HVAC & BAS Replacement Waverly Regional Youth Center

109 W Kelling Ave, Waverly, MO



SITE LOCATION MAP

OWNER: STATE OF MISSOURI MICHAEL L. PARSON,

GOVERNOR

PROJECT OFFICE OF ADMINISTRATION
MANAGEMENT: DIVISION OF FACILITIES MANAGEMENT,

DESIGN AND CONSTRUCTION

Applicable Codes

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL ELECTRICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FIRE CODE

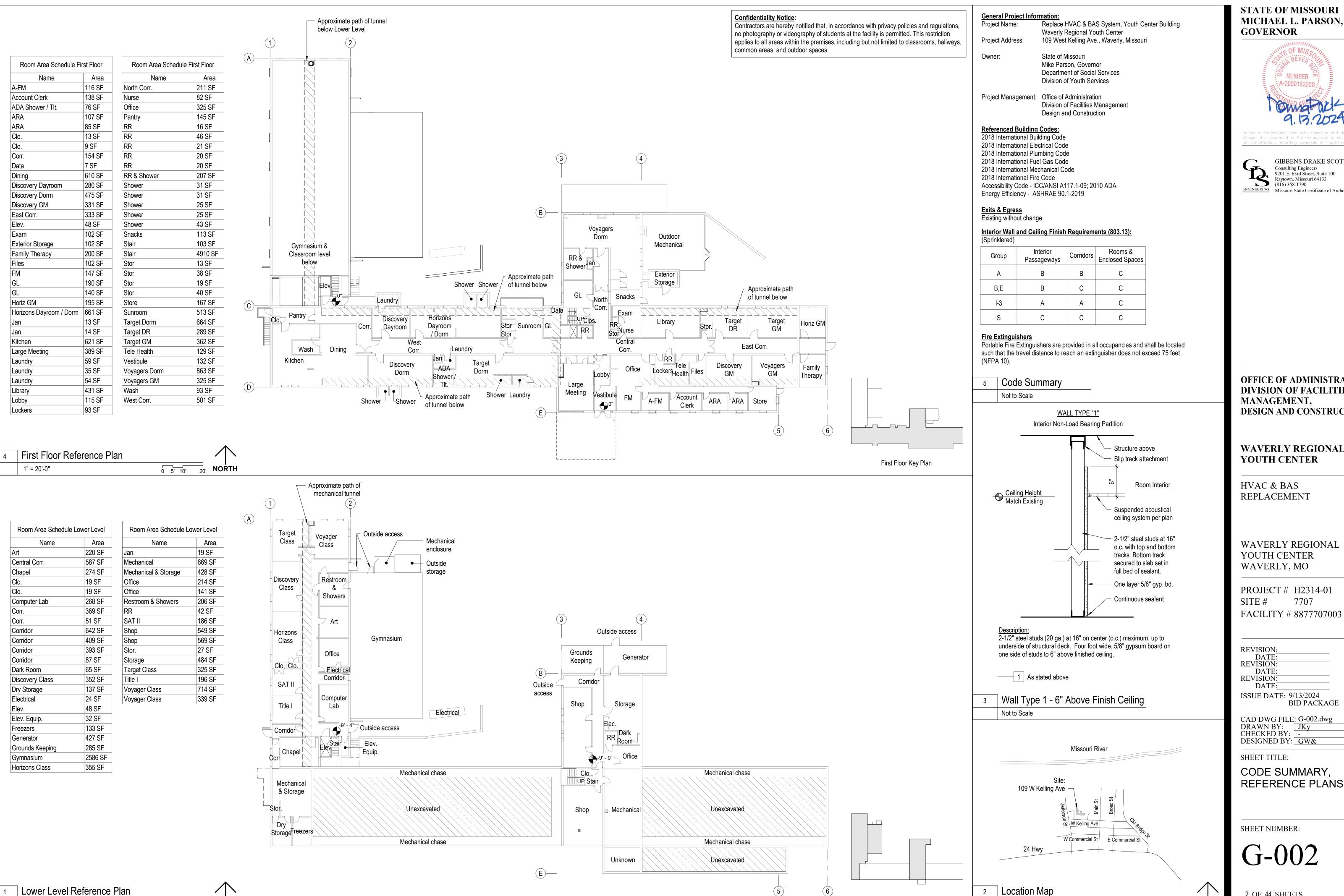
Index of Sheets

Sheet	<u>Contents</u>
G-001	Cover Sheet
G-002	Code Summary, Reference Plans
A-110	Architectural Site Plan, Details
A-120	Floor Plan – Lower Level
A-121	Floor Plan – First Floor
A-130	Roof Plan, Details
A-210	Exterior Elevations
A-310	Building Sections, Wall Section
AD-701	Reflected Ceiling Plan Demolition - Lower Level
AD-711	Reflected Ceiling Plan Demolition - First Floor
A-701	Reflected Ceiling Plan Lower Level
A-711	Reflected Ceiling Plan - First Floor
S-001	General Notes
S-110	Roof Framing Plan
S-110 S-111	Roof Davit Crane
S-310	Section and Details
	Lower Level Mechanical Demo Plan
	Lower Level Mechanical Demo Plan
	First Level & Gymnasium Level Mechanical Demo Plan
	First Level Mechanical Demo Plan
M-001	Mechanical Phasing Plans
M-101	Lower Level Mechanical Plan
M-102	Lower Level Mechanical Plan
M-111	First Level & Gymnasium Level Mechanical Plan
M-111	First Level Mechanical Plan
M-401	Enlarged Plans
M-501	Mechanical Details
M-601	Mechanical Schedules
M-602	Mechanical Controls
E-000	Electrical Symbols
E-000 E-001	Electrical Notes, Abbreviations
ED-101	Lower Level Electrical Demo Plan
ED-101 ED-102	Lower Level Electrical Demo Plan
ED-102 ED-111	
ED-111 ED-112	First Level & Gymnasium Level Electrical Demo Plan First Level & Gymnasium Level Electrical Demo Plan
E-101	Lower Level Electrical Plan
E-101 E-102	Lower Level Electrical Plan
E-102 E-111	
E-111 E-112	First Level & Gymnasium Level Electrical Plan First Level & Gymnasium Level Electrical Plan
E-112 E-501	First Level & Gymnasium Level Electrical Plan Electrical Details
E-501 E-601	
E-601 E-602	Electrical One-Line Diagram Electrical Panel Schedules
	Electrical Panel Schedules Electrical Panel Schedules
E-603	
H-121	Abatement Plan - First Floor
DESIG	NER: GIBBENS DRAKE SCOTT, INC.
	9201 E. 63RD STREET, SUITE 100
	RAYTOWN, MISSOURI 64133

PROJECT NUMBER: H2314-01

SITE NUMBER: 7707 FACILITY NUMBER: 8877707003 SHEET NUMBER:





0 5' 10' 20' **NORTH**

1" = 20'-0"

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 9201 E. 63rd Stree Raytown, Missour (816) 358-1790 Raytown, Missouri 64133 ENGINEERING Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

REVISION: DATE: **REVISION:** DATE: **REVISION:** DATE: ISSUE DATE: 9/13/2024 BID PACKAGE

CAD DWG FILE: G-002.dwg DRAWN BY: CHECKED BY: DESIGNED BY: GW&

SHEET TITLE:

CODE SUMMARY, REFERENCE PLANS

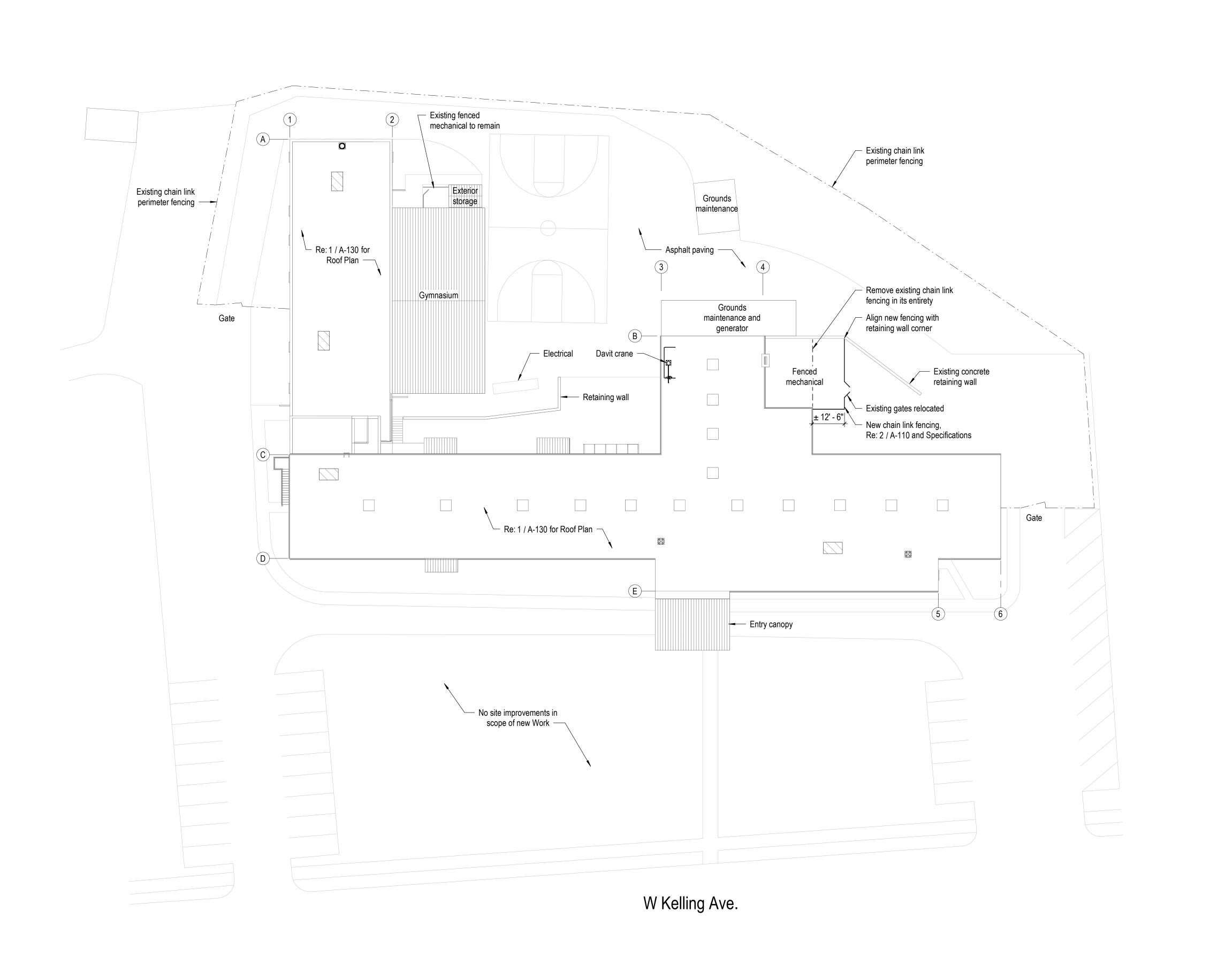
SHEET NUMBER:

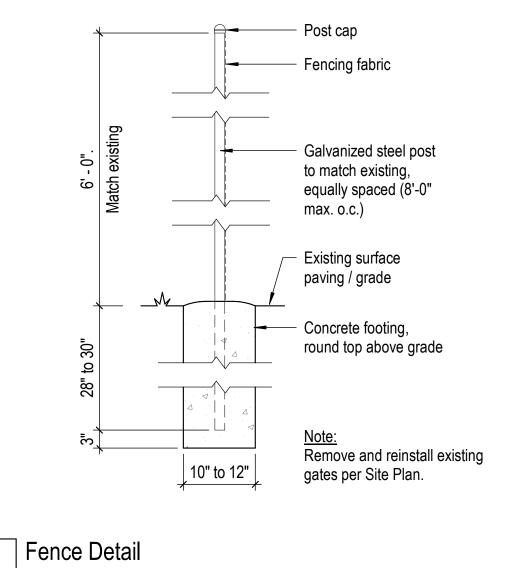
2 OF 44 SHEETS 9/13/24

NORTH

Lower Level Key Plan

Not to Scale





3/4" = 1'-0"

Confidentiality Notice:
Contractors are hereby notified that, in accordance with privacy policies and regulations, no photography or videography of students at the facility is permitted. This restriction applies to all areas within the premises, including but not limited to classrooms, hallways, common areas, and outdoor spaces.

0 4" 8" 1'4"

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**





OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707 SITE# FACILITY # 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 9/13/2024
BID PACKAGE

CAD DWG FILE: A-110.dwg
DRAWN BY: JKy
CHECKED BY: -DESIGNED BY: GW&

SHEET TITLE:

ARCHITECTURAL SITE PLAN

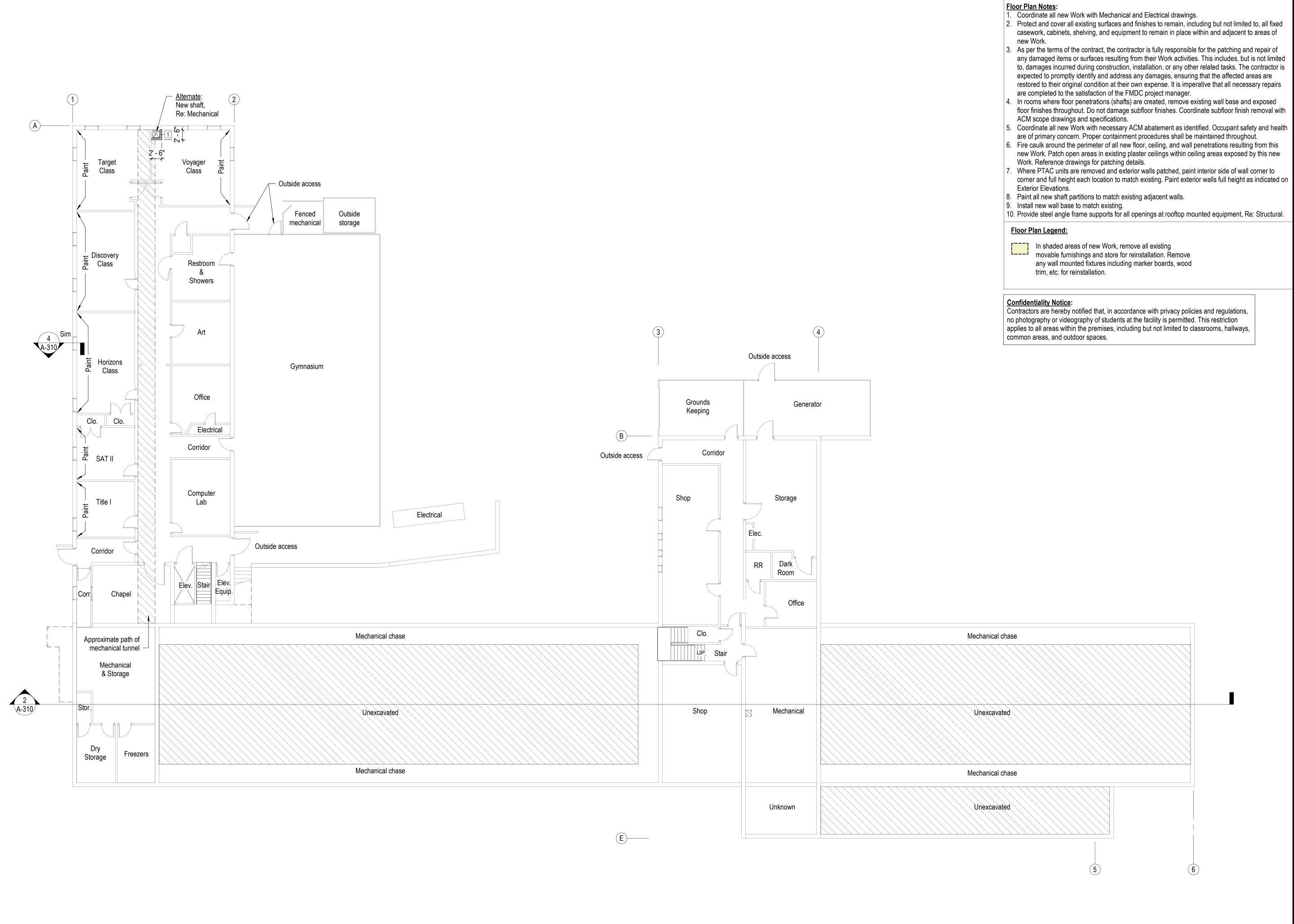
SHEET NUMBER:

3 OF 44 SHEETS 9/13/2024

0 5' 10' 20' NORTH TRUE NORTH

Site Plan

1" = 20'-0"



Floor Plan - Lower Level

3/32" = 1'-0"

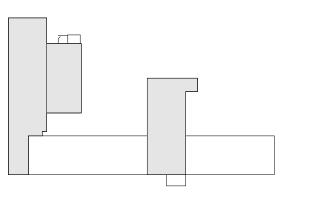
0 2'8" 5'4" 10'8" **NORTH**

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



document is Preliminary and is not intended ion, recording purposes or implementation.

GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



Lower Level Key Plan

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707 FACILITY # 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 9/13/2024
BID PACKAGE

CAD DWG FILE: A-120.dwg
DRAWN BY: JK
CHECKED BY: DESIGNED BY: GW&

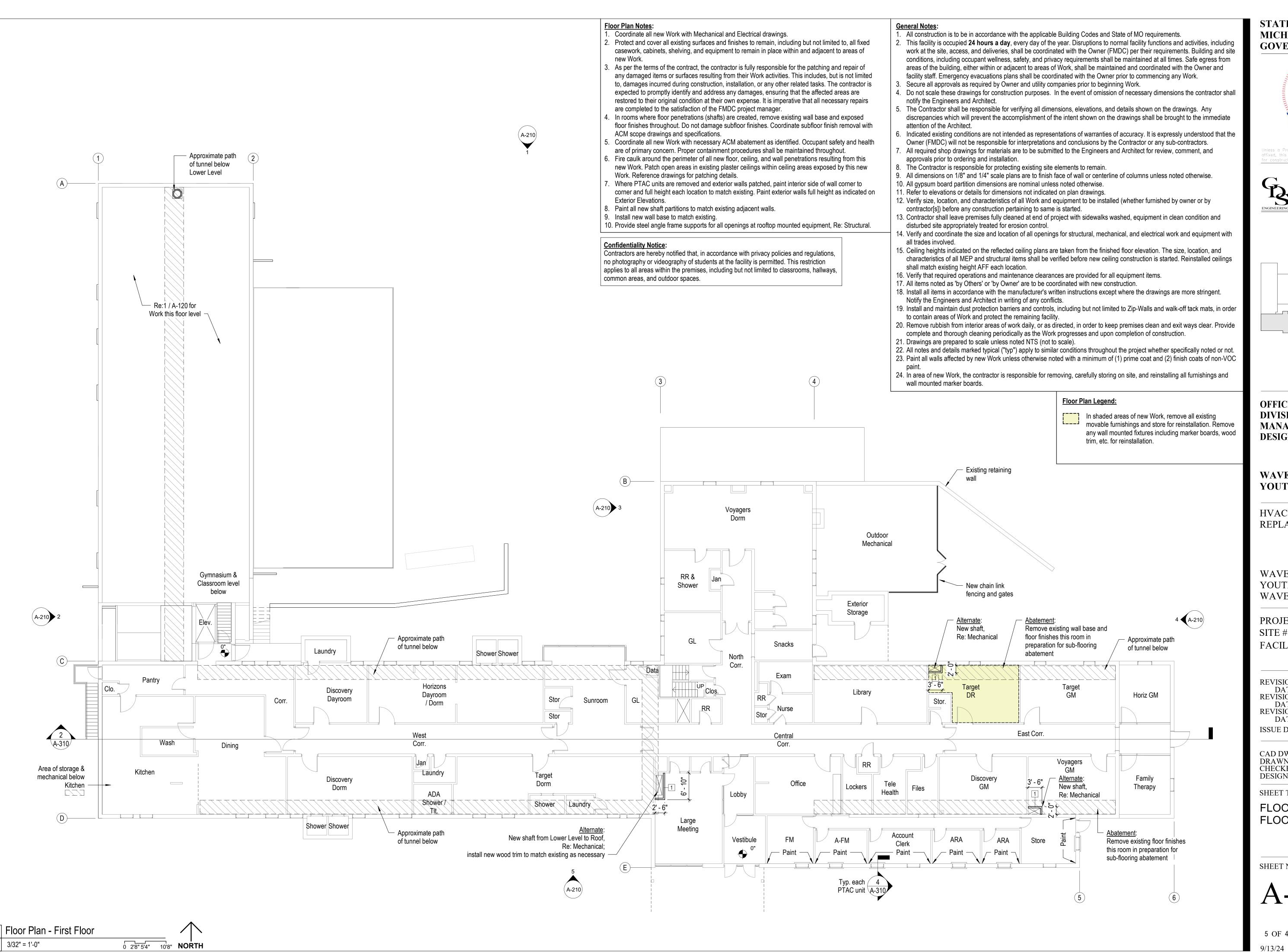
SHEET TITLE:

