	SHERWIN WILLIAMS	RESUFLOR	3746 GREY	MIN THICKNESS IS 3/16"	SMOOTH, GLASS FINISH	CONTINUOUS WITH SELF-COVED BASE	TROWELED-ON	NO SEAMS	FLOORING MUST BE SEALED TO BE IMPERVIOUS, GREASE, & ACID RESISTENT; MATERIAL MUST BE INSTALLED UNDER ALL EQUIP & EQUIP LEGS; MUST BE SELF-COVED UP THE WALLS 6"; NONSKID AGENTS CAN BE ADDED ONLY TO FLOORING IN HIGH TRAFFIC AREAS, FLOORING UNDER EQUIP AND COVED BASES MUST BE SMOOTH; NONSKID TILES MAY BE USED IF FLOOR DRAINS ARE PROVIDED; DEPENDING ON AMOUNT OF NONSKID AGENT USED, A HIGH-PRESSURE CLEANING SYSTEM MAY ALSO BE REQUIRED.	EP-1

CONCRETE FINISHING

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STAIN/ DYE/ TINT COLOR#	GRIT LEVEL	SHEEN LEVEL	FINISH	NOTES	MARK
CON-1	POLISHED CONCRETE SLAB FINISH	TYP. THROUGHOUT, U.O.N.	-	-	-	HIGH GLOSS	-	SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FLOOR-PREP REQUIREMENTS	CON-1
CON-2	SEALED CONCRETE	STORAGE, LAUNDRY ROOM	-	-	-	-	-	SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FLOOR-PREP REQUIREMENTS	CON-2

WALL FINISHES

WALL / CEILING PAINT

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	SERIES	COLOR/ COLOR #	SHEEN	NOTES	MARK
P-1A	PAINT	TYP. THROUGH U.N.O.	SHERWIN WILLIAMS	N/A	SW7005 PURE WHITE	EGGSHELL	TYPICAL ON WALLS THROUGHOUT, U.O.N. | NO V.O.C.	P-1A
P-1B	PAINT	TYP. THROUGH U.N.O.	SHERWIN WILLIAMS	N/A	SW7005 PURE WHITE	FLAT	TYPICAL ON CEILINGS AND SOFFIT THROUGHOUT, U.O.N. PAINT EXPOSED STRUCTURE AND MEP | NO V.O.C.	P-1B
P-1C	PAINT	WET WALLS	SHERWIN WILLIAMS	N/A	SW7005 PURE WHITE	SEMI-GLOSS	TYPICAL ON WET WALLS, U.O.N. | NO V.O.C.	P-1C
P-2	PAINT	SEE PLANS/ELEVATIONS	SHERWIN WILLIAMS	N/A	SW7067 CITY SCAPE	EGGSHELL	NO V.O.C.	P-2
P-3	PAINT	SEE PLANS/ELEVATIONS	SHERWIN WILLIAMS	N/A	SW7068 GRIZZLE GRAY	EGGSHELL	NO V.O.C.	P-3
P-4	PAINT	NOT IN PROJECT		N/A			NO V.O.C.	P-4
P-5	PAINT	NOT IN PROJECT		N/A		EGGSHELL	NO V.O.C.	P-5
P-6	PAINT	NOT IN PROJECT		N/A		EGGSHELL	NO V.O.C.	P-6
P-7	PAINT	NOT IN PROJECT		N/A		EGGSHELL	NO V.O.C.	P-7
P-8	PAINT	SEE PLANS/ELEVATIONS	SHERWIN WILLIAMS	N/A	SW6258 TRICORN BLACK	EGGSHELL	NO V.O.C.	P-8
P-8B	PAINT	FOOD COURT CEILING	SHERWIN WILLIAMS	N/A	SW6258 TRICORN BLACK	FLAT	PAINT EXPOSED STRUCTURE AND MEP | NO V.O.C.	P-8B
P-9A	PAINT	BADMINTON COURT WALL	DULUX	N/A	30 GG 40/290	EGGSHELL	NO V.O.C.	P-9A
P-9B	PAINT	BADMINTON COURT CEILING	DULUX	N/A	30 GG 40/290	FLAT	PAINT EXPOSED MEP | NO V.O.C.	P-9B

TILE WALL

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	COLLECTION/ STYLE/ #	COLOR/ COLOR #	SHAPE	SIZE	FINISH	INSTALLATION LAYOUT	GROUT MANUFACTURER	GROUT COLOR / COLOR #	GROUT WIDTH	NOTES	MARK
TW-3	CERAMIC TILE	FOOD COURT	DALTILE	MULTITUDE	ORIGAMI WHITE	RECTANGLE	12X24	SMOOTH	SEE ELEVATIONS				USE SCHLUTER-JOLLY EDGE FINISHING	TW-3
TW-5	PORCELAIN TILE SLAB	RECEPTION DESK	LAMINAM	PIETRA DI SAVOIA 3/3+	ANTRACITE	-		BRUSHED HAMMERED	SEE ELEVATIONS					TW-5

WALL PANELING (PRE-MANUFACTURED)

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	SERIES	STYLE/ STYLE #	TRIMS/ REVEALS	PANEL FINISH	PANEL COLOR/ COLOR#	PANEL SIZE	PANEL THICKNESS	INSTALLATION METHOD	NOTES	MARK
FRP-1	FIBERGLASS REIFORCED PANEL	KITCHEN	MARLITE	P199	BRIGHT WHITE	-		-	4W X 8H			PVC EDGE TRIM	FRP-1
WP-2	CORRUGATED METAL	LOBBY	MOZ DESIGNS	CORRUGATED METAL SHEETS		-		WHITE	-	-	-	-	WP-2
WP-3	METAL WALL PANEL	FOOD COURT, MILLWORK BACKSPLASH	FORMS+SURFACES	FUSED METAL	FUSED GRAPHITE	-		SEASTONE	-	-	-	-	WP-3
WP-4	MATTE BLACK METAL WALL PANEL	CORRIDOR, FOOD COURT, LOBBY	CHEMETAL	900 SERIES	HPL CLASSIC, SCRATCH RESISTANT	-		908 SATIN BLACK ALUMINUM	-	-	-	-	WP-4
WP-5	BLACK METAL MESH WALL PANEL	FOOD COURT	RIGIDIZED METALS CORP.	RICOMOND (4 LB.)	304 SS	-	BLACK & PC/HL		-	-	-	GAUGE: 0.024"	WP-5
WP-6A	WALL PADS	SPORTS COURTS (COLUMNS)	DRAPER	ECOVISION STANDARD PADS	-	-		TBD (GREY OR NAVY)	6'H	61MM (OVERALL)	PER MFG INSTRUCTIONS, INSTALL ABOVE VENTED WALL BASE, TYP. Z-CLIP AT TOP, 1" FLANGE AT BOTTOM	COORDINATE ACCESS PANEL LOCATIONS WITH ARCH AND PLUMBING ENGINEER; ADD ALT 1: 8'H, ADD ALT 2: CUSTOM COLOR	WP-6A
WP-6B	WALL PADS	SPORTS COURTS (WALLS)	DRAPER	ECOVISION STANDARD PADS	-	-		TBD (GREY OR NAVY)	6'H	61MM (OVERALL)		COORDINATE ACCESS PANEL LOCATIONS WITH ARCH AND PLUMBING ENGINEER; ADD ALT 1: 8'H, ADD ALT 2: CUSTOM COLOR	WP-6B
WP-7	ACOUSTIC FELT	LOBBY	BUZZISPACE	BUZZI SKIN	SK	-		SK-OFFWHITE 63		-	-		WP-7
WP-8	STAINLESS STEEL	KITCHEN	SEE KITCHEN DRAWINGS	-	-	-		-		-	-	FURNISHED AND INSTALLED BY KITCHEN EQUIPMENT VENDOR	WP-8
WP-9	ACOUSTIC PANEL	BADMINTON COURTS	ARMSTRONG	TECTUM	-	PER MANUFACTURER		MATCH P-9A	4X8	1 1/2"	DIRECT ATTACH	MOUNT AT 12' AFF; REFER TO ELEVATIONS FOR SPACING	WP-9
WP-10	ACOUSTIC PANEL	BASKETBALL COURTS	ARMSTRONG	TECTUM	-	PER MANUFACTURER		MATCH P-1	4X8	1 1/2"	DIRECT ATTACH	MOUNT AT 14' AFF; REFER TO ELEVATIONS FOR SPACING	WP-10

WALL BASE

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	PROFILE/ PROFILE #	COLOR/ COLOR #	SIZE	INSTALLATION METHOD	NOTE	MARK
B-1	RUBBER BASE	TYP. THROUGHOUT U.O.N.	TARKETT	EXHIBIT	20 CHARCOAL	4"		STRAIGHT BASE AT CARPET, COVED AT HARD SURFACE	B-1
B-2	VENTED BASE	SPORTS COURTS	TARKETT	VENT COVE WALL BASE	40 BLACK	4"	PER MANUFACTURER	TO BE USED WITH TARKETT SPORTS COURTS (WDF-1/WDF-2), SEE MANUFACTURER'S DETAILS FOR INSTALLATION INFORMATION	B-2
B-3	INTEGRAL COVE BASE	KITCHEN	SHERWIN WILLIAMS	RESUFLOR	3746	6"	TROWELED-ON	SMOOTH, GLASS FINISH WITH 3/8" RADIUS COVE AT THE JUNCTURE OF THE WALL AND FLOOR	B-3
B-4	MILLWORK WALL BASE	FOOD COURT	TARKETT	MANDALAY MW-XX-H6	MATCH WALL PAINT	6"			B-4
B-5	MILLWORK WALL BASE	LOBBY	FRY REGLETT	4" MILLWORK BASE MWRB75400	POWDER COAT FINISH	4"			B-5

MILLWORK FINISHES

LAMINATE

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STYLE/ STYLE #	TEXTURE	INSTALLATION METHOD	NOTE	MARK
L-1	PLASTIC LAMINATE	-	FORMICA	7223 NEW WHITE				L-1
L-2	PLASTIC LAMINATE	-	FORMICA	927 FOLKSTONE				L-2
L-3	PLASTIC LAMINATE	-	FORMICA	912C STORM				L-3
L-4	PLASTIC LAMINATE	-	FORMICA, VENEER SOLID WOOD	5794 BEIGE ELM				L-4

SOLID SURFACE

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STYLE/ STYLE #	NOTE	MARK
SS-1	QUARTZ SURFACE		CAESARSTONE	1141 PURE WHITE		SS-1
SS-2	QUARTZ SURFACE		CAMBRIA	FIELDSTONE		SS-2

MISCELLANEOUS FINISHES

ACOUSTICAL CEILING

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STYLE/ STYLE #	NOTE	MARK
C-1	ACOUSTICAL CEILING BAFFLES	MULTIPURPOSE	ACOUFELT	BEAM CEILING BAFFLES	FELT MATERIAL / COLOR - WHITE AND MARINE	C-1
C-2	METAL MESH CEILING	CORRIDOR	ARMSTRONG	METAL WORKS MESH TORSION	DESIGN - SCALLOPS / COLOR - WHITE	C-2
C-3	ACOUSTICAL CEILING BAFFLES	FOOD COURT	WOVEN IMAGE	ARRAY	COLOR - 633, 365, 500	C-3
C-4	WOOD VENEER CEILING	RECEPTION, CORRIDOR	-	MATCHV L-4		C-4
C-5	ACOUSTICAL CEILING BAFFLES	LOBBY	TURF	CUSTOM BEAM BAFFLE	TURF PROJECT #PRO-255283 COLOR - D06 PLANKED OAK	C-5

GREEN WALL

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STYLE/ STYLE #	NOTE	MARK
GW-1	GREEN PLANT WALL	LOBBY, RECEPTION	GARDEN ON THE WALL	GARDENS WITH MOSS, TIER 1	PROVIDE WALL BACKING	GW-1

GRAPHIC WALL

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STYLE/ STYLE #	NOTE	MARK
GR-1	WALL GRAPHIC	FOOD COURT	CUSTOM GRAPHIC BY OTHERS	PROVIDE LEVEL 5 FINISH		GR-1

WINDOW SHADE

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STYLE/ STYLE #	NOTE	MARK
WS-1	WINDOW SHADE	OFFICE 104, 105, 106, CONFERENCE 107	MECHOSHADE	MECHO /5	SHADE: THERMOVEIL 1000 SERIES (3% OPEN)	WS-1

TRANSITIONS

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	PROFILE/ PROFILE #	FINISH	SIZE	INSTALLATION METHOD	NOTE	MARK
TR-1	FLOORING TRANSITION	WOOD TO CONCRETE	INPRO	808-A01	ALUMINUM	2-3" GAP, VIF	REFER TO DETAIL 8/I530	WOOD SPORTS FLOORING TO CONCRETE	TR-1
TR-2	FLOORING TRANSITION	RESILIENT TO CONCRETE	SCHLUTER	VINPRO-U	SATIN ANODIZED		REFER TO DETAIL 9/I530	RESILIENT FLOORING TO CONCRETE	TR-2
TR-3	FLOORING TRANSITION	EPOXY TO CONCRETE	SCHLUTER	RENO-U	SATIN ANODIZED		REFER TO DETAIL 10/I530	EPOXY TO CONCRETE	TR-3
TR-4	MILLWORK REVEAL	MILLWORK	FRY REGLET	MWR7550 MILLWORK REVEAL	POWDERCOAT				TR-4
TR-5	MILLWORK REVEAL	MILLWORK	FRY REGLET	MWROSC75 MILLWORK REVEAL	POWDERCOAT				TR-5

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LICENSED ARCHITECT
ANA L. CERVANTES
C-44560
EXPIRATION DATE 12/31/2027
RENEWAL REQUIRED
STATE OF CALIFORNIA

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

FINISH SCHEDULE

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/26/2026	OC HEALTH DEPT
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	S. FOX
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

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I630

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FINISH SCHEDULE

EXISTING RESTROOM FINISHES - FOR REFERENCE ONLY

WALL / CEILING PAINT

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	SERIES	COLOR/ COLOR #	SHEEN	NOTES	MARK
P-1C	PAINT	EMPLOYEE AND CUSTOMER RR	SHERWIN WILLIAMS	N/A	SW7005 PURE WHITE	SEMI-GLOSS	TYPICAL ON WALLS AND CEILINGS THROUGHOUT, U.O.N. | NO V.O.C.	P-1C

WALL TILE

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	COLLECTION/ STYLE/ #	COLOR/ COLOR #	SHAPE	SIZE	FINISH	INSTALLATION LAYOUT	GROUT MANUFACTURER	GROUT COLOR / COLOR #	GROUT WIDTH	NOTES	MARK
TW-1	PORCELAIN WALL TILE	EMPLOYEE AND CUSTOMER RR	TILEBAR	HEXART	POP TURQUOISE	HEXAGON		MATTE	SEE ELEVATIONS					TW-1
TW-2	PORCELAIN WALL TILE	EMPLOYEE AND CUSTOMER RR	TILEBAR	HEXART	TURQUOISE	HEXAGON		MATTE	SEE ELEVATIONS					TW-2
TW-3	CERAMIC WALL TILE	EMPLOYEE AND CUSTOMER RR	DALTILE	MULTITUDE	ORIGAMI WHITE			SMOOTH	SEE ELEVATIONS					TW-3
TW-4	PORCELAIN WALL TILE	EMPLOYEE AND CUSTOMER RR	DALTILE	EMMERSON WOOD	BUTTER PECAN			MATTE	SEE ELEVATIONS					TW-4

WALL BASE

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	PROFILE/ PROFILE #	COLOR/ COLOR #	SIZE	INSTALLATION METHOD	NOTE	MARK
B-5	COVE BASE	EMPLOYEE AND CUSTOMER RR	SCHLUTER	DILEX - AHKA	BRUSHED CHROME ANODIZED	10MM HEIGHT			B-5

SOLID SURFACE

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STYLE/ STYLE #	NOTE	MARK
SS-1	QUARTZ SURFACE	EMPLOYEE AND CUSTOMER RR	CAESARSTONE	1141 PURE WHITE		SS-1

CONCRETE FINISHING

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	STAIN/ DYE/ TINT COLOR#	GRIT LEVEL	SHEEN LEVEL	FINISH	NOTES	MARK
CON-1	POLISHED CONCRETE SLAB FINISH	TYP. THROUGHOUT, U.O.N.	-	-	-	HIGH GLOSS	-	SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FLOOR-PREP REQUIREMENTS	CON-1

WALK-IN COOLER (2.0) FINISHES - FOR REFERENCE ONLY

WALL / CEILING / FLOOR MATERIAL

MARK	PRODUCT TYPE	GENERAL LOCATION, U.O.N.	MANUFACTURER	SERIES	COLOR/ COLOR #	SHEEN	NOTES	MARK
WIC-1	WALK-IN COOLER	KITCHEN	SEE KITCHEN DRAWINGS	-	-	-	REFER TO SHEET QF301	WIC-1

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ANA L. CERVANTES
C-44455
LICENSE EXPIRES 12/31/2027
RENEWAL DATE
STATE OF CALIFORNIA

CITY OF IRVINE 1971

FINISH SCHEDULE

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
2	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/26/2026	OC HEALTH DEPT
6	03/06/2026	OC HEALTH DEPT 2

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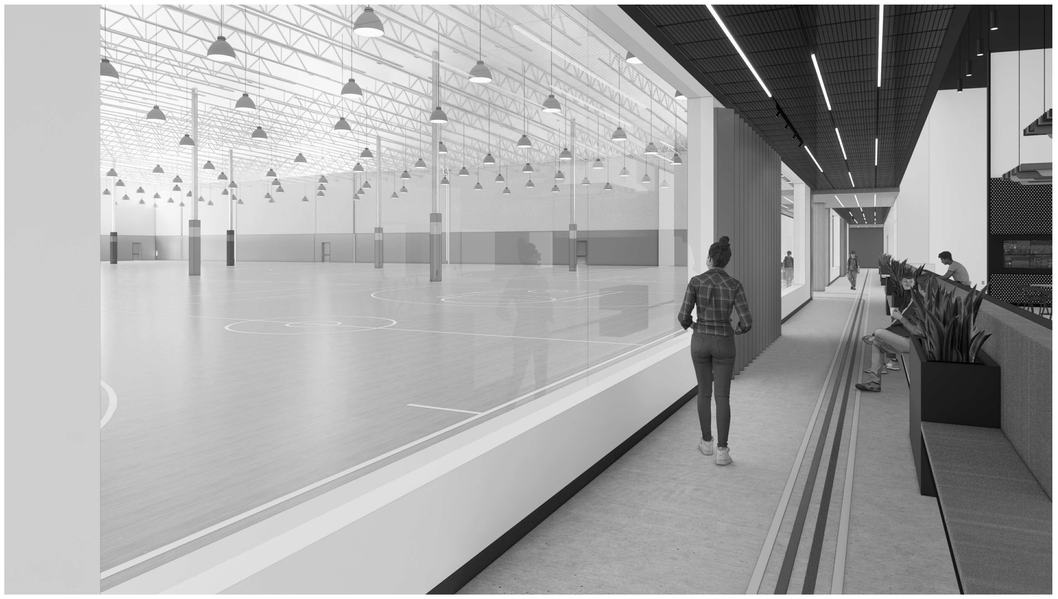
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LOBBY PERSPECTIVE



CORRIDOR PERSPECTIVE



FOOD COURT PERSPECTIVE

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INTERIOR RENDERINGS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS

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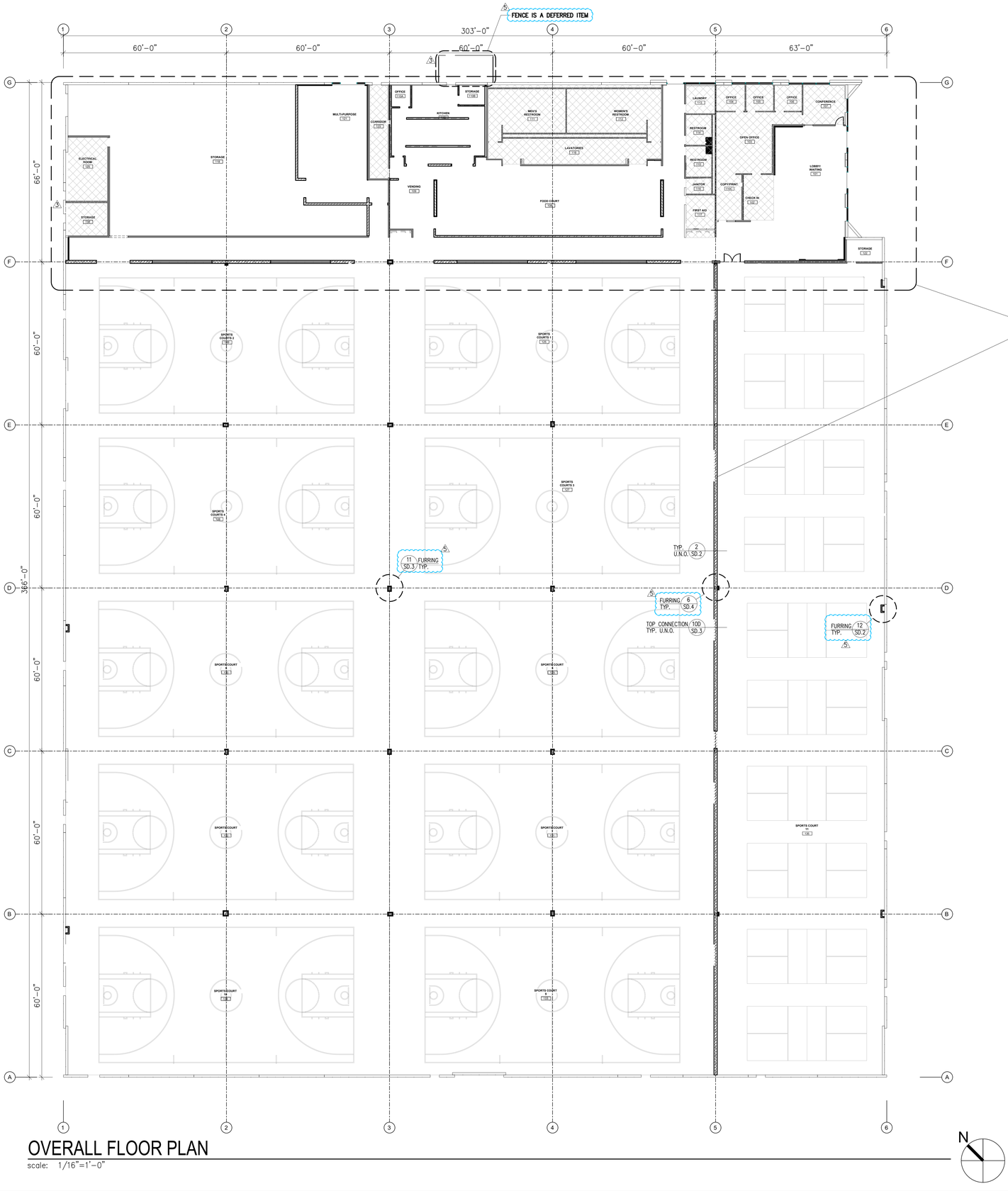
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NOTE:
WALL LEGEND, SEE SHEET ST-1.2.

SCOPE OF WORK:

1. NEW WALLS AND FULL HEIGHT WALL THAT SEPARATES COURT AND BREAK AREA, SEE SHEET ST-1.2.
2. NEW CEILING FRAMING, SEE SHEET ST-1.3.
3. BASKETBALL HOOPS, SCORE BOARD CONN., VOLLEYBALL NET AND NET DIVIDER TO EXISTING ROOF. (DEFERRED SUBMITTAL)

OVERALL FLOOR PLAN

scale: 1/16"=1'-0"

N

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HSA PROJECT NO. : 22-169E

REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA KEVIN L. LAU No. 39367 EXP. 06/30/27 Mar. 23, 2026 CIVIL

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OVERALL FLOOR PLAN

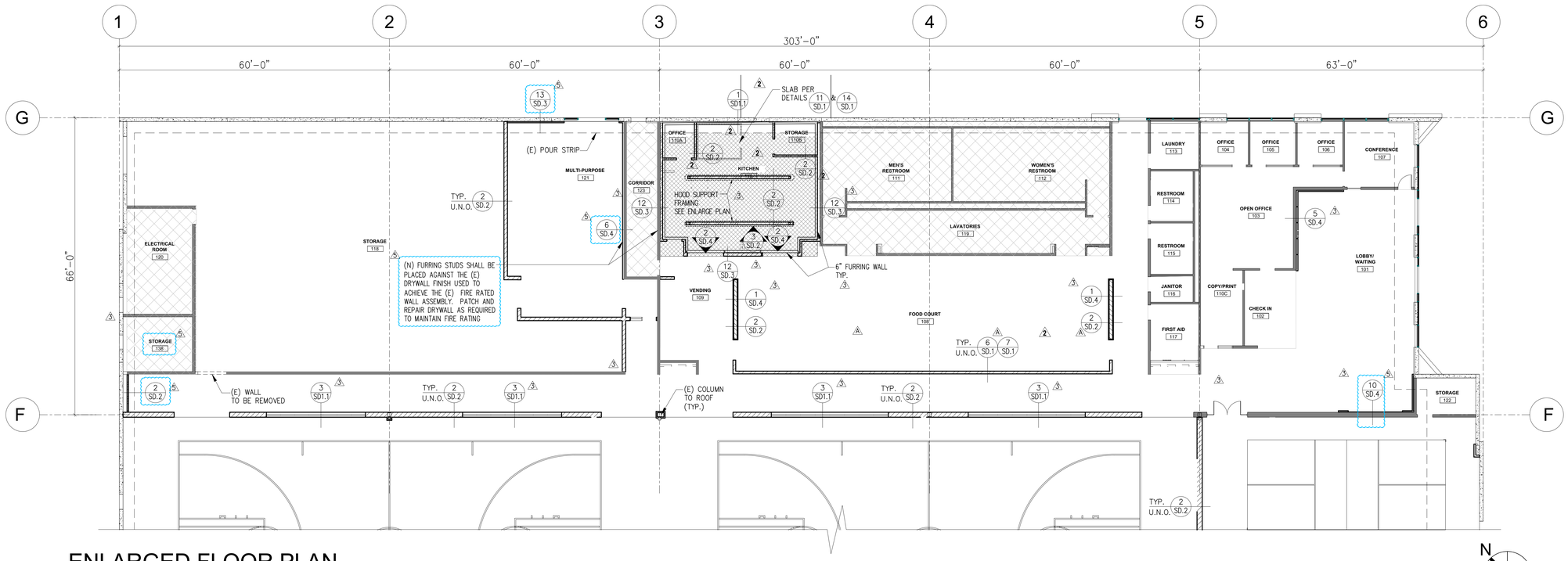
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A	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
	12/19/2025	ISSUE FOR CONSTRUCTABILITY REVIEW
3	02/04/2026	PLAN CHECK CORRECTIONS 3
5	03/20/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L
JOB NO.:	IRV24-6050-00

SHEET
ST-1.1

(NOT FOR BID OR CONSTRUCTION)

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ENLARGED FLOOR PLAN

scale: 3/32"=1'-0"

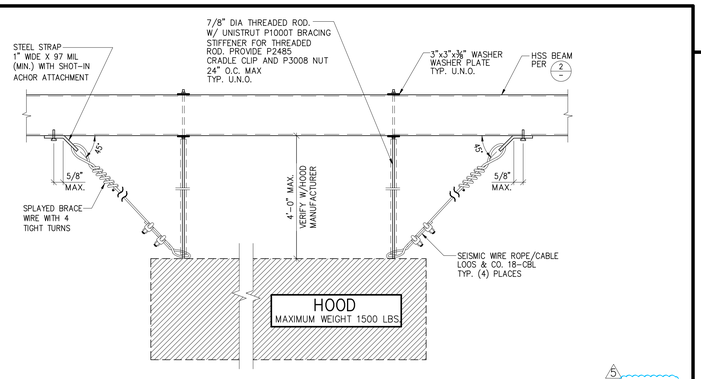
LEGEND:

- = DENOTES NEW PARTITION WALLS FOR HT. OF WALLS SEE ARCH. DWG'S FOR DETAILS, SEE (2 SD.2)
- = DENOTES NEW FULL HEIGHT METAL STUD WALL FOR DETAILS, SEE (2 SD.2)
- = DENOTES EXISTING CONCRETE WALLS.
- = EXISTING WALL TO BE REMOVED.
- = EXISTING WALL TO REMAIN.
- = LOW WALL PARTITION
- = PARTITION TO 6" ABOVE CEILING
- = DENOTES KITCHEN SLAB 9 3/4" THK. MIN. 16x16-D16xD16 WITH VIMS SYSTEM BELOW FOR ADD. INFO. SEE DET (1 SD1.1)
- = AREA NOT IN CONTRACT SEE SHELL BUILDING PACKAGE FOR MORE INFORMATION.

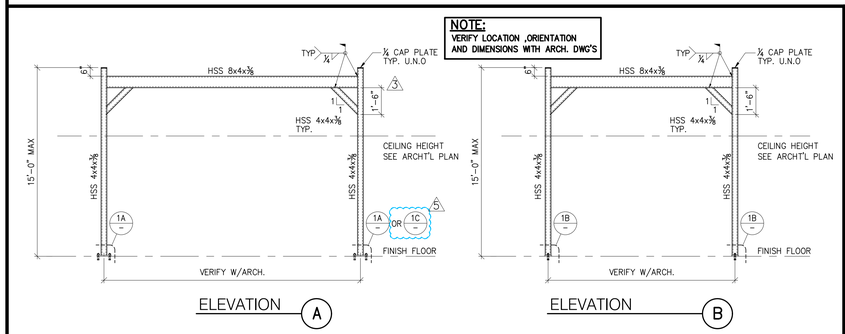
NOTE:
FOR TYPICAL METAL STUD DETAILS SEE SHEET "SD-2".

ENLARGE HOOD SUPPORT FRAMING PLAN

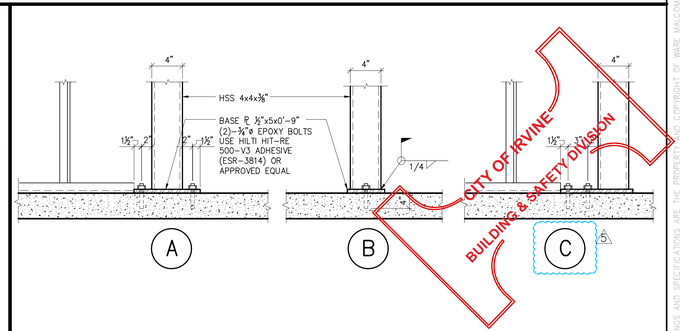
scale: NTS



HOOD SUPPORT DETAIL 3



HOOD SUPPORT FRAMING 2



DETAIL 1

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HSA & ASSOCIATES, INC.
CONSULTING STRUCTURAL ENGINEERS
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Phone: (949) 521-9931
Fax: (949) 521-9932
HSA PROJECT NO.: 22-169E

REGISTERED PROFESSIONAL ENGINEER KEVIN L. LANDRY No. S6307 EXP. 06-30-27 Mar. 23, 2026 STRUCTURAL

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

ENLARGED FLOOR PLAN

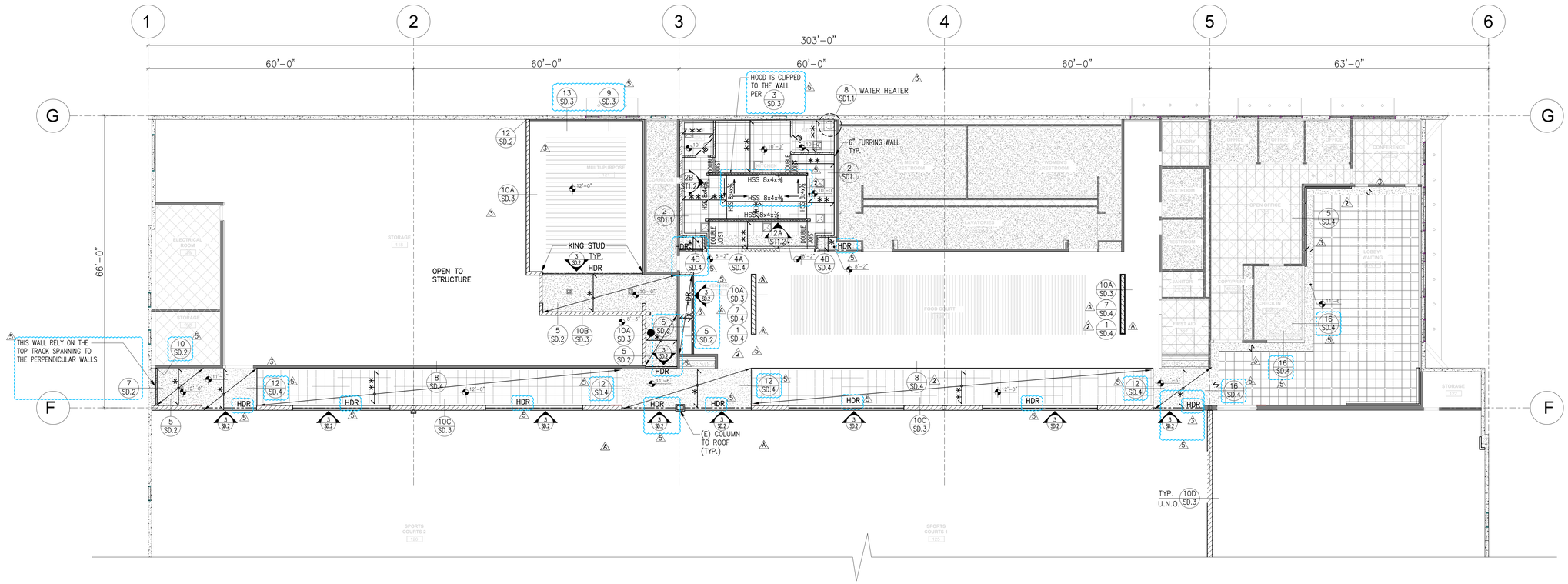
	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
A	09/22/2025	PLAN CHECK CORRECTIONS
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SHEET
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CEILING PLAN

scale: 3/32"=1'-0"

N

1. SEE SHEET "SD.2" FOR METAL STUD PARTITION WALLS AND FRAMING DETAILS. TYP. U.N.O.
2. SEE ARCHITECTURAL DRAWING FOR CEILING JOIST FRAMING PLAN. & FOR STRUCT'L DET., SEE 7 SD.2
3. FOR HEADER DETAIL, SEE DETAIL 3 SD.2
4. FOR WALL BRACE DETAIL SEE DETAIL 4 SD.2 (5)
5. FOR T-BAR CEILING STRUT DETAIL & SCHED. SEE SHEET "SD.3" TYPICAL U.N.O.

LEGEND:

- * = DENOTES CEILING JOIST FOR SIZES SEE DET. 1B SD.2 (2)
- ** = DENOTES CEILING JOIST FOR SIZES SEE DET. 2 SD1.1 (3)
- = DENOTES CEILING JOIST AREA (GYPBOARD CEILING)
- = DENOTES HORIZONTAL BRACE SEE DETAIL 4 SD.2 (5)
- = AREA NOT IN CONTRACT (5)
- = DENOTES DIAGONAL BRACE PER 3 ST1.2

NOTES:

1. VERIFY ALL DIMENSIONS WITH THE LATEST ARCHIT'L DRAWINGS
2. WALL LEGEND, SEE SHEET ST-1.2.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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17300 RED HILL
IRVINE, CALIFORNIA 92614

CEILING PLAN

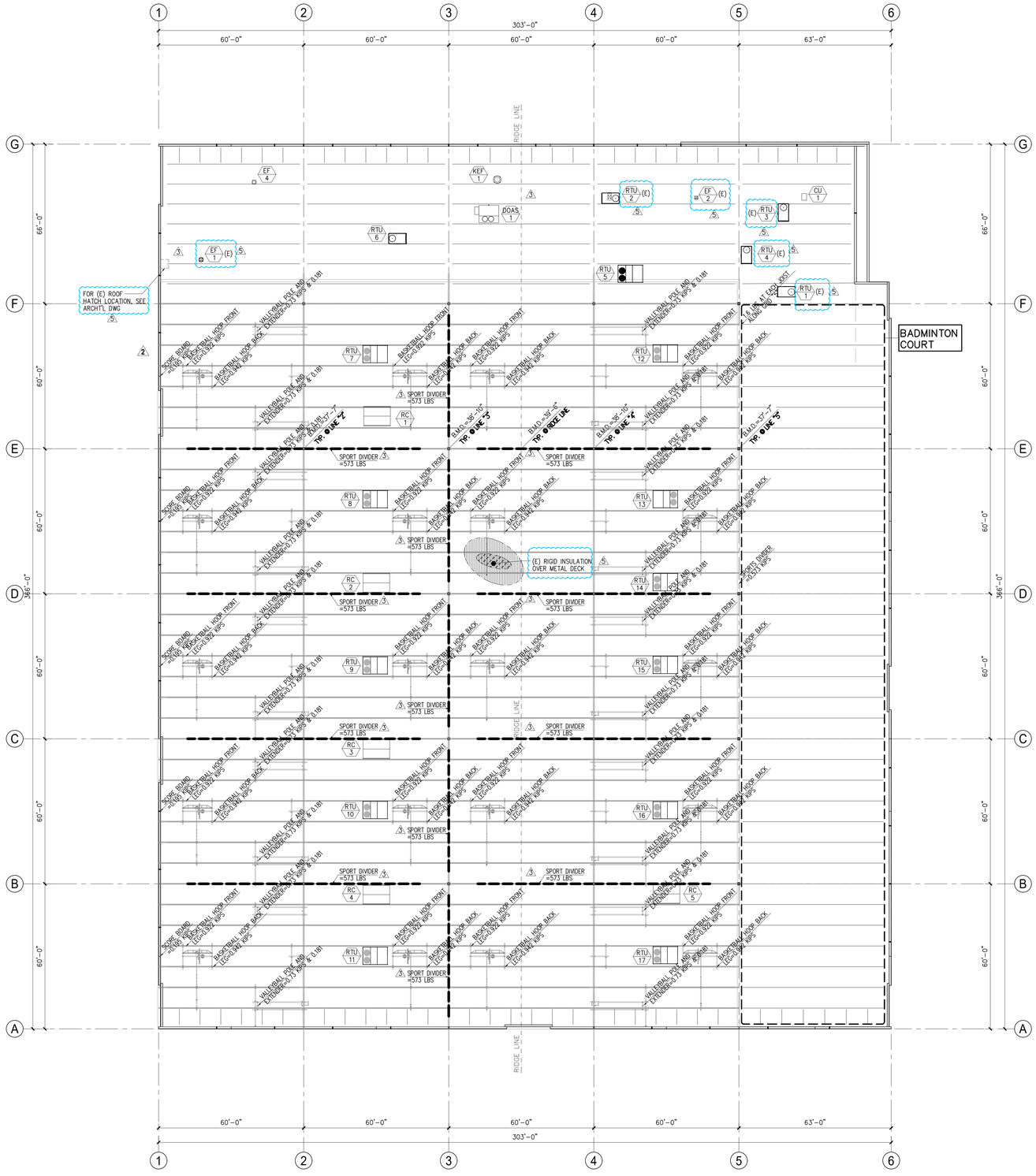
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SHEET
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ROOF TOP UNIT PLAN

scale: 1'=20'-0"

N

LEGENDS:

DENOTES EXHAUST FAN
VERIFY LOCATIONS & NO. OF UNITS W/ LATEST ARCHT'L DWG'S & MECH DWG'S. SEE DETAIL 9/SD1.1

DENOTES HEAT PUMP
VERIFY LOCATIONS & NO. OF UNITS W/ LATEST ARCHT'L DWG'S & MECH DWG'S. SEE DETAIL 11/SD1.1

MECH. UNIT SCHEDULE

UNIT NO.	OPER. WT. (LBS)
RTU 1	1039
RTU 2	1417
RTU 3 THRU RTU 4	927
RTU 5	2148
RTU 6	1055
RTU 7	2610
RTU 8	2610
RTU 9	2610
RTU 10	2610
RTU 11	2610
RTU 12	2610
RTU 13	2610
RTU 14	2610
RTU 15	2610
RTU 16	2610
RTU 17	2610
EF 1	29
EF 2	82
EF 4	82
KEF 1	176
CU 1	99
RC 1	591
RC 2	591
RC 3	591
RC 4	591
RC 5	591

NOTE:
1. VERIFY WEIGHT OF MECH. UNITS W/ LATEST MECH. & ARCHT'L DWG'S.

NOTE:
1. JOISTS MANUFACTURER SHALL DESIGN ROOF TRUSSES WITH RESPECT TO LOCATION OF EQUIPMENT ATTACHMENT AND WEIGHTS THAT DEVELOPED BY DRAPER DATED 06-13-25 AND PROVIDED BY WARE MALCOMB VIA EMAIL DATED 08-12-25.

UNIT	WEIGHT (LBS)
VOLLEYBALL POLE	730
VOLLEYBALL EXTENDER	181

NOTE:
VOLLEYBALL NET LOADING TO BE SPREAD OVER TWO JOISTS

UNIT	WEIGHT (LBS)
BASKETBALL HOOP FRONT LEG (TOTAL 1)	922.25
BASKETBALL HOOP BACK LEG (TOTAL 2)	942.25
SCOREBOARD	195
SPORT DIVIDER	573

NOTE:
BASKETBALL HOOPS LOADING TO BE SPREAD OVER THREE JOISTS

5 2. REFER TO DETAIL 10/SD1.1 FOR TRUSS LOADING CRITERIA

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REGISTERED PROFESSIONAL ENGINEER
JAMES R. HSA
No. 39307
EXP. 06-30-27
Mar. 23, 2026
CIVIL
STATE OF CALIFORNIA

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ROOF TOP UNIT PLAN

	DATE	REMARKS
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SHEET
ST-2.2

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GENERAL

1. "CODE" WHERE REFERRED TO HERE IN REFERS TO CALIFORNIA BUILDING CODE (CBC) 2022 EDITION.
2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CODE. AND ALL APPLICABLE LOCAL AND STATE CODES AND ORDINANCES.
3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ANY CHANGES OR SUBSTITUTIONS MADE MUST BE APPROVED BY THE BUILDING OFFICIAL, AS WELL AS THE ENGINEER OF RECORD, PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION AND SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS DURING CONSTRUCTION. SAFETY AND BRACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES.
6. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES AND FOR ALL PIPE SLEEVES, ELECTRICAL CONDUITS AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR OTHERWISE INCORPORATED IN STRUCTURAL WORK.
7. IN ALL CASES WHERE A CONFLICT MAY OCCUR, SUCH AS BETWEEN ITEMS COVERED IN SPECIFICATIONS AND NOTES ON THE DRAWINGS OR BETWEEN GENERAL NOTES AND SPECIFIC DETAILS, THE ENGINEER SHALL BE NOTIFIED AND HE WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS.
8. WHERE CONSTRUCTION MATERIALS ARE TEMPORARILY STORED ON ROOF OR FLOOR FRAMING, THEY SHALL BE DISTRIBUTED SO THAT THE LOAD DOES NOT EXCEED THE DESIGN LIVE LOAD.
9. THE GEOTECHNICAL REPORT IS CONSIDERED A PART OF THESE PLANS. A COPY SHALL BE KEPT AT THE JOB SITE AT ALL TIMES. ANY SUGGESTED "SHOULD" ACTION GIVEN IN THE GEOTECHNICAL REPORT SHALL BE TAKEN AS A DIRECTIVE "SHALL".
10. CONTRACTOR WILL SET UP A PRE-CONSTRUCTION MEETINGS WITH ARCHITECT, STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER PRIOR TO START OF CONSTRUCTION.

DESIGN CRITERIA

RISK CATEGORY

BUILDING IS DESIGNED PER RISK CATEGORY II REQUIREMENTS AND HAS TO COMPLY WITH BELOW OCCUPANCY AND STORAGE LIMITATIONS PER CBC 2022:

1. PUBLIC SPACES (SUCH AS BREAK ROOMS, CONFERENCE ROOMS, TRAINING ROOMS) OCCUPANCY SHOULD BE LIMITED TO BE LESS THAN 300. IF THE OCCUPANCY EXCEEDS 300, THEN CUMULATIVE OCCUPANCY OF ALL THE PUBLIC SPACES SHOULD NOT EXCEED 2500.
2. MAXIMUM CUMULATIVE OCCUPANCY OF BUILDING SHOULD NOT EXCEED 5000.
3. HAZMAT STORAGE BUILDINGS SHOULD NOT CONSIST OF MORE THAN 1 LB. OF SOLID OR LIQUID EXPLOSIVE MATERIALS NOR MORE THAN 500 LBS OF SOLID OR LIQUID TOXIC MATERIALS.

SEISMIC

OCCUPANCY CATEGORY	= III
RISK CATEGORY	= III
SEISMIC DESIGN CATEGORY	= D
RESPONSE MODIFICATION COEFFICIENT,	R = 4.0 (FOR INTERMEDIATE PRECAST STRUCTURAL WALLS)
SYSTEM OVERSTRENGTH FACTOR,	Ω_O = 2.0 (FOR INTERMEDIATE PRECAST STRUCTURAL WALLS WITH FLEXIBLE DIAPHRAGM)
DEFLECTION AMPLIFICATION FACTOR,	Cd = 4.0 (FOR INTERMEDIATE PRECAST STRUCTURAL WALLS)
REDUNDANCY FACTOR,	ρ = 1.0
SEISMIC IMPORTANCE FACTOR,	I_E = 1.25

S_S = 1.265g S_{DS} = 0.844g
S_1 = 0.454g S_{D1} = 0.842g

WIND

ULTIMATE WIND SPEED (V_{ULT})	= 102 MPH
NOMINAL WIND SPEED (V_{ASD})	= 80 MPH
WIND EXPOSURE	= C
IMPORTANCE FACTOR (I_W)	= 1.0

FOUNDATION

1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT NO. 3022025 & 4024017 DATED: 6/24/22 & 3/21/23 & 11/12/24 AND PREPARED BY NOVA Services.
2. ALL THE RECOMMENDATIONS CONTAINED IN THE ABOVE MENTIONED REPORT ARE PART OF THESE SPECIFICATIONS.
3. SITE AND BASE PREPARATION SHALL BE PER THE GEOTECHNICAL REPORT RECOMMENDATIONS WHICH INCLUDES GROUND IMPROVEMENT CONSISTING OF THE PLACEMENT OF AGGREGATE PIERS.
4. ALL FOOTINGS EXCAVATIONS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER AND BUILDING DEPARTMENT PRIOR TO POURING CONCRETE.
5. THE SOIL BEARING VALUE USED FOR THE DESIGN OF FOOTINGS UPON COMPACTED EARTH AND **18"** BELOW LOWEST FINISHED GRADE IS:

	ALLOWABLE SAFE BEARING CAPACITY (PSF)	
WIDTH (FT)	CONTINUOUS FOUNDATION	ISOLATED FOUNDATION
1.5~5	5000	5000

6. SEE GEOTECHNICAL REPORT FOR COMPACTED FILL REQUIRED UNDER ALL THE FOOTINGS.
7. PAD PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING ANY CONCRETE. THE PAD SHALL BE KEPT MOIST PRIOR TO THE PLACING OF CONCRETE. PRE-SATURATION OF THE SLAB SUBGRADE WILL BE AS PER GEOTECHNICAL REPORT.
8. ALL MATERIAL FROM FOOTING EXCAVATIONS TO BE REMOVED AND SHOULD NOT BE USED UNDER THE SLAB ON GROUND.
9. OVER EXCAVATION AND RECOMPACTION SHOULD BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL REPORT RECOMMENDATIONS
10. SLAB ON GROUND ON PAVEMENT AREAS SHOULD BE OVER EXCAVATED AND RECOMPACTED WHERE REQUIRED AS PER THE GEOTECHNICAL REPORT.
11. SOIL COMPACTION REPORT SHALL BE SUBMITTED TO THE CITY BUILDING INSPECTOR PRIOR TO FOOTING INSPECTION AND PRIOR TO PLACEMENT OF FOOTING CONCRETE.
12. PROVIDE SURVEY STAKES PRIOR TO FOUNDATION INSPECTION TO VERIFY LOT LINES.
13. SEE GEOTECHNICAL REPORT FOR REMOVAL AND RECOMPACTION REQUIREMENTS.
14. GEOTECHNICAL ENGINEER TO VERIFY SULFATE TEST RESULTS WITH ADDITIONAL TESTS DURING FINAL GRADING AND ADVISE SEOR IF CHANGED FROM THE GEOTECHNICAL REPORT.
15. GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE FOUNDATION PRIOR TO PLACEMENT OF CONCRETE FOR THE FOUNDATION. EVIDENCE OF SUCH INSPECTION SHALL BE PROVIDED TO THE BUILDING INSPECTOR AT FOUNDATION INSPECTION.
16. PROVIDE DRAINAGE BEHIND ALL RETAINING/SITE WALLS AS REQUIRED BY THE GEOTECHNICAL REPORT.
17. UNDERPINNING TO BE DESIGNED AS PER CBC CHAPTER 18 AND 33.
18. CONSTRUCTION TOLERANCES SHALL BE FOLLOWED PER ACI 301.

METAL STUDS

1. PROVIDE METAL STUDS AND TRACK FORMED FROM STANDARD COMMERCIAL STEEL WITH A MINIMUM YIELD STRENGTH AT 33,000 PSI AND COMPLYING WITH ASTM A568, CBC CHAPTER 22 AND SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS OF AISI S100-16/S2-20 EDITION. PROVIDE STUDS AND TRACK WITH MINIMUM YIELD STRENGTH AT 50,000 PSI FOR 16 GAUGE AND HEAVIER.
2. WELD STUDS COMPLYING WITH ANSI/AWS D1.3 AND CBC CHAPTER 22, WELDERS SHALL BE CERTIFIED AS REQUIRED BY GOVERNING CODE AUTHORITY.
3. USE METAL STUDS COMPLYING WITH CBC 2022 / AISI S100-16/S2-20.
4. PROVIDE UNPUNCHED 16 GAUGE TRACK, UNLESS NOTED OTHERWISE, OF DIMENSIONS TO ENSURE PROPER FIT OF STUDS.
5. CUT FRAMING COMPONENTS, SUCH AS BRACING, SQUARELY OR AT AN ANGLE TO FIT TIGHT AGAINST ABUTTING MEMBERS. HOLD MEMBERS FIRMLY IN POSITION UNTIL PROPERLY FASTENED.
6. ATTACH STUDS USING PLUG, BUTT OR SEAM WELDS, UNLESS NOTED OTHERWISE. WHERE STUDS ARE BURNED THROUGH BY WELDING, PROVIDE SUITABLE STITCH PLATE OF SAME GAUGE. SPLICES IN AXIAL LOADED STUDS OR BRACES ARE NOT PERMITTED. PROVIDE BUTT WELDS OR SPLICES AT JOINTS IN TRACK WIRE. TYING OF FRAMING COMPONENTS IS NOT PERMITTED.
7. NOT USED.
8. ALL METAL SCREW INDICATED ON THESE DRAWINGS ARE SELF DRILLING/SELF-TAPPING STEEL SCREWS AS MANUFACTURED BY HILTI COMPLYING WITH ICC REPORT NO. ESR-2196 OR APPROVED EQUAL.

POST-INSTALLED ANCHORS

1. FOR POST-INSTALLED ADHESIVE ANCHORS
   ALL ANCHORS TO BE "F1554" GR.36 ALL THREAD BOLTS MIN. EMBEDMENT = 4"MIN. U.N.O. FOR ALL WALL
   A. USE HIT-RE 500-V3 ADHESIVE (ESR 3814) (LARR 26028) OR APPROVED EQUAL FOR CONCRETE U.N.O.
   B. USE HILTI HY-270 ADHESIVE (ESR-4143) OR APPROVED EQUAL FOR FULLY GROUTED MASONRY U.N.O.
2. ALL THE EPOXY WORK WILL REQUIRE SPECIAL AND CONTINUOUS INSPECTION BY A CITY APPROVED DEPUTY INSPECTOR.
3. FOR POST-INSTALLED EXPANSION ANCHORS
   A. USE HILTI KWIK BOLT TZ (ESR 1917) OR APPROVED EQUAL FOR CONCRETE U.N.O
   B. USE QUICK BOLT 3 (ESR 1385) OR APPROVED EQUAL FOR FULLY GROUTED MASONRY U.N.O
4. INSTALL POST INSTALLED ANCHORS PER MANUFACTURER'S SPECIFICATIONS.

STATEMENT OF SPECIAL INSPECTION AND STRUCTURAL TEST

1. THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE AS DESCRIBED IN SEC. 1704.2 AND 1704.3 OF CBC. COPIES OF TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THIS ENGINEER IN ADDITION TO OTHER NORMAL DISTRIBUTIONS WITHIN ONE WEEK OF TEST OR INSPECTION.
2. ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER OR ARCHITECT AND NOT THE CONTRACTOR PER CBC SECTION 1703. JOB SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE A SPECIAL INSPECTION. THE FIRM PROVIDING SPECIAL INSPECTION SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
   (NOTE: FOUNDATION INSPECTIONS LISTED BELOW ARE PROVIDED BY AN INSPECTOR DESIGNATED BY OTHERS)
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND INSPECTION FIRM WITH A SCHEDULE TO FACILITATE THE PROPER COORDINATION OF WORK.
4. SPECIAL INSPECTION FOR SEISMIC RESISTANCE FOR DESIGN CATEGORY C,D,E & F SHALL BE DONE IN ACCORDANCE TO SECTION 1705.12
5. PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:

	YES	NO	N/A
VI. WELDING:			
A. ALL STRUCTURAL WELDING (INCLUDES DECKING AND WELDED STUDS), EXCEPT WELDING IN APPROVED SHOPS PER CBC 1704.2.5.1	■	□	□
B. ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS AT MOMENT FRAMES, BRACED FRAMES, BEAM SPLICES, AND FIELD WELDS.	■	□	□
C. STRUCTURAL LIGHT GAGE METAL FRAME WELDING	□	□	■
D. REINFORCING STEEL WELDING PER AISC 360-16 AND AISC 341-16	■	□	□
E. SEE TABLES N5.4-1 THRU N5.4-3 OF AISC 360-16 FOR ANY ADDITIONAL REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION			
F. SEE TABLES J6-1 THRU J6-3 OF AISC 341-16 FOR ANY ADDITIONAL REQUIRED VERIFICATION AND INSPECTION OF WELDING FOR SEISMIC DESIGN CATEGORY C,D,E & F.			
VII. BOLTING:			
A. HIGH STRENGTH BOLT A325SC & A490SC (TORQUE VERIFICATION).	■	□	□
B. HIGH STRENGTH BOLT A325N & A490N (SNUG CONTACT OF PLYS).	■	□	□
C. EXPANSION/ADHESIVE ANCHORS IN CONCRETE OR MASONRY.	■	□	□
D. ANCHOR BOLTS AT CONCRETE WALLS AND BRACED FRAMES, (BOLT INSTALLATION AND CONCRETE PLACEMENT)	■	□	□
E. SEE TABLES N5.6-1 THRU N5.6-3 OF AISC 360-16 FOR ANY ADDITIONAL REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION.			
F. SEE TABLES J7-1 THRU J7-3 OF AISC 341-16 FOR ANY ADDITIONAL REQUIRED VERIFICATION AND INSPECTION OF BOLTING FOR SEISMIC DESIGN CATEGORY C,D,E & F.			
6. STRUCTURAL OBSERVATIONS REQUIRED. AS BY THIS ENGINEER OR THE BUILDING DEPARTMENT; THE OWNER SHALL EMPLOY AN ENGINEER APPROVED BY THIS ENGINEER TO PERFORMED STRUCTURAL OBSERVATION AS DEFINED IN CBC SECTION 1704.6	■	□	□

7. EACH CONTRACTOR OR SUB-CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A WIND OR SEISMIC FORCE RESISTING SYSTEM/ COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

DEFERRED SUBMITTAL ITEMS

1. FOLLOWING STRUCTURAL ITEMS ARE DEFERRED SUBMITTAL:
   A. ALL SPORT EQUIPMENTS ANCHORAGE AND INSTALLATION
   B. VOLLEYBALL POLE & EXTENDER
   C. BASKETBALL HOOPS
   D. GYM DIVIDER LOADING
   E. ANCHORING FRIDGE/EQUIPMENT
   F. SUSPENDED CEILING ON MULTIPURPOSE ROOM
   G. SUSPENDED CEILING IN FOOD COURT
   H. SUSPENDED CEILING IN CORRIDOR
   HOOD HANGING SUPPORT
   J. FENCE
2. THE DEFERRED SUBMITTAL 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 SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

COMMUNITY DEVELOPMENT
Building and Safety

STATEMENT OF SPECIAL INSPECTION

Special Inspections shall be performed in accordance with Chapter 17 of the California Building Code (CBC) and the City of Irvine Special Inspection Manual.

INSTRUCTIONS: Place an **X** preceding each applicable section or indicate **N/A** if not applicable. Provide a complete and detailed description, detail, or plan sheet reference where required to complete an applicable section. Incorporate this completed form in its entirety into the project construction plans for plan check review.

SECTION 1705 : SPECIAL INSPECTIONS

1. X — **Special Cases, Section 1705.1.1** The following describes additional systems or elements subject to special inspection as required by the Chief Building Official, Engineer of Record, manufacturer's instructions, or Evaluation Report:
   POST-INSTALLED ANCHORS & EPOXY REBAR
2. X — **Structural Steel, Section 1705.2** Special inspections and nondestructive testing of structural steel elements shall be in accordance with AISC 360. Offsite fabrication may only be performed by an approved fabricator. See City of Irvine Informational Bulletin 311.
   Cold-Formed Steel Deck, Section 1705.2.2 Special inspections for cold formed steel floor and roof deck shall be in accordance with the quality assurance inspection requirements of SDI QA/QC.
   Open-Web Steel Joists and Joist Girders, Section 1705.2.3 Special inspections of open-web steel joists and joist girders shall be in accordance with Table 1705.2.3.
3. X — **Concrete Construction, Section 1705.3** All structural concrete is subject to special inspection per CBC Table 1705.3 and City of Irvine Information Bulletin 181.
4. N/A — **Masonry Construction, Section 1705.4** Special inspections and tests of masonry construction shall be performed in accordance with the quality assurance program requirements of TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6 except masonry fireplaces, masonry heaters, or masonry chimneys installed or constructed in accordance with Section 2111, 2112, or 2113, respectively.
5. N/A — **Wood Construction, Section 1705.5** Special inspections of prefabricated wood structural elements and assemblies shall be in accordance with Section 1704.2.5. Offsite fabrication may only be performed by an approved fabricator. See City of Irvine Informational Bulletin 311.
6. N/A — **Mass Timber Construction, Section 1705.5.7** Special inspections of Mass Timber elements shall be in accordance with Table 1705.5.7. Periodic special inspection will also be required for Mass Timber sealants and adhesives in accordance with Section 1705.20, when required by 703.9.
7. N/A — **High Load Diaphragms, Section 1705.5.1** The following describes high load diaphragms (diaphragms designed in accordance to CBC Table 2306.2) subject to special inspection requirements as described in Section 1704.2 (plan sheet or detail reference is acceptable):

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STATEMENT OF SPECIAL INSPECTION

SECTION 1705.12: SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

The following are applicable to specified seismic force-resisting systems, designated seismic systems, and architectural, mechanical, and electrical components. See CBC Sections 1705.12.1 through 1705.12.9 to determine applicability.

Seismic-Force Resisting Systems. The following describes the seismic-force resisting systems(s) subject to special inspection per applicable CBC Sections 1705.12.1 through 1705.12.9 as indicated below:

18. N/A — **Structural Steel, Section 1705.12.1** Special inspections of structural steel in the seismic force resisting systems of buildings shall be performed in accordance with the quality assurance requirements of American Institute of Steel Construction (AISC) 341.

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STATEMENT OF SPECIAL INSPECTION

19. N/A — **Structural Wood, Section 1705.12.2** For the seismic force-resisting systems:
   1. Continuous special inspection shall be required during field gluing operations of elements of the seismic force-resisting system.
   2. Periodic special inspection shall be required for nailing, bolting, anchoring, and other fastening of elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels, and hold-downs.

   Exception: Special inspections are not required for wood shear walls, shear panels, and diaphragms, including nailing, bolting, anchoring, and other fastening to other elements of the seismic force-resisting system, where the fastener spacing of the sheathing is more than 4 inches on center.
   Provide plan sheet or detail reference where the special inspection is required.
20. N/A — **Cold-Formed Steel Light-Frame Construction, Section 1705.12.3** For the seismic force-resisting systems of structures, periodic special inspection shall be required:
   1. For welding operations of elements of the seismic force-resisting system; and
   2. For screw attachment, bolting, anchoring, and other fastening of elements of the seismic force-resisting system, including shear walls, braces, diaphragms, collectors (drag struts), and hold-downs.

   Provide plan sheet or detail reference where the special inspection is required.
21. N/A — **Designated Seismic Systems, Section 1705.12.4** The special inspector shall examine designated seismic systems requiring seismic qualification in accordance with Section 13.2.2 of ASCE 7 and verify that the label, anchorage and mounting conform to the certificate of compliance.
22. X — **Architectural Components, Section 1705.12.5** Periodic special inspection is required during the erection and fastening of:
   ☐ Exterior cladding, and exterior or interior veneer, more than 30 feet in height above grade or walking surface, or weighing more than 5 psf as indicated on plan sheet(s): _____
   ☒ Non-bearing walls more than 30 feet in height or weighing more than 15 psf as indicated on plan sheet(s): ST-1.2, ST-1.3 and 1/SD-2
23. N/A — **Access Floors, Section 1705.12.5.1** Periodic special inspection is required for the anchorage of access floors.
24. N/A — **Mechanical and Electrical Components, Section 1705.12.6** Periodic special inspection is required during installation and anchorage of:
   ☐ Electrical equipment for emergency or standby power systems.
   ☐ The piping system(s) and associated mechanical units intended to hazardous materials as indicated on plan sheet(s): _____

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STATEMENT OF SPECIAL INSPECTION

   ☐ The HVAC ducts intended to carry hazardous materials as indicated on plan sheet(s): _____
   ☐ The vibration isolation system as indicated on plan sheet(s) : _____
25. N/A — **Storage Racks and Access Floors, Section 1705.12.7** Periodic special inspection is required during the anchorage of storage racks 8 feet or greater.
26. N/A — **Seismic Isolation System, Section 1705.12.8** Periodic special inspection is required during the fabrication and installation of ☐ isolator units and ☐ energy dissipation devices.
27. N/A — **Cold-Formed Steel Special Bolted Moment Frames, Section 1705.12.9** Periodic special inspection shall be provided for the installation of cold-formed steel special bolted moment frames.

SECTION 1705.13: TESTING FOR SEISMIC RESISTANCE

28. N/A — **Structural Steel, Section 1705.13.1** The following describes required testing of welds, base metal, weld tab removal sites, and thermally cut surfaces of beam copes or access holes per CBC Section 1708 and AISC 341. MT= Magnetic Particle Testing per Appendix W of Section W4.2 AISC 341, UT= Ultrasonic Testing per Appendix W, Section 4.1. Testing procedures and acceptance criteria shall conform to AISC 341 and AWS D1.1.
   ☐ K-area welding; web area shall be MT'd for cracks in the k-area base metal within 3 inches minimum of the weld.
   ☐ Complete joint penetration groove welds. All shall be UT'd for materials 5/16 inches or thicker.
   ☐ Complete joint penetration groove welds. 25% of all beam to column connections shall be MT'd.
   ☐ Base metal for lamellar tearing; UT testing for discontinuities behind and adjacent to weld fusion line for all complete joint penetration groove welded connections for tension loading in the through thickness direction of base metal greater than 1 1/2 inch thickness to connected piece greater than 3/4 inch.
   ☐ Flange and web thickness exceeding 1 1/2 inches-___ welded splices and connections, __ thermally cut surfaces of beam copes and access holes shall be MT or penetrant tested.
   ☐ End of welds from which a weld tab has been removed shall be MT'd. (**NOTE:** N/A for continuity plate weld tabs)
   ☐ UT percentage reduction protocol is as follows (**NOTE:** May not exceed that allowed by AISC 341): _____
   ☐ MT percentage reduction protocol is as follows (**NOTE:** May not exceed that allowed by AISC 341): _____
29. N/A — **Nonstructural Components, Section 1705.13.2** The registered design professional shall specify on the approved construction documents the requirements for seismic qualification. Certificate of compliance for the seismic qualification shall be provided to the building official as specified in Section 1704.5.
30. N/A — **Designated Seismic Systems, Section 1705.13.3** The registered design professional shall specify on the approved construction documents the requirements for seismic qualification. Certificate of compliance for the seismic qualification shall be provided to the building official as specified in Section 1704.5.

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STATEMENT OF SPECIAL INSPECTION

SECTION 1705.11: SPECIAL INSPECTIONS FOR WIND RESISTANCE

Special inspections for wind resistance, Section 1705.11 Special inspections for wind resistance specified in Sections 1705.11.1 through 1705.11.3

31. N/A — **Structural Wood, Section 1705.11.1** Continuous special inspection is required during field gluing operations of elements of the main windforce-resisting system. Periodic special inspection is required for nailing, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, and hold-downs.
   Exception: Special inspections are not required for wood shear walls, shear panels, and diaphragms where the fastener spacing of the sheathing is more than 4 inches on center.
32. N/A — **Cold-Formed Steel Light-Frame Construction, Section 1705.11.2** Periodic special inspection is required for welding operations of elements of the main windforce-resisting system. Periodic special inspection is required for screw attachment, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including shear walls, braces, diaphragms, collectors (drag struts), and hold-downs. See Section 1705.11.2 for exceptions.
33. N/A — **Wind-Resisting Components, Section 1705.11.3** Periodic special inspection is required for fastening of the following systems and components:
   1. Roof covering, roof deck, and roof framing connections.
   2. Exterior wall covering and wall connections to roof and floor diaphragms and framing.

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CITY OF IRVINE
BUILDING & SAFETY DIVISION

GENERAL NOTES

	DATE	REMARKS
	07/30/25	ISSUE FOR PLAN CHECK
A	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
	12/19/2025	ISSUE FOR CONSTRUCTABILITY REVIEW
3	02/04/2026	PLAN CHECK CORRECTIONS 3
5	03/09/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
SD-0.0

(NOT FOR BID OR CONSTRUCTION)

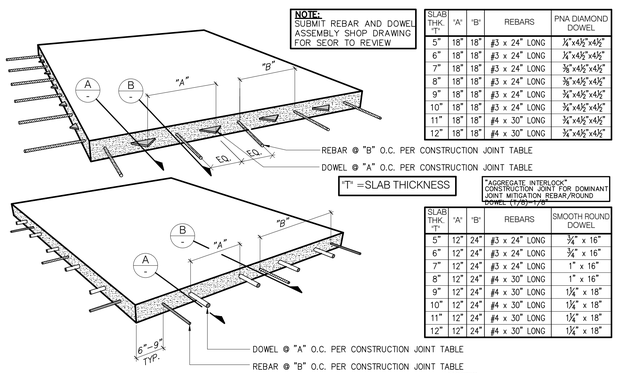
WARE MALCOMB
10 Edelman
Irvine, CA 92618
P: 949.660.9128
ARCHITECTURE PLANNING INTERIORS
CIVIL ENGINEERING BRANDING BUILDING MEASUREMENT

HSA & ASSOCIATES, INC.
CONSULTING STRUCTURAL ENGINEERS
HSA PROJECT NO.: 22-169E

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

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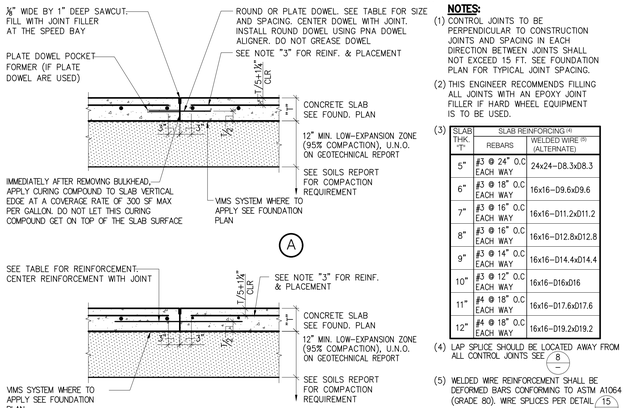


NOTE:
SUBMIT REBAR AND DOWEL ASSEMBLY SHOP DRAWING FOR SEOR TO REVIEW

SLAB THK. "T"	'A'	'B'	REBARS	PNA DIAMOND DOWEL
5"	18"	18"	#3 x 24" LONG	¼"x4½"x4½"
6"	18"	18"	#3 x 24" LONG	¼"x4½"x4½"
7"	18"	18"	#3 x 24" LONG	⅜"x4½"x4½"
8"	18"	18"	#3 x 24" LONG	⅜"x4½"x4½"
9"	18"	18"	#3 x 24" LONG	¾"x4½"x4½"
10"	18"	18"	#3 x 24" LONG	¾"x4½"x4½"
11"	18"	18"	#4 x 30" LONG	¾"x4½"x4½"
12"	18"	18"	#4 x 30" LONG	¾"x4½"x4½"

"AGGREGATE INTERLOCK" CONSTRUCTION JOINT FOR DOMINANT JOINT MITIGATION REBAR/ROUND DOWEL (T/3)+1/2"

SLAB THK. "T"	'A'	'B'	REBARS	SMOOTH ROUND DOWEL
5"	12"	24"	#3 x 24" LONG	⅝" x 16"
6"	12"	24"	#3 x 24" LONG	¾" x 16"
7"	12"	24"	#3 x 24" LONG	1" x 16"
8"	12"	24"	#4 x 30" LONG	1" x 16"
9"	12"	24"	#4 x 30" LONG	1⅛" x 18"
10"	12"	24"	#4 x 30" LONG	1⅛" x 18"
11"	12"	24"	#4 x 30" LONG	1⅛" x 18"
12"	12"	24"	#4 x 30" LONG	1⅛" x 18"



NOTES:

(1) CONTROL JOINTS TO BE PERPENDICULAR TO CONSTRUCTION JOINTS AND SPACING IN EACH DIRECTION BETWEEN JOINTS SHALL NOT EXCEED 15 FT. SEE FOUNDATION PLAN FOR TYPICAL JOINT SPACING.

(2) THIS ENGINEER RECOMMENDS FILLING ALL JOINTS WITH AN EPOXY JOINT FILLER IF HARD WHEEL EQUIPMENT IS TO BE USED.

(3)

SLAB THK. "T"	SLAB REINFORCING (4) REBARS	WELDED WIRE (5) (ALTERNATE)
5"	#3 @ 24" O.C. EACH WAY	24x24–D8.3xD8.3
6"	#3 @ 18" O.C. EACH WAY	16x16–D9.6xD9.6
7"	#3 @ 16" O.C. EACH WAY	16x16–D11.2xD11.2
8"	#3 @ 16" O.C. EACH WAY	16x16–D12.8xD12.8
9"	#3 @ 14" O.C. EACH WAY	16x16–D14.4xD14.4
10"	#3 @ 12" O.C. EACH WAY	16x16–D16xD16
11"	#4 @ 18" O.C. EACH WAY	16x16–D17.6xD17.6
12"	#4 @ 18" O.C. EACH WAY	16x16–D19.2xD19.2

(4) LAP SPLICE SHOULD BE LOCATED AWAY FROM ALL CONTROL JOINTS SEE 8

(5) WELDED WIRE REINFORCEMENT SHALL BE DEFORMED BARS CONFORMING TO ASTM A1064 (GRADE 80). WIRE SPLICES PER DETAIL 15

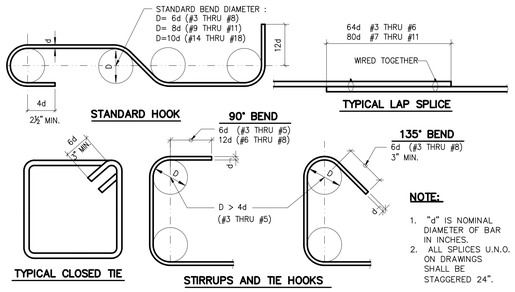
(6) CONSTRUCTION JOINTS SHALL BE LOCATED AT A MAXIMUM INTERVAL OF 200 FT. IN ANY DIRECTION OF THE BUILDING SLAB.

CONSTRUCTION JOINT | 14

NOT USED

9

NOT USED

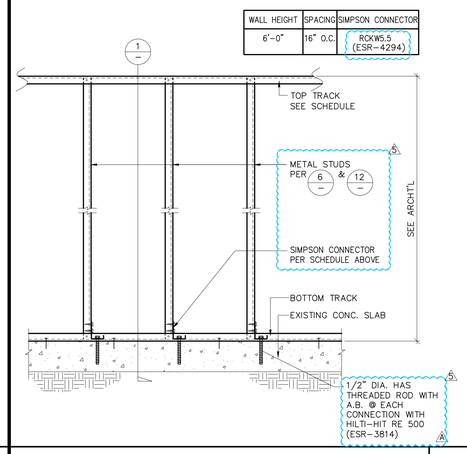


NOTE:
1. "d" IS NOMINAL DIAMETER OF BAR IN INCHES.
2. ALL SPLICES U.N.O. ON DRAWINGS SHALL BE STAGGERED 24".

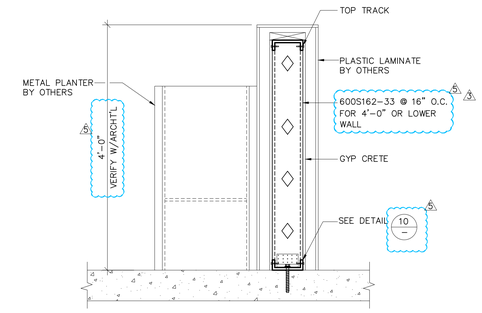
TYP. REBAR, HOOK, BENT AND LAP SPLICE | 5

NOT USED

DETAIL | 1

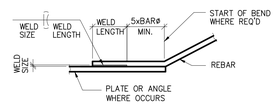


DETAIL | 10



PLANTER DETAIL | 6

REBAR SIZE	WELD SIZE	WELD LENGTH
#3	3/16"	2"
#4	1/4"	3"
#5	5/16"	4"
#6	3/8"	4"
#7	7/16"	5"
#8	1/2"	6"
#9	9/16"	6"
#10	5/8"	7"



1 WELDING SHALL CONFORM TO A.W.S. CODE D1.4–05.

2 REINFORCING THAT IS TO BE WELDED SHALL CONFORM ASTM A706.

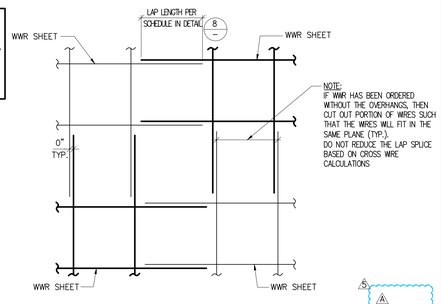
3 FURTHER TESTING AND APPROVAL IS REQUIRED PRIOR TO THE WELDING OF ANY ASTM A615 REINFORCING.

TYPICAL REINFORCING WELDING | 2

NOT USED

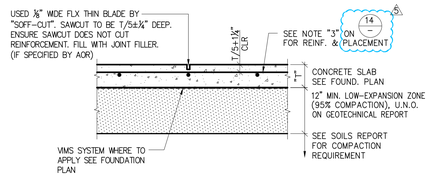
3

NOTE:
1. NO LAP SPLCE AT CONSTRUCTION & CONTRACTION JOINT.
2. PLACE THE LAP SPLICE AT LEAST 1'–0" AWAY FROM THE CONSTRUCTION & CONTRACTION JOINT.
3. REFER TO DETAIL 14/– FOR ADDITIONAL INFORMATION

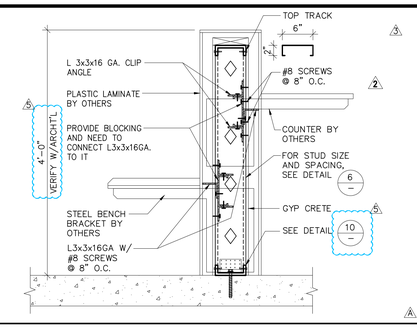


WWR SPLICE PLAN | 15

NOTE:
SEE CONSTRUCTION JOINT DET. 14 FOR INFO NOT SHOWN



CONSTRUCTION JOINT | 11

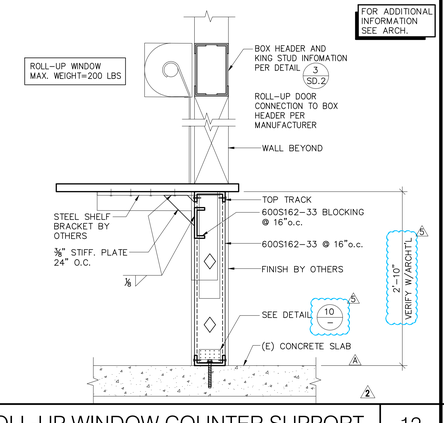


BACKING SUPPORT DETAIL | 7

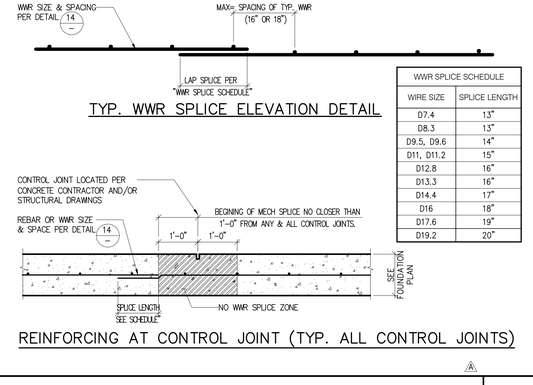
NOT USED

4

NOT USED



ROLL-UP WINDOW COUNTER SUPPORT | 12



WWR SPLICE SCHEDULE	
WIRE SIZE	SPLICE LENGTH
D7.4	13"
D8.3	13"
D9.5, D9.6	14"
D11, D11.2	15"
D12.8	16"
D13.3	16"
D14.4	17"
D16	18"
D17.6	19"
D19.2	20"

DETAIL | 8

NOT USED

CITY OF IRVINE
BUILDING & SAFETY DIVISION

4

WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING
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INTERIORS BUILDING MEASUREMENT
10 Edelman
Irvine CA 92618
P:949.660.9128

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA — EXP 06/30/27 — Mar. 23, 2026

HSA & ASSOCIATES, INC.
CONSULTING STRUCTURAL ENGINEERS
Irvine, California
Phone: (949) 521-9931
Fax: (949) 521-9933
HSA PROJECT NO. : 22-169E

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

FOUNDATION DETAILS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
	09/22/2025	PLAN CHECK CORRECTIONS
A	10/15/2025	PLAN CHECK CORRECTIONS 2
2	12/19/2025	ISSUE FOR CONSTRUCTABILITY REVIEW
3	02/04/2026	PLAN CHECK CORRECTIONS 3
5	03/20/2026	PLAN CHECK CORRECTIONS 4

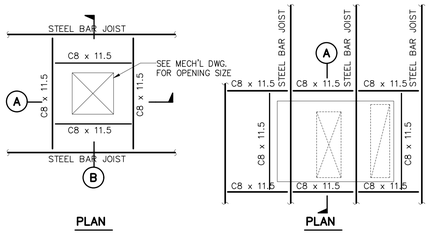
PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

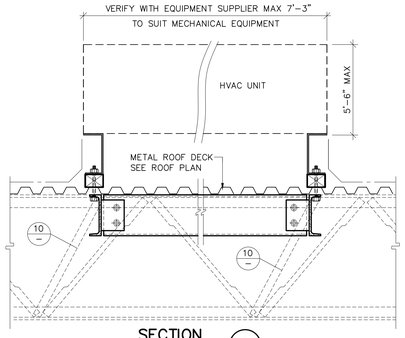
SHEET
SD-1

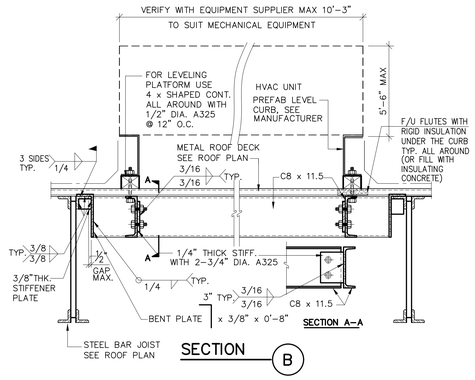
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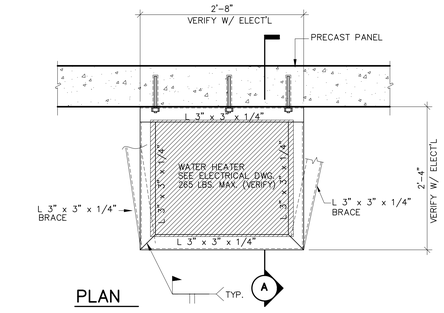


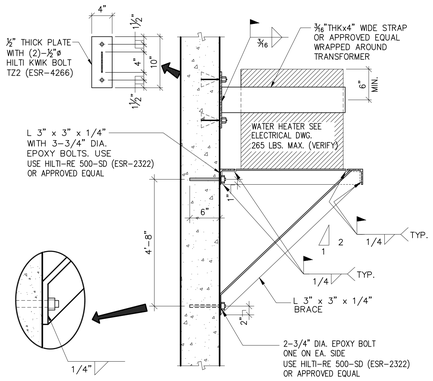


NOTES:

1. HEATER + HANGERS + HANGER CONNECTION TO HEATER & STRUT SWAY BRACES AS REQUIRED AND STRUT MEMBER & ITS CONNECTION TO STRUCTURAL MEMBER SHALL BE DESIGNED AND PROVIDED BY THE MECHANICAL CONTRACTOR.
2. NO HOLES SHALL BE DRILLED THRU THE STRUCTURAL MEMBER WITHOUT THE WRITTEN PERMISSION FROM STRUCTURAL ENGINEERS.
3. ALL BOLTED CONNECTIONS SHALL HAVE SPECIAL INSPECTION FOR SNUG CONTACT OF STRUCTURAL MEMBERS MINIMUM, U.N.O.

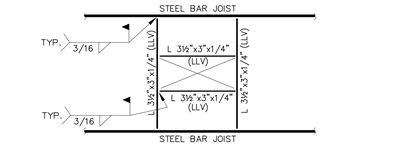
DETAIL | 11

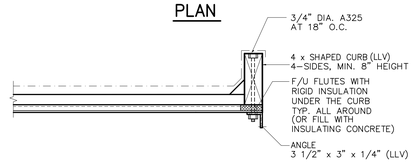




NOTE:
SEE ARCH'L & ELEC'L DWG'S. FOR DIMENSION AND FOR OTHER INFORMATION.

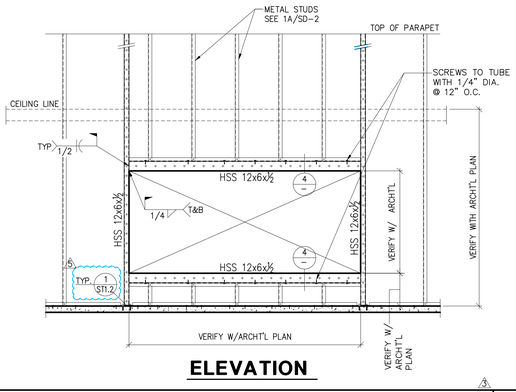
WATER HEATER PLATFORM DETAIL | 8



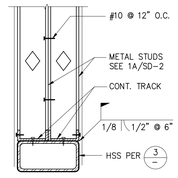


OPENING FOR EXHAUST FAN AND RELIEF VENTILATOR MOUNTING

NOT USED



OPENING @WALL BETWEEN BASKETBALL COURT & CORRIDOR | 3

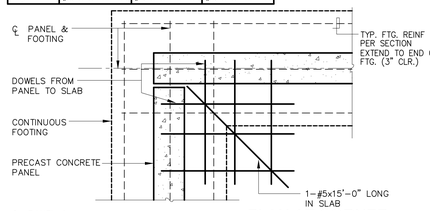


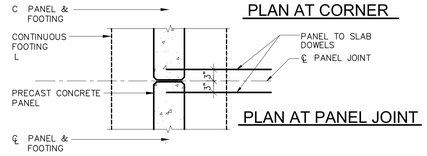
DETAIL | 4

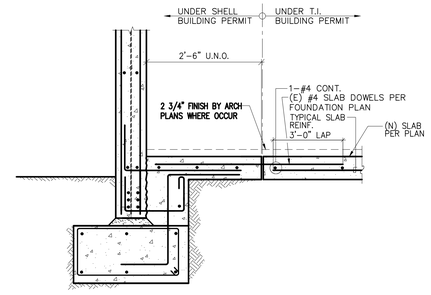
NOT USED

DETAIL | 5

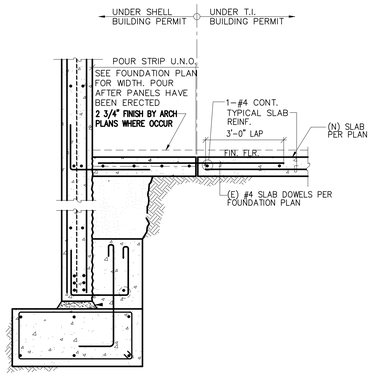
FOOTING DOWEL SCHEDULE			
PANEL THICKNESS	CONCRETE STRENGTH (56 DAYS STRENGTH) 4400 PSI	4950 PSI	5500 PSI
≥10½"	#5, 4 @ EA. END	#5, 4 @ EA. END	#5, 4 @ EA. END
10"	#5, 4 @ EA. END	#5, 4 @ EA. END	#5, 4 @ EA. END
9¼"	#4, 5 @ EA. END	#5, 4 @ EA. END	#5, 4 @ EA. END
8½"	#4, 5 @ EA. END	#4, 5 @ EA. END	#4, 5 @ EA. END
8"	#3, 8 @ EA. END	#4, 5 @ EA. END	#4, 5 @ EA. END







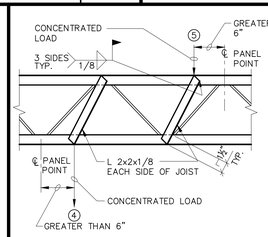
BOTTOM OF PANEL 3'-0" OR LESS BELOW F.F.



BOTTOM OF PANEL GREATER THAN 3'-0" BELOW F.F.

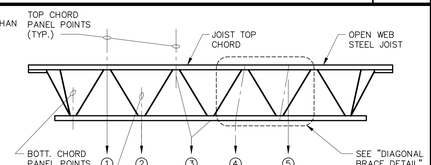
PANEL AT CONT. FOOTING | 1

NOT USED



NOTES:
1) WHERE CONCENTRATED LOADS ARE SUPPORTED BY JOISTS CHORDS AND ARE LOCATED MORE THAN 6" FROM A PANEL POINT, REINFORCE THE JOIST WITH AN ADDED ANGLE EA. SIDE OF JOIST EXTENDING FROM THE POINT LOAD TO THE NEAREST PANEL POINT ON THE OPPOSITE CHORD.
2) REMOVE LOAD FROM JOIST PRIOR TO WELDING ANGLE.

AUXILIARY WEB DETAIL

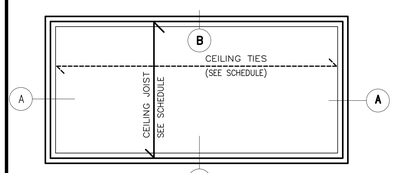


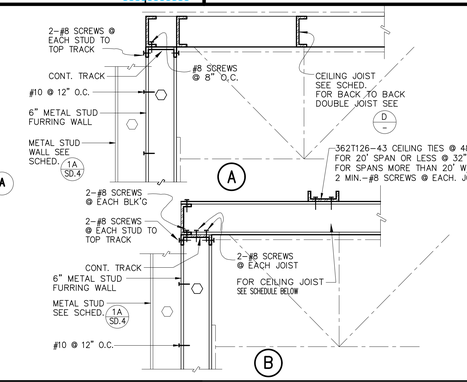
1. HANG LOAD FROM TOP CHORD WITHIN 6" OF ANY UPPER PANEL POINT.
2. HANG WITHIN 6" OF ANY LOWER PANEL POINT.
3. TRAPEEZE BETWEEN ANY PANEL POINTS.
4. ADD AN ANGLE E.S. TO REINFORCE THE BOTTOM CHORD SEE DIAGONAL BRACE DETAIL.
5. ADD AN ANGLE E.S. TO REINFORCE THE TOP CHORD SEE DIAGONAL BRACE DETAIL.

NOTES:
1) DO NOT CUT OR DRILL ANY JOIST MEMBER.
2) THIS DETAIL IS APPLICABLE TO SUPPORTING MECH. EQUIPMENT, SPRINKLER PIPES, ETC.
3) JOIST MANUFACTURER TO ACCOUNT FOR ABOVE LOADING ON JOIST DESIGN.
4) ALL FIELD WELDING REQUIRES SPECIAL INSPECTION BY A DEPUTY INSPECTOR.

ALLOWABLE METHODS & LOCATIONS FOR SUPPORTING ADDITIONAL LOADS FROM OPEN WEB STEEL JOIST

LOCATIONS FOR SUPPORTING LOADS FROM OPEN WEB STEEL JOIST | 10



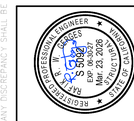


SPAN FT.	SINGLES CEILING @ 4'-0" O.C.	BACK TO BACK CEILING JOIST @ 4'-0" O.C. W/ #8 SCREWS @ 6" O.C. STAGGERED
8	450S162-43	
12	600S162-54	2-450S162-43
16	600S200-68	2-550S162-43
20	800S200-68	2-600S200-68
24	1200S162-68	2-800S250-68
28	1200S162-97	2-1000S200-68
32		2-1200S200-68

T-BAR CEILING DETAIL | 2

CITY OF IRVINE BUILDING & SAFETY DIVISION

WARE MALCOMB
10 Edelman
Irvine CA 92618
P 949.660.9128
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT



-HSA-
HSA & ASSOCIATES, INC.
CONSULTING STRUCTURAL ENGINEERS
Irvine, CA 92618
Tel: (949) 521-9951
Fax: (949) 521-9967
HSA PROJECT NO.: 22-169E

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

FOUNDATION DETAILS

	DATE	REMARKS
A	07/30/25	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
	10/15/2025	PLAN CHECK CORRECTIONS 2
	12/19/2025	ISSUE FOR CONSTRUCTABILITY REVIEW
3	02/04/2026	PLAN CHECK CORRECTIONS 3
5	03/20/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET 2
SD-1.1

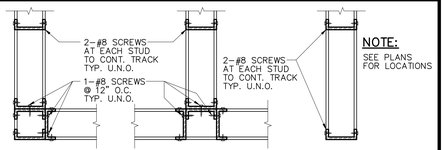
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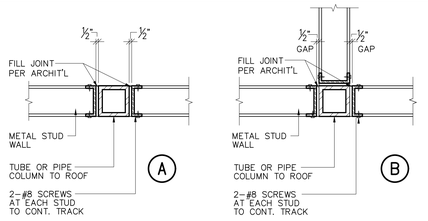
NOT USED

9



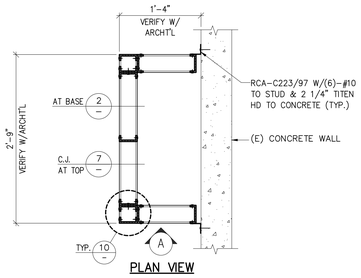
NOTE:
SEE PLANS FOR LOCATIONS

DETAIL 10

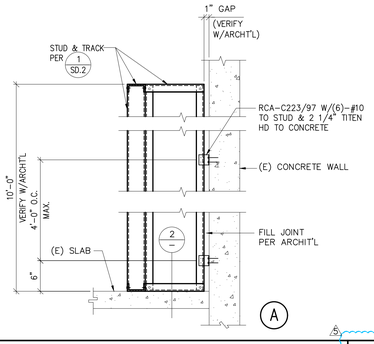


NOTE: –
PROVIDE GAP AS SHOWN AT FULL HEIGHT DEMISING WALLS ONLY. FILL JOINT PER ARCHIT'L.

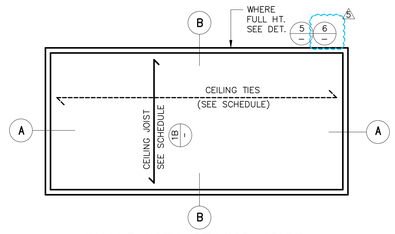
DETAIL 11



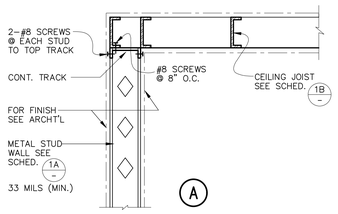
PLAN VIEW

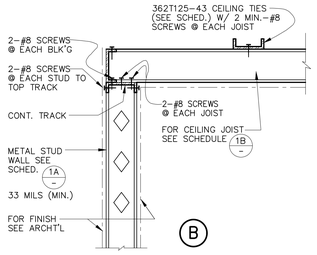


DETAIL 12

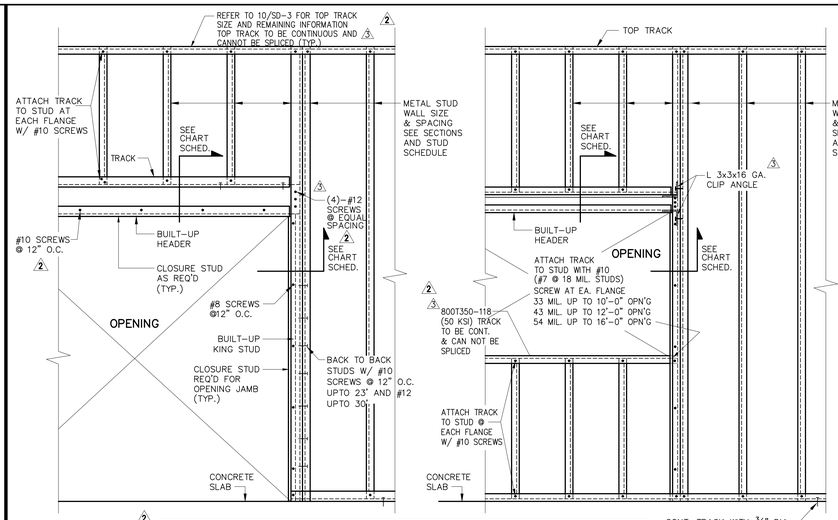


WALLS WITH CEILING JOIST





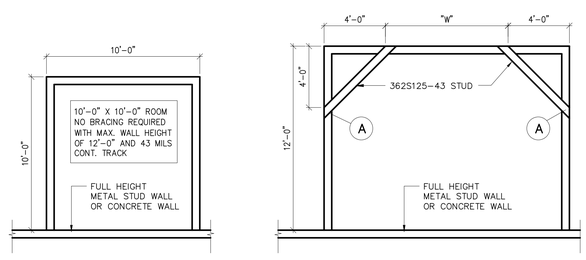
DETAIL (DRY WALL CEILING) 7

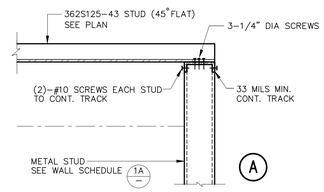


NOTES:
INFORMATION NOT SHOWN, SEE DETAIL 8

KING STUDS	SPAN	HEADER SIZE
1/ PARTITION WALL 2/ DEMISING WALL	6'–0"	362S 162–33 INT. SIZE OF WALL AND 33 MILS 600S 162–43 DEMISING SIZE OF WALL AND 33 MILS
2	8'–0"	600S 162–33 INT. SIZE OF WALL AND 33 MILS 600S 162–43 DEMISING SIZE OF WALL AND 33 MILS
3	12'–0"	800S 162–43 INT. SIZE OF WALL AND 43 MILS 800S 162–54 (50 KSI) DEMISING SIZE OF WALL AND 43 MILS
3	16'–0"	800S 162–54 INT. SIZE OF WALL AND 54 MILS 800S 162–68 (50 KSI) DEMISING SIZE OF WALL AND 54 MILS
800S350–118 (50 KSI) 2	30'–0"	1400T 350–118 INT. (50 KSI) 800T350–118 (50 KSI)

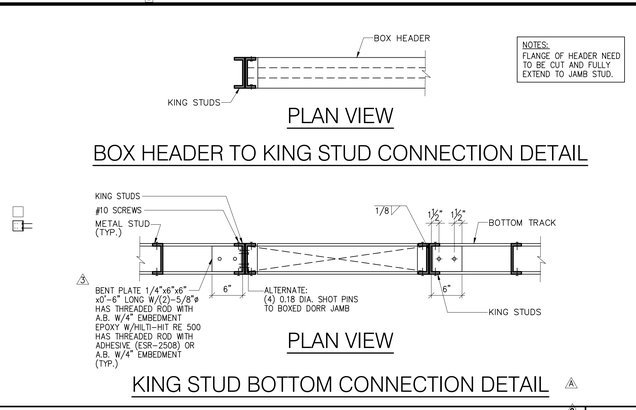
DETAIL (PARTIAL HEADER DETAIL) 3





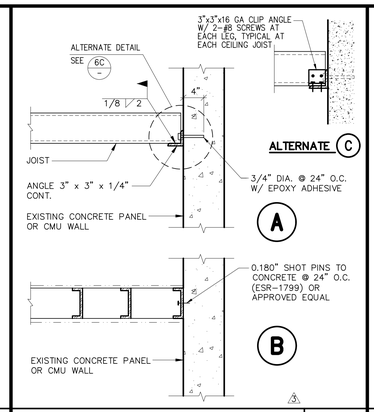
WALL HEIGHT "H"	33 MILS. CONT. TRACK FOR MAX. ROOM WIDE "W"	43 MILS. CONT. TRACK FOR MAX. ROOM WIDE "W"
6'–0"	12'–3"	14'–6"
8'–0"	10'–6"	12'–6"
10'–0"	9'–6"	11'–3"
12'–0"	8'–6"	10'–3"
14'–0"	8'–0"	9'–6"

WALL PARTITION BRACE LAYOUT (WALLS WITHOUT CEILING JOISTS) 4

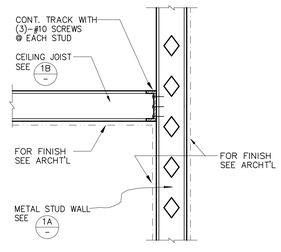


NOTES:
FLANGE OF HEADER NEED TO BE CUT AND FULLY EXTEND TO JAMB STUD.

METAL STUD DETAILS 8



DETAIL 6



JOIST TO STUD DETAIL 5

INTERIOR PARTITIONS (NON–LOAD BEARING)

1. BUILDING CODE USED IS IBC 2021 / AISI S100–2016 / CBC 2022.
2. ALL THE METAL STUDS USED SHALL BE 33 KSI U.N.O. CONFORMING TO BUILDING CODE. ALL THE METAL STUDS SHALL CONFORM TO STEEL STUD MANUF'S ASSOC., (SSMA) ICC–ESR 3064P
3. THE BRIDGING, BLOCKING OR END BEARING STIFFENERS SHALL BE AS REQUIRED BY THE MANUFACTURER UNLESS NOTED OTHERWISE ON THE DRAWINGS.
4. DRYWALL(GYPBOARD) FINISH IS ON BOTH SIDES OF WALL OR MUST BE BLOCKED/STRAPPED BY THE MANUFACTURER U.N.O.
5. UNLESS OTHERWISE NOTED ON THE PLANS, USE THE FOLLOWING GUIDELINE FOR STUD SIZE & SPACING FOR INTERIOR PARTITIONS.
6. TOP TRACK SIZE WILL BE MIN. 33MIL FOR PARTITION U.N.O.
7. DESIGN LOAD: LATERAL LOAD = 5 PSF, DEFLECTION LIMIT = L/240
8. SEE ARCHT'L FOR STUD WIDTH REQUIRED FOR FULL HEIGHT DEMISING WALL (8" STUDS MIN)

A

METAL STUDS	SIZE (SSMA DESIGNATION)	MAXIMUM SPACING	MAXIMUM HEIGHT
3–5/8" X 25 GA	362S125–18	16"	11'–9"
3–5/8" X 20 GA	362S125–33	16"	18'–9"
6" X 20 GA	600S125–33	16"	25'–0"
8" X 18 GA	800S137–43	24"	32'–0"
8" X 18 GA	800S350–68 (97KSI)	24"	37'–0"
8" X 14 GA	800S350–118 (50KSI)	12"	46'–0"
(2)–6" X 20 GA	600S350–118 (50KSI)	16"	46'–0"

CEILING JOISTS (GYPBOARD CEILING)

1. BUILDING CODE USED IS IBC 2021 / AISI S100–2016 / CBC 2022.
2. ALL THE METAL STUDS USED SHALL BE 33 KSI U.N.O. CONFORMING TO BUILDING CODE.
3. STUD TRACKS SHALL BE UNPUNCHED STUDS OF SAME GAUGE AS STUD UNLESS NOTED OTHERWISE.
4. 362T125–43 CEILING TIES (SEE SCHEDULE) WITH 2 – #8 SCREWS AT EACH JOIST.
5. GYPBOARD IS ON ONE SIDE OF CEILING U.N.O.
6. DESIGN LOAD: DEAD LOAD = 5 PSF & LIVE LOAD = 10 PSF, TOTAL DEFLECTION LIMIT = L/360

B

NO STORAGE LOAD ALLOWED

SIZE (SSMA DESIGNATION)	MAXIMUM SPACING	MAXIMUM SPAN	CEILING TIES (BRACING) MAX. SPACING (7)
** 362S125–18 (25 GA)	16"	6'–0"	4'–0"
362S125–33 (20 GA)	16"	9'–6"	4'–0"
600S125–33 (20 GA)	16"	14'–0"	4'–0"
800S137–43 (18 GA)	16"	20'–6"	4'–0"

** WEB STIFFENER TO BE REQUIRED AT SUPPORTS. USE STUD SEGMENT OR MIN. 25GA. CLIP ANGLE.

EXAMPLE:

MEMBER DEPTH:
(Example: 6"=600 x 1/100 inches)
All member depths are taken in 1/100 inches
For all "I" sections member depth is the inside to insided dimension.

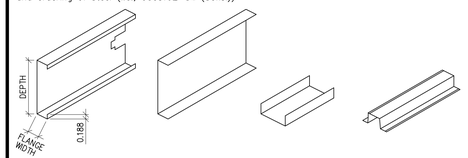
FLANGE WIDTH:
(Example: 1 5/8" = 1.625"=162 x 1/100 inches)
All flange widths are taken in 1/100 inches

600 S 162 - 54

STYLE:
(Example: Stud or Joist section = S)
The four alpha characters utilized by the designator system are:
S = Stud or Joist Sections
T = Track Sections
U = Channel Sections
F = Furring Channel Sections

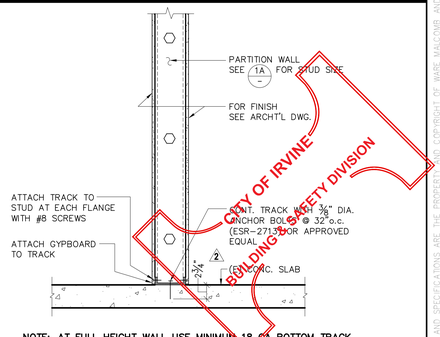
MATERICAL THICKNESS:
(Example; 0.054 in. = 54 mils: 1 mil = 1/1000 in.) designator system are:
Material thickness is the minimum base metal thickness in mils. Minimum base metal thickness represents 95% of the design thickness.

Note: For those sections where two different yield strengths (33 ksi and 50 ksi) are shown, the yield strenth use in the design, if greater than 33 ksi, needs to be identified on the design and ordering of steel (i.e., 600s162–54 (50ksi))



C-STUD / JOIST S-SECTIONS | TRACK T-SECTIONS | CHANNEL U-SECTIONS | FURRING CHANNEL F-SECTIONS

DETAIL 1



NOTE: AT FULL HEIGHT WALL USE MINIMUM 18 GA BOTTOM TRACK

PARTITION WALL DETAIL 2

WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING BRANDING BUILDING MEASUREMENT
PLANNING INTERIORS
10 Edelman
Irvine, CA 92618
P 949.660.9128

REGISTERED PROFESSIONAL ENGINEER ANDREW K. HSA No. C 58827 EXP. 06-30-27 Mar. 23, 2026 CIVIL STATE OF CALIFORNIA

HSA & ASSOCIATES, INC.
CONSULTING STRUCTURAL ENGINEERS
Brea Office
1990 S. Bundy Dr., Suite 620
Brea, Ca., 92821
Tel: (949) 221-9931
Irvine Office
Tel: (949) 221-9931
HSA PROJECT NO. : 22-169E

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

METAL STUD DETAILS

REMARKS	DATE	
ISSUE FOR PLAN CHECK	07/22/2025	A
PLAN CHECK CORRECTIONS	09/22/2025	2
PLAN CHECK CORRECTIONS 2	10/15/2025	
ISSUE FOR CONSTRUCTABILITY REVIEW	12/19/2025	3
PLAN CHECK CORRECTIONS 3	02/04/2026	
PLAN CHECK CORRECTIONS 4	03/20/2026	5

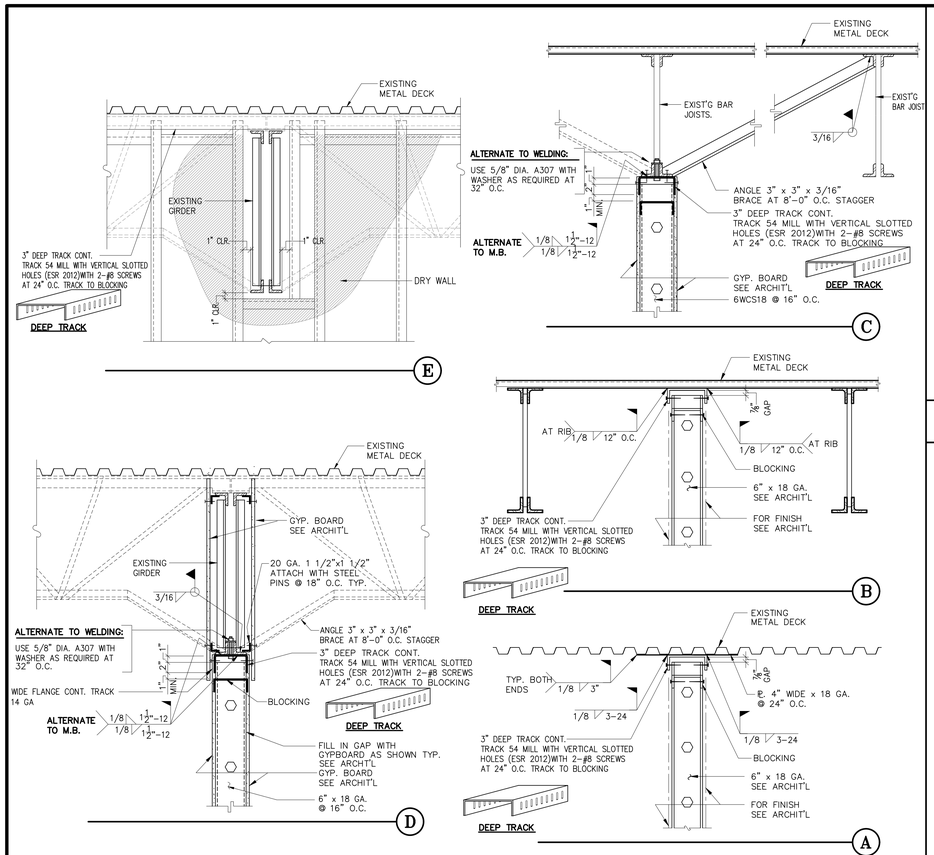
PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
SD-2

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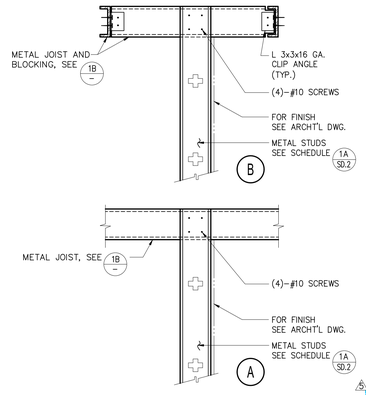
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT



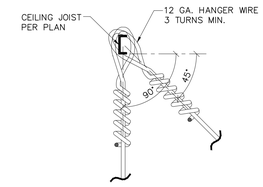
FULL HEIGHT WALL DETAILS | 10

NOT USED

WIRE LOCATION | 4



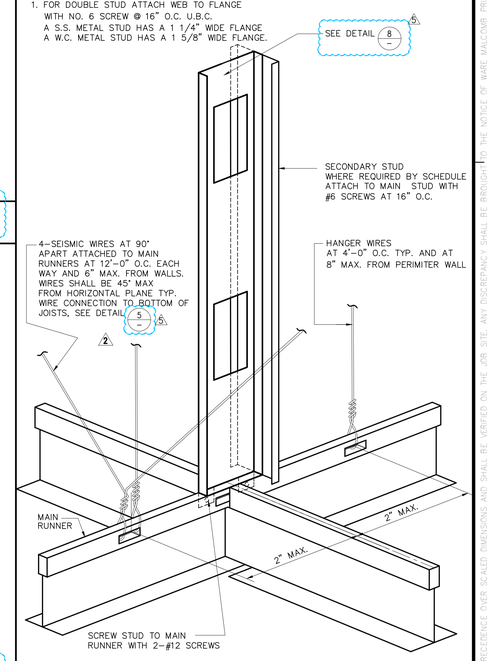
RIGID CONNECTION | 8



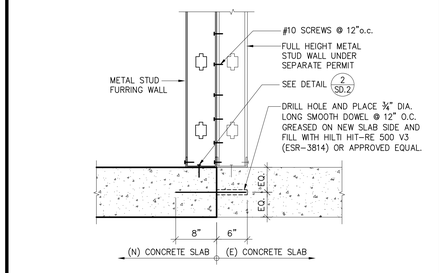
5

SCHEDULE			
METAL STUDS	SIZE (SSMA DESIGNATION)	MAX. HT. OF COMPRESSION STRUT	
		SINGLE STUD	DOUBLE STUD
2 1/2" x 20 GA.	250S125-33	7'-0"	16'-6"
3 5/8" x 20 GA.	362S125-33	–	23'-0"
3 5/8" x 18 GA.	362S137-43	8'-0"	23'-6"
6" x 20 GA.	600S125-33	–	36'-0"
6" x 18 GA.	600S137-43	–	37'-0"
8" x 18 GA.	800S137-43	–	47'-6"

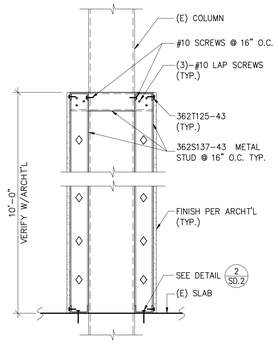
NOTES:
1. FOR DOUBLE STUD ATTACH WEB TO FLANGE WITH NO. 6 SCREW @ 16" O.C. U.B.C.
A S.S. METAL STUD HAS A 1 1/4" WIDE FLANGE.
A W.C. METAL STUD HAS A 1 5/8" WIDE FLANGE.



T-BAR CEILING STRUT DETAIL & SCHED. | 1



METAL STUD TO METAL STUD CONN. | 12



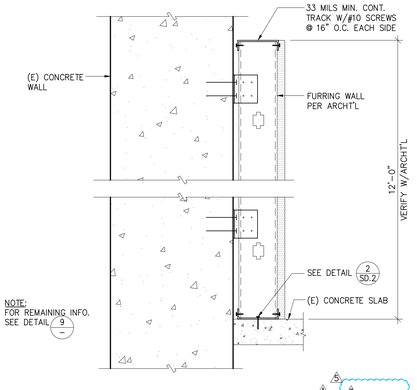
FURRING WALLS AT COLUMN | 11

NOT USED

6

NOT USED

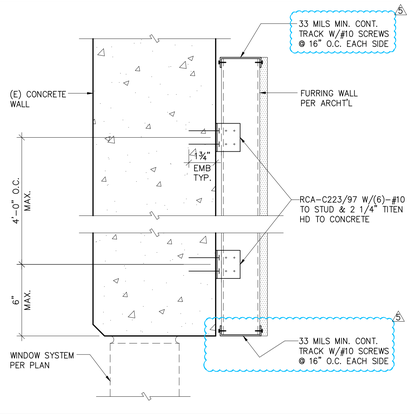
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DETAIL | 13

NOT USED

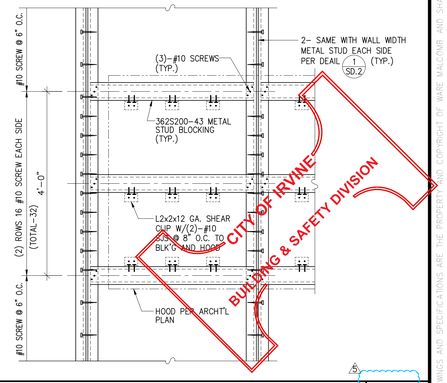
14



TYP. PERIMETER WINDOW HEAD | 9

NOT USED

7



DETAIL | 3

WARE MALCOMB
10 Edelman
Irvine CA 92618
P 949.660.9128
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

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Brandon A. Lee, P.E. Third
Principal
Tel: (949) 521-9931
Brandon@hsa-ca.com
HSA PROJECT NO.: 22-169E

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

T-BAR CEILING DETAILS

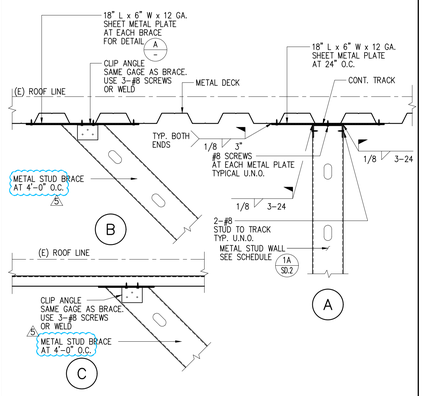
	DATE	REMARKS
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A	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
	12/19/2025	ISSUE FOR CONSTRUCTABILITY REVIEW
3	02/04/2026	PLAN CHECK CORRECTIONS 3
5	03/20/2026	PLAN CHECK CORRECTIONS 4

PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

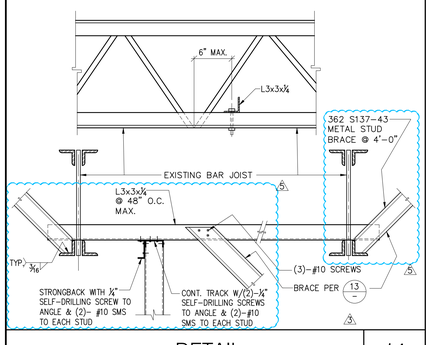
SHEET
SD-3
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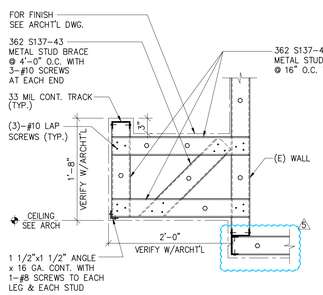
WALL & BRACE DETAIL TO METAL DECK | 13



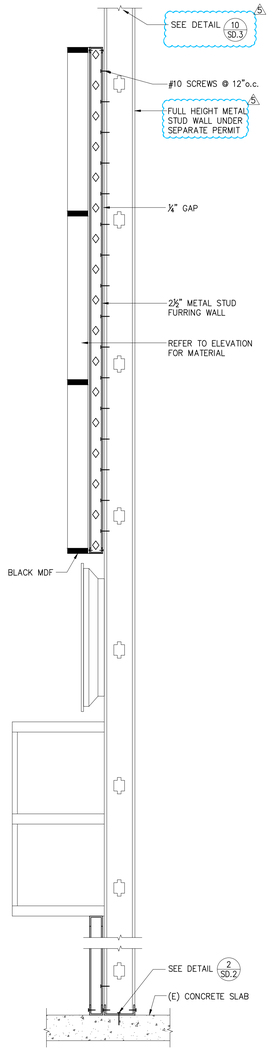
DETAIL | 14

NOT USED

15



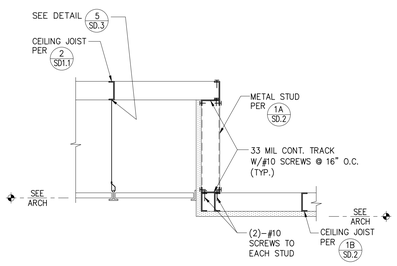
CEILING TRANSITION @ LOBBY | 16



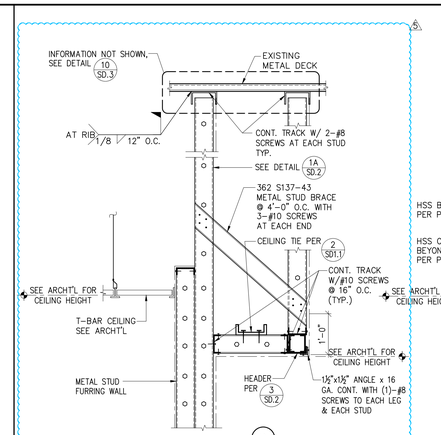
SCREEN WALL | 10

NOT USED

11

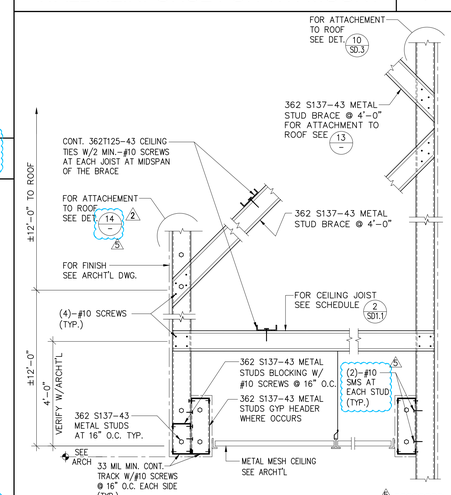


CEILING TRANSITION | 12

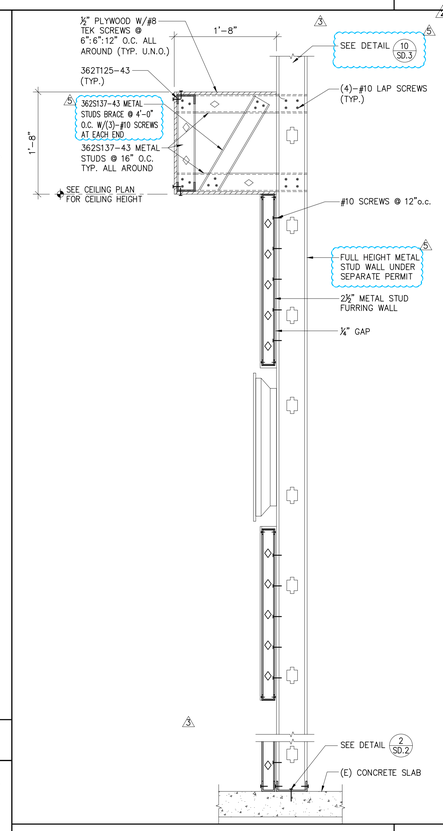


SOFFIT DETAIL | 4

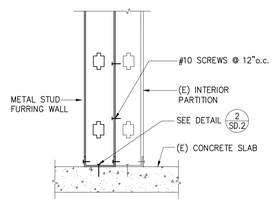
WALL REINFORCE FOR T.V. MOUNT | 7



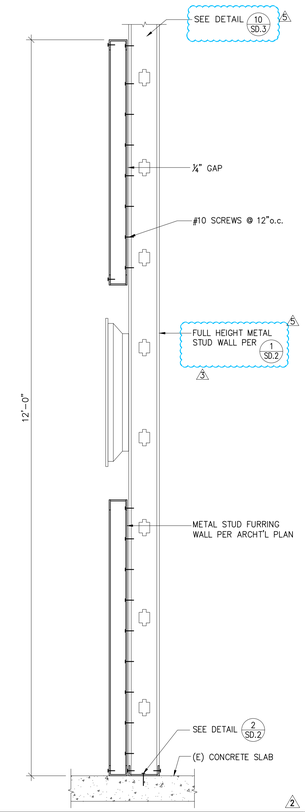
CEILING DETAIL | 8



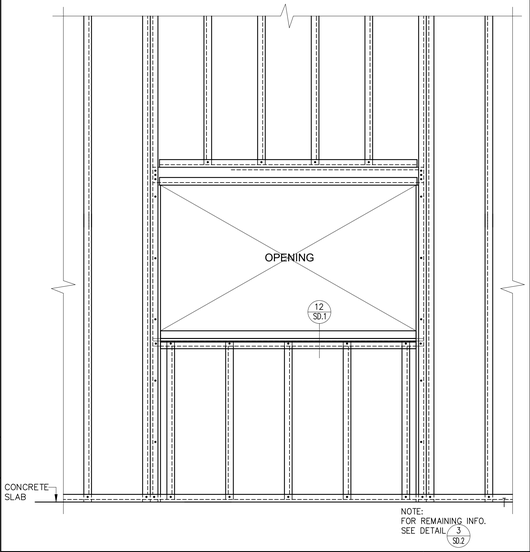
SCREEN WALL | 5



6



DETAIL | 1



WINDOW OPENING ELEVATION FOR ROLLUP DOOR | 2

NOT USED

CITY OF IRVINE
BUILDING & SAFETY DIVISION

3

WARE MALCOMB
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REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA — KEVIN L. LEE — No. 36307 — EXP. 06-30-27 — Mar. 24, 2026

HSA PROJECT NO.: 22-169E

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

MISCELLANEOUS DETAILS

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PA/PM:	A. HUMPHREY
DRAWN BY.:	K.L./I.L.
JOB NO.:	IRV24-6050-00

SHEET
SD-4
A

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PHASE 2 MECHANICAL SCOPE OF WORK:

THE CONSTRUCTION OF THIS PROJECT IS PLANNED TO BE COMPLETED IN TWO PHASES. PHASE 1 WILL BE COMPLETED BY THE DEVELOPER (LINCOLN PROPERTIES), AND PHASE 2 WILL BE COMPLETED BY THE CITY OF IRVINE TO COMPLETE THE BUILDOUT. THE BUILDING IS NOT PLANNED TO RECIEVE A CERTIFICATE OF OCCUPANCY UNTIL PHASE 2 CONSTRUCTION IS COMPLETED. TITLE 24 DOCUMENTATION HAS BEEN DEFERRED AND PROVIDED IN THIS PHASE 2 PERMIT/CONSTRUCTION DOCUMENTATION PACKAGE. MECHANICAL AND PLUMBING EQUIPMENT T24 DOCUMENTATION PROVIDED IN THIS PHASE 2 PACKAGE ENCOMPASSES ALL PHASE 1 & PHASE 2 EQUIPMENT.

PHASE 2 MECHANICAL SCOPE INCLUDES:

1. FULL MECHANICAL INSTALL IN LOCATIONS SHOWN PER THESE PHASE 2 DRAWINGS.
2. COMMISSIONING AND STARTUP OF ALL MECHANICAL EQUIPMENT, PHASE 1 & PHASE 2.

