REMODEL OF MENS AND WOMENS RESTROOMS IN THREE LOCATIONS. WORK INCLUDES DEMOLITION OF EXISTING INTERIOR FINISHES, TOILET PARTIONS, ACCESSORIES AND PLUMBING FIXTURES; AND PROVIDING NEW INTERIOR FINISHES, TOILET PARTITIONS, ACCESSORIES AND PLUMBING FIXTURES.

CODE ANALYSIS

SEE SHEET A1.0 FOR CODE ANALYSIS

LODI UNIFIED SCHOOL DISTRICT 1305 E. VINE STREET LODI. CA 95240

CONTACT: VICKIE BRUM TEL: (209) 331-7223

ARCHITECT SVA ARCHITECTS 1450 DREW AVE., STE, 1450 DAVIS, CA 95618

CONTACT: CHRIS BRADLEY TEL: (510) 302-2237

WORK.

PROJECT

NONE

PART 1, TITLE 24 CCR.

WITH ALL LOCAL ORDINANCES.

PLUMBING ENGINEER 11870 PIERCE STREET, SUITE 160 RIVERSIDE, CA 92505

CONTACT: RAMON CECEÑA TEL: (951) 299-4204

ELECTRICAL ENGINEER 11870 PIERCE STREET, SUITE 160

CONTACT: BILL VOLLER TEL: (951) 299-4160

RIVERSIDE. CA 92505

PROJECT DIRECTORY

2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE

3. A DSA CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24,

5. A COPY OF CCR TITLE 24, PARTS 1 THROUGH 5 MUST BE KEPT ON SITE DURING

6. IF ANY CONDITION IS DISCOVERED WHICH, IF LEFT UNCORRECTED, WOULD MAKE THE BUILDING NON-COMPLIANT WITH THE REQUIREMENTS OF THE EDITION OF THE CBC IN FORCE AT THE TIME OF ORIGINAL CONSTRUCTION, THE CONDITION MUST BE

SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR

7. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT

8. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A

CONSTRUCTION CHANGE DOCUMENT OR ADDENDUM, AND SHALL BE APPROVED BY

9. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF

DSA PRIOR TO FABRICATION AND INSTALLATION PER DSA IR A-6 AND SECTION 338(C)

THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE

WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION

WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILS AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING

REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY

GENERAL NOTES

DEFERRED APPROVALS

Eight Mile Rd

PROJECT LOCATION

VICINITY MAP

Whistler Way

OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY

THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY

WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)

10. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS

(OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE

BY AN ADDENDUM OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE

1. ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF

4. CCD MUST BE SIGNED AS REQUIRED BY DSA IR A-6.

ARCHITECT (DSA), AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

CORRECTED IN ACCORDANCE WITH CURRENT CODE REQUIREMENTS. A

CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SET OF PLANS AND

PROJECT SUMMARY

DIVISION OF THE STATE ARCHITECT (DSA)
SACRAMENTO REGIONAL OFFICE 1102 Q STREET, SUITE 5200 SACRAMENTO, CA 95811

TEL: (916) 323-3775

LOCAL FIRE AUTHORITY
STOCKTON FIRE DEPARTMENT 400 E. MAIN STREET, 4TH FLOOR STOCKTON, CA 95202

TEL: (209) 937-8801

GOVERNING AGENCIES

THIS PROJECT SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

AMERICANS WITH DISABILITIES ACT (ADA)

ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)

STATE OF CALIFORNIA PARTIAL LIST OF APPLICABLE CODES AS OF JAN 1, 2023

2022 BUILDING STANDARDS ADMINISTRATIVE CODE (CAC)

CALIFORNIA CODE OF REGULATIONS (CCR) PART 1, TITLE 24 C.C.R.

2022 CALIFORNIA BUILDING CODE (CBC)

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2021 INTERNATIONAL BUILDING CODE WITH THE INTERNATIONAL CODE COUNCIL WITH 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC)

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3 (2020 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA, WITH 2019 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4 (2021 UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO, WITH 2022 CALIFORNIA

2022 CALIFORNIA PLUMBING CODE

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24. PART 5 (2021 UNIFORM PLUMBING CODE OF THE INTERNATIONS ASSOCIATION OF THE PLUMBING AND MECHANICAL OFFICIALS, IAPMO, WITH 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY CODE

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24. PART 6

2022 CALIFORNIA FIRE CODE

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24. PART 9 (2021 INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL. WITH 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN CODE) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 11

2022 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12

PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

PARTIAL LIST OF APPLICABLE STANDARDS:

2022 BUILDING CODE (FOR SFM) REFERENCED STANDARDS **CHAPTER 35**

NFPA 13	AUTOMATIC SPRINKLER SYSTEM	2022 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2021 EDITION
NFPA 17A	WET CHEMICAL SYSTEMS	2021 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE	2022 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2019 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2018 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTION SIGNAL	1999 EDITION
	SYSTEMS	

APPLICABLE CODES

SVA ARCHITECTS IS THE DESIGNATED ARCHITECT OF RECORD AS REQUIRED BY THE STATE OF CALIFORNIA. THE ARCHITECT OF RECORD SHALL REVIEW SUBMITTALS AND COORDINATE SUBMITTALS AND DEFERRED SUBMITTALS THROUGH THE DIVISION OF THE STATE ARCHITECT, DEFERRED SUBMITTALS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

DSA SHALL BE NOTIFIED IN WRITING BY THE OWNER IF THE ARCHITECT OF RECORD IS CHANGED OR IS UNABLE TO CONTINUE TO PERFORM THE DUTIES. THE OWNER SHALL DESIGNATE A SUBSTITUTE ARCHITECT OR ENGINEER OF RECORD WHO SHALL PERFORM ALL OF THE DUTIES REQUIRED OF THE ORIGINAL ARCHITECT OF RECORD.

REVIEW AND COMMENT ON SUBMITTALS SHALL NOT RELIEVE THE AUTHOR OF THE DOCUMENTS OR THE CONTRACTOR FROM COMPLIANCE WITH ALL APPLICABLE CODES AND THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THE REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING HIS WORK WITH THAT OF OTHER TRADES, AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

ARCHITECT OF RECORD

STATEMENT OF GENERAL CONFORMANCE THE DRAWINGS OR SHEETS LISTED IN THE INDEX ON THIS SHEET HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS

- IN THIS STATE. IT HAD BEEN EXAMINED BY ME FOR: DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS
- COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THE PROJECT.

THIS STATEMENT OF GENERAL CONFORMANCE "SHALL" NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES AND RESPONSIBILITIES UNDER SECTION 17302 AND 81138 OF THE EDUCATION CODE AND SECTION 4-336, 4-341 AND 4-344 OF TITLE 24, PART 1 (TITLE 24, PART 1 SECTION 4-317) (B))

I CERTIFY THAT ALL DRAWINGS OR SHEETS LISTED IN THE INDEX ON THIS SHEET (PLUMBING AND ELECTRICAL) ARE IN GENERAL CONFORMANCE AND

SPANOS PARK Whist



LODI UNIFIED SCHOOL DISTRICT BEAR CREEK HIGH SCHOOL RESTROOMS MODERNIZATION

10555 THORNTON ROAD, STOCKTON, CA 95209

GENERAL

PROJECT INFORMATION & SHEET INDEX **GENERAL NOTES** GENERAL ACCESSIBILITY PROJECT SIGNAGE Grand total: 4

SITE PLAN & PATH OF TRAVAEL ENLARGED ACCESSSIBLE SITE PLAN & DETAILS DEMO FLOOR PLAN BUILDING G - ENLARGED PLANS & INTERIOR ELEVATIONS BUILDING J - ENLARGED PLANS & INTERIOR ELEVATIONS A40.3 BUILDING Q - ENLARGED PLANS BUILDING Q - INTERIOR ELEVATIONS

PLUMBING DEMO FLOOR PLAN PLUMBING FLOOR PLAN

ELECTRICAL

BLDG Q - RESTROOM TECHNOLOGY AND POWER PLANS **ELECTRICAL SPECIFICATIONS** ELECTRICAL SPECIFICATIONS

DISTRIC

ARCHITECTURAL

FINISH & DOOR SCHEDULES AND DETAILS Grand total: 8

PLUMBING

NOTES, LEGENDS AND SCEDULE Grand total: 3

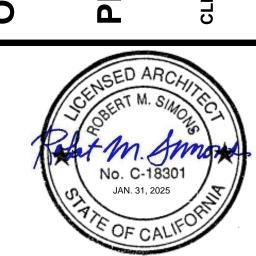
Grand total: 3

TOTAL SHEET COUNT

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITEC APP: 02-121348 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 6/30/2023

C

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REVISIONS: DESCRIPTION DATE

PROJECT NO: Project Number **DATE ISSUED:** Issue Date SCALE: 1" = 20'-0"

GEN-1

PROJECT INFORMATION & SHEET INDEX



T 510.267.3180

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A. GRADE AND DEVELOP SITE SUCH THAT ALL PRIMARY BUILDING ENTRANCES ARE ACCESSIBLE TO THE PHYSICALLY DISABLED FROM THE PUBLIC WAY AND DISABLED PARKING

B. ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, FACILITIES AND SPACES ON THE SAME SITE. WHERE MORE THAN ONE ROUTE IS PROVIDED, ALL ROUTES SHALL BE

C. IF AN ACCESSIBLE ROUTE HAS A CHANGE IN LEVEL GREATER THAN 1/2", THEN A CURB RAMP, RAMP, ELEVATOR, OR PLATFORM LIFT SHALL BE PROVIDED.

D. ALL WALKS, HALLS, CORRIDORS, AISLES, AND OTHER SPACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 48 INCHES AND A CLEAR HEIGHT OF 80 INCHES.

A. WALKS AND SIDEWALKS SUBJECT TO THESE REGULATIONS SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2", AND SHALL BE A MINIMUM OF 48 INCHES IN WIDTH.

B. ALL SIDEWALKS SHALL BE STABLE, FIRM AND SLIP RESISTANT.

C. SURFACE CROSS SLOPES SHALL NOT EXCEED 1:48 (CBC 11B-403.3).

D. WALKS, SIDEWALKS AND PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. GRATINGS LOCATED IN THE SURFACE OF ANY OF THESE AREAS, GRID OPENINGS IN THE GRATING SHALL BE LIMITED TO 1/2" IN THE DIRECTION OF TRAFFIC FLOW.

E. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2". WHEN CHANGES DO OCCUR, THEY SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2 EXCEPT THAT LEVELS NOT EXCEEDING 1/4" MAY BE VERTICAL.

F. WHEN CHANGES IN LEVELS GREATER THAN 1/2" ARE NECESSARY THEY SHALL COMPLY WITH THE REQUIREMENTS FOR CURB RAMPS OR RAMPS AS REQUIRED.

G. WALKS SHALL BE PROVIDED WITH A LEVEL AREA NOT LESS THAN 60" SQUARE AT A DOOR OR GATE THAT SWINGS TOWARD THE WALK, AND NOT LESS THAN 48" WIDE BY 44" DEEP AT A DOOR OR GATE THAT SWINGS AWAY FROM THE WALK. SUCH WALKS SHALL EXTEND 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALK.

H. WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 5%, IT MUST COMPLY WITH THE PROVISIONS FOR PEDESTRIAN RAMPS (PER CBC 11B-405).

I. ALL WALKS WITH CONTINUOUS GRADIENTS SHALL HAVE LEVEL AREAS AT LEAST 5 FEET IN LENGTH AT INTERVALS NOT EXCEEDING 400 FEET.

3. ENTRANCES AND DOORWAYS

A. PRIMARY ENTRANCES TO BUILDINGS AND FACILITIES SHALL BE MADE ACCESSIBLE TO THE

 B. ACCESSIBLE ENTRANCES SHALL BE IDENTIFIED WITH AT LEAST ONE "ISA" SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS AS REQUIRED VISIBLE FROM APPROACHING PEDESTRIAN

C. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND ARE IN THE PATH OF

TRAVEL, SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE.

D. HAND ACTIVATED DOOR HARDWARE SHALL BE CENTERED BETWEEN 34" AND 44" ABOVE THE FLOOR (CBC 11B-404.2.7).

E. THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL BE A MINIMUM 60" SQUARE IN THE DIRECTION OF THE DOOR SWING AND A MINIMUM 44" SQUARE OPPOSITE THE DIRECTION OF DOOR SWING (48" IF THE DOOR HAS BOTH LATCH AND CLOSER). THE SQUARES SHALL BE MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION. SEE NOTE I BELOW FOR STRIKE SIDE REQUIREMENTS.

F. THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24" PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18" PAS THE STRIKE EDGE FOR INTERIOR DOORS AND THE PRIMARY ENTRANCE TO THE DWELLING

G THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED NO GREATER

H. THE BOTTOM 10 INCHES OF ALL DOORS EXCEPT SLIDING AND POCKET DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.

I. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS FOR EXTERIOR DOORS AND 5 LBS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT SHALL BE APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. THE AUTHORITY HAVING JURISDICTION MAY INCREASE THE MAXIMUM EFFORT TO OPERATE FIRE DOORS TO ACHIEVE POSITIVE LATCHING, BUT NOT TO EXCEED 15

J. EXIT DOORS MUST OPEN FROM THE INSIDE WITHOUT A KEY, OR ANY SPECIAL KNOWLEDGE OR EFFORT. EXIT DOORS FROM BUILDINGS OR ROOMS SERVING 10 OR FEWER OCCUPANTS MAY HAVE A NIGHT LATCH, DEADBOLT OR SECURITY CHAIN, AS LONG AS THE DOORS CAN STILL BE OPENED FROM THE INSIDE WITHOUT A KEY, SPECIAL KNOWLEDGE OR EFFORT. IN ADDITION, THESE DEVICES ARE NOT MOUNTED MORE THAN 48" ABOVE THE FLOOR. MANUALLY OPERATED EDGE BOLTS, SURFACE MOUNTED FLUSH BOLTS AND SURFACE BOLTS ARE PROHIBITED. WHEN EXIT DOORS ARE USED IN PAIRS AND AUTOMATIC FLUSH BOLTS ARE USED, THE DOOR LEAF WITH THE FLUSH BOLT MUST HAVE NO DOORKNOB OR SURFACE MOUNTED HARDWARE. THE UNLATCHING OF ANY LEAF MUST NOT REQUIRE MORE THAN ONE OPERATION.

K. EVERY REQUIRED EXIT MUST BE LARGE ENOUGH TO PERMIT A DOOR AT LEAST 3'-0" WIDE BY 6'-8" HIGH. EXIT DOORS SHALL OPEN AT LEAST 90 DEGREES AND PROVIDE A CLEAR WIDTH OF

.. THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE NO HIGHER THAN 1/2". SUCH THRESHOLDS SHALL BE BEVELED NO GREATER THAN 1:2.

M. THE FLOOR LANDING IMMEDIATELY OUTSIDE THE ENTRY MAY BE SLOPED UP TO 1/8" PER FOOT IN THE DIRECTION AWAY FROM THE PRIMARY ENTRANCE FOR DRAINAGE.

N. THE SPACE BETWEEN TWO CONSECUTIVE DOOR OPENINGS IN A VESTIBULE. SERVING OTHER THAN A REQUIRED EXIT STAIRWAY, MUST HAVE AT LEAST 48" OF CLEAR SPACE FROM ANY DOOR OPENING INTO THE VESTIBULE WHEN THE DOOR IS OPEN 90 DEGREES FROM ITS CLOSED POSITION. DOORS IN SERIES MUST SWING IN THE SAME DIRECTION OR AWAY FROM THE SPACE BETWEEN THE DOORS.

A STAIRWAYS

A. STAIRWAYS SHALL HAVE HANDRAILS ON EACH SIDE. STAIRWAYS SHALL HAVE INTERINEDIATE HANDRAILS WHERE REQUIRED SUCH THAT ALL PORTIONS OF THE STATEWAY WIDTH REQUIRED FOR EGRESS CAPACITY ARE WITHIN 30 INCHES OF A HANDRAIL. INTERMEDIATE HANDRAILS SHALL BE SPACED AT EQUAL INTERVALS WITHIN THE WIDTH OF THE STAIRWAY AND BE CONTINUOUS FOR THE ENTIRE LENGTH.

B. HANDRAILS MUST BE 34 TO 38 INCHES ABOVE THE NOSING OF THE TRE $oldsymbol{A}$ OS AND MUST EXTEND IN THE DIRECTION OF THE STAIR RUN FOR AT LEAST 12" BEYOND THE TOP NOSING AND 12" PLUS THE TREAD WIDTH BEYOND THE BOTTOM NOSING.

C. ENDS SHALL BE RETURNED OR SHALL TERMINATE IN A NEWEL POST OR SAFETY

INCH BETWEEN THE WALL AND THE HANDRAIL. . THE HANDGRIP PORTION OF HANDRAILS SHALL BE NOT LESS THAN 1-1/4-INCHES NOR MORE THAN 1 1/2-INCHES IN CROSS-SECTIONAL DIMENSION OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE AND SHALL HAVE A SMOOTH SURFACE WITH NO SHARP OR ABRASIVE CORNERS AND ALL EDGES MUST MAVE A MINIMUM 1/8" RADIUS.

D. HANDRAILS PROJECTING FROM A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2-

F. THE UPPER APPROACH AND THE LOWER TREAD OF EACH INTERIOR STAIR SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR THE FULL WIDTH OF THE TREAD AT LEAST 2-INCHES WIDE PLACED PARALLEL TOAND NOT MORE THAN 1-INCH FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE STHER TREADS OF THE STAIR.

. WHERE STAIRWAYS OCCUB OUTSIDE A BUILDING, THE UPRER APPROACH AND ALL TREADS SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2-INCHES WIDE AND PLACED PARALLEL TO AND NOT MORE THAN 1 NICH FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT IÆAST AS SLIP RESISTANT AS THE OTHER TREARS OF THE STAIR. A PAINTED STRIP SHALL BE ACCEPTABLE.

H. ALL TREAD SURFACES SHALL BE SLIP RESISTANT.

K. STAIR RISERS SHALL BE SOLID PER CBC 11B-504.

. TREADS SMALL HAVE A SMOOTH, ROUNDED OR CHAMFERED EXPOSED EDGES, AND NO ABRUPT EDGES AT THE NOSING (LOWER FRONT EDGE). NOSING SHALL NOT PROJECT MORE THAN 1-1/4 INCH PAST THE FACE OF THE RISE

5. SANITARY FACILITIES

A. WHEELCHAIR ACCESSIBLE WATER CLOSET COMPARTMENTS SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC CLOSING DEVICE, AND SHALL HAVE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32-INCHES WHEN LOCATED AT THE END AND 34-INCHES WHEN LOCATED AT THE SIDE WITH THE DOOR POSITION AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.

B. TOILET FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS, NO MORE THAN 44-INCHES ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT.

C. WHERE URINALS ARE PROVIDED AT LEAST ONE WITH A RIM PROJECTING A MINIMUM OF 14-INCHES FROM THE WALL AND AT A MAXIMUM OF 17-INCHES ABOVE THE FLOOR SHALL BE

D. URINAL FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST AND SHALL BE MOUNTED NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT.

E. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE

F. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FOOT. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

G. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM GLASS EDGE NOT MORE THAN 40-INCHES ABOVE THE FLOOR.

H. LOCATE TOWEL, SANITARY NAPKIN, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS NOT MORE THAN 40-INCHES FROM THE FLOOR.

I. TOILET TISSUE DISPENSERS SHALL BE LOCATED ON THE WALL OR PARTITION WITHIN 7" TO 9" TO CENTERLINE FROM THE FRONT EDGE OF THE TOILET SEAT, MOUTED BELOW THE GRAB BAR, AT A MINIMUM HEIGHT OF 19 INCHES, AND 36 INCHES MAXIMUM TO THE FAR EDGE FROM THE REAR WALL. DISPENSERS SHALL PERMIT CONTINUOUS FLOW AND NOT CONTROL DELIVERY (CBC 11B-604.7).

J. GRAB BARS, TUB AND SHOWER SEATS, FASTENERS AND MOUNTING DEVICES SHALL BE DESIGNED FOR 250 LB. PER CBC 1607A.8.2.

1. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACE OF A GRAB BAR SHALL BE 1-1/4" TO 1-1/2" OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. 2. IF THE GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BARS SHALL BE 1-1/2". 3. A GRAB BAR AND ANY WALL OR OTHER SURFACE ADJACENT SHALL BE FREE OF

4. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS. 5. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".

ANY SHARP OR ABRASIVE ELEMENTS.

ACCESSIBILITY NOTES

6. SWITCHES CONTROLS AND ELECTRICAL OUTLETS A. RECEPTACLE OUTLETS SHALL BE 15" MIN ABOVE THE FINISHED FLOOR TO THE BOTTOM OF THE BOX PER CBC 11B-308.1.2.

B. SWITCHES SHALL BE 48" MAX. ABOVE THE FINISHED FLOOR TO THE TOP OF THE BOX (11B-308.1.1).

C. IF REACH IS OVER AN OBSTRUCTION (FOR EXAMPLE, A BASE CABINET) BETWEEN 20" AND 25" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH, OR 46" FOR SIDE APPROACH PROVIDED THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH. THE OBSTRUCTION MAY NOT EXTEND MORE THAN 25" FROM THE WALL BENEATH THE CONTROL

- D. THE CENTER OF FIRE ALARM INITIATING DEVICES (BOXES) SHALL BE LOCATED 48" ABOVE

E. IF EMERGENCY WARNING SYSTEMS ARE REQUIRED THEY SHALL ACTIVATE A MEANS OF WARNINGTHE HEARING IMPAIRED. FLASHING VISUAL WARNING SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE.

. THESE DOCUMENTS AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF SVA ARCHITECTS. AND ARE NOT TO BE USED, IN WHOLE OR IN PART FOR ANOTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF SVA ARCHITECTS.

. THE WORK SHOWN ON THESE DRAWINGS AS EXISTING CONDITIONS WAS PREPARED FROM INFORMATION FURNISHED BY THE OWNER. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, SVA ARCHITECTS INC. IS NOT RESPONSIBLE FOR THE ACCURACY OR ADEQUACY OF ANY WORK SHOWN AS EXISTING NOR IS SVA ARCHITECTS INC. RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT

EACH BIDDER SHALL POSSESS AT THE TIME OF BID A CLASS B OR THE APPROPRIATE CLASS C CONTRACTOR'S LICENSE PURSUANT TO PUBLIC CONTRACT CODE SECTION 3300 AND BUSINESS AND PROFESSIONS CODE SECTION 7028.15. THE SUCCESSFUL BIDDER MUST MAINTAIN THE LICENSE THROUGHOUT THE DURATION OF

4. FIRE SAFETY DURING CONSTRUCTION AND THE DURATION OF THIS CONTRACT: A. GENERAL: FIRE SAFETY DURING CONSTRUCTION SHALL COMPLY WITH 2022 CALIFORNIA FIRE CODE TITLE 24, PART 9, CHAPTER 33.

B. ACCESS ROADS: FIRE DEPARTMENT ACCESS ROADS SHALL BE ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410. C. WATER SUPPLY: WATER MAINS AND HYDRANTS SHALL BE OPERATIONAL IN

ACCORDANCE WITH SECTION 1412. D. BUILDING ACCESS: ACCESS TO BUILDINGS FOR THE PURPOSE OF FIREFIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK ACCESS TO

BUILDINGS, HYDRANTS OR FIRE APPLIANCES. E. ALTERATIONS OF BUILDINGS: SHALL COMPLY WITH APPLICABLE PROVISIONS OF

G. FIRE WATCH: MAINTAIN FIRE WATCH WHEN REQUIRED BY THE BUILDING OFFICIAL AND WHEN EXISTING FIRE PROTECTION SYSTEMS ARE SHUT DOWN FOR ALTERATIONS. FIRE WATCH SHALL REMAIN IN EFFECT UNTIL EXISTING FIRE PROTECTION SYSTEMS ARE RETURNED TO SERVICE OR AS ALLOWED BY THE BUILDING OFFICIAL.

5. PENETRATIONS TO FIRE RATED MATERIALS OR ASSEMBLIES SHALL BE RESTORED TO EQUAL RATING. FIRE STOP SYSTEMS AS LISTED BY UNDERWRITERS LABORATORIES SHALL BE INSTALLED PER FIRE RESISTANCE DIRECTORY. FIRE STOP SYSTEMS SHALL BE AS SPECIFIED.

6. STATEMENT (TITLE 24, PART 6): NONRESIDENTIAL ENERGY STANDARDS COMPLIANCE: THE DESIGN INDICATED HEREIN COMPLIES WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION STANDARDS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THE PROPOSED BUILDING(S) WILL BE IN COMPLIANCE WITH THE ENERGY CONSERVATION STANDARDS PROVIDED IT (THEY) IS (ARE) BUILT ACCORDING TO THESE DRAWINGS AND SPECIFICATIONS AND PROVIDED ANY FUTURE IMPROVEMENTS ARE COMPLETED ACCORDING TO THE REQUIREMENTS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED TO INCLUDE ALL SIGNIFICANT ENERGY CONSERVATION FEATURES REQUIRED FOR COMPLIANCE WITH THE STANDARDS. BUILDING AREAS THAT ARE UNCONDITIONED AND/OR NOT SUBJECT TO THE STANDARDS ARE INDICATED ON THE

ENVELOPE MANDATORY MEASURES:

INTERIM U-VALUE RATING PROCEDURE.

ANY WORK FOR THIS PROJECT.

SECTIONS 1405, 1411, 1413, AND 1415.

A. INSTALLED INSULATING MATERIALS SHALL HAVE BEEN CERTIFIED BY THE MANUFACTURER TO COMPLY WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.

B. ALL INSULATING MATERIALS SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF [TITLE 24, PART 2, CALIFORNIA BUILDING CODE, SECTIONS 719 AND 2603.]

C. ALL EXTERIOR JOINTS AND OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL AND OBSERVABLE SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED.

D. SITE CONSTRUCTED DOORS, AND WINDOWS SHALL BE CAULKED BETWEEN THE UNIT AND THE BUILDING, AND SHALL BE WEATHERSTRIPPED (EXCEPT FOR UNFRAMED GLASS DOORS AND FIRE DOORS).

E. MANUFACTURED DOORS AND WINDOWS INSTALLED SHALL HAVE AIR INFILTRATION

RATES CERTIFIED BY THE MANUFACTURER IN ACCORDANCE WITH TITLE 24. PART 6.

