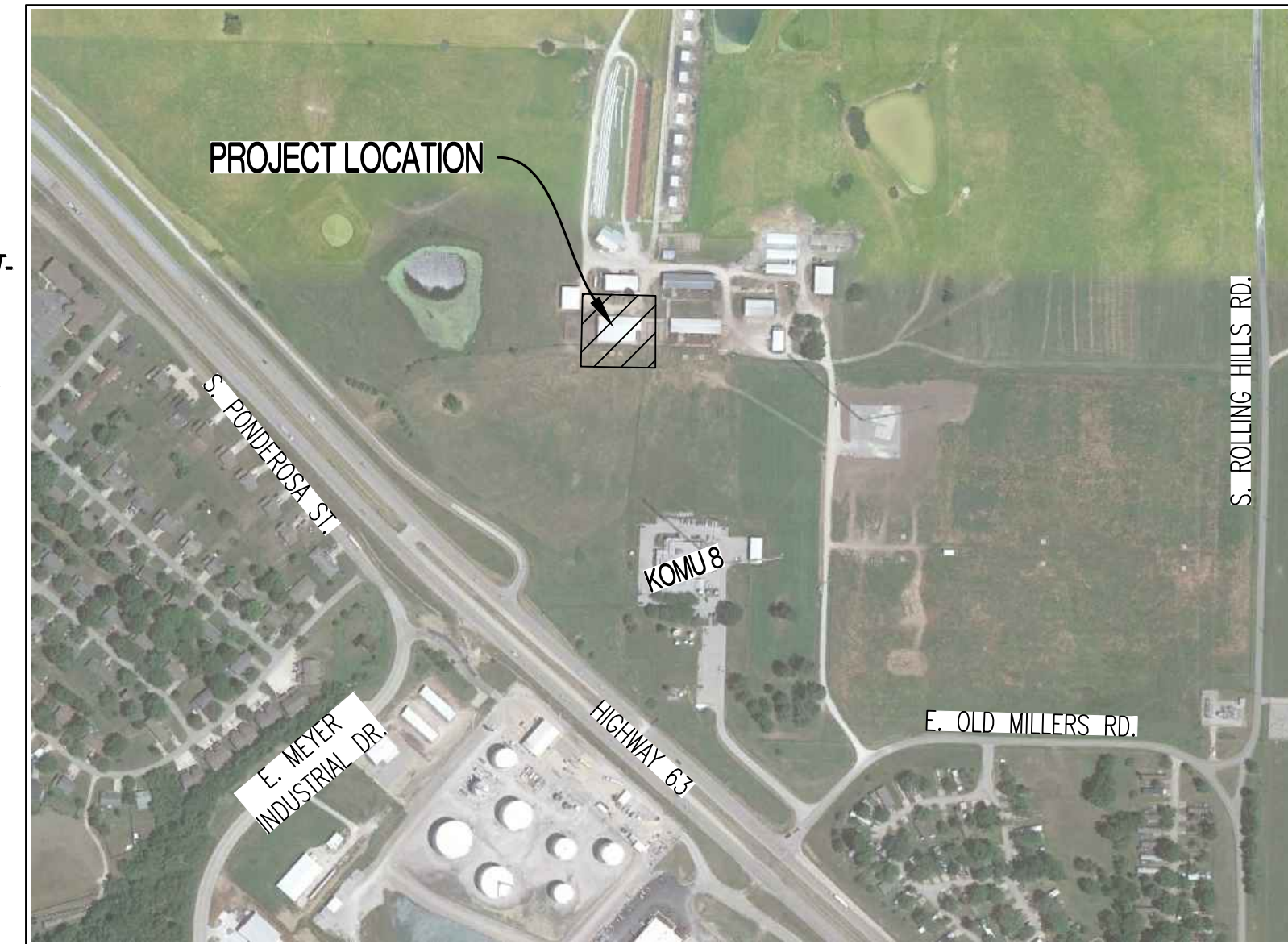




SOUTH FARM - CREED BARN REMODEL

FOR THE CURATORS OF THE UNIVERSITY OF MISSOURI PROJECT NO. CP241191

LOCATION MAP NOT TO SCALE



GENERAL NOTES:

- CONTRACTOR WILL BE RESPONSIBLE FOR PLACEMENT AND MAINTENANCE OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THEIR PORTION OF WORK. THE DEVICES AND METHODS EMPLOYED WILL COMPLY WITH THE CURRENT VERSION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES AND REMOVING THEM ONCE THE SITE IS STABILIZED.
- EXISTING UTILITIES SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE LOCATES PRIOR TO ANY EXCAVATION.
- ALL EXCAVATION TO BE IN ACCORDANCE WITH SECTIONS 319.010-319.050, REVISED STATUTES OF THE STATE OF MISSOURI. SUCH COMPLIANCE SHALL NOT, HOWEVER, EXCUSE ANY PERSON MAKING ANY EXCAVATION FROM DOING SO IN A CAREFUL AND PRUDENT MANNER, NOR SHALL IT EXCUSE SUCH PERSON FROM LIABILITY FOR ANY DAMAGE OR INJURY TO UNDERGROUND UTILITIES RESULTING FROM THE EXCAVATION.
- IT IS THE INTENT OF THESE PLANS TO COMPLY WITH THE REQUIREMENTS OF THE MODNR CLEAN WATER COMMISSION.
- CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND PAVEMENT THAT IS TO REMAIN. ALL DAMAGED ITEMS OUTSIDE THE SCOPE OF WORK TO BE REPLACED OR REPAIRED TO ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE.
- ALL PAVEMENTS OR OTHER OBSTRUCTIONS TO CONSTRUCTION THAT ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFICALLY NOTED AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH STATE REGULATION 10 CSR 80-2.010 (9)(A)1.
- ALL SLOPES ARE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- ALL DISTURBED AREAS WITHIN THE "LIMITS OF DISTURBANCE" THAT ARE NOT TO BE PAVED, SHALL BE FINE GRADED BY CONTRACTOR TO AN ELEVATION OF 6" BELOW FINISHED GRADE. VEGETATION WILL BE REESTABLISHED BY OWNER.
- TOTAL DISTURBED AREA ≈ 0.1 AC.
- MISSOURI DNR LAND DISTURBANCE PERMIT NOT NEEDED FOR THIS PROJECT.
- ALL WORK SHALL BE SCHEDULED WITH THE OWNER'S REPRESENTATIVE AND BE SUBJECT TO THE OWNER'S APPROVAL PRIOR TO PROCEEDING.

SPECIAL INSPECTIONS

- THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
- a. PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)
 - b. BOLTS & ANCHORS EMBEDDED IN CONCRETE (PERIODIC)
 - c. POST INSTALLED ANCHORS IN CONCRETE (CONTINUOUS)
 - d. IN-SITU SOILS, EXCAVATIONS, FILLING & COMPACTION (PERIODIC)
 - e. WOOD FRAMING:
 - e.a. SHEAR WALLS; WALL SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
 - e.b. DIAPHRAGMS (FLOOR AND ROOF SHEATHING); SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
 - e.c. FRAMING MEMBERS AND DETAILS (PERIODIC)
 - e.d. MATERIAL GRADE (PERIODIC)
 - e.e. CONNECTIONS; HANGERS, HOLD DOWNS, BUILT-UP COLUMNS, BUILT-UP BEAMS (PERIODIC)
 - e.f. PRE-ENGINEERED TRUSSES; FRAMING, CONNECTIONS, BRIDGING (PERIODIC)
- THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

UNIVERSITY OF MISSOURI ADOPTED BUILDING CODES:

- INTERNATIONAL BUILDING CODE - 2021
- INTERNATIONAL PLUMBING CODE - 2021
- INTERNATIONAL MECHANICAL CODE - 2021
- INTERNATIONAL EXISTING BUILDING CODE - 2021 (FOR LEVEL 1 & LEVEL 2 ALTERATIONS ONLY WITH PREAPPROVAL FROM THE AHJ)
- INTERNATIONAL FIRE CODE - 2021
- INTERNATIONAL FUEL GAS CODE - 2021
- ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - 2017 (APPLICABLE SECTIONS PER CODE DETERMINATION 08)
- NATIONAL ELECTRIC CODE/NFPA 70 - 2020
- NFPA 150 FIRE AND LIFE SAFETY IN ANIMAL HOUSING FACILITIES CODE - 2019
- NFPA 110 STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS - 2019
- NFPA 90A INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS - 2018
- NFPA 75 STANDARD FOR THE FIRE PROTECTION OF INFORMATION TECHNOLOGY EQUIPMENT - 2017
- NFPA 72 NATIONAL FIRE ALARM CODE - 2019
- NFPA 51B STANDARD FOR FIRE PREVENTION DURING WELDING, CUTTING, AND OTHER HOT WORK - 2019
- NFPA 45 STANDARD ON FIRE PROTECTION FOR LABORATORIES USING CHEMICALS - 2019
- NFPA 20 STANDARD FOR THE INSTALLATION OF STATIONARY FIRE PUMPS FOR FIRE PROTECTION - 2019
- NFPA 14 STANDARD FOR THE INSTALLATION OF STANDPIPE, PRIVATE HYDRANTS AND HOSE SYSTEMS - 2019
- NFPA 13 INSTALLATION OF FIRE SPRINKLER SYSTEMS - 2019
- ASHRAE 90.1 - ENERGY STANDARD FOR BUILDINGS - 2019
- ASME A17.1 - SAFETY CODE FOR ELEVATORS AND ESCALATORS - 2016
- AMERICANS WITH DISABILITIES ACT - STANDARDS FOR ACCESSIBLE DESIGN 2010

SHEET INDEX:

CIVIL:

- CE 0 - COVER SHEET
- CE 1 - DEMOLITION PLAN
- CE 2 - EROSION CONTROL PLAN
- CE 3 - GRADING PLAN
- CE 4 - UTILITY PLAN
- CE 5 - WASTE PROFILES
- CE 6 - SITE PLAN
- CE 7 - SITE SPECIFICATIONS

ARCHITECTURAL:

- A100 - COVER / CODE PLAN
- A200 - EXISTING BUILDING PLAN
- A300 - DEMOLITION BUILDING PLAN
- A400 - PROPOSED BUILDING PLAN
- A500 - PROPOSED BUILDING PLAN
- A600 - ELEVATIONS
- A700 - SCHEDULES

STRUCTURAL:

- S100 - GENERAL STRUCTURAL DATA
- S200 - NEW SLAB & FOUNDATION PLAN / EXISTING FLOOR PLAN
- S210 - FOUNDATION DETAILS
- S211 - FOUNDATION DETAILS
- S300 - NEW MEZZANINE / EXISTING FRAMING PLAN
- S310 - FRAMING DETAILS

MECHANICAL/ELECTRICAL/PLUMBING:

- M101 - HVAC PLAN
- M501 - HVAC DETAILS & SCHEDULES
- EPI01 - POWER PLAN
- EPI02 - SITE POWER PLAN
- EL101 - LIGHTING PLAN
- E501 - ELECTRICAL DETAILS & SCHEDULES
- PSI01 - SANITARY SEWER PLAN
- PW101 - WATER & GAS PLAN
- P501 - PLUMBING DETAILS & SCHEDULES

PROJECT BENCHMARK:

TBM #1 - CHISELED SQUARE ON THE EAST SIDE OF THE SILO FOUNDATION PAD. SILO LOCATED NORTH OF THE CREED BARN.
ELEVATION = 839.20

FLOOD PLAIN STATEMENT:

NO PART OF THIS PROJECT AREA IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN AS PER THE BOONE COUNTY FIRM MAP #29019C0295E DATED APRIL 19, 2017.

UTILITY COMPANIES:

LOCATES:
MISSOURI ONE CALL INC.
1022 B NORTHEAST DRIVE
JEFFERSON CITY, MO 65219
1-800-344-7483



TELEPHONE:
UNIVERSITY OF MISSOURI, DIVISION OF I.T.
615 LOCUST ST.
COLUMBIA, MO 65211
573-882-5000

TELEVISION / FIBER:
CHARTER COMMUNICATIONS
1510 CHARTER BOONE
INDUSTRIAL BOULEVARD
COLUMBIA, MO 65202
573-875-8875

DEFERRED SUBMITTALS:

NONE

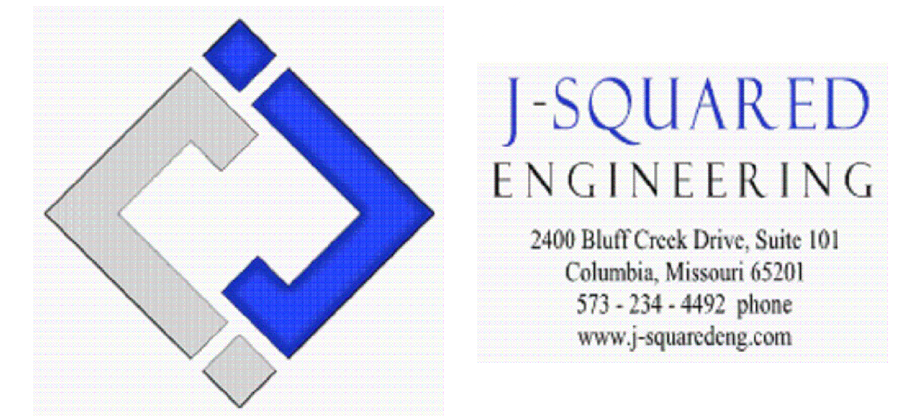
STEAM & MEDIUM VOLTAGE ELECTRIC:

MU ENERGY MANAGEMENT
180 GENERAL SERVICES BUILDING
COLUMBIA, MO 65211
573-882-8211

WATER:
ENERGY MANAGEMENT
417 S. 5TH ST.
COLUMBIA, MO 65211
573-882-3094

STORM & SECONDARY ELECTRIC:

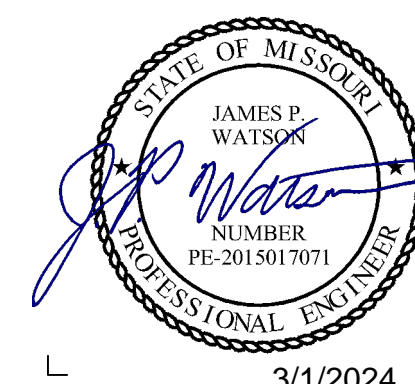
UNIVERSITY CAMPUS FACILITY OPERATIONS
180 GENERAL SERVICES BUILDING
COLUMBIA, MO 65211
573-882-8211



CIVIL

I HEREBY CERTIFY THAT THESE DRAWINGS AND/OR SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE DRAWINGS AND/OR SPECIFICATIONS ARE AS REQUIRED BY AND IN COMPLIANCE WITH THE BUILDING CODES OF THE UNIVERSITY OF MISSOURI.

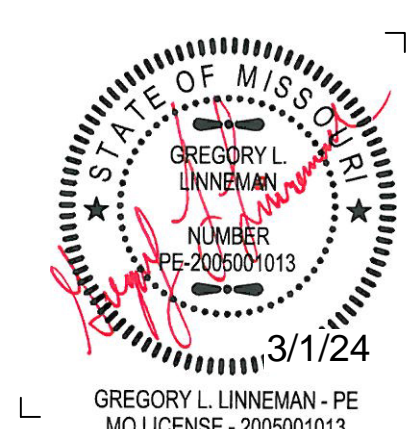
SIGNATURE: *Andrew T. Greene*



MEP

I HEREBY CERTIFY THAT THESE DRAWINGS AND/OR SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE DRAWINGS AND/OR SPECIFICATIONS ARE AS REQUIRED BY AND IN COMPLIANCE WITH THE BUILDING CODES OF THE UNIVERSITY OF MISSOURI.

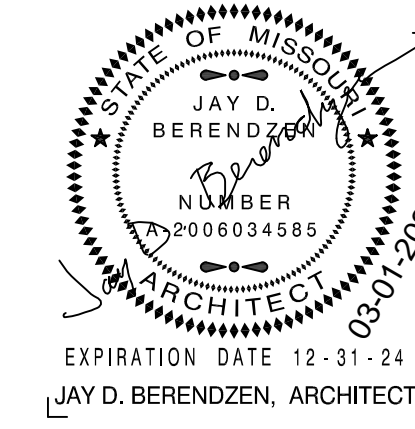
SIGNATURE: *J.P. Watson*



STRUCTURAL

I HEREBY CERTIFY THAT THESE DRAWINGS AND/OR SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE DRAWINGS AND/OR SPECIFICATIONS ARE AS REQUIRED BY AND IN COMPLIANCE WITH THE BUILDING CODES OF THE UNIVERSITY OF MISSOURI.

SIGNATURE: *Gregory L. Linnehan*



ARCHITECTURAL

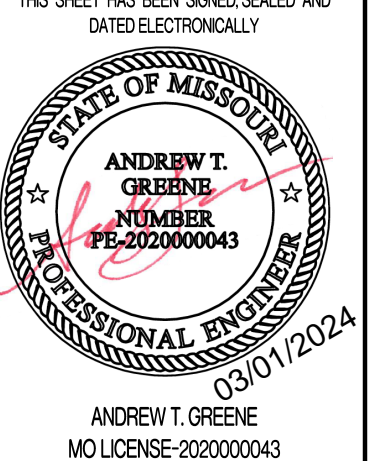
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SIGNATURE: *Jay D. Berendzen*

REVISIONS:

NO.	DATE
BID SET	03/01/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY



ANDREW T. GREENE
MO LICENSE: 2020000043

PREPARED BY: **CROCKETT ENGINEERING CONSULTANTS**
1000 W. Hifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com

OWNER: CURATORS OF THE UNIVERSITY OF MISSOURI
C/O BUSINESS SERVICES
285 UNIVERSITY HALL
COLUMBIA, MO 65211

CP241191 - SOUTH FARM - CREED BARN REMODEL
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:
COVER SHEET

DESIGNED: ATG
DRAWN: ATG
PROJECT NO.: 230338
SHEET: CE 0

Y:\2023\230338-CP241191 - Various Locations-Structural Engineering Services\Blanket\CP241191 - South Farm Creed Barn\Civil\MOU Files\Construction Plans\230338 Site Base.dwg

REVISIONS:

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PROFESSIONAL ENGINEER
MISSOURI LICENSE: 2020000043

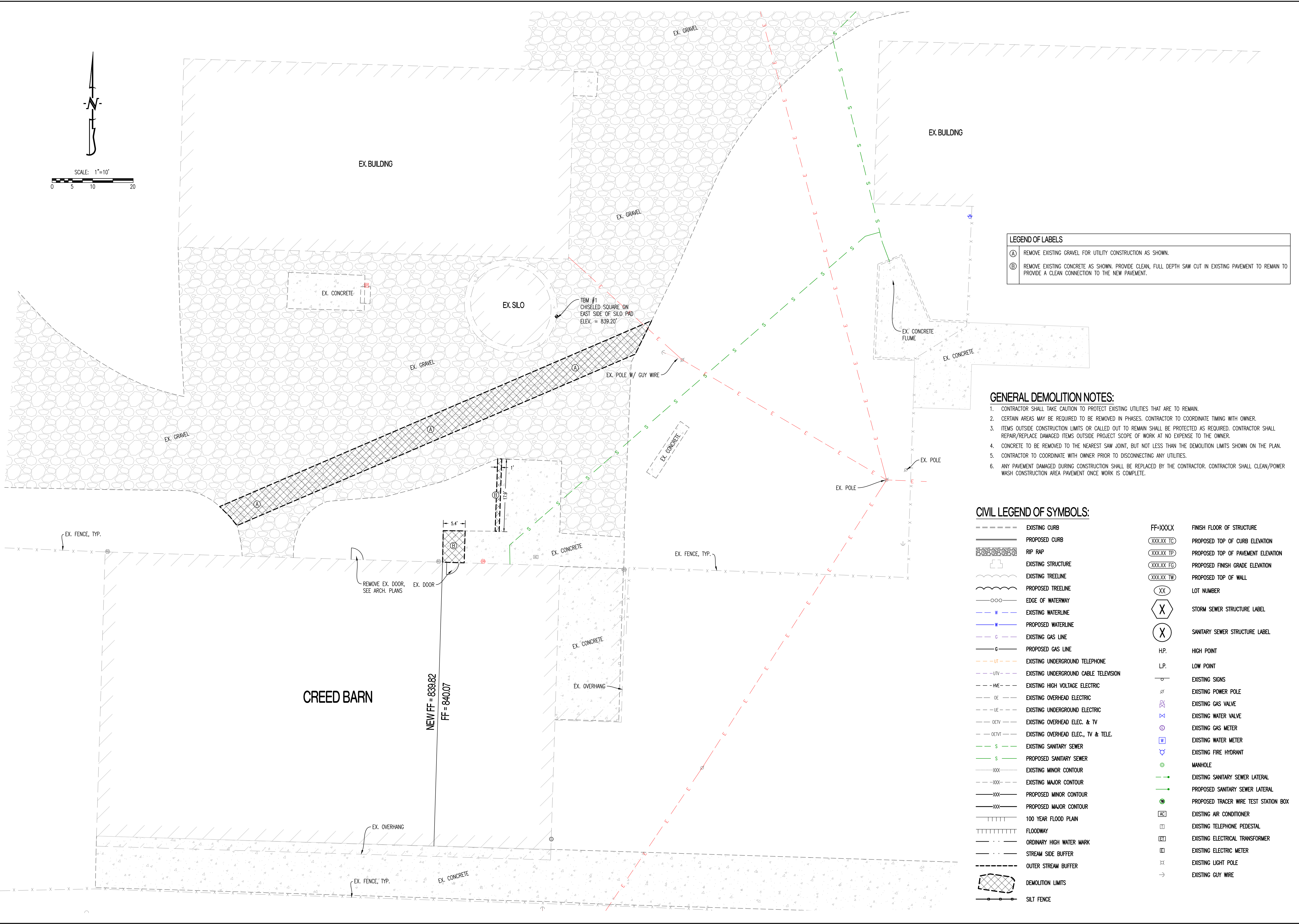
PREPARED BY:
CROCKETT ENGINEERS & ARCHITECTS
1000 W. MISSOURI BLVD.
COLUMBIA, MISSOURI 65203
(372) 487-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#00000001

OWNER:
CURATORS OF THE UNIVERSITY OF MISSOURI
COLUMBUS SERVICES
285 UNIVERSITY HALL
COLUMBIA, MO 65211

**CP241191 - SOUTH FARM - CREED BARN
REMODEL**
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:
DEMOLITION PLAN

DESIGNED: ATG
DRAWN: ATG
PROJECT NO: 2303338
SHEET: CE1



LEGEND OF LABELS

(A) REMOVE EXISTING GRAVEL FOR UTILITY CONSTRUCTION AS SHOWN.

(B) REMOVE EXISTING CONCRETE AS SHOWN. PROVIDE CLEAN, FULL DEPTH SAW CUT IN EXISTING PAVEMENT TO REMAIN TO PROVIDE A CLEAN CONNECTION TO THE NEW PAVEMENT.

GENERAL DEMOLITION NOTES:

- CONTRACTOR SHALL TAKE CAUTION TO PROTECT EXISTING UTILITIES THAT ARE TO REMAIN.
- CERTAIN AREAS MAY BE REQUIRED TO BE REMOVED IN PHASES. CONTRACTOR TO COORDINATE TIMING WITH OWNER.
- ITEMS OUTSIDE CONSTRUCTION LIMITS OR CALLED OUT TO REMAIN SHALL BE PROTECTED AS REQUIRED. CONTRACTOR SHALL REPAIR/REPLACE DAMAGED ITEMS OUTSIDE PROJECT SCOPE OF WORK AT NO EXPENSE TO THE OWNER.
- CONCRETE TO BE REMOVED TO THE NEAREST SAW JOINT, BUT NOT LESS THAN THE DEMOLITION LIMITS SHOWN ON THE PLAN.
- CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO DISCONNECTING ANY UTILITIES.
- ANY PAVEMENT DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR. CONTRACTOR SHALL CLEAN/POWER WASH CONSTRUCTION AREA PAVEMENT ONCE WORK IS COMPLETE.

CIVIL LEGEND OF SYMBOLS:

---	EXISTING CURB	FF-XXXX	FINISH FLOOR OF STRUCTURE
---	PROPOSED CURB	XXX.XX TC	PROPOSED TOP OF CURB ELEVATION
---	RIP RAP	XXX.XX TP	PROPOSED TOP OF PAVEMENT ELEVATION
---	EXISTING STRUCTURE	XXX.XX FD	PROPOSED FINISH GRADE ELEVATION
---	EXISTING TREELINE	XXX.XX TW	PROPOSED TOP OF WALL
---	PROPOSED TREELINE	XX	LOT NUMBER
---	EDGE OF WATERWAY	X	STORM SEWER STRUCTURE LABEL
---	EXISTING WATERLINE	X	SANITARY SEWER STRUCTURE LABEL
---	PROPOSED WATERLINE	HP.	HIGH POINT
---	EXISTING GAS LINE	LP.	LOW POINT
---	PROPOSED GAS LINE	---	EXISTING SIGNS
---	EXISTING UNDERGROUND TELEPHONE	---	EXISTING POWER POLE
---	EXISTING UNDERGROUND CABLE TELEVISION	---	EXISTING GAS VALVE
---	EXISTING HIGH VOLTAGE ELECTRIC	---	EXISTING WATER VALVE
---	EXISTING OVERHEAD ELECTRIC	---	EXISTING GAS METER
---	EXISTING UNDERGROUND ELECTRIC	---	EXISTING WATER METER
---	EXISTING OVERHEAD ELEC. & TV	---	EXISTING FIRE HYDRANT
---	EXISTING OVERHEAD ELEC., TV & TELE.	---	MANHOLE
---	EXISTING SANITARY SEWER	---	EXISTING SANITARY SEWER LATERAL
---	PROPOSED SANITARY SEWER	---	PROPOSED SANITARY SEWER LATERAL
---	EXISTING MINOR CONTOUR	---	PROPOSED TRACER WIRE TEST STATION BOX
---	EXISTING MAJOR CONTOUR	---	EXISTING AIR CONDITIONER
---	PROPOSED MINOR CONTOUR	---	EXISTING TELEPHONE PEDESTAL
---	PROPOSED MAJOR CONTOUR	---	EXISTING ELECTRICAL TRANSFORMER
---	100 YEAR FLOOD PLAIN	---	EXISTING ELECTRIC METER
---	FLOODWAY	---	EXISTING LIGHT POLE
---	ORDINARY HIGH WATER MARK	---	EXISTING GUY WIRE
---	STREAM SIDE BUFFER	---	
---	OUTER STREAM BUFFER	---	
---	DEMOLITION LIMITS	---	
---	SILT FENCE	---	

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REVISIONS:

NO.	DATE
BID SET	03/01/2024

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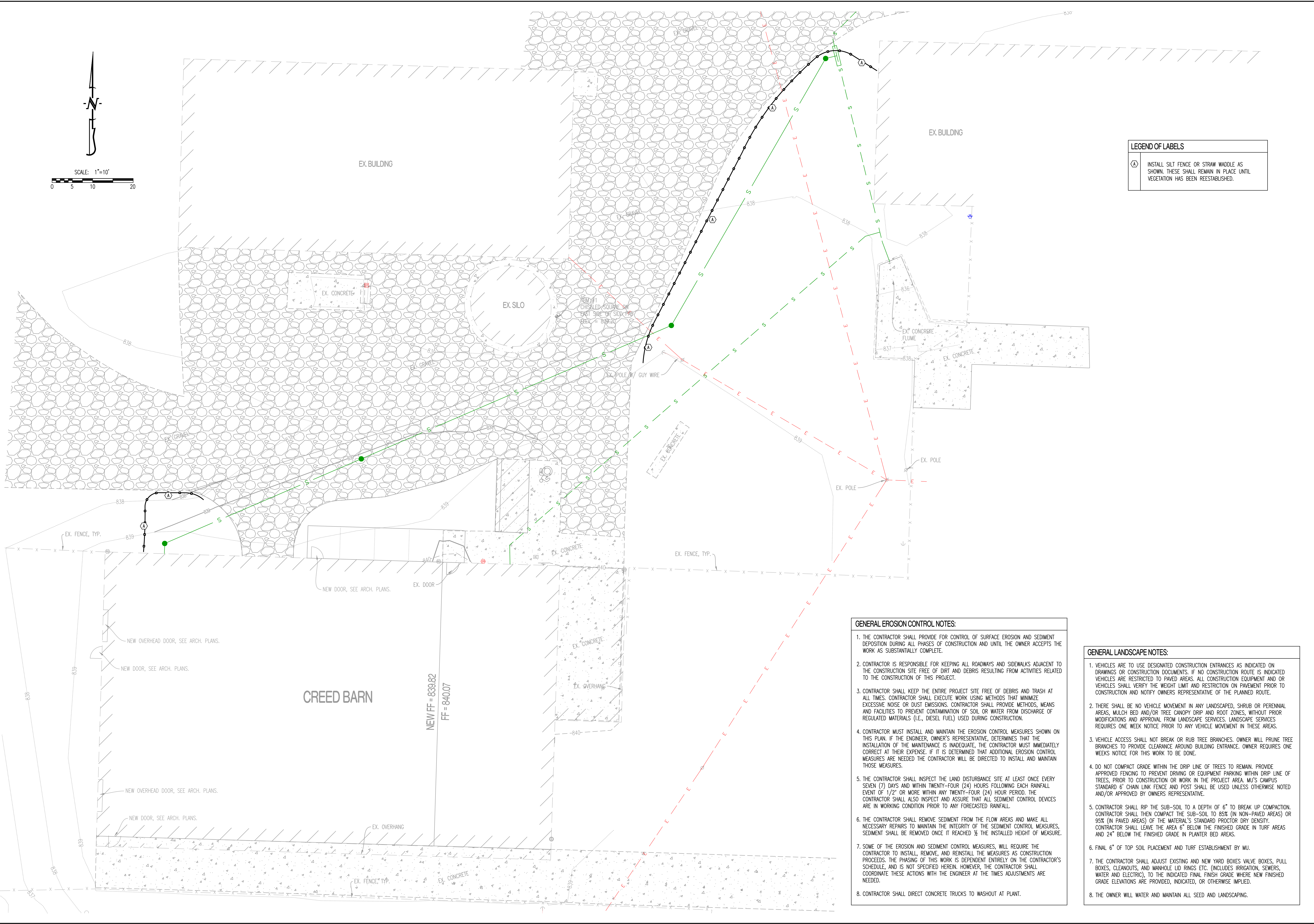
ANDREW T. GREENE
MO LICENSE: 2020000043

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Missouri Certificate of Authority
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OWNER:
CURATORS OF THE UNIVERSITY OF MISSOURI
COLUMBUS SERVICES
285 UNIVERSITY HALL
COLUMBIA, MO 65211

DRAWING INCLUDES:
EROSION CONTROL PLAN

DESIGNED: ATG
DRAWN: ATG
PROJECT NO.: 230338
SHEET: CE 2



LEGEND OF LABELS

(A)	INSTALL SILT FENCE OR STRAW WADDLE AS SHOWN. THESE SHALL REMAIN IN PLACE UNTIL VEGETATION HAS BEEN REESTABLISHED.
-----	---

- GENERAL EROSION CONTROL NOTES:**
1. THE CONTRACTOR SHALL PROVIDE FOR CONTROL OF SURFACE EROSION AND SEDIMENT DEPOSITION DURING ALL PHASES OF CONSTRUCTION AND UNTIL THE OWNER ACCEPTS THE WORK AS SUBSTANTIALLY COMPLETE.
 2. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ROADWAYS AND SIDEWALKS ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS PROJECT.
 3. CONTRACTOR SHALL KEEP THE ENTIRE PROJECT SITE FREE OF DEBRIS AND TRASH AT ALL TIMES. CONTRACTOR SHALL EXECUTE WORK USING METHODS THAT MINIMIZE EXCESSIVE NOISE OR DUST EMISSIONS. CONTRACTOR SHALL PROVIDE METHODS, MEANS AND FACILITIES TO PREVENT CONTAMINATION OF SOIL OR WATER FROM DISCHARGE OF REGULATED MATERIALS (I.E., DIESEL FUEL) USED DURING CONSTRUCTION.
 4. CONTRACTOR MUST INSTALL AND MAINTAIN THE EROSION CONTROL MEASURES SHOWN ON THIS PLAN. IF THE ENGINEER, OWNER'S REPRESENTATIVE, DETERMINES THAT THE INSTALLATION OF THE MAINTENANCE IS INADEQUATE, THE CONTRACTOR MUST IMMEDIATELY CORRECT AT THEIR EXPENSE. IF IT IS DETERMINED THAT ADDITIONAL EROSION CONTROL MEASURES ARE NEEDED THE CONTRACTOR WILL BE DIRECTED TO INSTALL AND MAINTAIN THOSE MEASURES.
 5. THE CONTRACTOR SHALL INSPECT THE LAND DISTURBANCE SITE AT LEAST ONCE EVERY SEVEN (7) DAYS AND WITHIN TWENTY-FOUR (24) HOURS FOLLOWING EACH RAINFALL EVENT OF 1/2" OR MORE WITHIN ANY TWENTY-FOUR (24) HOUR PERIOD. THE CONTRACTOR SHALL ALSO INSPECT AND ASSURE THAT ALL SEDIMENT CONTROL DEVICES ARE IN WORKING CONDITION PRIOR TO ANY FORECASTED RAINFALL.
 6. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM THE FLOW AREAS AND MAKE ALL NECESSARY REPAIRS TO MAINTAIN THE INTEGRITY OF THE SEDIMENT CONTROL MEASURES. SEDIMENT SHALL BE REMOVED ONCE IT REACHED 1/2 THE INSTALLED HEIGHT OF MEASURE.
 7. SOME OF THE EROSION AND SEDIMENT CONTROL MEASURES, WILL REQUIRE THE CONTRACTOR TO INSTALL, REMOVE, AND REINSTALL THE MEASURES AS CONSTRUCTION PROCEEDS. THE PHASING OF THIS WORK IS DEPENDENT ENTIRELY ON THE CONTRACTOR'S SCHEDULE, AND IS NOT SPECIFIED HEREIN. HOWEVER, THE CONTRACTOR SHALL COORDINATE THESE ACTIONS WITH THE ENGINEER AT THE TIMES ADJUSTMENTS ARE NEEDED.
 8. CONTRACTOR SHALL DIRECT CONCRETE TRUCKS TO WASHOUT AT PLANT.

- GENERAL LANDSCAPE NOTES:**
1. VEHICLES ARE TO USE DESIGNATED CONSTRUCTION ENTRANCES AS INDICATED ON DRAWINGS OR CONSTRUCTION DOCUMENTS. IF NO CONSTRUCTION ROUTE IS INDICATED VEHICLES ARE RESTRICTED TO PAVED AREAS. ALL CONSTRUCTION EQUIPMENT AND OR VEHICLES SHALL VERIFY THE WEIGHT LIMIT AND RESTRICTION ON PAVEMENT PRIOR TO CONSTRUCTION AND NOTIFY OWNERS REPRESENTATIVE OF THE PLANNED ROUTE.
 2. THERE SHALL BE NO VEHICLE MOVEMENT IN ANY LANDSCAPED, SHRUB OR PERENNIAL AREAS, MULCH BED AND/OR TREE CANOPY DRIP AND ROOT ZONES, WITHOUT PRIOR MODIFICATIONS AND APPROVAL FROM LANDSCAPE SERVICES. LANDSCAPE SERVICES REQUIRES ONE WEEK NOTICE PRIOR TO ANY VEHICLE MOVEMENT IN THESE AREAS.
 3. VEHICLE ACCESS SHALL NOT BREAK OR RUB TREE BRANCHES. OWNER WILL PRUNE TREE BRANCHES TO PROVIDE CLEARANCE AROUND BUILDING ENTRANCE. OWNER REQUIRES ONE WEEKS NOTICE FOR THIS WORK TO BE DONE.
 4. DO NOT COMPACT GRADE WITHIN THE DRIP LINE OF TREES TO REMAIN. PROVIDE APPROVED FENCING TO PREVENT DRIVING OR EQUIPMENT PARKING WITHIN DRIP LINE OF TREES, PRIOR TO CONSTRUCTION OR WORK IN THE PROJECT AREA. MU'S CAMPUS STANDARD 6" CHAIN LINK FENCE AND POST SHALL BE USED UNLESS OTHERWISE NOTED AND/OR APPROVED BY OWNERS REPRESENTATIVE.
 5. CONTRACTOR SHALL RIP THE SUB-SOIL TO A DEPTH OF 6" TO BREAK UP COMPACTION. CONTRACTOR SHALL THEN COMPACT THE SUB-SOIL TO 85% (IN NON-PAVED AREAS) OR 95% (IN PAVED AREAS) OF THE MATERIAL'S STANDARD PROCTOR DRY DENSITY. CONTRACTOR SHALL LEAVE THE AREA 6" BELOW THE FINISHED GRADE IN TURF AREAS AND 24" BELOW THE FINISHED GRADE IN PLANTER BED AREAS.
 6. FINAL 6" OF TOP SOIL PLACEMENT AND TURF ESTABLISHMENT BY MU.
 7. THE CONTRACTOR SHALL ADJUST EXISTING AND NEW YARD BOXES VALVE BOXES, PULL BOXES, CLEANOUTS, AND MANHOLE LID RINGS ETC. (INCLUDES IRRIGATION, SEWERS, WATER AND ELECTRIC), TO THE INDICATED FINAL FINISH GRADE WHERE NEW FINISHED GRADE ELEVATIONS ARE PROVIDED, INDICATED, OR OTHERWISE IMPLIED.
 8. THE OWNER WILL WATER AND MAINTAIN ALL SEED AND LANDSCAPING.

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REVISIONS:

NO.	DATE
BID SET	03/01/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

ANDREW T. GREENE
REGISTERED PROFESSIONAL ENGINEER
MO LICENSE: 2020000043

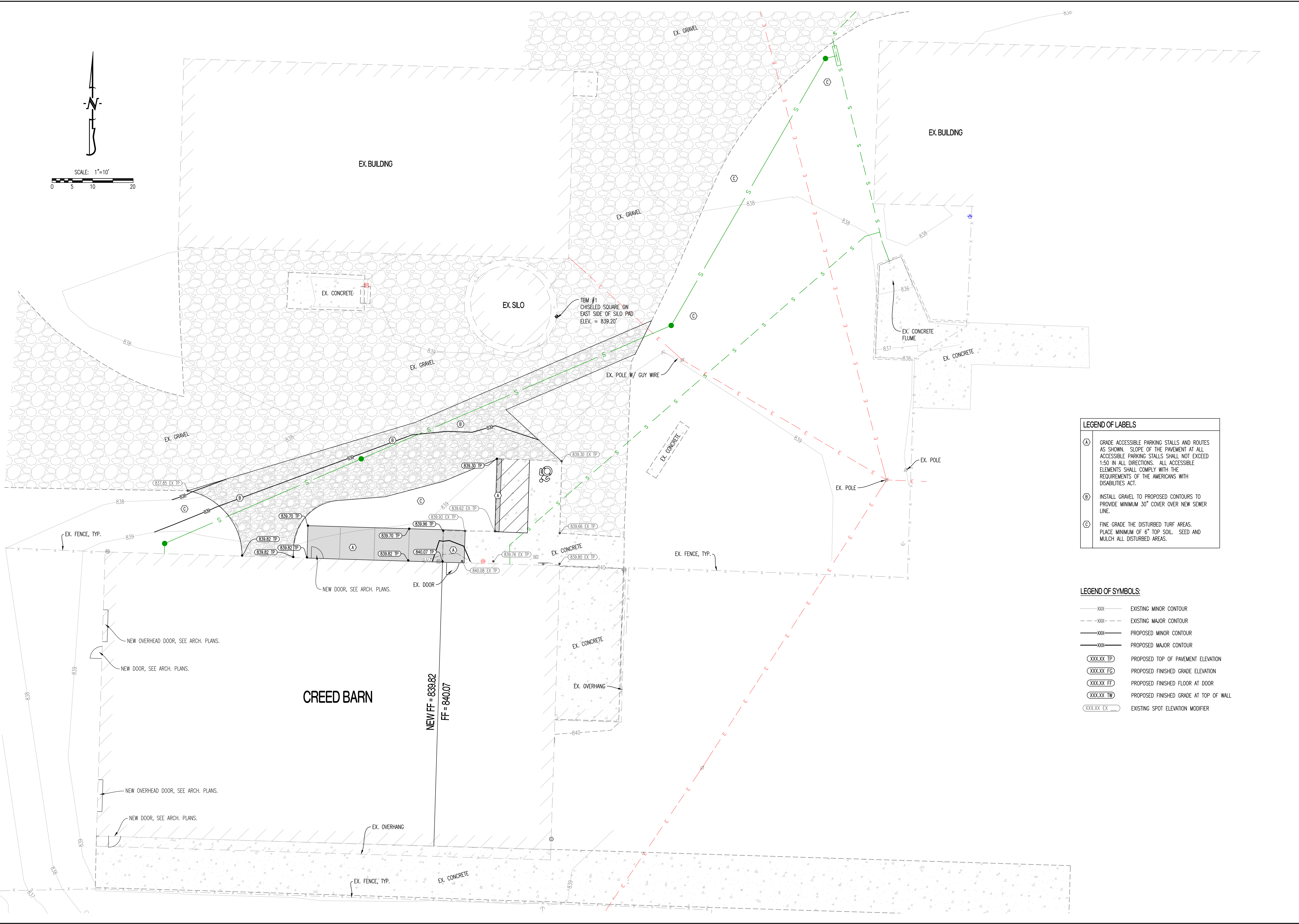
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OWNER:
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COLUMBUS SERVICES
228 UNIVERSITY HALL
COLUMBIA, MO 65211

**CP241191 - SOUTH FARM - CREED BARN
REMODEL**
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:
GRADING PLAN

DESIGNED: ATG
DRAWN: ATG
PROJECT NO: 2303338
SHEET: CE 3



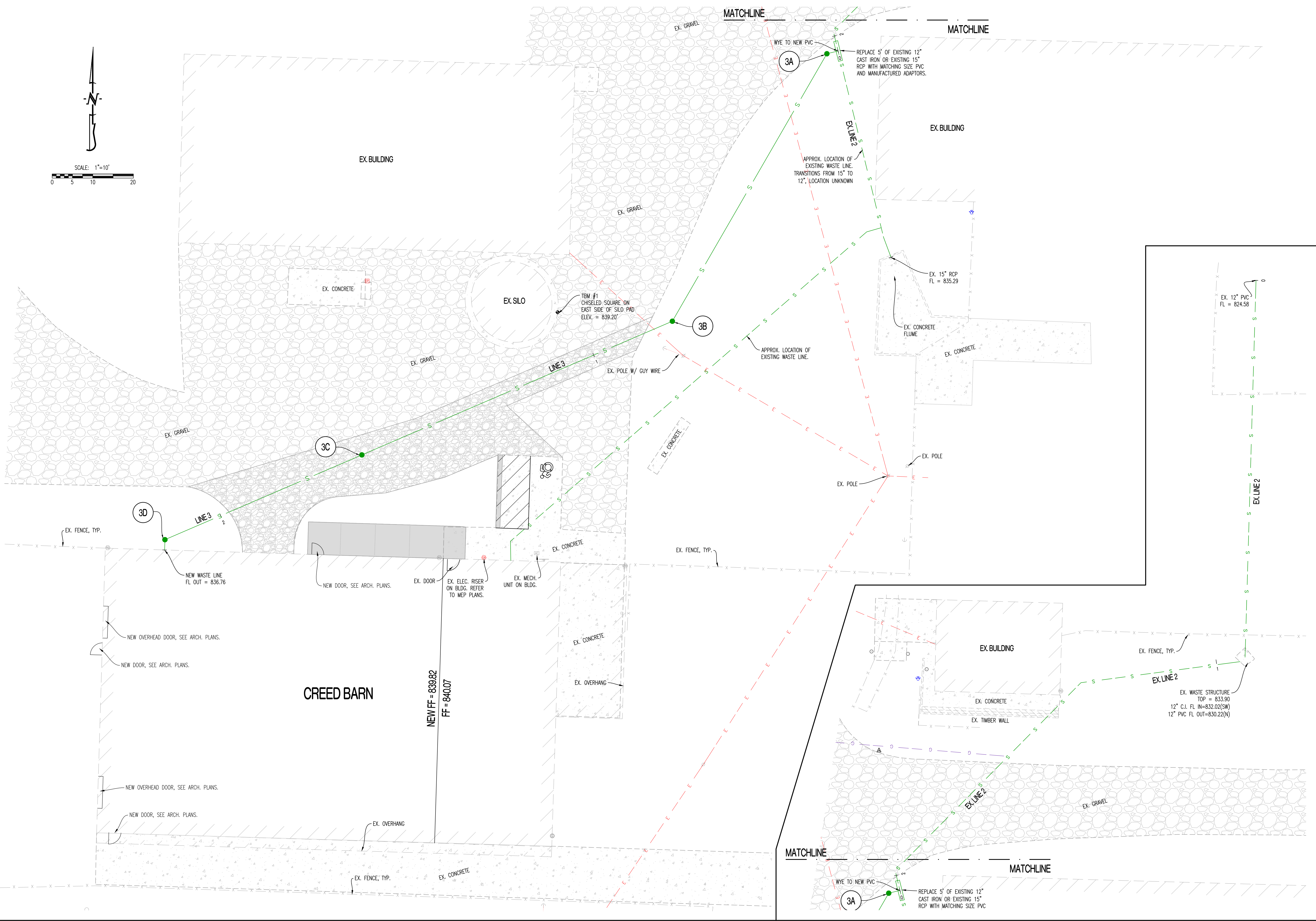
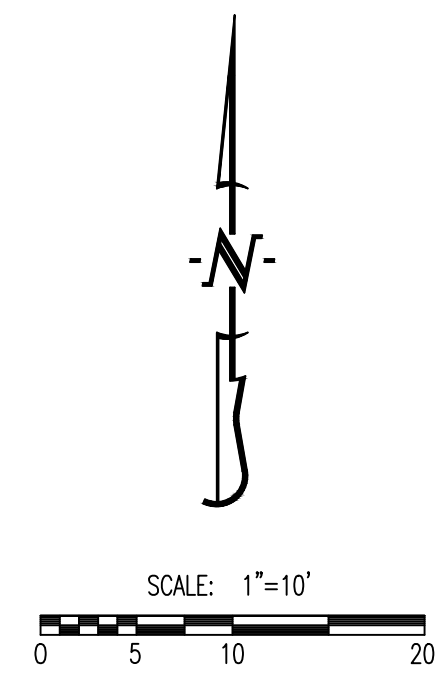
LEGEND OF LABELS:

- (A) GRADE ACCESSIBLE PARKING STALLS AND ROUTES AS SHOWN. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. ALL ACCESSIBLE ELEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- (B) INSTALL GRAVEL TO PROPOSED CONTOURS TO PROVIDE MINIMUM 30" COVER OVER NEW SEWER LINE.
- (C) FINE GRADE THE DISTURBED TURF AREAS. PLACE MINIMUM OF 6" TOP SOIL. SEED AND MULCH ALL DISTURBED AREAS.

