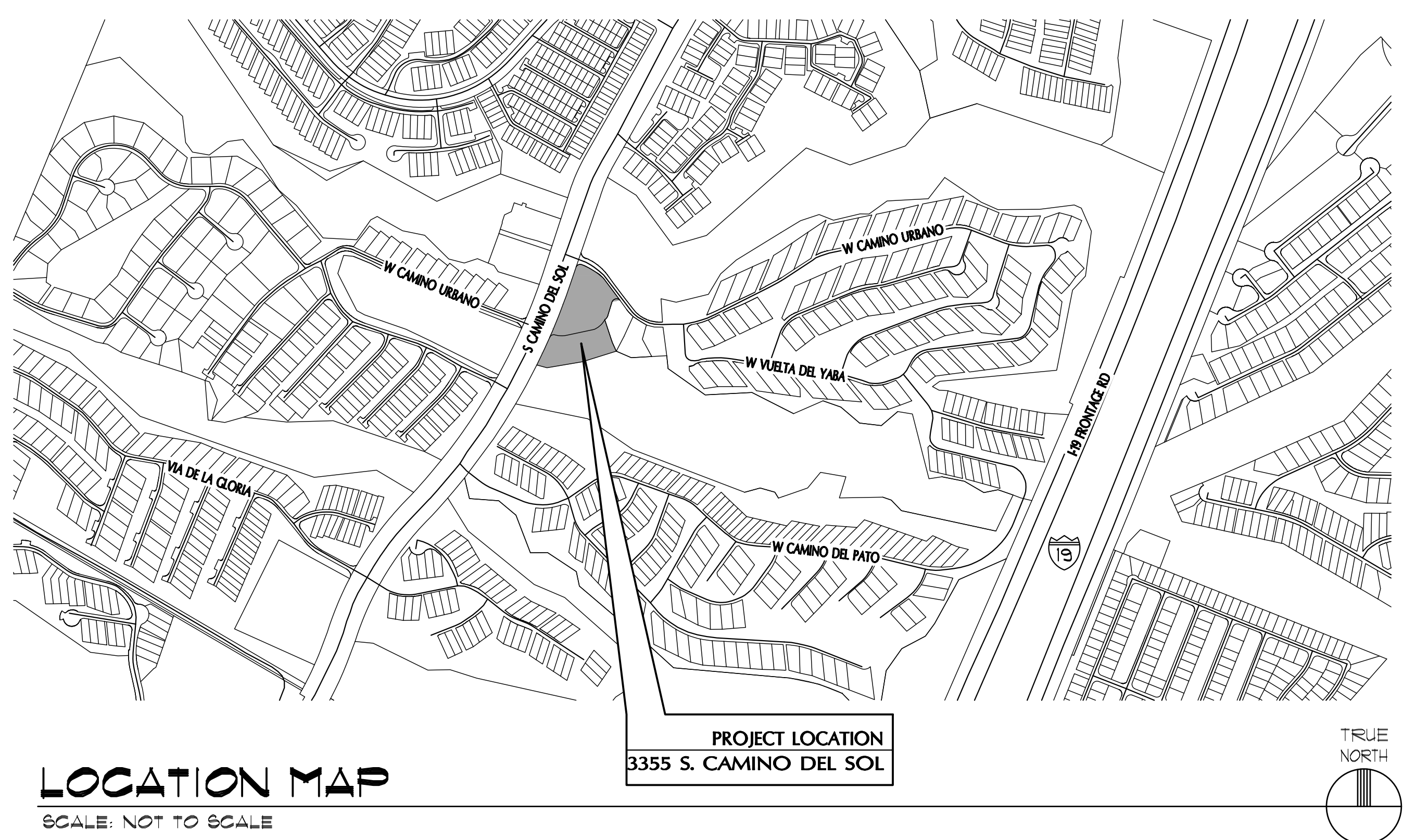
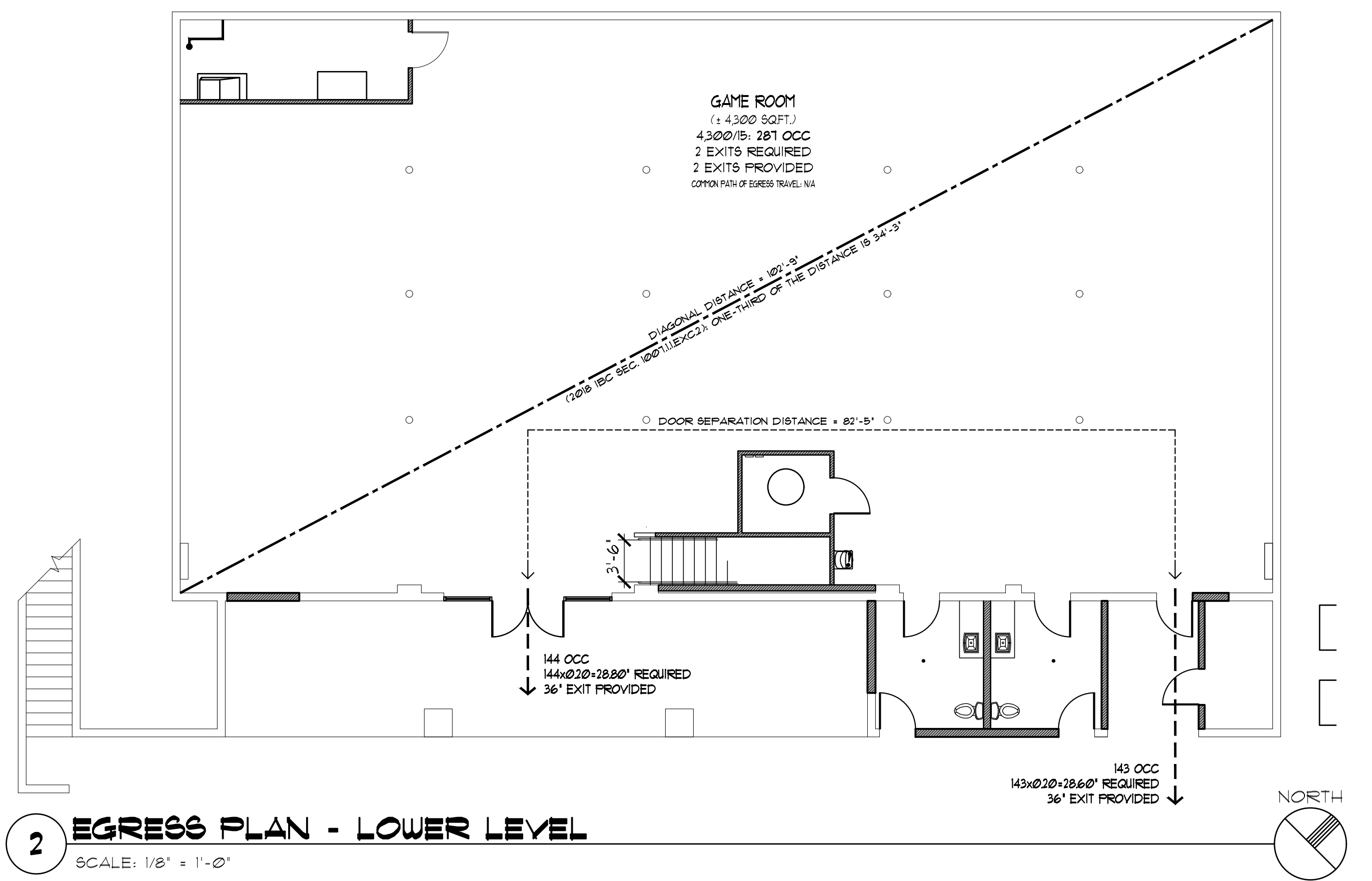
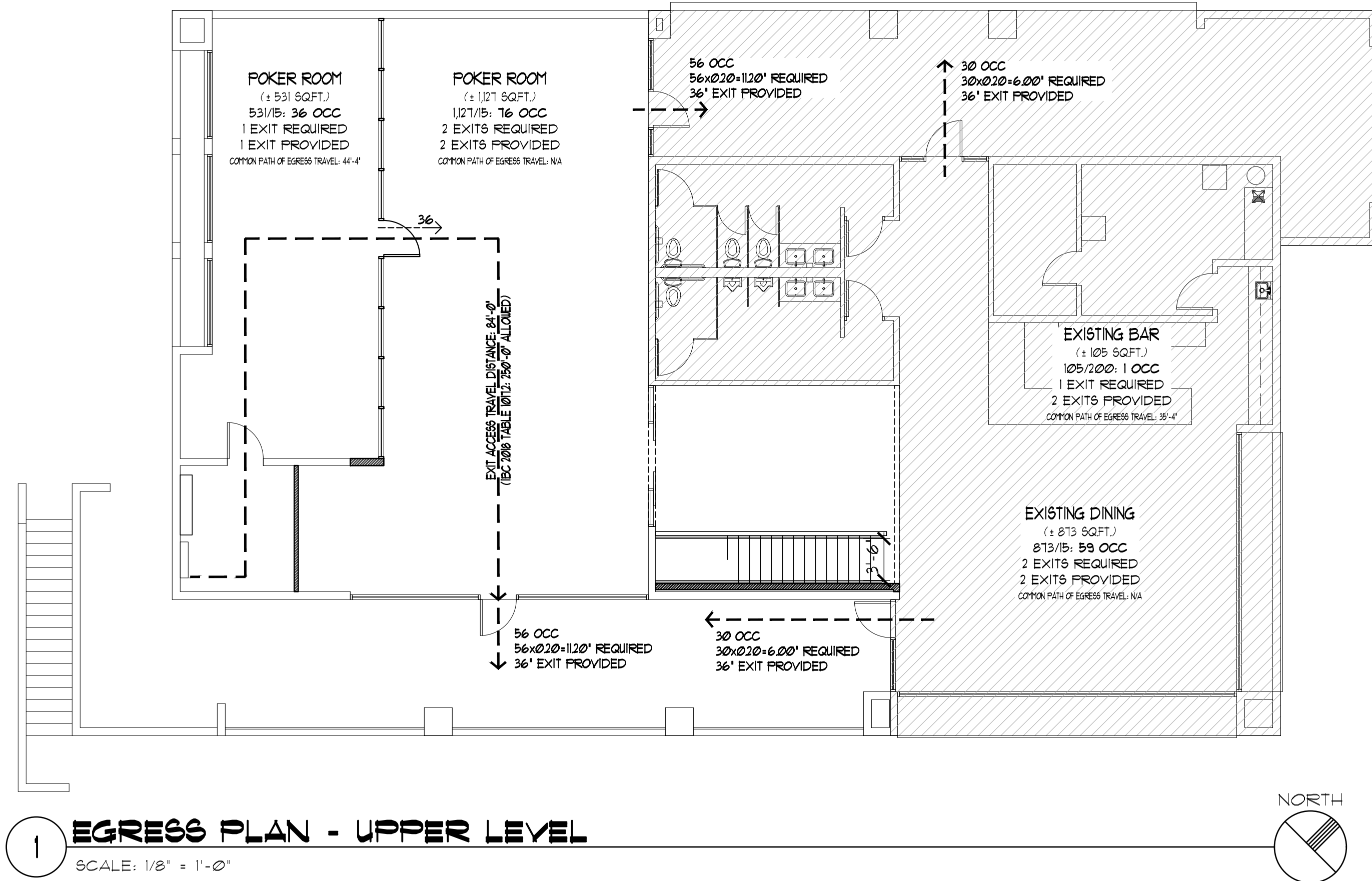


GENERAL REQUIREMENTS

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, AS LOCALLY AMENDED, AND ALL APPLICABLE CODES & ORDINANCES.
- OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWING, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
- DO NOT USE SCALED DIMENSIONS. USE WRITTEN DIMENSIONS, WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- ALL DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.
- REMOVE ALL MATERIALS RESULTING FROM DEMOLITION WORK FROM THE SITE IN SUCH A MANNER AS TO AVOID CREATING A NUISANCE. STOCKPILE ANY SALVAGED ITEMS PER OWNER'S REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR DISPOSE OF ALL SALVAGED ITEMS TO AN OFF SITE PROPERTY LOCATION.
- THE CONTRACTOR OR SUBCONTRACTOR SHALL INSPECT THE PREMISES PRIOR TO COMMENCING WORK TO CHECK EXISTING CONDITIONS. SHOULD CONTRACTOR OR SUBCONTRACTOR FIND CONDITIONS WHICH HE BELIEVES WOULD IMPEDE HIS WORK, THEN SUCH CONDITIONS MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT. FAILURE TO SO ADVISE WILL CONSTITUTE NOTICE THAT THE CONTRACTOR IS FULLY SATISFIED AND THAT HE INTENDS TO PERFORM HIS OBLIGATIONS WITH NO ALLOWANCE EITHER IN TIME OR MONEY FOR ANY IMPEDIMENTS TO HIS WORK.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD. IF DIMENSIONAL ERRORS OCCUR, OR CONDITIONS NOT COVERED ON THE DRAWINGS IS ENCOUNTERED, CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE COMMENCING THAT PORTION OF THE WORK.
- DETAILS, NOTES AND FINISHES SHALL BE APPLICABLE TO ALL TYPICAL CONDITIONS, WHETHER OR NOT REFERENCED AT ALL PLACES. WHEN WORK NOT SPECIFICALLY CALLED OUT IS REQUIRED TO COMPLETE THE PROJECT, IT SHALL BE PROVIDED AND BE OF THE BEST MATERIALS AND WORKMANSHIP.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGES THROUGHOUT CONSTRUCTION. HE SHALL MEET THE LATEST REQUIREMENTS OF THE UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH STANDARDS AND COMPLY WITH: THE MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION, ALL APPLICABLE SAFETY AND SANITARY LAWS, REGULATIONS AND ORDINANCES, AND ANY SAFETY RULES OR PROCEDURES ESTABLISHED BY THE ARCHITECT AND/OR THE OWNER FOR THE PROJECT.
- THE CONTRACTOR IS EXCLUSIVELY RESPONSIBLE FOR LOSS OR EXPENSE RESULTING FROM INJURY ON THE PROJECT SITE. HE ASSUMES ALL RISKS IN THE PERFORMANCE OF THE WORK AND IS RESPONSIBLE FOR SUPERVISION, MATERIALS, EQUIPMENT AND LABOR REQUIRED TO IMPLEMENT THE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPERVISION, SAFETY, ADMINISTRATION AND ALL PHASES OF ITS CONTRACT. HE IS ALSO RESPONSIBLE FOR SCHEDULING, COORDINATING, MANAGEMENT AND ADMINISTRATION OF SUB-CONSULTANTS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES AND PROTECT THEM.
- ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED AND CONDITIONED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS OR INSTRUCTIONS UNLESS HEREINAFTER SPECIFIED TO THE CONTRARY.
- ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER, ACCEPTABLE TO THE ARCHITECT.
- UNLESS OTHERWISE SPECIFICALLY NOTED, THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT AND MACHINERY, TRANSPORTATION, AND OTHER FACILITIES AND SERVICES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK.
- THE CONTRACTOR SHALL PAY FOR ALL FEES, PERMITS, ETC. NECESSARY FOR PROPER COMPLETION OF WORK (U.N.O.). THE CONTRACTOR SHALL FILE ALL APPLICATIONS REQUIRED AND PROCURE ALL PERMITS.
- THE CONTRACTOR WARRANTS TO THE OWNER THAT ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT WILL BE NEW UNLESS OTHERWISE SPECIFIED, AND THAT ALL WORK WILL BE GOOD QUALITY, FREE FROM FAULTS AND DEFECTS, AND IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. ALL WORK NOT CONFORMING TO THESE STANDARDS MAY BE CONSIDERED DEFECTIVE. IT IS UNDERSTOOD THAT NO INFERIOR OR NON-CONFORMING WORK OR MATERIALS WILL BE ACCEPTED WHETHER DISCOVERED AT THE TIME THEY ARE INCORPORATED IN THE WORK OR AT ANY TIME BEFORE OR AFTER FINAL ACCEPTANCE IF REQUIRED BY THE OWNER OR ARCHITECT. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT.
- THE WARRANTIES AND GUARANTEES PROVIDED IN THE CONSTRUCTION DOCUMENTS SHALL BE IN ADDITION TO AND NOT IN LIMITATION OF ANY OTHER WARRANTY OR GUARANTY OR REMEDY REQUIRED BY LAW OR BY THE CONSTRUCTION DOCUMENTS.
- THE ARCHITECT'S AND ENGINEER'S OBSERVATION FOR COMPLIANCE WITH THE PLANS AND SPECIFICATIONS SHALL NOT BE DEEMED SUPERVISION OR CONTROL OF CONSTRUCTION MEANS OR METHODS EMPLOYED BY THE CONTRACTOR OR ANY SUBCONTRACTOR.
- PROVIDE WOOD BLOCKING SUPPORT AT ALL SURFACE MOUNTED ITEMS MOUNTED TO FACE OF GYPSUM WALLBOARD WALLS.
- CAULK ALL JUNCTURES BETWEEN DIFFERENT MATERIALS.



GREEN VALLEY RECREATION CENTER DEL SOL CLUBHOUSE

3355 S. CAMINO DEL SOL • GREEN VALLEY, ARIZONA 85614

CONSTRUCTION/ PERMIT PACKAGE

PROJECT DIRECTORY

ARCHITECT SEAVER / FRANKS ARCHITECTS INC, ALA 2552 NORTH ALVERNON WAY TUCSON, ARIZONA 85712 (520) 795-4000 CONTACT: RICHARD HUCH	STRUCTURAL ENGINEER ENNOVATIVE ENGINEERING P.O. BOX 37013 TUCSON, ARIZONA 85740 (520) 440-2375 CONTACT: CRAIG HILL	ELECTRICAL ENGINEER CC ELECTRICAL CONSULTING, LLC 5551 SOUTH WHITE MOUNTAIN ROAD - SUITE 2-538 SHOW LOW, ARIZONA 85901 (602) 400-1792 CONTACT: JEFFREY CLARK
CIVIL ENGINEER RICK ENGINEERING, LLC 2401 W. PEORIA AVENUE - SUITE 130 PHOENIX, ARIZONA 85029 (586) 601-4102 CONTACT: BLAKE JUNAK	MECHANICAL/PLUMBING ENGINEER KC MECHANICAL ENGINEERING, LLC 5447 EAST FIFTH STREET - SUITE 112 TUCSON, ARIZONA 85711 (520) 327-7611 CONTACT: RUBY O'BRIEN-METZGER PABLO ZAMORA	

CODE REVIEW

SUMMARY OF GOVERNING REGULATIONS				
CODE	TITLE	EDITION	LOCAL AMENDMENTS	
BUILDING CODE	IBC	2018	YES	
ACCESSIBILITY CODE	ICC ANS A117.1	2017	YES	
MECHANICAL CODE	IMC	2018	YES	
ELECTRICAL CODE	NEC	2017	YES	
PLUMBING CODE	IPC	2018	YES	
FIRE CODE	IFC	2018	YES	
ENERGY CONSERVATION CODE	IECC	2018	YES	

GENERAL BUILDING SUMMARY (FOR REFERENCE)					
BUILDING	OCCUPANCY GROUP(S)	TYPE OF CONSTRUCTION	SPRINKLER SYSTEM	BUILDING AREA/HEIGHT/ NO. OF STORIES REQUIRED	BUILDING AREA/HEIGHT/ NO. OF STORIES ACTUAL
EXISTING BUILDING	A-3 ASSEMBLY (RECREATION)	VB	YES	18,000 SQFT./FLOOR 60'-0" HIGH 2 STORIES	± 8,948 SQFT. (4,836 SQFT. LOWER + 4,112 SQFT. UPPER) ± 24'-0" HIGH 2 STORIES

CODE ANALYSIS		
NOTE: TWO FLOORS TO BE COMBINED INTO ONE BUILDING FOR CODE CALCULATIONS: 4,836+4,112 = 8,948 SQUARE FEET < 28,500 SQUARE FEET		
TOTAL OCCUPANTS = 36+76+159+287 = 459 OCC (SEE EXIT PLAN ON THIS SHEET)		
EXITING - TOTAL BUILDING REQUIRED = 2	PROVIDED = 6	PANIC HARDWARE - YES LIGHTED EXIT SIGNS - YES
EGRESS STAIRWAYS (2018 IBC SECTION 1005.3.1) EXIT WIDTH REQUIRED AT STAIRS: 60 OCC x 0.30" = 18.00" EXIT WIDTH PROVIDED AT STAIRS: 42.00"		
CORRIDORS: NON-RATED WITHIN SPRINKLERED BUILDING DEAD END CORRIDORS SHALL NOT EXCEED 50'-0"		
ALL EXITS DISCHARGE DIRECTLY TO THE EXTERIOR GRADE		
SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY (2018 IBC TABLE 1006.2.1) OCCUPANCY MAXIMUM OCCUPANT MAXIMUM COMMON PATH OF EGRESS TRAVEL LOAD OF SPACE DISTANCE WITH SPRINKLER SYSTEM		
A	49	75'-0"
THREE EXITS OR EXIT ACCESS DOORWAYS SHALL BE PROVIDED FROM ANY SPACE WITH AN OCCUPANT LOAD OF 501 TO 1000. FOUR EXITS OR EXIT ACCESS DOORWAYS SHALL BE PROVIDED FROM ANY SPACE WITH AN OCCUPANT LOAD GREATER THAN 1000.		
MIXED OCCUPANCY: YES SEPARATED USES Y or N NO NONSEPARATED USES Y or N YES		
FLAME SPREAD RATINGS (PER TABLE 602) VERTICAL EXITS N/A HORIZONTAL EXITS 26-75 OTHER SPACES 26-75		
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (2018 IBC TABLE 601) BUILDING ELEMENT CONSTRUCTION TYPE VB PRIMARY STRUCTURAL FRAME 0 HOURS EXTERIOR BEARING WALLS 0 HOURS INTERIOR BEARING WALLS 0 HOURS EXTERIOR NONBEARING WALLS 0 HOURS INTERIOR NONBEARING WALLS 0 HOURS FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS 0 HOURS ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS 0 HOURS		
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (2018 IBC TABLE 602) FIRE SEPARATION DISTANCE = TYPE OF CONSTRUCTION OCCUPANCY GROUP A X > 30 VB 0		

PLUMBING FIXTURE CALCULATIONS						
OCCUPANCY	REQUIRED				PROVIDED	
	WATER CLOSET		LAVATORY		DRINKING FOUNTAIN	
	FEMALE	MALE	FEMALE	MALE		
ASSEMBLY: A-2 1 OCC 0 FEMALE 1 MALE	0/00 = 0.00	0/00 = 0.00	0/05 = 0.00	0/5 = 0.00	0/00 = 0.00	5 WATER CLOSETS 7 LAVATORIES
ASSEMBLY: A-3 458 OCC 229 FEMALES 229 MALES	229/50 = 4.58	229/100 = 2.29	229/50 = 0.916	229/25 = 0.916	458/1000 = 0.458	4 WATER CLOSET 4 URINAL 6 LAVATORIES
TOTAL	0/00+4.58 = 4.58	0/00+2.29 = 2.29	0/00+0.916 = 0.916	0/5+0.916 = 0.916	0/00+0.458 = 0.458	4 DRINKING FOUNTAINS 2 MOP SINKS

* PER 2018 IPC SECTION 424.2

SCOPE OF WORK

THE SCOPE OF WORK FOR THIS PROJECT INVOLVES THE TENANT IMPROVEMENT OF THE GREEN VALLEY RECREATION CENTER'S DEL SOL CLUBHOUSE TO REMODEL A STORAGE SPACE ON LOWER LEVEL INTO RESTROOMS AND GAME ROOM (APPROXIMATELY 4,836 SQUARE FEET). CONSTRUCTION WILL CONSIST OF NEW INTERIOR STAIR AND NEW STEEL STUD WALLS/PARTITIONS, GYP BOARD CEILING AS REQUIRED, INCLUDED IN THE SCOPE OF THIS WORK WILL BE ALL STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WORK AS REQUIRED; REVISIONS TO THE PARKING LAYOUT WILL BE COMPLETED UNDER SEPARATE PERMIT.

DEFERRED SUBMITTALS

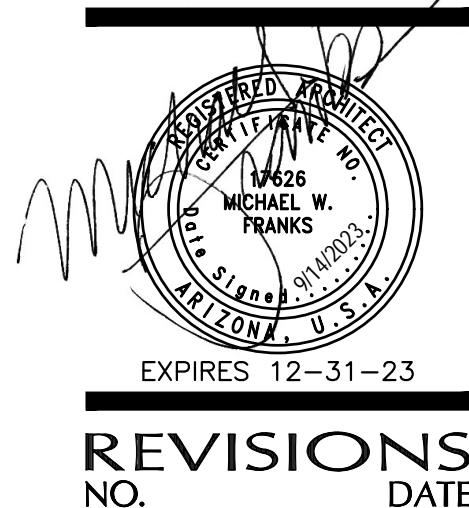
- FIRE SPRINKLER
- FIRE ALARM

SPECIAL INSPECTIONS

- EARTHWORK
- CONCRETE
- EPOXY ANCHORS
- STRUCTURAL WELDING
- HIGH STRENGTH BOLTING

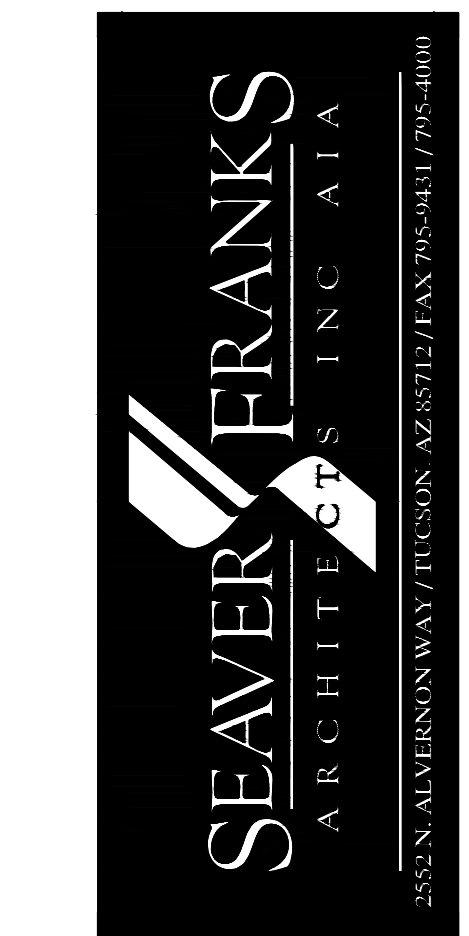
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27.	M3.0	SECOND FLOOR MECHANICAL NEW WORK PLAN
28.	M4.0	MECHANICAL SCHEDULES & DETAILS
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41.	E2.0	ELECTRICAL LIGHTING PLAN - UPPER LEVEL
42.	E2.1	ELECTRICAL LIGHTING PLAN - LOWER LEVEL
43.	E3.0	ONE LINE DIAGRAM AND PANEL SCHEDULE
44.	E4.0	ELECTRICAL SPECIFICATIONS



EXPIRES 12-31-23
REVISIONS NO. DATE

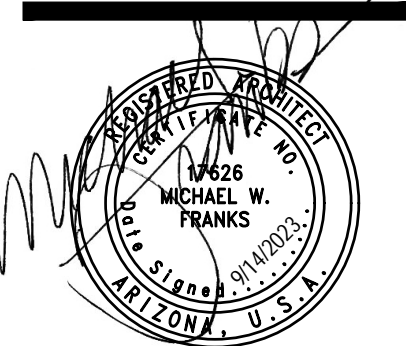
TENANT IMPROVEMENT
GENERAL INFORMATION



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

ISSUE DATE 09-14-2023
PROJ. NO. 37096
DRG. SCALE A8 NOTED

SHEET
A0.0



GENERAL PAVING + GRADING NOTES

- ALL CONSTRUCTION AND TEST METHODS SHALL CONFORM TO THE PIMA ASSOCIATION OF GOVERNMENTS (PAG) STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, VOLUMES 1 AND 2, 2015 EDITION, EXCEPT AS MODIFIED HEREIN. (MEASUREMENT AND PAYMENT TERMS DO NOT APPLY).
- CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY GOVERNMENT AGENCIES.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
- A COPY OF THE APPROVED PLANS SHALL BE KEPT IN AN ACCESSIBLE LOCATION ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE AND MAINTENANCE OF EXISTING IMPROVEMENTS AND VEGETATION IN THE WORK AREA. PAVEMENT, CURBS, AND ANY OTHER OBSTRUCTION DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR.
- UPON COMMENCEMENT OF WORK, TRAFFIC CONTROL DEVICES SHALL BE POSTED AND MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THE WORK IS COMPLETED. ALL WARNING SIGNS, BARRICADES, ETC. SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), ADOPTED BY THE STATE OF ARIZONA PURSUANT TO A.R.S.-28-650.
- IF UNANTICIPATED CONDITIONS ARE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION AND ARE BEYOND THE SCOPE OF THE DESIGN, THE OWNER SHALL BE NOTIFIED IMMEDIATELY.
- CONTRACTOR TO EXHIBIT EXTREME CAUTION WHEN EXCAVATING TO AVOID DAMAGING EXISTING UTILITY LINES IN AND AROUND THE AREA OF WORK. UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND NOT COMPLETE BUT ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME THIS PLAN WAS DESIGNED.
- CONTRACTOR SHALL ADJUST BOTH EXISTING AND NEW WATER VALVES, BOX COVERS, WATER METER BOXES, SANITARY SEWER MANHOLE AND CLEAN-OUT RING AND COVERS, TELEPHONE AND ELECTRIC MANHOLE RING AND COVERS TO THE NEW FINISHED GRADE.
- PROJECT EARTHWORK (UNADJUSTED)(APPROXIMATE):
TOTAL CUT COMPOSITE
428 CY 7 CY 421 CY (C)
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CALCULATE HIS OWN EARTHWORK QUANTITIES AND SUBMIT HIS BID THEREON. EARTHWORK QUANTITIES SHOWN HEREON ARE ESTIMATED FOR PERMITTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING OR PAYMENT QUANTITIES.
- THE CONTRACTOR SHALL VERIFY ALL QUANTITIES, INCLUDING EXCAVATION, BORROW EMBANKMENT, SHRINK OR SWELL, GROUND COMPACTION, HAUL AND ANY OTHER ITEMS AFFECTING THE BID TO COMPLETE THE GRADING TO THE ELEVATIONS SHOWN ON THESE PLANS AND TO BASE THE BID SOLELY UPON HIS OWN CALCULATED QUANTITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER PRIOR TO CONSTRUCTION OF ANY MAJOR DISCREPANCIES ON THE PLANS. ALL GRADE ADJUSTMENTS SHALL BE APPROVED IN WRITING BY THE OWNER PRIOR TO MAKING ANY CHANGES.
- THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND RICK ENGINEERING COMPANY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF RICK ENGINEERING COMPANY.
- IF THERE ARE ANY QUESTIONS REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING RICK ENGINEERING COMPANY AT 520-795-1000.
- CUT AND FILL SLOPES SHALL BE TRIMMED TO THE FINISH GRADE TO PRODUCE A SMOOTH SURFACE AND UNIFORM CROSS-SECTION. THE SLOPE OF THE EXCAVATIONS OR EMBANKMENTS SHALL BE SHAPED AND TRIMMED AS SHOWN ON THE PLANS AND LEFT IN A NEAT AND ORDERLY CONDITION. ALL STONES, ROOTS, OR OTHER WASTE MATTER EXPOSED ON EXCAVATION OR EMBANKMENT SLOPES SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH, HAUL AND APPLY ALL WATER REQUIRED FOR COMPACTION AND FOR THE CONTROL OF DUST FROM THE CONSTRUCTION ACTIVITY. THE COST THEREOF IS TO BE INCLUDED IN THE GRADING CONSTRUCTION PRICE.
- THE GRADING CONTRACTOR SHALL EXCAVATE AND REMOVE THE SOIL BENEATH ALL DECOMPOSED GRANITE AREAS SO THAT THE FINISHED SURFACE OF THE DECOMPOSED GRANITE WILL MATCH THE FINISHED SURFACE ELEVATION AS CALLED OUT ON THESE PLANS. WATER HARVESTING AREAS SHALL BE KEPT LOW TO ACHIEVE FULL DEPTH OF WATER HARVESTING TO THE FINISHED SURFACE OF THE DECOMPOSED GRANITE. SEE LANDSCAPE PLANS FOR DECOMPOSED GRANITE AREAS.

GENERAL PAVING + GRADING NOTES (cont.)

- RICK ENGINEERING COMPANY HEREBY CERTIFIES THAT ALL FINISHED GRADED AND PAVED AREAS CONTAINED WITHIN THIS DEVELOPMENT ARE DESIGNED WITH SLOPES OF AT LEAST 0.5%. RICK ENGINEERING COMPANY FURTHER CERTIFIES THAT THE PROPOSED DESIGN PROVIDES POSITIVE DRAINAGE THROUGHOUT THE DEVELOPMENT EXCEPT WITHIN DETENTION/RETENTION AREAS OR WATER HARVESTING AREAS SPECIFIED WITHIN THE APPROVED DRAINAGE ANALYSIS FOR THIS PROJECT.
- ALL ELEVATIONS ARE AT FINISH SURFACE OF PROPOSED ASPHALT (P). ADD 0.5' FOR THE ADJACENT TOP OF CURB/CONCRETE (TC/C) ELEVATION UNLESS OTHERWISE SHOWN.
- CURB RADII ARE MEASURED TO FRONT FACE OF CURB.
- ALL DIMENSIONS FOR PARKING AREA ACCESS LANES AND PARKING SPACES AS SHOWN ON THE PLAN ARE MEASURED AT THE GUTTER LINE.
- AGGREGATE BASE COURSE SHALL CONFORM TO PAG STANDARD SPECIFICATION SECTION 303.
- ASPHALTIC CONCRETE SHALL CONFORM TO PAG STANDARD SPECIFICATION SECTION 406, MIX NO. 2.
- ALL CONCRETE SHALL CONFORM TO PAG STANDARD SPECIFICATION SECTION 1006, CLASS B, 2500 PSI COMPRESSIVE STRENGTH AT 28 DAYS, OR CLASS S, 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS OTHERWISE SPECIFIED.
- PARKING AREA PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION. THE PAINT SHALL BE WHITE UNLESS OTHERWISE INDICATED OR AS REQUIRED BY THE MUTCD.
- THE APPROVED SITE CONSTRUCTION PLAN IS THE ONLY ACCEPTABLE CONSTRUCTION PLAN ON SITE. THE CONTRACTOR MAY NOT USE ANY OTHER PLANS, SUCH AS THE APPROVED TENTATIVE PLAT AND/OR DEVELOPMENT PLAN, FOR CONSTRUCTION PURPOSES. THE CONTRACTOR MAY ASK THE PLANNING AND DEVELOPMENT SERVICES INSPECTOR TO CONSULT WITH THE OTHER APPROVED PLANS FOR ADDITIONAL INFORMATION OR DETAILS THAT MIGHT NOT BE INCLUDED ON THE APPROVED GRADING PLAN BUT NEEDED FOR COMPLETION OF WORK.
- THE CONTRACTOR IS NOT PERMITTED TO MAKE AN AUTONOMOUS DECISION TO CARRY OUT CONSTRUCTION FIELD CHANGES WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD AND THE PIMA COUNTY DEVELOPMENT SERVICES DEPARTMENT.
- THE CONTRACTOR SHALL DETERMINE IN ADVANCE OF CONSTRUCTION IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC. ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION TO CONSTRUCTION OPERATIONS IS EVIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION. ANY COST ASSOCIATED WITH THIS EFFORT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- IF GRADING CONSTRUCTION IS EXPECTED TO LAST LONGER THAN THE EXPIRATION DATE OF THE GRADING PERMIT, CONTACT PDSO TO RENEW/EXTEND THE GRADING PERMIT. IF FINAL GRADING INSPECTION HAS NOT BEEN COMPLETED BEFORE THE GRADING PERMIT EXPIRES, AND THE PERMIT HAS NOT BEEN RENEWED, ADDITIONAL FEES AND REVIEWS MAY BE REQUIRED.
- THE PERMITTEE SHALL NOTIFY PIMA COUNTY WHEN THE GRADING OPERATION IS READY FOR FINAL GRADING INSPECTION. FINAL GRADING APPROVAL SHALL NOT BE GIVEN UNTIL ALL WORK, INCLUDING INSTALLATION OF ALL DRAINAGE IMPROVEMENTS, UTILITY TRENCHES ARE BACKFILLED, PRIVATE PAVING AND CURB, PERMANENT PROTECTIVE DEVICES, ALL EROSION CONTROL MEASURES HAVE BEEN COMPLETED, AND ALL CONDITIONS OF PERMITS ARE COMPLETED.
- IT IS THE OWNER'S RESPONSIBILITY TO VERIFY AND MITIGATE ANY POTENTIAL CONSTRUCTION IMPEDIMENTS DUE TO EXISTING ENCROACHMENTS BY ADJACENT PROPERTY OWNERS (WHETHER SITE WALLS, FENCES, OR OTHERWISE). RICK ENGINEERING COMPANY ASSUMES NO LIABILITY NOR RESPONSIBILITY FOR ANY ENCROACHMENTS OR FOR DELAYS TO THE APPROVAL PROCESS AS A RESULT THEREOF.

EARTHWORK/MATERIALS TESTING + CERTIFICATION

- A PROJECT SPECIFIC GEOTECHNICAL ENGINEERING INVESTIGATION AND ANALYSIS WAS NOT PROVIDED TO RICK ENGINEERING COMPANY FOR THIS PROJECT. RICK ENGINEERING COMPANY ASSUMES NO RESPONSIBILITY AND/OR NO LIABILITY FOR THE SOILS INFORMATION SHOWN HEREON, TO INCLUDE PAVEMENT STRUCTURE SECTIONS.
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF, AND FACILITATE THE WORK OF, AN INDEPENDENT ENGINEERING TESTING LABORATORY ACCEPTABLE TO PROVIDE THE CONSTRUCTION TESTING OF THE PROJECT EARTHWORK, ASPHALT PAVEMENT AND CIVIL CONCRETE. THE GEOTECHNICAL ENGINEER SHALL VERIFY THAT INITIAL SITE CONDITIONS CONFORM WITH THE PLANS AND SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES OBSERVED SHOULD ANY SOIL CONDITION ON THE SITE BE SUSPECT OF DETRIMENTAL CHARACTERISTICS. THE CONTRACTOR SHALL BE NOTIFIED OF CONCERNS AT LEAST TWENTY-FOUR (24) HOURS BEFORE CONSTRUCTION IS SCHEDULED TO BEGIN ON THE AFFECTED AREA.
- DURING THE COURSE OF CONSTRUCTION, TEST RESULTS SHALL BE SUBMITTED TO THE CONTRACTOR WHICH INDICATE IF WORK IS BEING DONE IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.

TYPICAL SLOPE TREATMENT	
SLOPE GRADIENT	TREATMENT
3:1 OR FLATTER	REVEGETATED WITH NATIVE SPECIES OR PROVIDE OTHER GROUND COVERS SUCH AS NETTING OR CRUSHED ROCK
2:1 TO 3:1	HAND-PLACED RIPRAP OVER FILTER FABRIC
1:1 TO 2:1	GROUTED OR WIRE-TIED RIPRAP
1:1 OR STEEPER	STABILITY ANALYSIS OR RETAINING WALL DESIGNED BY STRUCTURAL ENGINEER

- NOTES:
 - SLOPE GRADIENTS ARE HORIZONTAL OR VERTICAL
 - FINAL SLOPE TREATMENT SHALL BE AS PER THIS TABLE UNLESS OTHERWISE NOTED ON THIS PLAN OR WITHIN THE GEOTECHNICAL REPORT.
 - SEE RIPRAP NOTES FOR SPECIFICATIONS.

RIPRAP NOTES

- RIPRAP MATERIAL SHALL CONFORM TO PAG STANDARD SPECIFICATION SECTION 913. RIPRAP MATERIAL SHALL BE WELL GRADED, VARYING IN SIZE FROM 4 TO 8 INCHES ($d_{100}=6"$). THE RIPRAP LAYER SHALL BE 12 INCHES MINIMUM THICKNESS.
- THE GROUT FOR THE RIPRAP SHALL CONFORM TO PAG STANDARD SPECIFICATION SECTION 914. THE TOTAL GROUT AND RIPRAP LAYER SHALL BE A MINIMUM THICKNESS OF 1.5 d_{100} INCHES ($d_{100}=6"$). GROUT THICKNESS SHALL BE EQUAL TO 1.0 d_{100} AND RIPRAP ROCK SHALL BE EMBEDDED TO A DEPTH OF 0.5 d_{100} .
- FINISH GRADE ("FG") CALLOUTS ARE TO TOP OF RIPRAP, IN APPLICABLE AREAS.
- THE FILTER FABRIC FOR THE HAND-PLACED RIPRAP SHALL CONFORM TO PAG STANDARD SPECIFICATION SECTION 913-2.04 AND SECTION 1014-5.

SURVEY NOTES

- THE BASIS OF BEARINGS FOR THIS PROJECT IS THE CHORD OF THE ARC OF THE MONUMENT LINE OF CAMINO DEL SOL, BETWEEN 2 MONUMENTS, AS SHOWN ON THIS PLAN. THE BEARING OF SAID LINE IS **N 23°40'53" E**.
- THE BASIS OF ELEVATIONS FOR THIS PROJECT IS NGS OPUS CONTROL POINT "18S13E_V11", DESCRIBED AS AN "X" CUT ON THE CONCRETE COLLAR OF A WATER VALVE ON A DIRT TRAIL WEST OF THE KNUCKLE OF THE CUL-DE-SAC AT THE SOUTHWEST END OF S VIA DEL BAC. THE ELEVATION OF SAID BENCHMARK IS **3063.02'**, NAVD 88 DATUM.
- THE SURVEY FOR THIS PROJECT WAS PERFORMED BY:
 RICK ENGINEERING COMPANY
 3945 EAST FORT LOWELL ROAD, SUITE 111
 TUCSON, ARIZONA 85712
 ATTN: GREGG POPP, AZ RLS #71039
 PH: (520) 795-1000
 E: gpopp@rickengineering.com
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED LAND SURVEYOR TO PROVIDE THE CONSTRUCTION LAYOUT. THE SURVEYOR SHALL VERIFY THE KNOWN BENCHMARK AND COMPARE THE SITE CONDITIONS WITH THE PLANS AND SHALL NOTIFY THE OWNER OF ANY DISCREPANCIES OBSERVED SHOULD ANY BENCHMARK, GRADE OR DESIGN INDICATED ON THE PLANS BE SUSPECT. THE OWNER SHALL BE NOTIFIED OF SAID BENCHMARK, GRADE OR DESIGN PROBLEM AT LEAST TWENTY-FOUR (24) HOURS BEFORE CONSTRUCTION IS SCHEDULED TO BEGIN IN THE AFFECTED AREA.
- UPON COMPLETION OF THE WORK, THE CONTRACTOR AND HIS SURVEYOR SHALL CERTIFY IN WRITING TO THE OWNER THAT THE PROJECT CIVIL ENGINEERING IMPROVEMENTS WERE STAKED AND BUILT IN SUBSTANTIAL CONFORMANCE TO THE LINES AND GRADES SHOWN. UNLESS NOTED OTHERWISE, SUBSTANTIAL CONFORMANCE SHALL MEAN THAT BUILDING SITES HAVE BEEN CONSTRUCTED TO WITHIN 0.10± FEET OF FINISH BUILDING PAD ELEVATIONS AS DESIGNED BY THE ENGINEER. PARKING AREAS SHALL BE CONSTRUCTED TO WITHIN 0.10± FEET OF FINISH GRADE AS DESIGNED BY THE ENGINEER. SITE FEATURES SHALL BE WITHIN 0.25 FEET OF SPECIFIED POSITION.

NO.	DATE	REVISION DESCRIPTION	BY	OWNER/DEVELOPER
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				SITE ADDRESS 3355 SOUTH CAMINO DEL SOL TUCSON, ARIZONA 85622

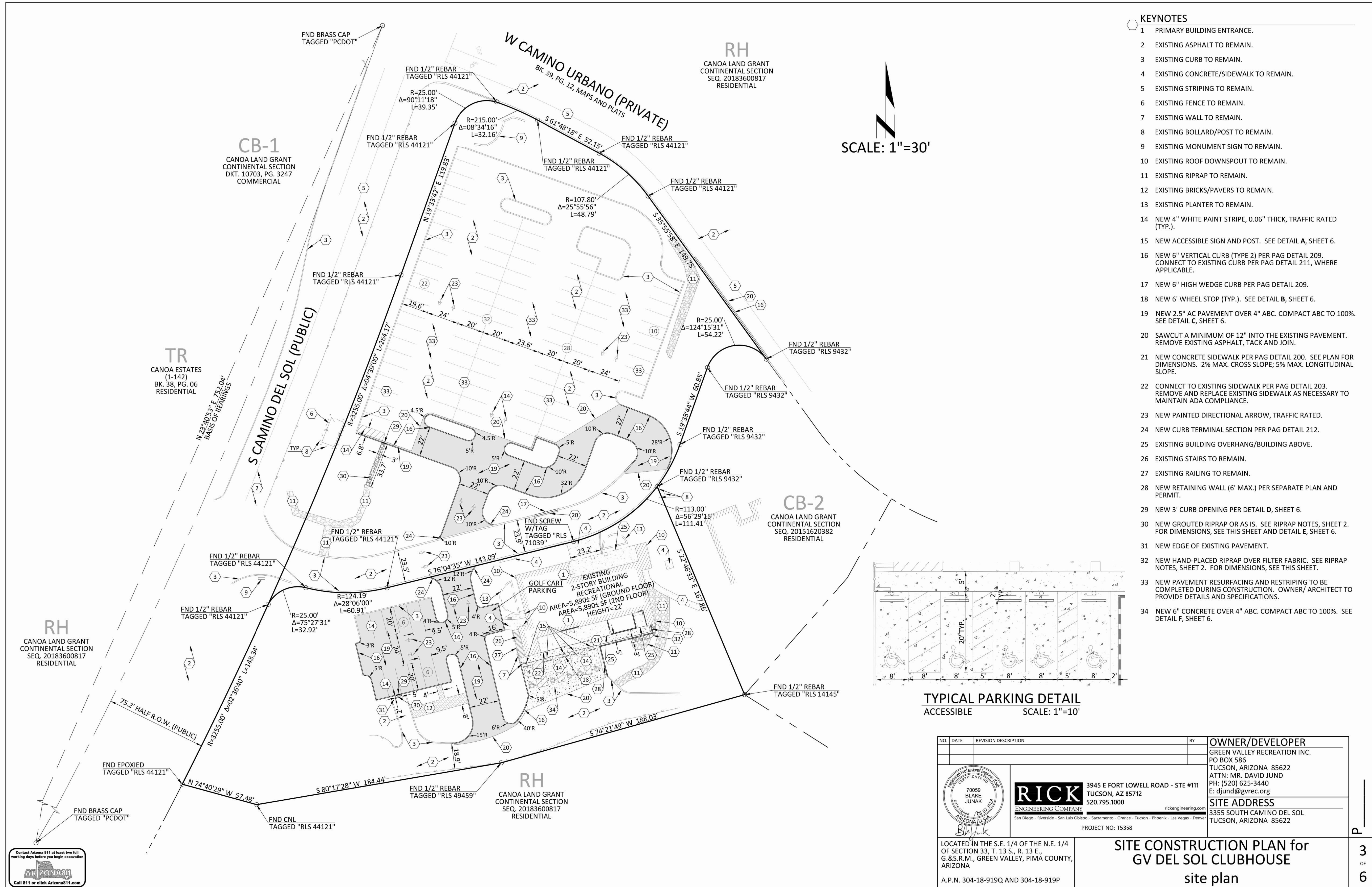
LOCATED IN THE S.E. 1/4 OF THE N.E. 1/4 OF SECTION 33, T. 13 S., R. 13 E., G.&S.R.M., GREEN VALLEY, PIMA COUNTY, ARIZONA
 A.P.N. 304-18-919Q AND 304-18-919P

SITE CONSTRUCTION PLAN for GV DEL SOL CLUBHOUSE

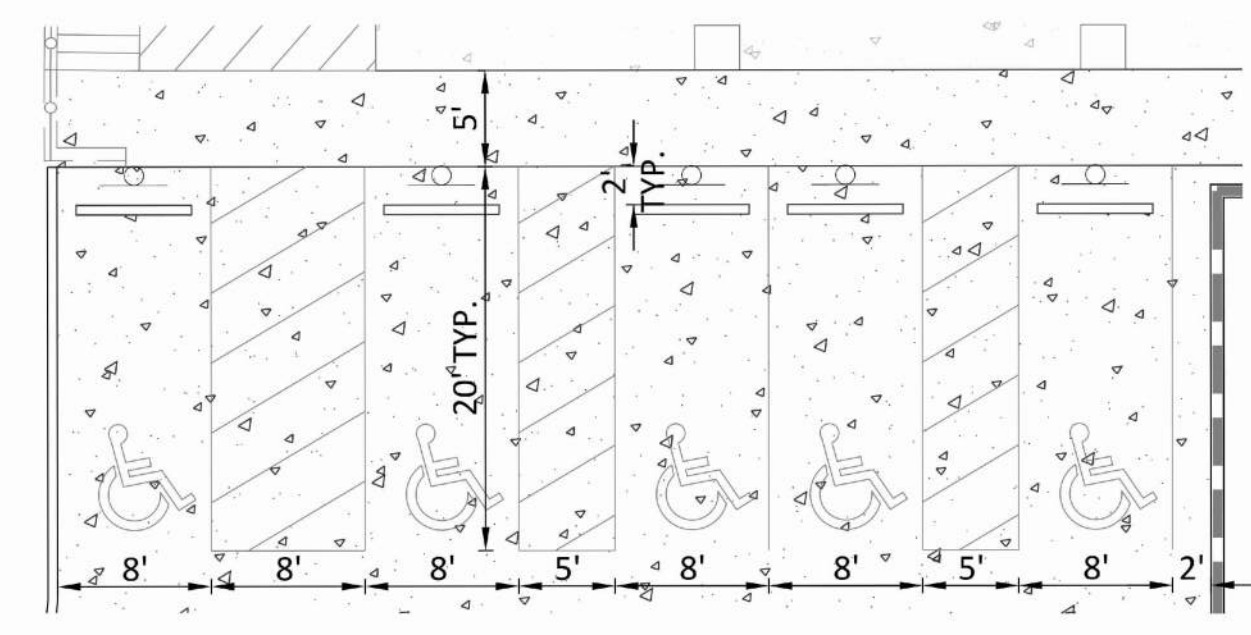
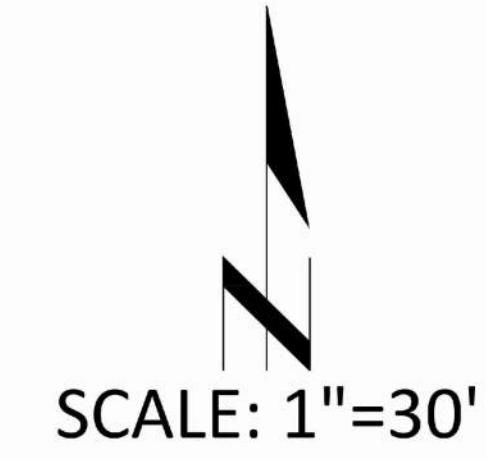
notes

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6





- KEYNOTES**
- 1 PRIMARY BUILDING ENTRANCE.
 - 2 EXISTING ASPHALT TO REMAIN.
 - 3 EXISTING CURB TO REMAIN.
 - 4 EXISTING CONCRETE/SIDEWALK TO REMAIN.
 - 5 EXISTING STRIPING TO REMAIN.
 - 6 EXISTING FENCE TO REMAIN.
 - 7 EXISTING WALL TO REMAIN.
 - 8 EXISTING BOLLARD/POST TO REMAIN.
 - 9 EXISTING MONUMENT SIGN TO REMAIN.
 - 10 EXISTING ROOF DOWNSPOUT TO REMAIN.
 - 11 EXISTING RIPRAP TO REMAIN.
 - 12 EXISTING BRICKS/PAVERS TO REMAIN.
 - 13 EXISTING PLANTER TO REMAIN.
 - 14 NEW 4" WHITE PAINT STRIPE, 0.06" THICK, TRAFFIC RATED (TYP.).
 - 15 NEW ACCESSIBLE SIGN AND POST. SEE DETAIL A, SHEET 6.
 - 16 NEW 6" VERTICAL CURB (TYPE 2) PER PAG DETAIL 209. CONNECT TO EXISTING CURB PER PAG DETAIL 211, WHERE APPLICABLE.
 - 17 NEW 6" HIGH WEDGE CURB PER PAG DETAIL 209.
 - 18 NEW 6" WHEEL STOP (TYP.). SEE DETAIL B, SHEET 6.
 - 19 NEW 2.5" AC PAVEMENT OVER 4" ABC. COMPACT ABC TO 100%. SEE DETAIL C, SHEET 6.
 - 20 SAWCUT A MINIMUM OF 12" INTO THE EXISTING PAVEMENT. REMOVE EXISTING ASPHALT, TACK AND JOIN.
 - 21 NEW CONCRETE SIDEWALK PER PAG DETAIL 200. SEE PLAN FOR DIMENSIONS. 2% MAX. CROSS SLOPE; 5% MAX. LONGITUDINAL SLOPE.
 - 22 CONNECT TO EXISTING SIDEWALK PER PAG DETAIL 203. REMOVE AND REPLACE EXISTING SIDEWALK AS NECESSARY TO MAINTAIN ADA COMPLIANCE.
 - 23 NEW PAINTED DIRECTIONAL ARROW, TRAFFIC RATED.
 - 24 NEW CURB TERMINAL SECTION PER PAG DETAIL 212.
 - 25 EXISTING BUILDING OVERHANG/BUILDING ABOVE.
 - 26 EXISTING STAIRS TO REMAIN.
 - 27 EXISTING RAILING TO REMAIN.
 - 28 NEW RETAINING WALL (6' MAX.) PER SEPARATE PLAN AND PERMIT.
 - 29 NEW 3' CURB OPENING PER DETAIL D, SHEET 6.
 - 30 NEW GROUTED RIPRAP OR AS IS. SEE RIPRAP NOTES, SHEET 2. FOR DIMENSIONS, SEE THIS SHEET AND DETAIL E, SHEET 6.
 - 31 NEW EDGE OF EXISTING PAVEMENT.
 - 32 NEW HAND-PLACED RIPRAP OVER FILTER FABRIC. SEE RIPRAP NOTES, SHEET 2. FOR DIMENSIONS, SEE THIS SHEET.
 - 33 NEW PAVEMENT RESURFACING AND RESTRIPIPING TO BE COMPLETED DURING CONSTRUCTION. OWNER/ ARCHITECT TO PROVIDE DETAILS AND SPECIFICATIONS.
 - 34 NEW 6" CONCRETE OVER 4" ABC. COMPACT ABC TO 100%. SEE DETAIL F, SHEET 6.



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				SITE ADDRESS 3355 SOUTH CAMINO DEL SOL TUCSON, ARIZONA 85622

LOCATED IN THE S.E. 1/4 OF THE N.E. 1/4 OF SECTION 33, T. 13 S., R. 13 E., G.&S.R.M., GREEN VALLEY, PIMA COUNTY, ARIZONA
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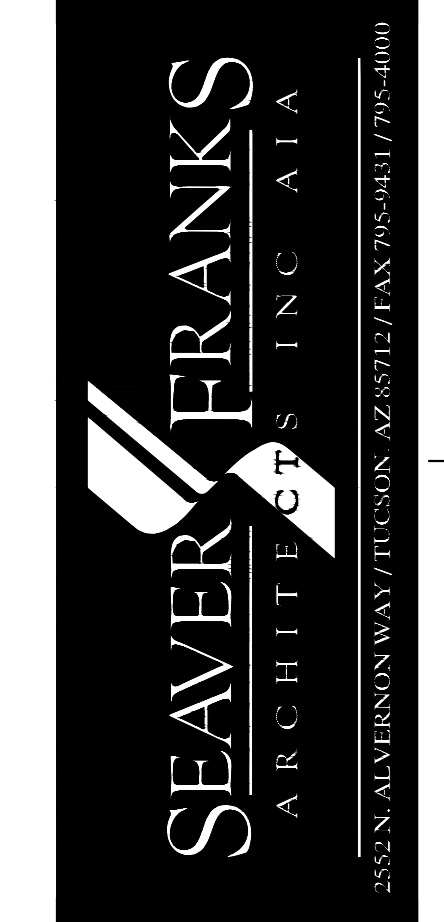
RICK ENGINEERING COMPANY
3945 E FORT LOWELL ROAD - STE #111
TUCSON, AZ 85712
520.795.1000
rickengineering.com

PROJECT NO: TS368

SITE CONSTRUCTION PLAN for GVR DEL SOL CLUBHOUSE
site plan

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of
6

TENANT IMPROVEMENT
SITE PLAN



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

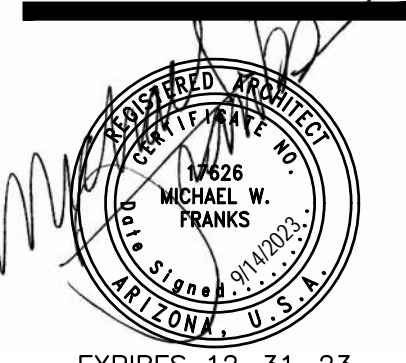
ISSUE DATE 09-14-2023
PROJ. NO. 37096
DRG. SCALE A6 NOTED

SHEET
C3.0

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FOR REFERENCE ONLY

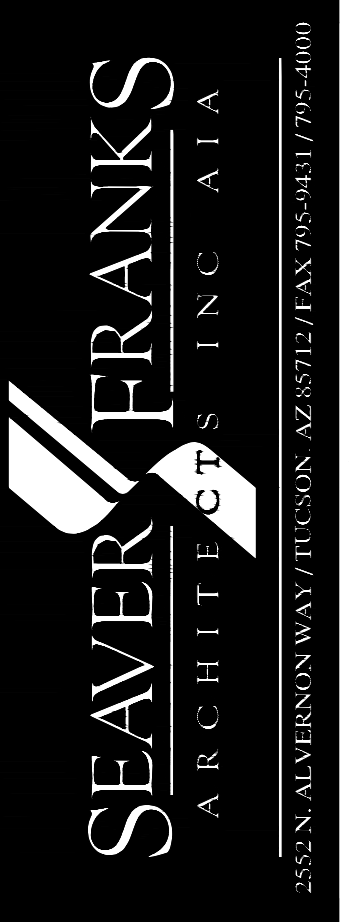
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NO. DATE

TENANT IMPROVEMENT
GRADING AND DRAINAGE PLAN

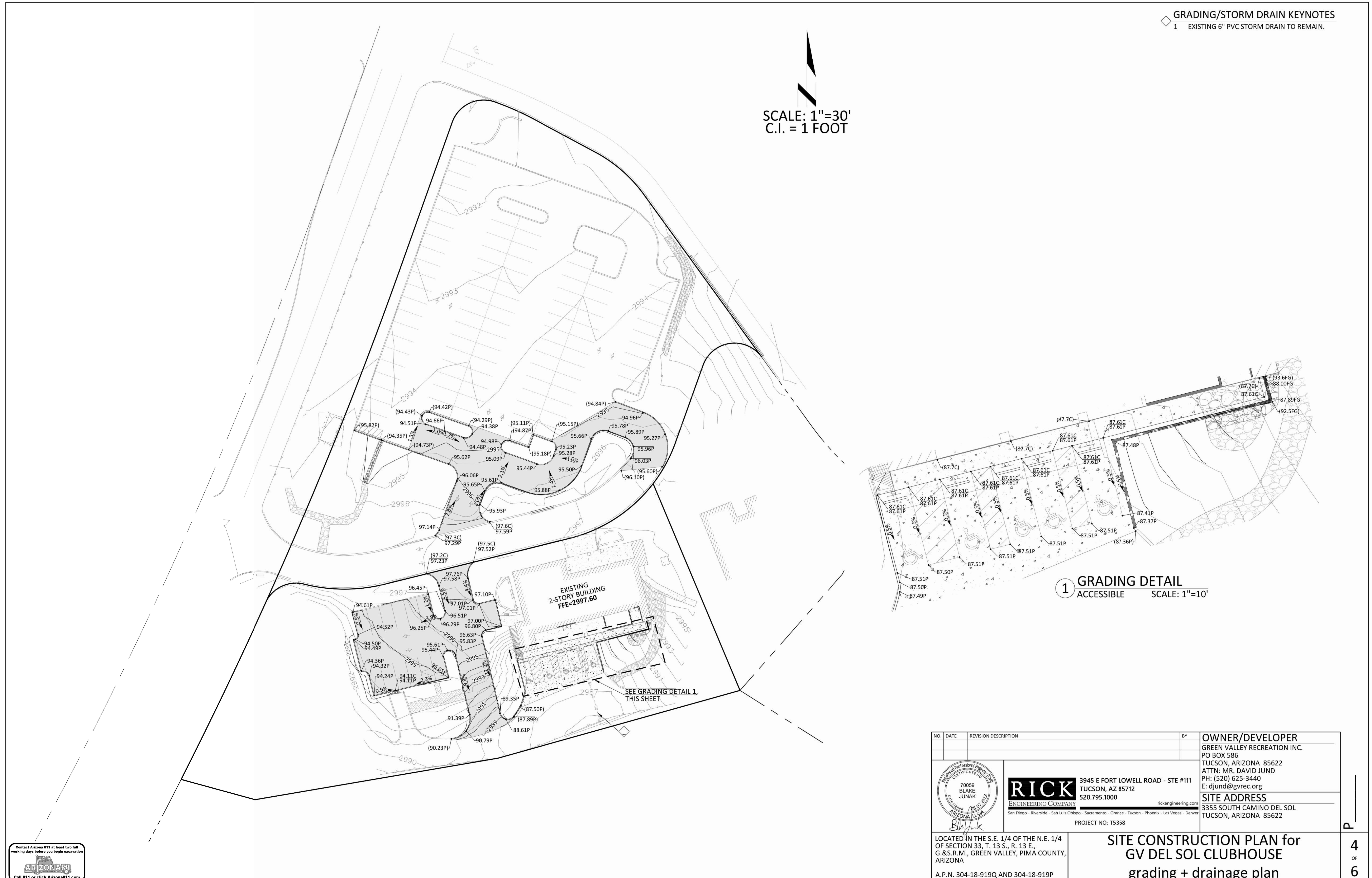


GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

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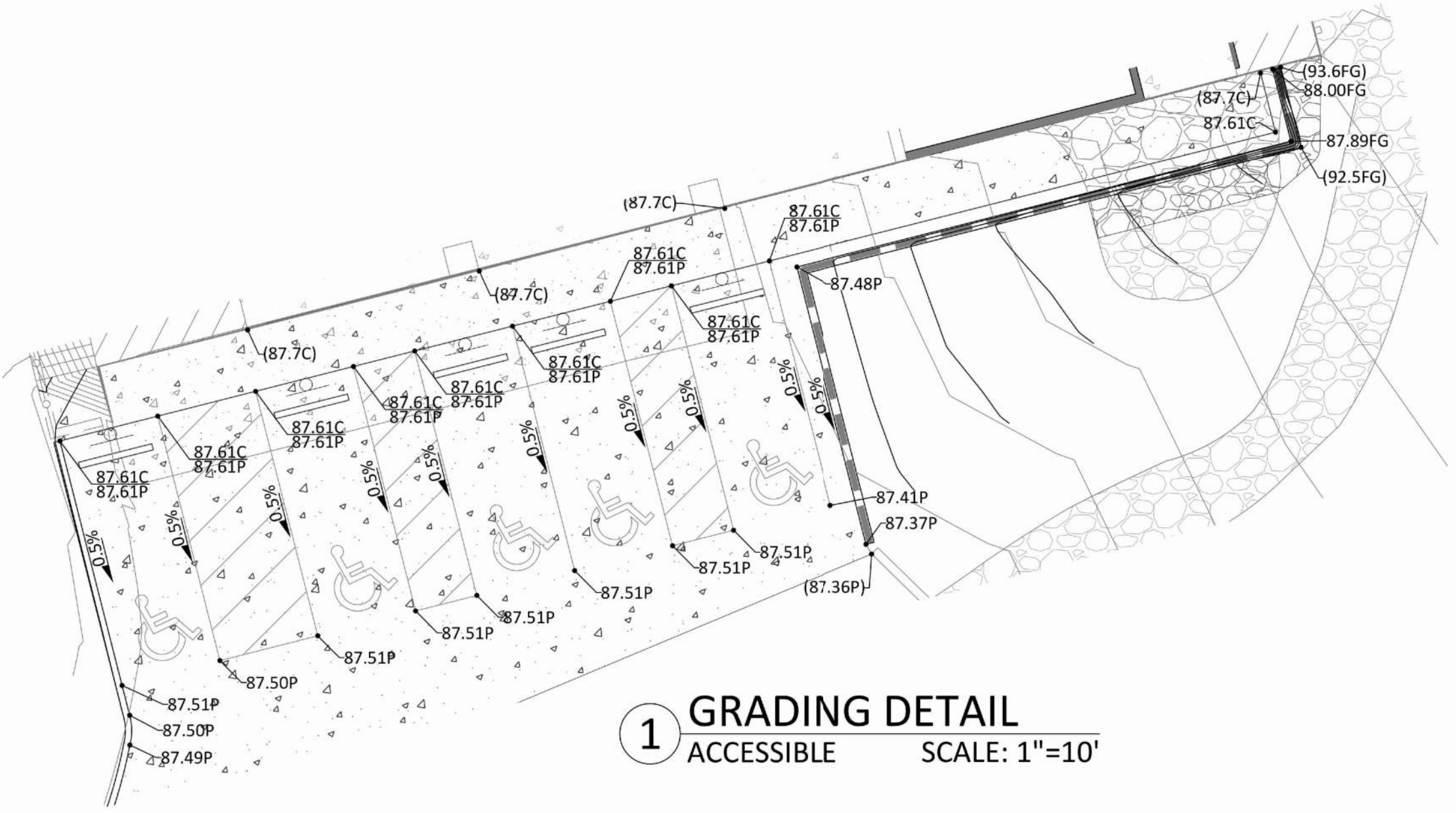
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◇ GRADING/STORM DRAIN KEYNOTES
1 EXISTING 6" PVC STORM DRAIN TO REMAIN.

SCALE: 1"=30'
C.I. = 1 FOOT



1 GRADING DETAIL
ACCESSIBLE SCALE: 1"=10'

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rickengineering.com

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A.P.N. 304-18-919Q AND 304-18-919P

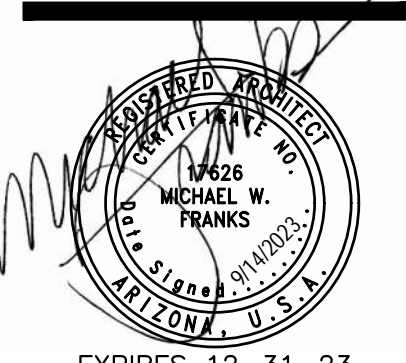
SITE CONSTRUCTION PLAN for
GV DEL SOL CLUBHOUSE
grading + drainage plan

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of
6

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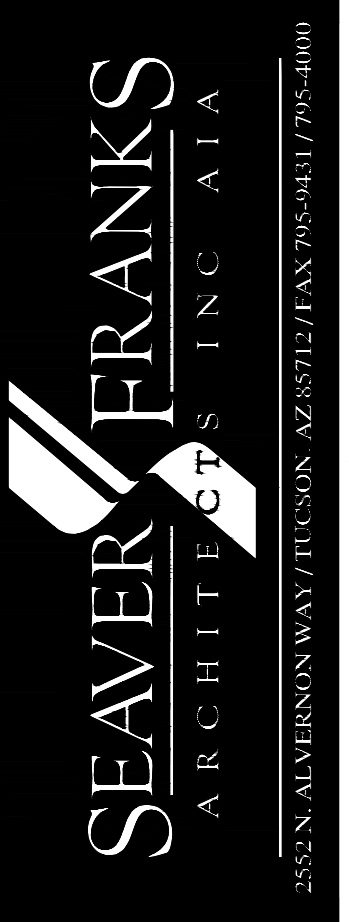
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TENANT IMPROVEMENT
UTILITIES AND EASEMENTS PLAN

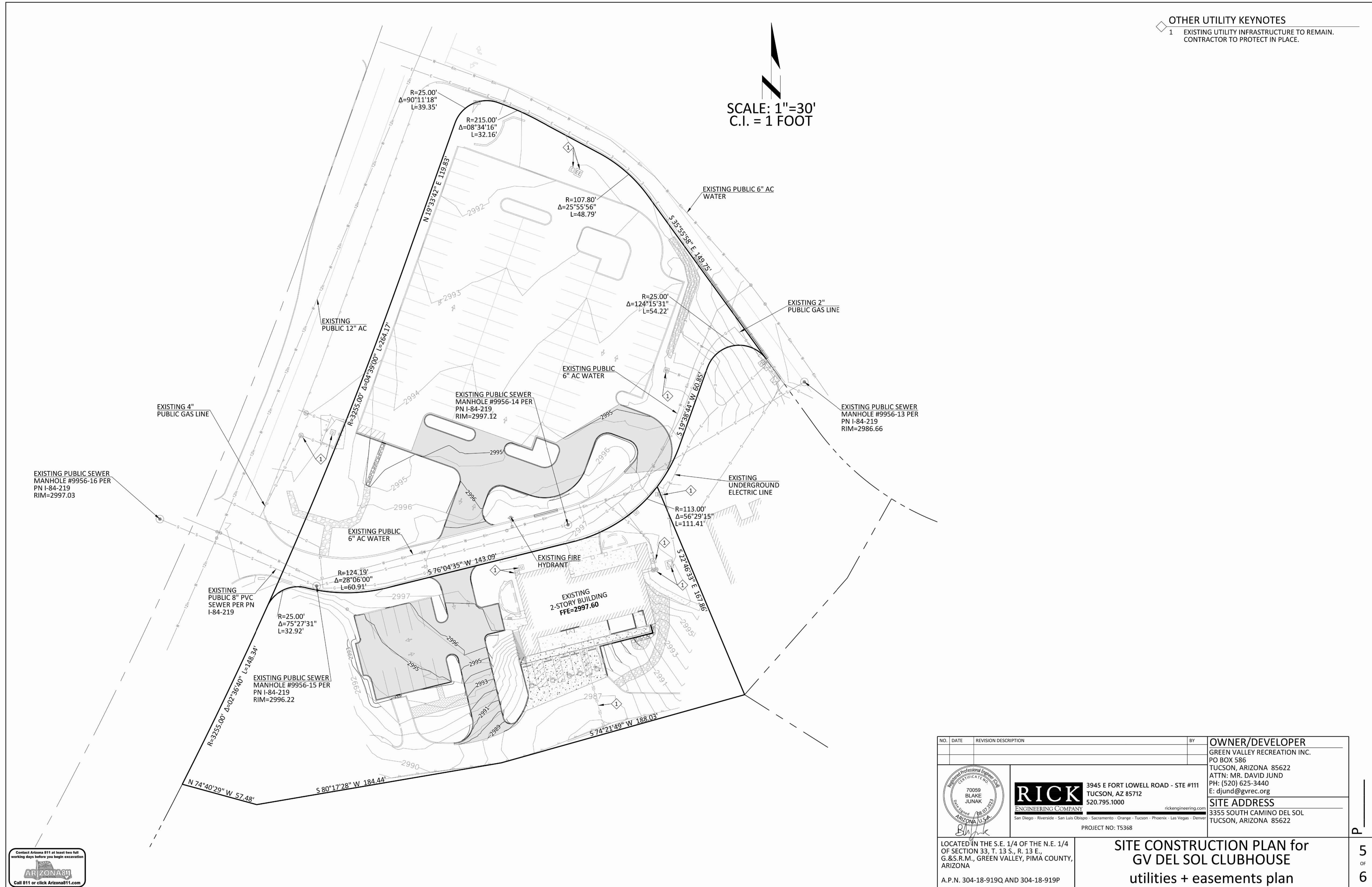


GVR DEL SOL CLUBHOUSE
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OTHER UTILITY KEYNOTES
1 EXISTING UTILITY INFRASTRUCTURE TO REMAIN. CONTRACTOR TO PROTECT IN PLACE.

SCALE: 1"=30'
C.I. = 1 FOOT

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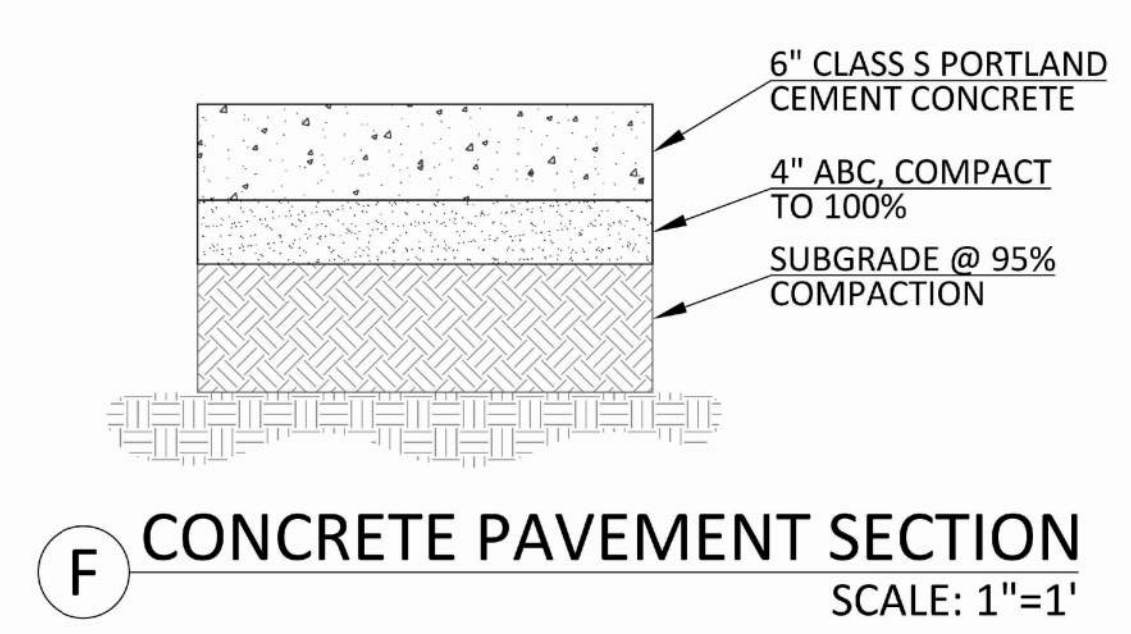
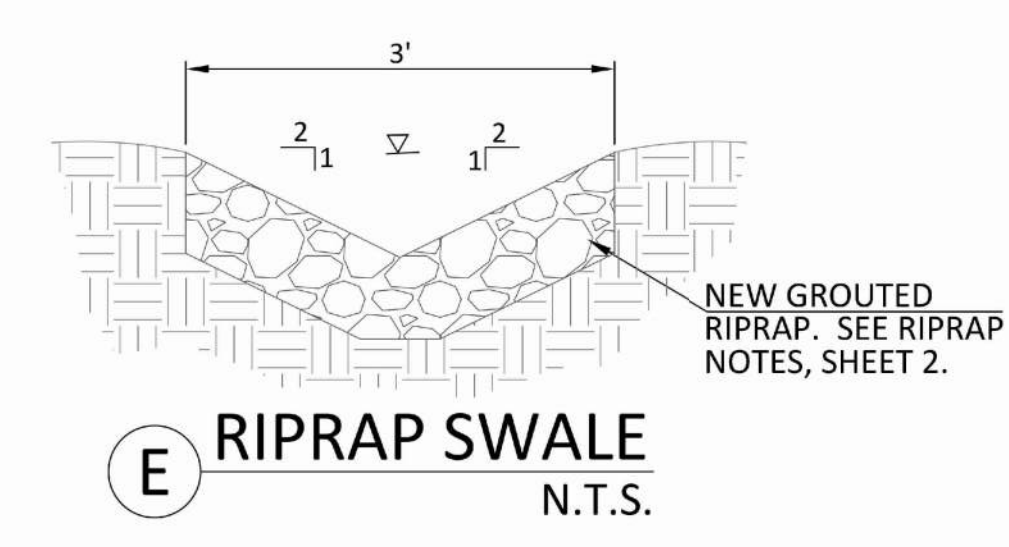
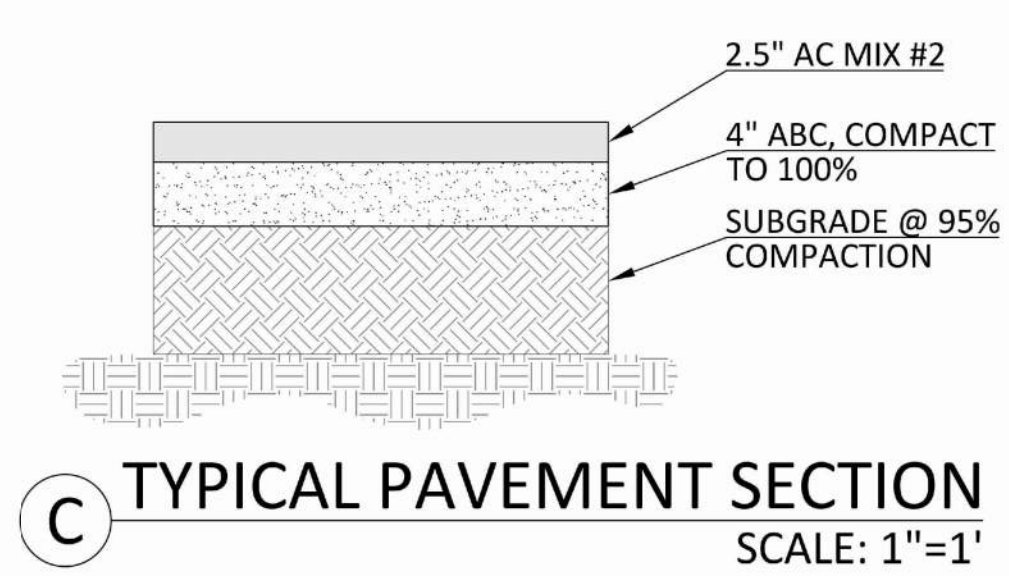
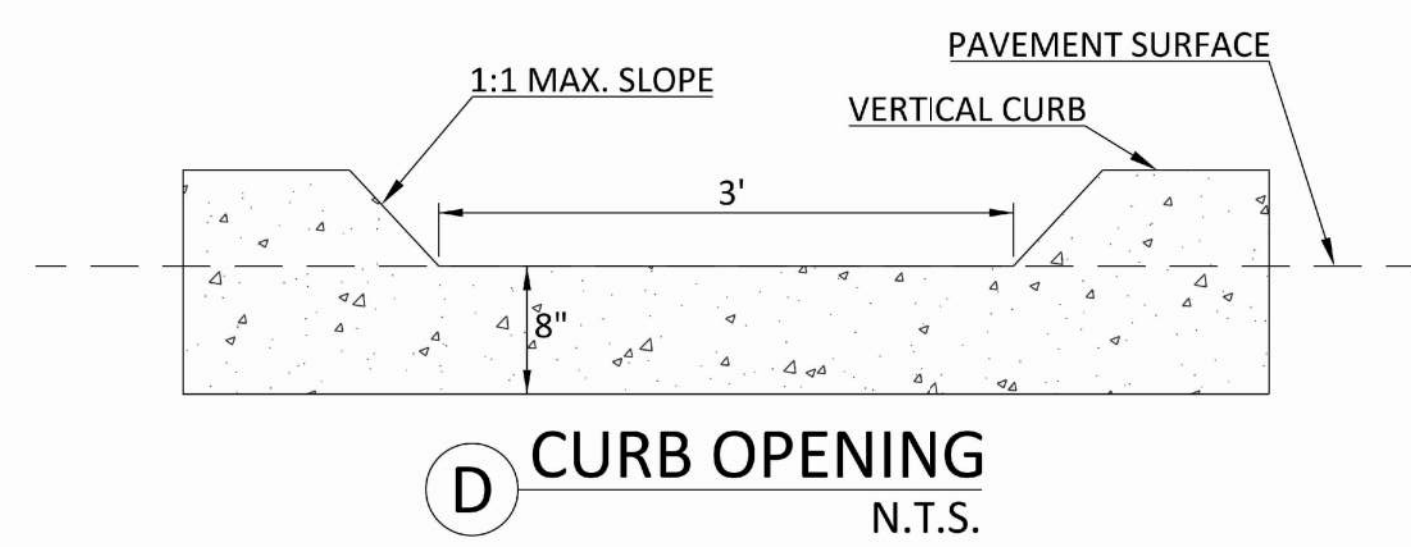
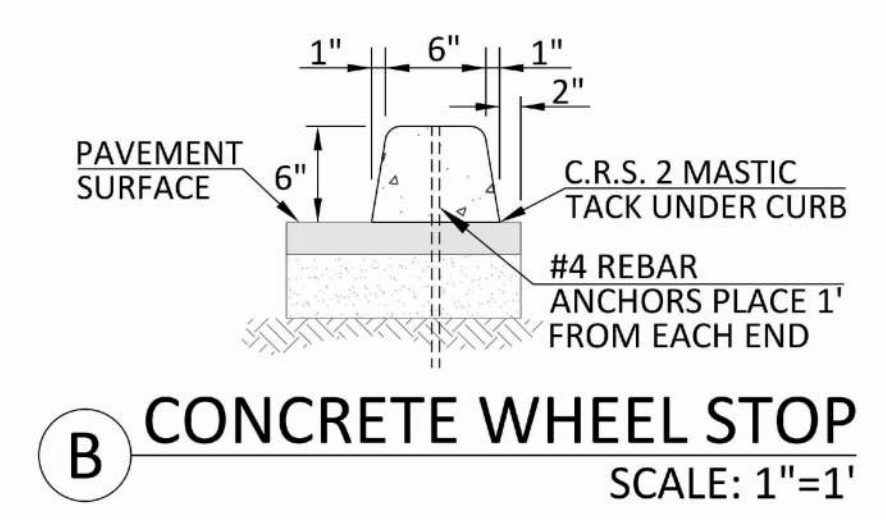
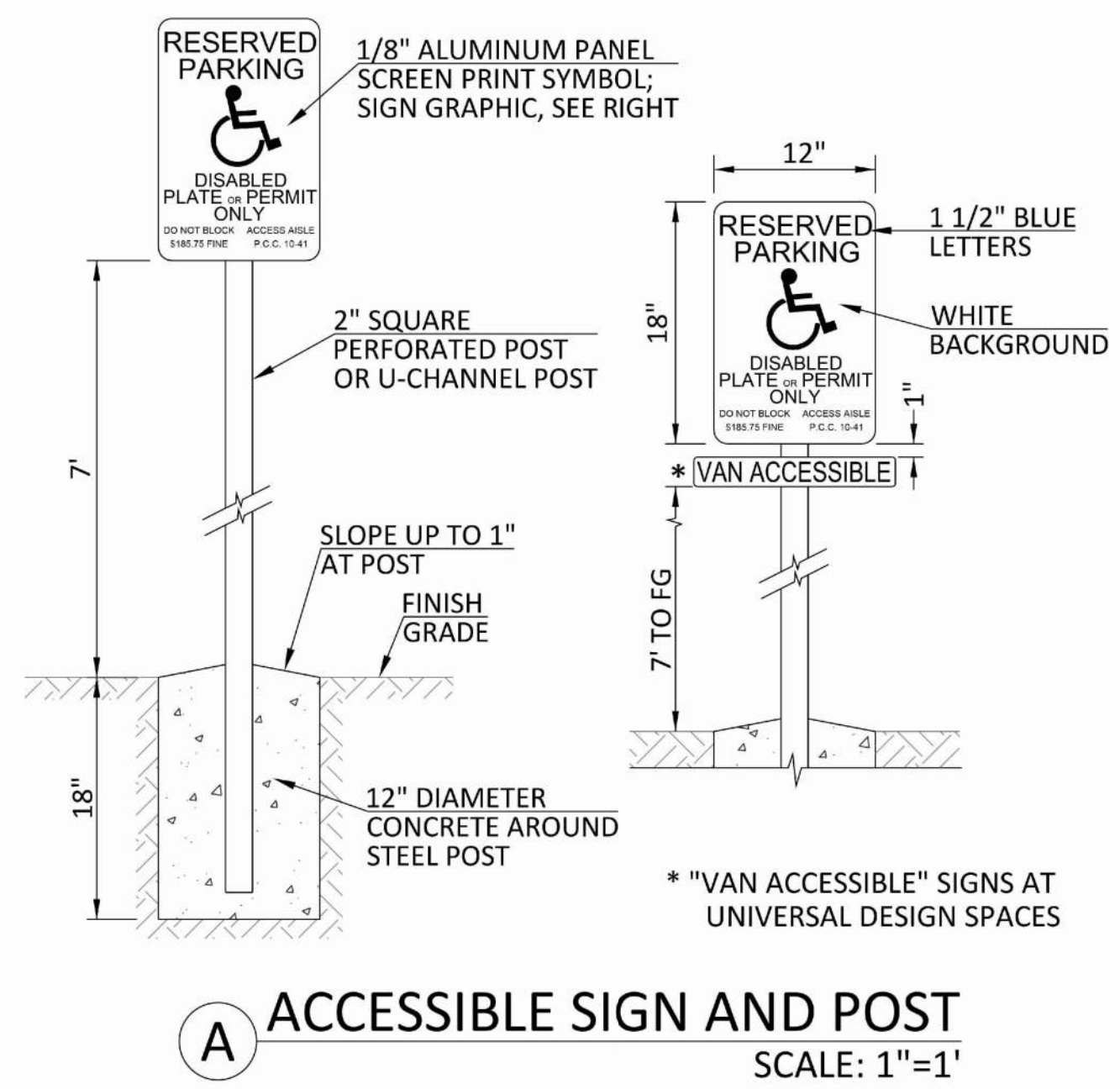
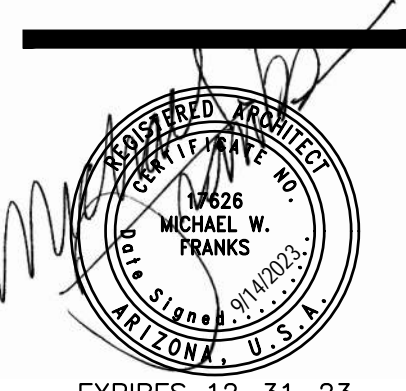
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PROJECT NO: TS368

**SITE CONSTRUCTION PLAN for
GV DEL SOL CLUBHOUSE
utilities + easements plan**

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NO.	DATE	REVISION DESCRIPTION	BY	OWNER/DEVELOPER
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PROJECT NO: TS368

SITE CONSTRUCTION PLAN for GV DEL SOL CLUBHOUSE details

6 of 6

TENANT IMPROVEMENT
DETAILS



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

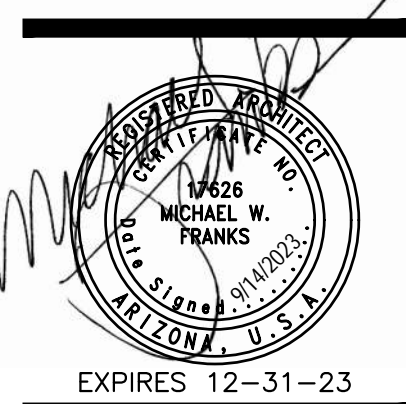
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PROJ. NO. 37096
DRG. SCALE AS NOTED

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GENERAL NOTES

- A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- B. SAW CUT AS NECESSARY THE CONCRETE FLOOR TO RELOCATE EXISTING PLUMBING STUBS/DRAIN/CONNECTIONS IN ORDER TO ACCOMMODATE THE NEW ADA COMPLIANT RESTROOMS.