CALIFORNIA CODE OF REGULATIONS, SECTION 116(a)1. F. MANUFACTURED FENESTRATION PRODUCTS IN THE ENVELOPE OF THE BUILDING, INCLUDING, BUT NOT LIMITED TO, WINDOWS, SLIDING GLASS DOORS, FRENCH DOORS SKYLIGHTS, CURTAIN WALLS, AND GARDEN WINDOWS MUST BE LABELED FOR U-VALUE IN ACCORDANCE WITH THE (NFRC) NATIONAL FENESTRATION RATING COUNCIL'S

G. DEMISING WALL INSULATION SHALL BE INSTALLED IN ALL OPAQUE PORTIONS OF FRAMED WALLS (EXCEPT DOORS).

. INSPECTOR OF RECORD REQUIREMENTS: A. ONE OR MORE INSPECTORS EMPLOYED BY THE OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS WILL BE ASSIGNED TO THE WORK. THE INSPECTORS DUTIES ARE SPECIFICALLY DEFINED IN SECTION 4-342 OF SAID TITLE 24, PART 1 AND IN ADDITION SHALL BE AS STIPULATED IN INTERPRETATION OF REGULATION DOCUMENT IR A-8. B. INSPECTOR SHALL BE CERTIFIED AS A CLASS [3] INSPECTOR THROUGH THE DIVISION OF THE STATE ARCHITECT INSPECTOR EXAMINATION PROGRAM. INSPECTOR SHALL ALSO BE SPECIFICALLY APPROVED BY THE DIVISION OF THE STATE ARCHITECT FOR THIS PROJECT AT LEAST 10 DAYS PRIOR TO THE START OF

8. $\,$ ALL WORK SHOWN ON THESE DRAWINGS SHALL COMPLY WITH THE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

9. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CCD APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

10. GRADING PLANS, DRAINAGE IMPRPOVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIROMENTAL HEALTH CONCIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES. 11. DRINKING WATER SHALL COMPLY WITH ALL LOCAL HEALTH DEPARTMENT

12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE CODES. ALL ENGINEERING SHALL COMFORM WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS HAVING JURISDICTION INCLUDING

ACCESSIBILITY STANDARDS AND ADA REQUIREMENTS. 13. DO NOT SCALE THE DRAWINGS. THE DRAWINGS ARE NOT NECESSARILY TO SCALE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO BIDDING AND START OF CONSTRUCTION. IF DISCREPANCIES ARE FOUND, THE

ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE COMMENCING WORK. 14. ALL DIMENSIONS ARE TO FACE OF CONCRETE, FACE OF MASONRY UNITS, CENTERLINE OF COLUMNS AND BEAMS, OR FACE OF STUDS, UNLESS OTHERWIS NOTED. FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE SLAB OR TOP OF INTERIOR PAVING UNLESS NOTED OTHERWISE. CEILING HEIGHT DIMENSIONS ARE TO FINISHED SURFACES UNLESS NOTED OTHERWISE.

15. THE CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE PROCEEDING WITH INSTALLATION OF CIVIL, STRUCTURAL MECHANICAL, PLUMBING, AND ELECTRICAL WORK. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THE ARCHITECT'S AND THE CONSULTING ENGINEER'S DRAWINGS AND SPECIFICATIONS THAT WOULD CAUSE A CONFLICT. IT SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION FOR CLARIFICATION PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER OR ARCHITECT.

16. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING ABBREVIATIONS OR THEIR EXACT MEANING. THE ARCHITECT SHALL BE NOTIFIED FOR

17. DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL SIMILAR CASES UNLES SPECIFICALLY INDICATED OTHERWISE.

18. ALL RUBBISH AND DEBRIS RESULTING FROM DEMOLITION AND/OR NEW WORK SHALL BE DISPOSED OF OFF-SITE AND SHALL NOT BE ALLOWED TO ACCUMULATE.

19. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 30 00 OF SPECIFICATIONS AND AS REQUIRED BY INDIVIDUAL SPECIFICATION SECTIONS.

20. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL. REQUEST FOR SUBSTITUTION SHALL BE IN ACCORDANCE WITH SECTION 01 60 00 OF SPECIFICATIONS.

- INSTALLATION OF PIPE CONDUITS AND DUCT WORK WITH A MINIMUM OF CUTTING. SHAFT WALLS

22. OFFSET STUDS WHERE REQUIRED SO THAT FINISH WALL SURFACE WILL BE FLUSH. 24. DOORS IN RATED WALLS SHALL CONSIST OF SELF-CLOSING, SELF-LATCHING ASSEMBLIES WITH SMOKE AND DRAFT SEALS AT HEAD AND JAMBS. DOOR ASSEMBLY RATINGS SHALL BE AS INDICATED ON DOOR AND ACTIVATED BY SMOKE DETECTORS.

25. INSTALL METAL CORNER BEADS AT ALL EXPOSED GYPSUM BOARD EDGES INSTALL CASING BEADS WHEREVER GYPSUM BOARD, PLASTER, ETC. ABUTS DISSIMILAR FINISH MATERIAL AND PROVIDE

26. GYPSUM BOARD SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE AT ALL COLUMNS AND EXTERIOR PERIMETER WALLS UNLESS OTHERWISE NOTED. WELD FURRING CHANNELS TO STEEL COLUMN PRIOR TO FIRE PROOFING WHEN REQUIRED. 27. CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIEFENERS, BRACING, BACK-UP PLATES, AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK, STAIR RAILINGS, TOILET ROOM ACCESSORIES AND PARTITIONS, AND OF ALL WALL MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL, OR MISCELLANEOUS EQUIPMENT.

28. ALL GLAZING SHALL COMPLY WITH THE CONSUMER PRODUCT SAFETY COMMISSION REQUIREMENTS (C.P.S.C.), CFC, AND CBC.

29. CONTACT BETWEEN DISSIMILAR METAL SHALL BE PROTECTED.

30. ALL DOOR SIZES SHOWN ON DOOR SCHEDULE ARE OPENING SIZES. ALLOWANCE FOR THRESHOLDS, ETC. SHALL BE TAKEN OFF DOOR. ALL DOORS AND FRAME SHALL BE REINFORCED WHERE REQUIRED FOR CLOSERS, STOPS, AND HARDWARE.

MATERIALS USED SHALL BEAR THE APPROPRIATE U.L. LABEL.

THE CALIFORNIA BUILDING CODE.

32. ALL WOOD TRIM, SPACER, FILLER, ETC., THROUGHOUT JOB SHOULD BE FIRE TREATED. 33. INSPECTION AND TESTING LABORATORY MUST BE IN THE EMPLOY OF THE OWNER, NOT THE

34. MINIMUM HEADROOM CLEARANCE AT STAIRS SHALL BE 6'-8" MEASURED VERTICALLY FROM A PLANE PARALLEL AND TANGENT TO THE TREAD NOSING TO THE SOFFIT ABOVE AT ALL POINTS. 35. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEGE. LOCKING DEVICES SHALL BE OF AN APPROVED TYPE. 36. EXIT SIGNS SHALL HAVE 6" MINIMUM HEIGHT LETTERS AND SHALL CONFORM TO SECTION 1013 OF

37. FURNISH AND INSTALL ACCESS DOORS, FIRE DAMPERS, ETC. IN CEILING AND WALL CONSTRUCTION LOCATED AS REQUIRED BY INSTALLATION OF MECHANICAL PLUMBING, AND ELECTRICAL WORK AND AS APPROVED BY THE ARCHITECT. PROVIDE RATED ASSEMBLIES IN RATED WALLS AND CEILINGS AND SHALL BE APPROVED BY BUILDING INSPECTOR PRIOR TO INSTALLATION.

38. FURNISH AND INSTALL EMERGENCY LIGHTING AS SPECIFIED AND INDICATED BUT IN NO CASE SHALL THE LIGHT VALUE BE LESS THAN ONE FOOT CANDLE AT FLOOR LEVEL IN ALL EXIT CORRIDORS AND STAIR SHAFTS (CBC SECTION 1008). 39. THERE SHALL BE NO TRENCHES OR EXCAVATIONS 5' OR MORE IN DEPTH INTO WHICH A PERSON IS

INDUSTRIAL SAFETY PRIOR TO THE ISSUANCE OF A BUILDING OR GRADING PERMIT. 40. THE CONSTRUCTION OR DEMOLITION OF ANY BUILDING, STRUCTURE, SCAFFOLDING OR FALSEWORK MORE THAN 3 STORIES OR 36' IN HEIGHT REQUIRES A PERMIT FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT

REQUIRED TO DECEND UNLESS A PERMIT IS OBTAINED FROM THE STATE OF CALIFORNIA DIVISION OF

41. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS WITHIN 18" OF THE ADJACENT FLOOR SHALL BE GLASS APPROVED FOR IMPACT HAZARD. 42. ALL LIGHT CAUCE METAL STUDS AND BRACING SHALL COMPLY WITH 2022 CALIFORNIA BUILDING

43. INSTALLATION OF SHORING, UNDERPINNING, AND/OR SLOT CUTTING EXCAVATIONS SHALL BE PERFORMED UNDER THE CONTINUOUS INSPECTION AND APPROVAL OF THE GEOTECHNICAL

44. ALL CONSTRUCTION SHALL PERFORMED IN ACCORDANCE WITH THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE STATE DIVISION OF INDUSTRIAL SAFETY. 45. DIMENSIONS AND CONDITIONS AT THE JOB SITE SHALL BE VERIFIED BY ALL CONTRACTORS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS TO THE OWNER SINCE PROPOSALS MUST TAKE INTO CONSIDERATION ALL SUCH CONDITIONS THAT MAY AFFECT THE WORK. DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITION SHALL BE REPORTED TO THE ARCHITECT. REVISED

46. CONTRACTORS SHALL PROVIDE AND INSTALL ALL CONCRETE HOUSEKEEPING PADS FOR

DRAWINGS OR INSTRUCTIONS SHALL BE ISSUED BY THE OWNER PRIOR TO THE INSTALLATION OF ANY

MECHANICAL AND ELECTRICAL EQUIPMENT, AS REQUIRED. 47. ALL GYPSUM WALL BOARD TO BE 5/8" THICK TYPE 'X' UNLESS OTHERWISE NOTED OR REQUIRED FOR SPECIFIC WALL CONSTRUCTION.

48. THERMAL INSULATION SHALL BE PROVIDED PER TYPICAL ASSEMBLIES NOTED ON DRAWINGS. REFER TO SPECS FOR PRODUCT INFORMATION.

49. PROVIDE TEMPERED GLASS AT LOCATIONS REQUIRED BY CBC SECTION 2406 AND BY OTHER APPLICABLE CODE.

50. ROOF DRAINS DISCHARGING WATER MUST BE CONDUCTED UNDER THE SIDEWALK 51. DOORS SHALL NOT PROJECT MORE THAN 7 INCHES INTO THE REQUIRED CORRIDOR WIDTH WHEN FULLY OPENED OR MORE THAN ONE HALF INTO THE REQUIRED WIDTH WHEN IN ANY POSITION. (CBC

52. PUBLIC HALLWAYS AND EXIT COURT PASSAGEWAYS TO HAVE 7'-0" CLEAR HEIGHT TO LOWEST PROJECTION. (CBC SECTION 1005.3) 53. OCCUPANCY LOAD SIGNS SHALL BE POSTED IN EACH CLASSROOM, ASSEMBLY ROOM, OR SIMILAR

PURPOSE ROOM, HAVING AN OCCUPANT LOAD OF 50 OR MORE. 54. DUCT PENETRATIONS THROUGH PROTECTIVE ELEMENTS OF FIRE RATED CORRIDOR WALLS SHALL BE PROTECTED WITH A COMBINATON FIRE SMOKE DAMPERS PER CBC SECTION 714.

55. NO CHANGES ARE TO BE MADE ON THESE PLANS WITHOUT THE KNOWLEDGE OR CONSENT OF THE ARCHITECT/ENGINEER WHOSE SIGNATURE APPEARS HEREON. 56. THESE DRAWINGS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR CONSTRUCTION

57. LOCATIONS OF ALL UTILITIES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID INTERCEPTING EXISTING PIPING OR CONDUITS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE ARCHITECT IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD ANY UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PROSECUTION OF THIS WORK.

58. THE PROJECT APPLICANT SHALL COMPLY WITH THE REQUIREMENTS OF THE ENGINEERING DIVISION FOR ALL PUBLIC IMPROVEMENTS.

BROOM **PUSHBUTTON CABINET** PULL CHAIN CARPET PLATE PROPERTY LINE **CATCH BASIN** PLASTER CEM. PLAS CEMENT PLASTER PLATE GLASS PL. GLS CENTER LINE PLAST. **PLASTER** CERAMIC PLYWD. **PLYWOOD** CAST IRON CIRCULAR CEILING PRECAST PREFABRICATED PREFAB. CERAMIC MOSAIC TILE **IERCEMT** COMPOSITION CONCRETE CONTINUOUS QTY. QUANTITY COUNTERSUNK CUBIC FEET RADIUS CUBIC INCH CU. YD. CUBIC YARD RETURN AIR GRILLE DRYFR ROOF DRAIN DOUGLAS FIR REDWOOD DRINKING FOUNTAIN RECP. RECEPTABLE DIAMETER REFERENCE DIMENSION REFRIGERATOR DOWN REGISTER REINFORCEMENT DOWN SPOUT REQ'D REQUIRED DRY STANDPIPE RES. FLR RESILIENT FLOORING DUPLICATE DISHWASHER DRAWINGS ROOFING ROUGH **ROUGH OPENING EXPANSION JOINT** RUBBER R.B. ELEVATOR RUBBER (RESILIENT) BASE ELEVATION ENCLOSURE SOLID CORE **EQUIPMENT** STORM DRAIL ELECTRIC WELDED WIRE MESH E.W.W.M EXPANSION SHT'G SHEATHING EXPOSED SIMILAR **EXTERIOR** SHELF AND POLE **EXTINGUISHER** SPECS. SPECIFICATIONS SPRINKLER FLAT HEAD SCREW SQUARE INCH FORCED AIR UNIT SQUARE FOOT FINISH FLOOR FIXED GLASS STORAGE FLAT HEAD WOOD SCREW STRUCT. STRUCTURAL SUSPENDED **FIXTURE** SIM. SIMILAR FLASHING SMOOTH FOUR SIDES S4S FLOOR **FLOORING FLUORESCENT** TOP AND BOTTOM **FACE OF CONCRETE** T.B. TOP OF BEAM **FACE OF MASONRY** TOP OF CURB TOP OF CONCRETE FACE OF STUD FACE OF WALL T.G. TOP OF GRATE TEL FIRE PLACE TELEPHONE TEMP. **FINISH SURFACE TEMPERED** FREQUENCY T&G TONGUE AND GROOVE FEET. FOOT THK. THICK FOOTING THRESH THRESHOLD FIRE EXTINGUISHER & CABINET TOP OF PAVING TOP OF SHEATHING T.W. TOP OF WALL GALVANIZED TYP. TYPICAL GALVANIZED IRON (STEEL) UNDERWRITER'S LABEL **FUNITE** GYPSUM ULT. ULTIMATE GYP. BD. GYPSUM BOARD UNFIN. UNFINISHED UNDER ROOF FRAMING U.R.F. HOSE BIBB **HOLLOW CORE** V.A.T. VINYL ASBESTOS TILE DFAD VFNT VENTILATOR VERT. **HOWLLOW METAL** VERTICAL **HORIZONTAL** VIT VITREOUS HOUR VOL. VOLUME VINYL TILE **INSIDE DIAMETER** WEST **INCORPORATED** WITH WATER CLOSET INSULATION INTERIOR WOOD WD. WIDE FLANGE (STEEL) **JOINT** WIRE GLASS JOIST W.H. WATER HEATER W.I. WROUGHT IRON KITCHEN WITH OUT WATERPROOFING LAMINATED WEATHERSTRIPPING LAM. PLAS. LAMINATED PLASTIC W.S.P. WET STANDPIPE LAVATORY WEIGHT LIGHT LOUVER YARD **ABBREVIATIONS**

ANCHOR BOLT (S)

ACOUSTICAL TILE

ACOUSTIC

AREA DRAIN

ADJUSTABLE

AGGREGATE

ALTERNATE

ALUMINUM

APPROXIMATE

AMERICAN SOCIETY OF

TESTING MATERIALS

BOTTOM OF BEAM

APARTMENT

ASPHALT

BLOCK

BEAM

BOTTOM

BLOCKING

BEDROOM

AC. T.

A.D.

B.B

BLK'G

BR.

C.M.T.

CONT

CTSK.

CU. IN.

EXPN.

EXP.

EXTR.

FIXT.

FLR

FLR'G

F.O.C.

F.O.M.

F.O.S.

F.O.W.

FΡ

F.S.

FTG.

FXC

GALV.

GUN

H.B.

H.C.

H.M.

HORIZ.

INSUL

INT

LAV.

LVR.

HD

HR.

FREQ.

FLUOR

FLASH.

ASPHALT CONCRETE PAVING

MEDICINE CABINET

MECHANICAL

MANUFACTURE

MEMBRANE

MAN HOLE

MINIMUM

MIRROR

METAL

NATURAL

NOT IN CONTRACT

OVERFLOW DRAIN

NOT TO SCALE

ON CENTER

OPPOSITE

OVERHEAD

MOUNTING

MECH

MEMB.

MFT

MFG.

MTG.

N.I.C.

N.T.S.

OPP.

OVHD.

DETAIL REFERENCE DETAIL NUMBER — SHEET ON WHICH DETAIL IS SHOWN ---

INTERIOR ELEVATION REFERENCE

BUILDING SECTION REFERENCE SECTION NUMBER — SHEET ON WHICH SECTION IS SHOWN --

ELEVATION NUMBER -SHEET ON WHICH ELEVATION IS EXTERIOR ELEVATION REFERENCE SHEET ON WHICH ELEVATION IS SHOWN - A101 DOOR REFERENCE

WINDOW REFERENCE STOREFRONT REFERENCE **REVISIONS REVISION NUMBER WALL TYPES** GRIDLINE REFERENCE MATERIAL REFERENCE

TOILET ROOM ACCESSORY SYMBOL

IDENTIFICATION STAMP

DIV. OF THE STATE ARCHITEC

REVIEWED FOR

SS 🗹 FLS 🗹 ACS 🗹

APP: 02-121348 INC:

REVISIONS: DESCRIPTION DATE

PROJECT NO: Project Number **DATE ISSUED:** Issue Date SCALE: 1 1/2" = 1'-0"

GENERAL NOTES

GEN-3



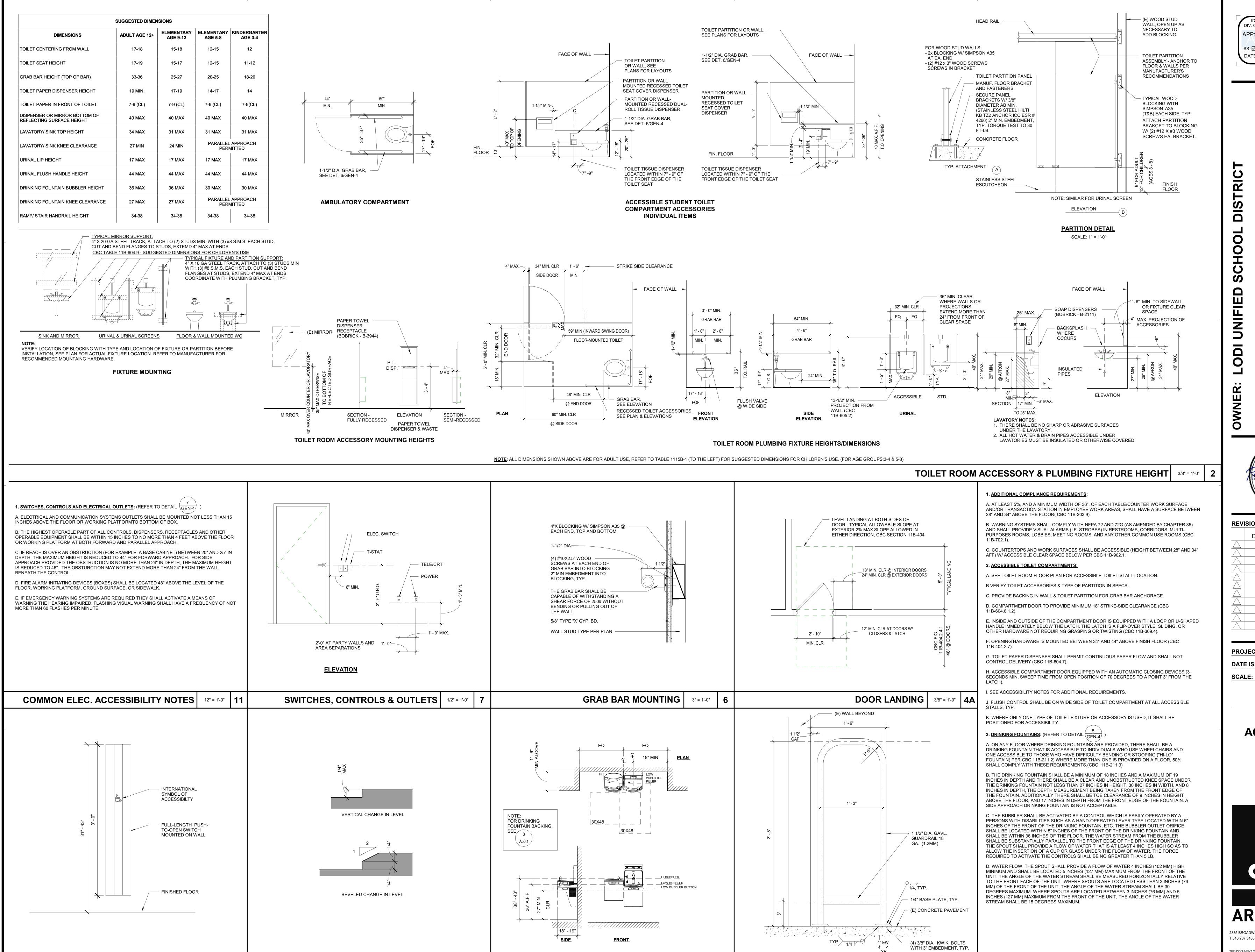
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GENERAL NOTES



DRINKING FOUNTAIN CLEARANCES

PIPE RAILS FLOOR MOUNTED

1 1/2" = 1'-0"

AUTOMATIC DOOR OPERATOR 1 1/2" = 1'-0" 8

CHANGES IN LEVEL

12" = 1'-0"

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GENERAL

As indicated

GEN-4

ACCESSIBILITY

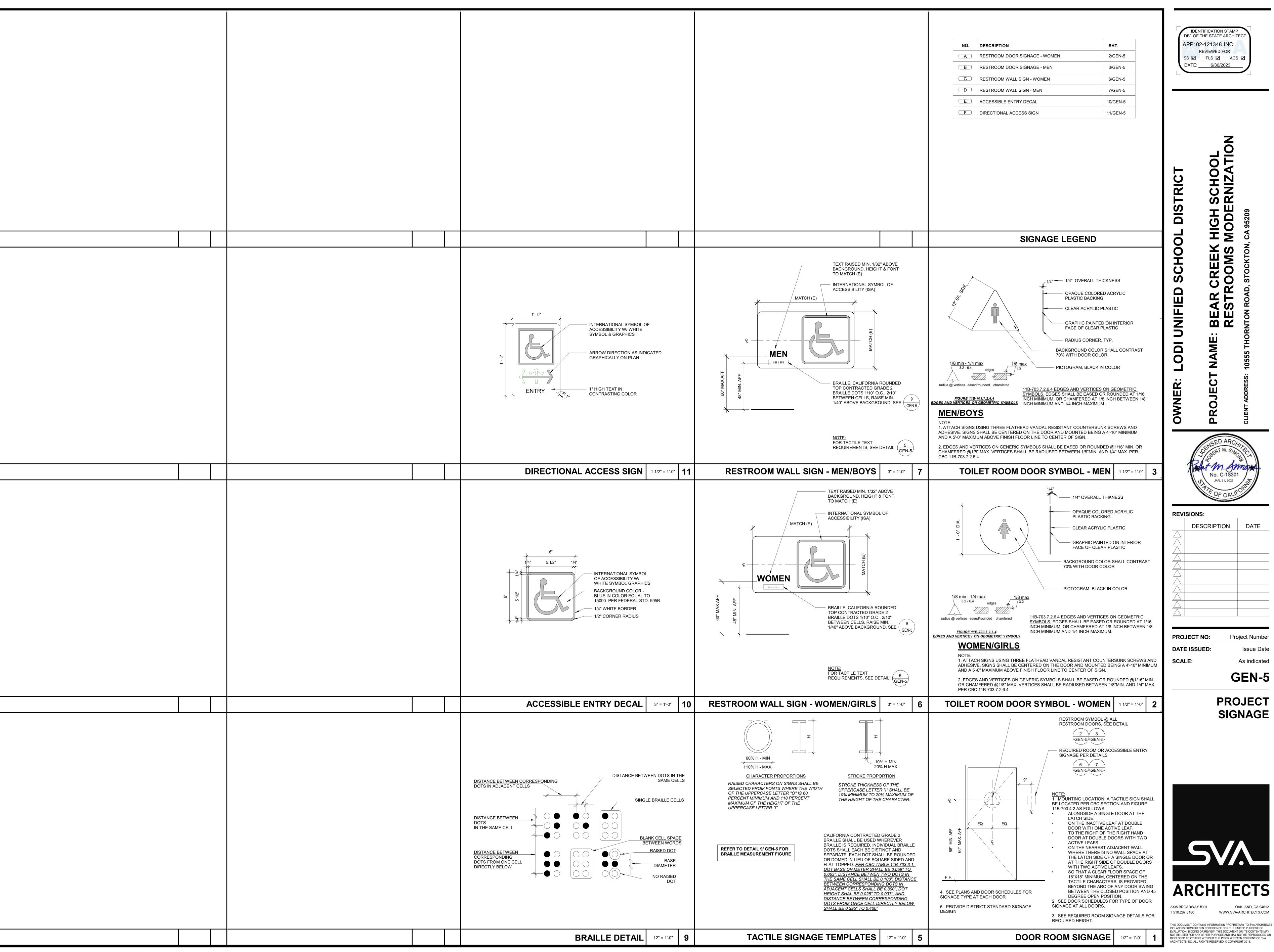


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COMMON AREA ACCESSIBILITY NOTES | 12" = 1'-0"

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DESCRIPTION

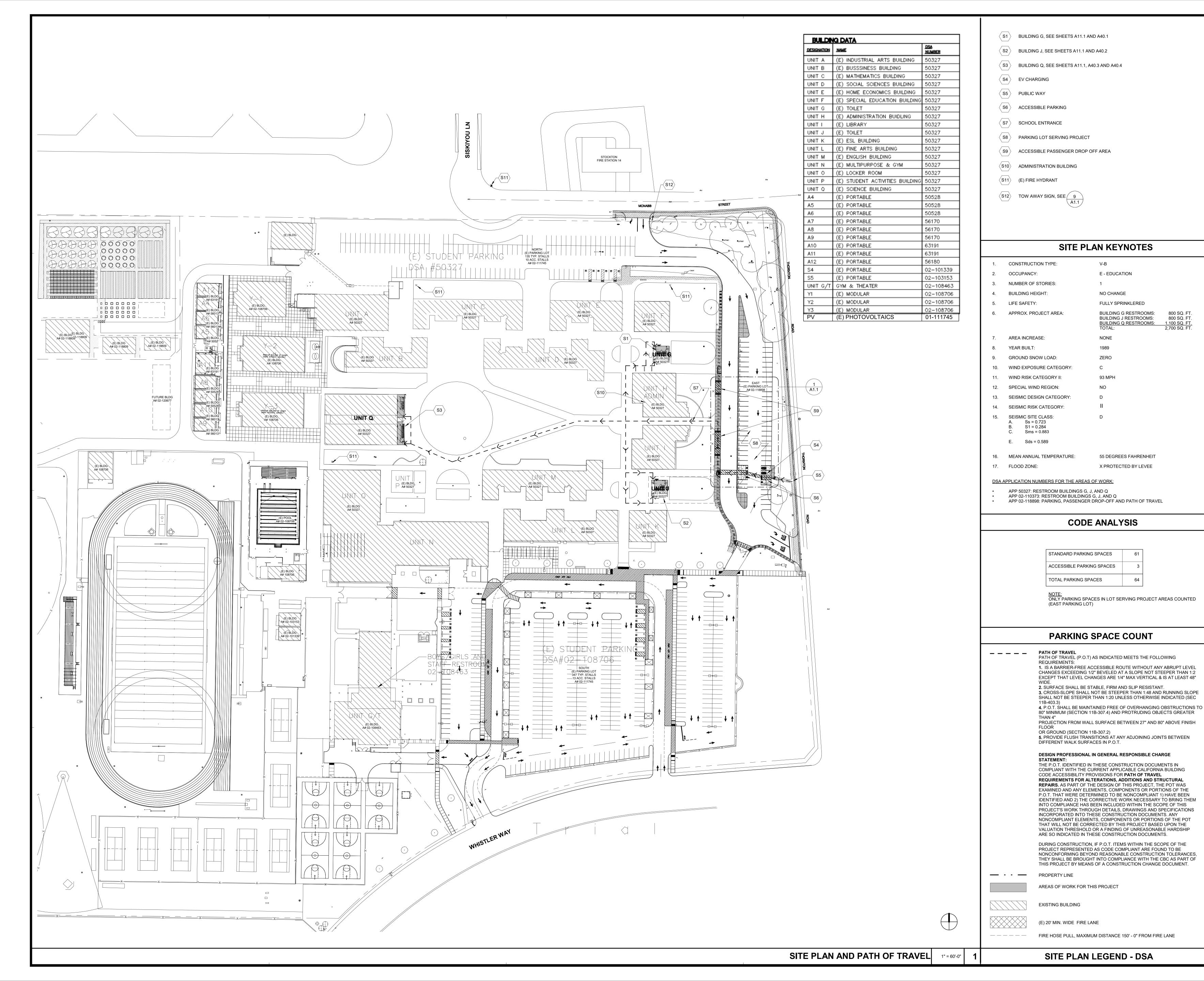
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> **PROJECT SIGNAGE**



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DATE: 6/30/2023

DISTRIC C

V-B

ZERO

E - EDUCATION

NO CHANGE

FULLY SPRINKLERED

BUILDING G RESTROOMS:

BUILDING J RESTROOMS:

55 DEGREES FAHRENHEIT

X PROTECTED BY LEVEE

BUILDING Q RESTROOMS:

800 SQ. FT.

1,100 SQ. FT. 2,700 SQ. FT.

