

IOWA DEPARTMENT OF NATURAL RESOURCES

Construction Documents for Lake Rathbun Law Enforcement Shop

Appanoose County, IA
PROJECT #23-05-04-01

PLANS PREPARED BY
LAND AND WATERS BUREAU
CONSERVATION AND RECREATION DIVISION



| | |
|--|--|
| | <p>I hereby certify that this architectural document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Architect under the laws of the State of Iowa.</p> <p>RYAN E. RICHEY DATE _____</p> <p>My license renewal date is June 30, 2023.</p> <p>Pages or sheets covered by this seal: A-001 - A-600</p> |
| | <p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.</p> <p>BRETT JOHNSON DATE _____</p> <p>My license renewal date is DECEMBER 31, 2023.</p> <p>Pages or sheets covered by this seal: C1</p> |
| | <p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.</p> <p>JAMES R. DEEDS IV DATE _____</p> <p>My license renewal date is DECEMBER 31, 2024.</p> <p>Pages or sheets covered by this seal: E-000 - E-400</p> |
| | <p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.</p> <p>CHAD D. BASS DATE _____</p> <p>My license renewal date is DECEMBER 31, 2023.</p> <p>Pages or sheets covered by this seal: M000 - P300</p> |

| SHEET INDEX | |
|-------------|--|
| SHEET. NO. | SHEET TITLE |
| | ARCHITECTURAL |
| A-001 | COVER SHEET |
| A-002 | WALL TYPES, NOTES & SYMBOLS |
| A-003 | PROJECT LOCATION |
| | CIVIL |
| C1 | SITE PLAN |
| | ARCHITECTURAL |
| A-020 | LIFE SAFETY PLAN |
| A-100 | REFERENCE FLOOR PLAN |
| A-101 | DIMENSION FLOOR PLAN |
| A-110 | REFLECTED CEILING PLAN |
| A-200 | EXTERIOR ELEVATIONS |
| A-201 | EXTERIOR ELEVATIONS & DETAILS |
| A-300 | BUILDING SECTIONS |
| A-400 | ENLARGED PLAN & ELEVATIONS |
| A-401 | INTERIOR ELEVATION & MILLWORK SECTIONS |
| A-600 | FINISH, DOOR & WINDOW SCHEDULES |
| | MECHANICAL |
| M-000 | MECHANICAL GENERAL NOTES AND SYMBOLS |
| M-100 | FLOOR PLAN MECHANICAL |
| M-200 | MECHANICAL DETAILS |
| M-300 | MECHANICAL SCHEDULES |
| | PLUMBING |
| P-100 | FLOOR PLANS - PLUMBING |
| P-200 | PLUMBING DETAILS |
| P-300 | PLUMBING SCHEDULES |
| | ELECTRICAL |
| E-000 | ELECTRICAL NOTES |
| E-200 | ELECTRICAL PLANS |
| E-201 | LIGHTING PLANS |
| E-300 | ONE-LINE DIAGRAM |
| E-400 | ELECTRICAL SCHEDULES |

CONSULTANT:

**IOWA DEPARTMENT OF
NATURAL RESOURCES**
ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034
P: 515.725.8200
F: 515.725.8202



| BID ITEMS | | |
|-----------|---|--------------------|
| ITEM # | ITEM DESCRIPTION | ESTIMATED QUANTITY |
| 1 | GRADING | 1 LS |
| 2 | 4" PVC SDR 23.5 SANITARY SEWER SERVICE | 85 LF |
| 3 | TYPE SW-203 SANITARY SEWER CLEANOUT | 1 EA |
| 4 | CLASS "A" CRUSHED STONE | 250 TONS |
| 5 | 1" X 1" X 1" HDPE TEE | 1 EA |
| 6 | 1" CURB STOP | 1 EA |
| 7 | 1" HDPE PIPE | 205 LF |
| 8 | HEATED SHOP BUILDING AND ALL ASSOCIATED ITEMS | 1 LS |
| 9 | ELECTRICAL TRANSFORMER AND SERVICE LINE | 1 LS |
| 10 | LP TANK AND PAD | 1 LS |
| 11 | SEEDING AND MULCHING | 1 LS |
| 12 | CONSTRUCTION STAKING | 1 LS |
| 13 | MOBILIZATION | 1 LS |

| PROJECT DATA - OFFICE BUILDING | |
|---|--|
| <p>OCCUPANT LOAD:</p> <p>GROUP S - STORAGE / ACCESSORY MECHANICAL AREAS - 210 GROSS (IBC TABLE 1004.1.1) STORAGE AREAS - 2,670 GROSS (IBC TABLE 1004.1.1)</p> <p>ACCESSORY / MECH. 210 SF / 300 = 0.7 = 1 OCCUPANT GARAGE / STORAGE 2,670 SF / 300 = 8.9 = 9 OCCUPANTS</p> <p>TOTAL OCCUPANT LOAD = 10 OCCUPANTS</p> <p>REQUIRED FIXTURES:</p> <p>1 TOTAL WATER CLOSET (1 UNISEX)</p> <p>WATER CLOSETS - 1 PER 25 FOR FIRST 50 = 1 REQUIRED / 1 PROVIDED LAVATORIES - 1 PER 40 FOR FIRST 80 = 1 REQUIRED / 1 PROVIDED</p> | <p>MEANS OF EGRESS:</p> <p>MIN. REQUIRED # EXITS = 1 EXITS PER LEVEL (IBC TABLE 1006.3.2(2)) MAX TRAVEL DISTANCE = 200' (IBC 1017.2) DEAD-END CORRIDOR LENGTH = 20' MAX. (IBC 1020.2) MIN. CORRIDOR WIDTH = 36" CLEAR MIN. CLEAR OPENINGS FOR EXIT DOORS = 34" (ACTUAL 32")</p> <p>FIRE EXTINGUISHERS: THE NUMBER AND LOCATION OF FIRE EXTINGUISHERS TO BE DETERMINED BY THE FIRE MARSHALL PRIOR TO CERTIFICATE OF OCCUPANCY.</p> <p>BUILDING:</p> <p>ADDRESS: LAKE RATHBUN LAW ENFORCEMENT 12194 HONEY CREEK PLACE MORAVIA, IA 52571 APPANOOSE COUNTY</p> <p>USE - SHOP / STORAGE BUILDING CONSTRUCTION - TYPE V-B (WITHOUT SPRINKLER SYSTEM) NUMBER OF STORIES - 1 STORY BUILDING HEIGHT - 23'-6" BUILDING AREA - 2,880 GSF BUILDING OCCUPANCY - GROUP S-1, STORAGE</p> |

PROJECT DESCRIPTION

Lake Rathbun is located in Appanoose County and the Rathbun Law Enforcement complex is within Honey Creek State Park on the north side of the lake. This new heated storage building will house Rathbun Law Enforcement's largest boats and equipment. It will have three (3) heated bays with an accessible storage mezzanine. It will also have a restroom, breakroom area, and mechanical room. The storage building will be constructed from Structural Insulated Panels and have heat. The break room will receive air conditioning via a mini-split system. There will also be a pull-through bay on the south end of the building and a concrete apron on the front.

AUTHORIZATION TO BID

ENGINEERING BUREAU CHIEF DATE _____

AUTHORIZED - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT DATE _____

| DIRECTORY | | | |
|---------------------------|--------------------------------------|----------------------------|-----------------------------|
| DISTRICT INSPECTOR | | ELECTRICAL DESIGNER | |
| COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES | COMPANY | KCL ENGINEERING |
| ADDRESS | | ADDRESS | 218 1/2 5TH STREET |
| CITY,STATE,ZIP | INDIANOLA, IA | CITY,STATE,ZIP | WEST DES MOINES, IA 50265 |
| CONTACT | JASON KRUSE | CONTACT | JON LACROIX |
| TELEPHONE | 515.250.3707 | TELEPHONE | 515-344-2960 |
| FAX | - | FAX | - |
| EMAIL | JASON.KRUSE@DNR.IOWA.GOV | EMAIL | JLACROIX@KCLENGINEERING.COM |
| ARCHITECT | | ELECTRICAL ENGINEER | |
| COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES | COMPANY | KCL ENGINEERING |
| ADDRESS | 502 E. 9TH. ST. | ADDRESS | 218 1/2 5TH STREET |
| CITY,STATE,ZIP | DES MOINES, IA 50319 | CITY,STATE,ZIP | WEST DES MOINES, IA 50265 |
| CONTACT | RYAN RICHEY | CONTACT | JAMES DEEDS |
| TELEPHONE | 515.979.0107 | TELEPHONE | 515-371-9970 |
| FAX | - | FAX | - |
| EMAIL | RYAN.RICHEY@DNR.IOWA.GOV | EMAIL | JDEEDS@KCLENGINEERING.COM |
| CIVIL ENGINEER | | MECHANICAL ENGINEER | |
| COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES | COMPANY | KCL ENGINEERING |
| ADDRESS | 502 E. 9TH. ST. | ADDRESS | 218 1/2 5TH STREET |
| CITY,STATE,ZIP | DES MOINES, IA 50319 | CITY,STATE,ZIP | WEST DES MOINES, IA 50265 |
| CONTACT | BRETT JOHNSON | CONTACT | CHAD BASS |
| TELEPHONE | 515.250.3711 | TELEPHONE | 515-205-1397 |
| FAX | - | FAX | - |
| EMAIL | BRETT.JOHNSON@DNR.IOWA.GOV | EMAIL | CBASS@KCLENGINEERING.COM |

COVER SHEET

Low Enforcement Shop for:
Lake Rathbun LE

12194 Honey Creek Place
Moravia, IA 52571

| | | |
|-----|----|----------|
| NO. | BY | REVISION |
| | | |
| | | |
| | | |
| | | |
| | | |

DRAWN BY: PROJECT NUMBER:
23-05-04-01

CHK'D BY: DATE:
12.10.2022

SHEET No: **A-001**

DIMENSION NOTES

- IN INTERIOR SPACES THE ACTUAL DIMENSIONS MAY BE LESS IMPORTANT THAN IF AT TWO ELEMENTS IN THE BUILDING WERE TO BE EQUAL. IN THESE CASES, THE WORD "EQUAL OR EQ" IS USED IN LIEU OF THE ACTUAL DIMENSIONS.
- WHEN A ROOM CENTERLINE IS INDICATED ONLY ONE SIDE OF THE ROOMS ELEMENTS MAY BE DIMENSIONED.
- COLUMN IDENTIFICATION: DETAILS WILL GOVERN ALL DIMENSIONS AND NO DIMENSIONS WILL BE SHOWN ON SMALL SCALE PLANS.
- PARTITION CENTERED ON COLUMN OR GRID LINES WILL NOT BE DIMENSIONED ON SMALL SCALE PLANS.
- PARTITION WITH A FINISHED FACE FLUSH WITH FINISH FACE OF COLUMN WILL NOT BE DIMENSIONED ON SMALL SCALE PLANS.
- PARTITION FINISH FACE ON COLUMN OR GRID LINE WILL NOT BE DIMENSIONED ON SMALL SCALE PLANS.
- WHEN ONE JAMB OCCURS AT A COLUMN OR GRID LINE NO DIMENSIONS WILL BE SHOWN ON THE SMALL SCALE PLANS. THE OPENING WIDTH WILL BE GOVERNED BY CRITERIA OR SCHEDULES.
- WHEN NEITHER JAMB OCCURS AT A COLUMN OR GRID LINE ONE JAMB WILL BE DIMENSIONED.
- DOOR LOCATIONS ARE TO BE LOCATED BY ONE OF FOLLOWING:
 - ONE JAMB FACE LOCATED BY A PARTITION AT RIGHT ANGLE. 4" TYPICAL UNLESS INDICATED ON PLAN.
 - OR AS DIMENSIONED ON PLAN.
- PARTITIONS ARE DIMENSIONED TO FACE OF CMU OR FACE OF STUD UNLESS OTHERWISE NOTED.
- DIMENSIONS ARE INDICATED IN THE DOCUMENTS. THE DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.

MATERIAL LEGEND

| | | | |
|-----------------|-------------------------|------------------|--------------------|
| EARTH | CONCRETE MASONRY UNIT | GYPSUM / STUCCO | MASONRY |
| COMPACTED EARTH | METAL STUD | GROUT | CONCRETE |
| GRASS | PARTICLE BOARD | TURF | CRUSHED STONE/SAND |
| GRAVEL | PLYWOOD | FOAM INSULATION | CAST STONE/STONE |
| CLAY | BATT INSULATION | RIGID INSULATION | STONE |
| FENCE | ACOUSTICAL CEILING TILE | ALUMINUM | GLASS |
| TURF BLOCK | PLASTIC | STEEL | WOOD BLOCKING |
| PAVERS | CARPET | FINISHED WOOD | CONTINUOUS WOOD |

SYMBOL LEGEND

| | |
|--|---|
| NORTH AAROW | ROOM /SPACE IDENTIFICATION |
| DRAWING / DETAIL IDENTIFICATION SCALE: 0 = 0'-0" | DOOR TAG |
| SECTION REFERENCE | WINDOW TAG |
| DETAIL REFERENCE | WALL TYPE REFERENCE KEYNOTE NUMBER -NEW C.S.I. DIVISION/KEY |
| EXTERIOR ELEVATION | KEYNOTE - DEMOLITION |
| INTERIOR ELEVATION | KEYNOTE - NEW/RENOVATION |
| ELEVATION TARGET ELEVATION : 0'-0" DESCRIPTION | KEYNOTE - FINISH/ACCESSORY |
| COLUMN GRID | PROPERTY LINE REFERENCE |
| LEVEL CHANGE REFERENCE | CENTER LINE REFERENCE |
| DETAIL CUT LINE | REVISION NUMBER AND CLOUD |
| MATCH LINES | |

GENERAL NOTES

- THE FOLLOWING GENERAL NOTES SHALL PERTAIN TO THE ENTIRE SET OF CONTRACT DOCUMENTS
- A GENERAL CONTRACTOR SHALL NOTE THAT THE ARCHITECTURAL DRAWINGS ARE ESTABLISHING A MINIMUM MATERIAL OR CONSTRUCTION METHOD STANDARD. THE GENERAL CONTRACTOR SHALL PROVIDE A BID PRICE BASED ON THE SPECIFIC MATERIALS NOTED.
 - DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
 - GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL PERFORM THEIR WORK IN ACCORDANCE WITH ALL APPLICABLE CODES GOVERNING EACH TRADE.
 - THE CONTRACTOR SHALL MAINTAIN A CLEAN AND ORGANIZED JOB SITE, ACCEPTABLE TO THE OWNER.
 - THE CONTRACTOR SHALL COORDINATE THE SEQUENCE OF WORK WITH THE OWNER REPRESENTATIVE.
 - THERE SHALL BE NO DEVIATION BY THE GENERAL CONTRACTOR FROM THE CONSTRUCTION DOCUMENTS UNLESS APPROVED IN WRITING BY THE ARCHITECT.
 - EACH CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD PRIOR TO THE INITIATION OF WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR CONDITIONS INTERFERING WITH THE ABILITY OF THE CONTRACTOR TO COMPLETE WORK AS OUTLINED ON THE CONSTRUCTION DRAWINGS.
 - ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH OTHER TRADES. LACK OF THIS COORDINATION RESULTING IN ADDED COST TO THE CONTRACT WILL BE BORNE BY THE CONTRACTOR.
 - GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE EXISTING BUILDING WATER TIGHT DURING CONSTRUCTION.
 - THE CONTRACTOR WILL VERIFY THAT EXIT EGRESS IS MAINTAINED FOR ALL OCCUPIED AREAS OF THE BUILDING THROUGHOUT ALL PHASES OF CONSTRUCTION.
 - PLAN DIMENSIONS ARE GIVEN TO FACE OF STUD OR BLOCK WALL. "CLEAR" DIMENSIONS ARE GIVEN TO THE FACE THE OWNER WILL ASSUME ALL LIABILITY AND SHALL TAKE PERSONAL RESPONSIBILITY FOR ANY DECISIONS THAT THEY MAKE TO CHANGE OR ALTER THE CONSTRUCTION DOCUMENTS WITHOUT THE ARCHITECT'S WRITTEN APPROVAL.
 - PROTECT ALL EXISTING FINISHES AND MATERIALS TO REMAIN, IN ACCORDANCE WITH ACCEPTABLE TRADE PRACTICES, MANUFACTURER, RECOMMENDATIONS, OR AS DIRECTED BY THE ARCHITECT.
 - CUTTING OF EXISTING CONSTRUCTION FOR THE INSTALLATION OF ALL NEW WORK BY ALL TRADES, AND THE SUBSEQUENT PATCHING THEREOF, SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, WHETHER THE WORK IS DONE BY HIS OWN FORCES OR NOT. GRINDING OF MATERIALS FOR REMOVAL SHALL NOT BE PERMITTED. CUTTING SHALL BE TO STRAIGHT LINE UNWORKMAN-LIKE CUTTING, DAMAGE RESULTING THEREFROM AND UNACCEPTABLE PATCHING SHALL BE REPAIRED AND/OR REPLACED TO AN ACCEPTABLE CONDITION APPROVED BY THE ARCHITECT. A OWNER PROJECT REPRESENTATIVE SHALL BE NOTIFIED PRIOR TO CUTTING OF ANY STRUCTURAL ITEM (I.E. CONCRETE FLOOR, MASONRY, WALL, ETC.) WITHIN THE EXISTING BUILDING. METHOD OF CUTTING SHALL BE APPROVED BY THE OWNER PROJECT REPRESENTATIVE.
 - PATCHING MATERIAL SHALL MATCH EXISTING ADJACENT MATERIALS AS CLOSELY AS POSSIBLE IN COLOR, PATTERNS, AND/OR TEXTURES.
 - ALL SALVAGE MATERIALS REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER. ALL NON-SALVAGE CONSTRUCTION MATERIALS AND DEBRIS FROM DEMOLITION WORK SHALL BE REMOVED FROM THE SITE AS WORK PROGRESSES, UNLESS OTHERWISE NOTED.
 - ISOLATE ALL DISSIMILAR METALS. G SHALL REQUEST APPROVAL BY THE ARCHITECT FOR MATERIALS USED FOR THIS PURPOSE, PRIOR TO INSTALLATION.
 - SEALANTS SHALL BE COMPATIBLE WITH ADJACENT SURFACE(S) THAT ARE IN CONTACT. REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS AND PROCEDURES.
 - CAULK JOINTS DISSIMILAR EXPOSED TO VIEW MATERIALS AS REQUIRED BY THE ARCHITECT.
 - ALL DOOR HARDWARE TO BE FL-ADA COMPLIANT.
 - ALL EXTERIOR WALLS, DOORS AND WINDOWS ARE EXISTING U.N.O.
 - ALL FINISHES TO BE PER CLASS INDICATED ON A-004
 - NO CONSTRUCTION SHALL OCCUR WITHOUT SHOP DRAWING APPROVAL. SHOP DRAWINGS TO BE PROVIDED TO ARCHITECT FOR REVIEW UPON BEING REVIEWED AND SIGNED/DATED BY THE GENERAL CONTRACTOR AND SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS:
 - CABINETS MILLWORK
 - RUNNING TRIM AND CASING PROFILES
 - PAINT/LAMINATE COLOR SAMPLES
 - ACOUSTICAL CEILING AND GRID
 - TOILET ACCESSORIES
 - KITCHEN EQUIPMENT
 - ROOF PENETRATIONS
 - HVAC EQUIPMENT
 - PLUMBING EQUIPMENT AND FIXTURES
 - ELECTRICAL EQUIPMENT AND FIXTURES
 - PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT (2) COPIES OF MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL PRODUCTS USED TO PERFORM THE WORK.

VERIFY ACTUAL LOCATIONS AND ELEVATIONS WITH DNR ENGINEER.

ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.

THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PROJECT AREA AND THOROUGHLY FAMILIARIZE THEMSELVES WITH THE ACTUAL JOB CONDITIONS PRIOR TO BEGINNING AND THE START OF WORK. FAILURE TO VISIT THE PROJECT SITE SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE WORK IN ACCORDANCE TO THE PLANS, SPECIFICATION, SPECIAL PROVISIONS AND CONTRACT.

THE CONTRACTOR SHALL VERIFY, AT THE SITE, ALL DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS AND SHALL NOTIFY THE DNR ENGINEER OF ANY DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS PRIOR TO PROCEEDING WITH THE WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE DNR ENGINEER.

THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE DNR ENGINEER.

WHERE UTILITIES AND FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DNR ENGINEER OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL BE AFFORDED ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

THE CONTRACTOR SHALL SHAPE GRADED AREA TO MAINTAIN SURFACE DRAINAGE. ALL ELEVATIONS ARE TO FINISH GRADE.

THE CONTRACTOR IS EXPECTED TO HAVE MATERIALS, EQUIPMENT, AND LABOR AVAILABLE ON A DAILY BASIS TO INSTALL AND MAINTAIN EROSION CONTROL FEATURES ON THE PROJECT. THIS MAY INVOLVE SEEDING, SILT FENCE, ROCK DITCH CHECKS, SILT BASINS OR SILT DIKES.

*DIVISIONS 20-41 OF THE STANDARD SPECIFICATIONS FOR BRIDGE AND HIGHWAY CONSTRUCTION, CURRENT EDITION WITH GS-15011 SHALL APPLY TO THIS PROJECT.

PROJECT NARRATIVE

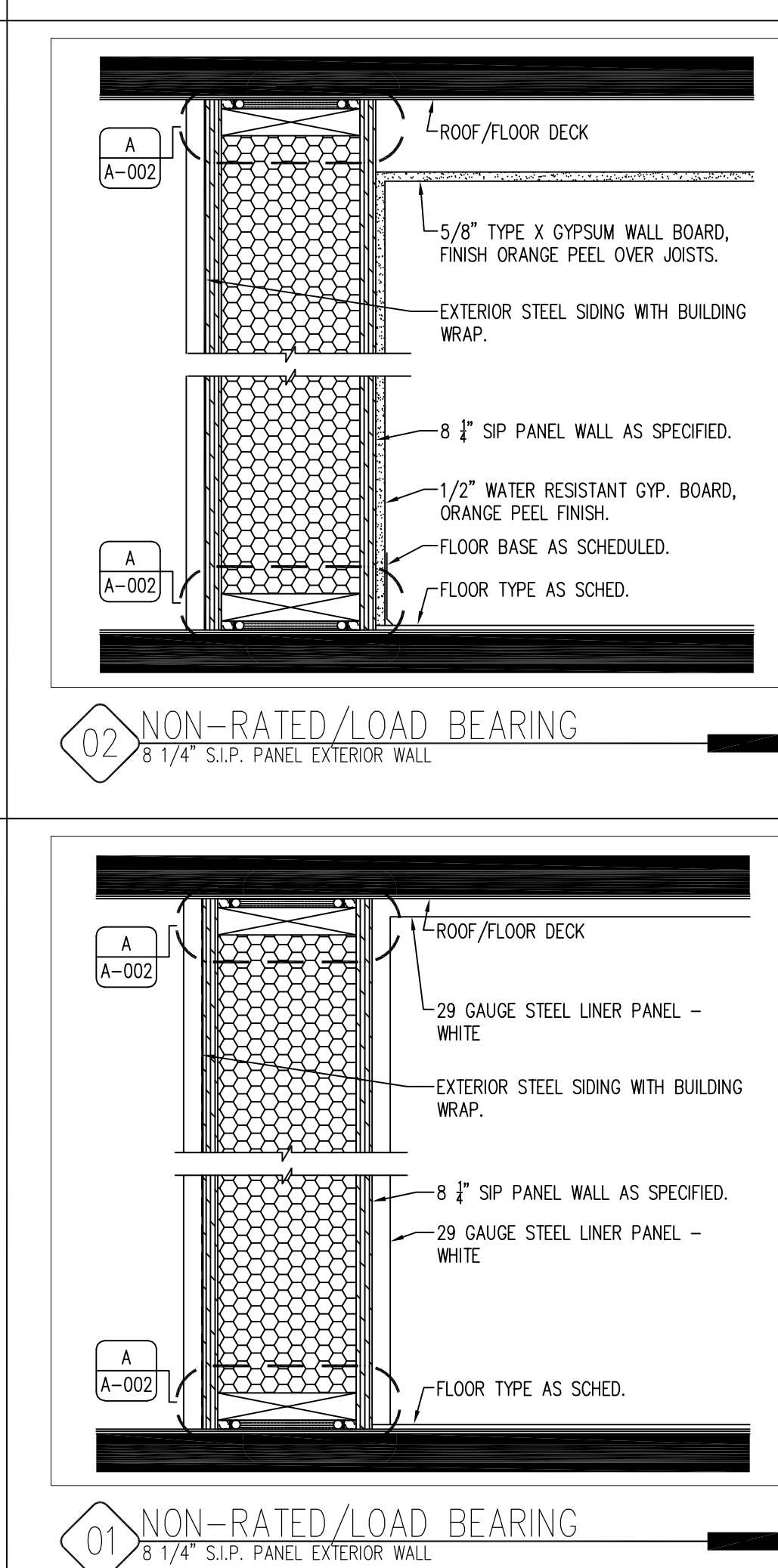
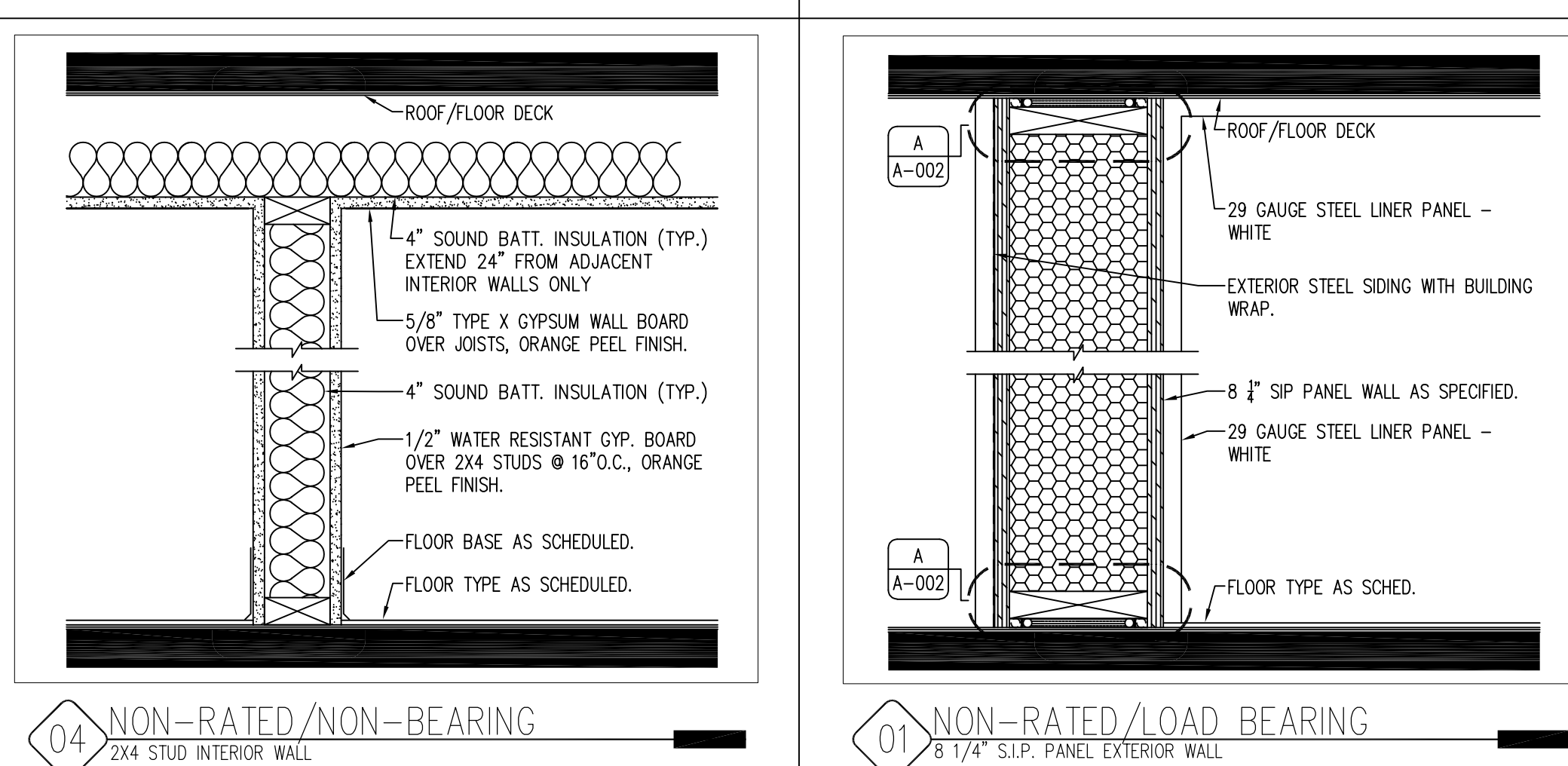
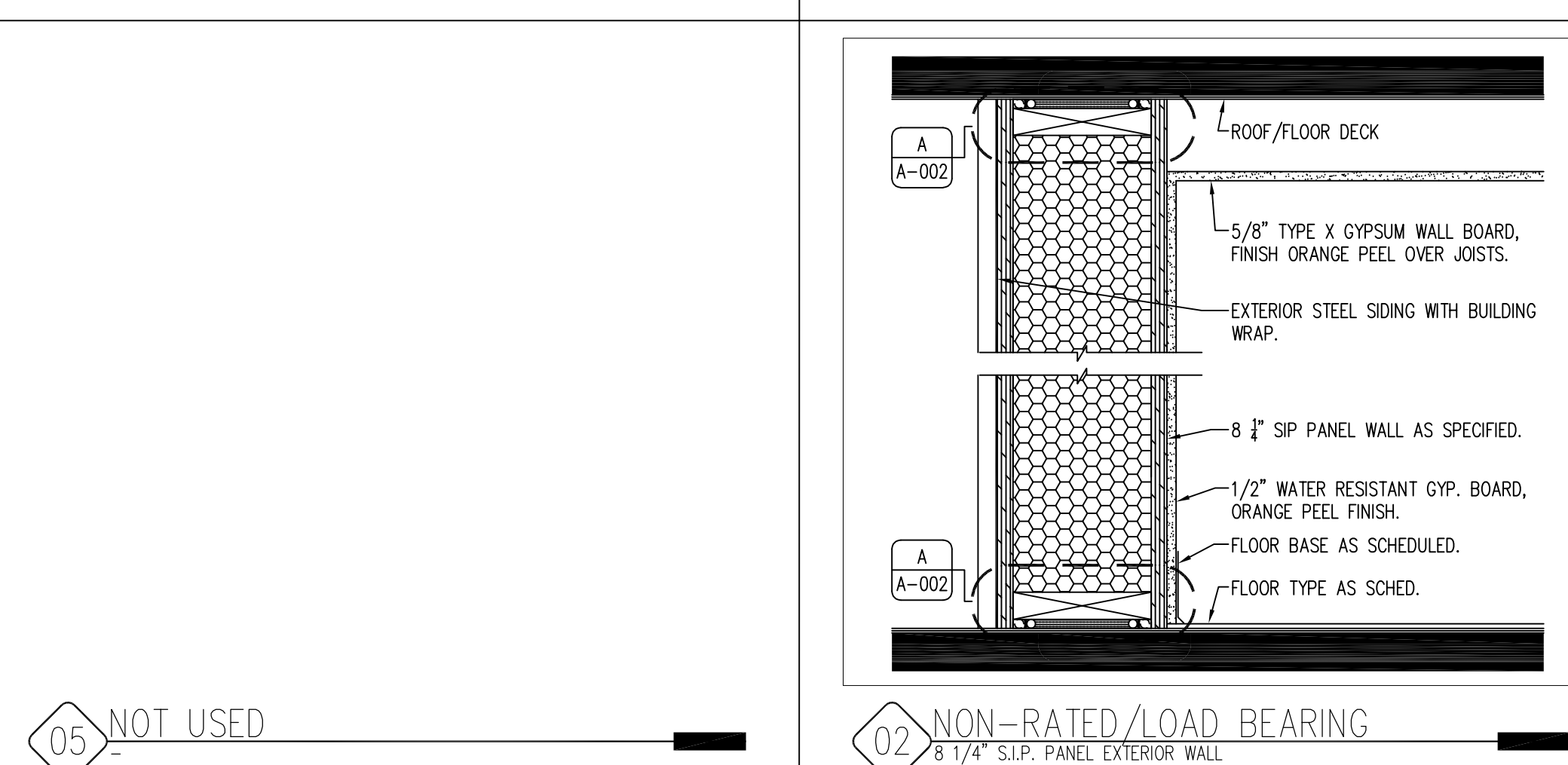
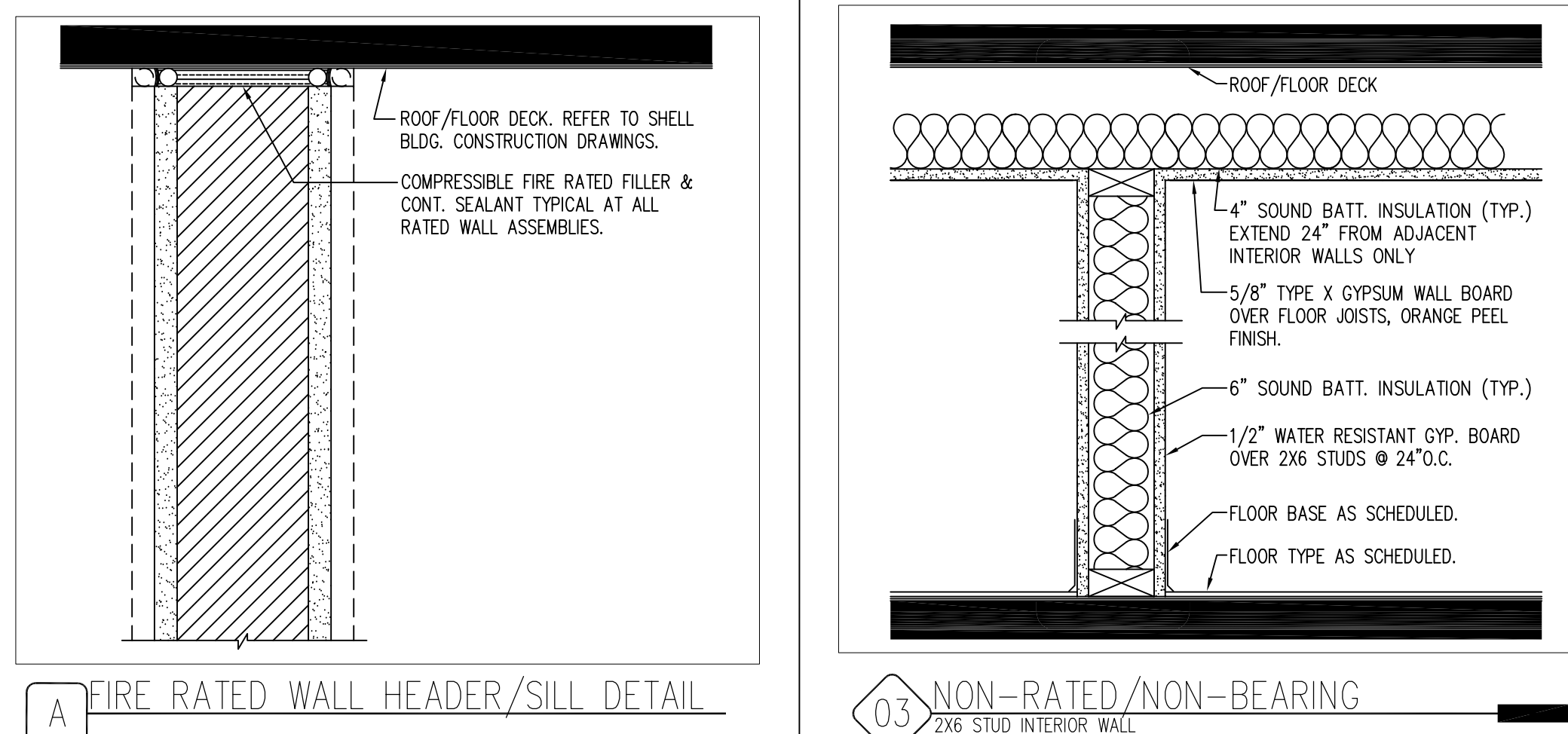
The contractor shall be responsible for providing and installing all items within this narrative, the drawings, and project manual unless specifically noted. This narrative is not meant to be a comprehensive account of all items to be covered by the contract, review all documents. The contractor is responsible for field verifying all dimensions and establishing all quantities that are dictated as "lump sum".

