

SITE IMPROVEMENTS & NEW BUILDING FOR:
UA LOCAL 671
MONROE PLUMBERS & PIPEFITTERS

313 HARBOR AVENUE • MONROE, MICHIGAN • 48162

LEGAL DESCRIPTION

PARCEL #51-0041T-01B
ADDRESS: 313 HARBOR AVE.
MONROE, MI 48162

LOTS 214 THROUGH 218 "HARBOR VIEW SUBDIVISION" BEING A PART OF PRIVATE CLAIM 684, CITY OF MONROE AND CITY OF FREIGHTOWN TOWNSHIP, MONROE COUNTY, MICHIGAN AS RECORDED IN LIBER 6 OF PLATS, PAGE 38 MONROE COUNTY RECORDS.

PARCEL CONTAINING 0.94± ACRES (NET & GROSS)

ZONING INFORMATION

I-1 LIGHT INDUSTRIAL (SECTION 2.15.C)
MIN. LOT SIZE = 10,000 S.F.
ACTUAL = 41,028 S.F. ~ 0.94± ACRES GROSS
MIN. LOT WIDTH = 100.00'
ACTUAL = 250.0' (HARBOR AVE.)
164.4' (MILL STREET)
MAX. LOT COVERAGE
NOTE (a): PROVIDED THAT ALL PARKING, LANDSCAPING, AND SETBACK REQUIREMENTS ARE MET, THERE SHALL BE NO MAXIMUM LOT COVERAGE.
EXISTING =
PROPOSED = 30%
BUILDING HEIGHT = 4 STORIES, 50.0'
EXISTING = 1 STORY, 18.8± (RIDGE HT.)
PROPOSED = 1 STORY, 25.0± (RIDGE HT.)
MIN. FRONT YARD SETBACK = 20.0'
PROPOSED BUILDING (HARBOR AVE. & MILL STREET) = 20.0'
MIN. SIDE YARD SETBACK = 20.0' AT LEAST FOR ONE, 40.0' TOTAL OF TWO
EXISTING = 21.1'
REAR YARD SETBACK = 20.0'
ACTUAL = 24.4'
MIN. BETWEEN BUILDINGS = 10.0'
ACTUAL = 103.8'
MIN. FLOOR AREA = NO REQUIREMENT
EXISTING = 6,151 S.F. (GROSS)
PROPOSED = 6,325 S.F. (GROSS)
TOTAL = 12,452 S.F. (GROSS)

PRINCIPAL PERMITTED USES

I-1 LIGHT INDUSTRIAL (SECTION 2.15.B)
PERMITTED USES
OFFICE - BUSINESS; EDUCATIONAL

FLOOD ZONE INFORMATION

INFORMATION FROM:
FLOOD INSURANCE RATE MAP
MAP NUMBER: 2615C0261F
DATED: JUNE 19, 2020

ZONE: X - AREA OF MINIMUM FLOOD HAZARD

WETLAND NOTE

NO WETLANDS HAVE BEEN IDENTIFIED ON THIS SITE.

NO WETLANDS WILL BE DISTURBED WITH THE PROPOSED SITE IMPROVEMENTS.

WATER & WASTE WATER VOLUMES

WATER USAGE IS BASED ON FIXTURE FLOW USING GALLONS PER MINUTE FOR LAVATORIES AND GALLON PER FLUSH FOR TOILETS TIMES NUMBER OF EMPLOYEES PER DAY.

40 STUDENTS / INSTRUCTORS (MAX) X 2 USES OF RESTROOM PER DAY = 80 TOTAL USES PER DAY

LAVATORY = 2.5 GALLON PER MINUTES
80 X 30 SECOND USE = 2400 SECONDS / 60 = 40 MINUTES
40 X 2.5 = 100 GALLONS PER DAY

TOILET = 1.6 GALLON PER FLUSH
80 X 1.6 GALLON PER USE = 128 GALLONS PER DAY

MISC. WATER USAGE (CLEANING) = 50 GALLONS PER DAY

100 + 128 + 50 = 278 TOTAL GALLONS PER DAY WATER & WASTEWATER USAGE

SANITARY & WATER SERVICE NOTES

NO CROSS CONNECTION INSPECTION IS REQUIRED FOR THE WATER AND SANITARY SEWER.

A SANITARY SEWER PERMIT IS NOT REQUIRED TO TAP INTO THE EXISTING PRIVATE SANITARY SEWER, HOWEVER, THE CITY OF MONROE MUST BE NOTIFIED PRIOR TO THE TAP BEING MADE. THE CITY OF MONROE ENGINEERING DEPARTMENT MUST WITNESS THE SANITARY TAP INSTALLATION FOR WATER TIGHTNESS.

BUSINESS INFORMATION

MAX. NUMBER OF OCCUPANTS IN STRUCTURE
= 40 STUDENTS / INSTRUCTORS

BUSINESS HOURS:
MONDAY THRU THURSDAY: 9:00 P.M. TO 10:00 P.M.
FRIDAY, SATURDAY, & SUNDAY CLOSED

UTILITY NOTE

NEW UTILITIES (SANITARY SEWER, MUNICIPAL WATER, GAS, ELECTRIC, CABLE, PHONE, ETC.) SHALL BE INSTALLED INTO THE NEW BUILDING.

A NEW STORM WATER DETENTION BASIN SYSTEM WITH STORM WATER QUALITY SHALL BE INSTALLED.

SIGNAGE NOTE

NO NEW SIGNAGE IS PROPOSED WITH THIS SUBMITTAL.

ANY FUTURE SIGN SHALL BE SUBMITTED SEPARATELY TO MONROE CHARTER TOWNSHIP FOR REVIEW, APPROVAL AND PERMIT.

PARKING REQUIREMENTS

I-1 LIGHT INDUSTRIAL (SECTION 2.15.B)

EXISTING BUILDING = 6,151 GROSS S.F.
PROPOSED BUILDING = 6,325 GROSS S.F.
TOTAL ON-SITE BUILDINGS = 12,452 GROSS S.F.

OFFICE OR BUSINESS: ONE (1) PARKING SPACE PER 200 S.F. OF USABLE FLOOR AREA

12,555 x 80% = 10,044 / 200 = 50.22 ~ 51 SPACES REQUIRED

1 TO 25 PARKING SPACES REQUIRE ONE ADA SPACE.
(VAN ACCESSIBLE)

11 SPACES PROVIDED ON-SITE INCLUDING 2 ADA VAN ACCESSIBLE SPACES (1 AT EACH BUILDING)

94 ADDITIONAL PARKING SPACES PROVIDED AT OWNER'S OTHER SITE ACROSS THE STREET TO USED AS OVERFLOW. PARKING AT THE OTHER SITE WILL NOT BE UTILIZED AT THE SAME TIME AS CLASSES TAKE PLACE.

LOADING / UNLOADING

(SECTION 5.24)
2,000 - 20,000 S.F. OF GROSS S.F. REQUIRE ONE SPACE
MINIMUM SPACE REQUIRED = 10.0' X 50.0' X 14.0' HT. CLEAR

DUE TO THE NATURE OF THIS EDUCATIONAL BUILDING NO LOADING / UNLOADING SPACE IS PROPOSED

DELIVERIES

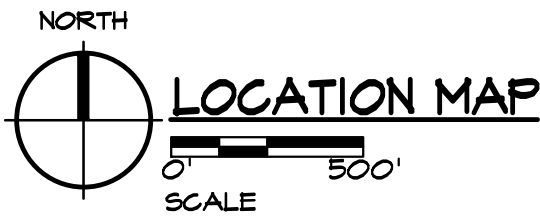
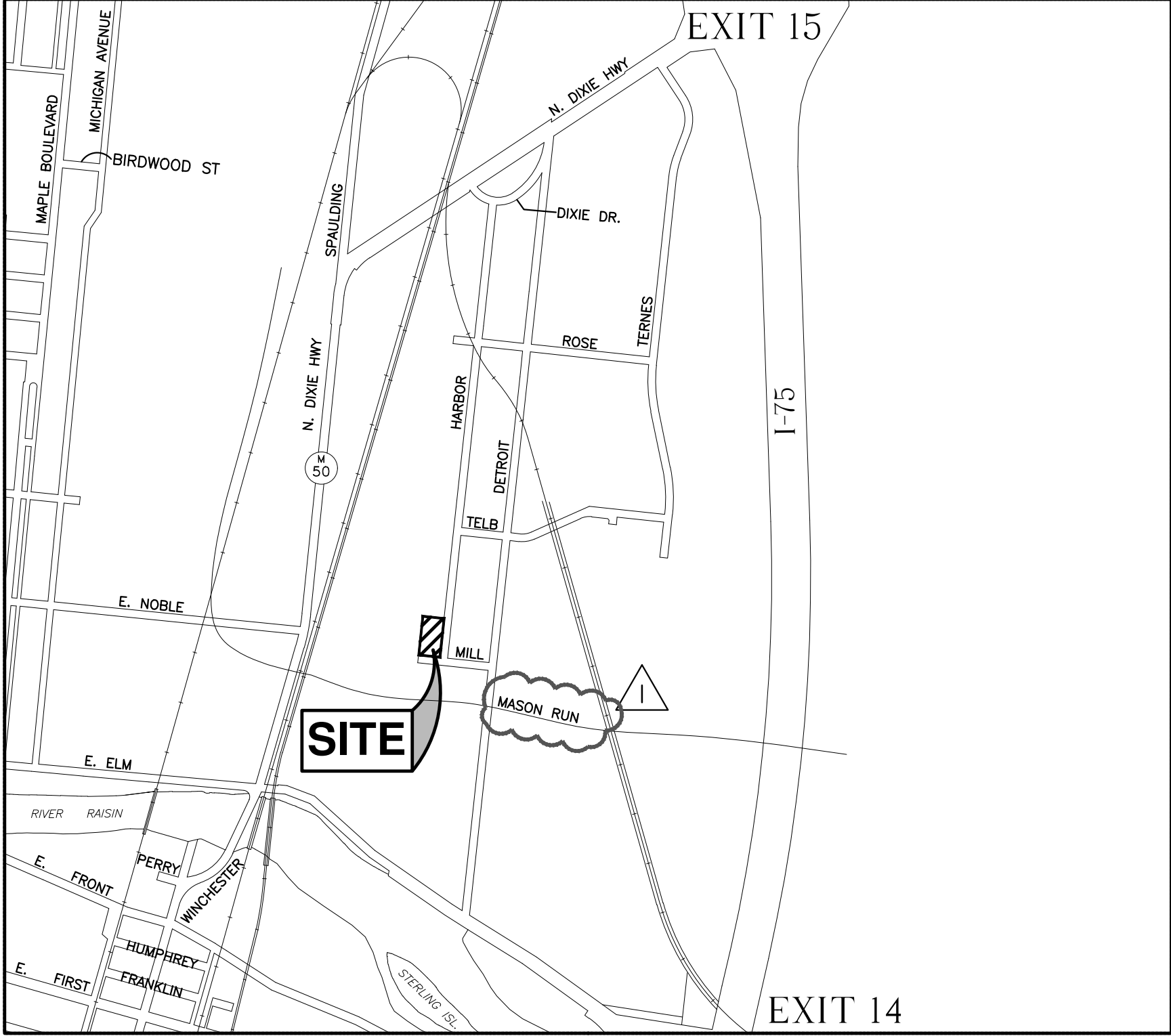
ALL TRUCK TRAFFIC FOR DELIVERIES & PICK-UPS SHALL BE DURING NORMAL BUSINESS HOURS.

REFUSE ENCLOSURE

ALL REFUSE WILL BE BROUGHT ACROSS THE STREET TO THE PLUMBERS & PIPEFITTERS DUMPSTERS LOCATED WITHIN AN EXISTING DUMPSTER ENCLOSURE.

KNOX BOX NOTE

A KNOX BOX SHALL BE ADDED TO THE BUILDING NEAR THE FRONT DOOR. CONTRACTOR TO COORDINATE STYLE OF BOX AND LOCATION WITH FIRE INSPECTOR.



PROJECT NARRATIVE

THE UA PLUMBERS / PIPEFITTERS LOCAL 671 IS PROPOSING CONSTRUCTION OF A NEW TRAINING BUILDING LOCATED AT 313 HARBOR AVENUE, MONROE, MICHIGAN 48162 WHICH WILL BE LOCATED ON THE SAME SITE AS 313 HARBOR AVE. THE PROPOSED STRUCTURE IS TO HOLD TRAINING CLASSES WITH OPEN LAB SPACE INCLUDING SAND PIT, (2) CLASSROOMS, (2) TOILET ROOMS, TOOL CRIB, OPEN MEZZANINE FOR MECHANICAL/ELECTRICAL EQUIPMENT AND ADDITIONAL LAB SPACE.

THE PROPOSED STRUCTURE IS TO BE A ONE-STORY, SLAB-ON-GRADE WITH A PORTION OF THE STRUCTURE TO HAVE AN OPEN MEZZANINE SPACE TO HOUSE TRAINING LAB SPACE ON BOTH LEVELS, TOILETS AND TOOL CRIB TO BE LOCATED ON MAIN FLOOR. THE STRUCTURE IS TO BE CONSTRUCTED AS A PRE-ENGINEERED STEEL STRUCTURE WITH SLAB-ON-GRADE CONCRETE FLOOR, METAL SIDING VENEER EXTERIOR, AND METAL STANDING SEAM SLOPED ROOF WITH MEZZANINE THAT CONSISTS OF CMU BEARING AND NON-BEARING WALLS, STEEL BEAMS, STAIR ASSEMBLY, STEEL BAR JOISTS, STEEL DECKING, STEEL GUARD RAILING, AND CONCRETE FLOOR. THE PROPOSED STRUCTURE IS APPROXIMATELY 8,280 GROSS SQUARE FEET (GSF) COMPRISED OF APPROXIMATELY 6,325 GSF GRADE LEVEL AND 1,955 GSF OPEN MEZZANINE. THE PRE-ENGINEERED STRUCTURE WILL BE SUPPLIED BY THE UA PLUMBERS / PIPEFITTERS LOCAL 671 (DRAWINGS INCLUDED IN BID PACKAGE FOR REFERENCE). THE OVERALL WORK SHALL BE PHASED WITH THE FIRST PHASE (BASE BID) INCLUDING THE ERECTING OF THE PRE-ENGINEERED STRUCTURE, CONSTRUCTION OF THE FOUNDATIONS, PARTIAL CONSTRUCTION OF MEZZANINE AT TOILET ROOMS AND TOOL CRIB WITH STAIR. ALL SITE WORK WHICH INCLUDES BRINGING UTILITIES (GAS, ELECTRICAL, AND PLUMBING) TO THE STRUCTURE, AND ENCLOSE THE STRUCTURE COMPLETELY. THE SECOND PHASE (SCOPE NOT INCLUDED IN BASE BID) TO BUILD-OUT THE FINISH OUT OF THE STRUCTURE WITH ALL NECESSARY MECHANICAL, PLUMBING, ELECTRICAL, AND LOW VOLTAGE INFRASTRUCTURE WORK TO BE BID AT A LATER TIME. ALL PLUMBING WORK TO BE SELF-PERFORMED BY OWNER WITH GENERAL CONTRACTOR COORDINATING WITH OWNER FOR WORK.

THE PROJECT ALSO INCLUDES SITE IMPROVEMENTS CONSISTING OF ROUGH AND FINAL GRADING EXCAVATION ACTIVITIES INCLUDING FILL AND SPOILS REMOVALS FOR BUILDING PAD AND FOUNDATION ACTIVITIES, CONCRETE AND ASPHALT PARKING LOTS, DRIVEWAYS, BUILDING MOUNTED SITE LIGHTING, AND LAWN RESTORATION. NEW GAS, ELECTRICAL, CABLE, AND PHONE SERVICES SHALL BE COORDINATED WITH THE LOCAL UTILITY SUPPLIERS, SANITARY SEWER & WATER SERVICES SHALL CONNECT TO THE EXISTING SANITARY AND WATER MAINS ALONG HARBOR AVENUE AND MILL STREET.

PROJECT FUNDING REQUIRES THIS PROJECT TO COMPLY WITH PREVAILING WAGE PROVISIONS IN ACCORDANCE WITH THE STATE OF MICHIGAN AND FEDERAL DAVIS BACON ACT FOR ALL SKILLED TRADESPERSONS AND LABORERS EMPLOYED ON THE PROJECT.

GENERAL CONTRACTORS MUST USE UNION SUB-CONTRACTORS ON THIS PROJECT.

ALTERNATE #1 - ADD TO THE PROPOSAL THE COST TO PROVIDE AND INSTALL STEEL FRAMING TO CONSTRUCT REMAINDER OF MEZZANINE STRUCTURE INCLUDING CONSTRUCTION OF THE CMU BEARING AND NON-BEARING WALLS, STEEL BEAMS, STEEL BAR JOISTS, STEEL DECKING, STEEL GUARD RAILING, AND CONCRETE FLOOR.

BASE BID: STAIR ASSEMBLY, STEEL BAR JOISTS, STEEL DECKING, CONCRETE FLOOR, STEEL GUARD RAILING, MASONRY BEARINGS AND NON-BEARING WALLS OVER AND AROUND THE TOILET AND MECHANICAL ROOMS.

DRAWING INDEX

T-1 TITLE SHEET, GENERAL NOTES & LOCATION MAP

CIVIL PLANS

- C-1 OVERALL SITE PLAN
- C-2 SITE PLAN & DETAILS
- C-3 GRADING PLAN & DETAILS
- C-4 PHOTOMETRIC PLAN & DETAILS
- C-5 SOIL EROSION CONTROL PLAN & NOTES
- L-1 LANDSCAPE PLAN & NOTES

ARCHITECTURAL, STRUCTURAL, MEP DRAWING INDEX

- T-2 TITLE SHEET, GENERAL NOTES, LOCATION MAP, & CODE INFORMATION
- LS-1 LIFE SAFETY PLANS

STRUCTURAL

- S-1 FOUNDATION PLAN & COLUMN PIER & FOOTING DETAILS (BASE BID)
- S-2 FOUNDATION DETAILS (BASE BID)
- S-3 MEZZANINE FRAMING PLAN, SAND PIT FLOOR, & DETAILS
- S-4 CONTROL JOINT FLOOR PLANS (BASE BID & ALTERNATE NO.1)

ARCHITECTURAL

- A-1 FLOOR PLANS & WALL TYPES
- A-2 FLOOR PLANS: ALTERNATE NO.1 & STAIR SECTION
- A-3 EXTERIOR ELEVATIONS
- A-4 BUILDING SECTIONS & DETAILS
- A-5 DOOR & WINDOW SCHEDULES

MECHANICAL

- M-1 FIRST FLOOR PLAN MECHANICAL
- M-2 MECHANICAL SCHEDULES AND DETAILS
- M-3 MECHANICAL SPECIFICATIONS

GENERAL NOTES

- DRAWINGS ARE SCHEMATIC. ACTUAL CONDITIONS AFFECTING THIS WORK ARE TO BE VERIFIED IN THE FIELD. DO NOT SCALE DRAWINGS.
- THE ARCHITECT IS NOT RESPONSIBLE FOR MEANS AND METHODS UTILIZED IN THE EXECUTION OF THE WORK.
- SECURE AND PAY FOR ALL PERMITS, INSPECTIONS, TESTS, ETC., AS REQUIRED FOR THE WORK UNDER THIS CONTRACT.
- CONTACT PUBLIC UTILITIES AND COORDINATE WORK WITH PUBLIC REQUIREMENTS AND INSTALLATIONS. CONTACT 'MISS DIG' (811) PRIOR TO START OF OPERATIONS.
- PROVIDE ANY MEANS NECESSARY TO ENSURE SAFETY TO EMPLOYEES, VISITORS TO THE SITE, AND THE GENERAL PUBLIC.
- WORK RELATINS TO DISTURBANCE OF EXISTING HAZARDOUS MATERIALS, SUCH AS ASBESTOS, PCB, LEAD, ETC., IS NOT WITHIN THE SCOPE OF THIS WORK. IF CONTRACTOR ENCOUNTERS MATERIALS KNOWN OR SUSPECTED TO CONTAIN A HAZARDOUS PRODUCT, HE/SHE SHALL ADVISE THE OWNER OF THE FINDINGS FOR DETERMINATION OF PROPER DISPOSITION. ANY SUCH HAZARDOUS MATERIALS SHALL NOT BE INCORPORATED IN THIS WORK.
- UNLESS OTHERWISE APPROVED BY OWNER, FURNISH ONLY NEW MATERIALS OF GOOD QUALITY FOR INCORPORATION INTO THIS WORK.
- EQUIPMENT AND FINISH MATERIAL COLOR SELECTION BY THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ALL SURFACES AND COMPONENTS DAMAGED DURING CONSTRUCTION.
- VERIFY FINAL LAYOUT WITH OWNER AND ARCHITECT.

ELECTRICAL

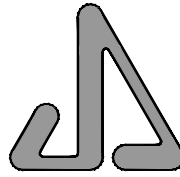
- E-1 LEGEND, LUMINAIRE SCHEDULE, SPECIFICATIONS
- E-2 SITE PLAN - ELECTRICAL
- E-3 FIRST FLOOR PLAN - LIGHTING
- E-4 MEZZANINE PLAN - LIGHTING
- E-5 FIRST FLOOR PLAN - POWER
- E-6 MEZZANINE PLAN - POWER
- E-7 DETAILS
- E-8 PANEL SCHEDULE, PANEL RISER DIAGRAM, FEEDER SCHEDULE

PLUMBING

- P-1 FIRST FLOOR PLAN PLUMBING
- P-2 MEZZANINE PLAN PLUMBING
- P-3 PLUMBING DETAILS

METAL BUILDING DRAWINGS (FOR REFERENCE ONLY)

- COVER PAGE
- 1 SPECIFICATIONS
- 2 ANCHOR BOLT PLAN
- 3 RIGID FRAME REACTIONS
- 4 ENDWALL REACTIONS, DESIGN CRITERIA
- 5 ANCHOR BOLT DETAILS
- 6 ROOF FRAMING
- 7 ROOF PANEL LAYOUT
- 8 RIGID FRAME #1
- 9 RIGID FRAME #2
- 10 FRONT SIDEWALL FRAMING
- 11 BACK SIDEWALL FRAMING
- 12 LEFT ENDWALL FRAMING
- 13 RIGHT ENDWALL FRAMING
- 14 DETAIL PAGE #1
- 15 DETAIL PAGE #2
- 16 DETAIL PAGE #3

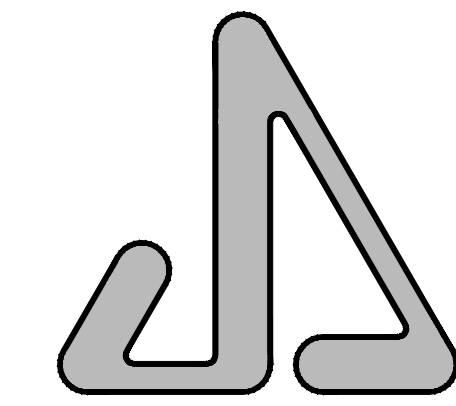


ARCHITECT: JAMES S. JACOBS ARCHITECTS, PLLC
CIVIL ENGINEER: 25 WASHINGTON STREET
STRUCTURAL ENGINEER: MONROE, MICHIGAN 48161
(734) 241-7933

MECHANICAL ENGINEER: JDRM ENGINEERING, INC.
PLUMBING ENGINEER: 5604 N. MAIN SUITE 200
ELECTRICAL ENGINEER: SYLVANIA, OHIO 43560
(419) 824-2400



Know what's below.
Call before you dig.
Non Members must call directly.



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MONROE, MI 48162

PROPERTY OWNER CONTACT:
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PHONE: 734-242-5711
EMAIL: mike@ualocal671.com

TITLE SHEET,
GENERAL NOTES,
& LOCATION MAP

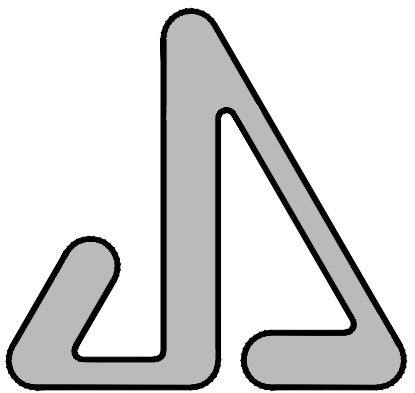
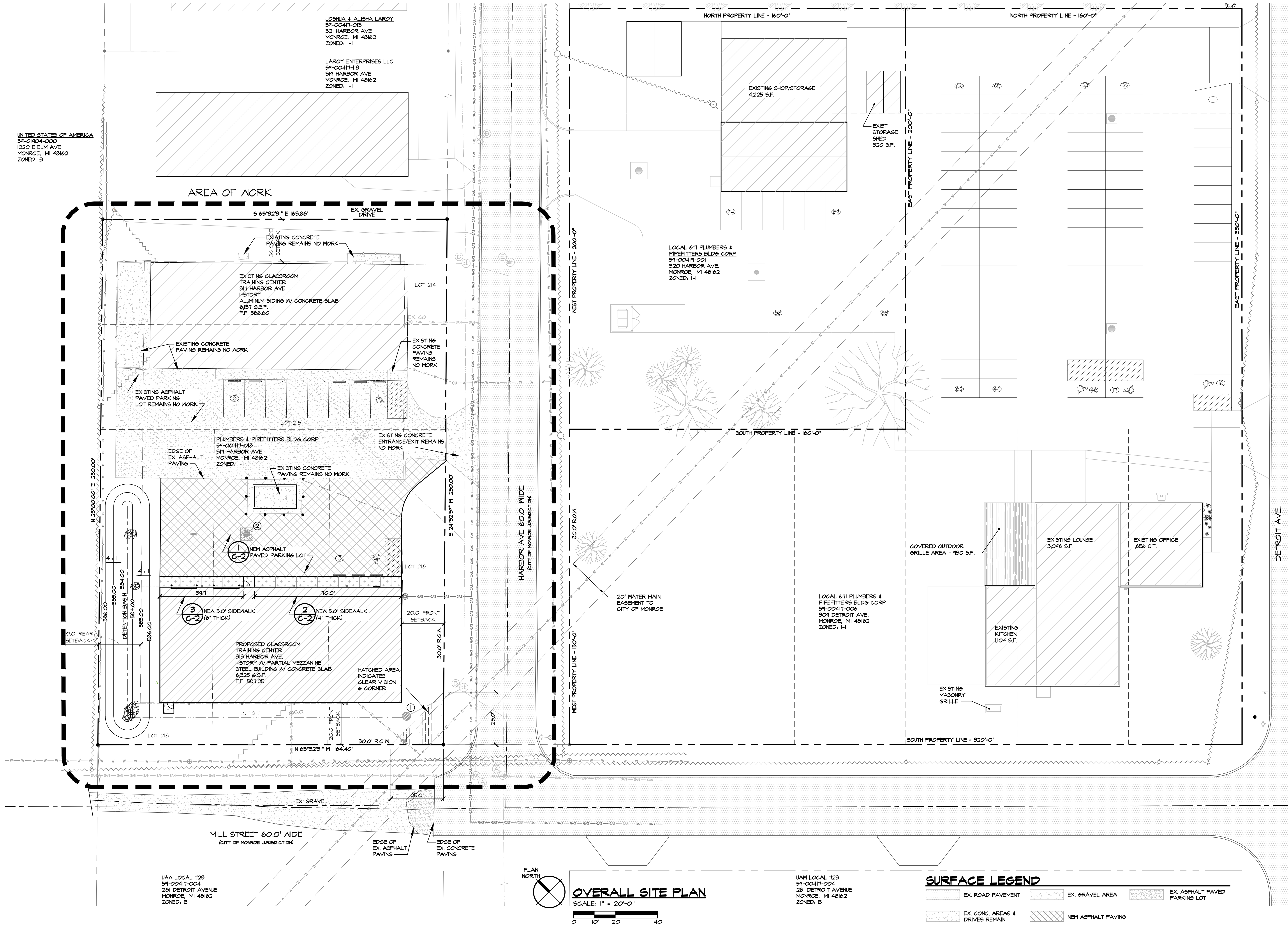
03-03-2026 BIDS
02-27-2025 OWNER REVIEW
10-14-2024 REVISION #1
09-04-2024 SOIL EROSION PERMIT
09-04-2024 ADMIN. SITE PLAN REVIEW
09-03-2024 OWNER REVIEW

DATE: ISSUED FOR:

DRAWN JLM

REVIEW'D JSJ

202411



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OVERALL
SITE PLAN

03-03-2025 BIDS
02-27-2025 OWNER REVIEW
10-18-2024 22% REVISION #1
09-04-2024 SOIL EROSION PERMIT
09-04-2024 ADMIN. SITE PLAN REVIEW
09-03-2024 OWNER REVIEW

DATE: ISSUED FOR:

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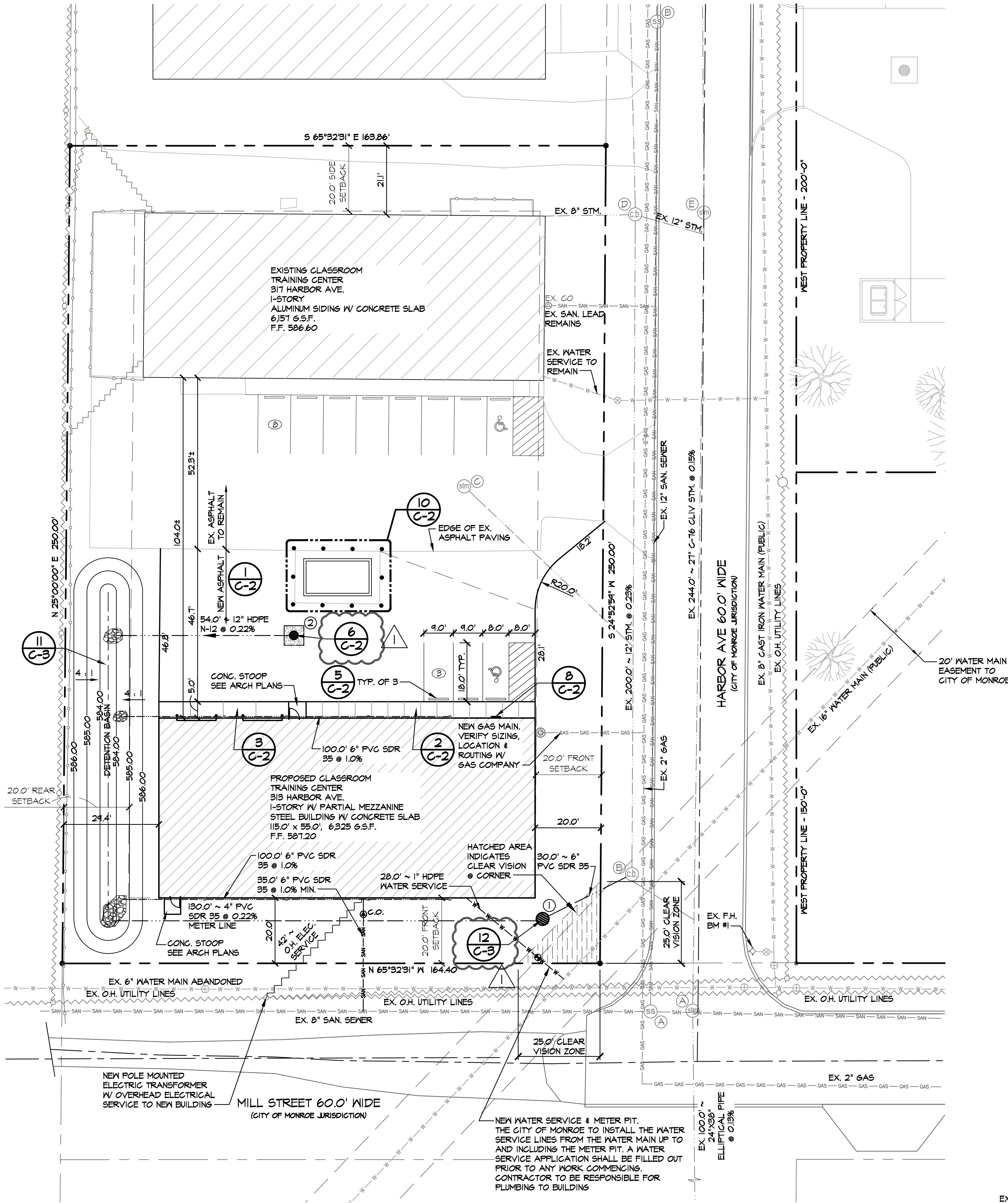
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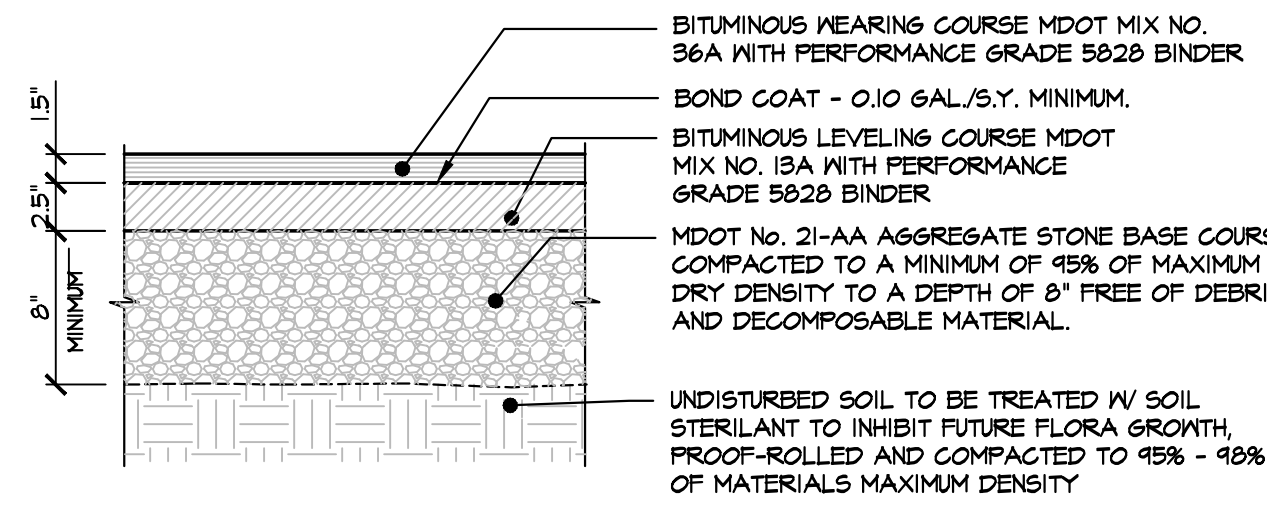
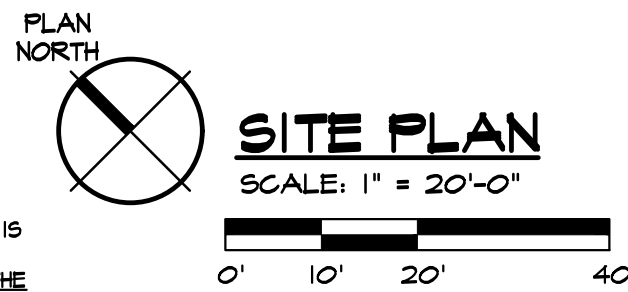
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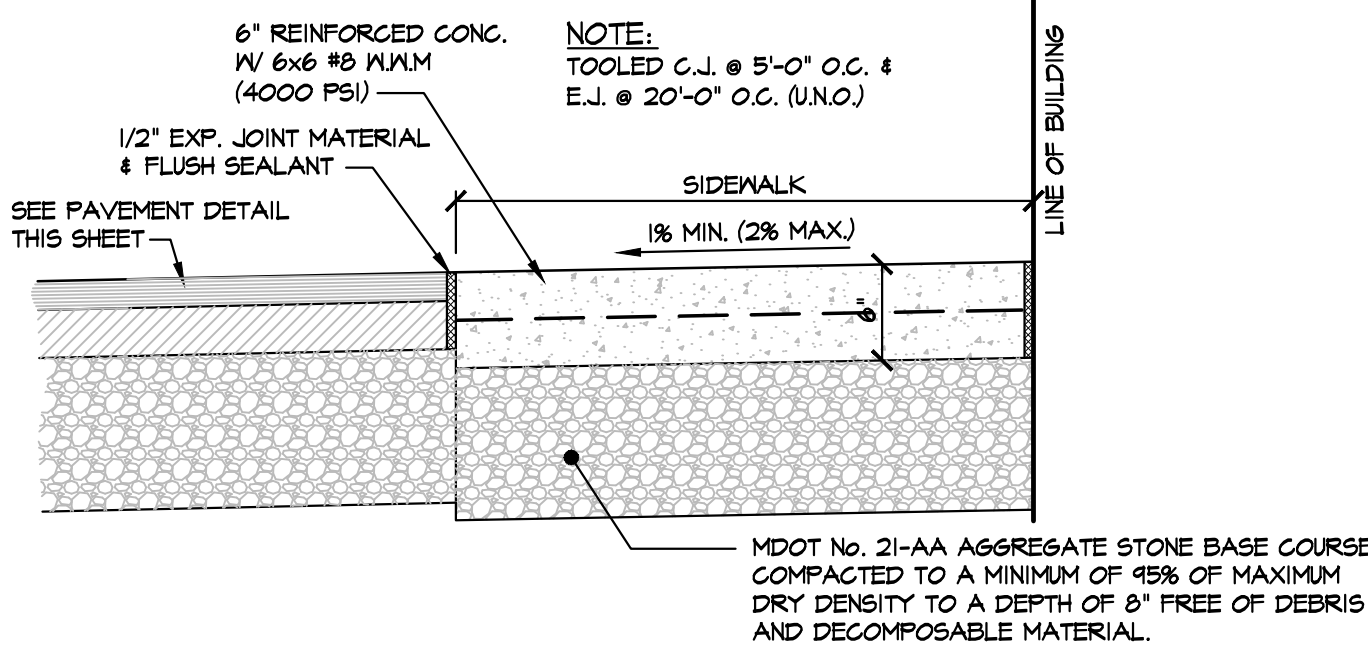


CONTRACTOR NOTES:
1. EXISTING UTILITIES
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THIS DRAWING WERE LOCATED IN THE FIELD AND/OR TAKEN FROM THE VARIOUS DEPARTMENT RECORDS. THE LOCATIONS MAYBE ASSUMED FROM SURFACE MANIFESTATIONS (E.G. VALVES, MANHOLES). NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES AND PROPOSED UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. CONTRACTORS ARE REQUIRED TO CONTACT MISS DIS (811) AND ITS NON MEMBERS WHO HAVE FACILITIES NEAR THE SITE, BEFORE BEGINNING EXCAVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE APPARENT OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

2. PROPOSED UTILITIES
CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING GRADES AND LOCATION OF CONSTRUCTION STAKING FOR ALL UTILITY (SANITARY, STORM, WATER), PAVEMENT AND CURBING INSTALLATIONS. IF GRADES AND LOCATION OF CONSTRUCTION STAKING ARE DIFFERENT THAN SHOWN ON PLANS, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.



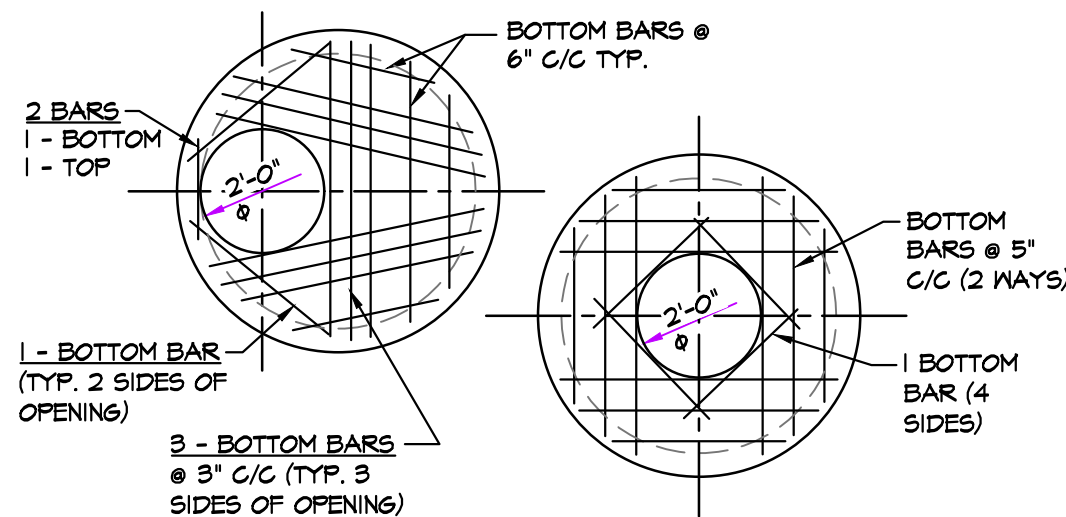
1 TYPICAL ASPHALT PAVEMENT SECTION
C-2 NO SCALE



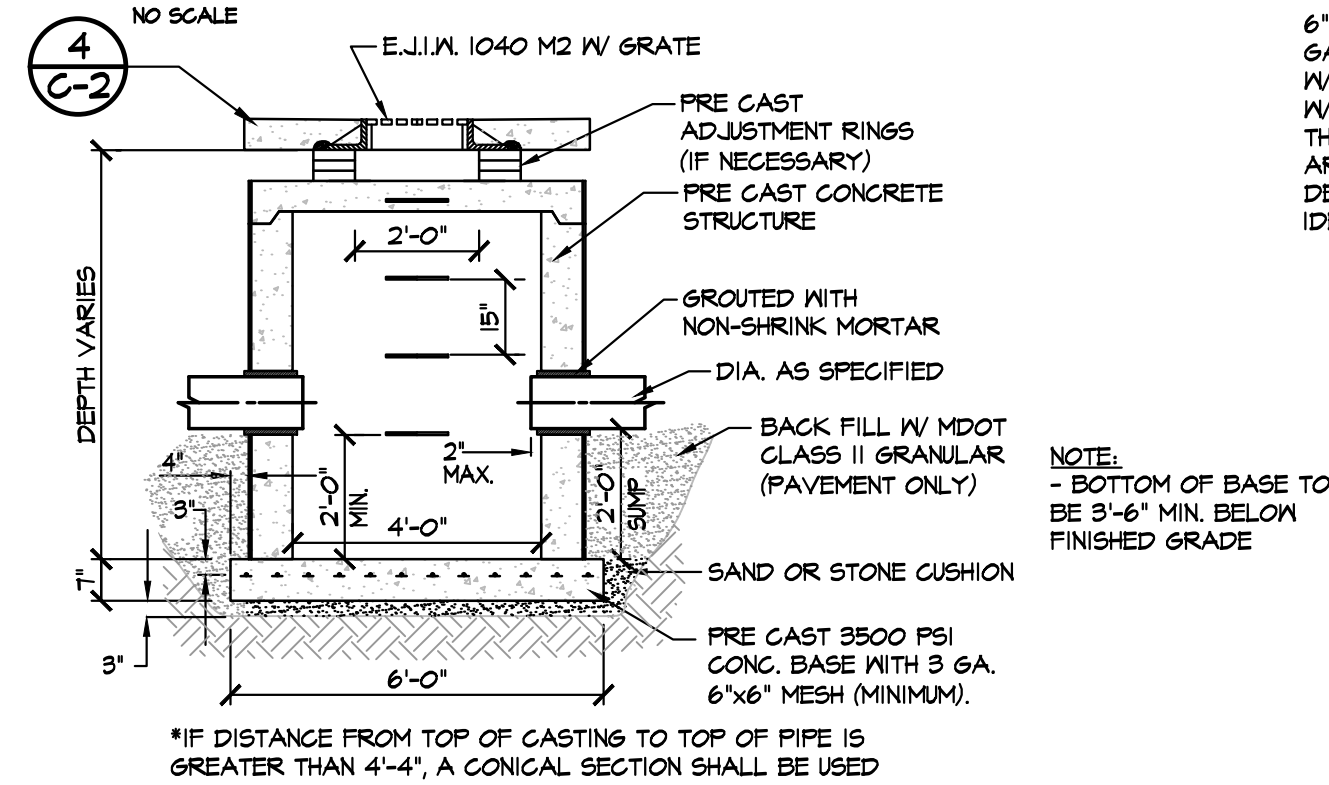
3 CONCRETE APPROACH / SIDEWALK
C-2 NO SCALE

MANHOLE TOP SLAB SCHEDULE *		
DIA.	MIN. TH.	REINF. BAR SIZE
4'-0"	6"	#4

* IF DISTANCE FROM TOP OF FRAME TO TOP OF PIPE PENETRATION IS GREATER THAN 4'-4", A PRE CAST CONCRETE CONICAL SECTION MUST BE USED.

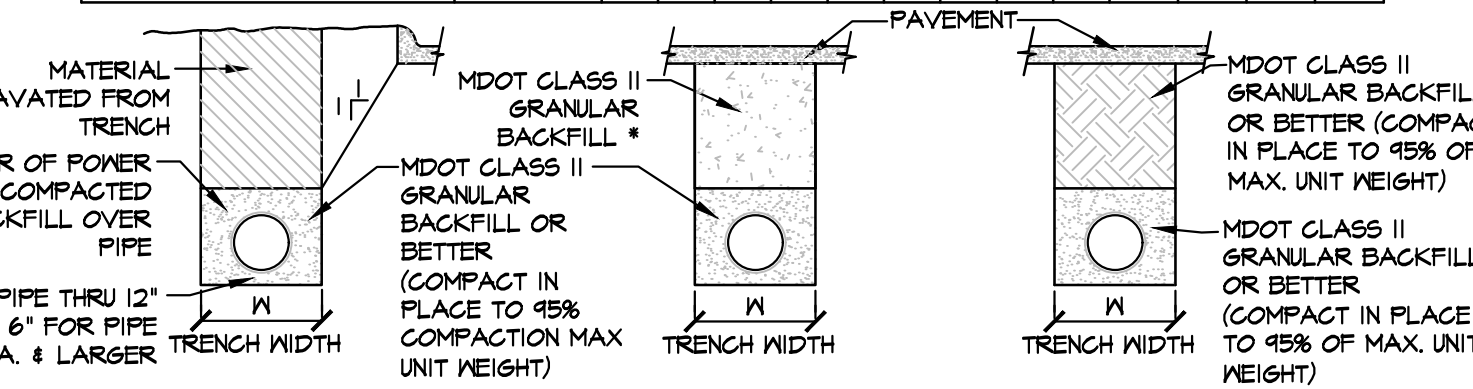


SHALLOW M.H. / C.B. TOP SLAB DETAIL
C-2 NO SCALE



6 SHALLOW C.B. DETAIL
C-2 NO SCALE

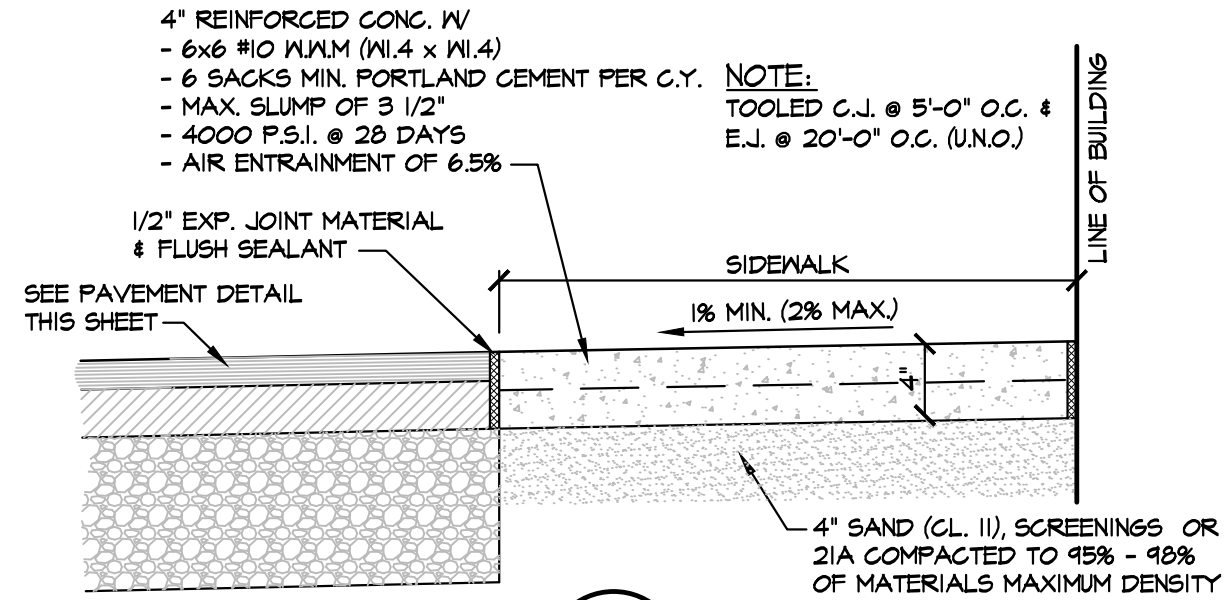
I.D. PIPE (INCHES)	18" & LESS	21"	24"	27"	30"	33"	36"	42"	48"	54"	60"	66"	72"	78"
"N" TRENCH WIDTH (FEET)	3.0'	3.5'	4.0'	4.5'	5.0'	5.5'	6.0'	7.0'	8.0'	9.5'	10.0'	10.5'	11.0'	11.5'



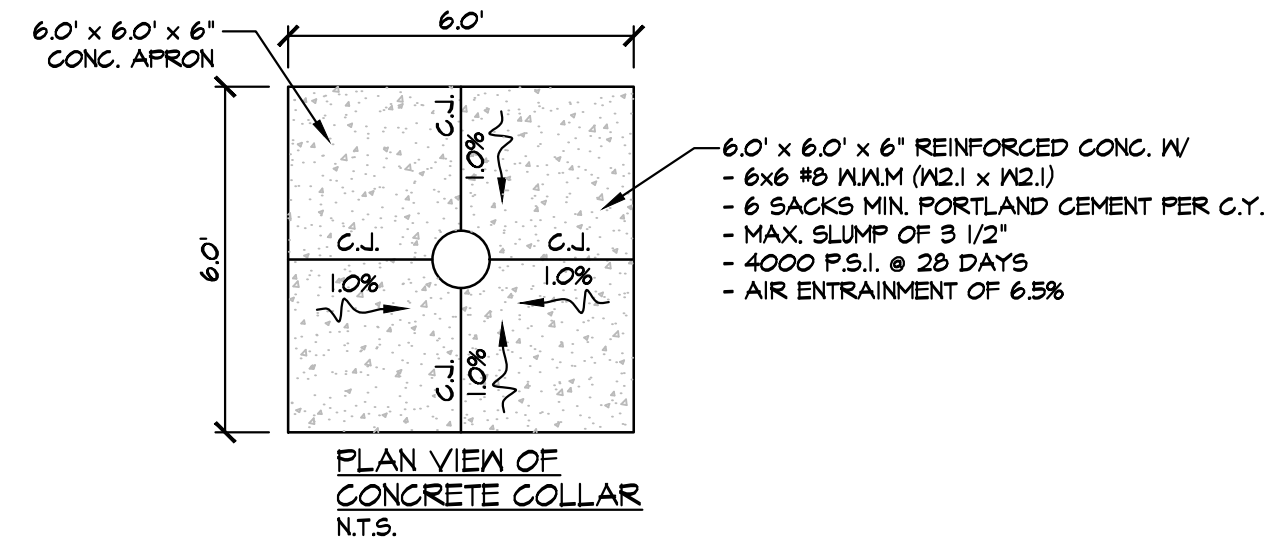
BACKFILL OUTSIDE PAVEMENT "A" BACKFILL UNDER ROAD/STREET "B" BACKFILL PARKING LOT AND DRIVES "C"

NOTES
- * CONTROLLED DENSITY BACKFILL TO BE USED ON OPEN CUT EXISTING COUNTY ROADS PER MRCG STANDARDS.
- CLASS II MATERIAL IS ONLY ACCEPTABLE IF THE PARTICLE SIZE IS LIMITED TO 1.5".

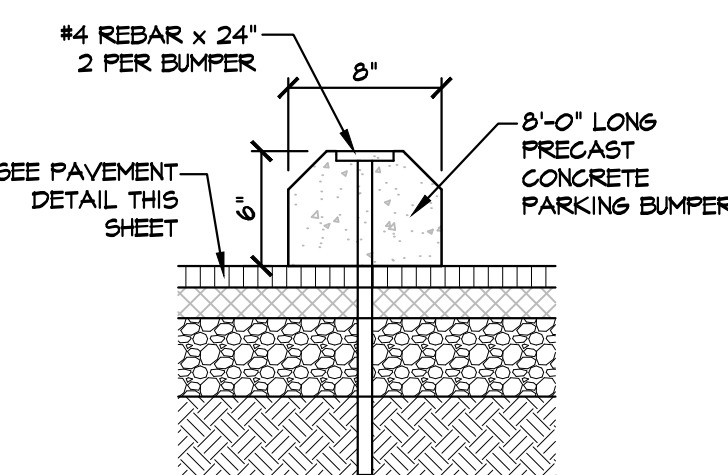
9 TRENCH BEDDING & BACKFILL DETAIL
C-2 NO SCALE



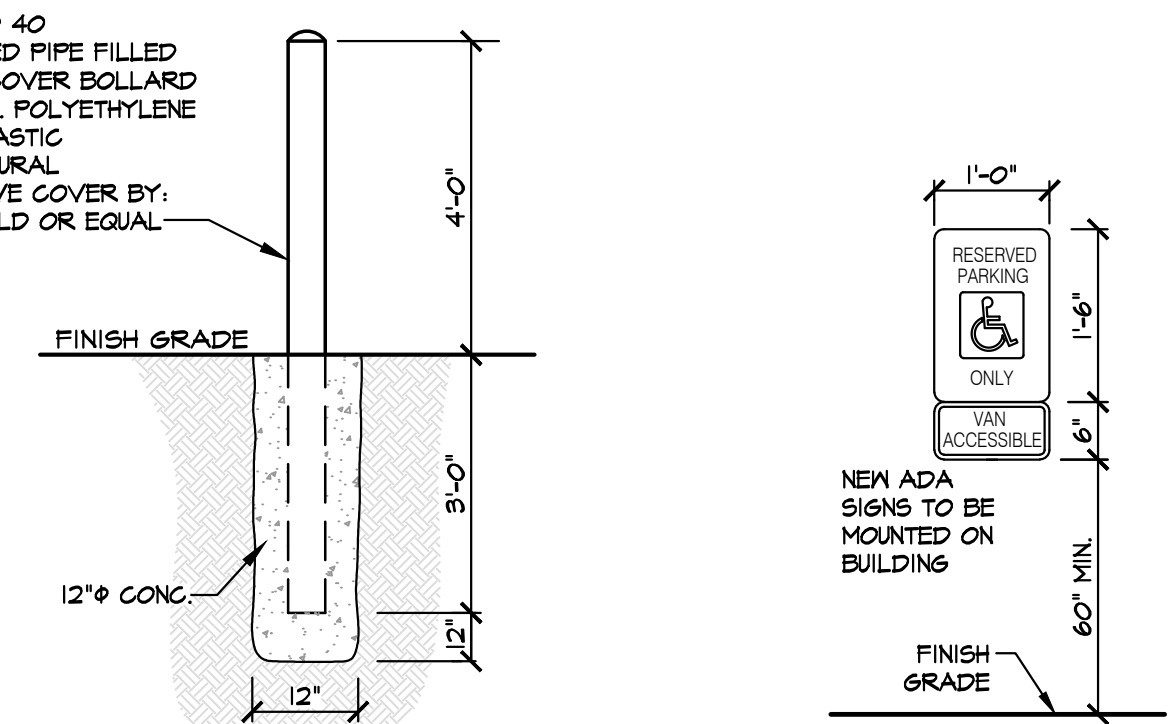
2 SIDEWALK DETAIL
C-2 NO SCALE



4 CONCRETE COLLAR DETAIL
C-2 NO SCALE

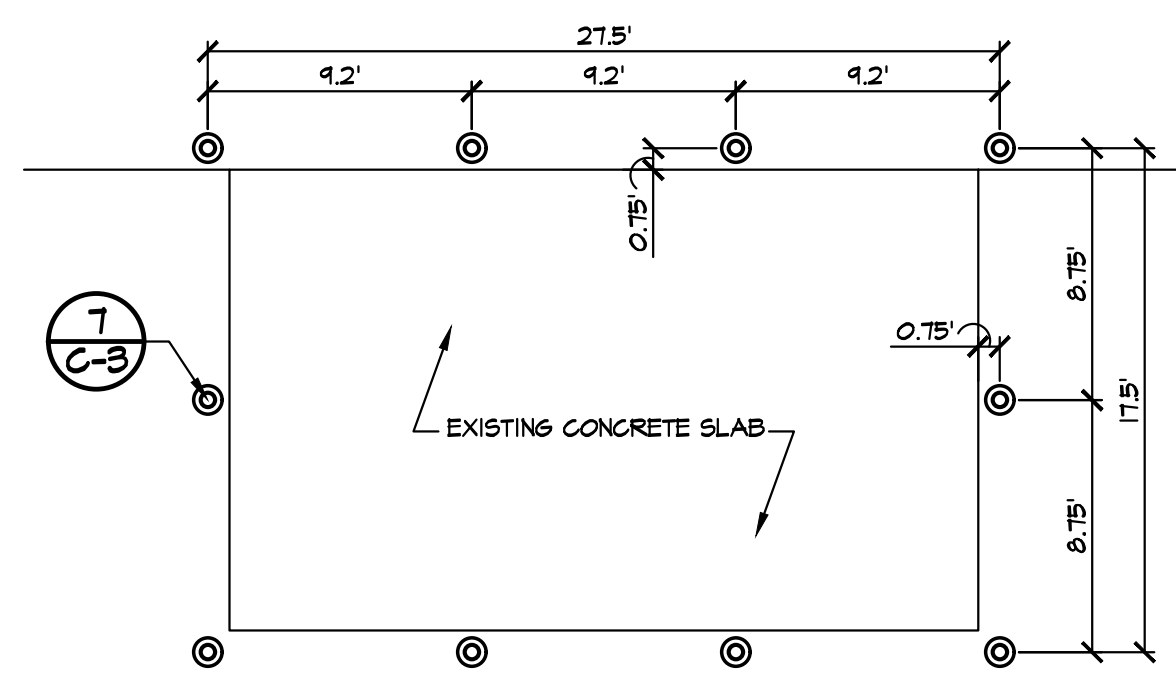


5 CURB STOP DETAIL
C-2 NO SCALE

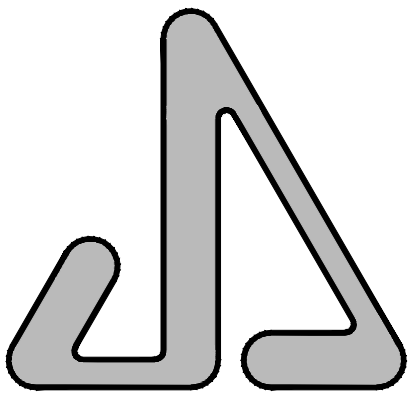


7 BOLLARD POST DETAIL
C-2 NO SCALE

8 SIGN DETAILS
C-2 NO SCALE



10 BOLLARD LAYOUT @ EX. CONC. SLAB
C-2 NO SCALE



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SITE PLAN
& DETAILS

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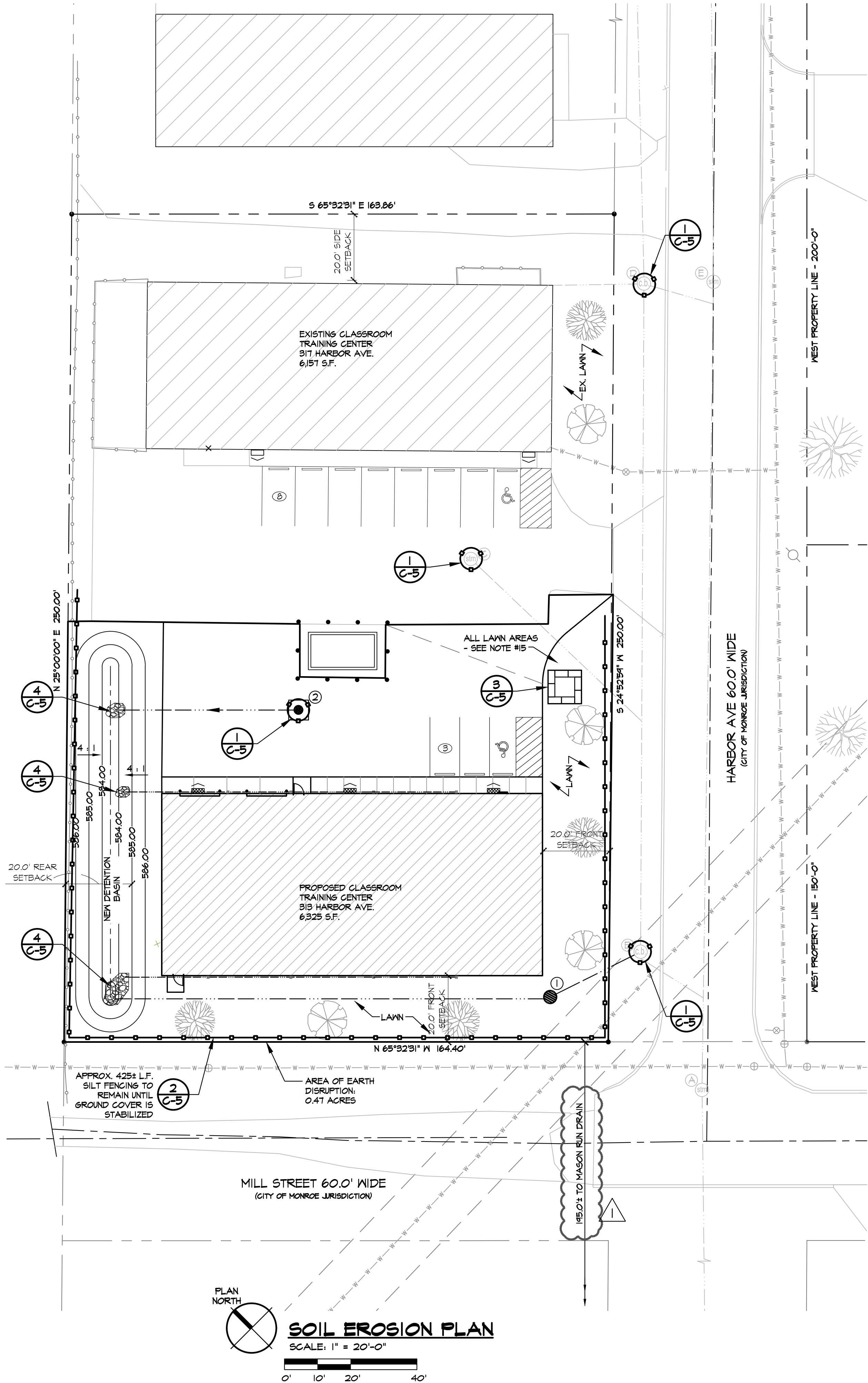
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C-2

2 OF 5

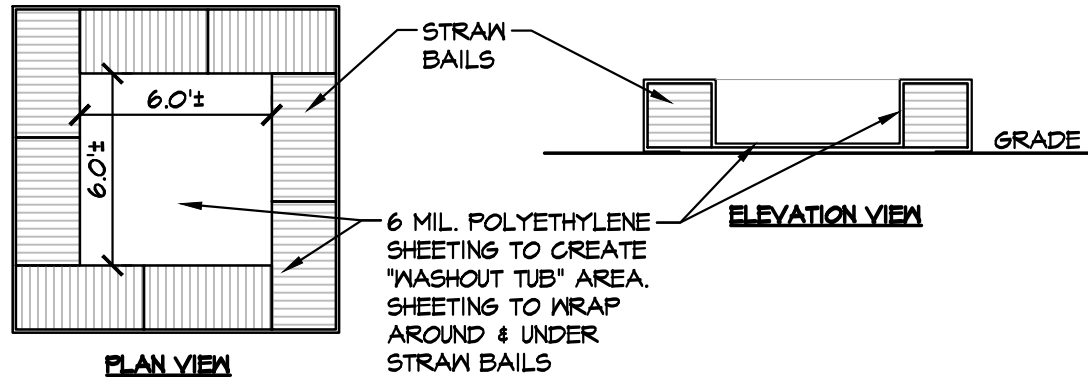
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SOIL EROSION & SEDIMENTATION CONTROL NOTES:

- A SOIL EROSION AND SEDIMENT CONTROL PERMIT SHALL BE OBTAINED FROM THE OFFICE OF THE MONROE COUNTY DRAIN COMMISSIONER PRIOR TO CONSTRUCTION. SOIL EROSION PROTECTION PRACTICES ARE TO BE IMPLEMENTED DURING CONSTRUCTION AS STIPULATED IN PART 91, ACT 451, 1994, AS AMENDED BY 2000 P.A. 504.
- THE CONTRACTOR SHALL CONDUCT HIS OPERATION IN SUCH MANNER AS TO MINIMIZE EROSION AND SEDIMENTATION OF DISTURBED SOIL. EROSION AND SEDIMENT CONTROL ACTIVITIES SHALL BE PERFORMED IN CONFORMANCE WITH THE SESC PERMIT, CITY OF MONROE AND THE MONROE COUNTY DRAIN COMMISSIONER STANDARDS AND SPECIFICATIONS.
- AS REQUIRED EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICE AND CONSTRUCTION BARRIERS WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- EROSION AND SEDIMENTATION RESULTING FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT IN ANY OFF-SITE AREAS OR IN WATERWAYS INCLUDING BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS. SEDIMENTATION SHALL BE REMOVED AND SPREAD ON SITE UPON COMPLETION OF CONSTRUCTION.
- IF REQUIRED CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED AND AS DIRECTED ON THE PLANS. HE SHALL REMOVE THE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED, UNLESS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE. CARE SHALL BE TAKEN DURING REMOVAL TO MINIMIZE SILTATION IN NEARBY DRAINAGE COURSES.
- ALL EXCAVATED MATERIAL AND IMPORTED FILL MATERIAL SHALL BE KEPT WITHIN THE DESIGNATED WORK AREA.
- PROMPTLY REMOVE ALL SOIL, MISCELLANEOUS DEBRIS AND OTHER MATERIAL SPILLED, DUMPED OR OTHERWISE DEPOSITED ON PUBLIC STREETS DURING TRANSIT TO AND FROM THE CONSTRUCTION SITE. ALL CONSTRUCTION TRAFFIC SHALL USE THE DEDICATED CONSTRUCTION ENTRANCE AS NOTED ON THE PLAN.
- DIRECT RUNOFF WATER FROM THE CONSTRUCTION AREA TO TEMPORARY SILT TRAPS.
- SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO DEMATER THE SITE, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY STRAW BALE BERM IN A MANNER THAT WILL FILTER ALL DISCHARGED WATER FROM THE DEMATERING OPERATION IN AN ESTABLISHED VEGETATIVE AREA.
- FINAL STABILIZATION SHALL IMMEDIATELY FOLLOW COMPLETION OF SITE GRADING.
- ALL MUD/DIRT TRACKED ONTO EXISTING STREETS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY SWEEP BY THE CONTRACTOR.
- DUST CONTROL SHALL BE CONTROLLED BY CONTRACTOR FOR THE DURATION OF THE PROJECT. THE USE OF WATER AND APPROVED CHEMICALS SHALL BE UTILIZED.
- PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES. TEMPORARY SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
- SHOULD THE SOIL EROSION CONTROL REQUIREMENTS BE NEGLECTED OR NOT ADEQUATELY FOLLOWED, THE OWNER SHALL REQUIRE THE CONTRACTOR TO CEASE CONSTRUCTION OPERATION AND THE CONTRACTOR TO APPLY HIS/HER ENTIRE FORCE TO MEET THE REQUIREMENT BEFORE PROCEEDING FURTHER WITH THE PROJECT.
- ALL DISTURBED AREAS NOT RECEIVING MULCH BEDS AND/OR PLANTINGS, SHALL BE HYDROSEEDING WITH TACTIFIER & PLANTED WITH GRASS SEED. GRASS SEED SHALL BE CERTIFIED WEEED - FREE AND CONSIST OF A BLEND OF 20% - 50% KENTUCKY BLUEGRASS, RED FESCUE & PERENNIAL RYE APPLIED AT THE RATE OF 10 LBS. PER 1000 S.F. ALL SEEDED AREAS TO BE COVERED WITH STRAW BLANKETS (STAKED) NOT LOOSE STRAW.



- NOTES:
- ALL CEMENT TRUCKS SHALL USE THE DESIGNATED WASHOUT PIT ONSITE PRIOR TO LEAVING THE SITE.
 - WASHOUT PIT MAY BE DUG INTO THE GROUND OR BUILT ABOVE GRADE.
 - PLASTIC LINING SHOULD BE FREE OF TEARS OR HOLES.
 - AFTER WASH WATER HAS EVAPORATED OR HAS BEEN VACUUMED OFF THE REMAINING HARDENED SOLIDS CAN BE BROKEN UP AND REMOVED FROM THE PIT.
 - BROKEN UP SOLIDS CAN BE USED AS RIP RAP OR HAILED OFF SITE AND DISPOSED OF PROPERLY.
 - CONTRACTOR'S OPTION TO USE A MANUFACTURED WASHOUT TUB IN PLACE OF ONSITE CONSTRUCTED WASHOUT PIT.