FLOOR PLAN - LOWER LEVEL

SHEET NUMBER:

A-120

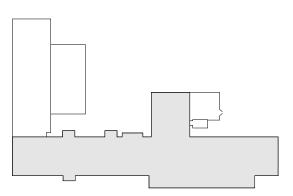
4 OF 44 SHEETS



STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 9201 E. 63rd Street Raytown, Missouri (816) 358-1790 Raytown, Missouri 64133 ENGINEERING Missouri State Certificate of Authority #000816



First Floor Key Plan

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707 FACILITY # 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 9/13/2024
BID PACKAGE

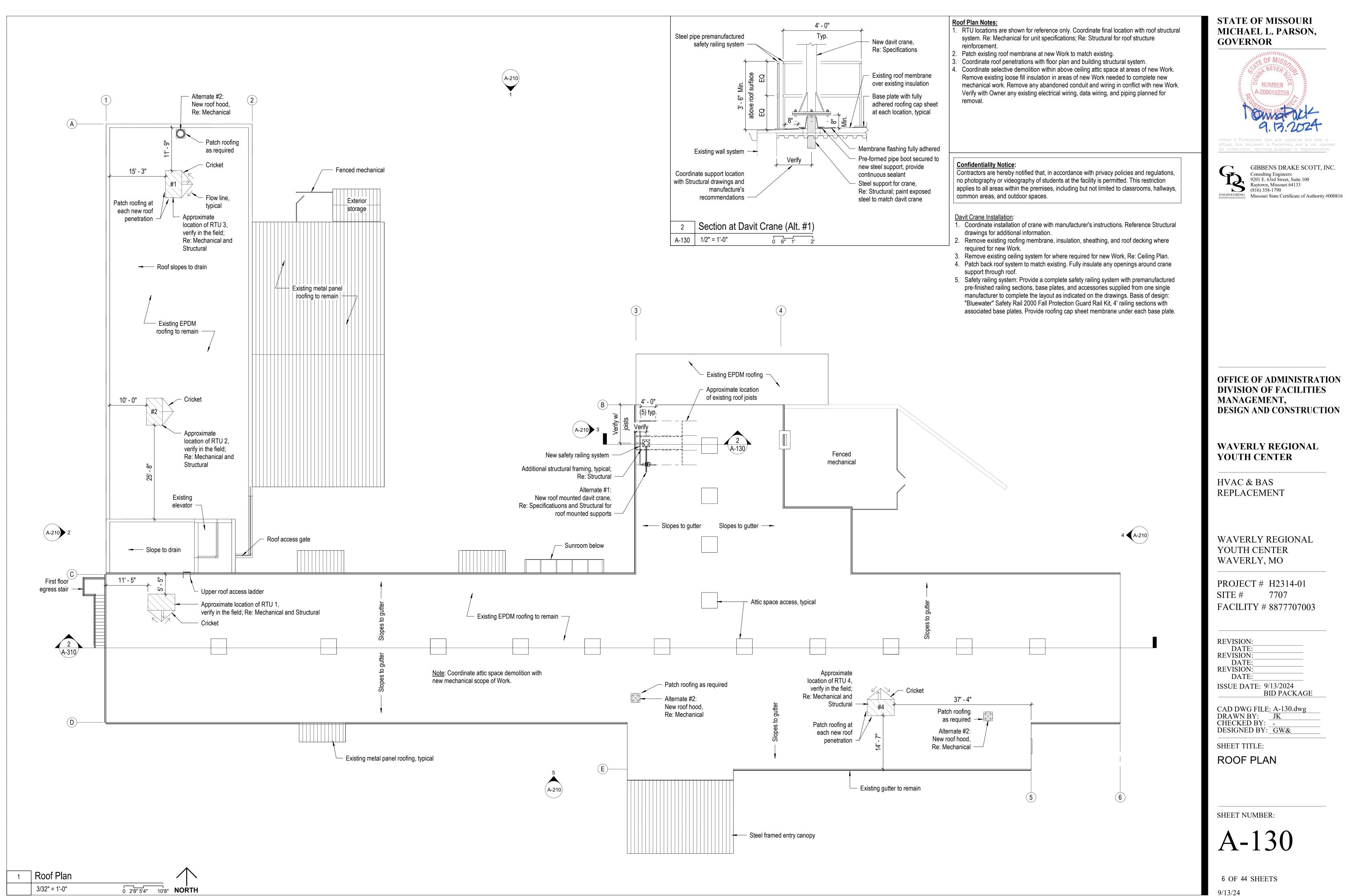
CAD DWG FILE: A-121.dwg DRAWN BY: JKy CHECKED BY: DESIGNED BY: GW&

SHEET TITLE:

FLOOR PLAN - FIRST **FLOOR**

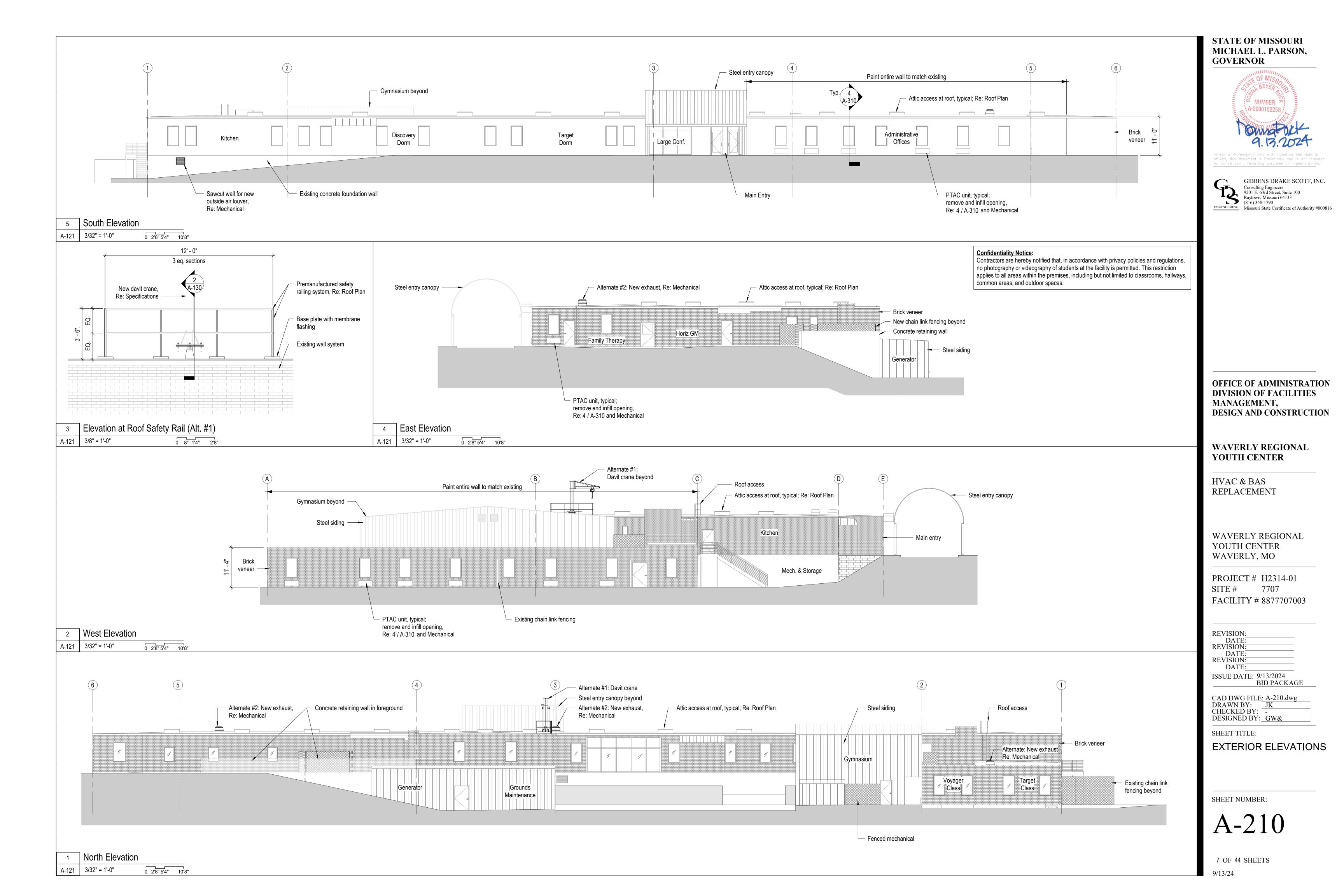
SHEET NUMBER:

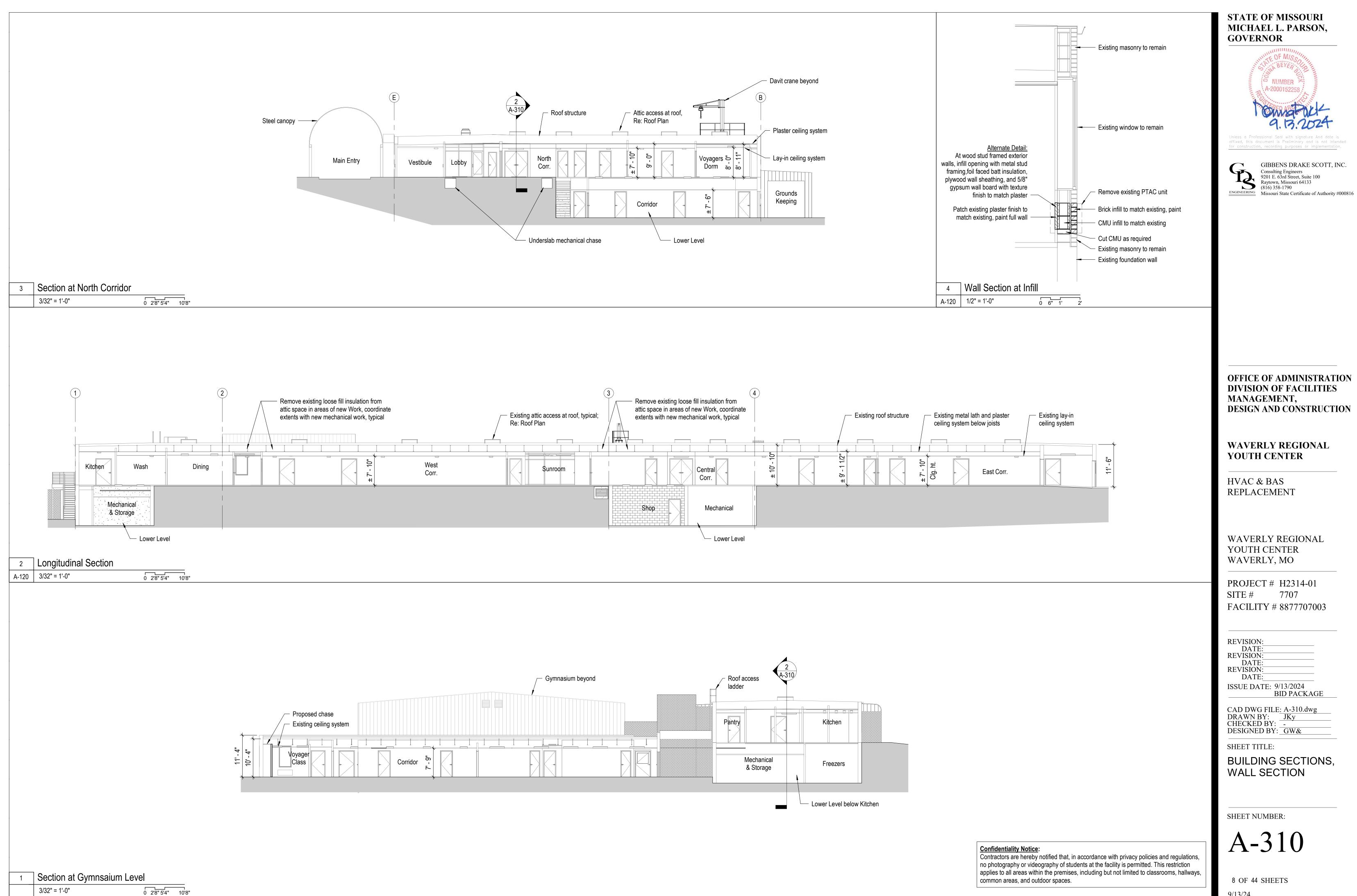
5 OF 44 SHEETS



GIBBENS DRAKE SCOTT, INC.

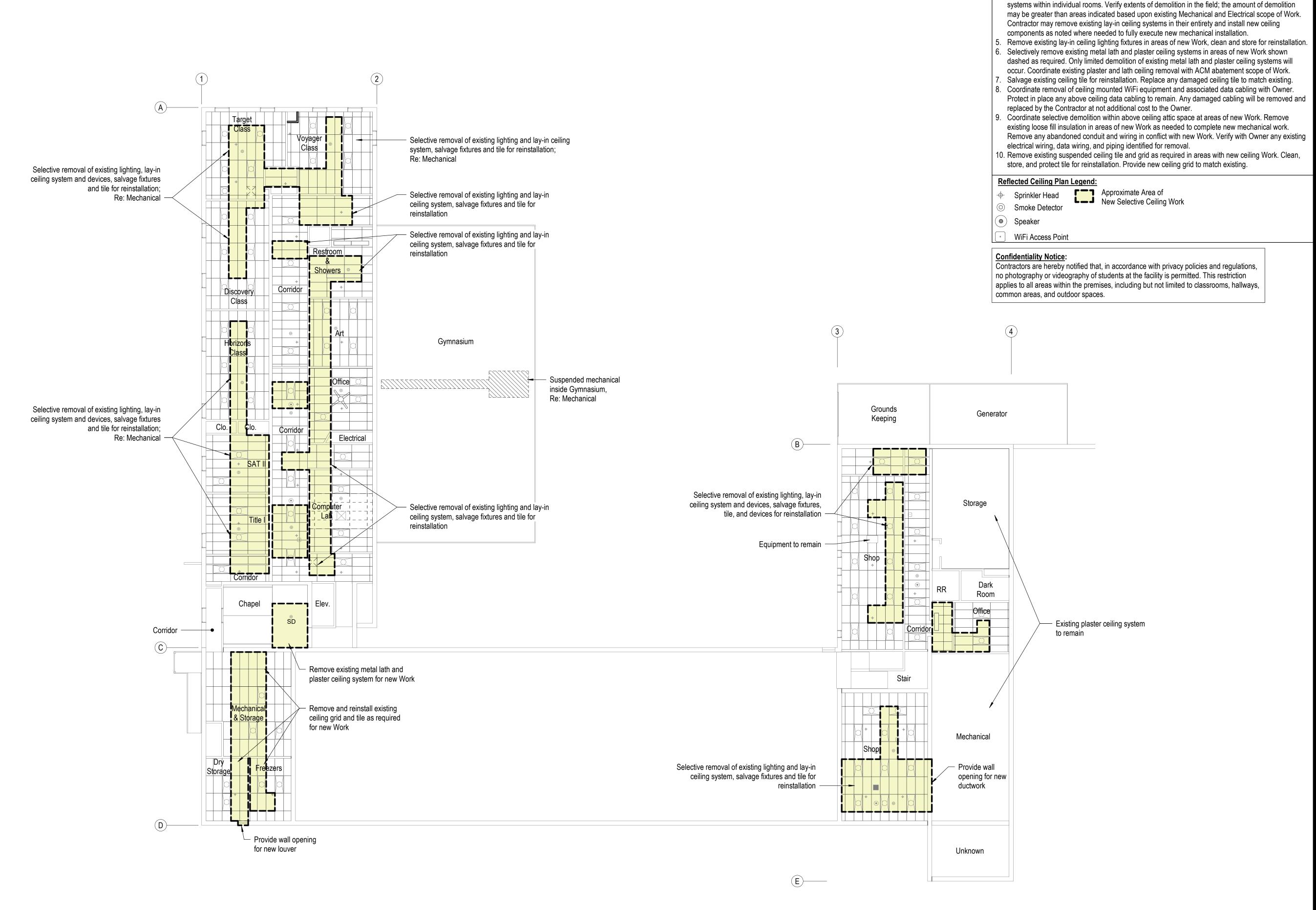
OFFICE OF ADMINISTRATION





GIBBENS DRAKE SCOTT, INC.

OFFICE OF ADMINISTRATION



STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**

<u>Ceiling Plan Demolition Notes</u>:

. Coordinate all new ceiling Work with Electrical and Mechanical drawings.

reinstallation of the ceiling grid, tile, lights, smoke detectors, and WiFi devices.