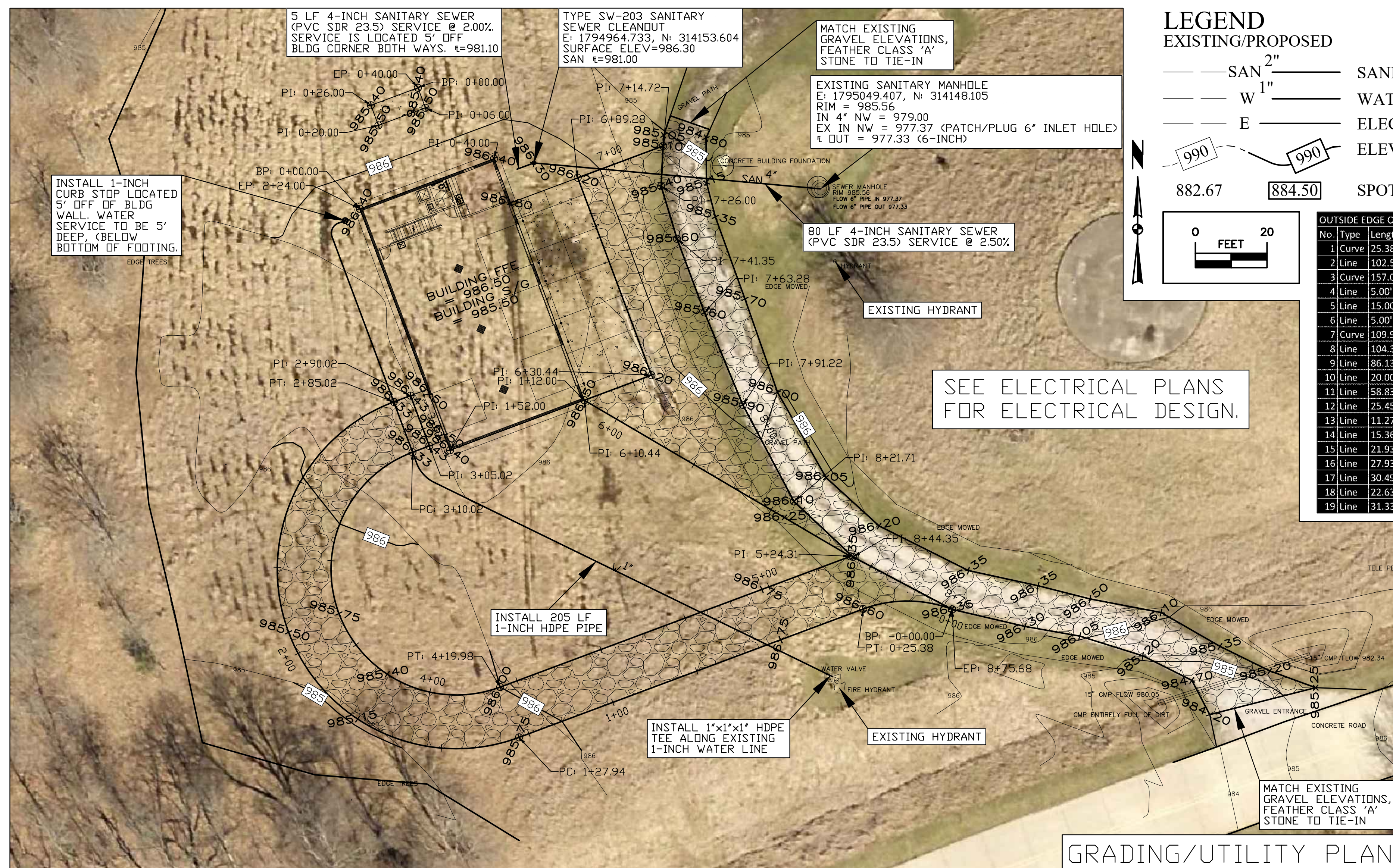
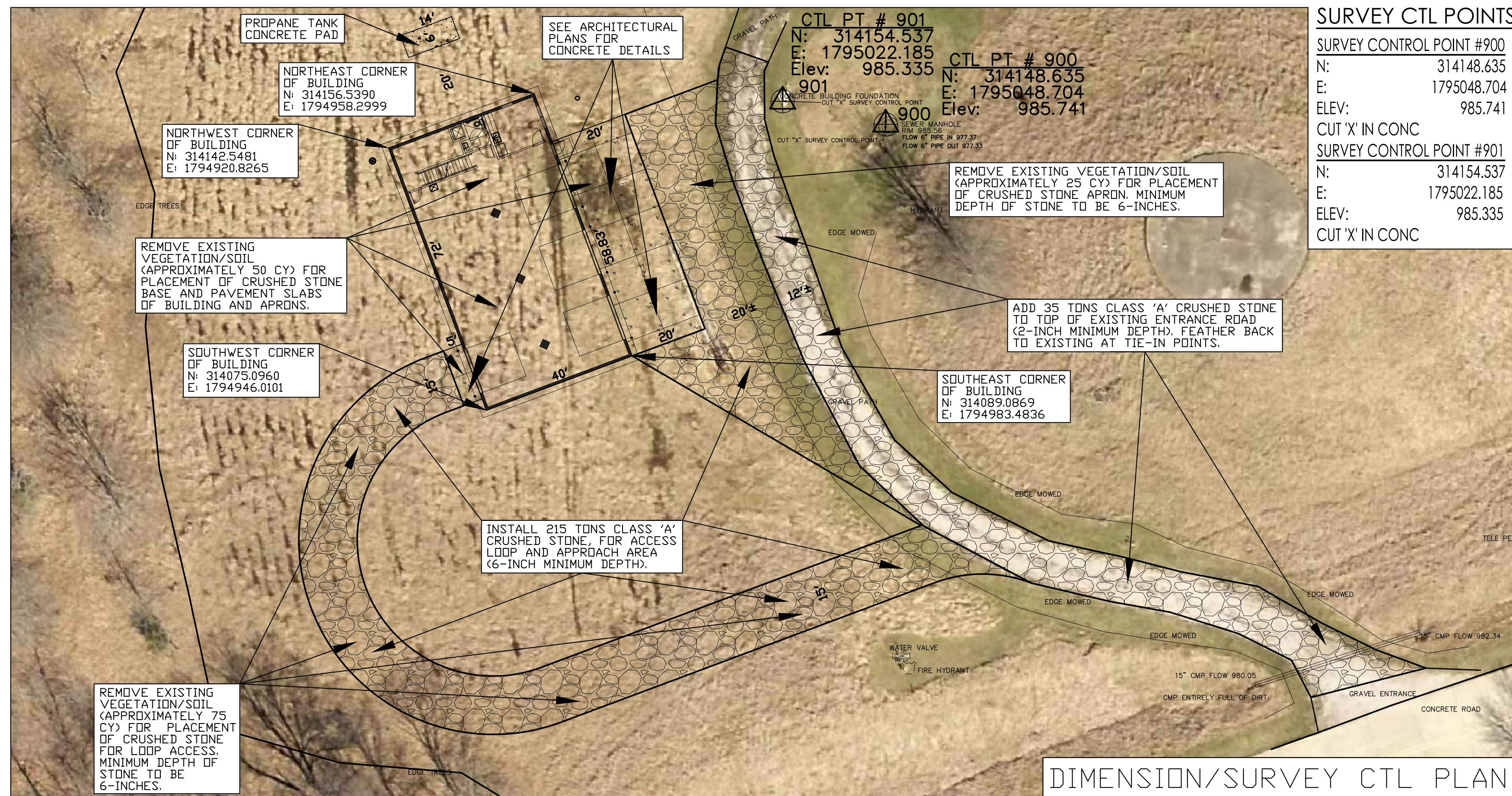
This project, Lake Rathbun Law Enforcement – Shop Building, shall commence after the contract is executed and shall be completed no later than September 29, 2023.

The contractor shall clear the ground of all vegetation and grade for new shop building. The contractor shall bring all utilities to the new shop building as shown on the plans. Contractor shall build a new 40x72 Structural Insulated Panel building as shown on the plans. The new addition shall have steel siding and roofing as outlined on the finish schedule.

The building shall be 16'-0" tall at the top plate, have four (4) overhead doors, and one walk-through door on the east end (front of building). The interior of the building shall have a restroom, breakroom, mechanical room, and a storage mezzanine. The interior shall have a concrete slab with floor-drains, and the exterior shall receive a concrete apron, refer to sheet A-100. The west side of the building will have a pull-through garage lane. The east side of the building shall receive a rock drive yard as shown on the civil plans.

WALL TYPES





| BUILDING PERIMETER CONTROL LINE | | | | | | | |
|---------------------------------|------|--------|----------------|-----------|----------|--|--|
| No. | Type | Length | Direction | Start Sta | End Sta | Start Point | End Point |
| 1 | Line | 40.00' | N69° 31' 36" E | 0+00.00' | 0+40.00' | (1794920.8265', 314142.5481', 986.50') | (1794958.2999', 314156.5390', 986.50') |
| 2 | Line | 72.00' | S20° 28' 24" E | 0+40.00' | 1+12.00' | (1794983.4836', 314089.0869', 986.50') | (1794983.4836', 314089.0869', 986.50') |
| 3 | Line | 40.00' | S69° 31' 36" W | 1+12.00' | 1+52.00' | (1794983.4836', 314089.0869', 986.50') | (1794946.0101', 314075.0960', 986.50') |
| 4 | Line | 72.00' | N20° 28' 24" W | 1+52.00' | 2+24.00' | (1794946.0101', 314075.0960', 986.50') | (1794920.8265', 314142.5481', 986.50') |

| FUEL PAD PERIMETER CONTROL LINE | | | | | | | |
|---------------------------------|------|--------|----------------|-----------|----------|--|--|
| No. | Type | Length | Direction | Start Sta | End Sta | Start Point | End Point |
| 1 | Line | 6.00' | S20° 28' 24" E | 0+00.00' | 0+06.00' | (1794937.0269', 314176.3496', 985.40') | (1794939.1255', 314170.7286', 985.50') |
| 2 | Line | 14.00' | S69° 31' 36" W | 0+06.00' | 0+20.00' | (1794939.1255', 314170.7286', 985.50') | (1794926.0098', 314165.8318', 985.50') |
| 3 | Line | 6.00' | N20° 28' 24" W | 0+20.00' | 0+26.00' | (1794926.0098', 314165.8318', 985.50') | (1794923.9112', 314171.4528', 985.40') |
| 4 | Line | 14.00' | N69° 31' 36" E | 0+26.00' | 0+40.00' | (1794923.9112', 314171.4528', 985.40') | (1794937.0269', 314176.3496', 985.40') |

| OUTSIDE EDGE OF GRAVEL | | | | | | | | | | | | |
|------------------------|-------|---------|--------|----------------|-----------|----------|--------------|-----------|----------------|--|--|-------------------------------|
| No. | Type | Length | Radius | Direction | Start Sta | End Sta | Delta angle | Ch length | Ch Direction | Start Point | End Point | Center Point |
| 1 | Curve | 25.38' | 35.00' | | 0+00.00' | 0+25.38' | 41.5490 (d) | 24.83' | N89° 41' 56" W | (1795086.1740', 314030.6760', 986.35') | (1795061.3460', 314030.8065', 986.60') | (1795073.5880', 313998.0173') |
| 2 | Line | 102.56' | | S69° 31' 36" W | 0+25.38' | 1+27.94' | | | | (1795061.3460', 314030.8065', 986.60') | (1794965.2649', 313994.9340', 985.75') | |
| 3 | Curve | 157.08' | 50.00' | | 1+27.94' | 2+85.02' | 180.0000 (d) | 100.00' | N20° 28' 24" W | (1794965.2649', 313994.9340', 985.75') | (1794930.2876', 314088.6174', 986.33') | (1794947.7762', 314041.7757') |
| 4 | Line | 5.00' | | N69° 31' 36" E | 2+85.02' | 2+90.02' | | | | (1794930.2876', 314088.6174', 986.33') | (1794934.9718', 314090.3663', 986.43') | |
| 5 | Line | 15.00' | | S20° 28' 24" E | 2+90.02' | 3+05.02' | | | | (1794934.9718', 314090.3663', 986.43') | (1794940.2184', 314076.3138', 986.43') | |
| 6 | Line | 5.00' | | S69° 31' 36" W | 3+05.02' | 3+10.02' | | | | (1794940.2184', 314076.3138', 986.43') | (1794935.5342', 314074.5649', 986.33') | |
| 7 | Curve | 109.96' | 35.00' | | 3+10.02' | 4+19.98' | 180.0000 (d) | 70.00' | S20° 28' 24" E | (1794935.5342', 314074.5649', 986.33') | (1794960.0183', 314008.9865', 986.00') | (1794947.7762', 314041.7757') |
| 8 | Line | 104.33' | | N69° 31' 36" E | 4+19.98' | 5+24.31' | | | | (1794960.0183', 314008.9865', 986.00') | (1795057.7629', 314045.4801', 986.35') | |
| 9 | Line | 86.13' | | N59° 35' 03" W | 5+24.31' | 6+10.44' | | | | (1795057.7629', 314045.4801', 986.35') | (1794983.4836', 314089.0869', 986.50') | |
| 10 | Line | 20.00' | | N69° 31' 36" E | 6+10.44' | 6+30.44' | | | | (1794983.4836', 314089.0869', 986.50') | (1795002.2202', 314096.0824', 986.20') | |
| 11 | Line | 58.83' | | N20° 28' 24" W | 6+30.44' | 6+89.28' | | | | (1795002.2202', 314096.0824', 986.20') | (1794981.6419', 314151.1995', 986.20') | |
| 12 | Line | 25.45' | | N69° 31' 36" E | 6+89.28' | 7+14.72' | | | | (1794981.6419', 314151.1995', 986.20') | (1795005.4803', 314160.0997', 985.10') | |
| 13 | Line | 11.27' | | S2° 50' 37" W | 7+14.72' | 7+26.00' | | | | (1795005.4803', 314160.0997', 985.10') | (1795004.9210', 314148.8410', 985.40') | |
| 14 | Line | 15.36' | | S16° 48' 03" E | 7+26.00' | 7+41.35' | | | | (1795004.9210', 314148.8410', 985.40') | (1795009.3600', 314134.1390', 985.60') | |
| 15 | Line | 21.93' | | S20° 28' 24" E | 7+41.35' | 7+63.28' | | | | (1795009.3600', 314134.1390', 985.60') | (1795017.0310', 314113.5930', 985.90') | |
| 16 | Line | 27.93' | | S22° 29' 16" E | 7+63.28' | 7+91.22' | | | | (1795017.0310', 314113.5930', 985.90') | (1795027.7150', 314087.7840', 985.90') | |
| 17 | Line | 30.49' | | S27° 54' 47" E | 7+91.22' | 8+21.71' | | | | (1795027.7150', 314087.7840', 985.90') | (1795041.9900', 314060.8380', 986.10') | |
| 18 | Line | 22.63' | | S46° 46' 46" E | 8+21.71' | 8+44.35' | | | | (1795041.9900', 314060.8380', 986.10') | (1795058.4840', 314045.3380', 986.35') | |
| 19 | Line | 31.33' | | S62° 05' 55" E | 8+44.35' | 8+75.68' | | | | (1795058.4840', 314045.3380', 986.35') | (1795086.1740', 314030.6760', 986.35') | |

CONSULTANT:

IOWA DEPARTMENT OF NATURAL RESOURCES

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SHEET NO:

SITE PLAN

Law Enforcement Shop for:
Lake Rathbun LE

Maraviva, IA 52571

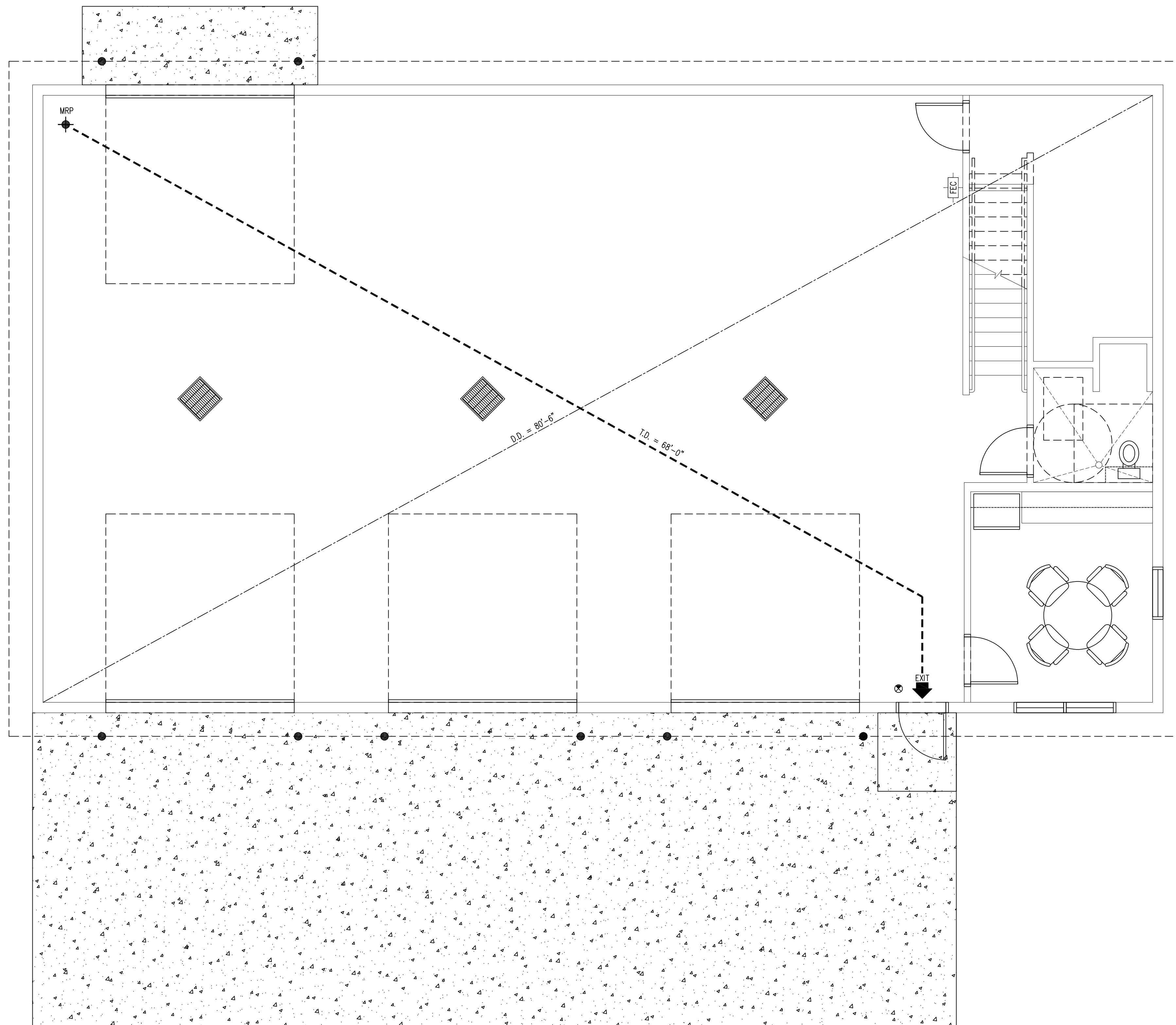
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CHK'D BY: DATE:
12.10.2022

SHEET NO: **C1**



01 LIFE SAFETY PLAN
SCALE: 1/4" = 1'-0"

CODE SUMMARY

| BUILDING AREA | 3,248 GSF | ALLOWABLE BLDG AREA (IBC TBL 503) | 9,000 SF | PROVIDED | 3,248 SF |
|-------------------|------------------------------|---|----------------------|---------------------|----------|
| CONSTRUCTION TYPE | V-B WITHOUT SPRINKLER SYSTEM | HEIGHT LIMITATION (IBC TBL 503) | 1 STORIES (40'-0") | 1 STORIES (24'-1") | |
| OCCUPANCY | GROUP S-1 - STORAGE | AUTOMATIC SPRINKLER SYSTEM (NFPA 13) | NO | NO | |
| | | MAXIMUM EXIT TRAVEL DISTANCE (IBC 1006.2.1) | 100'-0" | 68'-0" | |
| | | EXIT ACCESS DOORWAYS (IBC TBL 1006.2.1) | 1 | 1 | |
| | | EGRESS WIDTH PER OCCUPANT (IBC TBL 1005.1) [0.2"] | (0.2") X 9.3 = 1.87" | 1 DOORS @ 36" = 36" | |

LIFE SAFETY LEGEND

| SYMBOL | DESCRIPTION | LINE TYPE |
|---------|----------------------------------|-----------|
| --- | E.E. EXIT TO EXIT IN LINEAR FEET | ----- |
| --- | T.D. TRAVEL DISTANCE FROM M.R.P. | ----- |
| --- | D.D. DIAGONAL DISTANCE | ----- |
| ⊙ | EXIT LIGHT | |
| ◆ | MOST REMOTE POINT | |
| ⬆ | EXIT / ENTRY | |
| [-FEC-] | FIRE EXTINGUISHER | |

GENERAL NOTES

- a. INFORMATION PROVIDED ON THE LIFE SAFETY PLAN INDICATES EGRESS REQUIREMENTS.
- b. ALL CODE REFERENCES ARE FROM INTERNATIONAL BUILDING CODE, W/ AMENDMENTS UNLESS OTHERWISE NOTED

LIFE SAFETY PLAN

Law Enforcement Shop for:
Lake Rathbun LE

12194 Honey Creek Place
Maravia, IA 52571

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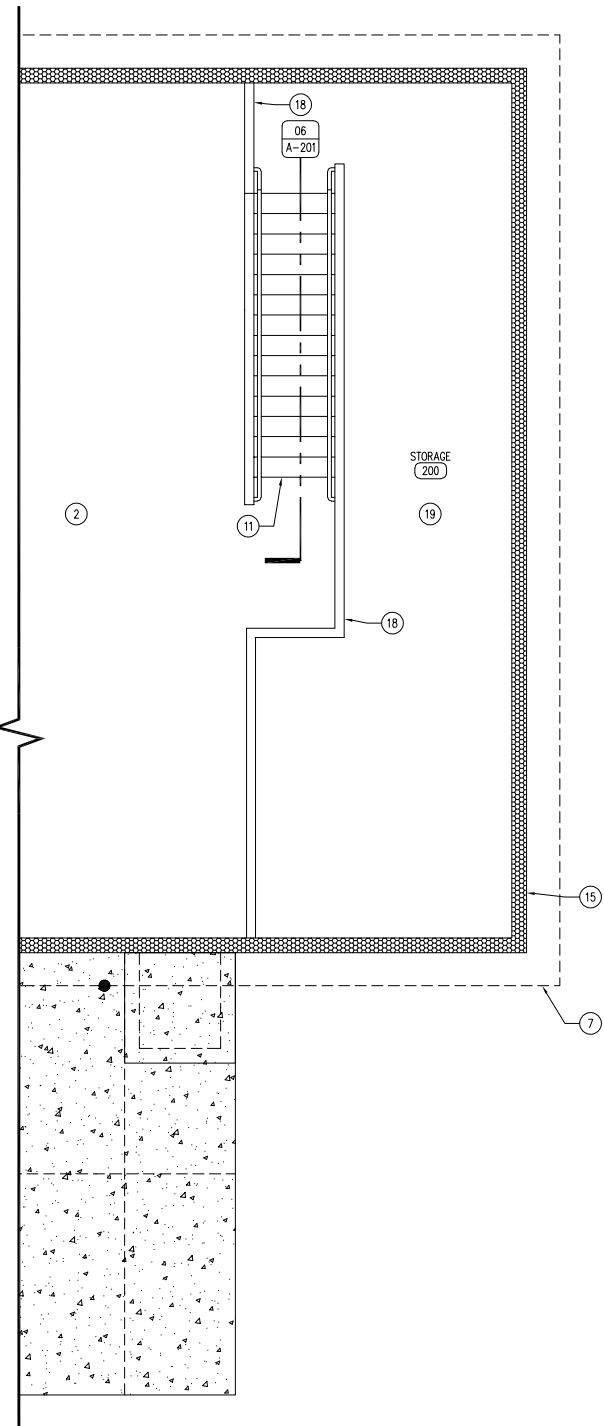
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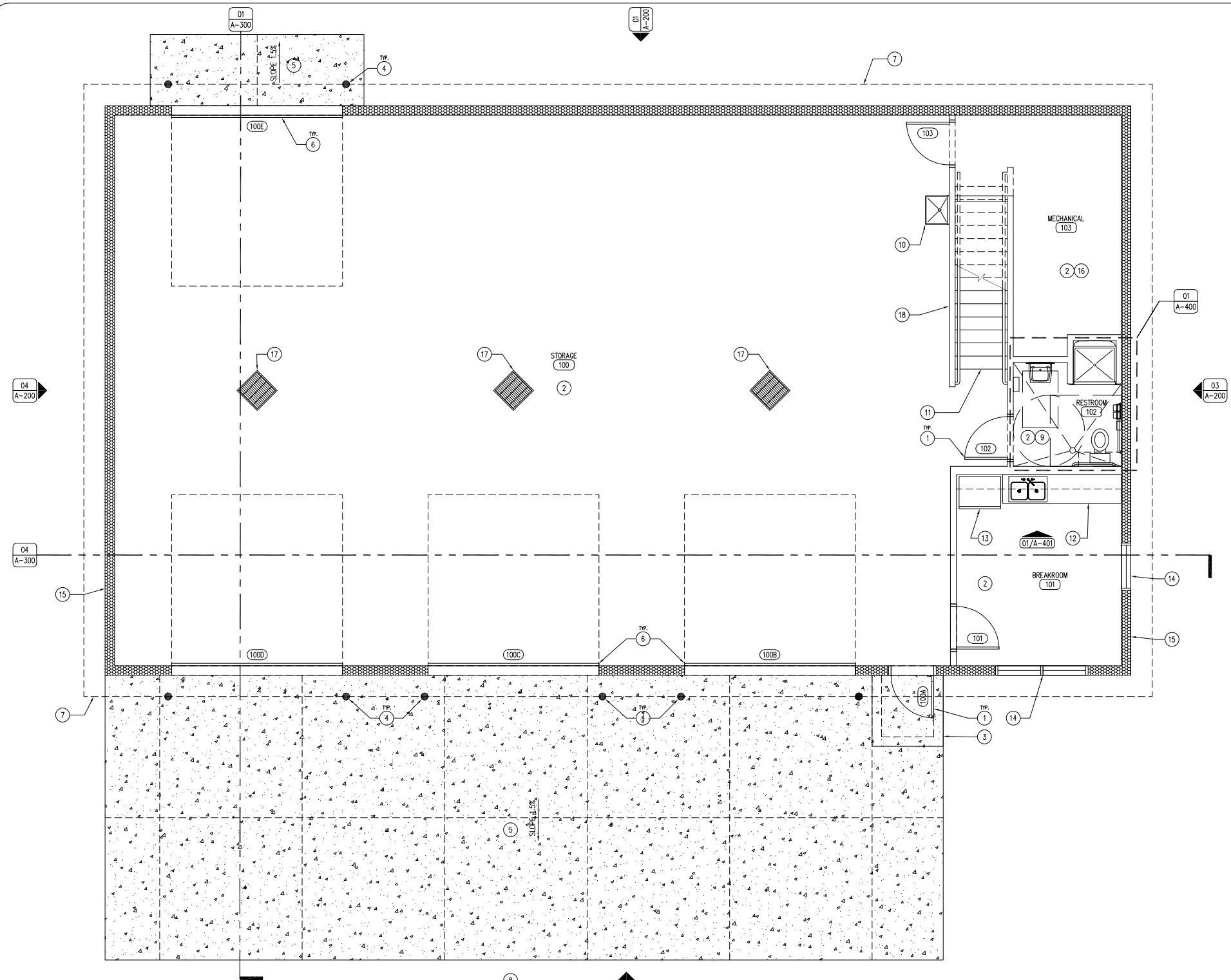
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02 REFERENCE FLOOR PLAN - MEZZANINE LEVEL
SCALE: 1/4" = 1'-0"



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



KEYNOTES

1. DOOR AS SCHEDULED, REFER TO SHEET A-600.
2. 6" CONCRETE BUILDING SLAB OVER 2" RIGID INSULATION AND 4" SUBBASE, #4 REBAR 24" O.C. BOTH DIRECTIONS. SMOOTH TROWEL FINISH WITH CONCRETE SEALER, REFER TO SHEET A-600.
3. 6" THICK STOP FOOTING, #4 REBAR 24" O.C. ALL DIRECTIONS WITH 6" SUBBASE. TURN DOWN STOP FOOTING ON THREE SIDES 48" MINIMUM.
4. STEEL TRAFFIC BOLLARD WITH PLASTIC COVER SLEEVE, REFER TO DETAIL 05/A-300.
5. 6" CONCRETE APRON OVER 6" SUBBASE, #4 REBAR 24" O.C. BOTH DIRECTIONS. BROOM TEXTURE FINISH. SLOPE 1.5% AWAY FROM BUILDING, REFER TO SHEET A-600.
6. OVERHEAD GARAGE DOOR, REFER TO DOOR SCHEDULE SHEET A-600.
7. ROOF LINE ABOVE.
8. CRUSHED LIMESTONE EQUIPMENT YARD, REFER TO CIVIL PLANS.
9. UNI-SEX RESTROOM, REFER TO ENLARGED FLOOR PLAN, 01/A-400.
10. UTILITY SINK, REFER TO PLUMBING DRAWINGS.
11. STAIRS TO STORAGE MEZZANINE, REFER TO 06/A-201.
12. HARDWOOD CABINETS, REFER TO SHEET A-401, ELECTRICAL AND PLUMBING DRAWINGS FOR MORE INFORMATION.
13. REFRIGERATOR, CONTRACTOR TO SUPPLY ALL APPLIANCES, REFER TO SHEET A-401 FOR MORE INFORMATION.
14. WINDOW AS SCHEDULED, REFER TO SHEET A-600.
15. 8 1/2" STRUCTURAL INSULATED PANEL BUILDING, BY BUILDING MANUFACTURER, WITH BUILDING WRAP AND 24 GAUGE METAL WALL PANEL, REFER TO FINISH SCHEDULE SHEET A-600.
16. MECHANICAL ROOM, REFER TO ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS FOR EQUIPMENT LAYOUT AND PLACEMENT.
17. 24" SQUARE HEAVY-DUTY STEEL GRATE DRAIN, CAST INTO CONCRETE SLAB WITH 48" DEEP OF 1 1/2" CLEAN ROCK, WRAP ROCK IN TWO LAYERS OF GEOTEXTILE, REFER TO SECTIONS.
18. EXTEND WALL FROM BELOW 42" ABOVE TOP OF FLOOR FOR GUARDRAIL HEIGHT BARRIER, WRAP WALL IN STEEL LINER PANEL, WITH HARD MAPLE CAP, REFER TO DETAIL 09/A-600.
19. STORAGE MEZZANINE, FLOOR TO BE T&G PLYWOOD, REFER TO FINISH SCHEDULE A-600.

GENERAL NOTES

- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
- C. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- D. FIELD VERIFY ALL DIMENSIONS AND QUANTITIES PRIOR TO CONSTRUCTION, SHEET A-101.
- E. FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ALL UTILITIES SHOWN ON PLAN ARE AN APPROXIMATION OF THEIR EXISTING LOCATION TO THE BEST OF THE DNR'S KNOWLEDGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL UTILITIES PRIOR TO DIGGING. ASSUME ALL ELECTRICAL, WATER, GAS, AND SEWER LINES ARE LIVE AND RUNNING, UNLESS SPECIFICALLY NOTED OTHERWISE.
- F. CONTRACTOR SHALL HAVE BUILDING STRUCTURE PRE-ENGINEERED PRIOR TO CONSTRUCTION, SUBMIT PLANS FOR APPROVAL.
- G. INTERIOR CONCRETE SLAB TO BE SLOPED 1% TO DRAINS.
- H. ALL PLYWOOD CABINET AND DRAWER SURFACES TO HAVE VOC-FREE, CLEAR SATIN FINISH. ALL PLYWOOD PRODUCTS TO HAVE NO ADDED UREA-FORMALDEHYDE (NAUF).

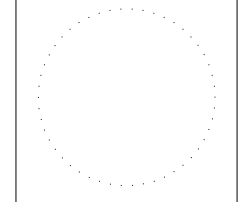
REFERENCE FLOOR PLANS

Law Enforcement Shop for:
Lake Rathbun LE

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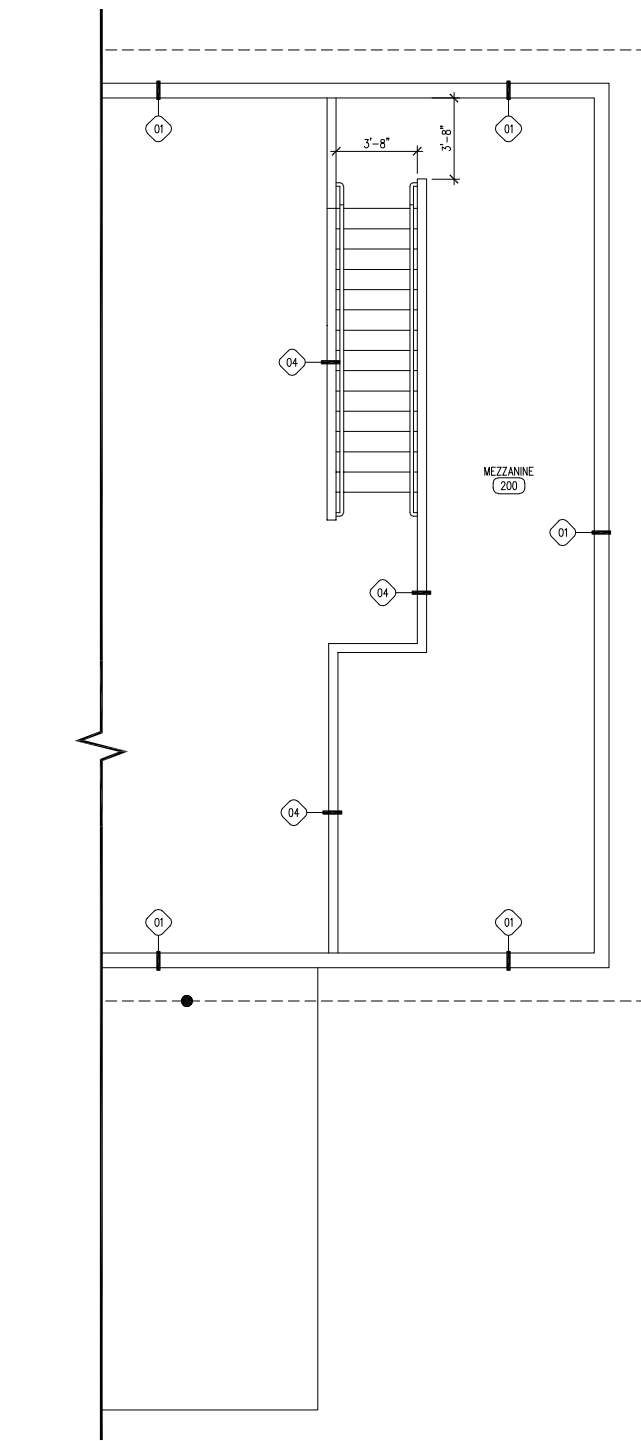


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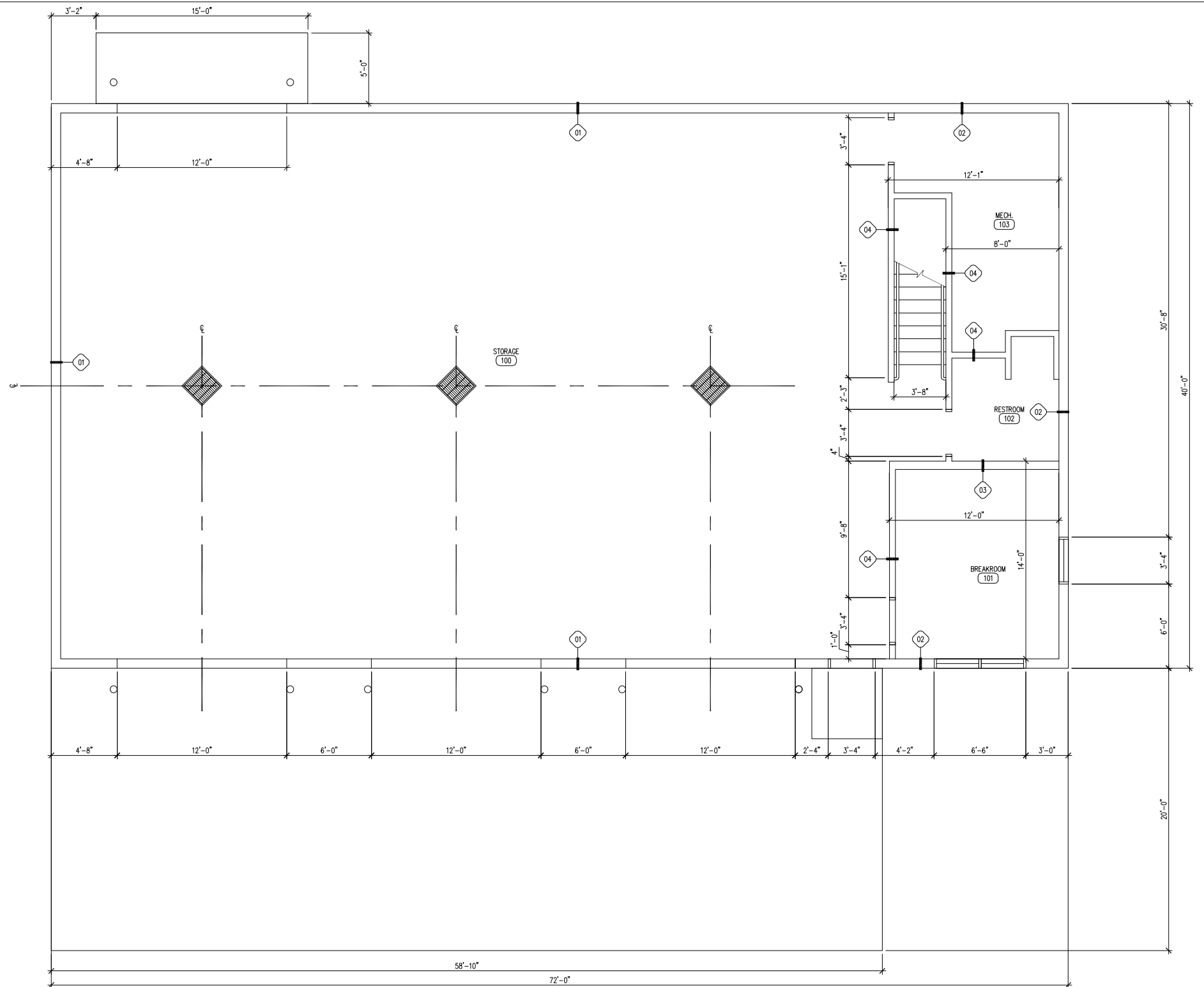
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02 DIMENSION FLOOR PLAN – MEZZANINE LEVEL
SCALE: 1/4" = 1'-0"

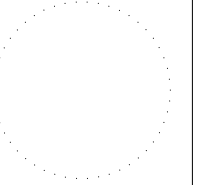


01 DIMENSION FLOOR PLAN – GROUND LEVEL
SCALE: 1/4" = 1'-0"

GENERAL NOTES

- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
- C. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- D. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-101.
- E. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL PLAN.
- F. CONTRACTOR SHALL HAVE THIS BUILDING, PRIOR TO CONSTRUCTION, PRE-ENGINEERED BY BUILDING SUPPLIER.
- G. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING AND POWER LAYOUTS.
- H. MAIN SHOP AND STORAGE SLABS TO BE SLOPED BETWEEN 1/8" MIN. – 1.5% MAX. TO DRAINS.
- I. ALL PLYWOOD PRODUCTS TO HAVE NO ADDED UREA-FORMALDEHYDE (NAUF).
- J. ALL PLYWOOD CABINET AND DRAWER SURFACES TO HAVE VOC-FREE, CLEAR SATIN FINISH.