MAINTENANCE:
STRAW BAILS & PLASTIC LINING SHOULD BE INSPECTED PERIODICALLY FOR DAMAGE, RIPS & OR TEARS. THE PIT SHALL BE REPAIRED PRIOR TO ANY FURTHER WASHOUT USE.

3 C-5 CONCRETE WASHOUT DETAIL
NO SCALE

EARTH'S DISRUPTION AREA NOTE

THE SCOPE OF WORK TO INCLUDE PARKING LOT EXPANSION, A NEW PRE-ENGINEERED METAL BUILDING, STORM SEWER, DETENTION BASIN, AND UTILITIES TO THE NEW BUILDING. DUE TO THE NATURE OF THIS WORK, THERE WILL BE VERY LITTLE TO NO CHANGE TO THE ELEVATIONS OF THE SITE.

EROSION CONTROL SCHEDULE

- DAY 1 - 3 TEMPORARY SOIL EROSION CONTROL MEASURES INSTALLED
DAY 4 - 45 PARKING LOT ROUGH GRADING, BUILDING FOUNDATION INSTALLED & EXCAVATION OF DETENTION BASIN
DAY 46 - 90 INSTALL SUB BASE, GRAVEL, AND ASPHALT, FINAL GRADING AROUND PARKING LOT, STORM SEWER INSTALLATION BY NEW BUILDING. CONSTRUCTION OF BUILDING CONTINUES
DAY 91 - 120 INSTALL LANDSCAPING & PERMANENT SOIL EROSION CONTROL MEASURES. CONSTRUCTION OF BUILDING CONTINUES
DAY 120 - 180 EXTERIOR OF BUILDING COMPLETED. REMOVE TEMPORARY SOIL EROSION CONTROL MEASURES (ONLY IF PERMANENT SOIL EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED)

NOTE: SCHEDULE MAY VARY DUE TO WEATHER CONDITIONS.

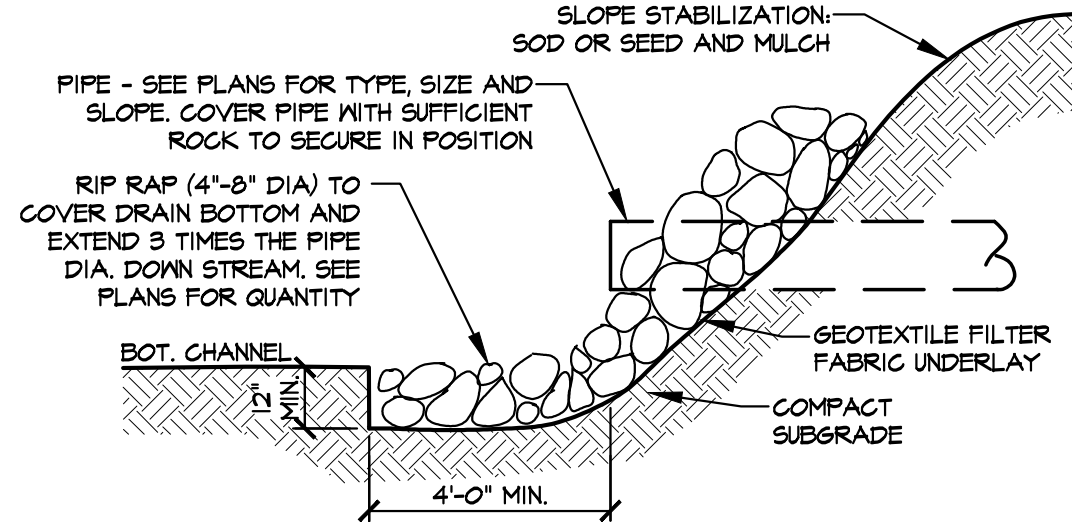
A MORE DETAILED CONSTRUCTION SCHEDULE WILL BE ISSUED ONCE A CONTRACTOR HAS BEEN SELECTED.

EROSION CONTROL MAINTENANCE NOTE

ALL SOIL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER ANY RAIN EVENT. IF ANY SOIL EROSION CONTROL MEASURE IS FOUND TO BE IN NEED OF REPAIR OR REPLACEMENT THE CONTRACTOR SHALL DO SO IMMEDIATELY.

SOIL CHARACTERISTICS

15A FULTON SILTY CLAY LOAM, 0 TO 3% SLOPES
63 URBAN LAND



- NOTES:
- BEFORE LAYING RIP RAP AND FILTER FABRIC MATERIAL, PREPARE THE SUBGRADE TO THE REQUIRED GRADES SHOWN ON THE PLANS.
 - COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED EARTH.
 - RIP RAP TO BE PLACED AT 8" - 12" THICK.
 - REMOVE BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIAL IF PRESENT.
 - PLACE THE FILTER FABRIC DIRECTLY ON THE PREPARED SUBGRADE. OVERLAP THE EDGES BY AT LEAST 8 INCHES. SPACE ANCHOR PINS EVERY 3 FEET ALONG THE OVERLAP. BURY THE UPPER AND LOWER ENDS OF THE FABRIC A MINIMUM OF 12 INCHES BELOW GROUND. TAKE CARE NOT TO DAMAGE THE FABRIC WHEN PLACING RIP RAP.
 - PLACEMENT OF RIP RAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER FABRIC. PLACE RIP RAP SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF THICKNESS IN ONE OPERATION.
 - THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES.

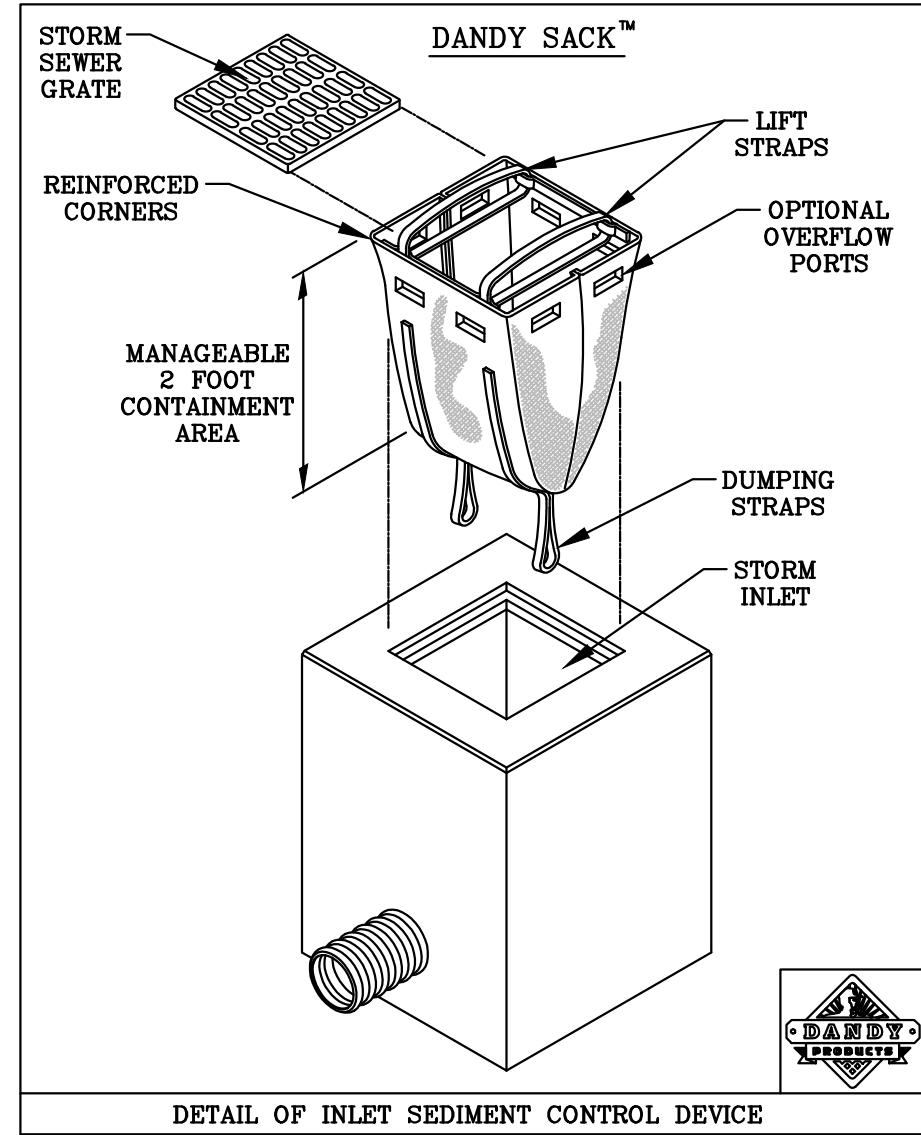
MAINTENANCE:
RIP RAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES. CONTROL OF WEED AND BRUSH GROWTH MAY BE REQUIRED IN SOME LOCATIONS.

4 C-5 RIP RAP DETAIL
NO SCALE

- PREPARE SOIL BEFORE INSTALLING STRAW BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURERS RECOMMENDATION.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 4" - 6" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
- CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
- PLACE STAPLES/STAKES PER MANUFACTURE RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

- NOTES:
- IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
 - FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION

5 C-5 EROSION CONTROL BLANKET
NO SCALE

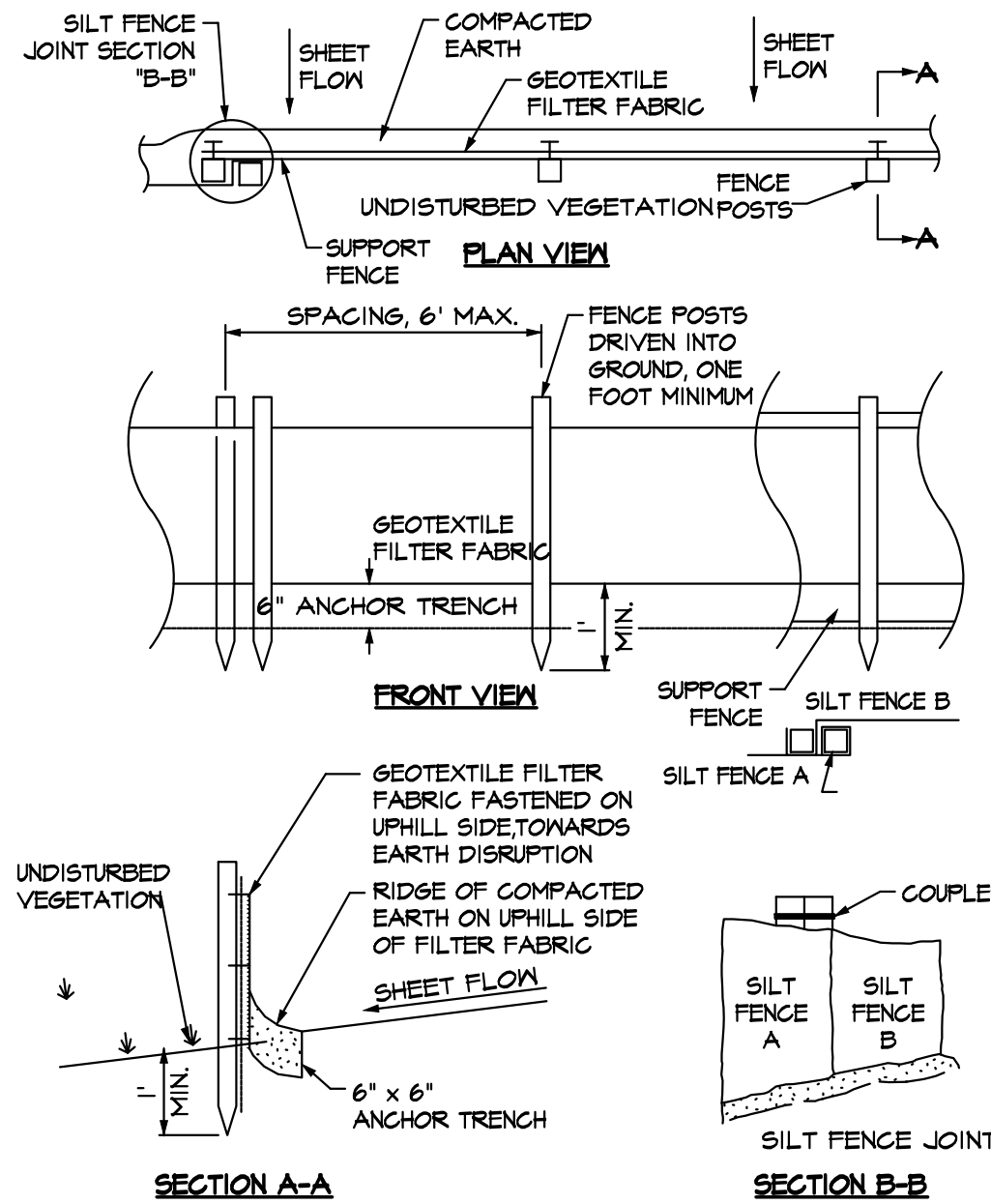


1 C-5 DANDY SACK DETAIL
NO SCALE

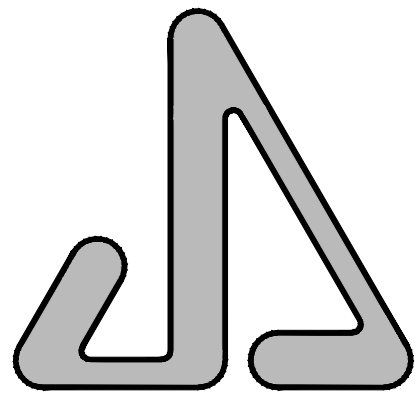
DANDY SACK™ SPECIFICATIONS				
NOTE: THE DANDY SACK™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS: REGULAR FLOW DANDY SACK™ (BLACK)				
Mechanical Properties	Test Method	Units	MARV	
Grab Tensile Strength	ASTM D 4832	kN (lbf)	1.78 (400)	x 1.40 (315)
Grab Tensile Elongation	ASTM D 4832	%	15 ± 15	
Puncture Strength	ASTM D 4833	kN (lbf)	0.67 (150)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2508 (360)	
Trapezoid Tear Strength	ASTM D 4533	kN (lbf)	0.67 (150)	x 0.73 (165)
UV Resistance	ASTM D 4355	%	60	
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)	
Flow Rate	ASTM D 4491	l/min/m² (gal/min/ft²)	2852 (110)	
Permeability	ASTM D 4491	Sec	0.90	

HI-FLOW DANDY SACK™ (SAFETY ORANGE)				
Mechanical Properties	Test Method	Units	MARV	
Grab Tensile Strength	ASTM D 4832	kN (lbf)	1.62 (365)	x 0.89 (200)
Grab Tensile Elongation	ASTM D 4832	%	24 x 10	
Puncture Strength	ASTM D 4833	kN (lbf)	0.49 (110)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	597 (86)	
Trapezoid Tear Strength	ASTM D 4533	kN (lbf)	0.51 (115)	x 0.33 (75)
UV Resistance	ASTM D 4355	%	80	
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)	
Flow Rate	ASTM D 4491	l/min/m² (gal/min/ft²)	5907 (145)	
Permeability	ASTM D 4491	Sec	≥1	

*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows



2 C-5 FILTER FABRIC FENCE DETAIL
NO SCALE



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SITE IMPROVEMENTS &
NEW BUILDING FOR:



UA LOCAL 671
MONROE PLUMBERS
& PIPEFITTERS
313 HARBOR AVENUE
MONROE, MI 48162

PROPERTY OWNER CONTACT:
MIKE JEWELL, BUSINESS MANAGER
309 DETROIT AVENUE
MONROE, MI 48162
PHONE: 734-242-5711
EMAIL: mike@ualocal671.com

SOIL EROSION
CONTROL PLAN
& NOTES

02-27-2025 OWNER REVIEW
10-14-2024 REVISION #1
09-04-2024 SOIL EROSION PERMIT
09-04-2024 ADMIN. SITE PLAN REVIEW
09-03-2024 OWNER REVIEW

DATE: ISSUED FOR:

DRAWN: JLM

REVIEW'D: JSJ

202411

C-5

5 OF 5

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SITE IMPROVEMENTS & NEW BUILDING FOR: UA LOCAL 671 MONROE PLUMBERS & PIPEFITTERS

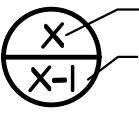
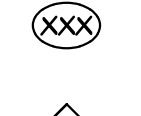



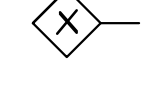








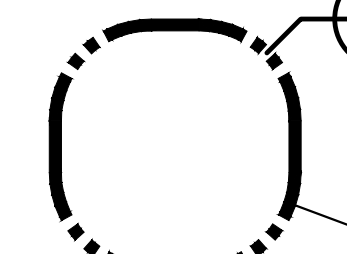

313 HARBOR AVENUE • MONROE, MICHIGAN • 48162

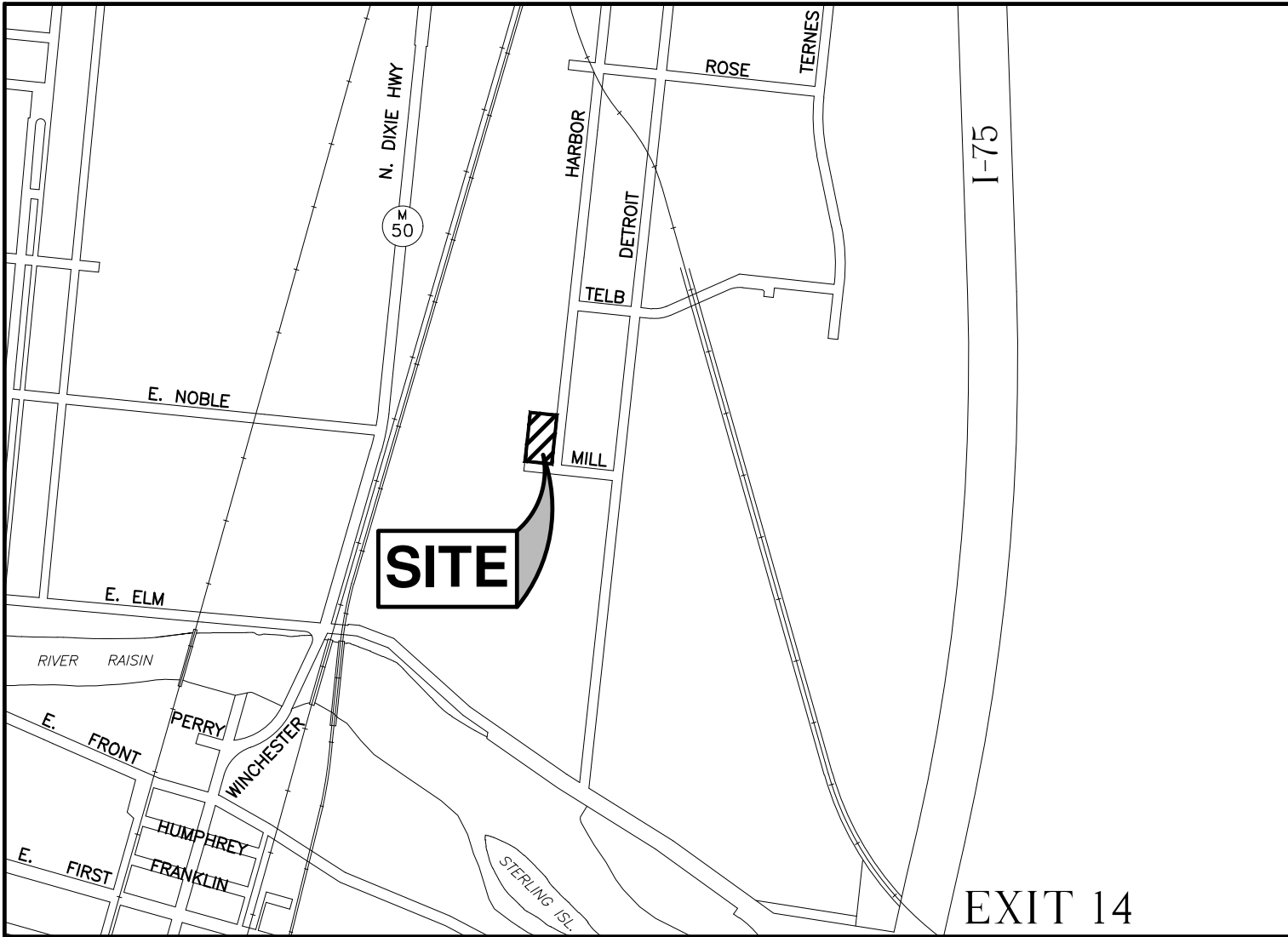
CODE INFORMATION

CODES:	MICHIGAN BUILDING CODE 2015 (MBC) MICHIGAN REHABILITATION CODE 2015 (MRCEB) MICHIGAN MECHANICAL CODE 2015 (MMC) MICHIGAN PLUMBING CODE 2015 (MPC) NATIONAL ELECTRICAL CODE 2017 (NEC) MICHIGAN ENERGY CODE 2015 (MEC) ANSI/ASHRAE/IES STANDARD 90.1-2013 (ENERGY CODE) INTERNATIONAL FIRE CODE 2015 (IFC) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) ANSI A117.1 2009 (ACCESSIBLE BUILDINGS)	EGRESS WIDTH:	BUSINESS USE 0.2" PER OCCUPANT (OTHER) (MBC SECTION 1005.3.2) 206 OCC. X 0.2" = 41.2" (EXITS) EXIT PASSAGESWAYS = 44" (MBC SECTION 1024, 1024.2) STAIRWAYS = WIDTH NOT LESS THAN 44" EXCEPTION #1 = MIN 36" WIDE (MBC SECTION 1005.3.1)
USE GROUP:	BUSINESS GROUP B - EDUCATIONAL ABOVE 12TH GRADE (MBC SECTION 304)	PLUMBING FIXTURES:	MAX ACTUAL OCCUPANCY = 40 OCC. BUSINESS USE MALE & FEMALE - 20 OCCUPANTS EACH WATER CLOSETS: 1 PER 25 OCC. 20 OCC. / 25 = 8 = 1 W.C. REQUIRED PROVIDED: 1 W.C. WOMEN'S 1 W.C. + 1 URINAL MEN'S LAVATORY: 1 PER 40 OCC. 20 OCC. / 40 = 0.5 = 1 LAV. REQUIRED PROVIDED: 1 LAV. WOMEN'S 1 LAV. MEN'S DRINKING FOUNTAIN: 1 PER 500 OCC. REQUIRED 1 PROVIDED SERVICE SINK: 1 REQUIRED 1 PROVIDED AS UTILITY FAUCET UNDER LAVATORY IN MEN'S TOILET ROOM (MBC SECTIONS 403.1 - 403.2, TABLE 403.1 MPC 2015)
CONSTRUCTION TYPE:	TYPE VB - EXTERIOR WALLS & INTERIOR WALLS ARE OF ANY MATERIALS PERMITTED BY CODE (MBC SECTION 602.4)		
ALLOWABLE HEIGHT & BUILDING AREA:	USE GROUP B - TYPE VB OVERALL HEIGHT: 40 FEET (MBC TABLE 504.3) PROPOSED HEIGHT: 25+ FEET ALLOWABLE STORIES: 2 STORIES (MBC TABLE 504.4) PROPOSED STORIES: 1 STORY (W/ MEZZANINE) ALLOWABLE AREA: 9,000 S.F. PER FLOOR (MBC TABLE 506.2) PROPOSED AREA: 6,325 S.F. (MEZZANINE = 1,914 S.F. = NOT INCLUDED IN OVERALL BUILDING AREA)		
SQUARE FOOTAGE:	PROPOSED ONE-STORY BUILDING = 6,325 S.F. PROPOSED MEZZANINE = 1,914 S.F. TOTAL SQUARE FOOTAGE = 8,239 S.F.		
OCCUPANT LOAD:	MBC SECTION 1004, TABLE 1004.1.2 MAIN FLOOR: CLASSROOMS = 1574 / 20 NET = 78.7 ~ 79 OCC. LABS = 4351 / 50 NET = 87.02 ~ 88 OCC. ACCESSORY STORAGE / MECH = 119 / 300 = 0.39 ~ 1 OCC. TOTAL MAIN FLOOR OCCUPANT LOAD = 168 OCCUPANTS MEZZANINE LABS = 1836 / 50 NET = 36.72 ~ 37 OCCUPANTS UTILITY ROOM = 138 / 300 = 0.46 ~ 1 OCCUPANTS TOTAL MEZZANINE OCCUPANT LOAD = 38 OCCUPANTS TOTAL CALCULATED OCCUPANT LOAD = 206 OCCUPANTS ACTUAL MAX. OCCUPANTS IN BUILDING AT ONE TIME = 40 OCC. ACTUAL MAX. OCCUPANCY OF CLASSROOMS = 20 OCC.	FIRE RESISTANCE RATINGS:	(MBC SECTION 602, TABLE 601 & TABLE 602) CONSTRUCTION TYPE VB PRIMARY STRUCTURAL FRAME: 0 HOUR BEARING WALL EXTERIOR: 0 HOUR BEARING WALL INTERIOR: 0 HOUR NON BEARING EXTERIOR WALLS: X > 30.0'; 0 HOUR NON BEARING WALLS INTERIOR: 0 HOUR FLOOR CONSTRUCTION: 0 HOUR ROOF CONSTRUCTION: 0 HOUR
		FIRE PROTECTION SYSTEMS:	FIRE ALARM SYSTEM: NOT REQUIRED GROUP B, NO CONDITION MET (MBC SECTION 907.2.2 GROUP B) PORTABLE FIRE EXTINGUISHERS (MBC SECTION 906 & NFPA 10) USE GROUPS B LOW HAZARD OCCUPANCY 75' MAX. TRAVEL DISTANCE TO EXTINGUISHER VERIFY LOCATIONS WITH FIRE INSPECTOR
EXITS REQUIRED:	OCCUPANT LOAD < 44, < 75' TRAVEL DISTANCE (MBC SECTION 1006, TABLE 1006.2.1) REQUIRED = (1) EXITS (1) EXIT FROM EACH CLASSROOM PROVIDED 2 EXITS PROVIDED	FIRE BLOCKING:	REQUIRED ON CONCEALED WALL SPACES (MBC SECTION 718.2.2) - BLOCKING REQUIRED HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'-0" VERTICAL IN HEIGHT.
EXIT ACCESS TRAVEL DISTANCE:	USE GROUP B 200 FEET W/O SPRINKLER SYSTEM (MBC SECTION 1017, TABLE 1017.2)	AUTOMATIC SPRINKLERS:	USE GROUP B - NOT REQUIRED (MBC SECTION 903)
aisle WIDTH:	USE GROUP B 44" MINIMUM CLEAR (MBC SECTION 1018.3, 1005.1 & TABLE 1020.2)		

NOTE:
THE CODE DATA LISTED IS FOR REFERENCE ONLY AND NOT INTENDED TO BE ALL INCLUSIVE. THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR MEETING ALL ASPECTS OF THE MICHIGAN BUILDING CODE 2015 (MBC 2015) AND ALL APPLICABLE REFERENCED CODES AND/OR STANDARDS.

DRAWING LEGEND

	DETAIL NUMBER SHEET DETAIL IS LOCATED		DOOR IDENTIFICATION (NUMBER)		LINE OF 1 HOUR FIRE RATED WALL ASSEMBLY		DETAIL NUMBER SHEET DETAIL IS LOCATED
	DIRECTION OF SECTION CUT		WALL TYPE (NUMBER)		LINE OF 2 HOUR FIRE RATED WALL ASSEMBLY		DETAIL REFERENCE TYPE (IF APPLICABLE)
	INTERIOR ELEVATION MARKER (NUMBER)		ADDENDUM REVISION (NUMBER)		LINE OF 3 HOUR FIRE RATED WALL ASSEMBLY		REVISION CLOUD
	BULLETIN REVISION / KEYNOTE (NUMBER)		REVISION CLOUD		INDICATES AREA OF DETAIL		
	ROOM IDENTIFICATION (NUMBER)						



GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC. ACTUAL CONDITIONS AFFECTING THIS WORK ARE TO BE VERIFIED IN THE FIELD. DO NOT SCALE DRAWINGS.
- THE WORK SHALL BE AS SHOWN OR NOTED ON THE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR THE FULL SCOPE OF THE WORK INDICATED UNLESS NOTED OTHERWISE.
- THE ARCHITECT IS NOT RESPONSIBLE FOR MEANS AND METHODS UTILIZED IN THE EXECUTION OF THE WORK.
- CONTRACTOR TO SECURE AND PAY FOR ALL PERMITS, INSPECTIONS, TESTS, ETC., AS REQUIRED FOR THE WORK UNDER THIS CONTRACT.
- CONTACT PUBLIC UTILITIES AND COORDINATE WORK WITH PUBLIC REQUIREMENTS AND INSTALLATIONS. CONTACT "MISS DIG" (811) PRIOR TO START OF OPERATIONS.
- WORK RELATING TO DISTURBANCE OF EXISTING HAZARDOUS MATERIALS, SUCH AS ASBESTOS, PCB, ETC., IS NOT WITHIN THE SCOPE OF THIS WORK. IF CONTRACTOR ENCOUNTERS MATERIALS KNOWN OR SUSPECTED TO CONTAIN A HAZARDOUS PRODUCT, HE/SHE SHALL ADVISE THE OWNER OF THE FINDINGS FOR DETERMINATION OF PROPER DISPOSITION. ANY SUCH HAZARDOUS MATERIALS SHALL NOT BE INCORPORATED IN THIS WORK.
- PROVIDE ANY MEANS NECESSARY TO ENSURE SAFETY TO OWNER'S EMPLOYEES, VISITORS TO THE SITE, AND THE GENERAL PUBLIC.
- UNLESS OTHERWISE APPROVED BY OWNER, FURNISH ONLY NEW MATERIALS OF GOOD QUALITY FOR INCORPORATION INTO THIS WORK.
- VERIFY FINAL LAYOUT WITH OWNER AND ARCHITECT.
- VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD PRIOR TO DOING ANY WORK OR FABRICATION. REVIEW DIMENSIONS SHOWN ON CONTRACT DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT AND RECEIVE CLARIFICATION PRIOR TO PROCEEDING.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ALL SURFACES AND COMPONENTS DAMAGED DURING CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL COORDINATE ALL TRADES WORK, EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PERMIT AND FEES, RELATED TO THEIR TRADE.
- MECHANICAL INSTALLATIONS SHALL BE PROVIDED BY A CONTRACTOR LICENSED TO PERFORM SUCH MECHANICAL WORK. AIR BALANCING TESTS AND REPORTS SHALL BE PROVIDED IF WORK INCLUDES SUPPLY AIR, RETURN AIR OR EXHAUST AIR SYSTEMS.
- ELECTRICAL INSTALLATIONS SHALL BE PROVIDED BY A CONTRACTOR LICENSED TO PERFORM SUCH ELECTRICAL WORK. CIRCUITS IN ELECTRICAL PANELS SHALL BE ACCURATELY IDENTIFIED.
- PLUMBING INSTALLATIONS SHALL BE PROVIDED BY THE OWNER AND GENERAL CONTRACTOR TO COORDINATE WITH ALL PLUMBING WORK AS SHOWN IN DRAWING PACKAGE.

BUILDING ENVELOPE REQUIREMENTS FOR CLIMATE ZONE 5 (A,B,C) MICHIGAN ENERGY CODE 2015 CHAPTER 4, SECTION C401, C401.2 ASHRAE STANDARD 90.1 - 2013 TABLE 5.5-5: NONRESIDENTIAL		
ZONE 5A	MIN. VALUE BY CODE	PROVIDED
ROOFS		
METAL BUILDING	R-19 + R-11 Ls OR R-25 + R-8 Ls	R-39 (6 TO 7 IN. SPRAY FOAM IN INSULATION)
WALLS ABOVE GRADE		
METAL BUILDING	R-0 + R-19 c1	R-19 c1
SLAB ON GRADE FLOORS		
UNHEATED SLAB	R-15 FOR 24" HORZ.	R-15 FOR 24" HORZ.
OPAQUE DOORS		
NON SWINGING	U-0.50	U-0.32
FENESTRATION		
METAL FRAMING, FIXED	U-0.42	U-0.40
METAL FRAMING, ENTRANCE DOOR	U-0.71	U-0.43

c1 = CONTINUOUS INSULATION
NR = NO REQUIREMENT
Ls = LINER SYSTEM

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	ELEV	ELEVATION	MIN	MINIMUM
ALT	ALTERNATE	EQ	EQUAL	MISC	MISCELLANEOUS
ALUM	ALUMINUM	EQUIP	EQUIPMENT	MTL	METAL
ANOD	ANODIZED	EXIST	EXISTING	NO.	NUMBER
ARCH	ARCHITECT	FIN	FINISH (ED)	NTS	NOT TO SCALE
CF	CUBIC FOOT	FT	FEET / FOOT	O.C.	ON CENTER
CLG	CEILING	GA	GAUGE	REQD	REQUIRED
D	DEPTH	GALV	GALVANIZED	SHT	SHEET
DET	DETAIL	H	HEIGHT	SIM	SIMILAR
DIM	DIMENSION	INSUL	INSULATION (ING) (ED)	STL	STEEL
DN	DOWN	LF	PER LINEAL FOOT	TEMP	TEMPERED
DWG	DRAWING	MAX	MAXIMUM	TYP	TYPICAL
EA	EACH	MECH	MECHANICAL	W	WIDTH
ELEC	ELECTRICAL	MFR	MANUFACTURER		

DRAWING INDEX

- T-2 TITLE SHEET, GENERAL NOTES, LOCATION MAP, & CODE INFORMATION
LS-1 LIFE SAFETY PLANS

STRUCTURAL

- S-1 FOUNDATION PLAN & COLUMN PIER & FOOTING DETAILS (BASE BID)
S-2 FOUNDATION DETAILS (BASE BID)
S-3 MEZZANINE FRAMING PLAN, SAND PIT FLOOR, & DETAILS
S-4 CONTROL JOINT FLOOR PLANS (BASE BID & ALTERNATE NO.1)

ARCHITECTURAL

- A-1 FLOOR PLANS & WALL TYPES
A-2 FLOOR PLANS: ALTERNATE NO.1 & STAIR SECTION
A-3 EXTERIOR ELEVATIONS
A-4 BUILDING SECTIONS & DETAILS
A-5 DOOR & WINDOW SCHEDULES

MECHANICAL

- M-1 FIRST FLOOR PLAN MECHANICAL
M-2 MECHANICAL SCHEDULES AND DETAILS
M-3 MECHANICAL SPECIFICATIONS

ELECTRICAL

- E-1 LEGEND, LUMINAIRE SCHEDULE, SPECIFICATIONS
E-2 SITE PLAN - ELECTRICAL
E-3 FIRST FLOOR PLAN - LIGHTING
E-4 MEZZANINE PLAN - LIGHTING
E-5 FIRST FLOOR PLAN - POWER
E-6 MEZZANINE PLAN - POWER
E-7 DETAILS
E-8 PANEL SCHEDULE, PANEL RISER DIAGRAM, FEEDER SCHEDULE

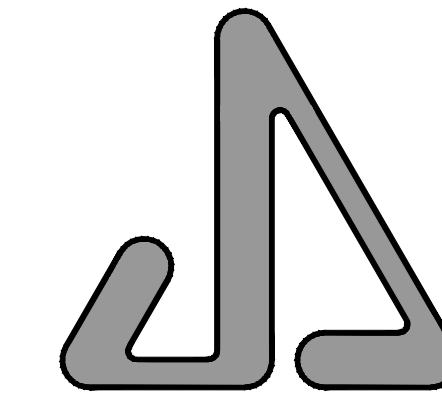
PLUMBING

- P-1 FIRST FLOOR PLAN PLUMBING
P-2 MEZZANINE PLAN PLUMBING
P-3 PLUMBING DETAILS

METAL BUILDING DRAWINGS (FOR REFERENCE ONLY)

COVER PAGE

- SPECIFICATIONS
- ANCHOR BOLT PLAN
- RIGID FRAME REACTIONS
- ENDWALL REACTIONS, DESIGN CRITERIA
- ANCHOR BOLT DETAILS
- ROOF FRAMING
- ROOF PANEL LAYOUT
- RIGID FRAME #1
- RIGID FRAME #2
- FRONT SIDEWALL FRAMING
- BACK SIDEWALL FRAMING
- LEFT ENDWALL FRAMING
- RIGHT ENDWALL FRAMING
- DETAIL PAGE #1
- DETAIL PAGE #2
- DETAIL PAGE #3



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& PIPEFITTERS
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MONROE, MI 48162

PROPERTY OWNER CONTACT:
MIKE JEWELL, BUSINESS MANAGER
309 DETROIT AVENUE
MONROE, MI 48162
PHONE: 734-242-5711
EMAIL: mike@ualocal671.com

TITLE SHEET,
GENERAL NOTES,
LOCATION MAP,
& CODE
INFORMATION

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72 Hours Before

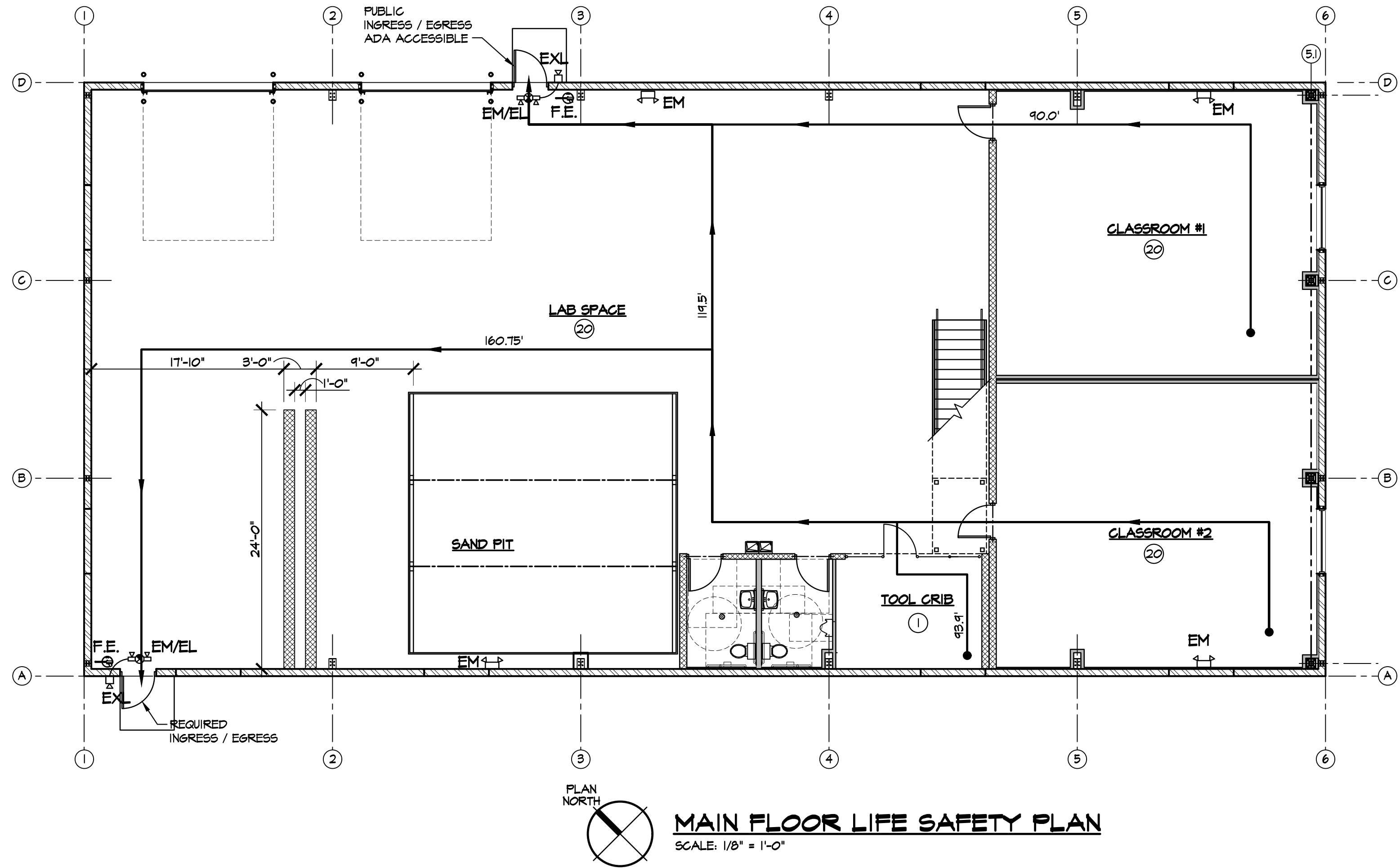


Know what's below.
Call before you dig.
Non Members must call directly.

T-2

1 OF 1

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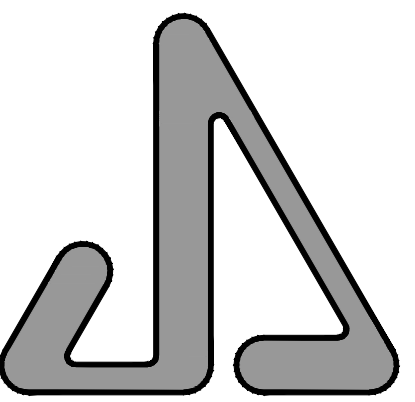
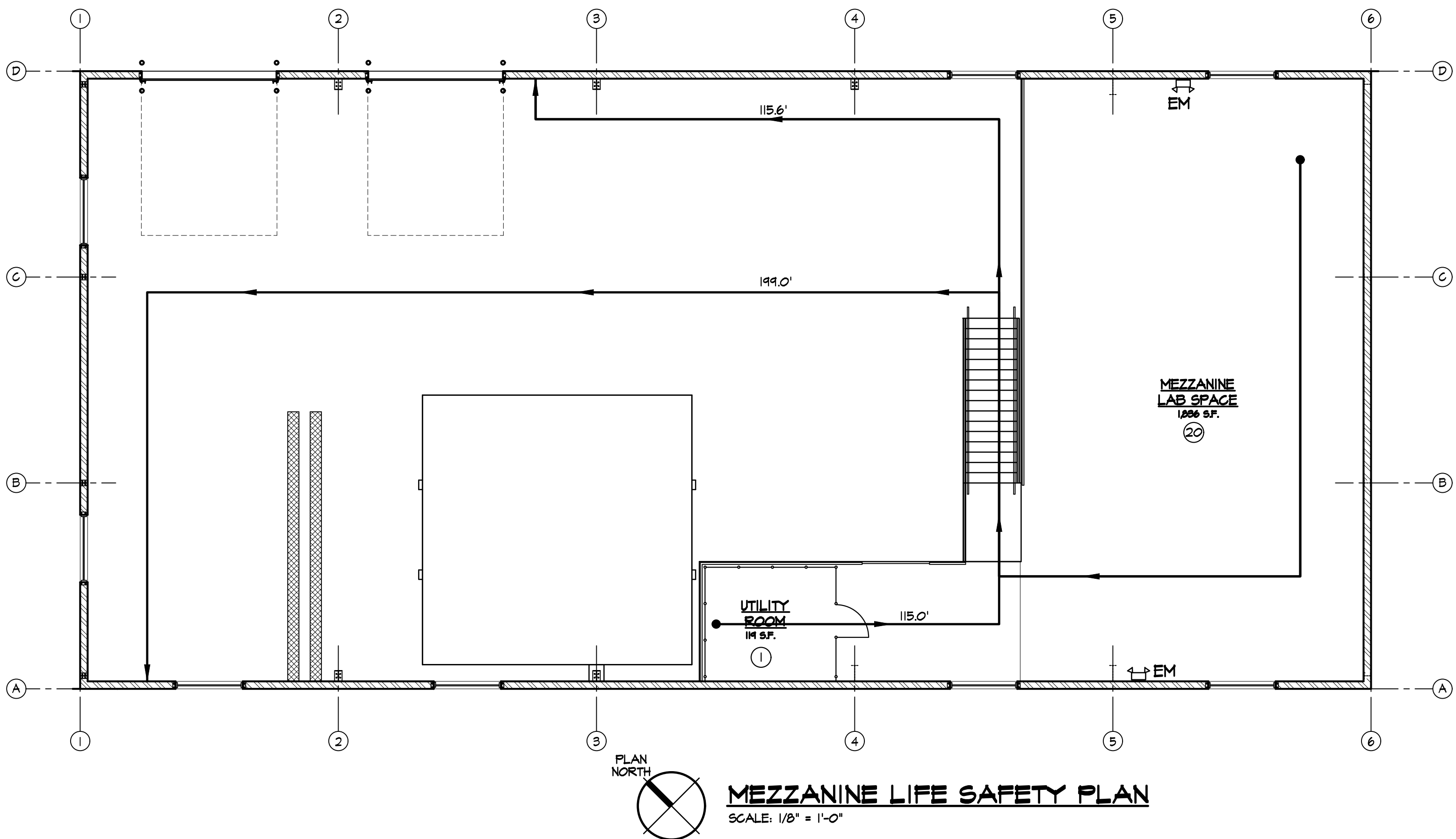


LIFE SAFETY PLAN LEGEND

- EM → EMERGENCY LIGHT
- EM/EL → EMERGENCY LIGHT & EXIT SIGN COMBINATION
- EXL → EMERGENCY EXTERIOR LIGHTING
- LIGHT FIXTURE WITH BUILT-IN EMERGENCY LIGHTING
- EMERGENCY ACCESS ROUTE TOTAL TRAVEL DISTANCE AS NOTED
- MOST REMOTE POINT
- F.E. → MIN. 10 LB. CLASS "A" DRY CHEMICAL PORTABLE FIRE EXTINGUISHER - TYP.
- (17) MAX. OCCUPANT LOAD

LIFE SAFETY PLAN NOTE

THESE LIFE SAFETY PLANS SHOW THE INTENT FOR THE BUILDING ONCE COMPLETED. AS NOTED IN THE PROJECT NARRATIVE THAT THIS PACKAGE IS FOR THE STRUCTURE AND MEZZANINE (ALTERNATE NO.1) ONLY WITH THE REMAINDER OF THE INTERIOR BUILD OUT TO BE COMPLETED AS PHASE 2 AT A FUTURE DATE.



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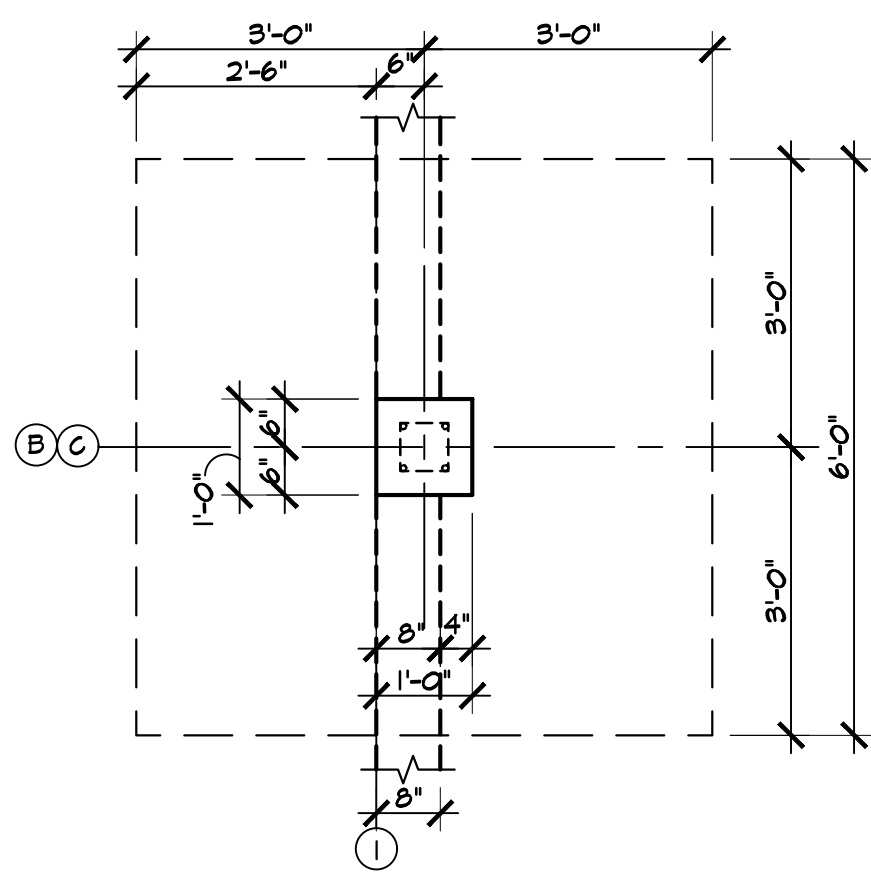
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PHONE: 734-242-5711
EMAIL: mike@uolocal671.com

LIFE SAFETY PLAN

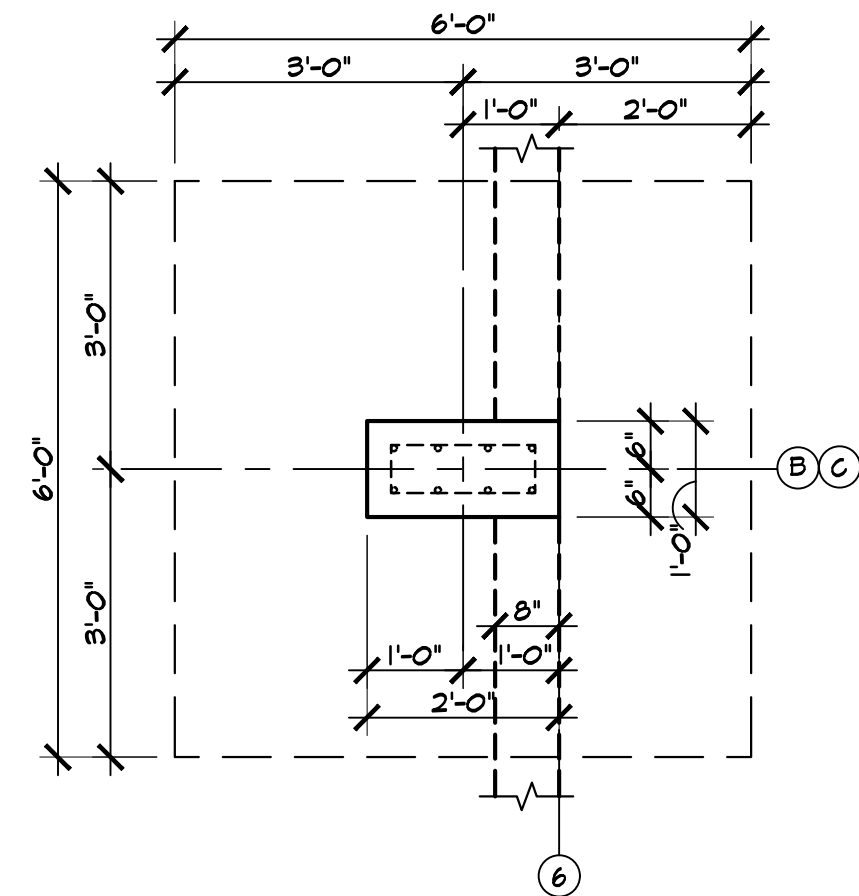
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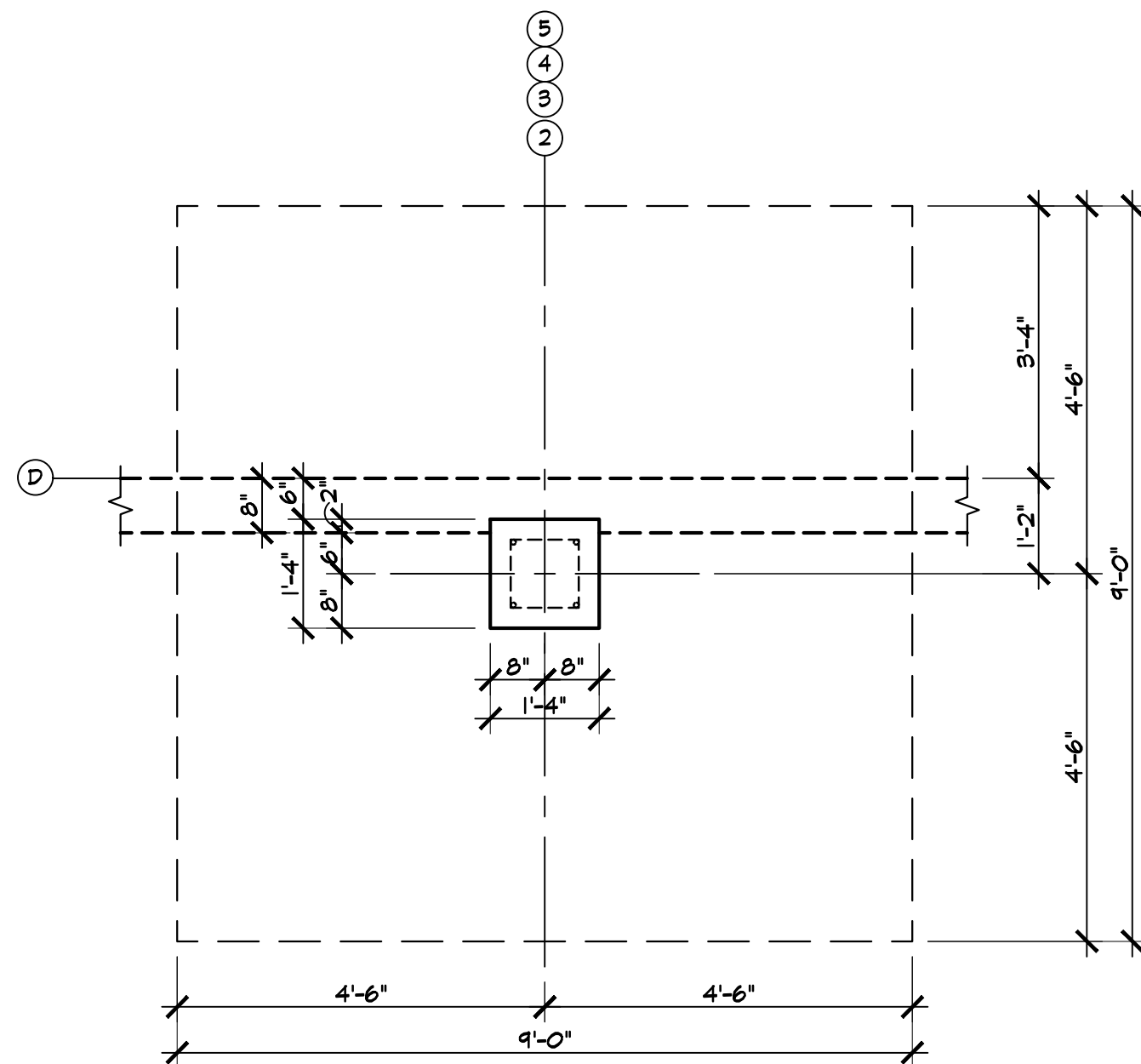
LS-1



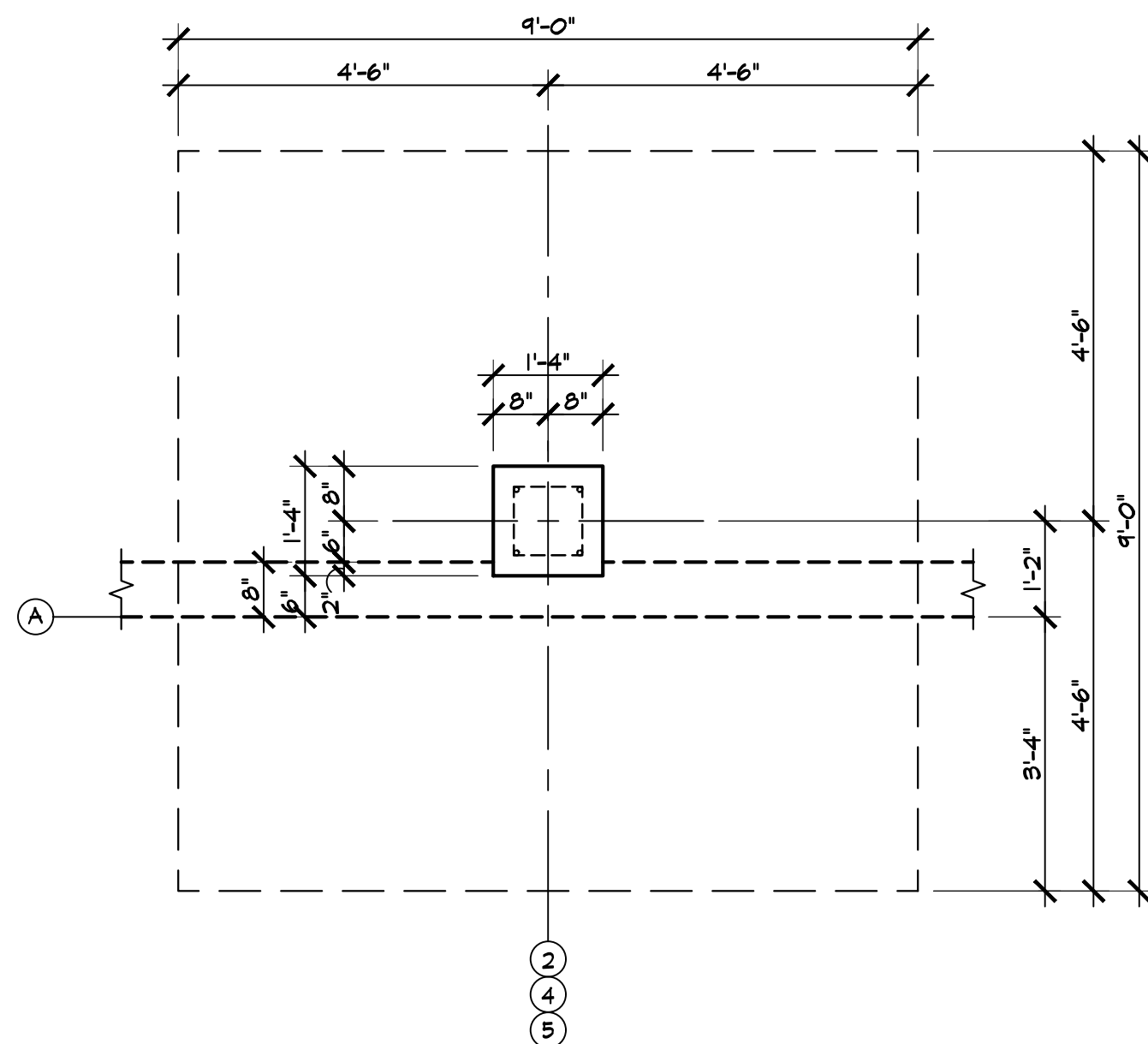
ENDWALL COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



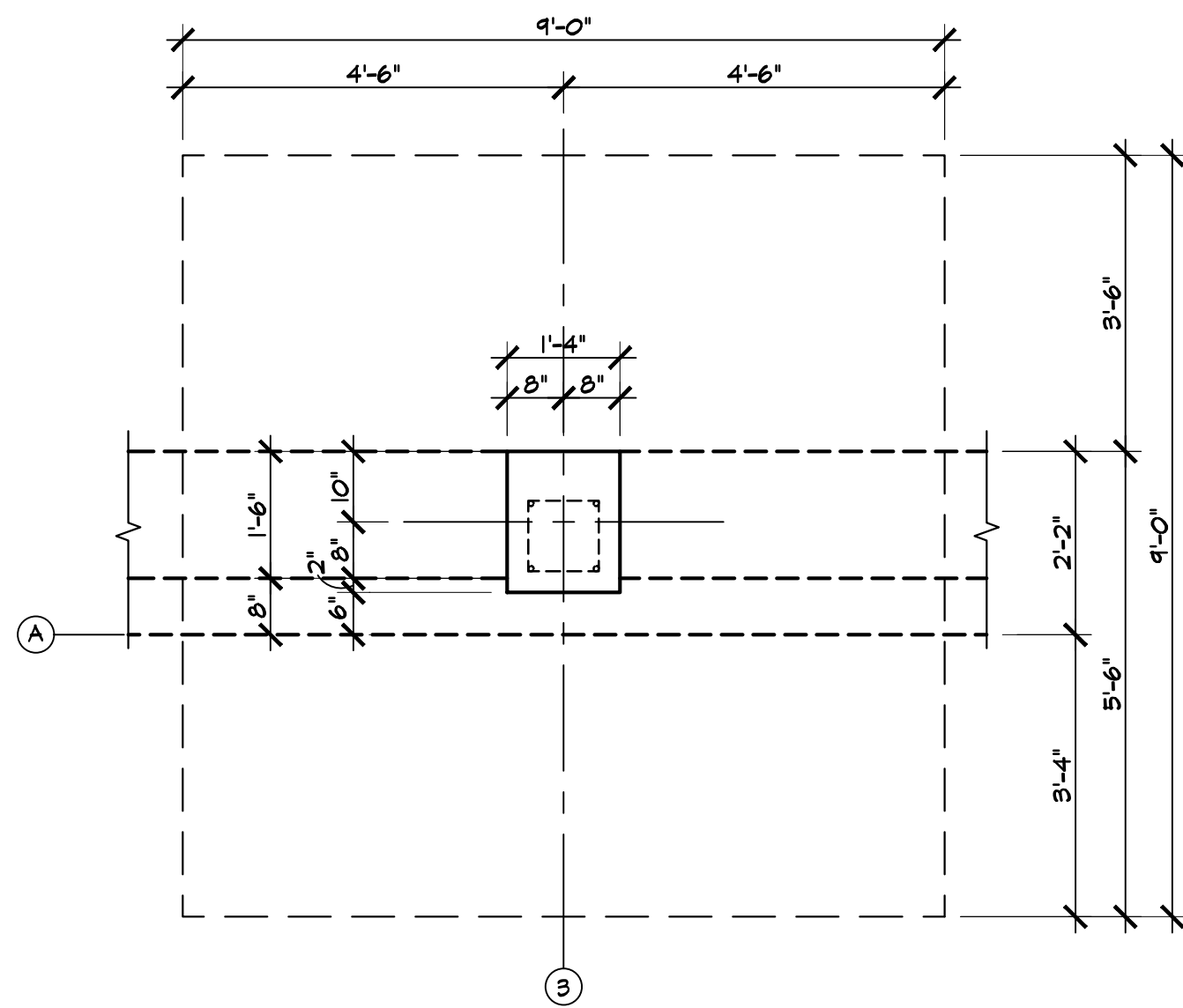
ENDWALL COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



SIDEWALL COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



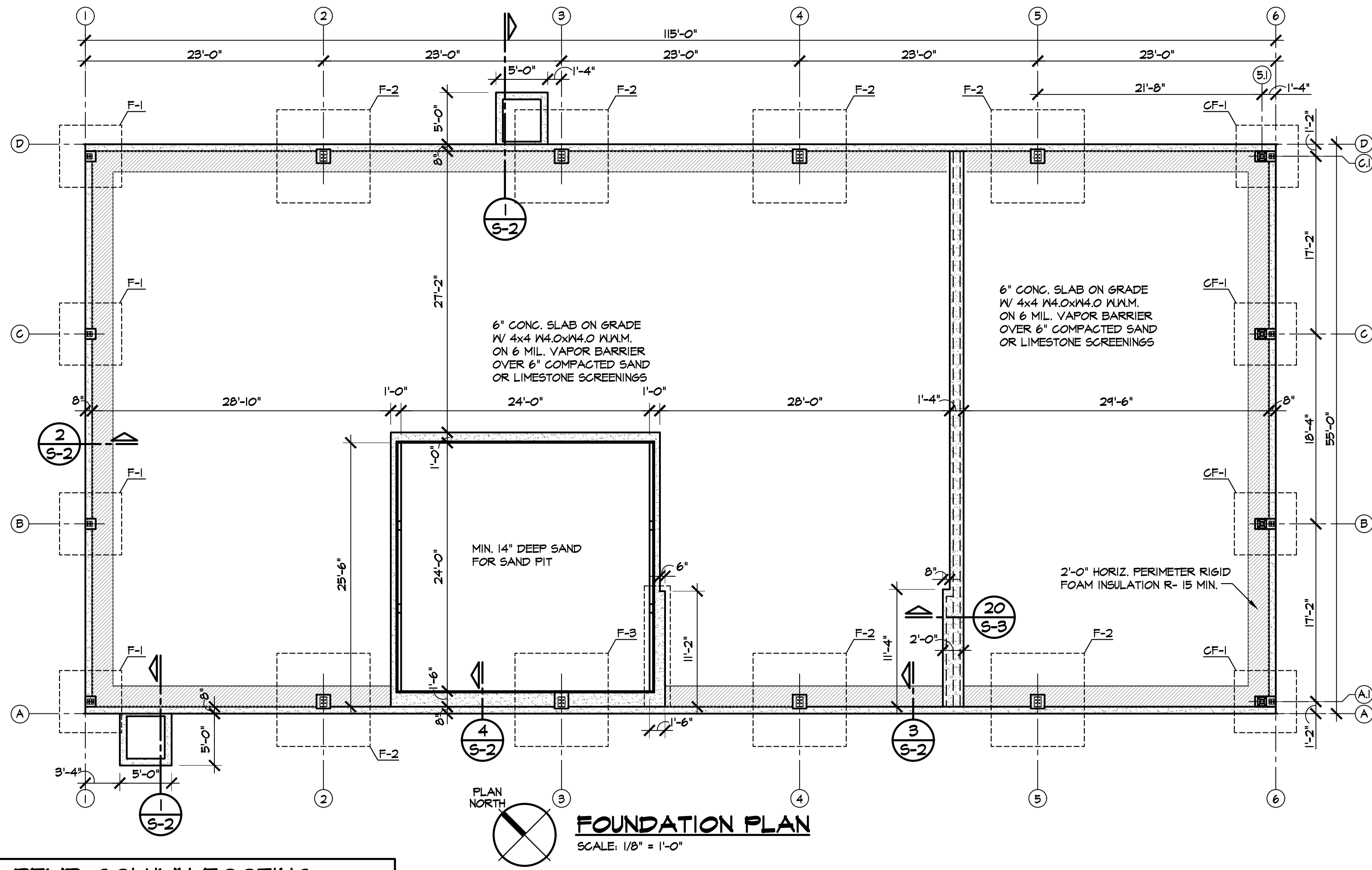
SIDEWALL COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



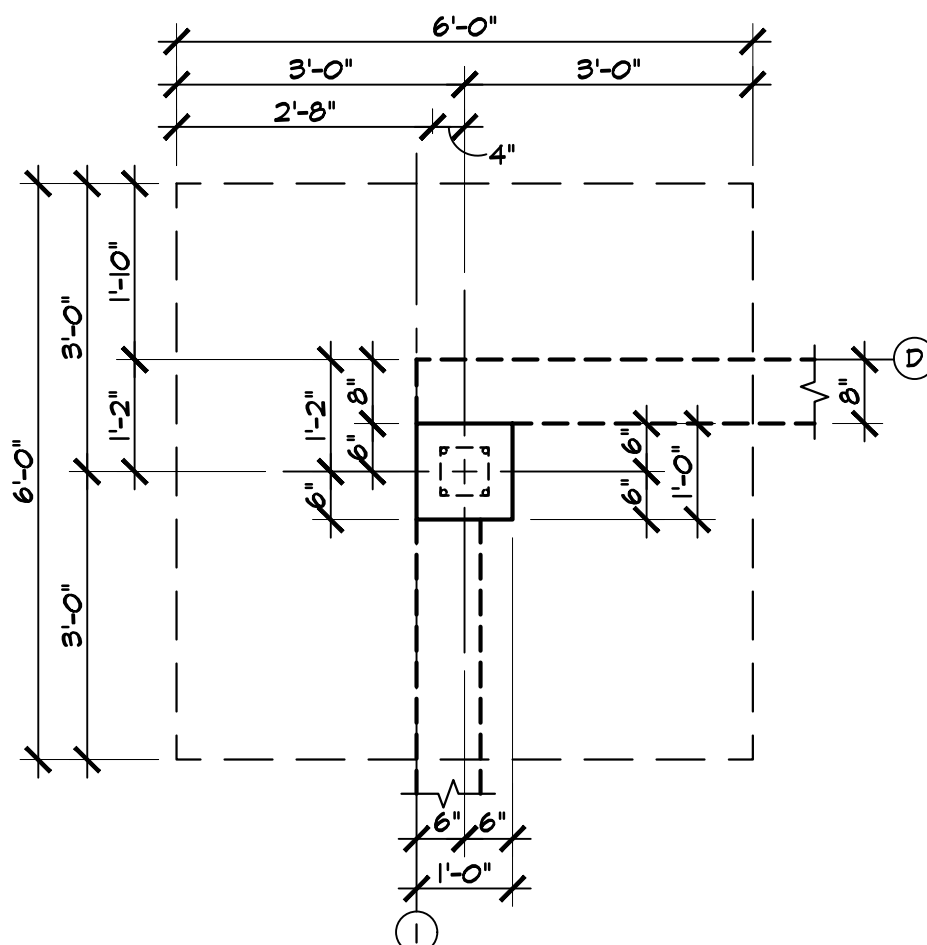
SIDEWALL A-3 COLUMN PIER & FOOTING @ SAND PIT
SCALE: 1/2" = 1'-0"