2. At areas of new ceiling demolition and reinstallation, coordinate with all trades for the removal and

. Not all ceiling components including sprinkler heads, smoke detectors, and diffusers are identified on

Selectively remove existing suspended ceiling systems including grid and ceiling tile in their entirety within areas of new Work shown dashed, which may include limited areas of Work or entire ceiling



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 9201 E. 63rd Stree Raytown, Missouri (816) 358-1790 Raytown, Missouri 64133 ENGINEERING Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE# 7707 FACILITY # 8877707003

REVISION: REVISION: DATE: **REVISION:** DATE: ISSUE DATE: 9/13/2024 BID PACKAGE

CAD DWG FILE: AD-701.dwg DRAWN BY: CHECKED BY: DESIGNED BY: GW&

SHEET TITLE:

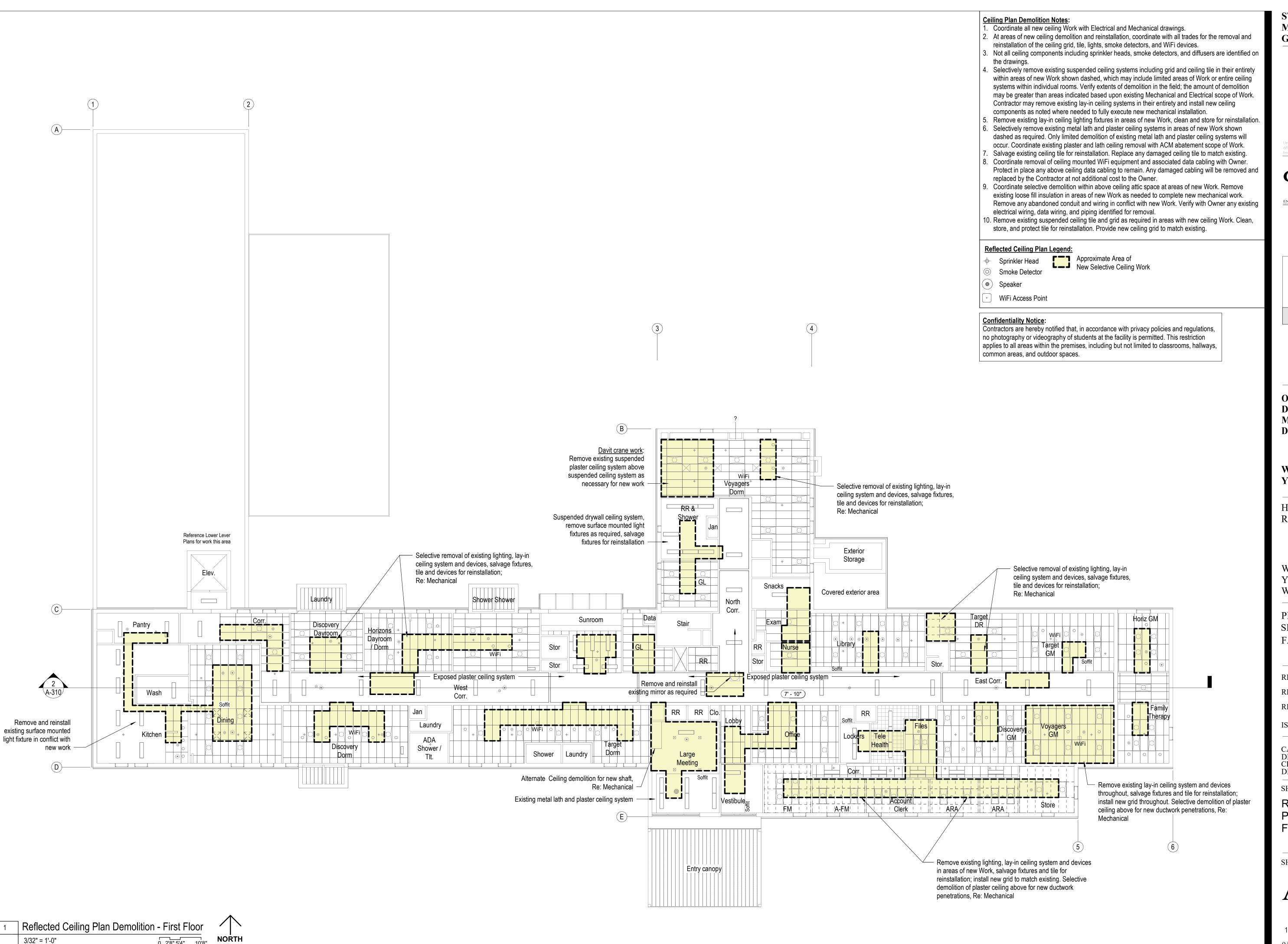
REFLECTED CEILING PLAN DEMOLITION LOWER LEVEL

SHEET NUMBER:

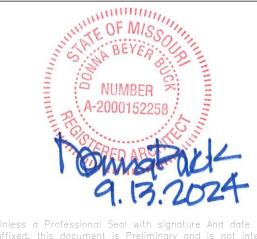
9 OF 44 SHEETS

3/32" = 1'-0"

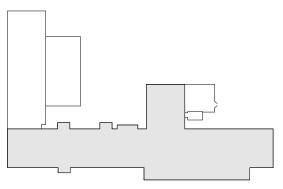
Reflected Ceiling Plan Demolition - Lower Level 0 2'8" 5'4" 10'8" **NORTH**



STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



First Floor Key Plan

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707 FACILITY # 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 9/13/2024
BID PACKAGE

CAD DWG FILE: AD-711.dwg
DRAWN BY: JKy
CHECKED BY: DESIGNED BY: GW&

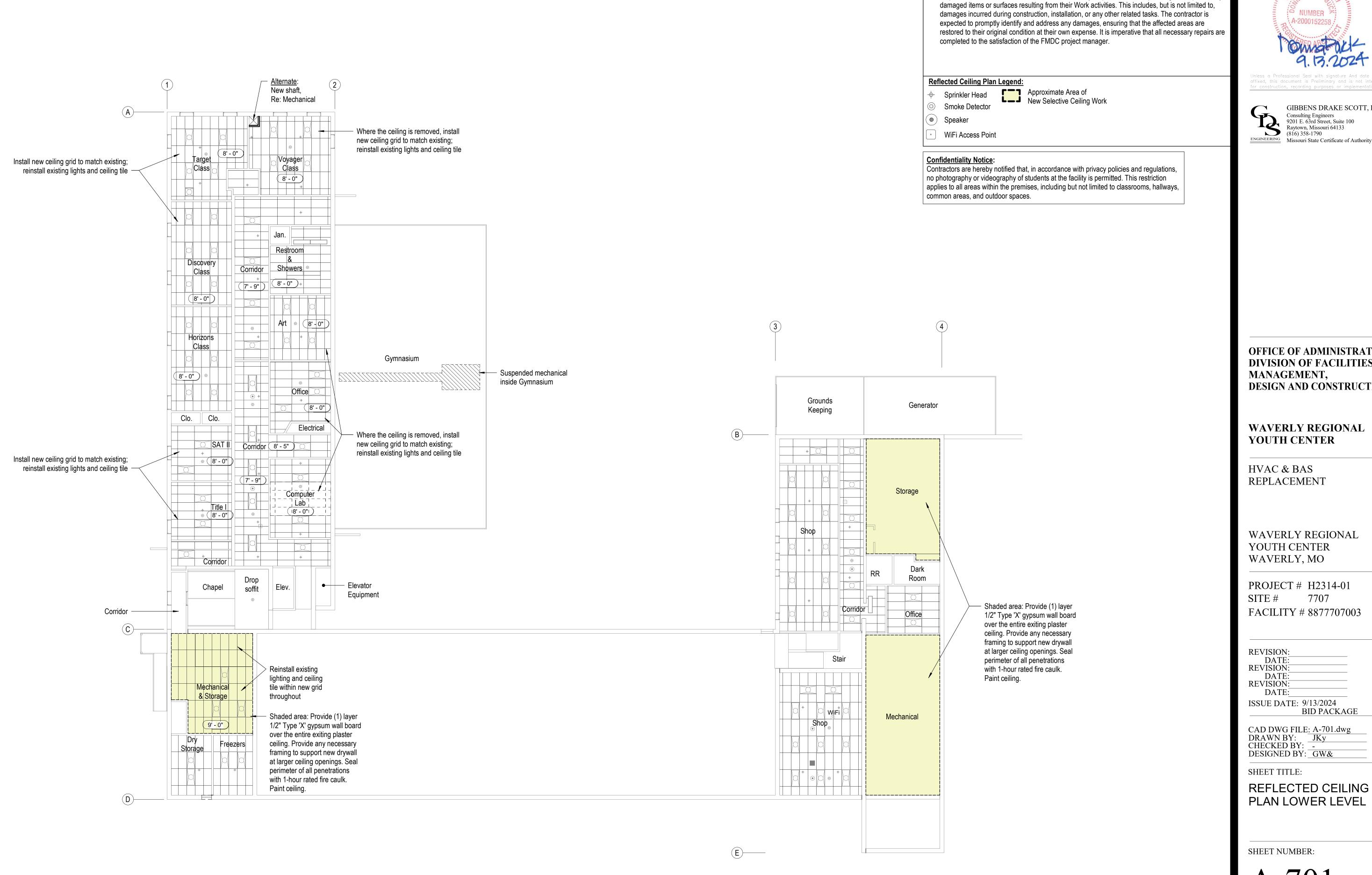
SHEET TITLE:

REFLECTED CEILING PLAN DEMOLITION FIRST FLOOR

SHEET NUMBER:

AD-711

10 OF 44 SHEETS



Reflected Ceiling Plan - Lower Level

0 2'8" 5'4" 10'8" **NORTH**

3/32" = 1'-0"

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**

Ceiling Plan Notes:

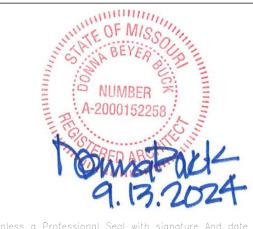
Coordinate all new ceiling work with Electrical and Mechanical drawings.
 Patch openings in existing plaster ceilings. Re: 4 / A-711

5. Install new ceilings to match existing height and configuration.

3. Paint all exposed plaster ceilings and soffits in areas of new Work (at corridors, etc) to match existing.

6. As per the terms of the contract, the contractor is fully responsible for the patching and repair of any

4. Where ceiling tile is removed for reinstallation, replace any damaged ceiling tile to match.





GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 Raytown, Missouri 64133 ENGINEERING Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

WAVERLY REGIONAL YOUTH CENTER

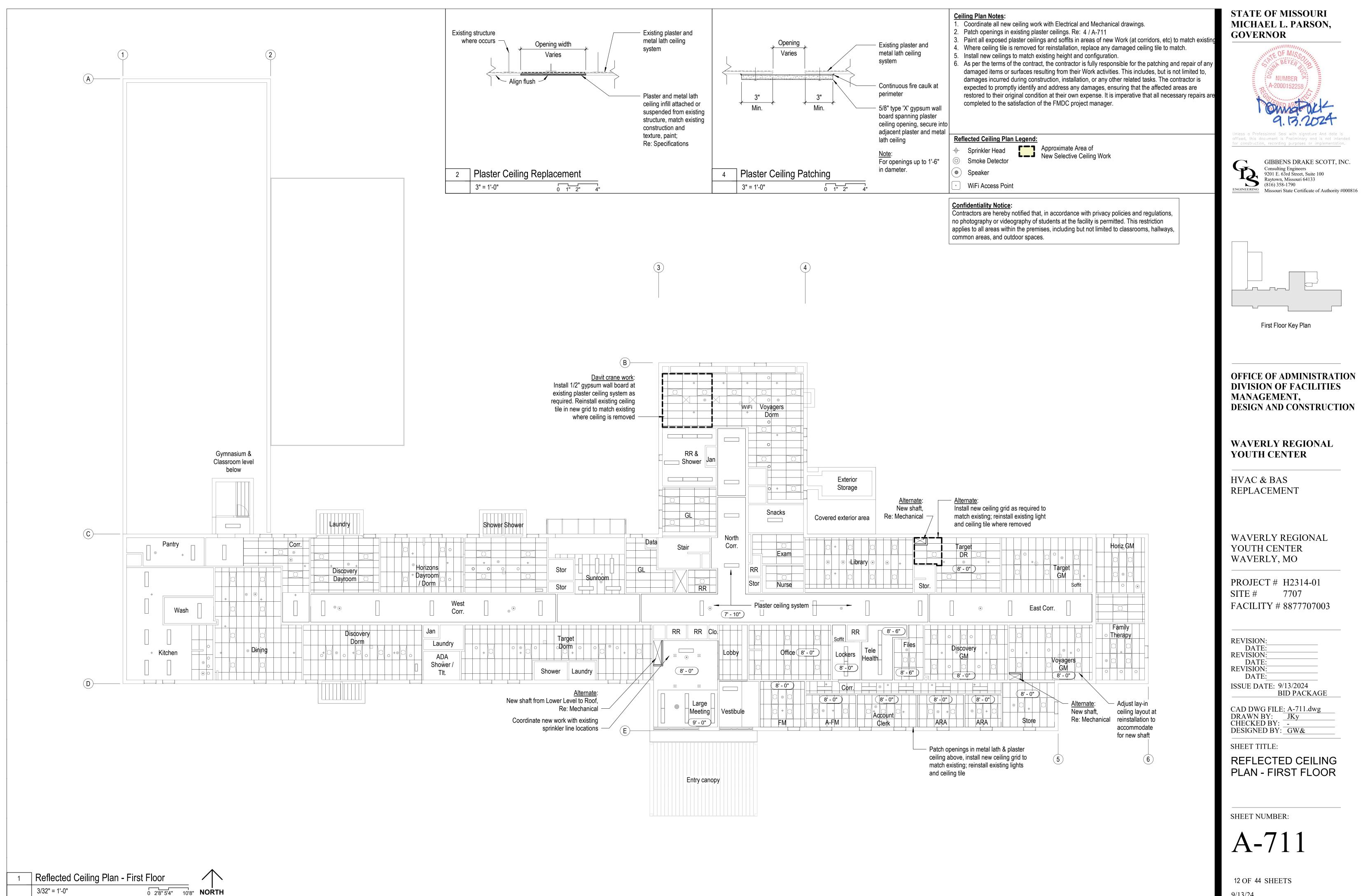
PROJECT # H2314-01 7707 FACILITY # 8877707003

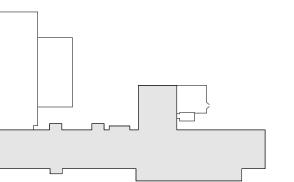
ISSUE DATE: 9/13/2024 BID PACKAGE

CAD DWG FILE: A-701.dwg DRAWN BY: JKy CHECKED BY: -DESIGNED BY: GW&

PLAN LOWER LEVEL

11 OF 44 SHEETS





OFFICE OF ADMINISTRATION

```
1.00
                 SEISMIC IMPORTANCE FACTOR, Ie
          SLAB ON GRADE FLOOR LOADS
                 LIVE LOAD
                                                                100 PSF
                CONCENTRATED LOAD
                                                                3000 LB ACTING ON AN AREA
                                                                4.5 IN. BY 4.5 IN.
          ROOF DEAD AND LIVE LOADS
                                                                20 PSF
                 DEAD LOAD TOP CHORD
                                                                5 PSF
                 DEAD LOAD BOT. CHORD
                                                                20 PSF
                 LIVE LOAD TOP CHORD
                                                                0 PSF (U.N.O)
                 LIVE LOAD BOT. CHORD
           ROOF SNOW LOADS
                                                                15 PSF
                 GROUND SNOW LOAD, Pa
                 FLAT ROOF SNOW LOAD, Pf
                                                                11.34 PSF
                 SNOW EXPOSURE FACTOR, Ce
                                                                0.9
                 THERMAL FACTOR, Ct
                                                                1.2
                 SLOPE FACTOR, C<sub>s</sub>
                                                                PER CODE
                 DRIFTING
           WIND LOADS
                                                                107 MPH
                 BASIC WIND SPEED (3 SECOND GUST)
                 EXPOSURE CATEGORY
                 INTERNAL PRESSURE COEFFICIENT, GCpi
                                                                +/- 0.18
                 COMPONENTS AND CLADDING PER ASCE 7-16.
           SEISMIC LOADS
                                                                0.189
                                                                0.105
                 SITE CLASS
                                                                0.164
                 S_{\mathsf{DS}}
                                                                0.105
                 SEISMIC DESIGN CATEGORY
                 SEISMIC FORCE RESISTING SYSTEM
                                                                WOOD WALLS SHEATHED
                                                                WITH WOOD STRUCTURAL
                                                                PANELS RATED FOR SHEAR
                 DESIGN BASE SHEAR
                                                                C_SW
                 DESIGN RESPONSE COEFFICIENT, Cs
                                                                0.025
                 RESPONSE MODIFICATION COEFFICIENT, R
                                                                6.5
                ANALYSIS PROCEDURE USED
                                                                EQUIVALENT LATERAL FORCE
                                                                (ELF) PROCEDURE
          ROOF RAIN LOADS
                 60-MIN DURATION/100 YEAR RAIN INTENSITY, i
                                                                3.20 IN/HR
                                                               7.58 IN/HR
                 15-MIN DURATION/100 YEAR RAIN INTENSITY, i
      CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO FABRICATION.
      IF DISCREPANCIES EXIST BETWEEN CONTRACT DRAWINGS, AND/OR SHOP DRAWINGS NOTIFY THE
       ENGINEER OF RECORD.
       THE CONTRACTOR SHALL REVIEW DRAWINGS FROM ALL OTHER DISCIPLINES FOR PERTINENT MISC.
       ITEMS OR INFORMATION RELATED TO THE STRUCTURAL WORK AND COORDINATE AS REQUIRED.
       THE BUILDING IS NOT STRUCTURALLY STABLE UNTIL ALL CONNECTIONS, FRAMING, SHEAR WALLS,
       PERMANENT BRACING, AND EXTERIOR LOAD-BEARING WALLS ARE COMPLETE AND HAVE ACHIEVED
       THEIR RESPECTIVE DESIGN STRENGTHS. CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTAINING
       STRUCTURAL STABILITY DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SYSTEMS ARE
       NOT TO BE REMOVED UNTIL STRUCTURAL WORK IS COMPLETE.
      PROVIDE ADEQUATE SHORING DURING CONSTRUCTION TO RESIST FORCES SUCH AS WIND AND
       UNBALANCED LOADS DUE TO CONSTRUCTION. DO NOT BACKFILL UNTIL CONCRETE HAS CURED 14
STRUCTURAL STEEL
            ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE
             WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST APPLICABLE EDITION
             AND AISC CODE OF STANDARD PRACTICE.
            ALL STRUCTURAL STEEL FOR WIDE FLANGE SHALL BE A992 GRADE 50 UNLESS NOTED
             OTHERWISE. ALL ANGLES, PLATES AND CHANNELS SHALL BE ASTM A36 UNLESS NOTED
             OTHERWISE, ALL RECTANGULAR AND ROUND HSS SHAPES SHALL BE ASTM A500, GRADE B.
            ALL BOLTS SHALL BE 3/4" Ø A-325 BOLTS WITH HEAVY HEX HEADS UNLESS NOTED OTHERWISE.
             ALL CONNECTIONS SHALL HAVE A MINIMUM OF (2) 3/4" Ø BOLTS, BEARING TYPE CONNECTIONS
             ONLY.
            ALL STRUCTURAL STEEL WELDS IN THE SHOP OR IN THE FIELD SHALL BE PERFORMED BY A
             QUALIFIED WELDER AND SHALL CONFORM TO THE CURRENT REQUIREMENTS OF A.W.S.
             SHOP WELDED AND FIELD BOLTED CONNECTIONS ARE PREFERRED UNLESS NOTED
             OTHERWISE.
             ALL STEEL EXPOSED TO THE EXTERIOR, EXHIBITS, POOLS, AND LSS AREAS SHALL BE HOT-DIP
             GALVANIZED AND PAINTED PER ARCHITECT UNLESS NOTED OTHERWISE.
            THE CONTRACTOR SHALL PROVIDE SHELF ANGLES, GLASS SUPPORTS, LINTELS, AND OTHER
             MISC. STEEL AS SHOWN ON THESE DRAWINGS AS REQUIRED TO PROVIDE SUPPORT
             (STABILIZATION) AROUND AND THROUGHOUT THE BUILDING. SEE ARCHITECTURAL DRAWINGS
             FOR ADDITIONAL MISC. STEEL DETAILS.
       STRUCTURAL ENGINEER SITE OBSERVATIONS
              THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND,
              EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF
              CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL
              BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES,
              TECHNIQUES, AND SEQUENCES.
              THE ENGINEER SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE
              RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, OR
              SEQUENCES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE
              WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR AN
              OTHER PERSONS PERFORMING ANY OF THE WORK, OR THE FAILURE OF ANY OF THEM TO
              CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
              PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF LEIGH & O'KANE L.L.C. IS
              SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS
              PROCEEDING IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS
              LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR
              CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF WORK, BUT RATHER PERIODIC IN
              AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS AND DEFICIENCIES IN THE WORK OF
              THE CONTRACTOR.
       SUBMITTALS
              ALL SHOP DRAWINGS AND SUBMITTALS MUST BE REVIEWED AND APPROVED BY THE
                CONTRACTOR PRIOR TO SUBMITTAL. ENGINEER'S REVIEW OF SHOP DRAWINGS IS LIMITED TO
                CHECKING FOR GENERAL CONFORMANCE WITH DESIGN DRAWINGS AND STRENGTH OF
                COMPONENTS AND MATERIALS. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES FROM THE
                DESIGN DRAWINGS, QUANTITIES, DIMENSIONAL ERRORS, OR OMISSIONS IN THE SHOP
                DRAWINGS.
              ALL SHOP DRAWINGS MUST BE ORIGINAL DOCUMENTS AND SHALL NOT BE REPRODUCTIONS OF
                THESE CONTRACT DOCUMENTS.
               SUBMIT SHOP DRAWINGS DETAILING FABRICATION OF EACH MEMBER AND ITS CONNECTIONS.
                DETAIL DRAWINGS ARE TO BE PREPARED UNDER THE SUPERVISION OF A LICENSED
                PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI FOR THE FOLLOWING ITEMS.
                1. PREFABRICATED WOOD TRUSSES
        D. CONTRACTOR SHALL SUBMIT STRUCTURAL SHOP DRAWINGS FOR THE FOLLOWING ITEMS.
                      CONCRETE MIX DESIGN AND MATERIALS
                      CONCRETE REINFORCING STEEL
                     PREFABRICATED WOOD TRUSSES
              PROVIDE A FINAL, "FOR CONSTRUCTION" SET OF ALL SHOP DRAWINGS TO THE ENGINEER OF
                RECORD PRIOR TO FABRICATION OR CONSTRUCTION OF THOSE ITEMS.
   16. SPECIAL INSPECTIONS
                THE FOLLOWING MINIMUM ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH THE
                BUILDING CODE.
                      CONCRETE PLACING
                      CONCRETE REINFORCING
                      BOLTS EMBEDDED IN CONCRETE / POST-INSTALLED ANCHORS
                      ANCHOR RODS
                      ROOF DIAPHRAGM ATTACHMENT
                      SOIL VERIFICATION
         B. THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR
                TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF
                THE WORK.
```

ALL WORK SHALL CONFORM TO 2015 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY

1.00

1.00

THE STATE OF MISSOURI.

