JOYA LA FIRE STATION LA JOYA, TEXAS 78560



ARCHITECT

SAM GARCIA ARCHITECT, LLC 200 S. 10TH STREET SUITE 1602 MCALLEN, TX 78501 (956) 631-8327 SAM GARCIA, AIA

MEP

A&G ENGINEERING,	GREEN
LLC	
1004 W. FRONTAGE RD.	
ALAMO, TX 78516	
(956) 787-3473	
LUIS MADRIGAL, P.E.	RO

 \geq C

OWNER

CITY OF LA JOYA 701 E. EXPRESSWAY 83 LA JOYA, TX 78560 (956) 581-7002

DESIGN CONSULTANT TEAM

STRUCTURE

EN, RUBIANO & ASSOCIATES

1220 W. HARRISON HARLINGEN, TX 78550 (956)428-4461 ROLANDO RUBIANO, P.E.

CIVIL

S&B INFRASTRUCTURE, LTD

5408 N. 10TH. STREET, MCALLEN, TX 78504 (956)926-5033 JOSE ALFRENDO CONSTANTE LANDSCAPE

SITE-WORK, LLC

15028 CR 4255 S. HENDERSON, TX 75654 (956)309-3113 STEPHEN P. WALKER, R.L.A

SHEET INDEX GENERAL A1.01 A1.02 CS COVER SHEET ADA1 ACCESSIBILITY STANDARDS A1.03 G1.01 GENERAL NOTES A1.04 ARCHITECTURE A1.05 AD1.01 DEMOLITION A1.06 ARCHITECTURE SITE A1.07 A\$1.01 SITE PLAN - OVERALL A2.01 A\$1.02 SITE PLAN - ENLARGED A2.02 CIVIL A3.01 CE100 CIVIL A4.01 LANDSCAPE A6.01 TREE LAYOUT - TREE PLANTING A7.01 L1 SHRUB LAYOUT - PLANTER LAYOUT L2 EMP HARDSCAPE LAYOUT B1.0 L3 ELECTRICAL L4 LANDSCAPE SHEET TOTALS E 0.0 L5 PLANTING DETAILS E 0.1 L6 TREE AND PALM PROTECTION TREE AND PALM PROTECTION E 1.0 L7 E 2.0 L8 IRRIGATION LAYOUT IRRIGATION DETAILS E 3.0 L9 E 3.1 STRUCTURAL MECHANICAL \$1.1 GENERAL STRUCTURAL NOTES \$1.2 GENERAL STRUCTURAL NO<u>tes</u> M 0.0 GENERAL STRUCTURAL DETAILS \$1.3 M 1.0 S1.4 STRUCTURAL RENDERING M 2.0 FOUNDATION DIMENSION LIMITS S2.0 M 3.0 PLAN M 3.1 \$2.1 FOUNDATION PLAN M 3.2 \$2.1C CONTROL JOINT PLAN M 4.0 FOUNDATION DETAILS \$2.2 PLUMBING FOUNDATION DETAILS S2.3 P 0.0 \$3.1 SCHEMATIC ROOF FRAMING PLAN P 1.0 \$3.2 FRAME PROFILES P 2.0 S4.1 ROOF FRAMING DETAILS P 3.0 ROOF FRAMING DETAILS S4.2 P 4.0 ROOF FRAMIN DETAILS S4.3 ARCHITECTURE

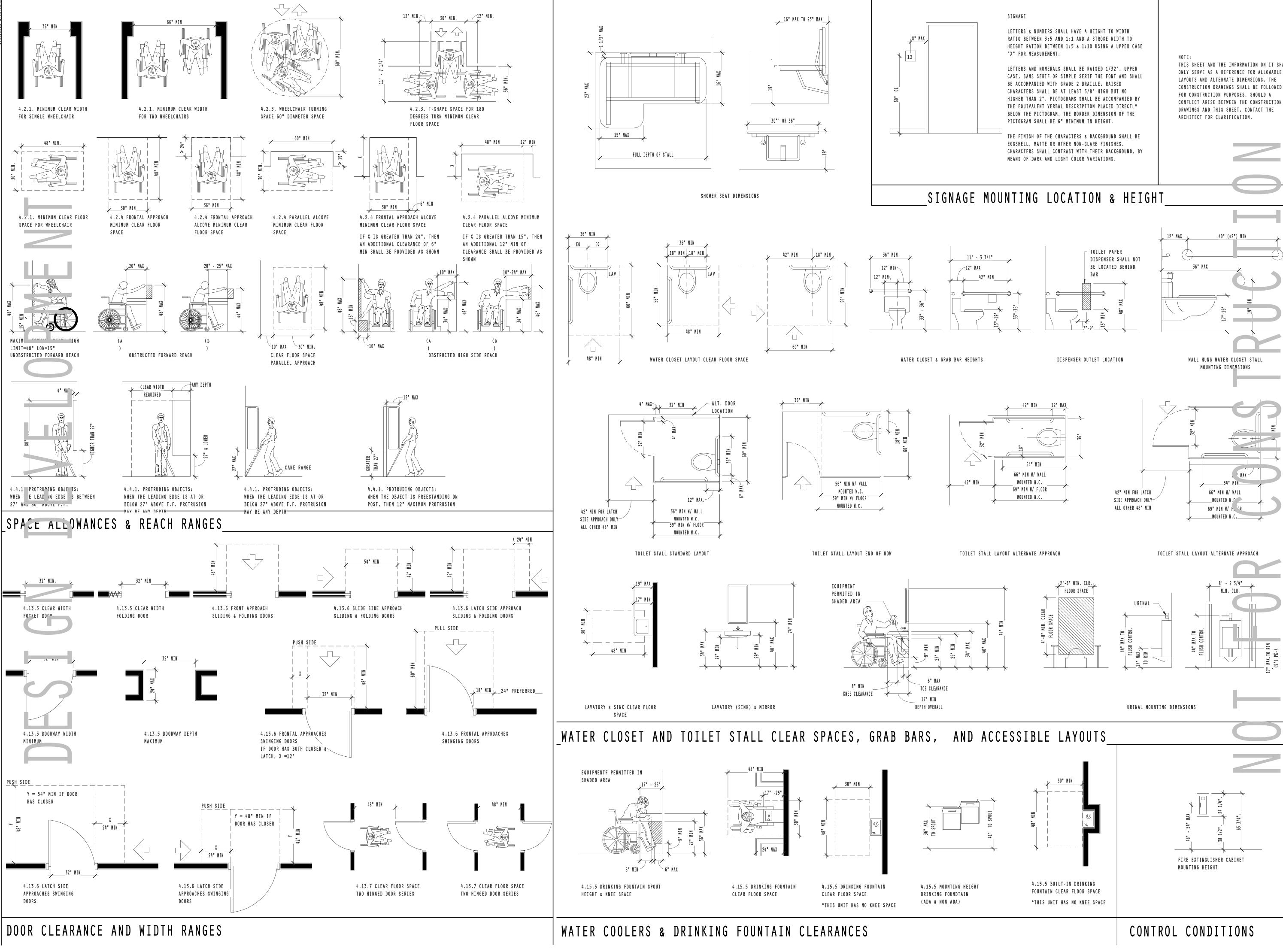
DIMENSION FLOOR PLAN ANNOTATED FLOOR PLAN ENLARGED PLANS / ELEVATIONS REFLECTED CEILING PLAN FINISH PLAN & PAINT ROOF PLAN LIFE SAFETY PLAN EXTERIOR ELEVATIONS EXTERIOR ELEVATIONS BUILDING SECTIONS WALL SECTIONS INTERIOR ELEVATIONS SCHEDULES COVER SHEET GENERAL NOTES - ELEC ELECTRICAL SITE PLAN - ELEC LIGHTING – ELEC POWER - ELEC SCHEDULES/DETAILS - ELEC SCHEDULES/DETAILS - ELEC GENERAL NOTES - MECH SUPPLY - MECH RETURN - MECH MECHANICAL SCHEDULES MECHANICAL SCHEDULES MECHANICAL SCHEDULES MECHANICAL DETAILS GENERAL NOTES - PLUMB

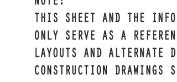
SHEET INDEX

WASTE/VENT - PLUMB DOM/HOT WATER - PLUMB RISERS - PLUMB SCHEDULES/DETAILS - PLUMB







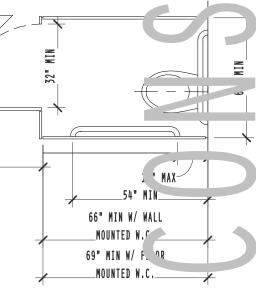


CONSTRUCTION DRAWINGS SHALL BE FOLLOWED CONFLICT ARISE BETWEEN THE CONSTRUCTION











DESCRIPTION

No.

DATE

THIS SHEET AND THE INFORMATION ON IT SHALL

GENERAL NOTES

1. THE CONTRACTOR SHALL PROTECT AREA AND NEW OR EXISTING MATERIALS AND FINISHES FROM DAMAGE, WHICH MAY OCCUR FROM CONSTRUCTION, TRANSPORT, DUST, WATER, ETC. AND SHALL PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC., AS REQUIRED, TO PROTECT THE PUBLIC/ADJACENT AREAS DURING THE PERIOD OF CONSTRUCTION.

2. DAMAGE TO NEW AND EXISTING MATERIALS, FINISHES, STRUCTURES AND EQUIPMENT SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT THE EXPENSE OF THE GENERAL CONTRACTOR.

3. MATERIALS SPECIFIED BY THEIR BRAND NAMES ARE TO ESTABLISH STANDARD OF QUALITY AND PERFORMANCE. ANY REQUEST FOR SUBSTITUTION SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW FOR EQUAL QUALITY AND PERFORMANCE AND SHALL NOT BE PURCHASED OR INSTALLED WITHOUT HIS WRITTEN APPROVAL.

4. WORK LISTED, SHOWN OR IMPLIED ON ANY CONSTRUCTION DOCUMENTS SHALL BE SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR, EXCEPT WHERE OTHERWISE NOTED. THE GENERAL CONTRACTOR SHALL CLOSELY COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS OR VENDORS TO ASSURE THAT ALL SCHEDULES ARE MET AND THAT ALL WORK IS DONE IN CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.

5. THE CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DOCUMENTS ON THE JOB SITE DURNING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES AND SHALL PROVIDE ALL SUBCONTRACTORS WITH CURRENT CONSTRUCTION DOCUMENTS AS REQUIRED.

6. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A REGULAR BASIS AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING TO PREVENT ANY DIR, DEBRIS, OR DUST FROM AFFECTING, IN ANY WAY, FINISHED AREAS IN OR OUTSIDE JOBSITE. THE BUILDING REFUSE FACILITIES SHALL NOT BE USED F

7. CONTRACTOR SHALL COORDINATE ALL WORK WITH MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER SUB-TRADES AND DEDODT TO ARCHITECT ANY DISCREPANCIES FOR CORRECTION OR ADJUSTMENT. NO ALLOWANCE WILL BE MADE FOR INCREASED COST INCURRED DUE TO LACK OF PROPER COORDINATION.

8. THE CONTRACTOR, OR SUBCONTRACTORS, SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, AND LICENSES REQUIRED FOR PROPER COMPLETION OF THE WORK. THE CONTRACTOR SHALL REQUEST ALL IN PECTIO REQUIR) BY LOCAL GOVERNMENTAL AGENCIES AND COORDINATE HIS WORK WITH SUCH.

9. THE GENERAL CONTRACTOR SHALL SUBMIT ONE (1) COPY OF ALL MANUFACTURER'S WARRANTIES AND OPERATIONS/MAINTENANCE INSTRUCTIONS TO THE OWNER.

FIF' ... RIFY EXISTING CONDITIONS PRIOR TO STARTING THE WORK. SHOULD THE CONTRACTOR 10. FIND, THEN THE TIGT. .) THE SITE OR DURING CONSTRUCTION, ANY DISCREPANCIES, OMMISSIONS, AMBIGUITIES, OR CONFLICTS IN OR AMONG THE DRAWINGS, OR BE IN DOUBT AS TO THEIR MEANING, HE/SHE SHOULD THE ATELY NOTIFY THE ARCHITECT IN WRITING BEFORE PROCEEDING.

11. GROUNDSTRECKING MAY NOT BE WHOLLY SHOWN ON DRAWINGS AND GOOD CONSTRUCTION PRACTICE SHALL GOVERN/DETERMINE SAID USE WHEN A QUESTION ARISES.

12. THE GENERAL CON PACTOR SHALL PAY PARTICULAR ATTENTION TO ALL LOCATIONS OF DRY WALL PARTIT. " COSTRUCTION HAT ABUTT OR RECEIVE MILLWORK OR CABINETRY.

13. ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY LESS THAN 8 INCHES FROM THE GROUND SHALL BE PRESSURE TREATED OR {EDWOOD.

14. ISOLATE DISSIMILAR METALS SO THEY ARE NOT IN CONTACT WITH EACH OTHER TO PREVENT/AVOID ELECTROLYTIC REACTION.

15. CONTRA OR SHAL COMPLY WITH CURRENT APPLICABLE LOCAL ORDINANCES FOR UTILITY SERVICES.

16. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES. WHERE ENCOURTERED. CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS FOR SUPPORT, SHORE-UP, REROUTE OR UTILITY DISCONNECTIONS AS REQUIRED BY APPLICABLE LOCAL OR PRIVATE UTILITY COMPANIES.

17. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL AND PLUMBING ROUGH-IN

18. THE CO RACTOR IALL COORDINATE HIS WORK W/ THAT OF THEIR SEPARATE CON- TRACTORS @ BUILDI C DENE ATTONS ICH AS WINDOW DOORS, VENTS, LOUVERS, ETC.

19. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION AND REQUIRED CLEAR- ANCES OF THE EQUIPMF ., NOT STRUCT PAL MEMBER SHALL BE OMITTED, NOTCHED OUT, BLOCKED OUT, OR RELOCATED W/OUT PRIOR PPROVAL BY THE CHITECT OR ENGINEER.

20. WINDOWS & DOOR LITES W/IN 40" OF THE LOCKING DEVICE SHALL BE FULLY TEMPERED.

21. THE ELECTRIC SUBCONTRACTOR SHALL FURNISH AND INSTALL EXIT LIGHTS IN ACCORDANCE WITH THE PREVAILING BUILDING AND FIRE CODES.

22. ALL PRODUCTS AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS/SPECIFICATIONS UNLESS SPECIFIED OTHERWISE.

MATERIALS, EQUIPMENT, AND CRAFTSMANSHIP OF ALL TRADES SHALL CONFORM TO RECOGNIZED ASTM OF QUALITY APPROPRIATE TO GRADE OF SAID MATERIALS, EQUIPMENT, AND CRAFTSMANSHIP.

24. ** TERIALS AND F JIPMENT SHALL BE NEW, SOUND, OF HIGH QUALITY, AND SUITABLE FOR APPLICATIONS SPECIFIED.

25. MATERIALS SHALL BE POSITIONED IN AN ORDERLY MANNER AND SHALL BE ALIGNED W/ THE BUILDING STRUCT JERS/SURFACES SHALL BE PLUMB. HORIZONTAL MEMBERS/SURFACES SHALL BE LEVEL AND ALL SURFACES TRUE TO PLANES SPECIFIED.

26. CRAFTSMANSHIP SHALL BE NEAT, CLEAN, AND TRUE TO LINE AND DIMENSION. FINISH MATERIALS SHALL E FREE FTOOL RKS, FLAWS AND BLEMISHES, JOINERY AND CONNECTIONS SHALL BE ACCURATE, WILL BE THE MINIMUM ACCEPTABLE STANDARD FOR RESPECTIVE TRADE WORK.

27. CEILIN PLANE S ILL BE LEVEL AND TRUE AND IN ALIGNMENT WITH ALL LIGHTING, SPRINKLER, HVAC, ND OTH FIEMEN ; INCORPORATED THEREIN.

28. MECHANICAL, HVAC, AND PLUMBING ELEMENTS SHALL AT NO TIME COME IN CONTACT WITH CEILING CONSTRUCTION EXCEPTION NECESSARY PENETRATIONS MAY REQUIRE.

29. MATERIALS, EQUI. MENT, AND/OR CONTRUCTIVE SERVICES NOT INDICATED IN DRAWINGS OR SPECIFIED HEREIN, BUT REQUIRED FOR SUCCESSFUL AND EFFICIENT COMPLETION OF THE INSTALLATION SHALL BE CONSIDERED IMPLIED IN THE DOCUMENTS. CONTENTS AND SAID MATERIAL, EQUIPMENT, AND/OR CONSTRUCTIVE SERVICES SHALL BE FURNISHED AND INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

30. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS OR LEVEL OF CRAFTSMANSHIP, SUCH STANDARDS SHALL BE MAINTAINED PER THE LATEST ADDITION AND/OR ADDENDUM.

31. ANY OMISSIONS OR CONFLICTS WITHIN THE DRAWINGS, NOTES, OR DETAILS SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

32. WHERE SPECIFIC INSTRUCTIONS REQUIRE THAT A PARTICULAR PRODUCT OR MATERIAL BE INSTALLED BY MANUFACTURER OR PER MANUFACTURER'S INSTRUCTIONS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ANY SUBCONTRACTORS ARE APPROVED APPLICATORS & THAT INSTALLERS FOLLOW MANUFACTURER'S INSTRUCTIONS.

33. DETAILS SHOWN SHALL BE INCORPORATED INTO CONSTRUCTION AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT/IDENTIFIED OR NOT.

34. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION THROUGHOUT, UNLESS DETAILED OTHERWISE ON DRAWINGS.

35. SHOP DRAWINGS: CONTRACTOR SHALL FURNISH SHOP DRAWINGS FOR ALL SHOP FABRICATED WHERE CUSTOMARILY REQUIRED. SUBMIT FOUR (4) SETS OF SHOP DRAWINGS FOR REVIEW. THE SHALL BE RESPONSIBLE FOR CHECKING THE SHOP DRAWINGS FOR ACCURACY, COORDINATION WITH AND COMPLIANCE WITH THE CONTRACT DOCUMENTS BEFORE BEING SUBMITTED FOR APPROVAL. ARCH ENGINEER'S APPROVAL OF SHOP DRAWINGS SHALL CONSTITUTE REVIEW AND APPROVAL OF THE GENI ARRANGEMENT OF COMPONENTS TO COMPLY WITH THE GEN- ERAL INTENT OF THE CONSTRUCTION DO IF SUCH ITEMS ARE NOT SHOWN ON THE SHOP DRAWINGS. THE CONTRACTOR SHALL CHECK ALL DI CONDI- TIONS TO INSURE A PROPER FIT UNDER FIELD CONDITIONS AND SHALL MAKE ADJUSTMENTS TO MAKE PARTS ALIGN. ALL REVISIONS TO SHOP DRAWINGS AFTER THE FIRST SUBMISSION MUST IDENTIFIED ON SUBSEQUENT SUBMISSIONS.

36. A MINIMUM QUANTITY OF TWO (2) 1'-0" x 1'-0" FINISH SAMPLES OF ALL SPECIFIED F CURRENT STOCK CUTTINGS OF ALL SPECIFIED WALL-COVERINGS SHALL BE PROVIDED FOR APPROVAL ORDERING.

37. PAINT FOR WALL FINISHES SHALL BE PROVIDED AS THREE (3) COAT EGGSHELL LATEX EN/ INSTALLATION: ONE (1) PRIME COAT AND TWO (2) FINISH COATS. COLORS AS SPECIFIED. MET/ AND DOOR FRAMES SHALL HAVE A THREE (3) COAT SEMI-GLOSS ALKYD ENAMEL FINISH.

 THE GENERAL CONTRACTOR SHALL ASSURE THAT NOT ELECTRIC RECEPTACLE OR TELECOMMUNICATION OUTLET COVERPLATES HAVE BEEN INSTALLED PRIOR TO COMPLE- TION OF APPLICATION OF ANY WA MATERIALS. ANY SUCH COVERPLATES OR SUR- FACE HARDWARE, ETC. IN PLACE SHALL BE REMOVE WALL FINISH APPLICATION.

39. THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN COMPLETE PROTECTION FOR ALL FLOOR FINISHES (INCLUDING CARPET) UNTIL ALL CONSTRUCTION WORK IS COMPLETE. PROTECTIO REMOVED ONLY IMMEDIATELY PRIOR TO JOB COMPLETION.

40. NO WORK IS TO COMMENCE UNTIL PLANS HAVE BEEN APPROVED BY THE DEPARTMENT OF BUI PERMIT TO BUILD HAS BEEN OBTAINED BY THE GENERAL CONTRACTOR.

41. PRIOR TO THE START OF CONSTRUCTION, THE GENERAL CONTRACTOR SHALL COORDI- NATE MEETING WITH HIS PROJECT PERSONNEL, THE OWNER, ARCHITECT, AND OTHERS FOR REVIEW OF PI DESIGN, INTENT, CONSTRUCTION QUALITY EXPECTED, AND FINAL DISCUSSION OF DRAWINGS/DETAIL

42. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE CODES OF THE LOCAL JURISDI

43. THE GENERAL CONTRACTOR AND ALL VENDORS/SUBCONTRACTORS ARE RESPONSIBLE FOR FIEL VERIFICATION OF DIMENSIONS, QUANTITIES, ETC. OF THEIR RESPECTIVE WORK.

44. DO NOT SCALE DRAWINGS. WHERE DIMENSIONS BETWEEN SMALL SCALE AND DETAIL DRAWIN DETAIL DIMENSIONS SHALL GOVERN. FIELD VERIFY ALL DIMENSIONS, NOTIFY ARCHITECT OF ANY DISCREPANCIES.

45. IF SPACE IS AVAILABLE, THE OWNER MAY PERMIT THE CONTRACTOR TO STORE SOME MATER SITE IN AN AREA APPROVED BY THE OWNER - PROVIDED THAT THE CONTRACTOR ACCEPTS FULL RES FOR ANY AND ALL STORED MATERIALS.

46. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA DOCUMENT A-201, THE EDITION, SHALL BE MADE A PART OF THESE DRAWINGS.

47. THE GENERAL CONTRACTOR SHALL CARRY WORKMEN'S COMPENSATION AND LIABILITY INSURA ALL CONSTRUCTION OPERATIONS TO BE PERFORMED.

48. DRAWINGS AND SPECIFICATIONS AS INSRUMENTS OF SERVICE REMAIN THE PROPERTY OF AR ARE PROTECTED UNDER COMMON LAW COPYRIGHT PROVISIONS. THEY ARE NOT TO BE REUSED EXCEN AGREEMENT AND WITH THE AGREED COMPENSATION TO THE ARCHITECT. IF REUSED, WITHOUT PERI ARCHITECT SHALL BE INDEMNIFIED AND HELD HARMLESS FROM ALL LIABILITY, LEGAL EXPOSURE, DAMAGES, LOSSES & EXPENSES. DRAWINGS SHALL NOT BE USED FOR ISSUANCE OF A BUILDING PI SIGNED AND SEALED BY THE ARCHITECT. DRAWINGS SHALL NOT BE USED FOR MULTIPLE OR PROT(DEVELOPMENT WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT.

49. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL GUARANTEE ALL WORK FOR A YEAR FROM DATE OF FINAL COMPLETION/RECEIPT OF FINAL PAYMENT. SHOULD DEFECTS DEVELOP GUARANTEE PERIOD DUE TO FAULTS IN MATERIALS AND/OR LABOR, THE CONTRACTOR SHALL MAKE COMPLETE ALL NECESSARY WORKS AS SOON AS POSSIBLE. SPECIFIC MATERIAL AND/OR MATERIAL SUPPLIED BY INDEPENDENT MANUFACTURERS SHALL BE GUARANTEED AS FOLLOWS: (1) IF MANUFA FABRICATOR'S GUARANTEES / WARRANTIES EXCEED THE ONE YEAR STIPULATED PERIOD OF GUARAN WARRANTY, THE SUCH GUARANTEES / WARRANTIES SHALL BE BINDING FOR THE DURATION STIPULA OF THE ONE YEAR STIPULATED PERIOD. (2) IF MANUFACTURER'S / FABRICATOR'S GUARANTEES ARE LESS THAN THE ONE YEAR STIPULATED PERIOD OF GUARANTEE / WARRANTY, THEN THE CONTR/ ASSOCIATED SUB-CONTRACTORS SHALL ASSUME THE GUARANTEES / WARRANTIES FOR MATERILS AND ASSEMBLIES TO THE ONE YEAR STIPULATED PERIOD.

DIVISION 1 GENERAL REQUIREMENTS

SECTION 00700 GENERAL CONDITIONS

1. QUALITY ASSURANCE

A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTA MANUFACTURERS THAT HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MAN INSTRUCTIONS.

2. INSTALLATION

A. INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCT APPROVED SUBMITTALS. INSTALL MATERIALS AND SYSTEMS IN PROPER RELATION WITH ADJACENT COORDINATE WITH WORK OF OTHER SECTIONS.

B. TEST FOR PROPER OPERATION. CLEAN OUT SYSTEM AND PROTECT WORK FROM DAMAGE C. RESTORE DAMAGED FINISH. CLEAN AND PROTECT WORK FROM DAMAGE.

SECTION 00800 SUPPLEMENTARY CONDITIONS

1. DOCUMENT PRECEDENCE: THESE CONDITIONS SUPPLEMENT AND SUPERSEDE PORTION OF THE CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, WHICH IS INCLUDED BY REFERENCE ABOVE.

2. CONTRACT DOCUMENTS

A. PRECEDENCE OF THE CONTRACT DOCUMENTS: THE MOST RECENTLY ISSUED DOCUMENT PRECEDENCE OVER PREVIOUS ISSUES OF THE SAME DOCUMENT. THE ORDER OF PRECEDENCE IS AS THE HIGHEST AUTHORITY LISTED AS "1" - 1. THE AGREEMENT; 2. ADDENDA; 3. SUPPLEMENT/ CONDITIONS; 4. GENERAL CONDITIONS; 5. SPECIFICATIONS AND DRAWINGS

3. RELATION OF SPECIFICATIONS AND DRAWINGS:

A. THE PARTS OF THE CONTRACT DOCUMENTS ARE EQUAL AUTHORITY AND PRIORITY. S DISAGREE IN THEMSELVES, OR WITH EACH OTHER, PRICING OF THE WORK SHALL BE BASED ON THI EXPENSIVE COMBINATION OF QUALITY AND QUANTITY OF WORK INDICATED. THE ARCHITECT WILL DETERMINATION OF THE APPROPRIATE METHOD OF PERFORMING THE WORK IN THE EVENT OF THE AJ DISAGREEMENTS.

B. FIGURES TAKE PRECEDENCE OVER SCALE MEASUREMENTS.

C. LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALLER SCALE DETAILS. D. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE IN REGARD TO DIMENSIONS, WHEN IN

ELECTRICAL, MECHANICAL, AND STRUCTURAL DRAWINGS, EXCEPT FOR THE SIZE OF THE STRUCTUR E. SPECIFICALLY TITLED DRAWINGS AND SECTIONS OF THE SPECIFICATIONS TAKE PRE INDICATION OF THE ITEM IN A COLLATERAL WAY. F. EXISTING CONDITIONS TAKE PRECEDENCE OVER DRAWINGS AND SPECIFICATIONS FOR

4. ENUMERATION OF ITEMS: LISTS OF "WORK INCLUDED" AND "WORK EXCLUDED" ARE NOT INTE ENUMERATE EACH AND EVERY ITEM OF WORK OR APPURTENANCES REQUIRED, AND MUST BE USED IN WITH OTHER PORTIONS OF THE CONTRACT DOCS.

5. CURRENT EDITION: WHEN THE WORK IS GOVERNED BY REFERENCE TO STANDARDS, BUILDING MANUFACTURER'S INSTRUCTIONS OR OTHER REFERENCE DOCUMENTS, THE CURRENT EDITIONS SHALL OR NOT PROPER EDITION IS SPECIFIED. WHEN A NEWER EDITION BECOMES EFFECTIVE DURING 1 OF A CONTRACT, THE EDITION THAT WAS CURRENT AT THE TIME THE CONTRACT WAS MADE SHALL THE ARCHITECT PROPERLY AUTHORIZES A CHANGE. IF CHANGES MUST BE MADE BECAUSE OF GOVE AUTHORITIES, THE CONTRACT WILL BE APPROPRIATELY MODIFIED WITH ADJUSTMENTS IN THE CONT

ITEMS AND CONTRACTOR OTHER TRADES, HI- TECT'S OR	6. OPTIONAL MATERIALS, BRANDS AND PROCESSES: WHEN MORE THAN ONE IS SPECIFIED FOR A PARTICULAR ITEM OF THE WORK, THE CHOICE SHALL BE CONTRACTOR'S. THE ARCHITECT'S SELECTION OF COLOR AND PATTERN WILL BE MADE FROM THE RANGE AVAILABLE WITHIN THE OPTION SELECTED BY THE CONTRACTOR, UNLESS THE ITEM IS SPECIFIED TO MATCH A SPECIFIC COLOR OR SAMPLE FURNISHED BY THE	<u>SECTION 10400 QUALITY REQUIREMENTS</u> 1. JOIN MATERIALS TO UNIFORM, ACCURATE FIT SO THEY MEET WITH NEAT S SMEARS OR OVERLAPS.
ERAL Cuments, even	ARCHITECT.	2. INSTALL EXPOSED MATERIALS APPROPRIATELY LEVEL, PLUMB, AND AT ACC
MENSIONS AND S AS REQUIRED BE PROPERLY	7. ALTERNATE MATERIALS: WHEN ONE PARTICULAR BRAND OR MANUFACTURER IS CALLED OUT, GENERAL CONTRACTOR MAY PROPOSE AN ALTERNATE BRAND FOR ARCHITECT & OWNER APPROVAL. ALL BRAND NAMES SHALL BE CONSIDERED AS A BASIS OF DESIGN. "OR APPROVED EQUAL" SHALL BE ASSUMED THROUGHOUT.	ADJOINING MATERIALS. 3. USE THE FASTENINGS OF SUFFICIENT STRENGTH AND SPACING SO THE MAT RETAINED EXCEED THE STRENGTH OF THE MATERIALS JOINTED.
INISHES AND L PRIOR TO	8. REFERENCE STANDARDS: REFERENCE STANDARDS AND GUARANTEES THAT ARE MADE A PART OF THE REQUIREMENTS APPLY IN FULL, EXCEPT FOR THE FOLLOWING PORTIONS: A. LESS STRINGENT REQUIREMENTS THAN THOSE GIVEN IN THE CONTRACT DOCS. B. EXCLUSIONS, LIMITATIONS OR WAIVERS THAT ARE INCONSISTENT WITH THE CONTRACT	4. FOLLOW SUPPLIER'S INSTRUCTIONS. WHEN SUCH INSTRUCTIONS ARE IN CO CONTRACT DOCUMENTS, NOTIFY THE ARCHITECT FOR CLARIFICATION BEFORE PROC THE MANUFACTURER'S INSTRUCTIONS ON THE JOB AND MAKE AVAILABLE TO THE A
AMEL PAINT. Al elements	DOCUMENTS. 9. INDEMNIFICATION: THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND THE	5. REPAIR OR REPLACE DAMAGED PORTIONS OF THE BUILDING CONTENTS, UND DAMAGES RESULT FROM FAULTY MATERIAL OR NEGLIGENT WORKMANSHIP.
	ARCHITECT AND THEIR AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES, AND Expenses including attorney's fees arising out of	6. WARRANT THAT MODIFICATIONS OR SUBSTITUTIONS SUGGESTED BY THE CON
NICATIONS All FINISH ED PRIOR TO	OR RESULTING FROM THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, DAMAGE, LOSS, OR EXPENSE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE, OR DEATH OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, (OTHER THAN THE WORK ITSELF) INCLUDING THE LOSS OF USE RESULTING THERE FROM, AND IS CAUSED IN WHOLE OR IN PART BY A NEGLIGENT ACT OR OMISSION OF THE	SATISFACTORY RESULTS AND THAT THEY WILL BE EQUAL OR SUPERIOR TO THE SP UNLESS SHORTCOMINGS ARE SPECIFICALLY LISTED IN THE REQUEST FOR MODIFIC SUBSTITUTIONS.
NEW INSTALLED ON SHALL BE	CONTRACTOR, AND SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY.	7. ARCHITECT: THE ARCHITECT'S PRESENCE AT THE PROJECT SITE DOES NOT APPROVAL OF THE WORK. THE CONTRACTOR SHALL CALL SPECIFIC ITEMS TO THE IN WRITING IF HE WISHES TO KNOW THE ARCHITECT'S OPINION.
ILDINGS AND	<u>SECTION O1100 PROCEDURES, CONTROLS, PAYMENTS</u>	SECTION 10500 TEMPORARY FACILITIES AND CONTROLS
	A. SUPERVISORY PERSONNEL B. PRECONSTRUCTION CONFERENCE	1. THE CONTRACTORS WILL ESTABLISH LAY DOWN AREAS ON SITE FOR CONSTR OWNER SHALL APPROVE THE LOCATION OF THESE AREAS.
SCHEDULING OF ROJECT SCOPE, ILS/QUESTIONS.	C. BI-WEEKLY MEETINGS (DISTRIBUTE MINUTES) D. OTHER MEETINGS	2. EQUIPMENT OWNED BY PUBLIC UTILITIES REMAINS THE PROPERTY OF THOS WITH AND PROVIDE REASONABLE ACCESS TO THE UTILITY COMPANIES FOR THE RE
CTION.	2. SUBMIT BI-WEEKLY AND SPECIAL REPORTS 3. SUBMIT PROGRESS SCHEDULE, BAR-CHART TYPE, AND UPDATED MONTHLY	SUCH EQUIPMENT. 3. PROVIDE TEMPORARY SERVICES AND UTILITIES: WATER (POTABLE AND NON
LD	4. PREPARE SUBMITTAL SCHEDULE; COORDINATE WITH PROGRESS SCHEDULE	SEDIMENT, POWER, METERING, TELEPHONE, ETC.
NGS DIFFER,	5. SUBMIT SCHEDULE OF VALUES	4. PROVIDE CONSTRUCTION FACILITIES: CONSTRUCTION EQUIPMENT, DEWATER ENCLOSURE, HEATING, LIGHTING, ACCESS, ROADS, ETC.
T	6. SUBMIT SCHEDULE OF REQUIRED TESTS (PAYMENT AND RESPONSIBILITY)	5. PROVIDE SECURITY AND PROTECTION REQUIREMENTS: FIRE EXTINGUISHER FENCE, BARRICADES, WARNING SIGNS, LIGHTS, BUILDING ENCLOSURE AND LOCK-
RIALS ON THE SPONSIBILITY	7. PERFORM SURVEYS: LAYING OUT WORK AND VERIFYING LOCATIONS DURING CONSTRUCTION	PROTECTION, PEST CONTROL, ETC.
LATEST	8. SUBMIT RECORD DRAWINGS AND SPECIFICATIONS (TO BE MAINTAINED BY CONTRACTOR AS WORK PROGRESSES)	6. PROVIDE PERSONNEL SUPPORT FACILITIES: CONTRACTOR'S FIELD OFFICE, DRINKING WATER, PROJECT IDENTIFICATION SIGN, CLEANING AND TRASH REMOVA
	9. SUBMIT PAYMENT REQUEST PROCEDURES	7. PROVIDE FOR TEMPORARY TRASH DUMPSTER SERVICE AND LEGAL DISPOSAL BASIS. KEEP THE SITE CLEANED AND A SAFE WORKING CONDITION ON A REGULA
ANCE TO COVER	10. PERFORM QUALITY CONTROL DURING INSTALLATION	8. PROVIDE FOR A FINAL CLEANING PRIOR TO OCCUPANCY BY THE SPACE. T
RCHITECT AND	SECTION 01300 ADMINISTRATIVE REQUIREMENTS	FINAL CLEANINGS SHALL INCLUDED VACUUMING CARPETS, WIPING DOWN MILLWORK INTERIORS AND EXTERIORS, CLEANING RESTROOMS, ETC.
PT BY WRITTEN MISSION, THE CLAIMS,	1. THE OWNER RESERVES THE RIGHT TO OBSERVE THE WORK AT ANY TIME, AND TO OCCUPY THE PROJECT, OR A SPECIFIED AREA OF THE PROJECT, REGARDLESS OF WHETHER THE CONTRACT TIME HAS EXPIRED. IN SUCH AN EVENT, THE OWNER SHALL PAY AN APPROPRIATE SHARE OF THE UTILITIES, INSURANCE AND OTHER	SECTION10600 PRODUCT REQUIREMENTS
ERMIT UNLESS Otype	EXPENSES CAUSES BY EARLY OCCUPANCY.	1. MATERIALS SHALL HAVE THE FOLLOWING CHARACTERISTICS: A. NEW AND HIGH QUALITY SUITED TO THE USE INTENDED, EXCEPT WH
PERIOD OF ONE	2. KEEP COMPLETE DOCUMENTS ON THE JOB, INCLUDING ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, AND CONDITIONS OF THE CONTRACT, ADDENDA, CHANGE ORDERS, SHOP DRAWINGS, AND OTHER DOCUMENTS ISSUED DURING THE COURSE OF THE WORK. KEEP THESE DOCUMENTS IN GOOD CONDITION AND MAKE THEM	AS "USED". B. SUITABLE FOR THE FUNCTION INTENDED. C. CORRESPONDING IN QUALITY TO RELATED MATERIALS IN THE ABSEN
WITHING THE REPAIRS AND	AVAILABLE TO THE ARCHITECT. NOTE ALL MODIFICATIONS TO THE CONTRACT ON THE APPROPRIATE DOCUMENT FOR RECORD DRAWINGS.	SPECIFICATION. D. OF GOOD APPEARANCE WHERE EXPOSED TO VIEW.
ASSEMBLIES CTURER'S / TEE /	3. SECURE REQUIRED INSPECTION CERTIFICATES, AND TRANSMIT THEM TO THE OWNER AND THE ARCHITECT.	E. OF ONE MANUFACTURER OR SOURCE FOR THE SAME SPECIFIC PURPOS F. PLAINLY MARKED AND DELIVERED TO THE SITE IN THEIR ORIGINAL WHEN THE NATURE OF THE MATERIALS IS SUITABLE FOR CONTAINERS.
TED IN EXCESS / WARRANTIES ACTOR AND MATERIAL	4. FURNISH WRITTEN WARRANTIES USING THE FORM DIRECTED BY THE OWNER AND THE ARCHITECT. A. THE OWNER MAY MAKE EMERGENCY REPAIRS TO THE WORK DURING THE WARRANTY PERIOD, TO PREVENT FURTHER DAMAGES.	2. APPROVAL OF MATERIALS, SUPPLIERS, PROCESSES, OR SUBCONTRACTORS: APPROVAL OR REVIEW OF ANY PORTIONS OF THE WORK DOES NOT IMPLY A WAIVER REQUIREMENT.
	B. THE CONTRACTOR SHALL PAY FOR SUCH REPAIRS WHEN NECESSITATED BY DEFECTS IN THE CONTRACTOR'S WORK.	SECTION 10700 EXECUTION REQUIREMENTS
	5. MAKE PROPER SUBSTITUTIONS WITHIN 15 DAYS AFTER THE AWARD OF THE CONTRACT, EXCEPT WHEN CIRCUMSTANCES OCCUR BEYOND THE CONTRACTOR'S CONTROL. SUBMIT REQUESTS FOR SUBSTITUTIONS IN	1. COMMENCE THE WORK WHEN AN OWNER AUTHORIZED WRITTEN WORK ORDER OR BEEN ISSUED WITH INSTRUCTIONS TO PROCEED, PROVIDED OTHER REQUIREMENTS
BLE USE	WRITING, GIVING SUFFICIENT INFORMATION AND SAMPLES FOR EVALUATION WITH THE DIFFERENCES IN COST, IF ANY. SUBSTITUTIONS MUST BE APPROVED IN WRITING BEFORE THEY MAY BE USED. COORDINATE WITH SECTION 01350 SUBMITTALS, PRODUCTS, AND SUBSTITUTIONS.	2. PROVIDE SAFE, REASONABLE CONVENIENT ACCESS FACILITIES TO THE WOR ARCHITECT, AND GOVERNMENTAL INSPECTORS.
UFACTURER'S	6. MISCELLANEOUS PROVISIONS A. NOT-IN-CONTRACT WORK: PROVIDE UTILITIES, PLACEMENT, AND CONNECTION OF ITEMS NOTED "NOT-IN-CONTRACT" WHEN SHOWN OR NOTED.	3. THE CONTRACTOR SHALL FURNISH BENCHMARKS AS REQUIRED. THE CONTRA RESPONSIBLE FOR ALL LAYOUTS RELATED TO HIS WORK INCLUDING PROPERTY & B SHALL REPORT ANY DISCREPANCY TO THE OWNER IMMEDIATELY.
IONS AND CONSTRUCTION.	B. LARGE SAMPLES OR COMPLETE UNITS SAMPLES: WILL BE REQUIRED ONLY WHEN CALLED FOR IN THE SPECIFICATIONS. C. APPROVAL OF MATERIALS, SUPPLIERS, PROCESSES, OR SUBCONTRACTORS: THE ARCHITECT'S	4. ITEMS TO BE TESTED AT OWNER'S DISCRETION: CONCRETE, EARTH FILL PAVEMENT, STEEL WELDS AND BOLTING, ROOF AND OTHER ITEMS AT OWNER OR AR
	APPROVAL OR REVIEW OF ANY PORTIONS OF THE WORK DOES NOT IMPLY A WAIVER OF ANY CONTRACT REQUIREMENT.	5. TESTING LABORATORY SERVICES
	SECTION 11350 SUBMITTALS, PRODUCTS, AND SUBSTITUTIONS	A. OWNER WILL SELECT INDEPENDENT TESTING LABORATORY TO INSPE AND WORK. B. OWNER PAYS FOR SERVICES, PROVIDED MATERIAL TESTED MEETS S
GENERAL	1. COMPLY WITH PROJECT FORMAT FOR SUBMITTALS. CONTRACTOR SHALL MAINTAIN A DETAILED AND ACCURATE SHOP DRAWING AND PRODUCT SUBMITTAL CONTROL SYSTEM FOR THE PROJECT. THE SYSTEM SHALL BE	REQUIREMENT. CONTRACTOR WILL PAY FOR INITIAL TESTS OF MATERIALS NOT M All subsequent tests including final test indicating compliance.
	UPDATED ON A WEEKLY BASIS AND REPORTED TO THE ARCHITECT FOR COORDINATION AT ALL BI-WEEKLY OWNER'S MEETINGS. THE SCHEDULE RESPONSIBILITY IS THAT OF THE CONTRACTOR AND NEGLIGENCE IN COORDINATING THE SHOP DRAWING PROCESS DOES NOT RELIEVE THE CONTRACTOR FROM THE CONTRACTUAL	C. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SIGN-IN INDICATING THE DATE, TIME, AND NAME OF EACH TESTING LABORATORY REPRESE SITE. THE OWNER AND/OR ARCHITECT WILL USE THIS LOG TO VERIFY TIME ELA
TAKES FOLLOWS, WITH	OBLIGATION OF SUBSTANTIAL COMPLETION.	THE TESTING LABORATORY'S REPRESENTATIVES AND WILL CHECK IT AGAINST INV LABORATORY.
ARY	 PROVIDE TYPES OF SUBMITTAL LISTED IN INDIVIDUAL SECTIONS AND NUMBER OF COPIES REQUIRED. A. SHOP DRAWINGS, REVIEWED AND ANNOTATED BY THE CONTRACTOR (3 SETS OF PRINTS); 	6. HALT THE WORK , WHEN NOTIFIED OF A PROPOSED CHANGE OR IF UNSATIS
HOULD THEY	B. PRODUCT DATA (3 COPIES); C. SAMPLES (2, PLUS EXTRA SAMPLES AS REQUIRED TO INDICATE RANGE OF COLOR, FINISH, AND TEXTURE TO BE EXPECTED;	ANTICIPATED. PROCEED ONLY AFTER RECEIVING ADDITIONAL INSTRUCTIONS FRO 7. ARRANGE TO ACCOMMODATE NOT IN CONTRACT WORK. WHEN INFORMATION I
E MOST Make	D. MOCK-UPS (AS REQUIRED BY INDIVIDUAL SECTIONS); E. INSPECTION AND TEST REPORTS (3 COPIES);	FURTHER INFORMATION BEFORE PROCEEDING.
BOVE-MENTIONED	F. WARRANTIES (3 COPIES); G. CLOSEOUT SUBMITTALS (3 COPIES); H. DROLECT DUDTOCDADUC, DECORD THE DROCDESS ON A DECULAR BASIS WITH DICITAL DUOTOS, AT	8. NOTIFY THE OWNER OF POSSIBLE DAMAGE CLAIMS IMMEDIATELY UPON KNOW CLAIMS THAT MIGHT CAUSE A REDUCTION BELOW 75% OF THE AGGREGATE LIMITS
CONFLICT WITH Al members.	H. PROJECT PHOTOGRAPHS: RECORD THE PROGRESS ON A REGULAR BASIS WITH DIGITAL PHOTOS, AT BEGINNING AND END OF CONSTRUCTION. COMPILE A DIGITAL ALBUM WITH DATES WHEN THE PHOTOS WERE TAKEN ON A CD AND GIVE TO OWNER WITH THE CLOSEOUT DOCUMENTS.	<u>SECTION 10800 PROJECT CLOSEOUT</u> 1. PROVIDE PREREQUISITES TO SUBSTANTIAL COMPLETION: PUNCH LIST, SUP
CEDENCE OVER	3. PROVIDE REQUIRED RESUBMITTALS; PROVIDE DISTRIBUTION OF APPROVED COPIES	WARRANTIES, CERTIFICATIONS, OCCUPANCY PERMIT, START-UP, AND TESTING OF CHANGEOVER OF LOCKS, ETC.
DIMENSIONS. ENDED TO	4. SAMPLES AND SHOP DRAWING SHALL BE PREPARED SPECIFICALLY FOR THIS PROJECT. SHOP DRAWINGS SHALL INCLUDE DIMENSIONS AND DETAILS, INCLUDING ADJACENT CONSTRUCTION.	2. PROVIDE PREREQUISITES TO FINAL ACCEPTANCE: FINAL PAYMENT REQUEST AFFIDAVITS, COMPLETED PUNCH LIST, ETC.
ENDED TO Conjunction	5. PROVIDE WARRANTIES AS SPECIFIED; WARRANTIES SHALL NOT LIMIT LENGTH OF TIME FOR REMEDY OF DAMAGES OWNER MAY HAVE LEGAL STATUTE. MANUFACTURER AND CONTRACTOR SHALL SIGN WARRANTIES	AFFIDAVITS, COMPLETED FUNCH LIST, ETC. 3. PROVIDE RECORD DOCUMENT SUBMITTALS: A. ONE BLUE LINE SET OF CONST. DOCS. SHOWING RECORD OF AS BUI
G CODES, APPLY WHETHER HE EXECUTION	6. PROVIDE PRODUCTS SELECTED OR APPROVED EQUAL. PRODUCTS SUBMITTED FOR SUBSTITUTION SHALL BE SUBMITTED WITH ACCEPTABLE DOCUMENTATION, AND INCLUDE COSTS OF SUBSTITUTION INCLUDING RELATED WORK.	B. ONE SET OF ALL SITE PLANS SHOWING THE LOCATIONS OF ALL THE INFORMATION IDENTIFIED BY DIMENSIONS C. ONE CD OF CONSTRUCTION PROGRESS PHOTOS
APPLY UNLESS RNMENTAL TRACT SUM.	7. SUBSTITUTIONS SHALL BE SUBMITTED PRIOR TO AWARD OF CONTRACT, UNLESS OTHERWISE ACCEPTABLE.	4. PROVIDE CLOSEOUT PROCEDURES: TURNOVER TO OWNER'S PERSONNEL, FINA UP, REMOVAL OF TEMPORARY FACILITIES, ETC.

STRAIGHT LINES, FREE OF

CURATE RIGHT ANGLES WITH

TERIALS JOINED WILL BE

ONFLICT WITH THE CEEDING. KEEP A COPY OF ARCHITECT.

IDER WARRANTY, WHEN

NTRACTOR WILL GIVE PECIFIED ITEM METHOD CATIONS OR

IMPLY CONCURRENCE OR ARCHITECT'S ATTENTION

RUCTION PURPOSES. THE

)SE UTILITIES. COOPERATE EMOVAL OR RELOCATION OF

I-POTABLE), SEWER

RING AND PUMPING,

ERS, SITE ENCLOSURE -UP, ENVIRONMENTAL

SANITARY FACILITIES, /AL, ETC.

OF TRASH ON A REGULAR AR BASIS.

THE PRELIMINARY AND RK, CLEANING WINDOW

HEN SPECIFICALLY NOTED

ENCE OF A COMPLETE

SES. _ UNOPENED CONTAINERS

THE ARCHITECT'S R OF ANY CONTRACT

R LETTER OF INTENT HAD HAVE BEEN MET. ORK FOR THE OWNER, THE

ACTOR SHALL BE

BUILDING CORNERS AND

UNDER BUILDING AND RCHITECT'S DISCRETION.

PECT AND TEST MATERIALS SPECIFICATION

MEETING REQUIREMENTS AND LOG AT THE SITE OFFICE ENTATIVE WHO VISITS THE

APSED ON THE SITE FOR VOICES FROM THE TESTING

SFACTORY RESULTS ARE ROM THE ARCHITECT.

IS INADEQUATE, REQUEST

WLEDGE OF POSSIBLE OF ANY POLICY.

PORTING DOCUMENTATION, • BUILDING SYSTEMS,

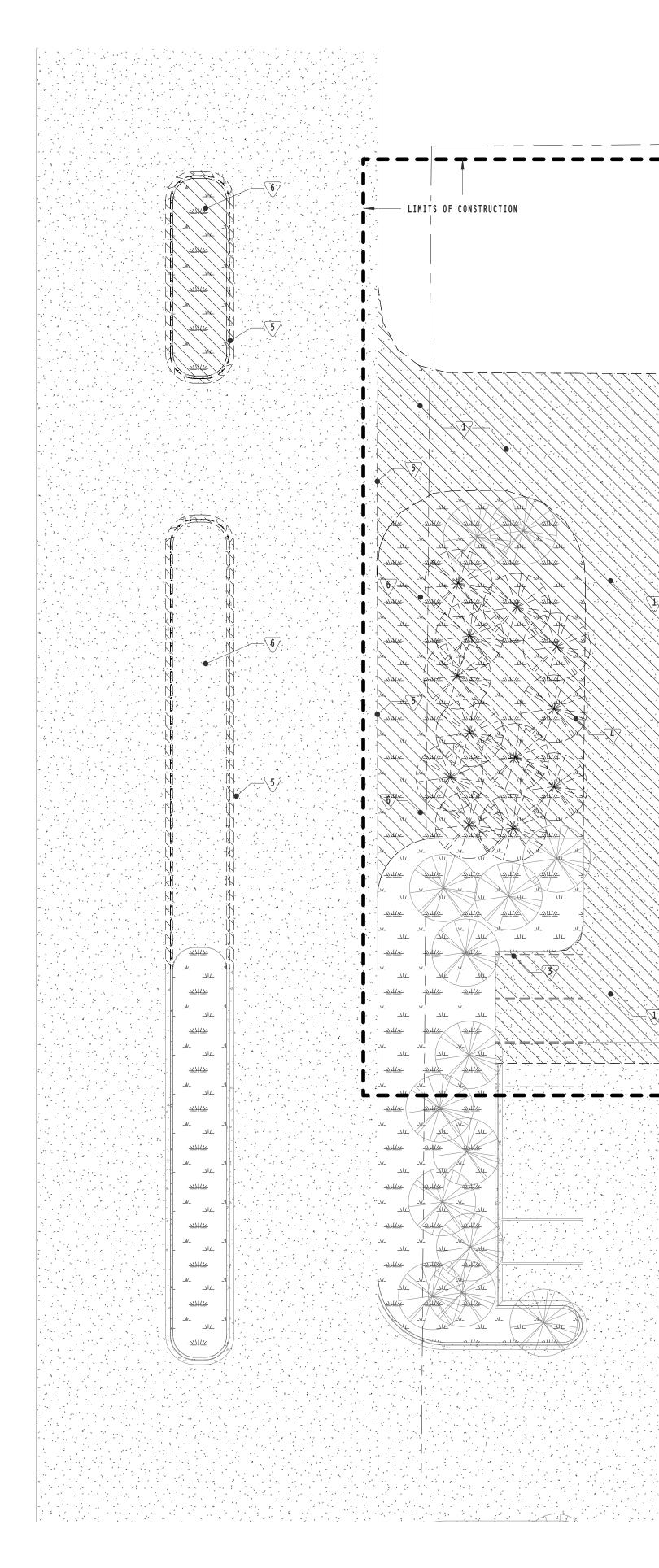
F WITH SUPPORTING

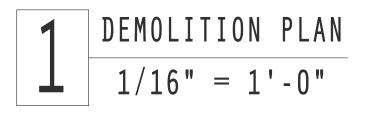
ILT INFORMATION UNDERGROUND UTILITY

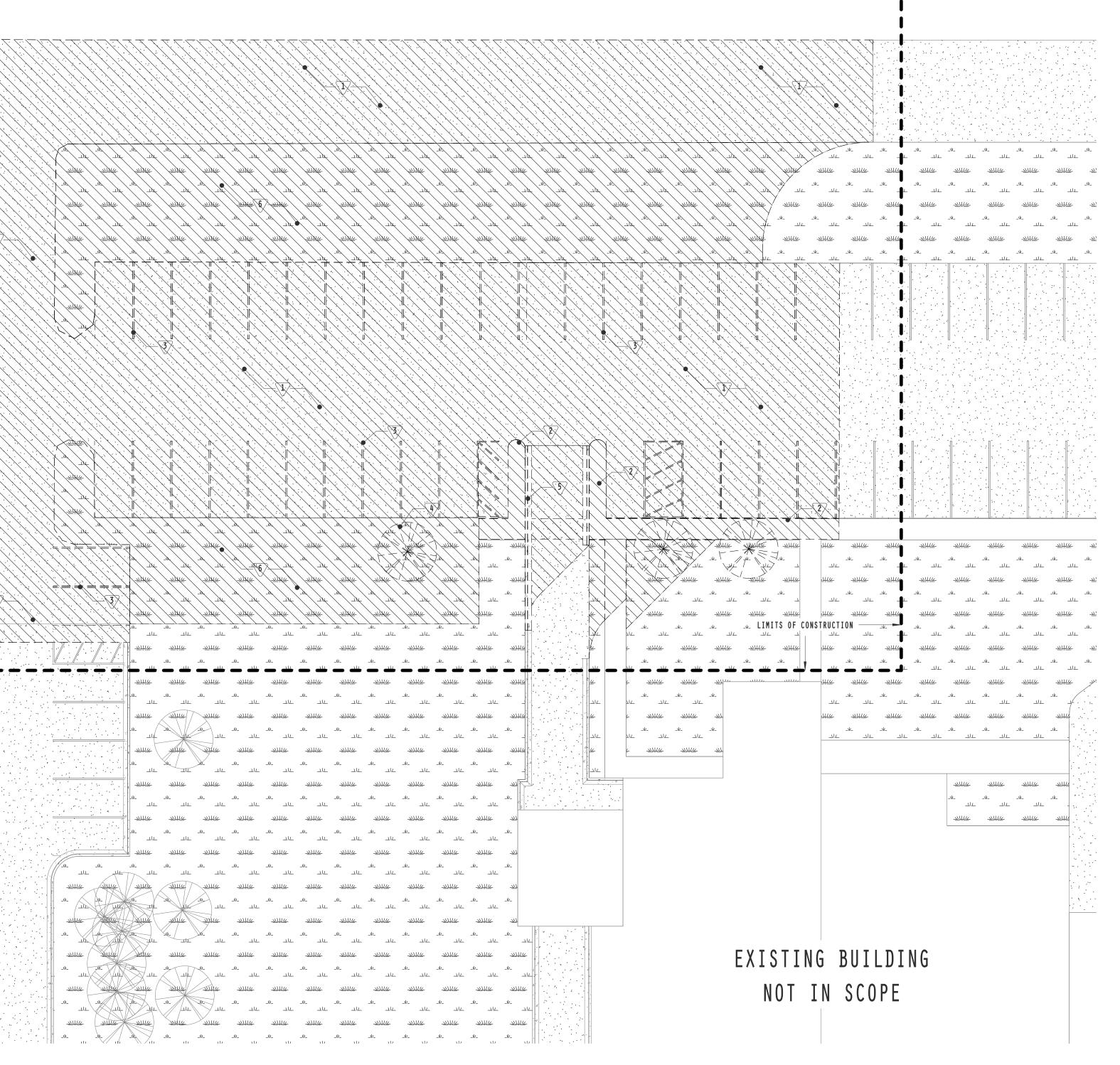
AL CLEANING AND TOUCH-











<u>DEMOLITION PLAN LEGEND</u>



DEMOLISH, RE. CIVIL FOR Additional notes

DEMOLISH STRUCTURE, RE. CIVIL FOR ADDITIONAL NOTES

DEMOLITION PLAN KEYNOTES 💿

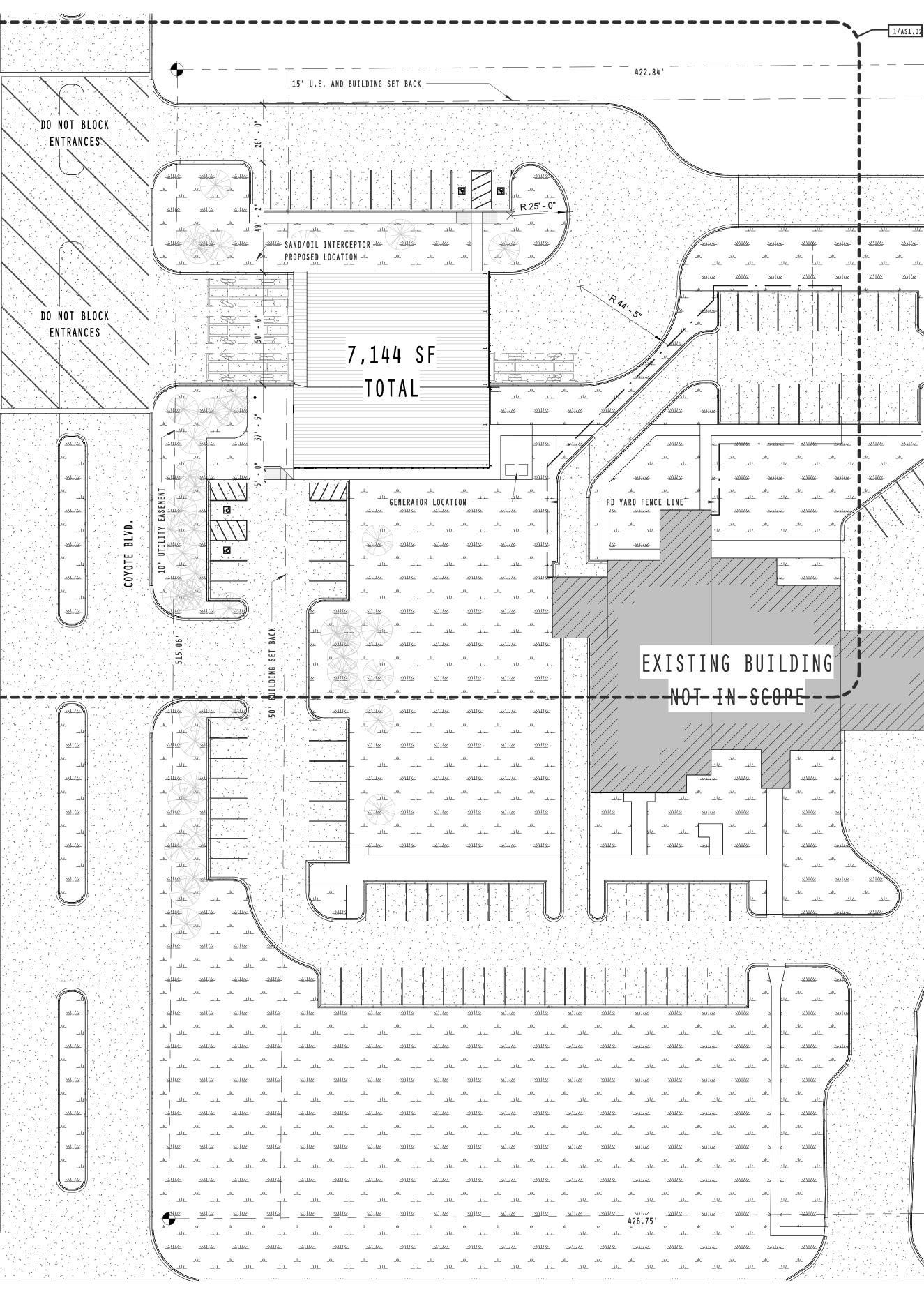
- 1. ASPHALT TO BE DEMOLISHED 2. CONCRETE TO BE DEMOLISHED
- 3. STRIPING TO BE DEMOLISHED 4. TREE TO BE RELOCATED, COORDINATE
- WITH OWNER
- 5. CONCRTE CURB TO BE DEMOLISHED 6. LANDSCAPE ISLAND TO BE DEMOLISHED

 \geq _____

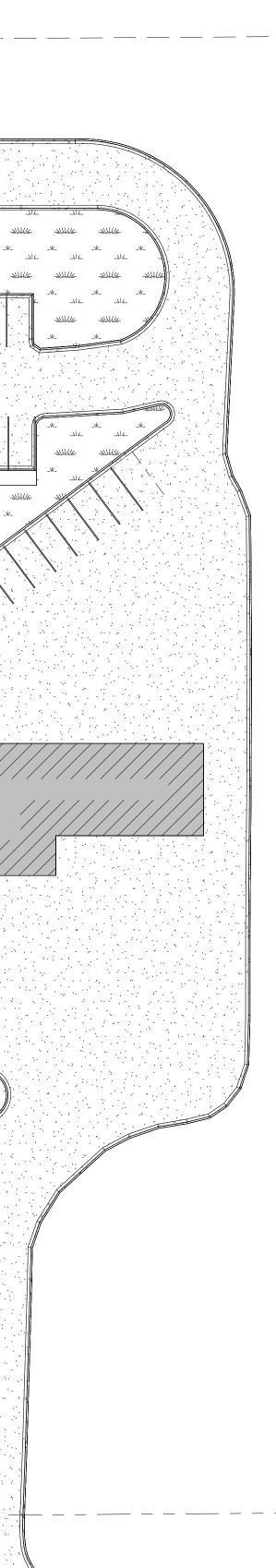
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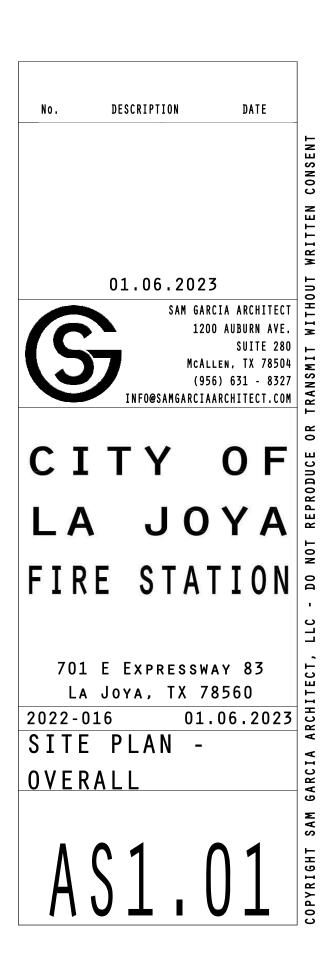
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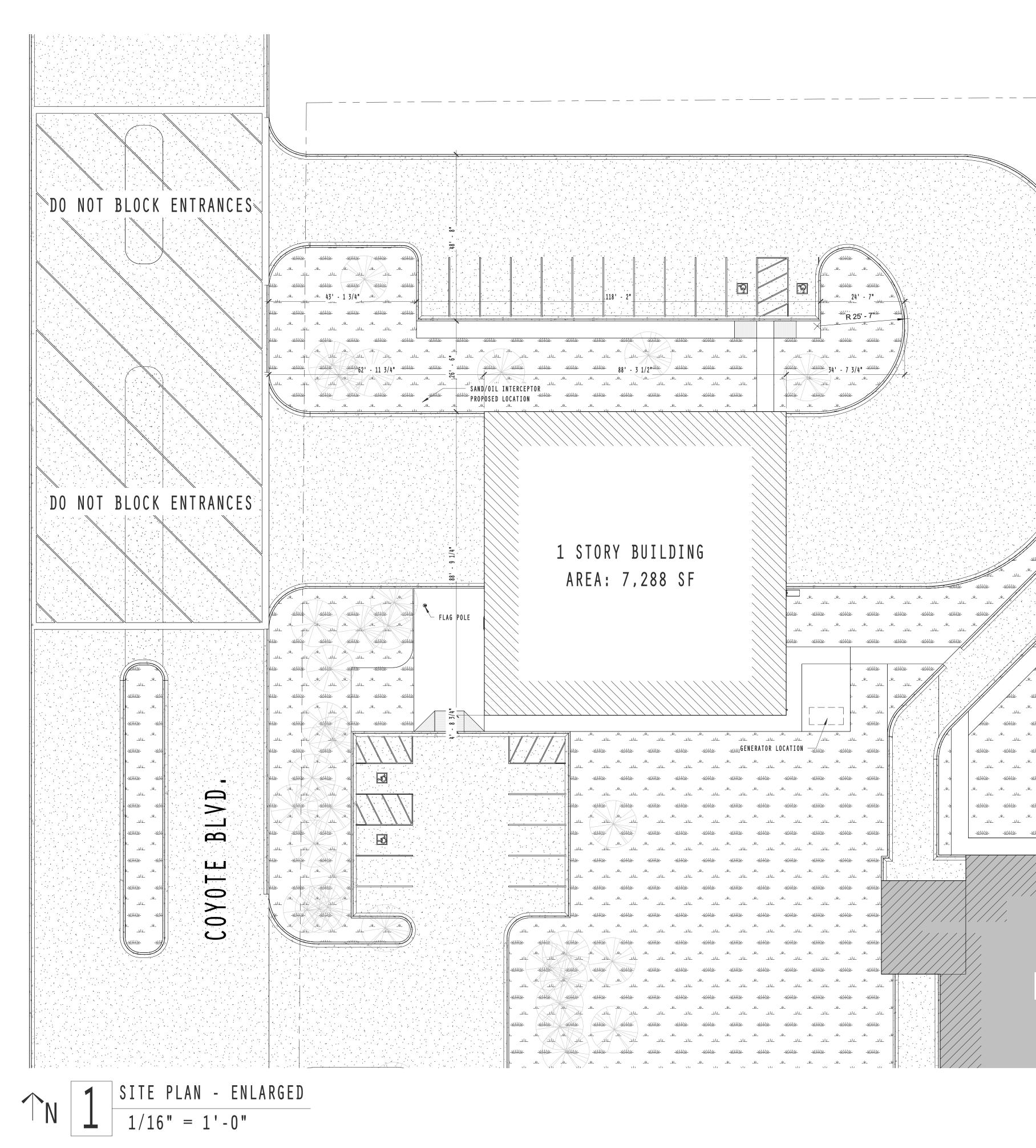
 $\uparrow N \qquad 1 \qquad SITE PLAN - OVERALL \\ 1" = 30' - 0"$