LEGEND OF SYMBOLS:

- XXX--- EXISTING MINOR CONTOUR
- - -XXX- - - EXISTING MAJOR CONTOUR
- XXX--- PROPOSED MINOR CONTOUR
- XXX--- PROPOSED MAJOR CONTOUR
- (XXXX TP) PROPOSED TOP OF PAVEMENT ELEVATION
- (XXXX FG) PROPOSED FINISHED GRADE ELEVATION
- (XXXX FF) PROPOSED FINISHED FLOOR AT DOOR
- (XXXX TW) PROPOSED FINISHED GRADE AT TOP OF WALL
- (XXXX EX) EXISTING SPOT ELEVATION MODIFIER

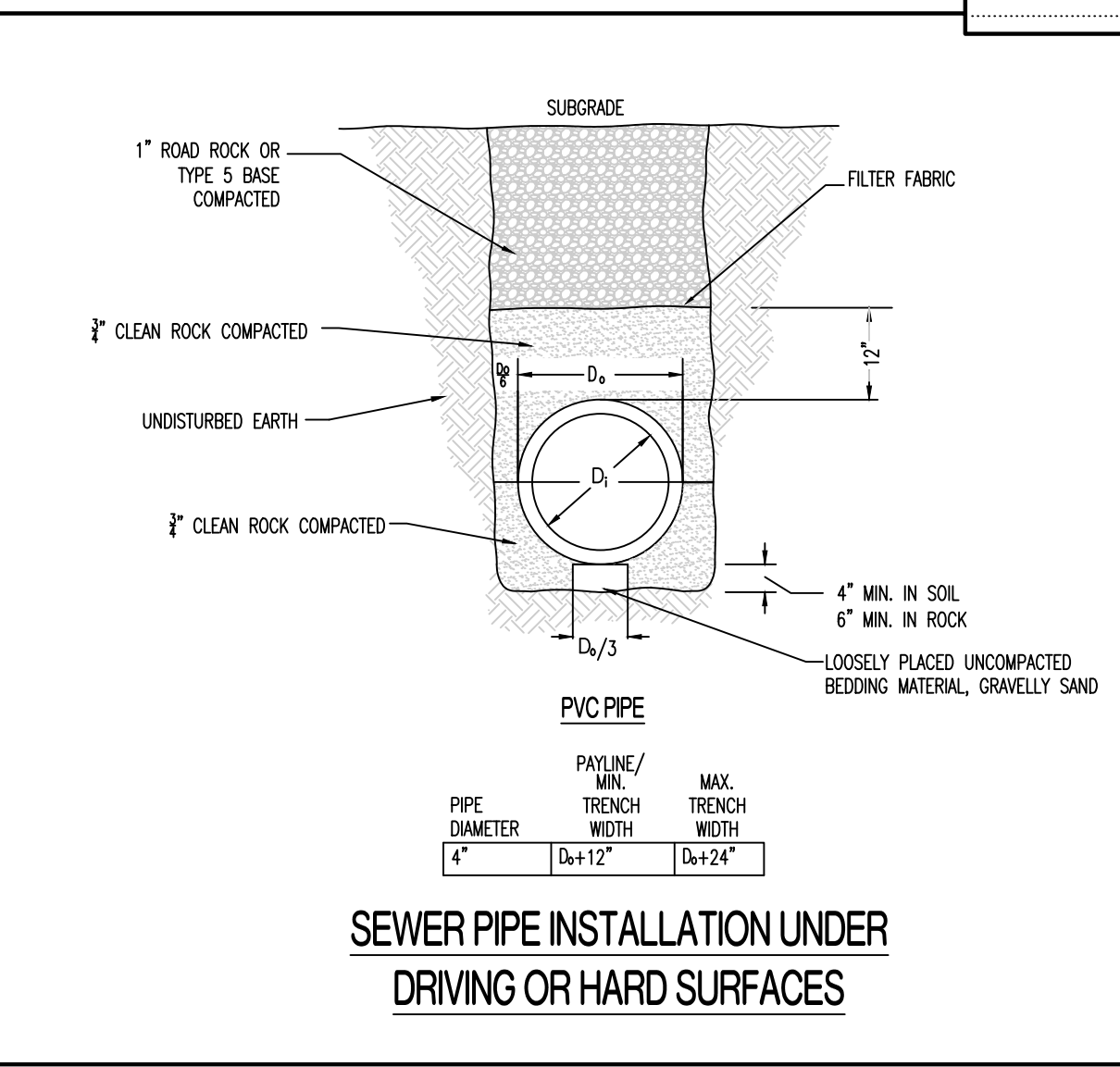
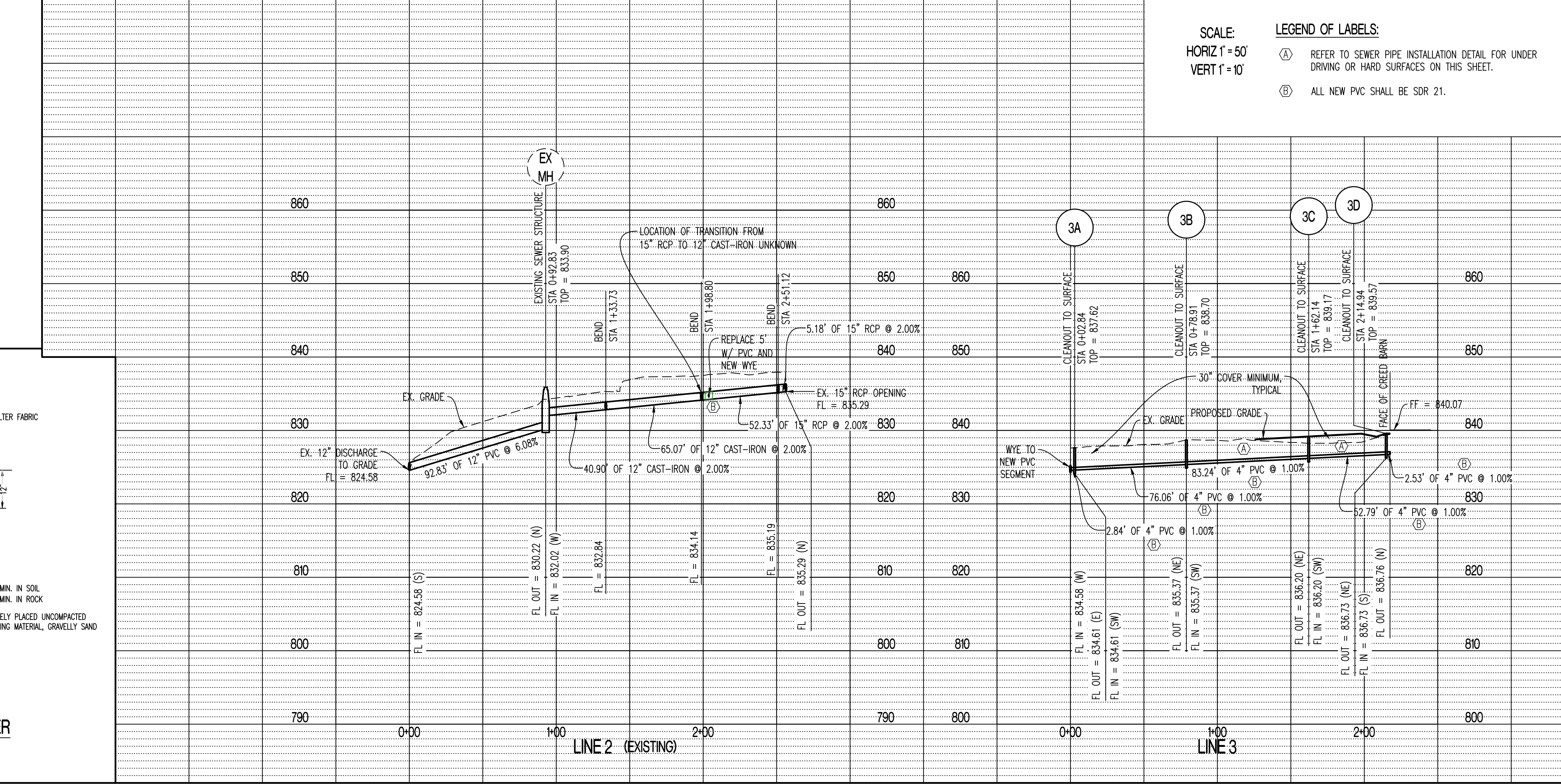
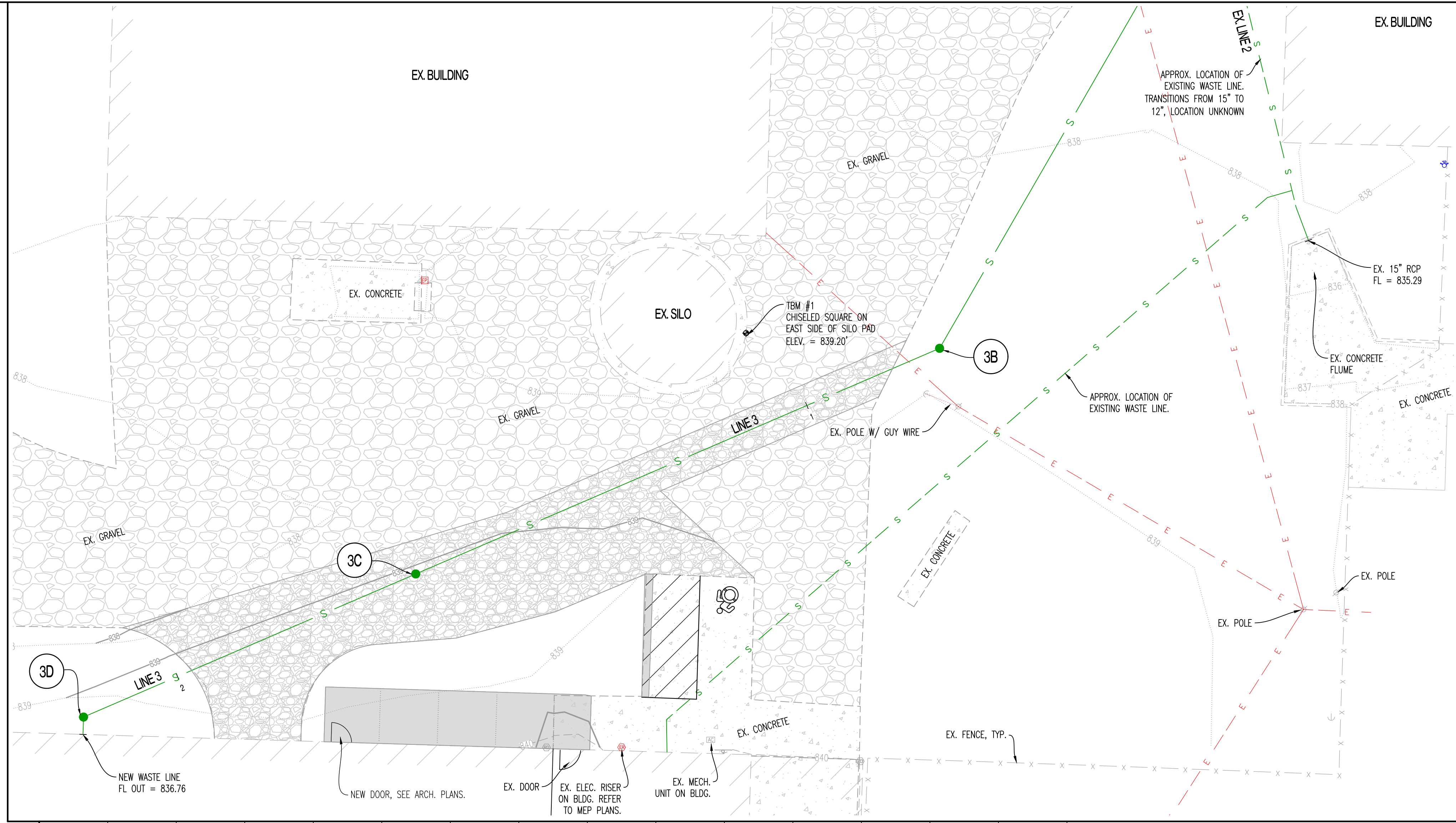
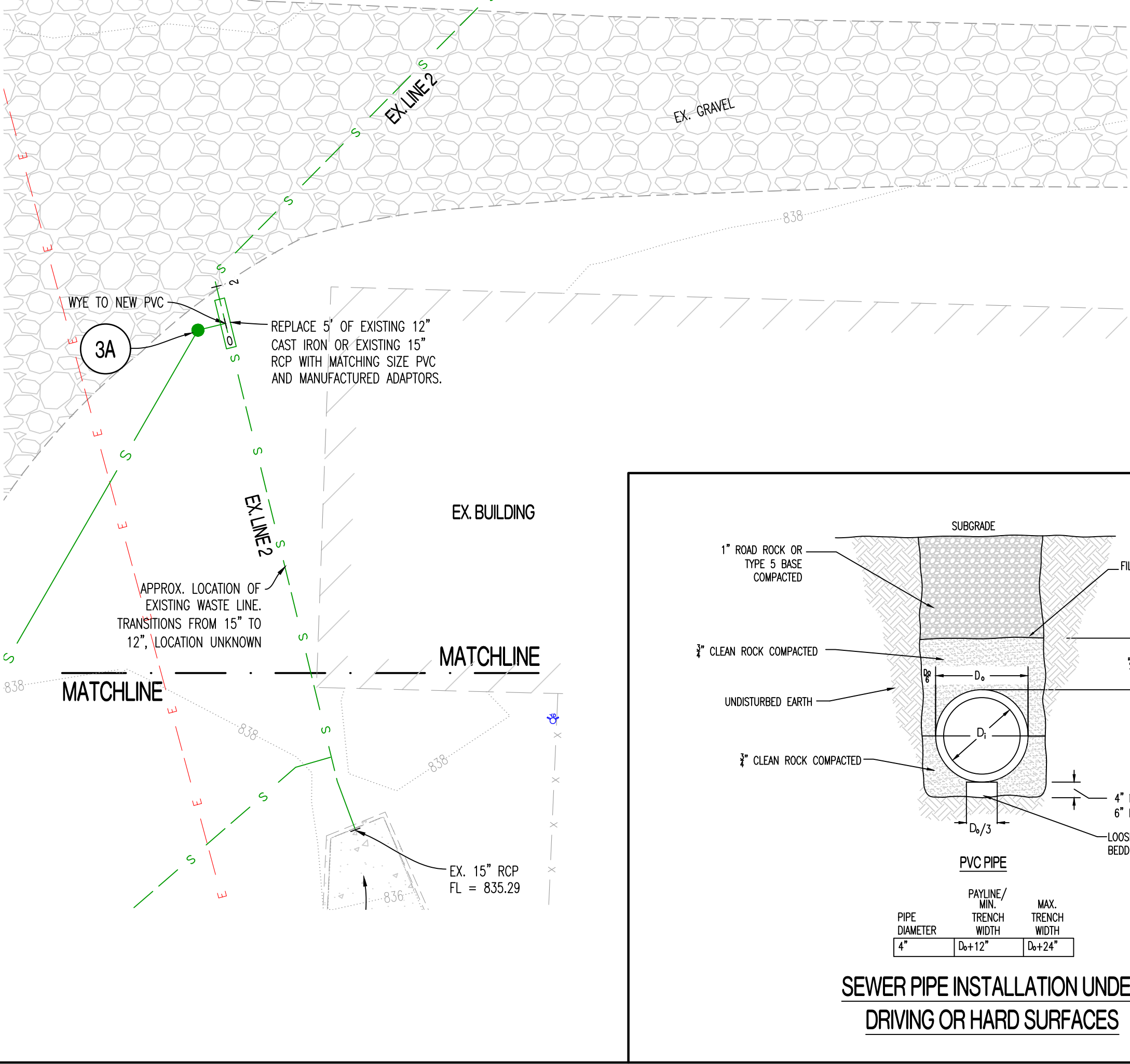
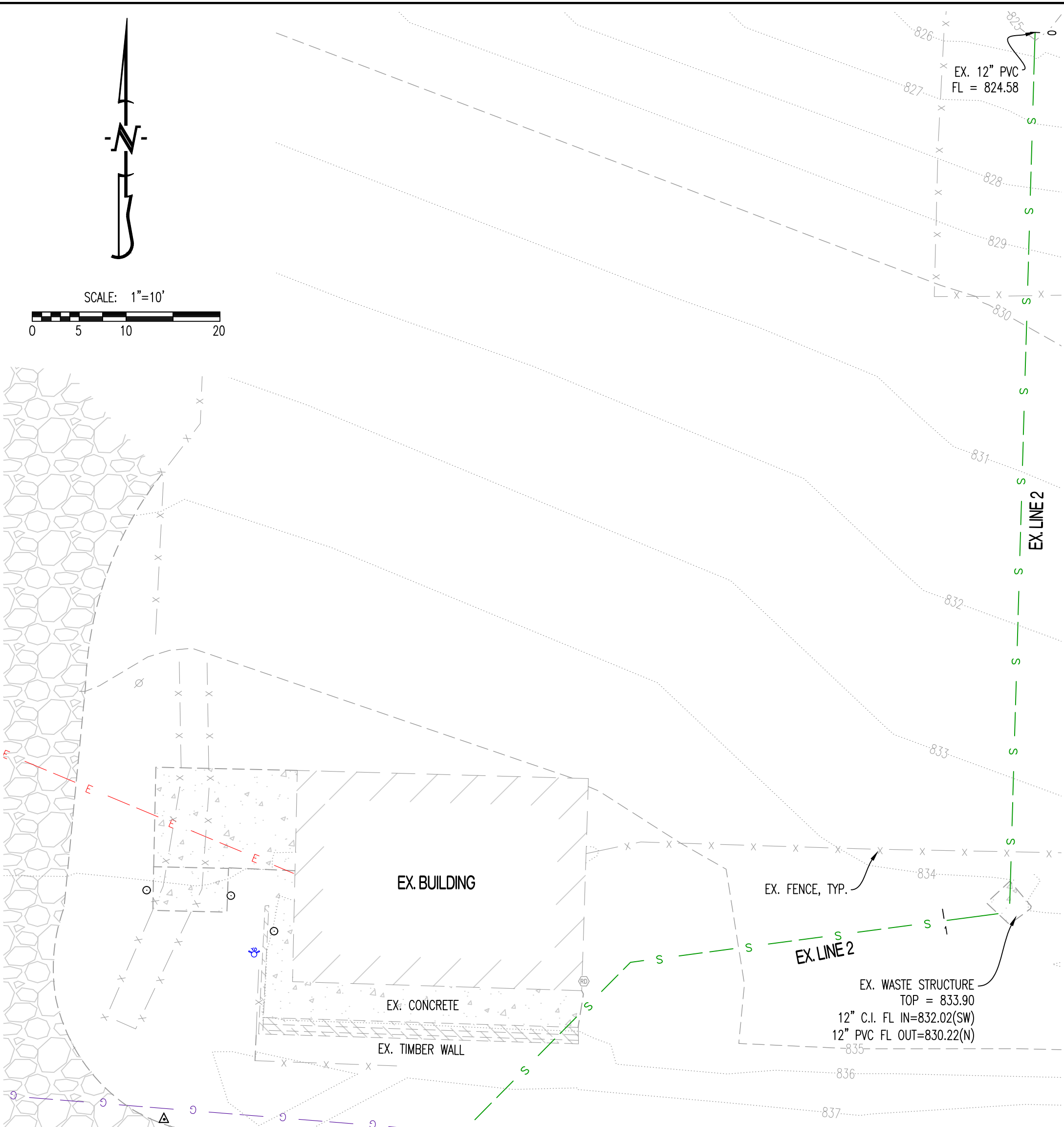
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REVISIONS:	
NO.	DATE
BID SET	03/01/2024
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY	
PREPARED BY: CROCKETT ENGINEERS & ARCHITECTS 1000 W. Wilson Blvd. Columbia, Missouri 65203 (372) 487-0299 www.crockettengineering.com Missouri Certificate of Authority #00000001	
OWNER: CURATORS OF THE UNIVERSITY OF MISSOURI COLUMBUS BUSINESS SERVICES 228 UNIVERSITY HALL COLUMBIA, MO 65211	
CP241191 - SOUTH FARM - CREED BARN REMODEL COLUMBIA, BOONE COUNTY, MISSOURI	
DRAWING INCLUDES:	
UTILITY PLAN	
DESIGNED:	ATG
DRAWN:	ATG
PROJECT NO.:	230338
SHEET:	CE 4

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SCALE:
HORIZ 1"=50'
VERT 1"=10'

LEGEND OF LABELS:
Ⓐ REFER TO SEWER PIPE INSTALLATION DETAIL FOR UNDER DRIVING OR HARD SURFACES ON THIS SHEET.
Ⓑ ALL NEW PVC SHALL BE SDR 21.

REVISIONS:	
NO.	DATE
BID SET	03/01/2024
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY	
PREPARED BY: CROCKETT ENGINEERS & ARCHITECTS ENGINEERS, ARCHITECTS & PLANNERS 1000 W. Wilson Blvd., Ste. 200 Columbia, Missouri 65203 (314) 487-0299 www.crockettingeering.com Missouri Certificate of Authority #00000001	
OWNER: CURATORS OF THE UNIVERSITY OF MISSOURI COLLEGE BUSINESS SERVICES 226 UNIVERSITY HALL COLUMBIA, MO 65211	
CP241191 - SOUTH FARM - CREED BARN REMODEL COLUMBIA, BOONE COUNTY, MISSOURI	
DRAWING INCLUDES: WASTE PROFILES	
DESIGNED:	ATG
DRAWN:	ATG
PROJECT NO.:	230338
SHEET:	CE 5

REVISIONS:

NO.	DATE
BID SET	03/01/2024

THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY

ANDREW T. GREENE
MO LICENSE 202000043

PREPARED BY: **CROCKETT ENGINEERS**
ENGINEERS AND ARCHITECTS
1000 W. Illinois Blvd.
Columbia, Missouri 65203
(372) 487-0299
www.crockettengineering.com
Missouri Certificate of Authority #00000001

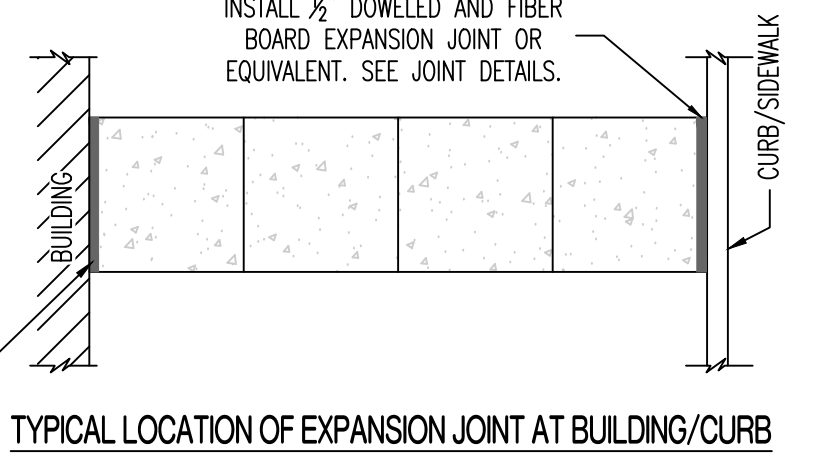
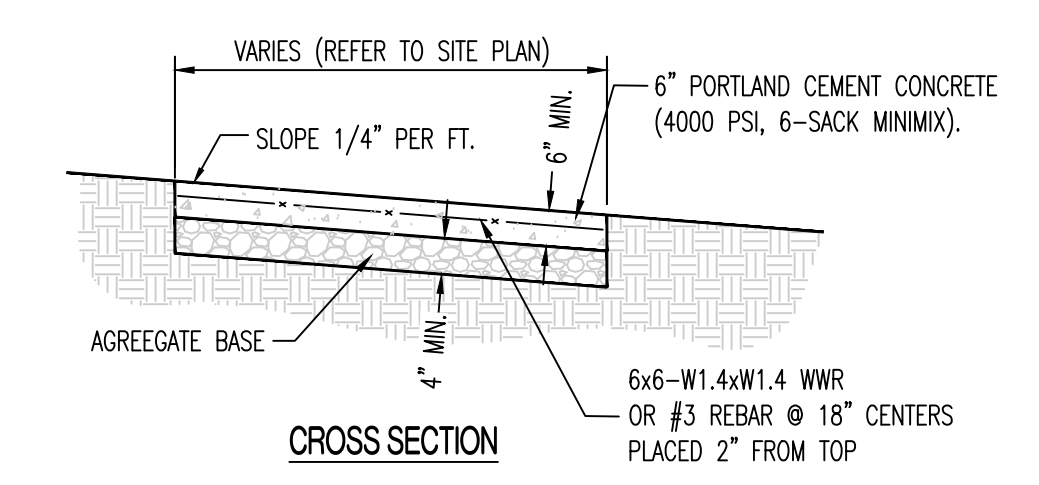
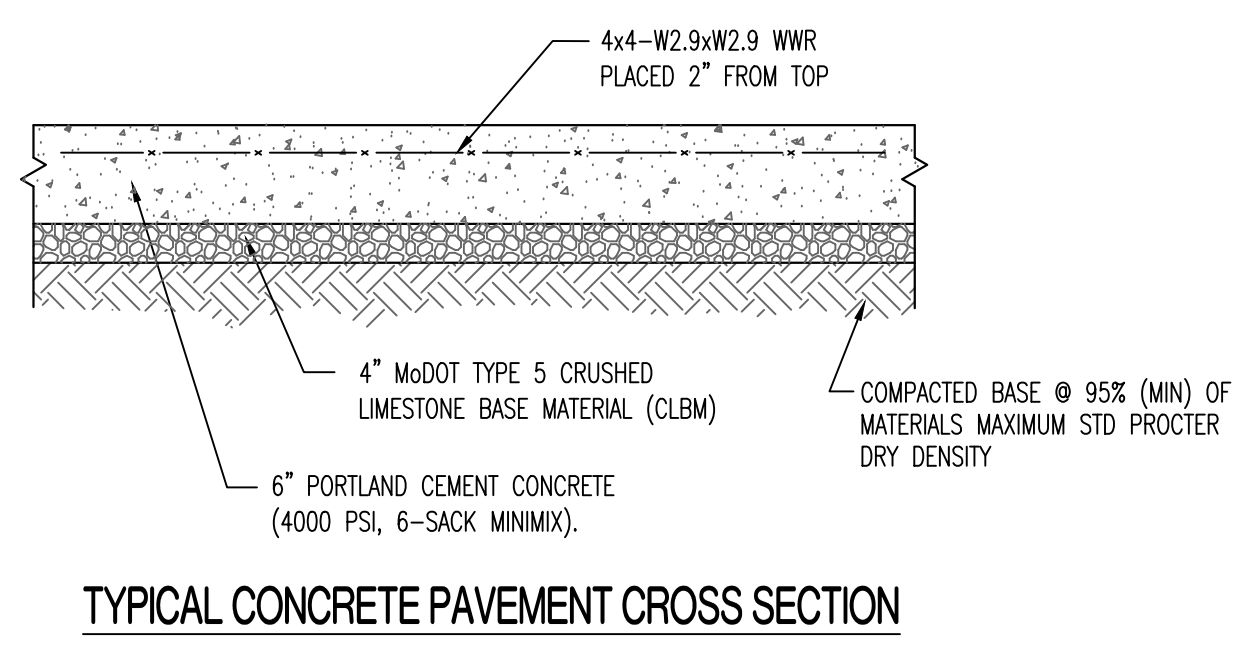
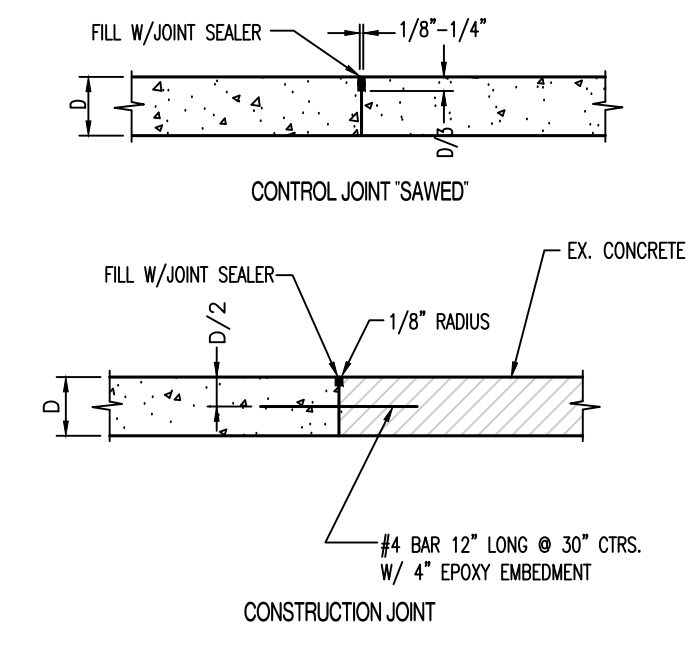
OWNER: CURATORS OF THE UNIVERSITY OF MISSOURI
COLUMBUS SERVICES
285 UNIVERSITY HALL
COLUMBIA, MO 65211

CP241191 - SOUTH FARM - CREED BARN REMODEL
COLUMBIA, BOONE COUNTY, MISSOURI

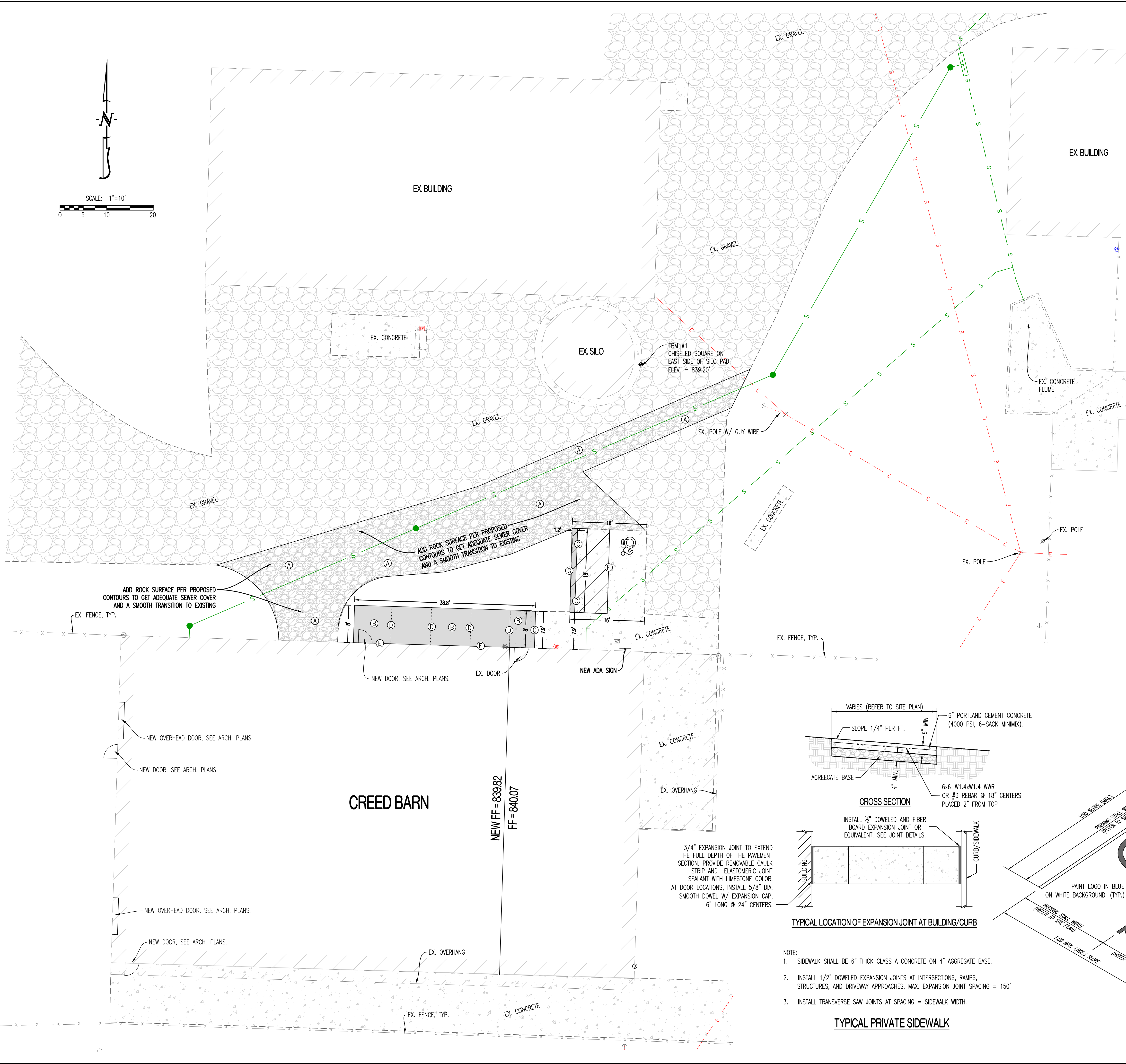
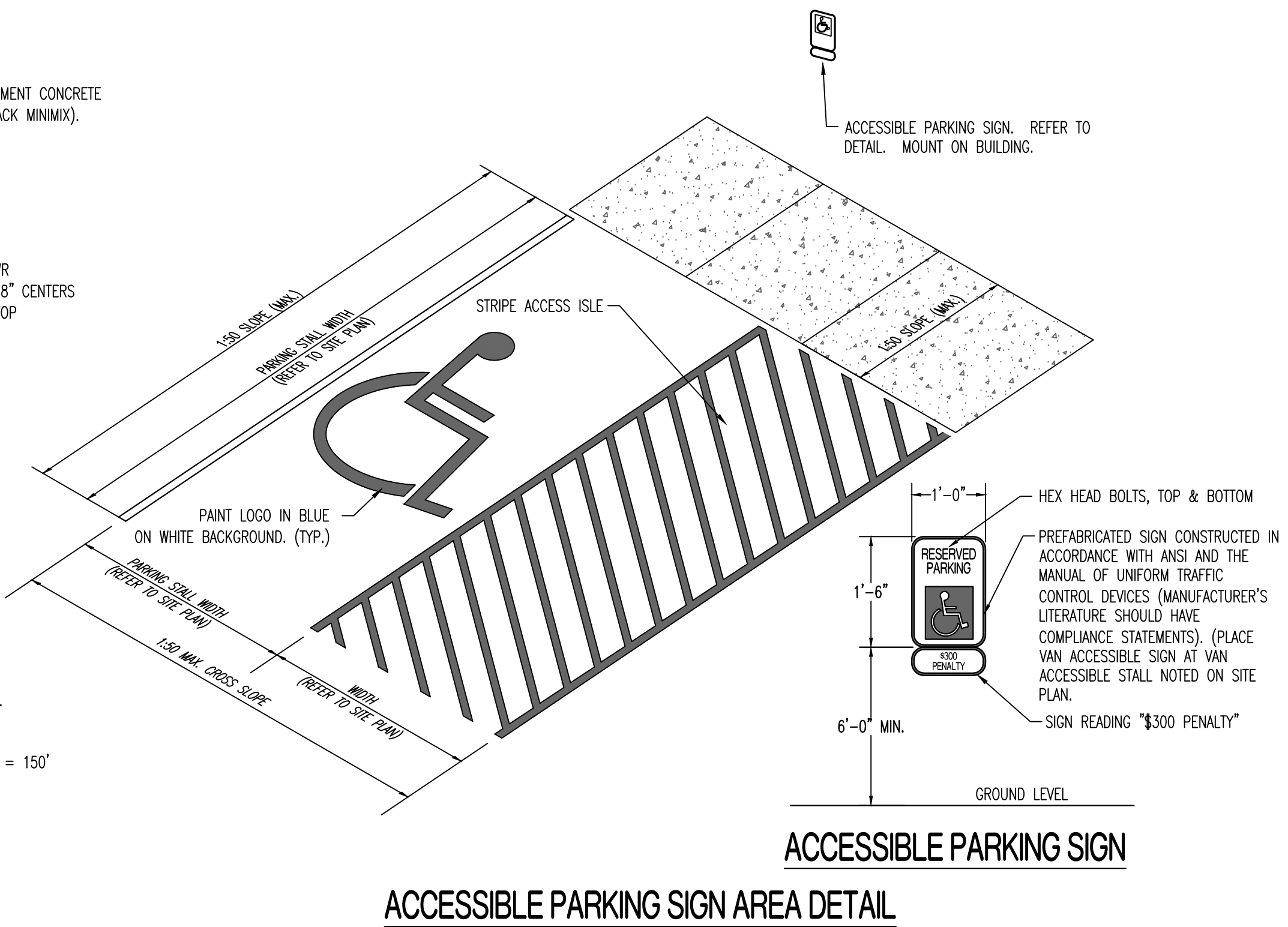
DRAWING INCLUDES: SITE PLAN

DESIGNED: ATG
DRAWN: ATG
PROJECT NO: 230338
SHEET: CE 6

- LEGEND OF LABELS**
- (A) INSTALL COMPACTED MODOT TYPE 5 ROCK OR 1" ROAD ROCK AS SHOWN.
 - (B) CONSTRUCT TYPICAL PRIVATE SIDEWALK AS SHOWN. REFER TO DETAIL ON THIS SHEET.
 - (C) INSTALL DOWELED CONSTRUCTION JOINT AT CONNECTION TO EXISTING CONCRETE PAVEMENT WITH SEALANT AS SHOWN. REFER TO DETAIL ON THIS SHEET.
 - (D) INSTALL SAWED CONTROL JOINT WITH SEALANT AS SHOWN (TYPICAL). REFER TO DETAIL ON THIS SHEET.
 - (E) INSTALL 3/4" EXPANSION JOINT BETWEEN BUILDING AND PAVEMENT. REFER TO SIDEWALK DETAIL ON THIS SHEET.
 - (F) CONSTRUCT ADA ACCESSIBLE PARKING AREA WITH SIGNAGE ATTACHED TO BUILDING. PAINT 4" STRIPES AND ACCESSIBLE SYMBOL, COLOR BLUE. PAINT HATCH AREA AS SHOWN, COLOR BLUE. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE STALLS SHALL NOT EXCEED 1:50.
 - (G) CONSTRUCT CONCRETE PAVING FOR PARKING AREA AS SHOWN. REFER TO DETAIL ON THIS SHEET.



- NOTE:
- SIDEWALK SHALL BE 6" THICK CLASS A CONCRETE ON 4" AGGREGATE BASE.
 - INSTALL 1/2" DOWELED EXPANSION JOINTS AT INTERSECTIONS, RAMPS, STRUCTURES, AND DRIVEWAY APPROACHES. MAX. EXPANSION JOINT SPACING = 150'
 - INSTALL TRANSVERSE SAW JOINTS AT SPACING = SIDEWALK WIDTH.



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UNIVERSITY OF MISSOURI SANITARY SEWER:

SUBMITTALS: PIPE AND FITTINGS, NON-PRESSURE AND PRESSURE COUPLINGS

DELIVERY, STORAGE, AND HANDLING: DO NOT STORE PLASTIC MANHOLES, PIPE, AND FITTINGS IN DIRECT SUNLIGHT. PROTECT PIPE, PIPE FITTINGS, AND SEALS FROM DIRT AND DAMAGE. HANDLE MANHOLES ACCORDING TO MANUFACTURER'S WRITTEN RIGGING INSTRUCTIONS.

DO NOT INTERRUPT SEWER SERVICE TO OTHER CONNECTED FACILITIES.

SEWER LATERAL PIPING SHALL BE A MINIMUM OF 4" DIAMETER.

PIPE FOR PVC SERVICE LATERALS SHALL AT A MINIMUM BE SDR 21 HEAVY WALL PVC GRAVITY SEWER PIPE AND CONFORM TO ASTM D2241. FITTINGS AND JOINTS SHALL CONFORM TO ASTM D3033/43034, TYPE 1, GRADE 1.

SERVICE CONNECTIONS SHALL NOT BE WITHIN FIVE (5) FEET OF AN EXISTING STRUCTURE.

CLEANOUTS: CLEANOUTS ARE REQUIRED ON SERVICE LINES OUTSIDE A BUILDING FOOTPRINT AND AT HORIZONTAL OR VERTICAL BENDS IN A SERVICE LINE. THE DEFLECTION SHOULD UTILIZE A WYE WITH THE CLEANOUT AS AN UPSTREAM EXTENSION OF THE DOWNSTREAM LINE'S ALIGNMENT. CLEANOUT CAP MATERIAL SHALL BE CAST IRON. FRAME AND CASTING SHALL BE NENAH R-1976, DEETER 1830, OR EQUAL. PVC SHALL NOT EXCEED ABOVE GRADE. CASTING SHALL BE ANCHORED BY A 2' x 2' x 8" THICK CONCRETE PAD, 6" BELOW FINISHED GRADE. SEPARATE CONCRETE FROM PIPE WITH TWO LAYERS OF BUILDING PAPER.

TRACER WIRE & TEST STATIONS: TRACER WIRE SHALL BE #14 AWG SOLID, STEEL CORE SOFT DRAWN HIGH STRENGTH TRACER WIRE, 250# AVERAGE TENSILE BREAK LOAD, 30 MIL HIGH MOLECULAR WEIGHT (HMWPE) OR HIGH DENSITY (HDPE) POLYETHYLENE JACKET COMPLYING WITH ASTM-D-1248, 30 VOLT RATING. JACKET COLOR SHALL BE GREEN, NO THIN INSULATED WIRE SHALL BE ALLOWED. TRACER WIRE SHALL BE COPPERHEAD INDUSTRIES HS-OCS OR APPROVED EQUAL. THE TRACER WIRE SHALL BE TAPED TO THE PIPE AT THE THREE O'CLOCK POSITION EVERY 5 FEET. THE TRACER WIRE ENDS WILL TERMINATE AT A TRACER WIRE TEST STATION.

TRACER WIRE SHALL HAVE MOISTURE RESISTANT SPLICES FOR DIRECT BURY APPLICATIONS. SPLICES SHALL BE COPPERHEAD INDUSTRIES SNAKEBIT OR 3M DWR OR APPROVED EQUAL. TRACER WIRE TEST STATIONS SHALL BE INSTALLED 2 FEET OF THE MANHOLE OR STRUCTURE IN THE FLOW LINE OF THE PIPE. THESE STATIONS SHALL BE DESIGNED TO BE EASILY DETECTED BY MAGNETIC AND ELECTRONIC LOCATORS. A MAGNET SHALL BE SECURELY ATTACHED AT THE TOP OF THE UPPER TUBE OF THE BOX FOR LOCATING PURPOSES. LID SHALL BE GREEN AND HAVE A BRASS TERMINAL FOR ATTACHING LOCATING EQUIPMENT AND A BRASS S SIED NUT FOR REMOVING CAP. TRACER WIRE TEST STATION SHALL BE COPPERHEAD INDUSTRIES SNAKE PIT OR APPROVED EQUAL.

WARNING TAPE SHALL BE INSTALLED AT LEAST 12" ABOVE THE PIPE.

PIPING INSTALLATION

GENERAL LOCATIONS AND ARRANGEMENTS: DRAWING PLANS AND DETAILS TO INDICATE GENERAL LOCATION AND ARRANGEMENT OF UNDERGROUND SANITARY SEWER PIPING. LOCATION AND ARRANGEMENT OF PIPING LAYOUT TAKE INTO ACCOUNT DESIGN CONSIDERATIONS. INSTALL PIPING AS INDICATED, TO EXTENT PRACTICAL. WHERE SPECIFIC INSTALLATION IS NOT INDICATED, FOLLOW PIPING MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL PIPING BEGINNING AT LOW POINT, TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. PLACE BELL ENDS OF PIPING FACING UPSTREAM. INSTALL GASKETS, SEALS, SLEEVES, AND COUPLINGS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR USING LUBRICANTS, CEMENTS, AND OTHER INSTALLATION REQUIREMENTS.

TRENCH BACKFILL IN YARD AREAS SHALL BE NATIVE SOIL COMPACTED TO 90% STANDARD PROCTOR DENSITY. INSTALL SOIL IN CONTINUOUS LAYERS NOT TO EXCEED 8" IN COMPACTED DEPTH.

TRENCH BACKFILL UNDER DRIVING, PAVED, OR OTHER HARD SURFACES SHALL BE GRANULAR MATERIAL. REFER TO TYPICAL INSTALLATION DETAIL.

INSTALL PROPER SIZE INCREASERS, REDUCERS, AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. REDUCING SIZE OF PIPING IN DIRECTION OF FLOW IS PROHIBITED.

WHEN INSTALLING PIPE UNDER STREETS OR OTHER OBSTRUCTIONS THAT CANNOT BE DISTURBED, USE PIPE-JACKING PROCESS OF MICROTUNNELING.

INSTALL GRAVITY-FLOW, NONPRESSURE, DRAINAGE PIPING ACCORDING TO THE FOLLOWING: INSTALL PIPING PITCHED DOWN IN DIRECTION OF FLOW, AT MINIMUM SLOPE OF 1 PERCENT UNLESS OTHERWISE INDICATED. INSTALL PIPING WITH 30-INCH MINIMUM COVER. INSTALL PVC GRAVITY SEWER PIPING ACCORDING TO ASTM D 2321 AND ASTM F 1668.

CLEAR INTERIOR OF PIPING OF DIRT AND SUPERFLUOUS MATERIAL AS WORK PROGRESSES. MAINTAIN SMOB OR DRAG IN PIPING, AND PULL PAST EACH JOINT AS IT IS COMPLETED. PLACE PLUG IN END OF INCOMPLETE PIPING AT END OF DAY AND WHEN WORK STOPS.

PIPE JOINT CONSTRUCTION

JOIN GRAVITY-FLOW, NONPRESSURE, DRAINAGE PIPING ACCORDING TO THE FOLLOWING: JOIN PVC GRAVITY SEWER PIPING ACCORDING TO ASTM D 2321 AND ASTM D 3034 FOR ELASTOMERIC-SEAL JOINTS OR ASTM 3304 FOR ELASTOMERIC-GASKET JOINTS.

CLEANOUT INSTALLATION

INSTALL CLEANOUTS AND RISER EXTENSIONS FROM SEWER PIPES TO CLEANOUTS AT GRADE. USE CAST-IRON SOIL PIPE FITTINGS IN SEWER PIPES AT BRANCHES FOR CLEANOUTS, AND USE CAST-IRON SOIL PIPE FOR RISER EXTENSIONS TO CLEANOUTS. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE.

SET CLEANOUT FRAMES AND COVERS IN EARTH WITH TOPS 1 INCH ABOVE SURROUNDING GRADE. SET CLEANOUT FRAMES AND COVERS IN CONCRETE PAVEMENT AND ROADS WITH TOPS FLUSH WITH PAVEMENT SURFACE.

CONNECTIONS

CONNECT NONPRESSURE, GRAVITY-FLOW DRAINAGE PIPING TO BUILDING'S SANITARY BUILDING DRAINS. PROTECT EXISTING PIPING TO PREVENT CONCRETE OR DEBRIS FROM ENTERING WHILE MAKING TAP CONNECTIONS. REMOVE DEBRIS OR OTHER EXTRANEOUS MATERIAL THAT MAY ACCUMULATE.

FIELD QUALITY CONTROL: DURING INSTALLATION, NOTIFY AUTHORITIES HAVING JURISDICTION AT LEAST 24 HOURS BEFORE INSPECTION MUST BE MADE. PERFORM TESTS SPECIFIED BELOW IN PRESENCE OF AUTHORITIES HAVING JURISDICTION. ROUGHING-IN INSPECTION: ARRANGE FOR INSPECTION OF PIPING BEFORE CONCIALIZING OR BACKFILLING PIPING AND STRUCTURES. FINAL INSPECTION: ARRANGE FOR FINAL INSPECTION BY AUTHORITIES HAVING JURISDICTION TO OBSERVE TESTS SPECIFIED AND TO ENSURE COMPLIANCE WITH REQUIREMENTS.

REPORTS: PREPARE INSPECTION REPORTS AND HAVE THEM SIGNED BY AUTHORITIES HAVING JURISDICTION. TEST SANITARY DRAINAGE ACCORDING TO PROCEDURES OF AUTHORITIES HAVING JURISDICTION OR, IN ABSENCE OF PUBLISHED PROCEDURES, AS FOLLOWS:

HYDROSTATIC TESTS: TEST SANITARY SEWERAGE ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND THE FOLLOWING: FILL SEWER PIPING WITH WATER. TEST WITH PRESSURE OF AT LEAST 10-FOOT HEAD OF WATER, AND MAINTAIN SUCH PRESSURE WITHOUT LEAKAGE FOR AT LEAST 15 MINUTES. CLOSE OPENINGS IN SYSTEM AND FILL WITH WATER. PURGE AIR AND REFILL WITH WATER, DISCONNECT WATER SUPPLY, TEST AND INSPECT JOINTS FOR LEAKS. AIR TESTS: TEST SANITARY SEWERAGE ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, UN1-B-6, AND THE FOLLOWING: TEST PLASTIC GRAVITY SEWER PIPING ACCORDING TO ASTM F 1417.

LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED. REPLACE LEAKING PIPING USING NEW MATERIALS, AND REPEAT TESTING UNTIL LEAKAGE IS WITHIN ALLOWANCES SPECIFIED.

PAVEMENT MARKINGS:

APPLIES TO PAVEMENT MARKINGS IN PARKING LOTS, ROADWAYS, SIDEWALKS, SAFETY ZONES, ADA ZONES, LOADING ZONES, AND NO PARKING ZONES AS INDICATED ON DRAWINGS.

MATERIAL SHALL BE AN EPOXY PAVEMENT MARKING MATERIAL WITH DROP-ON GLASS BEADS IN ACCORDANCE WITH MDOT SPECIFICATIONS, 620.20.3, 1048.20.2, AND 1048.30 OR GEVEKO PLASTICROTE (PMA) OR APPROVED EQUAL AT LOCATIONS SHOWN ON THE PLANS.

MATERIAL TYPE MUST BE COMPATIBLE WITH THE SURFACES TO BE MARKED

MARKINGS SHALL BE APPLIED PER THE FOLLOWING COLOR CODE: WHITE FOR STANDARD PARKING SPACE LINES, SIDEWALK CROSSINGS, AND DRIVE LINES AS NOTED ON THE PLANS. BLUE FOR ADA PARKING STALL AND SYMBOLS AND ASSOCIATED CROSS-HATCHED AREAS. YELLOW FOR DRIVE LINES AS NOTED ON THE PLANS.

DELIVER MATERIALS TO THE SITE IN ORIGINAL CONTAINERS WITH SEALS UNBROKEN AND LABELS INTACT.

PROTECT ALL MATERIAL FROM FREEZING.

DO NOT ALLOW MATERIAL TO SETTLE, CAKE, OR THICKEN IN THE CONTAINER. READY STIR WITH A PADDLE TO A SMOOTH CONSISTENCY.

MATERIAL SHALL ARRIVE ON THE JOB COLOR-MIXED EXCEPT FOR TINTING OF UNDERCOATS AND POSSIBLE THINNING.

PRIOR TO BEGINNING CLEANING OR MARKING OPERATIONS, CONTRACTOR SHALL PROTECT ALL ITEMS OR SURFACES NOT INCLUDED IN AREA TO BE MARKED. PROTECT VEHICLES, EQUIPMENT, STRUCTURES, OR OTHER ITEMS FROM MATERIAL SPATTERS, OVER SPRAY, OR DAMAGE.

CONTRACTOR SHALL PROVIDE BARRICADES AND ANY SIGNAGE NEEDED TO PROTECT ALL MARKED AREAS FROM PEDESTRIAN AND VEHICULAR TRAFFIC UNTIL ACHIEVING SUFFICIENT DRYING TIME.

PERFORM PAVEMENT MARKINGS AS SOON AS FEASIBLE AND PRACTICAL AFTER THE FINISHING OF THE PAVEMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

ADEQUATE LIGHTING SHALL BE AVAILABLE AT THE TIME OF PAVEMENT MARKING.

THE SURFACE ON WHICH PERMANENT PAVEMENT MARKING IS TO BE PLACED SHALL BE CLEAN, DRY AND FREE OF ALL DEBRIS, LANTACE, CURING COMPOUND AND ANY OTHER CONTAMINANTS THAT MAY HINDER THE ADHESION OF THE SYSTEM TO THE SURFACE. PERMANENT PAVEMENT MARKING SHALL NOT BE APPLIED IN DAMP CONDITIONS OR IF THERE IS ANY EVIDENCE OF SURFACE MOISTURE ON THE PAVEMENT. EXAMINE ALL SURFACES TO RECEIVE PAVEMENT MARKING TO MAKE SURE THERE ARE NO DEFECTS IN THE SURFACE TO BE STRIPPED. DO NOT MARK PAVEMENT OVER RUST, SCALE, GREASE, OIL, FUEL, DUST, WET PAVEMENT, OR OTHER CONDITIONS DETRIMENTAL TO PAVEMENT MARKING ADHESION. REMOVE GREASE, OIL, OR FUEL ON ANY SURFACE BEFORE MARKING PAVEMENT. CORRECT ALL SURFACE DEFECTS BEFORE MARKING PAVEMENT.

CONTRACTOR SHALL EXAMINE AREAS TO HAVE PAVEMENT MARKING. NOTIFY THE OWNERS REPRESENTATIVE IN WRITING OF CONDITIONS THAT MIGHT DELAY TIMELY COMPLETION OF THE WORK.

THE PAVEMENT MARKING SHALL ONLY BE APPLIED DURING DRY WEATHER AND ON DRY PAVEMENT SURFACES. THE PAVEMENT SURFACE TEMPERATURE AND AMBIENT AIR TEMPERATURE SHALL BE IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S RECOMMENDATIONS THROUGHOUT THE APPLICATION AND DURING THE SPECIFIED TIME FOR CURING OF THE MATERIAL.

AREAS TO BE MARKED SHALL NOT BE LESS THAN 25 MILS THICKNESS WITH THE PROPER APPLICATION OF GLASS BEADS. IN LOCATIONS REQUIRING MULTIPLE COATS, PRIOR COAT SHALL BE DRY TO MANUFACTURER'S RECOMMENDATIONS BEFORE APPLYING THE NEXT COAT.