OVERALL BUILDING CLASSIFICATIONS

SNOW IMPORTANCE FACTOR, Is

ICE IMPORTANCE FACTOR - WIND, I_w

RISK CATEGORY

DESIGN LOADS

ALTERNATE A.B. ANCHOR BOLT ARCH. ARCHITECT BEAM BOT. BOTTOM BOTTOM OF B.O. BLDG. BUILDING CENTER LINE CLR. CLEAR COL. COLUMN CONC. CONCRETE CONN. CONNECTION CONT. CONTINUOUS C.J. CONTROL JOINT DET. DETAIL DIA. DIAMETER DIM. DIMENSION DWG(S) DRAWING(S) EACH ELEV. ELEVATION ELEVATION EQ. **EQUAL** EQUIP. **EQUIPMENT** EXIST. EXISTING EXT. **EXTERIOR** F.S. FAR SIDE FIN. FINISH FLR. FLOOR FOOTING FOUNDATION FOUND. GALV. GALVANIZED GYP. GYPSUM H.S. **HEADED STUD** HIGH HORIZONTAL HORIZ. INSUL. INSULATION INT. INTERIOR LOC. LOCATION LONG LEG HORIZONTAL LLO LONG LEG OUT LLV LONG LEG VERTICAL LONG. LONGITUDINAL LO LOW MSRY. MASONRY MAX. MAXIMUM MECH. MECHANICAL MIN. MINIMUM MIR. MIRRORED N.S. NEAR SIDE NOT APPLICABLE N.A. N.T.S. NOT TO SCALE O.C. ON CENTER OPNG. OPENING PLATE **RADIUS** REFERENCE REINFORCING REQ'D REQUIRED SCHED. SCHEDULE SEC. SECTION SHT. SHEET SIM. SIMILAR SQ. **SQUARE** S.S. STAINLESS STEEL STL. STEEL T&B TOP & BOTTOM T.O. TOP OF TRANS. TRANSVERSE TYP. TYPICAL U.N.O. UNLESS NOTED OTHERWISE VERT. VERTICAL WITH

WITHOUT

W/O

STANDARD ABBREVIATIONS

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**







Lee's Summit, MO 64063 816.444.3144 www.leok.com Missouri State Certificate of Authority #001644

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT. **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE# 7707

8877707003 ASSET#

REVISION: DATE: **REVISION:** DATE: **REVISION:** DATE: 9/13/2024 ISSUE DATE: 9/13/2024

CAD DWG FILE: DRAWN BY:

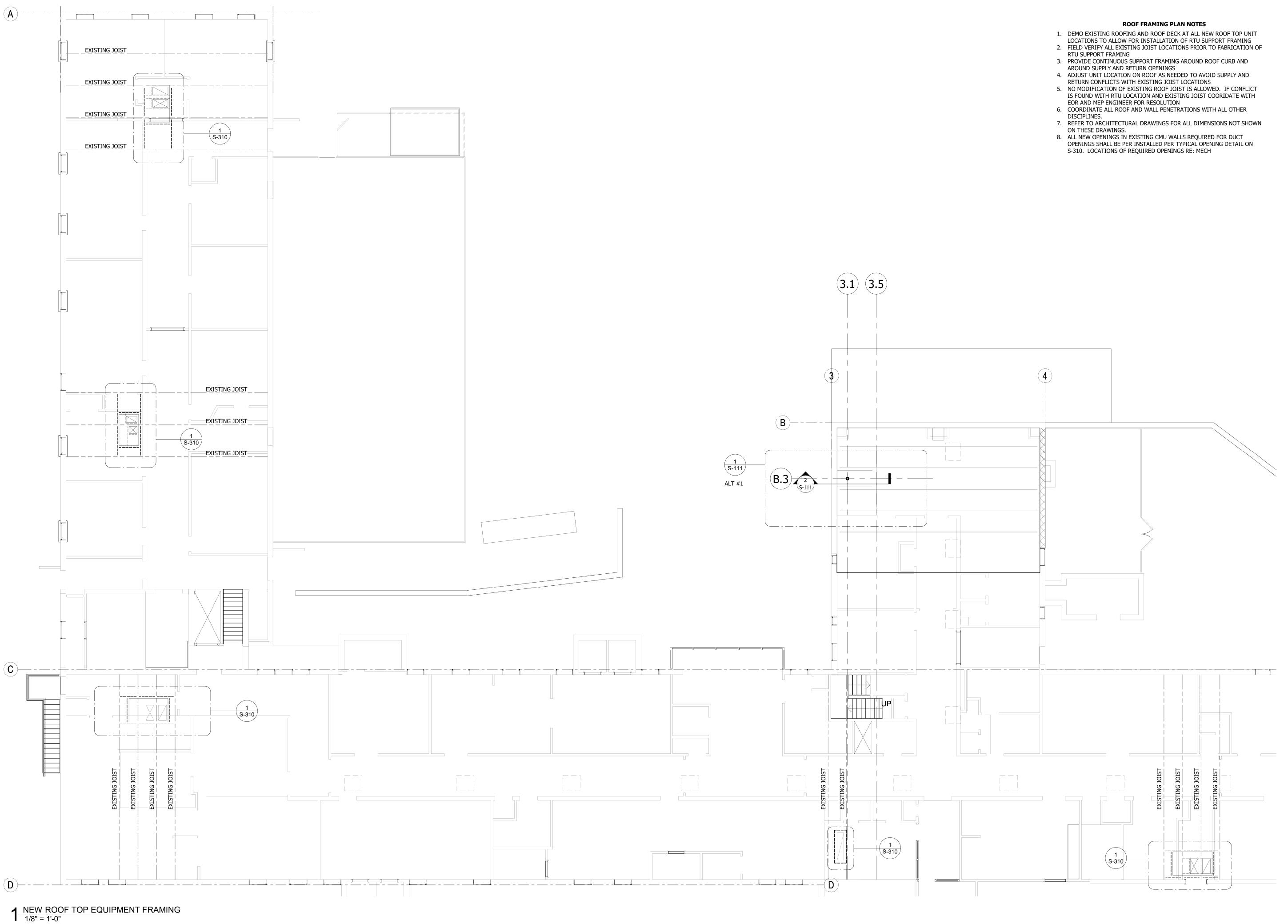
DESIGNED BY:

SHEET TITLE:

CHECKED BY:

GENERAL NOTES

SHEET NUMBER:



STATE OF MISSOURI

MICHAEL L. PARSON,

GOVERNOR



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE# 7707

ASSET# 8877707003

REVISION: REVISION: REVISION:

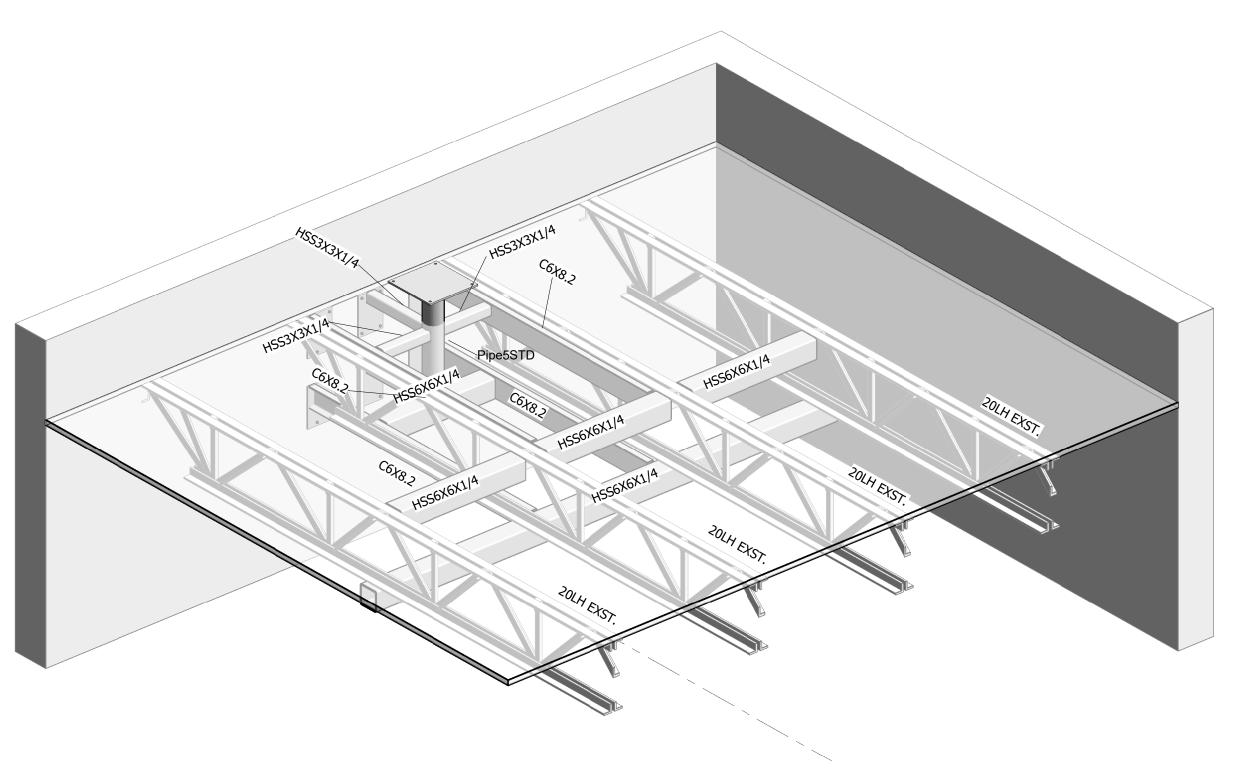
DATE: 9/13/2024 ISSUE DATE: 9/13/2024 BID SET

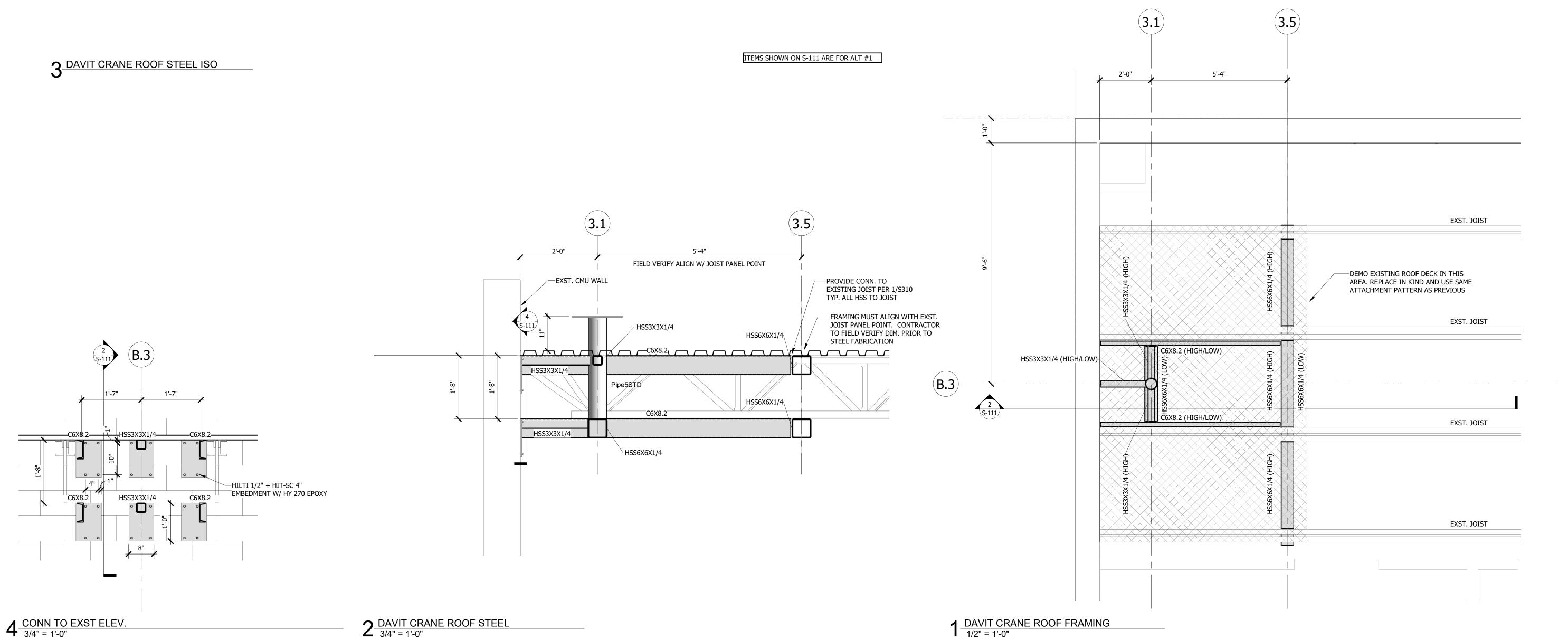
CAD DWG FILE: DRAWN BY: CHECKED BY: DESIGNED BY:

SHEET TITLE:

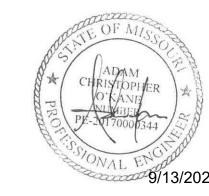
ROOF FRAMING PLAN

SHEET NUMBER:









Unless a Professional Seal with signature And date is



816.444.3144

www.leok.com

Missouri State Certificate of
Authority #001644

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET#

8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
PATE: 9/13/2024

ISSUE DATE: 9/13/2024 BID SET

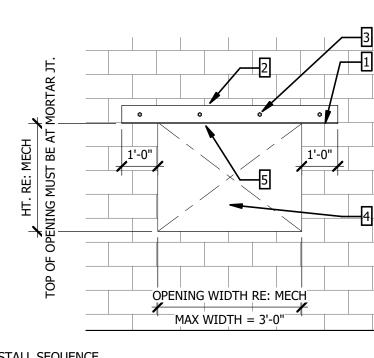
CAD DWG FILE: DRAWN BY: CHECKED BY: DESIGNED BY:

SHEET TITLE:

ROOF DAVIT CRANE

SHEET NUMBER:

S-111 15 OF 44 SHEETS 9/13/2024

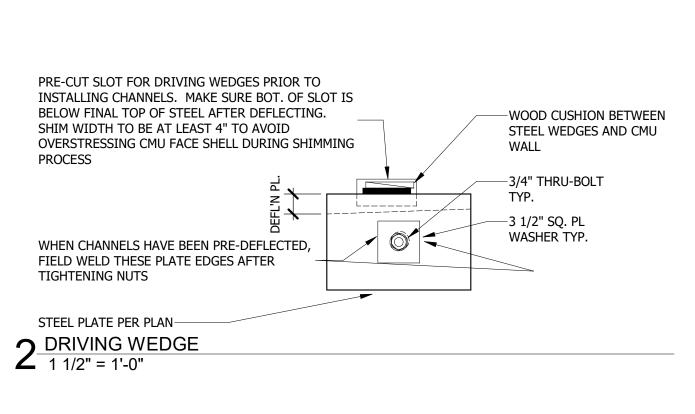


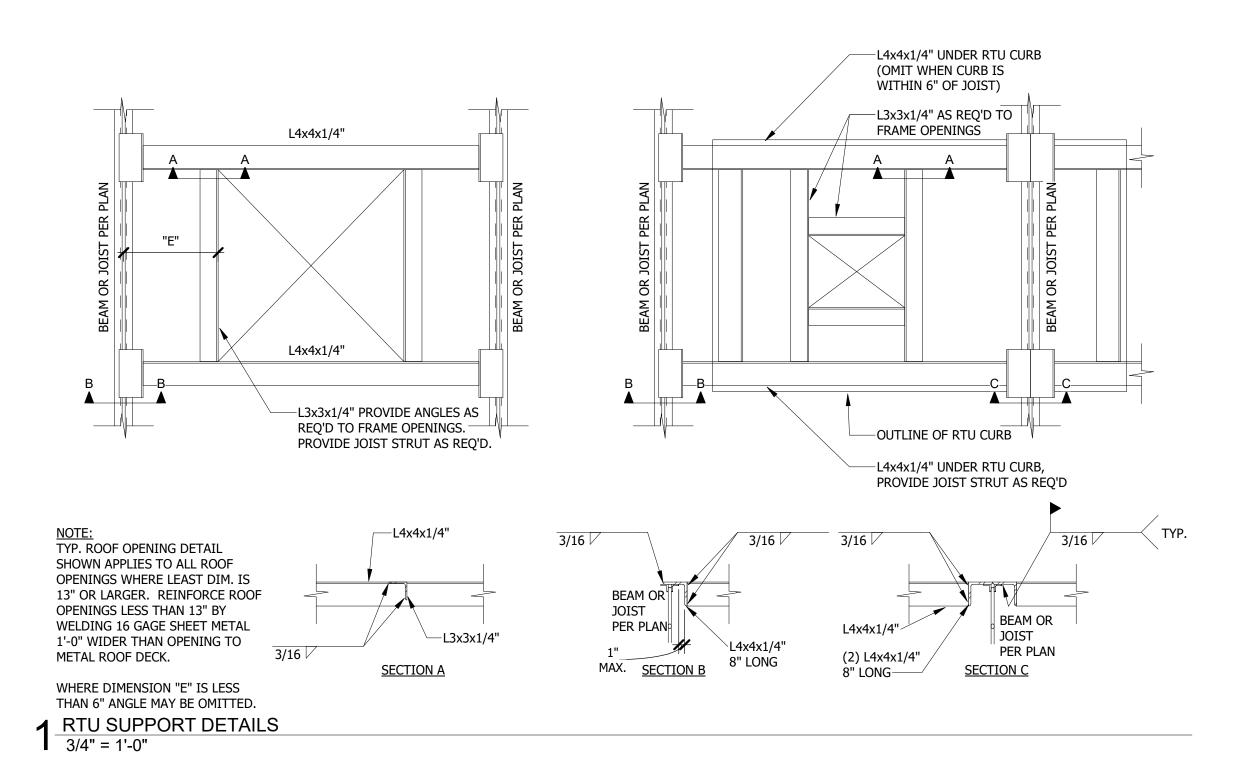
1. SAW-CUT EXISTING MORTAR JOINT AT OPENING HEIGHT FULL WIDTH OF OPEING PLUS 1'-0" EITHER SIDE