CONSULTANT:



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DIMENSION FLOOR PLANS

Law Enforcement Shop for:
Lake Rathbun LE

12194 Honey Creek Place
Marion, IA 52571

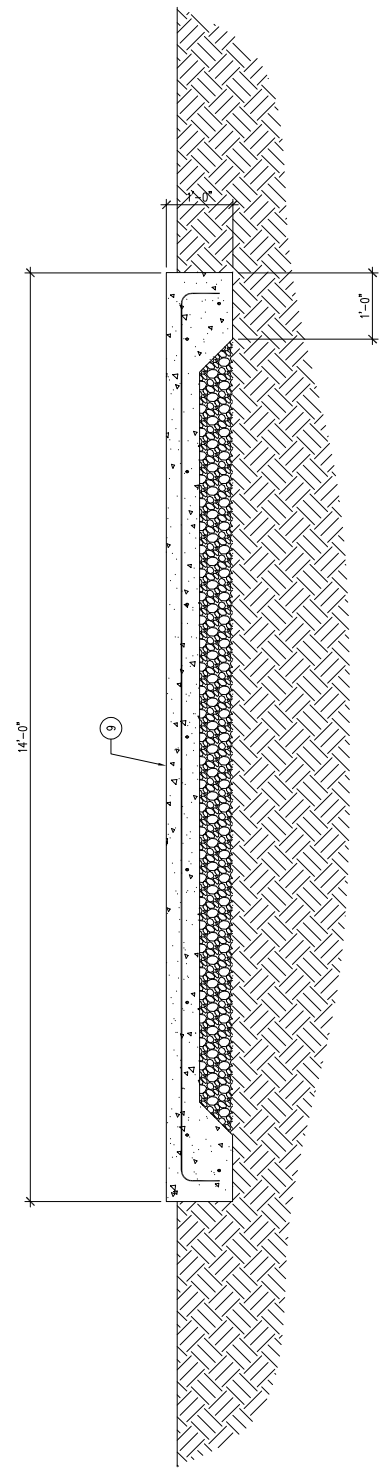
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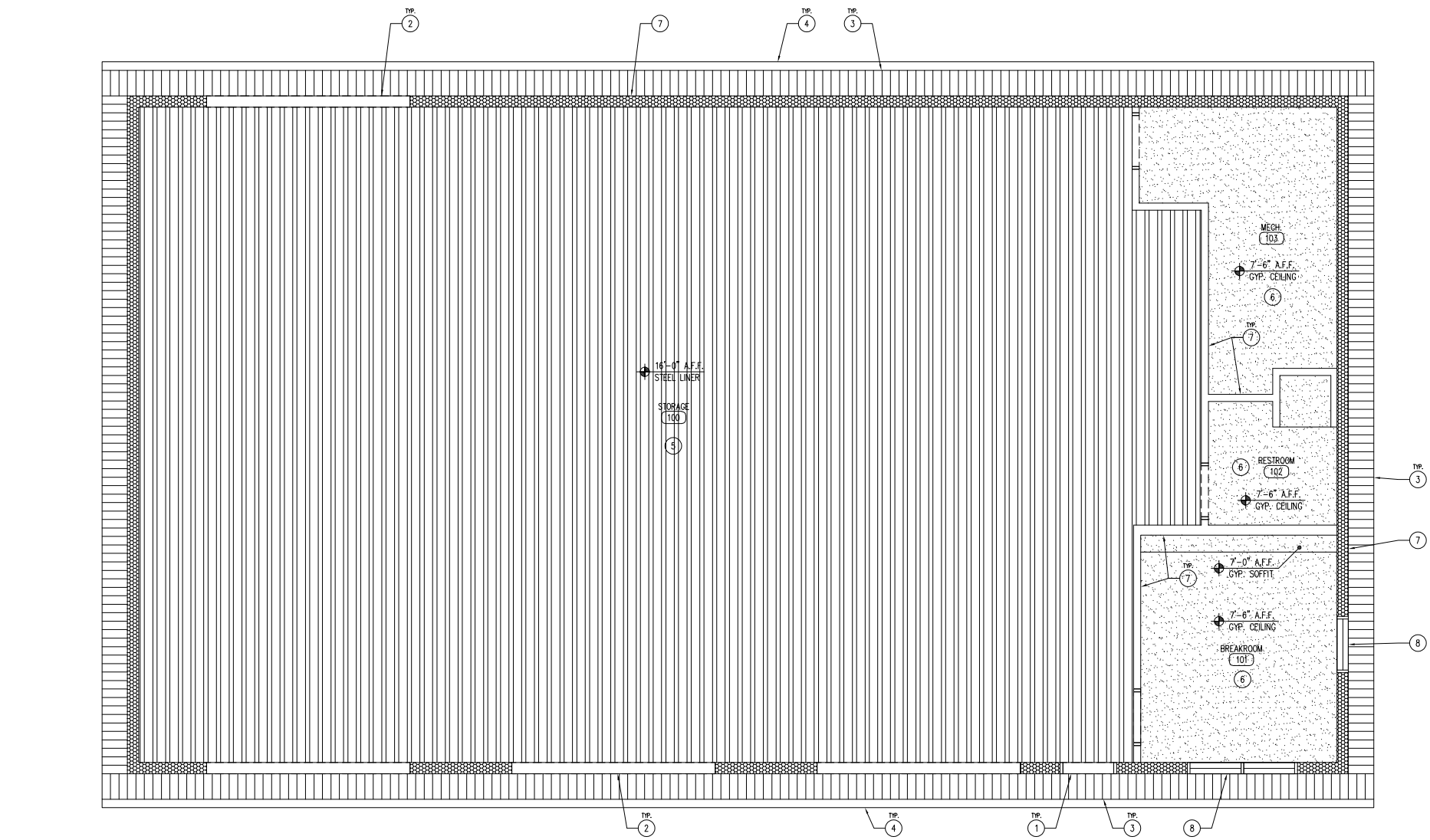
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02 LP TANK PAD
SCALE: 3/4" = 1'-0"



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

LP TANK NARRATIVE

CONTRACTOR SHALL PROVIDE:

LP TANK - CONTRACTOR SHALL PURCHASE AND INSTALL (OR COORDINATE INSTALLATION WITH LP SUPPLIER) ONE (1) FIVE-HUNDRED GALLON (500 GA) LIQUID PROPANE TANK. CONTRACTOR SHALL INCLUDE ALL NECESSARY EQUIPMENT (REGULATORS, PIPING, ETC.) FOR PROPER USE OF THE TANK.

TANK PAD - TANK SHALL BE BOLTED DOWN TO A 6" THICK CONCRETE PAD (6'-0" WIDE X 14'-0" LONG) WITH #4 REBAR 36" O.C. BOTH DIRECTIONS OVER 6" SUBBASE AND 12" THICKENED EDGE, TO BE POURED BY THE CONTRACTOR AT A LOCATION SHOWN ON CIVIL PLANS.

LEGEND

- 5/8" TYPE "X" GYPSUM BOARD
- 29 GAUGE LINER PANEL

KEYNOTES

1. DOOR AS SCHEDULED, REFER TO SHEET A-600.
2. OVERHEAD GARAGE DOOR, REFER TO DOOR SCHEDULE SHEET A-600.
3. 29 GAUGE STEEL "Y" SOFFIT PANEL, MATCH ROOF COLOR.
4. 6" SEAMLESS METAL GUTTERS AND DOWNSPOUTS, COLOR TO MATCH ROOF. SHUR-FLO GUTTER GUARDS, OR APPROVED EQUAL, OVER ENTIRE GUTTER OPENING.
5. 29 GAUGE STEEL LINER PANEL CEILING OVER 5/8" TYPE "X" GYPSUM BOARD, REFER TO FINISH SCHEDULE A-600.
6. 5/8" TYPE "X" GYPSUM CEILING, REFER TO FINISH SCHEDULE A-600.
7. WALL AS SPECIFIED, REFER TO WALL TYPES A-002.
8. WINDOW AS SCHEDULED, REFER TO SHEET A-600.
9. 6'-0" WIDE X 14'-0" LONG X 6" THICK CONCRETE TANK PAD WITH #4 REBAR 24" O.C. BOTH DIRECTIONS. 12" DEEP X 12" WIDE THICKENED EDGE, AS SHOWN, PLACE ON NORTH SIDE OF BUILDING PER CIVIL PLANS.

GENERAL NOTES

- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
- C. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- D. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-101.
- E. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL PLAN.
- F. CONTRACTOR SHALL HAVE THIS BUILDING, PRIOR TO CONSTRUCTION, PRE-ENGINEERED BY BUILDING SUPPLIER.
- G. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING AND POWER LAYOUTS.
- H. MAIN SHOP AND STORAGE SLABS TO BE SLOPED BETWEEN 1% MIN. - 1.5% MAX. TO DRAINS.
- I. ALL PLYWOOD PRODUCTS TO HAVE NO ADDED UREA-FORMALDEHYDE (NAUF).
- J. ALL PLYWOOD CABINET AND DRAWER SURFACES TO HAVE VOC-FREE, CLEAR SATIN FINISH.

REFLECTED CEILING PLAN

Law Enforcement Shop for:
Lake Rathbun LE

12194 Honey Creek Place
Marion, IA 52571

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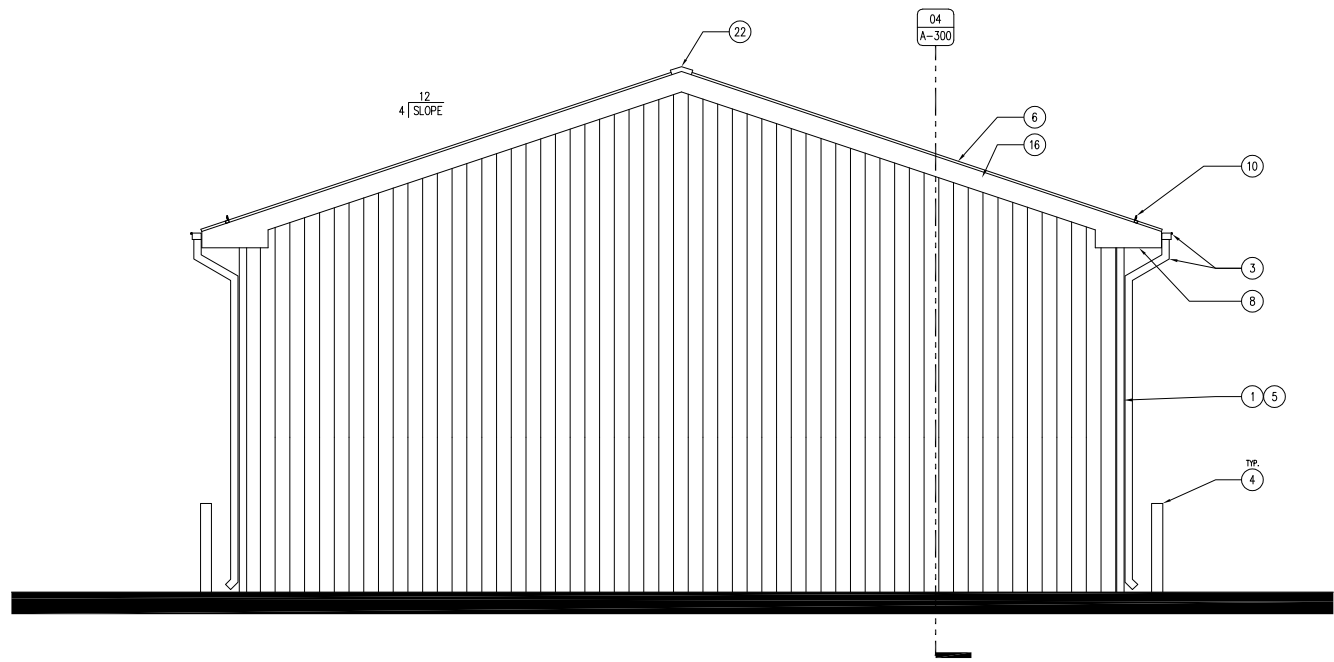
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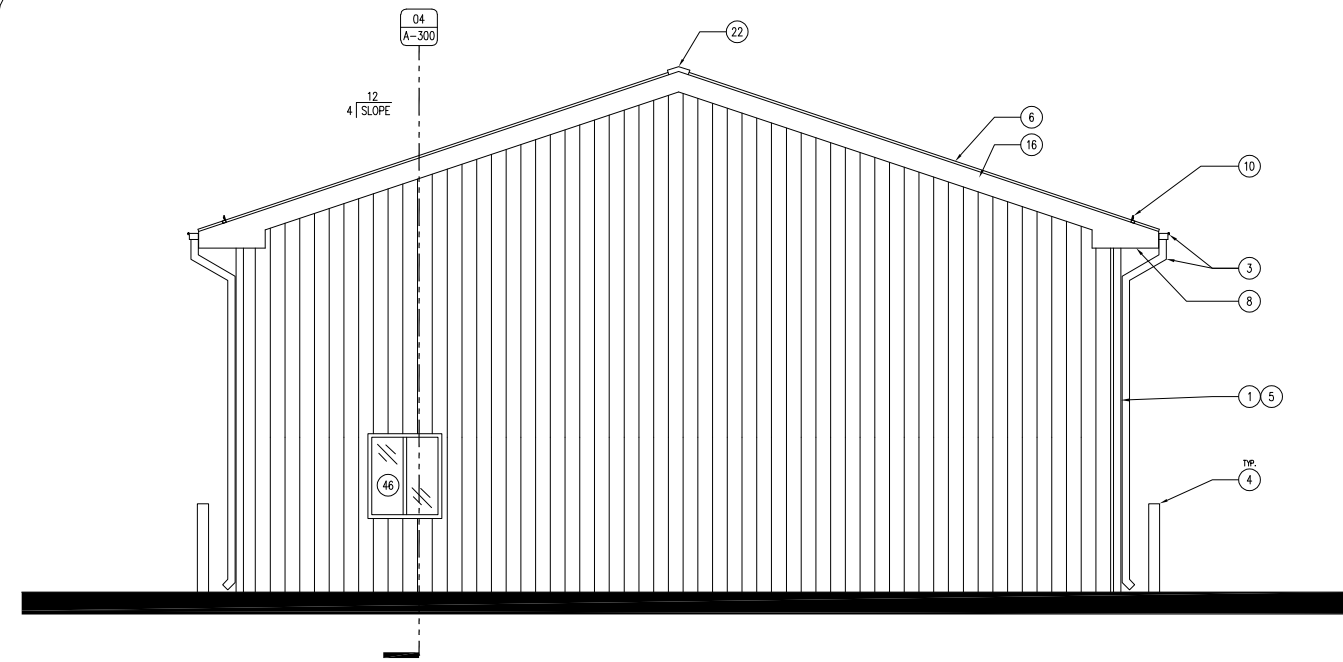
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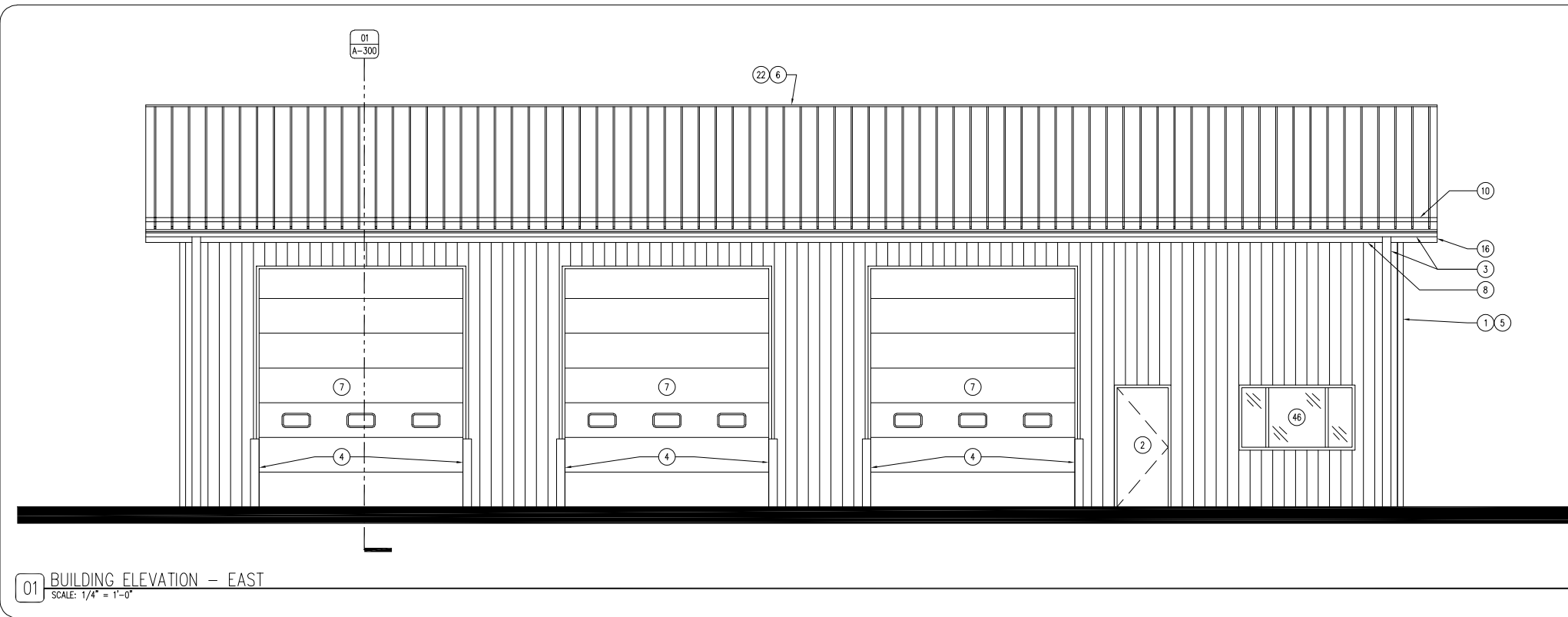
04 BUILDING ELEVATION - SOUTH
SCALE: 1/4" = 1'-0"



03 BUILDING ELEVATION - NORTH
SCALE: 1/4" = 1'-0"



02 NOT USED
SCALE: 1 1/2" = 1'-0"



01 BUILDING ELEVATION - EAST
SCALE: 1/4" = 1'-0"

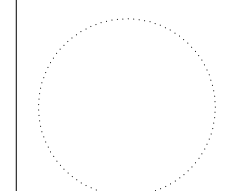
KEYNOTES

1. STEEL WALL PANEL OVER BUILDING WRAP, REFER TO SHEET A-600.
2. DOOR AS SCHEDULED, REFER TO SHEET A-600.
3. 6" SEAMLESS METAL GUTTER AND DOWNSPOUT SYSTEM WITH SHUR-FLO GUTTER GUARDS, COLOR TO MATCH ROOF.
4. STEEL TRAFFIC BOLLARD WITH PLASTIC COVER SLEEVE, REFER TO 05/A-300.
5. 8 1/2" STRUCTURAL INSULATED PANEL BUILDING, BUILDING STRUCTURE TO BE PRE-ENGINEERED.
6. STEEL SNAP-CLAD ROOF WITH STRIATIONS OVER SELF-ADHERED WATER AND ICE GUARD, ENTIRE ROOF, REFER TO SHEET A-600.
7. OVERHEAD GARAGE DOOR, REFER TO SHEET A-600.
8. 29 GAUGE V-GROOVE FLUSH VENTED SOFFIT PANEL, COLOR TO MATCH ROOF.
9. 2X TOP PLATE, PER BUILDING MANUFACTURER.
10. 5-SI. COLORGARD METAL SNOW GUARD BARS, OR APPROVED EQUAL, ALL EAVES, ENTIRE LENGTH OF BUILDING, COLOR TO MATCH ROOF.
11. 6" CONCRETE BUILDING SLAB OVER 2" RIGID INSULATION AND 4" SUBBASE, #4 REBAR 24" O.C. BOTH DIRECTIONS. SMOOTH TROWEL FINISH WITH CONCRETE SEALER, REFER TO SHEET A-600.
12. 6" CONCRETE APRON SLAB OVER 6" SUBBASE, #4 REBAR 24" O.C. BOTH DIRECTIONS. BROOM FINISH, SLOPE AWAY FROM BUILDING.
13. ROOF RAKE TRIM, PER ROOF MANUFACTURER.
14. TRENCH FOOTING, REFER TO DETAIL 02/A-300.
15. BUILDING TRUSS PER BUILDING MANUFACTURER, SPACING FOR DEMONSTRATION ONLY.
16. 2X FASCIA BY BUILDING MANUFACTURER. WRAP FASCIA WITH STEEL BREAK METAL TO MATCH ROOF.
17. SIMPSON TRUSS CLIP.
18. DRIP-EDGE, COLOR TO MATCH ADJACENT MATERIAL.
19. 2X OUTRIGGER, EXTEND 18" FOR OVERHANG, PER BUILDING MANUFACTURER.
20. WALL FINISH AS SCHEDULED, REFER TO FINISH SCHEDULE A-600.
21. ROOF SHEATHING PER BUILDING MANUFACTURER.
22. STEEL VENTED ROOF RIDGE CAP BY ROOFING MANUFACTURER.
23. 2" SUB-SLAB 40 PSI RIGID INSULATION UNDER HEATED SHOP BAYS AND AROUND PERIMETER OF FOUNDATION. TAPE AND SEAL ALL JOINTS.
24. 2X TREATED DOUBLE SILL PLATE WITH SEALANT ON ALL POINTS, PER BUILDING MANUFACTURER. INSTALL SILL PLATE ANCHORS PER CODE BY BUILDING MANUFACTURER.
25. ROOF CLIPS, PER MANUFACTURER'S RECOMMENDATIONS.
26. SILL ANCHOR, PER BUILDING MANUFACTURER'S RECOMMENDATIONS.
27. 24" SQUARE HEAVY-DUTY STEEL GRATE DRAIN, CAST RIM INTO CONCRETE SLAB. DRILL 48" DEEP HOLE AND LINE WITH TWO (2) LAYERS OF FILTER FABRIC, FILL HOLE WITH 1 1/2" CLEAN ROCK.
28. 2X BLOCKING AS REQUIRED.
29. INSULATION BAFFLE.
30. R-42 FIBERGLASS BATT ATTIC INSULATION OVER VAPOR BARRIER.
31. 1/2" EXPANSION JOINT WITH CONTINUOUS SEALANT.
32. 5/8" TYPE X GYPSUM BOARD.
34. STEEL LINER PANEL AND TRIM THROUGHOUT HEATED SHOP, WALLS AND CEILING, COLOR TO BE WHITE.
35. 6" CONCRETE STOOP FOOTING WITH #4 REBAR 24" O.C. BOTH DIRECTIONS OVER 6" COMPACTED SUBBASE, TURN THREE SIDES DOWN 4'-0" AS SHOWN, BROOM FINISH, SLOPE AWAY FROM DOOR.
36. 3/4" PLYWOOD RISER.
37. EXTEND WALL 42" FROM TOP OF FLOOR FOR GUARDRAIL HEIGHT BARRIER, WRAP WALL IN STEEL LINER PANEL. TOP WALL WITH 3/4" HARD MAPLE CAP, REFER TO DETAIL 09/A-600.
38. 1 1/2" ALUMINUM HANDRAIL, INSTALL 3'-0" ABOVE TOP OF FLOOR. EXTEND 12" AT TOP AND BOTTOM OF STAIR, AS SHOWN.
39. WOOD STAIR CARRIAGE WITH 3/4" WOOD TREADS AND 3/4" PLYWOOD RISERS. RISER HEIGHT TO BE 7" MAX., TREAD DEPTH TO BE 11" MIN., LANDINGS AS SHOWN. HEADROOM BELOW STAIR TO BE 7'-6" MINIMUM.
40. FLOOR JOISTS, SIZING TO BE DETERMINED BY BUILDING MANUFACTURER.
41. 3/4" PLYWOOD T&G FLOOR DECK.
42. OSHA YELLOW PLASTIC COVER SLEEVES FOR ALL BOLLARDS.
43. 6" DIAMETER X 3/8" THICK STEEL POST, 8'-0" LONG. EMBED 3'-0" DEEP IN CONCRETE FOOTING, FILL POST VOID WITH CONCRETE GROUT.
44. CONCRETE BOLLARD FOOTING TO BE 1'-6" DIAMETER X 4'-0" DEEP.
45. BASE DRIP FLASHING BY SIDING MANUFACTURER.
46. WINDOW AS SCHEDULED, REFER TO SHEET A-600.
47. OVERHEAD DOOR HEADER BY BUILDING MANUFACTURER. FLASH AND TRIM PER SIDING MANUFACTURER. WRAP 2X JAMB EXTENSIONS IN BLACK BREAK METAL WITH GARAGE DOOR SEALS PER DOOR MANUFACTURER.
48. PROTECTIVE TRIM OVER FOUNDATION INSULATION, TUCK UNDER BASE DRIP FLASHING TRIM, DEPTH OF 2" MINIMUM.

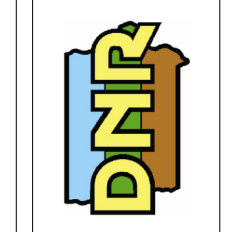
GENERAL NOTES

- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
- C. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- D. FIELD VERIFY ALL DIMENSIONS AND QUANTITIES PRIOR TO CONSTRUCTION, SHEET A-101.
- E. FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ALL UTILITIES SHOWN ON PLAN ARE AN APPROXIMATION OF THEIR EXISTING LOCATION TO THE BEST OF THE DNR'S KNOWLEDGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL UTILITIES PRIOR TO DIGGING. ASSUME ALL ELECTRICAL, WATER, GAS, AND SEWER LINES ARE LIVE AND RUNNING, UNLESS SPECIFICALLY NOTED OTHERWISE.
- F. CONTRACTOR SHALL HAVE BUILDING STRUCTURE PRE-ENGINEERED PRIOR TO CONSTRUCTION, SUBMIT PLANS FOR APPROVAL.
- G. INTERIOR CONCRETE SLAB TO BE SLOPED 1% TO DRAINS.
- H. ALL PLYWOOD CABINET AND DRAWER SURFACES TO HAVE VOC-FREE, CLEAR SATIN FINISH. ALL PLYWOOD PRODUCTS TO HAVE NO ADDED UREA-FORMALDEHYDE (NAUF).

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES
ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034
P: 515.725.8200
F: 515.725.8202



EXTERIOR ELEVATIONS

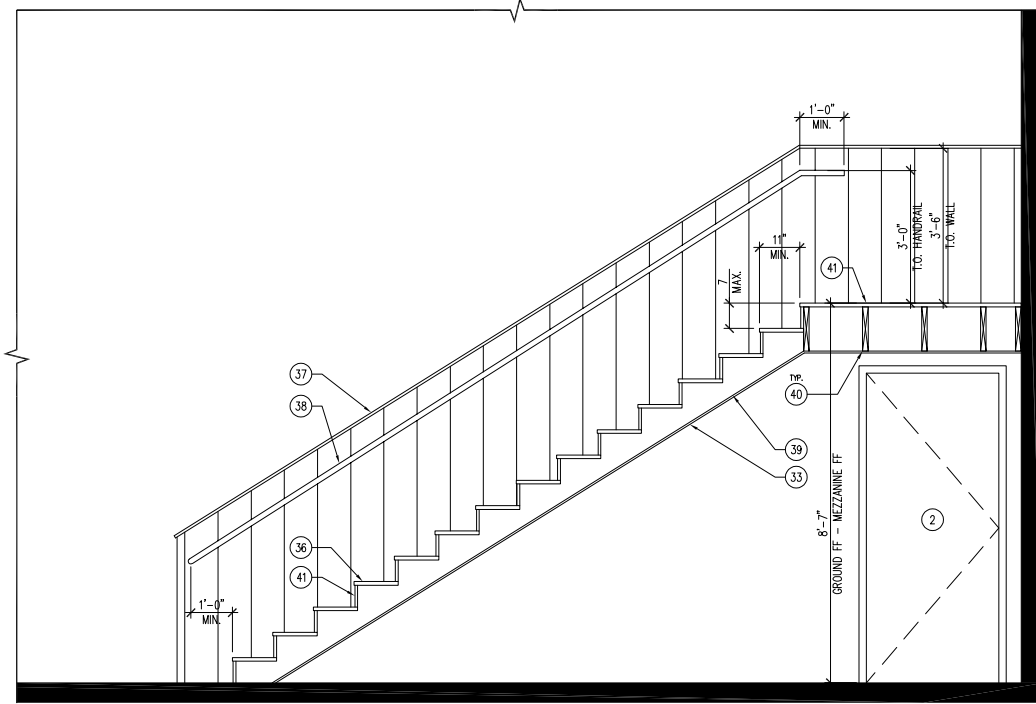
Law Enforcement Shop for:
Lake Rathbun LE

12194 Honey Creek Place
Marion, IA 52571

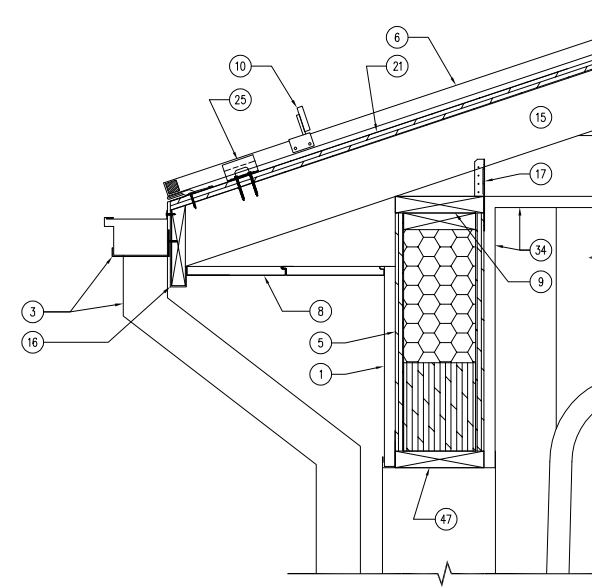
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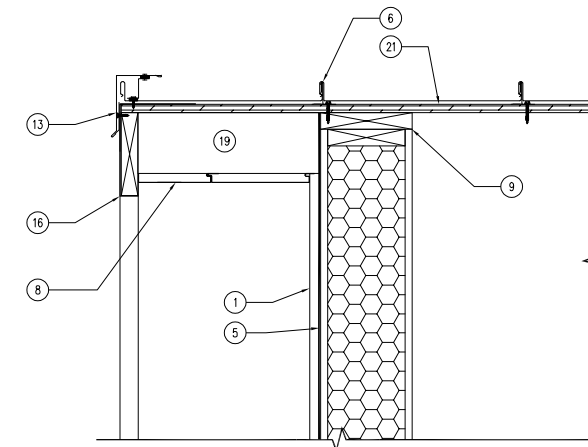
A-200



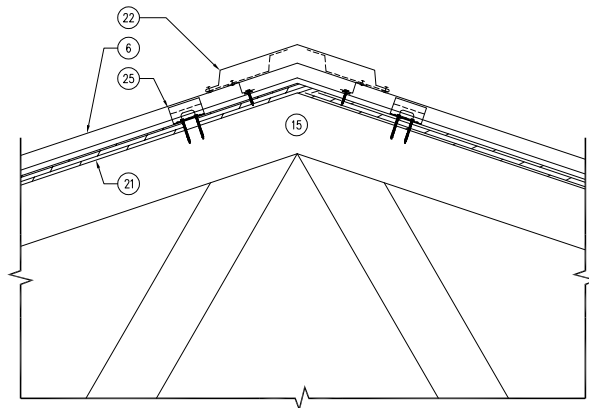
05 SECTION - MEZZANINE STAIR
SCALE: 1/2" = 1'-0"



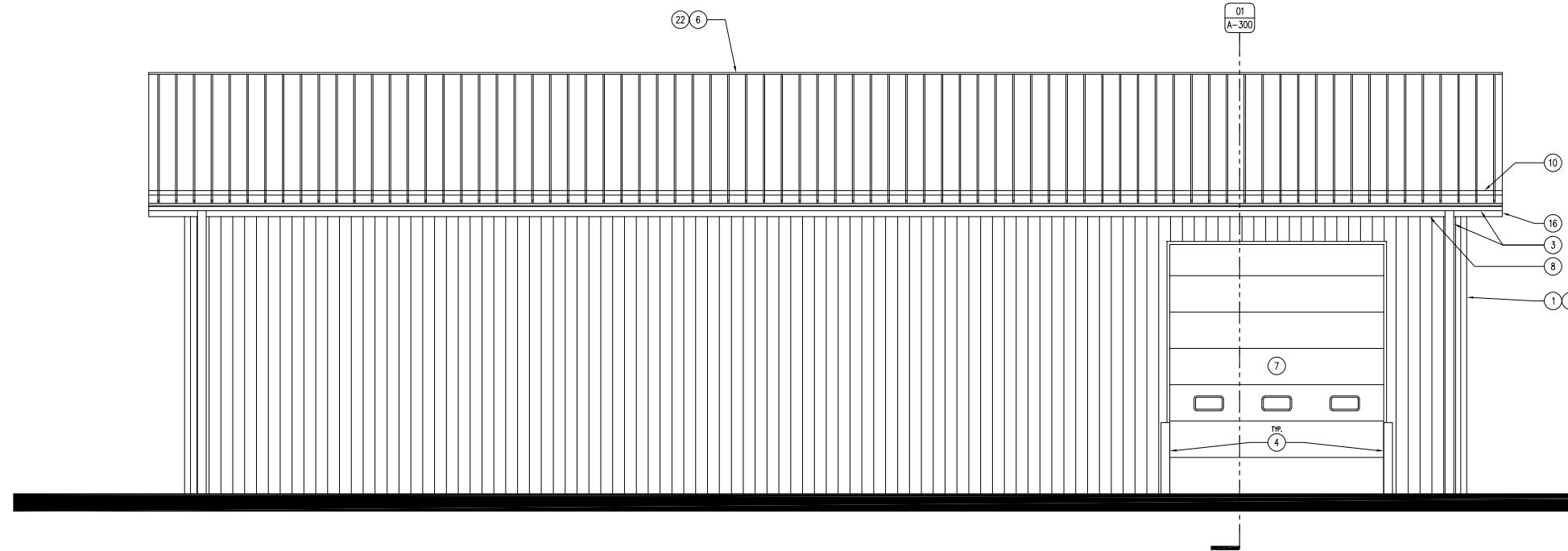
04 DETAIL - ROOF EAVE
SCALE: 1 1/2" = 1'-0"



03 DETAIL - GABLE RAKE
SCALE: 1 1/2" = 1'-0"



02 DETAIL - ROOF RIDGE
SCALE: 1 1/2" = 1'-0"



01 EXTERIOR ELEVATION - WEST
SCALE: 1/4" = 1'-0"

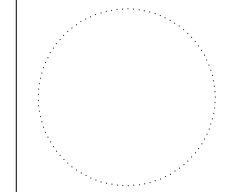
KEYNOTES

1. STEEL WALL PANEL OVER BUILDING WRAP, REFER TO SHEET A-600.
2. DOOR AS SCHEDULED, REFER TO SHEET A-600.
3. 6" SEAMLESS METAL GUTTER AND DOWNSPOUT SYSTEM WITH SHUR-FLO GUTTER GUARDS, COLOR TO MATCH ROOF.
4. STEEL TRAFFIC BOLLARD WITH PLASTIC COVER SLEEVE, REFER TO 05/A-300.
5. 8 1/2" STRUCTURAL INSULATED PANEL BUILDING, BUILDING STRUCTURE TO BE PRE-ENGINEERED.
6. STEEL SNAP-CLAD ROOF WITH STRIATIONS OVER SELF-ADHERED WATER AND ICE GUARD, ENTIRE ROOF, REFER TO SHEET A-600.
7. OVERHEAD GARAGE DOOR, REFER TO SHEET A-600.
8. 29 GAUGE V-GROOVE FLUSH VENTED SOFFIT PANEL, COLOR TO MATCH ROOF.
9. 2X TOP PLATE, PER BUILDING MANUFACTURER.
10. S-51 COLORGARD METAL SNOW GUARD BARS, OR APPROVED EQUAL, ALL EAVES, ENTIRE LENGTH OF BUILDING, COLOR TO MATCH ROOF.
11. 6" CONCRETE BUILDING SLAB OVER 2" RIGID INSULATION AND 4" SUBBASE, #4 REBAR 24" O.C. BOTH DIRECTIONS. SMOOTH TROWEL FINISH WITH CONCRETE SEALER, REFER TO SHEET A-600.
12. 6" CONCRETE APRON SLAB OVER 6" SUBBASE, #4 REBAR 24" O.C. BOTH DIRECTIONS. BROOM FINISH, SLOPE AWAY FROM BUILDING.
13. ROOF RAKE TRIM, PER ROOF MANUFACTURER.
14. TRENCH FOOTING, REFER TO DETAIL 02/A-300.
15. BUILDING TRUSS PER BUILDING MANUFACTURER, SPACING FOR DEMONSTRATION ONLY.
16. 2X FASCIA BY BUILDING MANUFACTURER. WRAP FASCIA WITH STEEL BREAK METAL TO MATCH ROOF.
17. SIMPSON TRUSS CLIP.
18. DRIP-EDGE, COLOR TO MATCH ADJACENT MATERIAL.
19. 2X OUTRIGGER, EXTEND 18" FOR OVERHANG, PER BUILDING MANUFACTURER.
20. WALL FINISH AS SCHEDULED, REFER TO FINISH SCHEDULE A-600.
21. ROOF SHEATHING PER BUILDING MANUFACTURER.
22. STEEL VENTED ROOF RIDGE CAP BY ROOFING MANUFACTURER.
23. 2" SUB-SLAB 40 PSI RIGID INSULATION UNDER HEATED SHOP BAYS AND AROUND PERIMETER OF FOUNDATION. TAPE AND SEAL ALL JOINTS.
24. 2X TREATED DOUBLE SILL PLATE WITH SEALANT ON ALL POINTS, PER BUILDING MANUFACTURER. INSTALL SILL PLATE ANCHORS PER CODE BY BUILDING MANUFACTURER.
25. ROOF CLIPS, PER MANUFACTURER'S RECOMMENDATIONS.
26. SILL ANCHOR, PER BUILDING MANUFACTURER'S RECOMMENDATIONS.
27. 24" SQUARE HEAVY-DUTY STEEL GRATE DRAIN, CAST RIM INTO CONCRETE SLAB. DRILL 48" DEEP HOLE AND LINE WITH TWO (2) LAYERS OF FILTER FABRIC, FILL HOLE WITH 1 1/2" CLEAN ROCK.
28. 2X BLOCKING AS REQUIRED.
29. INSULATION BAFFLE.
30. R-42 FIBERGLASS BATT ATTIC INSULATION OVER VAPOR BARRIER.
31. 1/2" EXPANSION JOINT WITH CONTINUOUS SEALANT.
32. 3/8" TYPE X GYPSUM BOARD.
33. 1/2" PLYWOOD RISER.
34. STEEL LINER PANEL AND TRIM THROUGHOUT HEATED SHOP, WALLS AND CEILING, COLOR TO BE WHITE.
35. 6" CONCRETE STOOP FOOTING WITH #4 REBAR 24" O.C. BOTH DIRECTIONS OVER 6" COMPACTED SUBBASE, TURN THREE SIDES DOWN 4'-0" AS SHOWN, BROOM FINISH, SLOPE AWAY FROM DOOR.
36. 1/2" PLYWOOD RISER.
37. EXTEND WALL 42" FROM TOP OF FLOOR FOR GUARDRAIL HEIGHT BARRIER, WRAP WALL IN STEEL LINER PANEL. TOP WALL WITH 3/4" HARD MAPLE CAP, REFER TO DETAIL 09/A-600.
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45. BASE DRIP FLASHING BY SIDING MANUFACTURER.
46. WINDOW AS SCHEDULED, REFER TO SHEET A-600.
47. OVERHEAD DOOR HEADER BY BUILDING MANUFACTURER. FLASH AND TRIM PER SIDING MANUFACTURER. WRAP 2X JAMB EXTENSIONS IN BLACK BREAK METAL WITH GARAGE DOOR SEALS PER DOOR MANUFACTURER.
48. PROTECTIVE TRIM OVER FOUNDATION INSULATION, TUCK UNDER BASE DRIP FLASHING TRIM, DEPTH OF 2" MINIMUM.