DUCT SYSTEMS:

- BD-# — BACKDRAFT DAMPER
- FD-# — FIRE DAMPER
- SD-# — SMOKE DAMPER
- FSD-# — COMBINATION FIRE SMOKE DAMPER
- MD-# — MOTORIZED DAMPER
- VOLUME DAMPER
- SIDEWALL GRILLE
- CEILING DIFFUSER, SUPPLY 4-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 3-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 2-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 1-WAY BLOW PATTERN
- CEILING DIFFUSER, RETURN
- CEILING DIFFUSER, EXHAUST
- UC — DOOR UNDERCUT
- DUCT SECTION, SUPPLY
- DUCT SECTION, RETURN
- DUCT SECTION, EXHAUST
- FLEXIBLE DUCT
- DIRECTION OF AIR FLOW
- DUCT SIZE TRANSITION
- RECTANGULAR ELBOW DOWN - SINGLE LINE
- ROUND ELBOW DOWN - SINGLE LINE
- RECTANGULAR ELBOW UP - SUPPLY
- RECTANGULAR ELBOW DOWN - SUPPLY
- ROUND ELBOW UP - SUPPLY
- ROUND ELBOW DOWN - SUPPLY
- RECTANGULAR ELBOW UP - RETURN
- RECTANGULAR ELBOW DOWN - RETURN
- ROUND ELBOW UP - RETURN
- ROUND ELBOW DOWN - RETURN
- RECTANGULAR ELBOW UP - EXHAUST
- RECTANGULAR ELBOW DOWN - EXHAUST
- ROUND ELBOW UP - EXHAUST
- ROUND ELBOW DOWN - EXHAUST
- MITERED ELBOW
- MITERED ELBOW WITH TURNING VANES
- ACCESS DOOR - TOP/SIDE
- AIR FLOW MEASURING STATION
- SOUND ATTENUATOR
- FLEXIBLE CONNECTION

HYDRONIC VALVES:

- TWO-POSITION 2-WAY VALVE
- MODULATING 2-WAY VALVE
- TWO-POSITION 3-WAY VALVE
- MODULATING 3-WAY VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIFFERENTIAL PRESSURE VALVE
- FLOAT OPERATED VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE INDEPENDENT VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- TRIPLE DUTY VALVE
- BACKFLOW PREVENTER

MECHANICAL EQUIPMENT:

PLAN / SYMBOL

- AIR SEPARATOR
- BASKET STRAINER
- EXPANSION TANK, FREE STANDING
- EXPANSION TANK, HANGING
- SIDE STREAM FILTER
- LOUVER
- HEAT EXCHANGER, PLATE AND FRAME
- HEAT EXCHANGER, SHELL AND TUBE
- T — STEAM TRAP
- VFD — VARIABLE FREQUENCY DRIVE
- CB — CONTROL BOX
- M — ENERGY METER
- GM — NATURAL GAS METER
- PUMP (SEE SCHEDULE FOR TYPE)
- VARIABLE AIR VOLUME BOX
- VAV BOX WITH ELECTRIC REHEAT
- VAV BOX WITH HYDRONIC REHEAT
- ROUND IN / ROUND OUT VAV BOX
- FAN POWERED BOX

HVAC SENSORS:

- CO2 — CARBON DIOXIDE
- CO — CARBON MONOXIDE
- DS — DEWPOINT
- ES — EMERGENCY SHUT OFF
- FC — FAN CONTROLLER
- G — GAS
- H — HUMIDITY
- NO — NITROGEN OXIDE
- P — RELATIVE PRESSURE MONITOR
- R — REFRIGERANT MONITOR
- SD — SMOKE DETECTOR
- SP — STATIC PRESSURE
- TCO — COMBINATION TEMPERATURE AND CARBON MONOXIDE
- T — THERMOSTAT
- TS — TEMPERATURE

HYDRONIC SPECIALTIES:

- FS — FLOW SWITCH
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- PRESSURE GAUGE
- PS — PRESSURE SWITCH
- PSD — PUMP SUCTION DIFFUSER
- THERMOMETER
- STRAINER, BLOW DOWN
- STRAINER, HOSE CONNECTION
- STRAINER
- ANCHOR
- PIPING GUIDE
- EXPANSION LOOP
- EXPANSION JOINT
- FM — FLOW METER

RENOVATION LEGEND:

(E)	EXISTING TO REMAIN
(ED)	EXISTING LOCATION, NEW DEVICE OR EQUIPMENT TO BE INSTALLED IN PLACE
(ER)	EXISTING TO BE RELOCATED
(EO)	EXISTING TO BE REMOVED
(EN)	EXISTING IN NEW LOCATION
(RAI)	REMAIN AS IS

HYDRONIC FITTINGS:

- 45° ELBOW
- CAP
- 90° ELBOW
- ELBOW DOWN
- ELBOW UP
- TEE
- TEE DOWN
- TEE UP
- UNION
- FLEXIBLE CONNECTION
- PIPE CONTINUATION
- FLANGE

HYDRONIC SYSTEM ABBREVIATIONS:

— — —	PIPE TO BE DEMOLISHED
D	DRAIN
NG	NATURAL GAS
LP	LIQUEFIED PETROLEUM
V	VENT
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CD	CONDENSATE DRAIN
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
GS	GLYCOL SUPPLY
GR	GLYCOL RETURN
MU	MAKEUP WATER
HPWS	HEAT PUMP WATER SUPPLY
HPWR	HEAT PUMP WATER RETURN
GWS	GEOTHERMAL WATER SUPPLY
GWR	GEOTHERMAL WATER RETURN
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
HPS	HIGH PRESSURE STEAM
MPS	MEDIUM PRESSURE STEAM
LPS	LOW PRESSURE STEAM
HPC	HIGH PRESSURE STEAM CONDENSATE
MPC	MEDIUM PRESSURE STEAM CONDENSATE
LPC	LOW PRESSURE STEAM CONDENSATE
CR	CONDENSATE RETURN
PC	PUMPED CONDENSATE
VPD	VACUUM PUMP DISCHARGE
BBD	BOILER BLOWDOWN
FWS	BOILER FEEDWATER SUPPLY
H	HUMIDIFICATION LINE
FOF	FUEL OIL FILL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
A	COMPRESSED AIR
VAC	VACUUM AIR

MECHANICAL TAGS:

- VISIBLE DIMENSION
- ## x ## XX — DUCT DIMENSIONS (CLEAR, INTERNAL)
- SYSTEM ABBREVIATION

SYSTEM:
SA - SUPPLY
RA - RETURN
EA - EXHAUST
TA - TRANSFER

- CONNECTION SIZE
- DIFFUSER TYPE
- X-###-X / ### — DIFFUSER TAG
- AIR FLOW RATE
- MARK / NUMBER — MECHANICAL EQUIPMENT TAG
- RISER X / NUMBER — RISER TAG
- PIPE SIZE / ##" XX / SYSTEM ABBREVIATION — PIPE DIMENSION TAG
- POINT OF NEW CONNECTION
- POINT OF DISCONNECTION

GENERAL:

- ## — DRAWING KEYNOTE SYMBOL
- DETAIL NUMBER / SHEET NUMBER — BUILDING SECTION
- DETAIL NUMBER / SHEET NUMBER — BUILDING ELEVATION
- DETAIL NUMBER / SHEET NUMBER — CALLOUT BOUNDARY
- DETAIL NUMBER / SHEET NUMBER — VIEW REFERENCE CALLOUT
- +X' - X" — MOUNTING HEIGHT DESIGNATION

MECHANICAL ABBREVIATIONS:

AC	AIR CONDITIONER
ACH	AIR CHANGES PER HOUR
AF	AIR FILTER
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CC	COOLING COIL
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CO	CLEANOUT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT AIR VOLUME
DAT	DISCHARGE AIR TEMPERATURE
DB	DECIBEL OR DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DH	DUCT HEATER
DX	DIRECT EXPANSION
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FC	FAN COIL
FD	FIRE DAMPER
FH	FUME HOOD
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FREEZE STAT
FSD	COMBINATION FIRE/SMOKE DAMPER
GA	GAUGE
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HUMIDISTAT
HC	HEATING COIL
HD	HOOD OR HEAT DETECTOR
HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER
HP	HORSEPOWER OR HEAT PUMP
HR	HOUR
HUM	HUMIDIFIER
HX	HEAT EXCHANGER
HZ	HERTZ
IN W.C.	INCHES WATER COLUMN
IN W.G.	INCHES WATER GAUGE
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUH
NC	NORMALLY CLOSED
NK	NECK
NO	NORMALLY OPEN
P	PUMP
PA	PASCAL
PH	PHASE
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RO	RELIEF OPENING
RPM	REVOLUTIONS PER MINUTE
SAT	SUPPLY AIR TEMPERATURE
SD	SMOKE DAMPER OR SMOKE DETECTOR
SF	SQUARE FEET OR SUPPLY FAN
SP	STATIC PRESSURE SENSOR
T	THERMOSTAT
TD	TEMPERATURE DIFFERENCE
TO	TRANSFER OPENING
TYP	TYPICAL
UC	UNDERCUT (DOOR)
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
VTR	VENT THROUGH ROOF
W	WATT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

GENERAL ABBREVIATIONS:

A/E	ARCHITECT/ENGINEER
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
ARCH	ARCHITECT
BFG	BELOW FINAL GRADE
BLDG	BUILDING
CLG	CEILING
DIR	DIRECT
DISC	DISCONNECT
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION REFERENCE
EM	EMERGENCY
EP	EXPLOSION PROOF
EWC	ELECTRIC WATER COOLER
F	FLUSH
FBO	FURNISHED BY OTHERS
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FS	FLOW SWITCH
GC	GENERAL CONTRACTOR
GRD	GROUND
GYP	GYPSUM BOARD
HC	HEATING CONTRACTOR
HVAC	HEATING & VENTILATING - AIR CONDITIONING
HW	HEAVYWALL
ID	INDIRECT
IL	INTERLOCK
IU	IN UNIT
J-BOX	JUNCTION BOX
LG	LAY-IN GRID
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LINE VOLTAGE THERMOSTAT
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PLBG	PLUMBING CONTRACTOR
RM	ROOM
SURF	SURFACE
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
VC	VENTILATION CONTRACTOR

DUCT SYSTEM ABBREVIATIONS:

CA	COMBUSTION AIR
CV	COMBUSTION VENT
EA-AII	EXHAUST AIR - AIRBORNE INFECTIOUS ISOLATION
EA-CH	EXHAUST AIR - CHEMICAL
EA-D	EXHAUST AIR - DRYER
EA	EXHAUST AIR - ENVIRONMENTAL
EA-K1	TYPE 1 - KITCHEN EXHAUST
EA-K2	TYPE 2 - KITCHEN EXHAUST
OA	OUTDOOR AIR
RA	RETURN AIR
SA	SUPPLY AIR
TR	TRANSFER AIR

GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR AS REQUIRED TO INSTALL A COMPLETE AND OPERABLE HVAC SYSTEM PER THE NEW ARCHITECTURAL LAYOUT AND AS TO COMPLY WITH THE SPECIFICATION, DETAILS, THIS SCOPE OF WORK AND ALL APPLICABLE CODES.
2. ALL WORK PERFORMED SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND COORDINATE ALL NEW WORK WITH ALL TRADES PRIOR TO ANY WORK BEING DONE TO ENSURE CONFLICTS DO NOT OCCUR.
4. DISRUPTION OF ANY EXISTING SERVICE SHALL BE CLEARED WITH THE OWNER AND SHALL BE PERFORMED AT A TIME AND IN A MANNER SO AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE.
5. ALL DUCT SIZES INDICATED ON PLANS AND RISERS ARE CLEAR INSIDE DIMENSIONS. DUCT SIZES NOT SHOWN SHALL BE SIZED TO VELOCITIES NO GREATER THAN UPSTREAM SECTION USING SIMILAR ASPECT RATIOS.
6. DIFFUSER BRANCHES AND TAKE-OFFS SHALL BE SIZED TO NECK SIZE OF DIFFUSER UNLESS OTHERWISE NOTED.
7. ALL SUPPLY AIR TAKEOFFS FROM MAIN TRUNK DUCTS ARE TO BE INSTALLED WITH BELL MOUTH FITTINGS OR 45 DEGREE ENTRY TO PROVIDE THE SMOOTHEST AIR FLOW POSSIBLE.
8. PROVIDE TURNING VANES IN ALL LOW-PRESSURE 90 DEGREE DUCT TURNS.
9. ALL THERMOSTAT LOCATIONS SHALL BE APPROVED BY THE ARCHITECT.
10. ALL DUCTS LOCATED ABOVE INACCESSIBLE CEILINGS ARE TO BE BALANCED PRIOR TO CEILING INSTALLATIONS.
11. CONTRACTOR SHALL PROVIDE ACCESS DOORS FOR SERVICE AND MAINTENANCE OF ALL EQUIPMENT LOCATED ABOVE INACCESSIBLE CEILINGS.
12. PROVIDE GUIDES, HANGERS, EXPANSION LOOPS AND SUPPLEMENTARY STEEL SUPPORT WHERE REQUIRED FOR ALL PIPING.
13. ALL ROOF TOP UNITS TO HAVE 14" ROOF CURB.
14. PVC PIPE NOT ALLOWED TO BE INSTALLED WITHIN PLENUM SPACES.
15. ALL ACCESS PANELS LOCATED IN FINISHED CONSTRUCTION MUST BE COORDINATED WITH THE ARCHITECT AND NO ACCESS PANELS WILL BE PERMITTED IN THE CONFERENCE ROOM CEILING.
16. FLEX DUCT LENGTH SHALL NOT EXCEED 5'. FLEX DUCT SIZE SHALL MATCH RIGID DIFFUSER BRANCH SIZE.
17. WHERE EQUIPMENT OR ACCESSORIES ARE USED WHICH DIFFER IN ARRANGEMENT, CONFIGURATION, DIMENSIONS, RATINGS, OR ENGINEERING PARAMETERS FROM THOSE INDICATED ON THE CONTRACT DOCUMENTS, THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS, INCLUDING ARCHITECTURAL/ENGINEERING DESIGN AND CONSTRUCTION COSTS, INVOLVED IN INTEGRATING THE EQUIPMENT OR ACCESSORIES INTO THE SYSTEM AND THE ASSIGNED SPACE AND FOR OBTAINING THE PERFORMANCE FROM THE SYSTEM INTO WHICH THESE ITEMS ARE PLACED.
18. ALL SUBSTITUTION REVIEW COSTS SHALL BE REIMBURSED TO THE ENGINEER BY THE CONTRACTOR OR THEIR SUPPLIERS ON A TIME/MATERIAL BASES. THIS COST SHALL BE PAID ON APPROVAL OR DISPROVAL OF THE SUBSTITUTION MATERIAL, EQUIPMENT OR DESIGN.

DESIGN CRITERIA:

BASED ON 2022 T24 APPENDIX JA2 TABLE 2-3
IRVINE, CA

OUTDOOR DESIGN CONDITION
1% COOLING: 86°F/68° DB/WB
DESIGN DRYBULB (0.2%): 37°F DB

INDOOR DESIGN CONDITIONS
CONDITIONED SPACES:
75°F DB COOLING
72°F DB HEATING

APPLICABLE CODES / STANDARDS AS AMENDED BY AUTHORITY HAVING JURISDICTION

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA ELECTRIC CODE
- 2022 CALIFORNIA ENERGY CODE
- 2022 CALIFORNIA FIRE CODE

MECHANICAL SHEET INDEX

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INSULATION SCHEDULE

ALL EXPOSED DUCTWORK IN CONDITIONED SPACES OR SPIRAL DUCT MAINS	1" LINED / 1" LINED
ALL EXTERIOR DUCTWORK	MIN. R-12
ALL CONCEALED SUPPLY AND RETURN DUCT	MIN. R-6
ALL EXHAUST UP TO 15'-0" FROM DISCHARGE	MIN. R-6
ALL HEATING AND COOLING HYDRONIC PIPING	MIN. 2"
CONDENSATE PIPING	MIN. 1"

NOTE:

ROUND MEDIUM PRESSURE DUCT TO BE LINED FOR ACOUSTICS. ALL DUCT SIZES SHOWN ARE CLEAR DIMENSIONS NOT INCLUDING INSULATION OR LINING. CONTRACTOR TO ACCOUNT FOR LINER/INSULATION ACCORDINGLY WHEN INSTALLING DUCTWORK.

ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R-12 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-12 INSULATION. RE: GAPS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS, MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS OR TAPES. TAPES AND MASTICS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS. ALL INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME-SPREAD RATING AND SMOKE-DENSITY REQUIREMENTS OF THE APPLICABLE BUILDING CODE.

PRELIMINARY NOT FOR CONSTRUCTION

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MECHANICAL LEGEND

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/05/2026	PLAN CHECK CORRECTIONS 3
	01/26/2026	OC HEALTH DEPT

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

SHEET
MT000

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CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

CALGREEN NOTES

1. PER SECTION 4.504.1 & SECTION 5.504.3, COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION, 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, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM.
2. HEATING AND AIR CONDITIONING SYSTEMS HAVE BEEN SIZED ACCORDING TO SECTION 4.507.2
3. PER SECTION 5.504.1.3, TEMPORARY VENTILATION. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. 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 PERCENT BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY.
4. PER SECTION 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 MINIMUM EFFICIENCY REPORTING VALUE (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.
5. MINIMUM OUTSIDE AIR HAS BEEN PROVIDED FOR NON-RESIDENTIAL AREAS BASED ON TABLE 4-3 OF THE 2022 NON-RESIDENTAL TITLE-24 COMPLIANCE MANUAL.
6. BATHROOM EXHAUST FANS SHALL BE ENERGY STAR COMPLAINT AND DUCTED TO TERMINATE OUTSIDE THE BUILDING.
7. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, BATHROOM EXHAUST FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL, WHICH SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80% SEC. 4.506.1.
8. EXCEPTION TO CALGREEN SECTION: 5.504.5.3.- AN ASHRAE 10% TO 15% EFFICIENCY FILTER SHALL BE PERMITTED FOR AN HVAC UNIT MEETING THE 2022 CALIFORNIA ENERGY CODE HAVING 60000 BTUH OR LESS CAPACITY PER FAN COIL, IF THE ENERGY USE OF THE AIR DELIVERY SYSTEM IS 0.4 W/CFM OR LESS AT DESIGN AIR FLOW.
9. INSTALLATION OF HVAC, REFRIGERATION, AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2. HVAC, REFRIGERATION, AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CHLOROFLUOROCARBONS (CFCs) AND SHALL NOT CONTAIN HALONS (SECTION: 5.508.1).
10. FIREPLACES ARE DIRECT-VENT SEALED COMBUSTION PER CALGREEN 5.503.1
11. ADHESIVES, SEALANTS, AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF SECTION 5.504.4.1.
12. 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 1/4 INCH, FLARED TUBING CONNECTIONS AND SHORT RADIUS ELBOWS SHALL NOT BE USED IN REFRIGERANT SYSTEMS EXCEPT AS NOTED BELOW:

    5.508.2.1.1 THREADED PIPE. THREADED CONNECTIONS ARE PERMITTED AT THE COMPRESSOR RACK.

    5.508.2.12 COPPER PIPE. COPPER TUBING WITH AN OD LESS THAN 1/4 INCH MAY BE USED IN SYSTEMS WITH A REFRIGERANT CHARGE OF 5 POUNDS OR LESS.

    5.508.2.1.2.1 ANCHORAGE. ONE-FOURTH-INCH 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.

    5.508.2.1.4 ELBOWS. SHORT RADIUS ELBOWS ARE ONLY PERMITTED WHERE SPACE LIMITATIONS PROHIBITED USE OF LONG RADIUS ELBOWS.
13. 5.508.2.5 PRESSURE TESTING. THE SYSTEM SHALL BE PRESSURE TESTED DURING INSTALLATION PRIOR TO EVACUATION AND 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. 5.508.2.6 EVACUATION. THE SYSTEM SHALL BE EVACUATED AFTER PRESSURE TESTING AND PRIOR TO CHARGING.

    5.508.2.6.1 FIRST VACUUM. PULL A SYSTEM VACUUM DOWN TO AT LEAST 1,000 MICRONS (+/- 50 MICRONS), HOLD FOR 30 MINUTES. 5.508.2.6.2 SECOND VACUUM. PULL SECOND 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.
14. THIRD PARTY INSPECTION REQUIRED TO CERTIFY THE CALGREEN MEASURES.
15. THE HVAC SYSTEM SHALL BE BALANCED IN ACCORDANCE WITH APPROVED NATIONAL STANDARD PER 5.410.4.3.1

COMMISSIONING NOTES:

1. 5.410.2 COMMISSIONING. [N] FOR NEW BUILDINGS 10,000 SQUARE FEET AND OVER, BUILDING COMMISSIONING SHALL BE INCLUDED IN THE DESIGN AND CONSTRUCTION PROCESSES OF THE BUILDING PROJECT TO VERIFY THAT THE BUILDING SYSTEMS AND COMPONENTS MEET THE OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS. COMMISSIONING SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION BY TRAINED PERSONNEL WITH EXPERIENCE ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. COMMISSIONING REQUIREMENTS SHALL INCLUDE:
    - A. OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS.
    - B. BASIS OF DESIGN.
    - C. COMMISSIONING MEASURES SHOWN IN THE CONSTRUCTION DOCUMENTS.
    - D. COMMISSIONING PLAN.
    - E. FUNCTIONAL PERFORMANCE TESTING.
    - G. DOCUMENTATION AND TRAINING.
    - H. COMMISSIONING REPORT.

BLDG. DEPT. NOTES

1. SUPPLY AIR, RETURN AIR, AND OUTSIDE AIR FOR HEATING, COOLING OR EVAPORATIVE COOLING SYSTEMS SHALL BE CONDUCTED THROUGH DUCT SYSTEMS CONSTRUCTED OF METAL AS SET FORTH IN THE LATEST ANSI/SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE, OR ANOTHER APPROVED DUCT CONSTRUCTION STANDARD.
2. AIR MOVING SYSTEMS SUPPLYING AIR IN EXCESS OF 2000 CFM SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF ACTIVATED BY A SMOKE DETECTOR LOCATED IN THE MAIN SUPPLY-AIR DUCT. A SYSTEM MAY INCLUDE MORE THAN ONE PIECE OF AC UNIT WHICH SERVES A COMMON SPACE WITH AGGREGATE SUPPLY AIR OF MORE THAN 2000 CFM.
3. WHEN FIRE DETECTION ALARM SYSTEMS ARE PROVIDED FOR THE BUILDING, ANY REQUIRED SMOKE DETECTORS SHALL BE SUPERVISED BY SUCH SYSTEMS AND SHALL BE CAPABLE OF ACTIVATING THE FIRE ALARM SYSTEM.
4. ALL APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE IN ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS AND THE BUILDING CODE.
5. ALL APPLIANCES AND PLUMBING VENTS AND THE DISCHARGE OUTLET OF EXHAUST FANS SHALL BE AT LEAST TEN (10) FEET IN A HORIZONTAL DIRECTION, OR THREE (3) FEET ABOVE THE OUTSIDE – AIR INTAKES FOR HVAC UNITS.
6. ENVIRONMENTAL AIR DUCTS ARE SHALL TERMINATE A MINIMUM OF THREE FEET FROM PROPERTY LINE AND OPENINGS INTO THE BUILDING PER SECTION 504.5 OF THE CALIFORNIA MECHANICAL CODE.
7. OVERFLOW DRAINS FROM AC UNITS PLACATED IN AN ATTIC OR FURRED SPACE SHALL DISCHARGE AT A POINT THAT IS READILY OBSERVED.
8. HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS (INCLUDING HYDRONIC SYSTEMS) SHALL BE BALANCED IN ACCORDANCE WITH AN APPROVED METHODS PER SECTION 317.1 OF THE CALIFORNIA MECHANICAL CODE.
9. AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER ACCEPTABLE METHODS TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.
10. PRIOR TO PERMIT BEING FINALIZED, A COMPLETE TESTING, ADJUSTING, AND BALANCING REPORT SHALL BE PROVIDED TO THE OWNER OR OWNER'S REPRESENTATIVE AND FORM 5.410 – TESTING AND ADJUSTING SHALL BE COMPLETED AND PROVIDED TO THE INSPECTOR.
11. PRIOR TO PERMIT BEING FINALIZED, A COMPLETE REPORT OF THE COMMISSIONING PROCESS SHALL BE PROVIDED TO THE OWNER OR OWNER'S REPRESENTATIVE AND FORM 5.410 – VERIFICATION SHALL BE COMPLETED AND PROVIDED TO THE INSPECTOR.
12. THE PERSON RESPONSIBLE FOR CONSTRUCTION OR THE PERSON RESPONSIBLE FOR THE INSTALLATION OF REGULATED FEATURES, MATERIALS, COMPONENTS OR MANUFACTURED DEVICES SHALL POST, OR MAKE AVAILABLE WITH THE BUILDING PERMIT(S) ISSUED FOR THE BUILDING, THE REQUIRED INSTALLATION CERTIFICATES(S) FOR THE FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS OR PART 6. SUCH INSTALLATION CERTIFICATES(S) SHALL BE MADE AVAILABLE TO THE ENFORCEMENT AGENCY FOR ALL APPROPRIATE INSPECTIONS. THESE CERTIFICATES SHALL:
    - A. IDENTIFY FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES REQUIRED TO VERIFY COMPLIANCE WITH THE APPLIANCE EFFICIENCY REGULATIONS AND PART 6.
    - B. INCLUDE A STATEMENT INDICATING THAT THE FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICE CONFORM TO THE APPLIANCE EFFICIENCY REGULATIONS AND PART 6 AND THE REQUIREMENTS FOR SUCH FEATURES, MATERIALS, COMPONENTS OR MANUFACTURED DEVICES GIVEN IN THE PLANS AND SPECIFICATIONS APPROVED BY THE LOCAL ENFORCEMENT AGENCY.
    - C. STATE THE NUMBER OF THE BUILDING PERMIT UNDER WHICH THE CONSTRUCTION INSTALLATION WAS PERFORMED.
13. WITH IN 90 DAYS OF ISSUANCE OF CERTIFICATE OF OCCUPANCY RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER. IF A BUILDING DESIGN FEATURE, MATERIAL, COMPONENT OR MANUFACTURED DEVICE IS CHANGED BEFORE FINAL CONSTRUCTION AND INSTALLATION, SUCH THAT THE BUILDING MAY NO LONGER COMPLY WITH PART 6, THE BUILDING MUST BE BROUGHT INTO COMPLIANCE, AND SO INDICATED ON AMENDED PLANS AND CERTIFICATE OF COMPLIANCE(S) THAT SHALL BE SUBMITTED FOR APPROVAL.
14. THE BUILDER SHALL PROVIDE THE OWNER OR THE PERSON(S) RESPONSIBLE FOR BUILDING MAINTENANCE (IN CASE OF MULTI-TENANT) OR CENTRALLY OPERATED BUILDINGS) AT OCCUPANCY THE FOLLOWING:
    - A. OPERATING INFORMATION: THE APPROPRIATE CERTIFICATE(S) OF COMPLIANCE AND A LIST OF THE FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING AND INSTRUCTIONS ON HOW TO OPERATE THEM EFFICIENTLY.
    - B. MAINTENANCE INFORMATION: REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL, THE LABEL MAY BE LIMITED TO IDENTIFYING THE OPERATION AND MAINTENANCE MANUAL.
    - C. VENTILATION INFORMATION: A DESCRIPTION OF THE QUANTITIES OF OUTDOOR AND RETICULATED AIR THAT THE VENTILATION SYSTEMS ARE DESIGNED TO PROVIDE TO EACH AREA.
15. ALL EQUIPMENT SHALL BE LISTED/APPROVED BY A THIRD-PARTY AGENCY.

TEMPERATURE CONTROL NOTES

1.1 SUMMARY

- A. THIS SECTION INCLUDES CONTROL EQUIPMENT FOR HVAC SYSTEMS AND COMPONENTS, INCLUDING CONTROL COMPONENTS FOR HEATING AND COOLING UNITS NOT SUPPLIED WITH FACTORY-WIRED CONTROLS.
- B. ALL LABOR, MATERIAL, EQUIPMENT AND SOFTWARE NOT SPECIFICALLY REFERRED TO HEREIN OR ON THE PLANS, THAT IS REQUIRED TO MEET THE FUNCTIONAL INTENT OF THIS SPECIFICATION, SHALL BE PROVIDED WITHOUT ADDITIONAL COST TO THE OWNER.
- C. ALL LINE VOLTAGE AND LOW VOLTAGE ELECTRICAL WORK ASSOCIATED WITH TEMPERATURE CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCAL CODE REQUIREMENTS. ALL WIRING SHALL BE ROUTED IN CONDUIT.

1.2 COORDINATION

COORDINATE LOCATION OF THERMOSTATS AND OTHER EXPOSED CONTROL SENSORS WITH PLANS AND ROOM DETAILS BEFORE INSTALLATION.

1.3 HVAC SYSTEMS CONTROLS AND SEQUENCE OF OPERATION

A. COMPONENTS REQUIRED

- a. STARTER DISCONNECT SWITCHES FOR ALL FANS.
- b. CONTROL PANEL FOR INTEGRATION OF ALL EQUIPMENT AND OPERATIONS.
- c. PROGRAMMABLE THERMOSTATS.
- d. DAMPERS AND ACTUATORS AS INDICATED ON PLANS.
- e. SENSORS AS REQUIRED BY SEQUENCE OF OPERATION.

B. SEQUENCE OF OPERATION

FAN COIL UNITS:

- a. OUTSIDE AIR DAMPER SHALL BE OPEN AND FAN SHALL OPERATE CONTINUOUSLY DURING OCCUPIED TIMES AS SCHEDULED BY A TIME CLOCK.
- b. DURING UNOCCUPIED TIMES, FAN COIL UNITS SHALL REMAIN OFF UNLESS SPACE TEMPERATURE DROPS BELOW PRESET LOWER LIMIT IN WHICH CASE UNIT FAN AND HEATING SECTION SHALL CYCLE AND MODULATE TO MAINTAIN UNOCCUPIED SPACE TEMPERATURE VIA SAME OCCUPIED SEQUENCE AS DESCRIBED ABOVE.

1.4 THERMOSTATS

ELECTRIC, SOLID-STATE, MICROCOMPUTER-BASED ROOM THERMOSTAT WITH REMOTE SENSOR.

- A. PROGRAMMING BASED ON WEEKDAY, SATURDAY, AND SUNDAY.
- B. SELECTION FEATURES INCLUDE DEGREE F OR DEGREE C DISPLAY, 12- OR 24-HOUR CLOCK, KEYBOARD DISABLE, REMOTE SENSOR, AND FAN ON-AUTO.
- C. BATTERY REPLACEMENT WITHOUT PROGRAM LOSS.
- D. THERMOSTAT DISPLAY FEATURES INCLUDE THE FOLLOWING:
    - a. TIME OF DAY.
    - b. ACTUAL ROOM TEMPERATURE.
    - c. PROGRAMMED TEMPERATURE.
    - d. PROGRAMMED TIME.
    - e. DURATION OF TIMED OVERRIDE.
    - f. DAY OF WEEK.

1.5 ACTUATORS

ELECTRONIC ACTUATORS: DIRECT-COUPLED TYPE DESIGNED FOR MINIMUM 60,000 FULL-STROKE CYCLES AT RATED TORQUE.

- A. COUPLING: V-BOLT AND V-SHAPED, TOOTHED CRADLE.
- B. OVERLOAD PROTECTION: ELECTRONIC OVERLOAD OR DIGITAL ROTATION-SENSING CIRCUITRY.
- C. FAIL-SAFE OPERATION: MECHANICAL, SPRING-RETURN MECHANISM. PROVIDE EXTERNAL MANUAL GEAR RELEASE ON NONSPRING-RETURN ACTUATORS.
- D. POWER REQUIREMENTS (TWO-POSITION SPRING RETURN): 120-V AC.
- E. POWER REQUIREMENTS (MODULATING): MAXIMUM 10 VA AT 120-V AC OR 8 W AT 120-V DC.
- F. TEMPERATURE RATING: MINUS 22 TO PLUS 122 DEG F (MINUS 30 TO PLUS 50 DEG C).
- G. RUN TIME: 30 SECONDS.

1.6 EXAMINATION

- A. THE PROJECT PLANS SHALL BE THOROUGHLY EXAMINED FOR CONTROL DEVICE AND EQUIPMENT LOCATIONS. ANY DISCREPANCIES, CONFLICTS, OR OMISSIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION BEFORE ROUGH-IN WORK IS STARTED.
- B. THE CONTRACTOR SHALL INSPECT THE SITE TO VERIFY THAT EQUIPMENT MAY BE INSTALLED AS SHOWN. ANY DISCREPANCIES, CONFLICTS, OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION BEFORE ROUGH-IN WORK IS STARTED.
- C. THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS FOR OTHER PARTS OF THE WORK. IF HEAD ROOM OR SPACE CONDITIONS APPEAR INADEQUATE OR IF ANY DISCREPANCIES OCCUR BETWEEN THE PLANS AND THE CONTRACTOR'S WORK AND THE PLANS AND THE WORK OF OTHERS THE CONTRACTOR SHALL REPORT THESE DISCREPANCIES TO THE ARCHITECT/ENGINEER AND SHALL OBTAIN WRITTEN INSTRUCTIONS FOR ANY CHANGES NECESSARY TO ACCOMMODATE THE CONTRACTOR'S WORK WITH THE WORK OF OTHERS. ANY CHANGES IN THE WORK COVERED BY THIS SPECIFICATION MADE NECESSARY BY THE FAILURE OR NEGLECT OF THE CONTRACTOR TO REPORT SUCH DISCREPANCIES SHALL BE MADE BY AND AT THE EXPENSE OF THIS CONTRACTOR.
- D. VERIFY THAT POWER SUPPLY IS AVAILABLE TO CONTROL UNITS.
- E. VERIFY THAT PIPE- AND EQUIPMENT-MOUNTED DEVICES ARE INSTALLED BEFORE PROCEEDING WITH INSTALLATION.

1.7 INSTALLATION

- A. INSTALL SYSTEM AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. LINE AND LOW VOLTAGE ELECTRICAL CONNECTIONS TO HVAC EQUIPMENT SHOWN SPECIFIED OR SHOWN ON THE CONTROL DIAGRAMS SHALL BE FURNISHED AND INSTALLED BY THE TEMPERATURE CONTROL SUB-CONTRACTOR.
- C. CONNECT AND CONFIGURE EQUIPMENT AND SOFTWARE TO ACHIEVE SEQUENCE OF OPERATION SPECIFIED.
- D. INSTALL DAMPER MOTORS ON OUTSIDE OF DUCT IN WARM AREAS, NOT IN LOCATIONS EXPOSED TO OUTDOOR TEMPERATURES.

1.8 ELECTRICAL WIRING AND CONNECTION INSTALLATION

- A. INSTALL RACEWAYS, BOXES, AND CABINETS ACCORDING TO THE ELECTRICAL SPECIFICATIONS.
- B. INSTALL BUILDING WIRE AND CABLE ACCORDING TO THE ELECTRICAL SPECIFICATIONS.
- C. ALL ELECTRICAL CONTROL WIRING AND POWER WIRING TO THE BAS, NETWORK COMPONENTS AND CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR AND TEMPERATURE CONTROL SUB-CONTRACTOR.

1.9 INSTALLATION OF SENSORS

- A. INSTALL SENSORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- B. MOUNT SENSORS RIGIDLY AND ADEQUATELY FOR THE ENVIRONMENT WITHIN WHICH THE SENSOR OPERATES.
- C. ROOM TEMPERATURE SENSORS SHALL BE INSTALLED ON CONCEALED JUNCTION BOXES PROPERLY SUPPORTED BY THE WALL FRAMING.
- D. ALL WIRES ATTACHED TO SENSORS SHALL BE AIR SEALED IN THEIR RACEWAYS OR IN THE WALL TO STOP AIR TRANSMITTED FROM OTHER AREAS AFFECTING SENSOR READINGS.

1.10 CONTROL DAMPER INSTALLATION

- A. DAMPER SUBMITTALS SHALL BE COORDINATED FOR TYPE, QUANTITY, AND SIZE TO ENSURE COMPATIBILITY WITH SHEET METAL DESIGN.
- B. DUCT OPENINGS SHALL BE FREE OF ANY OBSTRUCTION OR IRREGULARITIES THAT MIGHT INTERFERE WITH BLADE OR LINKAGE ROTATION OR ACTUATOR MOUNTING. DUCT OPENINGS SHALL MEASURE ¼ IN. LARGER THAN DAMPER DIMENSIONS AND SHALL BE SQUARE, STRAIGHT, AND LEVEL.
- C. INDIVIDUAL DAMPER SECTIONS, AS WELL AS ENTIRE MULTIPLE SECTION ASSEMBLIES, MUST BE COMPLETELY SQUARE AND FREE FROM RACKING, TWISTING, OR BENDING. MEASURE DIAGONALLY FROM OPPOSITE CORNERS TO OPPOSITE LOWER CORNERS OF EACH DAMPER SECTION. BOTH DIMENSIONS MUST BE WITHIN 0.3 CM (1/8 IN.) OF EACH OTHER.
- D. FOLLOW THE MANUFACTURER'S INSTRUCTIONS FOR FIELD INSTALLATION OF CONTROL DAMPERS. UNLESS SPECIFICALLY DESIGNED FOR VERTICAL BLADE APPLICATION, DAMPERS MUST BE MOUNTED WITH BLADE AXIS HORIZONTAL.
- E. INSTALL EXTENDED SHAFT OR JACKSHAFT ACCORDING TO MANUFACTURER'S INSTRUCTIONS. (TYPICALLY, A STICKER ON THE DAMPER FACE SHOWS RECOMMENDED EXTENDED SHAFT LOCATION ATTACH SHAFT ON LABELED SIDE OF DAMPER TO THAT BLADE.) USE LINE SHAFTING OR SHAFT COUPLINGS (JACKSHAFTING) IN LIEU OF BLADE-TO-BLADE LINKAGES OR SHAFT COUPLING WHEN DRIVING AXIALLY ALIGNED DAMPER SECTIONS.
- F. DAMPER BLADES, AXLES, AND LINKAGE MUST OPERATE WITHOUT BINDING. BEFORE SYSTEM OPERATION, CYCLE DAMPER AFTER INSTALLATION TO ENSURE PROPER OPERATION ON MULTIPLE SECTION ASSEMBLIES, ALL SECTIONS MUST OPEN AND CLOSE SIMULTANEOUSLY.
- G. PROVIDE A VISIBLE AND ACCESSIBLE INDICATION OF DAMPER POSITION ON THE DRIVE SHAFT END.
- H. SUPPORT DUCTWORK IN AREA OF DAMPER WHEN REQUIRED TO PREVENT SAGGING DUE TO DAMPER WEIGHT.
- I. AFTER INSTALLATION OF LOW-LEAKAGE DAMPERS WITH SEALS, CAULK BETWEEN FRAME AND DUCT OR OPENING TO PREVENT LEAKAGE AROUND PERIMETER OF DAMPER.
- J. MOUNT AND LINK CONTROL DAMPER ACTUATORS ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- K. TO COMPRESS SEALS WHEN SPRING-RETURN ACTUATORS ARE USED ON NORMALLY CLOSED DAMPERS, POWER ACTUATOR TO APPROXIMATELY 5° OPEN POSITION, MANUALLY CLOSE THE DAMPER, AND THEN TIGHTEN THE LINKAGE.
- L. CHECK OPERATION OF DAMPER/ACTUATOR COMBINATION TO CONFIRM THAT ACTUATOR MODULATES DAMPER SMOOTHLY THROUGHOUT STROKE TO BOTH OPEN AND CLOSED POSITIONS.
- M. PROVIDE ALL MOUNTING HARDWARE AND LINKAGES FOR ACTUATOR INSTALLATION.
- N. THE TOTAL DAMPER AREA OPERATED BY AN ACTUATOR SHALL NOT EXCEED 80% OF THE MANUFACTURER'S MAXIMUM AREA RATING. PROVIDE AT LEAST ONE ACTUATOR FOR EACH DAMPER SECTION. EACH DAMPER ACTUATOR SHALL NOT POWER MORE THAN 20 SQUARE FEET OF DAMPER.
    - a. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS RESULTING FROM THEIR ACTIVITIES DAILY. THE CONTRACTOR SHALL REMOVE ALL CARTONS, CONTAINERS, CRATES, ETC., UNDER THEIR CONTROL AS SOON AS THEIR CONTENTS HAVE BEEN REMOVED. WASTE SHALL BE COLLECTED AND PLACED IN A DESIGNATED LOCATION.
    - b. AT THE COMPLETION OF WORK IN ANY AREA, THE CONTRACTOR SHALL CLEAN ALL WORK, EQUIPMENT, ETC., KEEPING IT FREE FROM DUST, DIRT, AND DEBRIS, ETC.
    - c. AT THE COMPLETION OF WORK, ALL EQUIPMENT FURNISHED UNDER THIS SECTION SHALL BE CHECKED FOR PAINT DAMAGE, AND ANY FACTORY-FINISHED PAINT THAT HAS BEEN DAMAGED SHALL BE REPAIRED TO MATCH THE ADJACENT AREAS. ANY CABINET OR ENCLOSURE THAT HAS BEEN DEFORMED SHALL BE REPLACED WITH NEW MATERIAL AND REPAINTED TO MATCH THE ADJACENT AREAS.

DUCT SMOKE DETECTORS

ALL AIR SAMPLING STYLE SMOKE DETECTORS MUST BE TESTED FOR PROPER INSTALLATION AND AIR FLOW BY A TECHNICIAN USING AN HVAC MANOMETER TO MEASURE PRESSURE DIFFERENTIAL ACROSS THE DETECTOR SAMPLING TUBE. THIS TESTING MUST BE WITNESSED BY THE FIRE DEPARTMENT AND IS TO BE COMPLETED AT THE EXPENSE OF THE INSTALLING CONTRACTOR. UPON SMOKE DETECTION, AIR HANDLING UNIT TO SHUTDOWN. DUCT SMOKE DETECTORS TO BE CONNECTED TO AND MONITORED BY THE BUILDING FIRE ALARM SYSTEM AS A SUPERVISORY ALARM.

FIRE AND SMOKE DAMPERS

COMBINATION FIRE/SMOKE DAMPERS MUST HAVE THE MINIMUM FIRE PROTECTION RATING SPECIFIED IN CBC TABLE 717.3.2.1 FOR THE TYPE OF PENETRATION.

UNLESS SPECIFICALLY SHOWN ON THE MECHANICAL PLANS, DUCT SMOKE DETECTORS SHALL NOT BE THE METHOD FOR ACTUATION FIRE ALARM CONTRACTOR SHALL PROVIDE ACTUATION DEVICE FOR COMBINATION FIRE SMOKE DAMPERS PER SECTION 717.3.3.1 OF 2022 CBC

1. WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED INSIDE THE DUCT OR OUTSIDE THE DUCT WITH SAMPLING TUBES PROTRUDING INTO THE DUCT. THE DETECTOR OR TUBES WITHIN THE DUCT SHALL BE WITHIN 5 FEET (1524 MM) OF THE DAMPER. AIR OUTLETS AND INLETS SHALL NOT BE LOCATED BETWEEN THE DETECTOR OR TUBES AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE LOCAL SMOKE DETECTORS REQUIRE A MINIMUM VELOCITY TO OPERATE.

2. WHERE A SMOKE DAMPER IS INSTALLED ABOVE SMOKE BARRIER DOORS IN A SMOKE BARRIER, A SPOT-TYPE DETECTOR SHALL BE INSTALLED ON EITHER SIDE OF THE SMOKE BARRIER DOOR OPENING. THE DETECTOR SHALL BE LISTED FOR RELEASING SERVICE IF USED FOR DIRECT INTERFACE WITH THE DAMPER.

3. WHERE A SMOKE DAMPER IS INSTALLED WITHIN AN AIR TRANSFER OPENING IN A WALL, A SPOT-TYPE DETECTOR SHALL BE INSTALLED WITHIN 5 FEET (1524 MM) HORIZONTALLY OF THE DAMPER. THE DETECTOR SHALL BE LISTED FOR RELEASING SERVICE IF USED FOR DIRECT INTERFACE WITH THE DAMPER.

4. WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR.

5. WHERE A SMOKE DETECTION SYSTEM IS INSTALLED IN ALL AREAS SERVED BY THE DUCT IN WHICH THE DAMPER WILL BE LOCATED, THE SMOKE DAMPERS SHALL BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION SYSTEM.

THERMOSTATS

FOR ALL SINGLE ZONE, AIR CONDITIONERS AND HEAT PUMPS ALL THERMOSTATS SHALL HAVE SETBACK CAPABILITIES WITH A MINIMUM OF FOUR SEPARATE SET POINTS PER 24-HOUR PERIOD. ALSO THE THERMOSTAT MUST COMPLY WITH THE OCCUPANT CONTROLLED SMART THERMOSTAT REQUIREMENTS IN 2022 CALIFORNIA ENERGY CODE SECTION 110.12(A), WHICH IS CAPABLE OF RESPONDING TO DEMAND RESPONSE SIGNALS IN THE EVENT OF GRID CONGESTION AND SHORTAGES DURING HIGH ELECTRICAL DEMAND PERIODS.

THERMOSTAT MUST BE LISTED ON CALIFORNIA'S ENERGY COMMISSION CERTIFICATION LIST OF APPROVED OCCUPANT CONTROLLED SMART THERMOSTATS.

THERMOSTATS SHALL BE FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR, AND PROGRAMMED BY MECHANICAL CONTRACTOR.

PROVIDE LOCKABLE SECURITY BOX IN STORAGE BUILDINGS AND OFFICE BUILDING. MOUNT ALL THERMOSTATS WITH TOP OF THERMOSTAT AT 48"ABOVE FINISHED FLOOR.

VOLUME DAMPERS

PROVIDE AN ACCESSIBLE MANUAL VOLUME DAMPER FOR EACH SUPPLY, RETURN, OSA AND EXHAUST OPENING, LOCATED AS FAR UPSTREAM AS POSSIBLE FROM THE OPENING UNLESS SPECIFIED. PROVIDE A MANUAL VOLUME DAMPER FOR BRANCH MAINS SERVING MORE THAN ONE OPENING. VOLUME DAMPERS IN NON-ACCESSIBLE CEILING SHALL HAVE A CONTROL ARM EXTENDED TO AN ACCESSIBLE LOCATION. PROVIDE "YOUNG" REGULATOR OR EQUAL. EXACT LOCATION OF CONTROL DEVICES VISIBLE IN FINISHED SPACES SHALL BE COORDINATED WITH THE ARCHITECT.

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SHALL BE AS FOLLOWS:

AN ACCEPTANCE TEST TECHNICIAN (ATT) SHALL ACT AS THE ACCEPTANCE AGENT AND PERFORM WORK REQUIRED IN THE FOLLOWING ACCEPTANCE TESTS AS DESCRIBED IN CHAPTER 13 OF THE 2022

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

MECHANICAL SPECIFICATIONS

1.0 GENERAL REQUIREMENTS

1.01 SCOPE OF WORK

A. THE GENERAL REQUIREMENTS OF THE ARCHITECTURAL SPECIFICATIONS ARE PART OF THESE SPECIFICATIONS. WHERE AN INCONSISTENCY EXISTS BETWEEN THE WORDING OR INTENT, THIS DIVISION SHALL TAKE PRECEDENCE.

B. THE STANDARD FORM OF GENERAL CONDITIONS ISSUED BY THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A201, LATEST EDITION, SHALL FORM A PART OF THIS CONTRACT.

C. ALL CONTRACTORS FOR THIS WORK SHALL VERIFY EQUIPMENT LOCATIONS, WEIGHTS AND CLEARANCES IN THE FIELD PRIOR TO SUBMITTING BIDS TO VERIFY CONDITIONS, INTERFERENCES WITH OTHER TRADES, AND DIMENSIONS. NO ALLOWANCES WILL BE MADE AFTER ACCEPTANCE OF BIDS FOR FAILURE TO COMPLY.

D. PROVIDE ALL LABOR AND MATERIALS, EQUIPMENT, FACILITIES, TRANSPORTATION AND SERVICES NECESSARY TO FURNISH, INSTALL AND COMPLETE THE HEATING, VENTILATING AND AIR CONDITIONING WORK AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. THE WORKMANSHIP SHALL BE COMPLETE IN EVERY RESPECT, BE TESTED AND APPROVED, AND BE SATISFACTORY TO THE ARCHITECT/ENGINEER AND IN ACCORDANCE WITH THE LOCAL, COUNTY AND STATE LAWS GOVERNING THIS INSTALLATION, INCLUDING THE FIRE MARSHAL.

E. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT AND LOCATION OF THE WORK INCLUDED. WORK INDICATED, BUT HAVING MINOR DETAILS OBVIOUSLY OMITTED, SHALL BE PROVIDED, INCLUDING THESE DETAILS, WITHOUT EXTRA COST.

F. IT IS THE DECLARED AND ACKNOWLEDGED INTENT OF THESE SPECIFICATIONS TO PROVIDE THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS, INCLUSIVE OF ALL REQUIRED PARTS, ACCESSORIES AND CONTROLS COMPLETE AND READY FOR USE AS INDICATED ON THE ACCOMPANYING DRAWINGS. WORK INDICATED ON THE DRAWINGS, BUT NOT NECESSARILY INDICATED IN THESE SPECIFICATIONS SHALL BE PROVIDED AS REQUIRED.

1.02 RELATED WORK

POWER WIRING (IE FEEDERS) TO MOTORS, INCLUDING FINAL CONNECTIONS TO EQUIPMENT, SHALL BE PROVIDED BY THE DIVISION 16 - ELECTRICAL CONTRACTOR.

1.03 VISITING THE SITE

THE CONTRACTOR SHALL, PRIOR TO SUBMITTING HIS BID FOR DOING WORK AS DESCRIBED IN THIS SPECIFICATION AND ON THE ACCOMPANYING DRAWINGS, VISIT THE SITE AND COMPLETELY FAMILIARIZE HIMSELF WITH THE DIFFICULTIES AND FACILITIES THAT WILL BE INVOLVED FOR THE PROPER EXECUTION OF THE CONTRACT. NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE CONTRACTOR FAILING TO DO SO OR NOT TO FULLY APPRECIATE THE DIFFICULTIES AT HAND.

1.04 FEES AND INSPECTIONS

ALL OF THE CONTRACTORS SHALL APPLY, PROCURE AND PAY FEES FOR ALL PERMITS AND INSPECTIONS OR OTHER OBLIGATIONS THAT THE CITY, COUNTY, STATE OR UTILITIES MAY REQUIRE IN ORDER FOR HIM TO DO HIS WORK ACCORDING TO THE PLANS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.

1.05 LAWS AND ORDINANCES

THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF WORK AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, HE SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING WHEN SUBMITTING HIS BID AND ANY NECESSARY CHANGES SHALL BE ADJUSTED AS PROVIDED IN THE CONTRACT FOR SUCH CHANGES IN WORK. IF THE CONTRACTOR PERFORMS ANY WORK CONTRARY TO SUCH LAWS, ORDINANCES, RULES AND REGULATIONS, HE SHALL BEAR ALL COSTS FOR CORRECTING THE WORK.

1.06 TRADE JURISDICTION

WHEN IT BECOMES NECESSARY FOR THE COMPLETE FULFILLMENT OF THIS WORK, FOR THE CONTRACTOR TO FURNISH LABOR OR MATERIALS OTHER THAN WHICH IS GENERALLY ACCEPTED BY HIS TRADE OR BRANCH OF WORK, THE CONTRACTOR SHALL SUBLET SAME TO A CONTRACTOR NORMALLY ENGAGED IN THE TRADE OR BRANCH OF WORK, INVOLVED TO THE END, SO THAT THERE IS NO DELAY TO OR STOPPAGE OF WORK DUE TO THE INFRINGEMENT OR ALLEGED INFRINGEMENT TO TRADE AGREEMENTS AS TO THE JURISDICTION.

1.07 SUBMITTALS

THIS CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, COMPLETE LISTS INCLUDING CATALOG CUTS, ETC., AND WHERE APPLICABLE DIMENSIONED SHOP DRAWINGS OF ALL MATERIALS, FIXTURES AND EQUIPMENT TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. INCLUDE SHEETMETAL DUCT LAYOUTS AND PIPING PLAN LAYOUTS. REFER TO THE ARCHITECT'S GENERAL CONDITIONS FOR NUMBER OF COPIES TO BE SUBMITTED. DO NOT ORDER EQUIPMENT, FABRICATE DUCTWORK, OR INSTALL EQUIPMENT, DUCTWORK OR PIPING BEFORE RECEIVING SHOP DRAWINGS WHICH HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER.

REQUIRED ITEMS TO BE SUBMITTED SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

DIFFUSERS, GRILLES AND REGISTERS
ACCESS PANELS
LOUVERS
MOTORIZED DAMPERS
FIRE DAMPERS
EQUIPMENT
ROOF CURBS
INSULATION
CONTROLS
SPECIALTIES

1.08 RECORD DRAWING SUBMITTAL

AT PROJECT CLOSEOUT, THE CONTRACTOR SHALL SUBMIT RECORD "AS-BUILT" DRAWINGS OF INSTALLED DUCTWORK, PIPING AND EQUIPMENT AS IT WAS ACTUALLY INSTALLED SO AS TO MAKE A PERMANENT RECORD. REFER TO THE ARCHITECTS GENERAL CONDITIONS FOR NUMBER OF COPIES TO BE SUBMITTED.

1.09 WORKMANSHIP AND MATERIALS

ALL MATERIALS SHALL BE NEW AND OF FIRST QUALITY. ALL LABOR SHALL BE EXECUTED IN A NEAT WORKMANLIKE MANNER AND SHALL BE PERFORMED BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES. THE ENGINEER SHALL DECIDE ALL MATTERS PERTAINING TO THE QUALITY OF WORKMANSHIP AND MATERIALS.

ALL DUCTWORK BEING STORED ON SITE AWAITING INSTALLATION AND ALL INSTALLED DUCTWORK WITH OPEN ENDS SHALL BE COVERED TO REDUCE THE CLEANING EFFORT ONCE THE SYSTEM IS PUT INTO OPERATION.

1.10 SPECIFICATIONS AND DRAWINGS

SPECIFICATIONS AND DRAWINGS ARE INTENDED TO BE COOPERATIVE. WHAT IS CALLED FOR BY EITHER SHALL BE AS BINDING AS IF CALLED FOR BY BOTH. ANY WORK OR MATERIALS NOT SPECIFICALLY MENTIONED, THOUGH REQUIRED TO MAKE THE JOB COMPLETE, SHALL BE FURNISHED BY THE CONTRACTOR AT HIS EXPENSE.

1.11 OPERATING INSTRUCTIONS

THIS CONTRACTOR SHALL PREPARE A TYPEWRITTEN LIST OF OPERATING INSTRUCTIONS FOR ALL THE EQUIPMENT INSTALLED UNDER THIS CONTRACT, AND SHALL INSTRUCT THE OWNER IN ITS OPERATION. INDIVIDUAL MANUALS PROVIDED BY THE EQUIPMENT MANUFACTURERS SHALL BE INCLUDED.

1.12 EQUIPMENT SCHEDULE

THIS CONTRACTOR SHALL PREPARE AND FURNISH TO THE OWNER, TWO (2) BOUND BOOKLETS, EACH CONTAINING A COMPLETE LIST OF ALL EQUIPMENT AND VALVES INSTALLED UNDER THIS CONTRACT. EACH PIECE OF EQUIPMENT AND VALVE LISTED SHALL INCLUDE ITS TAG NUMBER, MANUFACTURERS MODEL NUMBER AND COMPONENTS THEREIN WHICH MAKE UP THE SPARE PARTS LIST.

1.13 GUARANTEE

THIS CONTRACTOR SHALL GUARANTEE HIS WORK TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL CERTIFICATE. ANY REPAIRS OR REPLACEMENT DURING THE PERIOD SHALL BE MADE WITHOUT COST TO THE OWNER, UPON HIS OR HER REQUEST.

1.14 COORDINATION OF WORK

THE CONTRACTOR SHALL CONFER WITH OTHER TRADES WHOSE WORK MAY AFFECT HIS INSTALLATION TO AVOID INTERFERENCE BEFORE STARTING THE INSTALLATION. ALL CHANGES IN THE WORK OF THIS CONTRACTOR CAUSED BY HIS NEGLECT TO COMPARE AND CONFER WITH OTHER TRADES SHALL BE MADE BY HIM AT HIS OWN EXPENSE.

1.15 CUTTING AND PATCHING

EACH CONTRACTOR SHALL DO HIS OWN CUTTING AND PATCHING. IF STRUCTURALLY REQUIRED, HE SHALL PROVIDE AND INSTALL THE NECESSARY STEEL WHEN GOING THROUGH A LOAD BEARING WALL. THIS CONTRACTOR SHALL NOT ENDANGER ANY WORK BY CUTTING, DIGGING OR OTHERWISE AND SHALL NOT CUT OR ALTER THE WORK OF OTHER TRADES WITHOUT CONSENT OF THE ARCHITECT/ENGINEER.

1.16 DEMOLITION

A. PIPING, VALVES, DUCTWORK, EQUIPMENT, ETC., WHICH IS REQUIRED TO BE REMOVED TO PERFORM WORK UNDER THIS SPECIFICATION WILL BE PERFORMED BY THIS CONTRACTOR AND TURNED OVER AND DELIVERED TO THE BUILDING MAINTENANCE DEPARTMENT OR DISPOSED OF AS DIRECTED.

B. ANY HOLES OR OPENINGS LEFT IN WALLS, ROOFS, FLOORS, CEILINGS, ETC., AFTER REQUIRED DEMOLITION WORK, SHALL BE FILLED IN AND PATCHED BY THIS CONTRACTOR IN A MANNER APPROVED BY THE ARCHITECT AND ENGINEER. FAILURE ON THIS CONTRACTOR'S PART TO COMPLY WITH ABOVE SHALL MAKE HIM RESPONSIBLE FOR ANY EXTRA EXPENSE INVOLVED.

C. ANY EQUIPMENT OR ARCHITECTURAL ELEMENTS DAMAGED OR DESTROYED IN THE DEMOLITION WORK SHALL BE REPAIRED, REPLACED AND/OR BROUGHT BACK TO GOOD WORKING ORDER TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.

1.17 MECHANICAL IDENTIFICATION

A. GENERAL: PROVIDE MECHANICAL IDENTIFICATION FOR ALL MECHANICAL EQUIPMENT, PIPING AND DUCT SYSTEMS. COMPLY WITH ANSI A13.1 FOR LETTERING SIZE, LENGTH OF COLOR FIELD, COLORS AND VIEWING ANGLES OF IDENTIFICATION DEVICES.

B. EQUIPMENT: PROVIDE EQUIPMENT SYSTEM NUMBER, CAPACITY, FLOW RATE, STATIC PRESSURE, PUMP HEAD, HORSEPOWER AND VOLTAGE. PROVIDE SETON MODEL "VENTMARK" MARKERS.

C. PIPING: PROVIDE SYSTEM DESIGNATION NAME AND DIRECTION OF FLOW. PROVIDE SETON MODEL "SETMARK" PIPE MARKERS.

D. DUCTS: PROVIDE SYSTEM DESIGNATION NAME AND DIRECTION OF FLOW. PROVIDE SETON MODEL "VENTMARK" MARKERS.

E. VALVES: PROVIDE BRASS VALVE TAGS AND BRASS "S" HOOK FASTENERS WITH VALVE NUMBER AND TYPE OF SERVICE NOTED ON THE TAG. PROVIDE DUPLICATE VALVE CHARTS. THE CHART SHALL BE FOR ALL VALVES AND SHALL INDICATE VALVE IDENTIFICATION NUMBER, LOCATION AND PURPOSE. PROVIDE SETON BRASS VALVE TAGS AND VALVE CHARTS.

1.18 TESTING AND BALANCING

THIS CONTRACTOR SHALL NEGOTIATE A CONTRACT WITH AN INDEPENDENT, QUALIFIED AND CERTIFIED MEMEBER OF NEBB OR AABC TO COMPLETELY BALANCE THE AIR AND HYDRONIC SYSTEMS INCLUDED IN THIS SPECIFICATION AND ACCOMPANYING DRAWINGS, AS REQUIRED. THE CONTRACTOR SHALL SUBMIT A PROJECT CERTIFICATION GUARANTEE AND CERTIFIED BALANCE REPORT TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FINAL ACCEPTANCE OF THE SYSTEMS BY THE OWNER.

1.19 NOISE AND VIBRATION CONTROL

THIS CONTRACTOR SHALL PROVIDE ACCOUSTICAL AND VIBRATION TREATMENT FOR ALL EQUIPMENT WITH MOVING PARTS TO MEET CODE AND MAINTAIN THE FOLLOWING NOISE CRITERIA:

LOBBIES, TOILETS AND CORRIDORS	NC 30
SPACE ADJACENT TO FAN ROOMS	NC 35
OFFICES, CONFERENCE ROOM, ETC.	NC 20

VIBRATION ISOLATORS AND FLEXIBLE CONNECTIONS SHALL BE USED AT EACH PIECE OF EQUIPMENT WITH MOVING PARTS.

1.20 BUILDING STANDARDS

IF BUILDING HAS STANDARDS FOR PIPING, DUCTWORK, DIFFUSERS, GRILLES, REGISTERS, TEMPERATURE CONTROLS, OTHER EQUIPMENT, ETC., PROVIDE SAME UNLESS OTHERWISE NOTED.

2.0 PRODUCTS, MATERIALS AND CONTROLS

2.01 HANGERS AND SUPPORTS

A. PIPING HANGERS AND SUPPORTS SHALL COMPLY WITH MSS SP-58. PROVIDE ONLY ONE TYPE OF HANGER/SUPPORT, BY ONE MANUFACTURER, FOR EACH PIPING SERVICE.

B. DUCT HANGERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS.

C. EQUIPMENT HANGERS AND SUPPORTS SHALL BE PROVIDED AND INSTALLED PER THE EQUIPMENT MANUFACTURER'S REQUIREMENTS.

2.02 ACCESS DOORS

ACCESS DOORS SHALL BE INSTALLED FOR ALL NON-ACCESSIBLE EQUIPMENT, VALVES, OPERATIONS, CONTROLS, OR OTHER WORKING PARTS REQUIRING MAINTENANCE OR ADJUSTMENT. THIS CONTRACTOR SHALL FURNISH ALL SUCH ACCESS DOORS AND ADVISE GENERAL CONTRACTOR OF THE LOCATION OF ALL ACCESS DOORS REQUIRED THROUGHOUT THE PROJECT. ACCESS DOOR MANUFACTURERS DATA SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER. COLOR OF ACCESS DOORS SHALL BE APPROVED BY THE ARCHITECT.

2.03 EQUIPMENT

A. PROVIDE AND INSTALL ALL EQUIPMENT AS SHOWN IN THE EQUIPMENT SCHEDULES.

B. ALL EQUIPMENT DATA SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER.

C. COLOR OF ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE APPROVED BY THE ARCHITECT.

D. COORDINATE FINAL LOCATION OF ALL THERMOSTATS, DIFFUSERS, GRILLES AND REGISTERS WITH THE ARCHITECT'S REFLECTED CEILING PLAN.

2.04 DUCTWORK AND ACCESSORIES

A. ALL DUCTWORK SHALL BE PRIME GALVANIZED SHEET STEEL, LOCK FORMING, FIRST QUALITY, FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE ASHRAE GUIDE, EXCEPT AS NOTED OTHERWISE.

B. ROUND SPIRAL DUCTWORK SHALL BE UNITED SHEET METAL TYPE DUCT FITTINGS, OR APPROVED EQUAL, INSTALLED AND SUSPENDED AS PER MANUFACTURER'S RECOMMENDATIONS.

C. ALL DUCTS ARE TO HAVE GALVANIZED STIFFENERS IN THE FORM OF SEAMS INVOLVING AT LEAST THREE FOLDS OF SHEET METAL (POCKET LOCKS, STANDING SEAMS, STANDING S-SLIPS, ETC.).

D. VENTILATION CONSTRUCTION NOT COVERED BY THE ASHRAE GUIDE AND/OR GOVERNING AUTHORITIES SHALL BE IN ACCORDANCE WITH THE MAXIMUM STANDARDS AND TRADE PRACTICES AS SET FORTH BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) INCLUDING THEIR MOST CURRENT DUCT MANUAL.

E. DUCT DIMENSIONS SHOWN ON THE DRAWINGS INDICATE INSIDE DIMENSIONS. INCREASE DUCT SIZE WHEN LINING IS UTILIZED.

F. LOW PRESSURE DUCTWORK SHALL BE CONSIDERED AS ALL DUCTWORK NOT DEFINED AS MEDIUM PRESSURE DUCTWORK, UNLESS NOTED OTHERWISE. PROVIDE 2" SP DUCT CONSTRUCTION FOR SUPPLY AIR DUCTS AND 1" SP CONSTRUCTION FOR RETURN AND EXHAUST AIR DUCTS, UNLESS OTHERWISE NOTED.

G. MEDIUM PRESSURE DUCTWORK SHALL BE CONSIDERED AS ALL DUCTWORK UPSTREAM OF VAV BOXES AND FAN-POWERED BOXES. PROVIDE 3" SP DUCT CONSTRUCTION UNLESS NOTED OTHERWISE. ROUND SINGLE WALL MEDIUM PRESSURE DUCTWORK IN SOUND-LINED SYSTEMS WILL NOT BE PERMITTED IN LENGTHS GREATER THAN FIVE FEET.

H. ALL LOW AND MEDIUM PRESSURE DUCTWORK SHALL BE SEALED WITH AN APPROVED MASTIC.

I. ALL DUCT SYSTEMS ARE TO BE TESTED FOR LEAKAGE. MAXIMUM ALLOWABLE LEAKAGE FOR ANY SYSTEM WILL BE 5% OF TOTAL AIR QUANTITY. SUBMIT TEST DATA SHEET(S) TO ARCHITECT/ENGINEER FOR APPROVAL.

J. A 5'-0" MAXIMUM LENGTH OF INSULATED FLEXIBLE DUCT WILL BE PROVIDED TO EACH SUPPLY OUTLET AND RETURN INLET AS REQUIRED.

K. DIFFUSER TAKE-OFF WHERE DIFFUSER IS LOCATED BELOW THE MAIN TRUNK, AND WHERE INDICATED. DEVICE SHALL BE COMPLETE WITH WORM GEAR MECHANISM FOR OPERATION OR ADJUSTMENTS THRU THE FACE OF THE DIFFUSER. IF TURNING DEVICE IS LOCATED REMOTELY FROM GRILLE, REGISTER OR DIFFUSER, PROVIDE EXTENSION ROD ON ADJUSTING DEVICE. TITTLE AND BAILEY, "VENTROL NLC" OR APPROVED EQUAL.

L. PROVIDE FACTORY-FABRICATED TURNING VANES IN ALL SQUARE ELBOWS. VANES SHALL BE BARBER-COLEMAN "AIRTURNS" OR APPROVED EQUAL.

M. TAPERED SPIN-IN FITTING, WITH LOCK-IN QUADRANT AND VOLUME DAMPER SHALL BE PROVIDED FROM BRANCHES TO DIFFUSERS, FOR LOW PRESSURE DUCTWORK.

N. ALL BRANCH DUCT TAKE-OFFS SHALL BE EQUIPPED WITH TAPERED FITTINGS.

O. ALL FULL RADIUS ELBOWS SHALL HAVE A CENTERLINE RADIUS OF 1.5 TIMES THE DUCT WIDTH. ELBOWS WITH A CENTERLINE RADIUS LESS THAN 1.5 TIMES THE DUCT WIDTH SHALL HAVE TURNING VANES.

P. VOLUME DAMPERS SHALL BE PROVIDED FOR AIR BALANCE PURPOSES. PROVIDE MANUAL VOLUME DAMPERS ON ALL LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCT BRANCHES AND TO AIR DIFFUSERS, REGISTERS AND GRILLES, UNLESS NOTED OTHERWISE. DAMPERS SHALL BE OPPOSED BLADE TYPE UNLESS NOTED OTHERWISE.

1. FOR VOLUME DAMPERS ABOVE DRYWALL CEILINGS AND OTHER INACCESSIBLE LOCATIONS, PROVIDE LEVER, POSITION INDICATOR AND LOCK NUT, ENCLOSED IN A DEEP DIE-CAST BOX WITH ADJUSTABLE 2-5/8" DIAMETER COVER. YOUNG REGULATOR SERIES 315 OR VENTLOCK SERIES 677 AND/OR PROVIDE ACCESS PANEL, SIZED AS REQUIRED (12" X 12" MINIMUM).

2. FOR VOLUME DAMPERS ABOVE ACCESSIBLE CEILINGS, PROVIDE LOCKING TYPE WITH LEVER HANDLE, POSITION INDICATOR AND LOCK NUT. YOUNG REGULATOR SERIES 400 OR VENTLOCK SERIES 600.

Q. DYNAMIC RATED FIRE DAMPERS SHALL BE PROVIDED PER CODE REQUIREMENTS. PROVIDE TYPE "B" FIRE DAMPERS FOR LOW PRESSURE DUCTWORK AND TYPE "C" FIRE DAMPERS FOR MEDIUM PRESSURE DUCTWORK. PROVIDE A DUCT ACCESS DOOR FOR EACH FIRE DAMPER.

R. ROOFTOP UNIT LEVELING CURBS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. THE MECHANICAL CONTRACTOR IS TO INSTALL FACTORY PROVIDED CURBS ON TOP OF LEVELING CURB SO THAT THE ROOFTOP EQUIPMENT IS INSTALLED PLUM AND LEVEL, UNLESS OTHERWISE NOTED.

S. PROVIDE RIGID LINED CONNECTIONS AT THE INLET AND OUTLET OF EACH VAV BOX AND INLET OF EACH FAN-POWERED BOX. FLEXIBLE CONNECTIONS ARE ONLY PERMITTED ON THE DISCHARGE OF FAN-POWERED BOXES.

T. ALL UNINSULATED EXTERIOR DUCTWORK WHICH IS EXPOSED TO THE OUTDOOR ELEMENTS SHALL BE GALVANIZED OR BLACK IRON AND OF CONSTRUCTION TO COMPLY WITH SMACNA STANDARDS. PROVIDE WATER-PROOF SEAMS AND TWO COATS OF TAR-BASED PAINT OVER ALL DUCTWORK EXPOSED TO THE OUTDOOR ELEMENTS. PROVIDE "PATE CO." TYPE ROOF SUPPORTS WITH ALL NECESSARY ANGLE IRON SUPPORT LEGS AND CROSSES. WHEREVER THIS DUCTWORK PENETRATES THE BUILDING ENVELOPE, THE PENETRATION SHALL BE MADE WATER-PROOF.

U. ALL KITCHEN HOOD EXHAUST DUCTWORK SHALL BE 14 GAUGE BLACK IRON OR 18 GAUGE 303 STAINLESS STEEL WITH CONTINUOUSLY WELDED SEAMS. ACCESS DOORS SHALL BE PROVIDED EVERY 20 FEET AND AT EVERY CHANGE IN DIRECTION.

V. ALL DISHWASHER EXHAUST DUCTWORK SHALL BE ALUMINUM OF WATERTIGHT CONSTRUCTION. DUCTWORK SHALL BE PITCHED AT ¼" PER FOOT TO ENSURE THAT ANY DEVELOPED CONDENSATION TRAVELS BACK TO THE DISHWASHER EQUIPMENT.

2.05 PIPING

A. ALL PIPING FOR WORK CONTAINED IN THIS SPECIFICATION AND ACCOMPANYING DRAWINGS SHALL BE IN CONFORMANCE WITH ASTM STANDARDS. ALL CHANGES IN DIRECTION WILL BE MADE WITH FITTINGS. REAM ALL PIPING AND CLEAN OUT SAME BEFORE ASSEMBLY. PROVIDE VALVES OF SIMILAR MATERIAL AS THE PIPING MATERIAL THEY ARE INSTALLED IN. FERROUS BODY VALVES WITH STEEL PIPING. BRASS AND BRONZE VALVES WITH COPPER PIPING. PROVIDE DIELECTRIC FITTINGS, UNIONS, ETC. WHERE PIPING, VALVES, FITTINGS, EQUIPMENT, ETC. OF DISSIMILAR METALS ARE JOINED. COVER OPEN PIPING DURING CONSTRUCTION. FLUSH OUT AND CLEAN PIPING IN A MANNER THAT IS APPROVED BY THE ENGINEER. FOR EACH BRANCH TAKE-OFF, PROVIDE A 3-ELBOW "Z" SHAPE CONNECTION TO PROVIDE PIPING FLEXIBILITY FOR EXPANSION. PROVIDE GUIDES, ANCHORS, EXPANSION LOOPS, SUPPORTS, VENTS, DRAINS, MAKE-UP WATER, ETC., AS REQUIRED.

B. COPPER PIPING SHALL HAVE SOCKET FITTINGS FOR SOLDER OR BRAZING CONNECTIONS.

C. STEEL PIPING SHALL BE SCHEDULE 40, ASTM A120 OR A53, UNLESS OTHERWISE NOTED. THE FITTINGS IN PIPE 2" AND SMALLER SHALL BE CAST IRON OR MALLEABLE, UNLESS OTHERWISE NOTED. ALL PIPING 2-1/2" AND LARGER SHALL BE BUTT WELDED. WELDING SHALL BE DONE ONLY BY WELDERS CERTIFIED FOR THIS TYPE OF WORK. ALL FITTINGS SHALL BE AS MANUFACTURED BY STOCKHOLM, BONNEY FORGE, WALWORTH, GRINNEL OR TUBE TURNS. PAINT ALL EXPOSED THREADS AFTER ASSEMBLY. FOR ALL PIPING EXPOSED TO THE OUTSIDE AIR, PAINT PIPING WITH ONE COAT OF RUST INHIBITING PRIMER AND ONE COAT OF BLACK FINISH PAINT.

D. PIPING SYSTEMS AND MATERIALS

1. REFRIGERANT PIPING: TYPE K DRAWN COPPER. PROVIDE SHUTOFF VALVES, FILTER DRIERS, SOLENOID VALVES, THERMAL EXPANSION VALVES, SIGHT GLASSES, PRESSURE GAUGES, OIL TRAPS, ETC., AS REQUIRED. PROVIDE REFRIGERANT VENT PIPING TO THE OUTDOORS AS REQUIRED.

2. HVAC DRAIN PIPING: TYPE L DRAWN COPPER FOR INDOOR DRAINS FROM COPPER PIPING SYSTEM. SCHEDULE 40, ASTM A120 OR A53 STEEL FOR INDOOR DRAINS FROM STEEL PIPING SYSTEMS, STEEL PIPES TO BE CORROSION RESISTANT. SCHEDULE 40 PVC PLASTIC FOR OUTDOOR DRAINS, PVC DRAINS TO BE PROVIDED WITH PROTECTION FROM SUNLIGHT AND UV DAMAGE.. INSTALL A TRAP IN THE DRAIN PIPE. PROVIDE A CONCRETE SPLASH BLOCK FOR DRAIN TERMINATIONS FROM ROOFTOP HVAC UNITS.

3. GAS PIPING: PROVIDE SCHEDULE 40 STEEL PIPE OR CORRUGATED STAINLESS STEEL TUBING (CSST). PROVIDE VENTED ENCLOSURES FOR RISERS AND HORIZONTAL RUNS (IN PLENUM CEILINGS, ETC.). FOR SCHEDULE 40 PIPE SIZES 2" AND SMALLER, PROVIDE ALL WELDED OR ALL SCREWED FITTINGS. FOR SCHEDULE 40 PIPE SIZES 2-1/2" AND LARGER, PROVIDE ALL WELDED FITTINGS. ALL CSST SHALL MEET THE DESIGN AND INSTALLATION REQUIREMENTS SET FORTH IN ANSI/AGA LC 1-1993. GROUND ALL GAS PIPING. INSTALL DIRT LEGS IN ALL PIPING IMMEDIATELY BEFORE CONNECTION TO EACH PIECE OF EQUIPMENT. INSTALL VENT PIPING FROM VALVES, IF REQUIRED, TO THE OUTDOORS WITH WEATHER-PROOF AND INSECT-PROOF OUTDOOR TERMINATION DEVICES.

2.06 INSULATION

A. FURNISH AND INSTALL INSULATION AS SPECIFIED.

B. DUCT INSULATION

1. ALL SUPPLY, RETURN, AND EXHAUST AIR DUCTWORK IN UNCONDITIONED SPACES: 1-1/2" FLEXIBLE GLASS FIBER WITH FACTORY APPLIED ALUMINUM FOIL VAPOR BARRIER. 3/4 LBS. PER CUBIC FOOT DENSITY. FLAME SPREAD RATING OF NOT GREATER THAN 25 AND A SMOKE DEVELOPED RATING OF NOT GREATER THAN 50.

2. ALL OUTSIDE AIR DUCTWORK AND DUCTWORK IN MECHANICAL ROOMS: 2" SEMI-RIGID GLASS FIBER WITH FACTORY APPLIED, WHITE, ALL SERVICE, VAPOR BARRIER JACKET. 3 LBS. PER CUBIC FOOT DENSITY. FLAME SPREAD RATING OF NOT GREATER THAN 25 AND A SMOKE DEVELOPED RATING OF NOT GREATER THAN 50.

3. ALL KITCHEN HOOD EXHAUST DUCTWORK: 2" THICK MINERAL WOOL WITH CANVAS COVERING JACKET OVER INSULATION. COVERING OVER ACCESS PANEL SHALL BE REMOVABLE.

C. INSULATED FLEXIBLE DUCT

ALL SUPPLY AND RETURN/EXHAUST AIR CONNECTIONS TO EACH DIFFUSER: POLYETHYLENE CORE LAMINATED TO A GALVANIZED STEEL WIRE HELIX; 1" THICK, 1 LB. PER CUBIC FOOT DENSITY GLASS FIBER INSULATION; FIBERGLASS REINFORCED, METALIZED, VAPOR BARRIER.

D. PIPE INSULATION

1. REFRIGERATION PIPING: 1" THICK, FLEXIBLE, CLOSED CELL, FOAMED ELASTOMER; FACTORY APPLIED ADHESIVE ALONG PRESLIT JOINT; FIELD APPLIED WEATHER RESISTANT PROTECTIVE FINISH AS RECOMMENDED BY THE MANUFACTURER. K-VALUE OF 0.27 AT 75 DEGREES F.

2. CHILLED WATER SUPPLY AND RETURN, HEATING HOT WATER SUPPLY AND RETURN, LOW PRESSURE STEAM AND CONDENSATE, AND COOLING COIL INTERIOR CONDENSATE DRAIN PIPING: HEAVY DUTY, MOLDED GLASS FIBER WITH FACTORY APPLIED ALL SERVICE VAPOR BARRIER JACKET AND SELF-SEALING JOINTS. 1" THICK FOR PIPE SIZES 2" AND SMALLER. 1-1/2" THICK FOR PIPE SIZES 2-1/2" AND LARGER. K-VALUE OF 0.24 AT 75 DEGREES F.

2.07 CONTROLS

A. INTERLOCKED WITH MANUFACTURER PROVIDED THERMOSTATS. INTERLOCK AS NOTED/SHOWN ON PLANS.

B. TYPICAL EXHAUST FAN CONTROL: THE FANS SHALL BE CONTROLLED AS NOTED ON THE EQUIPMENT SCHEDULE.

3.0 EXECUTION

3.01 INSPECTION

PRIOR TO BEGINNING ANY WORK, CAREFULLY COORDINATE WITH THE WORK OF OTHER TRADES AND AT TIMES CONFIRM THAT THE WORK OF OTHERS IS COMPLETE TO THE POINT WHERE THIS INSTALLATION CAN PROPERLY COMMENCE.

3.02 GENERAL INSTALLATION REQUIREMENTS

VERIFY QUANTITIES, CAPACITIES, PERFORMANCE CHARACTERISTICS, OPERATING REQUIREMENTS AND CURRENT CHARACTERISTICS OF ALL EQUIPMENT PRIOR TO ITS INSTALLATION. VERIFY THAT SPACE ALLOTTED FOR EQUIPMENT IS SUFFICIENT FOR ENTRANCE AND INSTALLATION, MAINTENANCE AND SERVICE, AND REMOVAL AND REPLACEMENT.

3.03 COORDINATION OF INSTALLATION

A. INSTALL WORK IN SUCH A MANNER THAT IT WILL CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. GENERALLY, KEEP HORIZONTAL LINES AS HIGH AS POSSIBLE. MAKE LOCAL PROVISIONS FOR THE SERVICING AND REMOVAL OF EQUIPMENT.

B. ANY INTERFERENCE WITH WORK OF OTHER TRADES ARISING FROM FAILURE TO COORDINATE THE WORK AND LACK OF COOPERATION HEREUNDER, SHALL REQUIRE THE REMOVAL AND REINSTALLATION OF ALL INTERFERING WORK WITHOUT ADDITIONAL COST TO THE OWNER.

3.04 IDENTIFICATION OF EQUIPMENT

EACH PIECE OF EQUIPMENT SHALL DISPLAY A PERMANENT METAL OR PLASTIC NAMEPLATE WHICH SHALL BE LOCATED SO AS TO BE FULLY VISIBLE AFTER THE EQUIPMENT HAS BEEN INSTALLED. THE NAMEPLATE SHALL SHOW THE EQUIPMENT NUMBER AND OTHER PERTINENT INFORMATION.

3.05 CLEAN UP

A. UPON COMPLETION OF THE INSTALLATION OF DUCTWORK, CLEAN THE ENTIRE SYSTEM OF RUBBISH, PLASTER, DIRT, ETC., BEFORE INSTALLING THE DIFFUSERS, REGISTERS AND GRILLES.

B. REMOVE TEMPORARY FILTERS FROM RETURN INLETS.

C. OPERATE AND MAKE ANY REQUIRED ADJUSTMENT TO EQUIPMENT, DUCTWORK, PIPING, ETC., AS MAY BE NECESSARY TO PUT THE SYSTEMS IN PROPER OPERATING CONDITION.

D. REMOVE ALL LABELS, TAGS, ETC., FROM ANY SPECIALTIES, EQUIPMENT, ETC., AND REMOVE ALL GREASE OR OTHER PROTECTIVE COATING FROM ALL EQUIPMENT, PIPING, ETC., AND LEAVE WORK IN A MANNER THAT IS ACCEPTABLE TO THE ARCHITECT/ENGINEER.

3.06 OPERATING AND MAINTENANCE INSTRUCTIONS

AFTER HAVING COMPLETELY INSTALLED ALL SYSTEMS AND ALL NECESSARY TESTS ARE COMPLETED, THIS CONTRACTOR SHALL MAKE ARRANGEMENTS TO OPERATE ALL THE SYSTEMS FOR A PERIOD OF NOT LESS

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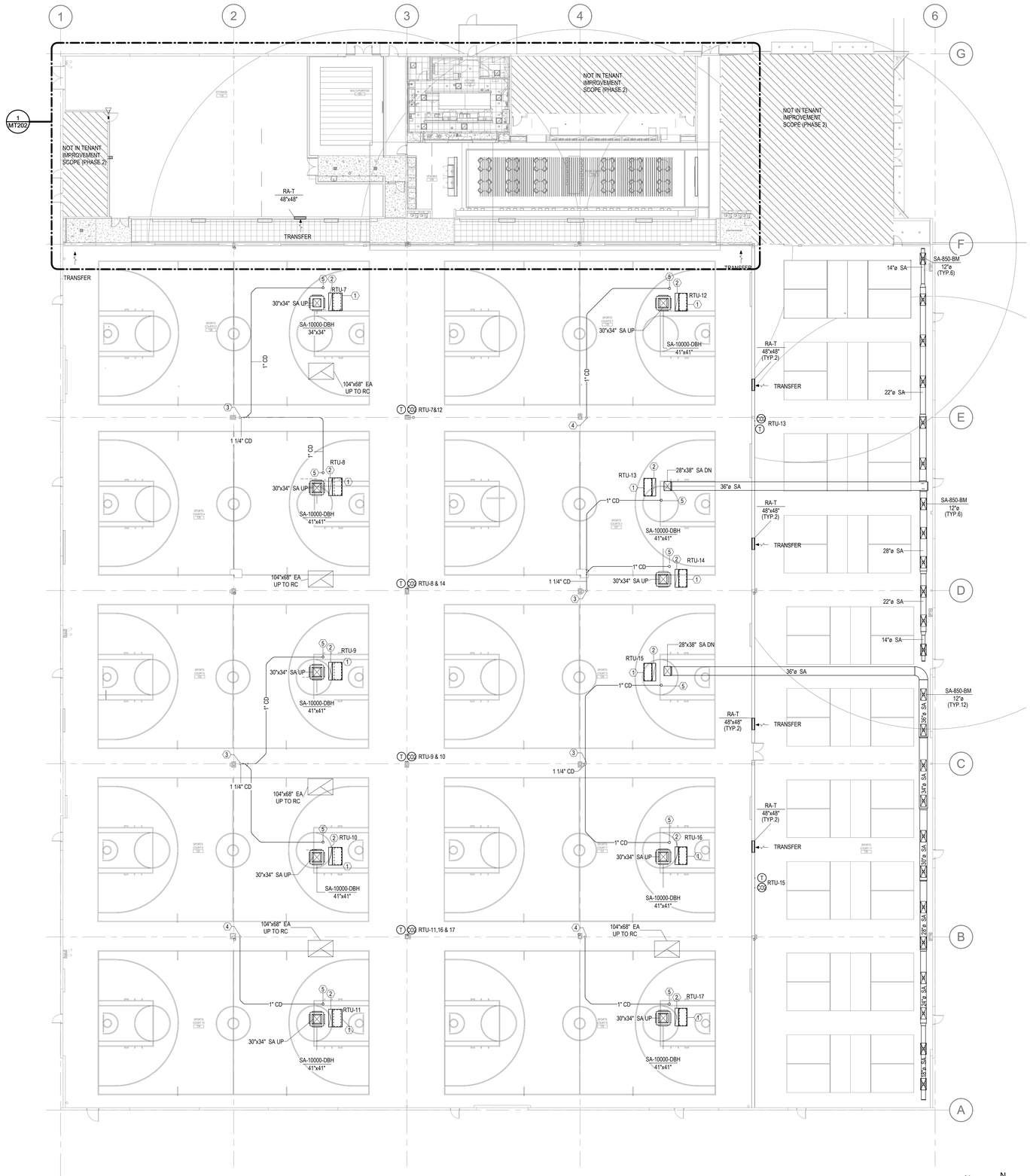
GENERAL NOTES:

1. SIZE, INSULATE, AND PROVIDE REFRIGERANT LINE PER MANUFACTURER'S REQUIREMENTS.
2. PLENUM: THE SPACE ABOVE THE CEILING IS BEING UTILIZED AS A RETURN AIR PLENUM. ALL PIPING, WIRING AND DEVICES INSTALLED WITHIN THE PLENUM SHALL BE U.L. LISTED PLENUM RATED AND COMPLY WITH CURRENT SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPMENT INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.

   PLENUM SPACE ONLY OCCURS WHERE THERE IS A SUSPENDED OR JOIST SUPPORTED CEILING AREA BELOW ROOF STRUCTURE BOUNDED BY FULL HEIGHT WALLS (FLOOR TO ROOF DECK).
3. ALL HVAC SENSORS WITHIN THE PLAYCOURT AREA SHALL BE CONTAINED IN SCHNEIDER ELECTRIC WIRE GUARD, AT-1153/1163 OR EQUIVALENT. BOTTOM OF SENSOR TO BE RIGHT ABOVE TOP OF MAT (~10' AFF).

KEYNOTES

1. 72"X36" OPENING CUT ON TOP OF 74"X15" RA DUCT. OPENING SHALL BE COVERED WITH WIRE MESH COVER.
2. BOOTED RETURN UP TO RTU. SIZED TO RTU RETURN OPENING. PROVIDE TRANSITION.
3. 1 1/4" CONDENSATE DOWN TO HUB DRAIN (HB-1). SEE PLUMBING DRAWINGS.
4. 1" CONDENSATE DOWN TO HUB DRAIN (HB-1). SEE PLUMBING DRAWINGS.
5. CONDENSATE DOWN FROM RTU ON ROOF.



1 MECHANICAL FLOOR PLAN
1/16" = 1'-0"

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OVERALL MECHANICAL PLAN

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	12/04/2025	PLAN CHECK CORRECTIONS 3
	01/26/2025	OC HEALTH DEPT

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

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GENERAL NOTES:

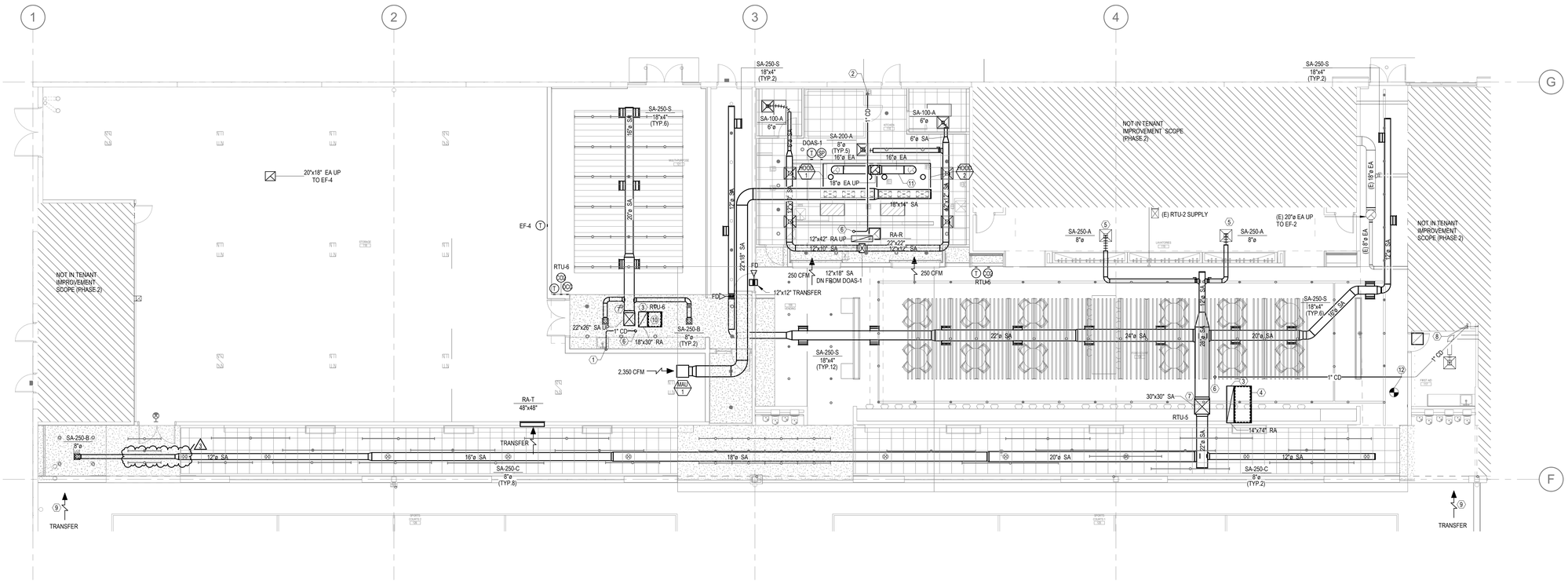
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   PLENUM SPACE ONLY OCCURS WHERE THERE IS A SUSPENDED OR JOIST SUPPORTED CEILING AREA BELOW ROOF STRUCTURE BOUNDED BY FULL HEIGHT WALLS (FLOOR TO ROOF DECK).

2. PROVIDE SOUND ATTENUATING RETURN BOOT ON ALL RETURNS, SEE DETAIL.

3. ALL DIFFUSERS IN HALLWAY SHALL BE MOUNTED WITH FACES @ 6" ABOVE OPEN CEILING COMPONENTS (METAL OR WOOD FRAMES).

#	KEYNOTES
1	CONDENSATE DOWN AND SHALL TIE IN TO SINK TAILPIECE.
2	CONDENSATE DOWN TO DRAIN TO FLOOR SINK WITH AIR GAP.
3	BOOTED RETURN UP TO RTU, SIZED TO RTU RETURN OPENING. PROVIDE TRANSITION.
4	72"X36" OPENING CUT ON TOP OF 74"X15" RA DUCT. OPENING SHALL BE COVERED WITH WIRE MESH COVER.
5	CONNECT DUCTWORK TO EXISTING DIFFUSER INSTALLED IN CEILING DURING PHASE 1.
6	CONDENSATE DOWN FROM RTU ON ROOF.
7	SUPPLY DUCT DN FROM RTU. PROVIDE TRANSITION AS NECESSARY TO CONNECT TO UNIT THROUGH CURB.
8	CONDENSATE TO CONNECT TO EXISTING 1-1/4" DOWN TO DRAIN TO MOP BASIN WITH AIR GAP
9	AIR TRANSFER PATH THROUGH WALL OPENING.
10	28"X22" OPENING CUT ON TOP OF 18"X30" RA DUCT.
11	EA DUCTING SHALL BE PREMANUFACTURED GREASE DUCT. SEE MT501.
12	CONNECT CD FROM RTU-5 TO EXISTING STUB INSTALLED DURING PHASE 1.



1 ENLARGED MECHANICAL PLAN
1/8" = 1'-0"

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ENLARGED MECHANICAL PLAN

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/06/2026	PLAN CHECK CORRECTIONS 3
	01/26/2026	OC HEALTH DEPT

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

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MECHANICAL ROOF PLAN

#	DATE	REMARKS
4	01/28/2025	OC HEALTH DEPT
3	02/04/2025	PLAN CHECK CORRECTIONS 3
2	10/16/2025	PLAN CHECK CORRECTIONS 2
1	09/22/2025	PLAN CHECK CORRECTIONS
	07/09/2025	ISSUE FOR PLAN CHECK

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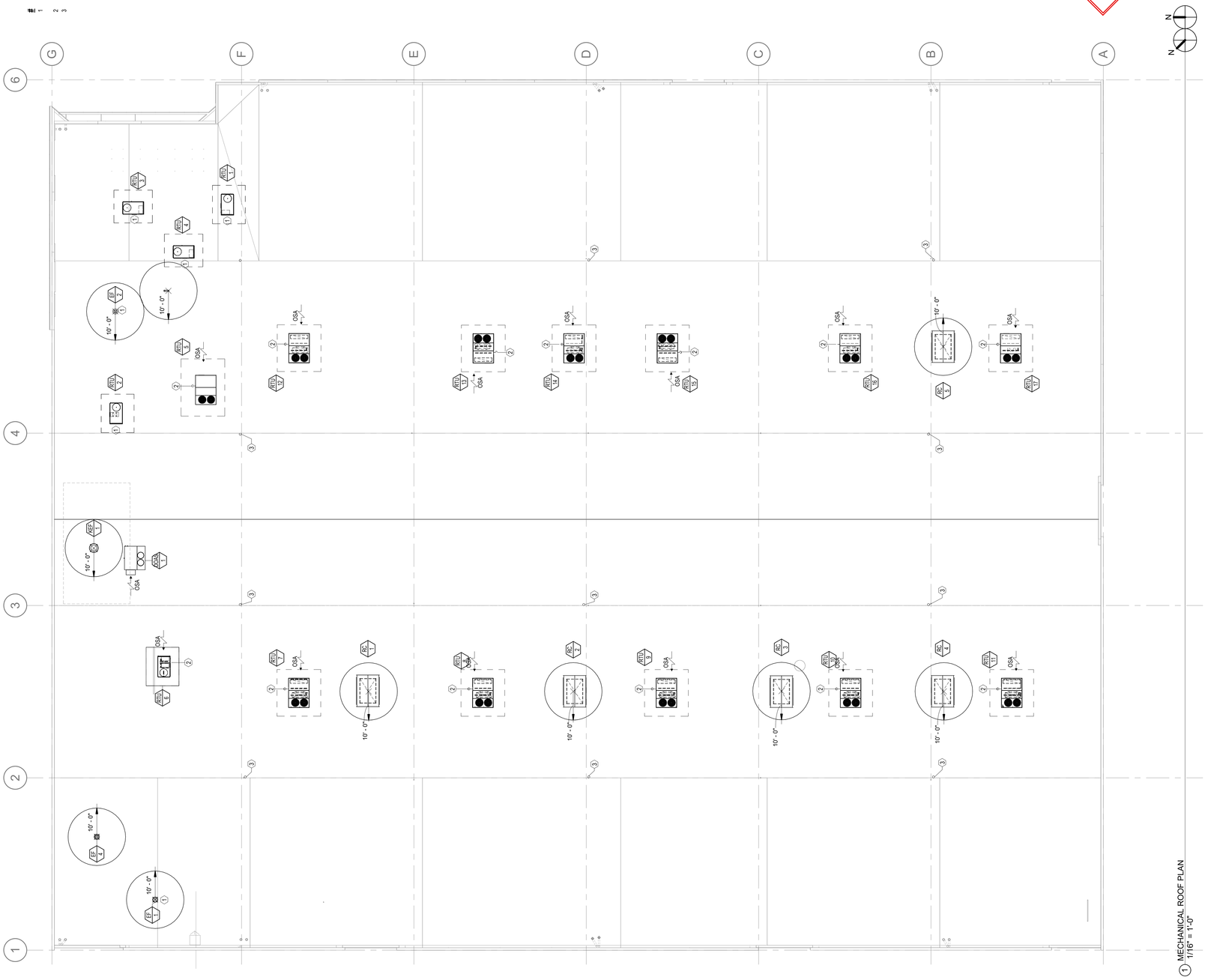
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GENERAL NOTES:

1. AIR INTAKE AND EXHAUST POINTS SHALL BE SEPARATED BY 10' MIN.
2. PROVIDE MANUFACTURER'S REQUIRE CLEARANCES AROUND ALL ROOFTOP EQUIPMENT.

KEYNOTES

#	
1	EXISTING EQUIPMENT INSTALLED PREVIOUSLY DURING PHASE 1. SHOWN FOR COORDINATION PURPOSES.
2	CONDENSATE DOWN TO INDIRECT DRAIN.
3	EXISTING VMS VENT.



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VENTILATION SCHEDULE

ROOM NAME	OCCUPANCY CLASSIFICATION	Az, FLOOR AREA FT2	EXPECTED NUMBER OF PEOPLE/UNITS, Pz	2022 TITLE 24 REQUIREMENTS, SECTION 120.1								ACTUAL			EQUIPMENT	
				Rp, PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	AREA OUTDOOR AIRFLOW RATE (CFM/SF)	AREA DCV AIRFLOW RATE (CFM/SF)	TOTAL OCCUPANT OA CFM	TOTAL AREA OA CFM	TOTAL OA CFM REQ'D (VZ)	DCV MIN REQUIRED	TOTAL EA REQUIRED CFM	SUPPLY CFM	OA CFM	EXHAUST CFM	SUPPLY FAN	EXHAUST FAN
115-FOOD COURT	CAFETERIA, FAST FOOD	2,252	48	15	0.5	0.15	720	1126	1126	338	0	4,000	1,126	0	RTU-5	
119-LAVATORIES	-NO REQUIREMENTS-	570	0	0	0	0	0	0	0	0	0	500	0	0	RTU-5	
119-VENDING	CAFETERIA, FAST FOOD	463	5	15	0.5	0.15	75	232	232	69	0	1,500	232	0	RTU-5	
CORRIDOR	CORRIDORS	2,771	5	15	0.15	N/A	75	416	416	N/A	0	2,500	416	0	RTU-5	
	TOTALS	**5,056**									**TOTALS**	**8,500**	**1,773**	**0**	**RTU-5**	
121-MULTI-PURPOSE	MULTIPURPOSE ASSEMBLY	1,200	32	15	0.5	0	473	600	600	0	0	2,000	600	0	RTU-6	
	TOTALS	**1,200**									**TOTALS**	**2,000**	**600**	**0**	**RTU-6**	
125-134 SPORTS COURTS (BASKETBALL & VOLLEYBALL)	HEALTH CLUB/AEROBICS ROOM	72,000	1800	15	0.15	N/A	27000	10800	27000	N/A	0	90,000	27,000	RELIEF	RTU'S 7-12, 14, 16-17	RC-1-5
	TOTALS	**72,000**									**TOTALS**	**90,000**	**27,000**	**RELIEF**	**RTU'S 7-12, 14, 16-17**	**RC-1**
136 - SPORTS COURT 11 (BADMINTON)	HEALTH CLUB/AEROBICS ROOM	18,145	80	15	0.15	N/A	1200	2722	2722	N/A	0	20,400	2,722	RELIEF	RTU'S 13&15	RC-1
	TOTALS	**18,145**									**TOTALS**	**20,400**	**2,722**	**RELIEF**	**RTU'S 13&15**	**RC-1**
118-KITCHEN	KITCHENS (COOKING)	821	N/A	0	0	0	0	0	0	0	4050	2,700	2,700	4050	DOAS-1	KEF-1
	TOTALS	**821**									**TOTALS**	**2,700**	**2,700**	**4050**	**DOAS-1**	**KEF-1**
120-STORAGE	STORAGE ROOMS	4,975	0	0	0.15	N/A	0	746	746	N/A	0	TRANSFER	746	2500	TRANSFER	EF-4
	TOTALS	**4,975**									**TOTALS**	**0**	**746**	**2500**	**TRANSFER**	**EF-4**

PACKAGED HEAT PUMP / DX COOLING ROOFTOP UNIT SCHEDULE

TAG	AREA SERVED	MANUFACTURER AND MODEL	HEATING			COOLING						FAN/MOTOR DATA						WEIGHT (LBS)	REMARKS
			OUTPUT (MBH)	EAT DB°F	LAT DB°F	EER/IEER/SEER	GROSS (MBH)	SENSIBLE (MBH)	EAT DB°F	LAT DB°F	# OF COMP.	REFRIG. TYPE	CFM	OA CFM	ESP (IN. W.C.)	HP	MCA (AMPS)	M.O.C.P (AMPS)	V/PH/Hz	
RTU-5	FOOD COURT/VENDING	TRANE / WHK240A4S00	189.0	60	85	10.90/16.90/-	251	219.0	80.0	55	2	R-454B	8,500	1,775	1.00	2.90	55	70	460/3/60	2,148	1-14,16
RTU-6	MULTIPURPOSE	TRANE / WHK060A4S00	47.0	55	85	13.50/-/16.40	63	52.0	80.0	55	1	R-454B	2,000	600	0.75	3.00	16	20	460/3/60	1,055	1-14,16
RTU-7	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-8	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-9	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-10	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-11	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-12	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-13	BADMINTON	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,200	1,375	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-14	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-16	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-15	BADMINTON	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,200	1,375	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16
RTU-17	PLAYCOURTS	TRANE / WHK300A4S00	193.5	60	85	10.10/16.00/-	270	227.0	77.0	64	2	R-454B	10,000	3,000	0.75	4.20	61	80	460/3/60	2,610	1-11, 13-16

REMARKS:
1. 1 YEAR PARTS WARRANTY.
2. 5 YEAR TOTAL COMPRESSOR WARRANTY.
3. PROVIDE WITH HOT GAS REHEAT.
4. PROVIDE WITH SINGLE POINT POWER CONNECTION. PROVIDE WITH THRU-THE-BASE ELECTRICAL CONNECTIONS.
5. PROVIDE WITH SUPPLY FAN VFD. ALL FANS TO BE DIRECT DRIVE, NO BELTS.
6. PROVIDE UNIT WITH FACTORY WIRED POWERED OUTLET.
7. PROVIDE WITH UNIT MOUNTED DUCT SMOKE DETECTORS ON SUPPLY SIDE OF UNITS SUPPLYING GREATER THAN 2000 CFM.
8. PROVIDE WITH HINGED ACCESS PANELS.
9. MANUFACTURER PROVIDED ROOF CURB TO BE A MINIMUM OF 14" HEIGHT.
10. PROVIDE HAIL GUARDS FOR CONDENSER COIL.
11. PROVIDE WITH 1 YEAR QUARTERLY MAINTENANCE AGREEMENT.
12. 0-100% DRY BULB ECONOMIZER WITH POWER EXHAUST. POWER EXHAUST REQUIRES SEPARATE 460V/3 ELECTRICAL CONNECTION AND DISCONNECT @ 10A MOP.
13. PROVIDE WITH MERV-13 FILTRATION FOR RA/OA.
14. PROVIDE CONTROLS PACKAGE TO OPERATE INDEPENDENTLY AS SINGLE ZONE VAV OR INTERFACE WITH BAS.
15. 0-100% DRY BULB ECONOMIZER WITH BAROMETRIC RELIEF. RELIEF DURING ECONOMIZING BY BAROMETRIC RELIEF ROOF HOOD.
16. PROVIDE WITH SEISMIC RATED ANCHORAGE AS REQUIRED PER ASCE 13 OR AS OTHERWISE REQUIRED BY THE MANUFACTURER.

EXHAUST FAN SCHEDULE

TAG	QUANTITY	SERVICE	CFM	E.S.P. (IN. W.C.)	MOTOR DATA					WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS
					HP	RPM	V	PH	HZ				
EF 4	1	STORAGE	2500	0.50	0.75	1518	120	1	60	95	GREENHECK	G-140-VG	1-6

REMARKS:
1. INTEGRAL GRAVITY BACKDRAFT DAMPER & 1/4" GALV. MESH BIRD SCREEN.
2. FACTORY VIBRATION ISOLATORS.
3. MIN 14" FACTORY ROOF CURB.
4. ECM OR SPEED CONTROLLER.
5. MANUFACTURER PROVIDED DISCONNECT.
6. FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS.

ROOF HOODS - BAROMETRIC RELIEF

TAG	LOCATION	SYSTEM	MAX CFM	CURB CAP SIZE	MANUFACTURER	CURB CAP MODEL	CURB MODEL	WEIGHT (CURB+CAP)	REMARKS
RC-1 THRU 5	ROOF	BAROMETRIC RELIEF	22,000	70"W X 106"L	GREENHECK	FGR-64X100	GPI-70X106-G12	591	ALL

REMARKS:
1. PROVIDE WITH GREENHECK CONTROL DAMPER, 24V AC LINE POWER. CONTROLS CONTRACTOR TO INTERLOCK TO OPEN DURING OCCUPIED HOURS AND CLOSE DURING UNNOCUPIED HOURS.
2. PROVIDE WITH GRAVITY BACKDRAFT DAMPER, SET TO RELIEVE BUILDING PRESSURE AT +0.03" WG.

GRILLE, REGISTERS, AND DIFFUSER SCHEDULE

TAG	AIR STREAM	MOUNTING TYPE	FRAME SIZE		MANUFACTURER	MODEL NO.	REMARKS
			HEIGHT	WIDTH / LENGTH			
A	SUPPLY	CEILING	2' - 0"	2' - 0"	TITUS	TMS-AA	ALL
B	SUPPLY	CEILING	1' - 0"	1' - 0"	TITUS	TMS-AA	ALL
BM	SUPPLY	CEILING	4' - 0"	2' - 0"	TITUS	RADIATEC-AL 1 WAY PATTERN,AIR FLOW TOWARDS EXTERIOR WALL	ALL
C	SUPPLY	DUCT MOUNTED	1' - 0"	1' - 0"	TITUS	TMR	ALL
DBH	SUPPLY	DUCT MOUNTED	1' - 3"	3' - 4"	PRICE	DBH-30T	ALL
R	RETURN	CEILING	2' - 0"	2' - 0"	TITUS	PAR	1-4
S	SUPPLY	DUCT MOUNTED	0' - 5 1/2"	1' - 7 1/2"	TITUS	DL	ALL
T	RETURN	WALL MOUNTED	4' - 1 1/2"	4' - 1 1/2"	TITUS	30R	1-4

REMARKS:
1. 4-WAY THROW UNLESS OTHERWISE NOTED.
2. PROVIDE ADAPTOR BOOTS AS REQUIRED.
3. COORDINATE FRAME STYLES WITH ARCHITECTURAL PLANS.
4. SEE PLANS FOR CONNECTION SIZES. TYPICAL ALL.
5. PROVIDE WITH MANUAL VOLUME BALANCE DAMPER.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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IRVINE FIELD HOUSE

17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

MECHANICAL SCHEDULES

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/06/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

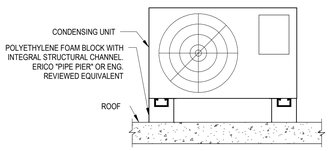
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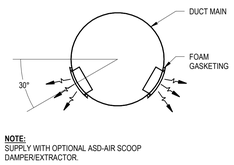
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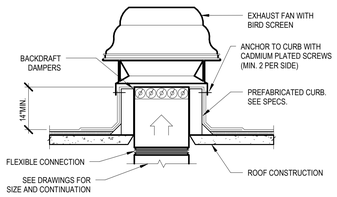


4 CONDENSING UNIT DETAIL
SCALE: N.T.S.

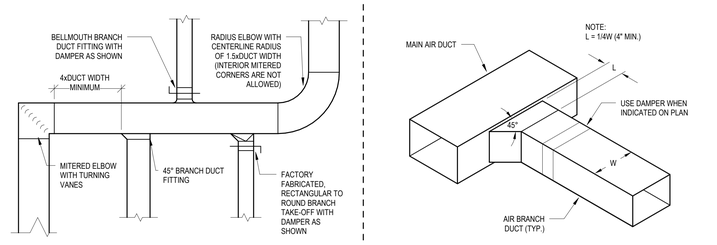


NOTE:
SUPPLY WITH OPTIONAL ASD-AIR SCOOP DAMPER/EXTRACTOR.

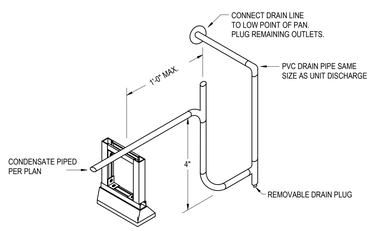
3 SPIRAL MOUNTED SUPPLY GRILLE
SCALE: N.T.S.



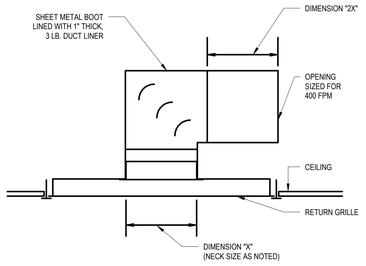
2 EXHAUST FAN DETAIL
SCALE: N.T.S.



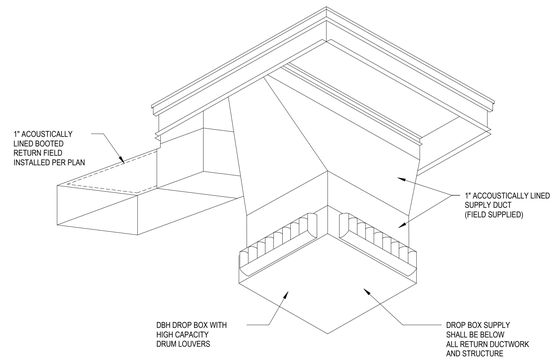
1 DUCTWORK CONSTRUCTION DETAIL
SCALE: N.T.S.



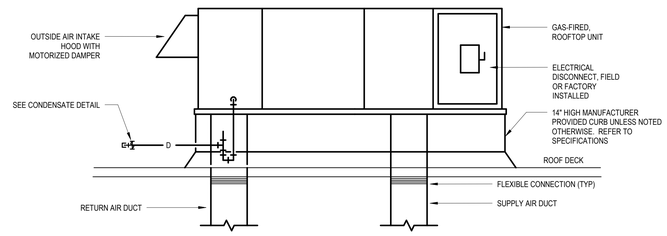
8 CONDENSATE DRAIN FROM RTU DETAIL
SCALE: N.T.S.



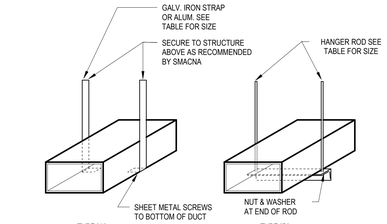
7 SOUND ATTENUATING RETURN BOOT DETAIL
SCALE: N.T.S.



6 DROP BOX WITH DRUM LOUVERS TYPICAL INSTALLATION DETAIL
SCALE: N.T.S.



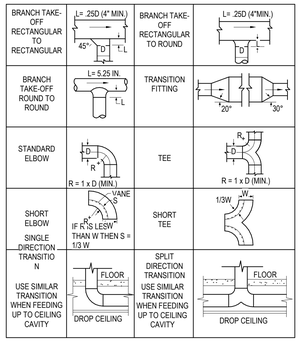
5 ROOFTOP UNIT DETAIL
SCALE: N.T.S.



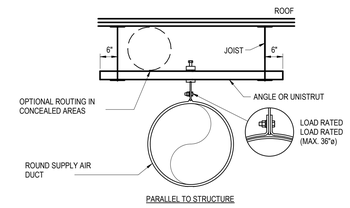
DUCT HANGER SCHEDULE					
DUCT SIZE (INCH)	TYPE OF HANGER	HANGER SPACING (FT)	STRAP SIZE	ROD SIZE (INCH)	ANGLE FOR BRACING
UP TO 12	A	8'-0"	1"x16GA	N.A.	N.A.
13 TO 18	A	8'-0"	1"x16GA	N.A.	N.A.
19 TO 30	A/B	8'-0"	1"x16GA	1/4"	1-1/2"x1-1/2"x1/8"
31 TO 42	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
43 TO 54	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
55 TO 60	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
61 TO 84	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x3/16"
85 TO 96	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x3/16"
OVER 96	B	8'-0"		3/8"	2"x2"x1/4"

NOTES:
1. FOR SEVERAL DUCTS ON ONE HANGER, TYPE "B" MAY BE USED. SIZE OF HANGER WILL BE SELECTED ON THE SUM OF DUCT WIDTHS EQUAL TO MAX WIDTH OF DUCT SCHEDULE.
2. ON TYPE "A" HANGER, PROVIDE 3 HANGERS AT EACH TAKE-OFF OR BRANCH.

12 RECTANGULAR DUCT SUPPORT DETAIL
SCALE: N.T.S.

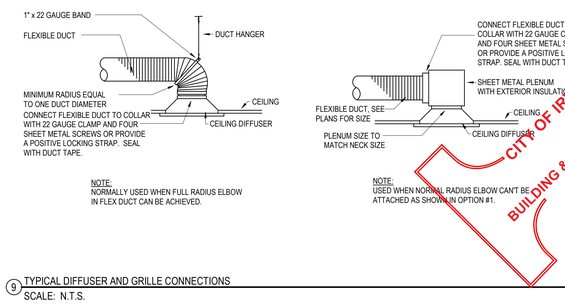


11 TYPICAL DUCT TAKE-OFFS
SCALE: N.T.S.



NOTE:
FOR DUCTS LARGER THAN 36"ø, USE TWO HANGER RODS, WIRES OR STRAPS TO SUPPORT DUCT FROM EACH SIDE.

10 SPIRAL DUCT HANGER DETAIL
SCALE: N.T.S.



9 TYPICAL DIFFUSER AND GRILLE CONNECTIONS
SCALE: N.T.S.

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IRVINE FIELD HOUSE

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MECHANICAL DETAILS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
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3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	12/16/2025	PLAN CHECK CORRECTIONS 3
	01/26/2026	OC HEALTH DEPT

PA/PM:	BL
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HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD TYPE	EXHAUST CFM	SUPPLY CFM	SUPPLY AIR TEMP.	LIGHTS (W)	MANWAYS (W)	WASH SECTION
			LENGTH	WIDTH	HEIGHT							
1	HOOD #1	XXRH-3072	197	54	24	CONDENSATE	2200	1980	55	1115	385	LEFT
2	HOOD #1	XXRH-3072	197	54	24	CONDENSATE	1980	1782	55	1115	385	RIGHT

HOOD CONSTRUCTION

HOOD NO.	MARK	LIGHTING DETAILS			POWER TO HOOD	GREASE FILTRATION DETAILS				UTILITY CONNECTIONS					
		BULB LAMP NO.	QTY	CANCELER	WATERTIGHT	TYPE	QTY	LENGTH	WIDTH	TYPE	LOCATION	GAS	WATER	ELECTRICAL	DRAIN
1	HOOD #1	ROUND LED	2	63	INSULATED JUNCTION BOX	BAFFLE	4	20	20	SHIP LOOSE	TOTAL 1115	TOTAL 1313	MAIN FACTORY	2	1.5
2	HOOD #1	ROUND LED	2	63	INSULATED JUNCTION BOX	BAFFLE	4	20	20	SHIP LOOSE	TOTAL 1115	TOTAL 1313	MAIN FACTORY	2	1.5

HOOD SECTIONS

HOOD NO.	MARK	TYPE	SIDE SEAL	INSULATED HANGERS	EXTERNAL GUTTER	INTERNAL GUTTER	DUCT SIZE	DUCT TYPE	DUCT HEIGHT	DUCT LENGTH	DUCT WIDTH	SUPPLY PLENUM	SUPPLY PLENUM POWER	SUPPLY PLENUM OUTLETS	SUPPLY PLENUM OUTLET SIZE	SUPPLY PLENUM DAMPERS	SUPPLY PLENUM DAMPER SIZE	SUPPLY PLENUM DAMPER TYPE	SUPPLY PLENUM DAMPER ACTUATOR	SUPPLY PLENUM DAMPER ACTUATOR VOLTAGE	SUPPLY PLENUM DAMPER ACTUATOR POWER	SUPPLY PLENUM DAMPER ACTUATOR CONTROLS	SUPPLY PLENUM DAMPER ACTUATOR FEEDBACK	SUPPLY PLENUM DAMPER ACTUATOR FEEDBACK PANEL	WASH SECTION
1	HOOD #1 SECTION 1	PCH	THRU	YES	YES	NO	12"Ø	RND	12"	12"	12"	YES	1 PHASE	1	12"Ø	1	12"	12"	1	120	1	1	1	1	1
2	HOOD #1 SECTION 2	PCH	THRU	YES	YES	NO	12"Ø	RND	12"	12"	12"	YES	1 PHASE	1	12"Ø	1	12"	12"	1	120	1	1	1	1	1

MARK: HOOD #1 - SECTION 1
ELEVATION VIEW

MARK: HOOD #1 - SECTION 2
ELEVATION VIEW

MARK: HOOD #1
PLAN VIEW

MARK: HOOD #1 - SECTION 1
PLAN VIEW

MARK: HOOD #1 - SECTION 2
PLAN VIEW

MARK: HOOD #1 FLASH HOOD IN ROW
SECTION VIEW

CONTROLS FOR CAPTIVE-AIRE HOOD

HOOD CONTROLS FOR CAPTIVE-AIRE SYSTEMS

HOOD MANUFACTURER DETAILS

ROOF CURB DETAILS

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e
AMEER.TILLMAN@ACCUREX.COM
(509)430-5326

PROJECT
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MARK
HOOD #1

CONTROL INFORMATION

MARK	CONTROLS	MODEL	ELECTRICAL CONTROL LOCATION	TYPE	USER INTERFACE LOCATION	FANS	FAN MARK	ZONE	CFM	ANCHOR-all ANCHOR	CYCLES	ANCHOR POWER	ANCHOR STARTER	ANCHOR FEEDBACK	ANCHOR FEEDBACK PANEL
CONTROLS		MCC-CV-S-12-1-0	SHIP LOOSE ENCLOSURE	TOUCHSCREEN	SHIP LOOSE	1	MAU-1	1	6000	1	1	1	1	1	1

CONTROLS SEQUENCE OF OPERATION

POWER WIRING FOR MOTORS CONTROLS

CAUTION

ATTENTION

WIRING DIAGRAM FOOD VENDOR

CITY OF IRVINE RECREATIONAL

CABINET DETAILS

USER INTERFACE DETAILS

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AMEER.TILLMAN@ACCUREX.COM
(509)430-5326

PROJECT
2/4/2025
CITY OF IRVINE RECREATIONAL

MARK
CONTROLS

FIRE SYSTEM INFORMATION

MARK	MODEL	LOCATION	CONTROLS		SUPPLY	DETECTION		MANNING/PROTECTION BY FIRE SYSTEM	
			REMOTE MOUNTED	IN KITCHEN EQUIP. PANEL	CONTROLLING	SUPPLY (MIN)	DETECTION (MIN)		
FIRE	ANSUL R-102	HOOD #1 SECTION 1						MANNING/PROTECTION BY FIRE SYSTEM	
		HOOD #1 SECTION 2							

FIRE SUPPRESSION SYSTEM NOTES:
PROVIDE AUTOMATIC FIRE SUPPRESSION SYSTEM FOR COOKING EQUIPMENT AS REQUIRED BY CFC 904.2.2.1
FULL INSTALLATION INCLUDES FIRE PIPING HOODS WITH DETECTION AND FACTORY COORDINATED INSTALL
CHROME BUILT-IN DUCT FACTORY PROVIDED APPLIANCES ENDS - INCLUDED
MANUAL PULL STATION - FACTORY PROVIDED - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2" (ANSUL) - PARTS #46817
NOZZLES - AS REQUIRED BY SYSTEM DESIGN - INCLUDED
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

ANSUL R-102 (UUKL) CHEMICAL FLUIDS PRODUCTION SYSTEM - MODEL SERIES

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(509)430-5326

PROJECT
2/4/2025
CITY OF IRVINE RECREATIONAL

MARK
FIRE

Back-to-back exhaust hood on roof w/ Packaged Roof Exhaust Fans

MARK	QTY	MODEL	TYPE	COLOR	EXTERNAL INSULATION	FAN WHEEL	FAN HP	DISCHARGE	DISCHARGE DIRECTION	FAN RPM	FAN BHP	FAN MOTOR HP	SOUND POWER	SOUND POWER OCTAVE	VOLTS	PHASE	HZ	FLA	MCA	MOCP	DISCONNECT	DISCONNECT SIZE	DISCONNECT FUSES	DISCONNECT FUSE SIZE	DISCONNECT FUSE CLASS	DISCONNECT NEMA SIZE	DISCONNECT ENCLOSURE	DISCONNECT ENCLOSURE MATERIAL	DISCONNECT ENCLOSURE RATING	DISCONNECT ENCLOSURE LOCATION	DISCONNECT ENCLOSURE MOUNTING	DISCONNECT ENCLOSURE ACCESSORIES	DISCONNECT ENCLOSURE NOTES
KEF-1	1	XUBE-220SE-D	BIA	4,000	YES	TAPE	7.5	TOP	HORIZONTAL	1,750	5.9	7.5	90	63	480	3	60	7.6	15	20	NON-FUSIBLE	30	3	30	J	1	NEMA 3R	GALVANIZED	3R	ROOF	CURB		

"KEF-1" is: Based on item XUBE-220SE of Natural Draulics Corp. (2022 - Actual motor if it may vary for factory thermal overload, consult factory)

Only power & control wiring by others

Base Unit: Belt Drive, Aluminum Wheel, Aluminum Housing, Aluminum Base, Weather type motor, 4.4 sq.ft. (Class BI-BIII)

Accessories: Inlet Screen, Aluminum (3003-H14) - Aluminum (3003-H24) - 304SS Aluminum (3003-H24) - 304SS Aluminum (3003-H24) - 304SS

Motor: Premium Efficiency, 1800 RPM, 480/3/60, TEFC, Inverter Duty

UL/cUL 762 Listed - Supplemental EIC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)

Shipped Loose: Roof Curb, Disconnect Switch, Gasket, Hardware

Finish: Factory Installed

Options: Roof Curb (Commercial Duty) at 1000'-0" (Factory Attached)

Curb Size: 12"x12"

Weight with Curb: 1,175 lbs

Weight with Screen Hinge: 1,175 lbs of 1000.00 lbs (Life Avg.) lbs 1000.00 lbs)

RECOMMENDED EXHAUST DUCT SIZE

MAXIMUM HOOD CAPACITY

MAXIMUM HOOD CAPACITY	
1000 CFM	1000
1500 CFM	1500
2000 CFM	2000

DUCT CONNECTION DETAILS

DUCT CONNECTION DETAILS

DUCT CONNECTION DETAILS

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

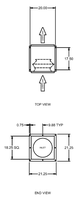
Direct Drive Mixed Flow Inline Fan

MARK INFORMATION			FAN INFORMATION								SOUND INFORMATION					MOTOR INFORMATION							
MARK	QTY	MODEL	DRIVE TYPE	VOLUME (CFM)	EXTERNAL SP (IN. WG)	TOTAL EXTERNAL SP (IN. WG)	FAN SPEED (RPM)	OUTLET VELOCITY (FT/MIN)	FC	TOTAL WEIGHT (LB)	INLET dBA	INLET SONES	INLET SONES (SPHERICAL)	OUTLET dBA	OUTLET SONES	OPERATING POWER (HP)	MOTOR SIZE (HP)	FEP INPUT POWER (kW)	ENCLOSURE	VOLTAGE	CYCLE	PHASE	EC MOTOR
MAU-1	1	XIB-12	Direct	—	1	1	2,118	1,617.00	1.47	106	68.31	17.35	5	69.32	18.33	0.69	1	0	TF	460	60	3	No

MAU-1 SELECTED OPTIONS AND ACCESSORIES

UL/cUL 705 Listed - "Power Ventilators"
Junction Box Mounted and Wired
Switch, NEMA-3R, Toggle, Shipped Separate
Damper Shipped Loose, Inline, WD-330-PB-18.25X18.25, Not Coated
Galvanized Housing
Aluminum Mixed Flow Wheel
Composite Inlet Cone
Fan Spring, Hanging, 1 Inch Isolator PN: 850343, Inch 4 isolators and 4 brackets
Square Duct Mounting Collar, Shipped Separate

CONTROL NOTES:
1. MAU OPERATING WILL BE CONTROLLED BY ACCUREX PROVIDED CONTROLLERS & SENSORS




DAMPER



TYP SECTION VIEW

CITY OF IRVINE RECREATIONAL
PROJECT/ DESIGN: 24-0000
MARK: MAU-1
ACCUREX.CO.VIY
AMEER.TILLMAN@ACCUREX.COM
(909)430-3326
ACCUREX

EQUIPMENT SCHEDULE

Packaged Ventilator

Mark Name	Qty	Model	Mounting Location	Weight	Outdoor Air Volume	Recirc Air Volume	Economizer Outdoor Air Volume	Economizer Exhaust Air Volume
AHAS-1	1	XRV-25-24-3-V2	Outdoor	2,500 lb	1,250 CFM	0 CFM	NA	NA

Supply Fan

Supply Air Volume	Supply ESP	Supply TSP	RPM	Supply BHP	Supply Motor	Voltage	Frequency	Phase	VSP VFD	VSP Type
1,000 CFM	1.14 in. wg	2.07 in. wg	1324	0.756	1.0 hp	460	60	3	YES	JP

Electrical

MCA	MOP
15.3	20

Air-Source Heat Pump Indoor Coil

Coil Face Velocity	Coil Pressure Drop	Rows Deep	Fins Per Inch	Compressor Type	Compressor Qty
97 ft/min	0.555 in. wg	4	15	Inverter Scroll	1

Air-Source Heat Pump Cooling

Entering DB	Entering WB	Leaving LDS	Leaving WB	Sensible Capacity	Refrigerant type	AHRI 340/360 EER	AHRI 340/360 IEER	Net Cooling Capacity	Full Load Power	Part Load Power
80.0 F	70.0 F	51.0 F	50.9 F	9.0 kBtu/h	454.4 MBTU	15.40/B	17.0	20.5	40.3 MBTU	19.07

Hot Gas Reheat

Net Gas Reheat Capacity	Lvd
40.3 MBTU	19.07

Air-Source Heat Pump Heating

Entering DB	Leaving DB	Capacity	AHRI 340/360 COP @ 17F	AHRI 340/360 COP @ 47F
47.0 F	91.0 F	54.5 MBtu	2.05	3.64

NOTES

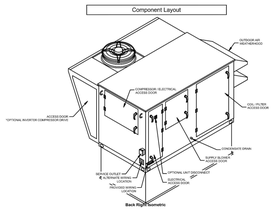
Rooftop indoor unit 2,000 ft. left and by Villa.
Trane unit # 17 ft. inverter from rooftop villa.
Condensing unit shall be provided with a minimum of 24 coil.
Condensing mounted on a shelf behind an insulated door for roof cover reclaimed and hermetrafted sound.
Condensing unit shall be provided with a minimum of 24 coil.
Contractor must have weather screen on or inspect to see and change coil operation, and points, alarm history for 1 week of trending data.

CONTROL NOTES:
1. SYSTEM OR AIR HANDLING UNIT SHUTDOWN TO MAINTAIN SET POINT OR AS REQUIRED BY STATE REGULATIONS. DIVISION 23 CONTROLS SYSTEM OPERATIONS.

OPTIONS AND ACCESSORIES

Economizer Type: Fresh Air Hood
Condenser Coils: Cu-Al
Condenser Coil Fins: Al
EC Motor Fan
Fan Motor Type: Belt Drive
Refrigerant: R-410A/R454B
Compressor: Scroll
Disconnect: Non-Fused Disconnect
Powered Convenience Outlet: 115V
Roof Curb: 24" (Fits as AAON: 1- 2-1/2x2x2, 2-2x2x2
Outdoor Air Dampers - Motorized Low Leakage
Exhaust Air Dampers - Motorized Low Leakage
Barometric Relief
Airside Economizer Controller Only (No TEK)
Airside Economizer Controller - Constant Volume (No Setpoint)
DX/HW Sensor Controller - Fault Monitor Only (No Effects)
Dirty Filter Sensor
Supply Air Temperature - 1 Temperature Only
Network Protocol: BACnet/MSTP
Phase and Brown Out Protection
Phase and Brown Out Protection
Unit Mounted - Mounted Disconnect (non-fused and unwired)
Unit Mounted - Mounted Toe Rooms
Shipped Loose Smoke Detectors - Both Airstreams
Unit Warranty - 5 Years for Compressor
Unit Warranty - 10 Years for Materials

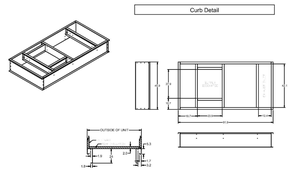
Component Layout



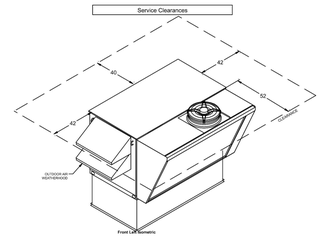
Curb Installation Instructions

1. Factory supplied roof curbs. Roof curbs are model GKD which ship in a knockdown kit (includes duct adapters) and require field assembly (by others) on all units except XRV-110 which are shipped assembled. Assembly instructions are included with the curb kit.
2. Install curb. Locate curb over roof opening and fasten in place. Check that the diagonal dimensions are within ± 1/8 inch of each other and adjust as necessary. For proper coil drainage and unit operation, it is important that the installation be level. Shim the curb as required to level. Install gasketing on top surface of curb (provided by others).
3. Install ductwork. Installation of all ducts should be done in accordance with SMACNA and AMCA guidelines. Duct adapters are provided to support ducts prior to setting the unit.
4. Set the unit. Lift unit to a point directly above the curb and duct openings. Guide unit while lowering to align with duct openings. Roof curbs fit inside the unit base. Make sure the unit is properly seated on the curb and level.
5. Fasten the unit. Fasten the unit to the curb/equipment support(s) using the provided mounting holes. It is the installer's responsible for determining appropriate support and fastening methods to ensure compliance with all applicable codes.
6. Install vestibule. If unit was ordered with a vestibule and it has not yet been attached to the unit, caulk and attach the vestibule at this time.