2. INSTALL ANGLES BOTH SIDES OF OPENING 3. INSTALL THRU-BOLTS FOR LENGTH OF LINTEL. TIGHTEN ALL NUTS AND

4. INTERIOR MASONRY REMOVED FROM OPENING5. WELD PLATE TO UNDERSIDE OF LINTEL

3 MECH OPENING CMU
3/8" = 1'-0"





STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**





816.444.3144 www.leok.com Missouri State Certificate of Authority #001644

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

ASSET#

8877707003

REVISION: DATE: **REVISION:** DATE: REVISION: DATE: 9/13/2024 ISSUE DATE: 9/13/2024

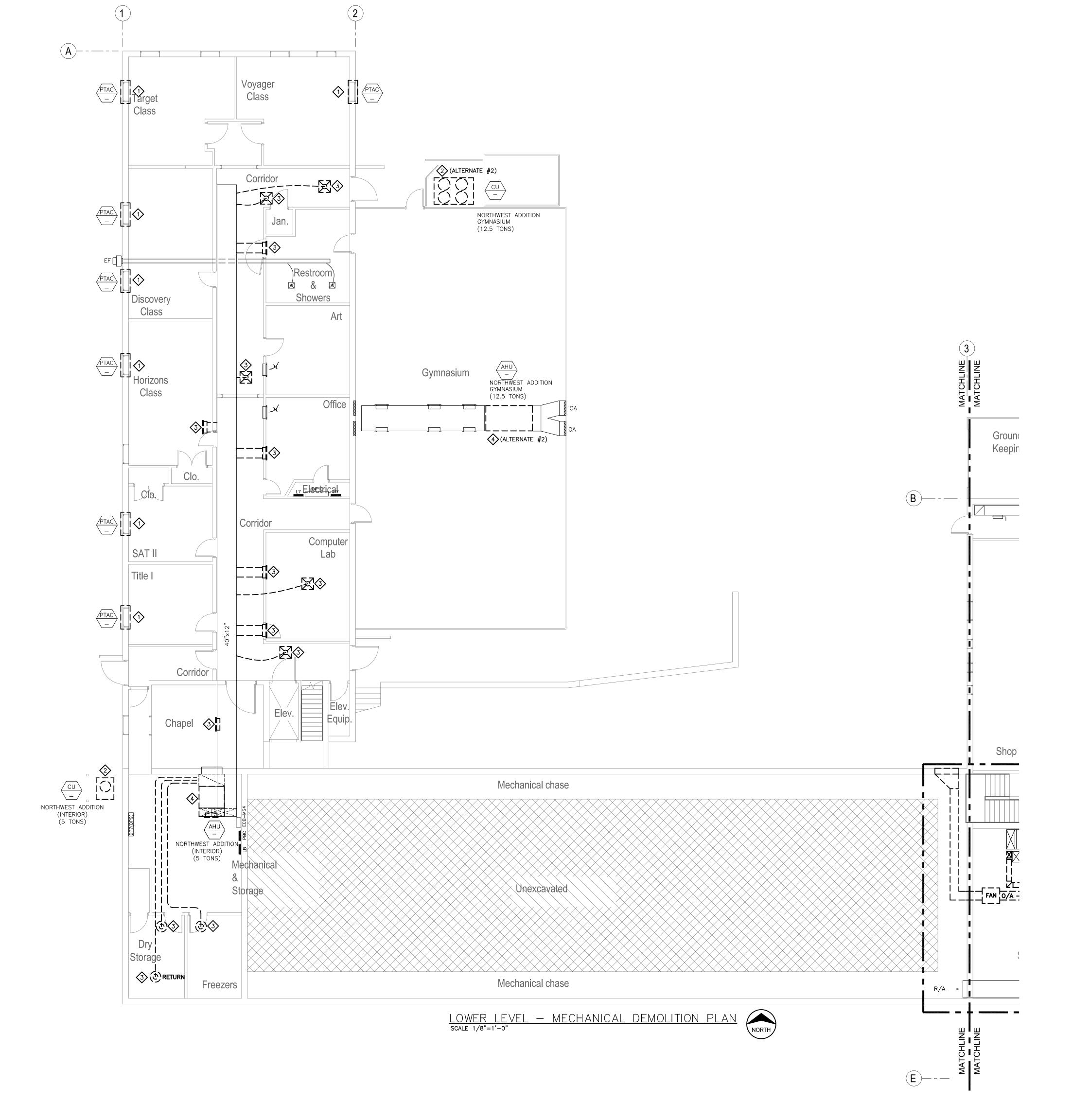
CAD DWG FILE: DRAWN BY: CHECKED BY: **DESIGNED BY:**

BID SET

SHEET TITLE:

SECTION AND **DETAILS**

SHEET NUMBER:



- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- E. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN DEMOLITION NOTES

- EXISTING PTAC AND WIRING TO BE REMOVED. PATCH AND FINISH WALL TO MATCH EXISTING.
- EXISTING CONDENSING UNIT TO BE REMOVED. PIPING AND WIRING THAT CANNOT BE REUSED SHALL ALSO BE REMOVED.
- EXISTING DIFFUSER/REGISTER/GRILLE AND ASSOCIATED BRANCH DUCTWORK TO BE REMOVED. PATCH REMAINING OPENING IN MAIN DUCT AIR—TIGHT.
- REMOVE EXISTING AIR HANDLING UNIT AND REPLACE WITH NEW AIR HANDLING UNIT. PIPING AND WIRING THAT CANNOT BE REUSED SHALL ALSO BE REMOVED.

MISCELLANEOUS NOTES

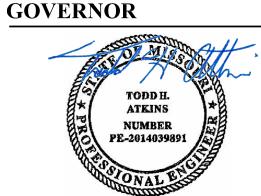
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

STATE OF MISSOURI MICHAEL L. PARSON,



9-13-2024

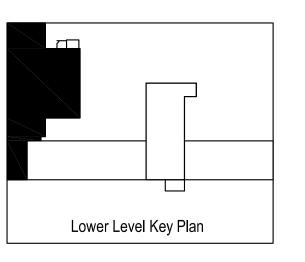
TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE



Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
PATE: 9/13/2024
ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE: MD-101
DRAWN BY: AAC
CHECKED BY: THA
DESIGNED BY: GDS

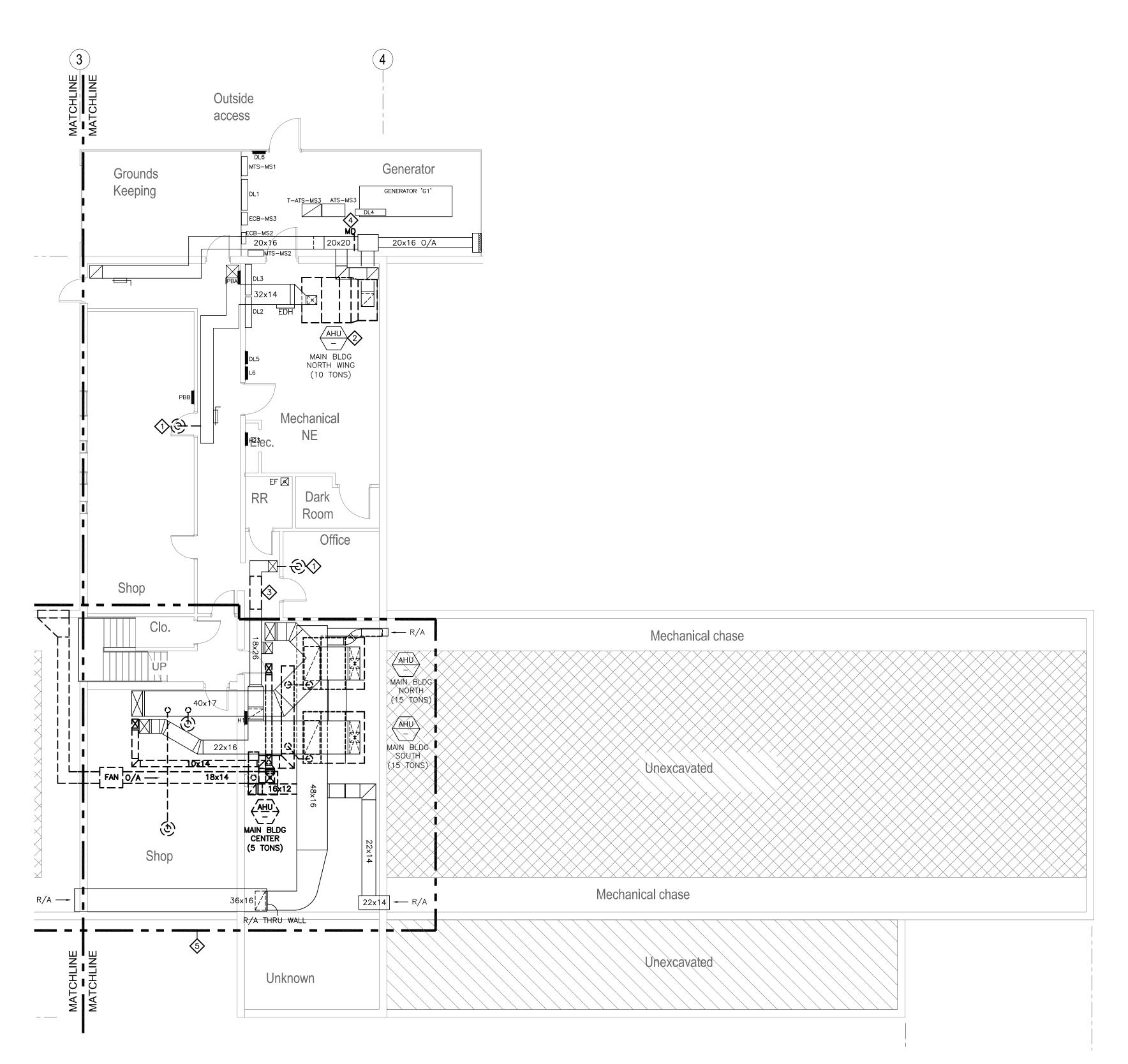
SHEET TITLE:

LOWER LEVEL MECHANICAL DEMO PLAN

SHEET NUMBER:

09/13/24

MD-10
17 OF 44 SHEETS



LOWER LEVEL - MECHANICAL DEMOLITION PLAN



MECHANICAL GENERAL NOTES

- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN DEMOLITION NOTES

- HANDLING UNIT.
- 3 REMOVE SECTION OF DUCTWORK AS NEEDED FOR INSTALLATION OF NEW
- REMOVE EXISTING MANUAL DAMPER AS NEEDED FOR INSTALLATION OF NEW AUTOMATIC CONTROL DAMPER.
- (5) REFER TO SHEET M-401 FOR WORK IN THIS AREA.

DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- E. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN

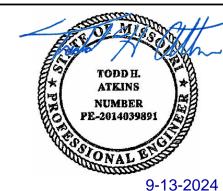
- EXISTING DIFFUSER/REGISTER/GRILLE AND ASSOCIATED BRANCH DUCTWORK TO BE REMOVED. PATCH REMAINING OPENING IN MAIN DUCT
- 2 REMOVE EXISTING AIR HANDLING UNIT AND REPLACE WITH NEW AIR

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT.

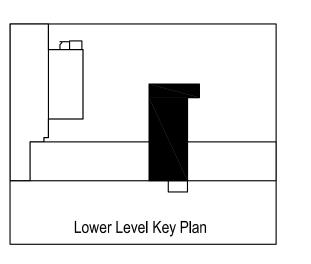
STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



9201 E. 63rd Street Raytown, Missouri (816) 358-1790 Raytown, Missouri 64133 Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01

7707 SITE# 8877707003 ASSET#

REVISION: DATE: REVISION: DATE: **REVISION:** DATE: 9/13/2024

ISSUE DATE: 9/13/2024

BID SET CAD DWG FILE: MD-102 DRAWN BY:

CHECKED BY: THA DESIGNED BY: GDS

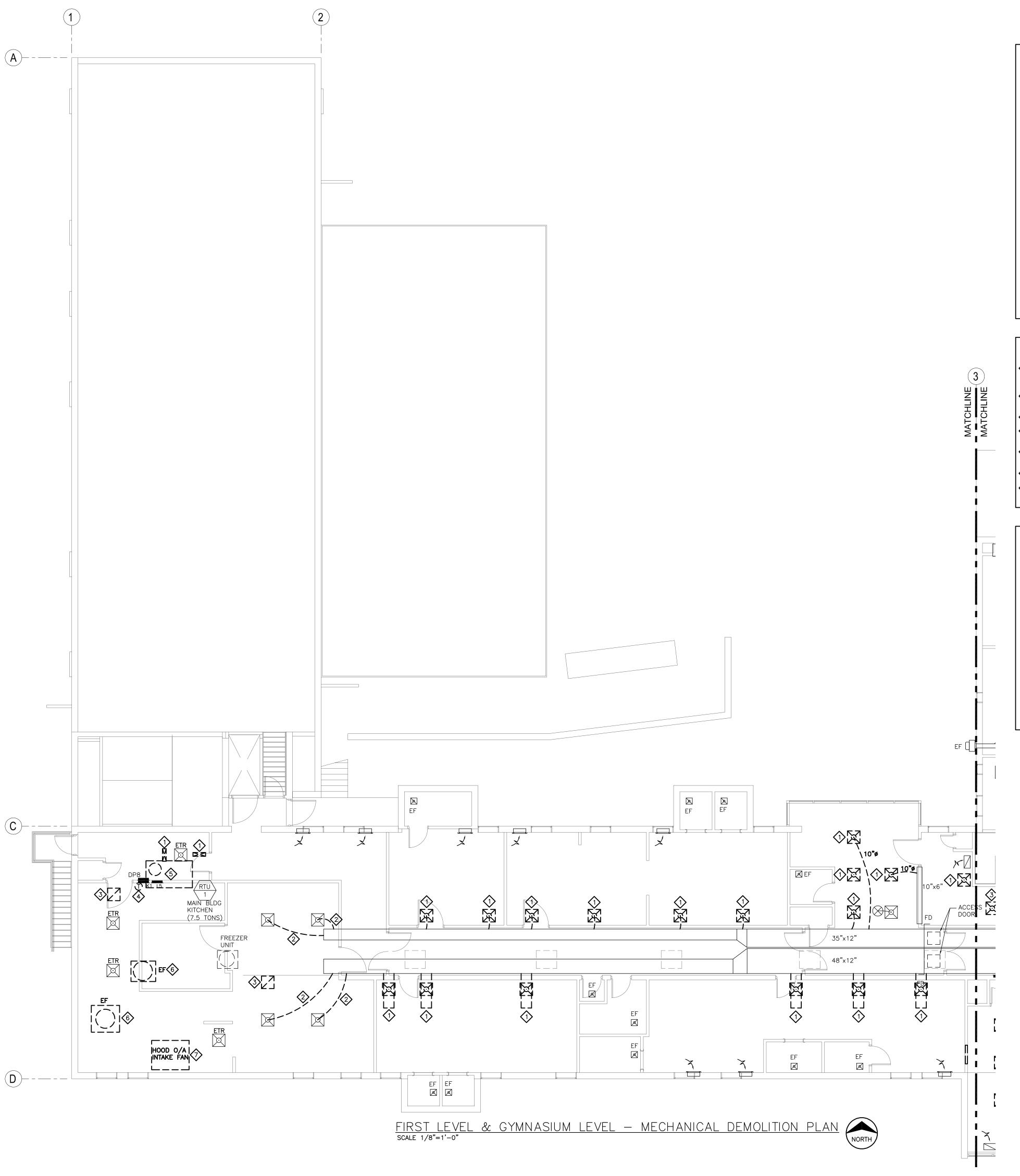
SHEET TITLE:

LOWER LEVEL **MECHANICAL DEMO PLAN**

SHEET NUMBER:

09/13/24

18 OF 44 SHEETS



- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- E. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN DEMOLITION NOTES

- EXISTING DIFFUSER/REGISTER/GRILLE AND ASSOCIATED BRANCH DUCTWORK TO BE REMOVED. PATCH REMAINING OPENING IN MAIN DUCT
- EXISTING DUCTWORK AND HANGERS TO BE REMOVED. PATCH REMAINING OPENING IN MAIN DUCT AIR—TIGHT.
- 3 EXISTING RETURN GRILLE TO BE REMOVED.
- EXISTING THERMOSTAT AND WIRING TO BE REMOVED. PATCH AND FINISH WALL TO MATCH EXISTING.
- EXISTING ROOFTOP UNIT AND ASSOCIATED DUCTWORK AND HANGERS TO BE REMOVED.
- (6) (ALTERNATE #2): EXISTING EXHAUST FAN TO BE REMOVED.
- (ALTERNATE #2): EXISTING KITCHEN HOOD MAKEUP AIR FAN TO BE

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

STATE OF MISSOURI MICHAEL L. PARSON

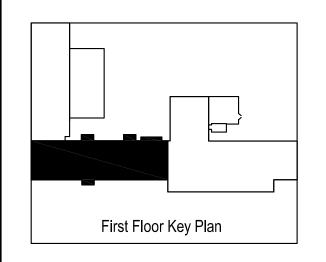
MICHAEL L. PARSON, GOVERNOR



TODD H. ATKINS
LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT
CONSIDERED SIGNATURE MUST BE VERIFIED ON ANY



Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
9/13/2024

ISSUE DATE: 9/13/2024 BID SET

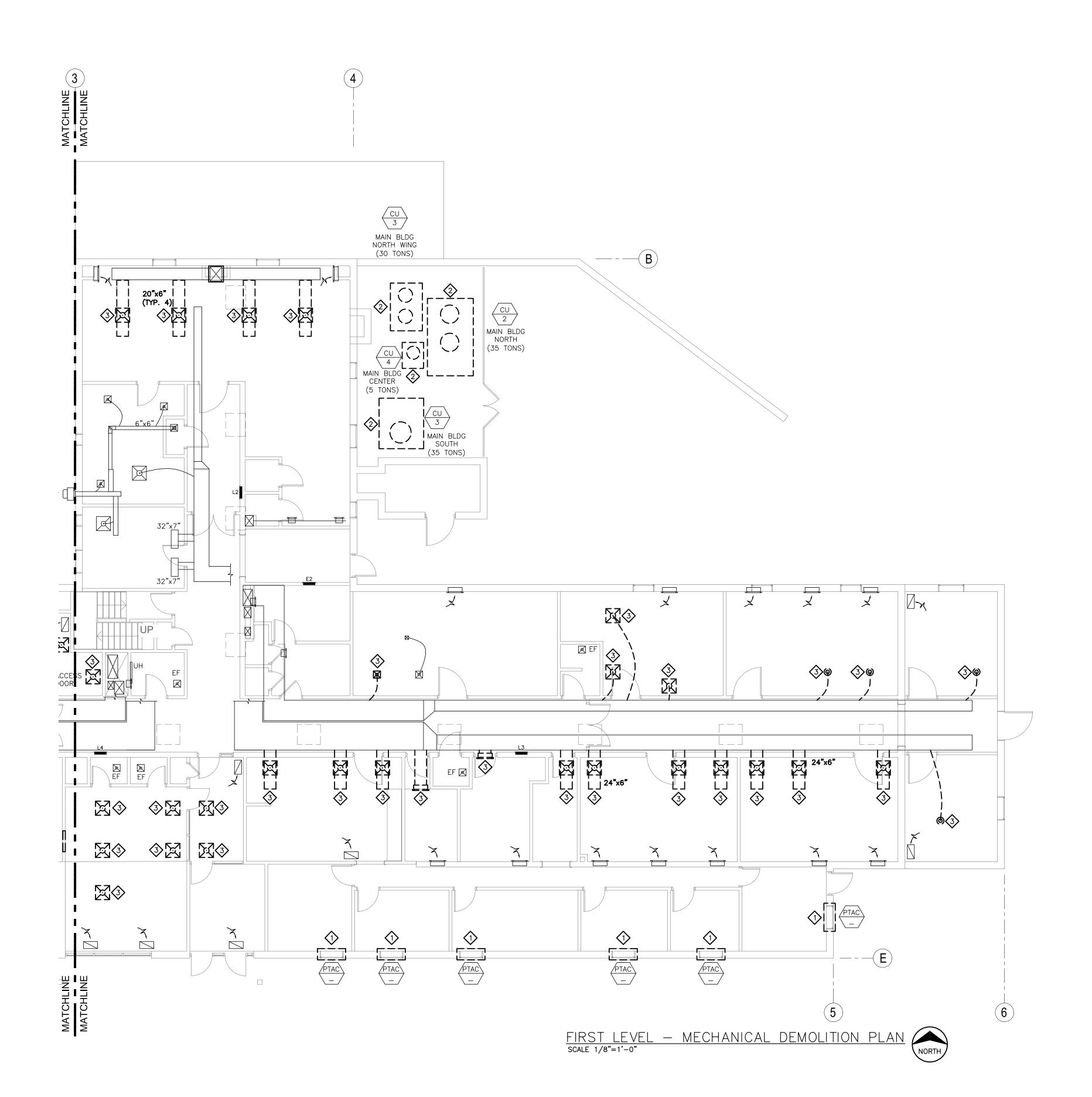
CAD DWG FILE: MD-111
DRAWN BY: AAC
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:
FIRST LEVEL &
GYMNASIUM LEVEL
MECHANICAL

SHEET NUMBER:

DEMO PLAN





- . CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN DEMOLITION NOTES

- EXISTING PTAC AND WIRING TO BE REMOVED. PATCH AND FINISH WALL TO MATCH EXISTING.
- EXISTING CONDENSING UNIT, PIPING, WIRING AND CONCRETE PAD TO BE REMOVED. PATCH REMAINING WALL OPENINGS TO MATCH EXISTING.
- EXISTING DIFFUSER/REGISTER/GRILLE AND ASSOCIATED BRANCH DUCTWORK TO BE REMOVED. PATCH REMAINING OPENING IN MAIN DUCT AIR-TIGHT.