GENERAL NOTES

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EXTERIOR ELEVATIONS & DETAILS

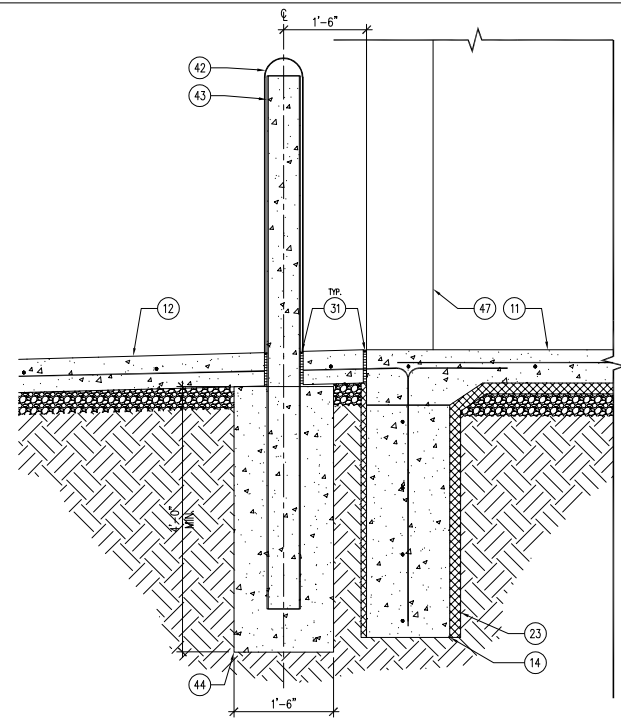
Law Enforcement Shop for:
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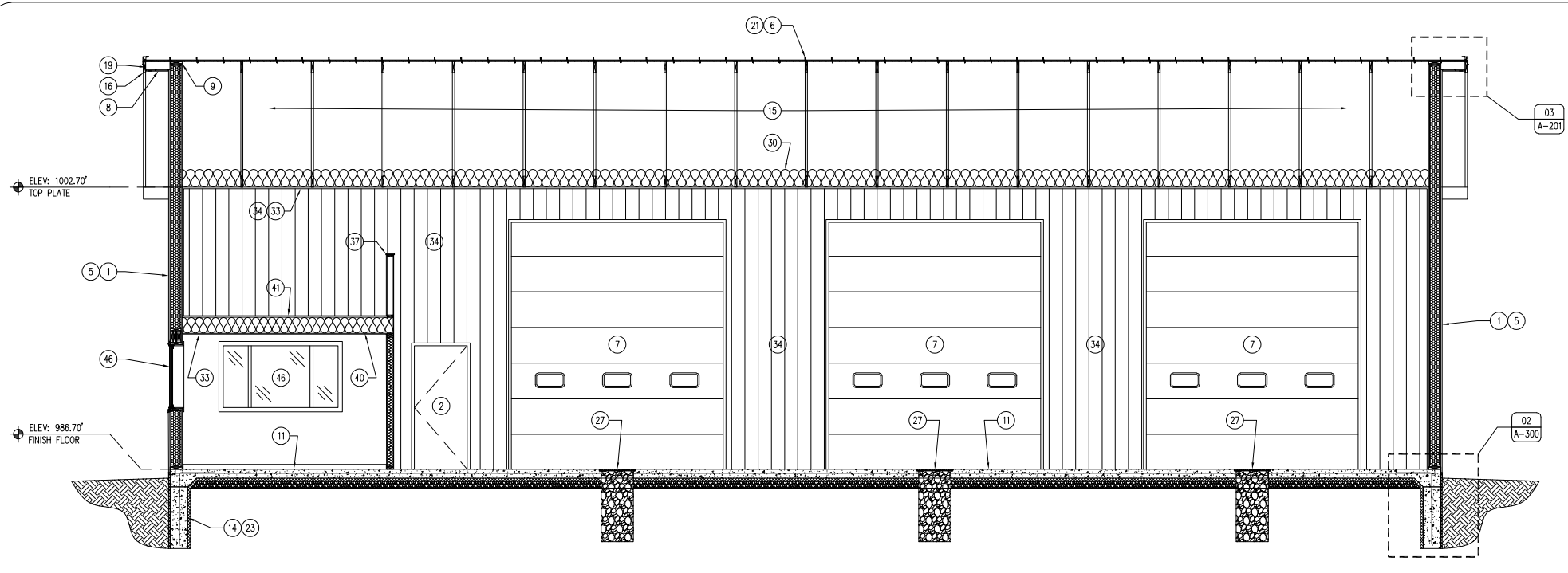
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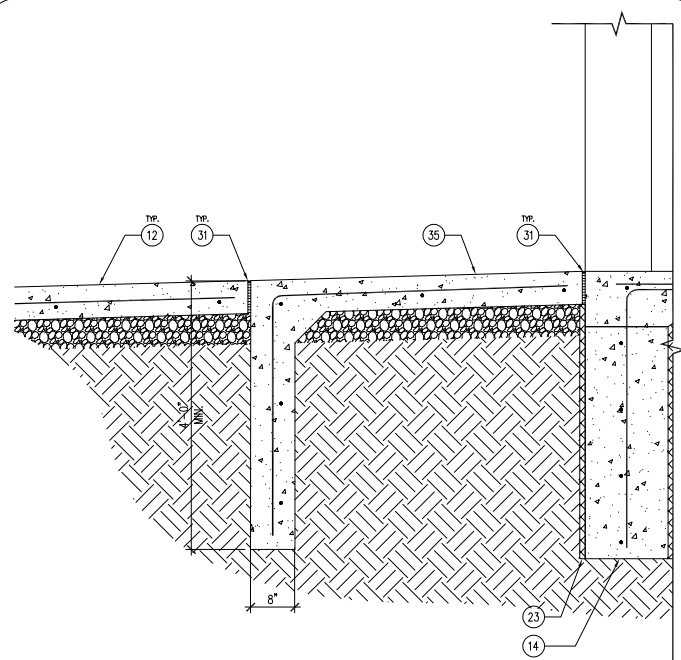
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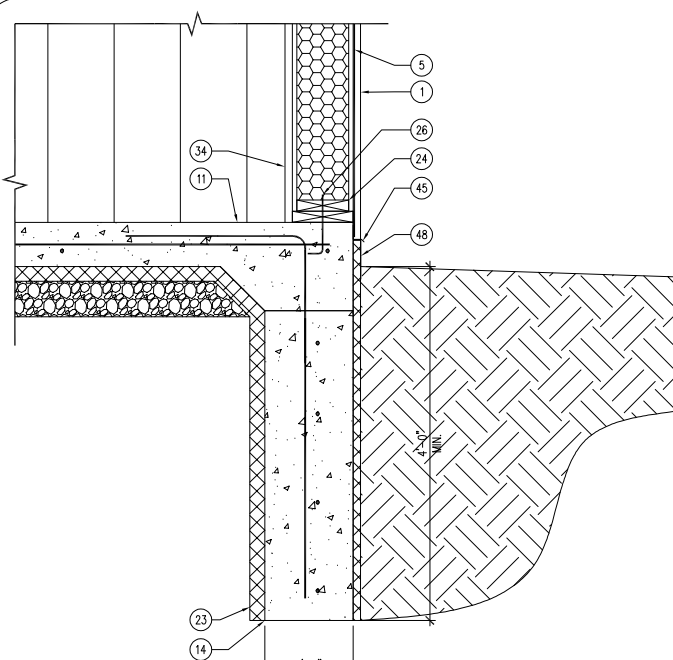
05 DETAIL - BOLLARD
SCALE: 1" = 1'-0"



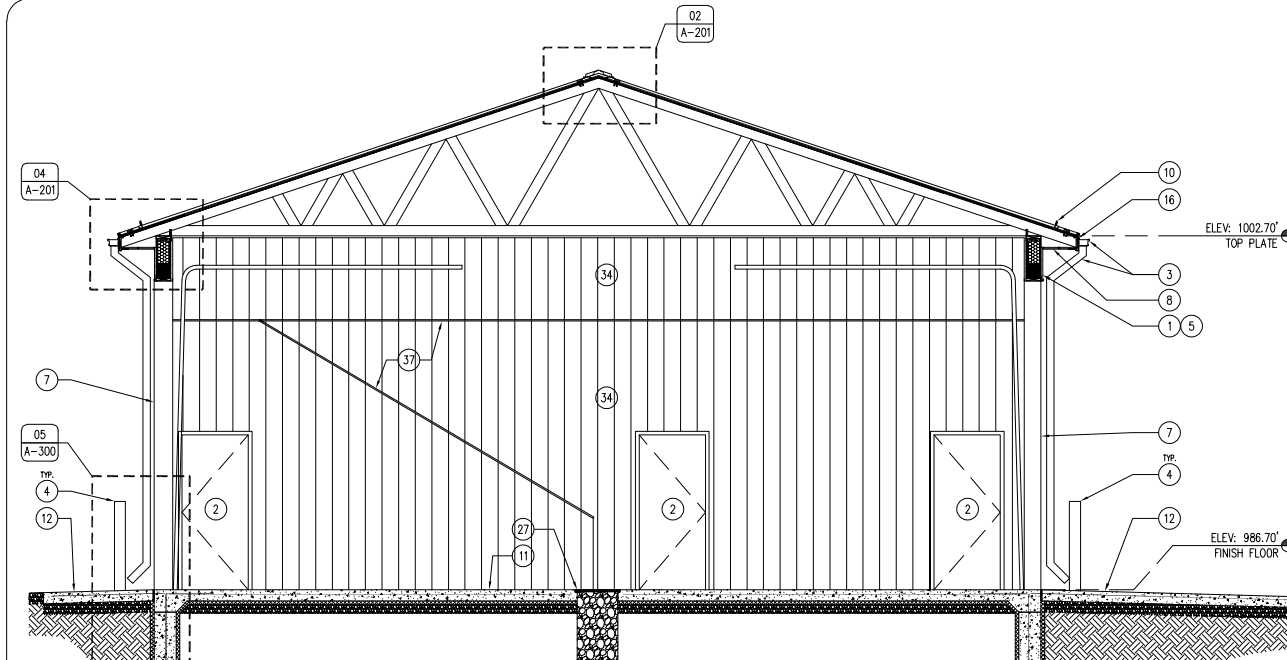
04 BUILDING SECTION
SCALE: 3/16" = 1'-0"



03 DETAIL - STOOP FOOTING
SCALE: 1" = 1'-0"



02 DETAIL - BUILDING FOOTING
SCALE: 1" = 1'-0"



01 BUILDING SECTION
SCALE: 3/16" = 1'-0"

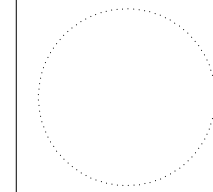
KEYNOTES

1. STEEL WALL PANEL OVER BUILDING WRAP, REFER TO SHEET A-600.
2. DOOR AS SCHEDULED, REFER TO SHEET A-600.
3. 6" SEAMLESS METAL GUTTER AND DOWNSPOUT SYSTEM WITH SHUR-FLO GUTTER GUARDS, COLOR TO MATCH ROOF.
4. STEEL TRAFFIC BOLLARD WITH PLASTIC COVER SLEEVE, REFER TO 05/A-300.
5. 8' STRUCTURAL INSULATED PANEL BUILDING, BUILDING STRUCTURE TO BE PRE-ENGINEERED.
6. STEEL SNAP-CLAD ROOF WITH STRIATIONS OVER SELF-ADHERED WATER AND ICE GUARD, ENTIRE ROOF, REFER TO SHEET A-600.
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9. 2X TOP PLATE, PER BUILDING MANUFACTURER.
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11. 6" CONCRETE BUILDING SLAB OVER 2" RIGID INSULATION AND 4" SUBBASE, #4 REBAR 24" O.C. BOTH DIRECTIONS. SMOOTH TROWEL FINISH WITH CONCRETE SEALER, REFER TO SHEET A-600.
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13. ROOF RAKE TRIM, PER ROOF MANUFACTURER.
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18. DRIP-EDGE, COLOR TO MATCH ADJACENT MATERIAL.
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20. WALL FINISH AS SCHEDULED, REFER TO FINISH SCHEDULE A-600.
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22. STEEL VENTED ROOF RIDGE CAP BY ROOFING MANUFACTURER.
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29. INSULATION Baffle.
30. R-42 FIBERGLASS BATT INSULATION OVER VAPOR BARRIER.
31. 1" EXPANSION JOINT WITH CONTINUOUS SEALANT.
32. TYPE X GYPSUM BOARD.
33. 2" PLYWOOD RISER.
34. STEEL LINER PANEL AND TRIM THROUGHOUT HEATED SHOP, WALLS AND CEILING, COLOR TO BE WHITE.
35. 6" CONCRETE STOOP FOOTING WITH #4 REBAR 24" O.C. BOTH DIRECTIONS OVER 6" COMPACTED SUBBASE, TURN THREE SIDES DOWN 4'-0" AS SHOWN, BROOM FINISH, SLOPE AWAY FROM DOOR.
36. 2" PLYWOOD RISER.
37. EXTEND WALL 42" FROM TOP OF FLOOR FOR GUARDRAIL HEIGHT BARRIER, WRAP WALL IN STEEL LINER PANEL. TOP WALL WITH 3/4" HARD MAPLE CAP, REFER TO DETAIL 09/A-600.
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43. 6" DIAMETER X 3/8" THICK STEEL POST, 8'-0" LONG. EMBED 3'-0" DEEP IN CONCRETE FOOTING, FILL POST VOID WITH CONCRETE GROUT.
44. CONCRETE BOLLARD FOOTING TO BE 1'-6" DIAMETER X 4'-0" DEEP.
45. BASE DRIP FLASHING BY SIDING MANUFACTURER.
46. WINDOW AS SCHEDULED, REFER TO SHEET A-600.
47. OVERHEAD DOOR HEADER BY BUILDING MANUFACTURER. FLASH AND TRIM PER SIDING MANUFACTURER. WRAP 2X JAMB EXTENSIONS IN BLACK BREAK METAL WITH GARAGE DOOR SEALS PER DOOR MANUFACTURER.
48. PROTECTIVE TRIM OVER FOUNDATION INSULATION, TUCK UNDER BASE DRIP FLASHING TRIM, DEPTH OF 2" MINIMUM.

GENERAL NOTES

- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
- C. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- D. FIELD VERIFY ALL DIMENSIONS AND QUANTITIES PRIOR TO CONSTRUCTION, SHEET A-101.
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- F. CONTRACTOR SHALL HAVE BUILDING STRUCTURE PRE-ENGINEERED PRIOR TO CONSTRUCTION, SUBMIT PLANS FOR APPROVAL.
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CONSULTANT:



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BUILDING SECTIONS

Law Enforcement Shop for:
Lake Rathbun LE

12194 Honey Creek Place
Marion, IA 52571

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12.10.2022

A-300

05 NOT USED
SCALE: 3/4" = 1'-0"

04 RESTROOM ELEVATION
SCALE: 3/4" = 1'-0"

03 RESTROOM ELEVATION
SCALE: 3/4" = 1'-0"

02 RESTROOM ELEVATION
SCALE: 3/4" = 1'-0"

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

TOILET ACCESSORY SCHEDULE

ALL MODEL NUMBERS BASED ON BOBRICK WASHROOM EQUIPMENT, OR APPROVED EQUAL, UNLESS OTHERWISE NOTED.

- (1) SURFACE MOUNTED SANITARY NAPKIN DISPOSAL
B-270 (OPERABLE AREA MOUNTED 20" A.F.F.)
- (2) SURFACE MOUNTED TOILET TISSUE DISPENSER
B-2740 (OPERABLE AREA MOUNTED 20" A.F.F.)
- (3) WELDED FRAMED MIRROR
B-290 2448 (BOTTOM OF MIRROR MOUNTED 40" A.F.F.)
- (4) 42" LONG X 1-1/2" DIAMETER CONCEALED MOUNTING, STRAIGHT GRAB BAR
B-6806 x 42 (MOUNTED 34" A.F.F.)
- (5) 36" LONG X 1-1/2" DIAMETER CONCEALED MOUNTING, STRAIGHT GRAB BAR
B-6806 x 36 (MOUNTED 34" A.F.F.)

KEYNOTES

1. CEILING AS SCHEDULED, REFER TO REFLECTED CEILING PLAN SHEET A-110.
2. DOOR AS SCHEDULED, REFER TO SHEET A-600.
3. HAND DRYER, REFER TO MECHANICAL DRAWINGS.
4. FINISH FLOOR AS SCHEDULED, REFER TO FINISH SCHEDULE SHEET A-600.
5. WALL FINISH AS SCHEDULED, REFER TO FINISH SCHEDULE SHEET A-600.
6. 3/4" PLYWOOD CABINET WITH HARDWOOD VENEER (WD-1) ON CONCEALED HINGES, PROVIDE DECORATIVE HARDWARE WIRE PULLS (DARK BRONZE).
7. ADA COMPLIANT TOILET AS SCHEDULED, REFER TO PLUMBING DRAWINGS.
8. ADA COMPLIANT LAVATORY AS SHOWN, WITH SCALD GUARDS. REFER TO PLUMBING DRAWINGS.
9. ADA COMPLIANT SHOWER SURROUND WITH TRANSLUCENT DOOR AS SCHEDULED. REFER TO PLUMBING DRAWINGS.
10. RUBBER WALL BASE AS SCHEDULED, REFER TO FINISH SCHEDULE SHEET A-600.
11. FLOOR DRAIN, REFER TO PLUMBING DRAWINGS. SLOPE FLOOR LOCALLY TO DRAIN.

GENERAL NOTES

- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
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- D. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-101.
- E. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL PLAN.
- F. CONTRACTOR SHALL HAVE THIS BUILDING, PRIOR TO CONSTRUCTION, PRE-ENGINEERED BY BUILDING SUPPLIER.
- G. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING AND POWER LAYOUTS.
- H. MAIN SHOP AND STORAGE SLABS TO BE SLOPED BETWEEN 1% MIN. - 1.5% MAX. TO DRAINS.
- I. ALL PLYWOOD PRODUCTS TO HAVE NO ADDED UREA-FORMALDEHYDE (NAUF).
- J. ALL PLYWOOD CABINET AND DRAWER SURFACES TO HAVE VOC-FREE, CLEAR SATIN FINISH.

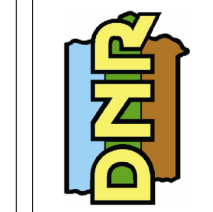
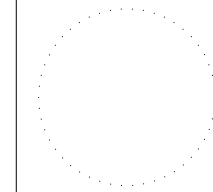
ENLARGED PLAN AND ELEVATIONS

Law Enforcement Shop for:
Lake Rathbun LE

12194 Honey Creek Place
Marion, IA 52571

**IOWA DEPARTMENT OF
NATURAL RESOURCES**
ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034
P: 515.725.8200
F: 515.725.8202

CONSULTANT:



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DRAWN BY: PROJECT NUMBER:
23-05-04-01

CHECK'D BY: DATE:
12.10.2022

SHEET No:

A-400

07 NOT USED
SCALE: 3/4" = 1'-0"

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

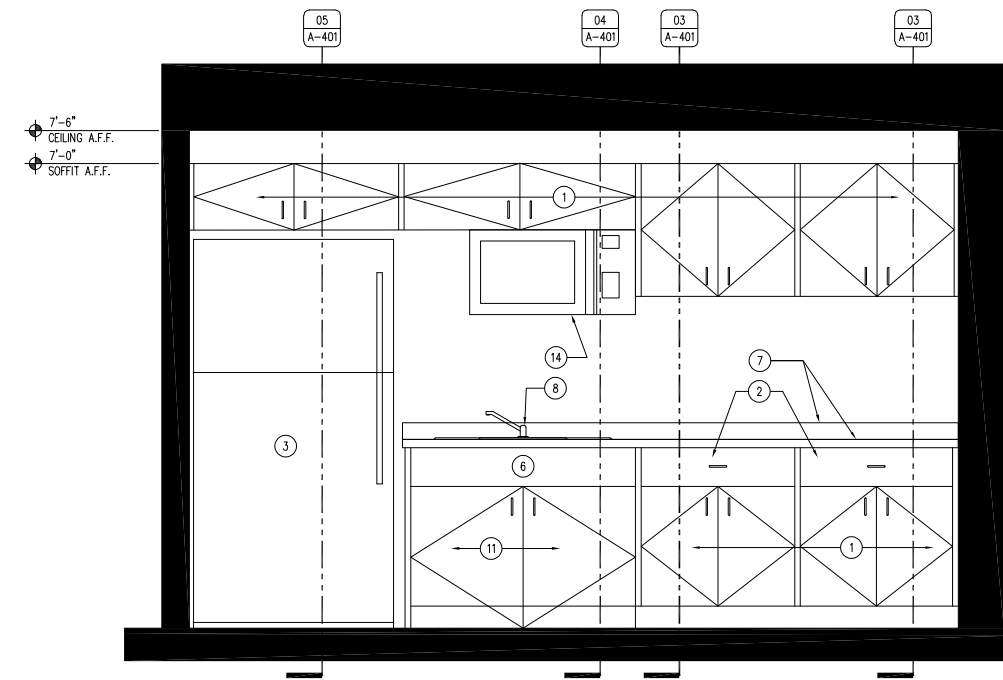
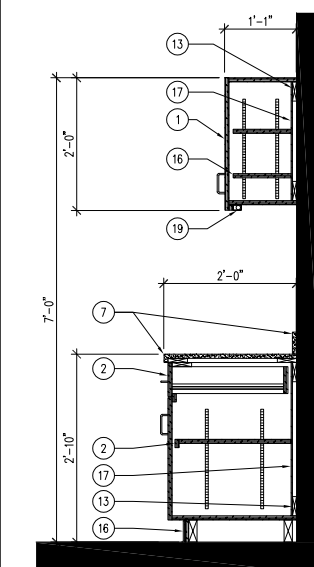
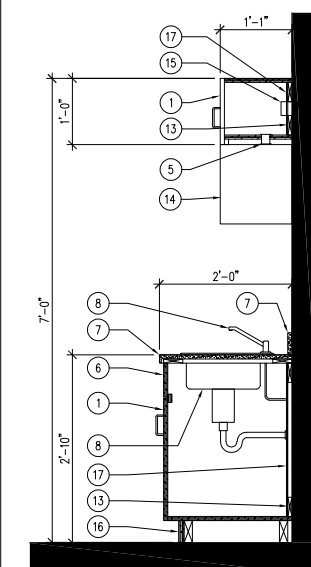
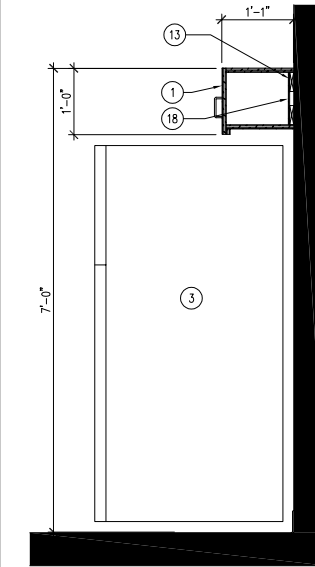
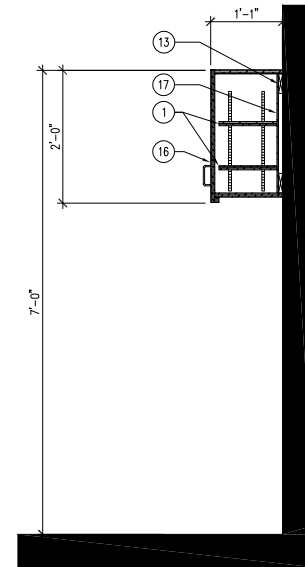
05 MILLWORK SECTION
SCALE: 3/4" = 1'-0"

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

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

02 NOT USED
SCALE: 3/4" = 1'-0"

01 INTERIOR ELEVATION - BREAKROOM 101 KITCHEN
SCALE: 3/4" = 1'-0"



KEYNOTES

GENERAL NOTES

1. 3/4" PLYWOOD DOOR ON CONCEALED HINGES WITH WOOD VENEER (WD-1). PROVIDE DECORATIVE HARDWARE WIRE PULLS (DARK BRONZE). REFER TO FINISH SCHEDULE SHEET A-600.
2. 3/4" PLYWOOD DRAWER WITH UNDERMOUNT SLIDES WITH WOOD VENEER (WD-1). PROVIDE DECORATIVE HARDWARE WIRE PULLS (DARK BRONZE). REFER TO FINISH SCHEDULE SHEET A-600.
3. REFRIGERATOR, GENERAL ELECTRIC MODEL #GBE210SKSS, OR APPROVED EQUAL, BY CONTRACTOR.
4. WALL FINISH AS SCHEDULED, REFER TO SHEET A-600.
5. GROMMET HOLE WITH PLASTIC GROMMET, SIZE ACCORDING TO MICROWAVE MANUFACTURER'S RECOMMENDATIONS.
6. 3/4" PLYWOOD VALANCE WITH WOOD VENEER (WD-1). REFER TO FINISH SCHEDULE SHEET A-600.
7. 3/4" SOLID SURFACE TOP AND BACKSPASH (SS-1). REFER TO FINISH SCHEDULE SHEET A-600.
8. TWO-BASIN STAINLESS STEEL UNDER-MOUNT SINK. REFER TO PLUMBING DRAWINGS.
9. CEILING FINISH AS SCHEDULED. REFER TO REFLECTED CEILING PLAN SHEET A-110.
10. FLOOR AS SCHEDULED. REFER TO FINISH SCHEDULE SHEET A-600.
11. ADA COMPLIANT UNDER-SINK DOORS ON CONCEALED HINGES WITH WOOD VENEER (WD-1). PROVIDE DECORATIVE HARDWARE WIRE PULLS, REFER TO FINISH SCHEDULE SHEET A-600.
12. DOOR AS SCHEDULED, REFER TO DOOR SCHEDULE SHEET A-600.
13. WOOD BLOCKING AS REQUIRED.
14. MICROWAVE, GENERAL ELECTRIC MODEL #JWM2160RFSS, OR APPROVED EQUAL, BY CONTRACTOR.
15. ELECTRICAL OUTLET, REFER TO ELECTRICAL DRAWINGS.
16. 3/4" PLYWOOD TOE KICK.
17. 1/2" PLYWOOD BACKER BOARD WITH PLASTIC LAMINATE (PL-1).

- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
- C. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- D. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-101.
- E. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL PLAN.
- F. CONTRACTOR SHALL HAVE THIS BUILDING, PRIOR TO CONSTRUCTION, PRE-ENGINEERED BY BUILDING SUPPLIER.
- G. ALL PLYWOOD PRODUCTS TO HAVE NO ADDED UREA-FORMALDEHYDE (NAUF).
- H. ALL PLYWOOD CABINET AND DRAWER SURFACES TO HAVE VOC FREE CLEAR SATIN FINISH.

CONSULTANT:

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ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034
P: 515.725.8200
F: 515.725.8202



INTERIOR ELEVATION & MILLWORK SECTIONS

Law Enforcement Shop for:
Lake Rathbun LE

| NO. | BY | DATE | REVISION |
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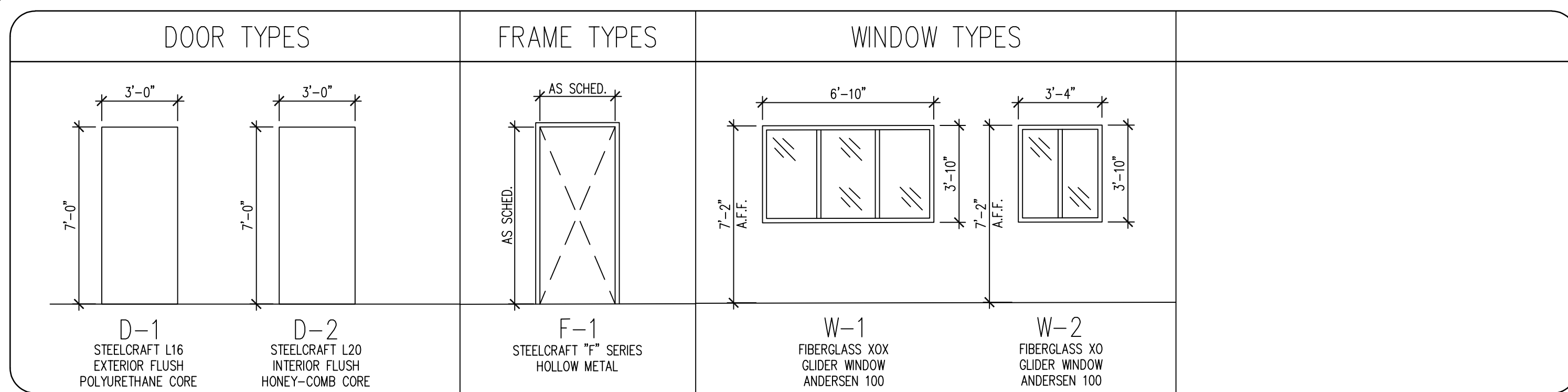
DRAWN BY: PROJECT NUMBER:
23-05-04-01

CHKD BY: DATE:
12.10.2022

SHEET NO:

A-401

12194 Honey Creek Place
Marion, IA 52571



DOOR HARDWARE

- A. ALL HARDWARE MODEL NUMBERS BASED ON SCHLAGE "ND-SERIES" LOCKSETS AND "IVES" HARDWARE, OR APPROVED EQUAL.
- B. HARDWARE FINISH TO BE: "SATIN CHROME (626)", UNLESS NOTED OTHERWISE.
- C. CHECK ALL QUANTITIES, DIMENSIONS AND FINISHES BEFORE ORDERING.
- D. ALL STEEL WALK-THROUGH DOORS TO BE GALVANIZED. PAINT ALL STEEL DOORS AND FRAMES.
- E. ALL STEEL WALK-THROUGH DOORS TO RECEIVE DRIP-CAPS BY MANUFACTURER.
- F. ALL OVERHEAD GARAGE DOORS TO BE OVERHEAD DOOR COMPANY WITH RMX COMMERCIAL ELECTRIC HOIST, OR APPROVED EQUAL. DOORS TO HAVE THREE (3) SAFETY LIGHTS, INTERIOR PUSH BUTTON CONTROLS, AND EXTERIOR KEYPAD ENTRY. LIFTS TO BE HARDWIRED. PROVIDE THREE (3) REMOTE CONTROL FOBS.

- HARDWARE SET NO. 1 - DOORS: 100A**
 3 EA. NRP HINGES FBB191 4 1/2 X 4 1/2
 1 EA. DIGITAL LOCKSET CO-100 (ATHENS)
 3 EA. PERIMETER SEALS BLACK GASKET
 1 EA. THRESHOLD SEAL BLACK BROOM TYPE
 1 EA. ADA THRESHOLD PLATE
 1 EA. CLOSER LCN 4111

- HARDWARE SET NO. 2 - DOORS: 103**
 3 EA. NRP HINGES FBB191 4 1/2 X 4 1/2
 1 EA. DIGITAL LOCKSET CO-100 (ATHENS)
 3 EA. SILENCERS SR66 (BLACK)
 1 EA. CLOSER LCN 4111

- HARDWARE SET NO. 3 - DOORS: 102**
 3 EA. HINGES FBB179 4 1/2 X 4 1/2
 1 EA. PRIVACY LOCKSET ND40S (ATHENS)
 1 EA. WALL BUMPER 2237
 3 EA. SILENCERS SR66 (BLACK)

- HARDWARE SET NO. 4 - DOORS: 101**
 3 EA. HINGES FBB179 4 1/2 X 4 1/2
 1 EA. PASSAGE ND10 (ATHENS)
 1 EA. WALL BUMPER 2237
 3 EA. SILENCERS SR66 (BLACK)

*KEYING FOR LOCKSETS TO BE THE SAME, COORDINATE WITH LOCAL LAW ENFORCEMENT STAFF FOR EXACT KEY MATCH.