L

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REVISIONS: DATE DESCRIPTION

PROJECT NO: Project Number **DATE ISSUED:** Issue Date SCALE: As indicated

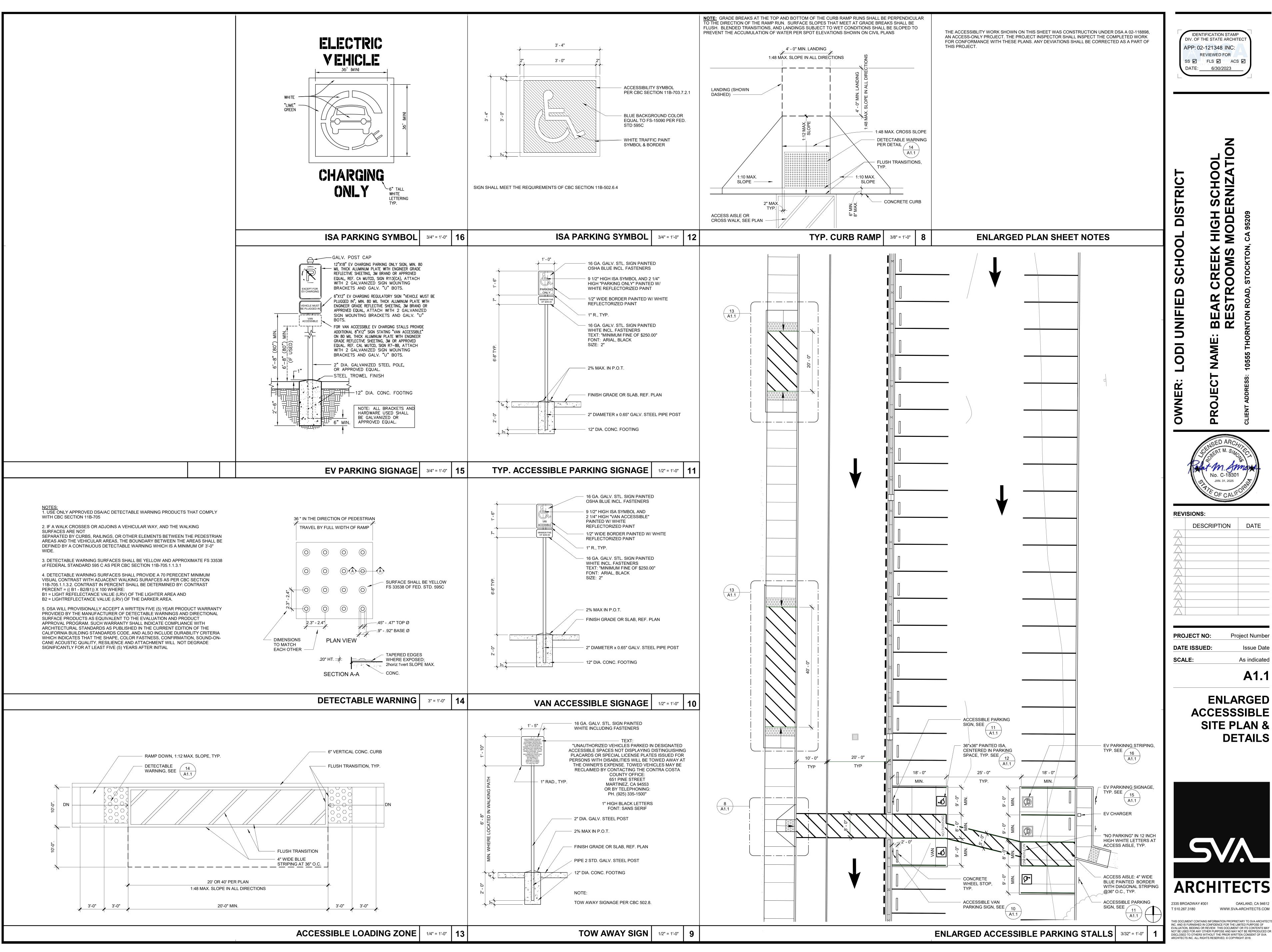
> A1.0 SITE PLAN & **PATH OF**

> > **TRAVAEL**

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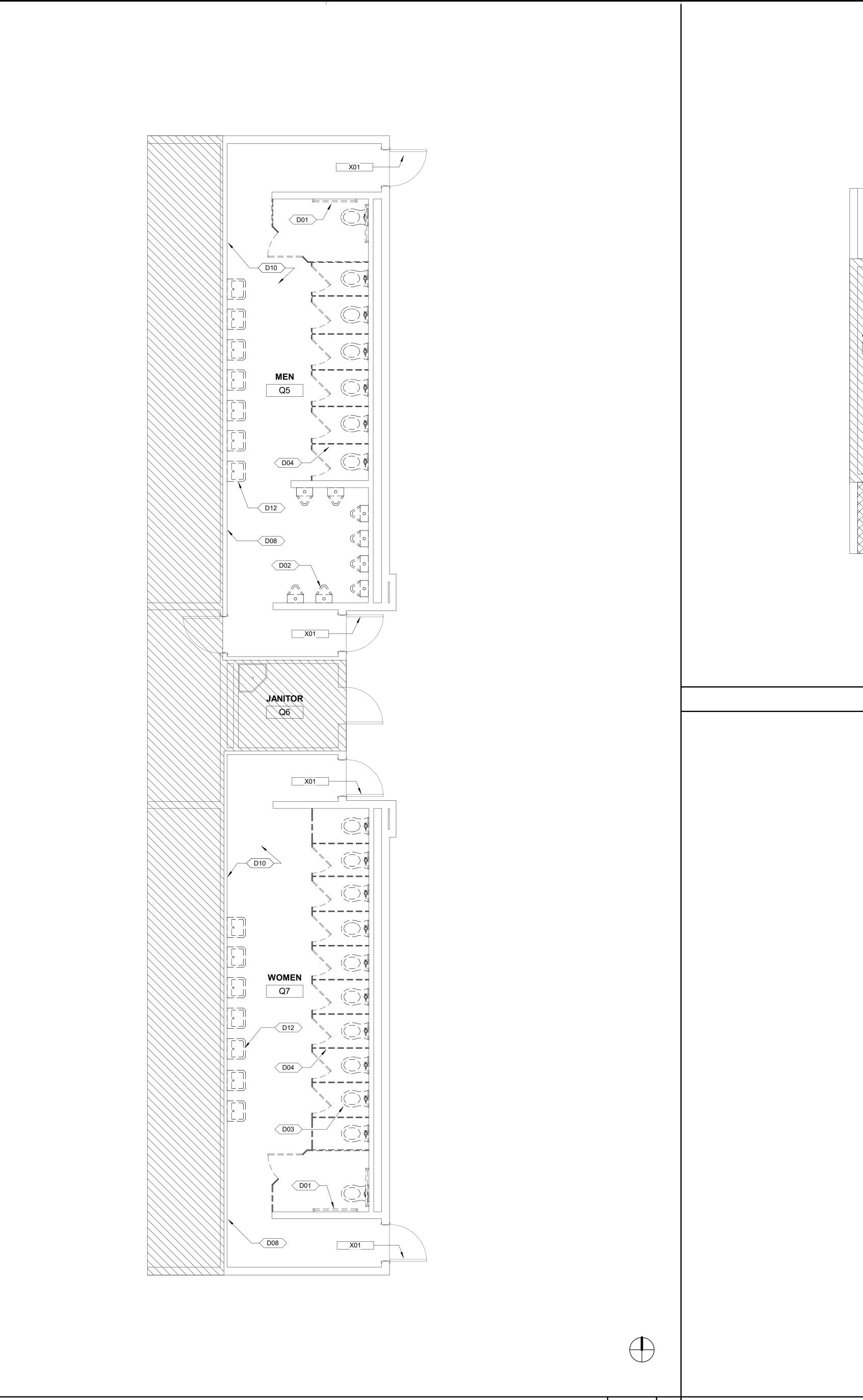
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> PROJECT NO: Project Number **DATE ISSUED:** Issue Date As indicated

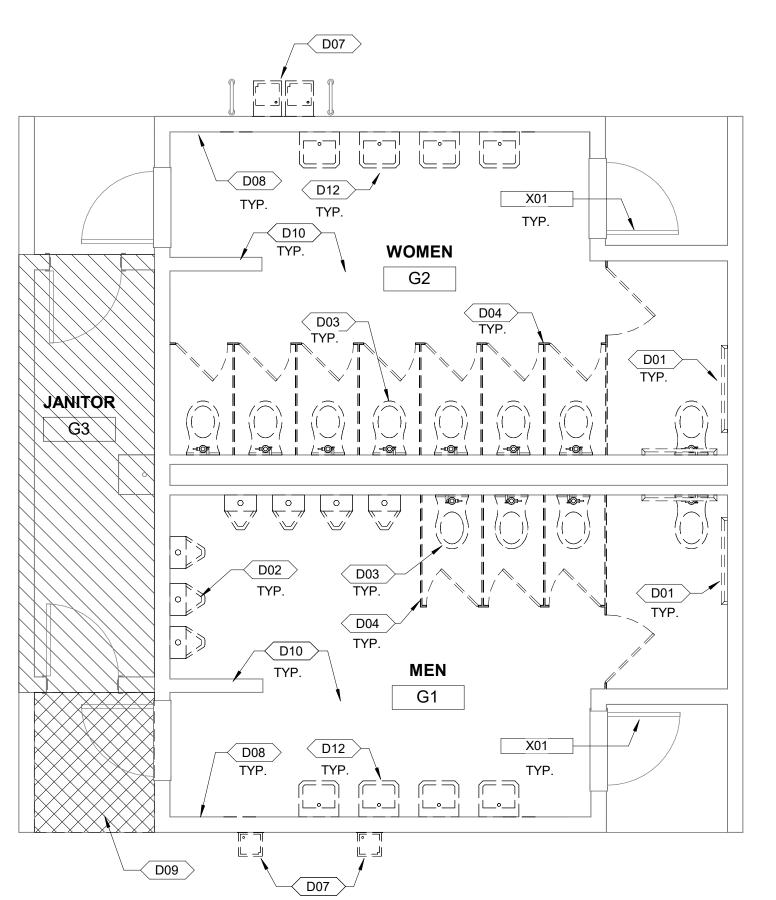
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ENLARGED ACCESSSIBLE SITE PLAN & **DETAILS**

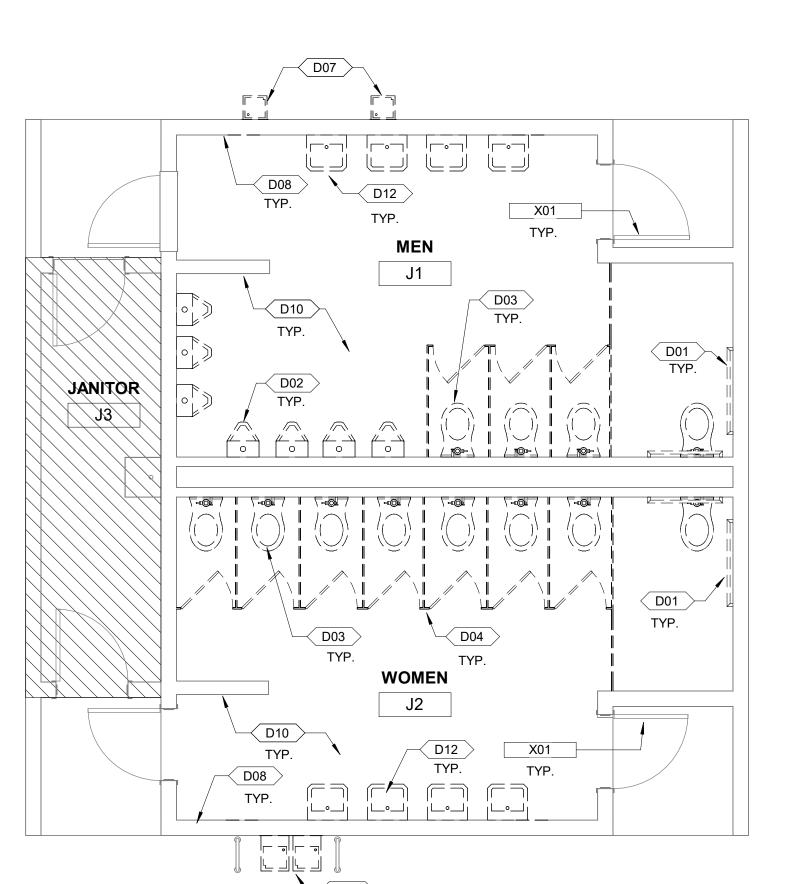




BUILDING Q - DEMO FLOOR PLAN | 1/4" = 1'-0" | 3



BUILDING G - DEMO FLOOR PLAN | 1/4" = 1'-0" | 2



DESCRIPTION

REMOVE (E) GRAB BAR, TYP.

REMOVE (E) URINAL, CAP PIPE IN WALL FOR FUTURE USE

REMOVE (E) WATER CLOSET, CAP PIPE IN WALL FOR **FUTURE USE**

REMOVE (E) TOILET PARTITION

REMOVE (E) DRINKING FOUNTAIN; CUT BACK PIPES TO

WITHIN WALL, AND CAP

REMOVE (E) WALL FINISH REMOVE CONC. AND PREP SLAB AS REQUIRED TO PATCH D09

REMOVE (E) FLOORING AND BASE REMOVE (E) LAVATORY, CAP PIPE IN WALL FOR FUTURE

REMOVE (E) DRINKING FOUNTAIN. CAP PIPING WITHIN

WALL. PREP AREA OR SURFACE FOR NEW WORK (E) DOOR, HARDWARE AND FRAME TO REMAIN

KEYNOTES

1. DEMOLITION DRAWINGS PREPARED BY THE ARCHITECT ARE FOR A GENERAL DESCRIPTION OF EXISTING BUILDING COMPONENTS, ASSEMBLIES AND MATERIALS TO BE REMOVED. DEMOLITION CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITION AND QUANTITIES.

2. DEMOLITION CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL MUNICIPAL AGENCIES HAVING JURISDICTIONAL AUTHORITY OVER ANY ASPECT OF THE DEMOLITION SCOPE.

3. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO DEMOLITION WORK.

4. DEMOLITION CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL

DEMOLISHED MATERIALS IN A MANNER COMPLIANT TO FEDERAL, STATE AND LOCAL MUNICIPAL REQUIREMENTS AND GUIDELINES.

5. DEMOLITION CONTRACTOR SHALL COORDINATE ALL WORK SCHEDULES WITH OWNER. IN NO CASE SHALL DEMOLITION WORK BE CONDUCTED DURING HOURS PROHIBITED BY LOCAL

6. PLANS ARE BASED ON EXISTING RECORD DRAWINGS AND VISUAL OBSERVATION. UNIDENTIFIED ITEMS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE PRIOR TO REMOVAL.

7. CONTACT OWNER'S REPRESENTATIVE FOR LIST OF SALVAGEABLE ITEMS.

8. CEILING FINISH, LIGHT FIXTURES, FIRE SPRINKLERS AND FIRE ALARM SYSTEM TO REMAIN 9. REMOVE EXISTING WALL FINISHES (CERAMIC TILE, VINYL WALL COVERING, PLYWOOD, GYPSUM BOARD SUBSTRATES, PLASTER, WAINSCOTTING, ETC.) IN ALL ROOMS DESIGNATED TO RECEIVE NEW WALL FINISHES PER INTERIOR FINISH SCHEDULE.

10. REMOVE EXISTING FLOORING & BASE (CERAMIC TILE, CARPET, PADDING AND ACCESSORIES) IN ALL ROOMS DESIGNATED TO RECEIVE NEW FLOORING AND BASE PER INTERIOR FINISH

11. REPAIR ALL SURFACES DESIGNATED TO RECEIVE NEW FLOOR, WALL, AND CEILING FINISHES AS REQUIRED TO PROVIDE A SOUND AND FLUSH SUBSTRATE.

12. ALSO REFERENCE PLUMBING AND ELECTRICAL DEMOLITION DRAWINGS FOR ADDITIONAL COORDINATION OF ITEMS TO BE REMOVED OR PROTECTED IN PLACE.

13. REMOVE ALL WALL AND PARTITION MOUNTED ACCESSORIES (TOILET PAPER DISPENSER, SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, SANITARY NAPKIN DISPENSER, SOAP DISPENSER, PAPER TOWEL DISPENSER, MIRROR, GRAB BARS, SHELVES, ETC.).

14. SALVAGE SIGNAGE FOR REINSTALLATION AS REQ'D TO PAINT DOORS

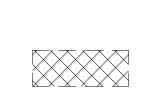
15. REMOVE (E) PLUMBING FIXTURES WITHIN THE AREA OF WORK, INCLUDING FLOOR DRAINS AND HOSE BIBBS. FOR MORE INFORMATION, SEE PLUMBING DRAWINGS.

16. NO DEMOLITION SHALL BEGIN UNTIL PLANS, INCLUDING THE DEMOLITION WORK, HAVE BEEN APPROVED BY DSA.

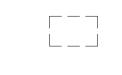
DEMOLITION NOTES

EXISTING WOOD STUD WALL

EXISTING DOOR/FRAME/HW TO BE REMOVED



SAWCUT AND REMOVE PORTION OF (E) CONCRETE SLAB (INCLUDING CONCRETE CURBS FOR WALLS TO BE DEMOLISHED)



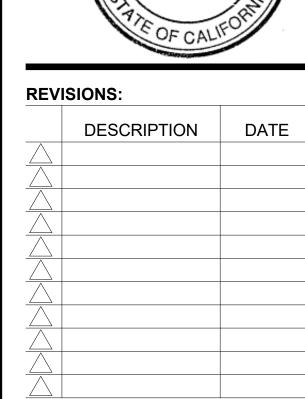
TO BE DEMOLISHED

EXISTING ITEM & EQUIPMENT

AREA NOT IN SCOPE OF WORK

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> **DEMO FLOOR PLAN**



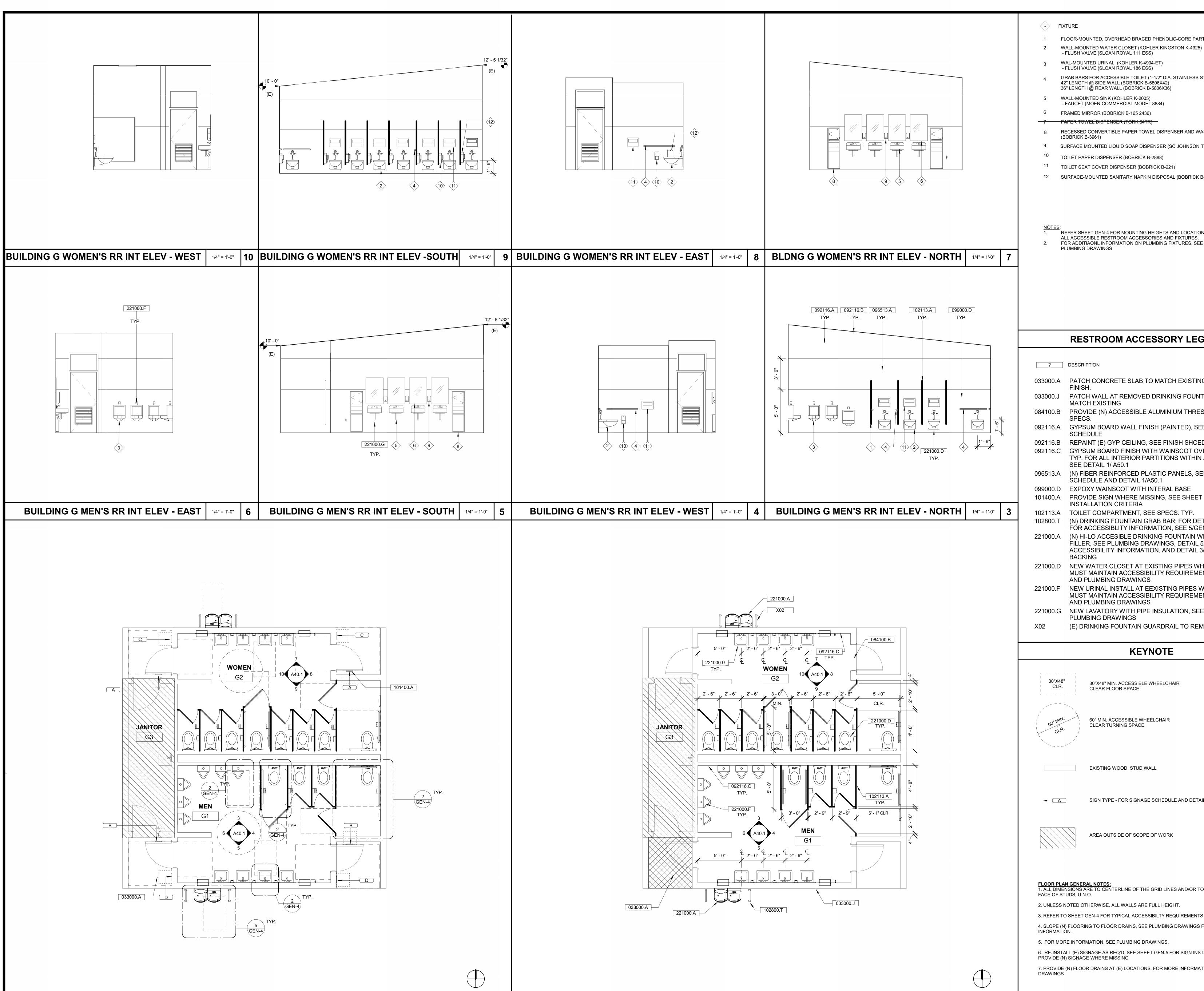
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BUILDING J - DEMO FLOOR PLAN **DEMO PLAN LEGEND** 1/4" = 1'-0"



BUILDING G - IMPROVEMENT FLOOR PLAN | 1/4" = 1'-0" | 2

FLOOR-MOUNTED, OVERHEAD BRACED PHENOLIC-CORE PARTITIONS-SEE SPECS

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A40.1

BUILDING G-

ELEVATIONS

ENLARGED

PLANS &

INTERIOR

- WALL-MOUNTED WATER CLOSET (KOHLER KINGSTON K-4325) FLUSH VALVE (SLOAN ROYAL 111 ESS)
- WAL-MOUNTED URINAL (KOHLER K-4904-ET) FLUSH VALVE (SLOAN ROYAL 186 ESS)
- GRAB BARS FOR ACCESSIBLE TOILET (1-1/2" DIA. STAINLESS STEEL):
- 42" LENGTH @ SIDE WALL (BOBRICK B-5806X42) 36" LENGTH @ REAR WALL (BOBRICK B-5806X36)
- FAUCET (MOEN COMMERCIAL MODEL 8884)
- FRAMED MIRROR (BOBRICK B-165 2436)
- RECESSED CONVERTIBLE PAPER TOWEL DISPENSER AND WASTE RECEPTACLE
- SURFACE MOUNTED LIQUID SOAP DISPENSER (SC JOHNSON TPB1LDS)
- TOILET SEAT COVER DISPENSER (BOBRICK B-221)
- SURFACE-MOUNTED SANITARY NAPKIN DISPOSAL (BOBRICK B-270)
- REFER SHEET GEN-4 FOR MOUNTING HEIGHTS AND LOCATIONS FOR ALL ACCESSIBLE RESTROOM ACCESSORIES AND FIXTURES.

RESTROOM ACCESSORY LEGEND

033000.A PATCH CONCRETE SLAB TO MATCH EXISTING. PROVIDE LEVEL

033000.J PATCH WALL AT REMOVED DRINKING FOUNTAIN. FINISH TO MATCH EXISTING

084100.B PROVIDE (N) ACCESSIBLE ALUMINIUM THRESHOLD, SEE

092116.A GYPSUM BOARD WALL FINISH (PAINTED), SEE FINISH

092116.B REPAINT (E) GYP CEILING, SEE FINISH SHCEDULE GYPSUM BOARD FINISH WITH WAINSCOT OVER (E) FRAMING, TYP. FOR ALL INTERIOR PARTITIONS WITHIN AREA OF WORK,

SEE DETAIL 1/ A50.1 096513.A (N) FIBER REINFORCED PLASTIC PANELS, SEE FINISH

SCHEDULE AND DETAIL 1/A50.1

099000.D EXPOXY WAINSCOT WITH INTERAL BASE PROVIDE SIGN WHERE MISSING, SEE SHEET GEN-5 FOR

INSTALLATION CRITERIA 102113.A TOILET COMPARTMENT, SEE SPECS. TYP.