PEMB COLUMN FOOTING AND PIER SCHEDULE				
MARK	F-1	F-2	F-3	
PIER				
SIZE	12"x12"	16"x16"	16"x20"	
REINFORCING	(4) #6	(4) #6	(4) #6	
TIES	#3 @ 6"	#3 @ 6"	#3 @ 6"	
TOP/PIER EL.	100'-0"	100'-0"	100'-0"	
FOOTING				
SIZE (dxbxt)	6'-0"x6'-0"x1'-4"	9'-0"x9'-0"x1'-4"	9'-0"x9'-0"x1'-4"	
REINFORCING (BOT. EACH WAY UNO)	(7) #6	(10) #6	(10) #6	
BOT. /FTG. EL.	96'-0"	96'-0"	96'-0"	
REMARKS	DETAIL 10/S-2	DETAIL 12/S-2	DETAIL 13/S-2	

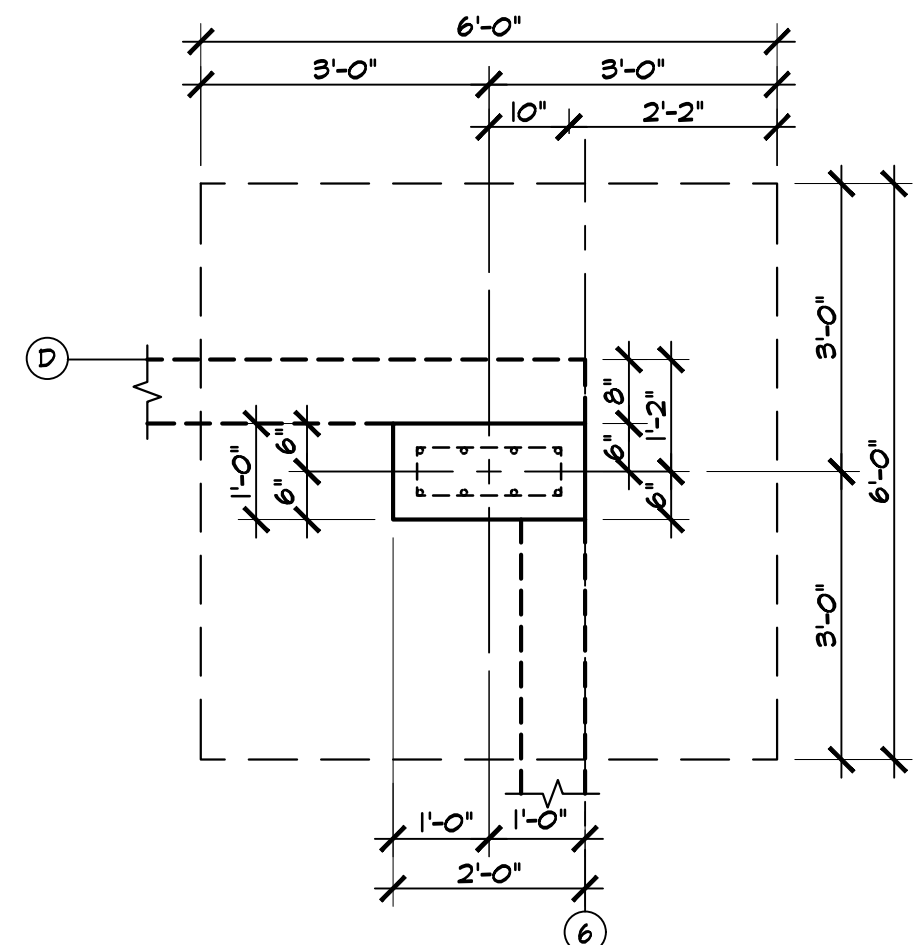
COMBINED PEMB COLUMN FOOTING AND PIER SCHEDULE		
MARK	CF-1	
PIER		
SIZE	24"x12"	
REINFORCING	(8) #6	
TIES	#3 @ 6"	
TOP/PIER(S) EL.	100'-0"	
FOOTING		
SIZE (dxbxt)	6'-0"x6'-0"x1'-4"	
REINFORCING (BOT. EACH WAY UNO)	(7) #6	
BOT. /FTG. EL.	96'-0"	
REMARKS	- (2) COLUMNS ON SINGLE PIER & FOOTING - DETAIL 11/S-2	



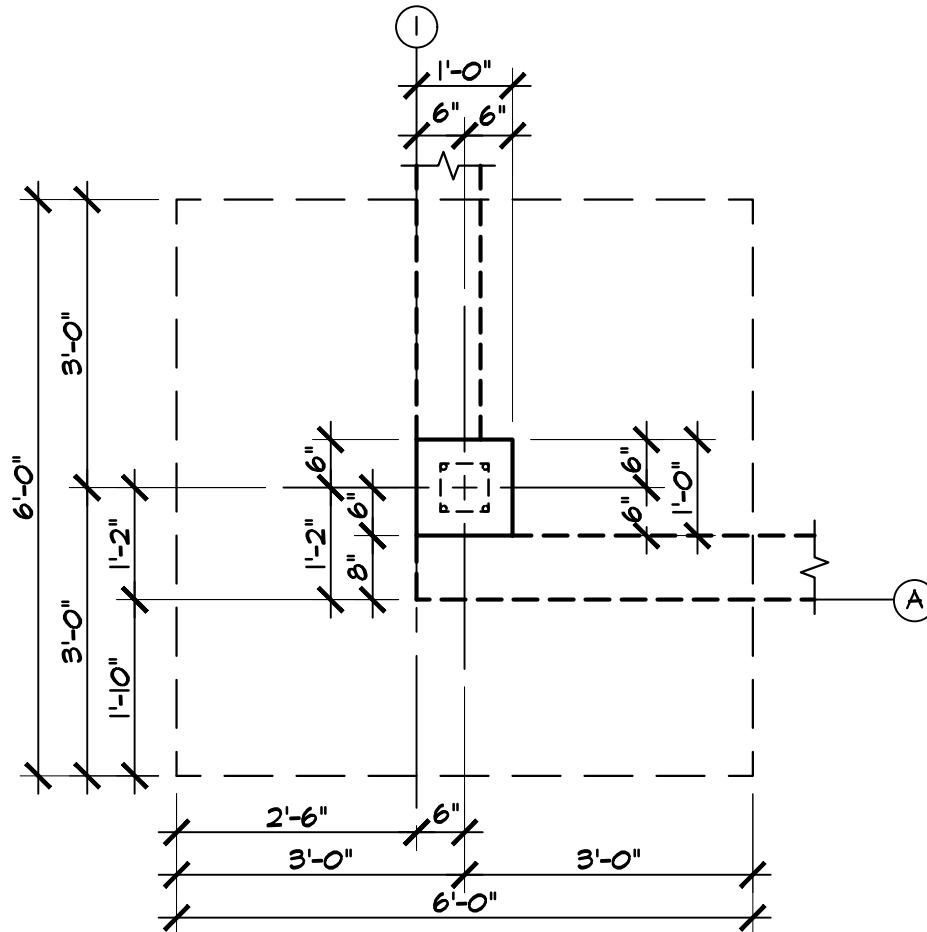
FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



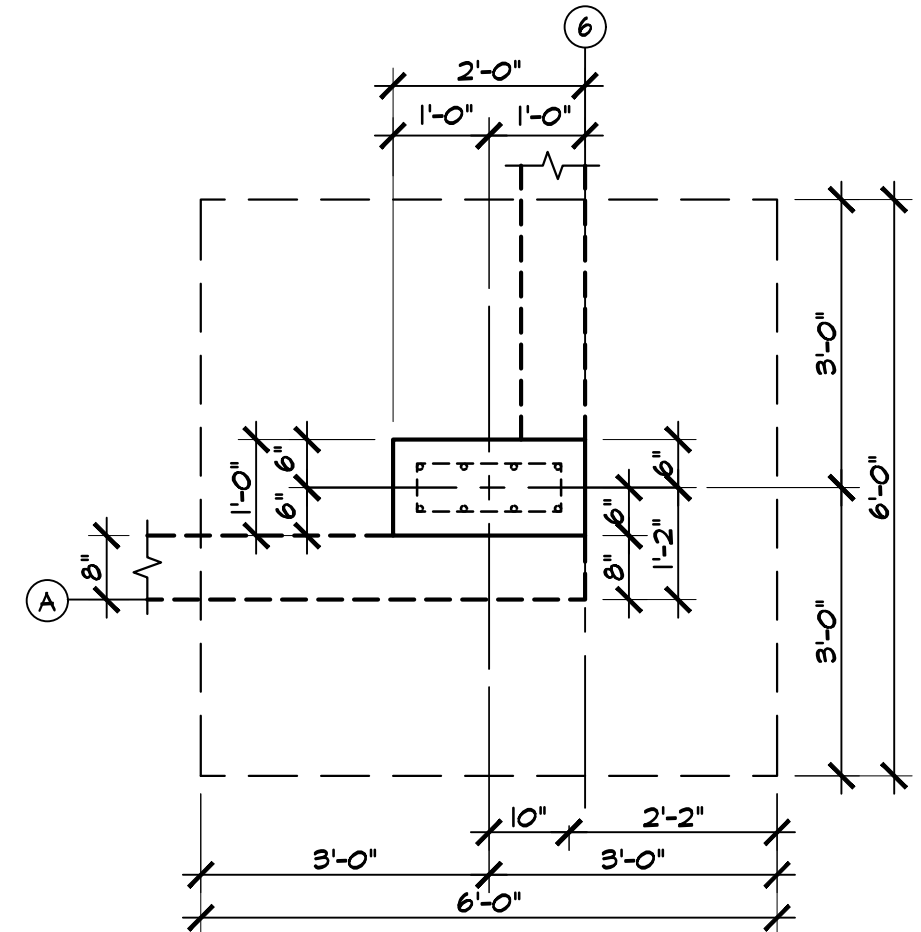
CORNER D-1 COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



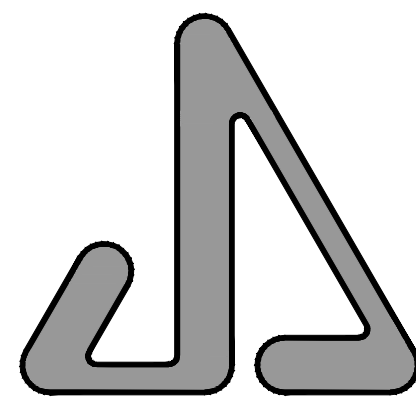
CORNER D-6 COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



CORNER A-1 COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



CORNER A-6 COLUMN PIER & FOOTING
SCALE: 1/2" = 1'-0"



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**FOUNDATION
PLAN & COLUMN
PIER & FOOTING
DETAILS
(BASE BID)**

03-03-2025 BIDS
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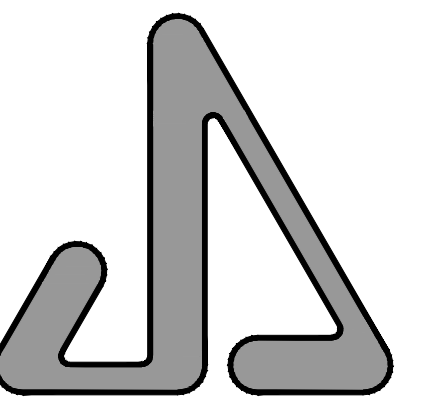
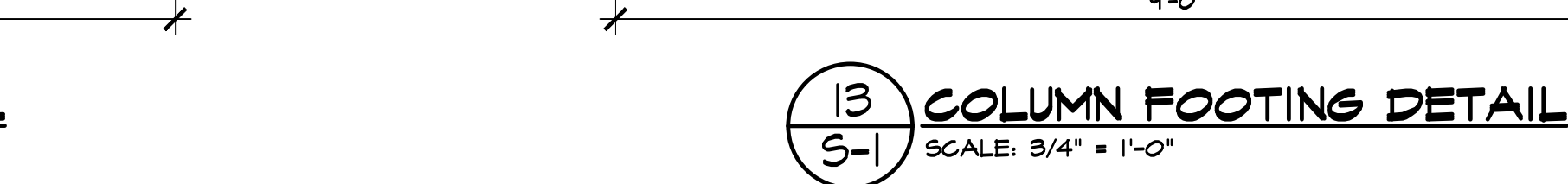
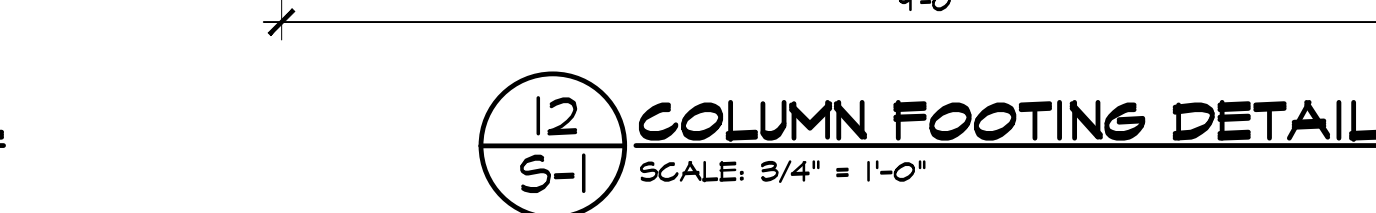
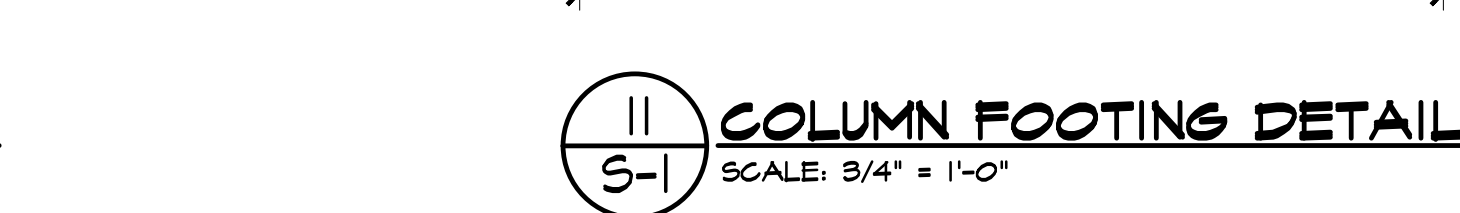
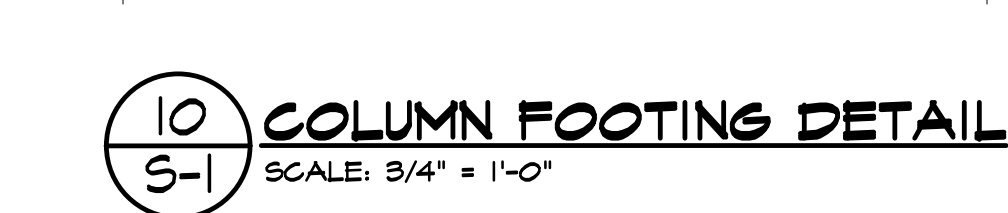
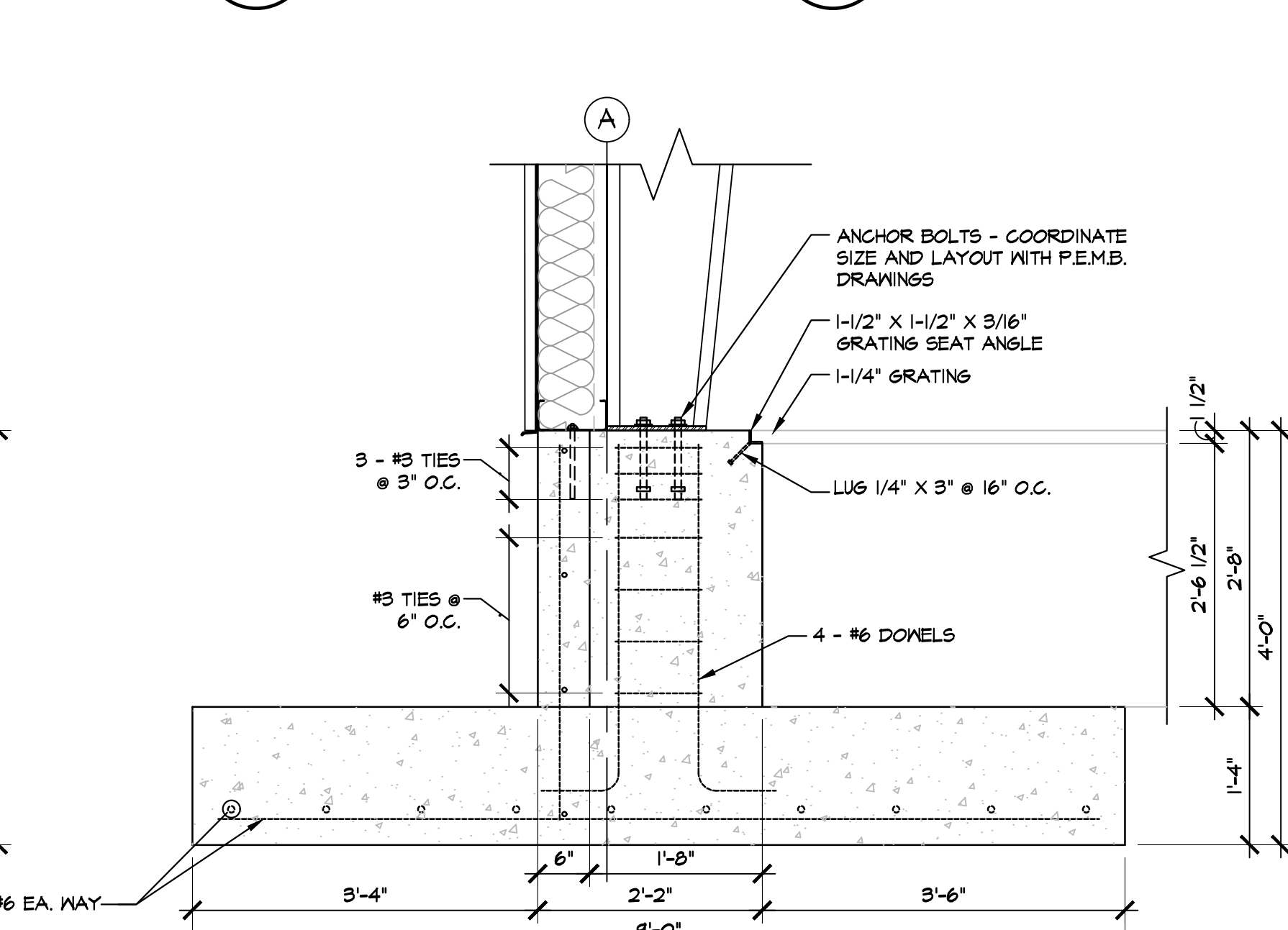
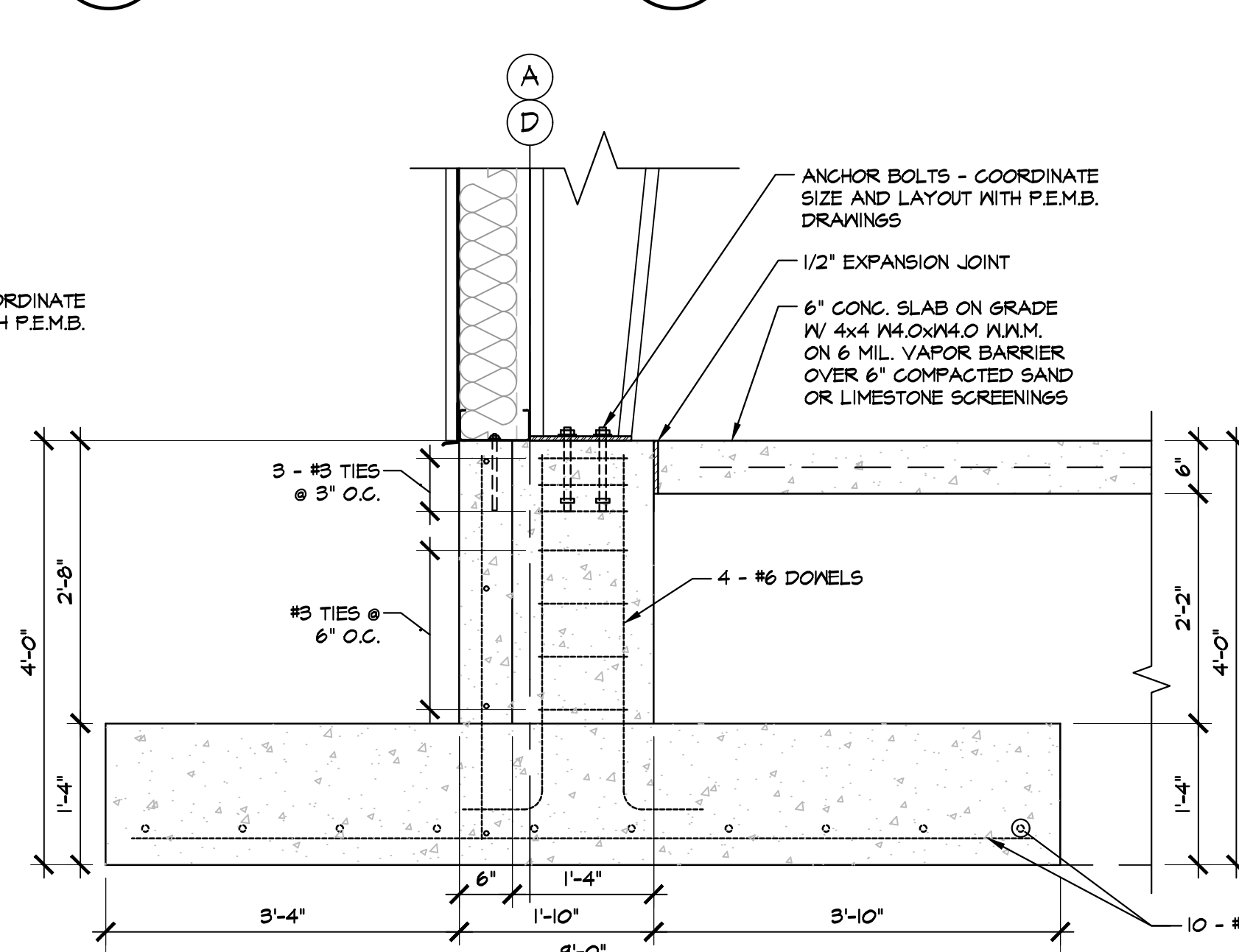
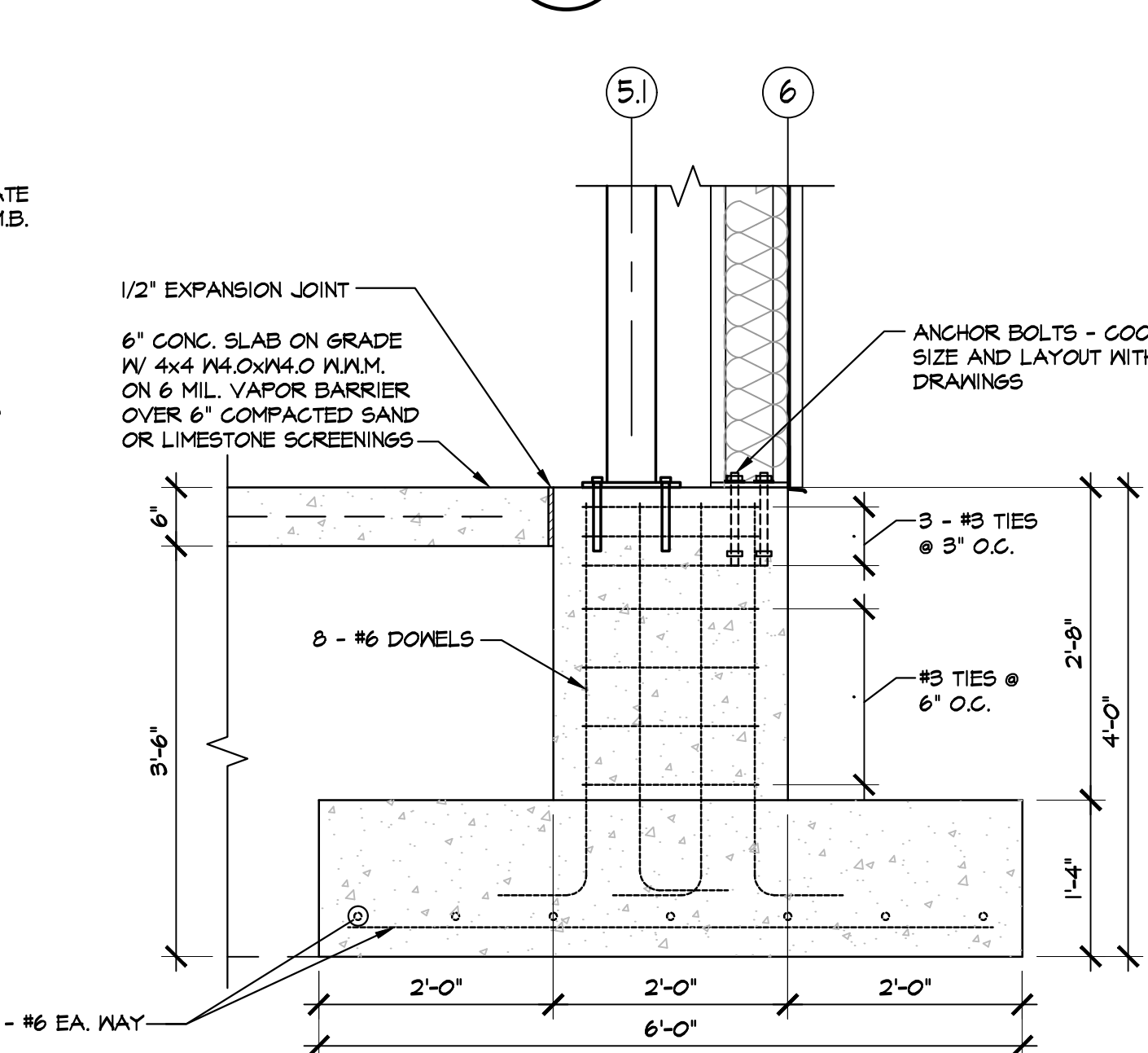
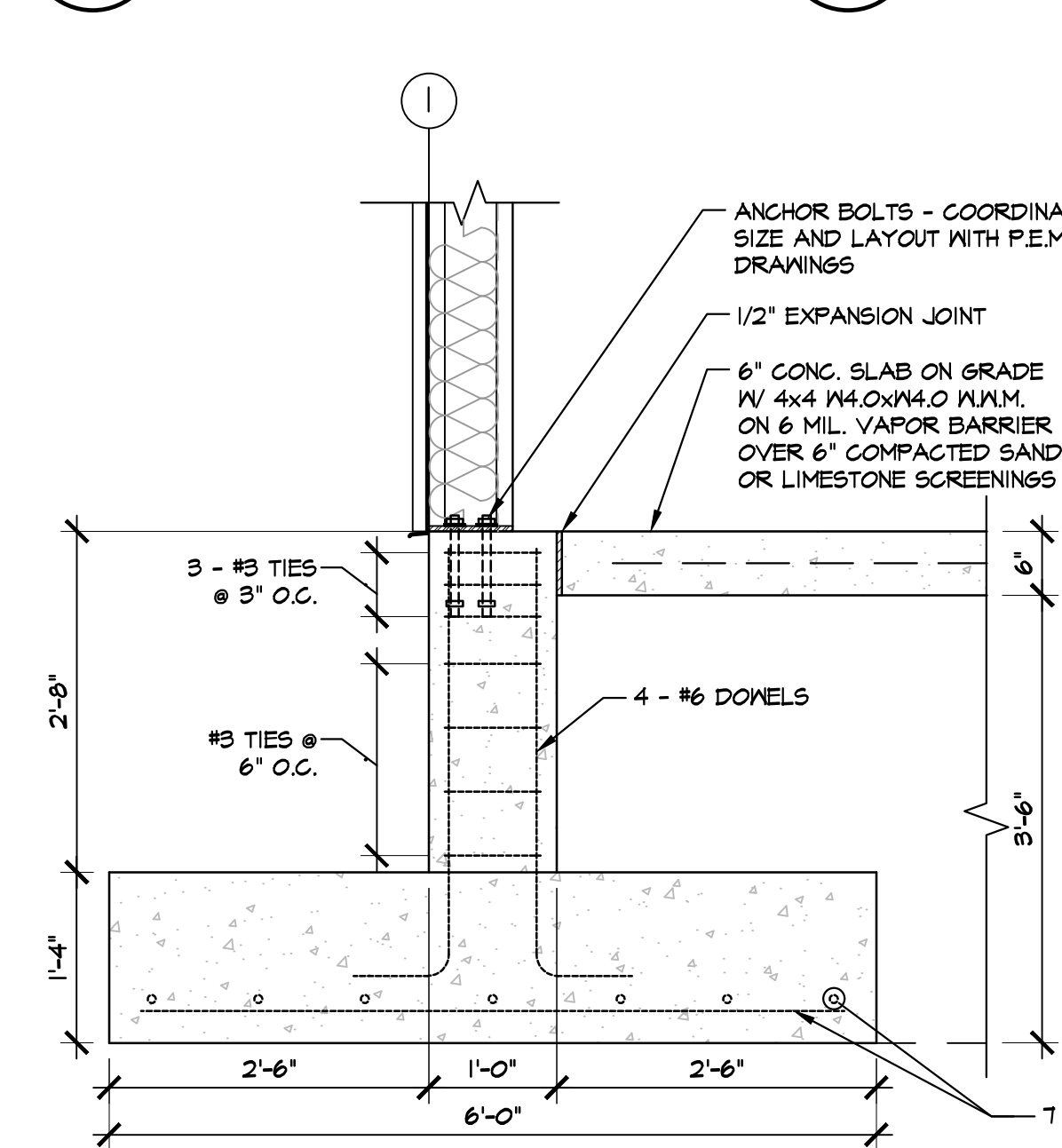
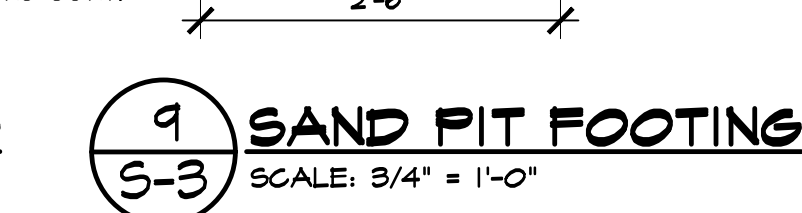
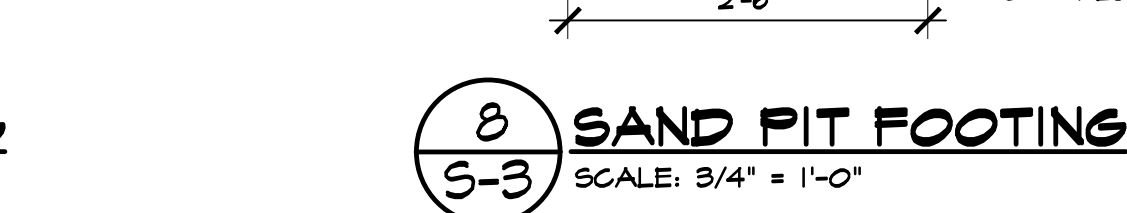
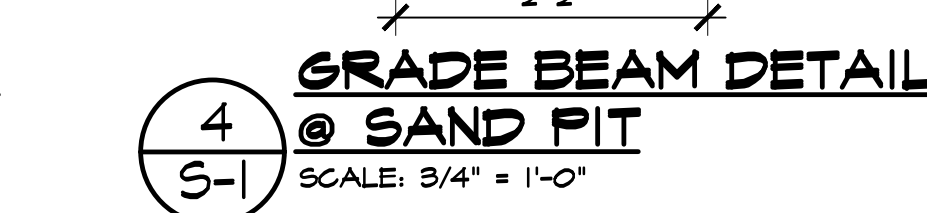
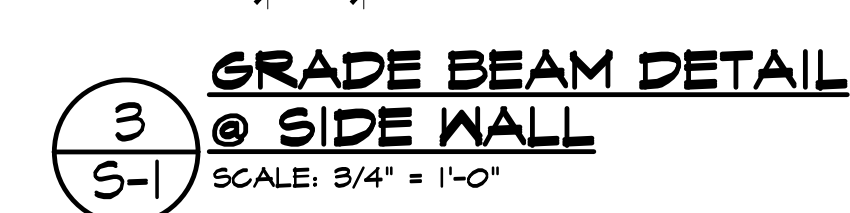
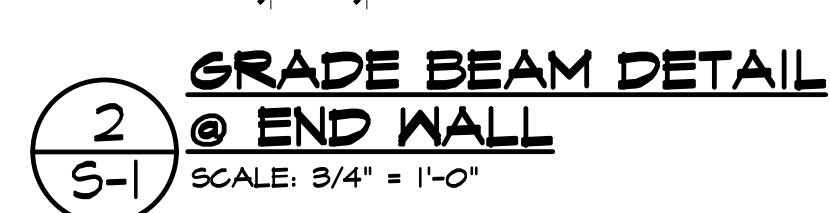
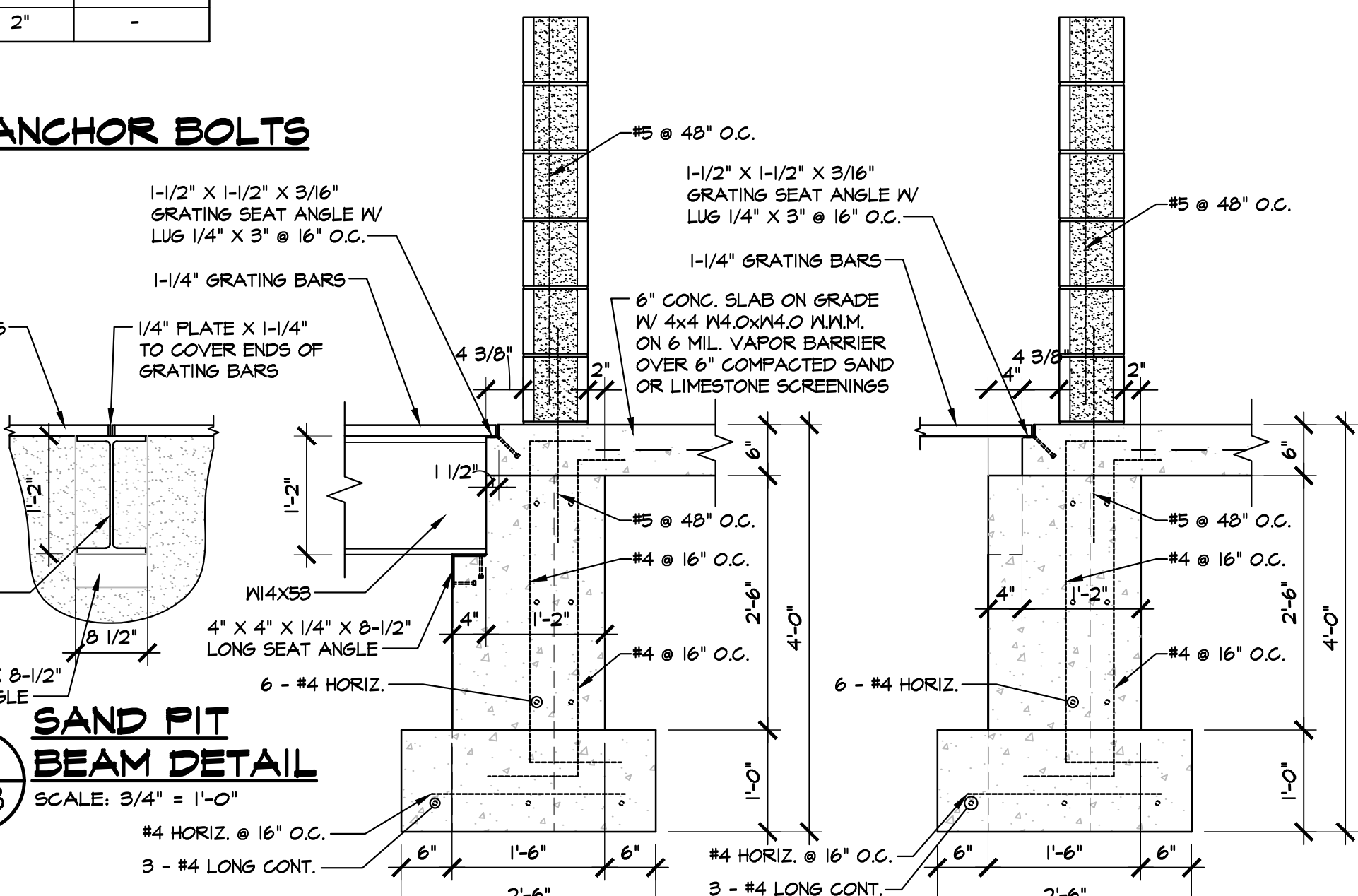
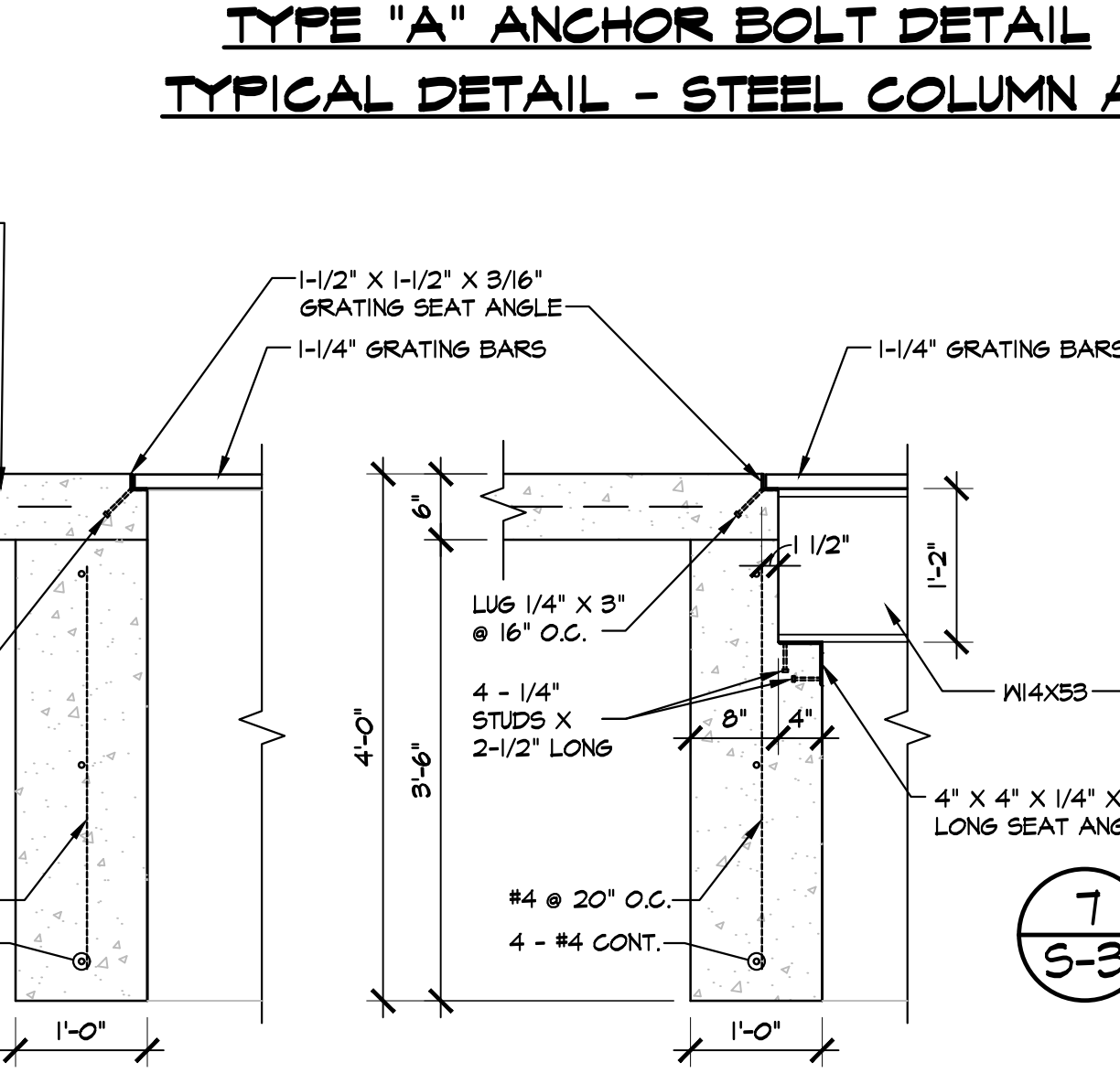
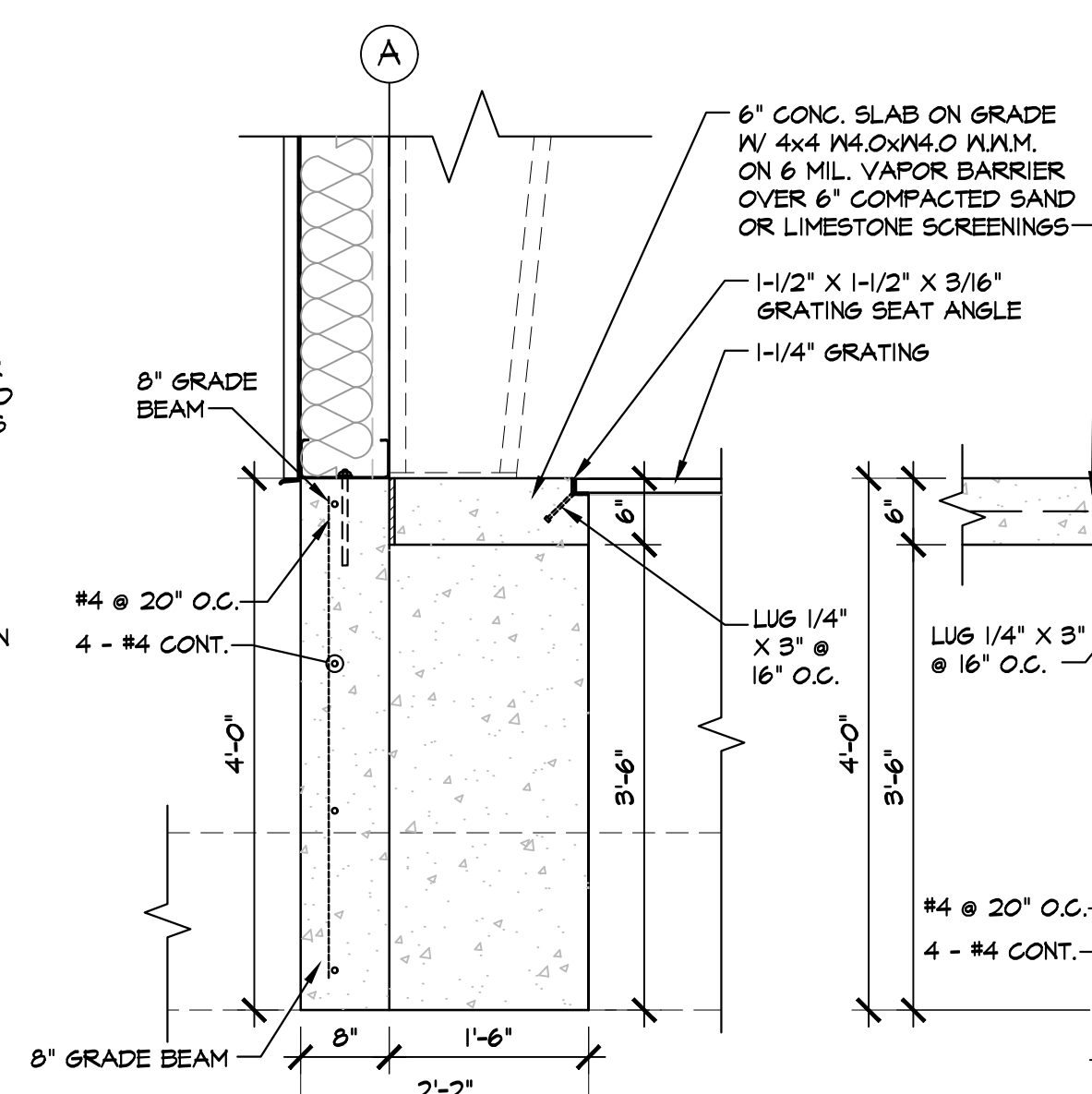
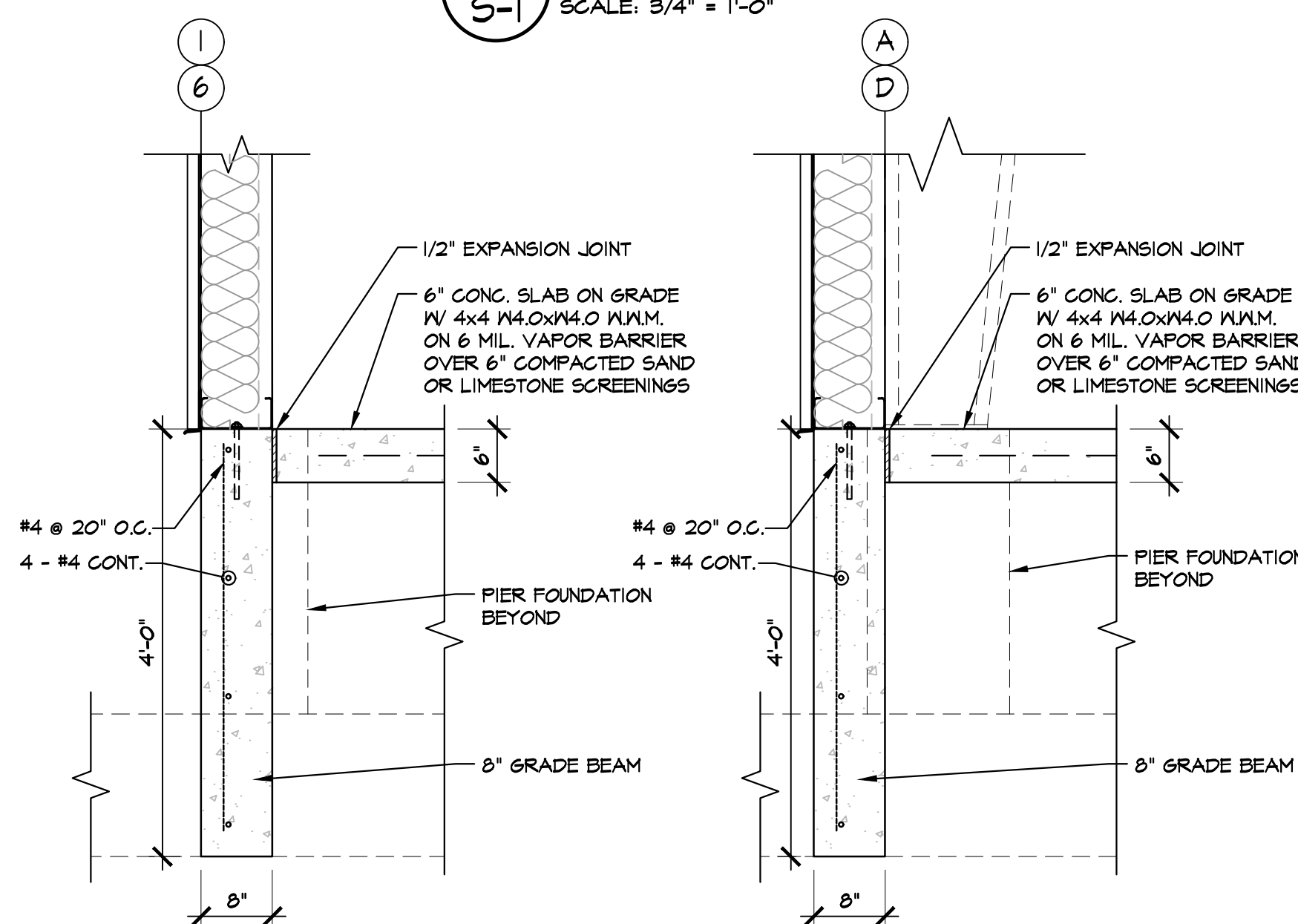
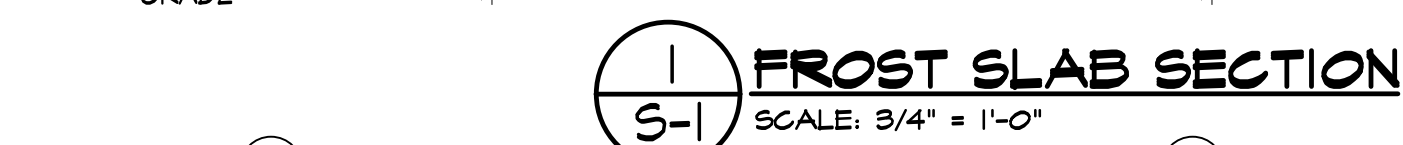
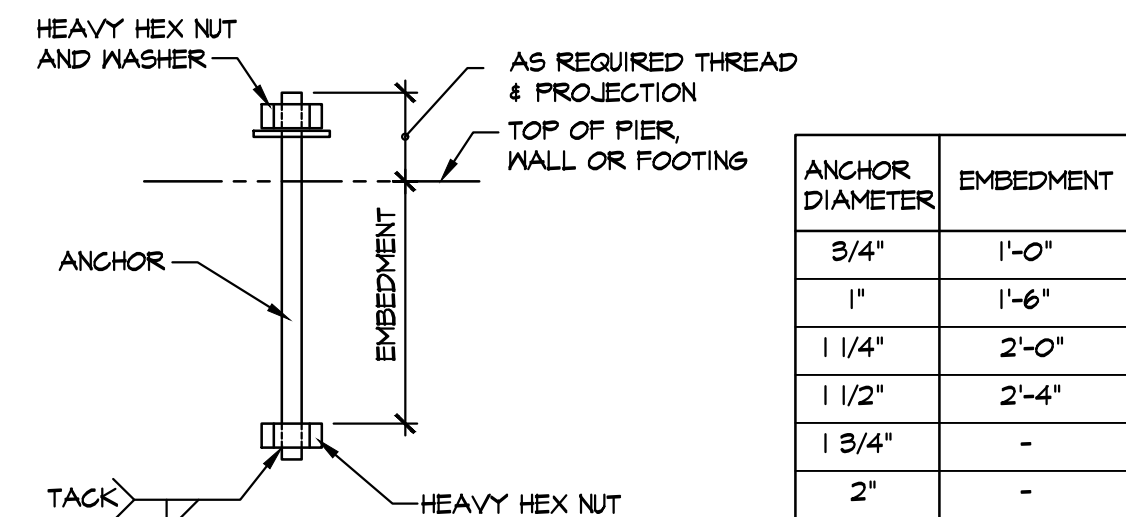
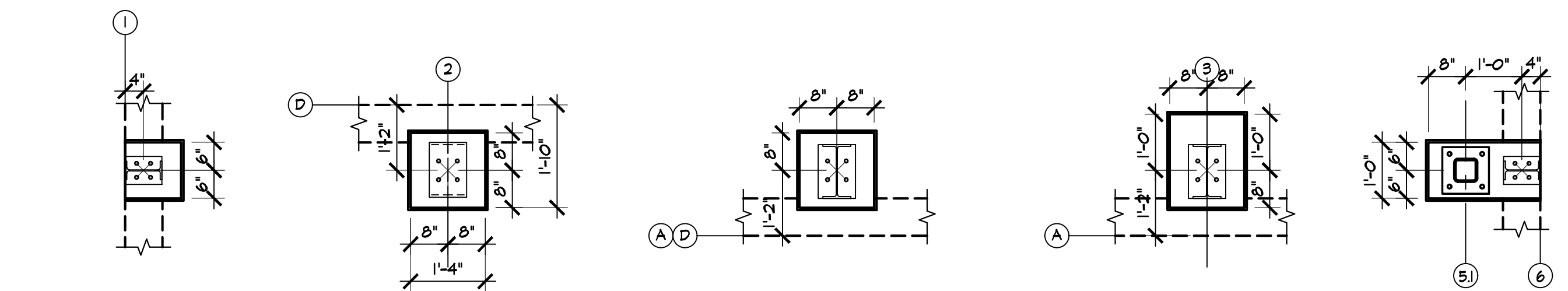
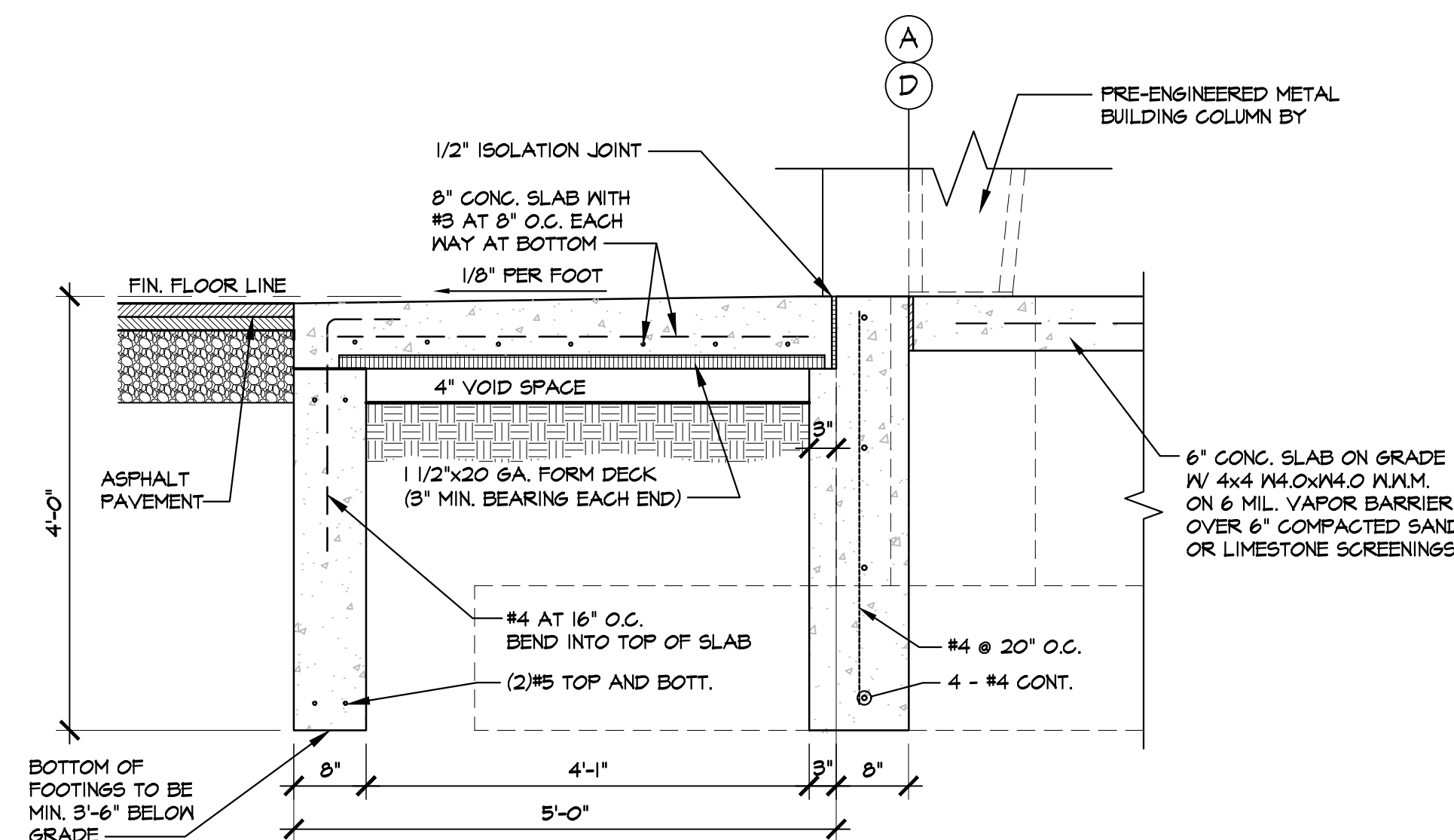
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S-1

1 OF 4

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**FOUNDATION
DETAILS
(BASE BID)**

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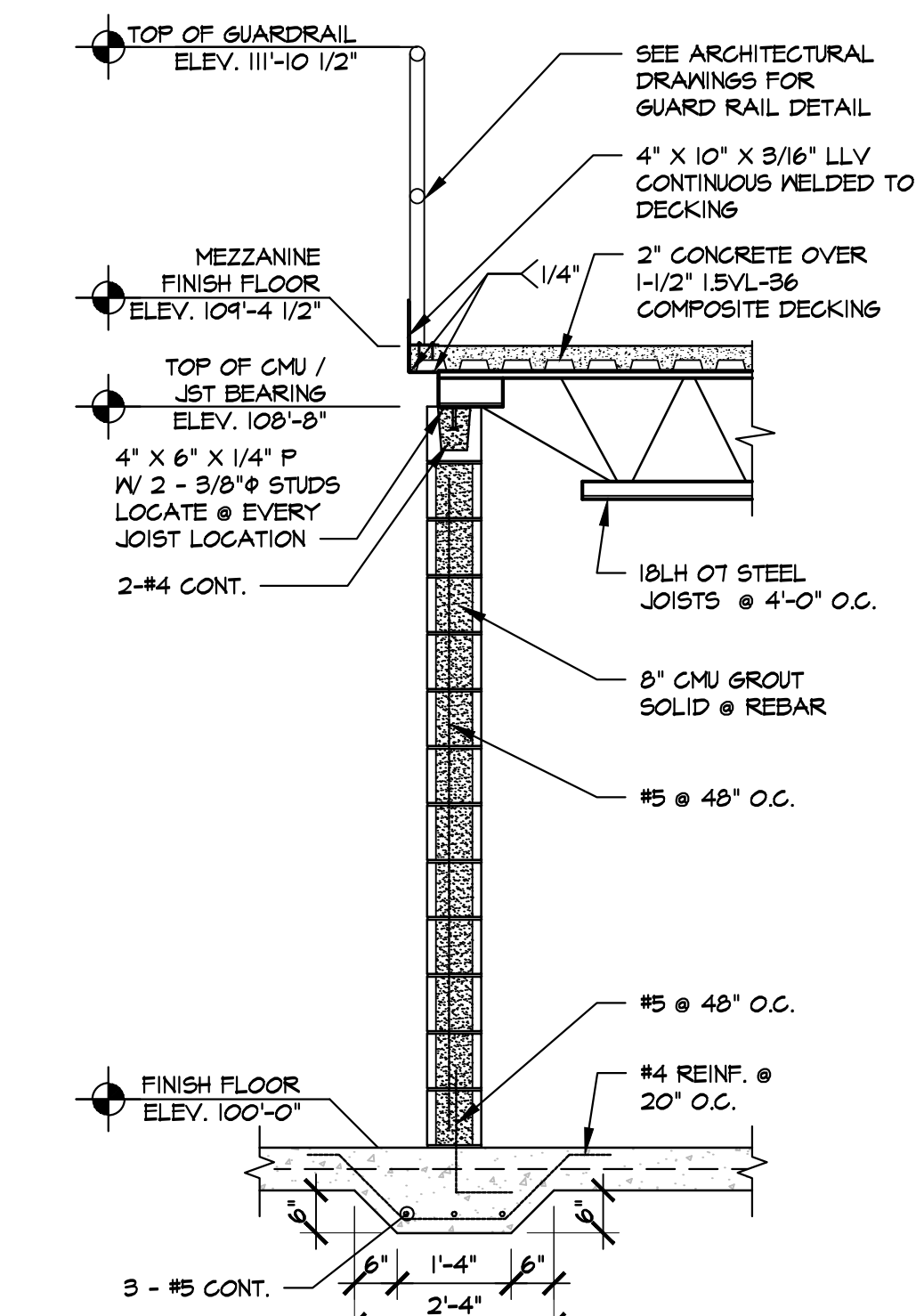
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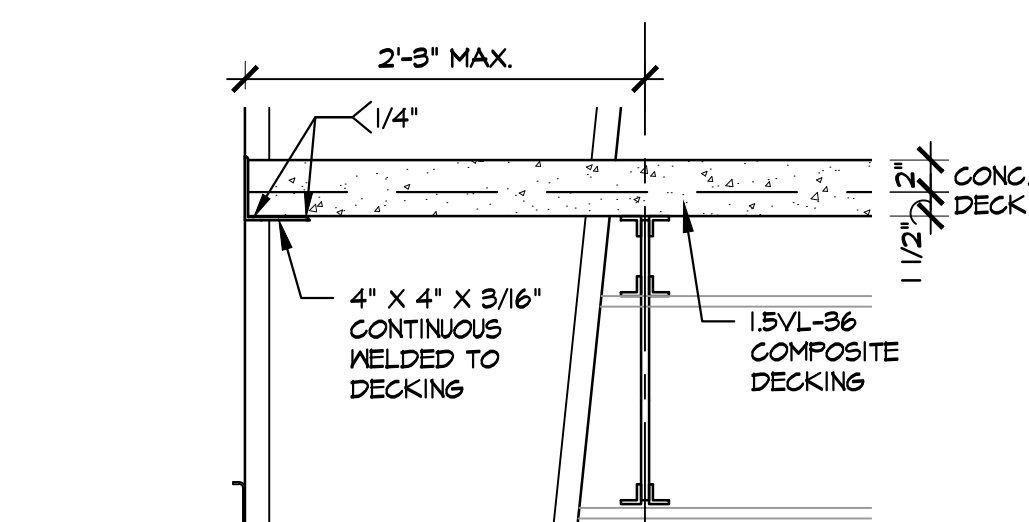
S-2

2 OF 4

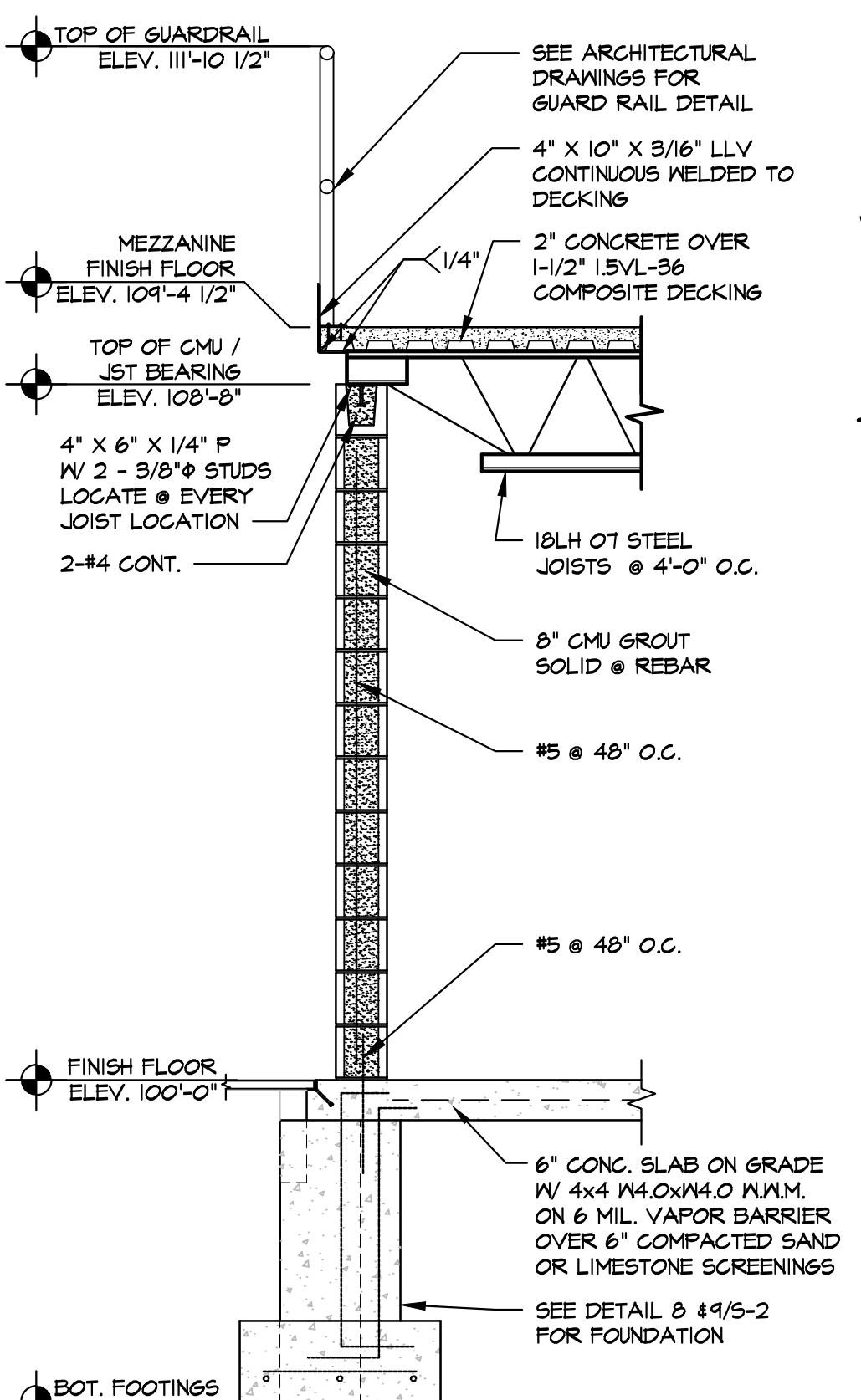
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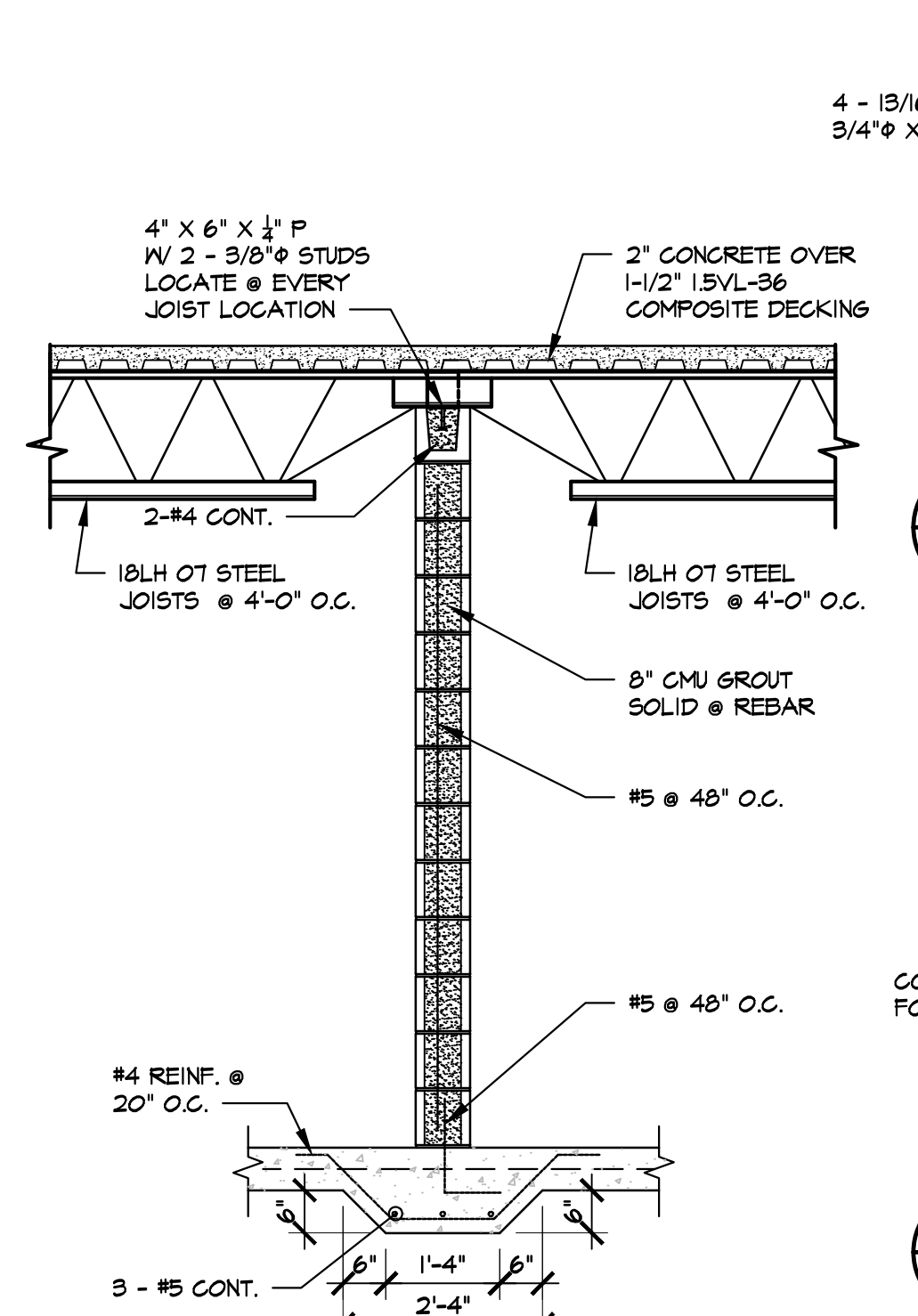
15 MEZZANINE WALL SECTION
SCALE: 1/2" = 1'-0"
ALTERNATE NO.1 WORK