FINISHED WORK SHALL BE UNIFORM, OF APPROVED COLOR, FREE OF RUNS, DRIPS, DEFECTIVE BRUSHING, SPRAYING, AND CLOGGING. PARKING LINES AND SYMBOLS SHALL BE NEAT AND WELL DEFINED. ONLY SKILLED APPLICATORS SHALL APPLY PAVEMENT MARKINGS.

REMOVE PAVEMENT MARKING SPATTER FROM ADJACENT AREAS OR AREAS NOT DESIGNATED TO RECEIVE PAVEMENT MARKING.

CONTRACTOR SHALL REPAIR OR TOUCH UP ANY SURFACES IF EXPOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER.

WHEN COLOR, DIRT, STAINS, EXISTING PAVEMENT MARKINGS, ETC., SHOW THROUGH THE FINAL COAT, REMARK THE SURFACE UNTIL THE FILM IS UNIFORM IN FINISH, COVERAGE, COLOR, AND APPEARANCE.

SITE CLEARING & DEMOLITION :

IT IS THE INTENT THAT THE DEMOLITION BE COMPLETE AND ADEQUATE FOR THE INTENDED PURPOSE. THIS WORK SHALL INCLUDE THE REMOVAL OF ALL ITEMS, WHETHER IN VIEW OR HIDDEN UNDERNEATH THE SURFACE OF THE GROUND, REGARDLESS OF WHETHER SHOWN ON THE DRAWINGS OR ENCOUNTERED DURING CONSTRUCTION.

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING MATERIALS, METHODS OF WORK, AND DISPOSAL OF EXCESS WASTE MATERIALS.

ERECT BARRIERS TO PROTECT PERSONNEL, STRUCTURES AND UTILITIES REMAINING INTACT.

PROTECT ALL EXISTING OBJECTS INTENDED TO REMAIN. IN CASE OF DAMAGE, MAKE REPAIRS OR REPLACEMENTS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

MINIMIZE INTERFERENCE WITH ROADS, STREETS, DRIVEWAYS, SIDEWALKS, AND ADJACENT FACILITIES.

DO NOT CLOSE OR OBSTRUCT STREETS, SIDEWALKS, ALLEYS OR PASSAGEWAYS WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION. IF CLOSURE IS PERMITTED, PROVIDE SIGNAGE INDICATING CLOSURE AND SIGNAGE TO DIRECT TRAFFIC TO ALTERNATE ROUTE.

MOISTEN SURFACES AS REQUIRED TO PREVENT DUST FROM BEING A NUISANCE TO THE PUBLIC, NEIGHBORS, AND CONCURRENT PERFORMANCE OF OTHER WORK ON THE SITE.

PROVIDE THE OWNER'S REPRESENTATIVE A MINIMUM OF TWO BUSINESS DAYS' NOTICE PRIOR TO COMMENCING WORK ON THIS SECTION.

THE CONTRACTOR SHALL LOCATE EXISTING UTILITY LINES AND SERVICES TRAVERSING THE SITE AND DETERMINE THE REQUIREMENTS FOR THEIR PROTECTION. THE CONTRACTOR SHALL PRESERVE ACTIVE UTILITIES ON THE SITE THAT ARE DESIGNATED TO REMAIN.

BEFORE STARTING SITE OPERATIONS, THE CONTRACTOR SHALL DISCONNECT OR ARRANGE FOR THE DISCONNECTION OF ALL UTILITY SERVICES DESIGNATED TO BE REMOVED. THE CONTRACTOR SHALL PERFORM ALL SUCH WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY OR AGENCY INVOLVED.

IN REMOVING PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., WHERE A PORTION IS LEFT IN PLACE, REMOVAL SHALL BE TO AN EXISTING JOINT OR TO A JOINT SAWED TO A MINIMUM DEPTH OF 2" WITH A TRUE SAW LINE AND A VERTICAL FACE. REMOVE SUFFICIENT PAVEMENT TO PROVIDE FOR PROPER GRADE AND CONNECTIONS IN THE NEW WORK REGARDLESS OF ANY LIMITS INDICATED ON THE DRAWING.

EXISTING CASTINGS AND CURVERTS, IF SALVAGEABLE AND REMOVED INTACT, REMAIN THE PROPERTY OF THE CONTRACTOR.

ALL SEWERS AND DRAINAGE PIPES, WHICH HAVE BEEN OR ARE TO BE ABANDONED, SHALL BE PERMANENTLY SEALED AT THE ENDS WITH BULKHEADS CONSTRUCTED OF CONCRETE, HAVING A MINIMUM THICKNESS OF 8".

ABANDON STORM OR SANITARY SEWER STRUCTURES BY BREAKING THE CONCRETE BOTTOM OF THE STRUCTURE INTO PIECES NO LARGER THAN 12" IN ANY DIRECTION AND REMOVING THE TOP OF THE STRUCTURE TO 3' BELOW FINISHED GRADE. PLUG ALL PIPES WITH CONCRETE AND FILL STRUCTURE WITH 1" CLEAN GRAVEL.

ALL DEBRIS SHALL BE DISPOSED OF OFF-SITE

DO NOT STORE OR BURN MATERIALS ON-SITE UNLESS PERMITTED BY THE GOVERNING JURISDICTION.

ALL ASPHALT OR CONCRETE MATERIALS SHALL BE DISPOSED OF OFF-SITE.

MATERIAL ACQUIRED THROUGH DEMOLITION, OTHER THAN THOSE REQUIRED TO COMPLETE THE CONSTRUCTION PROJECT AND DESIGNATED FOR RETURN TO OWNER, WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE. THE MATERIAL WILL BE DISPOSED OF IN A LEGAL MANNER.

THE CONTRACTOR'S OPERATIONS SHALL BE RESTRICTED TO THOSE AREAS INSIDE THE CONSTRUCTION LIMITS INDICATED ON THE DRAWINGS. IF LIMITS ARE NOT INDICATED, RESTRICT WORK TO THE OWNER'S PROPERTY, EASEMENT, OR PUBLIC RIGHTS-OF-WAY.

COMPLETE WORK WITHIN PUBLIC RIGHTS-OF-WAY UNDER THE PERMISSION OF THE GOVERNING AGENCY.

IF ITEMS OUTSIDE THE LIMITS OF DISTURBANCE GET DAMAGED, OWNER COMPLETES THE REQUIRED REPAIRS AND CHARGES THE CONTRACTOR.

THE CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT OF ALL MANHOLES, CASTINGS, WATER VALVES IRRIGATION BOXES, CLEAN OUTS AND ETC. WITHIN THE GRADING LIMITS TO MATCH THE FINISHED SURFACE. ADJUSTMENTS SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO CONSTRUCTION UNLESS NOTED AS A BID ITEM. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITY STRUCTURES AND APPURTENANCES THAT OCCURS DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

EARTHMOVING:

CONTRACTOR TO SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.

TEST REPORTS: SUBMIT FOR APPROVAL TEST REPORTS, LIST OF MATERIALS AND GRADATIONS PROPOSED FOR USE. OBTAIN SAMPLES OF ANY PROPOSED FILL MATERIAL AND CONTRACTOR TO PROVIDE STANDARD PROCTOR TEST REPORTS TO ENGINEER.

COMPACTION REQUIREMENTS ARE AS FOLLOWS:

1. UNDER STEPS, PAVEMENTS, AND WALKWAYS, 95 PERCENT STANDARD PROCTOR MINIMUM DENSITY, ASTM D 698.
2. UNDER LAWNS OR UNPAVED AREAS, 85 PERCENT, ASTM D 698.

GRADING TOLERANCES OUTSIDE BUILDING LINES ARE AS FOLLOWS:

1. LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1 INCH.
2. PAVEMENTS, PLUS OR MINUS 1/2 INCH.
3. ALL ADA ROUTES AND PARKING ARE TO MEET ADA REQUIREMENTS AT ALL TIMES.

ALL ACTIVITIES WILL BE CONTAINED WITHIN CONSTRUCTION BOUNDARIES INDICATED ON SITE PLAN. SPECIFIED EXCAVATION REQUIREMENTS, PRECAUTIONS, AND PROTECTIVE SYSTEMS WILL BE OBSERVED AT ALL TIMES.

MOVEMENT OF TRUCKS AND EQUIPMENT ON OWNER'S PROPERTY WILL BE IN ACCORDANCE WITH OWNER'S INSTRUCTIONS.

TOPSOIL WILL BE STRIPPED FROM THE CONSTRUCTION SITE AND WILL BE DISPOSED OF LEGALLY OFF SITE.

TRENCHES WILL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE COMPLETED AND THE UTILITY SYSTEMS, AS INSTALLED, CONFORM TO REQUIREMENTS SPECIFIED BY THE CONTRACT DOCUMENTS.

EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE REGARDLESS OF MATERIALS ENCOUNTERED. REPAIR EXCAVATIONS BEYOND ELEVATIONS AND DIMENSIONS INDICATED AS FOLLOWS:

1. AT STRUCTURE: CONCRETE OR COMPACTED STRUCTURAL FILL.
 1. ELSEWHERE: BACKFILL AND COMPACT AS DIRECTED.
 2. MAINTAIN STABILITY OF EXCAVATIONS. CONTRACTOR TO BE RESPONSIBLE FOR DESIGN AND COORDINATION OF SHORING AND BRACING AS REQUIRED. PREVENT SURFACE AND SUBSURFACE WATER FROM ACCUMULATING IN EXCAVATIONS. STOCKPILE SATISFACTORY MATERIALS FOR REUSE, ALLOW FOR PROPER DRAINAGE AND DO NOT STOCKPILE MATERIALS WITHIN DRIP LINE OF TREES TO REMAIN.
- COMPACT MATERIALS AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 698 BY AERATION OR WETTING TO THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY:
1. STRUCTURE, PAVEMENT, WALKWAYS: SUBGRADE AND EACH FILL LAYER TO 95% (-2%+4%) OF STANDARD PROCTOR MAXIMUM DRY DENSITY TO SUITABLE DEPTH. COMPACTION TESTING SHALL BE PERFORMED IMMEDIATELY PRIOR TO THE PLACEMENT OF REINFORCING STEEL AND NEW PAVING MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING TESTING WITH OWNERS DESIGNATED TESTING AGENCY.
 2. UNPAVED AREAS: TOP 6" OF SUBGRADE AND EACH FILL LAYER TO 90% MAXIMUM DRY DENSITY.
 3. A PROOF-ROLL SHALL BE REQUIRED OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE COURSE. PROOF ROLLING SHALL CONSIST OF PASSING A LOADED, 20-TON, TANDEM DUMP TRUCK OVER THE PREPARED SUBGRADE SOIL WITH A MAXIMUM ALLOWABLE DISPLACEMENT OF 1". ANY AREAS THAT DISPLACE MORE THAN 1" SHALL BE COMPACTED UNTIL THIS CRITERION IS MET, OR THOSE AREAS MAY BE EXCAVATED AND BACKFILLED WITH COMPACTED TYPE 1 AGGREGATE USED FOR BASE MATERIAL. ALL PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
 4. CUT AREAS UNDER PROPOSED ASPHALT OR CONCRETE PAVEMENTS SHALL BE CUT AND COMPACTED. AFTER GRADING TO SUBGRADE ELEVATION, SCARIFY THE TOP SIX INCHES OF THE SUB-BASE AND COMPACT AS OUTLINED ABOVE.

PLACE ACCEPTABLE MATERIALS IN LAYERS NOT MORE THAN 6" LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY EQUIPMENT AND NOT MORE THAN 4" LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND EQUIPMENT TO SUBGRADES INDICATED AS FOLLOWS:

1. STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED.
2. DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
3. LANDSCAPE AREA FILL:
 - 3.1. ALL SUB-GRADE AREAS SHALL BE "RIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINIMAL TREE TRAFFIC TO FOLLOW.
 - 3.2. CONTRACTOR TO LEAVE AREAS 6" OR 18" (PLANTER AREAS) BELOW FINISH GRADE. OWNER TO PLACE TOPSOIL AND ALL PLANTINGS.
 - 3.3. ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND PLANTER AREAS SHALL BE COHESIVE SOILS IN SOIL CLASSIFICATIONS GROUPS ML, CL, CH OR A COMBINATION THEREOF; FREE OF ROCK OR GRAVEL LARGER THAN 1" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIAL, VEGETATION AND OTHER DELETERIOUS MATTER.
4. SUB-BASE MATERIAL: USE UNDER PAVEMENT, WALKS, STEPS, PIPING AND CONDUIT.

GRADE TO WITHIN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE AND WITHIN A TOLERANCE OF 1/2" IN 10'.

PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. RECOMPACT AND REGRADE SETTLED, DISTURBED AND DAMAGED AREAS AS NECESSARY TO RESTORE QUALITY, APPEARANCE, AND CONDITION OF WORK.

CONTROL EROSION TO PREVENT RUNOFF INTO SEWERS OR DAMAGE TO SLOPED OR SURFACED AREAS.

CONTROL DUST TO PREVENT HAZARDS TO ADJACENT PROPERTIES AND VEHICLES. IMMEDIATELY REPAIR OR REMEDY DAMAGE CAUSED BY DUST INCLUDING AIR FILTERS IN EQUIPMENT AND VEHICLES. CLEAN SOLED SURFACES.

DISPOSAL OF EXCAVATION WASTE AND UNSUITABLE MATERIALS SHALL BE THE RESPONSIBILITY OF THE SITE WORK CONTRACTOR. NO SPECIFIC OR PRE-APPROVED LOCATION IS BEING PROVIDED BY THE OWNER.

CONCRETE PAVING JOINT SEALANTS:

DELIVER MATERIALS TO PROJECT SITE IN ORIGINAL UNOPENED CONTAINERS OR BUNDLES WITH LABELS INDICATING MANUFACTURER, PRODUCT NAME AND DESIGNATION, COLOR, EXPIRATION DATE, POT LIFE, CURING TIME, AND MIXING INSTRUCTIONS FOR MULTICOMPONENT MATERIALS.

STORE AND HANDLE MATERIALS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO PREVENT THEIR DETERIORATION OR DAMAGE DUE TO MOISTURE, HIGH OR LOW TEMPERATURES, CONTAMINANTS, OR OTHER CAUSES.

DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS UNDER THE FOLLOWING CONDITIONS:

1. WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 DEG F.
2. WHEN JOINT SUBSTRATES ARE WET OR COVERED WITH FROST.
3. WHERE JOINT WIDTHS ARE LESS THAN THOSE ALLOWED BY JOINT-SEALANT MANUFACTURER FOR APPLICATIONS INDICATED.
4. WHERE CONTAMINANTS CAPABLE OF INTERFERING WITH ADHESION HAVE NOT YET BEEN REMOVED FROM JOINT SUBSTRATES.

PROVIDE JOINT SEALANTS, BACKING MATERIALS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

COLD-APPLIED JOINT SEALANTS ARE TO BE TYPE NS SILICONE SEALANT FOR CONCRETE: SINGLE-COMPONENT, LOW-MODULUS, NEUTRAL-CURING, NONSAG SILICONE SEALANT COMPLYING WITH ASTM D 5883 FOR TYPE NS. PRODUCTS ALLOWED ARE: GRAFCO INC.; ROUNDSAWER SILICONE ; DOW CORNING CORPORATION; 888; PECORA NS 301; OR APPROVED EQUAL.

CONTRACTOR TO PROVIDE JOINT-SEALANT BACKER MATERIALS THAT ARE NONSTAINING; ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS, AND OTHER JOINT FILLERS; AND ARE APPROVED FOR APPLICATIONS INDICATED BY JOINT-SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING. ROUND BACKER ROOFS FOR COLD-APPLIED SEALANTS: ASTM D 5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL SEALANT DEPTH/AND PREVENT BOTTOM-SIDE ADHESION OF SEALANT.

PRIOR TO JOINT INSTALLATION, CONTRACTOR IS TO EXAMINE JOINTS INDICATED TO RECEIVE JOINT SEALANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATION, INSTALLATION TOLERANCES, AND OTHER CONDITIONS AFFECTING JOINT- SEALANT PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS.

COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.

COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.

INSTALL BACKER MATERIALS OF TYPE INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY. DO NOT LEAVE GAPS BETWEEN ENDS OF BACKER MATERIALS. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR BACKER MATERIALS. REMOVE ABSORBENT BACKER MATERIALS THAT HAVE BECOME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.

INSTALL SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKING ARE INSTALLED:

1. PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.
2. COMPLETELY FILL RECESSES PROVIDED FOR EACH JOINT CONFIGURATION.
3. PRODUCE UNIFORM, CROSS-SECTIONAL SHAPES AND DEPTHS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.

IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPECIFIED BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED; TO ELIMINATE AIR POCKETS; AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH SIDES OF JOINT. REMOVE EXCESS SEALANTS FROM SURFACES ADJACENT TO JOINT/USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY JOINT-SEALANT MANUFACTURER AND THAT DO NOT DISSOLVE SEALANTS OR ADJACENT SURFACES.

PROVIDE JOINT CONFIGURATION TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS OTHERWISE INDICATED.

PROVIDE RECESSED JOINT CONFIGURATION FOR SILICONE SEALANTS OF RECESS DEPTH AND AT LOCATIONS INDICATED.

CLEAN OFF EXCESS SEALANTS OR SEALANT SMEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND WITH CLEANING MATERIALS APPROVED BY MANUFACTURERS OF JOINT SEALANTS AND OF PRODUCTS IN WHICH JOINTS OCCUR.

PROTECT JOINT SEALANTS DURING AND AFTER CURING PERIOD FROM CONTACT WITH CONTAMINATING SUBSTANCES AND FROM DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS OR OTHER CAUSES SO SEALANTS ARE WITHOUT DETERIORATION OR DAMAGE AT TIME OF SUBSTANTIAL COMPLETION. F, DESPITE SUCH PROTECTION, DAMAGE OR DETERIORATION OCCURS, CUT OUT AND REMOVE DAMAGED OR DETERIORATED JOINT SEALANTS IMMEDIATELY AND REPLACE WITH JOINT SEALANT SO INSTALLATIONS WITH REPAIRED AREAS ARE INDISTINGUISHABLE FROM THE ORIGINAL WORK.

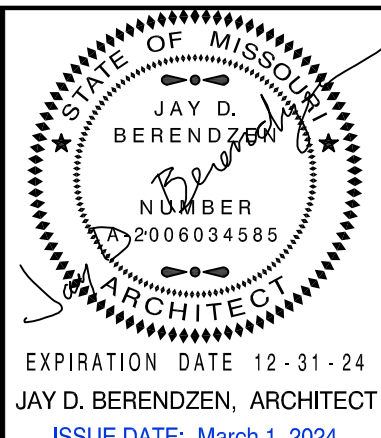
CONCRETE :

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:

FOUNDATIONS	-	3,000 PSI
CAST-IN-PLACE WALLS	-	3,500 PSI
FLOOR SLAB	-	4,000 PSI
EXTERIOR SLABS, WALLS AND CURBS	-	4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE-BASED ADMIXTURES ARE PROHIBITED IN ALL CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION.
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4 +/- 1" (ASTM C-143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR ICEING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGAIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
 - A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
 - B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE, ON THE DRAWINGS:

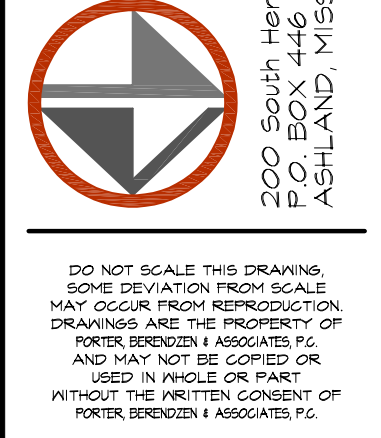
CAST AGAINST AND EXPOSED TO EARTH.....	3 INCHES
EXPOSED TO EARTH OR WEATHER.....	2 INCHES
NOT EXPOSED TO WEATHER OR	1 1/2 INCHES
 - C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLOGGING AGGREGATE.
 - D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
 - E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C509, ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.
12. FLINT AND CHERT WILL BE LIMITED TO 1% MAXIMUM, BY WEIGHT OF THE COURSE AGGREGATE, IN ALL EXPOSED CONCRETE. (CAST-IN-PLACE OR PRECAST). LIGHTNIE WILL BE REQUIRED TO 0.5%, BY WEIGHT OF THE FINE AGGREGATE IN ALL EXPOSED CONCRETE. SOME APPLICATIONS MAY BE REQUIRED TO BE LIGHTNIE FREE.
13. CONCRETE SHALL NOT BE PLACED UPON FROZEN SUBGRADE. ALL CONCRETE SHALL BE EFFECTIVELY PROTECTED FROM FREEZING UNTIL A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI HAS BEEN ATTAINED. THE CONTRACTOR SHALL PROVIDE A METHOD, MEETING THE APPROVAL FROM



EXPIRATION DATE: 12-31-24
 JAY D. BERENDZEN, ARCHITECT
 ISSUE DATE: March 1, 2024

MISSOURI ARC-000588
 EXP. 12/31/25

PORTER, BERENDZEN & ASSOCIATES, P.C.
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 Phone: 657.202.8100
 Email: jay@pberarchitects.com



PROJECT

Proposed Rehabilitation Plans for:
CP241191-Remodel Creed Building
 5151 Old Miller Road
 Columbia, Boone County, Missouri

ISSUE		
ID	DESCRIPTION	DATE
1	BID SET	03/01/2024

PROJECT NO.
pba-2406

PROJECT DATE
MARCH 2024

SHEET TITLE

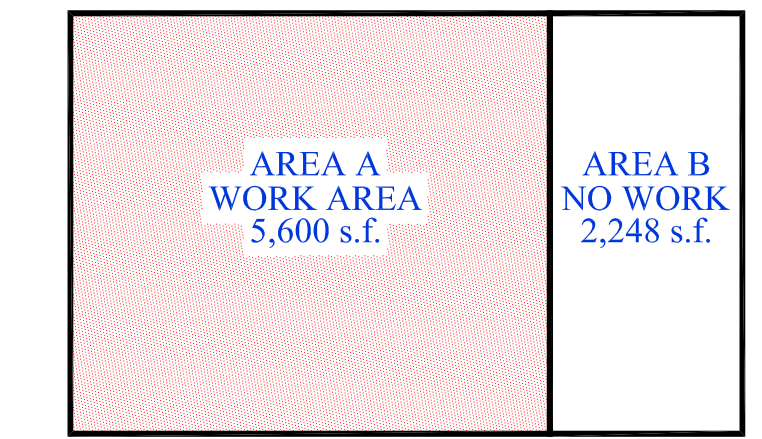
COVER / CODE PLAN

SHEET NUMBER

A100

SHEET INDEX

Architectural		
A100	-	COVER / CODE PLAN
A200	-	EXISTING BUILDING PLAN
A300	-	DEMOLITION BUILDING PLAN
A400	-	CODE FLOOR PLAN
A500	-	DIMENSIONAL FLOOR PLAN
A600	-	ELEVATIONS
A700	-	SCHEDULES



PROJECT SCOPE:
 EXISTING FACILITY OF APPROXIMATELY 7,848 SF CONSISTING OF A MIXED USE U (AGRICULTURAL-PRIMARY) AND B (EDUCATIONAL-SECONDARY) USE GROUP. THE BUILDING IS A WOOD POLE STRUCTURE AND IS CONSIDERED TYPE VB CONSTRUCTION. THE WORK AREA (AREA A) IS 5,600 SF.

BUILDING CODES IN EFFECT:
 IBC/2021, NEC/2020, IFG/2021, IMG/2021, IFMG/2021, IFGG/2021, IEGG/2021, IEBC/2021, IFG/2021, NFPA 150 FOR ANIMAL FACILITIES AS AMENDED AND ADOPTED BY THE UNIVERSITY OF MISSOURI

ADMINISTRATION (CHAPTER 1)
 • DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE
 JAY D. BERENDZEN, ARCHITECT
 PORTER, BERENDZEN & ASSOCIATES, P.C.
 200 SOUTH HENRY CLAY BLVD.
 ASHLAND, MISSOURI 65010
 573.657.2022 PHONE

USE & OCCUPANCY CLASSIFICATION (CHAPTER 3)
 • MIXED USE, NON-SEPARATED
 • UTILITY U - AGRICULTURAL
 • GROUP B - SECONDARY EDUCATION

GENERAL BUILDING HEIGHTS & AREAS (CHAPTER 5)
 • (MIXED USE, NON-SEPARATED, CONSTRUCTION TYPE VB - NON-SPRINKLERED)

HEIGHTS
 • TABULAR ALLOWABLE BUILDING HEIGHT
 • U USE GROUP: 2 STORIES, 40 FEET
 • B USE GROUP: 2 STORIES, 40 FEET
 • ACTUAL BUILDING HEIGHT: 1 STORY, 24 FEET

AREA
 • TABULAR ALLOWABLE BUILDING AREA PER FLOOR:
 • MIXED USE (U USE PER APPENDIX C): 12,000 SF
 • FRONTAGE INCREASE = 75% = 0 SF (0.00) = 0 SF
 • TOTAL ALLOWABLE AREA = 12,000 SF

ACTUAL BUILDING AREAS:
 • TOTAL MAIN LEVEL BUILDING AREA: 7,848 SF

DEFERRED SUBMITTALS:
 1) NONE

ALTERNATES:
 SEE CIVIL COVER SHEET

TYPES OF CONSTRUCTION (CHAPTER 6)
 TYPE VB - NON-SPRINKLERED

INTERIOR FINISHES (CHAPTER 8)
 TABLE 803.13 INTERIOR WALL & CEILING FINISH REQUIREMENTS, NON-SPRINKLERED

USE GROUP U - NO RESTRICTIONS
USE GROUP B
 • EXIT ENCLOSURES & EXIT PASSAGEWAYS:
 • CLASS A - (FLAME SPREAD 0-25, SMOKE DEVELOPED 0-450)
 • CORRIDORS:
 • CLASS B - (FLAME SPREAD 26-75, SMOKE DEVELOPED 0-450)
 • ROOMS & ENCLOSED SPACES:
 • CLASS C - (FLAME SPREAD 76-200, SMOKE DEVELOPED 0-450)

FIRE PROTECTION SYSTEM (CHAPTER 9)
 THIS BUILDING WILL NOT BE EQUIPPED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEM.
 THRESHOLD: U = NONE / B = AMBULATORY CARE FACILITY
 THIS BUILDING WILL NOT BE EQUIPPED WITH A FIRE ALARM SYSTEM.
 THRESHOLD: U = NONE / B = TOTAL OCCUPANT LOAD >500 OR >100 ABOVE/BELOW EXIT DISCHARGE OR FIRE AREA CONTAINING AMBULATORY CARE.

THE GENERAL CONTRACTOR SHALL PROVIDE & INSTALL PORTABLE FIRE EXTINGUISHER(S) WITH NO MORE THAN 75 FEET OF TRAVEL DISTANCE BETWEEN FIRE EXTINGUISHERS LOCATED AS DIRECTED BY THE FIRE MARSHAL.

A KNOX BOX IS REQUIRED AT 6'-0" ABOVE SIDEWALK IN THE LOCATION AS DIRECTED BY THE FIRE MARSHAL.

MEANS OF EGRESS (CHAPTER 10)
 SEE LIFE SAFETY / EGRESS PLAN ON FOLLOWING SHEET A100 FOR DETAILS & INFORMATION.

ACCESSIBILITY (CHAPTER 11)
 • ACCESSIBLE ROUTES WITHIN THE SITE SHALL BE PROVIDED FROM PUBLIC TRANSPORTATION STOPS; ACCESSIBLE PARKING; ACCESSIBLE PASSENGER LOADING ZONES; AND PUBLIC STREETS OR SIDEWALKS TO THE ACCESSIBLE BUILDING ENTRANCE SERVED (SECTION 1104.1) AT LEAST 60% OF ALL PUBLIC ENTRANCES SHALL BE MADE ACCESSIBLE.
 • AT LEAST 2 PERCENT, BUT NOT LESS THAN ONE, OF EACH TYPE OF PARKING SPACE PROVIDED SHALL BE AN ACCESSIBLE SPACE.
 • THIS BUILDING SHALL CONFORM TO: THE AMERICAN NATIONAL STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (ICC/ANSI A117.1-2017) AND THE LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT.

VARIANCE/WAIVER REQUESTS:

Due to the Business Use component a variance has been requested for the following:
 1) Restroom Requirement

Waiver has been requested for the following:
 1) Sprinkler System - Not practical and B use group has no Ambulatory Care Component.
 2) Fire Alarm System - Not practical and occupancy load will be under the thresholds of 500 occupants.

Also see formal variance request latter submitted and dated February 15, 2024.

PLUMBING FIXTURES, FAUCETS, & FIXTURE FITTINGS ~ (IPC 2021)

MINIMUM NUMBER OF PLUMBING FACILITIES (USE GROUP U PER APPENDIX C)
 NO PLUMBING REQUIREMENTS UNDER APPENDIX C

OCCUPANT LOAD: (USE GROUP B)
 WORK AREA ~ 5600 SF / 150 = 38 OCCUPANTS
 ACTUAL MAX. ANTICIPATED LOAD = 24 OCCUPANTS

• WATER CLOSETS: 1 WC/25 FOR 1st 50, THEN 1 WC/50 REMAINDER EXCEEDING 50 OCCUPANTS
 • WATER CLOSETS PROVIDED = (1) UNISEX - SEE BELOW

• LAVATORIES: 1 LAV / 40 FOR 1st 80, THEN 1 LAV / 80 REMAINDER EXCEEDING 80 OCCUPANTS
 • LAVATORIES PROVIDED = (1) MEN'S / WOMENS (1) UNISEX - SEE BELOW

PER IPC 2021 SEPARATE FACILITIES ARE NOT REQUIRED FOR BUSINESS USE GROUP WITH 25 OR FEWER OCCUPANTS - ONE UNISEX RESTROOM REQUIRED.

• DRINKING FOUNTAINS: 1 DF / 100 OCCUPANTS
 DRINKING FOUNTAINS REQUIRED: 1 REQUIRED
 DRINKING FOUNTAINS PROVIDED = BOTTLED WATER PROPOSED IN LIEU OF DRINKING FOUNTAIN

• SERVICE SINKS:
 • SERVICE SINKS REQUIRED = 1 REQUIRED
 • SERVICE SINK PROVIDED = 1 PROVIDED

NOTE: A VARIANCE HAS BEEN REQUESTED FOR THIS PROJECT FOR THE RESTROOM REQUIREMENT.

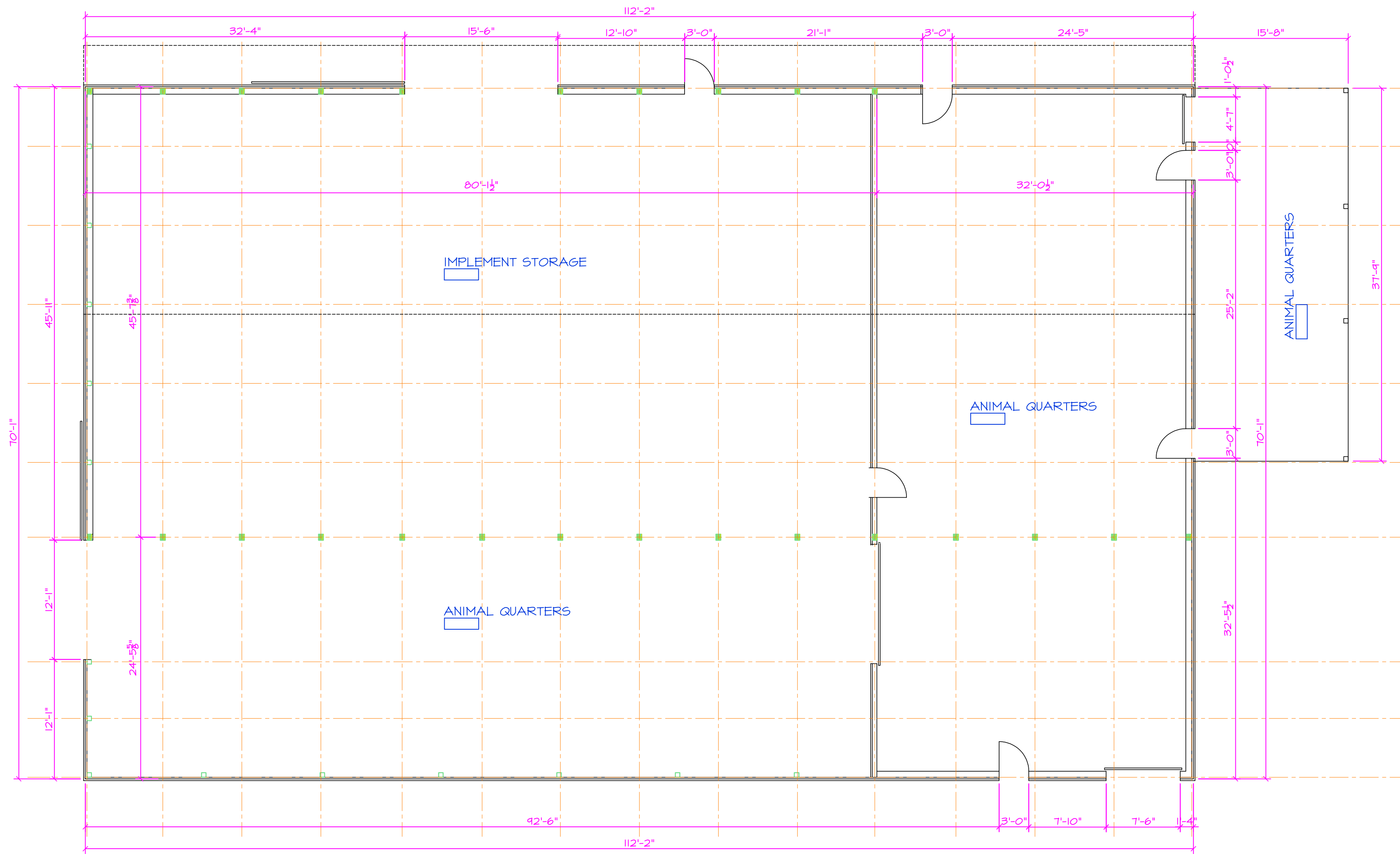
IBC DOES NOT REQUIRE RESTROOMS FOR THE PRIMARY BUILDING USE.


THE ADJACENT BUILDING (LESS THAN 500 FEET TRAVEL DISTANCE) HAS RESTROOMS AVAILABLE FOR USE. THE EXISTING RESTROOMS IN THE ADJACENT BUILDING HAVE BEEN REVIEWED AND WERE FOUND TO MEET CURRENT ACCESSIBILITY REQUIREMENTS.

GENERAL NOTES

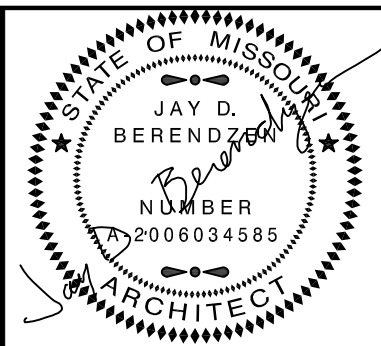
IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND EACH OF HIS SUBCONTRACTORS TO REVIEW THE DRAWINGS TO ASSURE COORDINATION OF ALL WORK AFFECTING EACH TRADE. FAILURE TO REVIEW ALL CONTRACT DOCUMENTS FOR APPLICABLE ITEMS OF WORK SHALL NOT RELIEVE THE RESPONSIBLE PARTY FROM PERFORMING ALL WORK REQUIRED.

- CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING - NOTIFY THE DESIGN TEAM OF ALL CONFLICTS WITHIN THE WORK.
- DRAWINGS - THESE DRAWINGS SHALL NOT BE SCALED. REFER TO DIMENSIONS INDICATED. ACTUAL SIZES OF CONSTRUCTION ITEMS, OR OTHER METHODS OF LOCATING CONSTRUCTION, WHERE NO DIMENSION OR METHOD OF DETERMINING A LOCATION IS GIVEN, VERIFY CORRECT LOCATION WITH THE DESIGN TEAM PRIOR TO INSTALLATION.
- DIMENSIONS - DIMENSIONS ON PLANS ARE FROM FACE OF CONCRETE, MASONRY, OR FRAMING UNLESS OTHERWISE NOTED. DIMENSIONS INDICATED AS "CLEAR" SHALL BE A MINIMUM DIMENSION, (FACE TO FACE) OF FINISH MATERIALS.
- COORDINATION - GENERAL CONTRACTOR SHALL COORDINATE REQUIREMENTS OF ALL TRADES TO ALLOW FOR TIMELY INCLUSION IN THE WORK SO AS NOT TO DELAY THE WORK OR THE WORK OF ANY SUBCONTRACTOR.
- EQUIPMENT - REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION. VERIFY ANY REQUIREMENTS FOR ROUGH-IN OR CONNECTION PRIOR TO CONSTRUCTION TO ASSURE CORRECT INSTALLATION, OPENINGS, ELECTRICAL, MECHANICAL, BLOCKING, ETC.
- DUCTS, PIPE, CONDUIT, ETC. - ALL VERTICAL AND HORIZONTAL DUCTS, PIPES, CONDUIT, ETC. (WHETHER SHOWN OR NOT) IN FINISHED ROOMS SHALL BE LOCATED WITHIN WALLS OR ABOVE FINISHED CEILINGS. ITEMS THAT CANNOT BE LOCATED WITHIN WALLS OR CEILINGS SHALL BE FURRED IN AND FINISHED TO MATCH ADJACENT SURFACES AND ANY REQUIRED WALL OR CEILING RATINGS. VERIFY ACCEPTABILITY WITH THE DESIGN TEAM PRIOR TO ENCASMENT.
- FIXTURES - LAVATORIES AND SINKS SHALL BE INSTALLED A MINIMUM OF 4" FROM FINISHED SIDE WALLS. FAUCETS SHALL BE INSTALLED WITH A MINIMUM OF 5" FROM THE OUTLET TO THE FLOOD RIM OF SINKS, INCLUDING THOSE EQUIPPED WITH VACUUM BREAKERS. WATER CLOSETS SHALL BE INSTALLED A MINIMUM OF 16" FROM FINISHED SIDE WALLS TO CENTERLINE OF FIXTURES.
- BLOCKING - BLOCKING OUTSIDE THE BUILDING ENVELOPE OR SUBJECT TO MOIST OR HUMID CONDITIONS SHALL BE PRESSURE TREATED AND USE CORROSION RESISTANT FASTENERS.
- ACCESS DOORS - FURNISH AND INSTALL ACCESS DOORS IN WALLS AND NON-ACCESSIBLE TYPE CEILINGS WHERE SERVICE OR ADJUSTMENT TO MECHANICAL, FIRE PROTECTION, PLUMBING, ELECTRICAL, OR OTHER EQUIPMENT IS REQUIRED. WHERE WALL OR CEILING IS REQUIRED TO BE RATED, PROVIDE ACCESS DOORS OF FIRE RATING EQUAL TO THE ASSEMBLY IN WHICH THEY OCCUR.
- EXISTING CONDITIONS - THE EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON INFORMATION PROVIDED TO THE DESIGN TEAM. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS ON THE JOB SITE, AND NOTIFY THE DESIGN TEAM & THE DISTRICT OF DEVIATIONS FROM THESE DRAWINGS PRIOR TO FABRICATION AND INSTALLATION OF THE WORK.
- PRECAUTIONS - IF UNFORESEEN CONDITIONS ARE DISCOVERED WHICH COULD RESULT IN DAMAGE TO THE STRUCTURE OR INJURY TO ITS OCCUPANTS, REPORT ANY SUCH CONDITION IMMEDIATELY TO THE DESIGN TEAM. TAKE PRECAUTIONS TO PROPERLY SUPPORT THE STRUCTURE.
- HAZARDOUS MATERIALS - CONTRACTOR SHALL IMMEDIATELY REPORT THE DISCOVERY OF ANY HAZARDOUS MATERIALS TO THE DESIGN TEAM.
- SITE USAGE - USE OF THE SITE FOR ANY CONSTRUCTION STAGING OR OTHER OPERATIONS SHALL BE COORDINATED WITH THE DESIGN TEAM & THE DISTRICT. TAKE CARE NOT TO BLOCK OR ADVERSELY AFFECT ANY PUBLIC OR ADJACENT OWNER AREAS.
- EXIT ACCESS - MAINTAIN FREE, SAFE, AND APPROVED MEANS OF EGRESS IN AND OUT OF PROJECT LOCATION IN ACCORDANCE WITH REQUIREMENTS OF APPLICABLE REGULATORY AGENCIES.
- THE CONTRACT DESIGN DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED PROJECT, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES AND SEQUENCES.
- THE ARCHITECT SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DESIGN DOCUMENTS.
- THE DESIGN TEAM INCLUDING THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY CHANGES TO OR DEVIATIONS FROM THE CONTRACT DESIGN DOCUMENTS. ANY CHANGES OR DEVIATIONS MUST BE REVIEWED AND APPROVED BY THE ARCHITECT OF RECORD. WRITTEN APPROVAL MUST BE OBTAINED.
- PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF THE ARCHITECT IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN ACCORDANCE WITH THE CONTRACT DESIGN DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.




EXISTING BUILDING PLAN
 SCALE: 1/8" = 1'-0"

BUILDING FOOTPRINT = 8,450 S.F.

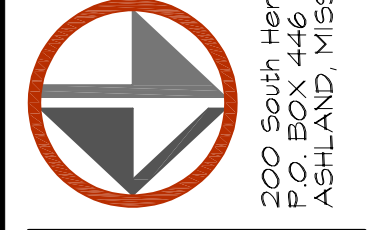


EXPIRATION DATE: 12-31-24
 JAY D. BERENDZEN, ARCHITECT
 ISSUE DATE: March 1, 2024

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MISSOURI ARC-000588
 EXP. 12/31/25

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PROJECT

Proposed Rehabilitation Plans for:
 CP241191-Remodel Creed Building
 5151 Old Miller Road
 Columbia, Boone County, Missouri

ID	DESCRIPTION	DATE
1	BID SET	03/01/2024

PROJECT NO. pba-2406

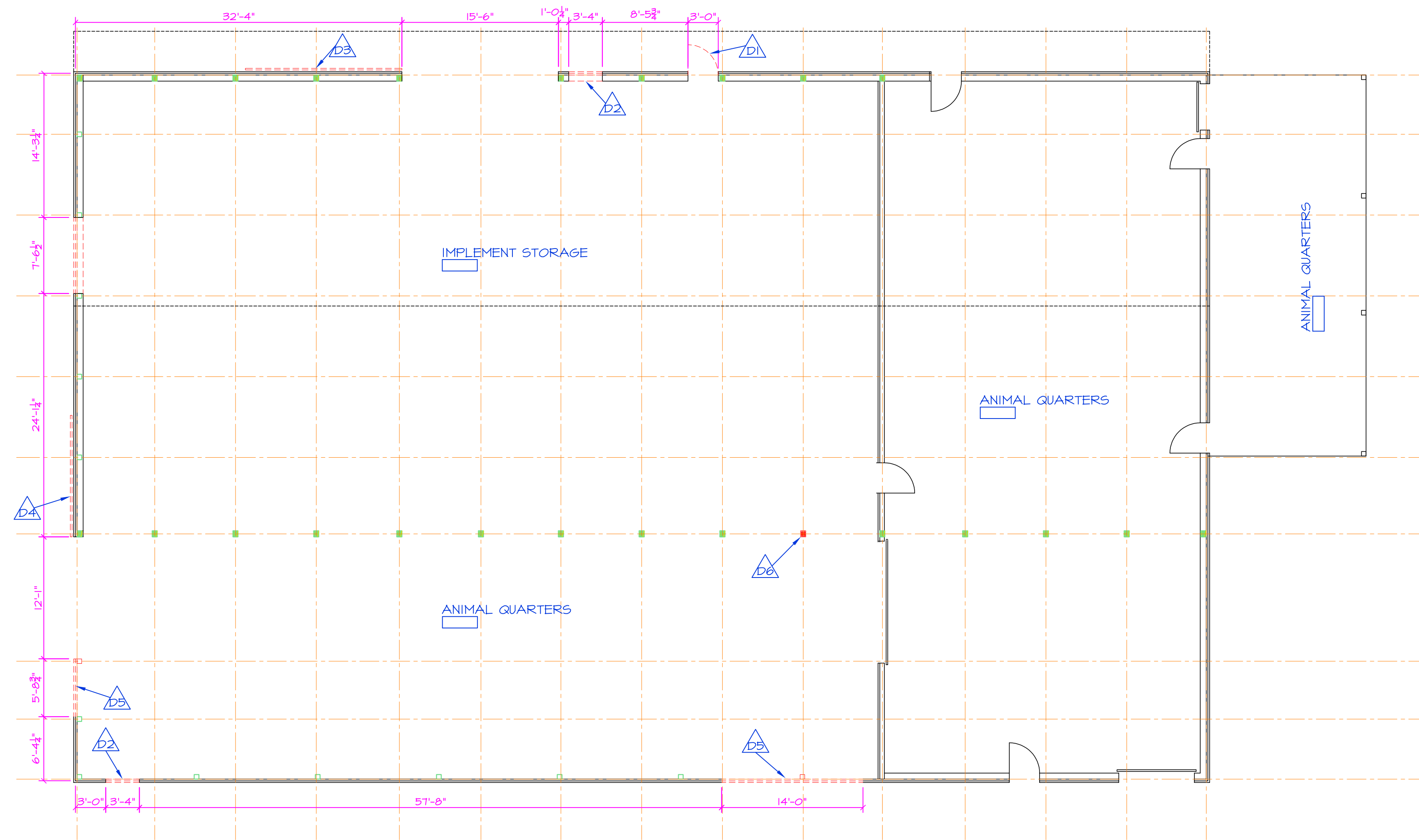
PROJECT DATE MARCH 2024

SHEET TITLE

EXISTING BUILDING PLAN

SHEET NUMBER

A200



NOTES
GENERAL NOTES - FLOOR PLANS

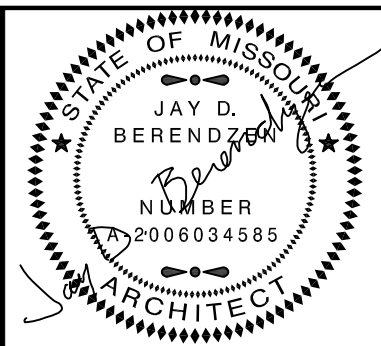
- D1** THE DEMOLITION UNDER THIS CONTRACT INCLUDES DEMOLITION OF SELECT INTERIOR WALLS, CEILING, FLOORING, CASEWORK, POWER, LIGHTING, HVAC, PLUMBING, ETC. TO ALLOW FOR THE REMODEL OF THE BUILDING. REMOVE/ADJUST SELECT MEP WORK (POWER/DATA/PLUMBING/ELECT) AS REQUIRED - SEE MEP PLANS. NOTE THAT ALL LIGHTING IS TO REMAIN AND BE RE-USED. THE REMAINDER OF THE WORK WILL BE DESCRIBED BELOW, HOWEVER, ANY DEMO WORK NOT LISTED THAT IS REQUIRED TO PERFORM THE REMODEL IS TO BE INCLUDED. THE FOLLOWING NOTES ADDRESS SPECIFIC ITEMS THAT ARE TO BE DEMOLISHED.
- HAZARDOUS MATERIALS** - TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO ASBESTOS CONTAINING MATERIALS IN THE EXISTING WORK AREA. IF/WHEN ANY MATERIALS ARE ENCOUNTERED DURING DEMOLITION THAT THE CONTRACTOR SUSPECTS COULD CONTAIN ASBESTOS, THE CONTRACTOR IS TO STOP WORK IMMEDIATELY AND IS TO CONTACT THE OWNER. ANY REQUIRED ABATEMENT WILL BE THE RESPONSIBILITY OF THE OWNER AND IS TO BE REMOVED BY AN APPROVED ABATEMENT SPECIALIST CONFORMING TO ALL STATE AND FEDERAL REGULATIONS. SEE THE DEMOLITION PLAN ON THIS SHEET AND THE NOTES BELOW FOR FURTHER DETAIL. ALSO SEE CIVIL PLANS FOR EXTERIOR DEMOLITION.
- D2** REMOVE AND DISPOSE OF EXISTING EXTERIOR DOOR AND FRAME. INSTALL NEW FRAMING AND METAL WALL PANEL TO MATCH EXISTING.
- D3** REMOVE PORTION OF WALL AND RE-FRAME FOR NEW WALK DOOR. INSTALL NEW FRAMING AND TRIM OUT METAL WALL PANEL TO MATCH EXISTING. SEE STRUCTURAL FOR FRAMING.
- D4** REMOVE EXISTING SLIDING DOOR AND RE-FRAME OPENING FOR NEW OVERHEAD DOOR. INSTALL NEW FRAMING AND TRIM OUT METAL WALL PANEL TO MATCH EXISTING. SEE STRUCTURAL FOR FRAMING.
- D5** REMOVE EXISTING SLIDING DOOR AND INSTALL NEW FRAMING AND METAL PANEL TO MATCH EXISTING. SEE STRUCTURAL FOR FRAMING.
- D6** REMOVE PORTION OF WALL AND RE-FRAME FOR NEW OVERHEAD DOOR. INSTALL NEW FRAMING AND TRIM OUT METAL WALL PANEL TO MATCH EXISTING. SEE STRUCTURAL FOR FRAMING.
- D7** REMOVE EXISTING BUILT-UP WOOD COLUMN TO ALLOW FOR NEW USE/LAYOUT. INSTALL NEW FRAMING TO SUPPORT ROOF STRUCTURE ABOVE. SEE STRUCTURAL FOR FRAMING.

DEMOLITION LEGEND

DRAWING	DESCRIPTION
	EXISTING (MATERIAL TO REMAIN)
	EXISTING INTERIOR WALL THAT IS LOAD BEARING - STRUCTURAL
	EXISTING (MATERIALS TO BE REMOVED)
	EXISTING (MATERIALS TO BE REMOVED) FLOORING - QUARRY TILE / CERAMIC TILE

DEMOLITION BUILDING PLAN
SCALE: 1/8" = 1'-0"

BUILDING FOOTPRINT = 8,450 S.F.