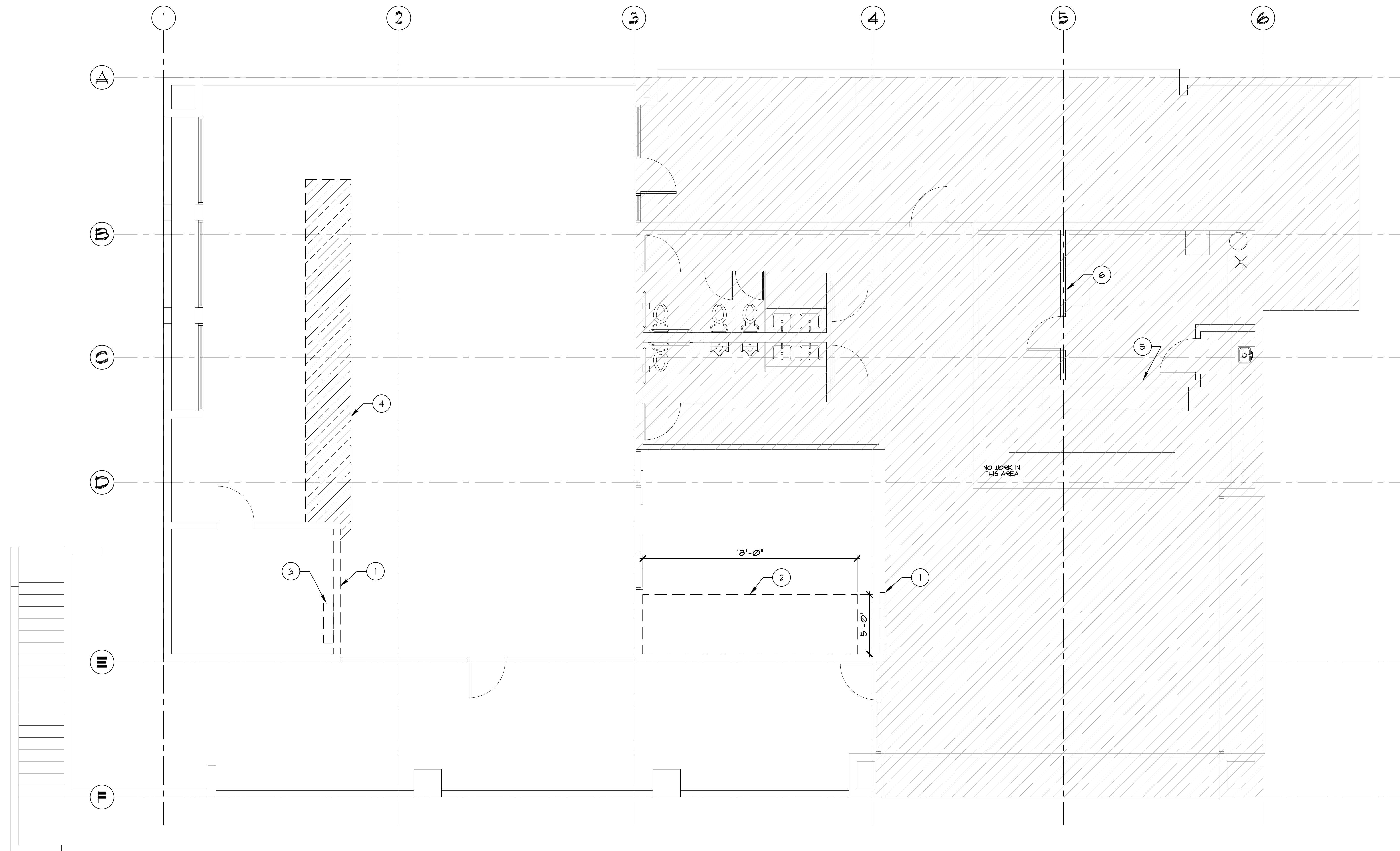


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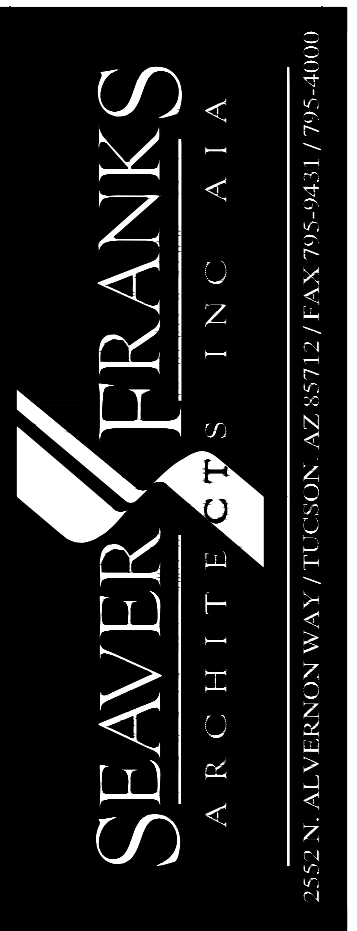
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DEMO FLOOR PLAN KEYNOTES

- 1. EXISTING WALL TO BE REMOVED
- 2. FLOOR TO BE REMOVED FOR STAIR
- 3. EXISTING ELECTRICAL EQUIPMENT TO BE RELOCATED AS REQUIRED
- 4. REMOVE EXISTING CEILING (ABOVE) IN ORDER TO REMOVE EXISTING DUCTWORK
- 5. EXISTING ELECTRICAL PANEL TO REMAIN
- 6. EXISTING ROOF ACCESS LADDER TO REMAIN.



TENANT IMPROVEMENT
DEMOLITION FLOOR PLAN
UPPER LEVEL



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

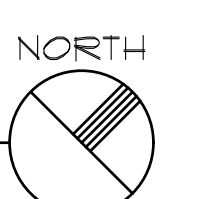
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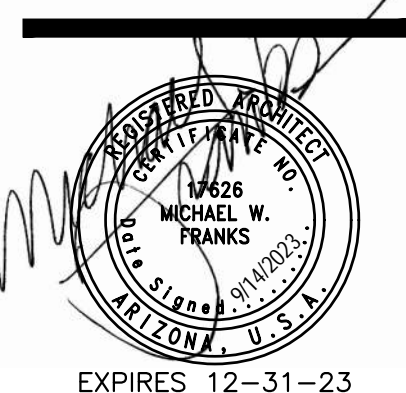
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GENERAL NOTES

- A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- B. SAW CUT AS NECESSARY THE CONCRETE FLOOR TO RELOCATE EXISTING PLUMBING STUBS/DRAIN/CONNECTIONS IN ORDER TO ACCOMMODATE THE NEW ADA COMPLIANT RESTROOMS.

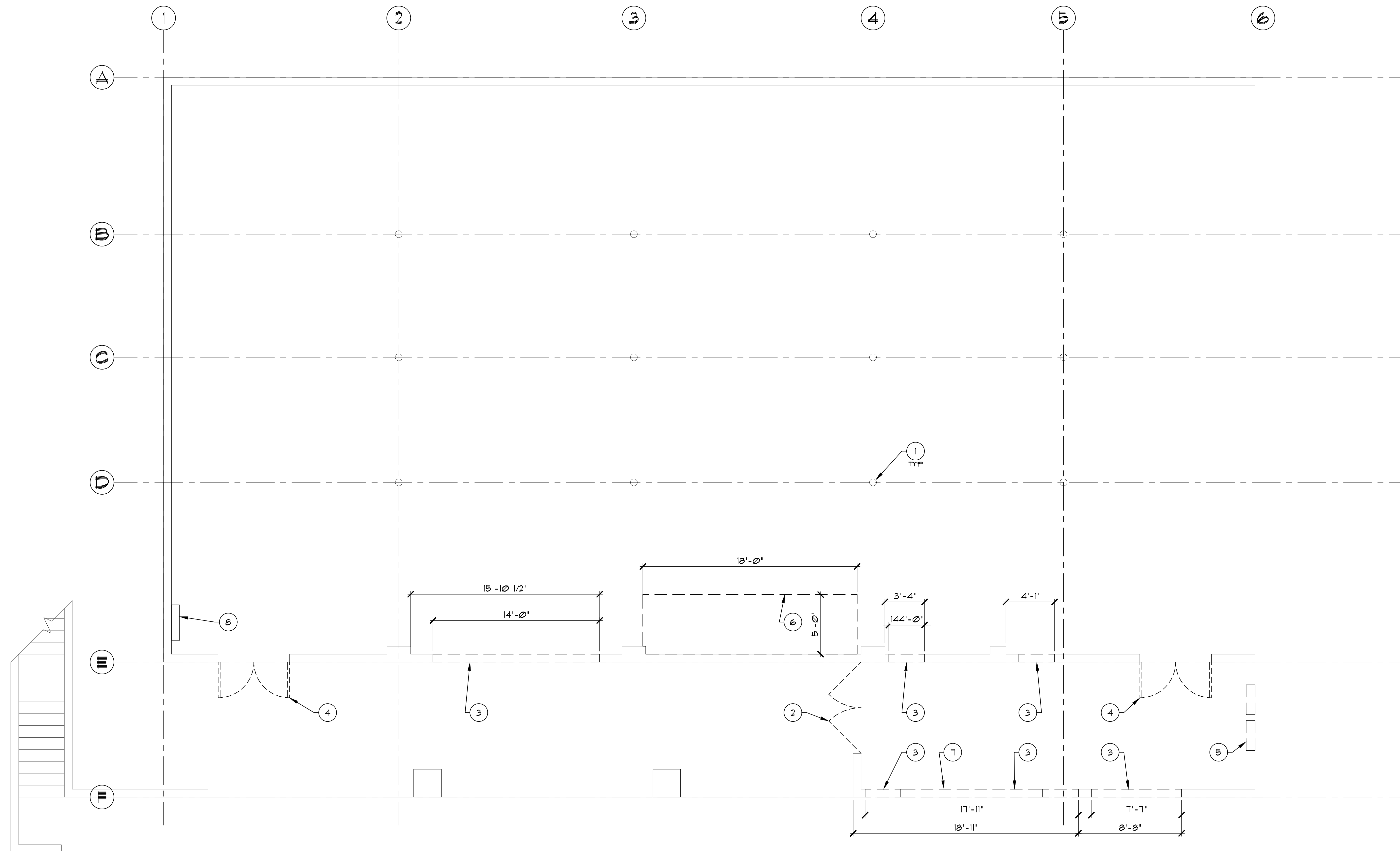


EXPIRES 12-31-23

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NO. DATE

DEMO FLOOR PLAN KEYNOTES

- 1. EXISTING COLUMN TO REMAIN.
- 2. REMOVE IRON GATE.
- 3. EXISTING WALL TO BE REMOVED FOR DOOR OPENING.
- 4. EXISTING DOOR TO BE REMOVED.
- 5. EXISTING ELECTRICAL EQUIPMENT TO BE RELOCATED AS REQUIRED.
- 6. CEILING ASSEMBLY (ABOVE) TO BE REMOVED AS REQUIRED FOR NEW STAIR.
- 7. EXISTING WALL, WHERE PERFORATED, TO BE REMOVED.
- 8. EXISTING ELECTRICAL PANEL TO REMAIN.



**TENANT IMPROVEMENT
DEMOLITION FLOOR PLAN
LOWER LEVEL**

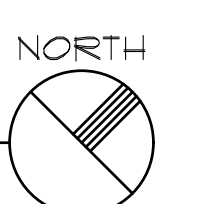


**GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747**

ISSUE DATE 09-14-2023
PROJ. NO. 31096
DRG. SCALE AS NOTED

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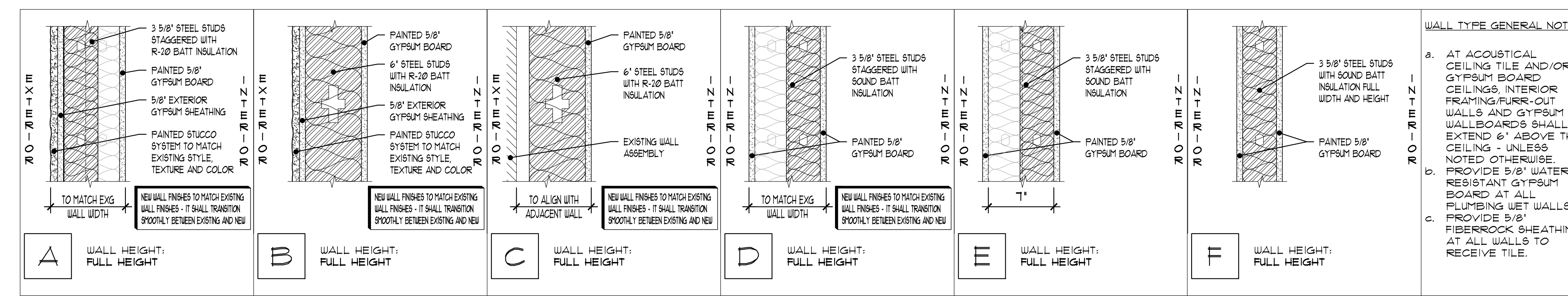
PARTITION SIZE TABLE

STEEL STUD PARTITION SIZE TABLE				
MAXIMUM UNBRACED PARTITION HEIGHT	STUD DEPTH	FLANGE WIDTH	STUD GA	STUD SPACINGS
10'-10"	3 5/8"	1 1/4"	25	24" O.C.
12'-5"	3 5/8"	1 1/4"	25	16" O.C.
13'-0"	3 5/8"	1 1/4"	20	24" O.C.
15'-0"	3 5/8"	1 1/4"	20	16" O.C.
20'-0"	6"	1 1/4"	20	24" O.C.

- NOTES:**
- HEIGHT LIMITATIONS AND STUD PROPERTIES BASED ON INFORMATION PROVIDED IN THE STEEL STUD MANUFACTURERS ASSOCIATION HANDBOOK. VALUES ARE FOR INTERIOR NON-STRUCTURAL NON-COMPOSITE PARTITIONS WITH A 5 PSF LOAD AND L7/40 DEFLECTION FACTOR.
 - PROVIDE 4" STUDS AT PARTITIONS WITH 4" COLLING.
 - PROVIDE SLIP TRACK AT ALL INTERIOR FULL HEIGHT WALLS, ESPECIALLY AT THE PRE-ENGINEERED METAL BUILDING AREAS.
 - PROVIDE TYPE 'X' GYPSUM BOARD AT ALL RATED PARTITIONS.
 - PROVIDE DRYWALL CONTROL JOINTS (MICO DEEP 'Y' WITH REMOVABLE TAPE OR SIMILAR) JOINTS ARE TO BE PLACED AT DRYWALL EXPANSES EXCEEDING 30'-0" IN LENGTH. PROVIDE CONTROL JOINTS IN CEILING TO LIMIT AREAS TO 15000 SQUARE FEET AND IN ORDER TO LIMIT DIMENSIONS IN EITHER DIRECTION TO 50'-0".

WALL TYPES

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



NOTE: NOT ALL WALL TYPES ARE DEPICTED ON THIS SHEET.

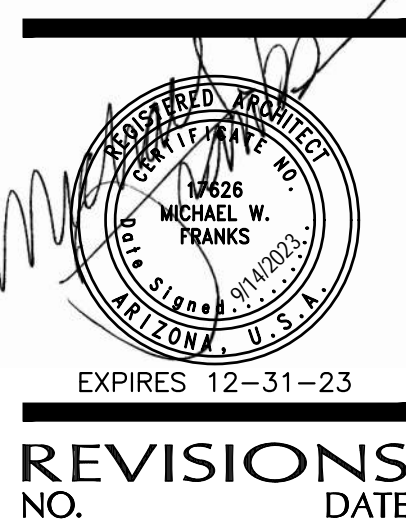
- WALL TYPE GENERAL NOTES:**
- AT ACOUSTICAL CEILING TILE AND/OR GYPSUM BOARD CEILING, INTERIOR FRAMING FURR-OUT WALLS AND GYPSUM WALLBOARDS SHALL EXTEND 6" ABOVE THE CEILING - UNLESS NOTED OTHERWISE.
 - PROVIDE 5/8" WATER RESISTANT GYPSUM BOARD AT ALL PLUMBING WET WALLS.
 - PROVIDE 5/8" FIBERROCK SHEATHING AT ALL WALLS TO RECEIVE TILE.

GENERAL NOTES

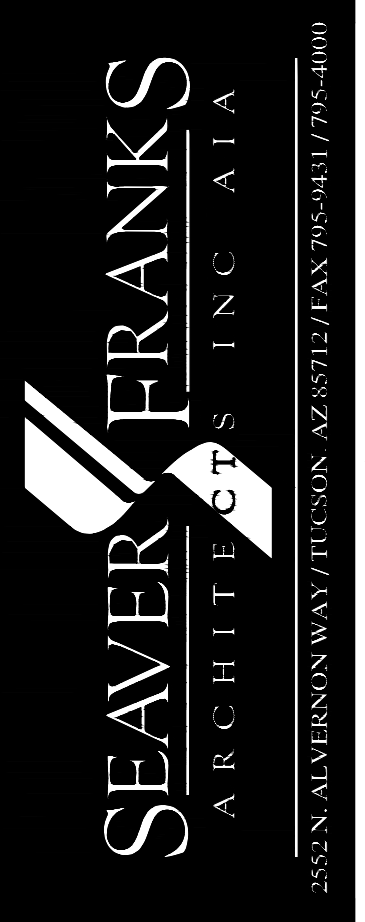
- FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- PROVIDE BACKING AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 3/A6-02.
- ALL FURNITURE TO BE FURNISHED AND INSTALLED BY OWNER.

PLAN KEYNOTES

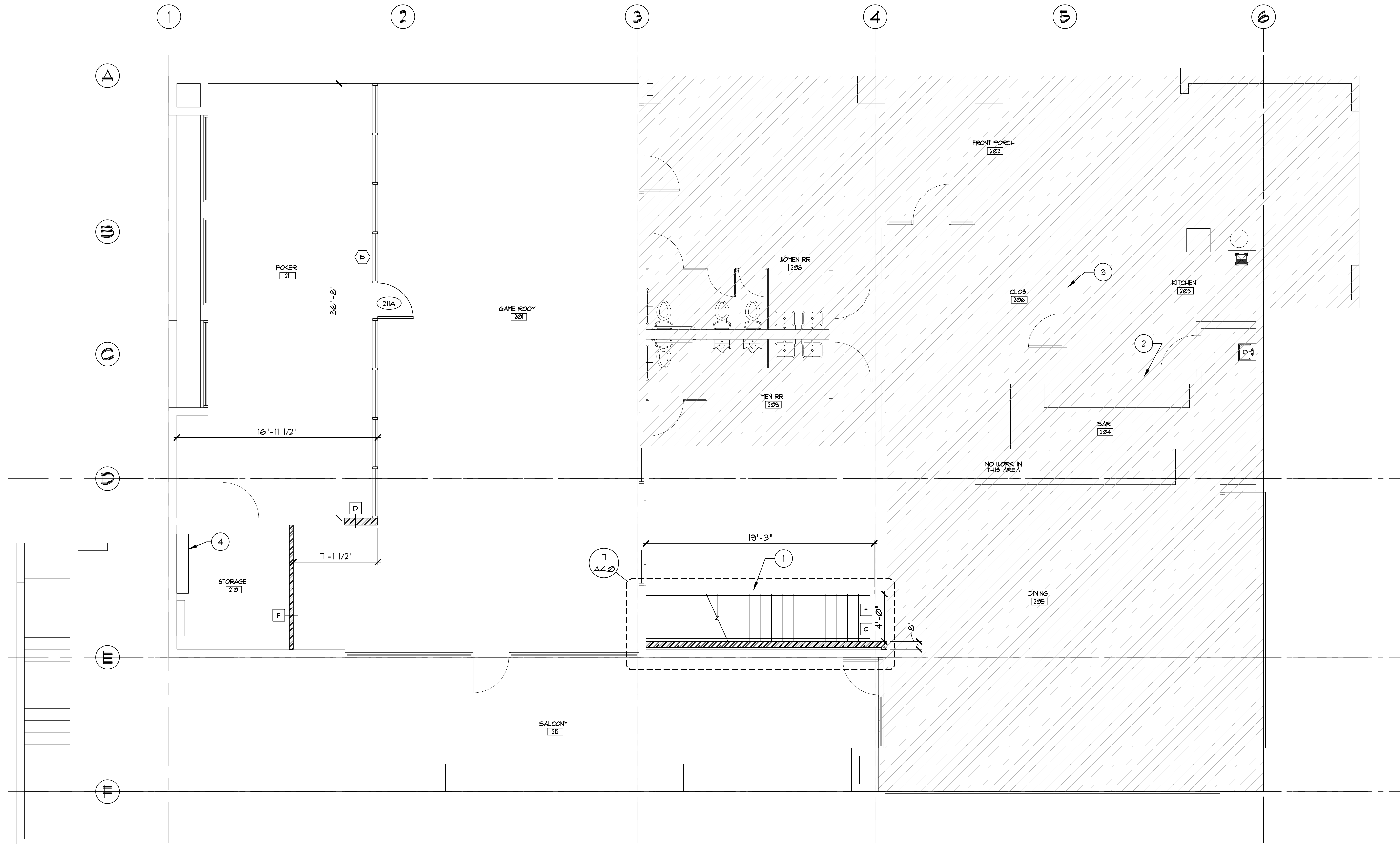
- NEW 42" HIGH GUARD WALL WITH CAP.
- EXISTING ELECTRICAL PANEL TO REMAIN.
- EXISTING ROOF ACCESS LADDER TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT RELOCATED AS REQUIRED.



**TENANT IMPROVEMENT
 REFERENCE FLOOR PLAN
 UPPER LEVEL**

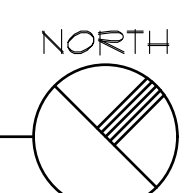


**GVR DEL SOL CLUBHOUSE
 3355 S. CAMINO DEL SOL
 TUCSON, ARIZONA 85747**



1 REFERENCE FLOOR PLAN - UPPER LEVEL

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



ISSUE DATE 09-14-2023
 PROJ. NO. 37096
 DRG. SCALE AS NOTED

A2.0

SHEET

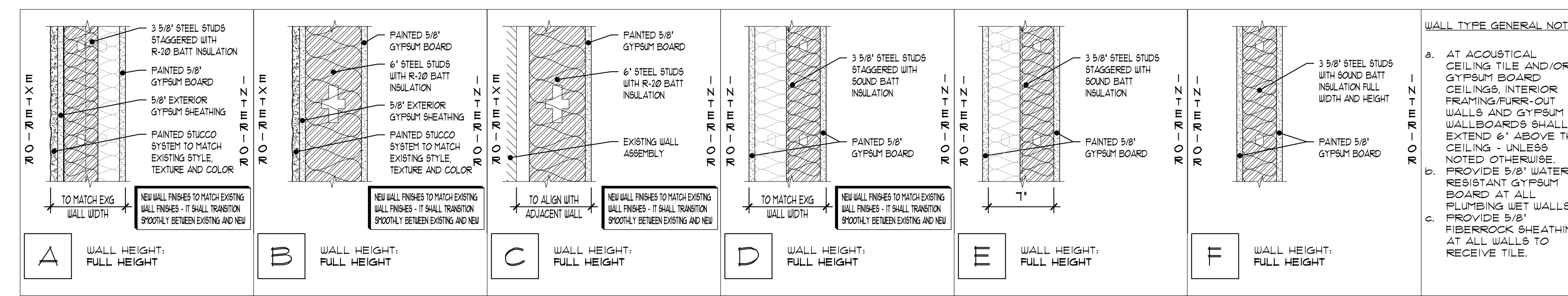
PARTITION SIZE TABLE

STEEL STUD PARTITION SIZE TABLE				
MAXIMUM UNBRACED PARTITION HEIGHT	STUD DEPTH	FLANGE WIDTH	STUD GA	STUD SPACINGS
10'-10"	3 5/8"	1 1/4"	25	24" O.C.
12'-5"	3 5/8"	1 1/4"	25	16" O.C.
13'-0"	3 5/8"	1 1/4"	20	24" O.C.
15'-0"	3 5/8"	1 1/4"	20	16" O.C.
20'-0"	6"	1 1/4"	20	24" O.C.

- NOTES:**
- HEIGHT LIMITATIONS AND STUD PROPERTIES BASED ON INFORMATION PROVIDED IN THE STEEL STUD MANUFACTURERS ASSOCIATION HANDBOOK. VALUES ARE FOR INTERIOR NON-STRUCTURAL NON-COMPOSITE PARTITIONS WITH A 5 PSF LOAD AND L740 DEFLECTION FACTOR.
 - PROVIDE 4" STUDS AT PARTITIONS WITH 4" COLLINGS.
 - PROVIDE SLIP TRACK AT ALL INTERIOR FULL HEIGHT WALLS, ESPECIALLY AT THE PRE-ENGINEERED METAL BUILDING AREAS.
 - PROVIDE TYPE 'X' GYPSUM BOARD AT ALL RATED PARTITIONS.
 - PROVIDE DRYWALL CONTROL JOINTS (MICO DEEP 'Y' WITH REMOVABLE TAPE OR SIMILAR). JOINTS ARE TO BE PLACED AT DRYWALL EXPANSES EXCEEDING 30'-0" IN LENGTH. PROVIDE CONTROL JOINTS IN CEILING TO LIMIT AREAS TO 1500 SQUARE FEET AND IN ORDER TO LIMIT DIMENSIONS IN EITHER DIRECTION TO 50'-0".

WALL TYPES

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

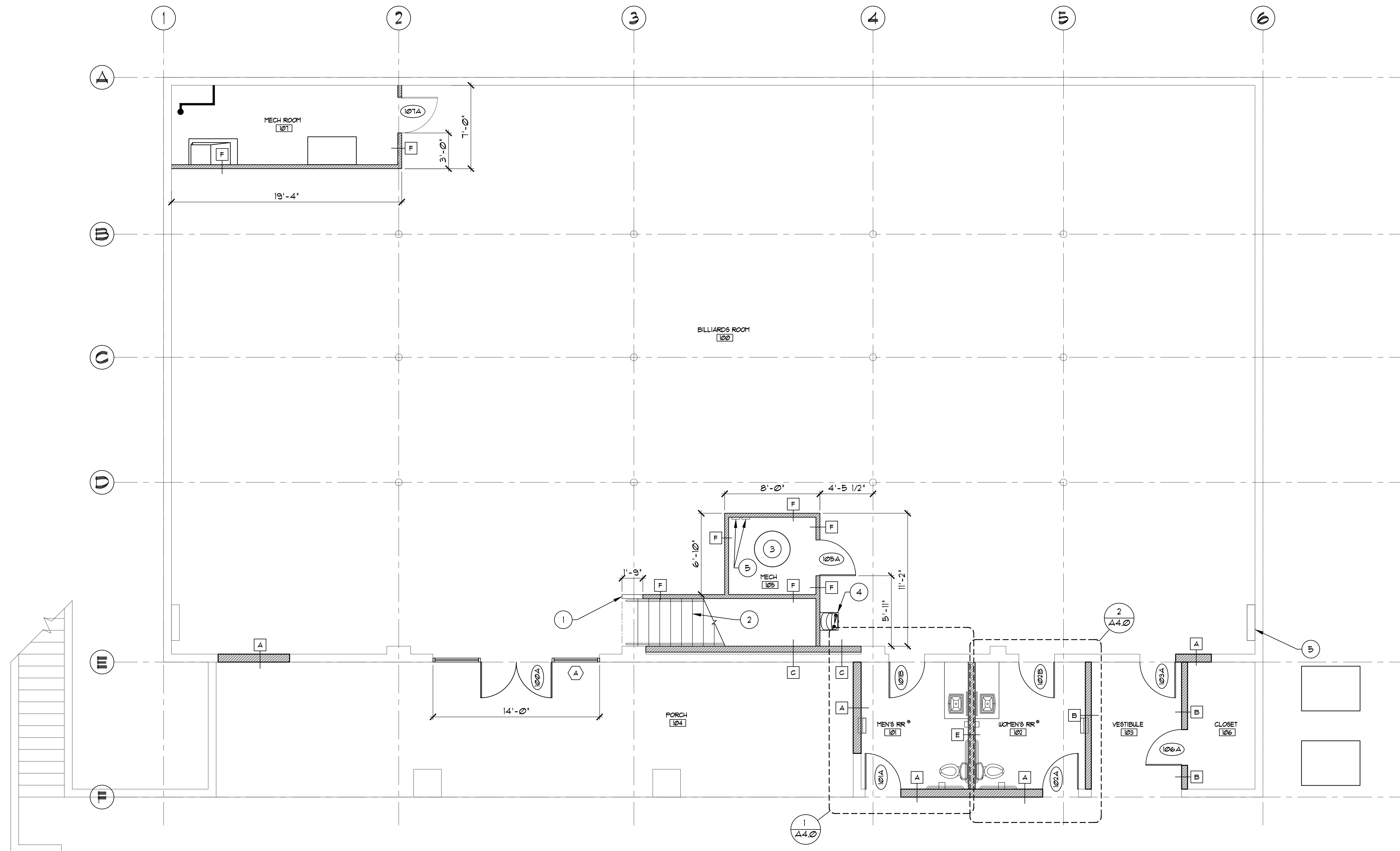


GENERAL NOTES

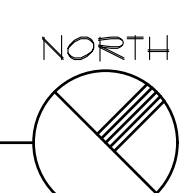
- FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- PROVIDE BACKING AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 3/A6-02.
- ALL FURNITURE TO BE FURNISHED AND INSTALLED BY OWNER.

PLAN KEYNOTES

- NEW 42" HIGH GUARD WALL WITH CAP TO ALIGN WITH EXISTING WALL.
- NEW STAIRS PER STRUCTURAL DRAWINGS. SPACE UNDER STAIRS SHALL BE FULLY ENCLOSED.
- NEW SEWER EJECTOR PUMP IN NEW SUMP PIT - SEE PLUMBING AND STRUCTURAL DRAWINGS. GENERAL CONTRACTOR TO FIELD VERIFY LOCATION.
- NEW WATER FOUNTAIN - SEE PLUMBING AND ELECTRICAL DRAWINGS.
- NEW ELECTRICAL PANEL - SEE ELECTRICAL DRAWINGS.



1 REFERENCE FLOOR PLAN - LOWER LEVEL
SCALE: 1/4" = 1'-0"



**TENANT IMPROVEMENT
REFERENCE FLOOR PLAN
LOWER LEVEL**

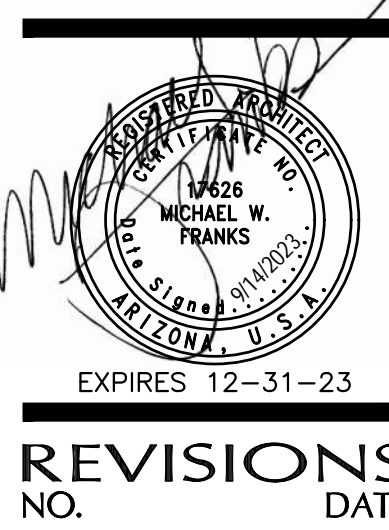


**GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747**







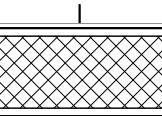
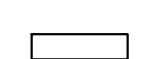

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DRG. SCALE AS NOTED

SHEET

A2.1



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NO. DATE


RCP LEGEND	
	CEILING HEIGHT TAG
	NEW SUPPLY AIR DIFFUSER
	NEW EXHAUST FAN
	NEW RETURN AIR GRILLE
	NEW 6" RECESSED CAN LIGHT
	NEW WALL MOUNTED SCONCE
	NEW 2x2' TEGULAR LAY-IN CEILING TILE IN 1/8\" data-bbox="615 145 725 155"/>
	NEW LED FIXTURE
	PAINTED GYPSUM BOARD CEILING (REFER TO DETAILS 4, 5, 6 ON SHEET A6.0)

NOTES:
 • SEE ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE SCHEDULE.

GENERAL NOTES

A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
 B. PROVIDE ACCESS PANEL(S) AS REQUIRED.
 C. ALL FAINT COLORS TO BE SELECTED BY OWNER

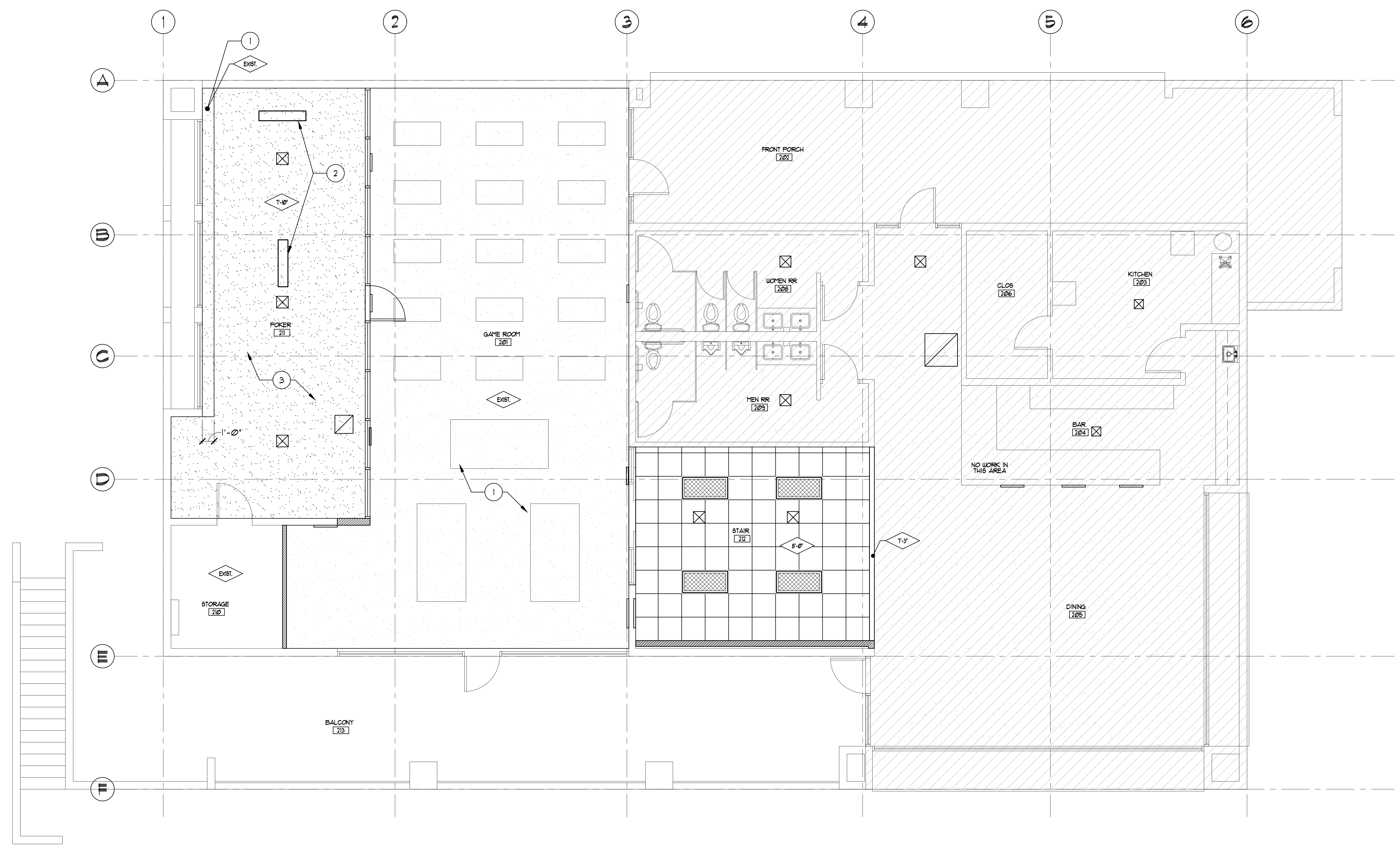
- REFLECTED CEILING PLAN KEYNOTES**
- EXISTING GYPSUM BOARD CEILING - PAINT AS REQUIRED PER OWNER'S REQUEST.
 - EXISTING LIGHT FIXTURE TO BE PLACED ON NEW GYPSUM BOARD CEILING AND REUSE EXISTING CIRCUITS.
 - NEW PAINTED GYPSUM BOARD CEILING.



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**TENANT IMPROVEMENT
 REFLECTED CEILING PLAN
 UPPER LEVEL**



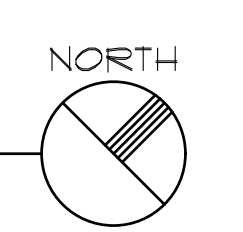
SEAVER FRANKS
 ARCHITECTS, INC. AIA
 2525 ALVERNAN WAY / TUCSON, AZ 85714 / FAX 520-284-1700

**GVR DEL SOL CLUBHOUSE
 3355 S. CAMINO DEL SOL
 TUCSON, ARIZONA 85747**

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A3.0





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GENERAL NOTES

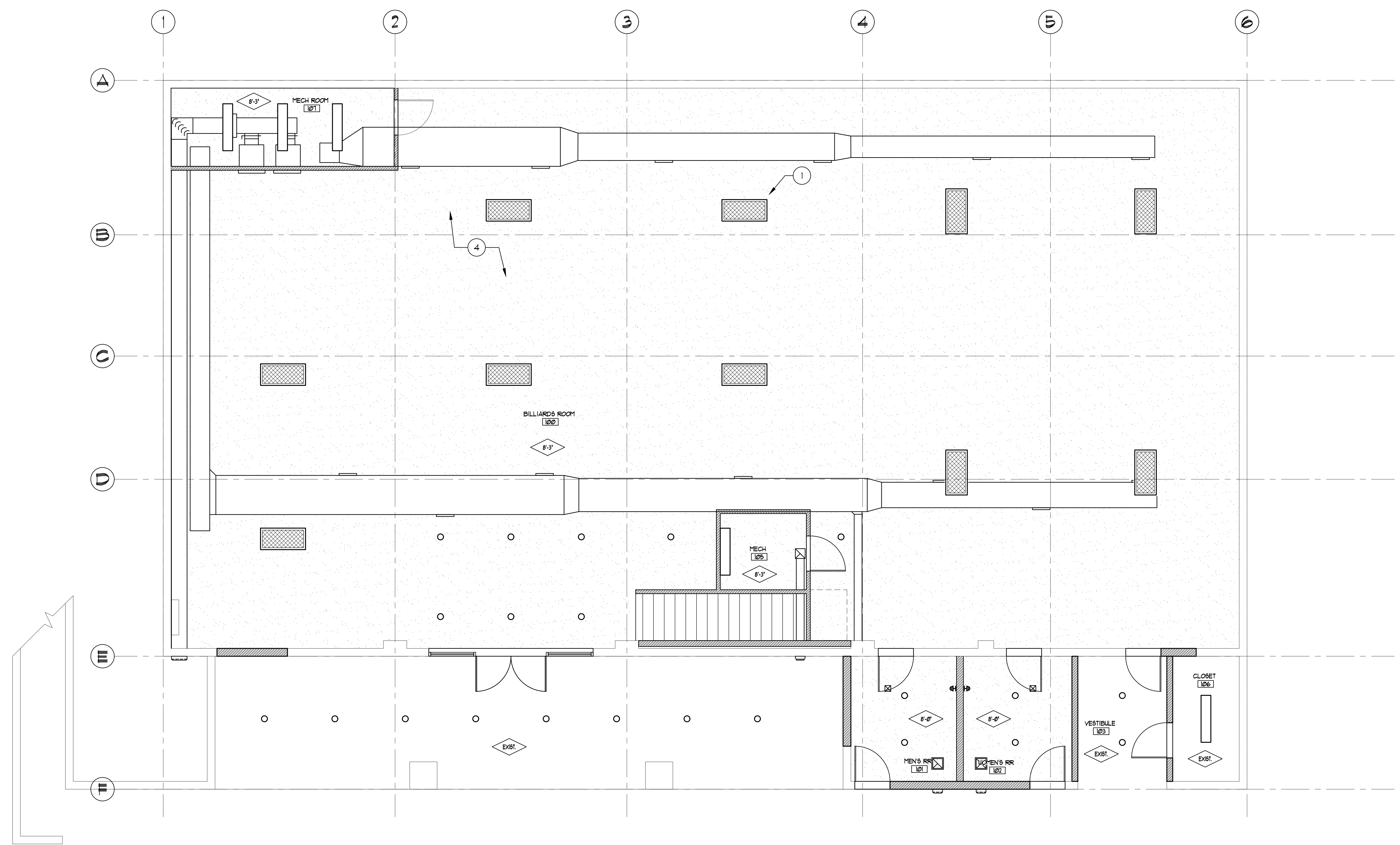
- A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- B. PROVIDE ACCESS PANEL(S) AS REQUIRED.
- C. ALL FAINT COLORS TO BE SELECTED BY OWNER.

REFLECTED CEILING PLAN KEYNOTES

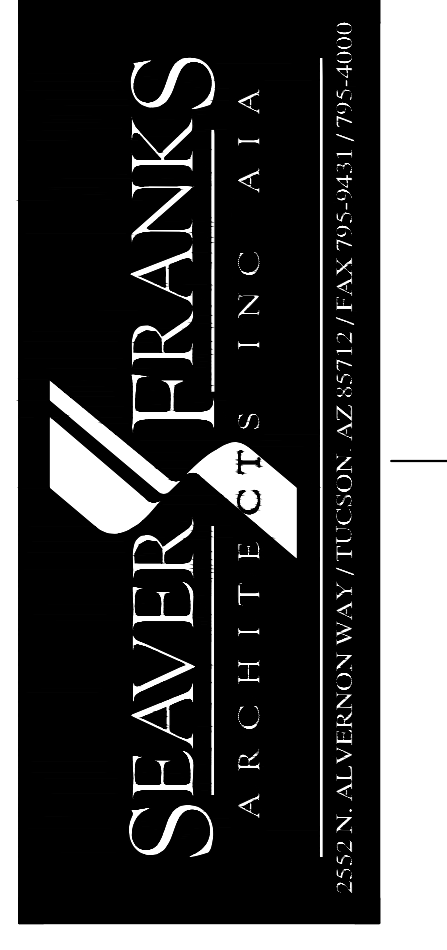
1. NEW PAINTED GYPSUM BOARD TO MATCH EXISTING HEIGHT AND COLOR.
2. EXISTING SLOPED GYP BOARD CEILING TO REMAIN.
3. EXISTING GYP BOARD CEILING TO REMAIN.

RCP LEGEND	
	CEILING HEIGHT TAG
	NEW SUPPLY AIR DIFFUSER
	NEW EXHAUST FAN
	NEW RETURN AIR GRILLE
	NEW 6" RECESSED CAN LIGHT
	NEW WALL MOUNTED SCONCE
	NEW 2'x2' REGULAR LAY-IN CEILING TILE IN 15/16" GRID CEILING WITH 2'x4' LED LIGHT FIXTURE
	NEW LED FIXTURE
	PAINTED GYPSUM BOARD CEILING

NOTES:
• SEE ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE SCHEDULE.



TENANT IMPROVEMENT
 REFLECTED CEILING PLAN
 LOWER LEVEL



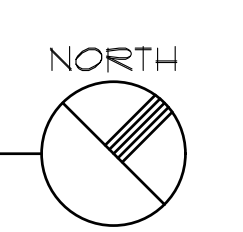
GVR DEL SOL CLUBHOUSE
 3355 S. CAMINO DEL SOL
 TUCSON, ARIZONA 85747

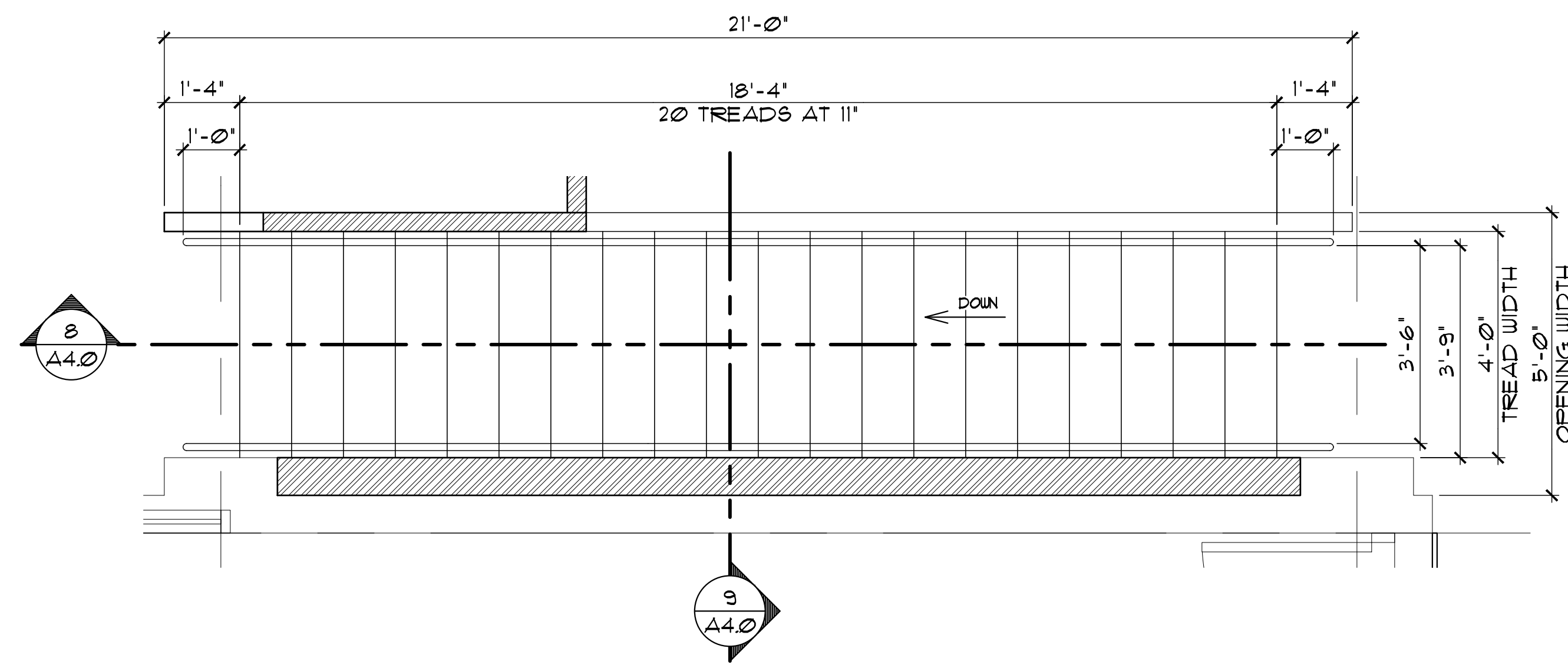
ISSUE DATE 09-14-2023
 PROJ. NO. 37096
 DRG. SCALE AS NOTED

SHEET

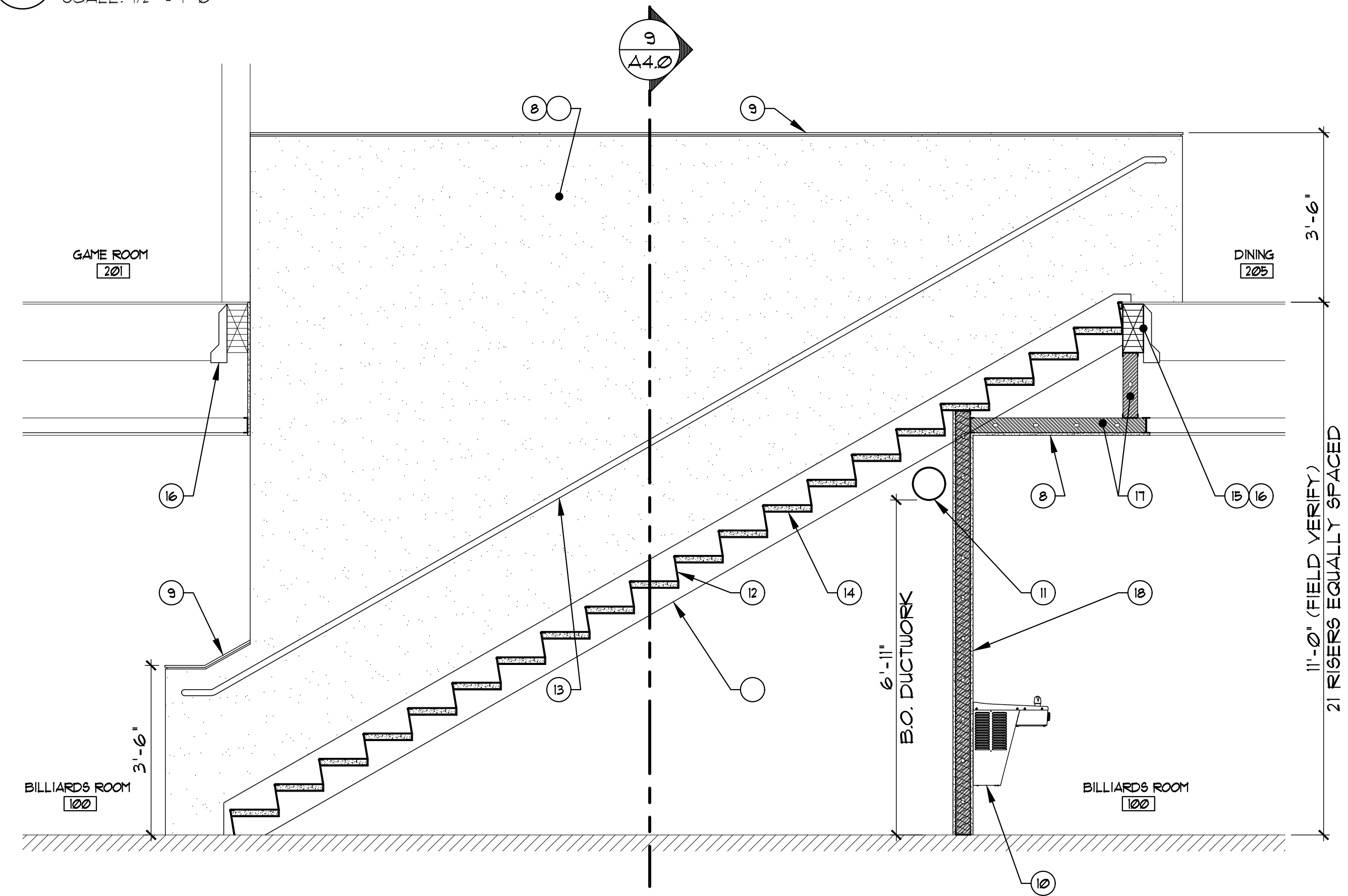
A3.1

1 REFLECTED CEILING PLAN - LOWER LEVEL
 SCALE: 1/4" = 1'-0"

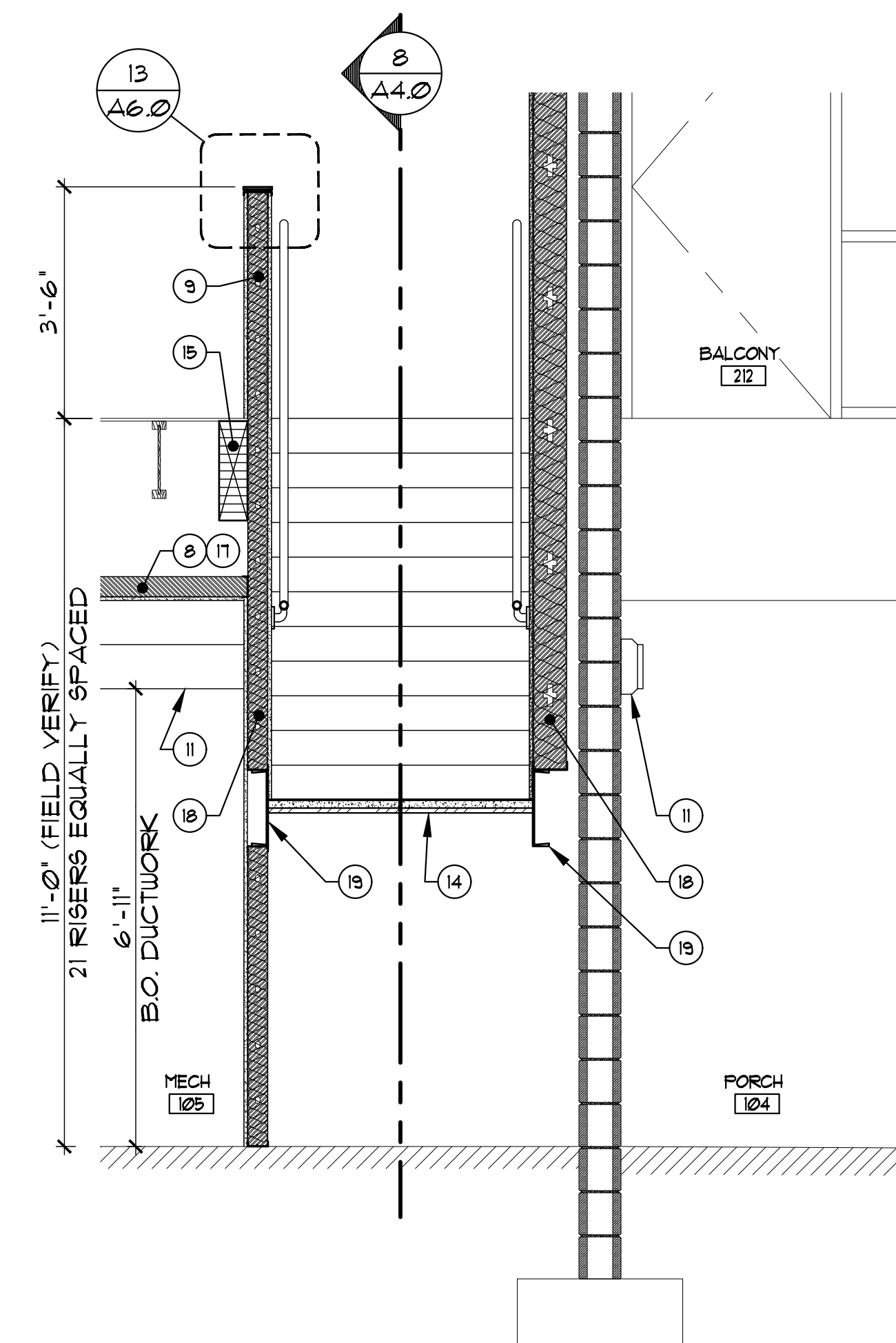




7 ENLARGED PLAN - STAIR
SCALE: 1/2" = 1'-0"



8 STAIR LONGITUDINAL SECTION
SCALE: 1/2" = 1'-0"



9 STAIR CROSS SECTION
SCALE: 1/2" = 1'-0"

GENERAL NOTES

- A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- B. PROVIDE BACKING AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 9/A6.0.

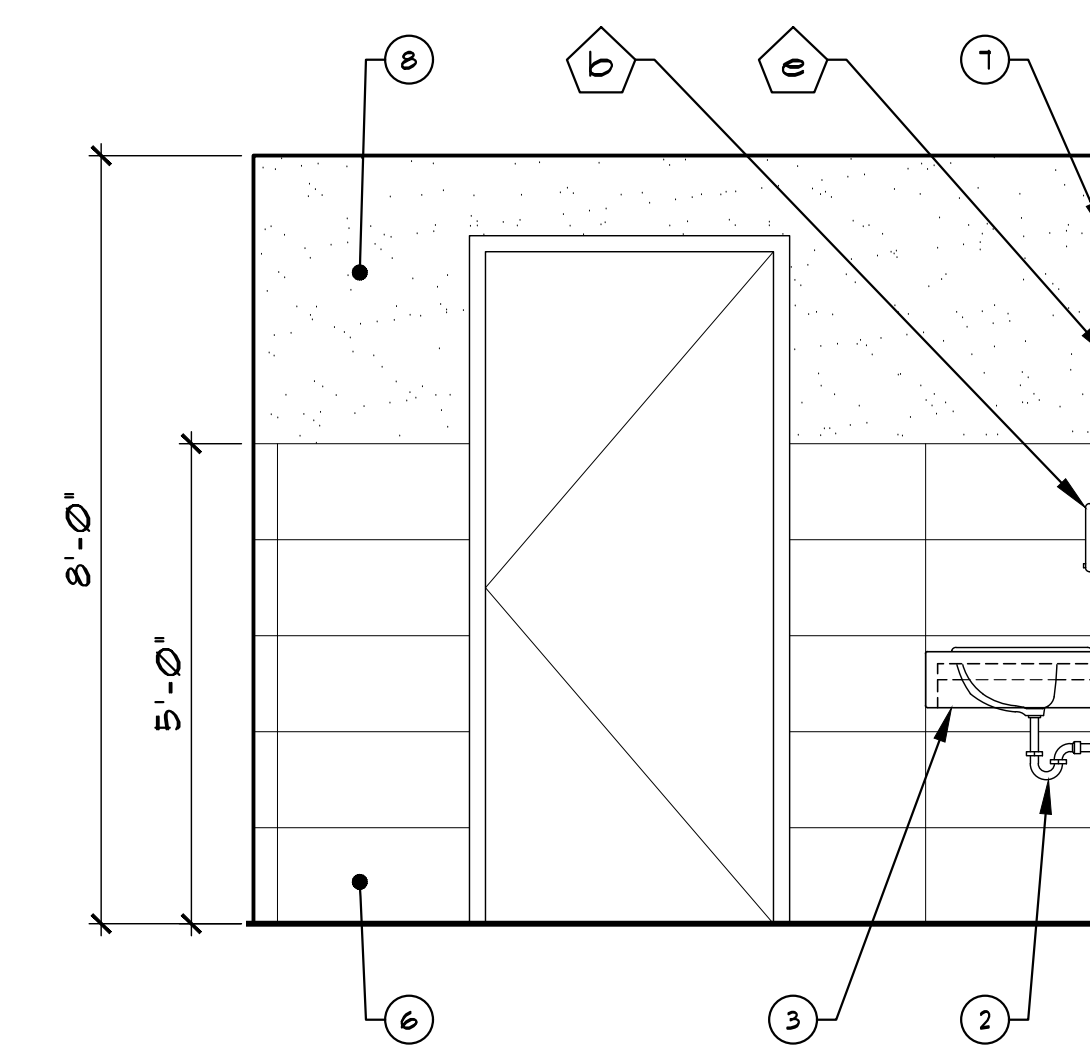
ACCESSORIES KEYNOTES

REFER TO INTERIOR DESIGN DRAWINGS FOR ADDITIONAL INFORMATION ON THESE ACCESSORIES

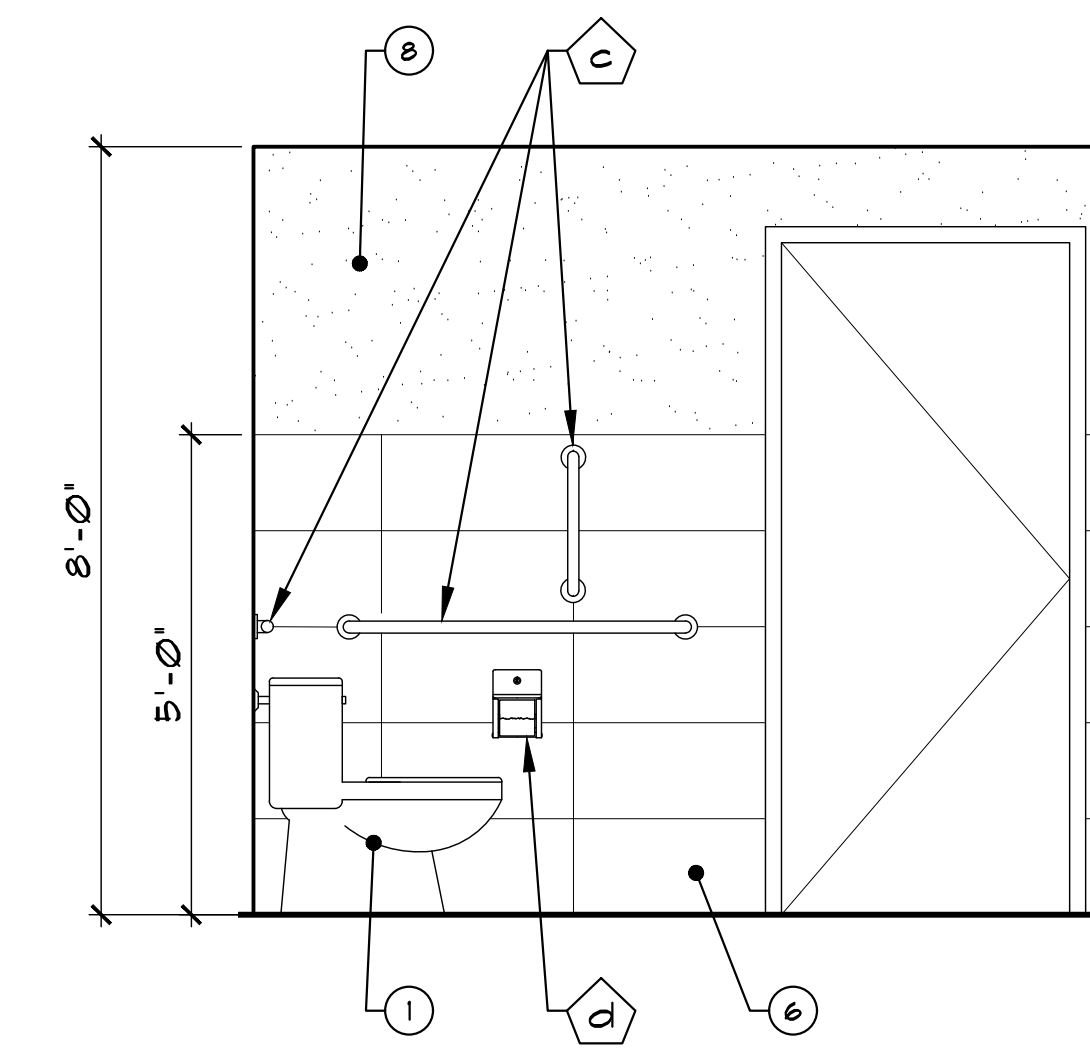
- a. SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE.
- b. SURFACE MOUNTED SOAP DISPENSER.
- c. GRAB BARS ON CONCEALED MOUNTING/SNAP FLANGE.
- d. SURFACE MOUNTED TOILET PAPER DISPENSER.
- e. FRAMED MIRROR.

KEYNOTES

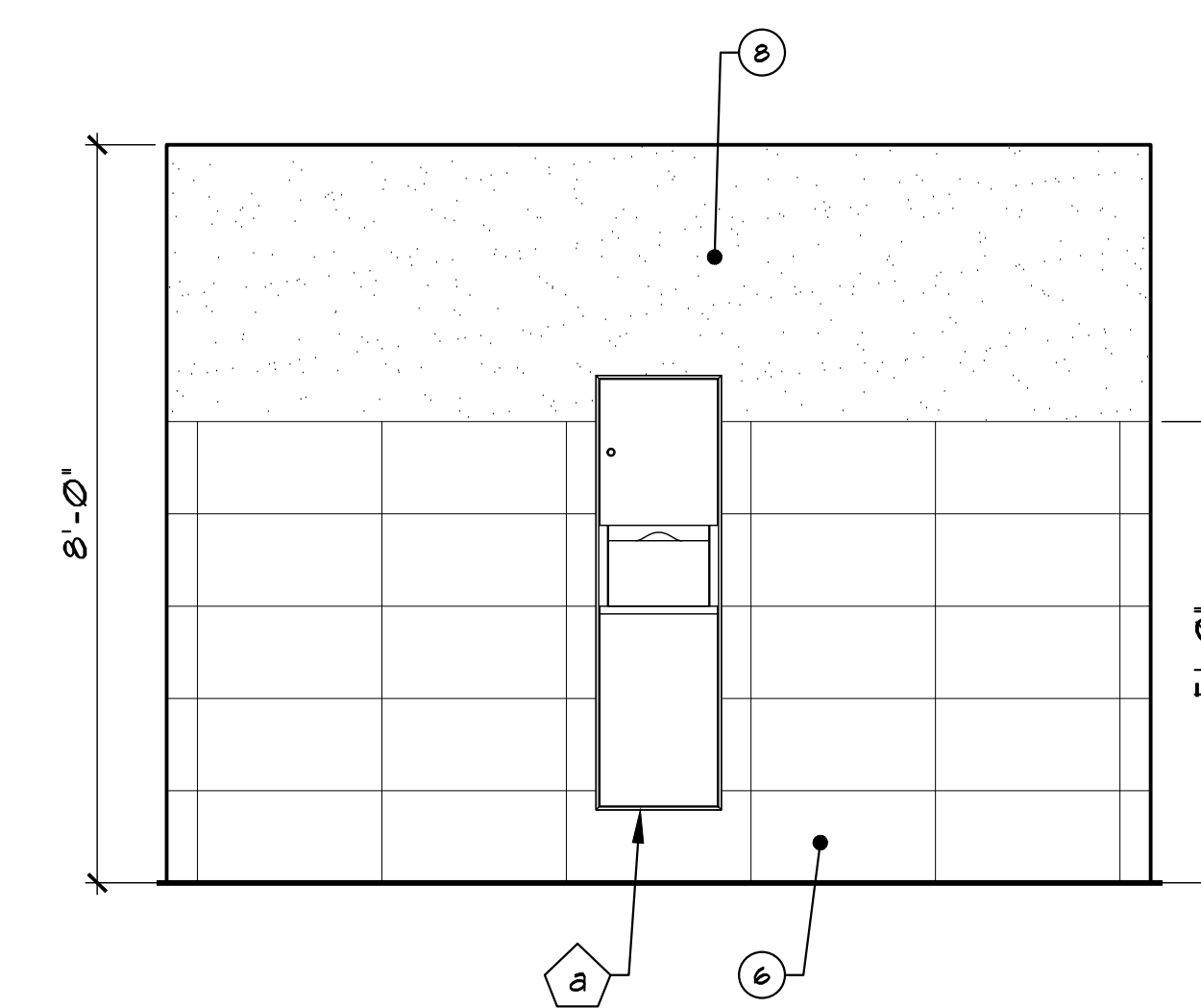
1. NEW WATER CLOSET - SEE PLUMBING DRAWINGS.
2. NEW LAVATORY - SEE PLUMBING DRAWING.
3. NEW SOLID SURFACE COUNTERTOP.
4. NEW FLOOR DRAIN - SEE PLUMBING DRAWINGS.
5. NEW FLOOR TILE.
6. NEW WALL TILE.
7. NEW WALL SCONCE - SEE ELECTRICAL DRAWINGS (FIXTURE SELECTED BY OWNER).
8. NEW PAINTED GYPSUM BOARD.
9. NEW GUARD WALL WITH CAP - SEE DETAIL 13/A6.0.
10. NEW DRINKING FOUNTAIN - SEE ELECTRICAL AND PLUMBING DRAWINGS.
11. NEW EXHAUST DUCTWORK - SEE MECHANICAL DRAWINGS.
12. NEW CLOSED RISER.
13. NEW PAINTED 1 1/2" STEEL PIPE HANDRAIL.
14. NEW NON-SLIP FINISH, 2" CONCRETE FILLED PAN TREAD.
15. NEW BEAM - SEE STRUCTURAL DRAWINGS.
16. NEW HANGER - SEE STRUCTURAL DRAWINGS.
17. NEW 3 5/8" STEEL STUD FRAMING AS REQUIRED.
18. NEW WALL ASSEMBLY AS SPECIFIED ON THE WALL TYPES.
19. NEW PAINTED STRINGER - SEE STRUCTURAL DRAWINGS.