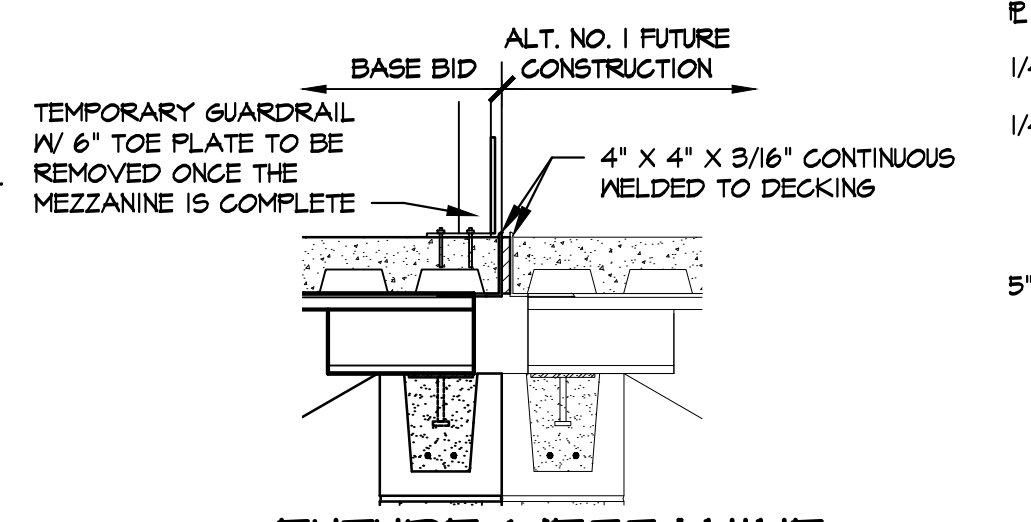
17 EDGE OF MEZZANINE DETAIL
SCALE: 1" = 1'-0"
BASE BID / ALTERNATE NO.1 WORK



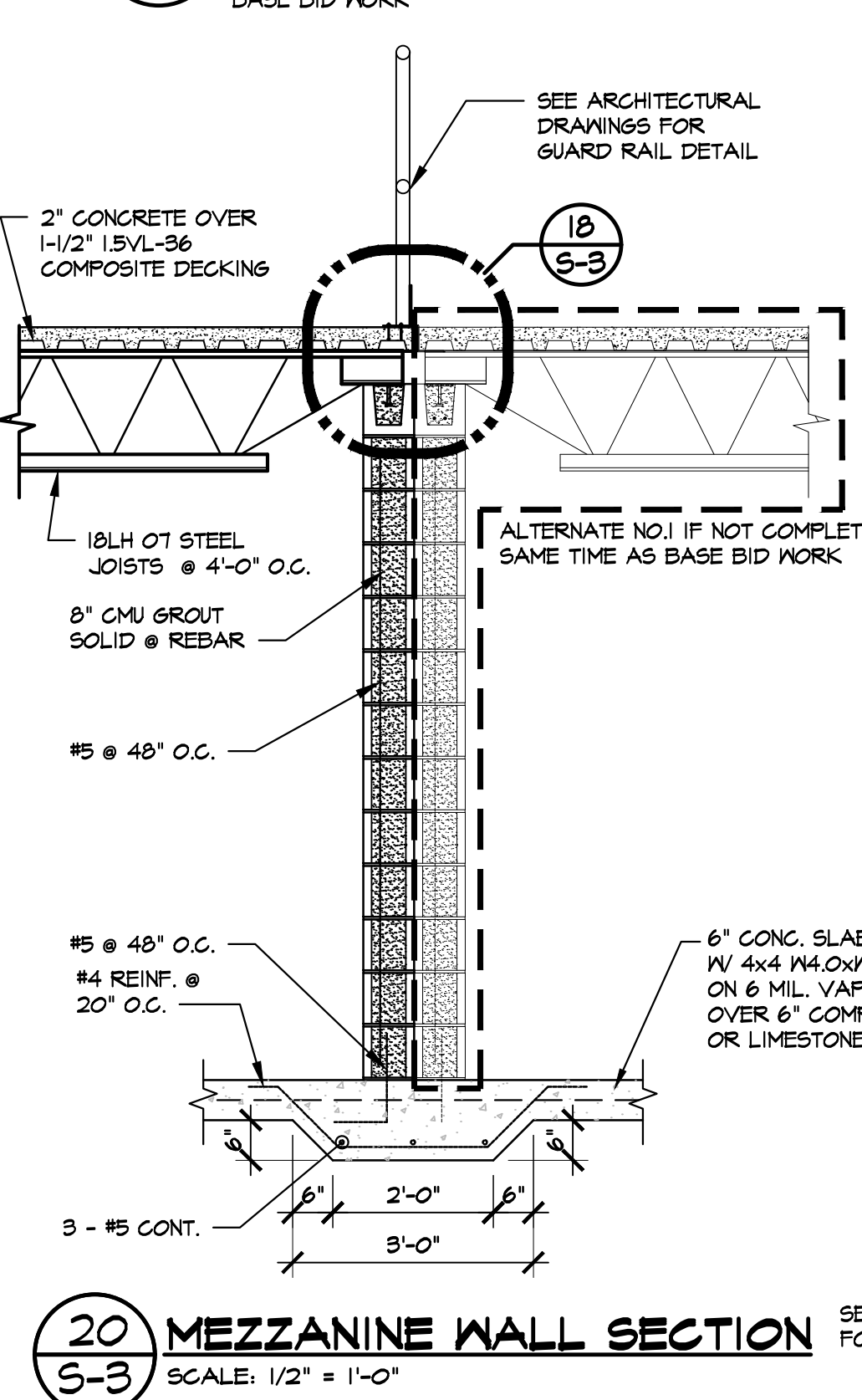
19 MEZZANINE WALL SECTION
SCALE: 1/2" = 1'-0"
BASE BID WORK



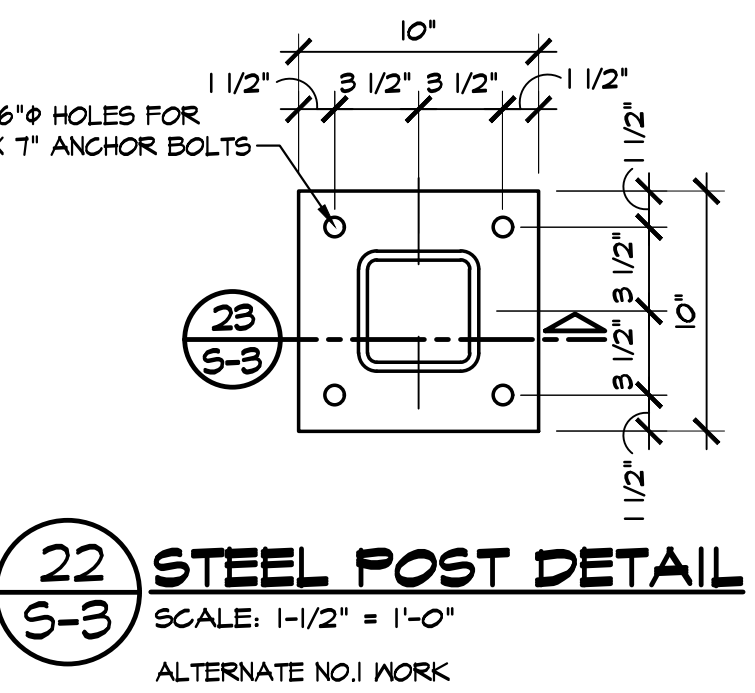
16 MEZZANINE WALL SECTION
SCALE: 1/2" = 1'-0"
BASE BID / ALTERNATE NO.1 WORK COMPLETED AT SAME TIME



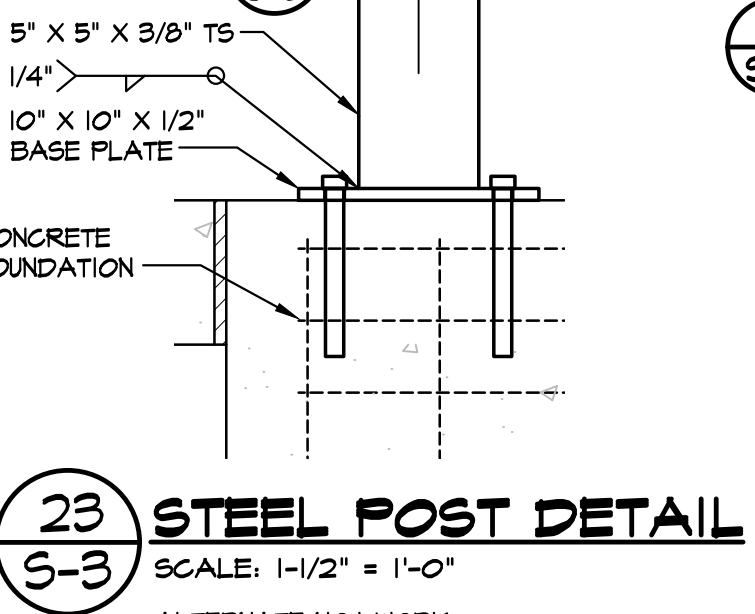
18 FUTURE MEZZANINE CONNECTION
SCALE: 1" = 1'-0"
BASE BID WORK



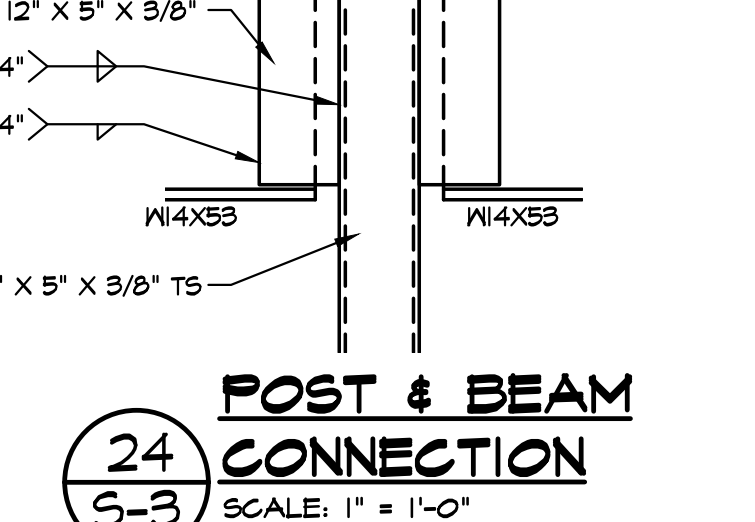
20 MEZZANINE WALL SECTION
SCALE: 1/2" = 1'-0"
BASE BID WORK



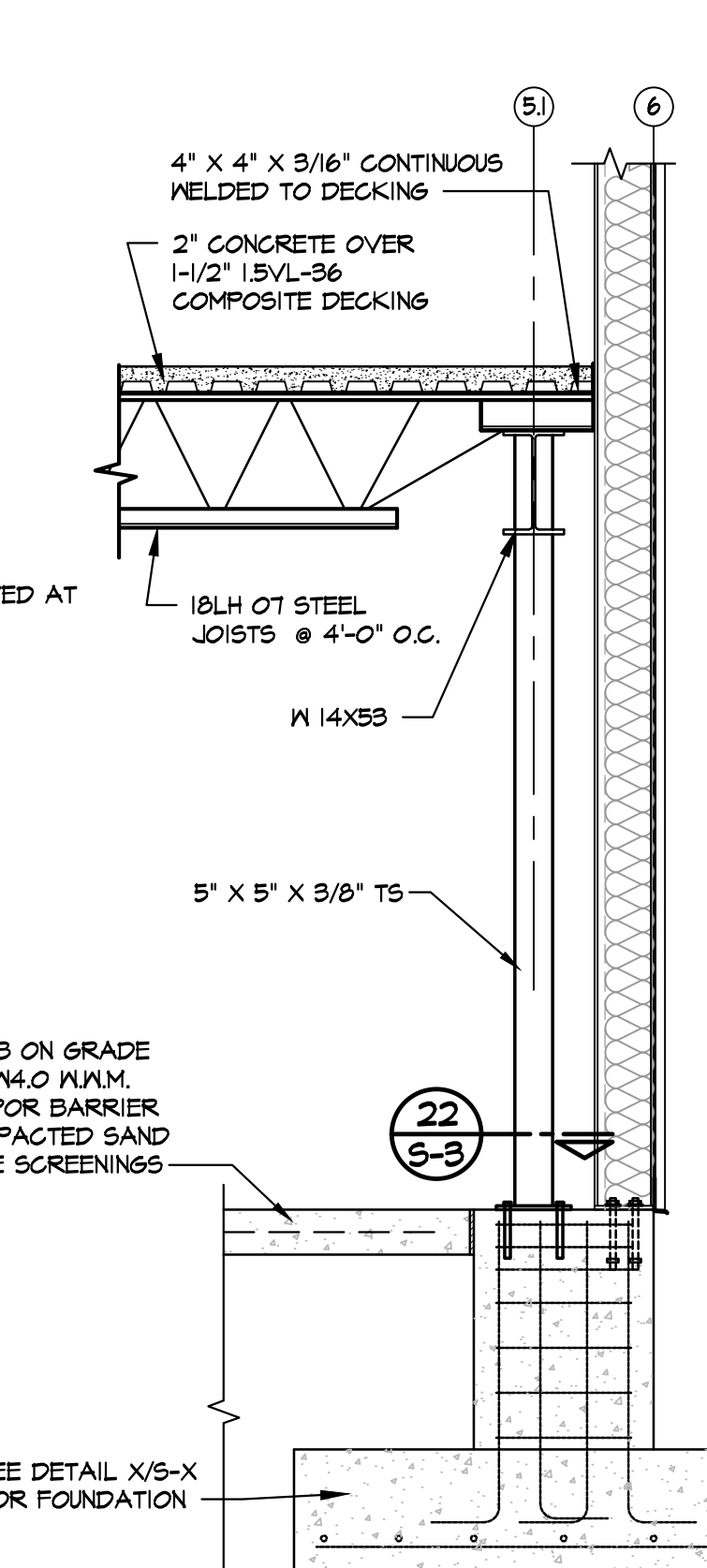
22 STEEL POST DETAIL
SCALE: 1-1/2" = 1'-0"
ALTERNATE NO.1 WORK



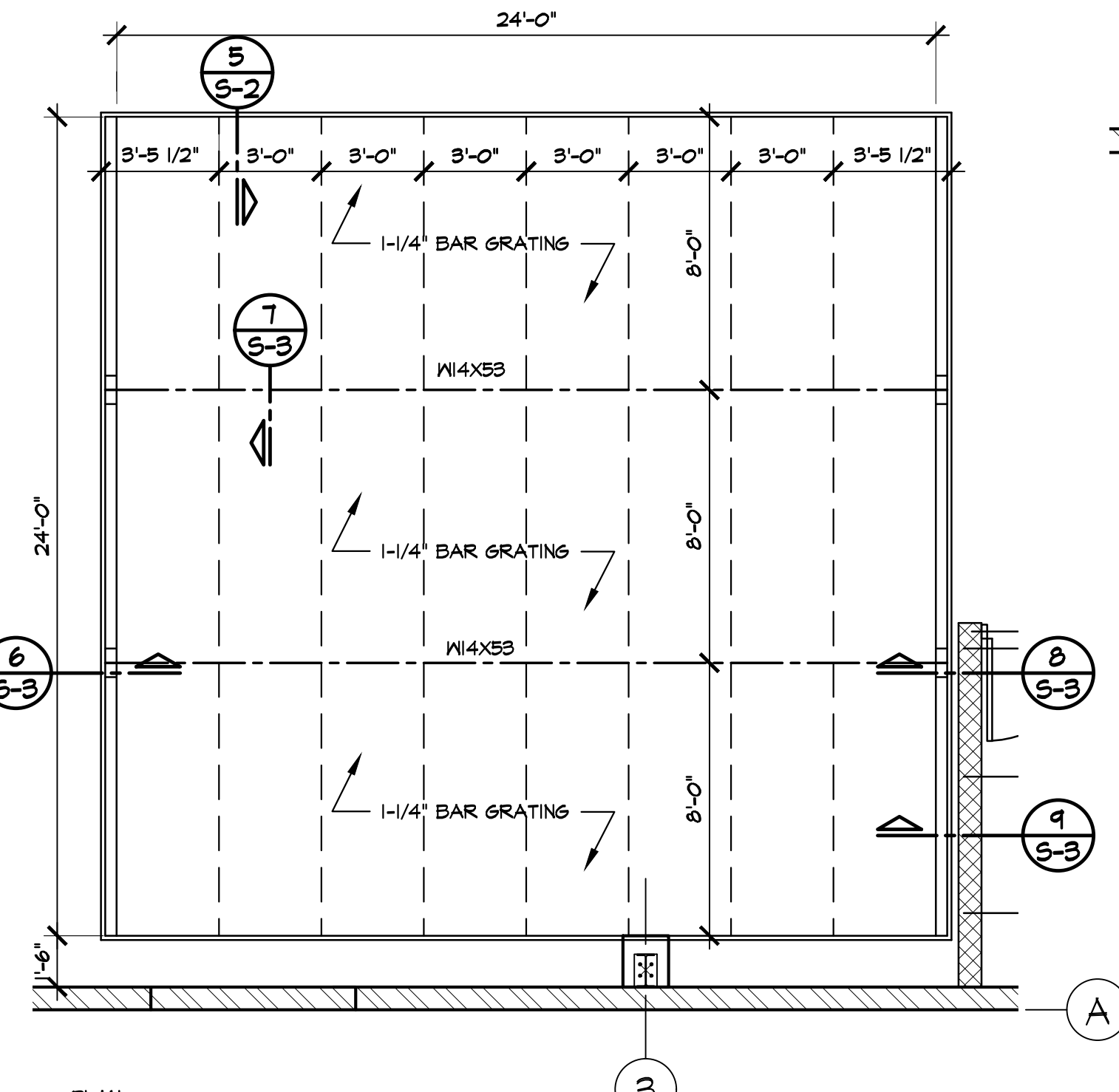
23 STEEL POST DETAIL
SCALE: 1-1/2" = 1'-0"
ALTERNATE NO.1 WORK



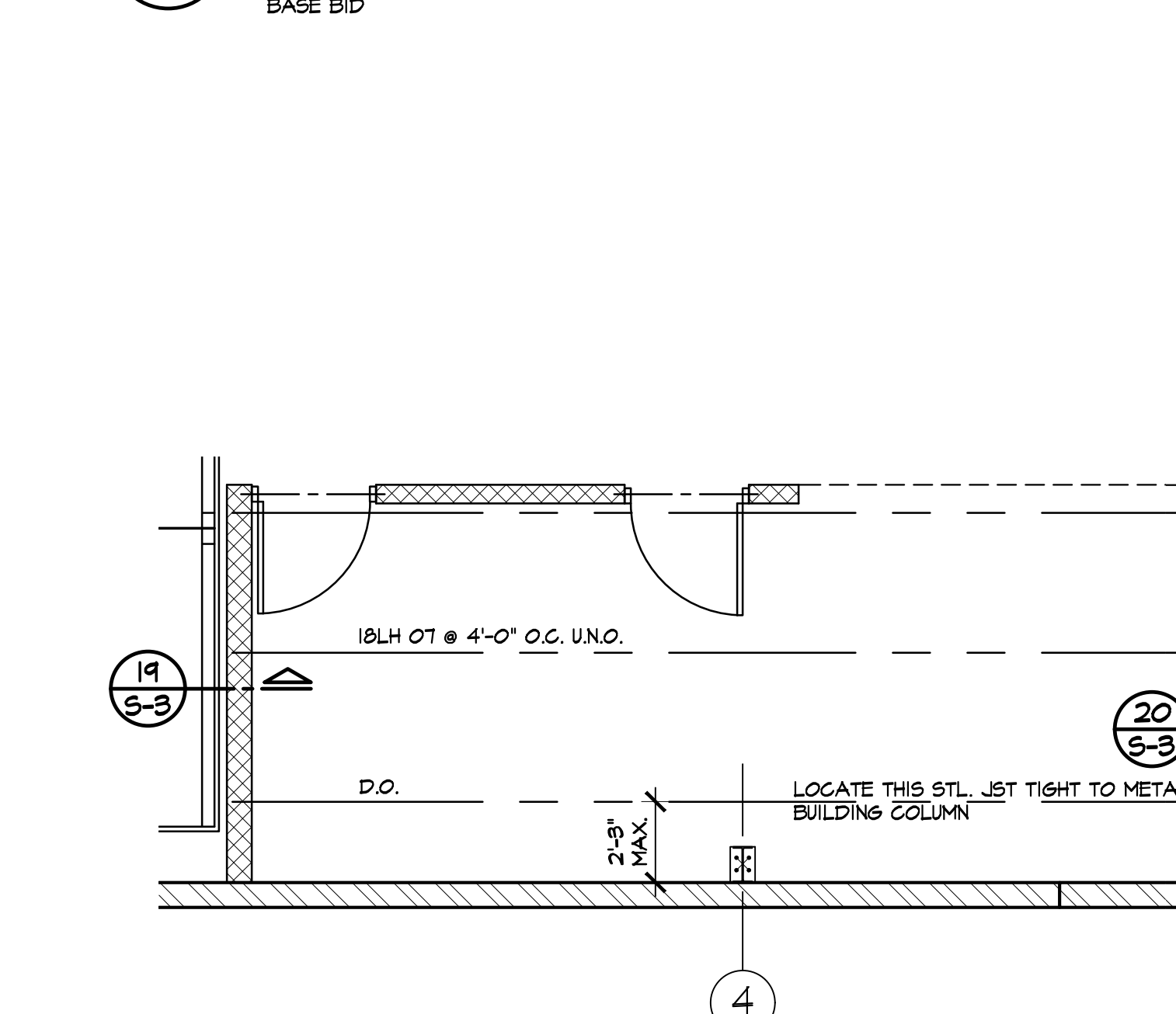
24 POST & BEAM CONNECTION
SCALE: 1" = 1'-0"
ALTERNATE NO.1 WORK



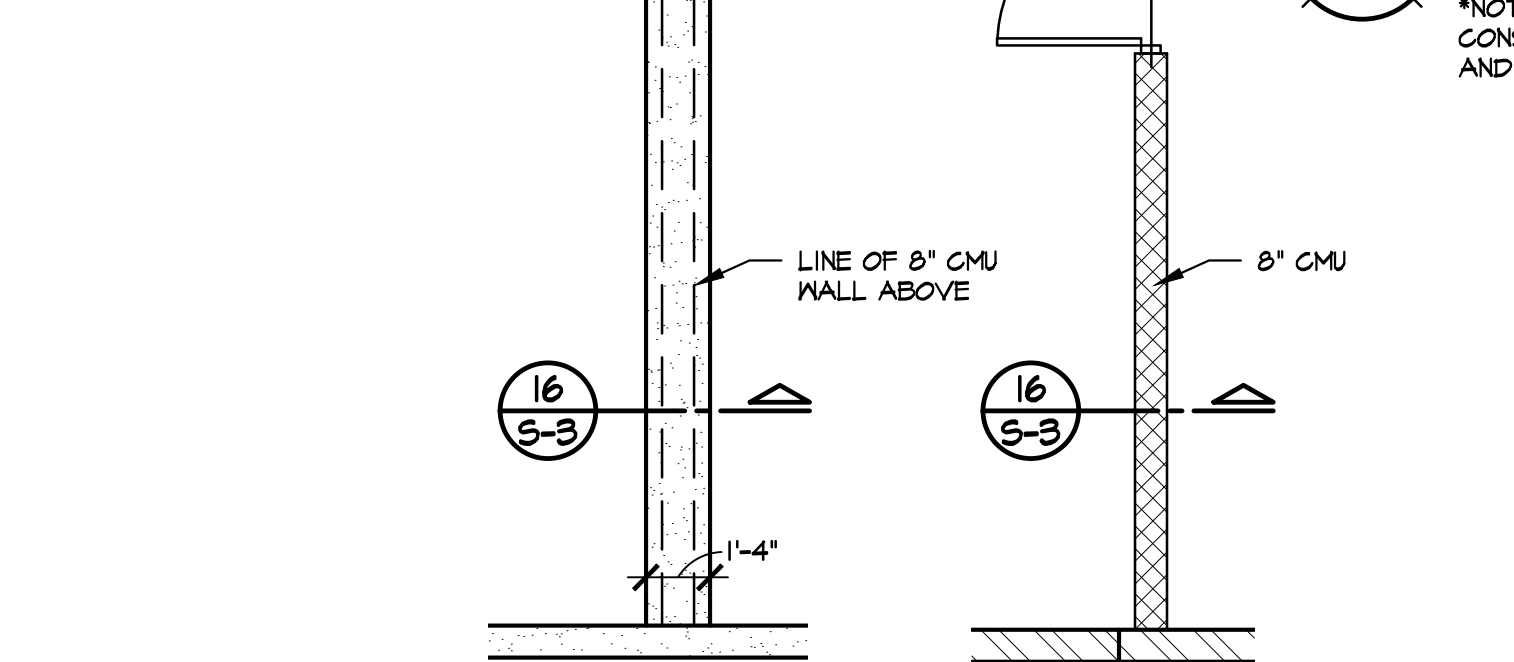
21 MEZZANINE WALL SECTION
SCALE: 1/2" = 1'-0"
ALTERNATE NO.1 WORK



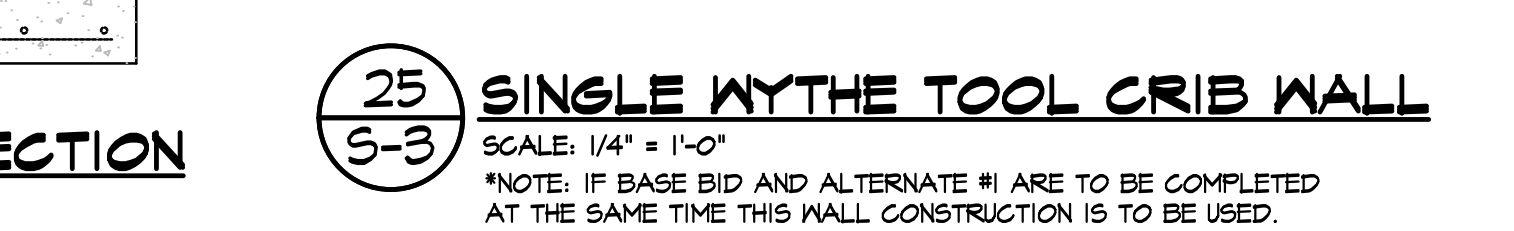
SAND PIT COVER FRAMING PLAN
SCALE: 1/4" = 1'-0"
BASE BID



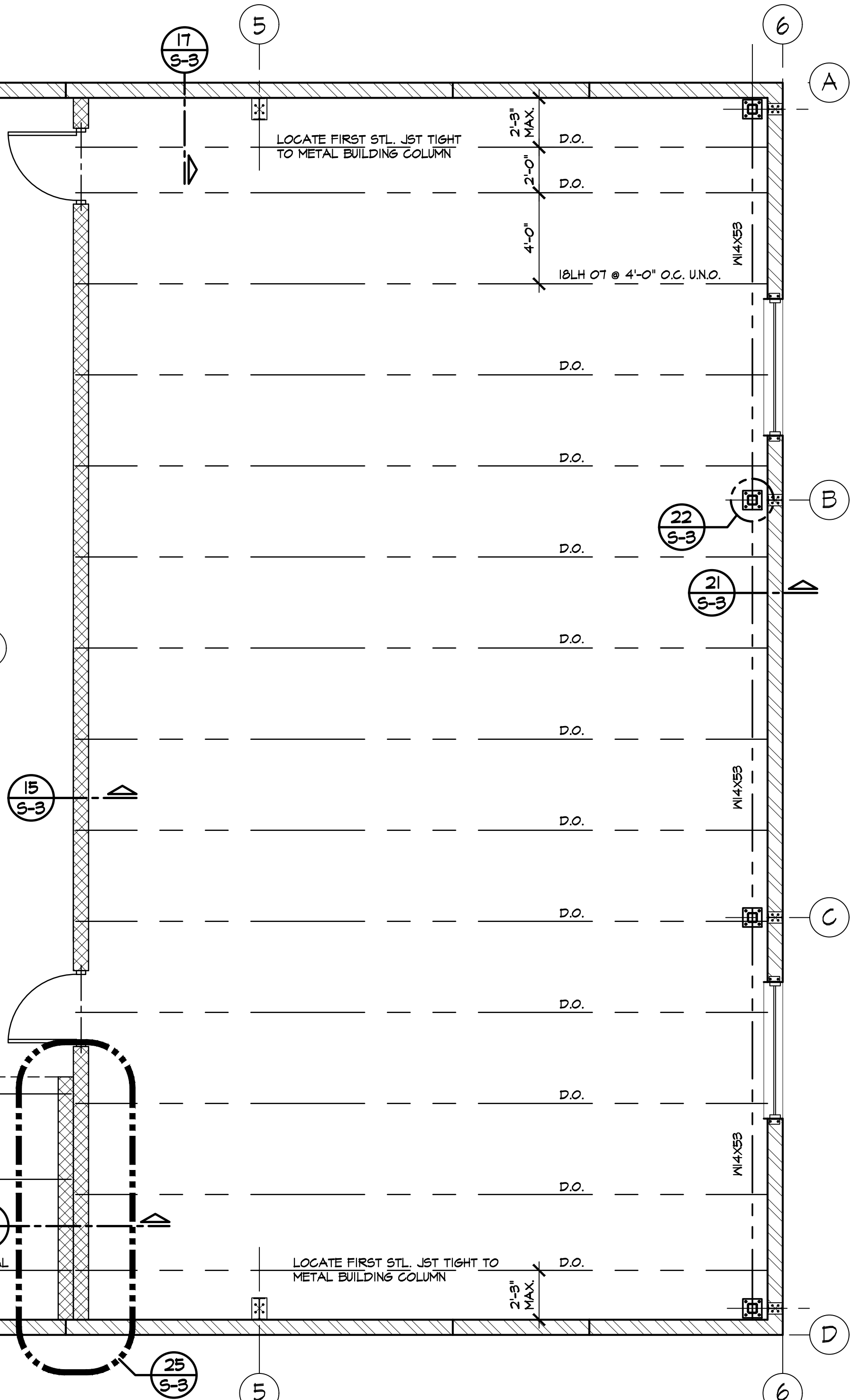
MEZZANINE FRAMING PLAN
SCALE: 1/4" = 1'-0"
NOTE: IF BASE BID ONLY IS ACCEPTED MEZZANINE TO BE CONSTRUCTED IN TWO PHASES WITH RESTROOMS, TOOL CRIB, AND STAIRS TO BE CONSTRUCTED FIRST.



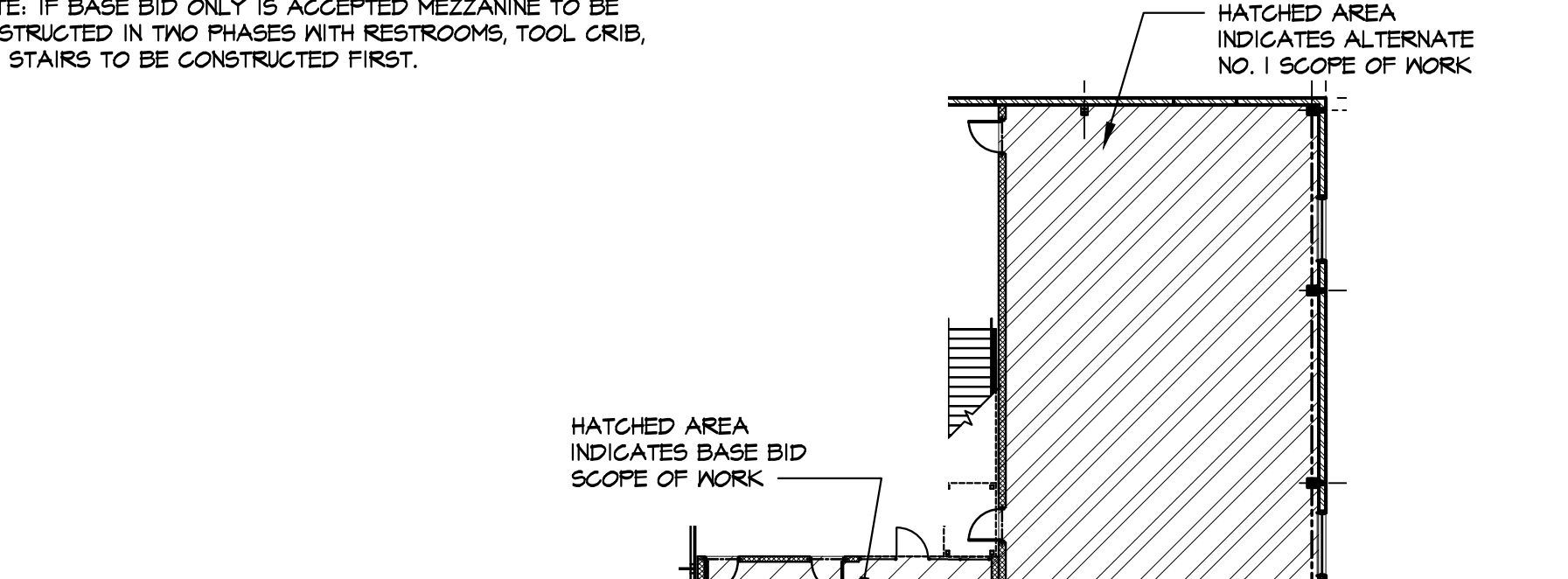
FOUNDATION FIRST FLOOR
SCALE: 1/4" = 1'-0"
NOTE: IF BASE BID AND ALTERNATE #1 ARE TO BE COMPLETED AT THE SAME TIME THIS WALL CONSTRUCTION IS TO BE USED.



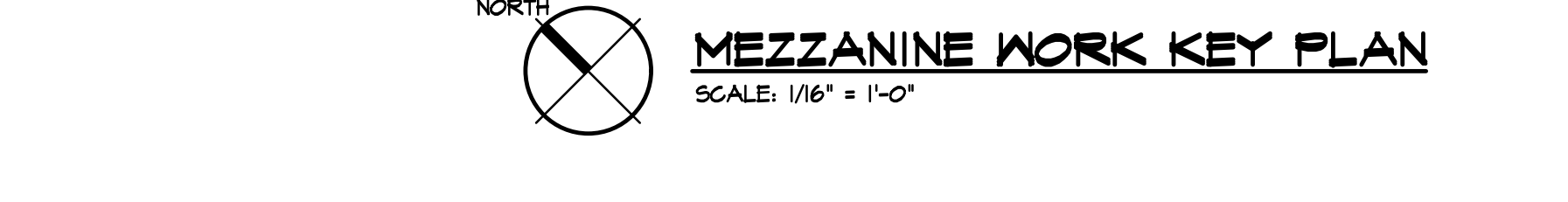
25 SINGLE WYTHE TOOL CRIB WALL
SCALE: 1/4" = 1'-0"
NOTE: IF BASE BID AND ALTERNATE #1 ARE TO BE COMPLETED AT THE SAME TIME THIS WALL CONSTRUCTION IS TO BE USED.



MEZZANINE WORK KEY PLAN
SCALE: 1/16" = 1'-0"
HATCHED AREA INDICATES ALTERNATE NO. 1 SCOPE OF WORK



MEZZANINE WORK KEY PLAN
SCALE: 1/16" = 1'-0"
HATCHED AREA INDICATES BASE BID SCOPE OF WORK



MEZZANINE WORK KEY PLAN
SCALE: 1/16" = 1'-0"
HATCHED AREA INDICATES BASE BID SCOPE OF WORK

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SITE IMPROVEMENTS & NEW BUILDING FOR:

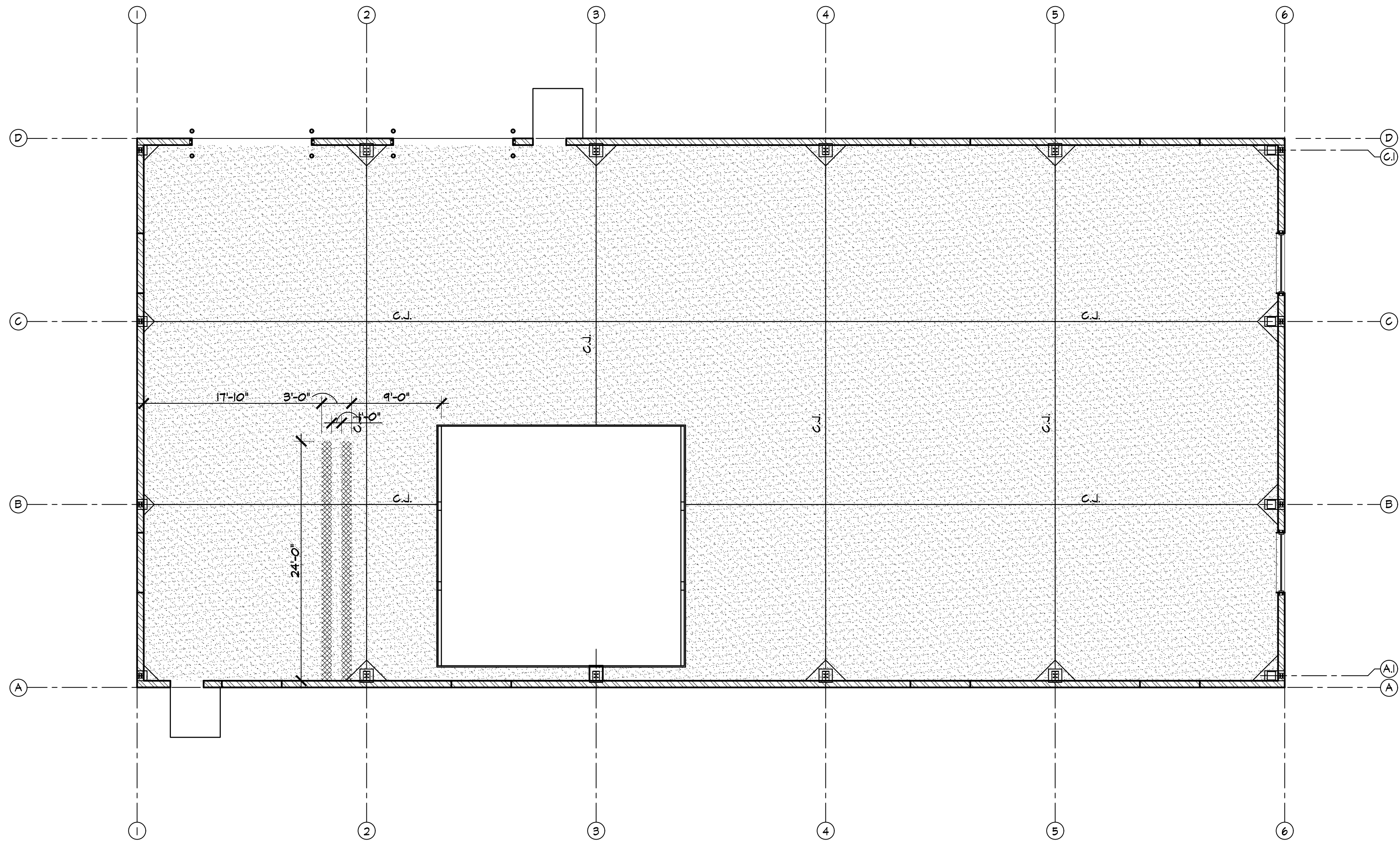
UA LOCAL 671 MONROE PLUMBERS & PIPEFITTERS
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MONROE, MI 48162

PROPERTY OWNER CONTACT:
MIKE JEWELL, BUSINESS MANAGER
309 DETROIT AVENUE
MONROE, MI 48162
PHONE: 734-242-5711
EMAIL: mike@uallocal671.com

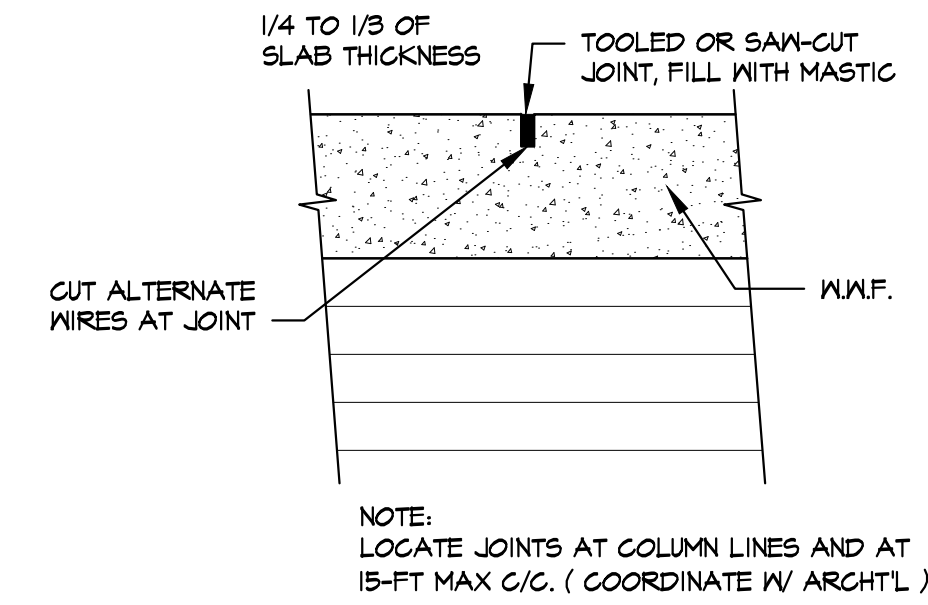
MEZZANINE FRAMING PLAN, SAND PIT FLOOR, & DETAILS

03-03-2025 BIDS
02-27-2025 OWNER REVIEW
DATE: ISSUED FOR:
DRAWN: JLM
REVIEW'D: JSJ
202411

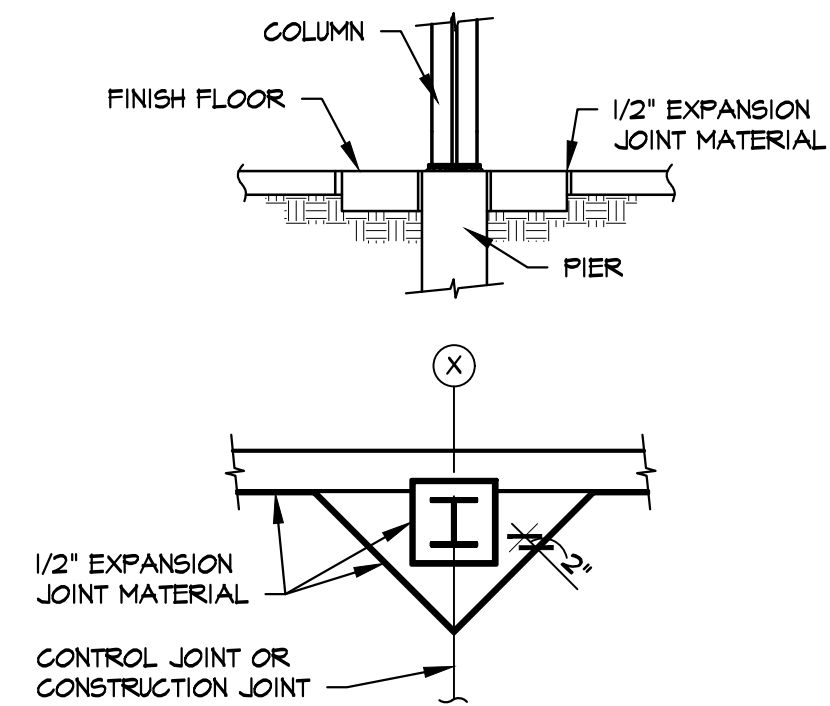
S-3
3 OF 4
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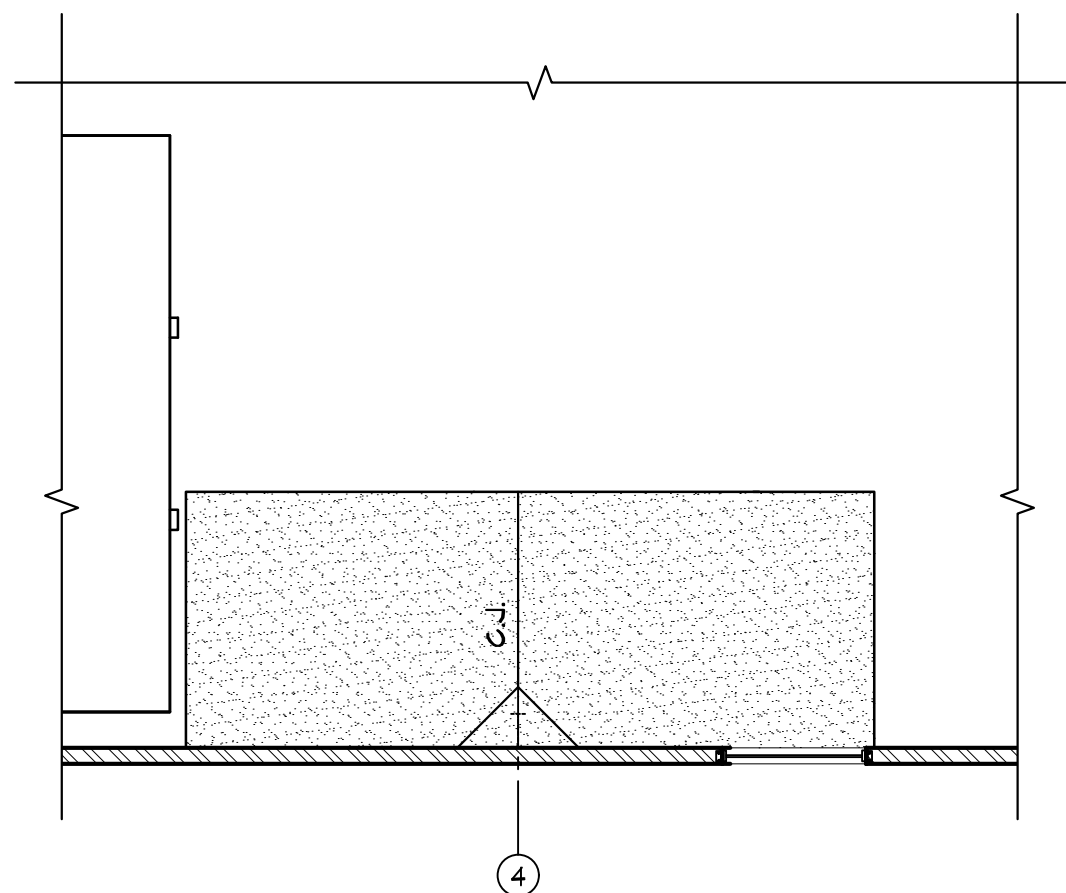
CONTROL JOINT MAIN FLOOR PLAN - BASE BID
SCALE: 1/8" = 1'-0"



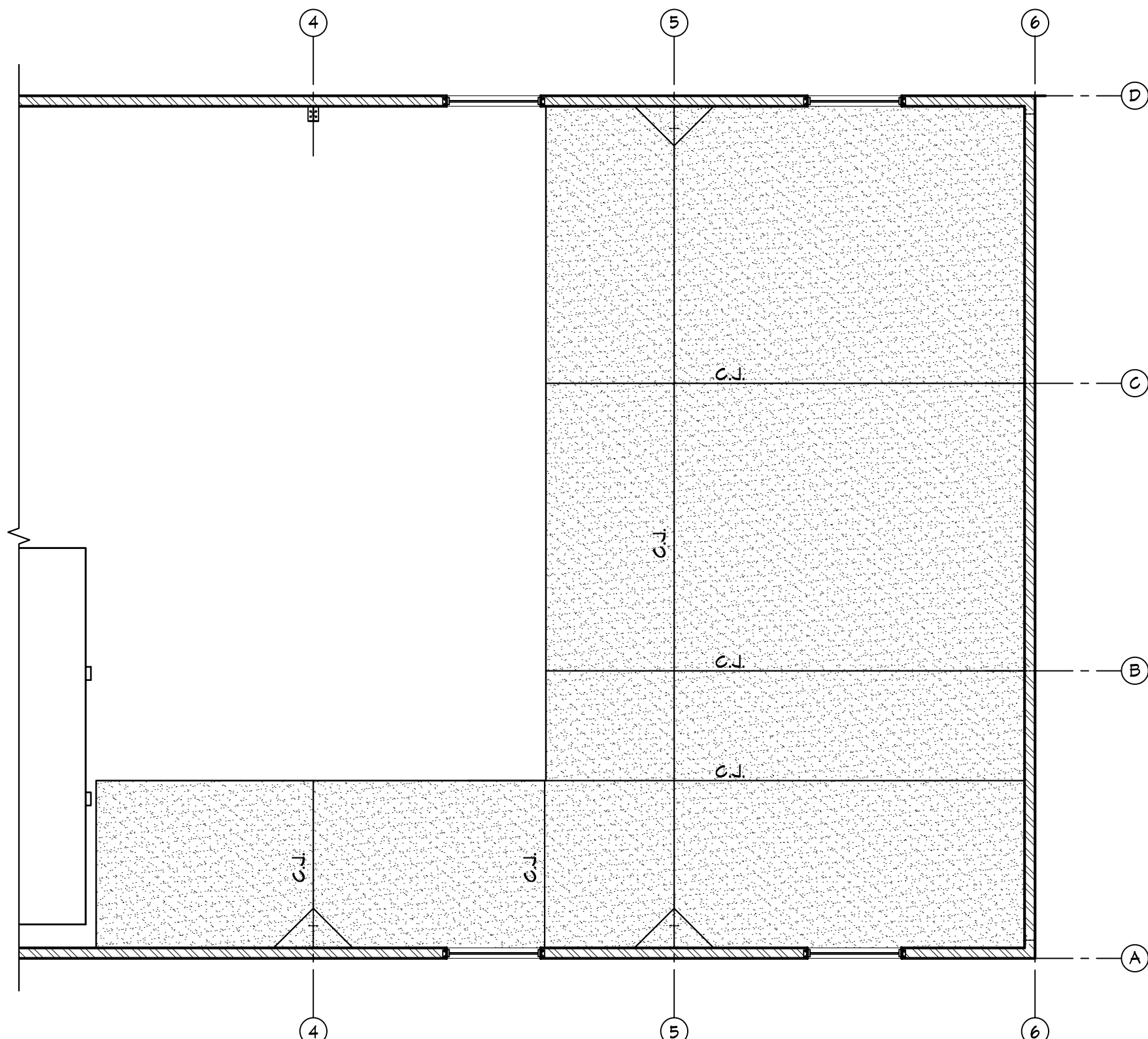
26 SLAB ON GRADE CONTROL JOINT DETAIL
SCALE: 1-1/2" = 1'-0"



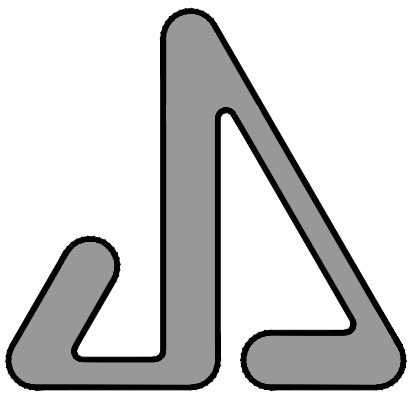
27 SLAB ON GRADE ISOLATION JOINT DETAIL
SCALE: 1/2" = 1'-0"



CONTROL JOINT MEZZANINE FLOOR PLAN - BASE BID
SCALE: 1/8" = 1'-0"



CONTROL JOINT MEZZANINE FLOOR PLAN - ALTERNATE NO.1
SCALE: 1/8" = 1'-0"



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CONTROL JOINT
FLOOR PLANS
(BASE BID &
ALTERNATE NO.1)

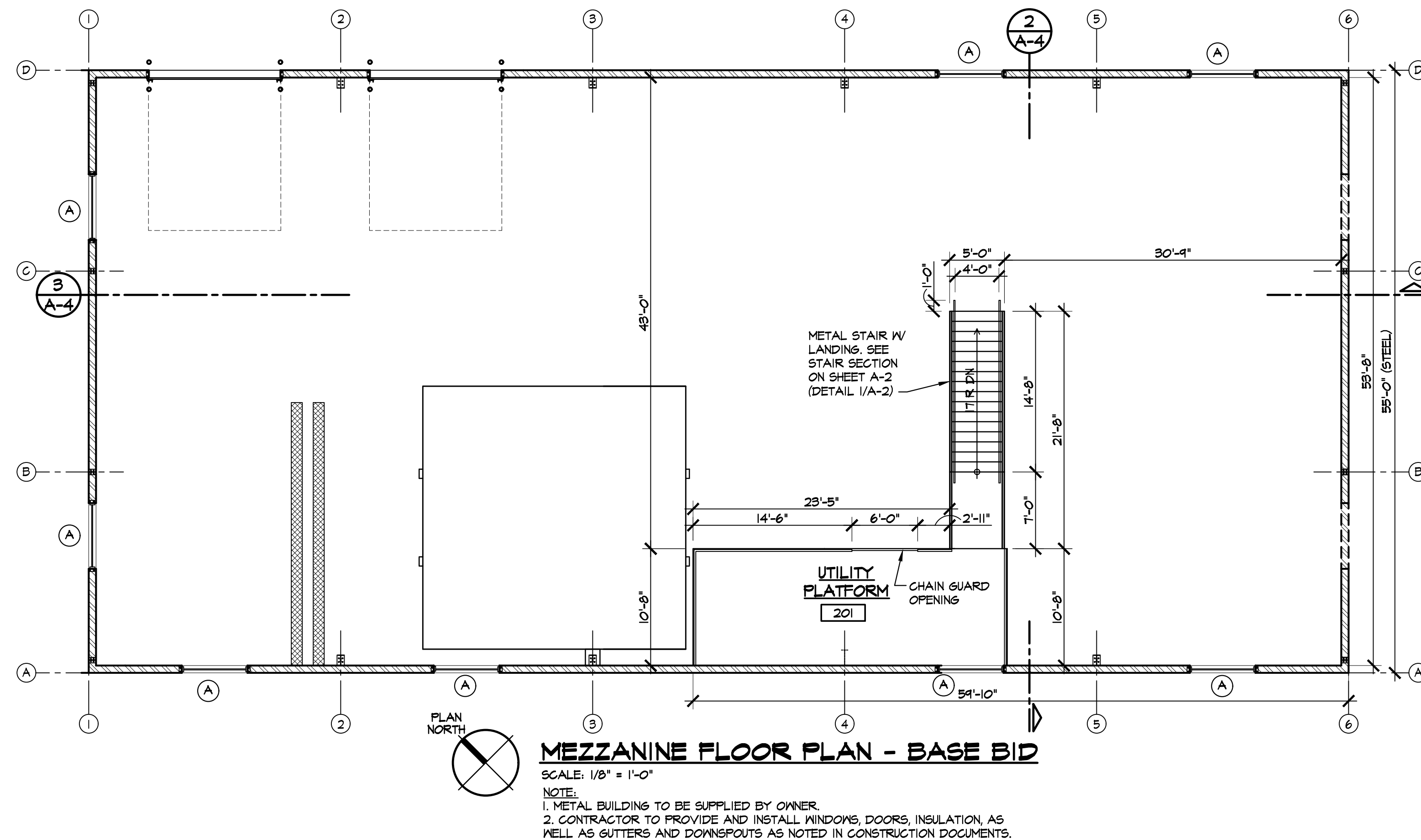
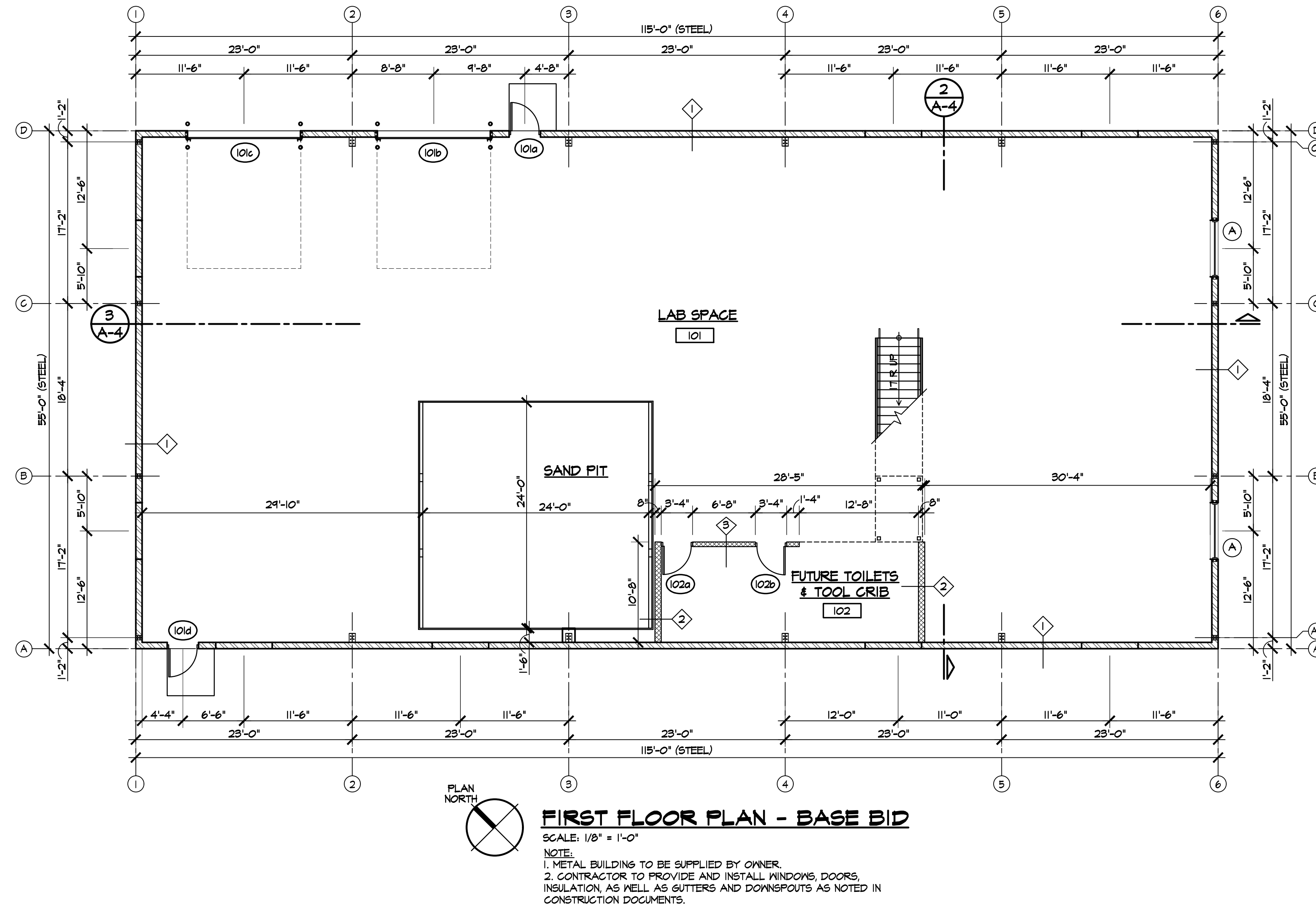
03-03-2025	BIDS
02-27-2025	OWNER REVIEW
DATE:	ISSUED FOR:
DRAWN	JLM
REVIEW'D	JSJ


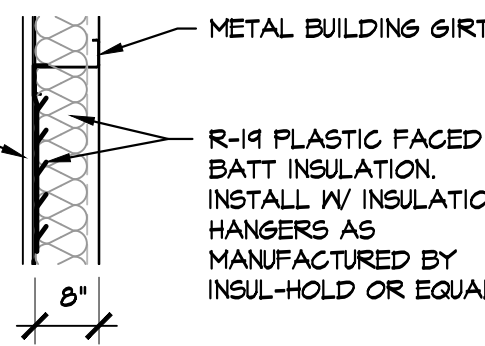

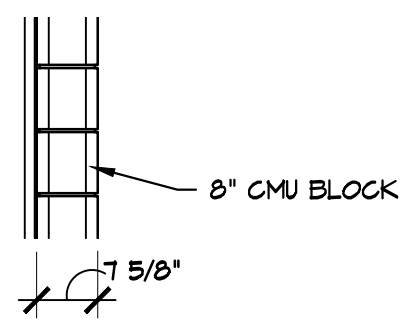

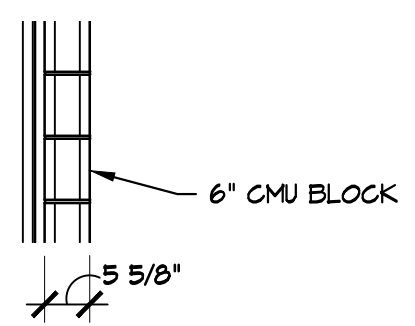
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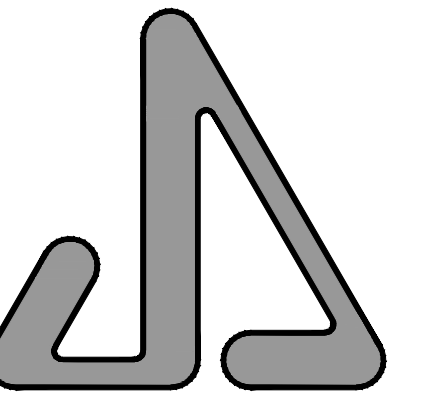
S-4

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WALL LEGEND	
WALL TYPE 1: 1 EXTERIOR 8" GIRT WALL  NOTE: WALL DRAWN @ NOMINAL 8" THK.	 METAL BUILDING GIRTS EXTERIOR METAL SIDING R-19 PLASTIC FACED BATT INSULATION. INSTALL W/ INSULATION HANGERS AS MANUFACTURED BY INSUL-HOLD OR EQUAL 8"
WALL TYPE 2: 2 INTERIOR 8" CMU BEARING WALL  NOTE: WALL DRAWN @ NOMINAL 8" THK.	 8" CMU BLOCK 7 5/8"
WALL TYPE 3: 3 INTERIOR 6" NON-BEARING CMU WALL  NOTE: WALL DRAWN @ NOMINAL 6" THK.	 6" CMU BLOCK 5 5/8"



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FLOOR PLANS
 & WALL TYPES

03-03-2023	BIDS
02-27-2023	OWNER REVIEW
10-13-2024	REVISION #1
09-04-2024	SOIL EROSION PERMIT
09-04-2024	ADMIN. SITE PLAN REVIEW
09-03-2024	OWNER REVIEW

DATE: ISSUED FOR:

DRAWN: JLM

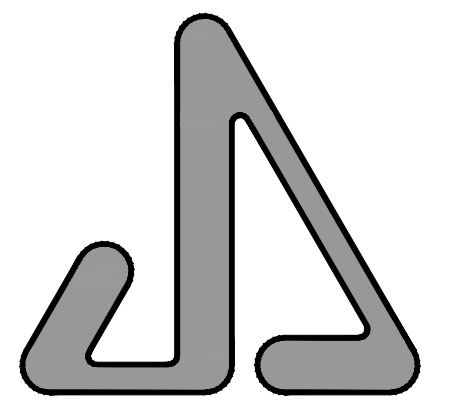
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FLOOR PLANS
ALTERNATE NO.1
& STAIR SECTION

03-03-2025 BIDS
02-27-2025 OWNER REVIEW
DATE: ISSUED FOR:

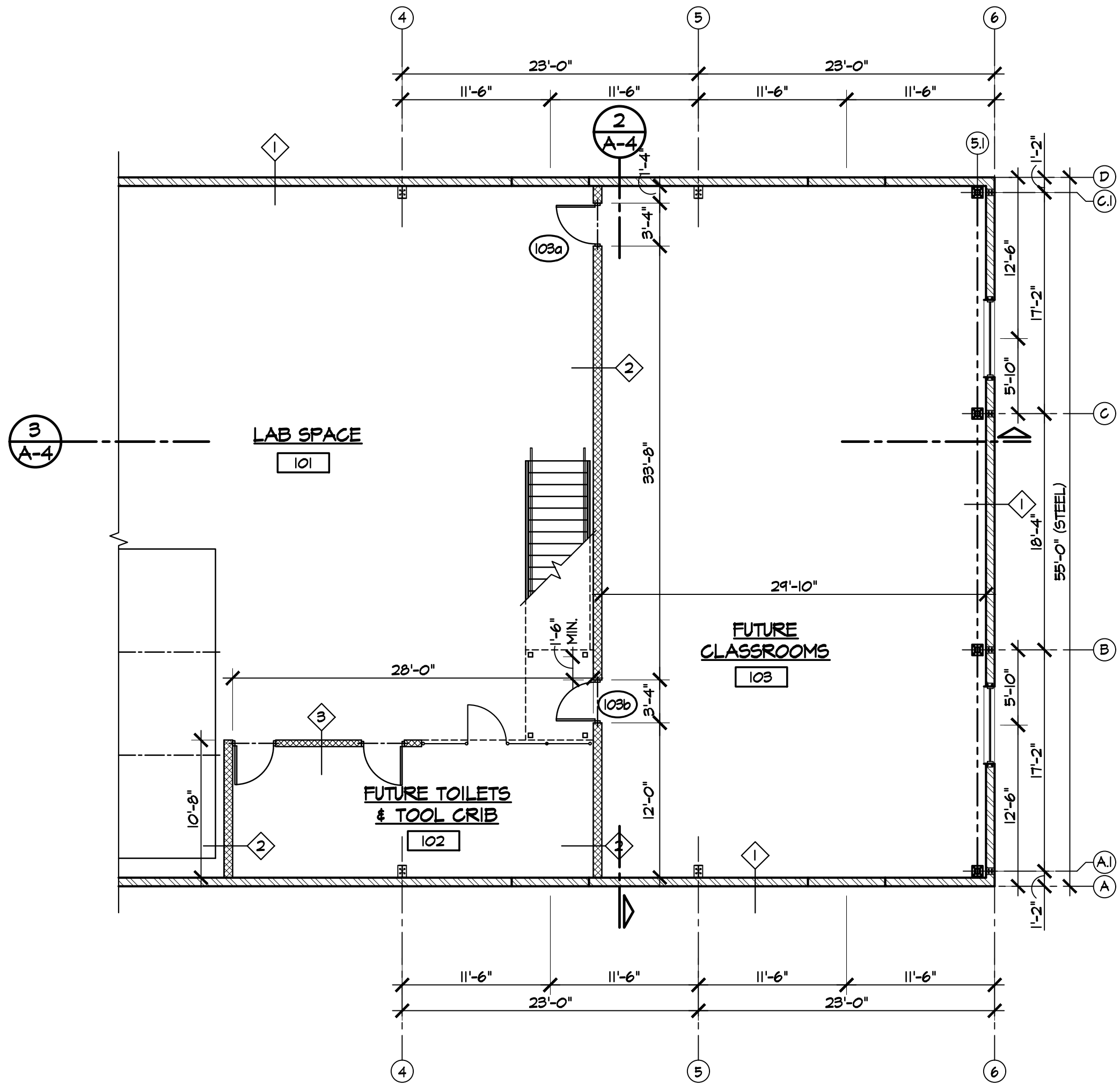
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A-2