Curb Detail



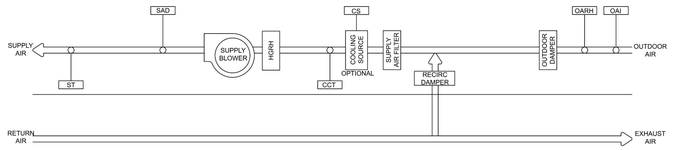
Service Clearances



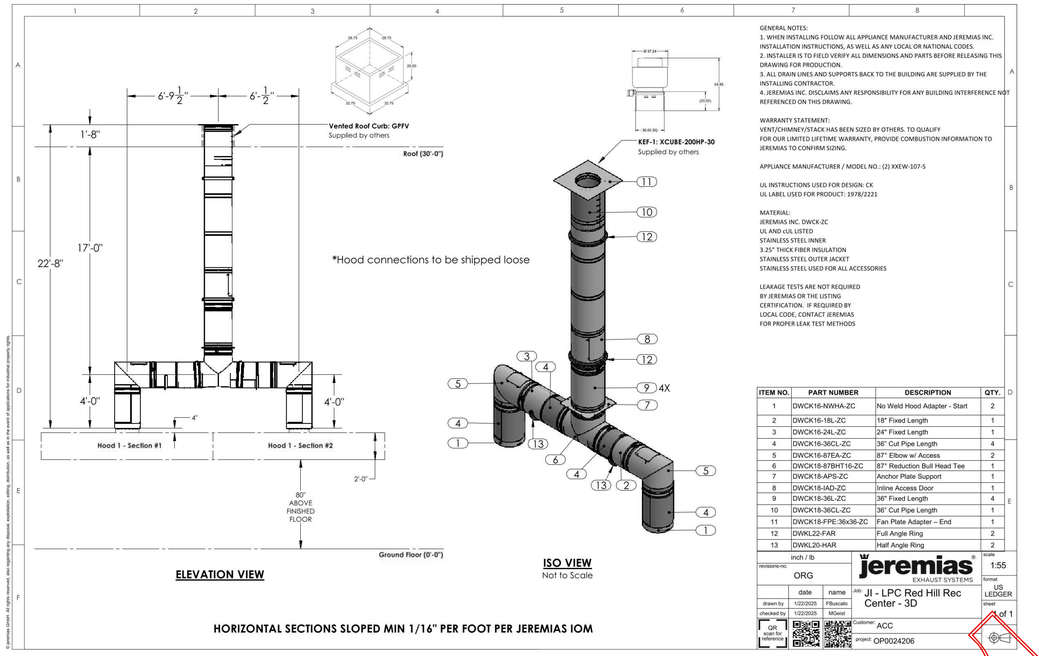
Curb Specifications

Height (in)	Length (in)	Width (in)	Material	Finish Type	Duct Adapter	Weight (lb)
24	91.9	45.9	Galvanized	Galvanized	Yes	333

CITY OF IRVINE RECREATIONAL
PROJECT/ DESIGN: 24-0000
MARK: DOAS-1
ACCUREX.CO.VIY
AMEER.TILLMAN@ACCUREX.COM
(909)430-3326
ACCUREX



SENSORS
SAD: Supply air discharge temperature
OAI: Outdoor air intake temperature
CCT: Cooling coil temperature
OARH: Outdoor air intake relative humidity
ST: Space temperature



HORIZONTAL SECTIONS SLOPED MIN 1/16" PER FOOT PER JEREMIAS IOM

GENERAL NOTES:
1. WHEN INSTALLING FOLLOW ALL APPLIANCE MANUFACTURER AND JEREMIAS INC. INSTALLATION INSTRUCTIONS, AS WELL AS ANY LOCAL OR NATIONAL CODES.
2. INSTALLER IS TO FIELD VERIFY ALL DIMENSIONS AND PARTS BEFORE RELEASING THIS DRAWING FOR PRODUCTION.
3. ALL DRAIN LINES AND SUPPORTS BACK TO THE BUILDING ARE SUPPLIED BY THE INSTALLING CONTRACTOR.
4. JEREMIAS INC. DISCLAIMS ANY RESPONSIBILITY FOR ANY BUILDING INTERFERENCE NOT REFERENCED ON THIS DRAWING.

WARRANTY STATEMENT:
VENT/CHIMNEY/STACK HAS BEEN SIZED BY OTHERS. TO QUALIFY FOR OUR LIMITED LIFETIME WARRANTY, PROVIDE COMBUSTION INFORMATION TO JEREMIAS TO CONFIRM SIZING.

APPLIANCE MANUFACTURER / MODEL NO.: (2) XXEW-107-S

UL INSTRUCTIONS USED FOR DESIGN: CK
UL LABEL USED FOR PRODUCT: 1978/2221

MATERIAL:
JEREMIAS INC. DWCK-ZC
UL AND cUL LISTED
STAINLESS STEEL INNER
3.25" THICK FIBER INSULATION
STAINLESS STEEL OUTER JACKET
STAINLESS STEEL USED FOR ALL ACCESSORIES

LEAKAGE TESTS ARE NOT REQUIRED BY JEREMIAS OR THE LISTING CERTIFICATION. IF REQUIRED BY LOCAL CODE, CONTACT JEREMIAS FOR PROPER LEAK TEST METHODS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	DWCK16-NWHA-ZC	No Weld Hood Adapter - Start	2
2	DWCK16-18L-ZC	18" Fixed Length	1
3	DWCK16-24L-ZC	24" Fixed Length	1
4	DWCK16-36CL-ZC	36" Cut Pipe Length	4
5	DWCK16-87EA-ZC	87° Elbow w/ Access	2
6	DWCK18-87BHT16-ZC	87° Reduction Bull Head Tee	1
7	DWCK18-APS-ZC	Anchor Plate Support	1
8	DWCK18-IAD-ZC	Inline Access Door	1
9	DWCK18-36L-ZC	36" Fixed Length	4
10	DWCK18-36CL-ZC	36" Cut Pipe Length	1
11	DWCK18-FPE:36x36-ZC	Fan Plate Adapter – End	1
12	DWKL22-FAR	Full Angle Ring	2
13	DWKL20-HAR	Half Angle Ring	2

inch / lb
revisions-no. ORG

	date	name
drawn by	1/22/2025	FBuscato
checked by	1/22/2025	MGoez

QR scan for reference

jeremias® EXHAUST SYSTEMS

Job: JI - LPC Red Hill Rec Center - 3D

Customer: ACC

project: OP0024206

scale 1:55
format US LEDGER
sheet 4 of 1

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IRVINE FIELD HOUSE
17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

RESTAURANT EQUIPMENT

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/14/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT

CITY OF IRVINE
BUILDING & SAFETY DIVISION

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

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Autodesk Docs://LAX21-0174-02_17300 Red Hill - Rec Center/RTM/MEP Red Hill Rec Center_R22.rvt

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

Space Conditioning Mandatory Measures:

110.2 CERTIFICATION BY MANUFACTURERS
ANY SPACE CONDITIONING EQUIPMENT LISTED IN §110.2 SHALL ONLY BE INSTALLED IF CERTIFIED TO THE ENERGY COMMISSION TO MEET ALL APPLICABLE §110.2 REQUIREMENTS.

110.2(a) SPACE CONDITIONING EQUIPMENT EFFICIENCY
EQUIPMENT SHALL MEET APPLICABLE EFFICIENCY REQUIREMENTS IN TABLE 110.2-A THROUGH TABLE 110.2-N.

110.2(b) HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEAT
HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL HAVE CONTROLS THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE. CUT-ON TEMPERATURE FOR COMPRESSION HEATING SHALL BE HIGHER THAN THAT FOR SUPPLEMENTARY HEATING. CUT-OFF TEMPERATURE FOR COMPRESSION HEATING SHALL BE HIGHER THAN THAT FOR SUPPLEMENTARY HEATING.

110.5 PILOT LIGHTS PROHIBITED FOR NATURAL GAS EQUIPMENT
PILOT LIGHTS ARE PROHIBITED ON NATURAL GAS FAN-TYPE CENTRAL FURNACES, POOL HEATERS, SPA HEATERS, AND FIREPLACES.

110.8(a) INSULATION CERTIFICATION
INSTALLED INSULATION SHALL BE CERTIFIED BY THE DEPARTMENT OF CONSUMER AFFAIRS PER TITLE 24, PART 12, CHAPTERS 12-13, ARTICLE 3 "STANDARDS FOR INSULATING MATERIAL."

110.8(b) UREA FORMALDEHYDE INSULATION
UREA FORMALDEHYDE INSULATION SHALL NOT BE INSTALLED UNLESS IN EXTERIOR SIDE WALLS WITH A FOUR-MIL-THICK PLASTIC POLYETHYLENE VAPOR RETARDER OR EQUIVALENT PLASTIC SHEATHING VAPOR RETARDER INSTALLED BETWEEN THE UREA FORMALDEHYDE FOAM INSULATION AND THE INTERIOR SPACE.

110.8(c) INSULATING MATERIAL
ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF THE CALIFORNIA BUILDING CODE.

110.8(d) DUCTS
IF INSULATION IS INSTALLED ON AN EXISTING SPACE-CONDITIONING DUCT, IT SHALL COMPLY WITH SECTION 604.0 OF THE CMC.

120.1(a) GENERAL VENTILATION AND INDOOR AIR QUALITY REQUIREMENTS
ALL OCCUPIABLE SPACES IN HOTEL/MOTEL AND NONRESIDENTIAL BUILDINGS OTHER THAN HEALTHCARE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF §120.1(a) THROUGH (g). THE REQUIRED OUTDOOR AIR VENTILATION RATE AND AIR-DISTRIBUTION SYSTEM DESIGN SHALL BE CLEARLY IDENTIFIED ON THE PLANS.

120.1(c)2 NATURAL VENTILATION
NATURALLY VENTILATED SPACES SHALL BE DESIGNED IN ACCORDANCE WITH 120.1(c)2A THROUGH 120.1(c)2C AND INCLUDE A MECHANICAL VENTILATION SYSTEMS DESIGNED IN ACCORDANCE WITH 120.1(c)3.

120.1(c)3 MECHANICAL VENTILATION
OCCUPIABLE SPACES SHALL BE VENTILATED WITH A MECHANICAL VENTILATION SYSTEM CAPABLE OF PROVIDING AN OUTDOOR AIRFLOW RATE (V_{ez}) TO THE ZONE NO LESS THAN EQUATION 120.1-F.

120.1(d) TIMES OF OCCUPANCY
MINIMUM OUTDOOR AIR RATE SHALL BE MET AT TIMES WHEN THE SPACE IS USUALLY OCCUPIED IN ACCORDANCE WITH 120.1(c).

Space Conditioning Mandatory Measures:

120.1(d)2 PRE-OCCUPANCY
THE LESSER OF THE MINIMUM RATE OF OUTDOOR AIR REQUIRED BY SECTION 120.1(c) OR THREE COMPLETE AIR CHANGES SHALL BE SUPPLIED TO THE ENTIRE BUILDING DURING THE 1-HOUR PERIOD IMMEDIATELY BEFORE THE BUILDING IS NORMALLY OCCUPIED.

120.1(d)3 REQUIRED DEMAND CONTROL VENTILATION
DCV CONTROLS ARE REQUIRED FOR A SPACE WITH A DESIGN OCCUPANCY DENSITY >= 25 PEOPLE/1,000 FT2 IF THE SYSTEM SERVING THE SPACE HAS ONE OR MORE OF THE FOLLOWING

- AN AIR ECONOMIZER
- MODULATING OUTSIDE AIR CONTROL
- DESIGN OUTDOOR AIRFLOW RATE > 3,000 CFM

120.1(f) DESIGN AND CONTROL REQUIREMENTS FOR QUANTITIES OF OUTDOOR AIR

120.1(f)1 ALL MECHANICAL VENTILATION AND SPACE-CONDITIONING SYSTEMS SHALL BE DESIGNED WITH AND HAVE INSTALLED DUCTWORK, DAMPERS, AND CONTROLS TO ALLOW OA RATES TO BE OPERATED AT NO LESS THAN THE LARGER OF: 120.1(c)3 MINIMUMS OR THE RATE REQUIRED FOR MAKE-UP OF EXHAUST SYSTEMS FOR AN EXEMPT OR COVERED PROCESS, CONTROL OF ODORS, OR CONTAMINANT REMOVAL IN A SPACE.

120.1(f)3 MEASURED OA RATES OF CONSTANT VOLUME SYSTEMS SHALL BE TESTED TO CONFIRM THEIR ABILITY TO OPERATE WITHIN 10% OF THE DESIGN MINIMUM OUTSIDE AIR RATE.

120.1(g) AIR CLASSIFICATION AND RECIRCULATION LIMITATIONS
AIR CLASSIFICATION AND RECIRCULATION LIMITATIONS OF AIR SHALL BE BASED ON TABLE 120.1-A OR TABLE 120.1-C, AND IN ACCORDANCE WITH 120.1(g)1 THROUGH 4.

120.2(a) THERMOSTAT CONTROLS
HEATING AND COOLING SUPPLY TO EACH SPACE-CONDITIONING ZONE OR DWELLING UNIT SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE IN THE ZONE AND MEETS 120.2(b) REQUIREMENTS.

120.2(b) ZONAL THERMOSTAT CONTROLS

120.2(b)4 THERMOSTATIC CONTROLS FOR ALL SINGLE ZONE AIR CONDITIONERS AND HEAT PUMPS SHALL COMPLY WITH THE REQUIREMENTS OF 110.2(c) AND 110.12(a) AND, IF EQUIPPED WITH DDC TO THE ZONE LEVEL WITH THE AUTOMATIC DEMAND SHED CONTROLS OF 110.12(b).

120.2(d) HEAT PUMP CONTROLS
ALL HEAT PUMPS WITH SUPPLEMENTAL ELECTRIC RESISTANCE HEATERS SHALL BE INSTALLED WITH CONTROLS THAT MEET 110.2(b) REQUIREMENTS.

120.2(e)1 AUTOMATIC SHUT-OFF FOR SPACE-CONDITIONING SYSTEMS
EACH SPACE-CONDITIONING SYSTEM SHALL BE INSTALLED WITH ONE OF THE FOLLOWING CONTROLS CAPABLE OF AUTOMATICALLY SHUTTING OFF THE SYSTEM DURING PERIODS OF NONUSE:

- AUTOMATIC TIME SWITCH CONTROL PER 110.9, WITH ACCESSIBLE MANUAL OVERRIDE ALLOWING SYSTEM OPERATION FOR UP TO 4 HOURS, OR
- AN OCCUPANCY SENSOR, OR
- A 4-HOUR TIMER THAT CAN BE MANUALLY OPERATED.

120.2(f) DAMPERS FOR AIR SUPPLY AND EXHAUST EQUIPMENT
OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN.

Space Conditioning Mandatory Measures:

120.2(h) AUTOMATIC DEMAND SHED CONTROLS
SHALL MEET REQUIREMENTS IN 110.12
110.12(a) DEMAND RESPONSIVE (DR) CONTROL REQUIREMENTS:

1. EITHER CERTIFIED OPENADR 2.0a, OPENADR 2.0b VIRTUAL END NODE (VEN); OR CERTIFIED BY THE MANUFACTURER AS BEING CAPABLE OF RESPONDING TO A DR SIGNAL FROM A CERTIFIED OPENADR 2.0b VIRTUAL END NODE BY AUTOMATICALLY IMPLEMENTING THE CONTROL FUNCTIONS REQUESTED BY THE VIRTUAL END NODE FOR THE EQUIPMENT IT CONTROLS.
2. CAPABLE OF COMMUNICATING USING WI-FI, ZIGBEE, BACNET, ETHERNET, AND/OR HARD-WIRING.
3. MAY INCORPORATE AND USE ADDITIONAL PROTOCOLS BEYOND THOSE SPECIFIED IN 110.12(a)1 AND 2.
4. SHALL CONTINUE TO PERFORM ALL OTHER CONTROL FUNCTIONS PROVIDED BY THE CONTROL WHEN COMMUNICATIONS ARE DISABLED.
5. THERMOSTATS SHALL COMPLY WITH REFERENCE JOINT APPENDIX 5 (JA5)

110.12(b) NONRESIDENTIAL HVAC SYSTEMS WITH DDC TO THE ZONE LEVEL SHALL BE PROGRAMMED TO ALLOW CENTRALIZED DEMAND SHED FOR NON-CRITICAL ZONES. CONTROLS SHALL BE CAPABLE OF:

1. REMOTELY INCREASING THE OPERATING COOLING TEMPERATURE SETPOINTS BY 4 DEGREES OR MORE IN ALL NON-CRITICAL ZONES ON SIGNAL FROM A CENTRALIZED CONTACT OR SOFTWARE POINT WITHIN AN EMCS
2. REMOTELY DECREASING THE OPERATING HEATING TEMPERATURE SETPOINTS BY 4 DEGREES OR MORE IN ALL NON-CRITICAL ZONES ON SIGNAL FROM A CENTRALIZED CONTACT OR SOFTWARE POINT WITHIN AN EMCS
3. REMOTELY RESETTING THE TEMPERATURES IN ALL NON-CRITICAL ZONES TO ORIGINAL OPERATING LEVELS ON SIGNAL FROM A CENTRALIZED CONTACT OR SOFTWARE POINT WITHIN AN EMCS
4. PROVIDING AN ADJUSTABLE RATE OF CHANGE FOR THE TEMPERATURE INCREASE, DECREASE, AND RESET
5. THE FOLLOWING FEATURES:
   A. DISABLED BY AUTHORIZED FACILITY OPERATORS
   B. MANUAL CONTROL BY AUTHORIZED FACILITY OPERATORS
   C. UPON RECEIPT OF A DR SIGNAL, SPACE-CONDITIONING SYSTEMS SHALL CONDUCT A CENTRALIZED DEMAND SHED, AS SPECIFIED IN 110.12(b)1 AND 110.12(b)2, FOR NON-CRITICAL ZONES DURING THE DR PERIOD

120.2(j) DIRECT DIGITAL CONTROLS (DDC)
DDC TO THE ZONE SHALL BE PROVIDED AS SPECIFIED BY TABLE 120.2-A. THE DDC SYSTEM SHALL MEET CONTROL LOGIC REQUIREMENTS OF 120.1(D), 110.12(a) AND 110.12(b) AND BE CAPABLE OF ALL OF THE FOLLOWING:

1. MONITORING ZONE AND SYSTEM DEMAND FOR FAN PRESSURE, PUMP PRESSURE, HEATING AND COOLING
2. TRANSFERRING ZONE AND SYSTEM DEMAND INFORMATION FROM ZONES TO AIR DISTRIBUTION SYSTEM CONTROLLERS AND FROM AIR DISTRIBUTION SYSTEMS TO HEATING AND COOLING PLANT CONTROLLERS
3. AUTOMATICALLY DETECTING THE ZONES AND SYSTEMS THAT MAY BE EXCESSIVELY DRIVING THE RESET LOGIC AND GENERATE AN ALARM OR OTHER INDICATION TO THE SYSTEM OPERATOR
4. READILY ALLOW OPERATOR REMOVAL OF ZONE(S) FROM THE RESET ALGORITHM
5. FOR NEW BUILDINGS, TRENDING AND GRAPHICALLY DISPLAYING INPUT AND OUTPUT POINTS
6. RESETTING HEATING AND COOLING SETPOINTS IN ALL NON-CRITICAL ZONES UPON RECEIPT OF A SIGNAL FROM A CENTRALIZED CONTACT OR SOFTWARE POINT AS DESCRIBED IN 110.12(b).

Space Conditioning Mandatory Measures:

120.4 AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS
PORTIONS OF SUPPLY- AND RETURN-AIR DUCTS CONVEYING HEATED OR COOLED AIR LOCATED IN ONE OR MORE OF THE FOLLOWING SPACES SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-8:

- OUTDOORS
- IN A SPACE BETWEEN THE ROOF AND AN INSULATING CEILING
- IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR OPENINGS TO THE OUTSIDE OR UNCONDITIONED SPACES
- UNCONDITIONED SPACES, SUCH AS UNCONDITIONED CRAWLSPACE

PORTIONS OF SUPPLY-AIR DUCTS THAT ARE NOT IN ONE OF THESE SPACES, INCLUDING DUCTS BURIED IN CONCRETE SLAB, SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-4.2 (OR ANY HIGHER LEVEL REQUIRED BY CMC 605.0), OR BE ENCLOSED IN DIRECTLY CONDITIONED SPACE.

120.4(b) DUCT AND PLENUM MATERIALS
120.4(b) FACTORY-FABRICATED DUCT SYSTEMS MUST:

- COMPLY WITH UL 181 FOR DUCTS AND CLOSURE SYSTEMS AND BE LABELED AS COMPLYING WITH UL 181
- ALL PRESSURE SENSITIVE TAPES, HEAT ACTIVATED TAPES, AND MASTICS USED IN MANUFACTURE OF RIGID FIBERGLASS DUCTS SHALL COMPLY WITH UL 181 AND UL 181A
- ALL PRESSURE SENSITIVE TAPES, AND MASTICS USED IN MANUFACTURE OF FLEXIBLE DUCTS SHALL COMPLY WITH UL 181 AND L 181B
- JOINTS AND SEAMS SHALL NOT BE SEALED WITH CLOTH BACK RUBBER ADHESIVE DUCT TAPES UNLESS COMBINED WITH MASTICS AND DRAWBANDS.

FIELD-FABRICATED DUCT SYSTEMS:

- FACTORY-MADE RIGID FIBERGLASS AND FLEXIBLE DUCTS FOR FIELD-FABRICATED DUCT SYSTEMS SHALL COMPLY WITH UL 181. ALL CLOSURE SYSTEMS, INCLUDING PRESSURE SENSITIVE TAPES, MASTICS, AND AEROSOL SEALANTS, SHALL MEET THE APPLICABLE REQUIREMENTS OF UL 181, UL 181A AND UL 181B.
- MASTIC SEALANTS SHALL:
  - COMPLY WITH APPLICABLE REQUIREMENTS OF UL 181, UL 181A, AND UL 181B AND BE NONTOXIC AND WATER RESISTANT.
  - PASS ASTM C731 AND D2202, IF USED IN BUILDING INTERIOR,
  - PASS ASTM C731, C732, AND D2202, IF USED ON EXTERIOR.
  - SEALANTS AND MESHES SHALL BE RATED FOR EXTERIOR USE.
- PRESSURE SENSITIVE TAPES SHALL COMPLY WITH APPLICABLE REQUIREMENTS IN UL 181, UL 181A, AND UL 181B.
- JOINTS AND SEAMS SHALL NOT BE SEALED WITH CLOTH BACK RUBBER ADHESIVE DUCT TAPES UNLESS COMBINED WITH MASTICS AND DRAWBANDS.
- DRAWBANDS USED WITH FLEXIBLE DUCTS SHALL:
  - BE EITHER STAINLESS STEEL WORM-DRIVE HOSE CLAMPS OR UV-RESISTANT NYLON DUCT TIES
  - HAVE A MINIMUM TENSILE STRENGTH RATING OF 150 LBS.
  - BE TIGHTENED AS RECOMMENDED BY THE MANUFACTURER
- AEROSOL SEALANT CLOSURES SHALL:
  - MEET REQUIREMENTS OF UL 723 AND BE APPLIED ACCORDING TO MANUFACTURER SPECIFICATIONS
  - TAPES OR MASTICS USED IN COMBINATION WITH AEROSOL SEALING SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF UL 181, UL 181A, AND UL 181B, ASTM C731, C732 AND D2202.

120.4(c)
ALL DUCT INSULATION PRODUCT R-VALUES SHALL BE BASED ON INSULATION ONLY AND TESTED IN ACCORDANCE WITH ASTM C518 OR ASTM C177 AND CERTIFIED PER §110.8.

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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: Red Hill Rec Center C&S	**Report Page:** **(Page 1 of 11)**
Project Address:	**Date Prepared:** 2025-05-12T17:17:24-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Irvine	04	Total Conditioned Floor Area	98070
02	Climate Zone	8	05	Total Unconditioned Floor Area	98070
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1
• Gymnasium					

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		02		03	
Air System(s)		Wet System Components		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

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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 with Exceptional Conditions
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.

The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans.

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	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
RTU-1	1	Single zone	New/ Addition	All Other Occupancies	☐

Space Conditioning Mandatory Measures:

120.4(d)
INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUE SHALL BE DETERMINED AS FOLLOWS:

- DUCT BOARD, LINER, AND FACTORY-MADE RIGIDS: USE NOMINAL INSULATION THICKNESS
- DUCT WRAP: USE 75% (25% COMPRESSION) OF NOMINAL THICKNESS
- FACTORY-MADE FLEXIBLE AIR DUCTS: DIVIDE THE DIFFERENCE BETWEEN THE ACTUAL OUTSIDE DIAMETER AND NOMINAL INSIDE DIAMETER BY TWO.

120.4(e)
INSULATED FLEXIBLE DUCT PRODUCTS INSTALLED TO MEET THIS REQUIREMENT MUST INCLUDE LABELS (MAX INTERVALS OF 3 FT) SHOWING THERMAL RESISTANCE PERFORMANCE R-VALUE FOR THE DUCT INSULATION ITSELF BASED ON TESTS IN 120.4(c). AND INSTALLED THICKNESS DETERMINED BY 120.4(d)3.

120.4(f) PROTECTION OF INSULATION
INSULATION SHALL BE PROTECTED FROM DAMAGE BY SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND. CELLULAR FOAM INSULATION SHALL BE PROTECTED, OR BE PAINTED WITH A WATER RETARDANT COATING THAT PROVIDES SHIELDING FROM SOLAR RADIATION.

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
RTU-2	1	Single zone	New/ Addition	All Other Occupancies	☐
RTU-3,4	2	Single zone	New/ Addition	All Other Occupancies	☐
CU-1	1	Single zone	New/ Addition	All Other Occupancies	☐
RTU-5	1	Single zone	New/ Addition	All Other Occupancies	☐
RTU-6	1	Single zone	New/ Addition	All Other Occupancies	☐
RTU-7,...,17	1	Single zone	New/ Addition	All Other Occupancies	☐

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
				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]	
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	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)
RTU-1	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	80	85	0	82	105	85	105
RTU-2	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	95	99	0	85	96	99	96
RTU-3,4	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	18	20	0	25	27	20	27
CU-1	Unitary AC/ Condensers	AC, air cooled, split (1 phase)	Yes				15	18		15
RTU-5	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	175	189	0	219	251	189	9
RTU-6	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	40	47	0	52	270	47	52
RTU-7,...,17	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	180	193.5	0	227	270	193.5	227

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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

[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 excepted.*

[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
RTU-1	>=65,000 and <135,000	47 °Fdb/ 43 °Fwb OSA	COP	3.4	3.74	EER IEER	11 14.1	12.1 17.5
RTU-2	>=65,000 and <135,000	47 °Fdb/ 43 °Fwb OSA	COP	3.4	3.5	EER IEER	11 14.1	11 16.9
RTU-3,4	<65,000		HSPF	8	12	SEER	14	17.5
CU-1	<45,000					EER2 SEER2	9.8 14.3	16.5 19.6
RTU-5	>=240,000	17 °Fdb/ 15 °Fwb OSA	COP	2.05	2.25	EER IEER	9.3 10.4	10.9 16.9
RTU-6	<65,000		HSPF	8	8	SEER	14	16.4
RTU-7,..,17	>=240,000	17 °Fdb/ 15 °Fwb OSA	COP	2.05	2.46	EER IEER	9.3 10.4	10.1 16

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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	EF	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	5,300	Site Elevation	60	Economizer	NA: Efficiency per Table 140.4-F
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance		Design				
									Component Allowance (watt/cfm)	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method		Motor Nameplate Horsepower		Fan Electrical Input Power (kW)
EF-1	Exhaust	1	Airflow control devices required for space pressurization control			14			0.102	0.0143	Manufacturer provided				0.12
EF-2	Exhaust	1	Airflow control devices required for space pressurization control			37			0.102	0.0377	Manufacturer provided				0.56
EF-3	Exhaust	1	Airflow control devices required for space pressurization control			2			0.102	0.002	Manufacturer provided				0.01
EF-4	Exhaust	1	Airflow control devices required for space pressurization control			47			0.102	0.0479	Manufacturer provided				0.75
Supply Fan Base Allowance (watt/cfm)		0	Exhaust/Return/Relief/Transfer Fan Base Allowance(watt/cfm)					0.18	Fan System Allowance (kW)[3]		1.51		Fan System Electrical Input Power (kW)		1.44

[1] *FOOTNOTES: Fans serving spaces with design background noise goals below NC35*

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System Name	EF	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	5,300	Site Elevation	60	Economizer	NA: Efficiency per Table 140.4-F
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance		Design				
									Component Allowance (watt/cfm)	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method		Motor Nameplate Horsepower		Fan Electrical Input Power (kW)
EF-1	Exhaust	1	Airflow control devices required for space pressurization control			14			0.102	0.0143	Manufacturer provided				0.12
EF-2	Exhaust	1	Airflow control devices required for space pressurization control			37			0.102	0.0377	Manufacturer provided				0.56
EF-3	Exhaust	1	Airflow control devices required for space pressurization control			2			0.102	0.002	Manufacturer provided				0.01
EF-4	Exhaust	1	Airflow control devices required for space pressurization control			47			0.102	0.0479	Manufacturer provided				0.75
Supply Fan Base Allowance (watt/cfm)		0	Exhaust/Return/Relief/Transfer Fan Base Allowance(watt/cfm)					0.18	Fan System Allowance (kW)[3]		1.51		Fan System Electrical Input Power (kW)		1.44

[1] *FOOTNOTES: Fans serving spaces with design background noise goals below NC35*

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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	10
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	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	Direct Digital Control (DDC) per 120.2
SC	Single zone	> 25,000 ft^2	Setback + DR Tstat per 110.12	NA: 7 day per 120.2(e)1	NA: Single Zone	DR Tstat per 110.12	NA: Single Zone	NA: No operable windows	NA: Single Zone

[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.*

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 d:t24refnolink/]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.

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

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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:	DS	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No
		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?	---
		Duct leakage testing per CMC Section 603.9.2 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	No	The space conditioning system serves less than 5,000 ft^2 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	No	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	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18	No	All ductwork is an extension of an existing duct system
19	No	Ductwork serving individual dwelling unit
20		< 25 ft of new or replacement space conditioning ducts installed
21	R-6	Duct Insulation R-value
22	No	Ductwork Existing To Remain
23	No	Duct System Connected To Altered Space Conditioning System

M. COOLING TOWERS

This section does not apply to this project.

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/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4

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/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4

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.	
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".	SC

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
		MXXX

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Ben Lieberman	Documentation Author Signature:
Company: RTM Engineering Consulting	Signature Date: 5-19-25
Address: 9035 Wadsworth Pkwy	CEA/ HERS Certification Identification (if applicable): N/A
City/State/Zip: Westminster, CO 80021	Phone: 720-588-1514

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 [illegible] to the building owner at occupancy.

Responsible Designer Name: Ben Lieberman	Responsible Designer Signature:
Company: RTM Engineering Consultants	Date Signed: 5-19-25
Address: 9035 Wadsworth Pkwy	License: PE M42166
City/State/Zip: Westminster, CO 80021	Phone: 720-588-1514

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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IRVINE, CALIFORNIA 92614

T24 COMPLIANCE DOCS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/06/2026	PLAN CHECK CORRECTIONS 3
	01/26/2026	OC HEALTH DEPT

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

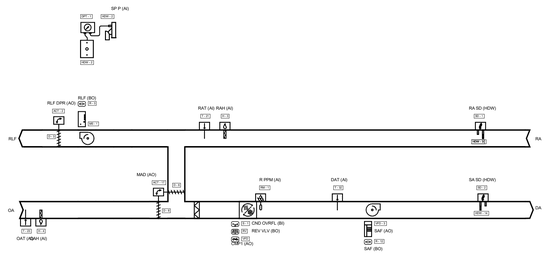
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CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

Flow Diagram: PACKAGED RTU-1,3,4,5,6 [QTY: 5]



Sequence of Operation: PACKAGED RTU-1,3,4,5,6 [QTY: 5]

General Note:

A Building Automation System (BAS) is specified / installed for phase 2. The phase 2 contractor shall coordinate with the phase 1 contractor to coordinate equipment installed during phase 1. All mechanical equipment shall be comissioned and put in service in phase 2.

Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

Occupied:

During occupied periods, the supply fan shall run continuously and the mixed air dampers shall open to maintain minimum ventilation requirements. If economizing is enabled, the outdoor air or mixed air dampers shall modulate to maintain the discharge air temperature setpoint and the relief air damper shall track the mixed air dampers.

Optimal Start:

The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to calculate when the optimal start occurs.

Optimal Stop:

The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall maintain the space temperature to the space temperature offset setpoint. Outside air damper shall remain enabled to provide minimum ventilation.

Pre-Cool Mode:

During optimal start, if the space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling or economizer. The outside air damper shall remain closed, unless economizing. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.

Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensor. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

Heat/Cool Mode:

When the space temperature rises above the occupied cooling setpoint the mode shall transition to cooling. When the space temperature falls below the occupied heating setpoint the mode shall transition to heating. When the space temperature is above the occupied cooling setpoint or below the occupied heating setpoint the mode shall remain in its last state. If the space temperature sensor fails the mode shall remain in its last state and an alarm shall annunciate at the BAS. If the local and communicated setpoints fail the controller shall disable the supply fan and an alarm shall annunciate at the BAS.

Economizer:

ENABLE (Comparative Enthalpy): Outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point. The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB. The economizer shall disable when OA enthalpy is greater than RA enthalpy.

OPERATION: The supply air sensor shall measure the dry bulb temperature of the air leaving the evaporator coil while economizing. When economizing is enabled and the unit is operating in the cooling mode, the economizer damper shall modulate between its minimum position and 100% to maintain the space temperature setpoint. Minimum position shall be calculated based on supply fan speed. If the supply air temperature starts to fall below supply air temperature setpoint, the outdoor damper shall be at minimum position. Compressors shall be delayed from operating until the economizer has opened to 100% for 5 minutes.

Supply Fan:

The unit controller shall vary the supply fan speed to optimize minimum fan speed in all cooling and heating modes.

Relief Air and Building Pressure Control:

A differential pressure transducer shall actively monitor the difference in pressure between the building (indoors) and outdoors. If the building pressure increases above the differential pressure setpoint, the unit controller shall open the relief air damper, turn on the relief fan and modulate the relief air damper to control building pressure to the differential pressure setpoint. If the building pressure decreases below the differential pressure setpoint, the associated controller shall deactivate the relief fan and close the relief air damper.

Condensate Overflow Shutdown:

The unit shall shut down in response to a signal from the condensate overflow sensor. The sensor shall be interlocked to the unit cooling controller for immediate shutdown of cooling.

Refrigerant Mitigation Mode:

The unit controller will monitor the leak detection system, when a leak is detected, an alarm will promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation will be activated.

In occupied mode, the supply fan will remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

In unoccupied mode, the supply fan will remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

Points List: PACKAGED RTU-1,3,4,5,6 [QTY: 5]

System Point Description	POINTS										ALARMS				
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWIRE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY ALARM	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
BUILDING STATIC PRESSURE LOCAL SP P		X	X							X	X			X	
COMPRESSOR 1 MODULATION COMMAND CMP1		X		X											
CONDENSATE OVERFLOW DETECTION LOCAL CND OVRFL		X		X									X		
COOLING OUTPUT COMMAND CLG		X		X											
DISCHARGE AIR TEMPERATURE DAT		X	X											X	
MIXED AIR DAMPER MAD		X		X											
OUTSIDE AIR DAMPER COMMAND OAD		X		X											
OUTSIDE AIR HUMIDITY LOCAL OAH		X	X											X	
OUTSIDE AIR TEMPERATURE LOCAL OAT		X	X											X	
PRIMARY FILTER STATUS LOCAL FIL		X		X									X		
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR A R ALM A			X												
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR B R ALM B			X												
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR C R ALM C			X												
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR D R ALM D			X												
REFRIGERANT CONCENTRATION BAS R PPM				X											
REFRIGERANT HIGH SIDE PRESSURE (63HS1) R HI			X												
REFRIGERANT LOW SIDE PRESSURE (63LS) R LO			X												
DUCT REFRIGERANT MONITOR R PPM			X												
REFRIGERANT LEAK DETECTION SYSTEM INPUT R IN				X											
REFRIGERANT LEAK SENSOR COMMUNICATION STATUS SENSOR A R STS A						X									
REFRIGERANT LFL CONCENTRATION SENSOR A R PPM A			X												
REFRIGERANT LFL CONCENTRATION SENSOR B R PPM B			X												
REFRIGERANT LFL CONCENTRATION SENSOR C R PPM C			X												
REFRIGERANT LFL CONCENTRATION SENSOR D R PPM D			X												
REFRIGERANT MITIGATION ACTIVE R MGT				X											
REFRIGERANT TYPE R TYPE						X									
RELIEF AIR DAMPER COMMAND RLF DPR		X		X											
RELIEF AIR FAN START/STOP RLF		X			X										
RETURN AIR HUMIDITY LOCAL RAH		X	X											X	
RETURN AIR SMOKE DETECTION LOCAL RA SD							X								
RETURN AIR TEMPERATURE LOCAL RAT		X	X											X	
REVERSING VALVE REV VLV		X			X										
SPACE HUMIDITY LOCAL (WIRELESS) SPH		X						X							
SPACE TEMPERATURE LOCAL (WIRELESS) SPT		X						X		X	X				
SPACE TEMPERATURE SETPOINT LOCAL (WIRELESS) SPT SP		X						X							
SUPPLY AIR SMOKE DETECTION LOCAL SA SD							X								
SUPPLY FAN SPEED SAF				X											
SUPPLY FAN START/STOP SAF		X			X										
SUPPLY FAN STATUS LOCAL SAF		X	X												
APPLICATION MODE APP MODE					X										
BAS COMMUNICATION STATE BAS COM					X										X
COMPRESSOR ENABLE CMP ENA		X			X										
COMPRESSOR LOCKOUT STATUS CMP LCK					X										
COOL OUTPUT CLG					X										
DISCHARGE AIR STATIC PRESSURE SETPOINT DA SP SPT		X			X										
ECONOMIZER ENABLE ECON ENA					X										
ECONOMIZER MINIMUM POSITION SETPOINT ECON MIN POS SP		X			X										
FAN MODE COMMAND FAN MODE					X										
FILTER TIMER HOURS FIL HRS					X										
HEAT / COOL MODE REQUEST H/C REQ		X			X										
OCCUPANCY OCC		X			X										
OCCUPIED COOLING SETPOINT OCC CLG SP		X			X										
SPACE TEMPERATURE SETPOINT ACTIVE SPT SP ACT		X			X										
TIMED OVERRIDE STATUS TOV					X										
UNOCCUPIED COOLING SETPOINT UNOCC CLG SP		X			X										

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17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

MECHANICAL CONTROLS & SEQUENCE OF OPERATIONS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/16/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT

CITY OF IRVINE
BUILDING & SAFETY DIVISION

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

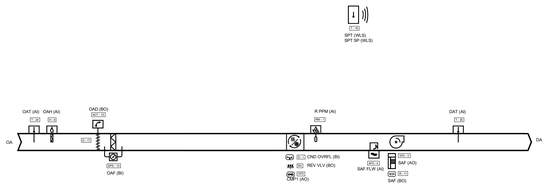
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Flow Diagram: PACKAGED RTU-2



Sequence of Operation: PACKAGED RTU-2

DOAU Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

DOAU Occupied:

The unit controller shall control the supply fan speed to maintain a constant volume (adj.).

DOAU Unoccupied:

Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. The outdoor air damper shall be commanded to close, and the return air damper shall open. If the unit is under Economizer conditions, the Outdoor Air Damper Position Command shall open to the Outdoor Air Damper Maximum Position Setpoint. Unoccupied Heating Mode shall be enabled when the Space Temperature falls below the Unoccupied Heating Enable Setpoint. During Unoccupied Heating Mode the unit shall run the heat to maintain 90°F (adj.) for the discharge air temperature. Unoccupied Heating Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Heating Setpoint. When there is no call for Unoccupied Heating Mode or Unoccupied Dehumid Mode, Unoccupied Cooling Mode shall be enabled when the Space Temperature rises above the Unoccupied Cooling Enable Setpoint. During Unoccupied Cooling Mode the unit shall run the cooling to maintain 50 deg. F for the discharge air temperature. Unoccupied Cooling Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Cooling Enable Setpoint.

DOAU Pre-Cool Mode:

During optimal start, if the space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.

DOAU Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensor. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

DOAU Heat/Cool Mode:

When the space temperature rises above the occupied cooling setpoint the mode shall transition to cooling. When the space temperature falls below the occupied heating setpoint the mode shall transition to heating. When the space temperature is above the occupied cooling setpoint or below the occupied heating setpoint the mode shall remain in its last state. If the space temperature sensor fails the mode shall remain in its last state and an alarm shall annunciate at the BAS. If the local and communicated setpoints fail the controller shall disable the supply fan and an alarm shall annunciate at the BAS.

DOAU Cooling:

Cooling Mode shall be enabled whenever the Outdoor Air Temperature rises above the Outdoor Air Cooling Enable Setpoint. When this occurs, heating shall not be allowed, regardless of space conditions. On units without head pressure control, the compressors shall be locked out if the Outdoor Air Temperature falls below the Compressor Low Ambient Lockout Setpoint and there is a demand for cooling. When this occurs, the unit shall display Compressor Low Ambient Lockout Active as an informational diagnostic.

DOAU Primary Heating:

Heating Mode shall be enabled whenever the Outdoor Air Temperature falls below the Outdoor Air Heating Enable Setpoint. When this occurs, cooling and dehumidification shall not be allowed, regardless of space conditions. During Heating Mode, Heat Capacity shall be adjusted to maintain the Discharge Air Temperature to Discharge Air Temperature Setpoint. The unit controller shall monitor the status of the heater using Heat On Off Status Local. In the event of ignition failure, the unit shall make three ignition attempts before displaying Diagnostic: Heat Failure. The unit shall shut down when a heat failure occurs and shall a reset four hours later to re-attempt ignition.

DOAU Ventilation:

Ventilation Mode shall be enabled when the Outdoor Air Temperature and the Space Temperature is within two degrees of the Space Temperature Setpoint. During Ventilation Mode, heating and cooling shall be locked out and the unit shall supply un-conditioned air.

DOAU Supply Fan Operation:

When the unit becomes occupied, the outdoor air damper shall open. When the outdoor air damper is completely open the damper end switch shall close indicating the damper is fully open and the supply fan sequence can begin. When the fan start sequence has begun, the unit controller shall command the variable speed drive for the supply fan to 50%. A supply fan status switch shall prove fan status. If after 2 minutes (adj.) the fan does not have a proven signal, the Supply Fan Failure alarm shall be displayed and the unit shall shutdown requiring a manual reset. Supply and relief fans are interlocked via software; a failure of either shall disable both.

Refrigerant Mitigation Mode:

The unit controller will monitor the leak detection system, when a leak is detected, an alarm will promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation will be activated.

In occupied mode, the supply fan will remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

In unoccupied mode, the supply fan will remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

Points List: PACKAGED RTU-2

System Point Description	POINTS								ALARMS			
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
COMPRESSOR 1 COMMAND CMP1	X				X										
CONDENSATE OVERFLOW DETECTION LOCAL CND OVRFL	X		X									X			
DISCHARGE AIR TEMPERATURE DAT	X	X												X	
DX COIL LEAVING AIR TEMPERATURE LOCAL DX LAT	X	X								X	X			X	
OUTDOOR AIR DAMPER COMMAND OAD	X				X										
OUTDOOR AIR DAMPER END SWITCH OAD	X		X												
OUTSIDE AIR FILTER STATUS OAF	X		X												
OUTSIDE AIR HUMIDITY LOCAL OAH	X	X												X	
OUTSIDE AIR TEMPERATURE LOCAL OAT	X	X												X	
PRIMARY FILTER STATUS LOCAL FIL	X		X									X			
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR A R ALM A		X													
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR B R ALM B		X													
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR C R ALM C		X													
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR D R ALM D		X													
REFRIGERANT CONCENTRATION BAS R PPM				X											
REFRIGERANT HIGH SIDE PRESSURE (63HS1) R HI		X													
REFRIGERANT LOW SIDE PRESSURE (63LS) R LO		X													
DUCT REFRIGERANT MONITOR R PPM		X													
REFRIGERANT LEAK DETECTION SYSTEM INPUT R IN			X												
REFRIGERANT LEAK SENSOR COMMUNICATION STATUS SENSOR A R STS A						X									
REFRIGERANT LFL CONCENTRATION SENSOR A R PPM A		X													
REFRIGERANT LFL CONCENTRATION SENSOR B R PPM B		X													
REFRIGERANT LFL CONCENTRATION SENSOR C R PPM C		X													
REFRIGERANT LFL CONCENTRATION SENSOR D R PPM D		X													
REFRIGERANT MITIGATION ACTIVE R MGT			X												
REFRIGERANT TYPE R TYPE						X									
REVERSING VALVE REV VLV	X				X										
SPACE TEMPERATURE LOCAL (WIRELESS) SPT	X						X			X	X				
SPACE TEMPERATURE SETPOINT LOCAL (WIRELESS) SPT SP	X						X								
SUPPLY FAN AIR FLOW SAF FLW	X	X								X	X			X	
SUPPLY FAN SPEED SAF				X											
SUPPLY FAN START/STOP SAF	X				X										
COMPRESSOR ENABLE CMP ENA	X					X									
COMPRESSOR LOCKOUT STATUS CMP LOK						X									
COOL OUTPUT CLG						X									
HEAT / COOL MODE REQUEST H/C REQ	X					X									
OCCUPANCY OCC	X					X									
OCCUPIED COOLING SETPOINT OCC CLG SP	X					X									
UNOCCUPIED COOLING SETPOINT UNOCC CLG SP	X					X									
UNOCCUPIED HEATING SETPOINT UNOCC HTG SP	X					X									
SUPPLY FAN AIR FLOW SETPOINT SAF FLW SP						X									

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MECHANICAL CONTROLS & SEQUENCE OF OPERATIONS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/06/2026	PLAN CHECK CORRECTIONS 3
	01/26/2026	OC-HEALTH DEPT

CITY OF IRVINE BUILDING & SAFETY DIVISION

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

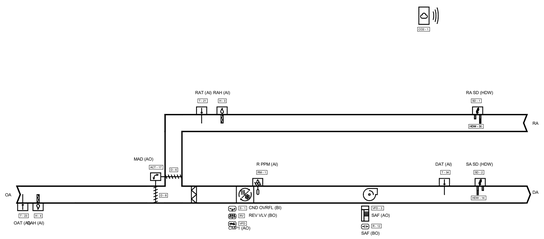
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Flow Diagram: PACKAGED RTU-7-17 [QTY: 11]



Sequence of Operation: PACKAGED RTU-7-17 [QTY: 11]

Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

Occupied:

During occupied periods, the supply fan shall run continuously and the mixed air dampers shall open to maintain minimum ventilation requirements. If economizing is enabled, the outdoor air or mixed air dampers shall modulate to maintain the discharge air temperature setpoint and the relief air damper shall track the mixed air dampers.

Unoccupied:

When the space temperature is below the unoccupied heating setpoint of 60.0 deg. F (adj.) the supply fan shall be commanded on, the outside air damper shall remain closed and the gas heat shall be enabled. When the space temperature rises above the unoccupied heating setpoint of 60.0 deg. F (adj.) plus the unoccupied differential of 4.0 deg. F (adj.) the supply fan shall stop and the gas heat shall be disabled.

Optimal Start:

The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to calculate when the optimal start occurs.

Optimal Stop:

The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall maintain the space temperature to the space temperature offset setpoint. Outside air damper shall remain enabled to provide minimum ventilation.

Morning Warm-Up Mode:

During optimal start, if the space temperature is below the occupied heating setpoint a morning warm-up mode shall be activated. When morning warm-up is initiated the unit shall enable the heating and fan(s). The outside air damper shall remain closed. When the space temperature reaches the occupied heating setpoint (adj.), the unit shall transition to the occupied mode.

Pre-Cool Mode:

During optimal start, if the space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling or economizer. The outside air damper shall remain closed, unless economizing. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.

Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensor. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

Heat/Cool Mode:

When the space temperature rises above the occupied cooling setpoint the mode shall transition to cooling. When the space temperature falls below the occupied heating setpoint the mode shall transition to heating. When the space temperature is above the occupied cooling setpoint or below the occupied heating setpoint the mode shall remain in its last state. If the space temperature sensor fails the mode shall remain in its last state and an alarm shall annunciate at the BAS. If the local and communicated setpoints fail the controller shall disable the supply fan and an alarm shall annunciate at the BAS.

Economizer:

ENABLE (Comparative Enthalpy): Outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point. The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB. The economizer shall disable when OA enthalpy is greater than RA enthalpy.

OPERATION: The supply air sensor shall measure the dry bulb temperature of the air leaving the evaporator coil while economizing. When economizing is enabled and the unit is operating in the cooling mode, the economizer damper shall modulate between its minimum position and 100% to maintain the space temperature setpoint. Minimum position shall be calculated based on supply fan speed. If the supply air temperature starts to fall below supply air temperature setpoint, the outdoor damper shall be at minimum position. Compressors shall be delayed from operating until the economizer has opened to 100% for 5 minutes.

Demand Control Ventilation (DCV):

If the space CO2 level is greater than or equal to the Design Minimum CO2 Setpoint, the outdoor air damper shall open to the Design Minimum Outdoor Air Damper Setpoint. If there is a call for economizer cooling, the damper may be opened further to satisfy the cooling request.

If the space CO2 level is less than or equal to the DCV Minimum CO2 Setpoint, the outdoor air damper shall close to the DCV Minimum Outdoor Air Damper Setpoint. If there is a call for economizer cooling, the damper may be opened further to satisfy the cooling request.

If the space CO2 level is greater than the DCV Minimum CO2 Setpoint and less than the Design Minimum CO2 Setpoint, the outdoor air damper position shall be modulated proportionally to the space CO2 level relative to a target position between the DCV Minimum CO2 Setpoint and the Design Minimum CO2 Setpoint. If there is a call for economizer cooling, the damper may be opened further to satisfy the cooling request.

Supply Fan:

The unit controller shall vary the supply fan speed to optimize minimum fan speed in all cooling and heating modes.

Condensate Overflow Shutdown:

The unit shall shut down in response to a signal from the condensate overflow sensor. The sensor shall be interlocked to the unit cooling controller for immediate shutdown of cooling.

Refrigerant Mitigation Mode:

The unit controller will monitor the leak detection system, when a leak is detected, an alarm will promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation will be activated.

In occupied mode, the supply fan will remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

In unoccupied mode, the supply fan will remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

Points List: PACKAGED RTU-7-17 [QTY: 11]

System Point Description	POINTS									ALARMS				
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LOCAL DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
COMPRESSOR 1 MODULATION COMMAND CMP1	X			X											
CONDENSATE OVERFLOW DETECTION LOCAL CND OVRFL	X		X								X				
COOLING OUTPUT COMMAND CLG	X			X											
DISCHARGE AIR TEMPERATURE DAT	X	X												X	
HEATING OUTPUT COMMAND HTG	X			X											
MIXED AIR DAMPER MAD	X			X											
OUTSIDE AIR DAMPER COMMAND OAD	X			X											
OUTSIDE AIR HUMIDITY LOCAL OAH	X	X												X	
OUTSIDE AIR TEMPERATURE LOCAL OAT	X	X												X	
PRIMARY FILTER STATUS LOCAL FIL	X		X								X				
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR A R ALM A		X													
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR B R ALM B		X													
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR C R ALM C		X													
REFRIGERANT LFL CONCENTRATION ALARM THRESHOLD SENSOR D R ALM D		X													
REFRIGERANT CONCENTRATION BAS R PPM				X											
REFRIGERANT HIGH SIDE PRESSURE (63HS1) R HI		X													
REFRIGERANT LOW SIDE PRESSURE (63LS) R LO		X													
DUCT REFRIGERANT MONITOR R PPM		X													
REFRIGERANT LEAK DETECTION SYSTEM INPUT R IN			X												
REFRIGERANT LEAK SENSOR COMMUNICATION STATUS SENSOR A R STS A						X									
REFRIGERANT LFL CONCENTRATION SENSOR A R PPM A		X													
REFRIGERANT LFL CONCENTRATION SENSOR B R PPM B		X													
REFRIGERANT LFL CONCENTRATION SENSOR C R PPM C		X													
REFRIGERANT LFL CONCENTRATION SENSOR D R PPM D		X													
REFRIGERANT MITIGATION ACTIVE R MGT			X												
REFRIGERANT TYPE R TYPE						X									
RETURN AIR HUMIDITY LOCAL RAH	X	X												X	
RETURN AIR SMOKE DETECTION LOCAL RA SD							X								
RETURN AIR TEMPERATURE LOCAL RAT	X	X												X	
REVERSING VALVE REV VLV	X				X										
SPACE HUMIDITY LOCAL (WIRELESS) SPH	X							X							
SPACE TEMPERATURE LOCAL (WIRELESS) SPT	X							X		X	X				
SPACE TEMPERATURE SETPOINT LOCAL (WIRELESS) SPT SP	X							X							
SUPPLY AIR SMOKE DETECTION LOCAL SA SD								X							
SUPPLY FAN SPEED SAF					X										
SUPPLY FAN START/STOP SAF	X				X										
SUPPLY FAN STATUS LOCAL SAF	X		X												
APPLICATION MODE APP MODE						X									
BAS COMMUNICATION STATE BAS COM						X									X
COMPRESSOR ENABLE CMP ENA	X					X									
COMPRESSOR LOCKOUT STATUS CMP LCK						X									
COOL OUTPUT CLG						X									
DISCHARGE AIR STATIC PRESSURE SETPOINT DA SP SPT	X					X									
ECONOMIZER ENABLE ECON ENA						X									
ECONOMIZER MINIMUM POSITION SETPOINT ECON MIN POS SP	X					X									
FAN MODE COMMAND FAN MODE						X									
FILTER TIMER HOURS FIL HRS						X									
HEAT / COOL MODE REQUEST H/C REQ	X					X									
HEAT OUTPUT HTG						X									
OCCUPANCY OCC	X					X									
OCCUPIED COOLING SETPOINT OCC CLG SP	X					X									
SPACE CO2 HIGH LIMIT SP CO2 HL						X									
SPACE TEMPERATURE SETPOINT ACTIVE SPT SP ACT	X					X									
TIMED OVERRIDE STATUS TOV						X									
UNOCCUPIED COOLING SETPOINT UNOCC CLG SP	X					X									
UNOCCUPIED HEATING SETPOINT UNOCC HTG SP	X					X									

CITY OF IRVINE
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4	01/26/2026	OC HEALTH DEPT

PA/PM:	BL
DRAWN BY.:	DG
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SYMBOL LIST NOTE:

MOUNTING HEIGHTS FOR DEVICES AND EQUIPMENT TO BE MEASURED FROM FLOOR TO CENTERLINE OF DEVICE. DEVICES EXTENDING GREATER THAN 4" FROM THE WALL SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 80" AFF TO BOTTOM OF DEVICE.

PANELS:

XXX' XXX' — ELECTRICAL PANEL - SURFACE / RECESSED

EQUIPMENT CABINETS:

WITHOUT DOOR - SURFACE / RECESSED

WITH DOOR - SURFACE / RECESSED

XXX' XXX'

DENOTES THE FOLLOWING
(FAAP) FIRE ALARM ANNUNCIATOR PANEL
(FACP) FIRE ALARM CONTROL PANEL
(LCP) LIGHTING CONTROL PANEL
(SACP) SECURITY ACCESS CONTROL PANEL

POWER:

SIMPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

X M XXX — DUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

XXX DENOTES THE RECEPTACLE TYPE OR EQUIPMENT SERVED (WP) WEATHERPROOF WITH GFI RECEPTACLE

X DENOTES CIRCUIT NUMBER

DUPLEX RECEPTACLE - ISOLATED GROUND - MOUNTED AT 18" AFF UNLESS NOTED OTHERWISE

DUPLEX RECEPTACLE - GFCI (INDICATED BY CENTER HATCH) - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

DUPLEX RECEPTACLE - GFCI - MOUNTED 4" ABOVE COUNTERTOP OR COUNTER BACKSPLASH WHERE PRESENT

DUPLEX RECEPTACLE - SWITCHED TOP HALF - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

DUPLEX RECEPTACLE - MOUNTED 4" ABOVE COUNTERTOP OR COUNTER BACKSPLASH WHERE PRESENT

DUPLEX RECEPTACLE - CEILING MOUNTED

DUPLEX RECEPTACLE - FURNITURE MOUNT

NON NEMA 5-20R RECEPTACLE

QUADRUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

QUADRUPLEX RECEPTACLE - GFCI (INDICATED BY CENTER HATCH) - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

QUADRUPLEX RECEPTACLE - SWITCHED TOP HALF - MOUNTED 18" AFF UNLESS NOTED OTHERWISE

QUADRUPLEX RECEPTACLE - MOUNTED 4" ABOVE COUNTERTOP OR COUNTER BACKSPLASH WHERE PRESENT

QUADRUPLEX RECEPTACLE - CEILING MOUNTED

QUADRUPLEX RECEPTACLE - FURNITURE MOUNT

QUADRUPLEX RECEPTACLE - ISOLATED GROUND

FLOOR MOUNTED ELECTRICAL BOX

XPP — POWER POLE. X DENOTES DEVICE TYPE AND INCLUDED RECEPTACLES.

DISCONNECT SWITCH

FUSED DISCONNECT SWITCH

MOTOR STARTER

METER SOCKET

TRANSFORMER. WALL / FLOOR MOUNTED

T-XX T-XX — INDICATES TRANSFORMER MOUNTED ON EQUIPMENT PAD

JUNCTION BOX WITH WHIP FOR FURNITURE FEED

JUNCTION BOX

PULL BOX

PUSHBUTTON SWITCH - MOUNT AT 44" AFF UNLESS NOTED OTHERWISE

XXX DENOTES THE FOLLOWING
(CD) COMPUTER DROP OUT
(D) DOOR BELL STATION
(EPO) EMERGENCY - POWER OFF STATION
(ES) EQUIPMENT SHUTDOWN
(F) FAN SHUTDOWN

AD — AUTOMATIC DOOR OPERATOR (SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT)

GM — GROUND MODULE

GROUND ROD

MARK / X / X / NUMBER — EQUIPMENT TAG

MOTOR CONNECTION

CONDUCTOR QUANTITY IN RACEWAY. NUMBERS INDICATE WIRE SIZES (AWG).
INDICATES PHASE CONDUCTOR
INDICATES NEUTRAL CONDUCTOR
INDICATES GREEN GROUND CONDUCTOR

TECHNOLOGY:

#X — # DENOTES QUANTITY, X DENOTES DEVICE TYPE

#V — TECHNOLOGY OUTLET WITH BACKBOX, CONDUIT, AND INDICATED DEVICES AND CABLES. 4" ABOVE COUNTER/COUNTER BACKSPLASH WHERE PRESENT.

#X — TECHNOLOGY OUTLET WITH BACKBOX, CONDUIT, AND INDICATED DEVICES AND CABLES. 18" AFF UNLESS NOTED OTHERWISE.

#X — TECHNOLOGY OUTLET WITH BACKBOX, CONDUIT, AND INDICATED DEVICES AND CABLES. FURNITURE MOUNTED.

FLOOR MOUNTED DATA BOX

CEILING MOUNTED DATA BOX

WAP WAP — WIRELESS ACCESS POINT

SLEEVE THROUGH WALL

FIRE RATED SLEEVE THROUGH FLOOR

CONDUIT SLEEVE THROUGH FLOOR

FREE STANDING OPEN FRAME DATA CABINET. (HEAVY LINE INDICATES FRONT OF CABINET)

FREE STANDING ENCLOSED FRAME DATA CABINET. FLOOR MOUNTED / WALL MOUNTED. (HEAVY LINE INDICATES FRONT OF CABINET)

GROUND BUS BAR

LIGHTING:

NOTE: SHADING ANY OF THE LIGHTING FIXTURE INDICATES UNIT IS WIRED TO AN EMERGENCY OR NIGHT LIGHTING CIRCUIT.

CEILING MOUNTED FIXTURE - SURFACE / RECESSED

1a A — FIXTURE DESIGNATION (SEE SCHEDULE); SWITCH LEG. NO DESIGNATION INDICATES PORTION OF CIRCUIT SWITCHED FROM LOCAL SWITCH AND/OR OCCUPANCY SENSOR

CIRCUIT NUMBER (SEE PANEL BOUNDARIES)

ILLUMINATED DOME FIXTURE - RECESSED

STRIP LIGHT FIXTURE

LINEAR WALL MOUNTED FIXTURE

TRACK LIGHT FIXTURE - SPOT LIGHT / PENDANT

CEILING MOUNTED DOWNLIGHT FIXTURE - SURFACE / RECESSED

CEILING MOUNTED DOWNLIGHT FIXTURE - WALL WASH - SURFACE / RECESSED

POLE MOUNTED FIXTURE

WALL MOUNTED FIXTURE - SURFACE / RECESSED

GROUND MOUNTED FIXTURE - BOLLARD / FLOOD OR ACCENT

EXIT LIGHT - WALL MOUNTED / CEILING MOUNTED PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLAN

EMERGENCY BATTERY POWER SPOT ILLUMINATION UNIT - DUAL HEAD LIGHT - WALL MOUNT 12" BELOW CEILING UNLESS NOTED OTHERWISE.

BATTERY PACK REMOTE HEAD SPOT ILLUMINATION UNIT

SWITCHING DEVICES:

NOTE: ALL SWITCHING DEVICES SHALL BE MOUNTED AT 44" AFF, UNLESS OTHERWISE NOTED.

X XX — SINGLE POLE TOGGLE SWITCH

XX DENOTES THE FOLLOWING
(2) DOUBLE POLE
(3W) 3 WAY
(4W) 4 WAY
(DLS) DUAL LEVEL SWITCHING
(K) KEY OPERATED
(P) WITH PILOT LIGHT INDICATION
(T) TIMER SWITCH

X DENOTES SWITCH DESIGNATION (LOWER CASE)

DIMMER SWITCH

DS — DAYLIGHT SENSOR.

MS — MOTION DETECTOR.

OS — OCCUPANCY SENSOR.

VS — VACANCY SENSOR.

C — CONTACTOR.

D — DIMMING SYSTEM CONTROL STATION.

L — LOW VOLTAGE SWITCH STATION.

PC — PHOTO-CONTROL.

T — TIME CLOCK.

PA — POWER PACK

SYSTEMS:

P P / XX/XX XX/XX — PAGING AND SOUND SYSTEM - CEILING / WALL

XX DENOTES THE FOLLOWING
(DP) COMBINATION HOUSE PAGING & WIRED RADIO
(DP) DEPARTMENTAL PAGING
(HP) HOUSE PAGING
(LM) LOCAL MUSIC
(TS) TELEVISION SOUND REINFORCEMENT SYSTEM WIRED
(WR) RADIO

XX DENOTES THE FOLLOWING
(CR) CEILING MOUNTED RECESSED SPEAKER
(CS) CEILING MOUNTED SURFACE SPEAKER
(FS) FOOT SWITCH
(MC) MICROPHONE JACK - CEILING MOUNTED
(MD) MICROPHONE JACK - DESK MOUNTED
(MF) MICROPHONE JACK - FLOOR MOUNTED
(MW) MICROPHONE JACK - WALL MOUNTED
(RE) RE - ENTRANT TYPE HORN
(VC) VOLUME CONTROL
(VS) VOLUME CONTROL WITH 6 POSITION STATION SELECTOR
(WR) WALL MOUNTED RECESSED SPEAKER
(WS) WALL MOUNTED SURFACE SPEAKER

SECURITY:

D D / XX XX — DOOR HARDWARE INSTALLATION - CEILING / WALL (SEE DETAILS, ARCHITECTURAL PLANS AND SPECIFICATIONS)

XX DENOTES THE FOLLOWING
(AA) AUTODOOR ACTUATOR (PUSH PLATE)
(AM) AUTODOOR ACTUATOR (MOTION SENSOR)
(AO) AUTODOOR OPERATOR
(ED) ELECTRICAL EXITING DEVICE
(DE) DELAYED EGRESS MODULE
(EL) ELECTROMAGNETIC LOCK
(ES) ELECTRICAL STRIKE
(KS) KEY SWITCH
(PS) POWER SUPPLY
(PT) POWER TRANSFER HINGE
(RL) RELAY MODULE
(RM) SEPARATELY MOUNTED REQUEST TO EXIT MOTION SENSOR NOT ASSOCIATED WITH SECURITY SYSTEM

S S / XX XX — SECURITY, ACCESS CONTROL AND DOOR MOUNTING - CEILING / WALL

XX DENOTES THE FOLLOWING
(BIO) BIOMETRIC READER
(CR) CARD READER
(DB) DURESS - PUSHBUTTON
(DC) DOOR CONTACT
(DP) DOOR POSITION INDICATOR SWITCH
(DR) DOOR RELEASE - PUSHBUTTON
(EL) ELECTROMAGNETIC LOCK
(ES) ELECTRIC STRIKE
(GB) GLASS BREAK DETECTOR
(KE) KEYLESS ENTRY
(KP) KEYPAD - SECURITY SYSTEM
(KS) KEEPER SWITCH
(MD) MOTION SENSOR - DUAL TECHNOLOGY
(MI) MOTION SENSOR - INFRARED
(MU) MOTION SENSOR - ULTRASONIC
(PB) PANIC BUTTON
(RM) REQUEST FOR EXIT - MOTION
(RP) REQUEST FOR EXIT - PUSH BUTTON

GENERAL:

(##) DRAWING KEYNOTE SYMBOL

DETAIL NUMBER / SHEET NUMBER — BUILDING SECTION

DETAIL NUMBER / SHEET NUMBER — BUILDING ELEVATION

DETAIL NUMBER / SHEET NUMBER — CALLOUT BOUNDARY

DETAIL NUMBER / SHEET NUMBER — VIEW REFERENCE CALLOUT

+X' - X" — MOUNTING HEIGHT DESIGNATION

RENOVATION LEGEND:

(E)	EXISTING TO REMAIN
(ED)	EXISTING LOCATION, NEW DEVICE OR EQUIPMENT TO BE INSTALLED IN PLACE
(ER)	EXISTING TO BE RELOCATED
(EO)	EXISTING TO BE REMOVED
(EN)	EXISTING IN NEW LOCATION
(RAI)	REMAIN AS IS

ELECTRICAL ABBREVIATIONS:

A/E	ARCHITECT/ENGINEER
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AVAILABLE INTERRUPTING CURRENT
ALT	ALTERNATE
ALT SW	ALTERNATOR SWITCH
ARCH	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
BFG	BELOW FINAL GRADE
BKR	BREAKER
BLDG	BUILDING
BOL	BUILT IN OVERLOAD
BPC	BOLTED PRESSURE CONTACT SWITCH
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CP	CONTROL PANEL
CS	COMBINATION STARTER
CT	CURRENT TRANSFORMER
DE	DUAL ELEMENT FUSES
DIR	DIRECT
DISC	DISCONNECT
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION REFERENCE
EM	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
ENT	ELECTRICAL NON-METALLIC TUBING
EOL	END OF LINE RESISTOR
EP	EXPLOSION PROOF
EWC	ELECTRIC WATER COOLER
F	FLUSH
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FDR	FEEDER
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FLUOR	FLUORESCENT
FS	FLOW SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
GRD	GROUND
GYP	GYPSUM BOARD
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SWITCH
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HVAC	HEATING & VENTILATING - AIR CONDITIONING
HVC	HEATING VENTILATING CONTRACTOR
HW	HEAVYWALL
ID	INDIRECT
IL	INTERLOCK
IMC	INTERMEDIATE METAL CONDUIT
INC	INCANDESCENT
IU	IN UNIT
J-BOX	JUNCTION BOX
LG	LAY-IN GRID
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LINE VOLTAGE THERMOSTAT
MAG	MAGNETIC STARTER
MAN	MANUAL STARTER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
NIC	NOT IN CONTRACT
NU	NEAR UNIT
OU	ON UNIT
P	POLE
PB	PUSH BUTTON
PC	PHOTO CONTROL
PE SW	PNEUMATIC SWITCH
PEND	PENDANT
PLBG	PLUMBING CONTRACTOR
PNL	PANEL
R	RELAY
REC	RECESS
RECEPT	RECEPTACLE
RM	ROOM
RVS	REDUCED VOLTAGE STARTING
S	SPLINE
SEL SW	SELECTOR SWITCH
SP SW	SPEED SWITCH
SURF	SURFACE
SW	SWITCH
TC	TIME CLOCK
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UNIV	UNIVERSAL
USS	UNIT SUBSTATION
WP	WEATHERPROOF
XFMR	TRANSFORMER

DETECTORS:

SS — COMBINED SMOKE-GAS DETECTOR - CEILING MOUNTED

COMBINED SMOKE-HEAT DETECTOR - CEILING MOUNTED

R/S — DUCT SMOKE DETECTOR - RECTANGULAR/SQUARE

XX — GAS DETECTOR

XX DENOTES THE FOLLOWING
(CO) CARBON MONOXIDE

X XX — HEAT DETECTOR - CEILING MOUNTED

XX DENOTES THE FOLLOWING
(F) FIXED TEMPERATURE
(R) RATE OF RISE
(R/C) RATE COMPENSATION
(R/F) COMBINED RISE AND FIXED TEMPERATURE

X DENOTES THE FOLLOWING
(W) WALL MOUNTED

X — SMOKE DETECTOR

X DENOTES THE FOLLOWING:
(W) WALL MOUNTED

MF — FLOW SWITCH

MS — TAMPER SWITCH

P — MANUAL PULL STATION

PS — WATER PRESSURE SWITCH

NOTIFICATION DEVICES:

W — COMBINATION HORN-STROBE - CEILING / WALL MOUNTED

RTS — REMOTE ALARM INDICATING AND TEST SWITCH

W — STROBE - CEILING / WALL MOUNTED

W — COMBINATION SPEAKER-STROBE - CEILING / WALL MOUNTED

GENERAL NOTES

1. THE CONTRACTOR PROPOSING TO PERFORM THE ELECTRICAL WORK SHALL VISIT THE JOB SITE AND FULLY INFORM THEMSELVES OF ALL CONDITIONS THAT AFFECT THE WORK, OR COST THEREOF, AND EXAMINE THE DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTING HIS BID.
2. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE PERFORMANCE OF THE WORK.
3. THE CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THIS WORK SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT SPECIFICATIONS BEFORE COMMENCING ANY WORK. THE PROJECT SPECIFICATIONS AND DRAWINGS FORM THE BASIS OF THIS CONTRACT REQUIREMENTS AND INCLUDE THE TYPE AND GRADE OF MATERIALS TO BE INSTALLED, EQUIPMENT TO BE FURNISHED, THE MANNER BY WHICH TO BE INSTALLED AND WHERE TO BE LOCATED. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT SPECIFICATIONS AND DRAWINGS, SPECIFICATIONS GOVERN UNLESS THE ARCHITECT/ENGINEER DIRECTS OTHERWISE.
4. THE ELECTRICAL CONTRACTOR SHALL CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO ENSURE THAT NO FIXTURE, OUTLET, ALARM STATION OR CONTROL AND POWER WIRING IS OMITTED. HE SHALL CONSULT ALL TRADES FURNISHING EQUIPMENT AND OBTAIN FROM THEM ALL DATA. IN SOME CASES EQUIPMENT, FIXTURES AND DEVICES ARE SHOWN ONLY. ASCERTAIN AND PROVIDE THE WIRING AND CONTROL STATIONS REQUIRED FOR THE PROPER FUNCTION OF BUILDING EQUIPMENT. NO EXTRA CHARGES SHALL BE ACCEPTED BY OWNER AFTER BIDDING FOR SUCH EQUIPMENT AND LABOR.
5. EQUIPMENT LABELS AND INSTRUCTIONS REGARDING THE APPLICATION AND INSTALLATION OF THE LISTED EQUIPMENT SHALL BE FOLLOWED TO ENSURE THAT THE EQUIPMENT IS BEING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING INSTRUCTIONS. THE TEMPERATURE RATING OF THE EQUIPMENT TERMINATIONS MUST BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
6. COORDINATE WORK WITH OTHER TRADES AND INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.
7. ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS.
8. CONDUIT RUNS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. ALL CONDUITS SHALL RUN CONCEALED, EXCEPT IN EQUIPMENT ROOMS AND WHERE APPROVED BY ARCHITECT.
9. FURNISH AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS.
10. POWER AND DATA DEVICES SHALL BE SPACED NO MORE THAN 4" APART. PROVIDE JUNCTION BOX MOUNTING BRACKET BETWEEN STUDS AS NEEDED.
11. ALL RECEPTACLES, TELEPHONE, AND DATA OUTLETS SHALL BE MOUNTED AT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. ALL DEVICES SHALL BE NEW UNLESS OTHERWISE NOTED.
12. ALL FIRE ALARM SIGNAL DEVICES SHALL BE MOUNTED AT 80" AFF IN ACCORDANCE WITH ADA, UNLESS OTHERWISE NOTED.
13. DETERMINE, IN ADVANCE OF PURCHASE, THAT ALL ELECTRICAL MATERIALS AND EQUIPMENT TO BE INSTALLED SHALL FIT INTO THE ROOM OR SPACE ALLOCATED, AS INDICATED ON THE DRAWINGS, ALLOWING SUFFICIENT CLEARANCE FOR THE SAFE SERVICE AND/OR MAINTENANCE OF RELATED EQUIPMENT, INCLUDING THAT OF OTHER TRADES.
14. TELEPHONE AND DATA BOXES, CONDUITS, AND WIRING/CABLE SHALL BE PROVIDED BY EC. SECURITY CAMERAS SHALL BE PROVIDED BY NORTH SCHOOL DISTRICT INSTALLED BY EC. COOORDINATE ALL CAMERA LOCATIONS WITH SCHOOL DISTRICT.
15. CONDUCTORS SUPPLYING CIRCUITS SHALL NOT BE LESS THAN #12 AWG COPPER FOR ANY CIRCUIT.
16. AT THE COMPLETION OF THE JOB, IT WILL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO TURN OVER TO THE BUILDING MANAGER AN AS-BUILT-DRAWING IN REPRODUCIBLE FORM. THESE DRAWINGS DO NOT HAVE TO BE MADE FROM SCRATCH. THE ENGINEER'S REFLECTED CEILING AND ELECTRICAL/TELEPHONE PLANS MAY BE USED AS BACKGROUND WITH THE ACTUAL CIRCUITING CHANGES ADDED.
17. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL J-BOX AND 3/4"C FOR MECHANICAL THERMOSTAT + CONTROLS. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
18. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE 2022 CEC AND THE LATEST REQUIREMENTS OF ALL CODES AND REGULATIONS.
19. ALL EXTERIOR RECEPTACLES SHALL HAVE METAL COVERS.
20. EC SHALL UPSIZE WIRE AND CONDUIT AS REQUIRED FOR VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH A MAXIMUM OF A 3% VOLTAGE DROP, AND FEEDERS SHALL BE INSTALLED WITH A MAXIMUM OF 2% VOLTAGE DROP. NO ELECTRICAL CIRCUITS SHALL EXCEED A VOLTAGE DROP OF MORE THAN 5%.
21. DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS A CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER OF RECORD. AS STATED IN SPECIFICATION DIV 1, THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
22. ALL EXPOSED ELECTRICAL CONDUIT, CABLE, AND JUNCTION BOXES INSTALLED OPEN CEILING CEILINGS SHALL BE PAINTED. MC CABLE AND FLEXIBLE CONDUIT SHALL BE LIMITED IN EXPOSED OPEN CEILING LOCATIONS TO A 6-0" MAXIMUM LENGTH FOR INDIVIDUAL WHIPS FOR EQUIPMENT CONNECTIONS. INSTALL ALL CONDUIT, CABLE, AND JUNCTION BOXES IN A NEAT AND CONSISTENT MANNER. COLOR SELECTIONS BY ARCHITECT.
23. TYPE MC CABLE SHALL BE INSTALLED FOR BRANCH CIRCUITS IN ONLY CONCEALED LOCATIONS WITHIN THE SPACE THAT THE LIGHTING, EQUIPMENT, AND/OR RECEPTACLE DEVICES IT SERVES ARE LOCATED, UNLESS NOTED OTHERWISE.
24. ALL DATA, SECURITY, ADN ACCESS POINT CABLING SHALL BE PLENUM RATED CAT-6A. CABLE TERMINATION JACKS AND CABLING TO BE COLOR-CODED PER NORTH SCOTT SCHOOL DISTRICTS STANDARDS. (DATA - BLUE, CAMERAS - GREEN) PROVIDE 10' SERVICE LOOPS AT END OF CABLE. DATA AND SECURITY CABLING IN BUILDING ADDITION SHALL BE PULLED TO NEAREST MDF OR IDF SPACE LOCATED IN THE BUILDING.
25. ALL LOW VOLTAGE CABLING SHALL BE PLENUM RATED WHEN INSTALLED IN MECHANICAL PLENUM RETURN SPACES.
26. ELECTRICAL EQUIPMENT SHALL BE LISTED BY A CITY OF IRVINE RECOGNIZED ELECTRICAL TESTING LABORATORY OR APPROVED BY THE DEPARTMENT PER CITY OF IRVINE BULLETIN #195.

DEFERRED SUBMITTALS TO TI SCOPE:

DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEERS OF RECORD WHO SHALL REVIEW AND PROVIDE NOTATION INDICATING DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE BUILDING DESIGN.

SUBMITTAL MATERIALS SHALL INCLUDE PLANS, DETAILS, AND CALCULATIONS PREPARED AND SIGNED BY A STATE REGISTERED ENGINEER.

CONTRACTOR SHALL SUBMIT ARCHITECT AND ENGINEER REVIEWED SUBMITTAL MATERIALS TO THE BUILDING OFFICIAL FOR REVIEW AND PERMIT APPROVAL. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED PRIOR TO OBTAINING THE BUILDING OFFICIAL'S APPROVAL OF THE SUBMITTAL.

1. FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.

NOTE:
PORTIONS OF THE PROJECT THAT ARE DEFERRED SHALL BE SUBJECT TO THE CODES, STANDARDS, AND OTHER APPLICABLE REQUIREMENTS IN FORCE ON THE DATE THAT THE DEFERRED PLAN IS SUBMITTED TO OCFA.

PHASE 2 ELECTRICAL SCOPE OF WORK:

THE CONSTRUCTION OF THIS PROJECT IS PLANNED TO BE COMPLETED IN TWO PHASES. PHASE 1 WILL BE COMPLETED BY THE DEVELOPER (LINCOLN PROPERTIES), AND PHASE 2 WILL BE COMPLETED BY THE CITY OF IRVINE TO COMPLETE THE BUILDOUT. THE BUILDING IS NOT PLANNED TO RECIEVE A CERTIFICATE OF OCCUPANCY UNTIL PHASE 2 CONSTRUCTION IS COMPLETED. THEREFORE, ALL TITLE 24 DOCUMENTATION FOR INDOOR IS DEFERRED AND PROVIDED IN THE PHASE 2 PERMIT/CONSTRUCTION DOCUMENTATION PACKAGE.

PHASE 2 ELECTRICAL SCOPE INCLUDES:

1. ELECTRICAL SERVICES FOR PHASE 2 SPACES.
2. ADDITION OF COMMERCIAL KITCHEN.
3. INTERIOR LIGHTING TO COMPLETE PHASE 2 CONSTRUCTION.

FIRE ALARM GENERAL NOTES

1. PROVIDE A NEW FIRE ALARM SYSTEM WITH EMERGENCY VOICE NOTIFICATION PER THE CFC 2022.
2. FIRE ALARM SHALL BE DESIGN-BUILD BY CONTRACTOR. DEVICES ARE SHOWN FOR REFERENCE ONLY. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ANY ADDITIONAL REQUIREMENTS WITH THE FIRE MARSHALL AND ADJUST LAYOUT AS NECESSARY.
3. THE FOLLOWING FIRE ALARM DRAWINGS ARE SCHEMATIC ONLY. THE CONTRACTOR IS RESPONSIBLE FOR BIDDING A COMPLETE & OPERATIONAL FIRE ALARM SYSTEM THAT MEETS LOCAL CODE. PROVIDE DEVICES AS REQUIRED TO MEET LOCAL MINIMUM REQUIREMENTS & NFPA FIRE CODE.
4. CONTRACTOR IS RESPONSIBLE FOR TESTING THE SYSTEM TO CREATE A UL-LISTED, CODE-COMPLIANT FIRE ALARM SYSTEM AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
5. ALL FIRE ALARM PANELS SHALL BE AN APPROVED ADDRESSABLE TYPE.
6. A MAP INDICATING THE LOCATION OF ALL FIRE ALARM DEVICES SHALL BE POSTED DIRECTLY ADJACENT TO THE FIRE ALARM PANEL OR IN A LOCATION ACCEPTABLE TO THE FIRE PREVENTION BUREAU.
7. ALL SPEAKER/STROBE DEVICES MAY NOT BE SHOWN AS REQUIRED BY THE LOCAL JURISDICTION HAVING AUTHORITY. ALL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 72, ADA, STATE & LOCAL CODES. A COMPLETE FIRE ALARM DEVICE LAYOUT SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR.
8. CONDUIT & WIRING FOR ALL FIRE ALARM DEVICES TO BE RUN WITHIN COLUMNS OR WALLS WHERE APPLICABLE. ALL WIRING SHALL BE CONCEALED.
9. ALL FIRE ALARMS TO BE AUDIBLE & VISUAL, & COMPLY FULLY TO ICC/ANSI A117.1 SECTION 702. ALL VISUAL ALARMS TO BE SYNCHRONIZED THROUGHOUT.
10. DOOR LOCKS TO AUTOMATICALLY OPEN DURING A FIRE ALARM EVENT. PROVIDE ALL NECESSARY CABLING FROM THE DOOR SECURITY SYSTEM TO THE FIRE ALARM CONTROL PANEL.
11. UPON ACTIVATION OF A DUCT SMOKE DETECTOR, ALL MECHANICAL EQUIPMENT SHALL SHUT DOWN. RTU REMOTE TEST STATIONS SHALL HAVE LED INDICATOR.
12. PROVIDE ALL NECESSARY TAMPER AND FLOW SWITCHES FOR FIRE SUPPRESSION SYSTEM PER THE FIRE SUPPRESION DRAWINGS. COORDINATE EXACT LOCATION AND QUANTITY WITH THE FIRE SUPPRESION CONTRACTOR.
13. ALL JUNCTION BOXES HOUSING FIRE ALARM CABLE SHALL HAVE A RED COVER PLATE. COVER PLATE SHALL HAVE CIRCUIT INFORMATION.
14. ALL FIRE ALARM INITIATING DEVICES AND NOTIFICATION DEVICES SHALL BE LABELED WITH CIRCUIT INFORMATION AND ADDRESSIBLE SERIAL CODE AS APPLICABLE.
15. UTILIZE WIRING SIZES AND TYPES AS REQUIRED AND RECOMMENDED BY MANUFACTURER.
16. BATTERY BACK UP SHALL BE SIZED TO COMPLY WITH CODE REQUIREMENT AND LOCAL AMENDMENTS.
17. ALL BATTERIES INSTALLED SHALL BE NEW. FIELD LABEL ALL BATTERIES WITH DATE OF MANUFACTURING.
18. PROVIDE BOOSTER POWER SUPPLIES AS REQUIRED FOR CONNECTION ALL NOTIFICATION DEVICES INDICATED IN FLOOR PLANS. CIRCUITS RATED AT 3A SHALL NOT SERVE A LOAD TO EXCEED 2.5A. INCLUDE IN THE BID SMOKE DETECTOR IN ROOM HOUSING BOOSTERS IF NOT INDICATED IN FLOOR PLANS.
19. NOTIFICATION CIRUCITS VOLTAGE DROP SHALL NOT EXCEED 5% UNLESS OTHERWISE APPROVED BY THE MANUFACTURER AND/OR AHJ.
20. SLC CIRCUITS SHALL HAVE 20% SPARE CAPACITY FOR FUTURE EXPANSION.
21. ALL NOTIFICATION DEVICES SHALL BE SYNCHRONIZED AND SHALL COMPLY WITH ADA REQUIREMENTS. SET CANDELA RATINGS AS REQUIRED BY CODE AND/OR AS REQUIRED BY THE AHJ.
22. PROVIDE A NATURAL GAS DETECTOR AT EACH SOURCE OF NATURAL GAS INCLUDING IN THE FIRST ROOM SERVED BY EACH MAU OR LEAVING EACH RTU/AHU. PROVIDED CENTRAL MONITORING STATION AND TIE INTO FACP.

CITY OF IRVINE BUILDING & SAFETY DIVISION

ELECTRICAL SHEET INDEX:

SHEET NO.	SHEET NAME
ET000	ELECTRICAL LEGEND AND GENERAL NOTES
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ET100	OVERALL ELECTRICAL POWER PLAN
ET101	ELECTRICAL ENLARGED POWER PLAN
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ET200	OVERALL ELECTRICAL LIGHTING PLAN
ET201	ELECTRICAL ENLARGED LIGHTING PLAN
ET201P	ELECTRICAL ENLARGED LIGHTING PLAN - EGRESS PHOTOMETRIC
ET300	ELECTRICAL ONE LINE DIAGRAM
ET301	ELECTRICAL SCHEDULES
ET302	ELECTRICAL PANEL SCHEDULES
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ETF10	OVERALL ELECTRICAL FIRE ALARM PLAN
ETF11	ELECTRICAL ENLARGED FIRE ALARM PLAN
ETF12	ELECTRICAL ROOF FIRE ALARM PLAN

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IRVINE, CALIFORNIA 92614

ELECTRICAL LEGEND AND GENERAL NOTES

	DATE	REMARKS
1	07/09/

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

A. GENERAL REQUIREMENTS

1. SCOPE OF WORK

FURNISH AND INSTALL A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DRAWINGS. THE INSTALLATION SHALL BE COMPLETE IN EVERY DETAIL ESSENTIAL TO PROPER AND SATISFACTORY OPERATION, READY FOR USE AND IN CONDITION FOR SERVICE WHEN DELIVERED TO THE OWNER. ALL MANUFACTURED ITEMS SHALL BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS EXCEPT AS OTHERWISE SPECIFIED HEREIN.

2. APPROVALS

OBTAIN APPROVALS FROM INSPECTION AUTHORITIES FOR ELECTRICAL INSTALLATIONS REQUIRING SPECIFIC APPROVAL. PRINTS OF THE ELECTRICAL DRAWINGS, FOR THIS PURPOSE, WILL BE FURNISHED UPON REQUEST. REQUIRED WIRING DIAGRAMS SHALL BE PROVIDED AND SUBMITTED FOR APPROVAL BY THE CONTRACTOR. COPIES OF THE FINAL APPROVALS SHALL BE OBTAINED BEFORE COMMENCEMENT OF RELATED WORK.

3. CODES AND STANDARDS

a. THE WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, MUNICIPAL, AND NATIONAL CODES. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN. HOWEVER, THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION. IOWA IS CURRENTLY USING THE 2011 NEC.

b. MATERIALS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE 2011"NATIONAL ELECTRIC CODE". STANDARDS OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), UNDERWRITERS LABORATORIES (UL), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND ALL LAWS AND ORDINANCES OF LOCAL, STATE AND FEDERAL GOVERNING AGENCIES.

4. FEES

CONTRACTOR SHALL PAY ALL FEES AND OTHER CHARGES INCIDENTAL TO THE ELECTRICAL WORK. IN ADDITION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED INSURANCE, PERMITS, LICENSES, ETC. RELATING TO THE ELECTRICAL WORK.

5. CONTRACTOR'S LIABILITY

a. THE CONTRACTOR SHALL AGREE THAT THE OWNER, THE ARCHITECT AND THE ENGINEER SHALL NOT IN ANY FORM OR MANNER BE ANSWERABLE OR ACCOUNTABLE FOR ANY VIOLATION OF ORDINANCES, CODES OR REGULATIONS OF ANY AUTHORITIES, UTILITIES, INSURANCE COMPANIES AND GOVERNMENT AGENCIES HAVING JURISDICTION, OR FOR ANY ACCIDENTS, INJURY, LOSS OR DAMAGE TO ANY PERSON OR PERSONS AND THEIR PROPERTIES ARISING FROM NEGLIGENCE OR CARELESSNESS ON THE PART OF THE CONTRACTOR (NOR ANYONE IN HIS EMPLOY), ANY OF HIS SUBCONTRACTORS, OR ANY OTHER PARTIES OR AGENTS TO THIS CONTRACT.

b. THE CONTRACTOR SHALL AGREE TO MAKE GOOD TO SAID OWNER, ARCHITECT, AND ENGINEER ANY LOSS, DAMAGE OR EXPENSE SO INCURRED, TOGETHER WITH REASONABLE ATTORNEY'S FEES.

6. EXAMINATION OF DRAWINGS AND SITE

a. THE ELECTRICAL CONTRACTOR SHALL OBTAIN A COMPLETE SET OF ARCHITECTURAL AND ENGINEERING DOCUMENTS AND COORDINATE WITH MECHANICAL, PLUMBING, ARCHITECTURAL, AND OTHER TRADES FOR EXACT DIMENSIONS, CLEARANCES, ROUGH-IN LOCATIONS, AND OTHER ADDITIONAL SCOPES OF WORK THAT MAY NOT BE SHOWN ON THE ELECTRICAL PLANS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE POWER TO OTHER TRADES EQUIPMENT AND HARDWARE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONTROLS, FIRE AND SECURITY SYSTEMS, MOTORIZED DOORS, DAMPERS, LIFTS, AND OTHER SYSTEMS. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE ELECTRICAL PLANS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL SAFETY DISCONNECT SWITCHES TO MECHANICAL EQUIPMENT.

b. BY THE ACT OF HAVING SUBMITTED A BID, THE CONTRACTOR SHALL DEEM TO HAVE MADE SUCH AN EXAMINATION AND SHALL HAVE ACCEPTED THE PREVAILING CONDITIONS. NO SUBSEQUENT ALLOWANCE WILL BE MADE TO CONTRACTOR BECAUSE OF HIS NEGLECT IN COMPLYING WITH THE FOREGOING.

7. DRAWINGS AND SPECIFICATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING AND COMPLYING WITH BOTH THE DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, OR CODES, THE REFERENCE WHICH PROVIDES THE MORE COMPLETE OR HIGHER STANDARD SHALL PREVAIL.

8. INTERPRETATION OF THE DOCUMENTS

CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING MEASUREMENTS AND CONDITIONS UNDER WHICH THIS INSTALLATION IS TO BE MADE. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS, BETWEEN DRAWINGS OR SPECIFICATION, OR BETWEEN SECTIONS OF THE SPECIFICATION, THE MATTER SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS A COMPLETE, READY TO USE INSTALLATION. IF NOT STATED IN THE PROPOSAL, IT WILL NOT BE CONSIDERED EXTRA.

9. ELECTRICAL DRAWINGS

THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL DOORS, WALLS, FURNITURE, EQUIPMENT, ETC., THE LOCATION OF RACEWAY SYSTEM COMPONENTS IS SCHEMATIC. THE EXACT LOCATION OF RACEWAY SYSTEM COMPONENTS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL CONFIRM THE DIMENSIONS OF THE ACTUAL EQUIPMENT TO BE SUPPLIED FOR THIS PROJECT, AND VERIFY CLEARANCES AND ROUGH-INS PRIOR TO STARTING WORK.

10. PERMITS, APPLICATIONS AND RELEASES

THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS INSPECTIONS, APPLICATIONS, RELEASES AND FEES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES FOR THE EXECUTION OF THIS WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

B. INSTALLATION

1. CUTTING AND PATCHING

a. ALL CUTTING, DRILLING, PATCHING, ETC. NECESSARY FOR INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT SHALL BE DONE BY THIS CONTRACTOR.

b. ALL DISTURBED CONSTRUCTION AND FINISHED SHALL BE RETURNED TO ITS ORIGINAL STATE. HOLES IN CONCRETE WALLS AND FLOORS SHALL BE CORE DRILLED AND SLEEVED. NO CUTTING OF STRUCTURAL MEMBERS WILL BE ALLOWED.

2. INSTALLATION OF WIRING

WIRE SHALL BE INSTALLED CONTINUOUS BETWEEN DEVICES, WITH SPLICES LOCATED ONLY IN JUNCTION BOXES, PULL BOXES, OUTLET BOXES OR IN CABINETS. CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO REACH THE FARTHEST TERMINAL IN PANELS. A MINIMUM OF 6" LOOPS SHALL REMAIN WHERE CONNECTIONS OR TAPS ARE TO BE MADE IN BRANCH CIRCUIT WIRING.

3. GROUNDING

CONTRACTOR SHALL INSTALL ENTIRE CONDUIT SYSTEM, INCLUDING BOXES, CABINETS, PANELS, ETC. SO AS TO INSURE PROPER GROUND CONTINUITY THROUGHOUT THE SYSTEM.

4. INSTALLATION OF WORK

a. CONTRACTOR SHALL BE RESPONSIBLE FOR EXACT LOCATION OF ALL EQUIPMENT AND IN CASE ANY OUTLETS DO NOT COME IN CORRECT LOCATION, HE SHALL MOVE SAME, DO NECESSARY CUTTING AND PATCHING.

b. OWNER RESERVES THE RIGHT TO CHANGE LOCATION OF OUTLETS WITHIN 10'-0" RADIUS BEFORE WORK IS INSTALLED WITHOUT EXTRA COST.

c. CHECK WITH HVAC CONTRACTOR AS TO LOCATION OF UNITS, DUCTS AND GRILLES AND PLUMBING CONTRACTOR AS TO LOCATION OF PIPING BEFORE INSTALLING THE WORK.

d. CONTRACTOR SHALL CONSULT WITH THE ARCHITECT AND REVIEW THE PLANS TO VERIFY THE EXACT LOCATIONS OF ALL OUTLETS ARE ABOVE COUNTERS WHERE CABINET WORK OCCURS, AND VERIFY THAT SWITCHES ARE AT THE CORRECT SIDE OF DOOR SWINGS.

e. THE CONTRACTOR SHALL CONSULT WITH THE EQUIPMENT SUPPLIERS FOR THE CORRECT SIZES OF ALL OUTLETS IN SUFFICIENT TIME BEFORE WALL CONSTRUCTION.

f. FAILURE OF THE CONTRACTOR TO COMPLY WITH ALL OF THE ABOVE SHALL MAKE HIM RESPONSIBLE FOR ANY RELOCATIONS AT HIS EXPENSE DUE TO CONFLICT WITH OTHER EQUIPMENT.

5. BALANCING OF LOADS

UPON CONNECTING ALL CIRCUITS TO PANELS, THE CONTRACTOR SHALL BALANCE THE LOAD IN AMPERES TO +/- 5% BETWEEN PHASES FOR EACH PANEL OR PER OWNERS SATISFACTION.

6. FIRE STOPPING

ALL PENETRATIONS IN WALL, FLOOR OR CEILINGS SHALL BE SUITABLY CLOSED UP AND SEALED WITH AN INTUMESCENT FIRE STOPPING COMPOUND LISTED IN THE MOST RECENT FACTORY MUTUAL RESEARCH CORPORATION (FMRC) APPROVAL GUIDE. FIRE STOPPING PRODUCTS SHALL BE MANUFACTURED BY 3M CO.

7. EQUIPMENT

ALL MATERIALS AND EQUIPMENT USED IN THIS INSTALLATION SHALL BE NEW, AND HAVE THE APPROPRIATE UL LISTING AND LABEL.

8. MISCELLANEOUS SUPPORTING MEMBERS

THE INSTALLATION OF ANGLES CHANNELS, AND OTHER MISCELLANEOUS STEEL, BOLTS, RODS, ETC. REQUIRED TO SUPPORT LIGHT FIXTURE, CONDUIT, RACEWAY, LADDER TRAY, OR OTHER ELECTRICAL EQUIPMENT OR DEVICES SHALL BE COORDINATED WITH THE G.C.

9. SAFETY

THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE OWNERS EMPLOYEES, BUILDING EMPLOYEES AND GUESTS, AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CONDUCTORS, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

10. EQUIPMENT CONNECTIONS

PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS AND FOR ALL OWNER FURNISHED EQUIPMENT. PROVIDE A FLEXIBLE LIQUID TIGHT CONNECTION TO ALL VIBRATION PRODUCING EQUIPMENT.

11. TEMPORARY LIGHTING, POWER, FIRE, AND SAFETY

a. PROVIDE TEMPORARY LIGHTING AND POWER AS REQUIRED IN AREAS UNDERGOING WORK DURING CONSTRUCTION.

b. COMPLY WITH NFPA 241 FOR SAFEGUARDING DURING CONSTRUCTION AND ALTERATION OPERATIONS.

12. CABLING

BRANCH CIRCUITS TO RECEPTACLES, LIGHTING AND MISC. SMALL LOADS (20 AMP CIRCUITS), UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE 2 - #12, 1 - #12 GND, 3/4" C.

C. MATERIAL AND EQUIPMENT

1. PROPOSALS SHALL BE BASED UPON THE FURNISHING OF ALL MATERIALS AND EQUIPMENT AS SPECIFIED, WHICH IN EVERY CASE SHALL BE NEW AND OF THE BEST GRADE AND QUALITY AVAILABLE.

2. EQUIPMENT AND MATERIALS SHALL BE WITHOUT BLEMISH OR DEFECT AND SHALL NOT BE USED FOR TEMPORARY POWER PURPOSES, WITHOUT THE ENGINEER'S PRIOR WRITTEN AUTHORIZATION.

3. ALL ITEMS OF EQUIPMENT OF ONE GENERIC TYPE, EXCEPT CONDUIT, CONDUIT FITTINGS, OUTLET BOXES, WIRE, AND CABLE, SHALL BE THE PRODUCT OF ONE MANUFACTURER THROUGHOUT UNLESS OTHERWISE INDICATED OR ACCEPTED BY THE ENGINEER.

4. CONDUITS

a. THE CONTRACTOR SHALL PROVIDE ALL CONDUITS SERVING ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO LIGHTING, RECEPTACLES, HEATING, AIR CONDITIONS, PLUMBING EQUIPMENT, TELEPHONE AND ELECTRICAL EQUIPMENT.

b. ALL PANEL AND SERVICE FEEDERS SHALL BE IN GALVANIZED IMC OR GRMC. ALL CONDUIT SHALL BE UL LABELED. EMT SHALL BE ACCEPTABLE FOR BRANCH CIRCUITS RUN ABOVE SUSPENDED CEILINGS OR CONCEALED IN INTERIOR PARTITIONS. EMT CONNECTORS SHALL BE COMPRESSION TYPE. CONDUIT UNDER SLAB ON GRADE SHALL BE GALVANIZED RIGID STEEL (HWG).

c. ALL APARTMENT PANEL FEEDERS AND SECONDARY CABLES SHALL BE COPPER.

d. ALL SECONDARY CABLES SHALL BE IN GRMC RIGID METALLIC CONDUIT PER LOCAL ORDINANCE.

e. MINIMUM SIZES OF CONDUIT SHALL BE 1/2" FOR INDIVIDUAL LIGHTING FIXTURE CONNECTION OR TO INDIVIDUAL LIGHT SWITCHES AND FOR ALL OTHER LOCATIONS. IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE MINIMUM OF 1/2" SIZE, UNLESS NOTED OTHERWISE ON DRAWINGS. ALL IN/UNDER FLOOR SLAB CONDUIT SHALL BE OF MINIMUM 3/4" SIZE.

f. SUPPORT ALL CONDUIT, INCLUDING SEISMIC AND SWAY BRACING, IN ACCORDANCE WITH THE NEC.

g. GENERALLY, ALL CONDUIT SHALL BE CONCEALED EXCEPT FOR UNFINISHED AREAS, SUCH AS EQUIPMENT ROOMS. EXPOSED CONDUIT SHALL BE ALLOWED ONLY AS NOTED ON PLAN AND AS APPROVED BY THE OWNER'S CONSTRUCTION MANAGER. PAINTING OF CONDUITS WILL BE BY GENERAL CONTRACTOR.

h. FLEXIBLE METAL CONDUIT

a. FLEXIBLE METAL CONDUIT IS NOT PERMITTED.

b. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.

c. PROVIDE POLY PULL-STRING IN ALL EMPTY CONDUITS.

d. HOME RUNS AND MAIN CONDUIT RUNS ARE TO BE HELD TIGHT TO STRUCTURE ABOVE OR AS REQUIRED TO ALLOW PROPER CLEARANCE OF CEILING AND OTHER TRADES WORK.

e. ALL CONDUITS SHALL BE RUN PARALLEL OR PERPENDICULAR TO COLUMN LINES.

f. ALL CONDUITS MUST BE SIZED PER THE NEC.

5. OUTLET BOXES

a. UNLESS OTHERWISE NOTED, OUTLET BOXES SHALL BE GALVANIZED PRESSED STEEL, KNOCKOUT TYPE, WITH SUITABLE PLASTER RINGS AND COVERS OR PLATES.

b. UNUSED KNOCKOUT HOLES SHALL REMAIN CLOSED AND THOSE OPENED BY ERROR SHALL BE CLOSED WITH SNAP-IN BLANKS.

c. OUTLET BOXES SHALL NOT BE SMALLER THAN REQUIRED BY CODE FOR THE NUMBER AND SIZE OF WIRES TO BE INSTALLED.

d. OUTLET BOX AND COVE LOCATED ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

e. OUTLET BOX MANUFACTURERS SHALL BE APPLETON, GARVIN, RACO (HUBBELL) & STEEL CITY.

6. JUNCTION AND PULL BOXES

a. PROVIDE JUNCTION BOXES, PULL BOXES, CABLE SUPPORTS, AND WIREWAYS AS REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL WORK, WHETHER OR NOT SPECIFICALLY SHOWN ON THE DRAWINGS. COVERS SHALL BE ACCESSIBLE. SMALL JUNCTION BOXES SHALL BE SIMILAR TO OUTLET BOXES.

b. PULL BOXES, CABLE SUPPORT BOXES, AND LARGE JUNCTION BOXES FOR INDOOR USE SHALL BE MADE OF CODE GAUGE STEEL. COVERS SHALL BE HELD IN PLACE WITH STAINLESS STEEL SCREWS.

c. JUNCTION BOX AND PULL BOX LOCATED ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

7. WIRING

a. CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER AND THE AWG SIZE AND TYPE AS SHOWN ON DRAWINGS MINIMUM WIRE SIZE SHALL BE #12. THE CONDUCTORS SHALL HAVE 600 VOLT INSULATION, TYPE THW, THWN OR THHN.

b. MINIMUM WIRE SIZE - 20 AMP. BRANCH CIRCUIT SHALL BE AWG LISTED SIZE PER DISTANCE SHOWN BELOW. DISTANCE SHALL BE MEASURED FROM THE PANELBOARD CIRCUIT BREAKER TO THE FURTHEST OUTLET.

1. #12 LESS THAN 80 FEET. (AT 120V)
2. #10 OVER 80 FEET. (AT 120V)

c. CONDUCTORS SHALL BE STRANDED FOR SIZES #8AWG AND LARGER.

d. ALL CONDUCTORS SHALL BE COPPER, ALUMINUM CONDUCTORS ARE NOT PERMITTED.

e. ALL WIRING SHALL BE IN EMT CONDUIT, UNLESS SPECIFICALLY NOTED OTHERWISE (I.E. LOW VOLTAGE PLENUM RATED WIRE).

f. THE USE OF SHARED NEUTRALS IS ALLOWED FOR LIGHTING AND NON-COMPUTER RECEPTACLE CIRCUITS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC. ALL OTHER EQUIPMENT SHALL HAVE A DEDICATED FULL SIZE NEUTRAL.

g. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #8 AWG WIRE AND SMALLER AND EQUAL TO T & B "LOCKTIGHT" FOR #6 AWG AND LARGER. EQUALS BY BUCHANAN OR IDEAL ARE ACCEPTABLE.

h. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

120/208 VOLT SYSTEM	277/480 VOLT SYSTEM
NEUTRAL - WHITE	NEUTRAL - GRAY
PHASE A OR L1 - BLACK	PHASE A OR L1 - BROWN
PHASE B OR L2 - RED	PHASE B OR L2 - ORANGE
PHASE C OR L3 - BLUE	PHASE C OR L3 - YELLOW
GROUND - GREEN	GROUND - GREEN

8. GROUNDING

a. PROVIDE COMPLETE WIRE GROUNDING CONDUCTOR SYSTEM, #12 AWG MINIMUM, SIZED AND INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NEC.

b. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL. METAL-TO-METAL CONTACT BETWEEN THE DEVICES YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES. ALL JUNCTION BOXES, OUTLET BOXES AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM. ALL CONDUIT, INCLUDING FLEXIBLE CONDUIT, SHALL BE GROUNDED WITH GREEN GROUNDING CONDUCTOR.

c. ALL ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE TO BE GROUNDED. CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. ALL GROUND CLAMPS SHALL BE "PENN-UNION" OR EQUAL, SIMILAR TO "GPL" TYPE.

d. NO OTHER CIRCUITS ARE TO BE RUN IN SAME CONDUIT FEEDING ISOLATED GROUND RECEPTACLES.

9. SLEEVES

a. THE CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH IT'S RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR.

b. UNLESS OTHERWISE NOTED, ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THE FIRE RATING OF THE FLOOR OR WALL. CONFORM TO UL ASSEMBLY RATING OF FLOOR OR WALL.

c. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS AND PARTITIONS SHALL BE STANDARD WEIGHT BLACK STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL CONDUIT. SLEEVES SHALL BE NO. 22.

10. TESTING AND INSPECTION

a. THE ELECTRICAL CONTRACTOR SHALL THOROUGHLY TEST THE ENTIRE ELECTRICAL SYSTEM FOR GROUNDS, SHORTS AND PROPER GROUNDING RESISTANCE. A MAXIMUM OF 5 OHMS RESISTANCE FROM NEUTRAL CONDUCTOR AND CONDUIT TO EARTH GROUND SHALL BE PERMITTED. ONLY A GROUND RESISTANCE MEASURING METER OF APPROVED TYPE SHALL BE USED. A COMMON OHM METER IS NOT ACCEPTABLE.

b. ALL MOTORS TO BE CHECKED FOR PROPER ROTATION AND SHALL BE TESTED UNDER LOAD WITH AMPERE READINGS TAKEN ON EACH PHASE AND THE RPM OF MOTORS RECORDED AT THE SAME TIME, CONTRACTOR TO MAKE ALL REQUIRED CHANGES TO CORRECT ANY DEFICIENCIES AND RETEST.

c. THE ELECTRICAL CONTRACTOR SHALL SEE THAT LOCAL INSPECTION AUTHORITIES ARE NOTIFIED WHEN INSPECTIONS ARE REQUIRED BY CODE AND SHALL GIVE ALL NECESSARY ASSISTANCE TO THE INSPECTOR WHEN HE IS MAKING AN INSPECTION.

d. THE ELECTRICAL CONTRACTOR WILL SATISFY ALL REGULATIONS HAVING JURISDICTION ON THIS PROJECT.

11. WIRING DEVICES

a. THIS CONTRACTOR SHALL FURNISH AND INSTALL SWITCHES AND RECEPTACLES AS SHOWN ON THE DRAWINGS AND NECESSARY FOR A COMPLETE INSTALLATION. COLOR OF DEVICES AND PLATES SHALL BE AS DIRECTED BY ARCHITECT. THE DEVICES SHALL BE OF THE TYPES AND RATINGS LISTED, OR EQUALS BY PASS & SEYMOUR, HUBBELL OR LEVITON. WEATHERPROOF GFI RECEPTACLES SHALL BE INSTALLED WHERE SHOWN ON DRAWINGS OR AS REQUIRED BY CODE.

1. LOW VOLTAGE SWITCHES: TO MATCH EXISTING
2. DUPLEX RECEPTACLES: 20A-120V LEVITON-5362
3. ISOLATED GROUND RECEPTACLES: 20A-120V LEVITON-5362-IG
4. GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE: 20A-120V, LEVITON 8899-HG
5. SURGE SUPPRESSION RECEPTACLE: 20A-120V PASS & SEYMOUR 8200-ISP

12. WALL PLATES

a. WALL PLATES SHALL BE AS SPECIFIED BY OWNER. WHERE STANDARD PLATES WILL NOT FIT WALL FINISH, UNPLASTERED BRICK OR SPECIAL FINISH WALLS, USE SPECIAL SIZE PLATES TO SUIT CONDITIONS. ALL WALL PLATES LINE UP AND FLUSH WITH MOUNTING SURFACE AND SECURELY ATTACHED IN PLACE.

b. WHERE SWITCHES, RECEPTACLES OR COMBINATIONS THEREOF ARE GROUNDED, USE GANG PLATES AND OUTLET BOXES TO SUIT THE SPECIFIC ARRANGEMENTS.

c. VERIFY MOUNTING HEIGHTS OF WIRING DEVICES WITH OWNER: IN GENERAL, RECEPTACLES 18" ABOVE FLOOR OR 6" ABOVE COUNTER TOP WHERE COUNTERS OCCUR, AND SWITCHES 3'-4" ABOVE FLOOR, EXCEPT WHERE SPECIFIC HEIGHTS ARE INDICATED. SPECIAL RECEPTACLE LOCATED AS DIRECTED BY ARCHITECT AND ENGINEER.

d. WALL PLATES SHALL BE OF THE SAME MANUFACTURER AS WIRING DEVICE.

13. LIGHTING FIXTURES & LAMPS:

a. UNLESS OTHERWISE NOTED, THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LIGHTING FIXTURES AND LAMPS AS SHOWN ON THE DRAWINGS.

b. ALL RECESSED INCANDESCENT FIXTURES SHALL BE PROVIDED WITH APPLICABLE THERMAL PROTECTION.

c. WHERE FLUORESCENT FIXTURES ARE SPECIFIED, THEY SHALL BE PROVIDED WITH HIGH POWER FACTOR RAPID START ELECTRONIC BALLASTS, UL LISTED, C.B.M. CERTIFIED AND E.T.L. APPROVED WITH EFFICIENCY FACTORS IN ACCORDANCE WITH THE "NATIONAL APPLIANCE ENERGY CONSERVATION ACT OF 1987" AND AMENDMENTS WITH A THD OF LESS THAN 10%.

d. THIS CONTRACTOR SHALL FURNISH ADDITIONAL AUXILIARY SUPPORTING STEEL HANGER WIRES ADEQUATELY SIZED TO SUPPORT THE WEIGHT OF THE FIXTURE AND FASTENED TO BUILDING STRUCTURE (MINIMUM TWO PER FIXTURE) FOR FIXTURES NOT MOUNTED ON BUILDING FRAMEWORK. FIXTURES SHALL NOT BE SUPPORTED SOLELY BY THE CEILING STRUCTURE.

e. THIS CONTRACTOR SHALL VERIFY THE MODEL NUMBERS AND QUANTITY OF ALL LIGHTS AND FIXTURES PROVIDED. CONTACT THE TENANT'S CONSTRUCTION MANAGER IMMEDIATELY IF THE MODELS DIFFER FROM THOSE LISTED ON THE LIGHTING FIXTURE SCHEDULE OR IF THEY DO NOT HAVE PROPER THERMAL PROTECTION.

f. PROVIDE APPLICABLE FIRE RATED DRYWALL BOXES OVER RECESSED FIXTURES IN FIRE RATED CEILINGS AS REQUIRED BY CODES. FIELD COORDINATE AS REQUIRED TO AVOID CONFLICT.

g. THIS CONTRACTOR SHALL PROVIDE ANY NECESSARY FITTINGS, ACCESSORIES, ETC. AS NECESSARY TO MAKE A COMPLETE INSTALLATION.

h. REMOVE ALL DIRT, OIL OR GREASE FROM LIGHT FIXTURES. CLEAN ALL GLASS, LENSES, ETC. AND POLISH FIXTURES AND TRIM.

i. THIS CONTRACTOR SHALL SUPPLY 10% EXTRA OF EACH LAMP TYPE USED.

14. IDENTIFICATION

a. PROVIDE TYPED DIRECTORIES IN PANELBOARDS TO DEPICT ACTUAL EQUIPMENT CONNECTED TO INDIVIDUAL BREAKERS/SWITCHES.

15. SHOP DRAWINGS AND SUBMITTALS:

a. SUBMIT COMPLETE SHOP DRAWINGS FOR MANUFACTURED EQUIPMENT: CLEARLY MARK SUBMISSIONS FOR LIGHTING FIXTURES WITH THE TYPE LETTER OR LETTERS ASSIGNED TO EACH FIXTURE IN THE FIXTURES SCHEDULE AND INCLUDE A GRAPH SHOWING TYPICAL LIGHT DISTRIBUTION AND A TABLE OF CERTIFIED UTILIZATION FACTORS. ALL FIXTURE SUBMITTALS SHALL BE IN BROCHURE FORM.

b. PROVIDE SUFFICIENT INFORMATION AND DATA REQUIRED FOR THE ARCHITECT TO REASONABLY DETERMINE PROPER COMPLIANCE WITH THE SPECIFICATIONS.

c. IN ADDITION, THE CONTRACTOR SHALL SUBMIT A COMPLETE LIST OF MATERIALS PROPOSED, GIVING THE MANUFACTURER'S NAME, CATALOG NUMBER, OR OTHER MEANS OF IDENTIFICATION TO SHOW COMPLIANCE WITH THESE SPECIFICATIONS.

d. REVIEW OF SHOP DRAWINGS ARE RENDERED AS A SERVICE ONLY, AND SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR BUILDING CONDITIONS, NOR SHALL IT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF BASIC RESPONSIBILITY UNDER THE CONTRACT. SHOP DRAWINGS SHALL BE SUBMITTED ON, BUT NOT BE LIMITED TO THE FOLLOWING SYSTEMS: LIGHTING FIXTURES IF FURNISHED BY CONTRACTOR, PANELS, WIRING DEVICES

16. FIELD RECORD DRAWINGS

CONTRACTOR SHALL SUBMIT `AS-BUILT" MARK-UPS TO RTM & ASSOCIATES WHEN PROJECT IS CLOSED, FOR UPDATING OF ELECTRONIC FILES.

17. INSTALLATION OF EQUIPMENT FURNISHED BY OTHERS

a. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, WIRE AND CABLE FURNISHED TO HIM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL INSTALLATION DRAWINGS AND WIRING DIAGRAMS FROM THE EQUIPMENT MANUFACTURER. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

b. CONTRACTOR SHALL MAKE FINAL CONNECTIONS AND TERMINATIONS TO THE OWNER, MECHANICAL, AND PLUMBING CONTRACTOR'S FURNISHED EQUIPMENT.

18. MATERIAL AND EQUIPMENT REQUIREMENTS

a. PROPOSAL SHALL BE BASED UPON THE FURNISHINGS OF ALL MATERIALS AND EQUIPMENT AS SPECIFIED, WHICH IN EVERY CASE SHALL BE NEW AND OF THE BEST GRADE AND QUALITY AVAILABLE.

b. EQUIPMENT AND MATERIALS SHALL BE WITHOUT BLEMISH OR DEFECT AND SHALL NOT BE USED FOR TEMPORARY POWER PURPOSES, WITHOUT THE ENGINEER'S WRITTEN AUTHORIZATION.

c. ALL ITEMS OF EQUIPMENT OF ONE GENERIC TYPE (SUCH AS FUSES OR CIRCUIT BREAKERS) EXCEPT CONDUIT FITTINGS, OUTLET BOXES, WIRE, AND CABLE, SHALL BE THE PRODUCT OF ONE MANUFACTURER THROUGHOUT UNLESS OTHERWISE INDICATED OR ACCEPTED BY THE ENGINEER.

19. SPECIAL SYSTEMS

REFER TO TECHNOLOGY DRAWINGS FROM GLUMAC (T, TN, TY, TA SERIES) FOR ELECTRICAL WORK SCOPE.

20. FIRE ALARM

a. ALL FIRE ALARM WIRING SHALL BE IN CONDUIT.

b. WIRING SHALL BE FIRE RATED FOR 2 HOURS AND SHALL MEET NFPA REQUIREMENTS FOR THIS TYPE OF INSTALLATION.

c. FIRE ALARM CALCULATIONS INCLUDING BATTERY, LOAD, VOLTAGE DROP, AND WIRE SIZING SHALL BE PREFORMED AND SUBMITTED BY THE FA CONTRACTOR AS PART OF THE FIRE ALARM SHOP DRAWING SUBMITTAL PROCESS AT WHICH TIME THE CONTRACTOR SHALL SUBMIT ALL REQUIRED INFORMATION TO THE APPROPRIATE CODE OFFICIALS.

d. PROVIDE ADEQUATE CAPACITY TO THE FIRE ALARM CONTROL PANEL AS REQUIRED TO CONNECT ALL THE DEVICES SHOWN ON THE PLANS.

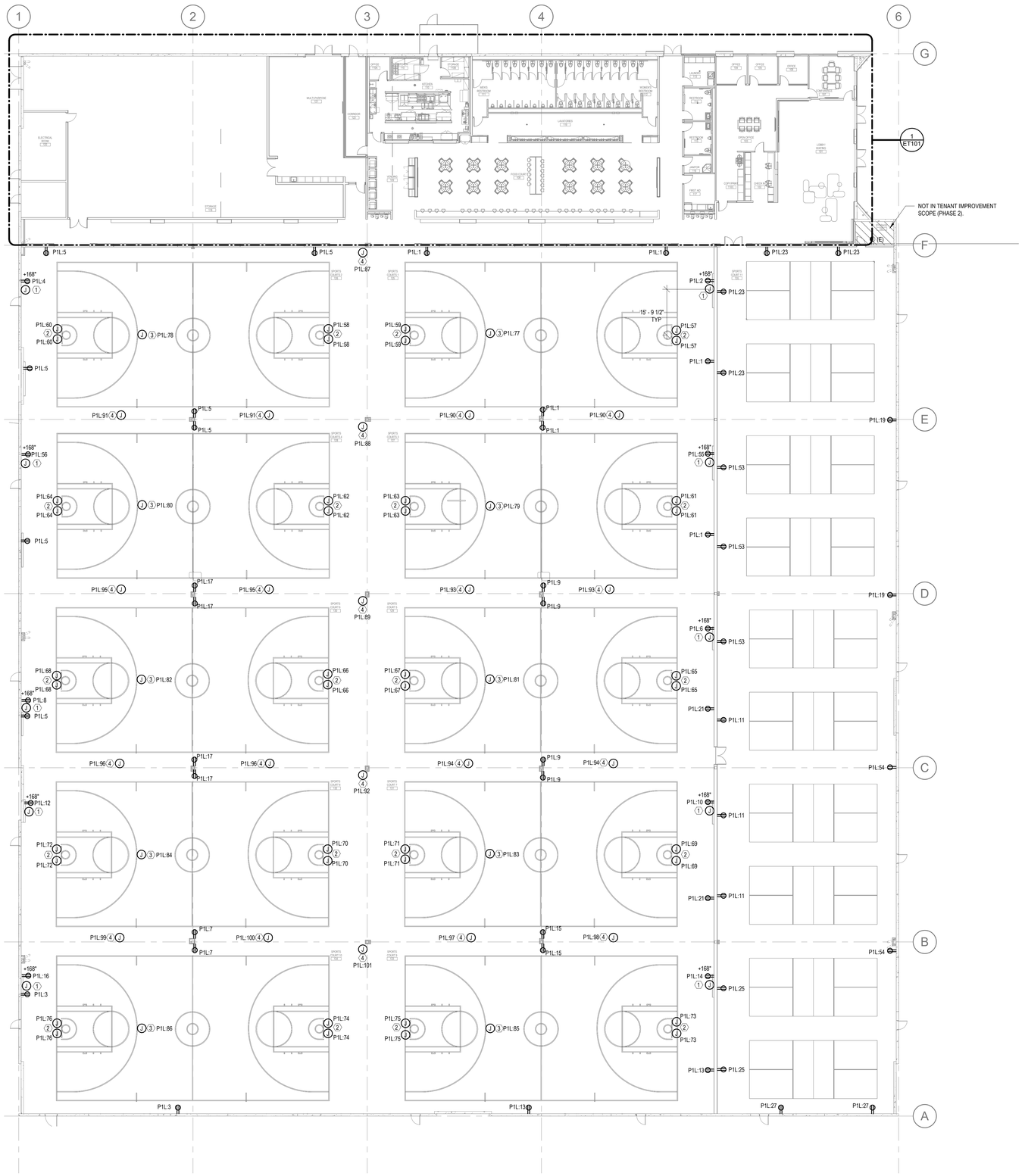
e. FIRE ALARM DEVICES ARE SHOWN FOR REFERENCE ONLY. COORDINATE EXACT LOCATION AND INSTALLATION OF DEVICES WITH FIRE ALARM SHOP DRAWINGS.

f. PROVIDE NEW DETECTION AND NOTIFICATION DEVICES AND TIE INTO FIRE ALARM CONTROL PANEL. NEW DEVICES SHALL BE COMPATIBLE WITH FIRE ALARM SYSTEM.

g. PROVIDE FIRE ALARM ACCESSORIES AND HARDWARE AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. COORDINATE ALL WORK WITH FIRE ALARM MANUFACTURER.

h. FIRE ALARM SYSTEM INSTALLER SHALL VERIFY THAT SYSTEM COMPLIES WITH LOCAL F

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1 ELECTRICAL FLOOR PLAN
1/16" = 1'-0"

GENERAL POWER NOTES

1. REFER TO GENERAL NOTES ON SHEET ET000.
2. REFER TO SPECIFICATIONS ON SHEET ET001.
3. ALL DEVICES ARE NEW , UNLESS OTHERWISE NOTED.
4. CIRCUITS ARE DESIGNATED BY THE NUMBER SHOWN ADJACENT TO EACH ELECTRICAL FIXTURE OR JUNCTION BOX. WIRING IS SHOWN ONLY UNDER SPECIAL CIRCUMSTANCES. PROVIDE CONDUITS, WIRE, ARMORED CABLE, AND BOXES REQUIRED TO ENERGIZE THE EQUIPMENT.
5. CIRCUIT NUMBERS ARE FOR GROUPING PURPOSES AND REFERENCE ONLY. FIELD CONDITIONS PREVAIL.
6. ALL BRANCH CIRCUITING WIRING SHALL RUN CONCEALED IN WALLS AND ABOVE HUNG CEILING, UNLESS OTHERWISE NOTED.
7. WHERE WIRING IS RUN IN OPEN CEILINGS, ALL CONDUITS SHALL BE EMT TYPE.
8. WHERE RECEPTACLES ARE SHOWN WITHOUT CIRCUIT NUMBERS, PROVIDE 120V-20A CIRCUIT FROM NEAREST PANEL TO RECEPTACLES. CONNECT NO MORE THAN (8) DUPLEX RECEPTACLES TO A SINGLE 120V-20A CIRCUIT.
9. GFCI RECEPTACLES SHALL BE USED WHERE REQUIRED BY GOVERNING CODES, INCLUDING ALL DEVICES SHOWN TO BE WITHIN 6 FEET OF SINK/WATER.
10. FOR ROOMS WITH SWITCHED RECEPTACLES SHOWN, PROVIDE ADDITIONAL POWER PACK IN CONJUNCTION WITH LIGHTING CONTROLS FOR CONTROLLED RECEPTACLE FUNCTIONALITY.
11. ALL RECEPTACLES INSTALLED IN WET LOCATIONS SHALL HAVE "IN-USE" TYPE COVERS AND MUST BE LISTED AS "EXTRA-DUTY" AS PER NEC 406.9(B) (1).
12. NOT USED
13. CONTROLLED RECEPTACLES SHOWN ON PLANS SHALL BE OCCUPANCY CONTROLLED BY OCCUPANCY SENSOR. TOP HALF SHALL BE CONTROLLED AND TURN ON WITH OCCUPANCY, AND TURN OFF ONCE THE SPACE HAS BEEN VACANT FOR 20 MINUTES. SWITCHED/OCCUPANCY CONTROLLED RECEPTACLES SHALL HAVE PERMANENT LABEL PER TITLE 24 REQUIREMENTS.
14. EC TO PROVIDE ALL REQUIRED CONDUITS, BACK BOXES, and STUB-UPS SHOWN ON GLUMAC DOCUMENTS DRAWINGS (T, TN, TY, TA SERIES DRAWINGS).
15. LOW VOLTAGE IS NOT PART OF PLAN CHECK, PERMIT ONLY.