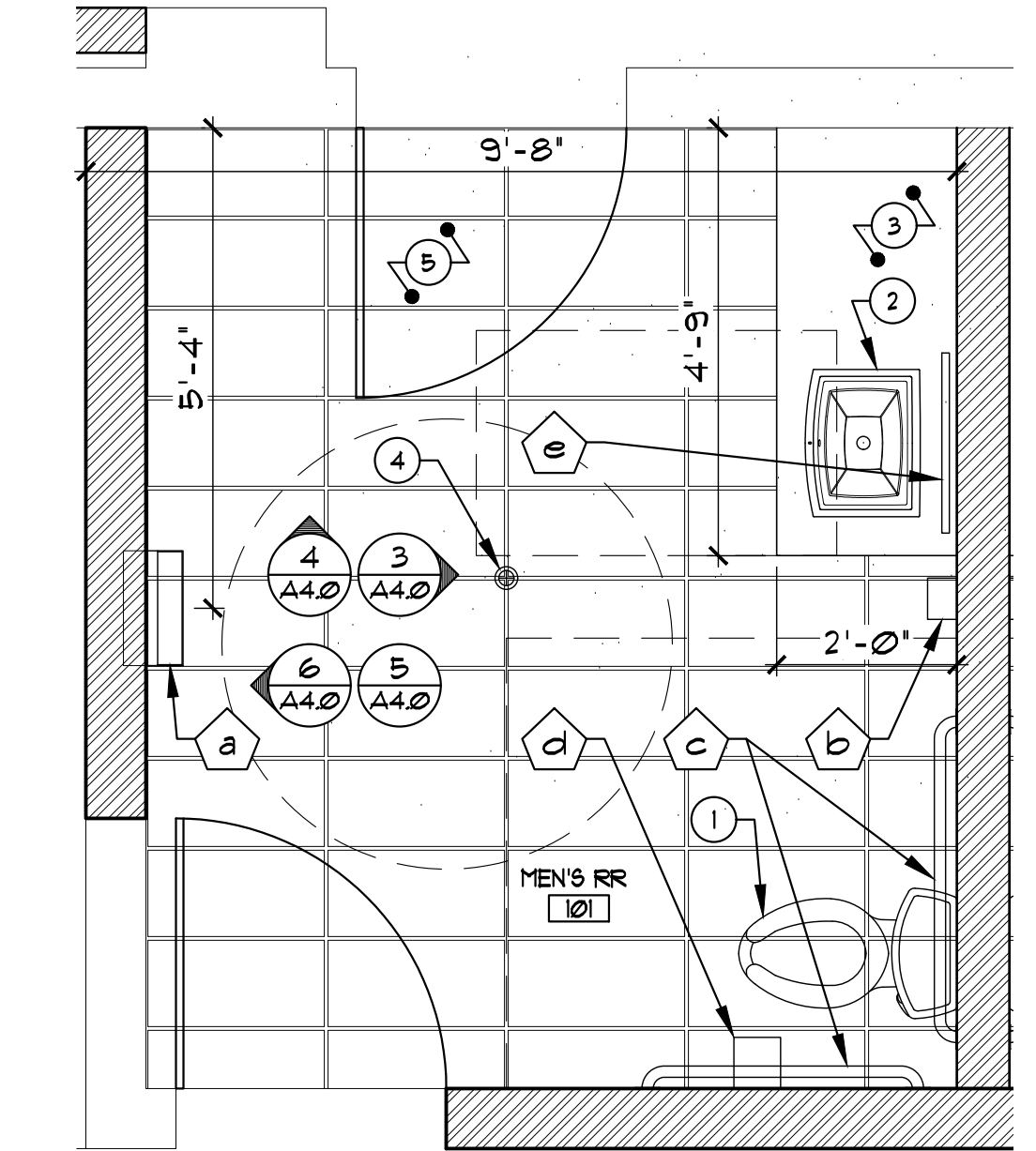
4 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"
ROOM IS MIRRORED AT 61M LOCATIONS



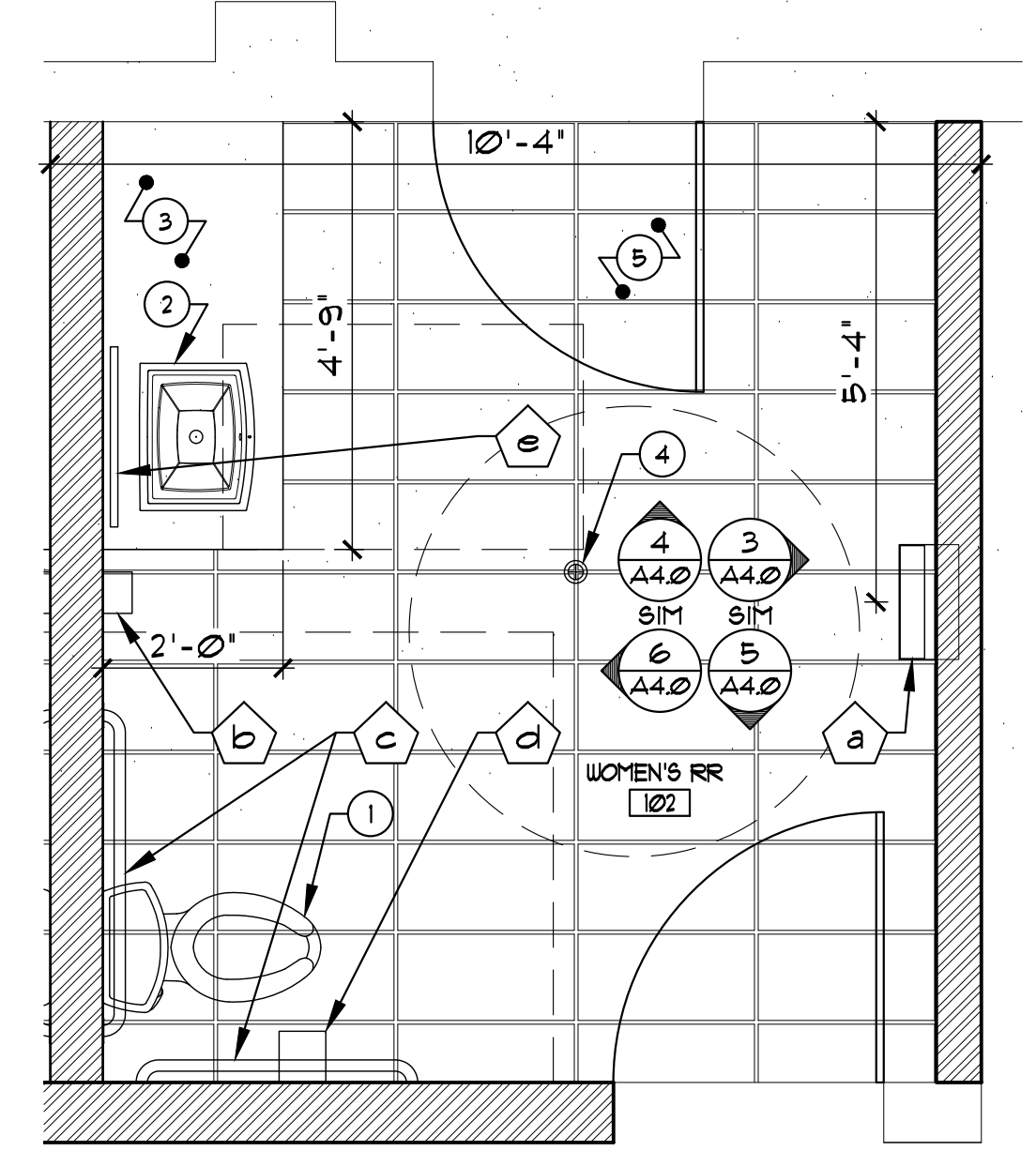
5 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"
ROOM IS MIRRORED AT 61M LOCATIONS



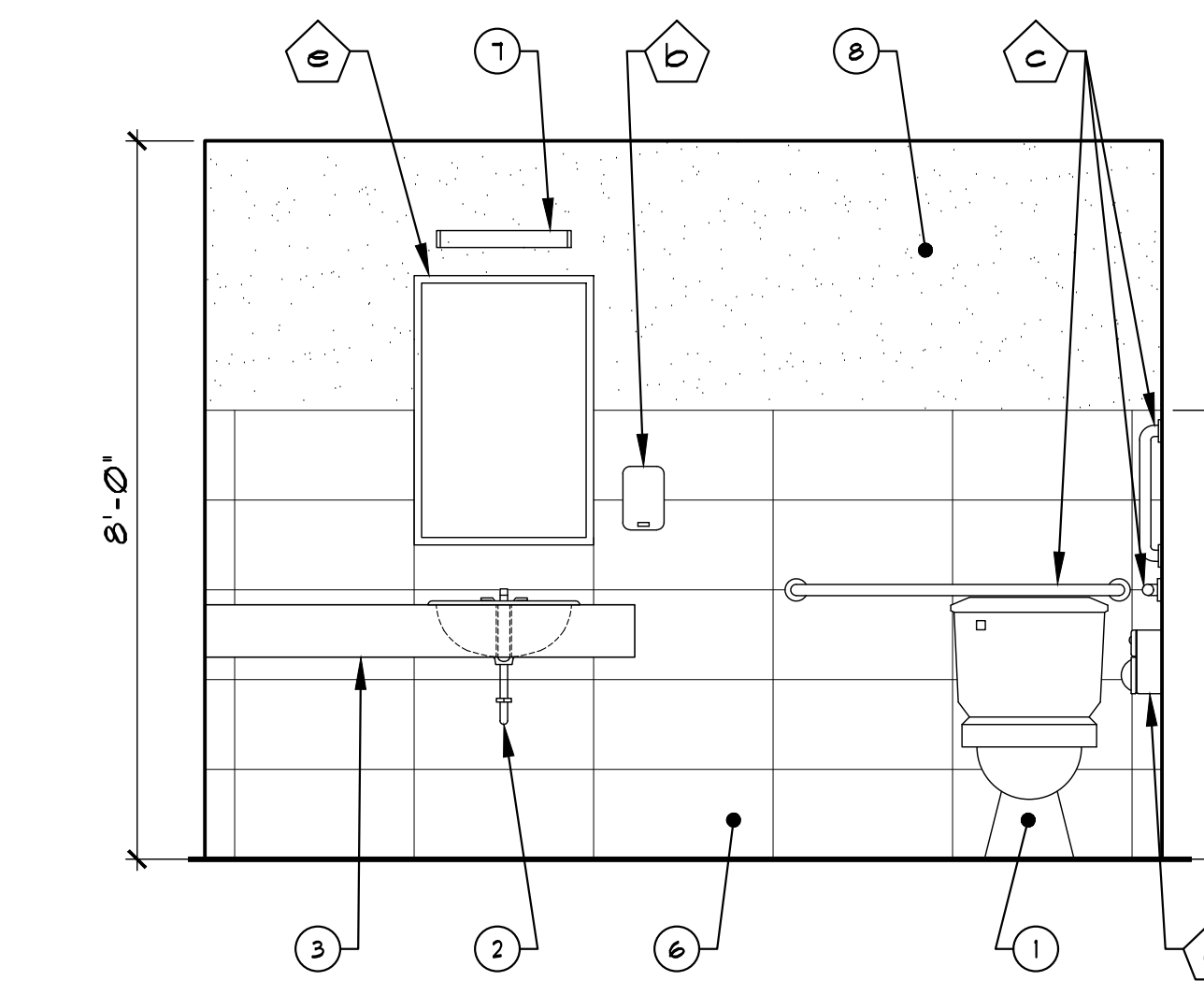
6 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"
ROOM IS MIRRORED AT 61M LOCATIONS



1 ENLARGED FLOOR PLAN
SCALE: 1/2" = 1'-0"



2 ENLARGED FLOOR PLAN
SCALE: 1/2" = 1'-0"



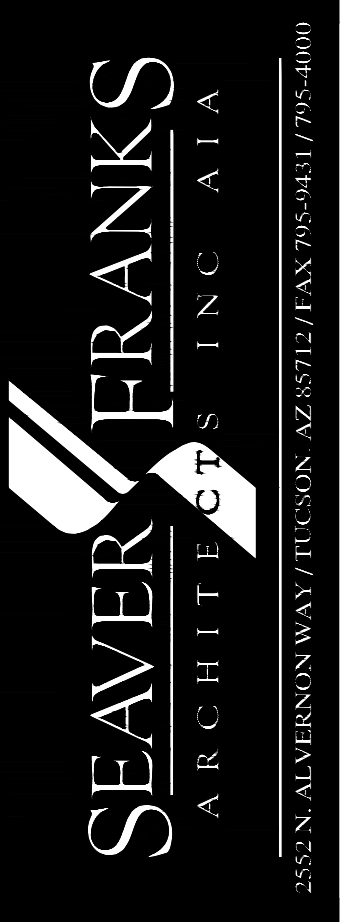
3 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"
ROOM IS MIRRORED AT 61M LOCATIONS



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TENANT IMPROVEMENT
ENLARGED PLANS AND
INTERIOR ELEVATIONS



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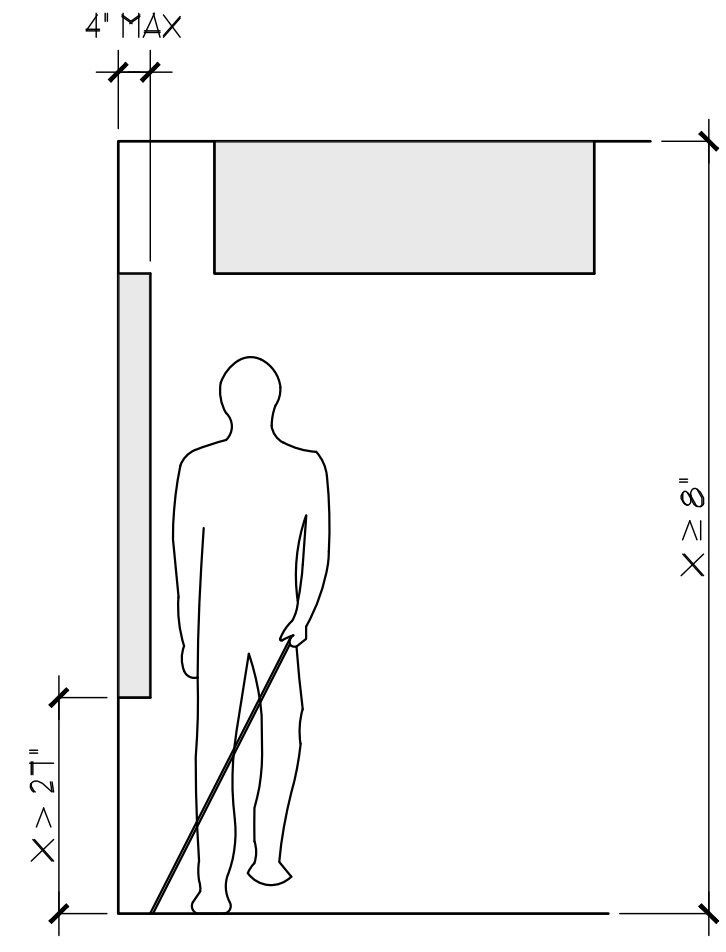
SHEET

A4.0

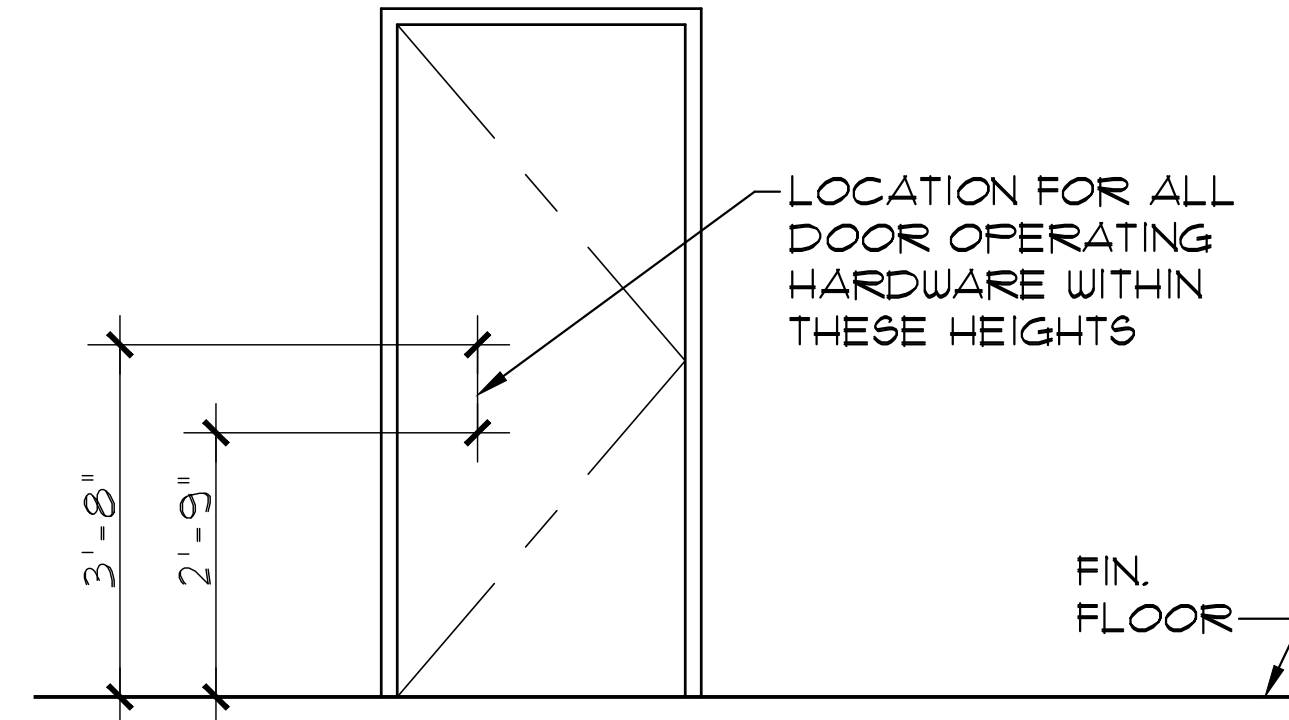


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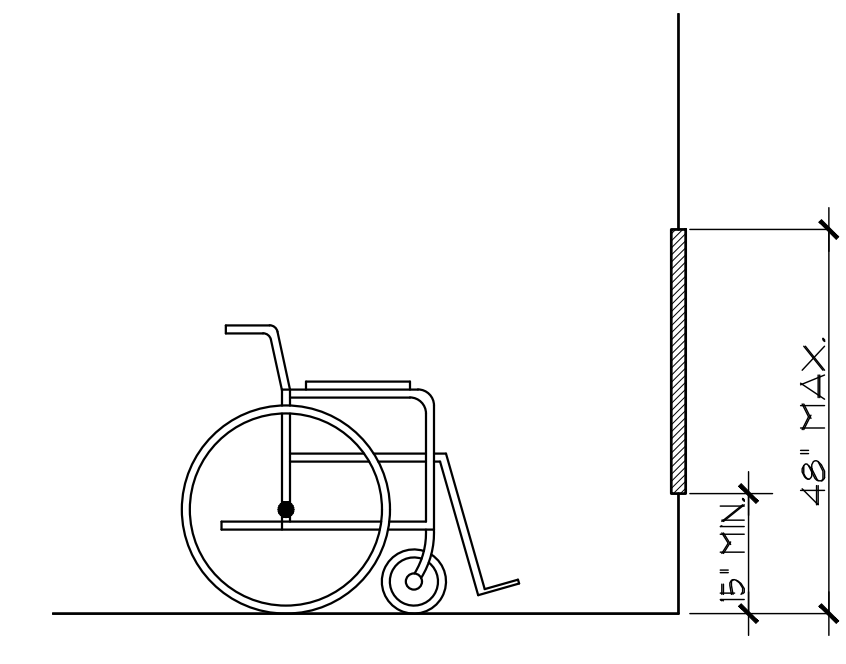
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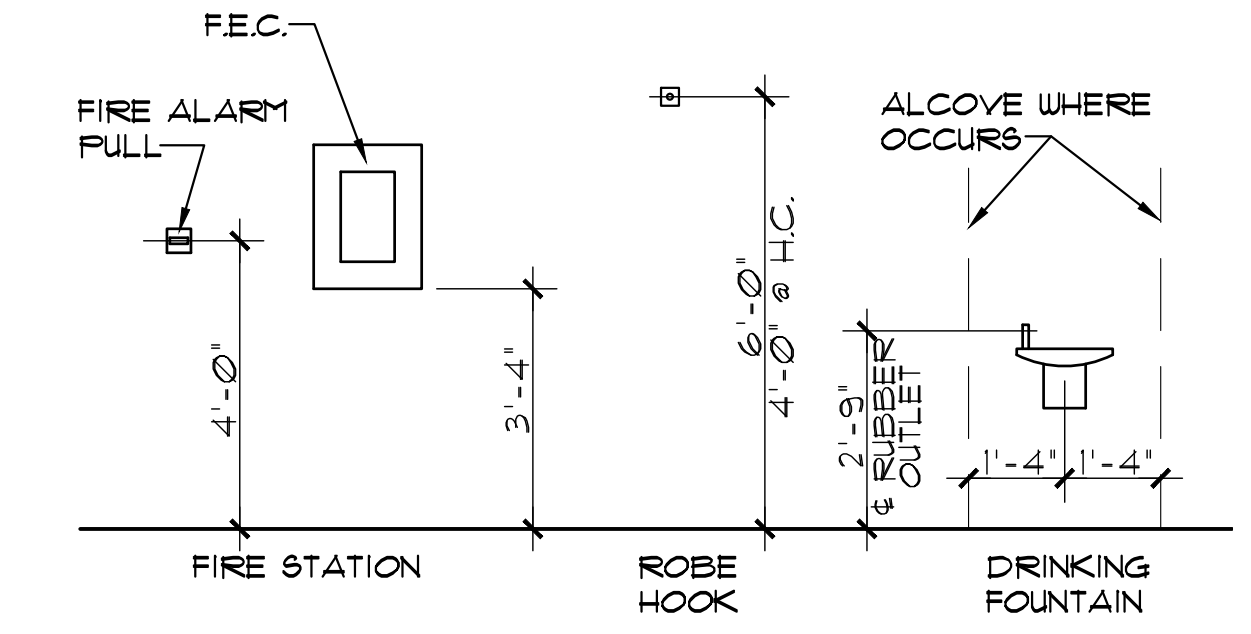
13 LIMITS OF PROTRUDING OBJECTS
SCALE: 1/2" = 1'-0"



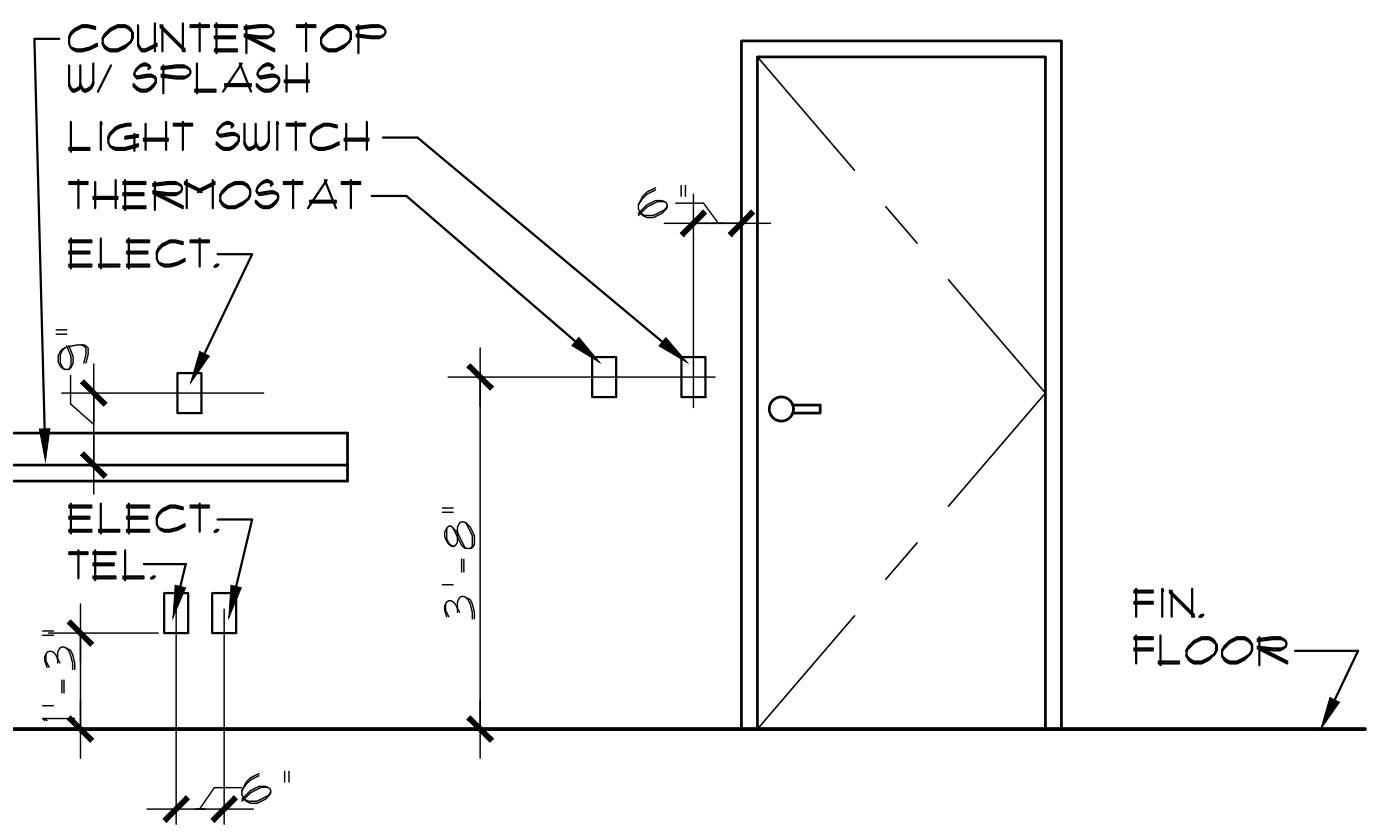
9 DOOR OPERATING HARDWARE MOUNTING HEIGHT
SCALE: 1/2" = 1'-0"



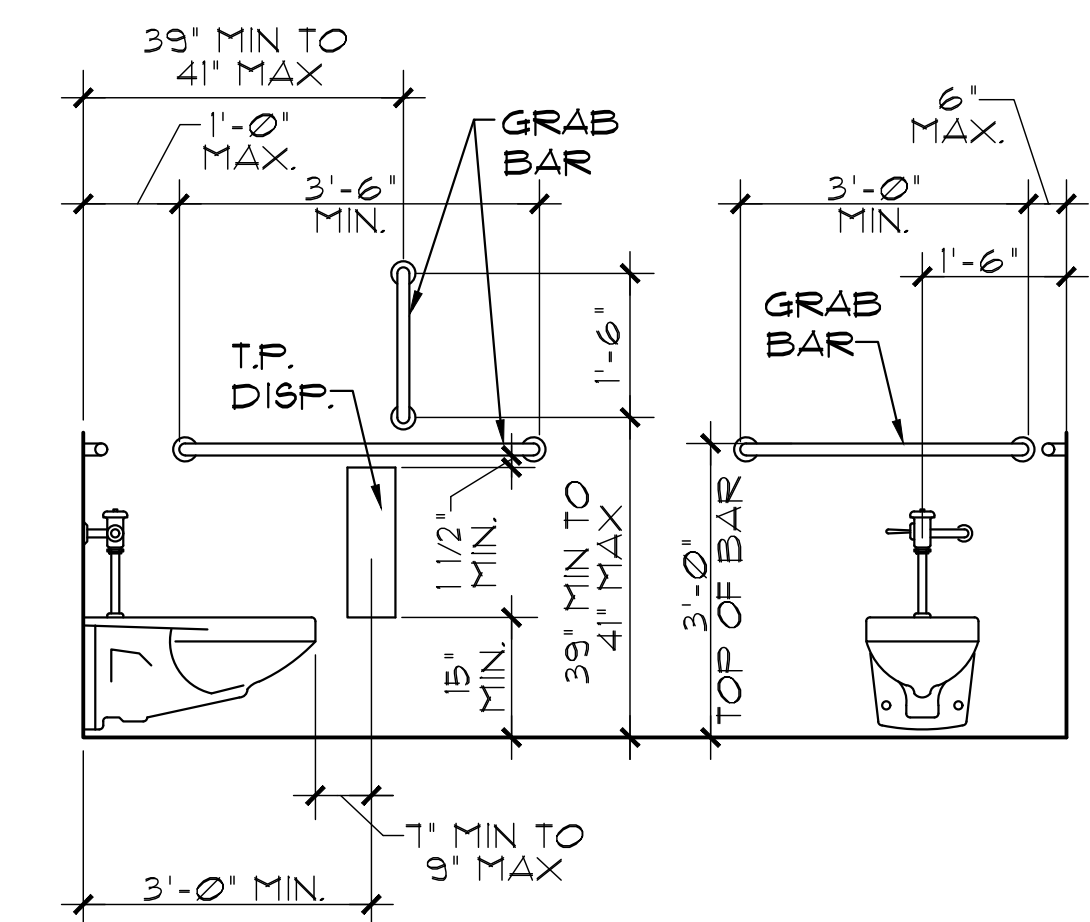
5 ADA UNOBSTRUCTED FORWARD REACH
SCALE: 1/2" = 1'-0"



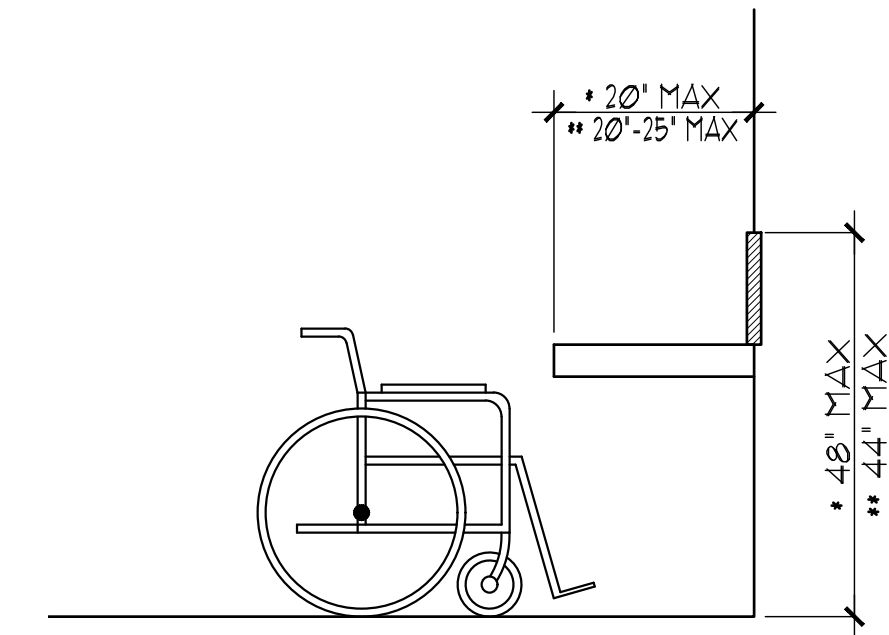
1 TYPICAL MOUNTING HEIGHTS
SCALE: 3/8" = 1'-0"



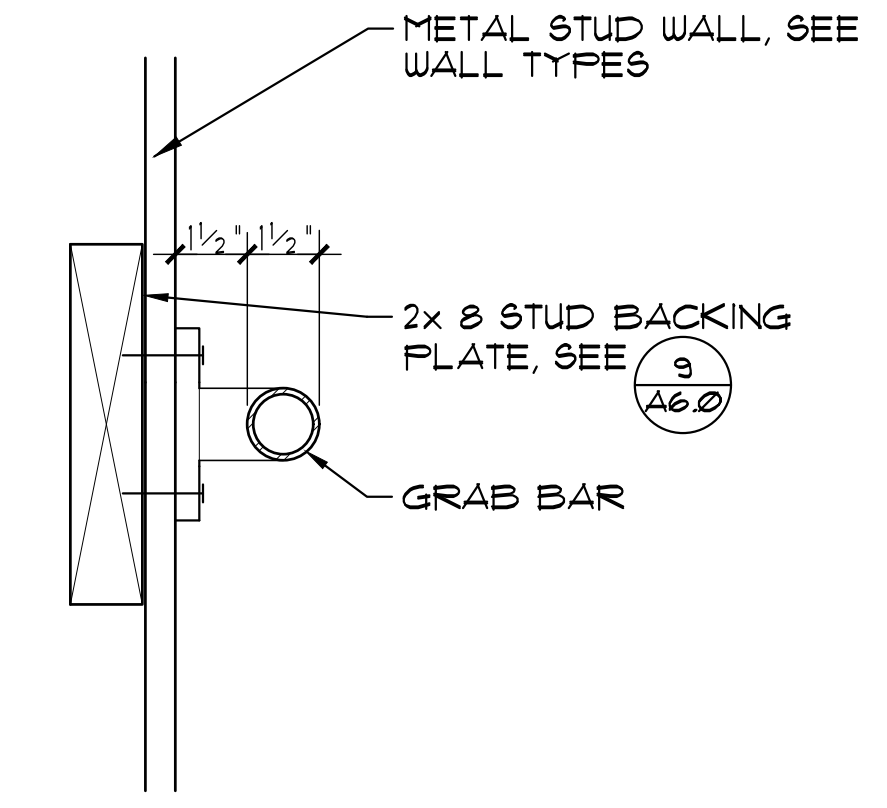
14 ELECTRICAL MOUNTINGS
SCALE: 1/2" = 1'-0"



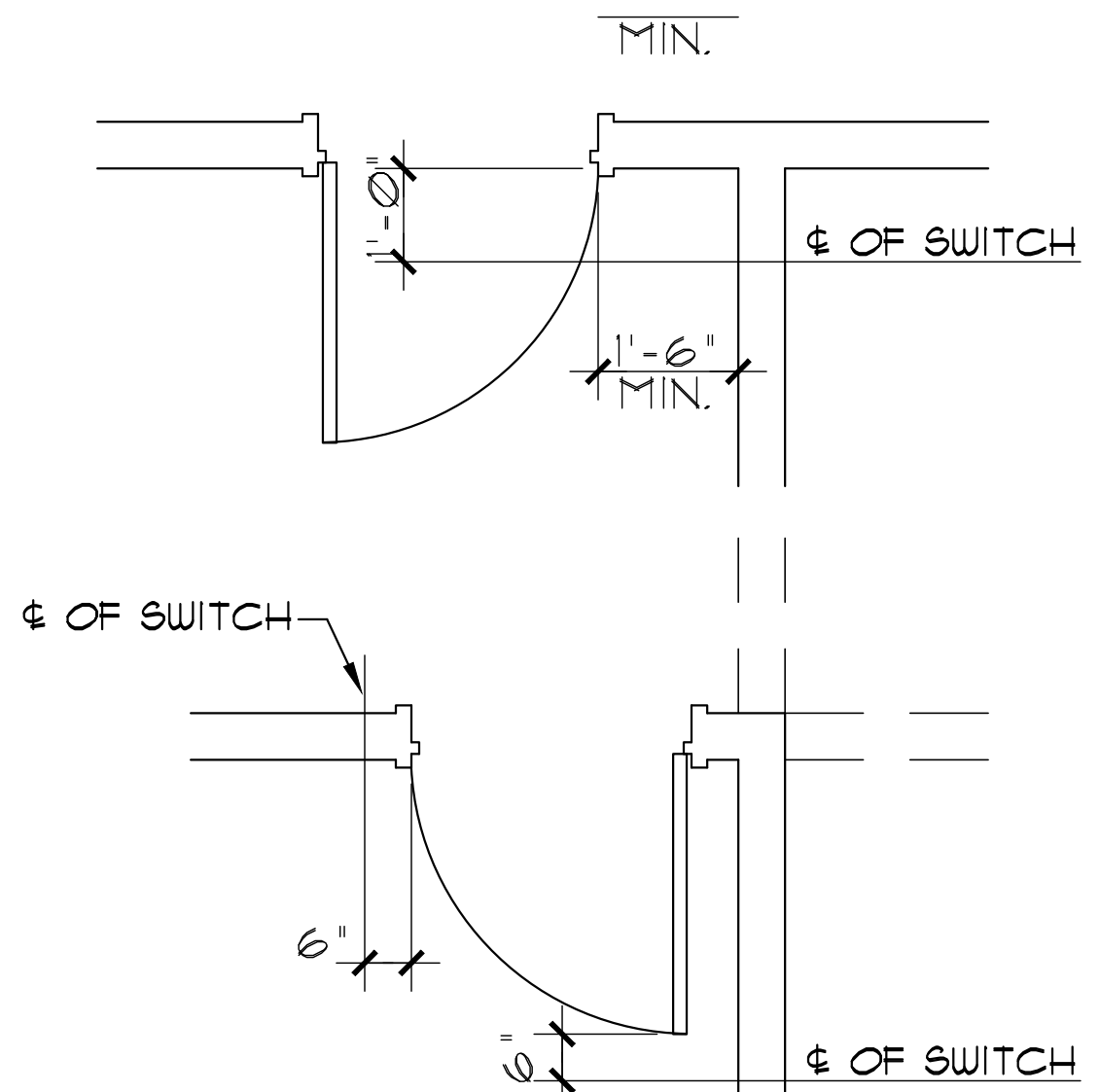
10 ADA WATER CLOSET
SCALE: 1/2" = 1'-0"



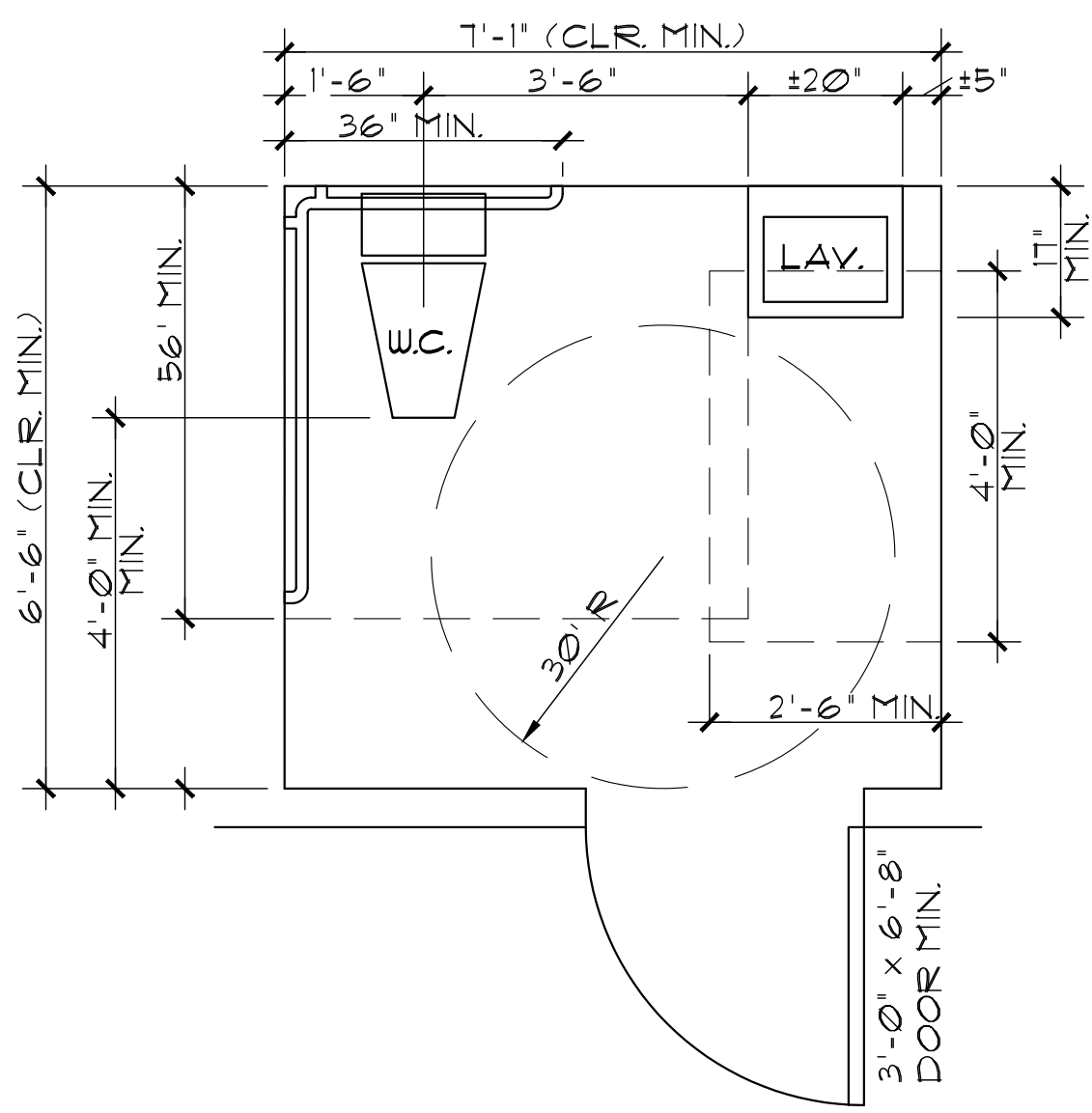
6 ADA OBSTRUCTED HIGH FORWARD REACH
SCALE: 1/2" = 1'-0"



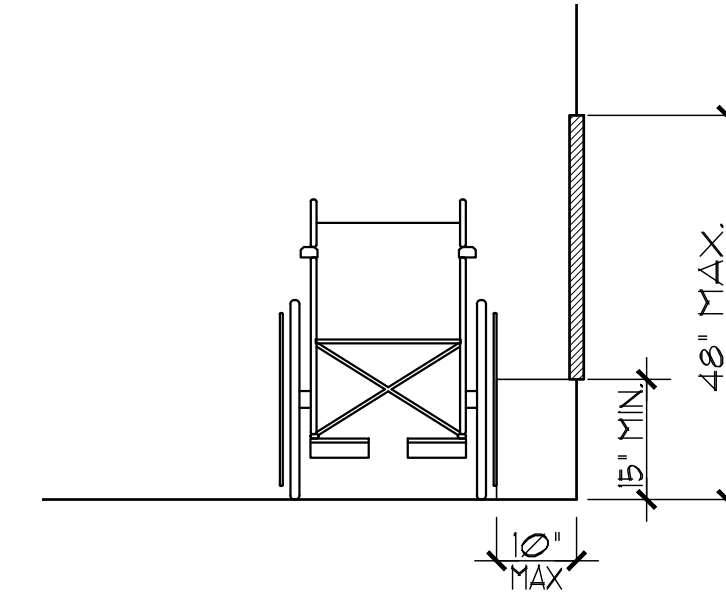
2 GRAB BAR
SCALE: 3/4" = 1'-0"



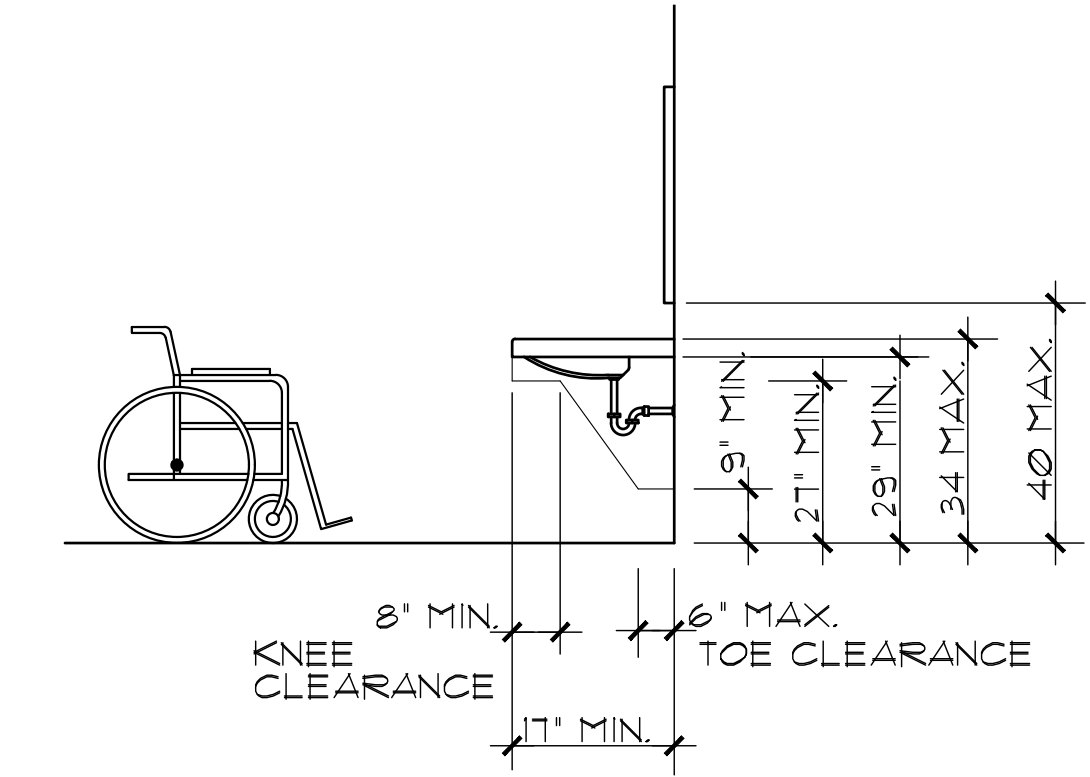
15 LIGHT SWITCH LOCATIONS
SCALE: 1/2" = 1'-0"



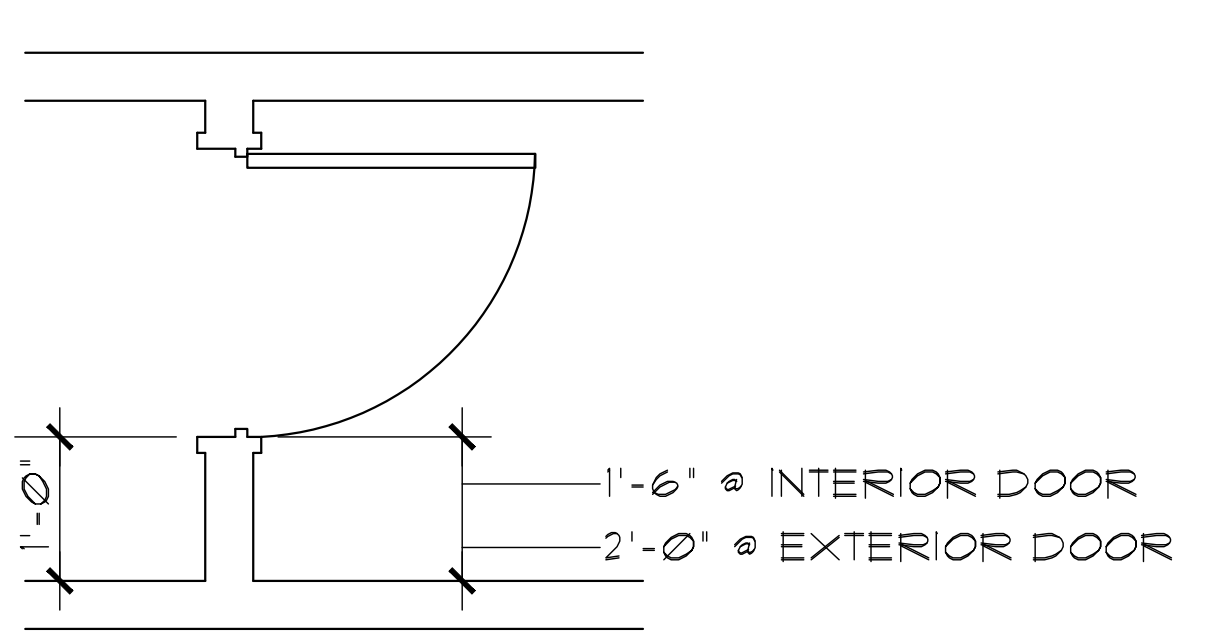
11 ADA WATER CLOSET
SCALE: 1/2" = 1'-0"



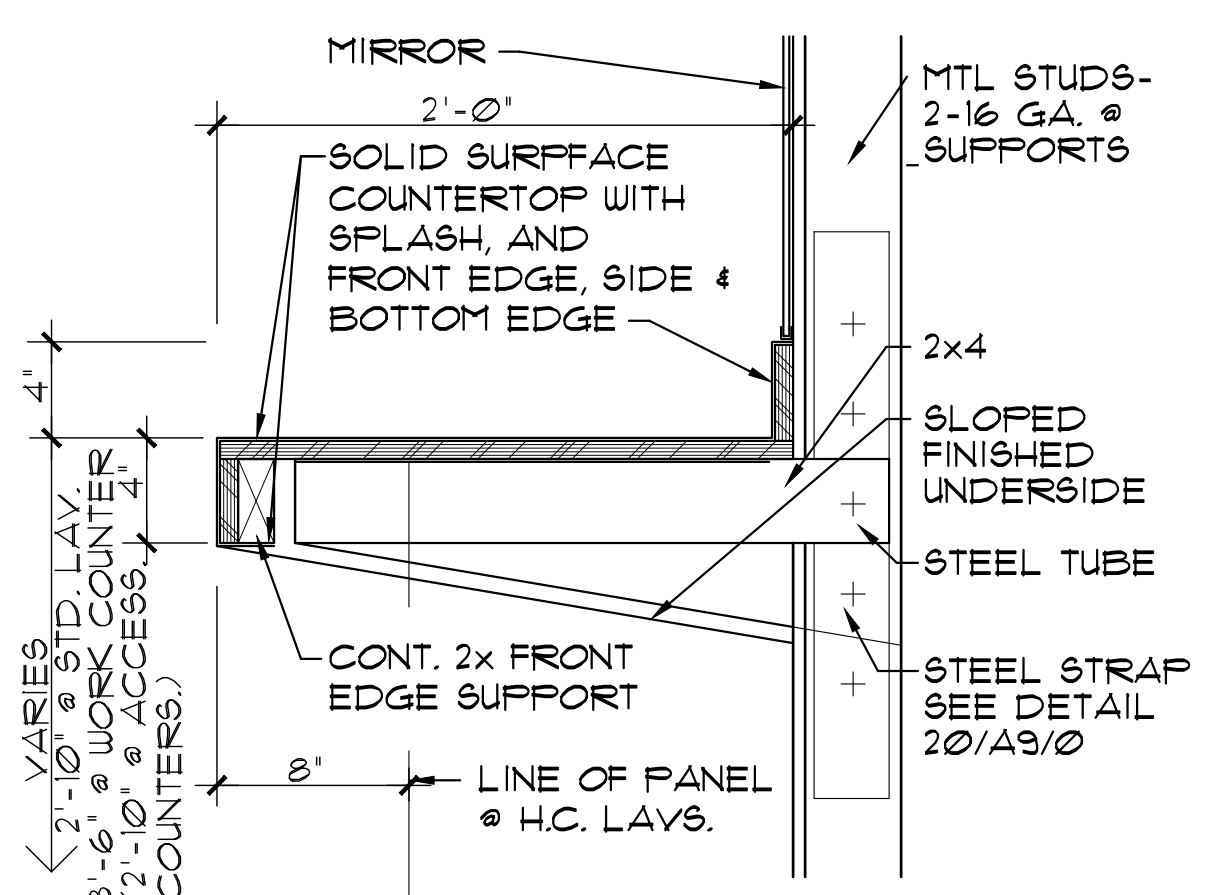
7 ADA UNOBSTRUCTED SIDE REACH
SCALE: 1/2" = 1'-0"



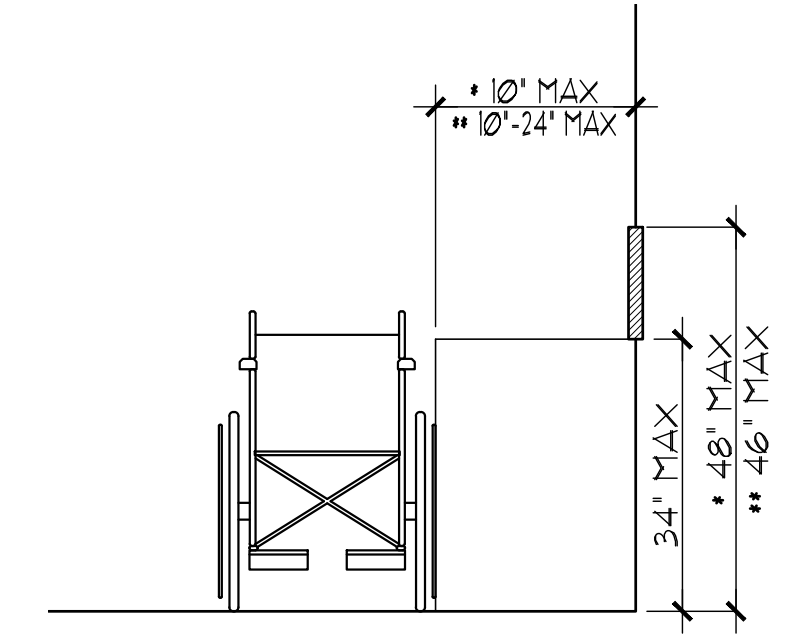
3 ACCESSIBLE LAVATORY CLEARANCES
SCALE: 1" = 1'-0"



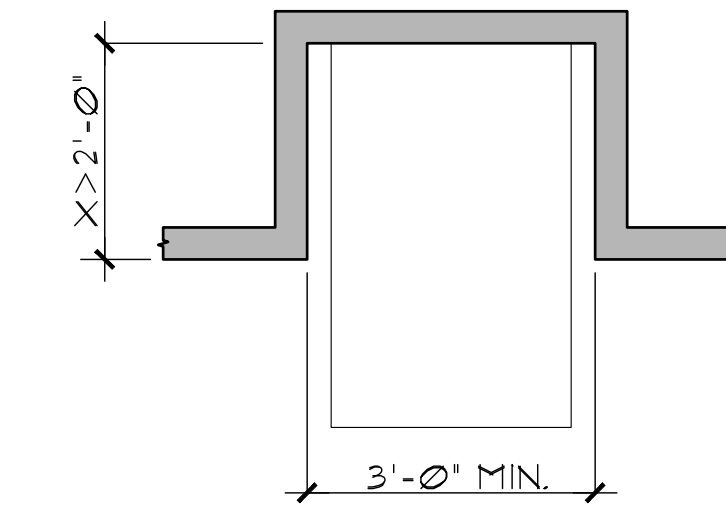
16 STANDARD DOOR CLEARANCE REQUIREMENTS
SCALE: 1/2" = 1'-0"



12 ADA LAVATORY DETAIL
SCALE: 1/2" = 1'-0"



8 ADA OBSTRUCTED HIGH SIDE REACH
SCALE: 1/2" = 1'-0"



4 ADA FORWARD APPROACH
SCALE: 1/2" = 1'-0"

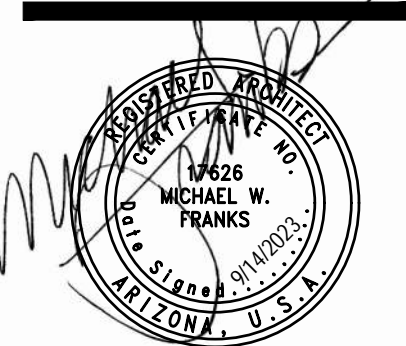
TENANT IMPROVEMENT
ACCESSIBILITY DETAILS



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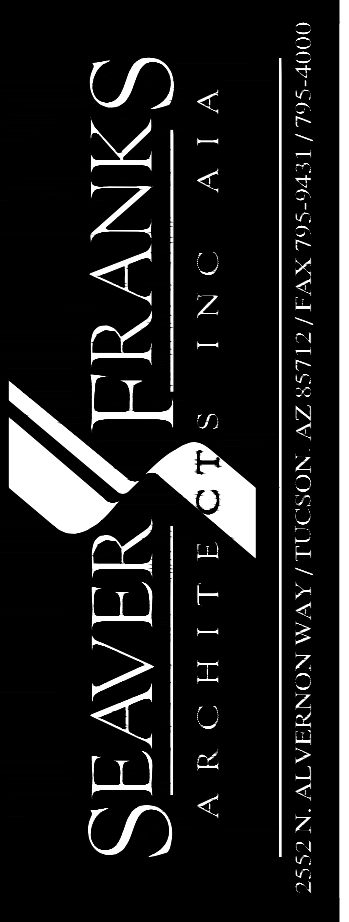
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DRG. SCALE A6 NOTED

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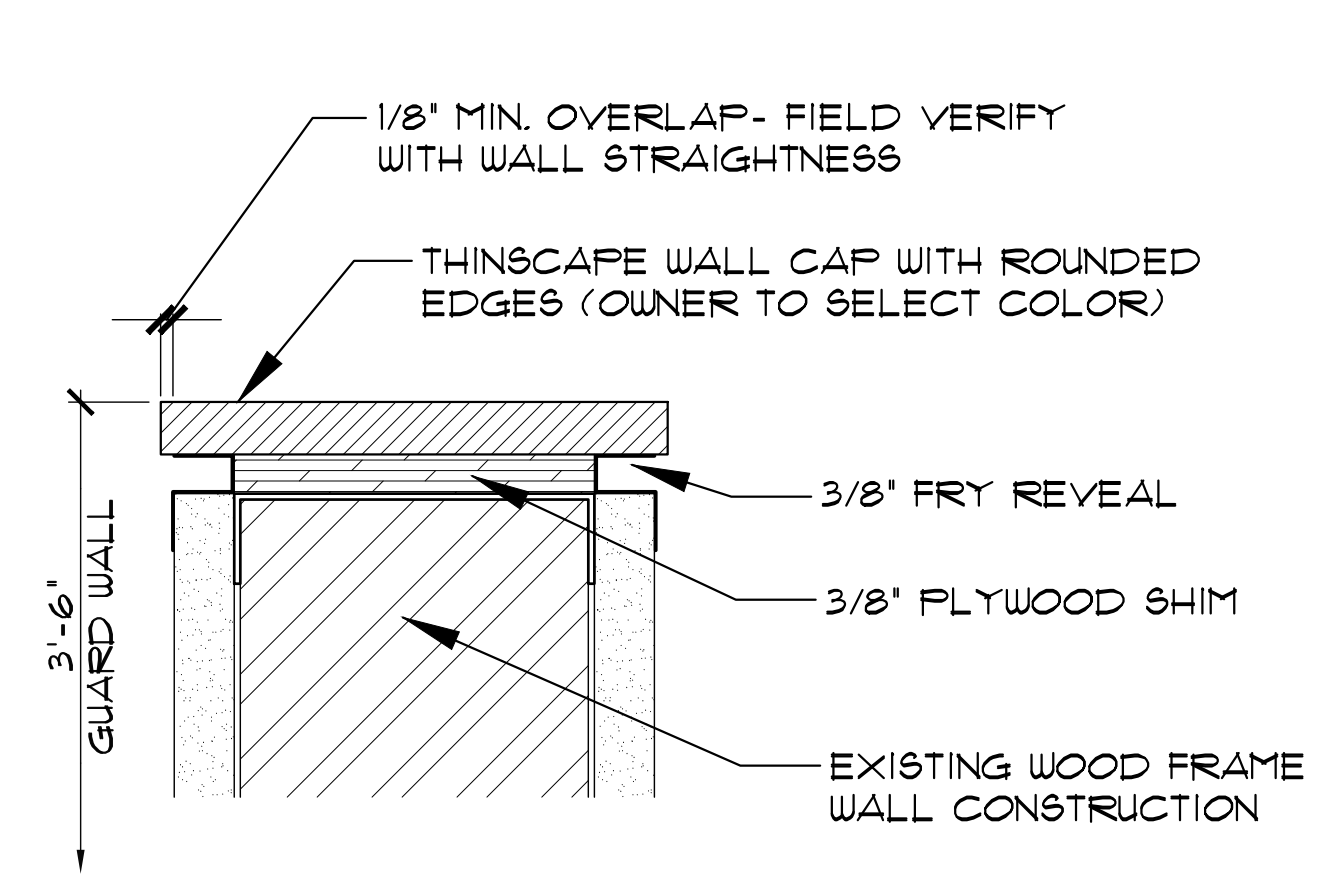
TENANT IMPROVEMENT
GENERAL DETAILS



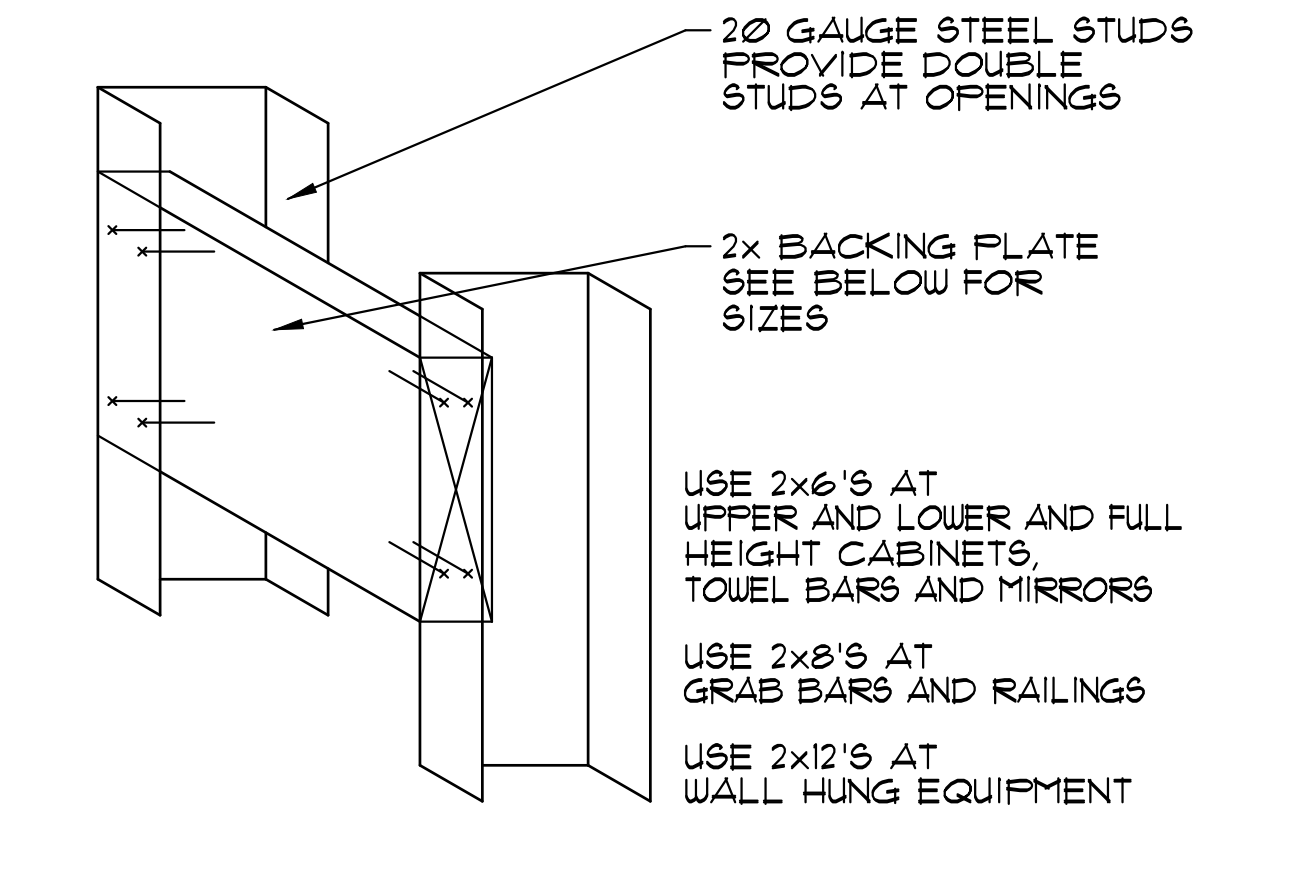
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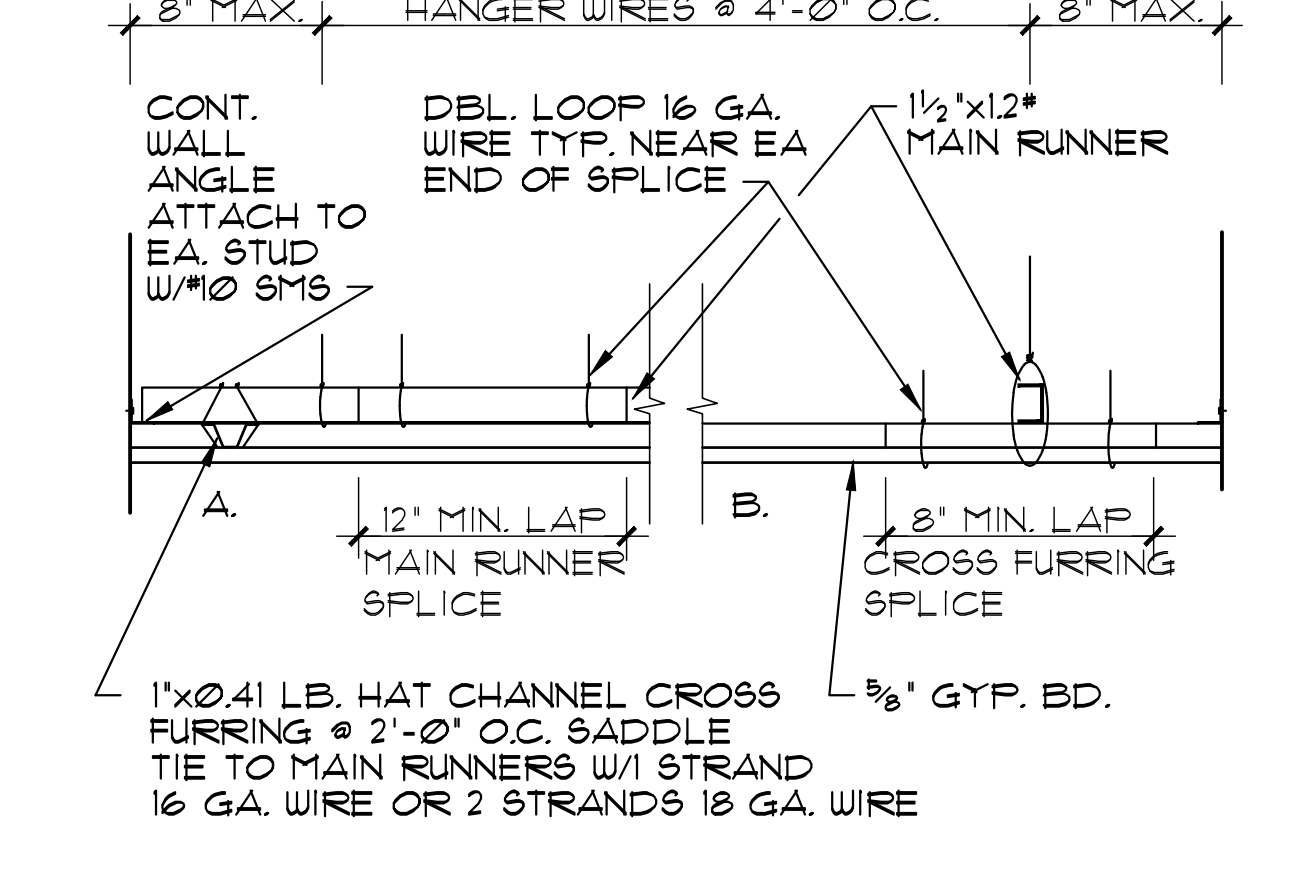
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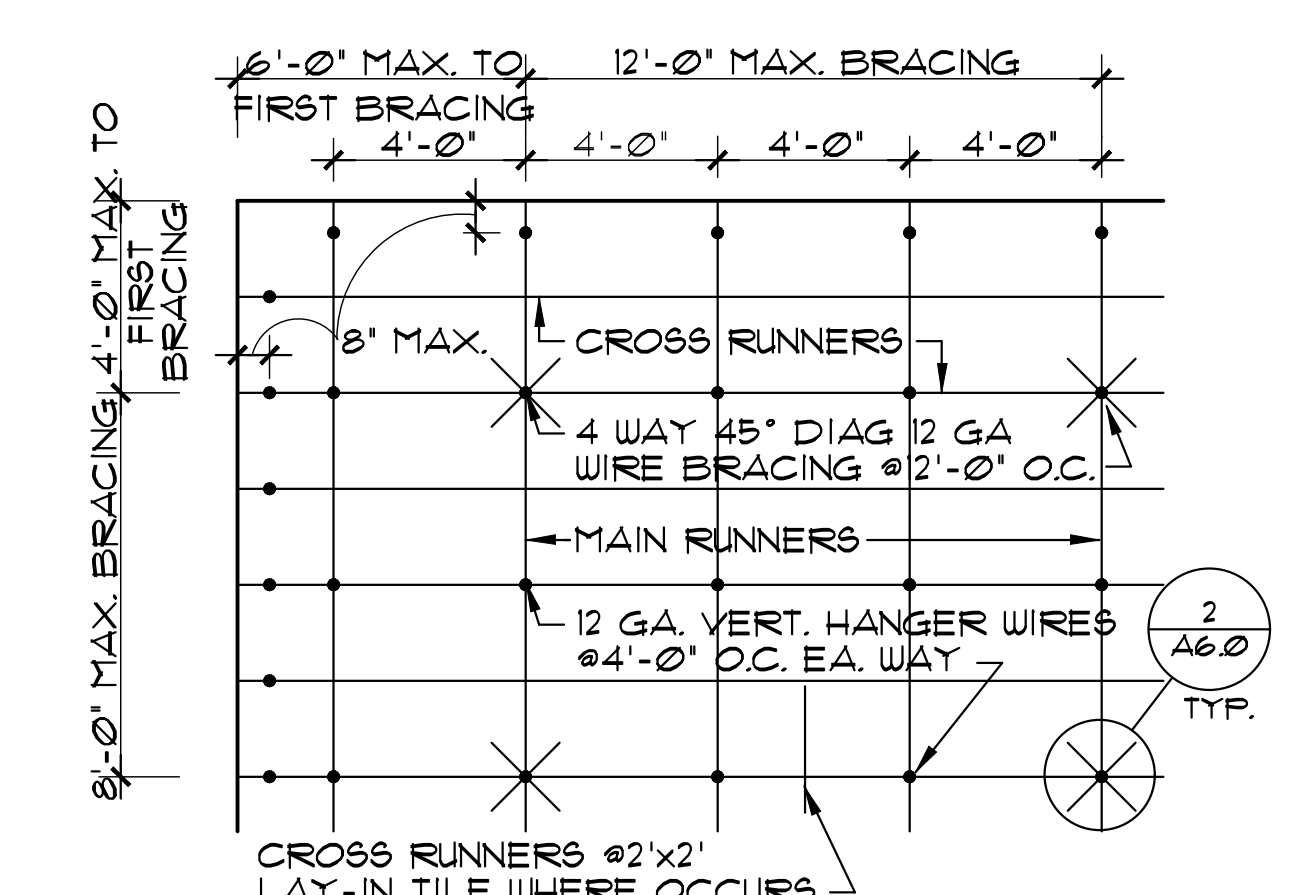
13 GUARDWALL CAP DETAIL
SCALE: 6\"/>



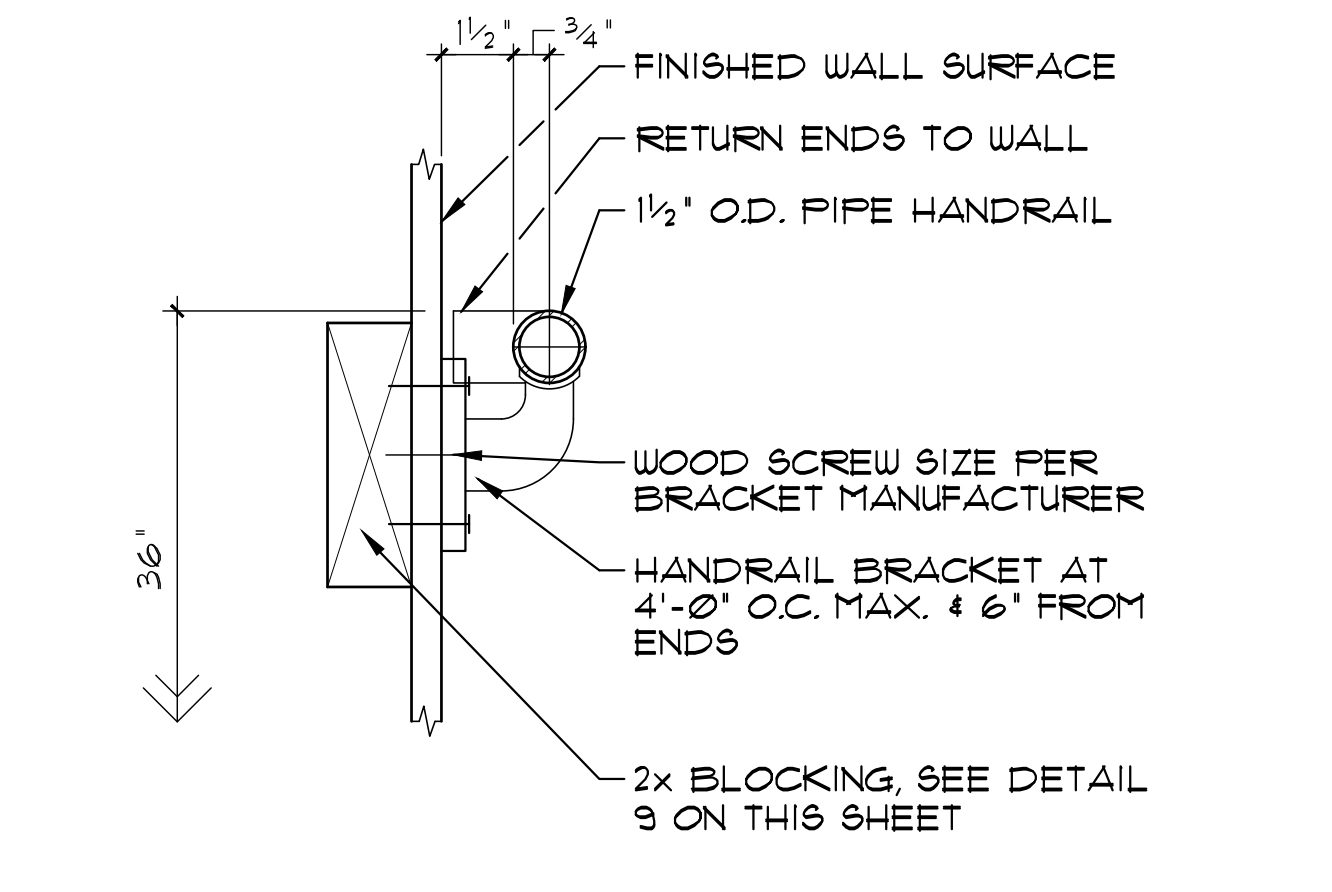
9 BACKING PLATE
SCALE: 3\"/>



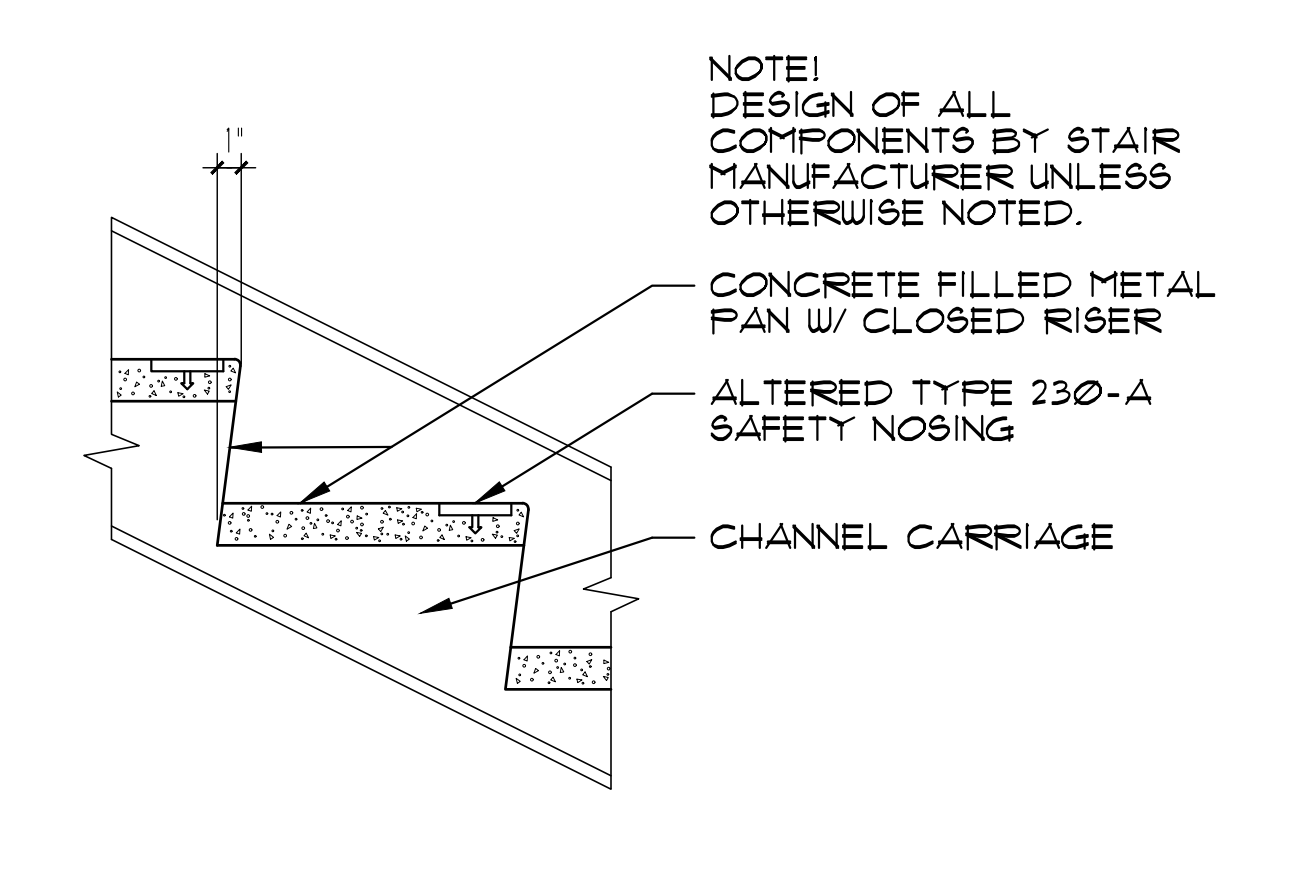
5 PERIMETER AT GYPSUM BOARD CEILING
SCALE: 1 1/2\"/>



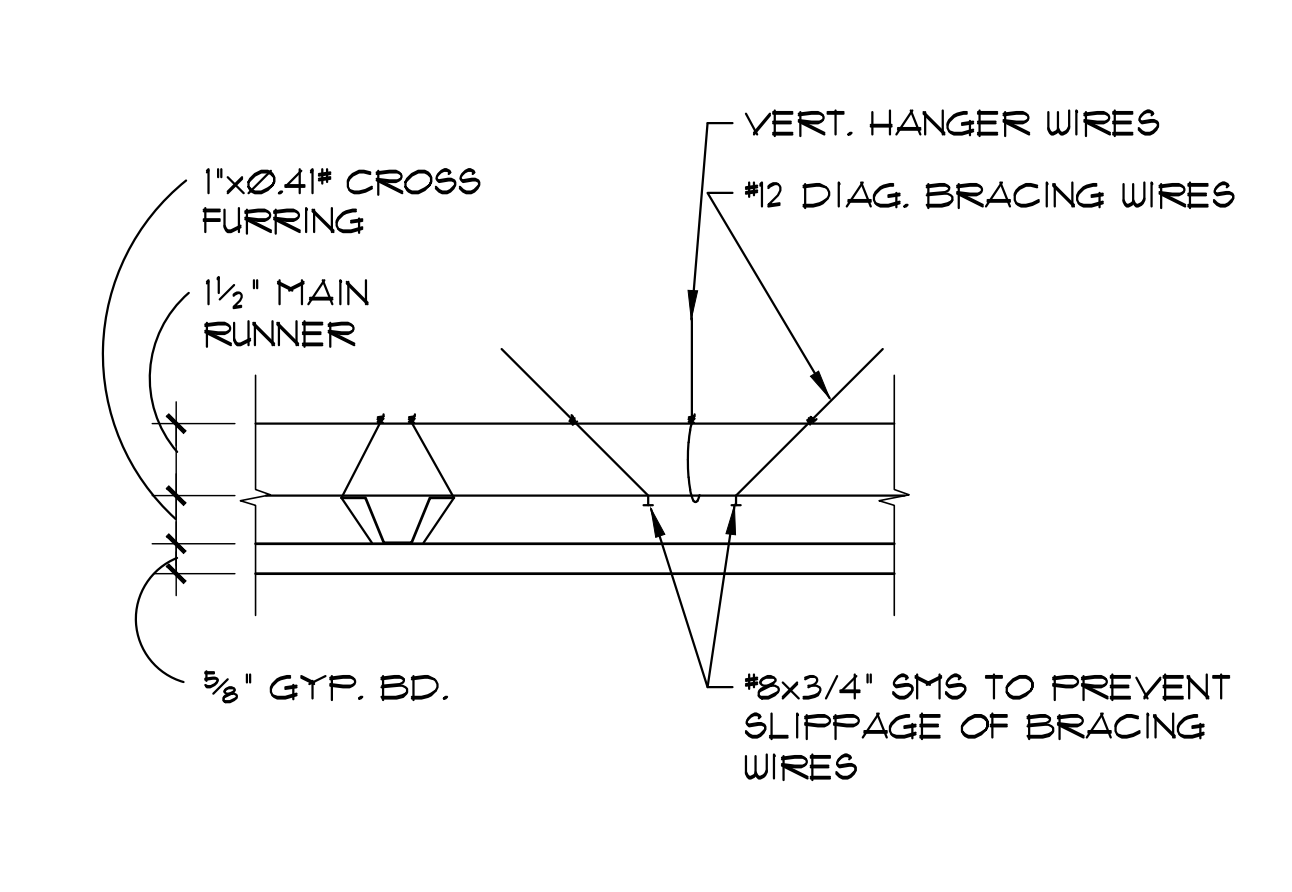
1 2x4 LAY-IN CEILING PLAN
SCALE: 1/4\"/>



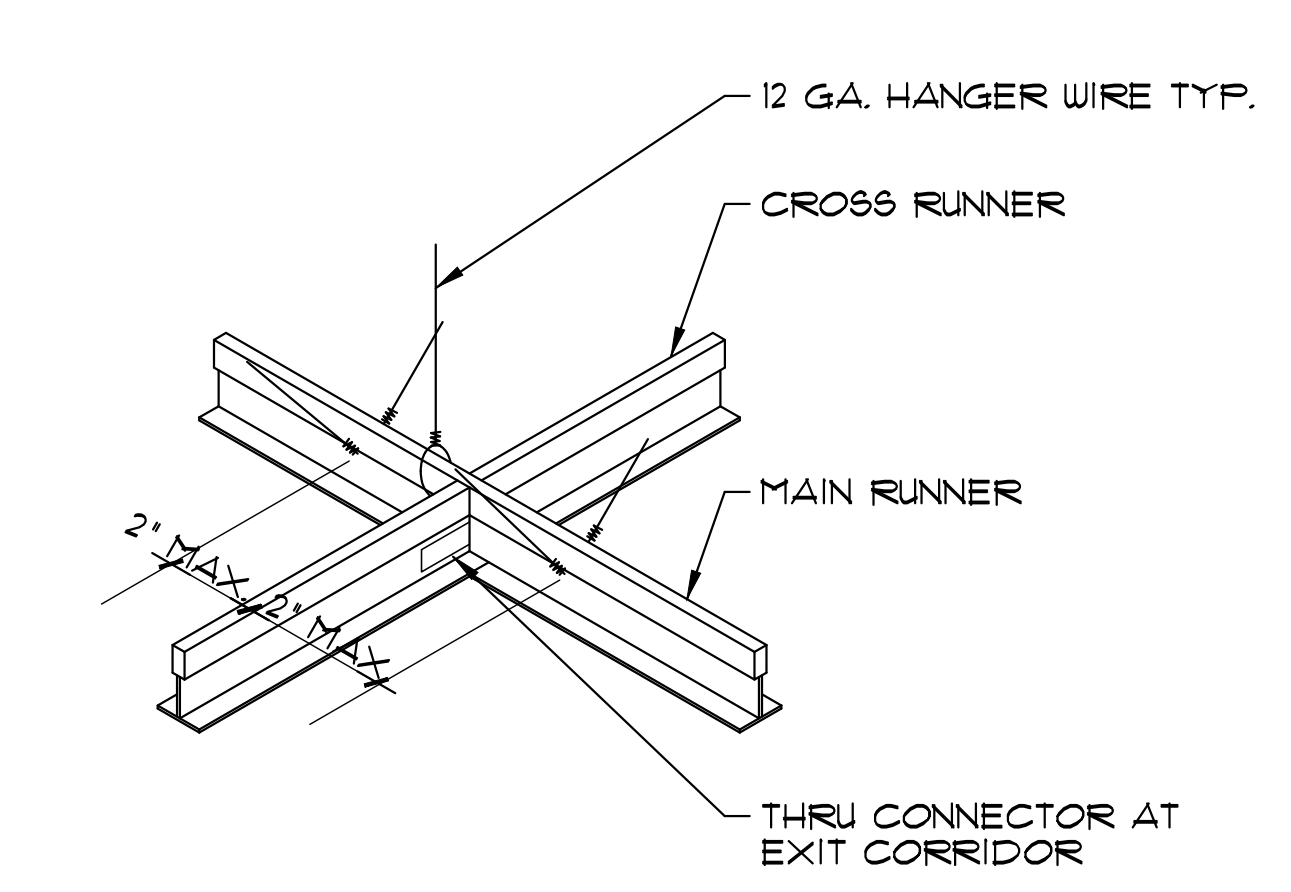
14 HANDRAIL AT FRAMED WALL
SCALE: 3\"/>



10 METAL PAN STAIR
SCALE: 1 1/2\"/>



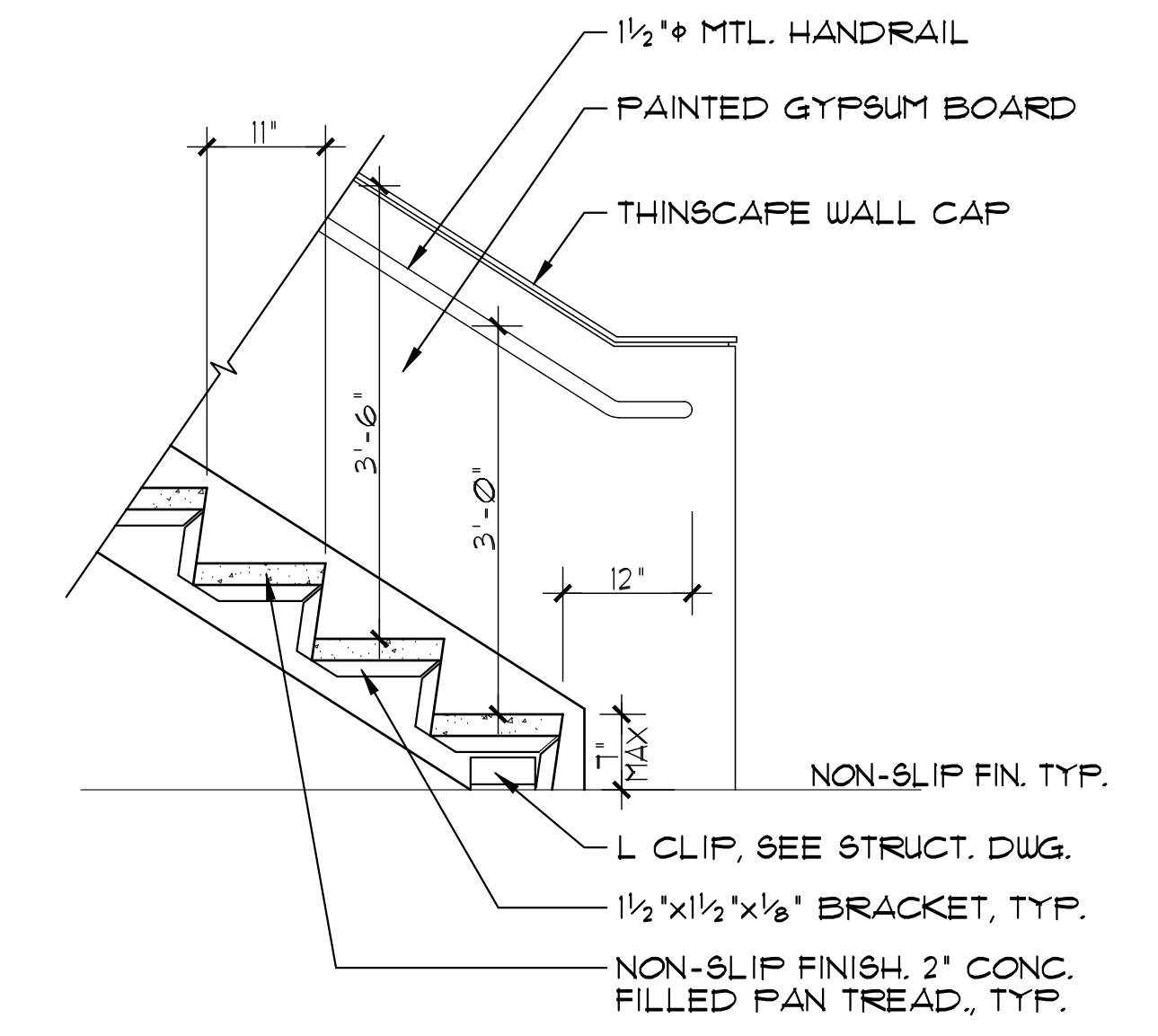
6 INTERMEDIATE AT GYPSUM BOARD CEILING
SCALE: 3\"/>



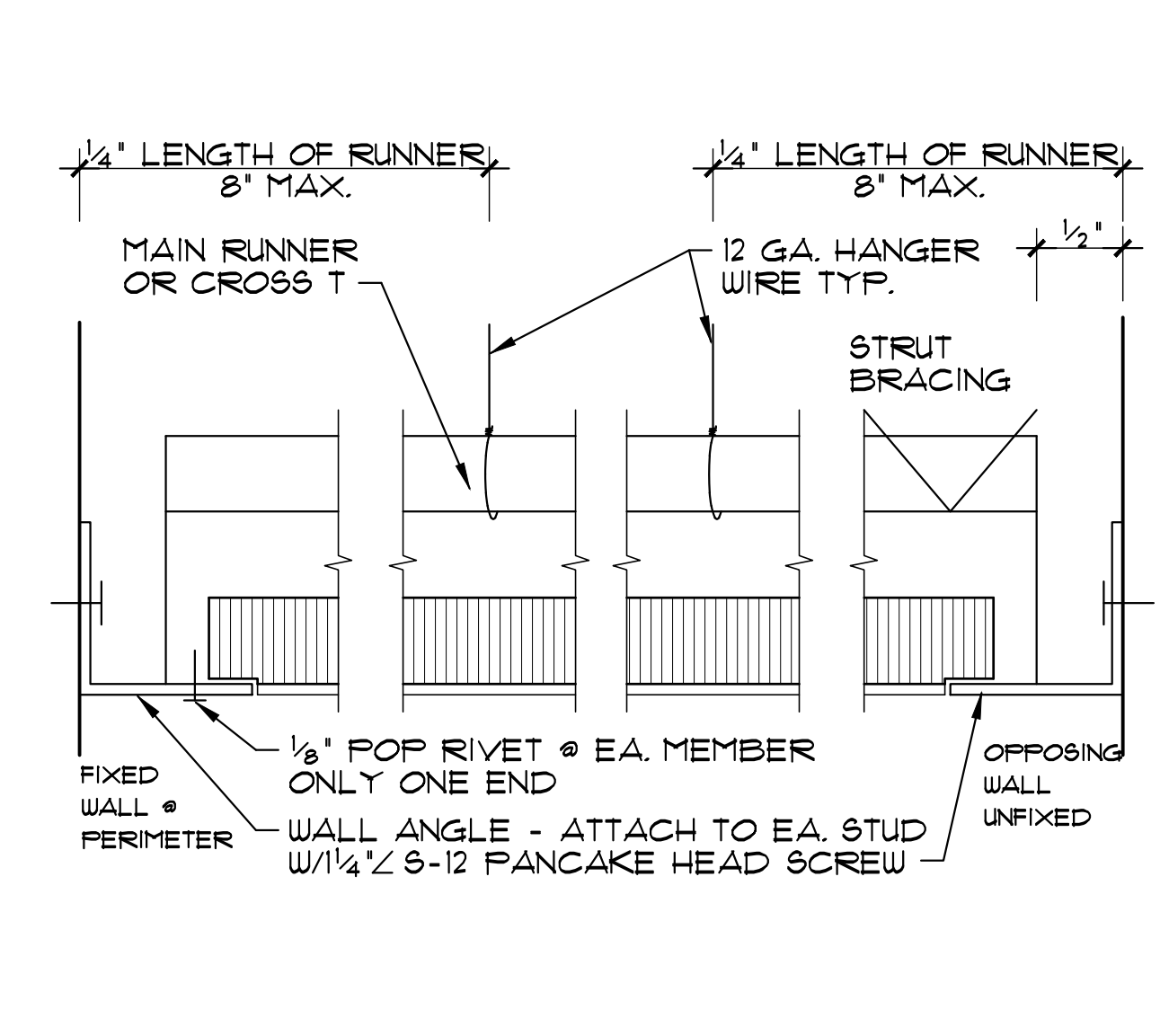
2 ACOUSTIC CEILING CROSS CONNECTION
SCALE: 3\"/>