(N) DRINKING FOUNTAIN GRAB BAR; FOR DETAIL, SEE 3/GEN-4; FOR ACCESSIBLITY INFORMATION, SEE 5/GEN-4 221000.A (N) HI-LO ACCESIBLE DRINKING FOUNTAIN WITH BOTTLE

FILLER, SEE PLUMBING DRAWINGS, DETAIL 5/GEN-4 FOR ACCESSIBILITY INFORMATION, AND DETAIL 3/A50.1 FOR

221000.D NEW WATER CLOSET AT EXISTING PIPES WHERE POSSIBLE

MUST MAINTAIN ACCESSIBILITY REQUIREMENTS, SEE 2/ GEN-4 AND PLUMBING DRAWINGS 221000.F NEW URINAL INSTALL AT EEXISTING PIPES WHERE POSSIBLE,

MUST MAINTAIN ACCESSIBILITY REQUIREMENTS, SEE 2/ GEN-4 AND PLUMBING DRAWINGS 221000.G NEW LAVATORY WITH PIPE INSULATION, SEE 2/ GEN-4 AND

PLUMBING DRAWINGS

(E) DRINKING FOUNTAIN GUARDRAIL TO REMAIN

KEYNOTE

30"X48" MIN. ACCESSIBLE WHEELCHAIR

60" MIN. ACCESSIBLE WHEELCHAIR CLEAR TURNING SPACE

EXISTING WOOD STUD WALL

SIGN TYPE - FOR SIGNAGE SCHEDULE AND DETAILS, SEE SHEET GEN-5

AREA OUTSIDE OF SCOPE OF WORK

FLOOR PLAN GENERAL NOTES:

1. ALL DIMENSIONS ARE TO CENTERLINE OF THE GRID LINES AND/OR TO THE

- 2. UNLESS NOTED OTHERWISE, ALL WALLS ARE FULL HEIGHT.
- 3. REFER TO SHEET GEN-4 FOR TYPICAL ACCESSIBILTY REQUIREMENTS AND DIMENSIONS.
- 4. SLOPE (N) FLOORING TO FLOOR DRAINS, SEE PLUMBING DRAWINGS FOR MORE

5. FOR MORE INFORMATION, SEE PLUMBING DRAWINGS.

BUILDING G - IMPROVEMENT FLOOR PLAN

6. RE-INSTALL (E) SIGNAGE AS REQ'D, SEE SHEET GEN-5 FOR SIGN INSTALLATION CRITERIA, PROVIDE (N) SIGNAGE WHERE MISSING

7. PROVIDE (N) FLOOR DRAINS AT (E) LOCATIONS. FOR MORE INFORMATION, SEE PLUMBING

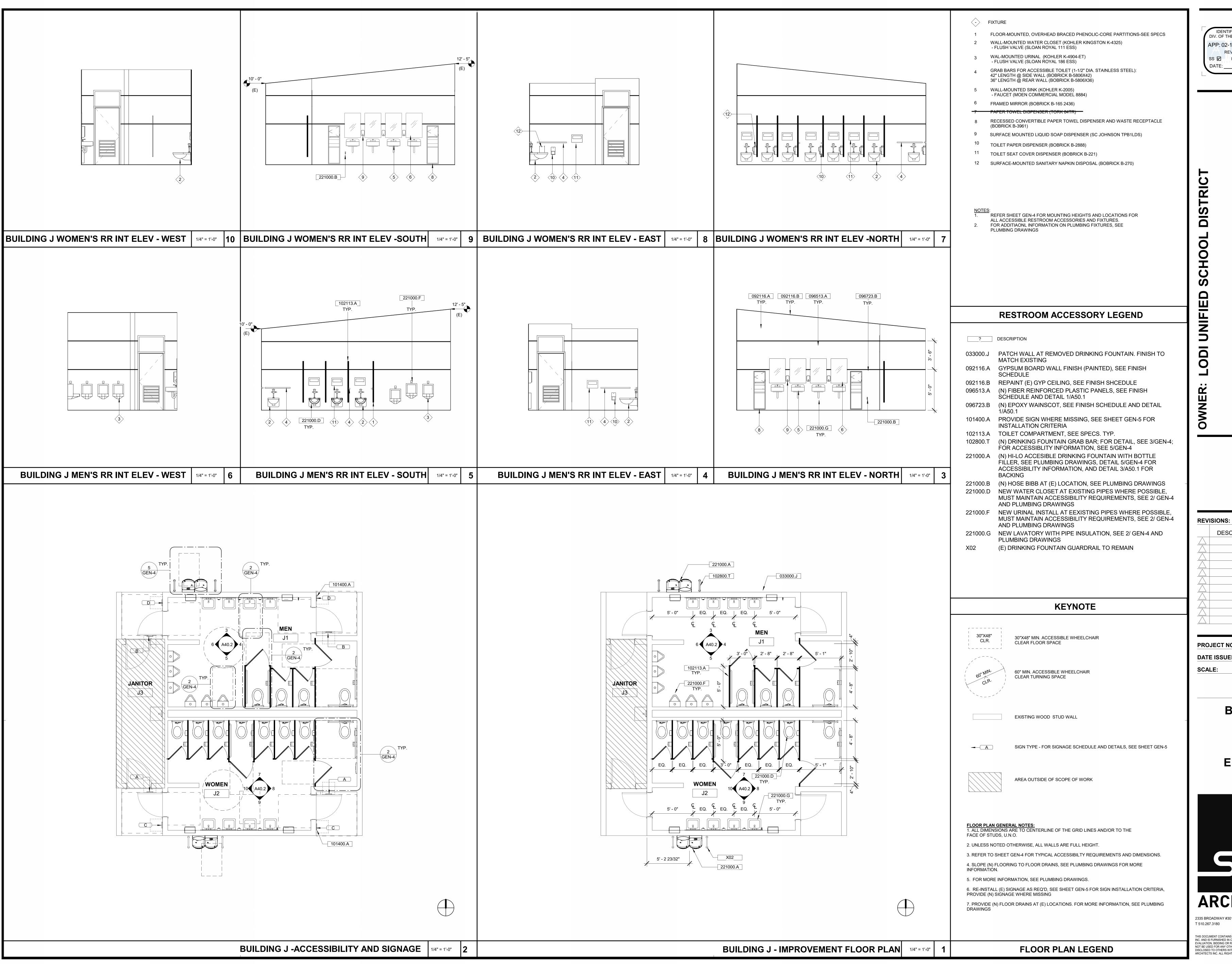
FLOOR PLAN LEGEND

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BUILDING J -ENLARGED PLANS & **INTERIOR ELEVATIONS**



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?____ DESCRIPTION

033000.A PATCH CONCRETE SLAB TO MATCH EXISTING. PROVIDE LEVEL

087113.A PROVIDE (N) FULL-LENGTH DOOR ACTUATOR PUSH PLATE, SEE

DOOR SCHEDULE 092116.C GYPSUM BOARD FINISH WITH WAINSCOT OVER (E) FRAMING,

TYP. FOR ALL INTERIOR PARTITIONS WITHIN AREA OF WORK, SEE DETAIL 1/ A50.1

102113.A TOILET COMPARTMENT, SEE SPECS. TYP.

221000.D NEW WATER CLOSET AT EXISTING PIPES WHERE POSSIBLE. MUST MAINTAIN ACCESSIBILITY REQUIREMENTS, SEE 2/ GEN-4 AND PLUMBING DRAWINGS

221000.F NEW URINAL INSTALL AT EEXISTING PIPES WHERE POSSIBLE, MUST MAINTAIN ACCESSIBILITY REQUIREMENTS, SEE 2/ GEN-4 AND PLUMBING DRAWINGS

221000.G NEW LAVATORY WITH PIPE INSULATION, SEE 2/ GEN-4 AND PLUMBING DRAWINGS

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REVISIONS: DESCRIPTION

SCALE:

CLEAR TURNING SPACE

SIGN TYPE - FOR SIGNAGE SCHEDULE AND DETAILS, SEE SHEET GEN-5

30"X48" MIN. ACCESSIBLE WHEELCHAIR

60" MIN. ACCESSIBLE WHEELCHAIR

CLEAR FLOOR SPACE

KEYNOTE

EXISTING WOOD STUD WALL

30"X48" CLR.

AREA OUTSIDE OF SCOPE OF WORK

FLOOR PLAN GENERAL NOTES:

1. ALL DIMENSIONS ARE TO CENTERLINE OF THE GRID LINES AND/OR TO THE FACE OF STUDS, U.N.O.

2. UNLESS NOTED OTHERWISE, ALL WALLS ARE FULL HEIGHT. 3. REFER TO SHEET GEN-4 FOR TYPICAL ACCESSIBILTY REQUIREMENTS AND DIMENSIONS.

4. SLOPE (N) FLOORING TO FLOOR DRAINS, SEE PLUMBING DRAWINGS FOR MORE INFORMATIÓN.

5. FOR MORE INFORMATION, SEE PLUMBING DRAWINGS.

 $6.\,$ RE-INSTALL (E) SIGNAGE AS REQ'D, SEE SHEET GEN-5 FOR SIGN INSTALLATION CRITERIA, PROVIDE (N) SIGNAGE WHERE MISSING

7. PROVIDE (N) FLOOR DRAINS AT (E) LOCATIONS. FOR MORE INFORMATION, SEE PLUMBING

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BUILDING Q -ENLARGED PLANS



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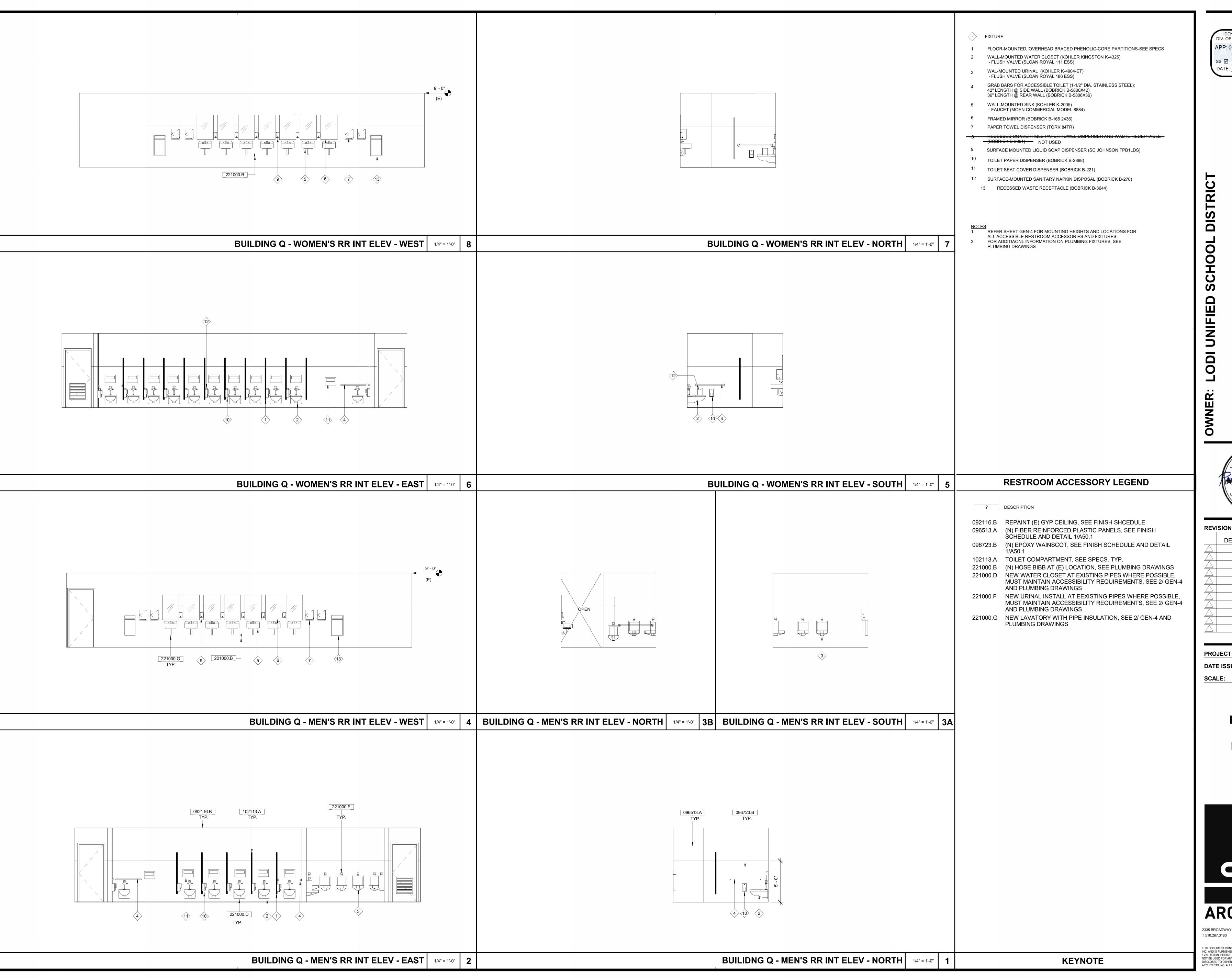
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BUILDING Q - ACCESSIBILITY AND SIGNAGE 1/4" = 1'-0" 2

BUILDING Q - IMPROVEMENT FLOOR PLAN | 1/4" = 1'-0" | 1

FLOOR PLAN LEGEND



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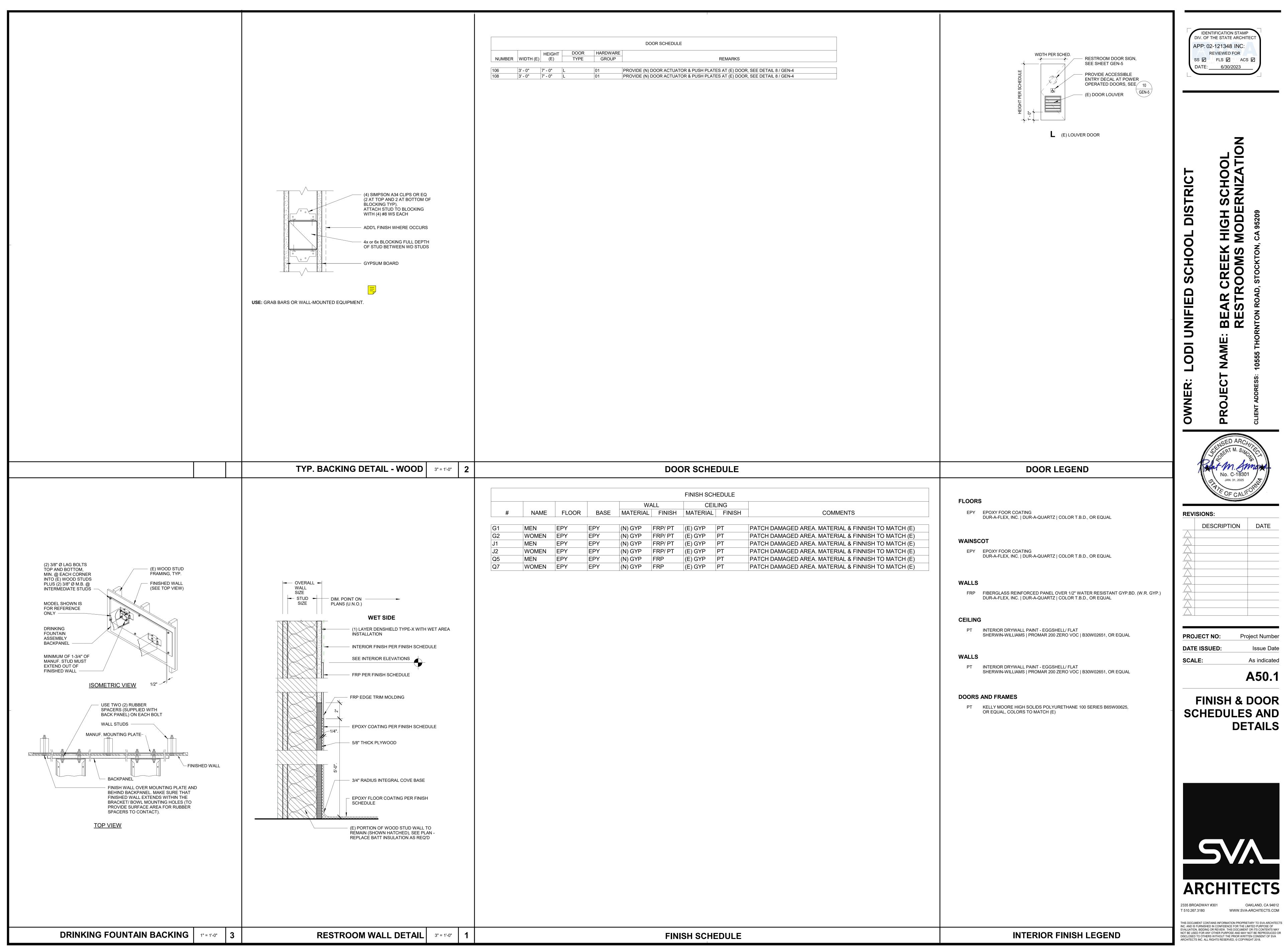
BUILDING Q -INTERIOR ELEVATIONS



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FINISH & DOOR **SCHEDULES AND DETAILS**

A50.1



PIPE MATERIAL SANITARY SEWER , VENT AND STORM DRAIN SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO THE REQUIREMENTS CISPI STANDARD 301, ASTM A 888 OR ASTM A74 PIPING BELOW GROUND: WITH TYPE 304 STAINLESS STEEL HEAVY DUTY NO-HUB COUPLINGS. PROVIDE PIPE WRAP ON ALL UNDERGROUND PIPING IN ACCORDANCE WITH ANSI/AWWA STANDARDS C105 /A21.5-93. BED AND BACKFILL WITH CLEAN SAND, 6" THICK ALL AROUND PIPE. 2. SOIL, WASTE VENT, STORM DRAIN PIPING SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO ABOVE GROUND: THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A888 OR ASTM A74 WITH TYPE 304 STAINLESS STEEL STANDARD DUTY NO-HUB COUPLINGS. WATER PIPING BELOW GROUND : TYPE 'K' COPPER WITH BRAZED JOINTS. WATER PIPING ABOVE GROUND : TYPE 'L' COPPER WITH LEAD-FREE SOLDERED JOINTS. GAS PIPING : SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON SCREWED OR WELDED JOINTS.

INSULATION OF DOMESTIC HOT WATER GLASS FIBER PIPE INSULATION WITH FACTORY APPLIED WHITE JACKET, SUPPLY AND HOT WATER RETURN J-M MICRO-LOK 650AP, 1" THICK FOR PIPE SIZES OF 1/2" TO 1"., AND 1 1/2" THICK FOR PIPE SIZES TO 1 1/4" AND LARGER. INSULATE FITT- INGS AND VALVES W/ PREFORMED INSULATION WITH PVC PREMOLDED ONE PIECE FITTING COVER BY J.M. ZESTON. ADHERE LONGITUDINAL LAPS AND BUTTS OF STRIPS OF JACKET W/ FACTORY APPLIED PRESSURE

6. PIPING BEGAS LOW GROUND:

7. CONDENSATE DRAIN PIPING:

INSULATION OF INTERIOR CONDENSATE DRAIN AP ARMFLEX CLOSED-CELL ELASTOMERIC FOAM INSULATION. FLAME-SPREAD INDEX OF 25 OR LESS AND SMOKE-DEVELOPED INDEX OF 50 OR LESS. 1/2 INCH THICK FOR 4 INCH DIAMETER PIPE AND LESS.

DRISCOPLEX PE2406 POLYETHYLENE PIPING SYSTEMS WITH ELECTRIC

SPIRAL WRAPPED AROUND PIPE. UNDERGROUND STEEL PIPING AND FITTINGS SHALL BE AS FOR ABOVE GROUND. PIPING SHALL BE WRAPPED

FUSION SOCKET JOINTS. PROVIDE #12 ELECTRIC TRACER COPPER WIRE,

AND CATHODICALLY PROTECTED PER THE SOILS ENGINEER DIRECTION.

SENSITIVE TAPE SYSTEM, J-M AP-T. FLANGES AND UNIONS SHALL NOT

TYPE 'M' COPPER WITH SOLDERED JOINTS.

10. ALL OF THE ABOVE SHALL COMPLY WITH THE SPECIFICATIONS.

2022 CALIFORNIA GREEN BUILDING CODE.

NOTE:
ALL PIPE, FITTINGS, FIXTURES, ETC. THAT CONTACT POTABLE WATER FOR HUMAN CONSUMPTION SHALL SHOW APPROVAL TO NSF 61, ANNEX "G". EFFECTIVE JANUARY 1, 2010, THE LEAD CONTENT OF THE WETTED SURFACE AREA OF THE PIPES, FITTINGS AND FIXTURES CONVEYING POTABLE WATER FOR HUMAN CONSUMPTION, OF NOT MORE THAN 0.25%, SHALL BE DETERMINED PURSUANT TO A PRESCRIBED FORMULA AS DETERMINED BY THIRD PARTY CERTIFIERS TO NSF STANDARD 61, ANNEX "G". REFERENCE SECTION 604.10, CALIFORNIA PLUMBING CODE, 2022 EDITION, AND HEALTH & SAFETY CODE SECTION 116875.

APPLICABLE CODE

2022 CALIFORNIA BUILDING CODE (CBC: PART 2 , TITLE 24 , CCR) (BASED ON 2021 INTERNATIONAL BUILDING CODE) 2022 CALIFORNIA ELECTRICAL CODE (CEC: PART 3, TITLE 24, CCR) (BASED ON 2020 NATIONAL ELECTRICAL CODE) 2022 CALIFORNIA MECHANICAL CODE (CMC: PART 4, TITLE 24, CCR) (BASED ON 2021 UNIFORM MECHANICAL CODE) 2022 CALIFORNIA PLUMBING CODE (CPC: PART 5 , TITLE 24 , CCR) (BASED ON 2021 UNIFORM PLUMBING CODE) 2022 CALIFORNIA FIRE CODE (CFC: PART 9, TITLE 24, CCR.) (BASED ON 2021 INTERNATIONAL FIRE CODE) 2022 CALIFORNIA ENERGY CODE.

PLUMBING GENERAL NOTES

- 1. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, DRAINS AND EQUIPMENT.
- COORDINATE ALL LOCATIONS, SIZES AND ELEVATIONS OF ALL SLEEVES THROUGH BEAMS, SLABS AND FOOTINGS WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- 3. ALL HORIZONTAL WASTE LINES SHALL BE RUN AT A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS OTHERWISE NOTED ON PLAN.
- ALL HORIZONTAL STORM DRAINS AND OVERFLOW DRAIN LINES SHALL BE RUN AT A SLOPE OF 1/8" PER FOOT UNLESS OTHERWISE
- COORDINATE AND VERIFY EXACT LOCATION, SIZE, POINTS OF CONNECTION AND INVERT ELEVATIONS OF UTILITY SERVICE PIPING BEFORE TRENCHING OR INSTALLATION.
- COORDINATE WITH ARCHITECTURAL DRAWINGS FOR WALL AND PARTITION CONSTRUCTION AND THICKNESS WHERE PLUMBING
- PIPING OR EQUIPMENT IS INDICATED.
- 7. THE LOCATION AND ELEVATION OF ALL PLUMBING PIPING SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES, STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION PRIOR TO START OF INSTALLATION.
- 8. ALL VALVES AND COCKS SHALL BE LOCATED TO BE READILY ACCESSIBLE. WHERE VALVES ARE INSTALLED WITHIN OR BEHIND WALLS, PARTITIONS OR CEILINGS, AN ACCESS PANEL SHALL BE INSTALLED.
- 9. ALL OUTLETS FOR FUTURE CONNECTIONS SHALL BE INSTALLED SO AS TO PERMIT EASY CONNECTION COORDINATE WITH DUCT WORK, STRUCTURAL CONDITIONS AND ARCHITECTURAL LAYOUT.
- 10. ALL PLUGGED OR CAPPED WASTE OUTLETS FOR FUTURE CONNECTIONS SHALL BE INSTALLED ABOVE CEILING WITH PIPE INVERT +
- 11. ALL PLUGGED OR CAPPED VENT OUTLETS FOR FUTURE CONNECTIONS SHALL BE INSTALLED ABOVE CEILING WITH PIPE INVERT 12" FROM BOTTOM OF SLAB.
- 12. THESE DRAWINGS ARE DIAGRAMMATIC. THE LOCATION & ELEVATION OF ALL PLUMBING PIPING IS APPROXIMATE AND SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES, STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION PRIOR TO
- 13. ALL HOT AND COLD WATER PIPE SHALL BE INSULATED INCLUDING PIPING IN THE WALLS.

START OF INSTALLATION.

14. DIELECTRIC UNIONS SHALL BE USED AT ALL POINTS OF CONNECTION WHERE THERE IS A DISSIMILARITY OF METALS.

TITLE 24 MANDATORY MEASURES APPLICABLE EQUIPMENT AND SYSTEMS EFFICIENCY

ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE. PIPING SYSTEMS SHALL BE INSULATED IN ACCORDANCE WITH REQUIREMENTS OF THE TITLE 24 STANDARDS AND ALL CODES HAVING THE SERVICE WATER HEATING SYSTEMS THE FOLLOWING SERVICE WATER HEATING SYSTEMS AND EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFED

THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN 113 OF THE ENERGY EFFICIENCY STANDARDS: GAS-FIRED NON-STORAGE TYPES >200,000 BTU/HR. UNFIRED SERVICE WATER HEATER STORAGE TANKS AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEMS SHALL HAVE EITHER: EXTERNAL INSULATION WITH AN INSTALLED R-VALUE OF AT LEAST R-12, INTERNAL AND EXTERNAL INSULATION WITH A COMBINED R-VALUE OF AT LEAST R-15, OR SUFFICIENT INSULATION SO THAT THE HEAT LOSSO FHTE TANK SURFACE BASED ON AN 80^F WATER-AIR

TEMPERATURE DIFFERENCE SHALL BE LESS THAN 6.5 BTU/HR/SF. IF A CIRCULATING HOT WATER SYSTEM IS INSTALLED, IT SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMP (S) WHEN HOT WATER IS NOT REQUIRED.

LAVATORIES IN RESTROOMS OF PUBLIC FACILITIES SHALL BE EQUIPED WITH: OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO MAXIMUM OF 0.5 GALLONS PER MINUTE.

FOOT ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER PROXIMITY SENSOR ACTUATED CONTROLS VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER RMINUTE, AND

0.25 GALLONS/CYCLE (CIRCULATING SYSTEM). SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER RMINUTE, AND 0.50 GALLONS/CYCLE (NON-CIRCULATING SYSTEM) SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER RMINUTE, AND 0.75 GALLONS/CYCLE (FOOT SWITCHES AND PROXIMITY SENSOR CONTROLS).

LAVATORIES IN RESTROOM OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH CONTROLS TO LIMIT THE OUTLET TEMPERATRURE TO 110° F.