MISCELLANEOUS NOTES

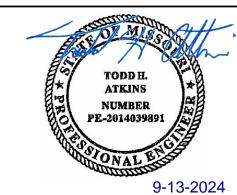
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

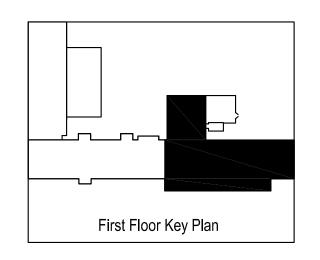
STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 Raytown, Missouri 64133 Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

ASSET#

8877707003

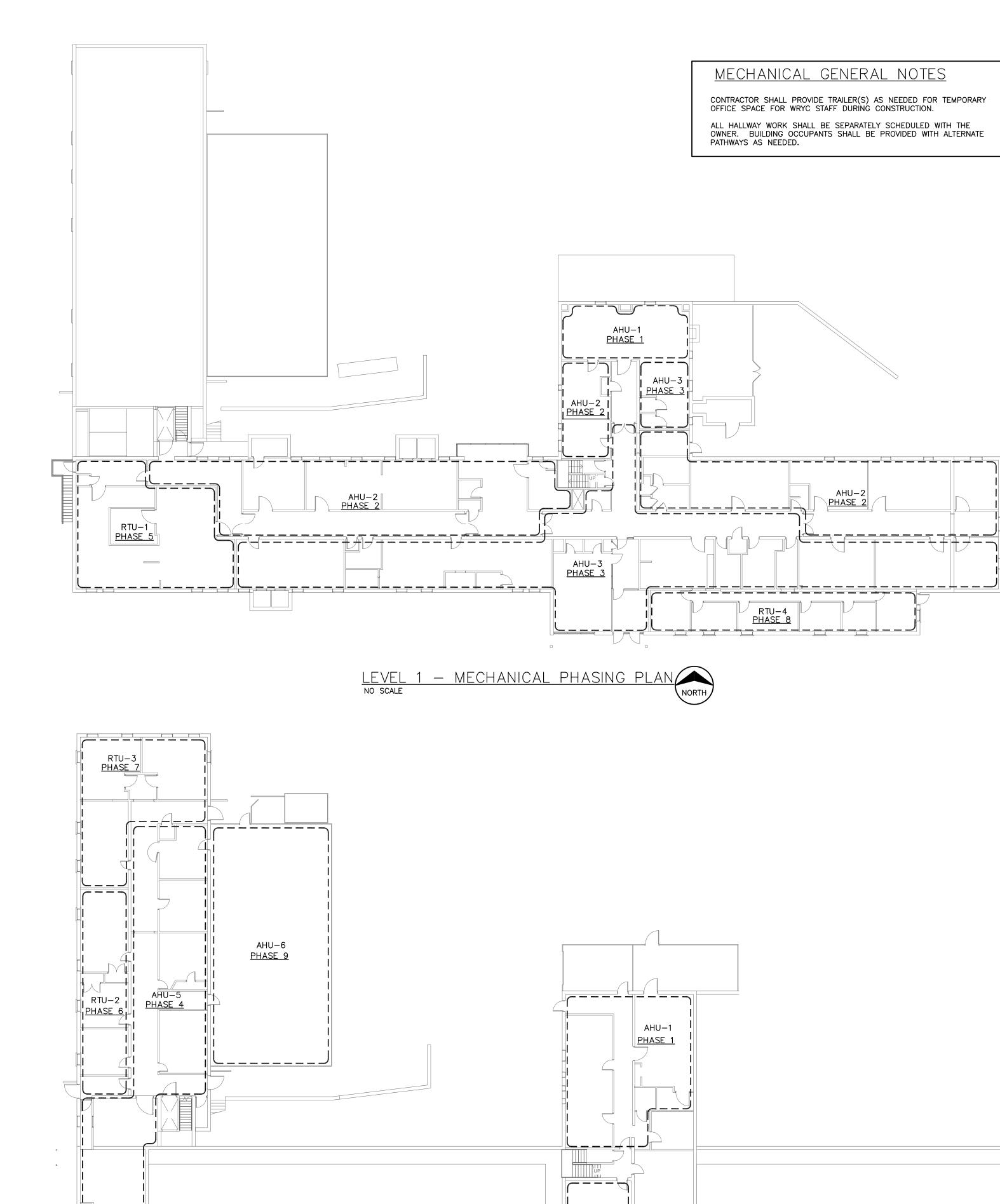
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE: 9/13/2024
ISSUE DATE: 9/13/2024 BID SET
מוט סוט

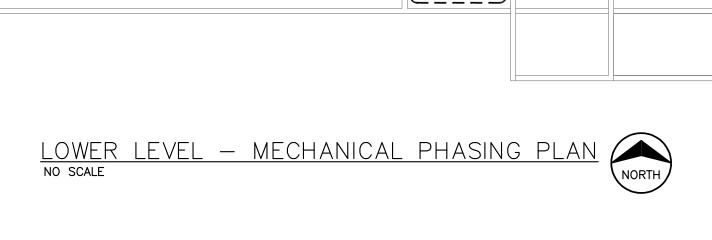
CAD DWG FILE: MD-112 DRAWN BY: AAC DRAWN BY: AAC CHECKED BY: THA

DESIGNED BY: GDS SHEET TITLE: FIRST LEVEL **MECHANICAL**

DEMO PLAN

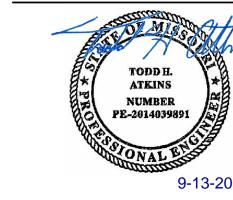
SHEET NUMBER:



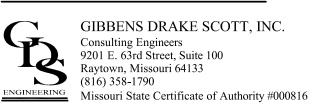


AHU-2 <u>PHASE 2</u>

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

8877707003 ASSET#

REVISION: REVISION: REVISION: DATE: 9/13/2024

ISSUE DATE: 9/13/2024 BID SET CAD DWG FILE: M-001
DRAWN BY: AAC
CHECKED BY: THA
DESIGNED BY: GDS

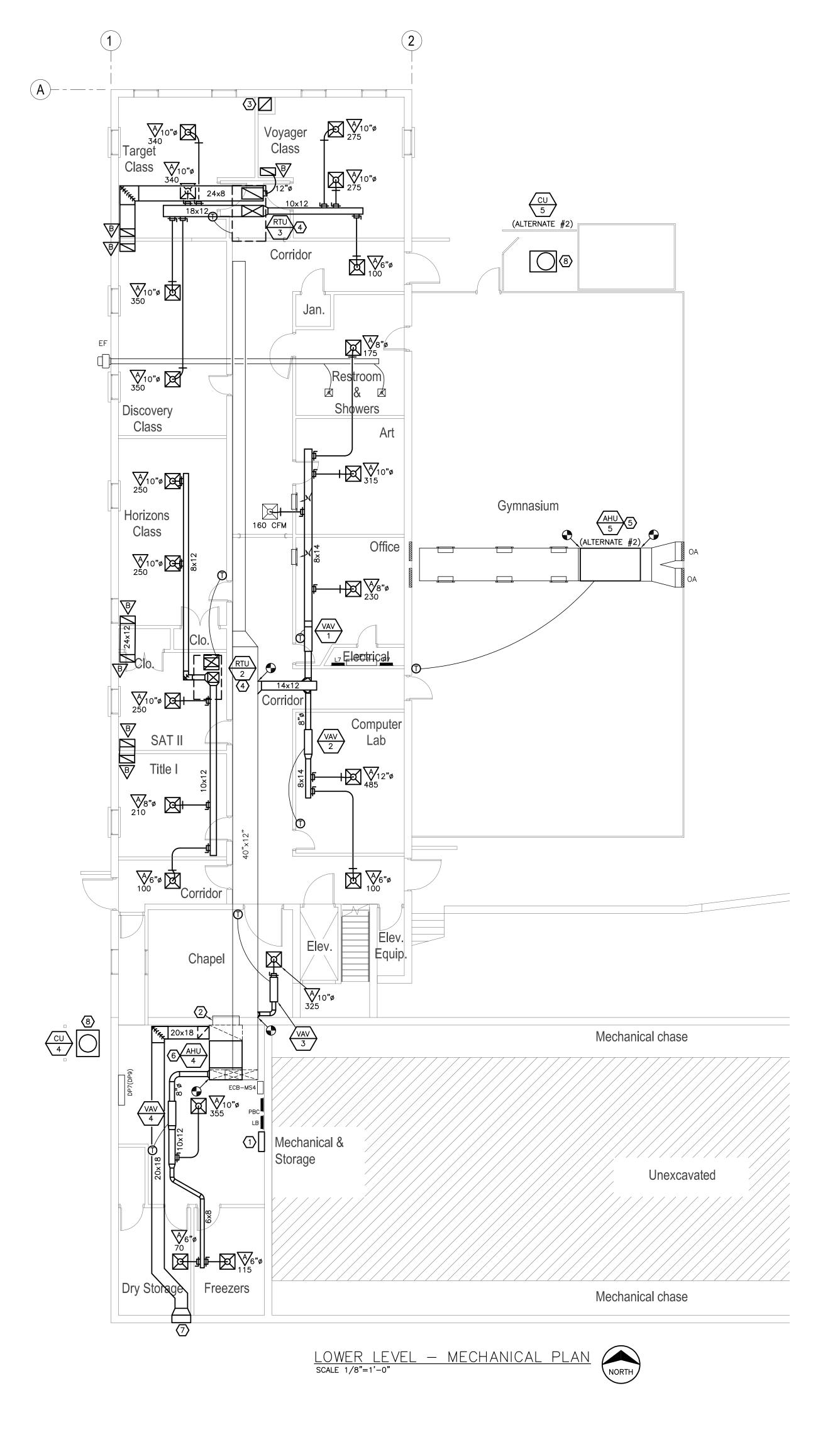
SHEET TITLE:

MECHANICAL PHASING PLANS

SHEET NUMBER:

09/13/24

21 OF 44 SHEETS



- A. CONTRACTORS AND SUB—CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- E. EXISTING DUCTWORK TO BE CLEANED, TESTED FOR LEAKAGE, REPAIRED/REPLACED AS NECESSARY, AND INSULATED.
- F. COORDINATE ALL THERMOSTAT LOCATIONS WITH OWNER. PROVIDE LOCKING COVERS ON ALL THERMOSTATS. THERMOSTATS SHALL NOT HAVE A DISPLAY.
- G. PROVIDE ACCESS DOORS FOR ALL VAV BOXES LOCATED ABOVE HARD CEILINGS. PROVIDE REMOTE DAMPER OPERATORS FOR ALL BALANCING DAMPERS LOCATED ABOVE HARD CEILINGS.
- H. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN NOTES

- BMS PANEL.
- PROVIDE ACCESS DOOR AT RETURN AIR PENETRATION INTO CRAWLSPACE CHASE. SEAL PENETRATION AIR—TIGHT.
- 20"X20" RELIEF DUCT DOWN TO CHASE BELOW AND UP TO RELIEF HOOD ON ROOF WITH CONTROL DAMPER.
- (4) CONDENSATE DRAIN PIPING FOR ROOFTOP UNIT SHALL DISCHARGE TO
- 5 SUPPORT NEW AHU FROM STRUCTURE ABOVE. AHU CONDENSATE DRAIN
- PIPING SHALL CONNECT TO EXISTING CONDENSATE DRAIN PIPING.
- 6 EXTEND AHU CONDENSATE DRAIN PIPING TO NEAREST FLOOR DRAIN.
- 30x30 OUTSIDE AIR LOUVER.
- SET CONDENSING UNIT LEVEL ON EXISTING CONCRETE PAD. ROUTE REFRIGERANT PIPING TO AIR HANDLING UNIT. SIZE, SLOPE AND TRAP REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS. SEAL WALL PENETRATIONS AIR—TIGHT.

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

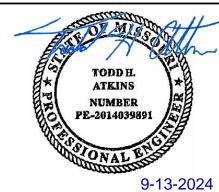
CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

CONTROLS NOTES

CONTROLS SHALL USE NIAGRA BASED (OPEN PROTOCOL) PLATFORM. ALL ACCESS PERMISSIONS AND PASSWORD PROTECTIONS SHALL BE PROVIDED TO OWNER FOR FULL ACCESS AND CONTROL DURING PROJECT CLOSEOUT AND/OR OWNER TRAINING.

THE CONTROLS CONTRACTOR SHALL COORDINATE WITH ALL PROJECT COMPONENT & EQUIPMENT PROVIDERS SUCH THAT ALL AVAILABLE COMMUNICATION POINTS ARE INTEGRATED TO THE BAS. THE CONTROLS CONTRACTOR SHALL SUBMIT FOR ENGINEER.OWNER APPROVAL A POINTS BETWEEN EQUIPMENT/COMPONENTS AND THE BAS. THIS SUBMITTAL REVIEW AND APPROVAL SHALL OCCUR AHEAD OF EQUIPMENT, COMPONENT, AND ANY CONTROLS PROCUREMENT.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT

CONSIDERED SIGNED AND SEALED AND ANY

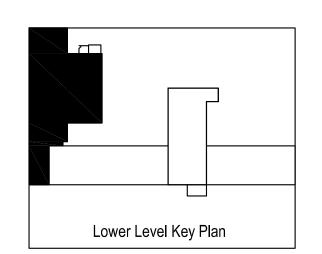
SIGNATURE MUST BE VERRIED ON ANY



GIBBENS DRAKE SCOTT, INC.

Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790

Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01

SITE # 7707 ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
PATE: 9/13/2024

DATE: 9/13/2024 ISSUE DATE: 9/13/2024 BID SET

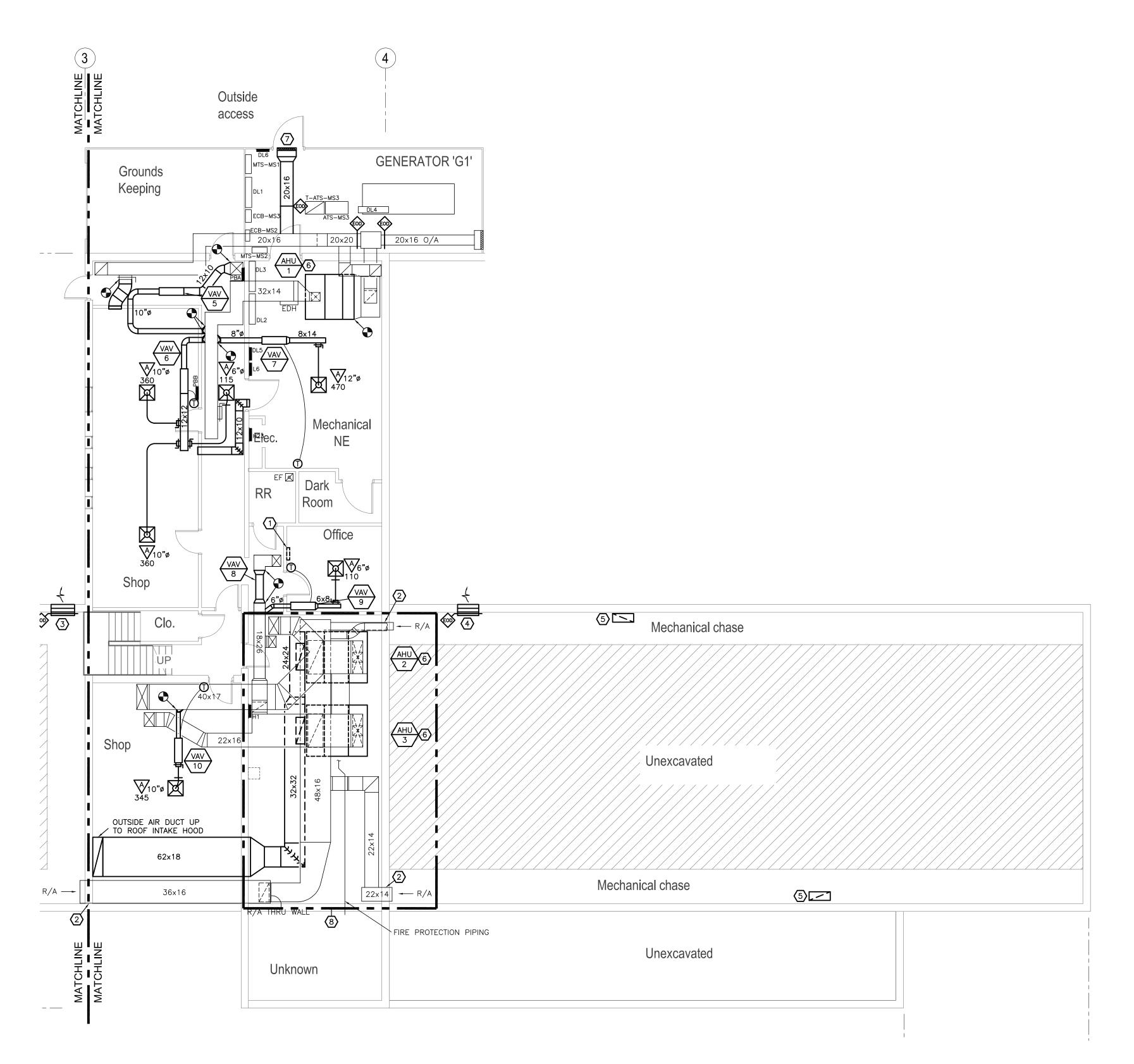
CAD DWG FILE: M-101
DRAWN BY: AAC
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

LOWER LEVEL MECHANICAL PLAN

SHEET NUMBER:

M-10
22 OF 44 SHEETS





- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS
 AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING
 APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES,
 OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL.
 PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL
 INSPECTIONS REQUIRED BY CODE.
- E. EXISTING DUCTWORK TO BE CLEANED, TESTED FOR LEAKAGE, REPAIRED/REPLACED AS NECESSARY, AND INSULATED.
- F. COORDINATE ALL THERMOSTAT LOCATIONS WITH OWNER. PROVIDE LOCKING COVERS ON ALL THERMOSTATS. THERMOSTATS SHALL NOT HAVE A DISPLAY.
- G. PROVIDE ACCESS DOORS FOR ALL VAV BOXES LOCATED ABOVE HARD CEILINGS. PROVIDE REMOTE DAMPER OPERATORS FOR ALL BALANCING DAMPERS LOCATED ABOVE HARD CEILINGS.
- H. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN NOTES

- BMS PANEL.
- PROVIDE ACCESS DOOR IN DUCT AT CHASE PENETRATION. SEAL PENETRATION AIR—TIGHT.
- 3 36"x36" RELIEF LOUVER AND CONTROL DAMPER.
- (4) 30×14 RELIEF DUCT UP TO FLOOR ABOVE.
- 7 70 44 DELISE DUOT LID TO ELOOD ADOLE
- 5 30x14 RELIEF DUCT UP TO FLOOR ABOVE.
- 6 EXTEND AHU CONDENSATE DRAIN PIPING TO NEAREST FLOOR DRAIN.
- (7) 24"x24" RELIEF LOUVER AND CONTROL DAMPER.
- (8) REFER TO SHEET M-401 FOR WORK IN THIS AREA.