11 HANDRAIL DETAIL
SCALE: 3/4\"/>



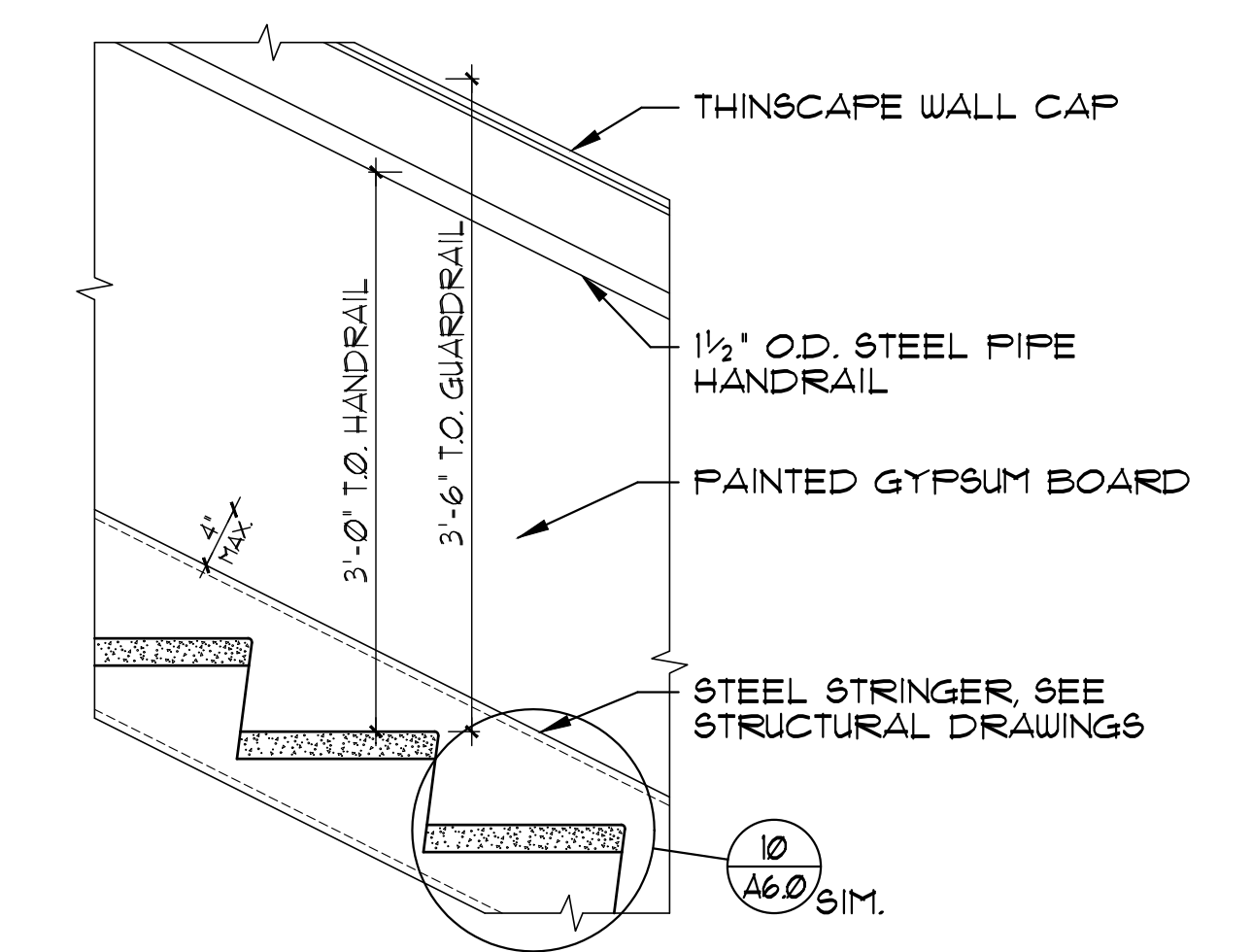
7 DEFLECTION SLIP TRACK
SCALE: 3/4\"/>



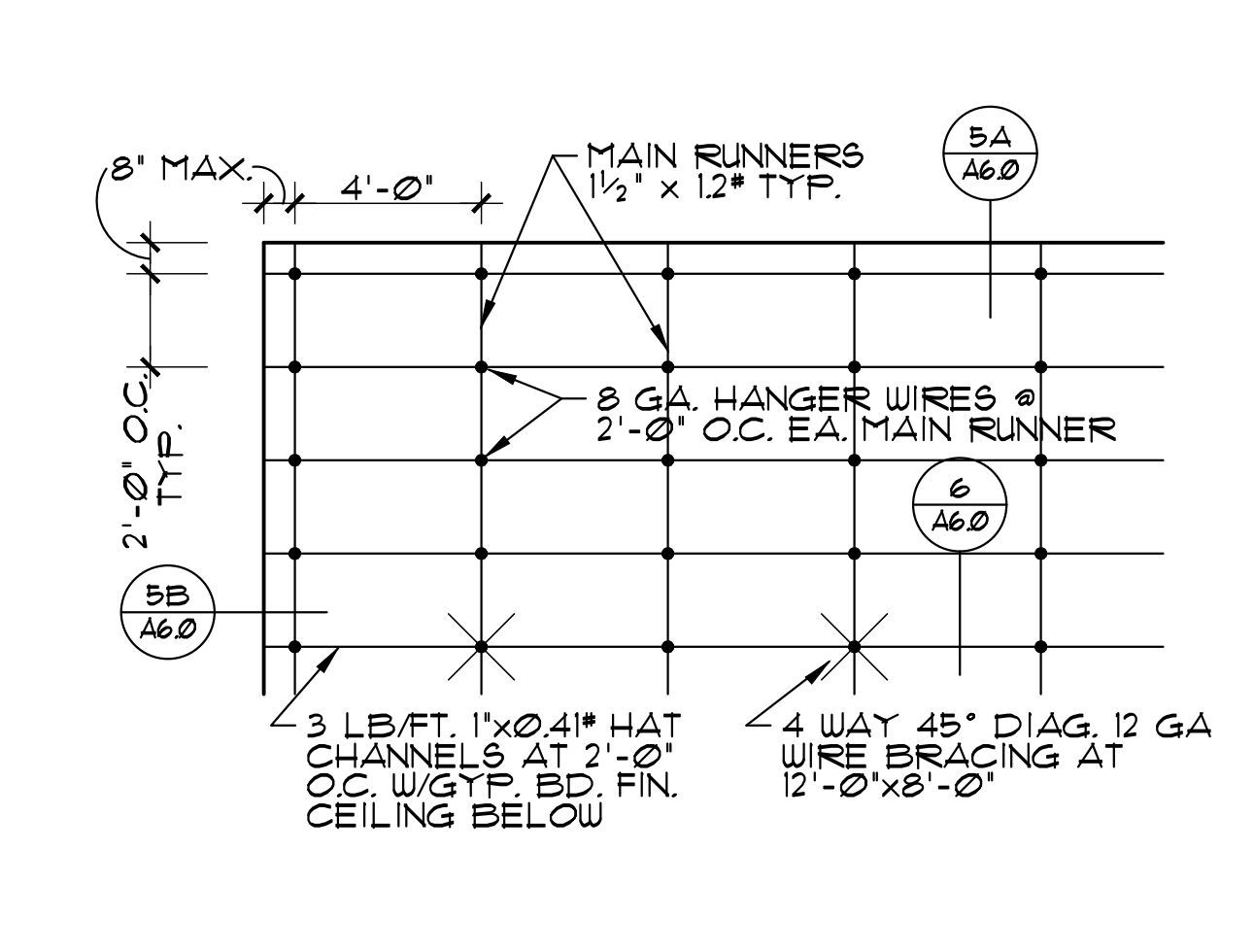
3 ACOUSTIC CEILING WALL CONNECTIONS
SCALE: 1\"/>



12 HANDRAIL DETAIL
SCALE: 1\"/>



8 GRAB BAR
SCALE: 3\"/>



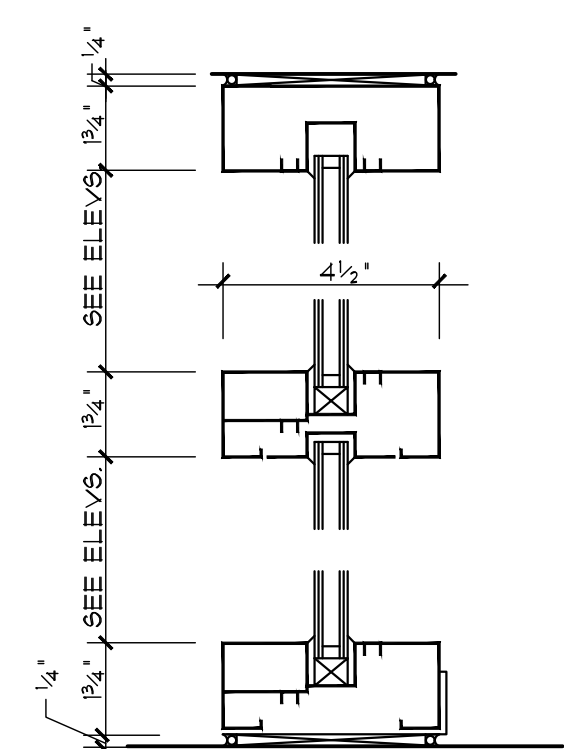
4 GYPSUM BOARD CEILING PLAN
SCALE: 1/4\"/>

FINISH SCHEDULE												
NO.	ROOM NAME	FLOOR				WALLS				CEILING		REMARKS
		MATERIAL AND FINISHES	BASE	N	S	E	W	MATERIAL AND FINISHES	HGT.			
100	BILLIARDS ROOM	F2	B1	EXG	EXG	EXG	EXG	EXG	8'-3"	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		
101	MEN'S RR	F3	B2	W1	W2	W2	W2	C2	8'-0"	TILE WAINSCOT TO ± 5'-0"		
102	WOMEN'S RR	F3	B2	W1	W2	W2	W2	C2	8'-0"	TILE WAINSCOT TO ± 5'-0"		
103	VESTIBULE	EXG	-	W3	-	W3	W3	EXG	EXG	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		
105	MECH	F1	B1	W1	W1	W1	W1	C2	EXG	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		
106	CLOSET	EXG	-	EXG	W1	EXG	W1	EXG	EXG	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		
107	MECH ROOM	F1	B1	EXG	W1	EXG	W1	C2	EXG	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		
201	GAME ROOM	F2	B1	W1	W1	W1	W1	C2	EXG	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		
211	POKER ROOM	F2	B1	W1	W1	W1	W1	C2	1'-10"	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		
212	STAIR	F2	B1	W1	W1	W1	W1	C1	8'-0"	PAINT EXISTING WALLS AND REPAIR ANY DAMAGE DURING DEMO		

ROOM FINISH SCHEDULE KEY			
FLOOR	BASE	WALL / WAINSCOT	CEILING
F1 - SEALED CONCRETE	B1 - 4" VINYL BASE	W1 - GYPSUM WALLBOARD - PAINTED	C1 - LAY-IN CEILING GRID
F2 - LUXURY VINYL TILE	B2 - PORCELAIN TILE	W2 - PORCELAIN WALL TILE	C2 - GYPSUM BOARD
F3 - PORCELAIN TILE		W3 - MATCH EXTERIOR FINISH	EXG - EXISTING CLG
EXG - MATCH EXISTING			

FINISH MATERIAL NOTES

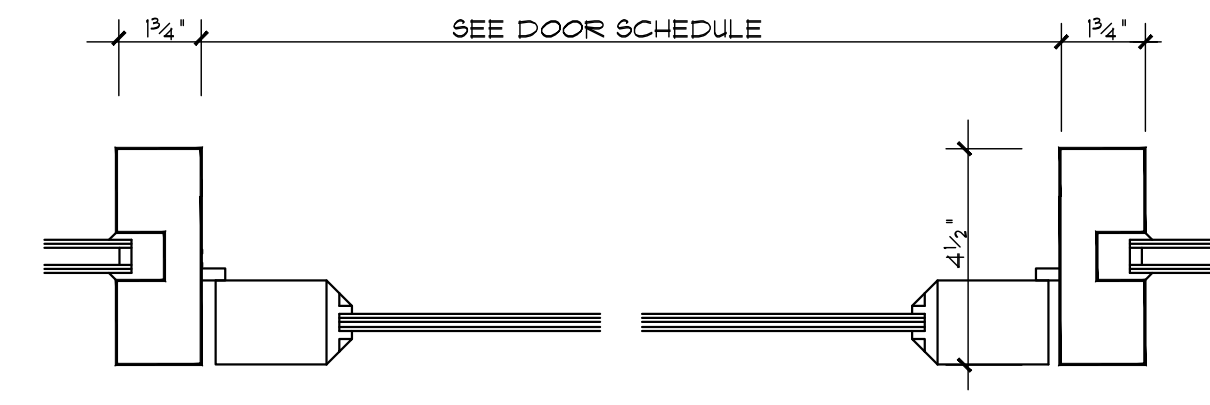
a. ALL INTERIOR FINISHES TO COMPLY WITH ALL STATE AND LOCAL BUILDING CODES.
b. SAMPLES OF ALL FINISHES ARE REQUIRED TO BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.
c. ALL PAINTED WALLS TO RECEIVE 1 COAT OF PRIMER AND 2 FINISH COATS OF PAINT.
d. ALL INTERIOR WALLS TO BE PAINTED.



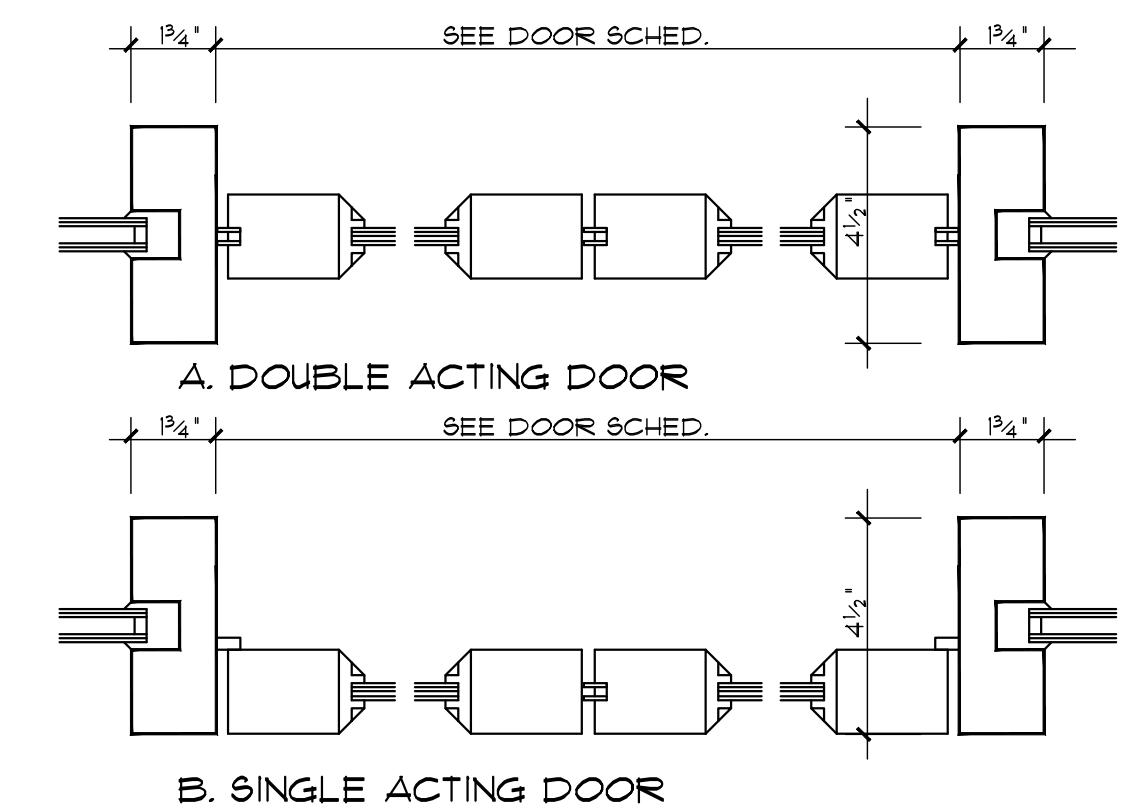
6 ALUMINUM STOREFRONT
SCALE: 3" = 1'-0"

NOTE:

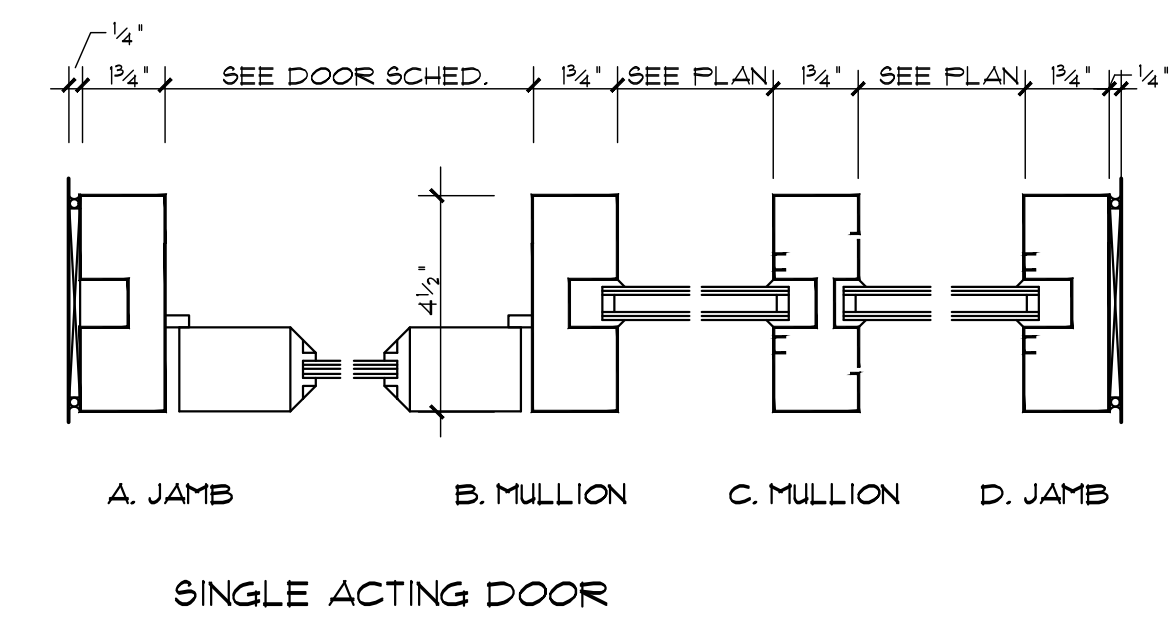
- INTERIOR GLAZING SHALL BE SINGLE PANE.
- EXTERIOR GLAZING SHALL BE LOW-E DUAL PANE.



3 ALUMINUM STOREFRONT
SCALE: 3" = 1'-0"



4 PAIRED ALUMINUM FRAME DOORS
SCALE: 3" = 1'-0"



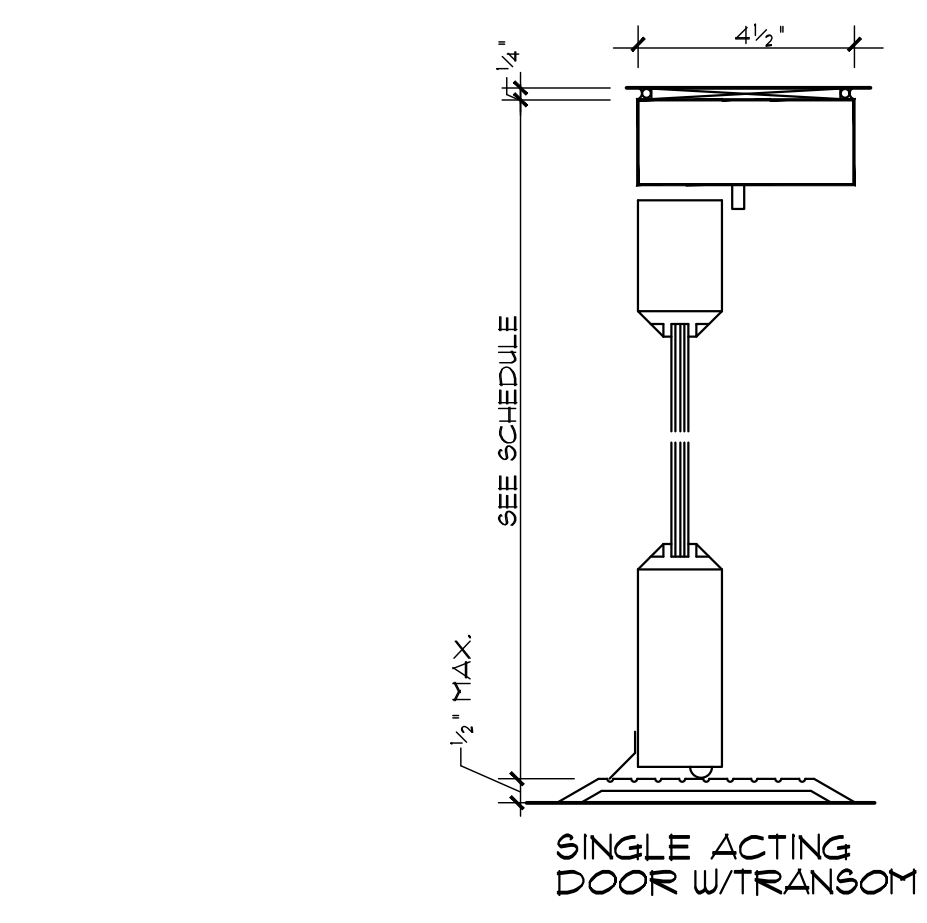
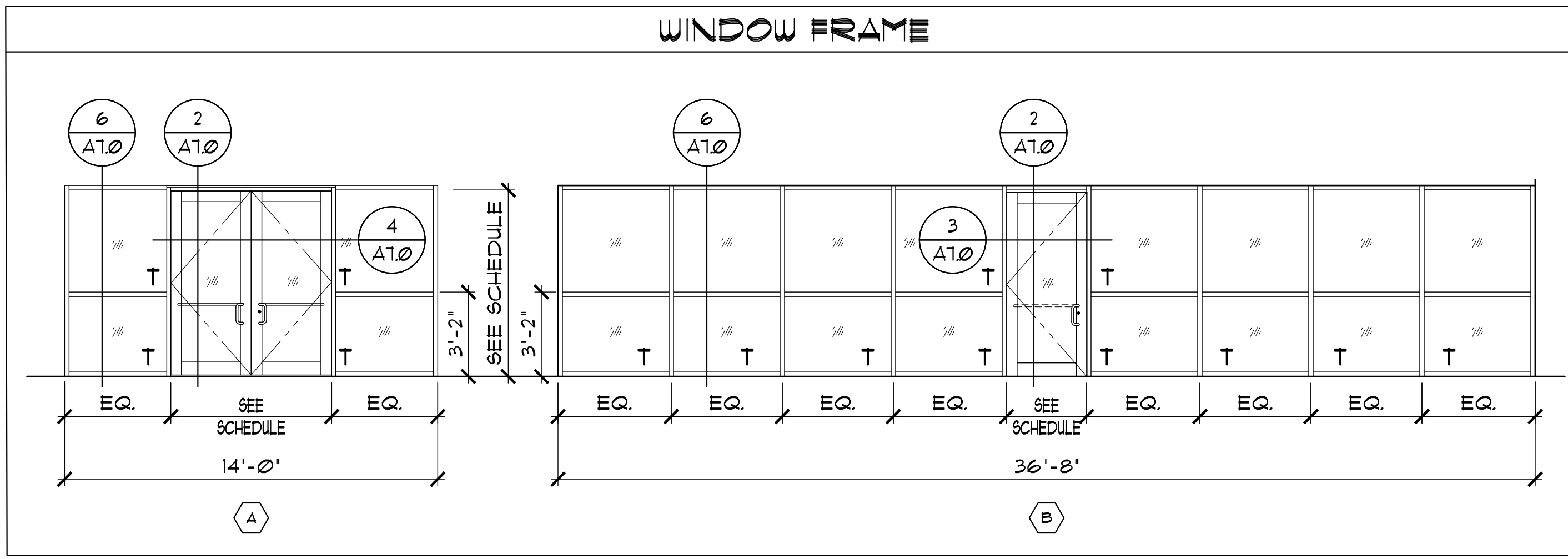
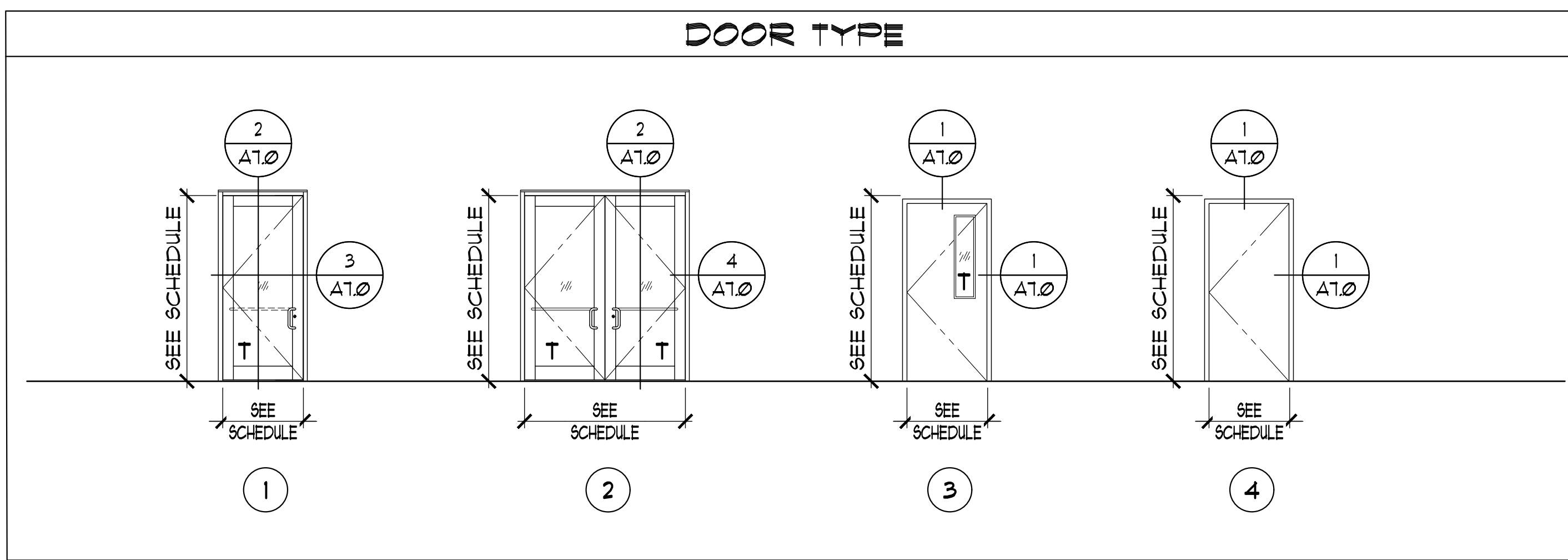
5 ALUMINUM STOREFRONT
SCALE: 3" = 1'-0"

DOOR SCHEDULE										
ROOM NAME	OPENING SIZE (W x H)	DOOR			FRAME		HARDWARE	NOTES		
		TYPE	MATERIAL	FINISH	GLASS	MATERIAL			FINISH	
100A	BILLIARDS ROOM	(2) 3'-0" x 1'-0"	2	AL/GL	BRZ	T	AL	BRZ	ENTRANCE	-
101A	MEN'S RR	3'-0" x 1'-0"	4	HM	PT	-	FM	PT	ENTRANCE	-
101B	MEN'S RR	3'-0" x 1'-0"	4	HM	PT	-	FM	PT	PRIVACY	-
102A	WOMEN'S RR	3'-0" x 1'-0"	4	HM	PT	-	FM	PT	ENTRANCE	-
102B	WOMEN'S RR	3'-0" x 1'-0"	4	HM	PT	-	FM	PT	PRIVACY	-
103A	VESTIBULE	3'-0" x 1'-0"	3	HM	PT	T	FM	PT	ENTRANCE	-
105A	MECH	3'-0" x 1'-0"	4	HM	PT	-	FM	PT	STOREROOM	-
106A	CLOSET	3'-0" x 1'-0"	4	HM	PT	-	FM	PT	STOREROOM	-
107A	MECH ROOM	3'-0" x 1'-0"	4	HM	PT	-	FM	PT	STOREROOM	-
211A	POKER ROOM	3'-0" x 1'-0"	1	AL/GL	BRZ	T	AL	BRZ	PASSAGE	-

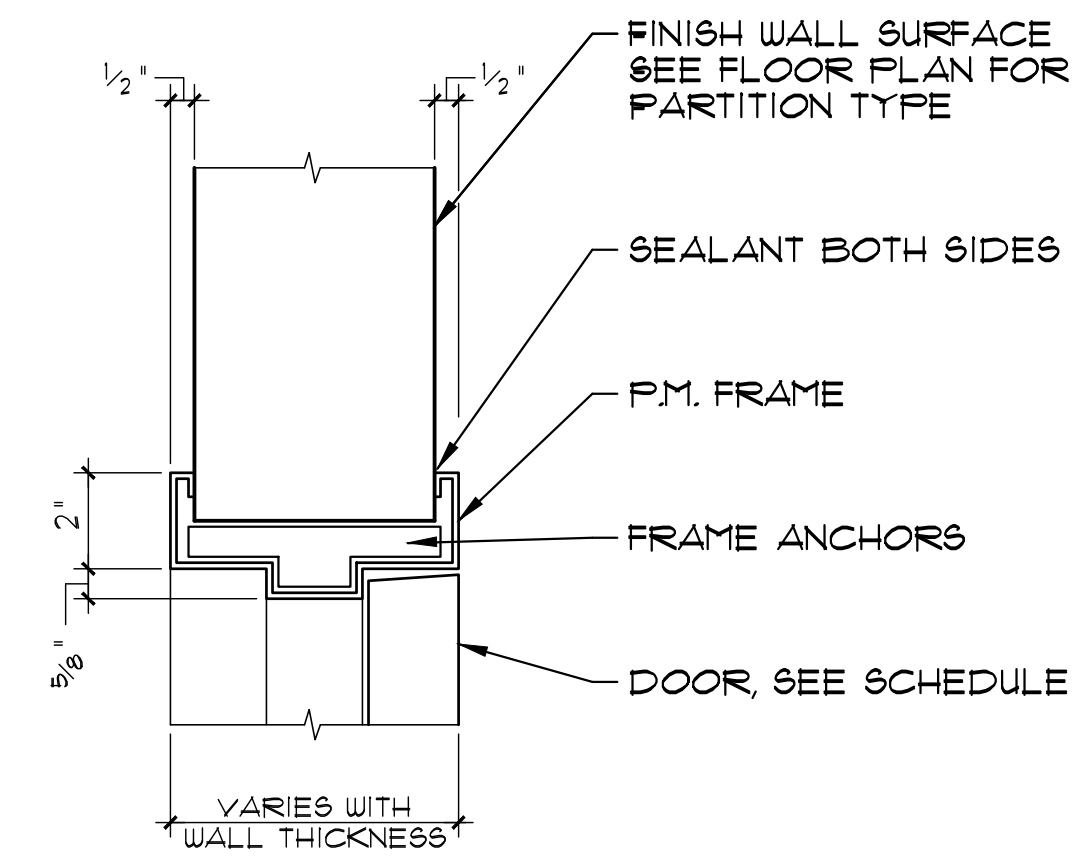
KEY TO ABBREVIATIONS			
AL	= ALUMINUM	GL	= GLAZING
BRZ	= DARK BRONZE ANODIZED	HM	= HOLLOW METAL
FM	= PRESSED METAL	T	= TEMPERED GLAZING
PT	= PAINTED		

GENERAL DOOR NOTES

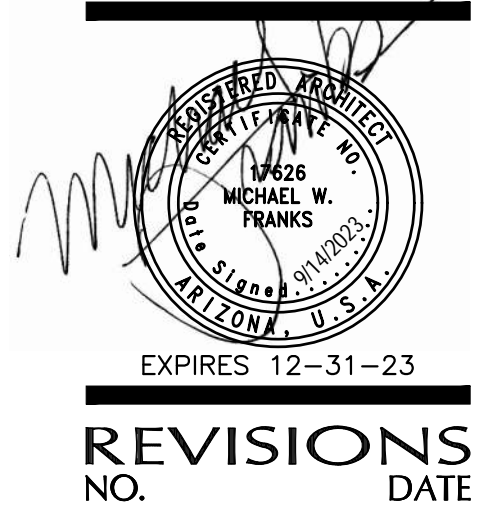
- REQUIRED HARDWARE TO COMPLY WITH ACCESSIBILITY REQUIREMENTS PER ANSI 117.1 404.2.6.
- EGRESS DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
- EGRESS DOOR HARDWARE (INCLUDING HANDLES, PULLS, LATCHES, LOCKS, ETC) SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF WRIST TO OPERATE.
- EGRESS DOOR HARDWARE SHALL BE INSTALLED NO LOWER THAN 34" ABOVE FINISHED FLOOR AND NO HIGHER THAN 38" ABOVE FINISHED FLOOR.
- PROVIDE PANIC HARDWARE ON REQUIRED EXITS ONLY.
- EGRESS DOORS SHALL NOT HAVE MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS. IN THE CASE OF THE USE OF DEADBOLT, A SIGN SHALL BE PROVIDED READING AS FOLLOWS: 'DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED.'
- EGRESS DOORS SHALL BE CAPABLE OF BEING UNLATCHED IN NO MORE THAN A SINGLE OPERATION.
- OWNER SHALL WORK WITH CONTRACTOR'S DOOR HARDWARE SUPPLIER TO GENERATE A DOOR HARDWARE SCHEDULE. SECURITY ACCESS CONTROL MAY BE REQUIRED AT CERTAIN DOORS. ONCE CRITERIA IS SET, CONTRACTOR SHALL SUBMIT HARDWARE SCHEDULE FOR FINAL OWNER APPROVAL.
- LIGHTED EXIT SIGNS ABOVE NON EXIT EGRESS DOORS SHALL BE REMOVED.
- ALL PAINTED NEW DOORS TO MATCH EXISTING.



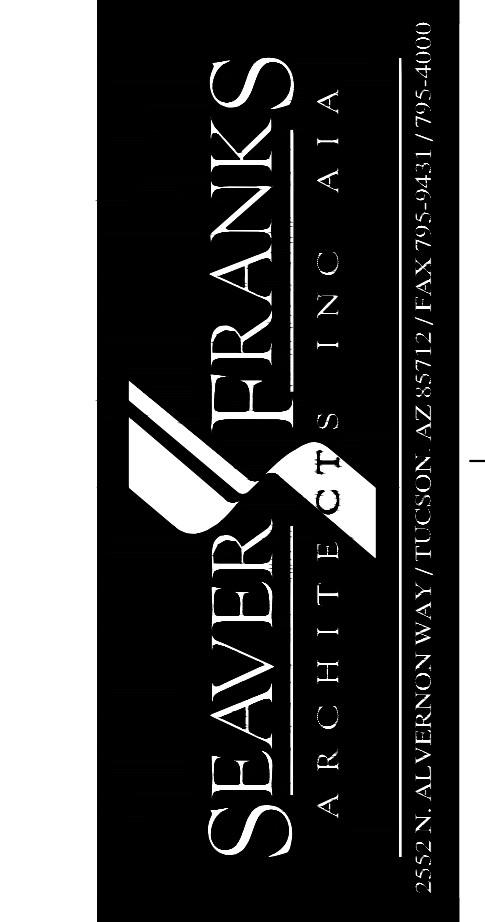
2 ALUMINUM DOOR SECTION
SCALE: 3" = 1'-0"



1 PRESSED METAL DOOR HEAD
SCALE: 3" = 1'-0"



**TENANT IMPROVEMENT
DOOR AND FINISH
SCHEDULES**



**GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747**

ISSUE DATE 09-14-2023
PROJ. NO. 37096
DRG. SCALE AS NOTED

SHEET
A7.0
JAMB SIMILAR

GENERAL STRUCTURAL NOTES

- A. DESIGN CRITERIA:**
- DESIGN CODE: 2018 INTERNATIONAL BUILDING CODE, WITH LOCAL AMENDMENTS.
 - RISK CATEGORY: II
 - STAIR LIVE LOAD: 100 PSF
 - RAIN INTENSITY, i: 3 IN/HR
 - SNOW DESIGN:
 - GROUND SNOW LOAD: 0 PSF
 - WIND DESIGN:
 - BASIC DESIGN WIND SPEED, V: 105 MPH
 - ALLOWABLE STRESS DESIGN WIND SPEED, V_{all}: 83 MPH
 - WIND EXPOSURE: C
 - INTERNAL PRESSURE COEFFICIENT (GC_p): +0.18
 - SEISMIC DESIGN:
 - SEISMIC DESIGN CATEGORY: B
- WIND AND SEISMIC LOADS ARE ULTIMATE/STRENGTH DESIGN LIMIT STATES PER ASCE 7-16, U.N.O.

- B. GENERAL:**
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. THESE MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTORS' METHODS, MEANS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, NOR WILL THE STRUCTURAL ENGINEER BE RESPONSIBLE FOR CONSTRUCTION SITE SAFETY, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO.
 - CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THE DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES AND OMISSIONS SHALL BE RESOLVED WITH THE ARCHITECT. DO NOT USE SCALED DIMENSIONS.
 - CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS SO AS NOT TO EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
 - WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.
 - WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. WHERE NO SPECIFIC DETAIL IS SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. FOR BIDDING PURPOSES, WHERE ANY MEMBER OR STRUCTURAL ELEMENT IS SHOWN BUT NOT CALLED OUT ON THE PLANS OR DETAILS, THE LARGEST SIMILAR MEMBER OR ELEMENT USED IN THE PROJECT SHALL BE UTILIZED.
 - REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND CIVIL DRAWINGS FOR LOCATION AND DETAILS OF BLOCKOUTS, INSERTS AND OPENINGS, CURBS, EQUIPMENT BASES AND PADS, SITE WORK ITEMS, ETC. AND DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
 - APPROVED EQUAL OPTIONS ARE FOR THE CONTRACTORS CONVENIENCE. IF AN OPTION IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY AND COORDINATION OF ALL DETAILS.
 - ALL DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY INDICATED OR NOT. TYPICAL DETAILS WHICH MAY NOT BE FLAGGED ON THE DRAWINGS BUT SHALL APPLY UNLESS NOTED OTHERWISE.
 - ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN.

- C. INSTRUCTIONS TO BIDDERS AND CONTINGENCIES:**
- UNDER NO CIRCUMSTANCES SHALL THESE DRAWINGS BE "FINAL BID" UNTIL THE PROJECT IS FULLY PERMITTED.
 - ALL PRELIMINARY PRICING EFFORTS SHALL BE CONSIDERED TO BE ESTIMATES ONLY AND SHALL INCLUDE THE NECESSARY CONTINGENCIES, ALLOWANCES, ALTERNATES, ETC., AS APPROPRIATE TO ACCOUNT FOR MODIFICATIONS AND ADDITIONS THAT WILL OCCUR TO THE DRAWINGS DURING THE FINALIZATION OF THE DESIGN AND PERMITTING.
 - THE GENERAL CONTRACTOR SHALL UTILIZE THE FOLLOWING MINIMUM CONTINGENCIES FOR EACH OF THE STRUCTURAL ELEMENT COSTS TO BE USED AT THE SOLE DISCRETION OF THE STRUCTURAL ENGINEER.
 - CONSTRUCTION DOCUMENTS/FINAL BID - 3% MINIMUM
 - THE CONTINGENCY FOR EACH STRUCTURAL ELEMENT COST SHALL BE CLEARLY SHOWN AS A LINE ITEM IN THE GENERAL CONTRACTOR'S FINAL BID AND/OR COST ESTIMATE. ALL OF THE "FINAL BID" CONTINGENCIES NOT USED BY THE STRUCTURAL ENGINEER SHALL BE REFUNDED TO THE OWNER PRIOR TO CLOSEOUT OF THE PROJECT.
 - ANY MODIFICATIONS, DELETIONS OR ELIMINATIONS TO THE STRUCTURAL BIDDING AND CONTINGENCY REQUIREMENTS, WITHOUT THE CONSENT OF THE STRUCTURAL ENGINEER, SHALL AUTOMATICALLY INDEMNIFY THE STRUCTURAL ENGINEER OF ANY COSTS THAT MAY ARISE DURING THE DESIGN AND CONSTRUCTION OF THE PROJECT.
 - WHERE DISCREPANCIES OCCUR WITHIN THE DRAWINGS, THE CONTRACTOR WILL EITHER RESOLVE THE DISCREPANCIES WITH THE ARCHITECT BEFORE BIDDING OR INCLUDE THE GREATER COST ITEM IN THE BID AND RESOLVE THE DISCREPANCY PRIOR TO CONSTRUCTION.

- D. LIMITATION OF LIABILITY:**
- THE STRUCTURAL ENGINEER IS NOT LIABLE FOR ANY ASPECTS OF THE STRUCTURE WHICH ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DOCUMENTS. IN THE EVENT A BUILDING ELEMENT IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE TO INFORM THE ENGINEER SO THAT THE ENGINEER CAN PROVIDE THE DESIGN.
- E. EXISTING STRUCTURES:**
- ALL PARTIES INVOLVED IN THE RENOVATION WORK SHALL VISIT THE SITE, BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND VERIFY THOSE EXISTING CONDITIONS SHOW ON THE DRAWINGS.
 - VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE STRUCTURAL ENGINEERING THROUGH THE ARCHITECT OF ANY DISCREPANCIES OR INCONSISTENCIES.
 - THESE PLANS HAVE BEEN PREPARED BASED ON LIMITED AS-BUILT DOCUMENTS AND/OR VISUAL OBSERVATIONS. DESIGN CHANGES MAY BE REQUIRED BECAUSE OF POSSIBLE AMBIGUITIES, HIDDEN CONDITIONS OR INCONSISTENCIES IN RECORD DRAWINGS.
 - THE CONTRACTOR SHALL HAVE APPROPRIATE CONTINGENCIES TO ACCOUNT FOR BOTH DESIGN AND CONSTRUCTION CONDITIONS THAT MAY ARISE FROM THE DISCOVERY OF CONCEALED OR UNKNOWN CONDITIONS IN THE EXISTING STRUCTURE.
 - IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON PLANS, NOTIFY THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT PRIOR TO PROCEEDING. FAILURE TO NOTIFY THE STRUCTURAL ENGINEER OF DISCREPANCIES BETWEEN THE PLANS AND ACTUAL EXISTING CONDITIONS SHALL INDEMNIFY THE STRUCTURAL ENGINEER (THE STRUCTURAL ENGINEER SHALL NOT BE LIABLE FOR UNKNOWN EXISTING CONDITIONS OR ISSUES ARISING THEREFROM).

- F. FOUNDATIONS:**
- NO SOILS REPORT PROVIDED. FOUNDATION DESIGN IS BASED UPON A PRESUMPTIVE ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF PER IRC TABLE 1806.2. FOUNDATIONS SHALL BEAR ON FIRM, UNDISTURBED NATIVE SOIL AT 1'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE. FINISHED GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOUNDATIONS AND LOWEST FINISHED GRADE WITHIN 9'-0" FOR EXTERIOR FOUNDATIONS. THE BUILDING OFFICIAL SHALL INSPECT THE FOUNDATIONS PRIOR TO PLACEMENT OF CONCRETE PER IRC SECTION 110.3. A GEOTECHNICAL INVESTIGATION OF THE SITE SOIL CONDITIONS IS RECOMMENDED. IF THE BUILDING OFFICIAL HAS REASON TO DOUBT THE VALIDITY OF THE PRESUMPTIVE SOIL BEARING PRESSURE, A GEOTECHNICAL INVESTIGATION MAY BE REQUIRED. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY GEOTECHNICAL ASPECTS OF THIS PROJECT.

- G. CONCRETE:**
- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 AND ACI 318.
 - CEMENT SHALL CONFORM TO ASTM C150, TYPE II. AGGREGATE PER ASTM C33.

- MIX DESIGNS SHALL BE DESIGNED BY THE CONCRETE PRODUCTION FACILITY IN ACCORDANCE WITH ACI 301 AND REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
- CONCRETE SHALL BE READY MIXED CONCRETE IN ACCORDANCE WITH ASTM C94. MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:
 - CONCRETE OVER STEEL PAN: 3,000 PSI
 - SLABS ON GRADE: 3,000 PSI*
 - FOUNDATIONS: 3,000 PSI*
 - CURBS AND SIDEWALKS: 2,500 PSI

- *DESIGNED FOR 2,500 PSI
- CONCRETE SHALL BE FREE OF CHLORIDE. FLY ASH MAY NOT BE USED IN CONCRETE USED IN FLATWORK OR ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH MAY BE SUBSTITUTED AT A 1:2.1 RATIO BY WEIGHT OF FLY ASH TO CEMENTITIOUS MATERIAL IN ALL OTHER CONCRETE. FLY ASH SHALL CONFORM TO ASTM C618, CLASS F AND SHALL BE LIMITED TO 30% OF CEMENT BY WEIGHT.
 - MAXIMUM SLUMP 4 1/2" FOR CONCRETE WITHOUT PLASTICIZER. IF PLASTICIZER IS USED, AN 8" MAXIMUM SLUMP IS ALLOWED AT PLACEMENT.
 - PROVIDE SLEEVES FOR UTILITY OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. DO NOT CUT ANY CONFLICTING REINFORCING.
 - NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER.
 - MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDERFLOOR DUCTS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER DEAD LOAD IS APPLIED UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT. ALL CONCRETE SLABS ON GRADE SHALL BE BOUNDED BY CONTROL JOINTS, KEYS OF SAW CUT, AS SHOWN ON THE FOUNDATION PLAN, UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT. ALL CONCRETE SLABS ON GRADE SHALL BE BOUNDED BY CONTROL JOINTS, KEYS OR SAW CUT, SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 100 SQUARE FEET. CONTROL JOINTS SHALL NOT BE SPACED MORE THAN 15' O.C. AND SHALL NOT EXCEED A LENGTH TO WIDTH RATIO OF 1.5:1 UNLESS APPROVED IN WRITING BY THE ARCHITECT. KEVED CONSTRUCTION JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT. ALL OTHER JOINTS MAY BE SAW CUT.
 - CONCRETE SHALL NOT BE DROPPED MORE THAN FIVE FEET VERTICALLY WITHOUT USE OF TREMIES.
 - CONCRETE FOOTINGS AND PADS MAY BE Poured AGAINST NEAT EXCAVATIONS PROVIDED THE REQUIRED CONCRETE COVERAGE FOR REINFORCING IS MAINTAINED.
 - CONCRETE WHICH HAS CONTAINED WATER FOR MORE THAN 90 MINUTES, 60 MINUTES IF AIR TEMPERATURE EXCEEDS 85 DEGREES, SHALL NOT BE USED. RETEMPERING OF CONCRETE AFTER INITIAL SET HAS OCCURRED IS NOT PERMITTED.
 - CURE EXPOSED CONCRETE FOR A MINIMUM OF 9 DAYS IN ACCORDANCE WITH ACI 301 PROCEDURES IN ORDER TO PREVENT CRACKING. CURE WITH CURING AND SEALING COMPOUND, MOIST CURING, MOISTURE RETAINING COVER CURING OR COMBINATIONS THEREOF.
 - CONCRETE COMPRESSIVE STRENGTH AND SLUMP SHALL BE TESTED PER ASTM C31 AND C39. PROVIDE A MINIMUM OF 3 CYLINDERS PER TEST FOR EACH DAY'S CONCRETE PLACEMENT OR AS DIRECTED BY THE ARCHITECT. TEST ONE CYLINDER AT 7 DAYS AND TWO AT 28 DAYS. TESTING SHALL BE DONE BY A QUALIFIED TESTING LABORATORY.

- H. REINFORCING STEEL:**
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 (Fy = 60 KSI) DEFORMED BARS FOR ALL BARS #4 AND LARGER. ASTM A616, GRADE 40 (Fy = 40 KSI) DEFORMED BARS FOR ALL #3 BARS. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60 (Fy = 60 KSI) LOW ALLOY DEFORMED BARS. WELDING OF REINFORCING SHALL BE IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING BARS IS ALLOWED.
 - ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 318 AND THE CRSI 'MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION', AND AS MODIFIED BY THE DRAWINGS. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
 - ALL REINFORCING STEEL, INCLUDING WELDED WIRE FABRIC, SHALL BE ACCURATELY PLACED AND SUPPORTED BY GALVANNEED METAL CHAIRS, SPACES, HANGERS, SUPPORT BARS OR CONCRETE BLOCKS. REINFORCING SHALL NOT BE SUPPORTED BY STAKES DRIVEN INTO THE GROUND. PROVIDE THE FOLLOWING MINIMUM CLEAR CONCRETE COVERAGE:
 - CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - #6 AND LARGER EXPOSED TO EARTH OR WEATHER: 2"
 - #5 AND SMALLER EXPOSED TO EARTH OR WEATHER: 1 1/2"
 - FLAT SLAB: 3/4"
 - ALL OTHERS PER LATEST EDITION OF ACI 318
 - UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES PER LATEST EDITION OF ACI 318. LAP SPLICES IN CONCRETE COLUMNS SHALL BE STANDARD COMPRESSION LAP SPLICES. STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SUCH THAT THE OVERLAP BETWEEN THE OUTER MOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.
 - ALL SPLICES LOCATIONS SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
 - ALL REINFORCING NOTED AS CONTINUOUS SHALL BE FULLY CONTINUOUS AND SPLICED. SPLICED BARS SHALL BE PLACED AT THE SAME EFFECTIVE DEPTH, U.N.O.
 - REINFORCING BAR SPACINGS GIVEN ARE MAXIMUM ON CENTERS. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SKEW HOOKS AS REQUIRED FOR CONCRETE COVER. SECURELY TIE ALL BARS IN POSITION BEFORE PLACING CONCRETE.
 - PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS.
 - REINFORCING BAR HOOKS SHALL BE STANDARD A/C HOOKS UNLESS NOTED OTHERWISE.

- I. MASONRY:**
- MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF IRC CHAPTER 21 AND ACI 530.
 - C.M.U. SHALL CONFORM TO ASTM C90, NORMAL OR MEDIUM WEIGHT, F_m=2,000 PSI AT 28 DAYS, RUNNING BOND, WITH A NET COMPRESSIVE STRENGTH OF 2000 PSI PER ASTM C140.
 - MORTAR SHALL CONFORM TO ASTM C270, TYPE S, 2000 PSI USING PORTLAND CEMENT, FINE AND COURSE GROUT PER ASTM C476, 2,000 PSI AT 28 DAYS, TESTED PER ASTM C1019. GROUT SHALL BE FREE OF CHLORIDE. GROUT MAY CONTAIN UP TO 18% FLY ASH WITH THE APPROVAL OF THE ARCHITECT.
 - HORIZONTAL JOINT REINFORCING SHALL BE LADDER TYPE IN CMU WALLS AND TRUSS TYPE IN BRICK OR COMPOSITE WALLS WITH NO. 3 GAGE WIRE CONFORMING TO ASTM A82. PROVIDE MINIMUM 12" LAPS AT ALL SPLICES.
 - SEE DRAWINGS FOR SIZE AND SPACING OF REINFORCING. LAP SPLICE ALL REINFORCING PER TYPICAL DETAIL.
 - ALL REINFORCING SHALL BE ACCURATELY LOCATED PRIOR TO AND DURING GROUTING. REINFORCING SHALL BE SECURED AGAINST DISPLACEMENT WITH WIRE POSITIONERS AT EACH LIFT AND AT INTERVALS NOT EXCEEDING 9'-0" VERTICALLY. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH DOWELS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING. PROVIDE BENT BARS TO MATCH HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND WALL INTERSECTIONS.
 - ALL CELLS AND COURSES WITH REINFORCING AND ADDITIONAL CELLS AND COURSES NOTED ON DRAWINGS SHALL BE GROUTED SOLID. ALL MASONRY BELOW FINISHED FLOOR OR GRADE SHALL BE GROUTED SOLID. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING AND AGAIN APPROXIMATELY 5 MINUTES LATER. PROVIDE CLEANOUTS IF GROUT POUR HEIGHT EXCEEDS 5'-4" IN BLOCK WALLS. IF THE MASONRY HAS CURED FOR AT LEAST 4 HOURS, THE GROUT SLUMP IS MAINTAINED BETWEEN 10" AND 11", AND NO INTERMEDIATE BOND BEAMS ARE PLACED BETWEEN THE TOP AND BOTTOM OF THE POUR HEIGHT, THEN GROUT MAY BE PLACED IN LIFTS UP TO 12'-8" TALL.
 - STOP ALL GROUT LIFTS 1'-12" BELOW THE TOP COURSE OF THE LIFT. PLACE GROUT LIFTS CONTINUOUS FOR HEIGHT OF LINTELS. DO NOT INTERRUPT GROUTING FOR MORE THAN ONE HOUR. ERECTED MASONRY SHALL BE FOG SPRAYED EVERY 8 HOURS FOR 48 HOURS FOLLOWING INSTALLATION WHEN TEMPERATURES EXCEED 100 DEGREES OR WHEN THE TEMPERATURE EXCEEDS 90 DEGREES AND THE WIND SPEED IS GREATER THAN 8 MPH.
 - UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS THE LESSER OF 1 1/2:1 LENGTH TO HEIGHT RATIO OR 26'-0" AND SUCH THAT CONTROL JOINTS ARE LOCATED NOT MORE THAN 1/2 THE CONTROL JOINT SPACING FROM CORNERS PER ACMA TEK 10-2-C. CONTROL JOINTS SHALL NOT OCCUR AT WALL CORNERS, INTERSECTIONS, ENDS, WITHIN 24" OF BEARING POINTS OR JAMBS, OR OVER OPENINGS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.
 - MORTAR AND GROUT SHALL BE TESTED BY A QUALIFIED TESTING AGENCY. TEST MORTAR, GROUT, AND MASONRY UNITS AT THE FREQUENCY AND SAMPLING REQUIRED BY THE CONSTRUCTION DOCUMENT TESTING TABLES.

- J. STRUCTURAL STEEL:**
- ALL STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST AISC 'STEEL CONSTRUCTION MANUAL' AND AWS D1.1.
 - STRUCTURAL SHAPES, PLATES AND BOLTS SHALL BE AS FOLLOWS:
 - W SECTIONS: ASTM A992, Fy = 50 KSI
 - HSS SQUARE AND RECTANGULAR SHAPES: ASTM A500, GRADE B, Fy = 46 KSI
 - ROUND HSS: ASTM A500, GRADE B, Fy = 42 KSI
 - PIPE STEEL: ASTM A53, Fy = 35 KSI
 - ALL OTHER SHAPES AND PLATES: ASTM A36, Fy = 36 KSI
 - BOLTS IN STEEL CONNECTIONS: ASTM A325N
 - BOLTS IN WOOD CONNECTIONS: ASTM A307, GRADE A
 - ANCHOR BOLTS: ASTM A36 OR A307, GRADE A
 - HEAVY HEX ANCHOR BOLTS: ASTM F1554, GRADE 36
 - ANCHOR RODS: ASTM F1554, GRADE 36
 - THREADED RODS: ASTM A36
 - BOLTS, ANCHOR BOLTS, EXPANSION BOLTS, ETC., SHALL BE INSTALLED WITH STEEL WASHERS. TYPE N BOLTS PER AISC 'STEEL CONSTRUCTION MANUAL' AND SHALL BE TIGHTENED TO THE SNUG-TIGHT CONDITION AS DEFINED PER AISC UNLESS NOTED OTHERWISE. ALL HIGH STRENGTH BOLTING SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY TO ENSURE BOLT TENSION.
 - SHOP PAINT ALL STEEL SURFACES WITH FABRICATOR'S STANDARD RUST-INHIBITING PRIMER EXCEPT AT SURFACES ENCASED IN CONCRETE, SURFACES TO RECEIVE FIREPROOFING, OR SURFACES ENCLOSED WITHIN THE BUILDING FINISHES.
 - BEAMS, COLUMNS AND BRACES SHALL NOT BE SPLICED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
 - DRYPACK FOR COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL BE FIRE STAR GROUT OR AN EQUAL NON-METALLIC SHRINKAGE-RESISTANT GROUT. Fy = 5000 PSI MINIMUM. INSTALL GROUT UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL GROUT UNDER BASEPLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION.
 - ALL WELDING PER LATEST AMERICAN WELDING SOCIETY STANDARDS, EXCEPT STEEL JOISTS AND JOIST GIRDERS SHALL COMPLY WITH SJI STANDARDS. ALL STEEL SHALL BE DONE BY WELDERS HOLDING VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELDING SHOWN ON THE DRAWINGS OR NOTES. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW. FULL PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.
 - ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR ASTM A706 GRADE 60 REINFORCING BARS, USE E80 SERIES.
 - HEADED STUDS SHALL BE NELSON GRANULAR FLUX-FILLED HEADED ANCHOR STUDS OR APPROVED EQUAL. MADE FROM COLD FINISHED LOW CARBON STEEL, AND SHALL CONFORM TO ASTM A108, GRADES 1015 OR 1020 WITH A MINIMUM TENSILE STRENGTH OF 60 KSI. STUD WELDING INSPECTION AND TESTING SHALL CONFORM TO AWS D1.1.
 - DEFORMED BAR ANCHOR STUDS SHALL BE NELSON D2L GRANULAR FLUX-FILLED REBAR STUDS OR APPROVED EQUAL. MADE FROM LOW CARBON COLD ROLL STEEL WITH A MINIMUM TENSILE STRENGTH OF 70 KSI. STUD WELDING INSPECTION AND TESTING SHALL CONFORM TO AWS D1.1.

- K. POST-INSTALLED ANCHORS:**
- EPOXY BOLTS OR DOWELS SHALL BE A THREADED ROD OR REINFORCING STEEL INSTALLED WITH ONE OF THE FOLLOWING PRODUCTS SATISFYING CRACKED CONCRETE REQUIREMENTS IN ACCORDANCE WITH CURRENT ACI PUBLICATION.
 - SIMPSON "SET XP" ICC REPORT ESR-2508
 - SIMPSON "SET-3G" ICC REPORT ESR-4057
 - EPOXY BOLTS FOR MASONRY SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS.
 - SIMPSON "SET" ICC REPORT ESR-1772
 - HILTI "HIT-HY 270" ICC REPORT ESR-4143
 - EXPANSION BOLTS FOR CONCRETE SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS SATISFYING CRACKED CONCRETE REQUIREMENTS IN ACCORDANCE WITH CURRENT ACI PUBLICATION.
 - HILTI "KWIK BOLT TZ" ICC REPORT ESR-1917
 - SIMPSON "STRONG BOLT 2 WEDGE ANCHOR" ICC REPORT ESR-3037
 - EXPANSION BOLTS OR SCREW BOLTS FOR MASONRY SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS.
 - HILTI "KWIK BOLT III" ICC REPORT ESR-1385
 - SIMPSON "TITEN HD" ICC REPORT ESR-1056
 - SIMPSON "WEDGE-ALL" ICC REPORT ESR-1396
 - SCREW BOLTS FOR CONCRETE SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS SATISFYING CRACKED CONCRETE REQUIREMENTS IN ACCORDANCE WITH CURRENT ACI PUBLICATION.
 - SIMPSON "TITEN HD" ICC REPORT ESR-2713
 - FOR MINIMUM EMBEDMENT LENGTH SEE DETAILS AND NOTES. INSTALL ALL BOLTS AS OUTLINED IN THE DRAWINGS. UTILIZE PROPER SIZES AND TYPES OF DRILL, HOLE CLEANING, DRIVING AND TIGHTENING BOLT.
 - SPECIAL INSPECTION OF ALL POST-INSTALLED ANCHORS IS REQUIRED.
 - U.N.O. DO NOT CUT OR DRILL THROUGH EXISTING REINFORCING WITHOUT APPROVAL OF THE ENGINEER. IF EXISTING REINFORCING IS ENCOUNTERED, NOTIFY ENGINEER.

- L. ROUGH CARPENTRY AND PLYWOOD:**
- WOOD FRAMING SHALL CONFORM TO IRC CHAPTER 23. FRAMING LUMBER SHALL COMPLY WITH THE 2018 EDITION OF THE NATIONAL DESIGN SPECIFICATION. MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 19 PERCENT. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY. ALL SAWN LUMBER SHALL BE DOUGLAS FIR-LARCH WITH THE FOLLOWING MINIMUM GRADES:
 - JOISTS: NO. 2
 - BEAMS/LINTELS
 - 4X MEMBERS: NO. 2
 - 6X MEMBERS: NO. 1
 - POSTS
 - 4X MEMBERS: NO. 2
 - 6X MEMBERS: NO. 1
 - STUDS: NO. 2
 - LEDGERS AND TOP PLATES: NO. 2
 - OTHER APA RATED PANELS (I.E. ORIENTED STRAND BOARD) MAY BE SUBSTITUTED FOR PLYWOOD PROVIDED THAT THEY COMPLY WITH PRODUCT STANDARD 2-10 AND HAVE THE SAME EXPOSURE DURABILITY CLASSIFICATION, SPAN RATING AND NOMINAL THICKNESS.
 - DO NOT NOTCH, DRILL OR SPLICE JOISTS, BEAMS OR LOAD BEARING OR STRUCTURAL STUDS WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.
 - DOUBLE UP FLOOR JOISTS AND BLOCKING UNDER PARTITIONS. DOUBLE UP JOISTS BELOW MECHANICAL EQUIPMENT. PROVIDE 2" SOLID BLOCKING AT MIDSPAN AND AT SUPPORTS OF ALL JOISTS.
 - ALL NAILING SHALL BE WITH COMMON NAILS. ALL NAILING NOT NOTED SHALL BE PER TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE. WOOD CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. OR OTHER MANUFACTURER WITH CURRENT AND EQUIVALENT ICC APPROVAL. ALL NAIL HOLES IN CONNECTORS SHALL BE FILLED WITH NAIL OF THE LARGEST SIZE INDICATED IN THE MANUFACTURER'S CATALOG U.N.O. MULTIPLE, SKEWED AND/OR SLOPED HANGERS SHALL BE SUPPLIED BY THE CONTRACTOR WHERE NECESSARY.
 - ALL FABRICATION SHALL BE PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

- M. GLULAM BEAMS:**
- GLULAM BEAMS SHALL BE DOUGLAS FIR LARCH WITH THE FOLLOWING WOOD GRADES:
 - SIMPLE SPAN BEAMS - 24F-V4
 - CONTINUOUS AND CANTILEVERED BEAMS - 24F-V8
 - FABRICATION AND HANDLING SHALL COMPLY WITH THE LATEST AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) OR APA/ELS (THE ENGINEERED WOOD ASSOCIATION) STANDARDS. ALL BEAMS SHALL BEAR AITC OR APA/ELS GRADE STAMP AND CERTIFICATE. ALL BEAMS SHALL BE FABRICATED WITH WATERPROOF GLUE. APPEARANCE GRADE REQUIREMENTS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
 - CAMBER BEAMS AS SHOWN ON THE DRAWINGS. IF NO CAMBER IS SPECIFIED, PROVIDE MANUFACTURER'S STANDARD CAMBER USING A RADIUS OF 5,000 FEET.

- N. SHOP DRAWINGS AND PRODUCT DATA:**
- SHOP DRAWINGS AND/OR PRODUCT DATA SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ANY STRUCTURAL ITEMS REQUIRED BY THE ARCHITECTURAL DRAWINGS OR SPECIFICATIONS PRIOR TO FABRICATION AND/OR CONSTRUCTION IN THE FIELD. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
 - THE GENERAL CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DRAWINGS PRIOR TO SUBMITTAL. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW. THE CONTRACTOR SHALL CLOUD OR FLAG ALL ITEMS NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. VERIFY ALL DIMENSIONS WITH THE ARCHITECT.
 - ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS SHALL BE CLOUDED BY THE MANUFACTURER OR FABRICATOR. ANY CHANGES, SUBSTITUTIONS OR DEVIATIONS WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTED PARTIES, SHALL NOT BE CONSIDERED ALLOWED AFTER THE ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY BY THE STRUCTURAL ENGINEER.
 - THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO ALLOW OR NOT ALLOW ANY CHANGES TO THE ORIGINAL CONTRACT DOCUMENTS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW. THE ENGINEER RESERVES TH RIGHT TO MAKE CHANGES TO THE CONTRACT DOCUMENTS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW.
 - PROVIDE ELECTRONIC PDF SUBMITTALS IN A TIMELY MANNER TO ALLOW A MINIMUM OF FIVE WORKING DAYS FOR THE ENGINEER'S REVIEW. THE FILES SHALL ALLOW FOR COMMENTS TO BE PLACED ON THE FILES DURING REVIEW BY THE STRUCTURAL ENGINEER.
 - THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND WHICH ARE NOT NOTED AS ALLOWED CHANGES TO THE ORIGINAL CONTRACT DOCUMENTS ARE NOT TO BE CONSIDERED CHANGES TO THE ORIGINAL CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ITEMS OMITTED OR SHOWN INCORRECTLY ARE CONSTRUCTED IN ACCORDANCE WITH THE ORIGINAL CONTRACT DOCUMENTS. SHOP DOCUMENTS PROCESSED BY THE ENGINEER SHALL NOT BE CONSIDERED CHANGE ORDERS.
 - THE ENGINEER'S REVIEW IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS AND COMPLETENESS SHALL REST WITH THE CONTRACTOR. SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF SIGNIFICANT ERRORS ARE FOUND DURING REVIEW.
 - THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING PARTY.
 - ALL ENGINEERING DESIGNS AND LAYOUTS PERFORMED BY OTHERS SHALL BE SEALED BY A REGISTERED ENGINEER LOCATED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

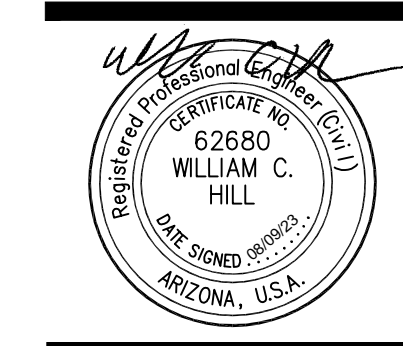
- O. SPECIAL INSPECTIONS AND TESTING:**
- THE OWNER SHALL EMPLOY SPECIAL INSPECTORS TO PROVIDE INSPECTION AND TESTING DURING CONSTRUCTION OF THE TYPES OF WORK REQUIRING SPECIAL INSPECTION AS INDICATED ON THE DRAWINGS.
 - SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED INSPECTOR APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER OF RECORD AND THE BUILDING OFFICIAL.
 - SPECIAL INSPECTIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A STATE REGISTERED STRUCTURAL OR CIVIL ENGINEER WHO IS FAMILIAR WITH THE STRUCTURAL DESIGN OF THIS PROJECT. THE SPECIAL INSPECTION CERTIFICATE SHALL BE SEALED BY THE SUPERVISING REGISTERED ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MINIMUM OF 24 HOURS NOTICE TO THE SPECIAL INSPECTOR AND THE TESTING LABORATORY PRIOR TO BEGINNING ANY WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED.
 - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR THE COMPLIANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
 - THE SPECIAL INSPECTOR SHALL PROVIDE INSPECTION REPORTS TO THE BUILDING OFFICIAL AND ENGINEER OR ARCHITECT OF RECORD. REPORTS SHALL INDICATE THAT THE INSPECTED WORK WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN, IF UNCORRECTED, TO THE ENGINEER OR ARCHITECT OF RECORD AND THE BUILDING OFFICIAL PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
 - UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT, TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

INTERPRETATION OF DRAWINGS

TYPICAL NOTES		
1.	FOR APPLICABLE CODES AND STANDARDS, MATERIAL STRENGTHS AND CONSTRUCTION REQUIREMENTS, SEE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS.	
2.	VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION - RESOLVE ANY DISCREPANCY WITH ARCHITECT. DO NOT SCALE DRAWINGS.	
3.	FOR CLARITY, ALL EXTERIOR SLABS AND SIDEWALKS MAY NOT BE SHOWN. FOR EXACT DIMENSIONS, LOCATIONS, JOINTS AND SCORE LINES, SEE ARCHITECTURAL DRAWINGS.	
4.	FOR CLARITY, ALL ROOF, FLOOR AND WALL OPENINGS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL STRUCTURAL DETAILS. VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTS, ETC. WITH MECHANICAL AND ELECTRICAL ENGINEERS THROUGH ARCHITECT.	
5.	DETAILS MARKED "TYPICAL" MAY OR MAY NOT BE CUT ON PLANS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.	

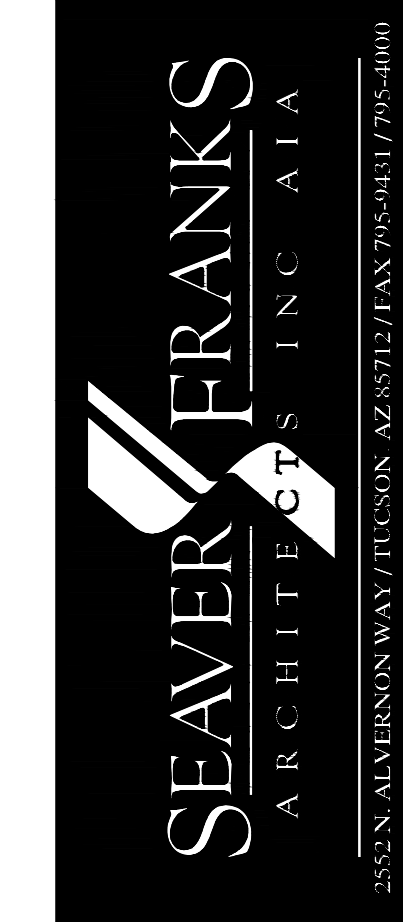
PLAN LEGEND		
SYMBOL	DESCRIPTION	LOCATION
	DETAIL CUT SHOWN ON PLAN	SEE 84 SERIES SHEETS FOR FOUNDATION DETAILS AND 85 SERIES SHEETS FOR FRAMING DETAILS
	TYPICAL DETAIL	SEE S1 SERIES SHEETS FOR TYPICAL DETAILS
	PLAN KEYNOTE	SEE PLAN KEYNOTES ON EACH PLAN SHEET
	OPENING IN FLOOR OR ROOF	SEE TYPICAL NOTE 4 ABOVE
	MASONRY WALL / VENEER	
	CAST-IN-PLACE OR PRECAST CONCRETE WALL	SEE FOUNDATION / FRAMING PLANS
	WOOD / STEEL STUD WALL	
	WINDOW IN WALL ABOVE	
	SHEAR WALL HOLDOWN	SEE FOUNDATION PLANS AND HOLDOWN SCHEDULE
	MECHANICAL UNIT	SEE FRAMING PLANS AND MECHANICAL EQUIPMENT SCHEDULE
F1	FOOTING	
C1	COLUMN	
B1	BEAM	SEE FOUNDATION/FRAMING PLANS AND APPLICABLE SCHEDULES
L1	LEDGER	
LT1	LINTEL	

STRUCTURAL ABBREVIATIONS			
AFB	ABOVE FINISHED FLOOR	MAX	MAXIMUM
A.B.C.	AGGREGATE BASE COURSE	MCJ	MASONRY CONTROL JOINT
ACI	AMERICAN CONCRETE INSTITUTE	MIN	MINIMUM
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION		
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	N.I.C.	NOT IN CONTRACT
APA	AMERICAN PLYWOOD ASSOCIATION	N.T.S.	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS		
AWS	AMERICAN WELDING SOCIETY	OPP	OPPOSITE
		O.C.	ON CENTER
BOO	BOTTOM OF DECK		
BOF	BOTTOM OF FOOTING		
BOS	BOTTOM OS SHEATHING	PCF	POUNDS PER CUBIC FOOT
		PCJ	PRESTRESSED CONCRETE INSTITUTE PANEL JOINT
CABO	COUNCIL OF AMERICAN BUILDING OFFICIALS	PJ	POUNDS PER LINEAR FOOT
CJ	CONSTRUCTION/CONTROL JOINT	PRE-ENG	PRE-ENGINEERED
CLR	CLEAR	PSF	POUNDS PER SQUARE FOOT
CMU	CONCRETE MASONRY UNIT	PSI	POUNDS PER SQUARE INCH
CONT	CONTINUOUS	PTI	POST-TENSIONING INSTITUTE
CRS	CONCRETE REINFORCING STEEL INSTITUTE	RS	ROUGH SAWN
d	PENNY (nails)		
D.B.A.	DEFORMED BAR ANCHOR	SIM	SIMILAR
D.F.	DOUGLAS FIR-LARCH	(SLV)	SHORT LEG VERTICAL
EFPE	EXISTING FINISHED FLOOR ELEVATION	(SSV)	SHORT SIDE VERTICAL
EQ	EQUAL		
FFE	FINISHED FLOOR ELEVATION	T & G	TONGUE AND GROOVE
		T _f	FLANGE THICKNESS
		T _w	WEB THICKNESS
		T _p	TYPICAL
		TOP	TOP OF FOOTING
		TOS	TOP OF STEEL
		TOW	TOP OF WALL
K	KIP(S)	U.N.O.	UNLESS NOTED OTHERWISE
LBS	POUNDS	W.P.	WORKING POINT
(LV)	LONG LEG VERTICAL	W.W.F.	WELDED WIRE FABRIC
(SV)	LONG SIDE VERTICAL		



REVISIONS NO. DATE

TENANT IMPROVEMENT RENOVATION FLOOR PLAN GENERAL STRUCTURAL NOTES



SPECIAL STRUCTURAL INSPECTIONS

STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS PER IBC 2018

- SPECIAL INSPECTIONS / TESTING -**
"SPECIAL STRUCTURAL INSPECTIONS" ARE NOT TO BE CONFUSED WITH, NOR RELIEVE THE OWNER OR OWNER'S AGENT FROM THE JURISDICTION BUILDING DEPARTMENT INSPECTIONS REQUIRED BY IBC SECTION 110. SPECIAL INSPECTIONS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT DOCUMENTS. MEANS AND METHODS AND JOBSITE SAFETY ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. SEE SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS.
- REPORTING FOR SPECIAL INSPECTION -**
SPECIAL INSPECTION AND TESTING REPORTS SHALL BE COMPLETED AND DISTRIBUTED ON A WEEKLY BASIS. REPORT DEFICIENCIES THAT HAVE NOT BEEN RESOLVED IMMEDIATELY. PROVIDE COPIES OF REPORTS TO CONTRACTOR, OWNER, ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. SPECIAL INSPECTOR TO KEEP A NON-COMPLIANCE LIST DOCUMENTING ITEMS INSPECTED NOT MEETING APPROVED CONSTRUCTION DOCUMENTS AND WHEN / HOW RESOLVED.
- REFER TO IBC SECTION 1705 AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING CONSTRUCTION DOCUMENTS FOR ADDITIONAL NON-STRUCTURAL SPECIAL INSPECTION ITEMS.**
- ANY FABRICATOR NEEDS TO BE APPROVED BY THE JURISDICTION BUILDING DEPARTMENT OR BE CERTIFIED BY AN INDUSTRY RECOGNIZED AGENCY QUALIFIED FOR SUCH CERTIFICATION. CERTIFICATION OF FABRICATORS ARE TO BE PROVIDED TO THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTION ITEMS CONTAINED HEREIN ARE REQUIRED FOR ALL NON-CERTIFIED FABRICATORS**
- DEFINITION OF "CONTINUOUS" AND "PERIODIC" SPECIAL INSPECTIONS:**
CONTINUOUS: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
PERIODIC: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
WHERE "PERIODIC" SPECIAL INSPECTION IS REQUIRED, "PART-TIME" OR "INTERMITTENT" MEANS THAT INSPECTION OF THE TASK SHOULD BE PERFORMED FROM TIME TO TIME DURING THE PROGRESS OF THE TASK. THE PERIOD OF TIME BETWEEN INSPECTIONS VARIES GREATLY FOR DIFFERENT TYPES OF WORK DEPENDING ON THE TYPE OF INSPECTION DONE.
THE PERIOD OF TIME BETWEEN INSPECTIONS ALSO DEPENDS ON THE PACE OF THE CONSTRUCTION, THE NUMBER OF WORKERS, THE QUALITY OF THE WORKMANSHIP, AND OTHER FACTORS. IT IS THE RESPONSIBILITY OF THE SPECIAL INSPECTOR TO PROVIDE INSPECTIONS AT AN APPROPRIATE FREQUENCY AND AT APPROPRIATE TIMES DURING CONSTRUCTION. THE INSPECTOR MUST HAVE ADEQUATE EXPERIENCE AND EXHIBIT GOOD JUDGEMENT IN DETERMINING THE TIMING AND FREQUENCY OF INSPECTIONS.