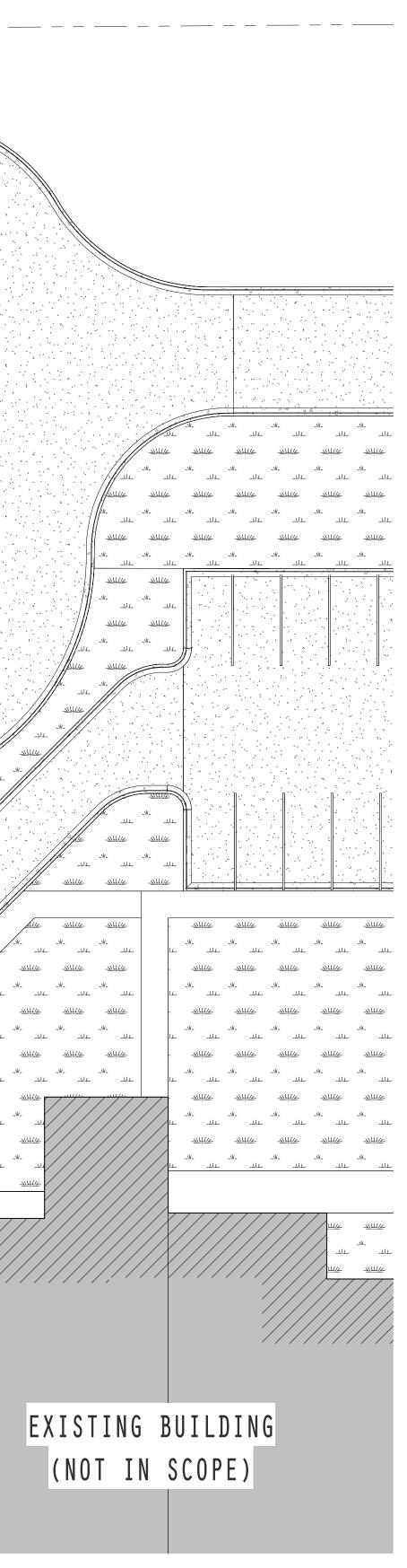






<u>SHEET KEYNOTES</u> √1 SAMPLE





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✓ SAMPLE

PLANT LEGEND LARGE TREES



MEXICAN WILD OLIVE

TEXAS MT. LAUREL

(🌼) TEXAS PERSIMMON

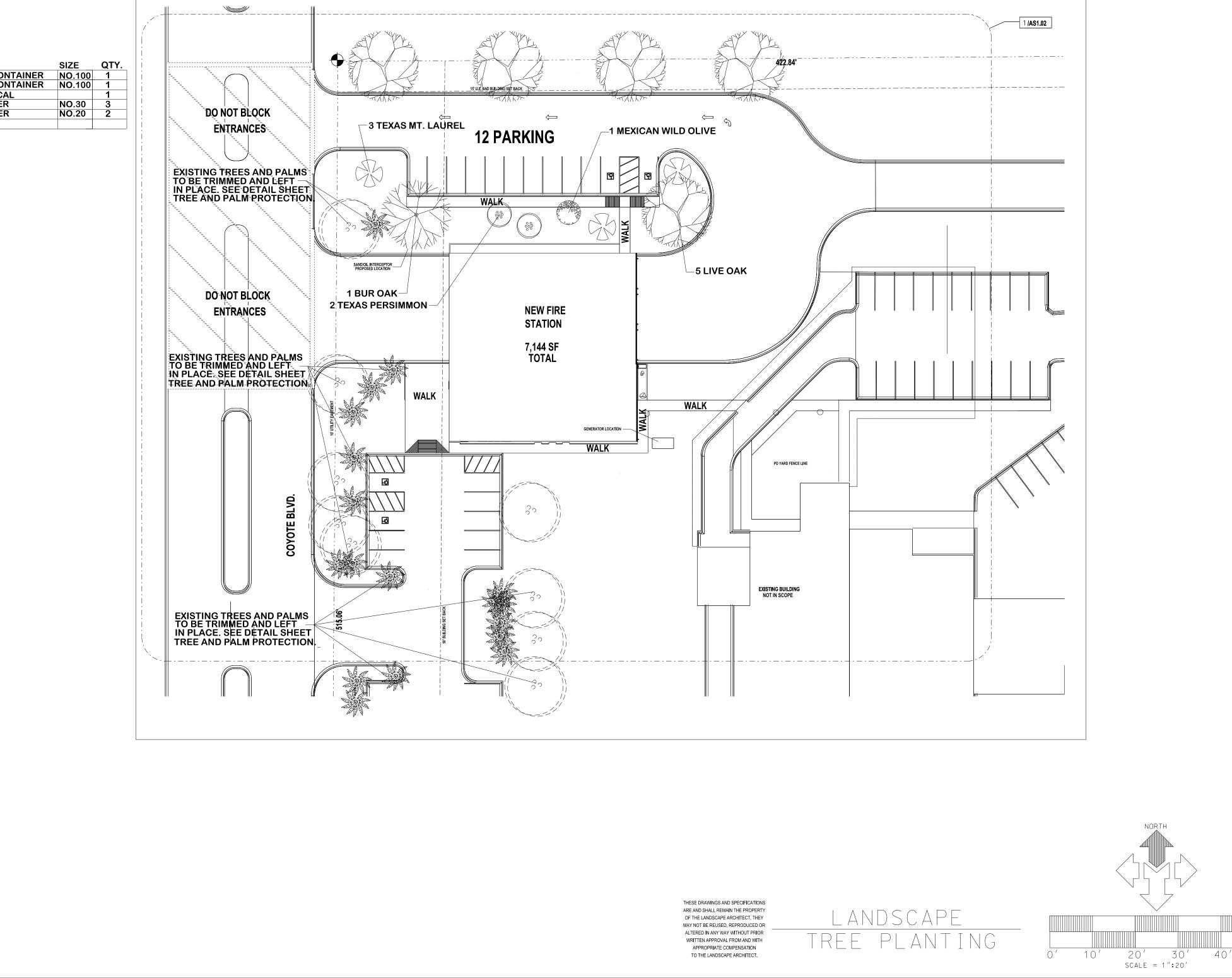
EXISTING PALM

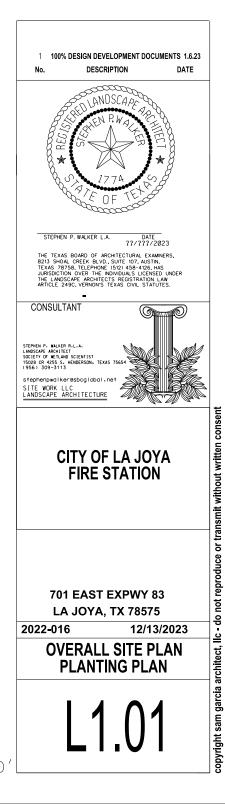
EXISTING TREE

* ESTIMATED SHEET TOTALS

TREES	LIVE OAK	QUERCUS VIRGINIANA	4" CAL. CONT
	BUR OAK	QUERCUS MCROCARPA	4" CAL. CONT
SMALL TREES	MEXICAN WILD OLIVE	CORDIA BOSSERII	B&B 2.5" CAL
	TEXAS MT. LAUREL	SOPHORA SECUNDIFLORA	CONTAINER
	TEXAS PERSIMMON	DIOSPYROS TEXANA	CONTAINER

* ESTIMATE ONLY, CONTRACTOR TO VERIFY





100% DD SUBMISSION

* ESTIMATED SHEET TOTALS

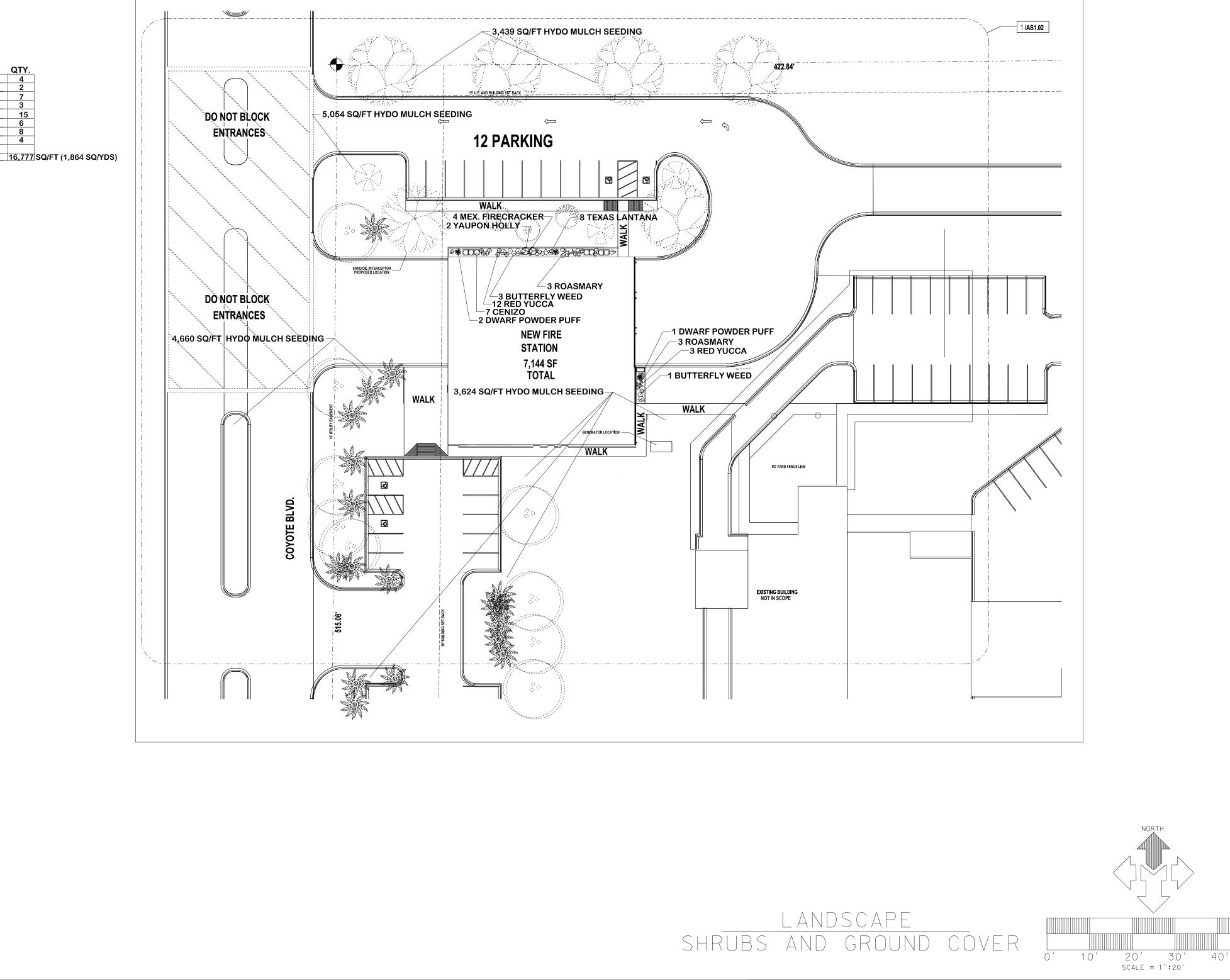
^ ES	IIMATED SHEET	IUTALS	SIZE
BUTTERFLY WEED	ASCLEPIAS TUBEROSA	CONTAINER	NO.5
YAUPON HOLLY	ILEX VOMITORIA	CONTAINER	NO.5
GREEN CLOUD SEGE (CENIZO)	LEUCOPHYLLUM FRUTESCENS	CONTAINER	NO.1
DWARF POWDER PUFF	CALLIANDRA EMARGINATA	CONTAINER	NO.1
RED YUCCA	HESPERALOE PARVIFLORA	CONTAINER	NO.1
ROASMARY	DESERT OFFICINALLS 'ARP'	CONTAINER	NO.1
TEXAS LANTANA	LANTANA HORRIDA	CONTAINER	NO.1
MEX. FIRECRACKER	RUSELLIA EQUISETIFORMIS	CONTAINER	NO.1
HYDO MULCH SEEDING		AS PER GEN. NOTES	

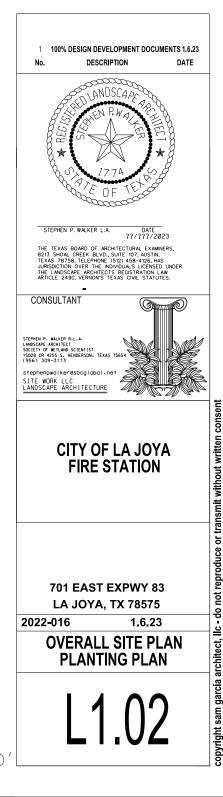
* ESTIMATE ONLY, CONTRACTOR TO VERIFY

PLANT LEGEND SHRUBS

⊙ BUTTERFLY WEED

- > YAUPON HOLLY
- 🔘 CENIZO
- ROASMARY
- # DWARF POWDER PUFF
- \oplus RED YUCCA \odot TEXAS LANTANA
- ⊗ MEX. FIRECRACKER



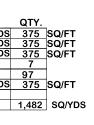


SION 100% DD SUBMIS

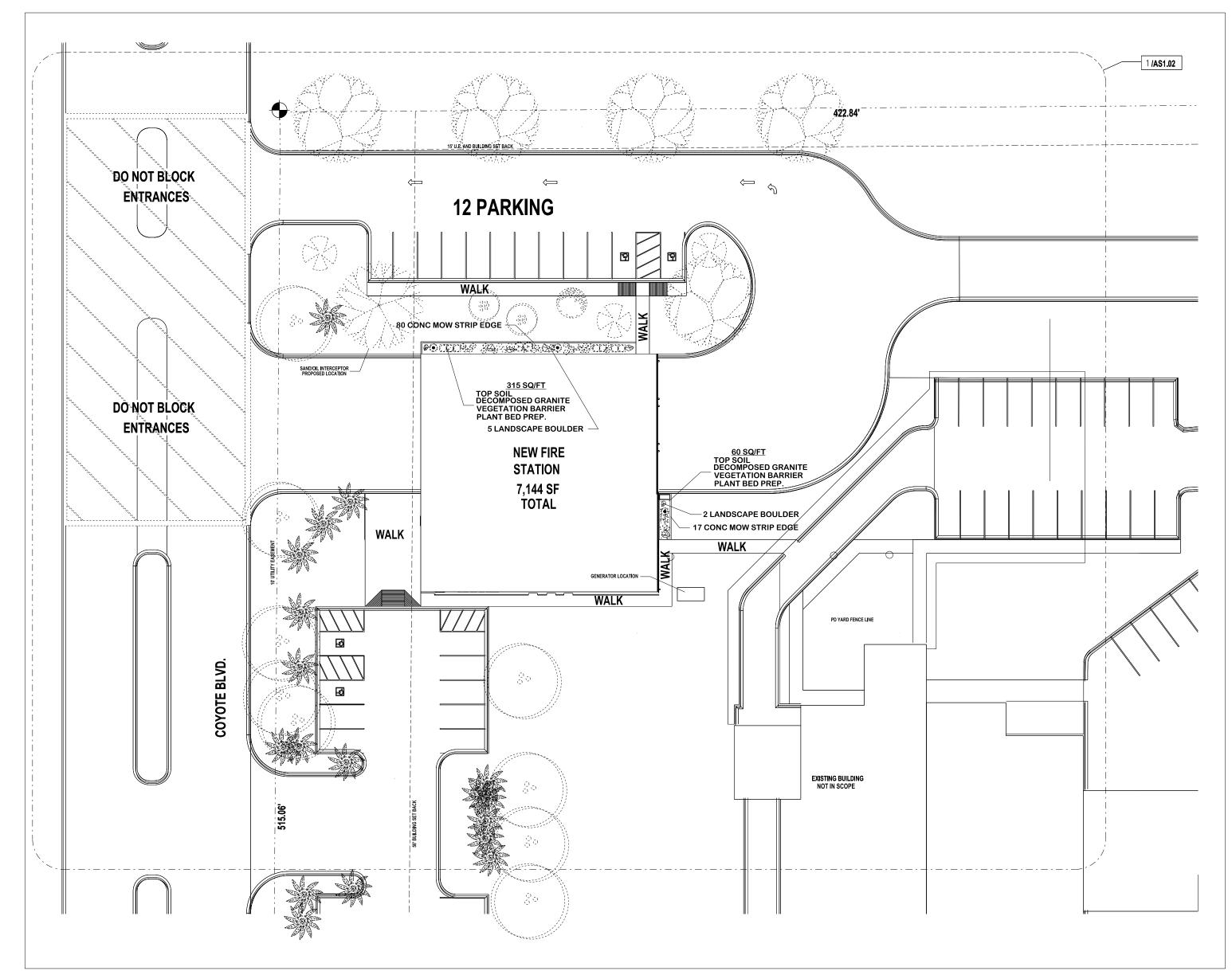
* ESTIMATED SHEET TOTALS

DECOMFOSED GRANTE			AS PER GEN. NUTES	34/103	
VEGETATION BARRIER			AS PER GEN. NOTES	SQ/YDS	
PLANT BED PREP.			AS PER GEN. NOTES	SQ/YDS	Ĩ
LANDSCAPE BOULDER	50% 3'X4' & 50% 2'X3'		AS PER GEN. NOTES	EA	
CONC MOW STRIP EDGE	12"X10"		AS PER DETAILS	L/FT	
TOP SOIL			AS PER DETAILS	SQ/YDS	
HYDO MULCH SEEDING			AS PER GEN. NOTES		
* ESTIMATE ONLY, CONTRACTOR	R TO VERIFY				
,,,,,,,					
		LANDSCAP			
				- D	

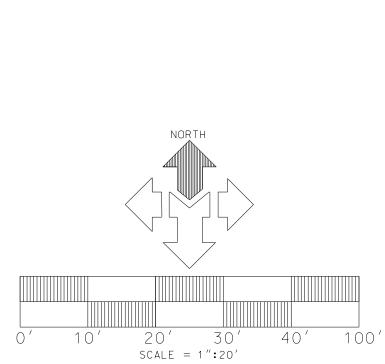
DECOMPOSED PINK TEXAS GRANITE LANDSCAPE BOULDER COLOR AND SHAPE TO BE APPROVED 50% 3'X4' & 50% 2'X3' $P \xrightarrow{P} \\ C \xrightarrow{P} \\ C \xrightarrow{C} \\ C$

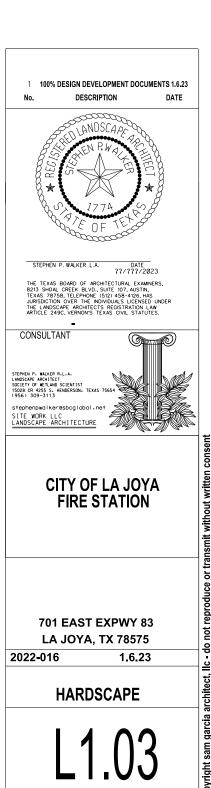


SIZE



HARDSCAPE





100% DD SUBMISSION

	Botanical Name	С
TREES	LIVE OAK	(
L TREES	BUR OAK MEXICAN WILD OLIVE	
LIKEES	TEXAS MT. LAUREL	
	TEXAS PERSIMMON	
6HURBS	BUTTERFLY WEED GREEN CLOUD SEGE (CENIZO)	/ / L
	DWARF POWDER PUFF	
	RED YUCCA	ŀ
	ROASMARY TEXAS LANTANA	[
	MEX. FIRECRACKER	F
	BUTTERFLY WEED	

- 1. Contractor shallbe responsible for referencing 5. All plants shall be hardy, symmetrical, tight knit, and so trained or favored in development the general notes for specifications dimensions volumes and measurements that have been modified or not shown. of branches, and compactness. Plants shall be Rejection of plants shallbe in accordance with sound, healthy and vigorous, well branched, and densly folliated when in leaf, and shall have the general notes. 2. The contractor shall be responsible for the
- healthy, well developed root systems. 6. All plants shall be nursery-grown in containers
- safe transportation of plants to the project 3. site and their condition upon arrival. Plant materials shall not be stored on hard unless otherwise shown on plans. surface or left exposed to the sun. Protect
- the root balls and water regularly until planting. If plants are left in storage over the weekend or holiday, a means of periodically watering and inspection container moisture shall be provided.

mon Name	Color × Quantity	Root Condition		Min. Caliper	Min. Height	Min. Spread	Remarks
ERCUS VIRGINIANA	5	CONTAINER	NO.100	4" CAL.	12'-15'	8'-10'	CENTRAL TRUNK / NO LOW FORKS
ERCUS MCROCARPA	1	CONTAINER	NO.100	4" CAL.	12'-15'	8'-10'	CENTRAL TRUNK / NO LOW FORKS
RDIA BOSSERII	1	B&B		2.5" CAL.	8' 4'-6'	4'-6'	NURSERY GROWN
PHORA SECUNDIFLORA SPYROS TEXANA	3	CONTAINER CONTAINER	NO.30 NO.20	1" CAL. 1" CAL.	4'-6'	4'-6' 4'-6'	MULI TRUNK MULI TRUNK
CLEPIAS TUBEROSA	ζ	CONTAINER	NO.5	I UAL.	4-0		NURSERY GROWN
JCOPHYLLUM FRUTESCENS	7	CONTAINER	NO.1				NURSERY GROWN
LLIANDRA EMARGINATA	3	CONTAINER	NO.1				NURSERY GROWN
SPERALOE PARVIFLORA	15	CONTAINER	NO.1				NURSERY GROWN
SERT OFFICINALLS 'ARP'	6	CONTAINER	NO.1				NURSERY GROWN
NTANA HORRIDA	8	CONTAINER	NO.1				NURSERY GROWN
SELLIA EQUISETIFORMIS CLEPIAS TUBEROSA	4 4	CONTAINER	NO.1 NO.5				NURSERY GROWN NURSERY GROWN

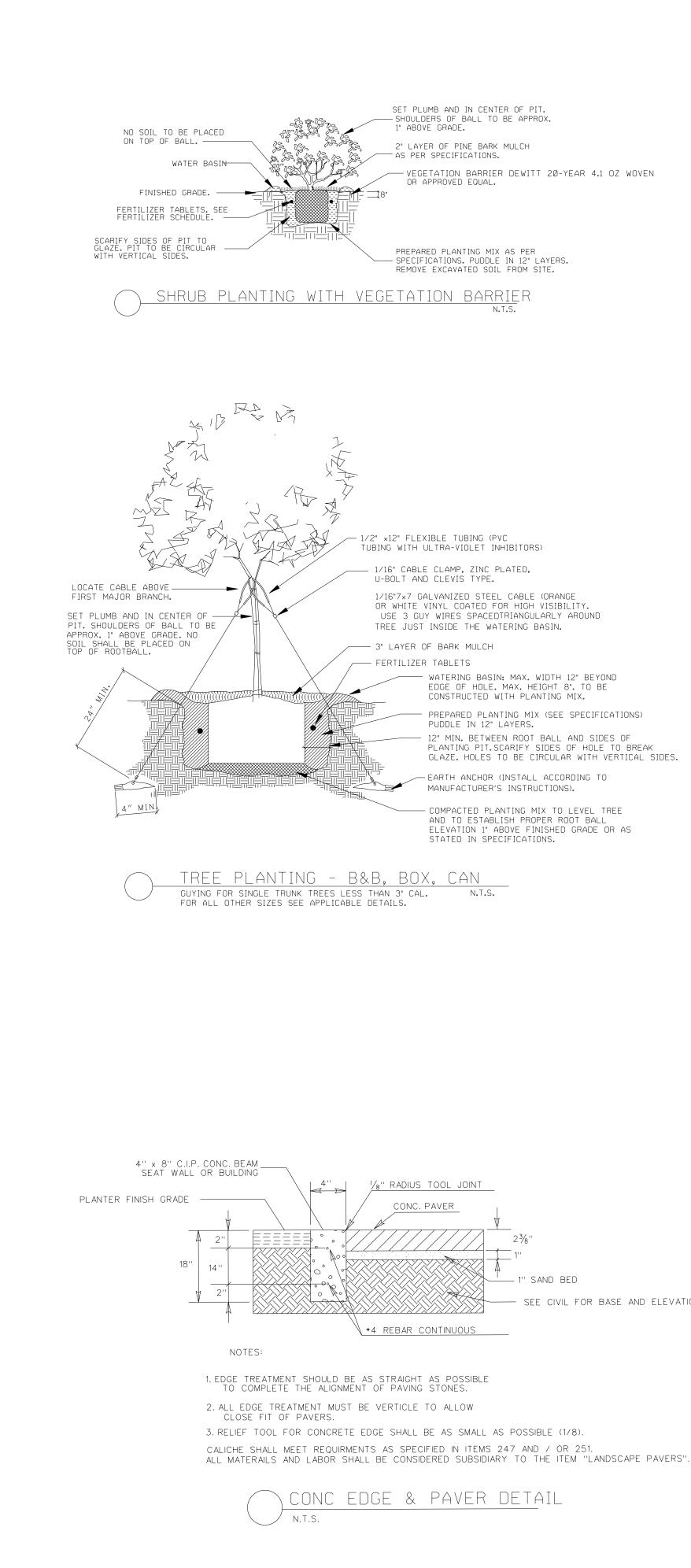
* ESTI	MATED SHEET	TOTALS	SIZE	QTY.	
DECOMPOSED GRANITE	SQ/YDS 4" DEPTH	AS PER GEN. NOTES	CU/YDS	5	SQ/YDS
VEGETATION BARRIER		AS PER GEN. NOTES	SQ/YDS	375	SQ/FT
PLANT BED PREP.		AS PER GEN. NOTES	SQ/YDS	375	SQ/FT
LANDSCAPE BOULDER	50% 3'X4' & 50% 2'X3'	AS PER GEN. NOTES	EA	7	
CONC MOW STRIP EDGE	12"X10"	AS PER DETAILS	L/FT	97	
TOP SOIL		AS PER DETAILS	SQ/YDS	375	SQ/FT
HYDO MULCH SEEDING		AS PER GEN. NOTES		1,864	SQ/YDS

* ESTIMATE ONLY, CONTRACTOR TO VERIFY

1 100% No.	DESIGN DEVELOPMENT DOC DESCRIPTION	UMENTS 1.6.23 DATE
* REGION	ANDSCAPE ANDSCAPE STREN RWALE STREN	
THE TEXAS 8213 SHOA TEXAS 787	P. WALKER L.A. DATE ??/???? BOARD OF ARCHITECTURAL EXA L CREEK BLVD., SUITE 107. JUST SR. TIELEPHONE (512) 458-4126, I N OVER THE INDIVIDUALS LICENS CAPE ARCHITECTS REGISTRATION 9C, VERNON'S TEXAS CIVIL STAT	MINERS, N,
stephenpwalke SITE WORK LL	R.L.A. T Socientist Henderson, texas 75654	
C	ITY OF LA JO' FIRE STATION	
		5
S	ESTIMATED	S
	L1.04	1

ESTIMATED SHEET TOTALS

PLANT SPECIFICATIONS:



— 1'' SAND BED SEE CIVIL FOR BASE AND ELEVATIONS

PAVING UNIT

FACE OF SEAT WALL , BUILDING OR COLUMN

10''

 $2\frac{3}{8}$

1'' SAND BASE

 $\sim \sim$

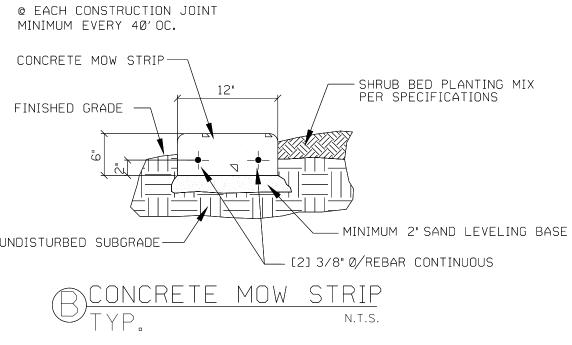
6" CALICHE SUB-BASE

N.T.S.

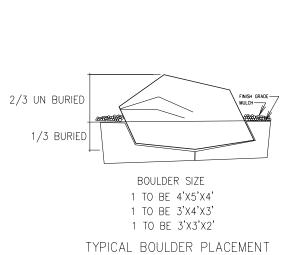
√./

GLAZE. HOLES TO BE CIRCULAR WITH VERTICAL SIDES.

NOTE: Dowel with [2]12" Long Rebar @ EACH CONSTRUCTION JOINT MINIMUM EVERY 40'OC. CONCRETE MOW STRIP----FINISHED GRADE UNDISTURBED SUBGRADE-[2] 3/8" Ø/REBAR CONTINUOUS



NTS



SECTION THROUGH SEAT WALL

19" CONCRETE BASE ∇_{\triangleright} $\nabla^{\Box} \forall$

__1/2" LIGHT BUFF MORTER TO SECURE ROCK WALL FINISH GRADE $\nabla \triangleright \nabla$. ∇ ∇ ____ 18" TOPSOIL BACKFILL AS SPECIFIED

2" THICK PRITCHARD UPRIGHT FLAG STONE CAP

NO. 2 RE-BAR VERTICAL AND HORIZONTAL 12" O.C.

WIRE JOINT RE ENFORCEMENT EVERY 16-18" TO SECURE ROCK TO WALL

2-8"X3" SQUARE & RECTANGULAR LOGAN CASTLE STONE

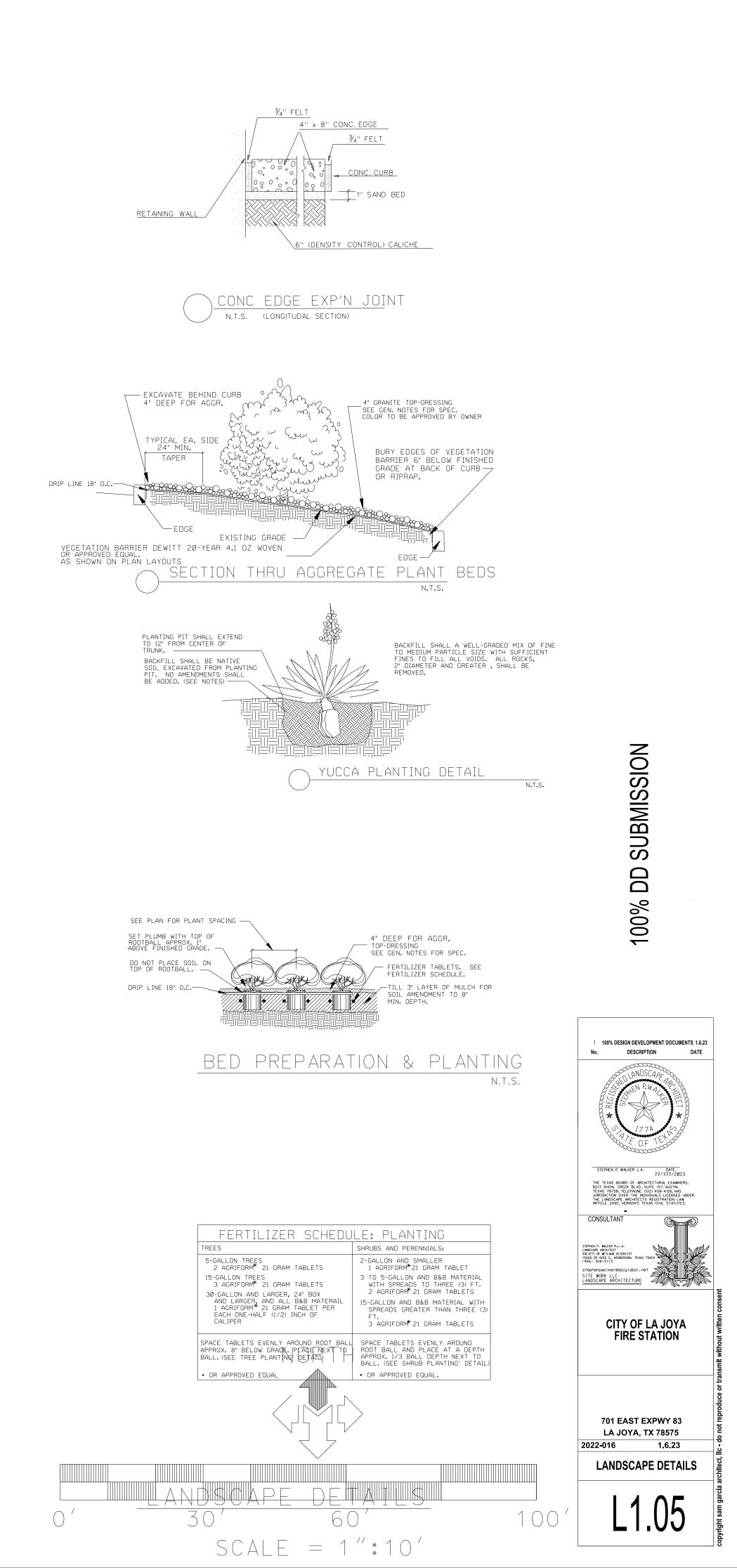
2 - NO.2 RE-BAR EXSPANSION JOINT AS SHOWN IN LAYOUT SHEET

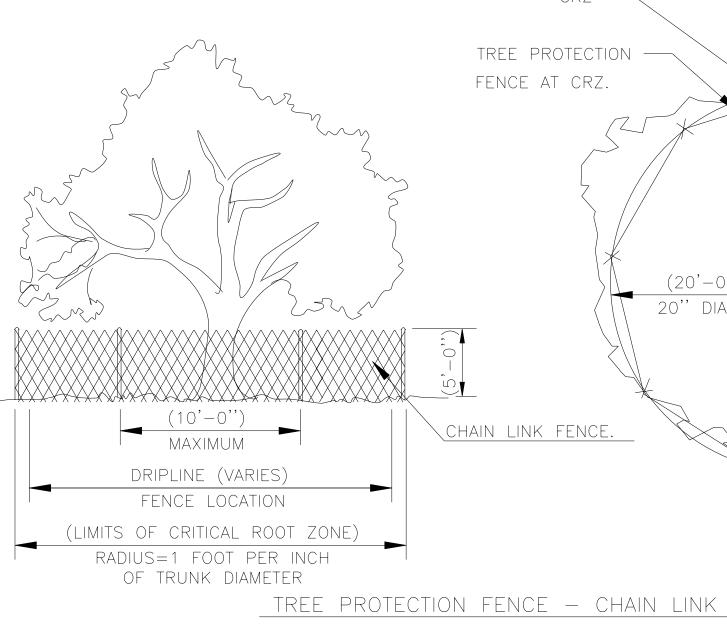
SECTION THROUGH LANDSCAPE BOULDERS SAND IN JOINT 1/8" +/-.

NTS

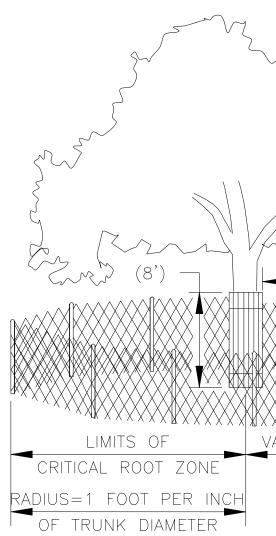
COLOR SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION CURB 1% SLOPE \rightarrow CURB FACE · • • • • ۰ ۰ · · · · · 0.0. 7 D 7 D · o o o \'FLEX BASE

PAVING DETAIL AT VERTICAL SURFACE

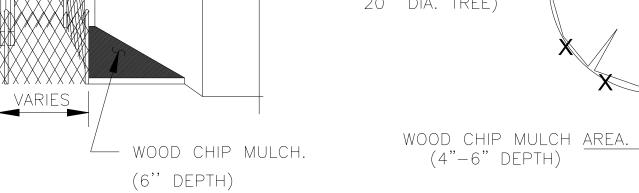




25V



*AS NEEDED TO PROVIDE NECESSARY WORK SPACE. IF LESS THAN 5', THEN ADD BOARDS STRAPPED TO TRUNK.



crz —

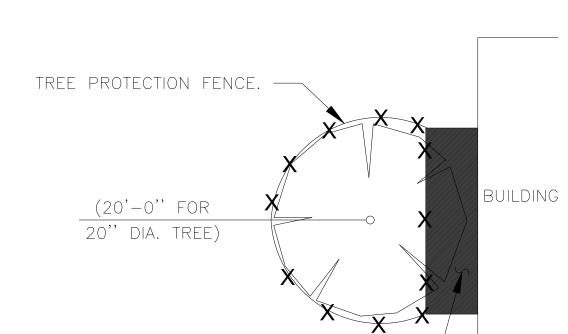
<u>(2</u>0'-0'' FOR

20'' DIA. TREE)

TREE PROTECTION -

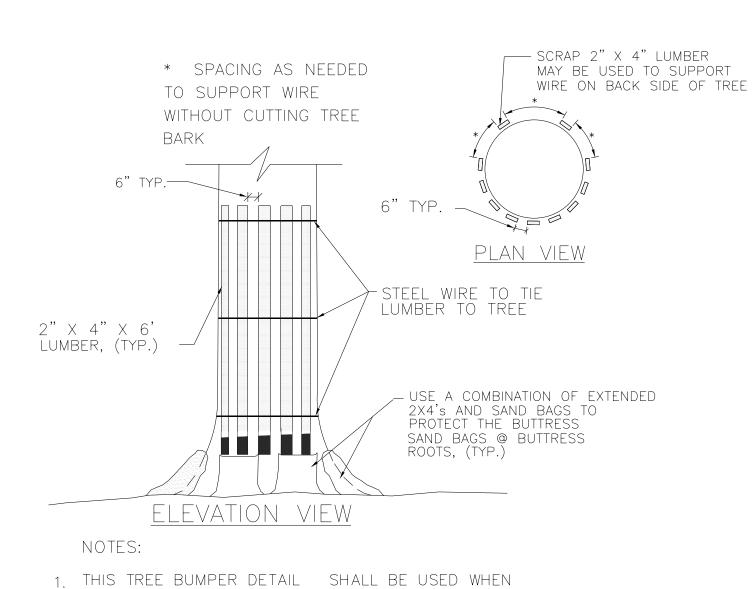
FENCE AT CRZ.

CHAIN LINK FENCE.



LIMITS OF WOOD CHIP MULCH AREA AND DISTANCE FROM TRUNK TO WORK AREA SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.

- DRIPLINE



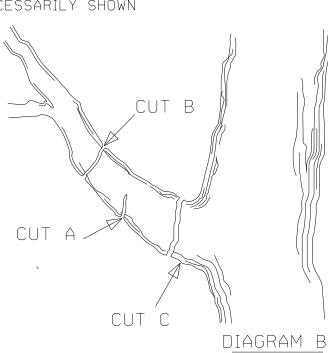
- WORKING WITHIN 10' OF AN EXISTING TREE TO BE PROTECTED.
- 2. ALL TREES SHALL BE SAVED UNLESS NOTED OTHERWISE ON THE PLANS OR DIRECTED BY THE OWNER.
- 3. LUMBER, WIRE, AND SANDBAGS MAY BE REUSED AT OTHER TREES.
- 4. THE INTENT OF THIS DETAIL IS TO PROTECT EXISTING TREES FROM DAMAGEDURING CONSTRUCTION ESPECIALLY FROM BACKHOE ARM SWING. AN ALTERNATE APPROACH MAY BE USED IF APPROVED IN WRITING BY THE OWNER AFTER CONSULTATION WITH THE CITY ARBORIST OR HIS DULY AUTHORIZED REPRESENTATIVE.
- TEMPORARY TREE PROTECTION DETAIL

THOSE EXISTING TREES, SHRUBS OR OTHER LANDSCAPE FEATURES DESIGNATED BY THE OWNER FOR PRESERVATION AND PRUNING AS INDICATED IN THE PLANS AND/OR AS DIRECTED BY THE OWNER SHALL BE PROTECTED AND PRUNED. THIS PROTECTION WORK SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM. ACCEPTIBLE FENCING MATERIAL FOR TREE PROTECTION SHALL BE "FENCE IT PLUS", 46" H X 150′ L, NEW ORANGE COLOR, AS MANUFACTURED BY WEATHERSHADE, 3000 W. ORANGE AVE., APOPKA, FLORIDA, 32703, (407) 889-3692, OR APPROVED EQUAL. ALL TREES TO BE PRESERVED ARE NOT NECESSARILY SHOWN ON THE PLANS.

IN THE EVENT OF OVERHANGING LIMBS ONTO TRAVEL LANES AND/OR IN CONFLICT WITH CONSTRUCTION, THE FOLLOWING PRUNING GUIDELINES SHALL BE UTILIZED. NOTE: TREE LIMBS SHALL NOT BE BROKEN FROM THE TREES BY EARTHWORK EQUIPMENT UNDER ANY CIRCUMSTANCES.

TREE PROTECTION FENCE (MODIFIED) - CHAIN LINK





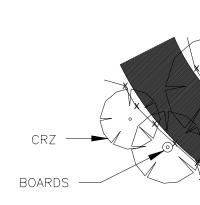
100% DESIGN DEVELOPMENT DOCUMENTS 1.6.23 DESCRIPTION DATE No. STEPHEN P. WALKER L.A. DATE ??/???/2023 THE TEXAS BOARD OF ARCHITECTURAL EXAMINERS, 8213 SHOAL CREEK BLVD. SUITE 107, AUSTIN, TEXAS 78758, TELEPHONE (512) 458-4126, HAS JURISDICTION OVER THE INDIVIDUAS, LICENSED LUND THE LANDSCAPE ARCHITECTS REGISTRATION LAW ARTICLE 249C, VERNON'S TEXAS CIVIL STATUTES. CONSULTANT STEPHEN P. WALKER R.L.A. LANDSCAPE ARCHITECT SOCIETY OF WETLAND SCIENTIST 15028 CF 4255 S. HENDERSON, TEXAS 7 (956) 309-3113 stephenpwalker@sbcglobal.net SITE WORK LLC LANDSCAPE ARCHITECTURE CITY OF LA JOYA FIRE STATION 701 EAST EXPWY 83 LA JOYA, TX 78575 2022-016 1.6.23 TREE PROTECTION DETAILS L1.06



- RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.
- SEE: TREE PROTECTION TREE WELLS (LANDSCAPE LAOUT SHEETS)
- AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
- TREE DRIPLINES.
- THE FOLLOWING:

- TO DISCUSS ALTERNATIVES.
- THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
- PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.

- PROHIBIT LEACHING OF LIME INTO THE CRZ.
- GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
- ARBORICULTURE (ISA PRUNING TECHNIQUES).
- TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES. 19. THE OWNER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.
- FOR APPROPRIATE REMOVAL METHODS.
- THESE PLAN SHEETS.



TREE PROTECTION NOTES

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS

2. ALL TREES SHOWN TO BE RETAINED WITHIN THE LIMITS OF CONSTRUCTION ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING.

3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION, INCLUDING TYPES OF FENCING AND SIGNAGE. 4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING)

5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN

6. FENCES SHALL COMPLETELY SURROUND THE TREE OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT

A) SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL. B) CRZ DISTURBANCES DUE TO GRADE CHANGES OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.

C) WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT

D) OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES. 7. EXCEPTIONS TO INSTALLING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER, MAY BE PERMITTED IN THE FOLLOWING CASES:

A) WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL;

B) WHERE PERMEABLE PAVING OR PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA. C) WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.

D) WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE OWNER

8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK, THE TRUNK SHALL BE PROTECTED BY STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED. 9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER,

10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE

11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.

12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE OWNER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.

13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.

14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO

15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE. 16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS

17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF

18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES).

20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO TREE PROTECTION SHEETS OR THE OWNER

21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN

22. DEVIATIONS FROM THE ABOVE REQUIREMENTS AND NEGLIGENT DAMAGE TO TREES MAY BE CONSIDERED AS VIOLATIONS OF THIS CONTRACT AND SUBJECT TO DAMAGE FEES.

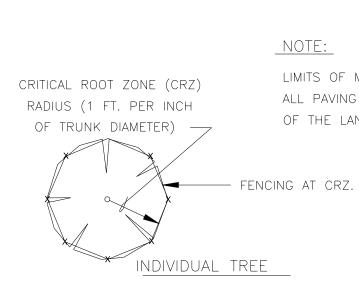
- BOARDS

TEMPORARY ACCESS ROAD, EXISTING ROADWAY OR EASEMENT, AS APPROVED.

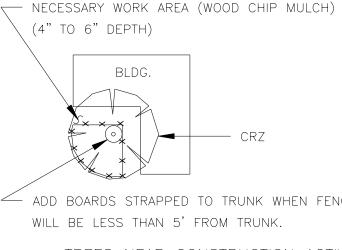
LINEAR CONSTRUCTION THROUGH TREES

GRADING AND PAVING. – PAVING AREA. FENCE LOCATION DURING PAVING INSTALLATION.

TREES IN PAVING AREA



LIMIT OF _____ CONSTRUCTION LINE AS SHOWN ON PLAN. FENCING -



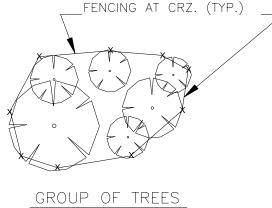
✓ ADD BOARDS STRAPPED TO TRUNK WHEN FENCE WILL BE LESS THAN 5' FROM TRUNK.

TREES NEAR CONSTRUCTION ACTIVITY

— CRZ

NATURAL AREAS

TREE PROTECTION DETAILS 2 OF 2



LIMITS OF MULCH AREAS AND DISTANCE FROM TRUNKS TO WORK/ ALL PAVING AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.

BLDG. _____





NAME GPH LIVE OAK 30 MONTEZUMA BALD CYPRESS 30 BUR OAK 30 PECAN 30 ASH 30 TEXAS EBONY 30 HONEY MESQUITE 30 DESERT WILLOW 30 BRAZIL 30 LA COMA 30 ROYAL POINCINA 15 MEXICAN WILD OLIVE 15 TEXAS PERSIMMON 15	O BUBBLER GPH AT EACH TREE	WELL	
LIVE OAK 30 MONTEZUMA BALD CYPRESS 30 BUR OAK 30 PECAN 30 ASH 30 TEXAS EBONY 30 HONEY MESQUITE 30 DESERT WILLOW 30 BRAZIL 30 LA COMA 30 ROYAL POINCINA 15 MEXICAN WILD OLIVE 15 TEXAS PERSIMMON 15			
MONTEZUMA BALD CYPRESS 30 BUR OAK 30 PECAN 30 ASH 30 TEXAS EBONY 30 HONEY MESQUITE 30 DESERT WILLOW 30 BRAZIL 30 LA COMA 30 ROYAL POINCINA 15 MEXICAN WILD OLIVE 15 TEXAS PERSIMMON 15		GPH	
BUR OAK 30 PECAN 30 ASH 30 TEXAS EBONY 30 HONEY MESQUITE 30 DESERT WILLOW 30 BRAZIL 30 LA COMA 30 ROYAL POINCINA 15 MEXICAN WILD OLIVE 15 TEXAS PERSIMMON 15	LIVE OAK	3Ø	
PECAN 30 ASH 30 TEXAS EBONY 30 HONEY MESQUITE 30 DESERT WILLOW 30 BRAZIL 30 LA COMA 30 ROYAL POINCINA 15 MEXICAN WILD OLIVE 15 TEXAS MT. LAUREL 15 TEXAS PERSIMMON 15	MONTEZUMA BALD CYPRESS	3Ø	
ASH30TEXAS EBONY30HONEY MESQUITE30DESERT WILLOW30BRAZIL30LA COMA30ROYAL POINCINA15ANAQUA15MEXICAN WILD OLIVE15TEXAS MT. LAUREL15TEXAS PERSIMMON15	BUR OAK	3Ø	
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DESERT WILLOW30BRAZIL30LA COMA30LA COMA30ROYAL POINCINA15ANAQUA15MEXICAN WILD OLIVE15TEXAS MT. LAUREL15TEXAS PERSIMMON15	HONEY MESQUITE	3Ø	
LA COMA30ROYAL POINCINA15ANAQUA15MEXICAN WILD OLIVE15TEXAS MT. LAUREL15TEXAS PERSIMMON15	DESERT WILLOW	3Ø	
ROYAL POINCINA15ANAQUA15MEXICAN WILD OLIVE15TEXAS MT. LAUREL15TEXAS PERSIMMON15	BRAZIL	3Ø	
ANAQUA15MEXICAN WILD OLIVE15TEXAS MT. LAUREL15TEXAS PERSIMMON15	LA COMA	3Ø	
MEXICAN WILD OLIVE15TEXAS MT. LAUREL15TEXAS PERSIMMON15	ROYAL POINCINA	15	
TEXAS MT. LAUREL15TEXAS PERSIMMON15PCN25.25 GPM	ANAQUA	15	
TEXAS PERSIMMON15.25 GPM	MEXICAN WILD OLIVE	15	
TEXAS PERSIMIMON 15	TEXAS MT. LAUREL	15	
	TEXAS PERSIMMON	15	25 GPM
	SABAL PALM	15	J

LEGEND

🖂 EXISTING 1″ WATER METER

▶ EXISTING 1" RP BACKFLOW PREVENTION DEVICE. CONTRACTOR TO ADD GUARDSHACK ENCLOSURE (SEE DETAIL SHEET). \otimes 1 – 2" main shut-off valve & 1 – 1" shut off valve

⊕ RAINBIRD PEB 1" – 2" ELECTRIC REMOTE CONTROL VALVE 100-PEB, 150-PEB, 200-PEB

 \oplus rain bird 5lrc quick coupling valve

AINBIRD ESP-LX IRRIGATION CONTROLLER TWO WIRE SYSTEM W/6 STATIONS EXPANDABLE WITH WALL MOUNT METAL CABINET, RAIN-CLICK RAIN SENSOR AND VALVE DECODERS VERIFY FINAL LOCATION WITH OWNER.

- CITY MAIN MAINLINE PIPE: CLASS 200 PVC (1 - 3" INCH SIZE)

---- LATERAL PIPE: CLASS 200 PVC (SIZED AS SHOWN)

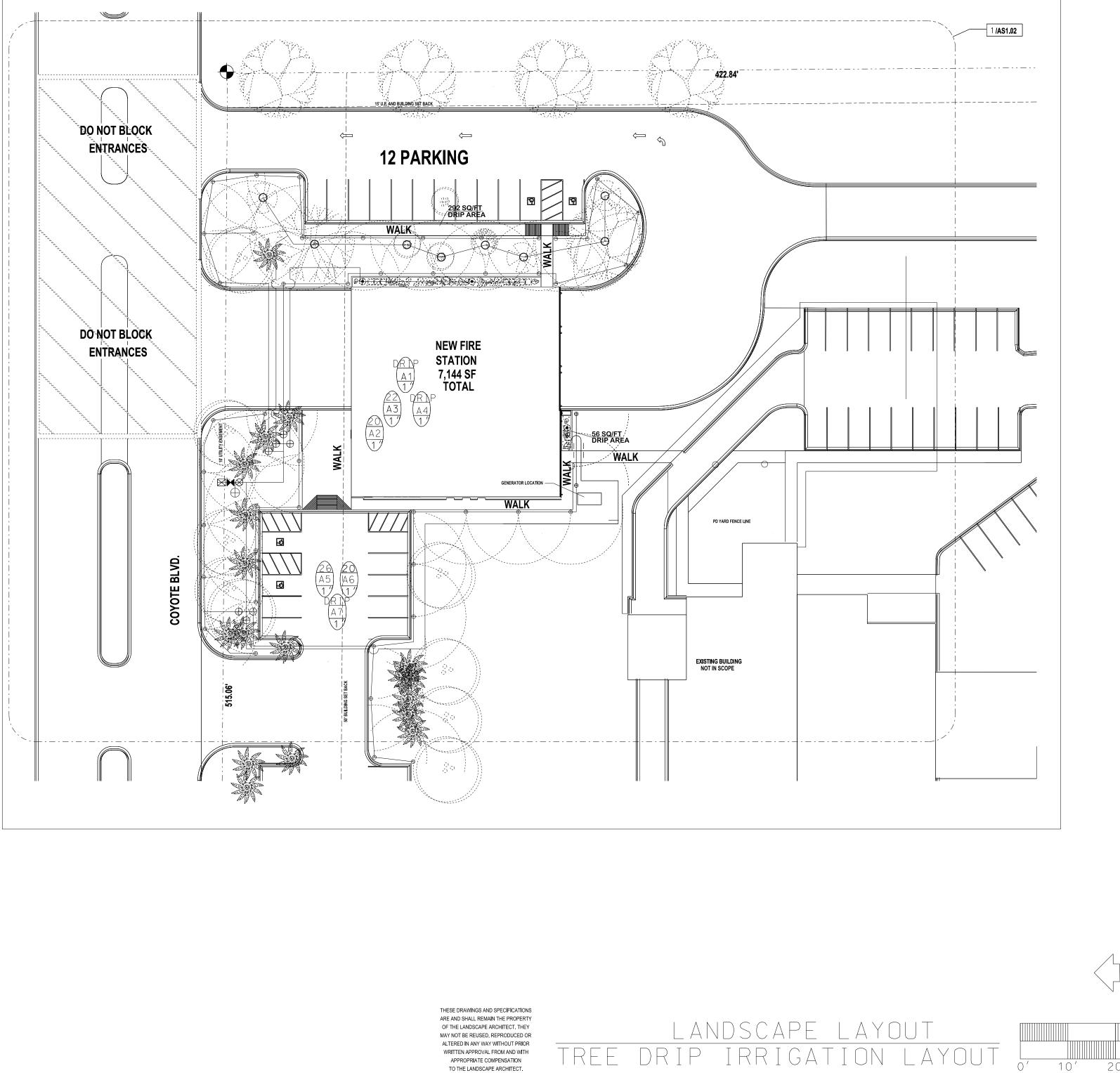
28 INDICATES LATERAL DISCHARGE IN GPM A1 INDICATES CONTROLLER AND CONTROLLER STATION NUMBER

1/ INDICATES REMOTE CONTROL VALVE SIZE

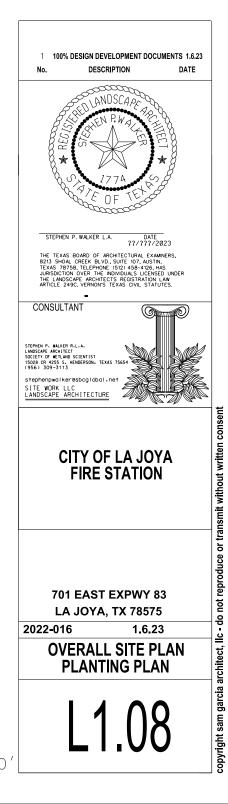
 \equiv \equiv \equiv \equiv \equiv \equiv Boring with 6" sch 40 sleeve by contractor

● RAINBIRD XERI-BUG EMITTER XB-10PCW/ CONTROL ZONE KIT & LOW FLOW VALVE 2 GPH RAINBIRD 5000 e FLOW = 1.81 GPM 360° №. 2.5 NOZZLE PRESSURE = 25 PSI RADIUS = 35 FEET RAINBIRD 3500 BE FLOW = 77 GPM 360°No. 1.0 NOZZLE PRESSURE = 25 PSI RADIUS = 20 FEET RAINBIRD MPR FLOW = 2.4 GPM 360° No. 12F NOZZLE PRESSURE = 25 PSI RADIUS = 10 FEET

CONTRACTOR TO VERIFY 55 PSI STATIC WATER PRESSURE.





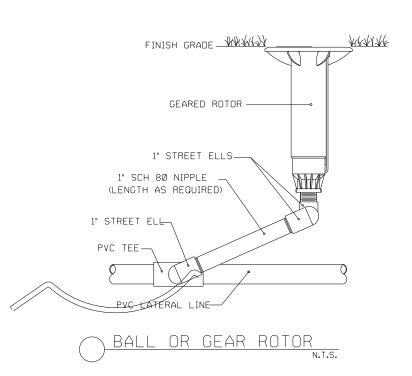


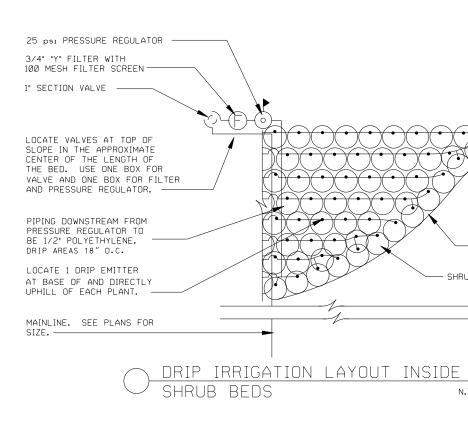
20′ 30′ scale = 1″:20′

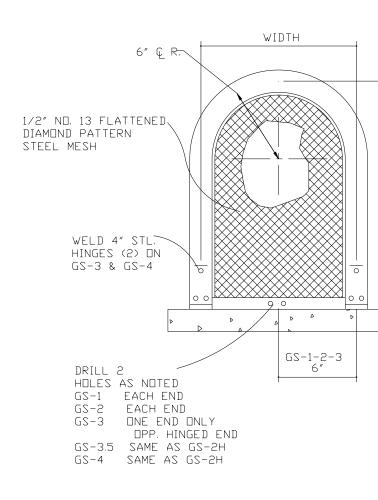
40′

10′

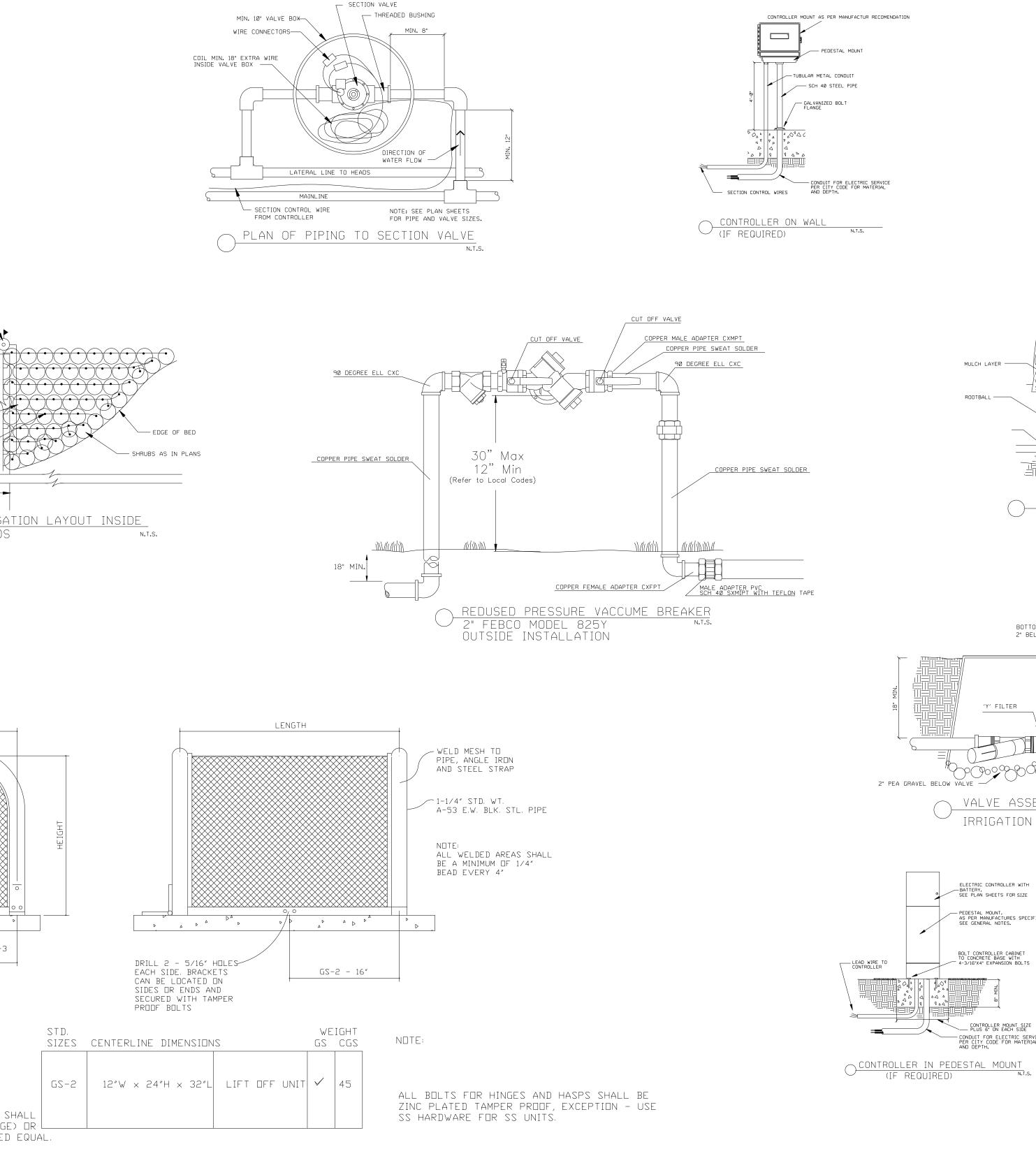
SION 100% DD SUBMIS





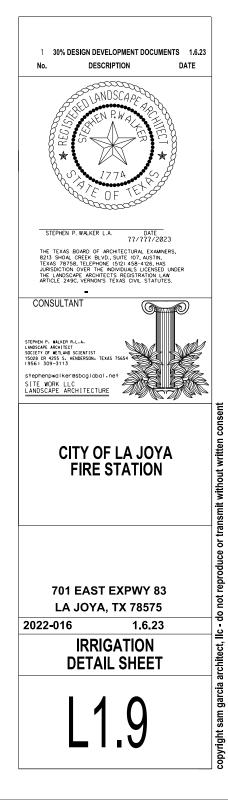


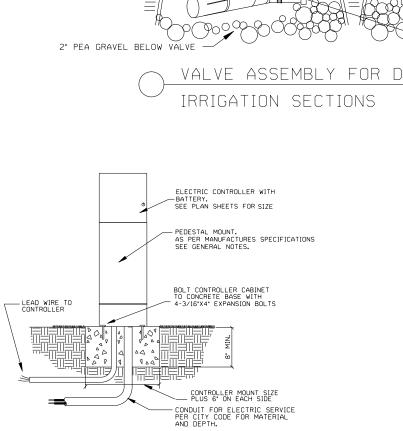
NDTE: AFTER ALL WELDING, ENTIRE UNIT SHALL BE PROCESSED WITH IRON PHOSPHATE PRETREATMENT. ELECTROSTATIC APPLICATION OF POWDER SHALL BE FUSION BONDED - PRS-8-4004-C (BEIGE) OR PRS-8-4003-C (LEAF GREEN) OR APPROVED EQUAL.



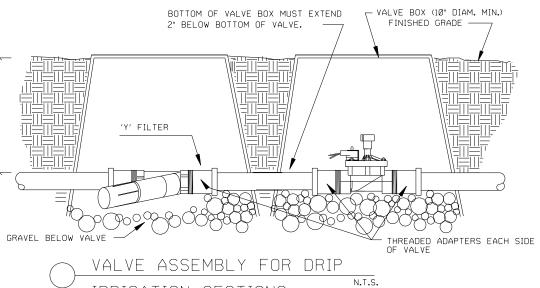
GS = POWDER COATED STEEL GUARD SHACK

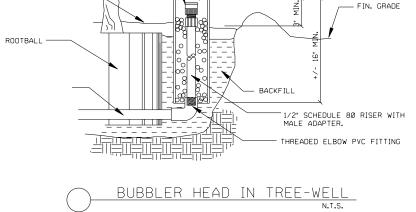
IRRIGATION DETAILS

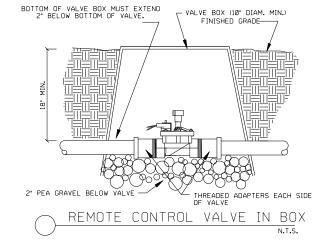




MULCH LAYER —







BUBBLER HEAD 2* ABOVE MULCH. (SEE SPECIFICATIONS FOR NOZZLE IN CHART ON SHEET .) 3* PERFORATED PVC SLEEVE TO EXTEND TO FITTING. FILL WITH PEA GRAVEL.





	THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS OR DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH ARCHITECTURAL & MECHANICAL DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONTRACTOR MEANS AND METHODS OF CONSTRUCTION OR SITE SAFETY. DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CONTROLLING PROVISIONS OF THE 2018 EDITION OF THE <u>INTERNATIONAL</u> BUILDING CODE (IBC).
DES	SIGN CRITERIA:
	BASIS FOR DESIGN AND CODE COMPLIANCE
	A. GOVERNING BUILDING CODEIBC 2018 EDITION
,	WIND DESIGN BASED ON ASCE 7-16 REQUIREMENTS:
••	ULTIMATE DESIGN WIND SPEED
Va	sd=*** MPH) RISK CATEGORYIIII
	WIND EXPOSURE CATEGORYD
	INTERNAL PRESSURE COEFFICIENT (GCpi)1.0
	Kd0.85 GRAVITY DESIGN
•	A. ROOF: DEAD LOADSELF-WEIGHT OF STRUCTURE &
	ROOFING SYSTEM COLLATERAL LOAD
	LIVE LOAD
	DRIFT LIMIT (PRE-ENGINEERED METAL BUILDING)H/300
(F E F	THESE BUILDINGS ARE DESIGNED TO MEET ASCE 7–16 WIND PRESSURES. ALL COMPONENTS AND CLADDINGS (E.G. WINDOWS, DOORS, ARCHITECTURAL SIDINGS AND ROOFING); MUST MEET MINIMUM WIND CODE REQUIREMENTS. IN ADDITION, GLAZED EXTERIOR OPENINGS IN THE LOWER 60 FEET OF THE BUILDING SHALL BE IMPACT RESISTANT MEETING ASTM E 1996 FOR LARGE MISSILES OR PROTECTED WITH AN IMPACT RESISTANT COVERING. UNDATION DESIGN CRITERIA:
1	FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, AND IS BASED ON THE GEOTECHNICAL REPORT RETL No. ********* PREPARED BY ************************************
	GRADE BEAMS, FOOTINGS, AND SLAB:
	BEARING CAPACITY (NET TOTAL LOAD)
(GROUNDWATER WAS ENCOUNTERED AT 2.0 FT AFTER TERMINATION OF DRILLING OPERATIONS (MAY FLUCTUATE WITH SEASON). CONTRACTOR SHALL DETERMINE ACTUAL GROUNDWATER LEVELS JUST PRIOR TO CONSTRUCTION EXCAVATION ACTIVITIES.
	THE GEOTECHNICAL ENGINEER OF RECORD SHALL BE RETAINED TO PERFORM TESTING AND INSPECTIONS DURING SITE PREPARATION AND PLACEMENT OF BUILDING PAD FILL AS REQUIRED BY SPECIFICATIONS AND GENERAL STRUCTURAL NOTES. JNDATION NOTES:
•	REMOVE <u>AT LEAST * INCHES. OR AS REQUIRED TO REACH AN ELEVATION OF *****</u> . OF THE EXISTING SITE SOIL, VEGETATION, TREE ROOTS, DEBRIS, ETC., FROM THE PROPOSED BUILDING AREA TO A DISTANCE OF 5'-0" OUTSIDE THE BUILDING AREA (EXTERIOR OF THE FOUNDATION, INCLUDING ATTACHED IMPROVEMENTS SUCH AS SIDE WALKS AND CANOPIES). DEPTH OF REMOVAL SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.
•	AFTER TOP SOIL HAS BEEN REMOVED, THE SUBGRADE SHALL BE PROOF-ROLLED WITH APPROPRIATE CONSTRUCTION EQUIPMENT WEIGHING AT LEAST 15 TONS UNTIL THE GRADE OFFERS A RELATIVELY UNYIELDING SURFACE. SOFT SOIL AND YIELDING AREAS, AND AREAS WHERE TREE ROOTS OR ORGANIC MATTER ARE PRESENT, SHALL BE OVER EXCAVATED AND REPLACED WITH COMPACTED SELECT FILL IN ACCORDANCE WITH THE REQUIREMENTS BELOW.
	DUE TO THE SHALLOW GROUNDWATER ENCOUNTERED AT THIS SITE, THE CONTRACTOR MAY NEED TO MODIFY METHODS, INCLUDING AVOIDING THE USE OF VIBRATORY COMPACTION MODE WHEN USING LARGE CONSTRUCTION COMPACTION EQUIPMENT, IN AN EFFORT TO KEEP THE GROUNDWATER FROM COMING TO THE SURFACE.
,	PROOFROLLING OPERATIONS AND EXCAVATION/BACKFILL ACTIVITIES SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER AND OBSERVED BY THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE TO DOCUMENT SUBGRADE CONDITIONS AND PREPARATION. IF SUBGRADE SOILS ARE ALLOWED TO BECOME WET OR SATURATED, REMOVAL AND REPLACEMENT OF SOFT SOILS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED FOR ADDITIONAL RECOMMENDATIONS, IF REQUIRED.
	SCARIFY, MOISTURE CONDITION, AND COMPACT THE TOP 12" OF THE EXPOSED SUBGRADE TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY FROM OPTIMUM TO ABOVE OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH TEST METHOD ASTM D-698 STANDARD PROCTOR. MOISTURE CONTENT SHALL BE AS NOTED IMMEDIATELY PRIOR TO PLACING SELECT FILL.
	RESTORE GRADE USING SELECT FILL <u>MINIMUM OF ** INCHES</u> OR AS REQUIRED TO PROVIDE THE SPECIFIED <u>FINISH FLOOR ELEVATION OF *****</u> , WHICHEVER IS GREATER, AND PROPER SITE DRAINAGE, COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS BELOW. FINISH FLOOR ELEVATION SHALL BE VERIFIED WITH ARCHITECT AND CIVIL ENGINEER.
•	SELECT FILL SHALL BE COMPACTED IN THE FIELD IN LIFTS NOT TO EXCEED 8" LOOSE MEASURE (6" COMPACTED LIFT) TO A MINIMUM OF 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY FROM OPTIMUM TO ABOVE OPTIMUM MOISTURE CONTENT AS EVALUATED BY ASTM D-698 STANDARD PROCTOR.
	SELECT FILL MATERIAL SHALL BE HOMOGENOUS, FREE OF DEBRIS AND ORGANIC MATERIAL, SHALL HAVE A MAXIMUM LIQUID LIMIT (LL) OF 40%, PLASTICITY INDEX (PI) BETWEEN 5–18 AND NO PARTICLES LARGER THAN 1.5" IN DIAMETER. THE SELECT FILL SOILS SHALL HAVE A MINIMUM OF 35% PASSING THE #200 SIEVE. IF BLENDED OR MIXED SOILS ARE PROPOSED FOR USE, THE GEOTECHNICAL ENGINEER SHOULD BE CONTACTED TO PROVIDE ADDITIONAL RECOMMENDATIONS AND REQUIREMENTS, INCLUDING APPROVAL TO UTILIZE BLENDED OR MIXED SOILS.
	FOUNDATION CONCRETE SHALL NOT BE PLACED ON SELECT FILL SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR WATER SEEPAGE. IF BEARING SOILS ARE SOFTENED BY WATER INTRUSION, OR BY DESICCATION, THE UNSUITABLE SOILS SHALL BE REMOVED FROM THE FOUNDATION EXCAVATION AND BE REPLACED WITH PROPERLY COMPACTED SELECT FILL PRIOR TO PLACEMENT OF FOUNDATION CONCRETE. ALL SOIL REMOVAL AND REPLACEMENT COSTS, INCLUDING ASSOCIATED COSTS TO REMOVE AND REINSTALL REINFORCEMENT AND VAPOR RETARDER MATERIALS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. DEPTH OF SOIL REMOVAL AND RECOMPACTION REQUIREMENTS SHALL BE COORDINATED WITH THE GEOTECHNICAL ENGINEER.
0.	SAMPLES OF PROPOSED SELECT FILL SHALL BE FURNISHED TO THE TESTING LABORATORY 7 DAYS PRIOR TO INSTALLATION TO PERMIT TIME FOR SPECIFICATION COMPLIANCE INSPECTION AND REVIEW BY THE GEOTECHNICAL ENGINEER.
1.	LABORATORY MOISTURE-DENSITY CURVES SHALL BE DEVELOPED FOR SUBGRADE AND FILL. PROCTOR CURVES AND FIELD DENSITY TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. A MINIMUM OF ONE (1) IN PLACE DENSITY TEST PER 3,000 SQUARE FEET OF SLAB AREA (MINIMUM OF THREE (3) TESTS PER INTERVAL) SHALL BE TAKEN ON THE SUBGRADE SOILS AND ON EACH LIFT DURING PLACEMENT OF SELECT FILL. DENSITY REPORTS SHALL BE TRANSMITTED TO ENGINEER WITHIN 3 DAYS AFTER TESTS ARE MADE.

12. GRAIN SIZE ANALYSIS AND ATTERBERG LIMITS TESTS SHALL BE PERFORMED DURING FILL PLACEMENT AT A RATE OF ONE TEST PER 2,000 CUBIC YARDS OF FILL BROUGHT TO THE SITE. SAMPLES FOR TEST SHALL BE TAKEN FROM JOBSITE MATERIALS.

FOUNDATION NOTES CONTINUED:

- 13. SITE SHALL BE GRADED SO THAT WATER DOES NOT POND WITHIN 10 FEET OF THE PERCENT FOR A DISTANCE OF AT LEAST TEN (10') FEET. ELEVATION OF GROUND FI OOR
- 14. FINAL DRAINAGE IS VERY IMPORTANT TO THE PERFORMANCE OF THE FOUNDATION. AREAS OF WATER POND AROUND BUILDINGS. WHICH CAN RESULT IN SOIL VOLUME IN SOIL VOLUME IN THE VICINITY OF THE TREE DURING DRY PERIODS. BUSHES AND CONTROLLED MANNER. PROLONGED WATERING SHOULD BE AVOIDED.