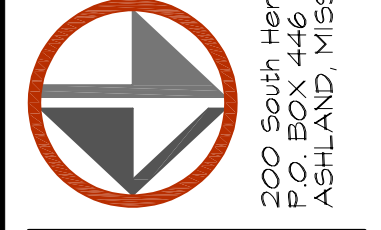


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PROJECT

Proposed Rehabilitation Plans for:
CP241191-Remodel Creed Building
5151 Old Miller Road
Columbia, Boone County, Missouri

ISSUE

ID	DESCRIPTION	DATE
1	BID SET	03/01/2024

PROJECT NO.
pba-2406

PROJECT DATE
MARCH 2024

SHEET TITLE
DEMOLITION BUILDING PLAN

SHEET NUMBER
A300

FLOOR PLAN / LIFE SAFETY & EGRESS NOTES:

CONSTRUCTION TYPE: TYPE VB - NON-SPRINKLERED

BUILDING OCCUPANCY: U - AGRICULTURAL
B - SECONDARY EDUCATION

GENERAL AREA CALCULATIONS

ACTUAL FLOOR AREAS:
WORK AREA A 5,600 SQ.FT. (GROSS)

MINIMUM OCCUPANT LOAD (WORK AREA)
U 5,600 SF / 300 GROSS = 19 OCCUPANTS
B 5,600 SF / 150 = 38 OCCUPANTS
(ACTUAL ANTICIPATED MAX. OCC. LOAD = 24)

CORRIDOR FIRE-RESISTANCE RATING REQUIRED = 0 (B OCC. / < 30)
NO CORRIDORS

MINIMUM CORRIDOR WIDTH = 44 INCHES

DEAD END CORRIDORS SHALL NOT EXCEED 20 FEET

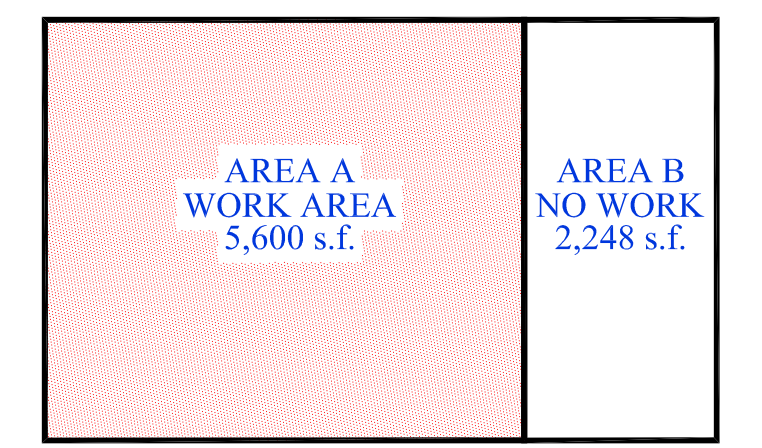
MINIMUM NUMBER OF EXITS REQUIRED = 2 (< 50 OCC. > 75') B USE
PROPOSED EXITS PROVIDED = 2 + 1 PER NFPA 150

EXIT ACCESS TRAVEL DISTANCE:
200 FEET FOR B USE GROUP
300 FEET FOR U USE GROUP

EGRESS WIDTH:
REQUIRED = 38 x 0.2" = 7.6"
PROVIDED = (3) 34" = 102"

EGRESS DOORS SHALL HAVE A MINIMUM CLEAR OPENING WIDTH OF NOT LESS THAN 32"

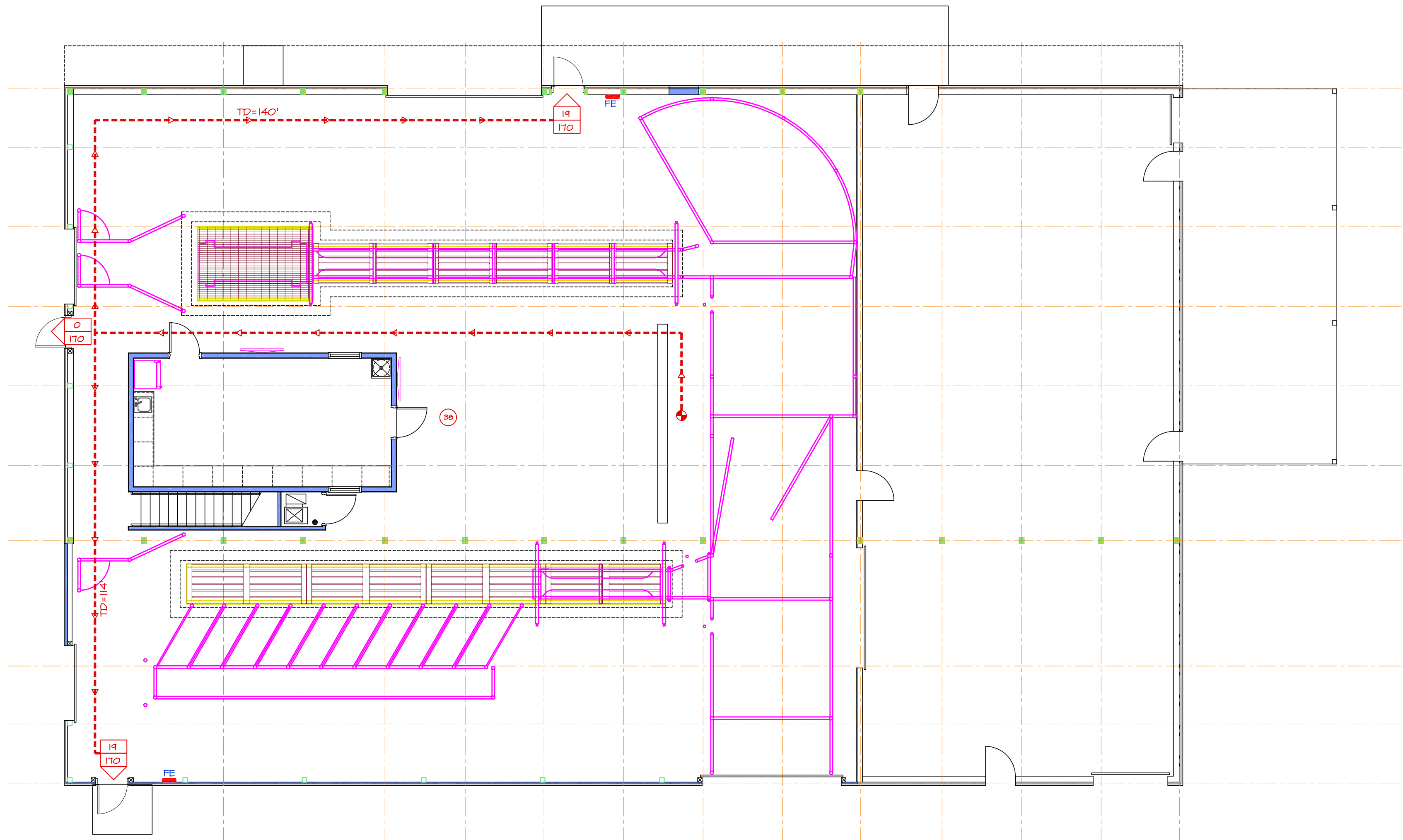
EVERY EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIFIC KNOWLEDGE OR EFFORT.



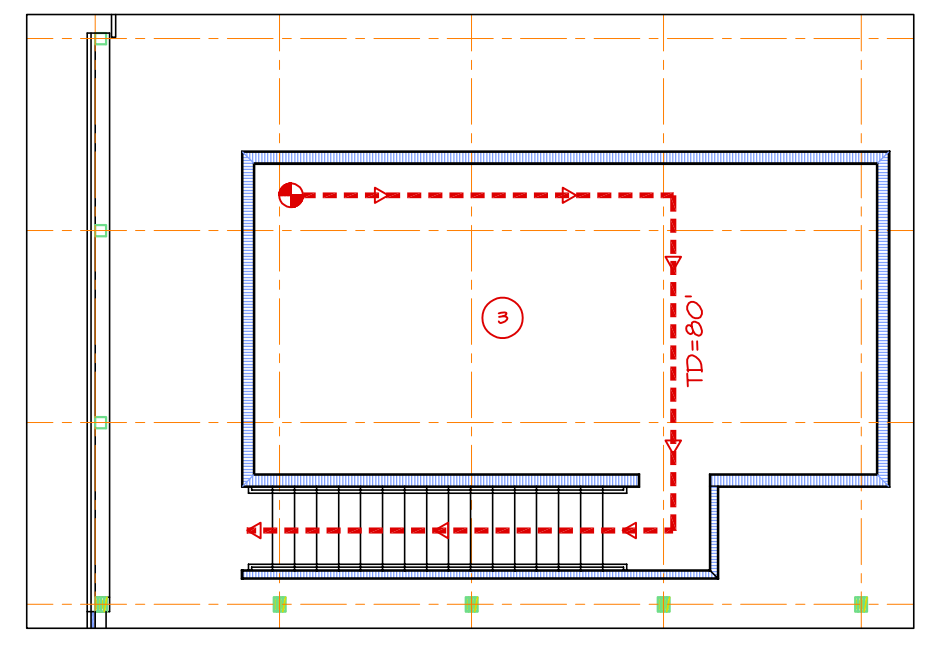
OCCUPANT LOAD/EGRESS LEGEND		
SYMBOL	DESCRIPTION	REMARKS
Exit symbol	EXIT ACCESS TRAVEL DISTANCE LENGTH / DIRECTION OF EGRESS	TRAVEL DISTANCE * ASSUMED PATH
Exit symbol	EXIT ACCESS TRAVEL DISTANCE POINT OF BEGINNING	TRAVEL DISTANCE MOST REMOTE POINT
Occupant load symbol	OCCUPANT LOAD	BASED ON ROOM OCCUPANCY
Area symbol	AREA WITH COMMON EGRESS TOTAL OCCUPANT LOAD	BASED ON ROOMS COMMON EGRESS
Building symbol	BUILDING/FIRE AREA TOTAL OCCUPANT LOAD	BASED ON BUILDING FIRE AREA LOADS
Door symbol	ACTUAL OCCUPANT LOAD ALLOWABLE OCCUPANT LOAD	DOOR EGRESS
Corridor symbol	ACTUAL OCCUPANT LOAD ALLOWABLE OCCUPANT LOAD	CORRIDOR EGRESS
Stair symbol	ACTUAL OCCUPANT LOAD ALLOWABLE OCCUPANT LOAD	STAIR EGRESS
FE symbol	FIRE EXTINGUISHER IN CABINET LOCATIONS SHOWN ON PLAN AND MARKED "FE". SEE PROJECT MANUAL. INSTALL IN TOP OF CABINET @ +56"	
KB symbol	KNOX BOX LOCATIONS SHOWN ON PLAN	MAIN ENTRANCE

EGRESS WIDTH BASED ON:
IBC 1004.1.2
0.3 inches per occupant for stairways / 0.2 inches for all other components (Non-sprinklered Building)

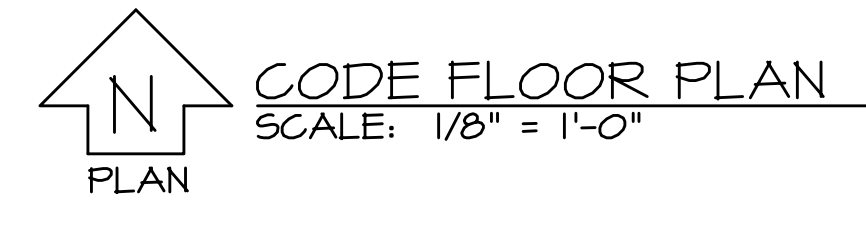
LOADS BASED ON: Main Occupancy = B Business
Business Use
accessory assembly - 15 net
accessory storage - 300 gross



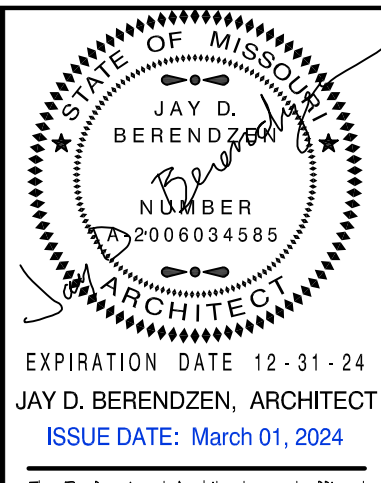
MAIN FLOOR



MEZZANINE 370 S.F.



BUILDING FOOTPRINT = 8,450 S.F.
WORK AREA = 5,600 S.F.



EXPIRATION DATE: 12-31-24
JAY D. BERENDZEN, ARCHITECT
ISSUE DATE: March 01, 2024

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EXP. 12/31/25

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PROJECT

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CP241191-Remodel Creed Building
5151 Old Miller Road
Columbia, Boone County, Missouri

ID	DESCRIPTION	DATE
1	BID SET	03/01/2024

PROJECT NO. pba-2406

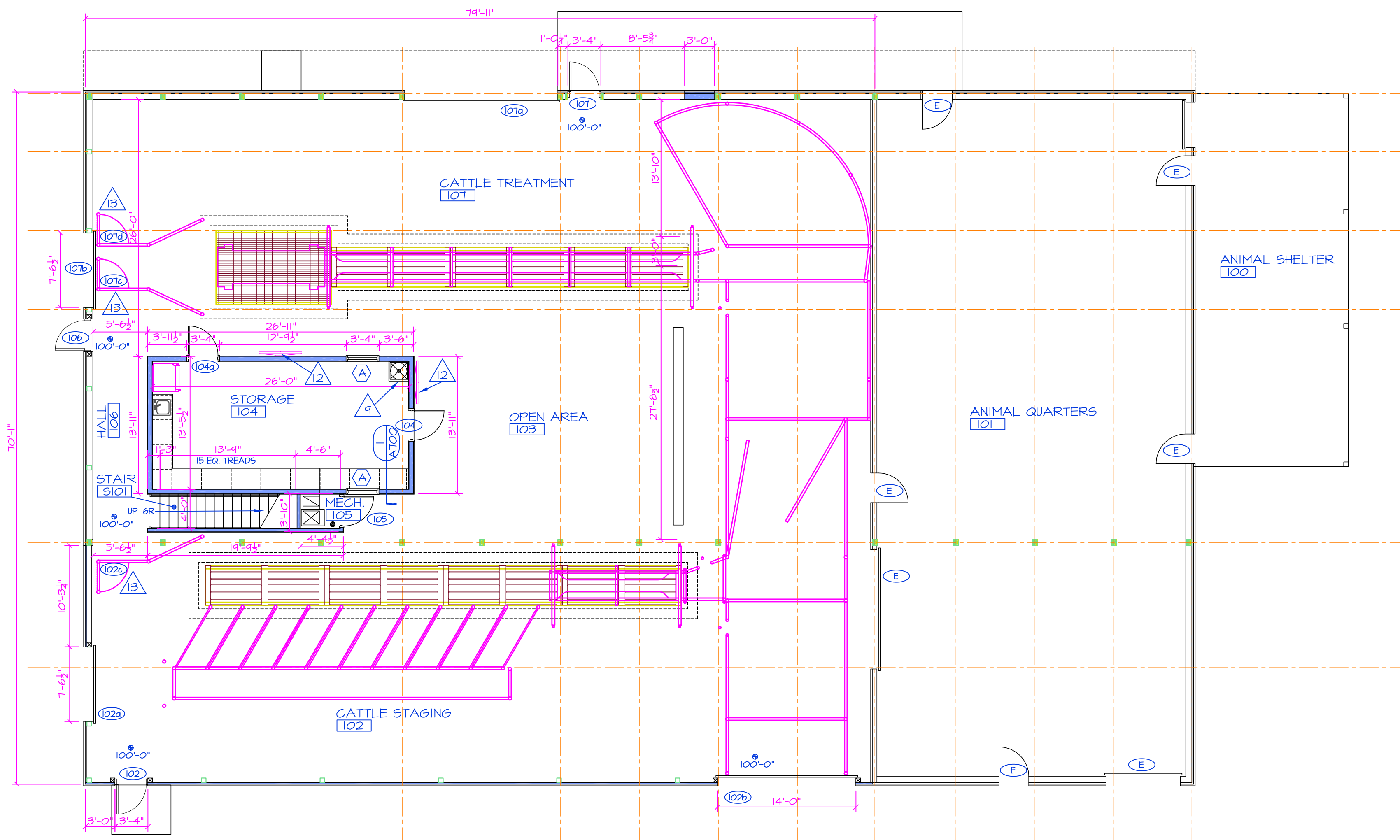
PROJECT DATE MARCH 2024

SHEET TITLE

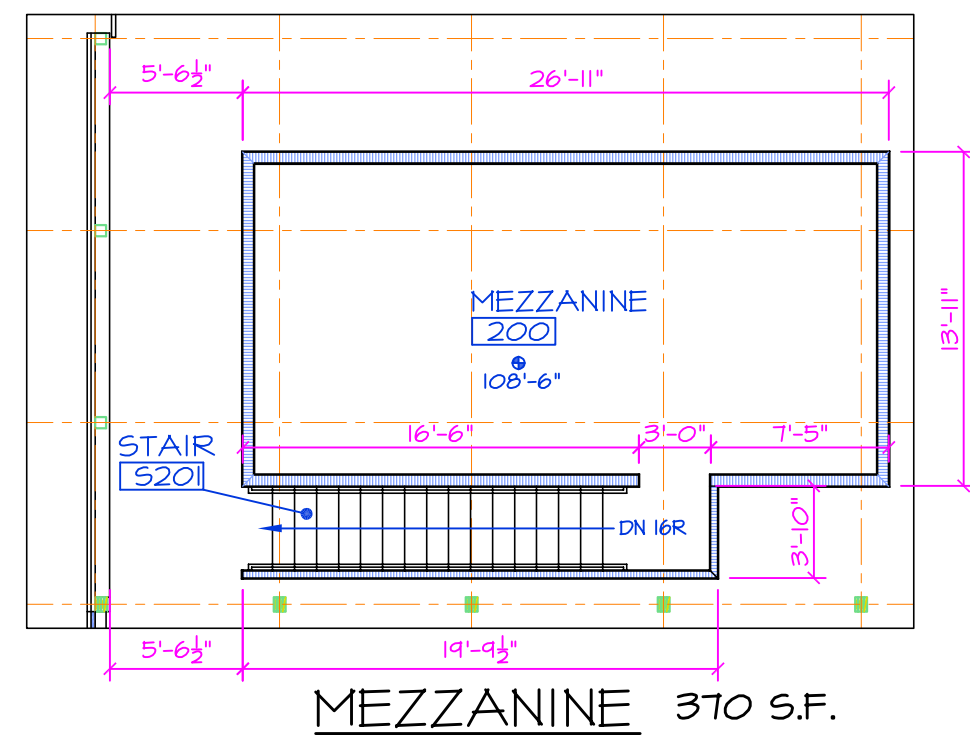
PROPOSED BUILDING PLAN

SHEET NUMBER

A400



REVIEW THIS DOOR LOCATION
MAIN FLOOR



PROPOSED FLOOR PLAN
 SCALE: 1/8" = 1'-0"

BUILDING FOOTPRINT = 8,450 S.F.
 WORK AREA = 5,600 S.F.

- NOTES**
GENERAL NOTES - FLOOR PLAN
- 1 FIRE EXTINGUISHERS / CABINETS - LOCATIONS SHOWN ON CODE PLAN - MARKED FE. INSTALL CABINETS WITH TOP AT (4'-8") AFF. DO NOT RECESS IN RATED WALLS. PROVIDE FIRE EXTINGUISHER.
 - 2 ALL INTERIOR DIMENSIONS ARE TO APPROXIMATE CLEAR FACE OF WOOD STUD UNLESS NOTED OTHERWISE.
 - 3 INTERIOR WAINSCOT PANEL - INSTALL NEW TREATED WOOD WAINSCOT PANELS IN ALL CATTLE AREAS. INSTALL (8) 2x8's HORIZONTAL FROM FLOOR TO +58". INSTALL ON SOUTH AND WEST OF CATTLE STAGING AREA - 102.
 - 4 BUILDING INSULATION - WALLS AND CEILING (JOIST SPACE) SURROUNDING STORAGE-103 TO BE FULLY INSULATED. THE EXISTING STRUCTURE IS NOT PLANNED TO HAVE ANY/ADDITIONAL INSULATION ADDED.
 - 5 FLOOR FINISH - THE FLOOR WILL BE SEALED CONCRETE. CATTLE HANDLING AREAS TO BE HEAVY BROOM/TEXTURED FINISH OR AS DIRECTED BY OWNER. NON-CATTLE AREAS TO HAVE TROWELED FINISH. ALSO SEE STRUCTURAL NOTES.
 - 6 BUILDING ENVIRONMENT - UNDER THE BASE BID, THE EXISTING BUILDING WILL BE UN-CONDITIONED. STORAGE-103 AREA WILL BE CONDITIONED - SEE MEP PLANS.
 - 7 WALL TYPES - SEE FLOOR PLAN AND DETAILS. MEZZANINE BEARING WALLS AND PLUMBING WALLS TO BE 2x6 AND OTHER INTERIOR WALLS TO BE 2x4 UNLESS NOTED OTHERWISE. SEE DETAILS. SEE STRUCTURAL PLANS. THE WALLS AT THE PERIMETER OF THE MEZZANINE ARE TO EXTEND TO A MINIMUM OF 42" ABOVE MEZZANINE FINISHED FLOOR AND ARE TO FUNCTION AS A GUARD.
 - 8 OWNER PURCHASED FURNITURE AND EQUIPMENT ITEMS - THESE ITEMS ARE SHOWN ON THE FLOOR PLAN IN DASHED AND ARE FOR REFERENCE ONLY. THESE ITEMS ARE NOT IN THE CONSTRUCTION BID CONTRACT.
 - 9 NEW MOP/LAUNDRY SINK - SEE FLOOR PLAN FOR LOCATIONS. ALSO SEE MEP SHEETS AND SPECIFICATIONS.
 - 10 ELECTRICAL SERVICE AND PANELS - SEE MEP PLANS FOR LOCATIONS.
 - 11 FLOOR DRAINS - SEE MEP PLANS FOR LOCATION OF FLOOR DRAINS AND DETAILS.
 - 12 INSTALL WOOD BACKING IN MIN. TWO STUD SPACES FOR WALL MOUNTED T.V. SEE PLAN, THIS SHEET FOR LOCATION(S).
 - 13 DOORS ON THE PLANS LABELED 100c, 100d AND 100e ARE SWING GATES FOR OCCUPANT ACCESS/EGRESS. GATES ARE TO BE MIN 36" AND HAVE POSITIVE LATCHING HARDWARE FOR OCCUPANT SAFETY. COMPLY WITH ACCESSIBILITY REQUIREMENTS AS BEST AS POSSIBLE.

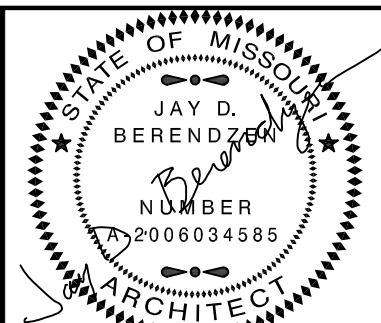
WALL HATCH LEGEND

DRAWING	DESCRIPTION
[Symbol]	EXISTING WALL
[Symbol]	CONCRETE
[Symbol]	CONCRETE MASONRY UNIT
[Symbol]	STUD WALL
[Symbol]	HALF HIGH WALL
[Symbol]	MASONRY - BRICK/STONE
[Symbol]	FIRE PARTITION WALL - 1 HOUR - CORRIDORS SEE WALL TYPE DETAILS
[Symbol]	FIRE SEPARATION WALL - 2 HOUR SEE WALL TYPE DETAILS
[Symbol]	BULKHEAD / HEADER - SEE FLOOR PLAN
[Symbol]	FLOOR FINISH TRANSITION
[Symbol]	RECESSED FIRE EXTINGUISHER CABINET
[Symbol]	DEMOLITION - WALLS, ETC. TO BE REMOVED

ALL WALLS TO EXTEND TO BOTTOM OF ROOF TRUSS/FLOOR STRUCTURE UNLESS NOTED OTHERWISE.

SYMBOL LEGEND

SYMBOL	DESCRIPTION	REFERENCE	REF. LOCATION
[Symbol]	NOTE I.D.	NOTE LIST	THIS SHEET
[Symbol]	ROOM I.D.	ROOM FINISH SCHEDULE	SHEET A501
[Symbol]	DOOR I.D.	DOOR SCHEDULE	SHEET A501
[Symbol]	WINDOW I.D.	WINDOW SCHEDULE	SHEET A501
[Symbol]	SECTION I.D.	SECTION DETAIL	SHEET INDICATED BY BOTTOM FIGURE
[Symbol]	WALL TYPE I.D.	WALL TYPE DETAILS	SHEET A501
[Symbol]	FACE OF STEEL	DIMENSIONS	FOUND., FRAMING, & FLOOR PLANS
[Symbol]	FACE OF BRICK OR BLOCK	DIMENSIONS	FOUND., FRAMING, & FLOOR PLANS
[Symbol]	FACE OF CONG.	DIMENSIONS	FOUND., FRAMING, & FLOOR PLANS



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PROJECT

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CP241191-Remodel Creed Building
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ISSUE

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1	BID SET	03/01/2024

PROJECT NO.
 pba-2406

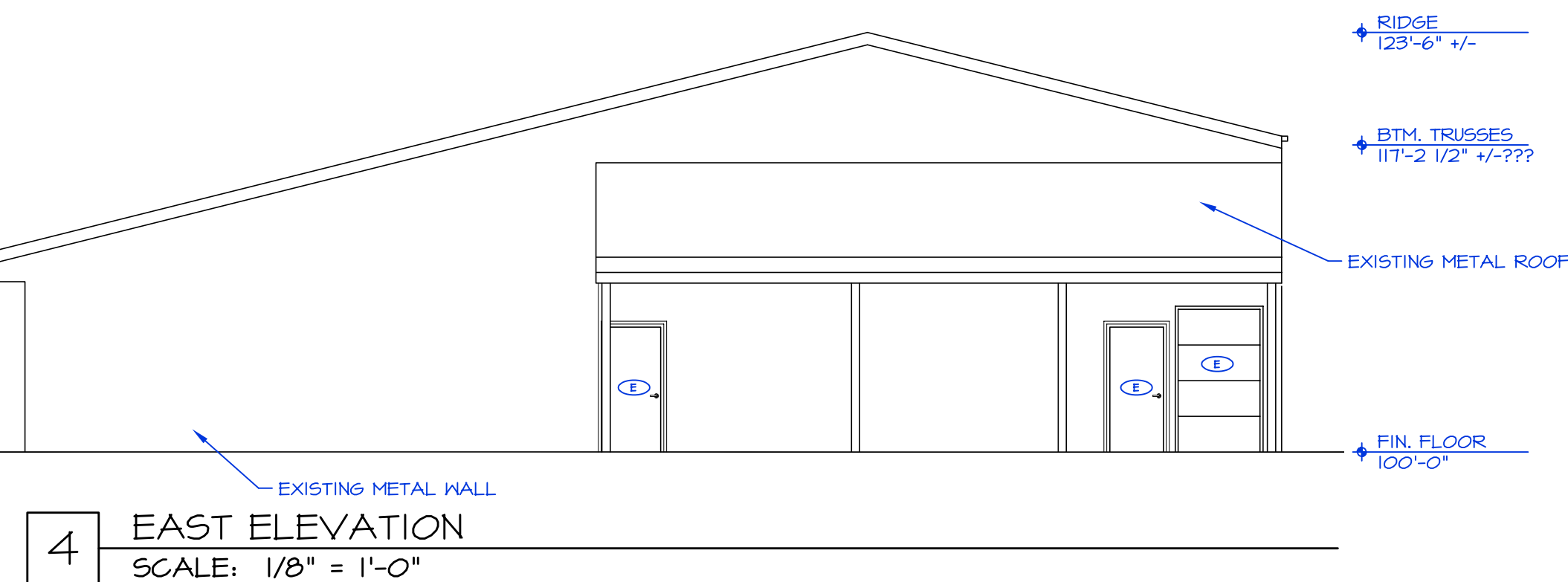
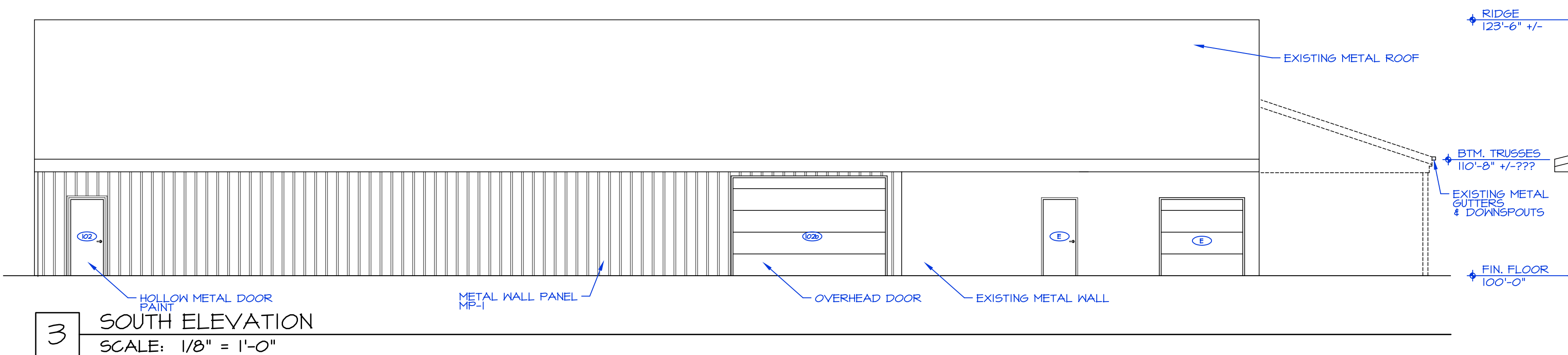
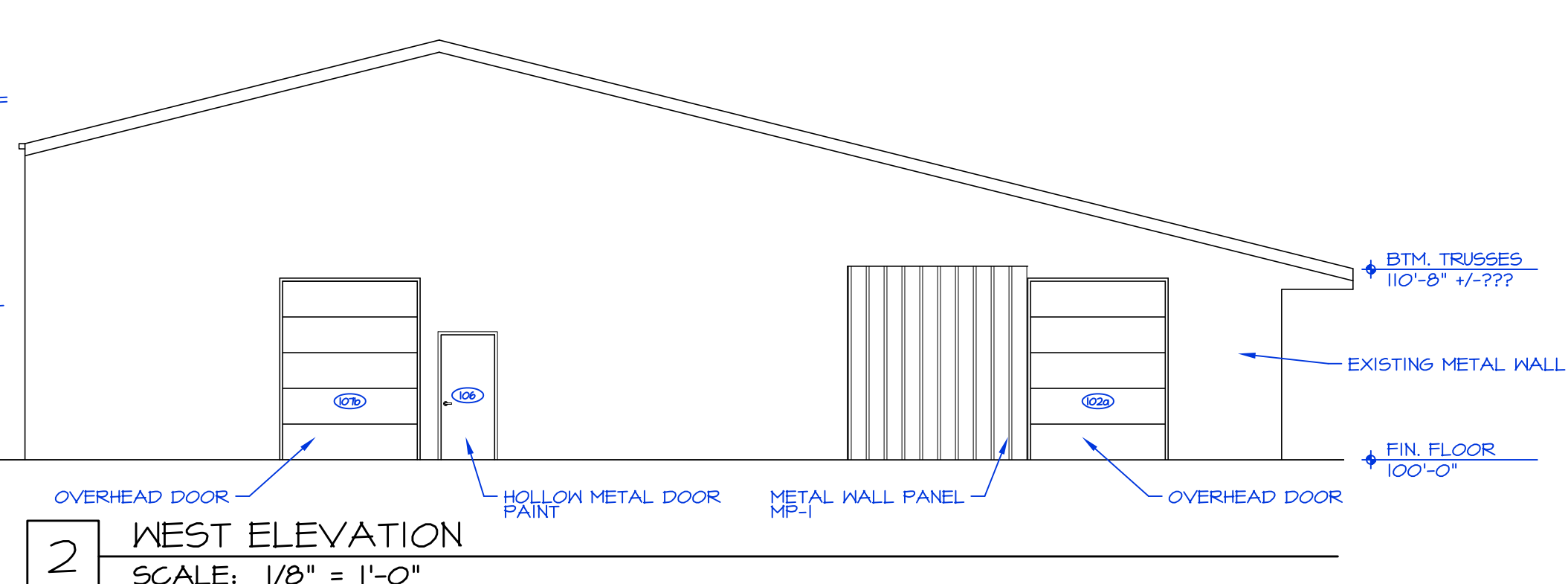
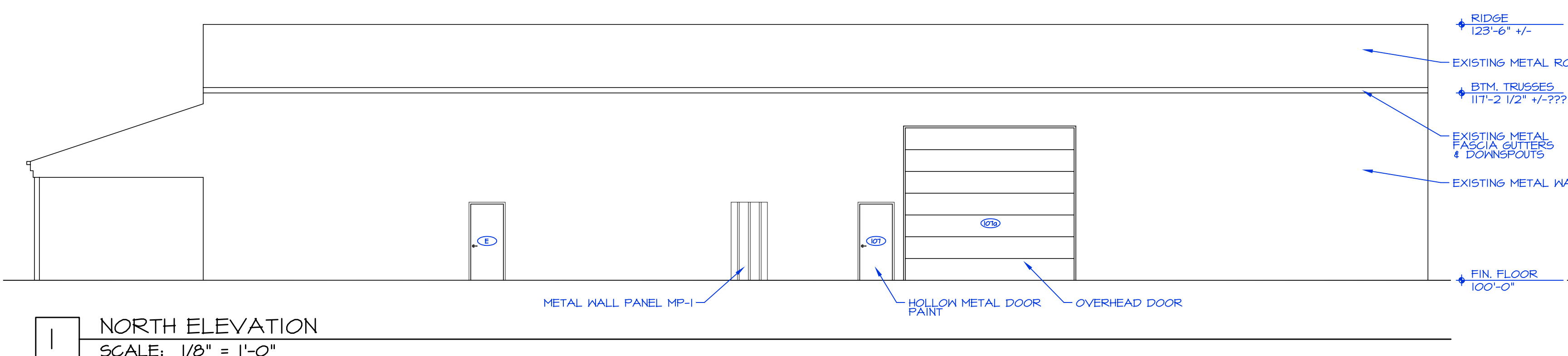
PROJECT DATE
 MARCH 2024

SHEET TITLE

PROPOSED BUILDING PLAN

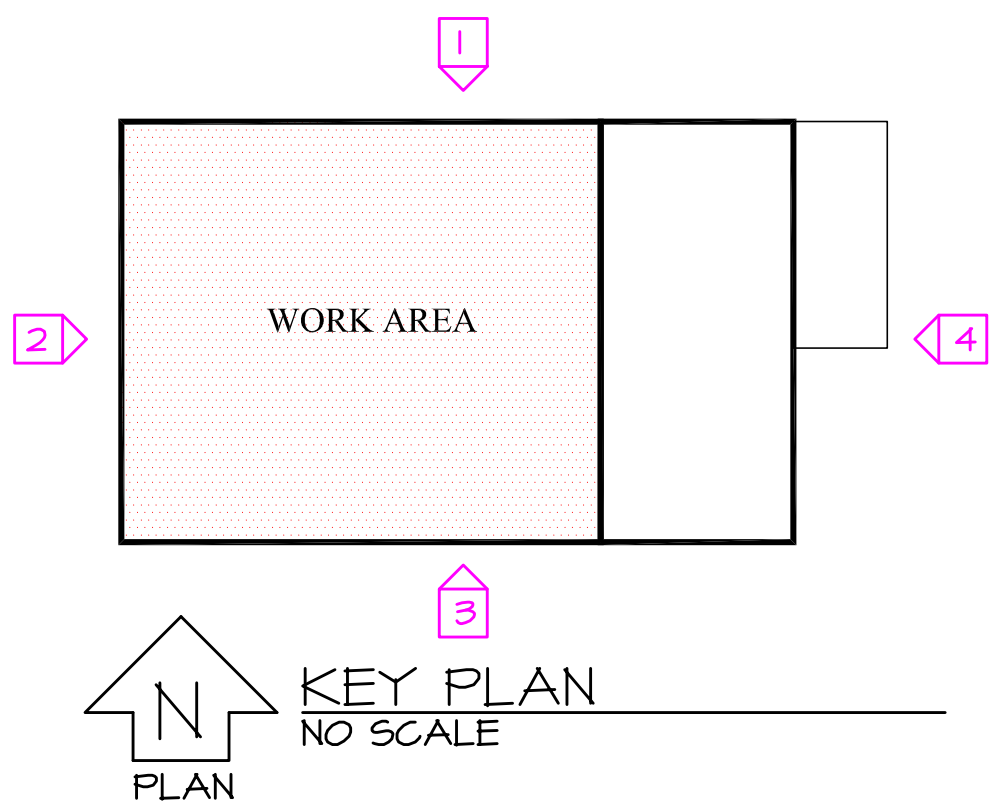
SHEET NUMBER

A500

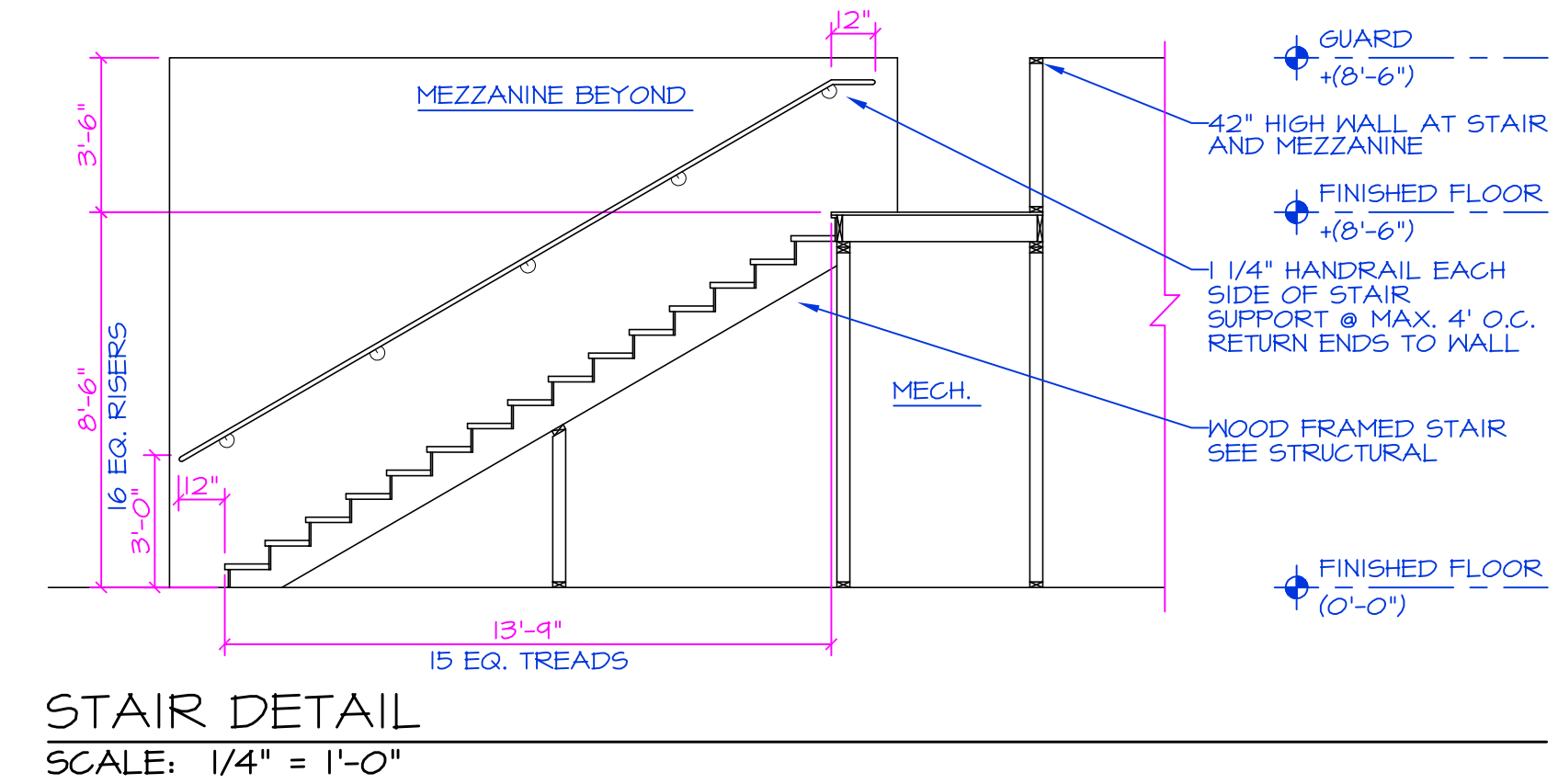
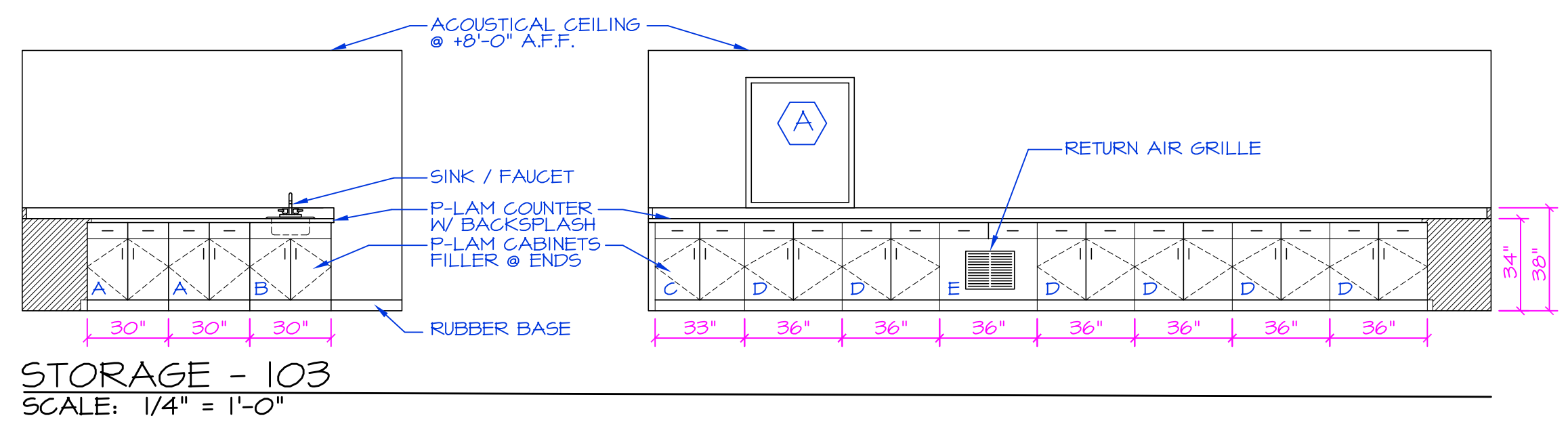


EXTERIOR ELEVATIONS
SCALE: 1/8" = 1'-0"

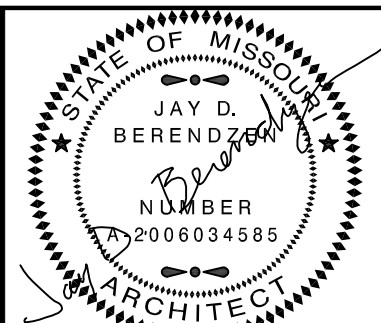
EXTERIOR FINISH MATERIALS	
	METAL WALL PANEL VERTICAL - "R" PANEL COLOR MP-1 - MATCH
	GLASS WINDOWS, DOORS
	METAL ROOF PANEL METAL ROOF PANEL SYSTEM
C.J. CONTROL JOINT (ALL EXTERIOR FINISHES TO BE REVIEWED AND VERIFIED BY OWNER)	



CABINET SCHEDULE		
KEY	DESCRIPTION	REMARKS
GENERAL CABINETS		
A	30" w x 24" d x 34" h BASE CABINET	
B	30" w x 24" d x 34" h SINK BASE	
C	33" w x 24" d x 34" h BASE CABINET	
D	36" w x 24" d x 34" h BASE CABINET	
E	36" w x 24" d x 34" h BASE CABINET	DRAWERS ONLY - TRIM AROUND RA DUCT
SEE ELEVATIONS, THIS SHEET FOR CABINET HEIGHTS WOOD/P-LAM CUSTOM CASEWORK P-LAM COUNTERTOPS TO BE FROM PREMIUM SELECTIONS P-LAM CABINETS TO BE FROM STANDARD SELECTIONS ALL P-LAM TO HAVE 3MM PVC EDGE BANDING LOCKING - NONE REQUIRED UNLESS LISTED ON PLAN (VERIFY)		



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

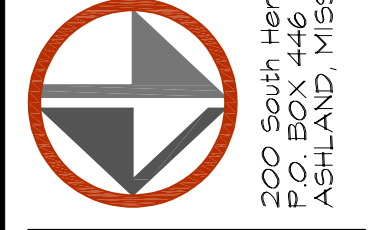


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ID	DESCRIPTION	DATE
1	BID SET	03/01/2024

PROJECT NO. pba-2406

PROJECT DATE MARCH 2024

SHEET TITLE

ELEVATIONS

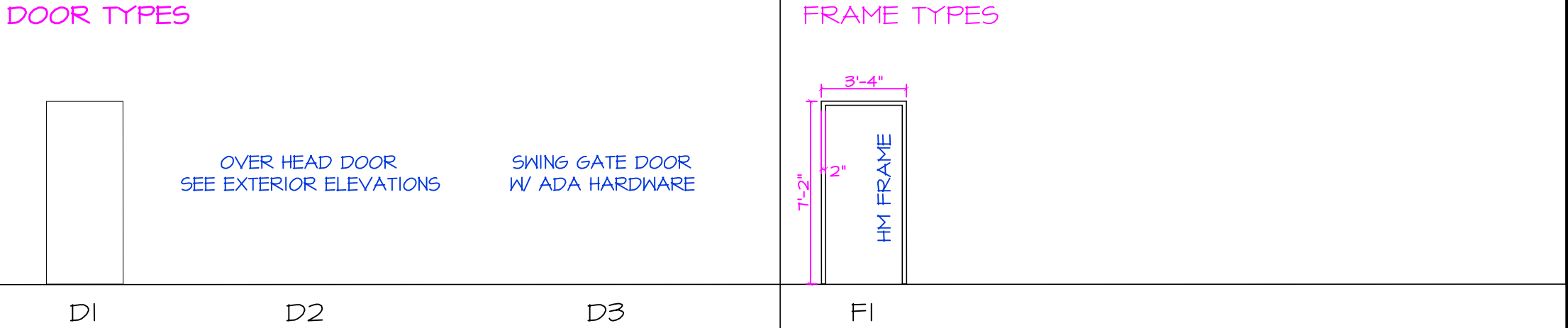
SHEET NUMBER

A600

RM. #	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CLG. HGT.	REMARKS
				NORTH	SOUTH	EAST	WEST			
100	ANIMAL SHELTER	--	--	NORTH	SOUTH	EAST	WEST	--	--	NO WORK
101	ANIMAL QUARTERS	--	--	--	--	--	--	--	--	NO WORK
102	CATTLE STAGING	SEALED CONCRETE	--	--	--	--	--	OPEN	--	2x6 WOOD MAINSCOT
103	OPEN AREA	SEALED CONCRETE	--	--	--	--	--	OPEN	--	
104	STORAGE	SEALED CONCRETE	RUBBER BASE	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	8'-0"	
105	MECH	SEALED CONCRETE	--	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	8'-0"	
106	HALL	SEALED CONCRETE	--	--	--	FRP PANEL	--	OPEN	--	
107	CATTLE TREATMENT	SEALED CONCRETE	--	--	--	--	--	OPEN	--	
5101	STAIR	RUBBER TREADS/RISERS	RUBBER BASE	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	OPEN	
5201	STAIR	RUBBER TREADS/RISERS	RUBBER BASE	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	OPEN	
200	MEZZANINE	PLYWOOD	RUBBER BASE	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	FRP PANEL	OPEN	

- ROOM FINISH SCHEDULE NOTES:
- SEALED CONCRETE FLOORS - SONNEBORN "KURE-N-SEAL" OR EQUAL. FINAL COAT TO BE APPLIED AT END OF PROJECT. SEE PROJECT MANUAL.
 - INSTALL LOW PROFILE TRANSITION/REDUCER TRIMS AT ALL CHANGES IN FLOOR COVERING/FINISH.
 - ALL FIRE-RATED INTERIOR WALLS TO EXTEND TO BOTTOM OF ROOF/FLOOR DECKING UNLESS NOTED OTHERWISE. SEE WALL TYPES AND DETAILS.
 - PAINT ALL INTERIOR AND EXTERIOR HOLLOW METAL DOORS, FRAMES, BORROW LITE FRAMES, HANDRAILS, GUARDRAILS, EXPOSED STRUCTURAL STEEL, ETC. THIS INCLUDES ALL EXISTING DOORS AND FRAMES.
 - ALL NEW/EXISTING WALLS SCHEDULED TO BE PAINTED THAT HAVE EXPOSED PIPING OR MECH. UNIT COVERS - PAINT ALL.
 - ADD 8 HIGH 2x8 MAINSCOT - 8 BOARDS HIGH ON SOUTH AND WEST WALLS.
 - ALL MATERIAL AND FINISH COLORS TO BE SELECTED BY OWNER AND APPROVED BY ARCHITECT.
 - CONCRETE FLOOR IN TREATMENT AREA TO HAVE HEAVY BROOM/TEXTURED FINISH. VERIFY EXACT FINISH/TEXTURE AND LOCATIONS.