SPECIAL INSPECTIONS AND TESTS OF SOILS BY BUILDING OFFICIAL					
SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA IBC SECTION	COMMENTS
		CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED		
Y	1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	---	X	1705.6	
Y	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	---	X	1705.6	
Y	3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	---	X	1705.6	
Y	4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	---	1705.6	
Y	5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.	---	X	1705.6	

SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION						
SPECIAL INSPECTION REQUIRED Y/N	TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE	COMMENTS
Y	2. REINFORCING BAR WELDING:					
Y	a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706.	---	X	AWS D1.4 ACI 318: 26.5.4	---	
Y	b. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM 5/16"	---	X			
Y	c. INSPECT ALL OTHER WELDS.	X	---			
Y	3. INSPECT ANCHORS CAST IN CONCRETE	---	X	ACI 318: 17.8.2	---	
Y	4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.					
Y	a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	---	ACI 318: 17.8.2.4	---	
Y	b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	---	X	ACI 318: 17.8.2	---	
Y	5. VERIFY USE OF REQUIRED DESIGN MIX.	---	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	
Y	6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	---	ASTM C 172 ACI 318: 26.5, 26.12	1908.10	

LEVEL B QUALITY ASSURANCE OF MASONRY (TMS 402/ACI)						
SPECIAL INSPECTION REQUIRED Y/N	MINIMUM TESTS	COMMENTS				
Y	VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF-CONSOLIDATING GROUT.					
Y	VERIFICATION OF F _u AND F _{ax} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY TMS 402/ACI 530					
Y	PRISM TEST METHOD, MINIMUM OF 3 PRISMS EACH TEST, PER ASTM C1314	ONLY REQUIRED WHEN UNIT STRENGTH METHOD CANNOT BE USED				
MINIMUM SPECIAL INSPECTION						
	INSPECTION TASK	FREQUENCY (a)		REFERENCE FOR CRITERIA		
		CONTINUOUS	PERIODIC	TMS 402 / ACI 530 / ASCE 5	TMS 602 / ACI 530.1 / ASCE 6	COMMENTS
Y	1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS.	---	X	---	ART. 1.5	
Y	2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
Y	a. PROPORTIONS OF SITE-PREPARED MORTAR.	---	X	---	ART. 2.1, 2.6 A	
Y	b. CONSTRUCTION OF MORTAR JOINTS.	---	X	---	ART. 3.3 B	
Y	c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.	---	X	---	ART. 2.4 B, 2.4 H	
Y	d. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS, AND ANCHORAGES.	---	X	---	ART. 3.4, 3.6 A	
Y	3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
Y	a. GROUT SPACE.	---	X	---	ART. 3.2 D, 3.2 F	
Y	b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES.	---	X	---	SEC. 6.1 ART. 2.4, 3.4	
Y	c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	---	X	---	SEC. 6.1, 6.2.1, 6.2.6, 6.2.7	ART. 3.2 E, 3.4, 3.6 A
Y	d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	---	X	---	ART. 2.6 B, 2.4 G, 1.b	
Y	e. CONSTRUCTION OF MORTAR JOINTS.	---	X	---	ART. 3.3 B	
Y	4. VERIFY DURING CONSTRUCTION:					
Y	a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	---	X	---	ART. 3.3 F	
Y	b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	---	X	---	SEC. 1.2.1(e), 6.1.4.3, 6.2.1	
Y	c. WELDING OF REINFORCEMENT.	X	---	---	SEC. 8.1.6.7.2, 9.3.3.4(c), 11.3.3.4(b)	
Y	d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	---	X	---	ART. 1.8 C, 1.8 D	
Y	e. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE.	X	---	---	ART. 3.5, 3.6 C	
Y	f. INSTALLATION OF POST-INSTALLED ANCHORS ACCORDING TO MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. VERIFY ANCHOR DIMENSIONS, ADHESIVE IDENTIFICATION AND EXPIRATION DATE, HOLE DIMENSION, EDGE DISTANCES, EMBEDMENT DEPTH, TIGHTENING TORQUE, BASE-MATERIAL TEMPERATURE.	X(d)	X(e)	---	SEANM	
Y	5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS.	---	X	---	ART. 1.4B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4	
(a) FREQUENCY REFERS TO THE FREQUENCY OF SPECIAL INSPECTIONS, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OR PERIODIC DURING THE LISTED TASK, AS DEFINED IN THE TABLE.						
(b) REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.						
(c) REQUIRED AFTER THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.						
(d) REQUIRED FOR THE FIRST 10% OF EACH DIFFERENT TYPE OF ANCHOR AND/OR INSTALLER.						
(e) REQUIRED FOR THE REMAINING 90% OF EACH DIFFERENT TYPE OF ANCHOR AND/OR INSTALLER.						

SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION					
SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	TYPE OF INSPECTION		REFERENCED STANDARD	COMMENTS
		QUALITY CONTROL TASK	QUALITY ASSURANCE TASK		
1. INSPECTION TASKS PRIOR TO WELDING:					
Y	a. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE.	P	P		
Y	b. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.	P	P		
Y	c. MATERIAL IDENTIFICATION (TYPE/GRADE).	O	O		
Y	d. WELDER IDENTIFICATION SYSTEM.	O	O		
Y	e. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY):				
	1) JOINT PREPARATION.				
	2) DIMENSIONS (ALIGNMENT, ROOT FACE, BEVEL).				
	3) CLEANLINESS (CONDITION OF STEEL SURFACES).				
	4) TACKING (TACK WELD QUALITY AND LOCATION).				
	5) BACKING TYPE AND FIT (IF APPLICABLE).				
Y	f. CONFIGURATION AND FINISH OF ACCESS HOLES.	O	O		
Y	g. FIT-UP OF FILLET WELDS:				
	1) DIMENSIONS (ALIGNMENT, GAPS AT ROOT)				
	2) CLEANLINESS (CONDITION OF STEEL SURFACES).				
	3) TACKING (TACK WELD QUALITY AND LOCATION).				
Y	h. CHECK WELDING EQUIPMENT.	O	---		
2. INSPECTION TASKS DURING WELDING:					
Y	a. USE OF QUALIFIED WELDERS.	O	O		
Y	b. CONTROL AND HANDLING OF WELDING CONSUMABLES:				
	1) PACKAGING	O	O		
	2) EXPOSURE CONTROL				
Y	c. NO WELDING OVER CRACKED TACK WELDS.	O	O		
Y	d. ENVIRONMENTAL CONDITIONS:				
	1) WIND SPEED WITHIN LIMITS	O	O		
	2) PRECIPITATION AND TEMPERATURE				
	e. WPS FOLLOWED.				
	1) SETTINGS ON WELDING EQUIPMENT.				
	2) TRAVEL SPEED				
	3) SELECTED WELDING MATERIALS				
	4) SHIELDING GAS TYPE/FLOW RATE	O	O		
	5) PREHEAT APPLIED				
	6) INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)				
	7) PROPER POSITION (F, V, H, OH)				
Y	f. WELDING TECHNIQUES:				
	1) INTERPASS AND FINAL CLEANING.	O	O		
	2) EACH PASS WITHIN PROFILE LIMITATIONS.				
	3) EACH PASS MEETS QUALITY REQUIREMENTS.				
3. INSPECTION TASKS AFTER WELDING:					
Y	a. WELDS CLEANED.	O	O		
Y	b. SIZE, LENGTH, AND LOCATION OF WELDS.	P	P		
Y	c. WELDS MEET VISUAL ACCEPTANCE CRITERIA:				
	1) CRACK PROHIBITION				
	2) WELD/BASE-METAL FUSION				
	3) CRATER CROSS SECTION				
	4) WELD PROFILES	P	P		
	5) WELD SIZE				
	6) UNDERCUT				
	7) POROSITY				
Y	d. ARC STRIKES.	P	P		
Y	e. k-AREA	P	P		
Y	f. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED).	P	P		
Y	g. REPAIR ACTIVITIES.	P	P		
Y	h. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER.	P	P		
4. INSPECTION OF ANCHOR ROD PLACEMENT AND PLACEMENT OF EMBEDDED ITEMS.					
Y	a. DIAMETER, GRADE, TYPE, AND LENGTH OF ANCHOR ROD OR EMBEDDED ITEM.	P	P		AISC 360 SECTION N5.7
Y	b. EXTENT OR DEPTH OF EMBEDMENT INTO CONCRETE.	P	P		
Y	5. INSPECTION OF THE FABRICATED STEEL OR ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS.	P	P		AISC 360 SECTION N5.7
O: ITEMS NEED TO BE OBSERVED ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.					
P: ITEMS NEED TO BE PERFORMED FOR EACH WELD JOINT OR MEMBER.					



REVISIONS NO. DATE

TENANT IMPROVEMENT RENOVATION FLOOR PLAN SPECIAL INSPECTION TABLES



GVR DEL SOL CLUBHOUSE 3355 S. CAMINO DEL SOL TUCSON, ARIZONA 85747

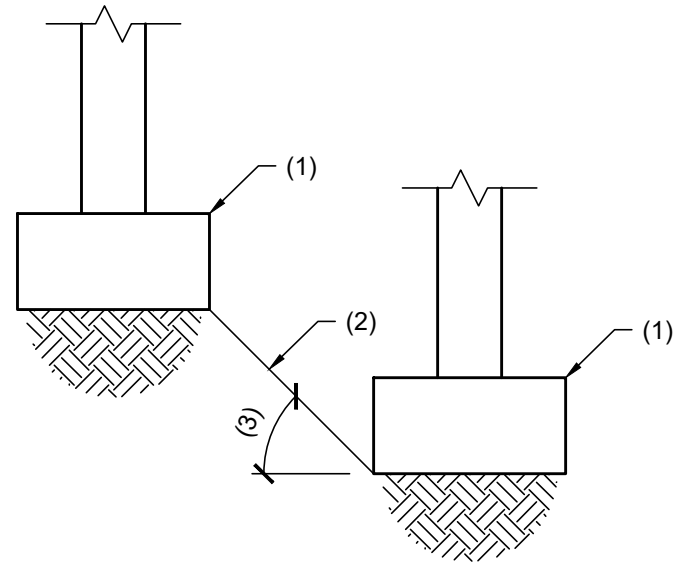
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 PROJ. NO. 37096
 DRG. SCALE AS NOTED

SHEET
S1.1

NOTES:

1. CONCRETE FOUNDATION.
2. DO NOT LOCATE BOTTOM OF ADJACENT FOOTING BELOW LINE EXTENDING FROM BOTTOM OF UPPER FOOTING.
3. 30" MAX IN GRANULAR SOILS, 45" MAX IN OTHER SOILS, U.N.O.



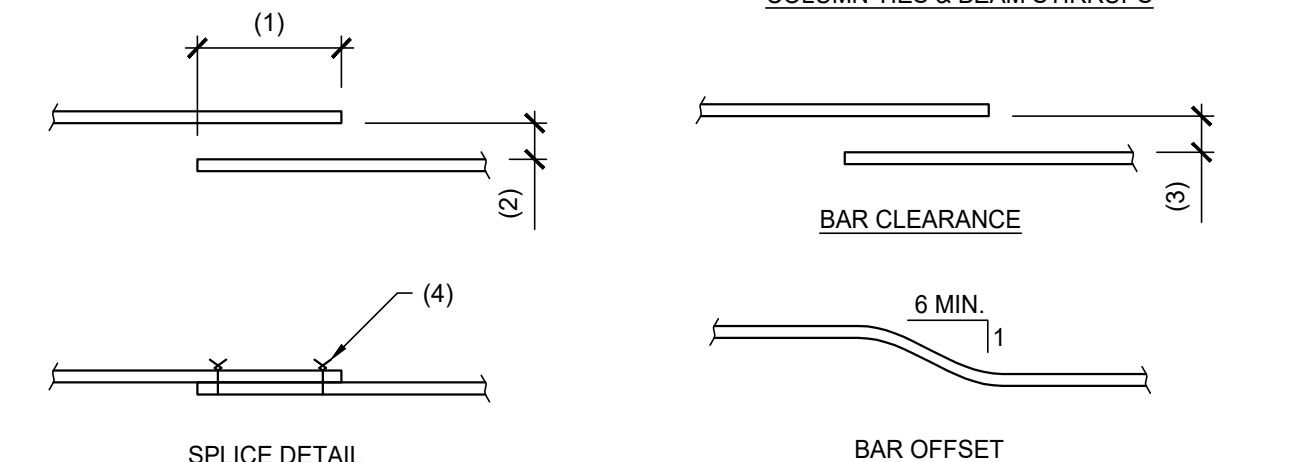
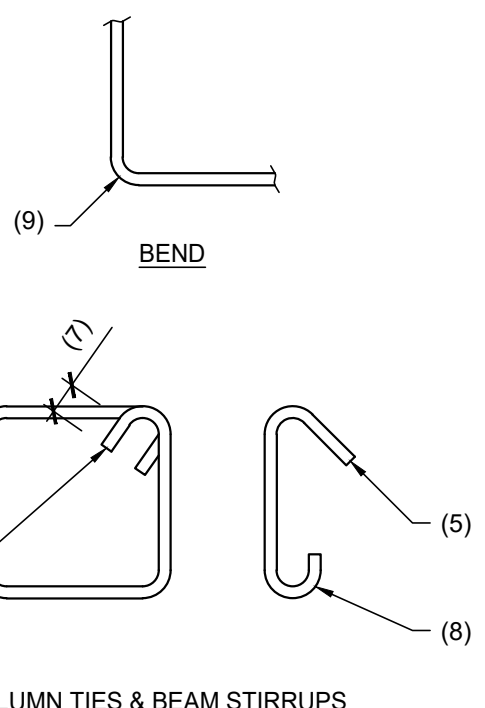
TYPICAL NOTES:

- SEE G.S.N., PLANS, DETAILS AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

01 TYPICAL MAXIMUM SLOPE BETWEEN ADJACENT FOOTING

NOTES:

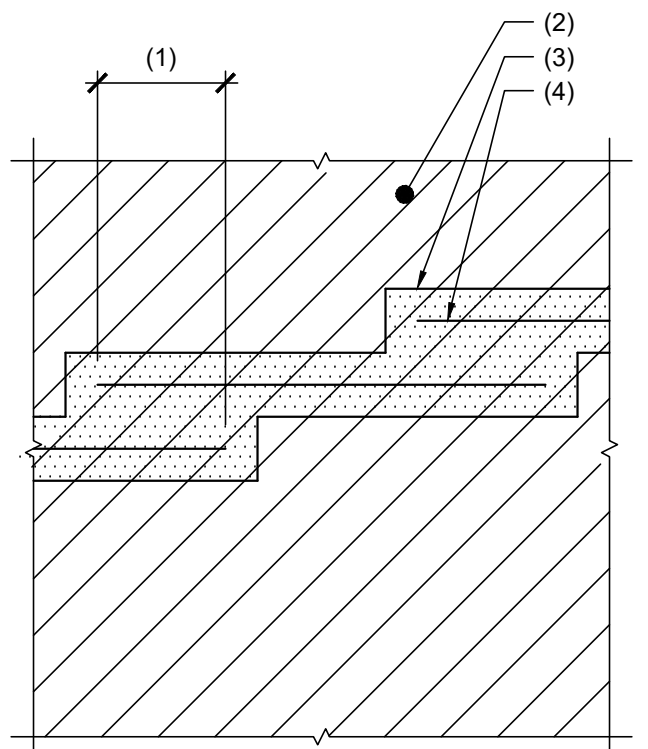
1. LAP - SEE G.S.N. AND TYPICAL DETAILS.
2. MAX 15 LAP BUT NOT MORE THAN 6'.
3. 1d (1" MINIMUM).
4. WIRE TIES.
5. 135 DEGREE BEND.
6. #3 BARS: BEND AROUND 1 1/2" PIN.
7. #4 BARS: BEND AROUND 2" PIN.
8. #5 BARS: BEND AROUND 2 1/2" PIN.
9. 180 DEGREE HOOK.
10. #8 AND SMALLER: RADIUS = 3d.
11. #9 - #11: RADIUS = 4d.
12. #14: RADIUS = 5d.
13. GRADE 40 BARS WITH 180 DEGREE HOOK: RADIUS = 5d.



02 TYPICAL PIPE THROUGH FOUNDATION WALL AND TRENCH

NOTES:

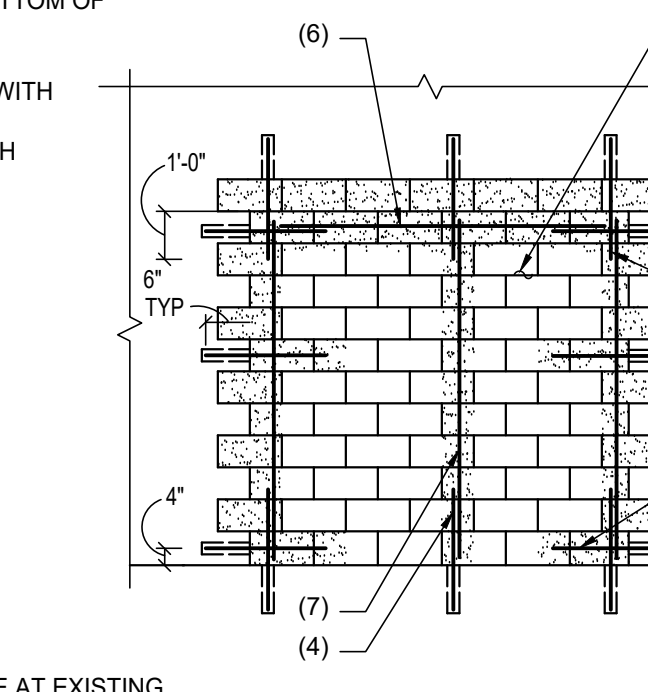
1. LAP REINFORCING.
2. MASONRY WALL.
3. SOLID GROUTED BOND BEAM.
4. BOND BEAM REINFORCING.



03 TYPICAL TRENCH PARALLEL TO FOUNDATION

NOTES:

1. LAP - SEE G.S.N. AND TYPICAL DETAILS.
2. MAX 15 LAP BUT NOT MORE THAN 6'.
3. 1d (1" MINIMUM).
4. WIRE TIES.
5. 135 DEGREE BEND.
6. #3 BARS: BEND AROUND 1 1/2" PIN.
7. #4 BARS: BEND AROUND 2" PIN.
8. #5 BARS: BEND AROUND 2 1/2" PIN.
9. 180 DEGREE HOOK.
10. #8 AND SMALLER: RADIUS = 3d.
11. #9 - #11: RADIUS = 4d.
12. #14: RADIUS = 5d.
13. GRADE 40 BARS WITH 180 DEGREE HOOK: RADIUS = 5d.



04 MINIMUM REINFORCING BAR SPLICE LENGTHS IN CONCRETE

NOTES:

- VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE.
- LENGTHS ARE IN INCHES.
- TENSION SPLICE LENGTHS ARE FOR CLASS B LAP SPLICES.
- TENSION DEVELOPMENT LENGTH = SPLICE LENGTH / 1.3
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
- FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
- CASES 1 AND 2 ARE DEFINED AS:

BEAMS AND COLUMNS	CASE 1	COVER AT LEAST 1d, AND C.C. SPACING AT LEAST 2d.
WITH TIES	CASE 2	COVER LESS THAN 1d OR C.C. SPACING LESS THAN 2d.
ALL OTHERS	CASE 1	COVER AT LEAST 1d AND C.C. SPACING AT LEAST 3d.
	CASE 2	COVER LESS THAN 1d OR C.C. SPACING LESS THAN 3d.
- FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED VALUES BY ONE OF THE FOLLOWING FACTORS:

CONCRETE COVER AND SPACING	TOP BARS	OTHER BARS
COVER < 3db OR CLEAR SPACING < 6db	1.31	1.5
COVER > 3db OR CLEAR SPACING > 6db	1.2	1.2

TYPICAL

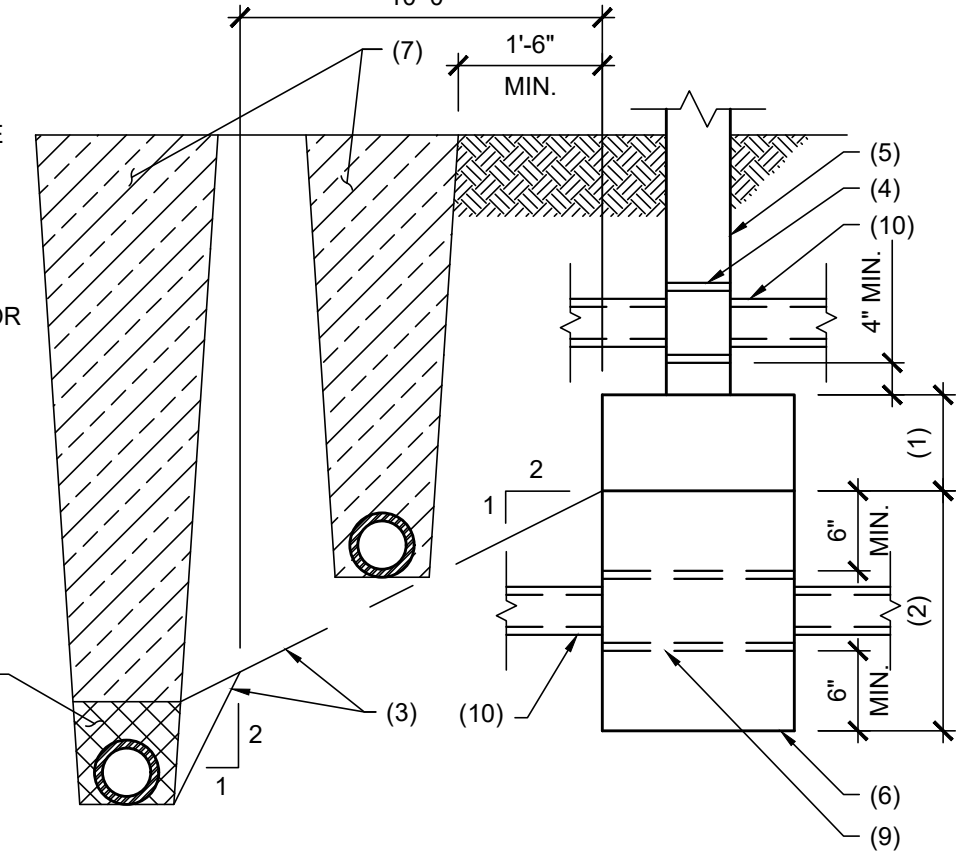
05 TYPICAL REINFORCING HOOK SCHEDULE

NOTES:

1. CONCRETE FOOTING. NO SLEEVES PERMITTED THROUGH FOOTING.
2. 3'-0" MAX. STEP FOOTING AS NEEDED TO MAINTAIN MAX. HEIGHT.
3. EXCAVATION BELOW THESE LINES NOT PERMITTED. CAST IRON SLEEVE, 2" LARGER THAN PIPE.
4. STEM WALL.
5. CONCRETE FILLED PIPE TRENCH. EXTEND 2'-0" EACH SIDE OF SLEEVE. CONCRETE FILL TO BE PLACED BEFORE FOOTING IS POURED.
6. BACKFILL PER SPECS.
7. 90% DENSITY (ASTM D-698).
8. PIPE SLEEVE, MIN. 12" CLEARANCE AROUND PIPE OR CONDUIT.
10. PIPE OR CONDUIT.

TYPICAL NOTES:

- PIPES MAY NOT PASS THROUGH FOOTINGS OR UNDER COLUMN FOOTINGS.
- FOR TRENCHES GREATER THAN 3'-0" BELOW BOTTOM OF FOOTING, SEE TYPICAL PIPE PASSING BELOW WALL FOOTING DETAIL.
- PIPES LOCATED GREATER THAN 3'-0" BELOW FOOTING BASE MAY BE BACKFILLED WITH COMPACTED FILL PER SPECIFICATIONS, IN LIEU OF CONCRETE FILL.



06 TYPICAL POST-INSTALLED ANCHORS/REINFORCING STEEL

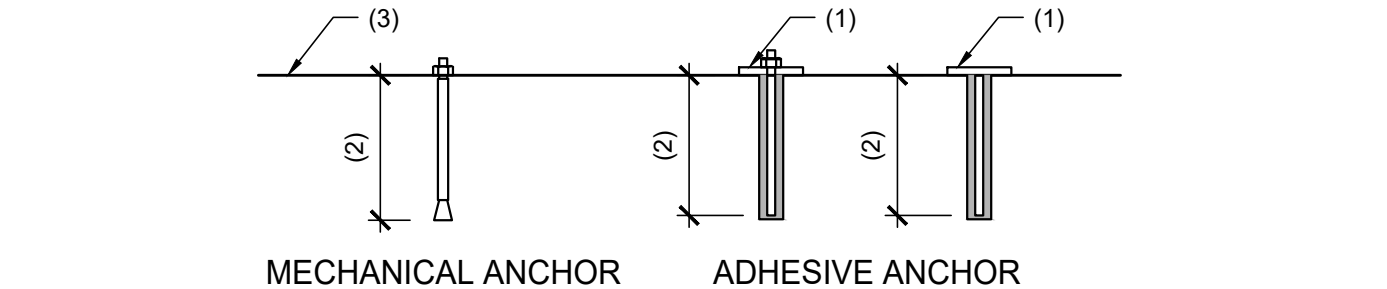
NOTES:

1. PLATE, ANGLE, CHANNEL, ETC. THICKNESS OF DRYPACK DOES NOT APPLY TOWARDS EMBEDMENT.
2. EMBEDMENT.
3. FACE OF CONCRETE OR MASONRY.

TYPICAL NOTES:

- PROVIDE ANCHORS AND REINFORCING PER THIS DETAIL UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.
- POST-INSTALLED ANCHORS SHALL HAVE CURRENT I.C.C. APPROVAL.
- MECHANICAL ANCHORS INCLUDE BUT ARE NOT LIMITED TO WEDGE, UNDERCUT AND SCREW TYPE ANCHORS.
- ADHESIVE ANCHORS INCLUDE BOTH THREADED ROD AND REINFORCING STEEL.

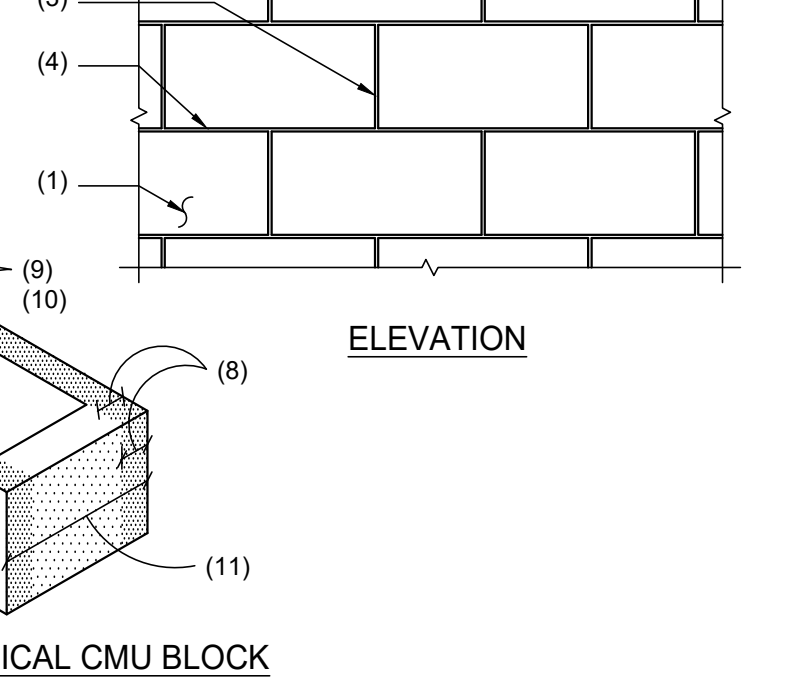
ANCHOR DIAMETER	MECHANICAL ANCHOR EMBEDMENT LENGTH		ADHESIVE ANCHORS EMBEDMENT LENGTH		REINFORCING STEEL SIZE	ADHESIVE ANCHORS EMBEDMENT LENGTH	
	CONCRETE	MASONRY	CONCRETE	MASONRY		CONCRETE	MASONRY
3/8"	3"	2 3/4"	4 1/2"	3 1/2"	#3	3"	6"
1/2"	4"	3 1/2"	5"	4 1/2"	#4	6"	8"
5/8"	5 1/4"	4 1/2"	6 3/4"	6"	#5	6"	8"
3/4"	5 3/4"	5 1/2"	8 3/4"	7"	#6	8"	8"
7/8"	---	---	7"	---	#7	8"	8"
1"	8"	8"	8"	---	#8	10"	8"
1 1/4"	---	---	10"	---	#9	12"	12"



07 TYPICAL CAST IN PLACE ANCHORS

NOTES:

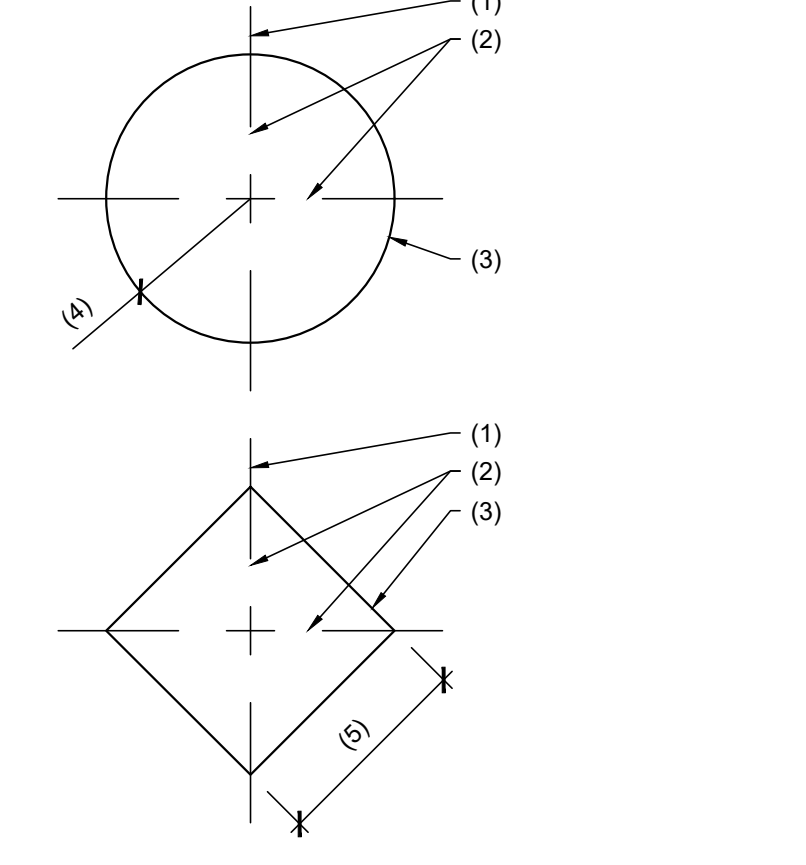
1. CMU WALL - ALL CMU SHALL BE LAID UP IN RUNNING BOND U.N.O.
2. CMU BLOCK.
3. HEAD JOINT - TYP.
4. BED JOINT - TYP.
5. GROUTED CELL.
6. CMU FACE SHELL - TYP.
7. CMU CROSS WEB - TYP.
8. ALL HEAD AND BED JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR FOR THE ENTIRE THICKNESS OF THE FACE SHELL (EXCEPT WHERE MORTAR JOINTS ARE RAKED).
9. CROSS WEBS SHALL BE COMPLETELY FILLED WITH MORTAR FOR THE ENTIRE THICKNESS OF THE FACE SHELL AT GROUTED CELLS.
10. SPREAD OUT FULL MORTAR BED AT ALL CROSS WEBS IN ALL COURSES OF PIERS, COLUMNS, PILASTERS AND SOLID GROUTED STEM WALLS AND WALLS.
11. AT SOLID GROUTED WALLS, HEAD JOINTS SHALL BE COMPLETELY FILLED FOR FULL WIDTH OF THE WALL. SPREAD MORTAR PRIOR TO PLACEMENT OF CMU BLOCK - DO NOT SLUSH HEAD JOINTS.



08 TYPICAL MASONRY CONTROL JOINT

NOTES:

1. NEW MASONRY WALL.
2. EXISTING MASONRY WALL.
3. TOP OF EXISTING STEM WALL SLAB OR BOTTOM OF EXISTING OPENING.
4. #5 VERTICAL EPOXY DOWELS X 24" LONG AT EACH SIDE OF OPENING AND AT 24" O.C. BETWEEN - TYPICAL.
5. #5 HORIZONTAL EPOXY DOWELS X 24" LONG AT TOP AND BOTTOM OF OPENING AND AT 48" O.C. BETWEEN - TYPICAL.
6. #5 HORIZONTAL LAPPED WITH DOWELS.
7. #5 VERTICAL LAPPED WITH DOWELS - TYPICAL.



09 TYPICAL REINFORCED MASONRY LINTEL

NOTES:

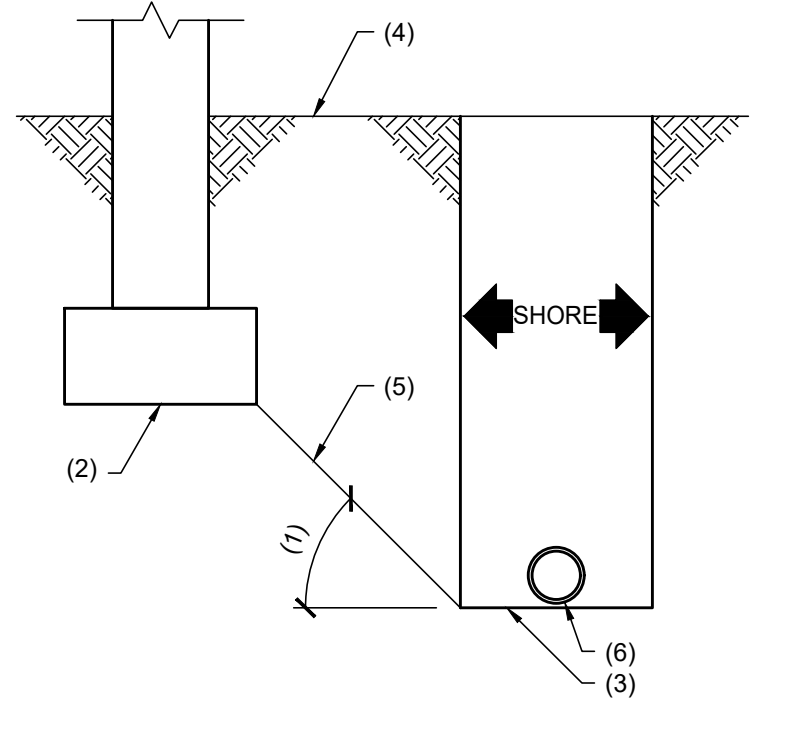
- FOR COLUMN, BASE PLATE, AND ANCHOR TYPE AND SIZE SEE PLANS AND SCHEDULES.
- FOR COLUMN TO BASE PLATE WELD SIZE SEE OTHER DETAILS AND NOTES.
- PROVIDE TEMPORARY SUPPORT DURING ERECTION OF COLUMNS WITH 2 BOLT BASE PLATES.

TYPICAL

10 TYPICAL MASONRY WALL OPENING REINFORCING

NOTES:

1. 30" MAX IN GRANULAR SOILS, 45" MAX IN OTHER SOILS U.N.O.
2. BOTTOM OF CONCRETE FOUNDATION.
3. BOTTOM OF TRENCH.
4. FINISHED GRADE.
5. DO NOT EXCAVATE A TRENCH BELOW IMAGINARY LINE EXTENDING FROM BOTTOM OF FOUNDATION.
6. PIPE OR CONDUIT.



11 TYPICAL STEEL COLUMN BASE PLATE

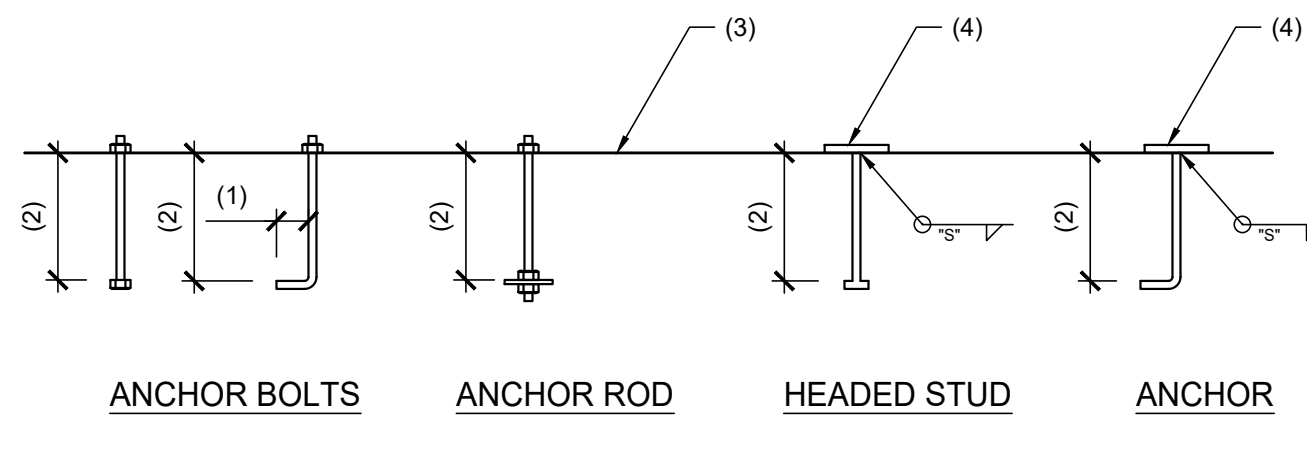
NOTES:

1. 2" MINIMUM EMBEDMENT.
2. FACE OF CONCRETE OR MASONRY.
3. THICKNESS OF DRYPACK DOES NOT APPLY TOWARDS EMBEDMENT.

ANCHOR DIAMETER	VERTICAL BOLT EMBEDMENT LENGTH	HORIZONTAL BOLT EMBEDMENT LENGTH	HEADED STUD FILLET WELD SIZE, "S"
1/2"	7"	4"	1/4"
5/8"	7"	4"	5/16"
3/4"	7"	5"	5/16"
7/8"	8"	6"	5/16"
1"	8"	7"	3/8"
1 1/8"	10"	8"	---
1 1/4"	11"	9"	---

TYPICAL NOTES:

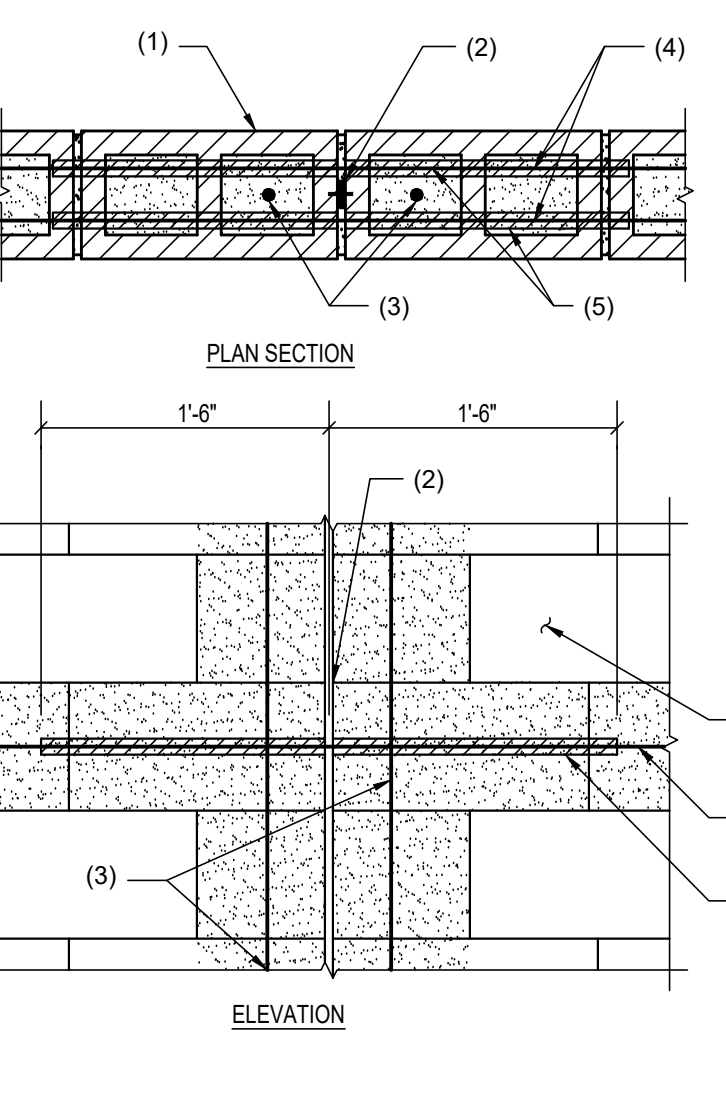
- PROVIDE ANCHORS PER THIS DETAIL UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.
- HEADED STUDS MAY BE AUTOMATICALLY WELDED IN LIEU OF FILLET WELDS SHOWN.



12 MORTAR AT TYPICAL CMU WALL

NOTES:

1. MASONRY WALL.
2. CONTROL JOINT PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
3. ONE VERTICAL BAR EACH SIDE OF CONTROL JOINT IN GROUTED CELL (BAR SIZE TO MATCH TYPICAL VERTICAL WALL REINFORCING).
4. CONTINUOUS BOND BEAM REINFORCING BARS.
5. WRAP REINFORCING WITH DUCT TAPE FOR BOND BREAK.



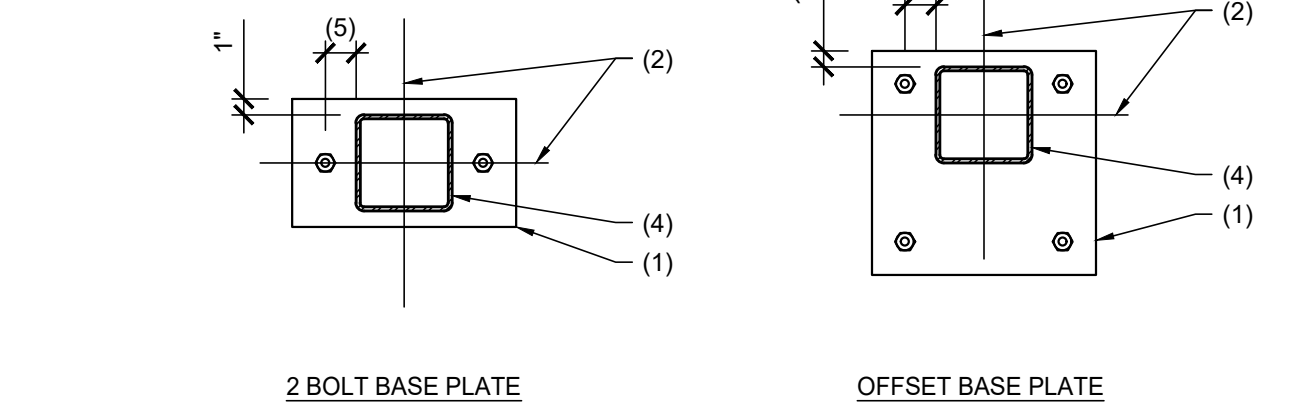
13 TYPICAL MASONRY CONTROL JOINT

NOTES:

1. STEEL BASE PLATE.
2. CENTERLINE OF COLUMN AND STEEL BASE PLATE.
3. PER A.I.S.C. TABLE J3.4, 1 1/4" MIN.
4. STEEL COLUMN.
5. 2" MIN OR AS REQUIRED FOR WRENCHING CLEARANCE.

TYPICAL NOTES:

- FOR COLUMN, BASE PLATE, AND ANCHOR TYPE AND SIZE SEE PLANS AND SCHEDULES.
- FOR COLUMN TO BASE PLATE WELD SIZE SEE OTHER DETAILS AND NOTES.
- PROVIDE TEMPORARY SUPPORT DURING ERECTION OF COLUMNS WITH 2 BOLT BASE PLATES.



14 TYPICAL REINFORCED MASONRY LINTEL

NOTES:

- CENTERED BARS ARE LOCATED IN THE CENTER OF A MASONRY CELL.
- EDGE BARS ARE LOCATED ON ONE OR BOTH FACES OF THE MASONRY CELL WITH A MINIMUM MASONRY COVER OF 2 1/4".
- EPOXY COATED REINFORCING BAR LAPS SHALL BE INCREASED BY 150% OF VALUES SHOWN IN TABLE.
- BARS SPLICED BY NONCONTACT LAP SPLICES SHALL NOT BE SPACED FURTHER APART THAN ONE-FIFTH THE REQUIRED LENGTH OF LAP NOR MORE THAN 8".

TYPICAL

15 MASONRY INFILL AT EXISTING MASONRY WALL

BAR #	f _c = 2500/3000 PSI				f _c = 4000 PSI				f _c = 5000 PSI			
	TOP BARS	OTHER BARS	CASE 1	CASE 2	TOP BARS	OTHER BARS	CASE 1	CASE 2	TOP BARS	OTHER BARS	CASE 1	CASE 2
#3	28	42	22	32	24	36	19	28	22	33	17	25
#4	37	56	29	43	32	48	25	37	29	43	22	33
#5	47	70	36	54	40	60	31	47	36	54	28	42
#6	56	84	43	64	48	72	37	56	43	65	33	50
#7	67	101	51	77	56	84	44	67	51	78	40	58
#8	81	122	63	94	70	106	54	81	63	94	49	73
#9	93	139	72	107	80	121	62	93	72	108	55	83
#10	105	157	81	121	91	136	70	105	81	122	63	94
#11	118	177	91	136	102	153	79	118	91	137	70	105
#11	131	196	101	151	113	170	87	131	101	152	78	117

GENERAL NOTES:

- VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE.
- LENGTHS ARE IN INCHES.
- TENSION SPLICE LENGTHS ARE FOR CLASS B LAP SPLICES.
- TENSION DEVELOPMENT LENGTH = SPLICE LENGTH / 1.3
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
- FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
- CASES 1 AND 2 ARE DEFINED AS:

BEAMS AND COLUMNS	CASE 1	COVER AT LEAST 1d, AND C.C. SPACING AT LEAST 2d.
WITH TIES	CASE 2	COVER LESS THAN 1d OR C.C. SPACING LESS THAN 2d.
ALL OTHERS	CASE 1	COVER AT LEAST 1d AND C.C. SPACING AT LEAST 3d.
	CASE 2	COVER LESS THAN 1d OR C.C. SPACING LESS THAN 3d.
- FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED VALUES BY ONE OF THE FOLLOWING FACTORS:

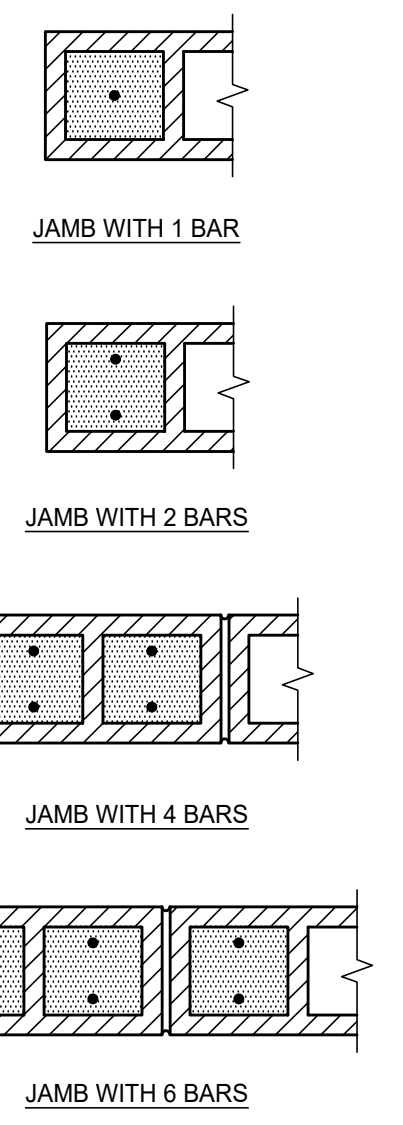
CONCRETE COVER AND SPACING	TOP BARS	OTHER BARS
COVER < 3db OR CLEAR SPACING < 6db	1.31	1.5
COVER > 3db OR CLEAR SPACING > 6db	1.2	1.2

TYPICAL

16 MASONRY INFILL AT EXISTING MASONRY WALL

NOTES:

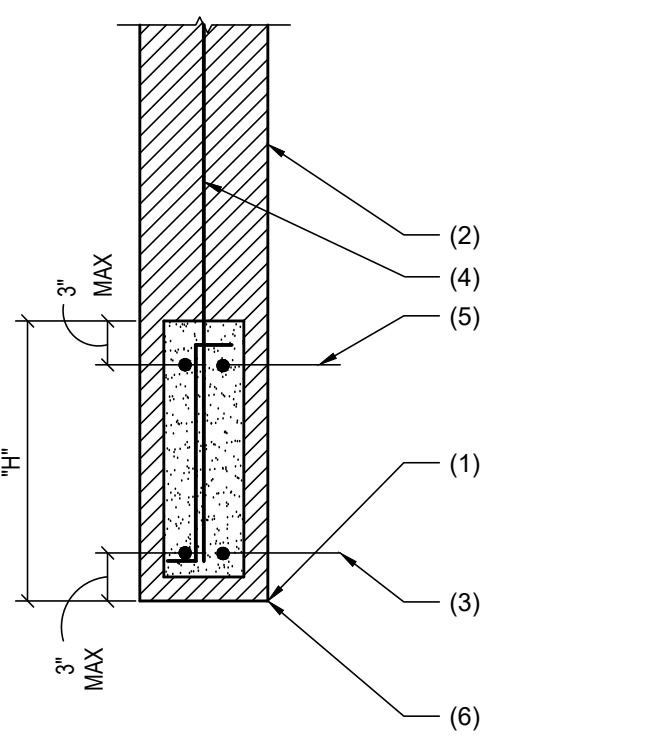
1. SEE SCHEDULES AND PLANS FOR REINFORCING.
2. ALL CELLS AND BOND BEAMS WITH REINFORCING SHALL BE GROUTED.
3. SINGLE BARS SHALL BE ACCURATELY LOCATED AT CENTERLINE OR WALL U.N.O.
4. WHERE 2 BARS PER CELL ARE INDICATED, LOCATE AS SHOWN ON JAMB DETAILS AND PROVIDE ADDITIONAL LAP SPLICE LENGTH PER THE GENERAL STRUCTURAL NOTES.



17 TYPICAL STEEL COLUMN BASE PLATE

NOTES:

1. PROVIDE OPEN-END MASONRY UNITS AT EACH COURSE WITHIN LINTEL U.N.O. AND SOLID GROUT AS SHOWN.
2. MASONRY WALL.
3. BOTTOM REINFORCING.
4. VERTICAL REINFORCING.
5. TOP REINFORCING WHERE SHOWN IN SCHEDULE.
6. SOLID BOTTOM BOND BEAM UNITS AT EXPOSED HEADS.
7. EXTEND REINFORCING, GROUT AND OPEN-END MASONRY UNITS FOR 24" BEYOND JAMB. EXTEND AROUND CORNERS WHERE NECESSARY.
8. STANDARD 90 DEGREE HOOK WHERE 24" EXTENSION CANNOT BE OBTAINED.
9. JAMB REINFORCING.
10. ADDITIONAL JAMB REINFORCING AS OCCURS PER TYPICAL MASONRY WALL REINFORCING SCHEDULE.
11. STRIPPERS WHERE SHOWN IN SCHEDULE X.



18 TYPICAL REINFORCED MASONRY LINTEL

NOTES:

1. GROUT LINTEL IN ONE CONTINUOUS POUR.
2. SHORE LINTEL UNTIL GROUT REACHES DESIGN STRENGTH.
3. AT SKEWED OR CORNER BEARING CONDITIONS, EXTEND REINFORCING 24" INTO SKEWED OR PERPENDICULAR WALL.

TYPICAL NOTES:

- CENTERED BARS ARE LOCATED IN THE CENTER OF A MASONRY CELL.
- EDGE BARS ARE LOCATED ON ONE OR BOTH FACES OF THE MASONRY CELL WITH A MINIMUM MASONRY COVER OF 2 1/4".
- EPOXY COATED REINFORCING BAR LAPS SHALL BE INCREASED BY 150% OF VALUES SHOWN IN TABLE.
- BARS SPLICED BY NONCONTACT LAP SPLICES SHALL NOT BE SPACED FURTHER APART THAN ONE-FIFTH THE REQUIRED LENGTH OF LAP NOR MORE THAN 8".

TENSION AND COMPRESSION BARS					
f _m = 2,000 PSI					
SIZE	GRADE	8" MASONRY		12" MASONRY	
		CENTERED BARS	EDGE BARS	CENTERED BARS	EDGE BARS
#3	40	12"	12"	12"	12"
	60	14"	14"	14"	14"
#4	60	18"	20"	18"	20"
	60	22"	31"	22"	31"
#6	60	35"	54"	35"	54"
	60	46"	63"	40"	63"
#8	60	69"	72"	53"	72"
	60	N/A	N/A	59"	81"

19 TYPICAL MASONRY INFILL AT EXISTING MASONRY WALL

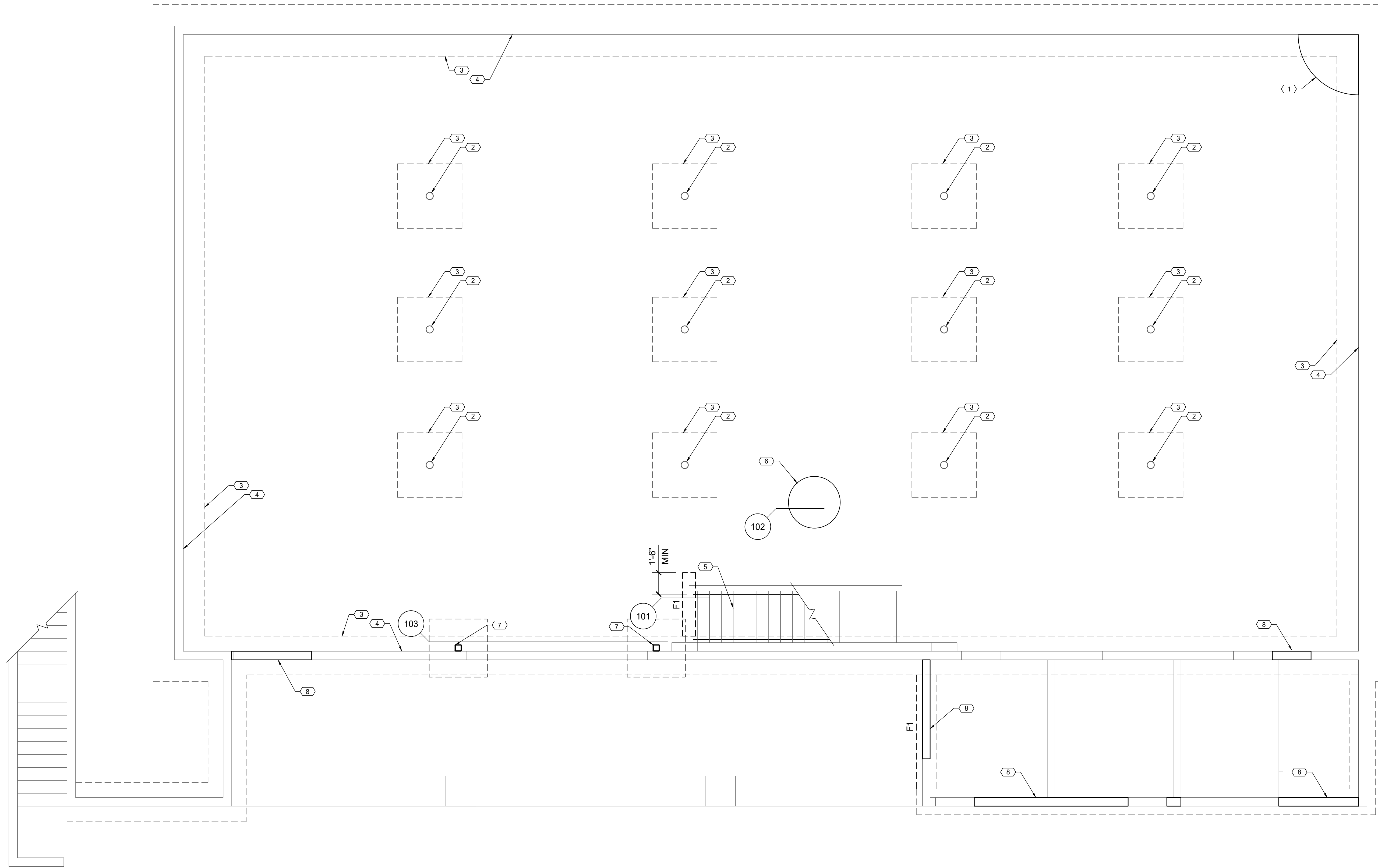
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TYPICAL

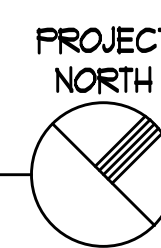
20 TYPICAL MASONRY INFILL AT EXISTING MASONRY WALL

BAR #	D (in.)	180° HOOKS		90° HOOK	
-------	---------	------------	--	----------	--

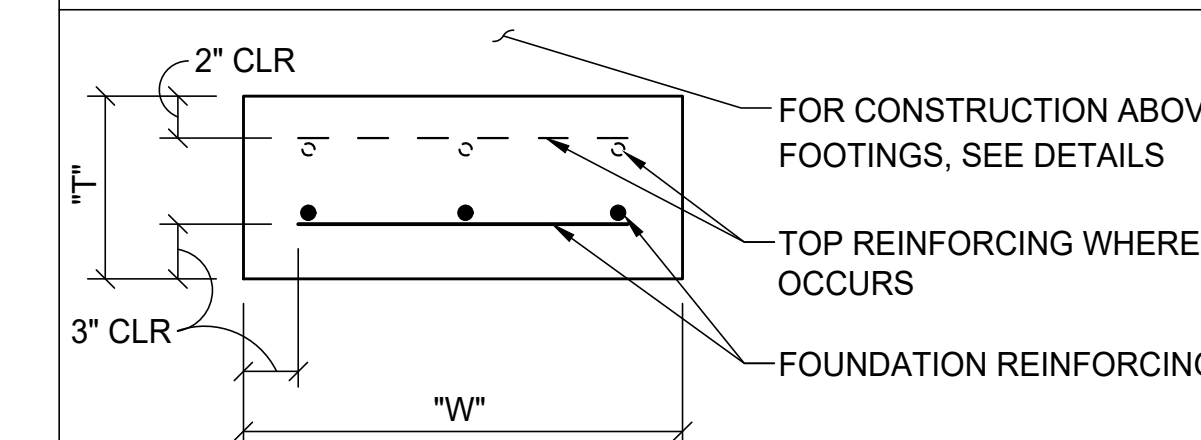


GROUND FLOOR PLAN

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

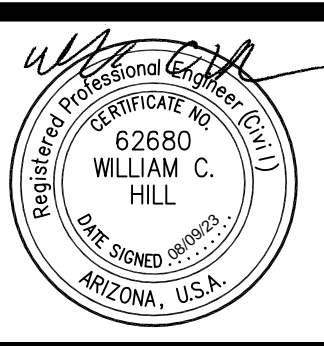


FOUNDATION (F) SCHEDULE				
MARK	DIMENSIONS		FOUNDATION REINFORCING	REMARKS
	"W"	"T"		
F1	1'-6" X CONTINUOUS	12"	(2) #5 CONTINUOUS	-



GROUND FLOOR PLAN KEYNOTES:

1. EXISTING CONCRETE SLAB ON GRADE.
2. EXISTING COLUMN.
3. EXISTING FOOTING.
4. EXISTING WALL.
5. STAIR TREAD - TYPICAL. 2" CONCRETE WITH (2) #5 LONGITUDINAL REINFORCING CENTERED IN CONCRETE OVER 12 GAGE STEEL PAN.
6. NEW SLUMP PIT PER MECHANICAL PLANS. LOCATION TO BE DETERMINED IN FIELD BY CONTRACTOR PER DETAILS.
7. SEE DETAIL FOR JAMB COLUMN AND FOOTING.
8. MASONRY INFILL WALL - SEE TYPICAL DETAILS.



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TENANT IMPROVEMENT
RENOVATION FLOOR PLAN
FOUNDATION PLAN



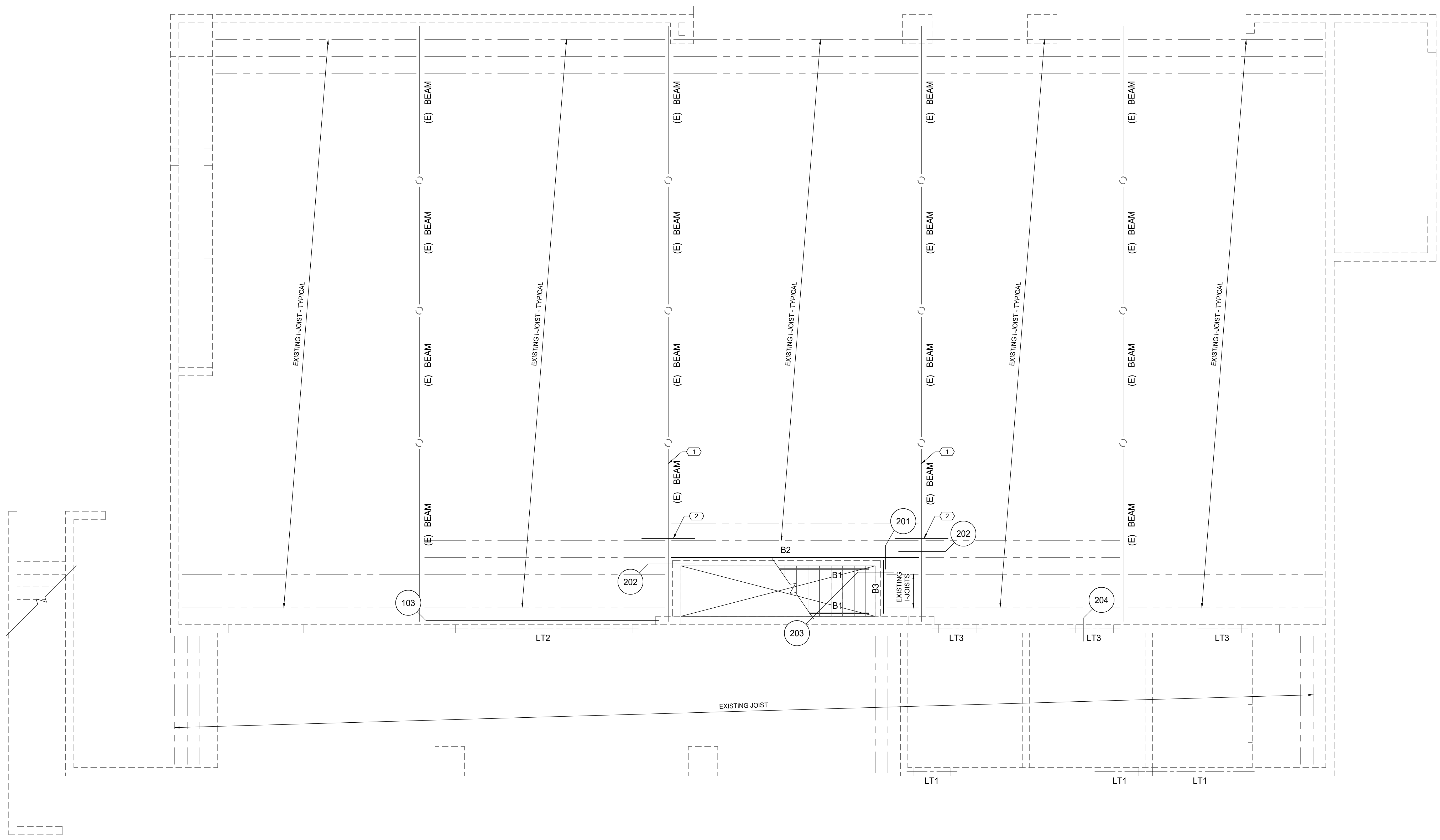
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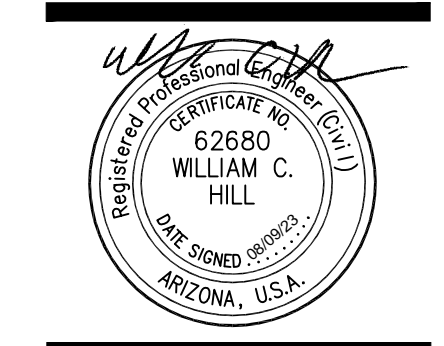
SECOND FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"



BEAM (B) SCHEDULE				
MARK	BEAM SIZE	CAMBER AT MIDSPAN	END CONNECTION (U.N.O.)	REMARKS
B1	C12X20.7	--	--	--
B2	5 1/8 X 18 GLB	--	--	--
B3	5 1/8 X 12 GLB	--	--	--

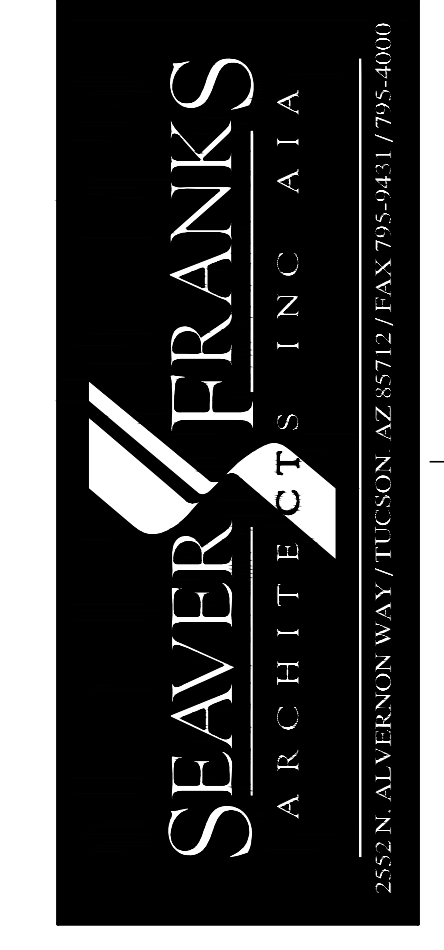
LINTEL (LT) SCHEDULE			
MARK	TYPE	LINTEL SIZE	REMARKS
LT1	CMU	16" DEEP WITH (1) #5 TOP AND BOTTOM	(4) #5 IN CMU JAMB, (2) EACH FACE
LT2	STEEL	HSS12X6X3/8	STEEL JAMB COLUMN PER DETAILS
LT3	STEEL	1/2" BENT PLATE PER DETAIL	(1) #5 IN SOLID GROUTED CMU JAMB EACH SIDE OF OPENING - MIN.

- SECOND FLOOR PLAN KEYNOTES:
- CONTRACTOR SHALL FIELD VERIFY EXISTING BEAM IS MINIMUM 6 3/4 X 18" GLB.
 - ATTACH TOP CHORD OF I-JOISTS NEAREST NEW FLOOR OPENING WITH SIMPSON MST148 WITH 10d NAILS EVERY HOLE. IF I-JOIST DONT ALIGN, NOTIFY ENGINEER.



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RENOVATION FLOOR PLAN
SECOND FLOOR FRAMING PLAN



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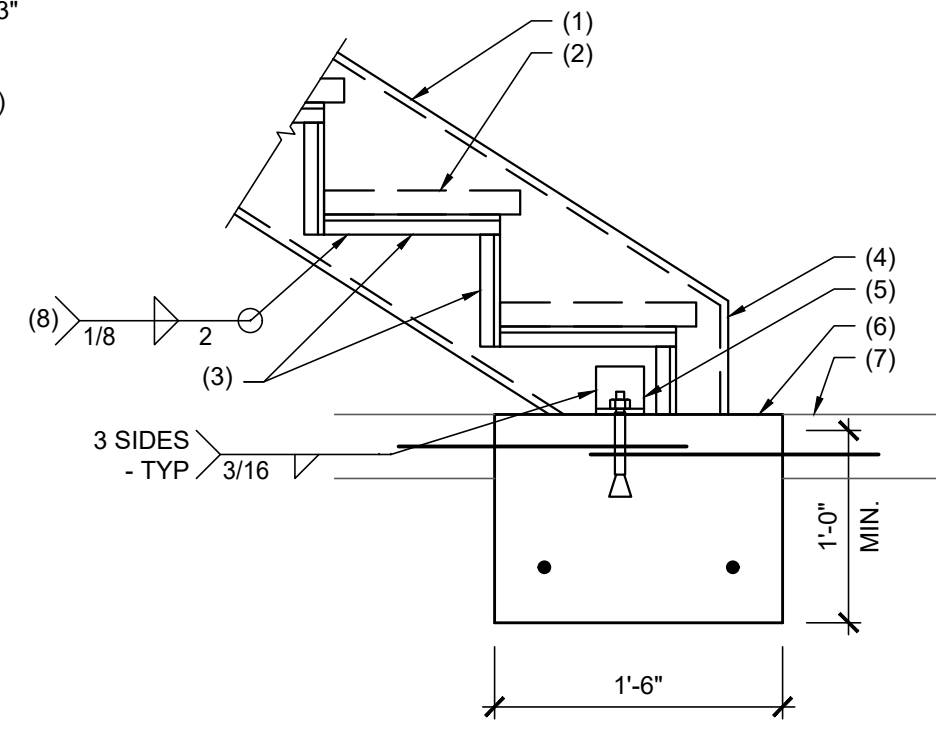
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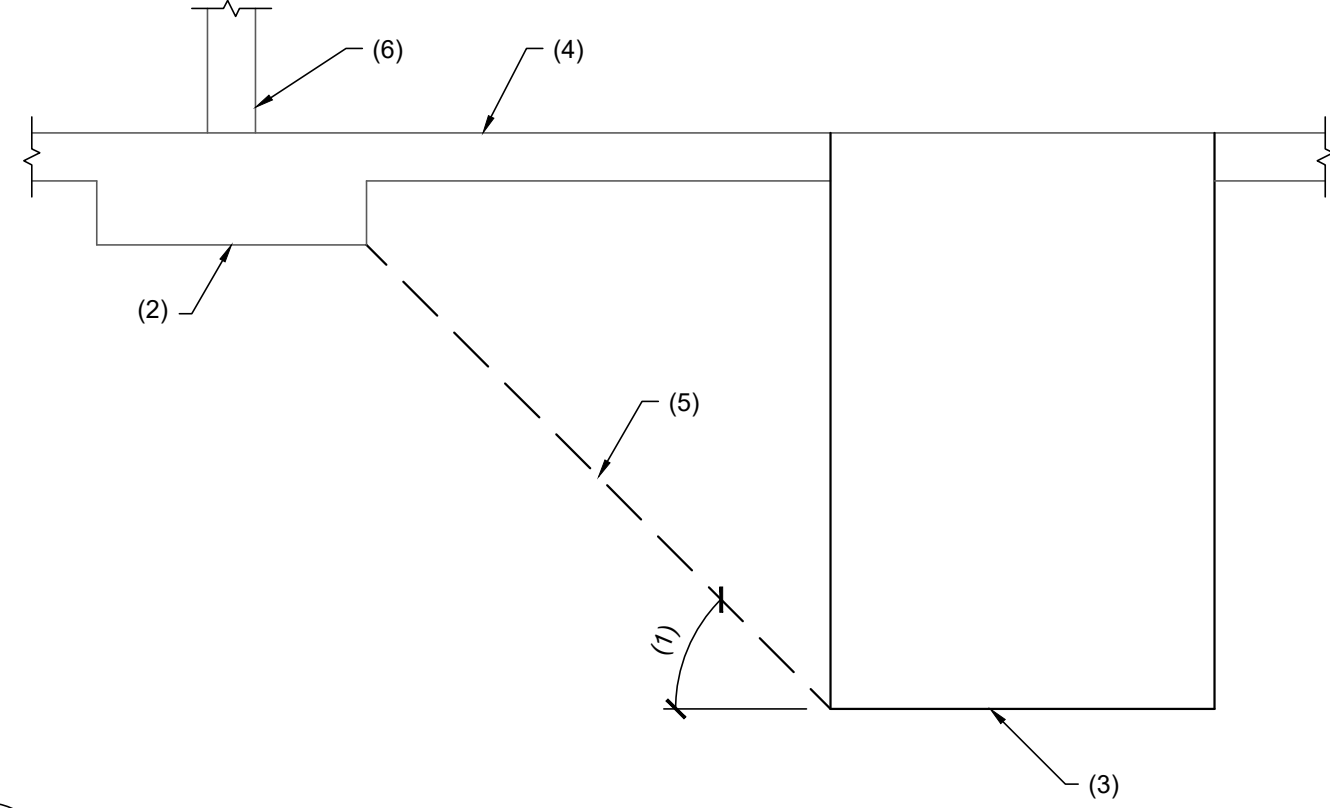
1. STEEL STAIR BEAM.
2. FOR TREADS AND RISERS, SEE ARCHITECTURAL DRAWINGS AND PLANS.
3. STEEL L 1 1/4 X 1 1/4 X 3/16 - TYPICAL.
4. 3/16" CLOSURE PLATE - BUTT WELD ALL AROUND.
5. STEEL L 4 X 3 X 1/4 (SLV) X 0'-3" LONG WITH (1) 3/4" DIA. EXPANSION BOLT.
6. CONCRETE FOOTING WITH (2) #4 CONTINUOUS.
7. EXISTING SLAB ON GRADE.
8. WELD EACH END OF EACH ANGLE - TYPICAL.
9. #4 X 18" DOWELS AT 12" O.C., DRILL AND EPOXY INTO EXISTING SLAB, 6" EMBED.



101 STEEL PAN STAIRS AT SLAB ON GRADE

NOTES:

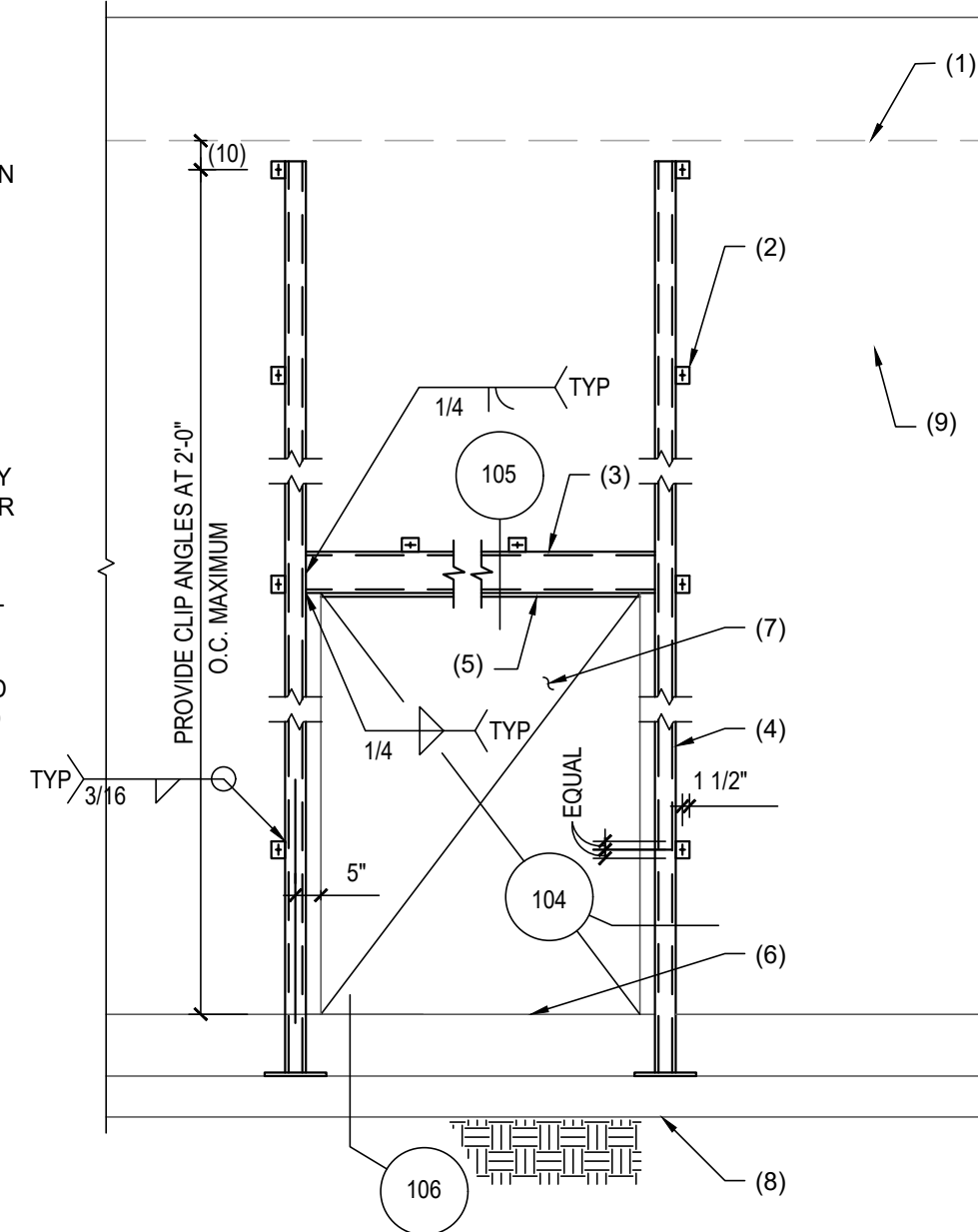
1. 45" MAX U.N.O.
2. BOTTOM OF CONCRETE FOUNDATION.
3. BOTTOM OF SUMP PIT.
4. EXISTING SLAB ON GRADE.
5. DO NOT EXCAVATE A TRENCH BELOW IMAGINARY LINE EXTENDING FROM BOTTOM OF FOUNDATION.
6. EXISTING COLUMN/WALL.



102 NEW SUMP ADJACENT TO FOUNDATION

NOTES:

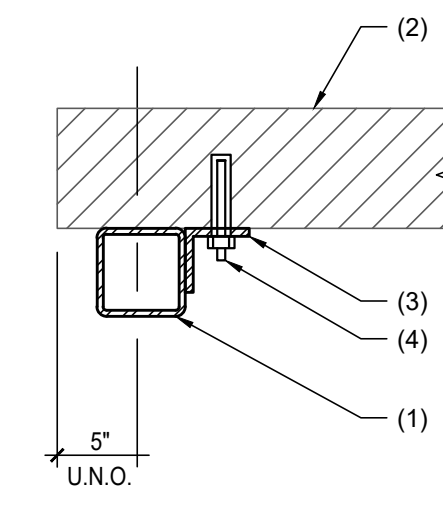
1. ROOF/FLOOR LINE.
1. L3 1/2X3 1/2X1/4 X 0'-3" LONG WITH 3/4" DIA. EPOXY BOLT IN GROUTED CELL - TYPICAL AT VERTICAL HSS MEMBERS.
3. STEEL TUBE AT HEAD OF OPENING - SEE LINTEL SCHEDULE.
4. STEEL COLUMN AT JAMB - SEE COLUMN SCHEDULE.
5. 1/2" X CONTINUOUS STEEL PLATE.
6. SAWCUT EXISTING MASONRY FLUSH WITH FINISHED FLOOR ELEVATION.
7. NEW OPENING IN EXISTING WALL - SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZE AND LOCATION.
8. EXISTING FOOTING - EXTEND FOOTING WHERE INDICATED ON PLAN.
9. EXISTING MASONRY WALL.
10. EXTEND COLUMN TO WITHIN 8" OF BOTTOM OF EXISTING LEDGER.



103 STEEL FRAMING AT NEW OPENING IN EXISTING MASONRY WALL

NOTES:

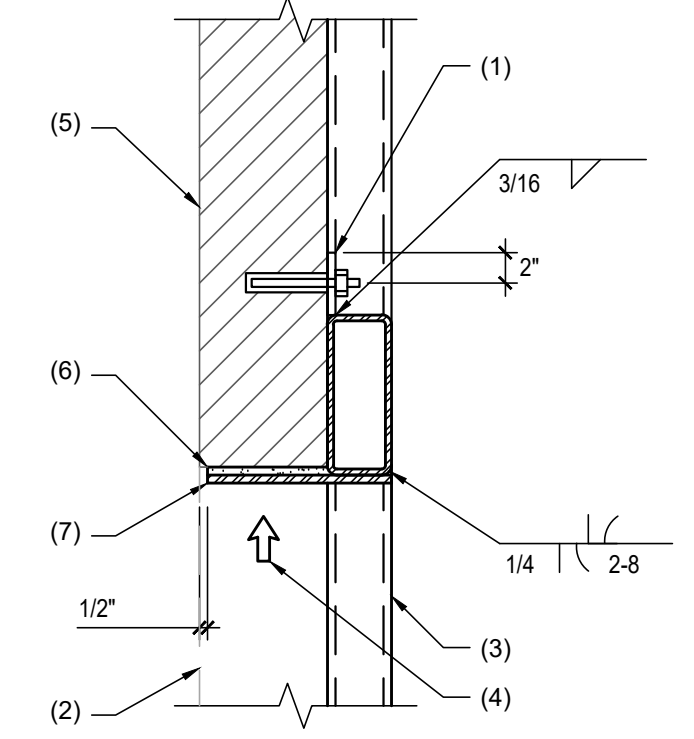
1. HSS COLUMN.
2. EXISTING MASONRY WALL.
3. L3 1/2X3 1/2X1/4 X 0'-3" LONG.
4. 3/4" DIA. EPOXY BOLT IN GROUTED CELL - IF UNGROUTED CELLS ARE ENCOUNTERED, ANCHOR BOLTS GROUTED IN PLACE MAY BE USED IN LIEU OF EPOXY BOLTS.