 # KEYNOTES

1 PROVIDE POWER AND CONTROL CONNECTION FOR SCOREBOARD. COORDINATE FINAL LOCATION AND REQUIREMENT WITH SYSTEM VENDOR AND OWNER.
2 EC TO PROVIDE ELECTRICAL CONNECTION FOR BASKETBALL HOOP HOIST AND HEIGHT ADJUSTER. VERIFY FINAL CONNECTION REQUIREMENTS WITH THE HOOP PROVIDER PRIOR TO ROUGH-IN. CONTROLLER SWITCHES TO BE LOCATED AT CHECK-IN RECEPTION AND FINAL LOCATION TO BE COORDIANTED WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
3 EC TO PROVIDE ELECTRICAL CONNECTION FOR VOLLEYBALL NET. VERIFY FINAL CONNECTION REQUIREMENTS WITH THE NET PROVIDER PRIOR TO ROUGH-IN. CONTROLLER SWITCHES TO BE LOCATED AT CHECK-IN RECEPTION AND FINAL LOCATION TO BE COORDIANTED WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
4 EC TO PROVIDE ELECTRICAL CONNECTION FOR DIVIDING CURTAIN. VERIFY FINAL CONNECTION REQUIREMENTS WITH PROVIDER PRIOR TO ROUGH-IN. CONTROLLER SWITCHES TO BE LOCATED AT CHECK-IN RECEPTION AND FINAL LOCATION TO BE COORDIANTED WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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OVERALL ELECTRICAL POWER PLAN

#	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/06/2026	PLAN CHECK CORRECTIONS 3
5	03/06/2026	OC-HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
	03/06/2026	OC-HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

SHEET
ET100

06/06/2025

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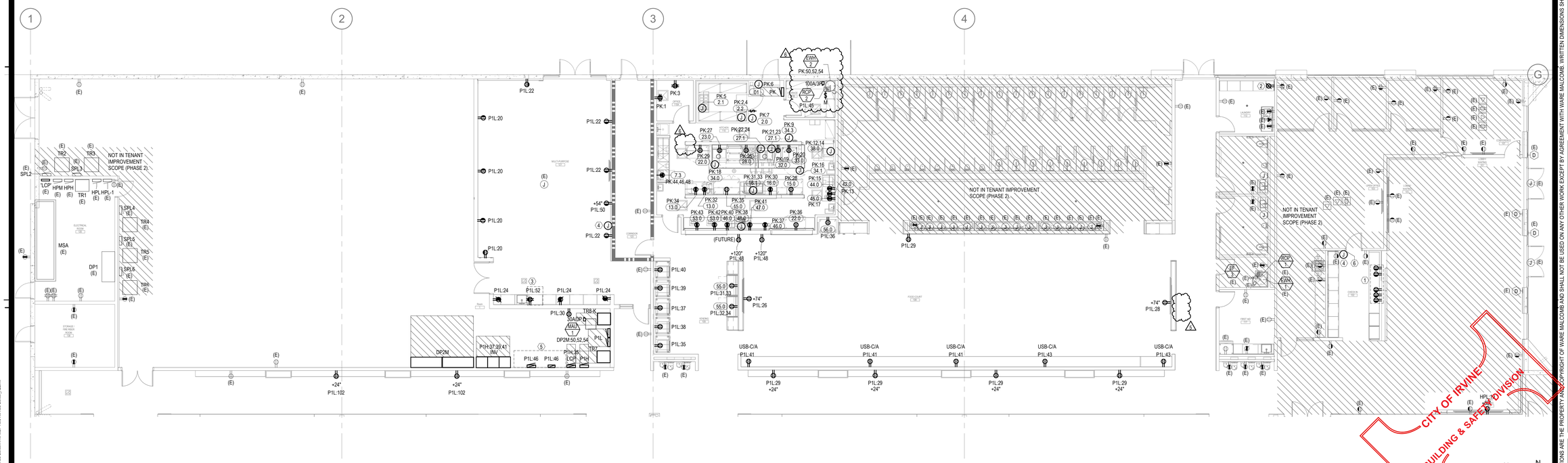
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ELECTRICAL KITCHEN EQUIPMENT SCHEDULE

TAG	QTY	NAME	AMPS	VOLTAGE/ PHASE	LOAD	CONNECTION TYPE	WIRE	ELEVATION	REMARKS
01	1	AIR CURTAIN	2.4 A	120V/1P	288 VA	EC	3/4"C, 1#12, #12N, #12G	18"	VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS
2.0	1	WALK-IN COMPLEX - ON SLAB WITH RAMP	15.0 A	120V/1P	1800 VA	EC	3/4"C, 1#12, #12N, #12G	18"	VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS
2.1	1	EVAPORATOR COIL, +35F	1.8 A	120V/1P	220 VA	EC	3/4"C, 1#12, #12N, #12G	18"	VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS
2.2	1	CONDENSER, AIR COOLED	7.4 A	208V/1P	1540 VA	EC	3/4"C, 2#12, #12N, #12G	18"	VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS
7.3	1	UNDER COUNTER DISHWASHER	22.0 A	208V/3P	7920 VA	15-30R	3/4"C, 1#10, #10N, #10G	18"	
13.0	2	FOOD SLICER, ELECTRIC	2.0 A	120V/1P	240 VA	5-15R	3/4"C, 1#12, #12N, #12G	48"	
15.0	2	REFRIGERATED PREP TABLE	3.9 A	120V/1P	470 VA	5-15R	3/4"C, 1#12, #12N, #12G	18"	
16.0	1	BACK COUNTER	16.0 A	120V/1P	1920 VA	5-20R	3/4"C, 1#12, #12N, #12G	48"	GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT
16.1	1	HOT FOOD WELL UNIT, DROP-IN	17.9 A	208V/1P	3720 VA	EC	3/4"C, 2#10, #10N, #10G	24"	
22.0	2	REFRIGERATOR, UNDERCOUNTER	3.0 A	120V/1P	360 VA	5-15R	3/4"C, 1#12, #12N, #12G	18"	
23.0	1	FRYER WITH FILTER	7.0 A	120V/1P	840 VA	5-15R	3/4"C, 1#12, #12N, #12G	12"	
27.1	2	HOT FOOD WELL	6.0 A	208V/1P	1240 VA	EC	3/4"C, 2#12, #12N, #12G	30"	
28.0	1	REFRIGERATED BASE, SELF-CONTAINED	12.6 A	120V/1P	1510 VA	5-15R	3/4"C, 1#12, #12N, #12G	10"	
32.0	1	FRYER WITH FILTER	5.6 A	120V/1P	670 VA	5-15R	3/4"C, 1#12, #12N, #12G	12"	
33.0	1	COMBI OVEN, GAS	12.0 A	120V/1P	1400 VA	5-20R	3/4"C, 1#12, #12N, #12G	24"	ADD DATA CONNECTION
34.0	1	EXHAUST HOOD - LEFT	16.0 A	120V/1P	1920 VA	EC	3/4"C, 1#12, #12N, #12G	18"	VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS
34.1	1	EXHAUST HOOD - RIGHT	16.0 A	120V/1P	1920 VA	EC	3/4"C, 1#12, #12N, #12G	18"	VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS
34.3	1	FIRE SUPPRESSION SYSTEM	15.0 A	120V/1P	1800 VA	EC	3/4"C, 2#12, #12N, #12G	18"	VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS
38.0	1	ICE MACHINE	11.0 A	208V/1P	2280 VA	EC	3/4"C, 2#10, #10N, #10G	66"	
42.0	1	WORKTABLE WITH SINK	16.0 A	120V/1P	1920 VA	5-20R	3/4"C, 1#12, #12N, #12G	48"	GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT
44.0	1	MIXER, COUNTERTOP	4.0 A	120V/1P	800 VA	5-15R	3/4"C, 1#12, #12N, #12G	48"	
45.0	1	FOOD PROCESSOR	7.0 A	120V/1P	840 VA	5-15R	3/4"C, 1#12, #12N, #12G	48"	
46.0	2	BACK COUNTER W/ SINK	16.0 A	120V/1P	1920 VA	5-20R	3/4"C, 1#12, #12N, #12G	48"	GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT
47.0	1	COFFEE GRINDER	8.0 A	120V/1P	960 VA	5-15R	3/4"C, 1#12, #12N, #12G	40"	
48.0	1	COFFEE BREWER	13.7 A	120V/1P	1650 VA	EC	3/4"C, 1#12, #12G	40"	
53.0	2	POINT OF SALE SYSTEM	5.0 A	120V/1P	600 VA	5-15R	3/4"C, 1#12, #12N, #12G	38"	PROVIDE DATA CONNECTION, VERIFY WITH OWNER
55.0	2	MERCHANDISER, SELF-SERVICE	16.0 A	208V/1P	2820 VA	6-20R	3#10 & 1#10 GND, IN 3/4" C.	8"	
56.0	1	REFRIGERATOR, REACH-IN	5.6 A	120V/1P	672 VA	5-15R	3/4"C, 1#12, #12N, #12G	84"	

GENERAL ELECTRICAL FOOD SERVICE NOTES:

1. ELECTRICAL PLANS SHOW EQUIPMENT NUMBERS WHICH CORRESPONDS TO EQUIPMENT SHOWN ON FOOD SERVICE DRAWINGS. REFER TO FOOD SERVICE PLANS FOR COMPLETE DESCRIPTION OF EQUIPMENT AND POWER REQUIREMENTS.
2. VERIFY ROUGH-IN REQUIREMENTS, LOCATIONS, MOUNTING HEIGHTS, VOLTAGE, PHASE, AMPS, HP, KW, NEMA RATINGS, ETC FOR ALL FOOD SERVICE EQUIPMENT PRIOR TO ROUGH-IN. DEVICE LOCATIONS SHOWN ON ELECTRICAL PLANS ARE APPROXIMATE. REFER TO FOOD SERVICE EQUIPMENT PLANS AND SHOP DRAWINGS FOR EXACT ROUGH-IN LOCATIONS AND REQUIREMENTS.
3. FURNISH AND INSTALL DISCONNECT SWITCHES, INTERLOCKS, CONDUIT AND WIRING, AND INSTALL AS SPECIFICALLY OUTLINED WITHIN THE FOOD SERVICE CONSULTANT DRAWINGS.
4. FOR EQUIPMENT ITEM NOT PROVIDED WITH CORD AND PLUG CONNECTIONS. VERIFY THE EQUIPMENT CONTAINS AN INTEGRAL EQUIPMENT POWER SWITCH. IF EQUIPMENT IS NOT PROVIDED WITH MANUAL SWITCH PROVIDE A WALL MOUNTED DISCONNECT SWITCH FOR THE EQUIPMENT.
5. ALL EQUIPMENT JUNCTION BOXES SHAL INCLUDE FINAL CONNECTION TO THIER RESPECTIVE KITCHEN EQUIPMENT. VERIFY REQUIREMENTS WITH EQUIPMENT SUPPLIER AND PROVIDE ALL NECESSARY ITEMS TO MEET THE EQUIPMENT'S ELECTRICAL INSTALLATION REQUIREMENTS.



1 TI ELECTRICAL ENLARGED POWER PLAN
1/8" = 1'-0"

GENERAL POWER NOTES

1. REFER TO GENERAL NOTES ON SHEET ET000.
2. REFER TO SPECIFICATIONS ON SHEET ET001.
3. ALL DEVICES ARE NEW , UNLESS OTHERWISE NOTED.
4. CIRCUITS ARE DESIGNATED BY THE NUMBER SHOWN ADJACENT TO EACH ELECTRICAL FIXTURE OR JUNCTION BOX. WIRING IS SHOWN ONLY UNDER SPECIAL CIRCUMSTANCES. PROVIDE CONDUITS, WIRE, ARMORED CABLE, AND BOXES REQUIRED TO ENERGIZE THE EQUIPMENT.
5. CIRCUIT NUMBERS ARE FOR GROUPING PURPOSES AND REFERENCE ONLY. FIELD CONDITIONS PREVAIL.
6. ALL BRANCH CIRCUITING WIRING SHALL RUN CONCEALED IN WALLS AND ABOVE HUNG CEILING, UNLESS OTHERWISE NOTED.
7. WHERE WIRING IS RUN IN OPEN CEILINGS, ALL CONDUITS SHALL BE EMT TYPE.
8. WHERE RECEPTACLES ARE SHOWN WITHOUT CIRCUIT NUMBERS, PROVIDE 120V-20A CIRCUIT FROM NEAREST PANEL TO RECEPTACLES. CONNECT NO MORE THAN (8) DUPLEX RECEPTACLES TO A SINGLE 120V-20A CIRCUIT.
9. GFCI RECEPTACLES SHALL BE USED WHERE REQUIRED BY GOVERNING CODES, INCLUDING ALL DEVICES SHOWN TO BE WITHIN 6 FEET OF SINK/WATER.
10. FOR ROOMS WITH SWITCHED RECEPTACLES SHOWN, PROVIDE ADDITIONAL POWER PACK IN CONJUNCTION WITH LIGHTING CONTROLS FOR CONTROLLED RECEPTACLE FUNCTIONALITY.
11. ALL RECEPTACLES INSTALLED IN WET LOCATIONS SHALL HAVE "IN-USE" TYPE COVERS AND MUST BE LISTED AS "EXTRA-DUTY" AS PER NEC 406.9(B) (1).
12. NOT USED
13. CONTROLLED RECEPTACLES SHOWN ON PLANS SHALL BE OCCUPANCY CONTROLLED BY OCCUPANCY SENSOR. TOP HALF SHALL BE CONTROLLED AND TURN ON WITH OCCUPANCY, AND TURN OFF ONCE THE SPACE HAS BEEN VACANT FOR 20 MINUTES. SWITCHED/OCCUPANCY CONTROLLED RECEPTACLES SHALL HAVE PERMANENT LABEL PER TITLE 24 REQUIREMENTS.
14. EC TO PROVIDE ALL REQUIRED CONDUITS, BACK BOXES, and STUB-UPS SHOWN ON GLUMAC DOCUMENTS DRAWINGS (T, TN, TY, TA SERIES DRAWINGS).
15. LOW VOLTAGE IS NOT PART OF PLAN CHECK, PERMIT ONLY.

 # KEYNOTES

1 EC TO CIRCUIT CHECK-IN DESK RECEPTACLES TO EXISTING HPL-5PARE.
2 EC TO CIRCUIT RECEPTACLE TO EXISTING LOCAL HPL-1S CIRCUIT IN LAUNDRY 113'.
3 EC TO PROVIDE POWER AND DATA FOR AV RACK AS SHOWN. PROVIDE UNDERNEATH CABINET. COORDINATE EXACT LOCATION WITH IT DRAWINGS.
4 EC TO PROVIDE 2-GANG JUNCTION BOX AND 3/4"C WITH PULLSTRING UP TO ACCESSIBLE CEILING FOR TOUCH PANEL. PROVIDE AT +44"AFF. COORDINATE EXACT LOCATION WITH IT DRAWINGS.
5 LIGHTING CONTROL PANELS EQUIPMENT. COORDINATE FINAL REQUIREMENTS WITH LIGHTING PROVIDER.
6 EC TO PROVIDE GYM CONTROL SYSTEM FOR GYMNASIUM EQUIPMENT. VERIFY FINAL CONNECTION REQUIREMENTS WITH PROVIDER PRIOR TO ROUGH-IN. FINAL LOCATION TO BE COORDINATED WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. CONTROLS TO BE CLEARLY IDENTIFIED WITH CORRESPONDING GYMNASIUM EQUIPMENT.

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ELECTRICAL ENLARGED POWER PLAN

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/05/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

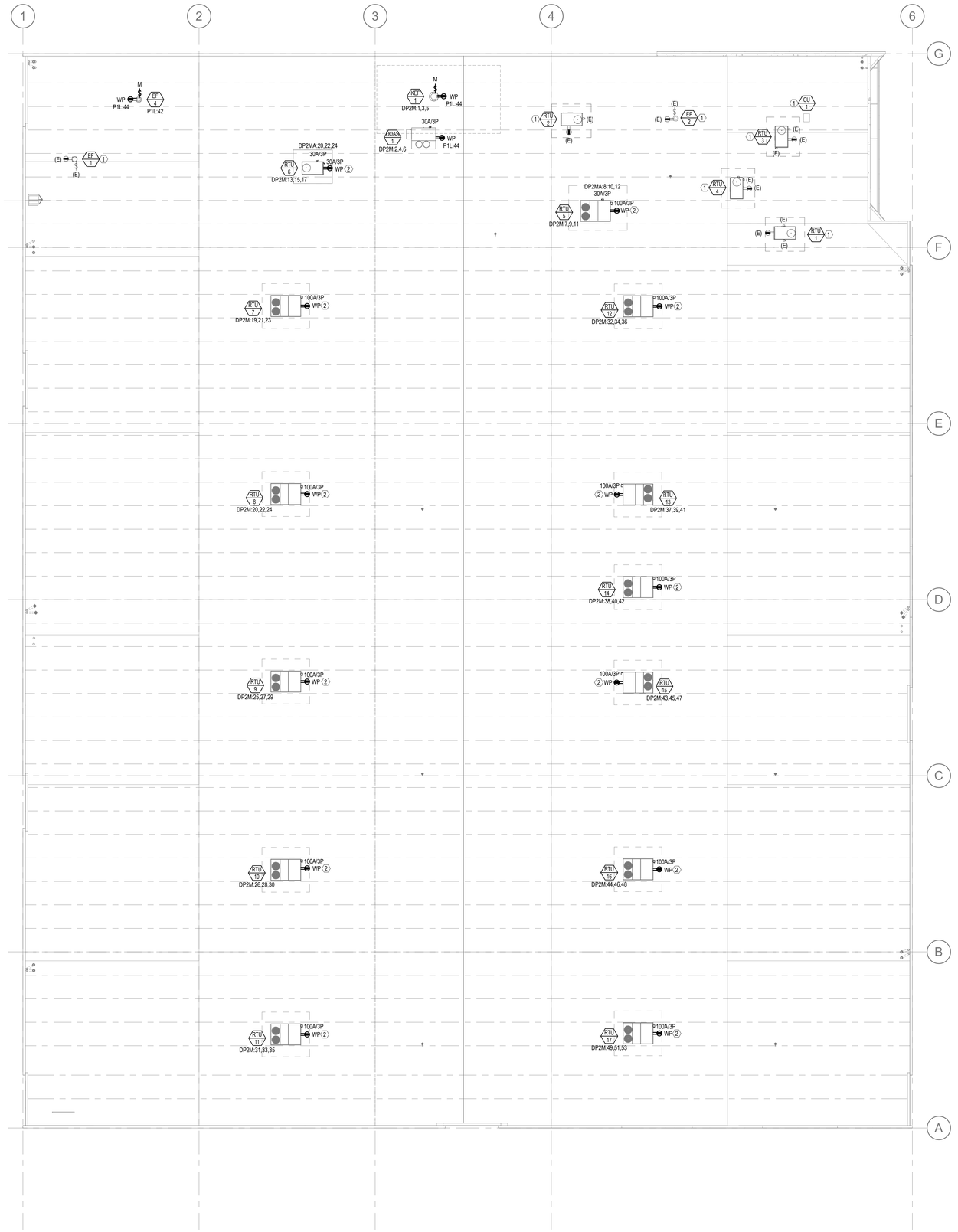
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SHEET
ET101

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CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT



1 TI ELECTRICAL ROOF PLAN
1/16" = 1'-0"

GENERAL POWER NOTES

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2. REFER TO SPECIFICATIONS ON SHEET ET001.
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14. EC TO PROVIDE ALL REQUIRED CONDUITS, BACK BOXES, and STUB-UPS SHOWN ON GLUMAC DOCUMENTS DRAWINGS (T, TN, TY, TA SERIES DRAWINGS).
15. LOW VOLTAGE IS NOT PART OF PLAN CHECK, PERMIT ONLY.

 # KEYNOTES

1 EXISTING EQUIPMENT INSTALLED PREVIOUSLY DURING PHASE 1. SHOWN FOR COORDINATION PURPOSES.
2 WP/GCFI RECEPTACLE IS PROVIDED WITH THE UNIT & SHALL HAVE INTEGRAL WIRING TO THE UNIT. THE RECEPTACLE SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE EQUIPMENT DISCONNECTION MEAN.

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ELECTRICAL ROOF PLAN

	DATE	REMARKS
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4	01/26/2025	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

CITY OF IRVINE
BUILDING & SAFETY DIVISION

PA/PM:	Approver
DRAWN BY.:	Author
JOB NO.:	LAX21-0174-02

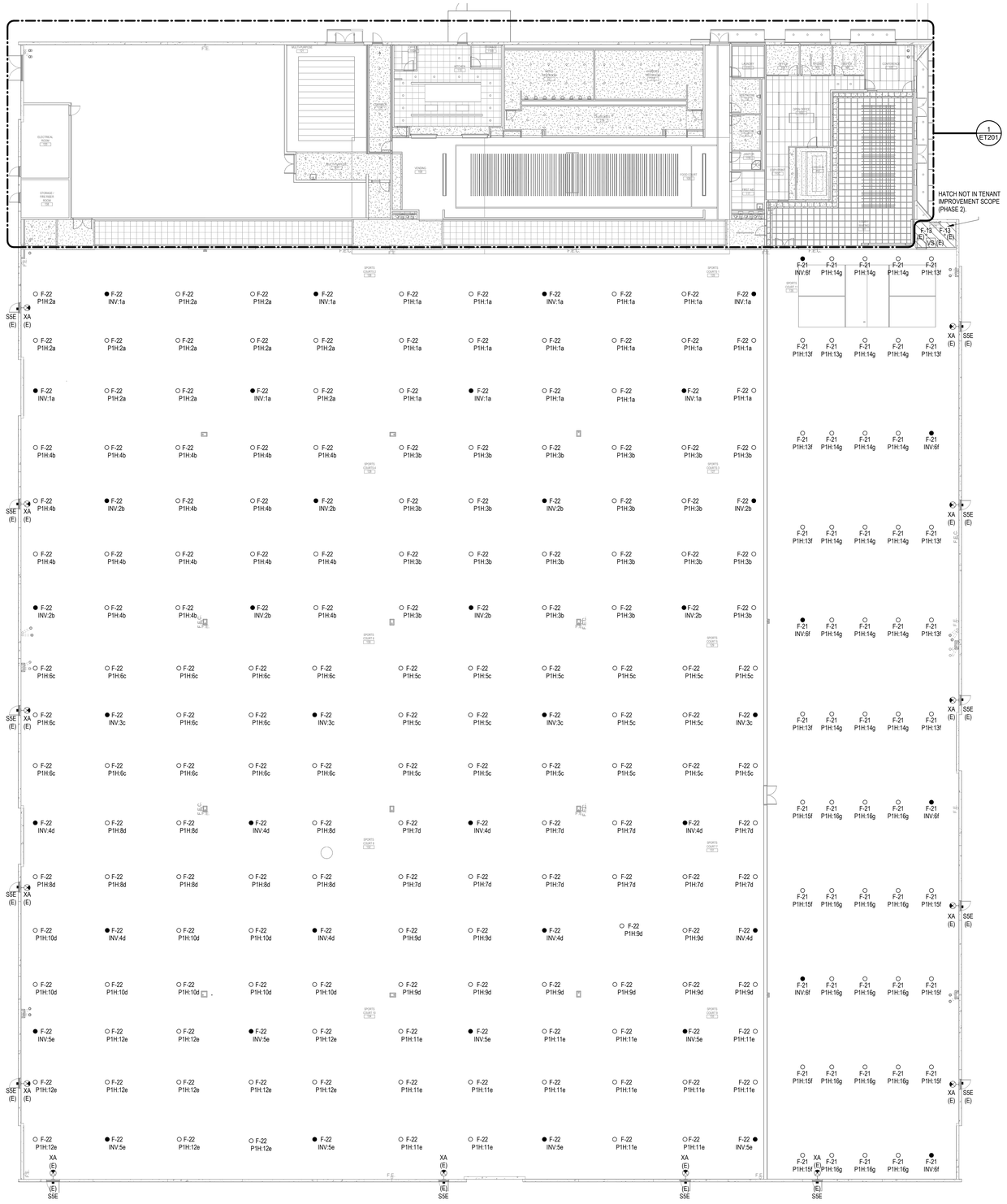
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1 FIRST FLOOR LIGHTING PLAN
1/16" = 1'-0"

GENERAL LIGHTING NOTES

1. REFER TO GENERAL NOTES ON SHEET ET000.
2. REFER TO SPECIFICATIONS ON SHEET ET001.
3. REFER TO LIGHT FIXTURE SCHEDULE ON ET301.
4. EMERGENCY BATTERY PACKS AND NIGHT LIGHTS SHALL BE CIRCUITED TO LOCAL CIRCUIT AHEAD OF SWITCHING AND CONTROLS.
5. FIXTURES WITH 'NL' DESIGNATION SHALL OPERATE AS NIGHT LIGHT.
6. FOR ALL LIGHTING CONTROLS, PROVIDE ALL NECESSARY OCCUPANCY SENSORS, RELAYS, OVERRIDES, POWERPACKS, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM.
7. ALL WALL SWITCHES SHALL BE LOW-VOLTAGE SWITCHES. NO 277V SWITCHES WILL BE PERMITTED. PROVIDE ALL NECESSARY COMPONENTS, INCLUDING LOW VOLTAGE SWITCH, POWER PACK, RELAY, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM.
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10. CIRCUIT NUMBERS ARE FOR GROUPING PURPOSES AND REFERENCE ONLY. FIELD CONDITIONS PREVAIL.
11. ELECTRICAL CONTRACTOR TO COORDINATE LIGHT FIXTURE MOUNTING WITH DUCTWORK, ATHLETIC EQUIPMENT AND FIRE PROTECTION.
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14. FOR ALL WALL MOUNTED SENSORS SHOWN, PROVIDE DUAL TECHNOLOGY WALL SWITCH SENSORS WITH 20A, 120V POWER PACK. SENSORS DESIGNATED AS 'VS' SHALL BE SET TO MANUAL-ON/AUTO-OFF. SENSORS SHALL BE SET TO AUTO-OFF AFTER 20 MINUTE TIME OUT.
15. FOR ALL CEILING MOUNTED 'VS' SENSORS SHOWN, PROVIDE DUAL TECHNOLOGY (PIR & ULTRASONIC) LOW VOLTAGE CEILING MOUNTED SENSOR WITH 2000 SQ. FT. MINIMUM COVERAGE. PROVIDE 20A,120V RATED POWER PACKS FOR EACH LIGHTING ZONE SHOWN AT THE SENSOR. PROVIDE FIXTURES WITH 0-10V DIMMING AND ASSOCIATED LOW VOLTAGE DIMMER/OVERRIDE SWITCH (LOCATION OF SWITCH SHOWN ON PLANS) FOR MANUAL DIMMING/OVERRIDE. SENSORS DESIGNATED AS 'VS' SHALL OPERATE AS MANUAL-ON/AUTO-OFF. SENSORS SHALL BE SET TO AUTO-OFF AFTER 20 MINUTE TIME OUT.
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CITY OF IRVINE
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OVERALL ELECTRICAL LIGHTING PLAN

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/14/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

06/06/2025

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KEYNOTES

1 PROVIDE A LIGHTING CONTROL PANEL FOR THE PROJECT. REFER TO SHEET ET301 FOR LIGHTING CONTROL SCHEDULE INFORMATION. COORDINATE THESE SPACES WITH OWNER AND EXISTING BUILDING CONTROLS.

2 IN 'LOBBY/WAITING 101' & 'CHECK-IN 102' SPACES, PROVIDE EACH LIGHT FIXTURE TYPE ON A DIFFERENT SWITCH LEVEL. CONFIRM SWITCH LEVELS WITH OWNER.

3 EC TO CIRCUIT F-5 IN AREA TO HPH:22.

4 EC TO CIRCUIT F-3, F-3E, F-13, F-10C, F-10DE, F-10F, F-10G, F-10H, F-10HE, F-10JE, F-10K, AND F-15C IN WEST SPORTS COURTS CORRIDOR TO P1H:22n.

5 EC TO CIRCUIT F-8, F-8E, F-9, F-9E, F-15D, AND F-15F IN FOOD COURT, FOOD COURT CORRIDOR, AND VENDING AREAS TO P1H:23m. EXISTING XA IS EXISTING TO REMAIN ON HPH:11. EC TO CIRCUIT NEW XA IN AREA TO HPH:11.

6 EC TO CIRCUIT F-6A IN EAST FOOD COURT AREA TO P1H:19m.

7 EC TO CIRCUIT F-6A IN WEST FOOD COURT AREA TO P1H:21m.

8 EC TO CIRCUIT F-13, F-13E, F-14, F-18, F-18E, AND F-19E IN KITCHEN AREA TO P1H:17. EXISTING XA IS EXISTING TO REMAIN ON HPH:11.

9 EC TO CIRCUIT F-6B, F-6BE, F13, AND F13E IN MULTI-PURPOSE AREA TO P1H:18. EXISTING XA IS EXISTING TO REMAIN ON HPH:11. EC TO CIRCUIT NEW XA IN MULTI-PURPOSE AREA TO HPH:11.

10 EC TO CIRCUIT F-11, F-11A, F-11B, F-11C IN LOBBY AREA TO HPH:24. THE EXISTING F11 CIRCUIT IN THE SPACE.

11 AREA IS EXEMPT FROM DAYLIGHT CONTROLS PER CALIFORNIA ENERGY CODE 130.1(D) EXCEPTION 3.

12 PROVIDE F-15D AND F-15F FIXTURES AND ROUGH-INS UP TO ACCESSIBLE CEILING. CONNECTION AND CONTROL TO BE PROVIDED IN PHASE 2.

13 REFER TO ARCHITECT DRAWINGS FOR ADDITIONAL INSTALLATION INFORMATION.

14 EC TO CIRCUIT F-3, F-3E, F-10A, F-10AE, F-10B, F-10BE, F-23A, AND F-23B IN EAST SPORTS COURTS CORRIDOR TO P1H:20n. EC TO CIRCUIT NEW XB IN EAST SPORTS COURTS CORRIDOR TO HPH:11.

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4	01/26/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

SHEET
ET201

06/06/2025

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Autodesk Docs://LAX21-0174-02_17300 Red Hill - Rec Center/RTM/ARE/Red Hill Rec Center_R23.rvt
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JOB NO.:	LAX21-0174.02	

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ET201P

3/6/2026 10:23:56 AM

06/06/2025

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	02/04/2026	PLAN CHECK CORRECTIONS 3
4	01/28/2025	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

ELECTRICAL ENLARGED LIGHTING PLAN - EGRESS PHOTOMETRIC

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IRVINE, CALIFORNIA 92614

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Electrical
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Los Angeles, CA 90017
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CITY OF IRVINE
BUILDING & SAFETY DIVISION

NOT IN TENANT IMPROVEMENT SCOPE (PHASE 2)

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	
CORRIDOR	Illuminance	Fc	7.15	16.4	1.0	7.15	16.40	
FOOD_COURT_108	Illuminance	Fc	6.45	17.7	1.4	4.61	12.64	
KITCHEN_110	Illuminance	Fc	12.34	44.3	1.2	10.28	36.92	
MENS-TOILET_121	Illuminance	Fc	5.40	23.1	2.2	4.27	10.50	

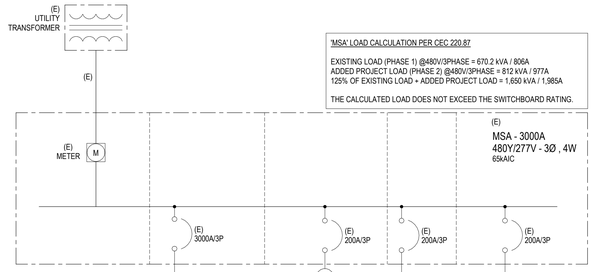
Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CORRIDOR	Illuminance	Fc	7.15	16.4	1.0	7.15	16.40
FOOD_COURT_108	Illuminance	Fc	6.45	17.7	1.4	4.61	12.64
KITCHEN_110	Illuminance	Fc	12.34	44.3	1.2	10.28	36.92
MENS-TOILET_121	Illuminance	Fc	5.40	23.1	2.2	4.27	10.50

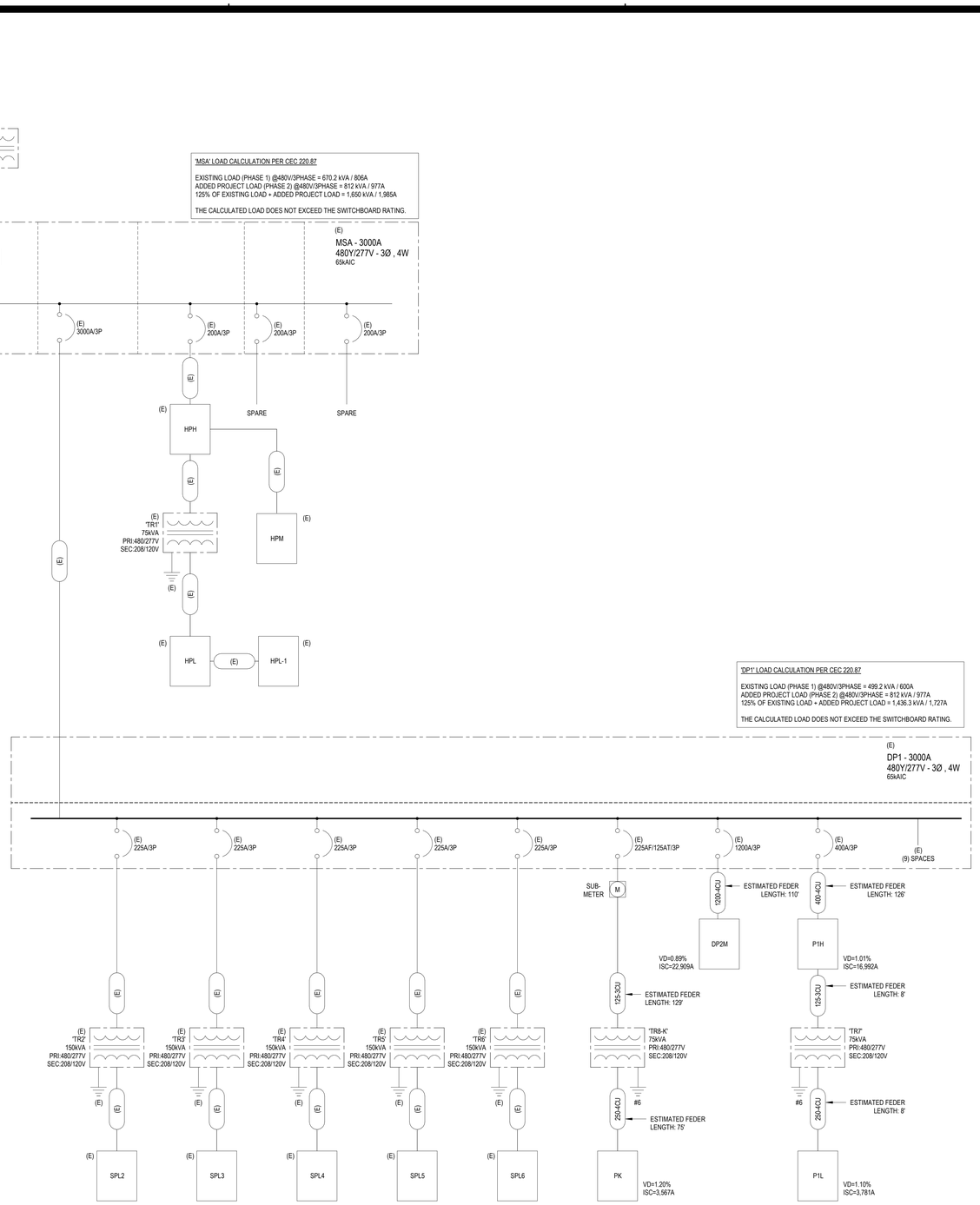
Luminaire Schedule		
Tag	Mounting Height	
F-01	10	12
F-02	9.5	10
F-03	8	8
F-04	12	12
F-05	12	12
F-06	9.5	9.5
F-07	9	11.5

1 TI ELECTRICAL ENLARGED LIGHTING PLAN - EGRESS PHOTOMETRIC
1/8" = 1'-0"

Autodesk Docs://LAX21-01 Ted-02_17300 Red Hill - Rec Center/BTS&RE Pulled Hill Rec Center_R22.rvt

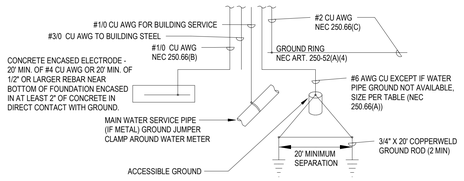
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1 Oneline Diagram TI

ET300 SCALE: N.T.S.



2 GROUNDING DETAIL

ET300 SCALE: N.T.S.

FEEDER SCHEDULE				
TAG	SETS	CURRENT CARRYING CONDUCTORS	GROUND	CONDUIT
20-2 CU	1	2#12	1#12	3/4"
20-3 CU	1	3#12	1#12	3/4"
20-4 CU	1	4#12	1#12	3/4"
25-2 CU	1	2#10	1#10	3/4"
25-3 CU	1	3#10	1#10	3/4"
25-4 CU	1	4#10	1#10	3/4"
30-2 CU	1	2#10	1#10	3/4"
30-3 CU	1	3#10	1#10	3/4"
30-4 CU	1	4#10	1#10	3/4"
35-2 CU	1	2#8	1#10	3/4"
35-3 CU	1	3#8	1#10	3/4"
35-4 CU	1	4#8	1#10	3/4"
40-2 CU	1	2#8	1#10	3/4"
40-3 CU	1	3#8	1#10	3/4"
40-4 CU	1	4#8	1#10	3/4"
45-2 CU	1	2#8	1#10	3/4"
45-3 CU	1	3#8	1#10	3/4"
45-4 CU	1	4#8	1#10	3/4"
50-2 CU	1	2#8	1#10	3/4"
50-3 CU	1	3#8	1#10	3/4"
50-4 CU	1	4#8	1#10	3/4"
60-2 CU	1	2#6	1#10	3/4"
60-3 CU	1	3#6	1#10	1"
60-4 CU	1	4#6	1#10	1"
70-2 CU	1	2#4	1#8	1"
70-3 CU	1	3#4	1#8	1"
70-4 CU	1	4#4	1#8	1-1/4"
80-2 CU	1	2#4	1#8	1"
80-3 CU	1	3#4	1#8	1"
80-4 CU	1	4#4	1#8	1-1/4"
90-2 CU	1	2#3	1#8	1-1/4"
90-3 CU	1	3#3	1#8	1-1/4"
90-4 CU	1	4#3	1#8	1-1/4"
100-2 CU	1	2#3	1#8	1-1/4"
100-3 CU	1	3#3	1#8	1-1/4"
100-4 CU	1	4#3	1#8	1-1/4"
110-3 CU	1	3#2	1#6	1-1/4"
110-4 CU	1	4#2	1#6	1-1/4"
125-3 CU	1	3#1	1#6	1-1/2"
125-4 CU	1	4#1	1#6	1-1/2"
150-3 CU	1	3#1/0	1#6	1-1/2"
150-4 CU	1	4#1/0	1#6	2"
175-3 CU	1	3#2/0	1#6	2"
175-4 CU	1	4#2/0	1#6	2"
200-3 CU	1	3#3/0	1#6	2-1/2"
200-4 CU	1	4#3/0	1#6	2-1/2"
225-3 CU	1	3#4/0	1#4	2-1/2"
225-4 CU	1	4#4/0	1#4	2-1/2"
250-3 CU	1	3#250	1#4	3"
250-4 CU	1	4#250	1#4	3"
300-3 CU	1	3#350	1#4	3"
300-4 CU	1	4#350	1#4	3"
350-3 CU	1	3#400	1#3	3"
350-4 CU	1	4#400	1#3	3"
400-3 CU	2	3#3/0	1#3	2-1/2"
400-4 CU	2	4#3/0	1#3	2-1/2"
450-3 CU	2	3#4/0	1#2	2"
450-4 CU	2	4#4/0	1#2	2-1/2"
500-3 CU	2	3#250	1#2	3"
500-4 CU	2	4#250	1#2	3"
600-3 CU	2	3#350	1#1	2-1/2"
600-4 CU	2	4#350	1#1	3"
700-3 CU	2	3#500	1#1/0	3"
700-4 CU	2	4#500	1#1/0	3-1/2"
800-3 CU	2	3#500	1#1/0	3"
800-4 CU	2	4#500	1#1/0	3-1/2"
900-3 CU	3	3#350	1#2/0	2-1/2"
900-4 CU	3	4#350	1#2/0	3"
1000-3 CU	3	3#400	1#2/0	3"
1000-4 CU	3	4#400	1#2/0	3"
1200-3 CU	4	3#350	1#3/0	2-1/2"
1200-4 CU	4	4#350	1#3/0	3"
1400-3 CU	4	3#500	1#4/0	3"
1400-4 CU	4	4#500	1#4/0	3-1/2"
1600-3 CU	5	3#400	1#4/0	3"
1600-4 CU	5	4#400	1#4/0	3"
1800-3 CU	5	3#500	1#250	3"
1800-4 CU	5	4#500	1#250	3-1/2"
2000-3 CU	6	3#400	1#250	3"
2000-4 CU	6	4#400	1#250	3"
2500-3 CU	7	3#500	1#350	3"
2500-4 CU	7	4#500	1#350	3-1/2"
3000-3 CU	8	3#500	1#400	3-1/2"
3000-4 CU	8	4#500	1#400	3-1/2"
3000-4CUS	8	4#500	1#3/0	4"
4000-4 CU	11	3#500	1#3/0	3-1/2"

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ELECTRICAL ONE LINE DIAGRAM

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/05/2026	PLAN CHECK CORRECTIONS 3
5	01/26/2026	OC HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
	03/06/2026	OC HEALTH DEPT 2

CITY OF IRVINE
BUILDING & SAFETY DIVISION

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

06/06/2025

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Autodesk Docs://LAX21-0174-02_17300 Red Hill - Rec Center/RTM/MEP Revit Files Center_R23.rvt

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LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	FIXTURE TYPE	K	CRI	INPUT WATTS	VOLTS	MANUFACTURER	MODEL NO.	REMARKS
F-3	66" L, SQUERO RECESSED DIRECT	LED	3000	90	25.3	277	LUMENWERX	SQUR D HLO BK SW 90CRI 500LMF 30K 5FT6IN UNV D1 1C DTL B	
F-3E	66" L, SQUERO RECESSED DIRECT, EMERGENCY	LED	3000	90	25.3	277	LUMENWERX	SQUR D HLO BK SW 90CRI 500LMF 30K 5FT6IN UNV D1 1C EC 2EMB DTL B	
F-5	BIONIC PRO 3	LED	3000	90	195.8	277	PRUDENTIAL	BPRO3-LIN-FLSH-LED3-SO-PER PLAN-TMW-SAL-NU-UNV-RSC-X1-DM01-C80-60	REFER TO ARCHITECT DRAWINGS AND DETAILS FOR SHAPE AND LENGTH.
F-6A	160" L, VIA 3" PENDANT DIRECT	LED	3000	90	49.2	277	LUMENWERX	VIA3P D HLO FH NA SW 90CRI 500LMF NA 30K 160 UNV D1 1C STS W	
F-6B	72" L, VIA 3" PENDANT DIRECT	LED	3000	90	24.6	277	LUMENWERX	VIA3P D HLO FH NA SW 90CRI 500LMF NA 30K 72 UNV D1 1C STS W	
F-6BE	72" L, VIA 3" PENDANT DIRECT, EMERGENCY	LED	3000	90	24.6	277	LUMENWERX	VIA3P D HLO FH NA SW 90CRI 500LMF NA 30K 72 UNV D1 1C EMB STS W	
F-8	AERA 4" PENDANT CYLINDER DIRECT 12"	LED	3000	90	20.0	277	LUMENWERX	AE4CYP D 12IN FTMB BVL FTMB NOL SW 50DEG 2STP 90CRI 30K UNV 20W D1 1C FLR FTMB BPC BKS	
F-8E	AERA 4" PENDANT CYLINDER DIRECT 12", EMERGENCY	LED	3000	90	20.0	277	LUMENWERX	AE4CYP D 12IN FTMB BVL FTMB NOL SW 50DEG 2STP 90CRI 30K UNV 20W D1 +EB 1C FLR FTMB BPC BKS	
F-9	AERA 4" PENDANT CYLINDER ASYMMETRIC DIRECT 12"	LED	3000	90	20.0	277	LUMENWERX	AE4CYPASY D 12IN FTMB BVL FTMB NOL SW 50DEG 2STP 90CRI 30K NA UNV 20W NA D1 1C FLR FTMB BPC B KS	
F-9E	AERA 4" PENDANT CYLINDER ASYMMETRIC DIRECT 12", EMERGENCY	LED	3000	90	20.0	277	LUMENWERX	AE4CYPASY D 12IN FTMB BVL FTMB NOL SW 50DEG 2STP 90CRI 30K NA UNV 20W NA D1 +EB 1C FLR FTMB BPC B KS	
F-10A	24" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT	LED	3000	90	10.0	277	LUMENWERX	12525-2-30K-TB15	
F-10AE	24" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT, EMERGENCY	LED	3000	90	10.0	277	LUMENWERX	12525-2-30K-TB15 XEM8	
F-10B	48" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT	LED	3000	90	20.0	277	LUMENWERX	12525-4-30K-TB15	
F-10BE	48" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT, EMERGENCY	LED	3000	90	20.0	277	LUMENWERX	12525-4-30K-TB15 XEM8	
F-11	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	LED	3000	90	177.5	277	BOLD LIGHTING	BIW-S-426-B-V-U-B-B-W-9-30-0	
F-11A	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	LED	3000	90	127.5	277	BOLD LIGHTING	BIW-S-306-B-V-U-B-B-W-9-30-0	
F-11B	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	LED	3000	90	65.0	277	BOLD LIGHTING	BIW-S-156-B-V-U-B-B-W-9-30-0	
F-11C	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	LED	3000	90	100.0	277	BOLD LIGHTING	BIW-S-240-B-V-U-B-B-W-9-30-0	
F-13	AERA 3" DOWNLIGHT ROUND (AE3RR)	LED	3000	90	10.0	277	LUMENWERX	AE3RR-TRM-SW-OF-ASB-UNV-10W-D1 + AE3RRB-SW-10W-80DEG-2STP-90CRI-30K-TRM-FTMW-NA	
F-13E	AERA 3" DOWNLIGHT ROUND (AE3RR) EMERGENCY	LED	3000	90	10.0	277	LUMENWERX	AE3RR-TRM-SW-OF-ASB-UNV-10W-D1+EB + AE3RRB-SW-10W-80DEG-2STP-90CRI-30K-TRM-FTMW-NA	
F-14	MELLOW LIGHT IV LED 2X4 SPLIT DIFFUSER	LED	3500	90	28.0	277	ZUMTOBEL	MLIV-24-RF-HE-SD-935-DU	
F-15A	16'-6"L, LED TAPE LIGHT (PDS-NK EXTRUSION)	LED	3000	90	120.5	277	KLUS INSPIRING SOLUTIONS	A01588L10OD_2+K-VBT30-0720-24+DRIVER	
F-15D	5'-6"L, LED TAPE LIGHT (PDS-NK EXTRUSION)	LED	3000	90	40.2	277	KLUS INSPIRING SOLUTIONS	A01588L10OD_2+K-VBT30-0720-24+DRIVER	
F-15F	5'L, LED TAPE LIGHT (PDS-NK EXTRUSION)	LED	3000	90	36.5	277	KLUS INSPIRING SOLUTIONS	A01588L10OD_2+K-VBT30-0720-24+DRIVER	
F-16	K-HEHD-0960-24 LED STRIP	LED	3000	95	46.0	277	KLUS INSPIRING SOLUTIONS	K-HEHD30-0960-24 + REMOTE DRIVER	
F-18	RONDO RB6 6" DOWNLIGHT (FOR WET LOCATION)	LED	3000	80	19.3	277	OPUS	RB6 RDW SW90 40K 30LM U DIMA1 BW AHZ AMI MT	
F-18E	RONDO RB6 6" DOWNLIGHT (FOR WET LOCATION), EMERGENCY	LED	3000	80	19.3	277	OPUS	RB6 RDW SW90 40K 30LM U DIMA1 BW AHZ AMI MT BB8	
F-19E	2X4 WET RATED TROFFER, EMERGENCY	LED	3500	90	36.0	277	LITHONIA	2WRTL G L48 5000LM AFL MD MVOLT GZ1 30K 80CRI IE10WLCP	
F-21	BADMINTON COURT REFLECTED LIGHTING	LED	5000	80	161.8	277	HOLOPHANE	HOLO1 24000LM MD 50K 70CRI UPL	REFER TO ET500 FOR MORE INFORMATION.
F-22	BASKETBALL COURT LIGHTING	LED	5000	80	179.0	277	HOLOPHANE	HOLO1 30000LM WD 50K 70CRI	REFER TO ET501 FOR MORE INFORMATION.
F-23A	14' TRACK SPOT LIGHTING	LED	3000	90	107.8	277	LUMENWERX	SQUPCOMSPAT D 14FT HLO BK SW 90CRI 500LMF 30K UNV D1 1C GRD B 5MS50	
F-23B	16' TRACK SPOT LIGHTING	LED	3000	90	123.2	277	LUMENWERX	SQUPCOMSPAT D 16FT HLO BK SW 90CRI 500LMF 30K UNV D1 1C GRD B 5MS50	
XA	EXIT SIGN WALL MOUNTED SINGLE FACED	LED	0		5.0	277	LITHONIA	LXC W 1 RW EL NGP	
XB	EXIT SIGN WALL MOUNTED DOUBLE FACED	LED	0		5.0	277	LITHONIA	LXC W 2 RW EL NGP	

FIXTURE SCHEDULE NOTES:
1. PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES FOR A COMPLETE INSTALLATION OF FIXTURE(S) IN THE SPACE. COORDINATE ALL INSTALLATION REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

2. FINISHES TO BE COORDINATED WITH ARCHITECT PRIOR TO ORDERING.

3. THE LISTED FIXTURE PRODUCT IN THE APPROVED MANUFACTURERS COLUMN WITH A FULL PRODUCT NUMBER FOR EACH FIXTURE TYPE IS THE BASIS OF DESIGN. FINAL PRODUCT APROVAL WILL BE PROVIDED DURING THE SUBMITTAL PROCESS. ALTERNATIVES OR EQUALS SHALL PROVIDE PHOTOMETRICS AND STATISTICS EQUAL TO BASIS OF DESIGN.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

TAG <1>	DESCRIPTION <2>	LOAD <3>	WIRE/CONDUIT <4>	STARTER <5>	VOLTAGE <6>	LOCAL DISCONNECT <7>	REMARKS
EF 4	EXHAUST FAN	0.75 HP	REFER TO PANEL 'P1L'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	MANUFACTURER PROVIDED DISCONNECT. PROVIDE ADDITIONAL WIRING AS REQUIRED FOR DAMPER CONTROL.
RTU 5	ROOFTOP UNIT	55 MCA 70 MOCP	REFER TO PANEL 'DP2M'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	480V 3P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC. SEPARETE POWER FOR EXHAUST 10A @480V 3PHASE
RTU 6	ROOFTOP UNIT	16 MCA 20 MOCP	REFER TO PANEL 'DP2M'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	480V 3P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC. SEPARETE POWER FOR EXHAUST 10A @480V 3PHASE
RTU -	ROOFTOP UNIT (7,8,9,10,11,12,13, 14,15,16,17)	61 MCA 80 MOCP	REFER TO PANEL 'DP2M'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	480V 3P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC. SEPARETE POWER FOR EXHAUST 10A @480V 3PHASE
EWH 2	ELECTRICAL WATER HEATER	24 kW	REFER TO PANEL 'PK'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC
RCP 2	RECIRCULATION PUMP	0.02 HP	REFER TO PANEL 'P1L'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC
KEF 1	KITCHEN EXHAUST FAN	1.83 HP	REFER TO PANEL 'DP2M'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	480V 3P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC
MAU 1	MAKEUP AIR UNIT	0.69 HP	REFER TO PANEL 'DP2M'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	480V 3P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC
ODAS 1	DEDICATED OUTDOOR AIR SYSTEM	15.3 MCA 20 MOCP	REFER TO PANEL 'DP2M'	☐ PROVIDED BY MC ☐ IN MCC NEMA SIZE ☐ TYPE	480V 3P	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	DISCONNECT PROVIDED BY EC

SCHEDULE KEY NOTES

1. VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH EQUIPMENT INSTALLER BEFORE INSTALLING FEEDERS.
2. SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
3. SIZE STARTER/FEEDER DISCONNECT PER FINAL EQUIPMENT REQUIREMENTS.
4. PROVIDE FEEDERS AS INDICATED, VERIFY WITH EQUIPMENT REQUIREMENTS.
5. COORDINATE FINAL STARTER WIRING REQUIREMENTS WITH MECHANICAL EQUIPMENT, PROVIDE ADDITIONAL WIRING AS REQUIRED FOR INSTALLATION STARTER(S) FOR MECHANICAL EQUIPMENT. PROVIDE OVERLOAD PROTECTION (FUSES OR MOTOR CIRCUIT PROTECTOR) PER SPECIFICATIONS, ACTUAL FIELD
6. VERIFY FINAL VOLTAGE AND PHASE REQUIREMENTS OF ALL EQUIPMENT WITH INSTALLER BEFORE INSTALLING FEEDERS.
7. EC TO PROVIDE LOCAL DISCONNECT WITHIN 5'-0" OF EQUIPMENT. NON-STANDARD ITEMS, TIMERS, METERS, INTERLOCKS, ETC.

SCHEDULE GENERAL NOTES

1. PROVIDE POWER CONNECTIONS TO ALL ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND OWNER FURNISHED EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND POWER REQUIREMENTS. VERIFY ALL TECHNICAL DATA WITH FINAL SHOP DRAWINGS.
2. OVER CURRENT PROTECTION SIZES LISTED ARE FROM MANUFACTURER'S AND STANDARD MOTOR DATA, FURNISH FUSES BASED ON FUSE MANUFACTURER'S STANDARDS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. FLEXIBLE CONNECTIONS TO MOTORS SHALL BE IN FLEXIBLE CONDUIT. PROVIDE COPPER EQUIPMENT GROUND FROM DISCONNECT TO MOTOR CONNECTION.
4. EC TO COORDINATE WITH THE MECHANICAL EQUIPMENT SCHEDULES TO PROVIDE DISCONNECTS FOR THE MECHANICAL EQUIPMENT.

INVERTER SCHEDULE

CIRCUIT NO.	CIRCUIT VOLT.	AREA SERVED	CIRCUIT CONFIGURATION	VD%	LOAD
(1)	277V	EMERGENCY LIGHTING SPORTS COURTS 1&2	3/4"C, 1#12, #12N, #12G	1.07%	1432
(2)	277V	EMERGENCY LIGHTING SPORTS COURTS 3&4	3/4"C, 1#12, #12N, #12G	1.58%	1432
(3)	277V	EMERGENCY LIGHTING SPORTS COURTS 5&6	3/4"C, 1#12, #12N, #12G	0.98%	716
(4)	277V	EMERGENCY LIGHTING SPORTS COURTS 7&8	3/4"C, 1#12, #12N, #12G	2.35%	1432
(5)	277V	EMERGENCY LIGHTING SPORTS COURTS 9&10	3/4"C, 1#12, #12N, #12G	2.85%	1432
(6)	277V	EMERGENCY LIGHTING SPORTS COURTS 11	3/4"C, 1#12, #12N, #12G	1.05%	548
(7)	277V	SPARE	-	-	-
(8)	277V	SPARE	-	-	-
(9)	277V	SPARE	-	-	-
(10)	277V	SPARE	-	-	-
(11)	277V	SPARE	-	-	-
(12)	277V	SPARE	-	-	-

NOTES

1. INVERTER TO BE ISOLITE E3MAX-10500-3P-LC-IG-OG-C12 OR APPROVED EQUAL.

2. INVERTER SYSTEM ARE REQUIRED TO BE INSTALLED PER NFPA 111. TESTING AND COMMISSIONING OF THESE SYSTEMS WILL BE REQUIRED PRIOR TO RECIEVING A TCO OR CO FOR THIS PROJECT AND THE COMMISSIONING REPORT SHALL BE MADE AVAILALBE TO BE THE FIELD INSPECTOR.

LIGHTING CONTROL PANEL SCHEDULE - PHASE 2: IRVINE FIELD HOUSE

RELAY NO.	DESCRIPTION	CIRCUIT NO.	LOCAL L.V. SWITCH	LOCAL DS OVERRIDE	RELAY NO.	DESCRIPTION	CIRCUIT NO.	LOCAL L.V. SWITCH	LOCAL DS OVERRIDE
1	LIGHTING EAST FOOD COURT	P1H:19	m	-	13	LGT EAST SPORTS CORRIDOR	P1H:20	n	-
2	LIGHTING WEST FOOD COURT	P1H:21	m	-	14	LGT WEST SPORTS CORRIDOR	P1H:23	n	-
3	LIGHTING FOOD COURT/VENDING	P1H:23	m	-	15	SPARE	-	-	-
4	SPARE	-	-	-	16	SPARE	-	-	-
5	LIGHTING SPORTS COURTS 1	P1H:1	a	-	17	LIGHTING SPORTS COURTS 2	P1H:2	a	-
6	LIGHTING SPORTS COURTS 3	P1H:3	b	-	18	LIGHTING SPORTS COURTS 4	P1H:4	b	-
7	LIGHTING SPORTS COURTS 5	P1H:5	c	-	19	LIGHTING SPORTS COURTS 6	P1H:6	c	-
8	LTG SPORTS COURTS 7-NORTH	P1H:7	d	-	20	LTG SPORTS COURTS 8-NORTH	P1H:8	d	-
9	LTG SPORTS COURTS 7-SOUTH	P1H:9	d	-	21	LTG SPORTS COURTS 8-SOUTH	P1H:10	d	-
10	LIGHTING SPORTS COURTS 9	P1H:11	e	-	22	LIGHTING SPORTS COURTS 10	P1H:12	e	-
11	LTG SPORTS COURTS 11-OUTSIDE	P1H:13	f	-	23	LTG SPORTS COURTS 11-INSIDE	P1H:14	g	-
12	LTG SPORTS COURTS 11-OUTSIDE	P1H:15	f	-	24	LTG SPORTS COURTS 11-INSIDE	P1H:16	g	-
25	SPARE	-	-	-	28	SPARE	-	-	-
26	SPARE	-	-	-	29	SPARE	-	-	-
27	SPARE	-	-	-	30	SPARE	-	-	-

LIGHTING CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE NEW LIGHTING CONTROL PANEL FOR INTERIOR FOOD COURT AND SPORTS COURTS.

2. EXTERIOR LIGHTS ARE TO ENERGIZE/DE-ENERGIZE BASED ON THE TIME OF DAY SCHEDULES & OUTSIDE LIGHT LEVELS MEASURED BY A BUILDING MOUNTED PHOTOCELL.

3. CONTRACTOR IS RESPONSIBLE FOR NECESSARY PROGRAMMING OF LIGHTING CONTROLS.

DETAILS OF OPERATION

THE LCP LIGHTING CONTROLS PROVIDE TIME OF DAY CONTROL WITH A CENTRAL BUILDING MOUNTED PHOTOCELL OVERRIDE FOR ALL EXTERIOR LIGHTING. THE OWNER DEFINES NORMAL HOURS OF OPERATION, CONTROLLED BY THE ASTRONOMICAL TIMER.

SPORTS COURTS CORRIDOR, FOOD COURT 108, VENDING 109 LIGHTS TO BE CONTROLLED VIA TIME OF DAY CONTROL. THROUGH THE LIGHTING CONTROL PANEL, LIGHTS TO BE ON 100% DURING OPERATORING HOURS AS DETERMINED BY THE OWNER. LOCAL OVERRIDE PER SWITCH LEG TO BE INTERGRATED INTO A TOUCHSCREEN WALL CONTROLLER BY THE MAIN RECEPTION DESK IN CHECK-IN 102. BASIS OF DESIGN TO BE nLIGHT UNITOUCH (NPOD TOUCH BK) OR APPROVED EQUAL. PASSWORD PROTECTED TOUCHSCREENS TO BE PROVIDED AT THE ENTRANCE OF BASKETBALL COURTS AND BADMINTON COURTS FOR LOCAL LIGHTING CONTROL.

LIGHT FIXTURES WITHOUT A SWITCH LEG TO BE CONTROLLED WITH LOCAL SENSORS AND OVERRIDES REFER TO THE FLOOR PLANS FOR LOCATIONS AND TYPE.

PROVIDE OCCUPANCY SENSORS ON THE FLOOR PLAN SET FOR 10 MINUTES TO TURN THE LIGHTS ON AFTER HOURS OF OPERATION.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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IRVINE FIELD HOUSE

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IRVINE, CALIFORNIA 92614

ELECTRICAL SCHEDULES

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/14/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT.
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

06/06/2025

SHEET
ET301

3/6/2026 10:23:57 AM

Autodesk Docs://LAX21-0174-02_17300 Red Hill - Rec Center/RTM/MEP Red Hill Rec Center_R22.rvt

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

CIRCUIT BREAKER PANELBOARD SCHEDULE

PANEL NAME: "DP2M" | **LOCATION:** Room 1 | **VOLTAGE:** 480/277 Wye | **MAIN TYPE:** MCB
FED BY: "DP1" | **ENCLOSURE:** Type 1 | **BUS RATING (A):** 1,200
MOUNTING: Surface | **MANUFACTURER:** | **MCB RATING (A):** 1,200
PANEL TYPE: | **MIN. AIC RATING (A):** 35k

CKT	LOAD DESCRIPTION	CIRCUIT CONFIGURATION	VD%	CB	P	TYPE	A		B		C		TYPE	P	CB	VD%	CIRCUIT CONFIGURATION	LOAD DESCRIPTION	CKT
1							455	4240											2
3	KEF-1, ROOFTOP	3/4"C, 3#12, #12N, #12G	0.16%	20	3	S			455	4240				3	20	1.18%	3/4"C, 3#12, #12N, #12G	DOAS-1, ROOFTOP	4
5											455	4240							6
7							15242	2770											8
9	RTU-5, ROOFTOP	1-1/4"C, 3#4, #4N, #8G	0.98%	70	3				15242	2770				3	20	1.16%	3/4"C, 3#12, #12N, #12G	SEPERATE DISCONNECT RTU-5, RTU-5 ROOFTOP	10
11											15242	2770							12
13							4434	2770											14
15	RTU-6, ROOFTOP	3/4"C, 3#10, #10N, #10G	0.52%	30	3				4434	2770				3	20	0.56%	3/4"C, 3#12, #12N, #12G	SEPERATE DISCONNECT RTU-6, RTU-6 ROOFTOP	16
17											4434	2770							18
19							16905	16905											20
21	RTU-7, ROOFTOP	1-1/4"C, 3#2, #2N, #8G	0.31%	80	3				16905	16905				3	80	0.58%	1-1/4"C, 3#2, #2N, #8G	RTU-8, ROOFTOP	22
23											16905	16905							24
25							16905	16905											26
27	RTU-9, ROOFTOP	1-1/4"C, 3#2, #2N, #8G	0.84%	80	3				16905	16905				3	80	1.11%	1-1/4"C, 3#2, #2N, #8G	RTU-10, ROOFTOP	28
29											16905	16905							30
31							16905	16905											32
33	RTU-11, ROOFTOP	1-1/4"C, 3#2, #2N, #8G	1.35%	80	3				16905	16905				3	80	0.81%	1-1/4"C, 3#2, #2N, #8G	RTU-12, ROOFTOP	34
35											16905	16905							36
37							16905	16905											38
39	RTU-13, ROOFTOP	1-1/4"C, 3#2, #2N, #8G	1.07%	80	3				16905	16905				3	80	1.21%	1-1/4"C, 3#2, #2N, #8G	RTU-14, ROOFTOP	40
41											16905	16905							42
43							16905	16905											44
45	RTU-15, ROOFTOP	1-1/4"C, 3#2, #2N, #8G	1.33%	80	3				16905	16905				3	80	1.61%	1-1/4"C, 3#2, #2N, #8G	RTU-16, ROOFTOP	46
47											16905	16905							48
49							16905	172											50
51	RTU-17, ROOFTOP	1-1/4"C, 3#2, #2N, #8G	1.85%	80	3				16905	172				3	20	0.02%	3/4"C, 3#12, #12N, #12G	MAU-1, STORAGE ROOM 1	52
53											16905	172							54
55	SPARE	--	--	20	1	--	0	0					--	1	20	--	--	SPARE	56
57	SPARE	--	--	20	1	--			0	0			--	1	20	--	--	SPARE	58
59	SPARE	--	--	20	1	--					0	0	--	1	20	--	--	SPARE	60
61	SPARE	--	--	20	1	--	0	0					--	1	20	--	--	SPARE	62
63	SPARE	--	--	20	1	--			0	0			--	1	20	--	--	SPARE	64
65	SPARE	--	--	20	1	--					0	0	--	1	20	--	--	SPARE	66
67	SPACE	--	--	--	1	--	--	--					--	1	--	--	--	SPACE	68
69	SPACE	--	--	--	1	--			--	--			--	1	--	--	--	SPACE	70
71	SPACE	--	--	--	1	--					--	--	--	1	--	--	--	SPACE	72
			CONNECTED PHASE LOAD				216038 VA		216038 VA		216038 VA								
			***PHASE DIVERSIFIED LOAD**				216038 VA		216038 VA		216038 VA								
			***PHASE DIVERSIFIED AMPS**				780 A		780 A		780 A								

CALCULATED PANEL AMPS:
780 A
(*DIVERSIFIED LOADS CALCULATED PER THE NATIONAL ELECTRIC CODE.)

NOTES/ACCESSORIES:
1. PROVIDE SPARE 20A, SINGLE-POLE BREAKERS IN ALL UNUSED SPACES.
2. L = LOCKOUT BREAKER G = GFI BREAKER S = SHUNT TRIP
3. KEF-1 TO SHUNT TRIP ONCE ANSUL SYSTEM IS ACTIVATED.

PANEL TOTALS	
TOTAL CONNECTED LOAD:	648115 VA
TOTAL DIVERSIFIED LOAD:	648115 VA
TOTAL CONNECTED:	780 A
TOTAL ESTIMATED DEMAND:	780 A

CIRCUIT BREAKER PANELBOARD SCHEDULE

PANEL NAME: "PK" | **LOCATION:** KITCHEN 110 | **VOLTAGE:** 120/208 Wye | **MAIN TYPE:** MCB
FED BY: "TR8-K" | **ENCLOSURE:** Type 1 | **BUS RATING (A):** 250
MOUNTING: Surface | **MANUFACTURER:** | **MCB RATING (A):** 250
PANEL TYPE: | **MIN. AIC RATING (A):** 10k

CKT	LOAD DESCRIPTION	CIRCUIT CONFIGURATION	VD%	CB	P	TYPE	A		B		C		TYPE	P	CB	VD%	CIRCUIT CONFIGURATION	LOAD DESCRIPTION	CKT
1	RECEPTS. KITCHEN OFFICE	3/4"C, 1#12, #12N, #12G	0.29%	20	1		360	770						2	20	0.24%	3/4"C, 2#12, #12N, #12G	CONDENSER, AIR COOLED	2
3	RECEPTS. KITCHEN OFFICE	3/4"C, 1#12, #12N, #12G	0.26%	20	1				360	770									4
5	EVAPORATOR COIL	3/4"C, 1#12, #12N, #12G	0.14%	20	1						220	288		1	20	0.08%	3/4"C, 1#12, #12N, #12G	AIR CURTAIN	6
7	WALK-IN COMPLEX	3/4"C, 1#12, #12N, #12G	0.74%	20	1	G	1800	0					--	1	20	--	--	SPARE	8
9	FIRE SUPPRESION SYSTEM	3/4"C, 1#12, #12N, #12G	0.68%	20	1	G			1800	0			--	1	20	--	--	SPARE	10
11	SPARE	--	--	20	1	--					0	1140	G	2	20	0.53%	3/4"C, 2#12, #12N, #12G	ICE MACHINE	12
13	WORKTABLE WITH SINK	3/4"C, 1#12, #12N, #12G	1.79%	20	1		1920	1140											14
15	MIXER COUNTERTOP	3/4"C, 1#12, #12N, #12G	0.72%	20	1				800	1920				1	20	1.18%	3/4"C, 1#12, #12N, #12G	EXHAUST HOOD	16
17	FOOD PROCESSOR	3/4"C, 1#12, #12N, #12G	0.80%	20	1						840	1920		1	20	1.66%	3/4"C, 1#12, #12N, #12G	EXHAUST HOOD	18
19	FRYER WITH FILTER	3/4"C, 1#12, #12N, #12G	0.27%	20	1	G	670	1400					G	1	20	0.55%	3/4"C, 1#12, #12N, #12G	COMBINE OVEN, GAS	20
21	HOT FOOD WELL	3/4"C, 2#12, #12N, #12G	0.18%	20	2	G			620	620			G	2	20	0.20%	3/4"C, 2#12, #12N, #12G	HOT FOOD WELL	22
23											620	620							24
25	REFRIGERATOR, BASE	3/4"C, 1#12, #12N, #12G	0.86%	20	1	G	1510												26
27	FRYER, FILTER 2	3/4"C, 1#12, #12N, #12G	0.60%	20	1	G			840	470			G	1	20	0.32%	3/4"C, 1#12, #12N, #12G	REFRIGRATOR, PREPTABLE	28
29	REFRIGERATOR,...	3/4"C, 1#12, #12N, #12G	0.29%	20	1	G					360	1920		1	20	1.36%	3/4"C, 1#12, #12N, #12G	RECEPT. BACK-COUNTER	30
31	HOT FOOD-WELL, DROP-IN	3/4"C, 2#10, #10N, #10G	0.52%	30	2	G	1860	240						1	20	0.25%	3/4"C, 1#12, #12N, #12G	FOOD SLICER	32
33									1860	240				1	20	0.27%	3/4"C, 1#12, #12N, #12G	WORKTABLE WITH SINK	34
35	REFRIGERATOR, PREPTABLE	3/4"C, 1#12, #12N, #12G	0.44%	20	1	G					470	360	G	1	20	0.32%	3/4"C, 1#12, #12N, #12G	REFRIGATOR, UNDERCOUNTER	36
37	BACK COUNTER WITH SINK	3/4"C, 1#12, #12N, #12G	1.77%	20	1		1920	1650					G	1	20	1.73%	3/4"C, 1#12, #12N, #12G	COFFEE BREWER	38
39	SPARE	--	--	20	1	--			0	1920				1	20	2.16%	3/4"C, 1#12, #12N, #12G	BACK COUNTER W/ SINK	40
41	COFFEE GRINDER	3/4"C, 1#12, #12N, #12G	0.97%	20	1						960	600		1	20	0.68%	3/4"C, 1#12, #12N, #12G	POINT OF SALE SYSTEM	42
43	POINT OF SALE SYSTEM	3/4"C, 1#12, #12N, #12G	0.77%	20	1		600	2640											44
45	SPARE	--	--	20	1	--			0	2640			G	3	30	0.98%	3/4"C, 3#10, #10N, #10G	UNDERCOUNTER DISHWASHER	46
47	SPARE	--	--	20	1	--					0	2640							48
49	SPARE	--	--	20	1	--	0	8000											50
51	SPARE	--	--	20	1	--			0	8000				3	100	0.07%	1-1/2"C, 3#1, #1N, #6G	EWH-2, STORAGE 110B	52
53	SPARE	--	--	20	1	--					0	8000							54
55	SPARE	--	--	20	1	--	0						--	1	--	--	--	SPARE	56
57	SPARE	--	--	20	1	--			0	--			--	1	--	--	--	SPACE	58
59	SPARE	--	--	20	1	--					0	--	--	1	--	--	--	SPACE	60
			CONNECTED PHASE LOAD				26480 VA		22860 VA		20958 VA								
			***PHASE DIVERSIFIED LOAD**				23684 VA		20446 VA		18745 VA								
			***PHASE DIVERSIFIED AMPS**				200 A		173 A		156 A								

CALCULATED PANEL AMPS:
200 A
(*DIVERSIFIED LOADS CALCULATED PER THE NATIONAL ELECTRIC CODE.)

NOTES/ACCESSORIES:
1. PROVIDE SPARE 20A, SINGLE-POLE BREAKERS IN ALL UNUSED SPACES.
2. L = LOCKOUT BREAKER
3. G = GFI BREAKER

PANEL TOTALS	
TOTAL CONNECTED LOAD:	70298 VA
TOTAL DIVERSIFIED LOAD:	62875 VA
TOTAL CONNECTED:	195 A
TOTAL ESTIMATED DEMAND:	175 A

CIRCUIT BREAKER PANELBOARD SCHEDULE

PANEL NAME: "P1H" | **LOCATION:** Room 1 | **VOLTAGE:** 480/277 Wye | **MAIN TYPE:** MCB
FED BY: "DP1" | **ENCLOSURE:** Type 1 | **BUS RATING (A):** 400
MOUNTING: Surface | **MANUFACTURER:** | **MCB RATING (A):** 400
PANEL TYPE: | **MIN. AIC RATING (A):** 35k

CKT	LOAD DESCRIPTION	CIRCUIT CONFIGURATION	VD%	CB	P	TYPE	A		B		C		TYPE	P	CB	VD%	CIRCUIT CONFIGURATION	LOAD DESCRIPTION	CKT
1	LIGHTING SC 1a	3/4"C, 1#12, #12N, #12G	1.86%	20	1		2506	1969						1	20	1.32%	3/4"C, 1#12, #12N, #12G	LIGHTING SC 2a	2
3	LIGHTING SC 3b	3/4"C, 1#10, #10N, #10G	2.26%	20	1				3580	2864				1	20	1.66%	3/4"C, 1#10, #10N, #10G	LIGHTING SC 4b	4
5	LIGHTING SC 5c	3/4"C, 1#10, #10N, #10G	2.36%	20	1						2864	2327		1	20	1.82%	3/4"C, 1#10, #10N, #10G	LIGHTING SC 6c	6
7	LIGHTING SC 7d-NORTH	3/4"C, 1#12, #12N, #12G	2.90%	20	1		1790	1432						1	20	2.17%	3/4"C, 1#12, #12N, #12G	LIGHTING SC 8d-NORTH	8
9	LIGHTING SC 7d-SOUTH	3/4"C, 1#12, #12N, #12G	3.18%	20	1				1790	1432				1	20	2.47%	3/4"C, 1#12, #12N, #12G	LIGHTING SC 8d-SOUTH	10
11	LIGHTING SC 9e	3/4"C, 1#10, #10N, #10G	2.99%	20	1						2506	1969		1	20	2.26%	3/4"C, 1#10, #10N, #10G	LIGHTING SC 10e	12
13	LIGHTING SC 11f-OUTSIDE	3/4"C, 1#12, #12N, #12G	2.40%	20	1		1618	2751						1	20	2.46%	3/4"C, 1#10, #10N, #10G	LIGHTING SC 11g-INSIDE	14
15	LIGHTING SC 11f-OUTSIDE	3/4"C, 1#12, #12N, #12G	2.60%	20	1				1133	2427				1	20	3.36%	3/4"C, 1#10, #10N, #10G	LIGHTING SC 11g-INSIDE	16
17	LIGHTING KITCHEN AREAS	3/4"C, 1#12, #12N, #12G	0.17%	20	1						429	543		1	20	0.13%	3/4"C, 1#12, #12N, #12G	LIGHTING MULTI-PURPOSE	18
19	LIGHTING EAST FOOD COURT	3/4"C, 1#12, #12N, #12G	0.19%	20	1		344	864						1	20	0.41%	3/4"C, 1#12, #12N, #12G	LGT EAST SPORTS CORRIODR	20
21	LIGHTING WEST FOOD COURT	3/4"C, 1#12, #12N, #12G	0.13%	20	1				344	1123				1	20	0.28%	3/4"C, 1#12, #12N, #12G	LGT WEST SPORTS CORRIODR	22
23	LIGHTING FOOD COURT/VENDING	3/4"C, 1#12, #12N, #12G	0.52%	20	1						1060	0	--	1	20	--	--	SPARE	24
25	SPARE	--	--	20	1	--	0	0					--	1	20	--	--	SPARE	26
27	SPARE	--	--	20	1	--			0	0			--	1	20	--	--	SPARE	28
29	SPARE	--	--	20	1	--					0	0	--	1	20	--	--	SPARE	30
31	SPARE	--	--	20	1	--	0	0					--	1	20	--	--	SPARE	32
33	SPARE	--	--	20	1	--			0	0			--	1	20	--	--	SPARE	34
35	LCP - STORAGE ROOM 1	3/4"C, 1#12, #12N, #12G	0.01%	20	1						500	0	--	1	20	--	--	SPARE	36
37							2864	20075											38
39	INV	3/4"C, 3#10, #10N, #10G	0.30%	25	3				2148	20520			3	125	2.00%	1-1/2"C, 3-1/0, 1/0N, #6G	TR7	40
41											2403	20784							42
		CONNECTED PHASE LOAD					36212 VA		37360 VA		35384 VA								
		***PHASE DIVERSIFIED LOAD**					40040 VA		41310 VA		39125 VA								
		***PHASE DIVERSIFIED AMPS**					145 A		150 A		141 A								

CALCULATED PANEL AMPS:
150 A
(*DIVERSIFIED LOADS CALCULATED PER THE NATIONAL ELECTRIC CODE.)

NOTES/ACCESSORIES:
1. PROVIDE SPARE 20A, SINGLE-POLE BREAKERS IN ALL UNUSED SPACES.
2. L = LOCKOUT BREAKER
3. G = GFI BREAKER

PANEL TOTALS	
TOTAL CONNECTED LOAD:	108956 VA
TOTAL DIVERSIFIED LOAD:	120475 VA
TOTAL CONNECTED:	131 A
TOTAL ESTIMATED DEMAND:	145 A

CIRCUIT BREAKER PANELBOARD SCHEDULE

PANEL NAME: "P1L" | **LOCATION:** Room 1 | **VOLTAGE:** 120/208 Wye | **MAIN TYPE:** MCB
FED BY: "TR7" | **ENCLOSURE:** Type 1 | **BUS RATING (A):** 250
MOUNTING: Surface | **MANUFACTURER:** | **MCB RATING (A):** 250
PANEL TYPE: | **MIN. AIC RATING (A):** 10k

CKT	LOAD DESCRIPTION	CIRCUIT CONFIGURATION	VD%	CB	P	TYPE	A		B		C		TYPE	P	CB	VD%	CIRCUIT CONFIGURATION	LOAD DESCRIPTION	CKT
1	WALL/POLE RECEPTS. COURT 1	3/4"C, 1#10, #10N, #10G	2.69%	20	1		1080	540						1	20	2.73%	3/4"C, 1#12, #12N, #12G	SCOREBOARDS COURTS 1	2
3	WALL RECEPTS. COURTS 1/2	3/4"C, 1#10, #10N, #10G	2.28%	20	1				360	540				1	20	2.48%	3/4"C, 1#12, #12N, #12G	SCOREBOARDS COURTS 2	4
5	WALL/POLE RECEPTS. COURT 2	3/4"C, 1#10, #10N, #10G	3.28%	20	1						1260	360		1	20	2.83%	3/4"C, 1#12, #12N, #12G	SCOREBOARDS COURTS 5	6
7	POLE RECEPTS. COURTS 8/10	3/4"C, 1#10, #10N, #10G	1.85%	20	1		360	360						1	20	2.90%	3/4"C, 1#12, #12N, #12G	SCOREBOARDS COURTS 6	8
9	POLE RECEPTS. COURTS 1/3	3/4"C, 1#10, #10N, #10G	2.83%	20	1				720	360				1	20	3.42%	3/4"C, 1#12, #12N, #12G	SCOREBOARDS COURTS 7	10
11	WALL RECEPTS. COURTS 11	3/4"C, 1#10, #10N, #10G	3.06%	20	1						540	360		1	20	3.25%	3/4"C, 1#12, #12N, #12G	SCOREBOARDS COURTS 8	12
13	WALL RECEPTS. COURTS 9	3/4"C, 1#10, #10N, #10G	2.43%	20	1		360	360						1	20	2.41%	3/4"C, 1#10, #10N, #10G	SCOREBOARDS COURTS 9	14
15	POLE RECEPTS. COURTS 7/9	3/4"C, 1#10, #10N, #10G	1.95%	20	1				360	360				1	20	2.31%	3/4"C, 1#10, #10N, #10G	SCOREBOARDS COURTS 10	16
17	POLE RECEPTS. COURTS 2/4	3/4"C, 1#10, #10N, #10G	2.62%	20	1						720	0	--	1	20	--	--	SPARE	18
19	WALL RECEPTS. COURTS 11	3/4"C, 1#10, #10N, #10G	1.79%	20	1		360	720						1	20	1.13%	3/4"C, 1#12, #12N, #12G	RECEPTS. MULTIPURPOSE	20
21	WALL RECEPTS. COURTS 3/5/7	3/4"C, 1#10, #10N, #10G	2.02%	20	1				360	720				1	20	0.87%	3/4"C, 1#12, #12N, #12G	RECEPTS. MULTIPURPOSE	22
23	WALL RECEPTS. COURTS 11	3/4"C, 1#10, #10N, #10G	2.11%	20	1						720	540		1	20	0.29%	3/4"C, 1#12, #12N, #12G	RECEPTS. MULTIPURPOSE	24
25	WALL RECEPTS. COURTS 11	3/4"C, 1#10, #10N, #10G	2.49%	20	1		360	180						1	20	0.18%	3/4"C, 1#12, #12N, #12G	TV'S FOOD COURTS WEST	26
27	WALL RECEPTS. COURTS 11	3/4"C, 1#10, #10N, #10G	2.90%	20	1				360	180				1	20	0.59%	3/4"C, 1#12, #12N, #12G	TV'S FOOD COURTS EAST	28
29	RECEPTS. FOOD COURT	3/4"C, 1#12, #12N, #12G	2.41%	20	1						900	180		1	20	0.08%	3/4"C, 1#12, #12N, #12G	RECEPT. ELEC AREA STORAGE	30
31	SELF SERVICE MACHINE	3/4"C, 2#12, #12N, #12G	1.00%	20	2	G	1410	1410											32
33									1410	1410			G	2	20	0.90%	3/4"C, 2#12, #12N, #12G	SELF SERVICE MACHINE	34
35	VENDING MACHINE	3/4"C, 1#12, #12N, #12G	0.32%	20	1	G					1000	672	G	1	20	1.29%	3/4"C, 1#12, #12N, #12G	FIDGE-REACH IN	36
37	VENDING MACHINE	3/4"C, 1#12, #12N, #12G	0.49%	20	1	G	1000	1000					G	1	20	0.39%	3/4"C, 1#12, #12N, #12G	VENDING MACHINE	38
39	VENDING MACHINE	3/4"C, 1#12, #12N, #12G	0.60%	20	1	G			1000	1000			G	1	20	0.70%	3/4"C, 1#12, #12N, #12G	VENDING MACHINE	40
41	RECEPTS. USB-C/A,FOOD COURT	3/4"C, 1#12, #12N, #12G	0.80%	20	1						540	559		1	20	2.19%	3/4"C, 1#12, #12N, #12G	EF-4, ROOFTOP	42
43	RECEPTS. USB-C/A,FOOD COURT	3/4"C, 1#12, #12N, #12G	1.01%	20	1		360	540						1	20	1.66%	3/4"C, 1#12, #12N, #12G	RECEPT. ROOFTOP	44
45	RECEPTS. USB-C/A,FOOD COURT	3/4"C, 1#12, #12N, #12G	0.24%	20	1				100	500				1	20	0.28%	3/4"C, 1#12, #12N, #12G	LCP - MUSCO CONTROLS	46
47	SPARE	--	--	20	1	--					0	360		1	20	0.54%	3/4"C, 1#12, #12N, #12G	FURTURE DIGITAL MENUS	48
49	SPARE	--	--	20	1	--	0	180						1	20	0.14%	3/4"C, 1#12, #12N, #12G	DISPLAY MULTIPURPOSE	50
51	SPARE	--	--	20	1	--			0	360				1	20	0.25%	3/4"C, 1#12, #12N, #12G	AV RACK MULTIPURPOSE	52
53	WALL RECEPTS. COURTS 11	3/4"C, 1#10, #10N, #10G	2.26%	20	1						540	360		1	20	2.51%	3/4"C, 1#10, #10N, #10G	WALL RECEPTS. COURTS 11	54
55	SCOREBOARDS COURTS 3	3/4"C, 1#12, #12N, #12G	1.12%	20	1		180	180						1	20	1.04%	3/4"C, 1#12, #12N, #12G	SCOREBOARDS COURTS 4	56
57	BASKETBALL HOOP COURT 1A	3/4"C, 1#12, #12N, #12G	2.50%	20	1				559	559				1	20	0.84%	3/4"C, 1#12, #12N, #12G	BASKETBALL HOOP COURT 2A	58
59	BASKETBALL HOOP COURT 1B	3/4"C, 1#12, #12N, #12G	1.09%	20	1						559	559		1	20	2.24%	3/4"C, 1#12, #12N, #12G	BASKETBALL HOOP COURT 2B	60
61	BASKETBALL HOOP COURT 3A	3/4"C, 1#10, #10N, #10G	2.05%	20	1		559	559						1	20	1.05%	3/4"C, 1#10, #10N, #10G	BASKETBALL HOOP COURT 4A	62
63	BASKETBALL HOOP COURT 3B	3/4"C, 1#10, #10N, #10G	1.21%	20	1				559	559				1	20	1.89%	3/4"C, 1#10, #10N, #10G	BASKETBALL HOOP COURT 4B	64
65	BASKETBALL HOOP COURT 5A	3/4"C, 1#10, #10N, #10G	2.61%	20	1						559	559		1	20	1.61%	3/4"C, 1#10, #10N, #10G	BASKETBALL HOOP COURT 6A	66
67	BASKETBALL HOOP COURT 5B	3/4"C, 1#10, #10N, #10G	1.76%	20	1		559	559						1	20	2.46%	3/4"C, 1#10, #10N, #10G	BASKETBALL HOOP COURT 6B	68
69	BASKETBALL HOOP COURT 7A	3/4"C, 1#10, #10N, #10G	3.17%	20	1				559	559				1	20	2.17%	3/4"C, 1#10, #10N, #10G	BASKETBALL HOOP COURT 8A	70
71	BASKETBALL HOOP COURT 7B	3/4"C, 1#10, #10N, #10G	2.32%	20	1						559	559		1	20	3.02%	3/4"C, 1#10, #10N, #10G	BASKETBALL HOOP COURT 8B	72
73	BASKETBALL HOOP COURT 9A	3/4"C, 1#8, #8N, #8G	2.42%	20	1		559	559						1	20	1.78%	3/4"C, 1#8, #8N, #8G	BASKETBALL HOOP COURT 10A	74
75	BASKETBALL HOOP COURT 9B	3/4"C, 1#8, #8N, #8G	1.87%	20	1				559	559				1	20	2.32%	3/4"C, 1#8, #8N, #8G	BASKETBALL HOOP COURT 10B	76
77	VOLLEYBALL NET COURT 1	3/4"C, 1#12, #12N, #12G	2.03%	20	1						746	746		1	20	2.48%	3/4"C, 1#12, #12N, #12G	VOLLEYBALL NET COURT 2	78
79	VOLLEYBALL NET COURT 3	3/4"C, 1#10, #10N, #10G	1.96%	20	1		746	746						1	20	2.22%	3/4"C, 1#10, #10N, #10G	VOLLEYBALL NET COURT 4	80
81	VOLLEYBALL NET COURT 5	3/4"C, 1#10, #10N, #10G	2.70%	20	1				746	746				1	20	2.97%	3/4"C, 1#10, #10N, #10G	VOLLEYBALL NET COURT 6	82
83	VOLLEYBALL NET COURT 7	3/4"C, 1#8, #8N, #8G	2.24%	20	1						746	746		1	20	2.42%	3/4"C, 1#8, #8N, #8G	VOLLEYBALL NET COURT 8	84
85	VOLLEYBALL NET COURT 9	3/4"C, 1#8, #8N, #8G	2.72%	20	1		746	746						1	20	2.90%	3/4"C, 1#8, #8N, #8G	VOLLEYBALL NET COURT 10	86
87	DRAPER DIVIDER COURTS 1/2	3/4"C, 1#12, #12N, #12G	0.45%	20	1				559	559				1	20	1.39%	3/4"C, 1#12, #12N, #12G	DRAPER DIVIDER COURTS 3/4	88
89	DRAPER DIVIDER COURTS 5/6	3/4"C, 1#12, #12N, #12G	2.32%	20	1						559	1119		1	20	2.75%	3/4"C, 1#10, #10N, #10G	DRAPER DIVIDER COURTS 1/3	90
91	DRAPER DIVIDER COURTS 2/4	3/4"C, 1#10, #10N, #10G	2.41%	20	1		1119	559						1	20	1.95%	3/4"C, 1#10, #10N, #10G	DRAPER DIVIDER COURTS 7/8	92
93	DRAPER DIVIDER COURTS 3/5	3/4"C, 1#8, #8N, #8G	2.50%	20	1				1119	1119				1	20	3.23%	3/4"C, 1#8, #8N, #8G	DRAPER DIVIDER COURTS 5/9	94
95	DRAPER DIVIDER COURTS 4/6	3/4"C, 1#8, #8N, #8G	2.29%	20	1						1119	1

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii	
Project Name: Red Hill - REC - CA	**Report Page:** (Page 1 of 7)
Project Address: 17300 Red Hill Ave. Irvine, CA 92614	**Date Prepared:** 2025-08-13T13:11:12-04:00

A. GENERAL INFORMATION

01	Project Location (city)	IRVINE, CALIFORNIA	02	Climate Zone	8
			03	Occupancy Types Within Project:	GymnasiumOffice

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work [1]	Rating[2] (kVA)	Utility Provided Metering System Exception to 130.5(a)/160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to 130.5(a)and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
ES101, E101, E300	New electrical service equipment and meter	2500	☒	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/160.3, 130.1/160.5, and 130.3/160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	☐

[1] FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.
[2] If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.
[3] Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

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C. COMPLIANCE RESULTS

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

01		02		03		04	05	06
Service Electrical Metering 130.5(a)/ 160.6(a) (See Table F)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d) (See Table I)	Electric Ready 160.9 (See Table J)	**Compliance Results**
	AND	Yes	AND	Yes	AND	Yes		COMPLIES with Exceptional Conditions

D. EXCEPTIONAL CONDITIONS

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

Table B indicates the project is exempt from 130.5(a) Service Electrical Metering requirements because the utility company has provided the project a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

E. ADDITIONAL REMARKS

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

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G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B [1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
ES101, E101, E300					
Charging stations for electrical vehicle	All loads in aggregate	Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type	ES101, E101, E300, ET101, ET300	☐	☐
HVAC systems and components	All HVAC in aggregate and each HVAC load rated at least 50 kVA	Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type	E101, E102, E300, ET101, E102, ET300	☐	☐
Lighting including exit, egress and exterior	All lighting disaggregated by floor, type or area	Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type	ES102, E200, E300, ET200, ET300	☐	☐

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G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B [1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
Plug Loads and appliances less than 25kVA	All plug loads separated by floor, type or area Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type	E101, E300, ET101, ET300	☐	☐

** NOTES: If "Other"* is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

[1] FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.
[2] Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type.
Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type.
Method 3: Branch circuits serve load types individually and provisions for adding future branch circuit monitoring.
Method 4: Complete metering system measures and reports loads by type.
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/ 160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)2Pii/ 180.2(b)4Bviic.

01	02			03	04	05	
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method			Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
						Pass	Fail
ES101, E101, E300	☒	Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	In construction documents	E300, E301, E302, ET300, ET301	☐	☐

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H. VOLTAGE DROP

** NOTES: If "Permitted by CA Elec Code "* is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

[1] FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(d)/ 160.6(d).. Both controlled and uncontrolled receptacles must be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces, copy rooms and hotel/motel guest rooms.

01	02	03	04	05	06	07	
Room name or Description	Location/ Type of Controlled Receptacles[1]	Shut-Off Controls	Demand Responsive Controls	Permanent Durable Marking Will be Used	Location of Requirements in Construction Documents	Field Inspector	
						Pass	Fail
OPEN OFFICE 103	50 % are controlled receptacle (hotel/motel room)	Occupancy Sensor	Included w capabilities per 110.12(e)	☒	E101	☐	☐
Lobby/Waiting 101, Check-In 102	50 % are controlled receptacle (hotel/motel room)	Occupancy Sensor	Included w capabilities per 110.12(e)	☒	E101	☐	☐
PRIVATE OFFICE 104	50 % are controlled receptacle (hotel/motel room)	Occupancy Sensor	Included w capabilities per 110.12(e)	☒	E101	☐	☐
PRIVATE OFFICE 105	50 % are controlled receptacle (hotel/motel room)	Occupancy Sensor	Included w capabilities per 110.12(e)	☒	E101	☐	☐
CONFERENCE 107	50 % are controlled receptacle (hotel/motel room)	Occupancy Sensor	Included w capabilities per 110.12(e)	☒	E101	☐	☐
Office 110A	50 % are controlled receptacle (hotel/motel room)	Occupancy Sensor	Included w capabilities per 110.12(e)	☒	ET101	☐	☐
Multi-Purpose 121	50 % are controlled receptacle (hotel/motel room)	Occupancy Sensor	Included w capabilities per 110.12(e)	☒	ET101	☐	☐

** NOTES: If "Other"* is selected under Shut-Off Controls above, please indicate how compliance has been achieved in the space provided below.*

[1] FOOTNOTES: Receptacles dedicated to refrigerators and water dispensers in kitchens, located a minimum of 6ft above the floor specifically for clocks, network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms, circuits rated more than 20 Amps, or connected to a UPS that are intended to be in continuous use and are marked to differentiate them from other receptacles or circuits are excepted from the requirements. .

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K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by 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-ELC-E - Must be submitted for all buildings

L. 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 any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-04-A - Must be submitted for demand response controls.	

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Red Hill - REC - CA	**Report Page:** (Page 7 of 7)
Project Address: 17300 Red Hill Ave. Irvine, CA 92614	**Date Prepared:** 2025-08-13T13:11:12-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Christopher Meyer	Documentation Author Signature: Christopher Meyer
Company: RTM Engineering Consultants	Signature Date: 2025.08.13
Address: 9035 Wadsworth Pkwy	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Westminster, CO 80021	Phone:

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: Victor Leon	Responsible Designer Signature: Victor Leon
Company: RTM Engineering Consultants	Date Signed: 2025.08.13
Address: 9035 Wadsworth Pkwy	License: E23782
City/State/Zip: Westminster, CO 80021	Phone: 563.726.6310

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: Red Hill - REC - CA	**Report Page:** (Page 1 of 17)
Project Address: 17300 Red Hill Ave. Irvine, CA 92614	**Date Prepared:** 2026-02-05T11:39:03-05:00

A. GENERAL INFORMATION

01	Project Location (city)	IRVINE, CALIFORNIA	04	Total Conditioned Floor Area (ft²)	107,910
02	Climate Zone	8	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Gymnasium ● Office ● Restaurant

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Area Category Method	107910	N/A	0
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
Total Area of Work (ft²)	107910			

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Red Hill - REC - CA	**Report Page:** (Page 2 of 17)
	Date Prepared: 2026-02-05T11:39:03-05:00

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 /170.2(e)	Allowed Lighting Power per 140.6(b) /170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) /170.2(e) (Watts)				Compliance Results
	01	02	03	04	05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 /170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 /170.2(e)4B (+)			Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 /170.2(e)1B (-)		**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 /170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned		76,453.55			=	76,453.55	≥ 55,071.3		=	55071.3	COMPLIES
Unconditioned					=		≥		=		
								Controls Compliance (See Table H for Details)			COMPLIES
								Rated Power Reduction Compliance (See Table Q for Details)			

D. EXCEPTIONAL CONDITIONS

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

Track Lighting has been included in this project, details are provided in Table G.

E. ADDITIONAL REMARKS

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

CITY OF IRVINE BUILDING & SAFETY DIVISION

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY AND COPYRIGHT OF WARE MALCOMB AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY AGREEMENT WITH WARE MALCOMB. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF WARE MALCOMB PRIOR TO THE COMMENCEMENT OF ANY WORK

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ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

REGISTERED PROFESSIONAL ENGINEER — No. E23782 Exp. 12/31/27 — ELECTRICAL — STATE OF CALIFORNIA

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9035 Wadsworth Parkway | Suite 3200 | Westminster, CO 80021
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IRVINE FIELD HOUSE
17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

ELECTRICAL T24 COMPLIANCE DOCS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/06/2026	PLAN CHECK CORRECTIONS 3
5	01/26/2026	OC HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
7	04/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

06/06/2025

SHEET
ET400

3/6/2026 10:24:01 AM

Autodesk Docs://LAX21-0174-02_-_17300 Red Hill - Rec Center/RTM-MEP-Plaza Hill Rec Center_2021.rvt

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Red Hill - REC - CA	Report Page:	(Page 3 of 17)
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F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
									Field Inspector	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change [1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Pass	Fail
F1A	48" L, VIA 3" RECESSED DIRECT, GRID INSTALL	No	NA	40.8	Mfr. Spec	5	No	204	☐	☐
F1AE	48" L, VIA 3" RECESSED DIRECT, GRID INSTALL, EMERGENCY	No	NA	40.8	Mfr. Spec	3	No	122.4	☐	☐
F1B	96" L, VIA 3" RECESSED DIRECT, GRID INSTALL	No	NA	81.6	Mfr. Spec	1	No	81.6	☐	☐
F1BE	96" L, VIA 3" RECESSED DIRECT, GRID INSTALL, EMERGENCY	No	NA	81.6	Mfr. Spec	1	No	81.6	☐	☐
F2	48" L, VIA 3" RECESSED DIRECT, GYP CEILING INSTALL	No	NA	40.8	Mfr. Spec	3	No	122.4	☐	☐
F2E	48" L, VIA 3" RECESSED DIRECT, GYP CEILING INSTALL, EMERGENCY	No	NA	40.8	Mfr. Spec	3	No	122.4	☐	☐
F4	41'(2X6'6"-2X14'), VIA 1.5" RECESSED PATTERN DIRECT	No	NA	287	Mfr. Spec	1	No	287	☐	☐
F7	AERA 4" PENDANT CYLINDER DIRECT 12"	No	NA	14	Mfr. Spec	19	No	266	☐	☐
F7E	AERA 4" PENDANT CYLINDER DIRECT 12", EMERGENCY	No	NA	14	Mfr. Spec	7	No	98	☐	☐

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Red Hill - REC - CA	Report Page:	(Page 4 of 17)
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F. INDOOR LIGHTING FIXTURE SCHEDULE

F-11	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	No	NA	177.5	Mfr. Spec	1	No	177.5	☐	☐
F12A	11' L, VIA 3" PERIMETER LIGHTING	No	NA	55	Mfr. Spec	2	No	110	☐	☐
F12B	23' L, VIA 3" PERIMETER LIGHTING	No	NA	112.7	Mfr. Spec	1	No	112.7	☐	☐
F12C	28'6" L, VIA 3" PERIMETER LIGHTING	No	NA	142	Mfr. Spec	1	No	142	☐	☐
F12D	29'4" L, VIA 3" PERIMETER LIGHTING	No	NA	146	Mfr. Spec	1	No	146	☐	☐
F12F	34'9" L, VIA 3" PERIMETER LIGHTING	No	NA	173	Mfr. Spec	1	No	173	☐	☐
F14E	MELLOW LIGHT IV LED 2X4 SPLIT DIFFUSER EMERGENCY	No	NA	28	Mfr. Spec	1	No	28	☐	☐
F-15A	16'-6"L, LED TAPE LIGHT (PDS-NK EXTRUSION)	No	NA	120.5	Mfr. Spec	1	No	120.5	☐	☐
F-16	K-HEHD-0960-24 LED STRIP	No	NA	46	Mfr. Spec	1	No	46	☐	☐
F17	CRAFT II PERFORMACE MEDIUM HIGHBAY (MOUNTED AT 30' AFF)	No	NA	73.6	Mfr. Spec	8	No	588.8	☐	☐
F17E	CRAFT II PERFORMACE MEDIUM HIGHBAY WITH INTEGRAL BATTERY (MOUNTED AT 30' AFF)	No	NA	73.6	Mfr. Spec	4	No	294.4	☐	☐
F20	4' STRIP LIGHT	No	NA	23.8	Mfr. Spec	1	No	23.8	☐	☐
F20E	4' STRIP LIGHT EMERGENCY	No	NA	23.8	Mfr. Spec	2	No	47.6	☐	☐
F-13	AERA 3" DOWNLIGHT ROUND (AE3RR)	No	NA	10	Mfr. Spec	94	No	940	☐	☐
F-13E	AERA 3" DOWNLIGHT ROUND (AE3RR) EMERGENCY	No	NA	10	Mfr. Spec	51	No	510	☐	☐

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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F. INDOOR LIGHTING FIXTURE SCHEDULE

F-14	MELLOW LIGHT IV LED 2X4 SPLIT DIFFUSER	No	NA	28	Mfr. Spec	5	No	140	☐	☐
F-3	66" L, SQUERO RECESSED DIRECT	No	NA	25.3	Mfr. Spec	12	No	303.6	☐	☐
F-5	BIONIC PRO 3	No	NA	195.8	Mfr. Spec	11	No	2,153.8	☐	☐
F-6A	160" L, VIA 3" PENDANT DIRECT	No	NA	49.2	Mfr. Spec	14	No	688.8	☐	☐
F-6B	72" L, VIA 3" PENDANT DIRECT	No	NA	24.6	Mfr. Spec	15	No	369	☐	☐
F-6BE	72" L, VIA 3" PENDANT DIRECT, EMERGENCY	No	NA	24.6	Mfr. Spec	3	No	73.8	☐	☐
F-8	AERA 4" PENDANT CYLINDER DIRECT 12"	No	NA	20	Mfr. Spec	25	No	500	☐	☐
F-8E	AERA 4" PENDANT CYLINDER DIRECT 12", EMERGENCY	No	NA	20	Mfr. Spec	21	No	420	☐	☐
F-9	AERA 4" PENDANT CYLINDER ASYMMETRIC DIRECT 12"	No	NA	20	Mfr. Spec	4	No	80	☐	☐
F-9E	AERA 4" PENDANT CYLINDER ASYMMETRIC DIRECT 12", EMERGENCY	No	NA	20	Mfr. Spec	3	No	60	☐	☐
F-10A	24" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT	No	NA	10	Mfr. Spec	18	No	180	☐	☐
F-10AE	24" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT, EMERGENCY	No	NA	10	Mfr. Spec	12	No	120	☐	☐
F-10B	48" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT	No	NA	20	Mfr. Spec	31	No	620	☐	☐

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Red Hill - REC - CA	Report Page:	(Page 6 of 17)
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F. INDOOR LIGHTING FIXTURE SCHEDULE

F-10BE	48" L, 1" INTEGRATED LINEAR LED T-BAR GRID CEILING LIGHT, EMERGENCY	No	NA	20	Mfr. Spec	18	No	360	☐	☐
F-18	RONDO RB6 6" DOWNLIGHT (FOR WET LOCATION)	No	NA	19.3	Mfr. Spec	7	No	135.1	☐	☐
F-18E	RONDO RB6 6" DOWNLIGHT (FOR WET LOCATION), EMERGENCY	No	NA	19.3	Mfr. Spec	6	No	115.8	☐	☐
F-19E	2X4 WET RATED TROFFER, EMERGENCY	No	NA	36	Mfr. Spec	2	No	72	☐	☐
F-21	BADMINTON COURT REFLECTED LIGHTING	No	NA	161.8	Mfr. Spec	55	No	8,899	☐	☐
F-22	BASKETBALL COURT LIGHTING	No	NA	179	Mfr. Spec	187	No	33,473	☐	☐
F-3E	66" L, SQUERO RECESSED DIRECT, EMERGENCY	No	NA	25.3	Mfr. Spec	6	No	151.8	☐	☐
F-11A	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	No	NA	127.5	Mfr. Spec	1	No	127.5	☐	☐
F-11B	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	No	NA	65	Mfr. Spec	1	No	65	☐	☐
F-11C	BILLET INDOOR WALLWASHER (BIW) - INTEGRAL	No	NA	100	Mfr. Spec	1	No	100	☐	☐
F15B	10'-6"L, LED TAPE LIGHT (PDS-NK EXTRUSION)	No	NA	23.1	Mfr. Spec	1	No	23.1	☐	☐
F15C	8'L, LED TAPE LIGHT (PDS-NK EXTRUSION)	No	NA	17.6	Mfr. Spec	1	No	17.6	☐	☐
F-15D	5'-6"L, LED TAPE LIGHT (PDS-NK EXTRUSION)	No	NA	40.2	Mfr. Spec	1	No	40.2	☐	☐

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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F. INDOOR LIGHTING FIXTURE SCHEDULE

F-15F	5'L, LED TAPE LIGHT (PDS-NK EXTRUSION)	No	NA	36.5	Mfr. Spec	1	No	36.5	☐	☐
F-23A	14' TRACK SPOT LIGHTING	Yes	NA	420	See Other Section	1	No	420	☐	☐
F-23B	16' TRACK SPOT LIGHTING	Yes	NA	480	See Other Section	1	No	480	☐	☐
							Total Designed Watts: CONDITIONED SPACES		55,071.3	

[1]FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B /170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

[2]Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) /160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This table calculates wattage for modular lighting systems/ track lighting fixtures indicated on Table F and transfers wattage to Table F.

01	02	03													04
Name or Item Tag	Complete Track Description	Calculation Method per 130.0(c)6													Track Wattage
F-23A	14' TRACK SPOT LIGHTING	☒	i Installed Luminaires vs Default 30 W/ft	☐	ii Current Limiter	☐	iii Overcurrent Protection Panel	☐	iv Power supplied by driver, power supply or transformer[2]						
		Number of luminaires in system	x	Rated Watts per luminaire	=	Total Watts	OR	Linear ft of track or busway	x	Default W/LF 30	=	Total Watts			420
								14				420			
F-23B	16' TRACK SPOT LIGHTING	☒	i Installed Luminaires vs Default 30 W/ft	☐	ii Current Limiter	☐	iii Overcurrent Protection Panel	☐	iv Power supplied by driver, power supply or transformer[2]						

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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G. MODULAR LIGHTING SYSTEMS

	Number of luminaires in system	x	Rated Watts per luminaire	=	Total Watts	OR	Linear ft of track or busway	x	Default W/LF 30	=	Total Watts	480
							16				480	

[1]FOOTNOTE: For power-over-Ethernet lighting systems, power provided to installed non-lighting devices may be subtracted from the total power rating of the power-over-Ethernet system.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Pass	Fail
Required >= 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
								Field Inspector	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) /160.5(b)4A	Multi-Level Controls 130.1(b) /160.5(b)4B	Shut-Off Controls 130.1(c) //160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) /160.5(b)4D	Secondary Daylighting 130.1(d) /160.5(b)4D	Interlocked Systems 140.6(a)1/1 70.2(e)2A	Pass	Fail
101/102 LOBBY/WAITING	Main Entry Lobby	Auth. Personnel	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
103 OPEN OFFICE	Office (>250 square feet)	Auth. Personnel	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
104 PRIVATE OFFICE	Office (<=250 square feet)	Auth. Personnel	Dimmer	Occupancy Sensor	NA: General Ltg < 120W	NA: Not daylit zone	No	☐	☐
105 PRIVATE OFFICE	Office (<=250 square feet)	Auth. Personnel	Dimmer	Occupancy Sensor	NA: General Ltg < 120W	NA: Not daylit zone	No	☐	☐
106 Private Office	Office (<=250 square feet)	Auth. Personnel	Dimmer	Occupancy Sensor	NA: General Ltg < 120W	NA: Not daylit zone	No	☐	☐
107 CONFERENCE	Conference, Multipurpose and Meeting Area	Auth. Personnel	Dimmer	Occupancy Sensor	NA: General Ltg < 120W	NA: Not daylit zone	No	☐	☐
108/109 FOOD COURT/VENDING	All Other Space Types	Auth. Personnel	Dimmer	Auto. Time Switch	NA: General Ltg < 120W	NA: Not daylit zone	No	☐	☐
110 KITCHEN	Kitchen/ Food Preparation	Auth. Personnel	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
110A OFFICE	Office (<=250 square feet)	Auth. Personnel	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
110B STORAGE	Storage - MF common areas	Auth. Personnel	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
111 MENS RESTROOM	Restroom	Auth. Personnel	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐

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Indoor Lighting
CALIFORNIA ENERGY COMMISSION

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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

112 WOMENS RESTROOM	Restroom	Auth. Personnel	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
113 LAUNDRY	Laundry	Auth. Personnel	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
114 RESTROOM	Restroom	Auth. Personnel	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
115 RESTROOM	Restroom	Auth. Personnel	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
116 JANITOR	All Other Space Types	Auth. Personnel	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
117 FIRST AID	All Other Space Types	Auth. Personnel	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
118 STORAGE	Storage - MF common areas	Auth. Personnel	Dimmer	NA: Elec. equip. rm	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
120 ELECTRICAL ROOM	Electrical, Mechanical, or Telephone Room	Auth. Personnel	NA: General Ltg <= 0.5W/SF	NA: Elec. equip. rm	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
121 MULTIPURPOSE	Classroom, Lecture, or Training Vocational	Auth. Personnel	Dimmer	Occupancy Sensor	NA: General Ltg < 120W	NA: Not daylit zone	No	☐	☐
122 STORAGE	Storage - MF common areas	Auth. Personnel	NA: General Ltg <= 0.5W/SF	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
123 CORRIDOR	Corridor	Auth. Personnel	NA: General Ltg <= 0.5W/SF	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
139 CORRIDOR	Corridor	Auth. Personnel	Dimmer	Auto. Time Switch	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
SPORTS COURTS - BASKETBALL	Sports Arena Class IV	Auth. Personnel	Dimmer	Auto. Time Switch	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
SPORTS COURTS - BADMINTON	Sports Arena Class IV	Auth. Personnel	Dimmer	Auto. Time Switch	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
119 STORAGE	Commercial Industrial Storage Area	Auth. Personnel	NA: General Ltg <= 0.5W/SF	NA: Elec. equip. rm	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐

Generated Date/Time: Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 240544-0226-0022 | Report Generated: 2026-02-05 08:39:07

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Red Hill - REC - CA	Report Page:	(Page 11 of 17)
	Date Prepared:	2026-02-05T11:39:03-05:00

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

	13
	Plan Sheet Showing Daylit Zones:
	E200, ET201

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
					Additional Allowance / Adjustment	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft^2)	Area (ft^2)	Allowed Wattage (Watts)	Area Category	PAF
101/102 LOBBY/WAITING	Main Entry Lobby	0.7	1,815	1,270.5	No	No
103 OPEN OFFICE	Office (>250 square feet)	0.6	966	579.6	No	No
104 PRIVATE OFFICE	Office (<=250 square feet)	0.65	99	64.35	No	No
105 PRIVATE OFFICE	Office (<=250 square feet)	0.65	99	64.35	No	No
106 Private Office	Office (<=250 square feet)	0.65	103	66.95	No	No
107 CONFERENCE	Conference, Multipurpose and Meeting Area	0.75	249	186.75	No	No
108/109 FOOD COURT/VENDING	All Other Space Types	0.4	3,582	1,432.8	No	No
110 KITCHEN	Kitchen/ Food Preparation	0.95	818	777.1	No	No
110A OFFICE	Office (<=250 square feet)	0.65	58	37.7	No	No
110B STORAGE	Storage - MF common areas	0.45	72	32.4	No	No
111 MENS RESTROOM	Restroom	0.65	479	311.35	No	No
112 WOMENS RESTROOM	Restroom	0.65	578	375.7	No	No
113 LAUNDRY	Laundry	0.45	108	48.6	No	No
114 RESTROOM	Restroom	0.65	105	68.25	No	No
115 RESTROOM	Restroom	0.65	107	69.55	No	No
116 JANITOR	All Other Space Types	0.4	55	22	No	No

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 240544-0226-0022 | Report Generated: 2026-02-05 08:39:07

CITY OF IRVINE BUILDING & SAFETY DIVISION

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CIVIL ENGINEERING BRANDING BUILDING MEASUREMENT

IRVINE FIELD HOUSE
17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

REGISTERED PROFESSIONAL ENGINEER — No. E23782 Exp. 12/31/27 — ELECTRICAL — STATE OF CALIFORNIA

rtm engineering consultants
9035 Wadsworth Parkway | Suite 3200 | Westminster, CO 80021
T 303.297.1038 | www.rtmec.com

ELECTRICAL T24 COMPLIANCE DOCS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS 2
3	10/15/2025	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

06/06/2025

SHEET
ET401

3/6/2026 10:24:03 AM

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I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

117 FIRST AID	All Other Space Types	0.4	132	52.8	No	No
118 STORAGE	Storage - MF common areas	0.45	4,557	2,050.65	No	No
120 ELECTRICAL ROOM	Electrical, Mechanical, or Telephone Room	0.4	617	246.8	No	No
121 MULTIPURPOSE	Classroom, Lecture, or Training Vocational	0.6	1,168	700.8	No	No
122 STORAGE	Storage - MF common areas	0.45	122	54.9	No	No
123 CORRIDOR	Corridor	0.4	235	94	No	No
139 CORRIDOR	Corridor	0.4	2,119	847.6	No	No
SPORTS COURTS - BASKETBALL	Sports Arena Class IV	0.75	70,981	53,235.75	No	No
SPORTS COURTS - BADMINTON	Sports Arena Class IV	0.75	18,250	13,687.5	No	No
119 STORAGE	Commercial Industrial Storage Area	0.4	187	74.8	No	No
		TOTALS:	107,661	76,453.55	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by 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-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections 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 any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	101/102 LOBBY/WAITING; 103 OPEN OFFICE; 104 PRIVATE OFFICE; 105 PRIVATE OFFICE; 106 Private Office; 107 CONFERENCE; 108/109 FOOD COURT/VENDING ; 110 KITCHEN; 110A OFFICE; 110B STORAGE; 111 MENS RESTROOM; 112 WOMENS RESTROOM; 113 LAUNDRY; 114 RESTROOM; 115 RESTROOM; 116 JANITOR; 117 FIRST AID; 121 MULTIPURPOSE; 122 STORAGE; 123 CORRIDOR; 139 CORRIDOR; SPORTS COURTS - BASKETBALL; SPORTS COURTS - BADMINTON
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	101/102 LOBBY/WAITING

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	101/102 LOBBY/WAITING; 103 OPEN OFFICE; 104 PRIVATE OFFICE; 105 PRIVATE OFFICE; 106 Private Office; 107 CONFERENCE; 108/109 FOOD COURT/VENDING ; 110 KITCHEN; 110A OFFICE; 110B STORAGE; 111 MENS RESTROOM; 112 WOMENS RESTROOM; 113 LAUNDRY; 114 RESTROOM; 115 RESTROOM; 116 JANITOR; 117 FIRST AID; 118 STORAGE; 120 ELECTRICAL ROOM; 121 MULTIPURPOSE; 122 STORAGE; 123 CORRIDOR; 139 CORRIDOR; SPORTS COURTS - BASKETBALL; SPORTS COURTS - BADMINTON; 119 STORAGE

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Christopher Meyer	Documentation Author Signature:	*Christopher Meyer*
Company:	RTM Engineering Consultants	Signature Date:	2026.02.05
Address:	9035 Wadsworth Pkwy	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Westminster, CO 80021	Phone:	

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:	Victor Leon	Responsible Designer Signature:	*Victor Leon*
Company:	RTM Engineering Consultants	Date Signed:	2026.02.05
Address:	9035 Wadsworth Pkwy	License:	E23782
City/State/Zip:	Westminster, CO 80021	Phone:	563.726.6310

CITY OF IRVINE
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REGISTERED PROFESSIONAL ENGINEER
Victor Leon
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Exp. 12/31/27
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PA/PM:	TB
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JOB NO.:	LAX21-0174-02

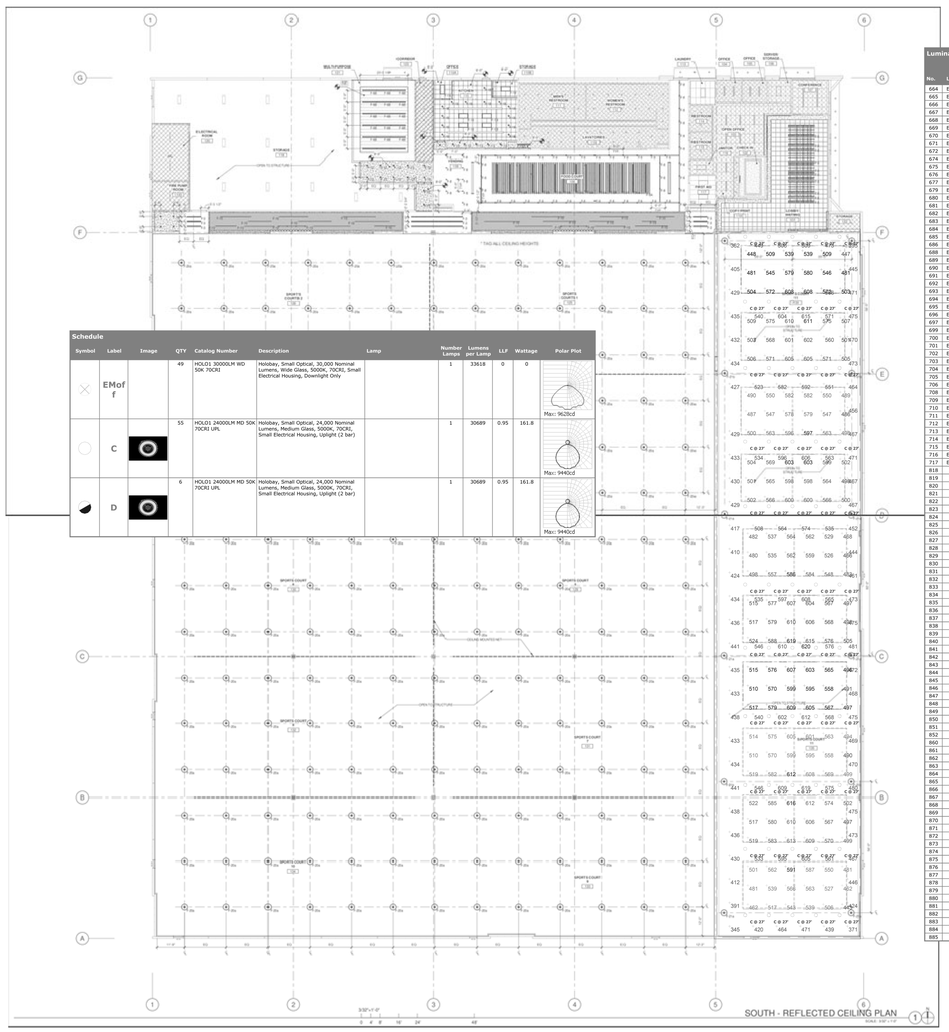
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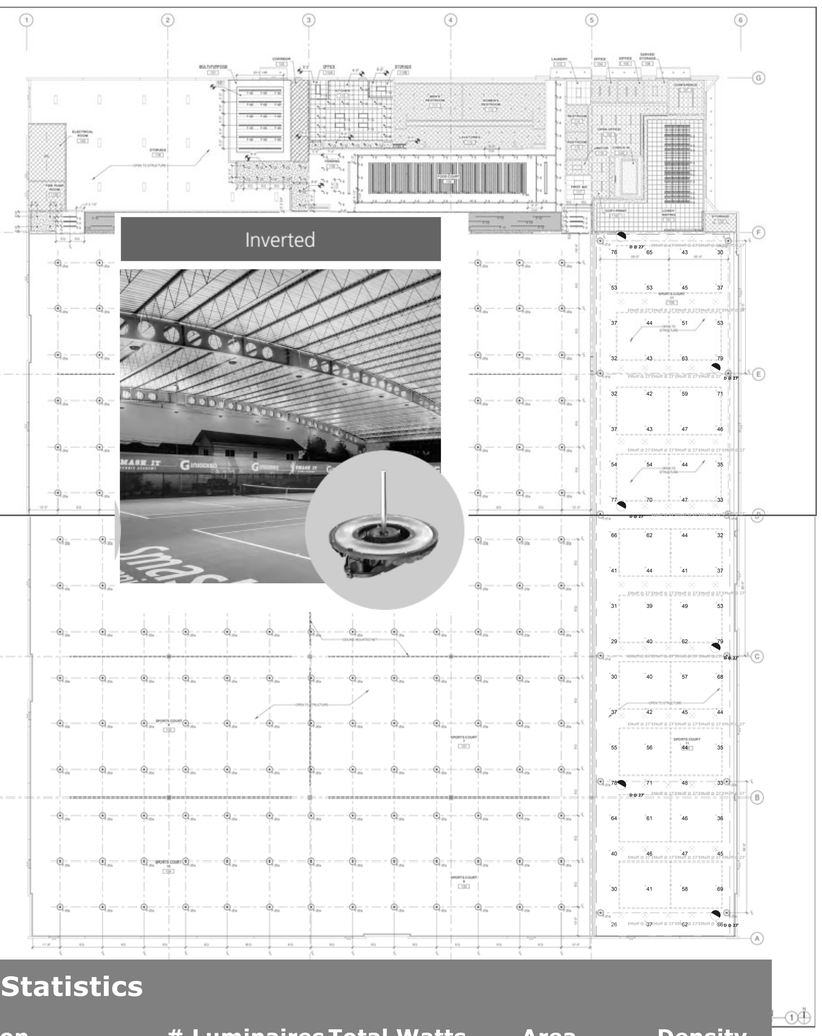
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Plan View
Scale - 1" = 20ft

Schedule

Symbol	Label	Image	QTY	Catalog Number	Description	Lamp	Number Lamps	Lumens per Lamp	LLF	Wattage	Polar Plot
	EMoff		49	HOLO1 3000LM WD 50K 70CRI	Holobay, Small Optical, 30,000 Nominal Lumens, Wide Glass, 5000K, 70CRI, Small Electrical Housing, Downlight Only		1	33618	0	0	
	C		55	HOLO1 24000LM MD 50K 70CRI UPL	Holobay, Small Optical, 24,000 Nominal Lumens, Medium Glass, 5000K, 70CRI, Small Electrical Housing, Uplight (2 bar)		1	30689	0.95	161.8	Max: 9628cd
	D		6	HOLO1 24000LM MD 50K 70CRI UPL	Holobay, Small Optical, 24,000 Nominal Lumens, Medium Glass, 5000K, 70CRI, Small Electrical Housing, Uplight (2 bar)		1	30689	0.95	161.8	Max: 9440cd

Luminaire Locations

No.	Label	Location X	Y	Z	Aim MH	Orientation	Tilt	X	Y	Z
664	EMoff	583.07	64.08	27.00	27.00	0.00	180.00	583.07	64.08	33.00
665	EMoff	593.08	64.08	27.00	27.00	0.00	180.00	593.08	64.08	33.00
666	EMoff	603.04	64.08	27.00	27.00	0.00	180.00	603.04	64.08	33.00
667	EMoff	583.07	92.24	27.00	27.00	0.00	180.00	583.07	92.24	33.00
668	EMoff	593.08	92.24	27.00	27.00	0.00	180.00	593.08	92.24	33.00
669	EMoff	603.04	92.24	27.00	27.00	0.00	180.00	603.04	92.24	33.00
670	EMoff	583.07	119.73	27.00	27.00	0.00	180.00	583.07	119.73	33.00
671	EMoff	593.08	119.73	27.00	27.00	0.00	180.00	593.08	119.73	33.00
672	EMoff	603.04	119.73	27.00	27.00	0.00	180.00	603.04	119.73	33.00
674	EMoff	613.06	119.73	27.00	27.00	0.00	180.00	613.06	119.73	33.00
675	EMoff	613.06	92.24	27.00	27.00	0.00	180.00	613.06	92.24	33.00
676	EMoff	572.97	92.24	27.00	27.00	0.00	180.00	572.97	92.24	33.00
677	EMoff	573.04	64.08	27.00	27.00	0.00	180.00	573.04	64.08	33.00
679	EMoff	583.07	32.88	27.00	27.00	0.00	180.00	583.07	32.88	33.00
680	EMoff	593.08	32.88	27.00	27.00	0.00	180.00	593.08	32.88	33.00
681	EMoff	603.04	32.88	27.00	27.00	0.00	180.00	603.04	32.88	33.00
682	EMoff	573.04	32.88	27.00	27.00	0.00	180.00	573.04	32.88	33.00
683	EMoff	613.06	32.88	27.00	27.00	0.00	180.00	613.06	32.88	33.00
684	EMoff	583.07	5.48	27.00	27.00	0.00	180.00	583.07	5.48	33.00
685	EMoff	593.08	5.48	27.00	27.00	0.00	180.00	593.08	5.48	33.00
686	EMoff	603.04	5.48	27.00	27.00	0.00	180.00	603.04	5.48	33.00
688	EMoff	613.06	5.87	27.00	27.00	0.00	180.00	613.06	5.87	33.00
689	EMoff	583.07	-27.73	27.00	27.00	0.00	180.00	583.07	-27.73	33.00
690	EMoff	593.08	-27.73	27.00	27.00	0.00	180.00	593.08	-27.73	33.00
691	EMoff	603.04	-27.73	27.00	27.00	0.00	180.00	603.04	-27.73	33.00
692	EMoff	573.04	-27.73	27.00	27.00	0.00	180.00	573.04	-27.73	33.00
693	EMoff	613.06	-27.73	27.00	27.00	0.00	180.00	613.06	-27.73	33.00
694	EMoff	583.07	-54.53	27.00	27.00	0.00	180.00	583.07	-54.53	33.00
695	EMoff	593.08	-54.53	27.00	27.00	0.00	180.00	593.08	-54.53	33.00
696	EMoff	603.04	-54.53	27.00	27.00	0.00	180.00	603.04	-54.53	33.00
697	EMoff	573.04	-54.53	27.00	27.00	0.00	180.00	573.04	-54.53	33.00
699	EMoff	583.07	-83.28	27.00	27.00	0.00	180.00	583.07	-83.28	33.00
700	EMoff	593.08	-83.28	27.00	27.00	0.00	180.00	593.08	-83.28	33.00
701	EMoff	603.04	-83.28	27.00	27.00	0.00	180.00	603.04	-83.28	33.00
702	EMoff	573.04	-83.28	27.00	27.00	0.00	180.00	573.04	-83.28	33.00
703	EMoff	613.06	-83.28	27.00	27.00	0.00	180.00	613.06	-83.28	33.00
704	EMoff	583.07	-112.69	27.00	27.00	0.00	180.00	583.07	-112.69	33.00
705	EMoff	593.08	-112.69	27.00	27.00	0.00	180.00	593.08	-112.69	33.00
706	EMoff	603.04	-112.69	27.00	27.00	0.00	180.00	603.04	-112.69	33.00
708	EMoff	613.06	-112.69	27.00	27.00	0.00	180.00	613.06	-112.69	33.00
709	EMoff	583.07	-139.81	27.00	27.00	0.00	180.00	583.07	-139.81	33.00
710	EMoff	593.08	-139.81	27.00	27.00	0.00	180.00	593.08	-139.81	33.00
711	EMoff	603.04	-139.81	27.00	27.00	0.00	180.00	603.04	-139.81	33.00
712	EMoff	573.04	-139.81	27.00	27.00	0.00	180.00	573.04	-139.81	33.00
713	EMoff	613.06	-139.81	27.00	27.00	0.00	180.00	613.06	-139.81	33.00
714	EMoff	583.07	-167.91	27.00	27.00	0.00	180.00	583.07	-167.91	33.00
715	EMoff	593.08	-167.91	27.00	27.00	0.00	180.00	593.08	-167.91	33.00
716	EMoff	603.04	-167.91	27.00	27.00	0.00	180.00	603.04	-167.91	33.00
717	EMoff	573.04	-167.91	27.00	27.00	0.00	180.00	573.04	-167.91	33.00
818	C	127.19	64.08	27.00	27.00	0.00	180.00	127.19	64.08	33.00
819	C	137.19	64.08	27.00	27.00	0.00	180.00	137.19	64.08	33.00
820	C	147.15	64.08	27.00	27.00	0.00	180.00	147.15	64.08	33.00
821	C	127.19	92.24	27.00	27.00	0.00	180.00	127.19	92.24	33.00
822	C	137.19	92.24	27.00	27.00	0.00	180.00	137.19	92.24	33.00
823	C	147.15	92.24	27.00	27.00	0.00	180.00	147.15	92.24	33.00
824	C	127.19	119.73	27.00	27.00	0.00	180.00	127.19	119.73	33.00
825	C	137.19	119.73	27.00	27.00	0.00	180.00	137.19	119.73	33.00
826	C	147.15	119.73	27.00	27.00	0.00	180.00	147.15	119.73	33.00
827	C	117.18	119.73	27.00	27.00	0.00	180.00	117.18	119.73	33.00
828	C	157.18	119.73	27.00	27.00	0.00	180.00	157.18	119.73	33.00
829	C	157.18	92.24	27.00	27.00	0.00	180.00	157.18	92.24	33.00
830	C	117.09	92.24	27.00	27.00	0.00	180.00	117.09	92.24	33.00
831	C	117.16	64.08	27.00	27.00	0.00	180.00	117.16	64.08	33.00
832	C	157.18	64.08	27.00	27.00	0.00	180.00	157.18	64.08	33.00
833	C	127.19	32.88	27.00	27.00	0.00	180.00	127.19	32.88	33.00
834	C	137.19	32.88	27.00	27.00	0.00	180.00	137.19	32.88	33.00
835	C	147.15	32.88	27.00	27.00	0.00	180.00	147.15	32.88	33.00
836	C	117.16	32.88	27.00	27.00	0.00	180.00	117.16	32.88	33.00
837	C	157.18	32.88	27.00	27.00	0.00	180.00	157.18	32.88	33.00
838	C	127.19	5.48	27.00	27.00	0.00	180.00	127.19	5.48	33.00
839	C	137.19	5.48	27.00	27.00	0.00	180.00	137.19	5.48	33.00
840	C	147.15	5.48	27.00	27.00	0.00	180.00	147.15	5.48	33.00
841	C	117.16	5.48	27.00	27.00	0.00	180.00	117.16	5.48	33.00
842	C	157.18	5.39	27.00	27.00	0.00	180.00	157.18	5.39	33.00
843	C	127.19	-27.73	27.00	27.00	0.00	180.00	127.19	-27.73	33.00
844	C	137.19	-27.73	27.00	27.00	0.00	180.00	137.19	-27.73	33.00
845	C	147.15	-27.73	27.00	27.00	0.00	180.00	147.15	-27.73	33.00
846	C	117.16	-27.73	27.00	27.00	0.00	180.00	117.16	-27.73	33.00
847	C	157.18	-27.73	27.00	27.00	0.00	180.00	157.18	-27.73	33.00
848	C	127.19	-54.53	27.00	27.00	0.00	180.00	127.19	-54.53	33.00
849	C	137.19	-54.53	27.00	27.00	0.00	180.00	137.19	-54.53	33.00
850	C	147.15	-54.53	27.00	27.00	0.00	180.00	147.15	-54.53	33.00
851	C	117.16	-54.53	27.00	27.00	0.00	180.00	117.16	-54.53	33.00
852	C	157.18	-54.53	27.00	27.00	0.00	180.00	157.18	-54.53	33.00
860	C	127.19	-112.69	27.00	27.00	0.00	180.00	127.19	-112.69	33.00
861	C	137.19	-112.69	27.00	27.00	0.00	180.00	137.19	-112.69	33.00
862	C	147.15	-112.69	27.00	27.00	0.00	180.00	147.15	-112.69	33.00
863	C	117.16	-112.69	27.00	27.00	0.00	180.00	117.16	-112.69	33.00
864	C	157.18	-112.69	27.00	27.00	0.00	180.00	157.18	-112.69	33.00
865	C	127.19	-139.81	27.00	27.00	0.00	180.00	127.19	-139.81	33.00
866	C	137.19	-139.81	27.00	27.00	0.00	180.00	137.19	-139.81	33.00
867	C	147.15	-139.81	27.00	27.00	0.00	180.00	147.15	-139.81	33.00
868	C	117.16	-139.81	27.00	27.00	0.00	180.00	117.16	-139.81	33.00
869	C	157.18	-139.81	27.00	27.00	0.00	180.00	157.18	-139.81	33.00
870	C	127.19	-167.91	27.00	27.00	0.00	180.00	127.19	-167.91	33.00
871	C	137.19	-167.91	27.00	27.00	0.00	180.00	137.19	-167.91	33.00
872	C	147.15	-167.91	27.00	27.00	0.00	180.00	147.15	-167.91	33.00
874	C	157.18	-167.91	27.00	27.00	0.00	180.00	157.18	-167.91	33.00
875	C	127.19	-83.53	27.00	27.00	0.00	180.00	127.19	-83.53	33.00
876	C	137.19	-83.53	27.00	27.00	0.00	180.00	137.19	-83.53	33.00
877	C	147.15	-83.53	27.00	27.00	0.00	180.00	147.15	-83.53	33.00
878	C	117.16	-83.53	27.00	27.00	0.00	180.00	117.16	-83.53	33.00
879	C	157.18	-83.53	27.00	27.00	0.00	180.00	157.18	-83.53	33.00
880	D	573.07	119.73	27.00	27.00	0.00	180.00	573.07	119.73	33.00
881	D	573.04	5.48	27.00	27.00	0.00	180.00	573.04	5.48	33.00
882	D	573.04	-112.69	27.00	27.00	0.00	180.00	573.04	-112.69	33.00
883	D	613.06	64.08	27.00	27.00	0.00	180.00	613.06	64.08	33.00
884	D	613.06	-54.53	27.00	27.00	0.00	180.00	613.06	-54.53	33.00
885	D	613.06	-167.91	27.00	27.00	0.00	180.00	613.06	-167.91	33.00

Power Statistics

Description	# Luminaires	Total Watts	Area	Density
Emergency Lights Only	6	970.80 W	17641.00 ft²	0.06 W/ft²
Power Density Zone # 3	55	8899.00 W	18662.00 ft²	0.48 W/ft²

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	UG
Badminton 1	+	532 lux	608 lux	447 lux	1.4:1	1.2:1	1.1
Badminton 2	+	560 lux	611 lux	501 lux	1.2:1	1.1:1	1.1
Badminton 3	+	544 lux	597 lux	486 lux	1.2:1	1.1:1	1.1
Badminton 4	+	556 lux	603 lux	498 lux	1.2:1	1.1:1	1.1
Badminton 5	+	529 lux	586 lux	466 lux	1.3:1	1.1:1	1.1
Badminton 6	+	565 lux	619 lux	497 lux	1.2:1	1.1:1	1.1
Badminton 7	+	559 lux	609 lux	491 lux	1.2:1	1.1:1	1.1
Badminton 8	+	559 lux	612 lux	490 lux	1.2:1	1.1:1	1.1
Badminton 9	+	566 lux	616 lux	497 lux	1.2:1	1.1:1	1.1
Badminton 10	+	523 lux	591 lux	443 lux	1.3:1	1.2:1	1.1
Emergency Lighting	+	49 lux	86 lux	26 lux	3.3:1	1.9:1	1.7
Off court	+	491 lux	620 lux	345 lux	1.8:1	1.4:1	1.2

GENERAL NOTES - SPORTS LIGHTING
THIS LIGHTING SYSTEM LAYOUT DIAGRAM IS PROVIDED ONLY FOR INFORMATIONAL PURPOSES AND TO HELP THE CUSTOMER OR END-USER (AS APPLICABLE)

UNDERSTAND HOW VARIOUS DEVICES ARE ARRANGED AND CONNECT TO EACH OTHER AND ARE INTENDED TO OPERATE. THIS LIGHTING SYSTEM LAYOUT DIAGRAM IS STRICTLY BASED ON THE INFORMATION PROVIDED TO ACUITY BRANDS LIGHTING, AND IS PROVIDED WITHOUT WARRANTY AS TO ACCURACY, COMPLETENESS, RELIABILITY OR OTHERWISE.