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

LNOTES

GOVERNOR



STATE OF MISSOURI

MICHAEL L. PARSON,

TODD H. ATKINS

LICENSE # E-2014039891

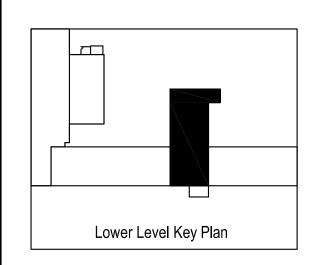
PRINTED COPIES OF THIS DOCUMENT ARE NOT

CONSIDERED SIGNED AND SEALED AND THE

SIGNATURE MUST BE VERIFIED ON ANY



GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01

SITE # 7707 ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE: 9/13/2024
ISSUE DATE: 9/13/2024

CAD DWG FILE: M-102
DRAWN BY: AAC
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

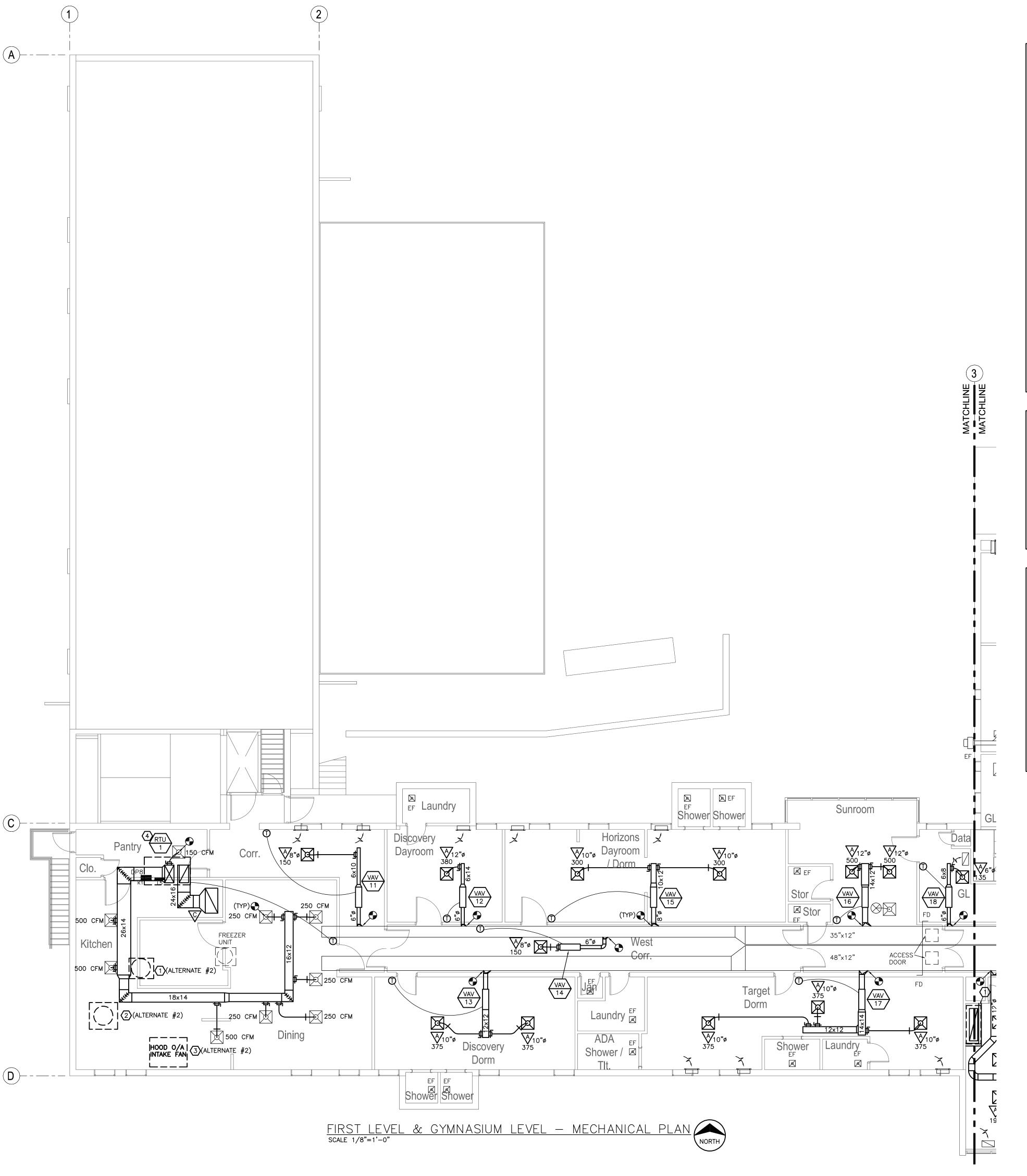
09/13/24

LOWER LEVEL MECHANICAL PLAN

BID SET

SHEET NUMBER:

M-102
23 OF 44 SHEETS



- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
 - DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- E. EXISTING DUCTWORK TO BE CLEANED, TESTED FOR LEAKAGE, REPAIRED/REPLACED AS NECESSARY, AND INSULATED.
- F. COORDINATE ALL THERMOSTAT LOCATIONS WITH OWNER. PROVIDE LOCKING COVERS ON ALL THERMOSTATS. THERMOSTATS SHALL NOT HAVE A DISPLAY.
- G. PROVIDE ACCESS DOORS FOR ALL VAV BOXES LOCATED ABOVE HARD CEILINGS. PROVIDE REMOTE DAMPER OPERATORS FOR ALL BALANCING DAMPERS LOCATED ABOVE HARD CEILINGS.
- H. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN NOTES

- EXISTING UPBLAST EXHAUST FAN TO BE REMOVED AND REPLACED WITH EQUIVALENT UPBLAST EXHAST FAN. TEST AND BALANCE EXISTING FAN TO DETERMINE FAN SIZE NEEDED.
- (2) EXISTING KITCHEN HOOD EXHAUST FAN TO BE REMOVED AND REPLACED WITH EQUIVALENT EXHAUST FAN. TEST AND BALANCE EXISTING FAN TO DETERMINE FAN SIZE NEEDED.
- (3) EXISTING KITCHEN HOOD MAKEUP AIR FAN TO BE REMOVED AND REPLACED WITH NEW MAKEUP AIR FAN. TEST AND BALANCE EXISTING FAN TO DETERMINE FAN SIZE NEEDED.
- (4) CONDENSATE DRAIN PIPING FOR ROOFTOP UNIT SHALL DISCHARGE TO

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

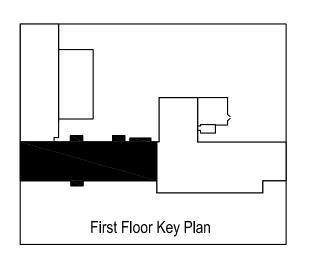
STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



TODD H. ATKINS
LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT
CONSIDERED SIGNED AND SEALED AND THE
SIGNATURE MUST BE VERIFIED ON ANY



Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
9/13/2024
ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE: M-111
DRAWN BY: AAC
CHECKED BY: THA

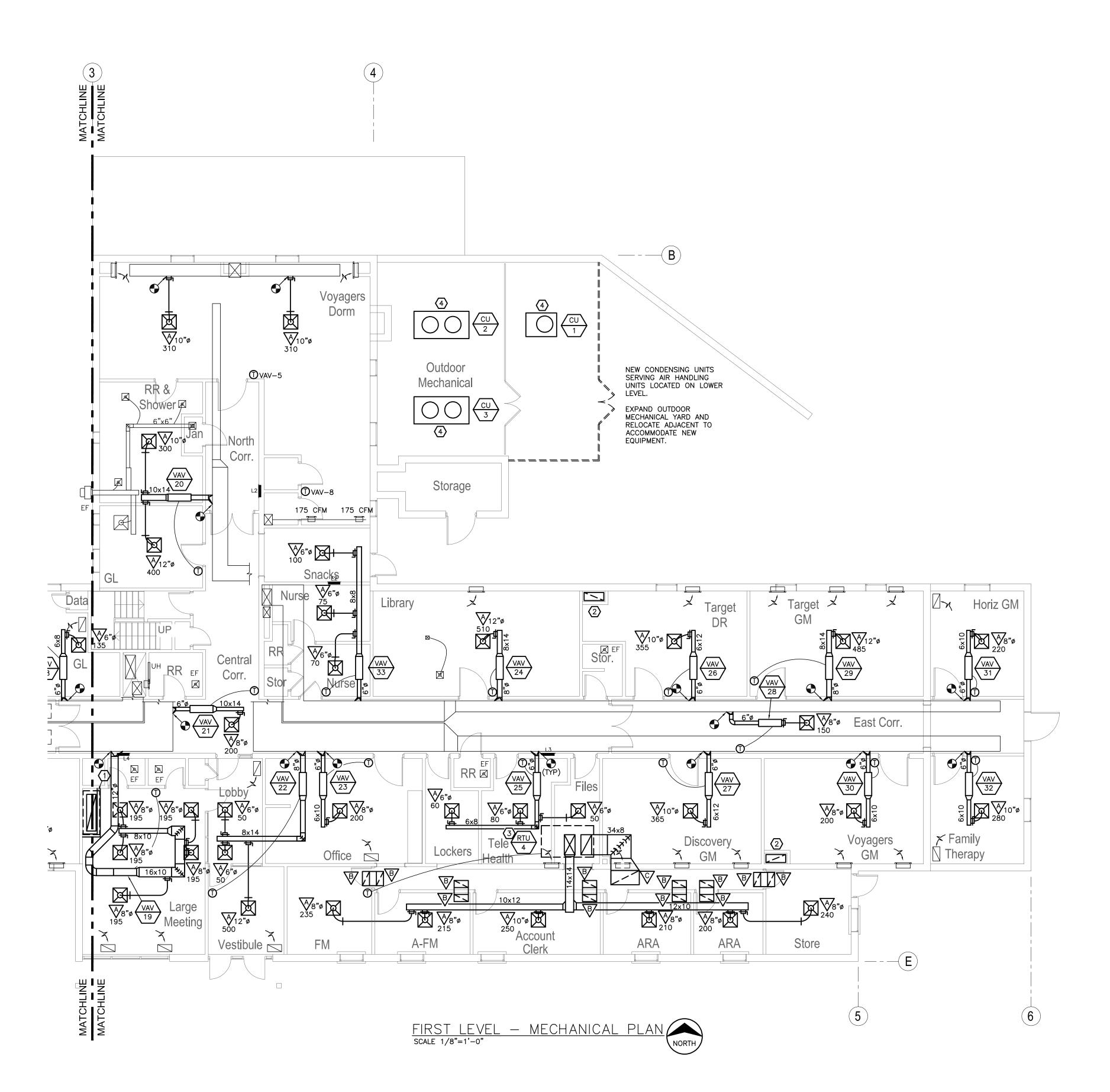
DESIGNED BY: GDS

SHEET TITLE:

FIRST LEVEL &
GYMNASIUM LEVEL
MECHANICAL PLAN

SHEET NUMBER:





- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- . DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- E. EXISTING DUCTWORK TO BE CLEANED, TESTED FOR LEAKAGE, REPAIRED/REPLACED AS NECESSARY, AND INSULATED.
- F. COORDINATE ALL THERMOSTAT LOCATIONS WITH OWNER. PROVIDE LOCKING COVERS ON ALL THERMOSTATS. THERMOSTATS SHALL NOT HAVE A DISPLAY.
- G. PROVIDE ACCESS DOORS FOR ALL VAV BOXES LOCATED ABOVE HARD CEILINGS. PROVIDE REMOTE DAMPER OPERATORS FOR ALL BALANCING DAMPERS LOCATED ABOVE HARD CEILINGS.
- H. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN NOTES

- \bigcirc 62×18 OUTSIDE AIR DUCT UP TO ROOF INTAKE HOOD AND DOWN TO LOWER LEVEL.
- 30"x14" DUCT DOWN TO CHASE BELOW AND UP TO RELIEF HOOD WITH CONTROL DAMPER.
- CONDENSATE DRAIN PIPING FOR ROOFTOP UNIT SHALL DISCHARGE TO ROOF.
- SET CONDENSING UNIT LEVEL ON CONCRETE PAD. ROUTE REFRIGERANT PIPING TO AIR HANDLING UNIT. SIZE, SLOPE AND TRAP REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS. SEAL WALL PENETRATIONS AIR-TIGHT.

MISCELLANEOUS NOTES

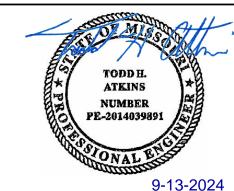
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

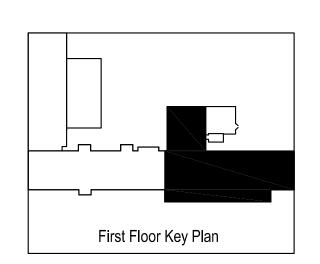
STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



GIBBENS DRAKE SCOTT, INC. 9201 E. 63rd Street, Suite 100 Raytown, Missouri 64133 GINEERING Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707 SITE#

8877707003 ASSET#

REVISION: REVISION DATE: **REVISION:** DATE: 9/13/2024 ISSUE DATE: 9/13/2024

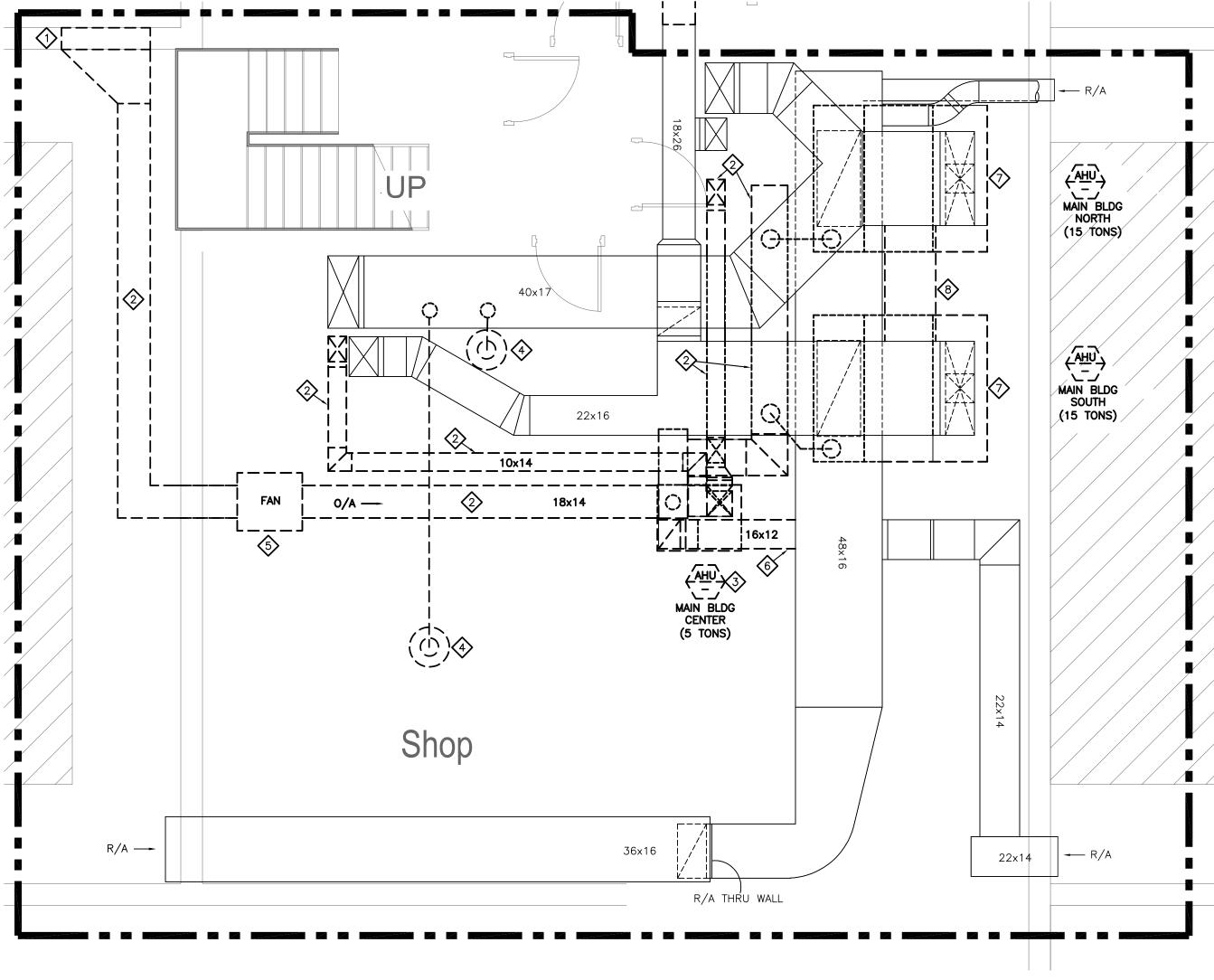
CAD DWG FILE: M-112 DRAWN BY: CHECKED BY: \overline{THA} DESIGNED BY: GDS

SHEET TITLE:

FIRST LEVEL MECHANICAL PLAN

BID SET

SHEET NUMBER:



LOWER LEVEL — ENLARGED MECHANICAL DEMOLITION PLAN SCALE 1/4"=1'-0"



MISCELLANEOUS NOTES

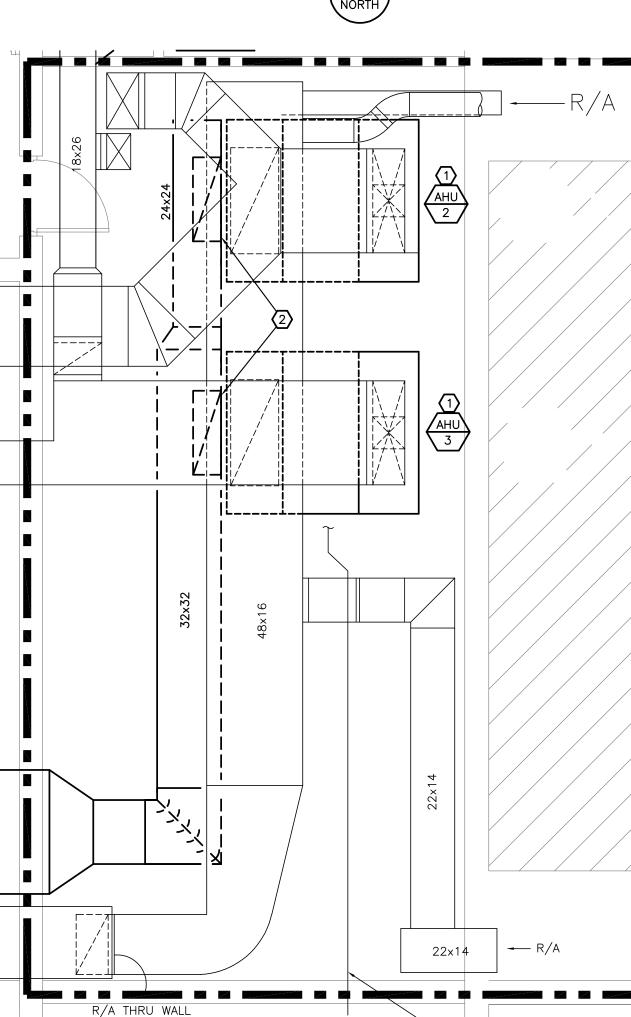
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS,

HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.