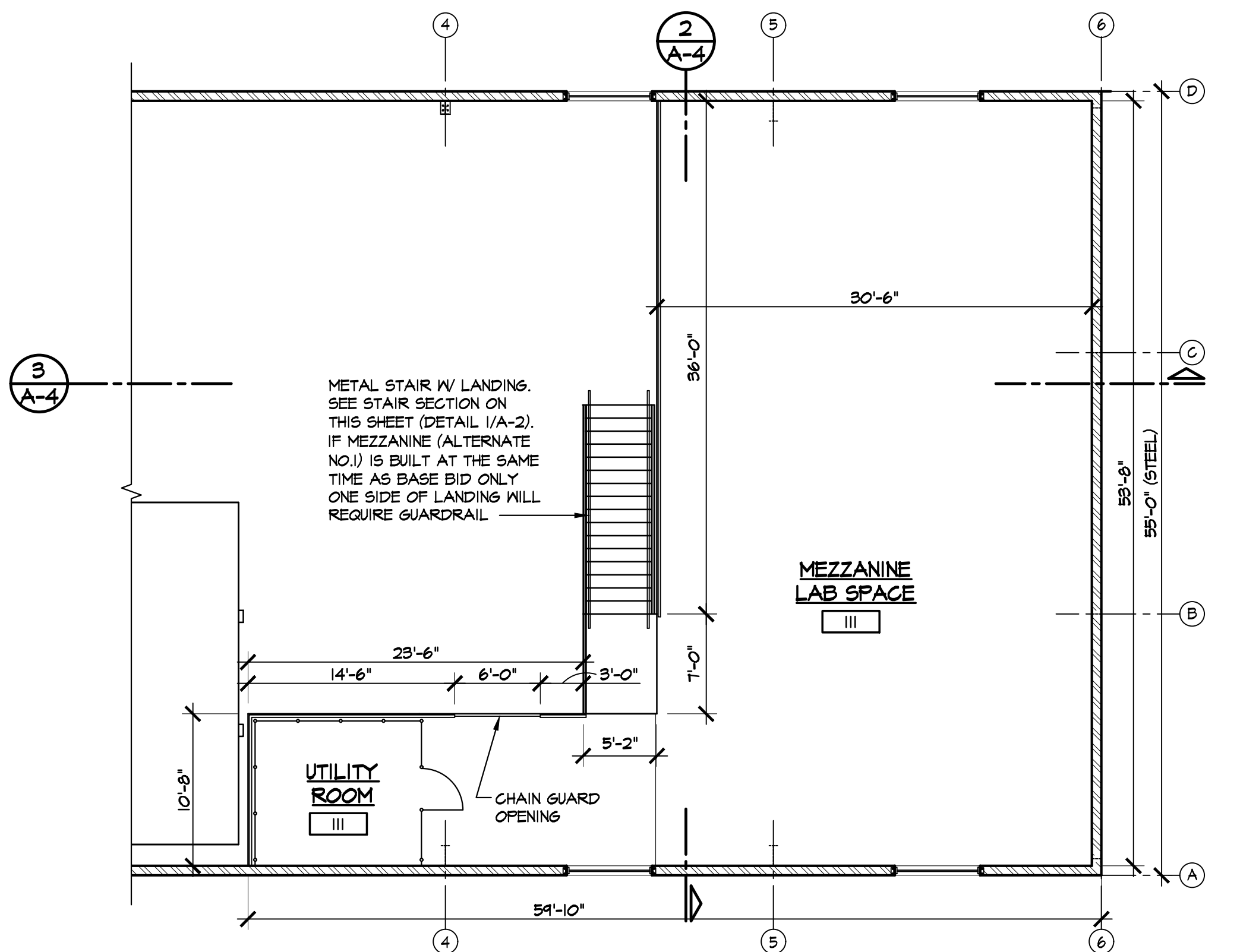
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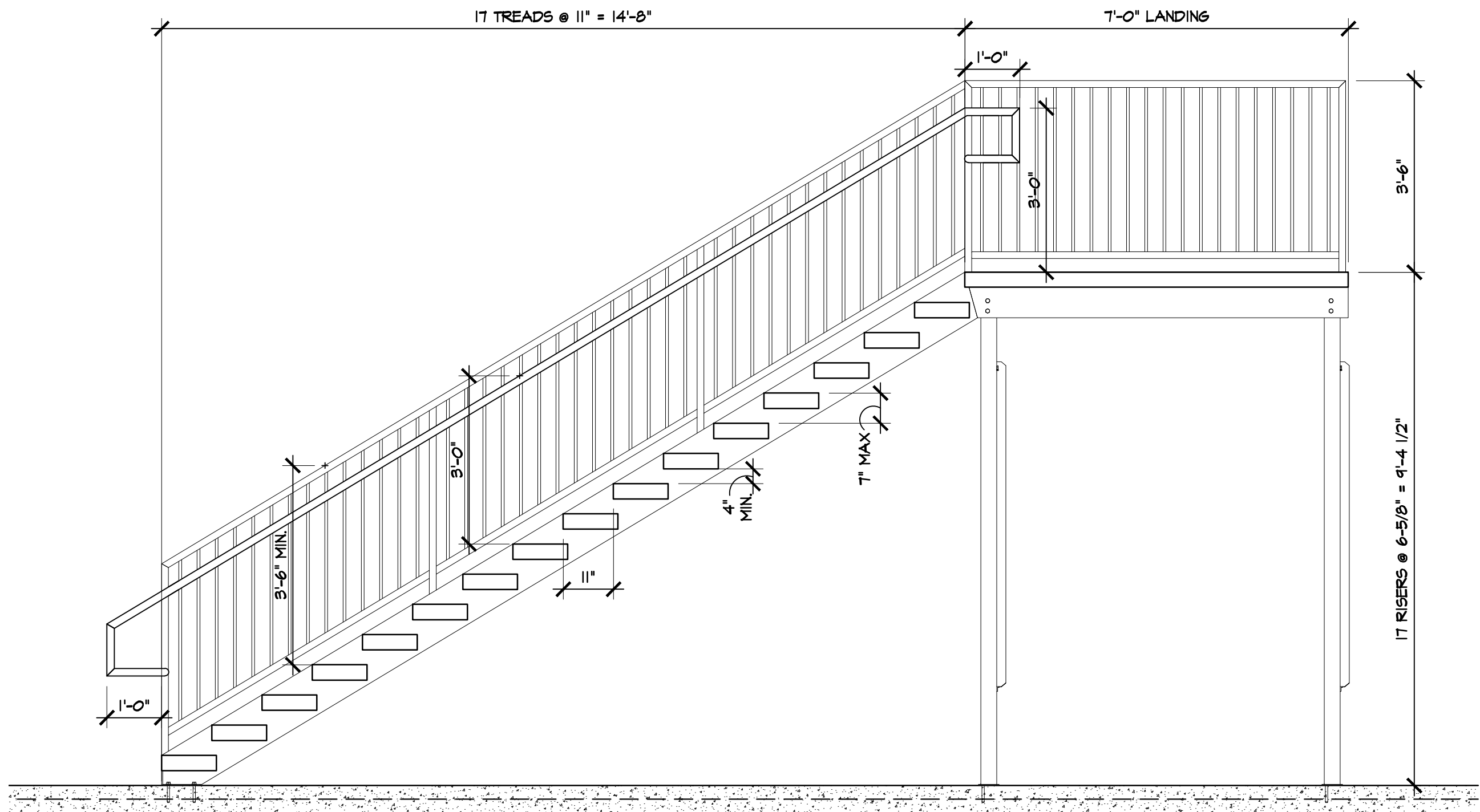
FIRST FLOOR PLAN - BASE BID & ALTERNATE NO.1

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



MEZZANINE FLOOR PLAN - BASE BID & ALTERNATE NO.1

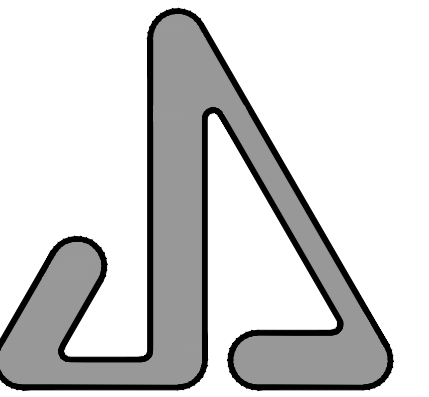
SCALE: 1/8" = 1'-0"



METAL STAIR SECTION WITH LANDING

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

STAIR NOTES:
- ALL STEEL TO BE POWDER COATED FINISH.
STANDARD COLOR SELECTED BY OWNER
- ALL RISERS SHALL BE EQUAL IN HEIGHT. FIELD
VERIFY F.F. TO F.F. PRIOR TO FABRICATION



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EXTERIOR ELEVATIONS

03-03-2025 BIDS
02-27-2025 OWNER REVIEW
10-19-2024 AS REVISION #1
09-04-2024 SOIL EROSION PERMIT
09-04-2024 ADMIN. SITE PLAN REVIEW
09-03-2024 OWNER REVIEW

DATE: ISSUED FOR:

DRAWN: JLM

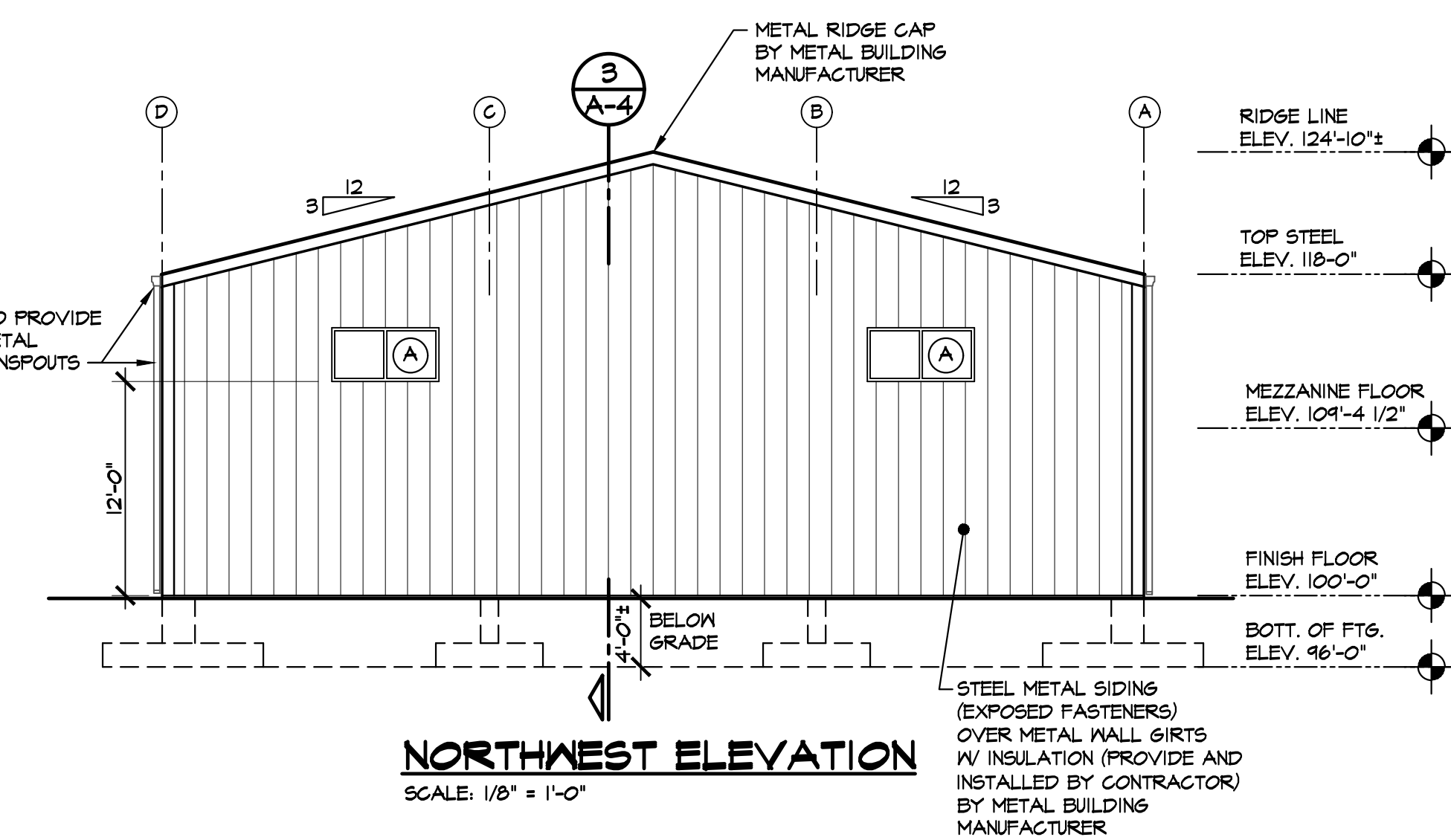
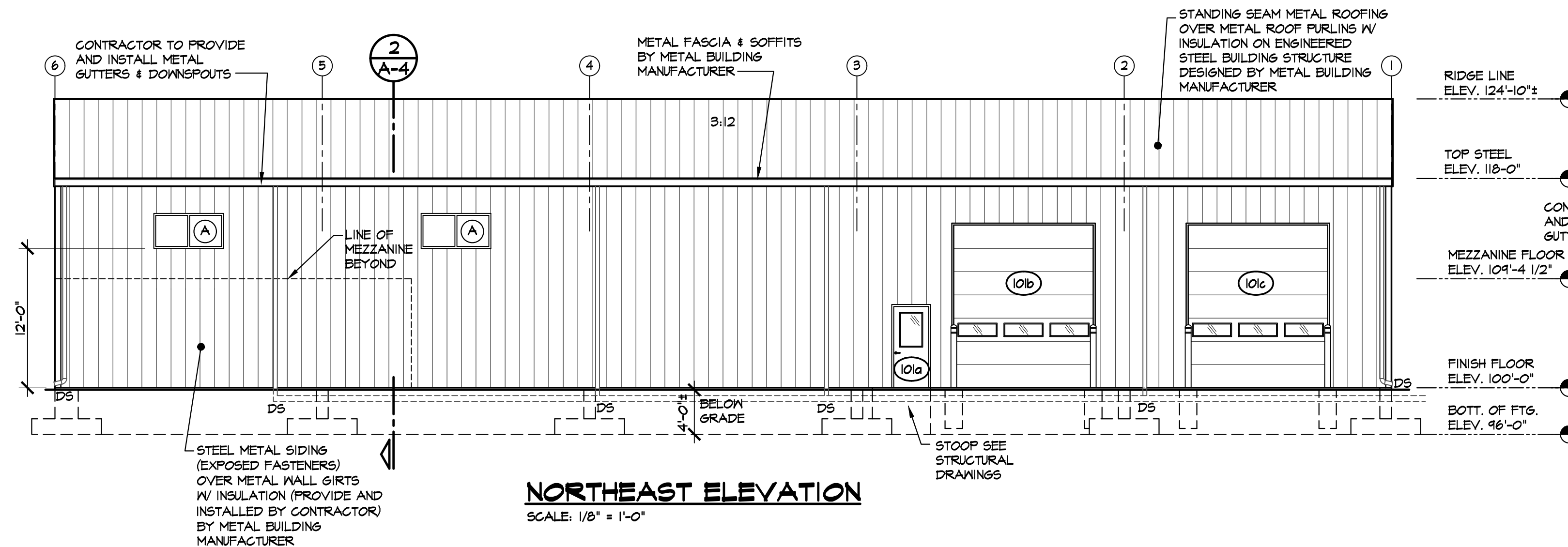
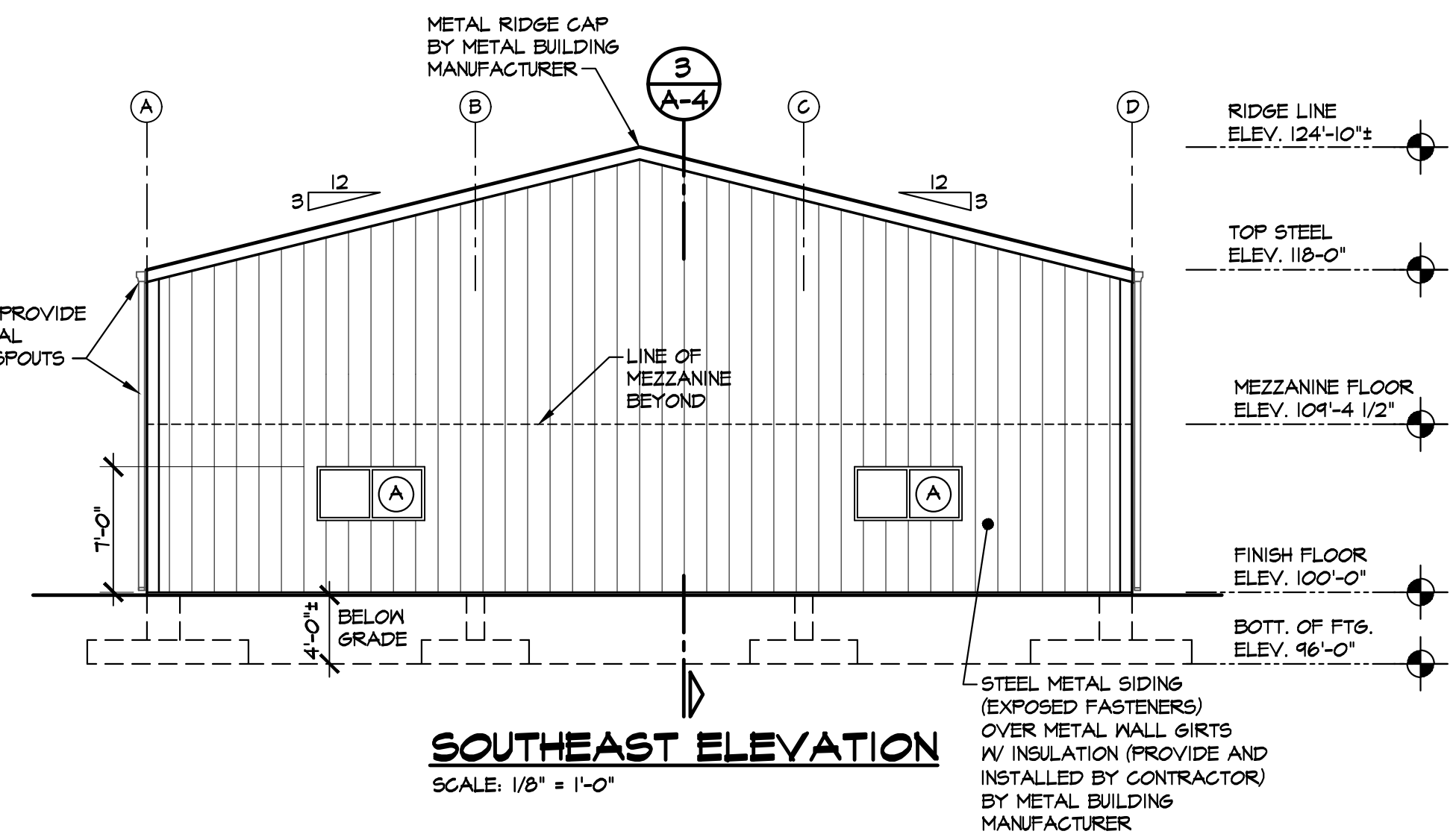
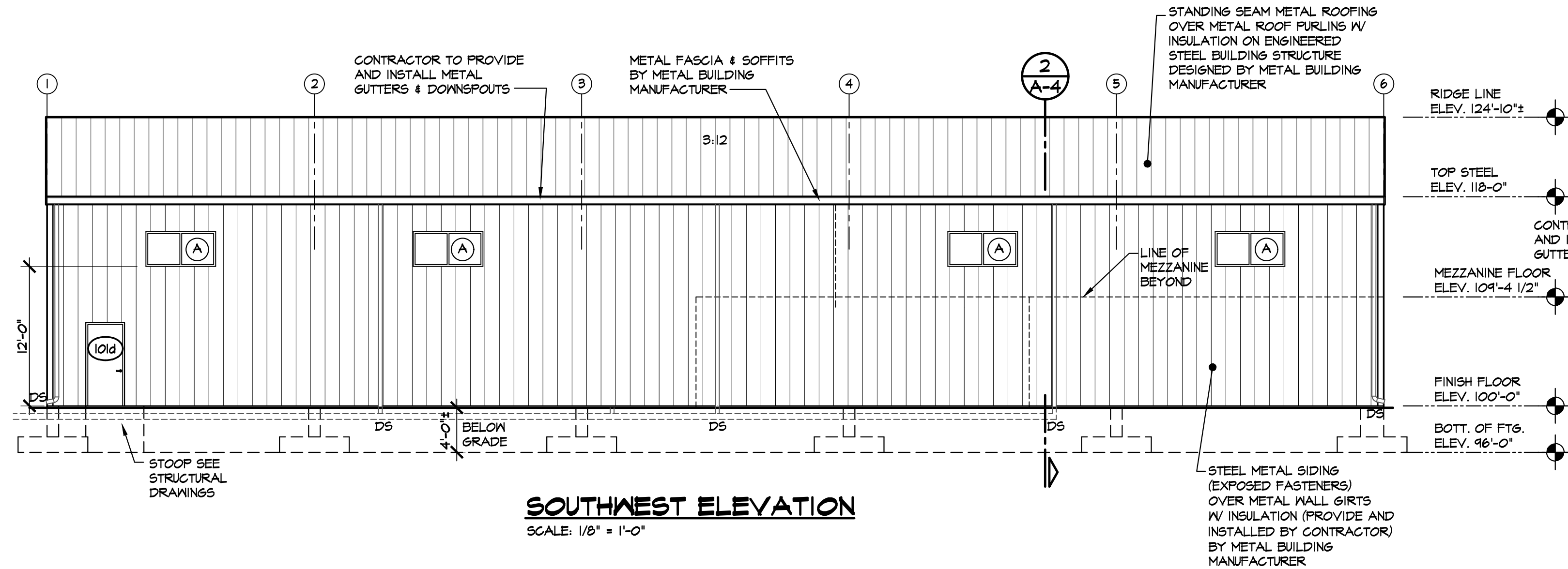
REVIEW'D: JSJ

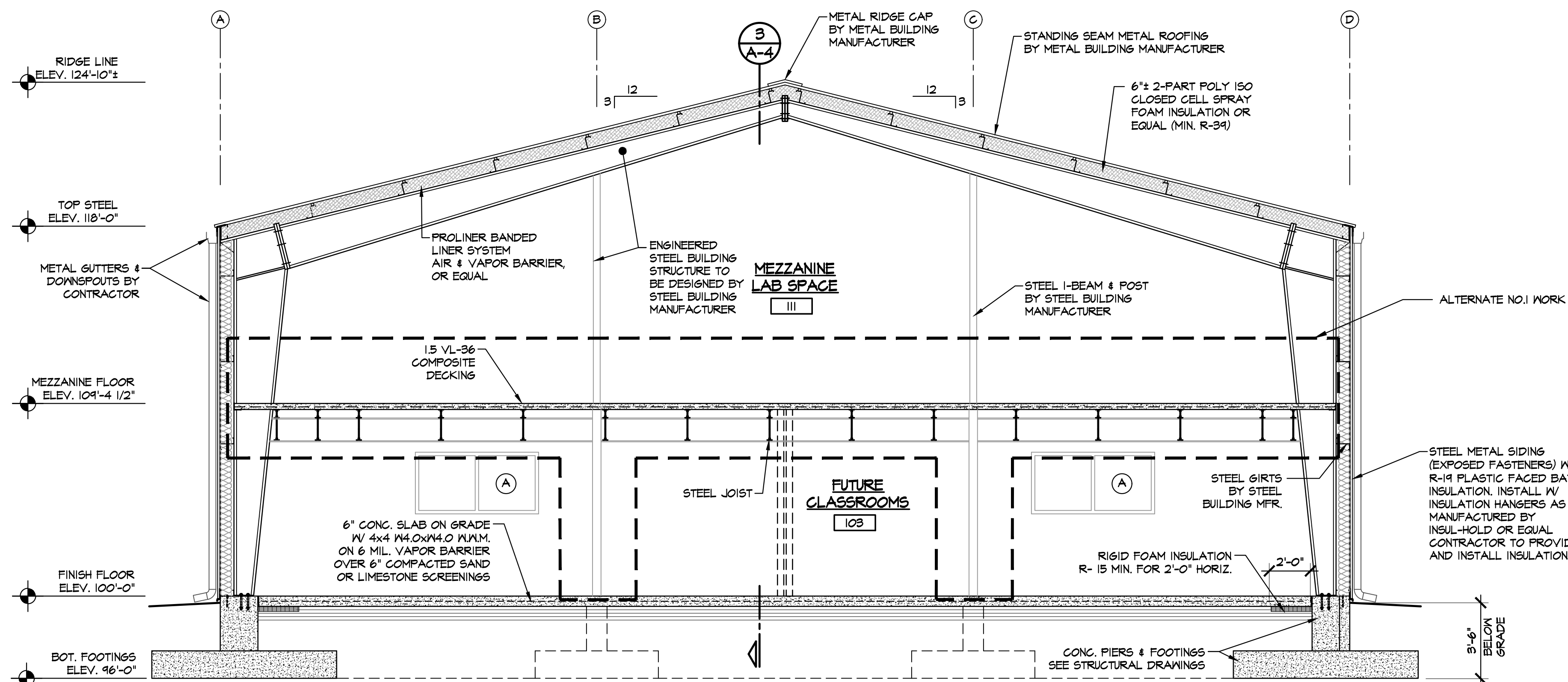
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A-3

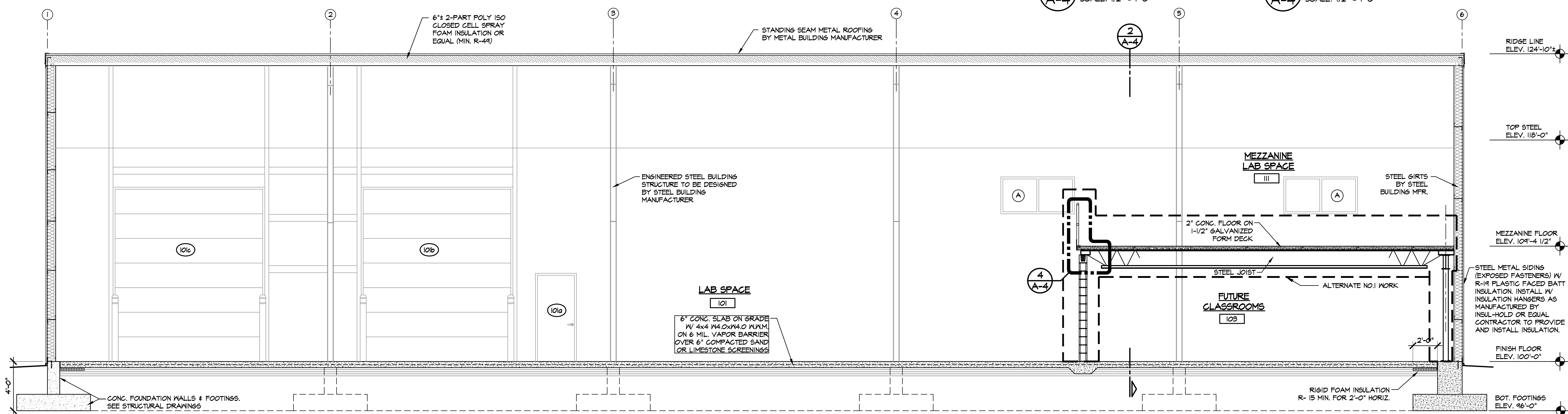
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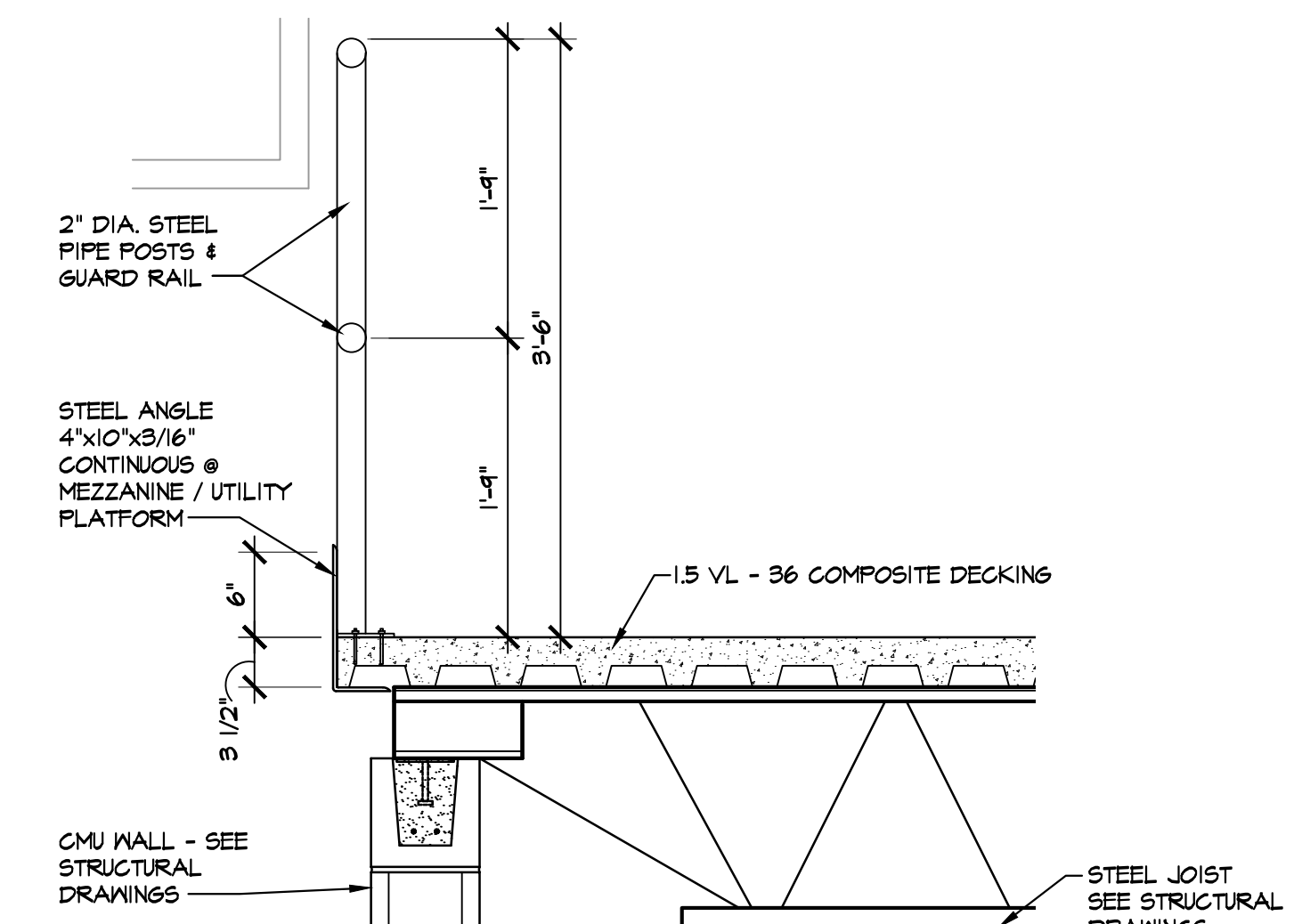




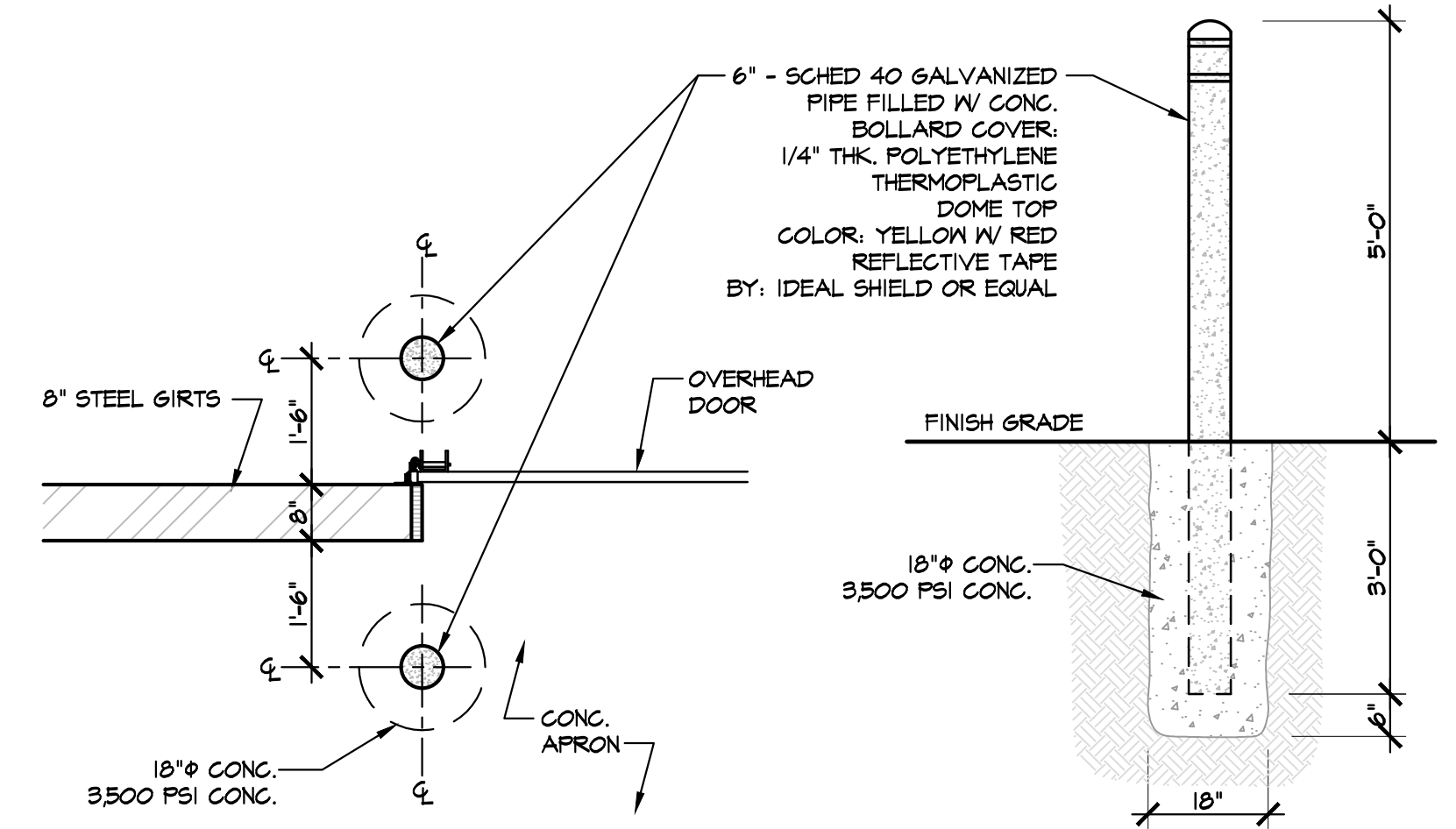
2 BUILDING SECTION
SCALE: 1/4" = 1'-0"



3 BUILDING SECTION
SCALE: 1/4" = 1'-0"

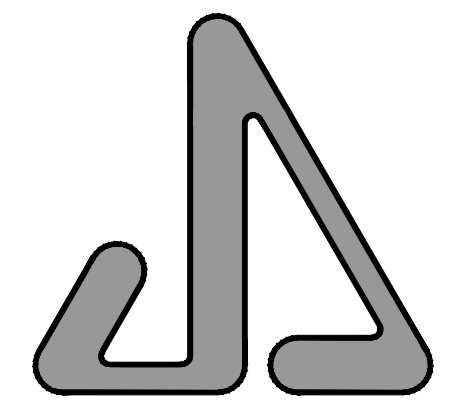


4 MEZZANINE / UTILITY PLATFORM GUARD RAIL DETAIL
SCALE: 1" = 1'-0"
NOTE: ALL STEEL TO BE PRIMED & PAINTED W/ EPOXY PAINT COATED FINISH. STANDARD COLOR SELECTED BY OWNER



5 BOLLARD PLAN DETAIL
SCALE: 1/2" = 1'-0"

6 BOLLARD DETAIL
SCALE: 1/2" = 1'-0"



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EMAIL: mike@ualocal671.com

BUILDING SECTIONS & DETAILS

NOT FOR CONSTRUCTION	
03-03-2025 BIDS	OWNER REVIEW
02-27-2025	ISSUED FOR:
DATE:	
DRAWN:	JLM
REVIEW'D:	JSJ
202411	

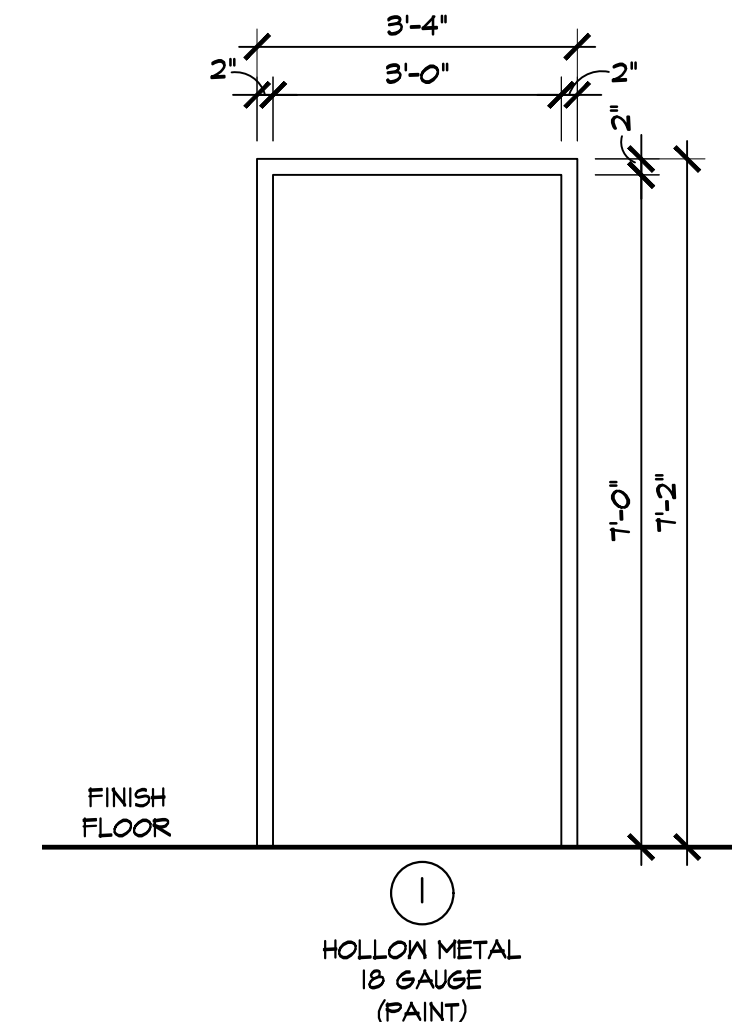
A-4

DOOR SCHEDULE														
	NO.	DOOR SIZE	DOOR			FRAME			DETAILS			FIRE RATING	HARDWARE SET	REMARKS
			MATERIAL	FINISH	TYPE	MATERIAL	FINISH	TYPE	HEAD	JAMB	SILL			
BASE BID	101a	3'-0" x 7'-0" x 1 3/4"	STEEL / GLAZING	PAINT	B	H.M.	PAINT	I	NOTE #1	NOTE #1	I	-	2	ENTRY LOCKSET
	101b	12'-0" x 14'-0" x 2"	STEEL	PRE-FINISH	C	STEEL BY PEMB	PRE-FINISH	-	NOTE #1	NOTE #1	3	-	1	HARDWARE SUPPLIED BY OVERHEAD DOOR MANUFACTURER
	101c	12'-0" x 14'-0" x 2"	STEEL	PRE-FINISH	C	STEEL BY PEMB	PRE-FINISH	-	NOTE #1	NOTE #1	3	-	1	HARDWARE SUPPLIED BY OVERHEAD DOOR MANUFACTURER
	101d	3'-0" x 7'-0" x 1 3/4"	STEEL	PAINT	A	H.M.	PAINT	I	NOTE #1	NOTE #1	I	-	2	ENTRY LOCKSET
	102a	3'-0" x 7'-0" x 1 3/4"	STEEL	PAINT	A	H.M.	PAINT	I	-	-	2	-	3	PRIVACY LOCKSET
	102b	3'-0" x 7'-0" x 1 3/4"	STEEL	PAINT	A	H.M.	PAINT	I	-	-	2	-	3	PRIVACY LOCKSET
ALT. NO.1	103a	3'-0" x 7'-0" x 1 3/4"	STEEL	PAINT	A	H.M.	PAINT	2	-	-	2	-	4	PASSAGE SET (NO LOCK)
	103b	3'-0" x 7'-0" x 1 3/4"	STEEL	PAINT	A	H.M.	PAINT	2	-	-	2	-	4	PASSAGE SET (NO LOCK)
									-	-				

NOTE #1: HEAD AND JAMB MATERIAL TO BE PROVIDED BY PRE-ENGINEERED BUILDING MANUFACTURER

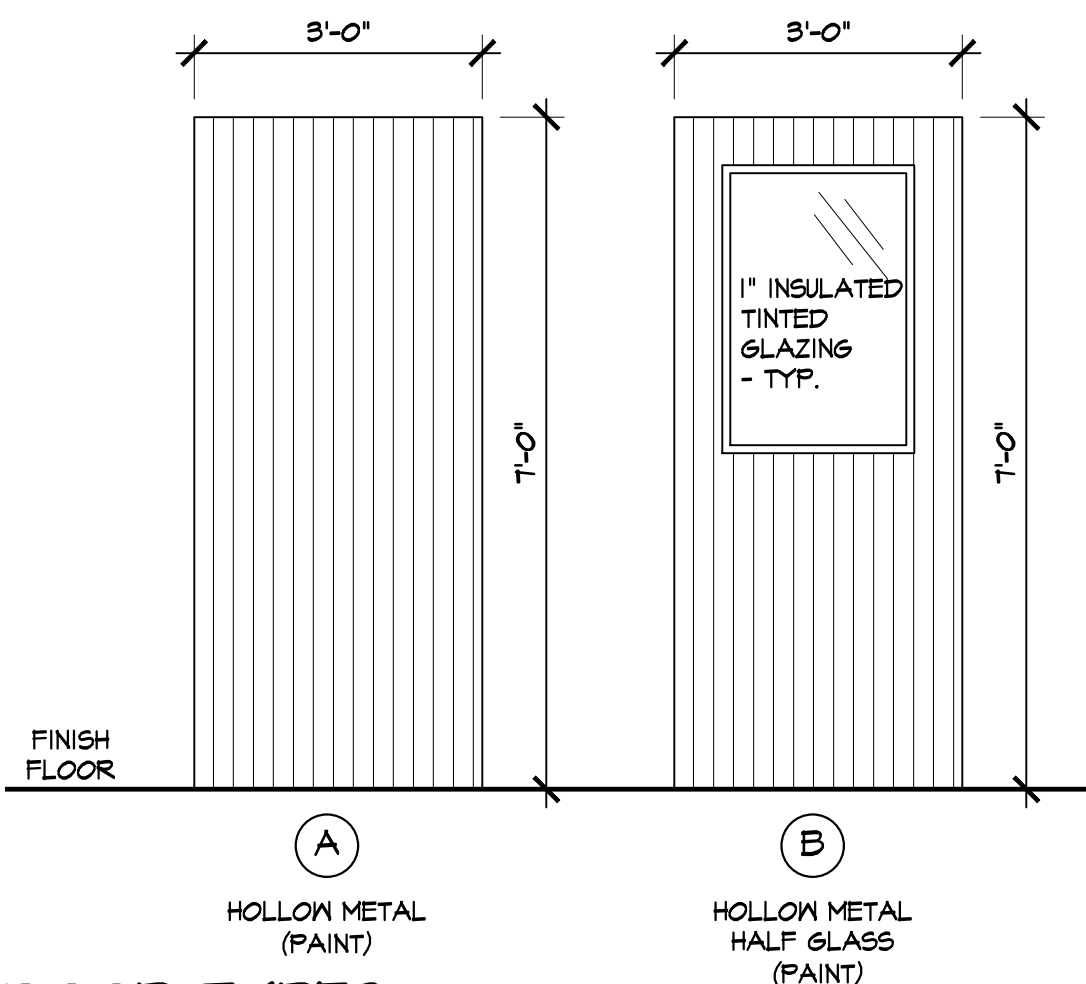
ABBREVIATIONS

ALUM.	ALUMINUM	HR.	HOUR(S)
ANOD.	ANODIZED	M.T.	MARBLE THRESHOLD
A.T.	ALUMINUM THRESHOLD	MTL.	METAL
EX.	EXISTING	R.S.	REDUCER STRIP
GL.	GLASS	S.C.	SOLID CORE
H.M.	HOLLOW METAL	WD.	WOOD
P.H.	PRE-HUNG		



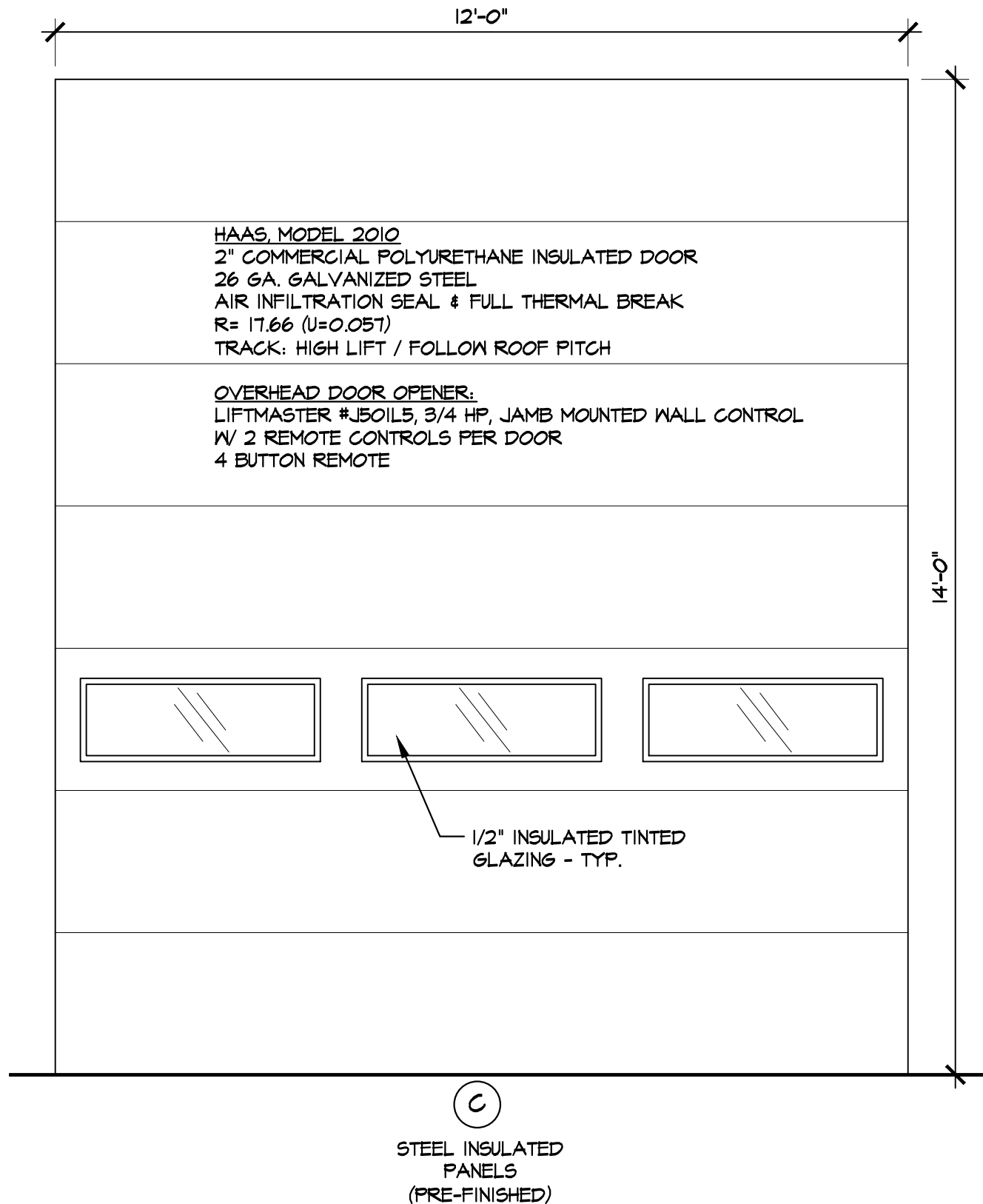
FRAME TYPES

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



DOOR TYPES

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



DOOR HARDWARE SETS

Hardware Group No. 01

For use on Door #(s):
101b 101c

Provide each RU door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	DOOR/HARDWARE	BY OVERHEAD DOOR MANUFACTURER		B/O

Hardware Group No. 02

For use on Door #(s):
101a 101d

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA PANIC HARDWARE	25-R-NL	626	FAL
1	EA RIM HOUSING	20-079	626	SCH
1	EA FSIC PRIMUS CORE	TO MATCH EXISTING SYSTEM	626	SCH
1	EA SURFACE CLOSER	4050A SCUSH MC ST-5207	689	LCN
1	EA CUSH SHOE SUPPORT	4050A-30 (AS REQ'D)	689	LCN
1	EA MOUNTING PLATE	4050A-XX (AS REQ'D)	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA DOOR SWEEP	39A	A	ZER
1	EA THRESHOLD	654A-223	A	ZER

Hardware Group No. 03

For use on Door #(s):
102a 102b

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA PRIVACY LOCK	ALX40 SPA	626	SCH
1	EA SURFACE CLOSER	1450 RW/PA (PULL SIDE MOUNT) MC	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS406/407CCV	630	IVE
3	EA SILENCER	SR64/SR65	GRY	IVE

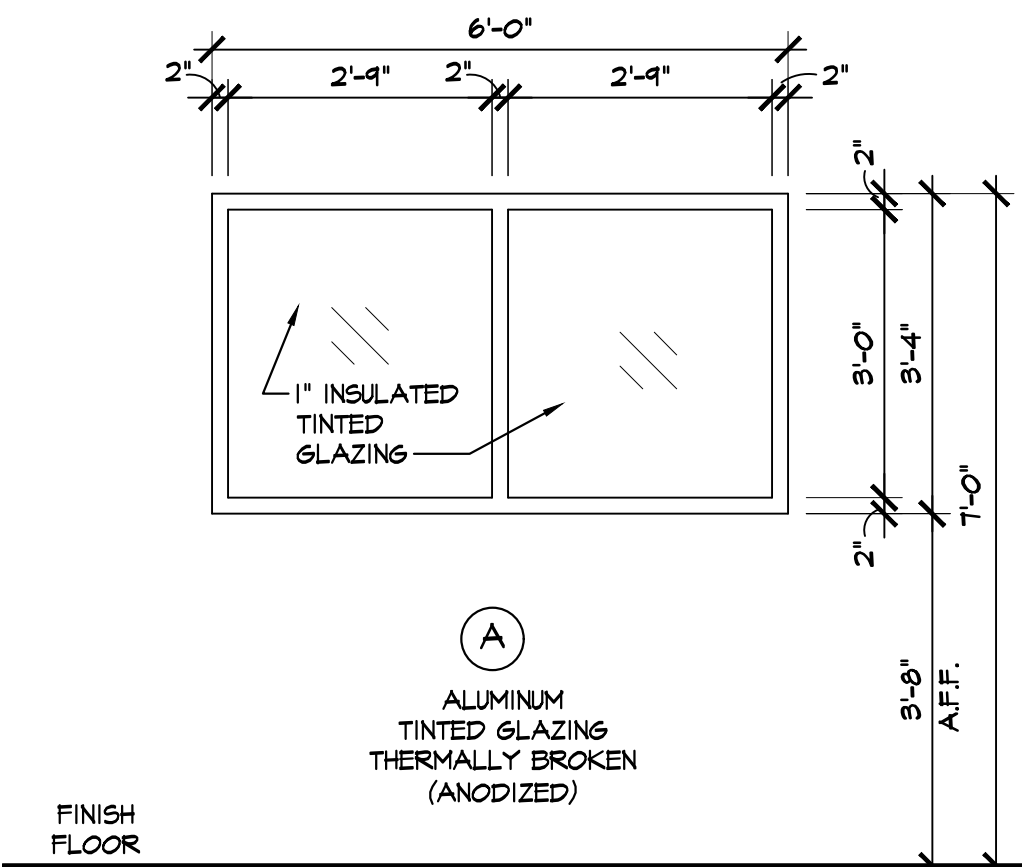
Hardware Group No. 04

For use on Door #(s):
103a 103b

Provide each SGL door(s) with the following:

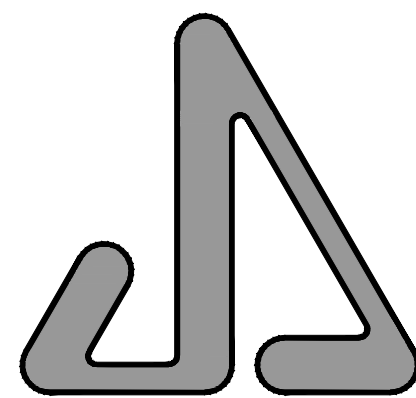
QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA PASSAGE SET	ALX10 SPA	626	SCH
1	EA SURFACE CLOSER	1450 EDA MC	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS406/407CCV	630	IVE
1	EA GASKETING	488SBK PSA	BK	ZER

INCLUDED IN ALTERNATE NO. 1 WORK



WINDOW TYPE

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



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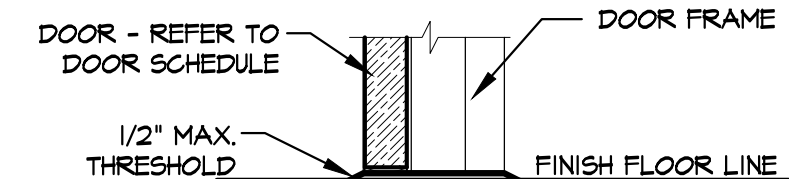
SITE IMPROVEMENTS &
NEW BUILDING FOR:



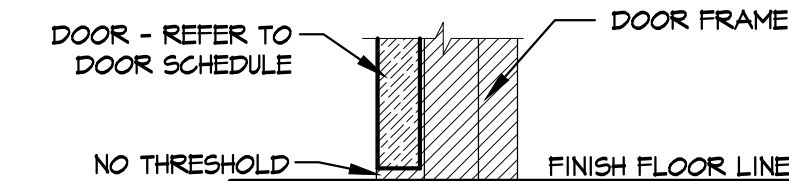
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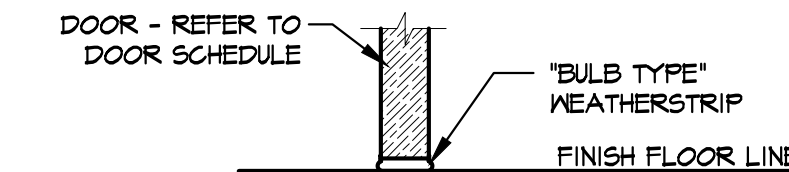
DOOR &
WINDOW
SCHEDULES



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



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



3 SILL DETAIL
SCALE: 1 1/2" = 1'-0"

03-03-2025	BIDS
02-27-2025	OWNER REVIEW
DATE:	ISSUED FOR:
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FIRST FLOOR PLAN MECHANICAL

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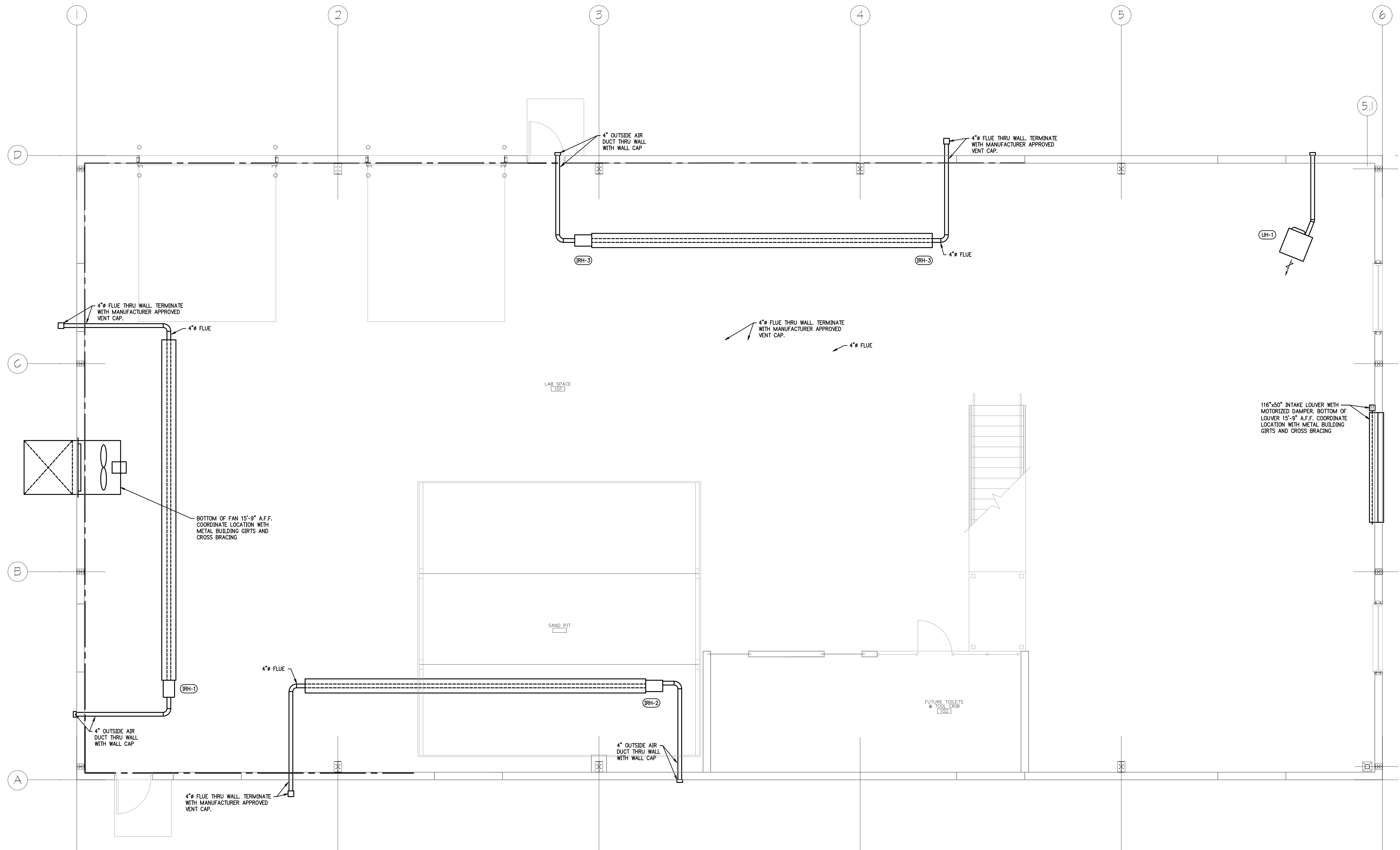
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REVIEW'D	JDS

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OF 3

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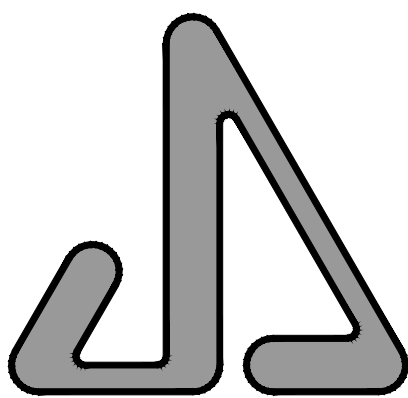
FIRST FLOOR PLAN - MECHANICAL

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



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SITE IMPROVEMENTS &
NEW BUILDING FOR:

UA LOCAL 671
MONROE PLUMBERS
& PIPEFITTERS
313 HARBOR AVENUE
MONROE, MI 48162

PROPERTY OWNER CONTACT:
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MECHANICAL
SCHEDULES
AND DETAILS

NOT FOR CONSTRUCTION

03-03-2025	BIDS
DATE:	ISSUED FOR:
DRAWN	--
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202411

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2 OF 3

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OUTLINE MECHANICAL SPECIFICATIONS

DIVISION 22 & 23 - BASIC MECHANICAL REQUIREMENTS

A. General:

These are Outline Specifications and not intended to cover all necessary items, but are to serve only as a guide. It is intended that complete Mechanical Systems as described herein will be furnished and installed.

Contractor shall visit the job site and examine all existing conditions.

All work shall be installed in accordance with local and state codes and regulations and shall receive the approval of the inspection department having jurisdiction.

All work specified herein shall carry the Contractor's Warranty for workmanship and materials for a period of one year minimum (or as specified) from the date of final acceptance or beneficial use by the Owner, whichever occurs first. The Contractor shall remedy the defects and reimburse the Owner for all damage to other work, whether caused by the defects or the work of correcting same. Provide an extended four (4) year replacement warranty for the refrigeration compressors after the first year full replacement warranty (parts and labor). The four (4) year warranty shall be for compressor replacement only; all labor charges will be the responsibility of the Owner.

All work shall be done by mechanics skilled in the particular trade involved, under responsible supervision and with the best modern practices.

All materials shall be new and of the grade and quality specified. Only the best material of each class specified shall be used.

In new construction, the General Contractor will provide duct openings and pipe shaft openings where shown on the architectural or structural drawings and also where indicated and sized by this Contractor.

This Contractor shall provide all miscellaneous steel and hardware as required to support, hang and secure all equipment as furnished, relocated or revised by him, unless such materials are specifically called out to be provided by other Contractors.

Manufacturer's directions shall be followed in all cases where the manufacturers of articles used in this Contract furnish directions covering specific points not shown on the drawings or mentioned in the specifications.

All work installed under this contract shall be tested in the presence of and to the satisfaction of the inspecting authority having jurisdiction and the Owner's Representative.

Mechanical shop drawings, fixture cuts, and schedules shall be submitted for review, in general, before starting the work involved, and so as to cause no delay in this work or that of any other Contractor or Subcontractor. Shop drawings may be submitted in electronic format utilizing PDF files. The submittal shall be organized by specification section and contain all required information within a PDF document for each specification section. If hard copies of shop drawings are submitted, a minimum of six copies shall be submitted. All shop drawings whether electronic or hard copies shall bear the stamp of approval of the Contractor as evidence that the submittals have been approved by him.

This Contractor to remove all unused ductwork, piping, etc. from the area and remove it from the premises. The Contractor shall, in general, keep the site clean and free of all debris generated by his work.

Before running any ducts, piping, etc. within the building, this Contractor shall assure himself that they can be installed as contemplated without trapping or interfering with columns, beams, piping, fixtures, etc. Contractor to verify all measurements and conditions at job site before proceeding with the work.

Of necessity, openings, supporting steel, field-built curbs, electrical data, space requirements, etc. were designed around specific parameters. It shall become the Contractor's responsibility to change as necessary, through the Architect and interested Contractors on the job, all required parameters, so that openings, supporting steel, curbs, electrical data, etc. will fit the equipment supplied. Any additional cost will be the sole responsibility of this Contractor.

Reduction of Lead in Drinking Water Act (PL 111-380): Products intended to dispense water for human consumption through drinking or cooking shall comply with the following:

- A weighted average lead content of not more than 0.25% as determined by NSF/ANSI 372, and
- NSF/ANSI 61.
- Product shall be certified compliant with these requirements by an American National Standards Institute (ANSI) accredited certification organization.
- Acceptable Product Marking: NSF-61 and NSF-372 (or NSF-61-G) or other accepted certifier marks demonstrating third party certification with these requirements.

Clean and disinfect water distribution piping as follows:

- During construction pipe openings shall be plugged to minimize dirt accumulation in the lines.
- Purge new potable water distribution piping systems and parts of existing potable water systems that have been altered, extended or repaired prior to use.
- Use purging and disinfection procedure prescribed by authority having jurisdiction or, if a method is not prescribed by that authority, the procedure described in either AWWA C651 or AWWA C652 or as described below:
- Flush piping system with clean, potable water until dirty water does not appear at outlets.
- Fill system or part thereof with water/chlorine solution containing at least 50 parts per million of chlorine. Isolate (valve off) and allow to stand for 24 hours.
- Drain system or part thereof of previous solution and refill with water/chlorine solution containing at least 200 parts per million of chlorine. Isolate and allow to stand for 3 hours.
- Flush system with clean, potable water until chlorine does not remain in water coming from system following allowed standing time.
- Submit water samples in sterile bottles to authority having jurisdiction. Repeat procedure if biological examination made by the authority shows evidence of contamination.

- Prepare and submit reports for purging and disinfecting activities and deliver to owner.

B. Scope of Work:

1. Plumbing
2. HVAC

C. Electrical:

The Electrical Contractor will provide all power wiring, starters and disconnects unless equipment is provided with starters or disconnect switches as part of the assembly. The Mechanical Contractor shall furnish all special control items, control and interlock wiring, and motors required for the operation of all equipment provided under his sections of work.

In general, all motors under 1/2 horsepower will be 120/1/60. For electrical power characteristics of other motors, see the mechanical drawings and schedules.

Motors 1/2 HP and over will be provided with across-the-line starters with overload protection unless otherwise specified. All motors under 1/2 HP shall have integral overload protection. On factory-supplied pre-wired equipment, accessory motors such as condensing unit fan motors may be single phase instead of three phase if standard with the manufacturer. All motors must conform to current NEMA Standards.

Where electrical requirements and/or motor horsepowers for the equipment supplied varies from that shown on the mechanical drawings or as specifically called out in the Mechanical Specifications, the Electrical Drawings and Specifications shall govern and be adhered to as to electrical power characteristics for the supplied equipment.

All open drive motors shall be of the high efficiency type with a minimum power factor of 82%.

D. Contract Closeout:

Testing and Adjustment:

Contractor shall operate all parts of the entire system, make any and all adjustments and repairs, and shall leave the entire work tested and ready for operation by the Owner and/or operation and final testing and balancing by the Testing and Balancing Contractor.

Operating Instructions:

Contractor shall provide four complete manuals in hardbacked binders, each containing all operating, servicing, lubrication, etc. information and parts lists for all equipment installed under his Contract. In addition, each manual shall contain a copy of each approved equipment submittal along with contact information for the supplier. Where diagrams are too large for the binder, arrange manila pockets with reinforced holes to hold folded drawings. Manuals to be submitted for approval at least 30 days before completion of the work.

Contractor shall arrange for technical instruction of the Owner's Maintenance Personnel for such time as is reasonably required to acquaint them with their duties. Instruction period shall be after all systems are in operation, and have been tested, balanced and adjusted.

Record Drawings:

Contractor shall keep an accurate record of all deviations from contract drawings. He shall neatly and correctly enter, in colored pencil, any deviations on drawings affected during the progress of the project and shall keep drawings available for inspection. At completion of job and before final acceptance, make any final corrections to drawings and deliver same to the Owner's Representative.

Balancing:

This Contractor shall provide for approval, prior to final acceptance by the Owner's Representative, balancing reports. These reports shall include individual air flow measurements at all outlets, total air quantity handled, individual water flow at equipment, total water flow at pumps, motor amperage, and voltage name plate data, actual operating amperage and voltage, and a statement that the control system has been checked and verified for operation.

A qualified Balancing Contractor shall be used to perform these services. Contractor shall use a Balancing Contractor who is a fully certified member of the National Environmental Balancing Bureau or the Associated Air Balance Council or an independent firm whose principals are registered Professional Engineers.

The above tests and adjustments are made to accomplish the conditions as set forth in the Drawings and Specifications

Mechanical Contractor shall include the cost of balancing in his bid.

E. Hangers and Supports for Piping and Equipment:

All piping materials furnished and all procedures followed in fabrication and erection shall comply with the applicable sections of the Local Building code, applicable Pressure Piping Code, and requirement of applicable sections of "Building Services Piping", ASME B31.9, latest revision and addenda.

Contractor shall furnish and install all adjustable hangers, special pipe supports spring hangers, anchors, guides, clamps, rods, miscellaneous iron supports and appurtenances as required to securely and properly hang or support the piping systems. On insulated piping, hangers to be oversized to fit on the outside of insulation with a heavy gauge protection pipe saddle or shield. Vertical lines shall be supported by pipe clamp type supports designed for this purpose at each floor level. Hangers to be equivalent to Anvil International No. 260 clevis type, or for bare copper pipe, Anvil International Fig. CT-99C.

Steel Pipe Maximum Spacing:

- Thru 1-1/4": 7' Max
- 1-1/2": 9' Max
- 2": 10' Max

Copper Tubing Maximum Spacing:

- Thru 3/4": 5' Max
- 1": 6' Max
- 1-1/4": 7' Max
- 1-1/2": 8' Max
- 2": 8' Max

Rigid Pvc Pipe (Up to 140°F) Maximum Spacing:

- Thru 1-1/4": 2-1/2' Max
- 1-1/2" & 2": 3' Max
- 2-1/2": 3-1/2' Max
- 3": 3-1/2' Max
- 4": 3-1/2' Max

Pipe Hanger and Rod Size Shall be as Follows:

- 3/4" to 2" inclusive: 3/8" rod
- 2-1/2" to 3-1/2" inclusive: 1/2" rod
- 4" and 5": 5/8" rod

Contractor shall do all excavating and backfilling in connection with his work. No piping shall be laid in water. Backfill within building shall be clean fine sand, as approved by the Owner's Representative, to proper finished grade. Backfill outside of building lines shall be tamped sand to 24 inches above pipe with remaining backfill being clean earth to proper finished grade.

Sleeves shall be installed by Contractor wherever pipes pass through wood, concrete or masonry slabs, walls, floors or ceilings. Openings around exposed and concealed pipes or in sleeves for pipes passing through floor slabs, fire-rated walls, smoke partitions, or fire rated ceilings must be sealed with a noncombustible fire stop material. Seal at both sides of wall. Insulation shall not extend through sleeve. Pack sleeve opening with STI SpecSeal or equivalent. Depth of fill material shall provide same fire rating as floor or wall penetrated. Fiberglass is not acceptable except as a backing for the above materials.

Where a copper pipe connects to a steel pipe, the connection shall be made with a dielectric union or flanges with dielectric bolt sets. Dielectric couplings shall not be used. When connections are made at coils or similar situations which include such items as steel or cast iron balancing cocks, valves, pumps, flow indicators, etc. it is suggested that all piping in these areas be to steel with dielectric unions or flanges when connecting to copper mains, and/or a copper header coil. Where copper pipes cross iron pipes and in all similar conditions where isolation is necessary to eliminate electrolysis, the pipe shall be isolated with a PVC sheathing.

Flashing of vent pipes through pre-engineered metal building roof shall be by the building manufacturer.

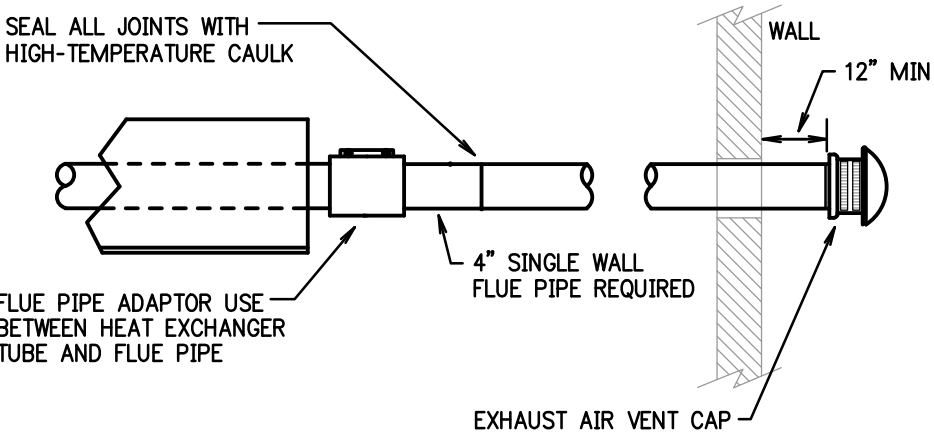
Sanitary piping shall be cleaned by flushing with water. Domestic water shall be flushed and chlorinated as required by AWWA C-601.