DOOR SCHEDULE												
ALL EXISTING DOORS/FRAMERS/ROUGH OPENING SIZES/WIDTHS ARE TO BE FIELD VERIFIED PRIOR TO ORDERING												
NO.	EXIST. DOOR REF. #	SIZE	DOOR			FRAME			(Min)	FIRE RATING	HARDWARE GROUP	REMARKS
			TYPE	MATERIAL	GLAZ.	TYPE	MATERIAL	GLAZ.				
102	NEW	3'-0" x 7'-0" x 1 3/4"	D1	INSUL. HOLLOW MTL	--	FI	HOLLOW METAL	--	6 3/4"	--	01	EXTERIOR
102a	NEW	7'-6-1/2" W x 10'-0" H	D2	STEEL-INSULATED	--	--	NO FRAME	--	--	--	--	EXTERIOR O.H. DOOR - NO OPERATOR
102b	NEW	14'-0" W x 9'-0" H	D2	STEEL-INSULATED	--	--	NO FRAME	--	--	--	--	EXTERIOR O.H. DOOR - W/ OPERATOR
102c	NEW	3'-0" Gate Door	D3	METAL	--	--	--	--	--	--	--	SWING GATE W/ HARDWARE
104	NEW	3'-0" x 7'-0" x 1 3/4"	D1	INSUL. HOLLOW MTL	--	FI	HOLLOW METAL	--	6 3/4"	--	02	INTERIOR
104a	NEW	3'-0" x 7'-0" x 1 3/4"	D1	INSUL. HOLLOW MTL	--	FI	HOLLOW METAL	--	6 3/4"	--	02	INTERIOR
105	NEW	3'-0" x 7'-0" x 1 3/4"	D1	INSUL. HOLLOW MTL	--	FI	HOLLOW METAL	--	6 3/4"	--	02	INTERIOR
106	NEW	3'-0" x 7'-0" x 1 3/4"	D1	INSUL. HOLLOW MTL	--	FI	HOLLOW METAL	--	6 3/4"	--	01	EXTERIOR
107	NEW	3'-0" x 7'-0" x 1 3/4"	D1	INSUL. HOLLOW MTL	--	FI	HOLLOW METAL	--	6 3/4"	--	01	EXTERIOR
107a	NEW	15'-6" W x 14'-0" H	D2	STEEL-INSULATED	--	--	NO FRAME	--	--	--	--	EXTERIOR O.H. DOOR W/ OPERATOR
107b	NEW	7'-6-1/2" W x 10'-0" H	D2	STEEL-INSULATED	--	--	NO FRAME	--	--	--	--	EXTERIOR O.H. DOOR - NO OPERATOR
107c	NEW	3'-0" Gate Door	D3	METAL	--	--	--	--	--	--	--	SWING GATE W/ HARDWARE
107d	NEW	3'-0" Gate Door	D3	METAL	--	--	--	--	--	--	--	SWING GATE W/ HARDWARE



- DOOR SCHEDULE NOTES:
- ALL DOOR HARDWARE TO BE BRUSHED STAINLESS OR BRUSHED ALUMINUM FINISH. SEE SECTION 087100-FINISH HARDWARE.
 - CONTRACTOR SHALL VERIFY ALL ROUGH OPENING DIMENSIONS INCLUDING JAMB DEPTHS WITH DOOR MANUFACTURER PRIOR TO ORDERING, FABRICATING, OR INSTALLING.
 - REFER TO DOOR MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR INFORMATION AND INSTALLATION REQUIREMENTS ON HARDWARE.
 - ALL MEANS OF EGRESS DOORS SHALL BE READILY OPERABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL EFFORT.
 - ALL DOORS AND HARDWARE SHALL COMPLY WITH APPLICABLE ACCESSIBILITY CODE REQUIREMENTS.
 - DOORS WITH CLOSERS SHALL REQUIRE NO MORE THAN FIVE (5) LBS. TO PUSH/PULL OPEN AT INTERIOR HINGED LOCATIONS AND SHALL REQUIRE NO MORE THAN EIGHT-AND-A-HALF (8.5) LBS. MAX. AT EXTERIOR HINGED LOCATIONS.
 - ALL DOOR OPERATING DEVICES SHALL BE CAPABLE OF OPERATION WITH ONE HAND AND SHALL NOT REQUIRE GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.
 - ALL DOOR OPENING DEVICES SHALL BE "LEVER" TYPE.
 - PROVIDE SOLID REINFORCING AT LOCATIONS OF ALL LOCK AND LATCH SETS AND AT LOCATIONS OF CLOSERS WHERE APPLICABLE.
 - SEE FLOOR PLANS FOR DOOR NUMBERS, LOCATIONS AND SWING OF DOORS.
 - PROVIDE A TACTILE WARNING ON ALL DOOR HANDLES FOR DOORS THAT LEAD TO POTENTIALLY DANGEROUS AREAS - ELECTRICAL, MECHANICAL, ETC...

- HARDWARE GROUP SCHEDULE
Also See Project Manual
(Verify Hardware with Owner)
- GROUP 01 EXTERIOR SINGLE (STEEL)
- CYLINDER
 - 1 1/2 PAIR BB BUTT HINGES
 - LOCKSET
 - CLOSER (HEAVY DUTY) WITH BACK CHECK (MAX 5 LB. PULL)
 - ACCESSIBLE THRESHOLD
 - WEATHERSTRIPPING & SNEEP
 - STOP IN CLOSER
 - RAIN CAP
- GROUP 02 STORAGE DOOR (STEEL)
- CYLINDER
 - 1 1/2 PAIR BB BUTT HINGES
 - LOCKSET
 - OVERHEAD STOP
 - SILENCERS

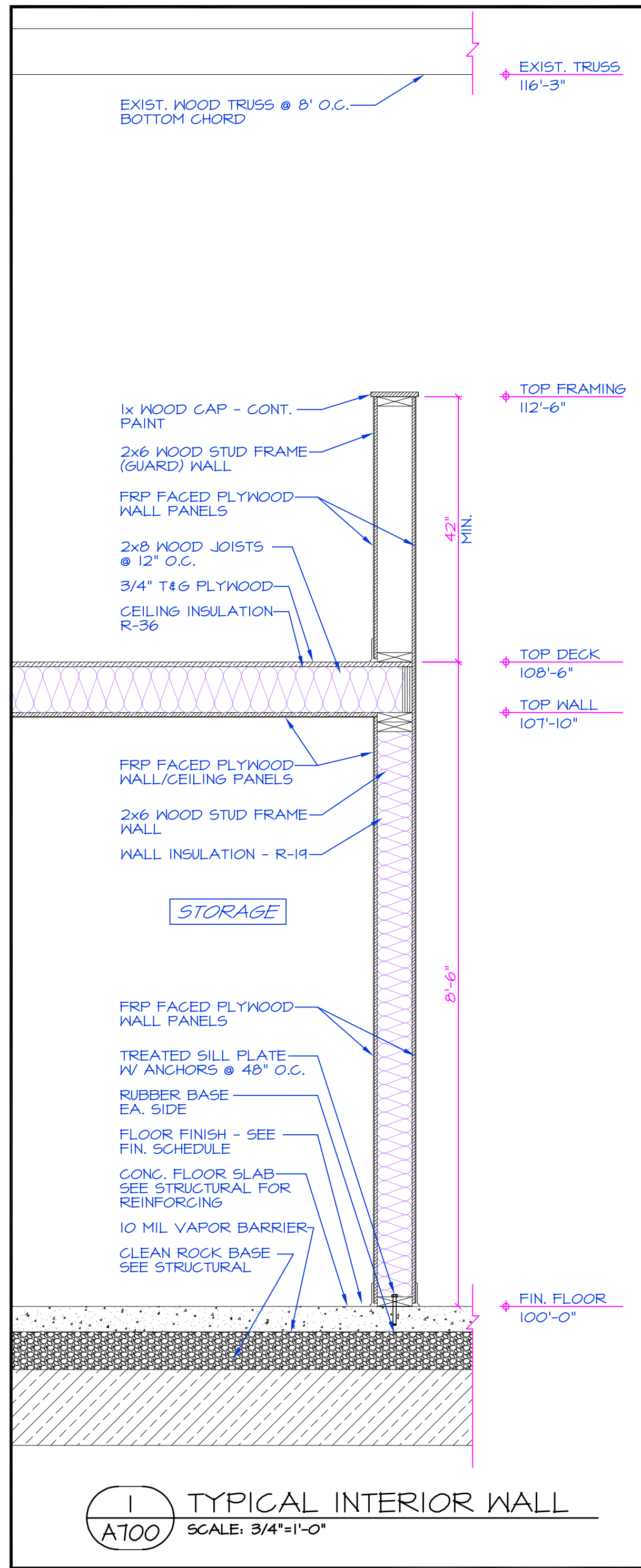
WINDOW SCHEDULE						
NO.	ROUGH OPENING		FRAME MATERIAL	OPERATION	GLAZING	LOCATION
	WIDTH	HEIGHT				
A	3'-4"	4'-0"	HOLLOW METAL	FIXED	62	INTERIOR

WINDOW SCHEDULE NOTES:

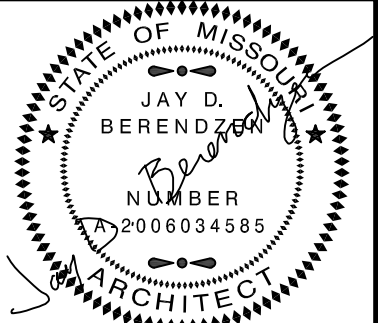
- SEE ELEVATIONS, THIS SHEET FOR ACTUAL SHAPES AND DIMENSIONS
- SEE FLOOR PLAN FOR NUMBER OF WINDOWS PER EACH WINDOW TYPE
- WINDOWS TO BE CLEAR ANODIZED TO MATCH EXISTING.

WINDOW ELEVATIONS

GLAZING SCHEDULE	
** NOT ALL GLASS TYPES USED **	
TYPE	DESCRIPTION
61	1/4" CLEAR FLOAT GLASS
62	1/4" TEMPERED GLASS
63	1/4" CLEAR LAMINATED GLASS
64	1/4" WIRE GLASS
65	1" CLEAR LOW-"E" INSULATING GLASS
66	1" CLEAR LOW-"E" INSULATING GLASS - TEMPERED -
67	1" CLEAR LOW-"E" INSULATING GLASS OBSCURED - MIN. 50% EMITTANCE
68	1/4" FIRE RATED GLASS - RATING PER SCHEDULE -
69	1/4" FIRE/IMPACT RATED GLASS - RATING PER SCHEDULE -



1 A700 TYPICAL INTERIOR WALL
SCALE: 3/4"=1'-0"



EXPIRATION DATE: 12-31-24
JAY D. BERENDZEN, ARCHITECT
ISSUE DATE: March 1, 2024

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MISSOURI ARC-000588
EXP. 12/31/25

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PROJECT

Proposed Rehabilitation Plans for:
CP241191-Remodel Creed Building
5151 Old Miller Road
Columbia, Boone County, Missouri

ISSUE		
ID	DESCRIPTION	DATE
1	BID SET	03/01/2024

PROJECT NO. pba-2406
PROJECT DATE MARCH 2024
SHEET TITLE

SCHEDULES

SHEET NUMBER

A700

GENERAL NOTES

DESIGN SPECIFICATIONS
2021 INTERNATIONAL BUILDING CODE

EARTHWORK

EARTHWORK OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL TESTING AGENCY TO ASSURE COMPLIANCE.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

- 1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:
FOUNDATIONS - 3,000 PSI
CAST-IN-PLACE WALLS - 3,500 PSI
FLOOR SLAB - 4,000 PSI
EXTERIOR SLABS, WALLS AND CURBS - 4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE-BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C-143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINMENT AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
CAST AGAINST AND EXPOSED TO EARTH.....3 INCHES
EXPOSED TO EARTH OR WEATHER.....2 INCHES
NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH.....1 1/2 INCHES
C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLOGGING AGGREGATE.
D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.

TIMBER

TIMBER WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ANSI/AF&PA NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION, WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

- 1. FOR COMMON MEMBER SIZES, THE SPECIES AND GRADES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
A. 2X4 SPF No.1/No.2
B. 2X6 SPF No.1/No.2
C. 2X8 DF-L No.2
D. 2X10 DF-L S.S.
E. 2X12 DF-L S.S.
EQUIVALENT (OR BETTER) GRADES & SPECIES MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL.
2. SIZES SHOWN FOR LUMBER ARE NOMINAL SIZES.
3. TIMBER EXPOSED TO WEATHER OR GROUND, OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-IMPREGNATED BY AN APPROVED PROCESS AND PRESERVATIVE.
4. SPLICING OF JOISTS, STUDS, OR HEADERS IS PROHIBITED EXCEPT AS SHOWN.
5. BOLTS SHALL CONFORM TO ASTM A307. HOLES SHALL BE DRILLED PER SECTION 11.1.2 OF THE 2005 ANSI/AF&PA NDS FOR WOOD CONSTRUCTION.
6. LAG SCREWS AND WOOD SCREWS SHALL BE INSTALLED PER SECTIONS 11.1.3 AND 11.1.4, RESPECTIVELY, OF THE 2005 ANSI/AF&PA NDS FOR WOOD CONSTRUCTION.
7. COMMON NAILS SHALL BE USED, UNLESS NOTED OTHERWISE. IN ADDITION, NAILS SHALL BE GALVANIZED, IF EXPOSED TO WEATHER OR MOISTURE. TOE-NAILS SHALL BE DRIVEN PER SECTION 11.1.5.4 OF THE 2005 ANSI/AF&PA NDS FOR WOOD CONSTRUCTION.
8. FASTENING SHALL BE PER THE IBC MINIMUM FASTENING SCHEDULE, TABLE 2304.9.1, UNLESS NOTED OTHERWISE.
9. CONNECTIONS/CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

PREFABRICATED WOOD TRUSSES

- 1. FLOOR & ROOF TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE (TPI) DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES, AND THE ANSI/NF&PA NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
2. PROVIDE TEMPORARY AND PERMANENT BRACING ON ALL TRUSSES, AS REQUIRED TO PROVIDE MEMBER AND TRUSS STABILITY.
3. FLOOR & ROOF TRUSSES SHALL BE DESIGNED AND CONSTRUCTED FOR A MAXIMUM TOTAL LOAD DEFLECTION OF L/360 AND TO SAFELY SUPPORT THE FOLLOWING LOADS:
A. DEAD, LIVE, SNOW, WIND, EARTHQUAKE: SEE PROJECT DESIGN DATA ON COVER SHEET.
B. MECHANICAL PIPE LOAD: TRUSSES SHALL BE DESIGNED FOR A CONCENTRATED LOAD OF 250 LBS HUNG ANYWHERE ALONG THE BOTTOM CHORD.
C. OVER-FRAMING LOAD: TRUSSES SHALL ALSO BE DESIGNED TO SUPPORT ADDITIONAL OVERBUILD FRAMING, SUCH AS THAT WHICH FORMS VALLEYS AND HIPS ON ROOFS.
D. DRIFTED SNOW LOAD: TRUSSES SHALL BE DESIGNED TO SUPPORT DRIFTED SNOW LOADS IN ACCORDANCE WITH THE APPROPRIATE BUILDING CODE.
E. IN-PLANE LATERAL LOADS: TRUSSES SHALL BE DESIGNED TO SUPPORT ANY LATERAL LOADS CARRIED AXIALLY IN THE PLANE OF THE TRUSS, AS SHOWN ON THE PLANS.
4. SUBMITTALS SHALL INCLUDE THE FOLLOWING:
A. SHOP DRAWINGS PREPARED UNDER THE SUPERVISION OF, AND SIGNED AND SEALED BY, A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS BUILT. THESE DRAWINGS SHALL INDICATE SPECIES, GRADE, AND SIZES OF LUMBER TO BE USED; PITCH, SPAN, CAMBER, CONFIGURATION, AND SPACING FOR EACH TYPE OF TRUSS REQUIRED; TYPE, SIZE, MATERIAL, FINISH, AND LOCATION OF METAL CONNECTOR PLATES; AND BEARING DETAILS. SHOW TRUSS LAYOUT AND ALL REQUIRED TEMPORARY AND PERMANENT BRACING AFFECTING THE STRUCTURAL CAPACITY OF THE TRUSSES.

PROVIDE COMPLETE ENGINEERING DESIGN CALCULATIONS THAT INCLUDE DESIGN VALUES, DESIGN ANALYSIS INDICATING LOADING, ASSUMED ALLOWABLE STRESSES, STRESS DIAGRAMS, AND CALCULATIONS, AND ANY OTHER INFORMATION NEEDED FOR REVIEW. THE CALCULATIONS SHALL HAVE BEEN SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER WHO IS REGISTERED IN THE STATE WHERE THE PROJECT IS BUILT AND WHO IS RESPONSIBLE FOR PREPARATION OF THE CALCULATIONS.

SPECIAL INSPECTIONS

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

- a. PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)
b. BOLTS & ANCHORS EMBEDDED IN CONCRETE (PERIODIC)
c. POST INSTALLED ANCHORS IN CONCRETE (CONTINUOUS)
d. IN-SITU SOILS, EXCAVATIONS, FILLING & COMPACTION (PERIODIC)
e. WOOD FRAMING:
e.a. SHEAR WALLS; WALL SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
e.b. DIAPHRAGMS (FLOOR AND ROOF SHEATHING); SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
e.c. FRAMING MEMBERS AND DETAILS (PERIODIC)
e.d. MATERIAL GRADE (PERIODIC)
e.e. CONNECTIONS; HANGERS, HOLD DOWNS, BUILT-UP COLUMNS, BUILT-UP BEAMS (PERIODIC)
e.f. PRE-ENGINEERED TRUSSES; FRAMING, CONNECTIONS, BRIDGING (PERIODIC)

THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

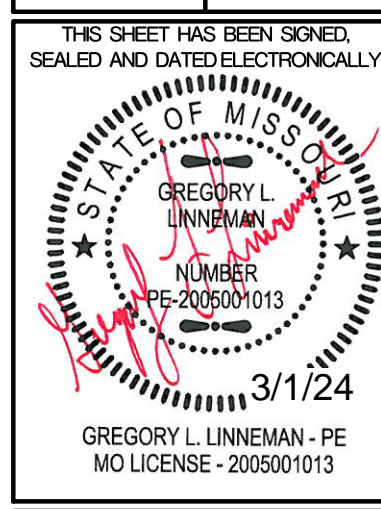
STRUCTURAL STEEL

- 1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AND CURRENT OSHA STANDARDS.
2. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. STRUCTURAL TUBES SHALL CONFORM TO ASTM A500 GRADE B. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.
3. BOLTS, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM A325-N, SIZE AS PER PLAN.
4. ANCHOR BOLTS, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM F1554 GRADE 36.
5. SPLICING OF STRUCTURAL STEEL IS PROHIBITED EXCEPT AS DETAILED.
6. ALL STRUCTURAL AND MISCELLANEOUS STEEL ITEMS SHALL RECEIVE ONE COAT OF "IRONCLAD RETARDO RUST INHIBITIVE PAINT 163" (BENJAMIN MOORE) OR APPROVED EQUAL UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS. ALL STEEL SURFACES EMBEDDED IN CONCRETE SHALL NOT BE PAINTED. PREPARATION OF STEEL SURFACES SHALL MEET THE REQUIREMENTS OF THE STEEL STRUCTURES PAINTING COUNCIL (SSPC-SP1) AND THE REMOVAL OF GREASE AND OIL BY SOLVENT CLEANING (SSPC-SP1) AND THE REMOVAL OF MILL SCALE, RUST, WELD FLUX AND SLAG BY HAND TOOL CLEANING (SSPC-SP2). PRIMER SHALL BE APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE BUT NOT LESS THAN ONE GALLON PER 400 SQ.FT. THEREBY DEPOSITING A DRY FILM THICKNESS OF NOT LESS THAN 1.5 MILS. ANY SCARRED AREAS SHALL BE TOUCHED UP WITH THE SAME PAINT AFTER ERECTION.
7. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE AWS STRUCTURAL WELDING CODE. WELDING ELECTRODES SHALL BE E70XX.

DESIGN DATA
2021 INTERNATIONAL BUILDING CODE / ASCE 7-16
BUILDING OCCUPANCY CATEGORY I
ROOF LOAD DATA
LIVE LOAD 20
METAL ROOFING 10
PURLINS 10
PRE-ENGINEERED WOOD TRUSSES 3.0
MECHANICAL ALLOWANCE 2.0
SOLAR 5.0
TOTAL TO TRUSSES 32 lbs/sqft
ROOF SNOW LOAD DATA: (*UNBALANCED & DRIFTING SNOW TO BE DETERMINED IN ADDITION TO UNIFORM LOAD, WHERE APPLICABLE)
Pd = 20 lbs/sqft
Cs = 1.0
Ie = 0.8
Ct = 12
Pr = 13.44 lbs/sqft
WIND DESIGN DATA
Vw = 109 MPH (3-SECOND GUST)
RISK CATEGORY II
EXPOSURE C
INTERNAL PRESSURE COEFFICIENT = +/- 0.18
DIRECTIONAL PROCEDURE (MWFRS - ASCE 7-10, CH 27; C&C - ASCE 7-10, CH 30, PART 4)
MAXIMUM COMPONENT S & CLADDING WIND +/- 30.78 lbs/sqft
EARTHQUAKE DESIGN DATA
RISK CATEGORY I
Ie = 1.0
Ss = 0.161
S1 = 0.094
SITE CLASS D (UNKNOWN)
SDES = 0.172
SDS = 0.15
SEISMIC DESIGN CATEGORY C
BASIC SEISMIC-FORCE-RESISTING SYSTEM = LIGHT-FRAME (WOOD) WALLS SHEATHED WITH SHEAR PANELS OF METAL
R = 2.5
Omega = 2.5
Cd = 2.5
DESIGN BASE SHEAR V = 0.069W
EQUIVALENT LATERAL FORCE PROCEDURE
NET ALLOWABLE SOIL BEARING 1500 lbs/sqft**
(**ASSUMED PER IBC TABLE 1806.2, PRESUMPTIVE LOAD-BEARING VALUES)

INDEX OF SHEETS
GENERAL STRUCTURAL DATA S100
NEW SLAB & FOUNDATION PLAN / EXISTING FLOOR PLAN S200
FOUNDATION DETAILS S210-S211
NEW MEZZANINE / EXISTING FRAMING PLAN S300
FRAMING DETAILS S310

REVISIONS:
No. Date
BID SET 03/01/2024

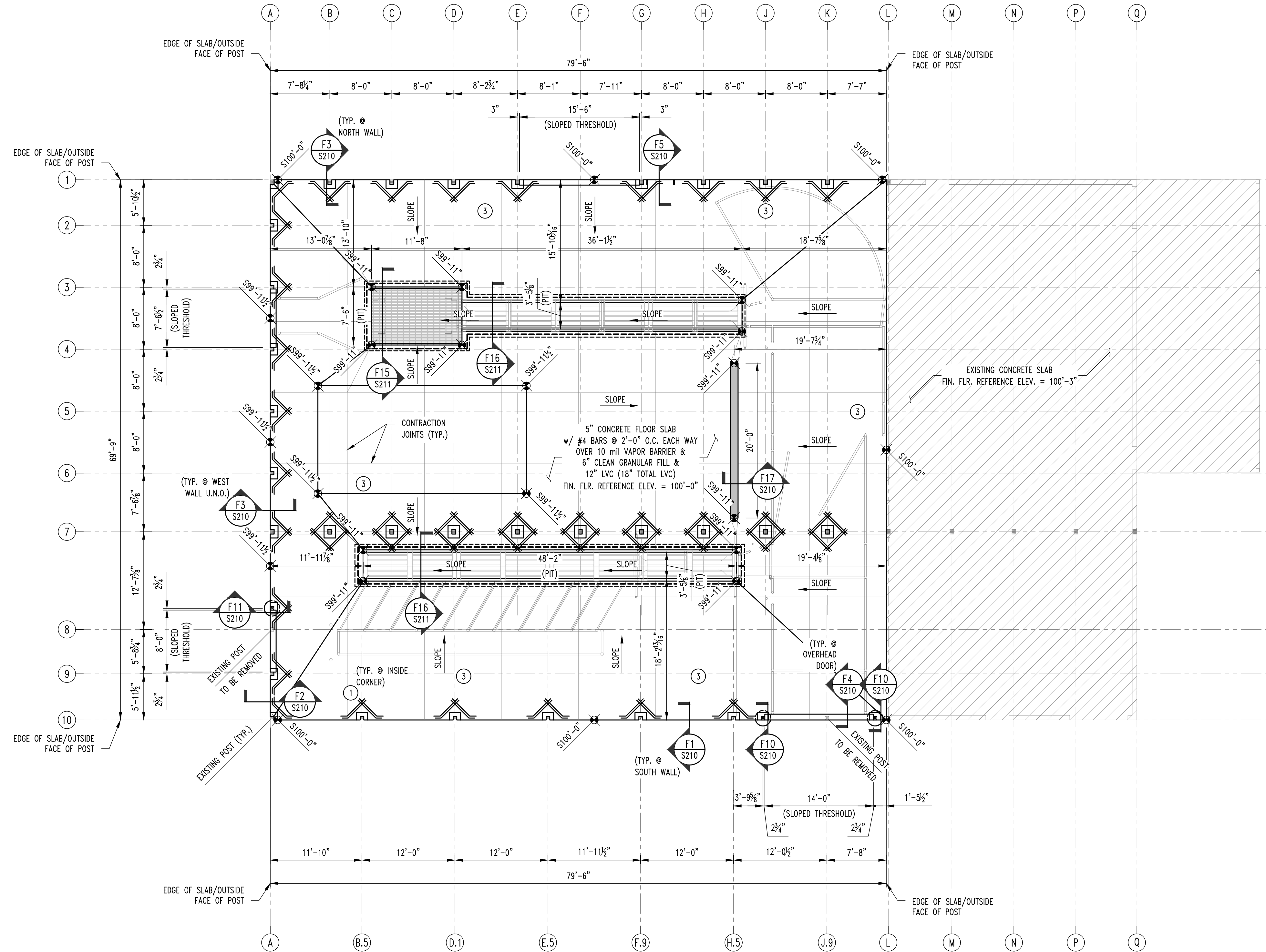


CLIENT:
CURATORS OF THE UNIVERSITY OF MISSOURI
COLUMBUS BUSINESS SERVICES
220 UNIVERSITY HALL
COLUMBIA, MO 65211

CP241191 - SOUTH FARM - CREED BARN
REMODEL
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:
GENERAL STRUCTURAL DATA

DESIGNED: GLL
DRAWN: SEH
PROJECT NO.: 230338
SHEET: S100



1 NEW SLAB & FOUNDATION PLAN / EXISTING FLOOR PLAN
 SCALE: 3/8" = 1'-0"
 PLAN NORTH

- FOUNDATION NOTES**
- REENTRANT CORNER BARS. REFER TO TYPICAL CRACK CONTROL REINFORCING DETAIL ON SHEET S210.
 - APPLY JOINT FILLER TO ALL SAW JOINTS.
 - CONTRACTOR TO RUN #6 SOLID COPPER BONDING JUMPER TO REBAR IN CONCRETE FLOOR. CONTRACTOR SHALL BOND REBAR AROUND PERIMETER OF FLOOR @ 20' CENTERS w/ BRASS CLAMPS. SEE ELECTRICAL DRAWINGS FOR REMAINING REQUIREMENTS.

REVISIONS:

No.	Date
BID SET	03/01/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

GREGORY L. LINEMAN - PE
 NO. LICENSE - 2005001013
 3/1/24

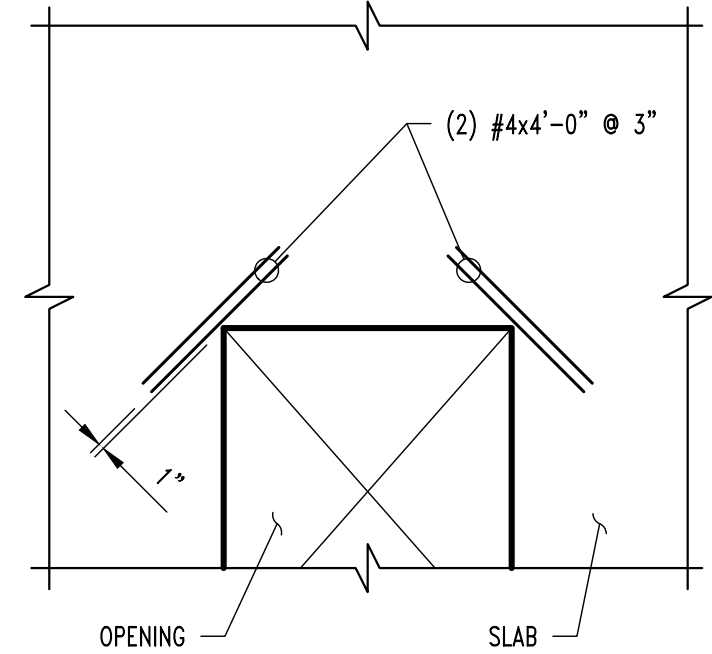
STRUCTURAL ENGINEER
CROCKETT
 ENGINEERING CONSULTANTS
 1000 W. NIKOS BLVD. SUITE 1
 COLUMBIA, MISSOURI 65203
 (573) 447-0992
 www.crockettengineering.com
 Missouri Certificate of Authority #200313101

CLIENT:
 CURATORS OF THE UNIVERSITY OF MISSOURI
 220 BUSINESS SERVICES
 UNIVERSITY HALL
 COLUMBIA, MO 65211

**CP241191 - SOUTH FARM - CREED BARN
 REMODEL**
 COLUMBIA, BOONE COUNTY, MISSOURI

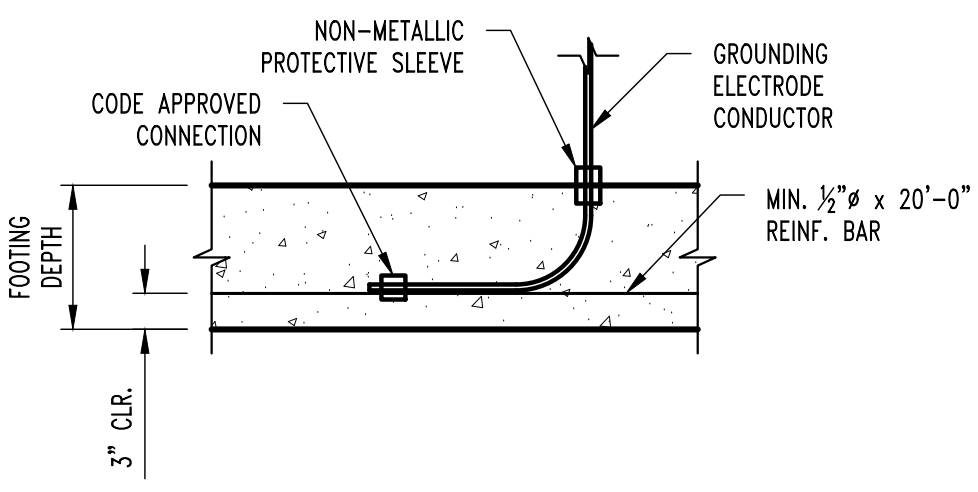
DRAWING INCLUDES:
 NEW SLAB & FOUNDATION
 PLAN / EXISTING FLOOR PLAN

DESIGNED:	GLL
DRAWN:	SEH
PROJECT NO.:	230338
SHEET:	S200

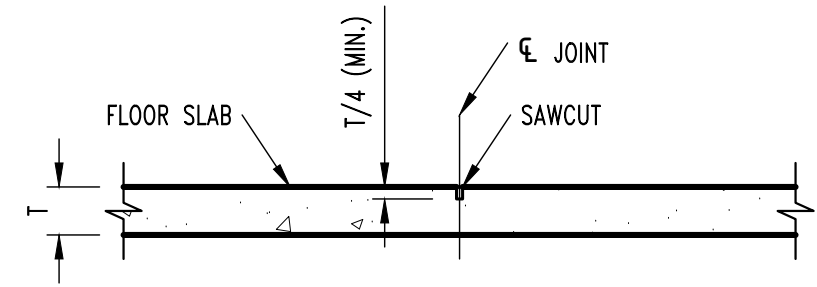


NOTE:
TYPICAL AT ALL REENTRANT CORNERS FOR
SLAB-ON-GRADE & STRUCTURAL SLAB.
REINFORCING TO BE CENTERED IN SLAB THICKNESS.

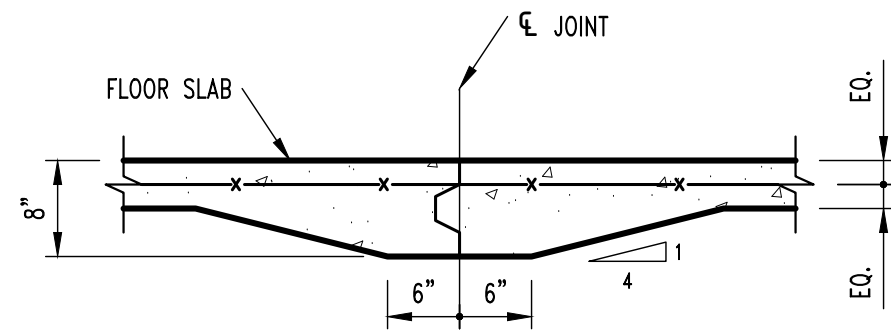
CRACK CONTROL REINFORCING



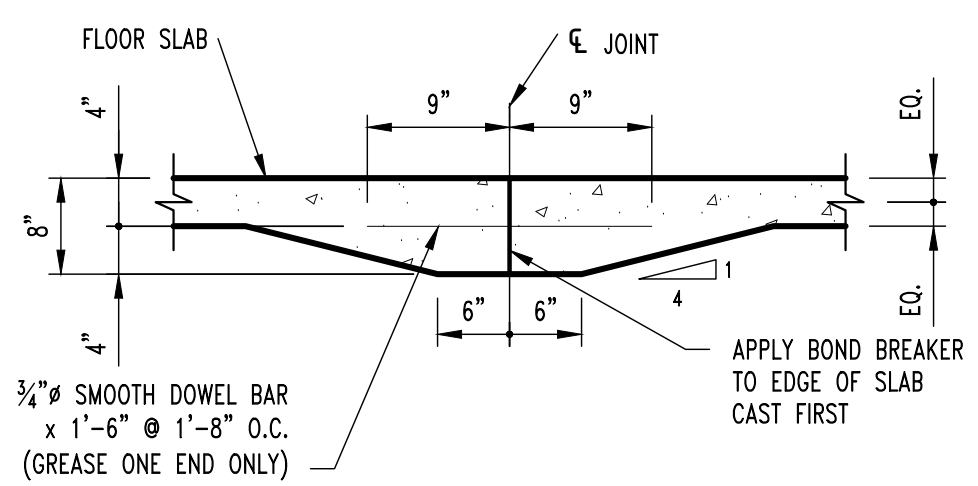
TYP. ELECTRICAL GROUNDING DETAIL @ FOOTING



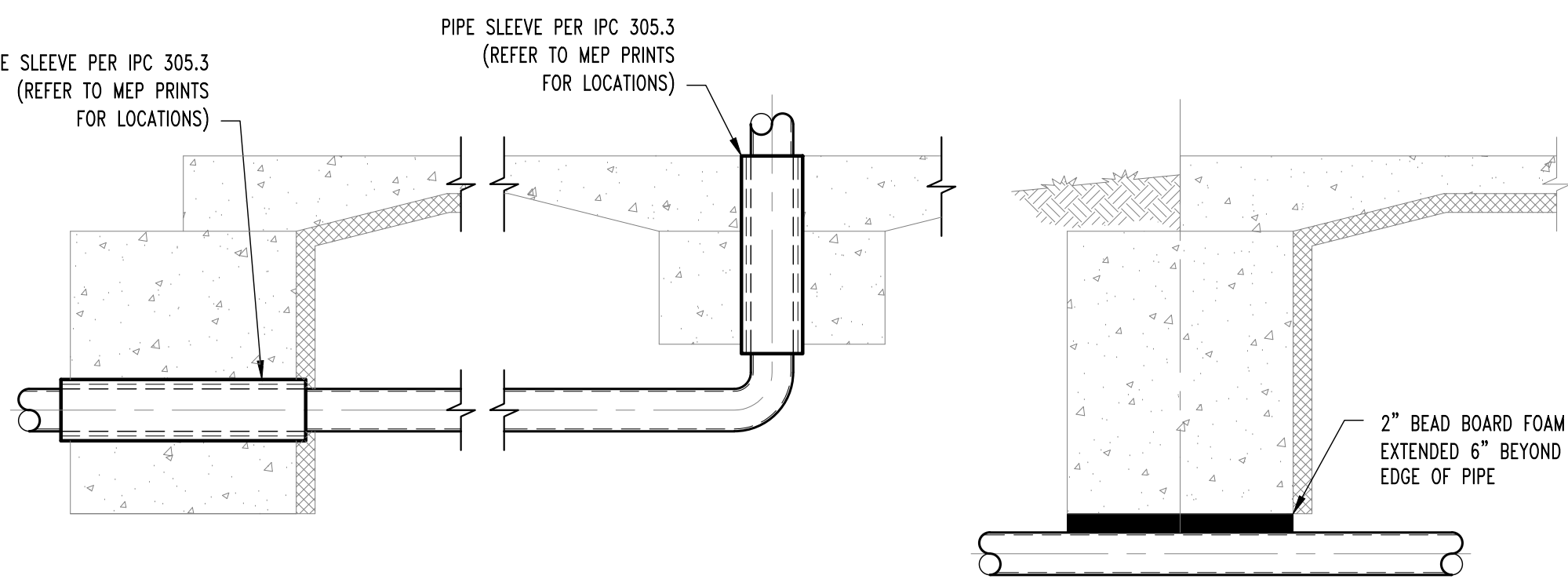
CONTRACTION JOINT



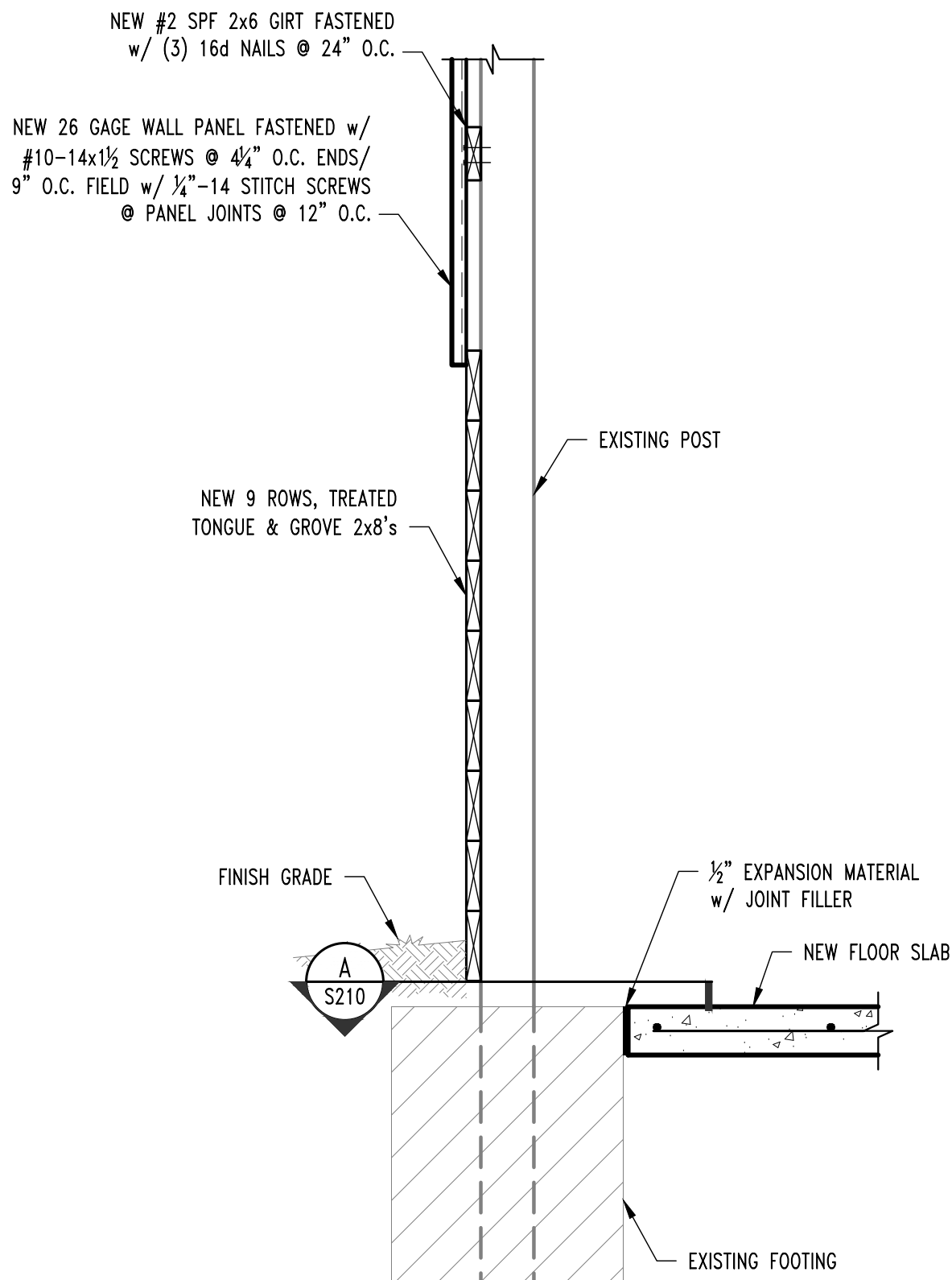
CONSTRUCTION JOINT



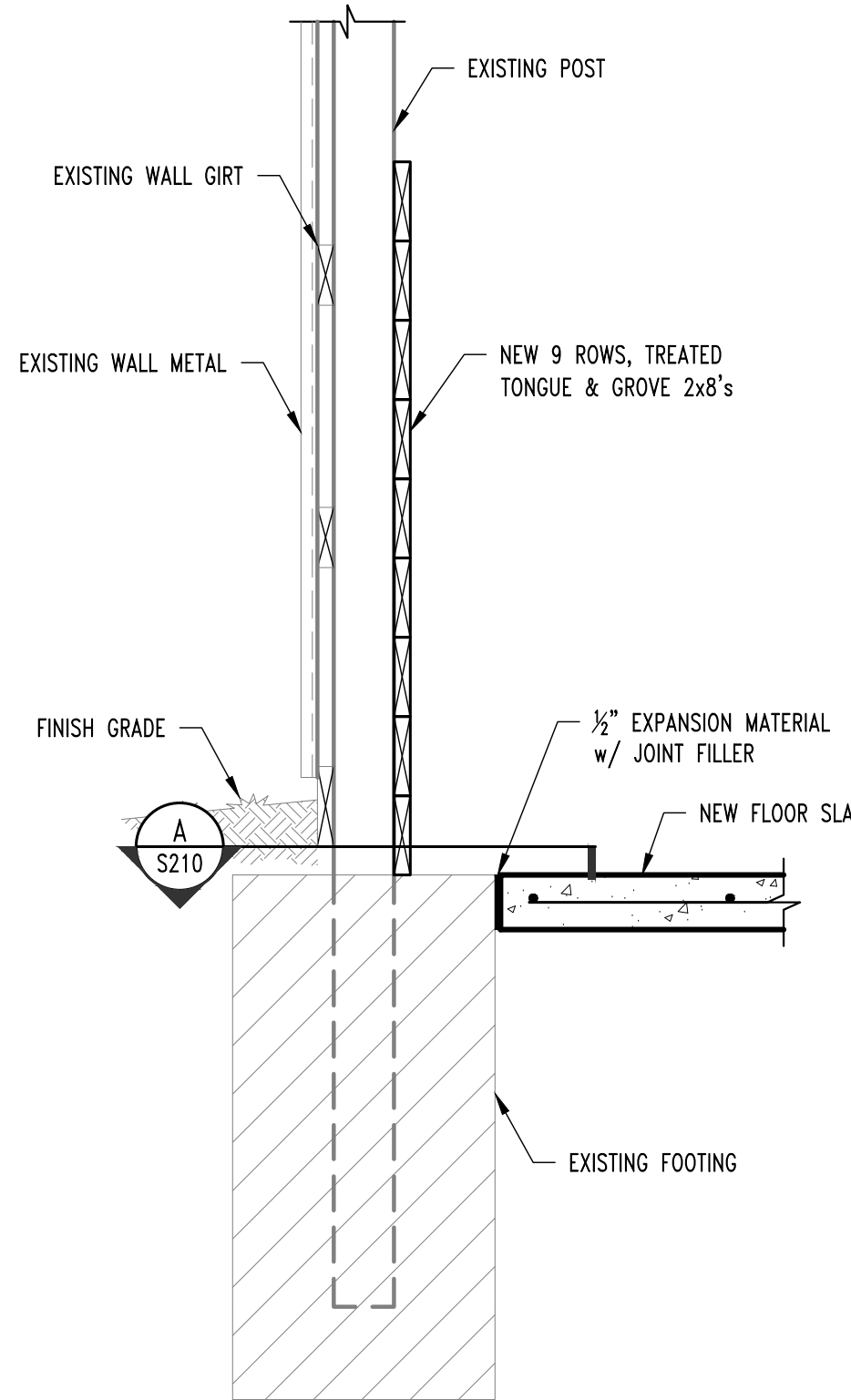
CONSTRUCTION JOINT



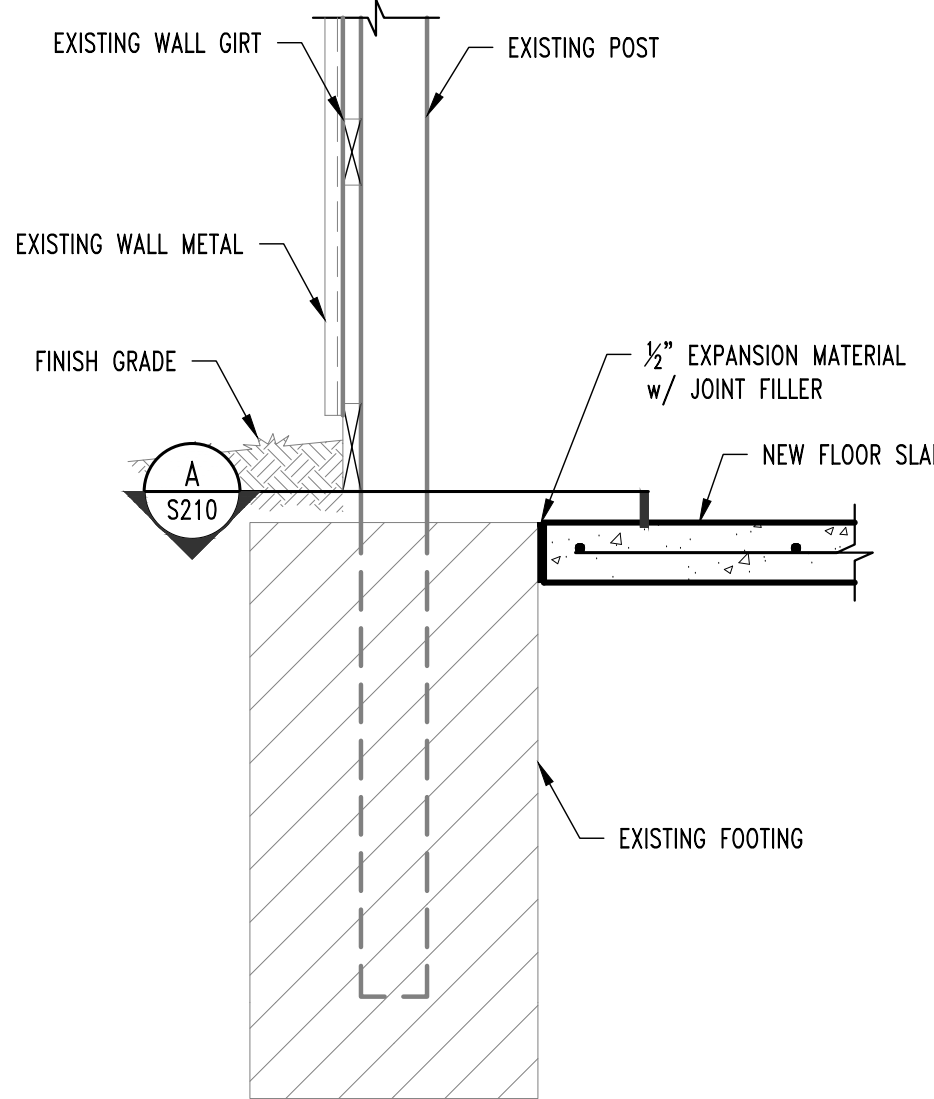
TYP. PLUMBING COORDINATION DETAILS



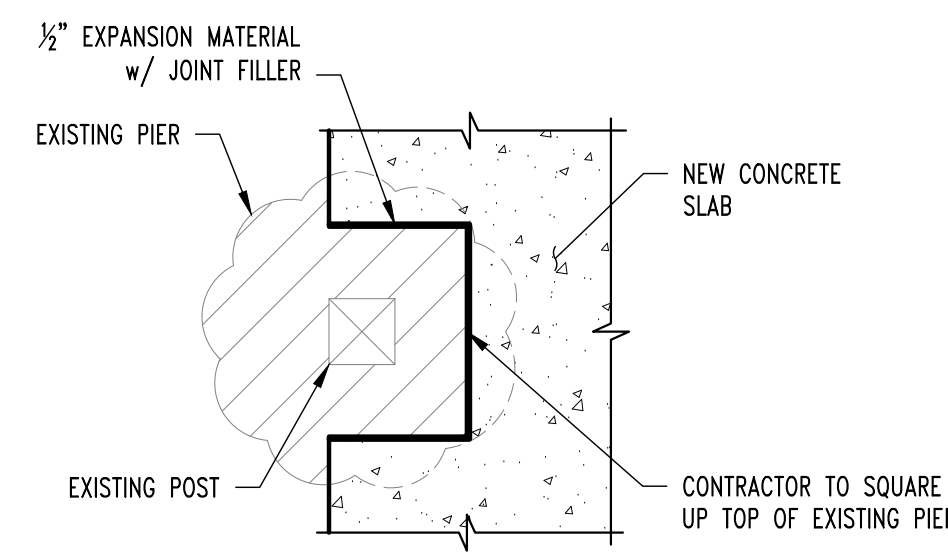
NEW SLAB SECTION @ POST
SCALE: 3/4" = 1'-0"



NEW SLAB SECTION @ POST
SCALE: 3/4" = 1'-0"

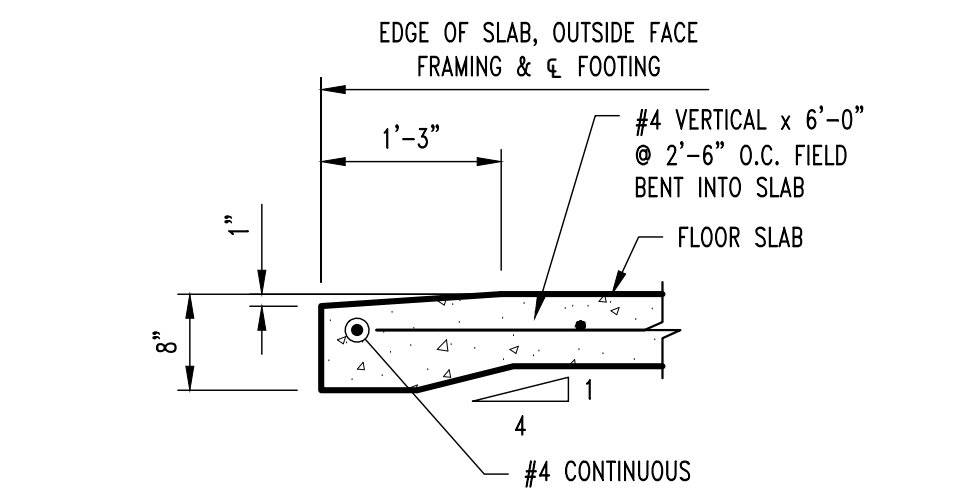


NEW SLAB SECTION @ POST
SCALE: 3/4" = 1'-0"