LIGHT POLE DRILLED PIERS

- (± 1) INCH SLUMP.
- 2. THE CONTRACTOR SHALL COORDINATE POLE BASE PLATE/ANCHOR BOLT DIMENSIONS WITH POLE SUPPLIER PRIOR TO PLACING PIERS. CONFLICTS SHALL BE COORDINATED WITH ENGINEER.
- INSTALL ALL PIERS AT THE LOCATIONS AND TO THE DEPTHS INDICATED ON THE DRAWINGS. BID SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIAL AND GENERAL CONDITIONS REQUIRED FOR INSTALLATION OF STRAIGHT SHAFT DRILLED PIERS. AS SHOWN ON THE DRAWINGS.
- 4. IF DIRECTED BY THE ARCHITECT/ENGINEER, PIERS SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO MEET DESIGN REQUIREMENTS.
- PRIOR TO DEVELOPMENT OF THE PIER REINFORCEMENT SUBMITTALS. THE GENERAL CONTRACTOR, FOUNDATION CONTRACTOR, DRILLER, AND THE GEOTECHNICAL ENGINEER SHALL HAVE A PRE-CONSTRUCTION MEETING TO DISCUSS THE CONTRACTOR'S RIGID TO PREVENT DEFORMATION UNDER LOAD. PROPOSED PIER INSTALLATION PROCEDURES. AT THE MEETING, THE CONTRACTOR 17. CONCRETE MAY BE PLACED WITH CHUTES UP TO 25' MAXIMUM. SLUMP SHALL NOT NEEDS TO PERFORM A "TEST" PIER TO DETERMINE CURRENT SUBSURFACE WATER LEVELS AND THE CONSTRUCTABILITY OF THE DRILLED PIERS SPECIFIED. THE TEST PIER EXCEED 6" AT TRUCK DISCHARGE POINT. WILL NEED TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER OF RECORD FOR APPROVAL OF THE PROPOSED INSTALLATION PROCEDURES AND/OR ISSUANCE OF 18. CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS: ADDITIONAL RECOMMENDATIONS, AS REQUIRED. A. COARSE AGGREGATE SHALL BE GRADED FROM A MAXIMUM OF 1" DOWN
- DRILL PIERS TO THE EXACT SIZE SHOWN. SHAFTS SHALL BE BORED PLUMB WITH A TOLERANCE OF TWO INCHES. INSTALL OFFSET STAKES ON OPPOSITE SIDES OF THE PIER AND USE TO MAINTAIN THE PIER CENTERS AND TO CHECK THE PIER PLUMBNESS. FOOTING BOTTOMS SHALL BE INSPECTED FOR A MAXIMUM OF ONE INCH (1") OF LOOSE DIRT AND TWO INCHES (2") OF GROUND WATER IMMEDIATELY PRIOR TO PLACING CONCRETE. IF MACHINE CLEANING IS NOT SATISFACTORY TO ARCHITECT/ENGINEER, HAND CLEANING WILL BE REQUIRED.
- EACH PIER SHAFT AND DRILLING OPERATIONS SHALL BE INSPECTED BY QUALIFIED GEOTECHNICAL PERSONNEL TO ENSURE PROPER BEARING AT SCHEDULED ELEVATION AND TO VERIFY STRATAS NOTED IN THE GEOTECHNICAL REPORT. INSPECTIONS SHALL ALSO VERIFY PIER SHAFT DIAMETER, DEPTH, REINFORCEMENT SIZE, QUANTITIES AND LOCATIONS. INSPECTION REPORTS SHALL BE TRANSMITTED TO ENGINEER WITHIN 3 DAYS OF INSPECTION.
- PROVIDE SUITABLE ACCESS AND LIGHTING FOR INSPECTION OF THE EXCAVATIONS FOR CLEANLINESS AND FOR CORRECTNESS OF DIMENSIONS AND ALIGNMENT.
- 9. DUE TO SUBSURFACE STRATIGRAPHY AND WATER LEVELS ENCOUNTERED, IF THE CONTRACTOR CANNOT INSTALL THE RECOMMENDED PIER AT THE REQUIRED DEPTH, THE ENGINEER MUST BE CONTACTED IMMEDIATELY.
- 10. DUE TO SUBSURFACE WATER ENCOUNTERED DURING DRILLING OPERATIONS. THE FOUNDATION CONTRACTOR SHOULD BE PREPARED TO UTILIZE SLURRY OR CASINGS TO C. SCRATCH FINISH 1/2" IN 10' CONTROL SLOUGHING OR SUBSURFACE WATER INFLUX DURING EXCAVATION SHOULD IT OCCUR. CASING SHOULD ONLY BE USED IN DRILLED PIERS TERMINATING IN THE 20. CONCRETE TO BE CURED IN ACCORDANCE WITH ACI RECOMMENDATIONS. PROPOSED CLAYEY SOILS. PRIOR TO EXCAVATION, THE FOUNDATION CONTRACTOR SHOULD VERIFY METHOD OF CURING TO BE COORDINATED WITH ENGINEER PRIOR TO CONCRETE THE SUBSURFACE WATER LEVELS. THE FOUNDATION CONTRACTOR SHOULD CONSIDER PLACEMENT. PERFORMING A "TEST" PIER EXCAVATION TO DETERMINE THE CONSTRUCTABILITY OF DRILLED PIER.
- FOR REVIEW BY ENGINEER. SUBMITTALS SHALL INCLUDE ELECTRONIC (PDF) COPIES OF 11. SHOULD A SLURRY BE USED TO CONTROL THE EXCAVATION PROCESS A CLEAN-OUT EACH DRAWING. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS BUCKET SHOULD BE USED JUST PRIOR TO PIER COMPLETION IN ORDER TO REMOVE ANY CUTTINGS AND LOOSE SOILS WHICH MAY HAVE ACCUMULATED IN THE BOTTOM OF SHOP DRAWINGS. THE EXCAVATION. STEEL AND CONCRETE SHOULD BE PLACED IN THE EXCAVATION 22. THE CONTRACTOR SHALL REVIEW AND ANNOTATE SHOP DRAWINGS BEFORE SUBMITTING IMMEDIATELY AFTER PIER COMPLETION. A CLOSED-END TREMIE SHOULD BE USED TO PLACE THE CONCRETE COMPLETELY TO THE BOTTOM OF THE EXCAVATION IN A THEM TO THE ARCHITECT/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL ALLOW CONTROLLED MANNER TO EFFECTIVELY DISPLACE THE SLURRY DURING ARCHITECT/ENGINEER 10 WORKING DAYS FOR REVIEW OF SHOP DRAWINGS. CONCRETE PLACEMENT.
- 23. ENGINEER TO BE NOTIFIED 48 HOURS PRIOR TO PLACEMENT OF FOUNDATION AND OF 12. SHOULD CASINGS BE USED TO CONTROL THE EXCAVATION PROCESS, CASING SHOULD STRUCTURAL CONCRETE TO SCHEDULE REQUIRED OBSERVATIONS. BE METAL WITH AMPLE STRENGTH TO WITHSTAND HANDLING STRESSES, CONCRETE AND EARTH PRESSURES, AND SHALL BE WATERTIGHT. CONCRETE MASONRY
- 13. PRECAUTIONS SHOULD BE TAKEN DURING THE PLACEMENT OF THE PIER REINFORCEMENT AND CONCRETE TO PREVENT LOOSE EXCAVATED MATERIAL FROM FALLING INTO THE EXCAVATION.
- 14. PLACEMENT OF CONCRETE SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER EXCAVATION IS COMPLETE, REINFORCING CAGE IS PLACED, INSPECTED AND APPROVED. THE CONCRETE SHOULD NOT BE ALLOWED TO RICOCHET OFF THE WALLS OF THE PIER EXCAVATION NOR OFF OF THE REINFORCING STEEL. PLACEMENT OF CONCRETE SHALL COMPLY WITH AMERICAN CONCRETE INSTITUTE (ACI) 318-05 CODE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 336.3R-14 ENTITLED "SUGGESTED DESIGN AND CONSTRUCTION PROCEDURES FOR PIER FOUNDATIONS", U.S. DEPARTMENT OF TRANSPORTATION-FEDERAL HIGHWAY ADMINISTRATION PUB. NO. FHWA-IF-99-025 "MANUAL ON DRILLED SHAFTS: CONSTRUCTION PROCEDURES AND DESIGN METHODS" AND ADSC: THE INTERNATIONAL ASSOCIATION OF FOUNDATION DRILLING CONTRACTORS PUB. NO. ADSC-TL-4, AUGUST 1999.

15. NO PIER EXCAVATION SHALL BE LEFT OPEN OVERNIGHT WITHOUT CONCRETING. CONCRETE:

- ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE SPECIFICATION, A.C.I. #301 AND BUILDING CODE REQUIREMENTS, A.C.I. #318, LATEST EDITION.
- ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.
- 3. CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 4,000 PSI AT 28 DAYS
- 4. A MAXIMUM OF 25% FLYASH MAY BE USED AS A CEMENT SUBSTITUTE AND SHALL CONFORM TO ASTM C618, CLASS C. THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.6 AND SLUMPS SHALL BE 5 INCHES (±1 INCH). AGGREGATE SHALL BE WELL-GRADED, 1" MAXIMUM FOR THE SLAB ON GRADE, 1" MAXIMUM FOR CAST-IN-PLACE BEAMS AND ABOVE GRADE SLABS. COARSE AGGREGATE SHALL MEET ASTM C33, GRADATION #57. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. A SAMPLE OF FOUR CYLINDERS SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100 YD3 OF CONCRETE. ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND TWO AT 28 DAYS. THE FOURTH CYLINDER MAY BE DISPOSED OF AFTER 45 DAYS IF NOT USED.
- ADMIXTURES CONTAINING WATER SOLUBLE CHLORIDE IONS GREATER THAN 0.06% BY WEIGHT OF CEMENT SHALL NOT BE USED.
- REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60. #3 BARS MAY BE GRADE 40.

GENERAL STRUCTURAL NOTES

PERIMETER FOUNDATION BEAM DURING OR AFTER CONSTRUCTION. THE SLOPE OF THE GROUND SURFACE AWAY FROM THE STRUCTURE SHOULD BE A MINIMUM OF THREE (3%) SURFACE ADJACENT TO THE FOUNDATION SHOULD BE AT LEAST 6 INCHES BELOW FINISH

LANDSCAPING, PLUMBING, AND DOWNSPOUT DRAINAGE ARE ALSO VERY IMPORTANT. IT IS VITAL THAT ALL ROOF DRAINAGE BE TRANSPORTED AWAY FROM BUILDINGS SO THAT NO CHANGE UNDER THE FOUNDATION. PLUMBING LEAKS SHOULD BE REPAIRED AS SOON AS POSSIBLE IN ORDER TO MINIMIZE THE MAGNITUDE OF MOISTURE CHANGE UNDER THE SLAB. LARGE TREES AND SHRUBS SHOULD NOT BE PLANTED IN THE IMMEDIATE VICINITY OF THE STRUCTURE, SINCE THE ROOT SYSTEMS CAN CAUSE A SUBSTANTIAL REDUCTION TREES SHOULD BE PLANTED A REASONABLE DISTANCE AWAY FROM THE STRUCTURE SO THAT THEIR CANOPY OR "DRIP LINE" DOES NOT EXTEND BEYOND THE PERIMETER OF THE FOUNDATION. WATERING OF VEGETATION SHOULD BE PERFORMED IN A TIMELY AND

CONCRETE MIX FOR ALL DRILLED PIERS SHALL BE DESIGNED TO ACHIEVE MINIMUM OF 4,000 PSI 28-DAY COMPRESSIVE STRENGTH WHEN PLACED WITH A SEVEN (7) INCH

CONCRETE CONTINUED:

- 8. ALL ACCESSORIES SHALL BE IN ACCORDANCE WITH THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.
- 9. SLAB MAT TO BE SUPPORTED BY MASONRY BRICK BATTS (MIN OF 1/2 BRICK) SPACED AT 4 FEET ON CENTER EACH WAY (MAX). BEAM CAGES SUPPORTED BY BATTS AT 4 FEET ON CENTER.
- 10. VERTICAL CONSTRUCTION JOINTS IN FLOOR SHALL BE COORDINATED WITH STRUCTURAL ENGINEER PRIOR TO FORMING SLAB. CRACK CONTROL JOINTS SHALL BE PROVIDED AT LOCATIONS SHOWN ON THE PLANS. CONTROL JOINTS SHALL BE SAWCUT (IMMEDIATELY SUBSEQUENT TO FINISHING SLAB) WITH "SOFF-CUT" SYSTEM. JOINTS SHALL BE CLEANED AND FILLED WITH "SONOLASTIC SL1" WITHIN TWO (2) DAYS AFTER SAWCUTTING. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS UNLESS APPROVED BY THE ENGINEER.
- 1. PROVIDE 2 TOP & BOTTOM CORNER BARS AT ALL DISCONTINUOUS GRADE BEAMS AND FOUNDATION CORNERS. CORNER BARS SHALL BE 4'-0" IN LENGTH (2'-0" LEGS). SIZE OF THE CORNER BARS SHALL MATCH THE SIZE OF THE GRADE BEAM REINFORCING AS SHOWN BY STRUCTURAL DRAWINGS.
- 12. MAINTAIN A MINIMUM OF ONE AND ONE-HALF (1-1/2) TIMES THE MAXIMUM COARSE AGGREGATE SIZE BETWEEN ALL REINFORCING BARS (EXCEPT AT LAPS).
- 13. BARS SCHEDULED OR DETAILED "CONT" SHALL BE LAPPED 48 BAR DIAMETERS (24 INCHES MINIMUM) UNLESS OTHERWISE NOTED.
- 14. WHERE CONCRETE IS TO HAVE UNEXPOSED SURFACES, THE FORMS MAY BE CONSTRUCTED OF #2 LUMBER OR BETTER. WHERE SURFACES ARE EXPOSED, SUCH AS FOR FINISH PAINTING OR STUCCO DASH. THE FORMS SHALL BE COMMERCIAL STANDARD DOUGLAS FIR, MOISTURE-RESISTANT CONCRETE FORM PLYWOOD; MINIMUM 5-PLY AND AT LEAST 9/16" THICK, OR FORMS LINED WITH COMMERCIAL STANDARD DOUGLAS FIR, CONCRETE FORM EXTERIOR. 3-PLY. NOT LESS THAN 1/4" THICK. WHERE CONCRETE IS EXPOSED, A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.
- 15. EXPOSED SURFACES OF CONCRETE AT THE PERIMETER OF THE FOUNDATION SHALL BE FORMED WITH 2X10 #2 LUMBER OR BETTER. A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.
- 16. CONSTRUCT FORMS SO THAT JOINTS ARE LEAKPROOF. MAINTAIN FORMS SUFFICIENTLY
- B. MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER NORMAL MIX DESIGN.
- C. MAXIMUM WATER CEMENT RATIO SHALL BE 7-1/2 GALLONS PER SACK OF CEMENT. IF MORE WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.
- D. MAXIMUM WEIGHT RATIO OF FINE AGGREGATES TO COARSE AGGREGATES SHALL NOT EXCEED 2/3.
- E. REFER TO A.C.I. #301, LATEST EDITION, SECTION 800, FOR OTHER PUMPING REQUIREMENTS.
- F. IN NO CASE SHALL CONCRETE BE PUMPED THROUGH AN ALUMINUM TUBE.
- G. SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.
- 19. FLOOR FINISH (TOLERANCES)
- A. STEEL TROWEL FINISH 1/8" IN 10'
- B. FLOAT FINISH 1/4" IN 10'
- 21. SHOP DRAWINGS SHALL BE PREPARED FOR ALL REINFORCING STEEL AND SUBMITTED
- THE GENERAL CONTRACTOR, PROJECT SUPERINTENDENT, TESTING LABORATORY AND THE MASONRY FOREMAN SHALL MEET WITH THE STRUCTURAL ENGINEER PRIOR TO THE START OF MASONRY WORK TO REVIEW PROJECT REQUIREMENTS AND PROCEDURES.
- AN INDEPENDENT TESTING LAB SHALL VERIFY PLACEMENT OF VERTICAL REINFORCING IN WALLS AND HORIZONTAL REINFORCING IN BOND BEAMS AND LINTELS PRIOR TO PLACEMENT OF GROUT. INDEPENDENT TESTING LAB SHALL PROVIDE CONTINUOUS VISUAL OBSERVATIONS OF GROUTING PROCEDURES, REBAR PLACEMENT, SITE MIXING OF MORTAR, INSTALLATION OF EMBEDED STEEL CONNECTORS, AND GENERAL PLACEMENT OF MASONRY UNITS AND MORTAR JOINTS. INSPECTION REPORTS ARE TO BE GENERATED DAILY BY THE TESTING LAB. INSPECTION SUMMARY REPORTS SHALL BE EMAILED TO THE STRUCTURAL ENGINEER IN ELECTRONIC (PDF) FORMAT.
- ALL CONCRETE MASONRY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING CODES AND THE AMERICAN CONCRETE INSTITUTE (ACI 530-11/ ASCE 5-11/ TMS 402-11). DESIGN IS BASED ON MASONRY COMPRESSIVE STRENGTH (f'm) OF 1,900 PSI.
- HOT AND COLD WEATHER CONSTRUCTION PROCEDURES SHALL BE UTILIZED AS REQUIRED BY THE SPECIFICATIONS AND ACI 530.1.
- HOLLOW CONCRETE MASONRY UNITS SHALL BE DOMESTIC LIGHTWEIGHT MOISTURE

CONTROLLED TYPE I UNITS, CONFORMING TO ASTM C-90-97.

- MASONRY UNITS SHALL HAVE A MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 1,900 PSI (NET AREA) WHEN TESTED IN ACCORDANCE WITH ASTM C-140, "METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS"
- MORTAR PROPORTIONS FOR REINFORCED MASONRY SHALL BE ESTABLISHED PER ASTM C270 PROPORTION SPECIFICATIONS, TYPE S USING MASONRY CEMENT. FIELD TESTS OF MORTAR SHALL BE PERFORMED BY A QUALIFIED TESTING LABORATORY IN ACCORDANCE WITH ASTM C780 AT A RATE OF ONE TEST PER 2,000 SF OF WALL SURFACE TO DETERMINE BATCH-TO-BATCH UNIFORMITY OF MORTAR. REFERENCE SPECIFICATIONS FOR NON REINFORCED MASONRY.
- GROUT FOR ALL REINFORCED HOLLOW MASONRY UNIT WALLS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI WITH A MAXIMUM 3/8" AGGREGATE. A MID RANGE WATER REDUCING AGENT SUCH AS "POLYHEED" (MASTER BUILDERS) SHALL BE USED. SLUMP TO BE BETWEEN 8 AND 11 INCHES. ALL GROUT SHALL BE PUMPED. PLACING OF GROUT TO FOLLOW AMERICAN CONCRETE INSTITUTE (ACI) RECOMMENDATIONS REGARDING LOW & HIGH LIFT GROUTING. MAXIMUM LIFT OF GROUT SHALL NOT EXCEED 5'-0" UNLESS APPROVED BY THE ENGINEER PRIOR TO START OF GROUTING. GROUT TO BE TESTED BY A QUALIFIED TESTING LABORATORY AT A RATE OF ONE TEST PER 25 CY OF GROUT IN ACCORDANCE WITH ASTM C1019.

- WITH 12" HOOKS.
- CORNERS.
- STRUCTURAL PLANS.

- ARCHITECT.
- THE STRUCTURAL PLANS.
- ADEQUATE CLEARANCE EXISTS.
- STRUCTURAL STEEL
- APPLICABLE SECTION FOR CLARIFICATION.
- A36 (Fy = 36 KSI).
- KSI).
- CONSTRUCTION.

- D1-72 CODE AND SERIES E 70XX.
- GROUND SMOOTH.
- COMPLETE PENETRATION WELDS.
- HOT-DIPPED GALVANIZED.
- WITH "ZRC".
- STRUCTURAL ENGINEER.

- CEILING.

CONCRETE MASONRY CONTINUED:

REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. ALL BAR REINFORCING SHALL BE LAPPED 48 BAR DIAMETERS (MIN). BARS SHALL BE PLACED WITHIN 1/2" (CENTERLINE OF BAR TO FACE OF MASONRY) OF LOCATION SHOWN IN STRUCTURAL PLANS. BARS SHALL BE HELD IN POSITION DURING GROUTING WITH BAR POSITIONERS. POSITIONERS SHALL BE LOCATED AT THE BOTTOM AND TOP OF THE WALL AND AT 8 TO 10 FOOT INTERVALS. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN ONE-FIFTH THE REQUIRED LENGTH OF LAP NOR MORE THAN 8 INCHES.

D. VERTICAL BARS SHALL EXTEND TO THE TOP OF THE PARAPET WALL OR BOND BEAM WHEN A 16" DEEP BEAM IS SPECIFIED. HOOKED DOWELS SHALL BE PROVIDED AT ROOF BOND BEAMS (W/O PARAPETS) LESS THAN 16" DEEP. DOWELS SHALL BE 30" LONG

ALL EXTERIOR MASONRY WALLS SHALL BE REINFORCED WITH 9 GA. HOT DIPPED GALVANIZED HORIZONTAL WIRE REINFORCEMENT (LADDER TYPE) EMBEDDED IN MORTAR JOINTS AT 16" O.C. NOMINAL WIDTH OF JOINT REINFORCING SHALL EQUAL WALL THICKNESS. (INTERIOR WALLS MAY BE MILL GALVANIZED). WIRE REINFORCEMENT SHALL CONFORM TO ASTM DESIGNATION A-82. AND SHALL BE LAPPED AT LEAST 8" WITH AT LEAST ONE CROSS WIRE WITHIN THE LAP. JOINT REINFORCING SHALL BE INSTALLED IN THE FIRST AND SECOND MORTAR BED JOINTS IMMEDIATELY ABOVE AND BELOW ALL OPENINGS. WIRE REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS.

12. EXTERIOR WALLS SHALL BE BONDED WITH CONCRETE MASONRY UNITS AT BUILDING

13. ONE GROUTED #5 BAR SHALL BE PROVIDED AROUND THE PERIMETER OF ALL WALL OPENINGS AND AT BUILDING CORNERS UNLESS NOTED OTHERWISE ON THE

14. NEATLY TOOL INTERIOR AND EXTERIOR JOINTS IN MASONRY TO FORM A SLIGHTLY CONCAVE PROFILE WHEN MORTAR IS THUMBPRINT HARD UNLESS SHOWN OTHERWISE. ALL MORTAR JOINTS SHALL BE TOOLED THE ENTIRE HEIGHT OF WALL.

5. BOND BEAMS SHALL BE REINFORCED WITH TWO CONTINUOUS #5 BARS UNLESS NOTED OTHERWISE ON THE STRUCTURAL PLANS. REINFORCING SHALL BE CONTINUOUS AT ALL CORNERS AND INTERSECTING WALLS. (PROVIDE CORNER BARS). WHERE SIDE WALL AND END WALL BOND BEAMS DO NOT COURSE CONTINUE THE LOWER BOND BEAM AROUND THE BUILDING CORNER TO THE FIRST VERTICAL REINFORCED CELL.

6. CONTROL JOINTS SHALL BE CONSTRUCTED WITH SLOTTED MASONRY UNITS AND FACTORY MOLDED JOINT FILLER. JOINTS SHALL BE CAULKED WITH AN APPROVED MATERIAL. JOINTS SHALL BE PROVIDED AT MAXIMUM SPACING OF 22 FT. AND AT ALL LOCATIONS WHERE COLUMNS ARE PLACED IN CMU CELLS. (EXTERIOR AND INTERIOR WALLS). JOINT LOCATIONS, IF NOT SHOWN ON PLANS, SHALL BE COORDINATED WITH

. CONTROL JOINTS SHALL NOT EXTEND THROUGH BOND BEAMS UNLESS INDICATED ON

18. CONTROL JOINTS IN CMU WALLS SHALL NOT BE LOCATED CLOSER THAN 2'-0" FROM AN EDGE OF OPENING WITHOUT REVIEW OF STRUCTURAL ENGINEER.

19. COLUMNS WHICH EXTEND THROUGH BOND BEAMS SHALL BE WRAPPED WITH 2 LAYERS OF 30# BUILDING PAPER. REINFORCING SHALL BE CONTINUOUS PAST COLUMNS WHEN

20. LINTELS OVER ALL OPENINGS IN INTERIOR MASONRY PARTITIONS, NOT OTHERWISE COVERED, ARE TO BE OF STANDARD CMU LINTEL BLOCK WITH THICKNESS EQUAL TO WALL THICKNESS. DEPTH SHALL BE 8" FOR OPENINGS UP TO 6'-0", REINFORCED WITH TWO #5's, LOCATED 2-1/2" ABOVE THE BOTTOM EXTERIOR FACE OF THE UNIT.

TOP OF BEAM/PLATE (TOB OR TOP) IS USED INTERCHANGEABLY ON PLANS. REFERENCE

STRUCTURAL STEEL WIDE FLANGE MEMBERS SHALL CONFORM TO ASTM A 572 AND/OR ASTM A 992 (Fy = 50 KSI) UNLESS OTHERWISE NOTED. PLATE AND ANGLES MAY BE

3. ALL STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM SPECIFICATION A-500. GRADE B (Fy=46 KSI). STEEL PIPE SHALL COMPLY WITH ASTM A53 TYPE E OR S (Fy=3

ALL STRUCTURAL STEEL SHALL BE DESIGNED. FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL

ALL BOLTS SHALL BE 3/4 DIAMETER ASTM A325. WASHERS SHALL BE PROVIDED AT OVERSIZED HOLES AND AT SLOTTED CONNECTIONS AT EXPANSION JOINTS. A325 CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE. ANCHOR BOLTS MAY BE ASTM A307 UNLESS NOTED OTHERWISE.

REFER TO ARCHITECTURAL & MECHANICAL PLANS FOR VERIFICATION OF ALL BOLTS, BLOCKING ANCHORS, ETC., FOR THE ANCHORAGE OF THEIR RESPECTIVE ITEMS.

ALL BEAMS AND COLUMNS SHALL BE FULL LENGTH WITHOUT SPLICES UNLESS INDICATED ON PLANS OR APPROVED BY THE ENGINEER IN WRITING.

ALL SHOP AND FIELD WELDS SHALL BE MADE BY WELDERS WHO HAVE BEEN QUALIFIED AND CERTIFIED TO MAKE THE REQUIRED WELDS IN ACCORDANCE WITH THE LATEST AMERICAN WELDING SOCIETY SPECIFICATIONS (A.W.S. D-1.1).

WELDS SHALL BE MADE WITH COVERED MILD STEEL ELECTRODES COMPLYING WITH AWS

0. ERECTION CONNECTORS SHALL BE PROVIDED IN ORDER TO PROPERLY ALIGN AND BE TRUE AND PLUMB WHEN WELDS ARE MADE.

ALL COMPLETE PENETRATION WELDS, BOTH SHOP AND FIELD, SHALL BE TESTED BY A QUALIFIED TESTING LABORATORY UTILIZING ULTRA SONIC TESTING PROCEDURES IN ACCORDANCE WITH A.W.S. D-1.1. ANY WELDS FOUND DEFECTIVE SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER. ALL X-RAYED WELDS SHALL BE

12. THE FABRICATOR, SHALL SUPPLY BACK-UP PLATES AND EXTENSION TABS FOR ALL

13. ALL STEEL MEMBERS INCLUDING FASTENERS AND ASSOCIATED ACCESSORIES SHALL BE

4. WELDED HEADED STUDS (WHS) SHALL BE "NELSON ANCHORS", OR EQUAL, Fs = 60 KSI, DIAMETER AND LENGTH AS SHOWN ON PLANS. STUDS TO BE WELDED& SHOP TESTED IN ACCORDANCE W/ THE MANUFACTURER'S RECOMMENDATIONS.

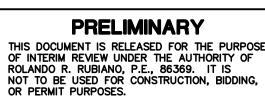
5. AFTER ERECTION, PRIME WELDS, ABRASIONS AND SURFACES NOT PRIMED. USE PRIMER CONSISTENT WITH SHOP COAT. GALVANIZED SURFACES SHALL BE CLEANED AND PAINTED

6. FIELD WELDS AND BOLTED CONNECTIONS SHALL BE VISUALLY INSPECTED BY A QUALIFIED INDEPENDENT INSPECTOR. THE INSPECTOR SHALL PROVIDE A WRITTEN REPORT TO THE

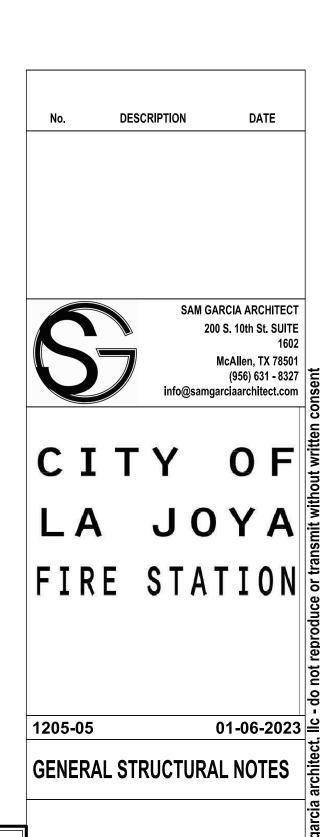
'. A SINGLE ELECTRONIC FILE (PDF FORMAT) SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL STEEL COMPONENTS AND SUBMITTED FOR REVIEW BY ENGINEER. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS.

18. THE CONTRACTOR SHALL REVIEW AND ANNOTATE SHOP DRAWINGS BEFORE SUBMITTING THEM TO THE ARCHITECT/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL ALLOW ARCHITECT/ENGINEER 10 WORKING DAYS FOR REVIEW OF SHOP DRAWINGS.

19. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED FOR A FRAMING OBSERVATION IMMEDIATELY AFTER ROOF PANELS ARE INSTALLED AND BEFORE INSTALLATION OF THE



GREEN, RUBIANO & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS 1220 WEST HARRISON HARLINGEN, TEXAS 78551 (956)428-4461 (956)428-0287 F FIRM REGISTRATION # F-4145



PRE-ENGINEERED METAL BUILDING:

- REFERENCE SCHEMATIC ROOF FRAMING PLAN AND DESIGN CRITERIA FOR DESIGN LOAD REQUIREMENTS AND SPECIFICATIONS FOR PERTINENT INFORMATION REGARDING THE PRE-ENGINEERED STRUCTURE. SPECIFICATIONS FOR THE PRE-ENGINEERED BUILDING. OTHER THAN LOAD AND CODE SPECIFICATIONS, ARE NOT IN THE SCOPE OF SERVICE PROVIDED BY THE PROJECT STRUCTURAL ENGINEER.
- THE BUILDING MANUFACTURER SHALL FURNISH DESIGN CERTIFICATION SIGNED AND SEALED BY A STATE OF TEXAS REGISTERED PROFESSIONAL ENGINEER FOR THE STRUCTURAL FRAMING AND COVERING PANELS OF THE METAL BUILDING SYSTEM. CERTIFICATION TO SPECIFICALLY STATE THAT THE DESIGN MEETS OR EXCEEDS THE APPLICABLE REQUIREMENTS OF THE IBC.
- THE ABOVE REFERENCED CERTIFICATION BY THE PRE-ENGINEERED BUILDING DESIGN ENGINEER SHALL BE INCLUDED WITH THE SEALED BUILDING ERECTION AND FABRICATION DRAWINGS WHEN SUBMITTED FOR REVIEW BY THE DESIGN TEAM. A REVIEW PACKAGE WITHOUT SIGNED AND SEALED CERTIFICATION FORMS AND SEALED BUILDING PLANS WILL NOT BE REVIEWED FOR RECORD BY THE STRUCTURAL ENGINEER.
- THESE BUILDINGS ARE SPECIFIED TO BE ENCLOSED BUILDINGS AS DEFINED BY ASCE 7. ACCESSORIES (DOORS, WINDOWS, ETC.) MUST BE DESIGNED AS COMPONENTS AND CLADDING IN ACCORDANCE TO THE SPECIFIC WIND CODE DESIGNATED IN THE GENERAL STRUCTURAL NOTES.
- ALL COMPONENTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND THE METAL BUILDING MANUFACTURER ASSOCIATION.
- ALL COMPONENTS SHALL BE SIZED FOR ALL DEAD LOADS, LIVE LOADS, WIND LOADS AS OUTLINED IN DESIGN CRITERIA AND/OR SPECIFIED ON PLANS.
- ROOF SYSTEM INCLUDING PANELS, FASTENERS, AND TRIM MATERIALS SHALL MEET OR EXCEED UPLIFT REQUIREMENTS OF ASTM E 1592 AND UL 580 CLASS 90. FASTENERS SHALL BE SPACED TO MEET ASTM E 1592 UPLIFT LOADS AND THE WIND UPLIFT LOADS AS TABULATED AND INDICATED ON THE WIND DIAGRAMS ON THE STRUCTURAL PLANS.
- SHOP DRAWINGS AND CALCULATIONS SHALL BE PERFORMED BY AN ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS. CALCULATIONS & SHOP DRAWINGS SHALL BE TRANSMITTED AS A SINGLE ELECTRONIC FILE (PDF FORMAT) TO THE A/E FOR REVIEW PRIOR TO FABRICATION OF COMPONENTS.
- REFER TO ARCHITECTURAL & M.E.P. DRAWINGS FOR ROOF SUPPORTED ITEMS INCLUDING FANS, PLUMBING, LIGHTING, PIPING, DUCTWORK, ETC. AND PROVIDE SUPPORT FRAMING FOR ADDITIONAL LOADS AS REQUIRED.
- D. PURLIN SPACING TO BE DETERMINED BY BUILDING SUPPLIER. TOTAL LOAD DEFLECTION SHALL NOT EXCEED OF L/240. METAL BUILDING COMPONENTS
- ALL COMPONENTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND THE LIGHT GAGE STRUCTURAL INSTITUTE.
- ALL PRIMARY FRAMING MEMBERS (RIGID FRAMES, PORTAL FRAMES, END WALL COLUMNS, ETC.) SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION AND ALL SECONDARY FRAMING MEMBERS (PURLINS, GIRTS, EAVE STRUTS, ETC.) SHALL BE COLD ROLLED FROM HOT-DIPPED GALVANIZED MATERIAL PER ASTM A653.
- PURLINS AND EAVE STRUTS SHALL BE FABRICATED FROM STEEL HAVING A MINIMUM YIELD OF 55 KSI. PURLINS SHALL BE SHOP PUNCHED AND LAPPED AS SHOWN ON THE ROOF FRAMING PLANS. EAVE STRUTS SHALL BE INSTALLED WITH BOLTED CONNECTIONS. PURLINS AND EAVE STRUTS TO BE SECURED WITH MINIMUM 1/2 DIAMETER BOLTS (A307 GRADE).
- SAG STRAPS SHALL BE LOCATED AS SHOWN ON THE PLANS. STRAPS SHALL BE FABRICATED FROM STEEL HAVING A MINIMUM YIELD OF 50 KSI. THE STRAPS SHALL BE SECURED TO TOP & BOTTOM FLANGES OF ALL PURLINS WITH #14 TEK SCREWS. FASTENERS
- CAST-IN-PLACE AND POST-INSTALLED ANCHORS SHALL BE PER ANCHOR DIAMETER AND EMBEDMENT DEPTH NOTED ON THE DRAWINGS. POST-INSTALLED ANCHORS SHALL BE UTILIZED ONLY WHERE SPECIFIED. ALL ANCHORS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153
- ALL ANCHORS NOTED BELOW SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS, AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.
- SPECIAL INSPECTIONS SHALL BE PROVIDED FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT NOTED BELOW. SPECIAL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT TESTING LABORATORY PERFORMING QA/QC SERVICES ON PROJECT.
- EXPANSION BOLTS (EB) IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
- A. KWIK BOLT III (ICC-ES ESR-2302) BY HILTI (CONCRETE)
- B. KWIK BOLT III (ICC-ES-ESR-1385) BY HILTI (MASONRY)
- C. STRONG-BOLT 2 (ICC-ES ESR-3037) BY SIMPSON STRONG-TIE (CONCRETE)

D. WEDGE-ALL ANCHOR (ICC-ES ESR-1396) BY SIMPSON STRONG-TIE (MASONRY) HEAVY DUTY SLEEVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED OR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. EXPANSION BOLTS (EB) SHALL NOT BE SUBSTITUTED FOR SLEEVE ANCHORS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER. ACCEPTABLE PRODUCTS:

A. HSL-3 (ICC-ES ESR-1545) BY HILTI (CONCRETE)

SCREW ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:

- A. KWIK HUS-EZ (ICC-ES ESR-3027) BY HILTI (CONCRETE)
- B. KWIK HUS-EZ (ICC-ES ESR-3056) BY HILTI (MASONRY)
- C. TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG-TIE (CONCRETE)
- D. TAPCON ANCHORS (ICC-ES ESR-1671) (MASONRY)
- E. POWERS WEDGE BOLT (ICC-ES ESR-1678) (MASONRY)
- UNDERCUT ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
- A. HDA (ICC-ES ESR-1546) BY HILTI (CONCRETE)
- B. TORQ-CUT (ICC-ES ESR-2705) BY SIMPSON STRONG-TIE (CONCRETE)
- POWDER ACTUATED FASTENERS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
- A. X-U (ICC-ES ESR-2269) BY HILTI (CONCRETE/MASONRY)
- B. POWDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TIE (CONCRETE/MASONRY)

FASTENERS CONTINUED:

- ADHESIVE ANCHORS IN CONCRETE/CMU SHAL
- A. HIT-RE 500-V3 (ICC-ES ESR-3814) BY HILTI (CONCRETE)
- B. HIT-HY 270 (ICC-ES ESR-4143) BY HILTI (MASONRY)
- C. SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)
- D. SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY
- 10. J-BOLTS SHALL BE FABRICATED FROM ASTM A36/A307 ROD. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. EXPANSION BOLTS/SLEEVE ANCHORS SHALL NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER.
- . HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY=36 KSI
- 2. SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT.
- LIGHTWEIGHT STEEL FRAMING (STEEL STUDS)
- STEEL FRAMING FOREMAN SHALL MEET WITH THE STRUCTURAL ENGINEER PRIOR TO THE START OF LIGHTWEIGHT STEEL FRAMING WORK TO REVIEW PROJECT REQUIREMENTS AND PROCEDURES.
- 2. ALL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS. STUD MANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY w/ ASTM C 955.
- ALL STUDS AND JOIST MEMBERS 16 GAUGE AND HEAVIER SHALL BE FORMED FROM DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.
- 4. ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SPECIFICALLY NOTED OTHERWISE.
- 5. ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, G60.
- 6. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO MEMBERS.
- ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.
- 8. WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.
- 9. NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE
- 10. NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.
- 11. WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.
- PERMITTED.
- 13. ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, A MINIMUM 1/2 INCH EDGE DISTANCE AND 1/2 INCH SCREW SPACING IS REQUIRED, BASED ON A TYPE 'T3' SCREW. (UNLESS NOTED OTHERWISE)
- 14. ALL POWDER ACTUATED FASTENERS (P.A.F.) SUBJECTED TO TENSION SHALL HAVE A AND FASTENER SPACING APPLY:

	EDGE DISTANCE		MINIMUM	SPACING	PENETRATION	
PIN DIAMETER	STEEL.	CONCRETE.	STEEL.	CONCRETE.	STEEL	CONCRETE.
0.157 " ø	1/2"	3"	1"	4"	FULL	1.1/4"

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS INDEPENDENT OF THE CONTRACTOR, THE ARCHITECT, OR THE ENGINEER, SHALL BE PROVIDED BY A SPECIAL INSPECTOR EMPLOYED BY THE OWNER ACCORDING TO CHAPTER 17 OF THE IBC 2018. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SEND WRITTEN REPORTS TO THE OWNER. THE ARCHITECT, THE ENGINEER AND THE CONTRACTOR. THE REPORTS SHALL INDICATE IF WORK INSPECTED WAS DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE SPECIAL INSPECTOR SHALL BRING THE DISCREPANCIES TO THE ATTENTION OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THAT THE SPECIAL INSPECTION WORK WAS, TO THE BEST OF THEIR KNOWLEDGE, IN OR NOT IN CONFORMANCE WITH THE DRAWINGS, SPECIFICATIONS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC 2018.

CONTINUOUS OR PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK:

REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK

VERIFY EXCAVATIONS ARE EXTENDED TO PRO AND HAVE REACHED PROPER MATERIAL

PERFORM CLASSIFICATION AND TESTING OF S FILL MATERIALS

VERIFY USE OF PROPER MATERIALS, DENSITIE THICKNESSES DURING PLACEMENT AND COMP. SELECT FILL

PRIOR TO PLACEMENT OF SELECT FILL, OBSEI SUBGRADE AND VERIFY THAT SITE HAS BEEN PROPERLY

GENERAL STRUCTURAL NOTES

ALL.	BE	TESTED	AND	QUALIFIED	FOR	USE	IN

ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. ACCEPTABLE PRODUCTS:

SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARDS. SUBSTITUTED ANCHORS SHALL

THE GENERAL CONTRACTOR. PROJECT SUPERINTENDENT AND THE LIGHTWEIGHT

STEEL CORRESPONDING TO A TYPE LISTED IN THE A.I.S.I. "SPECIFICATION FOR THE

SHALL BE FORMED FROM STEEL "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS

PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING

PUNCH OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO

WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).

SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALL OR THE TRACKS SHALL BE BUTTED TIGHT

12. FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; NO SPLICING IS

AND SHALL BE THOSE MANUFACTURED AND TESTED BY ITW BUILDEX OR EQUIVALENT. UNLESS NOTED OTHERWISE ON THE DRAWINGS. SCREW PENETRATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN THREE EXPOSED THREADS. SCREW DESIGN IS

15MM (MINIMUM) DIAMETER STEEL WASHERS. THE FOLLOWING MINIMUM EDGE DISTANCES

GROUT SPACE IS CLEAN

CONSTRUCTION OF MORTAR JOINTS

ANCHORAGES

DOCUMENT PROVISIONS

SUBITTALS SHALL BE VERIFIED

OBSERVED

PLACEMENT OF REINFORCEMENT, CONNECTORS AND

GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE

PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE

COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED

COMPLIANCE WITH CODE AND CONSTRUCTION

SK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
oper depth		×
SELECT		x
ES AND LIFT PACTION OF	x	
ERVE N PREPARED		x

URAL NOTES		
REQUIRED VERIFICATION AND INSPECTION OF		
VERIFICATION AND INSPECTION TASK	Continuous During Task Listed	PERIODICALLY DURING TASK LISTED
BSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE ND ACCURATE RECORDS OF EACH PIER	x	
ERIFY PLACEMENT LOCATIONS AND PLUMBNESS, ONFIRM PIER DIAMETERS, BELL DIAMETERS (IF PPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF PPLICABLE) AND ADEQUATE END BEARING STRATA APACITY	×	
OR CONCRETE PIERS, PERFORM ADDITIONAL INSPECTIONS	AS REQUIRED FO	OR CONCRETE
REQUIRED VERIFICATION AND INSPECTIO	N OF ANCHORS	
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
CAST-IN-PLACE, POST-INSTALLED, MECHANICAL AND EPOXY SET ANCHORS: AS APPLICABLE, THE INSPECTION PROGRAM SHALL VERIF THE ANCHOR TYPE, EMBEDMENT, TIGHTENING TORQUE, DIMENSIONS, HOLE DEPTH & DIAMETER AND CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE CURRENT ICC-ES EVALUATION REPORT		SHALL BE IN E WITH THE C-ES REPORT, OR ECIAL TS OF THE BSTRATE,
REQUIRED VERIFICATION AND INSPECTION OF CO	NCRETE CONST	RUCTION
VERIFICATION AND INSPECTION	CONTINUOUS	
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT		x
INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE	x	
VERIFY USE OF REQUIRED DESIGN MIX		x
PERFORM SLUMP AND AIR CONTENT TEST, AND DETERMINE THE TEMPERATURE OF THE CONCRETE AT THE TIME OF SAMPLING FRESH CONCRETE FOR MAKING SPECIMENS FOR STRENGTH TESTS PER ACI 318	x	
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	x	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		x
INSPECTION OF PRESTRESSED CONCRETE APPLICATION OF PRESTRESSING FORCES	x	
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		x
ERECTION OF PRECAST CONCRETE MEMBERS		x
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		x
REQUIRED LEVEL 1 SPECIAL INSPECTION OF MAS (OCCUPANCY CATEGORY I, II,		CTION
INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		•
PROPORTIONS OF SITE-PREPARED MORTAR		x
PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		×
LOCATION OF REINFORCEMENT, CONNECTORS AND ANCHORAGES		x
HE INSPECTION PROGRAM SHALL VERIFY:		
SIZE AND LOCATION OF STRUCTURAL ELEMENTS		x
TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION		x
SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT		x
PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)		x
PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		1
	1	

REQUIRED VE VERIFICATION A MATERIAL VERIFICATIO AND WASHERS INSPECTION OF HIGH INSPECTION OF WELDI COMPLETE AND PA MULTIPASS FILLET SINGLE-PASS FILLE FLOOR AND ROOF INSPECTION OF STEEL COMPLIANCE WITH AF VERIFICATIO MATERIAL VERIFICATION FRAMING MEMBERS AN

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ERIFICATION AND INSPECTION OF ST	EEL CONSTRUCT	TION
AND INSPECTION	CONTINUOUS	PERIODIC
ION OF HIGH-STRENGTH BOLTS, NUTS		x
STRENGTH BOLTING		x
DING:		
ARTIAL PENETRATION GROOVE WELDS	x	
WELDS	x	
ET WELDS		x
DECK WELDS		x
EL FRAME JOINT DETAILS FOR PPROVED CONSTRUCTION DOCUMENTS		x

REQUIRED VERIFICATION AND INSPECTION OF COLD-FORMED LIGHTWEIGHT STEEL FRAME CONSTRUCTION (EXTERIOR METAL STUDS)

\		
VERIFICATION AND INSPECTION TASK	Continuous During Task Listed	PERIODICALLY DURING TASK LISTED
MATERIAL VERIFICATION OF COLD-FORMED LIGHTWEIGHT FRAMING MEMBERS AND ACCESSORIES		x
TYPE, SIZE AND GAGE OF FRAMING MEMBERS AND ACCESSORIES (AS PER SHOP DRAWINGS)		×
SPACING OF FRAMING MEMBERS, BRACING, BLOCKING, AND BRIDGING (AS PER SHOP DRAWINGS)		x
INSPECTION OF WELDING; TYPE, LENGTH, SPACING (AS PER SHOP DRAWINGS)		x
INSPECTION OF FASTENER ATTACHMENT: BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS.		x

2	3	
1	2	3
2	3	
2		3
1		2
2		3

LA JOYA NEW FIRE STATION ROOF DESIGN WIND PRESSURE DIAGRAM (SERVICE)

DES	GN WIND PRESSURE FOR
ROOF	COMPONENTS & CLADDING
NE	P- (UPLIFT)
1	-** PSF
2	-** PSF
3	** PSF

DOORS & WINDOWS MAXIMUM DESIGN WIND PRESSURES P+ = +** PSF TOWARDS THE SURFACE P- = -** PSF AWAY FROM THE SURFACE



DESCRIPTION DATE No. SAM GARCIA ARCHITEC 200 S. 10th St. SUITE McAllen, TX 78501 (956) 631 - 8327 info@samgarciaarchitect.com CIJ **0** F JOYA FIRE STATION 1205-05 01-06-2023 |≚ **GENERAL STRUCTURAL NOTES**

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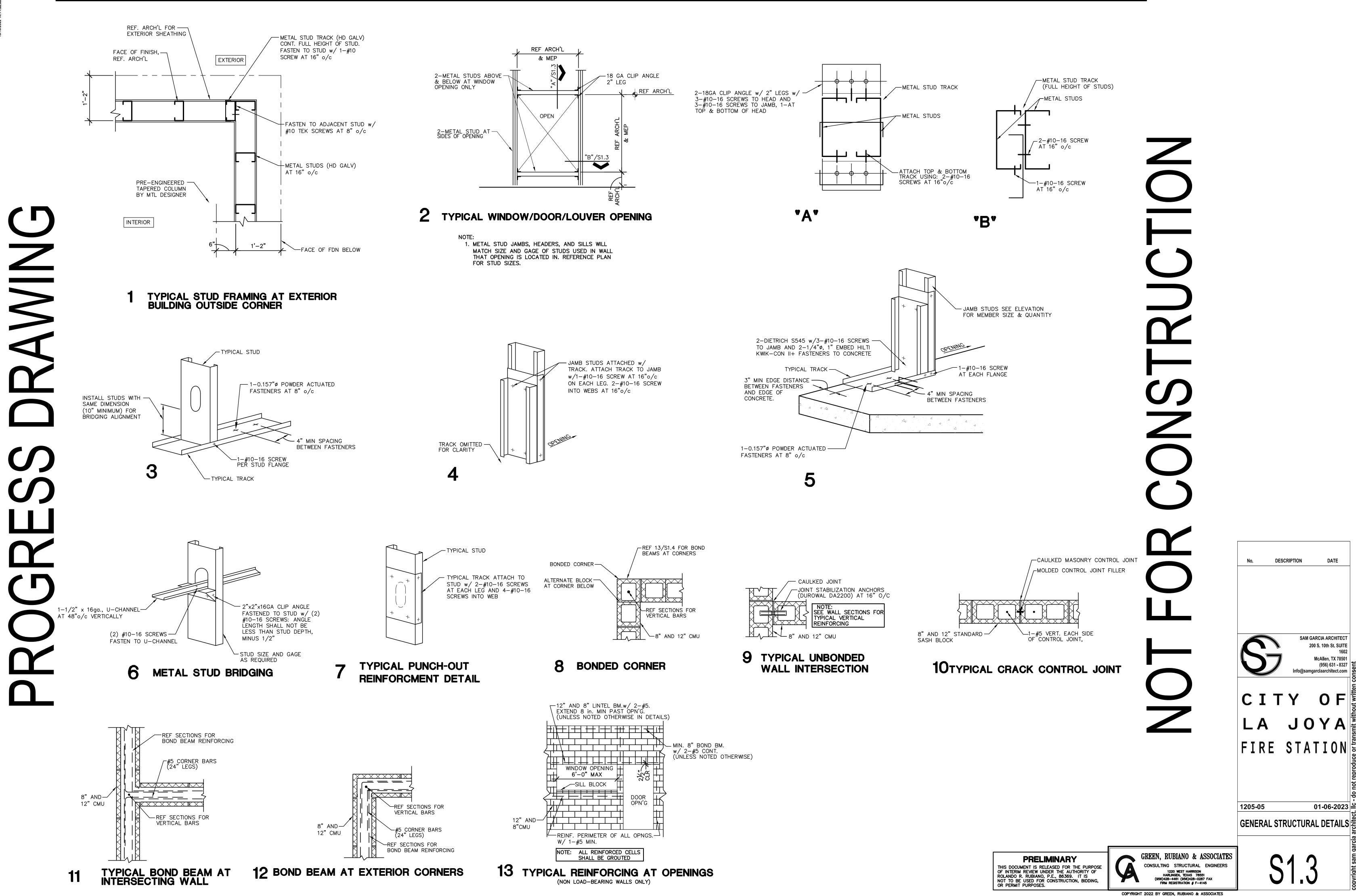
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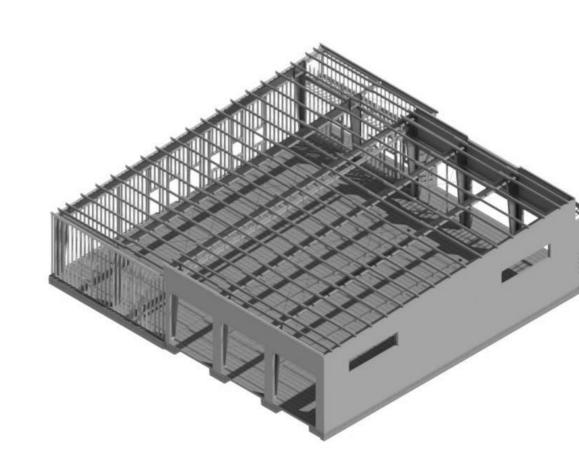
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1220 WEST HARRISON



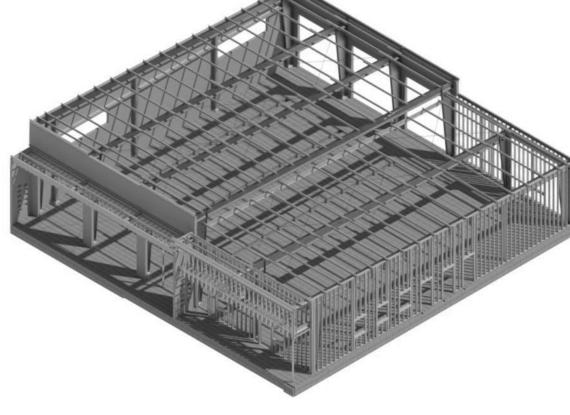
GENERAL STRUCTURAL DETAILS

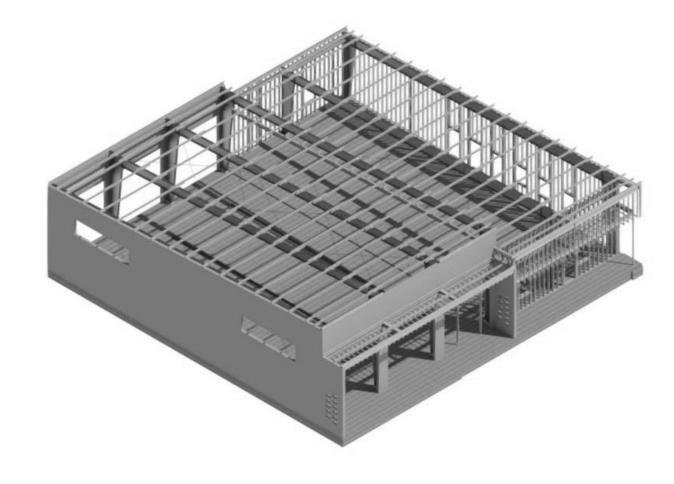
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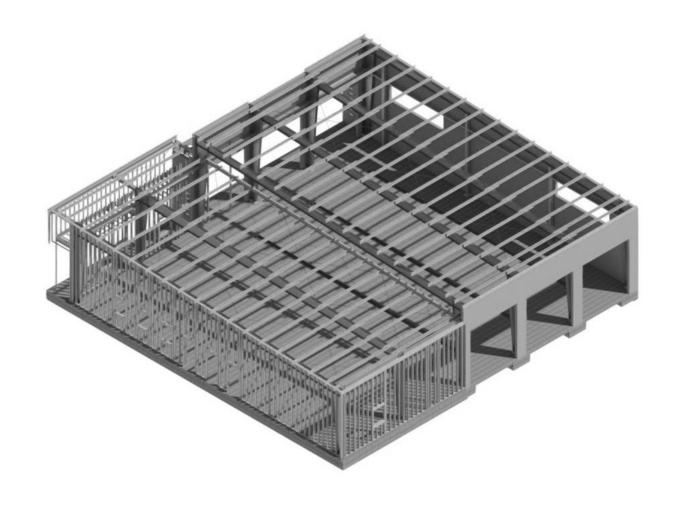














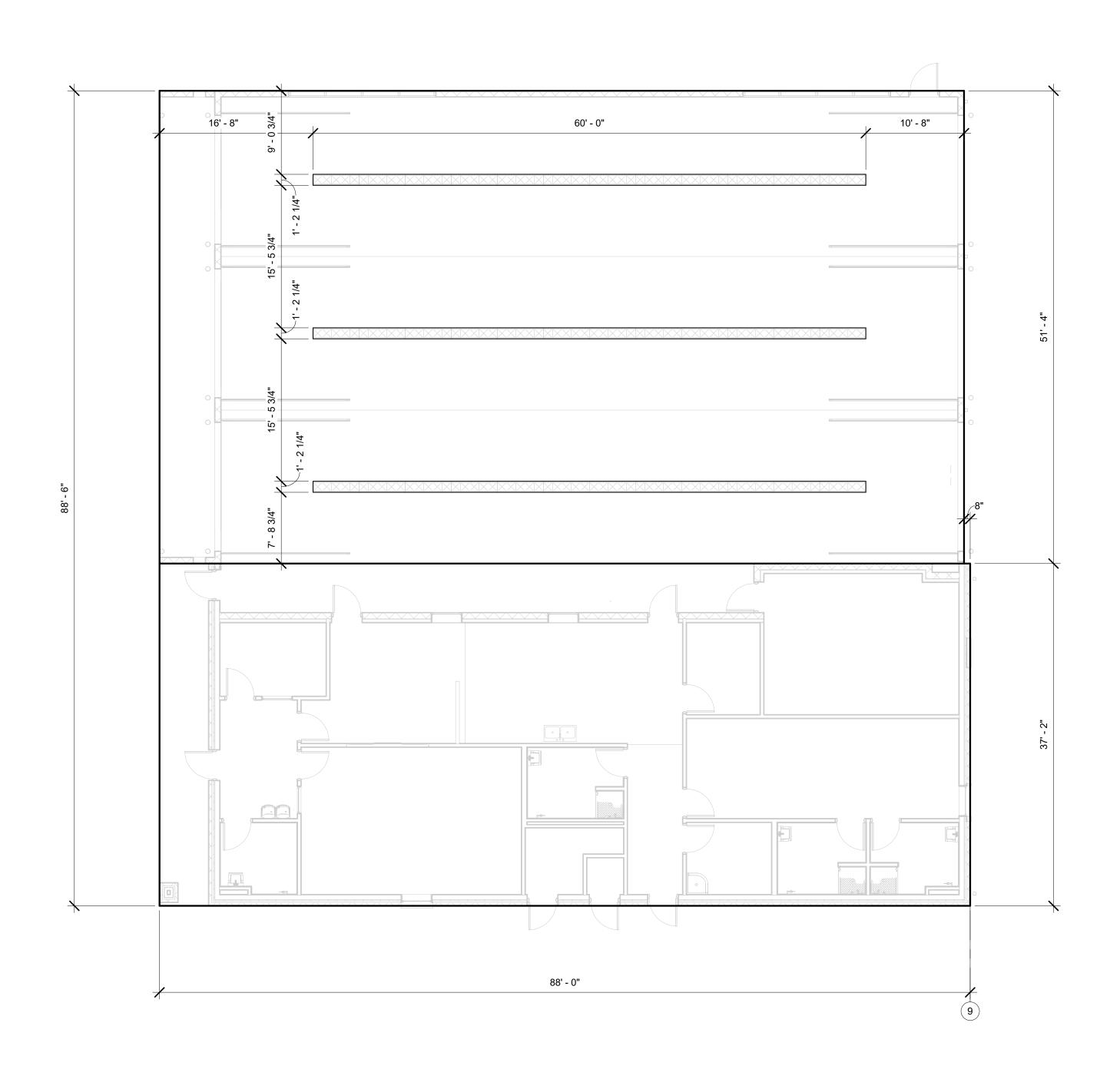
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FOUNDATION DIMENSION LIMITS PLAN

/ 1/8" = 1'-0"

NOTES:

- 1. REFERENCE ARCHITECTURAL AND CIVIL FOR BUILDING LOCATION AND ORIENTATION. 2. REFERENCE 1/S2.1 FOR FOUNDATION PLAN.
- 3. REFERENCE 1/S2.1C FOR CONTROL JOINT PLAN



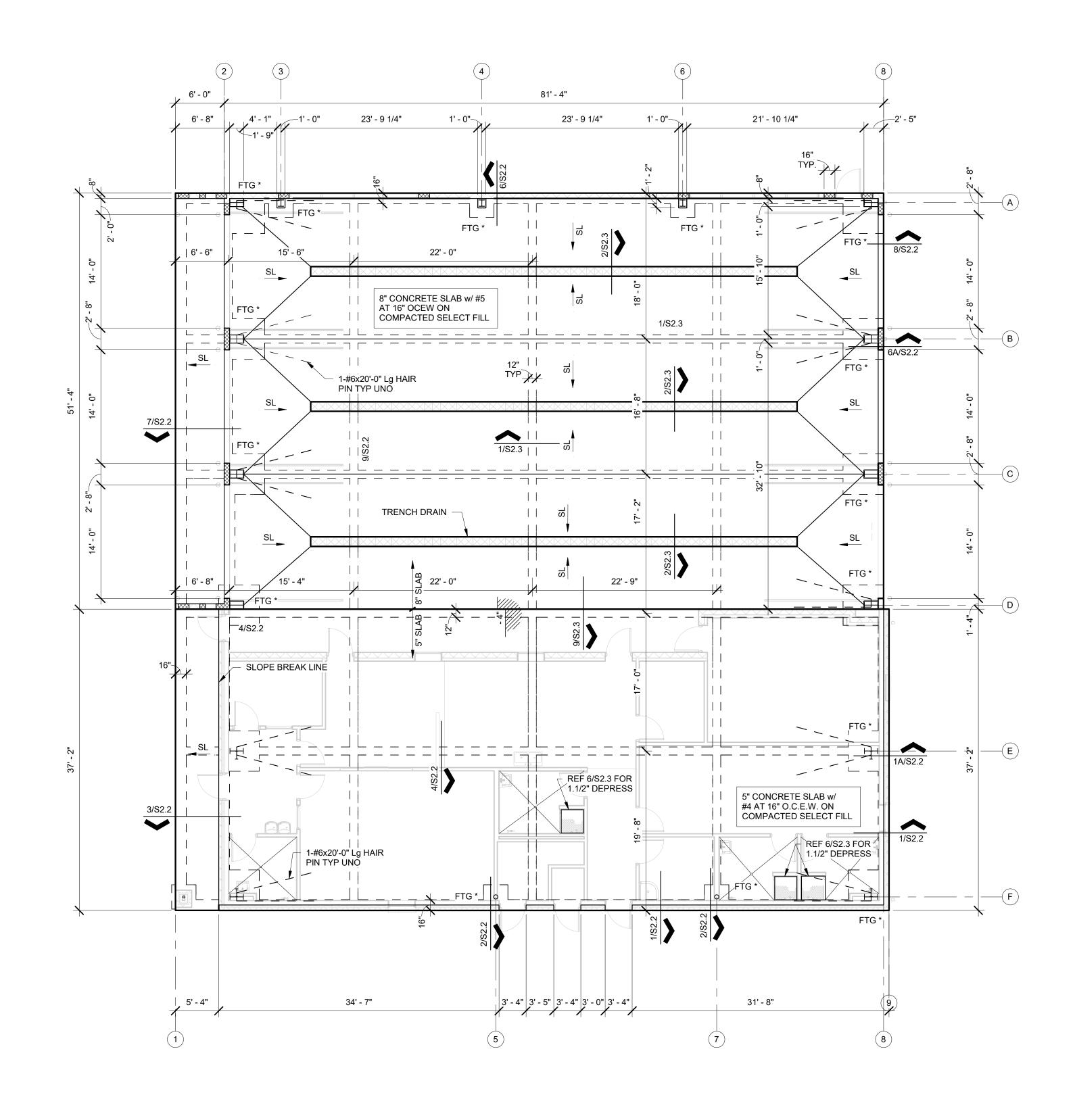


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- 1. REFERENCE PRE-ENGINEERED BUILDING ANCHOR BOLT PLAN FOR BOLT DIAMETER & LOCATION. COLUMN ANCHOR BOLT LENGTHS TO BE DETERMINED BY ENGINEER SUBSEQUENT TO RECEIPT & REVIEW OF THE BUILDING REACTION DIAGRAMS AND ANCHOR BOLT PLAN.
- 2. REFERENCE SCHEMATIC ROOF FRAMING PLAN FOR COLUMN LOCATIONS. FOUNDATION PLAN DIMENSIONS GENERALLY DENOTE GRADE BEAM CENTERLINE AND OUTSIDE FACE OF CONCRETE.
- 3. ALL CONDUIT GREATER THAN 1" IN DIAMETER SHALL BE RECESSED TO PROVIDE 1.1/2" CLEAR DISTANCE BETWEEN SLAB REBAR & CONDUIT.
- 4. MAINTAIN 2" MINIMUM CLEAR DISTANCE BETWEEN ALL CONDUIT IN SLAB.
- 5. A SINGLE CONDUIT (MAX 3" O.D.) MAY BE PLACED WITHIN THE BEAM CAGE. ALL CONDUIT IN BEAM CAGES TO BE TIED TO STIRRUPS MINIMUM OF 4" FROM HORIZONTAL BARS.
- 6. CRACK CONTROL JOINTS ARE NOTED ON THE PLANS. CONTRACTOR TO COORDINATE CHANGES WITH THE ENGINEER PRIOR TO FORMING FOUNDATION.
- 7. PLUMBING LINES SHALL NOT BE PLACED IN BOTTOM OF GRADE BEAM TRENCHES.
- 8. PLUMBING LINES PASSING THROUGH GRADE BEAMS SHALL BE SLEEVED. BEAMS SHALL BE DEEPENED AND BENT REBAR PROVIDED IF LOCATION OF DRAIN LINES REQUIRES CUTTING BOTTOM BARS. REFERENCE 6/S2.3.
- 9. ALL JOINTS IN 5 INCH SLAB TO BE CLEANED AND FILLED w/ SONOLASTIC SL1 (SONNEBORN).
- 10. ALL JOINTS IN 8 INCH SLAB TO BE CLEANED AND FILLED w/ METZGER/MCGUIRE MM-80
- 10. REFERENCE 1/S2.1C FOR CONTROL JOINT PLAN.
- 11. INDICATES 8" CMU w/ 1-#5 VERTICAL BARS AT 8" o/c.



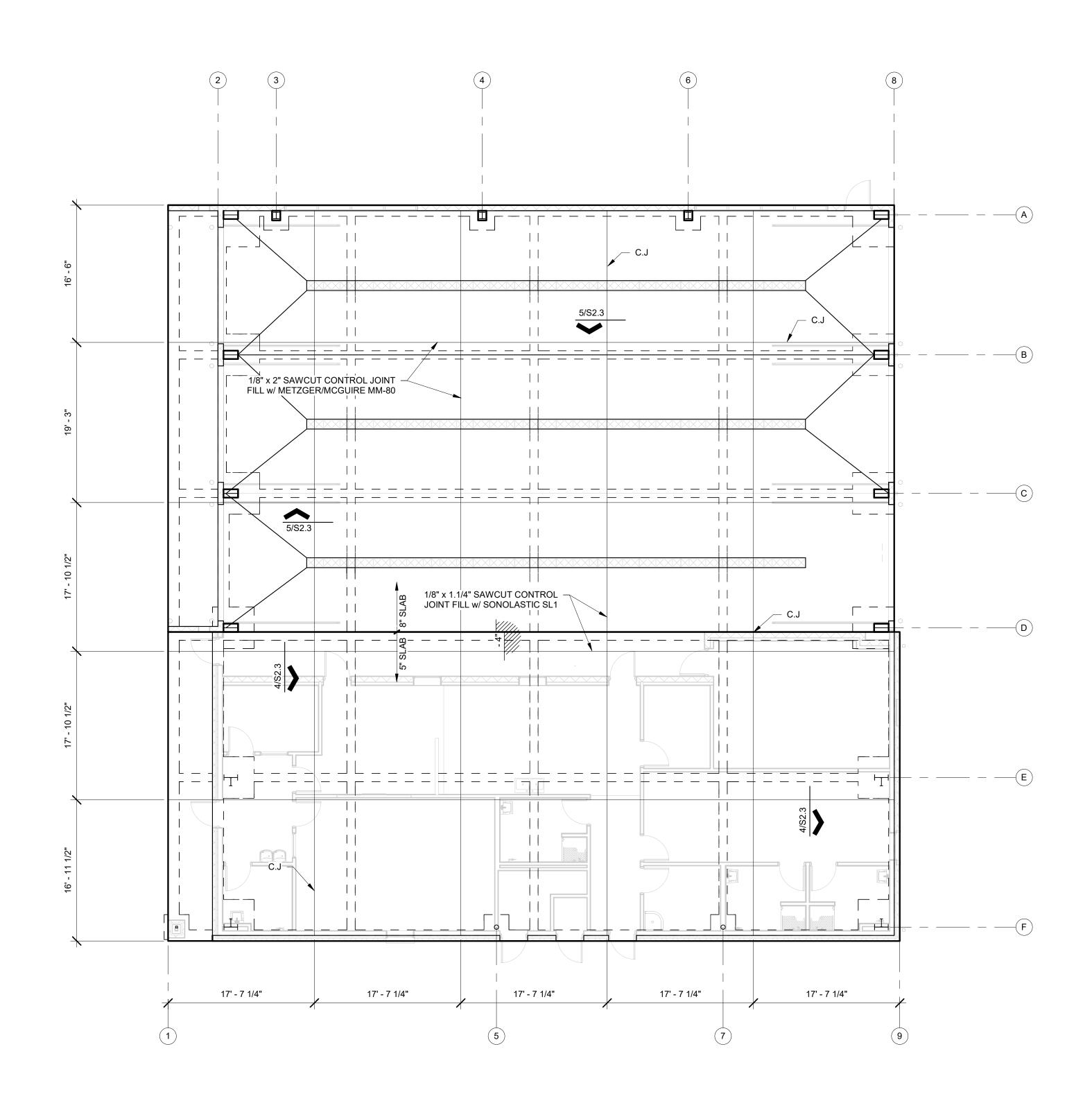
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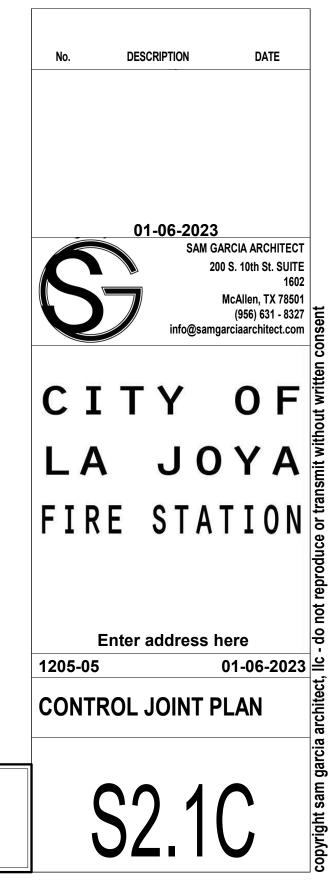
/ 1/8" = 1'-0" NOTES:

- 1. CRACK CONTROL JOINTS ARE NOTED ON THE PLANS. CONTRACTOR TO COORDINATE ANY CHANGES WITH THE ENGINEER PRIOR TO FORMING FOUNDATION.
- 2. ALL JOINTS IN 5 INCH SLAB TO BE CLEANED AND FILLED w/ SONOLASTIC SL1 (SONNEBORN). REFERENCE DETAIL 4/S2.3
- ALL JOINTS IN 8 INCH SLAB TO BE CLEANED AND FILLED w/ METZGER/MCGUIRE MM-80. REFERENCE DETAIL 5/S2.3
- 4. REFERENCE 1/S2.1 FOR ADDITIONAL FOUNDATION NOTES AND REFERENCES.