PLUMBING FIXTURE SCHEDULE

DESCRIPTION TRAP W V CW HW FLOW RATE REMARKS	REMARKS	
WC-1		
WC-2 WATER CLOSET (ACCESSIBLE) INT. 4" 2" 1-1/4" - 1.28 GPF ACCESSIBLE HEIGHT (CBC/ADA); REFER TO ARCHITECTURAL DRAWINGS. L-1 LAVATORY (STUDENT) (ACCESSIBLE) 1-1/2" 2" 1-1/2" 1/2" - 0.35 GPM AMERICAN STANDARD MODEL 0356.041 LUCERNE, WALL MOEN 884 SINGLE-HANDLE METERING FAUGET 0.5 GPM GPC @ 30 SECONDS, COMPLETE WITH CHICAGO STOP # GPC @ 30 SECONDS, COMPLETE WITH CHICAGO STOP # GPC @ 30 SECONDS, COMPLETE WITH CHICAGO STOP # 186-0.125 DBP 0.125		
L-1 LAVATORY (STUDENT) (ACCESSIBLE) 1-1/2" 2" 1-1/2" 1/2"		
U-1 URINAL 2" 2" 1-1/2" 1" - 186-0.125 DBP 0.125 GPF MANUAL OPERATED FLUSH VALVE, W/ U-2 URINAL (ACCESSIBLE) 2" 2" 1-1/2" 1" - SAME AS U-1 EXCEPT MOUNTED AT ACCESSIBLE HEIGHT (CBC/ADA); REFER TO ARCHITECTURAL DRAWINGS. DF-1 DRINKING FOUNTAIN (ADA) 1-1/2" 2" 1-1/2" 1/2" - DRINKING FOUNTAIN; WALL MOUNTED; PROVIDE WITH QU TP-1 TRAP PRIMER 1/2" - SIOUX CHIEF MODEL 695-01 AUTOMATIC TRAP PRIMER VINSTALL BEHIND ACCESS PANEL FD-1 FLOOR DRAIN 1-1/2" 2" 1-1/2" 1/2" TP SIOUX CHIEF MODEL 695-BS 1"	LAMINAR FLOW SET TO 0.25	
U-2 URINAL (ACCESSIBLE) 2" 2" 1-1/2" 1" - ACCESSIBLE HEIGHT (CBC/ADA); REFER TO ARCHITECTURAL DRAWINGS. DF-1 DRINKING FOUNTAIN (ADA) 1-1/2" 2" 1-1/2" - - HAWS MODEL 1117L WITH 1920 BOTTLE FILLER HI/LOW TV DRINKING FOUNTAIN; WALL MOUNTED; PROVIDE WITH QUENTIFICATION OF THE PROVID		
DF-1 DRINKING FOUNTAIN (ADA) 1-1/2" 2" 1-1/2" 1/2" - DRINKING FOUNTAIN; WALL MOUNTED; PROVIDE WITH QUENTIFY AND ADDRESS PROVIDE WITH QUENTIFY ADDRESS PROVIDE WITH QUENTIFY AND ADDRESS PROVIDE WITH QUENTIFY ADDRESS PROV		
TP-1 TRAP PRIMER - - - 1/2" - - INSTALL BEHIND ACCESS PANEL FD-1 FLOOR DRAIN 1-1/2" 2" 1-1/2" 1/2" TP - - JR SMITH 2005-B W/ TRAP PRIMER SIQUX CHIEF MODEL 653-BS 1" SIQUX CHIEF MODEL 653-BS 1" -		
FD-1 FLOOR DRAIN 1-1/2" 2" 1-1/2" 1/2" TP SIOUX CHIFF MODEL 653-BS 1"	ALVE	
WHA WATER HAMMER ARRESTER 1" - SIOUX CHIEF MODEL 653-BS 1"		
HB-1 HOSE BIBB 1/2" ACORN 8121-LF WITH KEY TEE. PROVIDE WITH VACUUM USE 8126-LF FOR ROOF INSTALLATION.	BREAKER.	
FS-1 FLOOR SINK SEE SEE PLAN JR SMITH 3140-Y W/ TRAP PRIMER CONNECTION. PROVIDE WITH IN ALL DIRECTIONS. SEE PLAN FOR SIZE	I 1/2" MAX. GRATE OPENING	
WCO WALL CLEAN OUT: "ZURN" MODEL: Z1447 SQUARE, Z1446	ROUND.	
FCO CLEAN-OUTS CLEAN OUT TO GRADE: "ZURN" MODEL: Z1400-BZ MUST BE F		

T CLEAN OUT: "ZURN" MODEL: Z1445.

LEGEND

LEGEND	ABBR.	DESCRIPTION
	S OR W	SOIL OR WASTE ABOVE FLOOR OR GRADE
	S OR W	SOIL OR WASTE BELOW FLOOR OR GRADE
sp	SD	STORM DRAIN ABOVE FLOOR OR GRADE
SD	SD	STORM DRAIN BELOW FLOOR OR GRADE
OD	OD	OVERFLOW DRAIN ABOVE FLOOR OR GRADE
OD	OD	OVERFLOW DRAIN BELOW FLOOR OR GRADE
	V	SANITARY VENT
	CW	DOMESTIC COLD WATER
ICW	ICW	INDUSTRIAL COLD WATER
	HW	DOMESTIC HOT WATER
IHW	IHW	INDUSTRIAL HOT WATER
	HWR	DOMESTIC HOT WATER RETURN
F	F	FIRE MAIN
D	D	INDIRECT DRAIN
CD	CD	CONDENSATE DRAIN
PCD	PCD	PUMPED CONDENSATE DRAIN
SCD	SCD	SECONDARY CONDENSATE DRAIN
MG	MG	MEDIUM PRESSURE FUEL GAS
G	G	FUEL GAS
——ТР——	TP	TRAP PRIMER
——		DIRECTION OF FLOW
Ø	P.G.	PRESSURE GAUGE W/PETE COCK
<u> </u>	G.C.	GAS COCK
	P.R.V.	PRESSURE REDUCING VALVE
N	C.V.	CHECK VALVE
\ ്	L.B.V.	LOCKING BALL VALVE
<u>—</u> Б—	B.V.	BALL VALVE
─── ₩──	G.V.	GATE VALVE
ф	FCO	FLOOR CLEANOUT
l	WCO	WALL CLEANOUT
		DOWN
		RISE
		UNION
· · · · · · · · · · · · · · · · · · ·		SLOPE IN DIRECTION OF FLOW
_₽ —	WHA	WATER HAMMER ARRESTOR
•	P.O.C.	POINT OF CONNECTION
	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
	ABV	ABOVE
	AFF	ABOVE FINISHED FLOOR
	AP	ACESS PANEL
	BEH	BEHIND
	BEL	BELOW
	CLG	CEILING
	CONT.	CONTINUATION
	CO.	CLEAN OUT
——(E)——	EXIST. (E)	EXISTING
(-/	FDC	FIRE DEPT. CONNECTION
	FIN.	FINISHED
	F.F.E.	FINISHED FLOOR ELEVATION
	1 .l ⁻ .E.	I HOUSE I LOOK LEEVATION

SHEET INDEX	
, LEGENDS AND SCHEDULE	
ING DEMO FLOOR PLAN	

GALLONS PER FLUSH

INVERT ELEVATION

OUTSIDE SCREW & YOKE

POST INDICATOR VALVE

VENT THROUGH ROOF

FLR.

HDR

P11.2 PLUMBING FLOOR PLAN

APP: 02-121348 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT

DISTRICT

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REVISIONS: DESCRIPTION

PROJECT NO: XXXX-XXXX **DATE ISSUED:** XX-XX-XXXX 12" = 1'-0"

SCALE:

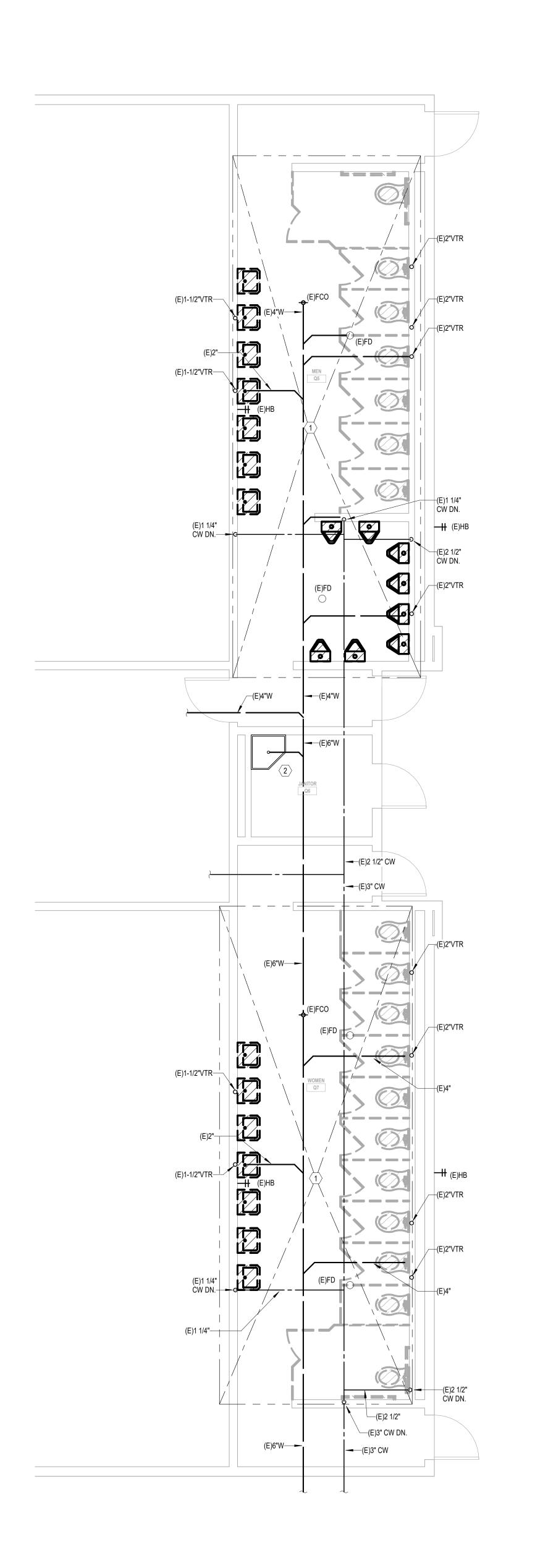
P001 NOTES, **LEGENDS AND**

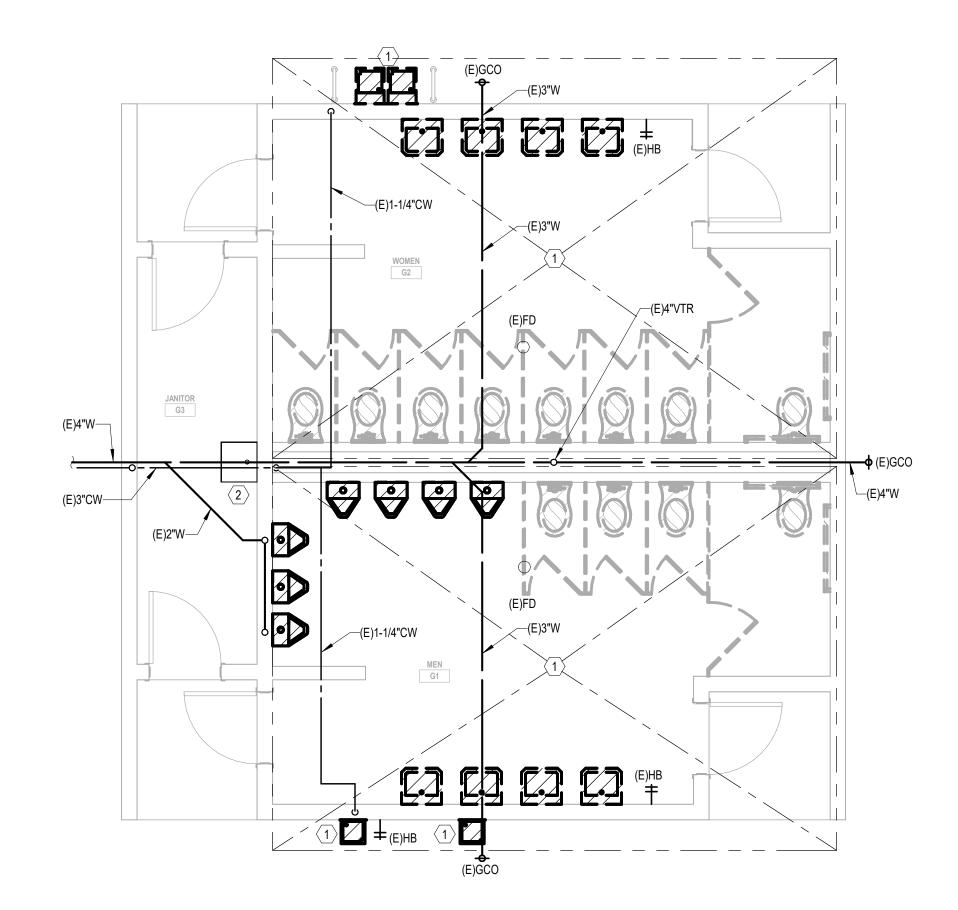
SCHEDULE

11870 Pierce Street, Suite 160 Riverside, California 92505 951.299.4160 www.tk1sc.com

tk1sc Job #: B2304076.000

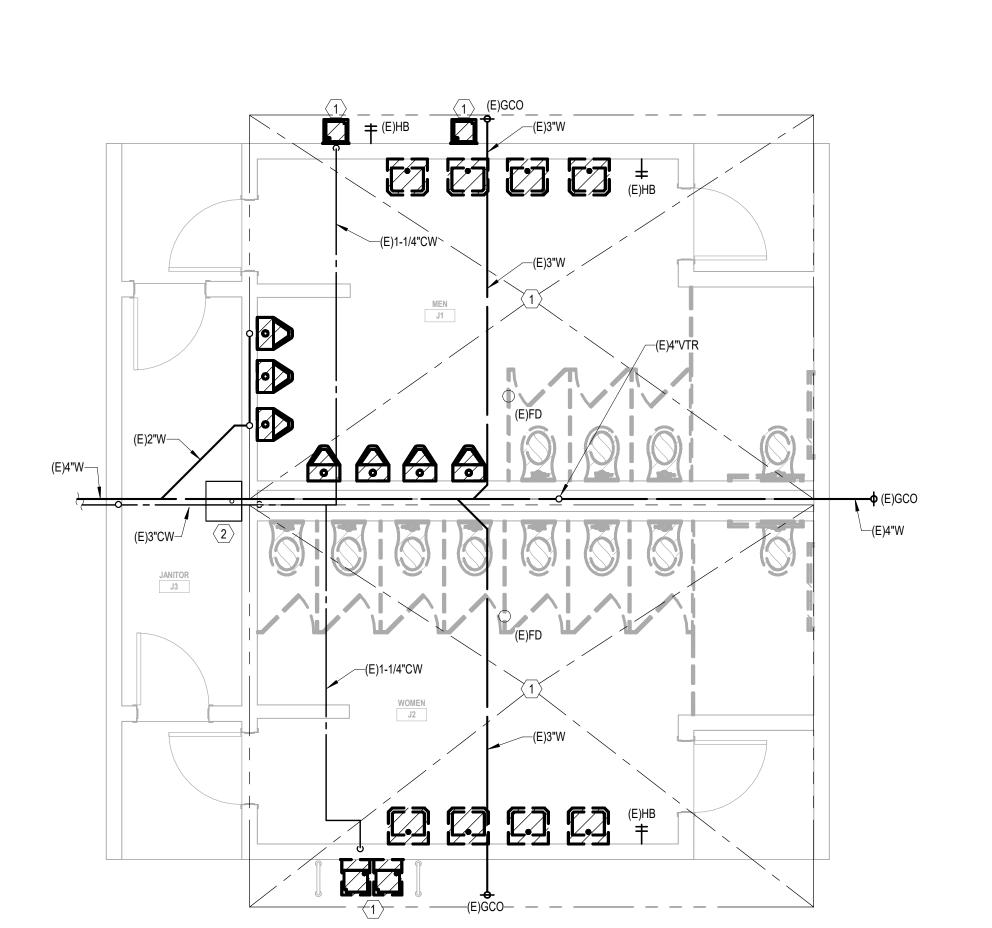
Project Leader - Bill Voller





BUILDING G - PLUMBING DEMO FLOOR PLAN

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



BUILDING J - PLUMBING DEMO FLOOR PLAN

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

GENERAL NOTES:

2. ALL VTR'S ARE EXISTING TO REMAIN.

DEMOLITION NOTES:

1 REMOVE EXISTING PLUMBING FIXTURE: CAP PIPING IN WALL, BELOW FLOOR, AND/OR ABOVE CEILING. PREPARE FOR RECONNECTION OF REPLACEMENT UNIT UNDER RENOVATION PHASE.

igg(2igg) EXISTING FIXTURE TO REMAIN.

1. EXACT CONDITIONS AND LOCATIONS OF ALL PLUMBING PIPING NOT KNOWN, CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF PIPING BEFORE BEGINNING OF WORK. NOTIFY ARCHITECT OF ANY MAJOR DISCREPANCIES IN PLANS BEFORE STARTING OF WORK.

DISTRICT ER:

APP: 02-121348 INC:

REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹

REVISIONS: DESCRIPTION

PROJECT NO: DATE ISSUED:

SCALE:

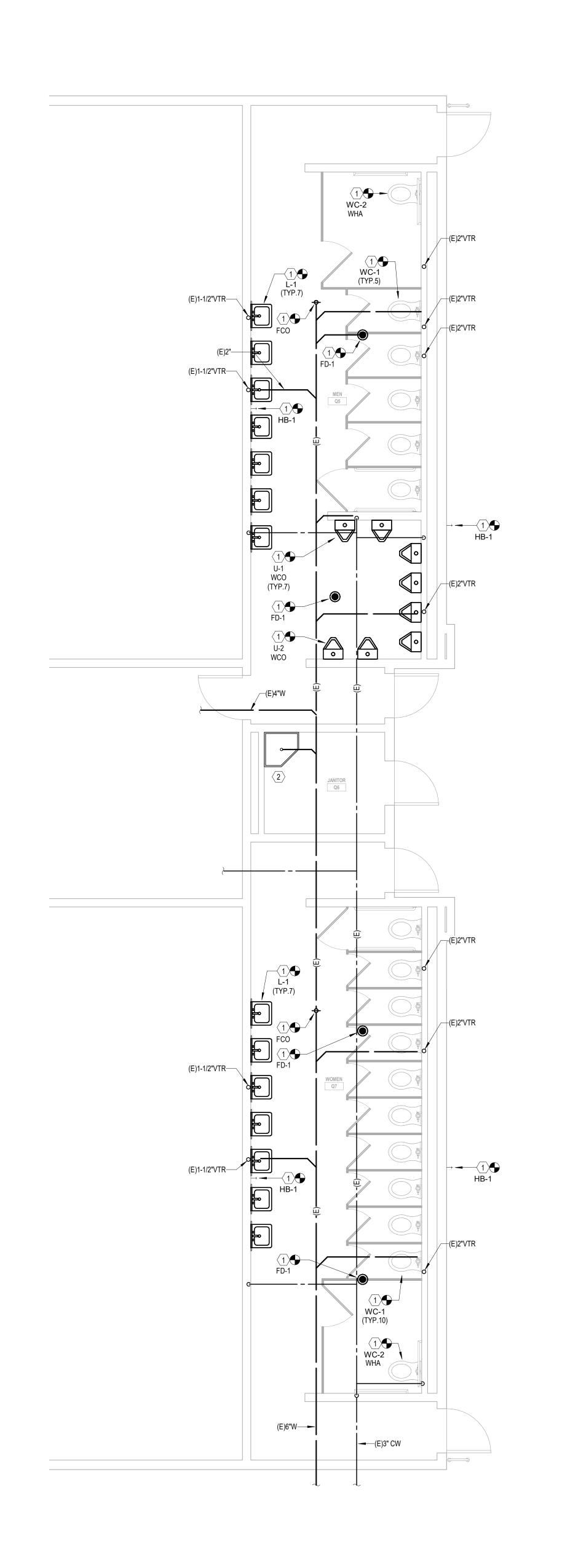
P11.1

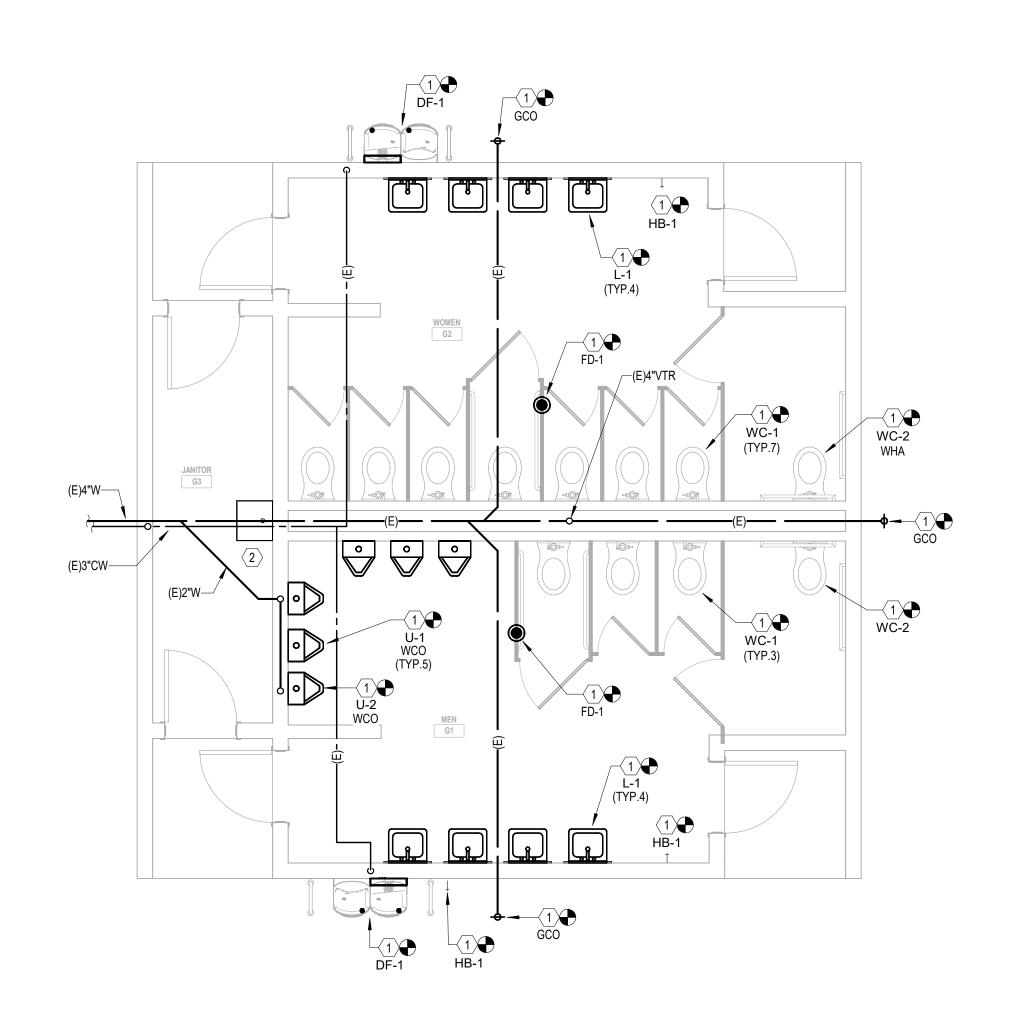
PLUMBING DEMO **FLOOR PLAN**



tk1sc Job #: B2304076.000

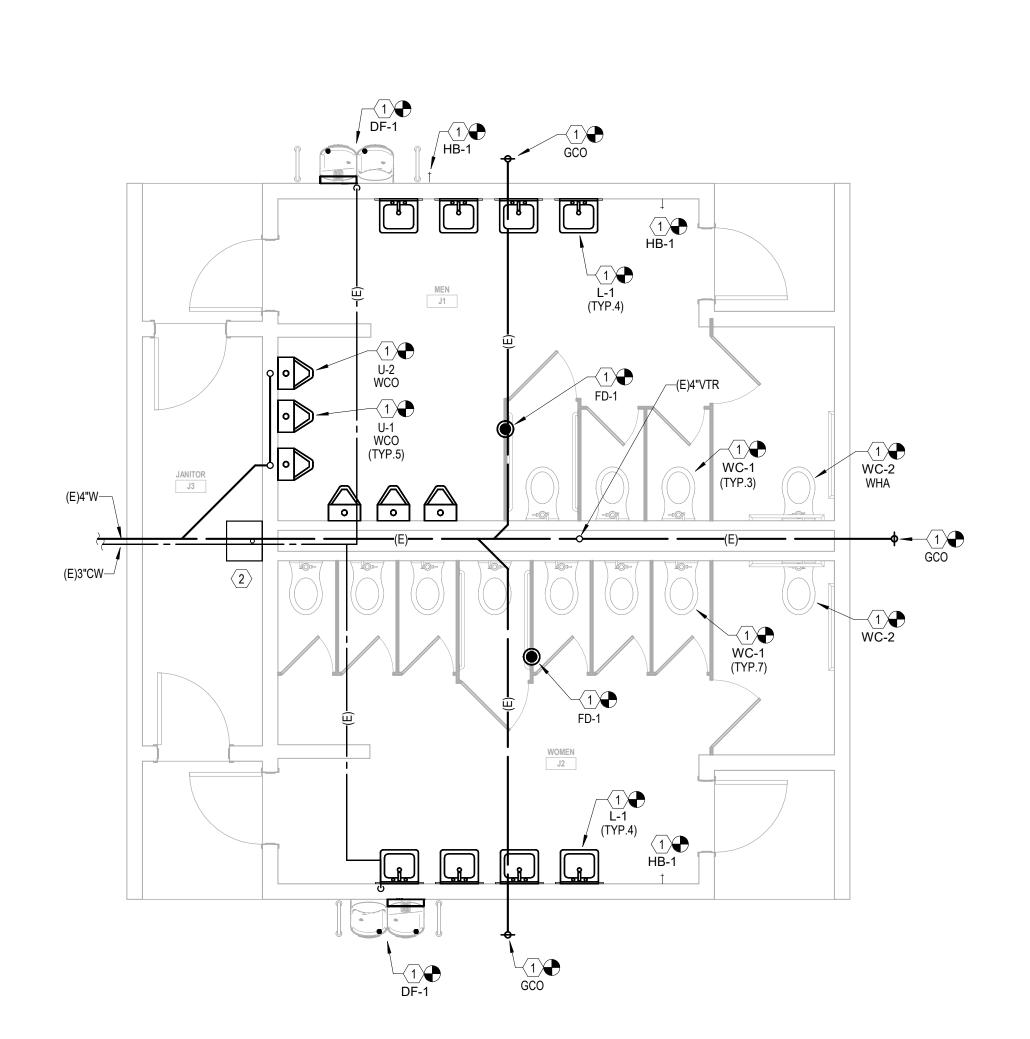
BUILDING Q - PLUMBING DEMO FLOOR PLAN
SCALE: 1/4" = 1'-0"





BUILDING G - PLUMBING FLOOR PLAN

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



BUILDING J - PLUMBING FLOOR PLAN

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

1. ALL WASTE SHALL SLOPE 2% UNLESS OTHERWISE NOTED

ALL WASTE SHALL SLOPE 2% UNLESS OTHERWISE NOTED ON PLANS.
 CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPING PRIOR TO BEGINNING WORK.
 REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES.
 ALL VTR'S ARE EXISTING TO REMAIN.