IF THE INFORMATION (INCLUDING BUT NOT LIMITED TO SATELLITE MAP, FIELD DIMENSIONS, NUMBER OF POLES, ELECTRICAL PLANS AND SPECIFICATIONS) PROVIDED TO ACUITY BRANDS LIGHTING IS INCOMPLETE OR NOT CURRENT (I.E., NEWER VERSIONS EXIST), THE ACCURACY OF THE LAYOUT DIAGRAM MAY BE ADVERSELY AFFECTED.

ONCE THIS LIGHTING SYSTEM LAYOUT DIAGRAM IS RECEIVED BY THE CUSTOMER OR END-USER (AS APPLICABLE), IT IS THE OBLIGATION OF THE CUSTOMER OR END-USER (AS APPLICABLE) TO CONSULT WITH A PROFESSIONAL ENGINEERING ADVISOR TO DETERMINE WHETHER THE PROPOSED DESIGN MEETS THE APPLICABLE PROJECT REQUIREMENTS FOR THE LIGHTING SYSTEM'S PERFORMANCE, CODE COMPLIANCE, SAFETY, SUITABILITY AND EFFECTIVENESS FOR USE IN A PARTICULAR APPLICATION. IN NO EVENT WILL ACUITY BRANDS LIGHTING BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF THIS LIGHTING SYSTEM LAYOUT DIAGRAM.

GENERAL NOTES - SPORTS LIGHTING
1. Readings shown are based on a total LLF as 0.95 in the luminaire schedule at 3' (1m) above floor. Data references the extrapolated performance projections in a 25c ambient based on 10,000 hrs of LED testing (per IESNA LM-80-08 and projected per IESNA TM-21-11). LLF is based on fixture type cutsheet (if not preferred differently).

2. Please refer to the fixture labels for product type and mounting heights.

3. Product information can be obtained at https://www.acuitybrands.com/ or through your local agency.

4. Grid spacing is 10' x 10' on center.

5. Room surface reflectances are: 70/45/20.

Background Image Disclaimer
Please note this design utilizes an image format or converted image such as a PDF or JPEG formats for the background shown. These
types of formats can negatively impact accuracy when scaled resulting with inconsistent measurement of lighting levels on project.
Acuity Brands strongly suggests the use of AutoCAD formats for all design requests.

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Far-field photometric/radiometric data may have been used to perform one or more calculations. Photometric/radiometric data is typically collected under far-field measurement conditions; far-field data is not generally representative of near-field geometric conditions. When using far-field photometric/ radiometric data, the Visual software applies certain generalizing assumptions to approximate near-field performance. These approximations may result in significant inaccuracies in individual calculated luminous and/or radiant power quantities in areas where a source is in close proximity to a particular surface or point.
The modeling of radiant flux exchange used in the Visual software requires a uniform exitance across each reflecting surface. The Visual software approximates the uniform surface exitance condition by adaptively subdividing surfaces with non-uniform exitance into subsurfaces with sufficiently uniform exitance gradients. Practical restrictions, due to computer hardware limitations, may prevent the subdivision procedure from subdividing surfaces with high exitance gradients into subsurfaces with sufficiently uniform exitance gradients, introducing potential discretization error into calculated values.
Calculations performed by the Visual software assume that all reflected flux is reflected in a perfectly diffuse (Lambertian) and spectrally uniform manner across the spectral range being analyzed. If actual reflectance characteristics differ from these assumptions, observed luminous and/or radiant power quantities may differ from predicted quantities.
As a result of the computational limitations and simplifying modeling assumptions described above, and/or variations in actual product performance from tested product samples, the accuracy of calculated output values identifying expected radiometric quantities and any resulting derived radiation dose calculations may be adversely affected.
In addition, the accuracy of the application design may be adversely affected if information about the physical space provided to Acuity Brands Lighting is incomplete, inaccurate, outdated or not in the required format (including but not limited to floor plans, space layout, reflected ceiling plans, physical structures, electrical design or specifications), if incorrect assumptions are made because of such deficiencies in the information provided, or if typical assumptions made about the depicted physical space are not appropriate for the space. Furthermore, actual field performance may differ from performance calculated using laboratory measurements as the result of miscalculations related to deficiencies in the information provided about the physical space, degradation factors in the end- user environment (including, but not limited to, voltage variation and dirt accumulation), or other possible variations in field conditions. Finally, lamp lumen depreciation and/or depreciation in lamp radiant intensity may result in performance over time that differs from performance calculated using a new lamp. Light loss factors may have been used in the application design to estimate such depreciation, but flaws in these estimates may also result in performance over time that differs from calculated performance.
It is the obligation of the end-user to consult with appropriately qualified Professional Engineer(s) to determine whether this application design meets the applicable requirements for performance, code compliance, safety, suitability and effectiveness for use in a particular application. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this application design.

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WB- IRVINE REC RCP (BADMINTON)

IRVINE FIELD HOUSE

17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

HOLOPHANE LIGHTING BADMINTON COURTS PLAN

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/06/2026	PLAN CHECK CORRECTIONS 3
5	01/26/2026	OC HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
	03/06/2026	OC HEALTH SHEET 2

CITY OF IRVINE
BUILDING & SAFETY DIVISION

Revised by: Cheryl Kite
Date 2/5/2026
Scale As Shown
Drawing No. 298333-3 A1
1 of 1

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

SHEET
ET500

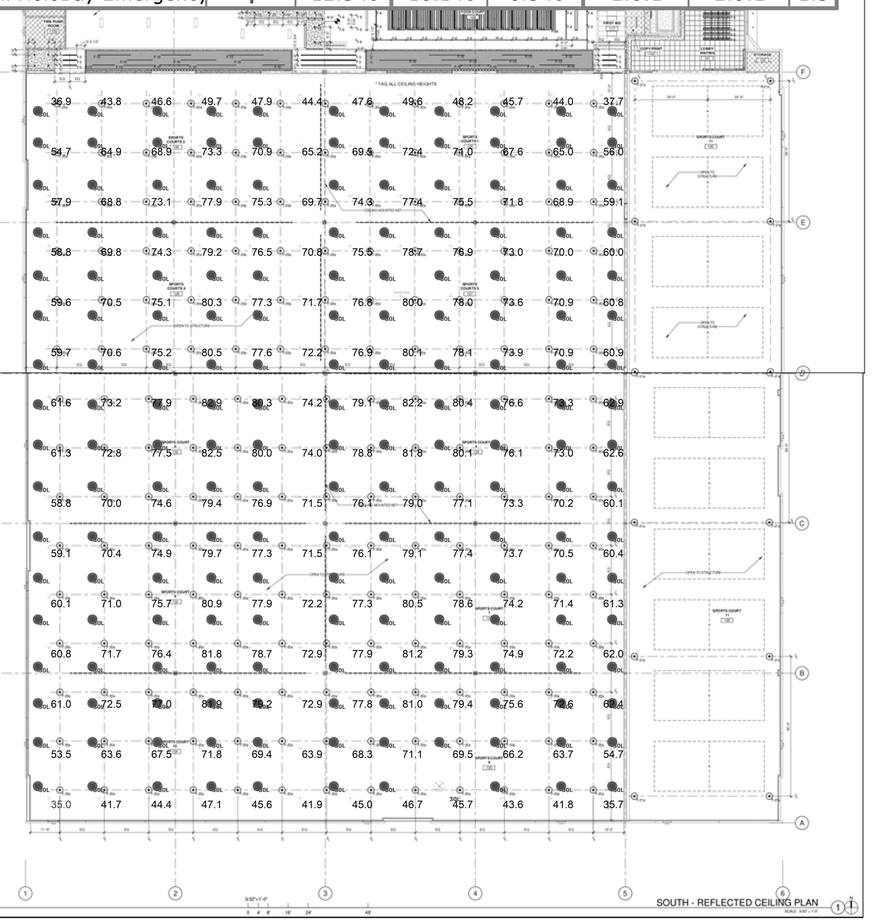
06/06/2025

Autodesk Docs://LAX21-0174-02_17300 Red Hill - Rec Center/RTM ARCH Files/17300 Red Hill Rec Center_2023.rvt
3/6/2026 10:24:09 AM

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	UG
Basketball HoloBay	+	68.4 fc	82.9 fc	35.0 fc	2.4:1	2.0:1	1.5
Basketball HoloBay Emergency	+	12.5 fc	16.1 fc	6.3 fc	2.6:1	2.0:1	1.5



Plan View
Scale - 1" = 20ft

Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	LLF	Lumens per Lamp	Number Lamps	Description	Wattage	Distribution
	30L	187	Holophane	HOLO1 30000LM WD 50K 70CRI	0.95	33618	1	Holobay, Small Optical, 30,000 Nominal Lumens, Wide Glass, 5000K, 70CRI, Small Electrical Housing, Downlight Only	178.99	DIRECT, SC-0=1.56, SC-90=1.56
	EM	36	Holophane	HOLO1 30000LM WD 50K 70CRI	0.95	33618	1	Holobay, Small Optical, 30,000 Nominal Lumens, Wide Glass, 5000K, 70CRI, Small Electrical Housing, Downlight Only	178.99	DIRECT, SC-0=1.56, SC-90=1.56
	Off	151	Holophane	HOLO1 30000LM WD 50K 70CRI	0	33618	1	Holobay, Small Optical, 30,000 Nominal Lumens, Wide Glass, 5000K, 70CRI, Small Electrical Housing, Downlight Only	178.99	DIRECT, SC-0=1.56, SC-90=1.56

GENERAL NOTES - INTERIORS

1. Readings shown are based on a total LLF of 0.97 as shown at 3.0' AFG. Data references the extrapolated performance projections in a 25c ambient based on 10,000 hrs of LED testing (per IESNA LM-80-08 and projected per IESNA TM-21-11).
2. Please refer to the "luminaire locations" for mounting heights.
3. Product information can be obtained at www.Holophane.com or through your local agency.
4. Reflectances are 80/50/20.
5. Design may not include any industrial equipment such as overhead ductwork, piping or conveyor systems. Actual lighting readings may vary.

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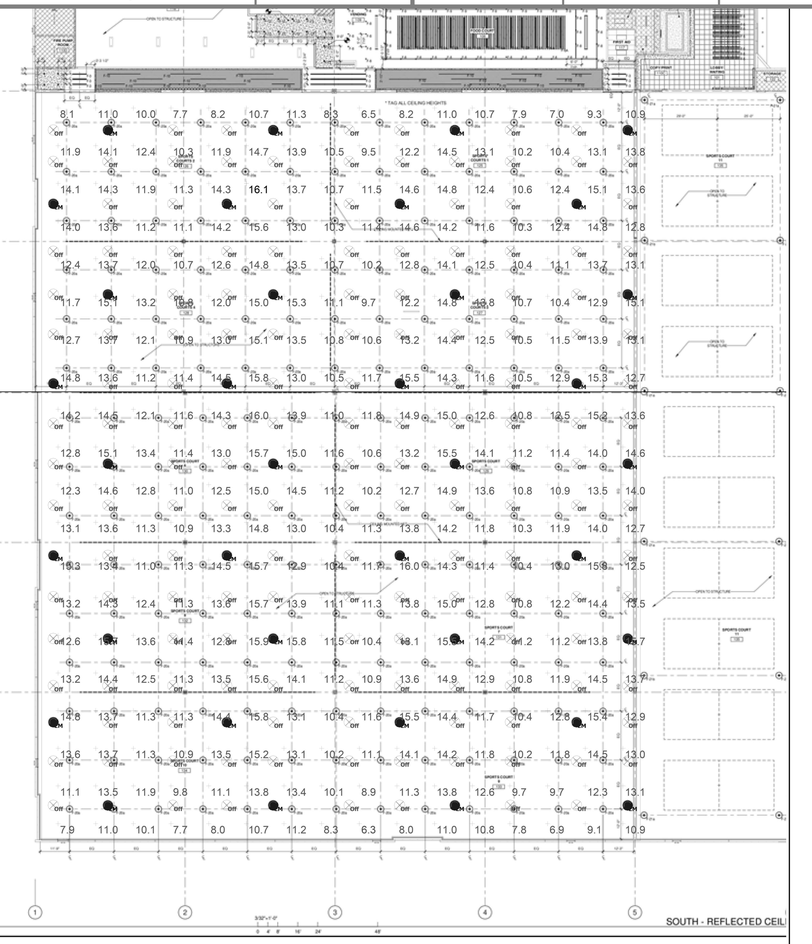
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Far-field photometric/radiometric data may have been used to perform one or more calculations. Photometric/radiometric data is typically collected under far-field measurement conditions; far-field data is not generally representative of near-field geometric conditions. When using far-field photometric/ radiometric data, the Visual software applies certain generalizing assumptions to approximate near-field performance. These approximations may result in significant inaccuracies in individual calculated luminous and/or radiant power quantities in areas where a source is in close proximity to a particular surface or point.
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It is the obligation of the end-user to consult with appropriately qualified Professional Engineer(s) to determine whether this application design meets the applicable requirements for performance, code compliance, safety, suitability and effectiveness for use in a particular application. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this application design.

Luminaire Locations

No.	Label	Location X	Location Y	Location Z	MH	Orientation	Tilt	Aim X	Aim Y	Aim Z
1302	Off	353.95	95.37	32.00	32.00	0.00	0.00	353.95	95.37	0.00
1303	Off	353.95	59.60	32.00	32.00	0.00	0.00	353.95	59.60	0.00
1304	Off	353.95	-8.93	32.00	32.00	0.00	0.00	353.95	-8.93	0.00
1305	Off	353.95	-41.56	32.00	32.00	0.00	0.00	353.95	-41.56	0.00
1306	Off	353.95	-77.97	32.00	32.00	0.00	0.00	353.95	-77.97	0.00
1307	Off	353.95	-113.41	32.00	32.00	0.00	0.00	353.95	-113.41	0.00
1308	Off	353.95	-143.43	32.00	32.00	0.00	0.00	353.95	-143.43	0.00
1311	Off	353.95	-94.63	32.00	32.00	0.00	0.00	353.95	-94.63	0.00
1313	Off	353.95	107.91	32.00	32.00	0.00	0.00	353.95	107.91	0.00
1314	Off	353.95	42.48	32.00	32.00	0.00	0.00	353.95	42.48	0.00
1316	Off	353.95	-161.06	32.00	32.00	0.00	0.00	353.95	-161.06	0.00
1317	Off	353.95	-24.96	32.00	32.00	0.00	0.00	353.95	-24.96	0.00
1318	Off	353.95	26.58	32.00	32.00	0.00	0.00	353.95	26.58	0.00
1319	Off	423.03	107.91	32.00	32.00	0.00	0.00	423.03	107.91	0.00
1323	Off	423.03	-24.96	32.00	32.00	0.00	0.00	423.03	-24.96	0.00
1325	Off	423.03	-94.63	32.00	32.00	0.00	0.00	423.03	-94.63	0.00
1327	Off	423.03	-161.06	32.00	32.00	0.00	0.00	423.03	-161.06	0.00
1328	Off	401.55	95.37	32.00	32.00	0.00	0.00	401.55	95.37	0.00
1329	Off	441.52	95.37	32.00	32.00	0.00	0.00	441.52	95.37	0.00
1330	Off	423.03	95.37	32.00	32.00	0.00	0.00	423.03	95.37	0.00
1331	Off	401.55	59.60	32.00	32.00	0.00	0.00	401.55	59.60	0.00
1332	Off	423.03	59.60	32.00	32.00	0.00	0.00	423.03	59.60	0.00
1333	Off	441.52	26.58	32.00	32.00	0.00	0.00	441.52	26.58	0.00
1334	Off	423.03	26.58	32.00	32.00	0.00	0.00	423.03	26.58	0.00
1335	Off	401.55	-8.93	32.00	32.00	0.00	0.00	401.55	-8.93	0.00
1336	Off	441.52	-8.93	32.00	32.00	0.00	0.00	441.52	-8.93	0.00
1337	Off	423.03	-8.93	32.00	32.00	0.00	0.00	423.03	-8.93	0.00
1338	Off	401.55	-41.56	32.00	32.00	0.00	0.00	401.55	-41.56	0.00
1339	Off	441.52	-41.56	32.00	32.00	0.00	0.00	441.52	-41.56	0.00
1340	Off	423.03	-41.56	32.00	32.00	0.00	0.00	423.03	-41.56	0.00
1342	Off	441.52	-77.97	32.00	32.00	0.00	0.00	441.52	-77.97	0.00
1343	Off	423.03	-77.97	32.00	32.00	0.00	0.00	423.03	-77.97	0.00
1344	Off	401.55	-113.41	32.00	32.00	0.00	0.00	401.55	-113.41	0.00
1345	Off	441.52	-113.41	32.00	32.00	0.00	0.00	441.52	-113.41	0.00
1346	Off	423.03	-113.41	32.00	32.00	0.00	0.00	423.03	-113.41	0.00
1347	Off	441.52	-143.43	32.00	32.00	0.00	0.00	441.52	-143.43	0.00
1348	Off	423.03	-143.43	32.00	32.00	0.00	0.00	423.03	-143.43	0.00
1349	Off	441.52	7.01	32.00	32.00	0.00	0.00	441.52	7.01	0.00
1351	Off	401.55	-61.51	32.00	32.00	0.00	0.00	401.55	-61.51	0.00
1353	Off	441.52	-127.94	32.00	32.00	0.00	0.00	441.52	-127.94	0.00
1355	Off	401.55	7.01	32.00	32.00	0.00	0.00	401.55	7.01	0.00
1356	Off	401.55	78.56	32.00	32.00	0.00	0.00	401.55	78.56	0.00
1359	Off	441.52	78.56	32.00	32.00	0.00	0.00	441.52	78.56	0.00
1360	Off	441.52	59.60	32.00	32.00	0.00	0.00	441.52	59.60	0.00
1361	Off	441.52	-61.51	32.00	32.00	0.00	0.00	441.52	-61.51	0.00
1362	Off	401.55	-127.94	32.00	32.00	0.00	0.00	401.55	-127.94	0.00
1363	Off	401.55	42.48	32.00	32.00	0.00	0.00	401.55	42.48	0.00
1364	Off	401.55	26.58	32.00	32.00	0.00	0.00	401.55	26.58	0.00
1365	Off	401.55	-94.63	32.00	32.00	0.00	0.00	401.55	-94.63	0.00
1366	Off	401.55	-161.06	32.00	32.00	0.00	0.00	401.55	-161.06	0.00
1367	Off	401.55	107.91	32.00	32.00	0.00	0.00	401.55	107.91	0.00
1368	Off	401.55	-143.43	32.00	32.00	0.00	0.00	401.55	-143.43	0.00
1369	Off	401.55	-24.96	32.00	32.00	0.00	0.00	401.55	-24.96	0.00
1371	Off	375.67	78.56	32.00	32.00	0.00	0.00	375.67	78.56	0.00
1373	Off	375.67	7.01	32.00	32.00	0.00	0.00	375.67	7.01	0.00
1374	Off	375.67	-61.51	32.00	32.00	0.00	0.00	375.67	-61.51	0.00
1376	Off	375.67	-127.94	32.00	32.00	0.00	0.00	375.67	-127.94	0.00
1378	Off	471.79	78.56	32.00	32.00	0.00	0.00	471.79	78.56	0.00
1379	Off	471.79	7.01	32.00	32.00	0.00	0.00	471.79	7.01	0.00
1380	Off	471.79	-24.96	32.00	32.00	0.00	0.00	471.79	-24.96	0.00
1381	Off	471.79	-61.51	32.00	32.00	0.00	0.00	471.79	-61.51	0.00
1382	Off	471.79	-127.94	32.00	32.00	0.00	0.00	471.79	-127.94	0.00
1384	Off	513.84	78.56	32.00	32.00	0.00	0.00	513.84	78.56	0.00
1385	Off	513.84	7.01	32.00	32.00	0.00	0.00	513.84	7.01	0.00
1386	Off	513.84	-61.51	32.00	32.00	0.00	0.00	513.84	-61.51	0.00
1387	Off	513.84	-127.94	32.00	32.00	0.00	0.00	513.84	-127.94	0.00
1388	Off	562.36	107.91	32.00	32.00	0.00	0.00	562.36	107.91	0.00
1390	Off	562.36	42.48	32.00	32.00	0.00	0.00	562.36	42.48	0.00
1393	Off	562.36	-94.63	32.00	32.00	0.00	0.00	562.36	-94.63	0.00
1395	Off	562.36	-161.06	32.00	32.00	0.00	0.00	562.36	-161.06	0.00
1396	Off	491.89	95.37	32.00	32.00	0.00	0.00	491.89	95.37	0.00
1397	Off	536.02	95.37	32.00	32.00	0.00	0.00	536.02	95.37	0.00
1398	Off	582.70	95.37	32.00	32.00	0.00	0.00	582.70	95.37	0.00
1399	Off	471.79	95.37	32.00	32.00	0.00	0.00	471.79	95.37	0.00
1400	Off	513.84	95.37	32.00	32.00	0.00	0.00	513.84	95.37	0.00
1401	Off	491.89	59.60	32.00	32.00	0.00	0.00	491.89	59.60	0.00
1402	Off	536.02	59.60	32.00	32.00	0.00	0.00	536.02	59.60	0.00
1403	Off	582.70	59.60	32.00	32.00	0.00	0.00	582.70	59.60	0.00
1404	Off	375.67	59.60	32.00	32.00	0.00	0.00	375.67	59.60	0.00
1405	Off	471.79	59.60	32.00	32.00	0.00	0.00	471.79	59.60	0.00
1406	Off	513.84	59.60	32.00	32.00	0.00	0.00	513.84	59.60	0.00
1407	Off	562.36	59.60	32.00	32.00	0.00	0.00	562.36	59.60	0.00
1408	Off	536.02	26.58	32.00	32.00	0.00	0.00	536.02	26.58	0.00
1409	Off	582.70	26.58	32.00	32.00	0.00	0.00	582.70	26.58	0.00
1410	Off	375.67	26.58	32.00	32.00	0.00	0.00	375.67	26.58	0.00
1411	Off	562.36	26.58	32.00	32.00	0.00	0.00	562.36	26.58	0.00
1412	Off	491.89	-8.93	32.00	32.00	0.00	0.00	491.89	-8.93	0.00
1413	Off	536.02	-8.93	32.00	32.00	0.00	0.00	536.02	-8.93	0.00
1414	Off	582.70	-8.93	32.00	32.00	0.00	0.00	582.70	-8.93	0.00
1415	Off	375.67	-8.93	32.00	32.00	0.00	0.00	375.67	-8.93	0.00
1417	Off	513.84	-8.93	32.00	32.00	0.00	0.00	513.84	-8.93	0.00
1418	Off	562.36	-8.93	32.00	32.00	0.00	0.00	562.36	-8.93	0.00
1419	Off	491.89	-41.56	32.00	32.00	0.00	0.00	491.89	-41.56	0.00
1420	Off	536.02	-41.56	32.00	32.00	0.00	0.00	536.02	-41.56	0.00
1421	Off	582.70	-41.56	32.00	32.00	0.00	0.00	582.70	-41.56	0.00
1422	Off	375.67	-41.56	32.00	32.00	0.00	0.00	375.67	-41.56	0.00
1423	Off	471.79	-41.56	32.00	32.00	0.00	0.00	471.79	-41.56	0.00
1424	Off	513.84	-41.56	32.00	32.00	0.00	0.00	513.84	-41.56	0.00
1425	Off	562.36	-41.56	32.00	32.00	0.00	0.00	562.36	-41.56	0.00
1426	Off	491.89	-77.97	32.00	32.00	0.00	0.00	491.89	-77.97	0.00
1428	Off	582.70	-77.97	32.00	32.00	0.00	0.00	582.70	-77.97	0.00
1429	Off	375.67	-77.97	32.00	32.00	0.00	0.00	375.67	-77.97	0.00
1430	Off	513.84	-77.97	32.00	32.00	0.00	0.00	513.84	-77.97	0.00
1431	Off	562.36	-77.97	32.00	32.00	0.00	0.00	562.36	-77.97	0.00
1432	Off	491.89	-113.41	32.00	32.00	0.00	0.00	491.89	-113.41	0.00
1433	Off	536.02	-113.41	32.00	32.00	0.00	0.00	536.02	-113.41	0.00
1434	Off	375.67	-113.41	32.00	32.00	0.00	0.00	375.67	-113.41	0.00
1435	Off	513.84	-113.41	32.00	32.00	0.00	0.00	513.84	-113.41	0.00
1436	Off	562.36	-113.41	32.00	32.00	0.00	0.00	562.36	-113.41	0.00
1437	Off	491.89	-143.43	32.00	32.00	0.00	0.00	491.89	-143.43	0.00
1438	Off	471.79	-143.43	32.00	32.00	0.00	0.00	471.79	-143.43	0.00
1439	Off	513.84	-143.43	32.00	32.00	0.00	0.00	513.84	-143.43	0.00
1440	Off	582.70	-143.43	32.00	32.00	0.00	0.00	582.70	-143.43	0.00
1441	Off	536.02	78.56	32.00	32.00	0.00	0.00	536.02	78.56	0.00
1442	Off	582.70	78.56	32.00	32.00	0.00	0.00	582.70	78.56	0.00
1443	Off	491.89	42.48	32.00	32.00	0.00	0.00	491.89	42.48	0.00
1445	Off	536.02	7.01	32.00	32.00	0.00	0.00	536.02	7.01	0.00
1447	Off	582.70	-61.51	32.00	32.00	0.00	0.00	582.70	-61.51	0.00
1448	Off	536.02	-94.63	32.00	32.00	0.00	0.00	536.02	-94.63	0.00
1451	Off	536.02	-61.51	32.00	32.00	0.00	0.00	536.02	-61.51	0.00
1452	Off	536.02	-127.94	32.00	32.00	0.00	0.00	536.02	-127.94	0.00
1453	Off	536.02	-161.06	32.00	32.00	0.00	0.00	536.02	-161.06	0.00
1456	Off	491.89	-24.96	32.00	32.00	0.00	0.00	491.89	-24.96	0.00
1458	Off	491.89	-94.63	32.00	32.00	0.00	0.00	491.89	-94.63	0.00
1460	Off	491.89	-161.06	32.00	32.00	0.00	0.00	491.89	-161.06	0.00
1461	Off	582.70	-113.41	32.00	32.00	0.00	0.00	582.70	-113.41	0.00
1463	Off	513.84	26.58	32.00	32.00	0.00	0.00	513.84	26.58	0.00
1465	Off	582.70	7.01	32.00	32.00	0.00	0.00	582.70	7.01	0.00
1466	Off	582.70	-127.94	32.00	32.00	0.00	0.00	582.70	-127.94	0.00
1468	Off	491.89	26.58	32.00	32.00	0.00	0.00	491.89	26.58	0.00
1469	Off	491.89	107.91	32.00	32.00	0.00	0.00	491.89	107.91	0.00
1474	Off	471.79	-77.97	32.00	32.00	0.00	0.00	471.79	-77.97	0.00
1475	Off	536.02	107.91	32.00	32.00	0.00	0.00	536.02	107.91	0.00
1476	Off	536.02	-143.43	32.00	32.00	0.00	0.00	536.02	-143.43	0.00
1477	Off	536.02	-24.96	32.00	32.00	0.00	0.00	536.02	-24.96	0.00
1478	Off	471.79	-94.63	32.00	32.00	0.00	0.00	471.79	-94.63	0.00
1479	Off	471.79	26.58	32.00	32.00	0.00	0.00	471.79	26.58	0.00
1489	Off	471.79	42.48	32.00	32.00	0.00	0.00	471.79	42.48	0.00
1490	Off	471.79	-113.41	32.00	32.00	0.00	0.00	471.79	-113.41	0.00
1494	EM	441.52	107.91	32.00	32.00	0.00	0.00	441.52	107.91	0.00
1495	EM	375.67	107.91	32.00	32.00	0.00	0.00	375.67	107.91	0.00
1496	EM	513.84	107.91	32.00	32.00	0.00	0.00	513.84	107.91	0.00
1497	EM	582.70	107.91	32.00	32.00	0.00	0.00	582.70	107.91	0.00
1499	Off	375.67	95.37	32.00	32.00	0.00	0.00	375.67	95.37	0.00
1500	Off	562.36	95.37	32.00	32.00	0.00	0.00	562.36	95.37	0.00
1501	Off	471.79	107.91	32.00	32.00	0.00	0.00	471.79	107.91	0.00
1502	EM	353.95	78.56	32.00	32.00	0.00	0.00	353.95	78.56	0.00
1503	EM	423.03	78.56	32.00	32.00	0.00	0.00	423.03	78.56	0.00
1504	EM	562.36	78.56	32.00	32.00	0.00	0.00	562.36	78.56	0.00
1505	EM	491.89	78.56	32.00	32.00	0.00	0.00	491.89	78.56	0.00
1507	Off	562.36	-24.96	32.00	32.00	0.00	0.00	562.36	-24.96	0.00
1508	Off	375.67	-143.43	32.00	32.00	0.00	0.00	375.67	-143.43	0.00
1509	Off	562.36	-143.43	32.00	32.00	0.00	0.00	562.36	-143.43	0.00
1510	Off	423.03	42.48	32.00	32.00	0.00	0.00	423.03	42.48	0.00
1511	Off	536.02	42.48	32.00	32.00	0.00	0.00	536.02	42.48	0.00
1512	Off	401.55	-77.97	32.00	32.00	0.00	0.00	401.55	-77.97	0.00
1513	Off	536.02	-77.97	32.00	32.00	0.00	0.00	536.02	-77.97	0.00
1514	Off	471.79	-161.06	32.00	32.00	0.00	0.00	471.79	-161.06	0.00
1515	Off	471.79	-8.93	32.00	32.00	0.00	0.00	471.79	-8.93	0.00
1516	EM	353.95	7.01	32.00	32.00	0.00	0.00	353.95	7.01	0.00
1517	EM	353.95	-127.94	32.00	32.00	0.00	0.00	353.95	-127.94	0.00
1518	EM	353.95	-61.51	32.00	32.00	0.00	0.00	353.95	-61.51	0.00
1519	EM	423.03	7.01	32.00	32.00	0.00	0.00	423.03	7.01	0.00
1520	EM	423.03	-61.51	32.00	32.00	0.00	0.00	423.03	-61.51	0.00
1521	EM	423.03	-127.94	32.00	32.00	0.00	0.00	423.03	-127.94	0.00
1522	EM	441.52	-24.96	32.00	32.00	0.00	0.00	441.52	-24.96	0.00
1523	EM	441.52	-94.63	32.00	32.00	0.00	0.00	441.52	-94.63	0.00
1524	EM	441.52	-161.06	32.00	32.00	0.00	0.00	441.52	-161.06	0.00
1525	EM	441.52	42.48	32.00	32.00	0.00	0.00	441.52	42.48	0.00
1526	EM	375.67	42.48	32.00	32.00	0.00	0.00	375.67	42.48	0.00
1527	EM	375.67	-94.63	32.00	32.00	0.00	0.00	375.67	-94.63	0.00
1528	EM	375.67	-161.06	32.00	32.00	0.00	0.00	375.67	-161.06	0.00
1529	EM	562.36	7.01	32.00	32.00	0.00	0.00	562.36	7.01	0.00
1530	EM	562.36	-61.51	32.00	32.00	0.00	0.00	562.36	-61.51	0.00
1531	EM	562.36	-127.94	32.00	32.00	0.00	0.00	562.36	-127.94	0.00
1532	EM	491.89	-61.51	32.00	32.00	0.00	0.00	491.89	-61.51	0.00
1533	EM	491.89	-127.94	32.00	32.00	0.00	0.00	491.89	-127.94	0.00
1534	EM	582.70	-161.06	32.00	32.00	0.00	0.00	582.70	-161.06	0.00
1535	EM	491.89	7.01	32.00	32.00	0.00	0.00	491.89	7.01	0.00
1536	EM	582.70	-24.96	32.00	32.00	0.00	0.00	582.70	-24.96	0.00
1537	EM	582.70	-94.63	32.00	32.00	0.00	0.00	582.70	-94.63	0.00
1538	EM	513.84	42.48	32.00	32.00	0.00	0.00	513.84	42.48	0.00
1539	EM	582.70	42.48	32.00	32.00	0.00	0.00	582.70	42.48	0.00
1540	EM	513.84	-94.63	32.00	32.00	0.00	0.00	513.84	-94.63	0.00
1541	EM	513.84	-24.96	32.00	32.00	0.00	0.00	513.84	-24.96	0.00
1542	EM	513.84	-161.06	32.00	32.00	0.00	0.00	513.84	-161.06	0.00
1543	EM	375.67	-24.96	32.00	32.00	0.00	0.00	375.67	-24.96	0.00
1107	30L	-133.33	107.91	32.00	32.00	0.00	0.00	-133.33	107.91	0.00
1108	30L	-111.61	107.91	32.00	32.00	0.00	0.00	-111.61	107.91	0.00

Power Statistics

Description	# Luminaires	Total Watts	Area	Density
Power Density Basketball	187	33471.16 W	71971.34 ft²	0.47 W/ft²





CITY OF IRVINE
BUILDING & SAFETY DIVISION

WB- IRVINE REC RCP

EC RCP B1 (BASKETBALL)

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IRVINE FIELD HOUSE

17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

HOLOPHANE LIGHTING BASKETBALL COURTS PLAN

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/26/2026	PLAN CHECK CORRECTIONS 3
5	03/06/2026	OC HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
	03/06/2026	OC HEALTH DEPT 2

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PA/PM: TB
DRAWN BY.: CM
JOB NO.: LAX21-0174-02

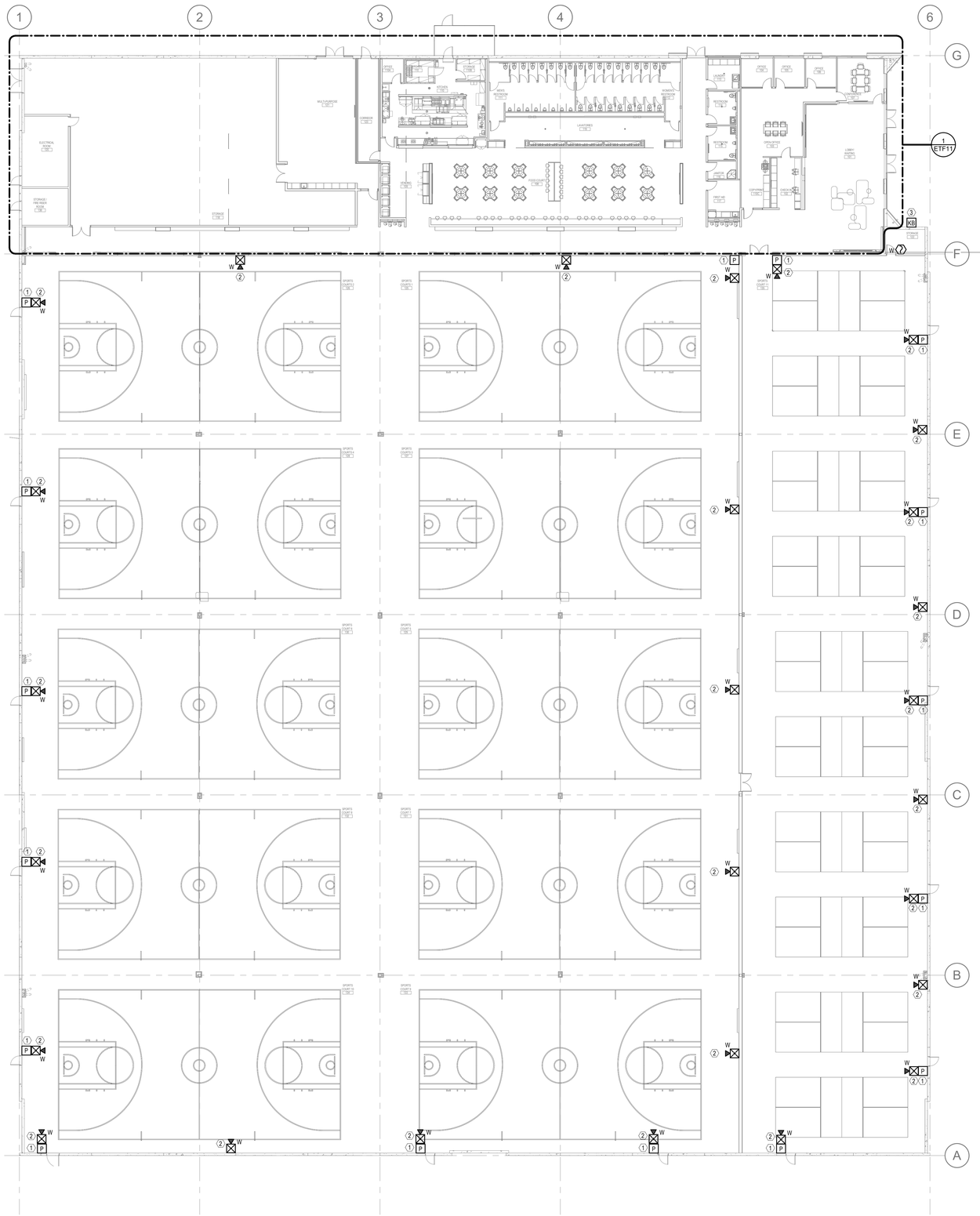
Designer Cheryl Kite
Date 02/05/2026
Scale As Shown
Drawing No. 298333-0 B1
1 of 1

SHEET
ET501

06/06/2025
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Autodesk Docs://LAX21-0174-02_17300 Red Hill - Rec Center/RTM/ET Files Cheryl_R22.rvt

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1 ELECTRICAL FLOOR PLAN
1/16" = 1'-0"

GENERAL FIRE ALARM NOTES

FIRE ALARM PLANS ARE PROVIDED FOR REFERENCE ONLY FOR GENERAL DESIGN INTENT AND BIDDING PURPOSES. AT NO TIME SHALL THESE PLANS BE USED FOR ACTUAL CONSTRUCTION PURPOSES. SEPARATE FIRE ALARM SHOP DRAWINGS SHALL BE SUBMITTED DIRECTLY TO OCFA FOR REVIEW AND APPROVAL WHICH SHALL BE USED FOR CONSTRUCTION. THE SHOP DRAWINGS SHALL COVER ALL NECESSARY MODIFICATIONS NEEDING TO BE TO SUPPORT PROPOSED TENANT IMPROVEMENT SCOPE.

5

GENERAL FIRE ALARM NOTES

1. REFER TO GENERAL NOTES ON SHEET ET000.
2. REFER TO SPECIFICATIONS ON SHEET ET001.
3. ALL DEVICES ARE NEW , UNLESS OTHERWISE NOTED.
4. REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS AND FINAL FIXTURE LOCATIONS.
5. CEILING DEVICES TO BE COORDINATED WITH ALL FINAL CEILING INSTALLATIONS.

 # KEYNOTES

1 PROVIDE PLASTIC GUARD FOR FIRE ALARM PULL STATION.
2 PROVIDE WIRE GUARD FOR FIRE ALARM NOTIFICATION DEVICE.
3 COORDINATE LOCATION OF KNOX BOX WITH 'AHJ' PRIOR TO ROUGH-IN.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

N N

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Exp. 12/31/27
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IRVINE, CALIFORNIA 92614

OVERALL ELECTRICAL FIRE ALARM PLAN

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/02/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

SHEET
ETF10

06/06/2025

3/6/2026 10:24:16 AM

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GENERAL FIRE ALARM NOTES

FIRE ALARM PLANS ARE PROVIDED FOR REFERENCE ONLY FOR GENERAL DESIGN INTENT AND BIDDING PURPOSES. AT NO TIME SHALL THESE PLANS BE USED FOR ACTUAL CONSTRUCTION PURPOSES. SEPARATE FIRE ALARM SHOP DRAWINGS SHALL BE SUBMITTED DIRECTLY TO OCFA FOR REVIEW AND APPROVAL WHICH SHALL BE USED FOR CONSTRUCTION. THE SHOP DRAWINGS SHALL COVER ALL NECESSARY MODIFICATIONS NEEDING TO BE TO SUPPORT PROPOSED TENANT IMPROVEMENT SCOPE.

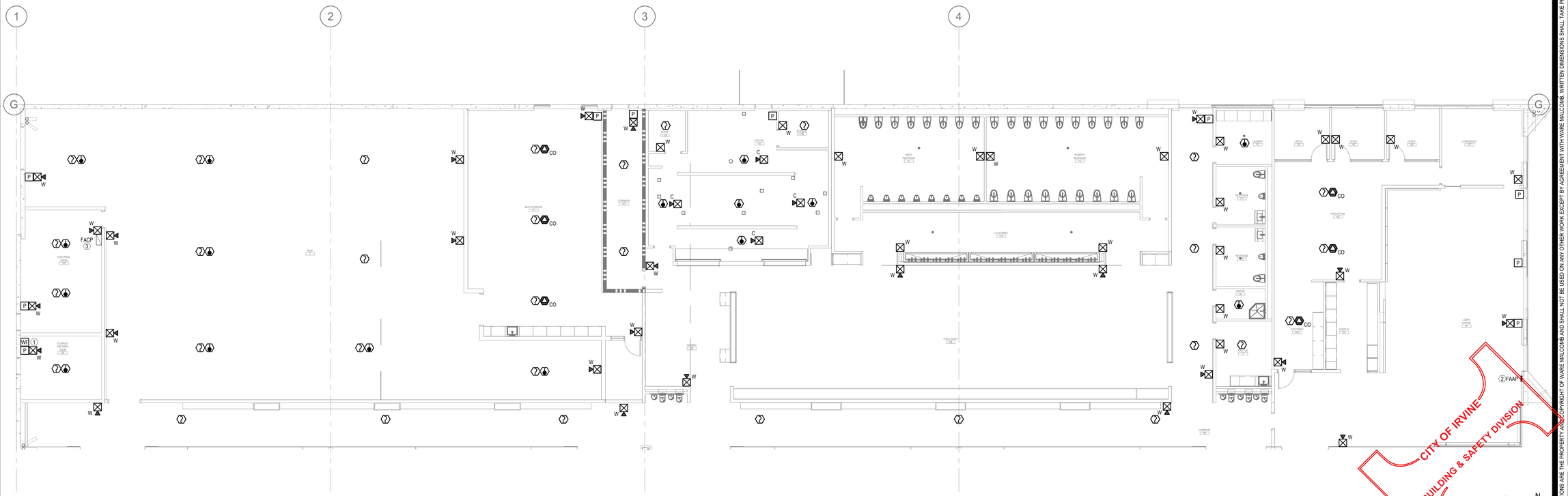
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GENERAL FIRE ALARM NOTES

1. REFER TO GENERAL NOTES ON SHEET ET000.
2. REFER TO SPECIFICATIONS ON SHEET ET001.
3. ALL DEVICES ARE NEW , UNLESS OTHERWISE NOTED.
4. REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS AND FINAL FIXTURE LOCATIONS.
5. CEILING DEVICES TO BE COORDINATED WITH ALL FINAL CEILING INSTALLATIONS.

KEYNOTES

#	
1	FIRE ALARM CONTRACTOR TO DETERMINE FLOW OR TAMPER SWITCHES REQUIRED FOR SPRINKLER SYSTEM.
2	COORDINATE LOCATION OF FIRE ALARM ANNUNCIATOR PANEL WITH 'AHJ' PRIOR TO ROUGH-IN.
3	CIRCUIT FIRE ALARM EQUIPMENT TO EXISTING PANEL "HPL" OR PANEL "HPL-1". FIRE ALARM EQUIPMENT CIRCUIT TO BE PROVIDED WITH SURGE PROTECTION AND BREAKER LOCKOUT.



1 TI ELECTRICAL ENLARGED FIRE ALARM PLAN
1/8" = 1'-0"

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ELECTRICAL ENLARGED FIRE ALARM PLAN

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/07/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	TB
DRAWN BY.:	CM
JOB NO.:	LAX21-0174-02

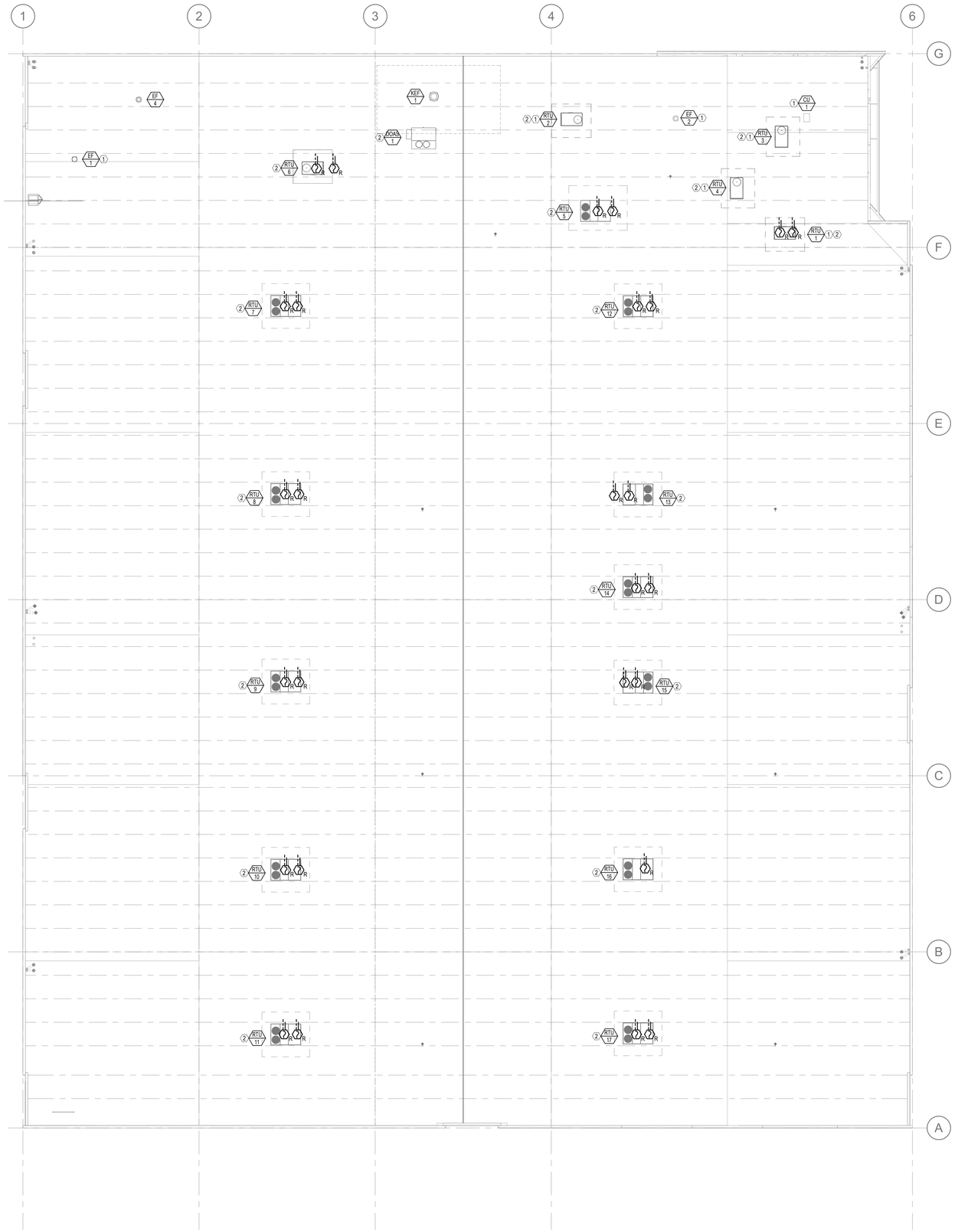
06/06/2025

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Autodesk Docs://LAX21-0174-02_17300 Red Hill - Rec Center/RTM/ME/Red Hill Rec Center_R23.rvt

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT



1 TI ELECTRICAL FIRE ALARM ROOF PLAN
1/16" = 1'-0"

GENERAL FIRE ALARM NOTES

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5

GENERAL FIRE ALARM NOTES

1. REFER TO GENERAL NOTES ON SHEET ET000.
2. REFER TO SPECIFICATIONS ON SHEET ET001.
3. ALL DEVICES ARE NEW , UNLESS OTHERWISE NOTED.
4. REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS AND FINAL FIXTURE LOCATIONS.
5. CEILING DEVICES TO BE COORDINATED WITH ALL FINAL CEILING INSTALLATIONS.

KEYNOTES

#	
1	EXISTING EQUIPMENT INSTALLED PREVIOUSLY DURING PHASE 1. SHOWN FOR COORDINATION PURPOSES.
2	PROVIDE DUCT DETECTORS IN THE SUPPLY AND RETURN SIDE OF ALL MECHANICAL EQUIPMENT UNITS RATED FOR GREATER THAN 2000CFM. PROVIDE DETECTORS WITH ASSOCIATED REMOTE TEST SWITCHES.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

N N

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ELECTRICAL ROOF FIRE ALARM PLAN

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6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	Approver
DRAWN BY.:	Author
JOB NO.:	LAX21-0174-02

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CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

PLUMBING ENERGY NOTES:

1. PROVIDE HEAT TRAPS ON COLD WATER SUPPLY TO WATER HEATERS (HEAT TRAP NIPPLE, U-FLEX CONNECTOR & FABRICATED RETURN BEND).
2. PROVIDE AUTOMATIC TIME SWITCHES TO TURN HOT WATER RECIRCULATION PUMPS OFF WHEN IT IS NOT IN USE. FOR AUTOMATIC-CIRCULATING HOT WATER SYSTEM, HWS AND HWR PIPING SHALL BE INSULATED WITH 1" OF INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 (BTU PER INCH/H X FT2 X F).
3. PROVIDE AUTOMATIC VENT OR FLUE DAMPERS FOR ALL FUEL FIRED WATER HEATERS.
4. ALL WATER HEATERS TO BE ENERGY EFFICIENT (STAND-BY HEAT LOSS & FUEL EFFICENCY).
5. INSULATE ALL HOT WATER PIPING WITH MINIMUM INSULATION AS REQUIRED TO MEET ENERGY EFFICIENCY STANDARDS.

PLUMBING EQUIPMENT:

- SEWAGE EJECTOR (SE)
- BOOSTER PUMP (BP)
- GAS FIRED WATER HEATER - EXTERNAL STORAGE (GWH)
- GAS FIRED WATER HEATER - INTERNAL STORAGE (GWH)
- ELECTRIC WATER HEATER - INTERNAL STORAGE (EWH)
- GAS FIRED WATER HEATER - TANKLESS (GWH)
- WATER METER
- SEPARATOR/ INTERCEPTOR (SEE SCHEDULE FOR ABBREVIATION)
- RECIRCULATION PUMP
- EXPANSION TANK (ET)
- SUMP PUMP (SP)
- BACK WATER VALVE (BW)

PLUMBING FITTINGS:

- 45° ELBOW
- CAP
- 90° ELBOW
- ELBOW DOWN
- ELBOW UP
- TEE
- TEE DOWN
- TEE UP
- LATERAL
- UNION
- FLEXIBLE CONNECTION
- PIPE CONTINUATION
- CLEANOUT (CO)
- FLOOR CLEANOUT (FCO)
- WALL CLEANOUT (WCO)
- FLOOR SINK
- XX DRAIN
  - XX DENOTES THE FOLLOWING
  - (AD) AREA DRAIN
  - (FD) FLOOR DRAIN
  - (HD) HUB DRAIN
  - (RD) ROOF DRAIN

PLUMBING VALVES:

- SOLENOID VALVE
- MODULATING 2-WAY VALVE
- MODULATING 3-WAY VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- MIXING VALVE
- FLOAT OPERATED VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- SAFETY RELIEF VALVE
- DOUBLE CHECK VALVE ASSEMBLY
- RP REDUCED PRESSURE ZONE VALVE (RPZ)
- DUAL CHECK VALVE WITH INTERMEDIATE ATMOSPHERIC VENT

PLUMBING SPECIALTIES:

- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- PRESSURE GAUGE
- PS PRESSURE SWITCH
- THERMOMETER
- STRAINER, BLOW DOWN
- STRAINER
- EXPANSION LOOP
- EXPANSION JOINT
- WATER HAMMER ARRESTER
- AQUASTAT
- HOSE BIBB/ WALL HYDRANT
- TRAP PRIMER
- VB VACUUM BREAKER
- SPV SPILL PROOF VACUUM BREAKER

PIPE MATERIAL SCHEDULE

APPLICATION	LOCATION	SIZE	MATERIALS
SANITARY WASTE / VENT	BELOW GRADE	ALL	SCHEDULE 40 PVC, SOLID CORE. PVC SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. -OR- CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.
	ABOVE GRADE	ALL	SCHEDULE 40 PVC, SOLID CORE. -OR- CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.
	PLENUM RETURN	ALL	CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER. -OR- A MATERIAL THAT SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
	DISCHARGE ABOVE 120°F		CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.
	DISCHARGE WITH A PH BELOW 4 OR ABOVE 7		CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74 AND SHALL BE COATED INSIDE AND OUT WITH A SUITABLE EPOXY COATING. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.
WATER HEATER FLUE	ABOVE GRADE	ALL	DURAVENT POLYPROPYLENE OR AL29-4C
	PLENUM RETURN	ALL	PLENUM WRAPPED DURAVENT POLYPROPYLENE OR AL29-4C OR A MATERIAL THAT SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTME E 84 OR UL 723.
STORM	BELOW GRADE	ALL	SCHEDULE 40 PVC, SOLID CORE. PVC SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. -OR- CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.
	ABOVE GRADE	ALL	SCHEDULE 40 PVC, SOLID CORE. -OR- CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.
	PLENUM RETURN	ALL	CAST IRON PIPE CONFORMING TO REQUIREMENTS OF CISPI STANDARD 301, ASTM A888, OR ASTM A74. CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER. -OR- A MATERIAL THAT SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
T&P RELIEF	ALL	ALL	COPPER (TYPE M)
DOMESTIC WATER IN OR WITHIN 5' OF BUILDING	BELOW GRADE	ALL	COPPER (TYPE K) W/CORROSION RESISTANT TAPE
	ABOVE GRADE	ALL	COPPER (TYPE L OR K)
CONDENSATE	PLENUM RETURN	ALL	COPPER (TYPE M) OR A MATERIAL THAT SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTME E 84 OR UL 723.
	DUCTED RETURN	ALL	SCHEDULE 40 PVC, SOLID CORE
PUMP DISCHARGE/FORCE MAIN	ALL	ALL	SOLVENT CEMENTED SCHEDULE 40 PVC, SOLID CORE. PIPE SHALL BE SLOPED CONTINUOUSLY BACK TO PIT EVENLY, WITH NO LOW OR HIGH POINTS.
NOTES:	1. ALL PIPING MATERIAL AND JOINING METHODS CONTINGENT ON AUTHORITY HAVING JURISDICTION APPROVAL. 2. ALL ABS AND PVC PIPING EXPOSED TO SUNLIGHT SHALL BE PROTECTED BY WATER-BASED LATEX PAINT. 3. ALL BLACK STEEL PIPING EXPOSED TO MOISTURE SHALL BE PROTECTED BY RUST-PREVENTATIVE PAINT. 4. LEGEND PRESS OR PROPRESS FITTINGS ALLOWABLE PENDING AHJ APPROVAL.		

PIPE SYSTEM LINETYPES:

- PIPING OR EQUIPMENT TO BE REMOVED
- PIPING OR EQUIPMENT TO REMAIN
- IWP — INDIRECT WASTE PIPE (IWP)
- GRS — GREY WASTE (GRS)
- GR — GREASE WASTE (GR)
- CV — CLEAR WATER VENT (CV)
- AV — ACID VENT (AV)
- AW — ACID WASTE (AW)
- DT — SUB-SOIL DRAINAGE (DT)
- IRRG — IRRIGATION (IRRIG)
- GRW — GREY WATER (GRW)
- CA — COMPRESSED AIR (CA)
- CW(CITY) — CITY COLD WATER (CW(CITY))
- COLD WATER DOMESTIC (CW)
- CWR — COLD WATER RETURN (CWR)
- SCW — SOFT COLD WATER (SCW)
- GW — GARAGE WASTE (GW)
- HOT WATER DOMESTIC (HW)
- HOT WATER DOMESTIC RETURN (HWR)
- NG — NATURAL GAS (NG)
- NPCW — NON-POTABLE COLD WATER (NPCW)
- OV — OIL VENT (OV)
- PD — PUMP DISCHARGE (PD)
- PW — PURE WATER (PW)
- SAN — SANITARY (SAN)
- ST — STORM (ST)
- STO — STORM OVERFLOW (STO)
- UNDERGROUND PIPING
- V — VENT (V)

PLUMBING TAGS:

- MARK / X / X / NUMBER — PLUMBING EQUIPMENT TAG
- RISER / X / NUMBER — RISER TAG
- PIPE SIZE / ## XX / SYSTEM ABBREVIATION — PIPE DIMENSION TAG
- POINT OF NEW CONNECTION
- POINT OF DISCONNECTION
- VIEW NUMBER REFERENCE / X | X / SHEET NUMBER — REFERENCE TAG
- # KITCHEN EQUIPMENT TAG

GENERAL:

- ## DRAWING KEYNOTE SYMBOL
- DETAIL NUMBER / SHEET NUMBER — BUILDING SECTION
- DETAIL NUMBER / SHEET NUMBER — BUILDING ELEVATION
- DETAIL NUMBER / SHEET NUMBER — CALLOUT BOUNDARY
- DETAIL NUMBER / SHEET NUMBER — VIEW REFERENCE CALLOUT
- +X' - X" MOUNTING HEIGHT DESIGNATION

RENOVATION LEGEND:

(E)	EXISTING TO REMAIN
(ED)	EXISTING LOCATION, NEW DEVICE OR EQUIPMENT TO BE INSTALLED IN PLACE
(ER)	EXISTING TO BE RELOCATED
(EO)	EXISTING TO BE REMOVED
(EN)	EXISTING IN NEW LOCATION
(RAI)	REMAIN AS IS

PHASE 2 PLUMBING SCOPE OF WORK:

THE CONSTRUCTION OF THIS PROJECT IS PLANNED TO BE COMPLETED IN TWO PHASES. PHASE 1 WILL BE COMPLETED BY THE DEVELOPER (LINCOLN PROPERTIES), AND PHASE 2 WILL BE COMPLETED BY THE CITY OF IRVINE TO COMPLETE THE BUILDOUT. THE BUILDING IS NOT PLANNED TO RECIEVE A CERTIFICATE OF OCCUPANCY UNTIL PHASE 2 CONSTRUCTION IS COMPLETED. TITLE 24 DOCUMENTATION HAS BEEN DEFERRED AND PROVIDED IN THIS PHASE 2 PERMIT/CONSTRUCTION DOCUMENTATION PACKAGE. MECHANICAL AND PLUMBING EQUIPMENT T24 DOCUMENTATION PROVIDED IN THIS PHASE 2 PACKAGE ENCOMPASSES ALL PHASE 1 & PHASE 2 EQUIPMENT.

PHASE 2 PLUMBING SCOPE INCLUDES:

1. ALL UNDERGROUND PIPING FOR THE KITCHEN AREA WITHIN THE SLAB LEAVOUT.
2. GREASE INTERCEPTOR INSTALLATION.
3. INSTLLATION OF PHASE 2 PLUMBING FIXTURES AND CONNECTION TO EXISTING UNDERGROUND SANITARY AND OVERHEAD DOMESTIC WATER AS SHOWN IN THIS PLAN SET.
4. COMMISSIONING AND STARTUP OF ALL PLUMBING EQUIPMENT AND FIXTURES, PHASE 1 & PHASE 2.

PLUMBING ABBREVIATIONS:

AD	AREA DRAIN
BFP	BACKFLOW PREVENTER
BP	BOOSTER PUMP
BTU	BRITISH THERMAL UNIT
BTUH	BTU(S) PER HOUR
CO	CLEANOUT
CO2	CARBON DIOXIDE
CPVC	CHLORINATED PVC
CW	COLD WATER
CWR	COLD WATER RETURN
CWFU	COLD WATER FIXTURE UNITS
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DS	DOWNSPOUT
DW	DISH WASHER
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
EVAC	WASTE ANESTHETIC GAS DISPOSAL
EW	EMERGENCY EYE WASH
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FRS	FLUSHING RIM SINK
FS	FLOOR SINK
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
HB	HOSE BIBB
HD	HUB DRAIN
HS	HAND SINK
HW	HOT WATER
HWR	HOT WATER RETURN
HWFU	HOT WATER FIXTURE UNITS
IWP	INDIRECT WASTE PIPE
KS	KITCHEN SINK
KW	KILOWATT
LA	LAB AIR
LAV	LAVATORY
LV	LABATORY VACUUM
MB	MOP BASIN
MBH	BTU PER HOUR (THOUSAND
MV	MIXING VALVE
N	NITROGEN
NCP	NITROGEN CONTROL PANEL
ND	NOZZLE DRAIN
NG	NATURAL GAS
NO	NITROUS OXIDE
NPT	NATIONAL PIPE THREAD TAPERED
O	OXYGEN
PEX	CROSS LINKED POLYETHYLENE
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PSIG	PSI GAUGE
PVC	POLYVINYL CHLORIDE
PW	PURE WATER
RD	ROOF DRAIN
RDO	ROOF DRAIN OVERFLOW
RPM	REVOLUTIONS PER MINUTE
S	SINK
SD	SHOWER DRAIN
SE	SEWAGE EJECTOR
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
SP	SUMP PUMP
SPR	STANDPIPE RECEPTOR
SS	SERVICE SINK
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
UR	URINAL
VA	VACUUM
VTR	VENT THROUGH ROOF
W	WASTE PIPE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WS	WATER SOFTENER
YCO	YARD CLEANOUT

GENERAL ABBREVIATIONS:

A/E	ARCHITECT/ENGINEER
ABV	ABOVE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
APPROX	APPROXIMATELY
ARCH	ARCHITECT
AVG	AVERAGE
BFG	BELOW FINAL GRADE
BLDG	BUILDING
CLG	CEILING
DEG-F, °F	DEGREES FAHRENHEIT
DIR	DIRECT
DISC	DISCONNECT
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION REFERENCE
EM	EMERGENCY
EP	EXPLOSION PROOF
F	FLUSH
FBO	FURNISHED BY OTHERS
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FP	FIRE PROTECTION
FS	FLOW SWITCH
GC	GENERAL CONTRACTOR
GRD	GROUND
GYP	GYPSUM BOARD
HVAC	HEATING & VENTILATING - AIR CONDITIONING
HVC	HEATING VENTILATING CONTRACTOR
HW	HEAVYWALL
ID	INDIRECT
IE	INVERT ELEVATION
IL	INTERLOCK
IU	IN UNIT
J-BOX	JUNCTION BOX
LG	LAY-IN GRID
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LINE VOLTAGE THERMOSTAT
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PC	PLUMBING CONTRACTOR
PLBG	PLUMBING
RM	ROOM
RQD	REQUIRED
SF	SQUARE FEET
SPEC	SPECIFICATION(S)
SURF	SURFACE
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE

GENERAL NOTES:

1. THE FOLLOWING NOTES APPLY TO THE FULL SET OF PLUMBING DRAWINGS AND SPECIFICATIONS INCLUDING ADDENDA, CHANGE ORDERS, BULLETINS AND ARCHITECTURAL SUPPLEMENTARY INSTRUCTIONS.
2. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT AND LOCATION OF THE WORK. FURTHER DETAIL OF THE WORK THAT IS REQUIRED FOR A COMPLETE INSTALLATION, WHICH IS NOT SHOWN BECAUSE OF DRAWING SCALE, SHALL BE INCLUDED IN BASE BID.
3. FOR ADDITIONAL DETAILS, CONSULT THE ARCHITECTURAL DRAWINGS, OTHER ENGINEERING DRAWINGS, OWNER FURNISHED DRAWINGS AND OTHER OWNER FURNISHED DOCUMENTATION.
4. ALL PERMITS, LICENSES, APPROVALS AND OTHER ARRANGEMENTS FOR THE WORK SHALL BE INCLUDED WITH THE BASE BID. THIS INCLUDES PLAN REVIEW FEE FOR ALL BACKFLOW PREVENTERS.
5. TRADES AND OWNER-VENDORS SHALL BE RESPONSIBLE FOR COORDINATING PLUMBING WORK WITH THE WORK OF OTHER TRADES. PROVIDE OFFSETS TO ALL PIPING AS REQUIRED WHETHER SHOWN OR NOT.
6. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES. THESE CODES SHALL BE FOLLOWED AS A MINIMUM. HIGHER GRADES OF MATERIAL AND WORKMANSHIP SHALL BE PROVIDED WHERE REQUIRED.
7. PROVIDE HOLES, SLEEVES, FIRE STOPPING AND PATCHING FOR THE INSTALLATION OF THE PLUMBING WORK.
8. MANUFACTURER AND PRODUCT SELECTION: THE DRAWINGS AND SPECIFICATIONS INDICATE SIZES, PROFILES, AND DIMENSIONAL REQUIREMENTS OF MATERIAL AND SPECIFIC PRODUCTS. MANUFACTURERS OF PRODUCTS HAVING EQUIVALENT PERFORMANCE CHARACTERISTICS HAVE BEEN LISTED IN THE SPECIFICATION. THE USE OF ANY OF THESE EQUIVALENT PRODUCTS SHALL REQUIRE THAT THE TRADES AND OWNER-VENDORS IDENTIFY MODIFICATIONS TO ACCOMMODATE VARIATIONS IN CHARACTERISTICS, SUCH AS WEIGHTS, CONNECTIONS, SIZES, AND DIMENSIONS. THE RESPONSIBILITY FOR MODIFICATIONS TO MECHANICAL, STRUCTURAL, ELECTRICAL, OR OTHER PLUMBING SYSTEMS, OR TO ACCOMMODATE CODES SHALL BE WITH THE TRADES AND OWNER-VENDORS. COSTS RESULTING FROM THE USE OF THESE EQUIVALENT PRODUCTS SHALL BE INCLUDED WITH THE BASE BID.
9. RETURN AIR PLENUM IN USE FOR SOME AREAS, PIPING MUST BE PLENUM-RATED OR FIRE WRAPPED.
10. HW PIPING TO LAVATORIES AND HANDSINKS SHALL COMPLY WITH IECC SECTION C404.5 " EFFICIENT HEATED WATER SUPPLY PIPING".
11. PVC IS PROHIBITED TO BE INSTALLED WITHIN PLENUM SPACES.
12. BUILDING SEWER SYSTEM TO BE A MINIMUM OF 12" BELOW FINISH FLOOR.
13. VENT PIPING TO EXTEND THROUGH THE ROOF AND TERMINATE A MINIMUM OF 12" ABOVE ROOF.

PLUMBING EXECUTION:

1. PROVIDE ISOLATION VALVES ON ALL CW/HW BRANCHES AND AT THE BASE OF ALL RISERS WHETHER SHOWN OR NOT.
2. PROVIDE BALANCING VALVES ON ALL HWR BRANCHES AND ON MAIN WHETHER SHOWN OR NOT.
3. PROVIDE SWING JOINTS ON ALL SUPPLY BRANCHES. TOP OR BOTTOM PIPE CONNECTIONS ARE AT THE PLUMBING CONTRACTOR'S DISCRETION.
4. UNLESS NOTED OTHERWISE, HWR PIPES SHALL BE ½" AND BALANCING VALVES SHALL BE SET TO 1/4 GPM.
5. UNLESS NOTED OTHERWISE, HOT WATER RETURN (HWR) SHALL BE PROVIDED TO WITHIN 2' OF HANDWASHING SINKS AND LAVATORIES. PROVIDE IECC TABLE C404.5.1 COMPLIANT HWR TO ALL OTHER FIXTURES AND APPLIANCES.
6. A STACK IS REFERRED TO AS WASTE PIPE UP/DN. OR VENT PIPE UP/DN. SIMILARLY, A VERTICAL STORM DRAIN IS REFERRED TO AS STORM UP/DN. A SUPPLY RISER IS REFERRED TO AS CW UP/DN., HW UP/DN. OR HWR UP/DN.
7. PLAN VIEWS GENERALLY SHOW PIPING ABOVE CEILINGS OR BELOW LOWEST FLOOR. SEE RISER DIAGRAMS FOR CLARITY OF HORIZONTAL PIPING AT OTHER ELEVATIONS.
8. SEE MINIMUM FIXTURE CONNECTION SCHEDULE FOR WASTE, VENT AND SUPPLY PIPE SIZES AND FOR FIXTURE UNITS.
9. SEE WATER HAMMER ARRESTERS SECTION IN THE SPECIFICATION FOR REQUIRED SIZE, MODEL, AND LOCATION OF WATER HAMMER ARRESTERS.
10. PITCH STORM DRAINS 1/8" PER FOOT UNLESS NOTED OTHERWISE.
11. UNLESS NOTED OTHERWISE, ALL WASTE PIPES 2" OR SMALLER SHALL BE PITCHED AT A MINIMUM ¼" PER FOOT, ALL 3" WASTE PIPES FOR WATER CLOSETS SHALL BE PITCHED AT A MINIMUM ¼" PER FOOT, AND ALL OTHER WASTE PIPES 3" OR LARGER SHALL BE PITCHED AT MINIMUM 1/8" PER FOOT.
12. VENTS MUST CONNECT TO EACH OTHER AT A MINIMUM OF 38 INCHES ABOVE FLOOR.
13. PROVIDE THERMOSTATIC MIXING VALVES (TMV) ON ALL PUBLIC LAVATORIES, PUBLIC SINKS, AND PUBLIC SHOWERS.

DESIGN CRITERIA:

APPLICABLE CODES / STANDARDS AS AMENDED BY AUTHORITY HAVING JURISDICTION

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA ELECTRIC CODE
- 2022 CALIFORNIA ENERGY CODE
- 2022 CALIFORNIA FIRE CODE

PLUMBING SHEET INDEX

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PT000	PLUMBING LEGEND
PT001	PLUMBING SPECIFICATIONS
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PT400	PLUMBING SCHEDULES AND DETAILS
PT500	T24 COMPLIANCE DOCS

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PLUMBING LEGEND

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/06/2026	PLAN CHECK CORRECTIONS 3
5	01/26/2025	OC HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
	03/30/2026	OC HEALTH DEPT 2

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

SHEET

PT000

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PLUMBING AND FIRE PROTECTION

1 GENERAL REQUIREMENTS

1.1 RELATED DOCUMENTS
1.1.1 DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATIONS IF APPLICABLE, APPLY TO WORK SPECIFIED HEREIN.

1.2 GENERAL
1.2.1 CONTRACTOR SHALL PROVIDE A COMPLETE OPERATING SYSTEM IN ACCORDANCE WITH DRAWINGS AND OTHER CONSTRUCTION DOCUMENTS. ALL NECESSARY EQUIPMENT, LABOR AND MATERIALS NOT SPECIFICALLY INDICATED OR SPECIFIED, BUT NECESSARY TO COMPLETE THE WORK, SHALL BE PROVIDED AS PART OF THE WORK.
1.2.2 CONTRACTOR SHALL COOPERATE WITH THE OTHER CONTRACTORS SO THAT CONSTRUCTION MAY PROCEED WITHOUT HINDRANCE. CONFER WITH OTHER CONTRACTORS REGARDING ANY WORK THAT MAY AFFECT THIS WORK AND ARRANGE SCHEDULE SO THAT COMPONENTS SHALL BE INSTALLED IN A NATURAL SEQUENCE.
1.2.3 PIPING SHOWN ON PLAN VIEWS SHALL BE INSTALLED ABOVE FINISHED CEILINGS OF ROOMS SHOWN UNLESS OTHERWISE SPECIFIED. IN MECHANICAL SPACES AND SIMILAR UNFINISHED AREAS, INSTALL PIPES AS HIGH AS POSSIBLE UNLESS OTHERWISE SPECIFIED.
1.2.4 PIPES ON FOUNDATION PLUMPING PLANS SHALL BE INSTALLED BELOW FINISHED FLOOR OF ROOMS SHOWN UNLESS OTHERWISE SPECIFIED.
1.2.5 PIPING INSTALLED AT SPECIFIED PITCH SHALL GENERALLY TAKE PRECEDENCE OF OTHER PIPING.
1.2.6 OPERATION OF DOORS, WINDOWS, LIGHTING, OWNER'S EQUIPMENT OR FIXTURES SHALL NOT BE HINDERED BY POSITION OF PIPING.

1.3 QUALITY ASSURANCE
1.3.1 SECURE PERMITS AND PAY PERMIT FEES AS REQUIRED FOR PLUMBING, FIRE PROTECTION, UTILITIES AND ALL AUTHORITIES HAVING JURISDICTION.
1.3.2 CONFIRM ELECTRICAL VOLTAGES, PHASE AND OTHER CHARACTERISTICS. DO NOT ORDER MOTORS, MOTOR CONTROLLERS AND OTHER EQUIPMENT WITH LINE VOLTAGE CONNECTIONS UNTIL ELECTRICAL CHARACTERISTICS ARE VERIFIED.
1.3.3 INSTALLER SHALL HAVE MINIMUM OF FIVE YEARS OF EXPERIENCE WITH ITS NATURE AND SIZE OF WORK SIMILAR TO AS SHOWN HEREIN.
1.3.4 SANITIZE DOMESTIC WATER SUPPLY PIPING AND PRESSURE-TEST PLUMBING PIPING PRIOR TO INSTALLING FIXTURES, EQUIPMENT AND INSULATION.
1.3.5 EXAMINE INSTALLATION FOR WORKMANSHIP, IDENTITY, LABELS AND FUNCTION. CORRECT DEFECTS PRIOR TO SUBSTANTIAL COMPLETION.
1.3.6 FURNISH TEST RESULTS TO AUTHORITIES HAVING JURISDICTION.

1.4 SUBSTITUTION OF EQUIPMENT
1.4.1 THE DRAWINGS AND SPECIFICATIONS INDICATE SIZES, PROFILES, AND DIMENSIONAL REQUIREMENTS OF SPECIFIC PRODUCTS AND MATERIAL. PRODUCTS AND MATERIAL HAVING EQUAL PERFORMANCE CHARACTERISTICS MAY BE REVIEWED BY THE ENGINEER FOR CONSIDERATION. HOWEVER, THE USE OF THESE PRODUCTS OR MATERIALS SHALL REQUIRE THE CONTRACTOR TO CONSIDER ALL MODIFICATIONS TO ACCOMMODATE VARIATIONS IN WEIGHTS, CONNECTIONS, SIZES, AND SIMILAR PARAMETERS AS COMPARED TO THE PRODUCTS SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS OF OTHER MECHANICAL, STRUCTURAL, ELECTRICAL, AND PLUMBING SYSTEMS REQUIRED TO ACCOMMODATE SUCH PRODUCTS AND MATERIALS.

1.5 JOB CONDITIONS
1.5.1 PROVIDE WORK INCLUDING COORDINATION WITH OTHER TRADES, CUTTING AND PATCHING, CHANGE ORDERS AND OTHER PROJECT CHANGES. EXISTING CONDITIONS HAVE BEEN SHOWN BASED ON AVAILABLE RECORDS AND FIELD WORK BUT ARE NOT IMPLIED TO BE COMPLETE, CORRECT OR REPRESENTATIVE OF THOSE ACTUALLY EXISTING. CONTRACTOR SHALL MAKE FIELD OBSERVATIONS DURING BIDDING PERIOD AND REPORT ERRORS, INCONSISTENCIES AND OMISSIONS IN DRAWINGS.
1.5.2 VERIFY THAT WORK MAY BE INSTALLED IN COMPLIANCE WITH THE DESIGN INTENT.
1.5.3 THEREAFTER, CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DEFICIENCIES, ERRORS, INCONSISTENCIES AND OMISSIONS IN THE CONSTRUCTION DOCUMENTS THAT THEY RECOGNIZED BUT KNOWINGLY FAILED TO REPORT TO THE ARCHITECT. DEFICIENCIES MAY INCLUDE OFFSETTING EXISTING PLUMBING OR OTHER WORK.
1.5.4 CONTRACTOR SHALL REPORT TO ARCHITECT DEFECTIVE EXISTING PLUMBING WITHIN OR NEAR THE LIMITS OF CONSTRUCTION INCLUDING LEAKS, DAMAGED SUPPORTS AND PIPE INSULATION, AND CROSS CONNECTIONS AND OTHER PUBLIC HEALTH HAZARDS.

1.6 DEMOLITION
1.6.1 DEMOLISH EQUIPMENT, FIXTURES, PIPING, AND SUPPORT HARDWARE AS INDICATED ON DRAWINGS WITHIN LIMITS OF CONTRACT OR AS REQUIRED TO COMPLETE WORK.
1.6.2 MAINTAIN THE CONDITION OF WORK NOT REMOVED OR DESIGNATED AS SALVAGEABLE.
1.6.3 DISPOSE ALL MATERIAL OFF SITE UNLESS OTHERWISE INSTRUCTED.
1.6.4 MINIMIZE LENGTHS OF DEAD ENDS WHEN CAPPING REMOVED SUPPLY AND DRAIN BRANCHES.
1.6.5 NOTE PIPING THAT IS DISCONNECTED AND ABANDONED ON RECORD DRAWINGS.

1.7 SUPERVISION
1.7.1 ONTRACTOR SHALL HAVE A FULL-TIME EXPERIENCED SUPERVISOR IN THE FIELD FOR THE DURATION OF THE WORK.

1.8 SUBMITTALS
1.8.1 SUBMIT PRODUCT DOCUMENTATION AND WARRANTY TO ARCHITECT FOR REVIEW.
1.8.2 DOCUMENTATION SHALL INCLUDE PRODUCT SIZES, CAPACITIES, DIMENSIONS, STANDARDS, PRODUCT MODEL NUMBERS AND OTHER INFORMATION TO IDENTIFY CONFORMANCE WITH BIDDING DOCUMENTS AND CHANGE ORDERS FOR MATERIAL INCLUDING PIPING, FIXTURES, EQUIPMENT, APPURTENANCES, PENETRATION MATERIAL, SUPPORTS AND RELATED PRODUCTS.
1.8.3 SUBMIT O&M MANUALS, TEST RESULTS, VALVE SCHEDULE, RECORD (AS-BUILT) DRAWINGS AND APPROVED SHOP DRAWINGS TO ARCHITECT AT PROJECT CLOSURE.
1.8.4 MAINTENANCE
1.8.4.1 FURNISH A SET OF THE FOLLOWING SPARE PARTS TO THE OWNER AT THE CLOSE OF THE PROJECT:
1.8.4.1.1 FAUCET RENEWABLE PARTS: FOR EACH TYPE FURNISHED IN THE WORK, FURNISH A SPARE SET.
1.8.4.1.2 SET OF BATTERIES FOR SENSOR FAUCETS.
1.8.4.2 LABEL EACH PACKAGE OF SPARES TO INDICATE WHICH EQUIPMENT ITEM IS USED ON.
1.8.4.3 PROVIDE ADDRESS AND OTHER INFORMATION TO RENEW SUPPLY OF SPARES.
1.8.4.4 A SET SHALL MEAN THE QUANTITY USED ON THAT EQUIPMENT.
1.8.5 RECORD (AS-BUILT) DRAWINGS: MAINTAIN UP-TO-DATE RECORD DRAWINGS ON-SITE AT ALL TIMES INCLUDING ABANDON PIPING AND OTHER RELEVANT ORIGINAL CONDITIONS COVERED BY FINISHES.

1.9 WARRANTIES
1.9.1 ADJUST, REPAIR OR REPLACE ITS WORK THAT FAILS IN MATERIAL OR WORKMANSHIP WITHIN THE SPECIFIED WARRANTY PERIOD
1.9.2 WARRANTY PERIOD SHALL BE ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION OF WORK. WARRANTY PERIOD SHALL BE LONGER WHERE INDICATED.

2 BASIC MATERIALS

2.1 ACCESS PANELS
2.1.1 INLAND STEEL PRODUCTS MILCOR, 18X18 INCH MINIMUM, CAM LOCK WITH SCREWDRIVER. SPECIFIC PRODUCT SHALL MATCH MANUFACTURER'S RECOMMENDATIONS FOR WALL AND CEILING TYPES.
2.1.2 UL LISTED FOR FIRE-RATED WALLS AND CEILINGS
2.1.3 INSTALL FOR ACCESS TO VALVES, CLEANOUTS AND OTHER AREAS REQUIRING PERIODIC ACCESS.

2.2 ELECTRICAL COORDINATION
2.2.1 CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING LOW VOLTAGE WIRING AND CONNECTIONS FOR EQUIPMENT INCLUDED IN THIS DIVISION.

2.3 HANGERS AND SUPPORT
2.3.1 PAINTED, GALVANIZED OR SIMILARLY PROTECTED STEEL PRODUCT COMPLYING WITH SIZES, SPACING AND INSTALLATION IN CONFORMANCE WITH MSS SP 58 AND RELATED DOCUMENTS.
2.3.2 AT ROD SUPPORT, PROVIDE SWIVEL-TYPE OR SIMILAR JOINT AND LISTED ANCHOR.
2.3.3 PROVIDE SADDLE BENEATH INSULATED PIPE. DO NOT DIRECTLY SUPPORT PIPE.
2.3.4 PROVIDE COPPER-PLATED SUPPORT OF BARE COPPER PIPE.

2.4 HOUSEKEEPING PADS
2.4.1 CONCRETE PAD, 3-1/2" HIGH, BELOW ALL FLOOR-SUPPORTED EQUIPMENT TO ADJACENT WALLS OR 6 INCHES FROM EQUIPMENT EDGE.

2.5 IDENTIFICATION
2.5.1 ANSI A31.1 COMPLYING PIPE LABELS; BRASS VALVE TAGS AND VALVE SCHEDULE FOR VALVE NUMBERING

2.6 PIPE PENETRATIONS
2.6.1 FIRE-SEALING
2.6.1.1 LISTED BY AN APPROVED AGENCY
2.6.1.2 HILTI, 3M, RECTOSEAL
2.6.2 SLEEVING AND CORING
2.6.2.1 COORDINATE SLEEVING AND CORING WITH OTHER CONTRACTORS
2.6.2.2 ONE-INCH LARGER THAN PIPE OUTSIDE DIAMETER OR PIPE JACKET OUTSIDE DIAMETER
2.6.2.3 SLEEVE MATERIAL: STEEL WITH ANCHORING FLANGE, PROTRUDE ABOVE FLOOR OR FROM WALL BY 1-INCH
2.6.3 SEAL AT EXTERIOR INCLUDING AGAINST SOIL
2.6.3.1 THUNDERLINE LINK-SEAL MODEL C
2.6.4 ESCUTCHEONS
2.6.4.1 METAL AND CHROME-PLATED
2.6.4.2 COVER PENETRATION SLEEVE OR OPENING AND SNUG AROUND PIPE OR PIPE JACKET
2.6.4.3 FURNISH FOR ALL PIPES PASSING THROUGH FINISHED SPACES

2.7 MOTOR CONTROL
2.7.1 MANUAL TYPE (HALF HP OR LESS); ALLEN BRADLEY BULLETIN 600 COMPLETE WITH ENCLOSURE, PILOT LIGHT, OVER-CURRENT PROTECTION AND LOCK-OUT PROVISIONS. MATCH HEATER ELEMENT TO MOTOR REQUIREMENT.

3 FIRE SPRINKLER SYSTEM

3.1 GENERAL
3.1.1 PROVIDE A FULLY SPRINKLERED BUILDING IN ACCORDANCE WITH REQUIREMENTS, REGULATORY STANDARDS AND THE AUTHORITY HAVING JURISDICTION.
3.1.2 PROVIDE ENGINEERING DESIGN SERVICES WITH INSTALLATION AS A DESIGN-BUILD CONTRACT. THE SPRINKLER CONTRACTOR SHALL BE THE ENGINEER-OF-RECORD.
3.1.3 VERIFY ADEQUACY OF AVAILABLE WATER SUPPLY.

3.2 CODES AND STANDARDS
3.2.1 CALIFORNIA BUILDING CODE 2022
3.2.2 NFPA 13
3.2.3 ASSE 1015

3.3 PIPING
3.3.1 THREADED STEEL BLACK PIPE FOR 2" OR SMALLER: SCHEDULE 40, ASTM A53, A135 OR A795
3.3.2 2-1/2" OR LARGER: ROLL-GROOVED STEEL, SCHEDULE 10 OR LISTED SIMILAR MATERIAL.
3.3.3 FITTINGS: LISTED FOR 175 PSI
3.3.4 VALVES: LISTED-INDICATING AND SUPERVISED ON WATER SUPPLY

3.4 SPRINKLERS
3.4.1 FINISHED SPACES: LISTED QUICK-RESPONSE PENDANT WITH SEMI-RECESSED ESCUTCHEON, FACTORY-PAINTED WHITE FINISH
3.4.2 UNFINISHED SPACES: EXPOSED, QUICK-RESPONSE BRASS UPRIGHT

3.5 TESTING
3.5.1 PROVIDE TESTING IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION, THE ARCHITECT OR THE ARCHITECT'S REPRESENTATIVE.
3.5.1.1 FLUSH WATER SERVICE OF ALL DEBRIS
3.5.1.2 PRESSURE TEST ALL PIPING
3.5.1.3 TEST ALARMING COMPONENTS
3.5.1.4 BACKFLOW PREVENTER FORWARD-FLOW TEST

4 PLUMBING

4.1 CODES AND STANDARDS
4.1.1 STATE OF CALIFONIA, CALIFORNIA PLUMBING CODE 2022
4.1.2 ANSI A117.1 ACCESSIBILITY, ADA GUIDELINES
4.1.3 ASHRAE 90.1 ENERGY CONSERVATION IN NEW BUILDING DESIGN
4.1.4 MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, INC. (MSS)
4.1.5 LEAD-FREE REQUIREMENT: ALL MATERIALS IN CONTACT WITH POTABLE WATER, INCLUDING SOLDER JOINTS, FAUCETS, SUPPLIES, FITTINGS, GENERAL AND SPECIALTY VALVES, WATER TREATMENT DEVICES AND PUMP MATERIALS, SHALL BE LEAD-FREE IN CONFORMANCE WITH FEDERAL REGULATIONS. THE LEAD-FREE DESIGNATION SHALL BE INDICATED ON MATERIAL BY INDELIBLE MEANS.

4.2 EQUIPMENT CONNECTIONS
4.2.1 CONNECT WATER AND INDIRECT WASTE PIPES TO MEDICAL, FIRE SPRINKLER, VENDING, ICE, BEVERAGE, HVAC AND LAUNDRY EQUIPMENT AS REQUIRED.
4.2.2 LOCATE FLOOR DRAINS AND INDIRECT WASTE RECEPTORS AS REQUIRED FOR EQUIPMENT AS REQUIRED.
4.2.3 PROVIDE WATER CONNECTION THROUGH APPROVED CROSS CONNECTION CONTROLS. VERIFY WHETHER APPROVED AIR GAPS OR VACUUM BREAKERS ARE PROVIDED WITHIN EQUIPMENT. IF REQUIRED, PROVIDE CODE-REQUIRED BACKFLOW PREVENTERS.

4.3 PIPING
4.3.1 STORM / SANITARY DRAIN AND VENT: HUBLESS CAST IRON PIPE AND FITTINGS: LATEST EDITION OF ASTM A888 WITH SLEEVE GASKET JOINTS ASTM C564, AND COUPLINGS C1540. PVC ASTM D1785 SCHEDULE 40
4.3.2 WATER SUPPLY: COPPER ASTM B88, TYPE L HARD DRAWN COPPER, WITH WROUGHT COPPER SOLDER JOINT FITTINGS, ANSI B16.22, OR CAST BRONZE SOLDER JOINT FITTINGS; ANSI B16.18.
4.3.2.1 SOLDER JOINTS: ASTM B32 95/5 TIN-ANTIMONY SOLDER AND NSF-APPROVED FLUX FOR DOMESTIC WATER PIPING. SOLDER SHALL BE LEAD FREE FOR DOMESTIC WATER PIPING, MEANING A CHEMICAL COMPOSITION OF 0.2 PERCENT LEAD OR LESS. JOINING METHOD SHALL COMPLY WITH ASTM B828.
4.3.2.2 ALTERNATIVE COPPER PRESS FITTINGS: HYDRAULICALLY PRESSED IN ACCORDANCE WITH INSTRUCTIONS OF VIEGA OR RIDGE TOOL CO.
4.3.3 NATURAL GAS
4.3.3.1 THREADED STEEL BLACK PIPE SCHEDULE 40, ASTM A53
4.3.3.2 ALTERNATIVE GASTITE OR TRACPIPE, CSA INTERNATIONAL AND ANSI LC1 COMPLYING
4.3.4 VALVES
4.3.4.1 BALL VALVES: NIBCO T-580-70-EL-LF: TWO PIECE, END ENTRY, CONVENTIONAL PORT, BRONZE THREADED, 600 PSIG AT 150° F, 150 PSIG AT 350° F.
4.3.4.2 CHECK VALVES: NIBCO T433-Y, HORIZONTAL SWING, ANSI CLASS 150, 300 PSIG AT 150° F, 150 PSIG AT 350° F.
4.3.4.3 BALANCING VALVES: BELL & GOSSETT MODELS CB AND RF, CIRCUIT SETTER.
4.3.4.4 GAS: NIBCO 585-70-UL
4.3.4.5 EFFLUENT VALVES: TRUE UNION BALL VALVE, PVC BODY; NON-SLAM CHECK VALVE; GEORGE FISHER SIGNET.

4.4 PIPE INSULATION
4.4.1 OWENS-CORNING FIBERGLAS SSL-II PIPE INSULATION WITH ALL-SERVICE VAPOR BARRIER JACKETING SEALED BY ADHESIVE LAP-JOINTS. MASTIC OR PVC COVERS ON ALL FITTINGS.
4.4.1.1 HOT WATER: <1" WILL BE COVERED WITH 1" INSULATION
HOT WATER: >1" TO 1.5" WILL BE COVERED WITH 1.5" INSULATION
HOT WATER: >2" WILL BE COVERED WITH 2" INSULATION
HOT WATER REPRESENTATIVE: 1" THICK
4.4.1.2 COLD WATER: 1" THICK
4.4.1.3 HORIZONTAL STORM PIPES AND ROOF DRAIN BODIES: 1" THICK
4.4.2 PIPE WRAP FOR PLENUM SPACES
4.4.2.1 PROVIDE MATERIAL MEETING UL 910 FLAMMABILITY TEST.
4.4.2.2 PROVIDE 3M FIRE BARRIER PLENUM WRAP 5A OR REVIEWED EQUIVALENT.

4.5 PLUMBING SPECIALTIES
4.5.1 AIR VENT
4.5.1.1 BRASS BODY, NON-FERROUS INTERNAL WORKING PARTS, FLOAT TYPE; AMTROL
4.5.2 CENTRAL MIXING VALVE
4.5.2.1 PROVIDE SIZE AND CAPACITY AS SCHEDULED.
4.5.2.2 THERMOSTATIC, ASSE 1017 COMPLYING, CAPACITY AS SCHEDULED AND MINIMUM FLOW RATING NOT LESS THAN 2 GPM, CAST BRASS BODY.
4.5.3 CROSS-CONNECTION CONTROL
4.5.3.1 AIR GAPS
4.5.3.2 REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER, ASSE 1013
4.5.3.3 ASSE COMPLYING VACUUM BREAKERS
4.5.4 EXPANSION TANK
4.5.4.1 PROVIDE SIZE AND CAPACITY AS SCHEDULED.
4.5.4.2 PRE-CHARGED STEEL THERMAL EXPANSION TANK WITH BUTYL DIAPHRAGM, WELDED CARBON STEEL CONSTRUCTION, THREADED WATER CONNECTION;
4.5.5 THERMOMETER
4.5.5.1 BI-METAL, DIAL TYPE, 5" DIAL
4.5.6 TRAP PRIMERS
4.5.6.1 ASSE 1018 COMPLYING, 125 PSI RATING, WATTS A200, WATTS T20 WITH D20
4.5.6.2 LOCATE ON LAVATORY BRANCH LINE CLOSE TO ANGLE SUPPLY
4.5.6.3 PROVIDE ACCESS PANEL
4.5.7 WATER HAMMER ARRESTORS
4.5.7.1 ASSE 1010 OR ANSI A112.26.1 COMPLYING, J.R. SMITH 5000 SERIES, SIZE AS RECOMMENDED BY MANUFACTURER
4.5.7.2 LOCATE ON BRANCH LINE BETWEEN LAST TWO FIXTURES

4.6 DRAINAGE MATERIAL
4.6.1 FURNISH WITH TRAP AND VENT.
4.6.2 SET RIM OF FLOOR DRAINS AND FLOOR SINKS FLUSH WITH FLOOR
4.6.3 CLEANOUTS
4.6.3.1 FURNISH FLOOR CLEANOUT WITH NICKEL BRONZE CAP AND RIM, J.R. SMITH 4021.
4.6.3.2 FURNISH WALL CLEANOUT WITH STAINLESS STEEL COVER, J.R. SMITH 4422.
4.6.3.3 FURNISH YARD CLEANOUT WITH FROST SLEEVE, J.R. SMITH 4250.
4.6.4 FLOOR DRAINS AND FLOOR SINKS
4.6.4.1 PROVIDE FLOOR SAFING.
4.6.4.2 SEE FIXTURE SCHEDULE FOR DRAIN PIPE SIZE.
4.6.4.3 FURNISH FLOOR DRAIN WITH ADJUSTABLE TOP, FLASHING COLLAR, CAST IRON BODY AND NICKEL BRONZE RIM AND STRAINER, J.R. SMITH 2005-A.
4.6.4.4 FURNISH HEAVY-DUTY FLOOR DRAIN WITH FLASHING COLLAR, CAST IRON BODY AND TRACTOR GRATE, J.R. SMITH 2120-Y.
4.6.4.5 FURNISH FLOOR SINK WITH FLASHING COLLAR, CAST IRON BODY, INTERIOR ENAMEL COATING, ALUMINUM DOME BOTTOM STRAINER AND NICKEL BRONZE TOP STRAINER WITH CENTER HOLE, J.R. SMITH 3020Y-C-14
4.6.5 ROOF DRAINS
4.6.5.1 FURNISH GENERAL PURPOSE ROOF DRAIN WITH FLASHING RING, GRAVEL STOP, UNDERDECK CLAMP, CAST IRON DOME AND SUMP RECEIVER, J.R. SMITH 1010-C-R-CID.
4.6.5.2 FURNISH STAINLESS STEEL MESH IF BALLAST SIZE IS LESS THAN OPENINGS IN DOME.
4.6.6 STANDPIPE RECEPTORS
4.6.6.1 SEE FIXTURE SCHEDULE FOR DRAIN PIPE SIZE AND HEIGHT.
4.6.6.2 LOCATE SMALL RECEPTORS BENEATH COUNTERS NEAR OTHER FIXTURES.

4.7 WATER CIRCULATION PUMP
4.7.1 PROVIDE SIZE AND CAPACITY AS SCHEDULED.
4.7.2 IN-LINE, WET ROTOR, ISOLATED STATOR THROUGH STAINLESS STEEL CAN, LEAD-FREE BRONZE BODY, POLYPROPYLENE IMPELLER, CERAMIC SHAFT, CARBON BEARINGS, WATER LUBRICATED, RATED FOR 150 PSIG WORKING PRESSURE. BUILT-IN MOTOR OVERLOAD PROTECTION.

4.8 WATER HEATER
4.8.1 NATURAL GAS, SEALED-COMBUSTION AUTOMATIC STORAGE TYPE.
4.8.2 QUANTITY, STORAGE VOLUME, RECOVERY AND ENERGY INPUT AS SCHEDULED.
4.8.3 MINIMUM FIVE YEAR WARRANTY, LABOR AND MATERIAL INCLUDING TANK.
4.8.4 ASHRAE 90.1, ANSI Z21.22 AND STATE OF WISCONSIN COMMERCE 84 COMPLYING FOR CONDENSING SEALED- COMBUSTION INCLUDING UL LISTING, T&P VALVE RATING, GLASS TANK LINING AND COMBUSTION LINING, HEATER CONTROL, ANODE RODS, EFFICIENCY RATING, PRESSURE VESSEL RATING AND DIRECT VENT PIPING. INSTALL WATER HEATERS AS DETAILED ON DRAWINGS INCLUDING VALVING, TEMPERATURE MAINTENANCE SYSTEM, MIXING VALVE, HEAT TRAPS, WATER EXPANSION CONTROL, VENTS AND NATURAL GAS CONNECTIONS.

4.9 SUMP PUMPS AND SEWAGE EJECTORS
4.9.1 PROVIDE SIZE AND CAPACITY AS SCHEDULED. PROVIDE DIAMETER, DEPTH AND RIM ELEVATION AS INDICATED ON DRAWINGS
4.9.2 SUBMERSIBLE PUMP AND MOTOR WITH CAST IRON BODY, MECHANICAL SHAFT SEAL, STAINLESS STEEL FASTENERS
4.9.3 FIBERGLASS BASIN AND COVER WITH NOT LESS THAN ¼-INCH WALL THICKNESS, COLLAR AT BASE, STAINLESS STEEL FASTENERS (AIR-TIGHT COVER GASKET AND PENETRATION SEALS ON SEWAGE EJECTORS) FURNISH PERFORATED STEEL COVER IN ELEVATOR PITS.
4.9.4 AUTOMATIC CONTROL WITH NEMA 6 FLOAT SWITCHES, SJOW/A JACKETED CABLES, NEMA 6 JUNCTION BOXES
4.9.5 HIGH-WATER ALARM WITH AUDIO-ALARM SILENCING SWITCH AND DRY AUXILIARY CONTACTS FOR REMOTE ALARM

4.10 PLUMBING FIXTURES
4.10.1 PROVIDE PRODUCTS IN COMPLIANCE WITH ADA GUIDELINES WHERE REQUIRED, INCLUDING COMPLYING FAUCETS AND FLUSH LEVERS, TRAP AND SUPPLY WRAPS, KNEE SPACES, RIM HEIGHTS, FLUSH HANDLE LOCATIONS AND OTHER DIMENSIONAL REQUIREMENTS.

4.11 TESTING
4.11.1 ALL TESTS SHALL BE MADE IN THE PRESENCE AND SATISFACTION OF THE ARCHITECTS REPRESENTATIVE OR OWNER AND THE LOCAL PLUMBING INSPECTOR.
4.11.2 NATURAL GAS PIPING: TEST TO A PRESSURE OF 50 PSI IN ACCORDANCE WITH THE ESTABLISHED POLICIES OF THE LOCAL GAS COMPANY.
4.11.3 WATER PIPING: TEST TO A PRESSURE OF 150 PSI.
4.11.4 HOT WATER: VERIFY DELIVERY OF HOT WATER WITHIN 10 SECONDS FROM MOST REMOTE FIXTURE.
4.11.5 STORM, SANITARY WASTE AND VENT: INITIALLY TEST PIPING IN SECTIONS OR IN ITS ENTIRETY, APPLY PRESSURE EQUIVALENT TO NOT LESS THAN 10 FEET OF WATER, AND VERIFY LEAK-TIGHT AFTER 15-MINUTE DWELL TIME. FINALLY TEST WASTE AND VENT WITH SMOKE OR AIR AT NOT LESS THAN 1-INCH WATER COLUMN.

END OF SECTION

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PLUMBING SPECIFICATIONS

	DATE	REMARKS
	07/09/2025	ISSUE FOR PLAN CHECK
1	09/22/2025	PLAN CHECK CORRECTIONS
2	10/15/2025	PLAN CHECK CORRECTIONS 2
3	01/14/2026	PLAN CHECK CORRECTIONS 3
4	01/26/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

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JOB NO.:	LAX21-0174-02

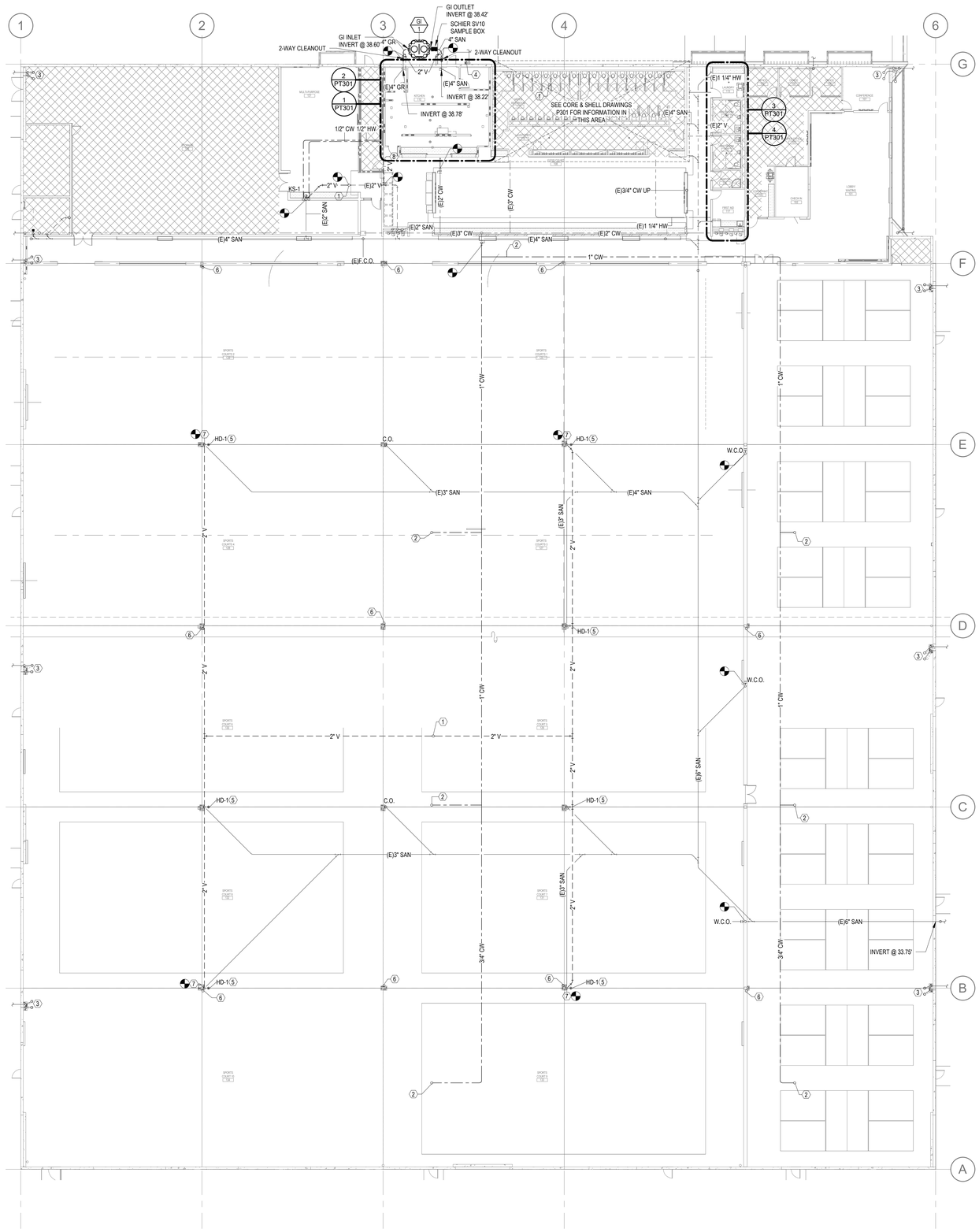
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PT001

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1 TI PLUMBING FLOOR PLAN
1/16" = 1'-0"

N

GENERAL NOTES:

1. REFERENCE PT000 FOR ADDITIONAL PROJECT PLUMBING NOTES, SYMBOLS AND ABBREVIATIONS.
2. ALL PIPING SHOWN LIGHT IS EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL USE EXTREME CAUTION WHEN INSTALLING SANITARY WASTE PIPING BELOW SLAB TO MAINTAIN SLOPE AND ENSURE NO SWALES OCCUR IN PIPE.
4. ALL EXISTING SANITARY AND VENT PIPING WHICH HAS BEEN DISCONNECTED AND IS NOT BEING CONNECTED TO NEW PIPING SHALL BE CAPPED/PLUGGED BELOW SLAB OR BEHIND WALL.
5. REFERENCE RISER DIAGRAMS FOR ADDITIONAL INFORMATION.
6. ASSE 1010 WATER HAMMER ARRESTORS SHALL BE INSTALLED AT ALL QUICKCLOSING VALVES.
7. REFER TO PLUMBING FIXTURE SCHEDULE FOR ALL FIXTURE BRANCH PIPING SIZES.
8. ROUTE NEW CW PIPING MAINS FROM EXISTING TIGHT TO BOTTOM OF JOISTS. COORDINATE WITH EXISTING CONDITIONS INCLUDING ALL DROP LOCATIONS TO NEW FIXTURES.
9. ALL VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILING. IF REQUIRED, COORDINATE ACCESS PANEL SIZES AND LOCATIONS WITH ARCHITECT REQUIRED TO ACCESS ANY HIDDEN SHUT-OFF VALVES AND WATER HAMMER ARRESTORS.
10. ALL SANITARY PIPES 4" OR GREATER IN DIAMETER SHALL BE SLOPED AT 1/8" PER LF.

 # KEYNOTES

1 2" VENT UP TO 3' VENT THRU ROOF.
2 3/4" COLD WATER UP TO RH-1.
3 EXISTING STORM AND OVERFLOW DRAINS AND PIPING. INSTALLED IN CORE & SHELL.
4 EXISTING GAS LINE & METER. INSTALLED IN CORE & SHELL.
5 MOUNT HUB DRAIN A MINIMUM OF 20'-0" ABOVE AFF ON STRUCTURAL COLUMN.
6 EXISTING VIMS VENT.
7 NEW VENT AND SANITARY FROM HUB DRAIN TO CONNECT TO EXISTING SANITARY.
8 SEE SHEET PT301 FOR CONTINUATION.

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PLUMBING FLOOR PLAN

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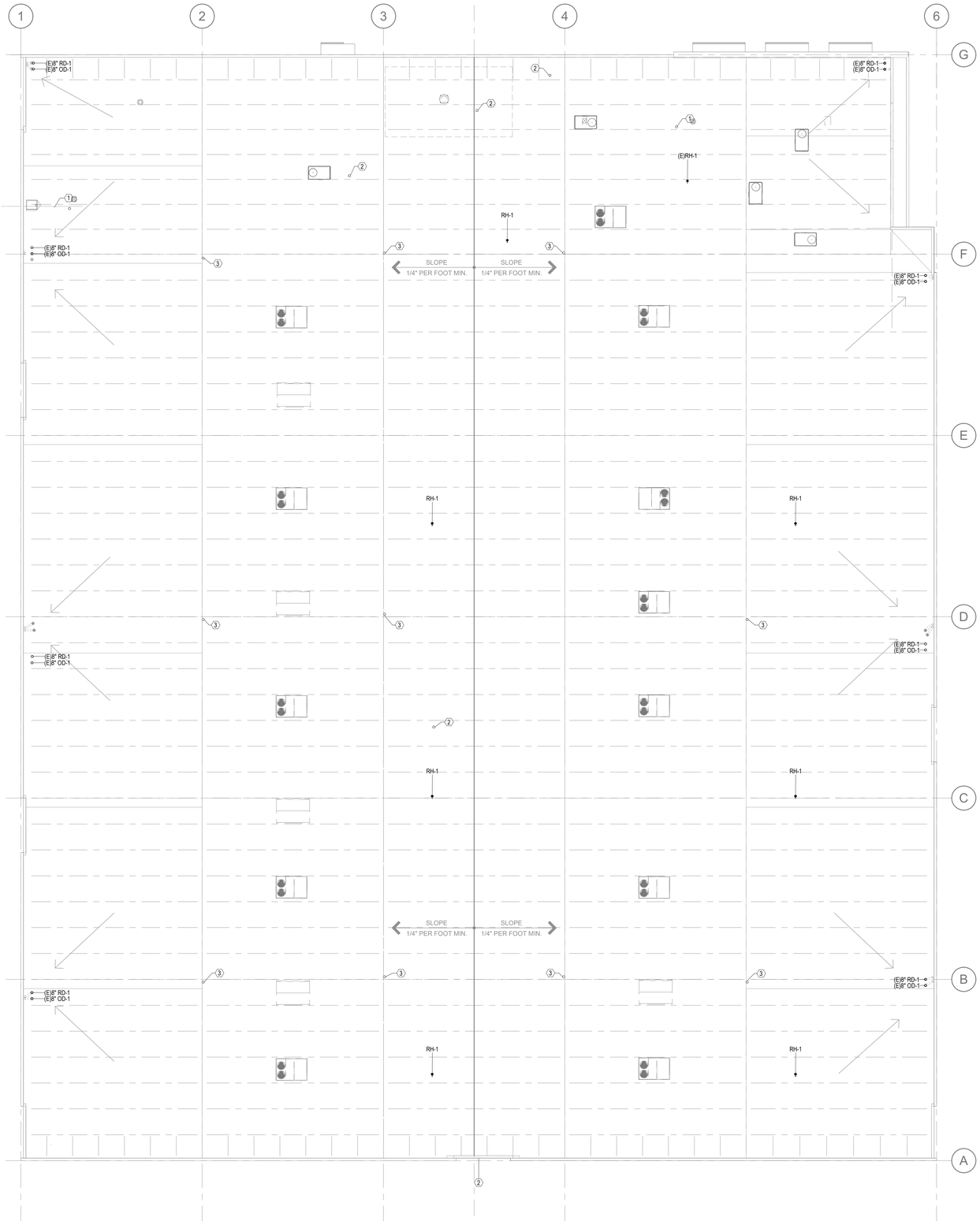
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1 PLUMBING ROOF PLAN
1/16" = 1'-0"

GENERAL NOTES:

1. ALL PLUMBING VENTS TO MAINTAIN 10 FEET MINIMUM FROM MECHANICAL FRESH AIR INTAKE OPENINGS.
2. PROVIDE MANUFACTURER'S REQUIRE CLEARANCES AROUND ALL ROOFTOP EQUIPMENT.

#	KEYNOTES
1	(E)3" VTR.
2	3" VTR.
3	EXISTING VIMS VENT.

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PLUMBING ROOF PLAN

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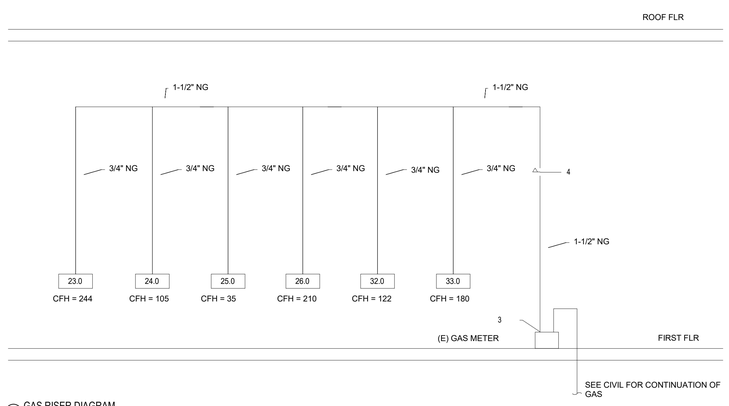
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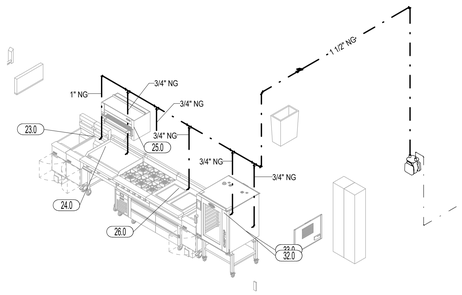
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6 GAS RISER DIAGRAM
SCALE: N.T.S.



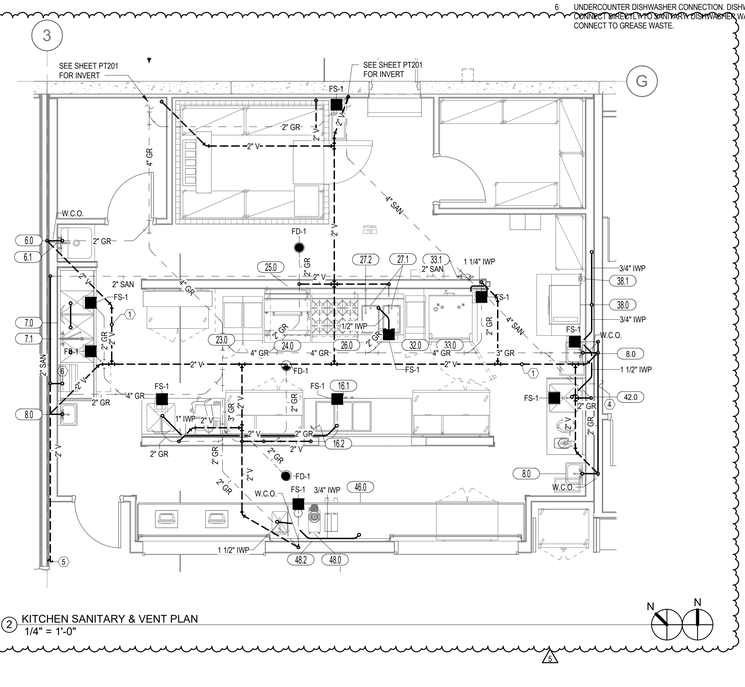
5 GAS RISER - KITCHEN
SCALE: N.T.S.

GENERAL NOTES:

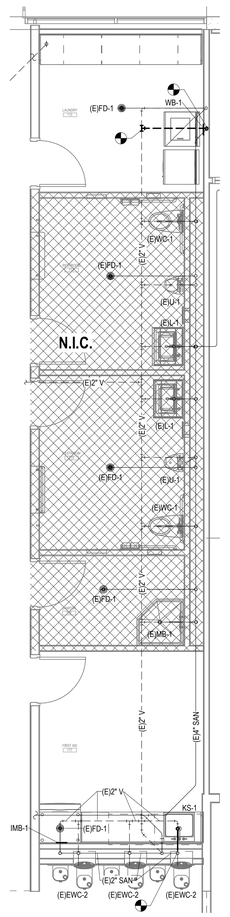
1. REFERENCE PT400 FOR KITCHEN EQUIPMENT SCHEDULE.
2. PROVIDE BACKFLOW PREVENTER, PER 602.3 & 603.2, IN BETWEEN SODA WATER FILTER(37.1), ICE MACHINE WATER FILTER(38.1), COMBI WATER FILTER(33.1), AND COFFEE WATER FILTER(48.2).
3. EXHAUST FAN FOR EMPLOYEE RESTROOMS HAS BEEN DESIGNED IN PHASE 1 TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.

 # KEYNOTES

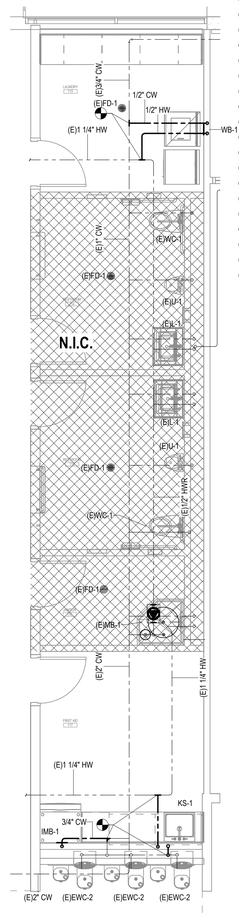
1 2" VENT UP TO 3" VENT THRU ROOF.
2 GAS TO CONNECT TO EXISTING GAS METER FROM PHASE 1.
3 GAS PRESSURE REGULATOR SHALL BE PROVIDED. VENT TO OUTSIDE. SET TO 7" W.C.
4 SANITARY CONTINUES TO CONNECT TO CAPPED SANITARY FROM PHASE 1.
5 SEE SHEET PT201 FOR CONTINUATION.
6 UNDERCOUNTER DISHWASHER CONNECTION. DISHWASHER WASTE SHALL CONNECT DIRECTLY TO SANITARY. DISHWASHER WASTE SHALL NOT CONNECT TO GREASE WASTE.



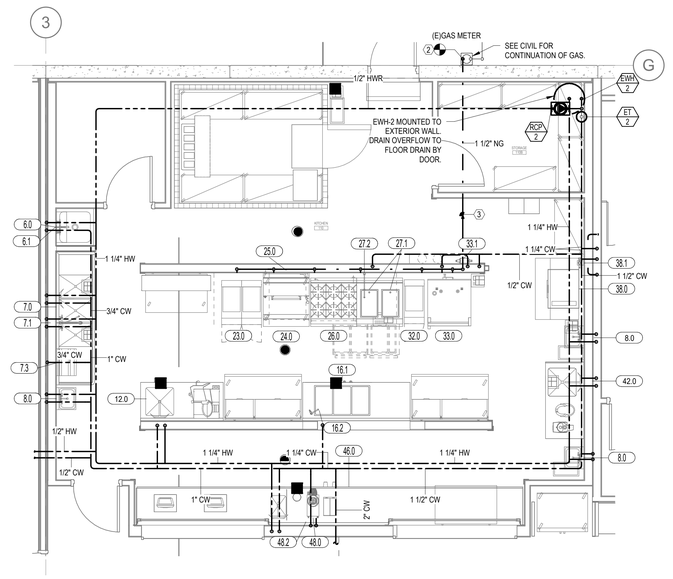
2 KITCHEN SANITARY & VENT PLAN
1/4" = 1'-0"



4 ENLARGED PLUMBING PLAN - SANITARY & VENT
1/4" = 1'-0"



3 ENLARGED PLUMBING PLAN - DOMESTIC WATER
1/4" = 1'-0"



1 KITCHEN DOMESTIC WATER PLAN
1/4" = 1'-0"

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ENLARGED PLUMBING PLANS

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4	01/06/2026	PLAN CHECK CORRECTIONS 3
5	01/26/2026	OC HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
	04/03/2026	OC HEALTH DEPT 2

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SHEET
PT301

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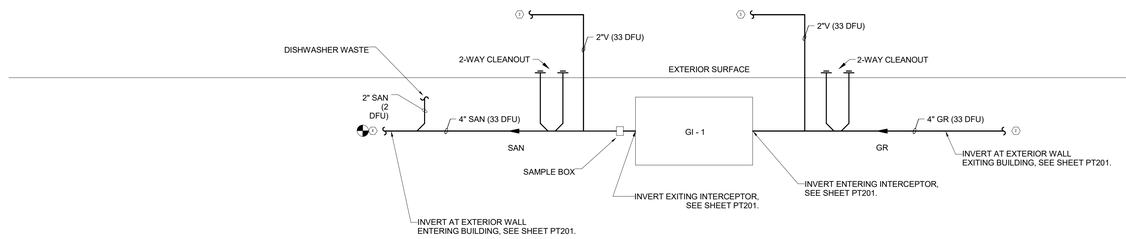
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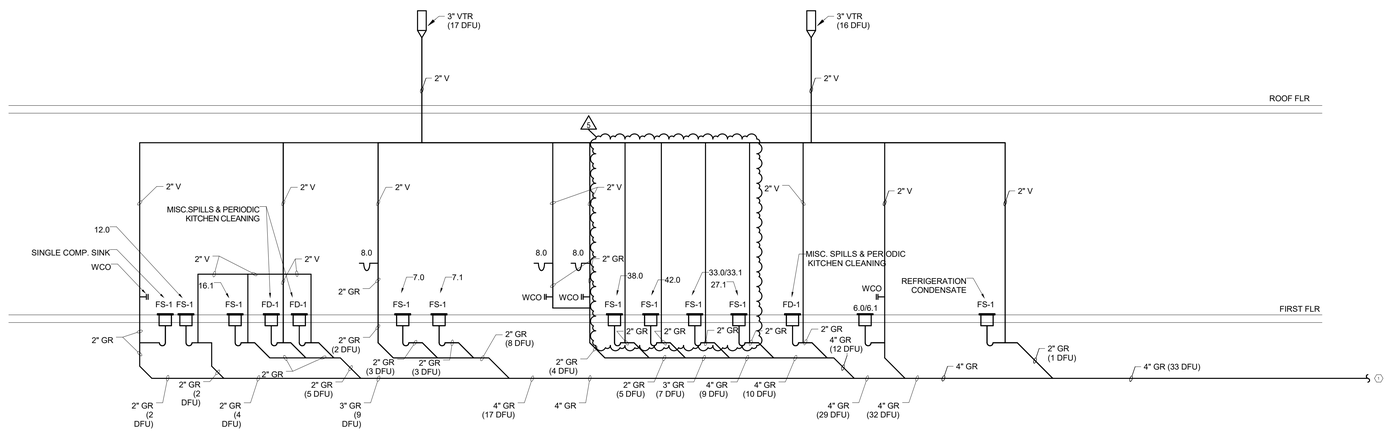
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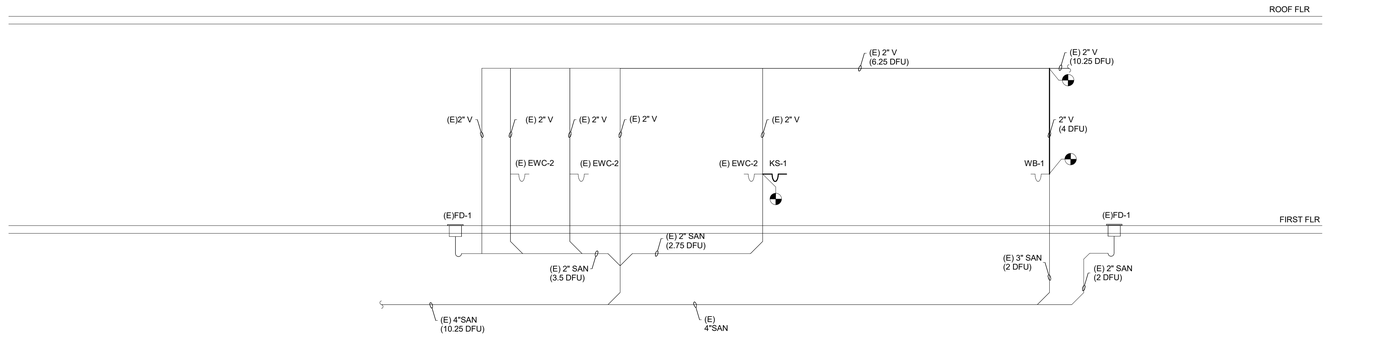
KEYNOTES

1. GREASE WASTE CONTINUES OUTSIDE OF BUILDING. SEE SHEET PT201 FOR CONTINUATION.
2. GREASE WASTE FROM KITCHEN. SEE SHEET PT301 FOR CONTINUATION.
3. VENT LOCATED ON EXTERIOR OF BUILDING FROM GI-1 CONTINUES TO INTERIOR OF BUILDING.
4. SANITARY CONTINUES TO INTERIOR OF BUILDING. SEE SHEET PT301 FOR CONTINUATION.