104 PLAN VIEW - STEEL TUBE COLUMN AT JAMB OF NEW OPENING

NOTES:

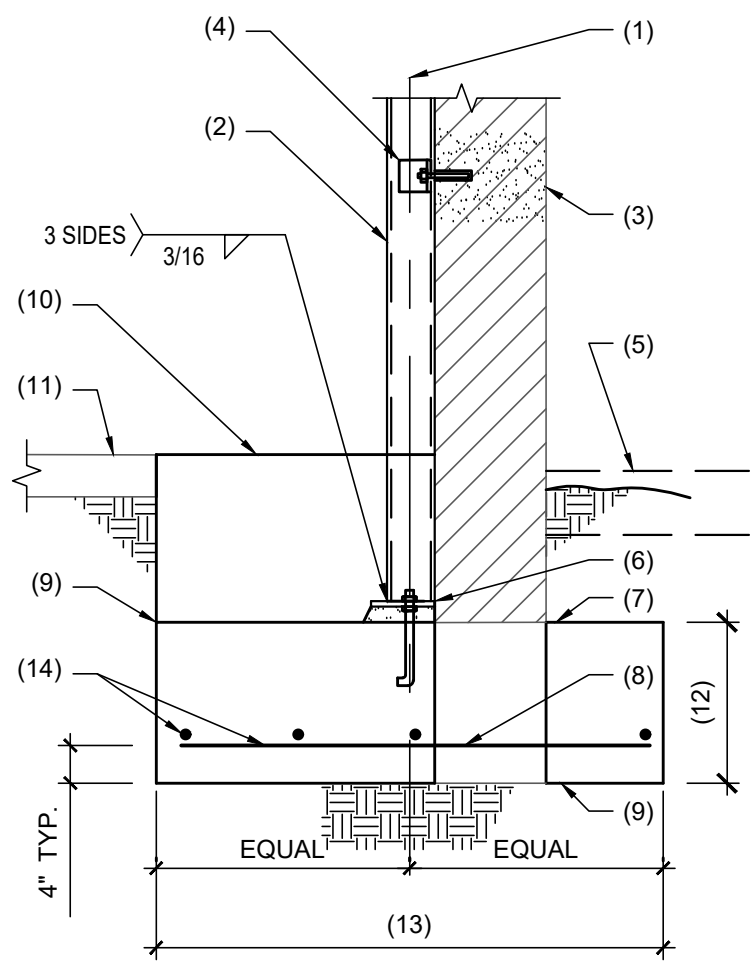
1. STEEL PLATE 3/8X4X0'-4" WITH 3/4" DIA. EPOXY BOLT AT 32" O.C.
2. WALL BEYOND.
3. STEEL COLUMN BEYOND AT JAMB.
4. SHORE EXISTING WALL UNTIL ALL STEEL FRAMING IS IN PLACE AND FULLY CONNECTED.
5. EXISTING MASONRY WALL.
6. DRYPACK AS REQUIRED FOR FULL BEARING.
7. 1/2" X CONTINUOUS STEEL PLATE.



105 STEEL LINTEL AT HEAD OF NEW OPENING IN EXISTING MASONRY

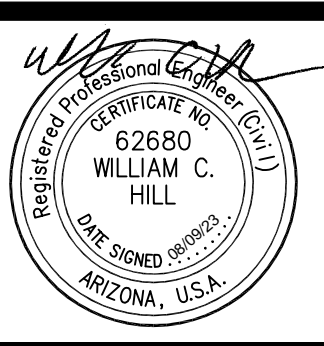
NOTES:

1. CENTERLINE OF COLUMN AND NEW FOOTING.
2. HSS6X6X1/4 STEEL COLUMN.
3. EXISTING MASONRY WALL.
4. L3 1/2X3 1/2X1/4 X 0'-3" LONG WITH 3/4" DIA. EPOXY BOLT - TYPICAL.
5. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
6. 3/4" X 7 X 1'-0" OFFSET STEEL BASE PLATE ON 1 1/2" +/- DRYPACK WITH (2) 3/4" DIA. ANCHOR BOLTS AND LEVELING NUTS.
7. EXISTING CONCRETE FOOTING - SAWCUT FLUSH WITH FACE OF WALL.
8. REINFORCING CONTINUOUS THROUGH EXISTING FOOTING. EPOXY REINFORCING TO EXISTING FOOTING.
9. CONCRETE FOOTING EXTENSION PER PLAN.
10. CONCRETE CLOSURE POUR.
11. EXISTING CONCRETE SLAB - SAWCUT AND REMOVE AS REQUIRED FOR CONSTRUCTION OF NEW FOOTING.
12. TO MATCH EXISTING.
13. 4'-6" SQUARE MINIMUM.
14. (4) #5 EACH WAY.



106 STEEL COLUMN AND CONCRETE FOOTING EXTENSION AT EXISTING FOOTING

106



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RENOVATION FLOOR PLAN
FOUNDATION DETAILS



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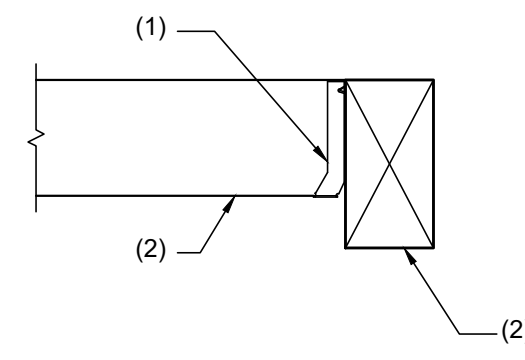
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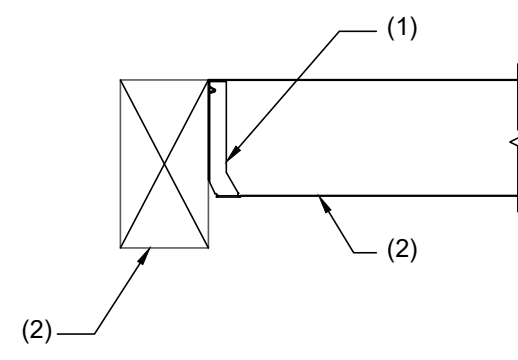
NOTES:

- 1. BEAM HANGER.
- 2. WOOD BEAM.



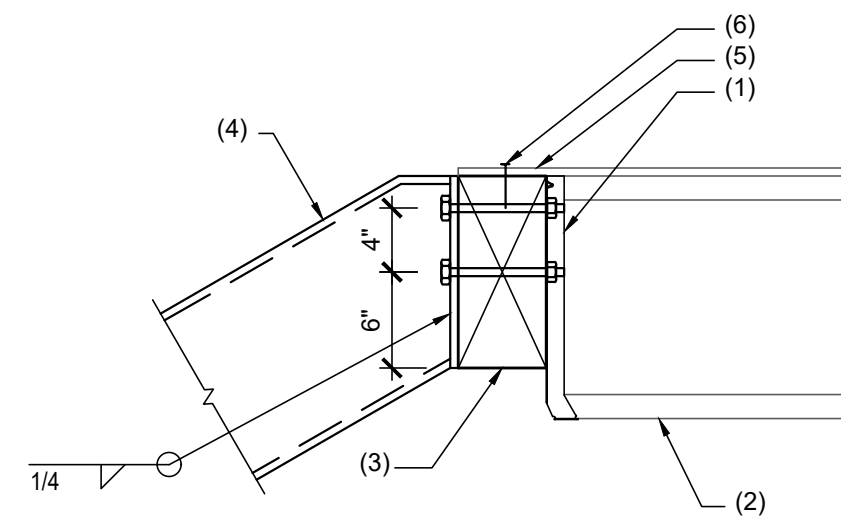
NOTES:

- 1. BEAM HANGER.
- 2. EXISTING WOOD BEAM.



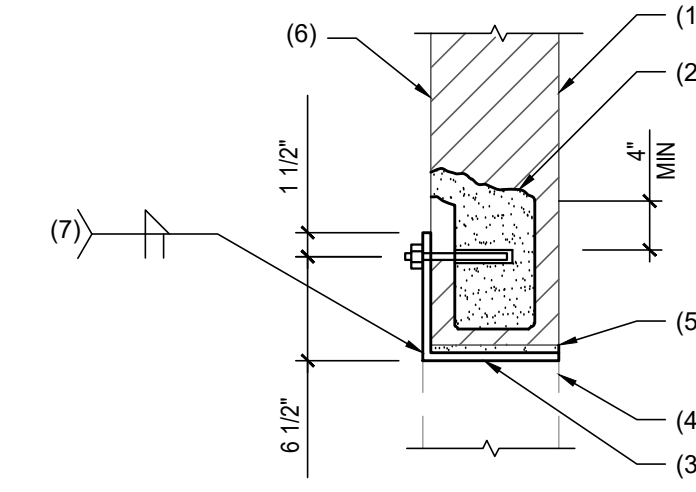
NOTES:

- 1. I-JOIST HANGER HANGER TO MATCH EXISTING.
- 2. EXISTING I-JOIST BEAM.
- 3. WOOD BEAM.
- 4. STEEL BEAM.
- 5. EXISTING SHEATHING.
- 6. 8d AT 6" O.C.



NOTES:

- 1. EXISTING MASONRY WALL.
- 2. BREAK OUT FACE SHELLS AT INSIDE FACE OF WALL AS REQUIRED AND GROUT SOLID AROUND BOLTS WHERE CELLS ARE UNGROUTED.
- 3. 1/2" BENT STEEL OR FABRICATED PLATES AS SHOWN WITH 5/8" DIA. BOLTS AT 24" O.C.
- 4. EXISTING MASONRY WALL TO BE REMOVED AFTER STEEL ANGLE AND BOLTS ARE IN PLACE AND SECURED.
- 5. DRYPACK FOR FULL BEARING.
- 6. INTERIOR FACE OF EXISTING WALL.
- 7. AT FABRICATED PLATES.



201 TYP. WOOD BEAM AT WOOD BEAM

202 TYP. WOOD BEAM AT EXISTING WOOD BEAM

203 STEEL BEAM AND EXISTING I-JOISTS AT WOOD BEAM

204 NEW STEEL LINTEL AT EXISTING MASONRY WALL



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RENOVATION FLOOR PLAN
FRAMING DETAILS



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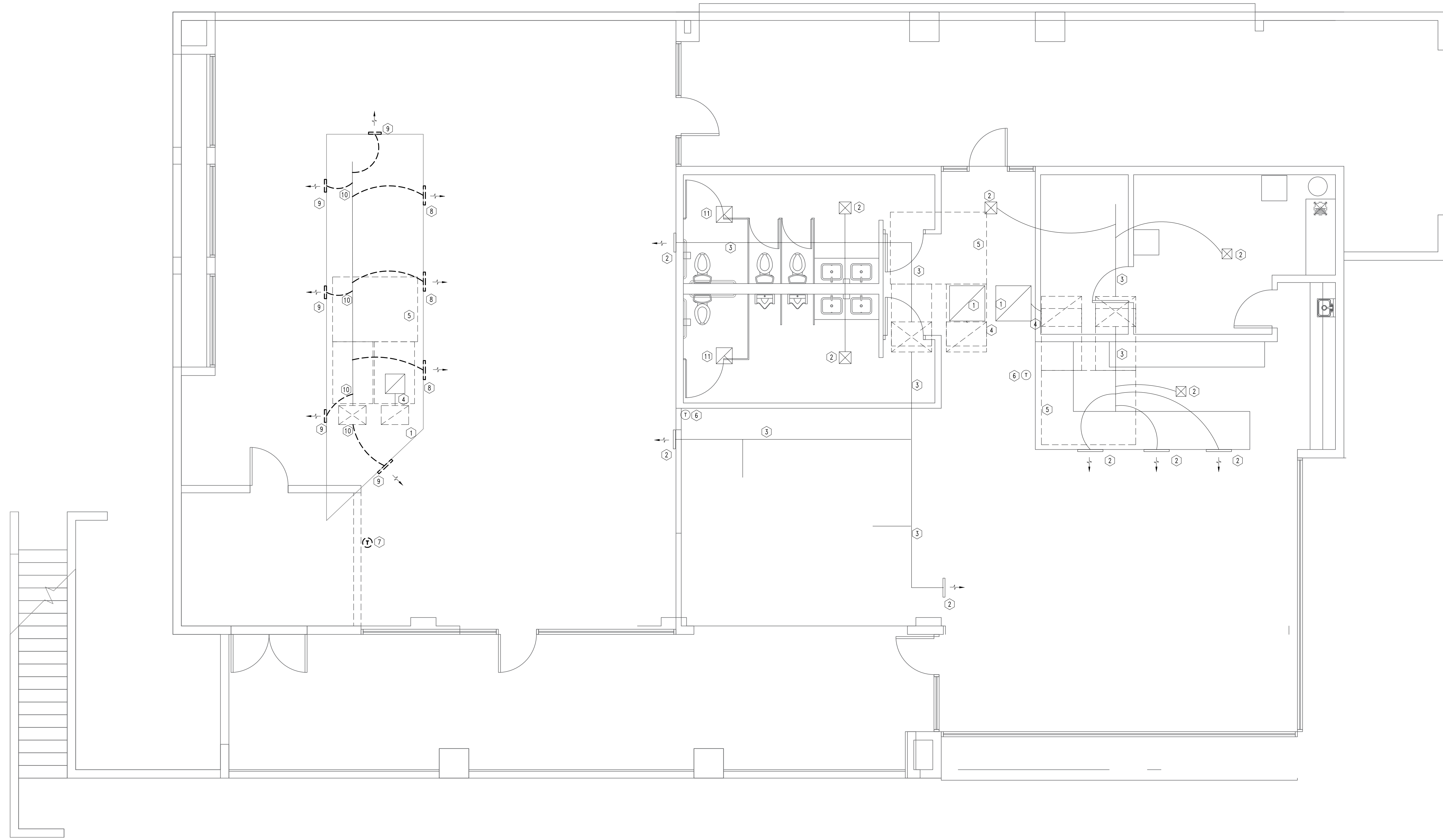
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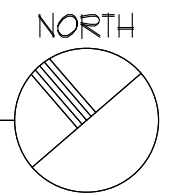
TENANT IMPROVEMENT
MECHANICAL DEMO PLAN



MECHANICAL DEMOLITION PLAN KEYNOTES

1. EXISTING RA AIR DEVICE TO REMAIN
2. EXISTING SA AIR DEVICE TO REMAIN
3. EXISTING SUPPLY AIR DUCT TO REMAIN.
4. EXISTING RETURN AIR DUCT TO REMAIN.
5. EXISTING AC UNIT TO REMAIN THOROUGHLY CLEAN UNIT, CONDENSATE PAN & DRAIN, AND COIL. LUBRICATE FAN BEARINGS. PROVIDE NEW FILTERS. INSPECT UNIT AND REPORT ANY DEFICIENCIES TO OWNER.
6. EXISTING THERMOSTAT TO REMAIN.
7. RELOCATE EXISTING THERMOSTAT. SEE NEW WORK PLANS.
8. RELOCATE EXISTING SA AIR DEVICE AND REWORK FLEXIBLE DUCT. SEE NEW WORK PLAN.
9. REMOVE EXISTING SA AIR DEVICE & ASSOCIATED FLEX DUCT.
10. PROVIDE SHEET METAL CAP AT EXISTING DUCT & SEAL AIRTIGHT WITH HARDCAST & SHEET METAL SCREWS. RE-INSULATE TO MATCH.
11. EXISTING EXHAUST FAN TO REMAIN

1 SECOND FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



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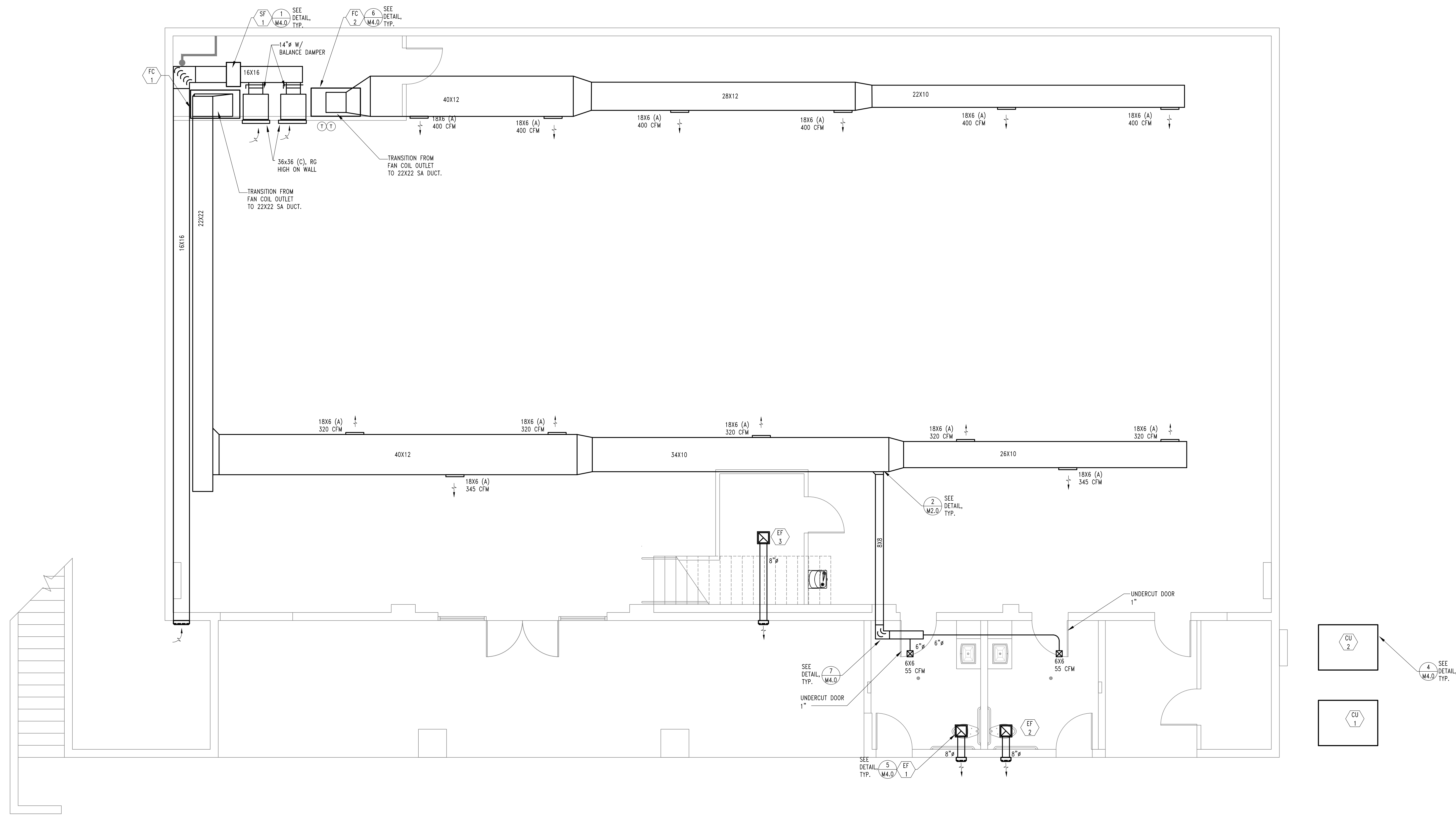
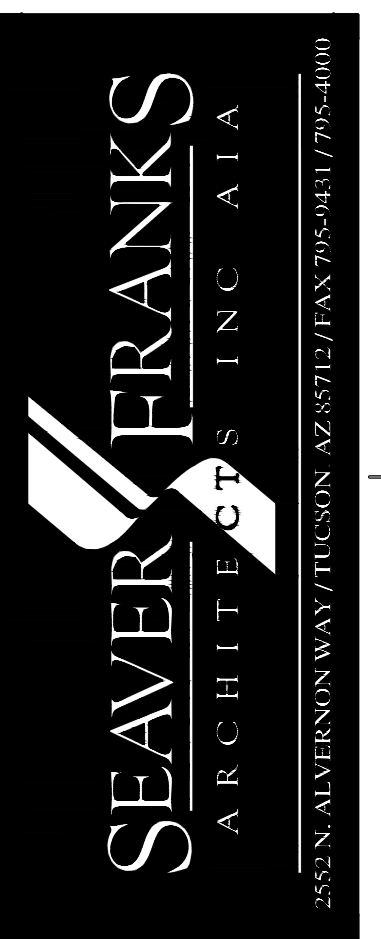


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Designers Mech: ROM Plumb: PLZ Project #: 23-243



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TENANT IMPROVEMENT
FIRST FLOOR MECHANICAL
NEW WORK PLAN



1 FIRST FLOOR MECHANICAL NEW WORK PLAN
SCALE: 1/4" = 1'-0" NORTH

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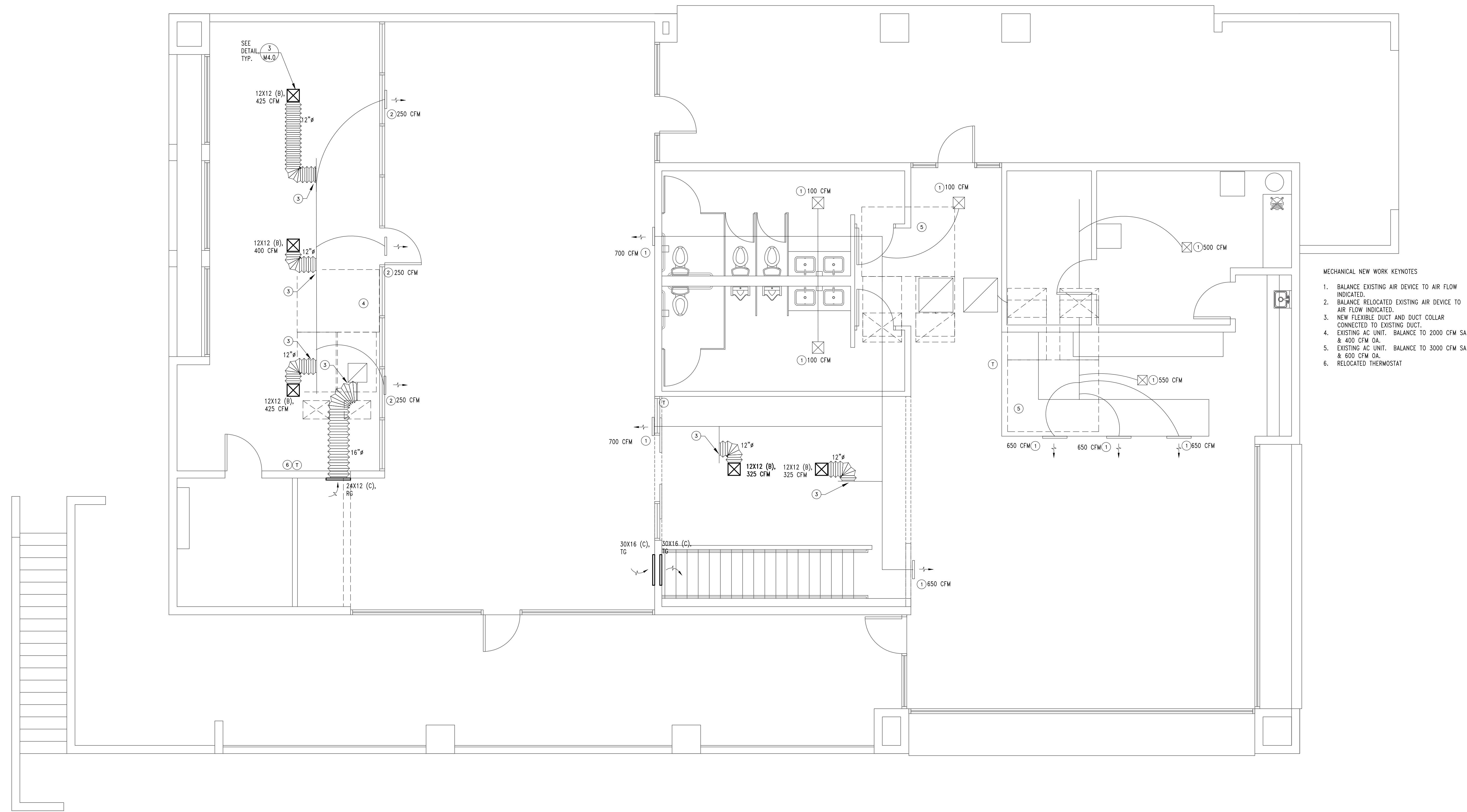
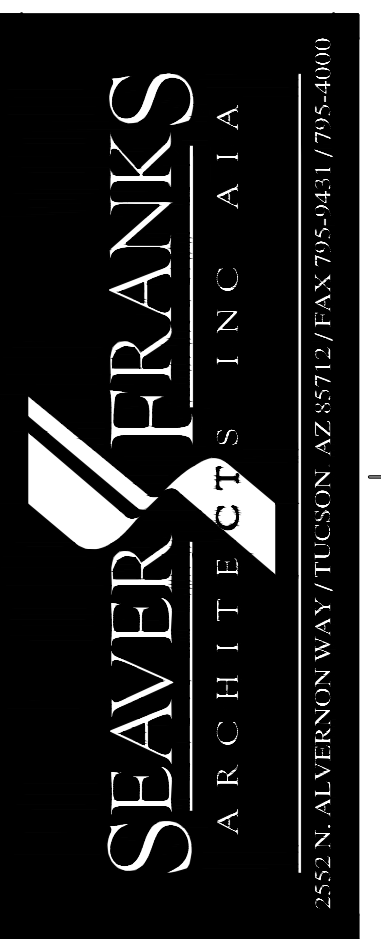
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TENANT IMPROVEMENT
SECOND FLOOR MECHANICAL
NEW WORK PLAN



- MECHANICAL NEW WORK KEYNOTES
1. BALANCE EXISTING AIR DEVICE TO AIR FLOW INDICATED.
 2. BALANCE RELOCATED EXISTING AIR DEVICE TO AIR FLOW INDICATED.
 3. NEW FLEXIBLE DUCT AND DUCT COLLAR CONNECTED TO EXISTING DUCT.
 4. EXISTING AC UNIT. BALANCE TO 2000 CFM SA & 400 CFM OA.
 5. EXISTING AC UNIT. BALANCE TO 3000 CFM SA & 600 CFM OA.
 6. RELOCATED THERMOSTAT

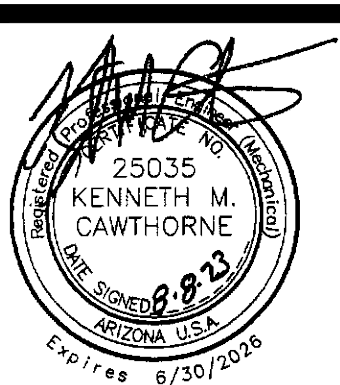
1 SECOND FLOOR MECHANICAL NEW WORK PLAN
SCALE: 1/4" = 1'-0"
NORTH

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OUTDOOR AIR CALCULATION													
BUILDING UNIT	ROOM NUM.	ROOM NAME	ZONE FLOOR AREA, Az (SQ.FT.)	CODE	OCCUPANCY CATEGORY, Ra, Rp	ZONE POPULATION Pz	ZONE AIR DISTRIBUTION EFFECTIVENESS, Ez	ZONE SUPPLY AIR FLOW Vpz (CFM)	SYSTEM POPULATION Ps	OUTDOOR AIR INTAKE Vol (CFM)	UNIT (WC OR URINAL) UNIT (CFM)	REQUIRED EXHAUST VENTILATION (CFM)	NOTES
HP-1&2 (EXIST)	WOMEN		170	126	TOILETS - CONTINUOUS		0.0	100				0	
	MEN		170	126	TOILETS - CONTINUOUS		0.0	100				0	
	DINING		560	27	RESTAURANT DINING ROOMS		39.2	2,000			1	0	
	DINING CORRIDOR		560	34	CORRIDORS		0.0	1,300			1	0	
	BAR		220	29	BAR, COCKTAIL LOUNGES		22.0	500				0	
	KITCHEN		175	30	KITCHEN		3.5	550			1	123	
	CLOSET		90	35	STORAGE ROOMS - LIQUIDS/GELS		0.2	50				0	
			1,945				64.9	CSCR	4,600	65	865	123	
HP-5&1 (EXIST)	GAME ROOM		1,100	103	GAME ARCADES		22.0	2,150				0	
	POKER		530	103	GAME ARCADES		10.6	1,250				0	
			1,630				32.6	CSCR	3,400	33	672	0	
FC-1.2	POOL		2,000	103	GAME ARCADES		40.0	2,600				0	
	POOL CORRIDORS		2,200	34	CORRIDORS		0.0	2,090				0	
	RR		100	126	TOILETS - CONTINUOUS		0.0	55				0	
	RR		100	126	TOILETS - CONTINUOUS		0.0	55				0	
			4,400				40.0	CSCR	4,800	40	990	0	

CONDENSING UNIT SCHEDULE	
MARK	CU-1.2
MATCHING FAN COIL UNIT MARK	FC-1.2
NOMINAL TONS	6
COOLING AMBIENT TEMPERATURE (DEG. DB)	110
MINIMUM SEASONAL ENERGY EFFICIENCY RATIO (EER)	12.1
UNIT MOCP	30
UNIT MCA	25
FULL LOAD AMPS	19
VOLTS/PHASE/HZ	230-3-60
MAXIMUM OPERATING WEIGHT (LBS.)	250
REFERENCE	CARRIER 38AUQ
NOTES	1 THRU 4

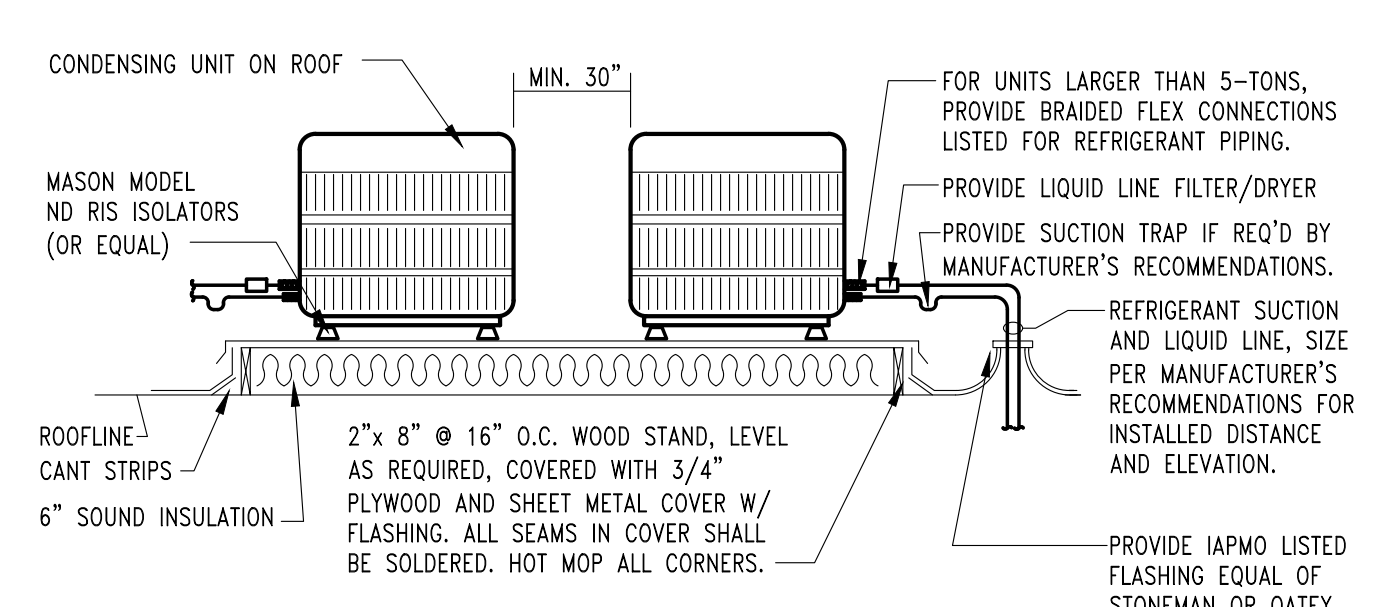
FAN SCHEDULE		
MARK	EF-1,2,3	SF-1
TYPE	CEILING	INLINE
AIR FLOW (CFM)	125	1000
E.S.P. ("w.g.)	0.125	0.25
DRIVE TYPE	DIRECT	DIRECT
MAXIMUM SONES	1.5	3
MOTOR HP	23 (WATTS)	469 (WATTS)
VOLTS/PHASE/HZ	115/1/60	115/1/60
MAXIMUM OPERATING WEIGHT (LBS.)	20	50
REFERENCE	GREENHECK SP-A125	GREENHECK CSP-A1050
NOTES	1 THRU 5	1,2,4 THRU 6

AIR DEVICE SCHEDULE			
MARK	A	B	C
SERVICE	SUPPLY	SUPPLY	RETURN
MATERIAL	ALUM	STEEL	STEEL
FINISH	WHITE	WHITE	WHITE
PATTERN	DOUBLE	4-WAY	SINGLE
DEFLECTION	DOUBLE	4-WAY	DEFLECTION
REFERENCE	KRUEGER S880V	KRUEGER SH	KRUEGER S80H
NOTES	1,2	1,2,3	2

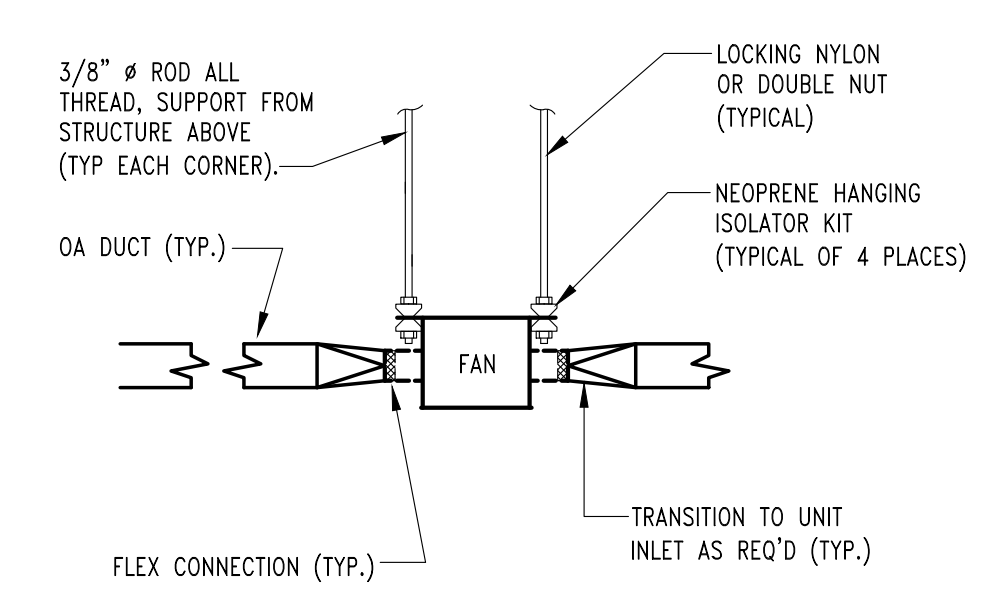
- MECHANICAL GENERAL NOTES**
- COORDINATE ALL MECHANICAL WORK WITH ALL OTHER TRADES. VERIFY ALL EXISTING CONDITIONS BEFORE THE START OF WORK.
 - PROVIDE ALL REQUIRED DEMOLITION OF EXISTING MECHANICAL EQUIPMENT, MATERIALS AND OTHER ITEMS WHICH ARE NOT TO BE REUSED IN NEW DESIGN. ALL ITEMS WHICH THE OWNER DOES NOT WISH TO SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
 - LINE ALL AIR CONDITIONING DUCTWORK WITH 1" OR 2" THICK DUCT LINER PER SPECIFICATIONS AND AS NOTED ON DRAWINGS.
 - FLEXIBLE DUCTS SHALL BE INSTALLED TO MAINTAIN FULL CROSS-SECTIONAL FREE AREA. PROVIDE RIGID SHEET METAL ELBOWS OR LINED PLENUM BOXES AT AIR DEVICES WHEN REQUIRED.
 - COORDINATE EXACT LOCATION OF ALL AIR DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
 - ROUTE DUCTS FROM TOILET EXHAUST FANS TO WALL CAPS. CONCEAL DUCTWORK. ROOF CAPS SHALL BE FLASHED WEATHERTIGHT. OFFSET EXHAUST DISCHARGE AS REQUIRED INSURING A MINIMUM 10'-0" CLEARANCE FROM ALL OUTSIDE AIR INTAKES.
 - ALL LOW VOLTAGE CONTROL WIRING AND ITS INSTALLATION TO BE BY MECHANICAL CONTRACTOR. INSTALL PER ELECTRICAL SPECIFICATIONS. MOUNTING HEIGHT OF THERMOSTATS SHALL BE PER ADA REQUIREMENTS.

FAN COIL UNIT SCHEDULE	
MARK	FC-1.2
MATCHING CONDENSING UNIT MARK	CU-1.2
TYPE	HEAT PUMP
NOMINAL TONS	6
MINIMUM COOLING CAPACITY (MBH)	70
SENSIBLE COOLING CAPACITY (MBH)	60
ENTERING AIR TEMPERATURE (DEG. DB/WB)	83/63
MINIMUM HEATING CAPACITY (MBH)	50
HEATING AMBIENT TEMPERATURE (* DB)	28
ENTERING AIR TEMPERATURE (* DB)	60
TOTAL SUPPLY AIR (CFM)	2400
MIN OUTSIDE AIR (CFM)	500
VOLTS/PHASE/HZ	230-3-60
MCA	8
UNIT MOCP	15
MAXIMUM OPERATING WEIGHT (LBS.)	150
REFERENCE	CARRIER 40RFQ
NOTES	1 THRU 7

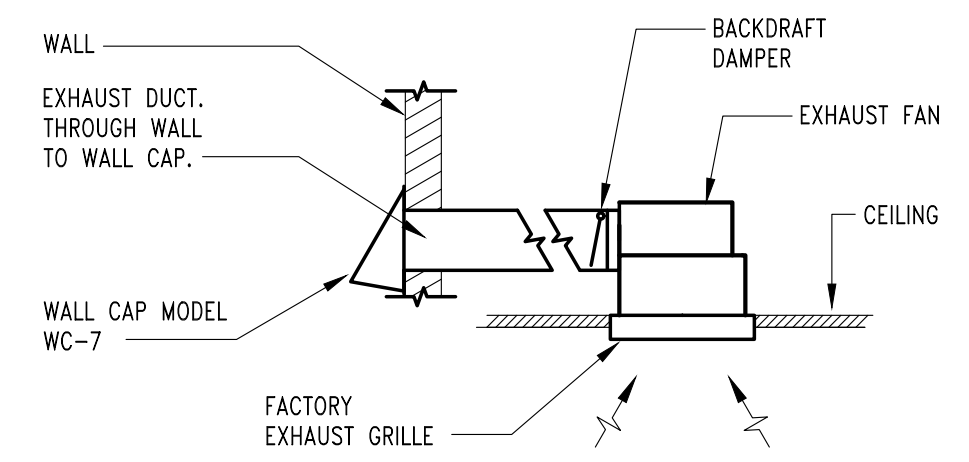
- NOTES**
- SCHEDULE CAPACITY SHALL BE FOR 2500 FT. ELEVATION.
 - PROVIDE ALL NECESSARY INTERCONNECTING PIPING (& REFRIGERANT ACCESSORIES) & CONTROL WIRING BETWEEN FAN COIL UNIT & MATCHING CONDENSING UNIT.
 - PROVIDE 2" THICK FILTER SECTION.
 - MANUFACTURER SHALL PROVIDE ALL NECESSARY DEVICES, VALVES, ETC. AS REQUIRED.
 - PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT EQUAL OF HONEYWELL T9 WITH OPTIMIZED START UP, AUTO-CHANGEOVER, NIGHT SET-BACK, AND OVERRIDE CONTROL.



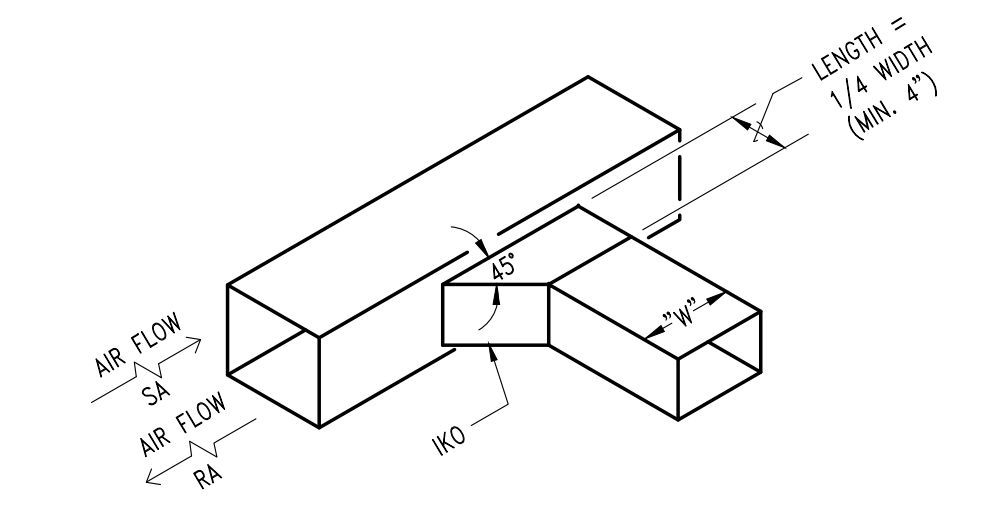
CONDENSING UNIT PLATFORM DETAIL
NO SCALE



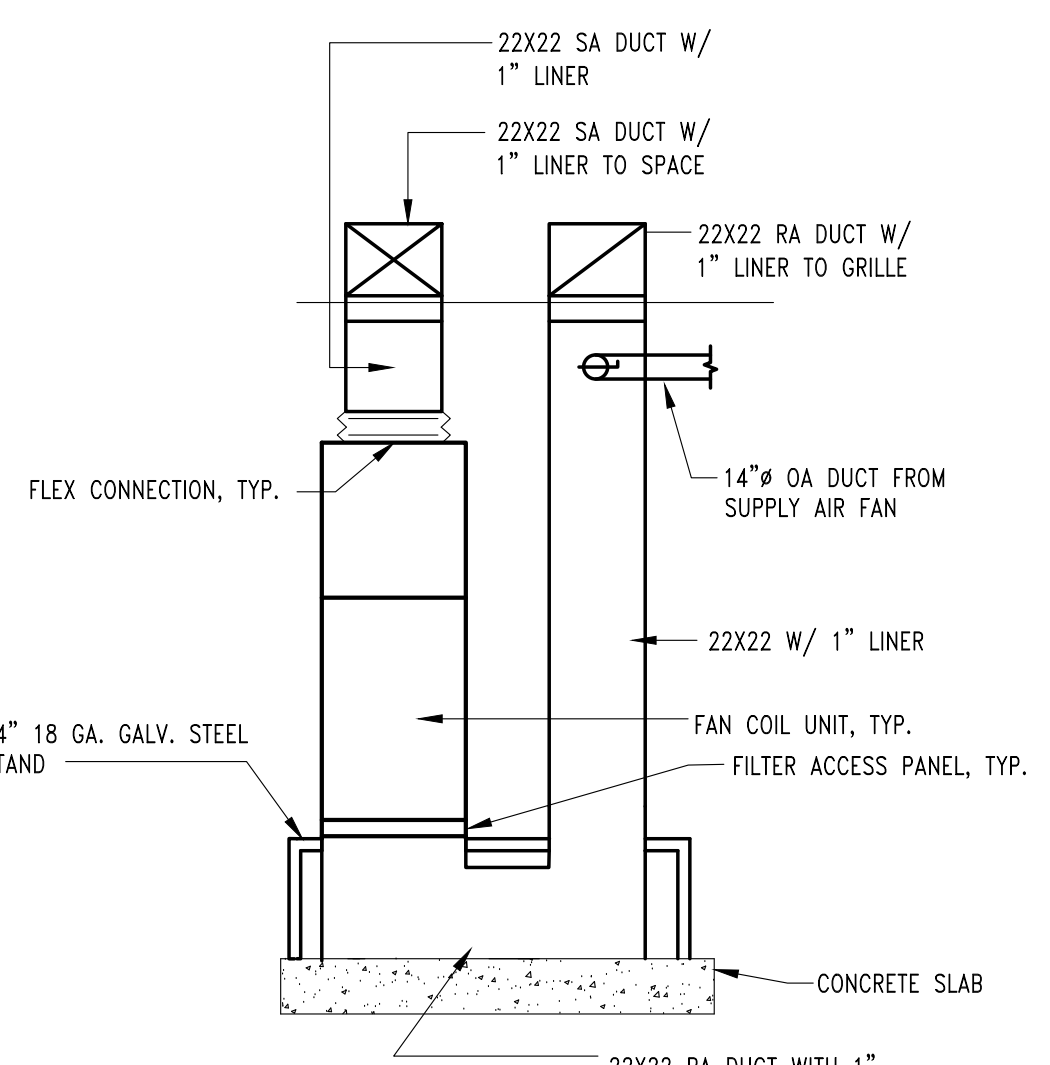
IN-LINE FAN DETAIL
NO SCALE



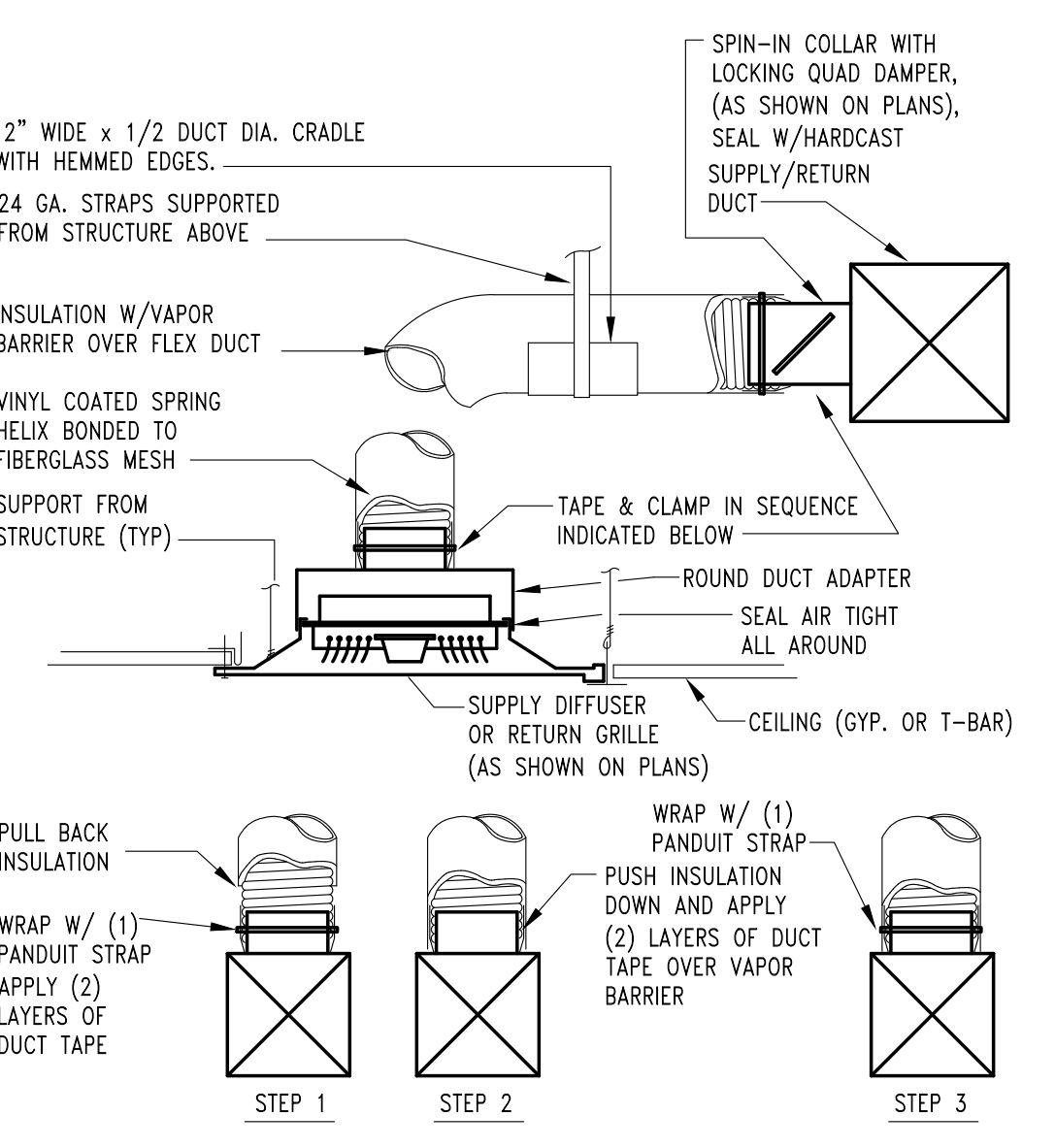
CEILING MOUNTED EXHAUST FAN
NO SCALE



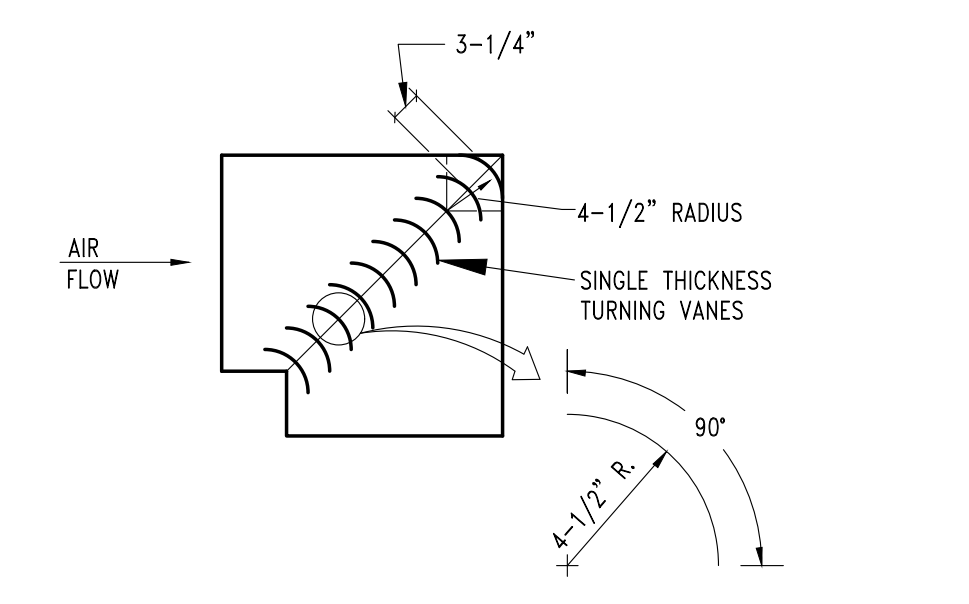
DUCT TAKE-OFF DETAIL
NO SCALE



FAN COIL DETAIL
NO SCALE



AIR DEVICE AND FLEXIBLE DUCT DETAIL
NO SCALE



MITER ELBOW WITH TURNING VANES DETAIL
NO SCALE

TENANT IMPROVEMENT
MECHANICAL SCHEDULES
& DETAILS



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

ISSUE DATE 09-14-2023
PROJ. NO. 37096
DRG. SCALE AS NOTED

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MECHANICAL GENERAL REQUIREMENTS

CODES: CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE FOLLOWING CODES: INTERNATIONAL BUILDING CODE (2018 EDITION), INTERNATIONAL MECHANICAL CODE (2018 EDITION), INTERNATIONAL PLUMBING CODE (2018 EDITION), INTERNATIONAL FUEL GAS CODE (2018 EDITION), INTERNATIONAL ENERGY CONSERVATION CODE (2018 EDITION) AND THE INTERNATIONAL FIRE CODE (2018 EDITION) AS AMENDED BY THE LOCAL GOVERNING AGENCY.

GENERAL: THE WORK COVERED BY THIS SPECIFICATION SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, LABOR, TRANSPORTATION, TOOLS, PERMITS, FEES, INSPECTIONS, UTILITIES AND INCIDENTALS NECESSARY FOR THE COMPLETE INSTALLATION OF ALL WORK REQUIRED BY THE CONTRACT DRAWINGS.

DRAWINGS: THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND CANNOT SHOW EVERY CONNECTION IN DETAIL OR EVERY PIPE OR DUCT IN ITS EXACT LOCATION. THESE DETAILS ARE SUBJECT TO THE REQUIREMENTS OF ORDINANCES AND ALSO STRUCTURAL AND ARCHITECTURAL CONDITIONS. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE STRUCTURAL AND FINISH CONDITIONS AND SHALL COORDINATE WITH THE SEPARATE TRADES IN ORDER TO AVOID INTERFERENCE BETWEEN THE VARIOUS PHASES OF WORK. WORK SHALL BE LAID OUT SO THAT IT WILL BE CONCEALED IN FURRED CHASES OR ABOVE CEILINGS, ETC., IN FINISHED PORTIONS OF THE BUILDING, UNLESS SPECIFICALLY NOTED OR INDICATED TO BE EXPOSED. WORK SHALL BE INSTALLED TO AVOID CRIPPLING OF STRUCTURAL MEMBERS. ALL WORK SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE LINES OF THE BUILDING UNLESS OTHERWISE NOTED. THE APPROXIMATE LOCATION OF EACH ITEM IS INDICATED ON THE DRAWINGS. THESE DRAWINGS ARE NOT INTENDED TO GIVE COMPLETE AND EXACT DETAILS IN REGARD TO LOCATION. EXACT LOCATIONS ARE TO BE DETERMINED BY ACTUAL MEASUREMENTS OF THE BUILDING.

EQUIPMENT INSTALLATION: PROVIDE AND INSTALL UNIONS AT PROPER POINTS TO PERMIT REMOVAL OF PIPE AND EQUIPMENT WITHOUT DAMAGE TO OTHER PARTS OF THE SYSTEM. ALL EQUIPMENT SHALL BE INSTALLED IN A MANNER TO PERMIT ACCESS TO PARTS REQUIRING SERVICE WITHOUT DISASSEMBLY OF OTHER EQUIPMENT.

EXCAVATION AND BACKFILL: THE CONTRACTOR SHALL PROVIDE ALL EXCAVATION REQUIRED FOR THE INSTALLATION OF THE WORK. CONTRACTOR SHALL BACKFILL, COMPACT AND REPAIR CONCRETE OR PAVING TO MATCH EXISTING FINISH AS CLOSELY AS POSSIBLE.

EXISTING FACILITIES: LOSS OR DAMAGE TO EXISTING FACILITY CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO COST TO THE OWNER. THE CONTRACTOR SHALL COORDINATE ALL WORK REQUIRED IN EXISTING AREAS WITH THE OWNER AND SHALL ARRANGE FOR ALL TEMPORARY UTILITY SERVICES, PROTECTION OF THE FACILITY AND ITS CONTENTS, BARRICADES, SAFETY DEVICES, ETC., REQUIRED TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL REMOVE AND REINSTALL EXISTING CONSTRUCTION IF REQUIRED TO ACCOMPLISH THE WORK. NOTIFY THE OWNER AT LEAST TWO DAYS IN ADVANCE OF ALL REQUIRED SERVICE OUTAGES.

SUBSTITUTIONS: EQUIPMENT OF EQUAL QUALITY TO THAT SPECIFIED MAY BE SUBSTITUTED PROVIDED IT MEETS OR EXCEEDS THE CAPACITY SCHEDULED, IS OF SIMILAR CONSTRUCTION, AND WILL FIT IN THE SPACE ALLOTTED WITH AMPLIFIED SERVICE CLEARANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION WITH ALL OTHER TRADES (SUCH AS ELECTRICAL AND STRUCTURAL) OF ANY PRODUCT REQUIRING A CHANGE IN THE WORK OF THAT TRADE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY ADDITIONAL COSTS ASSOCIATED WITH SUCH A CHANGE. MATERIALS OF CONSTRUCTION SHALL BE AS SPECIFIED.

SUPPORTS, ANCHORS AND SLEEVES: SUPPORT HORIZONTAL PIPING WITH STEEL CLEVIS HANGERS AND VERTICAL PIPING WITH RISER CLAMPS. PROVIDE COPPER PLATED HANGERS AND CLAMPS FOR COPPER PIPING OR WRAP THE COPPER PIPE AT HANGERS WITH TWO LAYERS OF PVC TAPE OR EQUIVALENT. HANGER SPACING AND ROD SIZE SHALL BE IN ACCORDANCE WITH THE LOCAL CODE AND/OR ASHRAE STANDARDS. SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA STANDARDS. DUCTWORK SHALL BE SUPPORTED INDEPENDENT FROM OTHER DUCTWORK AND EQUIPMENT. PROVIDE MINIMUM 18 GAUGE GALVANIZED STEEL SLEEVES FOR DUCTWORK, FLASHINGS, AND ESCUTCHEONS. SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS. THROUGH PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE PER MANUFACTURER'S UL LISTED DETAILS AND INSTRUCTIONS, EQUAL OF HILTI. PIPING SHALL BE PROVIDED WITH STANDARD WEIGHT STEEL PIPE OF SIZE TO PASS PIPE AND INSULATION. PIPE SLEEVES ARE NOT REQUIRED IF PENETRATIONS ARE CORE DRILLED. PIPING SHALL NOT BE SUPPORTED FROM PENETRATION.

SHOP DRAWINGS: PROVIDE SHOP DRAWINGS AND MANUFACTURER'S DATA ON ALL PLUMBING FIXTURES AND TRIM, EQUIPMENT, MECHANICAL DEVICES AND FIRE PROTECTION SYSTEM FOR APPROVAL.

WARRANTY: PROVIDE TWO YEAR WARRANTY FROM DATE OF FINAL ACCEPTANCE ON ALL LABOR AND MATERIALS PROVIDED UNDER THIS CONTRACT. PROVIDE AN ADDITIONAL FIVE YEAR WARRANTY ON THE MOTOR COMPRESSOR UNITS FOR ALL AIR CONDITIONING OR HEAT PUMP EQUIPMENT AND WATER HEATERS.

OPERATION AND MAINTENANCE MANUAL: PROVIDE A COMPLETE INDEXED, BOUND MANUAL OF ALL EQUIPMENT REQUIRING MAINTENANCE.

TRAINING: CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO HOURS TRAINING TO THE OWNER ON THE OPERATION OF ALL EQUIPMENT.

CLEAN UP: CONTRACTOR SHALL MAINTAIN PREMISES IN CLEAN CONDITION AT END OF EACH DAY AND THOROUGHLY CLEAN UP AT END OF CONSTRUCTION.

FIRE PROTECTION:

GENERAL: THE EXISTING FIRE PROTECTION SYSTEM IS A WET PIPE AUTOMATIC SPRINKLER SYSTEM AND SHALL BE MODIFIED PER THE NEW ARCHITECTURAL FLOOR PLAN AND CEILING PLAN.

QUALITY ASSURANCE: DESIGN INSTALLATION SHALL MEET THE REQUIREMENTS OF NFPA 13, INSURANCE UNDERWRITERS, THE REQUIREMENTS SPECIFIED HEREINAFTER AND THE LOCAL FIRE CODE. THE SYSTEM SHALL BE DESIGNED AND INSTALLED BY A FIRE PROTECTION CONTRACTOR LICENSED IN THE STATE OF ARIZONA AND EXPERIENCED IN THIS TYPE OF SYSTEM DESIGN AND INSTALLATION WITH A MINIMUM OF FIVE YEARS EXPERIENCE. EVIDENCE TO SUPPORT THE ABOVE REQUIREMENTS MAY BE REQUESTED, AND ANY PROPOSED INSTALLER WHO CANNOT SHOW SUITABLE EXPERIENCE WILL BE REJECTED.

ACCEPTABLE MANUFACTURERS: PRODUCTS MANUFACTURED BY AUTOMATIC SPRINKLER, VICTAULIC, GRINNELL, VIKING, CENTRAL, OR APPROVED EQUAL MEETING THESE SPECIFICATIONS ARE ACCEPTABLE.

ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF THE FIRE PROTECTION SYSTEM SHALL BE LISTED AS APPROVED BY THE UNDERWRITERS LABORATORIES, INC., LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS, AND THE FACTORY MUTUAL TESTING LABORATORIES LIST OF APPROVED EQUIPMENT. FIRE PROTECTION DEVICES AND DEVICES INVOLVING FIRE HAZARD SHALL BE THE LATEST DESIGN OF THE MANUFACTURER.

SPRINKLER PIPING AND PIPE FITTING:

PIPING: PIPING, FITTINGS, JOINTS, AND INSTALLATION SHALL BE AS SPECIFIED IN NFPA 13.

SPRINKLER HEADS: UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, SPRINKLER HEADS SHALL BE UPRIGHT OR PENDANT, QUICK RESPONSE HEADS EXCEPT THAT SPRINKLER HEADS TO BE INSTALLED IN THE VICINITY OF HEATING EQUIPMENT AND LIGHTS, SHALL BE OF THE TEMPERATURE RATINGS REQUIRED FOR SUCH LOCATIONS BY NFPA 13.

INSTALLATION: THE SPRINKLER SYSTEM SHALL BE DESIGNED AND SIZED BASED ON NFPA 13 REQUIREMENTS.

ACTUAL NUMBER OF SPRINKLER HEADS, HEAD SPACING, PIPE ROUTING, COVERAGE, ETC., AS REQUIRED BY THE APPLICABLE AUTHORITIES AND/OR ARCHITECTURAL AND STRUCTURAL CONDITIONS, SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

HEADS SHALL BE LOCATED IN A SYMMETRICAL PATTERN RELATED TO CEILING FEATURES SUCH AS BEAMS, LIGHT FIXTURES, DIFFUSERS, ETC., AND WHERE APPLICABLE, HEADS SHALL BE LOCATED SYMMETRICAL WITH THE GRID CEILING. HEADS SHALL BE ARRANGED IN A MANNER ACCEPTABLE TO THE ARCHITECT.

THE CONTRACTOR SHALL PROVIDE SPARE HEADS EQUAL TO ONE PERCENT OF THE TOTAL NUMBER OF HEADS INSTALLED UNDER THE CONTRACT, BUT NOT LESS THAN 10.

TESTS: UPON COMPLETION AND PRIOR TO ACCEPTANCE OF THE INSTALLATION, THE CONTRACTOR SHALL SUBJECT THE SYSTEM TO THE TESTS REQUIRED BY THE NFPA 13 AND THE LOCAL FIRE DEPARTMENT.

PLUMBING:

PIPING: SANITARY SOIL AND VENT PIPING SHALL BE SCHEDULE 40 SOLID CORE PVC PIPING WITH DWV FITTINGS (ASTM D1784, D1785 OR D2665) AND LOW VOC SOLVENT JOINTS WHERE APPROVED BY CODE AGENCIES AND NOT EXPOSED TO PHYSICAL DAMAGE. CELLULULAR OR FOAM CORE PVC PIPING WILL NOT BE ACCEPTED. WHERE INSTALLED IN A RETURN AIR PLENUM, CAST IRON PIPING SHALL BE USED.

DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE "L" HARD TEMPER COPPER PIPE WITH WROUGHT FITTINGS AND 95_5 LEAD FREE SOLDER JOINTS.

CONDENSATE DRAIN PIPING SHALL BE TYPE M, HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS. AT CONNECTION TO EACH UNIT PROVIDE DIELECTRIC UNION, TRAP AND OPEN BREATHER TEE ON DISCHARGE SIDE OF TRAP. INSULATE ALL CONDENSATE DRAIN LINES ABOVE CEILINGS AND IN STUD SPACES WITH 1/2" THICK ARMSTRONG "ARMAFLEX" INSULATION OR EQUAL.

FLASHING: FLASH ALL VENTS THROUGH ROOF WITH 4 LB. LEAD SHEET EXTENDING NOT LESS THAN 8" AWAY AND TURNED DOWN INTO THE VENT, 1" MINIMUM.

PIPING SPECIALTIES: CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS OR FLANGES AT ALL LOCATIONS WHERE COPPER OR BRASS PIPING CONNECTS TO FERROUS PIPING OR EQUIPMENT. INSTALL WATER HAMMER ARRESTORS (EQUAL TO J.R. SMITH SERIES #5000) WITH ACCESS DOORS (EQUAL TO J.R. SMITH SERIES #4760) WHERE SHOWN ON PLAN.

PLUMBING CONTRACTOR SHALL PROVIDE A BACKWATER VALVE ON THE SEWER LINE LEAVING THE BUILDING IF THE FINISH FLOOR ELEVATION IS LESS THAN 1"-0" ABOVE THE NEAREST UPSTREAM MANHOLE OR CLEANOUT RIM ELEVATION.

VALVES: VALVES FOR DOMESTIC HOT AND COLD WATER SHALL BE LEAD-FREE AND AS MANUFACTURED BY KITZ, STOCKHAM, NIBCO, APOLLO, MILWAUKEE OR JENKINS.

BALL VALVES SHALL BE BRONZE, TWO PIECE BODY, FULL PORT FORGED BRASS BALL, SILICON BRONZE STEM, PTFE OR HDPE SEAT, PACKING AND GASKET; THREADED OR SOLDERED ENDS. VALVES SHALL CONFORM TO MSS SP-110

CHECK VALVES SHALL BE CLASS 125, BRONZE BODY, BRONZE DISC, Y-PATTERN, SWING CHECK DESIGN, THREADED OR SOLDERED ENDS. VALVES SHALL CONFORM TO MSS SP-80.

WHERE VALVE INSTALLATION IS CONCEALED; PROVIDE J.R. SMITH SERIES 4760 OR APPROVED EQUAL ACCESS DOORS WITH CONCEALED HINGE AND KEY OPERATED LOCKS. DOORS SHALL BE LARGE ENOUGH TO SERVICE VALVES AND SHALL BE INSTALLED FLUSH WITH FINISHED WALLS OR CEILINGS.

PLUMBING FIXTURES: FURNISH ALL STANDARD PRODUCTS OF AMERICAN STANDARD, KOHLER, CRANE, TOTO, DELTA, MOEN, CHICAGO, T&S BRASS, WIFAB, SLOAN, DELANY, ELKAY, HAWS OR APPROVED EQUAL. ALL FIXTURES SHALL BE WHITE UNLESS OTHERWISE NOTED. REFER TO SCHEDULE FOR SPECIFIC REQUIREMENTS. PROVIDE STOPS AT HOT AND COLD WATER CONNECTIONS TO EACH FIXTURE.

WATER HEATERS: CAPACITIES AND ACCESSORIES TO BE AS SCHEDULED ON THE DRAWINGS AND BE MANUFACTURED BY STATE, A.O. SMITH, RHEEM, BRADFORD WHITE, CHRONOMITE, EEMAX OR APPROVED EQUAL.

EXECUTION: SLOPE DRAINAGE PIPING INSIDE AND OUTSIDE OF BUILDING IN ACCORDANCE WITH REQUIREMENTS OF THE GOVERNING PLUMBING CODES.

ESTABLISH GRADE LINES WITH SURVEYOR'S LEVEL. VERIFY LOCATION OF SEWER TAPS BEFORE START OF WORK AND MAKE NECESSARY GRADE ADJUSTMENTS. DRAIN VENT LINES BACK TO SOIL LINES.

LOCATE CLEANOUTS AT EACH CHANGE OF LINE DIRECTION OF MORE THAN 45 DEG. WHERE MORE THAN ONE CHANGE OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FT. INTERVAL.

BRING EXTERIOR CLEANOUTS UP TO GRADE AND INSTALL IN 18" X 18" CUBE OF CONCRETE. PROVIDE A CAST IRON COVER OVER EACH EXTERIOR CLEANOUT.

INSTALL WATER PIPING TO AVOID CONTACT WITH STRUCTURE WHEN POSSIBLE TO PREVENT EXCESSIVE WATER HAMMER NOISE TRANSMISSION.

ALL PIPING SHALL BE INSTALLED AT RIGHT ANGLES TO THE BUILDING LINES AND PLUMB.

WRAP METALLIC PIPE IN CONTACT WITH CONCRETE BLOCK, SLABS OR STUCCO WITH 10 MIL THICK PVC TAPE TO PREVENT CORROSION.

FLUSH PIPING CLEAN WITH WATER AFTER INSTALLATION. DISINFECT POTABLE WATER SYSTEM PER CODE, AWWA C651, OR AWWA C652 AND SUBMIT TEST RESULTS.

TEST ALL PIPING PRIOR TO COVERING OR BACKFILLING.

TEST WATER PIPING AT 100 PSIG FOR A CONTINUOUS PERIOD OF NOT LESS THAN FOUR (4) HOURS. DURING THIS TIME, CAREFULLY INSPECT THE SYSTEM FOR LEAKS. CONTRACTOR SHALL REPAIR ALL LEAKS IF NECESSARY AND TEST AGAIN UNTIL NO LEAKAGE IS DETECTED.

TEST SOIL, WASTE AND VENT SYSTEMS BY PLUGGING LINES AND FILLING SYSTEMS WITH WATER TO A STATIC HEAD OF 10 FEET OF WATER. OBSERVE WATER LEVEL FOR A TWO (2) HOUR PERIOD. IF LEVEL IS LOWERED, INDICATING LEAKAGE, REPAIR LEAKS AND TEST AGAIN UNTIL NO FURTHER LEAKAGE IS DETECTED.

HEATING, VENTILATING AND AIR CONDITIONING:

EQUIPMENT: EQUIPMENT CAPACITIES AND CHARACTERISTICS SHALL BE AS SCHEDULED ON THE DRAWINGS. INSTALL AS INDICATED ON DRAWINGS AND AS PER MANUFACTURER'S PRINTED INSTRUCTIONS. AIR CONDITIONING EQUIPMENT MANUFACTURED BY CARRIER, TRANE, LENNOX, DAIKIN, JCI (YORK), RHEEM, RUUD, AMERICAN STANDARD, BRYANT OR DAY & NIGHT IS ACCEPTABLE. DUCTLESS SPLIT AND VRF SYSTEM EQUIPMENT MANUFACTURED BY CARRIER (TOSHIBA), TRANE, LENNOX, DAIKIN, LG, MITSUBISHI, SANYO, FUJITSU, OR TOSHIBA IS ACCEPTABLE. EXHAUST FANS MANUFACTURED BY GREENHECK, LOREN COOK, TWIN CITY, PENN BARRY, BROAN, DELTA, JENCO OR S & P ARE ACCEPTABLE.

EQUIPMENT IDENTIFICATION: CONTRACTOR SHALL PROVIDE EQUIPMENT TAGS ON ALL MAJOR EQUIPMENT, I.E., AIR CONDITIONERS, EXHAUST FANS, ETC. TAGS SHALL BE BLACK WITH A MINIMUM OF 1" HIGH WHITE LETTERS PERMANENTLY AFFIXED TO THE UNITS. HAND WRITTEN TAGS ARE NOT ACCEPTABLE.

DUCTWORK:

DUCT SIZES: DIMENSIONS ON DRAWINGS ARE SHEET METAL DUCT SIZES. DO NOT INCREASE DUCT SIZE FOR ACOUSTICALLY LINED OR INTERNALLY INSULATED DUCTS.

ALL LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED WITH A MIN. 2" W.G. PRESSURE CLASSIFICATION AND SEAL CLASS C. SEAL ALL TRANSVERSE JOINTS WITH HARDCAST.

DUCT GAUGES: FABRICATION AND SUPPORT SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS.

GALVANIZED DUCTWORK: GALVANIZED STEEL LOCK FORMING QUALITY HAVING ZINC COATING OF 1.25 OUNCES PER SQUARE FOOT FOR EACH SIDE PER ASTM A653. ALL DUCTWORK SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. ALL DUCTWORK EXPOSED TO WEATHER SHALL BE SEALED (JOINTS AND SEAMS) WITH SILICONE SEALANT. ALL DUCTWORK JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK MUST BE SECURELY SEALED USING WELDMENTS; MECHANICAL FASTENERS WITH SEALS, GASKETS, OR MASTICS; MESH AND MASTIC SEALING SYSTEMS; OR TAPES. TAPES AND MASTICS MUST BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B.

FLEXIBLE DUCTS: FLEXIBLE DUCTS SHALL BE INSULATED (MINIMUM 1" THICK, WITH MINIMUM THERMAL RESISTANCE OF R4.2) AND HAVE A FOIL SCRIM VAPOR BARRIER. FLEXIBLE DUCTWORK SHALL BE LISTED AS UL 181 CLASS 1 FLEXIBLE AIR DUCT AND SHALL COMPLY WITH NFPA STANDARDS. PROVIDE FLEXIBLE DUCTWORK AS MANUFACTURED BY MANVILLE, OWEN CORNING, THERMOFLEX, OR EQUIVALENT.

DUCT LINER: ALL RECTANGULAR SUPPLY AND RETURN DUCTWORK TO BE INTERNALLY LINED FOR THERMAL AND/OR ACOUSTICAL PURPOSES SHALL BE 1" THICK WITH A MINIMUM THERMAL RESISTANCE OF R4.2, SUITABLE FOR TEMPERATURE RANGE OF 40 F TO 250 F AND MAXIMUM AIR VELOCITY OF 4000 FPM. INSTALL LINER IN ACCORDANCE WITH SMACNA DUCT LINER APPLICATION STANDARD. LINE ALL AIR CONDITIONING DUCTWORK EXTERIOR TO THE BUILDING ENVELOPE WITH 2" THICK DUCT LINER WITH A MINIMUM THERMAL RESISTANCE OF 8.0.

INSULATION: WRAP ALL ROUND SUPPLY AND RETURN DUCTWORK NOT INTERNALLY LINED WITH A MAXIMUM 1-1/2" THICK, FLEXIBLE FIBERGLASS INSULATION HAVING A FACTORY APPLIED FOIL SCRIM KRAFT VAPOR BARRIER. INSULATION SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R4.2 AT 75 F MEAN TEMPERATURE. INSULATION SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. DUCT WRAP SHALL BE INSTALLED SO AS TO PROVIDE A UNIFORM THICKNESS. INSULATION SHALL NOT BE COMPRESSED.

COMBINATION FIRE/SMOKE DAMPERS: DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL 555 AND UL 555S. DAMPERS SHALL BE OPPOSED BLADE ACTION WITH BLADE SEALS TO PROVIDE A MINIMUM CLASS II LEAKAGE CLASSIFICATION. PROVIDE WITH 120V NORMALLY CLOSED ACTUATOR AND DUCT SMOKE DETECTOR MOUNTED TO FRAME. INTERLOCK TO CLOSE WHEN FAN MOTOR IS TURNED OFF UPON ACTIVATION OF SMOKE DETECTOR OR IF TEMPERATURE REACHES 165F. PROVIDE MINIMUM 24" X 24" CEILING AND 18" X 18" DUCT ACCESS PANELS. INSTALL DAMPERS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

DAMPERS: FABRICATE BALANCING DAMPERS OF GALVANIZED STEEL, MINIMUM 16 GAUGE AND PROVIDE WITH LOCKING QUADRANTS. UNLESS INDICATED OTHERWISE, DAMPERS SHALL BE OPPOSED BLADE TYPE.

FLEXIBLE CONNECTION: PROVIDE FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET OF ALL AIR MOVING DEVICES. FABRICATE OF NEOPRENE COATED FLAMEPROOF FABRIC APPROXIMATELY 4-INCH WIDE TIGHTLY CRIMPED INTO METAL EDGING STRIP AND ATTACH TO DUCTING AND EQUIPMENT BY SCREWS OR BOLTS AT 6-INCH INTERVALS. FLEXIBLE CONNECTIONS SHALL BE ASSEMBLED PER MANUFACTURER'S INSTRUCTIONS FOR OPTIMUM SHAPE. FLEXIBLE CONNECTIONS EXPOSED TO THE WEATHER SHALL BE PROVIDED WITH A SHEET METAL WEATHER SHIELD.

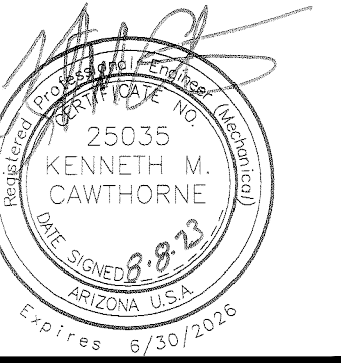
TURNING VANES: FABRICATE TURNING VANES AND RAILS OF 24 GAUGE GALVANIZED STEEL AND ASSEMBLE RATTLE FREE. TURNING VANES SHALL BE SINGLE THICKNESS PREFABRICATED OR ASSEMBLED PER MANUFACTURER'S INSTRUCTIONS FOR OPTIMUM SHAPE.

FILTERS: FILTERS SHALL BE 2" THICK PLEATED TYPE, DISPOSABLE, MEDIUM EFFICIENCY, MERV 8, CAMFIL FARR 30/30 OR EQUIVALENT. FILTERS SHALL BE IN PLACE WHENEVER SYSTEMS ARE IN OPERATION. CONTRACTOR SHALL PROVIDE AND INSTALL AN ADDITIONAL SET OF FILTERS FOR EACH UNIT AT THE COMPLETION OF PROJECT.

REFRIGERANT PIPING: REFRIGERANT PIPING SHALL BE CLEANED AND CAPPED TYPE ACR OR TYPE "L" HARD TEMPER COPPER TUBING WITH WROUGHT COPPER FITTINGS. JOINTS SHALL BE SILVER BRAZED WITH INTERNAL CONTINUOUS NITROGEN PURGE. INSULATE ALL REFRIGERANT SUCTION PIPING 1-1/2" AND SMALLER WITH 1/2" THICK ARMSTRONG "ARMAFLEX" INSULATION OR EQUAL. FOR DUCTLESS SPLIT AND VRF SYSTEMS, INSULATE BOTH SUCTION AND LIQUID LINES WITH 1/2" THICK ARMAFLEX OR PER MANUFACTURER MINIMUM REQUIREMENTS. FOR KITCHEN EQUIPMENT SUCTION LINES 1" AND LARGER, PROVIDE 1" THICK INSULATION. ARMAFLEX EXPOSED TO WEATHER SHALL BE COATED WITH TWO COATS OF ARMAFLEX UV PROTECTIVE COATING OR SHALL BE PROVIDED WITH A 0.16" THICK CORRUGATED ALUMINUM JACKET. ALL JOINTS AND SEAMS IN ALUMINUM JACKETING SHALL BE SEALED.

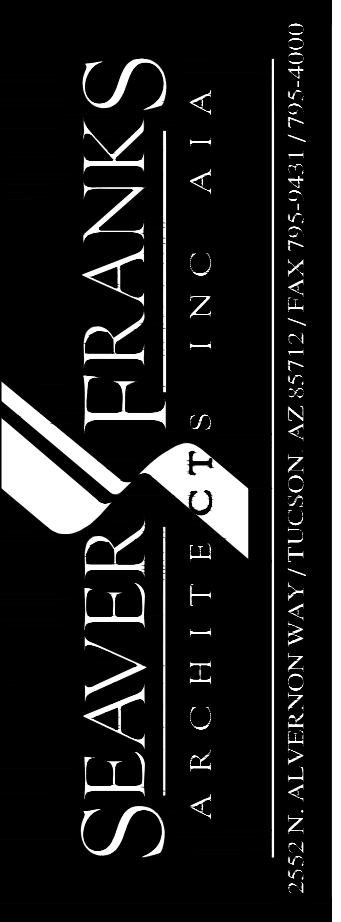
AIR DEVICES: AIR DISTRIBUTION DEVICES SHALL BE AS SCHEDULED ON THE DRAWINGS AND EQUAL TO KRUEGER, TITUS, PRICE, TUTTLE & BAILEY, NAILOR, OR AIR CONCEPTS.

TESTING AND BALANCING: AIR SYSTEMS SHALL BE BALANCED BY CERTIFIED TESTING & BALANCING CONTRACTOR IN ACCORDANCE WITH AABC STANDARDS AND METHODS. SUBMIT AIR BALANCE REPORT ON AABC STANDARD FORMS FOR APPROVAL.