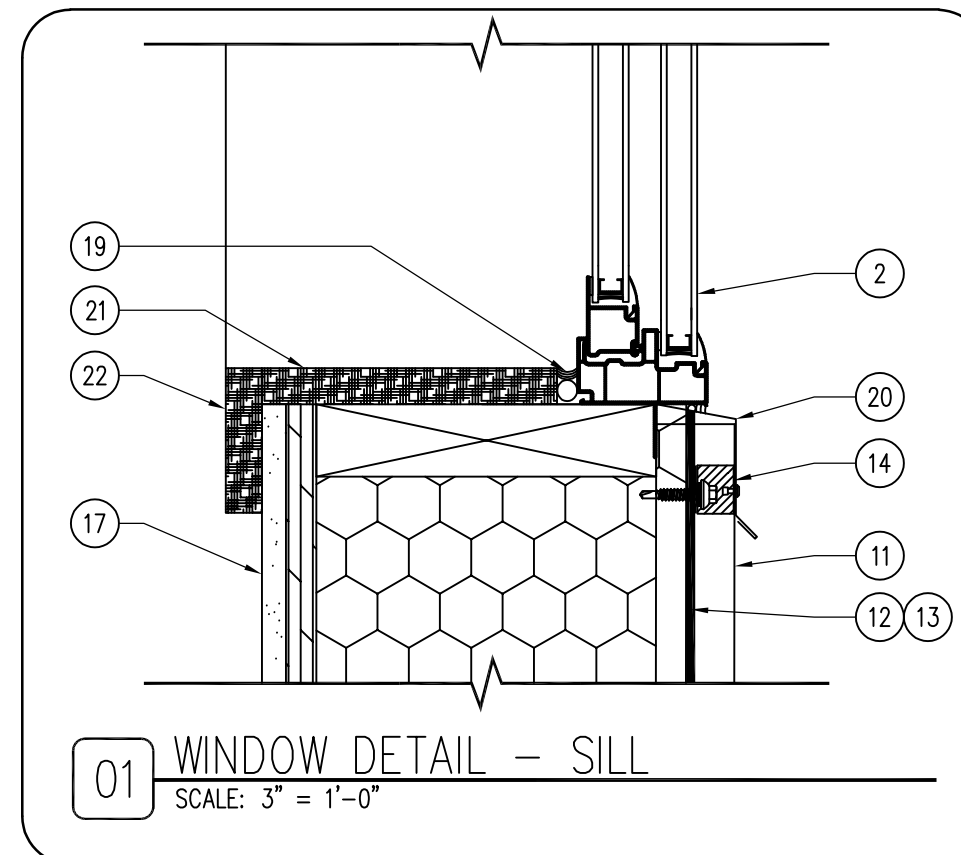
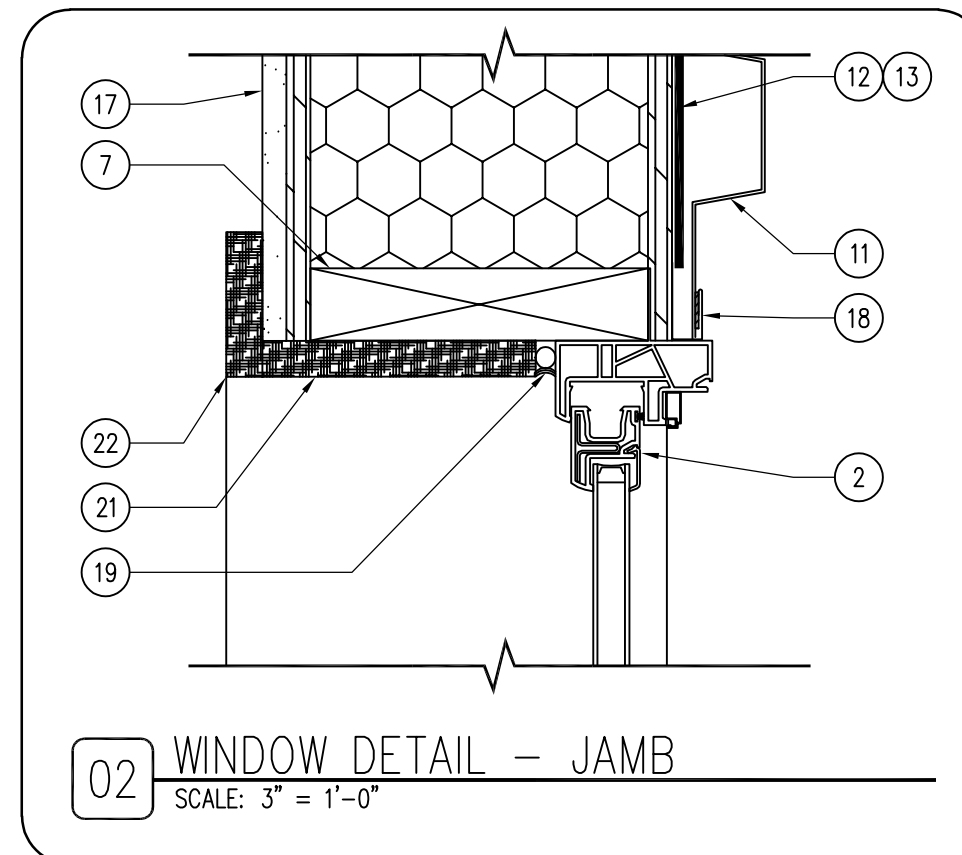
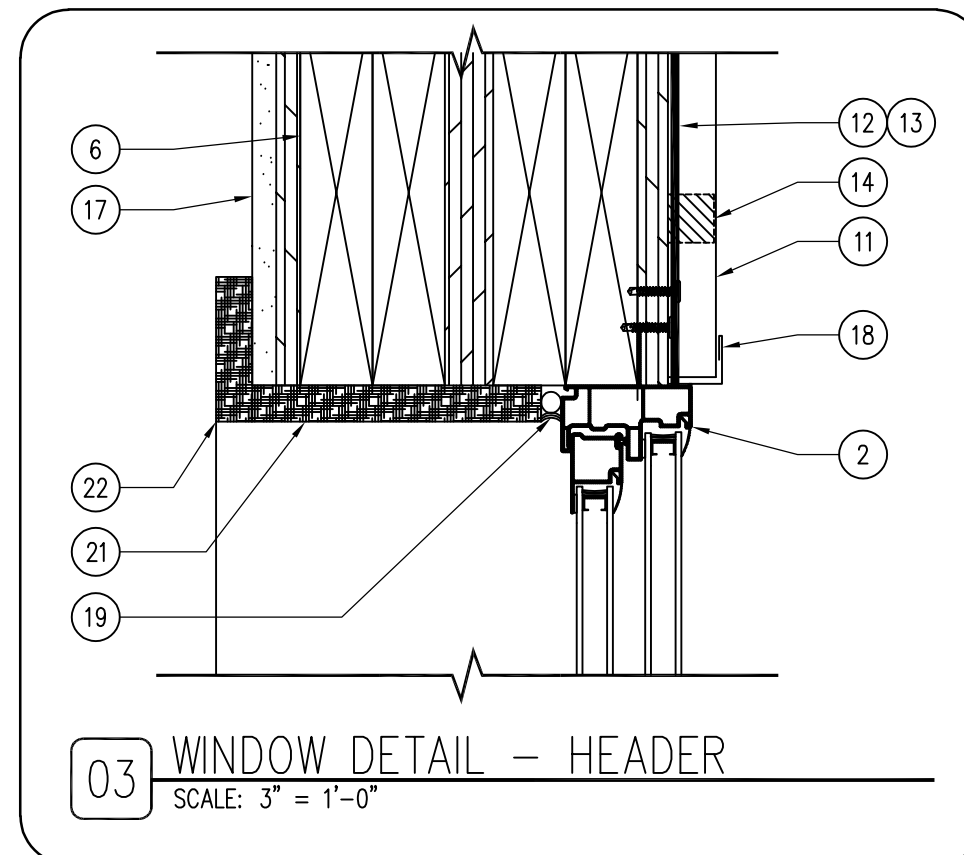
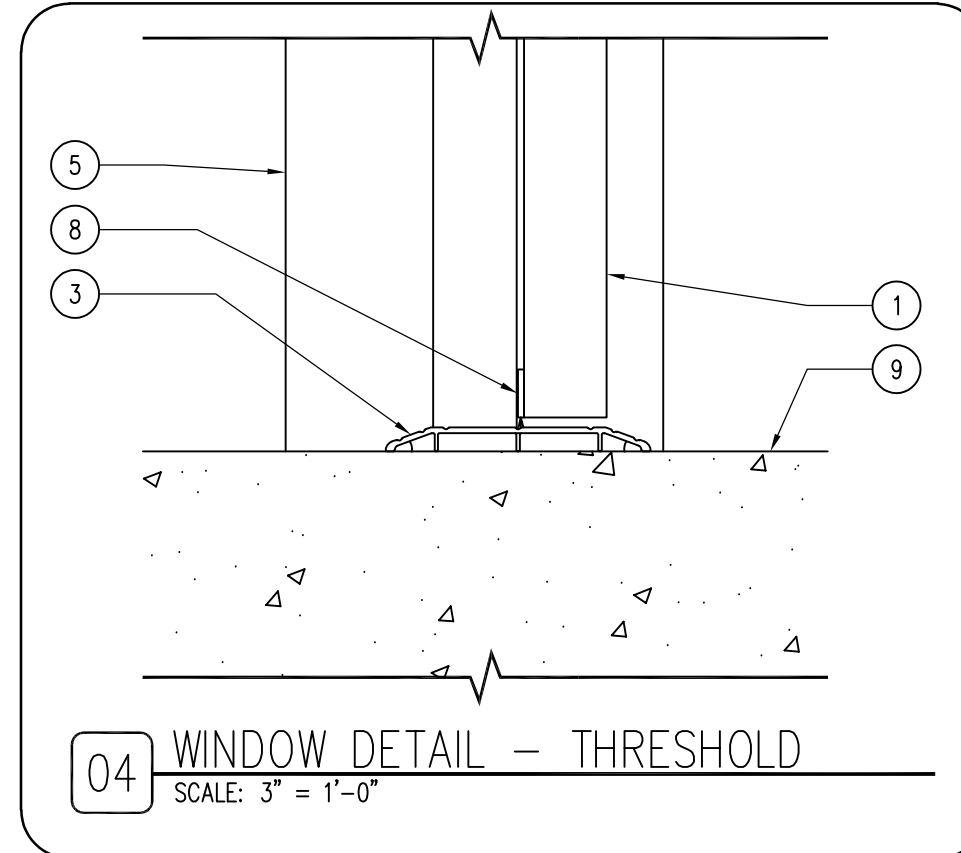
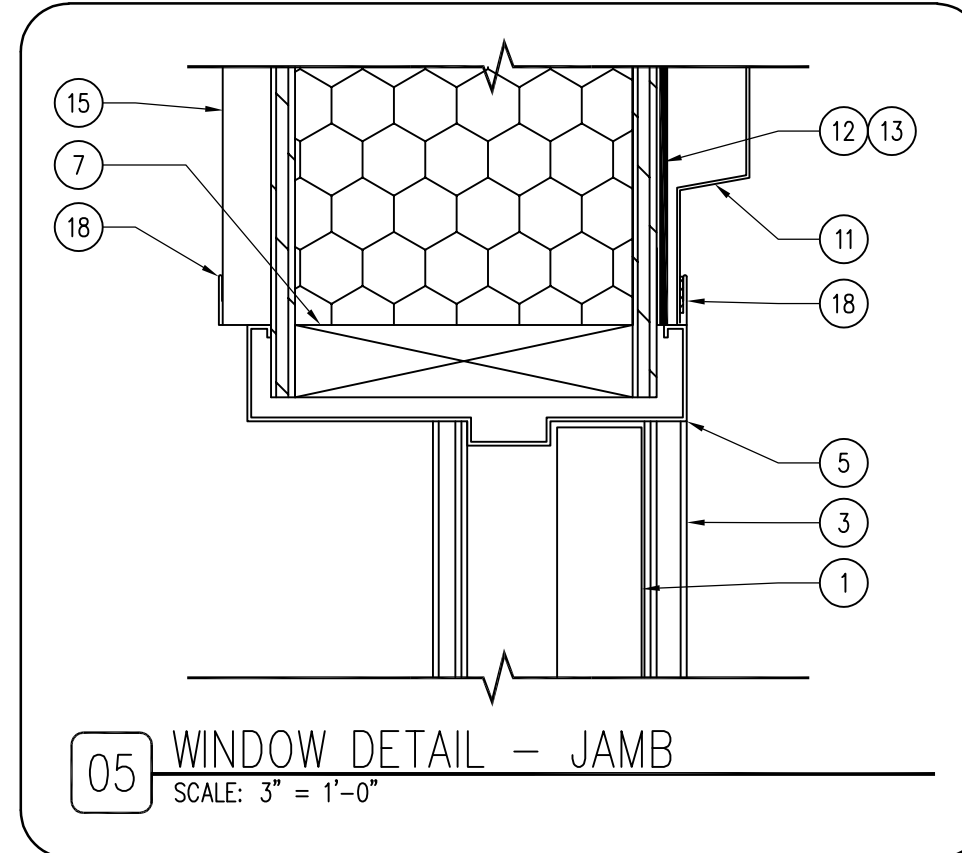
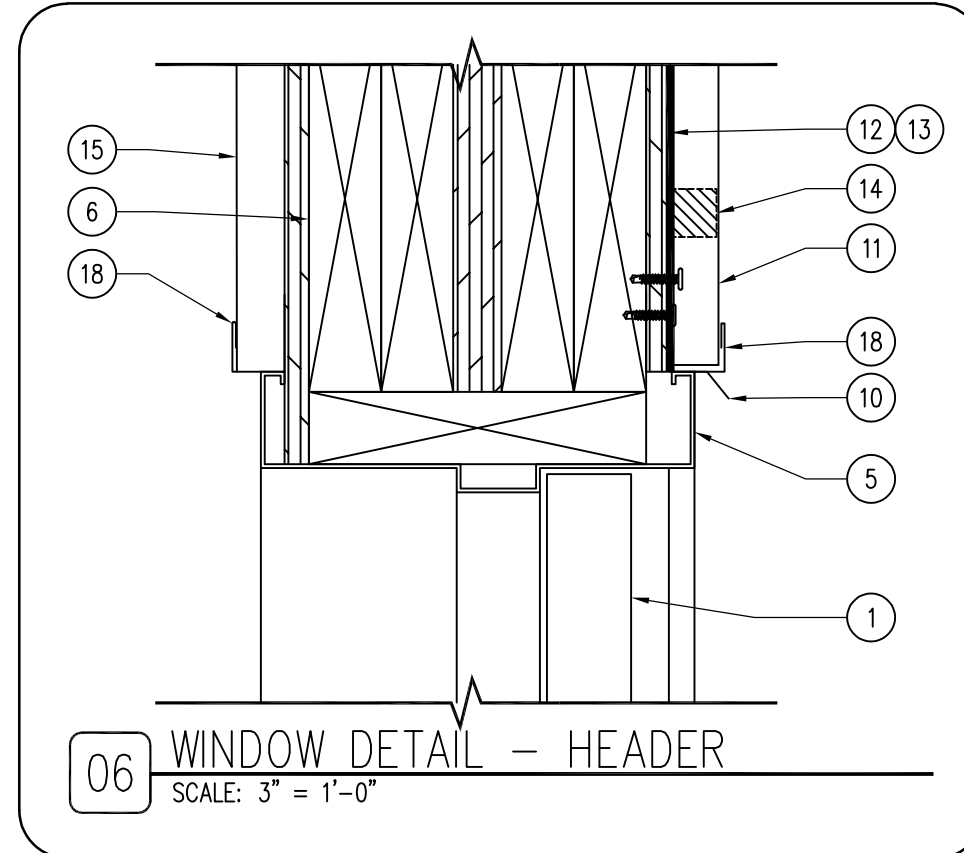
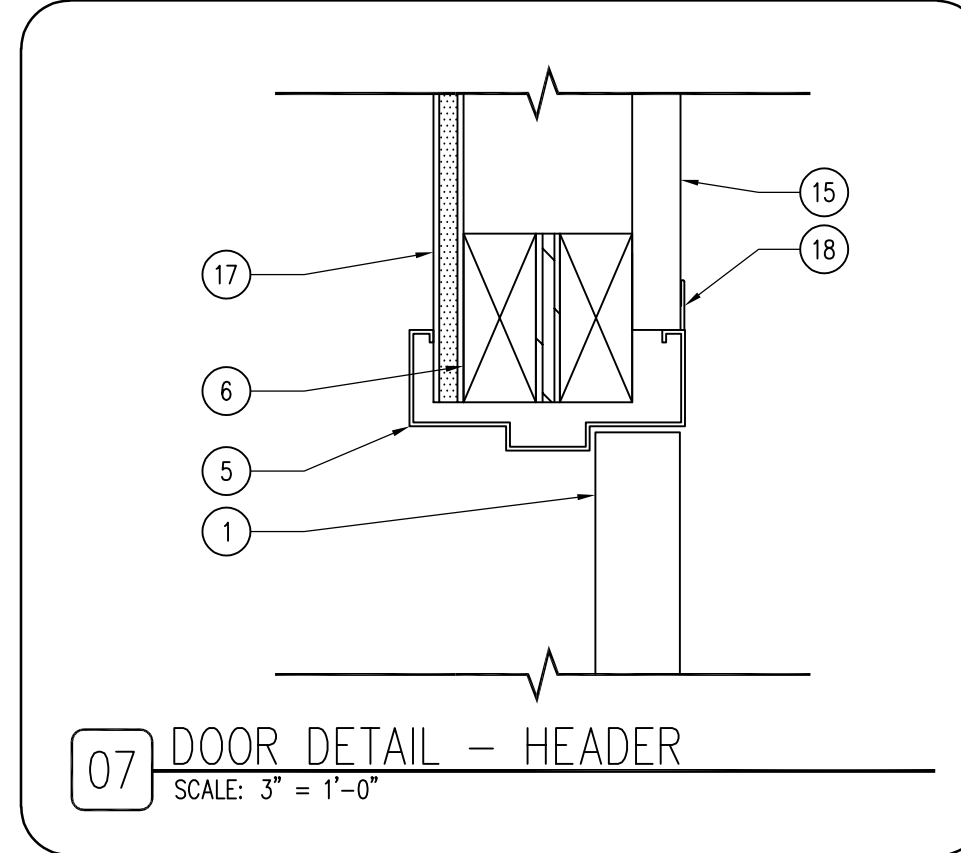
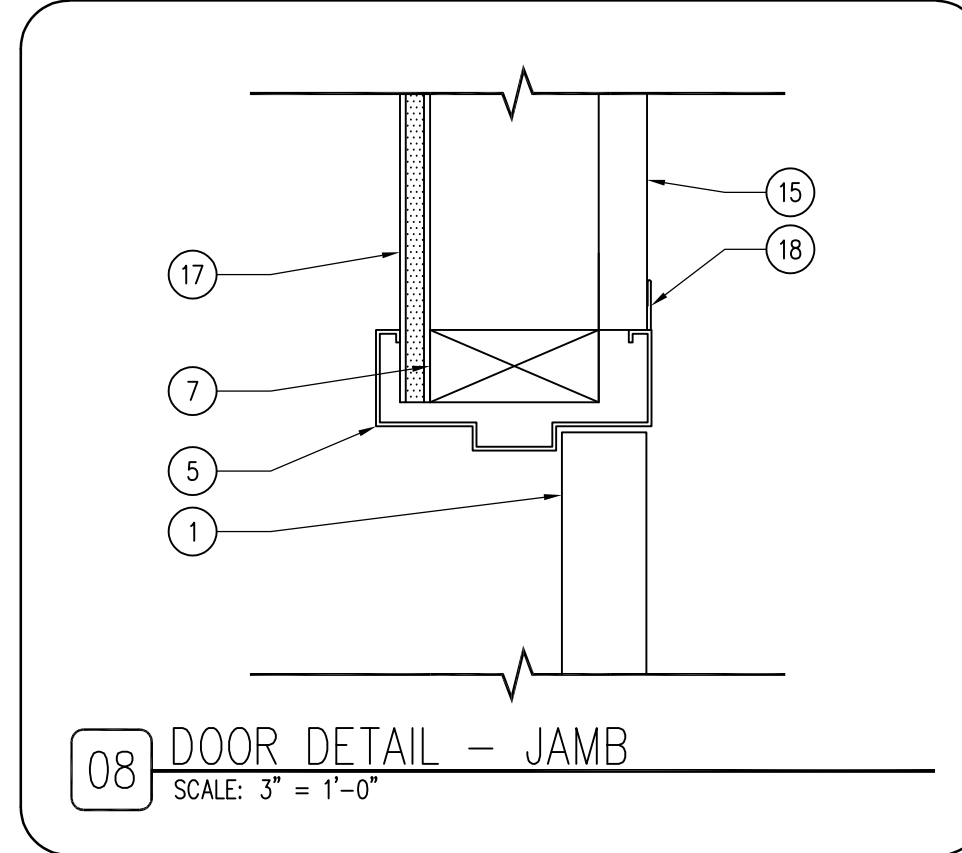
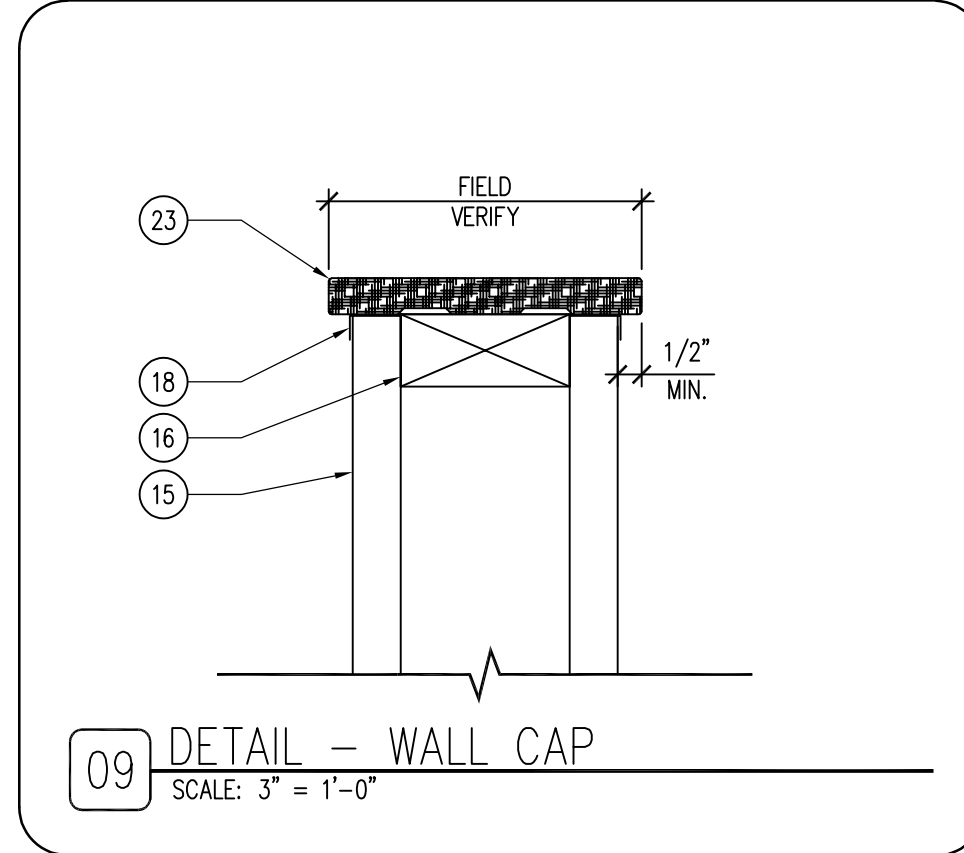
*WORK WITH STAFF TO ENTER PIN-CODES AND PROGRAMMING FOR DIGITAL LOCKSETS.

ROOM SCHEDULE

| ROOM # | ROOM NAME | FLOORING | BASE | NORTH WALL FINISH | EAST WALL FINISH | SOUTH WALL FINISH | WEST WALL FINISH | CEILING | NOTES |
|--------|------------|----------|------|-------------------|------------------|-------------------|------------------|---------|---|
| 100 | STORAGE | CONC-1 | - | SLP-1 | SLP-1 | SLP-1 | SLP-1 | SLP-1 | STEEL LINER PANEL WALLS & CEILING, INCLUDE ALL TRIM AND ACCESSORIES |
| 101 | BREAKROOM | CONC-1 | RB-1 | GYP-2 | GYP-2 | GYP-2 | GYP-2 | GYP-1 | - |
| 102 | RESTROOM | CONC-1 | RB-1 | GYP-2 | GYP-2 | GYP-2 | GYP-2 | GYP-1 | - |
| 103 | MECHANICAL | CONC-1 | RB-1 | GYP-2 | GYP-2 | GYP-2 | GYP-2 | GYP-1 | - |
| 200 | STORAGE | PLY-1 | - | SLP-1 | SLP-1 | SLP-1 | SLP-1 | SLP-1 | STEEL LINER PANEL WALLS & CEILING, INCLUDE ALL TRIM AND ACCESSORIES |

FINISH SCHEDULE

| FINISH MARK | MATERIAL | MANUFACTURER INFO | | DIMENSION | COLOR | FINISH | COMMENTS |
|-------------------------------|------------------------------|-------------------|----------------|------------|---------------|------------|---------------------------------------|
| | | COMPANY NAME | PRODUCT NUMBER | | | | |
| FLOOR FINISH | | | | | | | |
| CONC-1 | PENETRATING SEALER | - | - | - | CLEAR | MATTE | SILANE, SILOXANE OR SILICONATE |
| RB-1 | RUBBER BASE | JOHNSONITE | - | 4" | TBD | - | GARAGE, MECH. & BATHROOM AREAS |
| PLY-1 | T&G PLYWOOD DECKING | - | - | 3/4" | - | - | PLYWOOD FLOOR DECKING |
| CEILING FINISH | | | | | | | |
| SLP-1 | STEEL LINER PANEL | - | - | 29 GAUGE | WHITE | MANUF. | STORAGE 100 & 200 |
| GYP-1 | GYP-SUM CEILING | - | TYPE X | 5/8" | - | PNT-2 | FLAT FINISH |
| PNT-2 | INTERIOR PAINT | SHERWIN WILLIAMS | DURATION | - | WHITE | FLAT | PRIMER & 2 COATS OF PAINT |
| INTERIOR FINISH | | | | | | | |
| PNT-1 | INTERIOR PAINT | SHERWIN WILLIAMS | DURATION | - | WHITE | SATIN | PRIMER & 2 COATS OF PAINT |
| GYP-2 | WATER RESISTANT GYPSUM BOARD | - | - | 5/8" | - | PNT-1 | GYP. BOARD WALLS |
| SLP-1 | STEEL LINER PANEL | - | - | 29 GAUGE | WHITE | MANUF. | SLP-1 OVER GYP-1 |
| EXTERIOR FINISH | | | | | | | |
| SSR-1 | STANDING SEAM ROOF | MCELROY METAL | MEDALLION-LOK | 24 GA | DARK BRONZE | KYNAR 500 | STRIATIONS, VENTED ROOF CAP |
| SWP-1 | STEEL WALL PANEL | MCELROY METAL | WAVE | 26 GA | MEDIUM BRONZE | KYNAR 500 | VERTICAL INSTALL |
| SFP-1 | STEEL SOFFIT PANEL | MCELROY METAL | MATRIX | 26 GA | DARK BRONZE | KYNAR 500 | VENTED |
| MILLWORK / WOOD FINISH | | | | | | | |
| WD-1 | MAPLE VENEER PLYWOOD | - | - | - | NATURAL | SATIN POLY | ALL WOOD/MILLWORK SKINS |
| WD-2 | 3/4" SOLID HARD MAPLE | - | - | 3/4" THICK | NATURAL | SATIN POLY | GUARDRAIL CAP, DRAWERS, AND CAB DOORS |
| PL-1 | PLASTIC LAMINATE | - | - | - | BLACK | MANUF. | ALL WOOD/MILLWORK INTERIORS |



DOOR SCHEDULE

| DOOR NUMBER | DOOR | | | FRAME | | | DETAILS | | | FIRE RATING LABEL | HARDWARE | | COMMENTS | | |
|-------------|-----------|--------|--------|-------|--------|--------|----------|----------|-----------|-------------------|-------------|--------|----------|-------|-------------------------------------|
| | DIMENSION | | | TYPE | GLASS | FINISH | HEAD | JAMB | THRESHOLD | | TYPE | FINISH | | SET # | KEYSIDE ROOM NUMBER |
| | WIDTH | HEIGHT | THICK. | | | | | | | | | | | | |
| 100A | 3'-0" | 7'-0" | 1 3/4" | D-1 | - | WHITE | 06/A-600 | 05/A-600 | 04/A-600 | F-1 | DARK BRONZE | - | 1 | EXT. | STEELCRAFT L16 - POLYURETHANE |
| 100B | 12'-0" | 14'-0" | - | - | DBL AC | WHITE | - | - | - | - | DARK BRONZE | - | - | - | OD THERMACORE 592 W/ SAFETY WINDOWS |
| 100C | 12'-0" | 14'-0" | - | - | DBL AC | WHITE | - | - | - | - | DARK BRONZE | - | - | - | OD THERMACORE 592 W/ SAFETY WINDOWS |
| 100D | 12'-0" | 14'-0" | - | - | DBL AC | WHITE | - | - | - | - | DARK BRONZE | - | - | - | OD THERMACORE 592 W/ SAFETY WINDOWS |
| 100E | 12'-0" | 14'-0" | - | - | DBL AC | WHITE | - | - | - | - | DARK BRONZE | - | - | - | OD THERMACORE 592 W/ SAFETY WINDOWS |
| 101 | 3'-0" | 7'-0" | 1 3/4" | D-2 | - | WHITE | 07/A-600 | 08/A-600 | - | F-1 | DARK BRONZE | - | 4 | - | STEELCRAFT L20 - HONEY COMB |
| 102 | 3'-0" | 7'-0" | 1 3/4" | D-2 | - | WHITE | 07/A-600 | 08/A-600 | - | F-1 | DARK BRONZE | - | 3 | - | STEELCRAFT L20 - HONEY COMB |
| 103 | 3'-0" | 7'-0" | 1 3/4" | D-2 | - | WHITE | 07/A-600 | 08/A-600 | - | F-1 | DARK BRONZE | - | 2 | - | STEELCRAFT L20 - HONEY COMB |

WINDOW SCHEDULE

| WINDOW TYPE | WINDOW | | | FRAME | | | DETAILS | | | QUANTITY | COMMENTS | |
|-------------|-----------|--------|--------|-------|-------|----------|----------|----------|------|-------------|----------|--|
| | DIMENSION | | | TYPE | GLASS | FINISH | HEAD | JAMB | SILL | | | |
| | WIDTH | HEIGHT | THICK. | | | | | | | | | |
| W-1 | 6'-10" | 3'-10" | 1 | LOW-E | CLEAR | 03/A-600 | 02/A-600 | 01/A-600 | - | DARK BRONZE | 1 | ANDERSEN 100 - "XOX" SLIDER, ARGON FILLED, LOW-E GLASS |
| W-2 | 3'-4" | 3'-10" | 1 | LOW-E | CLEAR | 03/A-600 | 02/A-600 | 01/A-600 | - | DARK BRONZE | 1 | ANDERSEN 100 - "XO" SLIDER, ARGON FILLED, LOW-E GLASS |

KEYNOTES

1. DOOR AS SCHEDULED.
2. WINDOW AS SCHEDULED.
3. ADA COMPLIANT, ALUMINUM THRESHOLD.
4. WOOD BLOCKING AS REQUIRED.
5. DOOR FRAME AS SCHEDULED.
6. DOOR HEADER BY BUILDING MANUFACTURER.
7. 2X BY BUILDING MANUFACTURER.
8. BRUSH TYPE GASKET FOR EXTERIOR DOORS.
9. 6" THICK CONCRETE BUILDING SLAB, REFER TO SHEET A-100.
10. DOOR DRIP-CAP FLASHING, BY DOOR MANUFACTURER.
11. 26 GAUGE STEEL SIDING AS SCHEDULED, REFER TO FINISH SCHEDULE.
12. STRUCTURAL INSULATED PANEL BUILDING, BY MANUFACTURER.
13. CONTINUOUS BUILDING WRAP.
14. INSIDE SIDING CLOSURE GASKET BY STEEL SIDING MANUFACTURER.
15. 29 GAUGE STEEL LINER PANEL, REFER TO FINISH SCHEDULE.
16. 2X GUARDRAIL WALL ON STAIRS AND STORAGE MEZZANINE.
17. 5/8" GYPSUM WALL BOARD, FINISH PER ROOM SCHEDULE.
18. J-TIM BY SIDING/LINER MANUFACTURER.
19. CONTINUOUS BACKER-ROD AND SEALANT.
20. SILL FLASHING BY SIDING MANUFACTURER.
21. 3/4" HARD MAPLE PLYWOOD JAMB EXTENSIONS, FINISH WITH TWO (2) COATS OF CLEAR POLYURETHANE.
22. 3/4" HARD MAPLE TRIM, FINISH WITH TWO (2) COATS CLEAR POLYURETHANE.
23. 3/4" HARD MAPLE CAP, FINISH WITH TWO (2) COATS CLEAR POLYURETHANE.

CONSULTANT:

IOWA DEPARTMENT OF NATURAL RESOURCES
 ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034
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FINISH, DOOR & WINDOW SCHEDULES

Low Enforcement Shop for:
Lake Rathbun LE

MOOREHEAD, IA 52571

12194 Honey Creek Place

| NO. | DATE | REVISION |
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DRAWN BY: PROJECT NUMBER:
23-05-04-01

CHK'D BY: DATE:
12.10.2022

SHEET NO:

A-600

MECHANICAL SYMBOLS

| | |
|---------|---|
| — CW — | COLD WATER |
| — HW — | HOT WATER SUPPLY |
| — RHW — | RECIRCULATING HOT WATER |
| — SAN — | SOIL, WASTE, OR SANITARY SEWER BELOW FLOOR OR GRADE |
| — D — | DRAIN |
| — LP — | LP GAS |
| — V — | VENT ABOVE FLOOR OR GRADE |
| — HWS — | LOW TEMPERATURE HOT WATER SUPPLY |
| — HWR — | LOW TEMPERATURE HOT WATER RETURN |
| ⊠ 3TD-1 | FLOOR DRAIN - TYPE AND SIZE AS NOTED |
| — HB-1 | HOSE BIBB - TYPE AS NOTED |
| ⊙ | LOCATION OF THERMOSTAT/ROOM TEMPERATURE SENSOR +48" OR AS NOTED |
| ⊠ | EXHAUST DUCT UP |
| ⊠ | EXHAUST DUCT DOWN |
| ⊠ | RECTANGULAR TO ROUND DUCT TRANSITION |
| ⊠ | 90 DEGREE MITERED ELBOW |
| ⊠ | 90 DEGREE MITERED ELBOW WITH TURNING VANES |
| ⊠ | 90 DEGREE RADIUS ELBOW |
| ⊠ | 90 DEGREE RADIUS ELBOW WITH TURNING VANES |
| ⊠ | EQUIPMENT TAG |
| ⊠ | NEW DUCTWORK |

NOTE: NOT ALL SYMBOLS APPLY TO THIS PROJECT.

| | |
|---|---|
| — | UNION |
| — | RISER DOWN (ELBOW) |
| — | RISER DOWN (TEE) |
| — | RISER UP (ELBOW) |
| — | NEW PIPING |
| — | SHUT OFF VALVE (BALL, BUTTERFLY, ETC. REFER TO SPECS) |

NOTE: NOT ALL SYMBOLS APPLY TO THIS PROJECT.

MECHANICAL ABBREVIATIONS

| | | | | | |
|-------|-------------------------------|-------|-------------------------------|------|--------------------------------|
| ABSOR | ABSORPTION | EQUIP | EQUIPMENT | LDBT | LEAVING DRY BULB TEMPERATURE |
| ACU | AIR CONDITIONING UNIT | EST | EXTERNAL STATIC PRESSURE | LWT | LEAVING WATER TEMPERATURE |
| AD | ACCESS DOOR OR AREA DRAIN | EWBT | ENTERING WET BULB TEMPERATURE | LBWT | LEAVING WET BULB TEMPERATURE |
| AFF | ABOVE FINISHED FLOOR | EWC | ELECTRIC WATER COOLER | MB | MOP BASIN |
| AFG | ABOVE FINISHED GRADE | EWT | ENTERING WATER TEMPERATURE | MBH | 1000 BTUH |
| AHU | AIR HANDLING UNIT | EX | EXISTING | MC | MECHANICAL CONTRACTOR |
| AV | AIR VENT | EXH | EXHAUST | MECH | MECHANICAL |
| BOT | BOTTOM | EXP | EXPANSION | MH | MANHOLE |
| BTU | BRITISH THERMAL UNIT | FAI | FRESH AIR INTAKE | NTS | NOT TO SCALE |
| BTUH | BTU PER HOUR | FCU | FAN COIL UNIT | OA | OUTSIDE AIR |
| CA | COMPRESSED AIR | FD | FLOOR DRAIN | OD | OVERFLOW ROOF DRAIN |
| CB | CATCH BASIN | FLEX | FLEXIBLE | PSI | POUNDS PER SQUARE INCH |
| CENT | CENTRIFUGAL | FLR | FLOOR | PRV | POWER ROOF VENTILATOR |
| CFM | CUBIC FEET PER MINUTE | FFM | FEET PER MINUTE | PRV | PRESSURE REDUCING VALVE |
| CI | CAST IRON | FPS | FEET PER SECOND | PV | PRESSURE VENT |
| CL | CENTER LINE | FS | FLOOR SINK | PVC | POLYVINYL CHLORIDE |
| COND | CONDENSATE | FT | FINTUBE | RA | RETURN AIR |
| CO | CLEAN OUT | FTG | FOOTING | RD | ROOF DRAIN |
| CONC | CONCRETE | GA | GAGE | RH | RELATIVE HUMIDITY |
| CONTR | CONTRACTOR | GAL | GALLON | RTU | ROOF TOP UNIT |
| CP | CONDENSATE PUMP | GALV | GALVANIZED | RV | RELIEF VALVE |
| CU | COPPER | GC | GENERAL CONTRACTOR | SK | SINK |
| CUH | CABINET UNIT HEATER | GPH | GALLONS PER HOUR | SA | SUPPLY AIR |
| CWP | CIRCULATING WATER PUMP | GPM | GALLONS PER MINUTE | SH | SHOWER |
| DDC | DIRECT DIGITAL CONTROLS | H | WALL HYDRANT | SP | STATIC PRESSURE |
| DN | DOWN | HR | HOUR | TCC | TEMPERATURE CONTROL CONTRACTOR |
| DR | DRAIN | HTG | HEATING | TYP | TYPICAL |
| DS | DOWNSPOUT | HB | HOSE BIBB | UC | UNDER CUT DOOR (3/4") |
| EA | EXHAUST AIR | ISP | INTERNAL STATIC PRESSURE | UH | UNIT HEATER |
| EAT | ENTERING AIR TEMPERATURE | JR | JANITOR RECEPTOR | UR | URINAL |
| EC | ELECTRICAL CONTRACTOR | LAV | LAVATORY | UV | UNIT VENTILATOR |
| EDBT | ENTERING DRY BULB TEMPERATURE | | | VIR | VENT THROUGH ROOF |
| EF | EXHAUST FAN | | | WC | WATER CLOSET |
| EJ | EXPANSION JOINT | | | WH | WATER HEATER |

NOTE: NOT ALL ABBREVIATIONS APPLY TO THIS PROJECT.

MECHANICAL GENERAL NOTES

COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

INCORPORATE INTO INSTALLATION MECHANICAL SPECIFICATIONS, DRAWINGS, STATE AND LOCAL CODES, AND OTHER APPLICABLE REQUIREMENTS.

ON COMPLETION OF THE INSTALLATION, MECHANICAL CONTRACTOR SHALL COOPERATE WITH THE OWNER TO PROVIDE ANY NECESSARY ADJUSTING AND BALANCING TO OBTAIN PROPER OPERATION OF ALL EQUIPMENT AND SYSTEMS. CONTRACTOR SHALL PROVIDE ALL FACILITIES AND EQUIPMENT, AND MAKE ALL TESTS, REQUIRED FOR ADJUSTMENTS AND BALANCING TO ESTABLISH THE PROPER PERFORMANCE OF ANY PIECE OF EQUIPMENT.

PIPING SHALL NOT BLOCK CLEARANCES TO MECHANICAL EQUIPMENT. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING PIPING IF ACCESS CLEARANCES ARE OBSTRUCTED.

HVAC GENERAL NOTES

MECHANICAL CONTRACTOR TO PROVIDE A COMPLETE HVAC SYSTEM, INCLUDING DUCTWORK, MECHANICAL EQUIPMENT, SUPPORTS, HANGERS AND ALL APPURTENANCES. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. INSTALL SYSTEM TO MEET ALL CITY AND STATE CODES AND REQUIREMENTS.

DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCT SYSTEM. INDICATED DUCT LOCATIONS, CONFIGURATIONS, AND ARRANGEMENTS WERE USED TO SIZE DUCTS AND CALCULATE FRICTION LOSS FOR AIR-HANDLING EQUIPMENT SIZING AND FOR OTHER DESIGN CONSIDERATIONS.

ALL DUCT DIMENSIONS LISTED ARE INTERIOR FREE AREA DUCT DIMENSIONS AND DO NOT INCLUDE INSULATION REQUIREMENTS. CONTRACTOR MUST INCREASE DUCT SIZES ACCORDINGLY TO ACCOMMODATE INSULATION.

PLUMBING GENERAL NOTES

MECHANICAL CONTRACTOR TO PROVIDE A COMPLETE PLUMBING SYSTEM, INCLUDING, PIPE, INSULATION, HANGERS, SUPPORTS AND ALL APPURTENANCES. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. SIZE AND INSTALL SYSTEM PER PLUMBING CODE. COMPLY WITH ALL LOCAL AND STATE CODES AND REQUIREMENTS.

DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PLUMBING SYSTEM.

MECHANICAL WARRANTY NOTES

MECHANICAL CONTRACTOR SHALL WARRANT ALL EQUIPMENT AND INSTALLATION FOR A MINIMUM OF 1 YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. AIR CONDITIONING REFRIGERATION SYSTEMS SHALL BE WARRANTED FOR A MINIMUM OF 5 YEARS (PARTS ONLY), NON-PRORATED, FROM THE DATE OF SUBSTANTIAL COMPLETION. THE WARRANTY SHALL APPLY TO COMPRESSORS, EVAPORATORS, AND CONDENSER COILS, HIGH AND LOW SIDE PIPING AND PIPING SPECIALTIES WHICH SHALL INCLUDE EXPANSION AND SOLENOID VALVES, RELIEF VALVES, FILTER-DRYER, AND SIGHT GLASSES. PRESSURE GAUGES AND PRESSURE SWITCHES ARE NOT UNDER THE EXTENDED WARRANTY EXCEPT FOR LOSS OF REFRIGERANT AND CONSEQUENTIAL DAMAGE TO THE SYSTEM WHICH WILL BE AN EXTENDED WARRANTY OBLIGATION. ALL DEFECTS THAT BECOME APPARENT WITHIN THE WARRANTY PERIOD SHALL BE REPAIRED BY THE MECHANICAL CONTRACTOR AS DIRECTED BY THE ENGINEER THROUGH THE OWNERS REPRESENTATIVE. WARRANTY WILL NOT OBLIGATE THE MECHANICAL CONTRACTOR TO REPAIR DAMAGE RESULTING FROM ACCIDENT OR IMPROPER OPERATION OF CARE ON THE PART OF THE OWNER AND NOT DUE TO DEFECTIVE MATERIAL. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND OTHER WARRANTY INFORMATION.

MECHANICAL GENERAL NOTES AND SYMBOLS

Law Enforcement Shop for

Lake Rathbun LE

12194 Honey Creek Place

Monavia, IA 52571

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:

23-05-04-01

CHKD BY: DATE:

12.20.2022

SHEET No:

M-000

IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034

P: 515.725.8200

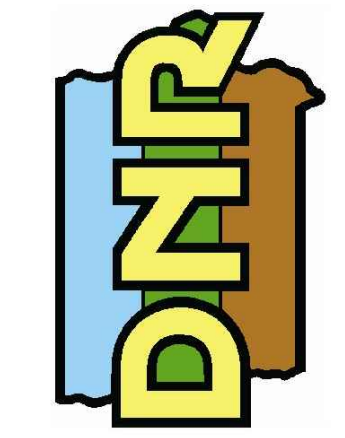
F: 515.725.8202

CONSULTANT

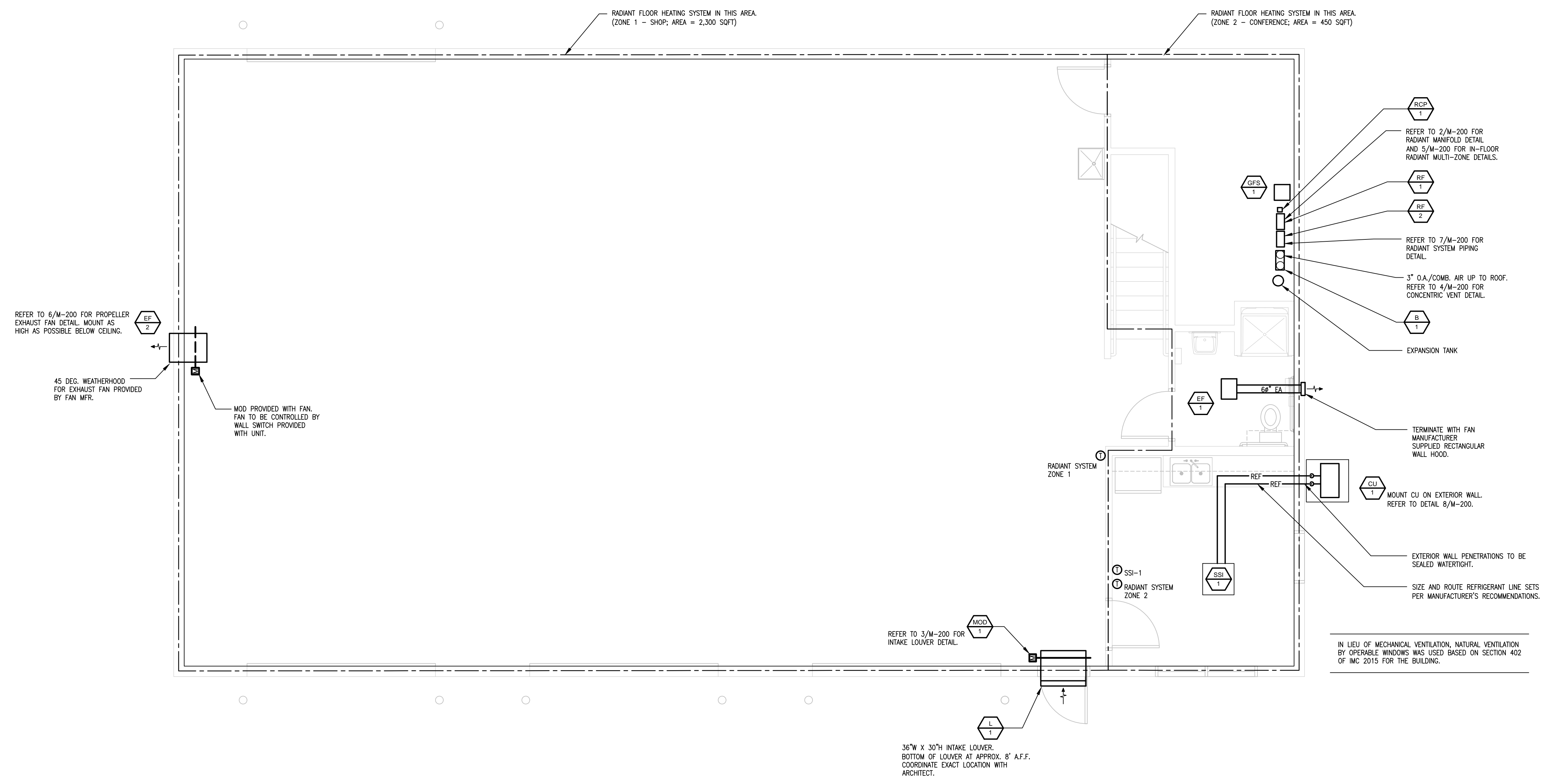
KCL
ENGINEERING

300 4th Street
West Des Moines, Iowa 50265
515.724.7938
info@kclengineering.com





- GENERAL NOTES**
1. REFER TO M-000 FOR GENERAL NOTES.
 2. REFER TO M-200 FOR HVAC DETAILS.
 3. REFER TO M-300 FOR HVAC SCHEDULES.



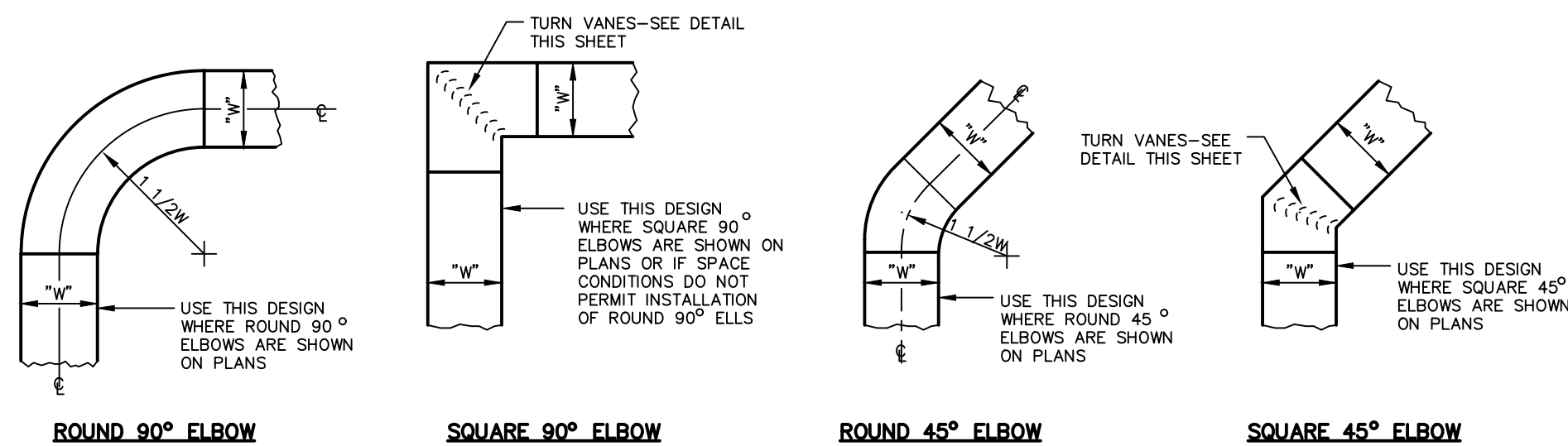
1 FLOOR PLAN - MECHANICAL
1/4" = 1'-0"

IN LIEU OF MECHANICAL VENTILATION, NATURAL VENTILATION BY OPERABLE WINDOWS WAS USED BASED ON SECTION 402 OF IMC 2015 FOR THE BUILDING.