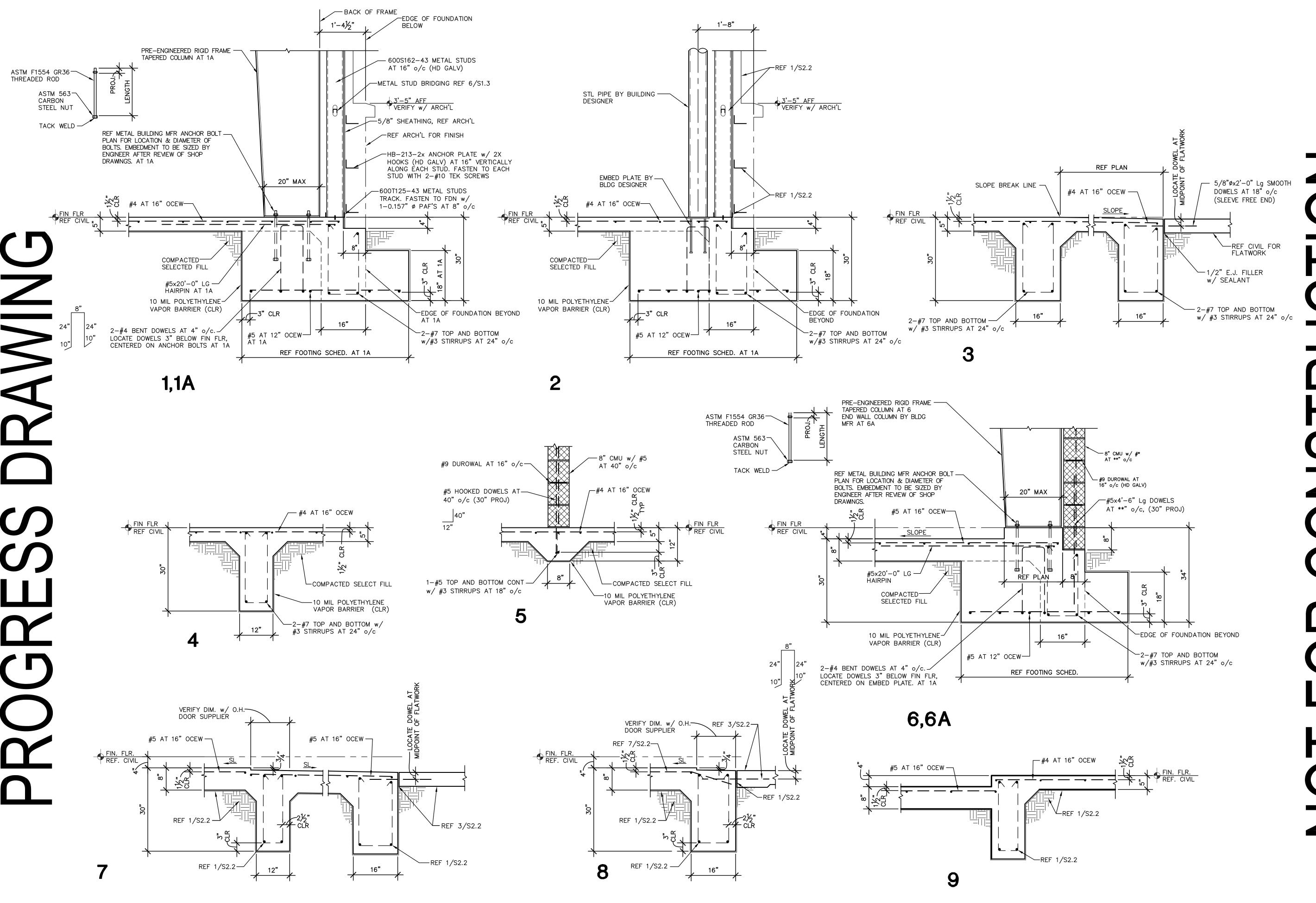


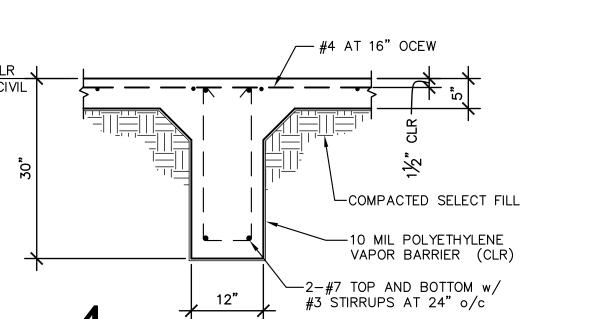
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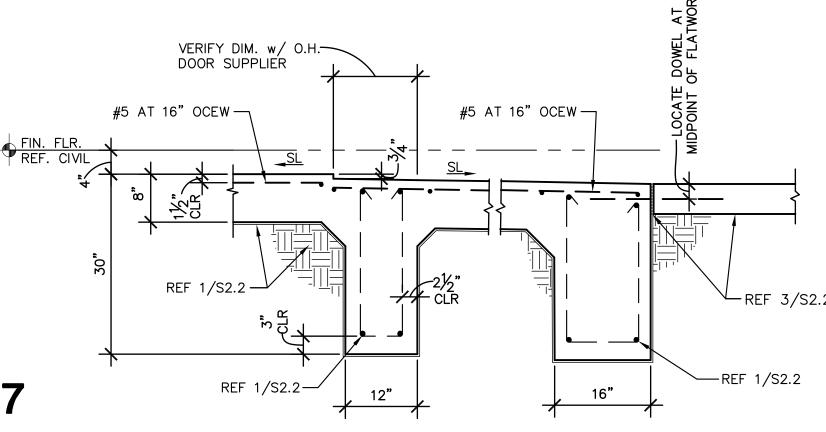


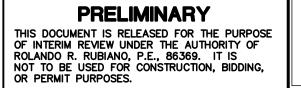
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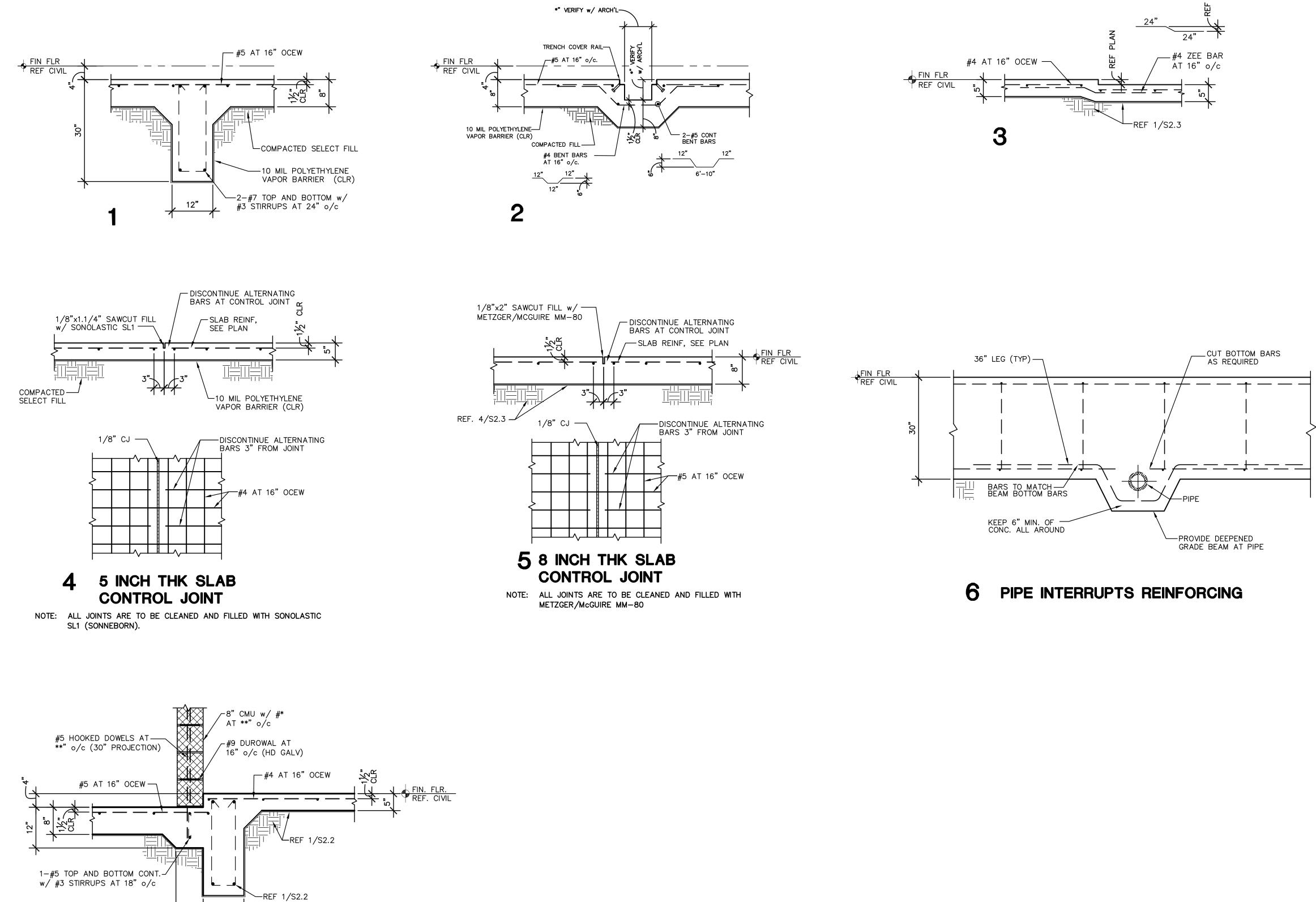






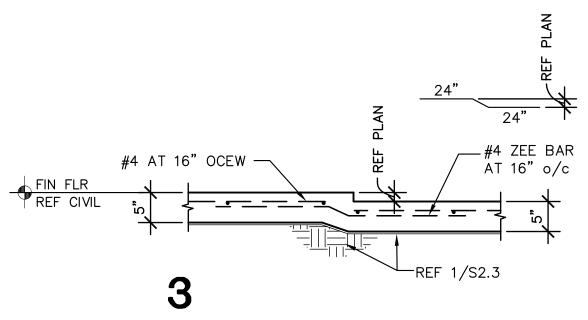


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8"

12"

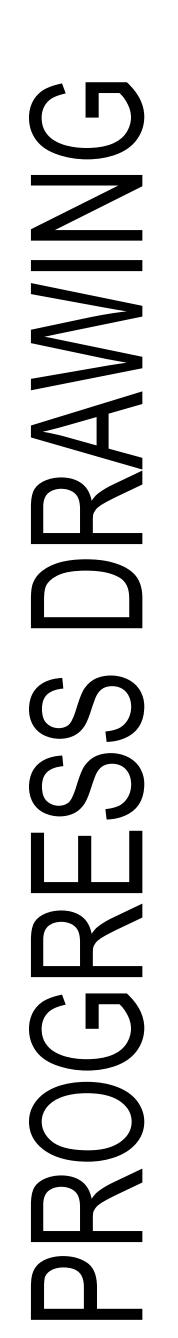


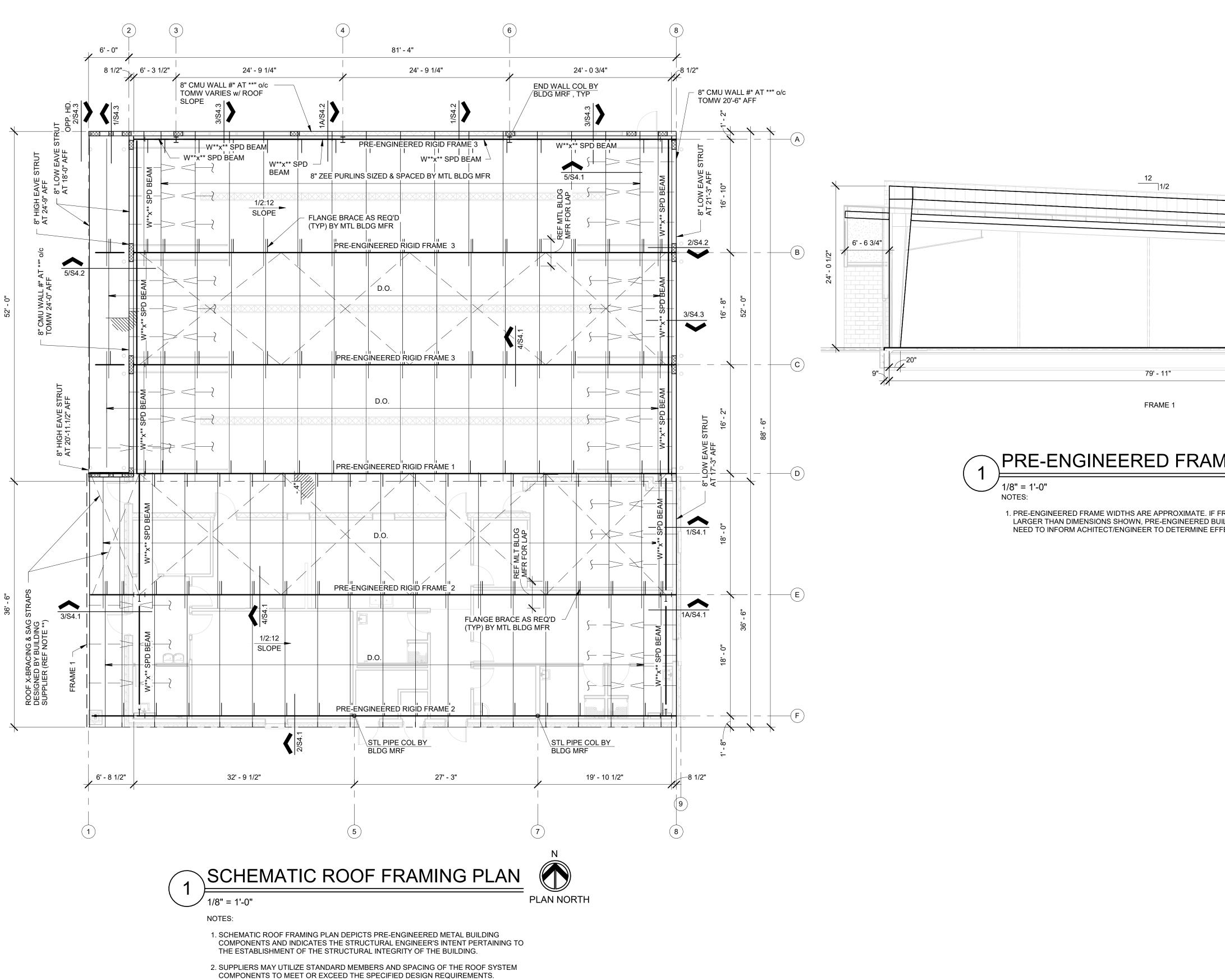
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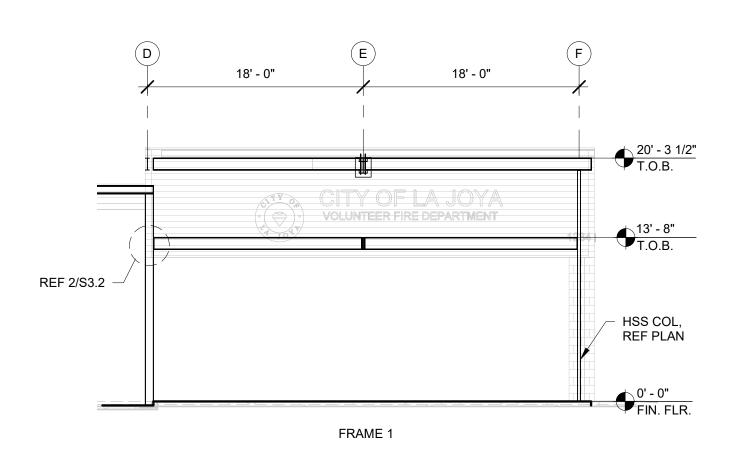






- 3. PRE-ENGINEERED BUILDING SUPPLER SHALL SUBMIT SHOP / ERECTION DRAWINGS AND BUILDING DESIGN CALCULATIONS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
- 4. ADDITIONAL PURLINS SHALL BE PROVIDED AS REQUIRED FOR SUPPORT OF METAL ROOF TO SATISFY PROJECT WIND PRESSURES.
- 5. INDICATES 8" CMU w/ 1-#5 VERTICAL BARS AT 8" o/c.
- 6. METAL BUILDING DESIGNER TO COORDINATE PORTAL FRAME BEAM AND COLUMN DIMENSIONS WITH ARCHITECTURAL WRAPS AND SIZE FIT (12" MAXIMUM COLUMN DEPTH).
- 7. REFERENCE 1/S3.2 FOR FRAME PROFILES.

A PROFILE RAME WIDTHS NEECS TO BE LIDING MANUFACTORER WILL TECT ON FLOOR LAYOUT.	
E S S S S S S S S S S S S S S S S S S S	No. DESCRIPTION DATE 01-06-2023 SAM GARCIA ARCHITECT 200 S. 10th St. SUITE 1602 MCAllen, TX 78501 (956) 631 - 8327 Info@samgarciaarchitect.com Info@samgarciaarchitect.com CITTY OF LA JOYA JOYA FIRE STATION
PRELIMINARY CREEN, RUBIANO & ASSOCIA THIS DOCUMENT IS RELEASED FOR THE PURPOSE INTERIM REVIEW UNDER THE AUTHORITY OF ROLANDO R. RUBIANO, P.E., 86369. IT IS CONSULTING STRUCTURAL END NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES. CONSULTING STRUCTURAL END	IATES NEERS NERS I SONDAL SOND



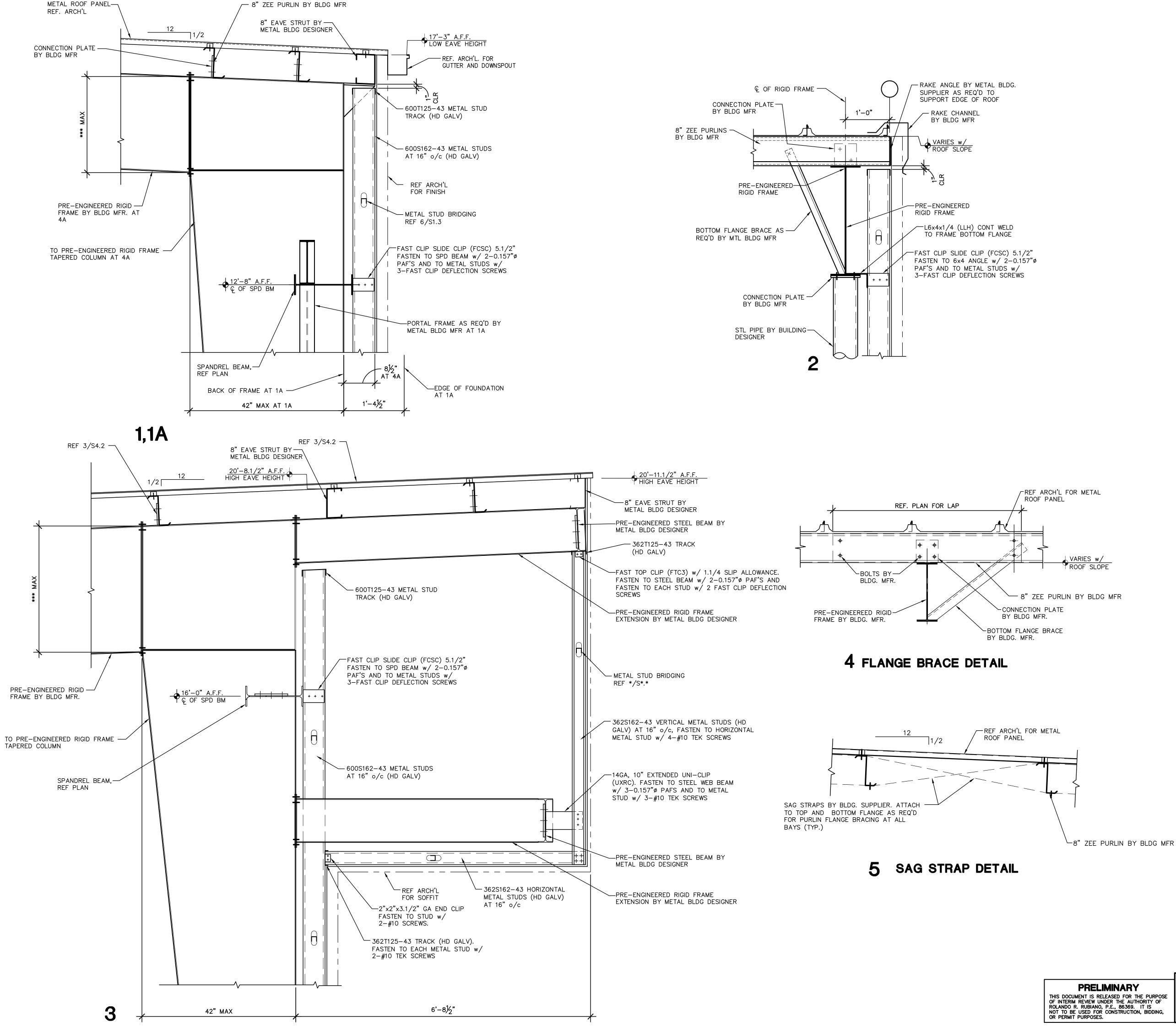


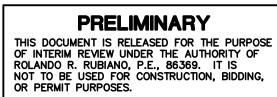
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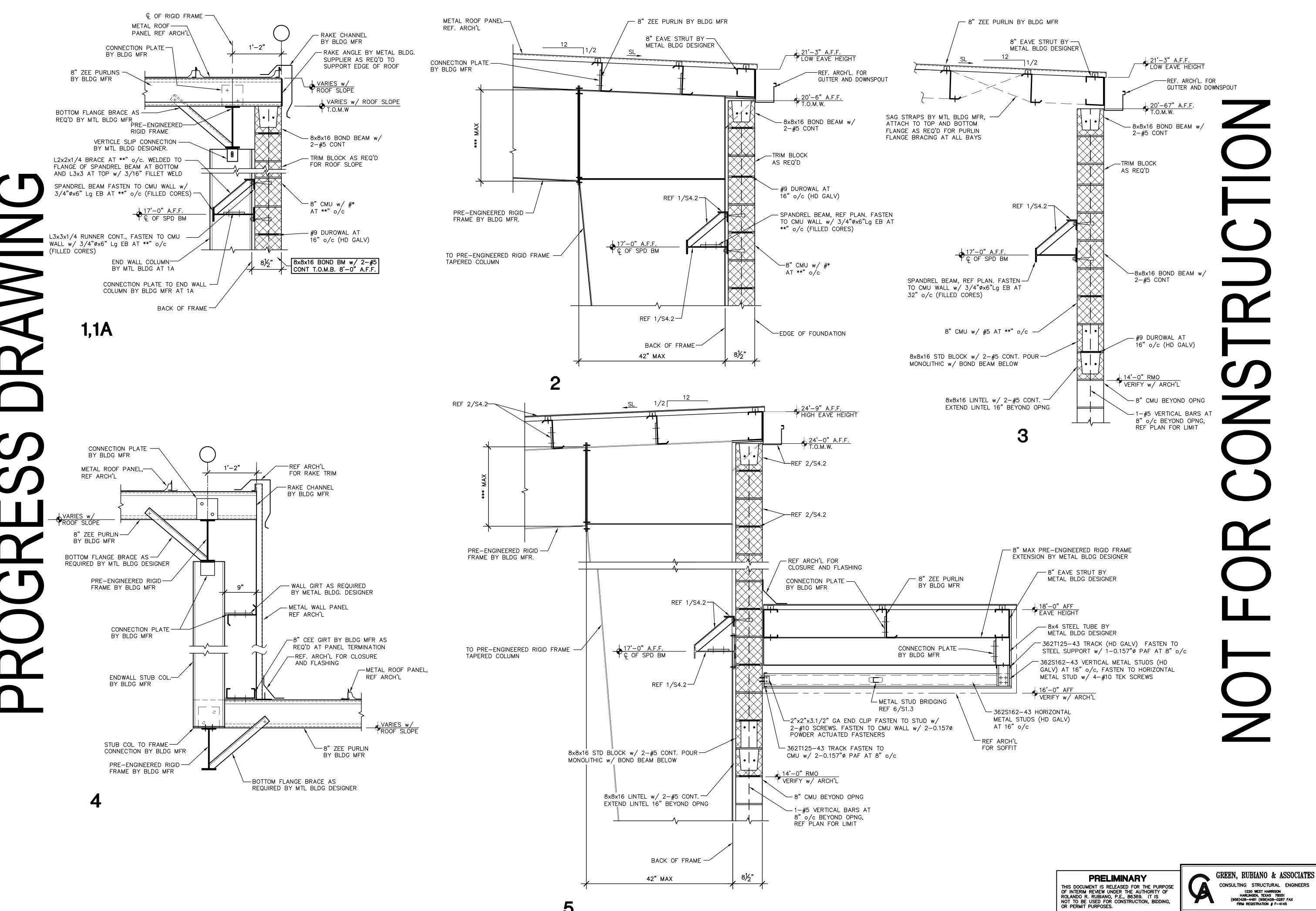
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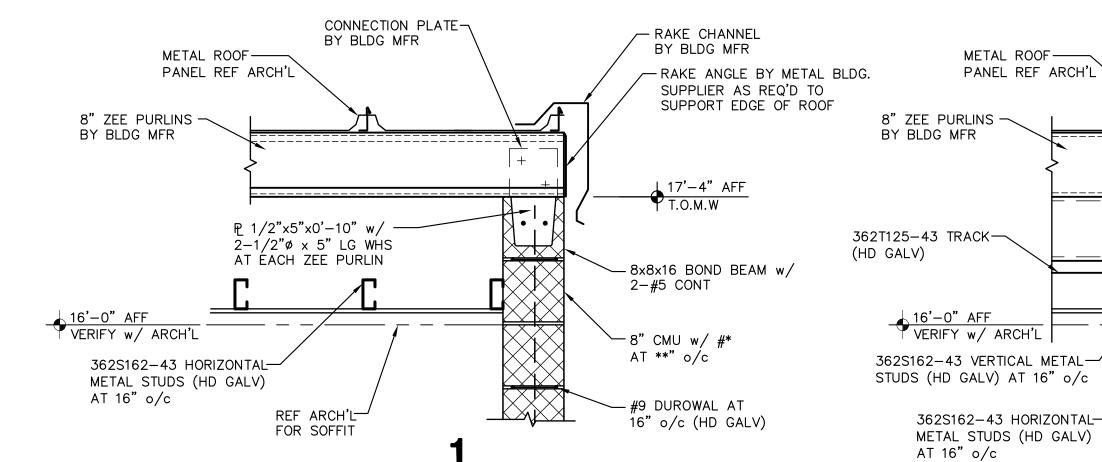
No.

DATE





1220 WEST HARRISON HARLINGEN, TEXAS 78551 (956)428-4461 (956)428-0287 FA: FIRM REGISTRATION # F-4145



CONNECTION PLATE BY BLDG MFR - RAKE CHANNEL BY BLDG MFR METAL ROOF ------- RAKE ANGLE BY METAL BLDG. SUPPLIER AS REQ'D TO SUPPORT EDGE OF ROOF PANEL REF ARCH'L ↓ 17'-4" AFF [₩]Т.О.М.W - P 3/8"x9" WIDE BENT PLATE w/1-5/8" x 6" WHS as req'd 📕 362S162-43 HORIZONTAL-/ METAL STUDS (HD GALV) REF ARCH'L FOR SOFFIT C

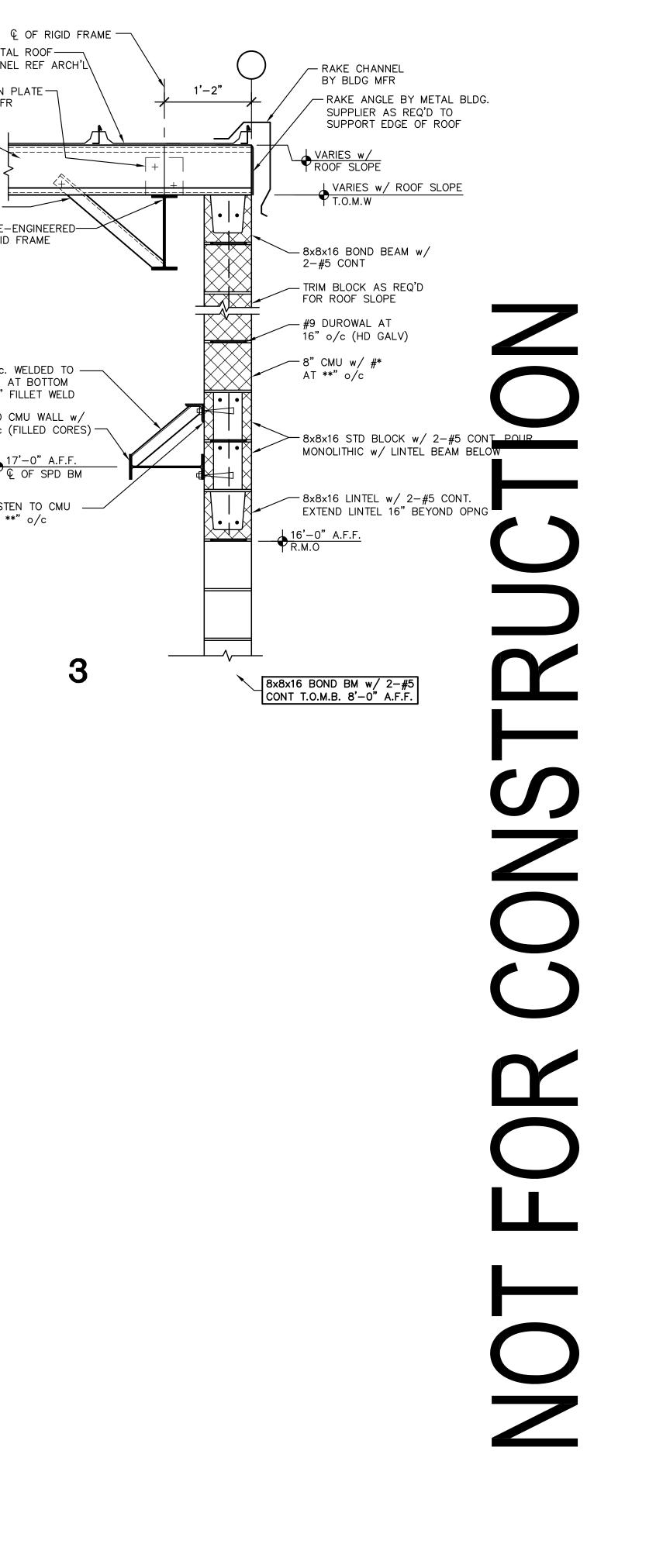
METAL ROOF ------PANEL REF ARCH'L CONNECTION PLATE BY BLDG MFR 8" ZEE PURLINS — BY BLDG MFR BOTTOM FLANGE BRAGE ... REQ'D BY MTL BLDG MFR PRE-ENGINEERED-RIGID FRAME

FLANGE OF SPANDREL BEAM AT BOTTOM AND L3x3 AT TOP w/ 3/16" FILLET WELD SPANDREL BEAM FASTEN TO CMU WALL w/ 3/4"øx6" Lg EB AT **" o/c (FILLED CORES) —

- + 17'-0" A.F.F. € OF SPD BM

3

L3x3x1/4 RUNNER CONT., FASTEN TO CMU WALL w/ 3/4"øx6" Lg EB AT **" o/c (FILLED CORES)

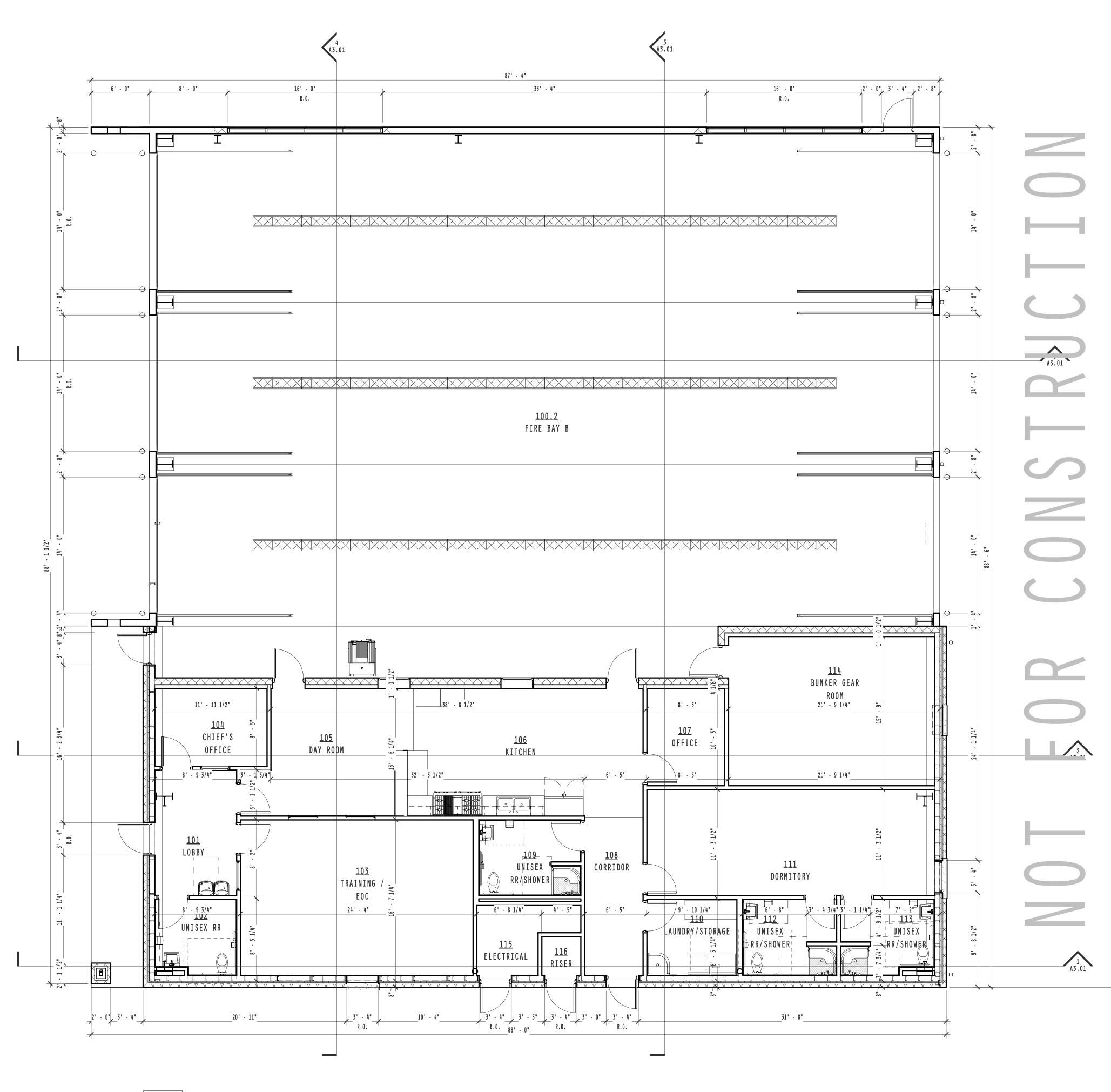




54

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GREEN, RUBIANO & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS 1220 WEST HARRISON HARLINGEN, TEXAS 78551 (956)428-4461 (956)428-0287 FA FIRM REGISTRATION # F-4145



 $\begin{array}{c|c} & 1 \\ \hline N \end{array} \begin{array}{c} 1 \\ \hline 3/16" = 1' - 0" \end{array}$

1. THESE DRAWINGS ARE INTENDED TO ILLUSTRATE THE LOCATIONS OF ALL NEW CONSTRUCTION, BUT ARE NOT TO BE SCALED. THE DIMENSIONS SHALL SUPERSEDE THE SCALE.

2. THE GENERAL CONTRACTOR IS REQUIRED TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ALL INFORMATION IN REGARDS TO THE EXISTING FIELD CONDITIONS, MATERIALS, AND METHODS OF CONSTRUCTION, DIMENSIONS, AND/OR DEFLECTIONS SHALL BE OBSERVED, NOTED, AND VERIFIED BY THE GENERAL CONTRACTOR

PRIOR TO ANY CONSTRUCTION OR FABRICATION. ANY AND ALL INFORMATION GATHERED THAT IS IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH ANY RELATED WORK.

3. FINISH FLOOR ELEVATIONS ARE 100'-0" AND ARE TO TOP OF CONCRETE UNLESS OTHERWISE NOTED OR SPECIFIED.

4. PROVIDE A 4" JAMB AT ALL DOORS LOCATED ON WALLS TYP., U.N.O.

5. PAINT, CAULK AND SEAL AT ALL DISSIMILAR WALL MATERIALS INTERSECTIONS.

6. ALL ANGLES ARE 0, 45, OR 90 DEGREES UNLESS

OTHERWISE SPECIFIED. ALL EXPOSED WALL CORNERS SHALL HAVE BULLNOSE EDGES AT CMU WALLS OR DRYWALLS TYP.

7. WHERE MATERIALS ARE APPLIED TO OR ARE IN DIRECT CONTACT WITH WORK INSTALLED BY ANOTHER SUBCONTRACTOR, COMMENCEMENT OF WORK IMPLIES ACCEPTANCE OF THE SUBSTRATE AS SUITABLE FOR THE APPLICATION INTENDED.

8. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR THE DETAILED DESIGN OF STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.

9. ALL CONSTRUCTION AND EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.

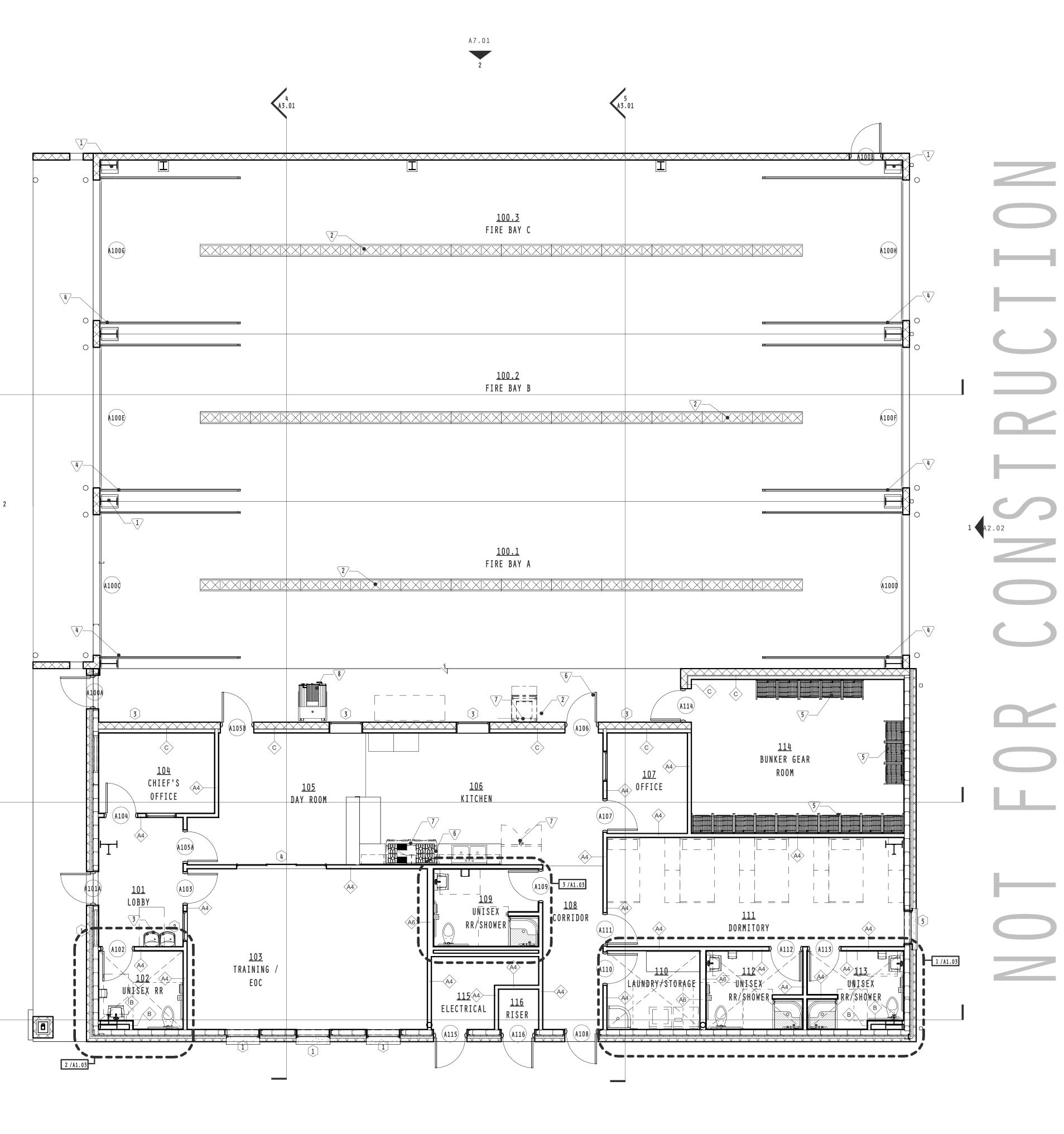
10. DIMENSIONS AT EXTERIOR OF BUILDING ARE TO EDGE OF SLAB. INTERIOR DIMENSIONS ARE TO FACE OF METAL STUDS.

11. GENERAL CONTRACTOR WILL PROVIDE DUMPSTER FOR CONSTRUCTION DEBRIS. LOCATE PER OWNER'S DIRECTION.

No.	DESCRIPTION	DATE
	01.06.202	3
6		RCIA ARCHITECT OO AUBURN AVE.
(S)		SUITE 280 LLEN, TX 78504
Y	(9	56) 631 - 8327 AARCHITECT.COM
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FIR	E STA	TION
701	E Expressw	IAY 83
LA 2022-0	JOYA, TX 7	'8560 .06.2023
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PLAN		
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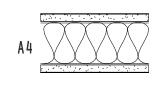
 $hightarrow N = \frac{1}{3/16} = 1' - 0"$

2 A2.02

<u>SHEET PLAN KEYNOTES</u> 🥑

- PRE-ENGINEERED STEEL STRUCTURE, RE. STRUCT FOR SLAB AND FOOTINGS.
- 2. TRENCH DRAIN, RE. MEP.
- ELECTRIC DRINKING FOUNTAIN
 OVERHEAD DOOR AS SCHED.
- 5. FIRE EQUIPMENT LOCKERS
- 6. KITCHEN EXHAUST SYSTEM, RE. MEP 7. KITCHEN APPLIANCE
- 8. FIRE GEAR WASHER/EXTRACTOR

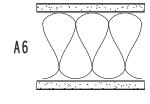
WALL TYPEDS

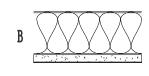


3 5/8" METAL STUD CORE Sound Batt Insulation 5/8" Gypsum Board (Each Side)

6" METAL STUD CORE

SOUND BATT INSULATION

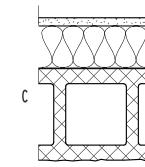




Z E/0# METAL STUD CODE

5/8" GYPSUM BOARD (EACH SIDE)

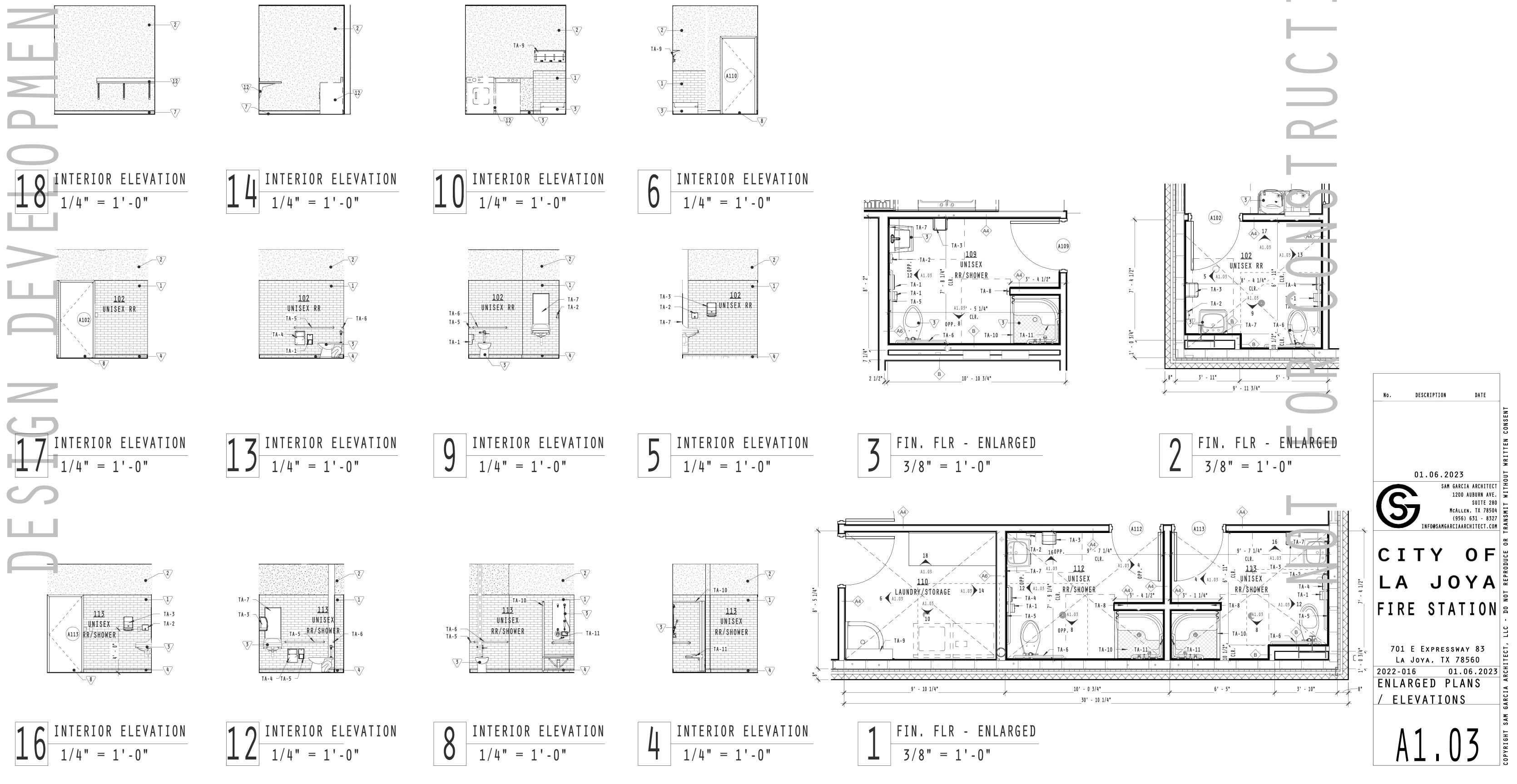
3 5/8" METAL STUD CORE Sound Batt Insulation 5/8" Gypsum Board (one Side)



5/8" GYPSUM BOARD (ONE SIDE) 3 5/8" METAL STUD CORE SOUND BATT INSULATION FLUID-APPLIED THERMAL BARRIER 8" CMU, SPLIT FACE







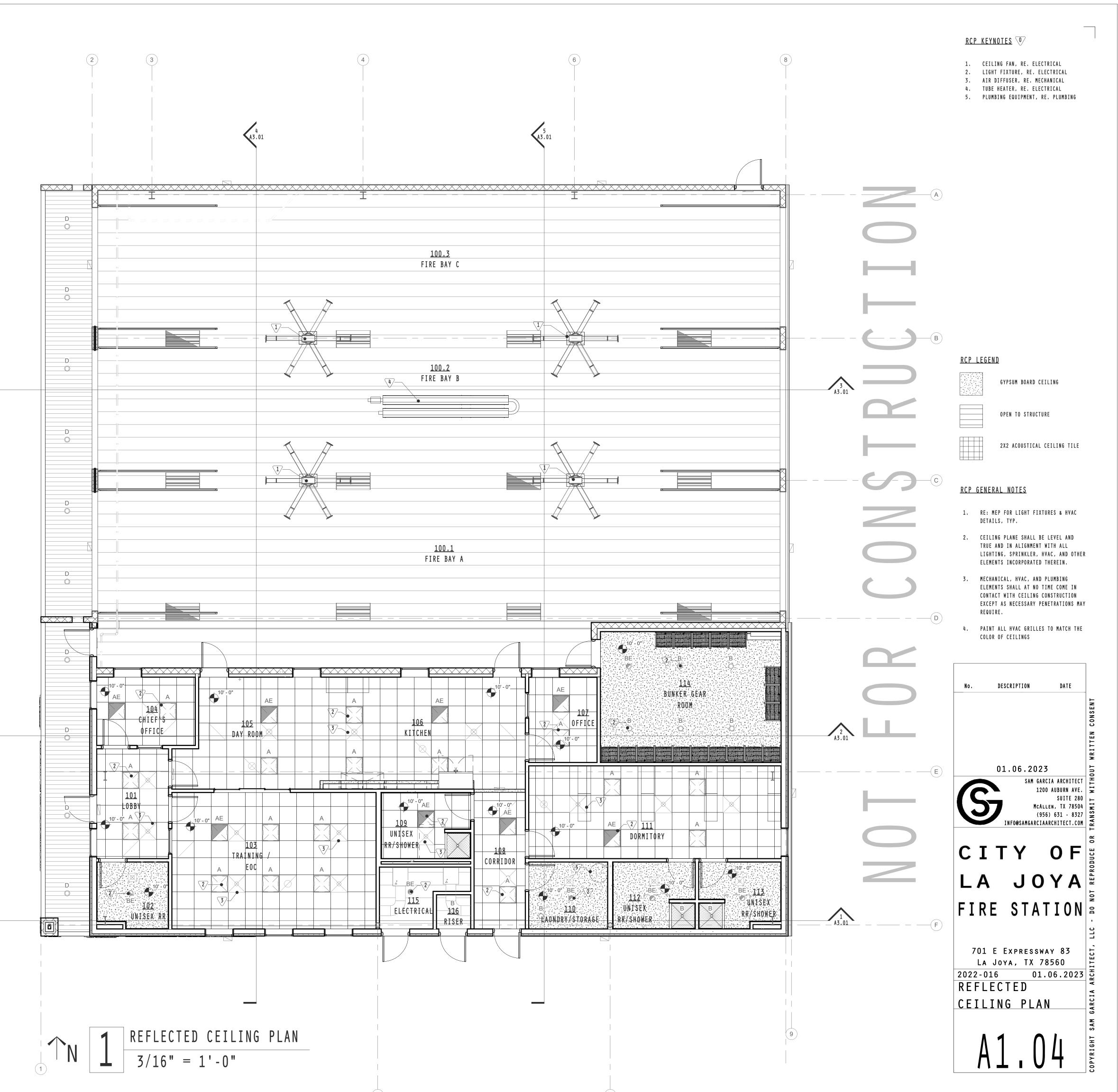
TYPE MARK	TYPE	BASIS OF DESIGN	NOTES
TA-1	MULTIROLL TOILET PAPER DISPENSER	BOBRICK SERIES NO. B-4388	CF/CI
T A - 2	SOAP DISPENSER	BOBRICK SERIES NO. B-4112	CF/CI
T A - 3	PAPER TOWEL DISPENSER	BOBRICK SERIES NO. B-72974	CF/CI
T A - 4	SANITARY NAPKIN DISPOSAL	BOBRICK SERIES NO. B-270	CF/CI
T A - 5	42" GRAB BAR - W/ GRIPPING SURFACE FINISH	BOBRICK SERIES NO. B-6800	CF/CI
T A - 6	36" GRAB BAR - W/ GRIPPING SURFACE FINISH	BOBRICK SERIES NO. B-6800	CF/CI
T A - 7	18" x 36" WELDED-FRAME MIRROR	BOBRICK SERIES NO. B-290-1836	CF/CI
T A - 8	SINGLE ROBE HOOK	BRADLEY MODEL NO. 9134	CF/CI
T A - 9	36" MOP AND BROOM HOLDER (4 HOLDERS)	BOBRICK SERIES NO. B-239 X 34	CF/CI
TA-10	SHOWER CURTAIN, ROD AND HANGER CLIPS	BRADLEY MODEL NO. 953	CF/CI
TA-11	FOLD-DOWN L-SHAPED SHOWER ASSEMBLY	BRADLEY MODEL NO. HN300	CF/CI
0	F/CI: OWNER FURNISHED-CONTRACTOR INSTALLED F/OI: OWNER FURNISHED-OWNER INSTALLED F/CI: CONTRACTOR FURNISHED-CONTRACTOR INSTAL		

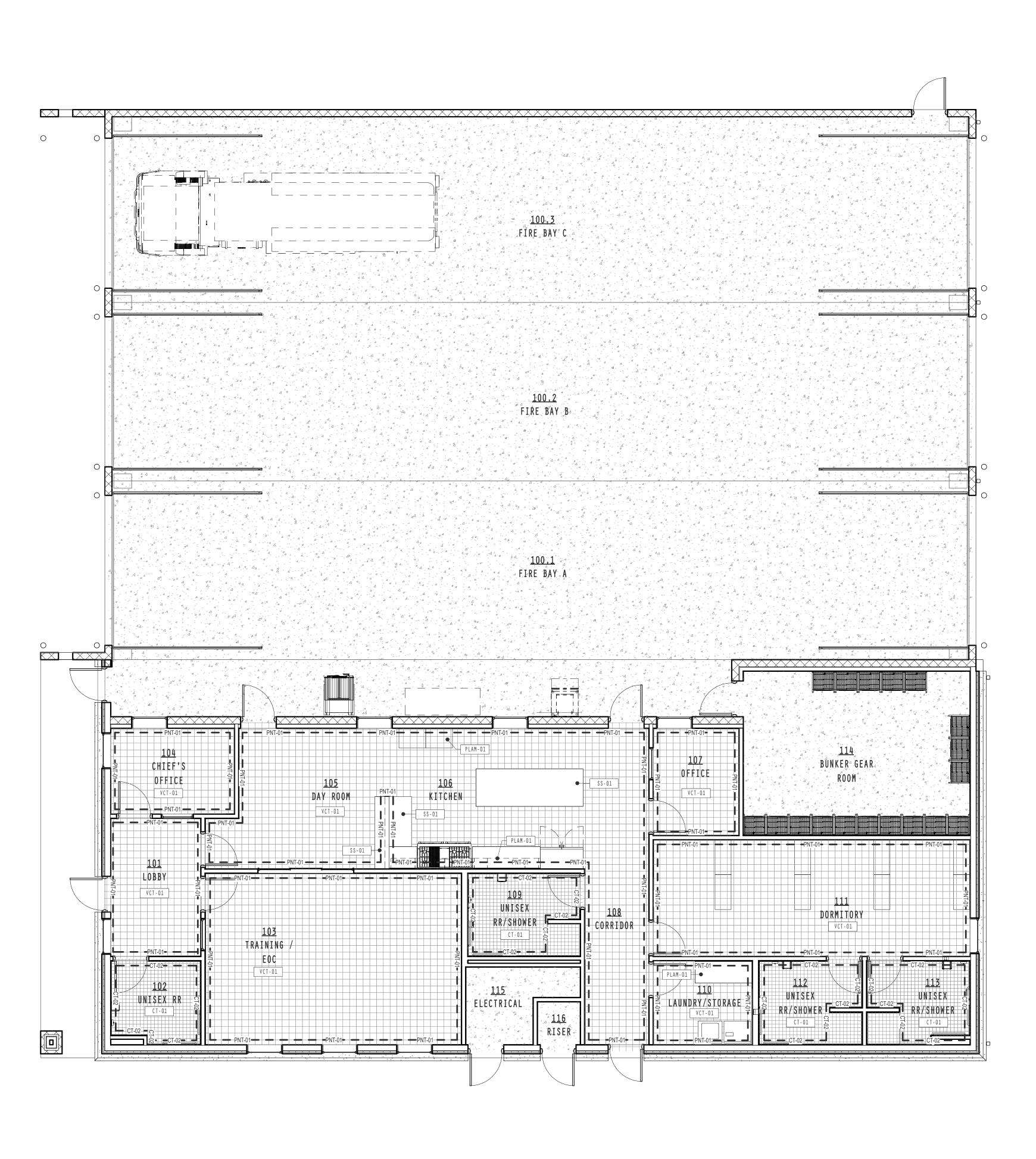
<u>FINISH PLAN KEYNOTES</u> 🕑

- 1. CERAMIC TILE
- 2. 5/8" GYPSYM BOARD, PTD. 3. PLUMBING FIXTURE, RE. PLUMBING
- 4. CERAMIC TILE COVE BASE
- 5. SOLID SURFACE COUNTER 6. MILLWORK SURFACE
- 7. 4" RUBBER BASE
- 8. HOLLOW METAL DOOR FRAME SYSTEM,
- DOOR AS SCHED. 9. ALUMINUM WINDOW SYSTEM
- 10. HARD SURFACE COUNTERS
- 11. PLAM CABINETS

- 12. RESIDENTIAL APPLIANCE, BY OWNER 13. 8" CMU, INTEGRAL COLOR SPLIT FACE
- FINISH
- 14. HOLOW METAL RATED WINDOW SYSTEM 15. CYLINDER FILLER
- 16. RIGID FRAME, RE. STRUCTURE
- 17. ALUMINUM OVERHEAD DOORS 18. ICE MAKER
- 19. ALUMINUM SLIDING WINDOW
- 20. ALUMINUM STOREFRONT DOOR SYSTEM
- 21. HOLLOW METAL DOOR AND FRAME, PTD.

 \square





 $\uparrow N \boxed{\begin{array}{c} 1 \\ \hline 3/16" = 1' - 0" \end{array} }$



SEALED CONCRETE 12"X12" TARKETT VCT II -325 GINGER SPICE FLOOR FINISH SCHEDULE CT-01 CERAMIC TILE VCT-01 VINYL COMPOSITION TILE <u>BASE MATERIAL LEGEND</u> RUBBER BASE - ROPPE 122 NATURAL CB-01 CERAMIC COVE BASE WALL FINISHES CT-02 CERAMIC WALL TILE (DAYTON - NATURAL WOOD PLANK) <u>PAINT SELECTION LEGEND</u> PT-01 FIELD COLOR -#SW6121 WHOLE WHEAT COUNTER SURFACE SELECTION SS-01 SOLID SURFACE - WILSONART MAPLE HARVEST 9106CS <u>MILLWORK FINISHES</u> PLAM-01 PLASTIC LAMINATE - WILSONART ITALIAN SILVER ASH 8217-12 PLAM-02 PLASTIC LAMINATE - WILSONART FAWN CYPRESS 8208-12 <u>FINISH PLAN KEYNOTES</u> 👽 1. CERAMIC TILE 5/8" GYPSYM BOARD, PTD. 3. PLUMBING FIXTURE, RE. PLUMBING 4. CERAMIC TILE COVE BASE SOLID SURFACE COUNTER MILLWORK SURFACE 7. 4" RUBBER BASE 8. HOLLOW METAL DOOR FRAME SYSTEM, DOOR AS SCHED. 9. ALUMINUM WINDOW SYSTEM 10. HARD SURFACE COUNTERS 11. PLAM CABINETS RESIDENTIAL APPLIANCE, BY OWNER 13. 8" CMU, INTEGRAL COLOR SPLIT FACE FINISH 14. HOLOW METAL RATED WINDOW SYSTEM 15. Cylinder Filler 16. RIGID FRAME, RE. STRUCTURE 17. ALUMINUM OVERHEAD DOORS 18. ICE MAKER 19. ALUMINUM SLIDING WINDOW 20. ALUMINUM STOREFRONT DOOR SYSTEM 21. HOLLOW METAL DOOR AND FRAME, PTD. DESCRIPTION DATE No. 01.06.2023 SAM GARCIA ARCHITECT 1200 AUBURN AVE. 🚽 SUITE 280 🛏 37 MCALLEN, TX 78504 🚽 (956) 631 - 8327 INFO@SAMGARCIAARCHITECT.COM CITY OF FIRE STATION 701 E Expressway 83 LA JOYA, TX 78560 2022-016 01.06.2023 ភ្ន FINISH PLAN & PAINT A1.0

<u>FLOOR FINISH LEGEND</u>

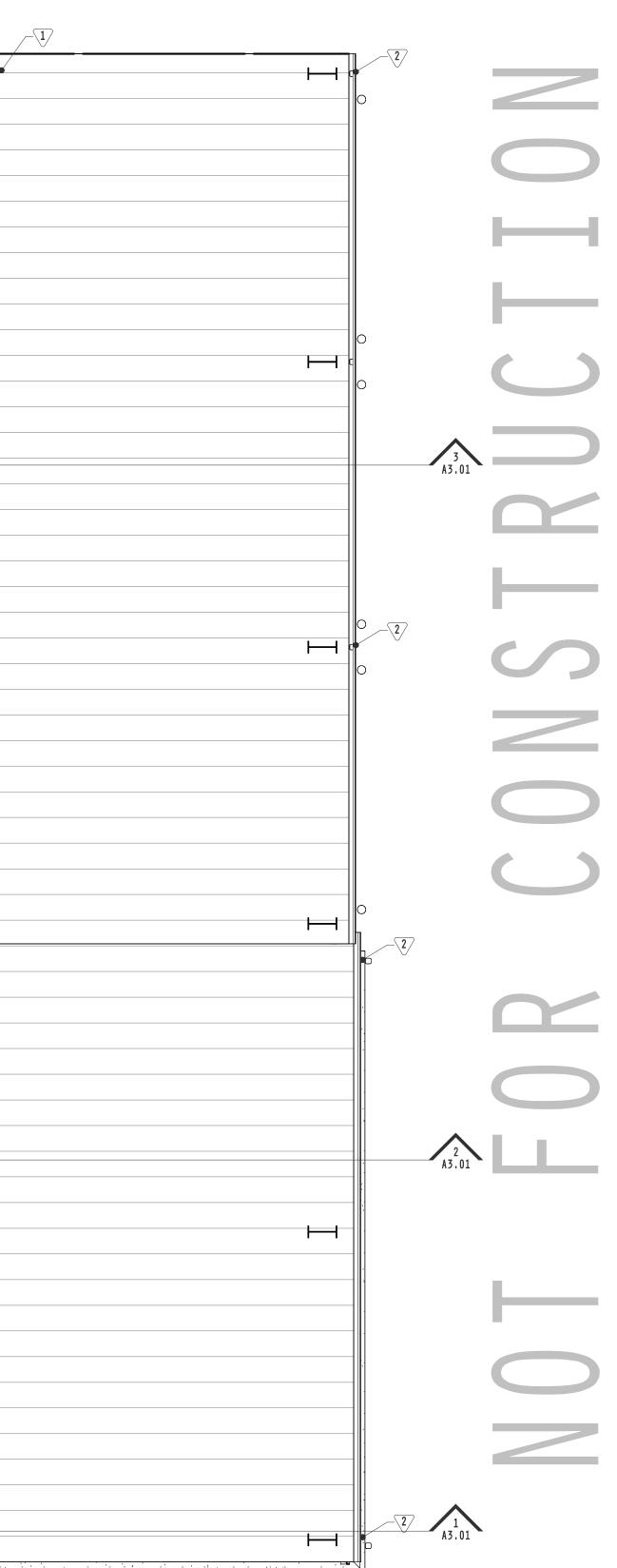
12" X 24"

SENTINEL GRAY CERAMIC TILE

C

	4 A3.01	01
		•
1/4" / 1'-0"	METAL PANEL ROOF SYSTEM	
	METAL PANEL ROOF SYSTEM	

 $find N = \frac{1}{3/16} = 1' - 0"$

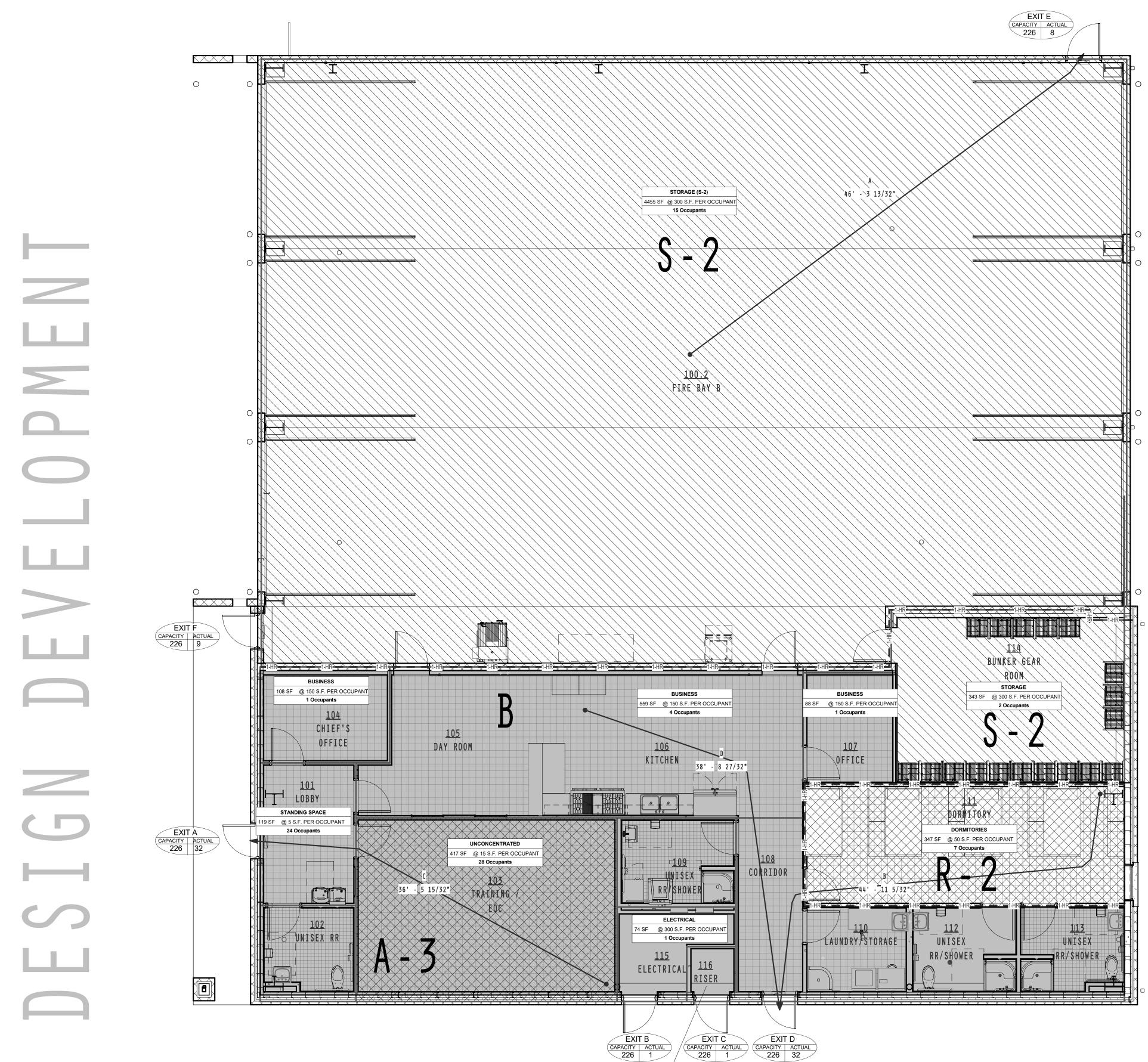


1. METAL PANEL ROOF 2. PRE-FINISHED GUTTER AND DOWNSPOUT

<u>RCP GENERAL NOTES</u>

- 1. THE WORD 'PROVIDE' SHALL MEAN 'FURNISH AND INSTALL COMPLETE AND READY TO USE.
- 2. ALL GENERAL ROOF NOTES AND SPECIFIC ROOF NOTES SHALL APPLY. ALL NOTES MAY OR MAY NOT BE SPECIFICALLY KEYED TO PLANS. THIS SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING WORK ACCORDING TO THE DESIGN INTENT AS INTERPRETED BY THE ARCHITECT. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL CONDITIONS WITH THE PROJECT INCLUDING ALL PROJECT DOCUMENTS PRIOR TO BIDDING OR COMMENCING WORK.
- 3. IF DISCREPANCIES APPEAR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER QUALITY, QUANTITY, AND PRICE SHALL SUPERSEDE.
- 4. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BECOME FAMILIAR WITH THE PROJECT AND THE ON-SITE / OFF-SITE CONDITIONS PRIOR TO BIDDING OR COMMENCING WORK.
- 5. ALL EXPOSED FLASHING, COPING (IF APPLICABLE) AND THEIR ACCESSORIES SHALL BE AS SPECIFIED.
- PAINT ALL METAL FLASHING THAT IS NOT PRE-FINISHED (TYP) AND VISIBLE FROM THE GROUND.
- ALL METAL FLASHING SHALL EXTEND BEYOND ROOF EDGE MIN. 8" WHERE FLASHING ABUTS VERTICAL WALL SURFACE AS DETAILED. ALL FLASHING SHALL BE INSTALLED IN SHINGLE FASHION.
- REFER TO MEP DOCUMENTS FOR THE PIPE 8. SUPPORT LOCATIONS, TYPE, AND DETAILS. PAD SHALL BE MIN 2" WIDER THAN SUPPORT IN ALL DIRECTIONS.
- GUTTERS SHALL BE PRE-FINISHED GALVANIZED STEEL, SIZE PER ROOF PLAN, UNO.
- 10. DOWNSPOUTS SHALL BE PRE-FINISHED GALVANIZED STEEL UNO AS INDICATED ON SITE DETAILS. PROVIDE PRE-FINISHED 2" GALVANIZED STEEL HANGERS AT 36" O.C. PROVIDE VANDAL PROOF STAINLESS STEE STRAINERS AT EACH OUTLET. COORDINATE LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
- 11. PROVIDE SPLASH BLOCKS AT ALL ROOF LEADER NOZZLES THAT SPILL ONTO GROUND





 $\uparrow_{N} 1 FIN. FLR - LIFE SAFETY$ 3/16" = 1'-0"

EXIT C CAPACITY ACTUAL 226 1 EXIT D CAPACITY ACTUAL 226 32

RISER @ 300 S.F. PER OCCUPANT 24 SF 1 Occupants

PROJECT DESCRIPTION: NEW CONSTRUCTION OF A SINGLE STORY PRE ENGINEERED METAL BUILDING WITH CMU VENEER. 3 UNCONDITIONED FIRE APPRATUS BAYS AND BUSINESS OPERATION AREAS WHICH WILL SERVE AS THE NEW CITY OF LA JOYA FIRE STATION. CODE ANALYSIS: APPLICABLE BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE 1. USE AND OCCUPANCY CLASSIFICATION (ACTUAL SQ. FT. TOTAL) A. B, BUISINESS - CIVIC ADMINISTRATION/TRAINING (964 SF) B. R-2, RESIDENTIAL - DORMITORIES (347 SF) C. S-2, STORAGE (4,794 SF) D. A-3, ASSEMBLY (417 SF) 2. GENERAL BUILDING HEIGHTS AND ALLOWABLE AREAS A. TABLE 504 & 506 - ALLOWABLE HT., STORIES AND BUILDING AREAS (CONST. TYPE II-B) I. B-2 (75 FEET HIGH / 4 STORIES / 92,000 SQ. FT.) II. R-2 (75 FEET HIGH / 5 STORIES / 64,000 SQ. FT.) III. S-2 (75 FEET HIGH / 5 STORIES / 104,000 SQ. FT.) IV. A-3 (75 FEET HIGH / 3 STORIES / 38,000 SQ.FT.) 3. TYPE OF CONSTRUCTION A. SECTION 602 - CONSTRUCTION CLASSIFICATION: TYPE II-B, UNPROTECTED, SPRINKLERED 4. MEANS OF EGRESS A. OCCUPANT COUNT - TABLE 1004.1.2 TOTAL OCCUPANTS = 83 B. 1005.3.2 MEANS OF EGRESS SIZING: .15 IN PER OCCUPANT = 12.45" INCHES OF EGRESS 5. REQUIRED PLUMBING FIXTURES: GROUP CLASSIFICATION B,R AND S CALCULATIONS: PLUMBING REQUIREMENTS - TABLE 2902.1 WATER CLOSET 000. M B (64 OCC.) 1/25 REQUIRED TOT. 3 R (7 OCC.) 1/10 REQUIRED TOT. 1 S (17 OCC.) 1/100 REQUIRED TOT. 1 1 PROVIDED 4 4 3 3 4 1 6. REQUIRED PARKING SPACES (CITY OF LA JOYA ORDINANCES) AND TAS 2012 TABLE 208.2 PARKING SPACES: PROVIDED PARKING TOTAL = 12 REGULAR PARKING SPACES 2 ADA PARKING SPACE REQUIRED BUILDING MEETS REQUIREMENTS