CONSTRUCTION NOTES:

1 REWORK CAPPED PIPING IN WALL; EXTEND, ROUGH-IN AND CONNECT TO REPLACEMENT PLUMBING FIXTURE UNIT.

2 EXISTING FIXTURE TO REMAIN.

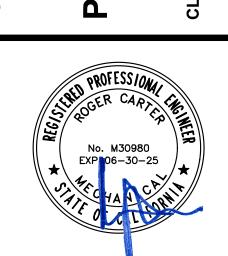
GENERAL NOTES:

ER:

DISTRICT

APP: 02-121348 INC:

REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹



REVISIONS: DESCRIPTION DATE

PROJECT NO: XXXX-XXXX DATE ISSUED: XX-XX-XXXX

SCALE: As indicated P11.2

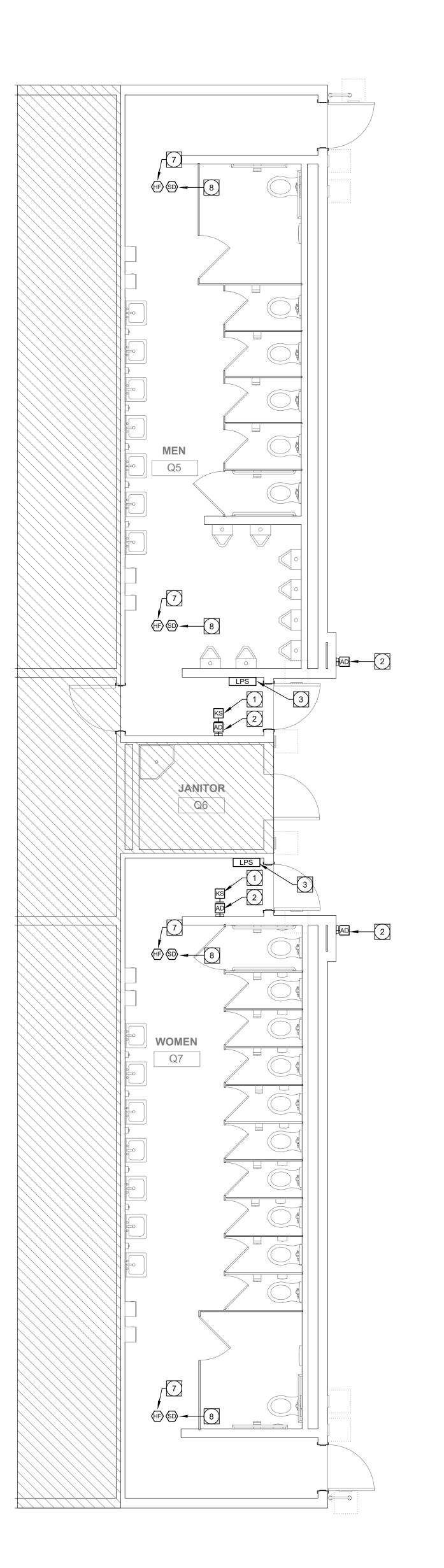
> **PLUMBING FLOOR PLAN**



tk1sc Job #: B2304076.000

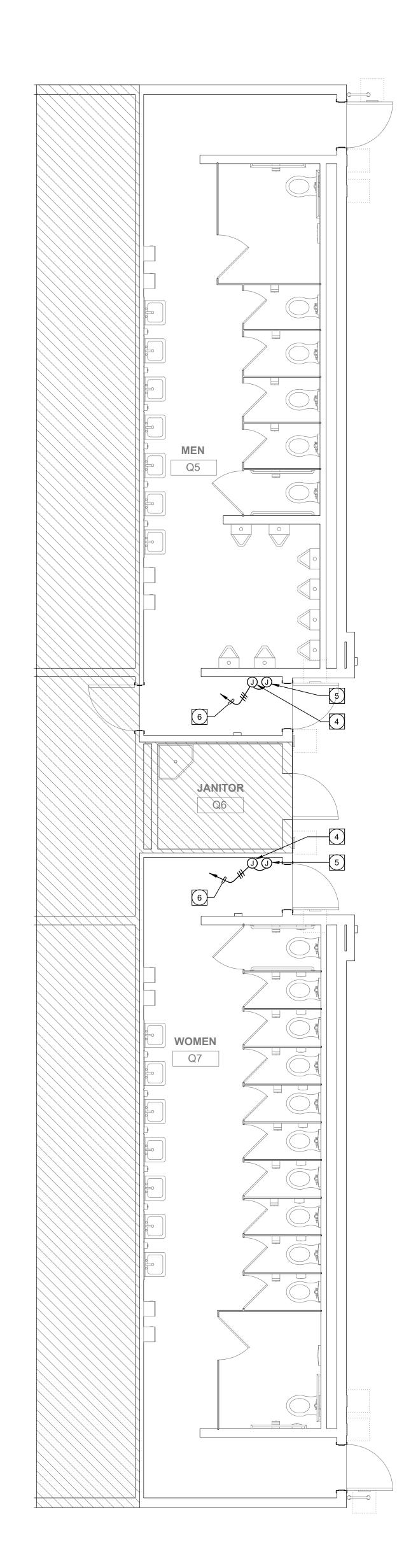
BUILDING Q - PLUMBING FLOOR PLAN

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



BLDG Q - TECHNOLOGY PLAN

SCALE: 1/4" - 1'-0"



(2)

POWER PLAN GENERAL NOTES:

- 1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24-INCHES MINIMUM.
- 2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
- B. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT
- PRIOR TO ROUGH-IN. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
- WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR. THE
- CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS: a. ALL BRANCH CIRCUITS SHALL BE EMT. b. ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEATLY TRAINED, IN PARALLEL TO STRUCTURES OR DUCTWORK. THE TERM
- "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.
- c. VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
- EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
- PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN RECEPTACLES ARE 50A OR LESS, 150V TO GROUND OR LESS AND ARE LOCATED WITHIN 6-FEET OF ANY SINK OR THERAPEUTIC TUB, LAUNDRY AREA, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE, LOCKER ROOM AREA, GARAGE AND BATHROOM SPACE AND/OR LOCATED OUTDOORS. WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE. PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
- 8. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
- UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

COMMUNICATIONS PATHWAYS GENERAL NOTES:

- 1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
- 2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
- 3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
- 4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHEST TO 3-INCHES ABOVE THE FLOOR SURFACE.
- 5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
- 6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
- 7. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1" 2" 3" 4"	4" 8" 12" 15"	16" 36" 48" 60"	3" 4" 5" 8"	2" 5" 6" 8"

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-569-C TABLE 12. - LATEST

- 8. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL
- 9. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.

SCALE: N.T.S.

PLAN NOTES

- KEY SWITCH (BY DIVISION 8 CONTRACTOR) AND FLUSH 1-GANG J-BOX WITH 3/4"C. AND 18/4 CONDUCTORS TO AUTO DOOR ACTUATOR. ALL CONDUCTORS SHALL BE CONCEALED. REFER TO ARCHITECTURAL SHEETS FOR MOUNTING INFORMATION.
- AUTOMATIC DOOR PUSH PLATE (BY DIVISION 8 CONTRACTOR) AND FLUSH 2-GANG J-BOX WITH 3/4"C. AND 18/4 CONDUCTORS TO AUTO DOOR ACTUATOR. ALL CONDUCTORS SHALL BE CONCEALED. REFER TO ARCHITECTURAL SHEETS FOR MOUNTING INFORMATION.
- DOOR LATCH RETRACTION POWER SUPPLY LOCATED ABOVE CEILING. FURNISH AND ROUTE CABLING AS REQUIRED TO ELECTRIFIED DOOR HINGE (BY DIVISION 8 CONTRACTOR).
- CONNECT COMPLETE TO DOOR ACTUATOR. FURNISH AND ROUTE CONDUCTORS
 AND CONDUIT AS REQUIRED TO DOOR ACTUATOR FOR INC. AND CONDUIT AS REQUIRED TO DOOR ACTUATOR FOR A COMPLETE AND OPERABLE SYSTEM. REFER TO MANUFACTURER'S INSTRUCTIONS AND DOOR CONTRACTOR FOR ADDITIONAL INFORMATION PRIOR TO ROUGH-IN.
- (5) CONNECT COMPLETE TO DOOR LATCH RETRACTION POWER SUPPLY LOCATED ABOVE CEILING. FURNISH AND ROUTE CONDUCTORS AND CONDUIT AS REQUIRED TO ELECTRIFIED DOOR HINGE FOR A COMPLETE AND OPERABLE SYSTEM. REFER TO MANUFACTURER'S INSTRUCTIONS AND DOOR CONTRACTOR FOR ADDITIONAL INFORMATION PRIOR TO ROUGH-IN.
- (6) PROVIDE 3/4"C.-3#12, #12G. AND ROUTE TO NEAREST 120V PANELBOARD. PROVIDE (2) TWO DEDICATED 20A/1P CIRCUIT BREAKERS TO AVAILABLE SPARE CIRCUIT BREAKERS WITHIN PANELBOARD. VERIFY LOCATIONS IN FIELD.
- (7) EXISTING FIRE ALARM AUDIBLE/VISUAL DEVICE TO REMAIN PROTECTED IN PLACE. VERIFY EXACT LOCATION IN FIELD.
- (8) EXISTING FIRE ALARM SMOKE DETECTOR TO REMAIN PROTECTED IN PLACE. VERIFY EXACT LOCATION IN FIELD.

POWER SYMBOLS

JUNCTION BOX, MOUNTED IN ACCESSIBLE CEILING FOR APPLICATION DENOTED ON PLAN. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C. OR CEC, WHERE ADOPTED.

WALL MOUNTED DEVICE MOUNTING HEIGHT NOTE: ALL WALL-MOUNTED EQUIPMENT MOUNTING HEIGHTS SHALL BE VERIFIED PRIOR TO ROUGH-IN PER

REQUIREMENTS OF THE DEVICE ALIGNMENT AND MOUNTING HEIGHT DETAILS AND SPECIFICATIONS.

BRANCH CIRCUIT SYMBOLS

/ A-1,3,5 HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.

CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM. CONDUIT CONTINUATION.

ANNOTATIONS

DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.

PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.

REVISION REFERENCE.

DIV. OF THE STATE ARCHITEC APP: 02-121348 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹

IDENTIFICATION STAMP

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REVISIONS: DESCRIPTION DATE

2023-40123 **PROJECT NO: DATE ISSUED:** 2023-04-20 As indicated SCALE:

E11.1 **NUMBER:** SHEET TITLE:

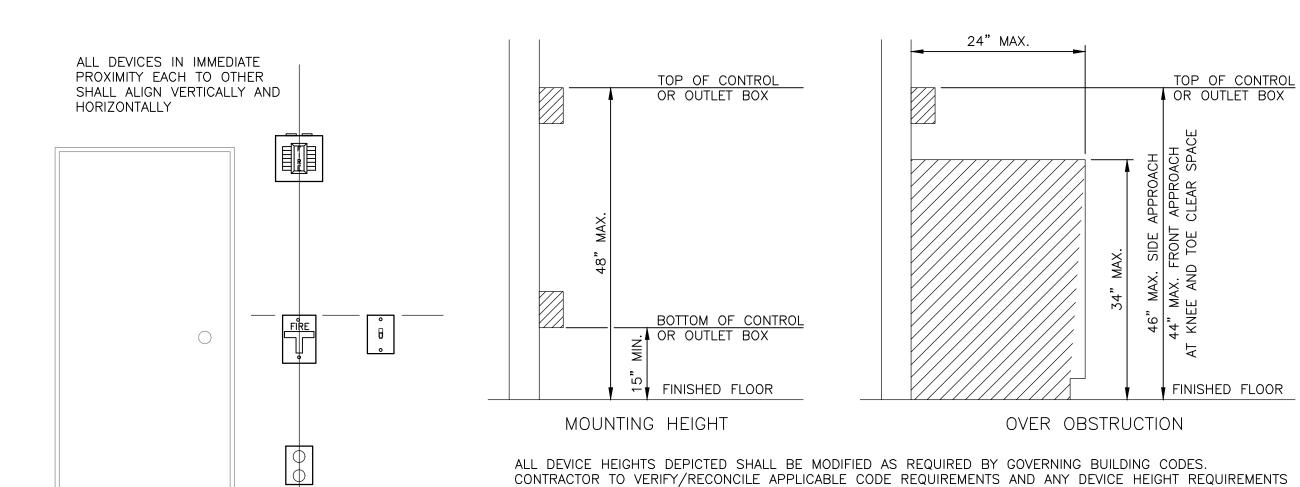
BLDG Q -**RESTROOM TECHNOLOGY AND POWER PLANS**

> COLLABORATIVE 11870 Pierce Street, Suite 160 Riverside, California 92505 951.299.4160 www.tk1sc.com

> > Project Leader - Bill Voller

Electrical Lead - Bill Voller

tk1sc Job #: B2304076.000



DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATIONS/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER - CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID. **DEVICE ALIGNMENT & MOUNTING HEIGHT DETAILS**

1.1 WORK INCLUDED:

- A. This specification shall apply to all phases of work hereinafter specified, shown on drawings, or as required to provide a complete installation of electrical systems for this project. Work required under this specification is not limited to just the Electrical drawings. Refer to Architectural, Structural, Landscape, and Mechanical/Plumbing drawings as well as all other drawings applicable to this project, which designate the scope of work to be accomplished. The intent of the Drawings and Specifications is to provide a complete and operable electrical system that includes all documents that are a part of the Contract.
- 1. Work Included: Furnish labor, material, services and skilled supervision necessary for the construction, erection, installation, connections, testing, and adjustment of all circuits and electrical equipment specified herein, or shown or noted on Drawings, and its delivery to the Owner complete in all respects ready for use.
- 2. The electrical Work includes installation or connection of certain materials and equipment furnished by others. Verify installation details, installation and rough-in locations from the actual equipment or from the equipment
- B. Electrical Drawings: Electrical Drawings are diagrammatic, and are intended to convey the scope of work, indicating intended general arrangement of equipment, conduit and outlets. Follow Drawings in laying out Work and verify spaces for installation of materials and equipment based on actual dimensions of equipment furnished.

1.2 QUALITY ASSURANCE

- A. Design, manufacture, testing and method of installation of all apparatus and materials furnished under requirements of these specifications shall conform to latest publications or standard rules of the following:
- Institute of Electrical and Electronic Engineers IEEE
- 2. National Electrical Manufacturers' Association NEMA
- 3. Underwriter's Laboratories, Inc. UL
- 4. National Fire Protection Association NFPA
- Federal Specifications Fed. Spec
- 6. American Society for Testing and Materials ASTM
- American National Standards Institute ANSI
- 8. National Electrical Code NEC
- 9. National Electrical Safety Code NESC
- 10. Insulated Cable Engineers Association ICEA
- 11. American Institute of Steel Construction AISC 12. State and Municipal Codes In Force In The Specific Project Area
- 13. Occupational Safety and Health Administration (OSHA)
- 14. Electronics Industries Association/Telecommunications Industry Association (EIA/TIA)
- 15. California Electrical Code (where adopted)
- 16. Local Authority Having Jurisdiction (AHJ) Published Electrical Standards and Codes (as applicable).
- . Perform Work in accordance with the National Electrical Code, applicable building ordinances, and other applicable codes, hereinafter referred to as the "Code." The Contractor shall comply with the Code including local amendments and interpretations without added cost to the Owner. Where Contract Documents exceed minimum requirements, the Contract Documents take precedence. Where code conflicts occur, the most stringent shall apply unless variance is approved.
- 1. Comply with all requirements for permits, licenses, fees and codes. The Contractor, at Contractor's expense, shall obtain all permits, licenses, fees, special service costs, inspections and arrangements required for Work under this contract, unless otherwise specified.
- 2. Comply with requirements of the applicable utility companies serving this Project. Make all arrangements with utility companies for proper coordination of Work.

1.3 GENERAL REQUIREMENTS

- A. Guarantee: Furnish a written guarantee for a period of one-year from date of acceptance.
- B. Wherever a discrepancy in quantity or size of conduit, wire, equipment, devices, circuit breakers, etc., (all materials), arises on the Drawings and/or in the Specifications, the Contractor shall be responsible for providing and installing all material and services required by the strictest condition noted on Drawings and/or in Specifications to ensure complete and operable systems as required by the Owner and Engineer.
- C. All Core Cutting, Drilling, and Patching:
- 1. For the installation of work under this Section, the aforementioned shall be performed under this Section of the Specifications and the Concrete section of the Specifications.
- 2. No holes will be allowed in any structural members without the written approval of the Project's Structural
- 3. For penetrations of concrete slabs or concrete footings, the work shall be as directed in the Concrete Section
- 4. The Contractor shall be responsible for patching and repairing surfaces where he is required to penetrate for
- 5. Penetrations shall be sealed to meet the rated integrity of the surface required to be patched and repaired.
- The patched surface shall be painted or finished to match the existing surface.
- D. Verifying Drawings and Job Conditions:

work under this contract.

- 1. The Contractor shall examine all Drawings and Specifications in a manner to be fully cognizant of all work
- 2. The Contractor shall visit the site and verify existing conditions. Where existing conditions differ from Drawings, adjustment(s) shall be made and allowances included for all necessary equipment to complete all parts of the Drawings and Specifications.

1.4 WORK IN COOPERATION WITH OTHER TRADES

- A. Examine the Drawings and Specifications and determine the work to be performed by the electrical, mechanical and other trades. Provide the type and amount of electrical materials and equipment necessary to place this work in proper operation, completely wired, tested and ready for use. This shall include all conduit, wire, disconnects, relays, and other devices for the required operation sequence of all electrical, mechanical and other systems or
- B. Provide a conduit-only system for low voltage wiring required for control of mechanical and plumbing equipment described in this or other parts of the Contract Documents. Install all control housings, conduits, and backboxes required for installing conduit to the controls.
- . Install separate conduits between each heating, ventilating and air conditioning sensing device and its control panel and/or control motor. Before installing any conduit for heating, ventilating and air conditioning control wiring, verify the exact requirements from the control diagrams provided with the equipment manufacturer's shop drawings.

1.5 TESTING AND ADJUSTMENT

- A. Upon completion of all electrical work, the Contractor shall test all circuits, switches, light fixtures, lighting control and dimming systems including distributed systems, UPSs, generators, SPDs, lighting inverters, transfer switches, motors, circuit breakers, motor starter(s) and their auxiliary circuits and any other electrical items to ensure perfect operation of all electrical equipment.
- B. Equipment and parts in need of correction, and discovered during such testing, shall be immediately repaired or replaced with all new equipment and that part of the system shall then be retested. All such replacement or repair shall be done at no additional cost to the Owner.
- C. All circuit(s) shall be tested for continuity and circuit integrity. Adjustments shall be made for circuits not complying with testing criteria.
- D. All test reports, including copies of any required Energy Code Acceptance Forms (e.g. CA Title 24 Acceptance For Code Compliance Forms) should be submitted to the Engineer at completion of project.

1.6 IDENTIFICATION

- A. Nameplates shall be provided for unit substations, switchgear, switchboards, distribution boards, distribution panels, panel boards, motor control centers, transformers, transfer switches, contactors, starters, disconnect switches, enclosed circuit breakers/switches, Inverters, UPSs, PDUs, RDCs, SPDs, lighting control panels, dimming panels, door releasing system panels, fire alarm/central monitoring terminal cabinets/power supplies/control panels, and all low voltage system terminal and control cabinets.
- 1. Nameplate inscriptions shall be identical to the equipment designations indicated in plans and specifications. Nameplates shall be engraved with the device designation/identification on the top line, source identification for the device on the 2nd line per NEC, or CEC where adopted, Art 408.4 and load designation for the device on the bottom line. Where load designation consists of a branch circuit, omit bottom line. Where device designation is not indicated on plans/specifications, Contractor shall submit a written clarification request to the

Example: Transformer 1TA Source Disconnecting Location: Switchboard MSA located in RM 110 Load: Panels 1LA & 1LB

- 2. All circuit breakers/fuses in switchgear, switchboards, distribution boards, distribution panels, UPS output circuit breakers, PDU sub-feed circuit breakers and motor control centers shall have individual nameplates located immediately adjacent to the respective device. Nameplate inscription shall identify the downstream equipment or device served by the circuit breaker or fuse.
- B. Identification nameplates, unless otherwise noted (UON), shall be laminated/extruded modified acrylic that is 3/32" thick, UV-stabilized, matte finish, suitable for use in 180 deg F ambient, with beyeled edges and engraved white letters 3/8" high, minimum, on 1-1/2" high black background (utility/normal and optional standby power systems) for single line of text. Where two lines of text are required, provide min. 2" high nameplate. Where three lines of text are required, provide min. 2.5" high nameplate. Provide white letters on red background for all NEC, or CEC where adopted, Article 517 essential power systems, Article 700 Emergency Systems, Article 701 Legally required standby systems and Article 708 COPS.

- C. Identification nameplates for new switchgear, switchboards, distribution boards, distribution panels, panelboards and motor control centers shall be attached with switchgear manufacturer-provided screws via switchgear manufacturer factory pre-drilled holes. A factory option to rivet identification nameplates to the equipment is only acceptable if screw-fastened nameplates are not an available option from the switchgear manufacturer. Field drilling or other mechanical attachment methods that change/void the NEMA or NTRL rating of the enclosure are
- D. Identification nameplates for transformers, transfer switches, disconnect switches, enclosed circuit breakers/switches, inverters, UPSs, PDUs, RDCs, SPDs, lighting control panels, dimming panels, door-releasing system panels, terminal cabinets and all circuit breakers/fuses in switchgear, switchboards, distribution boards, distribution panels, UPS output circuit breakers, PDUs, PDU sub-feed circuit breakers, and motor control centers shall be attached to the equipment by self-adhesive backing integral to the nameplates. When equipment is located outdoors, provide nameplates without self-adhesive backing and attach to equipment using weather-rated, UV-resistant epoxy. In all cases, clean surfaces before applying identification nameplates parallel to equipment
- E. Warning Placards, as required by General Single Line Diagram Notes for multiple power sources, or instruction placards, as required for all kirk-key interlock schemes, all UPS bypass procedures or as required elsewhere in the plans/specifications shall be engraved 1/2" high with white lettering on a red background using the same material specified for identification nameplates with a self-adhesive backing. Warning/instruction placards shall be attached to the face of the equipment directly related to the placards. Provide a formal placard submittal for review by the Engineer prior to ordering any warning/instruction placards. In all cases, clean surfaces before applying warning/instruction placards parallel to equipment lines.
- F. Receptacles that are part of a UL-listed under floor computer room whip assembly, ceiling and/or cable/ladder tray-mounted receptacles used in lab, manufacturing, commercial kitchen environments or that are serving telcom/data/AV racks and cabinets shall have identification nameplates located on the wiring device plate cover. Nameplates shall be self-adhesive, 3/32" thick Micarta with beveled edges, engraved 1/4" high white lettering on black background with serving power source, circuit identification and NEMA/IEC receptacle type. Use of two (2) separate nameplates per device plate cover is acceptable. Affix nameplates to be visible when plugs are
- G. See wiring device section of this specification for additional wiring device plate cover labeling requirements. H. See drawings for panel board schedule directory installation requirements.
- I. See conduit installation section of this specification for conduit labeling requirements.

1.7 FINAL INSPECTION AND ACCEPTANCE

- A. After all requirements of the Specifications and/or the Drawings have been fully completed, representatives of the Owner will inspect the work. Contractor shall provide competent personnel to demonstrate the operation of any item or system to the full satisfaction of each representative.
- B. Final acceptance of the work will be made by the Owner after receipt of approval and recommendation of acceptance from each representative.

1.8 RECORD DRAWINGS

- A. Drawings of Record: The Contractor shall provide and keep up-to-date, a complete record set of drawings. These shall be corrected daily and show every change from the original Drawings. This set of prints shall be kept on the iob site and shall be used only as a record set. This shall not be construed as authorization for the Contractor to make changes in the layout without definite instruction in each case. Upon completion of the work, a set of reproducible Contract Drawings shall be obtained from the General Contractor and all changes as noted on the record set of prints shall be incorporated thereon with black ink in a neat, legible, understandable and professional manner. Refer to the Supplementary General Conditions for complete requirements.
- 1.9 APPROVALS, EQUALS, SUBSTITUTIONS, ALTERNATIVES, NO KNOWN EQUAL
- A. Approvals: Where the words (or similar terms) "approved", "approval", "acceptable", and "acceptance" are used, it shall be understood that acceptance by the Owner, Architect and Engineer are required.
- B. Equal: Where the words (or similar terms) "equal", "approved equal", "equal to", "or equal by", "or equal" and "equivalent" are used, it shall be understood that these words are followed by the expression "in the opinion of the Owner, Architect, and Engineer". For the purposes of specifying products, the above words shall indicate the same size, made of the same construction materials, manufactured with equivalent life expectancy, having the same aesthetic appearance/style (includes craftsmanship, physical attributes, color and finish), and the same performance.
- Substitution: For the purposes of specifying products, "substitution" shall refer to the submittal of a product not explicitly approved by the construction documents/specifications.
- 1. Substitutions of specified equipment shall be submitted and received by the Engineer ten (10) days prior to the bid date for review and written approval. Regulatory Agency approval for all substitutions will be the sole responsibility of the contractor. To receive consideration, requests for substitutions must be accompanied by documentary proof of its equality with the specified material. Documentary proof shall be in letter form and identify the specified values/materials alongside proposed equal values/materials. In addition, catalog brochures and samples, if requested, must be included in the submittal. ONLY PRE-BID APPROVED PRODUCTS, ISSUED VIA A FORMAL BID ADDENDUM TO ALL BIDDERS, WILL BE ALLOWED ON THE PROJECT. REGARDLESS OF THE APPROVAL ON ANY SUBSTITUTION, ALL BIDS SHALL BE BASED ON THE PRODUCTS EXACTLY AS SPECIFIED. PRICING FOR EACH APPROVED SUBSTITUTION SHALL BE INCLUDED IN THE BID SUBMITTAL AS A SEPARATE LINE ITEM.
- 2. In the event that written authorization is given for a substitution after award of contract, the Contractor shall submit to the Engineer quotations from suppliers/distributors of both the specified and proposed equal material for price comparison, as well as a verification of delivery dates that conform to the project schedule.
- 3. In the event of cost reduction, the Owner will be credited with 100 percent of the reduction, arranged by
- 4. The Contractor warrants that substitutions proposed for specified items will fully perform the functions required.
- D. Alternates/Alternatives: For the purposes of specifying products, "alternatives/alternates" may be established to enable the Owner/Architect/Engineer to compare costs where alternative materials or methods might be used. An alternate price shall be submitted in addition to the base bid for consideration. If the alternate is deemed acceptable, written authorization will be issued.
- E. No Known Equal: For the purposes of specifying products, "No Known Equal" shall mean that the Owner/Architect/Engineer is not aware of an equivalent product. The Contractor will need to submit a "Substitution" item, per the requirements listed above, if a different product is proposed to be utilized.

1.10 SHOP DRAWINGS/SUBMITTALS

- A. Shop Drawings/Submittals, unless required otherwise by general project specifications or instructions to bidders, shall be submitted in electronic format (PDF) to include a Letter of Transmittal (PDF), which shall give a list of the drawings submitted with dates and/or sytem(s) components contained within the submittal. Drawings and material cut sheets shall be complete in every respect and edited/marked to indicate specific items being provided. Printed/Hard copies are not acceptable.
- B. The shop drawings/submittals shall be marked with the name of the project, numbered consecutively, and bear the approval of the Contractor as evidence that the Contractor has checked the drawings. Any drawings submitted without this approval will be returned to the Contractor for resubmittal.
- C. If the shop drawings show variations from the requirements of the Contract because of standard shop practice or other reasons, the Contractor shall make specific mention of such variations in the Contractor's letter of transmittal. If the substitution is accepted, the Contractor shall be responsible for proper adjustment that may be caused by the substitution. Samples shall be submitted when requested.
- D. Only products listed as "Equal" within the contract documents, along with formally approved "Substitutions" will be reviewed. Products not conforming to these items will not be reviewed and will be returned to the Contractor for
- E. Review comments used in response to shop drawings/submittals are:
- "No Exception Taken" Product approved as submitted.
- "Furnish as Corrected" Re-submittal not required, although the Contractor shall provide the submitted product with corrections as noted.
- "Revise and Resubmit"
- Re-submittal required with corrections as noted.
- 4. "Rejected"
- Re-submittal required based upon the originally specified product.