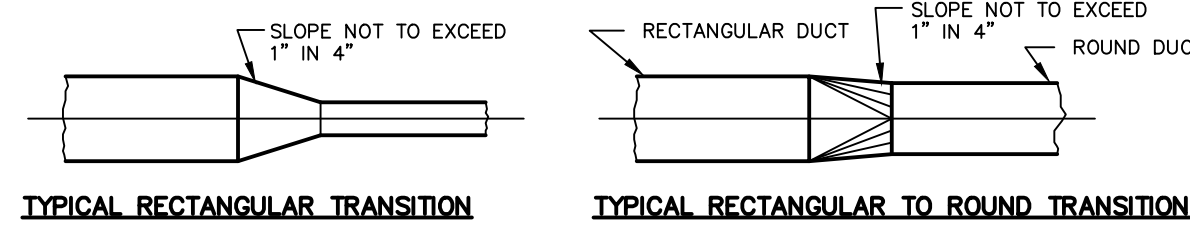
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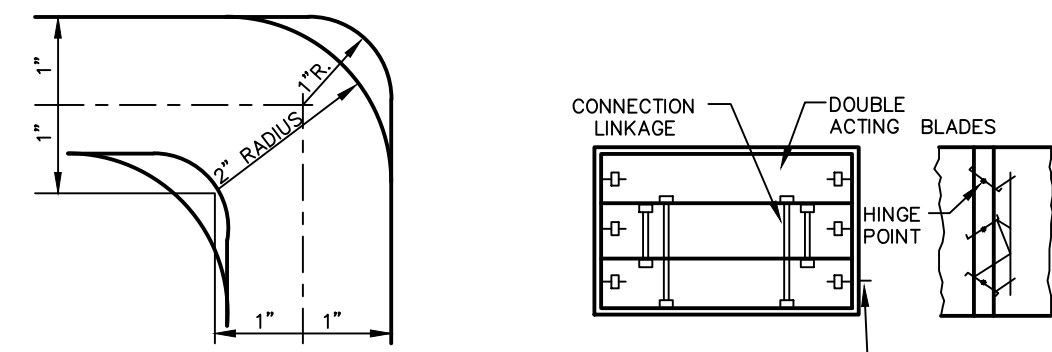
CHKD BY: DATE:
12.20.2022



ROUND 90° ELBOW **SQUARE 90° ELBOW** **ROUND 45° ELBOW** **SQUARE 45° ELBOW**
CONSTRUCTION OF 90° ELBOWS **CONSTRUCTION OF 45° ELBOWS**

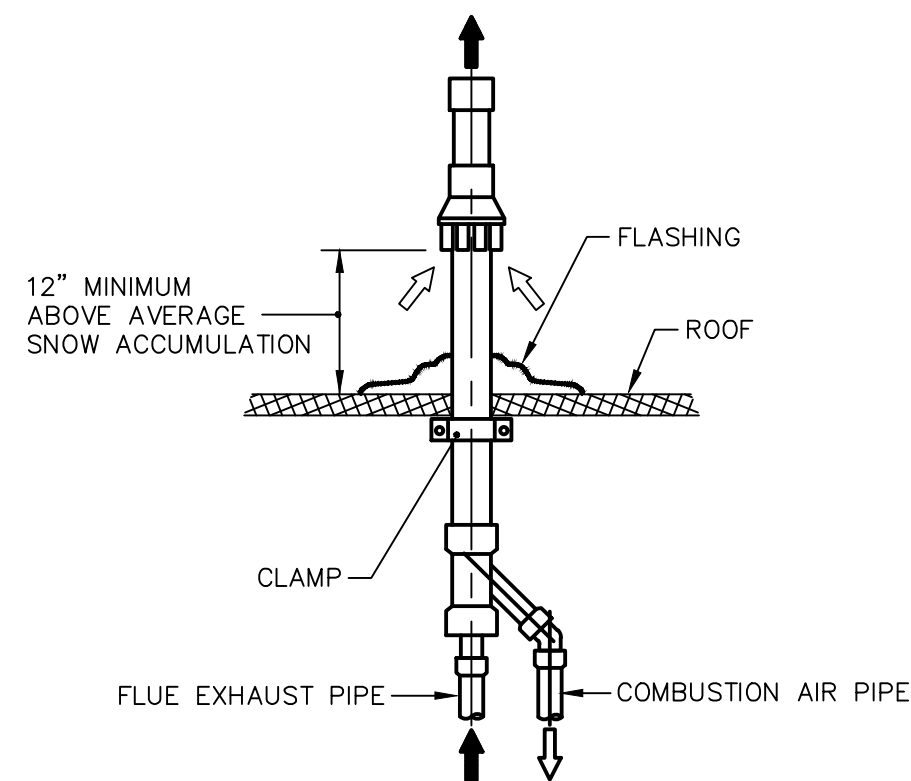


TYPICAL RECTANGULAR TRANSITION **TYPICAL RECTANGULAR TO ROUND TRANSITION**



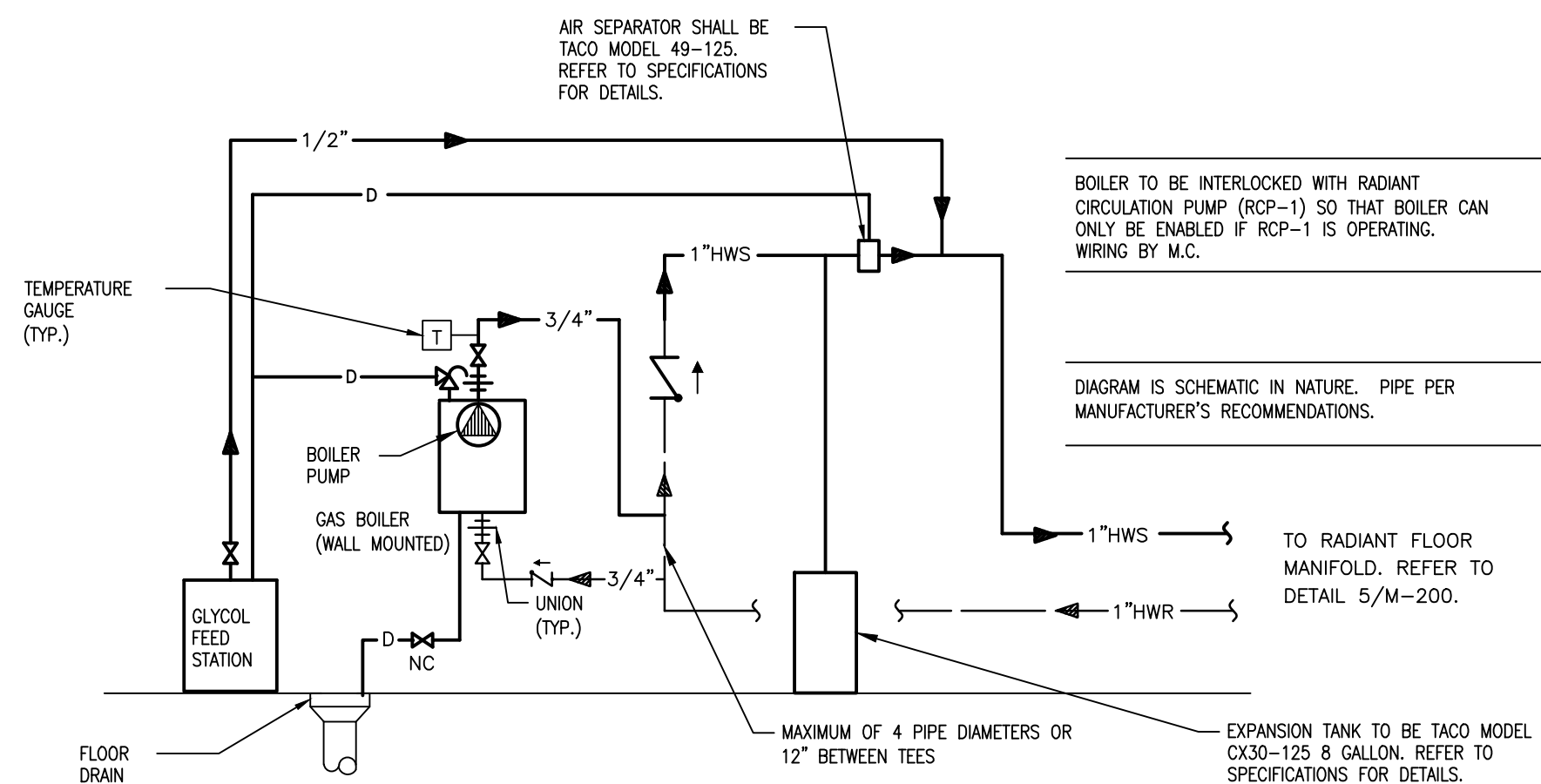
DETAIL OF TURN VANES **TYPICAL VOLUME DAMPER**

1 DETAILS OF THE LOW VELOCITY DUCT LAYOUT
 NOT TO SCALE

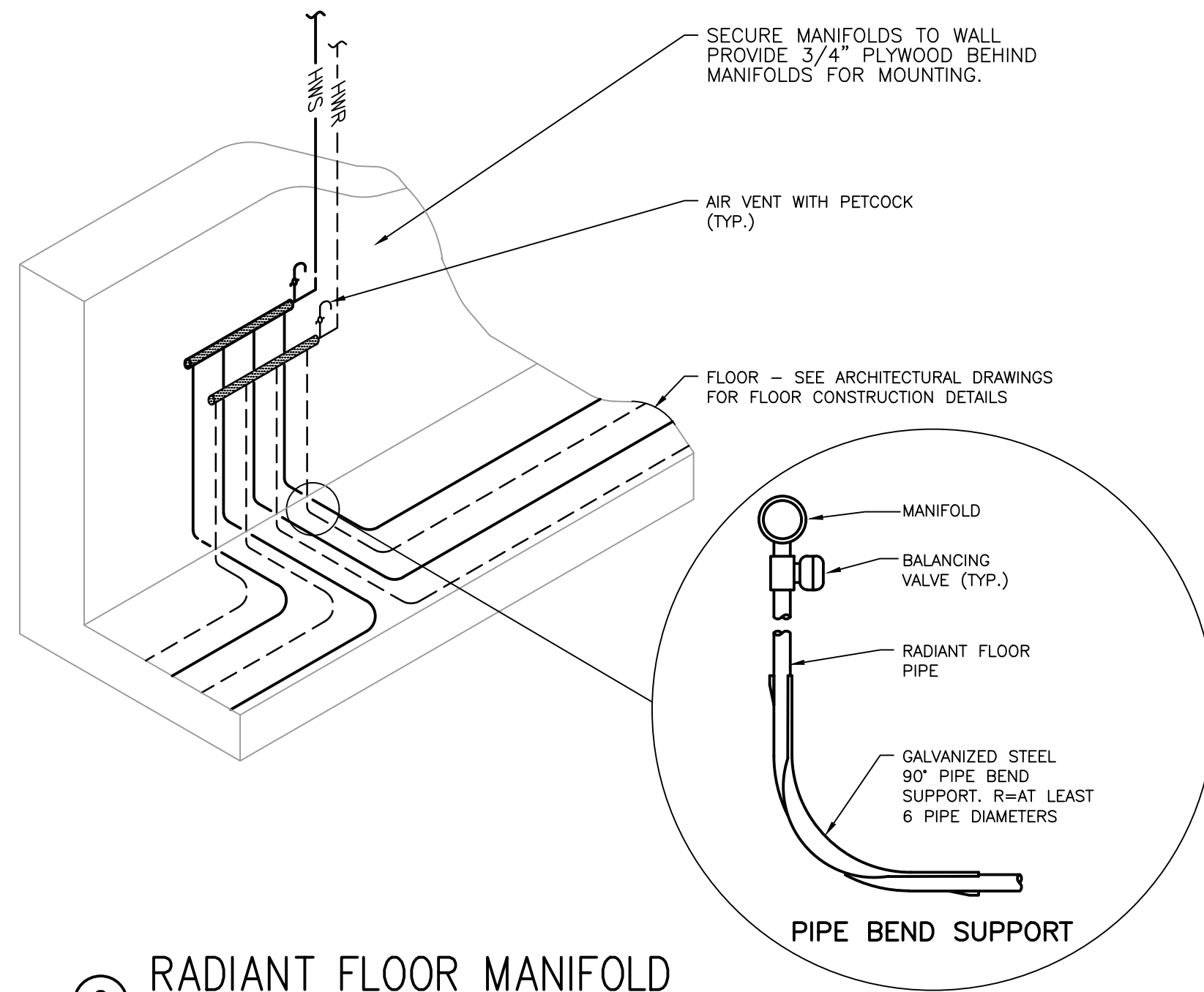


SIZE/ROUTE FLUE AND C.A. PIPING PER MFR RECOMMENDATIONS

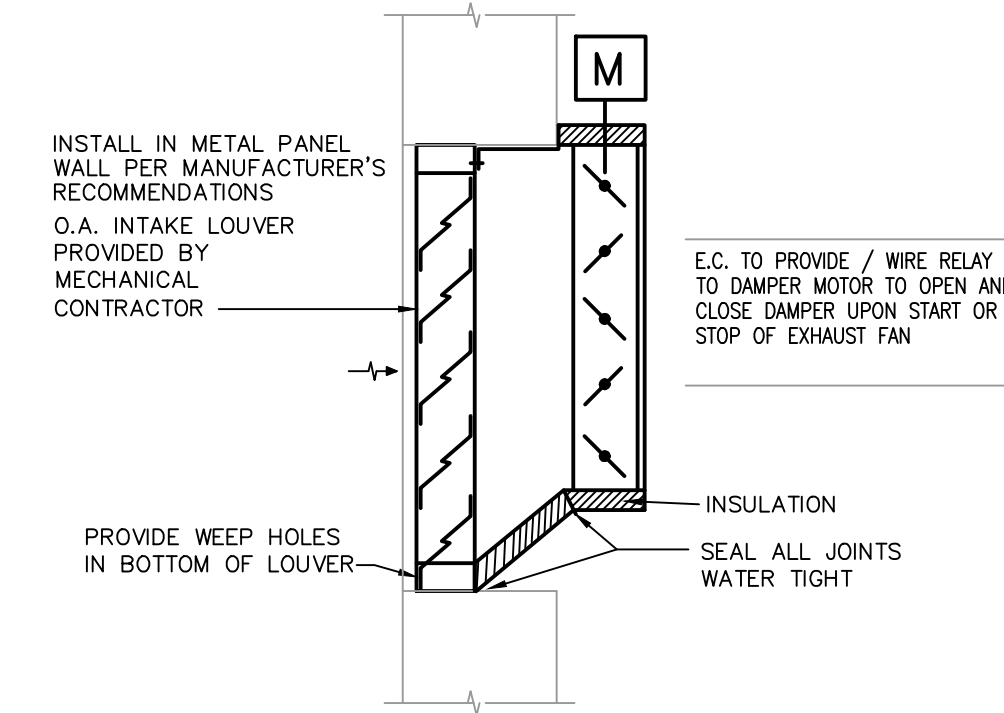
4 CONCENTRIC ROOF TERMINATION
 NOT TO SCALE



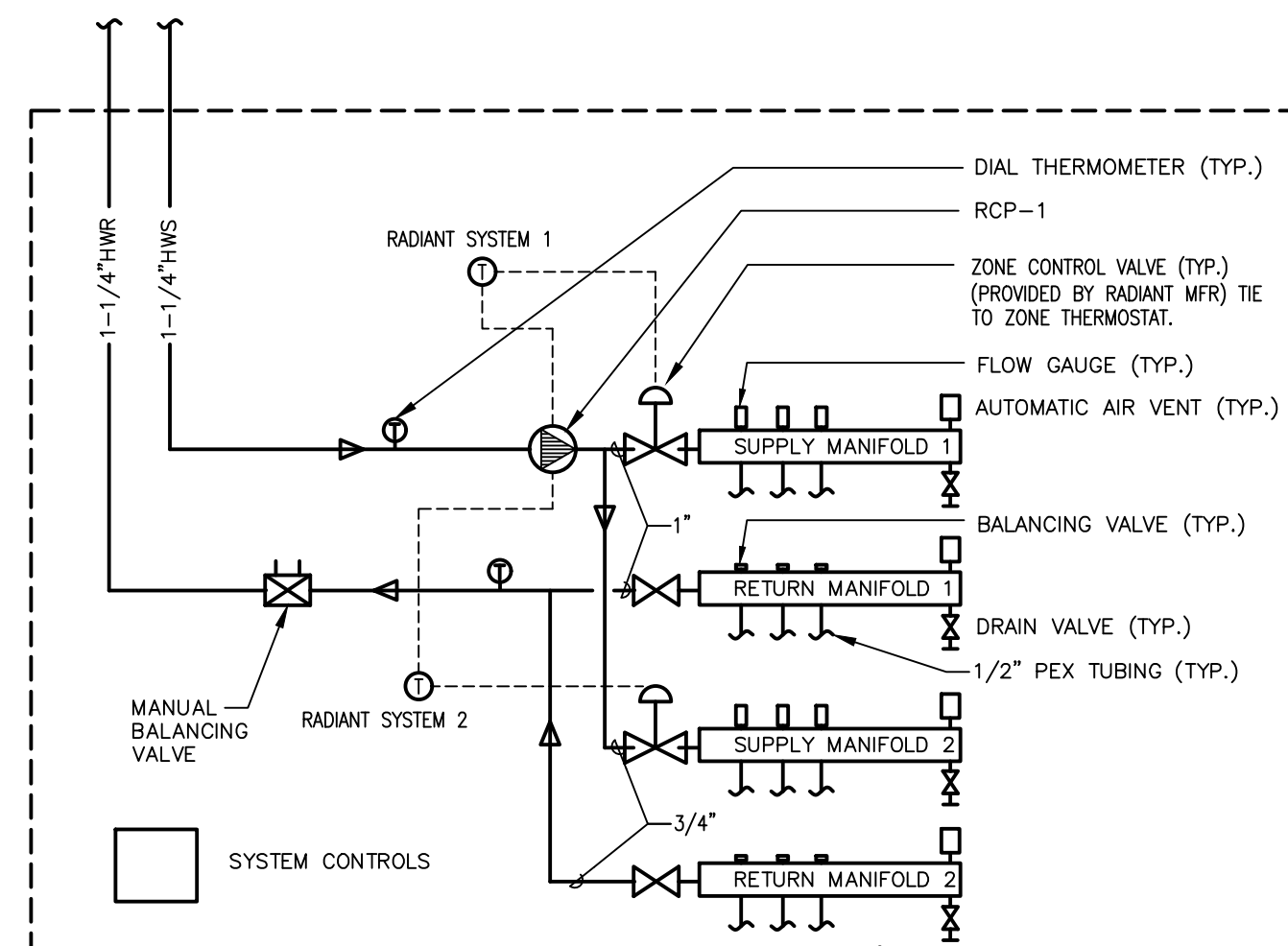
7 RADIANT HEATING PIPING DIAGRAM
 NOT TO SCALE



2 RADIANT FLOOR MANIFOLD
 NOT TO SCALE

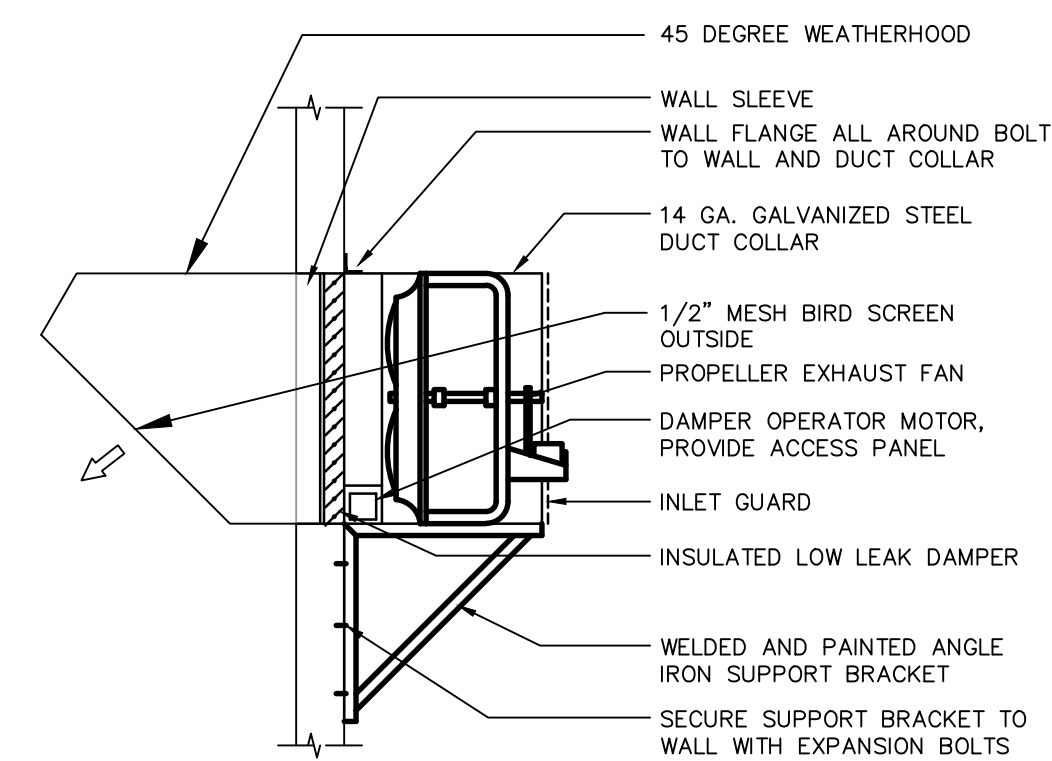


3 INTAKE LOUVER INSTALLATION
 NOT TO SCALE

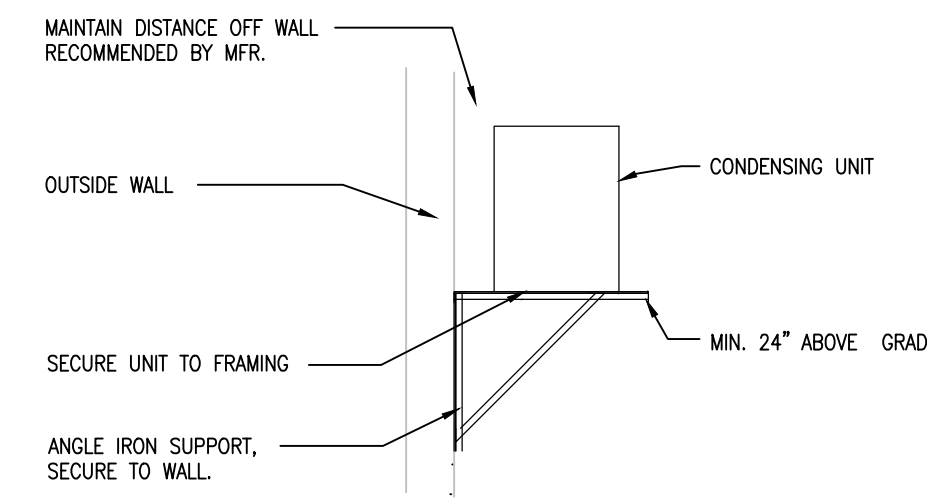


RADIANT CIRCULATION PUMP TO CYCLE ON/OFF TO MAINTAIN ZONE THERMOSTATS. ZONE THERMOSTATS SHALL ALSO OPEN/CLOSE ZONE CONTROL VALVES AS REQUIRED. PROVIDE CONTROLS AS REQUIRED. COORDINATE POWER REQUIREMENTS WITH ELECTRICIAN.

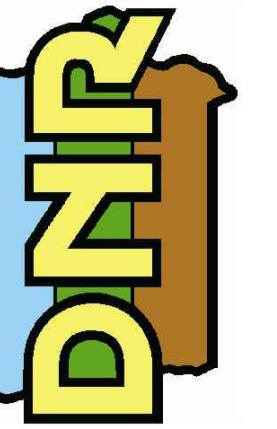
5 IN-FLOOR RADIANT MULTI-ZONE SYSTEM DETAIL
 NOT TO SCALE



6 PROPELLER EXHAUST FAN
 NOT TO SCALE



8 CONDENSING UNIT MOUNTING DETAIL
 NOT TO SCALE



| EXHAUST FAN SCHEDULE | | |
|------------------------|-----------------|-----------------------------|
| REFERENCE | EF-1 | EF-2 |
| MANUFACTURER | GREENHECK | GREENHECK |
| MODEL # | SP-B110 | SE1-14-432-A4 |
| TYPE | IN-CEILING | PROPELLER |
| SERVES | BATHROOM | SHOP |
| CFM | 75 | 1,900 |
| ESP (IN. W.C.) | 0.30 | 0.25 |
| FAN RPM | 950 | 1622 |
| BELT/DIRECT | DIRECT | DIRECT |
| SPEED CONTROL (YES/NO) | YES | YES |
| SONES | 2 | 10 |
| DAMPER TYPE | GRAV. BACKDRAFT | M.O.D. (INSULATED LOW LEAK) |
| BHP | 100 W | .20 HP |
| MOTOR HP | 100 W | 1/4 HP |
| VOLTAGE/PH | 120/1 | 120/1 |
| NOTES | 1,2,3 | 4,5,6,7,8 |

- NOTES:
1. PLUG DISCONNECT BY FAN MFR.
 2. FAN TO INCLUDE LOW PROFILE
 3. FAN TO BE CONNECTED TO ROOM OCCUPANCY SENSOR.
 4. PROVIDE WITH POTENTIOMETER IAL, SPEED CONTROL TO BE LOCATED IN UNIT HOUSING.
 5. PROVIDE WITH GREENHECK VCD-34-PB-16X16 (MOUNTED) DAMPER AND 115 VAC ACTUATOR WITH UNIT.
 6. FAN TO OPERATE BY WALL SWITCH PROVIDED WITH UNIT AND LOCATED BELOW UNIT. WIRING BY E.C.
 7. E.C. TO PROVIDE MOTORIZED DAMPER TO OPEN/CLOSE WITH FAN START OR STOP.
 8. PROVIDE WITH DISCONNECT, 45 DEG. GALV. WEATHERHOOD WITH BIRDSCREEN AND LONG WALL HOUSING.

| SPLIT SYSTEM HEAT PUMP INDOOR UNIT SCHEDULE | |
|---|-------------------|
| REFERENCE | SSI-1 |
| MANUFACTURER | MITSUBISHI |
| MODEL # | TPLA0A0121EA70B |
| TYPE | CEILING CASSETTE |
| SERVES | BREAK ROOM |
| NOMINAL TONS | 1 |
| MAX UNIT CFM | 390 |
| EXTERNAL STATIC PRESSURE (IN. W.G.) | N/A |
| COOLING CAP. (RATED/MIN.) (BTU/H) | 11,100 |
| HEATING CAP. (RATED/MIN.) (BTU/H) | 13,600 |
| REFRIGERANT | R410A |
| SEER | 27.0 |
| VOLTAGE/PH | 240/1 |
| MCA | 1 |
| MOCP | SEE C.U. SCHEDULE |
| NOTES | 1, 2, 3, 4, 5, 6 |

- NOTES:
1. PROVIDE WITH REMOTE WALL MOUNTED THERMOSTAT.
 2. INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT BY INTERCONNECTED WIRING PROVIDED BY M.C. WIRING BY E.C.
 3. COOLING RATED CAPACITY IS BASED ON THE FOLLOWING CONDITIONS. INDOOR: 80F/76F, OUTDOOR: 95F/75F
 4. HEATING RATED CAPACITY IS BASED ON THE FOLLOWING CONDITIONS. INDOOR: 70F/60F, OUTDOOR: 47F/43F
 5. HEATING MODE OF HEAT PUMP TO SERVE AS BACKUP FOR RADIANT FLOOR HEATING SYSTEM.
 6. PROVIDE FILTER WITH UNIT AND PROVIDE UNIT WITH INTEGRAL CONDENSATE PUMP.

| CONDENSING UNIT SCHEDULE | |
|---|-----------------|
| REFERENCE | CU-1 |
| MANUFACTURER | MITSUBISHI |
| MODEL # | TRUZA0121KA70BA |
| SERVES | SSI-1 |
| NOMINAL TONS | 1 |
| COOLING CAP. (RATED/MIN.) (BTU/H) | 12,000 / 5,800 |
| HEATING CAP. (RATED/MIN.) (BTU/H) | 20,000 / 14,000 |
| LOW TEMP. HEATING CAP. (AT 17F) (BTU/H) | 12,200 |
| REFRIGERANT | R410A |
| # COMPRESSORS | 1 |
| SEER | 27.0 |
| VOLTAGE/PH | 240/1 |
| MCA | 11 |
| OVERCURRENT PROTECTION (AMPS) | 28 |
| NOTES | 1, 2, 3, 4 |

- NOTES:
1. DISCONNECT SHALL BE PROVIDED / INSTALLED BY E.C.
 2. UNIT TO BE MOUNTED TO BUILDING EXTERIOR WALL.
 3. REFER TO SPLIT SYSTEM INDOOR UNIT SCHEDULE FOR CAP. RATING CONDITIONS.
 4. HEATING MODE OF HEAT PUMP TO SERVE AS BACKUP FOR RADIANT FLOOR HEATING SYSTEM.

| RADIANT FLOOR MANIFOLD SCHEDULE | | |
|--|----------------------|----------------------|
| REFERENCE | RF-1 | RF-2 |
| MANUFACTURER | ROTH RADIANT | ROTH RADIANT |
| MODEL # | NP MANIFOLD SET | NP MANIFOLD SET |
| SERVES | SHOP | CONFERENCE |
| SUPPLY WATER TEMP (F) | 120 | 120 |
| TUBE SPACING | 12" | 12" |
| TUBE SIZE (NOMINAL) | 1/2" | 1/2" |
| LOAD (BTU/H/S.F.) | 30 | 30 |
| APPROX. SQ. FT OF COVERAGE | 2,450 | 450 |
| TOTAL LOAD (BTUH) | 73,500 | 13,500 |
| AMBIANT ROOM TEMP (F) | 68 | 68 |
| FLOOR COVERING | POLISHED CONCRETE | CARPET |
| TOTAL MANIFOLD GPM | 6.0 | 1.2 |
| MINIMUM LOOPS REQUIRED | 9 | 2 |
| MAXIMUM LOOP LENGTH (FT) | 300 | 300 |
| MAXIMUM TUBE & MANIFOLD PRESS. DROP (FT) | 10 | 10 |
| SYSTEM FLUID | 30% PROPYLENE GLYCOL | 30% PROPYLENE GLYCOL |
| NOTES | 1 | 1 |

1. MFR TO PROVIDE OPEN/CLOSE TYPE CONTROL VALVE WITH MANIFOLD AND ZONE THERMOSTAT.

| GLYCOL FEED STATION SCHEDULE | |
|-------------------------------|-----------------------|
| REFERENCE | GFS-1 |
| MANUFACTURER | WESSELS |
| MODEL # | GMP-6 |
| SERVES | RF-1 (RADIANT SYSTEM) |
| TANK VOLUME | 6 GALLONS |
| UNIT DIMENSIONS | 12" W X 12"D X 18" H |
| FACTORY DISCH. PRESS. SETTING | 12 PSIG |
| VOLTAGE/PH | 115/1 |
| NOTES | 1, 2, 3 |

- NOTES:
1. DISCONNECT SHALL BE PROVIDED / INSTALLED BY E.C.
 2. SYSTEM CONNECTION SIZE IS 1/2"NPT.
 3. PROVIDE UNIT ABOVE, EQUIVALENT BY GENERAL TREATMENT PRODUCTS OR PRE-APPROVED EQUAL.

| MOTORIZED DAMPERS | |
|------------------------|------------------|
| REFERENCE | MOD-1 |
| MANUFACTURER | GREENHECK |
| MODEL | VCD-34 |
| SIZE (W X H) (IN.) | 36 X 24 |
| CFM | 1,900 |
| BLADE STYLE | OPPOSED |
| BLADE DIRECTION | HORIZONTAL |
| INSULATED | YES |
| ACTUATOR TYPE | ELECTRIC (120 V) |
| ACTUATOR STYLE | 2 POSITION |
| POWER FAILURE POSITION | CLOSED |
| NOTES | 1,2,3 |

- NOTES:
1. EC TO POWER MOTORIZED DAMPER TO OPEN/CLOSE WITH FAN START OR STOP.
 2. DAMPER SHOULD BE ULTRA LOW LEAK TYPE WITH GASKETED SEALS
 3. PROVIDE UNIT OR PRE-APPROVED EQUAL.

| GAS HOT WATER BOILER SCHEDULE | |
|-------------------------------|--------------------------|
| REFERENCE | B-1 |
| MANUFACTURER | LAARS |
| MODEL # | MFTHW140 |
| BOILER TYPE | INSTANTANEOUS CONDENSING |
| FUEL | L. P. |
| GAS PRESSURE (MIN/MAX) | 4.0" / 14" W.C. |
| SERVES | RADIANT FLOOR SYSTEM |
| GAS INPUT (MBH) | 140 |
| GAS OUTPUT (MBH) | 129 |
| TURNDOWN | 10:1 |
| DIMENSIONS (W/H/D) | 19"W X 32"H X 17"D |
| THERMAL EFFICIENCY (%) | 95 |
| ENTERING WATER TEMP (°F) | 95 |
| LEAVING WATER TEMP (°F) | 120 |
| COMB. AIR / FLUE DIAM | 3" |
| VOLTAGE/PH | 120/1 |
| FLA (AMPS) | 4 |
| MCA | 15 |
| NOTES | 1,2,3,4,5,6 |

- NOTES:
1. 1 1/4" HWS/HWR CONNECTIONS
 2. PROVIDE WITH PACKAGED BOILER CONTROLS.
 3. PROVIDE CONDENSATE NEUTRALIZER FOR THE BOILER CONDENSATE DRAIN.
 4. 3" EXHAUST VENT PIPE TO BE PVC/CPVC, PE, OR STAINLESS STEEL. 3" INTAKE CAN BE ABS, PVC, CPVC, OR GALVANIZED. INSTALL PER MFR RECOMMENDATIONS.
 5. PROVIDE PRIMARY BOILER PUMP WITH BOILER THAT COMES INSTALLED AND WIRED TO THE BOILER FROM THE FACTORY.
 6. BOILER TO BE INTERLOCKED WITH RADIANT CIRCULATION PUMP (RCP-1) SO THAT BOILER CAN ONLY BE ENABLED WHEN RCP-1 IS OPERATING.

| PUMP SCHEDULE | |
|---------------------------|----------------------|
| REFERENCE | RCP-1 |
| MANUFACTURER | TACO |
| MODEL # | 0026E |
| SERVES | RADIANT FLOOR SYSTEM |
| GPM | 7.2 |
| TOTAL DEVELOPED HEAD (FT) | 23 |
| HP | 1/8 |
| PUMP RPM | 830-3800 |
| VOLT/PHASE | 120/1 |
| NOTES | 1, 2 |

- NOTES:
1. E.C. TO PROVIDE DISCONNECT.
 2. PUMP TO RUN TO MAINTAIN SPACE TEMP. REFER TO RADIANT MANIFOLD DETAILS.

| LOUVER SCHEDULE | |
|--------------------------|---------------------|
| REFERENCE | L-1 |
| MANUFACTURER | GREENHECK |
| MODEL | ESD-403 |
| APPLICATION | INTAKE FOR SHOP |
| MATERIAL | ALUMINUM |
| SIZE (W X L X D) (IN.) | 36 X 30 X 4 |
| CFM | 1,900 |
| FREE AREA (SQ. FT.) | 2.75 |
| PRESSURE DROP (IN. W.C.) | 0.052 |
| FREE AREA VELOCITY (FPM) | 646 |
| BLADE DIRECTION | HORIZONTAL |
| INSTALLATION | S.I.P.S. METAL WALL |
| DRAINABLE | YES |
| NOTES | 1,2,3,4 |

- NOTES:
1. PROVIDE COLOR CHARTS TO ARCHITECT FOR COLOR SELECTION.
 2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 3. PROVIDE WITH BIRDSCREEN
 4. PROVIDE LOUVER ABOVE, EQUIVALENT BY NCA, UNITED ENERTECH OR ENGINEER PRE-APPROVED EQUAL

MECHANICAL SCHEDULES

Law Enforcement Shop for
Lake Rathbun LE

12194 Honey Creek Place
Mora, IA 52571

IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034
P: 515.725.8200
F: 515.725.8202

CONSULTANT

KCL
ENGINEERING

300 4th Street
West Des Moines, Iowa 50265
515.724.7938
info@kclengineering.com

| NO. | BY DATE | REVISION |
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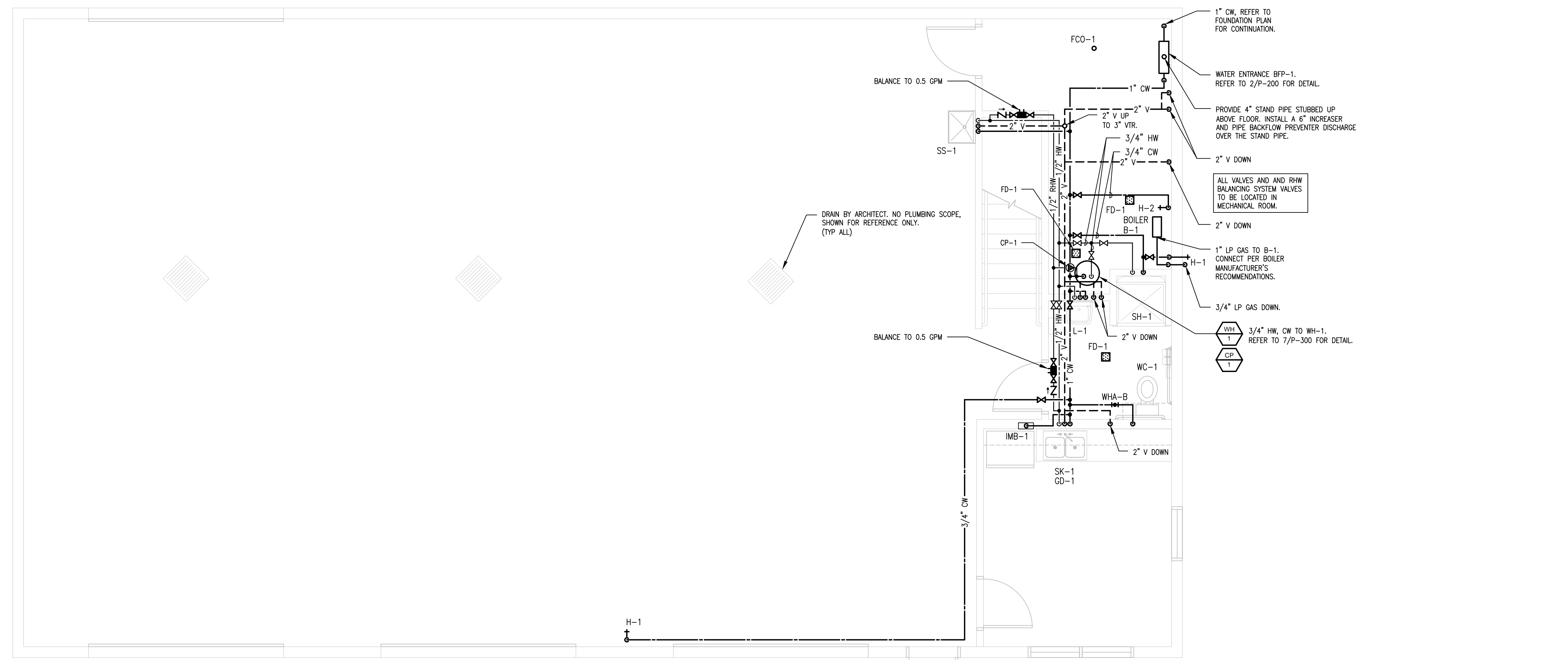
SHEET No:

M-300



- GENERAL NOTES**
1. REFER TO M-000 FOR GENERAL NOTES.
 2. REFER TO P-200 FOR PLUMBING DETAILS.
 3. REFER TO P-300 FOR PLUMBING SCHEDULES.