2 GI SANITARY RISER DIAGRAM
SCALE: N.T.S.





1 SANITARY RISER DIAGRAM
SCALE: N.T.S.

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SANITARY RISER DIAGRAM

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PT302

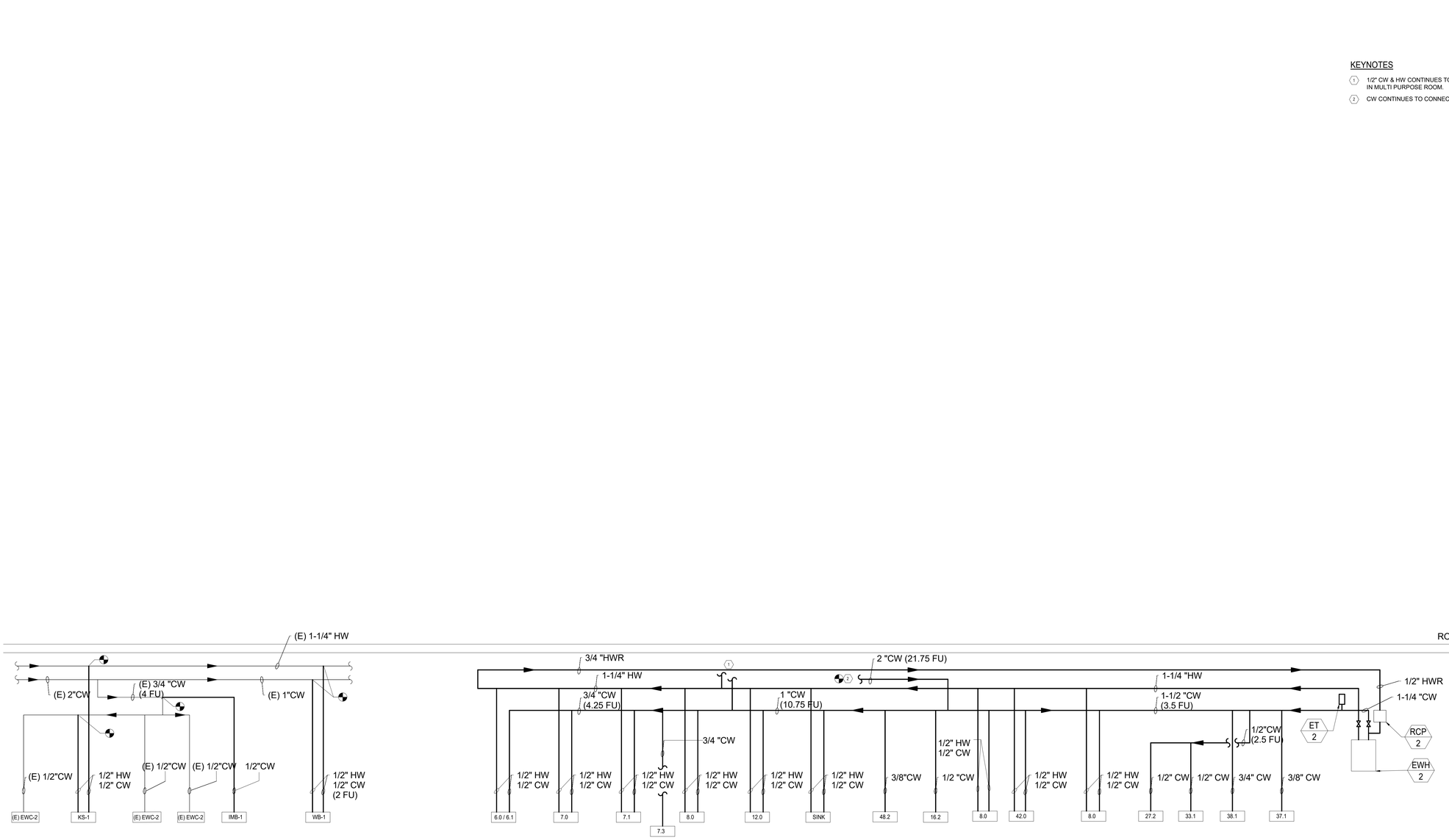
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KEYNOTES

1. 1/2" CW & HW CONTINUES TO CONNECT TO KS-1 IN MULTI PURPOSE ROOM.
2. CW CONTINUES TO CONNECT TO EXISTING CW.



1 DOMESTIC WATER RISER
SCALE: N.T.S.

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DOMESTIC WATER SUPPLY RISER DIAGRAM

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GREASE INTERCEPTOR CALCULATIONS

Quote: F1E7FA23

Reference No. 75599 — Project Name: Red Hill Rec Center

Step 1: Liquid Holding Capacity to grease interceptor

Fixture DFU to Liquid Holding Capacity per UPC Table 1014.3.6

NAME	TYPE	DIMENSIONS	DFU	QTY	TOTAL DFU
3 Compartment Sink	3 Compartment Sink	21" x 21" x 14" (3)	6	1	6
Floor Drain	Floor Drain	N/A	2	3	6
Floor Sink	Floor Sink	N/A	2	3	6
Hand Sink	Hand Sink	10" x 14" x 5"	2	3	6
Mop Basin	Mop Basin	24" x 24" x 10"	3	1	3
Prep Sink One Bowl	Prep Sink One Bowl	21" x 21" x 14"	2	3	6
Total					33

Liquid Holding Capacity used to size interceptor: 1,000 Gal

Step 2: Grease Production

Total square feet x 60% = Dining area

Dining area / 14 Sq ft per seat x 4 turns per seat per day x [Grease Production Value] x [Days between pump-out] = Grease output

Amount of square feet in facility: 1296
Grease production value: 0.0455 lbs per serving (Fried Chicken: High / Flatware)
Days between pump-outs: 90 days

(1296 x .6) / 14 x 4 x 0.0455 x 90 = 909.792 lbs of FOG

SCHIER MODEL	
GB-1000	**Description:** GREASE INTERCEPTOR 100 GPM / 200 GPM, 4" PLAIN/FPT CONNECTIONS **Dimensions:** Length: 92", Width: 73.75", Height: 71.25" **Flow Rate/Grease Capacity:** 100 GPM / 5495 lbs **Liquid Capacity:** 1000 gal

Specification Note: This Great Basin model has been sized to the flow rate and grease production requirements of the application and may not be substituted by liquid capacity alone. Any substitution requests must be approved by the specifying engineer and the authority having jurisdiction.

Please contact support@schierproducts.com for technical and procurement support for the specified Great Basin model.

FIXTURE UNIT SCHEDULE

TAG	DESCRIPTION	QTY.	CONNECTION SIZE (IN)				DFU		CWFU	HWFU	TOTAL WSFU		MANUFACTURER	MODEL NO.	REMARKS
			WASTE	VENT	CW	HW	FIXTURE	TOTAL	FIXTURE	FIXTURE	FIXTURE	TOTAL			
FD-1	DRAIN	3	2"	2"	0"	0"	2	6	0	0	0	0	MIFAB	F1000-C	CAST IRON BODY WITH DOUBLE DRAINAGE FLANGE AND WEEP HOLES, ROUND HEAVY DUTY SS STRAINER, ASSE 1072 TRAP SEAL
FS-1	FLOOR SINK	10	2"	1 1/2"	0"	0"	1	10	0	0	0	0	MIFAB	FS1720	DEEP CAST IRON FLOOR AREA AND INDIRECT SANITARY WASTE DRAIN COMPLETE WITH WHITE ACID RESISTANT PORCELAIN ENAMEL COATED INTERIOR AND LOOSE SET GRATE, ANTI-SPLASH ALUMINUM DOME STRAINER
HD-1	FLOOR HUB DRAIN	7	3"	2"	0"	0"	6	42	0	0	0	0	MIFAB	F1000-C	CAST IRON BODY WITH DOUBLE DRAINAGE FLANGE AND WEEP HOLES, ROUND HEAVY DUTY SS STRAINER, ASSE 1072 TRAP SEAL
IMB-1	ICE MAKER WALL BOX	1			1/2"	0"	0	0	0.5	0	0	0	OATEY	CENTRO II	POLYSTYRENE HOUSING, HAMMER ARRESTOR, LEAD FREE VALVE.
KS-1	SINK	2	1 1/2"	1 1/2"	1/2"	1/2"	2	4	1.5	1.5	2	4	SLOAN	SEE REMARKS	ADA COMPLIANT UNDERMOUNT LAVATORY; GRID STRAINER, CP BRASS TRAP. ANGLE SUPPLY WITH LOOSE KEY STOPS; WATTS #LFE480 THERMOSTATIC MIXING VALVE; IN-WALL CARRIER; FAUCET: OPTIMA SENSOR FAUCET MODEL #ETF-410-PLG-TEE-SF-0.5GPM-MLM-BAA-FCT, INFRARED SENSOR, HARD-WIRED WITH POWER CONVERTER, 0.5 GPM; SOAP DISPENSER: S LOAN MODEL #ESD-410-SF, INFRARED SENSOR, HARD-WIRED WITH POWER CONVERTER; HAND DRYER: OPTIMA MODEL #EHD-420-SF-HEPA, HARD-WIRED WITH POWER CONVERTER
RH-1	EXTERIOR HOSE BIBB, WITH VACUUM BREAKER, FREEZELESS, ROOF MOUNT	7	0"	0"	3/4"	0"	0	0	4	0	4	28	WOODFORD	SRH-MS	SELF-DRAINING, CAST IRON HYDRANT SUPPORT, BACKFLOW PREVENTER, 3/4" HOSE CONNECTION. NO DRAIN LINE REQUIRED.
WB-1	WASHER WALL BOX	1			1/2"	1/2"	2	2	0.5	0.5	2	2	OATEY	CNTRO II	POLYSTYRENE HOUSING, HAMMER ARRESTOR, LEAD FREE VALVE
		31						64				34			

INTERCEPTOR DFUS SCHEDULE

ITEM #	DESCRIPTION	QTY.	GPM	DFU	DFU TOTAL
FS-1	FLOOR SINK (3-COMP)	2	7.5~15	3	6
FS-1	FLOOR SINK	8	≤7.5	1	12
FD-2	FLOOR DRAIN	3	-	2	6
8.0	HAND SINK	3	-	2	6
6.0 & 6.1	MOP SINK	1	-	3	3
	TOTAL:	17			33
VOLUME PER CPC 2022 TABLE 1014.3.6 (GALS.):					1000

GAS CONNECTED LOAD TABLE

EQUIPMENT	INPUT (MBH)
FRYER WITH FILTER	244
GRIDDLE	105
SALAMANDER	35
COUNTERTOP OPEN BURNER RANGE	210
FRYER WITH FLITER	122
GAS COMBI OVEN	180
BUILDING TOTAL:	
896 MBH AT 2 PSI SERVICE PRESSURE	
TOTAL DEVELOPED LENGTH: 30 FT	
1 MBH = 1 CFH	

ELECTRIC WATER HEATER SCHEDULE

TAG	LOCATION	DESCRIPTION	STORAGE (GAL)	RECOVERY CAP. (100°F RISE)	ELECTRICAL DATA					TEMP. SET POINT (°F)	WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS
					AMPS	KW	V	PH	HZ					
EWH-2	ABOVE CEILING STORAGE 110 B	ELECTRIC WATER HEATER	50.0	98.0	67	24.0	208	3	60	140	260	A.O. Smith	DRE-52-24	ALL

REMARKS
1. ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH.
2. PROVIDE A CSA CERTIFIED AND ASME TESTED T&P RELIEF VALVE.
3. 197 GPH @ 50°F TEMPERATURE RISE.

EXPANSION TANK SCHEDULE

TAG	LOCATION	PRE-CHARGE PRESSURE (PSI)	FILL PRESSURE (PSI)	OPERATING PRESSURE (PSI)	ACCEPTANCE VOLUME (GAL)	CAPACITY (GAL)	WEIGHT (LBS)	MANUFACTURER	MODEL NO.
ET-2	KITCHEN	45.00	60.00	60.00	0.7	4.4	9	AMTROL	ST-12

KITCHEN EQUIPMENT SCHEDULE

ITEM #	DESCRIPTION	CONECTION SIZE (IN.)						
		WASTE	INDIRECT WASTE	VENT	CW	HW	FILTERED CW	GAS	MBH
6.0 & 6.1	MOP SINK	2"		2"	1/2"	1/2"			
7.0	3-COMPARTMENT SINK		(3)1-1/2"		1/2"	1/2"			
7.1	PRE-RINSE W/FAUCET				1/2"	1/2"			
7.3	UNDERCOUNTER DISHWASHER	5/8"			3/4"				
8.0	HAND SINK	1 1/2"		1 1/2"	1/2"	1/2"			
12.0	WORKTABLE W/SINK		1 1/2"		1/2"	1/2"			
16.1	HOT FOOD WELL UNIT, DROP-IN		1"						
16.2	FILL FAUCET				1/2"				
23.0	FRYER WITH FILTER							1"	244
24.0	GRIDDLE							3/4"	105
25.0	SALAMANDER							3/4"	35
26.0	OPEN RANGE BURNER, COUNTERTOP							3/4"	210
27.1	HOT FOOD WELL		1/2"						
27.2	POT FILLER FAUCET				1/2"				
32.0	FRYER WITH FILTER							3/4"	122
33.0	COMBI-OVEN, GAS		1 1/8"				3/4"	3/4"	180
33.1	WATER FILTER, COMBI-OVEN				1/2"				
37.0	CARBONATOR						1/2"		
37.1	WATER FILTER, SODA				3/8"				
38.0	ICE MACHINE		3/4"				3/8"		
38.1	WATER FILTER, ICE				3/4"				
39.0	ICE BIN		3/4"						
42.0	WORKTABLE W/SINK		1 1/2"		1/2"	1/2"			
46.0	BACK COUNTER W/DUMP SINK		1 1/2"		1/2"	1/2"			
48.0	COFFEE BREWER		3/8"				3/8"		
48.2	WATER FILTER, COFFEE				3/8"				

REMARKS:
1. REFER TO FOOD SERVICE DRAWINS.

PUMP SCHEDULE

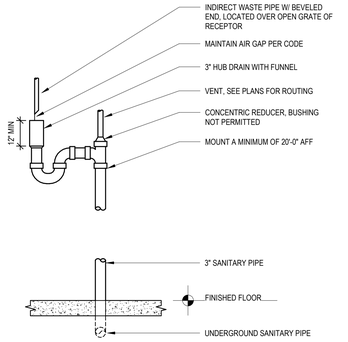
TAG	CAPACITY (GPM)	PUMP HEAD (FT)	ELECTRICAL DATA					WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS
			RPM	HP	V	PH	HZ				
RCP-2	3	9	3250	0.02	120	1	60	15	TACO	T006	ALL

REMARKS
1. LABEL ALL PUMPS.
2. INLINE PUMPS TO BE SUPPORTED BY PIPING, AND/OR HUNG FROM UNSTRUCT WITH VIBRATION HANGING RODS.
3. CONTRACTOR TO VERIFY FINAL HEAD PRESSURE AND PUMP SELECTION WITH ACTUAL FIELD CONDITIONS.
4. POTABLE WATER RATED, CIRCULATOR PUMP, WITH AQUASTAT & PROGRAMMABLE TIMER.

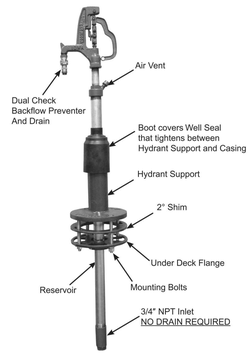
INTERCEPTOR SCHEDULE

TAG	LOCATION	SERVICE	CAPACITY LIQUID (GAL)	WEIGHT (LBS)	MANUFACTURER / MODEL	REMARKS
GI-1	OUTSIDE KITCHEN	GREASE WASTE	1000.0	824	SCHIER / GB-1000	ALL

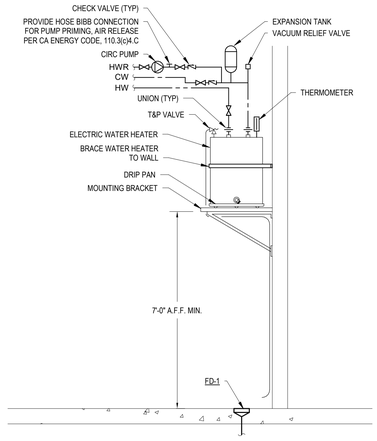
REMARKS
1. COORDINATE WITH CIVIL FOR EXACT LOCATION AND INVERT.
2. PROVIDE WITH SCHIER SV10 VIEWER SAMPLING PORT DOWNSTREAM OF UNIT AS SHOWN ON PLAN.



3 HUB DRAIN - EXPOSED TRAP
SCALE: N.T.S.



2 ROOF HYDRANT DETAIL
SCALE: N.T.S.



1 WATER HEATER HEATER - ELECTRIC - ELEVATED
SCALE: N.T.S.

SPECIFICATIONS

Notes:
1. 6" plain end inlet/outlet
2. Unit weight - w/ cast iron covers: 824 lbs. (for wet weight add 8,413 lbs.)
3. Maximum operating temperature: 150° F continuous
4. Capacities - Liquid: 1,000 gal.; Grease: 5,495 lbs. (753 gal.) @100GPM Grease: 4,959 lbs (679 gal.) @200GPM Solids: 211 gal.
5. Satisfies Miami DERM 99% efficiency requirements; retaining the following capacities at 99.0% efficiency: 5,272 lbs. (722 gal.) @100GPM 3,127 lbs. (428 gal.) @200GPM
6. For gravity drainage applications only.
7. Do not use for pressure applications.
8. Cover placement allows full access to tank for proper maintenance.
9. Vent not required unless per local code.
10. Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping.
11. Integral air relief / Anti-siphon / Sampling access.
12. Adjustable cover adapters provide up to 4" of additional height.
13. Designed for below-grade, above-grade, indoor or outdoor installations.
14. Safety Stan®, access restrictor built into each cover adapter, prevents accidental entry to tanks (450 lb rating).

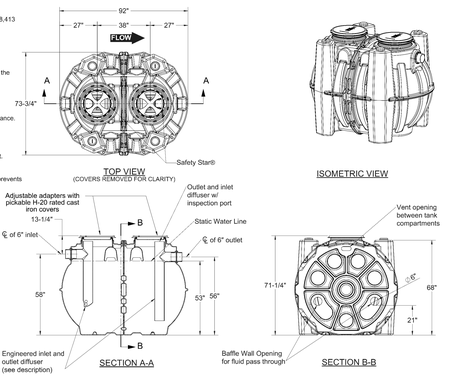
ENGINEER SPECIFICATION GUIDE

Schier Great Basin™ grease interceptor model # GB-1000 shall be lifetime guaranteed and made in USA of seamless, molded polyethylene with minimum 7/16" uniform wall thickness. Interceptor shall be furnished for above or below-grade installation with adjustable cover adapter and Safety Stan® access restrictor built into each cover adapter. Interceptor shall be certified to ASME A112.14.3 (Type D) and CSA B481.1 as well as certified to IAPMO/ANSI Z1001-2021. Interceptor flow rate shall be 100 GPM or 200GPM. Interceptor grease capacity shall be 5,495 lbs. Cover shall provide water/gas-tight seal and have minimum 16,000 lbs. load capacity.

CERTIFIED PERFORMANCE

Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

Type D certification does not require a flow control



NOTES:
1. 6" PLAIN END INLET/OUTLET.
2. UNIT WEIGHT - W/ CAST IRON COVERS: 824 LBS. (FOR WET WEIGHT ADD 8,413 LBS.) MAXIMUM OPERATING TEMPERATURE: 150° F CONTINUOUS
3. CAPACITIES - LIQUID: 1,000 GAL. GREASE: 5,495 LBS. (753 GAL.) @100GPM GREASE: 4,959 LBS (679 GAL.) @200GPM SOLIDS: 211 GAL.
4. SATISFIES MIAMI DERM 99% EFFICIENCY REQUIREMENTS; RETAINING THE; FOLLOWING CAPACITIES AT 99.0% EFFICIENCY; 5,272 LBS. (722 GAL.) @100GPM 3,127 LBS. (428 GAL.) @200GPM
5. FOR GRAVITY DRAINAGE APPLICATIONS ONLY.
6. DO NOT USE FOR PRESSURE APPLICATIONS.
7. COVER PLACEMENT ALLOWS FULL ACCESS TO TANK FOR PROPER MAINTENANCE.
8. VENT NOT REQUIRED UNLESS PER LOCAL CODE.
9. ENGINEERED INLET AND OUTLET DIFFUSERS WITH INSPECTION PORTS ARE REMOVABLE TO INSPECT / CLEAN PIPING.
10. INTEGRAL AIR RELIEF / ANTI-SIPHON / SAMPLING ACCESS.
11. ADJUSTABLE COVER ADAPTERS PROVIDE UP TO 4" OF ADDITIONAL HEIGHT.
12. DESIGNED FOR BELOW-GRADE, ABOVE-GRADE, INDOOR OR OUTDOOR INSTALLATIONS.
13. SAFETY STAR®, ACCESS RESTRICTOR BUILT INTO EACH COVER ADAPTER, PREVENTS ACCIDENTAL ENTRY TO TANKS (450 LB RATING).
14. INTERCEPTOR SHALL BE LOCATED OUTSIDE OF BUILDING. SEE SHEET PT201.

Satisfies Miami DERM 99% efficiency requirements. Product labels are permanently attached to inside and outside of unit for easy viewing.

SPECIFICATION SHEET

MODEL NUMBER: GB-1000

PART NUMBER: 4080-002-01

DESCRIPTION: GB-1000 GREASE INTERCEPTOR 100 GPM/ 200 GPM 6" INLET/OUTLET, H-20 RATED CAST IRON COVER

PROPRIETARY AND CONFIDENTIAL
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DWG BY: B.BROWN **DATE:** 10/18/2021 **REV:** 02 **ECO:** 032822TA

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IRVINE FIELD HOUSE
17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

PLUMBING SCHEDULES AND DETAILS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS 2
3	10/15/2025	PLAN CHECK CORRECTIONS 3
4	01/06/2026	OC HEALTH DEPT
5	03/06/2026	PLAN CHECK CORRECTIONS 4
6	03/06/2026	OC HEALTH DEPT 2

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

SHEET
PT400

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Autodesk Docs://LAX21-0174-02_ IT300 Red Hill - Rec Center/RTM ME/Red Hill Rec Center_R22.rvt

3/6/2026 4:58:12 PM

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Red Hill Rec Center C&S	Report Page:	(Page 1 of 8)
Project Address:	Date Prepared:	2025-05-12T17:17:58-04:00

This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.

A. GENERAL INFORMATION

01	Project Location (city)	Irvine	02	Climate Zone	8
03	Occupancy Types Within Project (select all that apply):				
● Gymnasium					

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140.5/ 170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☒ New system (DHW system being installed for the first time)	Central System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1] *FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.*
[3] *DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies*

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. 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
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

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

STATE OF CALIFORNIA
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E. ADDITIONAL REMARKS

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

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F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1/ 180.2 for addition and alteration scopes.

Equipment Schedule: Water Heating Efficiency and Standby Loss

03	04		05		06			
System Name	EWH-1	Exception to 140.5(c)/ 170.2(d)3	Exceptions Do Not Apply	☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %		
07	08	09	10		11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
EWH-1	Commercial Electric Storage Water Heater	55						0.79	0.79
EWH-2	Commercial Electric Storage Water Heater	50						0.79	0.84

[1] *FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.*
[2] *FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6
21	☐	☐	☒	School buildings < 25,000 ft^2 and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.

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G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Recirculation Loops in Central Systems Serving Dwelling Units or Nonresidential Spaces

	Yes	No	Not Applicable	Requirement
01	●	○	○	Air release valve or vertical pump installation per 110.3(c)4A
02	●	○	○	Check valve or similar located between recirculation pump and water heating equipment to prevent backflow per 110.3(c)4B
03	●	○	○	Hose bibb installed between pump and equipment and isolation valve between hose bibb and equipment per 110.3(c)4C
04	●	○	○	Isolation valves on both sides of the pump per 110.3(c)4D
05	●	○	○	Cold water and recirculation loop piping shall not be connected to the hot water storage tank drain port per 110.3(c)4E
06	●	○	○	Check valve installed on cold water supply between hot water system and next closest tee on cold water supply per 110.3(c)4F
07	○	○	●	DWELLING UNITS ONLY: For central systems serving multiple dwelling units, design includes a recirculation system serving separate dwelling units per 170.2(d) unless building has <=8 dwelling units.
08	○	○	●	DWELLING UNITS ONLY: For heat pump water heating systems, the hot water return from the recirculation loop shall connect to a recirculation loop tank and shall not directly connect to the primary heat pump water heater inlet or the primary thermal storage tanks per 170.2(d)2A.
09	○	○	●	DWELLING UNITS ONLY: For heat pump water heating systems, the fuel source for the recirculation loop tank shall be electricity if auxiliary heating is needed. The recirculation loop heater shall be capable of multi-pass water heating operation per 170.2(d)2B.

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G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see below) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☐	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☒	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 per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft^2 per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

STATE OF CALIFORNIA
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H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in 110.3 for all occupancies. For multifamily residential and hotel/motel occupancies, compliance is also demonstrated with requirements in 160.4(e) / 170.2(d).

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(a).
02	☐	☐	☒	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code §13.0.
03	☒	☐	☐	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(d) or 180.1(b)3 for additions.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per 170.2(d).
06	☐	☐	☒	Combustion air positive shut-off shall be provided per 160.4(3).on all newly installed commercial boilers as follows: • Boilers with input capacity >= 2.5 MMBtu/h, in which the boiler is designed to operate with a nonpositive vent static pressure • Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBtu/h.
07	☐	☐	☒	Boiler combustion air fans with motor >= 10 hp shall meet one of the following • The fan motor shall be driven by a variable speed drive OR • The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume.
08	☐	☐	☒	Newly installed boilers with an input capacity (d:gte/] 5MMBtu/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Red Hill Rec Center C&S	Report Page:	(Page 7 of 8)
	Date Prepared:	2025-05-12T17:17:58-04:00

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by 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-PLB-E - Must be submitted for all buildings

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Red Hill Rec Center C&S	Report Page:	(Page 8 of 8)
Project Address:	Date Prepared:	2025-05-12T17:17:58-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Ben Lieberman	Documentation Author Signature:
Company: RTM Engineering Consulting	Signature Date: 5-19-25
Address: 9035 Wadsworth Pkwy	CEA/ HERS Certification Identification (if applicable): N/A
City/State/Zip: Westminster, CO 80021	Phone: 720-588-1514

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 documentatic s to the building owner at occupancy.

Responsible Designer Name: Ben Lieberman	Responsible Designer Signature:
Company: RTM Engineering Consultants	Date Signed: 5-19-25
Address: 9035 Wadsworth Pkwy	License: PE M42166
City/State/Zip: Westminster, CO 80021	Phone: 720-588-1514

Service Water Heating Mandatory Measures:

110.3(a) CERTIFICATION BY MANUFACTURERS
ANY SERVICE WATER HEATING SYSTEM OR EQUIPMENT MAY BE INSTALLED ONLY IF CERTIFIED TO THE ENERGY COMMISSION TO MEET ALL APPLICABLE 110.3 REQUIREMENTS

110.3(a)1 TEMPERATURE CONTROLS
SERVICE WATER HEATING SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF BEING ADJUSTED FROM LOWEST TO HIGHEST ACCEPTABLE TEMPERATURES FOR THE INTENDED USE AS LISTED IN TABLE 3, CHAPTER 50 OF THE ASHRAE HANDBOOK, HVAC APPLICATIONS VOLUME, OR TABLE 613.1 OF THE CALIFORNIA PLUMBING CODE FOR HEALTHCARE FACILITIES. RESIDENTIAL OCCUPANCIES ARE EXEMPT FROM TEMPERATURE CONTROL REQUIREMENTS

110.3(b) EFFICIENCY
EQUIPMENT SHALL MEET THE APPLICABLE REQUIREMENTS OF THE APPLIANCE EFFICIENCY REGULATIONS AS REQUIRED BY 110.1.

110.3(c)2 CONTROLS FOR HOT WATER DISTRIBUTION SYSTEMS
SERVICE HOT WATER SYSTEMS WITH CIRCULATING PUMPS OR WITH ELECTRICAL HEAT TRACE SYSTEMS SHALL BE CAPABLE OF AUTOMATICALLY TURNING OFF THE SYSTEM.

110.3(c)4 WATER HEATER RECIRCULATION LOOPS
WATER HEATING RECIRCULATION LOOPS SERVING MULTIPLE DWELLING UNITS, HIGH-RISE RESIDENTIAL, HOTEL/MOTEL AND NONRESIDENTIAL OCCUPANCIES SHALL HAVE:
A. AIR RELEASE VALVE OR VERTICAL PUMP INSTALLATION
B. RECIRCULATION LOOP BACKFLOW PREVENTION
C. EQUIPMENT FOR PUMP PRIMING
D. PUMP ISOLATION VALVES
E. COLD WATER SUPPLY AND RECIRCULATION LOOP CONNECTION TO HOT WATER STORAGE TANK
F. COLD WATER SUPPLY BACKFLOW PREVENTION

110.8(a) INSULATION CERTIFICATION
INSTALLED INSULATION SHALL BE CERTIFIED BY THE DEPARTMENT OF CONSUMER AFFAIRS PER TITLE 24, PART 12, CHAPTERS 12-13, ARTICLE 3 "STANDARDS FOR INSULATING MATERIAL."

110.8(b) UREA FORMALDEHYDE INSULATION
UREA FORMALDEHYDE INSULATION SHALL NOT BE INSTALLED UNLESS IN EXTERIOR SIDE WALLS WITH A FOUR-MIL-THICK PLASTIC POLYETHYLENE VAPOR RETARDER OR EQUIVALENT PLASTIC SHEATHING VAPOR RETARDER IS INSTALLED BETWEEN THE UREA FORMALDEHYDE FOAM INSULATION AND THE INTERIOR SPACE.

110.8(c) INSULATING MATERIAL
ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF THE CALIFORNIA BUILDING CODE.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

LICENSED PROFESSIONAL ENGINEER BENJAMIN LIEBERMAN M 42166 MECHANICAL STATE OF CALIFORNIA
EXPIRES 12-31-26

rtm engineering consultants
9035 Wadsworth Parkway | Suite 3200 | Westminster, CO 80021
T 303.297.1038 | www.rtmec.com

IRVINE FIELD HOUSE
17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

T24 COMPLIANCE DOCS

	DATE	REMARKS
1	07/09/2025	ISSUE FOR PLAN CHECK
2	09/22/2025	PLAN CHECK CORRECTIONS
3	10/15/2025	PLAN CHECK CORRECTIONS 2
4	01/05/2026	PLAN CHECK CORRECTIONS 3
5	01/26/2026	OC HEALTH DEPT
6	03/06/2026	PLAN CHECK CORRECTIONS 4
	04/06/2026	OC HEALTH SHEET 2

PA/PM:	BL
DRAWN BY.:	DG
JOB NO.:	LAX21-0174-02

06/06/2025

SHEET
PT500

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CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT

FOODSERVICE SHEET INDEX	
SHEET NO.	**SHEET NAME**
QF000	FOODSERVICE COVER SHEET
QF101	FOODSERVICE EQUIPMENT PLAN AND SCHEDULE
QF102	FOODSERVICE MECHANICAL SPOT CONNECTION PLAN
QF103	FOODSERVICE ELECTRICAL SPOT CONNECTION PLAN
QF104	FOODSERVICE SPECIAL CONDITIONS PLAN
QF105	FOODSERVICE EQUIPMENT UTILITY LOAD SCHEDULE
QF106	FOODSERVICE EQUIPMENT UTILITY LOAD SCHEDULE
QF107	FOODSERVICE EQUIPMENT ELEVATIONS
QF201	FOODSERVICE EQUIPMENT VENTILATOR DRAWING
QF301	FOODSERVICE EQUIPMENT WALK-IN DRAWING
QF302	FOODSERVICE EQUIPMENT WALK-IN DRAWING
QF401	FOODSERVICE EQUIPMENT REFRIGERATION DRAWING

NOTE: THIS DRAWING IS FOR INFORMATION ONLY.

GENERAL CONTRACTOR SHALL COORDINATE WITH THE KITCHEN EQUIPMENT SUB-CONTRACTOR AND RELATED MECHANICAL, ELECTRICAL AND PLUMBING SUB-CONTRACTORS TO ESTABLISH FINAL SPOT CONNECTIONS LOCATIONS AND CONFIGURATIONS AS REQUIRED. THIS DRAWING SHALL NOT BE USED TO LOCATE ANY UTILITY CONNECTIONS IN THE FIELD OR TO LOCATE ANY ROUGH-IN, PENETRATION, OR OTHER REQUIREMENTS.
CINI• LITTLE INTERNATIONAL, INC.

DISCLAIMERS:

- THE FOODSERVICE EQUIPMENT PLANS AND SPECIFICATIONS ARE INTENDED TO DEMONSTRATE TYPES AND ARRANGEMENTS, INCLUDING SPACE AND UTILITY REQUIREMENTS, OF EQUIPMENT REQUIRED FOR THIS PROJECT REGARDING THE DESIRED FUNCTION AND PRODUCT FLOW, AND TO SERVE AS A REFERENCE ONLY TO THE LICENSED PROFESSIONAL ARCHITECT AND/OR ENGINEERS IN THE PREPARATION OF THEIR RESPECTIVE BID AND CONSTRUCTION DOCUMENTS. NO ARCHITECTURAL OR ENGINEERING DESIGN SERVICES ARE INTENDED OR ASSUMED.
- IT SHALL BE THE RESPONSIBILITY OF THE FOODSERVICE EQUIPMENT BIDDERS AND THE KITCHEN EQUIPMENT CONTRACTOR (KEC) TO INFORM CINI-LITTLE INTERNATIONAL, INC. OF ANY DISCREPANCIES FOUND WITHIN THESE DOCUMENTS TO INCLUDE: WRITTEN SPECIFICATIONS, DRAWINGS OR SCHEDULES, TO ALLOW AN OPPORTUNITY FOR CINI-LITTLE INTERNATIONAL, INC. TO CLARIFY AND ANSWER ANY DISCREPANCIES IN AN OFFICAL REQUEST FOR INFORMATION (RFI) . ANY IDENTIFIED DISCREPANCIES SHALL BE IDENTIFIED IN WRITING IN THE FORM OF A REQUEST FOR INFORMATION (RFI) TO CINI-LITTLE INTERNATIONAL, INC. AND INCLUDE THE DESIGN TEAM WHICH MAY INCLUDE THE GENERAL CONTRACTOR, ARCHITECT OF RECORD AND ENGINEERS ON THE PROJECT.

GENERAL NOTES

1. THESE DRAWINGS ARE AS ACCURATE AS CAN BE DETERMINED AT THE TIME OF ISSUE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR (GC), ALL TRADES, AND THE KITCHEN EQUIPMENT CONTRACTOR (KEC) TO FIELD VERIFY AND DIMENSION ALL EQUIPMENT LOCATIONS AND ROUGH-INS. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND IN COMPLIANCE WITH ALL HEALTH DEPARTMENT CODES.
2. THE SIZE AND LOCATION OF THE GREASE TRAP(S), HOT WATER HEATER(S), ELECTRICAL PANEL(S) AND ANY ADDITIONAL FLOOR DRAINS NOT SHOWN ON THESE PLANS ARE TO BE DESIGNED BY THE ARCHITECT AND ENGINEERS AND SHALL BE SUPPLIED/INSTALLED BY THE GENERAL CONTRACTOR.
3. UTILITIES SHOWN ARE FOR THE FOODSERVICE EQUIPMENT ONLY. ANY ADDITIONAL UTILITIES FOR OFFICES OR OTHER ROOMS ARE TO BE DESIGNED BY THE ARCHITECT/ENGINEERS.
4. ALL PENETRATIONS, CHASES, AND CURBS, INCLUDING THE REQUIRED SLEEVES AND FINISHES ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR, IN COORDINATION WITH THE KEC.
5. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ADVISE ALL TRADES, INCLUDING THE KEC, OF ANY CONFLICTS BETWEEN FIELD CONDITIONS AND THE PLANS.
6. WALL BACKING, WHERE SPECIFIED, IS TO SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR WITH COORDINATION BY THE KEC AS TO HEIGHTS AND SIZES.
7. EXHAUST AND CONDENSATE HOODS: ALL DUCTWORK, DUCT COLLARS, HANGING RODS, FANS, AND HOOD INSTALLATION ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, UNLESS OTHERWISE STATED.
8. ALL ROOF STANDS, SUPPORTS, AND SLEEVES FOR THE REFRIGERATION EQUIPMENT ARE TO BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR.
9. IT IS THE RESPONSIBILTY OF THE GENERAL CONTRACTOR TO ORDER A TEST AND BALANCE THE ENTIRE BUILDING, INCLUDING THE KITCHEN EXHAUST HOODS AND FANS TO ENSURE PROPER AIRFLOW IN ALL AREAS.

GENERAL ABBREVIATIONS

A / AMP	AMPERAGE
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISH FLOOR
AG	AIR GAP DRAIN
AIR	COMPRESSED AIR
ALT	ALTERNATE
ARCH	ARCHITECT
BFC	BRANCH FROM CONNECTION
BTC	BRANCH TO CONNECTION
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
°C	DEGREES CELSIUS
C02	CARBON DIOXIDE
CFI	CONTRACTOR FURNSIHED ITEM
CFCI	CONTRACTOR FURNSIHED / CONTRACTOR INSTALLED
CFM	CUBIC FEET PER MINUTE
CL	CENTER LINE
CLG	CEILING
CR	CONDENSATE RETURN
CTW	COOLING TOWER WATER
CTWR	COOLING TOWER WATER RETURN
CW	COLD WATER
DC	DATA COMMUNICATIONS
DCV	DEMAND CONTROL VENTILATION
DEG	DEGREES
DFA	DOWN FROM ABOVE
DR	DUPLEX RECEPTACLE
DTL	DETAIL
DW	DIRECT WASTE
EA	EACH
EC	ELECTRICAL CONNECTION
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRICAL METALIC TUBING
EP	ELECTRICAL PANEL
EQUIP	EQUIPMENT
EQ	EQUAL
ERI	ELECTRICAL ROUGH-IN
EXH	EXHAUST
°F	DEGREES FAHRENHEIT
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FLP	FLOOR PENETRATION
FPM	FEET PER MINUTE
FS	FLOOR SINK
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FSS	FIRE SUPPRESSION SYSTEM
FT	FEET
G	GAS
GA	GAUGE
GC	GENERAL CONTRACTOR
GI	GREASE INTERCEPTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GT	GREASE TRAP
H2O	WATER
HVAC	HEATING VENTILATION & AIR CONDITIONING
HZ	HERTZ
HP	HORSEPOWER
HW	HOT WATER
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCHES
IT	INFORMATION TECHNOLOGY
IW	INDIRECT WASTE
IWL	INTERCONNECTED WATER LINE
JB	JUNCTION BOX
KEC	KITCHEN EQUIPMENT CONTRACTOR
KDM	KITCHEN DISPLAY MONITOR
KW	KILOWATT
LEC	LAUNDRY EQUIPMENT CONTRACTOR
M	METER
MAX	MAXIMUM
MBTU	BRITISH THERMAL UNIT
MC	MECHANICAL CONTRACTOR
MEP	MECHANICAL ELECTRCIAL PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM
mm	MILLIMETER
MRI	MECHANICAL ROUGH-IN
MUA	MAKE-UP AIR
NA	NOT APPLICABLE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NIKEC	NOT IN KITCHEN EQUIPMENT CONTRACT
NILEC	NOT IN LAUNDRY EQUIPMENT CONTRACT
NIWHEC	NOT IN WASTE HANDLING EQUIPMENT CONTRACT
NSF	NATIONAL SANITATION FOUNDATION
OFI	OWNER OR OPERATOR FURNISHED ITEM
OFCI	OWNER OR OPERATOR FURNISHED / CONTRACTOR INSTALLED
OFOI	OWNER OR OPERATOR FURNISHED / OWNER OR OPERATOR INSTALLED
PC	PLUMBING CONTRACTOR
PH	PHASE
POS	POINT OF SALE
PREP	PREPARATION
PSI	POUNDS-PER-SQUARE-INCH
PVC	POLYVINYL CHLORIDE
QT	QUART
QTY	QUANTITY
REF	REFRIGERATION LINE
RFI	REQUEST FOR INFORMATION
S/S	STAINLESS STEEL
SC	SPECIAL CONDITIONS OR SELF CONTAINED
SF	SQUARE FEET
SPWG	STATIC PRESSURE WATER GAUGE
SR	SINGLE RECEPTACLE
SS	STEAM SUPPLY
SW	SWITCH
SWR	SOLID WASTE RECYCLING
TYP	TYPICAL
UDS	UTILITY DISTRIBUTION SYSTEM
V	VOLT
VFY	VERIFY
W	WATTS
WEC	WASTE EQUIPMENT CONTRACTOR
WHEC	WASTE HANDLING EQUIPMENT CONTRACTOR
WI	WALK-IN

CITY OF IRVINE
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17300 RED HILL
IRVINE, CALIFORNIA 92614

FOODSERVICE COVER SHEET

DATE	REMARKS
12/19/2025	ISSUED FOR CONSTRUCTABILITY REVIEW
01/28/2026	OC HEALTH DEPT

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

SHEET
QF000

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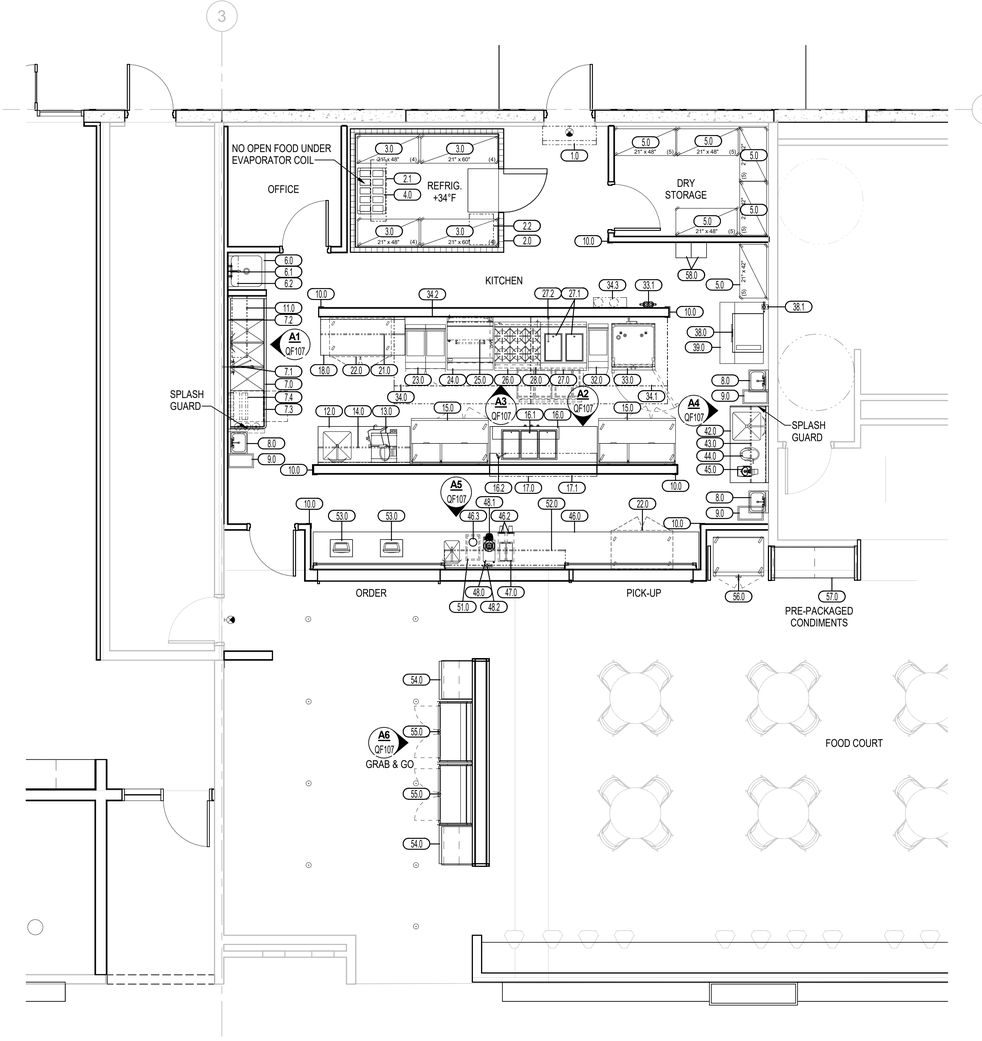
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EQUIPMENT SCHEDULE

ITEM NO.	QTY	DESCRIPTION	REMARKS	MANUFACTURER	MODEL
1.0	1	AIR CURTAIN		Mars Air Systems	LPN242-1UA-OB
2.0	1	WALK-IN COMPLEX - ON SLAB WITH RAMP		RMI	WALK-IN COMPLEX - ON SLAB WITH RAMP
2.1	1	EVAPORATOR COIL, +35F		Airdyne Refrigeration Inc.	LEL0095AS6AM
2.2	1	CONDENSER, AIR COOLED		Airdyne Refrigeration Inc.	FFAM-010Z
3.0	4	SHELVING UNIT, WALK-IN COOLER		Metro	MAX 4 SERIES
4.0	1	DUNNAGE RACK		Metro	HP2236PD
5.0	6	SHELVING UNIT, DRY STORAGE		Metro	MAX 4 SERIES
6.0	1	MOP SINK		Advance Tabco	9-OP-44
6.1	1	SERVICE FAUCET		T&S Brass	B-0665-CR-BSTP
6.2	1	CHEMICAL SHELF/MOP RACK		Advance Tabco	K-245
7.0	1	THREE-COMPARTMENT SINK		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 3.01
7.1	1	PRE-RINSE W/ FAUCET		T&S Brass	B-0133-12-CR-B
7.2	1	STAINLESS STEEL WALL SHEATHING - COOK LINE		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 8.02
7.3	1	UNDERCOUNTER DISHWASHER		Hobart	LXNR-5
7.4	1	RACK SHELF		Eagle Group	606296
8.0	3	HAND SINK		Advance Tabco	7-PS-66
9.0	3	TRASH RECEPTACLE		Rubbermaid Commercial Products	1971258
10.0	7	CORNER GUARD		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 1.03
11.0	1	WALL SHELF, SINGLE TIER		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 1.13
12.0	1	WORKTABLE WITH SINK		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 2.01
13.0	1	FOOD SLICER, ELECTRIC		Globe (Middleby)	S13
14.0	1	WALL SHELF, SINGLE TIER		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 1.13
15.0	2	REFRIGERATED PREP TABLE		True Mfg. - General Foodservice	TPP-AT-60-HC
16.0	1	BACK COUNTER		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 4.01
16.1	1	HOT FOOD WELL UNIT, DROP-IN		Wells (Middleby)	MOD-300TDM
16.2	1	FILL FAUCET		T&S Brass	5F-1SLX08
17.0	1	PASS THRU SHELF		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 1.13
17.1	1	PASS WINDOW TRIM		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 2.33
18.0	1	WORKTABLE		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 2.01
19.0	1	OPEN NUMBER			
20.0	1	OPEN NUMBER			
21.0	1	WALL SHELF, SINGLE TIER		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 1.13
22.0	2	REFRIGERATOR, UNDERCOUNTER		True Mfg. - General Foodservice	TUC-48-HC
23.0	1	FRYER WITH FILTER		Pitco Frialator (Middleby)	SG14RS-2FD
24.0	1	GRIDDLE		Jade Range (Middleby)	JMRH-36G
25.0	1	SALAMANDER		Jade Range (Middleby)	JSB-36RMT
26.0	1	OPEN BURNER RANGE, COUNTERTOP		Jade Range (Middleby)	JMRH-6
27.0	1	SPREADER PLATE		Jade Range (Middleby)	JMPR-36
27.1	2	HOT FOOD WELL		Wells (Middleby)	MOD-100T
27.2	1	POT FILLER FAUCET		T&S Brass	B-0580
28.0	1	REFRIGERATED BASE, SELF-CONTAINED		Jade Range (Middleby)	JRLH-04S-T-72
29.0	1	OPEN NUMBER			
30.0	1	OPEN NUMBER			
31.0	1	OPEN NUMBER			
32.0	1	FRYER WITH FILTER		Pitco Frialator (Middleby)	SG14RS-1FD
33.0	1	COMBI OVEN, GAS		UNOX USA	XAVC-10FS-GPLM
33.1	1	WATER FILTER, COMBI OVEN		Everpure	QT1+CR
34.0	1	EXHAUST HOOD - LEFT		Accurex	CUSTOM
34.1	1	EXHAUST HOOD - RIGHT		Accurex	CUSTOM
34.2	1	STAINLESS STEEL WALL SHEATHING - COOK LINE		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 8.02
34.3	1	FIRE SUPPRESSION SYSTEM		ANSUL	ANSUL R102 - FIRE SUPPRESSION SYSTEM
35.0	1	OPEN NUMBER			
36.0	1	OPEN NUMBER			
37.0	1	OPEN NUMBER			
38.0	1	ICE MACHINE		Scotsman	MC0630MA-32
38.1	1	WATER FILTER, ICE		Everpure	QC7I TWIN 7FC-S
39.0	1	ICE BIN		Scotsman	B948S
40.0	1	OPEN NUMBER			
41.0	1	OPEN NUMBER			
42.0	1	WORKTABLE WITH SINK		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 2.01
43.0	1	WALL SHELF, 2-TIER		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 1.13
44.0	1	MIXER, COUNTERTOP		Globe (Middleby)	SP05
45.0	1	FOOD PROCESSOR		Robot Coupe	R2N
46.0	1	BACK COUNTER W/ DUMP SINK		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 4.01
46.1	1	OPEN NUMBER			
46.2	2	CUP DISPENSER		Dispense-Rite	ADJ-1
46.3	1	TRASH CHUTE		Vollrath	3Y0502
47.0	1	COFFEE GRINDER		Curtis	ILGD-10
48.0	1	COFFEE BREWER		Curtis	TP1ST63A3000
48.1	1	COFFEE SERVER		Curtis	TXSG1501S600
48.2	1	WATER FILTER, COFFEE		Everpure	QC7I SINGLE 4FC-S
49.0	1	OPEN NUMBER			
50.0	1	OPEN NUMBER			
51.0	1	TRASH RECEPTACLE		Rubbermaid Commercial Products	1971258
52.0	1	WALL SHELF, SINGLE TIER		CUSTOM FABRICATOR	CUSTOM FABRICATED DTL. 1.13
53.0	2	POINT OF SALE SYSTEM	NIKEC / BY OWNER	NIKEC	
54.0	2	RETAIL COUNTER	NIKEC / BY MILLWORK	NIKEC	
55.0	2	MERCHANDISER, SELF-SERVICE		Structural Concepts	BN47R
56.0	1	REFRIGERATOR, REACH-IN	PRE-PACKAGED FOOD ONLY	True Mfg. - General Foodservice	T-35G-HC~FGD01
57.0	1	CONDIMENT COUNTER	NIKEC / BY MILLWORK	NIKEC	
58.0	2	EMPLOYEE LOCKER		SPG International	4K0070

NIKEC - NOT IN KITCHEN EQUIPMENT CONTRACT



1 LEVEL 1 - KITCHEN - EQUIPMENT PLAN
1/4" = 1'-0"

DISCLAIMERS:

- THE FOODSERVICE EQUIPMENT PLANS AND SPECIFICATIONS ARE INTENDED TO DEMONSTRATE TYPES AND ARRANGEMENTS, INCLUDING SPACE AND UTILITY REQUIREMENTS, OF EQUIPMENT REQUIRED FOR THIS PROJECT REGARDING THE DESIRED FUNCTION AND PRODUCT FLOW, AND TO SERVE AS A REFERENCE ONLY TO THE LICENSED PROFESSIONAL ARCHITECT AND/OR ENGINEERS IN THE PREPARATION OF THEIR RESPECTIVE BID AND CONSTRUCTION DOCUMENTS. NO ARCHITECTURAL OR ENGINEERING DESIGN SERVICES ARE INTENDED OR ASSUMED.
- IT SHALL BE THE RESPONSIBILITY OF THE FOODSERVICE EQUIPMENT BIDDERS AND THE KITCHEN EQUIPMENT CONTRACTOR (KEC) TO INFORM CINI-LITTLE INTERNATIONAL, INC. OF ANY DISCREPANCIES FOUND WITHIN THESE DOCUMENTS TO INCLUDE: WRITTEN SPECIFICATIONS, DRAWINGS OR SCHEDULES, TO ALLOW AN OPPORTUNITY FOR CINI-LITTLE INTERNATIONAL, INC. TO CLARIFY AND ANSWER ANY DISCREPANCIES IN AN OFFICAL REQUEST FOR INFORMATION (RFI) . ANY IDENTIFIED DISCREPANCIES SHALL BE IDENTIFIED IN WRITING IN THE FORM OF A REQUEST FOR INFORMATION (RFI) TO CINI-LITTLE INTERNATIONAL, INC. AND INCLUDE THE DESIGN TEAM WHICH MAY INCLUDE THE GENERAL CONTRACTOR, ARCHITECT OF RECORD AND ENGINEERS ON THE PROJECT.

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FOODSERVICE EQUIPMENT PLAN AND SCHEDULE

DATE	REMARKS
12/19/2025	ISSUED FOR CONSTRUCTABILITY REVIEW
01/26/2026	OC HEALTH DEPT

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

SHEET
QF101

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MECHANICAL NOTES

WORK DESCRIBED IN THESE NOTES IS TO BE PERFORMED UNDER DIVISION 22 (PLUMBING) AND DIVISION 23 (HVAC).

1. THIS DRAWING LOCATES FINAL MECHANICAL POINTS OF CONNECTION FOR EACH FOODSERVICE EQUIPMENT ITEM. IT DOES NOT INDICATE UTILITY ROUGH-IN LOCATIONS AND MUST NOT BE USED FOR THAT PURPOSE. LOCATIONS, SIZES, AND HEIGHTS ABOVE THE FLOOR ARE APPROXIMATELY AS THEY WILL OCCUR ON EQUIPMENT ITEMS SHOWN. THE DESIGN OF SYSTEMS TO ACCOMMODATE THESE REQUIREMENTS IS TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND MEET WITH THE APPROVAL OF ALL GOVERNING AUTHORITIES.
2. UTILITIES SHOWN ARE FOR FOODSERVICE EQUIPMENT ITEMS ONLY. THIS DRAWING MUST BE USED IN CONJUNCTION WITH THE MECHANICAL DRAWINGS FOR OTHER REQUIRED UTILITIES.

2A. RECOMMENDED AREA FLOOR DRAINS ARE SHOWN FOR INFORMATION ONLY. REFER TO MECHANICAL ENGINEERS PLAN FOR EXACT LOCATION. PITCH FLOOR PER CODE TO DRAIN.

3. CONCEAL ALL UTILITIES (GAS, WATER AND STEAM LINES) IN WALLS AND STUB-OUT OFWALLS AS REQUIRED FOR CONNECTIONS. DO NOT RUN EXPOSED ON THE FACE OF THE WALL. DO NOT STUB-OUT OF THE FLOOR UNLESS IT IS BELOW FREESTANDING EQUIPMENT.
4. EXPOSED PIPING AND FITTINGS ABOVE WORK SURFACES TO BE STAINLESS STEEL. EXPOSED PIPING AND FITTINGS BELOW WORK SURFACES TO BE CHROME PAINTED.
5. ALL HORIZONTAL PIPING RUNS EXTENDED TO AND CONNECTED TO EQUIPMENT ITEMS SHALL BE AT THE HIGHEST PRACTICAL ELEVATION, BUT NOT LESS THAN 6" (155mm) ABOVE THE FLOOR SO AS TO PROVIDE CLEARANCE FOR CLEANING.
6. PROVIDE WATER AND GREASE-PROOF EXHAUST DUCTS FROM VENT CONNECTIONS OF DISHWASHING MACHINES, EXHAUST HOODS / VENTILATORS.
7. PROVIDE FIRE EXTINGUISHING SYSTEM IN ALL GREASE EXHAUST DUCTS AS REQUIRED.
8. NOT USED.
9. A MECHANICAL GAS SHUT OFF VALVE OR ELECTRICAL SOLENOID SHUT OFF VALVE WITH MOMENTARY POWER INTERRUPTION DEVICE SHALL BE PROVIDED LOOSE BY KEC FOR FIELD INSTALLATION IN SUPPLY LINE FOR GAS FUELED EQUIPMENT ITEMS.
10. NOT USED.
11. PROVIDE EACH AIR-COOLED REFRIGERATION SYSTEM WITH A MINIMUM AIR SUPPLY OF 1,000 CFM PER HORSE POWER AND ADEQUATE EXHAUST TO KEEP AREA ADJACENT TO COMPRESSOR AND/OR COMPRESSOR ROOM TEMPERATURE BELOW 90°F (32°C).
12. NOT USED.
13. SEE SPECIAL CONDITIONS PLAN OF EACH AREA FOR SIZE AND LOCATION OF CONDUIT FOR BEVERAGE SYSTEM LINES. CONDUITS FOR BEVERAGE SYSTEMS SHALL BE WATERTIGHT AND HAVE 24" (600mm) MINIMUM RADIUS BENDS AND PULL BOXES EVERY 50' (15M). REFER TO STANDARD DETAILS 6.25 AND 6.25.1.
14. NOT USED.
15. ALL INTERCONNECTED WATER LINE (IWL) RUNS ARE FOR DESIGN INTENT ONLY AND DO NOT REPRESENT ACTUAL FIELD RUNS. REFER TO UTILITY LOAD SCHEDULE SHEETS FOR INFORMATION ON POINT OF CONNECTIVITY.
16. VENTILATORS SHALL INCLUDE THERMOSTAT(S) INSTALLED IN THE CANOPY TO AUTOMATICALLY START THE EXHAUST FAN(S) WHEN COOKING OCCURS TO MEET THE LATEST ADOPTED INTERNATIONAL MECAHANICAL CODE (IMC) 507.2.

MECHANICAL ABBREVIATIONS AND SYMBOLS

GAS	G	⬢
BRITISH THERMAL UNIT (000'S)	MBTU	
HOT WATER	HW	◆
COLD WATER	CW	◇
INTERCONNECTED WATER LINE	IWL	----◆
COOLING WATER	CTW	◆
COOLING WATER RETURN	CTWR	◆
WASTE	W	⊠
INDIRECT WASTE	IW	⊠
FLOOR DRAIN	FD	◎
FUNNEL FLOOR DRAIN	FFD	◯
FLOOR SINK	FS	▢ ▢ ▢
STEAM SUPPLY	SS	◆
CONDENSATE RETURN	CR	◆
GREASE TRAP	GT	
STATIC PRESSURE, WATER GAUGE	SPWG	
ABOVE FINISHED FLOOR	AFF	
DOWN FROM ABOVE	DFA	
AIR GAP DRAIN	AG	▣
COMPRESSED AIR	AIR	Ⓐ
REFRIGERATION LINE	REF	○

FIRE EXTINGUISHING SYSTEM NOTES

FA	WET CHEMICAL PIPING TO CONNECTION AT VENTILATOR BY KITCHEN EQUIPMENT TRADE
FB	IF REQUIRED BY LOCAL MECHANICAL JURISDICTIONS, MECHANICAL TRADE TO PROVIDE BY-PASS AT GAS SOLENOID VALVE

REFRIGERATION NOTES

NOTE A: REFRIGERATION LINES TO CONDENSING UNIT. HORIZONTAL RUNS OF SUCTION LINE PITCHED TOWARD COMPRESSOR- MIN. 1/2" (15mm) PER 10'-0" (3050mm)

NOTE B: LIQUID LINE SOLENOID VALVE

NOTE C: REFRIGERATION LINES TO EVAPORATOR UNIT

NOTE D: EVAPORATOR DRAIN LINE TO BE TYPE "M" COPPER, PITCHED 1/2" (15mm) PER FOOT AND CONTAIN A P-TRAP AS WELL AS AN AIR GAP BETWEEN DRAIN LINE AND DRAIN



1 LEVEL 1 - KITCHEN - MECHANICAL PLAN
1/4" = 1'-0"

NOTE:
REFER TO SHEET QF105 FOR
MECHANICAL UTILITY LOAD SCHEDULE

CITY OF IRVINE
BUILDING & SAFETY DIVISION

NOTE: THIS DRAWING IS FOR INFORMATION ONLY.

GENERAL CONTRACTOR SHALL COORDINATE WITH THE KITCHEN EQUIPMENT SUB-CONTRACTOR AND RELATED MECHANICAL, ELECTRICAL AND PLUMBING SUB-CONTRACTORS TO ESTABLISH FINAL SPOT CONNECTIONS LOCATIONS AND CONFIGURATIONS AS REQUIRED. THIS DRAWING SHALL NOT BE USED TO LOCATE ANY UTILITY CONNECTIONS IN THE FIELD OR TO LOCATE ANY ROUGH-IN, PENETRATION, OR OTHER REQUIREMENTS.
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FOODSERVICE MECHANICAL SPOT CONNECTION PLAN

DATE	REMARKS
12/19/2025	ISSUED FOR CONSTRUCTABILITY REVIEW
01/28/2026	OC HEALTH DEPT

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

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ELECTRICAL NOTES

WORK DESCRIBED IN THESE NOTES IS TO BE PERFORMED UNDER DIVISION 26 (ELECTRICAL).

1. THIS DRAWING LOCATES FINAL ELECTRICAL POINTS OF CONNECTION FOR EACH FOODSERVICE EQUIPMENT ITEM. IT DOES NOT INDICATE UTILITY ROUGH-IN LOCATIONS AND MUST NOT BE USED FOR THAT PURPOSE. LOCATIONS, SIZES, AND HEIGHTS ABOVE THE DESIGN OF SYSTEMS TO ACCOMMODATE THESE REQUIREMENTS IS TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND MEET WITH THE APPROVAL OF ALL GOVERNING AUTHORITIES.
2. UTILITIES SHOWN ARE FOR FOODSERVICE EQUIPMENT ITEMS ONLY. THIS DRAWING MUST BE USED IN CONJUNCTION WITH THE ELECTRICAL DRAWINGS FOR OTHER REQUIRED UTILITIES.
3. CONCEAL ALL UTILITIES IN WALLS AND STUB-OUT OF WALLS AS REQUIRED FOR CONNECTIONS. DO NOT RUN EXPOSED ON THE FACE OF THE WALL. DO NOT STUB-OUT OF THE FLOOR UNLESS IT IS BELOW FREESTANDING EQUIPMENT.
4. EXPOSED CONDUIT ABOVE WORK SURFACES TO BE STAINLESS STEEL. EXPOSED BELOW WORK SURFACES TO BE CHROME PAINTED.
5. POWER TO ALL ELECTRICALLY OPERATED EQUIPMENT UNDER HOODS IS TO COME FROM THE PANEL WHERE THE MAIN BREAKER IS INTERWIRED WITH THE FIRE EXTINGUISHING SYSTEM SO THAT POWER SHUT-OFF IS ACHIEVED UPON EITHER MANUAL OR AUTOMATIC OPERATION OF THE FIRE EXTINGUISHING SYSTEM.
6. PROVIDE A FLUSH, EMPTY JUNCTION BOX AT EACH REMOTE FIRE CABLE PULL. PROVIDE CONDUIT CONCEALED IN WALL FROM JUNCTION BOX TO A POINT 6"(150mm) ABOVE FINISHED CEILING.
7. PROVIDE CONDUIT AND WIRING BETWEEN THE FUEL LINE SOLENOID SHUT-OFF VALVES, SHUNT TRIP BREAKERS, CONTACTORS, REMOTE NOTIFICATION AND FIRE EXTINGUISHING SYSTEMS.
8. NOT USED.
9. PROVIDE COMPUTER GRADE, CLEAN, ISOLATED GROUND SERVICE FOR POINT-OF-SALE (POS) EQUIPMENT AND/OR ELECTRONIC POS AND/OR CASH REGISTERS AND/OR PRINTERS. PROVIDE EMPTY CONDUIT BETWEEN POS AND/OR CASH REGISTER AND/OR PRINTER LOCATIONS AND CENTRAL OFFICE LOCATION, ETC. VERIFY EXACT LOCATIONS.
10. SEE SPECIAL CONDITIONS PLAN OF EACH AREA FOR SIZE AND LOCATION OF CONDUIT FOR BEVERAGE SYSTEM LINES. CONDUITS FOR BEVERAGE SYSTEMS SHALL BE WATERTIGHT AND HAVE 24" (600mm) MINIMUM RADIUS BENDS AND PULL BOXES EVERY 50' (15M). REFER TO STANDARD DETAIL 6.25 AND 6.25.1.
11. A MECHANICAL GAS SHUT OFF VALVE OR ELECTRICAL SOLENOID SHUT OFF VALVE WITH MOMENTARY POWER INTERRUPTION DEVICE SHALL BE PROVIDED LOOSE BY KEC FOR FIELD INSTALLATION IN SUPPLY LINE FOR GAS FUELED EQUIPMENT ITEMS.
12. PROVIDE DUPLEX CONVENIENCE OUTLET (120/1Ø, 20A) AT HEIGHT INDICATED.
13. NOT USED.
14. VENTILATORS SHALL INCLUDE THERMOSTAT(S) INSTALLED IN THE CANOPY TO AUTOMATICALLY START THE EXHAUST FAN(S) WHEN COOKING OCCURS TO MEET THE LATEST ADOPTED INTERNAIONAL MECHANICAL CODE (IMC) 507.2.
15. ELECTRICAL PANELS TO BE LOCATED WITHIN LINE OF SIGHT OF EQUIPMENT SERVED BY PANELS AND NOT FURTHER AWAY FROM EQUIPMENT THAN LOCAL CODE REQUIREMENTS ALLOW.

ELECTRICAL ABBREVIATIONS AND SYMBOLS

SWITCH	SW	(S)
ELECTRICAL CONNECTION	EC	
JUNCTION BOX	JB	(J)
SINGLE RECEPTACLE	SR	
DUPLEX RECEPTACLE	DR	
DATA COMMUNICATIONS	DC	(D)
EMPTY JUNCTION BOX		
AMP	A	
KILOWATT	KW	
HORSEPOWER	HP	
VOLT	V	
PHASE	Ø	
ABOVE FINISHED FLOOR	AFF	
DOWN FROM ABOVE	DFA	

FIRE EXTINGUISHING SYSTEM NOTES

FA	WIRING IN CONDUIT BY ELECTRICAL TRADE BETWEEN RESET RELAY, AUTOMAN RELEASE AND ELECTRICAL GAS SOLENOID SHUT-OFF VALVE
FB	WIRING IN CONDUIT BY ELECTRICAL TRADE TO SHUNT-TRIP BREAKER LOCATED IN POWER PANEL SUPPLYING EQUIPMENT BENEATH VENTILATORAND/OR BETWEEN RESET RELAY AND CONTACTORS SERVING EQUIPMENT BENEATH VENTILATOR
FC	WIRING IN CONDUIT BY ELECTRICAL TRADE BETWEEN MICROSWITCH AND BUILDING FIRE ALARM SYSTEM AS REQUIRED
FD	FLUSH-MOUNT OCTAGONAL J-BOX (8B TYPE) MOUNTED AT 48"(1200mm) AFF WITH 1/2" (15mm) EMT TO 6"(150mm) ABOVE CEILING BY ELECTRICAL TRADE FOR REMOTE CABLE PULL (HEIGHT VARIES PER LOCAL CODES)
FE	NOT USED
FF	NOT USED

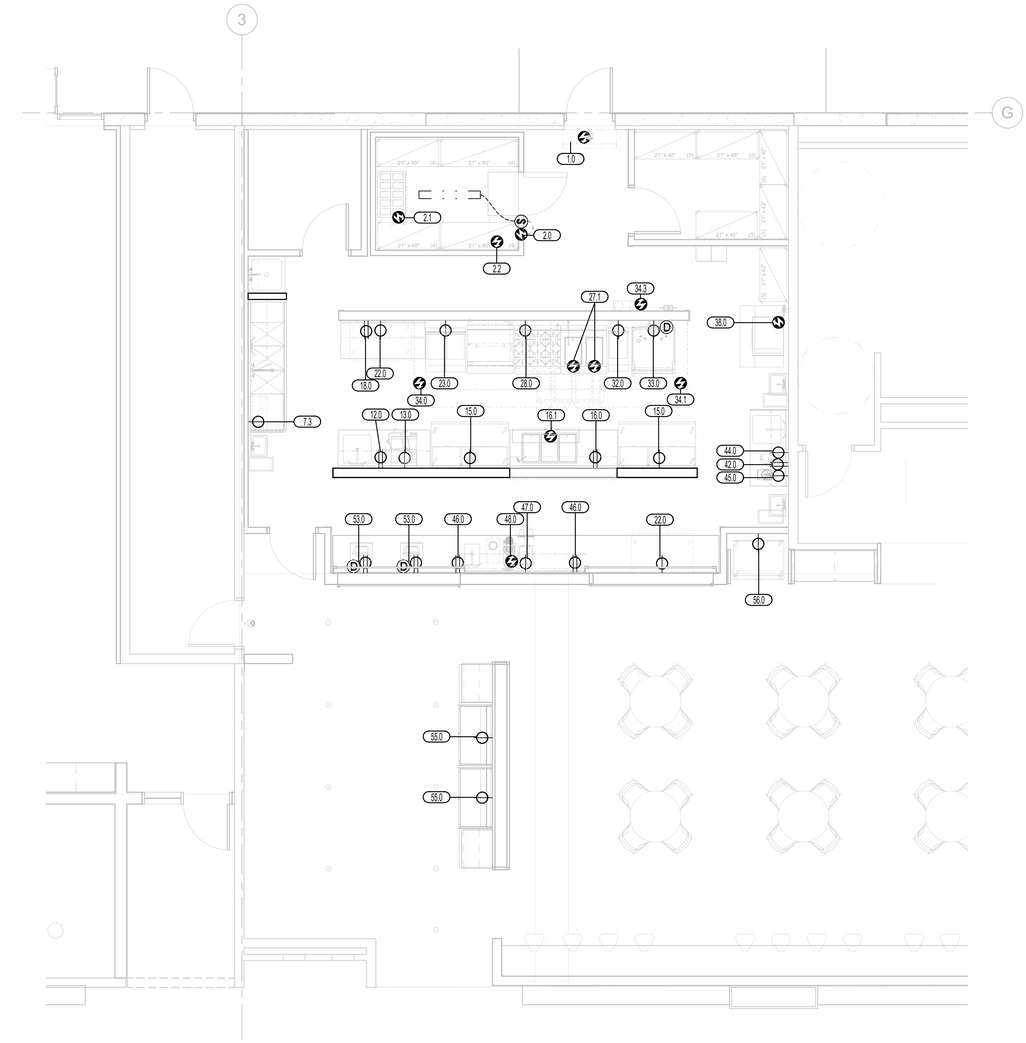
REFRIGERATION NOTES

NOTE A: POWER AND CONTROL WIRING BETWEENCOMPRESSOR AND JB ON TOP OF WALK-IN BY ELECTRICAL TRADE (FOR FREEZER ONLY)

NOTE B: CONCEALED WIRING IN CONDUIT TO JB AT EVAPORATOR UNIT BY ELECTRICAL TRADE

VENTILATOR NOTES

VA	NOT USED
VB	WIRING IN CONDUIT BY ELECTRICAL TRADE BETWEEN VENTILATOR CONTROL (FAN SWITCH, PANEL OR VARIABLE SPEED FAN CONTROL) AND EXHAUST/SUPPLY FAN MAGNETIC STARTER/MOTOR
VC	NOT USED
VD	NOT USED
VE	WIRING IN CONDUIT BY ELECTRICAL TRADE BETWEEN VENTILATOR CONTROL AND JB ON TOP OF VENTILATOR FOR LIGHTS AND/OR FAN
VF	NOT USED
VG	NOT USED
VH	NOT USED
VI	NOT USED



1 LEVEL 1 - KITCHEN - ELECTRICAL PLAN
1/4" = 1'-0"

NOTE:
REFER TO SHEET QF106 FOR
ELECTRICAL UTILITY LOAD SCHEDULE

NOTE: THIS DRAWING IS FOR INFORMATION ONLY.

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FOODSERVICE ELECTRICAL SPOT CONNECTION PLAN

DATE	REMARKS
12/19/2025	ISSUED FOR CONSTRUCTABILITY REVIEW
01/26/2026	OC HEALTH DEPT

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

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SPECIAL CONDITIONS NOTES

NOTE A: CONTRACTOR SHALL ENSURE ALL WALLS AND/OR CEILINGS ARE PROPERLY REINFORCED TO SUPPORT ALL WALL AND/OR CEILING SUPPORTED EQUIPMENT AS PER DETAIL 7.07.

NOTE B: NOT USED.

NOTE C: NOT USED.

NOTE D: CONTRACTOR SHALL PITCH FLOOR TO AREA FLOOR DRAINS PER ARCHITECTS DRAWINGS.

NOTE E: NOT USED.

NOTE F: CONTRACTOR SHALL PROVIDE 4" (100mm), 6" (150mm) OR 8" (200mm) DIA. CONDUIT (PVC, EMT OR OTHER MATERIAL REQUIRED BY CODE) TO RUN BEVERAGE LINES BY KEC OR BEVERAGE VENDOR. ALL BENDS TO BE EASY SWEEPS (24" (600mm) FOR 4" OR 6" DIA. OR 30" (750mm) FOR 8" DIA. RADIUS MIN). CONTRACTOR TO RUN CONDUIT FROM BEVERAGE SYSTEM(S) TO POINT(S) SHOWN FOR BEVERAGE EQUIPMENT. RUN CONDUIT ON UNDERSIDE OF SLAB OR ABOVE FINISHED CEILING AS INDICATED AND PROVIDE SUPPORT AS REQUIRED. SEE DETAIL 6.25.

NOTE G: CONTRACTOR SHALL PROVIDE 1" (25mm) DIA. CONDUIT (PVC, EMT OR OTHER MATERIAL REQUIRED BY CODE) FOR RUN OF COMPUTER GRADE WIRING. ALL BENDS TO BE EASY SWEEPS (18" (450mm) RADIUS MIN.) CONTRACTOR TO RUN FROM POS EQUIPMENT TO POINT(S) SHOWN.

NOTE H: CONTRACTOR SHALL PROVIDE CLEAR OPENING IN WALL TO RECEIVE FOODSERVICE EQUIPMENT BY KEC. CONTRACTOR TO ALLOW 1/4" (6mm) CLEARANCE ON EACH SIDE AND TOP(S) OF UNIT(S). KEC TO PROVIDE ALL NECESSARY S/S TRIM FOR BOTH SIDES OF WALL.

NOTE I: NOT USED.

NOTE J: NOT USED.

NOTE K: NOT USED.

NOTE L: CONTRACTOR SHALL VERIFY INSTALLATION HEIGHT OF FINISHED CEILING WITH FOODSERVICE EQUIPMENT BELOW AS SHOWN.

NOTE M: CONTRACTOR SHALL ENSURE STRUCTURAL FLOOR IS ADEQUATE TO SUPPORT HEAVY EQUIPMENT SUCH AS PIZZA OVEN, ICE MAKER AND REMOTE REF. SYSTEM.

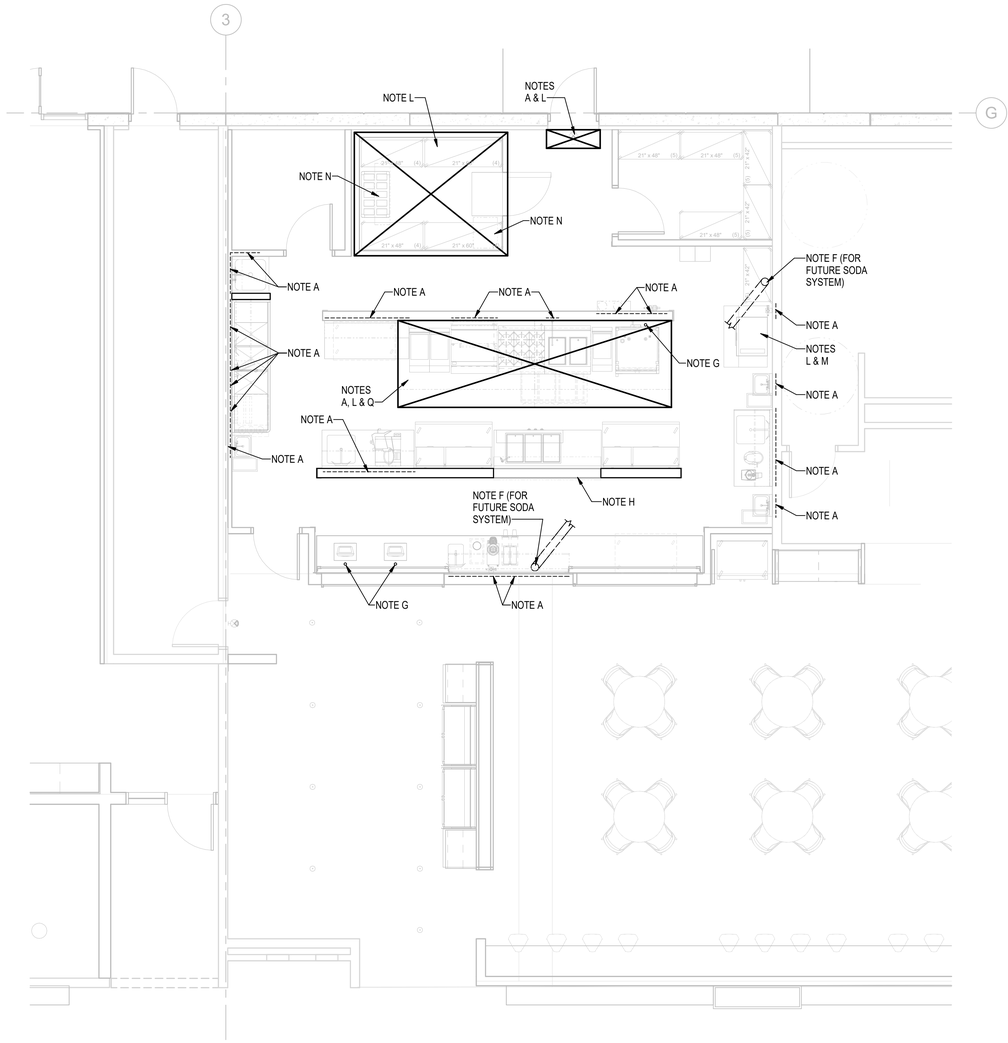
NOTE N: REFRIGERATION LINES TO/FROM PACKAGE REFRIGERATION SYSTEM. KEC TO COORDINATE PENETRATIONS AND LINE RUNS WITH GENERAL CONTRACTOR.

NOTE O: NOT USED.

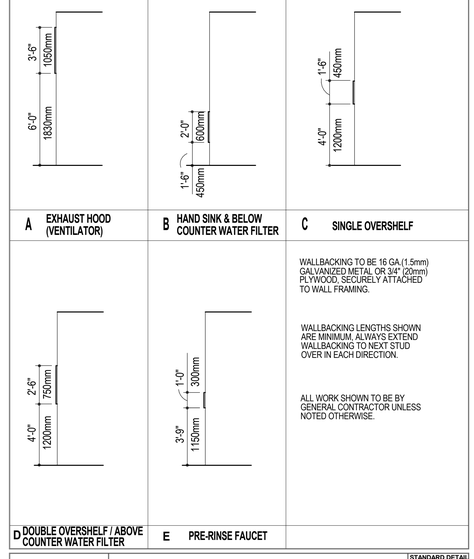
NOTE P: KEC TO COORDINATE ALL EQUIPMENT LEGS WITH FLOOR DRAIN AND FLOOR TROUGH LOCATIONS, TO ENSURE THERE IS NO CONFLICT WITH FLOOR DRAINS, SINKS, OR FLOOR TROUGHS FOR MAINTENANCE.

NOTE Q: CONTRACTOR TO PROVIDE A MINIMUM OF 18" (457mm) OF NON-COMBUSTIBLE CEILING MATERIAL AROUND TYPE I EXHAUST HOODS TO COMPLY TO NFPA 96, SECTION 4.2.1.

NOTE R: FLOOR TO BE LASER LEVEL UNDER ALL COOKING EQUIPMENT AND SERVERY AREA CUSTOM FABRICATED AND MILLWORK COUNTERS.



1 LEVEL 1 - KITCHEN - SPECIAL CONDITIONS PLAN
1/4" = 1'-0"



APPROVED: 11-01-02

cinilittle. | WALL BACKING DETAILS (NO SCALE) | STANDARD DETAIL 7.07

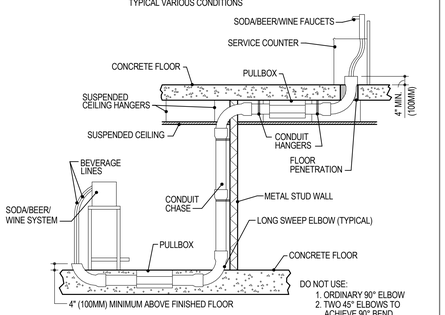


FIGURE 1

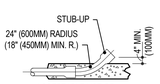
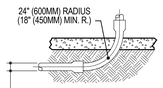
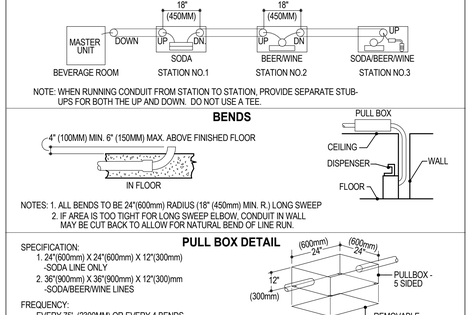


FIGURE 2



APPROVED: 11-01-02

cinilittle. | SODA / BEER CONDUIT SCHEMATIC (NO SCALE) | STANDARD DETAIL 6.25



APPROVED: 11-01-02

cinilittle. | SODA / BEER CONDUIT SCHEMATIC (NO SCALE) | STANDARD DETAIL 6.25.1

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FOODSERVICE SPECIAL CONDITIONS PLAN

REMARKS	DATE
ISSUED FOR CONSTRUCTABILITY REVIEW	12/19/2025
OC HEALTH DEPT	01/26/2026

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

SHEET QF104

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PLUMBING SCHEDULE

ITEM NO.	QTY.	DESCRIPTION	REMARKS	CW (in)	CW AFF (in)	HW (in)	HW AFF (in)	FILTERED H2O (in)	FILTERED AFF (in)	IW (in)	DW (in)	DW AFF (in)	GAS (in)	GAS AFF (in)	MBTU	CTW (in)	CTWR (in)	CTW GPM	MAX PSI	PLUMBING REMARKS	ITEM NO.
1.0	1	AIR CURTAIN																			1.0
2.0	1	WALK-IN COMPLEX - ON SLAB WITH RAMP																			2.0
2.1	1	EVAPORATOR COIL, +35F								1" TO FS											2.1
2.2	1	CONDENSER, AIR COOLED																			2.2
3.0	4	SHELVING UNIT, WALK-IN COOLER																			3.0
4.0	1	DUNNAGE RACK																			4.0
5.0	6	SHELVING UNIT, DRY STORAGE																			5.0
6.0	1	MOP SINK									2"	0"									6.0
6.1	1	SERVICE FAUCET		1/2"	36"	1/2"	36"														6.1
6.2	1	CHEMICAL SHELF/MOP RACK																			6.2
7.0	1	THREE-COMPARTMENT SINK		1/2"	18"	1/2"	18"			(3)1-1/2" TO (2) FS											7.0
7.1	1	PRE-RINSE W/ FAUCET		1/2"	18"	1/2"	18"														7.1
7.2	1	STAINLESS STEEL WALL SHEATHING																			7.2
7.3	1	UNDERCOUNTER DISHWASHER		3/4"	12"					5/8" TO FS										female garden hose connection	7.3
7.4	1	RACK SHELF																			7.4
8.0	3	HAND SINK		1/2"	18"	1/2"	18"				1-1/2"	24"									8.0
9.0	3	TRASH RECEPTACLE																			9.0
10.0	11	CORNER GUARD																			10.0
11.0	1	WALL SHELF, SINGLE TIER																			11.0
12.0	1	WORKTABLE WITH SINK		1/2"	18"	1/2"	18"			1-1/2" TO FS											12.0
13.0	1	FOOD SLICER, ELECTRIC																			13.0
14.0	1	WALL SHELF, SINGLE TIER																			14.0
15.0	2	REFRIGERATED PREP TABLE																			15.0
16.0	1	BACK COUNTER																			16.0
16.1	1	HOT FOOD WELL UNIT, DROP-IN								1" TO FS											16.1
16.2	1	FILL FAUCET		1/2"	18"																16.2
17.0	1	PASS THRU SHELF																			17.0
17.1	1	PASS WINDOW TRIM																			17.1
18.0	1	WORKTABLE																			18.0
19.0	1	OPEN NUMBER																			19.0
20.0	1	OPEN NUMBER																			20.0
21.0	1	WALL SHELF, SINGLE TIER																			21.0
22.0	2	REFRIGERATOR, UNDERCOUNTER																			22.0
23.0	1	FRYER WITH FILTER											1"	24"	244.0						23.0
23.1	1	QUICK DISCONNECT GAS HOSE & POSI SET																			23.1
24.0	1	GRIDDLE											3/4"	24"	105.0						24.0
24.1	1	QUICK DISCONNECT GAS HOSE & POSI SET																			24.1
25.0	1	SALAMANDER											3/4"	58"	35.0						25.0
26.0	1	OPEN BURNER RANGE, COUNTERTOP											3/4"	24"	210.0						26.0
26.1	1	QUICK DISCONNECT GAS HOSE & POSI SET																			26.1
27.0	1	SPREADER PLATE																			27.0
27.1	2	HOT FOOD WELL								1/2" TO FS											27.1
27.2	1	POT FILLER FAUCET		1/2"	54"																27.2
28.0	1	REFRIGERATED BASE, SELF-CONTAINED																			28.0
29.0	1	OPEN NUMBER																			29.0
30.0	1	OPEN NUMBER																			30.0
31.0	1	OPEN NUMBER																			31.0
32.0	1	FRYER WITH FILTER											3/4"	24"	122.0						32.0
32.1	1	QUICK DISCONNECT GAS HOSE & POSI SET																			32.1
33.0	1	COMBI OVEN, GAS						3/4"	30"	1-1/8" TO FS			3/4"	24"	180					CONNECTION FROM ITEM 33.1	33.0
33.1	1	WATER FILTER, COMBI OVEN		1/2"	72"															CONNECT TO ITEM 33.0	33.1
34.0	1	EXHAUST HOOD - LEFT																			34.0
34.1	1	EXHAUST HOOD - RIGHT																			34.1
34.2	1	STAINLESS STEEL WALL SHEATHING - COOK LINE																			34.2
34.3	1	FIRE SUPPRESSION SYSTEM																			34.3
35.0	1	OPEN NUMBER																			35.0
36.0	1	OPEN NUMBER																			36.0
37.0	1	OPEN NUMBER																			37.0
38.0	1	ICE MACHINE						3/8"		3/4" TO FS										CONNECTION FROM ITEM 38.1	38.0
38.1	1	WATER FILTER, ICE		3/4"	72"															CONNECT TO ITEM 38.0	38.1
39.0	1	ICE BIN								3/4" TO FS											39.0
40.0	1	OPEN NUMBER																			40.0
41.0	1	OPEN NUMBER																			41.0
42.0	1	WORKTABLE WITH SINK		1/2"	18"	1/2"	18"			1-1/2" TO FS											42.0
43.0	1	WALL SHELF, 2-TIER																			43.0
44.0	1	MIXER, COUNTERTOP																			44.0
45.0	1	FOOD PROCESSOR																			45.0
46.0	1	BACK COUNTER W/ DUMP SINK		1/2"	18"	1/2"	18"			1-1/2" TO FS											46.0
46.1	1	OPEN NUMBER																			46.1
46.2	2	CUP DISPENSER																			46.2
46.3	1	TRASH CHUTE																			46.3
47.0	1	COFFEE GRINDER																			47.0
48.0	1	COFFEE BREWER						3/8"	40"											CONNECTION FROM ITEM 48.2	48.0
48.1	1	COFFEE SERVER																			48.1
48.2	1	WATER FILTER, COFFEE		3/8"	28"															CONNECT TO ITEM 48.0	48.2
49.0	1	OPEN NUMBER																			49.0
50.0	1	OPEN NUMBER																			50.0
51.0	1	TRASH RECEPTACLE																			51.0
52.0	1	WALL SHELF, 2-TIER																			52.0
53.0	2	POINT OF SALE SYSTEM	NIKEC BY OWNER																		53.0
54.0	2	RETAIL COUNTER	BY MILLWORK																		54.0
55.0	2	MERCHANDISER, SELF-SERVICE																			55.0
56.0	1	REFRIGERATOR, REACH-IN	PRE-PACKAGED FOOD ONLY																		56.0
57.0	1	CONDIMENT COUNTER	BY MILLWORK																		57.0
58.0	2	EMPLOYEE LOCKER																			58.0

VENTILATOR SCHEDULE

ITEMO NO.	QTY.	DESCRIPTION	EXHAUST LENGTH (in)	EXHAUST DEPTH (in)	EXHAUST DIA (in)	EXHAUST CFM	EXHAUST SPWG	SUPPLY LENGTH (in)	SUPPLY DEPTH (in)	SUPPLY CFM	SUPPLY SPWG	VENTILATION REMARKS	ITEMO NO.
34.0	1	EXHAUST HOOD - LEFT	21"	10"		2200	0.603	(3)24"	(3)12"	540 ea.	0.01		34.0
34.1	1	EXHAUST HOOD - RIGHT	18"	10"		1850	0.496	(3)24"	(3)12"	540 ea.	0.01		34.1

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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17300 RED HILL
IRVINE, CALIFORNIA 92614

FOODSERVICE EQUIPMENT UTILITY LOAD SCHEDULE

DATE	REMARKS
12/19/2025	ISSUED FOR CONSTRUCTABILITY REVIEW
01/26/2026	OC HEALTH DEPT

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

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ELECTRICAL SCHEDULE

ITEM NO.	QTY.	DESCRIPTION	REMARKS	CONNECTION	AFF (in)	VOLTS	CYCLE	PHASE	AMPS	HP	KW	NEMA	ELECTRICAL REMARKS	ITEM NO.
1.0	1	AIR CURTAIN		EC	DFA	120	60	1	2.4	1/6				1.0
2.0	1	WALK-IN COMPLEX - ON SLAB WITH RAMP		EC	DFA	120	60	1	15.0		1.8		VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS	2.0
2.1	1	EVAPORATOR COIL, +35F		EC	DFA	120	60	1	1.8		0.22		VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS	2.1
2.2	1	CONDENSER, AIR COOLED		EC	DFA	208	60	1	7.4		1.54		VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS	2.2
3.0	4	SHELVING UNIT, WALK-IN COOLER												3.0
4.0	1	DUNNAGE RACK												4.0
5.0	6	SHELVING UNIT, DRY STORAGE												5.0
6.0	1	MOP SINK												6.0
6.1	1	SERVICE FAUCET												6.1
6.2	1	CHEMICAL SHELF/MOP RACK												6.2
7.0	1	THREE-COMPARTMENT SINK												7.0
7.1	1	PRE-RINSE W/ FAUCET												7.1
7.2	1	STAINLESS STEEL WALL SHEATHING												7.2
7.3	1	UNDERCOUNTER DISHWASHER		SR	18"	208	60	3	24.9			15-30P		7.3
7.4	1	RACK SHELF												7.4
8.0	3	HAND SINK												8.0
9.0	3	TRASH RECEPTACLE												9.0
10.0	11	CORNER GUARD												10.0
11.0	1	WALL SHELF, SINGLE TIER												11.0
12.0	1	WORKTABLE WITH SINK		DR	48"	120	60	1	16.0		1.92		GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT	12.0
13.0	1	FOOD SLICER, ELECTRIC		SR	48"	120	60	1	2.0	1/2	0.24	5-15P		13.0
14.0	1	WALL SHELF, SINGLE TIER												14.0
15.0	2	REFRIGERATED PREP TABLE		SR	18"	120	60	1	3.9	1/4	0.47	5-15P		15.0
16.0	1	BACK COUNTER		DR	48"	120	60	1	16.0		1.92		GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT	16.0
16.1	1	HOT FOOD WELL UNIT, DROP-IN		EC	24"	208	60	1	17.9		3.72			16.1
16.2	1	FILL FAUCET												16.2
17.0	1	PASS THRU SHELF												17.0
17.1	1	PASS WINDOW TRIM												17.1
18.0	1	WORKTABLE		DR	48"	120	60	1	16.0		1.92		GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT	18.0
19.0	1	OPEN NUMBER												19.0
20.0	1	OPEN NUMBER												20.0
21.0	1	WALL SHELF, SINGLE TIER												21.0
22.0	2	REFRIGERATOR, UNDERCOUNTER		SR	18"	120	60	1	3.0	1/5	0.36	5-15P		22.0
23.0	1	FRYER WITH FILTER		SR	12"	120	60	1	7.0		0.84	5-15P		23.0
23.1	1	QUICK DISCONNECT GAS HOSE & POSI SET												23.1
24.0	1	GRIDDLE												24.0
24.1	1	QUICK DISCONNECT GAS HOSE & POSI SET												24.1
25.0	1	SALAMANDER												25.0
26.0	1	OPEN BURNER RANGE, COUNTERTOP												26.0
26.1	1	QUICK DISCONNECT GAS HOSE & POSI SET												26.1
27.0	1	SPREADER PLATE												27.0
27.1	2	HOT FOOD WELL		EC	30"	208	60	1	6.0		1.24			27.1
27.2	1	POT FILLER FAUCET												27.2
28.0	1	REFRIGERATED BASE, SELF-CONTAINED		SR	10"	120	60	1	12.6		1.51	5-15P		28.0
29.0	1	OPEN NUMBER												29.0
30.0	1	OPEN NUMBER												30.0
31.0	1	OPEN NUMBER												31.0
32.0	1	FRYER WITH FILTER		SR	12"	120	60	1	5.6		0.67	5-15P		32.0
32.1	1	QUICK DISCONNECT GAS HOSE & POSI SET												32.1
33.0	1	COMBI OVEN, GAS		SR	24"	120	60	1	12.0		1.4	5-20P	ADD DATA CONNECTION	33.0
33.1	1	WATER FILTER, COMBI OVEN												33.1
34.0	1	EXHAUST HOOD - LEFT		EC	DFA	120	60	1	16.0		1.92		VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS	34.0
34.1	1	EXHAUST HOOD - RIGHT		EC	DFA	120	60	1	16.0		1.92		VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS	34.1
34.2	1	STAINLESS STEEL WALL SHEATHING - COOK LINE												34.2
34.3	1	FIRE SUPPRESSION SYSTEM		EC	DFA	120	60	1	15.0		1.8		VERIFY REQUIREMENTS WITH SYSTEM DRAWINGS	34.3
35.0	1	OPEN NUMBER												35.0
36.0	1	OPEN NUMBER												36.0
37.0	1	OPEN NUMBER												37.0
38.0	1	ICE MACHINE		EC	66"	208	60	1	11.0		2.28			38.0
38.1	1	WATER FILTER, ICE												38.1
39.0	1	ICE BIN												39.0
40.0	1	OPEN NUMBER												40.0
41.0	1	OPEN NUMBER												41.0
42.0	1	WORKTABLE WITH SINK		DR	48"	120	60	1	16.0		1.92		GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT	42.0
43.0	1	WALL SHELF, 2-TIER												43.0
44.0	1	MIXER, COUNTERTOP		SR	48"	120	60	1	4.0		0.8	5-15P		44.0
45.0	1	FOOD PROCESSOR		SR	48"	120	60	1	7.0	1	0.84	5-15P		45.0
46.0	1	BACK COUNTER W/ DUMP SINK		(2) DR	48"	120	60	1	16.0		1.92		GFCI CONVENIENCE RECEPTACLE - RATING ASSUMES 20.0 AMP CIRCUIT	46.0
46.1	1	OPEN NUMBER												46.1
46.2	2	CUP DISPENSER												46.2
46.3	1	TRASH CHUTE												46.3
47.0	1	COFFEE GRINDER		SR	40"	120	60	1	8.0	1/2	0.96			47.0
48.0	1	COFFEE BREWER		EC	40"	120	60	1	13.7		1.65			48.0
48.1	1	COFFEE SERVER												48.1
48.2	1	WATER FILTER, COFFEE												48.2
49.0	1	OPEN NUMBER												49.0
50.0	1	OPEN NUMBER												50.0
51.0	1	TRASH RECEPTACLE												51.0
52.0	1	WALL SHELF, 2-TIER												52.0
53.0	2	POINT OF SALE SYSTEM	NIKEC BY OWNER	DR	38"	120	60	1	5.0		0.6	5-15P	PROVIDE DATA CONNECTION; ESTIMATED UTILITIES, VERIFY WITH OWNER	53.0
54.0	2	RETAIL COUNTER	BY MILLWORK											54.0
55.0	2	MERCHANDISER, SELF-SERVICE		SR	8"	208	60	1	16.0		2.82	6-20P		55.0
56.0	1	REFRIGERATOR, REACH-IN	PRE-PACKAGED FOOD ONLY	SR	84"	120	60	1	5.6	1/3	5.6	5-15P		56.0
57.0	1	CONDIMENT COUNTER	BY MILLWORK											57.0
58.0	2	EMPLOYEE LOCKER												58.0

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

FOODSERVICE EQUIPMENT UTILITY LOAD SCHEDULE

DATE	REMARKS
12/19/2025	ISSUED FOR CONSTRUCTABILITY REVIEW
01/26/2026	OC HEALTH DEPT

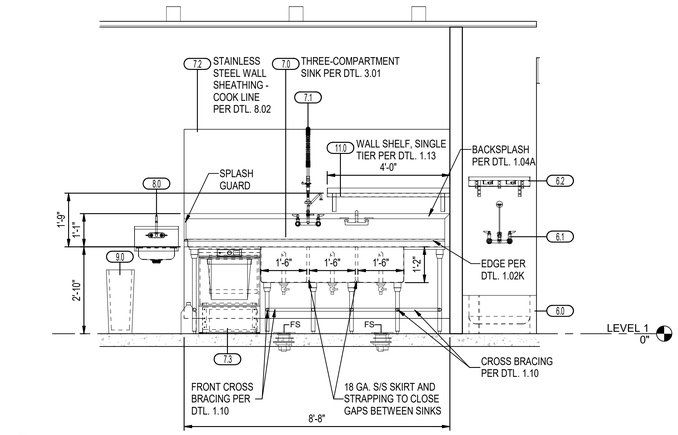
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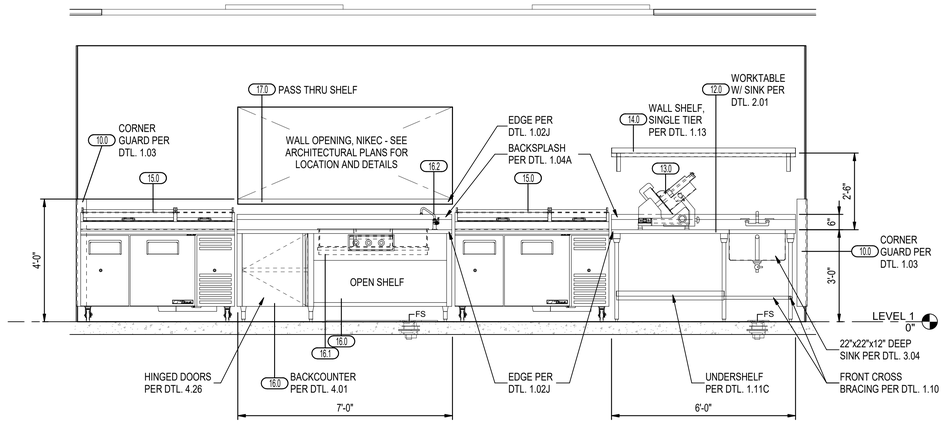
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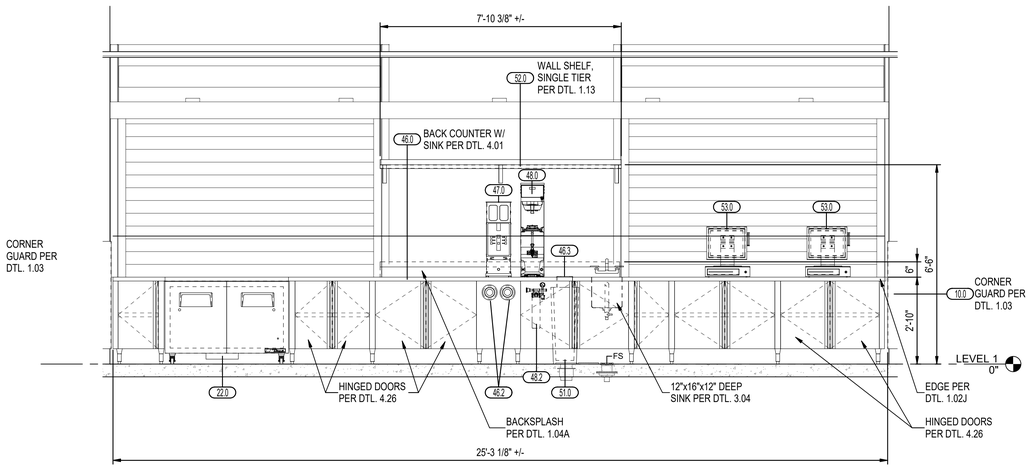
A1 ELEVATION A-1
1/2" = 1'-0"



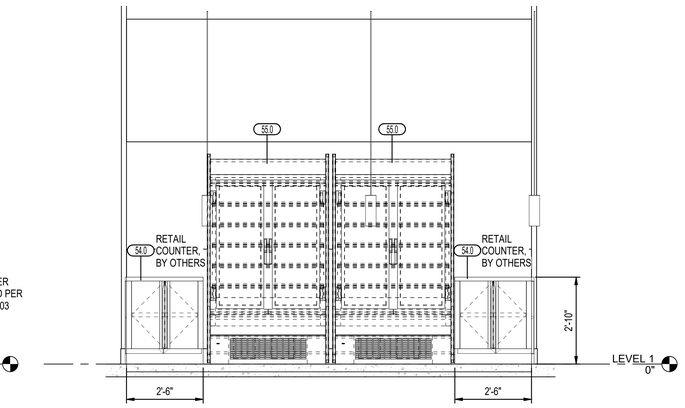
A2 ELEVATION A-2
1/2" = 1'-0"

A3 ELEVATION A-3
1/2" = 1'-0"

A4 ELEVATION A-4
1/2" = 1'-0"



A5 ELEVATION A-5
1/2" = 1'-0"



A6 ELEVATION A-6
1/2" = 1'-0"

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FOODSERVICE EQUIPMENT ELEVATIONS

DATE	REMARKS
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01/26/2026	OC HEALTH DEPT

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

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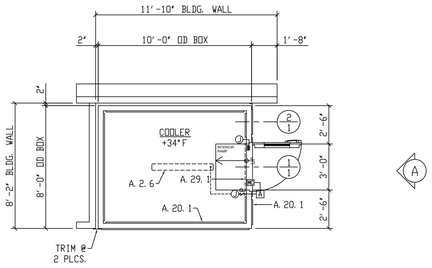
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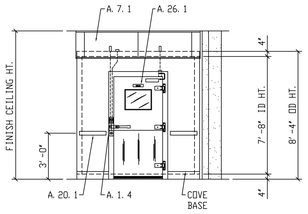
HOOD INFORMATION			HOOD DIMENSIONS (IN.)			HOODS		EXHAUST			SUPPLY		
HOOD NO.	MARK	MODEL	LENGTH	WIDTH	HEIGHT	HOOD CONFIG.	HOOD TYPE	DUCT SIZE (IN.)	CFM	S.P. (IN. W.G.)	CFM	MANIFOLD LOCATION
1	HOOD #1	XXXX-315-S	120	54	24	WALL	EYEBROW	22X20	3,600	1.50	195	LEFT
2	HOOD #1	XXXX-315-S	107	54	24	WALL	EYEBROW	21X20	3,600	1.50	195	RIGHT

| LIGHTING DETAILS | | | | | GREASE EXTRACTION DETAILS | | | | |

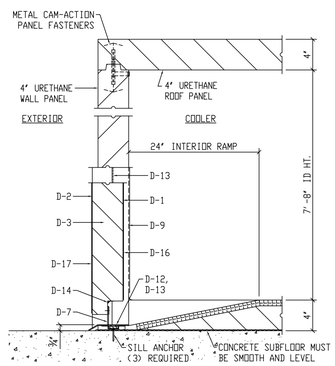
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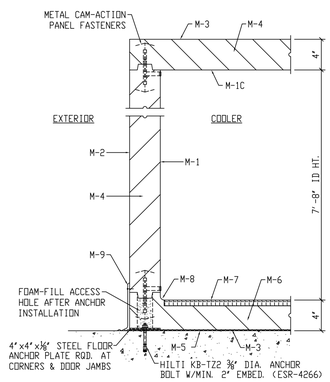
FLOOR PLAN
1/4"=1'-0"



ELEVATION
1/4"=1'-0" (A)



SECTION
(@ DOOR) 1-1/2"=1'-0" (1/1)



SECTION
(@ WALL) 1-1/2"=1'-0" (2/1)

MATERIAL LIST CITY OF IRVINE RECREATION CENTER		CONSULTANT: CINI-LITTLE INTERNATIONAL, INC. LOCATION: IRVINE, CA	
SYM.	ITEM	DESCRIPTION	QTY.
PANEL MATERIAL LIST			
M-1	INTERIOR WALL FACING	.040" WHITE STUCCO EMBOSSED ALUMINUM	
M-1C	INTERIOR CEILING FACING	.040" WHITE SMOOTH ALUMINUM	
M-2	EXTERIOR EXPOSED FACING	20G STAINLESS STEEL, TYPE 304 #4	
M-3	EXTERIOR UNEXPOSED FACING	26G STUCCO EMBOSSED GALVANIZED STEEL, A525 G-90	
M-4	PANEL INSULATION	4" URETHANE, CLASS 1 - UL LISTED	
NSF FLOOR PANELS			
M-5	SUBFLOOR MEMBRANE	6MIL VISQUEEN VAPOR BARRIER W/LAPPED JOINTS	
M-6	FLOOR PANEL INSULATION	4" URETHANE, CLASS 1 - UL LISTED	
M-7	INTERIOR FLOOR FACING	.100" SMOOTH ALUMINUM PLATE WITH MGP BACKING & NON-SKID STRIPS @RAMP AND AISLE (FURNISHED LOOSE)	
M-8	INTERIOR BASE	INTEGRAL 1/2" NSF COVE RADIUS	
M-9	EXTERIOR BASE	6" HIGH STAINLESS STEEL COVE MOLDING	
H-30L RAISED CASING COOLER DOOR: (3'-0" WIC x 6'-6" HIC)			
D-1	INTERIOR METAL FACING	20G STAINLESS STEEL, TYPE 304 #4	
D-2	EXTERIOR METAL FACING	20G STAINLESS STEEL, TYPE 304 #4	
D-3	DOOR INSULATION	4" URETHANE, CLASS 1 - UL LISTED	
D-4	DEADBOLT HANDLE	KASON #27C CHROME CYLINDER/PADLOCKING DEADBOLT LATCH WITH 1/4 TWIST SAFETY INSIDE RELEASE KNOB	
D-5	DOOR CLOSER	CALIBRE #6503AL HYDRAULIC RACK & PINION W/H.D.	
D-6	HINGE (3/DOOR)	KASON #1256 CAM-LIFT CHROME FINISH HINGE	
D-7	ADJUSTABLE WIPER	NEOPRENE W/STAINLESS STEEL RETAINER	
D-8	DOOR GASKET	EXTRUDED POLYVINYL CHLORIDE W/MAGNETIC CORE	
D-9	JAMB METAL FACING	20G STAINLESS STEEL (TYPE 430) WITH 48" HIGH 18G STAINLESS STEEL JAMB ANGLE GUARDS	
D-10	RAISED CASING	18G STAINLESS STEEL, TYPE 304 #4	
D-11	INSIDE BUMPER BAR	1/8" x 2" ALUMINUM CHANNEL	
D-12	REMOVABLE SILL PLATE	1/8" STAINLESS STEEL, TYPE 304 #2B	
D-13	SILL/FRAME HEATER	120V 230W WARMING CABLES W/SELF-REG. T-STAT	
D-14	DOOR PERIMETER HEATER	120V 230W WARMING CABLES W/SELF-REG. T-STAT	
D-15	VISION PANEL (15"x20")	SEALED INSULATED 3-PANE TEMPERED GLASS UNIT WITH 120 VOLT 35 WATT HEATER CIRCUIT	
D-16	INTERIOR KICKPLATE	18G STAINLESS STEEL, 36" HIGH	
D-17	EXTERIOR KICKPLATE	18G STAINLESS STEEL, 36" HIGH	
ACCESSORY MATERIAL LIST			
A. 1. 4	MULTI-MONITOR & AUTOMATIC LIGHT CONTROL	MODULARM #7SLC DIGITAL THERMOMETER & HI-LO TEMP. MONITORING CAPABLE ALARM WITH AUTO LIGHT CONTROL, MAGNETIC DOOR CONTACTS, ILLUMINATED INTERIOR SWITCH W/PANIC ALARM FEATURE, BATTERY BACK-UP, DRY CONTACTS & SENSOR PROBE (120V,30mA)	1
A. 2. 6	LIGHT FIXTURE	KASON #1810LCT400 4' FIXTURE W/FROSTED DIFFUSER & 4000K LED STRIPS (120V, 40W, 4550 LUMENS)	1
A. 6. 1	TRIM	MATCHING METAL ANGLES	2
A. 7. 1	CLOSURE PANELS	MATCHING METAL ANGLES, RAILS & TRACK	18'
A. 20. 1	WALL PROTECTION	ONE ROW BOSTON RETAIL SERIES 3300 BLACK VINYL BUMPERS WITH REAR ALUMINUM RETAINER, END CAPS & FASTENERS @INTERIOR AND EXPOSED EXTERIOR WALLS	42'
A. 26. 1	IDENTIFICATION LABEL	2"x8" BLACK PLASTIC SELF-ADHESIVE LABEL WITH WHITE RECESSED LETTERS (VERIFY WORDAGE)	1
A. 29. 1	STRIP CURTAINS	USDA APPROVED 8" WIDE x .080" THCIK CLEAR VINYL STRIPS WITH MOUNTING HARDWARE & FASTENERS	1

GENERAL NOTES
1. TO MAINTAIN NSF CERTIFICATION, A NSF CERTIFIED COVE BASE MUST BE INSTALLED.
2. ALL DIMENSIONS MUST BE FIELD VERIFIED PRIOR TO FABRICATION OF COLD STORAGE ROOMS.
3. WIRING & INSTALLATION OF FIXTURES AND POWER CONNECTIONS BY JOBSITE ELECTRICIAN.

VERIFIED BY: _____ DATE: _____

USTC® APPROVAL NO. LA111-01-110 CLASS 1 - INSULATED PANEL

NSF®

UL®

CITY OF LOS ANGELES CALIFORNIA RESEARCH REPORT: RR25133

STATE OF OREGON #1379YC

EISA COMPLIANT

RMI AIRDYNE

DRAWING NO. 1124-08

INDOOR WALK-IN COOLER
CITY OF IRVINE RECREATION CENETER
1 CIVIC CENTER PLAZA - IRVINE, CA 92606
CONSULTANT: CINI-LITTLE INTERNATIONAL, INC.

Refrigerator Manufacturers, LLC
17018 EDWARDS ROAD
CERRITOS, CA 90703
(562) 926-2006

DRAWN: RG	DATE: 11/26/24
CHECKED	SHEET: 1 of 2
CHECKED	SCALE: AS NOTED
APPROVED	W.O. #
REV.	REV.
REV.	REV.
REV.	REV.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

FOODSERVICE EQUIPMENT WALK-IN DRAWING

REMARKS	DATE
ISSUED FOR CONSTRUCTABILITY REVIEW	12/19/2025
OC HEALTH DEPT	01/26/2026

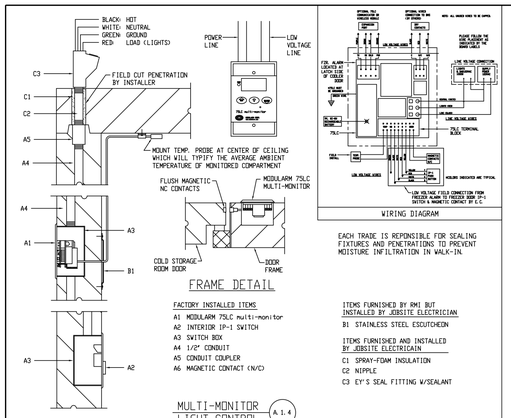
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JOB NO.:	LAX21-0174-02

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FRAME DETAIL

FACTORY INSTALLED ITEMS

- A1 MODULARM 75LC multi-monitor
- A2 INTERIOR IP-1 SWITCH
- A3 SWITCH BOX
- A4 1/2" CONDUIT
- A5 CONDUIT COUPLER
- A6 MAGNETIC CONTACT (N/C)

MULTI-MONITOR LIGHT CONTROL (A.1.4)

WIRING DIAGRAM

EACH TRADE IS REPONSIBLE FOR SEALING FIXTURES AND PENETRATIONS TO PREVENT MOISTURE INFILTRATION IN WALK-IN.

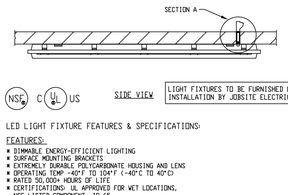
ITEMS FURNISHED BY RMI BUT INSTALLED BY JOBSITE ELECTRICIAN

- B1 STAINLESS STEEL ESCUTCHEON

ITEMS FURNISHED AND INSTALLED BY JOBSITE ELECTRICIAN

- C1 SPRAY-FOAM INSULATION
- C2 NIPPLE
- C3 EY'S SEAL FITTING W/SEALANT

120V/1PH/60HZ
0.3 AMP MAX



LED LIGHT FIXTURE FEATURES & SPECIFICATIONS:

FEATURES:

- DIMMABLE ENERGY-EFFICIENT LIGHTING
- SURFACE MOUNTING BRACKETS
- EXTREMELY DURABLE POLYCARBONATE HOUSING AND LENS
- OPERATING TEMP -40°F TO 104°F (-40°C TO 40°C)
- RATED 50,000+ HOURS OF LIFE
- CERTIFICATIONS: UL APPROVED FOR WET LOCATIONS, NSF LISTED COMPONENT, IP-65

SPECIFICATIONS:

MATERIALS:

- DIFFUSER: FROSTED UL APPROVED UL94-HB RATED, PC
- HOUSING: GRAY UL APPROVED UL94-5VA RATED, PC
- LED TRAY: WHITE PAINTED STEEL

POWER:

- WATTS: 40 W
- VOLTS: 120-277 V
- AMPS: 0.4 A @ 120 V
- PF: > 0.9

LED:

- OUTPUT: 4550 LUMENTS
- COLOR TEMPERATURE: 4000K
- 110 LUMENS/WATT

SIZE:

- NOMINAL OVERALL DIMENSIONS: 46-15/32" L x 4-59/64" W x 2-9/16" H (1180 x 125 x 65 mm)

SECTION A

ITEMS FURNISHED AND INSTALLED BY JOBSITE ELECTRICAIN

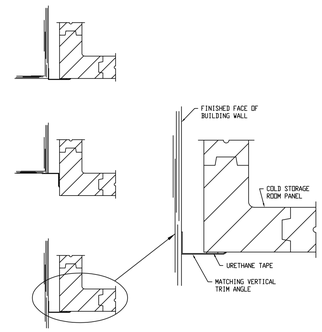
- C1 SPRAY-FOAM INSULATION
- C2 NIPPLE
- C3 "EY" SEAL OFF W/SEALANT
- C4 GASKETED CONNECTOR

EACH TRADE IS REPONSIBLE FOR SEALING FIXTURES AND PENETRATIONS TO PREVENT MOISTURE INFILTRATION IN WALK-IN.

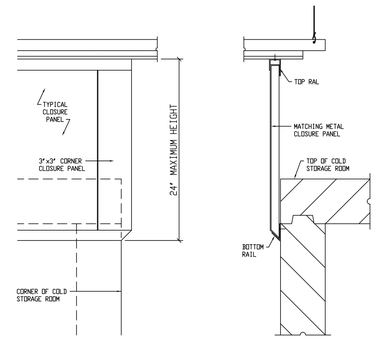
LIGHT FIXTURE DETAIL (A.2.6)

CEILING MOUNTED

120V/1PH/60HZ
40 WATTS



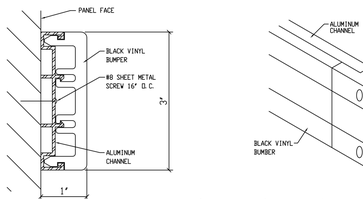
TRIM DETAIL (A.6.1)



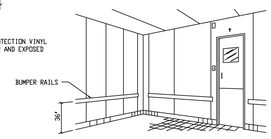
FRONT ELEVATION — SECTION

CLOSURE PANEL DETAIL (A.7.1)

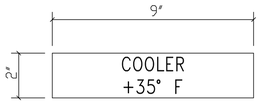
VINYL WALL BUMPER



☐ ONE ROW OF WALL PROTECTION VINYL BUMPERS AT INTERIOR AND EXPOSED EXTERIOR WALLS



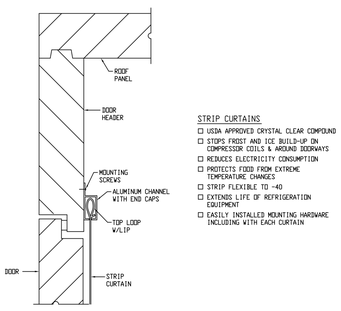
WALL PROTECTION DETAIL (A.20.1)



1/16" THICK SELF-ADHESIVE BLACK PLASTIC LABEL WITH 5/8" HIGH WHITE RECESSED LETTERS.

NOTE: VERIFY AND APPROVE LABEL WORDAGE

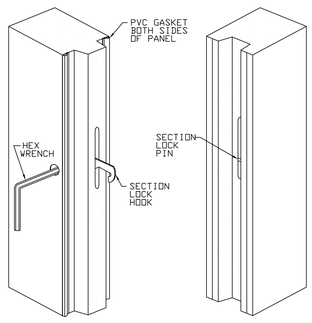
IDENTIFICATION LABEL DETAIL (A.26.1)



STRIP CURTAINS

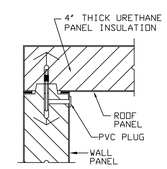
- ☐ USDA APPROVED CRYSTAL CLEAR COMPOUND
- ☐ STOPS FROST AND ICE BUILD-UP ON COMPRESSOR COILS & AROUND DOORWAYS
- ☐ REDUCES ELECTRICITY CONSUMPTION
- ☐ PROTECTS FOOD FROM EXTREME TEMPERATURE CHANGES
- ☐ STRIP FLEXIBLE TO -40
- ☐ EXTENDS LIFE OF REFRIGERATION EQUIPMENT
- ☐ EASILY INSTALLED MOUNTING HARDWARE INCLUDING WITH EACH CURTAIN

STRIP CURTAIN DETAIL (A.29.1)

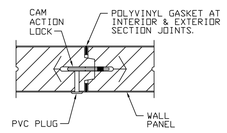


LOCK PANELS TOGETHER BY INSTERTING ALLEN WRENCH INTO 3/4" HOLE AND TURNING CLOCKWISE UNTIL PANELS MEET.

TYPICAL PANEL SECTION JOINT



WALL/ROOF SECTION



WALL/WALL SECTION

CAM-ACTION FASTENER CHART	
PANEL TYPE	MAX. CENTER DISTANCE
WALL TO WALL	34-3/8" O.C.
WALL TO ROOF	23" O.C.
ROOF TO ROOF	34-3/8" O.C.
WALL TO FLOOR	23" O.C.
FLOOR TO FLOOR	23" O.C.

USTC® APPROVAL NO. LA111-01-110 CLASS 1 - INSULATED PANEL

NSF/ANSI 2 — UL® — CITY OF LOS ANGELES CALIFORNIA RESEARCH REPORT: RR25133 — STATE OF OREGON #1.57PFC — EISA COMPLIANT

RMI AIRDYNE — DRAWING NO. 1124-08

COLD STORAGE ROOM ACCESSORY DETAILS
CITY OF IRVINE RECREATION CENETER
1 CIVIC CENTER PLAZA - IRVINE, CA 92606
CONSULTANT: CINI-LITTLE INTERNATIONAL. INC.

Refrigerator Manufacturers, LLC
17018 EDWARDS ROAD
CERRITOS, CA 90703
(562) 926-2006

DRAWN: RG	DATE: 11/26/24
CHECKED	SHEET: 2 of 2
CHECKED	SCALE: AS NOTED
APPROVED	W.O. #
REV.	REV.
REV.	REV.
REV.	REV.

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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WARE MALCOMB
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IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

FOODSERVICE EQUIPMENT WALK-IN DRAWING

REMARKS	DATE
ISSUED FOR CONSTRUCTABILITY REVIEW	12/19/2025
OC HEALTH DEPT	01/26/2026

PA/PM:	JT
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AIRDYNE ENGINEERING SUMMARY

POWER SUPPLY: 208V/1PH/60HZ **FUSE SIZE:** 15.0 AMPS
CONNECTED LOAD: 7.4 AMPS **MINIMUM AMPACITY:** 9.2 AMPS

ITEM #	ITEM #	FIXTURES: DESCRIPTION	FIXTURES: TEMP (F) FIXT.	FIXTURES: TEMP (F) SST.	REFRIGERANT R-	RECEIVER CAPACITY LBS.	COMPRESSORS: MODEL	H.P.	RATING @ 60 Hz: RLA	RATING @ 60 Hz: V	RATING @ 60 Hz: PH	MBH (90°F)	DEFROST	UNIT COOLER: ITEM #	QUANTITY	MODEL	RATING @ 60 Hz 1 ø FAN: RLA	RATING @ 60 Hz 1 ø FAN: V	HEATER: FLA	HEATER: V	HEATER: PH	SYSTEM TOTAL POWER 208V, 60 Hz: AMPS	SYSTEM TOTAL POWER 208V, 60 Hz: PH	100' LINE SIZE (O.D.): ROUTE	SUCTION	LIQUID	DISCH.	DRAIN	ACCESSORIES (SEE SUPPLY CODE *): HEAD PRESSURE CONTROL	CRANK CASE HEATER	FAN CYCLE SWITCH	SUCTION ACCUMULATOR	THERMOSTAT	SOLENOID VALVE	THERMOSTATIC EXPANSION VALVE	DEMAND DEFROST
A		WALK-IN COOLER	35	25	448a	6.4	FFAM-010Z	1.0	6.3	208	1	8.6	I	A1	1	LEL0095AS6AM	1.8	115				7.4	1	M	7/8	3/8						F	F	F	INTELLIGEN

C UL US LISTED
CONDENSING UNIT
FILE SA 45495

E ELECTRIC (TIMED)
I INTELLIGEN CONTROLLER
H HOT GAS (TIMED)
O OFF CYCLE (TEMP.)

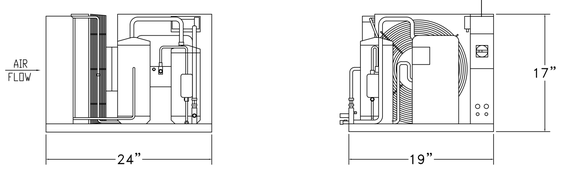
B BRANCH
M MAIN
S SINGLE

* SUPPLY CODES:
F – FACTORY INSTALLED
L – LOOSE (FIELD INSTALLED)
M – MANUFACTURER EQUIPPED
R – REFRIGERATION CONTRACTOR

NOTE:
– ALL SYSTEMS ENGINEERED WITH R-448AA REFRIGERANT. ANY BASES/COILS NOT SUPPLIED BY AIRDYNE MUST BE EQUIPPED WITH R404A EXPANSION VALVE.
– CONNECTION LINE SIZES BASED ON 100' MAX LINE RUNS. IF LINE RUNS EXCEED 100', CONSULT FACTORY FOR PROPER LINE SIZES.
– "COMPRESSOR MOTOR PROTECTED UNDER PRIMARY SINGLE PHASE PROTECTION."
– EFFECTIVE JANUARY 1, 2009, ALL WALK-IN COOLER AND FREEZER EVAPORATOR COILS INSTALLED IN THE U.S.A. SHALL BE SUPPLIED WITH ENERGY EFFICIENT (EC) MOTORS BASED ON THE FEDERAL ENERGY INDEPENDENCE AND SECURITY ACT (HR-6).

INDOOR-PAK SYSTEM

CONTROL PANEL
208-230V/1PH
CONN. LOAD = 7.4 AMPS
MCA = 9.2 AMPS
MOPD= 15.0 AMPS



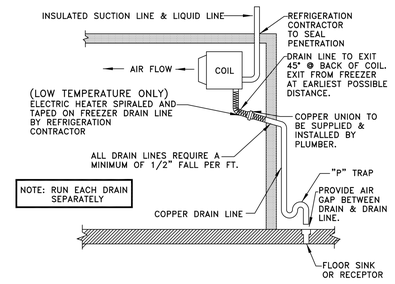
ELEVATION–LEFT SIDE

ELEVATION–FRONT VIEW

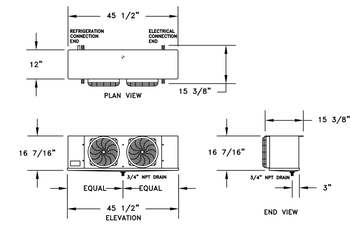
SYSTEM WEIGHT =90 LBS.
SOUND DATA =68 dBA

NOTES:
1. MINIMUM OF 1,150 CFM EXHAUST VENTILATION, TOTAL 11,600 BTU/HR AT 20 DEGREE TEMP. RISE.