- 1.11 MAINTENANCE, SERVICING, INSTRUCTION MANUALS AND WIRING DIAGRAMS
- A. All wiring diagrams shall specifically cover the system supplied. Typical drawings will not be accepted. Four (4) copies shall be presented to the Owner.

1.12 INTERRUPTION OF SERVICES/SERVICE SHUTDOWN

- A. Any interruption of electrical services, electrical circuits, electrical feeders, signal systems, communication systems, fire alarm systems, etc., required to perform work shall meet the specific prior-approval requirements of the Owner.
- B. Interruptions/outages of any of the Owner's systems and services mentioned above shall be scheduled to occur during other than the Owner's normal business hours. Any overtime costs shall be borne by the Contractor.

Such work shall be scheduled with the Owner to be performed at the Owner's convenience.

C. See drawings for any additional requirements regarding outages, interruption and any temporary services required. PART 2 - PRODUCTS

2.1 MATERIALS

A. Wiring Devices:

- 1. Provide wiring devices indicated per plan. Devices shall be specification grade. Acceptable manufacturers are Leviton, Pass & Seymour and Hubbell. Provide all similar devices of same manufacturer, unless indicated otherwise. All device colors shall be selected from the full range of manufacturer standard color options as selected by the Architect. This direction will be provided in the shop drawing review process.
- a. Wiring Devices (Decora) #16252-COLOR Convenience Receptacle) Dedicated Receptacle #16352-COLOR #16262-IG-COLOR 3) Convenience I.G. Receptacle 4) Dedicated IG Receptacle #16362-IG-COLOR #GFNT1-COLOR 5) Convenience G.F.C.I. Receptacle 6) Dedicated G.F.C.I. Receptacle #GFNT2-COLOR Convenience Hospital Grade Receptacle #16252-HG?-COLOR 8) Dedicated Hospital Grade Receptacle #16352-HG?-COLOR 9) Convenience G.F.C.I. Hospital Grade Receptacle #GFNT1-HG? 10) Dedicated G.F.C.I. Hospital Grade Receptacle #GFNT2-HG? #TDR15-COLOR 11) Tamper Resistant Convenience Receptacle 12) Tamper Resistant Dedicated Receptacle #TDR20-COLOR #GFTR2-COLOR 13) Tamper Resistant GFCI Receptacle 14) Tamper Res. Conv. G.F.C.I. Hospital Grade Receptacle #GFTR1-HG COLOR #GFTR2-HG COLOR 15) Tamper Res. Ded. G.F.C.I. Hospital Grade Receptacle 16) Weather/Tamper Resistant GFCI Receptacle #GFWT2-COLOR 17) Convenience Simplex Receptacle #16251-COLOR
- #16351-COLOR 18) Dedicated Simplex Receptacle #5361-CH-COLOR (Non-Decora) 19) Recessed Clock Receptacle #5621-2-COLOR 20) Single Pole Switch 21) Double Pole Switch #5622-2-COLOR 22) Three Way Switch #5623-2-COLOR
- #5624-2-COLOR 23) Four Way Switch 24) Pilot Light Switch "On" #5628-2-COLOR 25) Pilot Light Switch "Off" #5631-2-COLOR 26) Projection Screen Switch #5657-2-COLOR 27) Low Voltage Momentary Switch #5657-2-COLOR #1221-2L-COLOR 28) Keved Switch 29) Door Jam Switch #1865-COLOR (Non-Decora)
- simplex or duplex receptacle. Use of controlled receptacles is required where depicted on plans See controlled receptacle specifications for additional information. 2. I.G. (isolated ground) receptacle bodies shall be of a basic color specified above with an orange triangle to

b. Use of dedicated receptacles is required where plans depict a branch circuit supplying only a single

- 3. H.G. (hospital grade) receptacle bodies shall be of a basic color specified above with a green circle to
- 4. When shown circuited with an I.G. conductor, all receptacles shall be of the I.G. type. As an example, a NEMA L6-30R denoted on the plans and shown circuited with an I.G. conductor shall be an I.G. version of the
- 5. Wiring devices located in wood finished areas shall generally be black unless otherwise indicated by the
- . Wiring devices located in mirrors shall generally be white with stainless steel cover plates unless otherwise indicated by the architect.
- 7. In addition to other device requirements listed elsewhere in this specification and NEC, or CEC where adopted. Articles 406.12 & 517.18, all 125V & 250V, 15A and 20A, non-locking receptacles shall be Tamper-Resistant when located in the following locations:
- a. In dwelling units per NEC, or CEC where adopted, Article 210.52
- b. In guest rooms and guest suites of hotels and motels
- c. In child care or daycare facilities.

symbolize isolated ground.

- d. In preschool and elementary education facilities e. In business offices, corridors, waiting rooms and the like in clinics, medical and dental offices and outpatient facilities
- f. In a subset of Assembly Areas outlined in NEC, or CEC where adopted, Article 518.2 including transportation waiting areas, gymnasiums, skating rinks, and auditoriums.
- q. In dormitories. h. In pediatric care areas per NEC, or CEC where adopted, Article 517.18 (C).
- 8. Wiring devices shall be listed "hospital grade", and so identified, in the following locations:
- a. Patient bed locations within general care areas per NEC, or CEC where adopted, Article 517.18(B). b. Patient bed locations within critical care areas per NEC, or CEC where adopted, Article 517.19(B). c. In "other-than-hazardous" anesthetizing locations per NEC, or CEC where adopted, Article 517.61(C)(2).
- 9. Wiring device cover plates located on recessed boxes shall be commercial grade nylon. Plate color shall match wiring device color UON on plans. Cover plates utilized on surface mounted boxes shall be metal. Plastic cover plates are unacceptable.
- 10. Except as otherwise noted, all wiring device plates on the project shall be labeled with panel and circuit number(s) utilizing a Brother P-Touch labeling system with 1/2" tape (yellow on black) or equal by Herman-Tellerman or Panduit. Locate label on the concealed side of the wiring device plate. Handwritten labels are unacceptable.
- 11. The Contractor shall provide duplex receptacle outlets in the appropriate configurations necessary to comply with applicable energy code requirements for controlled receptacles and as shown on plans. All wiring devices indicated to be controlled receptacles shall be NEMA-approved, electrical code-compliant with factory markings on the face of the receptacle(s) with the word "Controlled" or utilize further markings and symbols to indicate which receptacles on each outlet is/are controlled. Stickers, field-applied markings or other non-permanent markings are not acceptable. Where a GFCI receptacle outlet is required to be controlled, provide an adjacent controlled duplex receptacle outlet connected on the load side of the GFCI outlet. Generally, one receptacle in a duplex receptacle outlet is required to be controlled. It may be the lower receptacle or upper receptacle based on manufacturer offering. However, the controlled receptacle location within a controlled receptacle outlet shall remain consistent throughout the project. Where an existing duplex receptacle outlet is required to be controlled, provide a new wiring device with the appropriate control configuration necessary to comply with plans. All controlled receptacles shall be connected to a branch circuit controlled by an occupancy sensor-based or relay panel lighting control system. Acceptable manufacturers are Leviton, Pass and Seymour & Hubbell.

- 12. The following wiring device plates shall have custom engraving:
- a. Key operated switches, switches with pilot lights, and switches for the control of motors, heaters and ventilators. Engraving shall be black and occur on the exposed side of the plate indicating the motor,
- heater, or ventilator controlled. b. Receptacles on optional standby generator and/or UPS power shall have custom engraved plates with the
- words "Generator" or "UPS" in black letters. In addition, where located in telecommunications closets, IDFs, server rooms, data centers, labs (wet, dry or electronic) indicating panel board and circuit number. c. For Health Care Facilities, provide custom engraved device cover plates, for all devices, indicating panel board and circuit number. Devices served by normal/utility power circuits shall have black lettering;
- devices served by essential electrical system power circuits shall have red lettering. d. All stainless steel and nylon device plates shall be engraved using a rotary engraving process except for black lettering on stainless steel device plates which may be accomplished via laser etching process. All lettering shall be 3/16" high. Provide a dimensioned submittal drawing detailing a typical device faceplate
- G. Weatherproof Outlet Covers/Assemblies: All Receptacles identified as weatherproof on the drawings shall be weather-resistant, tamper-resistant, GFCI type and equipped as follows:
- 1. Type WP-A: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is wet location-listed raintight while "in use". Unit shall comply with NEC, or CEC where adopted, Article 406.9(A) and (B). UON on drawings, provide a minimum of 2 separate compartments suitable for installation of power receptacles, AV or communications outlets. Additionally, unless otherwise noted on drawings, provide the following:
- a. A 20A Weather-resistant, tamper-resistant, GFCI duplex receptacle in the first compartment. Provide
- branch circuiting per plans. b. A blank metal plate suitable for field installation of power, AV or communications devices in the second compartment.
- c. Where indicated on plans as requiring data, AV, or other low voltage service outlet, provide min. 3/4" C.O. with pull string routed from the second compartment to nearest low voltage pull box. Where shown mounted in a building wall, any blank/unused compartment shall be equipped minimum 3/4" C.O. with pull string routed to the nearest accessible ceiling space.
- d. See wiring device section of this specification for additional wiring device plate cover labeling
- f. Custom color powder coat finish as selected by Architect Include all costs in base bid for same. g. In locations with sufficient wall depth, provide 6" wide x 6" tall x 5-1/2" deep recessed wall box (C.W. Cole
- #TL310-WCS-K1-CUSTOM COLOR) h. In locations utilizing shallow stud walls construction or other walls of insufficient depth, provide 10-3/4" wide x 7-3/8" tall x 3-7/8" deep recessed wall box (C.W. Cole #TL310-WCS-SH-K1-CUSTOM COLOR).

e. (1) key minimum per device (minimum of (2) per project) to the Owner's project manager upon completion

 See drawings for additional details. 2. Type/Subscript WP-B: Wet location-listed raintight while "in use" cast copper-free aluminum, extra-duty, lockable cover with baked aluminum lacquer finish and one-gang, weather-resistant, tamper-resistant GFCI receptacle. Hubbell WP26E series. Polycarbonate covers are unacceptable. Unit shall comply with NEC, or

CEC where adopted, Article 406.9(A) and (B). Contractor shall powder coat cover assembly to a custom color

where receptacle locations are deemed by the Architect to be in aesthetically sensitive or public spaces. Custom color as selected by Architect. 3. Type WP-C: (C.W. Cole #TL310-WCS-PED-ADA-K1-CUSTOM COLOR or #TL310-WCS -PED-K1-CUSTOM COLOR) pedestal device box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is wet location - listed raintight while "in use". Unit shall comply with NEC, or CEC where adopted, Article 406.9(A) and (B). UON on drawings, provide a minimum of 2 separate compartments suitable for installation

power receptacles, AV or communications outlets. Additionally, unless otherwise noted on drawings, provide

- a. A 20A weather-resistant, tamper-resistant, GFCI duplex receptacle in the first compartment. Provide
- branch circuiting per plans b. A blank metal plate suitable for field installation of power, AV or communications devices in the second
- compartment. c. Where indicated on plans as requiring data, AV or other LV outlet, provide min. 3/4" C.O. with pull string routed from the second compartment to nearest low voltage pull box.
- d. See wiring device section of this specification for additional wiring device plate cover labeling
- e. 1 key minimum per device (minimum of 2 per project) to the Owner's project manager upon completion of f. Include all costs in base bid for ADA version (22.5" tall) of pedestal box. Prior to ordering material,
- contractor shall coordinate with architect and/or AHJ to determine which pedestal box locations do not require ADA compliance and may be changed to the standard (11.5" tall) version of the pedestal box. g. Custom color powder coat finish as selected by Architect. Include all costs in base bid for same. h. See drawings for additional details.
- 4. Type/Subscript WP-D: Damp location-listed (not-raintight-in-use) cast copper-free, pad lockable, die-cast aluminum cover with baked aluminum lacquer finish and one gang GFCI receptacle. Hubbell/rayco 502?/503? Series. Polycarbonate covers are unacceptable. Unit shall comply with NEC, or CEC where adopted, article 406.9(A) and (B). Custom color powder coat finish as selected by Architect. Include all costs in base bid for

H. Circuit Breakers.

requirements.

the following:

- 1. Service entrance circuit breakers smaller than 400A frame shall be thermal-magnetic trip with inverse time current characteristics unless otherwise indicated below. Service entrance main circuit breakers and main circuit breakers, 400A frame and larger shall be 100% rated, solid-state type as outlined in this specification. All other service entrance circuit breakers, 400A frame and larger, shall be 100% rated, solid-state type as outlined in this specification.
- 2. All non-service entrance circuit breakers 225A and larger shall be thermal magnetic type and have continuously adjustable instantaneous pick-ups of approximately 5 to 10 times trip rating. Breakers shall have either tamper-resistant rating dials or easily changed trip rating plugs with trip ratings as indicated on the Drawings. Rating plugs shall be interlocked so they are not interchangeable between frames. Additionally, all non-service entrance circuit breakers, 600A frame and larger, located in 480V 3 phase, 3-wire or 277/480V, 3 phase 4-wire switchgear, distribution boards, panel boards or busway plugs, shall be solid state, 100% rated. Breaker shall have built-in test points for testing long delay, short delay and instantaneous, and ground fault (where shown) functions of the breaker by means of a 120V operated test kit. Contractor shall utilize a test kit capable of testing all breakers 400A and above - at the Engineer's request.
- 3. All non-service entrance circuit breakers less than 225A shall be molded plastic case, air circuit breakers conforming to UL 489. Provide breakers with thermal magnetic trip units, and a common trip bar for two- or three-pole breakers, connected internally to each pole so tripping of one pole will automatically trip all poles of each breaker. Provide breakers of trip-free and trip-indicating bolt-on type, with quick-make, quick-break contacts. Provide single two- or three-pole breaker interchangeability. Provide padlocking device for circuit breakers as shown on the Drawings.
- 4. Where a Current Limiting Circuit Breaker (CLCB) is indicated on drawings or as required elsewhere in this specification, provide a UL listed current limiting thermal magnetic circuit breaker(s) UON. An independently operating limiter section within a molded case is not allowed. Coordinate CLCB ratings as required to protect electrical system components on the load side of the CLCB to include, but not limited to, protecting automatic transfer switches, panel boards and lighting control panels. 5. Where a solid state circuit breaker is indicated on drawings or as required elsewhere in this specification,

provide a solid state circuit breaker with minimum five function complete with built-in current transformers. The

five functions shall be independently adjustable and consist of Overload/Long Time Amp Rating, Long Time

Delay, Short Time Delay, Short Circuit/Instantaneous Pick-up, but may also include Shunt Trip and/or Ground

between frames. Breaker shall have built-in test points for testing long delay and instantaneous, and ground

fault (where shown) functions of the breaker by means of a 120V operated test kit. Contractor shall utilize a test kit capable of testing all breakers 400A and above, at the Engineer's request. 6. Circuit breakers, 1200A Frame or larger, or circuit breakers with sensors or adjustable trip settings, 1200A or larger, shall be equipped with an Energy Reducing Maintenance Switch that complies with NEC, or CEC where adopted, 240.87 (B) (3) unless specified elsewhere with an alternate arc energy reduction method

Fault if so indicated on the Drawings. Rating plugs shall be interlocked so they are not interchangeable

- allowed by this same code section. 7. Ground Fault Interrupting Breakers: Provide with molded plastic case, air circuit breakers, similar to above
- with ground fault circuit interrupt capability, conforming to UL Class A, Group 1. 8. Arc Fault Interrupting Breakers: Provide with molded plastic case, air circuit breakers, similar to above with arc fault circuit interrupt capability, conforming to UL 1699. Provide on all dwelling-unit circuits supplying bedrooms, sleeping quarters, etc., as required to comply with NEC, or CEC where adopted, Article 210.12.
- 10. Series-Rated Breakers: UL listed series-rated combinations of breakers can be used to obtain panelboard-interrupting ratings shown on Drawings. If series-rated breakers are used, switchboards, distribution boards and panelboards shall be appropriately labeled to indicate the use of series rated breakers.
- Shop drawing submittal shall include chart of UL listed devices which coordinate to provide series rating. 11. Circuit breakers shall be standard interrupting construction. Panelboards shall accept standard circuit
- 12. Circuit breaker handle accessories shall provide provisions for locking handle in the on or off position.

9. Tandem or half-sized circuit breakers are not permitted.

breakers up to 100A.

- 13. Shunt trip equipped circuit breakers shall be provided on all elevator feeders. 14. Temperature compensating circuit breaker(s) shall be provided when located in outdoor enclosure(s) or when
- located in an enclosure subject to high ambient heat due to nearby industrial processes, etc. 15. Provide 75 degree Celsius-rated conductor lugs/lug kits as required on all circuit breakers to accept conductor
- quantities and sizes shown on drawings. 16. All circuit breaker terminations shall be suitable for use with 75 degree Celsius ampacity conductors. Listed, dual-rated pin terminals, straight or offset, are acceptable for use to in accommodating oversized or parallel conductor installations.

17. Circuit breakers serving Fire Alarm or Central Monitoring panels and power supplies shall be red in color and lockable in the "ON" position.

Disconnect Switches:

Non-fusible or fusible, heavy-duty, externally operated horsepower-rated, 600V A.C: Provide NEMA 3R, lockable enclosures for all switches located on roof tops, in wet or damp areas and in any area exposed to the

2. Fusible switches shall be Class "R" when 600A or less, and Class "L" when greater than 600A.

3. Amperage, horsepower, voltage, and number of poles per drawings: All shall be clearly marked on the switch

4. Provide the Owner's project manager with one (1) spare set of fuses and two (2) sets of fuse clips/fuses for every set of fuses on the project

J. Conduit:

- 1. Galvanized Rigid Conduit (GRC) shall be full weight threaded type steel. Steel conduit shall be protected by overall zinc coating to inside and outside surfaces, applied by the hot dip, metallizing, or sherardizing process.
- 2. Intermediate Metal Conduit (IMC) shall be hot-dipped galvanized in accordance with UL 1242, and meet Federal Specification WWC-581 (latest revision).
- 3. Electrical Metallic Tubing (EMT) shall be zinc-coated steel with baked enamel or plastic finish on inside surfaces except as noted below. EMT shall be dipped in a chromic acid bath to chemically form a

corrosion-resistant protective coating of zinc chromate over galvanized surface.

- 4. Flexible metal conduit shall be constructed of aluminum or hot-dipped galvanized steel strips wound spirally with interlocking edges to provide greatest flexibility with maximum strength. Interior surfaces shall be smooth and offer minimum drag to pulling in conductors. Used only as directed in writing by the Engineer with the exception of 400 Hz feeders and 400 Hz branch circuits which shall be run in flexible aluminum conduit.
- 5. Liquid-tight conduit (Seal-Tite) shall be galvanized steel flexible conduit as above except with moisture and oil-proof jacket, pre-cut lengths and factory-installed fittings. For outdoor installations and motor connections only unless otherwise noted on drawings.
- 6. Factory assembled, or off-site assembled wiring systems (such as Metal Clad (MC) Cable, Type AC Cable, Type NM Cable, Type BX Cable, etc.) shall not be used unless otherwise indicated in the Allowed Specification Deviations Section or Deductive/Additive Alternate Pricing Section generally located on the symbols list 7. When approved for use in the Allowed Specification Deviations Section, generally located on the symbols list
- drawing, MC cables shall be allowed for lighting branch circuits (homeruns shall be EMT), receptacle branch circuits (homeruns shall be EMT) and poke-thru fed systems furniture homeruns. MC shall not be used where exposed, except for a maximum 6' length for final connections to light fixtures, or terminate in electrical panelboards or distribution boards. Equipment ground conductor shall be green. Isolated ground conductor shall be green with yellow stripe. Provide 600V rated aluminum or lightweight steel interlocking armor Metal Clad (MC) cable with copper conductors, THHN (90 degree C) insulation, and integral equipment grounding conductor and isolated grounding conductor as required. Type AC cable listed for use in patient care areas for non-essential electrical system branch circuits per NEC, or CEC where adopted, Article 517.13 shall be required in such areas in lieu of MC cable. Type AC and MC cable shall not be used for essential electrical system branch circuits. MC cable shall be manufactured to Underwriters Laboratories Standard 1569. See Part 3 - Execution in this specification for additional installation requirements.
- 8. Nonmetallic Flexible Tubing (ENT) shall not be used unless otherwise indicated in the Allowed Specification Deviations Section or Deductive/Additive Alternate Pricing Section generally located on the symbols list drawing. Use of ENT, if allowed, is strictly limited to use in CMU walls and parking structure decks or as directed in writing by the Engineer. See Execution section of this specification for additional installation requirements.

9. Non-Metallic Conduit:

a. Polyvinyl chloride (PVC) rigid conduit, Schedule 40, Type II for underground installation only with solvent welded joints, conforming to UL requirements, listed for exposed and direct burial application. b. Conduit and fittings shall be produced by the same manufacturer.

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP: 02-121348 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹

C

REVISIONS:

PROJECT NO:

DATE ISSUED:

SCALE:

SHEET

DESCRIPTION DATE

E21.1 NUMBER: SHEET TITLE: **ELECTRICAL**

2023-40123

2023-04-20

As indicated

COLLABORATIVE 11870 Pierce Street, Suite 160 Riverside, California 92505 951.299.4160 www.tk1sc.com Project Leader - Bill Voller

Electrical Lead - Bill Voller tk1sc Job #: B2304076.000

- Condulet type fittings shall be smooth inside and out, taper threaded with integral insulating bushing and of the shapes, sizes and types required to facilitate installation or removal of wires and cables from the conduit and tubing system. These fittings shall be of metal, smooth inside and out, thoroughly galvanized, and sherardized cadmium plated.
- Metallic condulet covers shall have the same finish as the fitting and shall be provided for the opening of each fitting where conductors do not pass through the cover.
- Connector, coupling, locknut, bushings and caps used with rigid conduit shall be steel, threaded and thoroughly galvanized. Bushings shall be insulated.
- 4. UON all interior EMT fittings, connectors and couplings installed in concealed locations, areas not considered to be wet or damp locations by the AHJ, or areas not subject to physical damage, shall be steel, zinc or cadmium plated, threadless, compression, steel locking ring type with insulated throat. Where suitable for use, steel set screw fittings are allowed for trade sizes of 2" and smaller. Insulated throat is not required for fittings, connectors and couplings 1" and smaller.
- 5. All interior and exterior EMT fittings, connectors and couplings, 2" and smaller, installed in exposed or concealed locations that are considered by the AHJ to be wet or damp locations, shall be raintight-listed, steel, zinc or cadmium plated, threadless, compression, steel locking ring type with insulated throat. If raintight-listed, EMT fittings, connectors and couplings are unavailable for a given trade size or if conduit is installed in an area subject to damage provide rigid metallic or intermediate metallic conduits, fittings, connectors and couplings as required.
- 6. Flexible steel conduit connectors shall be a malleable iron clamp or squeeze type or steel twist-in type with insulated throat. The finish shall be zinc or cadmium plating.
- 7. Conduit unions shall be "Erickson" couplings, or approved equal. The use of running threads will not be permitted.

V. 600V Conductors - Wire and Cable:

- 1. All conductors shall be copper. Provide stranded conductor for #10 AWG and larger or when making flexible connections to vibrating machinery. Use compression "fork" type connectors or transition to solid conductors when connecting to switches, receptacles, etc.
- 2. Type THHN/THWN-2 thermoplastic, 600V, UL approved, dry and wet locations rated at 90 degrees Celsius, for conductors of all sizes from #12 AWG up to and including 1000 kcmil. RHH/RHW insulation is allowed only to provide an Electrical Circuit Protective System to comply with NEC, or CEC where adopted, Articles 695 and 700.
- Wire and cable shall be new, manufactured not more than six (6) months prior to installation, shall have size, type of insulation, voltage rating and manufacturer's name permanently marked on outer covering at regular intervals.
- Wire and cable shall be factory color-coded by integral pigmentation with a separate color for each phase and neutral. Each system shall be color-coded and it shall be maintained throughout.
- 5. Systems Conductor Color Coding:
- a. Power 208/120V, 3PH, 4W:

 Phase A
 Black
 Phase B
 Red
 Phase C
 Blue
 Neutral
 White or White with Phase Color Tracer
 Switchlegs
 Purple (Switchlegs shall also be identified separately by numerical tags)
 Travelers
 Purple with Black stripe or Pink

 b. Power 480/277V, 3PH, 4W:

 Phase A
 Brown
 Phase B
 Orange
- 3) Phase C = Yellow
 4) Neutral = Grey or Grey with Phase Color Tracer
 5) Switchlegs = Purple (Switchlegs shall also be identified separately by numerical tags).
 6) Travelers = Purple with Black stripe or Pink.
- d. Isolated Ground Conductors: Green with continuous Yellow stripe
- e. Fire Alarm System: As recommended by the manufacturer6. All color-coding for #12 through #6 AWG conductor shall be as identified above. Conductors #4 AWG and
- larger shall be identified by utilizing phase tape at each termination.
- No conductors carrying 120V or more shall be smaller than #12 AWG.
- 8. Aluminum conductors shall not be used.

c. Ground Conductors: Green

9. Wire-pulling compounds used as lubricants in installing conductors in raceways shall only be "Polywater J". No oil, grease, graphite, or similar substances may be used. Pulling of #1/0 or larger conductors shall be done with an approved cable pull machine. Other methods; e.g. using vehicles or block and tackle to install conductors are not acceptable.

W. Medium Voltage Conductors (greater than 600V):

- 1. See drawings for Medium Voltage Cable Schedule and Specifications.
- X. Junction boxes (less than 20lbs):
- For interior dry locations, boxes shall be NEMA 1 galvanized one-piece drawn steel, knockout type, with removable, machine screw secured covers.
- 2. For outside, damp or surface locations, boxes shall be NEMA 3R heavy cast aluminum or cast iron with
- removable, gasketed, non-ferrous machine screw secured covers.

 3. All boxes shall be sized for the number and sizes of conductors and conduits entering the box and equipped
- with plaster rings where required.

Y. Outlet Boxes (less than 20lbs):1. For fixtures, boxes shall be galvanized, one-piece drawn steel, knockout type equipped with 3/8" fixture studs

- and plaster rings where required.
- 2. For convenience outlets, wall switches, or other devices, outlet boxes shall be galvanized one-piece drawn steel, knockout type 4" x 4" x 2-1/8" minimum size with plaster rings as required.
- 3. For locations where standard boxes are not suitable due to number and size of conduit to be terminated, special boxes shall be designed to fit space or meet other requirements and submitted for approval.
- For exposure to weather, damp locations, or surface mounting, outlet boxes shall be heavy cast aluminum or cast iron with threaded hubs; covers shall be watertight with gaskets and non-ferrous screws.