NORTH 1 UNDERFLOOR PLAN - PLUMBING
1/4" = 1'-0"



NORTH 1 FLOOR PLAN - PLUMBING
1/4" = 1'-0"



FLOOR PLANS - PLUMBING

Law Enforcement Shop for
Lake Rathbun LE

12194 Honey Creek Place
Moravia, IA 52571

| NO. | BY | REVISION |
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23-05-04-01
CHKD BY: DATE:
12.20.2022
SHEET No:
P-100

| PLUMBING FIXTURE SCHEDULE | | | | |
|---------------------------|----------------|----------------|---|---|
| REFERENCE | MFR | MODEL | DESCRIPTION | TRIM |
| BFP-1 | WATTS | 009/909 | BACKFLOW PREVENTOR - REDUCED PRESSURE ZONE ASSEMBLY. BRONZE BODY CONSTRUCTION OR FDA APPROVED EPOXY COATED CAST IRON. INTERNAL PRESSURE RELIEF VALVE BETWEEN TWO CHECK VALVES. REPLACABLE SILICONE SEAT DISCS. PROVIDE WITH AIR GAP DRAIN FITTING. SERVICE OF ALL COMPONENTS SHALL BE THROUGH SINGLE ACCESS BRONZE COVER WITH STAINLESS BOLTS. COMPLY WITH AWWA AND ASSE. | NA |
| FCO-1 | ZURN | Z1400 | ADJUSTABLE FLOOR CLEANOUT. CAST IRON BODY, TAPERED THREAD PLUG AND ROUND NICKEL BRONZE SCORIATED CAST IRON HEAVY-DUTY SECURED TOP, ADJUSTABLE TO FINISHED FLOOR. OUTLET SIZE AS NOTED ON DRAWINGS. | NA |
| FD-1 | ZURN | ZB-415-6B-P-ZB | CAST IRON BODY FLOOR DRAIN, TYPE "B" 6" ROUND POLISHED NICKEL BRONZE STRAINER, DEEP SEAL TRAP. OUTLET SIZE AS NOTED ON DRAWINGS, MIN. 3". | NA |
| GCO-1 | ZURN | Z1474 | GRADE CLEANOUT, ROUND, DURA-COATED CAST IRON, SIZE AS INDICATED, DOUBLE FLANGED HOUSING, HEAVY DUTY SECURED SCORIATED DURA-COATED CAST IRON COVER, LIFTING DEVICE, BRONZE CLEANOUT PLUG WITH GAS/WATER-TIGHT SEAL. | NA |
| GD-1 | IN-SINK-ERATOR | BADGER 5 | GARBAGE DISPOSAL, CONTINUOUS FEED, GALVANIZED STEEL GRINDING ELEMENTS WITH STAINLESS STEEL 360° SWIVEL LUGS, PERMANENTLY LUBRICATED, 1/2 HP, 120V, MANUAL RESET OVERLOAD, WITH CORD AND PLUG. CONTROLLED BY WALL SWITCH. WIRING BY E.C. | NA |
| H-1 | WOODFORD | B65 | FREEZELESS WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-FERROUS METAL STEM, AUTOMATIC DRAINING, VACUUM BREAKER, 3/4" MALE HOSE THREAD, WALL CLAMP, CONCEALED IN FLUSH MOUNTED LOCKABLE WALL BOX, KEY OPERATED, ASSE 1019 APPROVED AND LISTED. INSTALL AT 18" ABOVE FINISH GRADE. | NA |
| H-2 | WOODFORD | 24 | WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-FERROUS METAL STEM, AUTOMATIC DRAINING, ANTI-SIPHON VACUUM BREAKER, 3/4" MALE HOSE THREAD, WALL CLAMP, POLYCARBONATE WHEEL HANDLE AND LOOSE KEY TEE, KEY OPERATED, ASSE 1019 APPROVED AND LISTED. INSTALL AT 36" ABOVE FINISH FLOOR. | NA |
| IMB-1 | GUY GRAY | BIM875QTSAB | ICE MAKER OUTLET BOX - 20-GAUGE G90 GALVANIZED ENCLOSURE, 1/2" FIP INLET, 1/4" OD OUTLET QUARTER TURN BRASS BALL VALVE WITH FACEPLATE. | NA |
| L-1 | KOHLER | K-2005 | WALL HUNG, VITREOUS CHINA LAVATORY, OVERALL DIMENSIONS 21" x 18", 4" CENTER HOLES, BACKSPASH, OVERFLOW. WALL MOUNT / PROVIDE WITH CONCEALED ARM CARRIER, ADA COMPLIANT. | DELTA "591-T1250", ADA COMPLIANT, BATTERY POWERED SENSOR TYPE FAUCET, WITH OFFSET GRID STRAINER AND TRAP. (TRUEBRO "102W, 105" CW, HW, AND WASTE PIPE GUARDS AND) ESCUTCHEONS. MAXIMUM FIXTURE FLOW TO BE 0.5 GPM. PROVIDE POWERS "LFE480" POINT OF USE MIXING VALVE UNDER FIXTURE. MIXING VALVE MUST MEET ASSE |
| SH-1 | AQUATIC | APFQ3682BF625 | ADA ACRYLIC SHOWER MODULE, 36"L X 36"W AND 81"H, SHOWER DRAIN, FOLD UP SEAT, MOLDED-IN FLOOR PATTERN, INTEGRAL SOAP LEDGES AND "PIT" INSTALLATION OPTION, STAINLESS STEEL GRAB BARS. COORDINATE "PIT" INSTALLATION WITH FLOOR PRIOR TO POURING SLAB. | POWERS "E710" OR APPROVED EQUAL THERMOSTATIC/PRESSURE SHOWER VALVE, 2.5 GPM FLOW, 1/2" IPS SUPPLY INLETS, CHECK STOPS AND INTEGRAL STRAINER. SYMMONS "H321-V" OR APPROVED EQUAL SHOWERHEAD, 2.5 GPM, 5" METAL HOSE AND 30" VERTICAL BAR, POLISHED CHROME, INTEGRAL VACUUM BREAKER. COORDINATE MOUNTING HEIGHTS WITH |
| SK-1 | ELKAY | ELUHE3118 | DOUBLE BOWL, UNDER COUNTER MOUNT, 18-GAUGE STAINLESS STEEL, COMPLETELY UNDERCOATED, 31" SIDE TO SIDE x 18" FRONT TO BACK, EACH BOWL 13 1/2" x 16" x 8" DEEP. VERIFY FINAL DIMENSIONS FROM ARCH ELEVATION AND MILWORK DRAWINGS. COORDINATE ALL REQUIRED HOLES FOR TRIM AND INDICATE IN SUBMITTAL. REMOVABLE STAINLESS | DELTA "101LF-HDF" OR APPROVED EQUAL, BRASS CONSTRUCTION, CHROME-PLATED FINISH, SWING SPOUT FAUCET, 8" REACH, 1.5 GPM AERATOR, SINGLE LEVER HANDLE, SEPARATE SPRAY WASH, TWO HOLE SUPPLIES FAUCET. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS. |
| SS-1 | FIAT | L-1 | WHITE MOLDED STONE WALL HUNG LAUNDRY TUB, 18 1/2" L X 24" W X 13"D, DRAIN WITH STOPPER, 17 GAL. HOLDING CAPACITY, HEAVY GAUGE GALVANIZED STEEL BRACKET CAPABLE OF WITHSTANDING 600 LBS. | PROVIDE WITH CHROME PLATED BRASS DECK TYPE 4" CENTERSET FAUCET WITH 6 3/4" SERVING SPOUT THAT MOUNTS ON REAR DECK. PROVIDE FAUCET WITH HOSE ADAPTER AS REQUIRED FOR 3/4" MALE HOSE THREAD. PROVIDE WITH P-TRAP, SUPPLY RISERS AND SHUT-OFF VALVES. |
| WC-1 (ADA) | KOHLER | K-3979 | FLOOR MOUNTED, 1.6 GPF, WHITE VITREOUS CHINA, ELONGATED BOWL, TANK TYPE TOILET, POLISHED CHROME TRIP LEVER, ADA COMPLIANT HEIGHT. | PROVIDE WITH ELONGATED SEAT, COVER AND 3/8" NPT ANGLE SUPPLY WITH STOP. |

NOTES:
1. REFER TO PLUMBING FIXTURE SCHEDULE FOR MINIMUM CONNECTION SIZES.

| ELECTRIC WATER HEATER | |
|-----------------------|----------|
| REFERENCE | WH-1 |
| MANUFACTURER | AO SMITH |
| MODEL # | ECT-40 |
| SERVES | BUILDING |
| GALLONS | 40 |
| ENERGY FACTOR | 0.92 |
| RECOVERY GPM 90F RISE | 21 |
| INPUT KW | 4.50 |
| VOLTAGE/PH | 240 / 1 |
| NOTES | 1,2,3 |

NOTES:
1. UNIT TO BE CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE.
2. UNIT TO MEET REQUIREMENTS OF ASHRAE 90.1
3. COORDINATE INSTALLATION OF DISCONNECT WITH E.C.

| DOMESTIC CIRC. PUMP | |
|---------------------|--------------|
| REFERENCE | CP-1 |
| MANUFACTURER | BELL&GOSSETT |
| MODEL # | PL-30 |
| TYPE | INLINE |
| SERVES | DOM. WATER |
| GPM | 1 |
| MOTOR HP | 0.08 |
| FT HEAD | 10 |
| VOLTAGE/PH | 115/1 |
| NOTES | 1,2 |

NOTES:
1. PUMP TO OPERATE PER TIMER PROVIDED/WIRED BY M.C.
2. EC TO PROVIDE DISCONNECT.

| PLUMBING FIXTURE ROUGH-IN SCHEDULE | | | | | |
|------------------------------------|------|------|--------|--------|-------|
| FIXTURE | CW | HW | VENT | WASTE | NOTES |
| FLOOR DRAIN | - | - | 1 1/2" | 3" | 1,2 |
| LAVATORY | 1/2" | 1/2" | 1 1/4" | 1 1/4" | 1,2 |
| SINK | 1/2" | 1/2" | 1 1/2" | 1 1/2" | 1,2 |
| SHOWER | 1/2" | 1/2" | 1 1/2" | 2" | 1 |
| WATER CLOSET (TANK TYPE) | 3/4" | - | 2" | 4" | 1 |

NOTES:
1. ALL SIZES SHOWN ARE MINIMUM CONNECTION SIZES, REFER TO DRAWINGS FOR FINAL SIZES.
2. ALL VERTICAL WASTE RISERS TO FIXTURES AND ALL BELOW FLOOR WASTE SIZES SHALL BE A MINIMUM OF 2".

PLUMBING SCHEDULES

Law Enforcement Shop for
Lake Rathbun LE

12194 Honey Creek Place
Mora, IA 52571

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:
23-05-04-01

CHKD BY: DATE:
12.20.2022

SHEET No:

P-300

IOWA DEPARTMENT OF
NATURAL RESOURCES

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GENERAL NOTES - ELECTRICAL

- 1. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. BEGIN INSTALLATION AND ROUGH-IN ONLY AFTER PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION IS COMPLETE. COORDINATE WITH BUILDING STRUCTURE, ARCHITECTURE, MECHANICAL SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, EQUIPMENT ACCESS/CLEARANCE, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REWORK OF INSTALLED EQUIPMENT RESULTING FROM INSUFFICIENT COORDINATION.
- 2. ELECTRICAL DRAWINGS ARE ONLY A PORTION OF THE COMPLETE SET OF PLANS AND CONTRACT DOCUMENTS. THE ELECTRICAL SCOPE OF WORK IS DEFINED BY THE COMPLETE SET OF CONTRACT DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO REFERENCING ARCHITECTURAL PLANS FOR DIMENSIONS AND DETAILS; EQUIPMENT PLANS FOR ROUGH-IN REQUIREMENTS, MECHANICAL PLANS FOR EQUIPMENT SIZES AND LOCATIONS.

CODE NOTES - ELECTRICAL

- 1. PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES.
- 2. THE CURRENT ADOPTED EDITION OF THE ELECTRICAL CODE IS THE STANDARD FOR THE ELECTRICAL INSTALLATION. VERIFY WITH LOCAL OFFICIALS WHEN PERMITS ARE OBTAINED. NOTIFY DESIGN TEAM OF ANY DISCREPANCIES BETWEEN THE PROJECT MANUAL OR DRAWINGS AND THE GOVERNING CODE.
- 3. INSTALLATION SHALL FOLLOW REQUIREMENTS OF THE ADAAG - AMERICANS WITH DISABILITIES ACT.
- 4. REFER TO PROJECT MANUAL AND PROJECT CODE REVIEW SHEET FOR LIST OF APPLICABLE CODES.

DEVICE INSTALLATION AND MATERIALS - ELECTRICAL

- 1. PROVIDE NORMAL WIRING DEVICES AS GRAY UNLESS OTHERWISE NOTED.
- 2. PROVIDE DEVICES COVER PLATES AS STAINLESS STEEL. MATCH WIRING DEVICES COLOR.
- 3. PROVIDE GFCI TYPE RECEPTACLES AT ALL LOCATIONS REQUIRED BY THE NEC.
- 4. INSTALL WALL MOUNTED RECEPTACLES AT +18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- 5. INSTALL WALL MOUNTED LIGHT SWITCHES AT +46" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. EXCEPTION: INSTALL DEVICES ABOVE AN OBSTRUCTED HIGH FORWARD REACH OBSTACLE GREATER THEN 20 INCHES IN DEPTH AT +42".
- 6. INSTALL ABOVE COUNTERTOP RECEPTACLES +8" ABOVE COUNTERTOP OR AS OTHERWISE INDICATED.
- 7. AT A COMMON COUNTERTOP, INSTALL ALL RECEPTACLES AND SWITCHES AT THE SAME HEIGHT UNLESS OTHERWISE SPECIFICALLY INDICATED.

INSTALLATION NOTES - LIGHTING

- 1. UNLESS NOTED OTHERWISE, CONNECT ALL EMERGENCY BATTERY FIXTURES WITH AN UN-SWITCHED LEG OF THE LIGHTING CIRCUIT THAT SERVES THE FIXTURES SPACE. MAINTAIN NORMAL SWITCHING SCHEME OF EMERGENCY FIXTURES UNDER NORMAL OPERATION. INSTALL PER EMERGENCY FIXTURE OR TRANSFER DEVICE INSTRUCTIONS.
- 2. VERIFY CEILING TYPE (IE. GRID, GYP) WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO RELEASE OF LIGHTING FIXTURE EQUIPMENT PACKAGE. ADJUST FIXTURE TYPE, CONSTRUCTION, FLANGE, OR OTHER COORDINATION DETAILS AS REQUIRED FOR CEILING TYPE.
- 3. LIGHTING CONTROLS SENSORS ARE SHOWN ON PLANS AT SUGGESTED LOCATIONS ONLY. VERIFY LOCATIONS WITH MANUFACTURER GUIDELINES AND INSTALLATION RECOMMENDATIONS. ADJUST LOCATIONS AS REQUIRED TO MEET MANUFACTURER GUIDELINES.
- 4. PROVIDE LIGHTING CONTROLS AS A COMPLETE SYSTEM AND INCLUDE MATERIAL AND INSTALLATION FOR ALL POWER PACKS, ACCESSORIES, CONTROLLERS, AND WIRING REQUIRED FOR OPERATION.

BUILDING EQUIPMENT COORDINATION NOTES - ELECTRICAL

- 1. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR COORDINATION DETAILS BETWEEN MECHANICAL AND ELECTRICAL SYSTEMS.
- 2. PROVIDE AND INSTALL ELECTRICAL SYSTEMS UNDER THIS CONTRACT MEETING THE REQUIREMENTS OF THE SPECIFIED MECHANICAL, FIRE PROTECTION, AND PLUMBING SYSTEMS. REFERENCE THE ENTIRE PROJECT DOCUMENTS, MANUALS, SCHEDULES, DETAILS, AND NOTES.
- 3. PROVIDE ELECTRICAL CONNECTIONS AND ACCESSORIES INCLUDING STARTERS, DISCONNECTS, CONTROL WIRING, ETC. AS REQUIRED FOR THE BUILDING MECHANICAL EQUIPMENT. INFORMATION HEREIN AND ON THE DRAWINGS IS FOR GENERAL DESCRIPTION AND ESTIMATING PURPOSES ONLY. VERIFY VOLTAGE, AMPERAGE, PHASE, INRUSH, ETC. FOR EACH ITEM OF EQUIPMENT BEFORE PROCEEDING WITH INSTALLATION. INSTALL EQUIPMENT PER WIRING DETAILS AND INSTRUCTIONS FURNISHED BY THE SUPPLIERS OF THE EQUIPMENT TO PROVIDE PROPER OPERATION.
- 4. REVIEW MECHANICAL EQUIPMENT SHOP DRAWINGS FOR COMPLIANCE AND COORDINATION WITH ELECTRICAL CONNECTIONS. NOTIFY ENGINEER IF CHANGES TO ELECTRICAL CONNECTIONS, WIRING, AND BREAKER REQUIREMENTS ARE NECESSARY TO ACCOMMODATE EQUIPMENT BEING SUPPLIED.
 - a. DO NOT RELEASE ELECTRICAL DISTRIBUTION EQUIPMENT UNTIL ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL INFRASTRUCTURE HAS BEEN SUBMITTED AND APPROVED. MAKE COORDINATION ADJUSTMENTS TO BREAKER SIZES AND SIMILAR CHANGES TO ELECTRICAL EQUIPMENT PRIOR TO SUBMITTAL RELEASE. COORDINATE SCHEDULING OF SHOP DRAWINGS WITH ALL TRADES.
- 5. PROVIDE DISCONNECTS RATED FOR EQUIPMENT AS REQUIRED AND AS INDICATED WITHIN EQUIPMENT CONNECTION SCHEDULE. COORDINATE DISCONNECT MOUNTING TO ALLOW EQUIPMENT REMOVAL WITHOUT DISCONNECT REMOVAL AND TO MINIMIZE WIRING WORK REQUIRED.
- 6. PROVIDE HEAVY DUTY TYPE DISCONNECTS RATED FOR THE INSTALLED ENVIRONMENT. PROVIDE MINIMUM NEMA 3R RATED DISCONNECTS FOR EXTERIOR INSTALLATIONS OR AS NOTED.
- 7. VERIFY LOCATIONS OF ALL EQUIPMENT. REFER TO MECHANICAL, PLUMBING, AND ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE ASSOCIATED SUB-CONTRACTOR. ADJUST ELECTRICAL INSTALLATION AS REQUIRED.

PROJECT DELIVERY NOTES - ELECTRICAL

- 1. THE DELIVERY METHOD FOR THIS PROJECT IS INDIVIDUAL SUB-CONTRACTS TO ONE GENERAL CONTRACTOR. THIS CONTRACTOR IS RESPONSIBLE FOR MEETING WITH ALL SUB-CONTRACTORS TO COORDINATE LOCATIONS AND INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. REWORK OF INSTALLED EQUIPMENT WILL BE AT CONTRACTORS EXPENSE.

INSTALLATION NOTES - ELECTRICAL

- 1. BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BID.
- 2. INCREASE CONDUCTOR SIZES ON 20A 120V-1 PHASE CIRCUITS EXCEEDING 100 FEET TO CENTER OF LOAD TO ACCOUNT FOR VOLTAGE DROP.
- 3. RACEWAYS AND BOXES ARE SHOWN DIAGRAMMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED, NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS.
- 4. LIGHT FIXTURES, SWITCHES, DEVICES, ETC. ARE SHOWN IN PREFERRED LOCATION. MODIFY CONDUIT, HANGERS, CIRCUITING, ETC. TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- 5. PROVIDE A DEDICATED GREEN INSULATED GROUND CONDUCTOR TO ALL DEVICES. DO NOT USE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUNDING METHOD.
- 6. DO NOT INSTALL BOXES BACK-TO-BACK ON OPPOSITE SIDES OF THE SAME WALL. MAINTAIN MINIMUM OF 8" DISTANCE BETWEEN BOXES WHEREVER APPLICABLE.
- 7. BALANCE PANEL LOADS DURING INSTALLATION. CIRCUIT NUMBERING SHOWN ON PLANS MAY BE ADJUSTED TO ACCOMMODATE.
- 8. PROVIDE TYPED PANEL DIRECTORY AT PROJECT COMPLETION FOR NEW PANELS AND EXISTING PANELS WITH CIRCUITS MODIFIED AS A RESULT OF THIS PROJECT. USE OWNER'S CURRENT ROOM NUMBERS AND EQUIPMENT NAMES.
- 9. CONTRACTOR IS RESPONSIBLE FOR OPENINGS IN WALLS, FLOORS, CEILINGS, AND ROOFS THAT ARE REQUIRED TO COMPLETE THEIR SCOPE OF WORK. SEAL PENETRATIONS IN ACCORDANCE WITH THE RATING OF THE AFFECTED ASSEMBLY. REFER TO ARCHITECTURAL CODE PLAN FOR RATED WALLS, FLOORS, AND CEILINGS.

POWER SYMBOLS

| | |
|--|--|
| | DUPLEX RECEPTACLE, WALL MOUNT +18", OR AS NOTED |
| | DUPLEX RECEPTACLE, SURFACE RACEWAY, WALL MOUNT +18", OR AS NOTED |
| | DUPLEX GFCI RECEPTACLE, WALL MOUNT +18", OR AS NOTED |
| | DUPLEX GFCI WEATHER RESISTANT RECEPTACLE WITH WEATHER-PROOF IN-USE COVER, WALL MOUNT +24", OR AS NOTED |
| | EQUIPMENT CONNECTION, REFER TO ELECTRICAL EQUIPMENT CONNECTION SCHEDULE FOR CONNECTION TYPE |
| | MOTORIZED DOOR OPERATOR CONTROL STATION, WALL MOUNT, +48", OR AS NOTED |
| | UTILITY METER |
| | PANELBOARD - SURFACE MOUNTED |
| | CORD REEL, CEILING MOUNTED - REFER TO DETAIL |
| | DISCONNECT SWITCH |
| | HAND DRYER |



GENERAL NOTE:

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN SHOWN BASED UPON INFORMATION OBTAINED FROM FIELD LOCATIONS BY UTILITY COMPANIES, AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS ALSO POSSIBLE THAT THERE MAY BE OTHER UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES IN EXISTENCE THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PARTY REFERENCING THIS PLAN TO DETERMINE THE EXACT LOCATION AND TYPE OF UNDERGROUND FACILITIES ON THE SITE. HAND EXCAVATE AT CRITICAL POINTS AS NECESSARY TO VERIFY LOCATIONS, SIZES, ELEVATIONS, FLOW LINES, ETC. IF A PROBLEM OR INTERFERENCE EXISTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING.

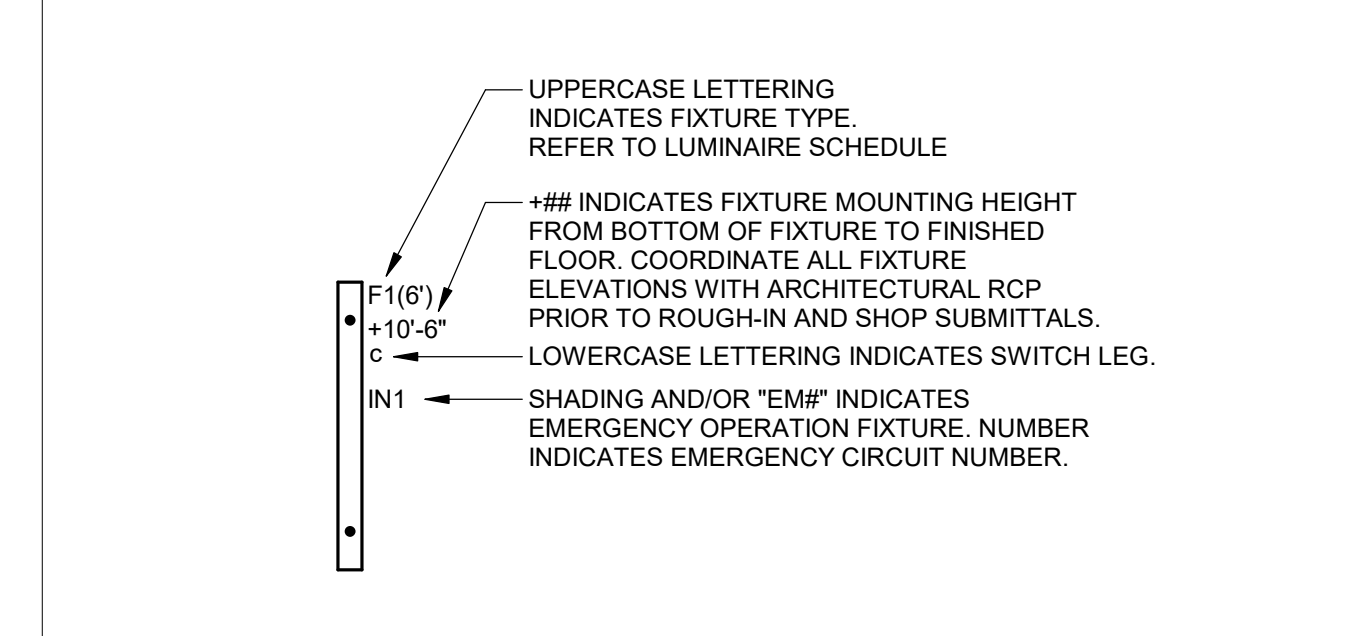
SITE NOTES - ELECTRICAL

- 1. UTILITIES SHOWN ON ELECTRICAL SITE PLAN ARE SCHEMATIC ONLY. VERIFY ALL SITE CONDITIONS AND DIMENSIONS ON SITE PRIOR TO SUBMITTING BID AND ORDERING EQUIPMENT.
- 2. REPAIR ALL AFFECTED SURFACES AND RESTORE TO EXISTING CONDITIONS AT COMPLETION OF PROJECT.
- 3. WARNING - CALL BEFORE YOU DIG: LAW REQUIRES ANYONE DOING EXCAVATION, FENCING, PLANTING OR DRILLING TO CALL 48 HOURS IN ADVANCE. HAND DIG WITHIN 18 INCHES OF ANY LOCATE MARK OR FLAG. ONE-CALL 811.

ELECTRICAL ABBREVIATIONS

| | | | |
|------|--|------|---|
| A | DEVICE MOUNTED +8" ABOVE COUNTER TOP (VERIFY LOCATION) | NIC | NOT IN CONTRACT |
| AFF | ABOVE FINISHED FLOOR | NM | NONMETALLIC |
| ATS | AUTOMATIC TRANSFER SWITCH | NTS | NOT TO SCALE |
| C | CEILING | OC | ON CENTER |
| CB | CIRCUIT BREAKER | OFCl | OWNER FURNISHED CONTRACTOR INSTALLED |
| CT | CURRENT TRANSFORMER | OFOI | OWNER FURNISHED, OWNER INSTALLED |
| E | EXISTING ITEM TO REMAIN | R | EXISTING ITEM TO BE REMOVED |
| EC | ELECTRICAL CONTRACTOR | RR | EXISTING ITEM TO BE REMOVED AND RELOCATED |
| EM | EMERGENCY LIGHT FIXTURE | RN | EXISTING ITEM TO BE REMOVED AND REPLACED WITH NEW |
| ER | NEW LOCATION OF EXISTING ITEM | SCCR | SHORT CIRCUIT CURRENT RATING |
| F | ROUGH IN FOR FUTURE DEVICE | T | TAMPER PROOF DEVICE |
| FAAP | FIRE ALARM ANNUNCIATOR PANEL | TCC | TEMPERATURE CONTROL CONTRACTOR |
| FACP | FIRE ALARM CONTROL PANEL | TV | TELEVISION |
| FSD | FIRE SMOKE DAMPER | TYP | TYPICAL |
| G | GROUND FAULT CIRCUIT INTERRUPTER | UPS | UNINTERRUPTIBLE POWER SUPPLY |
| GND | GROUND | V | VOLTS |
| KVA | KILO-VOLT-AMPERES | VA | VOLT-AMPERES |
| KW | KILOWATTS | WG | WIREGUARD COVER |
| MC | MECHANICAL CONTRACTOR | WP | WEATHERPROOF DEVICE |
| MCB | MAIN CIRCUIT BREAKER | WR | WEATHER RESISTANT DEVICE |
| MDP | MAIN DISTRIBUTION PANEL | +24" | INDICATES MOUNTING HEIGHT CENTER LINE OF DEVICE TO FINISHED FLOOR |
| MLO | MAIN LUGS ONLY | | |
| N | NEW DEVICE IN EXISTING LOCATION | | |

LIGHTING PLANS NOTATION KEY



GENERAL SYMBOLS

| | |
|--|--|
| | JUNCTION BOX, CEILING OR FLOOR MOUNTED. |
| | JUNCTION BOX, WALL MOUNTED, ELEVATION AS NOTED. |
| | CIRCUIT HOMERUN, CONCEALED CONDUIT OR CABLE |
| | KEYNOTE |
| | EQUIPMENT IDENTIFICATION TAG. REFER TO EQUIPMENT CONNECTION SCHEDULE |
| | DETAIL DRAWING REFERENCE TAG, SIM-SIMILAR, TYP-TYPICAL, OPP-OPPOSITE SHEET REFERENCE |

LIGHTING SYMBOLS

| | |
|--|--|
| | ROUND LIGHT FIXTURE - SURFACE MOUNTED |
| | SURFACE MOUNTED STRIP FIXTURE |
| | INDUSTRIAL STRIP LIGHT FIXTURE |
| | EMERGENCY LIGHT FIXTURE, WALL MOUNT, +96" OR AS NOTED |
| | EXIT SIGN, WALL MOUNT +96", SHADED AREAS INDICATE NUMBER OF FACES, ARROWS INDICATE SIGN ARROWS |
| | EXTERIOR LIGHT FIXTURE, WALL MOUNT +10', OR AS NOTED |
| | SINGLE POLE SWITCH, WALL MOUNT +48", OR AS NOTED, LETTER INDICATES SWITCH LEG |
| | OCCUPANCY SENSOR, WALL MOUNT +48" OR AS NOTED, NUMBER INDICATES TYPE, LETTER INDICATES SWITCH LEG, REFER TO LIGHTING CONTROLS SCHEDULE |
| | OCCUPANCY SENSOR, CEILING MOUNT, NUMBER INDICATES TYPE, LETTER INDICATES SWITCH LEG, REFER TO LIGHTING CONTROLS SCHEDULE |

NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT

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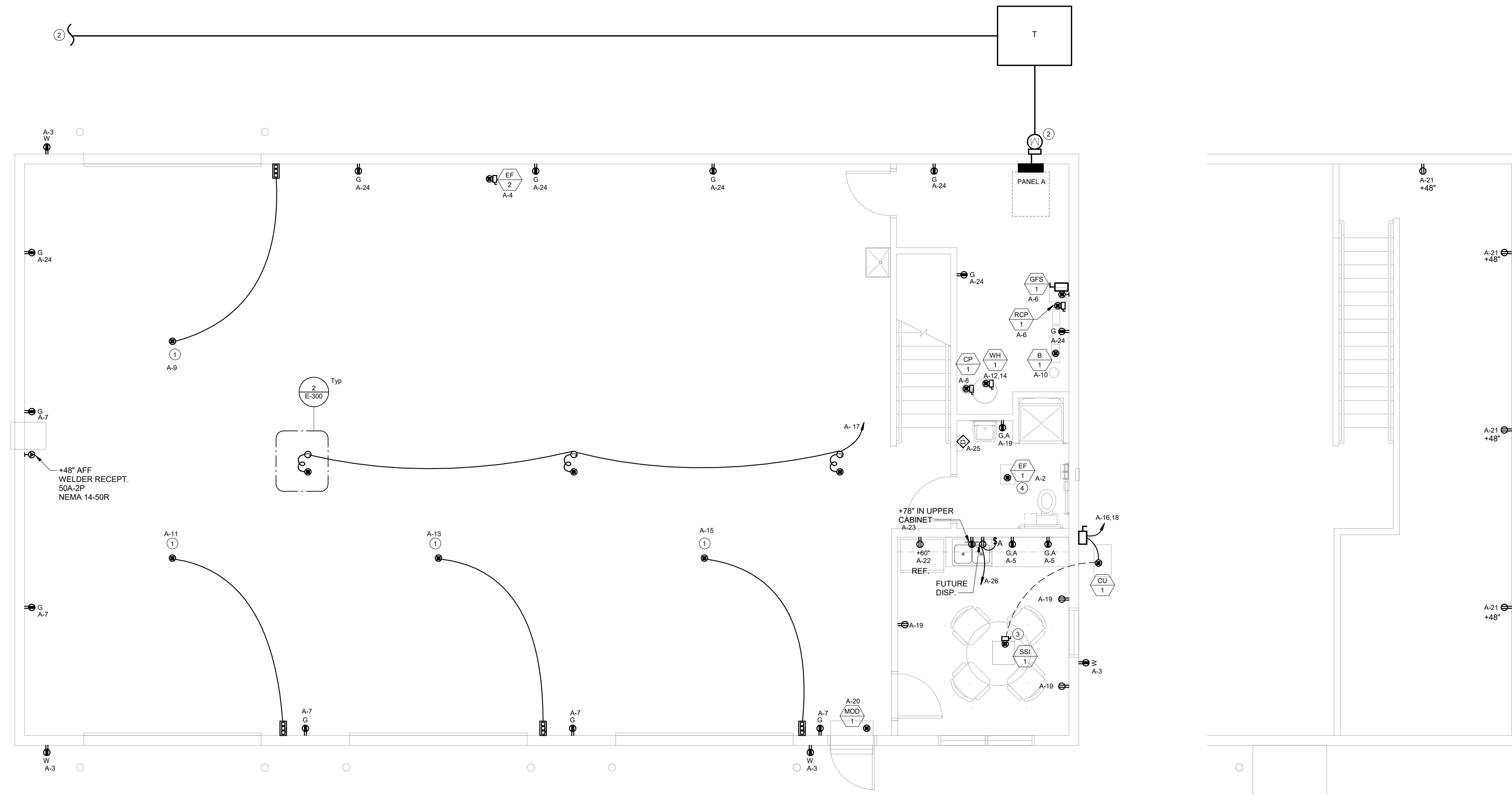


ELECTRICAL NOTES
Law Enforcement Shop for:
Lake Rathbun LE
Moravia, IA 52571
12194 Honey Creek Place

| NO. | BY DATE | REVISION |
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| DRAWN BY: | PROJECT NUMBER: |
| DEB | 23-05-04-01 |
| CHK'D BY: | DATE: |
| JTL | 12.20.2022 |

SHEET No:
E-000



① LEVEL 1 ELECTRICAL POWER
1/4" = 1'-0"

④ MEZZANINE ELECTRICAL POWER
1/4" = 1'-0"

POWER GENERAL NOTES

- A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- B. COORDINATE ELECTRICAL REQUIREMENTS FOR MECHANICAL UNITS WITH M.C. AND FINAL MECHANICAL SHOP DRAWINGS.
- C. PROVIDE PENETRATIONS REQUIRED FOR ROUTING RACEWAYS THROUGH THE BUILDING. COORDINATE FIRE RATED WALL PENETRATIONS AND PROVIDE CONDUIT SLEEVES AND FIRE STOPPING TO MAINTAIN RATING.

KEYNOTES (#)

- 1 OVERHEAD DOOR MOTORIZED CONTROLLER. INSTALL DEVICES PER MANUFACTURER INCLUDING ALL LOW VOLTAGE SENSORS AND SWITCHES. PROVIDE EQUIPMENT DISCONNECT WHERE NECESSARY.
- 2 REC UTILITY PRIMARY CONDUCTORS AND CONDUIT BY UTILITY COMPANY. COORDINATE FINAL TRANSFORMER LOCATION WITH REC UTILITY AND ASSOCIATED PRIMARY CONDUCTORS.
- 3 REFER TO MECHANICAL SCHEDULES FOR INTERCONNECTION BETWEEN UNITS.
- 4 FAN OPERATES VIA LOCAL OCCUPANCY SENSOR.