A R-1 MODEL NO: FFAM-010Z-CFV
ITEM: A

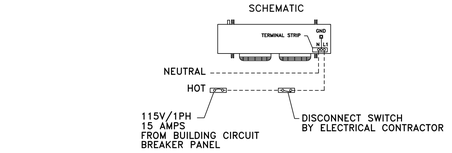


C R-1 CONDENSATE DRAIN LINE (TYPICAL)



ITEM No.	UNIT MODEL No.	CAPACITY BTU	LENGTH	FANS: QTY.	FANS: CFM	FANS: EC MOTOR 115/1PH	FANS: EC MOTOR 208/1PH	ELEC DEFROST 208/1PH	CONNECTIONS (In.): COIL INLET OD	CONNECTIONS (In.): SUCTION ID	CONNECTIONS (In.): DRAIN MPT	APPROX. NET WT. (Lbs.)
A1	LEL0095AS6AMAB0200	9450	45-1/2"	2	1305	1.8	--	--	1/2"	5/8"	3/4"	51

D R1 UNIT COOLER DETAIL



B R-1 INTELLIGEN POWER WIRING FOR WALK-IN COOLER

SPECIFICATION

THE REFRIGERATION PACKAGE SHALL BE PRE-ENGINEERED AND FACTORY ASSEMBLED UNIT, TRADE NAME "INDOOR-PAK", AS MANUFACTURED BY AIRDYNE REFRIGERATION, 17018 EDWARDS RD., CERRITOS, CA 90703 PHONE: (562) 926-2006, FAX: (562) 926-2007
E-MAIL: sales@airdyne.com

CONTRACTOR SHALL FURNISH AND INSTALL, WHERE SHOWN ON PLANS, (1) AIRDYNE, U.L. APPROVED "INDOOR-PAK" AIR-COOLED REMOTE REFRIGERATION PACKAGES, MODEL FFAM-010Z-CFV WITH CONTROL PANEL, 208 VOLTS, 1 PHASE, 60 HZ. REFRIGERATION SYSTEM SHALL BE HOUSE IN A HEAVY GALVANIZED BASE. ENTIRE BASE SHALL BE PRE-ASSEMBLED, WELDED, CLEANED, PRIMED AND POWDER COATED EPOXY AND BAKED.
THE CONDENSER SHALL BE SECTIONAL, REMOVABLE, WITH RIFLED TUBE SLOTTED FINNED AND SHALL BE DESIGNED FOR 20 FTD.

1. REFRIGERATION UNITS
   A. AIR-COOLED CONDENSING UNITS SHALL BE SCROLL TYPE (COPELAND). EACH UNIT SHALL BE EQUIPPED WITH PRESSURE CONTROL, LIQUID DRIER, SIGHT GLASS, COMPRESSOR CONTROLLER, CONTACTOR, CAPACITORS AND PRESSURE CONTROLS.
   B. ALL COMPRESSOR UNITS SHALL BE NEW FACTORY ASSEMBLED TO OPERATE WITH THE REFRIGERANT SPECIFIED IN THE ENGINEERING SUMMARY SHEET. REFRIGERANT R-448A SHALL BE USED ON ALL COMMERCIAL TEMPERATURE UNITS AND LOW TEMPERATURE UNITS.
2. PRE-PIPING
   A. ALL REFRIGERANT LINES SHALL BE EXTENDED TO ONE SIDE OF THE PACKAGE IN A NEAT AND ORDERLY MANNER. SUCTION LINES MUST BE INSULATED WITH ARMAFLEX (3/4" THICK LOW TEMP, 1/2" THICK MED TEMP).
   B. ALL TUBING SHALL BE SECURELY SUPPORTED AND ANCHORED WITH CLAMPS.
   C. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED FOR ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE.
   D. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 300 PSI. AFTER THE CONDENSING UNIT AND COIL HAVE BEEN CONNECTED, THE BALANCE OF THE SYSTEM SHALL BE LEAK TESTED WITH ALL VALVES OPEN.
3. CONTROL PANEL
   A. THE PACKAGE SHALL HAVE FACTORY MOUNTED AND PRE-WIRED CONTROL PANEL COMPLETE WITH COMPRESSOR CONTACTOR, PRESSURE CONTROL AND TIME CLOCKS WIRED FOR SINGLE POINT CONNECTION.
   B. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL MAIN POWER LINES TO PANEL AND PROVIDE WIRE HARNESS WIRING FOR CONTROL AND DEFROST HEATER BETWEEN AND THE DEFROST CLOCK AND THE REFRIGERATION FIXTURES, ALL IN ACCORDANCE WITH THE WIRING DIAGRAM AND LOCAL CODES.
4. SAFETY CAUTION
   EACH SYSTEM AND EVAPORATOR IS SHIPPED UNDER NITROGEN PRESSURE. USE CAUTION AND EXERCISE SAFETY AT ALL TIMES WHEN PREPARING FOR FINAL HOOK-UP.
5. EVAPORATOR COIL
   A. EVAPORATOR COILS SHALL BE DIRECT EXPANSION TYPE FABRICATED OF COPPER TUBES WITH ALUMINUM FINS. ALL EVAPORATOR COILS SHALL BE PROVIDED WITH SOLENOID VALVE, THERMOSTATIC EXPANSION VALVE, AND ELECTRONIC THERMOSTAT. PIPED AND WIRED TO THE JUNCTION BOX FOR POSITIVE PUMP DOWN.
   B. EVAPORATOR COILS SHALL BE EQUIPPED WITH ENERGY SAVING "EC" MOTORS.
   C. EVAPORATOR COILS SHALL BE EQUIPPED WITH INTELLIGEN CONTROLLERS.

CONSTRUCTION NOTES FOR TRADES

1. GENERAL CONTRACTOR
   A. CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND COORDINATE WITH OTHER TRADES.
   B. ALL CORE DRILLING REQUIRED FOR REMOTE REFRIGERATION PIPING WORK BY THE REFRIGERATION CONTRACTOR IS IN THE GENERAL CONTRACTOR SCOPE OF WORK. COORDINATE EXACT LOCATION AND NUMBER OF PENETRATIONS WITH THE REFRIGERATION CONTRACTOR AND COMPLY WITH ALL LANDLORD REQUIREMENTS FOR X-RAY OF SLAB PRIOR TO WORK.
2. REFRIGERATION CONTRACTOR
   A. CONTRACTOR SHALL USE ONLY CLEAN DEHYDRATED, SEALED REFRIGERATION GRADE A.C.R COPPER TUBING. USE ONLY LONG RADIUS ELBOWS TO REDUCE FLOW RESISTANCE AND LINE BREAKAGE. DO NOT USE 45 DEGREE ELBOWS AT ALL.
   B. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED ON ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE.
   USE MINIMUM 35% SILVER SOLDER FOR DISSIMILAR METALS
   C. ALL PIPING MUST BE SUPPORTED WITH HANGERS THAT CAN WITHSTAND THE COMBINED WEIGHT OF TUBING, INSULATION, VALVES AND FLUID IN THE TUBING.
   D. USE DRY NITROGEN IN THE COPPER TUBING DURING BRAZING TO PREVENT FORMATION OF COPPER OXIDES. LIQUID AND SUCTION LINES MUST BE FREE TO EXPAND INDEPENDENTLY OF EACH OTHER. DO NOT EXCEED 100 FEET WITH OUT A CHANGE IN DIRECTION OR AN OFFSET. PLAN PROPER PITCHING, EXPANSION ALLOWANCE, AND P-TRAPS AT THE BASE OF ALL SUCTION RISERS AND AT EVERY 15 FEET OF EVERY VERTICAL RISE. INSTALL SERVICE VALVES AT SEVERAL LOCATIONS FOR EASE OF MAINTENANCE. THESE VALVES MUST BE UL APPROVED FOR 450 PSI WORKING PRESSURE.
   E. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 300 PSI WITH ALL VALVES OPEN AND HELD FOR 12 HOURS. ELECTRONIC LEAK DETECTORS SHALL BE USED TO LOCATE ALL LEAKS.
   F. COMPLETE SYSTEM SHALL BE EVACUATED TO 500 MICRONS WITH VACUUM PUMP BEFORE CHARGING THE SYSTEM.
   G. ONCE SYSTEM IS CHARGED AND RUNNING, ADJUST ALL CONTROLS INCLUDING PRESSURE CONTROLS, EXPANSION VALVE, THERMOSTATS AND TIME CLOCKS. RETURN AFTER 24 HOURS TO VERIFY PROPER OPERATION OF SYSTEMS.
   I. REFRIGERANT SUCTION LINES OUTSIDE OF REFRIGERATED COMPARTMENTS, NOT RUN IN CONDUIT, SHALL BE INSULATED BACK TO COMPRESSOR WITH ARMSTRONG ARMA-FLEX AP-25/50 FOAMED PLASTIC INSULATION OR EQUAL IN ACCORD WITH DIRECTION OF THE MANUFACTURER. MINIMUM THICKNESS SHALL BE 1/2 INCH FOR COMMERCIAL TEMPERATURE AND 3/4 INCH FOR LOW TEMPERATURE.
   J. FILL ROOF REFRIGERATION AND ELECTRICAL PITCH POCKETS WITH FOAM AND SEALANT.
3. ELECTRICAL CONTRACTOR
   A. ELECTRICAL CONTRACTOR TO PROVIDE MAIN POWER FOR REFRIGERATION PACKAGE AND CONNECT CONTROL AND DEFROST SYSTEMS
   B. ALL ELECTRICAL WIRING AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE WIRING DIAGRAM AND LOCAL CODES.
4. PLUMBING CONTRACTOR
   A. PLUMBING CONTRACTOR TO PROVIDE TYPE "M" COPPER DRAIN LINES FOR WALK-IN REFRIGERATOR AND FREEZER, PITCHED 1/2" PER FOOT OF RUN. IN FREEZER, HEATED DRAIN LINE MUST BE INSULATED TO PREVENT FREEZING. TRAP DRAIN LINES OUTSIDE OF REFRIGERATED SPACE TO AVOID ENTRANCE OF WARM AND MOIST AIR.
   B. CONTRACTOR TO PROVIDE INDIVIDUAL DRAIN LINE FOR EACH EVAPORATOR UNLESS OTHERWISE CALLED FOR IN THE PLANS.
   C. ALL PLUMBING INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL CODES.

REV LEVEL	DESCRIPTION	DATE

DRAWING APPROVAL
"PRODUCTION LEAD TIME:
4-6 WEEKS AFTER RECEIPT
OF APPROVED DRAWINGS AND
PURCHASE ORDER.
SEND APPROVED DRAWING TO
"TONY BEDI"

APPROVED BY:_____
DATE:_____

AIRDYNE REFRIGERATION
17018 EDWARDS RD., CERRITOS, CA 90703
PHONE: (562) 926-2006 FAX: (562) 926-2007
E-MAIL: sales@airdyne.com

REFRIGERATION PLAN

CITY OF IRVINE
RECREATION CENTER
IRVINE, CA

DRAWN BY	Le
CHECKED BY	Tony Bedi
DATE	11/26/24
LATEST REVISION	XXXXXXXXX
DRAWING NO.	112624-081
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	1 OF 1 SHEET

CITY OF IRVINE
BUILDING & SAFETY DIVISION

WARE MALCOMB
915 Wilshire Blvd, Suite #2150
Los Angeles, CA 90017
P 310.903.4000
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT

IRVINE FIELDHOUSE
17300 RED HILL
IRVINE, CALIFORNIA 92614

FOODSERVICE EQUIPMENT REFRIGERATION DRAWING

DATE	REMARKS
12/19/2025	ISSUED FOR CONSTRUCTABILITY REVIEW
01/28/2026	OC HEALTH DEPT

PA/PM:	JT
DRAWN BY.:	CLI CAD
JOB NO.:	LAX21-0174-02

SHEET
QF401

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TECHNOLOGY LEGEND

NOTE: NOT ALL SYMBOLS OR ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT. REFER TO DETAILS AND NOTES FOR MOUNTING HEIGHTS.

COMMUNICATIONS - TN SERIES

SYMBOL	DESCRIPTION
◀#	COMMUNICATION OUTLET # INDICATES ALTERNATE QUANTITY OF CABLES (2) CABLES
◀#	COMMUNICATION/COAX OUTLET # INDICATES ALTERNATE QUANTITY OF CABLES (1) DATA CABLE + (1) COAX CABLE
▼	COMMUNICATION OUTLET IN FLOOR BOX COMM (2) CABLES
▼	COMMUNICATION OUTLET IN FLOOR BOX POWER / COMM (2) CABLES
▼	COMMUNICATION OUTLET IN FLOOR BOX POWER / COMM / AV (2) CABLES
▼	COMMUNICATION OUTLET IN POKE-THROUGH DEVICE COMM (2) CABLES
▼	COMMUNICATION OUTLET IN POKE-THROUGH DEVICE POWER / COMM (2) CABLES
▼	COMMUNICATION OUTLET IN POKE-THROUGH DEVICE POWER / COMM / AV (2) CABLES
▼	COMMUNICATION OUTLET IN CEILING ENCLOSURE COMM (2) CABLES
▼	COMMUNICATION OUTLET IN CEILING ENCLOSURE POWER / COMM (2) CABLES
▼	COMMUNICATION OUTLET IN CEILING ENCLOSURE POWER / COMM / AV (2) CABLES
W W	WIRELESS ACCESS POINT ANTENNA - COMMUNICATIONS OUTLET - OFCI
P P	COMMUNICATION OUTLET FOR PROJECTOR - WALL/CEILING (1) CABLE
C C	COMMUNICATION OUTLET FOR FOUR SENSOR FIXED CAMERA - WALL/CEILING (1) CABLE
C C	COMMUNICATION OUTLET FOR DUAL SENSOR FIXED CAMERA - WALL/CEILING (1) CABLE
C C	COMMUNICATION OUTLET FOR DUAL SENSOR FIXED CAMERA - WALL/CEILING (1) CABLE
C C	COMMUNICATION OUTLET FOR SINGLE SENSOR FIXED CAMERA - WALL/CEILING (1) CABLE
VI X VI X	COMMUNICATION OUTLET FOR VIDEO INTERCOM - WALL, DESK M = MAIN STATION R = REMOTE STATION (2) CABLES
I X I X	ASSISTANCE/EMERGENCY CALL STATION X: E = 2-WAY ELEVATOR COMM DEVICE B = BLUE LIGHT PHONE (2) CABLES
FC	FIBER TO COPPER CONVERTER BOX

SYNCHRONIZED CLOCKS

SYMBOL	DESCRIPTION
CA CD	CLOCK - WALL, CEILING CA = ANALOG CD = DIGITAL

WIRING

SYMBOL	DESCRIPTION
(N)	NEW WORK
	WIRING CONCEALED IN FLOOR OR UNDER GRADE OR ROUTED IN CEILING SPACE OF FLOOR BELOW.
(E)	EXISTING WORK TO REMAIN
(D)	EXISTING TO BE REMOVED
(ER)	EXISTING TO BE RELOCATED
(RL)	NEW LOCATION OF RELOCATED ITEM
(F)	FUTURE WORK
	HOME RUN CONDUIT OR WIRING TO INDICATED DESTINATION
	CONDUIT RUN TURNED UP THROUGH FLOOR OR CEILING. CORE & FIREPROOF AS REQUIRED.
	CONDUIT STUBBED OUT AT LOCATION SHOWN. PROVIDE INSULATED BUSHING & PULLROPE.
	TELEPHONE/DATA SLEEVE THROUGH WALL, ABOVE CEILING. EXTEND TO ACCESSIBLE TILE CLG. BOTH SIDES. TERMINATE WITH BUSHINGS.
	BASKET TYPE CABLE TRAY WITH 90 DEGREE ELBOW SHOWN
	LADDER TYPE CABLE TRAY WITH 90 DEGREE ELBOW SHOWN
J J J	JUNCTION BOXES, WALL, CEILING AND FLUSH FLOOR MOUNTED. 4" SQ. BOX MIN., LARGER IF REQUIRED
T	COMMUNICATIONS J-BOX
T	COMMUNICATIONS J-BOX WITH FURNITURE FEED
TT	UNDERGROUND TECHNOLOGY PULL BOX. X: T = TRAFFIC RATED W = WATER RATED
— J —	J-HOOK PATHWAY

SECURITY SYSTEM - TY SERIES

SYMBOL	DESCRIPTION
	ACCESS CONTROL SYSTEM:
CR	CARD READER
KR	KEYPAD READER
DS	DOOR POSITION SWITCH
ER ER	EMERGENCY DOOR RELEASE - WALL / TABLE TOP
RS X	DOOR RELEASE SWITCH - WALL / TABLE TOP X: A = ADA OPENER (SUPPLY BY DIVISION 8)
	INTRUSION DETECTION SYSTEM:
GB	GLASS BREAK SENSOR - WALL / CEILING
MS X MS X	MOTION SENSOR - WALL / CEILING X: L = LONG RANGE
DS DA	DURESS ALARM - WALL / TABLE TOP
KP	ARM / DISARM KEYPAD
S S	STROBE / HORN - WALL / CEILING
	VIDEO SURVEILLANCE:
C C	FOUR SENSOR CAMERA - WALL/CEILING
C C	DUAL SENSOR CAMERA - WALL/CEILING
C C	DUAL SENSOR CAMERA - WALL/CEILING
C C	SINGLE SENSOR CAMERA - WALL/CEILING
	INTERCOM:
VI X VI X	VIDEO INTERCOM - WALL, DESK X: M = MAIN STATION R = REMOTE STATION
I X I X	ASSISTANCE/EMERGENCY CALL STATION X: E = 2-WAY ELEVATOR COMM DEVICE B = BLUE LIGHT PHONE

AUDIOVISUAL - TA SERIES

SYMBOL	DESCRIPTION
AV DEVICE TAGS	# # - TAG X - # X - DEVICE TYPE Z# - # Z# - AUDIO ZONE
	AV OUTLET WALL / FLOORBOX / POKE-THRU
	AV OUTLET TABLE TOP / CEILING / PENDANT
	AV OUTLET - FLOORBOX / POKE-THRU POWER/AV
	AV OUTLET - FLOORBOX / POKE-THRU POWER/COMM/AV
	AV OUTLET - TABLE TOP POWER/COMM/AV
	AV OUTLET - TABLE TOP POWER/COMM/BUTTON CONTROL PANEL/AV
AV X	AV EQUIPMENT WALL ENCLOSURE / CEILING ENCLOSURE
AV AV	AV EQUIPMENT - POWER/AV WALL ENCLOSURE / CEILING ENCLOSURE
AV AV	AV EQUIPMENT - POWER/COMM/AV WALL ENCLOSURE / CEILING ENCLOSURE
A A	ASSISTED LISTENING DEVICE EXTENDED ANTENNA - WALL / CEILING
	CONTROL PANEL - WALL / TABLE TOP X: C = CAMERA PTZ CONTROL JOYSTICK R = ROOM SCHEDULING PANEL T = TOUCH PANEL W = WIRELESS DETACHABLE TOUCH PANEL # = REFERENCE NUMBERED FOR AV SCHEDULE
$ $	BUTTON CONTROL PANEL - WALL / TABLE TOP X: P = PROJECTOR SCREEN MOTOR CONTROLLER B = BUTTON PANEL V = VOLUME CONTROL # = REFERENCE NUMBERED FOR AV SCHEDULE
S S	SENSORS - WALL / CEILING X: B = BLUETOOTH PROXIMITY SENSOR N = NFC PROXIMITY SENSOR PS = PARTITION SENSOR OS = OCCUPANCY SENSOR # = REFERENCE NUMBERED FOR AV SCHEDULE
P P	PROJECTOR - WALL / CEILING
AV AV	CAMERA - WALL / CEILING X: F = FIXED CAMERA I = IR CAMERA P = PTZ CAMERA U = UNIFIED CONFERENCING DEVICE (CAMERA / MICROPHONE / SPEAKER)

AUDIOVISUAL - TA SERIES

SYMBOL	DESCRIPTION
	SPEAKER - WALL / CEILING / PENDANT / TABLE TOP
	MICROPHONE - CEILING / PENDANT / TABLE TOP
	MICROPHONE - 2x2 CEILING LAY-IN
	WIRELESS MICROPHONE WITH DOCKING STATION - TABLE TOP
AV X	AUDIOVISUAL SYSTEM CABINET X: 2 = 2-POST 4 = 4-POST F = FLOOR STANDING M = MOBILE FURNITURE S = SLIDE OUT W = WALL MOUNTED
	DASHED LINE (VIEWING AREA OF DISPLAY) (AV4) FINE DETAIL VIEWING AREA (AV6) MID DETAIL READABLE VIEWING AREA (AV8) LOW DETAIL PICTURE ONLY VIEWING AREA
X Y	DISPLAY / SCREEN X: D = DISPLAY I = INTERACTIVE DISPLAY P = PROJECTOR SCREEN V = VIDEO WALL IV = INTERACTIVE VIDEO WALL U = ULTRAWIDE DISPLAY (21:9 RATIO) Y = DISPLAY / SCREEN DIAGONAL SIZE IN INCHES

ABBREVIATIONS

(N)	NEW	NEC	NATIONAL ELECTRICAL CODE
(E)	EXISTING TO REMAIN	NEMA	NATIONAL ELECTRICAL MFGR'S ASSOC.
(D)	EXISTING TO BE REMOVED	NTS	NOT TO SCALE
(ER)	EXISTING TO BE RELOCATED	OC	ON CENTER
(RL)	NEW LOCATION OF RELOCATED ITEM	OD	OUTSIDE DIAMETER
(F)	FUTURE	OFCI	OWNER-FURNISHED CONTRACTOR-INSTALLED
AC	ABOVE COUNTER BACKSPLASH	OFNP	OPTICAL FIBER NONCONDUCTIVE PLENUM
ACP	ACCESS CONTROL PANEL	OFNR	OPTICAL FIBER NONCONDUCTIVE RISER
A, AMP	AMPERES	OFOI	OWNER-FURNISHED OWNER-INSTALLED
AFF	ABOVE FINISHED FLOOR	OSP	OUTSIDE PLANT
AFG	ABOVE FINISHED GRADE	PBX	PRIVATE BRANCH EXCHANGE
AHJ	AUTHORITY HAVING JURISDICTION	PDU	POWER DISTRIBUTION UNIT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	PNL	PANEL
AUX	AUXILIARY	POE	POWER OVER ETHERNET
AWG	AMERICAN WIRE GAUGE	PSP	POWER SUPPLY PANEL
BNC	VIDEO CONNECTOR	PTZ	PAN TILT ZOOM
BG	BELOW GRADE	PVC	POLYVINYL CHLORIDE
C	CONDUIT	QTY	QUANTITY
CATV	COMMUNITY ACCESS TELEVISION	REQD	REQUIRED
CLG	CEILING	RF	RADIO FREQUENCY
CO	CONDUIT ONLY	RFI	REQUEST FOR INFORMATION
CU	COPPER	RGB	RED GREEN BLUE
DIA	DIAMETER	RNC	RIGID NON-METALLIC CONDUIT (PVC)
DIAG	DIAGONAL	SATV	SATELLITE TELEVISION
DIV	DIVISION	SC	SUBSCRIBER CONNECTOR (FIBER CONNECTOR)
DVI	DIGITAL VIDEO INTERFACE	SCTP	SCREENED TWISTED PAIR
DWG	DRAWING	ST	STRAIGHT TIP (FIBER CONNECTOR)
EIA	ELECTRONICS INDUSTRY ALLIANCE	STP	SHIELDED TWISTED PAIR
EMT	ELECTRICAL METALLIC TUBING	TBB	TELECOMMUNICATIONS BONDING BACKBONE
ENT	ELECTRICAL NONMETALLIC TUBING	TBD	TO BE DETERMINED
ER	EQUIPMENT ROOM	SBB	SECONDARY GROUNDING BUSBAR
FA	FIRE ALARM	TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
FACP	FIRE ALARM CONTROL PANEL	PBB	PRIMARY GROUNDING BUSBAR
FBO	FURNISHED BY OTHERS	TYP	TYPICAL
FDU	FIBER DISTRIBUTION UNIT	UF	UNDERFLOOR
FTP	FOIL TWISTED PAIR	UG	UNDERGROUND
G, GND	GROUND	UL	UNDERWRITER'S LAB
GRC	GALVANIZED RIGID STEEL CONDUIT	UON	UNLESS OTHERWISE NOTED
HDMI	HIGH DEFINITION MULTIMEDIA INTERFACE	UPS	UNINTERRUPTIBLE POWER SUPPLY
HZ	HERTZ (CYCLES PER SECOND)	UTP	UNSHIELDED TWISTED PAIR
ID	INSIDE DIAMETER	VGA	VIDEO GRAPHICS ARRAY
TR	TELECOMMUNICATIONS ROOM	V	VOLTS
IG	ISOLATED GROUND	W	WATTS
IMC	INTERMEDIATE METAL CONDUIT	W/	WITH
IP	INTERNET PROTOCOL	W/O	WITHOUT
IT	INFORMATION TECHNOLOGY	WAN	WIDE AREA NETWORK
KO	KNOCK OUT	WAO	WORK AREA OUTLET
LAN	LOCAL AREA NETWORK	WAP	WIRELESS ACCESS POINT
LC	LUCENT CONNECTOR (FIBER CONNECTOR)	WP	WEATHERPROOF
LCD	LIQUID CRYSTAL DISPLAY	XFR	TRANSFORMER
LED	LIGHT EMITTING DIODE	XLR	MICROPHONE CONNECTOR
MAX	MAXIMUM	" , IN	INCHES
MDU	MEDIA DISTRIBUTION UNIT	' , FT	FEET
MFR	MANUFACTURER	>	GREATER THAN
MIN	MINIMUM	<	LESS THAN
MISC	MISCELLANEOUS	≥	GREATER THAN OR EQUAL TO
MTD	MOUNTED		
MUTOA	MULTI-USER TELECOM. OUTLET ASSEMBLY		

GENERAL NOTES

INFORMATION AND COMMUNICATION TECHNOLOGY SYSTEM GENERAL NOTES

1. THE FOLLOWING NOTES APPLY TO THE "T" SERIES DRAWINGS. ADDITIONAL NOTES MAY BE INDICATED ON INDIVIDUAL SHEETS.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. BECOME AWARE OF CONDITIONS RELATED TO THE SITE AND EXISTING BUILDING CONDITIONS THAT MAY AFFECT THE COST OR SCHEDULE OF CONSTRUCTION ACTIVITIES PRIOR TO SUBMITTING A BID. VERIFY DIMENSIONS AND CONDITIONS.
4. COMPLY WITH CURRENT STANDARDS, CODES AND INDUSTRY BEST PRACTICES AS REQUIRED BY TIA, BICSI, NFPA, NEC, NESC, NEMA, ANSI, IBC, UL, IEEE, FEDERAL, STATE, AND LOCAL ORDINANCES WHERE APPLICABLE.
5. OBTAIN AND PAY FOR REQUIRED FEES, PERMITS AND INSPECTIONS.
6. RESTORE DAMAGE RESULTING FROM WORK. LEAVE PREMISES IN CLEAN CONDITION WHEN FINISHED WITH WORK.
7. MAINTAIN A COMPLETE SET OF DIVISION 27 & 28 SPECIFICATIONS, DRAWINGS, SCHEDULES, AND REQUESTS FOR INFORMATION ON SITE.
8. SECURE THE REVIEWED SHOP DRAWINGS AND PRODUCT SUBMITTALS PRIOR TO THE COMMENCEMENT OF WORK. MAINTAIN A COMPLETE SET ON SITE.
9. VALIDATE DETAILS AND DIMENSIONS ASSOCIATED WITH THE WORK ON THESE DRAWINGS PRIOR TO THE COMMENCEMENT OF WORK THAT RELIES ON THIS INFORMATION.
10. CONDUITS AND BACK BOX LAYOUT ARE SHOWN AS DIAGRAMMATIC INDICATING GENERAL ARRANGEMENT. INSTALL CONDUITS TO AVOID INTERFERENCE WITH BUILDING STRUCTURAL MEMBERS, EQUIPMENT AND BUILDING OPENINGS.
11. LOCATIONS OF DEVICE BACK BOXES ON THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER THE TECHNOLOGY DRAWINGS. REFER TO ARCHITECTURAL FOR ELEVATIONS OF DEVICES IN FINISHED AREAS. LOCATE DEVICES SO THAT THEY DO NOT CONFLICT WITH GENERAL CONSTRUCTION AND THE WORK OF OTHER DIVISIONS.
12. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF CEILING MOUNTED ITEMS. INSTALL CEILING MOUNTED ITEMS IN THE CENTER OF CEILING TILES OR WHERE INDICATED ON THE DRAWINGS. WHERE LOCATION OF ITEMS ARE NOT INDICATED ON THE DRAWINGS, OBTAIN DIRECTION FROM ARCHITECT PRIOR TO ROUGH IN AND INSTALLATION.
13. PROVIDE PULL BOXES AFTER 100-FEET OF CONDUIT RUN OR AFTER 180 DEGREES OF CONDUIT BENDS. LOCATE PULL BOXES TO PROVIDE CLEAR ACCESS IN FRONT OF OR BELOW FOR THE INSTALLATION OF CABLE. REFER TO PULL BOX SIZING SCHEDULES.
14. COORDINATE REQUIREMENTS FOR ACCESS PANEL WITH ARCHITECT WHEN PULL BOXES ARE IN WALL OR ABOVE INACCESSIBLE CEILINGS.
15. CONDUITS AND SLEEVES THROUGH FIRE/SMOKE RATED WALLS/FLOOR ARE SHOWN ON THESE DRAWINGS TO SUPPORT THE INSTALLATION OF CABLE. PROVIDE ADDITIONAL CONDUITS OR SLEEVES THROUGH FIRE/SMOKE RATED WALLS/FLOORS AS REQUIRED TO SUPPORT THE INSTALLATION OF CABLES THROUGH THE WALL OR FLOOR. REFER TO ARCHITECTURAL DRAWINGS FOR PARTITION TYPES AND WALL CONSTRUCTION DETAILS.
16. WHERE CONDUITS, CABLE TRAY FOR COMMUNICATIONS CABLE PASS THROUGH FIRE RATED WALLS, PROVIDE AND AFFIX ADHESIVE WALL LABEL IMMEDIATELY ADJACENT TO THE CABLE PATHWAY/DEVICE TO COMMUNICATE TO FUTURE CABLE TECHNICIANS, AUTHORITIES HAVING JURISDICTION AND OTHERS THE MANUFACTURER OF THE DEVICE AND THE CORRESPONDING UL SYSTEM NUMBER INSTALLED.
17. CONDUITS AND SLEEVES THROUGH FULL HEIGHT WALLS ARE SHOWN ON THESE DRAWINGS TO SUPPORT THE INSTALLATION OF CABLE. PROVIDE ADDITIONAL (2-INCH MINIMAL) CONDUIT SLEEVES THROUGH FULL HEIGHT WALLS AS REQUIRED TO SUPPORT THE INSTALLATION OF CABLES THROUGH FULL HEIGHT WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR PARTITION TYPES AND WALL HEIGHTS.
18. CONDUITS ABOVE INACCESSIBLE CEILINGS ARE SHOWN ON THESE DRAWINGS TO SUPPORT THE INSTALLATION OF CABLE. PROVIDE ADDITIONAL (2-INCH MINIMAL) CONDUIT ABOVE INACCESSIBLE CEILINGS AS REQUIRED TO SUPPORT THE INSTALLATION OF CABLES ABOVE INACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
19. LOCATE CABLE TRAY TO PROVIDE CLEAR ACCESS TO AREAS IN FRONT AND ABOVE FOR THE INSTALLATION OF CABLE.
20. VALIDATE LOCATION OF CEILING PLENUM AREAS. INSTALL PLENUM RATED CABLES IN PLENUM AREAS. PROVIDE BACK BOXES FOR CEILING SPEAKERS IN PLENUM AREAS. PROVIDE ENCLOSURES FOR NON-PLENUM RATED DEVICES IN PLENUM AREAS. REFER TO MECHANICAL DRAWINGS FOR PLENUM CEILING LOCATIONS.
21. EXTEND CONDUIT STUB UPS SERVING DIVISION 27 & 28 BACK BOXES IN AREAS WITHOUT ACCESSIBLE CEILING TO AREAS WITH ACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
22. VALIDATE LOCATION OF CONDUITS INSTALLED IN 'WET' AREAS, INCLUDING AREAS IN OR UNDER SLAB. INSTALL OUTDOOR RATED CABLES IN CONDUITS INSTALLED IN WET AREAS. INTERCONNECT OUTDOOR RATED CABLE TO INDOOR RATED CABLE WITHIN 50-FEET OF EXPOSURE INSIDE THE BUILDING.
23. PROVIDE SUPPORTS AND SEISMIC RESTRAINTS FOR DEVICES, COMPONENTS, CABLE TRAY, CONDUIT, PULL BOXES, ENCLOSURES AND ACCESSORIES.
24. PROVIDE IDENTIFICATION LABELS ON FACEPLATES, TERMINATION BLOCKS, PATCH PANELS, ENCLOSURES AND ON EACH END OF EACH CABLE.
25. PROVIDE BONDING CONNECTIONS ON CABLE TRAYS, CONDUITS AND SLEEVES SERVING AS HORIZONTAL AND BACKBONE PATHWAYS FOR CABLE.
26. PROVIDE COMMUNICATION BACKBONE BONDING CONDUCTORS THAT ARE CONTINUOUS IN LENGTH FROM THE PRIMARY BONDING BUSBAR TO THE LAST SECONDARY BONDING BUS. DO NOT DAISY CHAIN THE BONDING CONDUCTORS BETWEEN BUSBARS.
27. CONFIRM THE FRAMED DIMENSIONS OF COMMUNICATION ROOM WITH THE ARCHITECTURAL DRAWINGS. REPORT DISCREPANCIES WITH THE ARCHITECT.
28. COORDINATE THE LAYOUT OF EQUIPMENT, PANELS, CONDUIT, EQUIPMENT RACKS & CABINETS, ENCLOSURES POWER PANELS, COOLING UNITS, ETC. IN THE COMMUNICATION ROOMS SO THAT THEY FITS INTO THE SPACE ALLOTTED. COORDINATE THE ROUTING OF SURFACE MOUNTED DIVISION 26, 27 & 28 CONDUITS SO THAT THEY DO NOT INTERFERE WITH MOUNTING OF EQUIPMENT ON THE WALL DURING INITIAL INSTALLATION.
29. COORDINATE THE CONDUIT AND BACK BOX ROUGH-IN REQUIREMENTS FOR DOORS FITTED WITH ACCESS CONTROL DEVICES WITH THE DIVISION 08 DOOR HARDWARE SCHEDULES AND THE ARCHITECTURAL DOOR DRAWINGS AND SCHEDULES.
30. COORDINATE CONDUIT AND BACK BOXES ROUGH-IN REQUIREMENTS FOR DEVICES LOCATED ON THE EXTERIOR OF THE BUILDING WITH THE ARCHITECT. PROVIDE WEATHERPROOF SEALS, GASKETS, FACEPLATES AND COVERS ON EXTERIOR DEVICES AND COMPONENTS.
31. COORDINATE THE MEANS AND METHODS OF ANCHORING EQUIPMENT RACKS, EQUIPMENT CABINETS, ENCLOSURES TO FLOORS AND WALLS WITH THE ARCHITECT.

TECHNOLOGY DRAWING LIST

SHEET NUMBER	SHEET NAME
T000	TECHNOLOGY LEGEND AND ABBREVIATIONS
TN001	TELECOM SCHEDULES
TN100	TELECOM SITE PLAN
TN120	OVERALL TELECOM FLOOR PLAN - SPORTS BUILDING 100 TELECOM PLAN
TN121	OFFICE TELECOM FLOOR PLAN
TN122	STORAGE, ELECTRICAL - TELECOM FLOOR PLAN
TN220	OVERALL TELECOM RCP PLAN - CABLE TRAY PLAN
TN221	OFFICE TELECOM RCP PLAN
TN222	STORAGE, ELECTRICAL - TELECOM RCP PLAN
TN501	TELECOM DIAGRAMS
TN601	ENLARGED PLANS
TN901	TELECOM DETAILS
TY001	SECURITY SCHEDULES
TY100	SECURITY SITE PLAN
TY120	OVERALL SECURITY FLOOR PLAN
TY121	OFFICE SECURITY FLOOR PLAN
TY122	STORAGE, ELECTRICAL - SECURITY FLOOR PLAN
TY123	SECURITY FLOOR PLAN - AREA A & B
TY124	SECURITY FLOOR PLAN - AREA C & D
TY125	SECURITY FLOOR PLAN - AREA E & F
TY126	SECURITY FLOOR PLAN - AREA G & H
TY501	SECURITY DIAGRAMS
TY901	CAMERA DETAILS
TY902	ACCESS CONTROL DETAILS
TY903	ACCESS CONTROL PANEL AND ELEVATION
TY904	ACCESS CONTROL DOOR DETAIL
TA001	AUDIOVISUAL SCHEDULES
TA120	OVERALL AUDIOVISUAL RCP PLAN
TA121	OFFICE AUDIOVISUAL FLOOR PLAN
TA601	ENLARGED PLANS
TA602	ENLARGED PLANS
TA603	ENLARGED PLANS
TA604	AV DIAGRAMS
TA901	AUDIOVISUAL DETAILS
Grand total: 34	

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TECHNOLOGY LEGEND AND ABBREVIATIONS

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

PA/PM:	Approver
DRAWN BY.:	Author
JOB NO.:	LAX21-0174-02

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AV CABLE SCHEDULE

CABLE DESIGNATOR	CABLE TYPE	DESCRIPTION	INSULATION TYPE	CONNECTOR TYPE
AH1	HDMI CABLE	STANDARD HDMI 1.3 1080P@60HZ CABLE 10.2 Gbps	NON-PLENUM	STANDARD HDMI
AH2	HDMI CABLE	HIGH SPEED HDMI 1.4 4K@30HZ, 10.2 Gbps	NON-PLENUM	STANDARD HDMI
AH3	HDMI CABLE	PREMIUM HIGH SPEED HDMI 2.0 4K@60HZ, 18Gbps, HDR	NON-PLENUM	STANDARD HDMI
AH4	HDMI CABLE	ULTRA HIGH SPEED HDMI 2.1 8k@120, 48Gbps, HDR	NON-PLENUM	STANDARD HDMI
AHP1	HDMI CABLE	STANDARD HDMI 1.3 1080P@60HZ CABLE 10.2 Gbps	PLENUM	STANDARD HDMI
AHP2	HDMI CABLE	HIGH SPEED HDMI 1.4 4K@30HZ, 10.2 Gbps	PLENUM	STANDARD HDMI
AHP3	HDMI CABLE	PREMIUM HIGH SPEED HDMI 2.0 4K@60HZ, 18Gbps, HDR	PLENUM	STANDARD HDMI
AHP4	HDMI CABLE	ULTRA HIGH SPEED HDMI 2.1 8k@120, 48Gbps, HDR	PLENUM	STANDARD HDMI
AD1	SF/UTP	XTP 24 AWG SHEILDED TWISTER PAIR, 4K@60HZ, 175 FT	NON-PLENUM	RJ45
AD2	SF/UTP	XTP 22 AWG SHEILDED TWISTER PAIR, 4K@60HZ, 300 FT	NON-PLENUM	RJ45
ADP1	SF/UTP	XTP 24 AWG SHEILDED TWISTER PAIR, 4K@60HZ, 175 FT	PLENUM	RJ45
ADP2	SF/UTP	XTP 22 AWG SHEILDED TWISTER PAIR, 4K@60HZ, 300 FT	PLENUM	RJ45
AU1	USB-C	USB-C TO USB-C PATCH CABLE, 4K@60HZ, 5Gbps	NON-PLENUM	USB-C
AUE1	USB EXTENTION CABLE	USB3.1 HIGH SPEED ACTIVE OPTICAL CABLE 10M/20M/30M	NON-PLENUM (IN CONDUIT)	USB
AC1	RS232 CABLE	3 CONDUCTOR CABLE	NON-PLENUM	CAPTIVE CONNECTOR
ACP1	RS232 CABLE	3 CONDUCTOR CABLE	PLENUM	CAPTIVE CONNECTOR
AME1	MIC EXT CABLE	MIC POD EXTENSION CABLE	PLENUM	PROPRIETARY MIC CONNECTION
AA1	LINE AUDIO CABLE	3 CONDUCTOR CABLE, BALANCED	NON-PLENUM	CAPTIVE CONNECTOR
AA2	LOUD SPEAKER CABLE	2 CONDUCTOR CABLE	PLENUM	2 CONDUCTOR
AN1	ANTENNA CABLE	ANTENNA EXTENTION CABLE, COAX	PLENUM	BNC
D	DATA CABLE	REFER TO TELECOM DEVICE INFRASTRUCTURE SCHEDULE ON TN0.01		

NOTES:
1. SEE AV FUCNTION DIAGRAMS FOR CABLE USE
2. ALL CABLES MAY NOT BE USED IN THE DESIGN

AUDIOVISUAL DEVICE INFRASTRUCTURE SCHEDULE

DEVICE	DEVICE DESIGNATOR	MOUNTING HEIGHT	BACKBOX SIZE	FINISH PLATE / MUDRING	CONDUIT SIZE	DETAIL	NOTE
D▼▽	A	FLOOR	SEE ELECTRICAL DRAWINGS	NONE	SEE DETAIL	5/TA901	REFER TO TN SERIES FOR TELECOM REQUIREMENTS
D▼AV	A	DISPLAY HEIGHT SEE AV ELEVATIONS	BUILT IN	NONE	SEE DETAIL	5/TA901	REFER TO TN SERIES FOR TELECOM REQUIREMENTS
D▼AV	B	DISPLAY HEIGHT SEE AV ELEVATIONS	BUILT IN	NONE	1-1/4"	4/TA901	REFER TO TN SERIES FOR TELECOM REQUIREMENTS
AV	U	SEE AV ELEVATIONS	N/A	NONE			
D		CEILING	N/A	NONE	1"		

NOTE:
1. SEE TA6xx SERIES FUNCTIONAL DIAGRAMS FOR CABLE REQUIREMENTS.
2. REFER TO TN SERIES DRAWINGS FOR IP BASED TELECOM DEVICE INFRASTRUCTURE.
3. SEE TA6xx SERIES FUNCTIONAL DIAGRAMS FOR CONDUIT ROUTING.

ALL DEVICES LOCATIONS TO MEET ADA REQUIREMENT. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.

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AUDIOVISUAL SCHEDULES

	DATE	REMARKS
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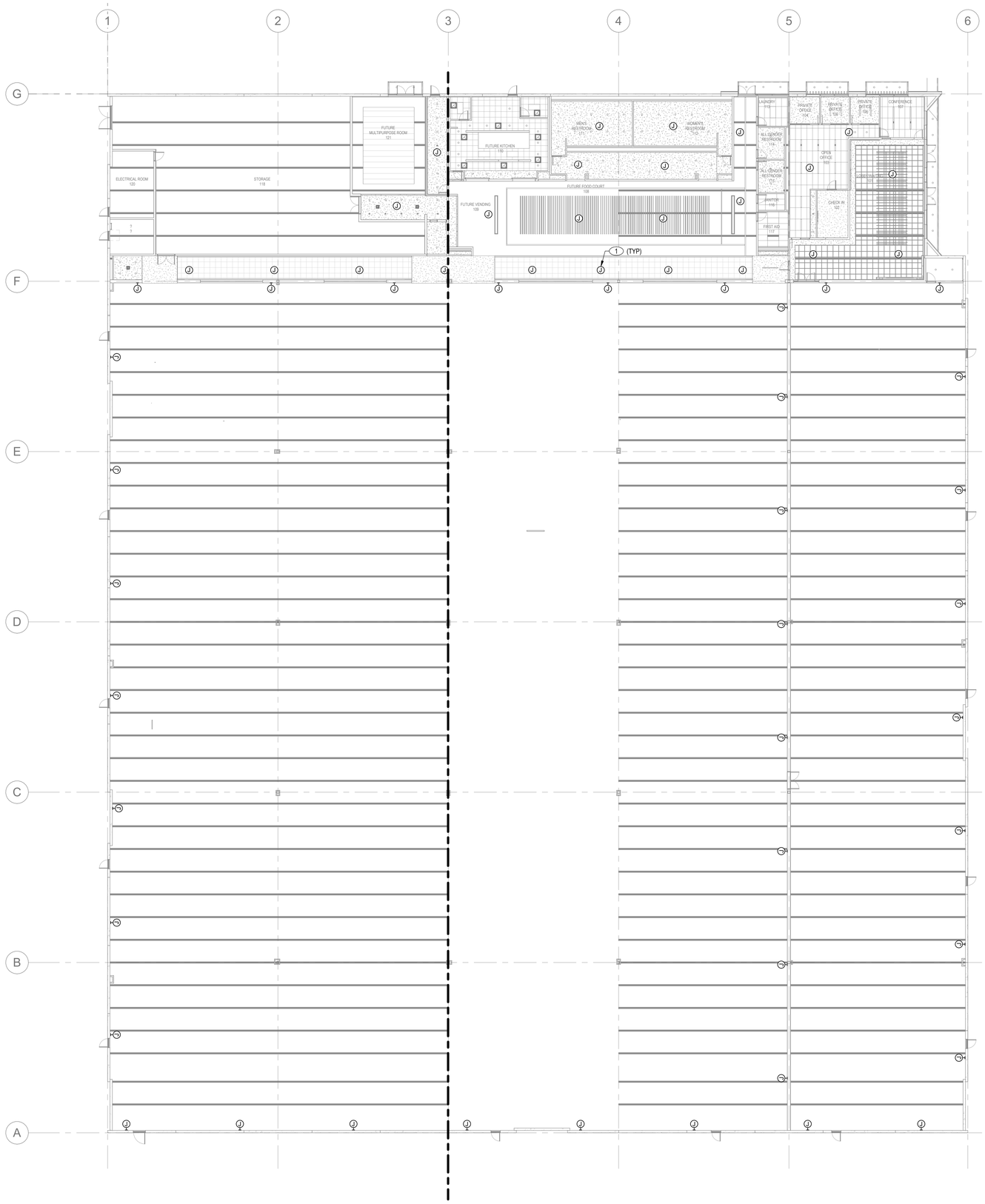
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OVERALL AUDIOVISUAL RCP PLAN

SCALE: 1/16" = 1'-0"

1

KEYNOTES: XX

1. PROVIDE BACK BOX WITH PATHWAY FOR EACH PA SPEAKER TO CABLE TRAY FOR HOME RUN.

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OVERALL AUDIOVISUAL RCP PLAN

DATE	REMARKS
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JOB NO.:	LAX21-0174-02

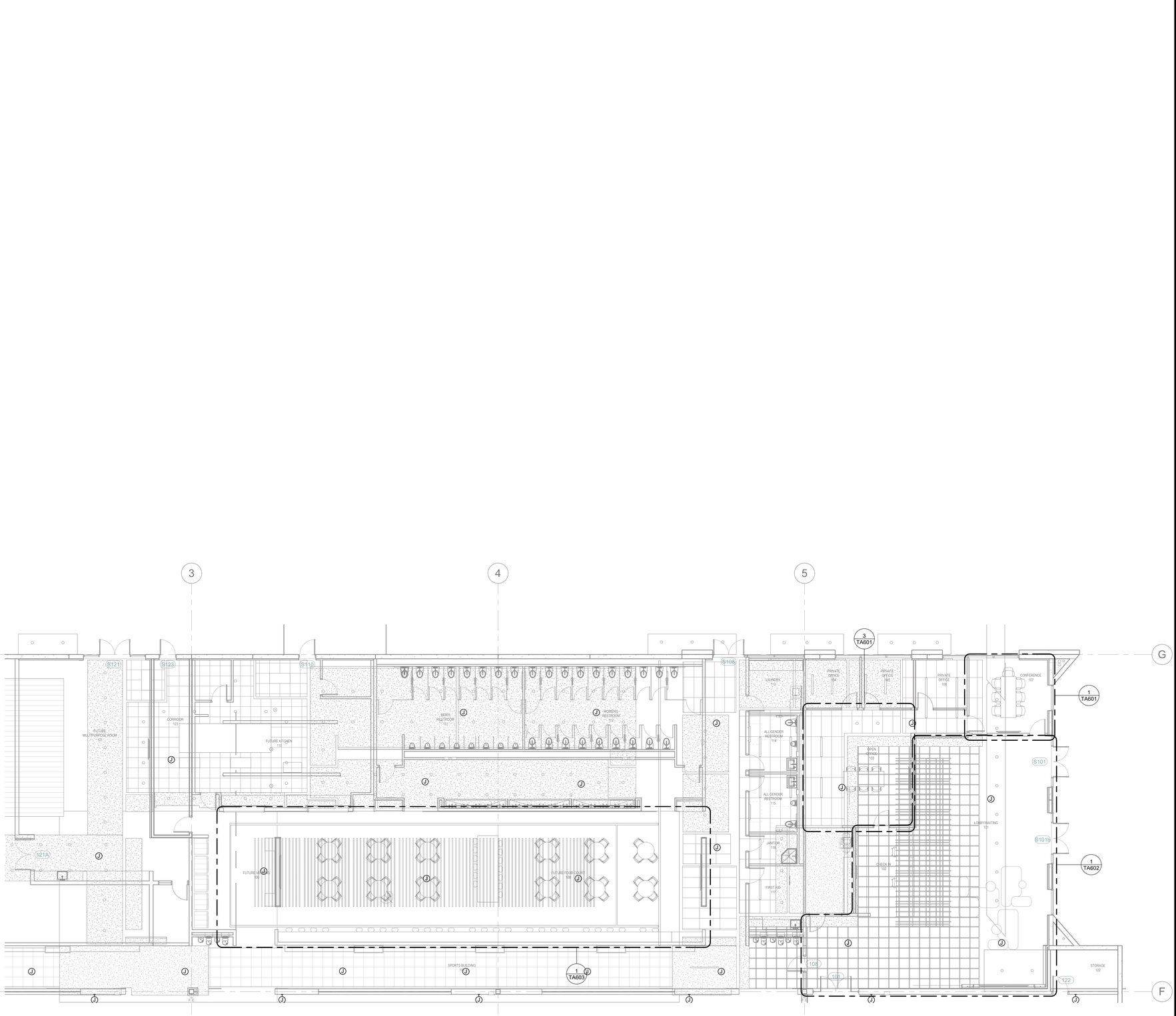
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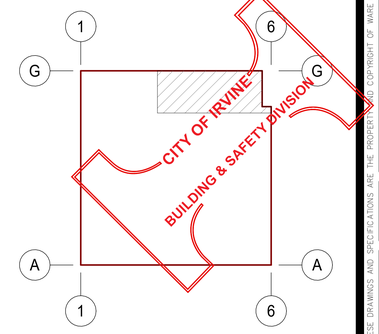
OFFICE AUDIOVISUAL FLOOR PLAN

SCALE: 1/8" = 1'-0"

1

N

KEY PLAN



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OFFICE AUDIOVISUAL FLOOR PLAN

	DATE	REMARKS
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SHEET
TA121

00944992-CNEW

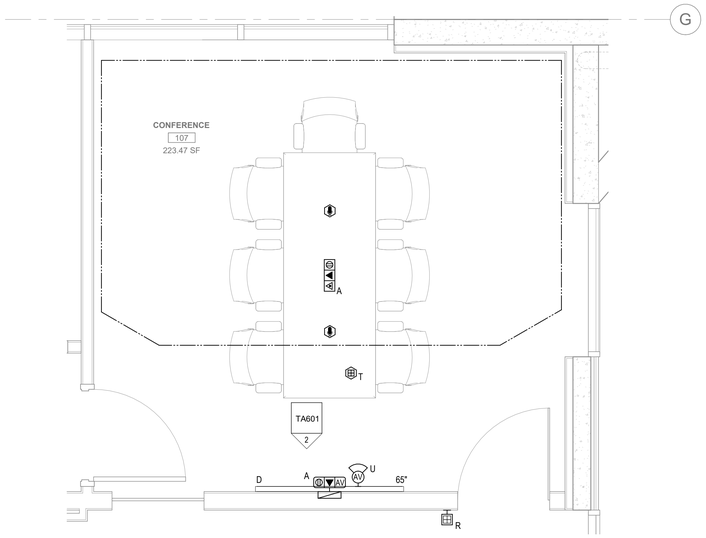
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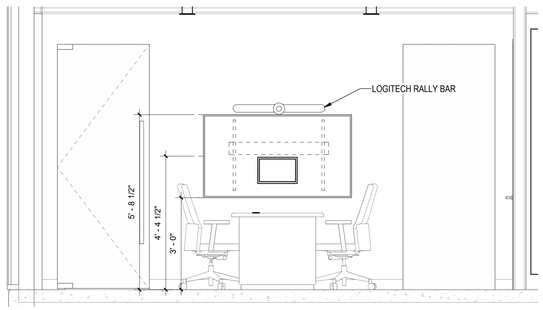
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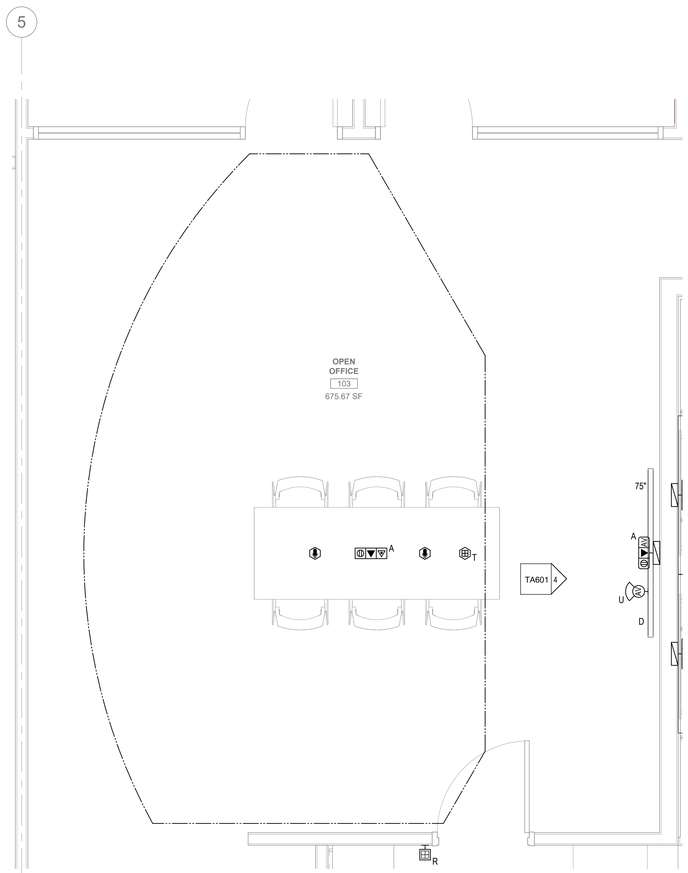
1 AUDIOVISUAL ENLARGED PLAN - CONFERENCE 107

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



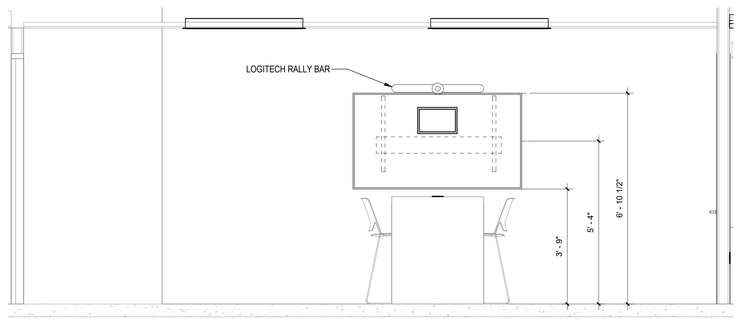
2 ELEVATION - CONFERENCE 107

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



3 AUDIOVISUAL ENLARGED PLAN - OPEN OFFICE 103

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



4 ELEVATION - OPEN OFFICE 103

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

N

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	DATE	REMARKS
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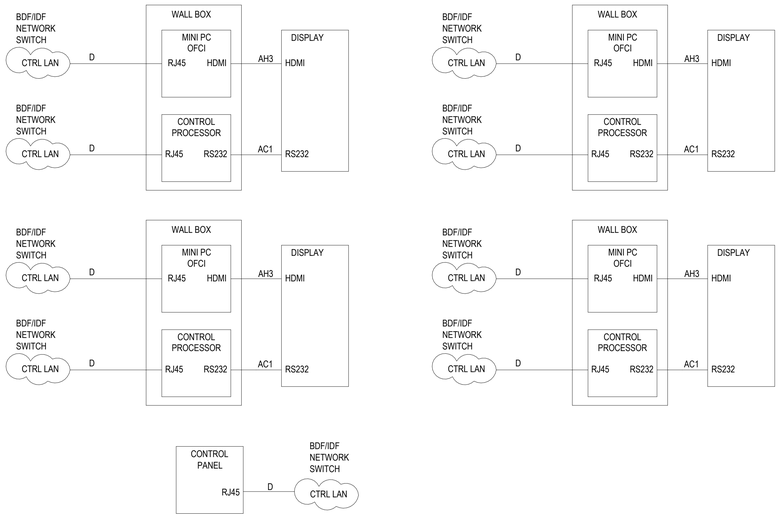
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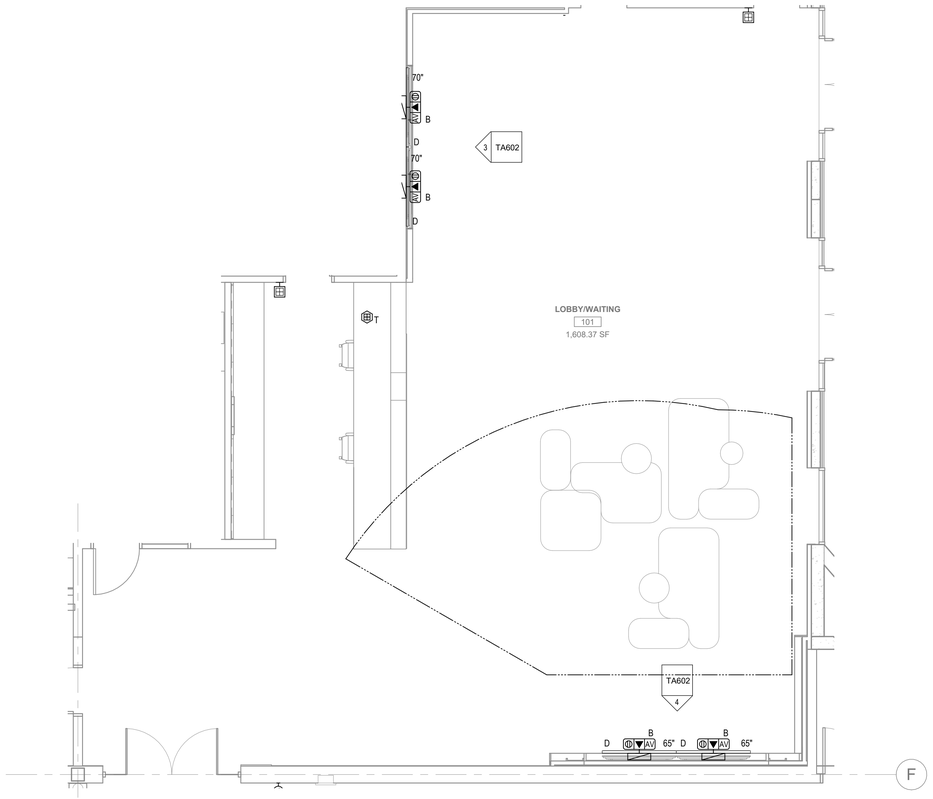
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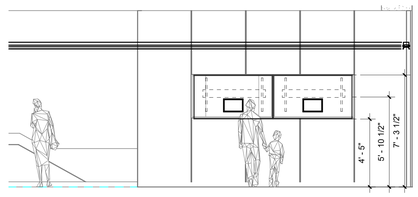
2 AUDIOVISUAL SINGLE LINE DIAGRAM - LOBBY

SCALE: NONE



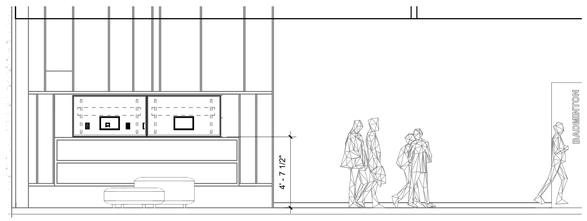
1 AUDIOVISUAL ENLARGED PLAN - LOBBY 101

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



3 ELEVATION - LOBBY 101

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



4 SOUTH ELEVATION - LOBBY 101

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

N

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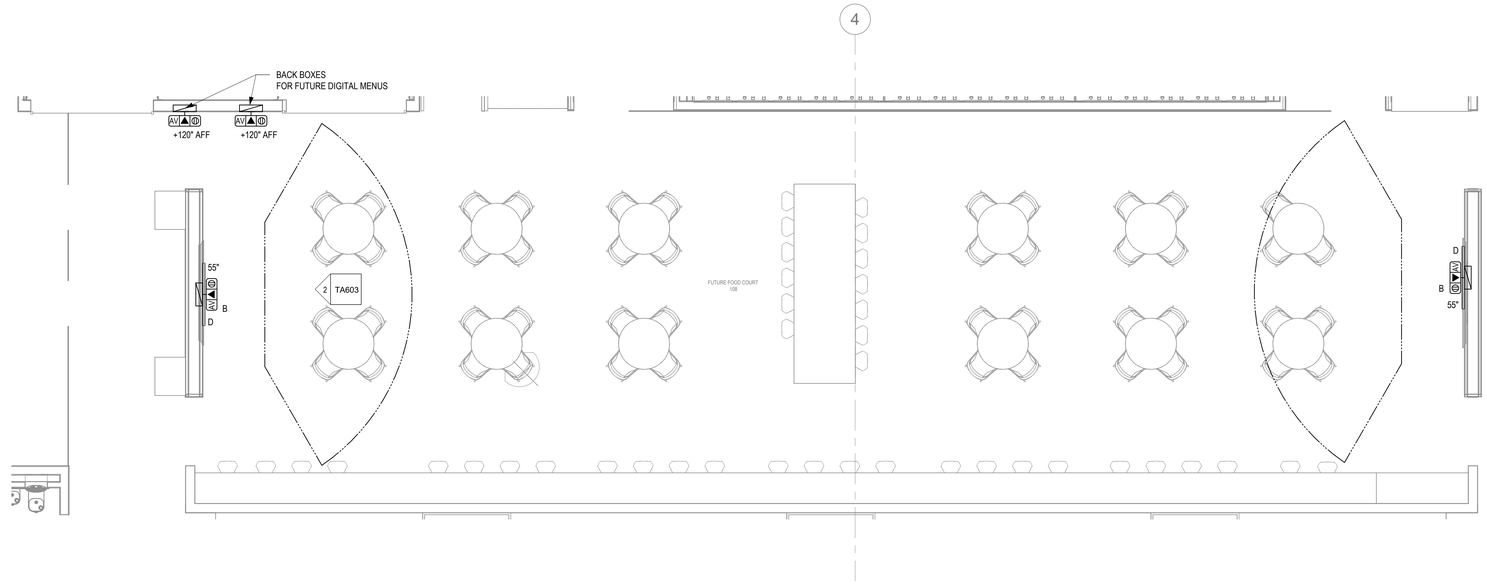
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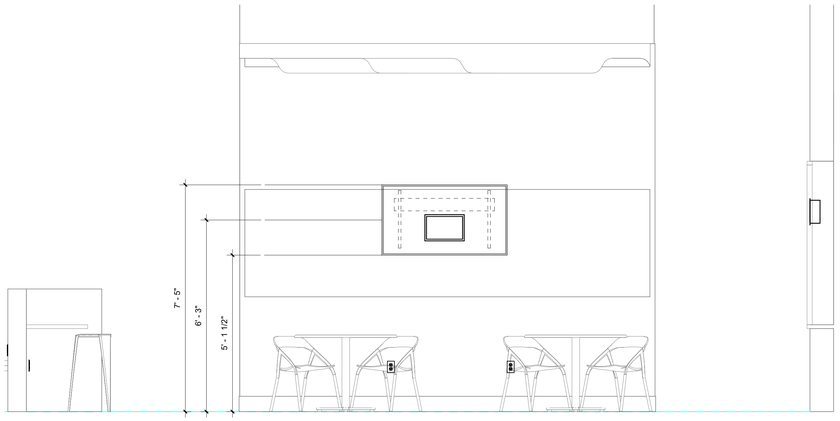
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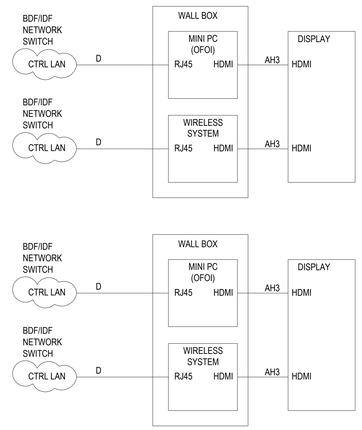
1 AUDIOVISUAL ENLARGED PLAN - KITCHEN 110

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



2 TYPICAL ELEVATION - KITCHEN 110

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



3 AV DIAGRAM - KITCHEN 110

SCALE: NONE

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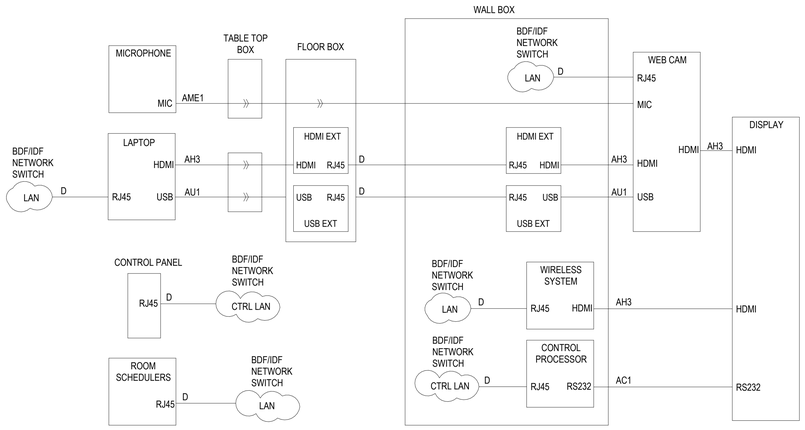
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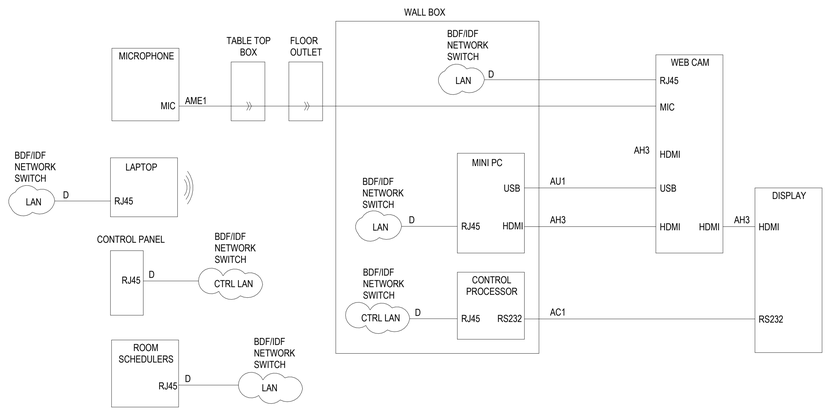
SHEET NOTES

A. SEE AV CABLE SCHEDULE ON SHEET TA001 FOR CABLE CODE REFERENCES.



1 AV DIAGRAMS - CONFERENCE ROOM 107

SCALE: NONE



2 AV DIAGRAMS - OPEN OFFICE 103

SCALE: NONE

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AV DIAGRAMS

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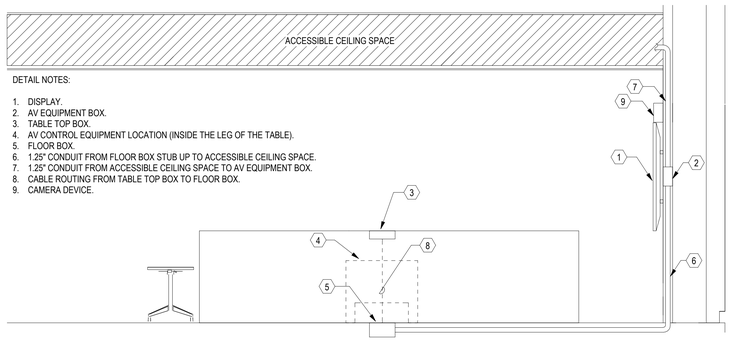
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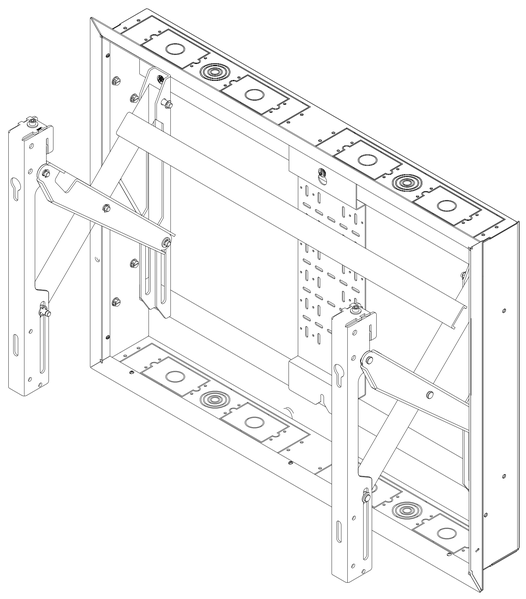
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5 CONFERENCE ROOM ELEVATION DETAIL
SCALE: NONE



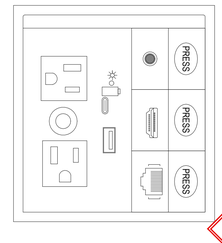
4 DISPLAY MOUNT DETAIL
SCALE: NONE

NOT USED

3 NOT USED
SCALE: 12" = 1'-0"

NOT USED

2 NOT USED
SCALE: 12" = 1'-0"



1 TABLE TOP BOX DETAIL
SCALE: NONE

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AUDIOVISUAL DETAILS

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

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Technology Responsibility Matrix

SYSTEM / TECHNOLOGY CATEGORIES X = In current Scope N/A = Not in Scope D = Design/Drawings S = Specification P = Performance Spec F = Furnished / Procurement I = Installation R = Rough-In Only Installation C = Coordination / Procurement of Service	In Project	Technology Consultant	Contractor	OWNER	Comments
TELECOMMUNICATIONS / TECHNOLOGY INFRASTRUCTURE					
Grounding and Bonding	X	D,S	F,I		
Grounding Busbars	X	D,S	F,I		
Grounding and Bonding	X	D,S	F,I		
Ground Cables	X	D,S	F,I		
Grounding Rods	X	D,S	F,I		
Pathways	X	D,S	F,I		
Conduits larger than 2"	X	D,S	F,I		
Conduits smaller than 2"	X	S	D,F,I		
Cable Trays	X	D,S	F,I		
Pull Boxes for conduit larger than 2"	X	S	D,F,I		
Pull Boxes for conduits smaller than 2"	X	S	D,F,I		
Underground Vaults	X	D,S	F,I		
Hanger and Supports	X	S	D,F,I		
Firestopping	X	D,S	F,I		
Communication Room Fittings	X	D,S	F,I		
Equipment Racks / Cabinets	X	D,S	F,I		
Ladder Rack	X	D,S	F,I		
Plywood Backboard	X	D,S	F,I		
Cable Management	X	S	D,F,I		
Uninterrupted Power Supply	X			F,I	
Communication Backbone Cabling	X	D,S	F,I		
Copper Cable	X	D,S	F,I		
Optical Fiber Cable	X	D,S	F,I		
Patch Cords	X	S	D,F,I		
Terminations	X	S	D,F,I		
Communications Horizontal Cabling	X	D,S	F,I		
Copper Cable	X	D,S	F,I		
Equipment Cords	X	S	D,F,I		
Terminations	X	S	D,F,I		
Cable Management / Patch Panels	X	S	D,F,I		
Outlets / Data, Telephone Connections	X	D,S	F,I		
DISTRIBUTED ANTENNA SYSTEM					
ERCES (Emergancy Responders Communications Enhancement System)	X	P	D,F,I		
Cellular Coverage	N/A				
Two Way Radio	N/A				
FCC Licensing	N/A				
I.T. SYSTEMS & EQUIPMENT					
Application Software	X			F,I	
Desktop Computer	X			F,I	
Network Equipment (LAN)	X			F,I	
Printers, Faxes & Scanners	X			F,I	
Switches	X			F,I	
Wireless Access Points (WAPS)	X		I	F	
TELEPHONY SYSTEMS					
Voice over IP gateway	X			F,I	
Handsets - hardwired	X			F,I	
Handsets - wireless	X			F,I	
Personal Communication Devices	X			F,I	
Software Applications	X			F,I	
Voice Mail	X			F,I	
AUDIO VISUAL					
Displays / Projectors / Video Systems	X	D,S	F,I		
Audio System	X	D,S	F,I		
Control System	X	D,S	F,I		
GUI / Software	X		D,S,F,I	C	
System Programming	X		D,S,F,I		
Licensing	X		D,S,F,I	C	
SECURITY					
Wired Access Control	X	D,S	F,I		
Video Surveillance Cameras	X	D,S	F,I		
Video Management System	X	D,S	F,I		
Video Storage Server	X	D,S	F,I		
Duress Buttons	X	D,S	F,I		
Intrusion Detection System	X	D,S	F,I		

TELECOM CABLE LEGEND

CABLE DESIGNATOR	CABLE TYPE	DESCRIPTION	INSULATION TYPE	CONNECTOR TYPE
F1	FIBER	MTP 48-STRAND OS2 SINGLE-MODE	INDOOR / OUTDOOR	LC
F2	FIBER	6-STRAND OS2 SINGLE-MODE	INDOOR / OUTDOOR	LC
C1	BACKBONE COPPER	25 PAIR CAT-3 UTP	INDOOR / OUTDOOR	110 BLOCK
D1	DATA	CATEGORY 6A	PLENUM	RJ45
D2	DATA	CATEGORY 6A	INDOOR / OUTDOOR	RJ45

TELECOM DEVICE INFRASTRUCTURE SCHEDULE

DEVICE	DEVICE DESIGNATOR	CABLE QUANTITY / TYPE	MOUNTING HEIGHT	BACKBOX SIZE	FINISH PLATE / MUDRING	CONDUIT SIZE	DETAIL	NOTE
◄	2	(2) D1	BUILDING OUTLET HEIGHT UON	5S-DEEP	1-GANG	1-1/4"	1 / TN901	
◄	4	(4) D1	+48" AFF	5S-DEEP		1-1/4"		
▽		(2) D1	FLOOR	N/A		1-1/4"		
▽		(2) D1	FLOOR	N/A		1-1/4"		REFER TO TA SERIES FOR AV REQUIREMENTS
▽AV		(2) D1	DISPLAY HEIGHT	REFER TO TA001		1-1/4"	1 / TN901	REFER TO TA SERIES FOR AV REQUIREMENTS
W		(1) D1	CEILING	5S-DEEP		1-1/4"	9 / TN901	
AV		(1) D1	CEILING MOUNTED	5S-DEEP	1-GANG	1-1/4"		REFER TO TA SERIES FOR AV REQUIREMENTS
AV		(1) D1	COORDINATE WITH TA DRAWINGS	5S-DEEP	1-GANG	1-1/4"		REFER TO TA SERIES FOR AV REQUIREMENTS
	R	(1) D1	BUILDING SWITCH HEIGHT	5S-DEEP		1-1/4"		
	T	(1) D1	BUILDING SWITCH HEIGHT	5S-DEEP		1-1/4"		
$	B	(1) D1	BUILDING SWITCH HEIGHT	2-GANG	1-GANG	1-1/4"		
C		(1) D1	CAMERA BACK BOX	5S	2-GANG	1"	REFER TO TY901	
C		(1) D1	CAMERA BACK BOX	5S	2-GANG	1"	REFER TO TY901	
C		(1) D1	CAMERA BACK BOX	5S	1-GANG	1"	REFER TO TY901	
C		(1) D1	CAMERA BACK BOX	5S	1-GANG	1"	REFER TO TY901	
I	B	(2) D2	COORDINATE WITH ARCH. DRAWINGS	MANUFACTURER BACK BOX	N/A	1-1/2"		
VI	R	(1) D2	COORDINATE WITH ARCH. DRAWINGS	MANUFACTURER BACK BOX	N/A	1-1/2"		
VI	M	(1) D1	COORDINATE WITH ARCH. DRAWINGS	MANUFACTURER BACK BOX	N/A	1-1/2"		

NOTE: ALL DEVICES LOCATIONS TO MEET ADA REQUIREMENT. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.

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TELECOM SCHEDULES

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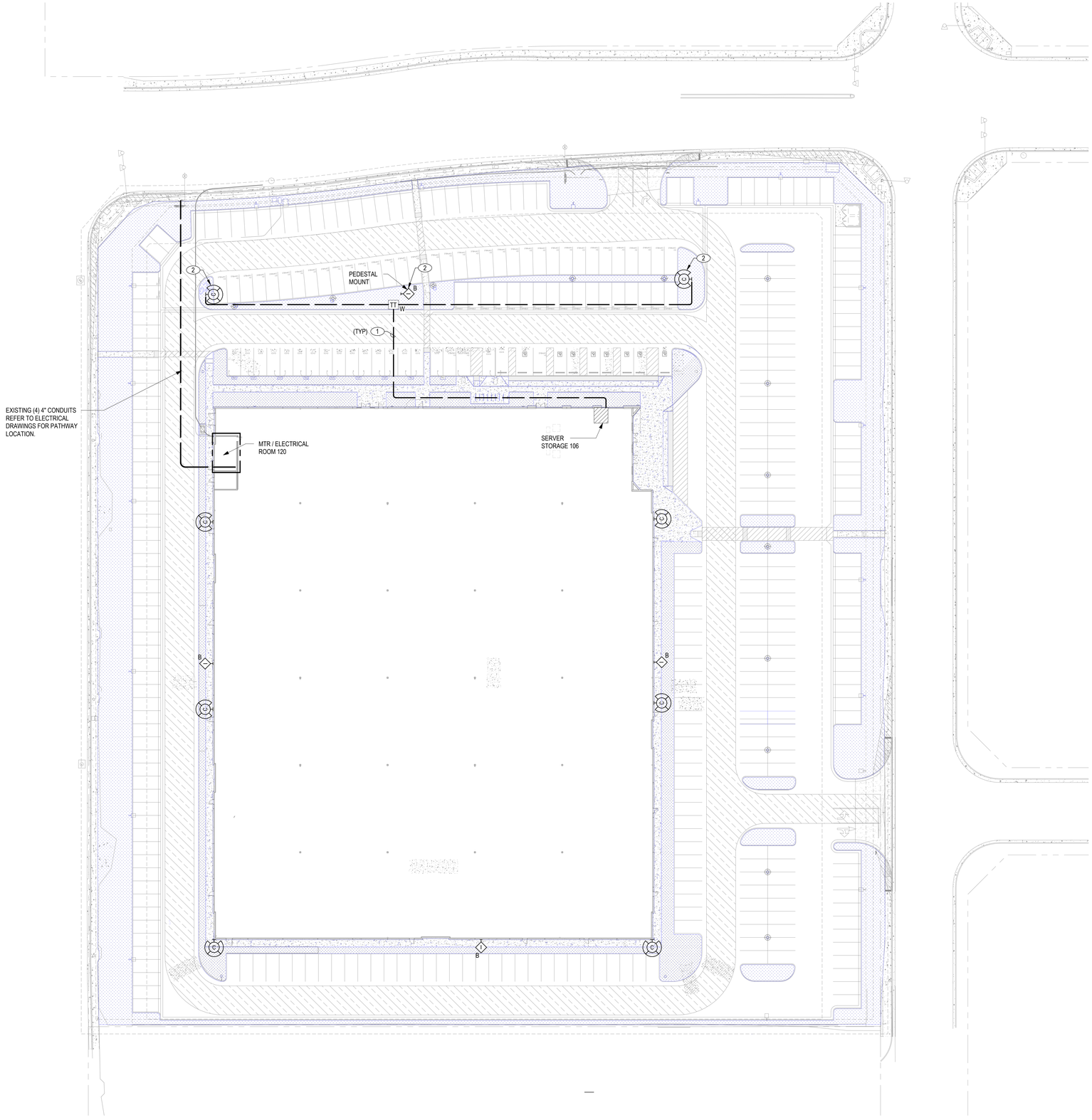
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KEYNOTES: (XX)

1. PROVIDE (1) 2" UNDERGROUND PVC CONDUIT. COORDINATE CONDUIT TRENCH WITH ELECTRICAL DRAWINGS.
2. PROVIDE GAME CHANGER EXTENDED DISTANCE CABLING (PART NUMBER 258340804) FOR SITE DEVICES.

SHEET NOTES

A. HOME RUN IP DEVICES TO THE NEAREST TELECOM CABINET.

B. ALL NETWORK CABLING THAT EXTENDS OUTSIDE OF THE BUILDING ENVELOPE MUST PASS THROUGH SURGE PROTECTION PRIOR TO TERMINATION AT PATCH PANEL.

TELECOM SITE PLAN
SCALE: 1" = 30'-0"

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TELECOM SITE PLAN

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

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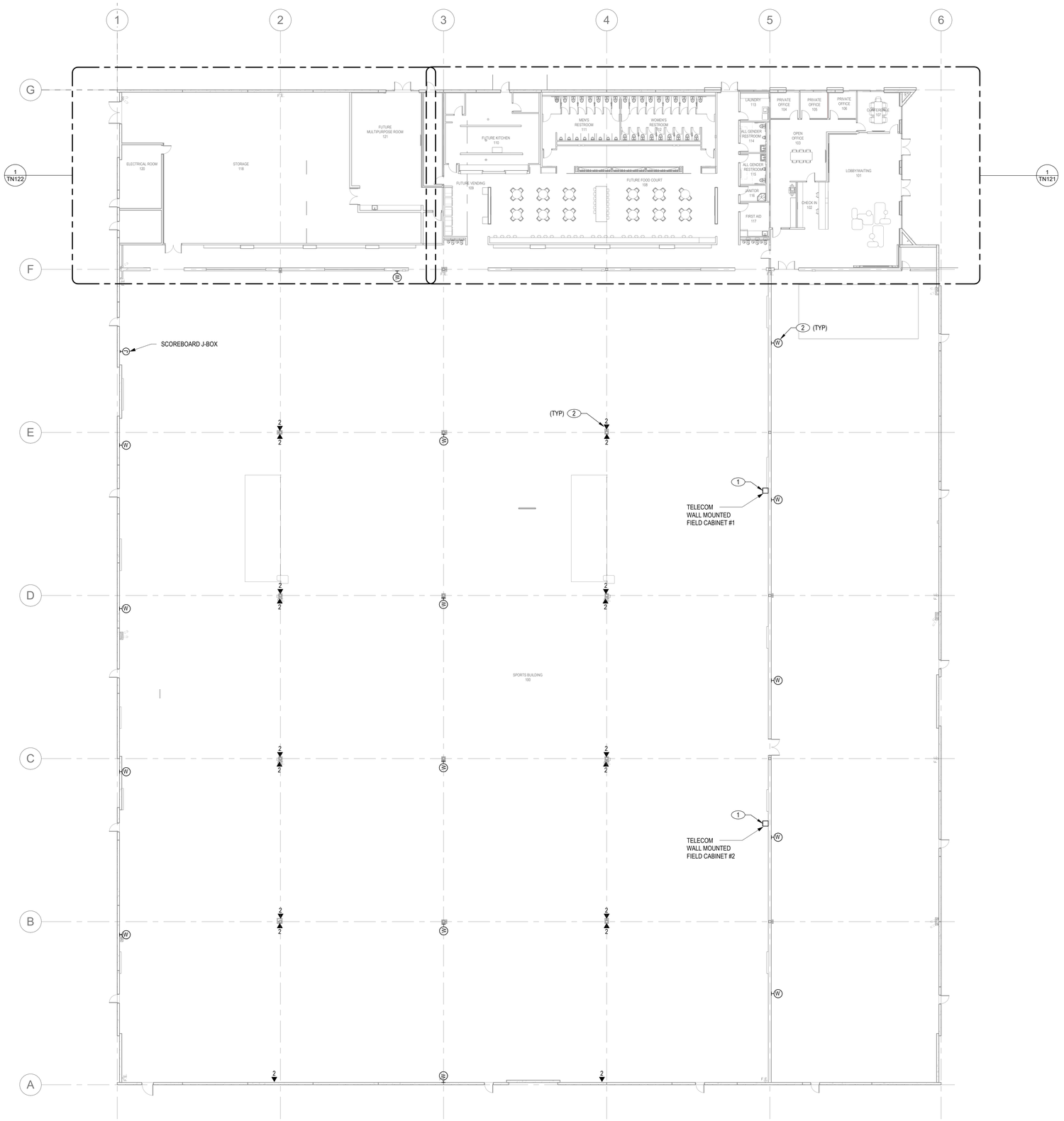
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KEYNOTES: (XX)

1. PROVIDE TECHNOLOGY WALL MOUNTED CABINET EATON MODEL NUMBER SRWF6U36. REFER TO 1/TN501 FOR MORE INFORMATION.
2. ALL DATA DROPS IN SPORT BUILDING 100 TO TERMINATE AT THE NEAREST FIELD TECHNOLOGY CABINET.

SHEET NOTES

A. HOME RUN IP DEVICES TO THE NEAREST TELECOM CABINET.

B. COORDINATE THE FINAL HEIGHT OF THE WAP INSTALATION WITH OWNER IT REPRESENTATIVE.

OVERALL TELECOM FLOOR PLAN - SPORTS BUILDING 100 TELECOM PLAN

SCALE: 1/16" = 1'-0" (1)

N

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OVERALL TELECOM FLOOR PLAN - SPORTS BUILDING 100 TELECOM PLAN

	DATE	REMARKS
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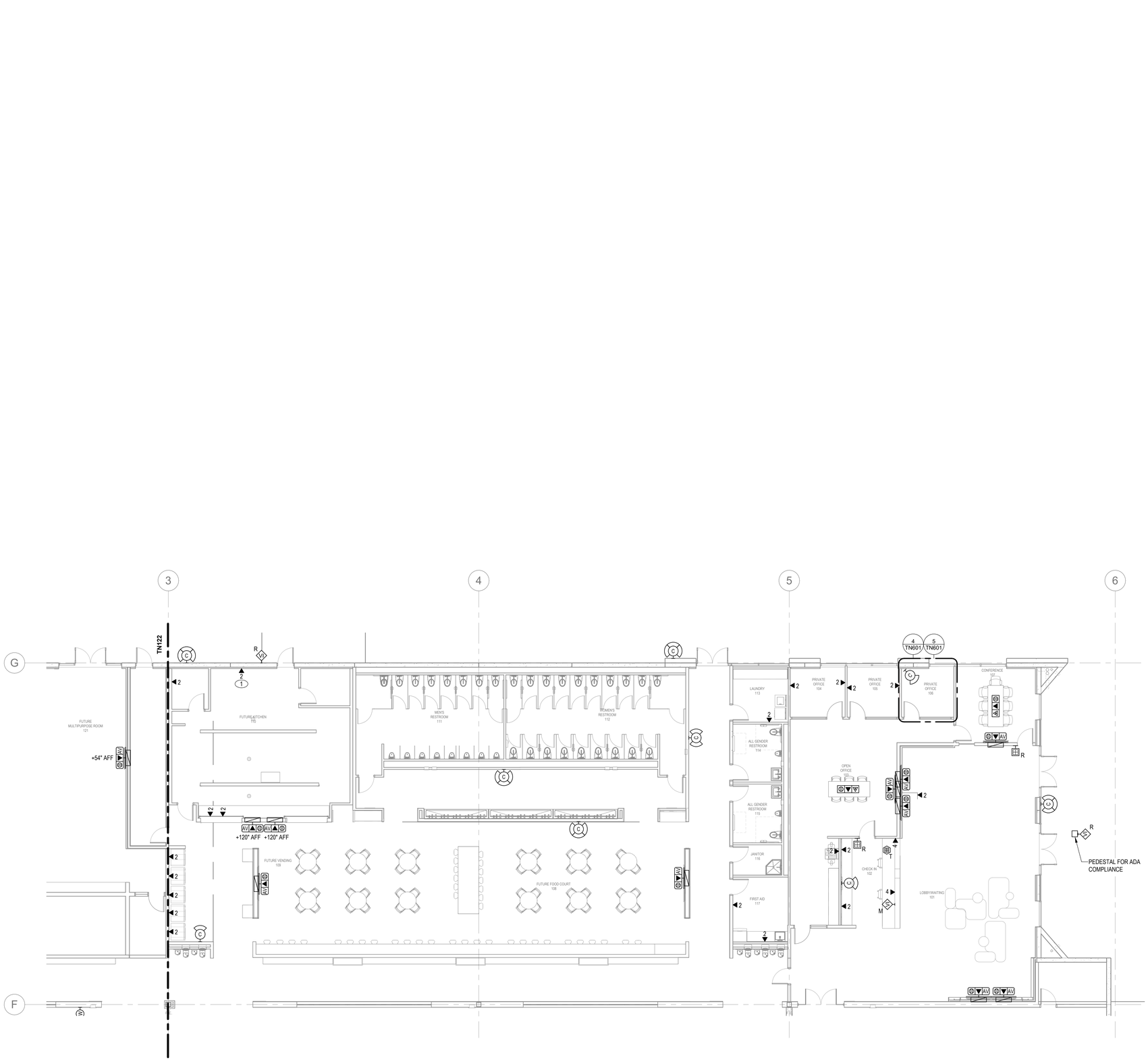
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KEYNOTES: (XX)

1. INSTALL DATA OUTLET FOR WALK-IN IN CEILING ABOVE THE APPLIANCE. PROVIDE 20' SERVICE LOOP FOR FINAL ADJUSTMENT.

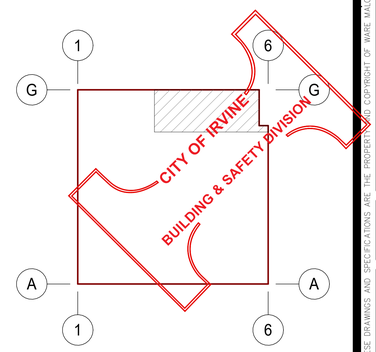
SHEET NOTES



OFFICE TELECOM FLOOR PLAN (1)
SCALE: 1/8" = 1'-0"

N

KEY PLAN



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OFFICE TELECOM FLOOR PLAN

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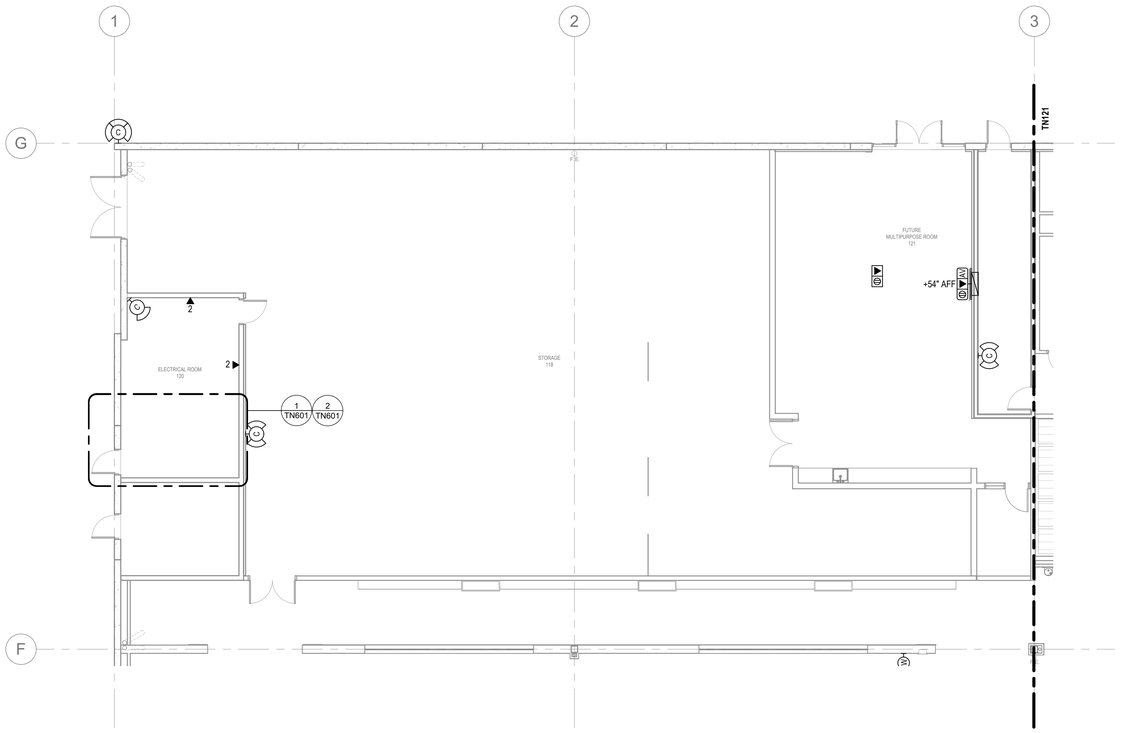
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KEYNOTES: (XX)

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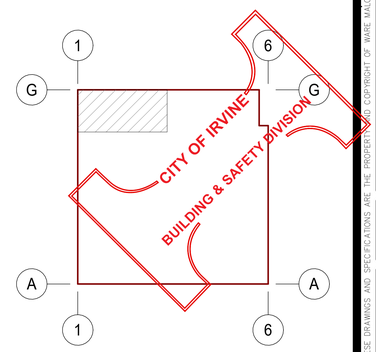
STORAGE, ELECTRICAL AND FIRE PUMP ROOM - TELECOM FLOOR PLAN

SCALE: 1/8" = 1'-0"

1

N

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STORAGE, ELECTRICAL - TELECOM FLOOR PLAN

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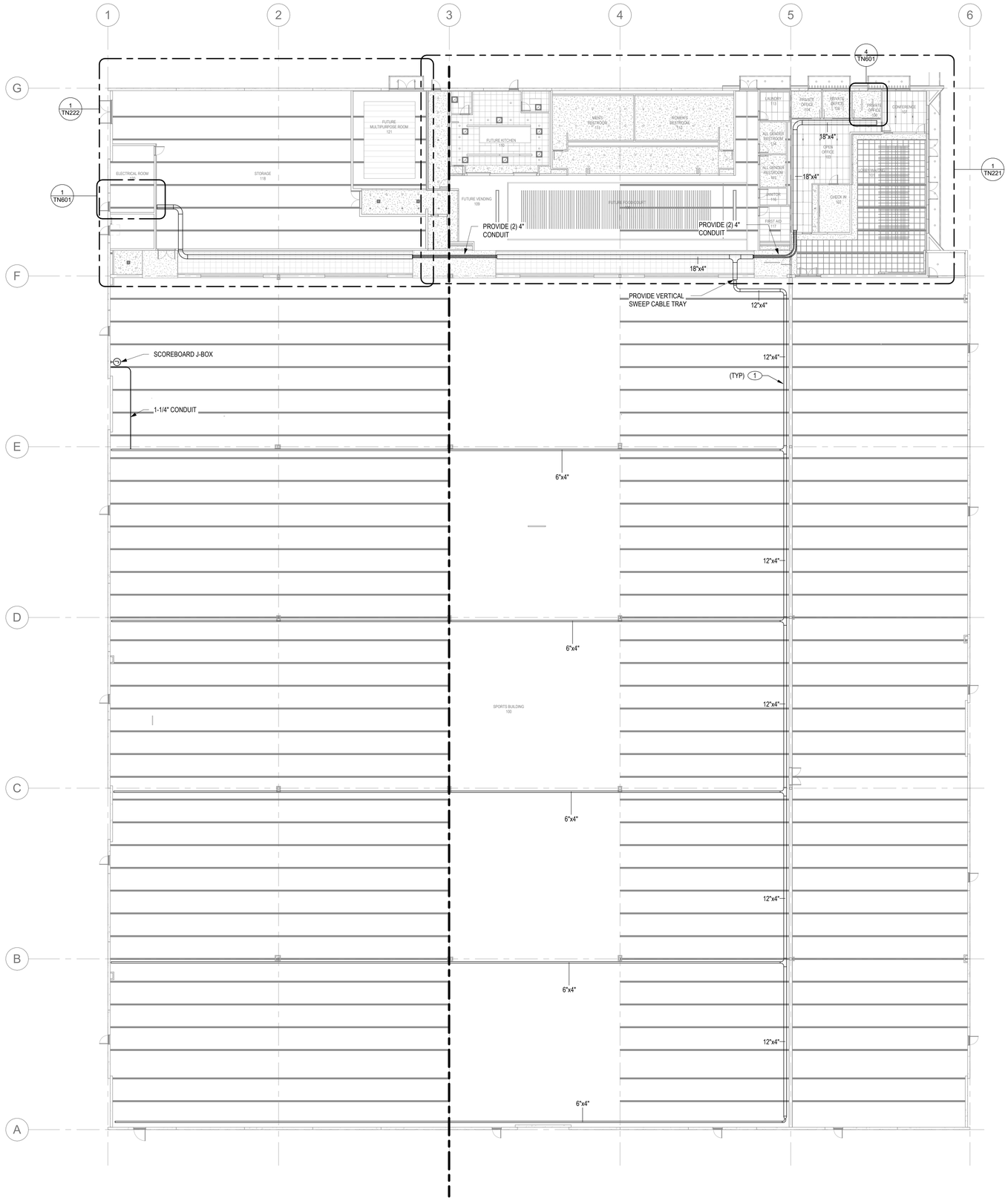
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OVERALL TELECOM RCP PLAN - CABLE TRAY PLAN

SCALE: 1/16" = 1'-0"

1

N

KEYNOTES: (XX)

1. PROVIDE CABLE TRAY IN SPORT BUILDING 100 AT MINIMUM +22' AFF.

SHEET NOTES

COMMUNICATION HORIZONTAL PATHWAY NOTES:

1. FLOOR PATHWAYS:
   A. ROUTE ALL CABLES FOR TECHNOLOGY DEVICES IN CONTINUOUS CONDUIT IN SLAB FOR LEVEL ONE.
   B. ROUTE ALL CABLES FOR EMERGENCY RESPONDER RADIO COMMUNICATION SYSTEM IN CONTINUOUS CONDUIT.
2. WALL PATHWAYS:
   A. ALL CABLES ROUTED UP WALL FOR TECHNOLOGY DEVICES ARE TO BE IN CONTINUOUS CONDUIT WITHIN WALL TO CONSOLIDATION.
   B. ROUTE ALL CABLES FOR EMERGENCY RESPONDER RADIO COMMUNICATION SYSTEM IN CONTINUOUS CONDUIT FROM DEVICE TO SOURCE.
3. CEILING PATHWAYS (HARD LID CEILING):
   A. ROUTE ALL CABLES FOR TECHNOLOGY DEVICES IN CONTINUOUS CONDUIT TO CONSOLIDATION PULL BOX. DISTRIBUTE ALL CABLES INSIDE THE ROOM IN CONDUIT FROM THE PULL BOX. J-HOOKS AND CABLE SUPPORTS ARE NOT ALLOWED WHERE THERE IS A HARD LID CEILING.
   B. ROUTE ALL CABLES FOR EMERGENCY RESPONDER RADIO COMMUNICATION SYSTEM IN CONTINUOUS CONDUIT IN CEILING.
4. CEILING PATHWAYS (ACOUSTICAL CEILING TILES AND OPEN TO STRUCTURE:
   A. ROUTE ALL CABLES FOR TECHNOLOGY DEVICES UTILIZING J-HOOKS AND CABLE SUPPORTS. MOUNT CABLE SUPPORTS TIGHT TO STRUCTURE. UNLESS OTHERWISE NOTED.
   B. ROUTE ALL CABLES FOR EMERGENCY RESPONDER RADIO COMMUNICATION SYSTEM IN CONTINUOUS CONDUIT IN CEILING.
   C. ALL FIRE RATED WALL PENETRATIONS BETWEEN ACCESSIBLE CEILINGS ARE TO UTILIZE FIRESTOP SPEED SLEEVES.

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OVERALL TELECOM RCP PLAN - CABLE TRAY PLAN

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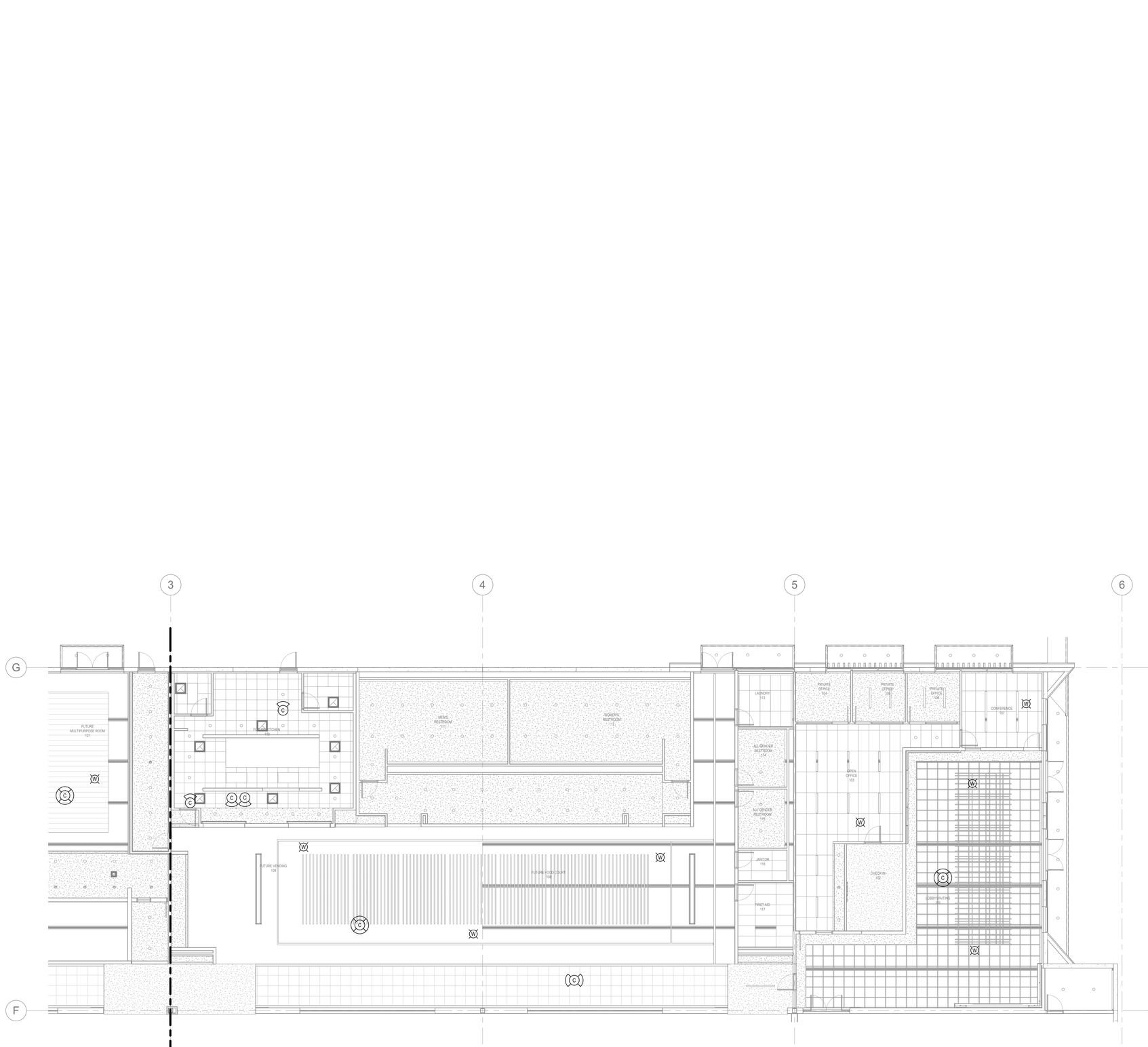
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KEYNOTES: (XX)

A. ADD NOTES AS NEEDED.

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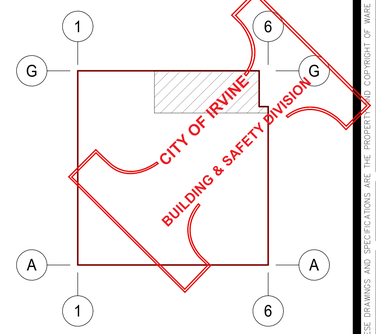


OFFICE TELECOM RCP PLAN (1)

SCALE: 1/8" = 1'-0"

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KEY PLAN



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Job. No.:

CITY OF IRVINE 1971

IRVINE FIELDHOUSE

17300 RED HILL
IRVINE, CALIFORNIA 92614

OFFICE TELECOM RCP PLAN

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

PA/PM:	Approver
DRAWN BY.:	Author
JOB NO.:	LAX21-0174-02

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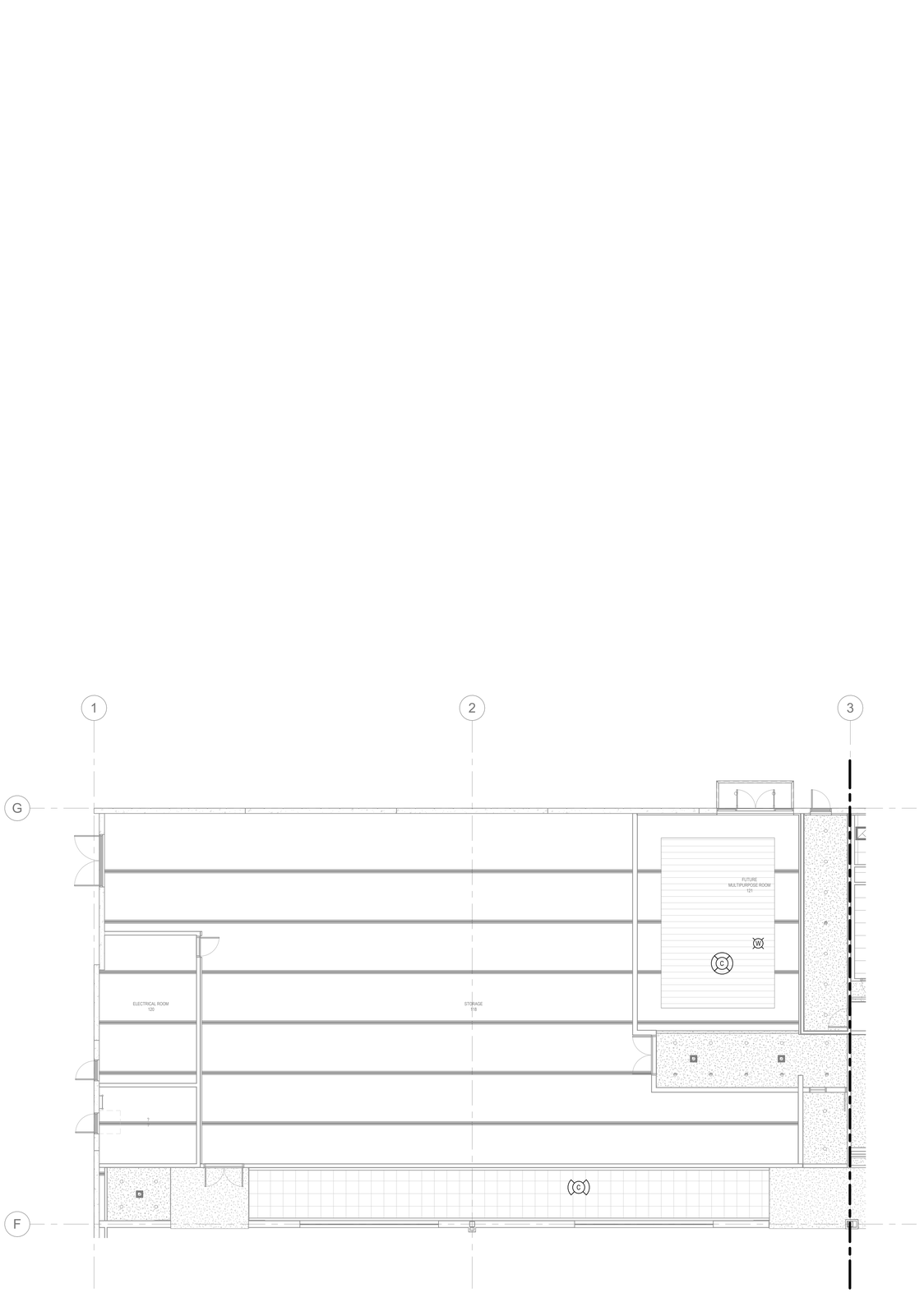
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KEYNOTES: (XX)

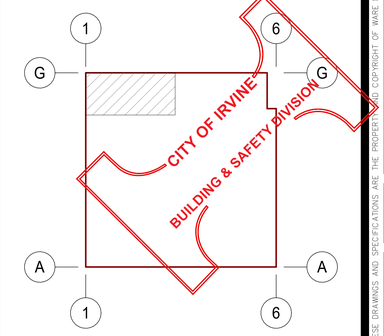
SHEET NOTES



STORAGE, ELECTRICAL AND FIRE PUMP ROOM - TELECOM RCP PLAN (1)

SCALE: 1/8" = 1'-0"

KEY PLAN



WARE MALCOMB
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STORAGE, ELECTRICAL - TELECOM RCP PLAN

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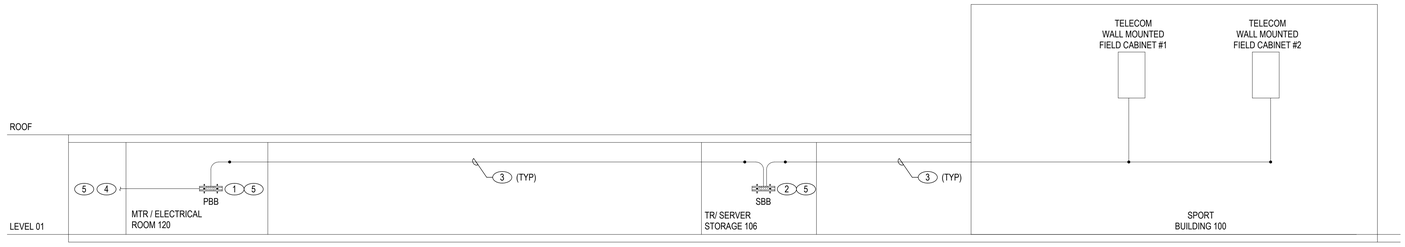
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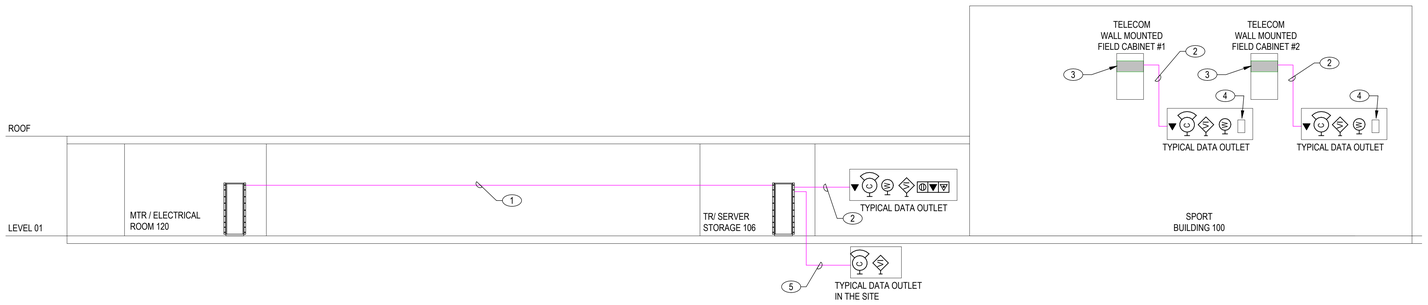


4 COMMUNICATIONS GROUNDING SINGLE LINE DIAGRAM

SCALE: NONE

KEYED NOTES (#)

1. PRIMARY GROUNDING BUSBAR.
2. SECONDARY GROUNDING BUSBAR.
3. GROUNDING CONDUCTOR.
4. TO THE MAIN ELECTRICAL GROUND BAR.
5. REFER TO GROUNDING/ BOUNDING DETAIL TN9.01 FOR MORE INFORMATION.

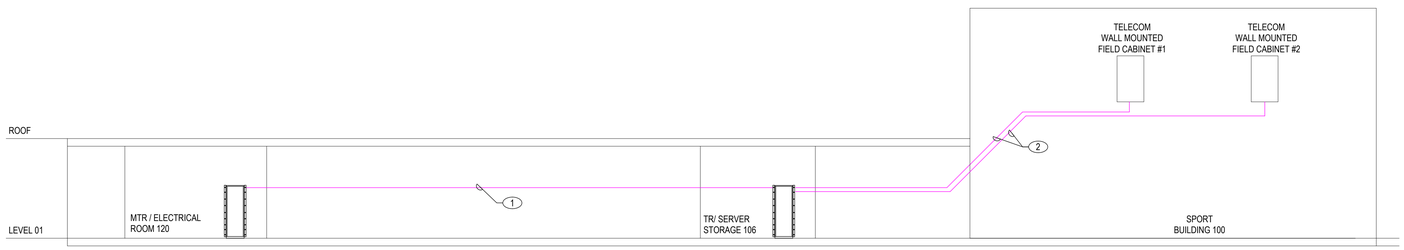


3 COMMUNICATIONS COPPER SINGLE LINE DIAGRAM

SCALE: NONE

KEYED NOTES (#)

1. PRIMARY GROUNDING BUSBAR.
2. SECONDARY GROUNDING BUSBAR.
3. GROUNDING CONDUCTOR.
4. TO THE MAIN ELECTRICAL GROUND BAR.
5. REFER TO GROUNDING/ BOUNDING DETAIL TN9.01 FOR MORE INFORMATION.

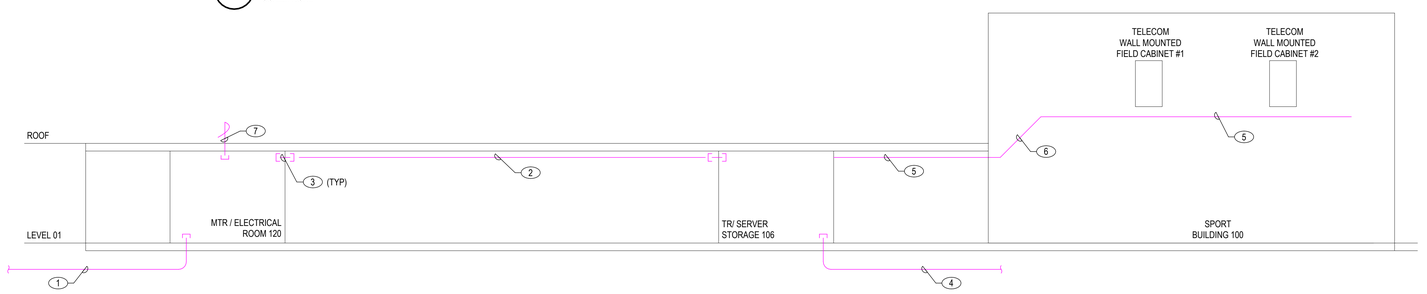


2 COMMUNICATIONS FIBER SINGLE LINE DIAGRAM

SCALE: NONE

KEYED NOTES (#)

1. PROVIDE 25 PAIR CAT3 FROM MTR/ ELECTRICAL ROOM 120 TO TR/ SERVER STORAGE 106.
2. PROVIDE CAT6A CABLE TO EACH DATA OUTLET.
3. PROVIDE ACTIVE NETWORK HARDWARE.
4. SCOREBOARD DATA OUTLET.
5. PROVIDE GAME CHANGER EXTENDED DISTANCE CABLING (PART NUMBER 258340804) AND GROUNDED SURGE PROTECTION FOR SITE DEVICES.



1 COMMUNICATIONS PATHWAY SINGLE LINE DIAGRAM

SCALE: NONE

KEYED NOTES (#)

1. EXISTING (4) 4" UNDERGROUND CONDUITS. REFER TO TN100 FOR MORE INFORMATION.
2. PROVIDE 18"X4" CABLE TRAY FROM MTR/ ELECTRICAL ROOM 120 TO TR/ SERVER STORAGE 106. WHERE PATHWAY CROSSES ENCLOSED CEILING, PROVIDE (2) 4" CONDUIT. REFER TO TN220 FOR MORE INFORMATION.
3. PROVIDE (4) 4" FIRE RATED INTUMESCENT SLEEVES.
4. PROVIDE (1) 2" UNDERGROUND PVC CONDUIT FOR SITE DEVICES. COORDINATE CONDUIT TRENCH WITH ELECTRICAL DRAWINGS. REFER TO TN100 FOR MORE INFORMATION.
5. PROVIDE 18"X4" CABLE TRAY. REFER TO TN220 FOR MORE INFORMATION.
6. PROVIDE VERTICAL SWEEP CABLE TRAY . REFER TO TN220 FOR MORE INFORMATION.
7. PROVIDE (1) 2" CONDUIT WITH WEATHER HEAD TO THE ROOF.

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TELECOM DIAGRAMS

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

PA/PM:	Approver
DRAWN BY.:	Author
JOB NO.:	LAX21-0174-02

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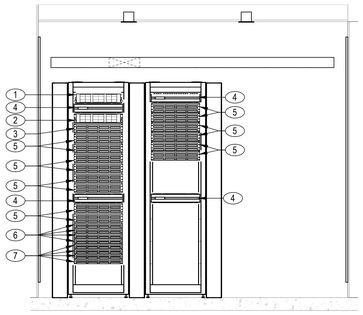
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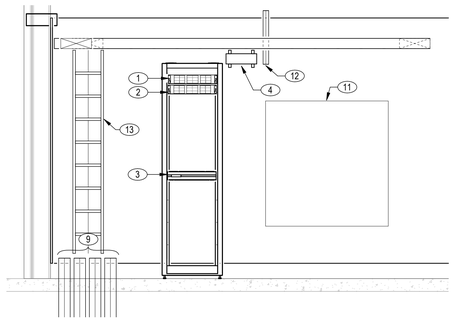
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TR 106 RACK EQUIPMENT SCHEDULE			
Equipment #	Description	Quantity	Location
1	2U FIBER PATCH PANEL		
2	2U FIBER PATCH PANEL FOR COLUMNS		
3	2U 48 PORT VOICE BACKBONE		
4	2U HORIZONTAL CABLE MANAGEMENT		
5	2U 48 PORT ANGLED CAT6A PATCH PANEL		
6	1RU 24 PORT ANGLED CAT6A PATCH PANEL FOR SECURITY		
7	1RU 24 PORT ANGLED CAT6A PATCH PANEL FOR WIRELESS ACCESS POINTS		

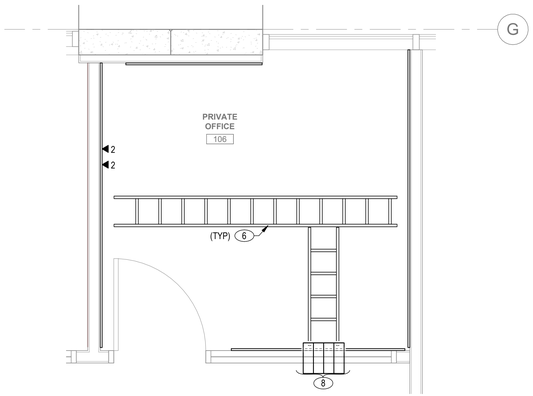


6 TR/SERVER 106 - RACK ELEVATION
SCALE: 1/2" = 1'-0"

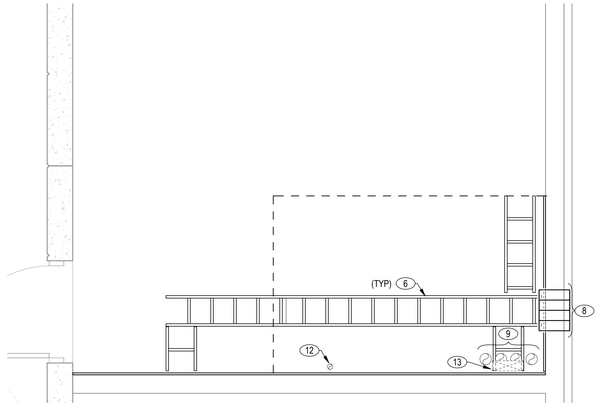
MTR 120 RACK EQUIPMENT SCHEDULE			
Equipment #	Description	Quantity	Location
1	2RU FIBER PATCH PANEL		
2	2U FIBER PATCH PANEL		
3	2U HORIZONTAL CABLE MANAGEMENT		



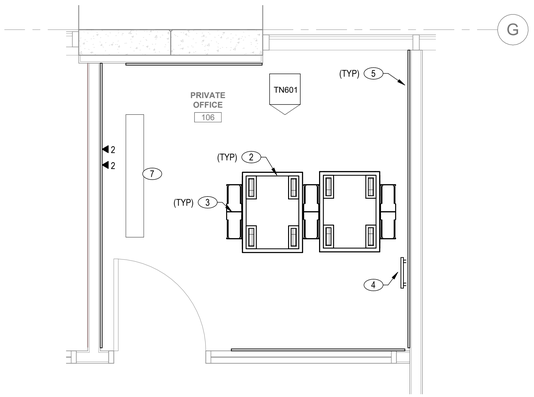
3 MTR 120 - RACK ELEVATION
SCALE: 1/2" = 1'-0"



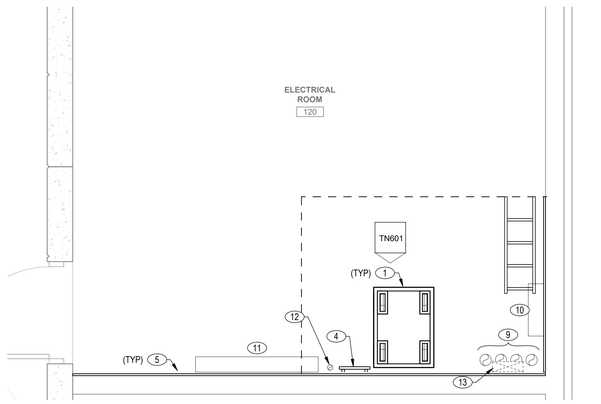
5 ENLARGED PATHWAY PLAN - TR/SERVER 106
SCALE: 1/2" = 1'-0"



2 ENLARGED PATHWAY PLAN - MTR/ELECTRICAL 120
SCALE: 1/2" = 1'-0"



4 ENLARGED EQUIPMENT PLAN - TR/SERVER 106
SCALE: 1/2" = 1'-0"



1 ENLARGED EQUIPMENT PLAN - MTR/ELECTRICAL 120
SCALE: 1/2" = 1'-0"

KEYNOTES: (XX)

SHEET NOTES

1. PROVIDE ENCLOSED SWING FRAME CABINET.
2. PROVIDE TRIPLITE CABINET.
3. PROVIDE 6" VERTICAL CABLE MANAGER.
4. PROVIDE GROUNDING BUSBAR 86" AFF.
5. PROVIDE 3/4" FIRE-RATED PLYWOOD.
6. PROVIDE 12" CABLE RUNWAY 90"AFF.
7. PROVIDE SPACE FOR ELECTRONIC SECURITY PANELS.
8. PROVIDE (4) - 44 SERIES EZ PATH
9. EXISTING (4) - UNDERGROUND CONDUITS.
10. PROVIDE SPACE FOR 110 CROSS CONNECT AND FUSED PROTECTOR BLOCK
11. PROVIDE SPACE FOR ERRCS SYSTEM.
12. PROVIDE (1) 2" CONDUIT WITH WEATHER HEAD TO THE ROOF.
13. PROVIDE 12" VERTICAL LADDER TRAY FROM GROUND CONDUIT TO HORIZONTAL CABLE TRAY.

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ENLARGED PLANS

REMARKS	DATE
PLAN CHECK CORRECTIONS 3	02-04-2026
1	

PA/PM:	Approver
DRAWN BY.:	Author
JOB NO.:	LAX21-0174-02

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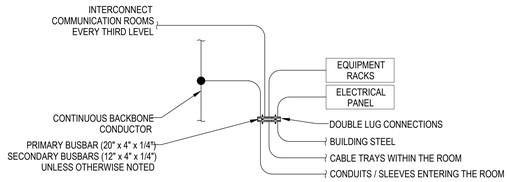
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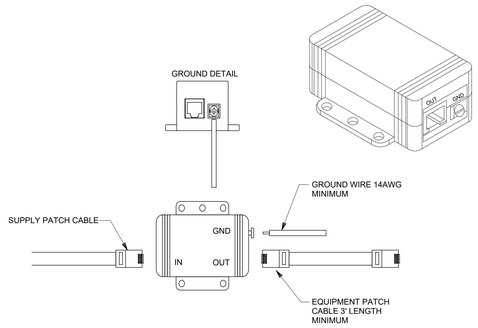


BONDING BUSBAR DETAIL

BONDING CONDUCTOR

LENGTH (FT)	SIZE (AWG)
< 13	6
14-20	4
21-26	3
27-33	1
34-41	1/0
42-52	2/0
53-66	3/0
67-84	4/0
85-105	250 kcmil
106-125	300 kcmil
151-175	350 kcmil
176-250	500 kcmil
251-300	600 kcmil
> 301	750 kcmil

7 GROUNDING DETAIL
SCALE: 1/8" = 1'-0"



8 SURGE PROTECTOR DETAIL
SCALE: 1/8" = 1'-0"

SHEET NOTES

A. WIRELESS ACCESS POINT MOUNT DETAILS SHOW DESIGN AND INSTALLATION INTENT. CUSTOMIZE FOR ACTUAL FIELD CONDITIONS.

B. PROVIDE REQUIRED COMPONENTS, FITTINGS, ADAPTERS AND COUPLERS TO ATTACH THE WIRELESS ACCESS POINTS TO THE MOUNTS AND TO ATTACH THE MOUNTS TO THE BUILDING OR STRUCTURE.

C. MODIFY WIRELESS ACCESS POINT MOUNTS TO ACCOMMODATE FIELD CONDITIONS.

D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING CONSTRUCTION DETAILS AND FOR COORDINATION OF EXACT PLACEMENT OF WIRELESS ACCESS POINTS.

E. PROVIDE WATERPROOF GASKETS BETWEEN BACK BOXES AND WIRELESS ACCESS POINTS.

F. PROVIDE OUTDOOR RATED COMPONENTS WHERE ANY PART OF THE COMPONENT COULD BE OR IS EXPOSED TO THE ELEMENTS.

G. PROVIDE STAINLESS STEEL FITTINGS WHERE ANY PART OF THE COMPONENT COULD BE OR IS EXPOSED TO THE SALT WATER OR SALT WATER MOISTURE.

H. PROVIDE MATERIAL AND SYSTEMS TO MAINTAIN FIRE RATING OF WALLS, FLOORS AND CEILINGS WHERE CONDUITS, CABLES, WIRELESS ACCESS POINT AND WIRELESS ACCESS POINT MOUNTS PASS THROUGH OR ARE ATTACHED TO.