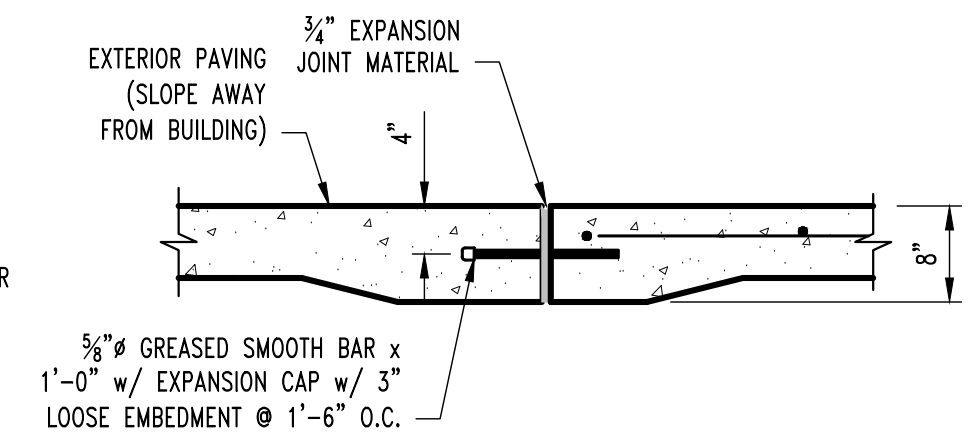


NEW SLAB @ POST PLAN VIEW
SCALE: 3/4" = 1'-0"

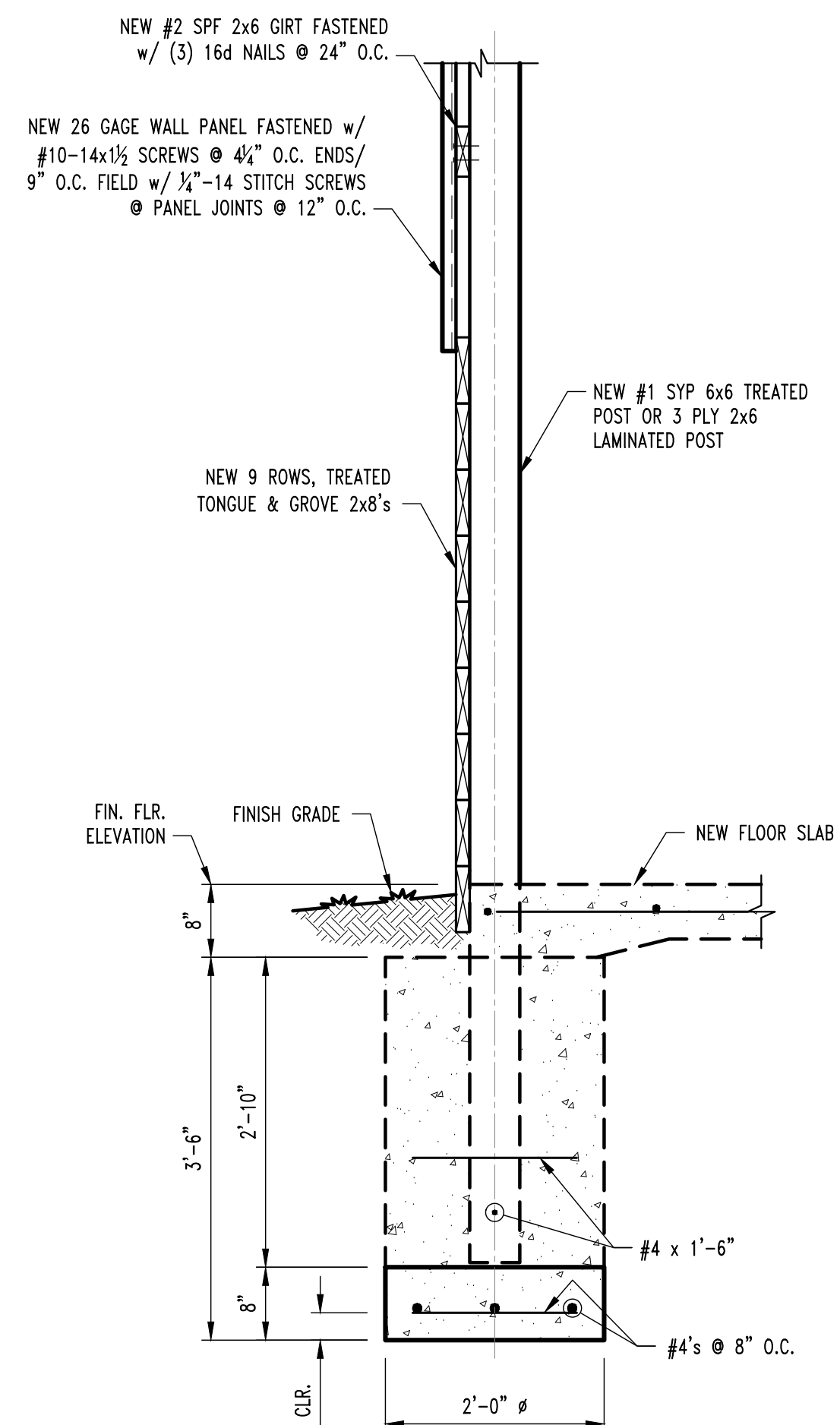
NOTE:
THIS DETAIL REQUIRED @ ALL EXISTING FOOTINGS



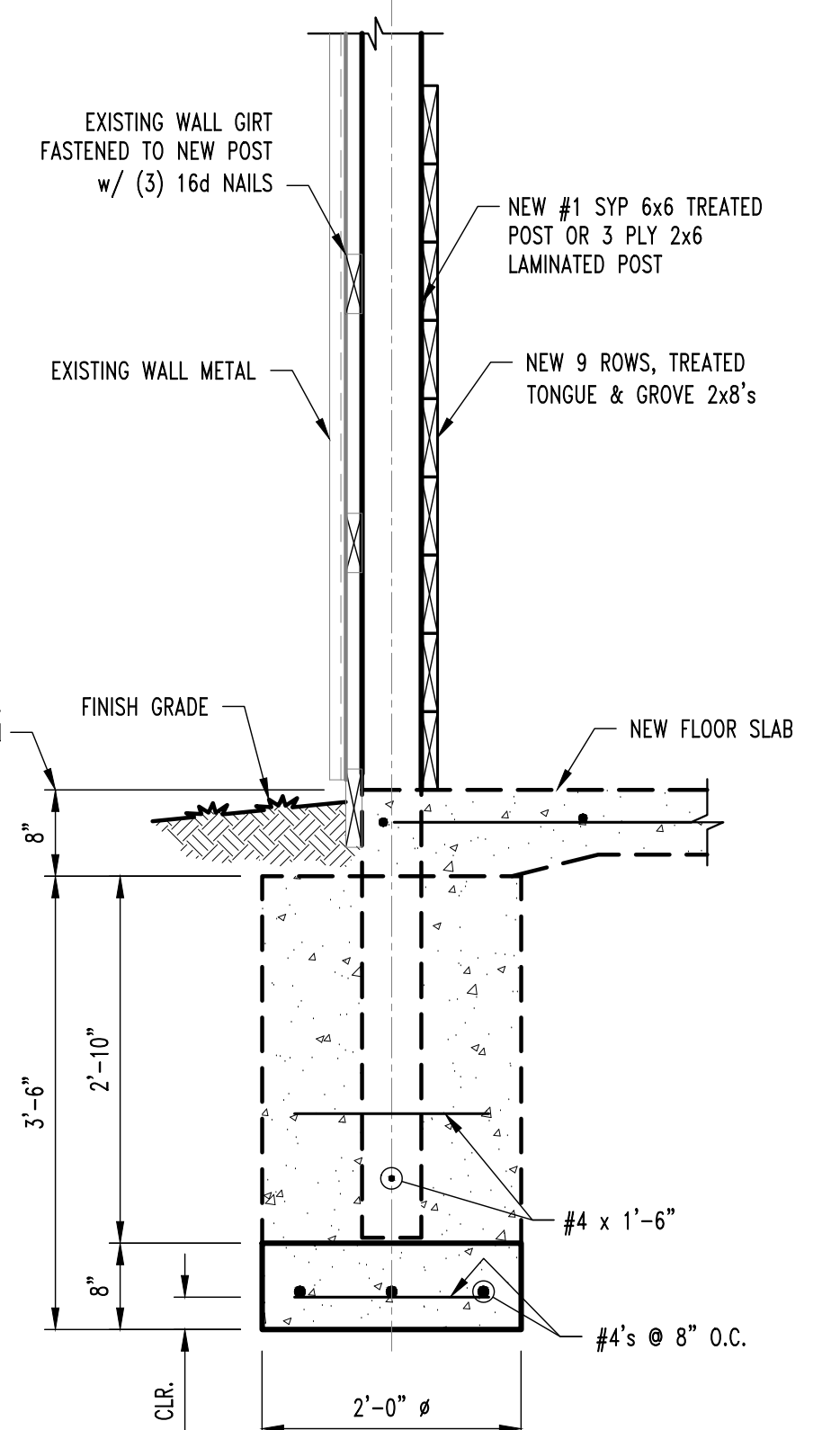
SLOPED THRESHOLD SECTION @ OVHD DOOR
SCALE: 3/4" = 1'-0"



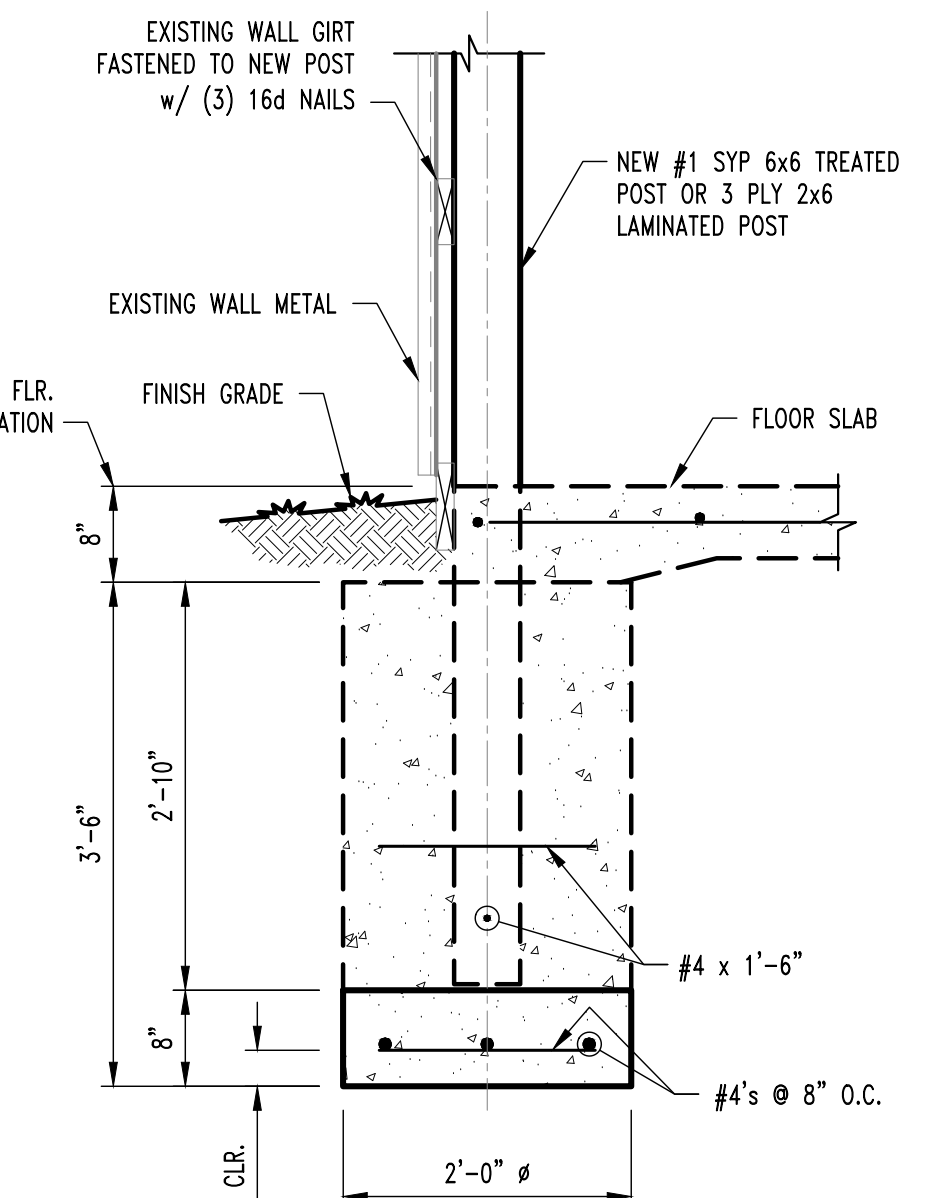
THRESHOLD SECTION @ WALK DOOR
SCALE: 3/4" = 1'-0"



NEW DRILLED PIER SECTION
SCALE: 3/4" = 1'-0"



NEW DRILLED PIER SECTION
SCALE: 3/4" = 1'-0"



NEW DRILLED PIER SECTION
SCALE: 3/4" = 1'-0"

REVISIONS:	
No.	Date
BID SET	03/01/2024



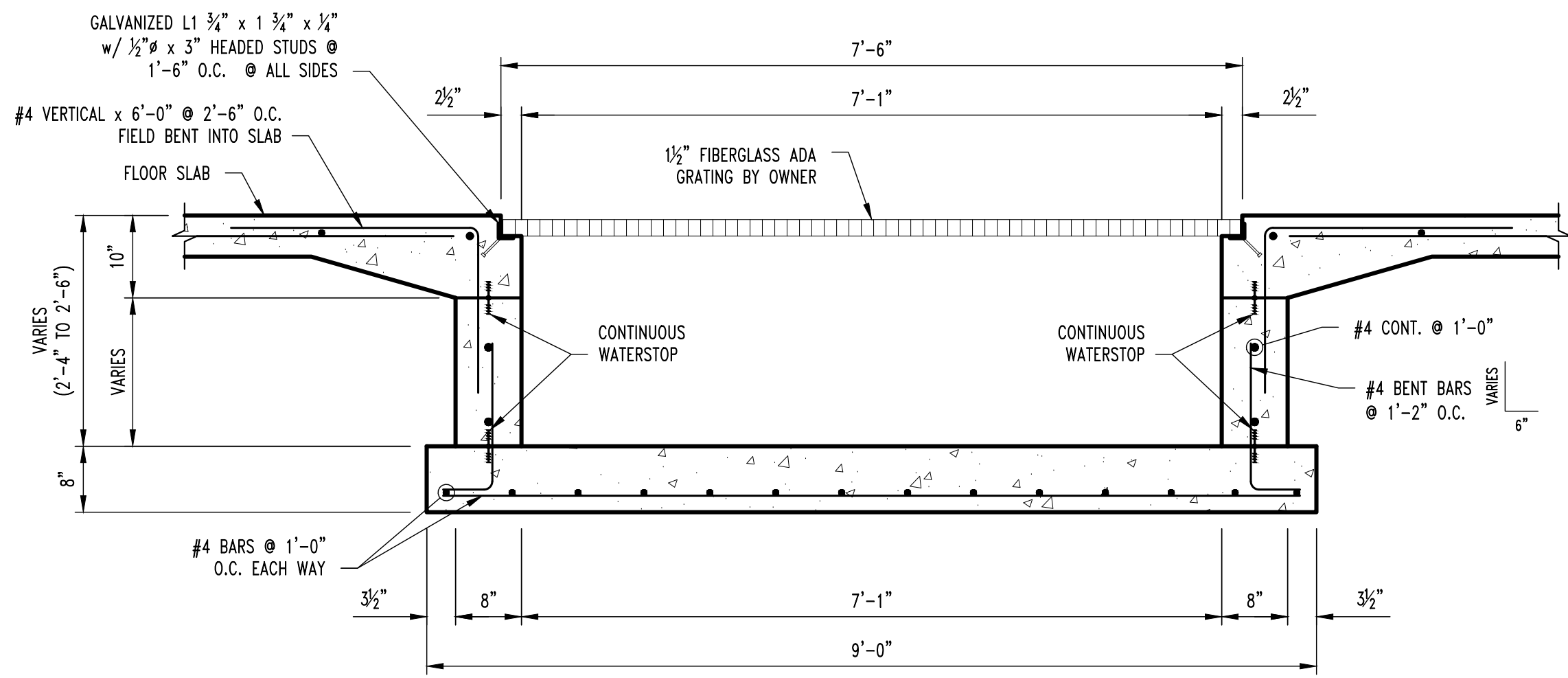
CROCKETT ENGINEERING CONSULTANTS
1000 W. N. Kings Blvd., Suite 1
Columbia, Missouri 65205
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www.crockettengineering.com
Missouri Certificate of Authority #200310301

CLIENT:
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CUM BUSINESS SERVICES
220 UNIVERSITY HALL
COLUMBIA, MO 65211

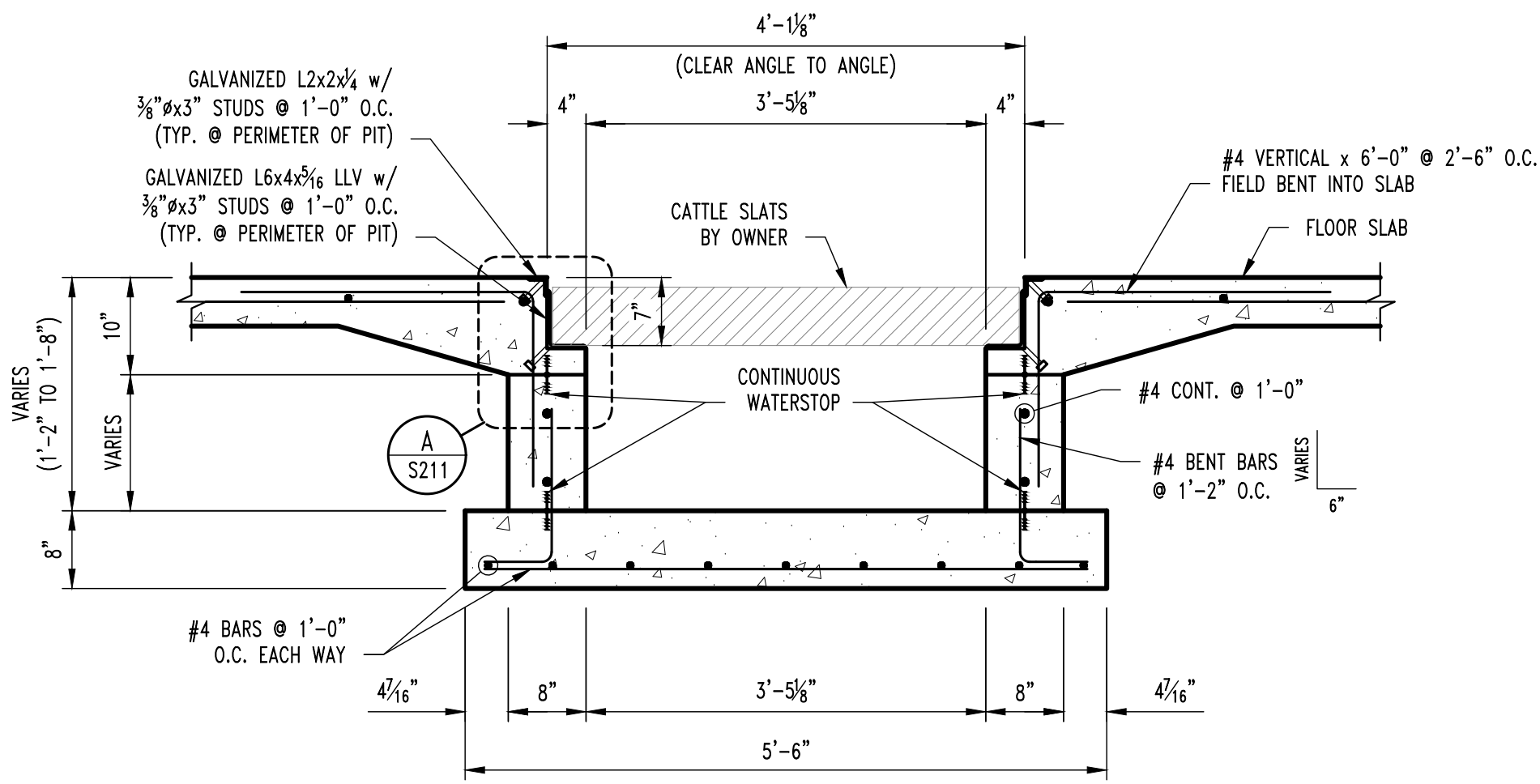
CP241191 - SOUTH FARM - CREED BARN REMODEL
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:
FOUNDATION DETAILS

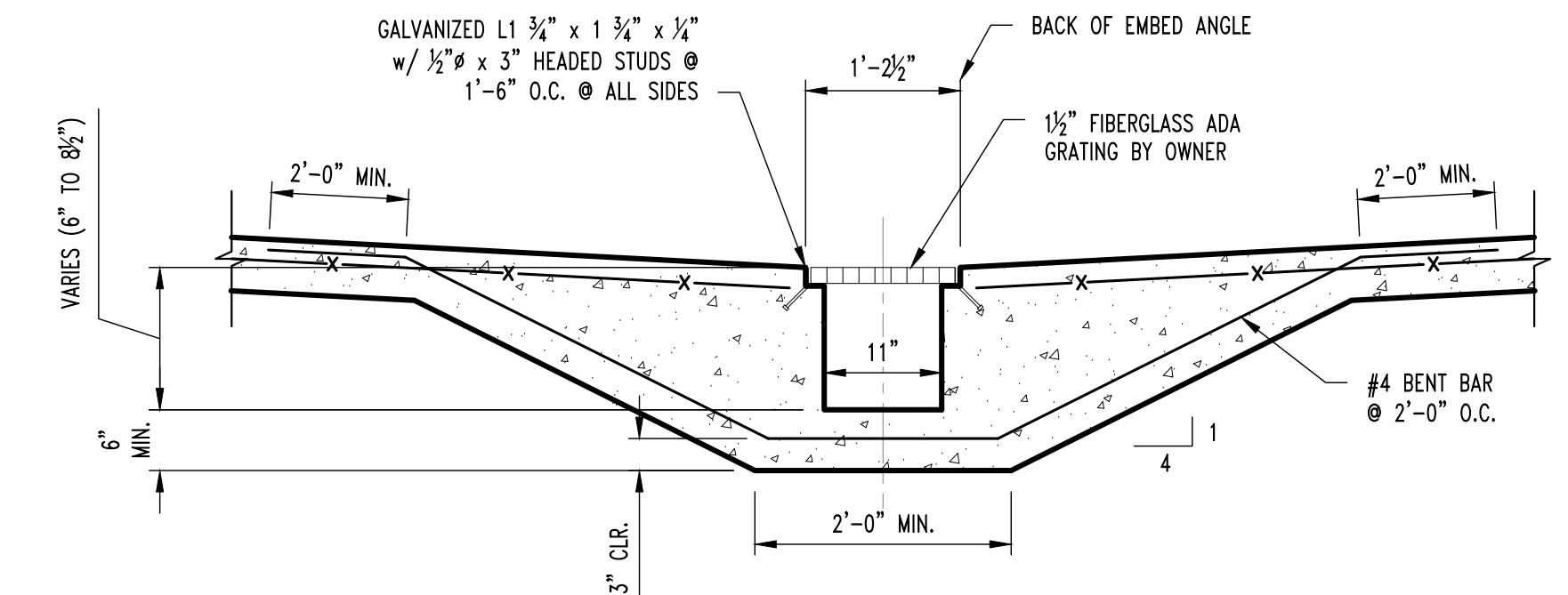
DESIGNED: GLL
DRAWN: SEH
PROJECT NO.: 230338
SHEET: S210



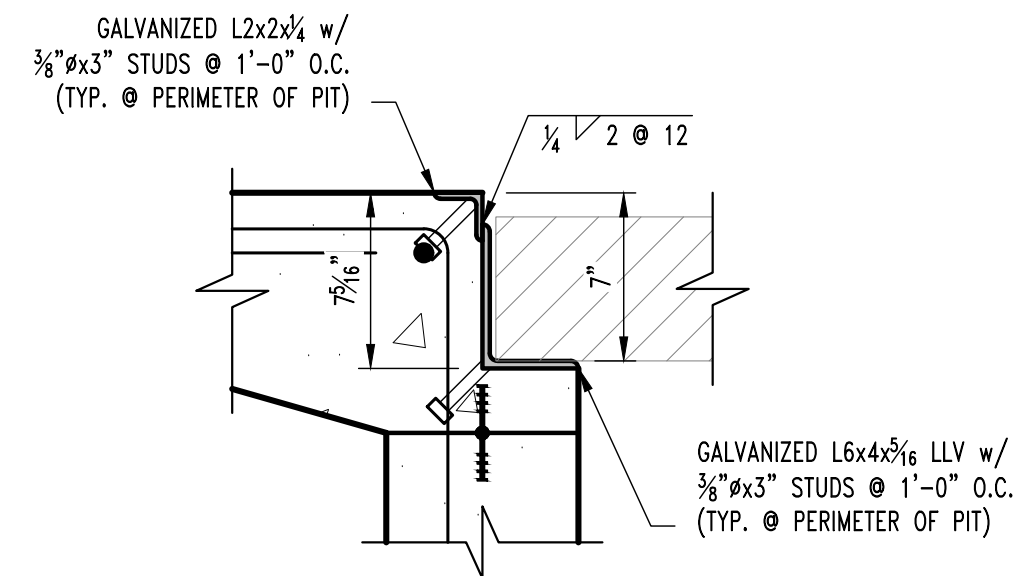
F15
S200
PIT SECTION
SCALE: 3/4" = 1'-0"



F16
S200
PIT SECTION
SCALE: 3/4" = 1'-0"



F17
S200
EXTERIOR PIT SECTION
SCALE: 3/4" = 1'-0"



A
S211
ENLARGED PIT PERIMETER SECTION
SCALE: 1 1/2" = 1'-0"

REVISIONS:	
No.	Date
BID SET	03/01/2024

THIS SHEET HAS BEEN SIGNED AND SEALED AND DATED ELECTRONICALLY.

GREGORY L. LINNEMAN - PE
NO LICENSE - 200501013
3/1/24

STRUCTURAL ENGINEER:
CROCKETT
ENGINEERING CONSULTANTS
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Missouri Certificate of Authority #200310301

CLIENT:
CURATORS OF THE UNIVERSITY OF MISSOURI
COLUMBUS BUSINESS SERVICES
220 UNIVERSITY HALL
COLUMBIA, MO 65211

**CP241191 - SOUTH FARM - CREED BARN
REMODEL**
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:
FOUNDATION DETAILS

DESIGNED: GLL
DRAWN: SEH
PROJECT NO.: 230338

SHEET:
S211

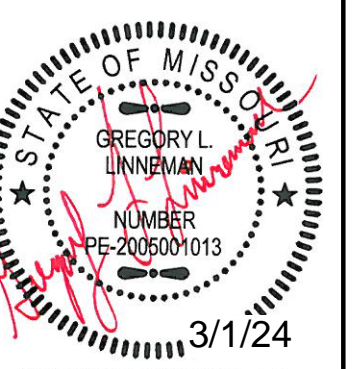
ROOF FRAMING NOTES

- 1 ADD 2x6x1'-6" BEARING BLOCK BELOW TRUSS FASTENED w/ (18) 16d NAILS.
- 2 ADD 1.75x22 MICROLAM 2.0E w/ (3) 3/4" THRU BOLTS & 2'-0" BEARING BLOCK BELOW FASTENED w/ (30) 16d NAILS.
- 3 ADD 2x6 KNEE BRACE @ 1:1 FASTENED w/ (6) 16d NAILS EACH END.
- 4 2-PLY 2x6 HEADER, SINGLE JACK & SINGLE KING.

REVISIONS:

No.	Date
BID SET	03/01/2024

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GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

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COLUMBIA, MO 65211

**CP241191 - SOUTH FARM - CREED BARN
REMODEL**
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:

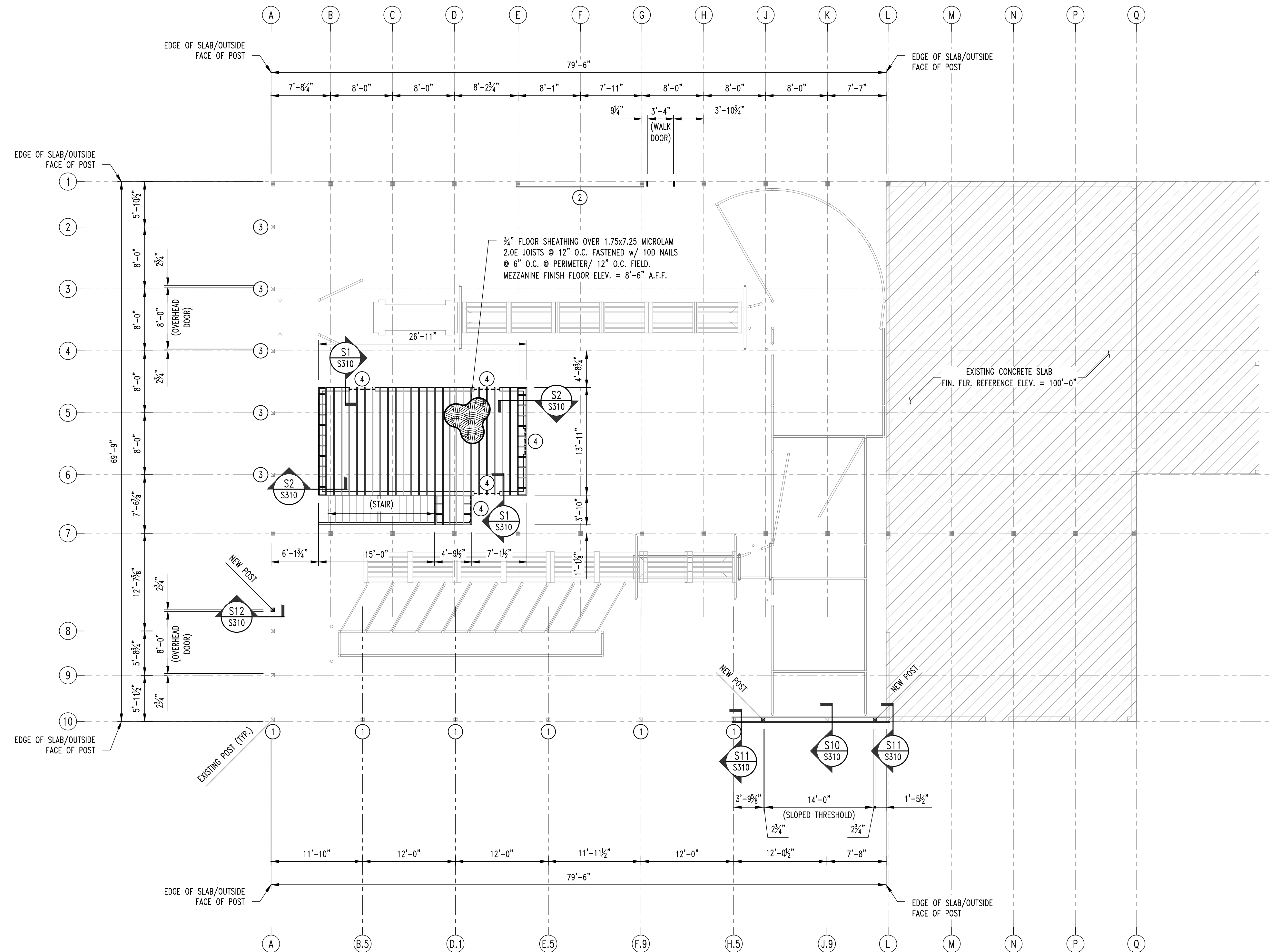
NEW MEZZANINE / EXISTING FRAMING PLAN

DESIGNED: GLL

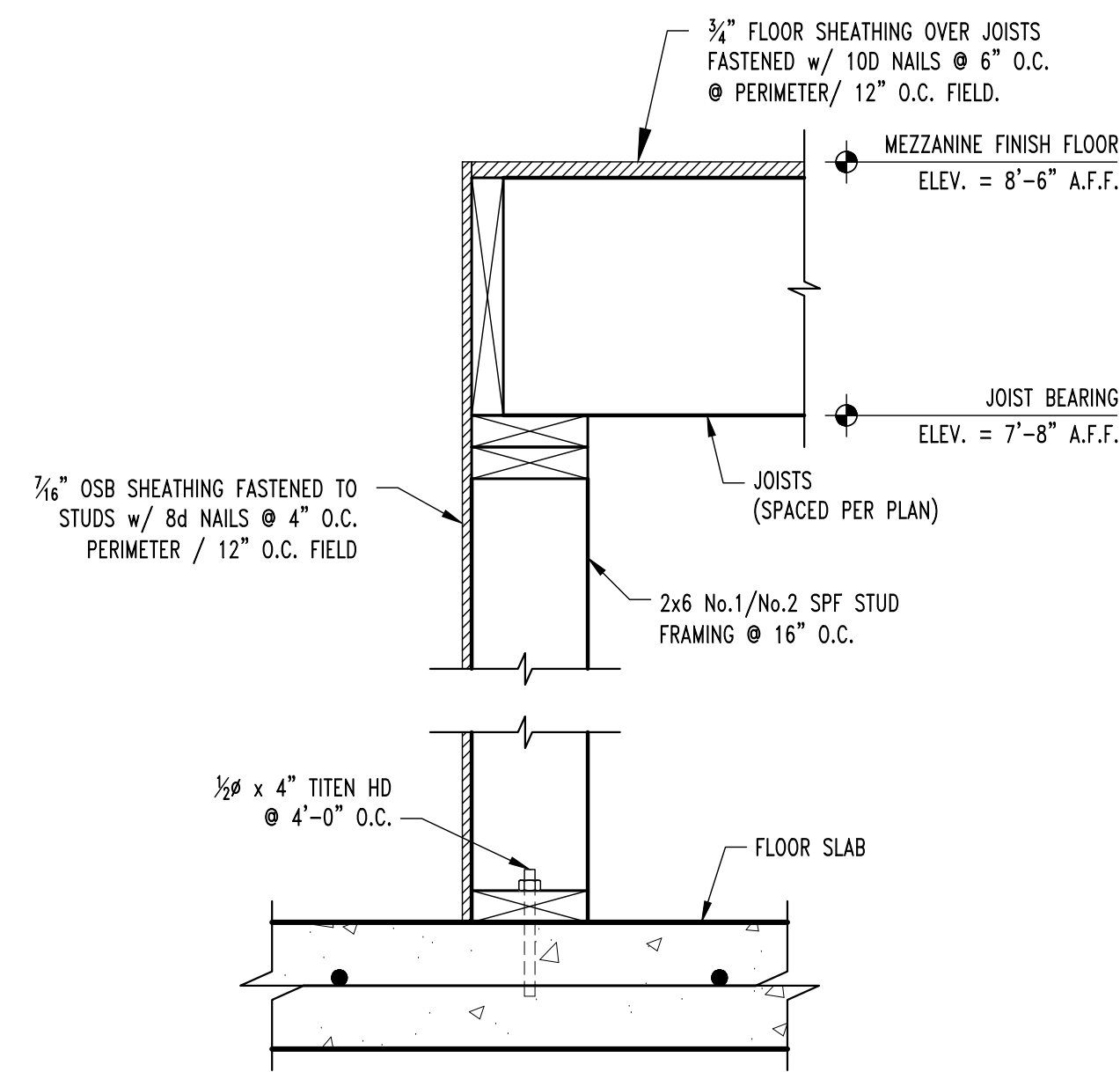
DRAWN: SEH

PROJECT NO.: 230338

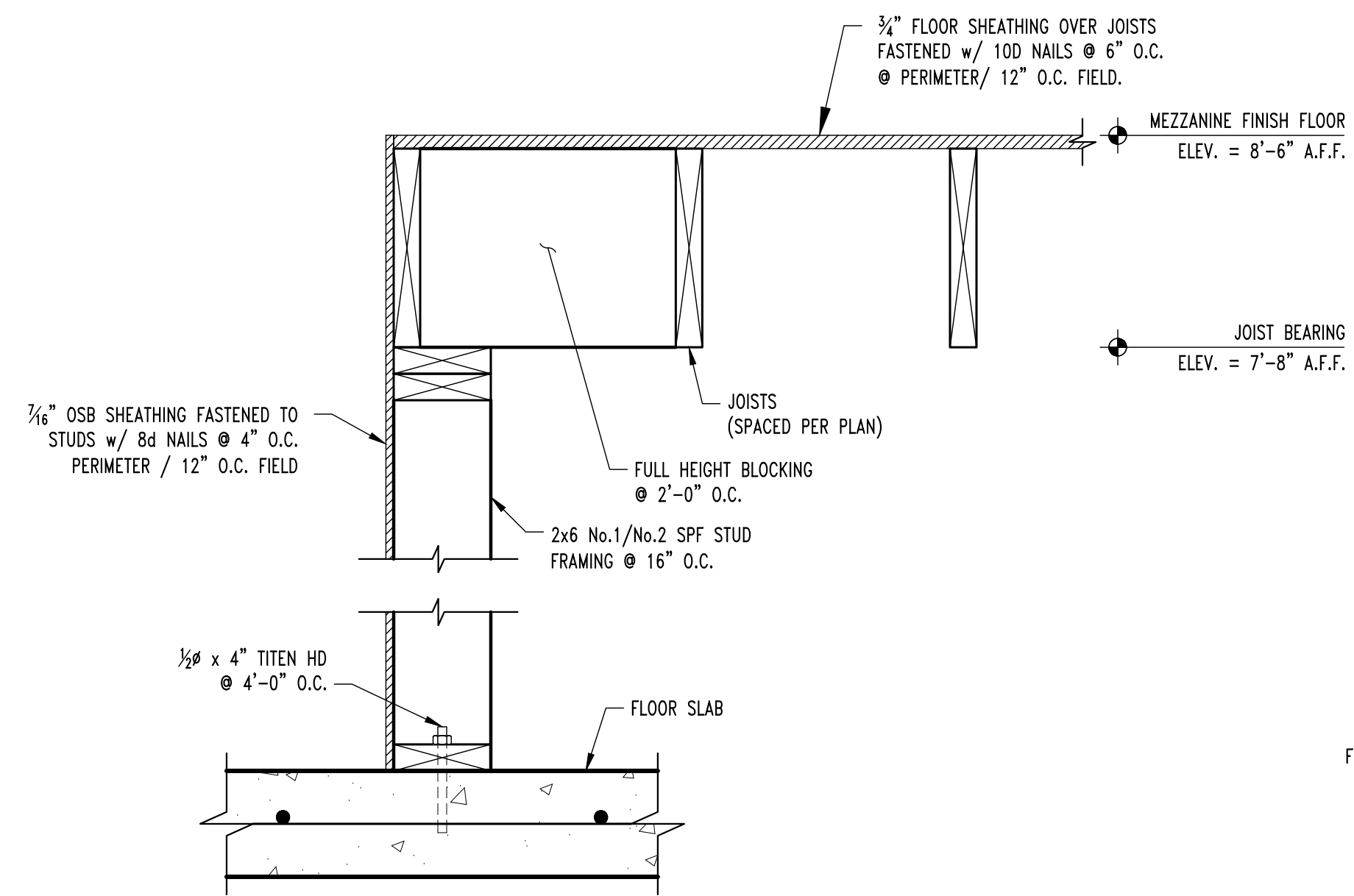
SHEET: S300



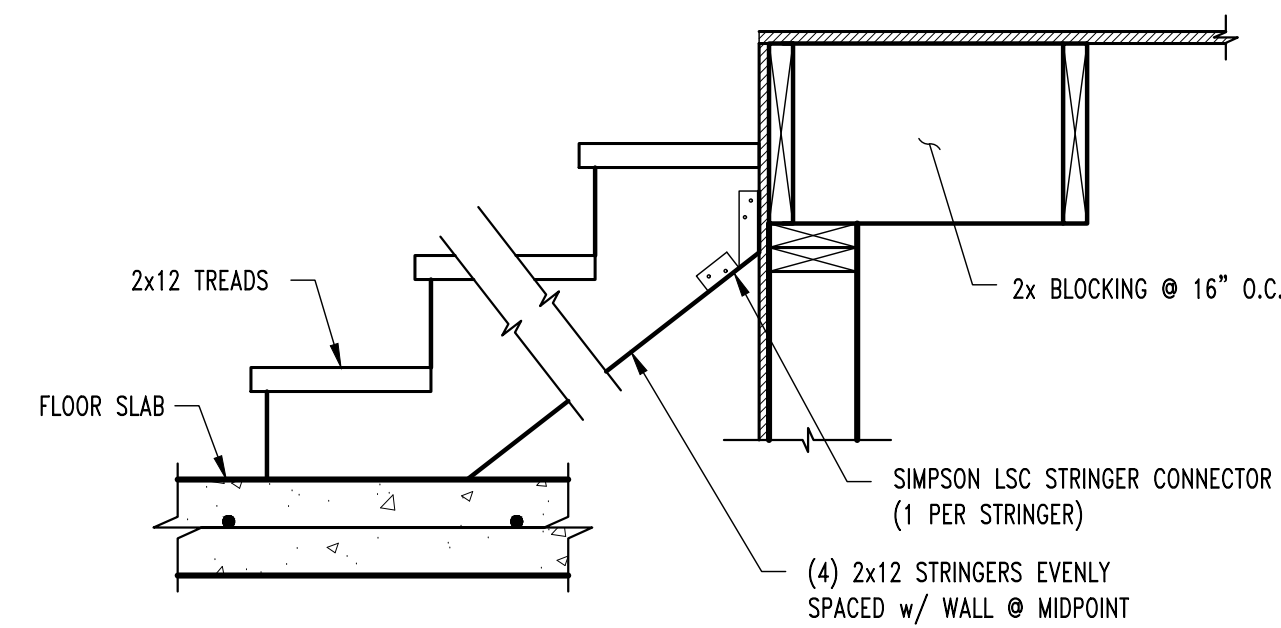
1
S200
NEW MEZZANINE / EXISTING FRAMING PLAN
SCALE: 1/8" = 1'-0"
PLAN NORTH



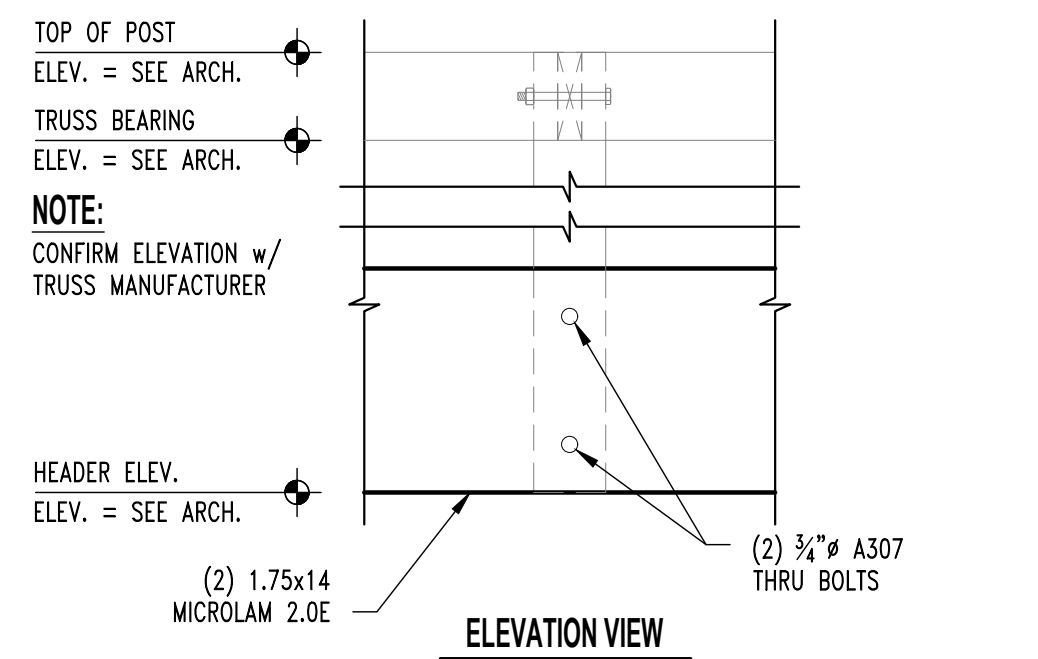
S1
S300 **MEZZANINE FRAMING SECTION**
SCALE: 1/2" = 1'-0"



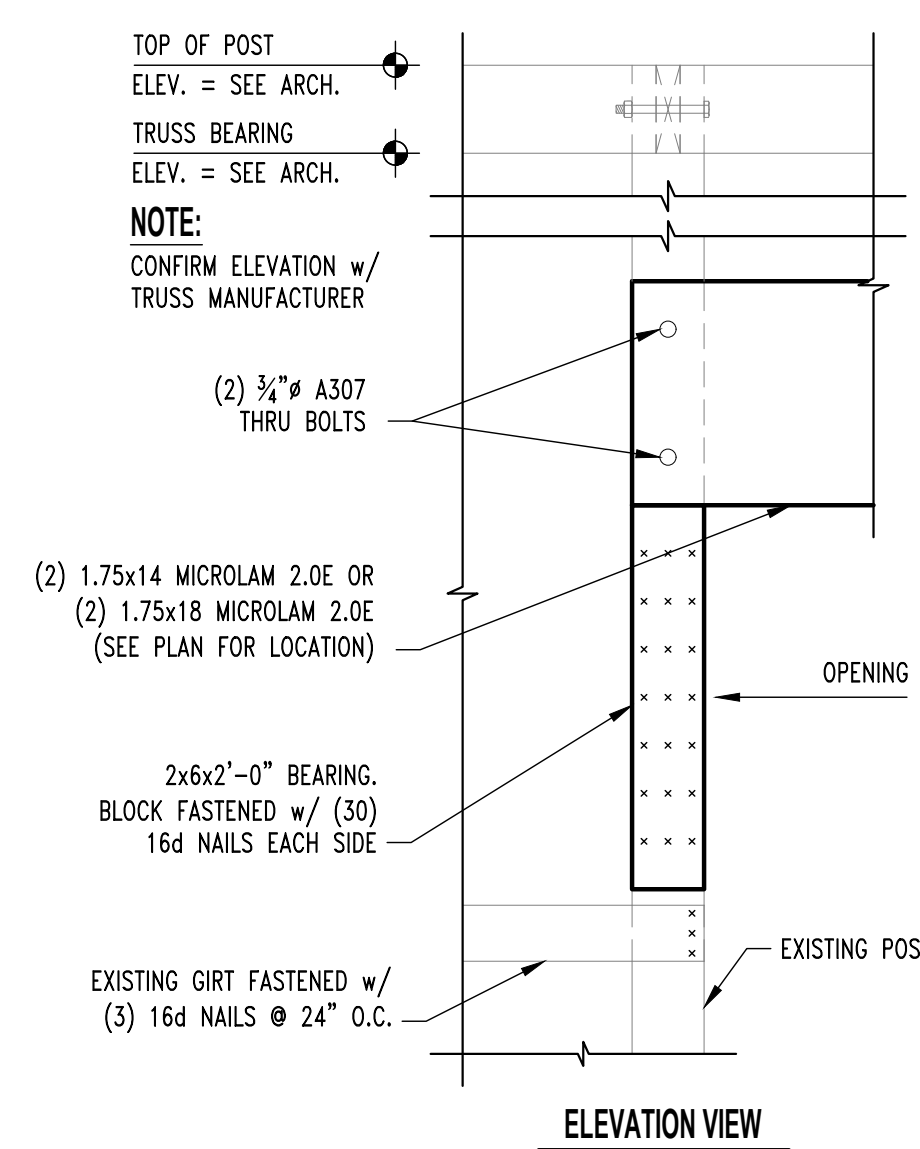
S2
S300 **MEZZANINE FRAMING SECTION**
SCALE: 1/2" = 1'-0"