ROOM NU Name STORAGE (S-2) 100.1/.2/ STANDING SPACE 101 UNCONCENTRATED 103 BUSINESS 104 105/106 BUSINESS 107 BUSINESS DORMITORIES STORAGE 114 115 ELECTRICAL RISER 116 GRAND TOTAL

TOTAL REQUIRED EXIT WIDTH: 110 X .15" PER OCC (SECTION 1005.3.2) = 17" OF EXIT

PI	PROPOSED BUILDING EXIT WIDTH IN INCHES:				
	EXIT COMPONENT	CLEAR WIDTH	CAPACITY (OCC)	ACTUAL (OCC)	
	EXIT A	34	226	32	
	EXIT B	34	226	1	
	EXIT C	34	226	1	
	EXIT D	34	226	32	
	EXIT E	34	226	8	
	EXIT F	34	226	9	
	TOTAL	204	1,356	83	

	TRAVEL	DIS
MARK		DI
A		46'
В		44'
C		36'
D		38

<u>CITY OF LA JOYA FIRE STATION / LA JOYA, TEXAS 78560:</u>

PROJECT DESCRIPTION

TS	SHOWERS	LAV	DRINKING	SERVICE
F			FOUNTAIN	SINK
1/25		1/40	1/100	1
3		2	1	1
1/10	1/8	1/10	1/100	1
1	1	1	1	1
1/100		1/40	1/100	1
1		1	1	1
4	3	3	4	1

OCCUPANT LOAD TOTALS			
UMBER	AREA	OCC. LOAD FACTOR	CALCULATED OCCUPANTS
/.3	4455 SF	300	15
	119 SF	5	23
	417 SF	15	28
	108 SF	150	1
	559 SF	150	4
	88 SF	150	1
	347 SF	50	7
	343 SF	300	2
	74 SF	300	1
	24 SF	300	1
			83

STANCE ISTANCE - 3 1/2" ' - 11" ' - 5 1/2**"** 8' - 9"



EXIT SIGN, REFER MEP DRAWINGS FOR SPECIFICATIONS

FIRE EXTINGUISHER

------ EGRESS TRAVEL

- -1-HR- - 1 HOUR RATING, WALLS TO DECK OCCUPANCY FACTOR - OCCUPANCY FACTOR Name of The Room

XXXX SF @ 300 S.F. PER OCCUPANT Occupant Load Occupants

> EXIT A 🍝 ACTUAL CAPACITY 15 150 🗲

GROSS AREA	SCHEDULE
AREA NAME	AREA
1ST FLOOR	2,599 SF
1ST FLOOR - FIRE BAYS	4,544 SF
GRAND TOTAL	7,144 SF

- OCCUPANT LOAD

AREA

EXIT NAME

EXIT CAPACITY

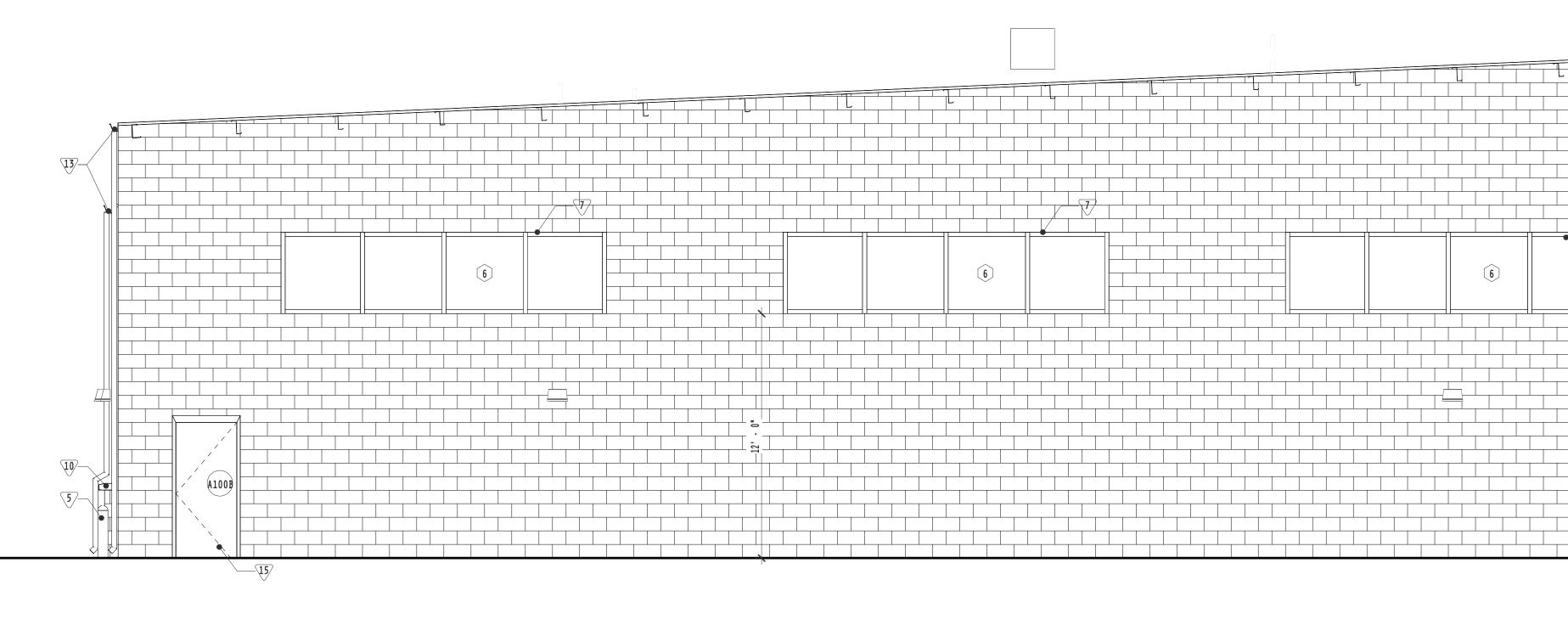
ACTUAL NO. OF

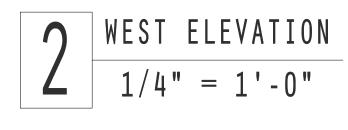
OCCUPANTS EXITING

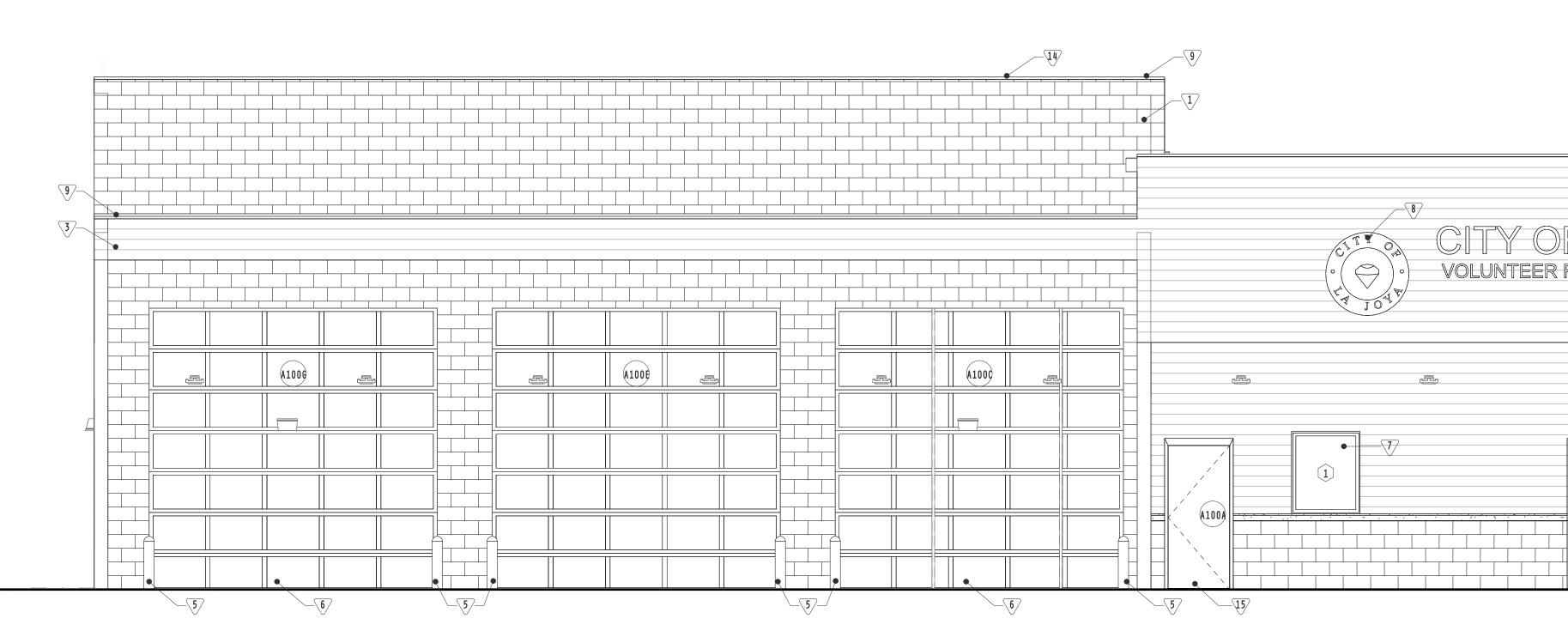
NET AREA SCHEDULE	
ROOM NAME	AREA
BUNKER GEAR ROOM	325 SF
CHIEF'S OFFICE	92 SF
CORRIDOR	98 SF
DAY ROOM	200 SF
 DORMITORY	322 SF
 ELECTRICAL	58 SF
FIRE BAY A	1,642 SF
FIRE BAY B	1,333 SF
FIRE BAY C	1,387 SF
KITCHEN	311 \$F
LAUNDRY/STORAGE	72 SF
LOBBY	108 SF
OFFICE	80 SF
RISER	16 SF
TRAINING / EOC	383 SF
UNISEX RR	62 SF
UNISEX RR/SHOWER	79 SF
UNISEX RR/SHOWER	73 \$F
UNISEX RR/SHOWER	70 SF
GRAND TOTAL	6,712 SF



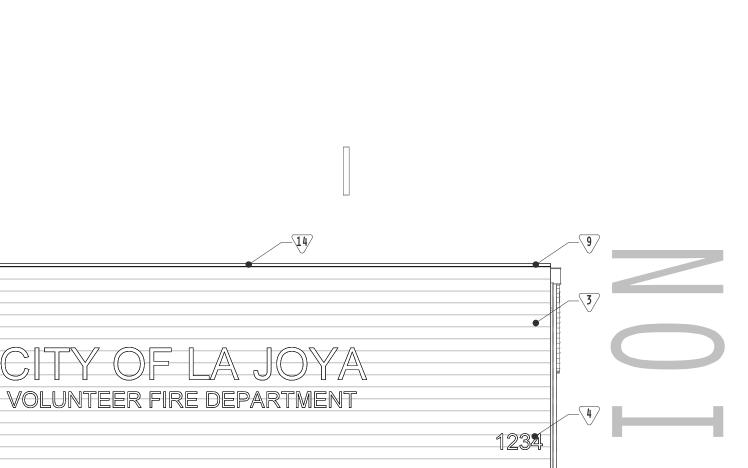
NORTH ELEVATION 1/4 " = 1 ' - 0 "











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- 2. 4" CMU VENEER, INTEGRAL COLOR 3. 1 1/2" METAL PANEL
- 4. 8" AND 16" TALL 3/8" THICK
- ALUMINUM LETTERS
- 5. 6" CONCRETE FILLED BOLLARDS, PTD. 6. OVERHEAD DOORS AS SPEC.
- 7. ALUMINUM WINDOW SYSTEM, AS SCHED. 8. 3/8" PERFORATED ALUMINUM LOGO
- 9. PRE-FINISHED EAVE TRIM.

<u>SHEET KEYNOTES</u> 🕖

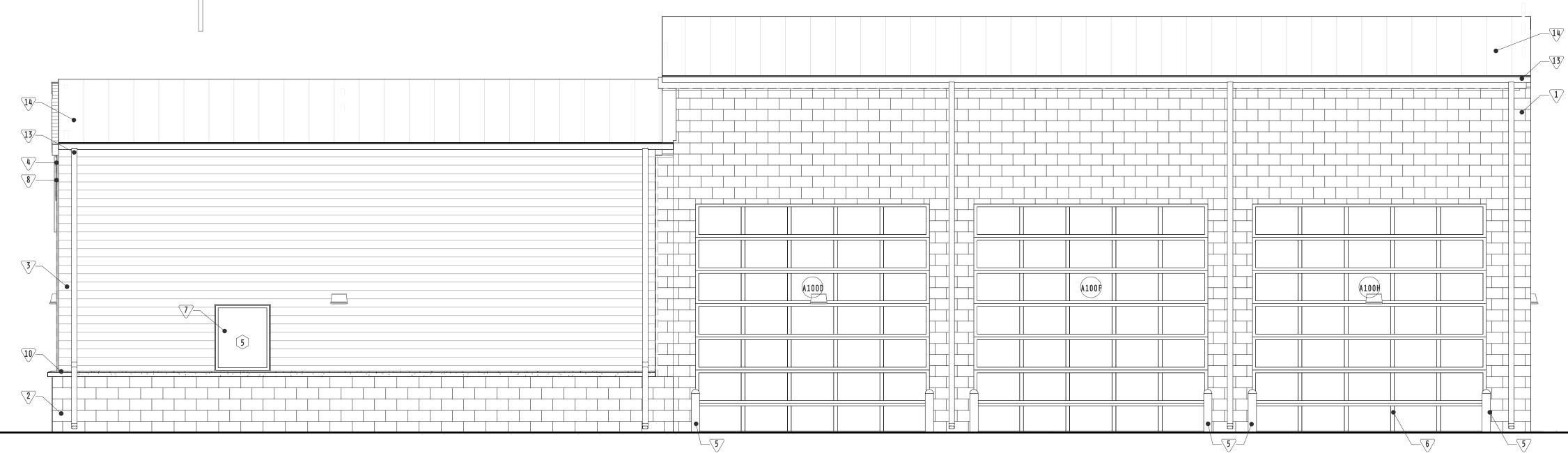
- 10. CAST STONE CAP
- 11. ALUMINUM DOOR SYSTEM, AS SCHED. 12. HOLLOW METAL DOOR SYSTEM, PTD.
- 13. PRE-FINISHED GUTTERS AND
- DOWNSPOUTS 14. METAL PANEL ROOFING SYSTEM WITH
- LINER INSULATION SYSTEM 15. HOLLOW METAL DOOR SYSTEM, PTD.

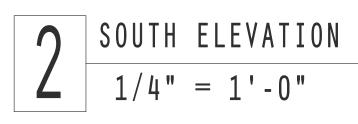
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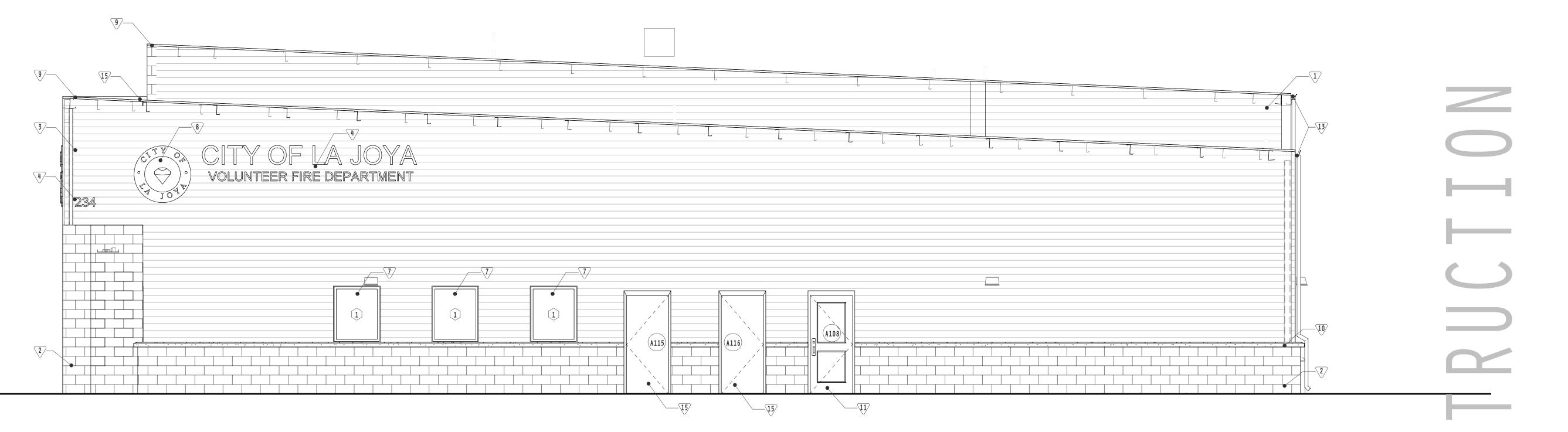


EAST ELEVATION 1/4" = 1' - 0"Т.









<u>SHEET KEYNOTES</u> 🕖

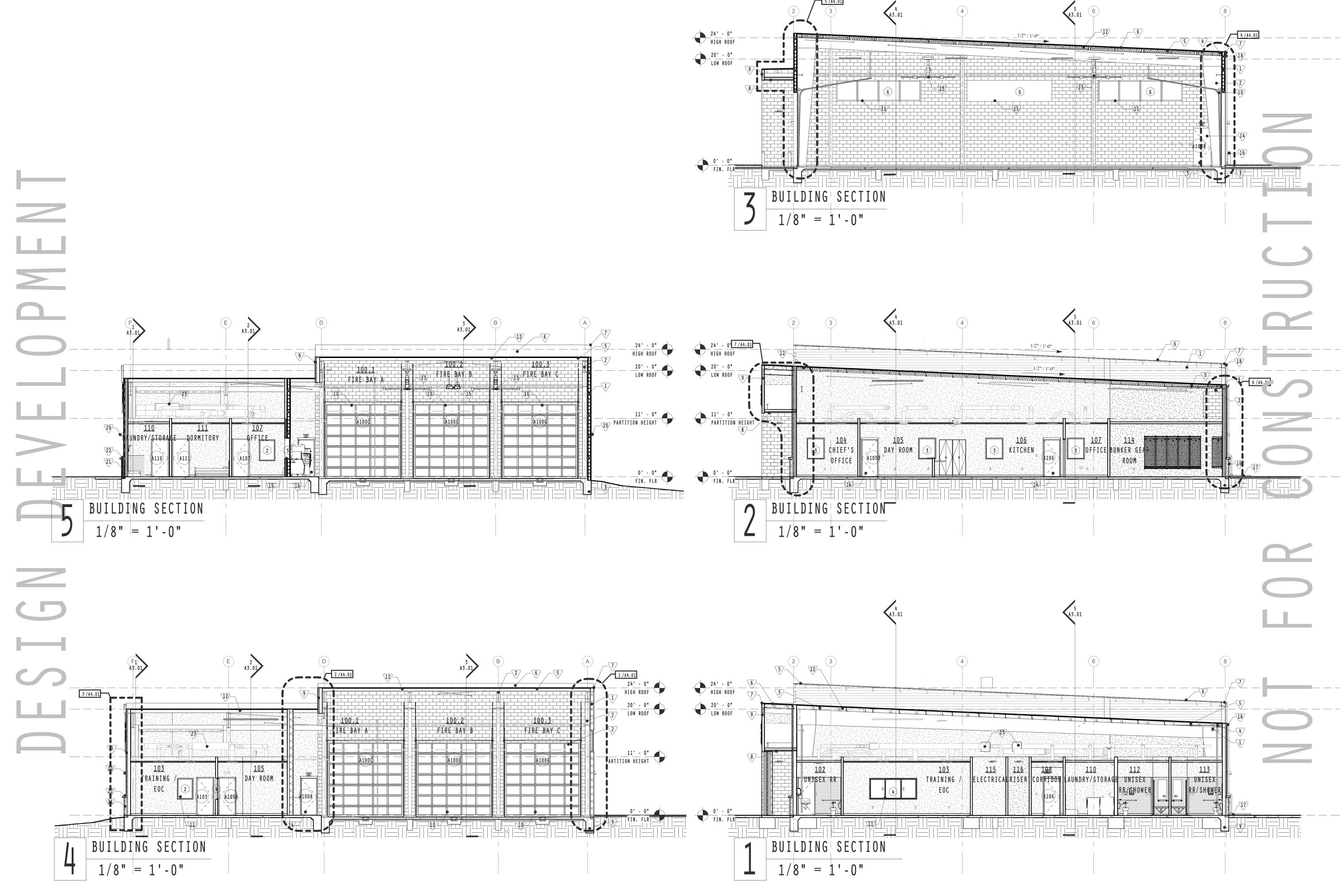
- 8" CMU, INTEGRAL COLOR
 4" CMU VENEER, INTEGRAL COLOR
- 3. 1 1/2" METAL PANEL
- 4. 8" AND 16" TALL 3/8" THICK
- ALUMINUM LETTERS 5. 6" CONCRETE FILLED BOLLARDS, PTD.
- 6. OVERHEAD DOORS AS SPEC.
- 7. ALUMINUM WINDOW SYSTEM, AS SCHED. 8. 3/8" PERFORATED ALUMINUM LOGO
- 9. PRE-FINISHED EAVE TRIM.

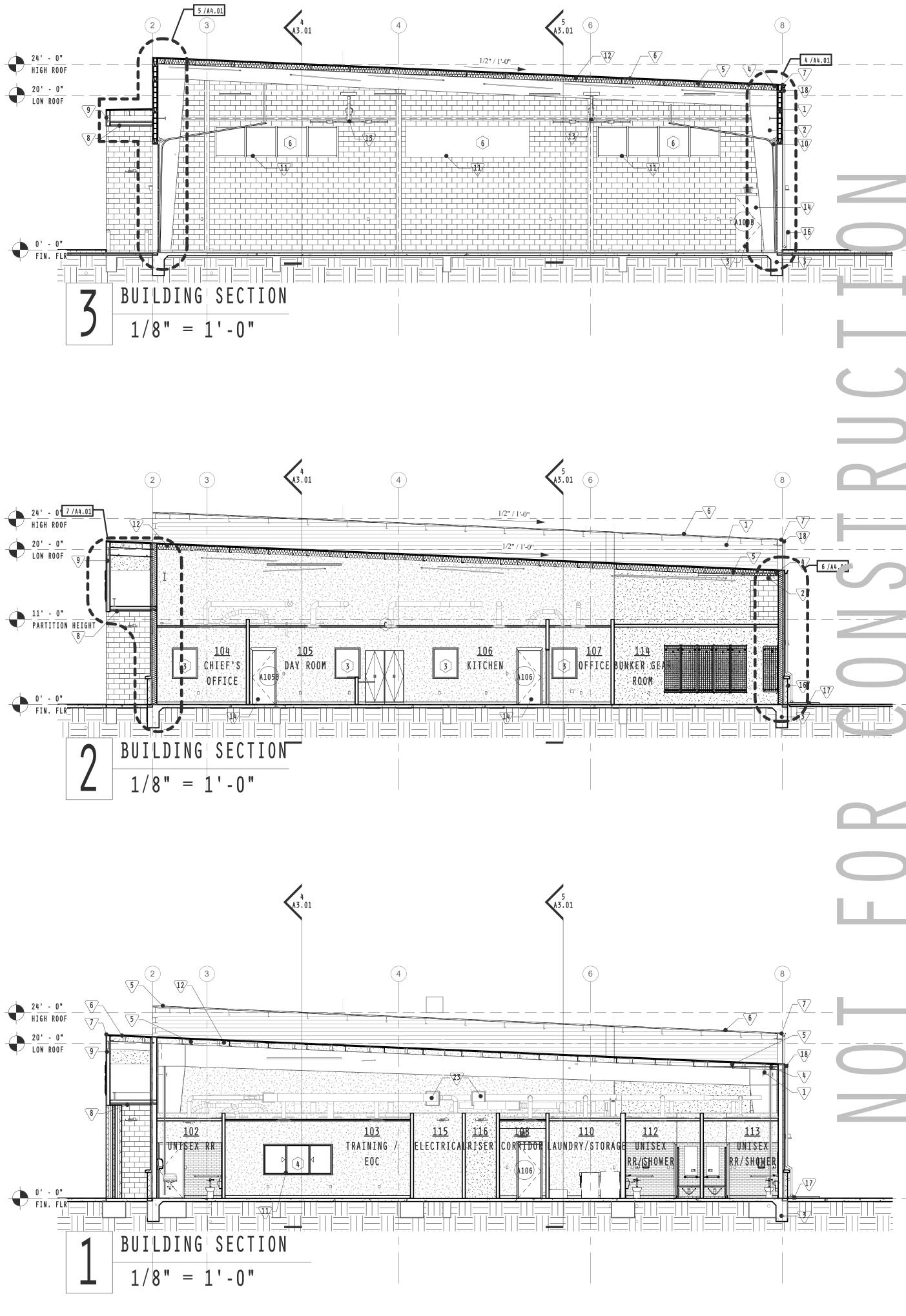
 \geq

- 10. CAST STONE CAP 11. ALUMINUM DOOR SYSTEM, AS SCHED.
- 12. HOLLOW METAL DOOR SYSTEM, PTD.
- 13. PRE-FINISHED GUTTERS AND DOWNSPOUTS
- 14. METAL PANEL ROOFING SYSTEM WITH
- LINER INSULATION SYSTEM 15. HOLLOW METAL DOOR SYSTEM, PTD.

DESCRIPTION DATE No. 01.06.2023 SAM GARCIA ARCHITECT 1200 AUBURN AVE. SUITE 280 MCALLEN, TX 78504 (956) 631 - 8327 INFO@SAMGARCIAARCHITECT.COM CITY OF LA JOYA FIRE STATION 701 E Expressway 83 LA JOYA, TX 78560 2022-016 EXTERIOR 01.06.2023 ភ្លួ ELEVATIONS A2.0







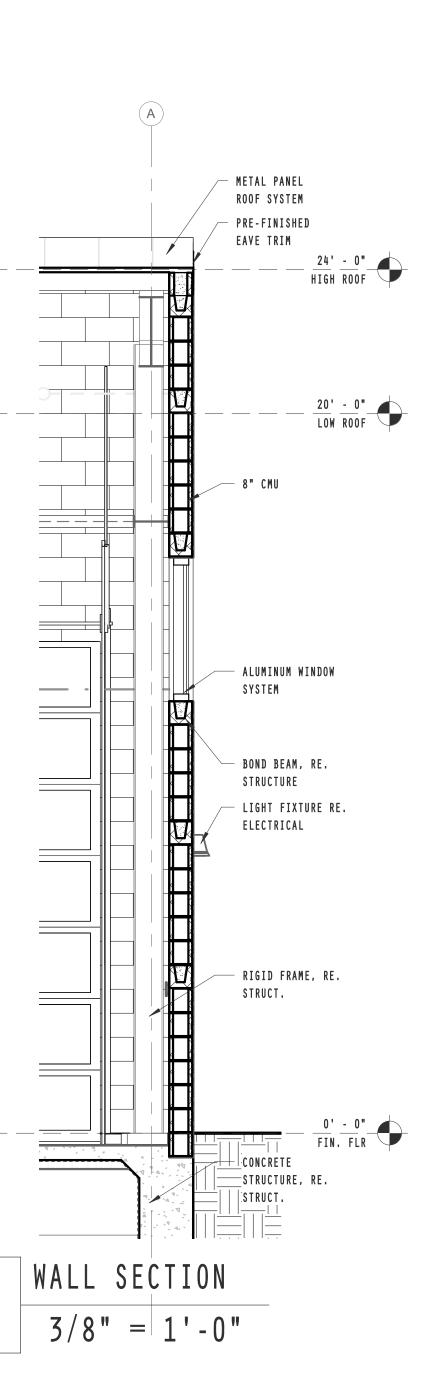
BUILDING SECTION KEYNOTES 🕖

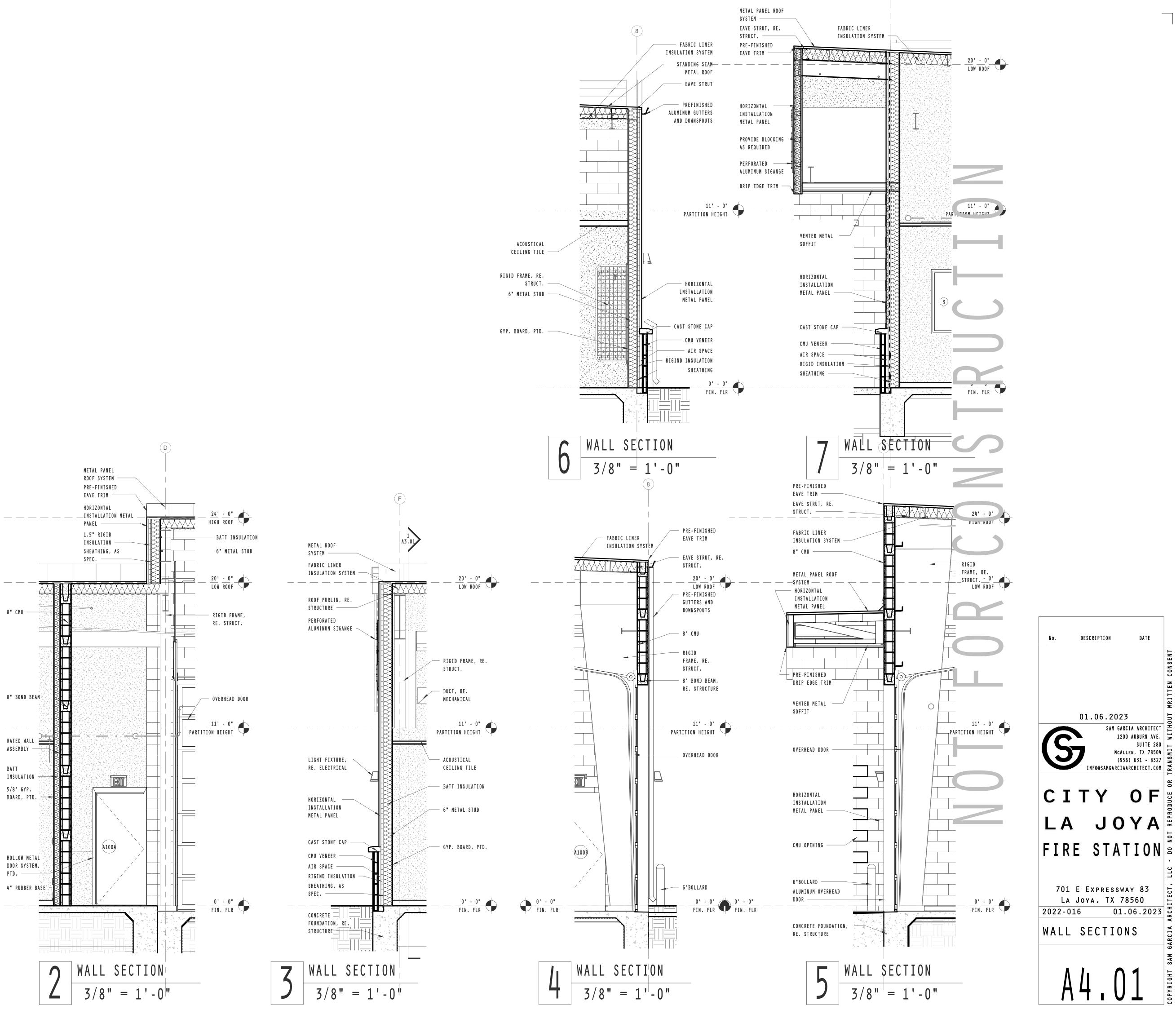
- 1. 8" CMU, INTEGRAL COLOR 2. RIGID FRAME, RE. STRUCTURE 3. BUILDING FOUNDATION , RE.
- STRUCT.
- 4. EAVE STRUT, RE. STRUCT.
- ROOF PURLINS, RE. STRUCT
- METAL PANEL ROOF PRE-FINISHED EAVE TRIM
- PRE-FINISHED SOFFIT PANEL
- PRE-FINISHED WALL METAL PANEL
- 10. OVERHEAD DOOR SYSTEM
- 11. ALUMINUM WINDOW SYSTEM 12. BATT INSULATION LINER SYSTEM
- 13. SHOP RATED CEILING FANS
- 14. HOLLOW METAL DOOR SYSTEM, PTD.
- 15. TUBE HEATER
- 16. 6" TUBE BOLLARD 17. 24" X 48" CONCRETE SPLASH BLOCK
- 18. PRE-FINISHED GUTTERS AND DOWNSPOUTS
- 19. HOLLOW METAL WINDOWS SYSTEM,
- PTD. 20. LIGHT FIXTURE, RE. ELECTRICAL
- 21. BRICK VENEER
- 22. CAST STONE CAP
- 23. MECHANICAL EQUIPMENT, RE. MECHANICAL
- 24. PLUMBING FIXTURE, RE. PLUMBING

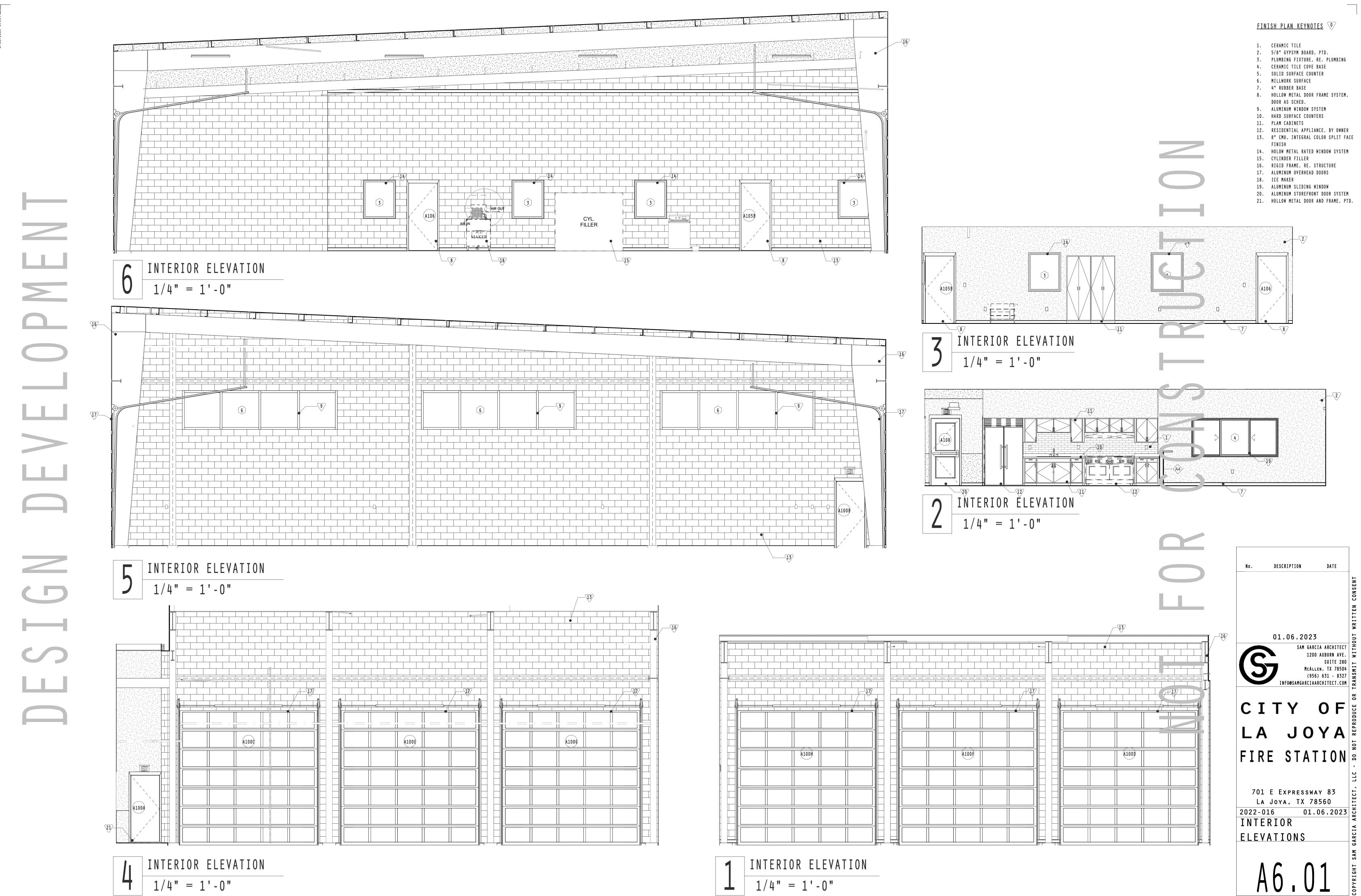


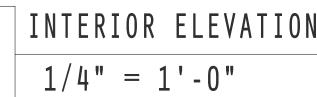


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PER SCHEDULE	PER SCHEDULE VARIES 6".6". 	PER SCHEDULE
		r B
FLUSH PANEL DOOR SOLID CORE - STAINED	SINGLE DOOR W/ VISION PANEL SOLID CORE - P. LAM. FACE (RE. SCHEDULE) TYPICAL GLAZING TYPE G1 FIRE-RATED DOORS GLAZING TYPE (RE. GLAZING TYPES)	FLUSH PANEL DOOR GALVANIZED HOLLOW METAL
<u>FRAME TYPES</u>		
2" PER 2" SCHEDULE	2" PER 2" SCHEDULE	2" PER 2" SCHEDULE
	(IN)	TI II
ALUMINUM - CLEAR	HOLLOW METAL - PAINT TO MATCH HOST WALL	GALVANIZED HOLLOW METAL - PAINT TO MATCH HOST WALL
1 DOOR	& FRAME ELE	VATIONS
L 1/4	" = 1'-0"	

<u>DOOR TYPES</u>

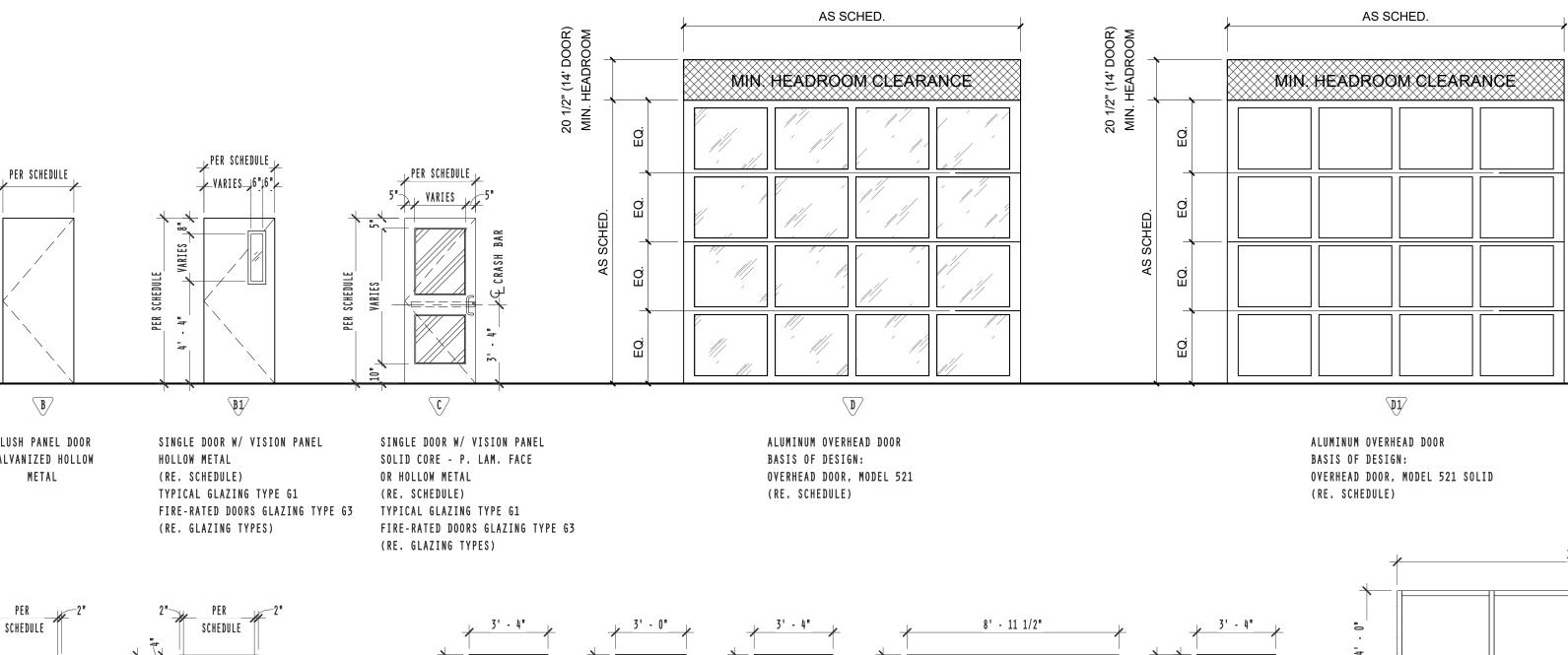
MARK	HEIGHT	WIDTH	COMMENTS	COUNT
1	4' - 0"	3' - 4"		5
2	4' - 0"	3' - 0"		3
3	4' - 0"	3' - 4"	1HR FIRE RATED WINDOW	4
4	4' - 0"	8' - 11 1/2"	SLIDING WINDOW	1
5	4' - 0"	3' - 4"	DOUBLE PANE OPERABLE ALUMINUM WINDOW	1

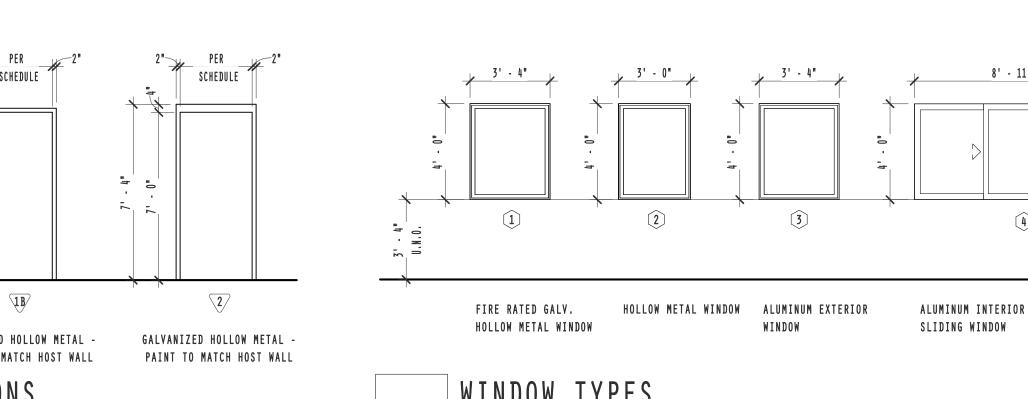
			WINDOW SCHEDULE	
MARK	HEIGHT	WIDTH	COMMENTS	COUNT
1	4' - 0"	3' - 4"		5
2	4'-0"	3' - 0"		3
3	4' - 0"	3' - 4"	1HR FIRE RATED WINDOW	4
4	4'-0"	8' - 11 1/2"	SLIDING WINDOW	1
5	4' - 0"	3' - 4"	DOUBLE PANE OPERABLE ALUMINUM WINDOW	1

ROOM	FINISH	SCHEDULE
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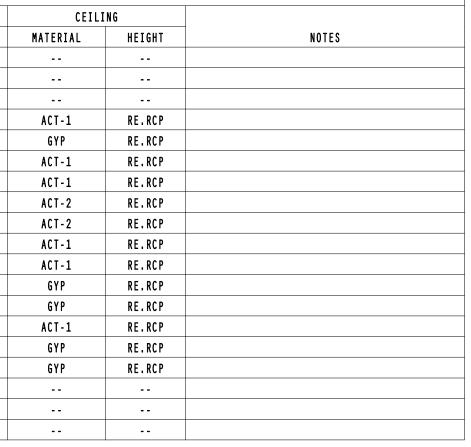
					WAL	.LS	
ROOM NO.	ROOM NAME	FLOOR	BASE	NORTH	EAST	SOUTH	WEST
100.1	FIRE BAY A	SEALED CONCRETE	RB-1	PT-1	PT-1	PT-1	PT-1
100.2	FIRE BAY B	SEALED CONCRETE	RB-1	PT-1	PT-1	PT-1	PT-1
100.3	FIRE BAY C	SEALED CONCRETE	RB-1	PT-1	PT-1	PT-1	PT-1
101	LOBBY	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
102	UNISEX RR	CERAMIC TILE	CT-1	PT-1	PT-1	PT-1	PT-1
103	TRAINING / EOC	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
104	CHIEF'S OFFICE	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
105	DAY ROOM	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
106	KITCHEN	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
107	OFFICE	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
108	CORRIDOR	VCT	RB-1	PT-1	PT-1	PT-1	PT-:
109	UNISEX RR/SHOWER	CERAMIC TILE	RB-1	PT-1	PT-1	PT-1	PT-1
110	LAUNDRY/STORAGE	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
111	DORMITORY	VCT	RB-1	PT-1	PT-1	PT-1	PT-1
112	UNISEX RR/SHOWER	CERAMIC TILE	CT-1	PT-1	PT-1	PT-1	PT-1
113	UNISEX RR/SHOWER	CERAMIC TILE	CT-1	PT-1	PT-1	PT-1	PT-1
114	BUNKER GEAR ROOM	SEALED CONCRETE	RB-1	PT-1	PT-1	PT-1	PT-:
115	ELECTRICAL	SEALED CONCRETE	RB-1	PT-1	PT-1	PT-1	PT-:
116	RISER	SEALED CONCRETE	RB-1	PT-1	PT-1	PT-1	PT-:

					108	COKKIDOK	VCI	KR-T	PI-1	PI-T 1	1-T LI-	I ACI-I	RE.RCP		
				Γ	109	UNISEX RR/SHOWER	CERAMIC TILE	RB-1	PT-1	PT-1 F	T-1 PT	1 GYP	RE.RCP		
				F	110	LAUNDRY/STORAGE	VCT	RB-1	PT-1	PT-1 F	T-1 PT	1 GYP	RE.RCP		
					111	DORMITORY	VCT	RB-1	PT-1	PT-1 F	T-1 PT	1 ACT-1	RE.RCP		
					112	UNISEX RR/SHOWER	CERAMIC TILE	CT-1	PT-1	PT-1 F	T-1 PT	1 GYP	RE.RCP		
					113	UNISEX RR/SHOWER	CERAMIC TILE	CT-1	PT-1	PT-1 F	T-1 PT	1 GYP	RE.RCP		
					114	BUNKER GEAR ROOM	SEALED CONCRET	E RB-1	PT-1	PT-1 F	T-1 PT	1			
					115	ELECTRICAL	SEALED CONCRET	E RB-1	PT-1	PT-1 F	T-1 PT	1			
					116	RISER	SEALED CONCRET	E RB-1	PT-1	PT-1 F	T-1 PT	1			
							DOOK	SCHEDULE							
				DO	DOR					FRAME			DETAILS		
MARK	TYPE	SINGLE OR PAIR	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	HARDWARE SET	TYPE	MATERIAL	FINI	H HEAD	JAMB	SILL	COMMENTS
A100A	В	SINGLE	3'-0"	7' - 0"	0' - 1 3/4"	HOLLOW METAL	PAINT		1B						
A100B	В	SINGLE	3'-0"	7'-0"	0' - 1 3/4"	HOLLOW METAL	PAINT		2	Н.М.	PAII	Т			
A100C	D	SINGLE	14' - 0"	14' - 0"	0'-2"	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER M	G. PER MFG.	PER MFG.	PER MFG.	OVERHEAD DOOR
A100D	D1	SINGLE	14' - 0"	14' - 0"	0'-2"	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER M	G. PER MFG.	PER MFG.	PER MFG.	OVERHEAD DOOR
A100E	D	SINGLE	14' - 0"	14' - 0"	0'-2"	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER M	G. PER MFG.	PER MFG.	PER MFG.	OVERHEAD DOOR
A100F	D1	SINGLE	14' - 0"	14' - 0"	0'-2"	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER M	G. PER MFG.	PER MFG.	PER MFG.	OVERHEAD DOOR
A100G	D	SINGLE	14' - 0"	14' - 0"	0'-2"	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER M	G. PER MFG.	PER MFG.	PER MFG.	OVERHEAD DOOR
A100H	D1	SINGLE	14' - 0"	14' - 0"	0'-2"	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER MFG.	PER M	G. PER MFG.	PER MFG.	PER MFG.	OVERHEAD DOOR
A101A	C	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	ALUMINUM	CLEAR		1	ALUMINUM	CLE	R			
A102	A	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	Η.Μ.	PAI	T			
A103	A1	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	Η.Μ.	PAI	T			
A104	A	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	Η.Μ.	PAI	Т			
A105A	A1	SINGLE	3' - 0"	7' - 0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	Η.Μ.	PAI	T			
A105B	B1	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	GALV.H.M.	PAINT		2	GALV.H.M.	PAII	т			
A106	B1	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	GALV.H.M.	PAINT		2	GALV.H.M.	PAI				
A107	A1	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	H.M.	PAII				
A108	C	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	ALUMINUM	CLEAR		1	ALUMINUM	CLE				
A109	A	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	Η.Μ.	PAII				
A110	A1	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	H.M.	PAII				
A111	A	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	H.M.	PAII				
A112	A	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	Η.Μ.	PAII				
A113	A	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	SOLID CORE WOOD	PLAM		1A	H.M.	PAI				
A114	B1	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	GALV.H.M.	PAINT		2	GALV.H.M.	PAII				
A115	B	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	GALV.H.M.	PAINT		1B	GALV.H.M.	PAII				
A116	В	SINGLE	3' - 0"	7'-0"	0' - 1 3/4"	GALV.H.M.	PAINT		1B	GALV.H.M.	PAII	т			

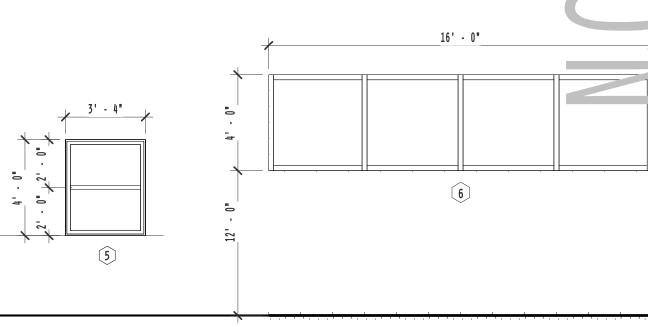








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STOREFRONT TYPE 6

2 1/4" = 1' - 0"



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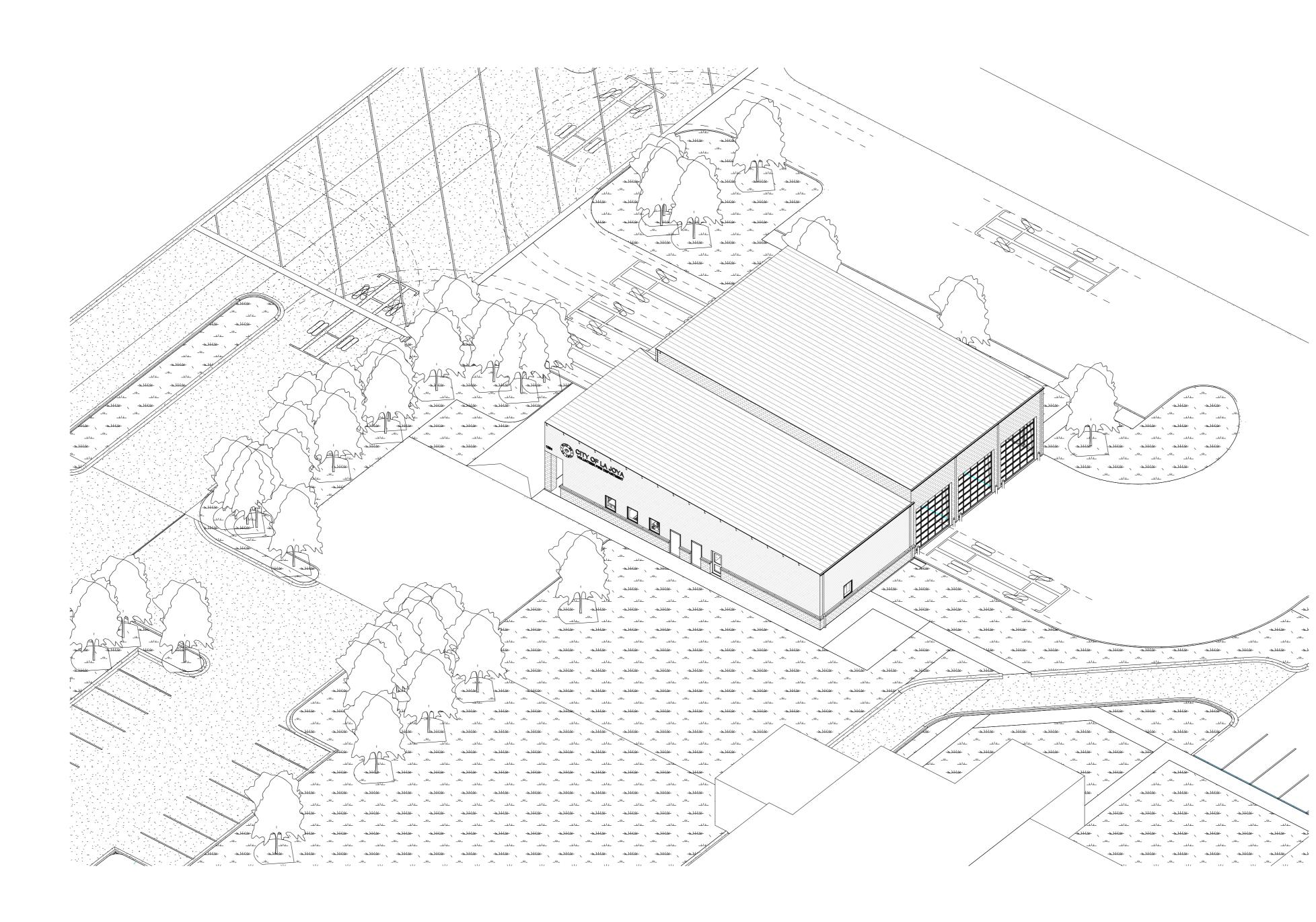
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ALUMINUM OPERABLE

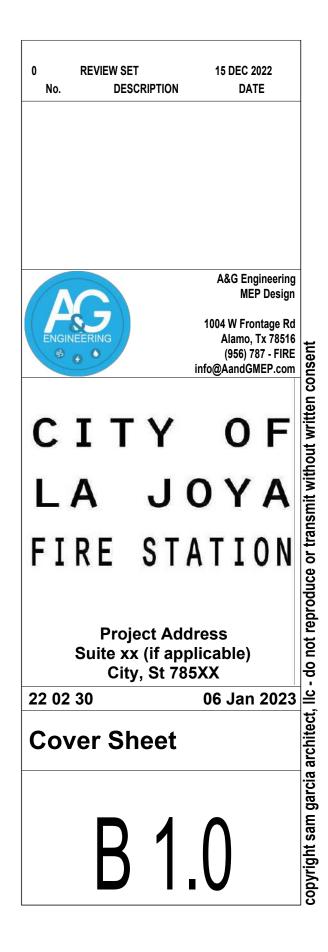
WINDOW

- 0

LA JOYA FIRE STATION



	SHEET INDEX								
NUMBER	NAME	DESIGNED BY							
B 1.0	Cover Sheet	A&G Engineering							
E 0.0	General Notes - Elec	E Garcia							
E 0.1	Electrical Site Plan - Elec	E Garcia							
E 1.0	Lighting - Elec	E Garcia							
E 2.0	Power - Elec	E Garcia							
E 3.0	Schedules/Details - Elec	E Garcia							
E 3.1	Schedules/Details - Elec	E Garcia							
M 0.0	General Notes - Mech	A Peralez							
M 1.0	Supply - Mech	A Peralez							
M 2.0	Return - Mech	A Peralez							
M 3.0	Mechanical Shedules	A Peralez							
M 3.1	Mechanical Shedules	A Peralez							
M 3.2	Mechanical Shedules	A Peralez							
M 4.0	Mechanical Details	A Peralez							
P 0.0	General Notes - Plumb	O Rodriguez							
P 1.0	Waste/Vent - Plumb	O Rodriguez							
P 2.0	Dom/Hot Water - Plumb	O Rodriguez							
P 3.0	Risers - Plumb	O Rodriguez							
P 4.0	Schedules/Details - Plumb	O Rodriguez							



GENERAL NOTES - ELECTRICAL

- CONTRACTOR REQUIREMENTS: ALL WORK UNDER THIS CONTRACT SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH A 1 FEDERAL, STATE, AND LOCAL CODES. WHERE THESE PLANS AND SPECIFICATIONS ARE IN CONFLICT WITH SUCH CODES, THE CODES SHALL GOVERN. BIDS SUBMITTED BY CONTRACT SHALL INCLUDE WORK REQUIRED TO COMPLY WITH ALL SUCH CODES. ANY ITEMS REQUIRED AND/OR MISSED IN THESE BASIS OF DESIGN DOCUMENT, SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR AT CONTRACTORS EXPENSE AND ZERO EXPENSE TO THE OWNER AND/OR DESIGN TEAM. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION.
- A.2. CONTRACTOR SHALL STUDY DOCUMENTS, FULLY UNDERSTAND AND ACCEPT THE BASIS OF DESIGN AND SCOPE OF WORK. SUBMISSION OF BID INDICATES CONTRACTOR'S COMPLETE APPROVAL AND ACCEPTANCE OF CONSTRUCTION DOCUMENTS.
- CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKERS, WHO ARE TRAINED, LICENSED A.3. AND EXPERIENCED IN COMMERCIAL ELECTRICAL, AND WHO ARE FAMILIAR WITH THE CONSTRUCTION DOCUMENTS AND METHODS OF PERFORMING THE WORK REQUIRED.EACH WORKDAY WILL BE FROM 8:00 AM UNTIL 5:00 PM. ANY DEVIATIONS MUST BE REQUESTED IN WRITING A MIN OF 24 HOURS PRIOR TO DATE OF DEVIATION.
- ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE JOBSITE PRIOR TO THE COMPLETION OF EACH WORKDAY. ALL WORK AREAS SHOULD BE BROOM CLEANED, AND EQUIPMENT WIPED CLEAN PRIOR TO FINISHING PROJECT AND PRIOR TO SUBMISSION OF FINAL PAYMENT APPLICATION. A.5. CONTRACTOR SHALL PROVIDE A MINIMUM 1 YR. WARRANTY ON ALL LABOR AND MATERIALS
- INSTALLED. CONTRACTOR SHALL MAKE ALL WARRANTY REPAIRS OR REPLACEMENTS IN A TIMELY MANNER, AT NO ADDITIONAL COST TO THE OWNER.
- BASIS OF DESIGN: ALL CONSTRUCTION DOCUMENTS PROVIDED BY OWNER, INCLUDING ENGINEERING DRAWINGS, NOTES, B.1. SCHEDULES, DETAILS, CALCULATIONS AND SPECIFICATIONS, EQUIPMENT MANUFACTURER'S DRAWINGS AND SPECIFICATIONS, FORM THE BASIS OF DESIGN.
- THE BASIS OF DESIGN WILL BE USED FOR ALL INSPECTIONS, TESTING AND ACCEPTANCE OF THE B.2. WORK PERFORMED BY THE CONTRACTOR TO VERIFY SUCCESSFUL COMPLETION OF SCOPE OF WORK. THESE DRAWINGS ARE INTENDED TO GENERALLY SHOW THE EXISTING BUILDING ELECTRICAL AND LIGHTING SYSTEMS MODIFICATIONS REQUIRED FOR THIS PROJECT. INFORMATION PROVIDED INCLUDES LOCATION, QUANTITY, TYPE, SIZE, CAPACITY, AND FUNCTION OF SPECIFIC COMPONENTS OF THE NEW AND MODIFIED ELECTRICAL AND LIGHTING SYSTEMS THAT ARE TO BE PROVIDED BY THE CONTRACTOR
- B.4. ALL WIRE AND CONDUIT SHALL BE SIZED BY A LICENSED ELECTRICAL CONTRACTOR AND SHALL ACCOUNT FOR VOLTAGE DROP OF LESS THAN 3%. ALL ELECTRICAL CIRCUITS ON PLAN ARE IDENTIFIED AT HOMERUN BY PANEL AND CIRCUIT NUMBERS
 - INCIDENTAL MODIFICATIONS OR DEMOLITION OF EXISTING ELECTRICAL SYSTEMS AND COMPONENTS AS REQUIRED FOR INSTALLATION OF NEW WORK IS INCLUDED AS PART OF THE PROJECT, WHETHER SHOWN ON PLANS OR NOT. CONTRACTOR SHALL FIELD VERIFY ALL REQUIREMENTS PRIOR TO BIDDING PROJECT. AN REQUIRED ITEMS REQUIRED, REGARDLESS IF ON PLANS, SHALL BE INSTALLED BY CONTRACTOR. ALL SUCH INSTALLTION SHALL BE INSTALLED AT CONTRACTORS EXPENSE. CEILING TILE AND GRID REMOVAL, MODIFICATION, AND REINSTALLATION AS REQUIRED FOR WORK SHOWN IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE ELECTRICAL
 - CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED WORK ACCESS ABOVE ALL LAY--IN CEILINGS. RELOCATION OF EXISTING BUILDING SYSTEMS AND EQUIPMENT, SUCH AS DUCT WORK, FIRE
- SPRINKLER PIPING AND HEADS, SMOKE DETECTORS, PLUMBING, ETC., AS REQUIRED FOR INSTALLATION OF NEW WORK IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES.
- THE EXISTING BUILDING ELECTRICAL SYSTEMS ARE INTENDED TO BE REUSED AS SHOWN ON PLANS OR AS INSTALLED IF NOT SHOWN. ALL EXISTING ELECTRICAL AND LIGHTING SYSTEMS ON PLANS ARE FOR REFERENCE ONLY AND MAY BE DIFFERENT IN THE FIELD. CONTRACTOR SHALL FIELD SURVEY, TEST AND INSPECT ALL EXISTING ELECTRICAL AND LIGHTING SYSTEMS PRIOR TO BIDDING TO ENSURE HE UNDERSTANDS AND ACCEPTS ALL EXISTING CONDITIONS.
- THE EXISTING ELECTRICAL LOADS AND PANEL SCHEDULES SHOWN ON PLANS ARE FOR REFERENCE ONLY TO ASSIST WITH NEW LOAD BALANCING BY THE ELECTRICAL CONTRACTOR. CONTRACTOR SHALL FIELD VERIFY ALL ACTUAL LOADS PRIOR TO FINAL LOAD BALANCING AND BREAKER SPACE SELECTION FOR ALL NEW CIRCUITS.

SCOPE OF WORK

FURNISH ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL MAKE ALL INSTALLATIONS ACCORDING TO MANUFACTURERS INSTRUCTIONS AND SPECIFICATIONS, IN ADDITION TO THOSE SHOWN ON PLANS.

INSTALL COMPLETER AND OPERABLE ELECTRICAL SYSTEMS AS DESCRIBED BY THE CONSTRUCTION DOCUMENTS. INCIDENTAL ITEMS NOT SPECIFIED, BUT WHICH ARE ESSENTIAL FOR THE PROPER OPERATION OF SPECIFIED SYSTEMS AND EQUIPMENT, ARE CONSIDERED INCLUDED IN THE SCOPE OF WORK AND SHALL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

CODE COMPLIANCE :

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCALLY ADOPTED BUILDINGS CODES AS LISTED ON THE DRAWINGS, AND ACCORDING TO THE LOCAL AUTHORITY HAVING JURISDICTION

THE BASIS OF DESIGN IS INTENDED TO COMPLY WITH ALL LOCAL CODES ENFORCED BUY THE AHJ OVER THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS MADE BY THE AHJ, WHETHER SPECIFICALLY SHOWN ON PLANS OR NOT.

DISCREPANCIES:

IN THE CASE OF A DISCREPANCY BETWEEN DRAWINGS, SPECIFICATIONS, OR MANUFACTURERS REQUIREMENTS, THE MOST STRINGENT SHALL APPLY AND BE COMPLIED WITH BY THE CONTRACTOR. IN THE CASE OF A DISCREPANCY BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS OR MANUFACTURERS REQUIREMENTS. THE AHJ SHALL DETERMINE WHICH SHOULD BE COMPLIED WITH BY THE CONTRACTOR.

JOBSITE CONDITIONS:

CONTRACTOR SHALL EXAMINE THE JOBSITE PRIOR TO BIDDING AND FULLY UNDERSTAND THE CONDITIONS UNDER WHICH THE WORK OS TO BE PERFORMED BY SUBMITTING FOR WORK CONTRACTOR ACCEPTS ALL JOB CONDITIONS AS-IS. CONTRACTOR SHALL LOCATE THE EXISTING ELECTRIC UTILITY POINT OF SERVICE PRIOR TO STARTING ANY OTHER WORK. SERVICE CONNECTION SHOWN ON THE PLANS ARE PRELIMINARY ONLY AND SHALL BE VERIFIED BY ELECTRICAL CONTRACTOR.

PERMITS AND FEES:

CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS, LICENSES, AND CERTIFICATIONS REQUIRED BY THE AHJ AND PAY FOR ALL PERMITTING FEES AT ZERO ADDITIONAL CHARGE TO THE OWNER. CONTRACTOR SHALL INCLUDE ANY/ALL FEES ON CONTRACTUAL BID REGARDLESS IF KNOWN OR UNKNOWN DURING BIDDING.

CONSTRUCTION DRAWINGS:

DRAWINGS ARE GENERAL SCHEMATIC IN NATURE. ELECTRICAL EQUIPMENT AND LIGHTING SHOWN ON DRAWINGS IS UNDERSTOOD TO BE THE GENERAL ARRANGEMENT ONLY, TO BE FIELD ADJUSTED AS REQUIRED.

ITEMS WITH SPECIFIC LOCATION AND OR SIZES WILL BE DIMENSIONED ON THE PLANS. DRAWINGS DO NOT SHOW EVERY DETAIL OR ITEM REQUIRED FOR EQUIPMENT INSTALLATIONS. REFER TO ALL EQUIPMENT MANUFACTURERS INSTRUCTIONS FOR ADDITIONAL; REQUIRED PARTS AND ACCESSORIES NEEDED FOR COMPLETE INSTALLATIONS.

COORDINATION WITH OTHER TRADES:

- CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCES, PROPERLY SEQUENCE INSTALLATIONS, AND PROVIDE MANUFACTURERS REQUIRED SERVICE CLEARANCES. WHERE REQUIRED, CONTRACTOR SHALL MAKE THE REQUIRED ADJUSTMENTS TO EQUIPMENT LOCATIONS AND INSTALLATION SCHEDULE.
- ALL ELECTRICAL CONNECTIONS TO OWNER FURNISHED HVAC EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR, INCLUDING STARTERS, SPEED CONTROLLERS, DISCONNECTS, ENCLOSURES AND LABELS AS NEEDED. OBTAIN FINAL ELECTRICAL SERVICE REQUIREMENTS FROM OWNER'S SUPPLIER.
- IF APPLICABLE, ALL ELECTRICAL CONNECTIONS TO OWNER FURNISHED KITCHEN EQUIPMENT 1.3. SHOWN ON PLANS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR, INCLUDING DISCONNECTS, ENCLOSURES AND LABELS. OBTAIN FINAL ELECTRICAL SERVICE REQUIREMENTS FROM KITCHEN EQUIPMENT SUPPLIER.
- COORDINATE WITH ROOFING CONTRACTOR TO SEAL ALL CONDUIT PENETRATIONS THROUGH ROOF AS REQUIRED, PER ARCHITECTURAL ROOFING SPECIFICATIONS. PROVIDE ALL WEATHERPROOFING REQUIRED
- IF REQUIRED, COORDINATE WITH OWNER'S FOR ALARM, SECURITY, COMMUNICATIONS OR OTHER 1.5. MEDIA COMPANY, TO INSTALL BACK BOXES, CONDUIT AND PULL STRING AS SHOWN ON PLANS FOR CABLE INSTALLATIONS BY OTHERS. VERIFY ROUGH-IN, ROUTING AND CONDUIT SIZES WITH EQUIPMENT PROVIDERS PRIOR TO INSTALLATIONS.
- CEILING TILE AND GRID REMOVAL. MODIFICATION AND REINSTALLATIONS AS REQUIRED FOR WORK 1.6. SHOWN IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES.

CONTRACTOR FURNISHED EQUIPMENT & MATERIALS:

- SHALL BE NEW, MANUFACTURED AND CERTIFIED TO COMPLY WITH THE BASIS OF DESIGN, FREE OF .11 DEFECT AND COVERED UNDER A MINIMUM OF 1-YEAR FACTORY WARRANTY. UNLESS SPECIFIED DIFFERENTLY ELSEWHERE.
- SHALL BE AS SPECIFIED IN CONSTRUCTION DOCUMENTS, OR AS ACCEPTABLE SUBSTITUTIONS OF J.2. EQUAL ITEM. ALL SUBSTITUTIONS MUST BE 'APPROVED' THROUGH THE COMMISSIONING PROCESS TO BE ACCEPTABLE.