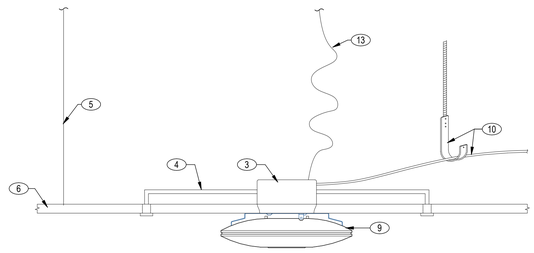
I. LIGHT POLE DETAILS SHOWN FOR DESIGN INTENT. COORDINATE CONDUIT, PULL BOX AND WIRELESS ACCESS POINT MOUNT DETAILS WITH THE LIGHT POLE INSTALLER AND THE ARCHITECT.

J. UPSIZE CONDUIT DIAMETER WHEN CONDUIT MAXIMUM RUN LENGTHS AND MAXIMUM NUMBER OF BENDS ARE EXCEEDED WITHOUT THE INSTALLATION OF ADDITIONAL HANDHOLE OR PULL BOXES.

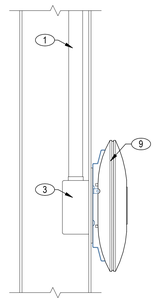
K. PROVIDE GASKETS ON EXTERIOR BACKBOXES.

KEYED NOTES (#)

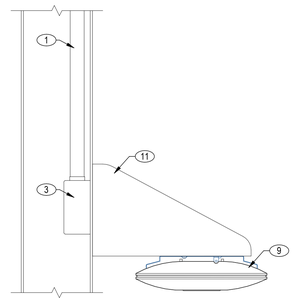
1. MINIMUM 1" EMT CONDUIT TO NEAREST CABLE TRAY OR ACCESSIBLE CEILING SPACE. FIRE STOPPED AND/OR CEILING SEALED AS REQUIRED.
2. THREADED PIPE (PENDANT), PAINTED TO PATCH COLOR OR WIRELESS ACCESS POINT HOUSING. COORDINATE LENGTH IN FIELD TO MATCH DESIRED HEIGHT.
3. BACK BOX (4-11/16 BY 4--11/16 BY 2-1/2 UNLESS OTHERWISE NOTED)
4. SUPPORT FRAME/SUPPORT BRACKET
5. CEILING CHANNEL SUPPORT WIRE
6. ACCESSIBLE CEILING TILE
7. GYPSUM BOARD/WOOD PANEL CEILING
8. EXPOSED STRUCTURE
9. WIRELESS ACCESS POINT
10. EXPOSED CABLE (SUPPORT WITH J-HOOKS ANCHORED TO STRUCTURE ON MAXIMUM 48" INTERVALS IN THE CEILING AREAS.)
11. WIRELESS ACCESS POINT BRACKET
12. WATERPROOF GASKET BETWEEN BACK BOX AND WIRELESS ACCESS POINT/WIRELESS ACCESS POINT BRACKET ON ALL EXTERIOR WIRELESS ACCESS POINTS.
13. SAFETY SLACK WIRE / CABLE SECURED TO STRUCTURE



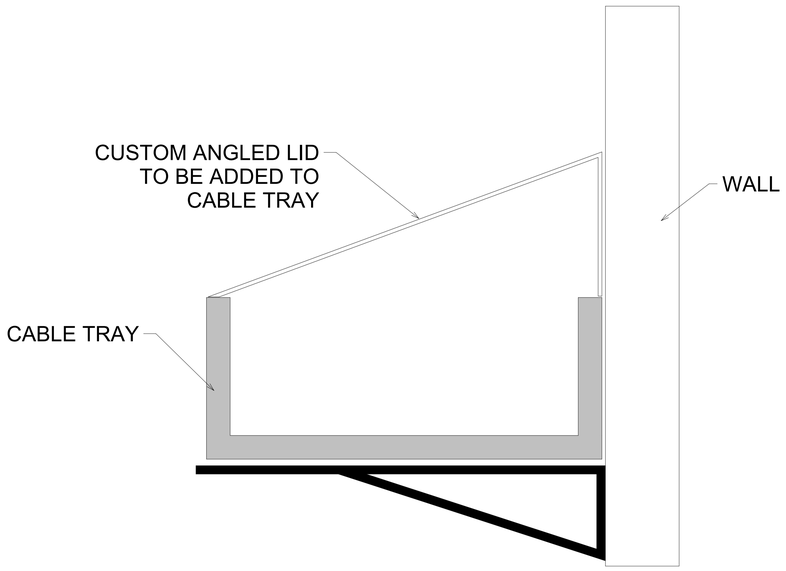
5 ACCESSIBLE CEILING TILE
SCALE: NONE



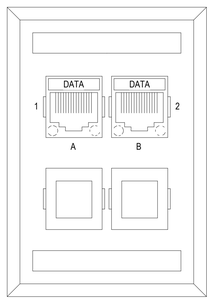
4 WALL MOUNT
SCALE: NONE



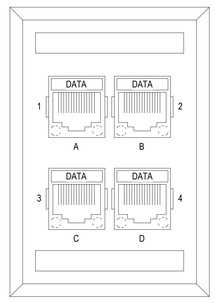
3 WALL MOUNT WITH BRACKET
SCALE: NONE



2 CABLE TRAY WITH CUSTOM LID
SCALE: 12" = 1'-0"



TYPE D OUTLETS
- QUAD JACKS FACEPLATE.
- TWO DATA JACKS.
- FACEPLATE LABEL IN UPPER AND LOWER LABELING WINDOW.
- JACKS LABELED INDIVIDUALLY.



TYPE D OUTLETS
- QUAD JACKS FACEPLATE.
- FOUR DATA JACKS.
- FACEPLATE LABEL IN UPPER AND LOWER LABELING WINDOW.
- JACKS LABELED INDIVIDUALLY.

1 STANDARD DATA OUTLETS
SCALE: 12" = 1'-0"

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TELECOM DETAILS

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SECURITY CABLE LEGEND

CABLE DESIGNATOR	CABLE TYPE	DESCRIPTION	INSULATION TYPE	CONNECTOR TYPE
A	HYBRID	OSDP TWISTED PAIR + POWER	RISER	N/A
B	COMPOSITE	18/4 STRANDED COPPER	RISER	N/A
C	COMPOSITE	22/4 STRANDED COPPER I/O	RISER	N/A
D	COMPOSITE	22/2 STRANDED COPPER I/O	RISER	N/A
E	DATA	22/6 SHIELDED STRANDED COPPER SERIAL	RISER	N/A
D1	DATA	CATEGORY 6A	PLENUM	N/A
D2	DATA	CATEGORY 6A	INDOOR / OUTDOOR	N/A

INTRUSION SCHEDULE

DOOR /DEVICE #	AREA	DEVICE LOCATION	TYPE	HEIGHT	MOUNT	CABLE QUANTITY / TYPE	DETAIL	NOTE
M-101	LEVEL 1	LOBBY/WAITING 101	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-102	LEVEL 1	LOBBY/WAITING 101	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-103	LEVEL 1	CONFERENCE 107	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-104	LEVEL 1	SERVER STORAGE 106	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-105	LEVEL 1	PRIVATE OFFICE 105	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-106	LEVEL 1	PRIVATE OFFICE 104	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-107	LEVEL 1	LAUNDRY	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-108	LEVEL 1	OPEN OFFICE 103	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-109	LEVEL 1	CORRIDOR - FUTURE FOOD COURT 108	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-110	LEVEL 1	FUTURE FOOD COURT 108	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-111	LEVEL 1	FUTURE FOOD COURT 108	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-112	LEVEL 1	RESTROOM 111 & 112	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-113	LEVEL 1	FUTURE KITCHEN 110	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-114	LEVEL 1	FUTURE KITCHEN 110	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-115	LEVEL 1	CORRIDOR 123	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-116	LEVEL 1	FUTURE MULTIPURPOSE ROOM 121	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-117	LEVEL 1	FUTURE MULTIPURPOSE ROOM 121	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-118	LEVEL 1	STORAGE 118	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-119	LEVEL 1	STORAGE 118	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-120	LEVEL 1	CORRIDOR	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-121	LEVEL 1	SPORT BUILDING 100 - AREA A	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-122	LEVEL 1	SPORT BUILDING 100 - AREA A	MOTION SENSOR - LONG RANGE	8' AFF	SURFACE WALL MOUNT			
M-123	LEVEL 1	SPORT BUILDING 100 - AREA B	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-124	LEVEL 1	SPORT BUILDING 100 - AREA B	MOTION SENSOR	8' AFF	SURFACE WALL MOUNT			
M-125	LEVEL 1	SPORT BUILDING 100 - AREA B	MOTION SENSOR - LONG RANGE	8' AFF	SURFACE WALL MOUNT			
M-126	LEVEL 1	SPORT BUILDING 100 - AREA G	MOTION SENSOR - LONG RANGE	8' AFF	SURFACE WALL MOUNT			
M-127	LEVEL 1	SPORT BUILDING 100 - AREA G	MOTION SENSOR - LONG RANGE	8' AFF	SURFACE WALL MOUNT			
M-128	LEVEL 1	SPORT BUILDING 100 - AREA H	MOTION SENSOR - LONG RANGE	8' AFF	SURFACE WALL MOUNT			
M-129	LEVEL 1	SPORT BUILDING 100 - AREA H	MOTION SENSOR - LONG RANGE	8' AFF	SURFACE WALL MOUNT			
M-130	LEVEL 1	ELECTRICAL ROOM 120	MOTION SENSOR - LONG RANGE	8' AFF	SURFACE WALL MOUNT			
D-101	LEVEL 1	CHECK IN 102	DURESS ALARM	N/A	UNDER DESK	(1) D1		
D-102	LEVEL 1	CHECK IN 102	DURESS ALARM	N/A	UNDER DESK	(1) D1		
D-103	LEVEL 1	PRIVATE OFFICE 105	DURESS ALARM	N/A	UNDER DESK	(1) D1		
K-101	LEVEL 1	CHECK IN 102	ARM/DISARM KEYPAD	BUILDING ADA SWITCH HEIGHT	SURFACE WALL MOUNT			
K-102	LEVEL 1	CORRIDOR - FUTURE FOOD COURT 108	ARM/DISARM KEYPAD	BUILDING ADA SWITCH HEIGHT	SURFACE WALL MOUNT			
K-103	LEVEL 1	FUTURE KITCHEN 110	ARM/DISARM KEYPAD	BUILDING ADA SWITCH HEIGHT	SURFACE WALL MOUNT			
S101B	LEVEL 1	LOBBY / WAITING 101	DOOR POSITION SWITCH	N/A	DOOR HEADER	(2) C		
S101	LEVEL 1	LOBBY / WAITING 101	DOOR POSITION SWITCH	N/A	DOOR HEADER	(2) C		
107A	LEVEL 1	CONFERENCE 107	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
103	LEVEL 1	OPEN OFFICE 103	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
102	LEVEL 1	OPEN OFFICE 103	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
106	LEVEL 1	SERVER STORAGE 106	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S108	LEVEL 1	CORRIDOR - FUTURE FOOD COURT 108	DOOR POSITION SWITCH	N/A	DOOR HEADER	(2) C		
S110	LEVEL 1	FUTURE KITCHEN 110	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
110C	LEVEL 1	FUTURE KITCHEN 110	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S123	LEVEL 1	CORRIDOR 123	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S121	LEVEL 1	FUTURE MULTIPURPOSE ROOM 121	DOOR POSITION SWITCH	N/A	DOOR HEADER	(2) C		
121A	LEVEL 1	FUTURE MULTIPURPOSE ROOM 121	DOOR POSITION SWITCH	N/A	DOOR HEADER	(2) C		
118A	LEVEL 1	STORAGE 118	DOOR POSITION SWITCH	N/A	DOOR HEADER	(2) C		
120B	LEVEL 1	ELECTRICAL ROOM 120	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S120	LEVEL 1	ELECTRICAL ROOM 120	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S119	LEVEL 1	FIRE PUMP ROOM 119	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S118	LEVEL 1	STORAGE 118	DOOR POSITION SWITCH	N/A	DOOR HEADER	(2) C		
S100N	LEVEL 1	SPORT BUILDING 100 - AREA A	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100A	LEVEL 1	SPORT BUILDING 100 - AREA B	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100L	LEVEL 1	SPORT BUILDING 100 - AREA C	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100M	LEVEL 1	SPORT BUILDING 100 - AREA C	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100B	LEVEL 1	SPORT BUILDING 100 - AREA D	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100C	LEVEL 1	SPORT BUILDING 100 - AREA D	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100K	LEVEL 1	SPORT BUILDING 100 - AREA E	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100D	LEVEL 1	SPORT BUILDING 100 - AREA F	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100I	LEVEL 1	SPORT BUILDING 100 - AREA G	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100J	LEVEL 1	SPORT BUILDING 100 - AREA G	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100E	LEVEL 1	SPORT BUILDING 100 - AREA H	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100F	LEVEL 1	SPORT BUILDING 100 - AREA H	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100G	LEVEL 1	SPORT BUILDING 100 - AREA H	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
S100H	LEVEL 1	SPORT BUILDING 100 - AREA H	DOOR POSITION SWITCH	N/A	DOOR HEADER	(1) C		
H-101	LEVEL 1	LOBBY / WAITING 101	STROBE / HORN	8' AFF	SURFACE WALL MOUNT			
H-102	LEVEL 1	LOBBY / WAITING 101	STROBE / HORN	8' AFF	SURFACE WALL MOUNT			

IP ALARM

DEVICE #	AREA	TYPE	HEIGHT	MOUNT	MDF / IDF Home	CABLE QUANTITY / TYPE	DETAIL	NOTE
B-001	LEVEL 1 - SITE	BLUE LIGHT PHONE		PEDESTAL	SERVER STORAGE 106	(1) D2		PROVIDE GAME CHANGER EXTENDED DISTANCE CABLING (PART NUMBER 258340804) FOR SITE DEVICES.
B-002	LEVEL 1 - SITE	BLUE LIGHT PHONE		WALL MOUNT	SERVER STORAGE 106	(1) D2		
B-003	LEVEL 1 - SITE	BLUE LIGHT PHONE		WALL MOUNT	TELECOM WALL MOUNTED FIELD CABINET #2	(1) D2		
B-004	LEVEL 1 - SITE	BLUE LIGHT PHONE		WALL MOUNT	TELECOM WALL MOUNTED FIELD CABINET #2	(1) D2		

CAMERA SCHEDULE

DEVICE #	AREA	TYPE	HEIGHT	MOUNT	FOV DESCRIPTION	MDF / IDF Home	DETAIL	NOTE
C-001	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	POLE MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	PROVIDE GAME CHANGER EXTENDED DISTANCE CABLING (PART NUMBER 258340804) FOR SITE DEVICES.
C-002	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	POLE MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	PROVIDE GAME CHANGER EXTENDED DISTANCE CABLING (PART NUMBER 258340804) FOR SITE DEVICES.
C-003	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	
C-004	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	
C-005	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	TELECOM WALL MOUNTED FIELD CABINET #2	TY-901	
C-006	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	TELECOM WALL MOUNTED FIELD CABINET #2	TY-901	
C-007	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	TELECOM WALL MOUNTED FIELD CABINET #2	TY-901	
C-008	LEVEL 1 - SITE	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	TELECOM WALL MOUNTED FIELD CABINET #1	TY-901	
C-101	LEVEL 1	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	
C-102	LEVEL 1	MULTI-IMAGER 360	CEILING	FLUSH CEILING	LOBBY / WAITING 101	SERVER STORAGE 106	TY-901	
C-103	LEVEL 1	SINGLE IMAGER FIXED DOME	8' AFF	SURFACE WALL MOUNT	CHECK IN 102	SERVER STORAGE 106	TY-901	
C-104	LEVEL 1	SINGLE IMAGER FIXED DOME	8' AFF	SURFACE WALL MOUNT	SERVER STORAGE 106	SERVER STORAGE 106	TY-901	
C-105	LEVEL 1	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	
C-106	LEVEL 1	MULTI-IMAGER 180	8' AFF	SURFACE WALL MOUNT	CORRIDOR - FUTURE FOOD COURT 108	SERVER STORAGE 106	TY-901	
C-107	LEVEL 1	MULTI-IMAGER 180	CEILING	FLUSH CEILING	FUTURE FOOD COURT 108	SERVER STORAGE 106	TY-901	
C-108	LEVEL 1	MULTI-IMAGER 360	8' AFF	SURFACE WALL MOUNT	FUTURE FOOD COURT 108	SERVER STORAGE 106	TY-901	
C-109	LEVEL 1	MULTI-IMAGER 360	8' AFF	SURFACE WALL MOUNT	RESTROOM 111 & 112	SERVER STORAGE 106	TY-901	
C-110	LEVEL 1	MULTI-IMAGER 360	CEILING	FLUSH CEILING	FUTURE FOOD COURT 108	SERVER STORAGE 106	TY-901	
C-111	LEVEL 1	SINGLE IMAGER FIXED DOME	8' AFF	SURFACE WALL MOUNT	FUTURE VENDING 109	SERVER STORAGE 106	TY-901	
C-112	LEVEL 1	SINGLE IMAGER FIXED DOME	CEILING	FLUSH CEILING	FUTURE KITCHEN 110	SERVER STORAGE 106	TY-901	
C-113	LEVEL 1	SINGLE IMAGER FIXED DOME	CEILING	FLUSH CEILING	FUTURE KITCHEN 110	SERVER STORAGE 106	TY-901	
C-114	LEVEL 1	SINGLE IMAGER FIXED DOME	CEILING	FLUSH CEILING	FUTURE KITCHEN 110	SERVER STORAGE 106	TY-901	
C-115	LEVEL 1	SINGLE IMAGER FIXED DOME	CEILING	FLUSH CEILING	FUTURE KITCHEN 110	SERVER STORAGE 106	TY-901	
C-116	LEVEL 1	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	
C-117	LEVEL 1	MULTI-IMAGER 180	8' AFF	SURFACE WALL MOUNT	CORRIDOR -FUTURE KITCHEN 110	SERVER STORAGE 106	TY-901	
C-118	LEVEL 1	MULTI-IMAGER 360	CEILING	FLUSH CEILING	FUTURE MULTIPURPOSE ROOM 121	SERVER STORAGE 106	TY-901	
C-119	LEVEL 1	MULTI-IMAGER 180	CEILING	FLUSH CEILING	CORRIDOR	SERVER STORAGE 106	TY-901	
C-120	LEVEL 1	MULTI-IMAGER 180	8' AFF	SURFACE WALL MOUNT	STORAGE 118	SERVER STORAGE 106	TY-901	
C-121	LEVEL 1	SINGLE IMAGER FIXED DOME	8' AFF	SURFACE WALL MOUNT	ELECTRICAL ROOM 120	SERVER STORAGE 106	TY-901	
C-122	LEVEL 1	MULTI-IMAGER 360	10' AFF	SURFACE WALL MOUNT	SIDEWALK	SERVER STORAGE 106	TY-901	

ACCESS CONTROL SCHEDULE

Door / Device Number	Siteplan Area	Floorplan Area	MDF / IDF Home	Access Device Type	Mount	Comms Format	Circulation	Fail Safe / Secure	Cable Quantity / Type	Detail	Notes
S101B	LEVEL 1	LOBBY / WAITING 101	SERVER 106	CR	BOLLARD	OSDP	READ-IN / FREE EGRESS / ADA	FAIL SECURE	(1) A, (1) B, (2) C, (2) D		
S101B	LEVEL 1	LOBBY / WAITING 101	SERVER 106	VI	BOLLARD	ETHERNET	N/A	N/A	(1) D2		VIDEO INTERCOM DOOR RELEASE. MASTER STATION LOCATED IN CHECK IN 102
107A	LEVEL 1	CONFERENCE 107	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
103	LEVEL 1	OPEN OFFICE 103	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
102	LEVEL 1	OPEN OFFICE 103	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
106	LEVEL 1	SERVER STORAGE 106	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
S108	LEVEL 1	CORRIDOR - FUTURE FOOD COURT 108	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (2) C		
S110	LEVEL 1	FUTURE KITCHEN 110	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
S110	LEVEL 1	FUTURE KITCHEN 110	SERVER 106	VI	WALL	ETHERNET	N/A	N/A	(1) D2		VIDEO INTERCOM DOOR RELEASE. MASTER STATION LOCATED IN CHECK IN 102
110C	LEVEL 1	FUTURE KITCHEN 110	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
S123	LEVEL 1	CORRIDOR 123	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
S121	LEVEL 1	FUTURE MULTIPURPOSE ROOM 121	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (2) C		
121A	LEVEL 1	FUTURE MULTIPURPOSE ROOM 121	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (2) C		
118A	LEVEL 1	STORAGE 118	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (2) C		
120B	LEVEL 1	ELECTRICAL ROOM 120	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
S120	LEVEL 1	ELECTRICAL ROOM 120	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		
S119	LEVEL 1	FIRE PUMP ROOM 119	SERVER 106	CR	WALL	OSDP	READ-IN / FREE EGRESS	FAIL SECURE	(1) A, (1) B, (1) C		

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SECURITY SCHEDULES

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

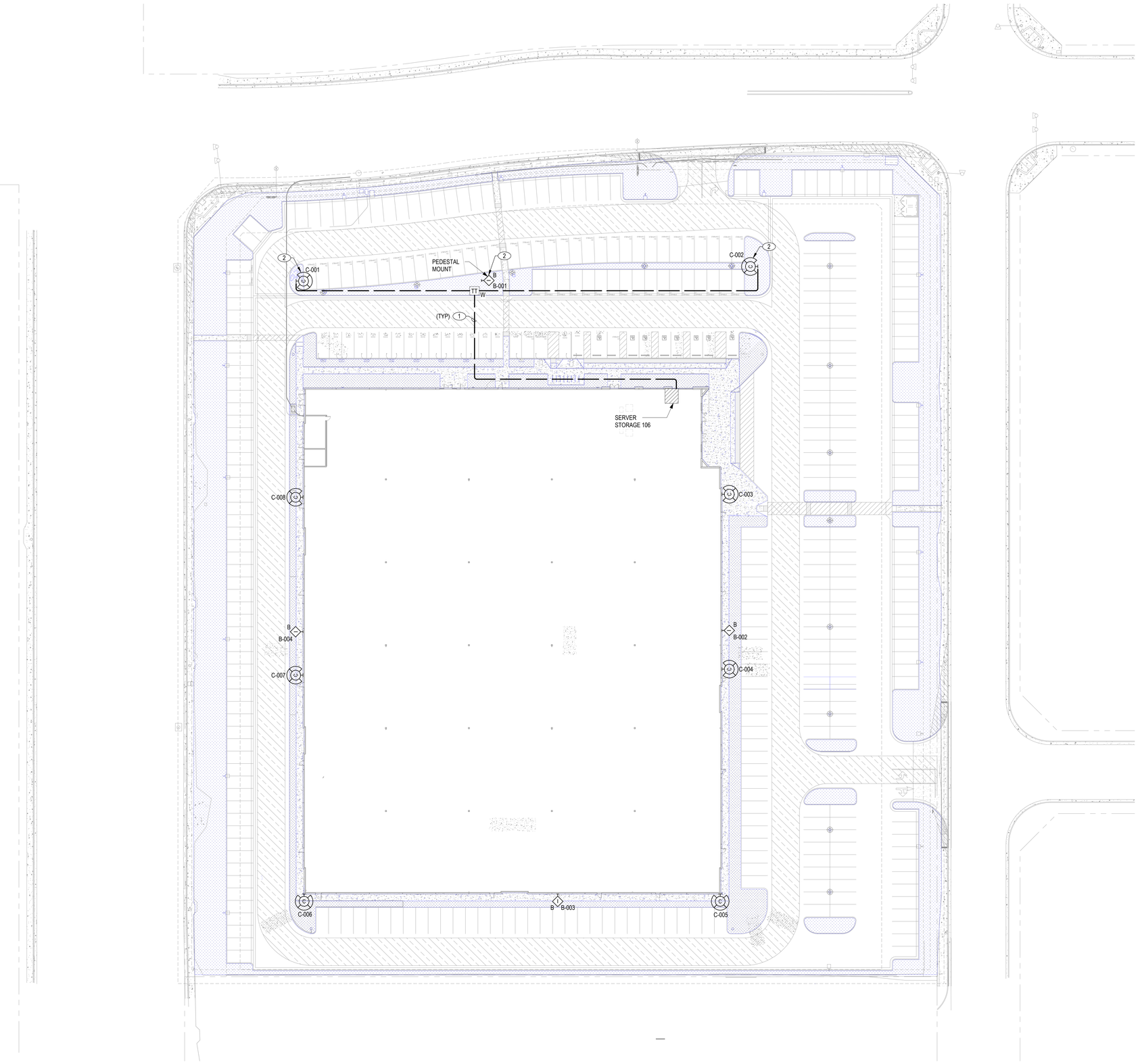
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SECURITY SITE PLAN

SCALE: 1" = 30'-0"

KEYNOTES: (XX)

1. PROVIDE (1) 2" UNDERGROUND PVC CONDUIT. COORDINATE CONDUIT TRENCH WITH ELECTRICAL DRAWINGS.
2. PROVIDE GAME CHANGER EXTENDED DISTANCE CABLING (PART NUMBER 258340804) FOR SITE DEVICES.

SHEET NOTES

A. HOME RUN IP DEVICES TO THE NEAREST TELECOM CABINET.

B. ALL NETWORK CABLING THAT EXTENDS OUTSIDE OF THE BUILDING ENVELOPE MUST PASS THROUGH SURGE PROTECTION PRIOR TO TERMINATION AT PATCH PANEL.

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SECURITY SITE PLAN

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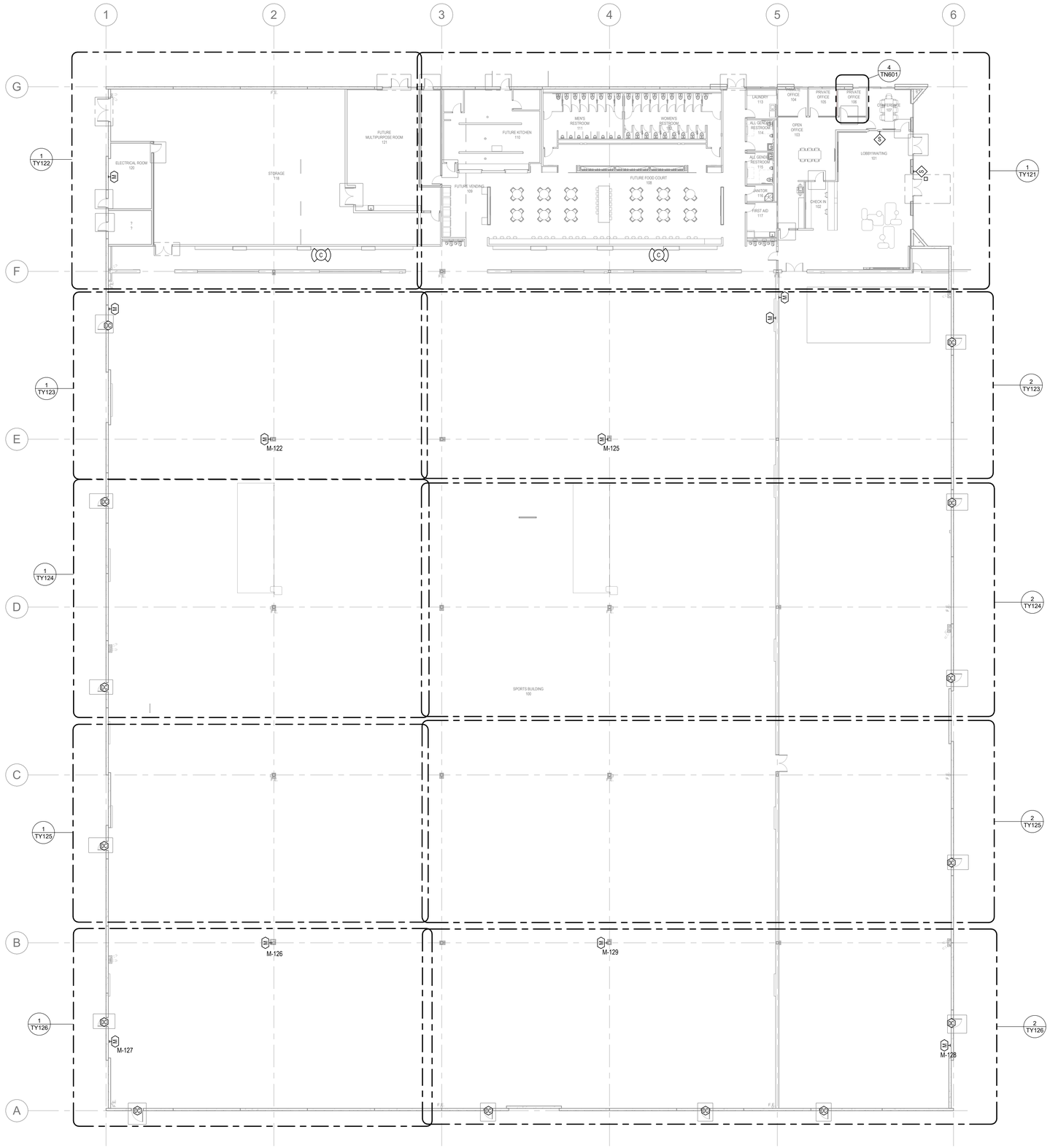
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OVERALL SECURITY FLOOR PLAN (1)
SCALE: 1/16" = 1'-0"

KEYNOTES: (XX)

A. ADD NOTES AS NEEDED.

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OVERALL SECURITY FLOOR PLAN

	DATE	REMARKS
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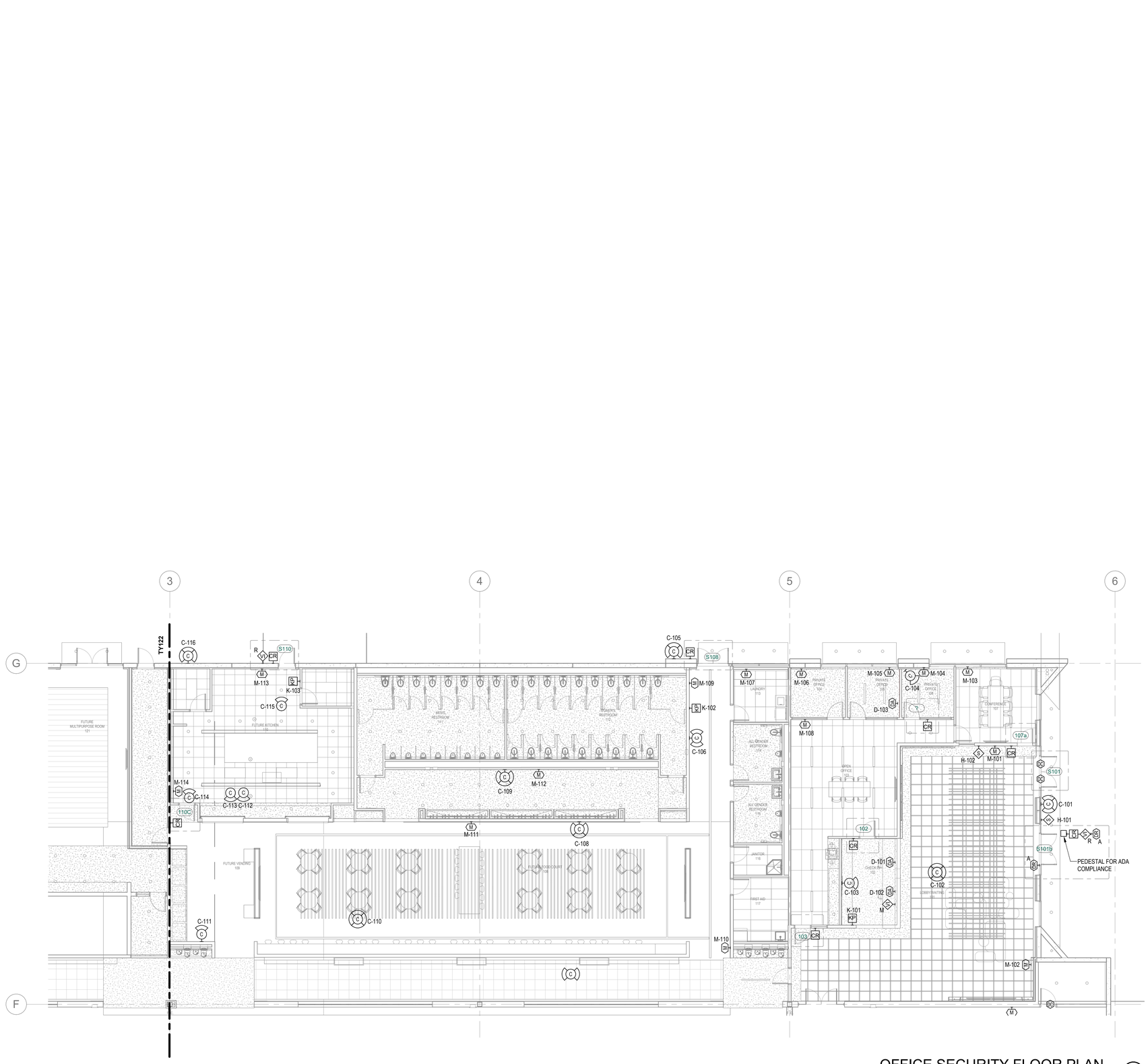
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KEYNOTES: (XX)

A. ADD NOTES AS NEEDED.

SHEET NOTES

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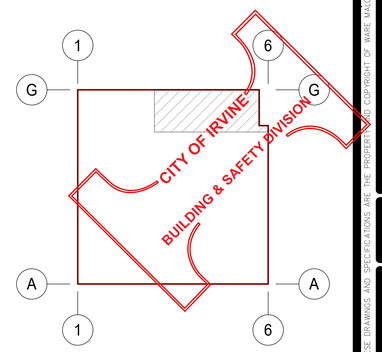


OFFICE SECURITY FLOOR PLAN 1

SCALE: 1/8" = 1'-0"

N

KEY PLAN



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OFFICE SECURITY FLOOR PLAN

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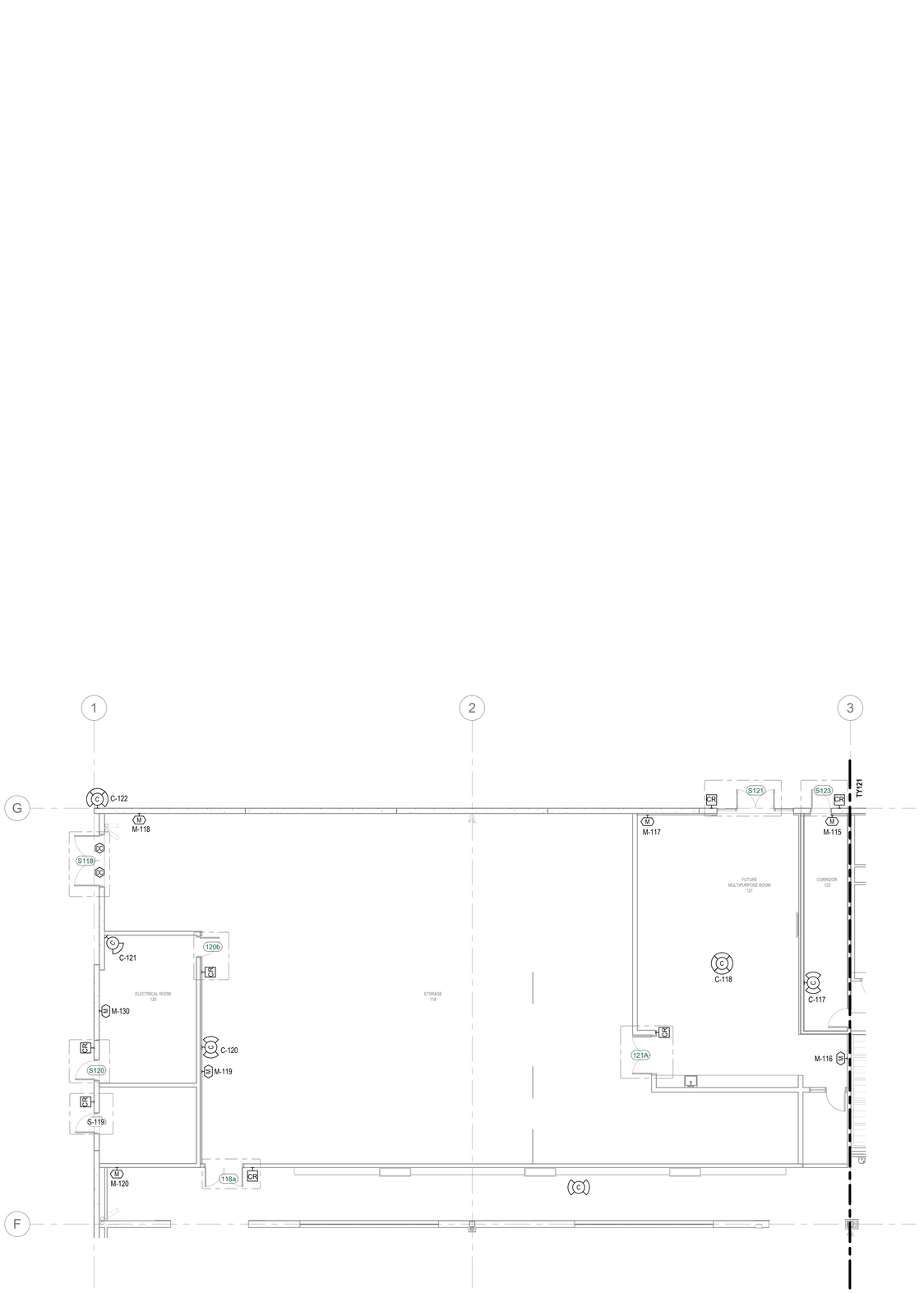
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KEYNOTES: (XX)

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SHEET NOTES

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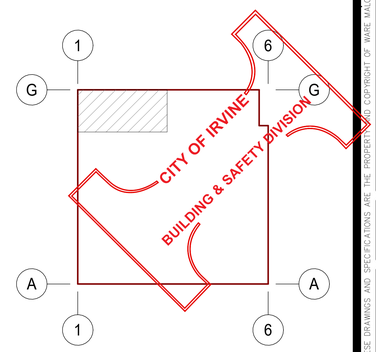
STORAGE, ELECTRICAL AND FIRE PUMP ROOM - SECURITY FLOOR PLAN

SCALE: 1/8" = 1'-0"

1

N

KEY PLAN



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IRVINE, CALIFORNIA 92614

STORAGE, ELECTRICAL - SECURITY FLOOR PLAN

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

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JOB NO.:	LAX21-0174-02

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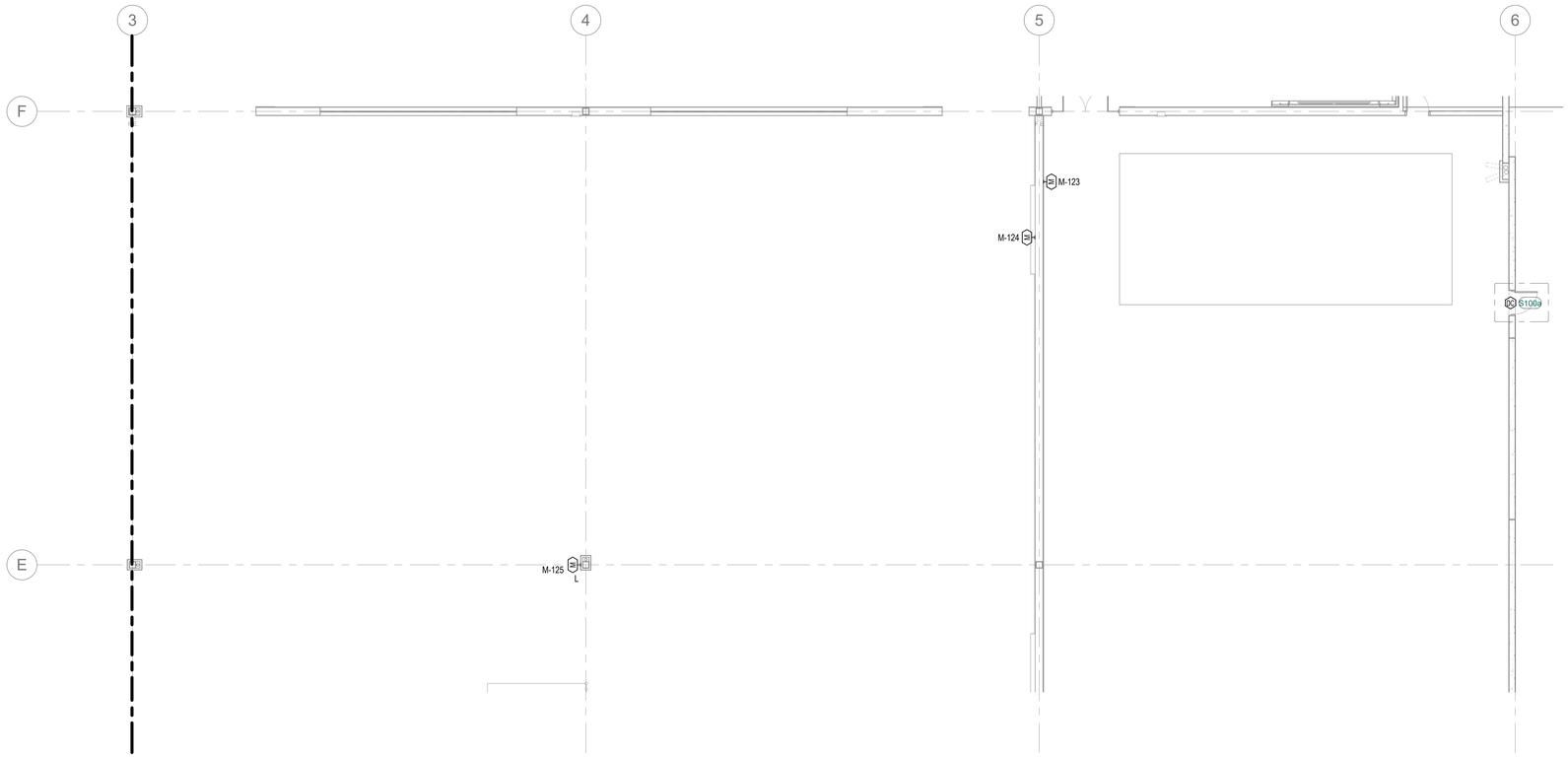
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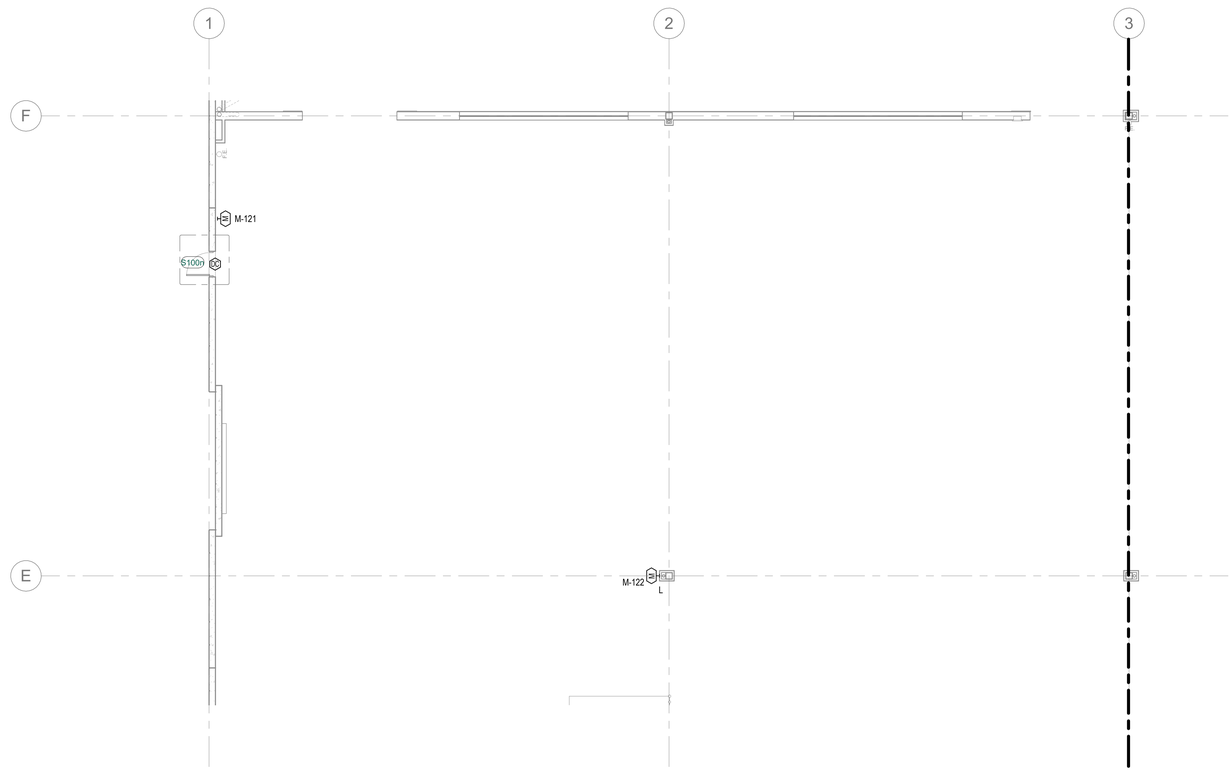
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SECURITY FLOOR PLAN - AREA B (2)
SCALE: 1/8" = 1'-0"



SECURITY FLOOR PLAN - AREA A (1)
SCALE: 1/8" = 1'-0"

KEYNOTES: (XX)

A. ADD NOTES AS NEEDED.

SHEET NOTES

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SECURITY FLOOR PLAN - AREA A & B

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

CITY OF IRVINE
BUILDING & SAFETY DIVISION

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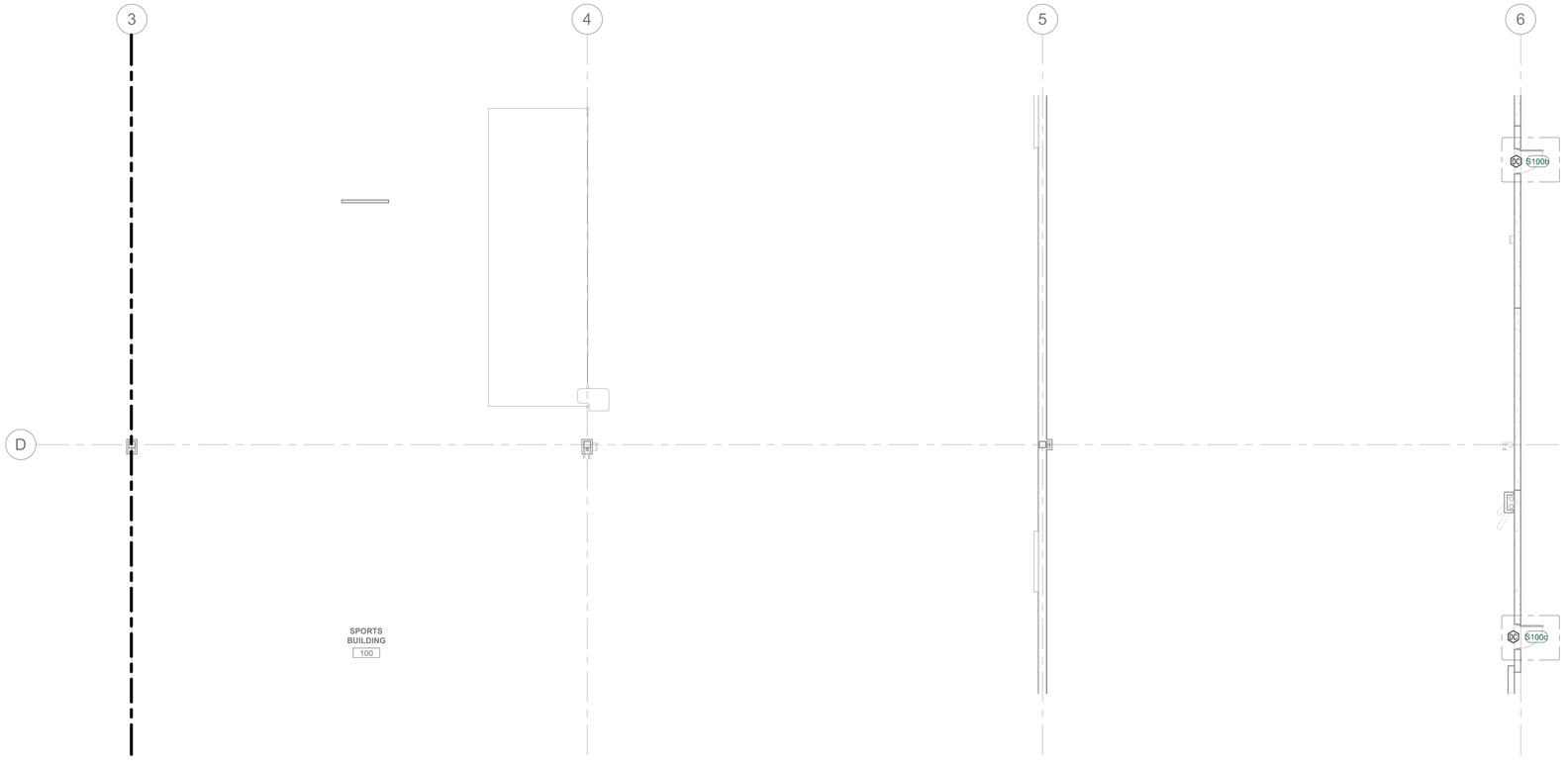
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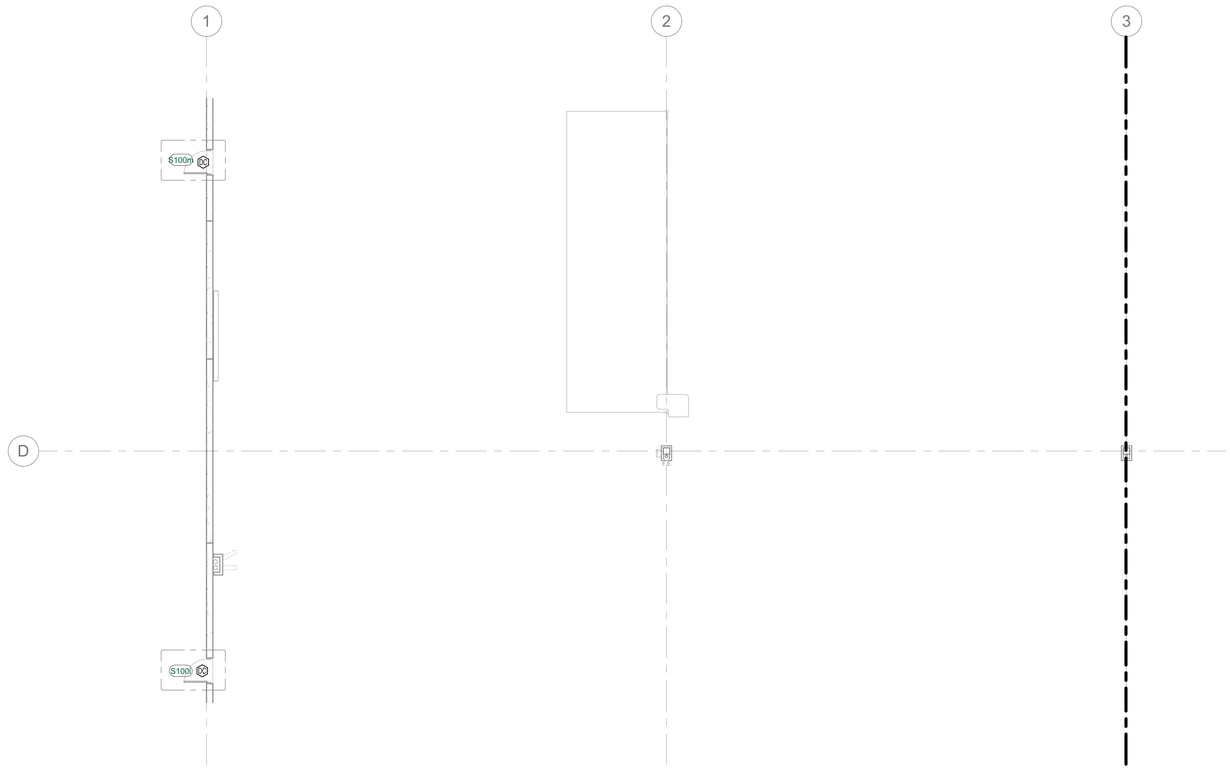
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SECURITY FLOOR PLAN - AREA D (2)
SCALE: 1/8" = 1'-0"



SECURITY FLOOR PLAN - AREA C (1)
SCALE: 1/8" = 1'-0"

KEYNOTES: (XX)

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SECURITY FLOOR PLAN - AREA C & D

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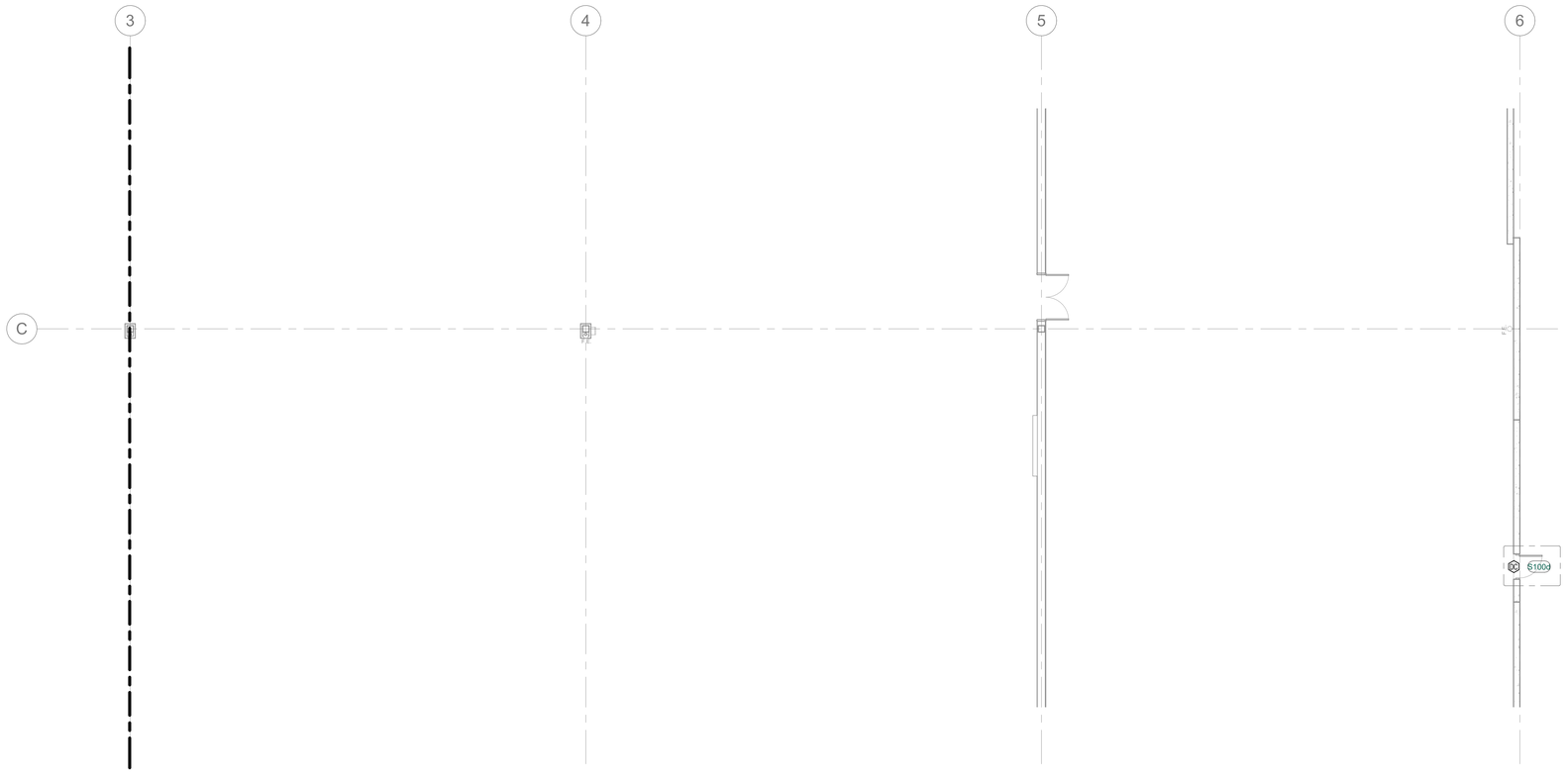
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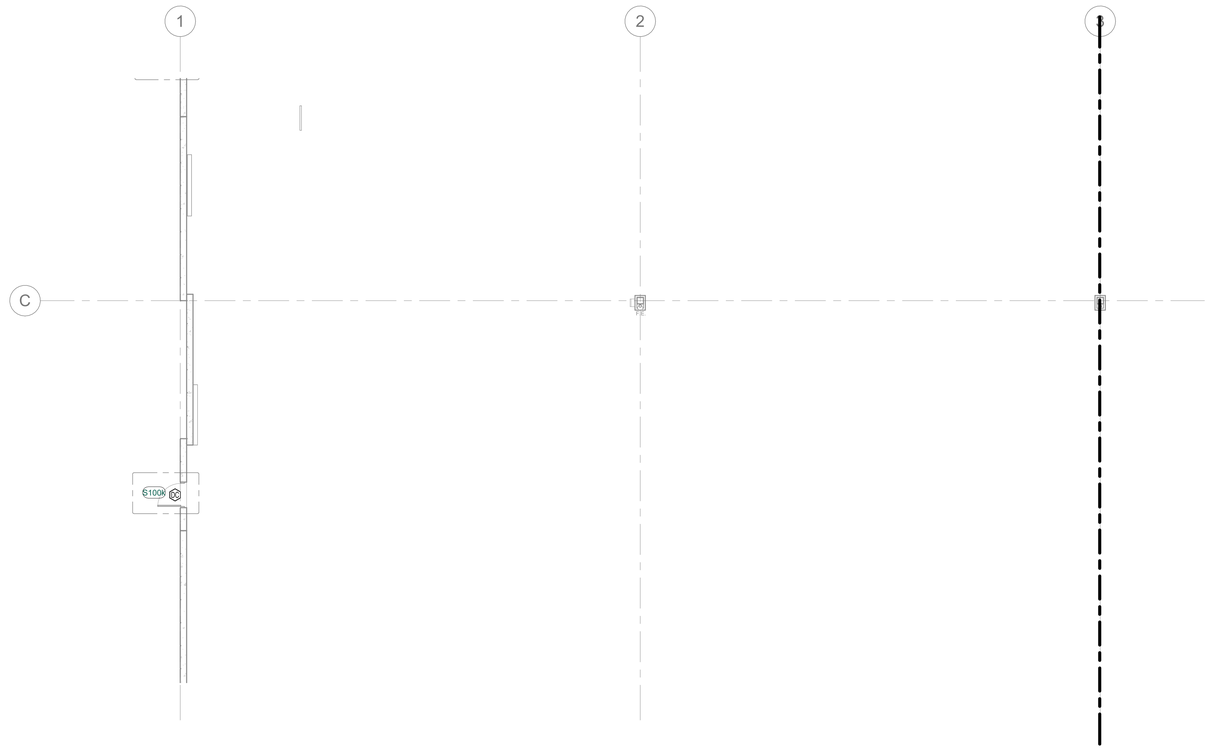
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SECURITY FLOOR PLAN - AREA F (2)
SCALE: 1/8" = 1'-0"



SECURITY FLOOR PLAN - AREA E (1)
SCALE: 1/8" = 1'-0"

KEYNOTES: (XX)

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SECURITY FLOOR PLAN - AREA E & F

#	DATE	REMARKS
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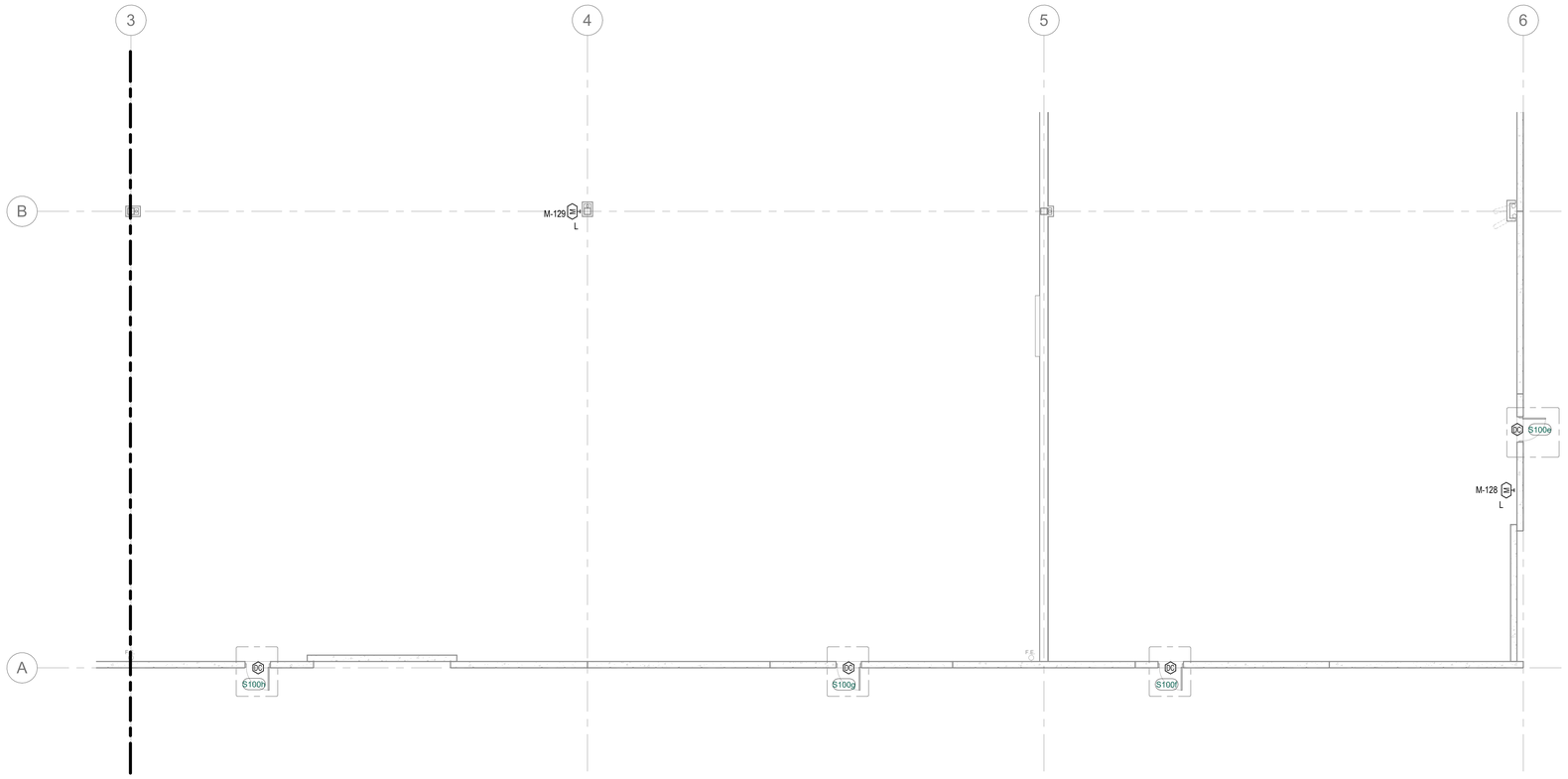
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SECURITY FLOOR PLAN - AREA H (2)
SCALE: 1/8" = 1'-0"



SECURITY FLOOR PLAN - AREA G (1)
SCALE: 1/8" = 1'-0"

KEYNOTES: (XX)

A. ADD NOTES AS NEEDED.

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SECURITY FLOOR PLAN - AREA G & H

	DATE	REMARKS
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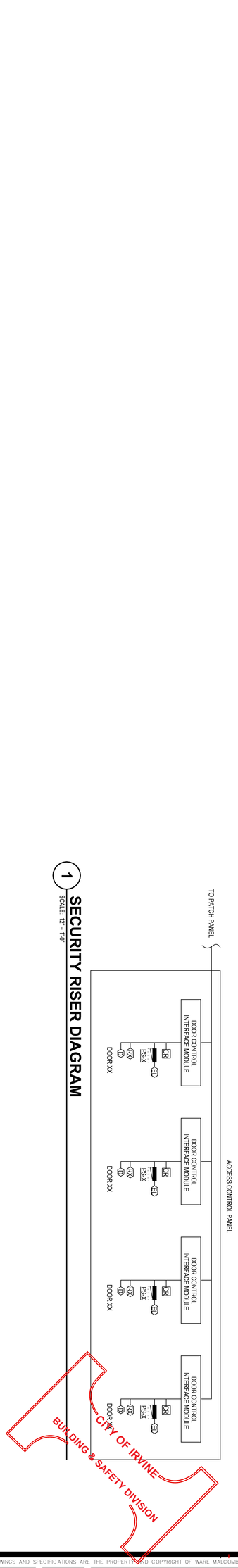
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1 SECURITY RISER DIAGRAM

SCALE: 12" = 1'-0"



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SECURITY DIAGRAMS

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

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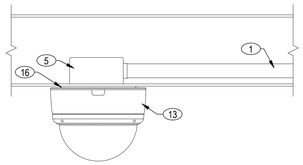
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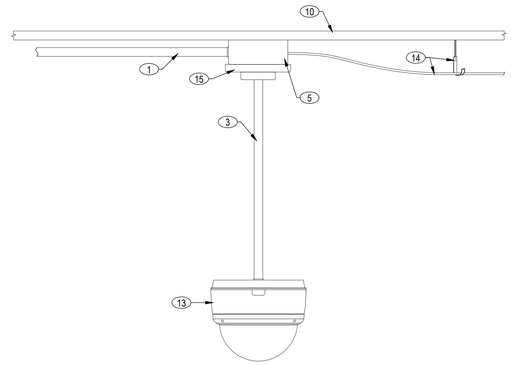
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UNDER CANOPY MOUNT CAMERA



PENDANT CAMERA

SHEET NOTES

A. CAMERA MOUNT DETAILS SHOW DESIGN AND INSTALLATION INTENT. CUSTOMIZE FOR ACTUAL FIELD CONDITIONS.

B. PROVIDE COMPONENTS, FITTINGS, ADAPTERS AND COUPLERS TO ATTACH THE CAMERAS TO THE MOUNTS AND TO ATTACH AND SECURE THE MOUNTS TO THE BUILDING OR STRUCTURE.

C. ADJUST CAMERA MOUNTS TO ACCOMMODATE FIELD CONDITIONS.

D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING CONSTRUCTION DETAILS AND FOR COORDINATION OF EXACT PLACEMENT OF CAMERAS.

E. COORDINATE REQUIREMENTS FOR CONDUIT AND BACK BOX ROUGH-IN INSIDE ELEVATOR CAB AND ELEVATOR MACHINE ROOM WITH THE ELEVATOR INSTALLER.

F. COORDINATE REQUIREMENTS FOR TRAVELING CABLE TO ELEVATOR CAMERAS IN ELEVATOR CABS WITH THE ELEVATOR INSTALLER.

G. COORDINATE CAMERA VIEWS WITH OWNER, OPERATOR AND ARCHITECT PRIOR TO INSTALLATION TO CONFIRM EXPECTED VIEWS. ADJUST CAMERA LOCATIONS AND FIELD OF VIEW TO COORDINATE AND PROVIDE THE APPROPRIATE CAMERA AND LENS TO MEET OWNER AND OPERATOR NEEDS. REFER TO SPECIFICATION 28300 FOR ADDITIONAL REQUIREMENTS.

H. PROVIDE WATERPROOF GASKETS BETWEEN BACK BOXES AND CAMERAS AND BETWEEN BACK BOXES AND EXTERIOR WALLS.

I. PROVIDE BIRD SPIKES ON THE TOP OF EXTERIOR CAMERAS.

J. PROVIDE OUTDOOR RATED COMPONENTS WHERE ANY PART OF THE COMPONENT COULD BE OR IS EXPOSED TO THE ELEMENTS.

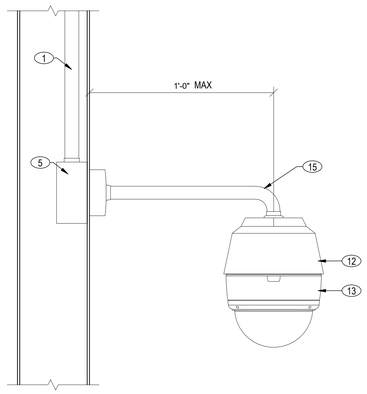
K. PROVIDE STAINLESS STEEL FITTINGS WHERE ANY PART OF THE COMPONENT COULD BE OR IS EXPOSED TO THE SALT WATER OR SALT WATER MOISTURE.

L. PROVIDE MATERIAL AND SYSTEMS TO MAINTAIN FIRE RATING OF WALLS, FLOORS AND CEILINGS WHERE CONDUITS, CABLES, CAMERA AND CAMERA MOUNTS PASS THROUGH OR ARE ATTACHED TO FIRE RATED WALLS OR CEILING.

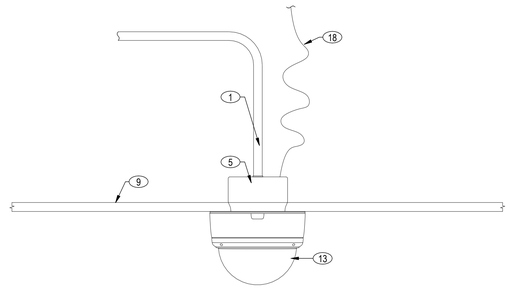
M. UPSIZE CONDUIT DIAMETER WHEN CONDUIT MAXIMUM RUN LENGTHS AND MAXIMUM NUMBER OF BENDS ARE EXCEEDED WITHOUT THE INSTALLATION OF ADDITIONAL HANDHOLE OR PULL BOXES.

KEYED NOTES

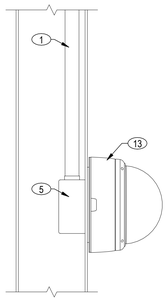
1. 1" MINIMUM CONDUIT TO NEAREST CABLE TRAY OR ACCESSIBLE CEILING SPACE. FIRE STOPPED AND/OR CEILING SEALED AS REQUIRED.
2. MINIMUM 1-1/2" RMC OR SCHEDULE 40 CONDUIT TO PULLBOX, UTILITY VAULT OR ACCESSIBLE SPACE IN BUILDING.
3. 1" MAXIMUM, END THREADED CONDUIT, PAINTED TO MATCH SURROUNDING COLOR OR CAMERA HOUSING. COORDINATE LENGTH IN FIELD TO MATCH DESIRED HEIGHT.
4. LOCKABLE, CONTINUOUS HINGE, NEMA 4X RATED ENCLOSURE - 12"H x 10"W x 6"D UON.
5. BACK BOX - 4-11/16" x 4-11/16" x 2-1/2" UON.
6. SUPPORT FRAME/SUPPORT BRACKET
7. CEILING CHANNEL SUPPORT WIRE
8. ACCESSIBLE CEILING TILE
9. GYPSUM BOARD/WOOD PANEL CEILING
10. EXPOSED STRUCTURE
11. ROOF LINE PARAPET.
12. CAMERA ENCLOSURE
13. CAMERA. REFER TO CAMERA SCHEDULE FOR REQUIREMENTS.
14. EXPOSED CABLE (SUPPORT WITH J-HOOKS ANCHORED TO STRUCTURE ON MAXIMUM 48" INTERVALS IN THE CEILING AREAS.)
15. CAMERA MOUNT BRACKET.
16. WATERPROOF GASKET BETWEEN BACK BOX AND CAMERA/CAMERA BRACKET ON ALL EXTERIOR CAMERAS.
17. BRACKET AND SWING OUT PARAPET MOUNT ARM.
18. SAFETY SLACK WIRE / CABLE SECURED TO STRUCTURE.



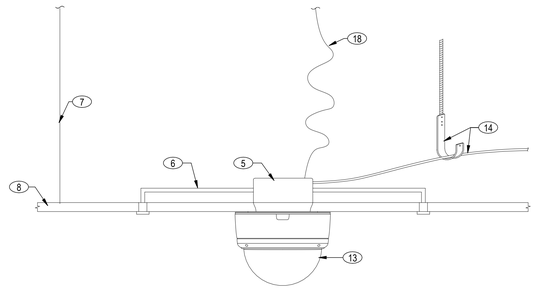
WALL MOUNT PENDANT CAMERA



HARD CEILING CAMERA



WALL MOUNT CAMERA



ACCESSIBLE CEILING TILE CAMERA

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CAMERA DETAILS

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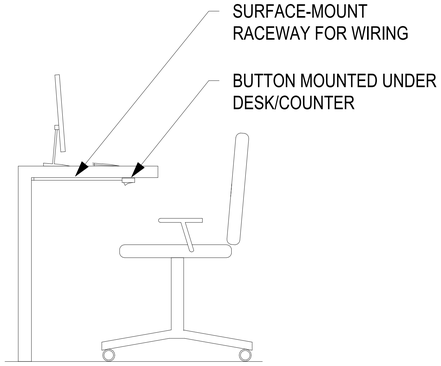
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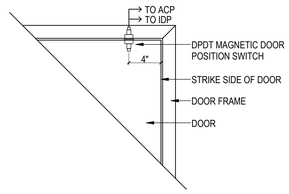
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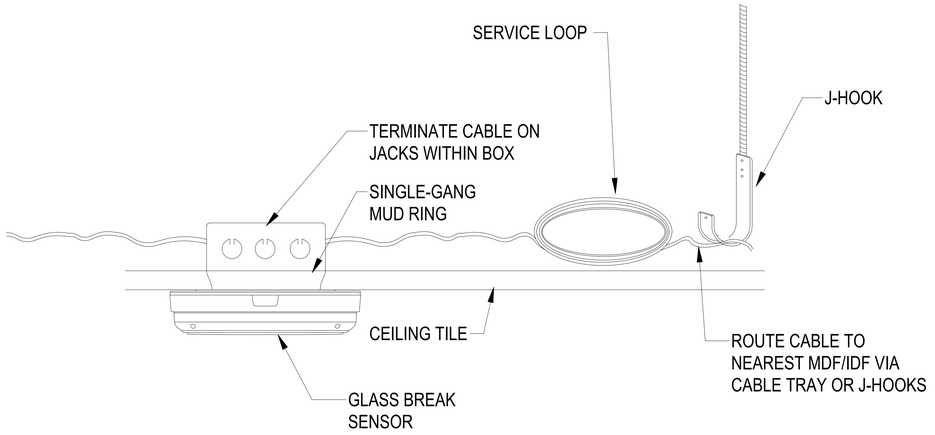
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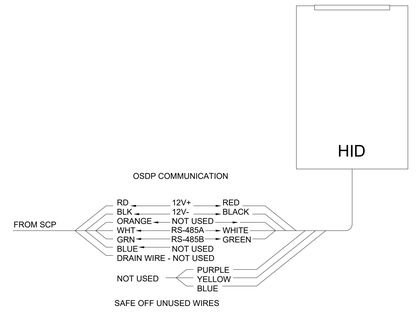
3 DURESS ALARM BUTTON DETAIL
SCALE: 12" = 1'-0"



4 DOOR POSITION SWITCH
SCALE: 12" = 1'-0"



2 GLASS BREAK DETAIL
SCALE: 6" = 1'-0"



1 WALL MOUNTED CARD READER
SCALE: NONE

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ACCESS CONTROL DETAILS

	DATE	REMARKS
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1 ACCESS CONTROL PANEL ELEVATION
A1.00 NONE

GENERAL NOTES

A. ACCESS CONTROL PANEL AND POWER SUPPLY SHOWN ON THIS SHEET ARE SCHEMATIC ONLY. FOR REVIEW AS PART OF SHOP DRAWING SUBMITTAL PROCESS. FINAL DESIGN TO BE PREPARED BY AND ENGINEERED TO SHOW ENGINEER'S DESIGN INTENT.

KEYED NOTES

1 PAINTED STEEL SURFACES, PAINTED GYPSUM BOARD TREATED WITH NON-CORROSIVE PRIMER AND RETENTIVE PAINT.

2 VISIBLE LABEL/STAMP ON BACKBOARD INDICATING THE PANEL ACTIVE.

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ACCESS CONTROL PANEL AND ELEVATION

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

IRVINE FIELDHOUSE

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IRVINE, CALIFORNIA 92614

CITY OF IRVINE 1971

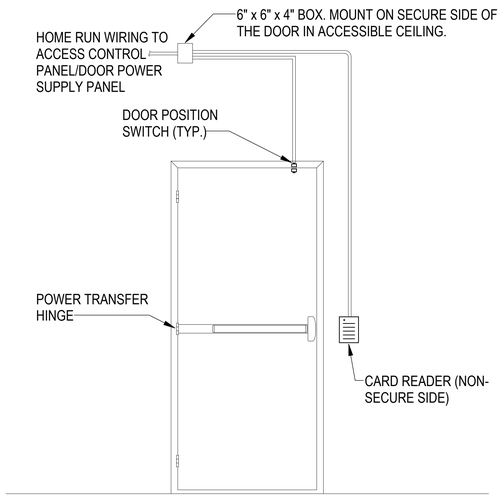
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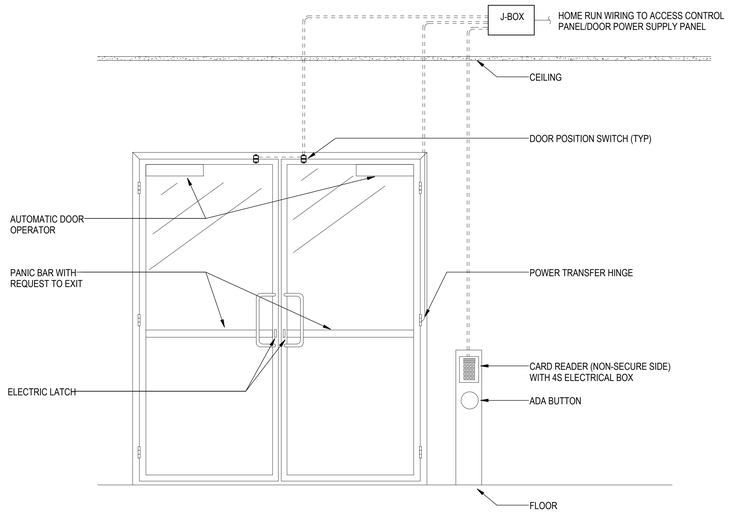
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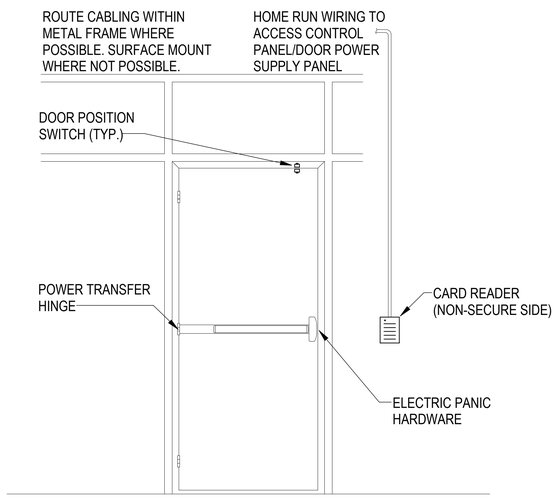
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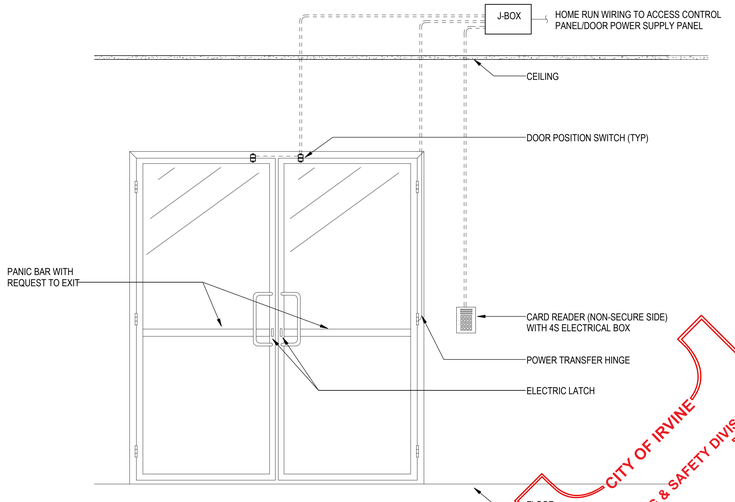
4 ACCESS CONTROL DOOR DETAIL -2
NONE



2 ACCESS CONTROL ADA DOUBLE DOOR DETAIL
NONE



3 ACCESS CONTROL DOOR DETAIL-1
NONE



1 ACCESS CONTROL DOUBLE DOOR DETAIL
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ACCESS CONTROL DOOR DETAIL

	DATE	REMARKS
1	02-04-2026	PLAN CHECK CORRECTIONS 3

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GENERAL NOTES

1 APPLICABILITY

1.1 THE STANDARD VAPOR INTRUSION MITIGATION SYSTEM (VIMS) COMPONENTS SHALL BE INSTALLED DURING CONSTRUCTION OF THE BUILDING. THE VIMS HAS BEEN DESIGNED TO VENT SUB-SLAB SOIL VAPORS TO THE EXTERIOR OF THE BUILDING BY PROVIDING A PATHWAY TO ALLOW SOIL VAPOR TO MIGRATE TO THE BUILDING EXTERIOR RATHER THAN INTO THE BUILDING. THE VIMS IS DESIGNED IN GENERAL CONFORMANCE WITH THE *FINAL VAPOR INTRUSION MITIGATION ADVISORY, REVISION 1* (CAL/EPA, 2011) (THE "ADVISORY") AND IN CONSIDERATION OF THE DRAFT *INTERIM FRAMEWORK FOR ASSESSMENT OF VAPOR INTRUSION AT TCE-CONTAMINATED SITES IN THE SAN FRANCISCO BAY REGION* (SFRWQCB, 2014). THIS DRAWING SET PERTAINS SPECIFICALLY TO THE TENANT IMPROVEMENT OF THE SLAB LEAVE OUT AREA. THE VENT PIPE, AGGREGATE LAYER, SOIL VAPOR BARRIER, PROTECTIVE SAND LAYER, AND CONCRETE RAT SLAB HAVE ALREADY BEEN INSTALLED IN THE SLAB LEAVE OUT AREA PER DETAIL 7/V1.1.

2 VIMS COMPONENTS

2.1 SOIL VAPOR BARRIER

2.1.1 MATERIALS. THE SOIL VAPOR BARRIER SHALL CONSIST OF: 1) APPROVED AGGREGATE SUBSTRATES; 2) BASE LAYER: EPRO E BASE 205; 3) CORE LAYER: EPRO E.SPRAY LAYER (60 MILS MINIMUM) AND 4) BOND LAYER: EPRO E SHIELD 205 LAYER. THE SOIL VAPOR BARRIER COMPONENTS ARE SHOWN ON DETAIL 1/V1.1. THE SELECTED MEMBRANE MATERIALS SHALL BE CHEMICALLY COMPATIBLE WITH THE CHEMICALS OF CONCERN IN SOIL AND SOIL VAPOR AT THE SITE.

2.1.1.1 SAND OR AGGREGATE LAYER. A SAND OR AGGREGATE LAYER SHALL BE PLACED UNDER THE BASE LAYER AND SHALL BE A MINIMUM OF 4 INCHES. AGGREGATE SUBSTRATES SHALL MEET THE FOLLOWING CONDITIONS AND BE APPROVED BY THE MANUFACTURER: AGGREGATE SUBSTRATES SHALL BE COMPACTED TO MEET STRUCTURAL AND BUILDING CODE REQUIREMENTS, THEN ROLLED FLAT TO PROVIDE A UNIFORM SUBSTRATE; AND ¾ INCH MINUS AGGREGATE WITH NO MORE THAN ONE FRACTURED FACE IS RECOMMENDED. OTHER AGGREGATE SUBSTRATES MAY BE APPROVED BY THE MANUFACTURER PROVIDED THEY DO NOT CREATE SHARP ANGULAR PROTRUSIONS THAT MAY COMPROMISE THE VAPOR BARRIER SYSTEM. IF THE AGGREGATE SUBSTRATES ARE NOT APPROVED BY THE MANUFACTURER, A GEOTEXTILE FABRIC (US FABRICS 380NW OR SIMILAR, IF APPROVED BY MANUFACTURER) MUST BE PLACED BETWEEN THE AGGREGATE SUBSTRATE AND THE EPRO BASE LAYER. A PROTECTIVE SAND LAYER SHALL BE PLACED ABOVE THE COMPLETED SOIL VAPOR BARRIER AND SHALL BE A MINIMUM OF 2 INCHES. THE PROTECTIVE SAND LAYER SHALL MEET THE SPECIFICATIONS BELOW FOR SAND.

TABLE 1: SPECIFICATIONS FOR SAND

SIEVE SIZE	PERCENTAGE PASSING SIEVE
3/8" (9.5 mm)	100
No. 4 (4.75 mm)	95-100
No. 8 (2.36 mm)	75-90
No. 16 (1.18 mm)	55-75
No. 30 (600 um)	30-60
No. 50 (300 um)	10-25
No. 100 (150 um)	2-10
No. 200 (75 um)	0-5

TABLE 2: SPECIFICATIONS FOR AGGREGATE

Sieve Size	Percentage Passing Sieve
1- 1/2- inch (37.5 mm)	100
1- inch (25 mm)	90 -100
3/4-inch (19 mm)	55 - 85
3/8-inch (9.5 mm)	8 -20
No. 4 (4.75 mm)	0 - 5
No. 8 (2.36 mm)	0 - 5
No. 200 (75 um)	0 - 2
ASTM C 131 Test Grading	8

2.1.1.2 BASE LAYER. THE BASE LAYER SHALL BE COMPRISED OF A HIGH STRENGTH LAMINATED HDPE MEMBRANE THAT IS THERMALLY BONDED TO A POLYPROPYLENE GEOTEXTILE GIVING THE BASE LAYER A HIGH PUNCTURE RESISTANCE (CLASS A RATING) AS WELL AS HIGH CHEMICAL RESISTANCE. THE BASE LAYER SHALL BE INSTALLED OVER THE SUBSTRATE WITH THE HDPE SIDE FACING UP.

2.1.1.3 CORE LAYER. THE CORE LAYER SHALL BE AN ELASTIC WATER-BASED CO-POLYMER MODIFIED ASPHALTIC MEMBRANE SPRAY APPLIED TO A MINIMUM DRY THICKNESS OF 60 MILS.

2.1.1.4 BOND LAYER. THE BOND LAYER SHALL BE COMPRISED OF A HIGH STRENGTH LAMINATED HDPE MEMBRANE THAT IS THERMALLY BONDED TO A POLYPROPYLENE GEOTEXTILE GIVING THE BASE LAYER A HIGH PUNCTURE RESISTANCE (CLASS A RATING) AS WELL AS HIGH CHEMICAL RESISTANCE. THE BOND LAYER SHALL BE INSTALLED AS A PROTECTION COURSE OVER THE BASE AND CORE LAYERS WITH THE GEOTEXTILE SIDE FACING UP.

2.1.2 SUBMITTALS. THE FOLLOWING PRODUCT DATA FOR THE SOIL VAPOR BARRIER SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER NO LATER THAN 30 DAYS PRIOR TO CONSTRUCTION: 1) MANUFACTURER'S PRINTED INSTRUCTIONS FOR EVALUATING AND PREPARING THE SUBSTRATE; 2) PRODUCT TECHNICAL DATA, INCLUDING TESTED PHYSICAL AND PERFORMANCE PROPERTIES; 3) SAMPLES OF SOIL VAPOR BARRIER COMPONENTS; AND 4) CERTIFIED INSTALLER CERTIFICATES.

2.1.3 INSTALLATION. THE SOIL VAPOR BARRIER SHALL BE INSTALLED BELOW THE ENTIRE BUILDING GROUND LEVEL FLOOR SLAB.

2.1.3.1 MATERIALS SHALL BE DELIVERED TO THE PROJECT SITE AS SPECIFIED BY THE MANUFACTURER, LABELED WITH MANUFACTURER'S NAME, PRODUCT BRAND NAME AND TYPE, DATE OF MANUFACTURE, SHELF LIFE, AND DIRECTIONS FOR STORING AND MIXING WITH OTHER COMPONENTS.

2.1.3.2 MATERIALS SHALL BE STORED AS SPECIFIED BY THE MANUFACTURER IN A CLEAN, DRY, PROTECTED LOCATION AND WITHIN THE TEMPERATURE RANGE REQUIRED BY MANUFACTURER.

2.1.3.3 STORED MATERIALS SHALL BE PROTECTED FROM DIRECT SUNLIGHT.

2.1.3.4 MATERIAL THAT CANNOT BE APPLIED WITHIN ITS STATED SHELF LIFE SHALL BE REMOVED AND REPLACED.

2.1.3.5 AREAS ADJACENT TO INSTALLATION AREA SHOULD BE PROTECTED. WHERE NECESSARY, MASKING SHALL BE APPLIED TO PREVENT STAINING OF SURFACES TO REMAIN EXPOSED WHEREVER MEMBRANE ABUTS TO OTHER FINISH SURFACES. MINIMUM CLEARANCE OF 24 INCHES IS REQUIRED FOR APPLICATION OF PRODUCT. FOR AREAS WITH LESS THAN 24 INCH CLEARANCE, THE MEMBRANE MAY BE APPLIED BY HAND.

2.1.3.6 SOIL VAPOR BARRIER INSTALLATION SHALL ONLY BE PERFORMED WHEN EXISTING AND FORECASTED WEATHER CONDITIONS ARE WITHIN MANUFACTURER'S RECOMMENDATIONS FOR THE MATERIAL AND APPLICATION METHOD USED. AMBIENT TEMPERATURE SHALL BE WITHIN MANUFACTURER'S SPECIFICATIONS. (GREATER THAN +45°F/+7°C.) CONSULT MANUFACTURER FOR THE PROPER REQUIREMENTS WHEN DESIRING TO APPLY THE CORE LAYER BELOW 45°F/7°C.

2.1.3.7 ALL PLUMBING, ELECTRICAL, MECHANICAL AND STRUCTURAL ITEMS TO BE UNDER OR PASSING THROUGH THE SOIL VAPOR BARRIER SYSTEM SHALL BE POSITIVELY SECURED IN THEIR PROPER POSITIONS AND APPROPRIATELY PROTECTED PRIOR TO MEMBRANE APPLICATION AND SMOKE TESTED IN ACCORDANCE WITH SOIL VAPOR BARRIER MANUFACTURER QUALITY ASSURANCE STANDARDS.

2.1.3.8 THE SOIL VAPOR BARRIER SHALL BE INSTALLED BEFORE PLACEMENT OF FILL MATERIAL AND REINFORCING STEEL. WHEN NOT POSSIBLE, ALL EXPOSED REINFORCING STEEL SHALL BE MASKED BY GENERAL CONTRACTOR PRIOR TO CORE LAYER APPLICATION.

2.1.3.9 STAKES USED TO SECURE THE CONCRETE FORMS SHALL NOT PENETRATE THE SOIL VAPOR BARRIER SYSTEM AFTER IT HAS BEEN INSTALLED. IF STAKES NEED TO PUNCTURE THE SOIL VAPOR BARRIER SYSTEM AFTER IT HAS BEEN INSTALLED, THE NECESSARY REPAIRS NEED TO BE MADE BY A CERTIFIED APPLICATOR. TO CONFIRM THE STAKING PROCEDURE IS IN AGREEMENT WITH THE MANUFACTURE'S RECOMMENDATION, CONTACT THE MANUFACTURER.

2.1.3.10 THE BASE LAYER SHALL BE INSTALLED OVER SUBSTRATE MATERIAL IN ONE DIRECTION WITH SIX-INCH OVERLAPS AND THE GEOTEXTILE (FABRIC SIDE) FACING DOWN, DEPENDENT ON AND PER MANUFACTURER SPECIFICATIONS.

2.1.3.11 THE BASE SEAMS SHALL BE SECURED BY APPLYING 60 MILS OF CORE BETWEEN THE 6" OVERLAPPED SHEETS WITH THE GEOTEXTILE SIDE DOWN.

2.1.3.12 IF APPROVED BY THE MANUFACTURER AND INSTALLER OF THE MEMBRANE, THE BASE SEAMS SHALL BE SECURED BY APPLYING 30 MILS OF CORE ON EITHER SIDE OF THE 6-INCH OVERLAPPED SEAMS (60 MIL TOTAL) WITH THE GEOTEXTILE SIDE DOWN.

2.1.3.13 THE INSTALLER SHALL MANUALLY VERIFY THERE ARE NO GAPS/FISH MOUTHS IN SEAMS.

2.1.3.14 AN EQUAL AMOUNT OF BASE AND CORE SHALL BE INSTALLED IN ONE DAY. LEAVING UNSPRAYED BASE OVERNIGHT MIGHT ALLOW EXCESS MOISTURE TO COLLECT ON THE BASE. IF EXCESS MOISTURE COLLECTS, IT SHALL BE REMOVED.

NOTE: IN WINDY CONDITIONS IT MIGHT BE NECESSARY TO ENCAPSULATE THE SEAM BY SPRAYING THE CORE LAYER OVER THE COMPLETED BASE SEAM.

2.1.3.15 CORE LAYER APPLICATION. SPRAY EQUIPMENT SHALL BE SET UP ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND MATERIALS MIXED AND PREPARED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

2.1.3.16 THE TWO CATALYST NOZZLES (8001) SHOULD BE ADJUSTED TO CROSS AT ABOUT 18" FROM THE END OF THE WAND. THIS APEX OF CATALYST AND EMULSION SPRAY SHOULD THEN BE LESS THAN 24" BUT GREATER THAN 12" FROM THE DESIRED SURFACE WHEN SPRAYING. WHEN PROPERLY SPRAYED, THE FAN PATTERN OF THE CATALYST SHOULD RANGE BETWEEN 65° AND 80°.

2.1.3.17 THE AMOUNT OF CATALYST USED SHOULD BE ADJUSTED BASED ON THE AMBIENT AIR TEMPERATURE AND SURFACE TEMPERATURE OF THE SUBSTRATE RECEIVING THE MEMBRANE. IN HOT WEATHER, LESS CATALYST WILL BE USED AS HOT CONDITIONS WILL QUICKLY "BREAK" THE EMULSION AND FACILITATE THE CURING OF THE MEMBRANE. IN COOL CONDITIONS AND ON VERTICAL SURFACES, MORE CATALYST WILL BE NEEDED TO "BREAK" THE EMULSION QUICKER TO EXPEDITE CURING AND SET UP TIME IN COLD CONDITIONS.

2.1.3.18 ONE SPRAY COAT OF THE CORE LAYER SHALL BE APPLIED TO OBTAIN A SEAMLESS MEMBRANE FREE FROM PINHOLES OR SHADOWS, WITH AN AVERAGE DRY FILM THICKNESS OF 60 MILS (1.52 MM). THE CORE LAYER SHOULD BE SPRAYED IN A PATTERN THAT IS PERPENDICULAR TO THE APPLICATION SURFACE. THE CONCERN WHEN SPRAYING AT AN ANGLE IS THAT AN AREA MIGHT BE MISSED. USING A PERPENDICULAR SPRAY PATTERN WILL LIMIT VOIDS AND THIN SPOTS, AND WILL ALSO CREATE A UNIFORM AND CONSISTENT MEMBRANE.

2.1.3.19 THE FILM THICKNESS OF THE CORE LAYER SHALL BE VERIFIED EVERY 500 FT² (46.45 M²). THE CORE LAYER WILL GENERALLY CURE IN 24 TO 48 HOURS. AS A RULE, WHEN TEMPERATURE DECREASES OR HUMIDITY INCREASES, THE CURING OF THE MEMBRANE WILL BE PROLONGED. THE MEMBRANE DOES NOT NEED TO BE FULLY CURED PRIOR TO THE PLACEMENT OF THE BOND LAYER, PROVIDED 60 MIL THICKNESS HAS BEEN VERIFIED AND A SMOKE TEST WILL BE CONDUCTED.

2.1.3.20 WHEN APPLYING TO A VERTICAL CONCRETE WALL, THE CORE LAYER CAN BE APPLIED DIRECTLY TO THE CONCRETE SURFACE USING MANUFACTURER'S RECOMMENDED PROTECTION MATERIAL BASED ON SITE SPECIFIC CONDITIONS. NOTE: CARE SHOULD BE TAKEN TO NOT TRAP MOISTURE BETWEEN THE LAYERS OF THE CONC. TRAPPING MOISTURE MAY OCCUR FROM APPLYING A SECOND COAT PRIOR TO THE MEMBRANE PRIOR TO CURING. REPAIRS AND DETAILING MAY BE DONE OVER THE CORE LAYER WHEN NOT FULLY CURED.

2.1.3.21 THE BOND LAYER PROTECTION COURSE SHALL BE INSTALLED PERPENDICULAR TO THE DIRECTION OF THE BASE LAYER WITH OVERLAPPED SEAMS OVER THE NOMINALLY CURED CORE LAYER.

2.1.3.22 ANY WATER THAT HAS COLLECTED ON THE SURFACE OF THE CORE LAYER SHALL BE REMOVED PRIOR TO THE PLACEMENT OF THE BOND LAYER.

2.1.3.23 THE SEAMS OF THE BOND LAYER SHALL BE OVERLAPPED IN THE SAME MANNER AS THE BASE LAYER.

2.1.3.24 FOR MEMBRANE REPAIRS THAT ARE WITHIN 6 INCHES OF CUT SLAB, SEE DETAIL 4/V1.1. FOR MEMBRANE REPAIRS THAT ARE GREATER THAN 6 INCHES FROM CUT SLAB, SEE DETAIL 3/V1.1. THE REPAIRED MEMBRANE SHALL BE SMOKE TESTED IN ACCORDANCE WITH NOTE 5.11.

2.1.4 UTILITY PIPE/CONDUIT PENETRATIONS. GAS TIGHT SEALS SHALL BE PROVIDED AT ALL PIPE OR CONDUIT PENETRATIONS THROUGH THE SOIL VAPOR BARRIER (AS DESCRIBED BELOW). PENETRATIONS SHALL BE FIELD TESTED FOR QUALITY ASSURANCE IN ACCORDANCE WITH THIS SPECIFICATION AND SOIL VAPOR BARRIER MANUFACTURER'S SPECIFICATIONS.

2.1.4.1 ALL PIPE PENETRATIONS SHOULD BE SECURELY IN PLACE PRIOR TO THE INSTALLATION OF THE SOIL VAPOR BARRIER. NO REBAR SHALL BE USED TO SUPPORT ANY PIPING UNDER THE MEMBRANE. PLASTIC OR FIBERGLASS STAKES CAN BE USED TO SUPPORT PIPING UNDER THE MEMBRANE, BUT NO STAKES SHALL PENETRATE THE MEMBRANE.

2.1.4.2 ANY LOOSE PENETRATIONS SHOULD BE SECURED PRIOR TO MEMBRANE APPLICATION, AS LOOSE PENETRATIONS COULD POTENTIALLY EXERT PRESSURE ON THE SOIL VAPOR BARRIER AND DAMAGE THE SOIL VAPOR BARRIER AFTER INSTALLATION.

2.1.4.3 TO PROPERLY SEAL AROUND PENETRATIONS, THE BASE LAYER SHALL BE CUT TO EXTEND 6" BEYOND THE OUTSIDE PERIMETER OF THE PENETRATION. A HOLE SHALL BE CUT IN THE BASE LAYER JUST BIG ENOUGH TO SLIDE OVER THE PENETRATION, ENSURING THE BASE LAYER FITS SNUG AGAINST THE PENETRATION; NO GAP LARGER THAN 1/8" SHOULD BE PRESENT BETWEEN THE BASE LAYER AND THE PENETRATION.

2.1.4.4 THE BASE LAYER SHALL BE SEALED USING THE CORE TO THE UNDERLYING BASE LAYER. ONE COAT OF CORE SHALL BE APPLIED TO THE BASE LAYER AND AROUND THE PENETRATION AT A THICKNESS OF 30 MILS. THE PENETRATION SHOULD BE TREATED IN A 6-INCH RADIUS AROUND PENETRATION AND 3 INCHES ONTO PENETRATING OBJECT.

2.1.4.5 A FABRIC REINFORCING STRIP SHALL BE EMBEDDED AFTER THE FIRST APPLICATION OF THE CORE MATERIAL AND THEN A SECOND 30 MIL COAT SHALL BE APPLIED OVER THE EMBEDDED JOINT REINFORCING STRIP ENSURING ITS COMPLETE SATURATION OF THE EMBEDDED STRIP AND TIGHT SEAL AROUND THE PENETRATION.

2.1.4.6 AFTER THE PLACEMENT OF THE BOND LAYER, A CABLE TIE SHALL BE PLACED AROUND THE FINISHED PENETRATION. THE CABLE TIE SHOULD BE SNUG, BUT NOT OVERLY TIGHT SO AS TO SLICE INTO THE FINISHED SEAL. A FINAL APPLICATION OF CORE MAY BE USED TO PROVIDE A FINISHING SEAL AFTER THE BOND LAYER HAS BEEN INSTALLED.

NOTE: METAL OR OTHER SLICK PENETRATION SURFACES MAY REQUIRE TREATMENT IN ORDER TO ACHIEVE PROPER ADHESION. FOR PLASTIC PIPES, SAND PAPER MAY BE USED TO ACHIEVE A PROFILE, AN EMERY CLOTH IS MORE APPROPRIATE FOR METAL SURFACES. AN EMERY CLOTH SHALL ALSO BE USED TO REMOVE ANY RUST ON METAL SURFACES.

2.1.4.7 WHERE MULTIPLE PENETRATIONS DO NOT ALLOW THE APPROPRIATE HORIZONTAL CLEARANCE BETWEEN PENETRATIONS FOR THE INSTALLATION OF THE SOIL VAPOR BARRIER, A CONCRETE BANK MUST BE POURED AROUND THE PENETRATIONS. THE CONCRETE BANK MUST EXTEND A MINIMUM OF 12 INCHES BELOW THE LEVEL OF THE SOIL VAPOR BARRIER AND A MINIMUM OF 6 INCHES OF CONCRETE MUST BE BETWEEN THE SOIL VAPOR BARRIER AND THE OUTER-MOST PENETRATIONS IN THE BUNDLE.

2.1.5 FOUNDATION SEAL. PER MANUFACTURER GUIDELINES, GAS TIGHT SEALS SHALL BE PROVIDED WHERE THE SOIL VAPOR BARRIER ATTACHES TO INTERIOR AND PERIMETER FOOTINGS.

2.2 VENT PIPING

2.2.1 MATERIALS. VENT PIPING SHALL CONSIST OF MINIMUM SCHEDULE 40, MINIMUM 3-INCH DIAMETER, RIGID, SLOTTED OR PERFORATED PVC PIPE. PER PLAN DETAILS, CORRUGATED PVC DRAIN PIPING MAY BE USED FOR SHORT BENDS BELOW SHALLOW FOOTINGS AND/OR UTILITY PIPING, AND SHALL BE CONNECTED TO SOLID PVC PIPE USING AN APPROPRIATE FITTING. A FABRIC SLEEVE (ADS FILTER SOCK OR SIMILAR) SHALL BE PLACED AROUND ALL VENT PIPING INCLUDING CORRUGATED PIPING IF IT IS PERFORATED.

2.2.2 VENT PIPING TRENCHES. VENT PIPES SHALL BE PLACED IN TRENCHES WITH A MINIMUM OF 2 INCHES OF APPROVED AGGREGATE SUBSTRATES (PER NOTE 2.1.1.1) AROUND THE SIDES AND BOTTOM OF THE VENT PIPE AND 4 INCHES OF APPROVED AGGREGATE ABOVE THE VENT PIPE. A GEO-FABRIC TO PREVENT APPROVED AGGREGATE FROM ENTERING THE VENT PIPES SHALL BE PLACED AROUND THE VENT PIPE.

2.2.3 INSTALLATION. VENT PIPING SHALL BE INSTALLED BELOW THE SOIL VAPOR BARRIER IN THE MIXED USE BUILDINGS.

2.2.3.1 THE VENT PIPING SHALL BE LOCATED NO GREATER THAN 25 FEET APART.

2.2.3.2 EXCEPT WHERE NEEDED TO ACCOMMODATE SHALLOW FOOTINGS AND/OR UTILITIES, UNDULATIONS IN THE VENT PIPING, WHICH MAY IMPEDE THE FLOW OF GAS, SHALL BE AVOIDED.

2.2.3.3 VENT PIPING SHALL BE CONNECTED TO VENT RISERS WHICH EXTEND ABOVE THE BUILDING.

2.3 VENT RISERS

2.3.1 MATERIAL. VENT PIPING SHALL CONSIST OF MINIMUM 4-INCH DIAMETER CAST IRON OR GALVANIZED STEEL AND SHALL COMPLY WITH THE UNIFORM PLUMBING AND MECHANICAL CODES. ALL JOINTS SHALL BE TIGHTLY SEALED WITH APPROVED MATERIALS.

GENERAL NOTES (CONTINUED)

2.3.2 INSTALLATION. VENT RISERS SHALL BE CONNECTED TO VENT PIPING AND EQUIPPED WITH A SHUT-OFF VALVE AS SHOWN IN THESE PLANS.

2.3.2.1 WHERE VENT RISERS ARE CAST-IN-CONCRETE, PIPING SHALL BE WRAPPED WITH HIGH DENSITY PVC FOAM TAPE [CLOSED CELL, ADHESIVE BACKED, ¾-INCH THICK (MINIMUM) BY 4-INCH WIDE (MINIMUM)].

2.3.2.2 WHERE VENT RISERS TRANSITION THROUGH BUILDING FOOTINGS, THE PENETRATION SHALL BE ACCOMPLISHED WITH THE APPROVAL OF THE PROJECT STRUCTURAL ENGINEER.

2.3.2.3 VENT RISERS SHALL BE PROPERLY SECURED WITH BRACKETS A MINIMUM OF EVERY 5 FEET.

2.3.2.4 VENT RISER PIPE SHALL BE CLEARLY MARKED TO INDICATE THAT THE PIPE MAY CONTAIN VAPORS. THIS MAY BE ACCOMPLISHED THROUGH STENCILS, LABELS, OR OTHER PERMANENT LABELING METHOD. RISER PIPE SHALL BE CLEARLY AND PERMANENTLY LABELED "VAPOR". IN ½" HIGH LETTERS, NEAR THEIR TERMINATION POINT AND AT 5-FOOT INTERVALS ALONG THE REMAINDER OF THE VENT PIPE. THIS INCLUDES SECTIONS ENCASED WITHIN WALLS OR OTHER ENCLOSURES. THE MINIMUM TEXT SIZE FOR ALL LETTERS ON SIGNAGE IS ½".

2.3.2.5 TO PREVENT UV DAMAGE, VENT RISERS SHALL BE PAINTED WITH A LIGHT-COLORED, WATER-BASED PAINT WHERE EXPOSED TO SUNLIGHT.

2.3.2.6 UPON INSTALLATION, VIMS VENT PIPE RISERS SHALL BE PRESSURE TESTING IN ACCORDANCE WITH APPLICABLE BUILDING CODES FOR PRESSURE TESTING OF SEWER VENT RISER PIPES.

2.3.2.7 VENT RISERS SHALL REMAIN VERTICAL. IF NECESSARY, HORIZONTAL SPANS SHALL BE MINIMIZED AND NOT EXCEED 45 DEGREES RELATIVE TO VERTICAL.

2.3.3 OUTLETS. VENT RISERS OUTLETS ATTACHED TO, OR PENETRATING THE SIDES OF, BUILDINGS SHOULD BE LOCATED AT LEAST 10 FEET ABOVE GROUND LEVEL, AT LEAST ONE FOOT ABOVE THE EDGE OF THE ROOF, AND AT LEAST 10 FEET AWAY FROM ANY OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT, AND AT LEAST 3 FEET FROM ANY LOT LINE, ALLEY OR STREET.

2.3.3.1 VENT RISER OUTLETS ABOVE THE ROOF LINE SHOULD TERMINATE ABOVE THE HIGHEST POINT OF THE ROOF OF THE BUILDING OR RIDGE, WHERE PRACTICABLE.

2.3.3.2 VENT RISER OUTLETS SHALL TERMINATE A MINIMUM OF 2 FEET ABOVE THE ROOF LINE. EACH PASSIVE VENT RISER SHALL BE EQUIPPED WITH A SPINNER VENT.

2.3.4 CONTINGENCY TO CONVERT PASSIVE SYSTEM TO ACTIVE. THE CONDITIONS REQUIRING THE SYSTEM TO BE CONVERTED TO ACTIVE WILL BE PROVIDED IN THE OPERATION AND MAINTENANCE (O&M) PLAN. CONVERSION TO AN ACTIVE SYSTEM MAY INVOLVE THE INSTALLATION OF IN-LINE FANS (E.G., RADON FANS) ON EACH RISER PIPE ON THE ROOF OF THE BUILDING.

2.3.4.1 TO ALLOW AN EASIER CONVERSION TO AN ACTIVE SYSTEM IN THE EVENT THE PASSIVE SYSTEM IS CONVERTED TO ACTIVE, ELECTRICAL JUNCTION BOXES OR 120 VOLT ELECTRICAL OUTLETS SHALL BE INSTALLED ON THE ROOF ADJACENT TO EACH RISER PIPE.

2.4 MONITORING PROBES AND SAMPLING PORTS

2.4.1 MATERIAL. MONITORING PROBES SHALL BE CONSTRUCTED OF STAINLESS STEEL TUBING CONNECTED TO SAMPLING PROBES SHALL BE ¼-INCH DIAMETER TEFLON TUBING OR EQUIVALENT. PROTECTIVE CONDUIT AROUND SAMPLE TUBING SHALL BE CONSTRUCTED OF MINIMUM SCHEDULE 80 PVC AND SHALL BE NO SMALLER THAN ½ INCH IN DIAMETER. MONITORING PROBES SHALL BE CONSTRUCTED TO WITHSTAND COMPACTION AND CONSTRUCTION OF THE SLAB. ALL JOINTS SHALL BE TIGHTLY SEALED WITH APPROVED MATERIALS. SAMPLING PORT PIPING AND ASSOCIATED FITTINGS SHALL BE CONSTRUCTED OF MINIMUM SCHEDULE 80 PVC. ALL JOINTS SHALL BE TIGHTLY SEALED WITH APPROVED MATERIALS.

2.4.2 INSTALLATION. MONITORING PROBE PIPING SHALL BE INSTALLED IN MIDDLE OF AGGREGATE LAYER WITH SAMPLING TUBING CONNECTED THROUGH PROTECTIVE CONDUIT. SAMPLING PORTS SHALL BE ROUTED TO THE OUTSIDE AND EQUIPPED WITH A SAMPLING PORT AND A SHUT-OFF VALVE.

2.4.2.1 WHERE MONITORING PROBE PIPING IS CAST-IN-CONCRETE, PIPING SHALL BE WRAPPED WITH HIGH DENSITY PVC FOAM TAPE [CLOSED CELL, ADHESIVE BACKED, ¾-INCH THICK (MINIMUM) BY 4-INCH WIDE (MINIMUM)].

2.4.2.2 WHERE MONITORING PROBE PIPING TRANSITIONS THROUGH BUILDING FOOTINGS, THE PENETRATION SHALL BE ACCOMPLISHED IN COMPLIANCE WITH THE UNIFORM BUILDING CODE AND WITH THE APPROVAL OF THE PROJECT STRUCTURAL ENGINEER.

2.4.2.3 MONITORING PROBE PIPING SHOULD TERMINATE INSIDE OF A UTILITY VAULT AND IT MUST BE TRAFFIC-RATED IF IT'S IN A DRIVEWAY.

2.4.2.4 UTILITY VAULT SHALL BE WATERTIGHT AND INSTALLED SO THAT WATER DRAINS AWAY FROM THE LID.

3 UTILITY CORRIDOR PROTECTION

3.1 INSTALLATION. TRENCH DAMS SHALL BE INSTALLED TO PROTECT UTILITY CORRIDORS FROM THE MIGRATION OF UNDERGROUND GAS INTO BUILDINGS OR STRUCTURES ALONG THE TRENCH BACKFILL. ALL PIPING AND ELECTRICAL CONDUITS INSTALLED BELOW GROUND SHALL BE PLACED IN TRENCHES SEALED WITH TRENCH DAMS PRIOR TO ENTERING THE BUILDING UNLESS PROHIBITED BY APPLICABLE BUILDING CODES.

3.2 MATERIALS. TRENCH DAMS SHALL BE CONSTRUCTED OF ONE OF THE FOLLOWING:

3.2.1 BENTONITE CEMENT SLURRY TRENCH DAM. A MIXTURE OF 4% TYPE II CEMENT AND 2% POWDERED BENTONITE. TRENCH DAM SHALL EXTEND A MINIMUM OF 3 FEET FROM THE BUILDING FOUNDATION, 6 INCHES BEYOND THE LIMITS OF THE UTILITY TRENCH AND 6 INCHES ABOVE THE BOTTOM OF THE FOUNDATION.

3.2.2 COMPACTED NATIVE SOILS BACKFILL TRENCH DAM. NATIVE SOILS SHALL BE COMPACTED AT LEAST 90% RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D-1557 TESTING PROCEDURES. THE LENGTH OF THE COMPACTED NATIVE SOIL TRENCH DAM SHALL BE A MINIMUM OF 5 FEET FOR TRENCHES THAT ARE 18 INCHES WIDE OR LESS. FOR UTILITY TRENCHES THAT ARE WIDER THAN 18 INCHES, THE LENGTH OF THE TRENCH DAM SHALL BE A MINIMUM OF 3 TIMES THE UTILITY TRENCH WIDTH.

3.2.3 CONCRETE MIXES OTHER THAN BENTONITE CEMENT SLURRY MAY BE USED FOR UTILITY TRENCH DAMS PROVIDED THAT CONDUIT OR PIPING IS WRAPPED WITH HIGH DENSITY PVC FOAM TAPE [CLOSED CELL, ADHESIVE BACKED, ¼ INCH THICK (MINIMUM) BY ¾ INCH WIDE (MINIMUM)] WITHIN THE TRENCH DAM. THE TAPE SHALL BE APPLIED TO A CLEAN SURFACE WITH ENDS BUTTED TOGETHER. CONDUIT/PIPING PROTECTION REQUIREMENTS SHOULD BE VERIFIED WITH UTILITY PROVIDER STANDARDS. TRENCH DAM SHALL EXTEND A MINIMUM OF 3 FEET FROM THE BUILDING FOUNDATION, 6 INCHES BEYOND THE LIMITS OF THE UTILITY TRENCH AND 6 INCHES ABOVE THE BOTTOM OF THE FOUNDATION.

3.3 CORROSION PROTECTION. PIPING AND CONDUIT PLACED IN TRENCH DAMS SHALL BE PROTECTED FROM CORROSION AND SETTLEMENT AS NEEDED DEPENDING ON THE SIZE AND TYPE OF PIPING MATERIAL AND UTILITY PROVIDER STANDARDS.THE PIPING AND CONDUIT INSTALLER(S) WILL BE RESPONSIBLE FOR UNDERSTANDING THE CORROSIVITY OF THE BACKFILL MATERIALS, AS NECESSARY.

3.4 CONDUIT SEALS. CONDUIT SEALS SHALL BE PROVIDED AT THE TERMINATION OF ALL UTILITY CONDUITS TO REDUCE THE POTENTIAL FOR ELEVATED CONCENTRATIONS OF CHEMICALS IN SOIL VAPOR TO MIGRATE ALONG THE CONDUIT TO OTHER NON-IMPACTED AREAS OF THE SITE. SEALS SHALL BE CONSTRUCTED OF CLOSED CELL POLYURETHANE FOAM, OR OTHER INERT GAS-IMPERMEABLE MATERIAL, EXTENDING A MINIMUM OF SIX INCHES AND A MAXIMUM OF FOUR CONDUIT DIAMETERS INTO THE CONDUIT. WHERE THE CONDUIT ENTERS THE BUILDING, THE SEAL SHOULD BE PLACED BELOW THE BUILDING SLAB. ELECTRICAL CONDUIT SHOULD BE PROVIDED WITH SEALS AS REQUIRED BY THE APPROPRIATE SECTIONS OF THE NATIONAL ELECTRICAL CODE.

4 NOTIFICATION PLACARDS

4.1 PERMANENT NOTIFICATION PLACARDS ARE REQUIRED TO INDICATE THE PRESENCE OF THE SOIL VAPOR BARRIER AND/OR VENT PIPING.

4.1.1 THE NOTIFICATION PLACARDS SHALL BE POSTED AND MAINTAINED AT THE FRONT OF THE BUILDING THAT IS CONSTRUCTED WITH A SOIL VAPOR BARRIER AND/OR VENT PIPING.

4.1.2 THE NOTIFICATION PLACARD SHALL BE UNCOVERED AND LOCATED IN A CONSPICUOUS LOCATION.

4.1.3 WHEN CAST IN FLOORS, THE PLACARD SHALL ALSO REMAIN UNCOVERED AND IN A CONSPICUOUS LOCATION.

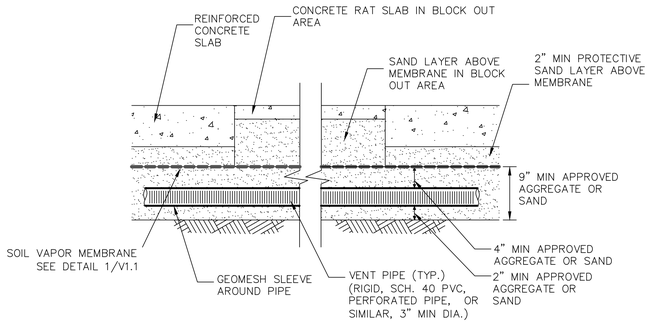
4.2 NO OTHER FORMS OF NOTIFICATION (E.G., AN ALARM SYSTEM) ARE SPECIFIED FOR THE VIMS.

5 QUALITY ASSURANCE

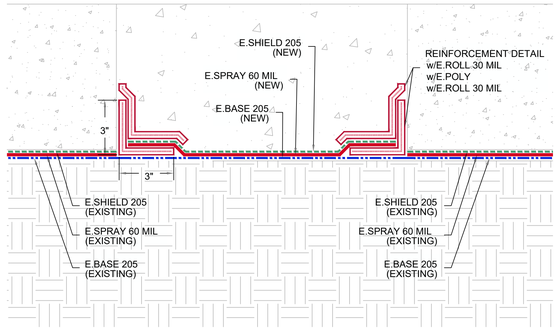
5.1 INSTALLER QUALIFICATIONS. VAPOR MEMBRANE INSTALLER SHALL BE AN EPRO AUTHORIZED CONTRACTOR WHO IS TRAINED AND PERFORMS WORK THAT IN ACCORDANCE WITH EPRO STANDARDS AND POLICIES. FOR PROJECT REQUIRING A NO-DOLLAR-LIMIT LABOR AND MATERIAL WARRANTY, THE VAPOR MEMBRANE INSTALLER MUST BE E.ASSURANCE CERTIFIED AT THE TIME OF BIDING. LEAK TESTING PERFORMED BY THE INSTALLER WILL BE OVERSEEN BY RAMBOLL.

5.2 CERTIFIED THIRD PARTY INSPECTION. AS REQUIRED BY THE MANUFACTURER'S WARRANTY, AN INDEPENDENT INSPECTOR MUST BE HIRED BY THE INSTALLER TO INSPECT AND VERIFY THAT THE SOIL VAPOR BARRIER HAS BEEN INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. THE INDEPENDENT INSPECTOR MUST BE E.ASSURANCE CERTIFIED AND COMPLY WITH THE DOCUMENTATION REQUIREMENTS. FOR PROJECTS WITH METHANE GAS PRESENT, INSPECTORS MUST MEET THE LOCAL BUILDING CODE REQUIREMENTS AND THE REQUIREM

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT



EXISTING MEMBRANE AT SLAB BLOCK OUT (BEFORE TENANT IMPROVEMENT) | 7



MEMBRANE REPAIR AGAINST CUR SLAB | 4

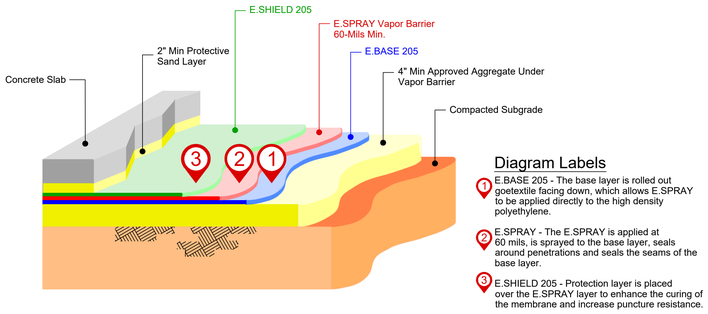
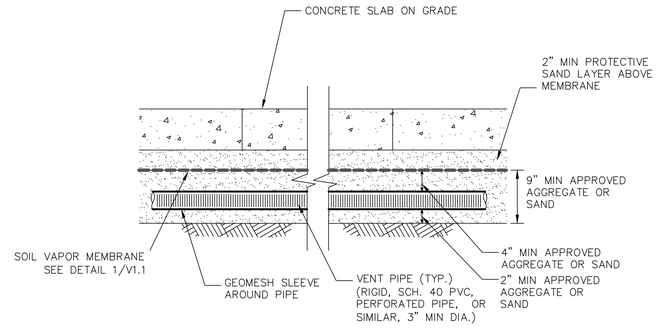


Diagram Labels

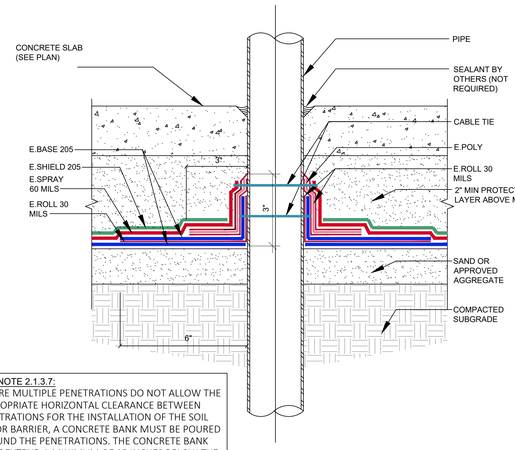
1. E.BASE 205 - The base layer is rolled out geotextile facing down, which allows E.SPRAY to be applied directly to the high density polyethylene.
2. E.SPRAY - The E.SPRAY is applied at 60 mils, is sprayed to the base layer, seals around penetrations and seals the seams of the base layer.
3. E.SHIELD 205 - Protection layer is placed over the E.SPRAY layer to enhance the curing of the membrane and increase puncture resistance.

VAPOR BARRIER CONFIGURATION | 1

PER NOTE 2.1.3.24:
FOR MEMBRANE REPAIRS THAT ARE WITHIN 6 INCHES OF CUT SLAB, SEE DETAIL 4/V1.1. FOR MEMBRANE REPAIRS THAT ARE GREATER THAN 6 INCHES FROM CUT SLAB, SEE DETAIL 3/V1.1. THE REPAIRED MEMBRANE SHALL BE SMOKE TESTED IN ACCORDANCE WITH NOTE 5.11.

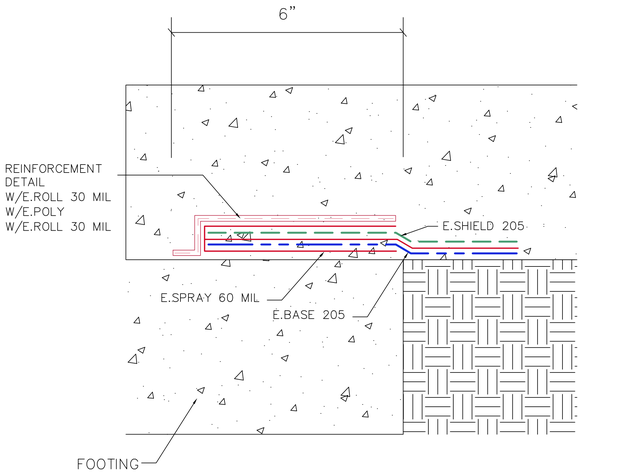


MEMBRANE AT COMPLETION OF TENANT IMPROVEMENT FOR KITCHEN | 8

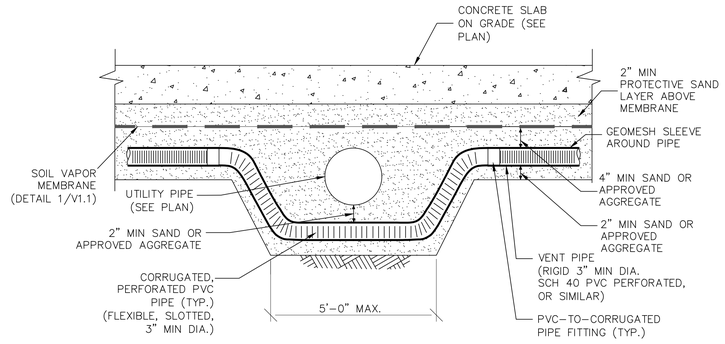


PER NOTE 2.1.3.7:
WHERE MULTIPLE PENETRATIONS DO NOT ALLOW THE APPROPRIATE HORIZONTAL CLEARANCE BETWEEN PENETRATIONS FOR THE INSTALLATION OF THE SOIL VAPOR BARRIER, A CONCRETE BANK MUST BE POURED AROUND THE PENETRATIONS. THE CONCRETE BANK MUST EXTEND A MINIMUM OF 12 INCHES BELOW THE LEVEL OF THE SOIL VAPOR BARRIER AND A MINIMUM OF 6 INCHES OF CONCRETE MUST BE BETWEEN THE SOIL VAPOR BARRIER AND THE OUTER-MOST PENETRATIONS IN THE BUNDLE.

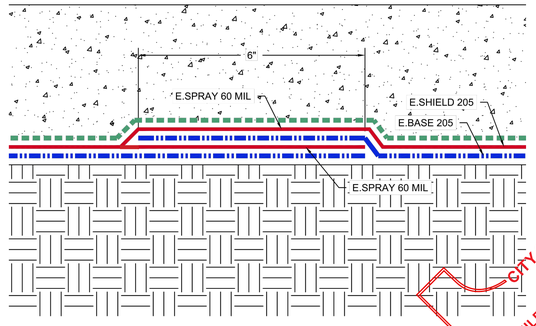
PIPE PENETRATION | 5



MEMBRANE TERMINATION DETAIL | 2



VENT PIPE CROSSING UNDERGROUND PIPE | 6



MEMBRANE OVERLAP DETAIL | 3

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USA

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17300 RED HILL AVE.
IRVINE, CALIFORNIA 92614

VIMS DETAILS

#	REMARKS	DATE
3	PLAN CHECK CORRECTIONS 3	2/4/2026

PA/PM:	J.KANE
DRAWN BY.:	R.Z.
JOB NO.:	1690027919_Conv-002

SHEET
V1.1
PLAN CHECK #00893200-CNEW

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