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NO. DATE

TENANT IMPROVEMENT
DIVISION 15 SPECIFICATIONS



GVR DEL SOL CLUBHOUSE
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PROJ. NO. 37096

DRG. SCALE A6 NOTED

SHEET

MP1.0

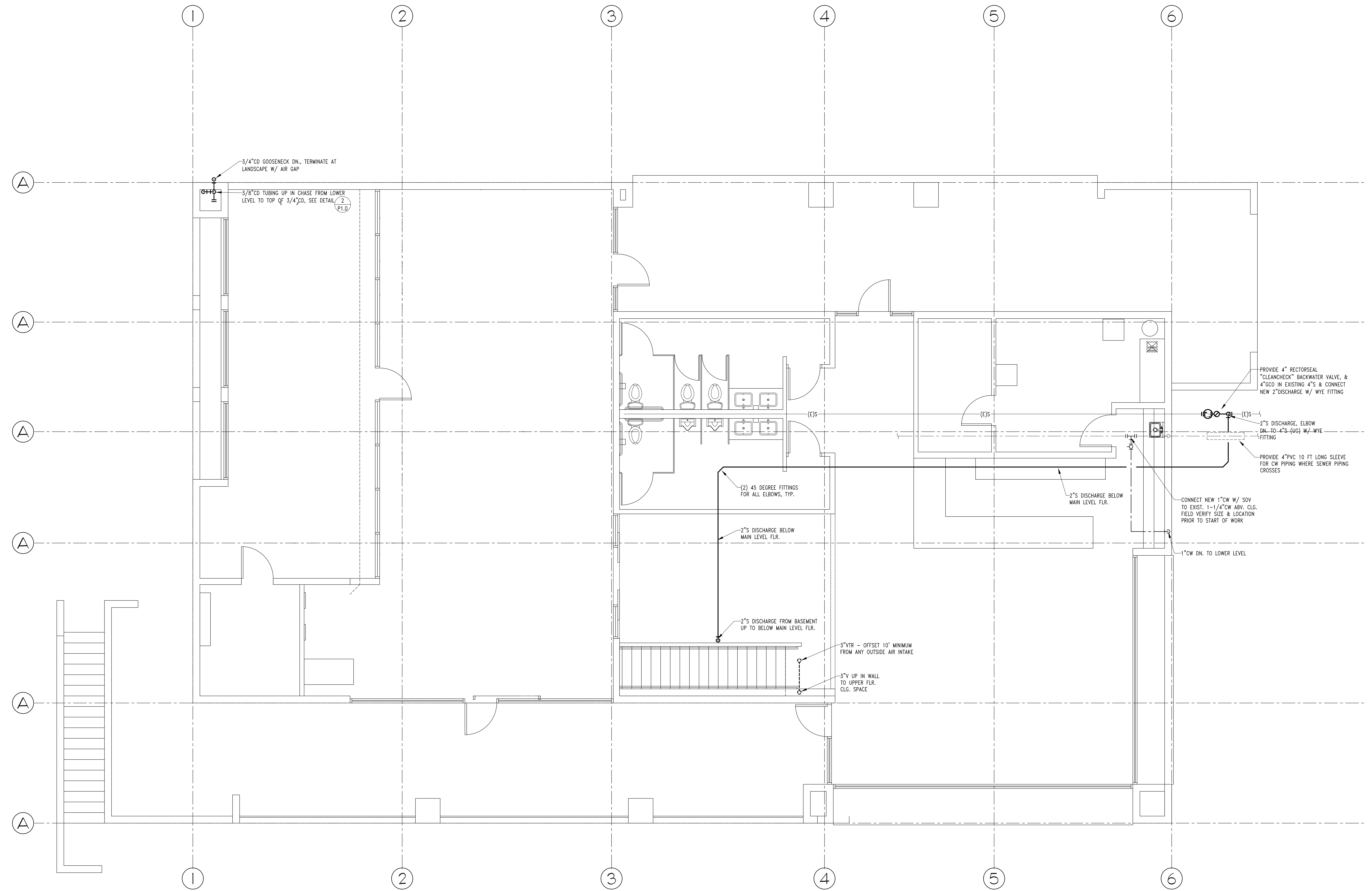


MECHANICAL ENGINEERING, L.L.C.
5447 East Fifth Street # 112 Tucson, Arizona 85711
520/327-7611
Designers Mech: ROM Plumb: PLZ Project #: 23-243

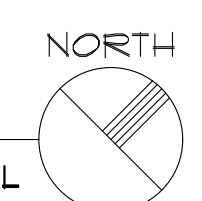


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- PLUMBING GENERAL NOTES
- COORDINATE ALL WORK WITH ALL OTHER TRADES. EXACT ROUTING OF ALL PIPING SHALL BE CAREFULLY COORDINATED WITH ALL STRUCTURAL CONDITIONS.
 - CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS INCLUDING PIPING LOCATIONS, SIZES, INVERTS AND DIRECTION OF FLOW BEFORE THE START OF WORK.
 - PROVIDE REQUIRED DEMOLITION OF EXISTING PLUMBING EQUIPMENT, FIXTURES, MATERIALS AND OTHER ITEMS WHICH ARE NOT TO BE REUSED IN NEW DESIGN. ALL ITEMS WHICH THE OWNER DOES NOT WISH TO SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
 - ALL PLUMBING FIXTURES AND EQUIPMENT IDENTIFIED BY A "P" NUMBER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR, UNLESS NOTED OTHERWISE. SEE PLUMBING SCHEDULES.
 - OFFSET ALL PLUMBING VENTS AS REQUIRED INSURING MINIMUM 10'-0" CLEARANCE FROM ALL OUTSIDE AIR INTAKES.
 - PROVIDE ACCESS DOORS WHERE SHUT-OFF VALVE OR OTHER DEVICES ARE CONCEALED IN A HARD CEILING. SEE SPECIFICATIONS. COORDINATE WITH ARCHITECT.
 - ALL SEWER PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT UNLESS NOTED OTHERWISE.



1 PLUMBING PLAN UPPER LEVEL
SCALE: 1/4" = 1'-0"
UPPER LEVEL



TENANT IMPROVEMENT
PLUMBING PLAN - UPPER
LEVEL



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SHEET
P1.0

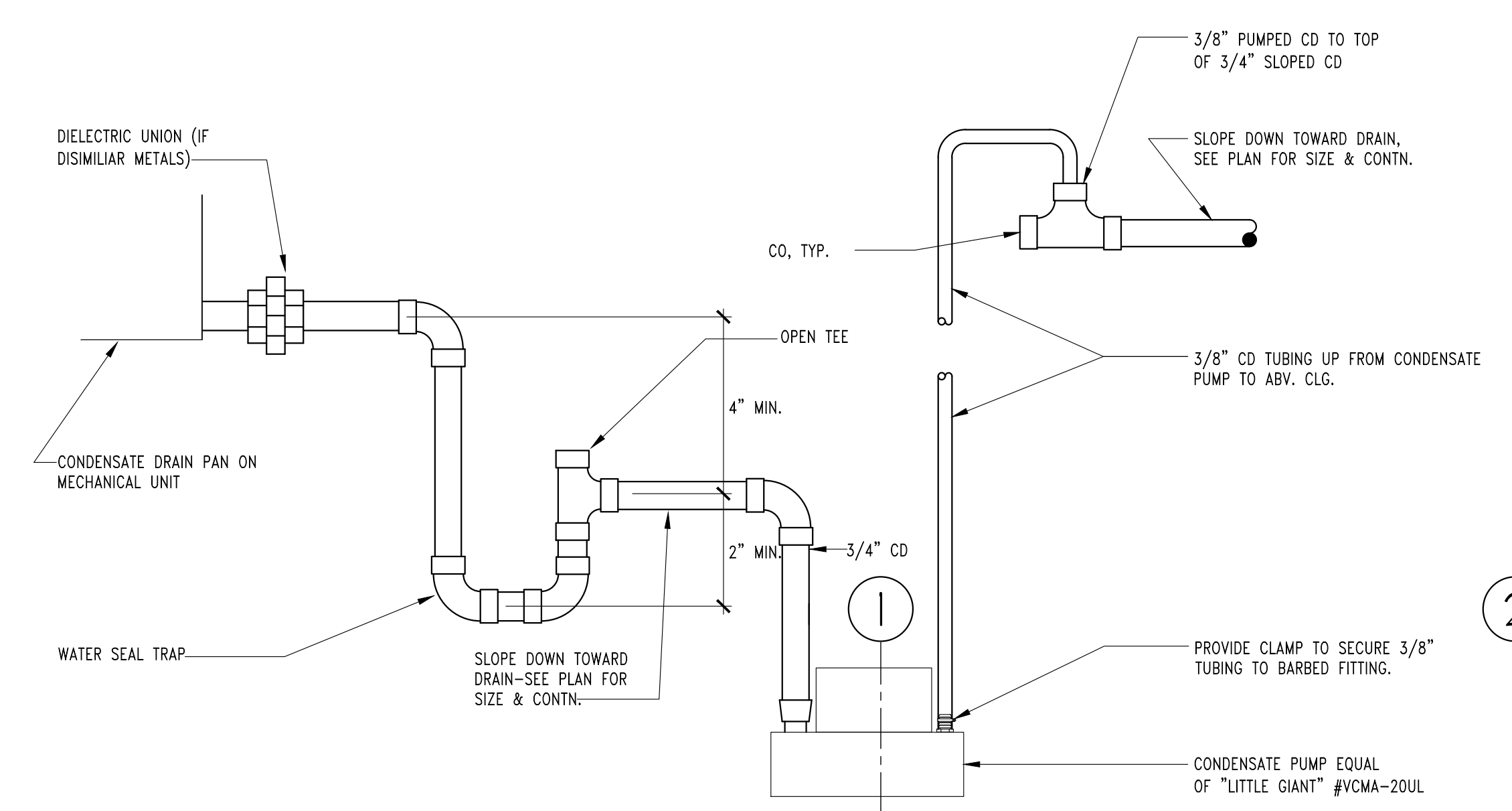
KC MECHANICAL ENGINEERING, L.L.C.
5447 East Fifth Street # 112 Tucson, Arizona 85711 520/327-7611
Designers Mech: ROM Plumb: PLZ Project #: 23-243



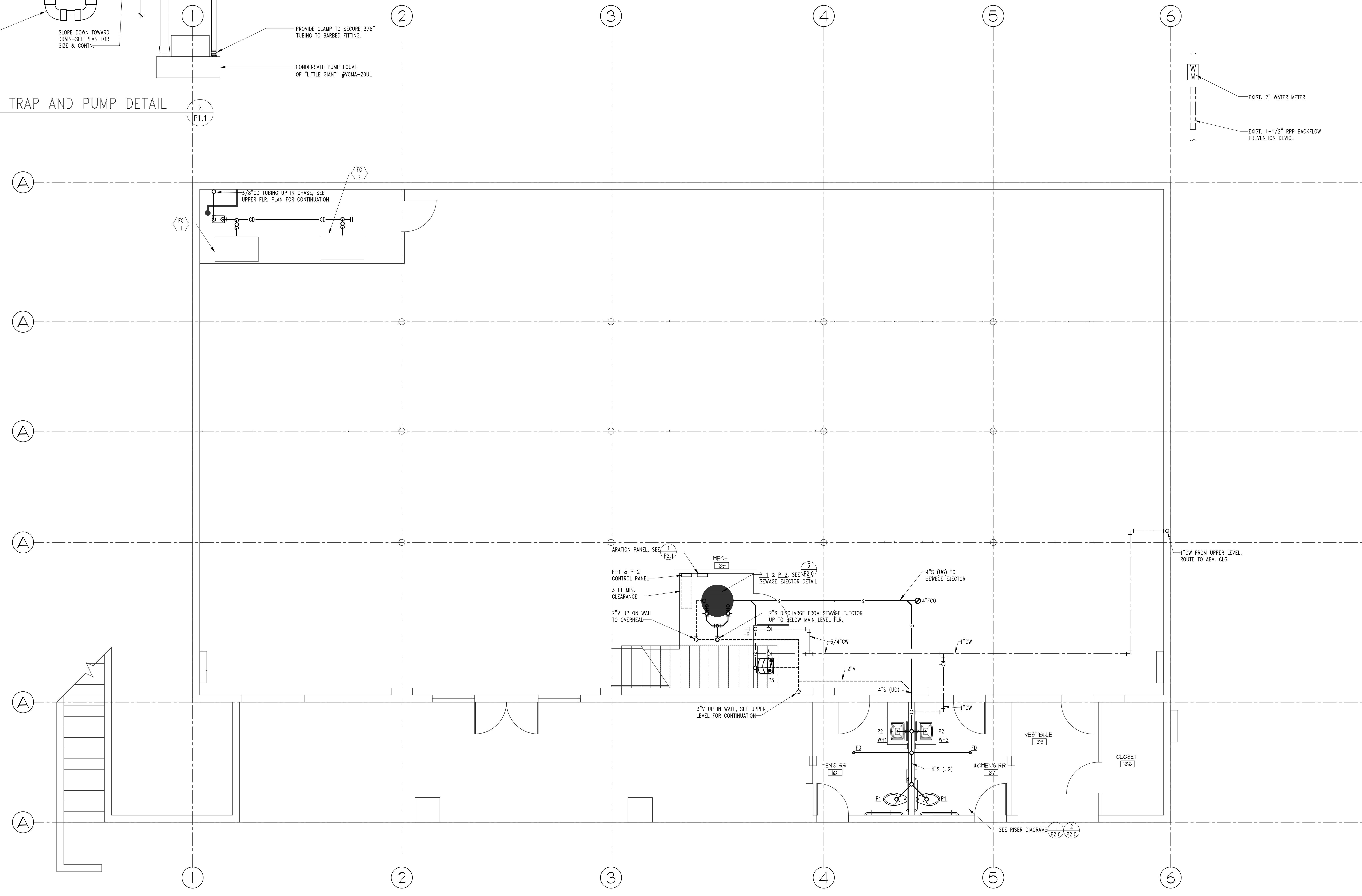
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NO. DATE

PLUMBING SYMBOLS AND LEGEND				
—S—	S.	SOIL OR WASTE LINE	ABV.	ABOVE
—GW—	GW	GREASE WASTE LINE	AFF	ABOVE FINISH FLOOR
—V—	V.	VENT LINE	A/C	AIR CONDITIONING
—CW—	CW	COLD WATER LINE	A.D.	ACCESS DOOR
—HW—	HW	HOT WATER LINE	BEL.FLR.	BELOW FLOOR
—HWR—	HWR	HOT WATER RETURN LINE	C.I.	CAST IRON
—G—	G.	GAS LINE (LOW PRESSURE)	C.F.H.	CUBIC FEET PER HOUR
—MPG—	MPG	MEDIUM PRESSURE GAS	CLG.	CEILING
—HPG—	HPG	HIGH PRESSURE GAS	CONT.	CONTINUATION
—FL—	FL	FIRE LINE	DN.	DOWN
—P—	P.	PLUG VALVE	EXIST.	EXISTING
—SOV—	SOV	SHUT OFF VALVE (BALL VALVE)	FCO	FLOOR CLEANOUT
—CV—	CV	CHECK VALVE	GCO	GRADE CLEANOUT
—U—	U.	UNION	TYP.	TYPICAL
—T&PR—	T&PR	TEMPERATURE & PRESSURE RELIEF	UG	UNDERGROUND
—HB—	HB	HOSE BIB	VCP	VITRIFIED CLAY PIPE
—WHA—	WHA	WATER HAMMER ARRESTOR	VR	VENT RISER
			VTR	VENT THRU ROOF
			W/F	WITH
			WCO	WALL CLEANOUT
			WET-V	WET-VENT

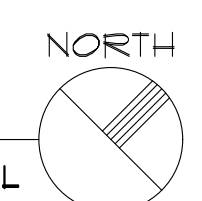
* SOME SYMBOLS MAY NOT APPLY TO THIS PROJECT



CONDENSATE TRAP AND PUMP DETAIL
NO SCALE



1 PLUMBING PLAN LOWER LEVEL
SCALE: 1/4" = 1'-0"
LOWER LEVEL



TENANT IMPROVEMENT
PLUMBING PLAN - LOWER
LEVEL



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KC MECHANICAL ENGINEERING, L.L.C.
5447 East Fifth Street # 112 Tucson, Arizona 85711
520/327-0452 Designers Mech/ROM Plumb/PLZ Project #: 23-243

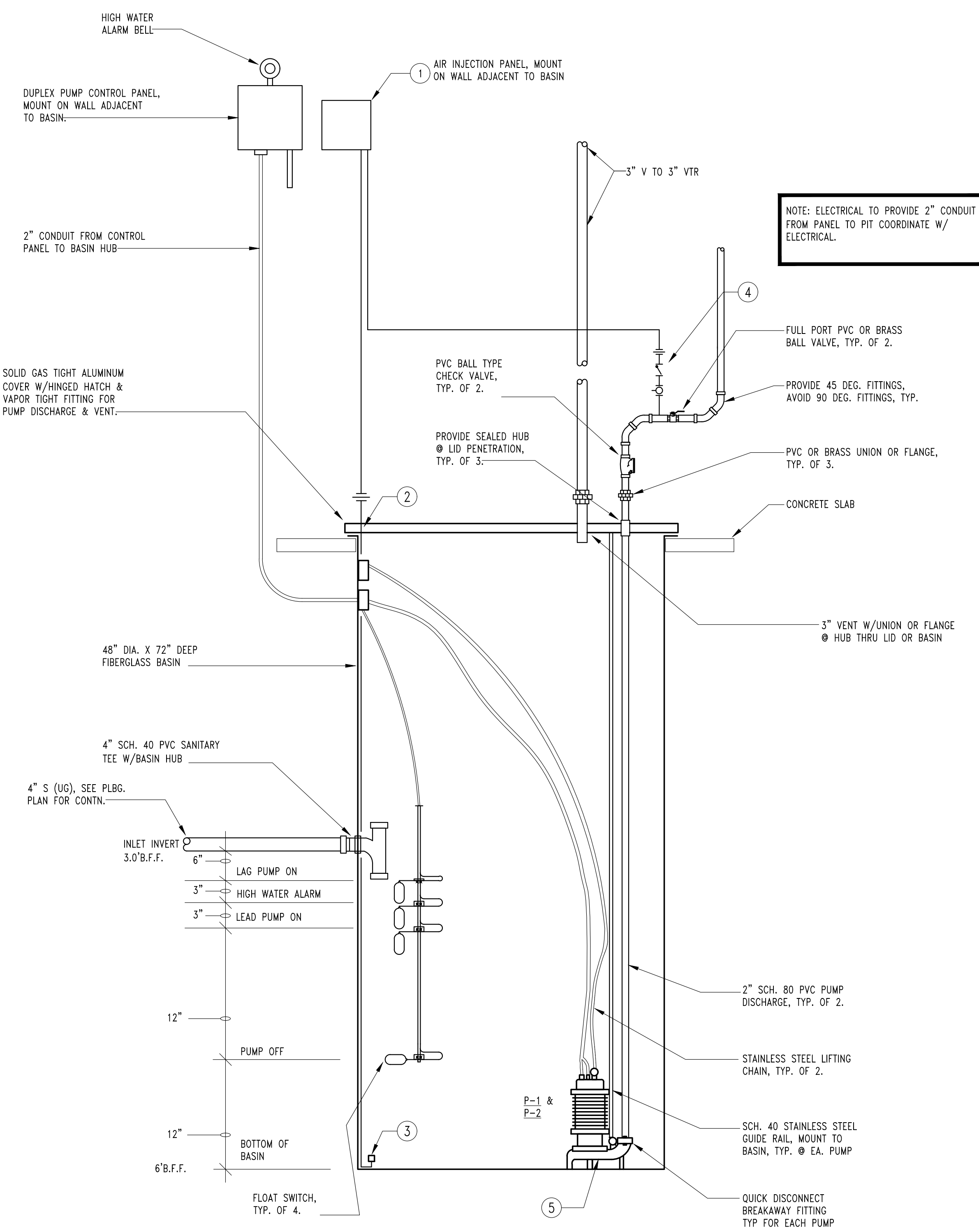
MARK	FIXTURE	DESCRIPTION	WASTE FIXTURE UNITS		WATER FIXTURE UNITS*		CONNECTION SIZES (INCHES) **				
			FU	TOTAL	FU	TOTAL	WASTE	VENT	HOT	COLD	
P1	WATER CLOSET (ADA)	KOHLER "HIGHLINE" K-3493, PRESSURE ASSISTED 1.6 GAL./FLUSH MAXIMUM VITREOUS CHINA, TANK TYPE WATER CLOSET W/ADA COMPLIANT HIGH BOWL. PROVIDE CHURCH #9500SCT SELF-SUSTAINING CHECK HINGES, OPEN FRONT SEAT & MCGUIRE CHROME PLATED LOOSE KEY ANGLE STOP & SUPPLY.	2	4	8	3.5	7	4	2	-	1/2
P2	LAVATORY (ADA)	KOHLER "PENNINGTON" #K-2196-4, VITREOUS CHINA SELF-RIMMING OVAL LAVATORY. PROVIDE MOEN #8866 FAUCET (0.5 GPM, 0.25 GALS. MAX PER CYCLE) & #327 DRAIN, MCGUIRE CHROME PLATED LOOSE KEY ANGLE STOPS & SUPPLIES CAST BRASS "P" TRAP & WASTE & STOP INSULATION EQUAL TO TREEBRO #102. PROVIDE ASSE 1070 CERTIFIED THERMOSTATIC MIXING VALVE EQUAL OF WATTS MODEL # USG-B W/ 3/8" FITTINGS.	2	1	2	1	2	2	1 1/2	1/2	1/2
P3	ELECTRIC WATER COOLER	ELKAY #L2S8 BARRIER FREE WATER COOLER, WITH WATERSENTRY VII FILTER SYSTEM 8.0 GPH CAPACITY OF 50 DEG. WATER AT 90 DEG. AMBIENT TEMPERATURE 3.7 FLA, 120/1/60. PROVIDE "P" TRAP AND MCGUIRE CHROME PLATED LOOSE KEY ANGLE STOP & SUPPLY.	1	0.5	0.5	0.5	0.5	2	1 1/2	-	1/2
FD	FLOOR DRAIN	J.R. SMITH #2005-BP, COATED CAST IRON BODY AND ADJUSTABLE 5" SQUARE NIKALOY STRAINER. PROVIDE TRAP GUARD OR SURE SEAL.	2	2	4	-	-	2	1 1/2	-	-
HB	HOSE BIBB	WOODFORD #24P-3/4 BRASS HOSE BIBB W/VACUUM BREAKER & REMOVABLE LOOSE KEY HANDLE ATTACHED TO OPERATING STEM.	1	-	-	2.5	1	2.5	-	-	3/4
TOTAL FIXTURE UNITS			14.5		12						

* PER 2018 IPC SECTION 604.1, THE WATER PIPE SIZE TO CONFORM TO AN ACCEPTED ENGINEERING PRACTICE. PIPE SIZE IS BASED ON USING 2018 IAPMO THAT IS AN ACCEPTED ENGINEERING PRACTICE AND IS BASED ON LOW FLOW FIXTURES.
** FIXTURE SERVICE PIPE SIZE SHALL BE THE SIZE INDICATED WITH REDUCER (IF REQ'D) AS CLOSE TO FIXTURE CONNECTION AS POSSIBLE

WET PIPE SPRINKLER SYSTEM	
THE BUILDING CONTAINS AN EXISTING WET PIPE SPRINKLER SYSTEM. THE CONTRACTOR SHALL MODIFY THIS SYSTEM TO CONFORM WITH THE NEW ARCHITECTURAL FLOOR PLAN. LOCATION OF SPRINKLER HEADS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTIVE CEILING PLAN (SPECIFICALLY THE LOCATION OF ALL LIGHT FIXTURES AND CEILING AIR DEVICES). THE SYSTEM PROVIDED SHALL COMPLY WITH ALL REQUIREMENTS OF NFPA, LOCAL AND FEDERAL CODES WHICH GOVERN SUCH WORK AND THE SPECIFICATION NOTES ON THESE DRAWINGS. CONTRACTOR SHALL SUBMIT DETAILED CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL BY THE GOVERNING AGENCY.	
STANDARD FOR CONSTRUCTION: NFPA 13	
IDENTIFICATION OF HAZARD: LIGHT HAZARD	
DESIGN DENSITY: 0.10GPM/S.F. OVER 1500 S.F.	
NOTE: 1. FIRE PROTECTION CONTRACTOR SHALL CONDUCT FLOW TEST PRIOR TO THE START OF WORK.	

WATER HEATER SCHEDULE	
MARK	WH-1, WH-2
ENTERING WATER TEMPERATURE (DEG. F)	60
LEAVING WATER TEMPERATURE (DEG. F)	120
RECOVERY RATE (GPH)	25
STORAGE VOLUME (GAL.)	N/A
ENERGY SOURCE	ELECTRIC
ELECTRICAL INPUT (KW)	4.2 KW
GAS INPUT (CFH)	N/A
VOLTS/PHASE/HZ	208/1/50
REFERENCE	CHROMONITE CM-20L/208
EXPANSION TANK	N/A
REFERENCE	
RELIEF VALVE SETTING (PSIG)	N/A
NOTES	1
1. WATER HEATER SHALL BE UL LISTED.	

PRESSURE LOSS CALCULATIONS	
Total Fixture Demand:	40.0 F.U.
Plumbing COP Demand:	28 GPM
Assumed Pressure Available at Property Line:	79.0 PSI
SITE PRESSURE LOSS	
A. Pipe Loss (main water pipe to Meter)	1.0 PSI
B. water meter	2.0 PSI
C. Reduced Pressure Backflow Preventors (RPBP)	14.0 PSI
D. Pipe Loss (RPBP to building)	1.0 PSI
E. xx	PSI
TOTAL SITE PRESSURE LOSSES	18.0 PSI
BUILDING PRESSURE LOSS	
A. Pressure Required at Last Fixture	25.0 PSI
B. L/H of 10 ft	4.3 PSI
TOTAL BUILDING PRESSURE LOSSES	29.3 PSI
TOTAL PRESSURE DROP (TOTAL SITE & BUILDING LOSS)	47.3 PSI
TOTAL ALLOWABLE PRESSURE DROP (ASSUMED PRESSURE - TOTAL PRESSURE LOSS)	31.7
EQUIVALENT FEET CALCULATION (BUILDING)	
A. Total Measured Length of Pipe (building entrance to furthest fixture)	200 FT
B. Add 50% for Fittings and Valves	100 FT
TOTAL EQUIVALENT FEET	300 FT
ALLOWABLE AVERAGE "P"/100 FT.	
31.7 PSI X 100 =	10.6 PSI/100 FT. ALLOWABLE WITHIN BUILDING
300 EQUIV. FT.	

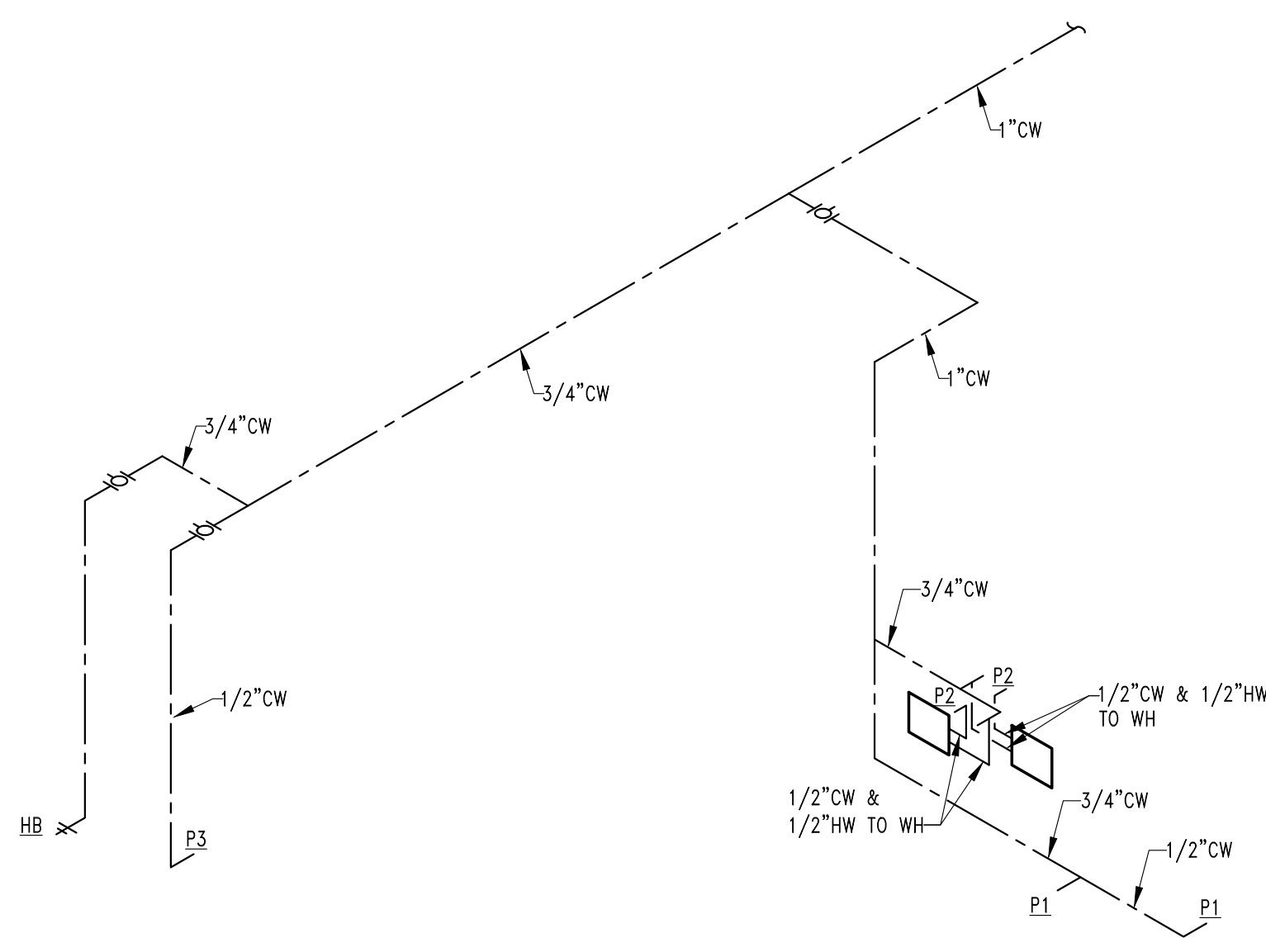


- SEWAGE EJECTOR DETAIL SHEET NOTES
1. PROVIDE DUAL OUTLET AIR INJECTOR PANEL WITH DUPLEX AIR COMPRESSOR, MINIMUM CAPACITY 0.25 CFM @ 25 PSI EACH, AS PER DETAIL. AN ALTERNATOR SHALL BE PROVIDED FOR THE AIR COMPRESSORS. PANEL TO BE PURCHASED FROM TUCSON PUMP (520 628-1534). MOUNT PANEL ON WALL NEXT TO THE EJECTOR CONTROL PANEL. PROVIDE MIN. 60" LENGTH OF COPPER (CA) PRIOR TO ENTERING CONDUIT.
 2. 1/2" SCHEDULE 40 STAINLESS STEEL THRU GAS TIGHT BULKHEAD FITTING INTO WET WELL, SS LINE MUST EXTEND 2 FT. OUTSIDE WET WELL.
 3. PROVIDE COARSE BUBBLE DIFFUSER LOCATED A MINIMUM OF 2" ABOVE THE PUMP INLET, AT LEAST 2" BELOW THE PUMP OFF LEVEL, AND AS LOW IN THE SUMP AS POSSIBLE, BUT NOT LESS THAN 6" ABOVE THE BOTTOM OF THE SUMP. LOCATE AS FAR AS POSSIBLE FROM EJECTOR PUMPS AND FLOAT SWITCHES.
 4. PROVIDE 1/2" CA BALL VALVE, CHECK VALVE, & UNION TO 2" FORCED MAIN ABOVE 2" BALL VALVE.
 5. SUBMERSIBLE GRINDER PUMP PER SPECIFICATIONS. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

- SEWAGE EJECTOR GENERAL NOTES:
- A. ALL CA (COMPRESSED AIR) PIPING IN WET WELL AND TO 2 FT. OUTSIDE TO BE 3/8" SCHEDULE 40 STAINLESS STEEL WITH COMPRESSION FITTINGS, ALL OTHER TO BE 1/2" TYPE L COPPER WITH SOLDERED JOINTS.
 - B. PROVIDE 115V POWER TO AIR INJECTION PANEL AND INTERLOCK TO SHUT-OFF WHEN PUMP IS OPERATING TO PREVENT PUMP CAVITATION.
 - C. MOUNT PUMP CONTROL PANEL ON WALL.

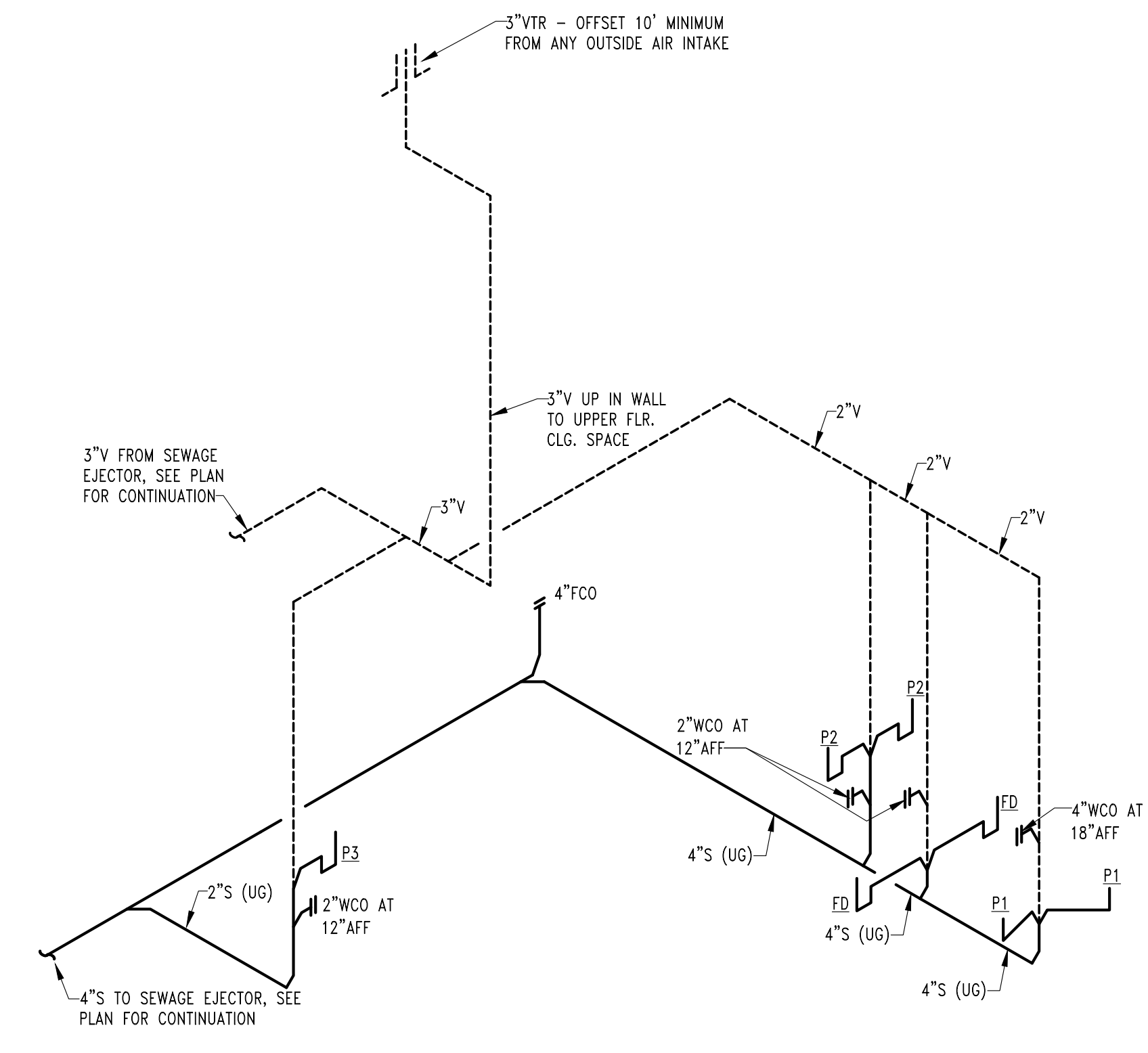
SEWAGE EJECTOR PUMP DETAIL
NO SCALE

3
P2.0



CW & HW RISER
NO SCALE

2
P2.0



SEWER & VENT RISER
NO SCALE

1
P2.0



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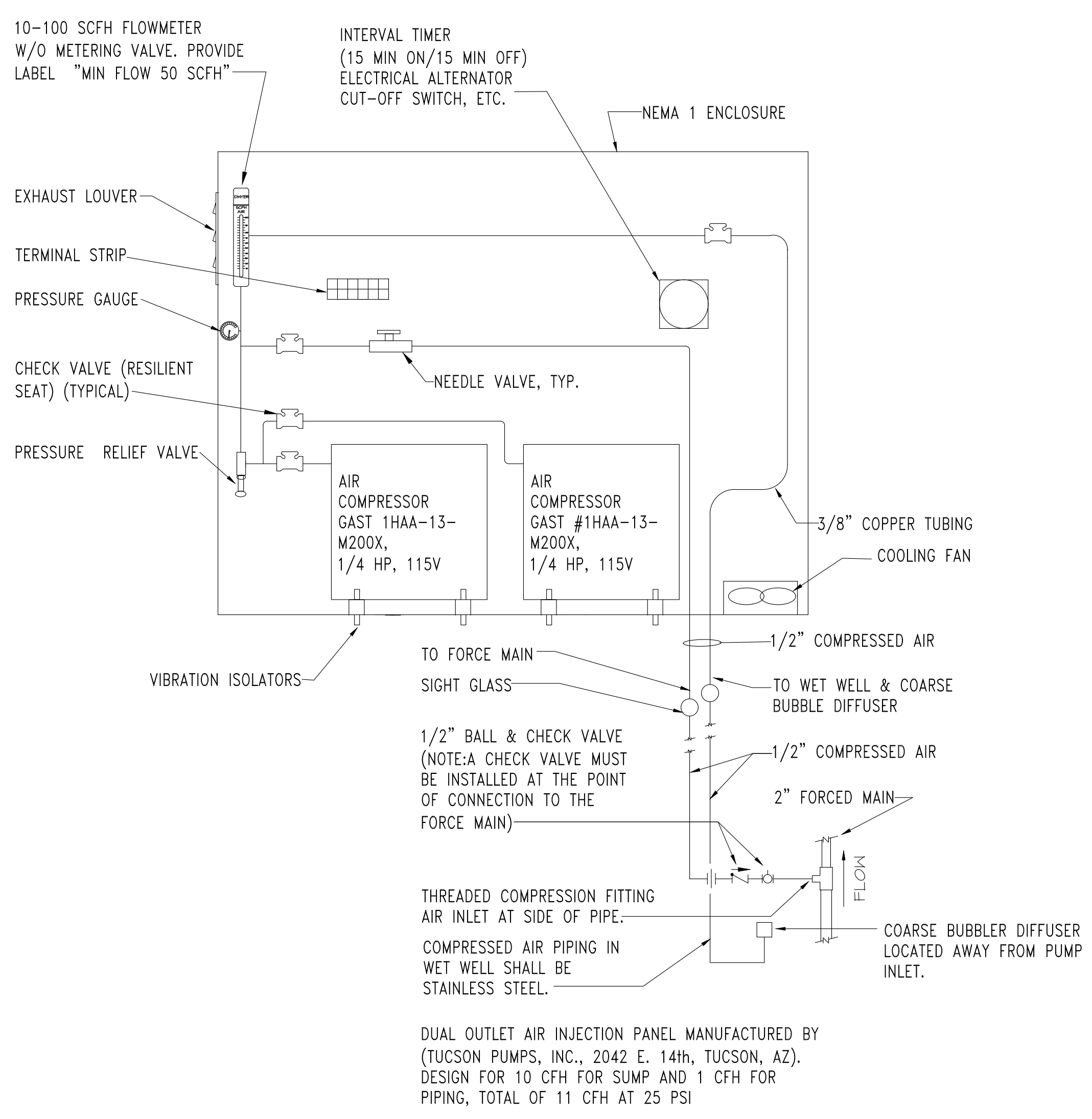
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SEWAGE EJECTOR SPECIFICATIONS:

- TWO (2) EACH, LIBERTY PUMP MODEL #PRG102A, 35 GPM @ 20 FEET OF HEAD, SUBMERSIBLE SEWAGE GRINDER PUMPS WITH, 1.0 HP, 230/1/60, 6 FLA, 3450 RPM MOTOR, CAST IRON VOLUTE AND MOTOR HOUSING, STAINLESS STEEL CUTTER AND SHAFT, DOUBLE MECHANICAL SEAL WITH UPPER AND LOWER OIL LUBRICATED BALL BEARINGS, AND BRONZE IMPELLER. PUMP SHALL BE MANUFACTURED BY LIBERTY, HOMA, GOULDS, EBARA ZOELLER, BELL & GOSSETT, PERLESS, ARMSTRONG OR APPROVED EQUAL.
- DUPLEX SYSTEM TO INCLUDE DUPLEX CONTROL PANEL IN NEMA 1 ENCLOSURE FOR INDOOR INSTALLATION CONTROL PANEL TO BE FURNISHED COMPLETE WITH MOTOR STARTERS, AMBIENT COMPENSATED BIMETAL TYPE OVERLOAD RELAYS, H.O.A. SELECTOR SWITCHES, PUMP RUNNING LIGHTS, MOISTURE AND TEMP. WARNING LIGHTS, 115 VAC CONTROL CIRCUIT TRANSFORMER, ELECTRIC ALTERNATOR, TERMINAL STRIP FOR WIRING OF EXTERNAL LIQUID LEVEL CONTROL SWITCHES, HIGH WATER ALARM AND BELL WITH SILENCE AND RESET BUTTON. PROVIDE FOUR (4) MERCURY ACTUATED LIQUID LEVEL SWITCHES SUSPENDED WITH WEIGHTS TO PROVIDE AUTOMATIC OPERATION OF PUMPS AND ACTIVATION OF THE HIGH WATER ALARM. PROVIDE PUMP START RELAY TO INTERLOCK WITH AIR INJECTION PANEL.
- PROVIDE 316 STAINLESS STEEL GUIDE RAILS TO LIFT PUMP WITHOUT PIPING WITH UPPER RAIL SUPPORT BRACKET AND BASE WITH PUMP DISCHARGE ALIGNMENT COUPLING AND GASKET.
- PROVIDE ONE (1) 48" DIAMETER X 72" DEEP FIBERGLASS BASIN COMPLETE WITH SCHEDULE 80 PVC INLET, OUTLET, AND VENT HUB, INDIVIDUAL PUMP DISCHARGE COUPLINGS, AND ELECTRICAL CONDUIT HUB. ALL HUBS AND COUPLINGS CAN BE INSTALLED IN THE FIELD BY THE INSTALLING CONTRACTOR. PROVIDE ANTI-FLOAT FLANGES.
- PROVIDE ALUMINUM COVER WITH HATCH. COVER SHALL BE 6" LARGER THAN SUMP. COVER SHALL HAVE A FLUSH FITTING ACCESS DOOR WITH STAINLESS STEEL DROP HANDLE AND HINGES TO OPEN MINIMUM 90 DEGREES. PROVIDE ALL GASKETS STAINLESS STEEL BOLTS AND WASHERS FOR ATTACHMENT TO SUMP. COVER WITH HATCH TO BE EQUAL OF STEEL PLASTICS.
- CONTRACTOR TO INSTALL DISCHARGE PIPING FOR EACH PUMP INCLUDING NON-CLOG BALL CHECK VALVES, UNIONS, AND ISOLATION VALVES FOR A COMPLETE DISCHARGE PIPING SYSTEM. ALL DISCHARGE PIPING IN SUMP SHALL BE SCHEDULE 80 PVC (PRESSURE PIPE). ALL PIPING ABOVE FLOOR SHALL BE SCH 80 PVC OR COPPER (PRESSURE PIPE).
- INSTALL ALL PUMPS AND ACCESSORIES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON THE DRAWINGS.

PUMP SCHEDULE	
MARK	P-1 & P-2
SERVICE	SEWAGE EJECTOR
TYPE	SUBMERSIBLE
FLOW RATE (GPM)	35
DESIGN HEAD (FT)	20
MOTOR HP	1
MOTOR FLA	6
MOTOR RPM	3450
VOLTS/PHASE/HZ	230/1/60
REFERENCE	LIBERTY PUMP PRG102A
NOTES	1. SEE SEWAGE EJECTOR SPECIFICATIONS AND PROVIDE ALL EQUIPMENT AND ACCESSORIES NOTED FOR A COMPLETE SYSTEM.



CONTROL/PURGE AIR PANEL DETAIL
NO SCALE

EJECTOR PUMP GENERAL REQUIREMENTS:

CODES: CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE FOLLOWING CODES: INTERNATIONAL BUILDING CODE (2018 EDITION), INTERNATIONAL MECHANICAL CODE (2018 EDITION), INTERNATIONAL PLUMBING CODE (2018 EDITION), INTERNATIONAL ENERGY CONSERVATION CODE (2018 EDITION) AND THE INTERNATIONAL FIRE CODE (2018 EDITION) AS AMENDED BY THE LOCAL GOVERNING AGENCY.

GENERAL: THE WORK COVERED BY THIS SPECIFICATION SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, LABOR, TRANSPORTATION, TOOLS, PERMITS, FEES, INSPECTIONS, UTILITIES AND INCIDENTALS NECESSARY FOR THE COMPLETE INSTALLATION OF ALL WORK REQUIRED BY THE CONTRACT DRAWINGS.

DRAWINGS: THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND CANNOT SHOW EVERY CONNECTION IN DETAIL OR EVERY PIPE IN ITS EXACT LOCATION. THESE DETAILS ARE SUBJECT TO THE REQUIREMENTS OF ORDINANCES AND ALSO STRUCTURAL AND ARCHITECTURAL CONDITIONS. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE STRUCTURAL AND FINISH CONDITIONS AND SHALL COORDINATE WITH THE SEPARATE TRADES IN ORDER TO AVOID INTERFERENCE BETWEEN THE VARIOUS PHASES OF WORK. WORK SHALL BE LAID OUT SO THAT IT WILL BE CONCEALED IN FURRED CHASES OR ABOVE CEILINGS, ETC., IN FINISHED PORTIONS OF THE BUILDING, UNLESS SPECIFICALLY NOTED OR INDICATED TO BE EXPOSED. WORK SHALL BE INSTALLED TO AVOID CRIPPLING OF STRUCTURAL MEMBERS. ALL WORK SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE LINES OF THE BUILDING UNLESS OTHERWISE NOTED. THE APPROXIMATE LOCATION OF EACH ITEM IS INDICATED ON THE DRAWINGS. THESE DRAWINGS ARE NOT INTENDED TO GIVE COMPLETE AND EXACT DETAILS IN REGARD TO LOCATION. EXACT LOCATIONS ARE TO BE DETERMINED BY ACTUAL MEASUREMENTS OF THE BUILDING.

EQUIPMENT INSTALLATION: PROVIDE AND INSTALL UNIONS AT PROPER POINTS TO PERMIT REMOVAL OF PIPE AND EQUIPMENT WITHOUT DAMAGE TO OTHER PARTS OF THE SYSTEM. ALL EQUIPMENT SHALL BE INSTALLED IN A MANNER TO PERMIT ACCESS TO PARTS REQUIRING SERVICE WITHOUT DISASSEMBLY OF OTHER EQUIPMENT.

EXCAVATION AND BACKFILL: THE CONTRACTOR SHALL PROVIDE ALL EXCAVATION REQUIRED FOR THE INSTALLATION OF THE WORK. CONTRACTOR SHALL BACKFILL, COMPACT AND REPAIR CONCRETE OR PAVING TO MATCH EXISTING FINISH AS CLOSELY AS POSSIBLE.

SUBSTITUTIONS: EQUIPMENT OF EQUAL QUALITY TO THAT SPECIFIED MAY BE SUBSTITUTED PROVIDED IT MEETS OR EXCEEDS THE CAPACITY SCHEDULED, IS OF SIMILAR CONSTRUCTION, AND WILL FIT IN THE SPACE ALLOTTED WITH AMPLE SERVICE CLEARANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION WITH ALL OTHER TRADES (SUCH AS ELECTRICAL AND STRUCTURAL) OF ANY PRODUCT REQUIRING A CHANGE IN THE WORK OF THAT TRADE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY ADDITIONAL COSTS ASSOCIATED WITH SUCH A CHANGE. MATERIALS OF CONSTRUCTION SHALL BE AS SPECIFIED.

EJECTOR PUMP GENERAL REQUIREMENTS: CONTINUATION

SUPPORTS, ANCHORS AND SLEEVES: SUPPORT HORIZONTAL PIPING WITH STEEL CLEVIS HANGERS AND VERTICAL PIPING WITH RISER CLAMPS. PROVIDE COPPER PLATED HANGERS AND CLAMPS FOR COPPER PIPING OR WRAP THE COPPER PIPE AT HANGERS WITH TWO LAYERS OF PVC TAPE OR EQUIVALENT. HANGER SPACING AND ROD SIZE SHALL BE IN ACCORDANCE WITH THE LOCAL CODE AND/OR ASHRAE STANDARDS. SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS. THROUGH PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE PER MANUFACTURER'S UL LISTED DETAILS AND INSTRUCTIONS, EQUAL OF HILT. PIPING SHALL BE PROVIDED WITH STANDARD WEIGHT STEEL PIPE OF SIZE TO PASS PIPE AND INSULATION. PIPE SLEEVES ARE NOT REQUIRED IF PENETRATIONS ARE CORE DRILLED. PIPING SHALL NOT BE SUPPORTED FROM PENETRATION.

SHOP DRAWINGS: PROVIDE SHOP DRAWINGS AND MANUFACTURER'S DATA ON ALL PLUMBING FIXTURES AND TRIM, EQUIPMENT, MECHANICAL DEVICES AND FIRE PROTECTION SYSTEM FOR APPROVAL.

WARRANTY: PROVIDE TWO YEAR WARRANTY FROM DATE OF FINAL ACCEPTANCE ON ALL LABOR AND MATERIALS PROVIDED UNDER THIS CONTRACT.

OPERATION AND MAINTENANCE MANUAL: PROVIDE A COMPLETE INDEXED, BOUND MANUAL OF ALL EQUIPMENT REQUIRING MAINTENANCE.

TRAINING: CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO HOURS TRAINING TO THE OWNER ON THE OPERATION OF ALL EQUIPMENT.

CLEAN_UP: CONTRACTOR SHALL MAINTAIN PREMISES IN CLEAN CONDITION AT END OF EACH DAY AND THOROUGHLY CLEAN_UP AT END OF CONSTRUCTION.

EJECTOR PUMP SYSTEM:

PIPING: GRAVITY DRAIN SANITARY SOIL AND VENT PIPING SHALL BE AS SPECIFIED ON THE PLUMBING PLANS OR SPECIFICATIONS.

PUMPED DISCHARGE PIPING WITHIN THE BUILDING AREA SHALL BE SCHEDULE 80 PVD WITH DWV FITTINGS AND LOW VOC SOLVENT JOINTS. THIS PIPING SHALL BE SOLID CORE PIPE DESIGNED FOR POSITIVE PRESSURE.

COMPRESSED AIR PIPING ABOVE GRADE SHALL BE TYPE "L" HARD TEMPER COPPER PIPE WITH WROUGHT FITTINGS AND SOLDER JOINTS.

COMPRESSED AIR PIPING WITHIN THE WET WELL SHALL BE SCHEDULE 40 STAINLESS STEEL WITH THREADED OR COMPRESSION JOINTS.

EJECTOR PUMP GENERAL REQUIREMENTS: CONTINUATION

VALVES: VALVES FOR PUMPED DISCHARGE PIPING SHALL BE SCHEDULE 40 PVC OR BRONZE AS MANUFACTURED BY KITZ, STOCKHAM, NIBCO, APOLLO, MILWAUKEE OR JENKINS.

BALL VALVES SHALL BE BRONZE, TWO PIECE BODY, FULL PORT FORGED BRASS BALL, SILICON BRONZE STEM, PTFE OR HDPE SEAT, PACKING AND GASKET; THREADED OR SOLDERED ENDS. VALVES SHALL CONFORM TO MSS SP-110

CHECK VALVES SHALL BE CLASS 125, BRONZE BODY, BRONZE DISC, Y-PATTERN, SWING CHECK DESIGN, THREADED OR SOLDERED ENDS. VALVES SHALL CONFORM TO MSS SP-80.

CLEANOUTS: SEE PLUMBING PLANS AND SPECIFICATIONS FOR FLOOR CLEANOUTS.

EXECUTION: SLOPE DRAINAGE PIPING INSIDE AND OUTSIDE OF BUILDING IN ACCORDANCE WITH REQUIREMENTS OF THE GOVERNING PLUMBING CODES.

ESTABLISH GRADE LINES WITH SURVEYOR'S LEVEL. VERIFY LOCATION OF SEWER TAPS BEFORE START OF WORK AND MAKE NECESSARY GRADE ADJUSTMENTS. DRAIN VENT LINES BACK TO SOIL LINES.

ALL PIPING SHALL BE INSTALLED AT RIGHT ANGLES TO THE BUILDING LINES AND PLUMB.

WRAP METALLIC PIPE IN CONTACT WITH CONCRETE BLOCK, SLABS OR STUCCO WITH 10 MIL THICK PVC TAPE TO PREVENT CORROSION.

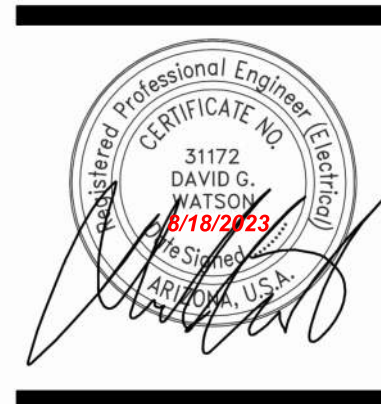
TEST ALL PIPING PRIOR TO COVERING OR BACKFILLING.

TEST PUMPED DISCHARGE PIPING AT 60 PSIG FOR A CONTINUOUS PERIOD OF NOT LESS THAN FOUR (4) HOURS. DURING THIS TIME, CAREFULLY INSPECT THE SYSTEM FOR LEAKS. CONTRACTOR SHALL REPAIR ALL LEAKS IF NECESSARY AND TEST AGAIN UNTIL NO LEAKAGE IS DETECTED.

TEST COMPRESSED AIR PIPING AT 100 PSIG FOR A CONTINUOUS PERIOD OF NOT LESS THAN FOUR (4) HOURS. DURING THIS TIME, CAREFULLY INSPECT THE SYSTEM FOR LEAKS. CONTRACTOR SHALL REPAIR ALL LEAKS IF NECESSARY AND TEST AGAIN UNTIL NO LEAKAGE IS DETECTED.

TEST VENT SYSTEMS BY PLUGGING LINES AND FILLING SYSTEMS WITH WATER TO A STATIC HEAD OF 10 FEET OF WATER. OBSERVE WATER LEVEL FOR A TWO (2) HOUR PERIOD. IF LEVEL IS LOWERED, INDICATING LEAKAGE, REPAIR LEAKS AND TEST AGAIN UNTIL NO FURTHER LEAKAGE IS DETECTED.

TEST GRAVITY DRAIN SEWER AS REQUIRED IN THE PLUMBING PLANS AND SPECIFICATIONS.



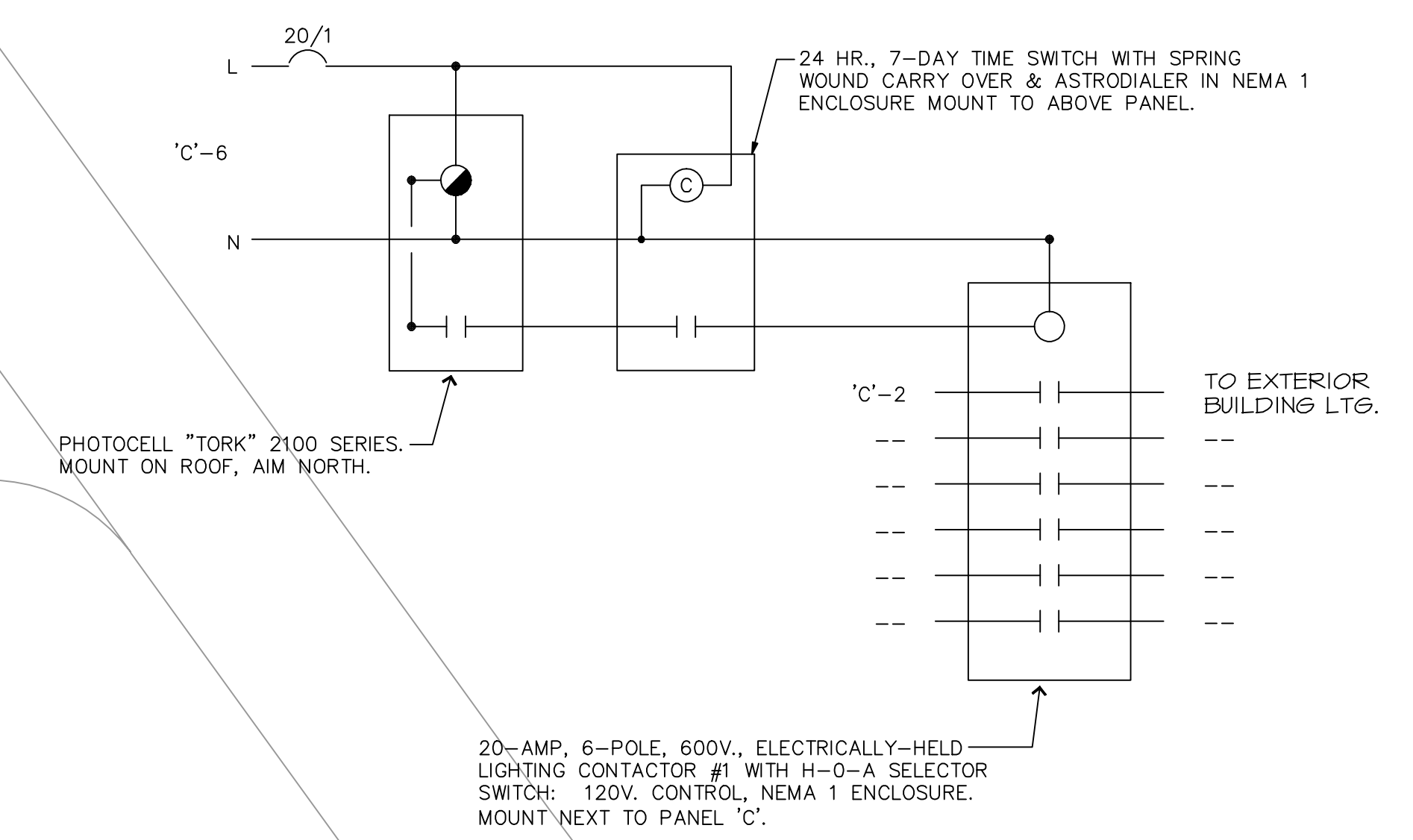
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SITE PLAN GENERAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL CONTACT POWER CO. REGARDING EXACT LOCATION OF ALL PRIMARY SERVICE EQUIPMENT, TRENCH LOCATIONS, TRANSFORMER LOCATION, METER LOCATION, ETC.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE NECESSARY SECONDARY CONDUITS, POWER TRENCHING, BACKFILL, CONCRETE PADS FOR TRANSFORMERS AND SERVICE EQUIPMENT AND CONDUIT STUBS INTO TRENCH AS REQUIRED BY POWER CO. AND TO THEIR SPECIFICATIONS.
3. ELECTRICAL CONTRACTOR SHALL CONTACT TELEPHONE COMPANY REGARDING EXACT LOCATION OF ALL PRIMARY SERVICE EQUIPMENT, TRENCH LOCATIONS, ETC.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE TRENCHING, BACKFILL, AND CONDUIT STUBS INTO TRENCH AS REQUIRED BY TELEPHONE COMPANY AND TO THEIR SPECIFICATIONS.
5. ALL WIRING SHALL BE COPPER UNLESS NOTED OTHERWISE. INSULATION SHALL BE TYPE "HHW" OR "THHN/THWN".
6. ALL WIRING FOR OUTSIDE LIGHTING SHALL BE A MINIMUM OF #10 COPPER WITH TYPE "THHN" INSULATION. FOR UNDERGROUND CIRCUITS RUN IN P.V.C., PROVIDE A #10 COPPER BOND IN ADDITION TO CIRCUIT CONDUCTORS.
7. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND COMPLIANCE WITH THE UTILITY COMPANY'S REQUIREMENTS. WITHIN TWO WEEKS AFTER AWARD OF CONTRACT, SUBMIT (2) COMPLETE SETS OF PLANS, INCLUDING PLOT OF SURVEY, TO UTILITY COMPANY FOR COORDINATION.
8. ROUTING OF INCOMING POWER AND TELEPHONE SERVICE SHOWN ARE FOR ESTIMATING PURPOSES ONLY. ACTUAL ROUTING, CONDUIT, TRENCH, AND PAD REQUIREMENTS SHALL BE AS SPECIFIED BY THE UTILITY COMPANY. CONFIRM ALL REQUIREMENTS WITH UTILITIES PRIOR TO INSTALLATION.

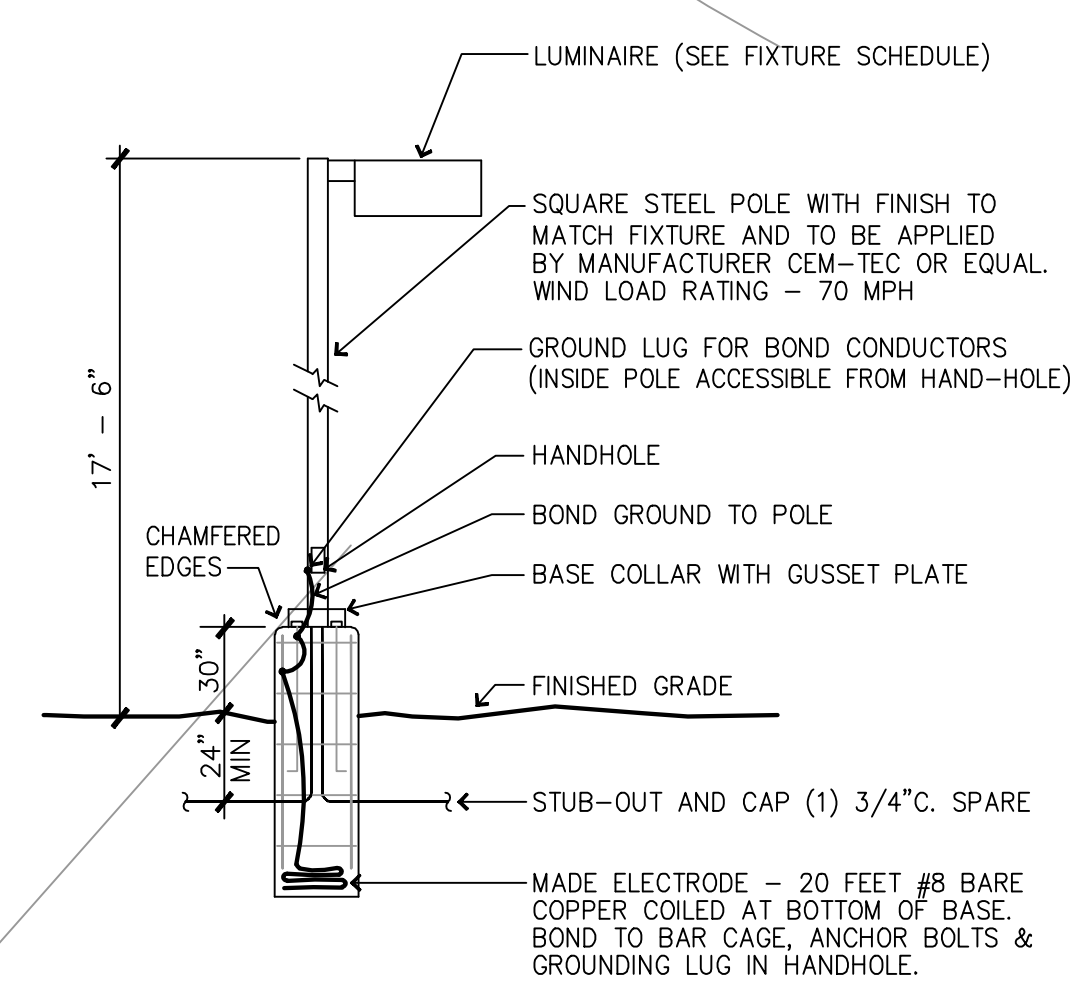
KEYED NOTES:

- 1 PROVIDE (3) #10 CU., (1) #10 CU. GND., 1" THROUGHOUT SITE LIGHTING CIRCUIT.
- 2 EXTEND TO EXTERIOR LIGHTING ON LOWER LEVEL. SEE E2.1 FOR CONTINUATION OF EXTERIOR LIGHTING CIRCUIT.



SITE LIGHTING CONTROL DIAGRAM

N.T.S.



POLE LIGHT FIXTURE 'P1' & 'P2' DETAIL

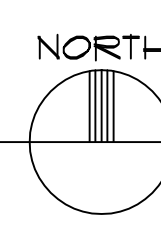
N.T.S.

NOTE:
LIGHT FIXTURE DETAIL SHOWN FOR SCHEMATIC PURPOSES ONLY; GENERAL CONTRACTOR SHALL OBTAIN FINAL ENGINEERED POLE BASE DETAIL FROM POLE MANUFACTURER OR STRUCTURAL ENGINEER PRIOR TO ANY WORK.

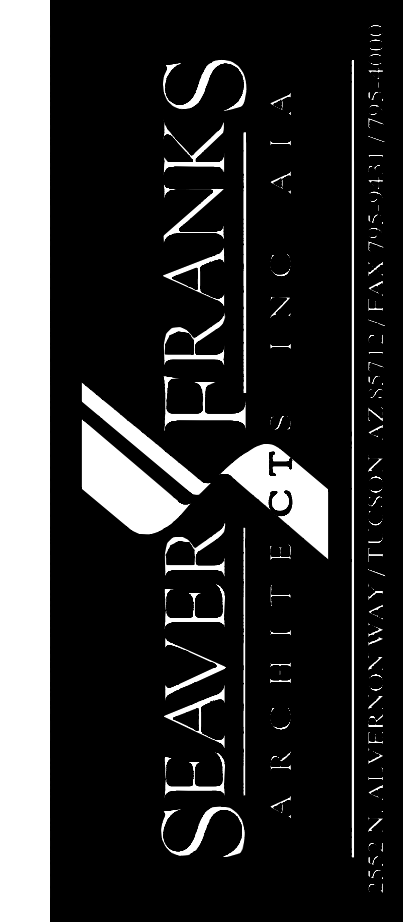


1 ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"



TENANT IMPROVEMENT
ELECTRICAL SITE PLAN



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TUCSON, ARIZONA 85747

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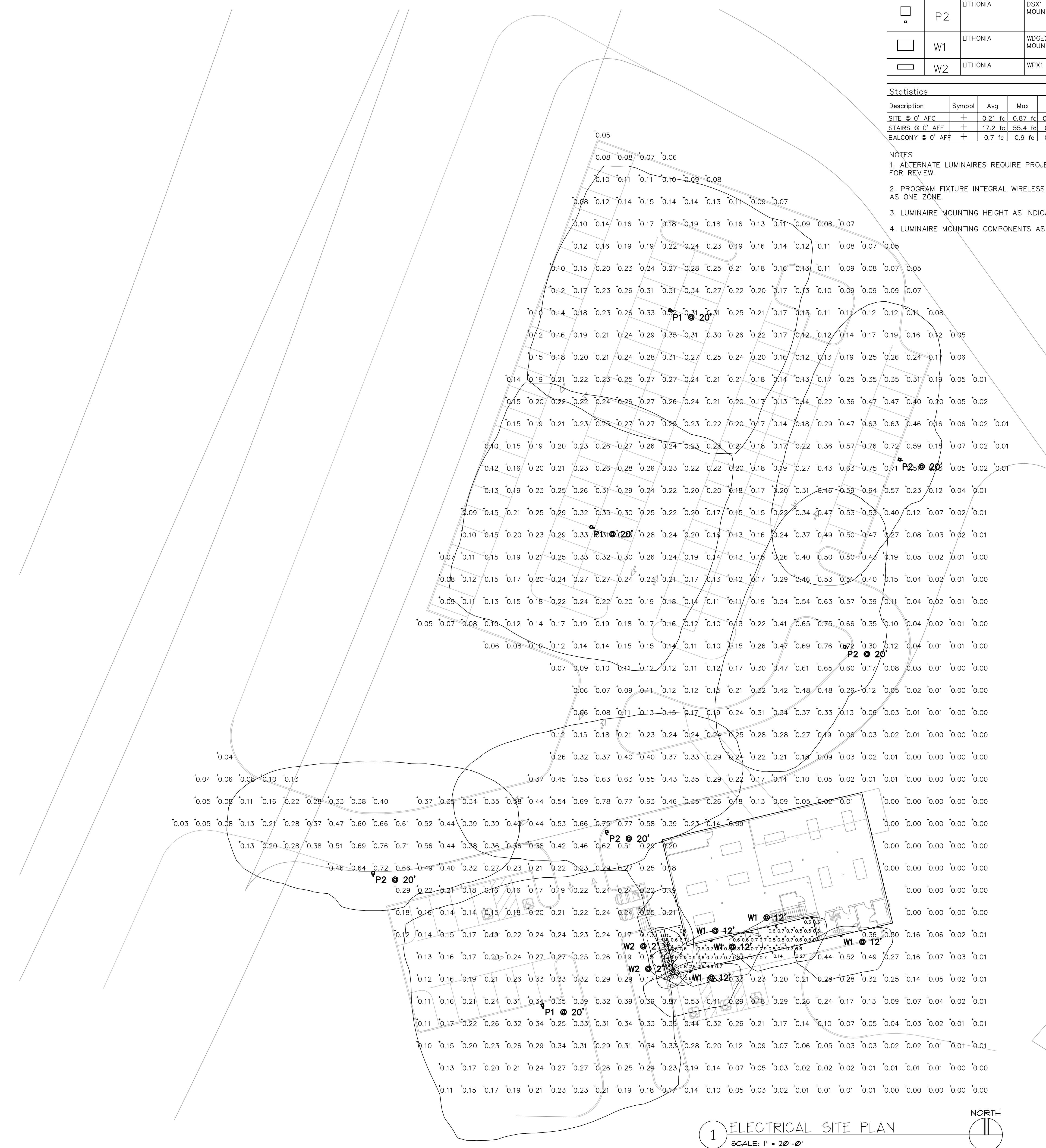


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Description										
Symbol	Label	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	
	P1	LITHONIA	DSX1 LED P7 AMBLW AMCRI T5W VOLTAGE MOUNTING NLTAIR2 PIRHN FINISH	SINGLE POLE MOUNT WITH INTEGRAL WIRELESS BI-LEVEL MOTION/AMBIENT SENSOR AND TYPE 5 WIDE OPTICS	LIMITED WAVELENGTH AMBER LED	1	3509	0.9	81.35	
	P2	LITHONIA	DSX1 LED P7 AMBLW AMCRI T3M VOLTAGE MOUNTING NLTAIR2 PIRHN HS FINISH	SINGLE POLE MOUNT WITH INTEGRAL WIRELESS BI-LEVEL MOTION/AMBIENT SENSOR, TYPE 3 MEDIUM OPTICS, AND HOUSE SIDE SHIELD	LIMITED WAVELENGTH AMBER LED	1	2867	0.9	81.35	
	W1	LITHONIA	WDGE2 LED P0 AMB LW T3M VOLTAGE MOUNTING FINISH	WDGE2 LED WITH P0 - PERFORMANCE PACKAGE, AMBER LIMITED WAVELENGTH TYPE 3 MEDIUM OPTIC	LIMITED WAVELENGTH AMBER LED	1	741	0.9	15.3017	
	W2	LITHONIA	WPX1 LED P1 30K VOLTAGE FINISH	ADA COMPLIANT EXTERIOR WALLPACK	3000K LED	1	1537	0.9	11.49	

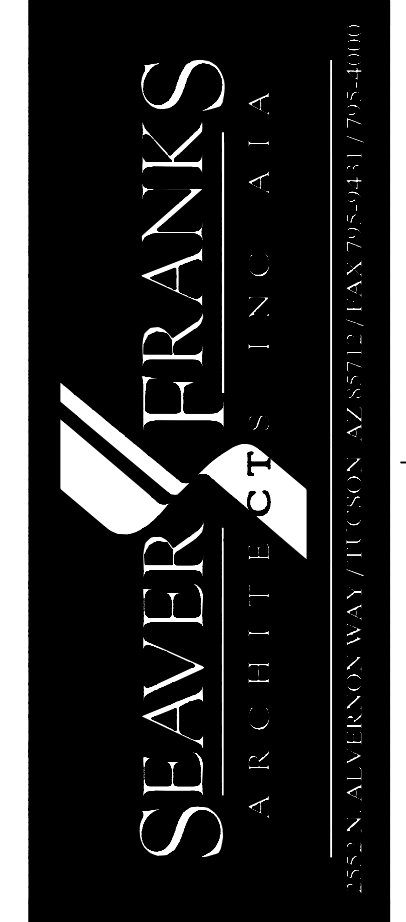
Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
SITE @ 0' AFG	+	0.21 fc	0.87 fc	0.00 fc	N/A	N/A
STAIRS @ 0' AFF	+	17.2 fc	55.4 fc	0.0 fc	N/A	N/A
BALCONY @ 0' AFF	+	0.7 fc	0.9 fc	0.3 fc	3.0:1	2.3:1

- NOTES
1. ALTERNATE LUMINAIRES REQUIRE PROJECT SPECIFIC POINT BY POINT PHOTOMETRY FOR REVIEW.
 2. PROGRAM FIXTURE INTEGRAL WIRELESS SENSORS TOGETHER TO OPERATE IN UNISON AS ONE ZONE.
 3. LUMINAIRE MOUNTING HEIGHT AS INDICATED.
 4. LUMINAIRE MOUNTING COMPONENTS AS REQUIRED FOR INSTALLATION.



1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"

TENANT IMPROVEMENT
SITE LIGHTING
PHOTOMETRICS



GVR DEL SOL CLUBHOUSE
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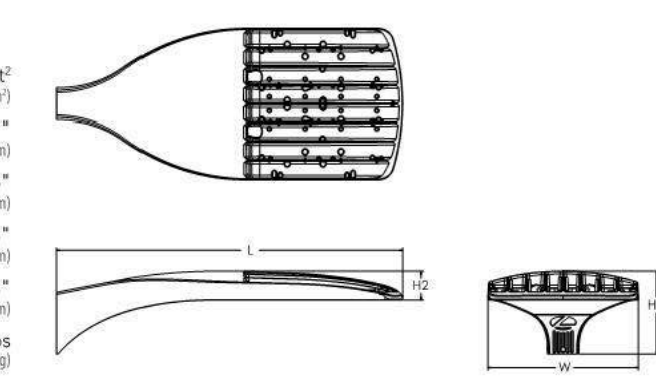




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Specifications
EPA: 0.69 f/10
Length: 32.71" (834mm)
Width: 14.26" (362mm)
Height H1: 7.88" (200mm)
Height H2: 2.73" (69mm)
Weight: 34 lbs (15.4kg)



Introduction
The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in Amber LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications.

Ordering Information EXAMPLE: DSX1 LED P7 AMBPC AMCRI T3M MVOLT SPA NLTAIR2 PIRHN DDBX8

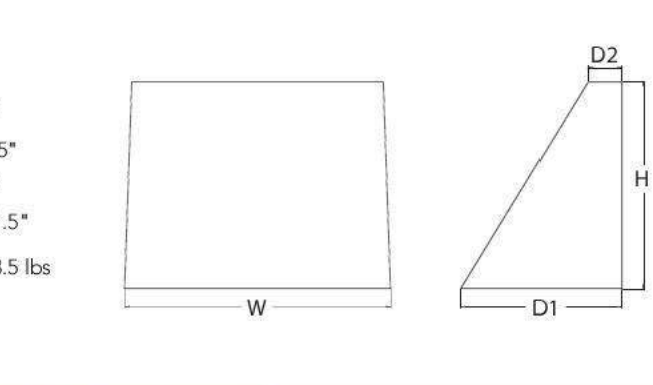
Series	LEDs	Color Temperature	Color Rendering Index	Mounting
DSX1 LED	Demanded optics P1 P6 P3 P8 P4 P9 P5	AMBER	Ambient	Standard
				Standard
				Standard
				Standard
DSX1 LED	Demand optics P10 P11 P12	AMBER	Ambient	Standard
				Standard
				Standard
				Standard

Control options	Other options	Finish
Shipped installed NLTAIR2 PIRHN 4 light 4000K 2 included with best modes / ambient sensor 4-10 mounting height, ambient sensor ambient 4-26 10-30	PIR7 Sensor pre-occupied only (ambush sensor) 10-30 D20 10-30 mounting height, ambient sensor ambient 4-26 10-30 BLS0 10-30 mounting height, ambient sensor ambient 4-26 10-30 DMS 10-30 mounting height, ambient sensor ambient 4-26 10-30 DS Dual switching 10-30	DDBX0 Dark Bronze DDBL0 Black DDBN0 Natural Aluminum DDBW0 White DDBR0 Bronze DDBS0 Satin Bronze DDBA0 Anodized Aluminum DDBW0 White DDBR0 Bronze DDBS0 Satin Bronze DDBA0 Anodized Aluminum

LITHONIA LIGHTING COMMERCIAL OUTDOOR One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com DSX1 LED AMBER Rev. 04/2022 Page 1 of 11



Specifications
Depth (D1): 7"
Depth (D2): 1.5"
Height: 9"
Width: 11.5"
Weight: 13.5 lbs (without options)



Introduction
The WDGE2 LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean, rectangular design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with night® AIR wireless controls, the WDGE2 family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

WDGE LED Family Overview

Luminaire	Optics	Standard LED FC	Color Temp. 30°C	Series	P6	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W	18W	Standard / no light	---	250	1,200	2,000	---	---	---
WDGE2 LED	Visual Comfort	10W	18W	Standard / no light	---	1,200	2,000	3,000	4,500	6,000	---
WDGE2 LED	Precision Refractive	10W	18W	Standard / no light	---	1,200	2,000	3,000	4,500	6,000	---
WDGE2 LED	Precision Refractive	15W	18W	Standard / no light	---	1,800	3,000	4,500	6,000	7,500	---
WDGE4 LED	Precision Refractive	15W	18W	Standard / no light	---	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBX8

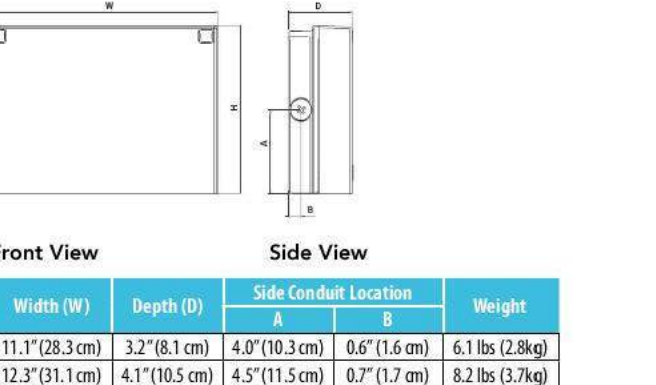
Series	Package	Color Temperature	CRI	Mounting	Shipped installed	Shipped separately
WDGE2 LED	P1	27K	70CRI	15W	15W	15W
	P2	30K	80CRI	15W	15W	15W
	P3	40K	80CRI	15W	15W	15W
	P4	5000K	80CRI	15W	15W	15W

Options	Standard Sensor/Controls	Finish
ET0W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	PIR7 10-30 mounting height, ambient sensor ambient 4-26 10-30	DDBX0 Dark Bronze
ET20W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	DMS 10-30 mounting height, ambient sensor ambient 4-26 10-30	DDBL0 Black
ET30W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	DS Dual switching 10-30	DDBN0 Natural Aluminum
ET40W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	DMS 10-30 mounting height, ambient sensor ambient 4-26 10-30	DDBW0 White
ET50W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	DS Dual switching 10-30	DDBR0 Bronze
ET60W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	DS Dual switching 10-30	DDBS0 Satin Bronze
ET70W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	DS Dual switching 10-30	DDBA0 Anodized Aluminum
ET80W Emergency battery backup, Certified in CA Title 20, MAJES 1000, 20' min	DS Dual switching 10-30	DDBW0 White

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Specifications
Depth (D1): 7"
Depth (D2): 1.5"
Height: 9"
Width: 11.5"
Weight: 13.5 lbs (without options)



Introduction
The WPX LED wall packs are energy-efficient, cost-effective, and aesthetically appealing solutions for both HID wall pack replacement and new construction opportunities. Available in three sizes, the WPX family delivers 1,500 to 9,200 lumens with a wide, uniform distribution.

The WPX full cut-off solutions fully cover the footprint of the HID glass wall packs that they replace, providing a neat installation and an upgraded appearance. Reliable IP68 construction and excellent LED lumen maintenance ensure a long service life. Photocell and emergency egress battery options make WPX ideal for every wall mounted lighting application.

Ordering Information EXAMPLE: WPX2 LED 40K MVOLT DDBX8

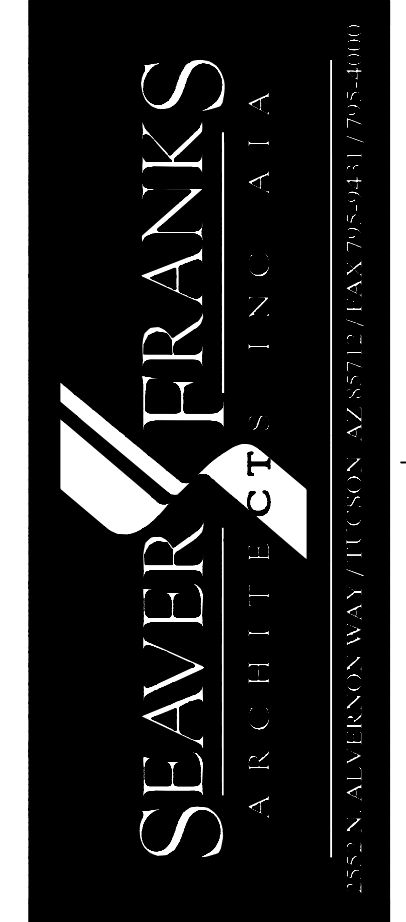
Series	Color Temperature	Voltage	Options	Finish
WPX1 LED P1	1500 Lumens, 10W	30K 300K	MPRO 100' 277V	Black
WPX1 LED P2	3000 Lumens, 20W	40K 400K	347 347V	White
WPX2 LED	6000 Lumens, 40W	50K 500K		Black
WPX3 LED	9200 Lumens, 80W			White

FEATURES & SPECIFICATIONS
INTENDED USE
The WPX LED wall packs are designed to provide a cost-effective, energy-efficient solution for the one-to-one replacement of existing HID wall packs. The WPX1, WPX2, and WPX3 are ideal for replacing up to 100W, 200W, and 400W HID luminaires respectively. WPX luminaires deliver a uniform, wide distribution. WPX is rated for 40°C to 40°C.
CONSTRUCTION
The WPX LED wall packs feature a cast aluminum body with optimal thermal management that both minimizes LED junction and sensor temperatures. The luminaires are IP68 rated and sealed against moisture or environmental contaminants.
ELECTRICAL
Lighting configurations consist of high efficacy LEDs and LED lumen maintenance of 100,000 hours. Color temperature CCT options of 3000K, 4000K and 5000K with minimum CRI of 80. Electronic drivers ensure system power factor >0.95 and THD <20%. All luminaires have a 2.5A surge current and are tested with a standard surge protection device. All luminaires are tested to meet UL 1591 and are listed on UL ETL.
WARRANTY
The luminaire warranty is 5 years or 50,000 hours, whichever is less. All other options and installed accessories are warranted as shown on the luminaire specification sheet.
Notes:
1. All WPX wall packs come with 18V surge protective device, except WPX1 LED P1 and P2 which come with 250V surge protection standard. Add 3P40V option to get WPX1 LED P1 and P2 with 250V surge protection standard. Add 3P40V option to get WPX1 LED P1 and P2 with 250V surge protection standard.
2. Battery pack options only available on WPX1 and WPX2.
3. Battery pack options not available with 24V and PE options.