- DELIVERY, STORAGE AND PROTECTION: K.1. REPLACEMENTS AT NO ADDITIONAL COST TO THE OWNER.
- K.2. PROTECTION, ACCESS AND SECURITY OF MATERIALS STORED ONSITE.
- LOCATION.
- CORRECTIONS REQUIRED: (ONLY IF CA SERVICES WERE SELECTED) L.1.
- COMPLY WITH THE CONTRACT DOCUMENTS. L.3.
- CONDUITS AND SUPPORTS: Μ. M.1.
- BUILDINGS LINES. M.2.
- EQUIPMENT CONNECTIONS: N.1.
- N.2.
- CONDUITS. PROPERLY SECURE SUPPORTS TO FLOORS OR WALLS.
- DETERMINE REQUIRED CLEARANCES AND SERVICE WORK AREAS. N.4.
- LIGHTING INSTALLATIONS: 0.1. CONTRACTOR
- 0.2. LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO STARTING WORK. 0.3.
- WRAP SUPPORTS TO HOLD TIGHT AGAINST STRUCTURE. 0.4.
- APPROXIMATE O.5. CONTROLLER FROM THE GROUND. 0.6.

COMMISSIONING PLAN - ELECTRICAL:

- COMMISSIONING AGENT. Α. DIRECTED TO THEM. SUBMITTALS ORDERING B.1.1. FIELD INSPECTIONS: C.1. MINIMUM, FIELD INSPECTIONS SHALL INCLUDE: LIGHTING SYSTEMS STARTUP AND TESTING. C.1.1. C.1.2. FINAL LOCATIONS OF RECEPTACLE AND DATA BOXES. D. STARTUP AND TESTING: ENSURE LIGHT FIXTURES ARE INSTALLED AND OPERATIONAL D.2. OPERATIONAL TESTING OF EMERGENCY LIGHTING SYSTEM'S REQUIRED BY NFPA 101, ANNUAL TESTING PROCEDURE. D.3. D.4. PLANS. ADJUST SET-POINTS AS REQUIRED FOR PROPER OPERATION, PER MANUFACTURER'S INSTRUCTIONS. D.5. PLANS. ADJUST SET-POINTS AS REQUIRED FOR PROPER OPERATION, PER MANUFACTURER'S INSTRUCTIONS. D.6. ENABLED CIRCUITS. PERFORM ALL TESTING PER MANUFACTURER'S INSTRUCTIONS. O&M DOCUMENTATION: BINDER SHOULD INCLUDE THE FOLLOWING ITEMS: THAN DESIGN DRAWINGS. E.0.2. EQUIPMENT MANUFACTURER'S INSTALLATION, OPERATION MAINTENANCE MANUALS. E.0.3. COMPLETED MANUFACTURER'S EQUIPMENT STARTUP SHEETS. E.0.4. EQUIPMENT PROGRAMMED SCHEDULES AND SET-POINTS DETERMINED AT STARTUP. E.0.5. EQUIPMENT WARRANTIES TRAINING: BASIS FOR INSTRUCTION. G. ELEC. COMMISIONING REPORT: AT OR BEFORE TIME OF COMPLETION.
- G2.0 TEST ALL EXIT SIGNS AND EMERGENCY LIGHTING.
- G3.0 MAKE SURE ALL OCCUPANCY SENSORS ARE INSTALLED AND WORKING.

- G6.0 VERIFY THE FOLLOWING:
- STATUS INDICATORS ON DEVICES ARE OPERATIONAL AND CORRECT.

CONTRACTOR SHALL FURNISH DELIVERY OF ALL REQUIRED MATERIALS AND EQUIPMENT TO BE INSTALLED. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS UNDAMAGED AT THE TIME OF DELIVERY FROM THE FACTORY. DAMAGED ITEMS SHALL BE RETURNED TO THE FACTORY FOR

CONTRACTOR SHALL COORDINATE WITH OWNER TO OBTAIN ACCEPTABLE JOBSITE STORAGE LOCATION FOR MATERIALS. CONTRACTOR SHALL COMPLY WITH OWNER REQUIREMENTS FOR

CONTRACTOR SHALL TAKE ALL REQUIRED PRECAUTIONS TO PROPERLY PROTECT ALL STORED MATERIALS FROM WEATHER, DAMAGE, THEFT OR ANY OTHER HAZARD PRESENT AT THE STORAGE

IF CONTRACTOR IDENTIFIES ANY ACTUAL SITUATION OR SITE CONDITION THAT WILL PROHIBIT OR NEGATIVELY IMPACT THE INSTALLATION OR PERFORMANCE OF THE SYSTEMS AS DESIGNED, CONTRACTOR SHALL STOP ALL WORK AND NOTIFY THE ENGINEER IMMEDIATELY.

L.2. IF CONTRACTOR PERFORMS WORK, AND OR INSTALLS ANY EQUIPMENT THAT IS FOUND TO BE DEFECTIVE, OR OUT OF COMPLIANCE WITH BASIS OF DESIGN OR CODE, CONTRACTOR SHALL REPLACE THE DEFECTIVE WORK AT NO ADDITIONAL COST TO THE OWNER. ALL NEW WORK SHALL

IF CONTRACTOR DAMAGES ADJACENT PROPERTY WHILE PERFORMING SCOPE OF WORK, HE SHALL MAKE PROMPT REPAIR AT CONTRACTORS EXPENSE, PRIOR TO COMPLETING PROJECT.

HOLD ALL CONDUITS TIGHT AGAINST STRUCTURE TO AVOID DAMAGE AND INTERFERENCE FORM OTHER TRADES. RUN ALL CONDUITS IN A NEAT AND WORKMAN LIKE MANNER PARALLEL TO

PROVIDE ALL REQUIRED CONDUIT HANGERS AND SUPPORTS WITH PROPER SPACING PER CODE REQUIREMENTS. GROUP PARALLEL RUNS OF CONDUIT TOGETHER ON COMMON HANGERS

INSTALL ALL UNIT MOUNTED SWITCHES AND EQUIPMENT IN A MANNER THAT DOES NOT COVER UP MANUFACTURER'S EQUIPMENT LABELS OR BLOCK ACCESS TO REMOVABLE SERVICE PANELS. WHERE REQUIRED FOR EQUIPMENT SERVICE CONNECTIONS, PROVIDE STEEL CHANNEL SUPPORT STANDS FOR MOUNTING OF UNIT DISCONNECT SWITCHES, STARTERS, SPEED CONTROLLERS AND

N.3. ENSURE THAT SERVICE CLEARANCES ARE NOT BLOCKED BY ROUTING OF CONDUIT OR SUPPORT STRUCTURES AT ALL EQUIPMENT SERVICE CONNECTIONS. COORDINATE WITH HVAC CONTRACTOR TO

VERIFY WITH OWNER EQUIPMENT IDENTIFICATION MARKS, PRIOR TO ORDERING AND INSTALLING LABELS ON UNIT DISCONNECT SWITCHES. UNIT MARK SHOWN ON PLANS IS PRELIMINARY.

COORDINATE MOUNTING HEIGHT OF ALL LIGHT FIXTURES WITH ARCH PLANS, PRIOR TO STARTING WORK. HEIGHTS SHOWN ON SCHEDULE ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY

ALL LIGHTING SWITCHES SHALL BE INSTALLED ON THE STRIKE SIDE OF DOOR. VERIFY ALL SWITCH ALL LIGHTING CONTROL CABLES SHALL BE PLENUM RATED AND RUN EXPOSED TIGHT AGAINST

BUILDING STRUCTURE IN MANNER TO KEEP IT FROM DAMAGE BY OTHER TRADES. PROVIDE TIE-COORDINATE LIGHTING CONTROL DEVICE LOCATIONS WITH MANUFACTURER'S REQUIREMENTS,

INCLUDING SENSORS, SWITCHES AND CONTROLLERS. LOCATIONS SHOWN ON PLANS ARE

INSTALL ALL LIGHTING CONTROLLERS IN ACCESSIBLE LOCATION ABOVE CEILING OR OTHER APPROVED LOCATION. WHEN ABOVE CEILING, PROVIDE PERMANENT MARKER FOR LOCATING

PROGRAM LIGHTING CONTROLLERS WITH OWNER FURNISHED OCCUPANCY SCHEDULES FOR GANG ON/OFF CONTROL OF ALL INTERIOR LIGHTING. SETUP ALL CONTROLLERS AND DEVICES AS REQUIRED TO PERFORM SEQUENCE OF OPERATIONS ON LIGHTING CONTROLLER SCHEDULE.

THE OWNER'S PROJECT MANAGER OR OTHER PERSON DESIGNATED SHALL FUNCTION AS THE 'COMMISSIONING AGENT' (CA) FOR THE PROJECT. THE CA SHALL INITIATE, DIRECT AND SUPERVISE ALL PHASES OF COMMISSIONING PLAN SPECIFIED BELOW. AGENT SHALL BE RESPONSIBLE TO ENSURE THAT COMMISSIONING PLAN IS FULLY IMPLEMENTED AND DOCUMENTED. OWNER HAS NOT CHOOSEN A&G ENGINEERING AS THIER COMMISSIONING AGENT AND QUESTIONS SHALL NOT BE

PROVIDE CA WITH MANUFACTURER'S SUBMITTAL DATA ON NEW EQUIPMENT TO BE FURNISHED AND OBTAIN OFFICIAL APPROVAL PRIOR TO ORDERING. PRE-CONSTRUCTION SUBMITTALS SHALL NCLUDE MANUFACTURER'S SPECIFICATIONS SHOP DRAWINGS AND INSTALLATIONS MANUAL PROVIDE SUBMITTALS FOR THE FOLLOWING MAJOR COMPONENTS AND EQUIPMENT PRIOR TO

ELECTRICAL PANELS, LIGHT FIXTURES, LIGHTING CONTROLS, RECEPTACLES, RECEPTACLE COVER PLATES, ELECTRIC HEATERS, ELECTRIC WATER HEATERS, CEILING FANS, FLOOR DEVICES, ETC

WHERE REQUIRED BY CA, CONTRACTOR SHALL COORDINATE FIELD INSPECTIONS OF CRITICAL CONSTRUCTION DETAILS FOR APPROVAL, PRIOR TO PROCEEDING WITH ADDITIONAL WORK, AT A

TEST ALL INDOOR AND OUTDOOR LIGHTING CONTROLS AFTER INSTALLATION. PROVIDE NAME AND SIGNATURE OF PERSON(S) COMPLETING THE TESTING, DATE PERFORMED, INITIAL AND FINAL SETTINGS OF CONTROLS ADJUSTMENTS AND THE RESULTING OPERATIONAL PERFORMANCE.

VERIFY OPERATION OF ALL WALL MOUNTED OCCUPANCY LIGHT SWITCHES AND ADJUSTMENTS REQUIRED FOR PROPER OPERATION, PER MANUFACTURER'S INSTRUCTIONS. VERIFY OPERATION OF ALL CEILING MOUNTED OCCUPANCY SENSORS IN EACH ZONE SHOWN ON

VERIFY OPERATION OF ALL CEILING MOUNTED DAYLIGHTING SENSORS IN EACH ZONE SHOWN ON

VERIFY OPERATION OF OUTSIDE LIGHTING TIME CLOCK AND PHOTOCELL CONTROLS. ADJUST SET-POINTS ON TIME CLOCK TO ENABLE OUTDOOR LIGHTING CIRCUIT INDEPENDENT OF SEASONAL CHANGES. VERIFY PHOTOCELL WILL BRING ON/OFF THE OUTDOOR LIGHTING WHEN TIMER HAS

PROVIDE THE CA AND OWNER W/A MINIMUM OF 2 SETS OF BINDERS FOR THE PROJECT. EACH

E.0.1. AS--BUILT DRAWING MARKUPS SHOWING MODIFICATIONS WHERE INSTALLATIONS ARE DIFFERENT

PROVIDE A MINIMUM OF 2 HOURS ON--SITE TRAINING FOR OWNER'S OPERATIONAL STAFF UPON COMPLETION OF ALL STARTUP WORK. TRAINING SHALL COVER OPERATIONS AND MAINTENANCE ON ALL NEW LIGHTING AND ELECTRICAL SYSTEMS INSTALLED BY CONTRACTOR, INCLUDING LIGHTING CONTROLS. TRAINING SHALL UTILIZE MANUFACTURER'S OPERATIONS AND MAINTENANCE MANUALS AS

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISION THE LIGHTING CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENATION DEALING THE TASKS BELOW. SUBMIT DOCUMENATION

G1.0 - MAKE SURE ALL LIGHTING FIXTURES HAVE LAMPS INSTALLED AND ARE FUNCTIONAL.

G4.0 - MAKE SURE WALLBOX AND SCENE CONTROLLERS ARE INSTALLED AND WORKING.

G5.0 - TEST 10% OF DEVICES FOR OCCUPANCY SENSOR TYPES: WALLBOX TYPE WSD-PDT.

-SENSORS HAVE BEEN LOCATED AND AIMED PER MANUFACTURER'S REQUIREMENTS.

-MOVEMENT IN ADJACENT AREA AND/OR CYCLING OF HVAC SYSTEMS NOT FALSE TRIGGER SENSORS.

EQUIPMENT & MATERIALS - ELECTRICAL

- A.1. EMT, PVC AND RIGID GALVANIZED STEEL ARE ACCEPTABLE AS ALLOWED BY THE NEC. ELBOWS AND BENDS FOR ALL CONDUIT SYSTEMS SHALL USE THE SAME MATERIAL AS THE CONDUIT WITH WHICH THEY ARE INSTALLED.
- A.2. PROVIDE FLEXIBLE CONDUIT CONNECTIONS AT ALL EQUIPMENT TERMINATIONS. INSTALL A GALVANIZED IRON OR PVC SLEEVE FOR THE CONDUIT PASSING THROUGH CONCRETE OR A.3.
- MASONRY CONSTRUCTION. A.4. EMT: UTILIZE WHERE INSTALLING ELECTRICAL IN EXPOSED LOCATIONS IN MECHANICAL ROOMS. SERVICE UTILITY AND OTHER WORK AREAS NOT OPEN TO PUBLIC. IN HIGH CEILING OR HIGH BAY AREAS, USE EMT CONDUIT FOR WIRING UP TO MINIMUM 10' ABOVE FLOOR BEFORE SWITCHING TO
- MC CABLE A.5. PVC: UTILIZE FOR INSTALLING ELECTRICAL IN UNDERGROUND EXTERIOR LOCATIONS WHERE ALLOWED AND NOT SUBJECT TOP DAMAGE. PROVIDE WITH RIGID STEEL FOR ALL BENDS AND ASSOCIATED FITTINGS. WHERE EXPOSED RISING OUT OF EXCAVATION TRENCH PROVIDE SCHEDULE
- 80 PVC PIPE AND FITTINGS. A.6. RIGID STEEL: UTILIZE FOR INSTALLING ELECTRICAL IN ALL HIGH ABUSE AREAS INDOORS AND OUTDOORS.
- WIRE AND CABLE B.1. COPPER CONDUCTORS FOR ALL WIRING SHOWN ON DRAWINGS. MINIMUM 90°F RATED INSULATION FOR ALL CONDUCTORS USED, SUCH AS THHN, THHW, THW OR EQUAL. ALUMINUM CONDUCTORS OF
- EQUIVALENT AMPACITY CAN BE SUBSTITUTED FOR SIZES #6 AND ABOVE. B.2. MC CABLE: METAL CLAD CABLE WITH COPPER CONDUCTORS, RATED FOR WET OR DRY LOCATIONS, 90C TEMPERATURE RATING, WITH GREEN INSULATED GROUNDING CONDUCTOR. ALL CONDUCTORS CABLED TOGETHER WITH SEPARATOR TAPE, INTERLOCKED ALUMINUM ARMOR, FLAME RETARDANT BLACK PVC JACKET OVER THE ARMOR.
- B.2.1. UTILIZE IN PLACE OF EMT CONDUIT AND WIRE WHERE ALLOWED FOR CONCEALED WIRING INSTALLATIONS, INSIDE WALLS OR OTHER BUILDING FRAMING, AND IN ATTIC AND CEILING PLENUM SPACES. INSTALL PER NEC REQUIREMENTS AND MANUFACTURERS INSTRUCTIONS WITH FACTORY FITTINGS AND CONNECTIONS.
- B.2.2. UTILIZE IN PLACE OF RIGID OR PVC CONDUIT AND WIRE FOR UNDERGROUND OUTDOOR INSTALLATIONS WHERE ALLOWED AND POTENTIAL FOR DAMAGE IS MINIMAL.
- C. RECEPTACLES AND COVER PLATES: C.1. INDOORS:
- C.1.1. DUPLEX RECEPTACLES :120V, DUPLEX, IVORY COLOR, SMOOTH NYLON FACE, DUPLEX, BACK AND SIDE WIRED, 15A 125V, NEMA 5-15R, AS MANUFACTURED BY HUBBELL MODEL #BR151 OR EQUAL. PROVIDE WITH MATCHING COVER PLATE.
- C.1.2. GFI RECEPTACLES: 120V, DUPLEX, IVORY COLOR, SMOOTH NYLON FACE, TEST BUTTON, LED INDICATOR LIGHT, BACK AND SIDE WIRED, 15 A 125V, NEMA 5-15R, AS MANUFACTURED BY HUBBELL MODEL #GF15IL OR EQUAL. PROVIDE WITH MATCHING COVER PLATE.
- C.1.3. 240V RECEPTACLES: 240V, MULTI-POLE WITH GROUND, COORDINATE FINAL NEMA TYPE AND AMPERAGE RATING WITH EQUIPMENT SUBMITTALS, SINGLE OR DUPLEX, AS MANUFACTURED BY HUBBELL OR EQUAL. PROVIDE WITH MATCHING COVER PLATE. C.2. OUTDOORS:
- C.2.1. GFI RECEPTACLES: 120V, WEATHER RESISTANT, DUPLEX, IVORY COLOR, SMOOTH NYLON FACE, TEST BUTTON, LED INDICATOR LIGHT, BACK AND SIDE WIRED, 15A 125V, NEMA 5-15R, AS MANUFACTURED BY HUBBELL MODEL #GF15LWR OR EQUAL. INSTALL IN WEATHERPROOF BOX WITH MATCHING GASKETED COVER PLATE.
- WALL SWITCHES AND COVER PLATES: D.1. MOTOR RATED SWITCH: 1P/20A, SUITABLE FOR USAGE AS MANUAL TOGGLE CONTROLLER FOR FRACTIONAL HP MOTORS, AS MANUFACTURED BY HUBBELL, CIRCUIT-LOOK MODEL #HBL7832D OR EQUAL. PROVIDE SUITABLE NEMA RATED BOX AND COVER PLATE AS REQUIRED.
- DISCONNECT SWITCHES: E.1. SQUARE D, HEAVY DUTY SAFETY SWITCH, OR EQUAL. QUICK-MAKE, QUICK-BREAK OPERATING MECHANISM, FUSIBLE OR NON-FUSIBLE, COLOR-CODED "ON"-"OFF" INDICATOR HANDLE, COVER PADLOCK HASP AND HANDLE LOCK "OFF" PROVISION FOR MULTIPLE PADLOCKS, 200,00 RMS SYMMETRICAL AMPERES SCCR. PROVIDE NEMA 1 OR 3R ENCLOSURE AS REQUIRED. PROVIDE CLASS R, L OR J FUSES AND SPRING REINFORCED PLATED COPPER FUSE CLIPS WHERE SPECIFIED.
- LABELS F.1. PROVIDE EQUIPMENT LABELS FOR ALL DISCONNECT SWITCHES, PANEL-BOARDS AND ENCLOSURES. LABELS SHALL BE PERMANENTLY FASTENED TO EXTERIOR OF ENCLOSURE IN VISIBLE LOCATION, AND SHALL MATCH EQUIPMENT IDENTIFICATION MARKS SHOWN ON PLANS.
- F.2. INTERIOR LABELS SHALL BE BLACK PLASTIC WITH WHITE LETTERS, MINIMUM 3/4" HIGH. F.3. EXTERIOR LABELS SHALL BE METALLIC, SUITABLE FOR EXTERIOR LOCATIONS WITH BLACK LETTERS MINIMUM 3/4" TALL
- ELECTRICAL PANELS: G. G.1. PANELS SHALL BE AS MANUFACTURED BY SQUARE D. OR EQUAL, PROVIDE SUBMITTALS FROM VENDOR. PRIOR TO ORDERING PANELS AND BREAKERS. VERIFY PANELS MEET THE FAULT CURRENT RMS VALUES AS SHOWN ON THE PLANS.
- Н. BUSSED GUTTERS: H 1 SURFACE MOUNT, NEMA 3R STEEL ENCLOSURE, REMOVABLE FRONT COVER(S) WITH FACTORY HANDLES, ALUMINUM BUSSING, UL1773 LISTED, AS MANUFACTURED BY EATON B-LINE #R1060HEE OR APPROVED EQUAL. MUST COMPLY WITH REQUIREMENTS OF LOCAL UTILITY SPECIFICATIONS AS DISTRIBUTION POINT FOR MULTIPLE METER APPLICATIONS. PROVIDE SINGLE LENGTHS OR MULTIPLE SECTIONS AS REQUIRED BUY TOTAL SERVICE LENGTH ON PLANS.
- INDOOR LIGHTING CONTROLS:
- I.1. LIGHTING MASTER INTERFACE: PROVIDES 'GATEWAY' TO ETHERNET NETWORK, PROGRAMMING AND CONTROL OF UP TO 100 DIRECTLY CONNECTED DEVICES, INCLUDES 120V POWER SUPPLY, CAT5 NETWORK CONNECTIONS AND STEEL NEMA 1 ENCLOSURE, AS MANUFACTURED BY TOUCHE LIGHTING CONTROL, MODEL #MSTR-DVOLT-S2 OR EQUAL
- 1.2. LIGHTING RELAY MODULE: CONSISTS OF (2) INDEPENDENT LATCHING, MECHANICALLY HELD, SINGLE POLE RELAYS, EACH RATED AT 20A/120V, (3) CAT5 INPUT PORTS FOR DAISY CHAIN OF UP TO (8) AMBIENT/OCCUPANCY SENSORS, (2) CAT 5 INPUT PORTS FOR SWITCHES OR DRY CONTACT DEVICES, (2) 0-10V DIMMING OUTPUT CHANNELS, AS MANUFACTURED BY TOUVHE LIGHTING CONTROL, MODEL #LRM-2P-120-0/10DIM OR EQUAL
- AMBIENT/ OCCUPANCY SENSOR: CEILING MOUNTED, INTEGRATED OCCUPANCY DETECTION AND 1.3. AMBIENT LIGHT CONTROL ON SINGLE SENSOR, AUTO- ADDRESSING AND SUTO-CONFIGURING, CAT5 CONNECTION PORTS, AUTOMATIC CALIBRATION, SOFTWARE CONFIGURATION THROUGH LIGHTNING MASTER INTERFACE, SURFACE OR FLUSH MOUNTING OPTIONS. AS MANUFACTURED BY TOUCHE LIGHTING CONTROL, MODEL #SMAOS-P, OR EQUAL. SELECT PROPER COVERAGE PATTERN FOR EACH SPECIFIC INSTALLATION SHOWN ON PLANS AS FOLLOWS: I.3.1. AISLES AND CORRIDORS: #SMAOS-P-A
- I.3.2. 360 COVERAGE, BELOW 20' CEILING HEIGHT: #SMAOS-P-360L
- I.3.3. 360 COVERAGE, ABOVE 20' CEILING HEIGHT: #SMAOS-P-360H I.4. LOW-VOLTASGE LIGHT SWITCH: MOMENTARY CONTACT SWITCH THAT PROVIDES DIGITAL INPUT TO CONTROLLER WHEN PRESSED, CUSTOM CONFIGURABLE THROUGH SOFTWARE AT THE LIGHTING MASTER INTERFACE, CAN BE PROGRAMMED TO FUNCTION AS ON/OFF ONLY, BI-LEVEL WITH DIMMING FIXTURES, ON/OFF WITH MANUAL OVERRIDE, AND 3-WAY SWITCH, AS MANUFACTURED BY TOUCHE LIGHTING CONTROL, MODEL #SW-SF, OR EQUAL. PROVIDE WITH MATCHING DECORATIVE COVER PLATE.
- ROOM CONTROLLERS: PROVIDE INTELLIGENT LIGHTING CONTROL ROOM CONTROLLERS TO ACHIEVE ZONING AS INDICATED J.1. ON PLANS.WHEN POWER PACKS ARE PROVIDED, CONTRACTOR MUST PROVIDE 0-10V DIMMING WIRES FROM POWER PACK TO FIXTURE FOR CONTROL.
- MOTION SENSORS: PROVIDE COMPLETE MOTION SENSOR COVERAGE FOR ENTIRE BUILDING, EXCEPT ELECTRIC ROOMS, K.1. AND AS WHEN NOTED EXCEPTION SHOWN ON PLANS. PROVIDE DUAL TECHNOLOGY MOTION SENSORS IN EVERY ROOM AS REQUIRED BY IECC 2021. ASSUME CEILING MOUNT UNLESS WALL MOUNT SHOWN.
- VACANCY SENSORS PROVIDE COMPLETE DUAL TECHNOLOGY VACANCY SENSOR COVERAGE PER IECC 2021 IN ALL AREAS L.1. EXCEPT EMERGENCY EGRESS CORRIDORS AND PATHWAYS. SHOP DRAWING REQUIRED.
- М OCCUPANCY SENSORS M.1. PROVIDE COMPLETE DUAL TECHNOLOGY OCCUPANCY SENSOR COVERAGE PER IECC 2021 IN ALL EMERGENCY EGRESS CORRIDORS AND PATWHAYS. SHOP DRAWING REQUIRED.
- CONTROL STATION: N 1 ALL ROOMS SHALL HAVE A CONTROL STATION FOR CONTROL OF LIGHTS IN ROOM. IF NO CONTROL STATION IS SHOWN, ASSUME A TWO ZONE CONTROLLER FOR ROOMS LARGER THAN 9' X 9' AND A WALL MOUNT DUAL TECHNOLOGY CONTROLLER FOR ROOMS SMALLER THAN 9' X 9'.

DESIGN WITHOUT CONSTRUCTION ADMINISTRATION:

IT IS UNDERSTOOD AND AGREED THAT THE ARCHITECT/ENGINEER'S SCOPE DOES NOT INCLUDE PROJECT OBSERVATION OR REVIEW OF THE CONTRACTOR'S PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES. THE OWNER AGREES TO PROVIDE CONSTRUCTION ADMINISTRATION AND ASSUMES ANY AND ALL POTENTIAL LIABILITY ARISING FROM SUCH ADMINISTRATION. THE OWNER ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE CONTRACT DOCUMENTS AND FOR CONSTRUCTION OBSERVATION AND THE OWNERS WAIVES ANY CLAIMS AGAINST THE ARCHITECT/ENGINEER THAT MAY BE IN ANY WAY CONNECTED THERETO. THE ARCHITECT/ENGINEER SHALL NOT RESPOND TO ANY AND ALL QUESTIONS DIRECTED TO THE INTERPRETATION OF THE CONTRACT DOCUMENTS OR IN RESPONSE TO ISSUES ENCOUNTERED BY AND AS RELAYED BY THE CONTRACTOR IN THE FIELD. ANY AND ALL QUESTIONS SHALL BE SUBMITTED DURING THE BIDDING PHASE.

SYMBOL LEGEND - ELECTRICAL:

	2' X 4' TROFFER LIGHT					
	2' X 4' TROFFER EMERGENCY LIGHT					
	2' X 2' TROFFER LIGHT					
	2' X 2' TROFFER EMERGENCY LIGHT					
	2" PENDANT					
	4" PENDANT					
	6" ROUND RECESSED DOWNLIGHT					
	6" ROUND RECESSED EMERGENCY DOWNLI	GHT				
	4' STRIPLIGHT BASIC LIGHTING					
	4' STRIPLIGHT BASIC EMERGENCY LIGHTING					
EXIT	EXIT/EMERGENCY LED LIGHTS. SHALL NOT E		SWITCH LEG			
L	1'X4' SURFACE, LOW PROFILE	DE COMMECTED TO	Switch LEO.			
1	STRIP LED LIGHT.					
	SINGLE HEAD ARM MOUNTED POLE LIGHT					
	WALL MOUNTED SCONCE UP/DOWN LIGHT					
	LED HIGH BAY					
-	SWITCH 120V/20A WALL MOUNTED. (MOUNTE					
- 3	3-WAY SWITCH 120V/20A WALL MOUNTED. (N		,			
. 4	4-WAY SWITCH 120V/20A WALL MOUNTED. (N					
D	DIMMER SWITCH 120V/20A WALL MOUNTED.					
	DATA/TELEPHONE WALL MOUNTED DEVICE. BOX. (MOUNTED AT 72" AFF).	FASTENED TO ST	RUCTURE WITHIN 8" OF			
	ELECTRICAL PANEL BOARD (REFER TO SCH	EDULE).				
	ELECTRICAL DISCONNECT (REFER TO SCHE	DULE).				
-	DUPLEX RECEPTACLE GENERAL 120V/20A (N	OUNTED AT 18" AI	FF).			
TV	TELEVISION DUPLEX RECEPTACLE 120V/20A	(MOUNTED AT 72"	AFF).			
- 	QUAD RECEPTACLE 120V/20A (MOUNTED 18	" AFF).				
GFC	GROUND FAULT DUPLEX RECEPTACLE 120V	/20A (MOUNTED 18	" AFF).			
++ GFC	GROUND FAULT QUAD RECEPTACLE 120V/20	DA (MOUNTED 18" A	NFF).			
WP	GROUND FAULT WEATHER RESISTANT RECE	EPTACLE 120V/20A	(MOUNTED 18" AFF).			
	4-GANG STEEL RECESSED FLOOR BOX TO IN	NCLUDE 2-DUPLEX	AND 2-DATA DEVICES.			
	DUPLEX RECEPTACLE GENERAL 208V/20A (N	OUNTED AT 18" A	FF).			
	JUNCTION (J) BOX. PROVIDE APPROPRIATE COMPLIANT SYSTEM.	BOX SIZE FOR A O	PERABLE AND	0 No.	REVIEW SET DESCRIPTION	15 DEC 2022 DATE
,	HOMERUN CIRCUIT BREAKER SINGLE POLE.					
	HOMERUN CIRCUIT BREAKER TWO POLE.					
_	HOMERUN CIRCUIT BREAKER THREE POLE.					
UE	ELECTRICAL UTILITY.					
—UTC	TELEPHONE & CABLE UTILITY.					
						A&G Engineering MEP Design
				$(\mathbf{P}$	5	0 1004 W Frontage Rd
				ENGINI S		Alamo, Tx 78516 (956) 787 - FIRE
				1 co		info@AandGMEP.com
ABBREVI	ATIONS:					
A - AC -	AMPERES; AMPS (CURRENT) ABOVE COUNTER	MCB - MED -	MAIN CIRCUIT BREAKER MEDIUM	С	ΙΤΥ	0 F
AFF - AFG -	ABOVE FINISHED FLOOR ABOVE FINISH GRADE	MFG - MLO -	MANUFACTURER MAIN LUGS ONLY			
AHJ - ARCH -	AUTHORITY HAVING JURISDICTION ARCHITECTURAL	MOCP - NEC -	MAX OVER-CURRENT PROTE NATIONAL ELECTRIC CODE		Α.Ι	ΟΥΑ
BC - C -	BELOW COUNTER CONDUIT	NFDS - NO -	NON-FUSED DISCONNECT SV NUMBER	vітсн — 4		
CA - CB -	COMMISSIONING AGENT CIRCUIT BREAKER	OH - P -	OVERHEAD PHASE OR POLE	FI	RE ST	ATION
CONC - CU -	CONCRETE COPPER	PC - PM -	PHOTOCELL PROJECT MANAGER			
DEG -	DEGREE	Т-	TELEPHONE			

UG

VA -

WP -

XFMR -

°C -

°K -

1Ø -

-

V

W

°F

3Ø

DET

DIM

EXIST

GFCI

IECC

JB

LC

IG -

KVA -

KW -

MCA -

GND

DETAIL

DIMMABLE

GROUND

ISOLATED GROUND

KILOVOLT AMP

KILOWATT

JUNCTION BOX (J-BOX)

LIGHTING CONTACTOR

MINIMUM CIRCUIT AMPACITY

GRD FAULT CIRCUIT INTERRUPTING

INT ENERGY CONSERVATION CODE

EXISTING

-

-

UNDERGROUND

WIRE OR WATTS

WEATHERPROOF

DEGREE CELSIUS

DEGREE KELVIN

SINGLE PHASE

THREE PHASE

DEGREE FAHRENHEIT

TRANSFORMER

VOLTS

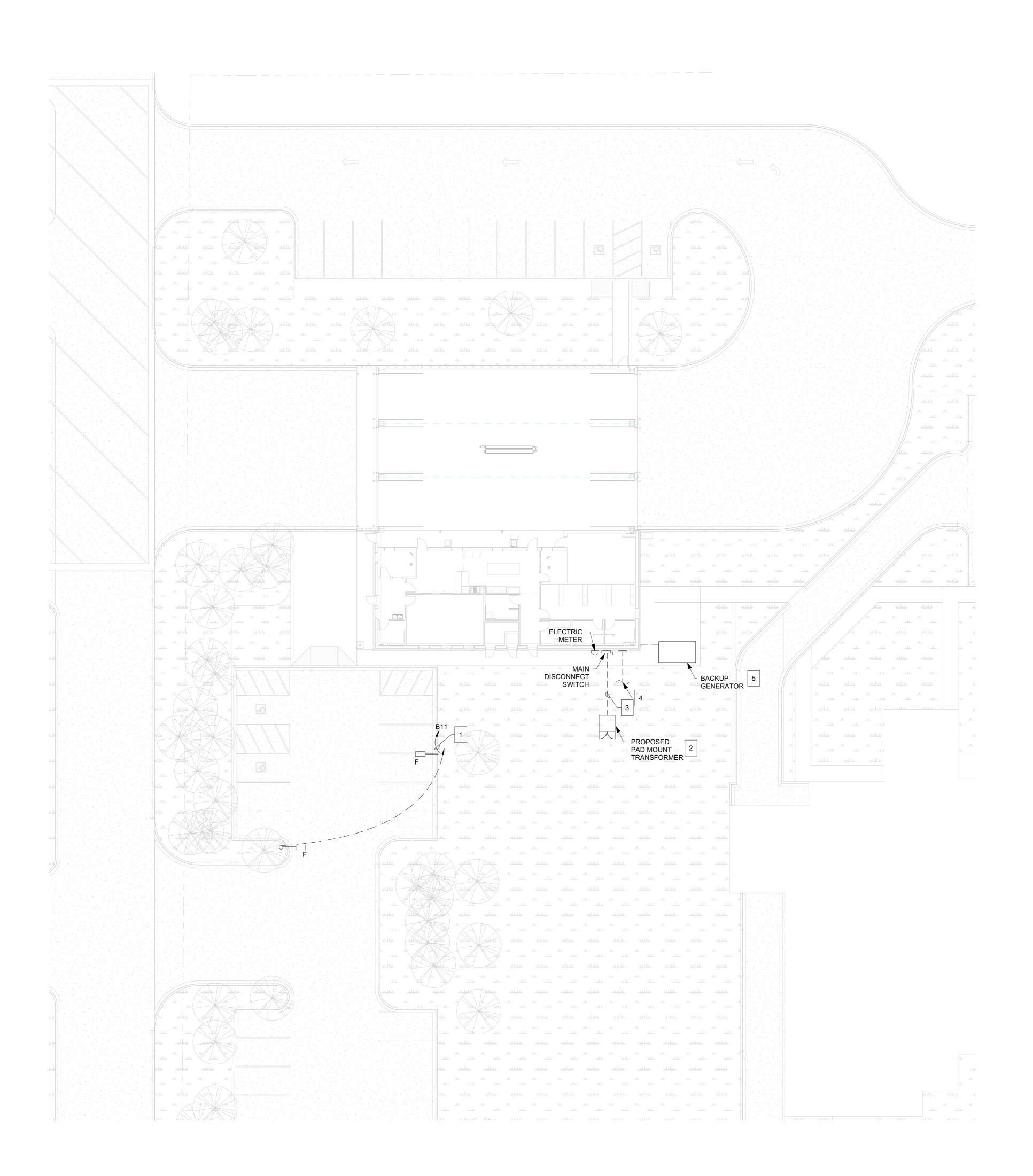
VOLTAMPS

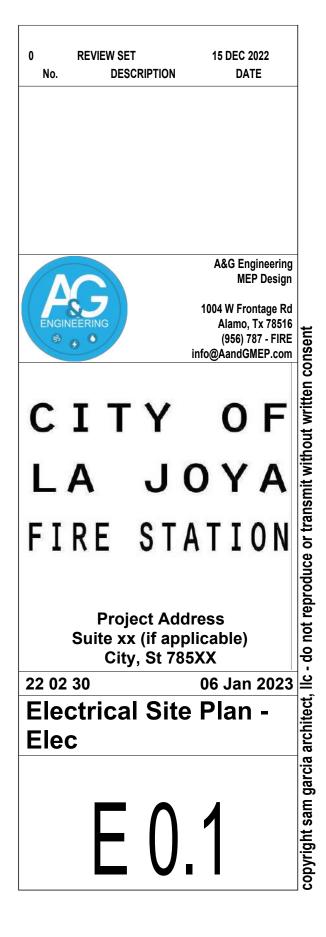
Project Address

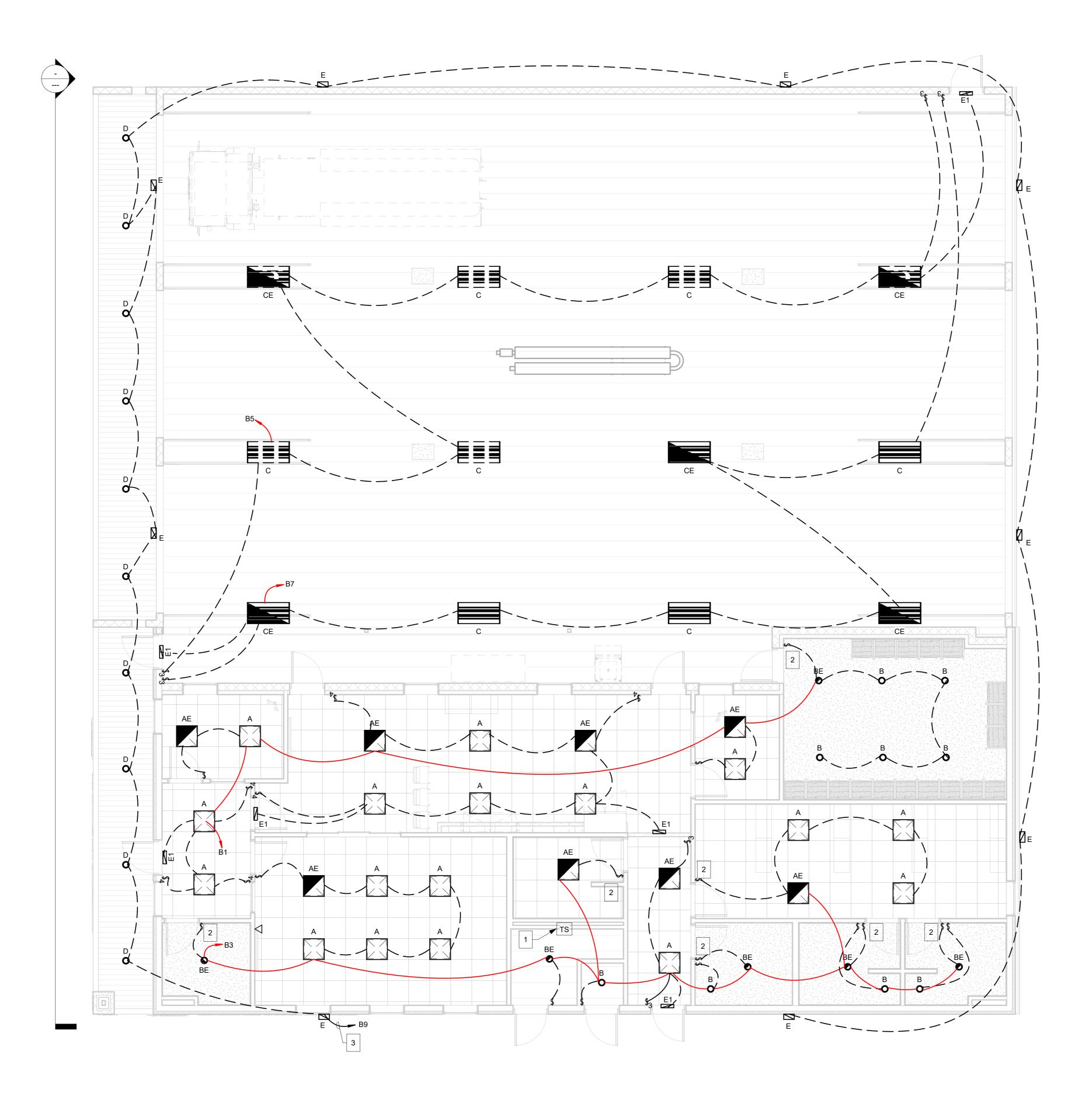
Suite xx (if applicable)

City, St 785XX

22 02 30



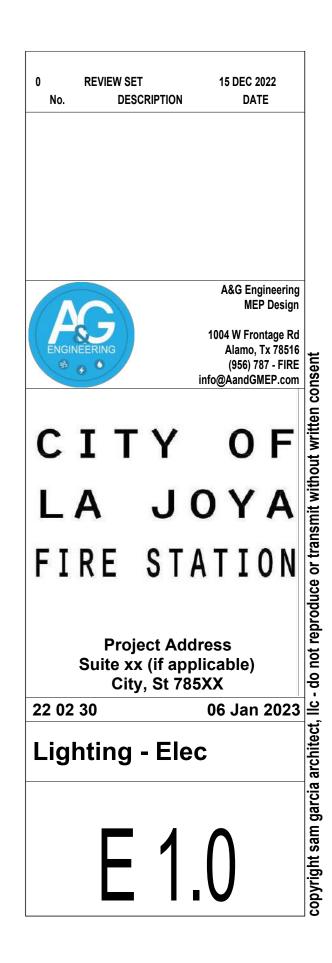


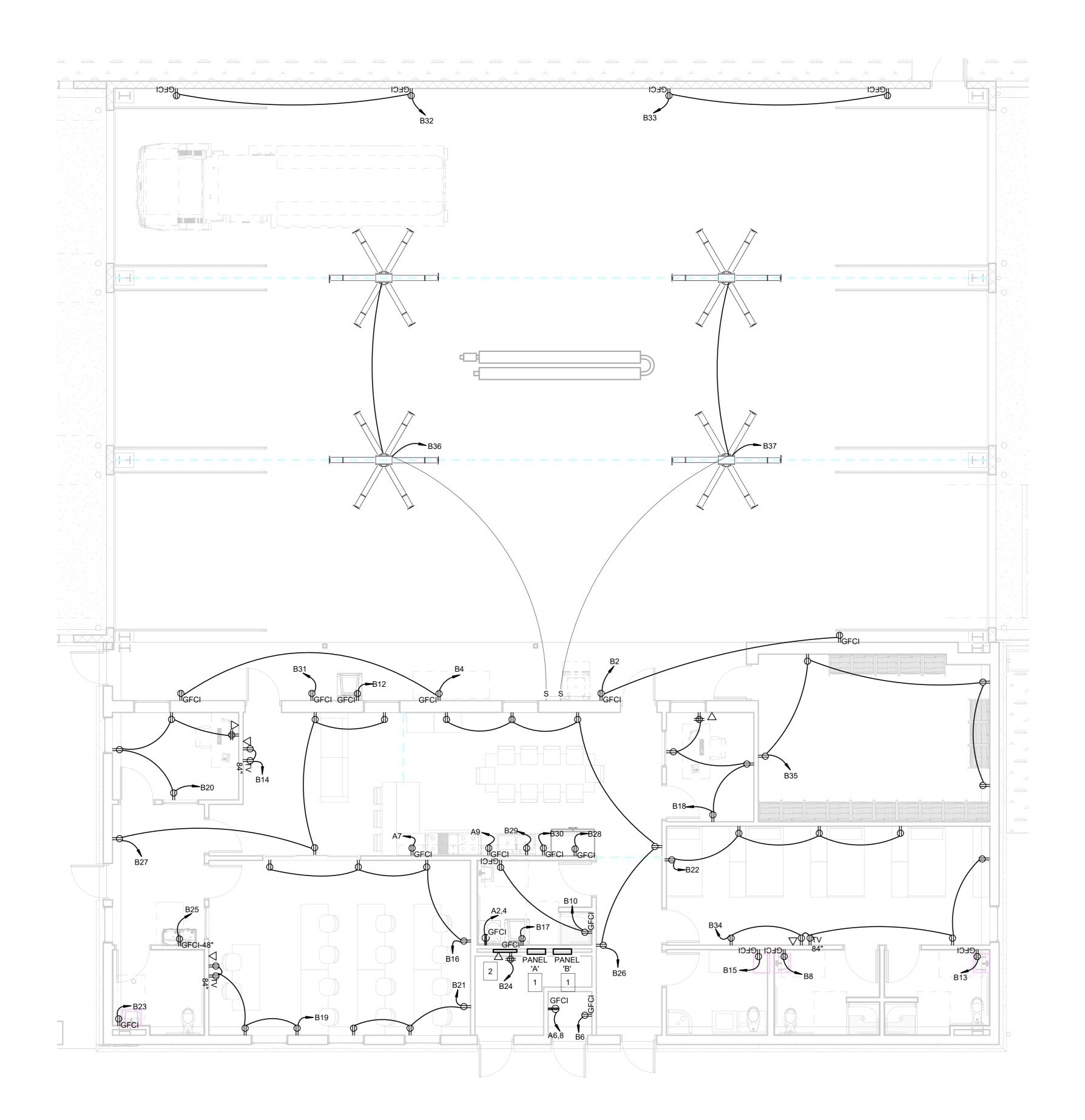


GENERAL NOTES:

A. ALL LIGHT FIXTURE SUBSTITUTION SHALL BE APPROVED BY OWNER AND MUST BE EQUAL OR BETTER QUALITY THAN FIXTURES APPROVED.

- 1. PROVIDE AND INSTALL TIME SWITCH CONTROL. COORDINATE EXACT LOCATION WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- 2. PROVIDE AND INSTALL OCCUPANCY SENSOR CONTROL WITH MANUAL SWITCH LIKE "DOUGLAS DIVERSA WOSSDU1-P-VW. COORDINATE EXACT LOCATION WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- CONTROL LIGHTING CIRCUIT VIA A 7-DAY, 24-HOUR, PROGRAMMABLE, ASTRONOMICAL, DIGITAL, TIME CLOCK/PHOTO CELL COMBINATION.

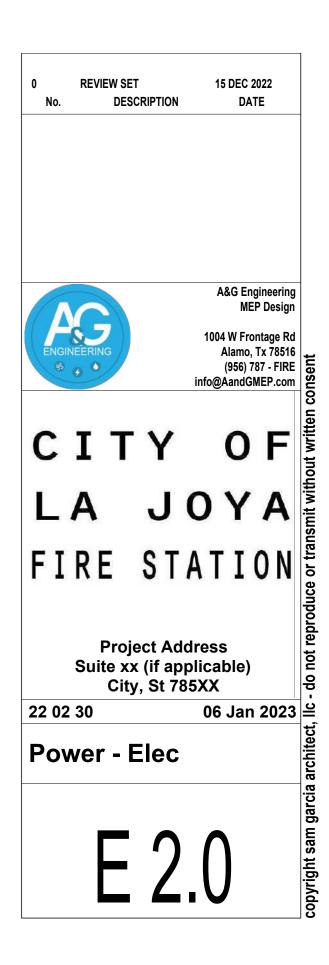




GENERAL NOTES:

- A. ALL 120 VOLTS, 1-PHASE, 20 AMPS RECEPTACLES INSTALLED SHALL HAVE AFCI CIRCUIT BREAKER TYPE.
- B. PROVIDE A 120V DEDICATED CIRCUIT FOR WIRED SMOKE DETECTORS. CONTRACTOR SHALL PLACE SMOKE DETECTORS AS REQUIRED BY CODE AND PER AUTHORITY HAVING JURISDICTION.
- C. EQUIPMENT GROUNDING CONDUCTORS SHALL NOT BE TERMINATED OR ROUTED THROUGH METER SOCKET. GROUNDING SHALL BE ESTABLISHED PER 2017 NEC 250.24(A)(1)
- D. GENERAL CONTRACTOR SHALL WORK WITH OWNER TO IDENTIFY LOCATIONS FOR SECURITY CAMERAS J-BOXES.

- 1. ELECTRICAL PANEL BOARD. REFER TO ELECTRICAL SCHEDULES FOR FURTHER INFORMATION.
- 2. 2'X2'X3/4" PLYWOOD TELEPHONE BOARD MOUNTED ON WALL. PROVIDE ONE (1) #6 GROUND CONDUCTOR AT BOARD FROM PANEL GROUND BUSS. NOTE: ROUTE TWO (2) CONDUITS WITH PULL STRING, STUB 1'-0" ABOVE FINISHED FLOOR FOR TELEPHONE / TELEVISION SERVICE.



	Branch Panel: A													
	Location: UNISEX RR Supply From: Mounting: Recessed Enclosure: Type 1	/SHOWER 1	09		I	Volts: Phases: Wires:		3 Wye				A.I.C. Rating: See Not Mains Type: Mains Rating: 400 A MCB Rating: 300 A	es 1 & 2	
Notes:														
скт	Circuit Description	Trip	Poles		A		В		с	Poles	Trip	Circuit De	escription	скт
A1	PANEL 'B'	100 A	3	7830						2		EQ: Dryer		A2
A3						6608	2500							A4
A5								7194	750 VA	2	20 A	EQ: Riser Room		A6
A7	EQ: Kitchen Microwave	20 A	1	1200	750 VA									A8
A9	EQ: Kitchen Blender	20 A	1			1000								A10
A11														A12
A13														A14
A15														A16
A17														A18
A19														A20
A21								_						A22
A23														A24
A25														A26
A27														A28
A29														A30
A31 A33														A32 A34
A33 A35														A34 A36
A35 A37														A30 A38
A37 A39														A30 A40
A39 A41														A40 A42
741		Tota	al Load:	1227	79 VA	1010)5 VA	70/	4 VA					A42
			Amps:	L	5 A		7 A		5 A					
Legend	:		•											
	assification		nected I		-	nand Fa		Estin	nated De			Panel	Totals	
Equipm	ents		2800 V			65.00%			8320 VA					
Other			1600 VA			100.00%			1600 VA			Total Conn. Load:		
Recepta			2960 V/			88.58%			11480 VA			Total Est. Demand:		
Lighting			3008 VA	\		125.00%	, D		3760 VA			Total Conn.:		
												Total Est. Demand:	70 A	
Notes:														
1. Electi	ical contractor shall submit over current protect ated loads were conservative estimates at time										ds be hi	gher.		

Load Classification	Connected Load	Demand Factor	Estimated Demand	F
Equipments	12800 VA	65.00%	8320 VA	
Other	1600 VA	100.00%	1600 VA	Total Conn. L
Receptacle	12960 VA	88.58%	11480 VA	Total Est. Dem
Lighting	3008 VA	125.00%	3760 VA	Total Co
				Total Est. Dem

Branch Panel: B Location: UNISEX RR/SHOWER 109 Volts: 120/208 Wye Supply From: A Phases: 3 Mounting: Recessed Wires: 4 Enclosure: Type 1 Notes: СКТ **Circuit Description** Trip Poles Α в 20 A 1 444 VA 360 VA B1 LTS: Kitchen Side 20 A 1 556 VA 360 VA B3 LTS: Training Room Side ____ B5 LTS: Bay Area 20 A 1 B7 LTS: Bay Area 20 A 1 528 VA 180 VA 20 A 1 B9 LTS: Wall packs 646 VA 360 VA B11 LTS: Pole lights 20 A 1 B13 REC: Restroom 2 20 A 1 180 VA 360 VA B15 REC: Restroom 3 20 A 1 180 VA 720 VA B17 REC: Washer 20 A 1 B19 REC: Training Room 20 A 1 720 VA 1540... 20 A 1 540 VA 720 VA B21 REC: Training Room B23 REC: Restroom 4 20 A 1 B25 REC: Electric Water Cooler 20 A 1 1000... 900 VA B27 REC: Day Room 20 A 1 720 VA 600 VA B29 REC: Kitchen Blender 20 A 1 B31 EQ: Ice maker 20 A 1 500 VA 360 VA B33 REC: Fire truck bay 20 A 1 360 VA 900 VA B35 REC: Locker Room 20 A 1 B37 EQ: Ceiling fans 20 A 1 800 VA B39 B41 B43 B45 B47 B49 B51 B53 B55 B57 B59 B61 B63 Total Load: 7830 VA 6608 VA Total Amps: 66 A 55 A 61 A Legend: Load Classification Demand Factor Connected Load Equipments 4100 VA 65.00% Other 1600 VA 100.00% Receptacle 12960 VA 88.58% 3008 VA 125.00% Lighting

		LIGH	TING SCHEDULE				
		GENERAL			SPECI	FICATION	S
LABEL	QTY	DESCRIPTION	MAKE/MODEL	LAMP	VOLTAGE	WATTS	MOUNTING
A	17	2' X 2' VOLUMETRIC RECESSED LIGHTING	SIGNIFY: 2FGXG30L840-2-RS-UNV-DIM	LED	120 V	22 VA	RECESSED
AE	8	2' X 2' VOLUMETRIC RECESSED LIGHTING EMERGENCY BATTERY PACK	SIGNIFY: 2FGXG30L840-2-RS-UNV-DIM-EMLED	LED	120 V	22 VA	RECESSED
В	10	SIGNIFY LYTEPROFILE 6IN 15L DL	6RN/P6RDL15840CLZ10U	LED	120 V	30 VA	RECESSED
BE	6	SIGNIFY LYTEPROFILE 6IN 15L DL, EMERGENCY BATTERY PACK	6RN/P6RDL15840CLZ10U-EMLED	LED	120 V	30 VA	RECESSED
С	7	SIGNIFY FBY 12L, 11085 LUMENS	FBY12L840-UNV-LFA-FBY-PENHGR	LED	120 V	88 VA	SURFACE
CE	5	SIGNIFY FBY 12L, 11085 LUMENS, BATTERY PACK INCLUDED	FBY12L840-UNV-LFA-FBY-PENHGR-E MLED	LED	120 V	88 VA	SURFACE
D	10	6" RECESSED DOWNLIGHT	6RN / Z6RDL20840WOCDZ10U	LED	120 V	21 VA	RECESSED
E	11	ARCHITECTURAL WALL PACK, TYPE WIDE DISTRIBUTION FINISH AS SELECTED BY ARCHITECT, BATTERY PACK INCLUDED	SIGNIFY: 101L-32L-700-NW-G1-3-UNV-XX	LED	120 V	50 VA	WALL MOUNTED
E1	6	EMERGENCY EXIT 1W (2) LED LAMPS FURNISHED	SIGNIFY: #VLTCR3R	LED	120 V	3 VA	WALL MOUNTED
F	2	SINGLE HEAD ARM MOUNTED POLE LIGHT, TYPE 3M DISTRIBUTION	ECF-S-48L-1.2A-NW-G2-AR-3-120-HIS -BZ	LED	120 V	183 VA	POLE
Grand to	otal: 82						

Grand total: 82

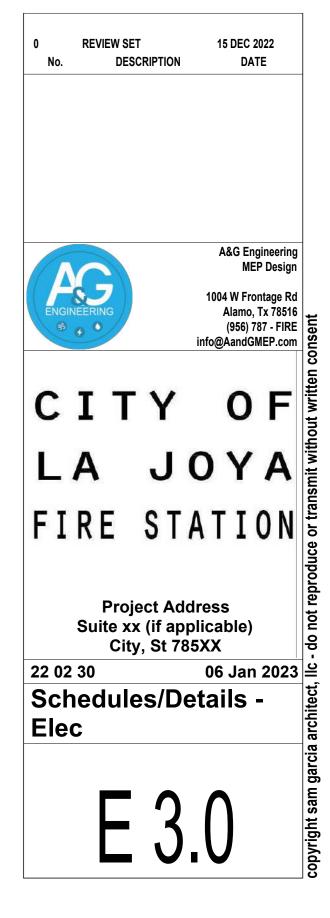
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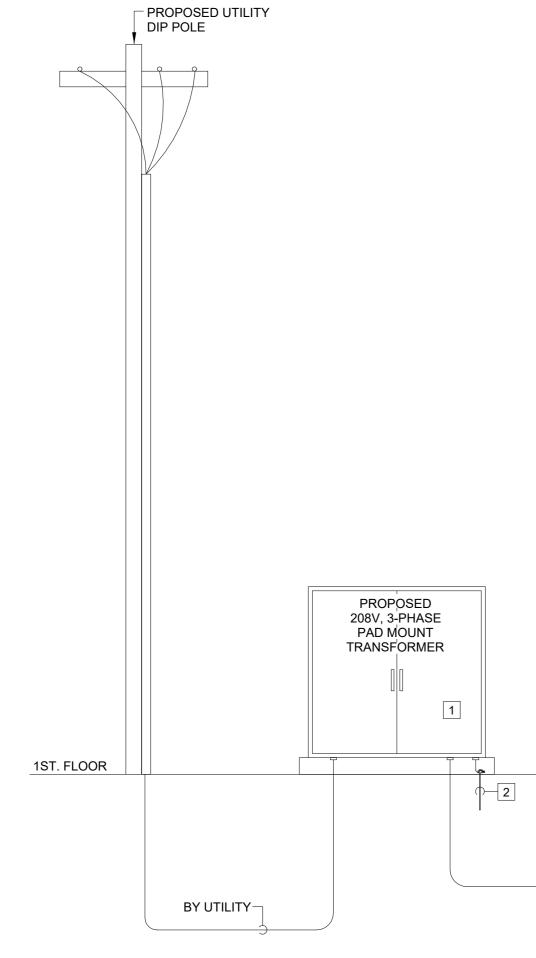
A.I.C. Rating: See Notes 1 & 2 Mains Type: Mains Rating: 125 A MCB Rating: -----

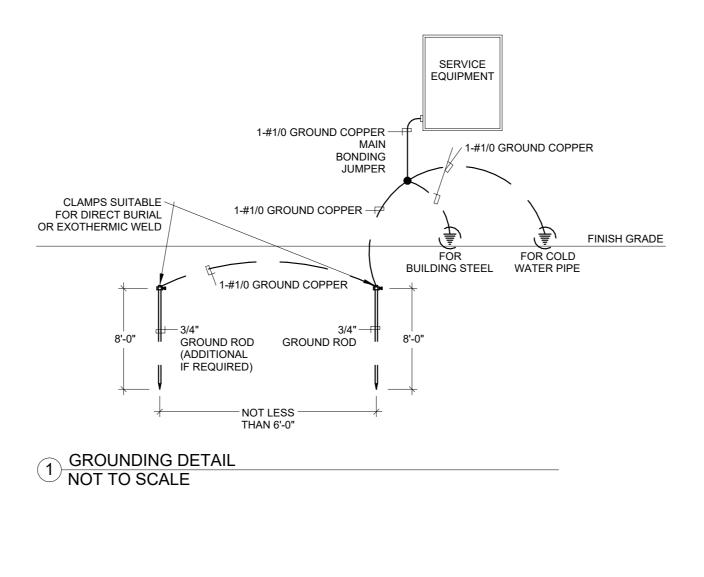
_	c	C Poles Trip Circuit Description		СКТ		
			1	20 A	REC: Fire truck bay	B2
A			1	20 A	REC: Fire truck bay	B4
	528 VA	500 VA	1	20 A	EQ: Riser Room	B6
			1	20 A	REC: Restroom 1	B8
A			1	20 A	REC: Laundry/Storage	B10
	366 VA	500 VA	1	20 A	REC: Washer in Bay	B12
			1	20 A	REC: Dayroom TV Console	B14
A			1	20 A	REC: Training Room	B16
	200 VA	1540	1	20 A	REC: Office	B18
			1	20 A	REC: Chief Office	B20
A			1	20 A	REC: Dormatory	B22
	180 VA	360 VA	1	20 A	REC: Telephone panel system	B24
			1	20 A	REC: Dining Area	B26
A			1	20 A	EQ: Refrigerator	B28
	500 VA	1000	1	20 A	EQ: Kitchen Blender	B30
			1	20 A	REC: Fire truck bay	B32
A			1	20 A	REC: Dormatory	B34
	720 VA	800 VA	1	20 A	EQ: Ceiling fans	B36
						B38
						B40
						B42
						B44
						B46
						B48
						B50
						B52
						B54
						B56
						B58
						B60
						B62
						B64

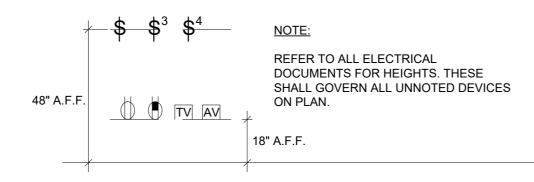
Estimated Demand	Panel	Totals
2665 VA		
1600 VA	Total Conn. Load:	21627 VA
11480 VA	Total Est. Demand:	19457 VA
3760 VA	Total Conn.:	60 A
	Total Est. Demand:	54 A

1. Electrical contractor shall submit over current protective device study prior to approval of the distribution equipment submittals. 2. Estimated loads were conservative estimates at time of design, contractor shall contact A&G Engineering should actual connected loads be higher.

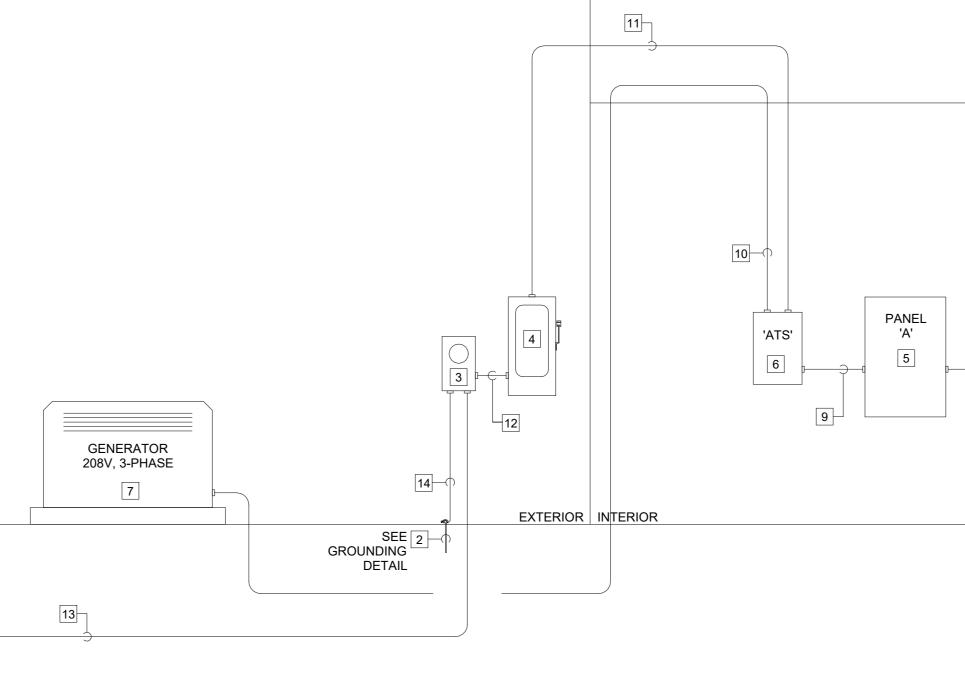








2 TYPICAL MOUNTING HEIGHT DETAIL NOT TO SCALE





GENERAL NOTES:

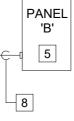
- A. ALL LIGHT FIXTURE SUBSTITUTION SHALL BE APPROVED BY OWNER AND MUST BE EQUAL OR BETTER QUALITY THAN APPROVED FIXTURES.
- B. ALL 120 VOLTS, 1-PHASE, 20 AMPS RECEPTACLES INSTALLED SHALL BE AFCI CIRCUIT BREAKER TYPE.
- C. PROVIDE A 120V DEDICATED CIRCUIT FOR WIRED SMOKE DETECTORS. CONTRACTOR SHALL PLACE SMOKE DETECTORS AS REQUIRED BY IFC AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- EQUIPMENT GROUNDING CONDUCTORS SHALL D. NOT BE TERMINATED OR ROUTED THROUGH METER SOCKET. GROUNDING SHALL BE ESTABLISHED PER 2017 NEC 250.24(A)(1)

KEYED NOTES:

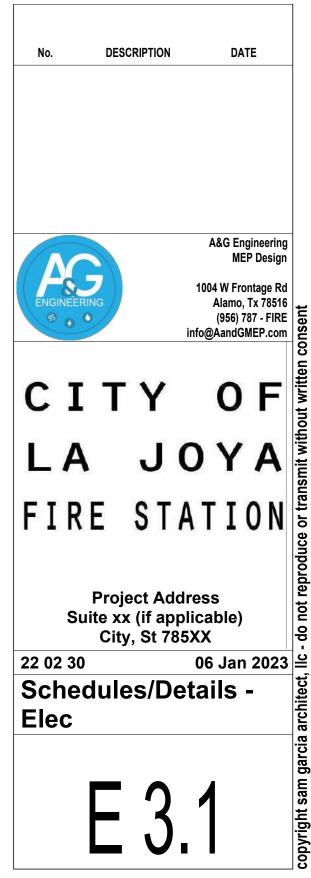
- PROPOSED POWER COMPANY POLE MOUNT 1. TRANSFORMER. CONTRACTOR SHALL COORDINATE CONFIGURATION WITH UTILITY COMPANY AND ENSURE INSTALLATION.
- 2. CONTRACTOR SHALL PROVIDE AND INSTALL GROUNDING ROD PER NOTED NEC.
- CONTRACTOR SHALL PROVIDE AND INSTALL AN 3. ELECTRIC METER. ELECTRICAL CONTRACTOR SHALL COORDINATE METER SOCKET CONFIGURATION WITH LOCAL UTILITY COMPANY.
- CONTRACTOR SHALL PROVIDE AND INSTALL 4. 400A, 208V, 3-PHASE, 300A FUSED, NEMA-3R, MAIN DISCONNECT SWITCH TO SERVE WIRING LUGS INSIDE WIREWAY. NOTE: UTILITY COMPANY SHALL PROVIDE VANDAL RESISTANT SEAL ON DISCONNECT AND CONTRACTOR SHALL ENSURE INSTALLATION.
- CONTRACTOR SHALL REVIEW ELECTRICAL PANEL 5. BOARD AND REFER TO PANEL SCHEDULES FOR FURTHER INFORMATION.
- CONTRACTOR SHALL PROVIDE AND INSTALL AN 6. AUTOMATIC TRANSFER SWITCH, 208V, 3-PHASE, NEMA-1.

ROOF

CEILING



1ST. FLOOR



GENERAL NOTES - MECHANICAL (HVAC):

- HVAC CONTRACTOR REQUIREMENTS: ALL WORK UNDER THIS CONTRACT SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH FEDERAL, STATE, AND LOCAL CODES. WHERE THESE PLANS AND SPECIFICATIONS ARE IN CONFLICT N.2. WITH SUCH CODES, THE CODES SHALL GOVERN. BIDS SUBMITTED BY CONTRACT SHALL INCLUDE WORK REQUIRED TO COMPLY WITH ALL SUCH CODES. ANY ITEMS REQUIRED AND/OR MISSED IN
- THESE BASIS OF DESIGN DOCUMENT, SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR AT CONTRACTORS EXPENSE AND ZERO EXPENSE TO THE OWNER AND/OR DESIGN TEAM. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION
- CONTRACTOR SHALL STUDY CONTRACT DOCUMENTS, FULLY UNDERSTAND AND ACCEPT THE A.2. BASIS OF DESIGN AND SCOPE OF WORK. SUBMISSION OF BID INDICATES CONTRACTOR'S COMPLETE APPROVAL AND ACCEPTANCE OF CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN, TRAINED, LICENSED AND
- EXPERIENCED IN COMMERCIAL HVAC WORK. AND WHO ARE FAMILIAR WITH THE CONSTRUCTION DOCUMENTS AND METHODS OF PERFORMING THE WORK REQUIRED. CONTRACTOR SHALL PROVIDE A MINIMUM 1 YR. WARRANTY ON ALL LABOR AND MATERIALS A.4.
- INSTALLED. CONTRACTOR SHALL MAKE ALL WARRANTY REPAIRS OR REPLACEMENTS IN A TIMELY MANNER, AT NO ADDITIONAL COST TO THE OWNER.

BASIS OF DESIGN:

B.1. ALL CONSTRUCTION DOCUMENTS PROVIDED BY OWNER, INCLUDING ENGINEERING DRAWINGS, NOTES, SCHEDULES, DETAILS, CALCULATIONS AND SPECIFICATIONS PROVIDED, ALONG WITH EQUIPMENT MANUFACTURER'S DRAWINGS AND SPECIFICATIONS, FORM THE BASIS OF DESIGN. THE BASIS OF DESIGN WILL BE USED FOR ALL INSPECTIONS, TESTING AND ACCEPTANCE OF THE WORK PERFORMED BY THE CONTRACTOR TO VERIFY SUCCESSFUL COMPLETION OF SCOPE OF WORK

SCOPE OF WORK:

- FURNISH ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO C.1. PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL MAKE ALL INSTALLATIONS ACCORDING TO THOSE SHOWN ON PLANS.
- C.2. INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS DESCRIBED BY THE CONSTRUCTION DOCUMENTS. INCIDENTAL ITEMS NOT SPECIFIED, BUT WHICH ARE ESSENTIAL FOR THE PROPER OPERATION OF SPECIFIED SYSTEMS AND EQUIPMENT, ARE INCLUDED IN THE SCOPE OF WORK AND SHALL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST. COMPLY WITH COMMISSIONING PLAN SHOWN ON DRAWINGS AND AS IMPLEMENTED BY OWNER'S
 - DESIGNATED 'COMMISSIONING AUTHORITY' (CA). PROVIDE STRUCTURAL ENGINEERING DESIGN, DRAWINGS AND MODIFICATIONS FOR
 - INSTALLATION OF HVAC EQUIPMENT OVER 200 LBS., UTILIZING THE BUILDING STRUCTURE OR FOUNDATION FOR SUPPORT, UNLESS PROVIDED BY OWNER OR ARCHITECT.
- CODE OF COMPLIANCE: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCALLY ADOPTED MECHANICAL. FUEL GAS AND PLUMBING CODES, ACCORDING TO THE LOCAL AUTHORITY HAVING JURISDICTION
- THE BASIS OF DESIGN IS INTENDED TO COMPLY WITH ALL LOCAL CODES ENFORCED BY THE AHJ OVER THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS MADE BY THE AHJ, WHETHER SPECIFICALLY SHOWN ON PLANS OR NOT.

DISCREPANCIES:

- IN THE CASE OF A DISCREPANCY BETWEEN DRAWINGS, SPECIFICATIONS OR MANUFACTURE'S REQUIREMENTS, THE MOST STRINGENT SHALL APPLY AND BE COMPLIED WITH BY THE CONTRACTOR
- IN THE CASE OF A DISCREPANCY BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS OR MANUFACTURERS REQUIREMENTS, THE AHJ SHALL DETERMINE WHICH SHOUD BE COMPLIED WITH BY THE CONTRACTOR.