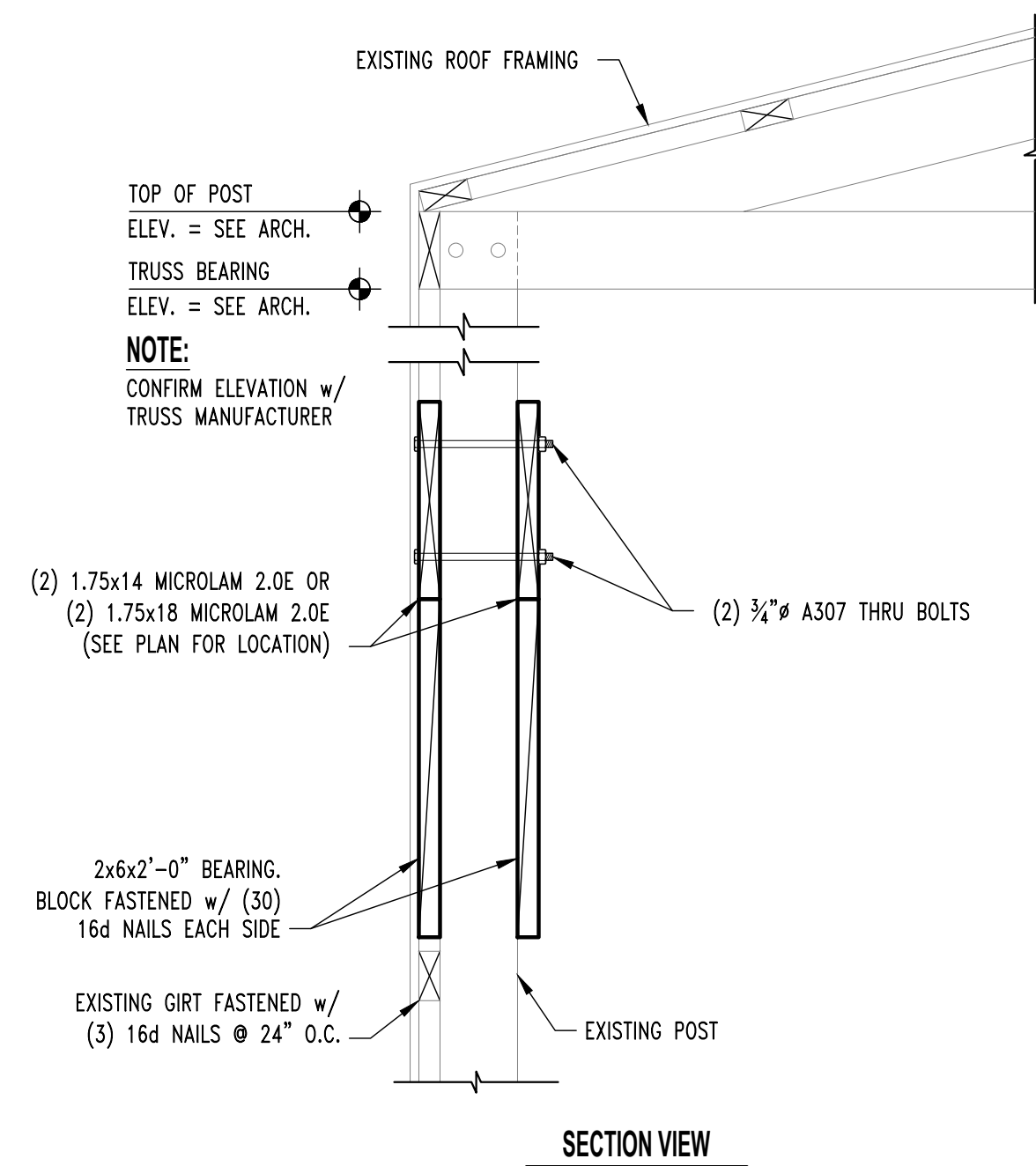
TYP. WOOD STAIR DETAIL



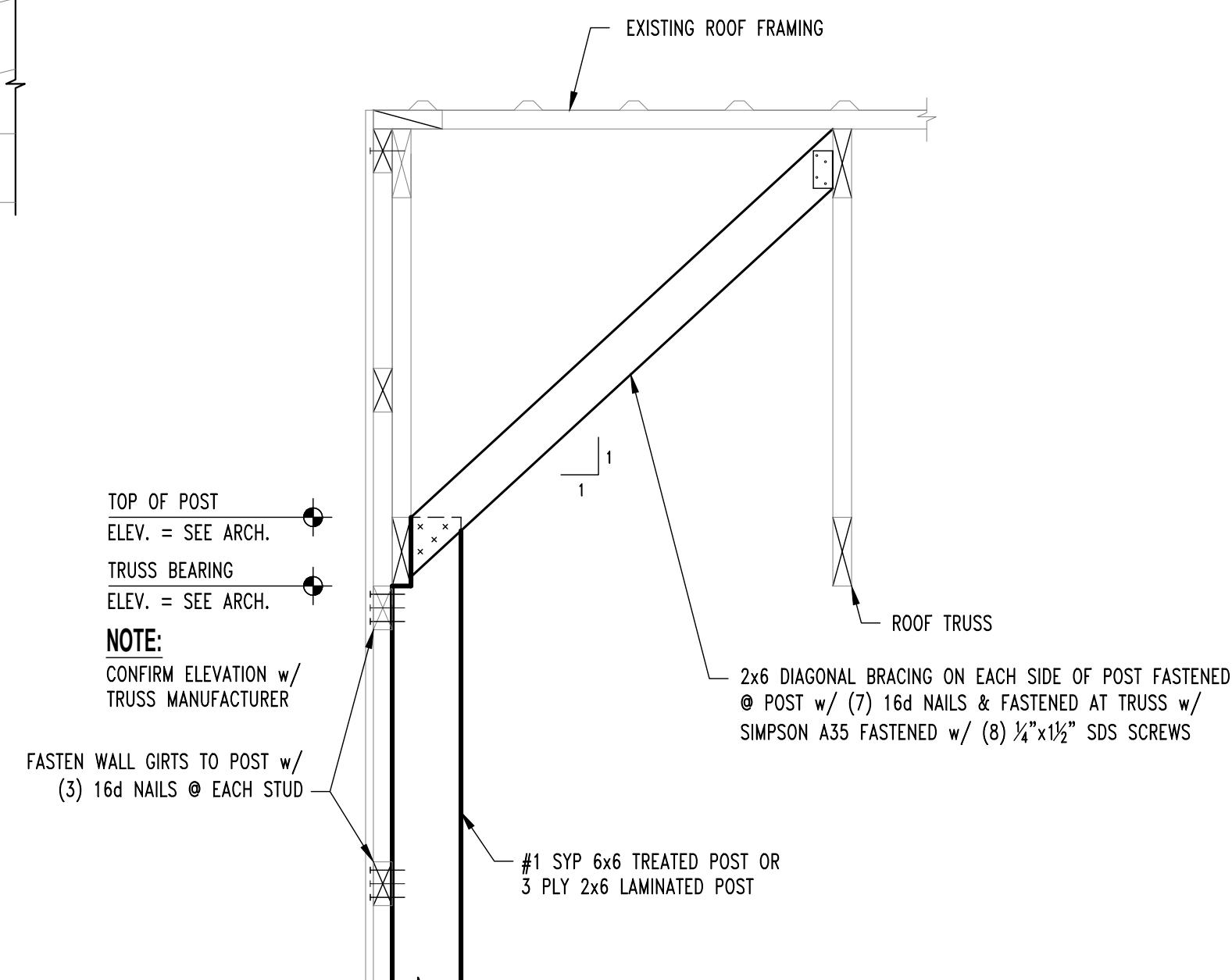
S10
S300 **ROOF FRAMING SECTION**
SCALE: 1" = 1'-0"



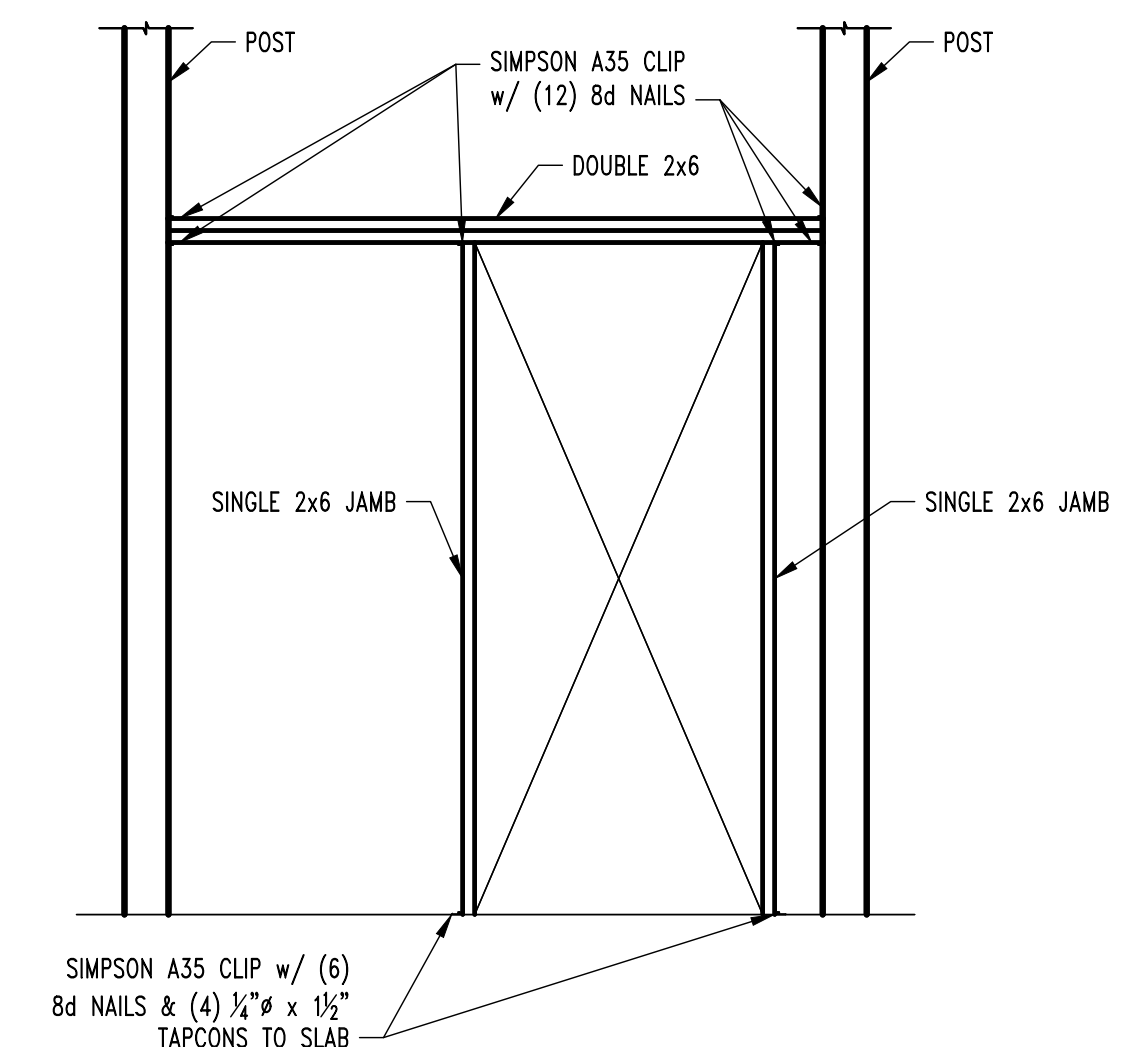
S11
S300 **ROOF FRAMING SECTION**
SCALE: 1" = 1'-0"



S11
S300 **ROOF FRAMING SECTION**
SCALE: 1" = 1'-0"

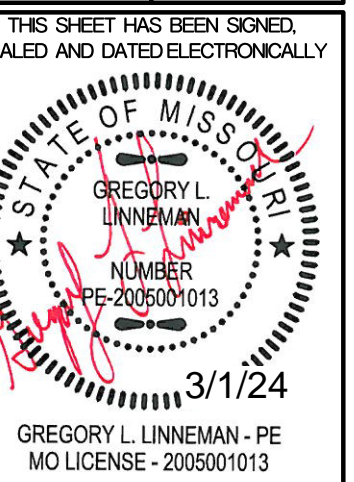


S12
S300 **ROOF FRAMING DETAIL**
SCALE: 1" = 1'-0"



TYP. SMALL OPENING FRAMING

REVISIONS:	
No.	Date
BID SET	03/01/2024



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#20030301

CLIENT:
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COLUMBIA, MO 65211

**CP241191 - SOUTH FARM - CREED BARN
REMODEL**
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:
FRAMING DETAILS

DESIGNED: GLL
DRAWN: SEH
PROJECT NO.: 230338
SHEET:
S310

HVAC PLAN SYMBOL LEGEND

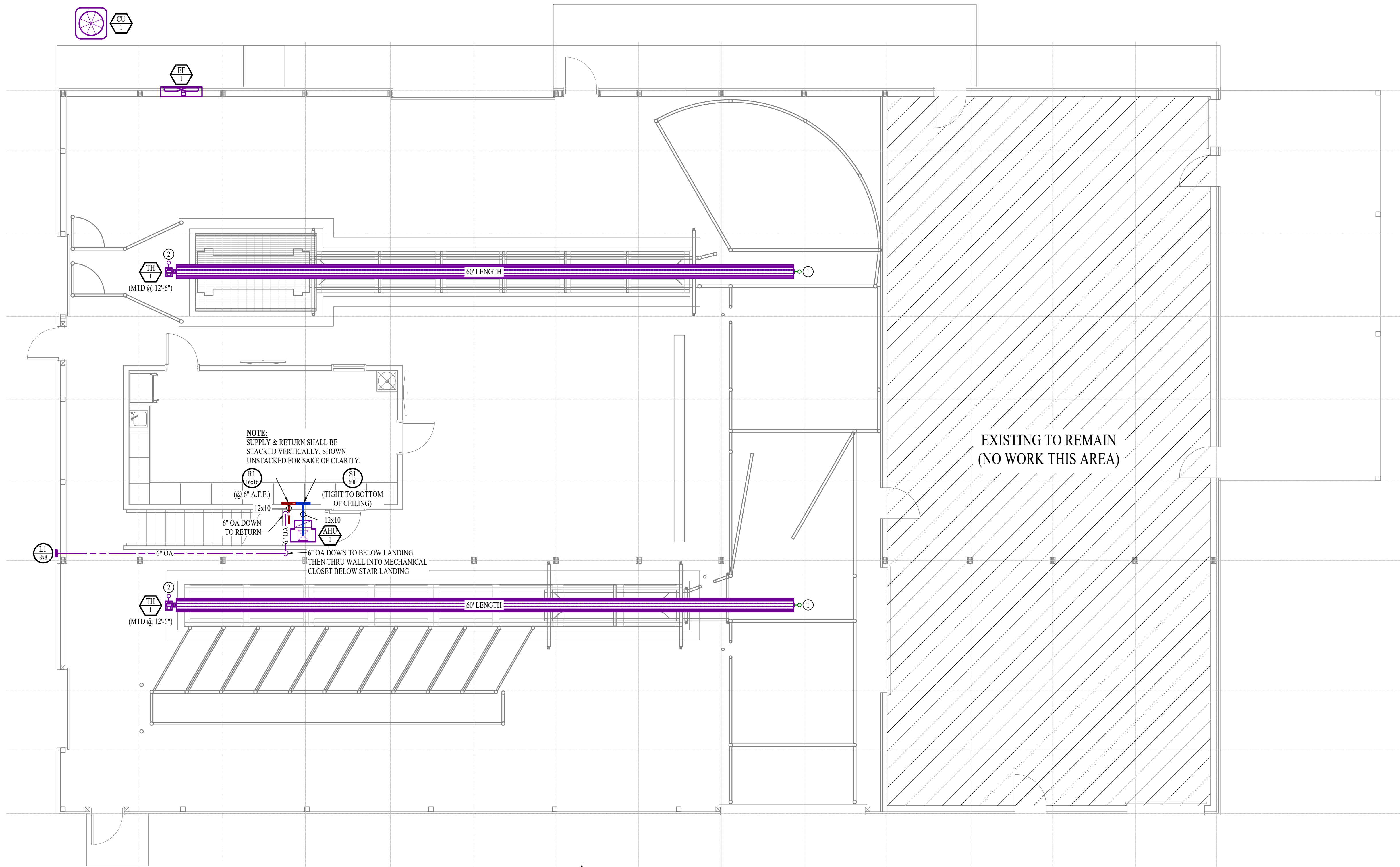
- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- EQUIPMENT REFERENCE NUMBER
- DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
- EXHAUST DUCTWORK
- OUTSIDE AIR DUCTWORK
- FLEX DUCT
- VENT / COMBUSTION AIR
- CONDENSATION LINE
- REFRIGERANT LINE
- TIE INTO EXISTING
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
- RETURN DIFFUSER
- BALANCE DAMPER
- MOTORIZED DAMPER
- CEILING RADIATION DAMPER
- FIRE RATED DAMPER
- SMOKE DAMPER
- THERMOSTAT

HVAC PLAN GENERAL NOTES:

1. SEE SHEET M501 FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.

HVAC PLAN KEY NOTES:

- ① 4" FLUE UP THRU ROOF.
- ② 4" COMBUSTION AIR INTAKE UP THRU ROOF.



HVAC PLAN
 SCALE: 3/16" = 1'-0"

James Watson, P.E. March 1, 2024
 PE-2015017071
 MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
 2400 Bluff Creek Drive, Suite 101
 Columbia, Missouri 65201
 573 - 234 - 4492 phone
 www.j-squaredeng.com

J2 PROJECT No:	J21143
J2 DESIGN:	JAP

ISSUE TITLE	DATE
DD SET	01 - 19 - 2024
100% CD	02 - 09 - 2024
BID SET	03 - 01 - 2024

Mechanical - Electrical - Plumbing Design Drawings for
CP241191 South Farm Creed Barn Remodel
 5151 Old Millers Road
 Columbia, Boone County, MO 65201

AHJ APPROVAL STAMP

 SHEET TITLE
HVAC PLAN

 SHEET NUMBER
M101

HVAC SPECIFICATIONS

1. EQUIPMENT
 - 1.1. ALL EQUIPMENT MUST PROVIDE THE PERFORMANCE SPECIFIED ON PLANS. WHERE SPECIFIC MAKES & MODELS ARE INDICATED ON PLAN, CONTRACTOR TO PROVIDE MODEL INDICATED OR APPROVED EQUAL.
 - 1.2. CONTRACTOR TO SUPPLY SUBMITTALS FOR ALL EQUIPMENT FOR REVIEW BY ARCHITECT & ENGINEER PRIOR TO PURCHASE.
 - 1.3. REFRIGERANT PIPING TO BE ACR COPPER.
2. DUCTWORK
 - 2.1. DUCTWORK TO BE GALVANIZED STEEL, SEAL CLASS B, CONSTRUCTED PER SMACNA STANDARDS.
 - 2.2. 26 GA. MINIMUM UP TO 16" DUCT, 24 GA. UP TO 20", 22 GA. UP TO 24", 20 GA. UP TO 28", AND 18 GA. UP TO 36".
 - 2.3. DOUBLE WALL TURNING VANES TO BE PROVIDED & INSTALLED AT ALL 90° BENDS & TEES.
 - 2.4. DUCT DIMENSIONS LISTED ARE TO INTERIOR OF DUCT.
 - 2.5. BALANCE DAMPERS MUST BE PROVIDED TO ALLOW ADJUSTMENTS AT EACH AIR TERMINAL.
 - 2.5.1. WHERE BRANCH TAKEOFF IS ACCESSIBLE (ABOVE LAY-IN CEILING OR EXPOSED DUCT), THE BALANCE DAMPER IS TO BE INSTALLED AT TAKEOFF.
 - 2.5.2. WHERE BRANCH TAKEOFF IS INACCESSIBLE (IN ATTIC OR SOFFIT), THE BALANCE DAMPER IS TO BE LOCATED SO IT IS ACCESSIBLE FROM FACE OF AIR DEVICE.
 - 2.6. HVAC CONTRACTOR RESPONSIBLE FOR ALL DUCTWORK TRANSITIONS & FITTINGS AS REQUIRED FOR FINAL CONNECTIONS TO HVAC EQUIPMENT.
3. INSULATION
 - 3.1. DUCTWORK
 - 3.1.1. EXTERNAL DUCT WRAP TO INCLUDE VAPOR BARRIER EQUAL TO JOHNS MANVILLE MICROLITE FSK TYPE 100 (2" THICK).
4. WORKMANSHIP
 - 4.1. COORDINATE WITH OTHER TRADES SO THAT HVAC EQUIPMENT & DUCTWORK DOES NOT BLOCK REQUIRED ACCESS OR CLEARANCE TO OTHER EQUIPMENT.
 - 4.2. ALL HVAC EQUIPMENT IS TO BE INSTALLED PER MANUFACTURER'S PUBLISHED RECOMMENDATIONS.
 - 4.2.1. ALL EQUIPMENT TO BE INSTALLED LEVEL & PLUMB.

HEATER SCHEDULE											
TAG	EQUIPMENT TYPE	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	HEATING CAPACITY		PHYSICAL					NOTES
				LOW (KBTU)	HIGH (KBTU)	VOLT/PH	MCA	OCF	DIM	WEIGHT	
TH-1	RADIANT TUBE	REZNOR	VPT-P-80-A-S60	60	80	120/1	7.5	20-1	60	112	1

NOTES:
1. WITH TWO-STAGE THERMOSTAT, COMBUSTION AIR INLET KIT, THRU-ROOF VENT KIT, & PROPANE CONVERSION KIT

AHU & AC SCHEDULE													
TAG	EQUIPMENT DESCRIPTION	SIZE (TONS)	ORIENTATION	TOTAL AIRFLOW (CFM)	OA AIRFLOW MAX/MIN (CFM)	HEATING ELECTRIC (KW)	COOLING (IA: 80 DB/67 WB, OA: 95 DB)			ELECTRICAL			NOTES
							SENSIBLE (KBTU)	TOTAL (KBTU)	MIN EFF. (SEER)	VOLTS/PH	MCA	OCF	
AHU-1	AIR HANDLER	1.5	VERTICAL	600	-	3	-	-	-	240/1	24	25-2	1,2
CU-1	CONDENSING UNIT	1.5	-	-	-	-	13.2	17.8	13	240/1	12	20-2	5

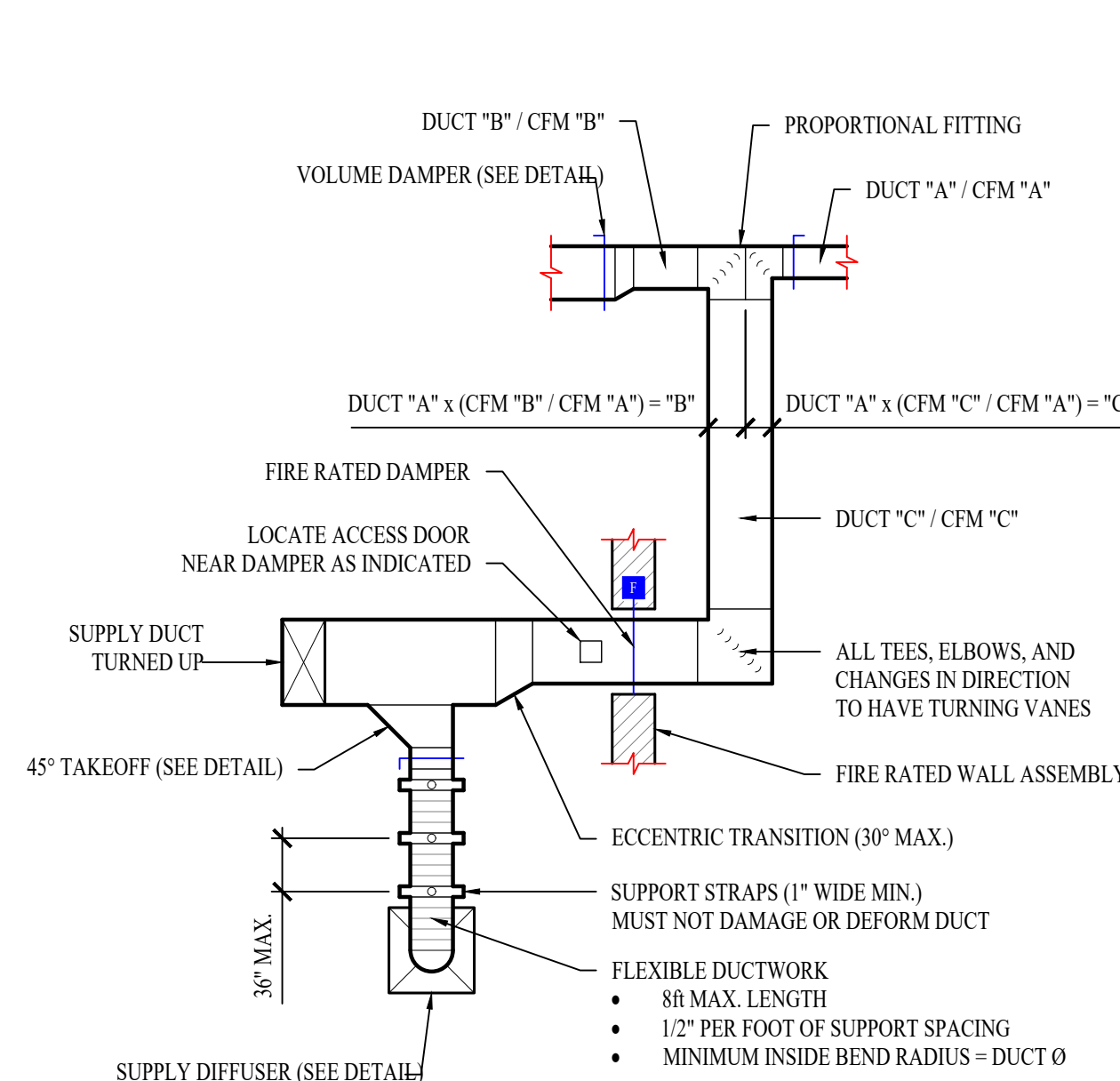
NOTES:
1. PROVIDE AND INSTALL 7 DAY PROGRAMABLE HONEYWELL THERMOSTAT. COORDINATE EXACT MOUNTING LOCATION WITH OWNER.
2. INCLUDE CORROSION RESISTANT DRAIN PAN WITH OVERFLOW SWITCH WIRED TO SHUT DOWN UNIT.
3. WITH CO2 SENSOR AND MOTORIZED DAMPER
4. WITH LOW LEAKAGE MOTORIZED OUTSIDE AIR DAMPER, DAMPER TO OPEN DURING OCCUPIED HOURS AND CLOSE DURING UNOCCUPIED HOURS THRU THERMOSTAT SCHEDULE.
5. WITH FACTORY HAIL GUARD
6. LOW AMBIENT PACKAGE FOR OPERATION TO 0° F.

EXHAUST FAN SCHEDULE												
TAG	EQUIPMENT TYPE	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	FLOW		ELECTRICAL			PHYSICAL		NOTES	
				CFM	S.P.	VOLT/PH	MCA	OCF	DIM	WEIGHT		
EF-1	SIDEWALL FAN	S & P	LCE36	18400	.375"	240/1	17.5	35-2	44 x 44	215	1,2,3,4	

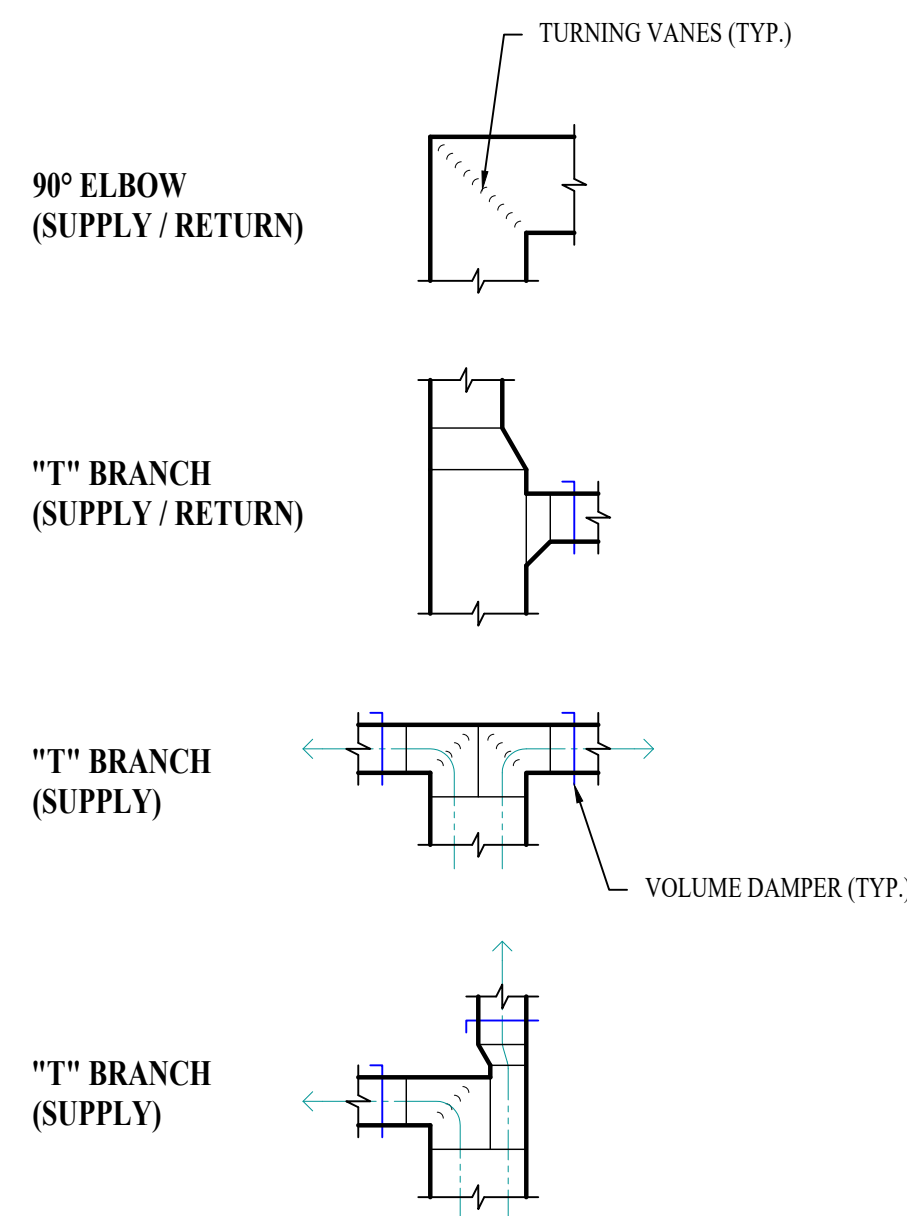
NOTES:
1. WITH GRAVITY DAMPER, RAIN HOOD, WALL HOUSING, & MOTOR GUARD
2. FAN TO BE MOUNTED FLUSH TO EXTERIOR
3. WITH 5 HP MOTOR
4. LEVEL 2 CONSTRUCTION

AIR DEVICE SCHEDULE						
TAG	SERVICE	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	SIZE	COLOR / FINISH	NOTES
S1	SUPPLY	PRICE	520	16x14	WHITE	SEE PLANS FOR AIRFLOW
R1	RETURN	PRICE	530	AS INDICATED	WHITE	
L1	OA / EX	PRICE	EPD-445	AS INDICATED	SEE NOTES	PAINT TO MATCH BUILDING

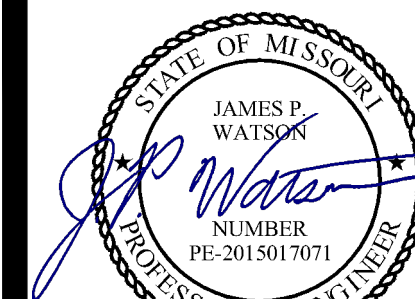
NOTES:
1. VERIFY AIR DEVICE FINISHES WITH OWNER/ARCHITECT PRIOR TO INSTALLATION



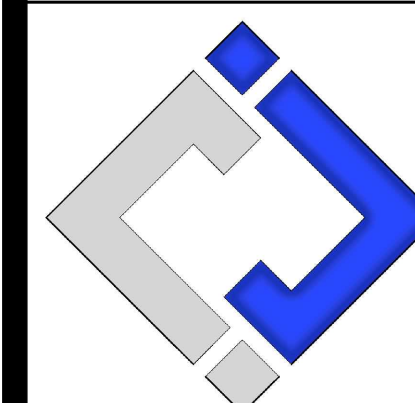
TYPICAL DUCTWORK DETAIL



TYPICAL DUCTWORK FITTINGS DETAIL



James Watson, P.E. March 1, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED ENGINEERING

2400 Bluff Creek Drive, Suite 101
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573 - 234 - 4492 phone
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J2 PROJECT No: J21143
J2 DESIGN: JAP

ISSUE TITLE	DATE
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Mechanical - Electrical - Plumbing Design Drawings for
CP241191 South Farm Creed Barn Remodel
 5151 Old Millers Road
 Columbia, Boone County, MO 65201

AHU APPROVAL STAMP

SHEET TITLE

HVAC DETAILS & SCHEDULES

SHEET NUMBER

M501

POWER PLAN SYMBOL LEGEND

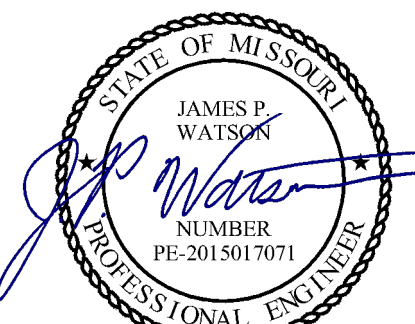
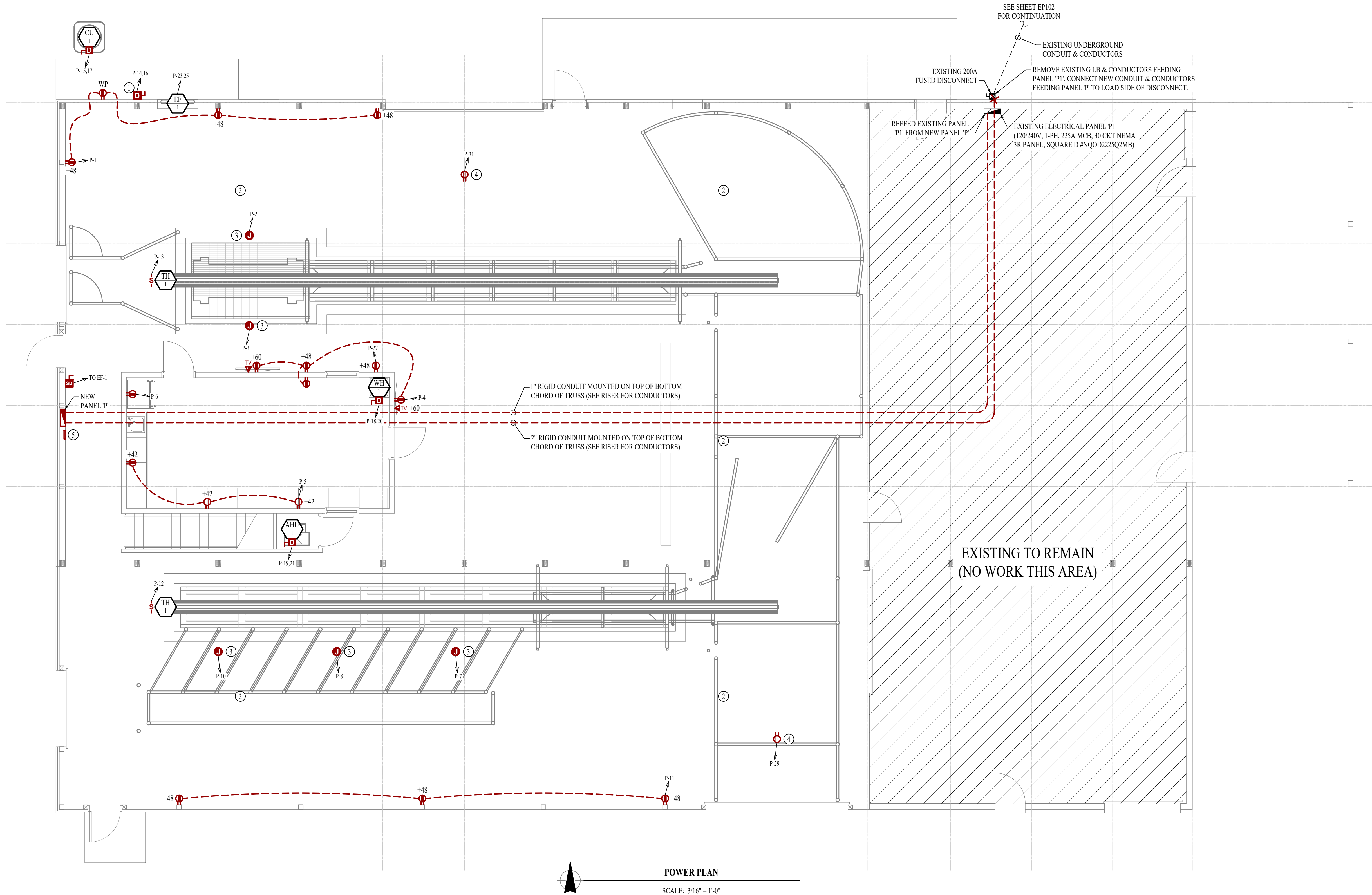
- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- "CR" = OUTLET FOR CORD REEL MOUNTED AT BOTTOM OF STRUCTURE
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- USB OUTLET WITH USB-A & USB-C CHARGING PORT
- DATA / PHONE JACK BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- WIRELESS ACCESS POINT, CEILING MOUNTED
- FLOOR RECEPTACLE
- FLOOR DATA
- DISCONNECT
- FUSED DISCONNECT
- FUSED SWITCH
- STARTER / DISCONNECT
- TIE INTO EXISTING

POWER PLAN GENERAL NOTES:

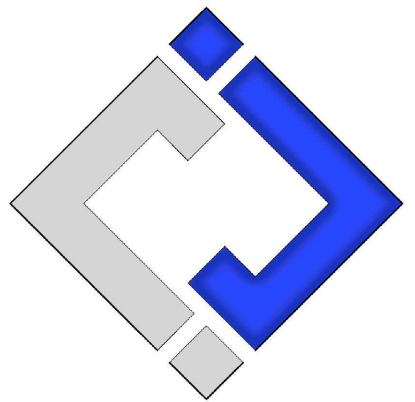
1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES

POWER PLAN KEY NOTES:

- ① POWER FOR CHUTE PUMP.
- ② CONTRACTOR TO RUN #6 SOLID COPPER BONDING JUMPER TO WIRE MESH / REBAR IN CONCRETE FLOOR. CONTRACTOR SHALL BOND WIRE MESH / REBAR AROUND PERIMETER OF FLOOR AT 20' CENTERS WITH BRASS CLAMPS. #6 COPPER SHALL TERMINATE IN GROUND BAR IN PANEL "P".
- ③ POWER FOR CORD REEL AT BOTTOM OF TRUSS. CONTRACTOR TO PROVIDE & INSTALL CORD REEL (EQUAL TO KH INDUSTRIES #RTB83LB-WW-112F). TERMINATE PAYOUT END WITH QUADPLEX RECEPTACLES IN BELL BOX WITH IN-USE COVER. COORDINATE MOUNTING OF CORD REELS TO MAINTAIN CLEARANCE REQUIREMENTS OF RADIANT TUBE HEATERS.
- ④ POWER FOR OVERHEAD DOOR OPERATOR. COORDINATE LOCATION WITH DOOR INSTALLER.
- ⑤ SURFACE MOUNTED GROUND BAR.



James Watson, P.E. March 1, 2024
 PE-2015017071
 MO Certificate of Authority # 2018029680



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J2 PROJECT No: J21143
 J2 DESIGN: JAP

ISSUE TITLE	DATE
DD SET	01 - 19 - 2024
100% CD	02 - 09 - 2024
BID SET	03 - 01 - 2024

Mechanical - Electrical - Plumbing Design Drawings for
CP241191 South Farm Creed Barn Remodel
 5151 Old Millers Road
 Columbia, Boone County, MO 65201

AHJ APPROVAL STAMP

SHEET TITLE

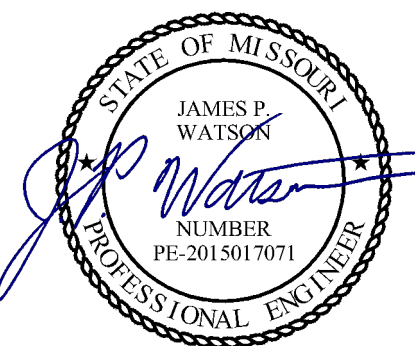
POWER PLAN

SHEET NUMBER

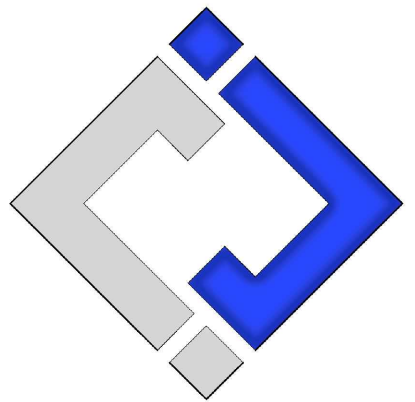
EP101

POWER PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES



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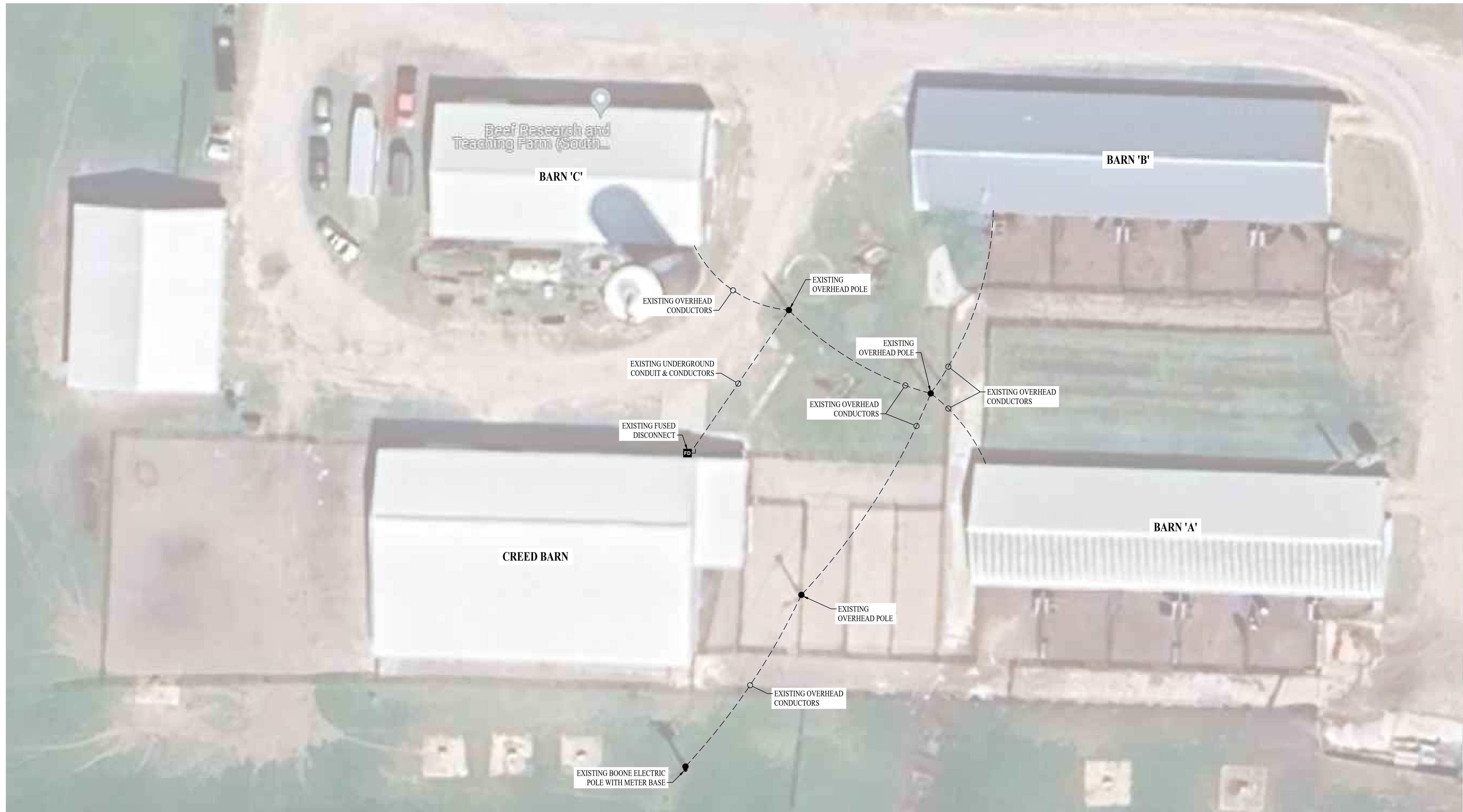


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SITE POWER PLAN
 SCALE: 1" = 20 ft

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SITE POWER PLAN

SHEET NUMBER

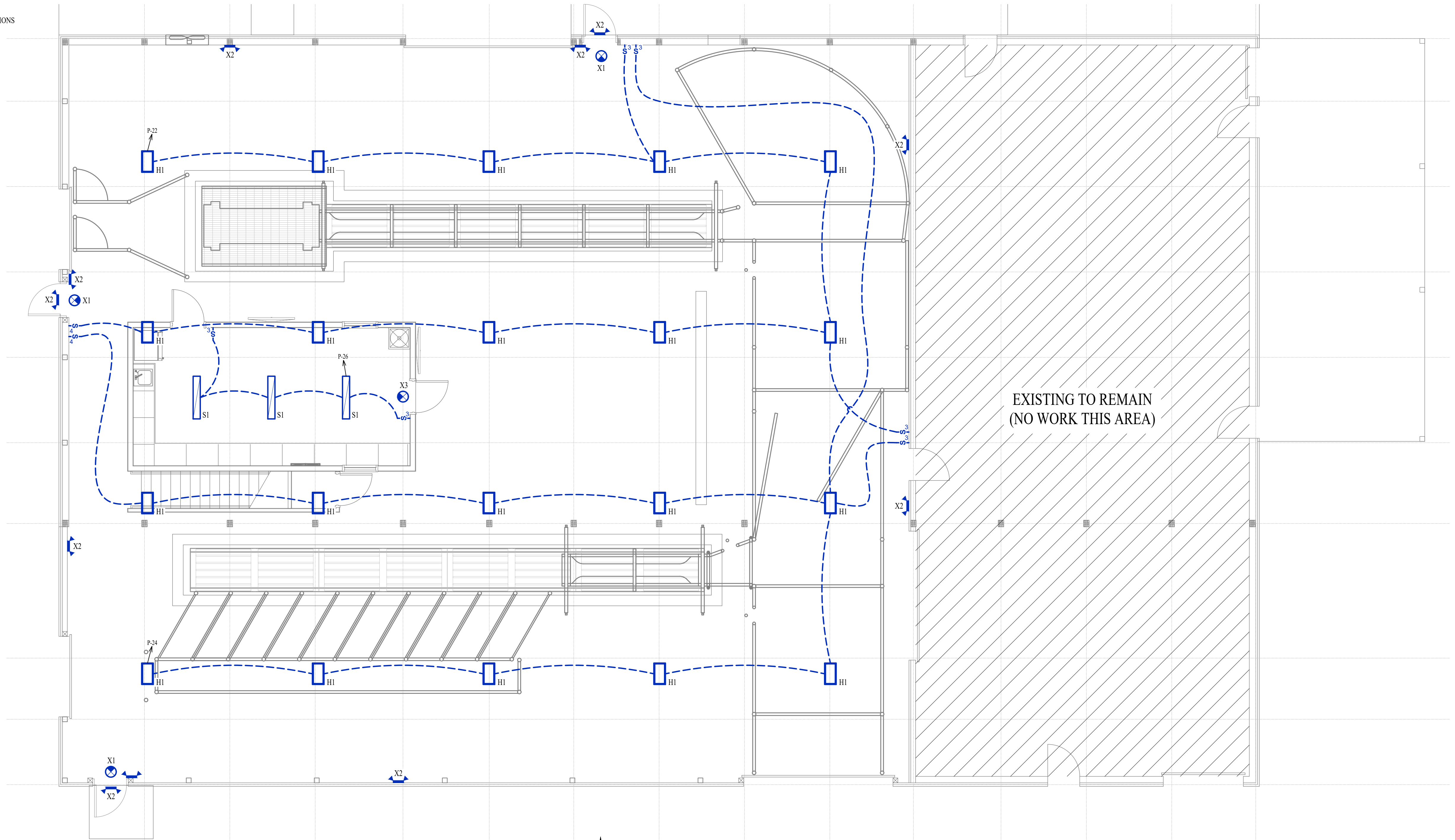
EP102

LIGHTING PLAN SYMBOL LEGEND

- X1 ← "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
 - ← LIGHTING FIXTURE
 - EM ← "EM" INDICATES EMERGENCY BATTERY BACKUP
 - NL ← "NL" INDICATES UN-SWITCHED NIGHT LIGHT
-
- EXIT LIGHT
 - INDICATES REQUIRED REMOTE HEAD
 - EMERGENCY EGRESS LIGHT
 - SWITCH (WALL MOUNTED)
 - SWITCH TYPE:
 - 3 = 3-WAY
 - 4 = 4-WAY
 - OP = PASSIVE INFRARED OCCUPANCY SENSOR
 - OU = ULTRASONIC OCCUPANCY SENSOR
 - OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
 - VP = PASSIVE INFRARED VACANCY SENSOR
 - VU = ULTRASONIC VACANCY SENSOR
 - VT = DUAL-TECHNOLOGY VACANCY SENSOR
 - M = MOMENTARY SWITCH
 - SS = SCENE SWITCH
 - DIMMER SWITCH (WALL MOUNTED)
 - SWITCH TYPE:
 - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
 - SWITCH (CEILING MOUNTED)
 - SWITCH TYPE:
 - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
 - POWER PACK
-
- OCCUPANCY SENSOR**
- AUTO FULL-ON (OR 50% IF NOTED)
 - AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
 - WITH MANUAL OVERRIDE CONTROL (IF NOTED)
-
- VACANCY SENSOR**
- MANUAL FULL-ON
 - AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
 - WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.
3. ELECTRICIAN SHALL PROVIDE & INSTALL SUPPORTS FOR LIGHT FIXTURES BETWEEN TRUSSES.



LIGHTING PLAN
 SCALE: 3/16" = 1'-0"

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LIGHTING PLAN

SHEET NUMBER

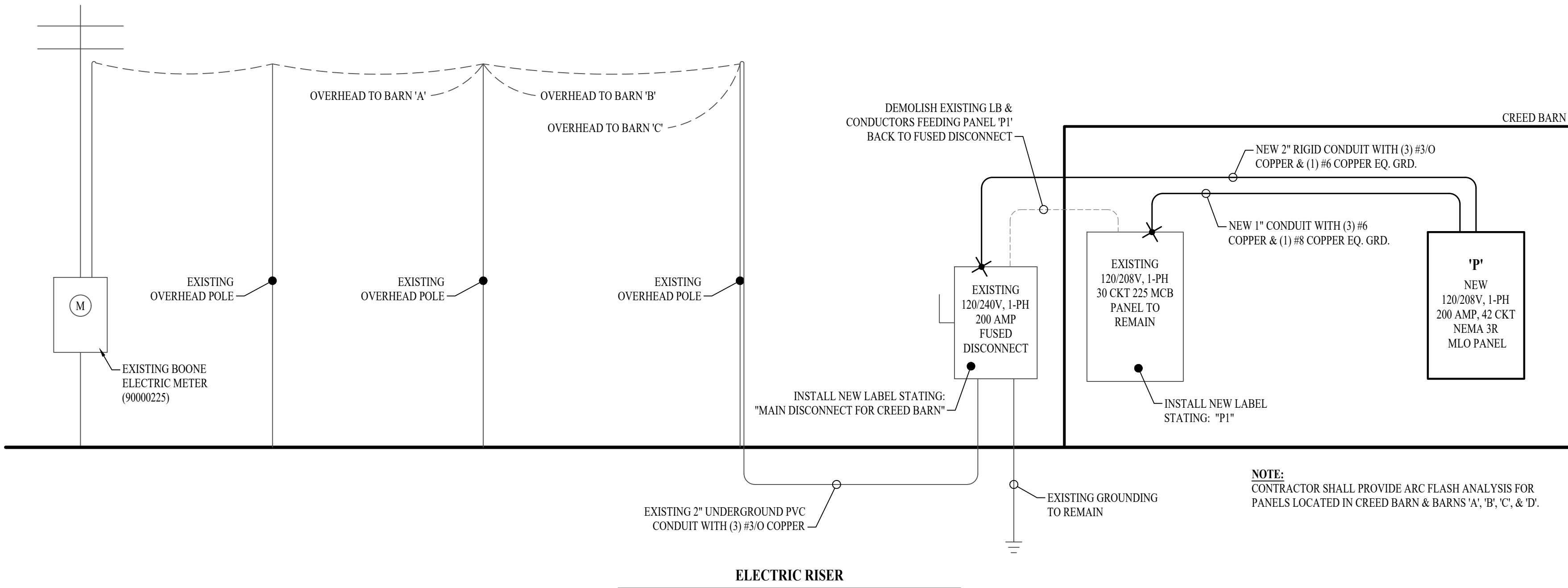
EL101

ELECTRICAL SPECIFICATIONS

1. GENERAL
 - 1.1. THE ENTIRE ELECTRICAL SYSTEM SHALL BE CONTINUOUSLY GROUNDED. EVERY BRANCH CONDUIT SHALL INCLUDE A GREEN GROUND CONDUCTOR SIZED PER NEC.
 - 1.2. PROVIDE UPDATED TYPEWRITTEN PANEL SCHEDULE FOR EACH PANEL.
 - 1.3. ALL WIRING MUST BE DONE IN ACCORDANCE WITH MU PLANNING, DESIGN & CONSTRUCTION GUIDELINES.
2. MATERIALS
 - 2.1. CONDUIT & CONDUCTORS
 - 2.1.1. ALL CONDUCTORS SIZES INDICATED ON PLANS ARE COPPER UNLESS NOTED OTHERWISE.
 - 2.1.2. ABOVE GRADE CONDUCTORS SHALL BE THIN COPPER.
 - 2.1.3. MINIMUM CONDUCTOR SIZE SHALL BE #12 UNLESS NOTED OTHERWISE. 120V, 20 AMP CIRCUITS WITH CONDUCTOR LENGTH GREATER THAN 100' SHALL BE MINIMUM #10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEASURING ACTUAL CONDUCTOR LENGTH AND INCREASING CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP AS REQUIRED BY NEC.
 - 2.1.4. ALL WIRING SHALL BE RUN IN MINIMUM 3/4" EMT CONDUIT. CONTRACTOR MAY USE MC FOR LIGHTING WHIPS THAT ARE 5' OR LESS.
 - 2.1.5. DATA JUNCTION BOXES MAY NOT BE DAISY CHAINED.
 - 2.1.6. CONDUIT FOR DATA SHALL BE MINIMUM 1/2" EMT.
 - 2.2. DEVICES
 - 2.2.1. CONTRACTOR TO PROVIDE J-BOXES, COVER PLATES, AND ANY ACCESSORIES REQUIRED TO PROVIDE A COMPLETE SYSTEM. SEE ARCHITECTURAL PLANS FOR DEVICE COLORS.
 - 2.2.1. DUPLEX RECEPTACLES SHALL BE COMMERCIAL GRADE, 20 AMP.