CC. Seismic Design, Certification, and Anchoring of Electrical Equipment (less than 20lbs):

- 1. Contractor shall include all costs in the base bid for labor, materials, all special inspections and structural engineering design necessary to meet the Seismic Design Requirements for Non-structural Components (Chapter 13, ASCE/SEI 7-16 Minimum Design loads for Buildings and Other Structures) as required by IBC, or CBC where adopted, Section 1617A and as related to the installation of all electrical equipment furnished under this contract. See Specific Project Site Seismic Criteria on architectural and/or structural plans which include Building Occupancy Category, Seismic Design Category, Design Spectral Response Acceleration (S_{DS}), Height factor ratio (z/h) and Site Class. Non-structural Component Importance Factor (I_P) for a particular component shall be determined based on the following criteria:
- a. I_P=1.0: Non-life safety, Non-structural Components in an Occupancy Category IV Facility not required for continued operations of the facility or in any other Occupancy Category Facility where component failure will not impair continued operation of the facility.
- b. I_P=1.5: Designated Seismic Systems are those non-structural components in any Occupancy Category IV facility (except as noted above) or that are a part of any code-defined Critical, Life Safety, Emergency and Legally Required Standby Electrical System. Additionally, those non-structural components containing hazardous materials shall be classified as Designated Seismic Systems. While Designated Seismic Systems are generally identified on the plans, they may include items such as Generators, Automatic Transfer Switches, UPS units and all associated electrical distribution equipment and components necessary for the designated seismic system to form a complete and operable system. The Contractor shall ultimately be responsible for identifying Designated Seismic Systems. For any electrical component either identified on the plans or determined by the contractor to be a Designated Seismic System, all line and load side electrical distribution systems supporting that Designated Seismic System (including, but not limited to, feeders, panel boards switchboards, transformers, all related component supports and attachments, etc.) shall be considered a part of the designated seismic system for the purposes of code-compliance and seismic certification.
- 2. Provide a delegated-design submittal for each of the following seismic-restraint systems to be used as

c. z/h - Height factor ratio: See plans for respective equipment locations.

- a. Restraint Channel Bracings consisting of MFMA-4, shop-or field-fabricated bracing assembly made of slotted steel channels with accessories for attachment to braced component at one end and to building structure at the other end, with other matching components, and with corrosion-resistant coating; rated in tension, compression, and torsion forces.
- b. Restraint Cables consisting of ASTM A 603 galvanized-steel cables. End connections made of steel assemblies with thimbles, brackets, swivel, and bolts designed for restraining cable service, with a minimum of two clamping bolts for cable engagement.
- minimum of two clamping bolts for cable engagement.
 c. Seismic-Restraint Accessories consisting of hanger rod/hanger rod stiffener assemblies, multifunctional steel connectors for attaching hangers to rigid channel bracings and/or restraint cables, bushings for floor
- and wall-mounted equipment, anchor bolts, and resilient isolation washers and bushings.
 d. Mechanical Anchor Bolts consisting of drilled-in and stud-wedge or female-wedge type in zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength required for anchor and as tested according to ASTM E 488.
- e. Adhesive Anchor Bolts consisting of drilled-in and capsule anchor system containing resin and accelerator, or injected polymer or hybrid mortar adhesive. Provide specific LEED-compatible, environmentally-friendly resins and adhesives on all LEED projects. Provide anchor bolts and hardware with zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength required for anchor and as tested according to ASTM E 488.
- 3. Submittal shall include design calculations and details for selecting seismic restraints complying with performance requirements, design criteria, and analysis data signed and sealed by the contractor's structural engineer responsible for their preparation. Calculations shall include, but not be limited to, static and dynamic loading caused by equipment weight, operation, and seismic and, if applicable, wind forces required to select seismic and, if applicable, wind restraints and for designing vibration isolation bases. Provide seismic and wind-restraint detailing to support system selection, arrangement of restraints, attachment locations, methods, and spacings with all components identified to include their strengths, directions and values of forces transmitted to the structure during seismic events and association with vibration isolation devices. Sizes of components shall be selected so strength will be adequate to carry present static and seismic loads to accommodate 25% spare future capacity within specified loading limits.
- 4. Any pre-approval and evaluation documentation shall have a California Office of Statewide Health Planning and Development (OSHPD) Special Seismic Certification Preapproval (OSP) demonstrating horizontal and vertical load testing and analysis showing maximum seismic-restraint ratings, by ICC-ES or another agency acceptable to authorities having jurisdiction. Ratings based on independent testing are preferred to ratings based on calculations. If preapproved ratings are not available, submittals based on independent testing are preferred. Calculations (including combining shear and tensile loads) that support seismic-restraint designs must be signed and sealed by a qualified professional engineer.
- 5. Coordinate the location of embedded connection hardware with supported equipment attachment and mounting points and with requirements for concrete reinforcement and formwork specified elsewhere in the project specifications.
- 6. Install flexible connections in runs of raceways, cables, wireways, cable trays, and busways where they cross seismic joints, where adjacent sections or branches are supported by different structural elements, and where connection is terminated to equipment that is anchored to a different structural element from the one supporting them as they approach equipment. Flexible connection limitations of the NEC, or CEC where adopted, shall apply.
- 7. Install seismic-restraint devices using methods approved by OSHPD or an agency acceptable to authorities having jurisdiction providing required submittals for component.
- 8. Multiple Raceways or Cables: Secure raceways and cables to trapeze member with clamps approved for application by OSHPD or an agency acceptable to authorities having jurisdiction.
- 9. The contractor shall engage a qualified testing agency to perform tests and inspections as listed in other Project Specifications, but as a minimum shall include at least four of each type and size of installed anchors and fasteners selected by Architect. Schedule tests with Owner, through Architect, before connecting anchorage device to restrained component (unless post connection testing has been approved), and with at least seven days' advance notice. Obtain Architect's approval before transmitting test loads to structure. Provide temporary load-spreading members as required. Test to 90 percent of rated proof load of device. Prepare and submit test and inspections reports.

PART 3 - EXECUTION

- 3.1 PREPARATION AND INSTALLATION
- A. Installation of Conduit and Outlet Boxes:
- All conduit installed in the dry walls or ceilings of a building shall be steel tube (EMT), aluminum tube (EMT), or intermediate Metal Conduit (IMC). Flexible conduit shall not be used in lieu of EMT, IMC or rigid conduit except as noted herein.
- 2. Galvanized rigid conduit (GRC) or intermediate metal conduit (IMC) shall be used as follows:
- a. When noted on the drawings.b. When considered exposed to damage by the local AHJ.
- c. When installed in wet or damp locations and of a trade size where listed-raintight fittings, connectors, couplings, etc. are unavailable.

bid and in accordance with pre-bid substitution request requirements of these specifications.

- d. When required by NEC or CEC Article 517.13
 e. When installed in concrete and masonry. The use of ENT in CMU walls and parking structures may be allowed only as directed in writing by the Engineer. Request for ENT substitution must be made prior to
- 3. Intermediate metal conduit (IMC), is approved for use in all locations as approved for GRC or EMT and in accordance with NEC, or CEC where adopted, Article 342.
- 4. Flexible steel conduit shall only be permitted to be used at light fixture outlets and connections to vibrating electrical equipment. All flexible steel conduit runs shall be less than 6'-0". Except when concealed in walls or other structural elements, all outdoor installation shall be made using liquid-tight flex with approved fittings. Include a separate insulated green ground conductor sized per NEC in each conduit. Other uses of flexible conduit shall be allowed only as approved in writing by the Engineer.
- 5. Flexible liquid-tight conduit shall be installed in lieu of the flexible steel where required by NEC, or CEC where adopted, in damp and wet location, where exposed to weather, in refrigerated area (65 Deg. F or less), and/or between seismic joints. All rotating electrical equipment shall be supplied with flexible, liquid-tight conduit with appropriate slack and shall not exceed thirty-six (36) inches. Include a separate insulated green ground conductor sized per NEC in each conduit. Other uses of liquid-tight flexible conduit shall be allowed as approved in writing by the Engineer on a case by case basis.
- Rigid metallic conduit installed underground or embedded in concrete shall be 1" trade size minimum and shall be wrapped with 20 mil polyvinyl chloride plastic tape. PVC conduit installed underground or imbedded in concrete shall be 3/4" minimum trade size.
- Where required for providing an Electrical Circuit Protective System to comply with NEC, or CEC where adopted, Articles 695 and 700, utilize UL Listed 2-hour fire-rated, MC cable or UL Listed 2-hour fire-rated RHH/RHW conductors in conduit.
- 8. Conduit shall be run so as not to interfere with other piping, fixtures or equipment.
- 9. The ends of all conduits shall be cut square, carefully reamed out to full size and shall be shouldered in fitting.10. No running threads will be permitted in locations exposed to the weather, in concrete or underground. Special union fittings shall be used in these locations.
- 11. Where conduit is underground, under slabs or grade, exposed to the weather, or in wet locations, make joints liquid tight and gas tight.
- 12. All metal conduit in masonry and concrete and where concealed under floor slabs shall have joints painted with thread compound prior to makeup.

- 13. PVC conduit shall not be run in walls except where approved by the Engineer prior to bid in limited instances that may include concrete or CMU walls used in site retaining, parking structures, or exterior equipment yard
- 14. Where conductors enter a raceway or a raceway in a cabinet, pull box, junction box, or auxiliary gutter, the conductors shall be protected by a plastic bushing type fitting providing a smoothly rounded insulating surface.
- 15. Where conduit extends through roof to equipment on roof area, the Contractor shall provide flashing material compatible with the roofing system as required by the roofing specifications or as required by the Owner's roof warranty. This flashing shall be delivered to the roofing Contractor for installation. The actual location of all such roof penetrations and outlets shall be verified by the Architect/Owner. Contractor to verify type of flashing prior to bid and include all costs.
- 16. All conduit shall be supported at intervals not less than 6'-0" and within 12" from any outlet and at each side of bends and elbows. Conduit supports shall be galvanized, heavy stamped, two-hole conduit clamp properly secured.
- 17. Where conduit racks are used, the rack shall consist of two piece conduit clamps attached to galvanized steel slotted channels, properly secured via threaded rods attached directly to the building structure.
- 18. Nail-in conduit supports, one-piece set screw type conduit clamps or perforated iron for supporting conduit shall not be used.
- 19. Seismic Conduit Support (less than 20lbs):

additional requirements.

or enclosure walls, etc.

All conduit shall be supported in such a manner that it is securely attached to the structure of the building.
 Attachment is to be capable of supporting the tributary weight of conduit and contents in any direction.
 Maximum spacing of support and braces are to be as follows:
 CONDUIT SIZE
 MAXIMUM SPACING

CONDUIT SIZE MAXIMUM SPACING 1/2" to 3" 6'-0" 3-1/2" to 4" 8'-0"

- 20. All conduit runs shall be installed parallel or perpendicular to walls, structural members, or intersection of vertical planes and ceilings. Field made bends and offset shall be avoided where possible. Crushed or deformed raceway shall not be installed.
- 21. Open knockouts in outlet boxes only where required for inserting conduit.

match adjacent surfaces as approved by the Owner's Project Manager.

- 22. Locate wall outlet of the same type at same level in all rooms, except where otherwise noted.
- 23. Outlet boxes on metal studs shall be attached to metal hangers, tack welded or screwed to studs; On wood studs attachment shall be with wood screws, nails are not acceptable.
- 24. Recessed boxes less than 20lbs shall not be mounted back-to-back in any wall; minimum offset shall be 24 inches.
 25. Junction Boxes that do not contain any device(s) shall be located in storage rooms, electrical closets or above accessible ceilings, not in hard lid ceilings or other forms of inaccessible ceilings. Place boxes which must be exposed to public view in a location approved by the Owner's Project Manager. Provide covers or plates to
- 26. Surface-mounted pull boxes, junction boxes, etc. shall be attached to wall using appropriate screws with lengths accounting for thickness of finishes (gypsum board, etc.). Provide mounting hardware as required for all boxes. Where required provide backing per det. 2/A50.1.
- 27. Except where below grade, sleeves shall be installed where conduit passes through masonry or concrete walls and shall be 24 gauge galvanized steel no more than 1/2" greater in diameter than the outside diameter of the conduit. When located in non-rated structures, caulk conduit sleeve with stone wool. When located in fire rated structures, provide UL listed fire stopping system. See fire stopping section of this specification for
- 28. All boxes shall be covered with outlet box protector, Appleton SB-CK, or similar device/method to keep dirt/debris from entering box, conduit or panels. If dirt/debris does get in, it shall be removed prior to pulling wires
- 29. All boxes installed outdoors shall be suitable for outdoor installations, gasketed, screw cover, and painted as directed by the Architect with weatherproof paint to match building.
- All conduit entries to outdoor mounted panels, cabinets, boxes, etc., shall be made using Myers "SCRU-TITE" hubs Series ST.
- 31. Provide nylon or a 1/8-inch O.D. polyethylene rope, rated at 250 pounds tensile strength, in all conduits more than 5 feet in length left empty for future use. Not less than 5 feet of rope shall be left at each end of the conduit. Tag all lines with a plastic tag at each end indicating the termination/stub location of the opposite end of the conduit.
- 32. All multiple conduit runs within suspended ceilings shall be suspended from building structure by means of unistrut hangers/racks. Conduit shall not be allowed to lay on ceiling or be supported from ceiling suspension wires or other suspension system. Support conduit to structure above suspended ceilings 8" minimum above ceiling to allow removal of ceiling tile. Maintain two inch clearance above recessed light fixtures.
- 33. All exposed conduits and support hardware shall be painted to match the finish of the wall or ceiling to which it is supported.
- 34. Where conduits or wireways cross seismic joints, provide approved flexible conduit connection or approved expansion/deflection fitting to allow for displacement of conduit in all three axes. Connection shall allow for movement in accordance with design of seismic joint. Non-flexible raceways crossing expansion joints or other areas of possible structural movement shall make provision for 3-way movement at such points by means of expansion/deflection fittings. Fittings shall be installed in the center of their axes of movement and shall not be deflected to make part of a conduit bend, or compressed or extended to compensate for incorrect conduit length. Install flexible conduit connection(s) or approved expansion/deflection fitting(s) complete with ground jumpers. Where necessary, provide approved expansion joints to allow for thermal expansion and contraction of conduit(s). Install expansion joints complete with ground jumpers.
- 35. Seal all conduits where termination is subject to moisture or where conduit penetrates exterior wall, floor or roof, in refrigerated areas, classified (hazardous areas) and as indicated on the drawings.
- 36. Except as otherwise indicated on the drawings or elsewhere in these specifications, bends in feeder and branch circuit conduit 2 inches or larger shall have a radius or curvature of the inner edge, equal to not less than ten (10) times the internal diameter of the conduit. Except where sweeping vertically into a building where sweep radius equals ten (10) times conduit diameter, underground communications and building interconnect conduits 3 inches or larger shall have a minimum 12'-6" radius or curvature of the inner edge. For the serving utilities, radius bends shall be made per their respective specifications.
- 37. Tag all empty conduits at each accessible end with a permanent tag identifying the purpose of the conduit, footage end-to-end, and the location of the other end. In wet, corrosive outdoor or underground locations, use brass, bronze, or copper 16 gauge tags secured to conduit ends with #16 or larger galvanized wire. Inscribe on the tags, with steel punch dies, clear and complete identifying information.

C. Grounding:

39. Installation of Metal Clad (MC) Cable (when use is permitted in the Allowed Specification Deviations Section or

a. Provide J-box above accessible ceiling prior to running MC cable within partitions or walls. J-box shall be

poke-through feeds utilizing MC cable, transition from MC cables to conduit and wire near the panelboard

in the TI accessible ceiling space on the floor below the panel board via code-sized gutter(s). Utilize UL

listed, insulated barrier strips with recessed screw heads (Ideal #89-6?? series or equal) fastened within

designation. Label each phase conductor with circuit number using wire markers (ideal or equal). Wire

the gutter(s), terminate MC conductors on one side of the strip(s) and individual conductors in conduit

Deductive/Additive Alternate Pricing Section generally located on the symbols list drawing).

permanently labeled with panel identification and circuit numbers contained within.

Provide (1) spare 3/4" conduit from each gutter to its respective panelboard.

d. MC cable shall not run directly into panelboards, distribution boards or electrical rooms.

f. Use lock or spring nut MC cable fittings.

requirements.

TC-13, and be UL-listed

less than 50 lbs.

B. Installation of 600V Conductors:

switchboard gutters.

277V circuits longer than 150 feet.

fitting to prevent movement and sag.

installation of a TIA 569-compliant pull box.

boxes as a repair method is unacceptable.

o. Empty ENT runs shall be provided with a nylon pull string.

1. All electrical wire, including signal circuits, shall be installed in conduit.

b. Wires #4 AWG and larger AWG shall be joined together as follows:

Paralleled conductor connections shall be by mechanical lugs.

obtaining approval in writing from the Structural Engineer of Record.

ceiling support wires. The use of nylon cable ties to support MC cable is not allowed.

b. Overhead MC cable runs shall generally follow building lines to provide a neat and workmanlike

c. Provide code-sized J-boxes to accommodate MC cable splicing in general. For systems furniture

from the panel board(s) on the other side of the strip(s). Label each terminal strip(s) with panel

nuts are not an acceptable alternative to the terminal strips in these underfloor transition locations.

e. MC cabling shall be provided with its own code-approved ceiling support wires, cable hangers, individual

g. Cable runs shall be continuous from wiring device to wiring device - no intermediate splicing J-boxes

h. When terminating or splicing at a junction, outlet, or switch box, cut the cable with an armored cable rotary

cutter such that 6" of free conductors remain for connections or splices. Use screw-in or spring lock

connector and ensure a proper bonding by firmly tightening the connector to both the box and cable.

Insert an anti-short bushing at cable ends to protect conductors from abrasion and use insulated

. MC cables passing through fire-rated walls or floors shall be firestopped as required with a UL listed

k. Installation shall not exceed code requirements for total current carrying conductors in multiple MC cable

runs bundled together into a single MC cable hanger or strap, unless support device is specifically listed

I. Maintain MC cable clearance of at least 6" from hot water and any other high temperature pipes. Maintain

m. MC cabling shall not be run through exposed ceilings, where open grid conditions exist, exposed on walls,

n. Use of MC-AP, "MC All Purpose" or MC cabling where the interlocked armor sheath forms all or a portion

or exposed to view. See Power Plan and Lighting Plan General Notes for additional requirements.

40. Installation of Electrical Nonmetallic Tubing (ENT) Cable (when use is permitted in the Allowed Specification

Deviations Section or Deductive/Additive Alternate Pricing Section generally located on the symbols list

a. When approved for use in the Allowed Specification Deviations Section or Deductive/Additive Alternate

Pricing Section, generally located on the symbols list drawing, 1/2" and 3/4" trade size ENT shall be

ENT conduit shall meet the requirements of Underwriters Laboratories Standards 1479 and 1653, NEMA

c. All ENT conduit, ENT fittings, ENT boxes and ENT accessories shall be UL listed and manufactured by

listed for use in fire resistance rated concrete floors and ceilings with resistance ratings as indicated

d. All ENT fittings and ENT boxes shall be concrete-tight listed without the use of tape. Additionally, ENT

fittings shall be constructed of high-impact PVC and able to resist ENT conduit pull out forces of a

e. Where tubing enters a box, fitting or other enclosure provide a bushing or adapter to protect conductors

f. ENT junction boxes shall have brass screw inserts and shall be rated to support lighting fixtures weighing

from abrasion unless the box, fitting, or enclosure design provides equivalent protection.

g. Concrete tight metal boxes shall be used to support pendant hung fixtures or fixtures over 50 lbs.

h. ENT shall be provided in continuous lengths between junction boxes without use of in-line splices or

i. All ENT conduit containing electrical branch circuits shall contain a code-sized equipment ground

. ENT shall transition to EMT, IMC, RMC, or rigid PVC, as appropriate or as called out elsewhere in this

k. ENT shall transition to appropriately sized PVC expansion joint(s) at all structure expansion or seismic

I. ENT shall be securely fastened and supported every 2 - 3 ft. and within 1 ft. of every junction box and

m. ENT shall be routed straight without sags, or excessive bending. Where bends are required, comply with

Table 362.24 of the NEC for minimum radius of bends. Number of bends shall not exceed quantity

allowed by code where used for power and lighting branch circuit and/or feeder conductors. Where

exceed the equivalent of (2) 90 degree bends with conduit length no more than 100 feet without

n. Separation of ENT from fitting(s), excessive sags or deflections in ENT runs that prevent pulling of wire, and other ENT system product or system installation failures/errors, shall be corrected by saw cutting and

patching as necessary at no additional cost to the Owner. Use of surface mounted conduits and junction

p. Coordinate installation of raceway with structural steel and other structural members. Do not cut, notch or

q. No more than (2) 3/4" ENT conduits may cross each other within a horizontal concrete slab without

2. All circuits and feeder wires for all systems shall be continuous from overcurrent protective device or switch to

terminal or farthest outlet. No joints shall be made except in pull, junction or outlet boxes, or in panel or

a. Utilize pre-insulated "winged" spring type connectors, 3M Company "Performance Plus" #O/B or #R/Y or

3507G epoxy resin connector sealing pack to seal the spring connector. THE USE OF PUSH-WIRE

CONNECTORS (e.g. "WAGO" OR EQUIVALENT) IS STRICTLY PROHIBITED.

equal and as required for splices and taps in conductors #6 AWG and smaller. When a spring connector

1) When located in an underground environment or when subject to moisture, the splice shall be made with compression connector and sealed by a 3M, or equal, PST cold shrink connector insulator.

2) When located in an interior environment, the splice shall be made with an ILSCO or equal dual rated,

Connections to busbar shall be made with dual-rated copper/aluminum one-piece compression lugs.

3. Thoroughly clean all conduit and wire-ways and see that all parts are perfectly dry before pulling any wires.

5. For 20A branch circuit wiring, increase #12 conductors to #10 for 120V circuits longer than 100 feet and for

manufacturer. Where required, provide cable supports in vertical conduits and provide lower end of conduit

4. Install UL approved fixture wire from all lighting fixture lamp sockets into fixture outlet or junction box.

6. Conductor Support: Provide conductor supports as required by codes and recommended by cable

insulated splicer-reducer connector or multi-tap connector listed for use with 75/90 degree Celsius

is used in an underground environment or when subject to moisture, utilize a 3M Company Scotchcast

otherwise alter structural members without obtaining approval in writing from the Structural Engineer of

utilized for communications system conductors (phones, data cabling, etc.) number of bends shall not

minimum of 175 lbs. ENT fittings with fewer than 6 locking tabs for ENT connection shall utilize

ENT to metal box fittings shall be equipped with a threaded end and lock washer.

connectors and shall be clearly marked/labeled at least every 10-feet.

specification, for all exposed conduits within/on/under a parking structure.

allowed for concealed lighting branch circuits, receptacle branch circuits and miscellaneous signal system

the same manufacturer so as to form a complete ENT system. ENT systems shall only be used if they are

elsewhere in the project plans. ENT System shall comply with NEC, or CEC where adopted, Article 362.

manufacturer-approved glue as additional protection from fitting/conduit separation. ENT conduit to rigid

conduit transition fittings shall be equipped with set screw fittings on the rigid conduit side of the fitting.

at least 12" clearance between MC cable(s) and telecommunication conduits and cables. MC cable shall

i. MC Cable bend radius shall not be less than seven (7) times the external diameter of the cable.

system. See firestopping requirements outlined elsewhere in this specification for additional

for such purpose. Neutrals shall be counted as current carrying conductors.

circuits within concrete floors, walls and columns within parking structures.

cross telecommunication cables and conduits at right angles.

of the equipment grounding conductor is expressly prohibited.

spring steel support clips, steel trapeze hangers, threaded rods or dedicated #10 AWG drop wire. Cable

supports shall be fastened to concrete slabs, beams, joists or other structural members of the building. In

no case shall MC cable rest on ceilings, suspended ceilings or structures. Do not support MC cable using

- 1. Provide separate green equipment ground conductor in all electrical raceways to effectively ground all fixtures, panels, controls, motors, disconnect switches, exterior lighting standards, and non current-carrying metallic enclosures. Use bonding jumpers, grounding bushings, lugs, busses, etc., for this purpose. Connect the equipment ground to the building system ground. Use the same size equipment ground conductors as phase conductors, up through #10 AWG. Use NEC (or CEC where adopted) Table 250.122 for conductor size with phase conductors #8 and larger, if not shown on the Drawings.
- 2. Clean the contact surfaces of all ground connections prior to making connections.
- D. Line Voltage and Low Voltage Power Supplies to all Mechanical Equipment Including Plumbing, Heating and Air Conditioning Units:
 - An electric power supply, including conduit, any necessary junction and/or outlet boxes and conductors and connection shall be furnished and installed by the Contractor for each item or mechanical equipment.
- 2. Power supplies to individual items of equipment shall be terminated in a suitable outlet or junction box adjacent to the respective item of equipment, or a junction box provided by the manufacturer or the equipment and directed by the Mechanical Contractor. Allow sufficient lengths of conductor at each location to permit connection to the individual equipment without breaking the wire run.
- 3. The location of all conduit terminations to the equipment is approximate. The exact location of these conduit terminations shall be located and installed as directed by the Mechanical or Plumbing Contractor.
- 4. Provide power supplies to all plumbing and mechanical equipment, including, but not limited to, equipment furnished and installed by Owner or Contractor, such as heating and air conditioning equipment, pumps, boilers, auto valves and water coolers, etc. The installation shall produce a complete and operable system.
- Unless otherwise noted, the Contractor shall furnish and install all conduit, boxes, wires, etc., for line voltage wiring and low voltage wiring.
- It is the Contractor's responsibility to verify with the drawings of other trades regarding the extent of his responsibility for mechanical equipment. The bid must include a sum sufficient to cover the cost of the installation.
- 7. The location of all power supply connection and/or terminations to the mechanical equipment is approximate.

The exact locations of these terminations shall be verified with other trades during construction.

E. Prefabricated Equipment: Installation of all prefabricated items and equipment shall conform to the requirements of the manufacturer's specifications and installation instruction pamphlets. Where code requirements affect installation of materials and equipment, the more stringent requirements, code or manufacturer's instructions and/or specifications, shall govern the work.

F. Firestopping:

- The Contractor shall be responsible for furnishing all material, labor, equipment, and services in conjunction
 with the selection and installation of a complete, fully functioning, code compliant, UL-listed, fire stop
 assembly/system(s) as required by project conditions.
- 2. Each fire stop assembly/system shall have an "F" and/or "T" rating as required by each condition requiring fire stopping. Each fire stop assembly/system shall have a current UL listing, as indicated in the latest edition of the UL Fire Resistance Directory. Contractor shall verify acceptability of all fire stopping methods and system selections with the authority having jurisdiction prior to installation. The Contractor shall install each firestop assembly/system in accordance with the manufacturer's printed instructions
- 3. Each fire stop assembly/system shall be labeled with fire stop manufacturer-furnished label on each side of the fire stopping systems depicting UL number, etc.

END OF SECTION

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT

APP: 02-121348 INC:

REVIEWED FOR

SS FLS ACS D

DATE: 6/30/2023

T NAME: BEAR CREEK HIGH SCHOOL RESTROOMS MODERNIZA

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DESCRIPTION

REVISIONS:

SCALE:

SHEET NUMBER: **E21.2**SHEET TITLE:

ELECTRICAL

As indicated

SPECIFICATION



tk1sc Job #: B2304076.000