CONSULTANT:
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 West Des Moines, Iowa 50265
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 info@kclengineering.com

**IOWA DEPARTMENT OF
 NATURAL RESOURCES**
 ENGINEERING SERVICES - WALLACE BUILDING
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ELECTRICAL PLANS

Low Enforcement Shop for:
Lake Rathbun LE

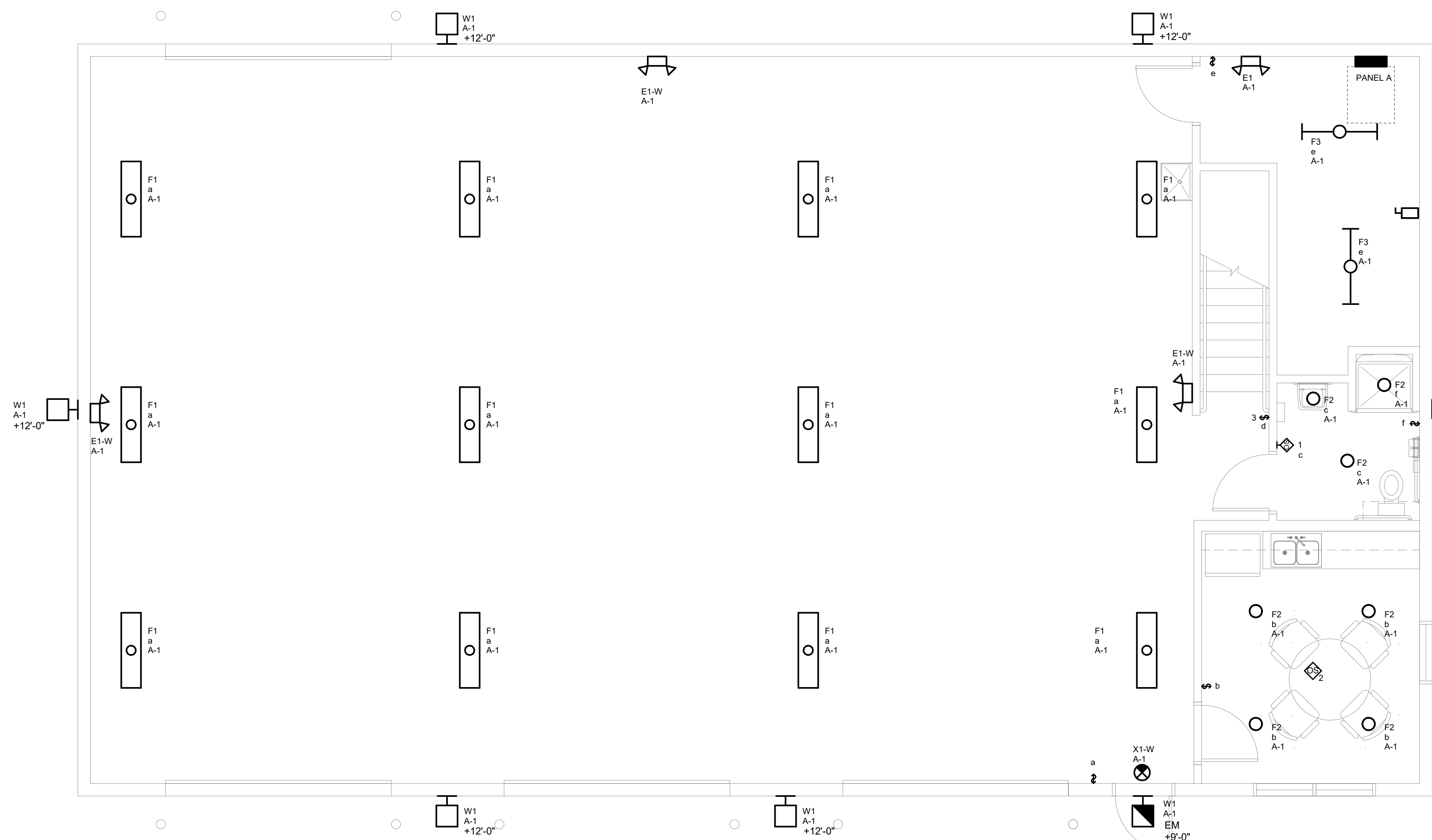
12194 Honey Creek Place
 Maravia, IA 52571

| NO. | BY DATE | REVISION |
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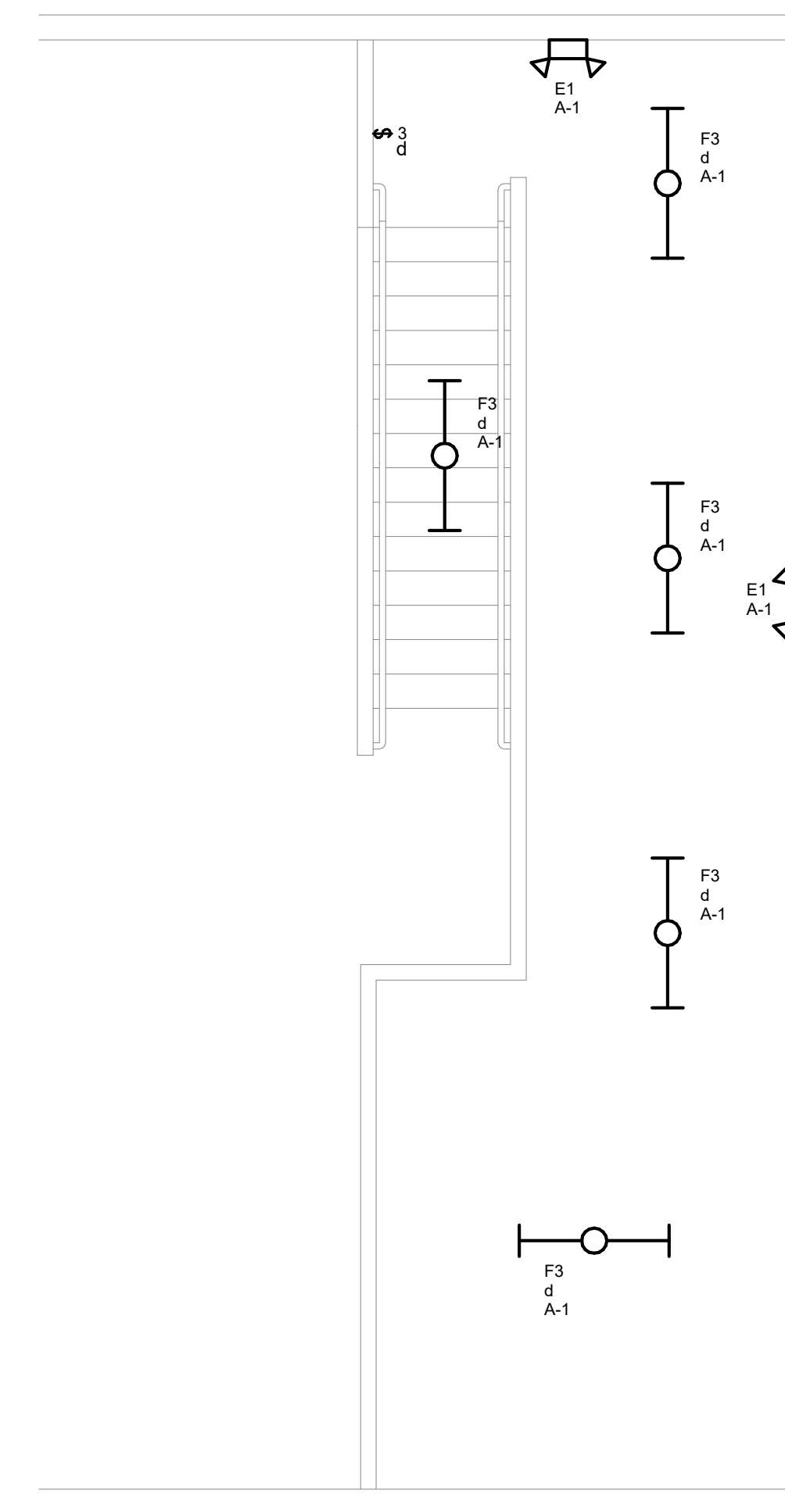
DRAWN BY: DEB PROJECT NUMBER: 23-05-04-01
 CHKD BY: JTL DATE: 12.20.2022

SHEET NO:

E-200



① LEVEL 1 ELECTRICAL LIGHTING
1/4" = 1'-0"



② MEZZANINE ELECTRICAL LIGHTING
1/4" = 1'-0"

LIGHTING GENERAL NOTES

- A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

KEYNOTES Ⓢ

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LIGHTING PLANS

Low Enforcement Shop for:
Lake Rathbun LE

Maraviva, IA 52571
12194 Honey Creek Place

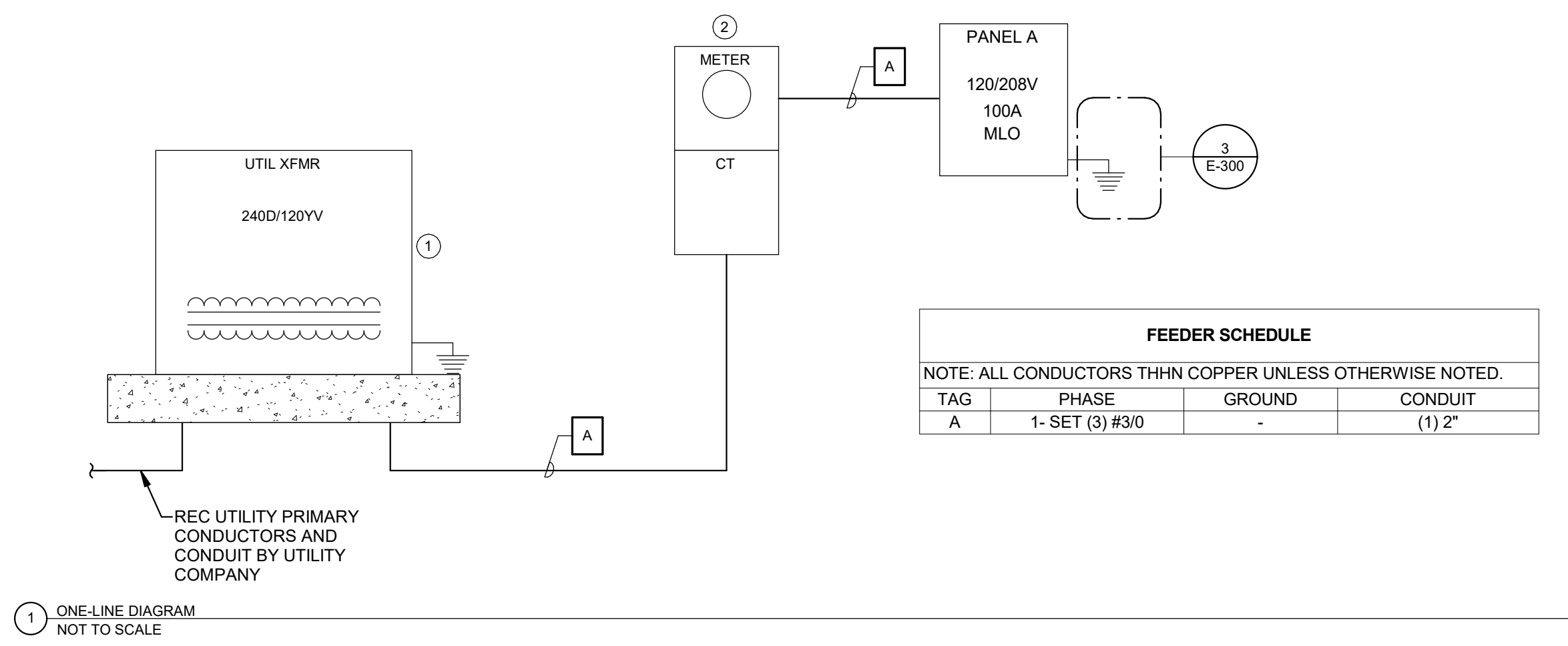
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| DRAWN BY: DEB | PROJECT NUMBER: 23-05-04-01 |
| CHK'D BY: JTL | DATE: 12.20.2022 |

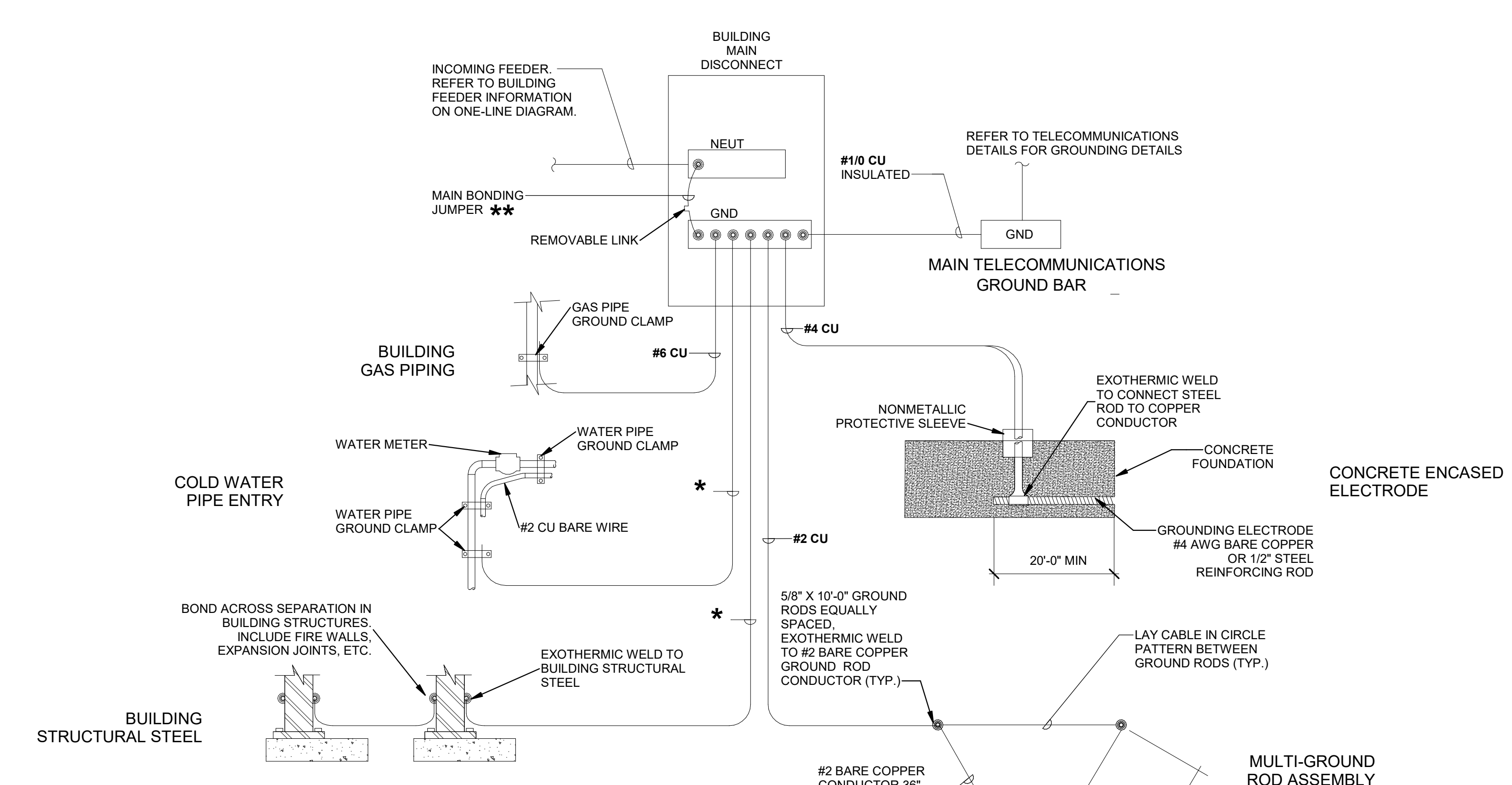
SHEET No:

RISER DIAGRAM GENERAL NOTES

- A. DIAGRAM INDICATES OVERALL LAYOUT OF ELECTRICAL DISTRIBUTION SYSTEM. REFER TO FLOOR PLANS FOR EQUIPMENT LOCATIONS.
- B. USE COPPER CONDUCTORS UNLESS OTHERWISE INDICATED.
- C. MATCH NEUTRAL CONDUCTOR SIZE TO THE PHASE CONDUCTORS UNLESS OTHERWISE NOTED.
- D. ALL WIRING SHALL BE IN RACEWAY AS NOTED. REFER TO SPECIFICATIONS FOR CONDUIT APPLICATION REQUIREMENTS.
- E. INSTALL UTILITY TRANSFORMER PAD, METERING EQUIPMENT, AND SERVICE ENTRANCE FEEDERS IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.



1 ONE-LINE DIAGRAM NOT TO SCALE



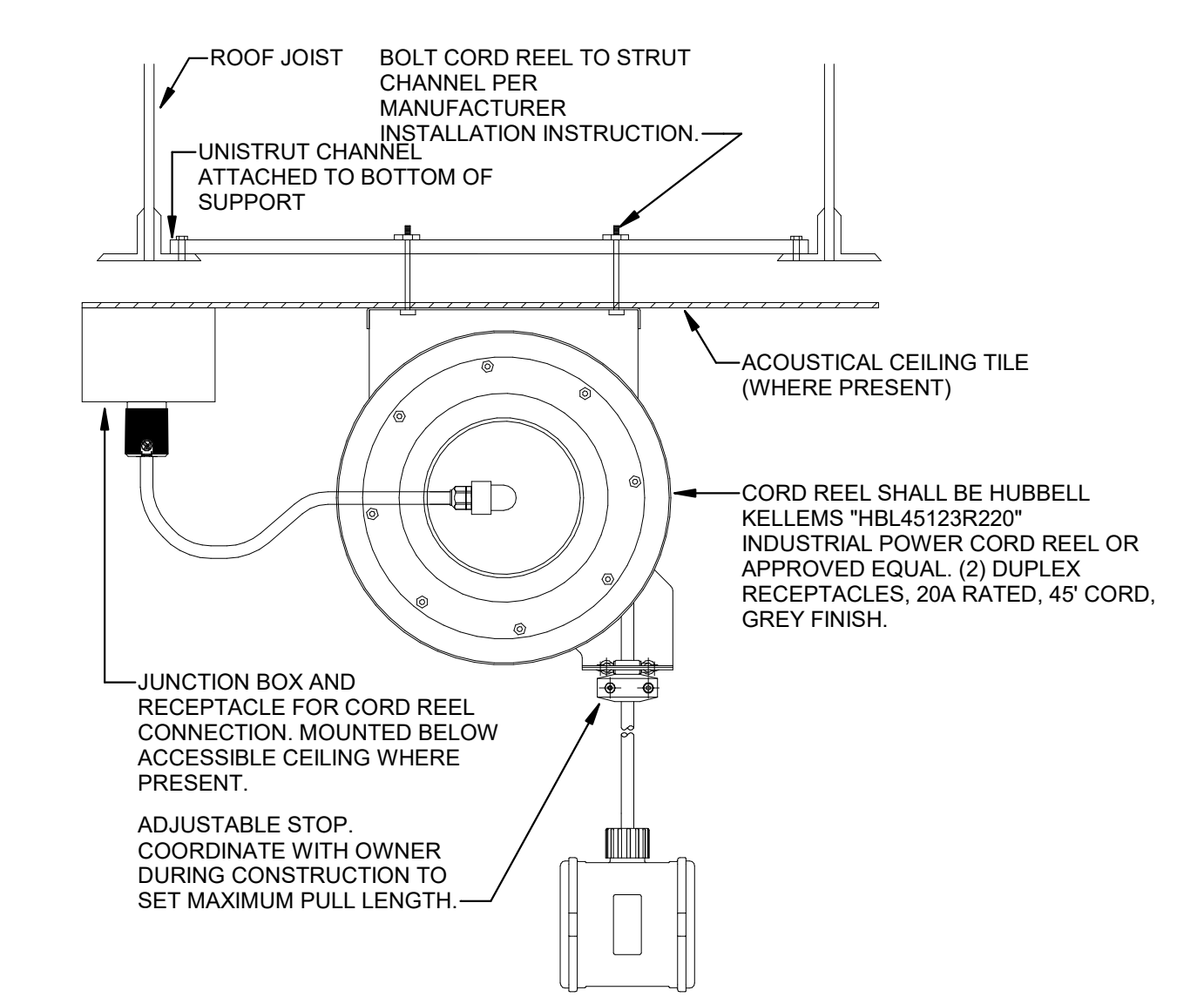
* SIZE GROUNDING ELECTRODE CONDUCTOR AND BONDING PER NEC 250.66 AND TABLE BELOW. ALL CONDUCTORS TO BE COPPER. TABLE BASED ON NEC 2017

TABLE 250.66 GROUNDING ELECTRODE CONDUCTOR FOR ALTERNATING-CURRENT SYSTEMS

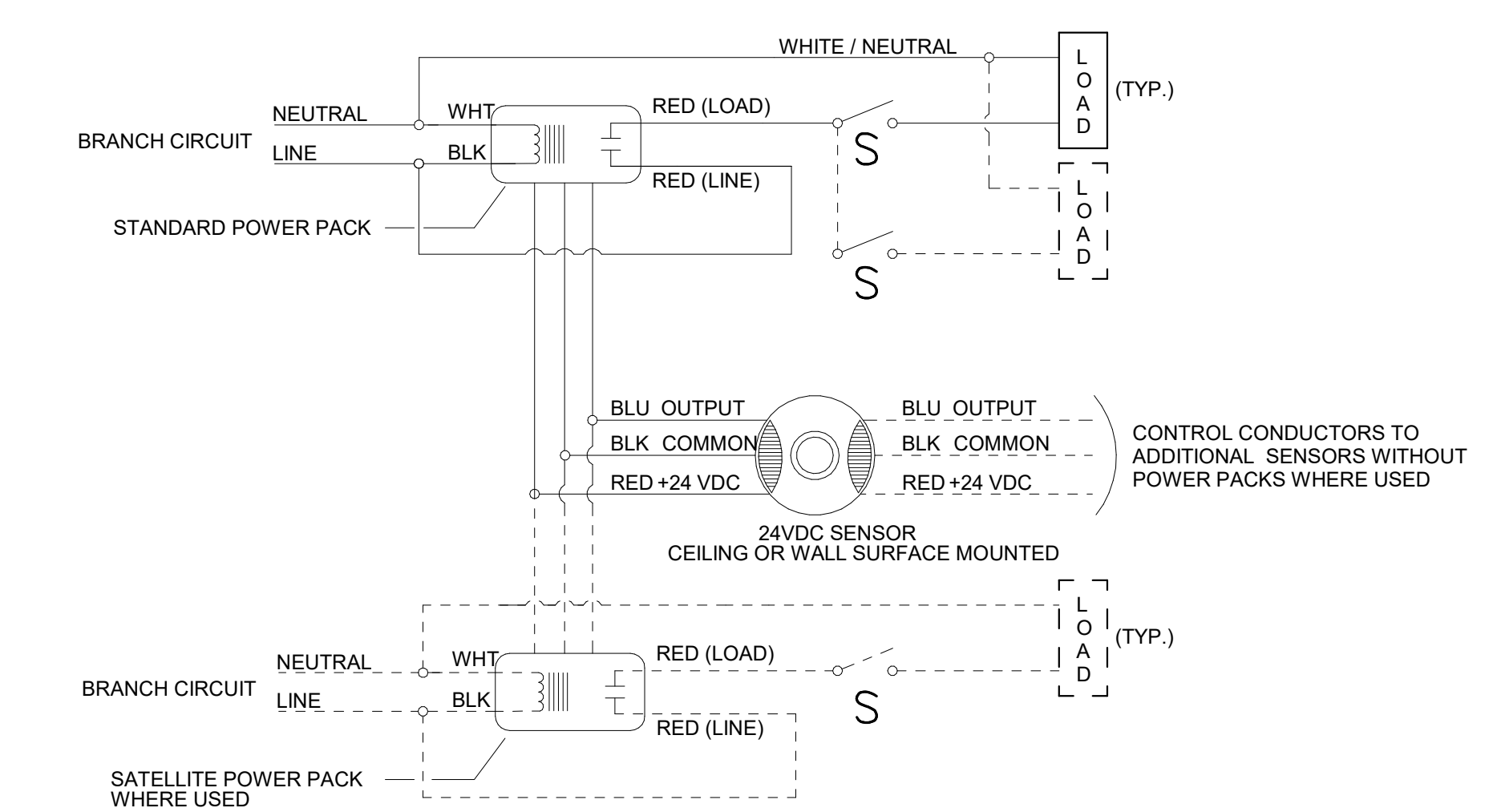
| SIZE OF LARGEST UNGROUNDING CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS (AWG/KCMIL) | ALUMINUM OR COPPER-CLAD AL | COPPER |
|--|----------------------------|--------|
| COPPER #2 OR SMALLER | #1/0 OR SMALLER | #8 |
| #1 OR #1/0 | #2/0 OR #3/0 | #6 |
| #2/0 OR #3/0 | #4/0 OR 250 | #4 |
| OVER #3/0 THROUGH 350 | OVER 250 THROUGH 500 | #2 |
| OVER 350 THROUGH 600 | OVER 500 THROUGH 900 | #1/0 |
| OVER 600 THROUGH 1100 | OVER 900 THROUGH 1750 | #2/0 |
| OVER 1100 | OVER 1750 | #3/0 |

** SIZE BONDING JUMPER PER NEC 250.102. USE TABLE ABOVE FOR ALL CONDUCTORS BETWEEN #2 AND #1/0. ALL INCOMING CONDUCTORS OVER 1100 CU OR 1750 AL SHALL BE SIZED PER THE TABLE 250.102(C). SERVICE EQUIPMENT SHALL BE SUPPLIED WITH BONDING JUMPER FROM THE MANUFACTURER.

3 GROUNDING ELECTRODE DETAIL NOT TO SCALE



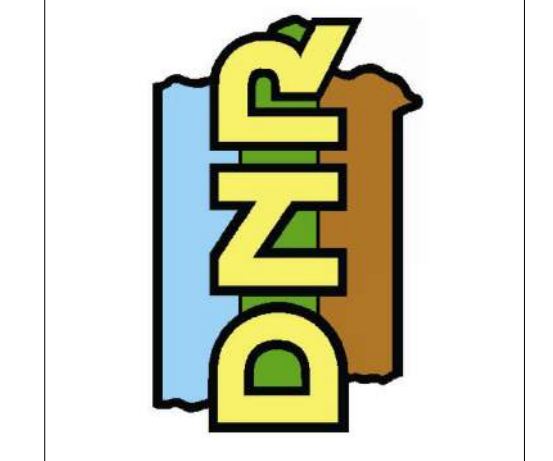
2 RETRACTABLE CORD REEL NOT TO SCALE



4 OCCUPANCY SENSOR LIGHTING CONTROL DETAIL NOT TO SCALE

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ONE-LINE DIAGRAM
 Low Enforcement Shop for:
Lake Rathbun LE
 12194 Honey Creek Place
 Maraviva, IA 52571

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DRAWN BY: DEB PROJECT NUMBER: 23-05-04-01
 CHCKD BY: JTL DATE: 12.20.2022
 SHEET NO:

E-300

BRANCH PANEL: A

LOCATION: ELEC/MECH
 SUPPLY FROM: UTILITY
 MOUNTING: SURFACE
 ENCLOSURE: TYPE 1

VOLTAGE: 120/240 SINGLE
 PHASES: 1
 WIRES: 3

SCCR RATING: 22k A
 MAINS TYPE: MCB
 MAINS RATING: 200 A
 MCB RATING: 200 A

NOTES:

| CIRCUIT DESCRIPTION | P | AMP | CKT NO | A | | B | | CKT NO | AMP | P | CIRCUIT DESCRIPTION |
|---------------------|---|------|--------|----------|------|----------|------|--------|------|----|---------------------|
| LIGHTING | 1 | 20 A | 1 | 1108 | 100 | | | 2 | 20 A | 1 | EF-1 |
| RCPT EXTERIOR | 1 | 20 A | 3 | | | 720 | 100 | 4 | 20 A | 1 | EF-2 |
| RCPT KITCHENETTE | 1 | 20 A | 5 | 360 | 1020 | | | 6 | 20 A | 1 | GFS-1, RCP-1 |
| RCPT GARAGE | 1 | 20 A | 7 | | | 900 | 510 | 8 | 20 A | 1 | CP-1 |
| DOOR OPENER | 1 | 20 A | 9 | 920 | 500 | | | 10 | 20 A | 1 | B-1 |
| DOOR OPENER | 1 | 20 A | 11 | | | 920 | 2250 | 12 | 25 A | 2 | WH-1 |
| DOOR OPENER | 1 | 20 A | 13 | 920 | 2250 | | | 14 | | | |
| DOOR OPENER | 1 | 20 A | 15 | | | 920 | 1835 | 16 | 20 A | 2 | CU-1 |
| CORD REELS | 1 | 20 A | 17 | 540 | 1835 | | | 18 | | | |
| RCPT KITCHENETTE | 1 | 20 A | 19 | | | 900 | 100 | 20 | 20 A | 1 | MOD-1 |
| RCPT MEZZ | 1 | 20 A | 21 | 720 | 1200 | | | 22 | 20 A | G | RCPT REFRIGERATOR |
| MW | 1 | 20 A | 23 | | | 1600 | 1260 | 24 | 20 A | 1 | RCPT GARAGE |
| HAND DRYER | 1 | 20 A | 25 | 1500 | 180 | | | 26 | 20 A | 1 | RCPT DISPOSAL |
| SPARE | 1 | -- | 20 A | 27 | | 0 | 0 | 28 | 20 A | -- | SPARE |
| SPARE | 1 | -- | 20 A | 29 | 0 | | | 30 | 20 A | -- | SPARE |
| | | | | 13153 VA | | 12015 VA | | | | | |
| | | | | 110 A | | 100 A | | | | | |

LEGEND:
 G INDICATES GFCI TYPE BREAKER.

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED... | PANEL TOTALS |
|---------------------|----------------|---------------|--------------|---|
| LIGHTING | 1108 VA | 125.00% | 1385 VA | TOTAL CONN. LOAD: 25168 VA TOTAL EST. DEMAND: 25445 VA TOTAL CONN.: 105 A TOTAL EST. DEMAND: 106 A |
| POWER | 14720 VA | 100.00% | 14720 VA | |
| RECEPTACLE | 9340 VA | 100.00% | 9340 VA | |

NOTES:

EQUIPMENT CONNECTION SCHEDULE

GENERAL NOTES:
 1. INCLUDE AUXILIARY CONTACTS AND LOW-VOLTAGE WIRING TO AUXILIARY EQUIPMENT THAT RUNS IN TANDEM WITH...

ABBREVIATIONS:
 1 NEMA 1 ENCLOSURE INT INTEGRAL WITH EQUIPMENT FROM FACTORY
 3R NEMA 3R ENCLOSURE M... MANUAL MOTOR STARTER WITH FUSES
 4 NEMA 4 ENCLOSURE N... NON-FUSED DISCONNECT SWITCH, HEAVY...
 4X NEMA 4X ENCLOSURE RD RETURN AIR DUCT DETECTOR
 BO PROVIDED BY OTHERS R... RUN STATUS RELAY, NORMALLY OPEN
 CB CIRCUIT BREAKER IN PANEL SD SUPPLY AIR DUCT DETECTOR
 C... COMBINATION STARTER/DISCONNECT SSP START/STOP PUSHBUTTON WITH PILOT
 CP CORD AND PLUG PROVIDED WITH UNIT SS START/STOP PUSHBUTTON
 E... ENCLOSED CIRCUIT BREAKER ST SHUNT TRIP
 FAR FIRE ALARM SHUTDOWN RELAY T... TIME DELAY OFF RELAY
 FDS FUSED DISCONNECT SWITCH, HEAVY... TS TOGGLE SWITCH WITH PLUG FUSE
 GF GROUND FAULT CIRCUIT INTERRUPTION VFD VARIABLE FREQUENCY DRIVE
 H... HAND-OFF-AUTO

| TAG | ELECTRICAL CHARACTERISTICS | | | | DISCONNECT | | | | REMARKS | |
|-------|----------------------------|-------|----------|-----|------------|------|-------------|-------------|---------|--|
| | VOLTAGE | PHASE | MOTOR HP | KW | MCA | TYPE | SIZE (AMPS) | NEMA RATING | | FUSE SIZE (AMPS) |
| B-1 | 120 V | 1 | | | 15 | CB | | | | |
| CP-1 | 120 V | 1 | 0.08 | - | - | CB | | | | PROVIDE DISCONNECT |
| CU-1 | 240 V | 1 | | | 18 | NFD | 30 | 3R | | PROVIDE AND INSTALL DISCONNECT |
| EF-1 | 120 V | 1 | FHP | | | INT | | | | CONNECT TO LOCAL OCCUPANCY SENSOR WITH LIGHTS IN SPACE. |
| EF-2 | 120 V | 1 | 1/4 | | | HOA | 20 | 1 | | POWER MOTORIZED DAMPER TO OPEN/CLOSE WITH FAN. INSTALL PROVIDED HOA. |
| GFS-1 | 120 V | 1 | FHP | | | CB | | | | |
| MOD-1 | 120 V | 1 | | | | | | | | POWER MOTORIZED DAMPER TO OPEN/CLOSE WITH FAN. |
| RCP-1 | 120 V | 1 | 1/8 | | | CB | | | | |
| WH-1 | 240 V | 1 | | 4.5 | | CB | | | | |

LIGHTING FIXTURE SCHEDULE

NOTES:

- ALL FIXTURES SHALL BE U.L. OR SIMILARLY LISTED.
- INCLUDE A MINIMUM 1 YEAR WARRANTY FOR LIGHTING FIXTURES, WHERE NOT OTHERWISE SPECIFIED.
- REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING LOCATIONS, DETAILS, AND CONFIGURATIONS OF ALL LUMINAIRES. IF ARCHITECTURAL DRAWINGS DO NOT CLARIFY EXACT MOUNTING LOCATION OR DETAIL, ISSUE AN RFI FOR ARCHITECT TO SPECIFICALLY CLARIFY PRIOR TO FIXTURE ROUGH-IN.
- VERIFY COMPATIBILITY OF LIGHT FIXTURES WITH CEILING MATERIAL, ADJACENT CONSTRUCTION, AND ADJACENT FINISHES PRIOR TO SHOP DRAWINGS SUBMITTAL. NOTIFY THE ARCHITECT OF ANY CONFLICTS WITH THE PROPOSED INSTALLATION.
- CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS HARDWARE NECESSARY TO INSTALL AND SUPPORT THE LUMINAIRES.
- AIM AND TARGET ADJUSTABLE INTERIOR AND EXTERIOR LIGHT FIXTURES UNDER THE OBSERVATION AND IN COMPLIANCE WITH RECOMMENDATIONS OF THE ARCHITECT. INCLUDE LABOR AND MATERIAL COSTS MADE NECESSARY BY THIS REQUIREMENT.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FILLING OUT ALL UTILITY REBATE FORMS FOR OWNER.

DESIGNED BY: DEB

| TYPE | MANUFACTURER | MODEL | DESCRIPTION | FINISH | LUMENS | CRI | DRIVER TYPE | SOURCE-CCT | VOLTAGE | LOAD-VA | APPROVED EQUALS |
|------|-------------------|------------------------------------|--|--------|--------|-----|-------------|------------|---------|---------|-------------------------|
| E1 | LITHONIA | ELM2L-120/347-SDRT | EMERGENCY UNIT, WALL OR CEILING MOUNTED, 2 LED ADJUSTABLE LAMP HEADS, MAINTENANCE FREE BATTERY | WHITE | EM | N/A | N/A | LED | 120 V | 2 VA | EMERGH-LITE, DUAL-LITE |
| E1-W | LITHONIA | ELM2L-120/347-SDRT / ELAWG1 | EMERGENCY UNIT, WALL OR CEILING MOUNTED, 2 LED ADJUSTABLE LAMP HEADS, MAINTENANCE FREE BATTERY, WIRE GUARD | WHITE | EM | N/A | N/A | LED | 120 V | 2 VA | EMERGH-LITE, DUAL-LITE |
| F1 | COLUMBIA LIGHTING | HEM-4"-40K-ML-RFA-E-U | CHAIN MOUNT VANDAL WRAP, POLYCARBONATE LENS, GENERAL DISTRIBUTION | WHITE | 5000 | 80 | NON-DIMMING | LED-4000K | 120 V | 50 VA | KENALL, FAIL-SAFE |
| F2 | LIGHTOLIER | SSR-8-40K-7 | SURFACE MOUNTED ROUND DOWNLIGHT NOMINAL 5" DIAMETER 1/2" THICK, GENERAL DISTRIBUTION, NON-CONDUCTIVE TRIM | WHITE | 600 | 80 | NON-DIMMING | LED-4000K | 120 V | 11 VA | AS APPROVED BY ENGINEER |
| F3 | LITHONIA LIGHTING | BLWP4-20LHE-ADSM-LP840 | CHAIN HUNG UTILITY FIXTURE 8" LENGTH, CURVED RIBBED LENS, GENERAL DISTRIBUTION | WHITE | 2000 | 80 | NON-DIMMING | LED-4000K | 120 V | 40 VA | AS APPROVED BY ENGINEER |
| W1 | MCGRAW EDISON | TRP1-24L-15-3K8-4W-UNV-DBT-PC | BUILDING MOUNTED WALL PACK, TYPE 4 DISTRIBUTION, BUTTON PHOTOCONTROL | BRONZE | 700 | 80 | NON-DIMMING | LED-3000K | 120 V | 20 VA | AS APPROVED BY ENGINEER |
| X1-W | LITHONIA | LQM-S-W-3-R-MVOLT-EL-N-SD / ELAWG1 | BACK MOUNTED EXIT SIGN, SINGLE FACE, THERMOPLASTIC HOUSING, SELF-DIAGNOSTICS, WIRE GUARD | WHITE | N/A | N/A | N/A | RED LED | 120 V | 2 VA | EMERGH-LITE, DUAL-LITE |

LIGHTING CONTROLS SCHEDULE

NOTES:

- ALL DEVICES SHALL BE U.L. OR SIMILARLY LISTED.
- ALL DEVICES PROVIDED WITH MANUFACTURER LIMITED 5 YEAR WARRANTY.
- PROVIDE LIGHTING CONTROLS WITH MANUFACTURER COMPLIANT POWER PACKS AND LOW VOLTAGE ROOM CONTROLLERS IN QUANTITY REQUIRED TO INSTALL A COMPLETE AND OPERATIONAL SYSTEM. MANUFACTURER OR MANUFACTURERS REP TO PROVIDE DEVICE QUANTITIES, LAYOUTS AND TYPICAL WIRING DETAILS DURING SHOP SUBMITTAL PROCESS. PROVIDE DIMMING COMPATIBLE DEVICES WHERE DIMMING CONTROLS ARE SHOWN. COORDINATE DIMMING TYPE WITH LIGHTING FIXTURES SHOWN. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE DIMMING TYPE.
- WHERE WIRELESS LIGHTING CONTROLS ARE PROVIDED, POWERPACKS SHALL BE PROVIDED AND INSTALLED WITHIN MANUFACTURER RECOMMENDED DISTANCES TO ENSURE CONTROLLER OPERATION.
- INSTALL LOW VOLTAGE POWER PACKS AND ROOM CONTROLLERS ABOVE NEARBY ACCESSIBLE CEILING TILES OR IN MECHANICAL/STORAGE SPACES ADJACENT TO CONTROLLED FIXTURES. DO NOT INSTALL POWERPACKS EXPOSED IN COMMON SPACES OR IN INACCESSIBLE LOCATIONS.
- PROVIDE FACTORY AUTHORIZED REPRESENTATIVE TO DEMONSTRATE TYPICAL INSTALLATION AND COMMISSIONING OF EQUIPMENT.
- WHERE APPROVED EQUAL MANUFACTURER PRODUCTS SENSOR COVERAGE OR LOAD RATINGS DIFFER FROM BASIS OF DESIGN, CONTRACTOR AND MANUFACTURER ARE RESPONSIBLE FOR PROVIDING ADDITIONAL DEVICES AS NECESSARY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
- ETD'S AND ALL EMERGENCY LIGHTING CONTROLS COMPONENTS SHALL BE TESTED AND LISTED AS COMPATIBLE BY MANUFACTURER WITH NORMAL LIGHTING CONTROLS IN ALL AREAS.
- UNLESS INDICATED OTHERWISE, LIGHTING CONTROL SCHEMES/OPERATION SHALL BE AS FOLLOWS:

CORRIDORS, VESTIBULES, COMMON SPACES: SENSORS PROGRAMMED FOR OCCUPANCY MODE, AUTOMATIC ON/OFF OPERATION, 20 MINUTES MINIMUM, 30 MINUTES MAXIMUM. DIMMING CONTROL OF FIXTURES WITHIN DAYLIGHT ZONES SHALL BE BY ALWAYS ON DAYLIGHT SENSOR.
ALL OTHER SPACES: SENSORS PROGRAMMED FOR VACANCY MODE, MANUAL ON/AUTOMATIC OFF OPERATION 20 MINUTES MINIMUM, 30 MINUTES MAXIMUM. DIMMING CONTROL OF FIXTURES WITHIN DAYLIGHT ZONES SHALL BE BY ALWAYS ON DAYLIGHT SENSOR.

DESIGNED BY: DEB

| TYPE | DESCRIPTION | ELECTRICAL | MOUNTING | SENSOR TYPE | COVERAGE | APPROVED MANUFACTURERS |
|------|--|------------------|---------------------------|------------------|----------------------|--|
| OS 1 | WALL SWITCH OCCUPANCY SENSOR. DEVICE FINISH MATCHING WIRING DEVICES SPEC. RATED FOR MIN 1/6 HP MOTOR. INTEGRAL AUTOMATIC SELF-ADAPTIVE COVERAGE THRESHOLD AND FALSE ON/FALSE OFF CORRECTION. 8-30 MINUTE TIMER SETTINGS. | 120V | WALL SWITCH / SINGLE GANG | PASSIVE INFRARED | 1000 SQ FT / 180 DEG | HUBBELL, CRESTRON, ACUTY, WATTSTOPPER, GREENGATE, AS APPROVED BY ENGINEER. |
| OS 2 | CEILING MOUNTED OCCUPANCY/VACANCY SENSOR. WHITE FINISH. AUTOMATIC SELF-ADAPTIVE COVERAGE THRESHOLD AND FALSE ON/FALSE OFF CORRECTION. 8-30 MINUTE TIMER SETTINGS. INDOOR USE. | INTEGRAL BATTERY | CEILING / 8'-12" MH | PASSIVE INFRARED | 500 SQ FT / 360 DEG | LUTRON, ACUTY, CRESTRON, WATTSTOPPER, AS APPROVED BY ENGINEER. |

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ELECTRICAL SCHEDULES
 Low Enforcement Shop for:
Lake Rathbun LE
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