LIGHT FIXTURE SCHEDULE										
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
H1	METALUX	VHB-1215-W-UNV-L850-CD-U-LEVEL1	LED HIGH BAY	CHAIN	12579	5000	80	120	80	MOUNTED AT 17 A.F.F.
S1	METALUX	4SNX-74HL-UNV-L855-CD1	# LED STRIPLIGHT	CEILING	8391	3500	80	120	52	WITH SNX-LENS-LC-IFT-U & DECOEND-RND PK
X1	SURE LITES	UX7-I-SD	INTERIOR EXIT LIGHT	CEILING	-	-	-	120	1	WITH RED LETTERS
X2	SURE LITES	SELDW-TA 50SD	EMERGENCY EGRESS LIGHT	WALL	-	-	-	120	1	
X3	SURE LITES	APCH7R	INTERIOR EXIT LIGHT WITH HEADS	WALL / CEILING	-	-	-	120	1	WITH RED LETTERS

NOTES:
1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION

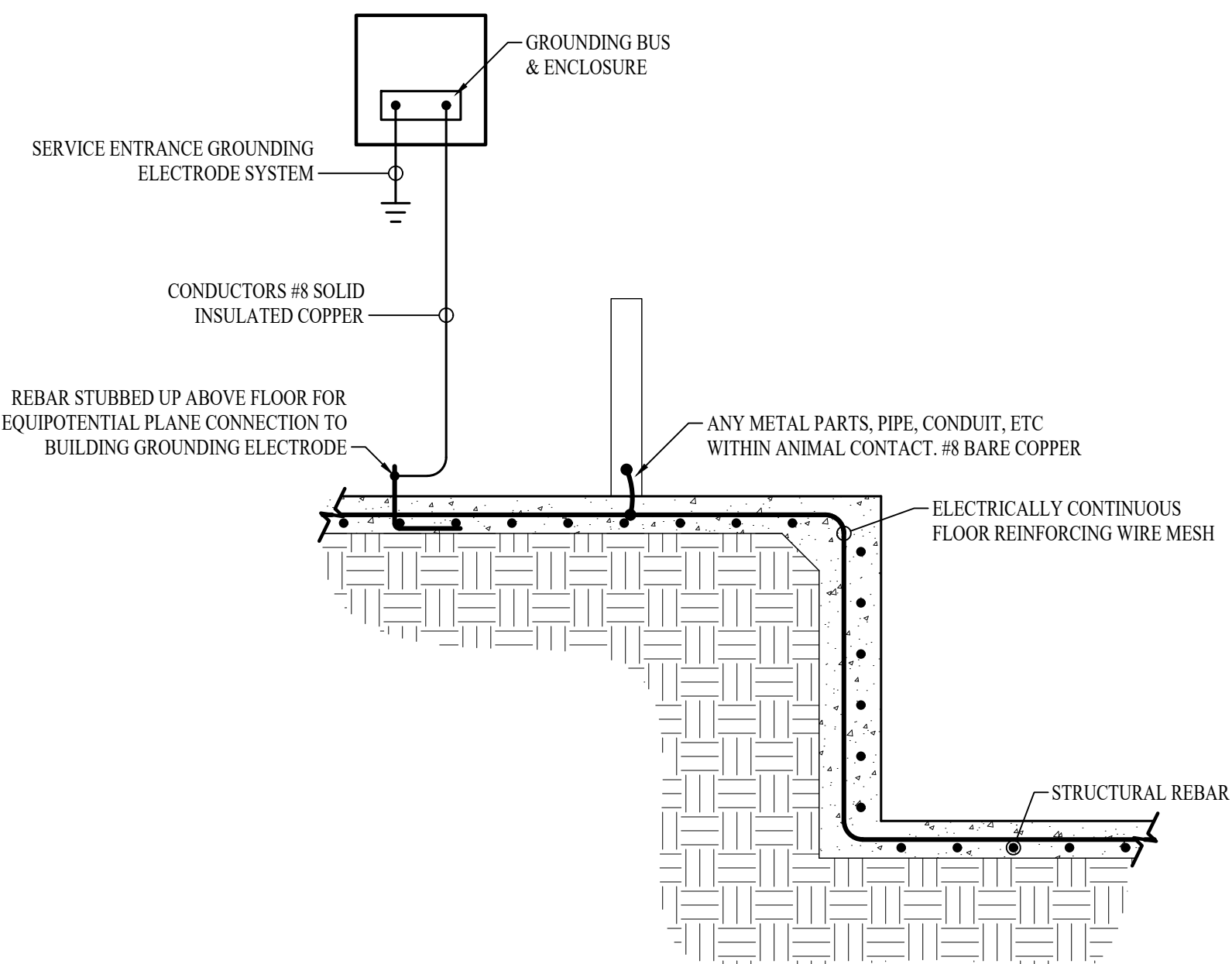


PANEL 'P' SCHEDULE									
VOLTAGE		PANEL SIZE		MOUNTING		ARC RATING		PHASE "A" LOAD	
120/208V		200 AMP MLO		SURFACE		22,000		144.5	
NEMA RATING: 3R								PHASE "B" LOAD: 148	
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER	
1	CATTLE TREATMENT OUTLETS	20-1	6	A	1.5	20-1	CATTLE TREATMENT CORD REEL	2	
3	CATTLE TREATMENT CORD REEL	20-1	1.5	B	6	20-1	CATTLE TREATMENT & TV OUTLETS	4	
5	STORAGE COUNTER OUTLETS	20-1	4.5	A	7	20-1	REFRIGERATOR	6	
7	CATTLE STAGING CORD REEL	20-1	1.5	B	1.5	20-1	CATTLE STAGING CORD REEL	8	
9	SPARE	20-1	-	A	1.5	20-1	CATTLE STAGING CORD REEL	10	
11	CATTLE STAGING OUTLETS	20-1	4.5	B	7.5	20-1	SOUTH TUBE HEATER	12	
13	NORTH TUBE HEATER	20-1	7.5	A	25	50-2	CHUTE PUMP	14	
15	CONDENSING UNIT (CU-1)	20-2	12	B	25	-	-	16	
17	-	-	12	A	6.5	20-2	WATER HEATER (WH-1)	18	
19	AIR HANDLING UNIT (AHU-1)	25-2	24	B	6.5	-	-	20	
21	-	-	24	A	7	20-1	CATTLE TREATMENT LIGHTING	22	
23	EXHAUST FAN (EF-1)	35-2	17.5	B	7	20-1	CATTLE STAGING LIGHTING	24	
25	-	-	17.5	A	1	20-1	STORAGE LIGHTING	26	
27	PRESSURE WASHER	20-1	10	B	-	20-1	SPARE	28	
29	GARAGE DOOR OPENER	20-1	3.5	A	-	20-1	SPARE	30	
31	GARAGE DOOR OPENER	20-1	3.5	B	-	20-1	SPARE	32	
33	SPARE	20-1	-	A	-	-	-	34	
35	SPARE	20-1	-	B	-	-	-	36	
37	EXISTING PANEL 'P1'	50-2	20	A	-	-	-	38	
39	-	-	20	B	-	-	-	40	
41	-	-	-	A	-	-	-	42	

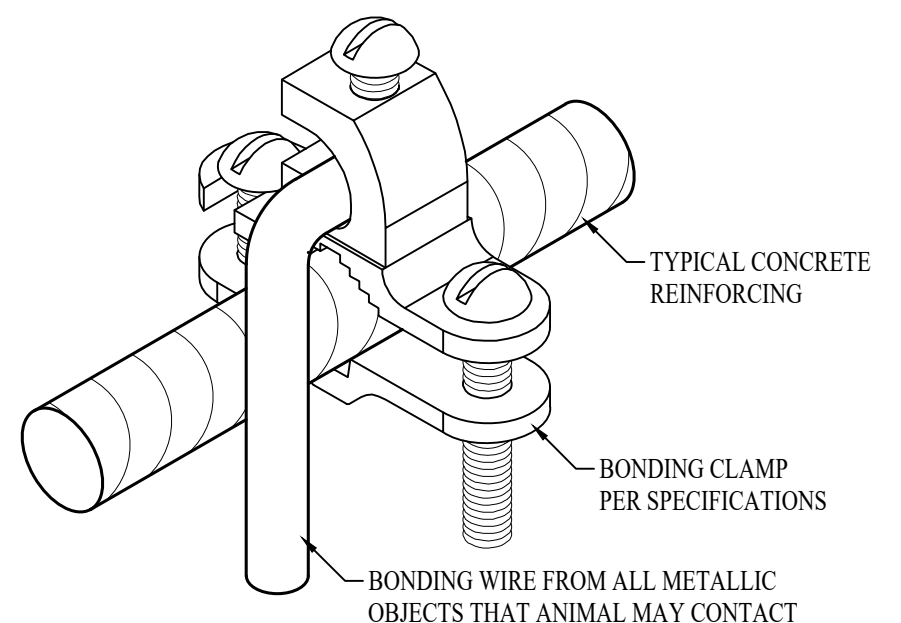
NOTES:
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"
B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

AGRICULTURAL EQUIPOTENTIAL PLANE BONDING & GROUND GENERAL NOTES:

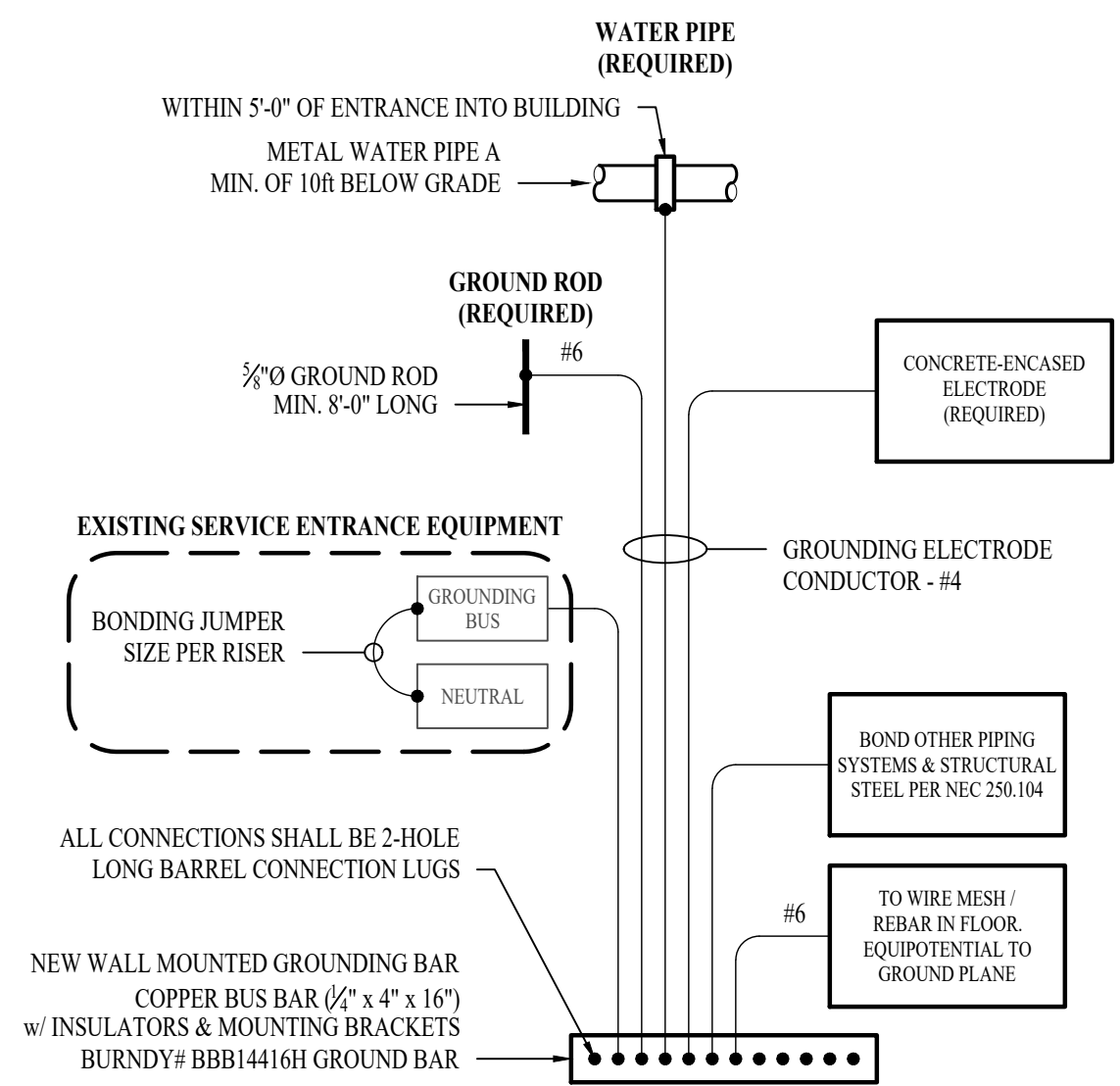
1. BUILDING SHALL BE PROVIDED WITH AN EQUIPOTENTIAL PLANE & ALL REQUIRED BONDING FOR ANIMAL CONFINEMENT AREAS WITHIN BUILDING. EQUIPOTENTIAL PLANE SHALL MEET ALL REQUIREMENTS AS DICTATED IN NEC ARTICLE 547.
2. EMBEDDED IN CONCRETE REINFORCING WIRE MESH NO SMALLER THAN #10 GAUGE FORMING A CONTINUOUS GRID. THE GRID COVERAGE SHALL ENCOMPASS ALL STRUCTURAL CONCRETE FOR THE NEW ADDITION. REFERENCE STRUCTURAL DRAWINGS / SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. SYSTEM OF REINFORCEMENT SHALL BE ELECTRICALLY CONTINUOUS. TWISTED STEEL TIE WIRE CONNECTING ALL WIRE MESH SHALL BE USED TO BOND ALL COMPONENTS OF THE GRID TOGETHER IN THE CONCRETE. THE WIRES SHALL BE MADE TIGHT & SHALL BE INSPECTED TO BE AS SUCH PRIOR TO CONCRETE POUR.
4. THE REINFORCING & STEEL TIE WIRE SHALL BE BY CONCRETE CONTRACTOR. THE WIRES SHALL ONLY BE USED TO BOND THE WIRE MESH TOGETHER & SHALL NOT BE USED TO BOND OTHER METAL COMPONENTS.
5. ELECTRICAL CONTRACTOR SHALL BOND ALL OTHER METAL COMPONENTS IN WHICH ANIMALS MAY COME IN CONTACT WITH, INCLUDING BUT NOT LIMITED TO, METALLIC PIPING, METAL GRATES, STALLS, GATES & ASSOCIATED SUPPORTS USING MINIMUM #8 SOLID COPPER CONDUCTOR BACK TO THE REINFORCING IN THE CONCRETE. BONDS SHALL BE BY PRESSURE CONNECTORS OR BRASS OR COPPER CLAMPS OR EQUALLY SUBSTANTIAL APPROVED METHOD. IT IS IMPORTANT THAT THE EQUIPOTENTIAL GROUNDING SYSTEM BE INSPECTED ONCE THESE BONDS ARE MADE, BUT BEFORE THE CONCRETE IS POURED.
6. ALL METAL COMPONENTS IN THE BUILDING THAT THE ANIMAL COULD COME IN CONTACT WITH INCLUDING THE REINFORCING IN THE CONCRETE SLAB SHALL BE ELECTRICALLY CONTINUOUS & CONNECTED BACK TO THE ELECTRICAL SERVICE GROUNDING ELECTRODE SYSTEM. A PIECE OF STRUCTURAL REBAR SHALL BE EXPOSED UP THROUGH THE SLAB AT THE ELECTRICAL SERVICE ENTRANCE FOR BONDING BETWEEN EQUIPOTENTIAL PLANE SYSTEM & BUILDING GROUNDING ELECTRODE SYSTEM AT SERVICE ENTRANCE. THE EXACT LOCATION IN WHICH REBAR IS TO BE STUBBED UP SHALL BE FULLY COORDINATED BETWEEN ELECTRICAL CONTRACTOR & CONCRETE CONTRACTOR.



AGRICULTURAL EQUIPOTENTIAL PLANE GROUNDING DETAIL



REBAR BONDING CLAMP DETAIL



TYPICAL GROUNDING & BONDING DETAIL

STATE OF MISSOURI
JAMES P. WATSON
Professional Engineer
Number PE-2015017071
March 1, 2024
MO Certificate of Authority # 2018029680

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AHU APPROVAL STAMP

SHEET TITLE

ELECTRICAL DETAILS & SCHEDULES

SHEET NUMBER
E501

SANITARY SEWER PLAN SYMBOL LEGEND

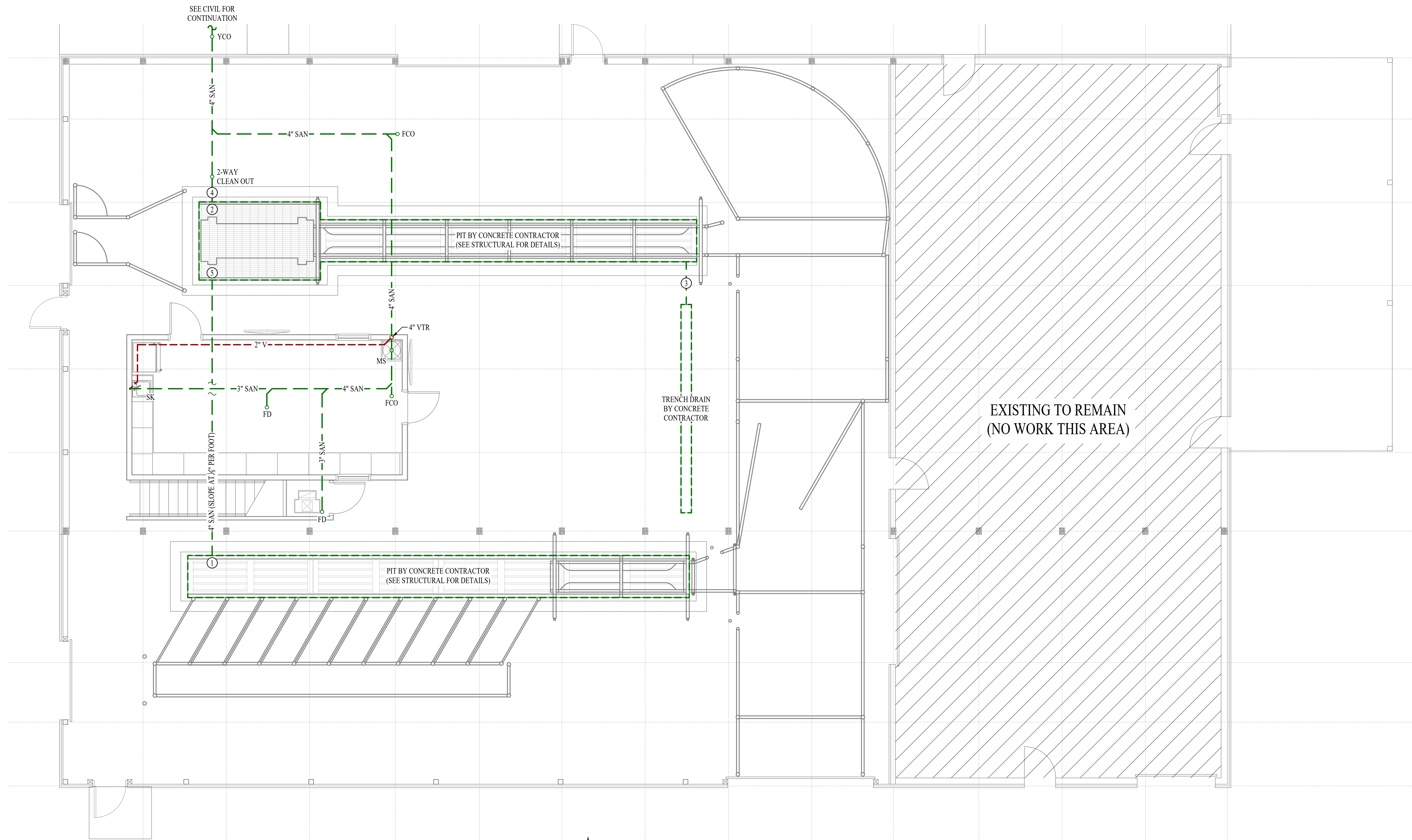
- SANITARY SEWER PIPING
- VENT PIPING
- PIPING TURNED DOWN / TURNED UP
- ✕ TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. REFER TO STRUCTURAL DRAWINGS FOR DIMENSIONS & DETAILS OF CONCRETE PITS & TRENCH DRAIN.

SANITARY SEWER PLAN KEY NOTES:

- ① 4" SAN CUT FLUSH WITH INSIDE FACE OF CONCRETE PIT. BOTTOM OF PIPE TO BE FLUSH WITH BOTTOM OF PIT.
- ② 4" SAN CUT FLUSH WITH INSIDE FACE OF CONCRETE PIT. BOTTOM OF PIPE TO BE 4" ABOVE BOTTOM OF PIT.
- ③ 3" SAN AT 1/8" PER FOOT FROM END OF CONCRETE TRENCH TO OTHER END OF CONCRETE TRENCH. BOTTOM OF PIPE TO BE FLUSH WITH TRENCH DRAINS ON BOTH SIDE.
- ④ INSTALL 4" P-TRAP.
- ⑤ CUT 4" SAN FLUSH WITH INSIDE FACE OF CONCRETE PIT.



SANITARY SEWER PLAN
 SCALE: 3/16" = 1'-0"

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SANITARY SEWER PLAN

 SHEET NUMBER
PS101

WATER & GAS PLAN SYMBOL LEGEND

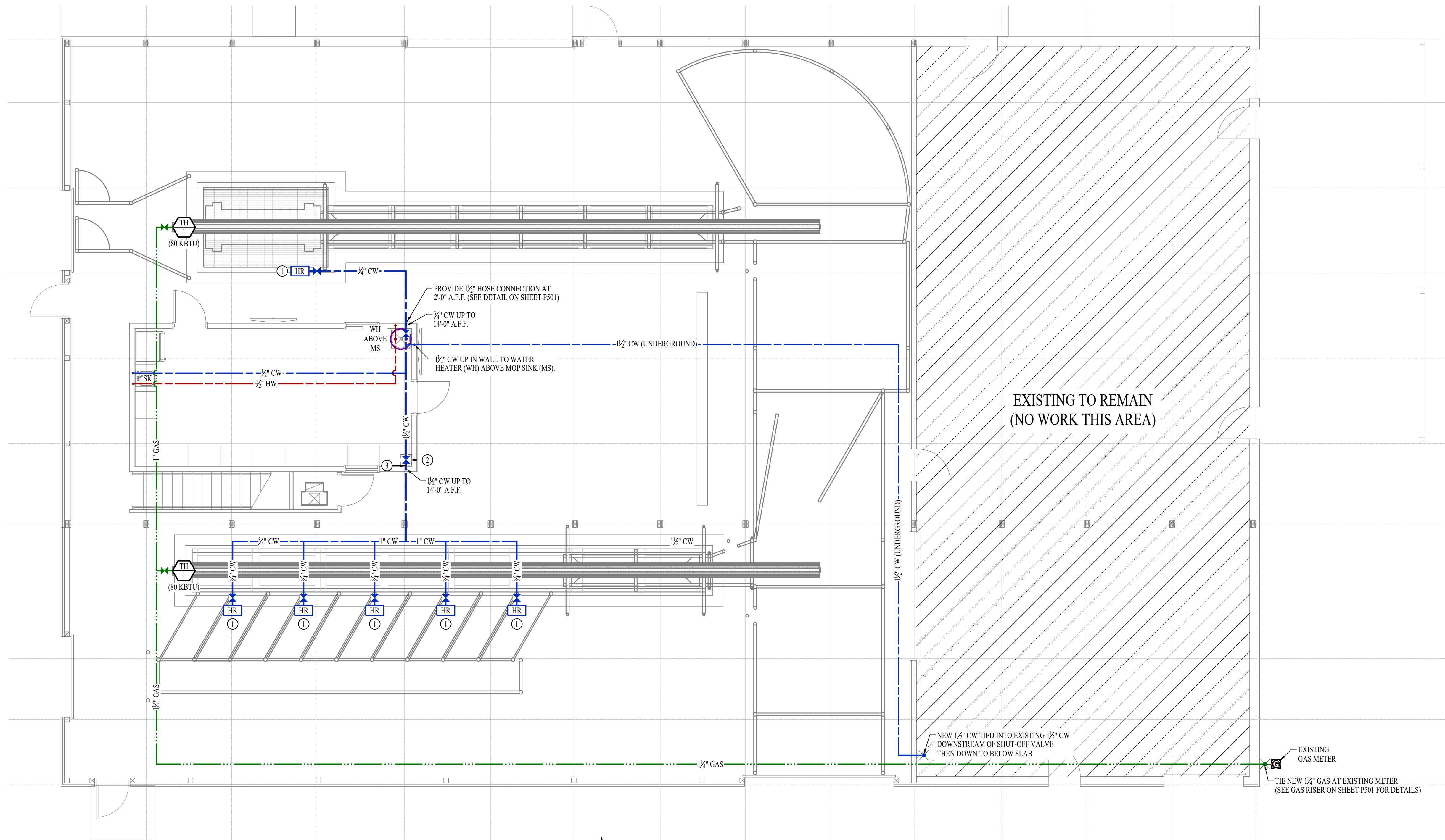
- COLD WATER LINE
- HOT WATER LINE
- HOT WATER RECIRCULATION LINE
- .-.- FILTERED WATER LINE
- M WATER METER
- X VALVE
- P PUMP
- GAS LINE
- G GAS METER
- .-.- AIR LINE
- o- PIPING TURNED DOWN / TURNED UP
- X TIE INTO EXISTING

WATER & GAS PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. CONTRACTOR TO PROVIDE OWNER 1/2" WITH NST THREADED CAP WITH SCHRADER VALVE IN END.

WATER & GAS PLAN KEY NOTES:

- ① HOSE REEL (EQUAL TO COX REELS #SHN-55U). ENSURE CLEARANCE FROM RADIANT TUBE HEATER.
- ② PROVIDE ACCESS PANEL IN CEILING FOR ACCESS TO BALL VALVE & SCHRADER VALVE.
- ③ PROVIDE SCHRADER VALVE IN WATER LINE DOWN STREAM OF BALL VALVE.



WATER & GAS PLAN
 SCALE: 3/16" = 1'-0"

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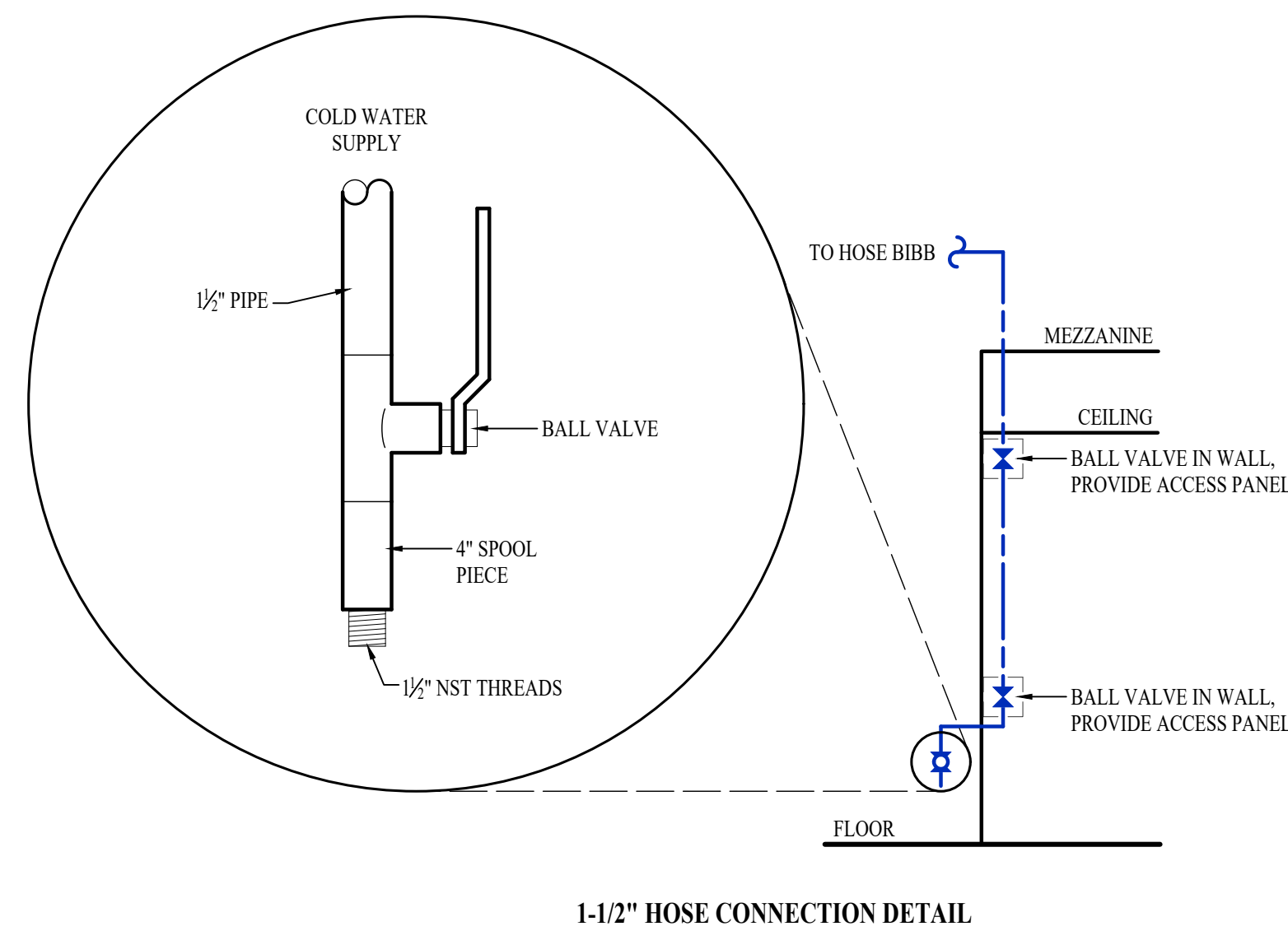
AHJ APPROVAL STAMP

 SHEET TITLE
WATER & GAS PLAN

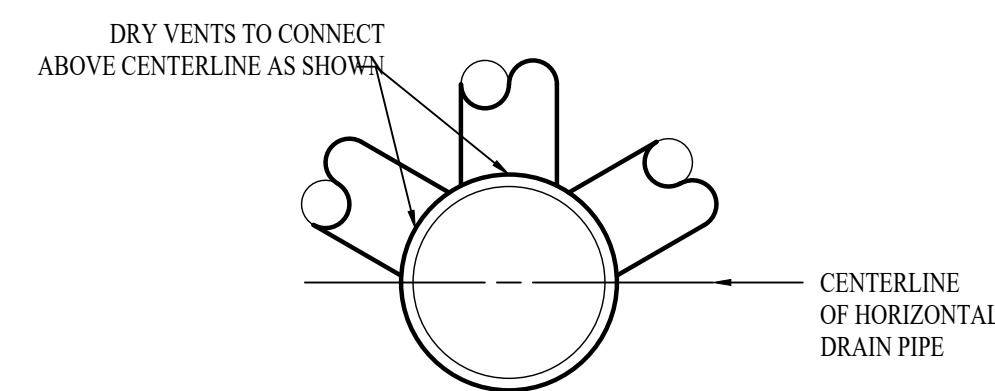
 SHEET NUMBER
PW101

PLUMBING SPECIFICATIONS

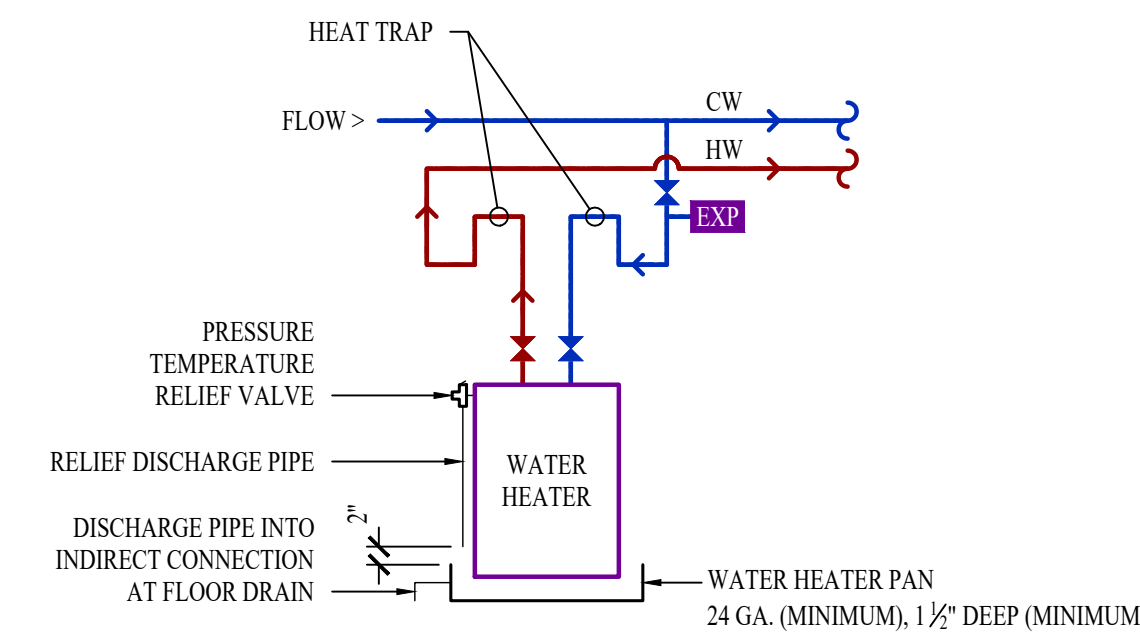
1. GENERAL
 - 1.1. PLUMBING CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL ESCUTCHEONS, 1/2 TURN STOPS, P-TRAPS, AND SUPPLY LINES TO PROVIDE A COMPLETE SYSTEM AT EACH FIXTURE INDICATED ON PLANS UNLESS NOTED OTHERWISE.
2. SANITARY
 - 2.1. BELOW AND ABOVE GRADE WASTE AND VENT PIPING IN BUILDING TO BE SOLID CORE SCH. 40 PVC DWV.
 - 2.2. NO PIPE SMALLER THAN 2" BELOW GRADE.
 - 2.3. WASTE AND VENT PIPING IN PLENUMS TO BE CAST IRON.
 - 2.4. ALL VENT PIPE TERMINATIONS ARE TO BE LOCATED EITHER 10' HORIZONTALLY OR 3' ABOVE MECHANICAL AIR INTAKE LOCATIONS.
3. DOMESTIC WATER
 - 3.1. DOMESTIC WATER PIPING TO BE COPPER.
 - 3.2. COPPER WATER PIPING BELOW GRADE SHALL BE CTS POLY. THERE SHALL BE NO JOINTS IN WATER PIPING LOCATED BENEATH BUILDING SLAB.
 - 3.3. COPPER WATER PIPING ABOVE GRADE SHALL BE TYPE "L".
 - 3.4. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK-CLOSE VALVES. FIXTURES REQUIRING WATER HAMMER ARRESTORS INCLUDE BUT ARE NOT LIMITED TO FLUSH VALVES, SENSOR FAUCETS, AND WASHING MACHINE BOXES. AIR CHAMBERS ARE NOT ACCEPTABLE.
 - 3.5. DOMESTIC WATER PIPING INSULATION
 - 3.5.1. ALL HW PIPING SHALL BE INSULATED WITH PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION. FOR PIPING LESS THAN 1/2", INSULATION THICKNESS TO BE 1". FOR PIPING 1/2" OR GREATER, INSULATION THICKNESS SHALL BE 1/2".
 - 3.5.2. CW COPPER PIPING TO INSULATED WITH 1/2" PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION.



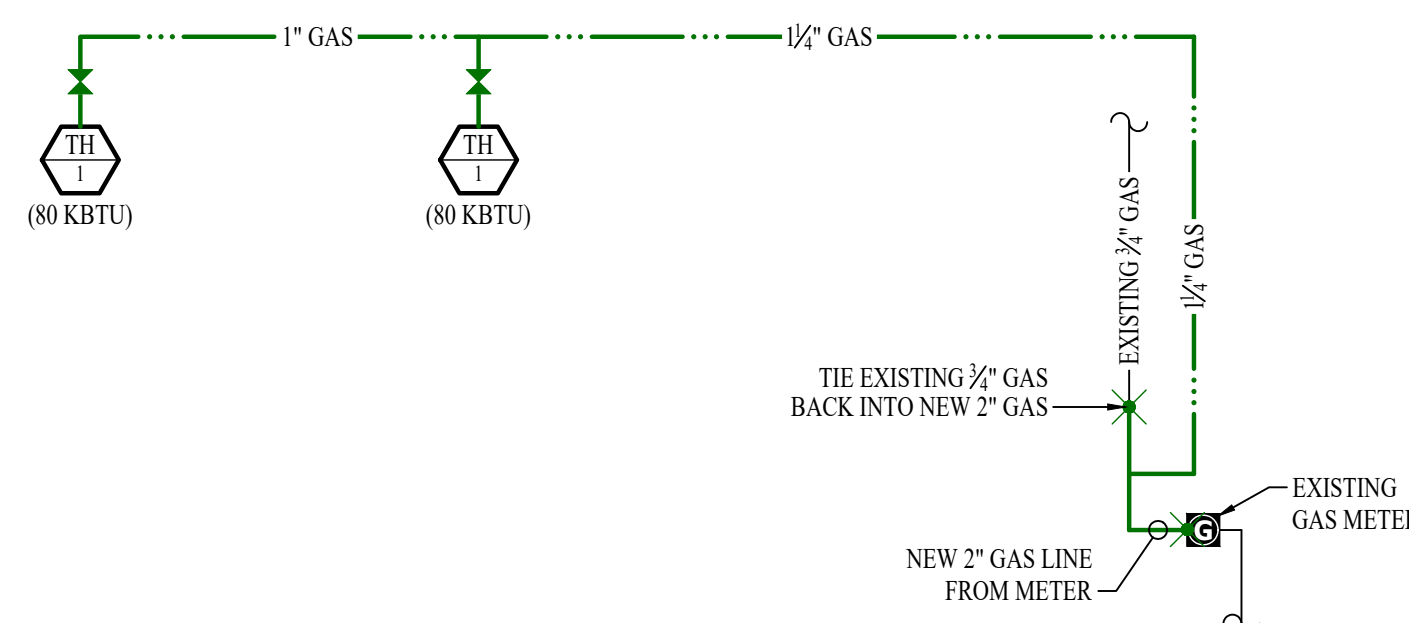
1-1/2" HOSE CONNECTION DETAIL



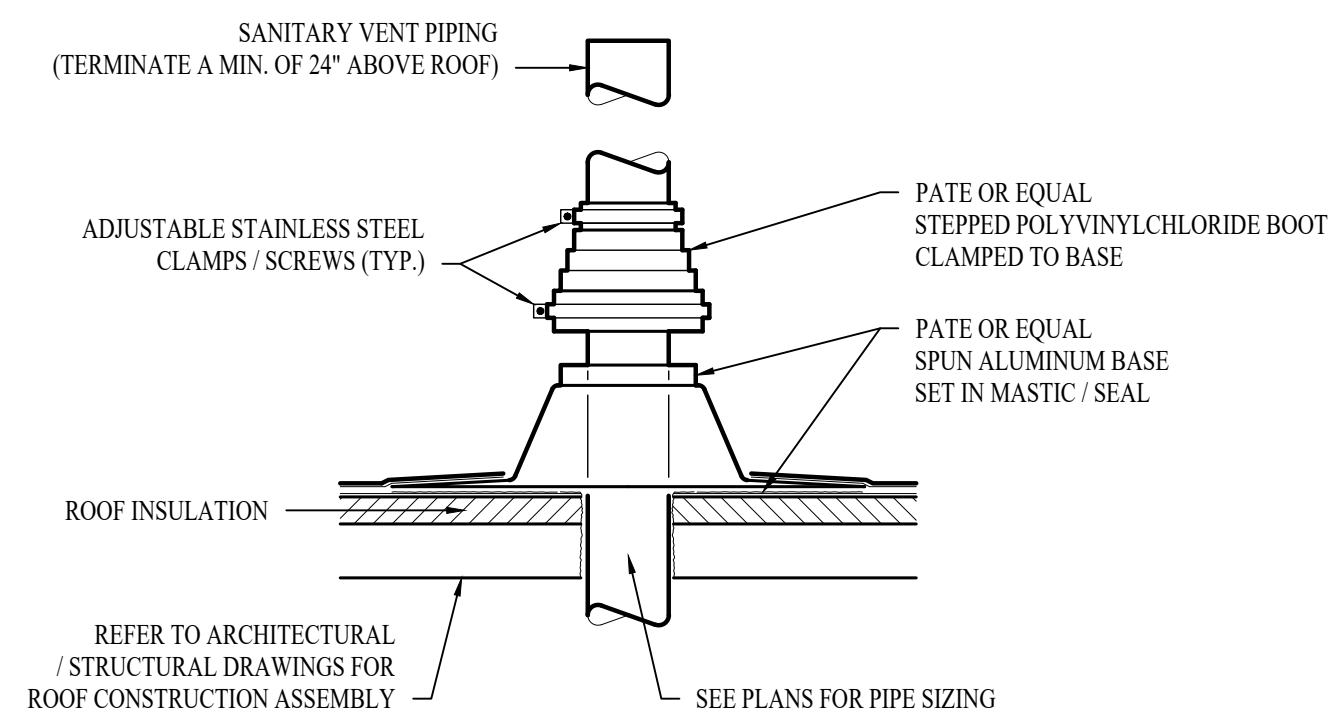
DRY VENT DETAIL



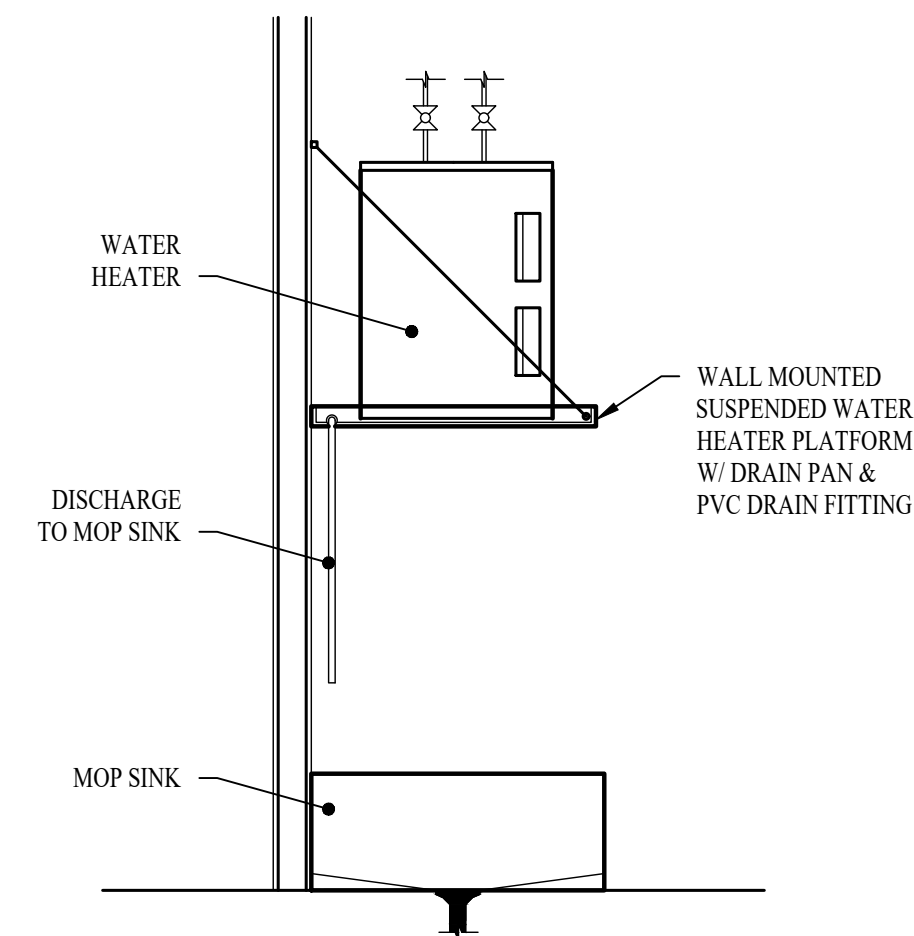
WATER HEATER DETAIL



GAS RISER



SANITARY VENT THRU ROOF DETAIL



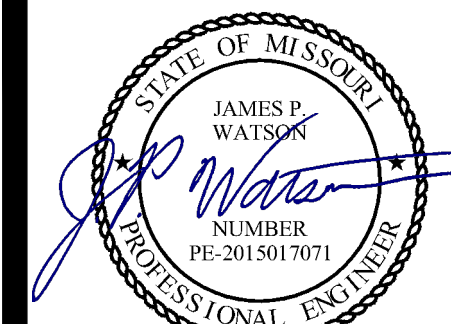
SUSPENDED WATER HEATER DETAIL

PLUMBING FIXTURE SCHEDULE				
TAG	DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	NOTES
FCO	FLOOR CLEAN OUT	ZURN	Z1400	
FD	FLOOR DRAIN	ZURN	Z415-BZ	WITH Z1072 TRAP SEAL
MS	MOP SINK	FIAT	MSB2424	WITH ZURN Z84M1 FAUCET WITH WALL HOOK
SK	SINGLE COMPARTMENT SINK (22x19x7)	ELKAY	LR2219	WITH TWO HANDLED ZURN Z871C4-XL FAUCET
WH1	WATER HEATER	RUUD	EGSP20	20 GALLON, 240V, 1500W
YCO	YARD CLEAN OUT	ZURN	Z1400	

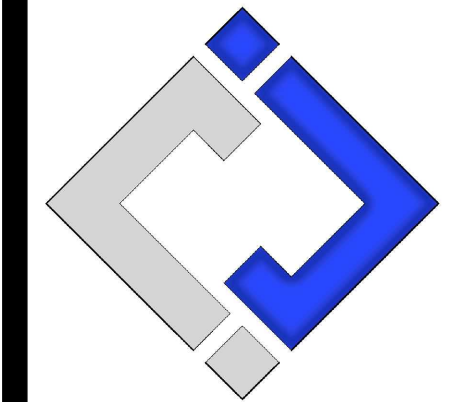
NOTES:
1. VERIFY NECESSARY FIXTURES MEET ADA REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION

PLUMBING CONNECTION SIZING SCHEDULE						
FIXTURE	TYPE	TYPICAL ABBREVIATION	SANITARY PIPING		SUPPLY PIPING	
			WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
DRINKING FOUNTAIN	DF	DF	1-1/2"	1-1/4"	1/2"	-
FLOOR DRAIN	FD	FD	3"	2"	-	-
HAND / HAIR SINK	HS / SK	HS / SK	2"	1-1/4"	1/2"	1/2"
HOSE BIBB	HB	HB	-	-	3/4"	-
LAVATORY	LAV	LAV	1-1/2"	1-1/4"	1/2"	1/2"
MOP SINK	MS	MS	3"	1-1/2"	1/2"	1/2"
ICE MAKER OUTLET BOX	REF	REF	-	-	1/2"	-
SHOWER	SH	SH	3"	1-1/2"	1/2"	1/2"
URINAL	UR	UR	2"	1-1/4"	3/4"	-
WATER CLOSET (FLUSH TANK)	WC	WC	3"	2"	1/2"	-
WATER CLOSET (FLUSH VALVE)	WC	WC	3"	2"	1"	-

NOTES:
1. SIZES SHOWN ABOVE ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS



James Watson, P.E. March 1, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED ENGINEERING

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J2 PROJECT No: J21143
J2 DESIGN: JAP

ISSUE TITLE	DATE
DD SET	01 - 19 - 2024
100% CD	02 - 09 - 2024
BID SET	03 - 01 - 2024

Mechanical - Electrical - Plumbing Design Drawings for
CP241191 South Farm Creed Barn Remodel
 5151 Old Millers Road
 Columbia, Boone County, MO 65201

AJH APPROVAL STAMP

SHEET TITLE
PLUMBING DETAILS & SCHEDULES

SHEET NUMBER
P501