JOBSITE CONDITIONS:

- CONTRACTOR SHALL EXAMINE THE JOBSITE PRIOR TO BIDDING AND FULLY UNDERSTAND THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, BY SUBMITTING BID FOR WORK CONTRACTOR ACCEPTS ALL JOB CONDITIONS AS-IS. CONTRACTOR SHALL LOCATE AND INSPECT ANY EXISTING HVAC EQUIPMENT TO BE REUSED AND OR MODIFIED, PRIOR TO BIDDING WORK. DIMENSIONAL AND PERFORMANCE DATA FOR EXISTING EQUIPMENT SHOWN ON THE PLANS ARE ESTIMATES ONLY AND NOT EXACT.
- FIELD VERIFY ROOF STRUCTURE AND TRUSS SPACING PRIOR TO STARTING WORK. CONTRACTOR SHALL EMPLOYEE A STRUCTURAL ENGINEER FOR ANY ROOF MOUTED EUQIPMENT ABOVE 100 LBS. PERMITS AND FEES:
- CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS: LICENSES, AND CERTIFICATIONS REQUIRED BY THE AHJ AND PAY FOR ALL PERMITTING FEES.

CONSTRUCTION DRAWINGS:

- DRAWINGS ARE GENERALLY SCHEMING IN NATURE. DUCTWORK, PIPING, CONTROLS AND EQUIPMENT SHOWN ON DRAWINGS IS UNDERSTOOD TO BE THE GENERAL ARRANGEMENT ONLY, TO BE FIELD ADJUSTED AS REQUIRED.
- ITEMS WITH SPECIFIC LOCATIONS AND OR SIZES WILL BE DIMENSIONED ON THE PLANS. DRAWINGS DO NOT SHOW EVERY DETAIL OR ITEM REQUIRED FOR EQUIPMENT INSTALLATIONS. REFER TO ALL EQUIPMENT MANUFACTURERS INSTRUCTIONS FOR ADDITIONAL REQUIRED PARTS AND ACCESSORIES NEEDED FOR COMPLETE INSTALLATIONS.
- FOR ALL STRUCTURAL ENGINEERING REQUIRED, UTILIZE ACTUAL EQUIPMENT WEIGHTS FROM EQUIPMENT SUPPLIERS FOR STRUCTURAL DESIGN. EQUIPMENT WEIGHTS SHOWN ON SCHEDULES ARE PRELIMINARY.
- OBTAIN FINAL SUBMITTALS ON ALL OWNER FURNISHED COMMERCIAL KITCHEN FANS, HOODS AND REFRIGERATION EQUIPMENT TO BE INSTALLED BY HVAC CONTRACTOR, AS SHOWN ON PLANS, PRIOR TO STARTING WORK. EQUIPMENT DATA SHOWN AND SCHEDULED ON PLANS IS PRELIMINARY
- ADJUST DUCTWORK SIZES AND PROVIDE OFFSETS AS NEEDED TO PASS DUCTWORK BETWEEN ROOF TRUSSES OR THROUGH WALL FRAMING WHERE REQUIRE. SIZES AND TRANSITIONS SHOWN ON PLANS ARE PRELIMINARY ONLY. FINAL COORDINATION AND DETAILING OF DUCTWORK SHALL BE PROVIDED BY HVAC CONTRACTOR.

COORDINATION WITH OTHER TRADES:

- CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCES, PROPERLY SEQUENCE INSTALLATION, AND PROVIDE MANUFACTURERS REQUIRED SERVICE CLEARANCES. WHERE REQUIRED, CONTRACTOR SHALL MAKE THE REQUIRED ADJUSTMENTS. ALL FUEL GAS CONNECTION TO HVAC EQUIPMENT. INCLUDING SERVICE VALVES, REGULATORS. FLEXIBLE COUPLINGS, AND OTHER FITTINGS SHALL BE PROVIDED BY PLUMBING CONTRACTOR AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE THE ACTUAL FUEL GAS PIPING REQUIREMENTS TO PLUMBING CONTRACTOR.
- ALL ELECTRICAL CONNECTIONS TO HVAC EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR, INCLUDING STARTERS, SPEED CONTROLLERS, DISCONNECTS, ENCLOSURES AND LABELS. PROVIDE ELECTRICAL CONTRACTOR THE ACTUAL SERVICE REQUIREMENTS FOR ALL HVAC EQUIPMENT.
- COORDINATE WITH ROOFING CONTRACTOR TO SEAL ALL ROOF CURBS AND PIPING PENETRATIONS THROUGH ROOF PER ARCHITECTURAL ROOFING SPECIFICATIONS. PROVIDE ALL REQUIRED WEATHERPROOFING.
- COORDINATE WITH FIRE ALARM CONTRACTOR TO CONNECT DUCT MOUNTED SMOKE DETECTORS TO FIRE ALARM SYSTEM, IF REQUIRED. PROVIDE ALL REQUIRED FAN SAFETY INTERLOCKS PER CONTROL DRAWINGS.
- CONTRACTOR FURNISHED EQUIPMENT & MATERIALS: SHALL BE NEW, MANUFACTURED AND CERTIFIED TO COMPLY WITH THE BASIS OF DESIGN, FREE OF DEFECT AND COVERED UNDER A MINIMUM 1-YEAR FACTORY WARRANTY, UNLESS SPECIFIED DIFFERENTLY ELSEWHERE.
- SHALL BE AS SPECIFIED IN CONSTRUCTION DOCUMENTS, OR AS ACCEPTABLE SUBSTITUTION OF EQUAL ITEM. ALL SUBSTITUTIONS MOST BE 'APPROVED' THROUGH THE COMMISSIONING PROCESS TO BE ACCEPTABLE.
- SHALL BE COMMERCIAL GRADE EQUIPMENT AND MATERIALS, UNLESS OTHERWISE INDICATED IN J.3. CONSTRUCTION DOCUMENTS.
- DELIVERY, STORAGE AND PROTECTION: CONTRACTOR SHALL FURNISH DELIVERY OF ALL REQUIRED MATERIALS AND EQUIPMENT TO BE K.1 INSTALLED. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS UNDAMAGED AT THE TIME OF DELIVERY FROM THE FACTORY. DAMAGED ITEMS SHOULD BE RETURNED TO THE FACTORY FOR REPLACEMENTS AT NO ADDITIONAL COST TO THE OWNER.
- WHERE REQUIRED, CONTRACTOR SHALL PROVIDE CRANE AND OR ALL RIGGING EQUIPMENT K.2. NEEDED TO INSTALL HVAC EQUIPMENT IN PLACE AS SHOWN ON PLANS. CONTRACTOR SHALL COORDINATE WITH OWNER TO OBTAIN ACCEPTABLE JOBSITE STORAGE K.3.
- LOCATION FOR MATERIALS. CONTRACTOR SHALL COMPLY WITH OWNER REQUIREMENTS FOR PROTECTIONS, ACCESS AND SECURITY OF MATERIALS STORED ONSITE
- CONTRACTOR SHALL TAKE ALL REQUIRED PRECAUTION TO PROPERLY, PROTECT ALL STORED MATERIALS FORM WEATHER, DAMAGE, THEFT OR ANY OTHER HAZARD PRESENT AT THE STORAGE LOCATION.
- JOBSITE CLEANUP: REMOVE ALL CONSTRUCTIONS DEBRIS FROM THE JOBSITE AS REQUIRED AND PRIOR TO COMPLETION OF ALL WORK. ALL WORK AREAS SHOULD BE BROOK CLEANED, AND EQUIPMENT WIPED CLEAN PRIOR TO FINISHING PROJECT.
- Μ SPARE PARTS: PRIOR TO COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE OWNER WITH ALL SPARE PARTS PROVIDED FORM FACTORY WITH ANY EQUIPMENT PURCHASED FOR THE PROJECT.

- CORRECTIONS REQUIRED:
- CONTRACTOR SHOULD STOP ALL WORK AND NOTIFY THE ENGINEER IMMEDIATELY CODE REQUIREMENTS, CONTRACTOR SHALL REPLACE THE DEFECTIVE WORK AT NO
- DOCUMENTS. N.3. IF CONTRACTOR DAMAGES ADJACENT PROPERTY WHILE PERFORMING SCOPE OF WORK, HE SHALL MAKE PROMPT REPAIR OF ALL DAMAGE AT OWN EXPENSE, PRIOR TO REQUESTING FINAL PAYMENT
- Ο.
- 0.1. FURNISH AND INSTALL THE FOLLOWING: ROOFTOP UNITS AND CURBS OR DX SPLIT SYSTEMS DUCT CONTROL PANEL AND CONTROL WIRING.
- 0.2. INSTALL THE FOLLOWING: EXHAUST FANS, HOODS, AND DUCTS FOR VENTILATION OF COOKING EQUIPMENT - ICE MACHINE AIR COOLED CONDENSER ON ROOF.
- 0.3. GENERAL REQUIREMENTS: COORDINATION: COORDINATE WORK WITH OTHERS TRADES. LOCATIONS MAY BE REQUIRED.
- WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, EVENTS, ETC.
- Q. SUPPLY MECHANICAL EQUIPMENT.
- BY HIM.
- CONDENSATE DRAINAGE FROM ROOF TOP HVAC UNITS SHALL BE TRAPPED.
- U. MACHINERY.
- V. ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
- MECHANICAL CONTRACTORS SHALL COORDINATE ALL DUCTS AND DIFFUSER LOCATIONS WITH W. LIGHTING LAYOUTS AS REQUIRED.
- Υ. ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.
- Ζ. IDENTIFICATION, MOUNT 42" AFF.
- RESPONSIBLE FOR ARRANGING FACTORY AUTHORIZED START-UP AND ADJUSTMENT ON THE ICE MACHINES.
- AB. MECHANICAL CONTRACTOR TO INSULATE BACKSIDE OF ALL DIFFUSERS
- AC. TRANSITION ALL DUCTS AS REQUIRED TO ATTACH TO EQUIPMENT.
- AD. OFFSET RETURN AIR DUCTS FOR ROOF TOP AC UNITS TO AVOID FRAMING AS REQUIRED.
- AE. ALL DAMAGED COIL FINS SHALL BE COMBED STRAIGHT PRIOR TO OWNER HANDOVER.
- AF. RESUBMISSION OF SIGNED AND SEALED DRAWINGS.
- AG. EXHAUST HOOD NOTES
- MECHANICAL CONTRACTOR. CLOSURE STRIP.
- AG.3. EXHAUST FANS AND CURBS EXCEPT RESTROOM EXHAUST FAN AND CUBS. AH. THE MECHANICAL CONTRACTOR SHALL RECEIVE THE ABOVE EQUIPMENT, UNCRATE, BE
- LOSS OR DAMAGE TO THE ABOVE EQUIPMENT ONCE RECEIVED ON THE JOB. AI.
- NSF # 1362 BEAR THE NSF SEAL OF APPROVAL AK. AL. - U.L. CLASSIFICATION # 24N1 - MEET OR EXCEED NFPA # 96, (AHJ ADOPTED EDITION) & IMC AM
- AO. - IF REQUIREMENTS ARE NOT MEET, SEEK OWNER APPROVAL. AP.
- HOOD MANUFACTURER OF ANY LOCAL CODES WHICH WILL AFFECT THE HOOD MANUFACTURE OR INSTALLATION.
- EXTINGUISHING SYSTEM. COMPLETE EXTINGUISHING BY HOOD MANUFACTURER.
- LOCAL AUTHORITIES.
- AS. EXHAUST HOOD DUCT NOTES AS.1. ALL FLYER EXHAUST COLLARS AND EXHAUST DUCTWORKS ARE SIZED TO MAINTAIN NOTED PENETRATIONS SEALED LIQUID TIGHT.
- OF EACH VERTICAL RISER.
- THE HOOD SURFACE AND A MINIMUM OF 10" FROM ANY OUTSIDE AIR INTAKE.
- AS.5. ALL GREASE EXHAUST DUCTS SHALL HAVE LONG RADIUS ELBOWS. WITH 1" MINERAL WOOD AND WIRE MESH SECURED TO COMBUSTIBLES WITH 1" NON

IF CONTRACTOR IDENTIFIES ANY ACTUAL SITUATION OR SITE CONDITION THAT WILL PROHIBIT OR NEGATIVELY IMPACT THE INSTALLATION OR PERFORMANCE OF THE SYSTEMS AS DESIGNED. IF CONTRACTOR PERFORMS WORK, AND OR INSTALLS ANY EQUIPMENT THAT IS FOUND TO BE DEFECTIVE, OR OUT OF COMPLIANCE WITH BASIS OF DESIGN, MANUFACTURERS INSTRUCTIONS, OR

ADDITIONAL COST TO THE OWNER. ALL NEW WORK SHALL COMPLY WITH THE CONTRACT

SCOPE: PROVIDING ALL LABOR, MATERIAL, AND EQUIPMENT IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWING TO PROVIDE A COMPLETE AND PROPERLY OPERATING HEATING, VENTILATING, AIR CONDITIONING, AND REFRIGERATION SYSTEMS FOR THE BUILDING. WORK UNDER THIS SECTION INCLUDES, BUT IS NOT NECESSARILY LIMITED TO:

INSULATION AND DUCT WORK FOR FOR HVAC SYSTEMS DIFFUSERS, GRILLES, AND PLENUM BOXES

SHOWN ARE APPROXIMATE. REFER TO THE ARCHITECTURAL PLANS FOR EXACT MEASUREMENTS IN THE PLACEMENT OF EQUIPMENT, FIXTURES, OUTLETS, ETC. WHERE THE LOCATIONS ARE NOT CLEAR, OBTAIN THE EXACT LOCATION FROM OWNER AND FIELD VERIFY. THE PLANS DO NOT GIVE EXACT DETAILS AS TO ELEVATIONS AND LOCATION OF VARIOUS PIPES, FITTINGS, DUCTS, CONDUIT, ETC., AND DO NOT SHOW ALL OFFSETS AND OTHER INSTALLATION DETAILS WHICH

MECHANICAL CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, AS SHOWN ON THESE DRAWINGS,

ALL ROOF MOUNTED EQUIPMENT AND PENETRATIONS SHALL BE FLASHED A MINIMUM OF 12" ABOVE THE ROOF. PROVIDE AMPLE CURBS OF PIPE SEALS FOR ELECTRICAL CONDUITS WHICH

R. ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM ANY EXHAUST FAN OR PLUMBING

THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR EQUIPMENT FOR ADMINISTERING ALL WARRANTIES ON EQUIPMENT WHICH HE INSTALLS. THIS INCLUDES ALL CONDENSERS, REFRIGERANT LINES, AND OTHERS ITEMS FURNISHED BY OTHERS AS WELL AS THOSE FURNISHED

PROVIDE VIBRATIONS ISOLATION DEVICES AND FLEXIBLE CONNECTIONS TO ALL MOVING

THE CONTRACTOR SHALL PROVIDE COMPLETE INFORMATION TO THE OTHER CONTRACTORS AND TRADES AS REQUIRED FOR COMPLETION AND COORDINATION OF THE COMPLETE PROJECT.

THE CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES. ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL OPENINGS IN FOUNDATIONS, FLOORS, WALLS AND ROOFS SHALL BE DESIGNED INTO THE STRUCTURE INITIALLY BY THE USE OF SLEEVES, CURBS,

THERMOSTATS SHALL BE LOCATED GENERALLY AS SHOWN BUT THEIR EXACT LOCATION SHALL BE FIELD COORDINATED TO AVOID INTERFERENCE WITH WALL MOUNTED ITEMS. ONCE FIELD

AA. THE GENERAL CONTRACTOR SHALL PERFORM AND BE RESPONSIBLE FOR ALL REFRIGERATION WORK REQUIRED FOR THE ICE MACHINES. ALL THIS WORK SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTACT THE EQUIPMENT SUPPLIERS TO OBTAIN ALL NECESSARY INFORMATION TO PERFORM THE REFRIGERATION WORK. G.C. SHALL ALSO BE

"RE-ENGINEERING", "VALUE ENGINEERING" OR ANY DEVIATIONS FROM THE SHOWN DESIGN AND REQUIRED HVAC EQUIPMENT MUST BE REQUESTED AND APPROVED PRIOR TO BIDDING. UNAUTHORIZED SUBSTITUTIONS OR ALTERATIONS WILL VOID THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER & ARCHITECT OF RECORD AND LEAVE VIOLATORS RESPONSIBLE FOR

AG.1. THE FOLLOWING EQUIPMENT SHALL BE SUPPLIED BY OWNER AND INSTALLED BY THE

AG.2. STAINLESS STEEL HOODS AS SPECIFIED PRE PIPED FOR FIRE PROTECTION SYSTEM, AND CEILING

RESPONSIBLE FOR REPORTING DAMAGE RECEIVED DURING SHIPMENT. AND BE RESPONSIBLE FOR

EXHAUST HOODS PROVIDED WILL MEET OR EXCEED THE FOLLOWING REQUIREMENTS:

THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO OBTAINING A SET OF SHOP DRAWINGS FROM THE HOOD MANUFACTURER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE

AQ. THE HOOD MANUFACTURER WILL PROVIDE PRE-PIPED AUTOMATIC FIRE CONTROL SYSTEMS FOR ANY FRYER HOOD INCLUDING FIRE CONTROL CABINETS - AND FURNISH A 2 POLE MICRO SWITCH FURNISHED FOR EQUIPMENT SHUT OFF TO BE HOOKED UP BY G.C. THE HOOD MANUFACTURER WILL BE RESPONSIBLE FOR FINAL INSTALLATION AND INSPECTIONS OF THE HOOD FIRE

AR. THE PLUMING CONTRACTOR SHALL INSTALL THE MECHANICAL GAS VALVE IN ACCORDANCE WITH THE PLUMBING DRAWING. THE VALVE WILL BE PROVIDED TO HIM BY THE HOOD SUPPLIER. VERIFY WITH

EXHAUST AIR VELOCITY. ALL GREASE EXHAUST DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NFPA-96. GREASE EXHAUST DUCTWORK SHALL HAVE ALL SEAMS, JOINTS AND

AS.2. ALL HORIZONTAL RUNS OF GREASE DUCT, EXHAUST OR CONDENSATE SHALL SLOPE BACK TOWARD THE HOOD, GRILLE OR DRAIN AT A SLOPE OF 1" PER FOOT. PROVIDE A RESIDUE TRAP AT THE BASE

AS.3. THE MECHANICAL CONTRACTOR IS TO PROVIDE CLEANOUTS, IN GREASE EXHAUST DUCTWORK AT A MINIMUM OF 10" INTERVALS, AT EACH CHANGE OF DIRECTION AND AT EACH RESIDUE TRAP. AS.4. THE DISCHARGE OF THE GREASE EXHAUST FAN SHALL BE UPWARD AND A MINIMUM OF 40" ABOVE

AS.6. GREASE EXHAUST DUCT SHALL BE CARBON STEEL 16 GAUGE WELDED DUCTS PER NFPA-96 PROTECTED WITH THE FOLLOWING: 1" AIR SPACE FROM DUCT TO 22 GA SHEET METAL COVERED COMBUSTIBLE SPACERS TO REDUCE CLEARANCE TO COMBUSTIBLE TO 3" PER NFPA 96 A-1-3.2.

EQUIPMENT & MATERIAL - MECHANICAL (HVAC):

DUCTWORK SYSTEMS: ROUND DUCT: GALVANIZED STEEL. MINIMUM 1" PRESSURE RATED OR AS SHOWN ON PLANS. AT.1. FACTORY MADE ELBOWS AND FITTINGS OR QUALITY GAUGE, AND SLIP JOINT CONNECTIONS. AT.1.1. CONCEALED: SNAP-LOCK TYPE LONGITUDINAL SEAM, STANDING GAUGES AND SIZED FOR 1" PRESSURE RATING, OR AS SHOWN ON PLANS. ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATION SEALED WITH METALLIC DUCT TAPE OR MASTIC. ANY INTERIOR DUCTWORK DOWNSTREAM OF EXHAUST FANS SHALL HAVE HARD CAST MASTIC SEALER ON ALL JOINTS AND SEAMS AT.1.2. EXPOSED: SPIRAL ROUND TYPE, STANDARD GAUGES AND SIZES FOR 1" PRESSURE RATING OR AS SHOWN ON PLANS. ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH CLEAR SILICONE.INSTALL IN NEAT AND ORDERLY MANNER WITH FINISHED APPEARANCES, INCLUDING ALL HANGERS AND SUPPORTS. CLEAN ALL EXTERIOR SURFACES FOR PAINTING AFTER INSTALLATION. RECTANGULAR DUCT: GALVANIZED STEEL. MINIMUM 1" PRESSURE RATED OR AS SHOWN ON PLANS. AT.2.

MINIMUM GAUGE, JOINTS AND REINFORCEMENT PER LATEST VERSION OF "SMACNA HVAC DUCT CONSTRUCTION STANDARDS". ANY INTERIOR DUCTWORK DOWNSTREAM OF EXHAUST FANS SHALL HAVE HARD CAST MASTIC SEALER ON ALL JOINTS AND SEAMS. AT.2.1. CONCEALED: ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH METALLIC DUCT TAPE OR MASTIC. SUPPLY AND RETURN DUCTWORK IN UNCONDITIONED SPACES SHALL HAVE MINIMUM R-6 EXTERNAL DUCT WRAP INSULATION AFTER SEALING.

AT.2.2. EXPOSED ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH CLEAR SILICON CAULKING. EXTERIOR DUCT INSTALLATIONS SHALL HAVE WELDED OR FLANGED AND GASKETED JOINTS. MINIMUM R-6 INTERNAL, FOIL-FACED DUCT LINER FOR FINISHED AREAS, MINIMUM R-6 EXTERIOR DUCT INSULATION BOARD FOR MECHANICAL ROOMS, AND R-6 DUCT WRAP FOR ALL OTHER UNCONDITIONED AREAS WHERE EXPOSED.

AT.3. FLEX DUCT: HEAVY SPRING STEEL WIRE HELIX, PERMANENTLY BONDED INNER FILM LINER AND FIBERGLASS SCRIM, FIBERGLASS BLANKET INSULATION AND POLYETHYLENE OUTER JACKET, AS MANUFACTURED BY THERMAFLEX, TYPE G-KM OR EQUAL. PROVIDE 2 TIE WRAPS AT EACH CONNECTION TO STEEL DUCTWORK, DEVICES OR EQUIPMENT.

AT.4. FLEX CONNECTION: 3" GALVANIZED STEEL EDGES WITH 3" FLEXIBLE VINYL STRIP IN MIDDLE. MINIMUM 2" PRESSURE RATED, AS MANUFACTURED BY DUCTMATE OR EQUAL. PLENUMS: GALVANIZED STEEL, MINIMUM STEEL GAUGE, JOINTS AND REINFORCEMENT PER LATEST

VERSION OF "SMACNA HVAC DUCT CONSTRUCTION STANDARDS" AT.5.1. ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH METALLIC DUCT TAPE OR

MASTIC. AT.5.2. FAN INLET OR DISCHARGE: PROVIDE ALL PLENUMS WITH MINIMUM 2" INTERIOR. FOIL-FACED DUCT LINER FOR NOISE REDUCTION. PROVIDE MINIMUM 12" SQ. DUCT ACCESS FOR DOOR FOR INTERNAL SERVICE AND CLEANING, AS SHOWN ON PLANS.

AT.5.3. ROOF HOODS OR WALL LOUVERS: PROVIDE ALL PLENUMS WITH MINIMUM 1" EXTERIOR DUCT INSULATION BOARD IN MECHANICAL ROOMS, AND 1" DUCT WRAP WHERE CONCEALED. PROVIDE MINIMUM 12: SQ. DUCT ACCESS DOOR FOR INTERNAL SERVICE AND CLEANING, OR AS SHOWN ON PI ANS

AT.6. INSULATION: SUPPLY, RETURN AND OUTSIDE AIR VENTILATION DUCTWORK INSTALLED IN UNCONDITIONED SPACES SHALL HAVE MINIMUM R-8 EXTERNAL DUCT WRAP INSULATION AFTER SEALING. SEE DUCT WRAP SPECIFICATIONS.

AT.6.1. PROVIDE INTERNAL DUCT LINER FOR RECTANGULAR DUCTWORK OR PLENUMS INSTALLED IN EXPOSED FINISHED AREAS.

AT.6.2. PROVIDE EXTERNAL DUCT INSULATION BOARD FOR RECTANGULAR DUCTWORK OR PLENUMS INSTALLED IN MECHANICAL SPACES. SEE DUCT INSULATION BOARD SPECIFICATIONS. AT.7. DUCT LINER: OWENS CORNING, SERIES 703 OR EQUAL. FIBERGLASS INSULATION FORMED INTO

RIGID BOARD, BONDED TO FOIL-REINFORCED KRAFT VAPOR RETARDING FACING, MINIMUM R-8 RATING FOR INTERIOR INSTALLATIONS, AND R-8 FOR EXTERIOR INSTALLATIONS. AT.8. DUCT WRAP: PROVIDE DUCT WRAP ON ALL SUPPLY AND RETURN DUCTWORK INSTALLED IN

CONCEALED, UNCONDITIONED SPACES.OWENS CORNING, ALL SERVICE DUCT WRAP, OR EQUAL FIBERGLASS BLANKET, FACTORY LAMINATED TO FRK VAPOR RETARDING FACING, MINIMUM R-8 RATING FOR INTERIOR INSTALLATIONS, AND R-8 FOR EXTERIOR INSTALLATIONS. AT.9. DUCT INSULATION BOARD: OWENS CORNING, SERIES 701 FOR CURVED SURFACES AND SERIES 7056 FOR FLAT SURFACES, OR EQUAL. FIBERGLASS INSULATION FORMED INTO RIGID BOARD, BONDED TO

FOIL-REINFORCED KRAFT VAPOR RETARDING FACING, MINIMUM R-8 RATING FOR INTERIOR INSTALLATIONS, AND R-8 FOR EXTERIOR INSTALLATIONS. AT.10. DUCT ACCESS DOOR: NAILOR INDUSTRIES, 08SCL SERIES, OR EQUAL. RATED FOR MEDIUM AND LOW

- PRESSURES, SMACNA CONSTRUCTIONS SPECIFICATIONS, GALVANIZED STEEL CONSTRUCTION, REMOVABLE DOOR WITH 1" INTERNAL FOIL-FACED INSULATION, KNOCK-OVER TABS PROGRESSIVE CAMLOCK OPERATION.
- AT.11. MANUAL BALANCING DAMPERS: PROVIDE MANUAL BALANCING DAMPERS WHERE SHOWN ON PLANS AND AS NEEDED FOR PROPER DISTRIBUTION OF AIRFLOWS. BALANCING DAMPERS SHALL BE SEPARATE FROM THE GRILLES AND DIFFUSES AND INSTALLED A MINIMUM OF 5 DUCT DIAMETERS UPSTREAM OR DOWNSTREAM TO REDUCE AIR NOISE.

AT.11.1.ROUND DAMPERS:20 GAGE, GALVANIZED STEEL, 3/8" SQUARE AXLE SHAFT EXTENDING BEYOND FRAME THROUGH FACTORY MOUNTED LOCKING HAND QUADRANT. MOLDED SYNTHETIC BEARINGS, MILL GALVANIZED FINISH, AS MANUFACTURED BY RUSKIN, MODEL MDRS25 PR APPROVED EQUAL. AT.11.2.RECTANGULAR DAMPERS: 22 GAGE, GALVANIZED STEEL ORT SMANCA STANDARD, WHICHEVER IS GREATER. SQUARE AXLE SHAFT EXTENDING BEYOND FRAME THROUGH FACTORY MOUNTED

LOCKING HAND QUADRANT, MOLDED SYNTHETIC BEARINGS, MILL GALVANIZED FINISH, AS MANUFACTURED BY RUSKIN, MODEL MD25 OR APPROVED EQUAL. AT.12. MOTORIZED BACKDRAFT DAMPERS: GALVANIZED STEEL FRAME, ALUMINUM BLADES WITH SEALS,

SIR LEAKAGE OF 4 CFM/SQFT OR LESS AT 1"WC PRESSURE DIFFERENTIAL, RATED FOR VELOCITIES UP TO 2500 FPM AND PRESSURES UP TO 2" WC, AS MANUFACTURED BY GREENHECK, OR EQUAL. PROVIDE WITH CLASS I DAMPER MOTOR ON ALL AIR INTAKE AND EXHAUST OPENINGS FOR HOODS AND FANS. AT.13. GRILLES AND DIFFUSERS: AS SCHEDULED OR EQUAL. PROVIDE WITH ALL REQUIRED FACTORY

ACCESSORIES NEEDED FOR COMPLETE INSTALLATION.

AT.13.1.WHERE REQUIRED, PROVIDE FACTORY MOUNTING FRAME FOR INSTALLATION INTO SHEETROCK CEILINGS. AT.13.2.FOR SPIRAL DUCT MOUNTED SIDEWALL GRILLES, PROVIDE FACTORY SCOOP FOR BALANCING. AT.14. WALL LOUVERS: AS SCHEDULED OR EQUAL. FIELD VERIFY FRAME SIZE AND TYPE WITH ACTUAL

WALL SECTION PRIOR TO ORDERING. PROVIDE WITH BAROMETRIC OR MOTORIZED BACKDRAFT DAMPERS AS NOTED ON PLANS. AT.15. ROOF HOODS: AS SCHEDULED OR EQUAL. PROVIDE WITH

AT.16. FACTORY CURBS AND BAROMETRIC OR MOTORIZED BACKDRAFT DAMPERS AS NOTED ON PLANS. BA. ROOFTOP UNITS: RTU PERFORMANCE, MAKE AND MODEL NUMBERS AS SCHEDULED. MAKE

MODIFICATIONS OR ADJUSTMENTS AS REQUIRED TO OPERATE EXISTING RTUS PER CONTROL DETAILS ON PLANS AND CONTRACTOR TO ASSUME ALL LIABLITY ON EXISTING UNITS.

EXHAUST FAN: PERFORMANCE, MAKE AND MODEL NUMBER AS SCHEDULED, OR APPROVED EQUAL. BB. PROVIDE WITH FACTORY CURB, CLASS I MOTORIZED BACKDRAFT DAMPERS, DISCONNECT SWITCH AND ECM MOTOR IF FRACTIONAL HP.

BC. CONTROL SYSTEMS: PROVIDE A COMPLETE SYSTEM OF CONTROLS TO PROPERLY OPERATE ALL HVAC SYSTEMS SHOWN ON PLANS. PLANS SHOW ONLY THE ANTICIPATED MAJOR COMPONENTS OF CONTROL SYSTEM, S AND SEQUENCE OF OPERATIONS ONLY. THEY DO NOT SHOWN EVERY SINGLE COMPONENT OF THE SYSTEM OR WIRING AND INSTALLATION DETAILS. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL ITEMS AS NEEDED TO MEET THE PERFORMANCE SEQUENCES SHOWN ON PLANS.

CONTROL WIRING: BC.1. BC.1.1. ALL CONTROL WIRING SHALL BE AS SPECIFIED BY CONTROL EQUIPMENT MANUFACTURER. THE NUMBER OF CONDUCTORS AND GAUGE SHALL MEET THEIR REQUIREMENTS. AS WELL AS THE METHOD OF INSTALLATION.

BC.1.2. ALL CONTROL WIRING EXPOSED IN MECHANICAL ROOMS SHALL BE INSTALLED IN EMT CONDUIT. BC.1.3. WIRING INSTALLED IN CEILING PLENUMS AND INSIDE WALLS SHALL BE PLENUM RATED AND RUN EXPOSED UNLESS OTHERWISE REQUIRED BY THE LOCAL AUTHORITY.

BC.2. THERMOSTATS: AS MANUFACTURED BY HONEYWELL OR EQUAL, DESIGNED TO OPERATE THE TYPE OF COOLING OR HEATING UNIT TO BE CONNECTED, WITH NUMBER OF COOLING AND HEATING STAGES EQUAL TO THOSE OF THE UNIT SERVED. ALL THERMOSTATS SHALL INCLUDE CAPABILITIES AS REQUIRED BY STATED IECC, INCLUDING 7-DAY SCHEDULED TEMPERATURE SETBACK WITH OPTIMAL START AND MANUAL OVERRIDE OF UP TO 2 HRS.

BC.2.1. MULTI-STAGE UNITS: PROVIDE SEPARATE CONTROL WIRE FOR EACH STAGE OF HEAT AND COOLING FOR ALL MULTI-STAGE UNITS. DO NOT JUMPER WIRE STAGES TOGETHER TO MAKE THEM RUN SIMULTANEOUSLY

BC.2.2. REMOTE SENSORS: WHERE SHOWN ON PLANS PROVIDE A REMOTE TEMPERATURE SENSOR COMPATIBLE WITH THERMOSTAT CONTROLLING UNIT. CONNECT TO THERMOSTAT PER MANUFACTURER'S INSTRUCTIONS. ADJUST THERMOSTAT PER MANUFACTURER'S INSTRUCTIONS TO UTILIZE REMOTE SENSOR FOR UNIT CONTROL AFTER INSTALLATION.

BD INTERLOCKS:

BACKDRAFT DAMPERS: FOR ALL BACKDRAFT DAMPERS SERVING EXHAUST AND OUTSIDE AIR BD.1. OPENING ON THE PLANS, INTERLOCK CLASS I MOTORIZED DAMPERS TO CLOSE WHEN SYSTEMS ARE NOT IN OPERATION.

EXHAUST FANS: INTERLOCK EXHAUST FANS TO OPERATE SIMULTANEOUSLY WITH HVAC UNITS AS BD.2. NOTED ON PLANS, USING AUXILIARY CONTACTS OR RELAYS IN UNIT STARTERS. PROVIDE ALL REQUIRED CONDUIT, WIRING AND CONTROL COMPONENTS NEEDED TO PROVIDE THE AUTOMATIC SIMULTANEOUS OPERATION.

BD.3. TESTING OF THE INTERLOCKS SHALL BE A PART OF THE STARTUP PROCESS FOR HVAC EQUIPMENT AND SHALL BE DOCUMENTED ON STARTUP SHEETS, PROVIDED TO THE PM.

SMOKE DETECTORS: PROVIDE A RETURN DUCT MOUNTED SMOKE DETECTOR FOR ALL HVAC UNITS WITH GREATER THAN BE.1. 2.000 CFM OF AIRFLOW. HVAC UNITS WITH GREATER THAN 15.000 CFM OF AIRFLOW SHALL ALSO HAVE SMOKE DETECTOR INSTALLED IN SUPPLY DUCTWORK AS SPECIFIED IN NFPA 90A. DETECTORS SHALL BE WIRED TO SHUT DOWN THE UNIT UPON ACTIVATION. AND INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL.

BF.1.

BF.3.

BF.6.

BG.8.

BH.

BH.1.

BI.1.

BI.3.

BI.4.

WHERE AN APPROVED FIRE ALARM SYSTEM IS INSTALLED IN THE BUILDING, THE DUCT SMOKE DUCTWORK AS SPECIFIED IN NFPA 90A. DETECTORS SHALL BE WIRED TO SHUT DOWN THE UNIT UPON ACTIVATION, AND INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAI

BE.3. WHERE AN APPROVED FIRE ALARM SYSTEM IS INSTALLED IN THE BUILDING, THE DUCT SMOKE DETECTORS SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM AND INITIATE EITHER AN ALARM SIGNAL AT THE PROTECTED PREMISES, A SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION, OR BE MONITORED BY A SUPERVISING STATION. HVAC DRAWINGS:

THESE DRAWINGS ARE INTENDED TO GENERALLY SHOW THE EXISTING BUILDING AND HVAC SYSTEMS MODIFICATIONS REQUIRED FOR THIS PROJECT. INFORMATION PROVIDED INCLUDES LOCATION, QUANTITY, TYPE, SIZE, CAPACITY AND FUNCTION OF SPECIFIC COMPONENTS OF THE NEW AND MODIFIED HVAC SYSTEMS TO BE PROVIDED BY THE CONTRACTOR

BF.2. SEE DIFFUSER AND GRILLE SCHUEDULE FOR ALL BRANCH DUCT SIZES NOT SHOWN ON PLAN FOR CLARITY, ALL BRANCH DUCTS AND CONNECTING FLEX DUCTS SHALL EQUAL DIFFUSER OR GRILLE COLLAR SIZE AS SCHEDULE.

ADJUST DUCT SIZES SHOWN ON PLANS AS NEEDED FOR OFFSETS AND INTEREFRENCES IDENTIFIED IN THE FIELD AND OR CREATED BY OTHER TRADES. MAINTAIN DUCT CROSS SECTIONAL AREA THROUGH OFFSETS, ELBOWS AND TRANSITIONS.

BF.4. INCIDENTAL MODIFICATION OR DEMOLITION OF EXISTING HVAC SYSTEMS AND COMPONENTS AS REQUIRED FOR INSTALLATION OF NEW WORK IS INCLUDED AS PART OF THE PROJECT. WHETHER SHOWN ON PLANS OR NOT. CONTRACTOR SHALL FIELD VERIFY ALL REQUIREMENTS PRIOR TO BIDDING PROJECT.

CEILING TILE AND GRID REMOVAL MODIFICATION AND REINSTALLATION AS REQUIRED FOR WORK SHOWN IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE HVAC CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED WORK ACCESS ABOVE ALL LAY-IN CEILINGS.

RELOCATION OF EXISTING BUILDING SYSTEMS AND EQUIPMENT SUCH AS LIGHT FIXTURES. FIRE SPRINKLER PIPING AND HEADS, SMOKE DETECTORS, ELECTORS, ELECTRICAL CONDUITS, PLUMBING, ETC., AS REQUIRED FOR INSTALLATION OF NEW WORK IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE HVAC CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES

THE EXISTING BUILDING HVAC SYSTEMS ARE INTENDED TO BE REUSED AS SHOWN ON PLANS OR AS INSTALLED IF NOT SHOWN ON PLANS. ALL EXISTING HVAC SYSTEMS AND PERFORMANCE DATA SHOWN ON PLANS IS FOR REFERENCE ONLY AND MAY BE DIFFERENT IN THE FIELD. CONTRACTOR SHALL FIELD SURVEY, TEST AND INSPECT ALL EXISTING HVAC SYSTEMS PRIOR TO BUILDING TO ENSURE HE UNDERSTANDS AND ACCEPTS ALL EXISTING CONDITIONS.

THE EXISTING HVAC SYSTEMS AIRFLOWS SHOWN ON PLANS ARE FOR REFERENCE ONLY TO ASSIST WITH COMFORT BALANCING TO BE PROVIDED BY THE HVAC CONTRACTOR AND SPECIFIED BY THE OWNER.

CUTTING AND PATCHING:

WHERE CUTTING AND PATCHING ARE REQUIRED TO INSTALL HVAC SYSTEMS CONTRACTOR SHALL PROVIDE WORK AS NEEDED. AFTER INSTALLATION, PATCH ALL OPENING TO MATCH ADJUSTMENT FINISHED SURFACES. FINISHED PAINTING TO BE PROVIDED BY OTHERS.

DUCTWORK, PIPING AND SUPPORTS:

LOCATE ALL BALANCING DAMPERS IN ACCESSIBLE LOCATIONS, WHERE INSTALLED ABOVE SHEETROCK CEILING, COORDINATE WITH OTHER TRADES TO PROVIDE ACCESS HATCH FOR BALANCING.

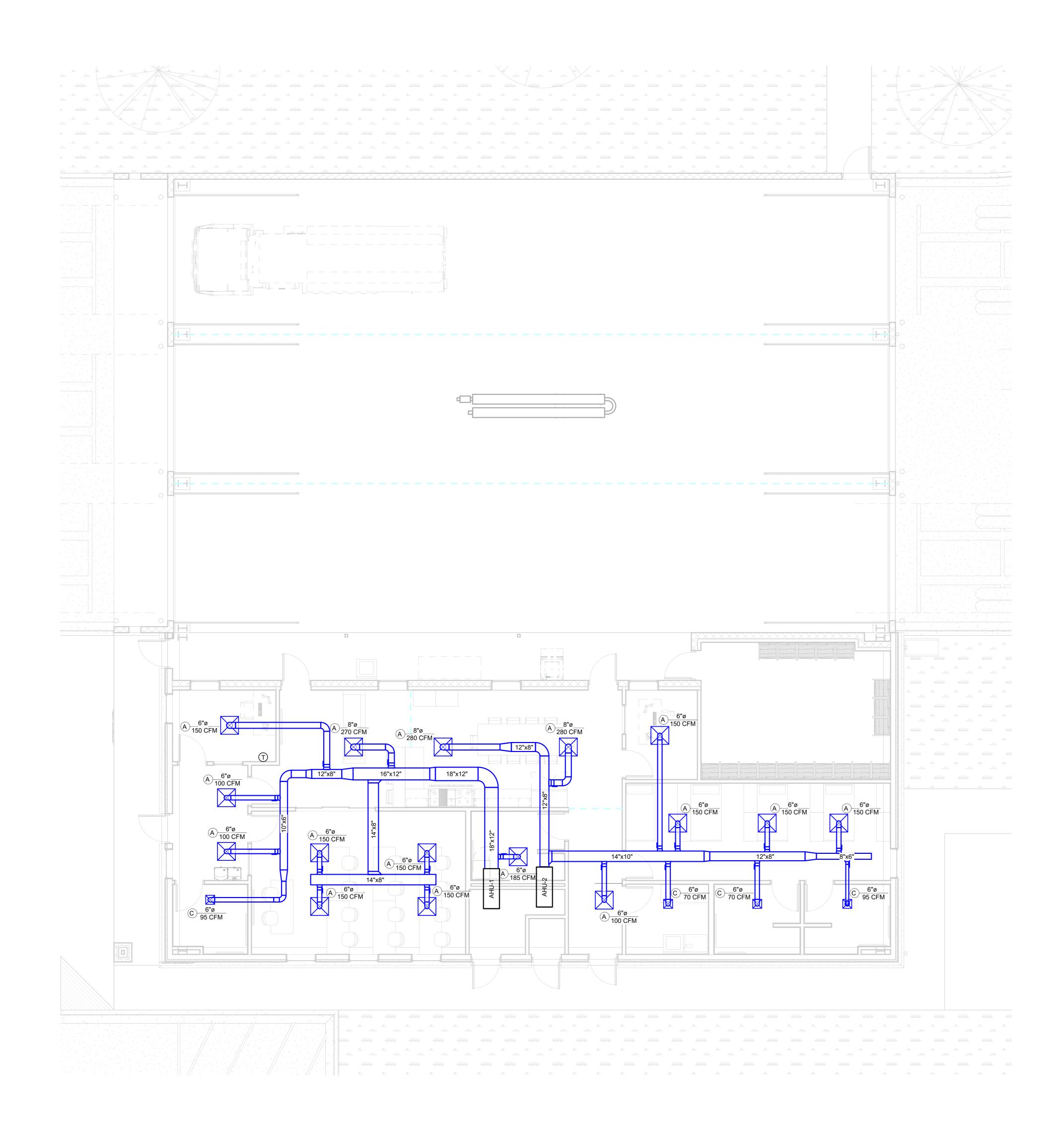
HOLD ALL DUCTWORK AND PIPING TIGHT AGAINST STRUCTURES, RUN IN A NEAT AND WORKMAN LIKE MANAGER PARALLEL TO BUILDING LINES WHEREVER POSSIBLE. PROVIDE ALL REQUIRED DUCT AND PIPE HANGERS AND SUPPORTS WITH PROPER SPACING PER CODE REQUIREMENTS.

GROUP PARALLEL RUNS OF DUCTWORK AND PIPING TOGETHER ON COMMON HANGERS AND SUPPORTS TO MINIMIZE SPACE WHEREVER POSSIBLE. ALL SUPPLY AND RETURN DUCTWORK CONCEALED ABOVE CEILINGS SHALL BE INSULATED AFTER INSTALLATION AND SEALING. SEE SPECS FOR INSULATION REQUIREMENTS.

DESIGN WITHOUT CONSTRUCTION ADMINISTRATION:

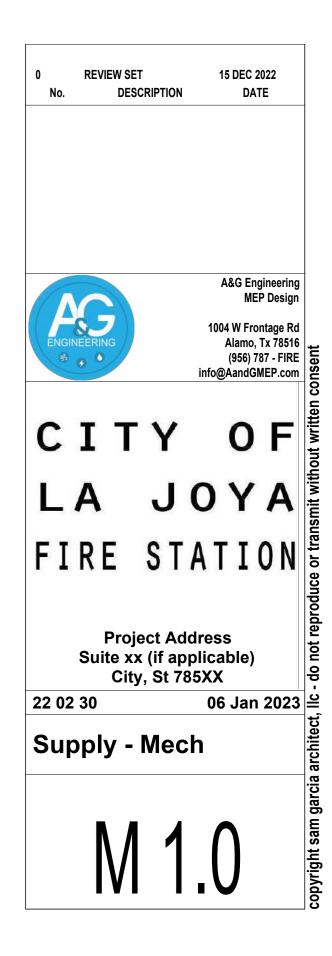
IT IS UNDERSTOOD AND AGREED THAT THE ARCHITECT/ENGINEER'S SCOPE DOES NOT INCLUDE PROJECT OBSERVATION OR REVIEW OF THE CONTRACTOR'S PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES. THE OWNER AGREES TO PROVIDE CONSTRUCTION ADMINISTRATION AND ASSUMES ANY AND ALL POTENTIAL LIABILITY ARISING FROM SUCH ADMINISTRATION. THE OWNER ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE CONTRACT DOCUMENTS AND FOR CONSTRUCTION OBSERVATION AND THE OWNERS WAIVES ANY CLAIMS AGAINST THE ARCHITECT/ENGINEER THAT MAY BE IN ANY WAY CONNECTED THERETO. THE ARCHITECT/ENGINEER WILL NOT RESPOND TO ANY QUESTIONS DIRECTED TO THE INTERPRETATION OF THE CONTRACT DOCUMENTS OR IN RESPONSE TO ISSUES ENCOUNTERED BY AND AS RELAYED BY THE CONTRACTOR IN THE FIELD.

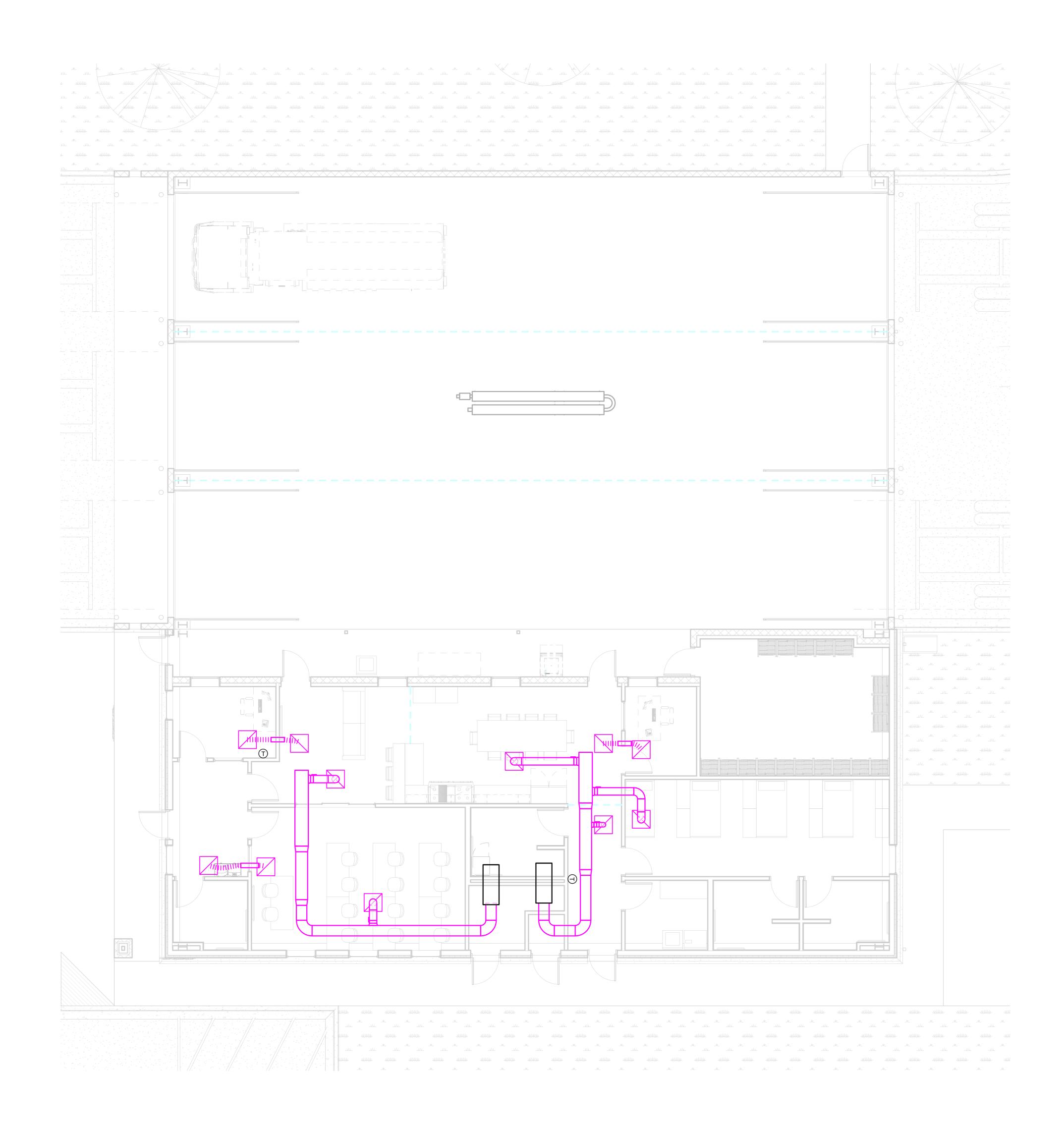
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EAT- ENTERING AIR TEMPERATUREPH- PHASEEER- ENERGY EFFICIENCY RATIOPLCS- PLACESEF- EXHAUST FANPM- PROJECT MANAGERELECT- ELECTRICALPSIG- POUNDS PER SQUARE INCHENGR- ENGINEER OR ENGINEERINGRA- RETURN AIRENT- ENTERINGSA- SUPPLY AIREXH- EXHAUSTSEER- SEASONAL ENERGY EFFICIENCY RATIOEXT- EXTERNALSEENSEEN	ION ole)
HZ - HERTZ IECC - INTL ENERGY CONSERVATION CODE IN - INCHES IMC - INTERNATIONAL MECHANICAL CODE VEL - VELOCITY WB - WET BULB TEMPERATURE WG - WATER GAUGE WG - WATER GAUGE	Jan 2023 Mech



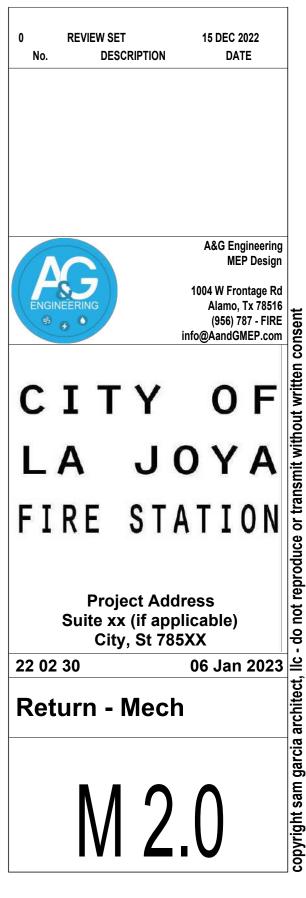
GENERAL NOTES:

- A. HVAC UNIT FAN SHALL BE PLACED IN "AUTO" RUN POSITION, NOT "CONTINUOUS RUN" POSITION.
- B. THERMOSTAT SHALL NOT BE SET BELOW 72 deg. F FOR COOLING.
- C. SYSTEM SHALL NOT BE OPERATED UNTIL BUILDING INTERIOR IS "FINISHED OUT". FIRST WEEK OF OPERATION, TEMPERATURE SHALL NOT BE SET BELOW 78 deg. F, SECOND WEEK: 76 deg. F, THIRD WEEK: 74 deg F, BUILDING MUST BE SLOWLY BROUGHT TO OPERATING TEMPERATURE TO PREVENT THE FORMATION OF MOISTURE ON THE WALLS, CEILING, ETC.
- D. CONTRACTOR SHALL ENSURE REFRIGERANT LINE IS LESS THAN 60 FEET. IF OVER 60 FEET CONTRACTOR SHALL ADD A PUMP.





- 1. CONTROLS FOR A/C UNIT WILL BE BY MEANS OF A 24 VOLT 7-DAY PROGRAMMABLE THERMOSTAT WITH HEAT-OFF-COOL AND FAN ON-AUTO CAPABILITIES SHOWN ON A DIGITAL DISPLAY. MOUNT THERMOSTAT AT 48" ABOVE FINISHED FLOOR. PROVIDE WITH KEYED CLEAR PLASTIC COVER.
- 2. WEATHERPROOF METAL WALL CAP FOR EXHAUST SYSTEM. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO INSTALLATION.
- 3. WEATHERPROOF METAL WALL CAP FOR OUTSIDE AIR SYSTEM. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO INSTALLATION.
- 4. PROVIDE MOTORIZED VOLUME DAMPERS ON OUTSIDE AIR DUCT.
- 5. PROVIDE AND INSTALL VEHICLE EXHAUST EXTRACTION SYSTEM MODEL PLYMOVENT STR-10520. CONTRACTOR SHALL VERIFY EXACT LOCATION PRIOR TO BIDDING AND ANY WORK.
- 6. PROVIDE EXTERIOR DRYER WALL VENT METAL COVER. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO ANY WORK.



HVAC SYSTEM SCHEDULE						
AIR HANDLING UNIT DESIGNATION	AHU-3, 4 (2.5 TON)	AHU-1, 2 (4 TON)				
SUPPLY CFM	940	1560				
OUTSIDE AIR CFM	140	230				
EXTERNAL S.P. ("W.G.)	0.5	0.5				
MOTOR HP	0.33	0.5				
TOTAL CAPACITY (MBH)	27,077	45,598				
SENSIBLE CAPACITY (MBH)	22,809	38,298				
EAT DB/WB (°F)	78/64	78/64				
LAT DB/WB (°F)	55.1/54.0	54.8/53.8				
ELECTRIC HEAT (KW)	7.5	12.5				
HEAT STAGES	1	1				
HEATING EAT DB (°F)	68.0	68.0				
HEATING LAT DB (°F)	87.0	87.0				
VOLTAGE/PHASE	208/1	208/1				
MCA/MOCP	36.0/40	61.0/70				
MANUFACTURER	LENNOX	LENNOX				
MODEL	CBX25UH-030	CBX25UH-048				
UNIT WEIGHT (LBS)	126	186				
CONDENSING UNIT DESIGNATION	CU-3, 4 (2.5 TON)	CU-1, 2 (4 TON)				
OUTDOOR AMBIENT (°F)	98	98				
VOLTAGE/PHASE	208/1	208/1				
MCA/MOCP	17.2/30	26.7/45				
MANUFACTURER	LENNOX	LENNOX				
MODEL	14ACX-030	14ACX-048				
UNIT WEIGHT (LBS)	171	250				
	(1.4)	(1.4)				

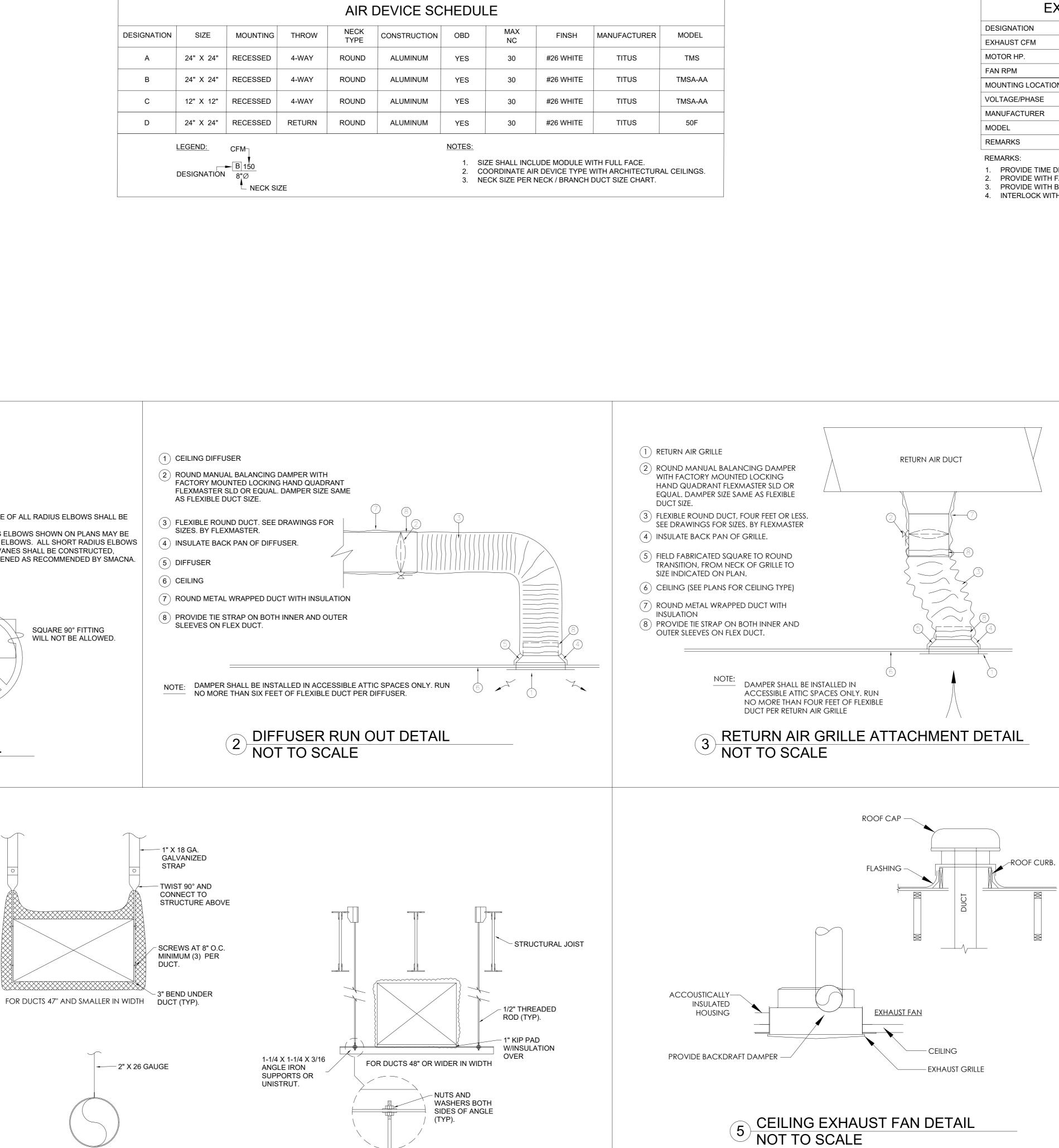
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EFFICIENCY EER (SEER)

R SHALL EQUAL OR BE GREATER THAN 1/6W. NOTES: 1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND. 2. ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE R SHALL EQUAL OR BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS GREATER THAN 1/3W. SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED. SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA. R SHALL EQUAL OR BE GREATER THAN W. RADIUS DUCT ELBOW DETAIL NOT TO SCALE DUCT SUPPORT: 1. HANGER ATTACHMENTS TO STRUCTURE: SEE DIVISION 23 SECTION "HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT:. MINIMUM ROD OR BOLT SIZE%S(9MM). 2. SUSPEND HORIZONTAL GALVANIZED RECTANGULAR DUCTWORK 47" (1220MM) OR LESS IN LARGEST DIMENSION FROM CONSTRUCTION BY 1 INCH BY 18 GAUGE (25MM X 1.3MM) GALVANIZED STRAP HANGERS SCREWED 8 INCHES (200MM) O.C. TO DUCTS. USE THREE (3) SCREWS MINIMUM PER STRAP. BEND STRAP UNDER DUCT AND SCREW INTO BOTTOM OF DUCT. 3. SUSPEND HORIZONTAL RECTANGULAR STAINLESS STEEL AND COATED

- DUCTWORK 48" (1220MM) OR LESS IN LARGEST DIMENSION FROM CONSTRUCTION BY 1 INCH BY 18 GAUGE (25MM BY 1.3MM) GALVANIZED STEEL STRAP HANGERS BOLTED TO MATING FLANGES AT MINIMUM OF THREE
- LOCATIONS. (TOP,MIDDLE,BOTTOM). 4. DUCTS OVER 48" (1220MM) IN LARGEST DIMENSION SUPPORT FROM UNISTRUT, SUPERSTRUT, OR EQUAL, TRAPEZE HANGERS SIZED FOR THE LOAD, PER SMACNA STANDARDS.
- 5. SUPPORT ROUND STEEL DUCTWORK FROM CONSTRUCTION BY 1 INCH BY 18 GUAGE (25MM BY 1.3MM) GALVANIZED STRAP HANGERS WITH INSIDE RADIUS OF LOOP HANGER EQUAL TO OUTSIDE RADIUS OF DUCT. FOR DUCTS UNDER 12" DIAMETER, PROVIDE SUPPORTS 10 FEET (3CM) O.C; 12 FEET (3.6M) AND OVER, 6 FEET (1.8M) O.C. PROVIDE NOT LESS THAN ONE HANGER PER BRANCH AND AT EACH CHANGE OF DIRECTION.
- 6. SUPPORT ROUND FLEXIBLE DUCTWORK FROM CONSTRUCTION BY 2 INCHES BY 26 GAUGE (50 MM BY 0.55MM) GALVANIZED STRAP HANGERS WITH INSIDE RADIUS OF LOOP HANGER EQUAL TO OUTSIDE RADIUS OF DUCT. LOCATE SUPPORTS TO AVOID KINKS AND SHARP BENDS.
- 7. DOUBLE FOLD STRAPS AT ATTACHMENTS TO STRUCTURE. 8. SPACE HANGERS NOT OVER 96 INCHES (2440MM) ON CENTER FOR DUCTS SMALLER THAN 18 INCHES (457MM) IN LARGEST DIMENSION; 60 INCHES (1524MM) O.C. FOR DUCTS 18 INCHES (457MM) AND OVER.





DUCT HANGER DETAIL NOT TO SCALE

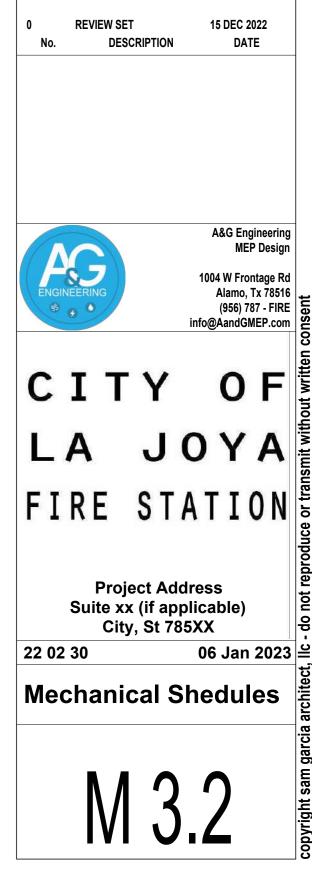
EXHAUST FAN SCHEDULE

DESIGNATION	EF-1, 2, 3	EF-4, 5	EF-6
EXHAUST CFM	73	212	2000
MOTOR HP.	90 WATTS	185 WATTS	9900 WATTS
FAN RPM	900	1,400	3,490
MOUNTING LOCATION	CEILING	CEILING	WALL
VOLTAGE/PHASE	120V/1-PHASE	120V/1-PHASE	208V/3-PHASE
MANUFACTURER	СООК	COOK	PLYMOVENT
MODEL	GC-124	GC-182	TEV-559-60
REMARKS	ALL	ALL	

1. PROVIDE TIME DELAYED SHUTOFF.

2. PROVIDE WITH FAN SPEED CONTROLLER. 3. PROVIDE WITH BACK DRAFT DAMPER.

4. INTERLOCK WITH LIGHTS.



GENERAL NOTES - PLUMBING

A. A.1.	PLUMBING CONDITIONS FOR PLUMBING WORK: ALL WORK UNDER THIS CONTRACT SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH FEDERAL, STATE, AND LOCAL CODES. WHERE THESE PLANS AND SPECIFICATIONS ARE IN CONFLICT WITH SUCH CODES, THE CODES SHALL GOVERN. BIDS SUBMITTED BY CONTRACT SHALL INCLUDE WORK REQUIRED TO COMPLY WITH ALL SUCH CODES. ANY ITEMS REQUIRED AND/OR MISSED IN THESE BASIS OF DESIGN DOCUMENT, SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR AT CONTRACTORS
A.2.	EXPENSE AND ZERO EXPENSE TO THE OWNER AND/OR DESIGN TEAM. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION. CONTRACTOR SHALL STUDY CONTACT DOCUMENTS, FULLY UNDERSTAND AND ACCEPT THE BASIS OF
A.3.	DESIGN AND SCOPE OF WORK. SUBMISSION OF BID INDICATES CONTRACTOR'S COMPLETE APPROVAL AND ACCEPTANCE OF CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN, TRAINED LICENSED AND
	EXPERIENCED IN COMMERCIAL PLUMBING, AND WHO ARE FAMILIAR WITH THE CONSTRUCTION DOCUMENTS AND METHODS OF PERFORMING THE WORK REQUIRED.
A.4.	CONTRACTOR SHALL PROVIDE A MINIMUM ONE (1) YEAR WARRANTY ON ALL LABOR AND MATERIALS INSTALLED. CONTRACTOR SHALL MAKE ALL WARRANTIED REPAIRS OR REPLACEMENT WITHIN SEVEN (7) CALENDAR DAYS, AT NO ADDITIONAL COST TO THE OWNER.
B. B.1.	BASIS OF DESIGN: ALL CONSTRUCTION DOCUMENTS PROVIDED BY OWNER, INCLUDING ENGINEERING DRAWINGS, NOTES, SCHEDULE, DETAILS, CALCULATIONS AND SPECIFICATIONS PROVIDED, ALONG WITH EQUIPMENT MANUFACTURER'S DRAWINGS AND SPECIFICATIONS, FROM THE BASIS OF DESIGN AND GENERALLY SCHEMATIC IN NATURE, PIPING, FIXTURES AND EQUIPMENT SHOWN ON DRAWINGS IS UNDERSTOOD TO BE THE GENERAL ARRANGEMENT ONLY, TO BE FIELD ADJUSTED AS REQUIRED.
B.2.	DRAWINGS DO NOT SHOW EVERY DETAIL OR ITEM REQUIRED FOR FIXTURE AND EQUIPMENT INSTALLATIONS. REFER TO ALL EQUIPMENT MANUFACTURER'S INSTRUCTIONS FOR ADDITIONAL
.3.	REQUIRED PARTS AND ACCESSORIES NEEDED FOR COMPLETE INSTALLATIONS. INVERT ELEVATIONS (IE) OF SANITARY DRAIN PIPING, SHOWN ON PLANS, IS ESTIMATED MINIMUM DEPTH BELOW FINISHED FLOOR ONLY, COORDINATE W/CIVIL FOR ADDITIONAL INFORMATION NOT SHOWN.
.4.	THESE DRAWINGS ARE INTENDED TO GENERALLY SHOW THE EXISTING BUILDING AND PLUMBING SYSTEMS MODIFICATION REQUIRED FOR THIS PROJECT. INFORMATION PROVIDED INCLUDES LOCATION, QUANTITY, TYPE, SIZE, CAPACITY AND FUNCTION OF SPECIFIC COMPONENTS OF THE
3.5.	NEW/MODIFIED PLUMBING SYSTEMS TO BE PROVIDED BY CONTRACTOR. FOR CLARITY, SEE PLUMBING FIXTURE AND DRAIN SCHEDULES FOR ALL PIPING CONNECTIONS SIZES
3.6.	NOT SHOWN ON PLANS. INCIDENTAL MODIFICATIONS FOR DEMOLITION OF EXISTING PLUMBING SYSTEMS AND COMPONENTS AS REQUIRED FOR INSTALLATION OF NEW WORK IS INCLUDED AS PART OF THE PROJECT, WEATHER
	AS REQUIRED FOR INSTALLATION OF NEW WORK IS INCLUDED AS PART OF THE PROJECT, WEATHER SHOWN ON PLANS OR NOT. CONTRACTOR SHALL FIELD VERIFY ALL REQUIREMENTS PRIOR TO BIDDING PROJECT.
B.7.	CEILING TILE AND GRID REMOVAL, MODIFICATIONS AND REINSTALLATION AS REQUIRED FOR WORK SHOWN SHALL BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE PLUMBING CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED WORK
B.8.	ACCESS ABOVE ALL LAY-IN CEILINGS. RELOCATION OF EXISTING BUILDING SYSTEMS AND EQUIPMENT, SUCH AS LIGHT FIXTURES, FIRE SPRINKLER PIPING AND HEADS, SMOKE DETECTORS, ELECTRICAL CONDUITS, DUCTWORK, ETC., AS
	REQUIRED BY FOR INSTALLATION OF NEW WORK IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE PLUMBING CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH
3.9.	OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES. THE EXISTING BUILDING PLUMING SYSTEMS ARE INTENDED TO BE REUSED AS SHOWN ON PLANS OR AS
	INSTALLED IF NOT SHOWN ON PLANS. ALL EXISTING PLUMBING SYSTEMS AND EQUIPMENT SHOWN ON PLANS IS FOR REFERENCE ONLY AND MAY BE DIFFERENT IN THE FIELD. CONTRACTOR
3.10.	SHALL FIELD SURVEY, TEST AND INSPECT ALL EXISTING PLUMBING SYSTEMS PRIOR TO BIDDING TO ENSURE HE UNDERSTANDS AND ACCEPTS ALL EXISTING CONDITIONS. THE EXISTING GAS EQUIPMENT LOADS SHOWN ON PLANS ARE FOR REFERENCE ONLY TO ASSIST WITH
5.10.	MODIFICATIONS TO BE PROVIDED BY THE PLUMBING CONTRACTOR AND GAS UTILITY COMPANY. FIELD VERIFY ALL ACTUAL GAS LOADS PRIOR TO COORDINATING MODIFICATIONS WITH GAS UTILITY. GAS
	DESIGN, SIZING, LAYOUT, AND MODIFICATIONS ESTIMATES SHOWN ON PLANS ARE STRICTLY PRELIMINARY.
C. C.1.	SCOPE OF WORK: FURNISH ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO
	PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL MAKE ALL INSTALLATIONS ACCORDING TO MANUFACTURE'S INSTRUCTIONS AND SPECIFICATION, IN
C.2.	ADDITION TO THOSE SHOWN ON PLANS. INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS DESCRIBED BY THE BASIS OF DESIGN DOCUMENTS. INCIDENTALS ITEMS NOT SPECIFIED, BUT WHICH ARE ESSENTIAL FOR THE PROPER
C.3.	OPERATION OF SPECIFIED SYSTEMS AND EQUIPMENT, ARE INCLUDED IN THE SCOPE OF WORK AND SHALL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST. COMPLY WITH COMMISSIONING PLAN SHOWN ON DRAWINGS AND AS IMPLEMENTED BY OWNER'S
D.4.	DESIGNATED 'COMMISSIONING AGENT/AUTHORITY' (CA). PROVIDE STRUCTURAL ENGINEERING DESIGN, DRAWINGS AND MODIFICATIONS FOR INSTALLATION
	OF PLUMBING EQUIPMENT OVER 100 LBS., UTILIZING THE BUILDING STRUCTURE OR FOUNDATION FOR SUPPORT, UNLESS PROVIDED IN ADVANCE BY OWNER
D. D.1.	CODE COMPLIANCE: ALL WORK SHALL BE PREPARED IN ACCORDANCE WITH ALL LOCALLY ADOPTED MECHANICAL FUEL
D.2.	GAS AND PLUMBING CODES, ACCORDING TO THE LOCAL AUTHORITY HAVING JURISDICTION(AHJ). THE BASIS OF DESIGN IS INTENDED TO COMPLY WORTH ALL LOCAL CODES ENFORCED BY THE AHJ
	OVER THOSE PROJECTS. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS MADE BY THE AHJ, WHETHER SPECIFICALLY SHOWN ON PLANS OR NOT.
Ξ. Ξ.1.	DISCREPANCIES: IN THE CASE OF A DISCREPANCY BETWEEN DRAWINGS, SPECIFICATIONS OR MANUFACTURER'S
E.2.	REQUIREMENTS. THE MOST STRINGENT SHALL APPLY AND BE COMPLIED WITH BY THE CONTRACTOR. IN THE CASE IF A DISCREPANCY BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS OR
	MANUFACTURER'S REQUIREMENTS, THE AHJ SHALL DETERMINE WHICH SHOULD BE COMPLIED WITH BY THE CONTRACTOR
F. F.1.	JOBSITE CONDITIONS: CONTRACTOR SHALL EXAMINE THE JOBSITE PRIOR TO BIDDING AND FULLY UNDERSTAND THE
F.2.	CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. BY SUBMITTING A BID FOR WORK, CONTRACTOR ACCEPTS ALL JOB CONDITIONS AS-IS WITHOUT EXTRA COMPENSATION. CONTRACTOR SHALL LOCATE AND UNCOVER THE EXISTING UTILITY SERVICES, INCLUDING GAS, WATER
Γ.Ζ.	AND SEWER PIPING, TO DETERMINE EXISTING SIZE AND DEPTH OF EACH PRIOR TO STARTING WORK. SERVICE CONNECTIONS SHOWN ON THE PLANS ARE PRELIMINARY ONLY.
G. G.1.	PERMITS AND FEES: CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS, LICENSES, AND CERTIFICATIONS REQUIRED BY THE AHJ AND PAY FOR ALL PERMITTING FEES.
Н.	COORDINATION WITH OTHER TRADES:
H.1.	CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCES, PROPERLY SEQUENCE INSTALLATIONS, AND PROVIDE MANUFACTURER'S REQUIRED SERVICE CLEARANCES. WHERE REQUIRED, CONTRACTOR SHALL MAKE THE ADJUSTMENTS TO PLUMBING SYSTEMS AND OR
H.2.	INSTALLATION SCHEDULE. ALL FUEL GAS CONNECTIONS TO HVAC EQUIPMENT, INCLUDING SERVICE VALVES REGULATORS, FLEXIBLE COUPLINGS, AND OTHER FITTINGS SHALL BE PROVIDED BY PLUMBING CONTRACTOR AS
	REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS, OBTAIN COMPLETE AND FINAL FUEL PIPING REQUIREMENTS FROM EQUIPMENT SUPPLIER.
H.3.	ALL ELECTRICAL CONNECTIONS TO PLUMBING FIXTURES AND EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR, INCLUDING DISCONNECTS, ENCLOSURES REQUIREMENTS FOR
H.4.	EQUIPMENT FURNISHED. COORDINATE WITH ROOFING CONTRACTOR TO SEAL ALL PIPING PENETRATION THROUGH ROOF PER ARCHITECTURAL ROOFING SPECIFICATIONS, PROVIDE ALL WEATHERPROOFING REQUIRED.
.1.	UTILITY CONNECTIONS: COORDINATE WITH UTILITY TO DETERMINE ACTUAL REQUIREMENTS FOR NEW SERVICE CONNECTION
I. I. I.2.	SAND METERING . INSTALL ALL UTILITY CONNECTIONS AS REQUIRED BY UTILITY SPECIFICATIONS. PAY ALL UTILITY REQUIRED FEES FOR SERVICE CONNECTIONS OR MODIFICATIONS SHOWN ON PLANS.
J.	CONTRACTOR FURNISHED EQUIPMENT & MATERIALS:
J.1.	SHALL BE NEW, MANUFACTURED CERTIFIED TO COMPLY WITH THE BASIS OF DESIGN, FREE OF DEFECT AND COVERED UNDER A MINIMUM 1-YEAR FACTORY WARRANTY, UNLESS SPECIFIED DIFFERENTLY ELSEWHERE.
J.2.	SHALL BE AS SPECIFIED IN CONSTRUCTION DOCUMENTS OR AS ACCEPTABLE SUBSTITUTION OF EQUAL

- J.2. SHALL BE AS SPECIFIED IN CONSTRUCTION DOCUMENTS OR AS ACCEPTABLE SUBSTITUTION OF EQUAL ITEM. ALL SUBSTITUTIONS MUST BE APPROVED THROUGH THE COMMISSIONING PROCESS TO BE ACCEPTABLE J.3. SHALL BE COMMERCIAL GRADE EQUIPMENT AND MATERIALS, UNLESS OTHERWISE INDICATED IN
- CONSTRUCTION DOCUMENTS.
- CUTTING AND PATCHING: WHERE CUTTING AND PATCHING ARE REQUIRED TO INSTALL PLUMBING SYSTEMS, CONTRACTOR SHALL K.1. PROVIDE THE CUTTING SERVICE AND DO SO AS TO MINIMIZE THE AMOUNT OF OPENING. AFTER PLUMING SYSTEMS HAVE BEEN INSTALLED, PATCH ALL OPENINGS TO MATCH ADJACENT FINISHED SURFACES.
- FINISHED TEXTURING AND PAINTING TO BE PROVIDED BY OTHERS BUT AT THE PLUMBING K.2. CONTRACTORS EXPENSES.