Solder used for connections in copper tubing shall be 95/5 tin antimony or 94/6 or 96/4 tin-silver solder with recommended flux.

Escutcheon plate for finished areas shall be chrome-plated escutcheon plates and for unfinished areas, black iron escutcheon plates are acceptable.

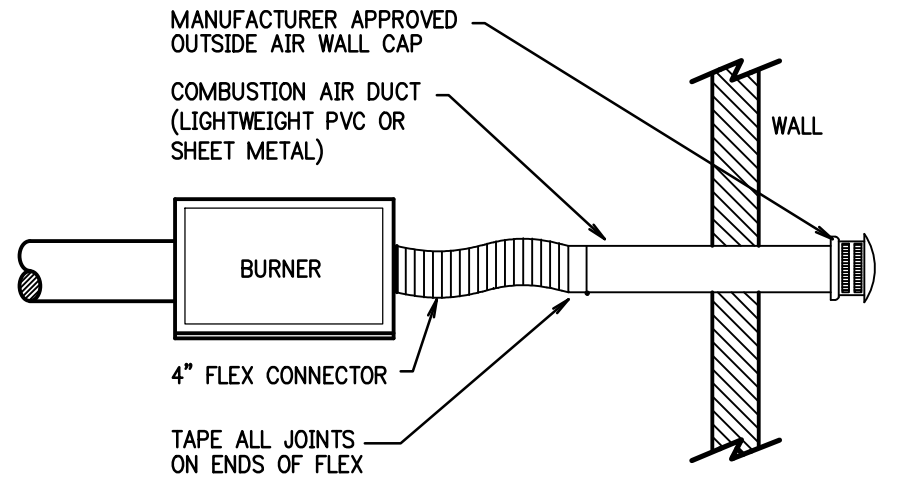
F. Roof Curbs and Supports:

For metal roofs, curb shall be the standard curb as manufactured by the metal building and roofing manufacturer. If the size curb required is not available from the building manufacturer, a curb with necessary configurations to fit the roof panels as manufactured by Pate; Thybar, Addison, Illinois; Chattanooga, Tennessee; Geske Sheet Metal Company, Kansas City, Missouri; or Standard Sheet Metal Company, Kansas City, Missouri may be provided. In addition, it will be necessary to provide on the high side of the curb a cricket to divert the rain water around the curb edges. All necessary gaskets, caulking, etc. to provide a water tight installation is the responsibility of this Contractor.



WALL VENT TERMINATION DETAIL

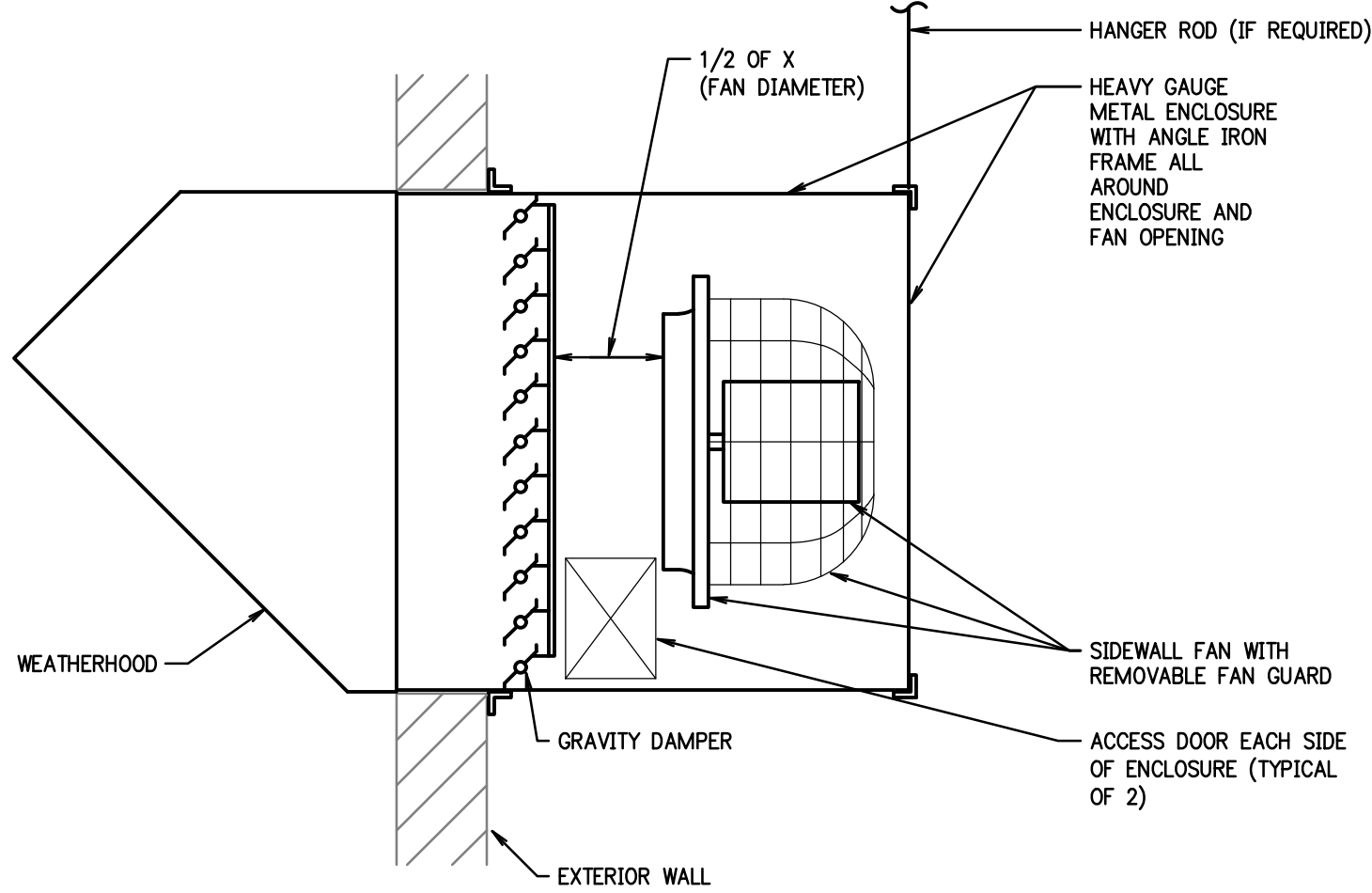
SCALE : NONE



OUTSIDE AIR CONNECTION DETAIL @ INFRARED HEATER

NO SCALE

NOTE: SYSTEM SHOWN IS FOR INDIVIDUAL HEATER CONNECTION



SIDEWALL FAN DETAIL

SCALE: NONE

GAS FIRED UNIT HEATERS

SCHEDULE BASED ON REZNOR

MARK	LOCATION	TYPE	FUEL	MBH		FAN				MODEL	POWER	REMARKS
				INPUT	OUTPUT	CFM	RPM	HP	THROW FT			
UH-1	FUTURE MEZZANINE	HORIZONTAL PROPELLER	NAT. GAS	75	62.2	961	1550	1/16	20	UDXC-75	120	

FANS

SCHEDULE BASED ON GREENHECK

MARK	SERVICE	CFM	SP INL. W.C.	HP	FAN RPM	DISCONNECT SWITCH PROVIDED	MAX. SOUND RATING	DRIVE	MODEL	POWER	REMARKS
F-1	VENTILATION	18,000	0.25	3	577	NO	24 SONES	BELT	SBE-2H48	208/5/60	FEL NOTES 1 AND 2

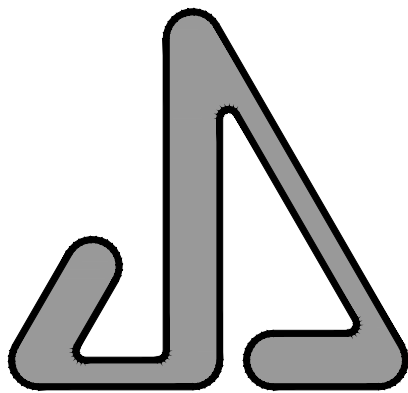
- NOTES:
1. INTERLOCKED WITH INTAKE LOUVER.
 2. SPACE THERMOSTAT SHALL OPEN LOUVER AND ENERGIZE FAN WHEN THE ROOM TEMPERATURE EXCEEDS 80° F. (ADJUSTABLE). FAN TO BE PROVIDED WITH WALL HOUSING AND 90 DEGREE WEATHERHOOD.

RADIANT TUBE HEATER SCHEDULE

SCHEDULE BASED ON

MARK	SERVICE	MODEL	LENGTH	INPUT MBH	MOUNTING HEIGHT FT	POWER	REMARKS
IRH-1	MAINTENANCE 17	CTH2V-150	40'-0"	150	18'-0"	120/1/60	
IRH-2	MAINTENANCE 17	CTH2V-150	40'-0"	150	18'-0"	120/1/60	
IRH-3	MAINTENANCE 17	CTH2V-150	40'-0"	150	18'-0"	120/1/60	

- NOTES:
1. MAINTAIN ALL MANUFACTURER'S REQUIRED CLEARANCES TO COMBUSTIBLES.



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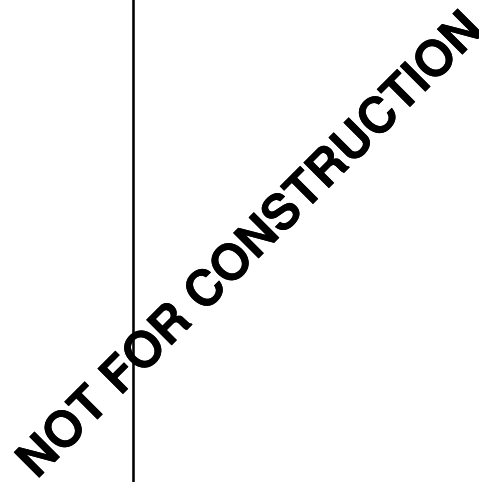
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MECHANICAL SPECIFICATIONS



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3 OF 3

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DIVISION 22 - PLUMBING

SECTION 22 0523 - GENERAL DUTY VALVES FOR PLUMBING PIPING

A. Manufacturers:

Gate, Globe and Check: Caleffi, Crane, Walworth, Nibco, Stockham or Milwaukee
Lubricated Plug: Homestead or Flowserve Nordstrom
Ball: Smith, Crane, Apollo, Watts, Nibco or Milwaukee

B. Domestic Water:

Ball - 600 psi, screwed ends, bronze body, brass/S.S. Trim - Nibco T-585-80-LF, 2" and smaller.

Gate - 300 psi, screwed ends, brnze body and trim - Nibco T-113-LF, 2" and smaller.

Check - 200 psi, screwed ends, bronze body and trim - Nibco T-413-Y-LF, 2" and smaller.

C. Natural Gas Shutoff:

125 psi, screwed - semi-steel body - Nordstrom 142 or Ball Valve -screwed - bronze body - Teflon trim - Nibco T-585-70-UL and T-280-70-UL - 2" and smaller.

SECTION 22 0553 - Identification for Plumbing Piping and Equipment

A. Nameplates:

Provide Laminated three-layer plastic nameplate with engraved letters to identify plumbing equipment.

B. Valve Tags:

Provide a numbered brass tag, approximately 2 inch in diameter, chained to hand wheel of each valve, except local stop or shutoff valves to an item of equipment. Attach tag to valve with non-rusting "S" hook of adequate size. Each tag shall be stamped with a serial number and service designation of valve. Also indicate on tag whether the valve is normally-closed or normally-open in service (N.C. or N.O.).

Provide typed valve directions identifying each valve as to size, manufacturer, type, service and location. Copies shall be included in the Operating Instruction and Service Manual hereinafter specified.

A. Pipe Markers:

Provide Pipe Markers that are factory fabricated semi-rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed. Alternative material to be plastic tape pipe markers of flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings. Color shall conform to ASME A13.1

SECTION 22 0700 - PLUMBING INSULATION

A. General:

All work shall be done by experienced insulation applicators in strict accordance with manufacturer's latest recommendations and shall be finished in a neat and workmanlike manner. Thermal conductivity shall not exceed 0.24 BTUH per square foot F°/inch. Insulation shall be equivalent to Owens-Corning Fiberglass 25 ASJ/SSL.

All insulation shall have a composite rating including insulation adhesives, jacket, etc. as follows. The composite assembly shall have a flame spread rating not over 25 and a smoke developed rating not higher than 50.

Pipe fittings shall be covered with preformed insulating fittings such as Zeston 25/50 rated PVC insulated fitting cover (pearl gray finish).

At hangers and supports of insulated pipe, provide high density insulation (maximum deflection 1/8 inches) and 12 inches long, 22 gauge galvanized sheet metal shields covering 50% of the circumference.

B. Piping:

Hot Service:

Domestic Hot Water Piping:

- 1-1/4 Inch and Smaller: 1 inch thick

All lavatories and sinks with exposed P-trap, hot and cold water angle stops and supplies shall be insulated with "Truebro" Handi-Lab-Guard insulation kit, Model #102W.

Cold Service:

Domestic Cold Water Piping and Valves:

- 1 1/4 Inch and Smaller: 1/2 inch

- 1-1/2 Inch and Larger: 1 inch

SECTION 22 1116 - DOMESTIC WATER PIPING:

A. Domestic Water Inside Building Underground:

Copper type "K" soft annealed tubing 3 inches and smaller, no joints if possible. If necessary, joints to be brazed.

B. Domestic Water Inside Building Aboveground:

Copper type "L" hard tempered 1/2 inch through 3 inches with soldered or press-fit joints and wrought copper fittings.

SECTION 22 1119 - DOMESTIC WATER PIPING SPECIALTIES

A. Water Hammer Arrestor. (WHA):

Size to correspond with (PDI) Plumbing Drainage Institute Standard PDI-WH201 and ASSE 1010.

Approved Manufacturers: Precision Plumbing Products, Zurn, Josam, Jay R. Smith, Mifab and Watts Regulator Company.

B. Backflow Preventers:

Reduced pressure type Watts 909-S (½ inch thru 2 inches).

Approved Manufacturers: Watts, Wilkins, Conbraco, Febco

C. Gauges:

Pressure gauge 4-1/2 inches diameter face; H. O. Terrice 600 Series.

D. Thermometer:

Adjustable angle, 9 inches long; H. O. Terrice BX9 1403.

SECTION 22 1316 - SANITARY WASTE & VENT PIPING

A. Sanitary Waste and Vent Inside Building Underground:

Asphalt-coated service weight cast iron, hubless end. Joints, "Clamp-All" Model #125, "Husky" 4000 or "Mission" Heavy Weight.

Plastic PVC, Schedule 40 ASTM D2665, DWV with solvent welded socket joints.

B. Sanitary Waste and Vent Aboveground:

Asphalt-coated service weight cast iron, hubless end. Joints, "Clamp-All" Model #125, "Husky" 4000 or "Mission" Heavy Weight.

Asphalt-coated service weight cast iron, hubless end, 3 inches and smaller. Joints, neoprene rubber gasket with stainless steel clamp.

Plastic PVC, Schedule 40, ASTM D2665, DWV with solvent welded socket joints. (Not allowable in return air plenums.)

D. Condensate Drain and Relief Valve Discharge:

Copper type "L" hard tempered with soldered or press-fit joints and wrought copper fittings.

SECTION 22 1319 - SANITARY WASTE PIPING SPECIALTIES

A. Floor Drains:

FD-1 - Zurn ZN-415-6B with 6 inches diameter strainer. Provide with ASSE 1072 compliant barrier-type trap seal protection device.

FD-2 - Zurn Z-611 with 9 inches square medium duty grate with sediment bucket. Provide with ASSE 1072 compliant barrier-type trap seal protection device.

Approved Manufacturers: Zurn, Josam, Mifab, Jay R. Smith and Wade.

B. Cleanouts:

CO - Cleanout plug for cast iron hub and spigot shall be screwed brass.

CO - Cleanout plug for cast iron no hub shall be a blind plug.

CO - Cleanout plug for PVC shall be a cleanout adapter with cleanout plug.

FCO - Heavy duty cleanout, Zurn ZN-1400-HD-T.

FCO - Floor cleanout for PVC pipe, Zurn ZN-1404.

COTG - Exterior cleanout, Zurn Z-1406-HD-VP.

Approved Manufacturers: Zurn, Josam, Mifab, Jay R. Smith and Wade.

SECTION 22 1600 - NATURAL GAS PIPING

A. Natural Gas Aboveground Less Than 5 PSI:

Black steel, Schedule 40, ASTM A-53, screwed 1/2 inch through 2 inches with 150# malleable iron joints. Black steel, Schedule 40 ASTM A-53, butt welded, standard weight welded fittings - 2-1/2" and larger with 150# welded neck flange.

SECTION 22 4000 - PLUMBING FIXTURES

A. General:

Fixtures shall be acid resisting and white.

Fixtures shall have supplies with stops with removable keys.

Mounting height of fixture shall be as shown on Architectural Drawing.

A. Water Closet, WC-1: - Kohler K-3979 (ADA, floor set, tank type - handle on left)

Supply: Brass Craft SCR-1912-DL-C
Seat: Osonite 95-SSC

B. Water Closet, WC-2: - Kohler K-3979-RA (ADA, floor set, tank type - handle on right)

Supply: Brass Craft SCR-1912-DL-C
Seat: Osonite 95-SSC

C. Urinal, UR-1: - Kohler K-25048-ET (Wall hung, flush valve)

Flush Valve: Sloan Valve Company, Sloan Model 186-1.0
Carrier: Zurn Z-1222

D. Lavatory, LV-1: - Kohler K-2032 (20 inches x 18 inches wall hung)

Faucet: Kohler K-15199-4NDRA-CP (single lever type)(0.5 gpm)
Supplies: Brass Craft SCR-1912-AC
Trap: Dearborn Brass 707-1
Strainer: Kohler K-7129-A
Carrier: Zurn Z-1231
Drain and Supplies Insulation Kit: True Bro Model #102W
Temperature Control Valve (ASSE 1070): Powers Hydroguard Lfe480

E. Water Cooler with Bottle Filler, FWC-1: - Oasis PG8EBFSL (Split level)

Supplies: Brass Craft SCR-1912-AC
Trap: Dearborn Brass 707-1, 1 1/4" with cleanout, 17 gauge
Carrier: Zurn Z-1225-BL

F. Water Heater:

Water heater shall be of capacity and characteristics as indicated on the drawings. Tank shall be insulated per ASHRAE 90A-latest edition. Relief valve shall be temperature and pressure ASME type. Unit shall be completely factory wired, piped, tested, approved for installation requiring only connections of water and power source for operation.

DIVISION 23 - HVAC

SECTION 23 0700 - HVAC INSULATION

A. General:

All work shall be done by experienced insulation applicators in strict accordance with manufacturer's latest recommendations and shall be finished in a neat and workmanlike manner. Thermal conductivity shall not exceed 0.24 BTUH per square foot F°/inch. Insulation shall be equivalent to Owens-Corning Fiberglass 25 ASJ/SSL.

All insulation shall have a composite rating including insulation adhesives, jacket, etc. as follows. The composite assembly shall have a flame spread rating not over 25 and a smoke developed rating not higher than 50.

Pipe fittings shall be covered with preformed insulating fittings such as Zeston 25/50 rated PVC insulated fitting cover (pearl gray finish).

At hangers and supports of insulated pipe, provide high density insulation (maximum deflection 1/8 inches) and 12 inches long, 22 gauge galvanized sheet metal shields covering 50% of the circumference.

Refrigeration piping insulation material shall be a highly flexible, closed cell EPDM rubber based elastomeric product. Insulation shall be Aerocell SSPT or AC, Armaflex UT/Solaflex or K Flex Solar HT. Thermal conductivity of the insulation shall not exceed 0.245 BTUH square foot F degree/inch at 75° mean temperature. Insulation shall have a maximum 25/50 fire/smoke rating and be applied according to manufacturer's instructions. All joints must be sealed and the piping supported with inserts and galvanized exterior shields. Sizing per schedule.

B. Ductwork:

Externally insulate all outside air intake ductwork with 1-1/2 inches thick semi-rigid fiberglass insulation with foil reinforced Kraft vapor barrier equivalent to OCF 703-FRK.

SECTION 23 3000 - AIR DISTRIBUTION SYSTEM

A. Sheet Metal Ductwork:

Shall be fabricated and installed in accordance with the latest ASHRAE and SMACNA recommendations and in the best practices of good workmanship. All ductwork shall be constructed of prime hot dip galvanized sheet steel. All joints, longitudinal and transverse seams and connections shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes.

While the drawings are to be adhered to as closely as possible, the right is reserved to vary the run and sizes of ducts during the progress of the work as may be found necessary or desirable to avoid local interferences.

Openings around exposed or concealed ductwork passing through walls, or partitions, when not protected by fire dampers or doors properly installed, shall be sealed with a sheet metal collar on both sides of the wall.

On all air handling units, fans, air conditioning units, etc. duct connections shall be flexible connections using Ventglas 30 ounce, or Durodon 24 ounce material. Canvas will not be acceptable.

For final connections of ductwork operating at pressures below 2" W.G. to supply air distribution items, UL approved pre-insulated flexible duct with exterior vapor barrier may be used. The length of flexible duct shall not exceed 3-1/2 feet and shall not be used for more than a final elbow connection to the unit. Duct to be Wiremold WK Acoustical Duct, or equal as manufactured by Owens-Corning, Johnson, Johns-Manville or Genflex. Secure with adhesive and metal bands. Installation to be in accordance with the latest SMACNA flexible duct installation standards.

B. Motor-Operated Damper:

Damper shall be Ruskin Type CD-36 low leakage, opposed blade operation with heavy galvanized steel frame, 16 gauge galvanized steel blades, and self-lubricating bearings. The damper shall be anti-leak construction with aluminum joint seals and vinyl blade edge seals. For complete control and best method of insuring minimum air leakage on low leakage dampers, each panel 48 inches x 72 inches or less shall be provided with its own individual damper control motor. Equivalent dampers by above manufacturers are acceptable.

C. Flue:

Flue shall be of double wall construction as manufactured by Selkirk Metalbestos, Metal-Fab, Inc., or American Metal Products Co. Flues under positive pressure shall be equal to Metalbestos Model PS. Where double wall insulated flue material is specified, Chemnee Lining E or Van Packer are acceptable manufacturers. Provide flue supports, spacers, storm collars, counterflashing cap, etc. to insure a weatherproof and fireproof installation.

D. Louver:

Greenheck Type ESD-403 extruded aluminum with 1/2 inches birdscreen in an extruded aluminum frame and having a 204-Rl etch and anodized aluminum finish with one coat of lacquer. Louver shall bear the AMCA certified rating seal.

Equivalent louvers by Airoilte, Greenheck, Louvers & Dampers, Inc., Construction Specialties, American Warming and Ventilating Company, Ruskin, All-Lite or Potliff will be acceptable. Paint duct behind louver dull black.

SECTION 23 3400 - HVAC FANS

A. General:

All fans shall be AMCA rated for airflow.

The maximum sound level, where given, represents the highest acceptable value for each fan. The sone value represents loudness levels obtained at 5'-0 inches from the fan inlet. In addition, where applicable, the fan schedule lists the maximum tip speed allowable.

All belt driven units, 1/2 horsepower and over, shall have at least double groove sheaves and dual belts. Drives to have a service factor of at least 125 percent of motor horsepower.

All disconnect switches supplied shall be horsepower rated per the National Electrical Code.

Fans shall be as manufactured by PennBarry, Carnes, Jenn-Fan, Acme, Cook, or Greenheck.

B. Propeller Fans:

Panel mounted with safety guard on inlet side, gravity shutter, permanently lubricated fan shaft bearings and continuous duty totally enclosed motor.

SECTION 23 5523 - GAS FIRED RADIANT HEATERS

PART 1 - GENERAL

SECTION INCLUDES

A. Tubular Infrared Heaters

REFERENCES

A. NFPA 54 - National Fuel Gas Code; National Fire Protection Association.

B. NFPA 90A - Standard for the Installation of Air Conditioning and Ventilating Systems; National Fire Protection Association.

C. NFPA 90B - Standard for the Installation of Warm Air Heating and Air Conditioning Systems; National Fire Protection Association.

SUBMITTALS

A. **Product Data:** Provide manufacturer's literature and data indicating rated capacities, dimensions, clearances, weights, accessories, electrical nameplate data, and wiring diagrams.

B. **Manufacturer's Instructions:** Indicate rigging, assembly, and installation instructions.

C. **Operation and Maintenance Data:** Include manufacturer's descriptive literature, operating instructions, maintenance and repair data, and parts listing.

D. **Warranty:** Submit manufacturer's warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

REGULATORY REQUIREMENTS

A. **Products Requiring Electrical Connection:** Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

EXTRA MATERIALS

A. See General Requirements for additional provisions.

PART 2 - PRODUCTS

INFRARED HEATER MANUFACTURERS

A. Detroit Radiant Products Company (Re-Verber-Ray)

B. Solaronics, Inc.

C. Space-Ray Infrared Gas Heaters

D. Roberts Gordon

E. Modine

F. Substitutions: See General Requirements

TUBULAR INFRARED HEATERS

A. **Units:** Packaged, partially factory assembled, pre-wired unit consisting of cabinet, burner, heat exchanger, radiant tube, reflector, controls; for natural gas or propane gas.

B. **Heat Exchanger:** Aluminized tubular steel combustion chamber with aluminized steel tube with aluminum reflector. Heater shall be approved for vented or unvented application.

C. Gas Burner:

1. **Gas Burner:** Forced draft or induced draft type with adjustable combustion air supply.

2. Gas valve provides 100 percent safety gas shut-off; 24 volt combining pressure regulation, safety pilot, manual set (On-Off), pilot filtration, automatic electric valve.

3. Electronic pilot ignition, with electric spark or hot surface igniter.

4. Non-corrosive burner or exhaust air blower with permanently lubricated motor.

D. **Gas Burner Safety Controls:** Thermo-couple sensor prevents opening of solenoid gas valve until pilot flame is proven and stops gas flow on ignition failure.

E. **Operating Controls:** Low voltage room thermostat cycles burner to maintain room temperature setting. Provide transformer if required.

PART 3 - EXECUTION

EXAMINATION

A. Verify that space is ready for installation of units and openings are as indicated on shop drawings.

B. Verify that proper power supply is available.

C. Verify that proper fuel supply is available for connection.

INSTALLATION

A. For each infrared heater, provide hanging chains and hooks to suspend heater from structural steel. Any additional supporting steel required for mounting of heater shall be by the Mechanical Contractor. This Contractor shall also provide for each unit a twelve inch (12") long flexible connection in the gas line as manufactured by Flexonics.

B. Provide operating controls.

SECTION 23 5533 - FUEL FIRED UNIT HEATERS

PART 4 - GENERAL

A. SECTION INCLUDES

Gas Fired Unit Heaters

B. RELATED SECTIONS

A. Section 23 0548 - Vibration and Seismic Controls for HVAC Piping and Equipment.

B. Section 23 5100 - Breechings, Chimneys, and Stacks.

C. REFERENCES

NFPA 31 - Standard for the Installation of Oil Burning Equipment; National Fire Protection Association.

NFPA 54 - National Fuel Gas Code; National Fire Protection Association.

NFPA 90A - Standard for the Installation of Air Conditioning and Ventilating Systems; National Fire Protection Association.

NFPA 90B - Standard for the Installation of Warm Air Heating and Air Conditioning Systems; National Fire Protection Association.

D. SUBMITTALS

See General Requirements for submittal procedures.

Product Data: Provide manufacturer's literature and data indicating rated capacities, dimensions, clearances, weights, accessories, electrical nameplate data, and wiring diagrams.

Manufacturer's Instructions: Indicate rigging, assembly, and installation instructions.

Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, maintenance and repair data, and parts listing.

Warranty: Submit manufacturer's warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

E. REGULATORY REQUIREMENTS

Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

F. WARRANTY

See General Requirements for additional warranty requirements.

Provide four year manufacturer's warranty for heat exchangers.

G. EXTRA MATERIALS

See General Requirements for additional provisions.

Provide two sets of filters.

PART 2 - PRODUCTS

A. UNIT HEATER MANUFACTURERS

- Modine Manufacturing Company

- Sterling Gas Division of Mestek, Inc.

- Resnor/Thomas & Betts Corporation

ELECTRICAL SPECIFICATIONS:

1.

ALL WORK SHALL CONFORM TO THE 2023 N.E.C., NATIONAL, STATE AND LOCAL CODES WHICH APPLY.
2.

ALL MATERIAL AND EQUIPMENT SHALL CONFORM TO U.L. AND NEMA STANDARDS WHICH APPLY.
3.

THIS CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL PERMITS REQUIRED FOR THE EXECUTION OF HIS WORK. HE SHALL ALSO PROVIDE PROOF OF FINAL APPROVAL BY THE AUTHORITY HAVING JURISDICTION BEFORE FINAL PAYMENT IS MADE.
4.

THIS CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY OF HIS ENTIRE ELECTRICAL INSTALLATION AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.
5.

SUBMIT ELECTRONIC COPIES OF DETAILED SHOP DRAWINGS OF ALL ITEMS OF EQUIPMENT FURNISHED UNDER THIS CONTRACT IN A TIMELY MANNER FOR APPROVAL, BEFORE MANUFACTURE OF THE EQUIPMENT OR ITS INCORPORATION IN THE WORK.
6.

CONDUCTORS:

MINIMUM WIRE SIZE SHALL BE #12 UNLESS NOTED OTHERWISE.

CONDUCTORS SMALLER THAN #2 AWG SHALL BE "THHN/THWN". CONDUCTORS #2 AWG AND LARGER SHALL BE "XHHW".

ALL CONDUCTORS SHALL BE COPPER.

CONDUCTORS SHALL BE AS MANUFACTURED BY AETNA, AMERICAN INSULATED, ENCORE, ESSEX, PARANITE, PIRELLI OR SOUTHWIRE.

7. CONDUITS:

INTERIOR CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT) UNLESS NOTED OTHERWISE.

EXTERIOR CONDUIT BURIED BELOW GRADE SHALL BE PVC SCHEDULE 40.

EXPPOSED EXTERIOR CONDUIT SHALL BE FULL WEIGHT RIGID GALVANIZED STEEL (RGS) OR INTERMEDIATE METAL CONDUIT (IMC) GALVANIZED OR SHERADERIZED INSIDE AND OUT.

FLEXIBLE METAL CONDUIT SHALL BE USED FOR "MAKE UP" CONNECTIONS TO ROTATING MACHINERY (24" MAXIMUM LENGTH), EQUIPMENT OR FLUSH LIGHT FIXTURES.

CONDUIT CONNECTORS SHALL BE STEEL SETSCREW OR COMPRESSION. FLEXIBLE METALLIC COUPLINGS AND CONNECTORS SHALL BE MALLEABLE IRON OR STAMPED STEEL FITTINGS.

EXTERIOR BURIED CONDUITS SHALL BE INSTALLED 36" BELOW GRADE WITH METALLIC WARNING/SENSOR TAPE 12" ABOVE THE CONDUIT.

MINIMUM CONDUIT SIZE IS 3/4" UNLESS NOTED OTHERWISE. MINIMUM CONDUIT SIZE SHALL BE 1" FOR CONDUITS CONCEALED UNDER FLOOR SLABS OR EXTERIOR BELOW GRADE.

8. DISCONNECT SWITCHES SHALL BE SQUARE D "HD" OR EQUAL BY GENERAL ELECTRIC, SIEMENS OR CUTLER-HAMMER.

9. FUSES SHALL BE AS FOLLOWS:

CLASS "J" IS TO BE USED FOR ALL PROJECTS UNLESS CLIENT IS UNWILLING TO CHANGE FROM CLASS "RK-5 / RK-1".
CLASS "J"
a. Zero to 600-Amps dual element, time delay Class J; Bussmann LPJ-SP, Mersen AJT or Littelfuse JTD-ID.
2. CLASS "RK-5 / RK-1"
a. Zero to 90-Amps dual element, time delay Class RK-5; Bussmann FRN-R/FRS-R, Mersen TR-R/TRS-R or Littelfuse FLN-R/FLS/R.
b. 100 to 600-Amps dual element, time delay, Class RK-1; Bussmann LPN-RK/LPS-RK, Mersen A2D-R A6D-R or Littelfuse LLN-RK/LLS-RK.
3. CLASS "L"
a. Above 600-Amps time delay, Class L; Bussmann KRP-C, Mersen A4BY or Littelfuse KLP-C.

10. WIRING DEVICES:

SWITCHES SHALL BE HEAVY DUTY INDUSTRIAL SPECIFICATION GRADE WITH SOLID BRASS CONSTRUCTION, 120/277V-20A RATING; HUBBELL HBL1221GRY, COOPER 2221GY, LEVITON 1221-2GY OR PASS & SEYMOUR PS20AC1-GRY (SINGLE POLE DEVICES INDICATED).

RECEPTACLES SHALL BE HEAVY DUTY INDUSTRIAL SPECIFICATION GRADE WITH SOLID BRASS CONSTRUCTION, 120V-20A RATING; HUBBELL HBL5362GY, COOPER 5362GY, LEVITON 5362GY OR PASS & SEYMOUR 5362-AGY.

GFI DUPLEX RECEPTACLES SHALL BE HEAVY DUTY INDUSTRIAL GRADE, 20A; HUBBELL GF5362GYA OR APPROVED EQUAL BY COOPER, LEVITON OR PASS & SEYMOUR.

PLATES SHALL BE GRAY THERMOPLASTIC; HUBBELL P1 SERIES OR APPROVED EQUAL BY LISTED MANUFACTURERS.

WEATHERPROOF COVER PLATES SHALL BE CLEAR THERMOPLASTIC, IN-USE RATED; RED DOT CKNM OR APPROVED EQUAL BY HUBBELL OR TAYMAC.

DEVICE COLOR AND PLATE COLOR SHALL BE SELECTED BY THE ARCHITECT/OWNER.

11. MOTOR STARTERS FOR MOTORS SMALLER THAN 1/2 HORSEPOWER SHALL BE MANUAL STARTERS WITH OVERLOAD AND PILOT LIGHT; SQUARE D CLASS 2510 OR EQUAL BY GENERAL ELECTRIC, SIEMENS, OR CUTLER-HAMMER. MANUAL ON-OFF SWITCHES SHALL BE SQUARE D 2510-KG-1 OR KG-2 OR EQUAL BY GENERAL ELECTRIC, SIEMENS OR CUTLER-HAMMER.

12. PANELBOARDS:

PANELBOARDS SHALL UTILIZE FULLY RATED COPPER BUS OF AMPACITY NOTED ON THE DRAWINGS.

CIRCUIT BREAKERS SHALL BE BOLT TYPE, COMMON TRIP AND RATED FOR THE LOAD CONTROLLED (HACR, HID, SWITCH DUTY, HIGH MAGNETIC IN RUSH).

PANELBOARDS AND CIRCUIT BREAKERS SHALL HAVE AN INTERRUPTING CAPACITY OF 14,000 (277/480V) AND 22,000 (120/208V) MINIMUM, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

PANELS NOTED FOR SERIES RATING WITH UPSTREAM DEVICES SHALL INCLUDE LABELING WITHIN THE PANEL.

PANELBOARDS SHALL BE SQUARE D "NQ" SERIES (120/208V)/SQUARE D "NF" SERIES (277/480V), OR APPROVED EQUALS BY CUTLER-HAMMER, GENERAL ELECTRIC OR SIEMENS.

13. NAMEPLATES SHALL BE INSTALLED ON ALL OF THE FOLLOWING EQUIPMENT TYPES: PANELBOARDS, MOTOR STARTERS, CONTROL PANELS, CONTROL DEVICES, TELEPHONE CABINETS, EMERGENCY SYSTEM EQUIPMENT, TRANSFORMERS, CURRENT TRANSFORMER (CT) CABINET, ETC. NAMEPLATE FOR CT CABINET SHALL READ "CT CABINET AND METER ARE NOT A DISCONNECTING MEANS." NAMEPLATES SHALL BE LAMINATED PHENOLIC, WHITE WITH BLACK CORE.

14. PROVIDE TYPED PANEL SCHEDULES FOR ALL PANELBOARDS DESCRIBING LOCATION OF DEVICE SERVED. PROVIDE PHENOLIC NAMEPLATES FOR EACH SWITCHBOARD DISCONNECT SWITCH OR CIRCUIT BREAKER.

15. SWITCHES SHALL BE MOUNTED 48" A.F.F. TO CENTER LINE UNLESS NOTED OTHERWISE. RECEPTACLES SHALL BE MOUNTED 18" A.F.F. TO BOTTOM OF DEVICE UNLESS NOTED OTHERWISE. PANELS SHALL BE MOUNTED 48" A.F.F. TO CENTER LINE OR LOWER, WITH TOP OF CABINET A MAXIMUM OF 6'-0" A.F.F.

16. PROVIDE AN ARC FLASH HAZARD LABEL FOR ALL ELECTRICAL DISTRIBUTION EQUIPMENT, INCLUDING BUT NOT LIMITED TO SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKETS, ENCLOSURES, DISCONNECTS, AND MOTOR CONTROL CENTERS. LABELING SHALL MEET FLASH PROTECTION REQUIREMENTS OF NFPA AND NEC (110.16). ARC FLASH HAZARD LABELS SHALL BE PERMANENTLY ADHERED. THE LABELS SHALL BE 3.50" X 5.00 SELF-ADHESIVE PLASTIC; BRADY CAT #99452. THE HAZARD LABEL SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE OF EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE LABEL ON A 1/8 CLEAR PLASTIC BACK PLATE WHERE PERMANENT ADHESION CAN NOT BE MAINTAINED. THIS PLASTIC BACK PLATE TAG ASSEMBLY SHALL BE SECURED TO THE ELECTRICAL EQUIPMENT WITH POP RIVETS.
- | L U M I N A I R E S C H E D U L E | | |
|-----------------------------------|--|---|
| | LED - COMBINATION EXIT SIGN/EMERGENCY LIGHT, WALL MOUNTED, THERMOPLASTIC WHITE HOUSING, STENCIL FACE, 1-1/2 HOUR BATTERY OPERATION, 2-1.2W ADJUSTABLE LAMP HEADS, SHADED AREA INDICATES FACE, 120V | SURE-LITES APC7RGSQ30
OR ENGINEER APPROVED EQUAL |
| | BATTERY OPERATED EMERGENCY LIGHT, WALL MOUNTED, 2-1.5W ADJUSTABLE LED LAMP HEADS, THERMOPLASTIC WHITE HOUSING, 1-1/2 HOUR BATTERY OPERATION, 120V | SURE-LITES APSQLED30
OR ENGINEER APPROVED EQUAL |
| | LED - EXTERIOR EMERGENCY REMOTE LAMP HEAD; 1.5W LED, THERMOPLASTIC WEATHERPROOF HOUSING, GRAY FINISH | SURE-LITES SRP13GY
OR ENGINEER APPROVED EQUAL |
| | LED - 54W, 9,000 LUMENS, 4,000°K COLOR TEMPERATURE, 1' X 2' SUSPENDED HIGH BAY LUMINAIRE, 80 CRI, ALUMINUM HOUSING, WHITE FINISH, WIDE DISTRIBUTION, ACRYLIC LENS, 120V | METALUX OHB-9SE-W-UNV-L840-CD
OR ENGINEER APPROVED EQUAL |
| | LED - 76W, 12,000 LUMENS, 4,000°K COLOR TEMPERATURE, 1' X 2' SUSPENDED HIGH BAY LUMINAIRE, 80 CRI, ALUMINUM HOUSING, WHITE FINISH, WIDE DISTRIBUTION, ACRYLIC LENS, 120V | METALUX OHB-12SE-W-UNV-L840-CD
OR ENGINEER APPROVED EQUAL |
| | LED - 85.6W, 12,000 LUMENS, 4,000°K COLOR TEMPERATURE, 1' X 8' SUSPENDED LOW BAY LINEAR LUMINAIRE, 80 CRI, ALUMINUM HOUSING, WHITE FINISH, HIGH IMPACT ACRYLIC SYMMMETRIC LENS, 120V | METALUX 8LBLD-LD4-12-SYMF-UNV-L840-CDI-U
OR ENGINEER APPROVED EQUAL |
| | LED - 64.5W, 9,000 LUMENS, 4,000°K COLOR TEMPERATURE, 1' X 8' SUSPENDED LOW BAY LINEAR LUMINAIRE, 80 CRI, ALUMINUM HOUSING, WHITE FINISH, HIGH IMPACT ACRYLIC SYMMMETRIC LENS, 120V | METALUX 8LBLD-LD4-9-SYMF-UNV-L840-CDI-U
OR ENGINEER APPROVED EQUAL |
| | LED - POLE WALL MOUNTED AREA LUMINAIRE, 48W/7,200 LUMENS/4,000K, 80CRI, FORWARD THROW DISTRIBUTION, ALUMINUM HOUSING, DARK BRONZE FINISH, PHOTOCELL, 120V | LITHONIA DSX1LED-P6-40K-80CRI-TFTM-MVOLT-WBA-
DOBXD-DLL127F1.5JU
OR ENGINEER APPROVED EQUAL |
- | L E G E N D | |
|---------------|---|
| S, Ss, Ss, Ss | WALL SWITCHES: SINGLE POLE, DOUBLE POLE, 3-WAY, 4-WAY. |
| Sss | WALL SWITCH, OCCUPANCY SENSOR, PASSIVE INFRARED/MICROPHONICS DETECTION, ADJUSTABLE TIME DELAY (SET TO 20 MINUTES), SINGLE POLE, 120/277V; SENSOR SWITCH WSD-PDT OR ENGINEER APPROVED EQUAL |
| | ULTRASONIC OCCUPANCY SENSOR, CEILING MOUNTED, 600 SQ. FT. 360° COVERAGE WITH POWER PACK (24VDC-150mA) AND AUXILIARY RELAY AS REQUIRED |
| | ULTRASONIC OCCUPANCY SENSOR, CORNER/WALL MOUNTED/SWIVEL, 2000 SQ. FT./50 LINEAR FOOT, POWER PACK (24VDC-150mA) AND AUXILIARY RELAY AS REQUIRED; WATT STOPPER LMDX-100 SERIES OR ENGINEER APPROVED EQUAL |
| | DUPLEX RECEPTACLE |
| | DOUBLE DUPLEX RECEPTACLE, 2-GANG, 4-OPENING |
| | DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER PROTECTION |
| | DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR ELECTRIC WATER COOLER, CORD AND PLUG SHALL NOT BE VISIBLE FROM GENERAL VIEW |
| | COMMUNICATION OUTLET, 4-11/16" SQ. 2-1/8" DEEP BOX WITH SINGLE GANG PLASTER RING, 1-1/4"C STUBBED UP ABOVE ACCESSIBLE CEILING |
| | PLYWOOD TELEPHONE BACKBOARD, 8'-0" X 3/4" X LENGTH AS SHOWN |
| | JUNCTION BOX, BLANK COVER |
| | HEAVY DUTY SAFETY SWITCH, SIZE AS NOTED, FUSED AS NOTED, NEMA 1 |
| | HEAVY DUTY SAFETY SWITCH, SIZE AS NOTED, FUSED AS NOTED, NEMA 3R |
| | FUSIBLE COMBINATION MAGNETIC MOTOR STARTER, FLUSH MOUNT, 208V-3P, SIZE '1', WITH FUSED 120V CONTROL XF AND 'HAND-OFF-AUTO' HEAVY DUTY SELECTOR SWITCH AND RED 'PUSH-TO-TEST' PILOT LIGHT MOUNTED IN COVER; SQUARE D 8538 SERIES |
| | MOTOR, HORSEPOWER AS NOTED |
| | MANUAL MOTOR STARTER WITH PILOT LIGHT |
| | MANUAL ON-OFF SWITCH |
| | JUNCTION BOX, BLANK COVER |
| | EXISTING RECEPTACLE PANEL; 120/208V-3PH-4W |
| | SURGE PROTECTION DEVICE; SEE SPECIFICATIONS |
| | DOOR OPERATOR; F.B.G.C. |
| | 'OPEN-CLOSE-STOP' PUSHBUTTON STATION FOR OVERHEAD DOOR; F.B.G.C. |
| | CONDUIT CONCEALED IN WALL OR ABOVE CEILING, EXPOSED IN UNFINISHED AREAS |
| | CONDUIT CONCEALED UNDER FLOOR |
| | HOME RUN TO PANEL; GROUND, PHASE 'A', 'B', 'C' AND NEUTRAL |
| | CONDUIT TURNED UP, CONDUIT TURNED DOWN |
| | FEEDER TAG |
| F.B.G.C. | FURNISHED BY GENERAL CONTRACTOR, INSTALLED AND/OR WIRED BY ELECTRICAL CONTRACTOR |
| F.B.M.C. | FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED AND/OR WIRED BY ELECTRICAL CONTRACTOR |
| F.B.S.C. | FURNISHED BY SPRINKLER CONTRACTOR, INSTALLED AND/OR WIRED BY ELECTRICAL CONTRACTOR |
| F.B.O. | FURNISHED BY OTHERS, INSTALLED AND/OR WIRED BY ELECTRICAL CONTRACTOR |
| L.D. | LOCATE AS DIRECTED |
| U.N.O. | UNLESS NOTED OTHERWISE |
| W.P. | ITEM TO BE WEATHERPROOF |
- LEGEND NOTES:
- A. LIGHTING CONTROL SENSORS ARE SHOWN ON PLANS TO INDICATE AREA GENERAL COVERAGE. WALK-TEST THE INSTALLATION FOR PROPER COVERAGE AND ADJUST LOCATIONS AND QUANTITIES OF DEVICES ACCORDINGLY. LIGHTING CONTROL SENSORS SHALL BE MOUNTED PER MANUFACTURER'S RECOMMENDATIONS. ADHERE TO CLEARANCE DISTANCES FROM ALL MECHANICAL DIFFUSERS.

B. DUPLEX RECEPTACLE PLATES SHALL HAVE ELECTRICAL PANEL AND CIRCUIT NUMBER IDENTIFICATION. IDENTIFY ELECTRICAL PANEL AND CIRCUIT NUMBER FROM WHICH SERVED. USE CLEAR ADHESIVE LABEL WITH BLACK LETTERS ON FACE OF PLATE, AND DURABLE WIRE MARKERS OR TAGS INSIDE OUTLET BOX. FOR EXAMPLE; ELECTRICAL PANEL RP-1A, CIRCUIT 12 SHALL BE LABELED RP-1A-12.
- | W I R E S I Z I N G T A B L E | | |
|--|--|--|
| FOR 120V-20A BRANCH CIRCUITS ONLY, UNLESS OTHERWISE NOTED | | |
| IF DISTANCE A+B IN FEET IS:
(SEE DIAGRAM AT RIGHT) | USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY: | |
| 0' TO 100' | #12 (MIN.) | |
| 100' TO 175' | #10 | |
| 175' TO 300' | #8 | |
| 300' TO 450' | #6 (MAX.) | |
| THESE TABLES ARE BASED ON AN EVENLY DISTRIBUTED LOAD ALLOWING A 3% VOLTAGE DROP AT LAST OUTLET; APPLY ACCORDINGLY. | | |
- | DRAWING INDEX | |
|---------------|--|
| SHT. No. | DESCRIPTION |
| E-1 | LEGEND, LUMINAIRE SCHEDULE, SPECIFICATIONS |
| E-2 | SITE PLAN - ELECTRICAL |
| E-3 | FIRST FLOOR PLAN - LIGHTING |
| E-4 | MEZZANINE PLAN - LIGHTING |
| E-5 | FIRST FLOOR PLAN - POWER |
| E-6 | MEZZANINE PLAN - POWER |
| E-7 | DETAILS |
| E-8 | PANEL SCHEDULE, PANEL RISER DIAGRAM, FEEDER SCHEDULE |
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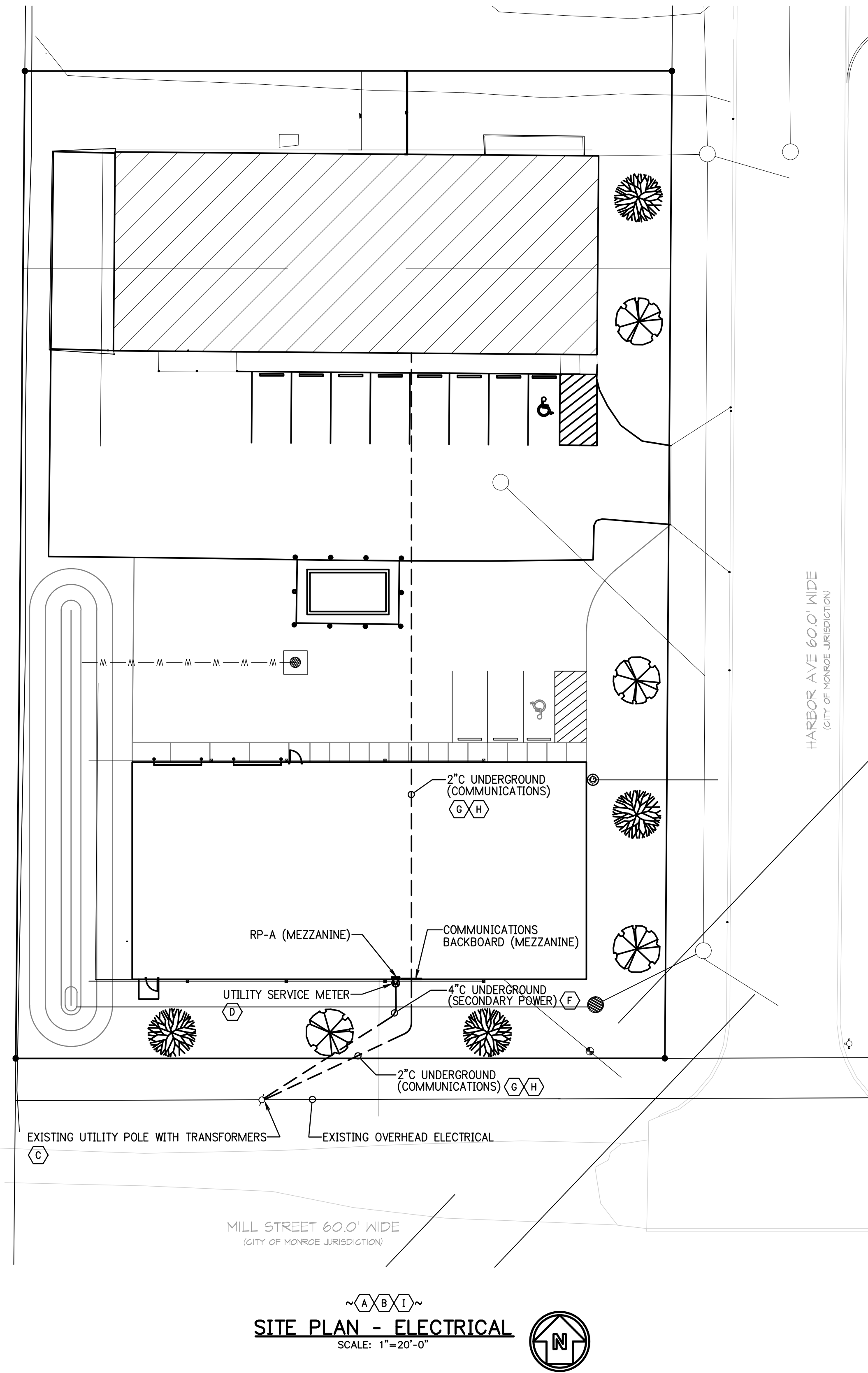
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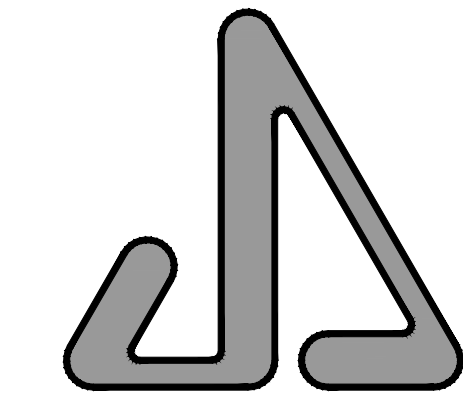
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MONROE, MI 48162
TELEPHONE: 734-242-5711
EMAIL: mike@ualocal671.com
- LEGEND,
LUMINAIRE
SCHEDULE,
SPECIFICATIONS
- | | |
|----------------------|-------------|
| NOT FOR CONSTRUCTION | |
| 03-03-2025 | BIDS |
| DATE: | ISSUED FOR: |
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- E-1
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- ⬡ **SITE PLAN NOTES:**
- A. ELECTRICAL CONTRACTOR SHALL PERFORM ALL SERVICE WORK IN ACCORDANCE WITH DETROIT EDISON COMPANY (ELECTRIC UTILITY CO. AND COMMUNICATIONS SERVICE PROVIDER) SPECIFICATIONS AND PER APPROVED ELECTRIC UTILITY COMPANY ENGINEERED WORK ORDER. ELECTRIC UTILITY WORK ORDER(S) SHALL BE SUBMITTED TO JDRM ENGINEERING FOR APPROVAL.
 - B. THE OWNER WILL PAY FOR ELECTRIC UTILITY COMPANY SERVICE EXTENSION CHARGES.
 - C. OVERHEAD POLE CONDUIT LATERALS ON STAND-OFFS WITH WEATHER HEAD OR BUSHING 6" FROM NEUTRAL PER UTILITY. BELOW GRADE SERVICE ENTRANCE ROOMS SEAL IN AND AROUND CONDUITS. CONDUITS, TRENCHING, AND BACKFILL BY ELECTRICAL CONTRACTOR.
 - D. METER BASE SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR PER UTILITY REQUIREMENTS. PROVIDE PEDESTAL AS REQUIRED. METER SOCKETS AND CT CABINETS REQUIRE SLIP JOINTS AND BUSHINGS PER NEC 300.5(J)(H), NESC, AND UTILITY REQUIREMENTS. PROVIDE NAMEPLATE FOR CT CABINET. NAMEPLATE SHALL READ "CT CABINET AND METER ARE NOT A DISCONNECTING MEANS."
 - E. NOT USED.
 - F. EXTEND CONDUITS TO SERVICE CONNECTION POINT. VERIFY EXACT LOCATION WITH ELECTRIC UTILITY AND TERMINATE AS DIRECTED.
 - G. PROVIDE ONE (1) 2" CONDUIT FOR COMMUNICATIONS SERVICE PROVIDER AS DIRECTED. PROVIDE PULL STRING IN CONDUIT.
 - H. EXTEND CONDUITS TO SERVICE CONNECTION POINT. VERIFY EXACT LOCATION WITH COMMUNICATIONS SERVICE PROVIDER AND TERMINATE AS DIRECTED. .
 - I. THE CONTRACTOR SHALL CONTACT UTILITY PROTECTION SERVICE (811) THREE WORK DAYS PRIOR TO COMMENCING SITE WORK TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES.



Call or submit 48 hours before you dig.



JAMES S. JACOBS ARCHITECTS, PLLC

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SITE IMPROVEMENTS & NEW BUILDING FOR:



UA LOCAL 671
MONROE PLUMBERS
& PIPEFITTERS
313 HARBOR AVENUE
MONROE, MI 48162

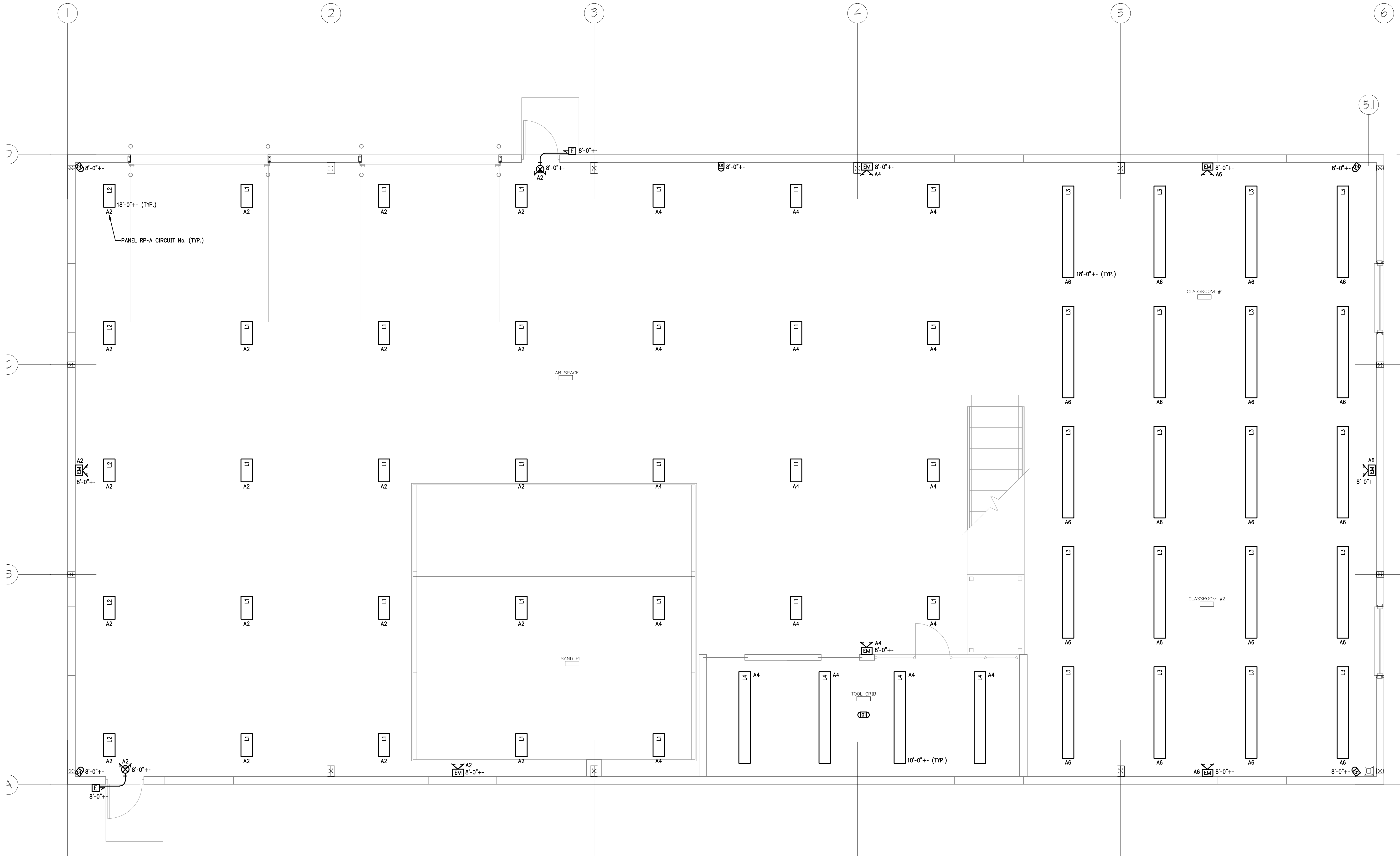
PROPERTY OWNER CONTACT:
MIKE JEWELL, BUSINESS MANAGER
309 DETROIT AVENUE
MONROE, MI 48162
TELEPHONE: 734-242-5711
EMAIL: mike@ualocal671.com

SITE PLAN - ELECTRICAL

NOT FOR CONSTRUCTION

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E-2



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

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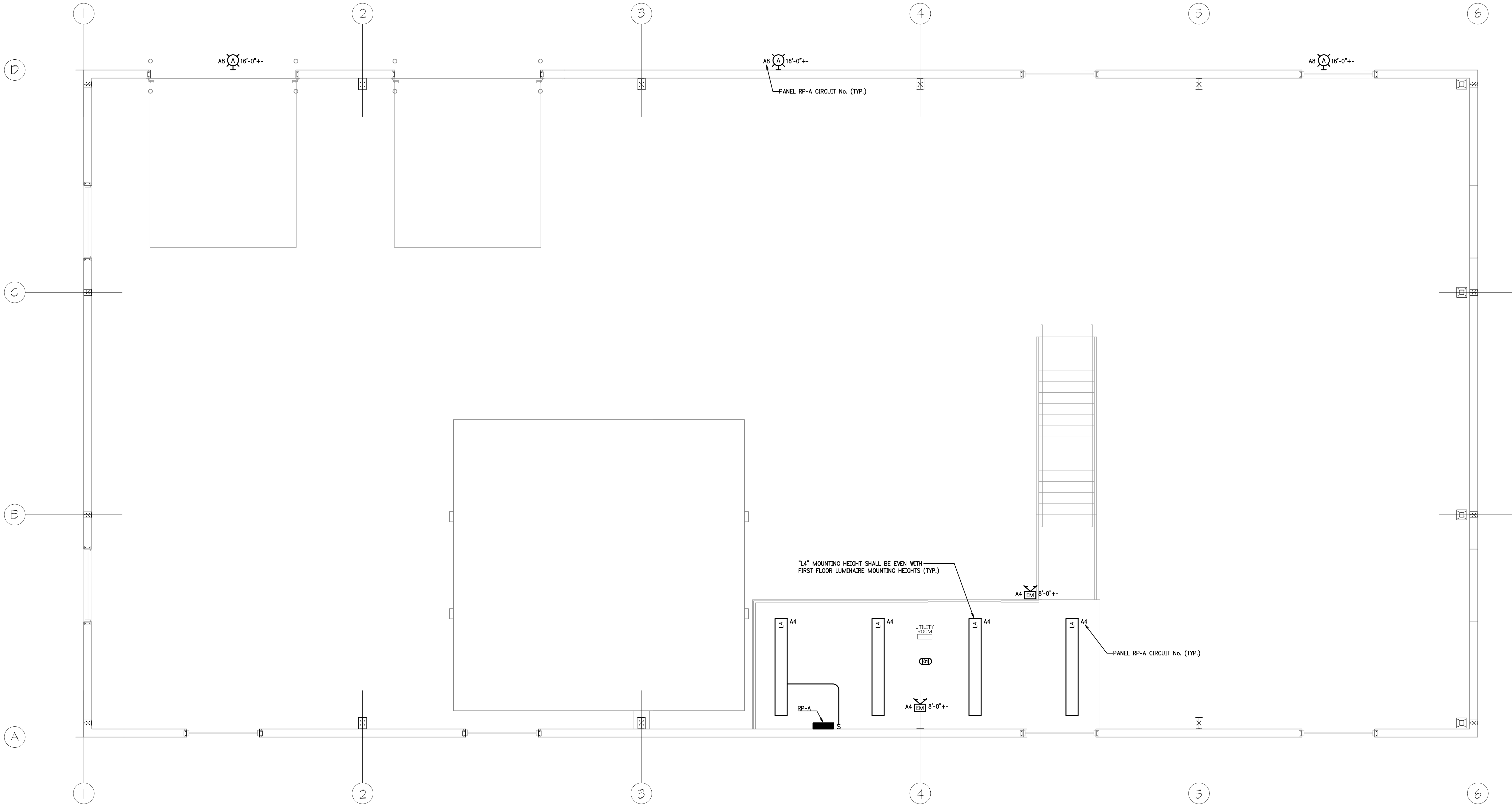
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FIRST FLOOR
PLAN -
LIGHTING

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

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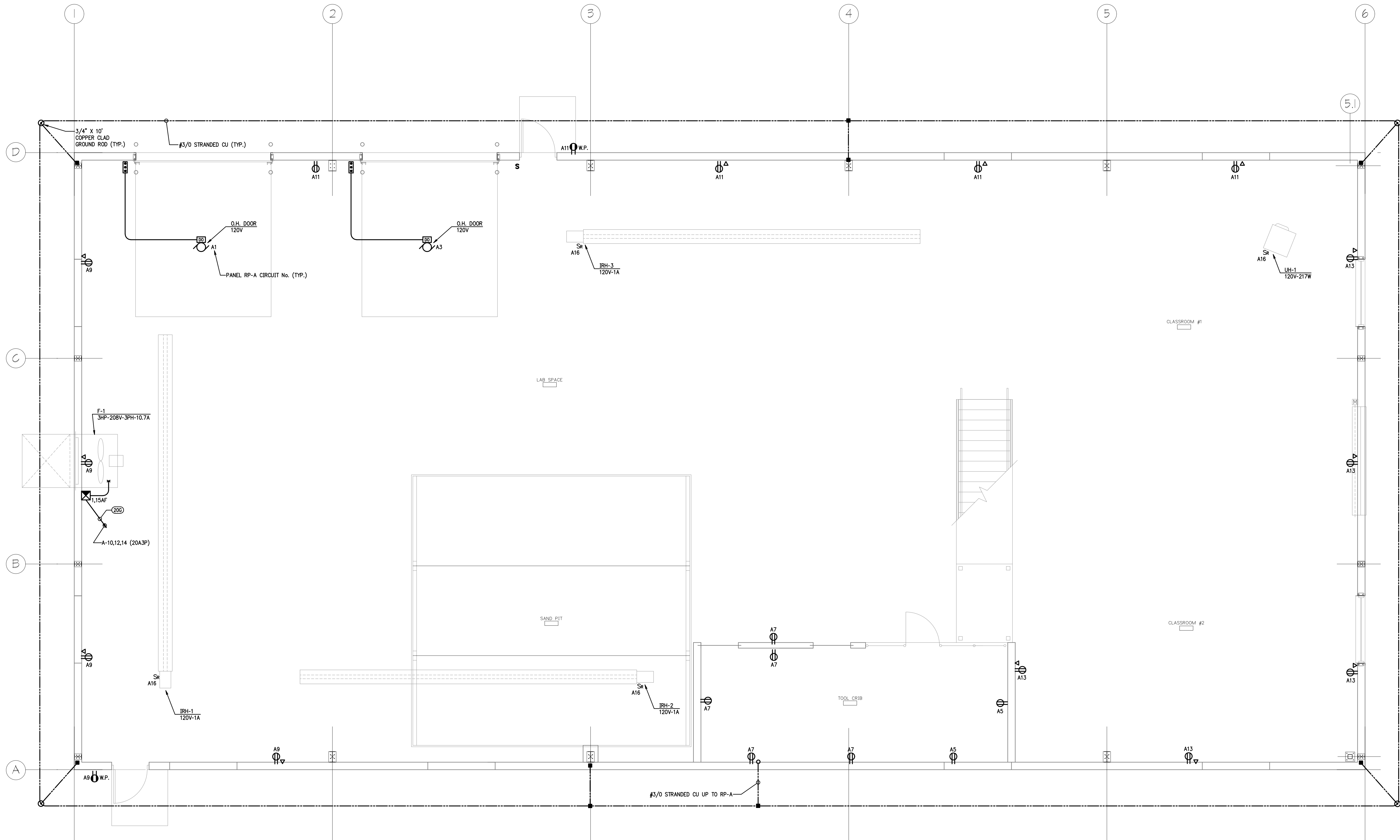
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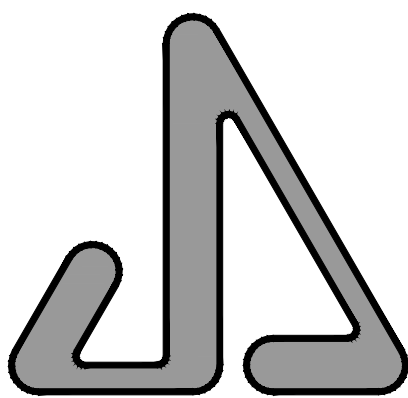
MEZZANINE
PLAN –
LIGHTING

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



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POWER

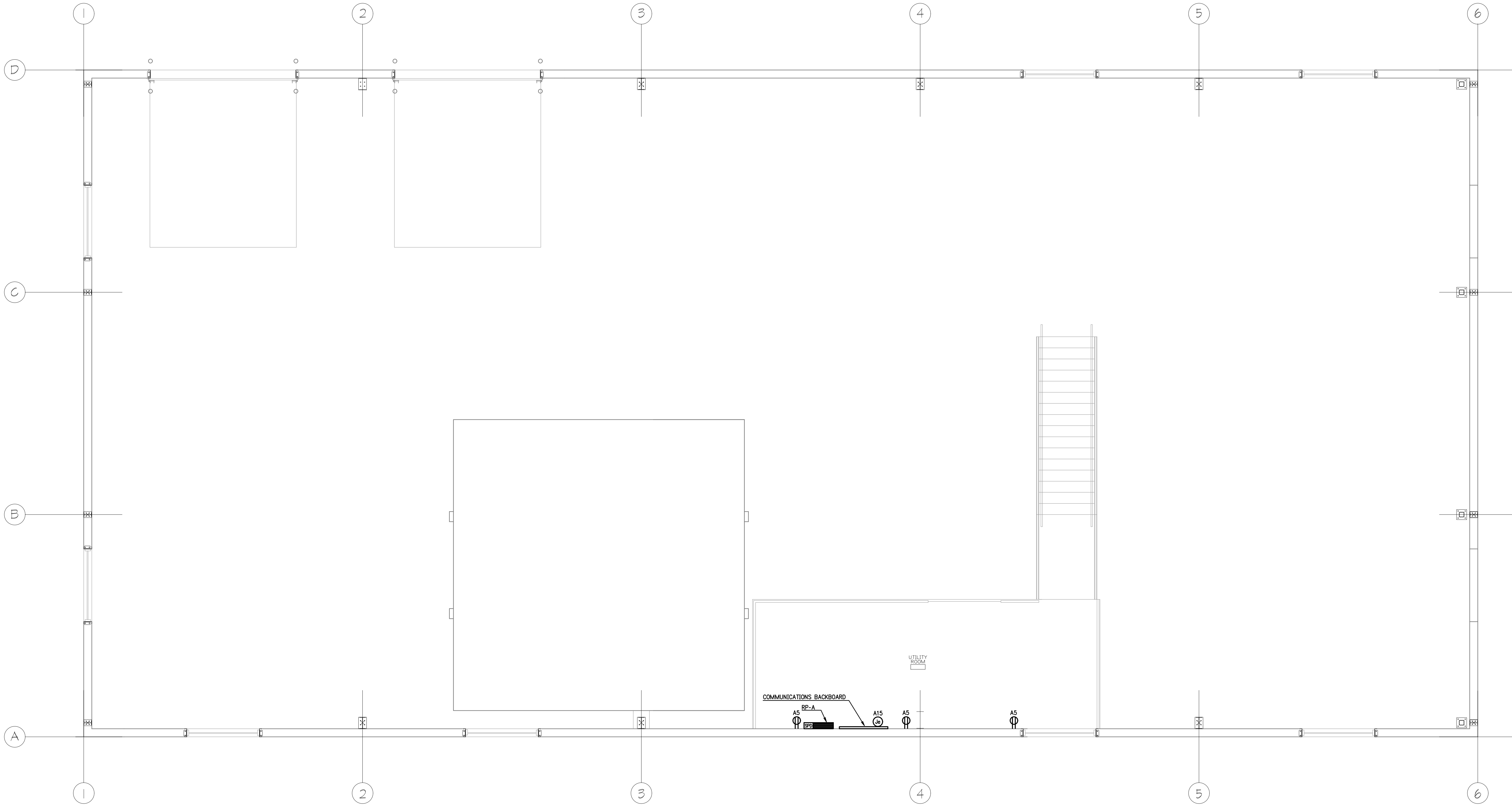
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E-5

5 OF 8



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



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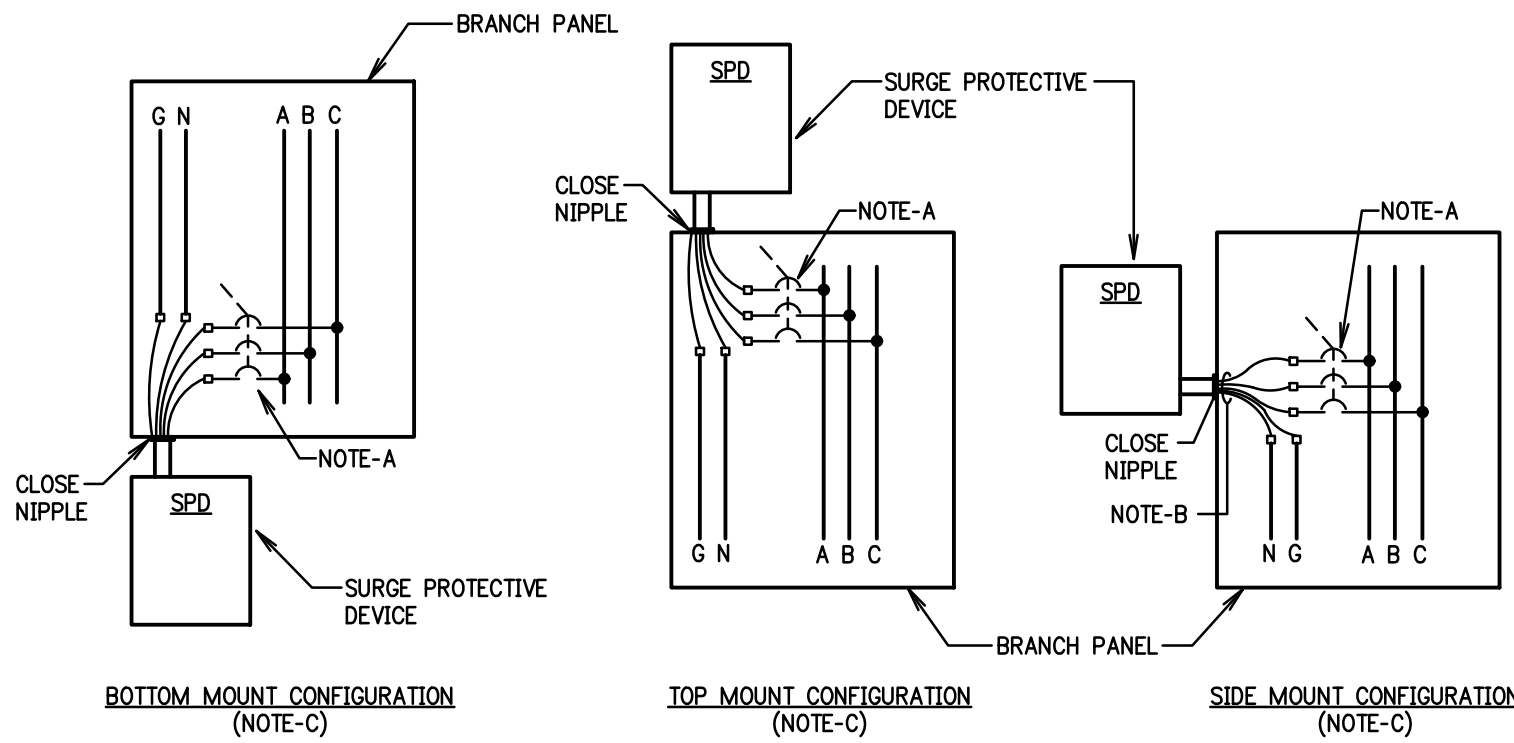
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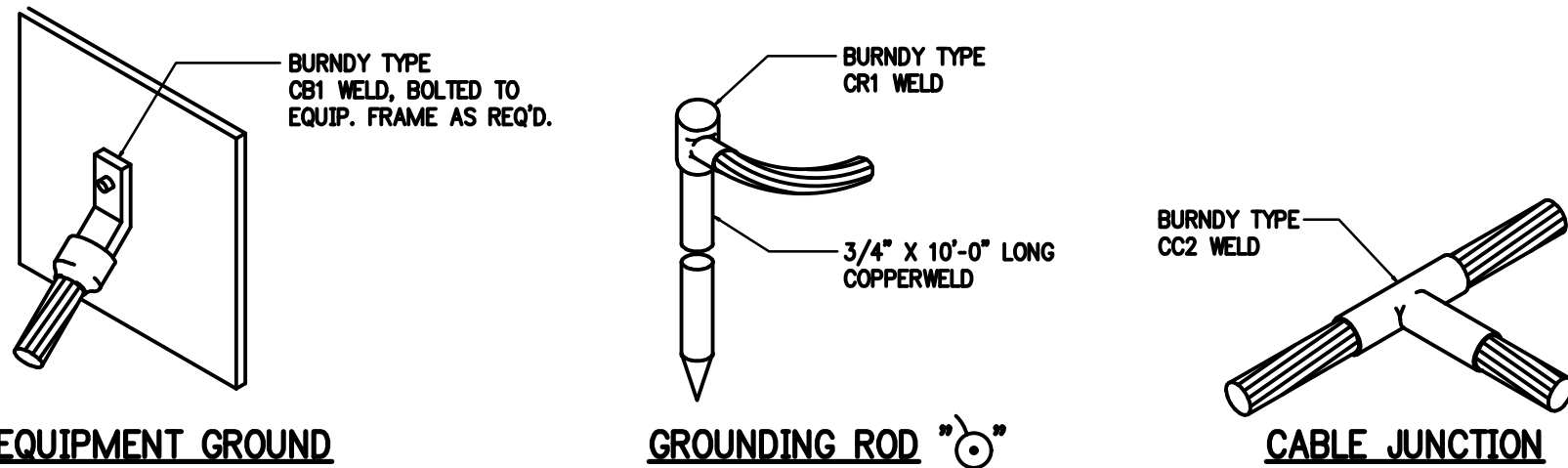


NOTES:

- A. CIRCUIT BREAKER FEEDING THE SURGE PROTECTIVE DEVICE SHALL BE INSTALLED DIRECTLY ACROSS FROM THE CONDUIT NIPPLE CONNECTING THE PANEL AND SURGE PROTECTIVE DEVICE. CIRCUIT BREAKERS SHALL BE LOCATED WITHIN PANEL AS REQUIRED TO ACCOMMODATE THIS INSTALLATION.
- B. PHASE NEUTRAL AND GROUND CONDUCTORS SHALL BE INSTALLED WITH THE SHORTEST LENGTH POSSIBLE WITH THE NEUTRAL, AND GROUND CONNECTION BEING MADE IN CLOSE PROXIMITY TO THE FEEDER CIRCUIT BREAKER. THE CONDUCTORS SHALL BE INSTALLED TWISTED TOGETHER.
- C. SIDE, BOTTOM AND TOP MOUNTING OF THE SURGE PROTECTIVE DEVICE ARE ACCEPTABLE. CONTRACTOR SHALL FIELD VERIFY BEST LOCATION WITH PANEL LAYOUT.
- D. FLUSH MOUNTED PANELS SHALL HAVE THE SURGE PROTECTIVE DEVICE MOUNTED WITHIN THE PANEL.