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LUMEN DENSITY	
GREEN VALLEY RECREATION - DEL SOL CLUBHOUSE	
LIGHTING AREA PER SECTION 401 OF 2012-14 CITY OF TUCSON/PIMA COUNTY OUTDOOR LIGHTING CODE	2.93 ACRES
PROPERTY AREA	2.93 ACRES
ALLOWABLE LUMENS PER ACRE PER TABLE 401.1 OF 2012-14 CITY OF TUCSON/PIMA COUNTY OUTDOOR LIGHTING CODE - OPTION #1 OUTDOOR LIGHTING CODE WITH THE USE OF LIMITED WAVELENGTH AMBER LED'S (PER ACRE AND FULL CUT-OFF)	18,000.0 LUMENS
TOTAL LUMENS ALLOWED FOR THIS SCOPE OF WORK	52,740.0 LUMENS/ACRE
NEW LUMENS ADDED UNDER THIS SCOPE OF WORK THIS SCOPE OF WORK (POLE MOUNTED, FULL CUT-OFF FIXTURES ONLY)	
TYPE "P1" (3) TOTAL FIXTURES	14,036.0 LUMENS
TYPE "P2" (4) TOTAL FIXTURES	8,601.0 LUMENS
TYPE "W1" (5) TOTAL FIXTURES	3,705.0 LUMENS
TOTAL	26,342.0 LUMENS
ALLOWABLE LUMENS PER ACRE PER TABLE 401.1 OF 2012-14 CITY OF TUCSON/PIMA COUNTY OUTDOOR LIGHTING CODE - OPTION #1 LIMITED ON NON-LPS FULL CUT-OFF	3,000.0 LUMENS
TOTAL LUMENS ALLOWED FOR THIS SCOPE OF WORK	8,790.0 LUMENS/ACRE
NEW LUMENS ADDED UNDER THIS SCOPE OF WORK THIS SCOPE OF WORK (POLE MOUNTED, FULL CUT-OFF FIXTURES ONLY)	
TYPE "W2" (2) TOTAL FIXTURES	3,074.0 LUMENS
TOTAL	3,074.0 LUMENS
LUMEN DENSITY: TOTAL EXTERIOR LUMENS	29,416.0 LUMENS
THE LUMEN DENSITY OF THIS PROJECT MEETS THE 2012-14 CITY OF TUCSON/PIMA COUNTY OUTDOOR LIGHTING CODE	
AS PER 105.2.1 SPECIAL INSPECTION SHALL BE REQUIRED WHEN THE LUMENS OR NET AREA ARE GREATER THAN 100,000 OR 75% OF THE ALLOWABLE LUMENS PER TABLE 401.1, WHICHEVER IS LESS. A SPECIAL INSPECTION IS NOT REQUIRED.	

TENANT IMPROVEMENT
SITE LIGHTING
SPEC. SHEETS & LUMEN CAL.



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1 ELECTRICAL DEMO LIGHTING/POWER PLAN
 SCALE: 1/4" = 1'-0"
 UPPER LEVEL

KEYED NOTES:

- 1 SCOPE OF UPPER FLOOR DEMO WORK IS TO DEMO EXISTING WALL AND ELECTRICAL DEVICES ON DEMO'D WALL.

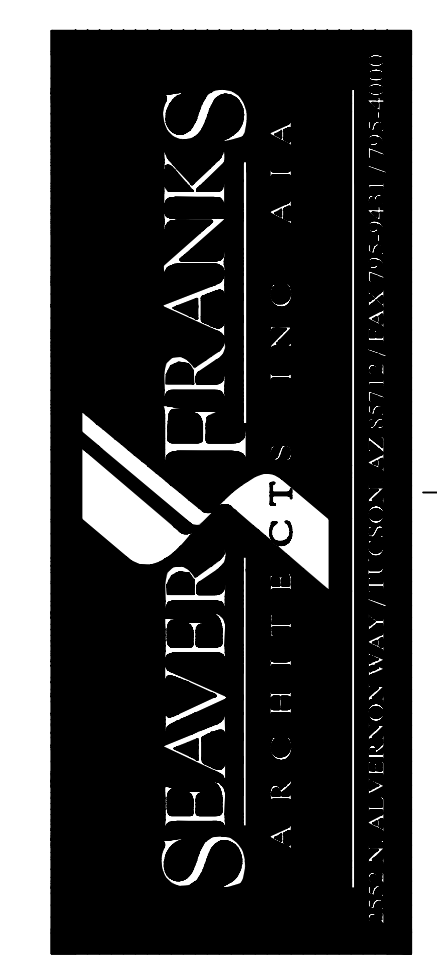
SHEET SYMBOLS

- (E) INDICATES EXISTING FIXTURE OR DEVICE TO REMAIN. CLEAN, REPAIR OR REPLACE AS REQUIRED.
- (R) INDICATES EXISTING FIXTURE OR DEVICE TO BE RELOCATED AS SHOWN. CLEAN, REPAIR OR REPLACE AS REQUIRED.
- (X) INDICATES EXISTING FIXTURE OR DEVICE TO BE REMOVED. REMOVE EXISTING CONDUCTORS BACK TO NEXT REMAINING DEVICE.
- (N) INDICATES NEW FIXTURE OR DEVICE.



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TENANT IMPROVEMENT
 ELECTRICAL DEMO
 PLAN - UPPER LEVEL



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 PROJ. NO. 37036
 DRG. SCALE AS NOTED



SHEET
 ED1.C



KEYED NOTES:

- 1 SCOPE OF LOWER FLOOR DEMO WORK IS TO DEMO ALL EXISTING FLUORESCENT LIGHTING AND REPLACE WITH NEW LED LIGHTING. SEE LIGHTING FLOOR PLAN.

SHEET SYMBOLS

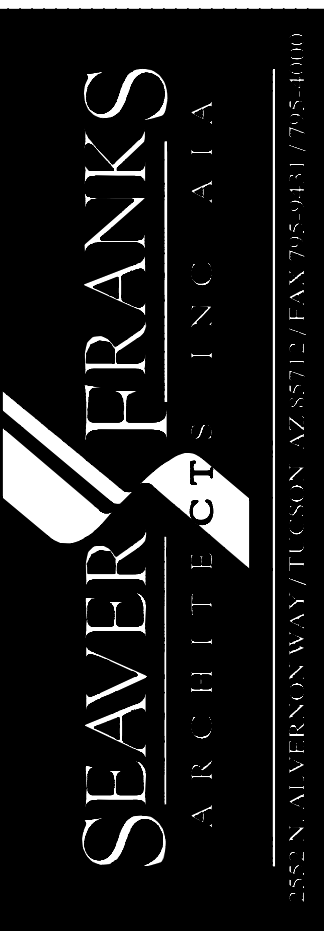
- (E) INDICATES EXISTING FIXTURE OR DEVICE TO REMAIN. CLEAN, REPAIR OR REPLACE AS REQUIRED.
- (R) INDICATES EXISTING FIXTURE OR DEVICE TO BE RELOCATED AS SHOWN. CLEAN, REPAIR OR REPLACE AS REQUIRED.
- (X) INDICATES EXISTING FIXTURE OR DEVICE TO BE REMOVED. REMOVE EXISTING CONDUCTORS BACK TO NEXT REMAINING DEVICE.
- (N) INDICATES NEW FIXTURE OR DEVICE.



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**TENANT IMPROVEMENT
ELECTRICAL DEMO
PLAN - LOWER LEVEL**



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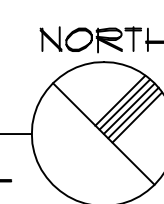
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ED1.1

1 ELECTRICAL LIGHTING/POWER DEMO PLAN

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

LOWER LEVEL

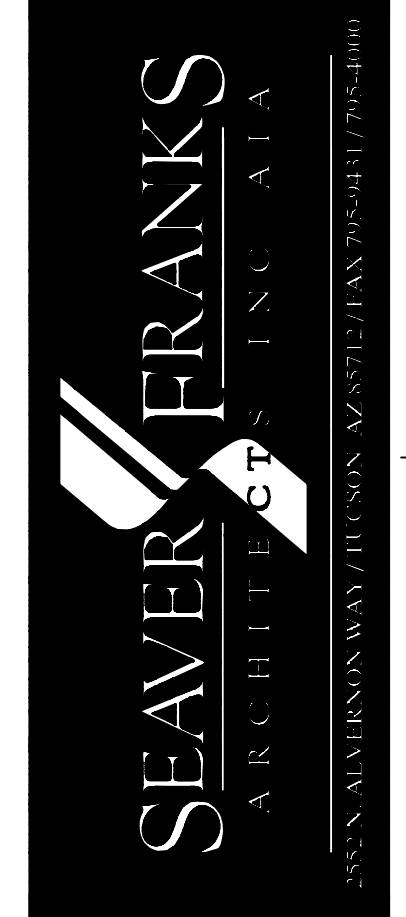


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TENANT IMPROVEMENT
ELECTRICAL POWER PLAN
UPPER LEVEL



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

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DRG. SCALE AS NOTED

SHEET

E1.0



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GENERAL NOTES:

ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH 2017 (OR LATEST ADOPTED) NATIONAL ELECTRICAL CODES AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND TOWN OF GREEN VALLEY AMENDMENTS TO N.E.C.

ALL WIRING SHALL BE COPPER UNLESS OTHERWISE NOTED OTHERWISE. INSULATION SHALL BE TYPE XHHW OR THHN/THWN. MINIMUM CONDUCTOR SIZE IS #12 AWG. LARGER CONDUCTORS TO BE USED WHEN INDICATED. #10 AWG. NEUTRAL CONDUCTOR WHEN COMMON WITH 2 OR 3 (208Y/120) VOLT CIRCUITS.

PROVIDE BOND WIRE IN ALL RACEWAYS, SIZED PER N.E.C. ART. #250.

INSTALL ALL WIRING IN APPROVED METALLIC RACEWAY. WIRING METHODS (AC, MC, NM, SE, UF OR SIMILAR CABLES) ARE NOT APPROVED.

ALL PENETRATIONS OF FIRE RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAILS THAT CONFORM TO UNDERWRITERS LABORATORY LISTINGS FOR THROUGH PENETRATIONS FIRESTOP SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS WHICH SHOW COMPLETE CONFORMANCE TO THE U.L. LISTING TO THE INSPECTORS. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED.

CONTRACTOR IS TO VERIFY CONDITION OF EXISTING INSTALLATIONS BY FIELD INSPECTION. CONTRACTOR IS TO PROVIDE NEW WIRE, CONDUIT, AND BOXES AS REQUIRED WITH NO ADDITIONAL COST.

CONTRACTOR IS TO COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.

ALL GENERAL USE RECEPTACLES MOUNTED WITHIN 6' OF A BASIN OR SINK SHALL BE G.F.C.I.

ALL RECEPTACLES, LIGHTING AND DATA/TELEPHONE COVER PLATE TYPES, COLORS AND FINISHES SHALL MATCH EXISTING. ALL WIRING DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE.

CONTRACTOR IS TO PROVIDE BOND WIRE IN ALL RACEWAYS, SIZED PER N.E.C. ART. #250.

CONTRACTOR IS TO VERIFY EXACT LOCATIONS, MOUNTING HEIGHTS AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PROVIDED BY OTHERS PRIOR TO ROUGH-IN. CONTRACTOR IS TO PROVIDE DISCONNECT SWITCHES AND TRANSFORMERS AS REQUIRED, AND FINAL CONNECTIONS TO EQUIPMENT PER OWNER.

CONTRACTOR IS TO PROVIDE AND INSTALL ADDITIONAL EXIT SIGNS, EMERGENCY LIGHTS AND NIGHT LIGHTS IF REQUIRED BY GOVERNING INSPECTOR. ALL LIGHTING FIXTURES TO BE INDEPENDENT LABORATORY LISTED.

ELECTRICAL CONTRACTOR SHALL PROPERLY SUPPORT ALL EXISTING AND NEW CONDUIT FROM NEW SUPPORTS PER NEC ART. 300-11.

2' X 4' FIXTURES SHALL BE SUPPORTED BY GALVANIZED CADMIUM PLATED JACK CHAINS AND SAFETY "S" HOOKS ATTACHED TO THE BUILDING STRUCTURE. LEAVE FIXTURES CLEAN OF DIRT, DUST, GREASE SPOTS, DEBRIS. ALL GLASS, PLASTIC AND OTHER COMPONENTS ARE TO BE UNSCRATCHED AND UNBROKEN PRIOR TO ACCEPTANCE.

CONTRACTOR MAY REUSE THE EXISTING CONDUIT, BRANCH CIRCUITS, DEVICES AND BACK BOXES TO THE EXTENT POSSIBLE. ALL REUSED CONDUCTORS SHALL MATCH DESIGNED CONDUCTOR SIZES OR THEY SHALL BE REPLACED.

KEYED NOTES:

- 1 RELOCATE EXISTING RECEPTACLE AS SHOWN.
- 2 EXISTING PANEL #1 TO BE RELABELED AS PANEL 'A'. ALL PANELS TO BE LABELED AS PER 2017 NEC 110.16(B) AND 408.4 (A).
- 3 EXISTING PANEL #2 TO BE RELABELED AS PANEL 'B'. ALL PANELS TO BE LABELED AS PER 2017 NEC 110.16(B) AND 408.4 (A).
- 4 DUE TO STAIR ADDITION. ELECTRICAL CONTRACTOR TO DEMO ALL LIGHTING IN CEILING AREA NEAR STAIR. REMOVE ALL CEILING LIGHTING AND REPLACE WITH NEW.

SHEET SYMBOLS

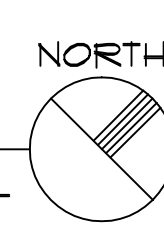
- (E) INDICATES EXISTING FIXTURE OR DEVICE TO REMAIN. CLEAN, REPAIR OR REPLACE AS REQUIRED.
- (R) INDICATES EXISTING FIXTURE OR DEVICE TO BE RELOCATED AS SHOWN. CLEAN, REPAIR OR REPLACE AS REQUIRED.
- (X) INDICATES EXISTING FIXTURE OR DEVICE TO BE REMOVED. REMOVE EXISTING CONDUCTORS BACK TO NEXT REMAINING DEVICE.
- (N) INDICATES NEW FIXTURE OR DEVICE.

ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT *						
EQUIP. NO.	VOLT/ PHASE	FLA	HP	HEATING (KW)	WIRE / CONDUIT SIZE	REMARKS
CU-1	208/3Ø	25.0	-	-	(3) #10 CU., (1) #10 CU. GND. 3/4"Ø	VERIFY CONTROLS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
CU-2	208/3Ø	20.0	-	-	(3) #10 CU., (1) #10 CU. GND. 3/4"Ø	VERIFY CONTROLS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
FC-1	208/3Ø	6.4	-	-	(3) #12 CU., (1) #12 CU. GND. 3/4"Ø	VERIFY CONTROLS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
FC-2	208/3Ø	6.4	-	-	(3) #12 CU., (1) #12 CU. GND. 3/4"Ø	VERIFY CONTROLS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
EF-1	120	-	-	-	(2) #12 CU., (1) #12 CU. GND. 3/4"Ø	M.C. TO PROVIDE PROGRAMMABLE WALL SWITCH. E.C. TO INSTALL.
EF-2	120	-	-	-	(2) #12 CU., (1) #12 CU. GND. 3/4"Ø	M.C. TO PROVIDE PROGRAMMABLE WALL SWITCH. E.C. TO INSTALL.
EF-3	120	-	-	-	(2) #12 CU., (1) #12 CU. GND. 3/4"Ø	M.C. TO PROVIDE PROGRAMMABLE WALL SWITCH. E.C. TO INSTALL.
SF-1	120	-	-	-	(2) #12 CU., (1) #12 CU. GND. 3/4"Ø	---
WH-1	208/1Ø	-	-	4.2	(3) #10 CU., (1) #10 CU. GND. 3/4"Ø	---
WH-2	208/1Ø	-	-	4.2	(3) #10 CU., (1) #10 CU. GND. 3/4"Ø	---

* VERIFY ELECTRICAL CHARACTERISTICS (hp, kw, FLA, VOLTAGE, etc.) OF ACTUAL SUPPLIED EQUIPMENT PRIOR TO ORDERING ANY ELECTRICAL DEVICES, etc. SIZE FUSES AND DISCONNECT SWITCHES PER SUPPLIED MECHANICAL EQUIPMENT MANUFACTURER'S SPECIFICATIONS.



1 POWER PLAN
SCALE: 1/4" = 1'-0"
UPPER LEVEL

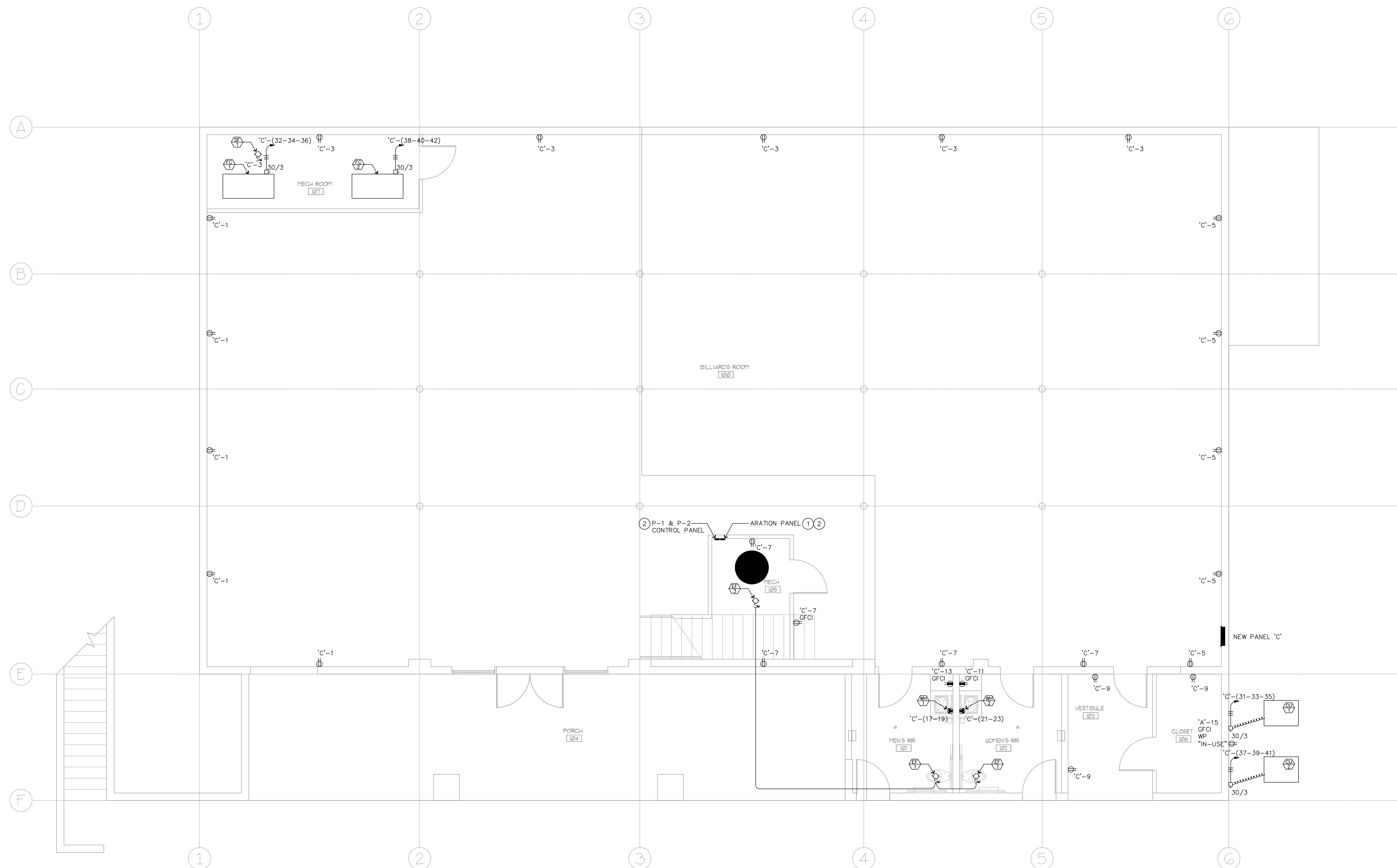




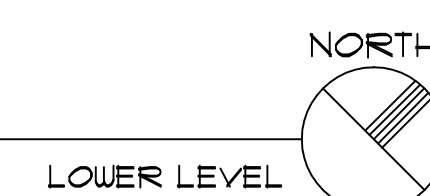
REVISIONS
NO. DATE

KEYED NOTES:

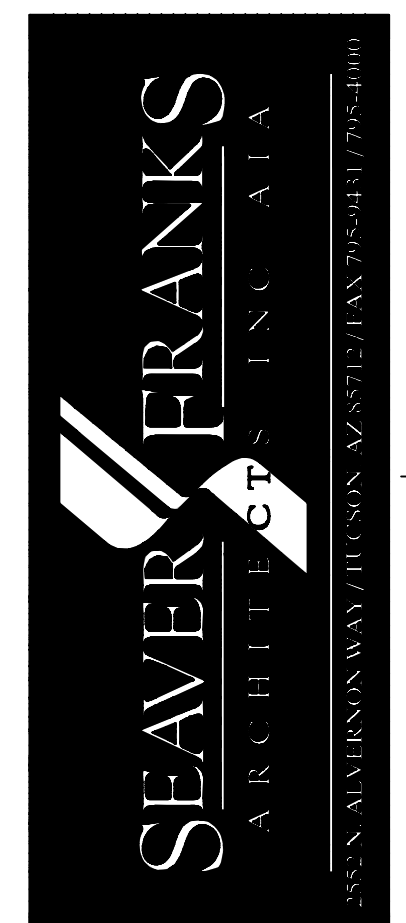
- ① ELECTRICAL CONTRACTOR TO PROVIDE 2" CONDUIT FROM CONTROL PANEL TO BASIN HUB. VERIFY WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
- ② ELECTRICAL CONTRACTOR TO VERIFY PANEL TERMINATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.



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



TENANT IMPROVEMENT
ELECTRICAL POWER PLAN
LOWER LEVEL



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

ISSUE DATE 09-14-2023
PROJ. NO. 37036
DRG. SCALE AS NOTED

SHEET

E1.1





REVISIONS
NO. DATE

LIGHT FIXTURE SCHEDULE

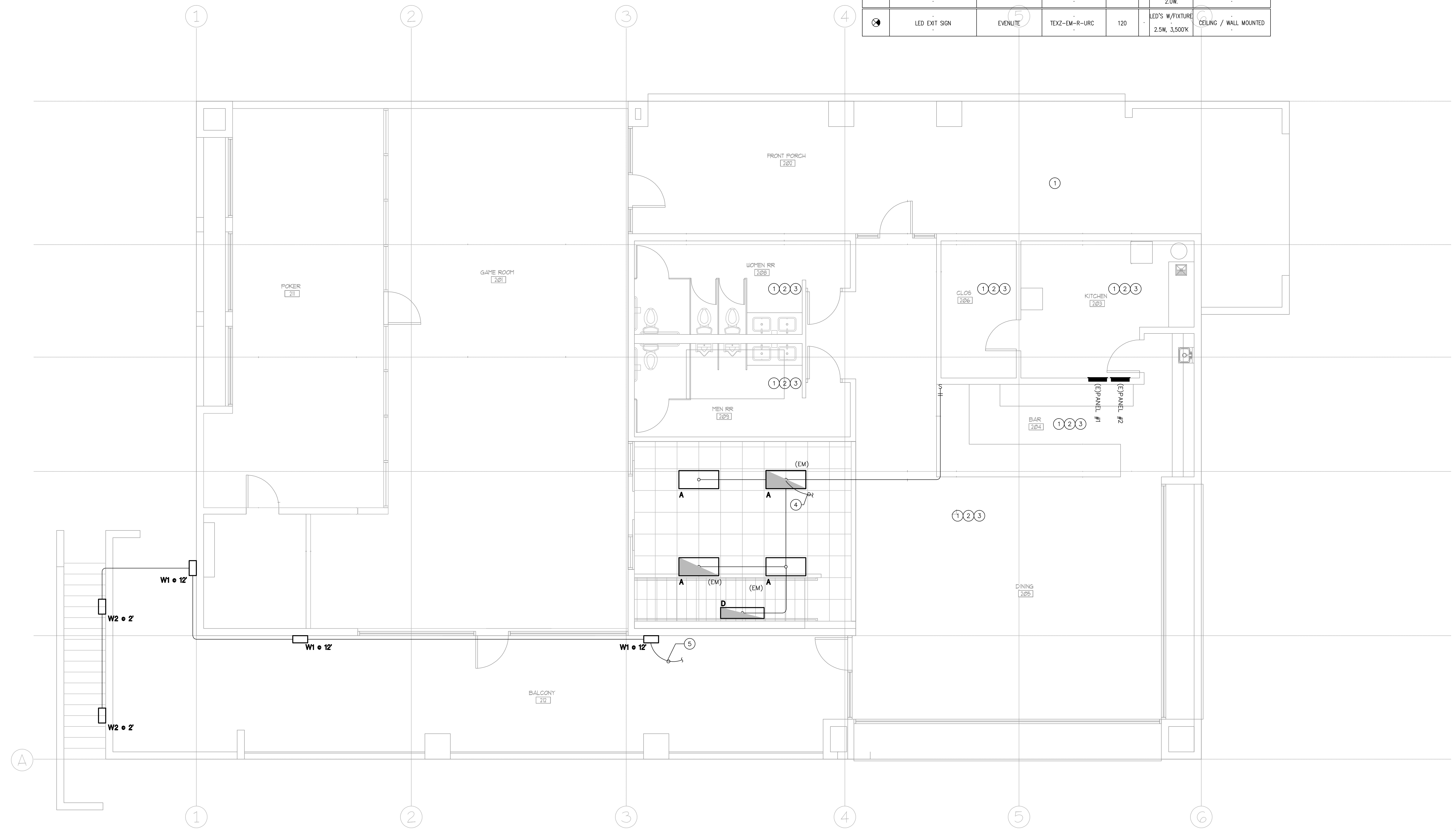
MARK	DESCRIPTION	MFR.	CATALOG #	VOLT.	LAMPS # TYPE	REMARKS
A	2' x 4' LED LAYIN FIXTURE	LITHONIA	2BL14 - 48L ADP MVOLT GZ1 LP835 E10WLCF GLR	MVOLT	5,032 LUMENS 39.3W, 3,500K	(EM) DENOTES 10W BATTERY BACK-UP. PROVIDE WITH CONTINUOUS PWR FOR CHARG
B	2' x 4' LED PENDENT	BEAM 2 - AXIS LIGHTING	TB2DLEDPAT R(2'x4') FF(12)PPR(90)75080 3550CKW/200P/MOUNT	120	LED'S W/FIXTURE 8,000 LUMENS 50.0W, 3,500K	
C	6" LED DOWNLIGHT	LITHONIA	LDN6 35/20 L06 WH LSS TWR 120 G21 ELSD	120	LED'S W/FIXTURE 2,006 LUMENS 22.5W, 3,500K	(EM) DENOTES 10W BATTERY BACK-UP. PROVIDE WITH CONTINUOUS PWR FOR CHARG
D	1' x 4' LED WRAPAROUND	LITHONIA	BLWP4 48L ADP 120 G210 LP835 E10WLCF GLR	120	LED'S W/FIXTURE 5,137 LUMENS 35.0W, 3,500K	(EM) DENOTES 10W BATTERY BACK-UP. PROVIDE WITH CONTINUOUS PWR FOR CHARG
E	EXTERIOR MEANS OF EGRESS LED FIXTURE	LITHONIA	AFF OEL DDBTXD UVOLT LTP SORT WF	MVOLT	LED'S W/FIXTURE 635 LUMENS 2.5W, 4,000K	NORMALLY OFF UNTIL LOSS OF POWER
P1	LED AREA LUMINAIRE	LITHONIA	DSX1 LED P7 AMBLW AMCR1 T5W MVOLT SPA NLTAIR2 PIRHN DDBXD	MVOLT	LED'S W/FIXTURE 3,509 LUMENS 81.3W, AMBER	SQUARE STEEL POLE 20 FOOT MOUNTING HEIGHT
P2	LED AREA LUMINAIRE	LITHONIA	DSX1 LED P7 AMBLW AMCR1 T5W MVOLT SPA NLTAIR2 PIRHN DDBXD	MVOLT	LED'S W/FIXTURE 2,867 LUMENS 81.3W, AMBER	SQUARE STEEL POLE 20 FOOT MOUNTING HEIGHT
W1	ARCHITECTURAL WALL SCONCE	LITHONIA	WDC2 LED P0 AMB LW T3M MVOLT SRM E10WH DDBXD	120	LED'S W/FIXTURE 662 LUMENS 7.0W, AMBER	12 FOOT MOUNTING HEIGHT
W2	ARCHITECTURAL WALL SCONCE	LITHONIA	WPXLED P1 30K MVOLT E4WH DDBXD	120	LED'S W/FIXTURE 1,537 LUMENS 11.0W, 3,000K	2 FOOT MOUNTING HEIGHT ON STAIR
⚡	LED EMERGENCY LIGHT FIXTURE	EVENLITE	TCL 2 W SD	120	LED'S W/FIXTURE 125 LUMENS 2.0W	MOUNTED AT 10'-0" A.F.F.
ⓧ	LED EXIT SIGN	EVENLITE	TEX2-EM-R-URC	120	LED'S W/FIXTURE 2.5W, 3,500K	CEILING / WALL MOUNTED

KEYED NOTES:

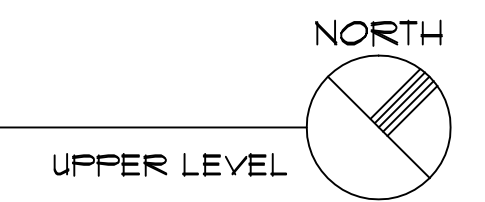
- NOT IN THE SCOPE OF WORK. LIGHTING, EMERGENCY LIGHTING, AND LIGHTING CONTROL IN THESE AREAS TO REMAIN "AS-IS".
- EXITING PATH FOR THIS SCOPE OF WORK WILL NOT CHANGE. ALL EXIT SIGNS ARE EXISTING TO REMAIN "AS-IS".
- EXISTING LIGHTING CIRCUITS WILL BE REUSED. LIGHTING CONTROL WILL BE AS 2020 IECC FOR AUTOMATIC CONTROL. ELECTRICAL CONTRACTOR TO PROVIDE AN CONTINUOUS "HOT" CONDUCTOR, OF THE SAME LIGHTING CIRCUIT, TO PROVIDE BATTERY CHARGER POWER TO ALL EMERGENCY LIGHTING.
- TIE INTO EXISTING LIGHTING CIRCUIT. NO NEW LOAD ADDED.

SHEET SYMBOLS

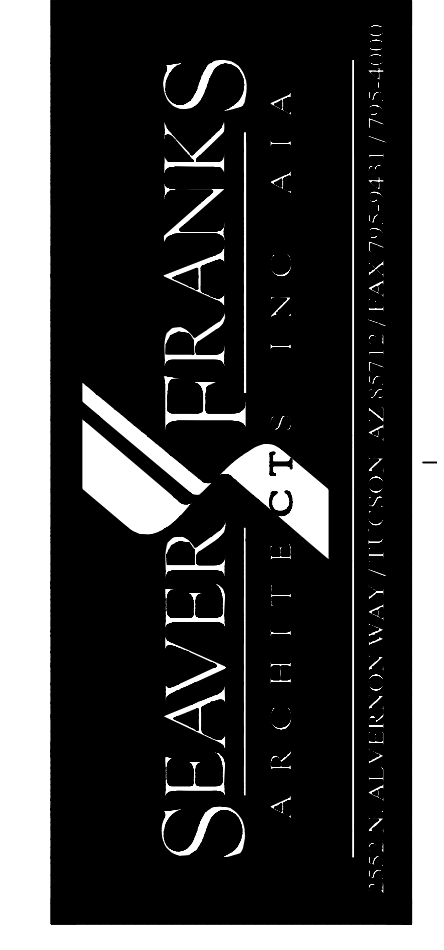
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- (N) INDICATES NEW FIXTURE OR DEVICE.



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



TENANT IMPROVEMENT
ELECTRICAL LIGHTING PLAN
UPPER LEVEL



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

ISSUE DATE 09-14-2023
PROJ. NO. 37036
DRG. SCALE AS NOTED

SHEET

E2.0



Job No. 23032
p. 602-400-1792 • jeff@ccecaz.com
5551 White Mountain Road, #2-538, Show Low, AZ 85901

KEYED NOTES:

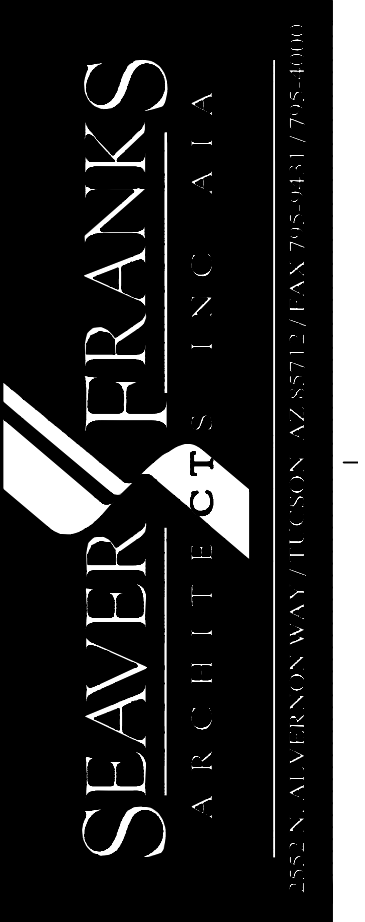
- ① EXTEND TO SITE LIGHTING. SEE E51.0 FOR CONTINUATION OF EXTERIOR LIGHTING CIRCUIT.
- ② EXTEND TO SITE LIGHTING LOCATED ON THE BALCONY. SEE E2.0 FOR CONTINUATION OF EXTERIOR LIGHTING CIRCUIT.

NEW POOL TABLE TYPICAL FOR 1ST AND 2ND FLOOR.



REVISIONS	DATE
NO.	

**TENANT IMPROVEMENT
ELECTRICAL LIGHTING PLAN
LOWER LEVEL**

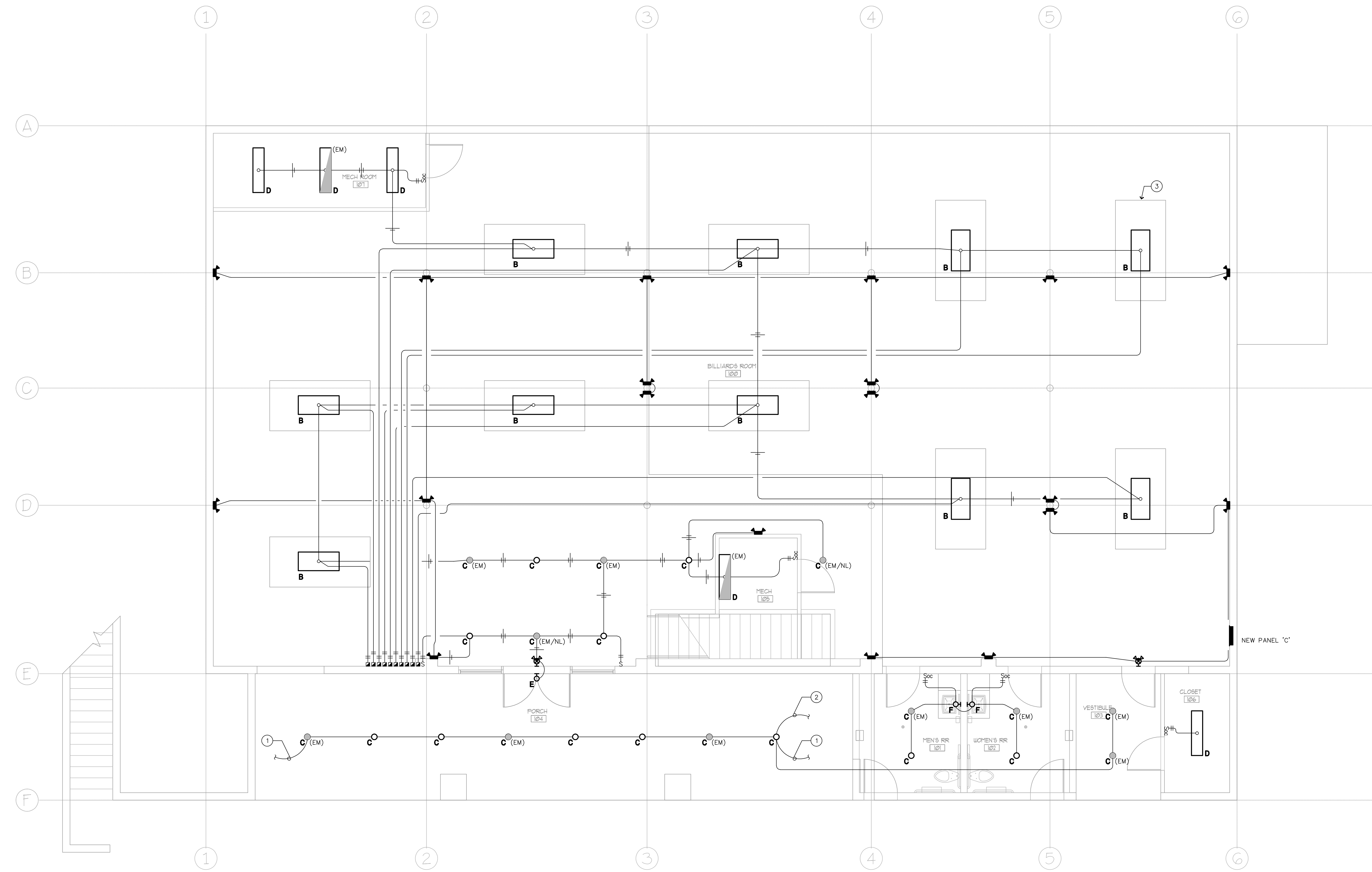


**GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747**

ISSUE DATE 09-14-2023
 PROJ. NO. 37036
 DRG. SCALE AS NOTED

SHEET

E2.1



1 LIGHTING PLAN
 SCALE: 1/4" = 1'-0"
 NORTH
 LOWER LEVEL

cccc
 CC ELECTRICAL CONSULTING
 Job No. 23032
 p. 602.400.1792 • jeff@cccex.com
 5551 White Mountain Road, #2-538, Show Low, AZ 85901



REVISIONS
NO. DATE

TENANT IMPROVEMENT
ONE LINE DIAGRAM AND
PANEL SCHEDULES



GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747

ISSUE DATE 09-14-2023
PROJ. NO. 37036
DRG. SCALE AS NOTED

SHEET

E3.0



NEW FULLY RATED PANEL

PANEL 'C'	200 AMP	120/208V, 3φ, 4W	MAIN	200 M.L.O.	NEMA 1	FLUSH MTO
LOCATION	SEE PLAN	TYPE SEE C.B. NOTE	BREAKER RATING	22,000 AIC		
USE/AREA SERVED	CB No.	LOAD	No CB	USE/AREA SERVED		
REC - LOWER LAYER	21	800	2	LTG - SITE		
REC - LOWER LAYER	22	800	4	LTG - LOWER ENTRY		
REC - LOWER LAYER	23	800	6	LTG - CONTACTOR		
REC - LOWER LAYER/MECH	24	900	8	BUSSED SPACE		
REC - VESTIBULE/CLOSET	25	540	10	BUSSED SPACE		
REC - L.L. WOMENS R.R.	26	180	12	BUSSED SPACE		
REC - L.L. MENS R.R.	27	180	14	BUSSED SPACE		
REC - EXTERIOR	28	180	16	BUSSED SPACE		
WATER HEATER #1	29	2100	18	BUSSED SPACE		
4.2 KW WATER HEATER #2	30	2100	20	REC - AIR COMPRESSOR		
4.2 KW WATER HEATER #2	31	2100	22	REC - AIR COMPRESSOR		
REC - EDF	32	444	24	P-1	1 H.P.	
EF-1, EF-2, EF-3	33	1664	26	P-2	1 H.P.	
SF-1	34	69	28	P-3	1 H.P.	
CU-1	35	3000	30	FC-1	6-TON	
6-TON	36	768	32	FC-1	6-TON	
CU-2	37	2400	34	FC-2	6-TON	
6-TON	38	768	36	FC-2	6-TON	
	39	2400	38			
	40	768	40			
	41	2400	42			
	42	768	44			
	43	2400	46			
	44	768	48			
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	269	2400	498			
	270	768	500			
	271	2400	502			
	272	768	504			

ELECTRICAL SYMBOLS (NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT)

- L.E.D. FIXTURE.
L.E.D. EMERGENCY FIXTURE
N.L. = NIGHT LIGHT - UNSWITCHED EM = LINE SENSITIVE - OPERATES ONLY ON POWER OUTAGE - SWITCHED.
CEILING MOUNTED LIGHT FIXTURE.
WALL MOUNTED LIGHT FIXTURE.
L.E.D. FIXTURE.
EXIT SIGN - SEE LIGHT FIXTURE SCHEDULE.
SURFACE-MOUNT EMERGENCY LIGHTING BATTERY PACK-SINGLE OR DOUBLE HEAD. SEE LIGHT FIXTURE SCHEDULE.
RECESSED EMERGENCY LIGHTING BATTERY PACK-SINGLE OR DOUBLE HEAD. SEE LIGHT FIXTURE SCHEDULE.
JUNCTION BOX IN ACCESSIBLE LOCATION ABOVE REMOVABLE CEILING WITH FLEXIBLE CONDUIT CONNECTION TO LIGHT FIXTURE.
FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT.
JUNCTION BOX IN ACCESSIBLE LOCATION.
DUPLEX CONVENIENCE RECEPTACLE AT +15" A.F.F. TO BOTTOM OR AS NOTED.
DUPLEX CONVENIENCE RECEPTACLE, MTD. ABOVE COUNTER BACKSPASH OR PER A.D.A. AND ARCHITECT.
DUPLEX CONVENIENCE RECEPTACLE, HALF SWITCHED MTD. 18" A.F.F. UNLESS NOTED OTHERWISE.
SIMPLEX RECEPTACLE, MTD. 18" A.F.F. UNLESS NOTED OTHERWISE.
FOUR-PLEX CONVENIENCE RECEPTACLE AT +15" A.F.F. TO BOTTOM OR AS NOTED.
ISOLATED GROUND RECEPTACLE AT + 15" A.F.F. TO BOTTOM OR AS NOTED.
RECEPTACLE (TYPE AS SHOWN) AT + 42" A.F.F.
SPECIAL USE RECEPTACLE. VERIFY NEMA NUMBER AND MOUNTING HEIGHT WITH EQUIPMENT.
TOGGLE SWITCH - SINGLE POLE, 3-WAY, 4-WAY AT +42" OR AS NOTED ON PLANS.
SINGLE-POLE, ILLUMINATED HANDEL OR PILOT LIGHT TOGGLE SWITCH AT +42" OR AS NOTED ON PLANS.
SWITCH - OCCUPANCY SENSOR TYPE. ADJUSTABLE SENSOR SENSITIVITY, THERMAL DETECTION AND MOTION. CEILING MOUNTED.
SWITCH - OCCUPANCY SENSOR TYPE. ADJUSTABLE SENSOR SENSITIVITY, THERMAL DETECTION AND MOTION. WALL MOUNTED.
MOTOR RATED SWITCH WITH THERMAL PROTECTION.
MOTOR SPEED CONTROL SWITCH. FURNISHED BY ELECTRICAL CONTRACTOR.
PHOTOCELL - TORX #2100 - MOUNT ON ROOF AND AIM NORTH.
TIME-SWITCH: TORX 'W' SERIES OR EQUAL.
CIRCUIT IN CONDUIT, CONCEALED. HASH MARKS INDICATE QUANTITY OF CONDUCTORS NO HASH MARKS INDICATE TWO CONDUCTORS, PLUS GROUND(S). (NOTE: WIRE AND OR CONDUIT SIZE SHOWN AT HOMERUN IS THE MINIMUM SIZE FOR THE ENTIRE CIRCUIT: #12 A.W.G. CU, 3/4" C. MINIMUM). LONG STROKE(S) INDICATE NEUTRAL CONDUCTOR(S), SHORT STROKES INDICATE PHASE OR SWITCHED CONDUCTORS AND LONG STROKES WITH DOT INDICATE GREEN INSULATED GROUNDING CONDUCTOR(S) TYPICAL. EACH ISOLATED GROUND CIRCUIT SHALL HAVE A SEPARATE NEUTRAL AND GROUND WIRE. BOND WIRES ARE NOT SHOWN ON DRAWINGS, BOND WIRES SHALL BE INSULATED CU. SIZED IN ACCORDANCE WITH N.E.C. #250.
CIRCUIT IN CONDUIT CONCEALED IN FLOOR.
CIRCUIT IN CONDUIT CONCEALED IN WALLS OR ABOVE CEILING.
HOMERUN TO PANELBOARD OR AS NOTED.
PANELBOARD, MOUNT TOP OF PANEL AT + 6"-8". STUB (2) 3/4" E.C. INTO ACCESSIBLE CEILING SPACE ON FLUSH MOUNTED PANELS.
MOTOR: SIZE AND RATING AS SHOWN. EF INDICATES 55-WATT, 120 V. EXHAUST FAN.
A.C. MAGNETIC STARTER BY ELECTRICAL CONTRACTOR; HORSEPOWER, VOLTAGE AND PHASE RATED; NUMBER OF POLES REQUIRED. FURNISH WITH (1) N.O. AUXILIARY CONTACT (120 V. CONTROL) SINGLE SPEED NON-REVERSING UNLESS OTHERWISE SHOWN ON PLAN.
DISCONNECT SWITCH - HORSEPOWER RATED, FUSED, NEMA 3R WHERE OUTSIDE. N.F. INDICATES NON-FUSED. (FUSE PER EQUIPMENT MANUFACTURERS' SPECIFICATIONS).
STRIP HEATER AND CONTROL.
MOTOR CONTROLLER - FURNISHED WITH EQUIPMENT.
TELEPHONE OUTLET AT +15" TO BOTTOM OR AS NOTED WITH 3/4" C. UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE.
DATA OUTLET AT + 15" A.F.F. TO BOTTOM OR AS NOTED. STUB 3/4" C. INTO ACCESSIBLE CEILING SPACE.
DATA/TELEPHONE OUTLET AT + 15" A.F.F. TO BOTTOM OR AS NOTED. STUB 3/4" C. INTO ACCESSIBLE CEILING SPACE.
APPROVED TEMPERATURE SEAL-OFF AND EXPANSION JOINTS AS REQ'D BY N.E.C. ART. #300-7.
FLUSH FLOOR FOURPLEX OUTLET AND DATA/TELEPHONE OUTLET COMBO WITH BRASS DEVICE PLATE.
FLUSH FLOOR DATA RECEPTACLE WITH BRASS COVER PLATE AND 3/4" C. STUBBED TO ABOVE ACCESSIBLE CEILING LOCATION.
FLUSH FLOOR TELEPHONE RECEPTACLE WITH BRASS COVER PLATE AND 3/4" C. STUBBED TO ABOVE ACCESSIBLE CEILING LOCATION.
FLUSH FLOOR DUPLEX OUTLET WITH BRASS DEVICE PLATE.
FLUSH FLOOR FOURPLEX OUTLET WITH BRASS DEVICE PLATE.
ISOLATED GROUND RECEPTACLE "HUBBELL" #65263, 20 A, 125 V, FLUSH FLOOR WITH BRASS DEVICE PLATE.
TELEVISION OUTLET AT +15" TO BOTTOM OR AS NOTED. STUB 3/4" C. INTO ACCESSIBLE CEILING SPACE.
DIMMER SWITCH AT +42" A.F.F. "LUTRON" NP SERIES. SIZE DIMMER FOR LOAD. TRACK LIGHTING SHALL HAVE "LUTRON" NP2000 DIMMER.
A.D.A. - APPROVED FIRE ALARM STROBE.
A.D.A. - APPROVED FIRE ALARM HORN/STROBE.
A.D.A. - APPROVED FIRE ALARM PULL STATION.
A.D.A. - APPROVED SMOKE DETECTOR MOUNTED IN CEILING OR AS INDICATED.
DUCT DETECTOR
FLOW SWITCH. BY OTHERS
TAMPER SWITCH. BY OTHERS
A.D.A. - APPROVED CARBON DIOXIDE DETECTOR MOUNTED IN CEILING. ALL DETECTORS TO BE 120VAC AND TIED TOGETHER FOR SIGNALING ABILITY.
FIRE ALARM BELL
WEATHERPROOF.
T.M.B. TELEPHONE MOUNTING BOARD: 4' x 8' x 3/4" PLYWOOD WITH #6 CU. BOND WIRE TO GROUNDING ELECTRODE SYSTEM.

ELECTRICAL SYSTEM SPECIFICATIONS - DIVISION 16000

- 1. GENERAL CONDITIONS
1.1 THE GENERAL PROVISIONS OF THE CONTRACT, INCLUDING THE CONDITIONS OF THE CONTRACT (GENERAL, SUPPLEMENTARY AND OTHER CONDITIONS) AND DIVISION 1 - GENERAL REQUIREMENTS AS APPROPRIATE, APPLY TO THE WORK SPECIFIED IN THIS SECTION.
1.2 SCOPE OF WORK
1.3 THE WORK INCLUDED UNDER THIS SECTION CONSISTS OF FURNISHING ALL MATERIALS, EQUIPMENT, AND LABOR AND THE PERFORMING OF ALL FUNCTIONS, EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS TO BE PERFORMED BY OTHERS, FOR THE INSTALLATION AND PLACING INTO OPERATION OF A COMPLETE ELECTRICAL SYSTEM AS SPECIFIED AND SHOWN ON THE DRAWINGS.
1.4 S.D.F.S.D.F. GENERAL DESCRIPTION
1.5 THE WORK IN GENERAL SHALL CONSIST OF, BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1.5.1 FURNISHING AND INSTALLING ALL FIXTURES WITH LAMPS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN UNLESS NOTED. (E.G., ALL DISCONNECT SWITCHES SHALL BE OF THE SAME MANUFACTURER)
1.5.2 FURNISHING AND INSTALLING ALL ELECTRICAL WORK, PANELS, SERVICE, CONDUIT, WIRING, ETC., FOR ALL OUTLETS AND EQUIPMENT.
1.5.3 FURNISHING AND INSTALLING ALL TELEPHONE OUTLETS, CONDUITS WITH PULL STRINGS AND TELEPHONE MOUNTING BOARDS INCLUDING CONDUIT FROM TELEPHONE MOUNTING BOARD TO THE BUILDING ENTRANCE AS INDICATED ON THE PLAN.
1.5.4 FURNISHING AND INSTALLING A COMPLETE FIRE ALARM SYSTEM AS INDICATED ON PLANS.
1.5.5 INCLUDE \$ HUNDRED DOLLARS) ALLOWANCE FOR POWER AND TELEPHONE COMPANY UTILITY SERVICE CHARGES. DIFFERENCE BETWEEN ACTUAL COST AND ALLOWANCE TO BE CREDITED OR BILLED TO THE OWNER.
1.5.6 FURNISHING AND INSTALLING ALL MOTOR STARTERS AND CONTROL COMPONENTS, NOT SPECIFICALLY SPECIFIED TO BE FURNISHED IN ACCORDANCE WITH OTHER SECTIONS OF THE SPECIFICATIONS.
1.5.7 FURNISHING AND INSTALLING ALL POWER AND WIRING EXCEPT THAT WHICH IS PRE-WIRED IN FACTORY ASSEMBLED EQUIPMENT.
1.5.8 INSTALLING ALL LINE VOLTAGE MECHANICAL CONTROL WIRING AND ASSOCIATED CONTROLS WHICH ARE FURNISHED BY THE MECHANICAL CONTRACTOR (LOW VOLTAGE CONTROL WIRING AND CONTROLS SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR).
1.5.9 PAINTING WORK AS DESCRIBED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS. CLEAN AND PREPARE ALL SURFACES READY FOR PAINTING.
1.5.10 PROVIDE TEMPORARY CONSTRUCTION POWER AS OUTLINED BELOW. THIS SERVICE SHALL BE MAINTAINED THROUGHOUT THE ENTIRE JOB AS THE WORK PROGRESSES. PROVIDE OUTLETS AT CONVENIENT POINTS AND IN SUFFICIENT NUMBERS SO THAT NO EXTENSION CORD OVER 50 FEET IN LENGTH IS REQUIRED TO REACH ANY WORK POINT. MAINTAIN GENERAL LIGHTING IN CORRIDORS, STAIRS, BASEMENT AND OTHER AREAS NOT RECEIVING SUFFICIENT DAYLIGHT REQUIRED FOR SAFETY. REMOVE TEMPORARY WORK AS RAPIDLY AS REQUIRED FOR OR ALLOWED BY INSTALLATION OF PERMANENT WORK.
1.5.11 CERTAIN ITEMS OF WORK BY OTHER TRADES WILL BE NECESSARY FOR THE COMPLETION OF WORK UNDER THIS DIVISION. COOPERATE WITH OTHER TRADES AND ARRANGE FOR THESE ITEMS TO BE PERFORMED IN ORDERLY COURSE.
1.5.12 THIS CONTRACTOR SHALL REVIEW THE MECHANICAL CONTROL REQUIREMENTS AS SPECIFIED AND SHOWN ON THE DRAWINGS AND SHALL FURNISH AND INSTALL ALL NECESSARY CONDUIT, WIRING, BOXES, PROTECTIVE DEVICES, SWITCHES, ETC., FOR THE COMPLETION AND PROPER OPERATION OF THE SYSTEM.
1.5.13 REVIEW ALL DRAWINGS AND ALL SPECIFICATIONS FOR EACH SECTION OF WORK. UNLESS SPECIFICALLY NOTED OTHERWISE, HEREIN OR ELSEWHERE, FURNISH AND INSTALL ITEMS OF ANY ELECTRICAL NATURE REQUIRED FOR COMPLETION OF WORK FOR OTHER TRADES, WHETHER OR NOT SAME IS SHOWN OR NOTED IN THIS OR OTHER SECTIONS.
2. REGULATIONS AND CODES
2.1 THE CONTRACTOR MUST COMPLY WITH ALL STATE, MUNICIPAL AND FEDERAL SAFETY LAWS, CONSTRUCTION CODES, ORDINANCES AND REGULATIONS RELATING TO BUILDING AND PUBLIC HEALTH AND SAFETY. IN ADDITION, COMPLY WITH RULES AND REGULATIONS OF THE STATE FIRE PROTECTION CODE. FIRE PROTECTION MATERIAL MUST BEAR THE FIRE UNDERWRITERS LABORATORIES LABEL.
3. GENERAL REQUIREMENTS
3.1 THE CONTRACTOR SHALL EXAMINE THE PREMISES AND SATISFY HIMSELF OF EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE IN PERFORMING HIS PART OF THE WORK OR THAT WILL IN ANY MANNER AFFECT THE WORK UNDER THE CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHER TRADES SO THAT THE INSTALLATIONS OF ALL EQUIPMENT MAY BE PROPERLY COORDINATED.
3.2 ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE, WITH CONNECTION, ETC., IN THE REQUIRED LOCATIONS AND WITH ADEQUATE SPACE FOR OPERATING AND SERVICING. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE MANNER AND METHOD OF THE INSTALLATION, WHILE THE SPECIFICATIONS AND FIXTURE LIST DENOTE THE TYPE AND QUALITY OF MATERIAL AND WORKMANSHIP TO BE USED. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT/ENGINEER WHOSE DECISION SHALL BE FINAL. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS CONNECTION IN BEHALF OF THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
4. CONDUIT
4.1 METALLIC CONDUITS SHALL BE HOT DIPPED GALVANIZED EQUAL TO LTV STEEL.

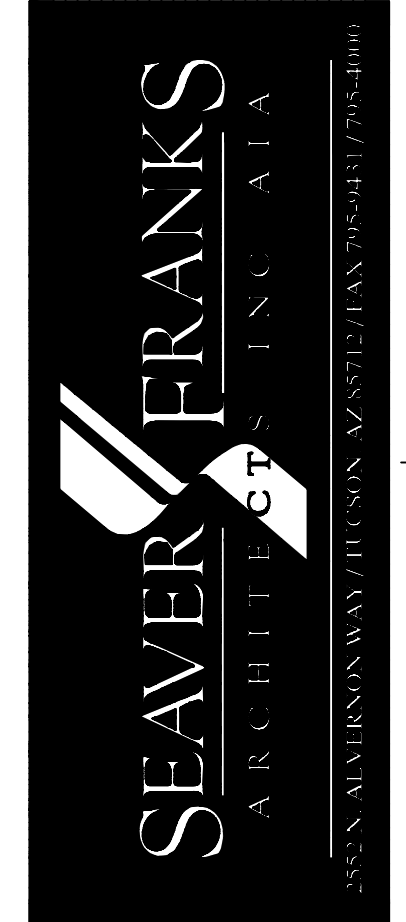
- 4.2 ALL MATERIALS FURNISHED UNDER THIS CONTRACT SHALL BE NEW (EXCEPT AS NOTED), FREE FROM DEFECTS OF ANY CHARACTER, SHALL CONFORM WITH THE STANDARDS OF THE UNDERWRITERS LABORATORIES, INC. (U.L.) (OR OTHER NATIONALLY RECOGNIZED LABORATORY), IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED AND SHALL BE SO LABELED. IT IS THE INTENTION OF THESE SPECIFICATIONS TO INDICATE A STANDARD OF QUALITY FOR ALL MATERIALS INCORPORATED IN THIS WORK, AND WHERE MATERIALS ARE NOT SPECIFIED HEREIN AND ARE REQUIRED TO COMPLETE THE ELECTRICAL INSTALLATION, THESE MATERIALS SHALL BE OF FIRST QUALITY FOR USE INTENDED. MANUFACTURERS OF SIMILAR QUALITY PRODUCTS WILL BE CONSIDERED UNLESS THE SPECIFICATIONS OR DRAWINGS INDICATE OTHERWISE.
4.3 MATERIALS SHALL BE SUITABLE FOR INTENDED USE AND LOCATION. UNLESS OTHERWISE SHOWN USE NEMA-1 FOR INTERIOR AREAS AND NEMA-3R FOR EXTERIOR AREAS.
4.4 THE ARCHITECT/ENGINEER DECISION AS TO EQUAL IN GRADE AND QUALITY SHALL BE FINAL FOR ALL ELECTRICAL MATERIALS INCORPORATED IN THIS WORK. WHERE TWO OR MORE SIMILAR TYPE ITEMS ARE FURNISHED, ALL SHALL BE OF THE SAME MANUFACTURER (E.G., ALL DISCONNECT SWITCHES SHALL BE OF THE SAME MANUFACTURER) UNLESS OTHERWISE NOTED HEREIN OR SHOWN ON THE DRAWINGS. ALL MATERIAL AND INSTALLATION METHODS USED SHALL BE IN ACCORDANCE WITH THE LATEST AND APPROVED ELECTRICAL AND MECHANICAL ENGINEERING PRACTICES.
5. SERVICE ENTRANCE EQUIPMENT
5.1 SERVICE ENTRANCE EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPAL GOVERNING BODY AND SERVING UTILITY. SHOP DRAWINGS SHALL BE SUBMITTED TO THE SERVING UTILITY FOR WRITTEN APPROVAL BEFORE ORDERING EQUIPMENT.
5.2 LABEL EQUIPMENT AND EACH INDIVIDUAL OVERCURRENT DEVICE PER SECTION 16000.22.
5.3 APPROVED MANUFACTURERS ARE: SUN VALLEY, SQUARE D, CUTLER-HAMMER, SIEMENS/ITE.
6. PANELBOARDS
6.1 EACH PANEL SHALL BE PROVIDED WITH DOOR LOCK AND TWO KEYS, ALL KEYS ALIKE. EACH PANEL SHALL BE PROVIDED WITH TYPEWRITTEN SHEET INSTALLED ON DOOR IDENTIFYING THE USE OF EACH BRANCH CIRCUIT. PANELS SHALL HAVE BUSSING AS INDICATED ON THE DRAWINGS.
6.2 LABEL EQUIPMENT PER SECTION 16000.22 8.3 APPROVED MANUFACTURERS ARE: SQUARE D, CUTLER-HAMMER, SIEMENS/ITE.
6.3 ALL PANEL SCHEDULES WILL HAVE TYPED PANEL SCHEDULES AS PER I.B.C. SECTION 107.2.1.
7. STARTERS
7.1 ALL MOTOR STARTERS SHALL BE FURNISHED UNDER THIS SECTION OF THE SPECIFICATIONS UNLESS AN INTEGRAL PART OF EQUIPMENT OR NOTED AS FURNISHED WITH EQUIPMENT SPECIFIED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS.
7.2 SEPARATELY MOUNTED MOTOR STARTERS SHALL BE ACROSS-THE-LINE COMBINATION MAGNETIC WITH 120V COILS, FUSED DISCONNECT CONTACTORS, ADDITIONAL AUXILIARY CONTACT FOR INTERLOCKING OF CONTROLS. PROVIDE PUSHBUTTON OR SELECTOR SWITCH IN COVER. SWITCHBOARD MOUNTED STARTERS SHALL BE MAGNETIC WITH 120V COILS AND ADDITIONAL AUXILIARY CONTACTS AS REQUIRED FOR INTERLOCKING OF CONTROLS. STARTERS SHALL HAVE AN INTEGRAL CONTROL CIRCUIT TRANSFORMER OR SEPARATE 120V CONTROL WITH CONTROL CIRCUIT DISCONNECT SWITCH IN COVER.
7.3 MANUAL STARTERS SHALL BE HORSEPOWER, VOLTAGE AND PHASE RATED WITH OVERLOAD PROTECTION AND GREEN "ON" PILOT LIGHT SURFACE MOUNTED UNLESS NOTED OTHERWISE.
7.4 ALL STARTERS SHALL HAVE OVERLOAD PROTECTION IN ALL PHASE LINES. FURNISH AND INSTALL THE PROPER SIZE OVERLOAD HEATER ELEMENTS DETERMINED FROM FULL LOAD NAMEPLATE READINGS ON MOTORS AND COMPENSATION FOR AMBIENT TEMPERATURE IN ALL STARTERS WHETHER THEY BE FURNISHED UNDER THIS SECTION OR OTHER SECTIONS.
7.5 LABEL PER SECTION 16000.22
7.6 APPROVED MANUFACTURERS ARE: SQUARE D
8. TRANSFORMERS
8.1 TRANSFORMERS SHALL BE DRY TYPE, WITH VOLTAGE RATINGS AS INDICATED ON PLANS. TRANSFORMERS SHALL BE RATED FOR FULL LOAD OPERATION AT A MAXIMUM 150 DEGREE CENTIGRADE RISE ABOVE A 40 DEGREE CENTIGRADE AMBIENT OR AS OTHERWISE NOTED ON DRAWINGS. PROVIDE AT LEAST (4) 2 1/2 PERCENT TAPS, TWO ABOVE NORMAL AND TWO BELOW NORMAL AND HAVE A SOUND RATING NOT TO EXCEED NEMA STANDARDS. SPECIAL "K" FACTOR RATINGS AS NOTED.
8.2 SUBMIT COMPLETE TRANSFORMER DATA WITH SHOP DRAWINGS FOR APPROVAL. THE DATA SHALL INCLUDE EFFICIENCIES, CORE AND COPPER LOSSES, IMPEDANCE, REGULATION AND SOUND LEVEL.
8.3 INSTALLATION OF TRANSFORMERS SHALL BE ON VIBRATION ISOLATORS AND ALL WIRING CONNECTIONS WITH FLEXIBLE CONDUIT.
8.4 LABEL PER SECTION 16000.22
8.5 APPROVED MANUFACTURERS ARE: ACME, SQUARE D, JEFFERSON, CUTLER-HAMMER, WESTINGHOUSE, GENERAL ELECTRIC, OR SAME MANUFACTURER AS DISTRIBUTION EQUIPMENT.
9. CONDUIT
9.1 METALLIC CONDUITS SHALL BE HOT DIPPED GALVANIZED EQUAL TO LTV STEEL.

- 9.2 ELECTRIC METALLIC TUBING (EMT) IS PERMITTED FOR EXPOSED WORK ABOVE 6'-0" A.F.F. OR CONCEALED WORK ONLY. EMT IS NOT PERMITTED IN THE FOLLOWING: (1) IN OR UNDER CONCRETE, (2) IN EARTH, (3) IN GROUTED WALLS, (4) EXTERIOR OF BUILDING, (5) WITH DISSIMILAR METALS, (6) WHERE IT WILL BE SUBJECT TO SEVERE PHYSICAL DAMAGE (EITHER DURING OR AFTER INSTALLATION), (7) IN ANY HAZARDOUS (CLASSIFIED LOCATION) EXCEPT AS PERMITTED BY 502.10, 502.10 AND 504.20, (8) WITHOUT AN EQUIPMENT GROUNDING CONDUCTOR SIZE AND PROVIDE EQUIPMENT GROUNDING CONDUCTOR PER ARTICLE 250 AND INCREASE CONDUIT SIZE IF REQUIRED.
9.3 RIGID PVC CONDUIT IS PERMITTED ONLY UNDERGROUND OR AS NOTED ON DRAWINGS. PROVIDE RIGID STEEL ELBOWS AND RISERS (NO MINIMUM SIZE), SIZE AND PROVIDE EQUIPMENT GROUNDING CONDUCTOR PER ARTICLE 250 AND INCREASE CONDUIT SIZE IF REQUIRED.
9.4 RIGID GALVANIZED OR SHERADIZED STEEL SHALL BE USED FOR ALL EXPOSED CONDUIT BELOW 6'-0" A.F.F. OR AS NOTED ON DRAWINGS. WHERE USED IN OR UNDER CONCRETE OR IN EARTH, SHALL BE CODE APPROVED PVC COATED OR HALF LAP WRAPPED WITH POLYKEN #990 TAPE OR EQUAL.
9.5 INSTALL EXPOSED RACEWAYS PARALLEL AND PERPENDICULAR TO NEARBY SURFACES OR STRUCTURAL MEMBERS AND FOLLOW THE SURFACE CONTOURS AS MUCH AS PRACTICAL.
9.6 RUN EXPOSED, PARALLEL, OR BANKED RACEWAYS TOGETHER. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM THE SAME CENTER LINE SO THAT THE BENDS ARE PARALLEL. FACTORY ELBOWS MAY BE USED IN BANKED RUNS ONLY WHERE THEY CAN BE INSTALLED PARALLEL. THIS REQUIRES THAT THERE BE A CHANGE IN THE PLANE OF THE RUN SUCH AS FROM WALL TO CEILING AND THAT THE RACEWAYS BE OF THE SAME SIZE. IN OTHER CASES PROVIDE FIELD BENDS FOR PARALLEL RACEWAYS.
10. WIRE
10.1 SOFT DRAWN ANNEALED COPPER (UNLESS OTHERWISE NOTED ON PLANS) HAVING CONDUCTIVITY OF NOT LESS THAN 98% OF THAT OF PURE COPPER, UNIFORM IN CROSS SECTION, FREE FROM FLAWS, SCALES, AND OTHER IMPERFECTIONS. ALL WIRE LARGER THAN #10 SHALL BE STRANDED.
10.2 INSULATION: TYPE THHN/THWN, OR XHHW FOR ALL BRANCH CIRCUIT AND FEEDER WIRING.
10.3 SIZES: NO WIRE SMALLER THAN #12 UNLESS OTHERWISE NOTED ON DRAWINGS.
10.4 FEEDER CONDUCTORS #2 AWG AND LARGER MAY BE COPPER OR AA-8000 SERIES ALUMINUM ALLOY. ALUMINUM CONDUCTORS SHALL BE EQUAL OR LARGER AMPACITY TO COPPER. CONDUIT FILL SHALL NOT EXCEED 40% FACTOR AS DESCRIBED IN 2011 NEC, ANNEX C, TABLE C1 (COPPER) OR C1A (ALUMINUM). ALL GROUND (BOND) CONDUCTORS WILL BE COPPER.
11. MISCELLANEOUS MATERIALS:
11.1 SAFETY SWITCHES: HEAVY DUTY, FUSED REJECTION TYPE, MINIMUM 200,000 A.I.C. RATED. "NF" INDICATES NOT FUSED.
11.2 LABEL PER SECTION 16000.22
11.3 APPROVED MANUFACTURERS ARE: SQUARE D, SIEMENS, CUTLER-HAMMER, WESTINGHOUSE, GENERAL ELECTRIC OR SAME MANUFACTURERS AS DISTRIBUTION EQUIPMENT.
11.4 FUSES: "BUSSMANN" OR "GOULD SHAWMUT" MFG. NO SUBSTITUTIONS UNLESS PRIOR WRITTEN APPROVAL FROM ENGINEER, OR AS NOTED ON DRAWINGS.
11.5 CONDUIT STRAP: HEAVY GAUGE STEEL SNAP-ON TYPE.
11.6 ELECTRICAL METALLIC TUBING FITTINGS: EQUAL TO T&B COMPRESSION TYPE. CONNECTORS SHALL HAVE INSULATED BUSHINGS.
11.7 RIGID CONDUIT LOOKNUTS AND BUSHINGS: EQUAL TO T&B.
11.8 FLEXIBLE CONDUIT AND FITTINGS: EQUAL TO CALIFORNIA CONDUIT AND CABLE COMPANY, INC.
11.9 LIQUID TIGHT CONDUIT AND FITTINGS FOR ALL EXTERIOR AND EQUIPMENT CONNECTIONS.
11.10 OUTLET BOXES, PLASTER RINGS, PULL, AND JUNCTION BOXES, ETC.: EQUAL TO RACO, ZINC COATED OR CADMIUM PLATED SHEET STEEL FOR INDOOR LOCATIONS, GALV ALUMINUM FOR OUTDOOR LOCATIONS.
11.11 FOR ALL LIGHT FIXTURES: OCTAGON OR 4" SQUARE BOXES.
11.12 FOR SWITCHES AND RECEPTACLES: 4" OR 4-11/16" SQUARE BOXES.
11.13 JUNCTION AND PULL BOXES: 4" SQUARE MINIMUM SIZE. PROVIDE WITH SCREWFASTENED COVERS LOCATED IN ACCESSIBLE LOCATIONS.
11.14 CONDULETS: EQUAL TO CROUSE-HINDS.
11.15 WIRE AND CABLE: EQUAL TO GENERAL CABLE AND/OR SIMPLEX.
11.16 DEVICES: "HUBBELL", "LEVITON", OR APPROVED EQUAL. RECEPTACLES: DUPLEX-20 AMP #5242, ISOLATED GROUND - 20 AMP #6-16282-I, GFCI-20 AMP #6-N7899. SWITCHES: 20 AMP #1221 SINGLE POLE, 1222 DOUBLE POLE, 1223 THREE WAY, 1224 FOUR WAY. COLORS TO BE SPECIFIED BY ARCHITECT/OWNER/TENANT.
11.17 DEVICE PLATES: "HUBBELL", "LEVITON", OR EQUAL. COLORS TO MATCH EXISTING OR AS NOTED ON DRAWINGS. ZINC DIE CAST FLIP LID MOUNTED HORIZONTALLY FOR EXTERIOR OR WEATHERPROOF LOCATIONS.
12. LIGHTING FIXTURES: EQUAL TO AS SHOWN ON FIXTURE SCHEDULE OR DESCRIBED ON DRAWINGS. COMPLETE WITH LAMPS IN ORIGINAL CARTONS AND ALL CANOPES, STEMS, HANGERS AND ACCESSORIES INCLUDING ALL STRUCTURAL MEMBERS REQUIRED FOR PROPER MOUNTING. FLOORING AND FUTURE BALLASTS SHALL BE ENERGY SAVING TYPE. SUBMIT SHOP DRAWINGS TO ARCHITECT/ENGINEER FOR APPROVAL BY THE SAME. MUST BE C.E.C. APPROVED IN CALIF.
13. LAMPS: G.E. OR EQUAL AND SHALL BE FOR THE MAXIMUM RATED WATTAGE OF FIXTURE UNLESS OTHERWISE SHOWN ON DRAWINGS.
14. SLEEVES, INSERTS, OPENINGS
14.1 CONTRACTOR SHALL LAYOUT AND INSTALL HIS WORK IN ADVANCE OF POURING CONCRETE FLOORS OR WALLS. PROVIDE ALL SLEEVES AND/OR OPENINGS THROUGH FLOORS OR WALLS REQUIRED FOR ELECTRICAL CONDUITS OR DUCTS.
14.2 SLEEVES SHALL BE OF RIGID CONDUIT OR GALVANIZED SHEET STEEL, RIGIDLY SUPPORTED AND SUITABLY PACKED TO PREVENT ENTRANCE OF WET CONCRETE.
15. EXCAVATION/CUTTING/FITTING/REPAIRING/FINISHING
15.1 THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL EXCAVATION, COMPACTION, FILL, BACKFILL, CUTTING, FITTING, REPAIRING AND FINISHING OF ALL WORK NECESSARY FOR THE INSTALLATION OF ALL EQUIPMENT UNDER THIS SPECIFICATION BUT NO CUTTING OF THE WORK OF OTHER CONTRACTORS SHALL BE DONE WITHOUT THE CONSENT OF THE GENERAL CONTRACTOR.
15.2 EARTHWORK SHALL BE DONE IN ACCORDANCE WITH LATEST INDUSTRY STANDARDS.
16. CLEANUP OF PREMISES
16.1 CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES CLEAR OF WASTE MATERIALS AND DEBRIS CAUSED BY HIS EMPLOYEES AND OPERATION. EQUIPMENT NOT REQUIRED IN THE WORK SHALL BE REMOVED PRIOR TO THE TERMINATION OF THE CONTRACT.
17. TESTS AND INSPECTIONS
17.1 CONTRACTOR SHALL TEST WIRING AND DEVICES AS SECTIONS ARE COMPLETED AND SHALL CORRECT ALL DEFECTS IMMEDIATELY AT HIS OWN EXPENSE, INCLUDING ANY DAMAGE TO WALLS, CEILING, FLOOR OR OTHER PORTIONS OF THE BUILDING WHICH MAY RESULT FROM REPLACING DEFECTIVE EQUIPMENT.
17.2 FURNISH ALL METERS, CABLE, CONNECTIONS AND APPARATUS NECESSARY FOR MAKING TESTS.
17.3 TEST SYSTEM FOR SHORTS AND GROUNDS, FAULTY WIRING SHALL BE REMOVED AND REPLACED. ANY DEVICE, APPARATUS OR FIXTURE INSTALLED SHOWING SUBSTANDARD PERFORMANCE SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ARCHITECT/ENGINEER.
17.4 MEGGER ALL SYSTEMS NEUTRALS TO INSURE THE NEUTRAL IS NOT GROUNDED WITHIN THE SYSTEM.
17.5 ALL EQUIPMENT RATED AT 1,000 AMPS OR MORE, OR 480 VOLTS SHALL BE TESTED FOR INSULATION BREAKDOWN PRIOR TO ITS BEING ENERGIZED. SUCH EQUIPMENT SHALL WITHSTAND FOR A PERIOD OF ONE MINUTE WITHOUT BREAKDOWN, THE APPLICATION OF A 60HZ ALTERNATING POTENTIAL OF 1,000V PLUS TWICE THE RATED VOLTAGE OF THE DEVICE.
17.6 AFTER THE ELECTRICAL WIRING SYSTEM INSTALLATION IS COMPLETED AND AT SUCH TIME AS THE ARCHITECT/ENGINEER OR HIS AUTHORIZED REPRESENTATIVE MAY DIRECT, THE CONTRACTOR SHALL CONDUCT AN OPERATING TEST FOR APPROVAL. EQUIPMENT SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH REQUIREMENTS OF SPECIFICATIONS. TEST SHALL BE PERFORMED IN PRESENCE OF ARCHITECT/ENGINEER OR HIS REPRESENTATIVE.
18. SHOP DRAWINGS
18.1 ALL DATA SHALL BE SUBMITTED AT ONE TIME, BOUND AND INDEXED IN AN ORDERLY MANNER. PRIOR TO STARTING THE WORK, SUBMIT TO THE ARCHITECT/ENGINEER FOR APPROVAL, SIX (6) SETS OF SHOP DRAWINGS OF SERVICE (S.E.S.), PANELS, DISTRIBUTION SECTIONS, LIGHT FIXTURES, MOTOR CONTROL CENTERS, FIRE ALARM SYSTEM, DIMMERS, SOUND SYSTEM, EMERGENCY GENERATOR, DEVICES, TRANSFORMERS, LABELS AS REQUIRED BY 16000.22, AND ALL OTHER EQUIPMENT TO BE FABRICATED.
18.2 PROCURE SHOP DRAWINGS, WIRING DIAGRAMS, ETC., FROM OTHER TRADES INVOLVED WHERE SUCH DRAWINGS MAY FACILITATE AND EXPEDITE THE WORK. AIR CONDITIONING AND MECHANICAL EQUIPMENT SHALL BE WIRED COMPLETE AS PER MANUFACTURER'S WIRING DIAGRAMS FURNISHED BY THE AIR CONDITIONING AND MECHANICAL CONTRACTORS.
19. DRAWINGS OF RECORD (AS-BUILT)
19.1 AS-BUILT DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH AND IF REQUIRED BY DIVISION 1 - GENERAL REQUIREMENTS.
20. GUARANTEE
20.1 THE CONTRACTOR SHALL GUARANTEE ALL MATERIAL AND EQUIPMENT TO BE FREE FROM DEFECT OF MATERIAL AND WORKMANSHIP AND SHALL REPLACE OR REPAIR WITHOUT COST TO THE OWNER ALL DEFECTIVE MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.
21. INSTRUCTIONS
21.1 CONTRACTOR SHALL INSTRUCT THE OWNER IN THE PROPER OPERATING AND MAINTENANCE OF THE EQUIPMENT.
21.2 CONTRACTOR SHALL PROVIDE TWO (2) SETS OF OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT PROVIDED BY THIS DISCIPLINE. ONLY WHEN SUCH MANUALS ARE AVAILABLE FROM THE MANUFACTURER.
21.3 ALL MANUALS TO BE BOUND IN A 3-RING BINDER AND TABULATED IN AN ORDERLY MANNER.
22. LABELING
22.1 LABELS SHALL BE ENGRAVED, BLACK ON WHITE MELAMINE PLASTIC LAMINATE, 1/16" MINIMUM THICKNESS FOR SIGNS UP TO 20 SQUARE INCHES OR 8 INCHES LONG, 1/8" THICK FOR LARGER SIZES. ENGRAVED LEGEND SHALL BE IN WHITE LETTERS ON BLACK FACE WITH MINIMUM 3/16" HIGH LETTERS. LABELS SHALL BE PUNCHED AND FASTENED TO EQUIPMENT WITH ALUMINUM RIVETS OR SELF TAPPING STAINLESS STEEL SCREWS OR NUMBER 10/32 STAINLESS STEEL MACHINE SCREWS WITH NUTS, FLAT AND LOCK WASHERS.
22.2 LABEL EQUIPMENT WITH NAME, AMPERAGE, VOLTAGE, PHASE, AND WIRES (I.E. PANEL "A", 400A., 120/208V,30,4W), SUBMIT LIST OF ALL LABELS WITH WIRING FOR REVIEW AS PER 16000.19.
22.3 EQUIPMENT TO BE LABELED SHALL INCLUDE SERVICE (S.E.S.) AND ALL OVERCURRENT DEVICES, DISTRIBUTION SECTIONS AND ALL OVERCURRENT DEVICES, MOTOR CONTROL CENTERS (M.C.C.) AND ALL OVERCURRENT DEVICES, FUSIBLE PANELBOARDS AND ALL OVERCURRENT DEVICES, PANELS, STARTERS AND TRANSFORMERS. LABEL OTHER EQUIPMENT AS NOTED ON PLANS.



REVISIONS
NO. DATE

TENANT IMPROVEMENT ELECTRICAL SPECIFICATIONS



**GVR DEL SOL CLUBHOUSE
3355 S. CAMINO DEL SOL
TUCSON, ARIZONA 85747**

ISSUE DATE 09-14-2023
PROJ. NO. 312036
DRG. SCALE A8 NOTED

SHEET

E4.0



Job No. 23052
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