PIPING AND SUPPORTS:

L.1. OPEN PIPING SYSTEMS, INCLUDING FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, ETC., SHALL BE CAPPED OR PLUGGED DURING ALL CONSTRUCTION TO PREVENT DAMAGE AND THE ENTRANCE OF FOREIGN MATERIALS. REMOVE ALL PROTECTIVE COVERINGS UPON COMPLETION OF ALL WORK.

- L.4. PROVIDE ALL REQUIRED PIPING HANGERS AND SUPPORTS WITH PROPER SPACING PER CODE REQUIREMENTS. GROUP PARALLEL RUNS OF PIPING TOGETHER ON COMMON HANGERS AND SUPPORTS TO MINIMIZE SPACE WHEREVER POSSIBLE. MAINTAIN MINIMUM 1/4" PER FOOT SLOPE TOWARDS DRAIN FOR BOTH WASTE AND VENT PIPING. ROUT L.5. ALL DRAIN PIPING AS NEEDED TO MINIMIZE REQUIRED DEPTH OF BUILDING SEWER. DRAIN PIPING ROUTING SHOWN ON PLANS IS SCHEMATIC LAYOUT, PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL ROUTING PER CODE AND AS TO MINIMIZE COST TO OWNER. PROVIDE INSULATION FOR ALL PLUMBING SYSTEMS AND EQUIPMENT AS REQUIRED FOR PREVENTION L.6. OF HEAT LOSS AND/OR FREEZING, REGARDLESS IF SHOWN ON PLANS OR NOT. EQUIPMENT INSTALLATIONS: WHERE REQUIRED FOR EQUIPMENT PIPING CONNECTIONS, PROVIDE STEEL CHANNEL SUPPORTS M.1. STANDS FOR MOUNTING OF PIPING, VALVES, AND FITTINGS. PROPERLY SECURE SUPPORTS TO FLOORS OR WALLS. M.2. ENSURE THAT SERVICE CLEARANCES ARE NOT BLOCKED BY ROUTING OF PIPING OR SUPPORT STRUCTURES AT ALL EQUIPMENT CONNECTIONS. COORDINATE WITH HVAC CONTRACTOR AND OR EQUIPMENT PROVIDE TO DETERMINE REQUIRED CLEARANCES AND SERVICE WORK AREAS. PROVIDE WATER HAMMER ARRESTERS ON HOT AND COLD-WATER SUPPLY PIPING FOR ALL WASHING M.3. MACHINES, DISHWASHERS, FLUSH VALVES, AND ANY OTHER EQUIPMENT WITH QUICK CLOSING VALVES, AND WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION. FOR CLARITY, ARRESTORS MAY NOT BE SHOWN ON PLANS. PROVIDE TRAP PRIMERS AND WATER SUPPLY PIPING ON ALL FLOOR DRAINS. FOR CLARITY, TRAP M.4. PRIMERS MAY NOT BE SHOWN ON PLANS. INSTALL PUMP AND OTHER VIBRATING EQUIPMENT IN A MANNER THAT MINIMIZES NOISE LEVELS. MAKE ALL POSSIBLE ADJUSTMENTS TO REDUCE NOISE TO ACCEPTABLE LEVELS. SQUEAKS, SQUEALING AND RATTLING ARE NOT ACCEPTABLE. EXCAVATIONS: N. IT IS THE PLUMBING CONTRACTORS JOB TO CALL FOR A DIG TESS. N.1. PERFORM EXCAVATIONS CAUTIOUSLY TO AVOID DISRUPTION OR DAMAGE TO UNDERGROUND N.2 UTILITIES. HAVE ALL UNDERGROUND UTILITIES LOCATED AND MARKED, PRIOR TO DIGGING. UTILIZE HAND DIGGING WHEN NEAR BURIED PIPING, CABLES, GAS LINES, ETC. ANY AND ALL DAMAGE TO UNDERGROUND UTILITIES WILL BE REPAIRED BY OTHERS BUT AT THE PLUMBING CONTRACTORS EXPENSE E.C.COMBINE UNDERGROUND PIPING INTO COMMON TRENCHES WHERE POSSIBLE TO MINIMIZE TRENCHING. PIPE ROUTING SHOWN ON PLANS IS PRELIMINARY. SEE CIVIL ENGINEERING PLANS FOR FINAL ROUTING, EQUIPMENT AND UTILITY CONNECTION LOCATIONS. DELIVERY, STORAGE AND PROTECTION: 0 CONTRACTOR SHALL FURNISH DELIVERY OF ALL REQUIRED MATERIALS AND EQUIPMENT TO BE 0.1. INSTALLED. CONTRACTORS SHALL VERIFY ALL EQUIPMENT IS UNDAMAGED AT THE TIME OF DELIVERY FORM THE FACTORY. DAMAGED ITEMS SHOULD BE RETURNED TO THE FACTORY FOR REPLACEMENTS AT NO ADDITIONAL COST TO THE OWNER. 0.2. WHERE REQUIRED, CONTRACTOR SHALL PROVIDE CRANE AND OR ALL RIGGING EQUIPMENT NEEDED TO INSTALL PLUMBING EQUIPMENT IN PLACE AS SHOWN ON PLANS. 0.3. CONTRACTOR SHALL COORDINATE WITH OWNER TO OBTAIN ACCEPTABLE JOBSITE STORAGE LOCATION FOR MATERIALS . CONTRACTOR SHALL COMPLY WITH OWNER REQUIREMENTS FOR PROTECTION, ACCESS AND SECURITY OF MATERIALS STORED ONSITE. 0.4 CONTRACTOR SHALL TAKE ALL REQUIRED PRECAUTIONS TO PROPERL; Y PROTECT ALL STORED MATERIALS FORM WEATHER, DAMAGE, THEFT OR ANY OTHER HAZARD PRESENT AT THE STORAGE LOCATION.
- SPARE PARTS:

L.2.

L.3.

COMMISSIONING PLAN - PLUMBING: COMMISSIONING AGENT

COMMISSIONING AGENT (CA) FOR THE PROJECT.

- SUBMITTALS B.1 FIELD INSPECTIONS:
- WHERE REQUIRED BY CA, COORDINATE FIELD INSPECTIONS OF CRITICAL CONSTRUCTION DETAILS C.1. FOR APPROVAL, PRIOR TO PROCEEDING WITH ADDITIONAL WORK. AT A MINIMUM, FIELD INSPECTIONS SHALL INCLUDE: C.1.1. PIPING SYSTEM STARTUP AND TESTING, EQUIPMENT STARTUP AND TESTING, OPERATIONS AND MAINTENANCE TRAINING
- STARTUP AND TESTING: PRESSURE TEST THE WASTE/VENT PIPING SYSTEMS BY PLUGGING BUILDING MAIN DRAIN CONNECTION D.1 TO SEWER, AND FILLING ENTIRE SYSTEM FULL OF WATER FROM LOWEST POINT TO HIGHEST POINT. PRESSURE TEST THE POTABLE WATER SYSTEMS TO MINIMUM OF 60 PSIG, USING POTABLE WATER D.2. OR AIR, FOR A MINIMUM OF 60 MINUTES WITHOUT LEAKS. FLUSH TO REMOVE DEBRIS AND PROVIDE DISINFECTION AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. D.3. FOLLOW ALL EQUIPMENT MANUFACTURERS;S INSTALLATION INSTRUCTIONS TO PROVIDE COMPLETE STARTUP AND TESTING OF NEW PLUMBING EQUIPMENT. MAKE MODIFICATION ADJUSTMENTS AS REQUIRED TO MEET PERFORMANCE SPECIFICATIONS ON PLANS. PROVIDE THE CA WITH COMPLETED MANUFACTURE'S STARTUP SHEETS AS RECORD OF SUCCESSFUL INSTALLATION. PROVIDE STARTUP

FOR THE FOLLOWING: **O&M DOCUMENTATION:** E.1

E.1.1. AS-BUILD DRAWING MARKUPS SHOWING MODIFICATIONS WHERE INSTALLATIONS ARE DIFFERENT THAN DESIGN DRAWINGS E.1.2. EQUIPMENT MANUFACTURES' INSTALLATION, OPERATION MAINTENANCE MANUALS. E.1.3. COMPLETED MANUFACTURE'S EQUIPMENT STARTUP SHEETS. E.1.4. EQUIPMENT SET-POINTS DETERMINED AT STARTUP. E.1.5. EQUIPMENT WARRANTIES TRAINING:

MAINTENANCE MANUALS AS BASIS FOR INSTRUCTION.

EQUIPMENT & MATERIALS - PLUMBING

A. A.1.	NATURAL GAS EQUIPMENT GAS PIPING: BLACK STEEL, SCREWED OR WELDED JOINTS AND FITTI TAPE ON ALL MALE THREA NATURAL GAS.
A.2.	GAS COCK: FLAT TEE HEAD MANUFACTURED BY A.Y. M INSTALLED.
A.3.	VENT PIPING: SHALL BE AS AS
A.3.1.	FOLLOWS: TYPE B, HEAVY-GAUGE, DC ALUMINUM INNER WALL, UL ACCESSORIES SHALL BE B
A.3.2.	SCHEDULE 40 PVC PIPING / PROVIDE FACTORY WALL C AND ROUT TO APPROVED D REQUIRED FOR PROPER DRAINAGE, PROV
В. В.1. В.1.1.	DOMESTIC WATER PIPING : WATER SERVICE PIPING (O NSF 61 STANDARDS, OF TH TYPE K COPPER, WITH JOIN MAXIMUM OF 8% LEAD COM

COORDINATE WITH HVAC CONTRACTOR TO MAINTAIN A MINIMUM OF TEN (10) FEET OF SEPARATION BETWEEN ALL VENT STACKS TERMINATIONS AND ALL OUTDOOR AIR INTAKES. HOLD ALL PIPING TIGHT AGAINST STRUCTURE TO AVOID DAMAGE AND INTERFERENCE FROM OTHER TRADES. RUN ALL PIPING IN A NEAT AND WORKMAN LIKE MANNER PARALLEL TO BUILDING LINES.

- PRIOR TO COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE OWNER WITH ALL SPARE PARTS PROVIDED FROM FACTORY WITH ANY EQUIPMENT PURCHASED FOR THE PROJECT.
- THE OWNER'S PROJECT MANAGER OR OTHER PERSON DESIGNATED SHALL FUNCTION AS THE
- IN ORDER TO OBTAIN OFFICIAL APPROVAL PRIOR TO ORDERING OF EQUIPMENT, CONTRACTOR SHALL PROVIDE THE CA WITH MANUFACTURE'S SUBMITTAL DATA ON ALL NEW EQUIPMENT TO BE FURNISHED. PRE-CONSTRUCTION SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, SHOP DRAWINGS AND INSTALLATION MANUALS. PROVIDE SUBMITTALS FOR THE FOLLOWING MAJOR
- COMPONENTS AND EQUIPMENT PRIOR TO ORDERING B.1.1. PLUMBING FIXTURES, PLUMBING FIXTURE ACCESSORIES, FAUCETS, VALVES, ETC, WATER HEATERS, HOT WATER CIRCULATION PUMPS, PIPING (HOT, DOMESTIC, AND NATURAL GAS)
- D.3.1. NATURAL GAS FIRED WATER HEATERS, CIRCULATION PUMPS, NATURAL GAS FIRED DRIERS

 - PROVIDE THE CA WITH A MINIMUM OF TWO (2) SETS OF BINDERS FOR THE PROJECT. EACH BINDER SHOULD INCLUDE THE FOLLOWING ITEMS:
 - PROVIDE A MINIMUM OF ONE (1) TRAINING SESSION OF NO LESS THAN TWO (2) HOURS OF ON-SITE TRAINING FOR OWNER'S OPERATIONAL STAFF UPON COMPLETION OF ALL STARTUP WORK. TRAINING SHALL COVER OPERATIONS AND MAINTENANCE ON ALL NEW PLUMBING SYSTEMS AND EQUIPMENT INSTALLED BY CONTRACTOR. TRAINING SHALL UTILIZE MANUFACTURER'S OPERATIONS AND

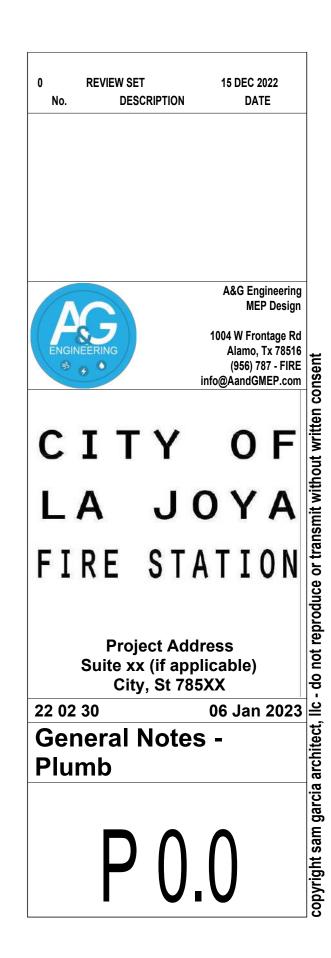
- ., CONFIRMING TO ASTM A 53 OR ASTM A 106. SCHEDULE 40 WITH
- TINGS OF SAME MATERIAL AS PIPING. SCREWED FITTINGS SHALL USE JOINT EADS WELDED JOINTS SHALL USE AND APPROVED METAL FILLER MATERIAL FOR
- AD GAS PLUG VALVE, BRONZE BODY, RATED TO 2 PSIG, FNPT THREADED, AS MCDONALD OR EQUALS. SELECT VALVE SUITABLE FOR LOCATION WHERE
- AS SPECIFIED BY GAS FIRED EQUIPMENT MANUFACTURER'S INSTRUCTIONS
- DOUBLE WALL, AIR-INSULATED PIPE, GALVANIZED STEEL OUTER WALL, IL LISTED, AS MANUFACTURED BY AMERIVENT, OR EQUAL. FITTINGS AND BY SAME MANUFACTURER AS VENT PIPING. AND FITTINGS, AS REQUIRED BY MANUFACTURER'S INSTRUCTIONS. CAP AT TERMINATION. PROVIDE CONDENSATE DRAIN PIPING AND FITTINGS DRAIN LOCATIONS, PER MANUFACTURE'S INSTRUCTIONS. WHERE
- VIDE FACTORY CONDENSATE DRAIN PUMP AND CONDENSATE NEUTRALIZER.
- OUTSIDE BUILDING): MINIMUM 160 PSI PRESSURE RATED, CONFORMING TO HE FOLLOWING APPROVED TYPES: DINTS AND FITTINGS OF SAME MATERIAL. SOLDER JOINTS SHALL HAVE A DNTENT.

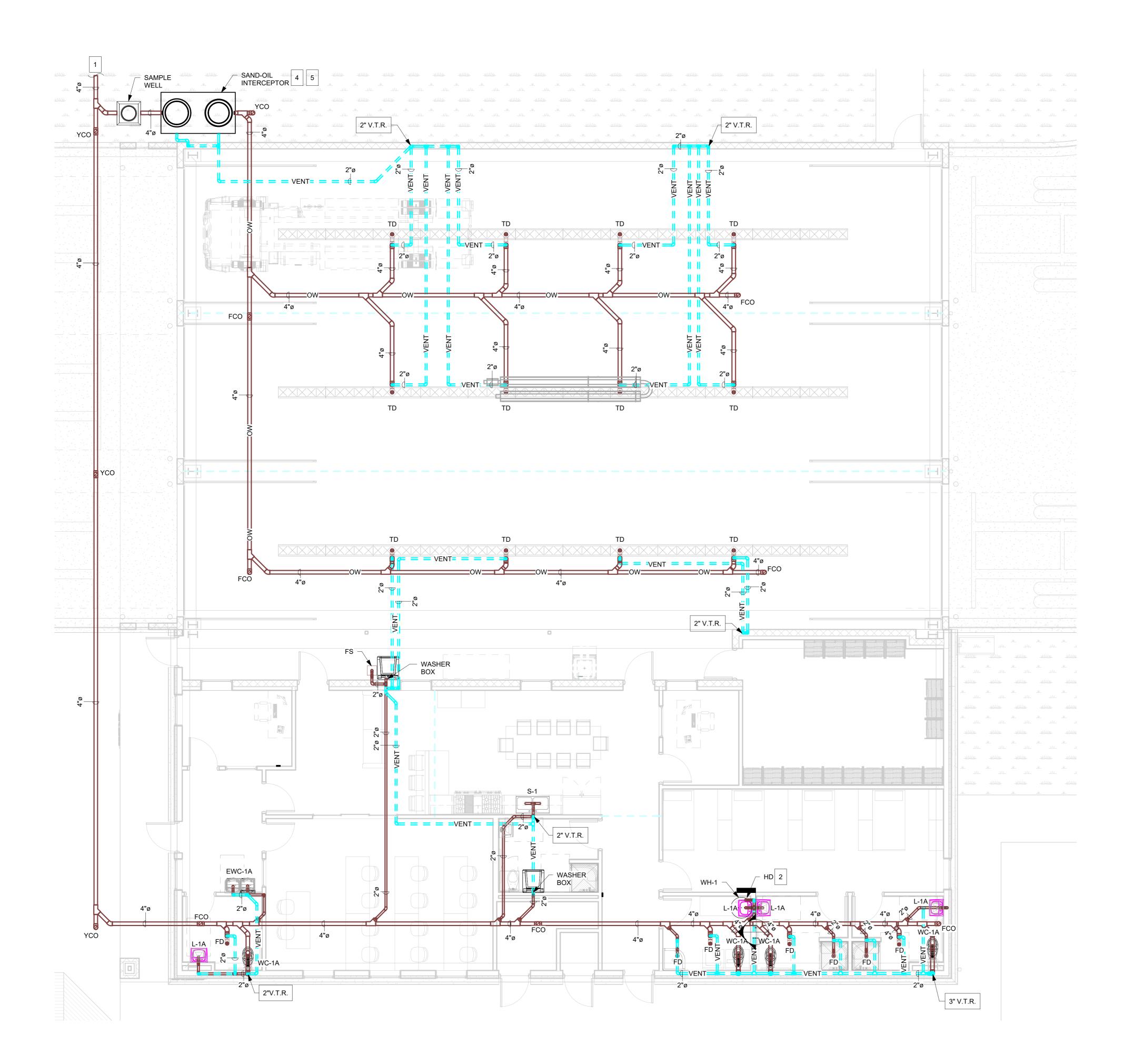
- B.1.2. GALVANIZED STEEL PIPING, JOINTS AND FITTINGS. B.1.3. PVC PLASTIC PIPE AND FITTINGS WITH SLIP OR SCREWED JOINTS AND FITTINGS OF SAM
- MATERIAL B.1.4. POLYETHYLENE (PE) PLASTIC TUBING, JOINTS, AND FITTINGS
- B.1.5. POLYPROPYLTNE(PP) PLASTIC PIPE OR TUBING, JOINTS AND FITTINGS. B.2. WATER DISTRIBUTION PIPING (INSIDE BUILDING): MINIMUM 100 PSI PRESSURE RATED.
- CONFORMING TO NSF 61 STANDARDS OF THE FOLLOWING APPROVED TYPES: B.2.1. TYPE L OR M COPPER, WITH JOINTS AND FITTINGS OF SAME MATERIAL. SOLDER JOINTS MADE WITH LEAD FREE FLUX AND SOLDER.
- B.2.2. GALVANIZED STEEL PIPING, JOINTS AND FITTINGS. B.2.3. CPVC PLASTIC PIPE AND FITTINGS WITH SLIP OR SCREWED JOINTS AND FITTINGS OF S.
- MATERIAL B.2.4. PEX PLASTIC TUBING AND FITTINGS.
- SANITARY WASTE AND VENT PIPING: CAN UTILIZE ANY OF THE FOLLOWING PIPING MATE C. TYPES DEPENDING UPON THE APPLICATION: C.1. BUILDING DRAINAGE (INSIDE BUILDING):
- C.1.1. SCHEDULE 40 ABS PLASTIC PIPE AND FITTINGS
- C.1.2. CAST IRON PIPE AND FITTINGS
- C.1.3. SCHEDULE 40 PVC PLASTIC PIPING AND FITTINGS C.2. BUILDING SEWER(OUTUSIDE BUILDING):
- C.2.1. SCHEDULE 40 ABS PLASTIC PIPE AND FITTINGS
- C.2.2. CAST IRON PIPE AND FITTINGS C.2.3. SCHEDULE 40 PVC PLASTIC PIPING AND FITTINGS
- D. PIPING INSULATION:
- D.1. MATERIALS: PIPING INSULATION MATERIALS SHALL BE ONE OF THE FOLLOWING TYPES: D.1.1. POLYETHYLENE FOAM, SELF-SEALING TYPE D.1.2. RUBBER, SELF-SEALING TYPE\MOLDED FIBERGLASS WITH ALL SERVICE JACKET
- D.2. DOMESTIC HW PIPING: PROVIDE PIPING INSULATION ON ALL DOMESTIC HOT WATER PIPING, AS WELL AS ALL DO WATER PIPING INSTALLED IN EXTERIOR WALLS, ATTICS OR UNCONDITIONED SPACES. IN SHALL BE MINIMUM R-4 RATED, WITH MINIMUM 1" THICKNESS ON HW PIPING UP THRU 1-1 MINIMUM 1.5" ON PIPING OVER 1-1/4".
- D.3. LAVATORIES: INSULATE ALL EXPOSED DRAIN AND WATER PIPING UNDER LAVATORIES WITH FACTORY AS MANUFACTURED BY TRUEBRU LAVGUARD, MODEL #102 OR EQUAL.
- E. PLUMBING FIXTURES AND ACCESSORIES: AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL. FURNISH AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ALL REQUIRED FITTINGS AND ACCESSORIE COMPLETE AND FUNCTIONING FIXTURE, WHETHER SPECIFIED ON PLANS OR NOT.
- E.1. POINT OF USE MIXING VALVES: HERMOSTATIC TEMPERATURE LIMITING DEVICE USED TO SUPPLY SINGLE OUTLET. AS MANUFACTURED BY LEONARD MODEL #170A-LF, OR EQUAL. ADJUST AS NEEDED TO MAI MAXIMUM WATER TEMPERATURE AT OUTLET BELOW 120-F.
- E.2. WATER HEATERS: TYPE, STORAGE CAPACITY (IF NOT TANKLESS), AND PERFORMANCE AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS. PRO REQUIRED VALVES AND FITTINGS AS SHOWN ON THE PLANS, INCLUDING THE FOLLOWIN ACCESSORIES:
- E.3. EXPANSION TANK: ANTI-MICROBIAL LINER, WATER DIFFUSER, PRE-CHARGED TO MATCH WATER SERVICE F DEEP DRAWN STEEL DOMES, THICK RUBBER DIAPHRAGM, STAINLESS STEEL SYSTEM CONNECTION NSF61 APPROVED. AS MANUFACTURED BY AMITROL, MODEL THERM-X-TH EQUAL. SIZING SHALL BE PROVIDED BY VENDOR BASED ON WATER HEATER CAPACITY.
- E.4. VACUUM BREAKER: LOW PROFILE, ALL BRASS BODY, PROTECTIVE CAP, AS MANUFACTURED BY WATTS MOD M1 OR EQUAL. LINE SIZED FOR COLD WATER INLET PIPING. E.5. <u>T&P RELIEF VALVE:</u>
- TEMPERATURE AND PRESSURE RELIEF VALVE, LEAD-FREE COPPER ALLOY BODY WITH INLET AND NPT FEMALE OUTLET CONNECTIONS. UNIQUE THERMOSTAT WITH SPECIAL T BONDED COATING, AND A TEST LEVER. TEMPERATURE RELIEF:210°F, PRESSURE RELIEF 75PSI TO 150PSI, AS MANUFACTURED BY WATTS, SERIES LF100XL. E.6. <u>HW RECIRCULATION PUMP</u>:
- IN-LINE CENTRIFUGAL PUMP, ELECTRONIC CONTROLS CAPABLE OF STARTING/STOPPIN PUMP AS THE DEMAND FOR HOT WATER COMES AND GOES, AND STOPPING PUMP WITH MINUTES OF END OF HEATING CYCLE. INCLUDE ALL FACTORY REMOTE TEMPERATURE \$ AND ACCESSORIES REQUIRED TO COMPLY WITH IECC (AHJ APPROVED YEAR). HOSE BIBS:
- E.7.1. OUTDOOF SHALL BE WOODFORD MODEL 67, CHROME FINISH, FREEZEPROOF TYPE, AUTOMATIC DRAINING WITH BACK FLOW PREVENTER AND KEYED OPERATION, OR APPROVED EQUAL. CONTRACTOR SHALL VERIFY WALL THICKNESS PRIOR TO ORDERING HOSE BIBS. E.7.2. INDOOR:
- SHALL BE WOODFORD MODEL 24P-1/2, CHROME FINISH, ANTI-SIPHON VACUUM BREAKER, OPTIONAL TEE KEY, OR APPROVED EQUAL. E.8. FLOOR DRAINS:
- AS SCHEDULED ON DRAWINGS OR MANUFACTURER RECOMMENDED EQUAL. VERIFY SCHEDULED SELECTIONS WITH DRAIN MANUFACTURER FOR EXPECTED USE AND LOCATION AND PROVIDE MANUFACTURER SPECIFIED DRAINS, ALONG WITH RECOMMENDED ACCESSORIES.
- E.9. TRAP PRIMERS PROVIDE ALL FLOOR DRAINS WITH TRAP PRIMERS OR AS NOTED ON PLANS. AUTOMATIC VALVE, BRONZE BODY, 1/2" NPT THREADED CONNECTIONS, AS MANUFACTURED BY JAY R. SMITH, FIGURE 2699 OR EQUAL.
- E.10. CLEANOUTS: PROVIDE WHERE SHOWN ON PLANS AND AS REQUIRED BY LOCAL PLUMBING CODES. CLEANOUTS SHALL BE SUITABLE FOR CONDITIONS WHERE INSTALLED AS FOLLOWS:
- E.10.1. FLOORS, FINISHED: CAST IRON WITH NICKEL BRONZE, ADJUSTABLE TOP, AS MANUFACTURED BY J.R. SMITH, MODEL # 4020 OR EQUAL.
- E.10.2. FLOORS.UNFINISHED: CAST IRON WITH NON-TILT TRACTOR COVER, ADJUSTABLE TOP, AS MANUFACTURED BY J.R.SMITH, MODEL #4237 OR EQUAL.
- E.10.3. WALL: CAST IRON CLEAN-OUT TEE, STAINLESS STEEL ROUND COVER AND SCREW, IRON PLUG WITH SEAL, AS MANUFACTURED BY J.R. SMITH, MODEL#4520S OR EQUAL. E.10.4. GRADE:
- HEAVY DUTY CAST IRON COVER, FLANGED FOR USE IN POURED CONCRETE, SUITABLE FOR USE IN ASPHALT PAVING OR EARTH, CAST IRON BODY WITH ADJUSTABLE TOP, AS MANUFACTURED BY J.R. SMITH, MODEL #4250 OR EQUAL.
- E.10.5. 2-WAY(DOUBLE): GRADE CLEAN-OUT WITH 2-WAY CLEAN-OUT TEE FITTING IN SEWER LINE, JUST OUTSIDE BUILDINGS WALL OR AS SHOWN ON PLANS.
- E.11. BACK-FLOW PREVENTER: REDUCED PRESSURE TYPE, DUAL CHECK VALVES WITH INTERMEDIATE RELIEF VALVE, TEE HANDLE SHUTOFF VALVES, AS MANUFACTURED BY WATTS, SERIES 009 OR EQUAL.
- E.12. BALL VALVES: LINE SIZED, FULLY PORTED, BRASS BODY.
- E.13. WATER HAMMER ARRESTERS: PROVIDE SHOCK ABSORBER ON DOMESTIC WATER AND HOT WATER SUPPLY LINES FOR ALL FAST ACUATING DEVICES, INCLUDING BUT NOT LIMITED TO WASHING MACHINES, DISHWASHERS AND OTHER EQUIPMENT WITH AUTOMATIC VALVES, AS MANUFACTURED BY WATTS. MODEL #15M2 OR EQUAL. SELECT AND INSTALL PER MANUFACTURERS INSTRUCTIONS. E.14. ELECTRIC WATER COOLER:
- SELF-CONTAINEED, HEAVY DUTY, VANDAL RESISTANT WATER COOLER, FRONT PUSHBUTTON ACTIVATION, INTERNAL BASIN DRAIN, WALL MOUNTED, AS MANUFACTURED BY ELKAY #LVRCHDTL8SC OR APPROVED EQUAL. SEE SCHEDULES FOR PERFORMANCE REQUIREMENTS. REFRIGERATION SYSTEM INCLUDES RECIPROCATING TYPE COMPRESSOR WITH R134 REFRIGERANT. COPPER TUBING AND STAINLESS-STEEL TANK, EPS FOAM INSULATION, CONDENSER FAN AND ADJUSTABLE THERMOSTATIC CONTROLS.
- E.15. <u>SAMPLE WELL:</u> FACTORY MADE. BELOW GRADE INSTALLATION. CONCRETE CONSTRUCTION WITH STEEL RISER COVER. PEDESTRIAN RATED LOADING ON COVER, AS MANUFACTURED BY PARK ENVIRONMENTAL. MODEL #SWBP OR EQUAL. COORDINATE FINAL SELECTION. INCLUDING REQUIRED ACCESSORIES AND DESIGN.

DESIGN WITHOUT CONSTRUCTION ADMINISTRATION:

IT IS UNDERSTOOD AND AGREED THAT THE ARCHITECT/ENGINEER'S SCOPE DOES NOT INCLUDE PROJECT OBSERVATION OR REVIEW OF THE CONTRACTOR'S PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES. THE OWNER AGREES TO PROVIDE CONSTRUCTION ADMINISTRATION AND ASSUMES ANY AND ALL POTENTIAL LIABILITY ARISING FROM SUCH ADMINISTRATION. THE OWNER ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE CONTRACT DOCUMENTS AND FOR CONSTRUCTION OBSERVATION AND THE OWNERS WAIVES ANY CLAIMS AGAINST THE ARCHITECT/ENGINEER THAT MAY BE IN ANY WAY CONNECTED THERETO. THE ARCHITECT/ENGINEER WILL NOT RESPOND TO ANY QUESTIONS DIRECTED TO THE INTERPRETATION OF THE CONTRACT DOCUMENTS OR IN RESPONSE TO ISSUES ENCOUNTERED BY AND AS RELAYED BY THE CONTRACTOR IN THE FIELD.

	SYME	BOL LEGEND - PLUMBING:
ME		NEW SANITARY DRAIN PIPING, UNDERGROUND OR UNDER FLOOR.
	VENT	NEW SANITARY VENT PIPING
		NEW DOMESTIC CW PIPING, ABOVE CEILING OR IN WALLS.
S SHALL BE		NEW DOMESTIC HW PIPING, ABOVE CEILING OR IN WALLS.
SAME	<u> </u>	NEW DOMESTIC HW RE-CIRCULATION PIPING.
	NG	NEW NATURAL GAS PIPING, CONCEALED ABOVE CEILING OR IN WALLS, OR EXPOSED IN MECH SPACES, OUTDOORS OR ROOF.
ERIAL	GW	NEW GREASE WASTE PIPING, ABOVE CEILING OR IN WALLS.
	02	NEW OXYGEN PIPING, ABOVE CEILING OR IN WALLS.
	N2O-	NEW MED GAS PIPING, ABOVE CEILING OR IN WALLS.
	AIR	NEW AIR PIPING, ABOVE CEILING OR IN WALLS.
	UNG	NATURAL GAS UTILITY.
·.		POINT OF CONNECTION TO EXISTING WATER PIPING.
).	— _	PIPE ELBOW, 90 DEG TURNED DOWN.
DOMESTIC		PIPE ELBOW, 90 DEG TURNED UP.
INSULATION		PIPE TEE, BRANCH TURNED DOWN.
	-+ _	PIPE TEE, BRANCH TURNED UP.
Y COVERS	I	VENT STACK CONNECTION TO WASTE LINE BELOW.
	<u> </u>	WASTE STACK THROUGH FLOOR.
IES FOR A	— _	CLEANOUT, FLOOR OR GRADE, WITH PROPER COVER.
LOTORA	— _	WALL CLEANOUT PLUG AND COVER.
S AINTAIN		HOSE BIB, FREEZEPROOF WITH VACUUM BREAKER, SEE SPECS.
		GATE VALVE, LINE SIZED.
N OVIDE ALL	-1 -	BALL VALVE, LINE SIZED.
ING		GAS COCK, LINE SIZED.
PRESSURE,	⊕ ^{BP/} ₩	CHECK VALVE OR BACKFLOW PREVENTOR AS NOTED.
TROL, OR	_t `,	PRESSURE REGULATOR VALVE, GAS OR WATER.
		BALANCING VALVE OR CIRCUIT SETTER.
DEL #N36-		PIPE UNION COUPLING.
I NPT MALE	—	PIPE FLEXIBLE COUPLING.
THERMO- EF RANGE:		HW RECIRCULATION PUMP, SEE SCHEDULE.
I IVANGE.	[NEW PLUMBING FIXTURE, MARK SHOWN, SEE SCHEDULE.
NG THE HIN 5	\bigcirc	NEW FLOOR DRAIN, MARK SHOWN, SEE SCHEDULE.
SENSORS		FLOOR SINK.
	E	TEMPERING VALVE.

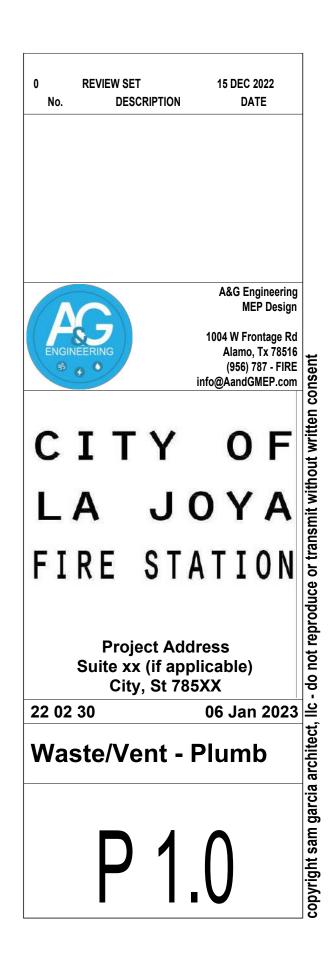


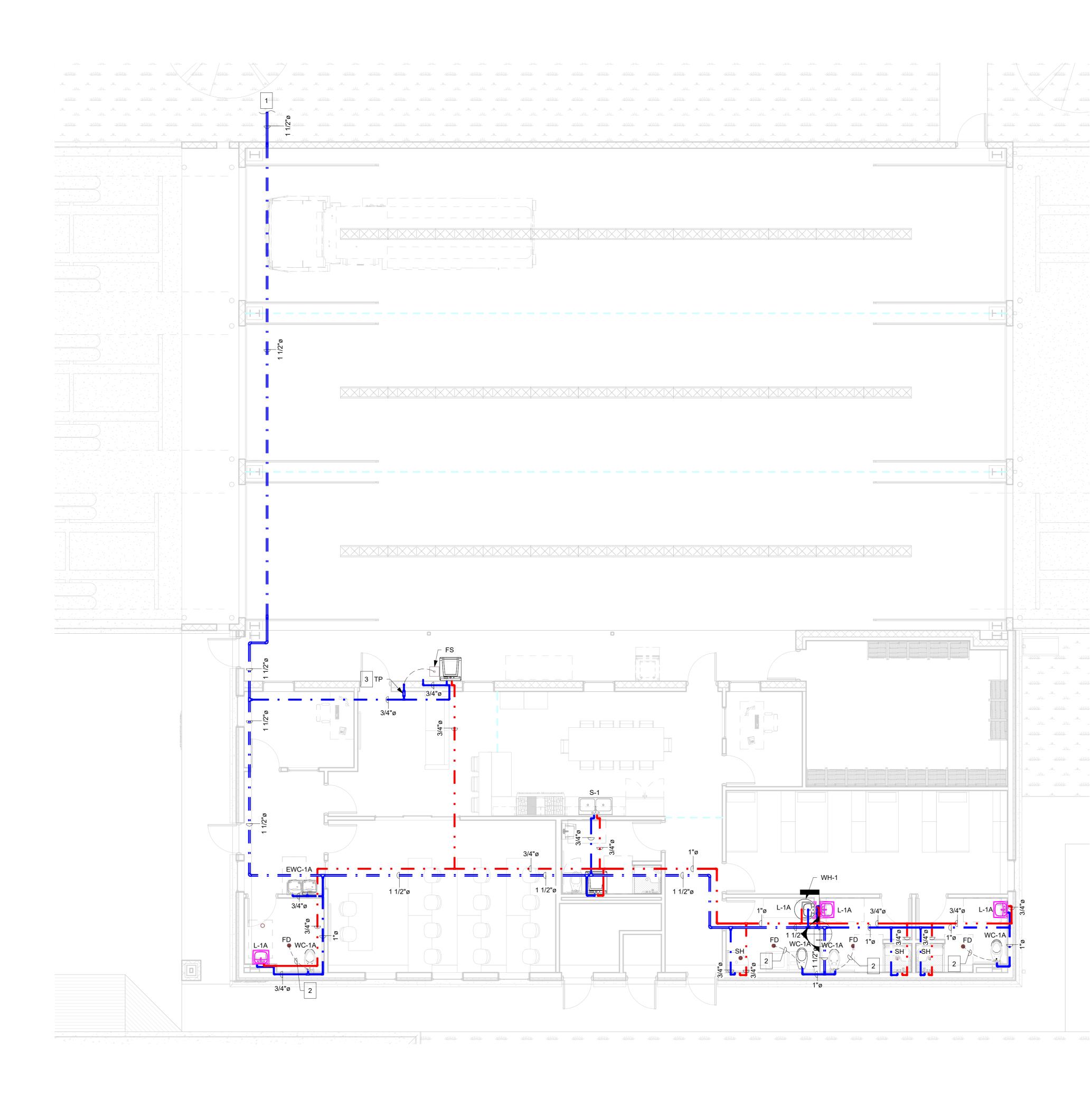


GENERAL NOTES:

- A. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES AND SLOPE PRIOR TO BIDDING.
- B. PROVIDE AND INSTALL YARD/GROUND CLEANOUTS A MAXIMUM OF 100'-0" ON CENTER.
- C. PRIMARY A/C CONDENSATE LINE SHALL BE CONNECTED DIRECTLY FROM THE HVAC EQUIPMENT AND DISCHARGE IN GROUP TO THE 2" HUB DRAIN/CONDENSATE RECEPTOR.
- D. SECONDARY A/C CONDENSATE LINE SHALL BE CONNECTED FROM EACH SAFETY DRAIN PAN AND DISCHARGE INDIVIDUALLY TO A VISIBLE HEIGHT BELOW CEILING IN THE NEAREST SINK, LAVATORY OR MOP SINK.

- 1. CONNECT NEW SEWER LINE TO EXISTING SANITARY PIPE BELOW SLAB. REFER TO CIVIL DRAWINGS FOR EXACT POINT OF CONNECTION PRIOR TO ANY WORK.
- 2. 2" HUB DRAIN LOCATED UNDER WATER HEATER PAN. COORDINATE HEIGHT AND LOCATION REQUIREMENTS WITH PLUMBING CONTRACTOR.
- 3. 2" HUB DRAIN LOCATED ABOVE A/C PLATFORM. CONDENSATE LINE SHALL RUN FROM THE DRAIN PAN OUTLET TO THE APPROVED HUB DRAIN, AND SHALL MAINTAIN A MINIMUM HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN ONE (1) PERCENT SLOPE.
- 4. SAND-OIL INTERCEPTOR SHALL BE BUILT AND INSTALLED TO MEET CITY WATER TREATMENT DEPARTMENT REQUIREMENTS. SUBMITTAL TO WATER TREATMENT DEPARTMENT PRIOR TO PURCHASE FOR APPROVAL IS REQUIRED. CONTACT WATER TREATMENT DEPARTMENT FOR INSTALLATION INSPECTION PRIOR TO COVERING UNIT. FAILURE TO COMPLY TO CITY REQUIREMENTS SHALL MAKE ALL CORRECTIONS AND/OR MODIFICATIONS THE FULL RESPONSIBILITY OF THE PLUMBING CONTRACTOR.
- 5. PROVIDE 1,500 GALLON SAND-OIL INTERCEPTOR EQUAL TO A PARK EQUIPMENT MODEL "SOCMP-1500" INSTALLATION SHALL MEET CITY REQUIREMENTS.

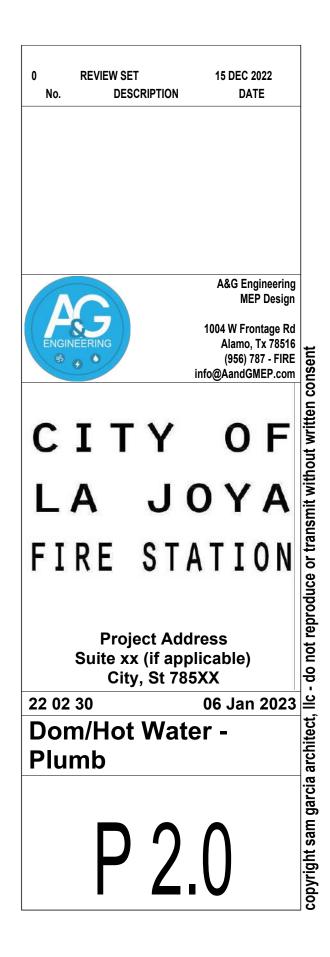


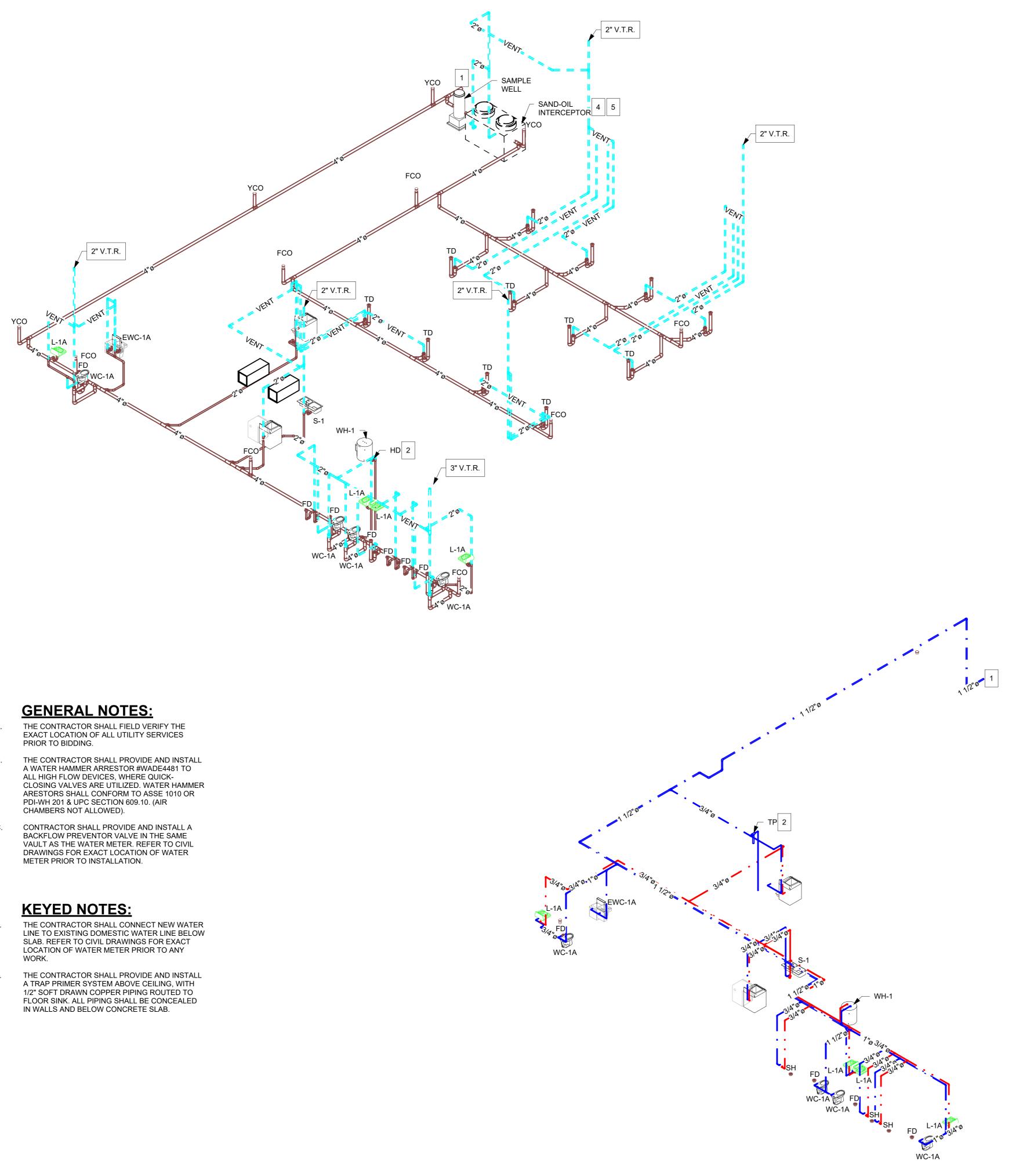


GENERAL NOTES:

- A. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES PRIOR TO BIDDING.
- B. THE CONTRACTOR SHALL PROVIDE AND INSTALL A WATER HAMMER ARRESTOR #WADE4481 TO ALL HIGH FLOW DEVICES, WHERE QUICK-CLOSING VALVES ARE UTILIZED. WATER HAMMER ARESTORS SHALL CONFORM TO ASSE 1010 OR PDI-WH 201 & UPC SECTION 609.10. (AIR CHAMBERS NOT ALLOWED).
- C. CONTRACTOR SHALL PROVIDE AND INSTALL A BACKFLOW PREVENTOR VALVE IN THE SAME VAULT AS THE WATER METER. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF WATER METER PRIOR TO INSTALLATION.

- 1. THE CONTRACTOR SHALL CONNECT NEW WATER LINE TO EXISTING DOMESTIC WATER LINE BELOW SLAB. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF WATER METER PRIOR TO ANY WORK.
- 2. THE CONTRACTOR SHALL PROVIDE AND INSTALL A TRAP PRIMER SYSTEM WITH 1/2" SOFT DRAWN COPPER PIPING ROUTED FROM WATER CLOSET TO FLOOR DRAIN. ALL PIPING SHALL BE CONCEALED IN WALLS AND BELOW CONCRETE SLAB.
- 3. THE CONTRACTOR SHALL PROVIDE AND INSTALL A TRAP PRIMER SYSTEM ABOVE CEILING, WITH 1/2" SOFT DRAWN COPPER PIPING ROUTED TO FLOOR SINK. ALL PIPING SHALL BE CONCEALED IN WALLS AND BELOW CONCRETE SLAB.





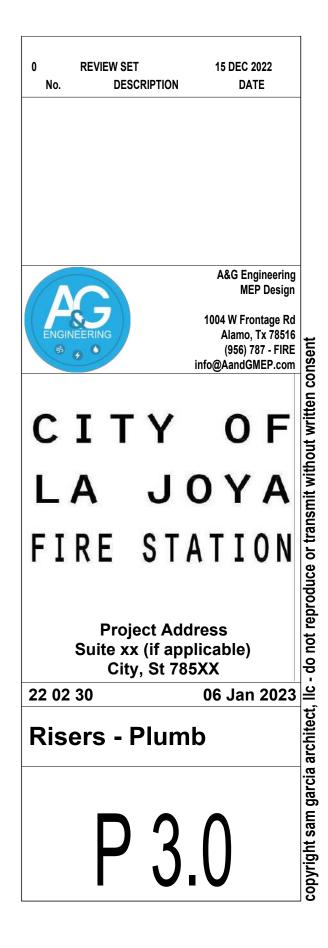
- Α.
- Β.
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- 1.
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GENERAL NOTES:

- A. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES AND SLOPE PRIOR TO BIDDING.
- PROVIDE AND INSTALL YARD/GROUND В. CLEANOUTS A MAXIMUM OF 100'-0" ON CENTER.
- C. PRIMARY A/C CONDENSATE LINE SHALL BE CONNECTED DIRECTLY FROM THE HVAC EQUIPMENT AND DISCHARGE IN GROUP TO THE 2" HUB DRAIN/CONDENSATE RECEPTOR.
- SECONDARY A/C CONDENSATE LINE SHALL BE D. CONNECTED FROM EACH SAFETY DRAIN PAN AND DISCHARGE INDIVIDUALLY TO A VISIBLE HEIGHT BELOW CEILING IN THE NEAREST SINK, LAVATORY OR MOP SINK.

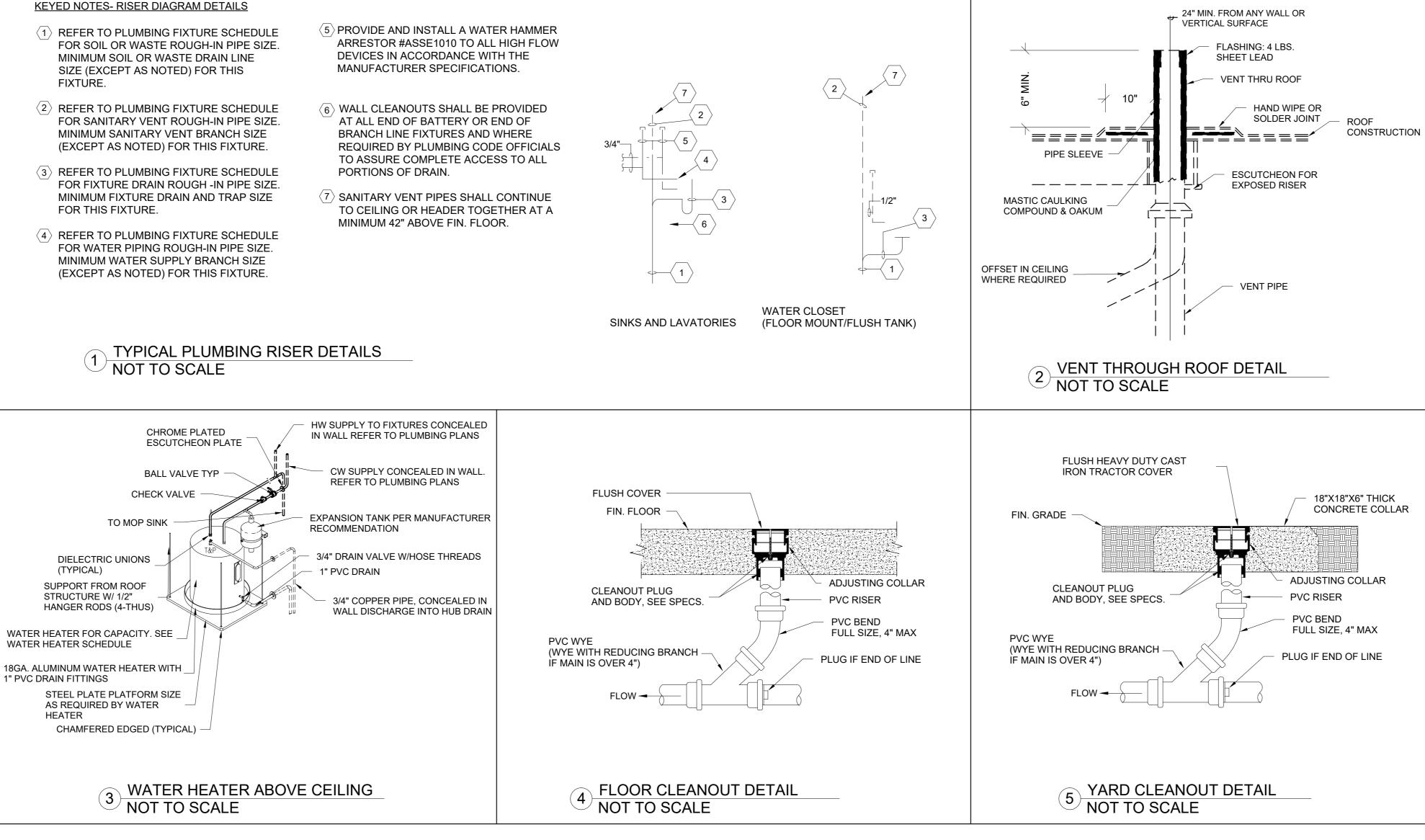
- CONNECT NEW SEWER LINE TO EXISTING 1. SANITARY PIPE BELOW SLAB. REFER TO CIVIL DRAWINGS FOR EXACT POINT OF CONNECTION PRIOR TO ANY WORK.
- 2. 2" HUB DRAIN LOCATED UNDER WATER HEATER PAN. COORDINATE HEIGHT AND LOCATION REQUIREMENTS WITH PLUMBING CONTRACTOR.
- 3. 2" HUB DRAIN LOCATED ABOVE A/C PLATFORM. CONDENSATE LINE SHALL RUN FROM THE DRAIN PAN OUTLET TO THE APPROVED HUB DRAIN, AND SHALL MAINTAIN A MINIMUM HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN ONE (1) PERCENT SLOPE.
- SAND-OIL INTERCEPTOR SHALL BE BUILT AND 4. INSTALLED TO MEET CITY WATER TREATMENT DEPARTMENT REQUIREMENTS. SUBMITTAL TO WATER TREATMENT DEPARTMENT PRIOR TO PURCHASE FOR APPROVAL IS REQUIRED. CONTACT WATER TREATMENT DEPARTMENT FOR INSTALLATION INSPECTION PRIOR TO COVERING UNIT. FAILURE TO COMPLY TO CITY REQUIREMENTS SHALL MAKE ALL CORRECTIONS AND/OR MODIFICATIONS THE FULL RESPONSIBILITY OF THE PLUMBING CONTRACTOR.
- PROVIDE 1,500 GALLON SAND-OIL INTERCEPTOR 5. EQUAL TO A PARK EQUIPMENT MODEL "SOCMP-1500" INSTALLATION SHALL MEET CITY REQUIREMENTS.

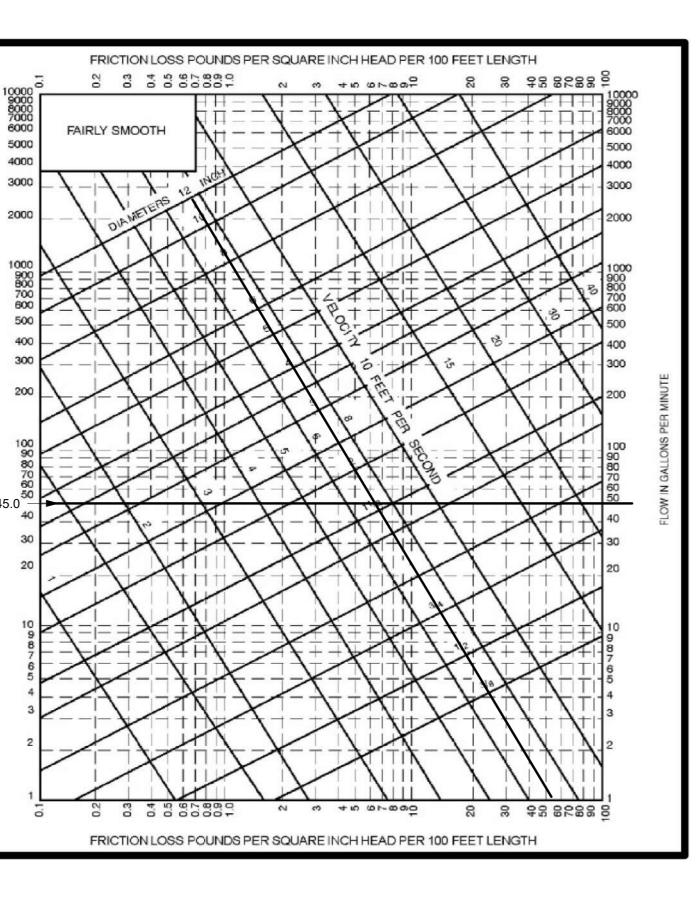


WATER SUPPLY FIXTURE UNITS (2018 IPC-Table E103.3(2))

	WSF	U PER DE	VICE		т	OTAL WS	FU
DEVICE	COLD	НОТ	TOTAL	QTY	COLD	НОТ	TOTAL
BATHROOM GROUP (PRIVATE FLUSH TANK)	2.7	1.5	3.6	0	0	0.00	0.00
BATHROOM GROUP (PRIVATE FLUSH VALVE)	6.0	3.0	8.0	0	0.00	0.00	0.00
BATHTUB (PRIVATE)	1.0	1.0	1.4	0	0.00	0.00	0.00
3ATHTUB (PUBLIC)	3.0	3.0	4.0	0	0.00	0.00	0.00
AVATORY (PRIVATE)	0.5	0.5	0.7	4	2.00	2.00	2.80
AVATORY (PUBLIC)	1.5	1.5	2.0	0	0.00	0.00	0.00
NATER CLOSET (PRIVATE FLUSH TANK)	2.2	0.0	2.2	0	0.00	0.00	0.00
NATER CLOSET (PRIVATE FLUSH VALVE)	6.0	0.0	6.0	4	24.00	0.00	24.00
NATER CLOSET (PUBLIC FLUSH TANK)	5.0	0.0	5.0	0	0.00	0.00	0.00
NATER CLOSET (PUBLIC FLUSH VALVE)	10.0	0.0	10.0	0	0.00	0.00	0.00
NATER CLOSET (PUB./PRIV. FLUSHOMETER)	2.0	0.0	2.0	0	0.00	0.00	0.00
HOWER HEAD (PUBLIC)	3.0	3.0	4.0	0	0.00	0.00	0.00
HOWER HEAD (PRIVATE)	1.0	1.0	1.4	3	3.00	3.00	4.20
SINK (PRIVATE)	1.0	1.0	1.4	1	1.00	1.00	1.40
(ITCHEN SINK (HOTEL/RESTAURANT)	3.0	3.0	4.0	0	0.00	0.00	0.00
SERVICE SINK	2.25	2.25	3.0	0	0.00	0.00	0.00
NATER HEATER	0.00	2.0	2.0	1	0.00	2.00	2.00
BIDET	1.5	1.5	2.0	0	0.00	0.00	0.00
JRINAL (1" FLUSHOMETER)	10.0	0.0	10.0	0	0.00	0.00	0.00
JRINAL (3/4" FLUSHOMETER)	5.0	0.0	5.0	0	0.00	0.00	0.00
JRINAL (FLUSH TANK)	3	0.0	3.0	0	0.00	0.00	0.00
COMBINATION FIXTURE	2.25	2.25	3.0	0	0.00	0.00	0.00
NASHING MACHINE (8 LBS PUBLIC)	2.25	2.25	3.0	0	0.00	0.00	0.00
NASHING MACHINE (8 LBS PRIVATE)	1.0	1.0	1.4	2	2.00	2.00	2.80
NASHING MACHINE (15 LBS PUBLIC)	3.0	3.0	4.0	0	0.00	0.00	0.00
HOSE BIB	2.5	0.0	2.5	0	0.00	0.00	0.00
DRINKING FOUNTAIN	0.25	0.0	0.25	1	0.25	0.00	0.25
DISHWASHING MACHINE	0.0	1.4	1.4	0	0.00	0.00	0.00
CE MACHINE	8.0	0.0	8.0	0	0.00	0.00	0.00
TOTAL (WSFU)			32.3	10.0	37.5
TOTAL(GPM) (1	Table E	103.3	(3)			45.0	

- (1) REFER TO PLUMBING FIXTURE SCHEDULE FOR SOIL OR WASTE ROUGH-IN PIPE SIZE. MINIMUM SOIL OR WASTE DRAIN LINE SIZE (EXCEPT AS NOTED) FOR THIS FIXTURE.
- FOR SANITARY VENT ROUGH-IN PIPE SIZE. MINIMUM SANITARY VENT BRANCH SIZE (EXCEPT AS NOTED) FOR THIS FIXTURE.
- FOR FIXTURE DRAIN ROUGH -IN PIPE SIZE. MINIMUM FIXTURE DRAIN AND TRAP SIZE FOR THIS FIXTURE.
- FOR WATER PIPING ROUGH-IN PIPE SIZE. MINIMUM WATER SUPPLY BRANCH SIZE (EXCEPT AS NOTED) FOR THIS FIXTURE.





GENERAL						
LABEL	DESCRIPTION	MAKE	MODEL			
EWC-1A	BI-LEVEL WATER COOLER	ELKAY	LVRCTL8V			
FCO	CLEANOUT	ZURN	Z1400-H			
FD	FLOOR DRAIN	ZURN	Z319			
FS	FLOOR SINK	ZURN	Z1900			
L-1A	LAVATORY	KOHLER	K-2006			
S-1	DOUBLE COMPARTMENT SINK		BY OWN			
TD	TRENCH DRAIN		BY OWN			
WC-1A	WATER CLOSET (HANDICAPPED)	SLOAN	ST-202			
WH-1	ELECTRIC WATER HEATER (TANK)	A.O. SMITH	DEL-50			
YCO	YARD CLEANOUT	ZURN	Z1402			



PLUMBING SCHEDULE CONNECTION SIZE DESCRIPTION/FEATURES DW HW WASTE VENT MODEL NUMBER: LVRCTL8WSK. BI-LEVEL COOLER FILTERED RIFRIGRATED. 1.5 GPM. 0' - 0 1/2" 0' - 2" 0' - 2" 1-1/2" NOMINAL DRAIN. LEVEL TROL ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY. WITH GAS AND WATERTGITH ABS TAPERED THREAD PLUG, AND ROUND EXTRA HEAVY-DUTY TOP ADJUSTABLE TO FINISHED FLOOR.
 SIZES INDICATED ON PLAN. 25" LARGE CAPACITY THOROFLUSH DRAIN, CAST IRON BODY WITH WHITE ACID RESISTANT COATING, BOTTOM OUTLET AND NICKEL BRONZE TOP ERAME AND CREATE 0' - 4" <varies> TOP FRAME AND GRATE. SANI-FLOR RECEPTOR 12" X 12" X 6" DEEP CAST IRON BODY AND SQUARE, LIGHT-DUTY GRATE WITH 1/2" SLOTTED OPENINGS, WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, COMPLETE WITH WHITE ABS ANTI-SPLASH INTERIOR BOTTOM 0' - 2" DOME STRAINER. KINGSTON", WALL MOUNTED LAVATORY VITREOUS CHINA, 4" FAUCET CENTERS, TW (2) BLADE HANDLE FAUCET, CHICAGO MODEL #802A-317, ANGLE STOPS, FLEXIBLE RISERS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, OFFSET TAILPIECE PROVIDE A.D.A. PROTECTIVE COVERS AT WATER PIPING, VALVES, AND DRAIN. MOUNT 0' - 0 3/4" 0' - 0 3/4" 0' - 2" 0' - 2" AT A.D.A. HEIGHT AS INDICATED ON ARCHITECTURAL DRAWINGS. DOUBLE COMPARTMENT SINK BY OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION. ADD SPLASH GUARDS TO AVOID MOISTURE IN WALLS. TRENCH DRAIN BY OWNER. REFER TO ARCHITECTURAL PLANS FOR FURTHER 0' - 0 3/4" 0' - 0 3/4" 0' - 2" 0' - 2" 0' - 2" 0' - 4" INFORMATION. FLUSHOMETER MODEL: ROYAL 111. VITREOUS CHINA. HANDICAP. ADA. FLOOR 0' - 1" 0' - 4" 0' - 2" MOUNTED. BAA COMPLIANT. cUPC GREEN CERTIFIED. CEC COMPLIANT. LEED COMPLIANT. 1.28 GPM. SMITH MODEL #DEL-50 ELECTRIC RATED AT 208 VOLTS, SINGLE PHASE, 4.5 KW, SINGLE SMITH MODEL #DEL-30 ELECTRIC RATED AT 208 VOLTS, SINGLE PHASE, 4.5 KW, SINGLE ELEMENT, GLASS LINED AND U.L. LISTED. 50 GALLONS, 3/4" TAPPING FOR RELIEF VALVE INSTALLATION, ANODE ROD FOR CATHODIC PROTECTION, TEMPERATURE AND PRESSURE VALVE, DRAIN PAN, THERMOSTAT SET AT 110 deg WITH TEMPERATURE CUTOFF, AND DRAIN VALVE LOCATED AT FRONT FOR EASE OF SERVICING. TUF-TOP NON-ADJUSTABLE FLOOR CLEANOUT W/ DURA-COATED CAST IRON BODY, W/ GAS & WATERTIGHT ABS TAPERED THREAD PLUG, & ROUND SCORIATED CAST IRON HEAVY DUTY SECURED COVER & REAME 0' - 0" HEAVY-DUTY SECURED COVER & FRAME.