SURGE PROTECTIVE DEVICE INSTALLATION DETAIL

SCALE: NONE

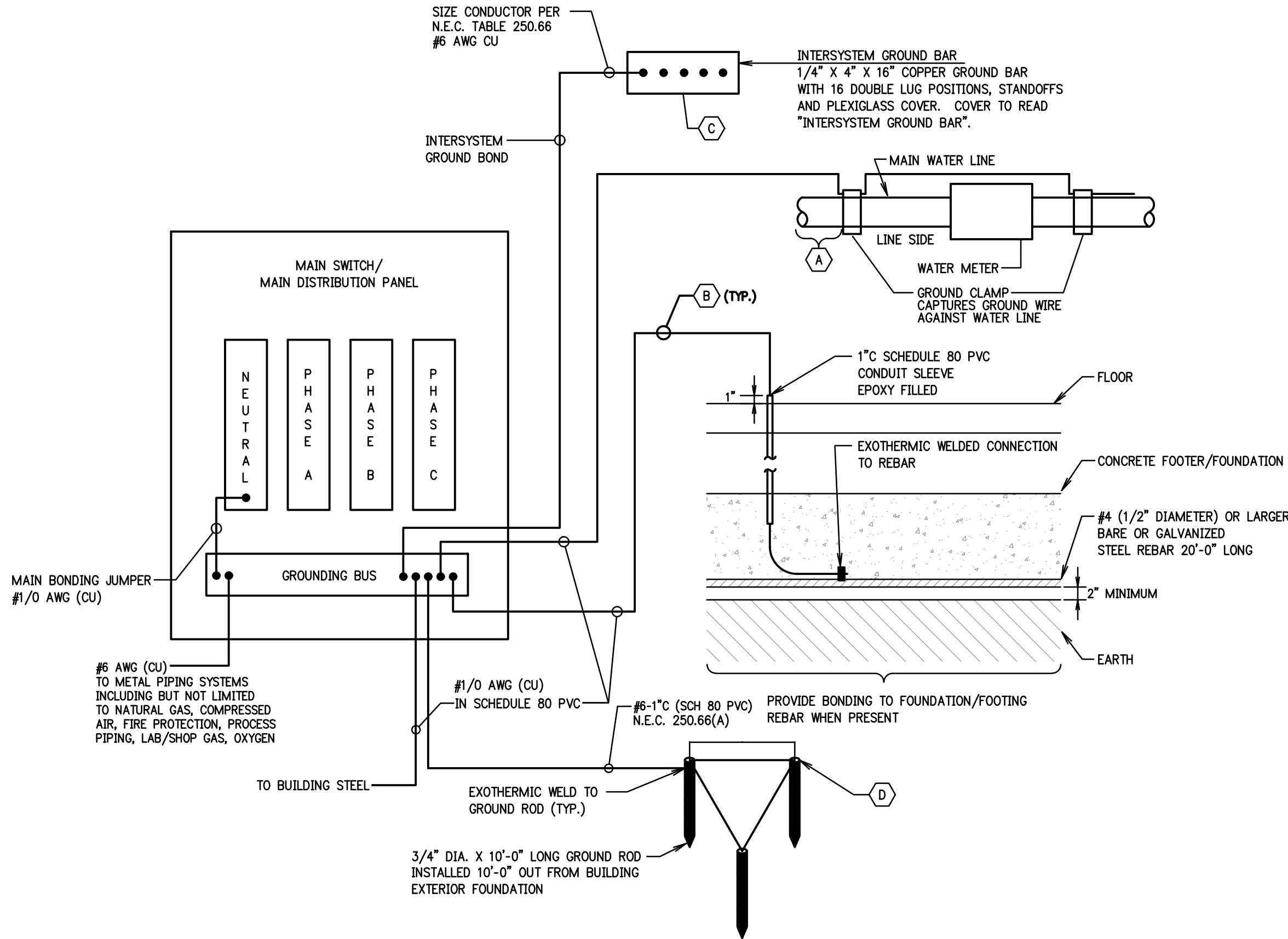


GROUNDING NOTES:

1. GROUNDING CABLE SHALL BE LAID SLACK A MINIMUM OF 18\"/>

GROUNDING DETAIL

SCALE: NONE

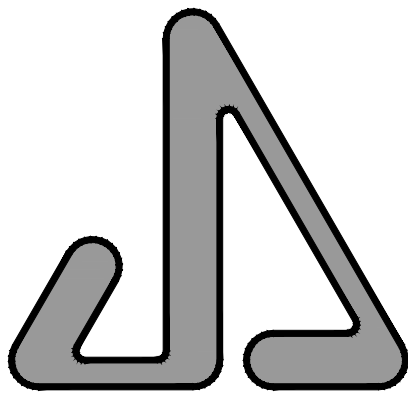


MAIN SERVICE GROUNDING NOTES:

- A. CONDUCTOR TO BE CLAMPED TO LINE SIDE OF MAIN WATER LINE WITHIN 5\"/>

MAIN SERVICE GROUNDING DETAIL

SCALE: NONE



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DETAILS

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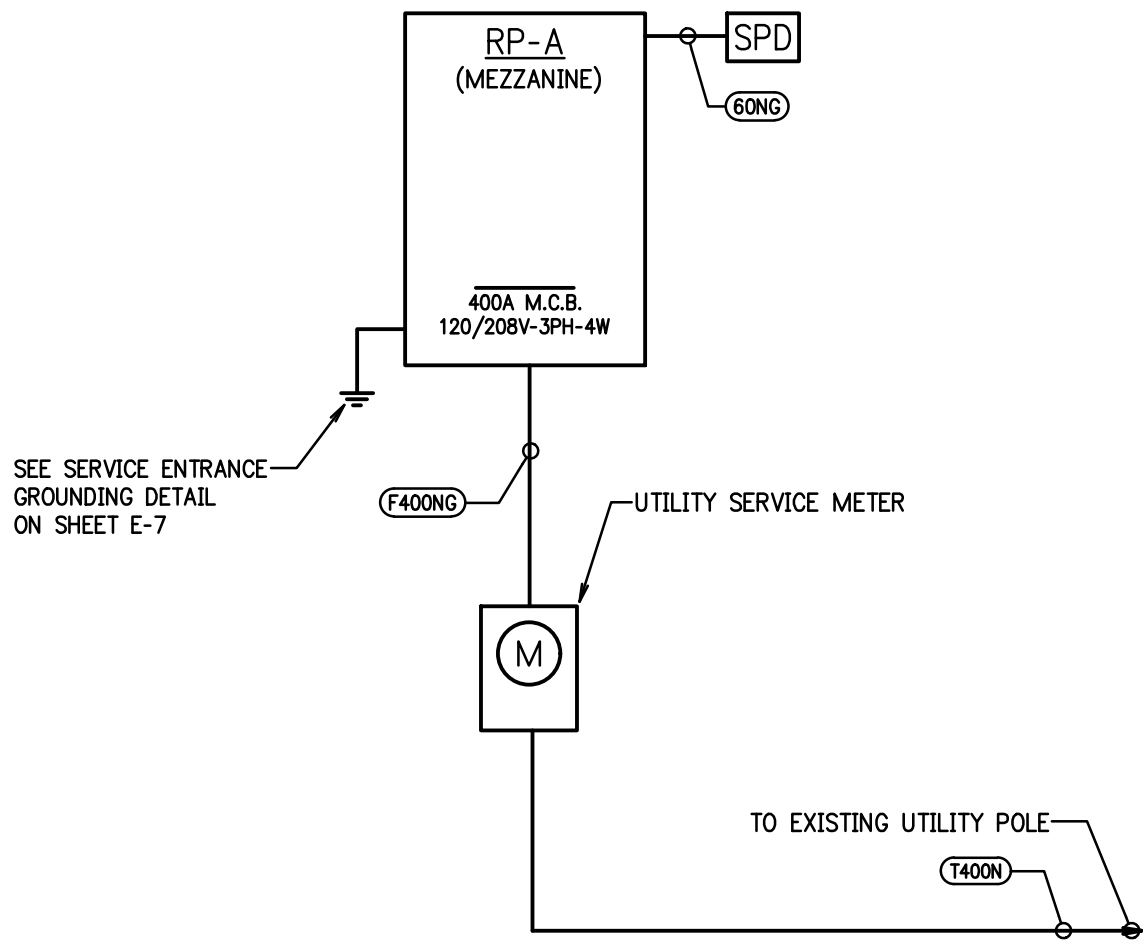
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E-7

7 OF 8

SERVICE ENTRANCE FEEDER SCHEDULE WITHOUT GROUND					
SERVICE ENTRANCE FEEDERS			GROUNDING ELECTRODE CONDUCTOR (CU) (T250.66)	ACTUAL AMPACITY (NEC T310.16 75C)	
MARK	3 PHASE-4 WIRE WITHOUT GROUND			COPPER	ALUMINUM
	COPPER	ALUMINUM			
(T20N)	4#12 - 1°C		#8	20A	
(T30N)	4#10 - 1°C		#8	30A	
(T50N)	4#8 - 1°C		#8	50A	
(T60N)	4#6 - 1°C		#8	65A	
(T80N)	4#4 - 2°C		#8	85A	
(T100N)	4#2 - 2°C	4#1 - 2°C	#8	115A	100A
(T125N)	4#1 - 2°C	4#2/0 - 2°C	#6	130A	135A
(T150N)	4#1/0 - 2°C	4#3/0 - 2°C	#6	150A	155A
(T175N)	4#2/0 - 2°C	4#4/0 - 2°C	#4	175A	180A
(T200N)	4#3/0 - 3°C	4#250kcmil - 3°C	#4	200A	205A
(T225N)	4#4/0 - 3°C	4#300kcmil - 3°C	#2	230A	230A
(T250N)	4#250kcmil - 3°C	4#350kcmil - 3°C	#2	255A	250A
(T300N)	4#350kcmil - 4°C	4#500kcmil - 4°C	#2	310A	310A
(T400N)	4#600kcmil - 4°C	2(4#250kcmil - 4°C)	#1/0	420A	410A
(T500N)	2(4#250kcmil - 4°C)	2(4#350kcmil - 4°C)	#1/0	510A	500A
(T600N)	2(4#350kcmil - 4°C)	2(4#500kcmil - 4°C)	#2/0	620A	620A
(T800N)	2(4#600kcmil - 4°C)	3(4#400kcmil - 4°C)	#3/0	840A	810A
(T1000N)	3(4#400kcmil - 4°C)	3(4#600kcmil - 4°C)	#3/0	1005A	1020A
(T1200N)	4(4#350kcmil - 4°C)	4(4#500kcmil - 4°C)	#3/0	1240A	1240A
(T1600N)	4(4#600kcmil - 4°C)	6(4#400kcmil - 4°C)	#3/0	1680A	1620A
(T2000N)	5(4#600kcmil - 4°C)	6(4#600kcmil - 4°C)	#3/0	2100A	2040A



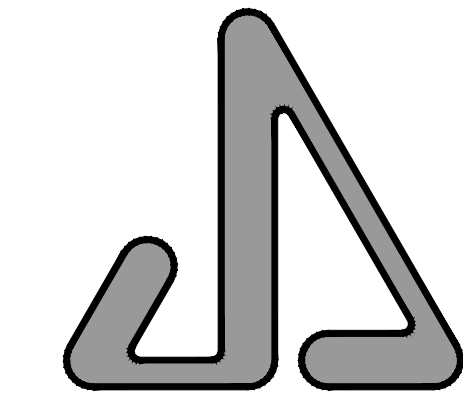
PANEL RISER DIAGRAM

SCALE: NONE

(CONTRACTOR SHALL COORDINATE NEW SERVICE WITH UTILITY COMPANY)

FEEDER SCHEDULE					
MARK	1PH - 2 WIRE W/ GROUND	MARK	1PH OR 3PH - 3 WIRE W/ GROUND	MARK	3PH - 4 WIRE W/ GROUND
(20SG)	2#12, 1#12G - 1/2°C	(20G)	3#12, 1#12G - 1/2°C	(20NG)	4#12, 1#12G - 1/2°C
(30SG)	2#10, 1#10G - 1/2°C	(30G)	3#10, 1#10G - 1/2°C	(30NG)	4#10, 1#10G - 3/4°C
(50SG)	2#8, 1#10G - 1°C	(50G)	3#8, 1#10G - 1°C	(50NG)	4#8, 1#10G - 1°C
(60SG)	2#6, 1#10G - 1°C	(60G)	3#6, 1#10G - 1°C	(60NG)	4#6, 1#10G - 1-1/4°C
(80SG)	2#4, 1#8G - 1°C	(80G)	3#4, 1#8G - 1°C	(80NG)	4#4, 1#8G - 1-1/4°C
(100SG)	2#2, 1#8G - 1-1/4°C	(100G)	3#2, 1#8G - 1-1/4°C	(100NG)	4#2, 1#8G - 1-1/4°C
		(125G)	3#1, 1#6G - 1-1/4°C	(125NG)	4#1, 1#6G - 1-1/2°C
		(150G)	3#1/0, 1#6G - 1-1/2°C	(150NG)	4#1/0, 1#6G - 1-1/2°C
		(175G)	3#2/0, 1#6G - 1-1/2°C	(175NG)	4#2/0, 1#6G - 2°C
		(200G)	3#3/0, 1#6G - 2°C	(200NG)	4#3/0, 1#6G - 2°C
		(225G)	3#4/0, 1#4G - 2°C	(225NG)	4#4/0, 1#4G - 2-1/2°C
		(250G)	3#250kcmil, 1#4G - 2-1/2°C	(250NG)	4#250kcmil, 1#4G - 2-1/2°C
		(300G)	3#350kcmil, 1#4G - 2-1/2°C	(300NG)	4#350kcmil, 1#4G - 3°C
		(400G)	3#500kcmil, 1#2G - 3°C	(400NG)	4#500kcmil, 1#2G - 3-1/2°C
		(F400G)	3#600kcmil, 1#2G - 3-1/2°C	(F400NG)	4#600kcmil, 1#2G - 3-1/2°C
		(500G)	2(3#250kcmil, 1#2G - 2-1/2°C)	(500NG)	2(4#250kcmil, 1#2G - 2-1/2°C)
		(600G)	2(3#350kcmil, 1#1G - 2-1/2°C)	(600NG)	2(4#350kcmil, 1#1G - 3°C)
		(800G)	2(3#500kcmil, 1#1/0G - 3°C)	(800NG)	2(4#500kcmil, 1#1/0G - 3-1/2°C)
		(F800G)	2(3#600kcmil, 1#1/0G - 3-1/2°C)	(F800NG)	2(4#600kcmil, 1#1/0G - 3-1/2°C)
		(1000G)	3(3#400kcmil, 1#2/0G - 3°C)	(1000NG)	3(4#400kcmil, 1#2/0G - 3°C)
		(1200G)	4(3#350kcmil, 1#3/0G - 2-1/2°C)	(1200NG)	4(4#350kcmil, 1#3/0G - 3°C)
		(1600G)	4(3#600kcmil, 1#4/0G - 3-1/2°C)	(1600NG)	4(4#600kcmil, 1#4/0G - 3-1/2°C)
		(2000G)	5(3#600kcmil, 1#250kcmilG - 3-1/2°C)	(2000NG)	5(4#600kcmil, 1#250kcmilG - 4°C)

RP-A											
NOTES	400A-M.C.B.		VOLTAGE: 120/208V-3PH-4W						SURFACE		NOTES
	LOAD DESCRIPTION		LOAD	BKR AMP	BKR No	PH	BKR No	BKR AMP	LOAD	LOAD DESCRIPTION	
	O.H. DOOR		1,656	20	1	A	2	20	1,190	LTG. - INTERIOR	
	O.H. DOOR		1,656	20	3	B	4	20	1,214	LTG. - INTERIOR	
	RECEPT. - FIRST FLOOR, MEZZANINE		800	20	5	C	6	20	1,720	LTG. - INTERIOR	
	RECEPT. - FIRST FLOOR		800	20	7	A	8	20	150	LTG. - EXTERIOR	
	RECEPT. - FIRST FLOOR		800	20	9	B	10	20	1,285		
	RECEPT. - FIRST FLOOR		800	20	11	C	12	-	1,285	F1	
	RECEPT. - FIRST FLOOR		800	20	13	A	14	3P	1,285		
	COMMUNICATIONS BACKBOARD		1,000	20	15	B	16	20	580	IRH-1, IRH-2, IRH-3, UH-1	
	SPARE			20	17	C	18	20		SPARE	
	SPARE			20	19	A	20	20		SPARE	
	SPARE			20	21	B	22	20		SPARE	
	SPARE			20	23	C	24	20		SPARE	
	SPARE			20	25	A	26	20		SPARE	
	SPARE			20	27	B	28	20		SPARE	
	SPARE			20	29	C	30	20		SPARE	
	SPARE			20	31	A	32	20		SPARE	
	SPARE			20	33	B	34	20		SPARE	
	SPARE			20	35	C	36	20		SPARE	
	SPARE			20	37	A	38	20		SPARE	
	SPARE			20	39	B	40	20		SPARE	
	SPARE			20	41	C	42	20		SPARE	
	SPARE			20	43	A	44	20		SPARE	
	SPARE			20	45	B	46	20		SPARE	
	SPARE			20	47	C	48	20		SPARE	
			60	49	A	50	20			SPARE	
			-	51	B	52	20			SPARE	
			3P	53	C	54	20			SPARE	
TOTAL CONNECTED LOAD:			17,521 W		49 AMPS				2025-03-03		



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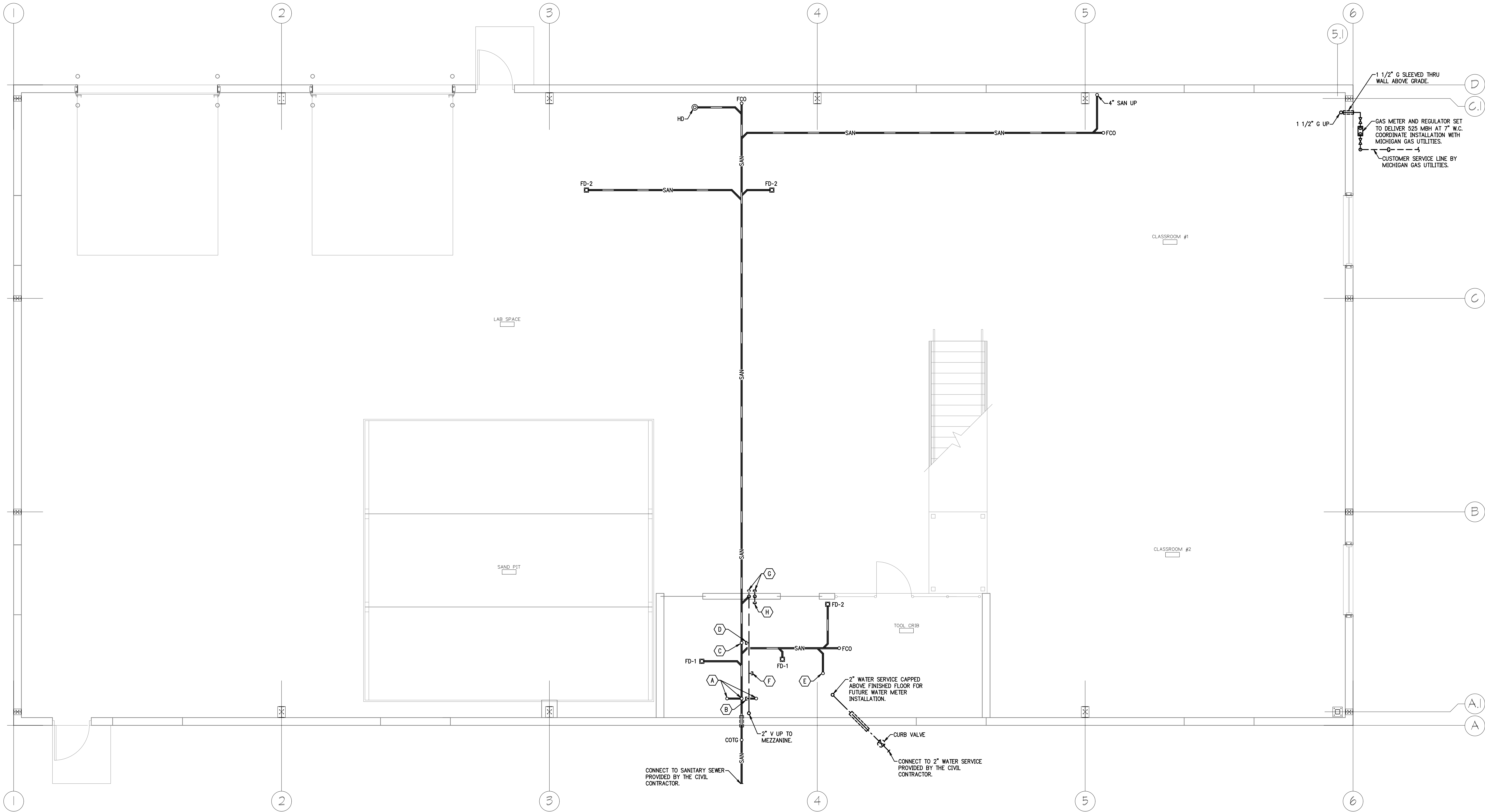
PANEL SCHEDULE,
PANEL RISER
DIAGRAM,
FEEDER SCHEDULE

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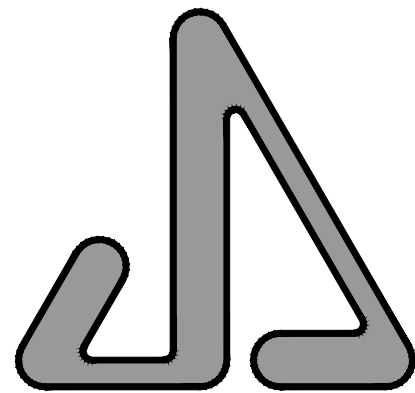
E-8



FIRST FLOOR PLAN - PLUMBING
SCALE: 1/4"=1'-0"



- PLAN NOTES:
- A. 3" SANITARY AND 2" VENT CAPPED ABOVE FINISHED FLOOR FOR FUTURE WATER CLOSETS.
 - B. 2" VENT CAPPED BELOW MEZZANINE FOR FUTURE WATER CLOSETS.
 - C. 2" SANITARY CAPPED ABOVE FINISHED FLOOR FOR FUTURE LAVATORIES.
 - D. 1/2" VENT CAPPED BELOW MEZZANINE FOR FUTURE LAVATORIES.
 - E. 2" SANITARY CAPPED ABOVE FINISHED FLOOR FOR FUTURE URINAL.
 - F. 2" VENT CAPPED BELOW MEZZANINE FOR FUTURE URINAL.
 - G. 1 1/2" VENT AND 1/2" CW ROUGH-IN FOR FUTURE WATER COOLER.
 - H. 1/2" CW CAPPED BELOW MEZZANINE FOR FUTURE WATER COOLER.



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FIRST FLOOR
PLAN
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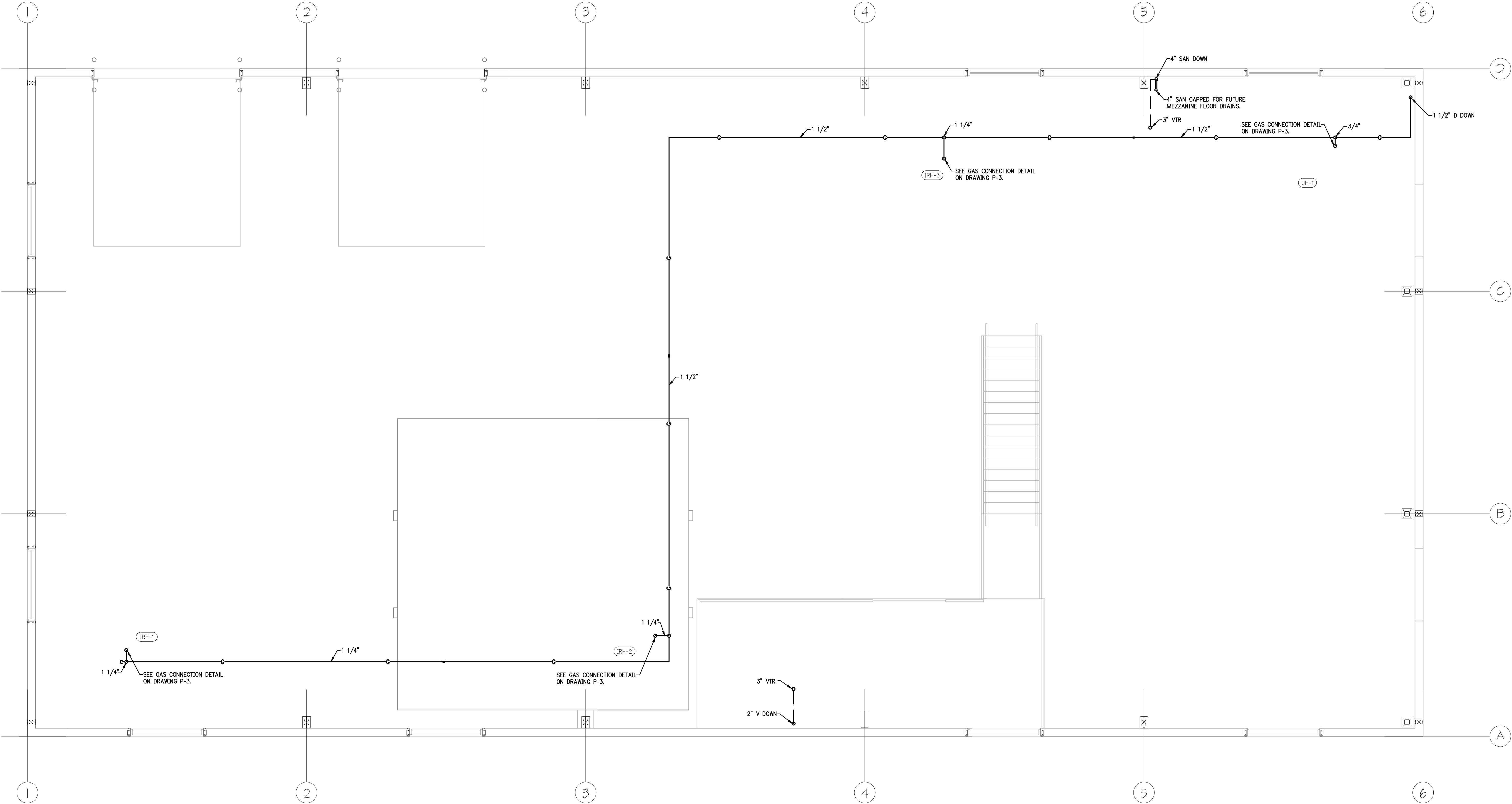
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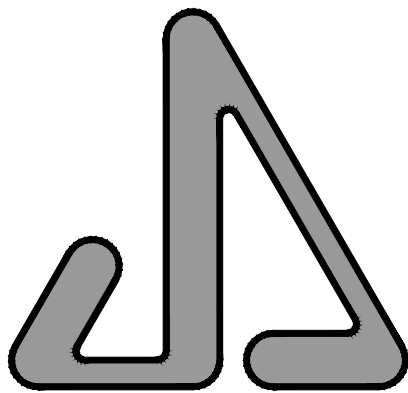
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P-1

1 OF 3



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



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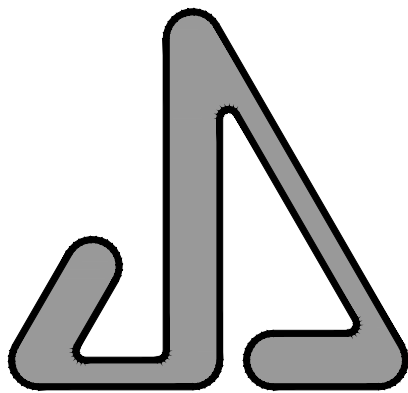
MEZZANINE
PLAN
PLUMBING

NOT FOR CONSTRUCTION

03-03-2025	BIDS
DATE:	ISSUED FOR:
DRAWN	BPM
REVIEW'D	JDS

202411

P-2



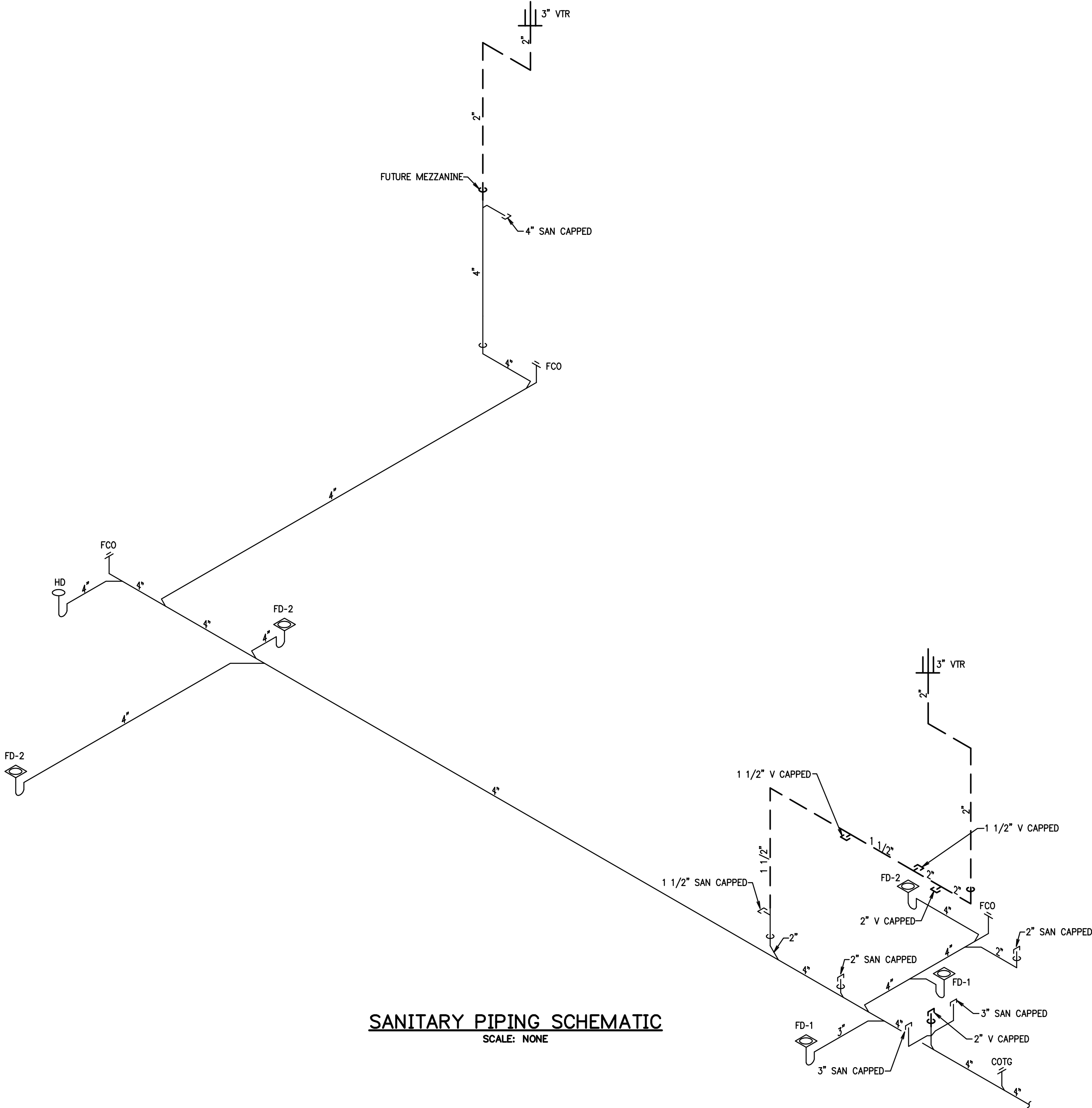
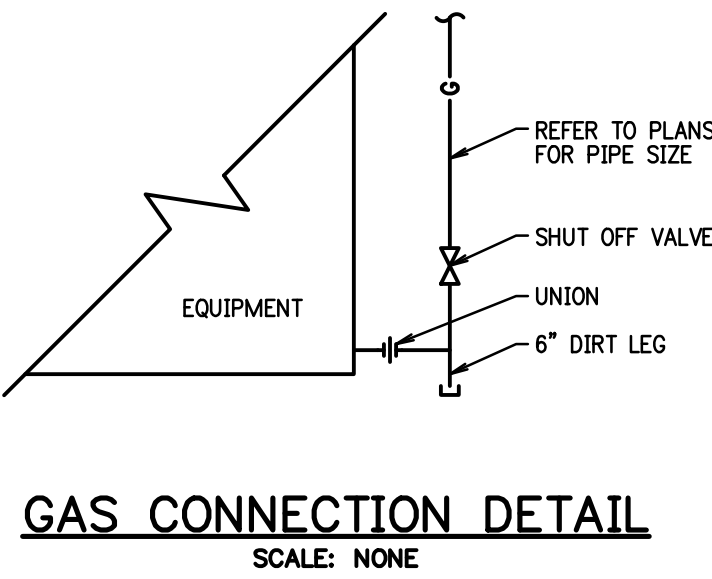
JAMES S. JACOBS ARCHITECTS, PLLC
25 WASHINGTON STREET
MONROE, MICHIGAN 48161
TELE: (734) 241-7933
FAX: (734) 241-1181
EMAIL: jim@jsjacobsarch.com

JDRM Engineering
Mechanical | Electrical | Plumbing | Technology | Safety
5604 N. Main St. Suite 200
Sylvania, Ohio 43560
PH: (419) 824-2400
FAX (419) 824-2409
www.jdrm.com

PLUMBING FIXTURE SCHEDULE					
MARK	DESCRIPTION	CW	HW	WASTE	VENT
WC-1	FUTURE WATER CLOSET - FLOOR SET - TANK TYPE - (ADA) TRIP LEVER ON LEFT SIDE OF TANK	1/2"	---	3"	1 1/2"
WC-2	FUTURE WATER CLOSET - FLOOR SET - TANK TYPE - (ADA) TRIP LEVER ON RIGHT SIDE OF TANK	1/2"	---	3"	1 1/2"
UR-1	FUTURE URINAL - WALL HUNG - FLUSH VALVE	1"	---	2"	1 1/2"
LV-1	FUTURE LAVATORY - WALL HUNG (ADA) WITH ASSE 1070 APPROVED WATER-TEMPERATURE LIMITING DEVICE	1/2"	1/2"	1 1/2"	1 1/2"
EW-1	FUTURE ELECTRIC WATER COOLER WITH BOTTLE FILLER - WALL HUNG H/L/O (ADA)	1/2"	---	1 1/2"	1 1/2"
FD-1	FLOOR DRAIN WITH BARRIER-TYPE TRAP SEAL PROTECTION DEVICE	---	---	3"	1 1/2"
FD-2	FLOOR DRAIN WITH FUNNEL AND BARRIER-TYPE TRAP SEAL PROTECTION DEVICE	---	---	4"	2"
HD	HUB DRAIN WITH BARRIER-TYPE TRAP SEAL PROTECTION DEVICE	---	---	4"	2"

PLUMBING LEGEND

SOIL , WASTE OR SANITARY SEWER - ABOVE FLOOR	SAN	
SOIL , WASTE OR SANITARY SEWER - BELOW FLOOR	SAN	
VENT	V	
DOMESTIC COLD WATER	CW	
DOMESTIC HOT WATER	HW	
NATURAL GAS - 1/2 PSIG OR LESS	G	
INDIRECT OR CONDENSATE DRAIN	D	
WATER HAMMER ARRESTER (WHA, PDI 'A' - UNLESS OTHERWISE INDICATED)	WHA	
PLUMBING DRAINAGE INSTITUTE 'SIZE'	PDI	
VENT THRU ROOF	VTR	
CLEANOUT PLUG	CO	
FLOOR CLEANOUT	FCO	
CLEANOUT TO GRADE	COTG	
MIXING VALVE		
SHUTOFF VALVE		
CHECK VALVE		
THERMOMETER		



SITE IMPROVEMENTS &
NEW BUILDING FOR:

**UA LOCAL 671
MONROE PLUMBERS
& PIPEFITTERS**
313 HARBOR AVENUE
MONROE, MI 48162

PROPERTY OWNER CONTACT:
MIKE JEWELL, BUSINESS MANAGER
309 DETROIT AVENUE
MONROE, MI 48162
TELEPHONE: 734-242-5711
EMAIL: mike@ulocal671.com

PLUMBING
DETAILS

NOT FOR CONSTRUCTION

03-03-2025	BIDS
DATE:	ISSUED FOR:
DRAWN	BPM
REVIEW'D	JDS
202411	

P-3

TITAN STEEL STRUCTURES

MONROE PLUMBERS & PIPEFITTERS

MONROE, MI 48162

FO# 29122

Building 1 of 1



INDEX OF DRAWINGS

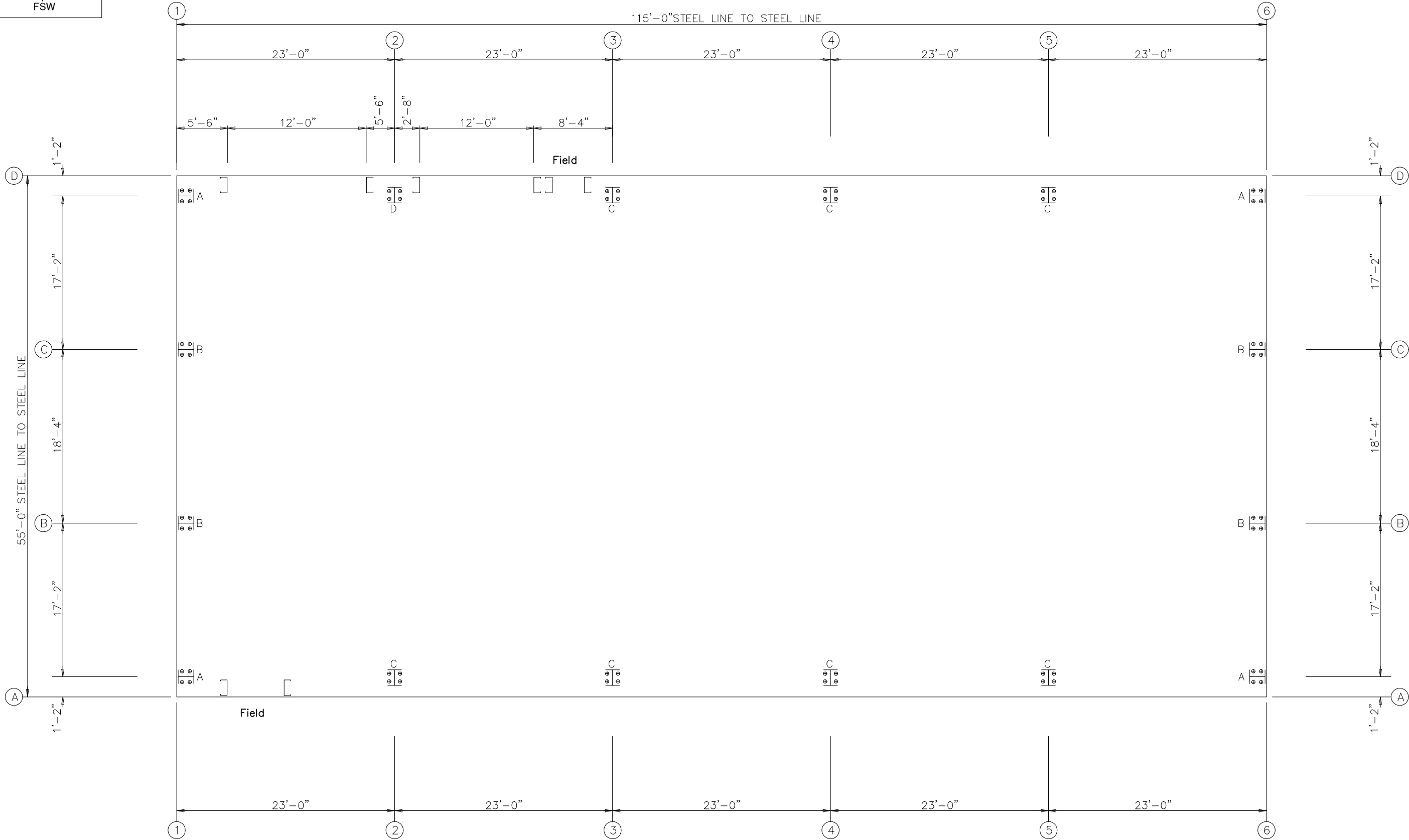
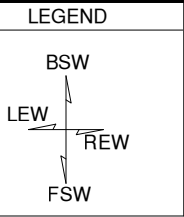
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	Cover Page	0
1	Specifications	0
2	Anchor Bolt Plan	0
3	Rigid Frame Reactions	0
4	EndWall Reactions, Design Criteria	0
5	Anchor Bolt Details	0
6	Roof Framing	0
7	Roof Panel Layout	0
8	Rigid Frame #1	0
9	Rigid Frame #2	0
10	Front Sidewall Framing	0

Page	Drawing Title	REV NO.
11	Back Sidewall Framing	0
12	Left Endwall Framing	0
13	Right Endwall Framing	0
14	Detail Page #1	0
15	Detail Page #2	0
16	Detail Page #3	0
17		0
18		0
19		0
20		0
21		0

Page	Drawing Title	REV NO.
22		0
23		0
24		0
25		0
26		0
27		0
28		0
29		0
30		0
31		0
32		0

<div>GENERAL</div> <div>All materials included in the Metal Building System are in accordance with the manufacturer's standard materials and details unless otherwise specified on the order documents. (MBMA 2018 Metal Building Systems Manual, Part IV, Section 2.1)</div>		<div>MATERIALS</div> <table><tr><td>Hot-Rolled Mill Sections</td><td>A 36, A 572, A 992</td><td>ASTM DESIGNATION</td><td>Fy = 36 ksi and/or 50 ksi</td><td>MATERIALS</td><td>Roof and Wall Sheeting</td><td>ASTM DESIGNATION</td><td>A 792, Gr. 50 Class 1 A 792, Gr. 80</td><td>MINIMUM YIELD</td><td>Fy = 50 ksi Fy = 80 ksi</td></tr><tr><td>Structural Steel Plates</td><td>A 572, A 1011</td><td></td><td>Fy = 55 ksi</td><td></td><td>Mild Steel Bolts</td><td></td><td>A 307</td><td></td><td>Fy = 36 ksi</td></tr><tr><td>Structural Steel Bars</td><td>A 572 or A 529</td><td></td><td>Fy = 55 ksi</td><td></td><td>High Strength Bolts</td><td></td><td>F3125: A 325-N A 490-N</td><td></td><td>Fy = 92 or 81 ksi N/A</td></tr><tr><td>Cold Formed Light Gauge Shapes</td><td>A 653 Gr. 55</td><td></td><td>Fy = 55 ksi</td><td></td><td>Anchor Rods (If supplied)</td><td></td><td>A 36</td><td></td><td>Fy = 36 ksi</td></tr><tr><td>Cable Bracing</td><td>A 475, EHS</td><td></td><td>N/A</td><td></td><td>Pipe and Hollow Structural Sections</td><td></td><td>A 500 Gr. B</td><td></td><td>Fy = 42 ksi, 46 ksi</td></tr><tr><td>Rod Bracing</td><td>A 36</td><td></td><td>Fy = 36 ksi</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>		Hot-Rolled Mill Sections	A 36, A 572, A 992	ASTM DESIGNATION	Fy = 36 ksi and/or 50 ksi	MATERIALS	Roof and Wall Sheeting	ASTM DESIGNATION	A 792, Gr. 50 Class 1 A 792, Gr. 80	MINIMUM YIELD	Fy = 50 ksi Fy = 80 ksi	Structural Steel Plates	A 572, A 1011		Fy = 55 ksi		Mild Steel Bolts		A 307		Fy = 36 ksi	Structural Steel Bars	A 572 or A 529		Fy = 55 ksi		High Strength Bolts		F3125: A 325-N A 490-N		Fy = 92 or 81 ksi N/A	Cold Formed Light Gauge Shapes	A 653 Gr. 55		Fy = 55 ksi		Anchor Rods (If supplied)		A 36		Fy = 36 ksi	Cable Bracing	A 475, EHS		N/A		Pipe and Hollow Structural Sections		A 500 Gr. B		Fy = 42 ksi, 46 ksi	Rod Bracing	A 36		Fy = 36 ksi							<div>MINIMUM YIELD</div>	
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<div>DESIGN RESPONSIBILITY</div> <div>The manufacturer is responsible only for the structural design of the Metal Building System it sells to the purchaser / customer. Neither the manufacturer nor the manufacturer's engineer is the design professional or engineer of record for the construction project. The manufacturer is not responsible for the design of any component or materials not sold by it, or their interface and connection with Metal Building System unless such design responsibility is specifically required by the order documents. (MBMA 2018 Metal Building Systems Manual, Part IV, Section 3.1) CSA A660 Manufacturer's Information: Corle Building Systems – CORLEO</div>		<div>CORRECTION OF ERRORS AND REPAIRS</div> <div>The correction of minor misfits by the use of drift pins to draw the components into line, shimming, moderate amounts of reaming, chipping, and cutting, and the replacement of minor shortages of material are a normal part of erection and are not subject to claim. (AISC Code of Standard Practice for Steel Buildings and Bridges, June 15, 2016, Section 7.14; CISC Code of Standard Practice, December 2015, Clause 7.15; MBMA 2018 Metal Building Systems Manual, Part IV, Section 6.10).</div>		<div>DESIGN RESPONSIBILITY</div>																																																													
<div>FOUNDATION DESIGN AND ANCHOR BOLTS</div> <div>The manufacturer is not responsible for the design, materials, and workmanship of the foundation. The anchor bolt plans prepared by the manufacturer are intended to show only the anchor bolt location, diameter (based on ASTM A36 bolts), and quantity required to connect the Metal Building System to the foundation. (MBMA 2018 Metal Building Systems Manual, Part IV, Section 3.2.2). It is the responsibility of the end customer to ensure that adequate provisions are made for specifying bolt embedment, bearing angles, tie rods, and / or associated items embedded in the concrete foundation, as well as foundation design based on the loads imposed by the Metal Building System, or other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 2018 Metal Building Systems Manual, Part IV, Section 3.2.2) U.S.–Anchor bolts shall be accurately set to a tolerance of +/- 1/8 in both elevation and location (AISC Code of Standard Practice for Steel Buildings and Bridges). Canada –Anchor bolts shall be accurately set in accordance with CISC Code of Standard Practice, December 2015, Clause 7.8.1</div>		<div>DRAWING DISCREPANCIES</div> <div>In case of discrepancies between the manufacturers steel plans and plans for other trades, the manufacturers steel plans govern. (AISC Code of Standard Practice for Steel Buildings and Bridges, June 15, 2016, Section 3.3; CISC Code of Standard Practice, December 2015, Clause 3.4; MBMA 2018 Metal Building Systems Manual, Part IV, Section 3.1).</div>		<div>FOUNDATION DESIGN AND ANCHOR BOLTS</div>																																																													
<div>ADJACENT EXISTING BUILDINGS</div> <div>The manufacturer does not investigate the influence of the Metal Building System on adjacent existing buildings or structures. The end customer assures that such buildings and structures are adequate to resist snow loads or other conditions as a result of the presence of the Metal Building System. (MBMA 2018 Metal Building Systems Manual, Part IV, Section 3.2.5)</div>		<div>DELIVERIES</div> <div>Delivery of any material by the manufacturers carrier, a common carrier, or to purchasers/ customers own leased, chartered, or authorized conveyance shall constitute delivery to builder, and thereafter, such material shall be at builders risk. If builder chooses to use its own, or private carrier, it shall be solely responsible for compliance with all applicable government regulations. All charges shall be borne by the builder. The manufacturers responsibility for damage or loss ceases upon delivery of shipment to carrier. The manufacturer will endeavor to deliver on the required date. The manufacturers truck is not considered as being late if deliveries are between 8am – 12pm (morning) and 12pm – 5pm (afternoon). However, the manufacturer cannot be held responsible for circumstances beyond our control. For deliveries via the manufacturers truck, the manufacturer will only honor claims that were approved by the customer service department at the time of delivery. For deliveries via contract carriers, it is the responsibility of the customer to file claims with the carrier. The manufacturer cannot assume any liability for the claim.</div>		<div>ADJACENT EXISTING BUILDINGS</div>																																																													
<div>SHOP-PRIMED STEEL</div> <div>All structural members of the Metal Building System not fabricated of corrosion resistant material or protected by corrosion resistant coating are painted with one coat of shop primer. All surfaces to receive shop primer are cleaned of loose rust, loose mill scale and other foreign matter by using, as a minimum the hand tool cleaning method SSPC–SP2 (Steel Manual, Structures Painting Council) prior to painting. The coat of shop primer is intended to protect the steel framing for only a short period of exposure to ordinary atmospheric conditions. Shop-primed steel should be placed on blocking to prevent contact with the ground, and so positioned as to minimize water holding pockets, dust, mud an other contamination of the primer film. Repairs of damage to primed surfaces and or removal of foreign material due to improper field storage or site conditions are not the responsibility of the manufacturer. (CISC Code of Standard Practice, December 2015, Clauses 6.8 & 6.9; (MBMA 2018 Metal Building Systems Manual, Part IV, Section 4.2.4).</div>		<div>SHORTAGES</div> <div>The purchaser /customer should make an inspection upon arrival of all building components. The purchaser/customer must note on the freight bill any missing item(s) and notify the manufacturers customer service department immediately; otherwise, the manufacturer cannot be held responsible for any shortages. If any item is damaged, note on the bill of lading and file a claim with the freight agent. Concealed shortages must be reported to the manufacturers customer service department within the following time frames (date from receipt of first delivery), based on the project shipment size, i.e., number of truck loads used in delivery. <div>1 to 3 loads...2 weeks 4 loads and over...3 weeks The manufacturers responsibility for shortages expires at the end of these time periods.</div></div>		<div>SHOP-PRIMED STEEL</div>																																																													
<div>ERECTION-GENERAL</div> <div>The erector, by entering into contract to erect the building, holds itself out as skilled in the erection of Metal Building Systems and is responsible for complying with all applicable local, federal, and state construction and safety regulations including OSHA regulations as well as any applicable requirements of local, national, or international union rules or practices. (CISC Code of Standard Practice, December 2015, Clause 7.3; (MBMA 2018 Metal Building System Manual, Part IV, Section 6.9). The erector shall erect the Metal Building System in accordance with the erection drawings, the Erection and Detail Manual (2019), and / or the Seam-Lok Technical – Erection manual (2019) as furnished by the manufacturer. The aforementioned erection information is intended to illustrate the layout of the framing members, provide the associated connection details, and suggests sequence of erection. It is not intended to specify any particular method of erection to be followed by the erector. The erector remains solely responsible for the safety and appropriateness of all techniques and methods utilized by its crews in the erection of the Metal Building System. The erector is responsible for supplying any safety devices such as scaffolds, runways, nets, et, which may be required to safely erect the Metal Building System. (MBMA 2018 Metal Building Systems Manual, Part IV, Section 6.9) The manufacturer expressly disclaims any responsibility for injury to persons in the course of erection or for damages to the product itself. Field erection of a Pre-Engineered Metal Building, as in all construction projects, involves hazards to persons within the area of the construction and risk of damage to the property itself. Only experienced persons who are skilled and qualified in the erection of Metal Building Systems should be permitted to field-erect a building due to the hazards of this construction activity. The manufacturer is not responsible for the erection of the Metal Building System, the supply of any tools or equipment, or any other field work. The manufacturer provides no field supervision for the erection of the structure nor does the manufacturer perform any intermediate or final inspections of the Metal Building System during or after erection. The erector shall furnish temporary guys and bracing where needed for squaring, plumbing, and securing the structural framing against loads, such as wind loads acting on the exposed framing as well as loads due to erection equipment and erection operation, but not including loads resulting from the performance of work by others. Bracing furnished by the manufacturer for the Metal Building System cannot be assumed to be adequate during erection. Temporary supports such as temporary guys, braces, false work, cribbing, or other elements required for the erection operation will be determined, erected, and installed by the erector. (AISC Code of Standard Practice for Steel Buildings and Bridges, June 15, 2016, Section 7.10.3; CISC Code of Standard Practices, December 2015, Clause 1.5; MBMA 2018 Metal Buildings System Manual, Part IV, Section 6.2.1.5).</div>		<div>FABRICATION ERRORS</div> <div>The purchaser/customer is responsible for contacting the customer service department to advise the manufacturer of fabrication problems and corresponding cost estimates. The manufacturer will be responsible for providing the builder with verbal approval to proceed with appropriate field corrections. This will be done in a timely manner. IF THE BUILDER PROCEEDS WITH CORRECTIVE WORK WITHOUT THE MANUFACTURERS APPROVAL, HE DOES SO AT HIS OWN RISK. The manufacturer shall not be responsible for any claims where the purchaser/customer has not documented the problem, its correction, and reasonable costs for repair, and submitted this documentation for payment within 30 days of the occurrence.</div>		<div>ERECTION-GENERAL</div>																																																													
<div>ERECTION TOLERANCES</div> <div>U.S. ; Erection tolerances are those set forth in AISC code of standard practice except individual members are considered, plumb, level and aligned if the deviation does not exceed 1:500. (AISC Code of Standard Practice for Steel Buildings and Bridges June 15, 2016 Section 7.13.1; MBMA 2018 Metal Building Systems Manual, Part IV, Section 6.8) Canada; Erection tolerances are those set forth in CISC Code of Standard Practice except individual members are considered plumb, level and aligned if the deviation does not exceed 1:500. (CISC Handbook of Steel Construction, Eleventh Edition, Third Revised Printing, Part 1, Clause 29.3; MBMA 2018 Metal Building Systems Manual, Part IV, Section 6.8)</div>		<div>INVOICE PAYMENT</div> <div>By acceptance of the materials of services set forth in the invoice, the purchaser/customer agrees to pay the invoice amount within the time period specified on the invoice. AT NO TIME IS IT ACCEPTABLE TO DEDUCT A BACK CHARGE OR SHORTAGE FROM AN INVOICE.</div>		<div>ERECTION TOLERANCES</div>																																																													
<div>BOLT TIGHTENING</div> <div>The proper tightening and inspection of all fasteners is the responsibility of the erector (Reference RCSC for structural joints using high strength bolts; June 11, 2020). All high strength (ASTM F3125, A325, A490) bolts and nuts must be tightened by the "turn-of-the-nut" method unless otherwise specified by the end customer in the contract documents. Inspection of high strength bolt and nut installation by other than the erector must also be specified in the contract documents and the erector is responsible for ensuring that the installation procedures are compatible prior to the start of erection (CISC Handbook of Steel Construction, Eleventh Edition, Third Revised Printing, Part 1, Clause 23.7.2), (MBMA 2018Metal Building Systems Manual, Part IV, Section 6.9).</div>		<div>SAFETY PROCEDURES</div> <div>The manufacturer is committed to manufacturing a quality product that can be erected safely. Although good job site practices and a commitment to safety by the erector are beyond the control of the manufacturer, the manufacturer highly recommends the erector provide good, safe working conditions on the job site. The erector should follow all local, state, and federal health and safety regulations at all times. Accident prevention practices should be implemented and each employee should know emergency procedures. The manufacturer also recommends daily meetings to discuss erection safety procedures. For additional information concerning federal health and safety regulations, contact the occupational safety and health administration (osha). <div>U.S. Department of Labor Occupational Safety and Health Administration 200 Constitution Avenue, N.W. Washington, DC 20210 www.osha.gov</div></div>		<div>BOLT TIGHTENING</div>																																																													

<div>MONROE PLUMBERS & PIPEFITTERS</div>		<div>ST / PV: MI</div>		<div>REVISION HISTORY</div>		<div>DATE</div>	
<div>CITY: MONROE</div>		<div>REV.</div>		<div>DESCRIPTION</div>			
<div>DRAWING STATUS</div>		<div>FOR APPROVAL: THESE DRAWINGS, BEING FOR APPROVAL, ARE BY DEFINITION NOT FINAL, AND ARE FOR CONCEPTUAL REPRESENTATION ONLY. THEIR PURPOSE IS TO CONFIRM PROPER INTERPRETATION OF THE PROJECT DOCUMENTS. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.</div>		<div>FOR PERMIT: THESE DRAWINGS, BEING FOR PERMIT, ARE BY DEFINITION NOT FINAL. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.</div>		<div>FOR CONSTRUCTION: FINAL DRAWINGS.</div>	
<div>STATE OF MICHIGAN T. JAMES EISENMAN, JR. ENGINEER No. 47101</div>		<div>9/27/24</div>		<div>PAGE 1</div>		<div>OF 16</div>	



ANCHOR BOLT PLAN
NOTE: All Base Plates @ 100'-0" (U.N.)
Finished Floor @ 100'-0"

DRAWING IS NOT TO SCALE



MONROE PLUMBERS & PIPEFITTERS

55'-0" x 115'-0" x 18'-0"

DATE: 9/ 6/24 REVISION: 0

ENG: IRM DWN: BJC APPD: IRM

F.O. 29122

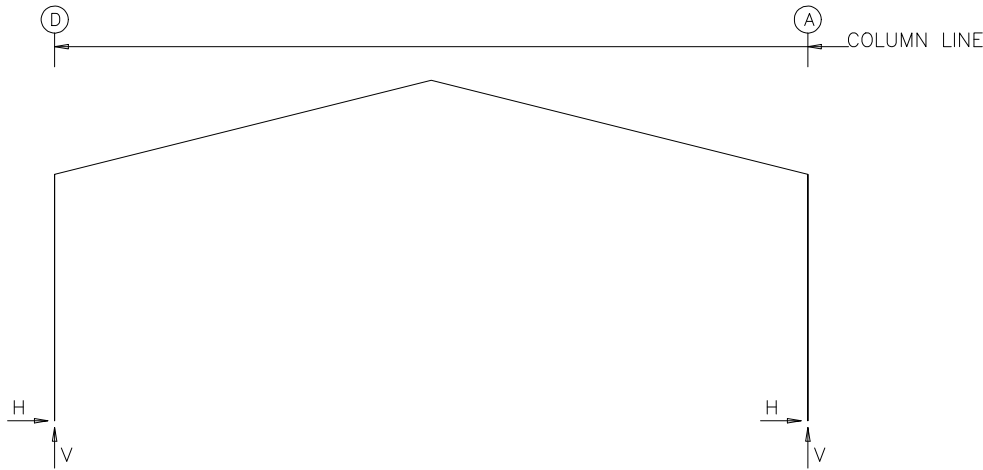
MONROE PLUMBERS & PIPEFITTERS

CITY: MONROE		ST / PV: MI	
DRAWING STATUS		REVISION HISTORY	
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FOR PERMIT: THESE DRAWINGS, BEING FOR PERMIT, ARE BY DEFINITION NOT FINAL. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.		DATE	
FOR CONSTRUCTION: FINAL DRAWINGS.			



9/27/24

FRAME LINES: 2 3 4 5



RIGID FRAME: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc. Qty	Bolt Dia	Base_Plate (in)		AFF/BFF (in)
				Width	Length	Thick
2	D	4	0.750	8.000	11.75	0.500
2	A	4	0.750	8.000	11.50	0.500

RIGID FRAME: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc. Qty	Bolt Dia	Base_Plate (in)		AFF/BFF (in)
				Width	Length	Thick
3*	D	4	0.750	8.000	11.50	0.500
3*	A	4	0.750	8.000	11.50	0.500

3* Frame lines: 3 4 5

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	-----Dead-----		-----Collateral-----		-----Live-----		-----Snow-----		-----Wind_Left1-----		-----Wind_Right1-----	
2	D	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert
2	A	0.9	2.4	1.6	3.3	6.2	12.7	4.3	8.9	-9.1	-14.6	-0.8	-10.1
2	A	-0.9	2.3	-1.6	3.3	-6.2	12.6	-4.3	8.8	0.8	-10.0	9.0	-14.5
Frame Line	Column Line	--Wind_Left2--		--Wind_Right2--		--Wind_Long1--		--Wind_Long2--		--Seismic_Left		Seismic_Right	
2	D	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert
2	A	-8.5	-8.6	-0.3	-4.1	-0.9	-12.7	-2.3	-11.0	-0.3	-0.2	0.3	0.2
2	A	0.3	-4.1	8.5	-8.6	2.2	-10.9	0.9	-12.6	-0.3	0.2	0.3	-0.2
Frame Line	Column Line	-MIN_SNOW-		F1UNB_SL_L-		F1UNB_SL_R-							
2	D	Horz	Vert	Horz	Vert	Horz	Vert						
2	A	6.2	12.7	3.7	8.7	3.8	5.2						
2	A	-6.2	12.6	-3.7	5.2	-3.8	8.7						
Frame Line	Column Line	-----Dead-----		-----Collateral-----		-----Live-----		-----Snow-----		-----Wind_Left1-----		-----Wind_Right1-----	
3*	D	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert
3*	A	0.9	2.3	1.6	3.3	6.2	12.7	4.3	8.9	-9.0	-14.5	-0.8	-10.0
3*	A	-0.9	2.3	-1.6	3.3	-6.2	12.6	-4.3	8.9	0.8	-10.0	9.0	-14.5
Frame Line	Column Line	--Wind_Left2--		--Wind_Right2--		--Wind_Long1--		--Wind_Long2--		--Seismic_Left		Seismic_Right	
3*	D	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert
3*	A	-8.5	-8.6	-0.3	-4.1	-0.9	-16.6	-2.2	-14.9	-0.3	-0.2	0.3	0.2
3*	A	0.3	-4.1	8.5	-8.6	2.2	-14.9	0.9	-16.6	-0.3	0.2	0.3	-0.2
Frame Line	Column Line	-Seismic_Long		-MIN_SNOW-		F2UNB_SL_L-		F2UNB_SL_R-					
3*	D	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert				
3*	A	0.0	-1.0	6.2	12.7	3.7	8.7	3.7	5.2				
3*	A	0.0	-1.0	-6.2	12.7	-3.7	5.2	-3.7	8.7				
3*	Frame lines:		3 4 5										



MONROE PLUMBERS & PIPEFITTERS

55'-0" x 115'-0" x 18'-0"

DATE: 9/ 6/24 REVISION: 0

ENG: IRM DWN: BJC APPD: IRM

MONROE PLUMBERS & PIPEFITTERS

CITY: MONROE ST / PV: MI

REVISION HISTORY

DESCRIPTION

DATE

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9/27/24

ENDWALL COLUMN:

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind_Left1 Horz	Wind_Left1 Vert	Wind_Right1 Horz	Wind_Right1 Vert	Wind_Left2 Horz	Wind_Left2 Vert	Wind_Right2 Horz	Wind_Right2 Vert	Wind Press Horz
1	D	0.4	0.5	1.7	1.2	0.0	-2.5	0.0	-2.3	0.0	-1.3	0.0	-1.1	-2.0
1	C	1.0	1.2	4.7	3.3	-2.4	-9.7	0.0	-1.3	-2.4	-7.9	0.0	0.5	-4.8
1	B	1.0	1.2	4.7	3.3	0.0	-1.3	2.4	-9.7	0.0	0.5	2.4	-7.9	-4.8
1	A	0.4	0.5	1.7	1.2	0.0	-2.3	0.0	-2.5	0.0	-1.1	0.0	-1.3	-2.0

Frm Line	Col Line	Wind Suct Horz	Wind_Long1 Horz	Wind_Long1 Vert	Wind_Long2 Horz	Wind_Long2 Vert	Seis_Left Horz	Seis_Left Vert	Seis_Right Horz	Seis_Right Vert	Seis Long Vert	-MIN_SNOW-- Horz	-MIN_SNOW-- Vert
1	D	2.3	0.0	-3.4	0.0	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	1.8
1	C	5.3	0.0	-5.0	-1.0	-4.7	-0.4	-0.4	0.0	0.4	0.0	0.0	4.7
1	B	5.3	1.0	-4.7	0.0	-5.0	0.0	0.4	0.4	-0.4	0.0	0.0	4.7
1	A	2.3	0.0	-2.2	0.0	-3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8

Frm Line	Col Line	E1UNB_SL_L-- Horz	E1UNB_SL_L-- Vert	E1UNB_SL_R-- Horz	E1UNB_SL_R-- Vert
1	D	0.0	1.2	0.0	0.3
1	C	0.0	4.2	0.0	1.5
1	B	0.0	1.5	0.0	4.2
1	A	0.0	0.3	0.0	1.2

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind_Left1 Horz	Wind_Left1 Vert	Wind_Right1 Horz	Wind_Right1 Vert	Wind_Left2 Horz	Wind_Left2 Vert	Wind_Right2 Horz	Wind_Right2 Vert	Wind Press Horz
6	A	0.4	0.5	1.7	1.2	0.0	-2.5	0.0	-2.3	0.0	-1.3	0.0	-1.1	-2.0
6	B	1.0	1.2	4.7	3.3	-2.4	-9.7	0.0	-1.3	-2.4	-7.9	0.0	0.5	-4.8
6	C	1.0	1.2	4.7	3.3	0.0	-1.3	2.4	-9.7	0.0	0.5	2.4	-7.9	-4.8
6	D	0.4	0.5	1.7	1.2	0.0	-2.3	0.0	-2.5	0.0	-1.1	0.0	-1.3	-2.0

Frm Line	Col Line	Wind Suct Horz	Wind_Long1 Horz	Wind_Long1 Vert	Wind_Long2 Horz	Wind_Long2 Vert	Seis_Left Horz	Seis_Left Vert	Seis_Right Horz	Seis_Right Vert	Seis Long Vert	-MIN_SNOW-- Horz	-MIN_SNOW-- Vert
6	A	2.3	0.0	-3.4	0.0	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	1.8
6	B	5.3	0.0	-5.0	-1.0	-4.7	-0.4	-0.4	0.0	0.4	0.0	0.0	4.7
6	C	5.3	1.0	-4.7	0.0	-5.0	0.0	0.4	0.4	-0.4	0.0	0.0	4.7
6	D	2.3	0.0	-2.2	0.0	-3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8

Frm Line	Col Line	E2UNB_SL_L-- Horz	E2UNB_SL_L-- Vert	E2UNB_SL_R-- Horz	E2UNB_SL_R-- Vert
6	A	0.0	1.2	0.0	0.3
6	B	0.0	4.2	0.0	1.5
6	C	0.0	1.5	0.0	4.2
6	D	0.0	0.3	0.0	1.2

ANCHOR BOLT SUMMARY

	Qty	Locate	Dia (in)	Type
⊕	32	Endwall	3/4"	
⊕	32	Frame	3/4"	

Reaction Type	Description
Dead	Dead Load
Collateral	Collateral Load
Live	Roof Live Load
Snow	Uniform Roof Snow Load
Wind_Left1	Transverse Wind From Left With Internal Pressure
Wind_Right1	Transverse Wind From Right With Internal Pressure
Wind_Left2	Transverse Wind From Left With Internal Suction
Wind_Right2	Transverse Wind From Right With Internal Suction
Wind_Long1	Longitudinal Wind From Left Endwall
Wind_Long2	Longitudinal Wind From Right Endwall
Wind_Press	Wind Pressure Applied Towards Endwall
Wind_Suct	Wind Suction Applied Away From Endwall
Seismic_Left	Seismic Load Applied From Left
Seismic_Right	Seismic Load Applied From Right
Seismic_Long	Seismic Load Applied Longitudinally
F# Unb_SL_L	Unbalanced Snow Load On Left
F# Unb_SL_R	Unbalanced Snow Load On Right
F# PAT_SL#	Pattern Snow Load
Drift	Snow Drift Load
Sliding	Sliding Snow Load
HorzOP	Horizontal Out of Plane Load

ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc._Bolt Qty	Bolt Dia	Base_Plate (in) Width	Base_Plate (in) Length	Thick	AFF/BFF (in)
1	D	4	0.750	6.000	7.875	0.375	0.0
1	C	4	0.750	6.000	7.875	0.375	0.0
1	B	4	0.750	6.000	7.875	0.375	0.0
1	A	4	0.750	6.000	7.875	0.375	0.0
6	A	4	0.750	6.000	7.875	0.375	0.0
6	B	4	0.750	6.000	7.875	0.375	0.0
6	C	4	0.750	6.000	7.875	0.375	0.0
6	D	4	0.750	6.000	7.875	0.375	0.0

BUILDING BRACING REACTIONS

---Wall---		Col		Reactions in plane of wall ± Reactions(k)				Panel_Shear (lb/ft)	
Loc	Line	Line	Line	Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Wind	Seis
L_EW	1	C,B		Bracing, see EW reactions					
F_SW	A	3,4		5.8	*	1.5	*		
R_EW	6	B,C		Bracing, see EW reactions					
B_SW	D	4,3		5.8	*	1.5	*		

*See RF reactions table for vertical and horizontal reactions in plane of the rigid frame.

Reactions for seismic represent shear force, Eh
Reaction values shown are unfactored

DESIGN INFORMATION

1. All loading conditions are examined and only the maximum / minimum H or V and the corresponding H or V are reported.

2. Positive reactions are shown in the sketch. Foundation loads are in opposite directions.

3. Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.

4. Building reactions are based on the following building data:

DESIGN CRITERIA		SEISMIC CRITERIA		DEFLECTION LIMITS
Width (ft)	= 55			
Length (ft)	= 115	Seismic Importance	= 1.00	ENDWALL COLUMN
Eave Height (ft)	= 18	Risk Category	= II – Normal	L / 120
Roof Slope (rise/12)	= 3.0:12			ENDWALL RAFTER (Live)
Building Code	= IBC 15			L / 180
Local Code (State/Prov)	= MIBC 15	Mapped Spectral Response Accelerations		ENDWALL RAFTER (Wind)
Dead Load (psf)	= 2.25	Ss	= 0.1120	L / 180
Collateral Load (psf)	= 5.00	S1	= 0.0510	WALL GIRTS
Roof Live Load (psf)	= 20.00			L / 90
Frame Live Load (psf)	= 20.00	---Spectral Response Coefficients---		PURLIN (LIVE)
		Sds	= 0.1195	L / 180
		Sd1	= 0.0816	PURLIN (WIND)
Snow:				L / 180
Ground Snow Load (psf)	= 20.00	Site Class	= D	WALL PANEL
Snow Importance	= 1.00	Seismic Design Category	= B	L / 90
Thermal Coefficient	= 1.00			ROOF PANEL (Live)
Snow Exposure Factor	= 1.0000	-----Base Shear-----		L / 180
Slippery Roof	= N	Expanded Formula	= 0.667*le*Sms*W/R	ROOF PANEL (Wind)
Roof Snow Load, Pf (psf)	= 14.00	Longitudinal Base Shear (k)	= 2.97	L / 120
Min Roof Snow Load, Pmin (psf)	= 20.0000	Transverse Base Shear (k)	= 2.96	Main Frame (Horiz)
				H / 60
Wind:				Main Frame (Vert)
Ultimate Wind Speed (mph)	= 115 mph	--Seismic Response Coefficients--		L / 180
Risk Category	= II – Normal	Frame	= 0.04	WIND BRACING
Importance – Wind	= 1.00	FSW	= 0.04	H / 60
Wind Exposure	= C	BSW	= 0.04	Main Frame (Crane)
Enclosure Classification	= C – Enclosed			H / 100
				Main Frame (Seismic)
---Internal Pressure Coefficients---				H / 50
Pressure	= 0.18	--Response Modification Factors--		SEISMIC BRACING
Suction	= -0.18	Frame	= 3	H / 50
		FSW	= 3	PARTITION COLUMN
-----Components & Cladding-----		BSW	= 3	L / 120
Design Pressure:				PARTITION GIRT
Pressure (psf)	= 30.95			L / 120
Suction (psf)	= -41.37			PARTITION PANEL
				L / 120

Equivalent Lateral Brace Force Procedure.

Steel systems not specifically detailed for seismic resistance.

MONROE PLUMBERS & PIPEFITTERS

55'-0" x 115'-0" x 18'-0"

DATE: 9/ 6/24

REVISION: 0

ENG: IRM

DWN: BJC

APPD: IRM

MONROE PLUMBERS & PIPEFITTERS

CITY: MONROE

ST / PV: MI

REVISION HISTORY

DATE

DESCRIPTION

REV.

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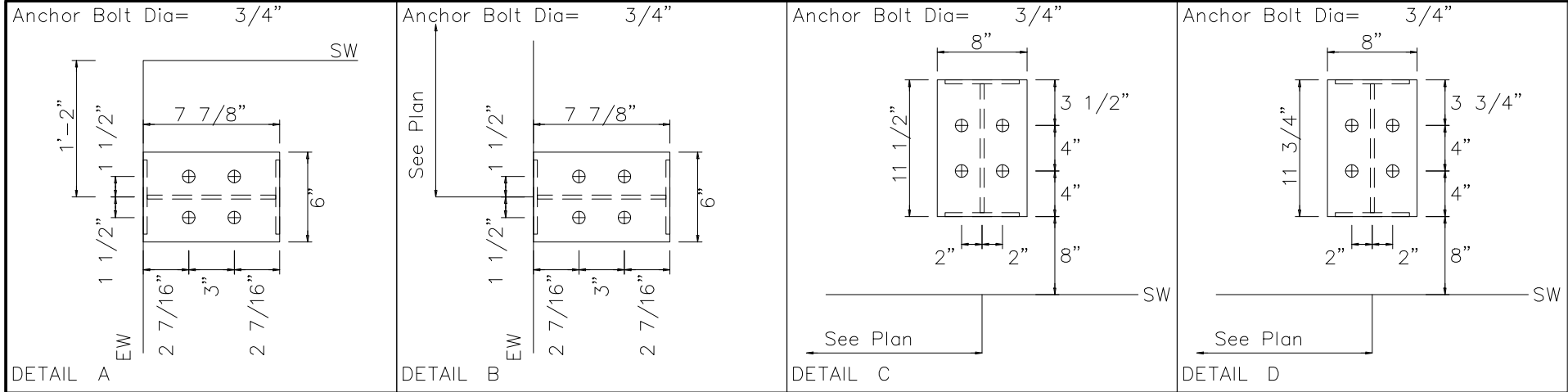
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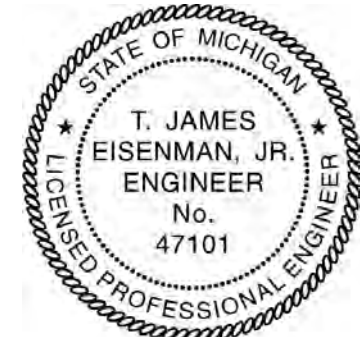
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MONROE PLUMBERS & PIPEFITTERS

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MONROE PLUMBERS & PIPEFITTERS

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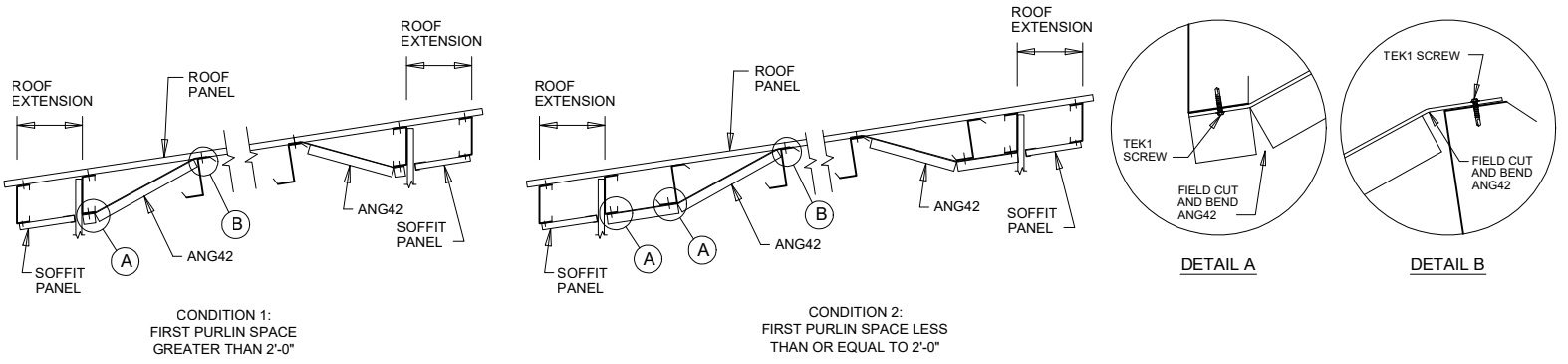
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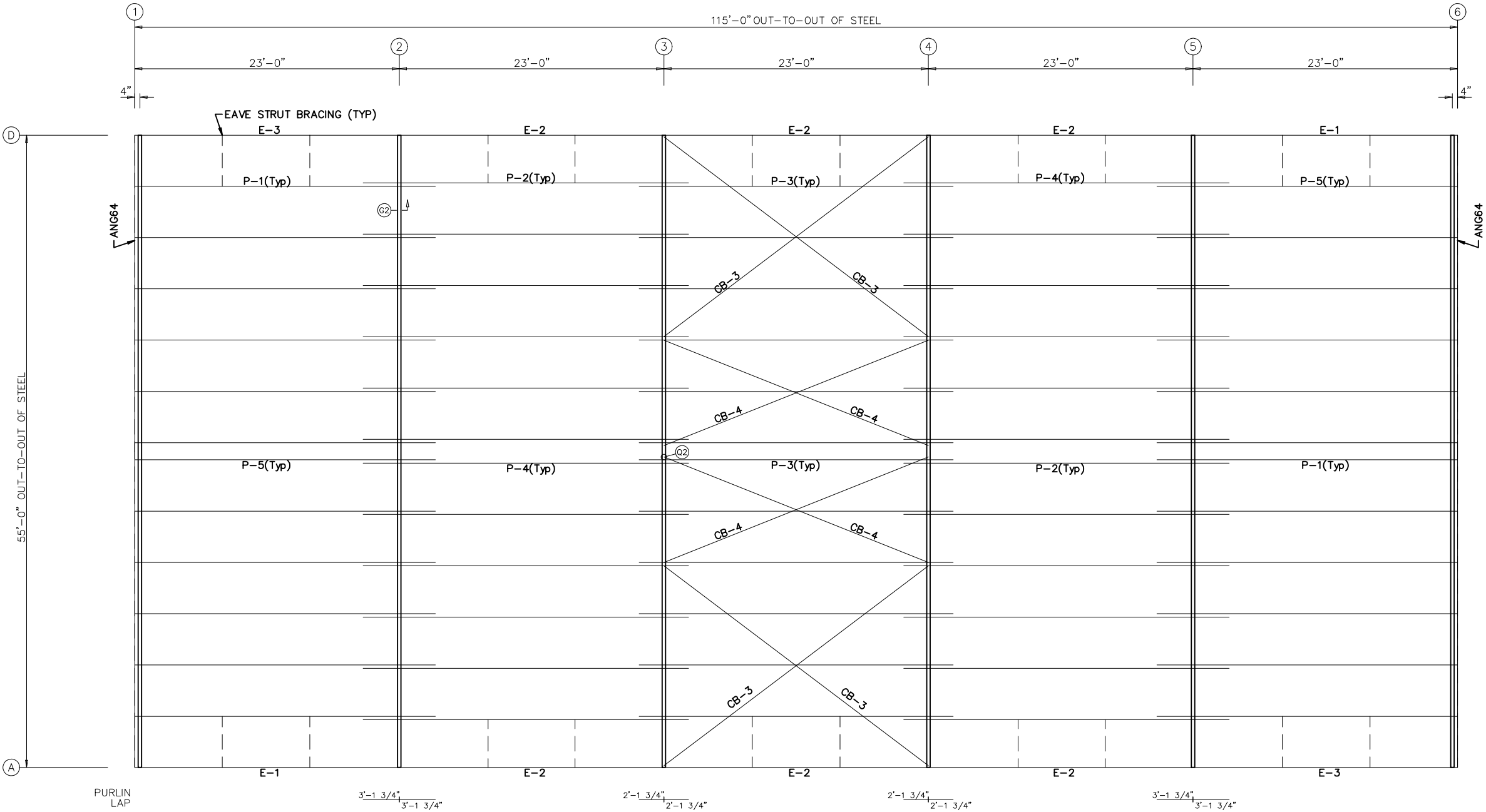
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NOTE 1: SPACE BRACES EVENLY ACROSS BAYS



MEMBER TABLE			
ROOF PLAN			
QUAN	MARK	PART	LENGTH
12	P-1	08X25Z13	26'-1 1/2"
12	P-2	08X25Z14	28'-3 1/2"
12	P-3	08X25Z16	27'-3 1/2"
12	P-4	08X25Z14	28'-3 1/2"
12	P-5	08X25Z13	26'-1 1/2"
2	E-1	08X35E14	22'-11 1/2"
6	E-2	08X35E14	22'-11 1/2"
2	E-3	08X35E14	22'-11 1/2"
4	CB-3	CABLE250	26'-8 7/16"
4	CB-4	CABLE250	22'-11 1/4"



ROOF FRAMING PLAN

GENERAL NOTES:

1. Screw Down Roof: Use TEK5WW screws in place of SD150 panel screws at all 10 gage purlins, eave struts, or roof joists.
2. Standing Seam Roof: Use FST#6 in place of FST#1 clip to purlin screws at all 10 gage purlins, eave struts, or at roof joists.

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MONROE PLUMBERS & PIPEFITTERS

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DATE: 9/ 6/24

REVISION: 0

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DWN: BJC

APPD: IRM

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MONROE PLUMBERS & PIPEFITTERS

CITY: MONROE

ST / P.V. MI

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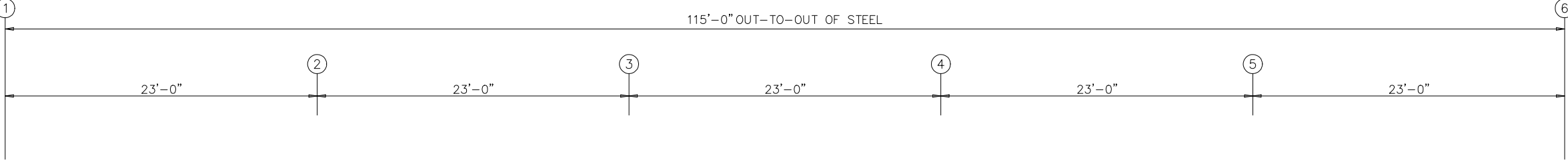
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ROOF SHEETING PLAN
PANELS: 26 Ga. R - Arctic White

GENERAL NOTES:

Panel "Start" and "End" dimensions must be followed for the proper installation of the gable trim(s) provided.

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TITAN
STEEL STRUCTURES

MONROE PLUMBERS & PIPEFITTERS

55'-0" x 115'-0" x 18'-0"

DATE: 9/ 6/24	REVISION: 0
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MONROE PLUMBERS & PIPEFITTERS

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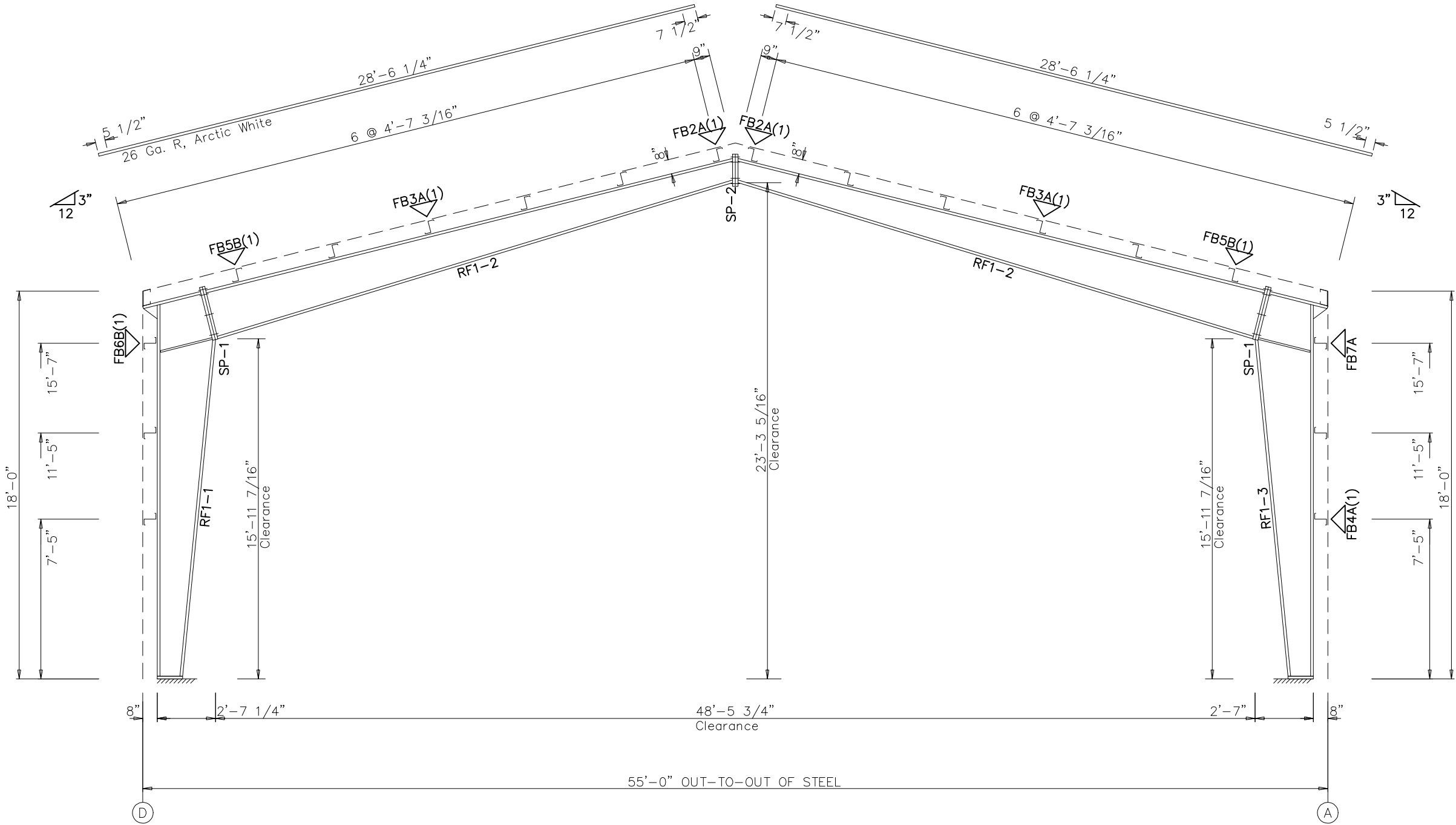
A circular professional engineer seal for the State of Michigan. The outer ring contains the text "STATE OF MICHIGAN" at the top and "LICENSED PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The inner circle contains the text "T. JAMES EISENMAN, JR." followed by "ENGINEER" and "No. 47101".

9/27/24

SPLICE BOLT TABLE						
Mark	Qty		Int	Type	Dia	Length
	Top	Bot				
SP-1	4	2	2	A325	0.750	2.25
SP-2	4	4	0	A325	0.500	1.50

▽FLANGE BRACES: Both Sides(U.N.)
FBxxB(1)
B - L20X1/4
A - L15X1/8

MEMBER TABLE						
Mark	Web Depth		Web Plate		Outside Flange	
	Start/End	Thick	Length	W x Thk x Length	Inside Flange W x Thk x Length	
RF1-1	11.0/23.3	0.149	120.0	6 x 1/4" x 209.0	6 x 1/2" x 191.6	
RF1-2	23.3/30.5	0.188	95.2	5 x 1/4" x 33.6	5 x 1/4" x 302.7	
	25.0/21.8	0.188	64.9	5 x 1/4" x 304.9		
RF1-3	21.8/10.0	0.149	240.0	5 x 1/4" x 33.6	5 x 1/4" x 191.6	
	30.5/23.3	0.188	95.2			
	23.3/11.0	0.149	120.0	5 x 1/4" x 209.0		



BUILDING CROSS SECTION: FRAME LINE 2

GENERAL NOTES:

- See Detail Sheets for Connection Information.
- See Shipping List for Flange Brace Lengths.

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MONROE PLUMBERS & PIPEFITTERS

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APPD: IRM

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MONROE PLUMBERS & PIPEFITTERS

CITY: MONROE

ST / PV: MI

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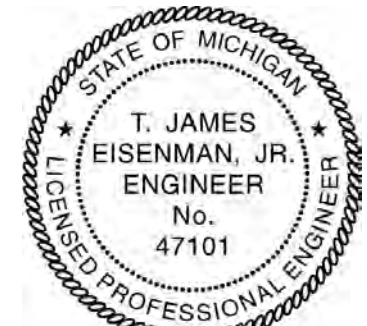
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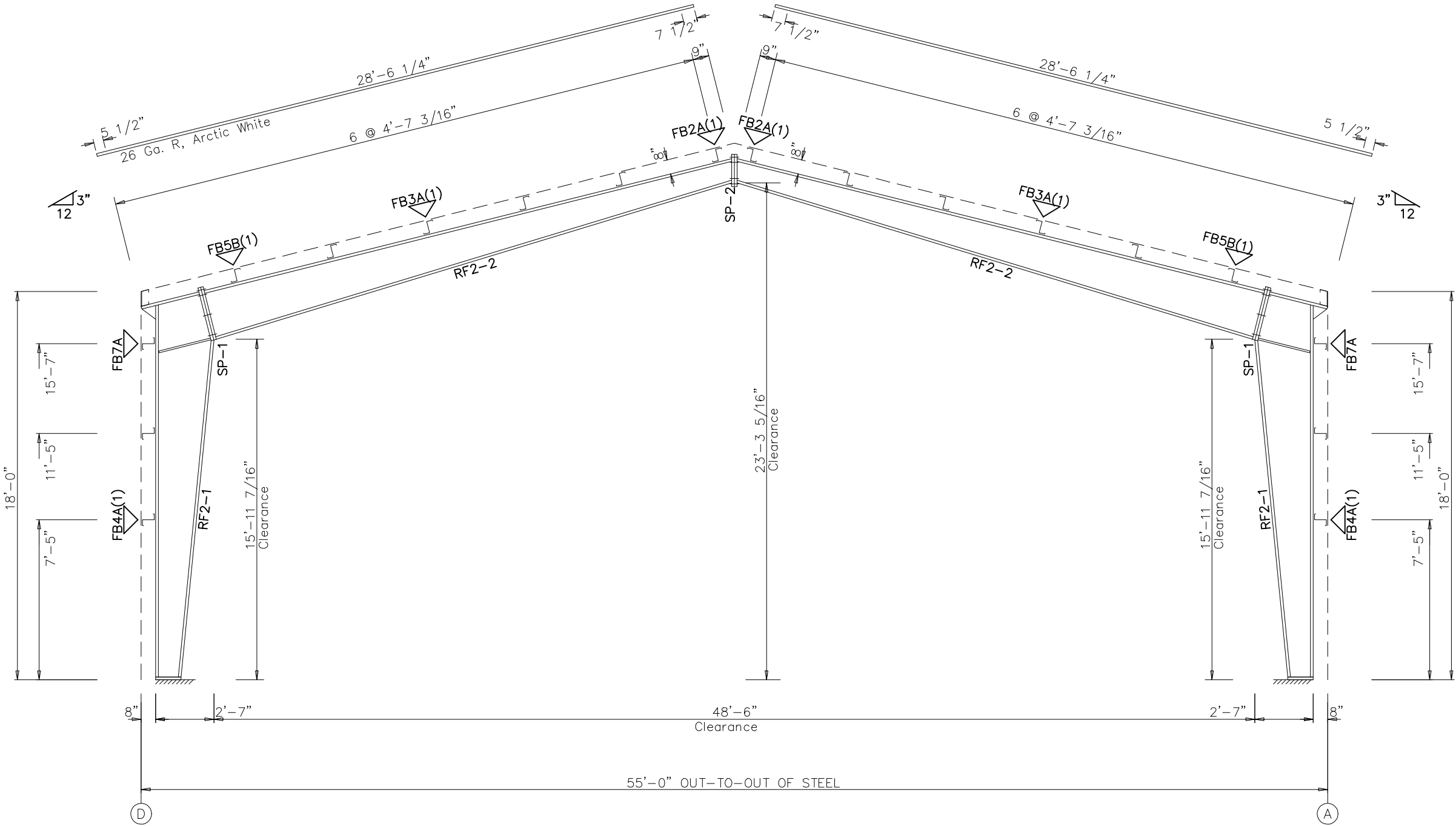


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SPLICE BOLT TABLE						
Mark	Qty		Int	Type	Dia	Length
	Top	Bot				
SP-1	4	2	2	A325	0.750	2.25
SP-2	4	4	0	A325	0.500	1.75

▽FLANGE BRACES: Both Sides(U.N.)
FBxxA(1)
A - L15X1/8
B - L20X1/4

Mark	Web Depth		Web Plate		Outside Flange	Inside Flange
	Start/End		Thick	Length		
					W x Thk x Length	W x Thk x Length
RF2-1	11.0	23.3	0.149	120.0	5 x 1/4" x 209.0	5 x 1/4" x 191.6
RF2-2	23.3	30.5	0.188	95.2	5 x 1/4" x 33.6	
	25.0	21.8	0.188	64.8	5 x 1/4" x 304.8	
	21.8	10.0	0.149	240.0		5 x 1/4" x 302.6



GENERAL NOTES:

- See Detail Sheets for Connection Information.
- See Shipping List for Flange Brace Lengths.

BUILDING CROSS SECTION: FRAME LINE 3 4 5

DRAWING IS NOT TO SCALE



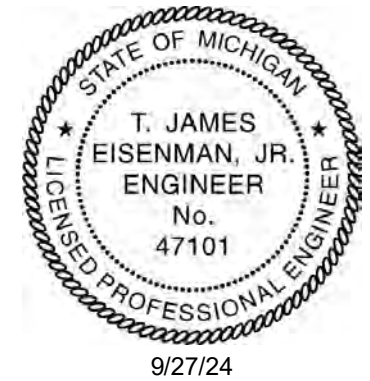
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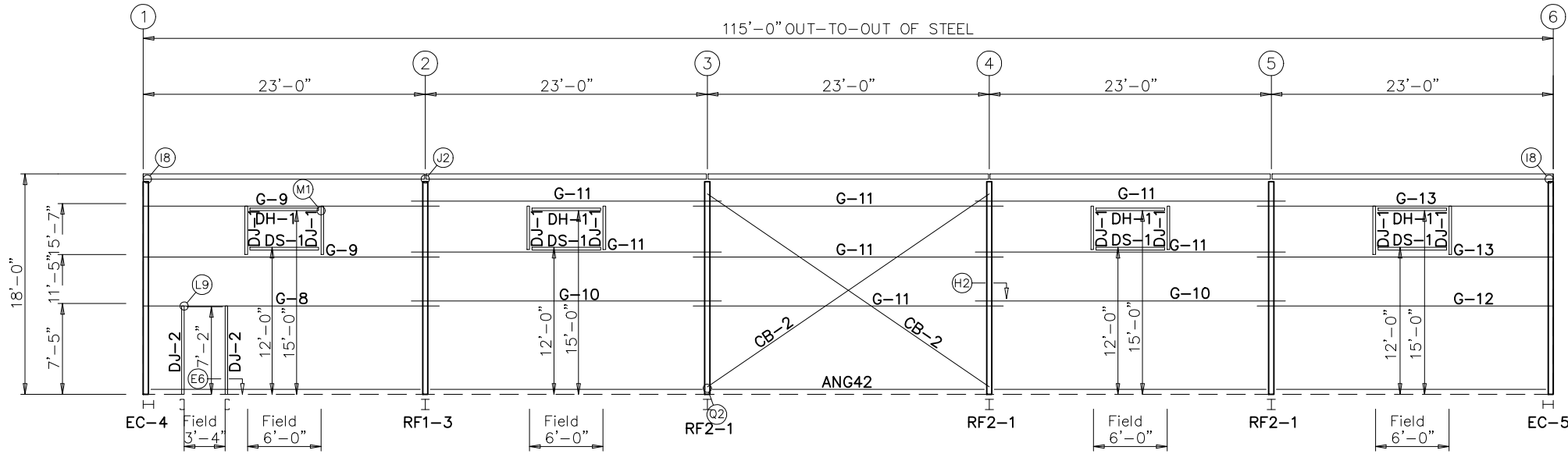
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MONROE PLUMBERS & PIPEFITTERS

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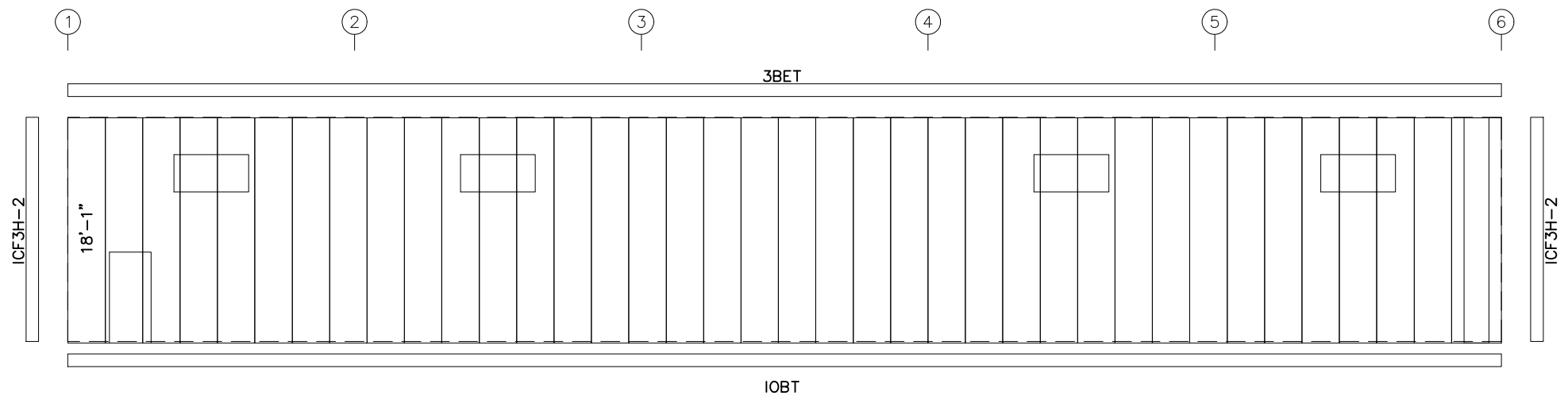




GIRT LAPS

1'-1 3/4" 1'-1 3/4" 1'-1 3/4" 1'-1 3/4" 1'-1 3/4" 1'-1 3/4"

SIDEWALL FRAMING: FRAME LINE A



SIDEWALL SHEETING & TRIM: FRAME LINE A

PANELS: 26 Ga. R - Arctic White

- GENERAL NOTES:
1. Use TEK5WW screws in place of SD150 panel screws at all 10 gage members.
 2. All connections to door or window jambs where the clip is not designated in the clip table / drawing are made with JC# clips (#= Girt Depth).

IEF5B IWF5D IEF5B

Exterior Walkdoor Trims

Quantity: 1

IEF5B IWF5D IEF5B

Exterior Window Trims

Quantity: 4

TRIM COLORS			
EAVE TRIM	= Arctic White	CORNER TRIM	= Arctic White
BASE TRIM	= Arctic White	GUTTER	=
DOOR TRIM	= Arctic White	DOWNSPOUTS	=
RAKE TRIM	= Arctic White		
* LINER TRIM	= Liner panel color		
* SOFFIT TRIM	= Soffit panel color		
* ONLY APPLICABLE IF LINER TRIM OR SOFFIT PANEL IS INDICATED ON BUILDING ORDER.			

MEMBER TABLE			
FRAME LINE A			
QUAN	MARK	PART	LENGTH
8	DJ-1	08X35C16	4'-1 1/2"
2	DJ-2	08X35C16	7'-4 3/4"
4	DH-1	08X35C16	6'-0"
1	DH-2	08X35C16	3'-4"
4	DS-1	08X35C16	6'-0"
1	G-8	08X25Z14	24'-1 1/2"
2	G-9	08X25Z16	24'-1 1/2"
2	G-10	08X25Z14	25'-3 1/2"
7	G-11	08X25Z16	25'-3 1/2"
1	G-12	08X25Z14	24'-1 1/2"
2	G-13	08X25Z16	24'-1 1/2"
2	CB-2	CABLE375	26'-0 9/16"



MONROE PLUMBERS & PIPEFITTERS

55'-0" x 115'-0" x 18'-0"

DATE: 9/ 6/24 REVISION: 0

ENG: IRM DWN: BJC APPD: IRM

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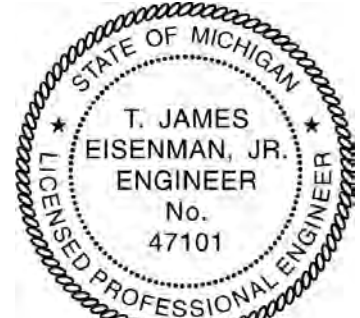
MONROE PLUMBERS & PIPEFITTERS

REVISION HISTORY		DESCRIPTION	DATE
REV.	ST / PV: MI		
	CITY: MONROE		

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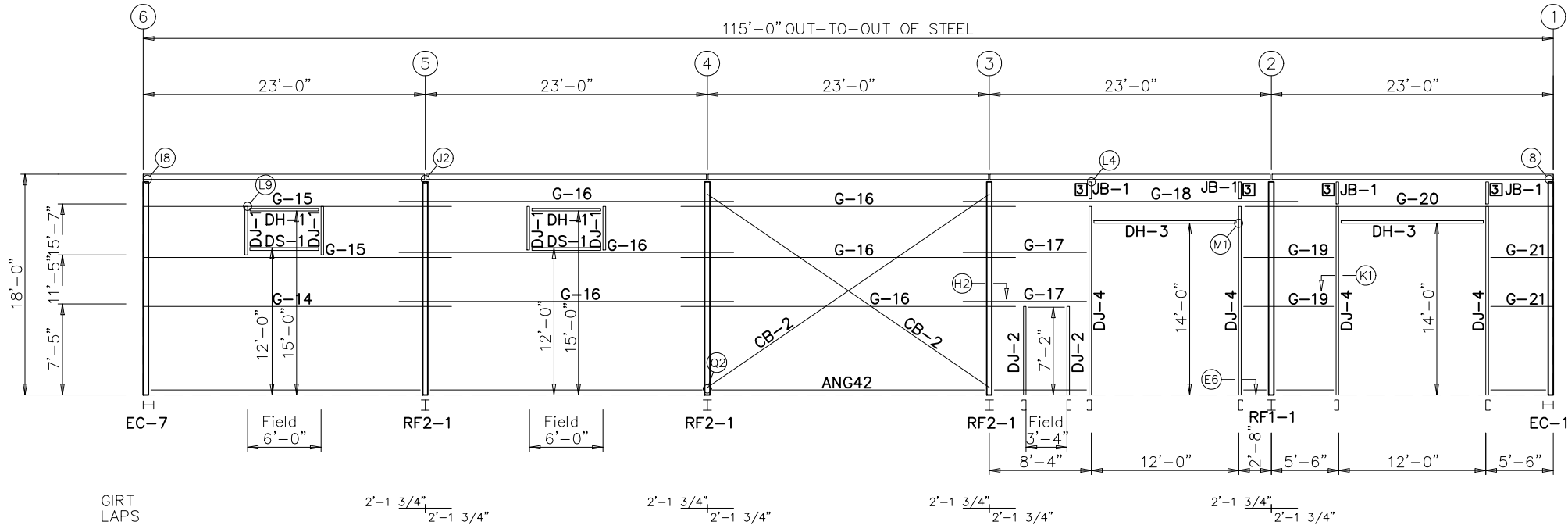
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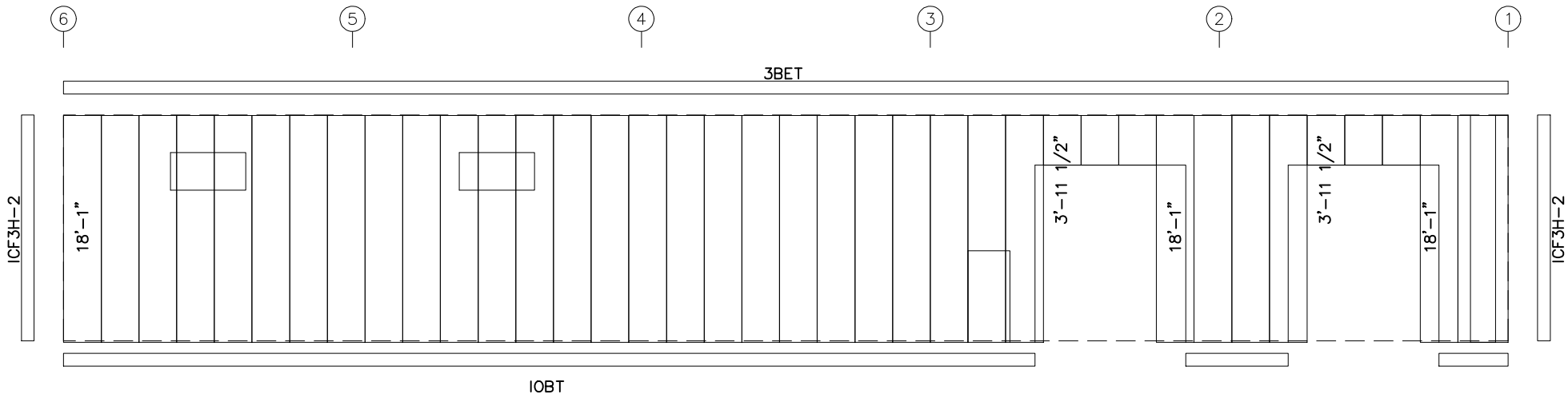


9/27/24

DRAWING IS NOT TO SCALE



SIDEWALL FRAMING: FRAME LINE D



SIDEWALL SHEETING & TRIM: FRAME LINE D
PANELS: 26 Ga. R - Arctic White

MEMBER TABLE			
FRAME LINE D			
QUAN	MARK	PART	LENGTH
4	DJ-1	08X35C16	4'-1 1/2"
2	DJ-2	08X35C16	7'-4 3/4"
4	DJ-4	08X35C16	15'-6 3/4"
2	DH-1	08X35C16	6'-0"
1	DH-2	08X35C16	3'-4"
2	DH-3	08X35C16	12'-0"
2	DS-1	08X35C16	6'-0"
1	G-14	08X25Z14	25'-1 1/2"
2	G-15	08X25Z16	25'-1 1/2"
6	G-16	08X25Z16	27'-3 1/2"
2	G-17	08X25Z16	10'-2"
1	G-18	08X25Z14	27'-3 1/2"
2	G-19	08X25Z16	7'-6 1/2"
1	G-20	08X25Z13	25'-1 1/2"
2	G-21	08X25Z16	5'-2"
2	CB-2	CABLE375	26'-0 9/16"
4	JB-1	08X35C16	1'-7 3/4"

CONNECTION PLATES		
FRAME LINE D		
ID	QUAN	MARK /PART
3	4	JC



MONROE PLUMBERS & PIPEFITTERS

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MONROE PLUMBERS & PIPEFITTERS

CITY: MONROE ST / PV: MI

REVISION HISTORY

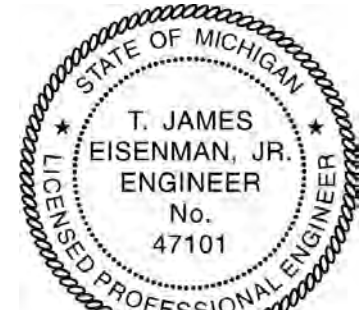
REV.	DESCRIPTION	DATE
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TRIM COLORS

EAVE TRIM	= Arctic White	CORNER TRIM	= Arctic White
BASE TRIM	= Arctic White	GUTTER	=
DOOR TRIM	= Arctic White	DOWNSPOUTS	=
RAKE TRIM	= Arctic White		
* LINER TRIM	= Liner panel color		
* SOFFIT TRIM	= Soffit panel color		

* ONLY APPLICABLE IF LINER TRIM OR SOFFIT PANEL IS INDICATED ON BUILDING ORDER.

GENERAL NOTES:

- Use TEK5WW screws in place of SD150 panel screws at all 10 gage members.
- All connections to door or window jambs where the clip is not designated in the clip table / drawing are made with JC# clips (#= Girt Depth).

IEF5B

IWF5D

IEF5B

Exterior Window Trims

Quantity: 2

IEF5B

IWF5D

IEF5B

Exterior Walkdoor Trims

Quantity: 1

IEF5B

IWF5D

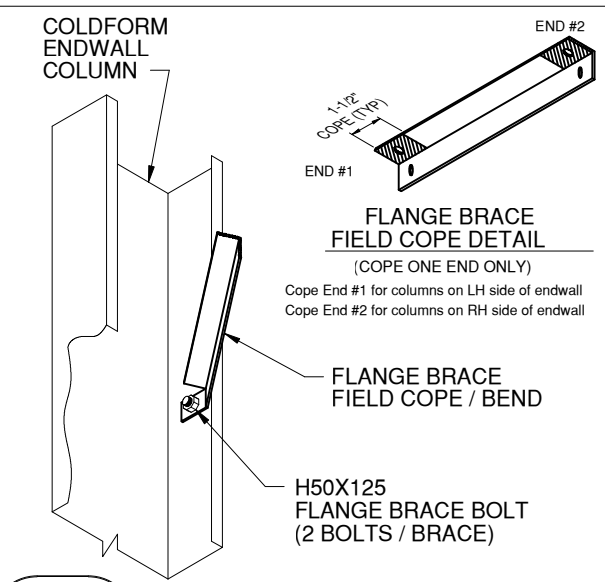
DLJ8C14

DLJ8C14

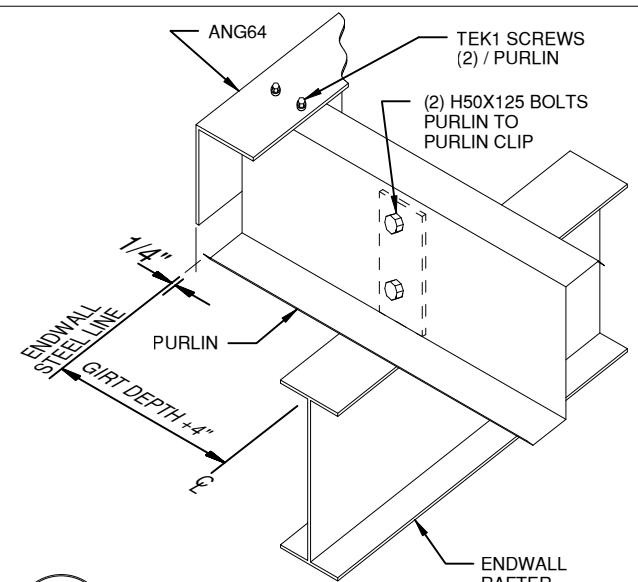
IEF5B

Exterior OHD Trims

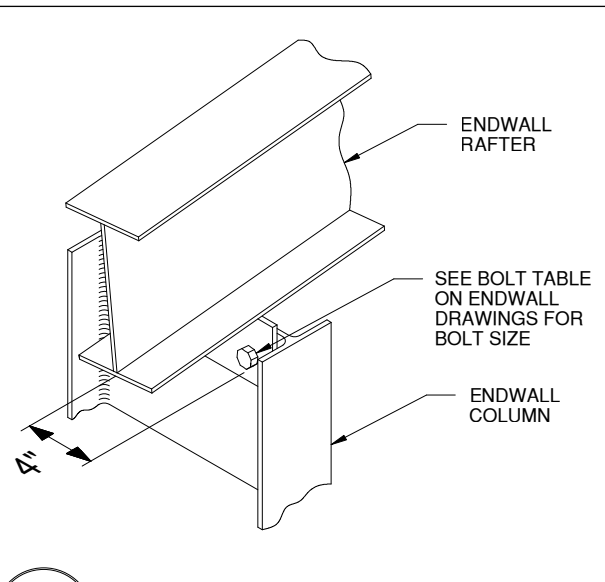
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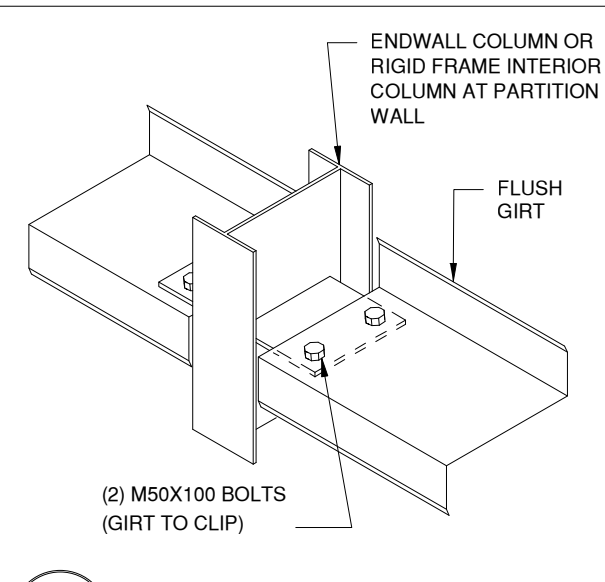
C7A FLANGE BRACE TO BYPASS COLDFORM ENDWALL COLUMN



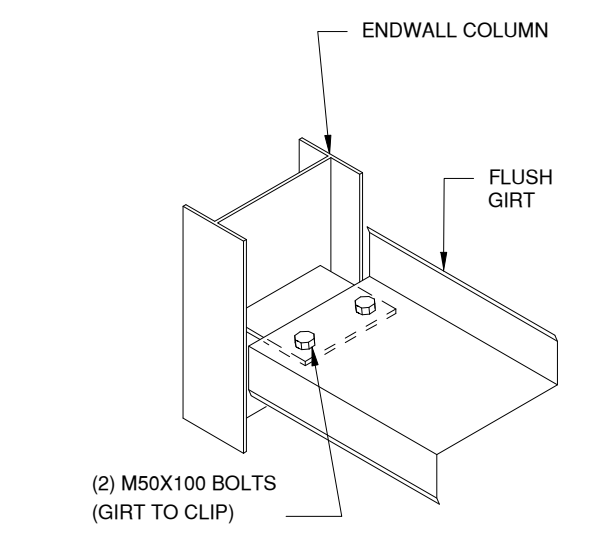
A7 PURLIN TO ENDWALL RAFTER CONNECTION



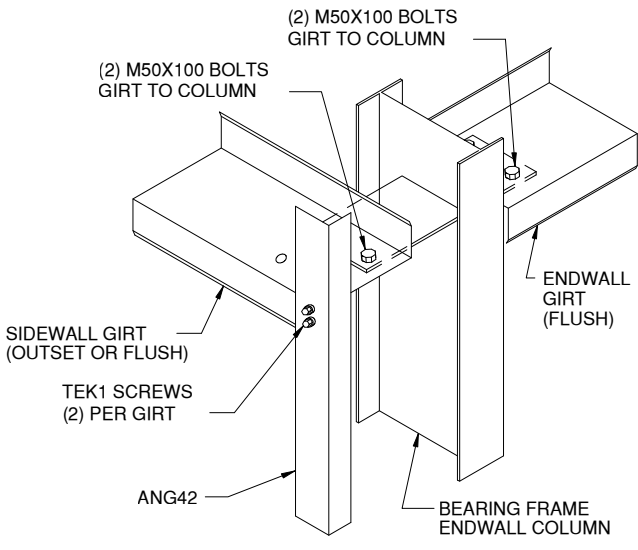
B6 ENDWALL COLUMN TO RAFTER CONNECTION



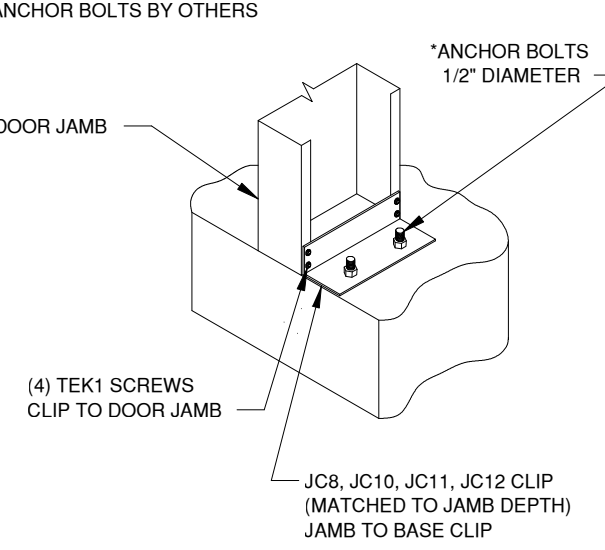
C6 FLUSH GIRT TO COLUMN



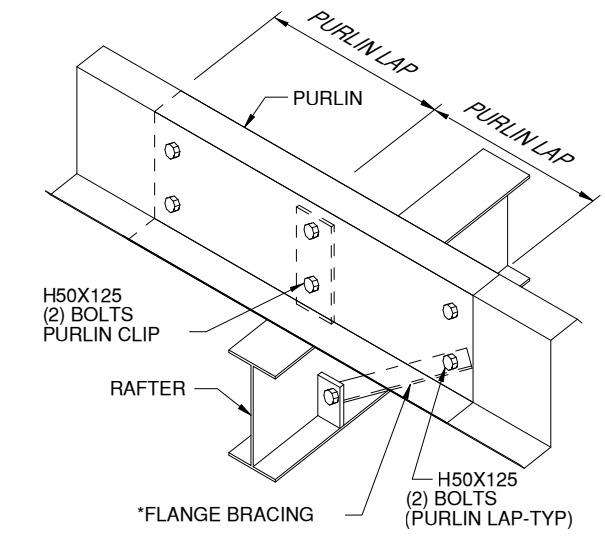
C15 FLUSH GIRT ENDING AT COLUMN



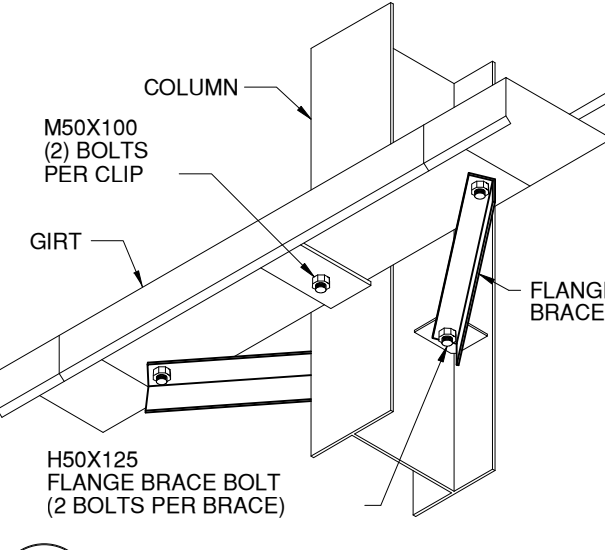
D6 WALL GIRTS TO FLUSH CORNER COLUMN



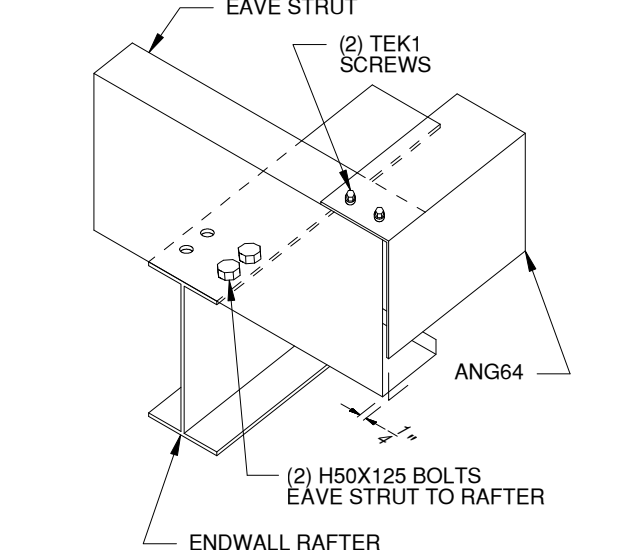
E6 DOOR JAMB TO FOUNDATION



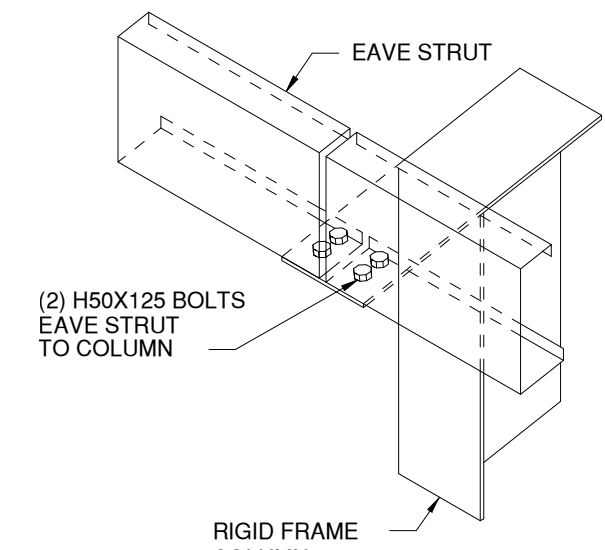
G2 ROOF PURLIN TO INTERIOR FRAME RAFTER



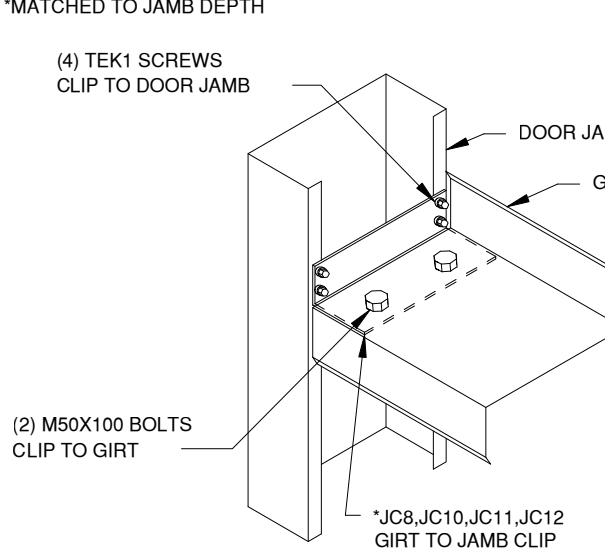
H2 GIRT TO COLUMN - BYPASS GIRTS



I8 EAVE STRUT TO ENDWALL RAFTER LOW EAVE



J2 EAVE STRUT TO RIGID FRAME BYPASS GIRT CONDITION



K1 WALL GIRT TO DOOR JAMB

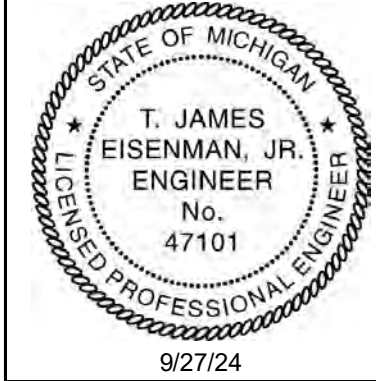


MONROE PLUMBERS & PIPEFITTERS
55'-0" x 115'-0" x 18'-0"
DATE: 9/6/24 REVISION: 0
ENG: IRM DWN: BJC APPD: IRM

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REVISION HISTORY		
REV.	DESCRIPTION	DATE

CITY: MONROE		ST / PV: MI	
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55'-0" x 115'-0" x 18'-0"

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ENG: IRM	DWN: BJC	APPD: IRM
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MONROE PLUMBERS & PIPEFITTERS

ST / PV: MI	
NROE	
REVISION HISTORY	

DESCRIPTION	DATE
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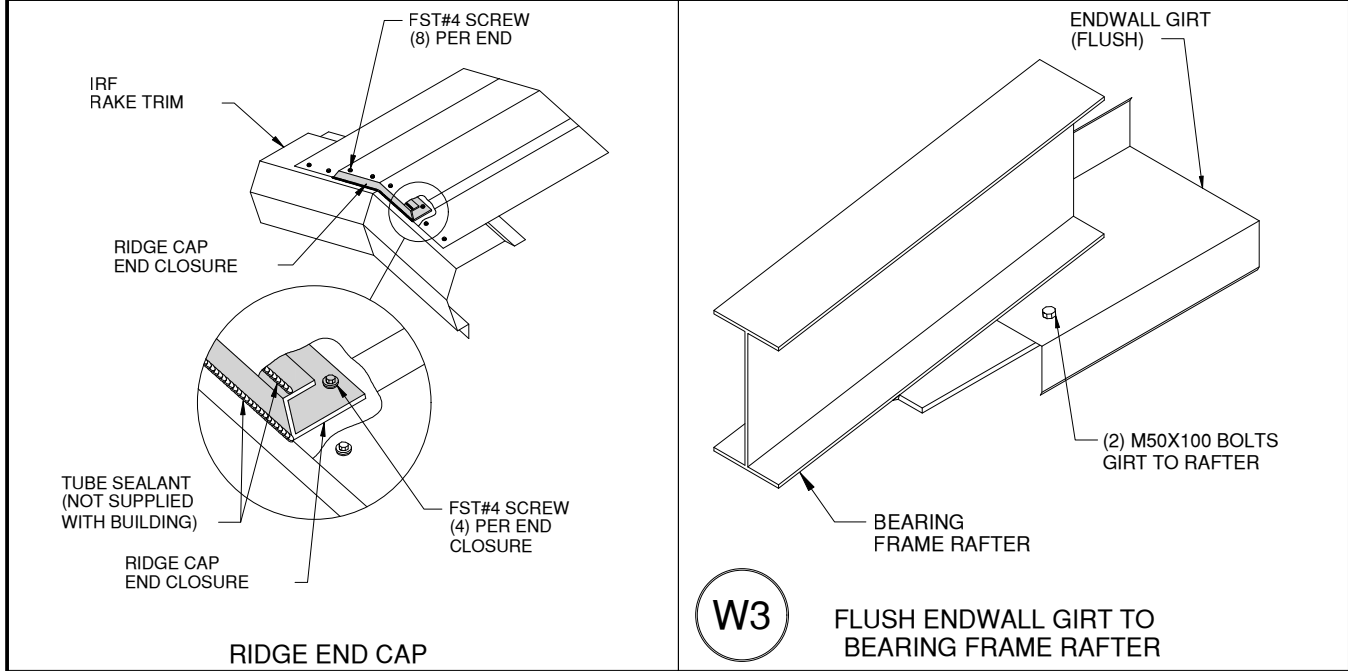
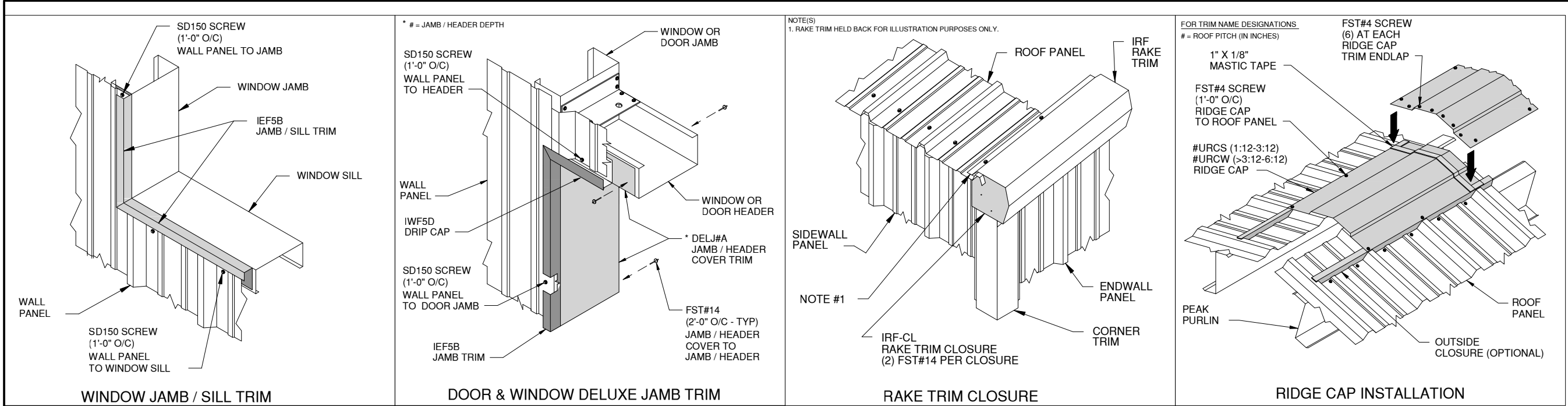
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MONROE PLUMBERS & PIPEFITTERS

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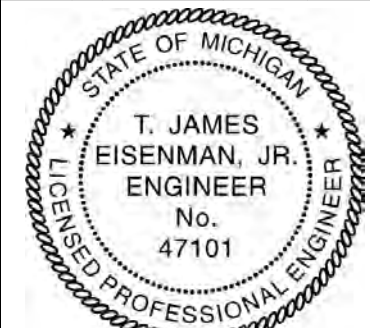
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