LOWER LEVEL — ENLARGED MECHANICAL PLAN



MECHANICAL GENERAL NOTES

- . CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- . DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN DEMOLITION NOTES

- 1) EXISTING LOUVER TO BE REMOVED.
- 2 EXISTING DUCTWORK AND HANGERS TO BE REMOVED.
- 3 EXISTING AHU TO BE REMOVED, ALONG WITH ALL ASSOCIATED PIPING, WIRING AND DUCTWORK.
- 4> EXISTING DIFFUSER TO BE REMOVED, ALONG WITH BRANCH DUCTWORK AND HANGERS. PATCH OPENING IN REMAINING MAIN DUCT AIR-TIGHT.
- 5 EXISTING FAN TO BE REMOVED, ALONG WITH ALL ASSOCIATED HANGERS AND WIRING.
- 6 EXISTING DUCT AND HANGERS TO BE REMOVED. PATCH REMAINING OPENING IN MAIN DUCT AIR-TIGHT.
- EXISTING AHU TO BE REMOVED, ALONG WITH ALL ASSOCIATED PIPING AND WIRING.
- (8) INTERCONNECTING SUPPLY DUCTWORK BETWEEN THE TWO AIR HANDLING UNITS TO BE REMOVED. PATCH OPENINGS IN REMAINING SUPPLY DUCTS

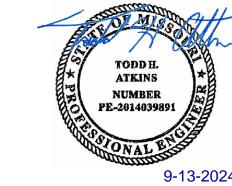
MECHANICAL GENERAL NOTES

- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- C. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE
- D. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA, OSHA, INTERNATIONAL BUILDING CODES, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- E. EXISTING DUCTWORK TO BE CLEANED, TESTED FOR LEAKAGE, REPAIRED/REPLACED AS NECESSARY, AND INSULATED.
- F. COORDINATE ALL THERMOSTAT LOCATIONS WITH OWNER. PROVIDE LOCKING COVERS ON ALL THERMOSTATS. THERMOSTATS SHALL NOT HAVE A DISPLAY.
- G. PROVIDE ACCESS DOORS FOR ALL VAV BOXES LOCATED ABOVE HARD CEILINGS. PROVIDE REMOTE DAMPER OPERATORS FOR ALL BALANCING DAMPERS LOCATED ABOVE HARD CEILINGS.
- H. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

MECHANICAL PLAN NOTES

- 1) INSTALL NEW AIR HANDLING UNIT. INSTALL UNIT LEVEL FOR PROPER CONDENSATE DRAINAGE. CONNECT TO EXISTING SUPPLY AND RETURN AIR DUCTWORK AND NEW OUTSIDE AIR DUCTWORK. PROVIDE FLEXIBLE CONNECTORS AT ALL DUCT CONNECTIONS.
- $\langle 2 \rangle$ 44×14 OA DUCT DOWN TO AHU OA CONNECTION.

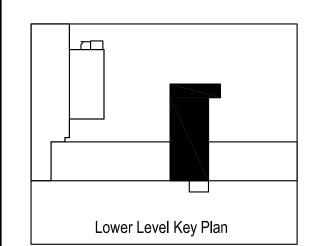
STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT



GIBBENS DRAKE SCOTT, INC. 9201 E. 63rd Street, Suite 100 9201 E. 63rd Street. Raytown, Missouri (816) 358-1790 Raytown, Missouri 64133 GINEERING Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER

WAVERLY, MO

PROJECT # H2314-01

SITE# 7707 8877707003 ASSET#

REVISION: DATE: **REVISION:** DATE: **REVISION:**

DATE: 9/13/2024 ISSUE DATE: 9/13/2024 **BID SET**

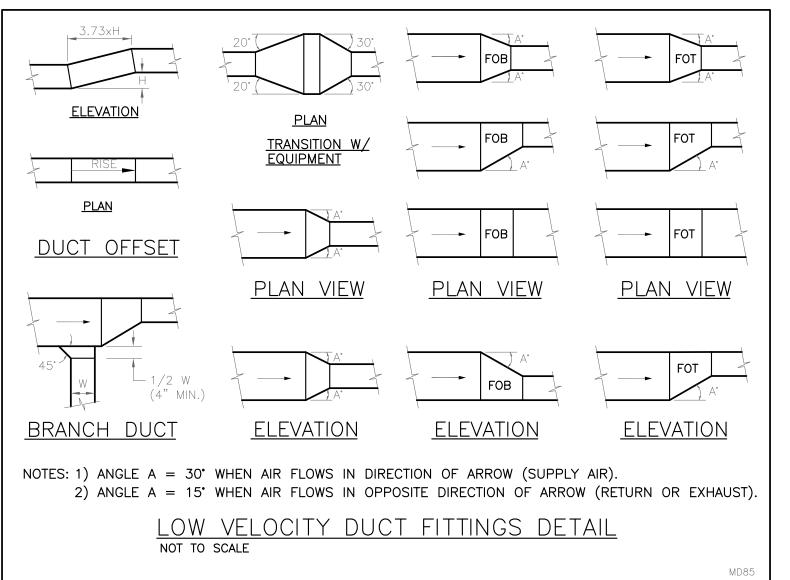
CAD DWG FILE: M-401 DRAWN BY: CHECKED BY: THA DESIGNED BY: GDS

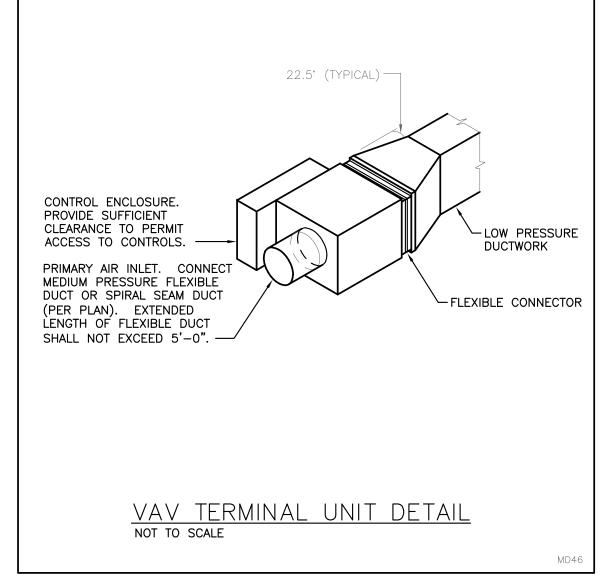
SHEET TITLE:

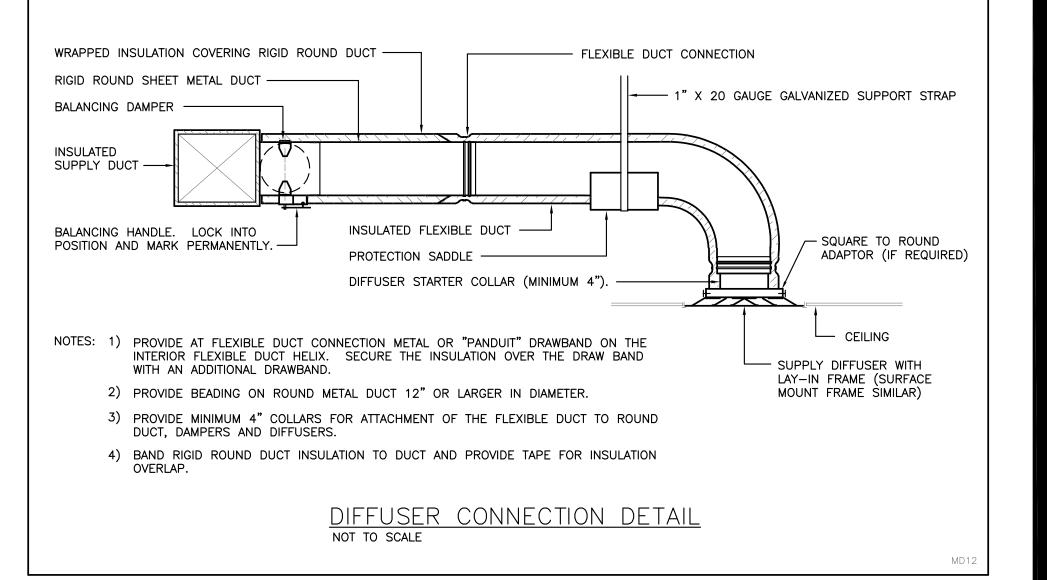
ENLARGED PLANS

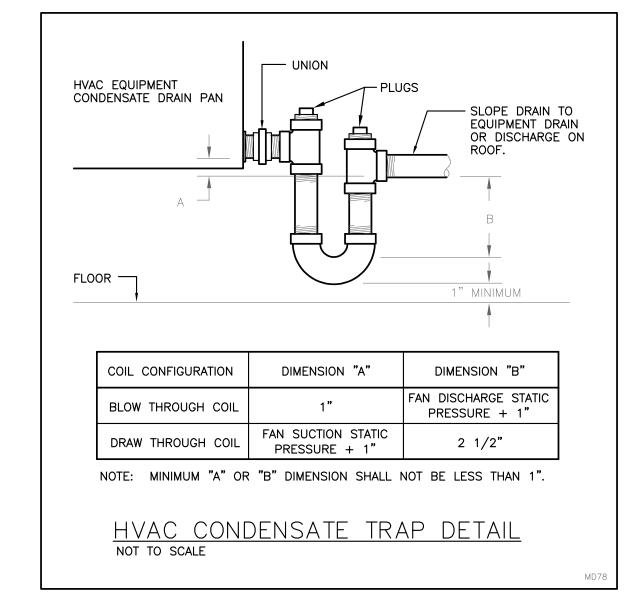
SHEET NUMBER:

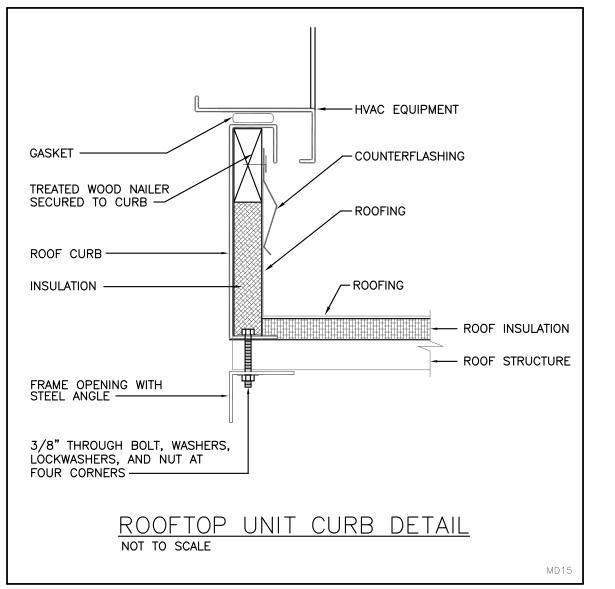
26 OF 44 SHEETS

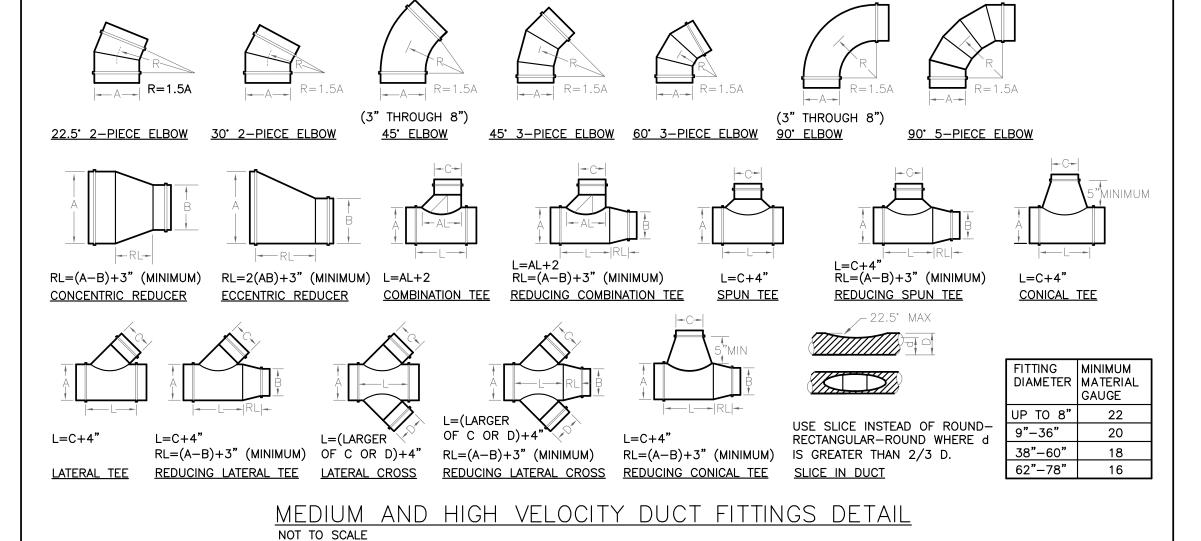


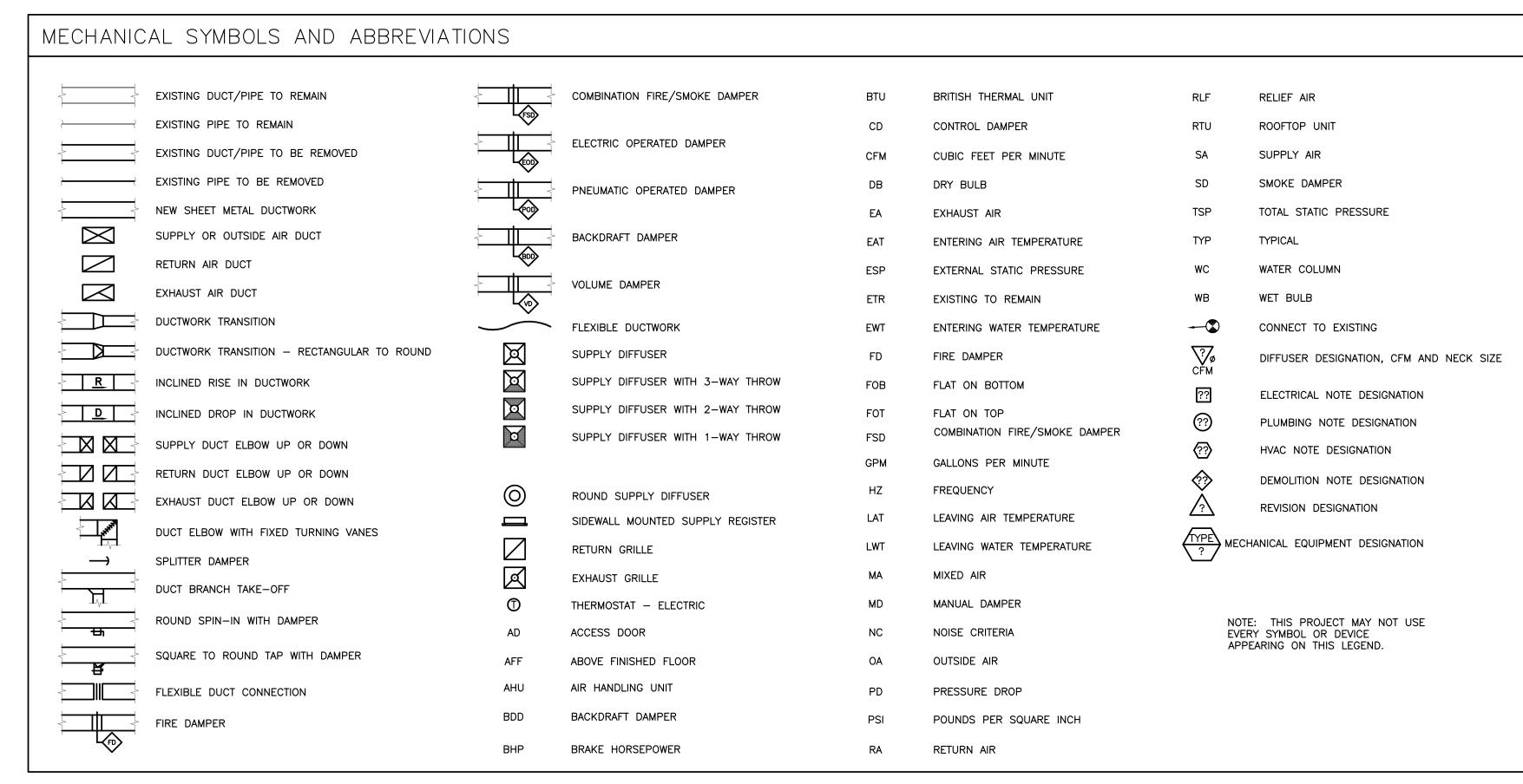


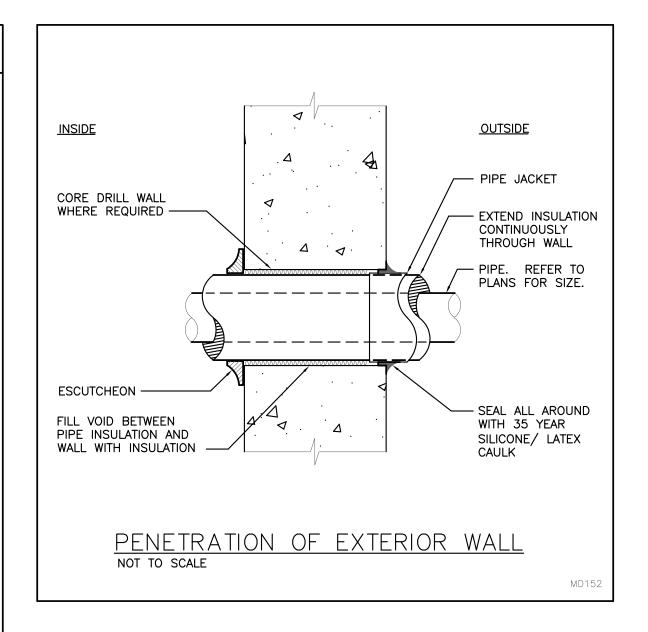




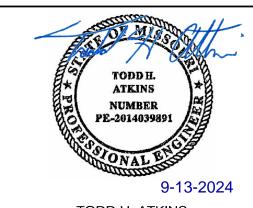








STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

GIBBENS DRAKE SCOTT, INC.

Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
9/13/2024
ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE: M-501
DRAWN BY: AAC
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

MECHANICAL DETAILS

SHEET NUMBER:

09/13/24

M-501
27 OF 44 SHEETS

MECHANICA		REA BASIS			OCCUPAN					
Zone/ System	A Area (ft²)	B CFM/ft ²	C CFM (A x B)	Persons / 1000 SF	D # of People	E CFM per Person	F CFM (D x E)	G Zone Air Distribution Effectiveness	Required Ventilation Air (CFM) (C+F)/G	Design Ventilation A (CFM)
Account Clerk	155	0.06	9	5	1	5	4	0.8	16	
A-FM	116	0.06	7	5	1	5	3	0.8	12	
ARA ARA 2	107 85	0.06 0.06	6 5	5 5	1	5 5	3 5	0.8 0.8	11	
FM	147	0.06	9	5	1	5	4	0.8	16	
Store	144	0.06	9	5	1	5	4	0.8	15	
East Corridor	1,360	0.06	82	0	0	5	0	0.8	102	
RTU-4	2,114					_			186	190
AHU-1 (Gym)	2,500	0.3	750	-	-	-		0.8	938	940
			<u> </u>							
Dark Room	65	0.06	4	5	1	5	5	0.8	11	
Basement Corridor East GL	400	0.06	24	5	0	5	0	0.8	30	
East GL East RR & Shower	168 247	0.06 0.00	10	0	0	5 0	4 0	0.8 0.8	18	
Mechanical NF	470	0.06	28	5	2	5	12	0.8	50	
Nurse	106	0.06	6	5	1	5	3	0.8	11	
Nurse & RR	118	0.06	7	5	1	5	3	0.8	13	
Office - Lower Level	140	0.06	8	5	1	5	4	0.8	15	
Shop	550	0.06	33	5	3	5	14	0.8	58	
South Shop	567	0.06	34	5	3	5	14	0.8	60	
Snacks	113	0.06	7	5	1	5	3	0.8	12	
Voyagers Dorm	871	0.18	157	-	12	7.5	90	0.8	308	
AHU-2	3,815								587	590
	200	0.40	0.7	0.5		40	70	0.0	100	
Art	226	0.12	27	35 50	8	10	79 30	0.8	133	
Chapel Computer Lab	275 268	0.06 0.12	32	35	6 9	5 10	94	0.8 0.8	58 157	
Dry Storage	137	0.12	8	0	0	5	0	0.8	10	
Mechanical & Storage	430	0.06	26	0	0	5	0	0.8	32	
West Corridor	1,050	0.06	63	0	0	5	0	0.8	79	
West Office	243	0.06	15	5	1	5	6	0.8	26	
West RR & Showers	210	0.00	0	0	0	0	0	0.8	0	
AHU-3	2,839								495	495
Horizons Class	355	0.12	43	35	8	10	80	0.8	153	
SATII	207	0.06	12	5	2	5	10	0.8	28	
Title I	182	0.06	11	5	2	5	10	0.8	26	240
RTU-2	744				12				207	210
Discovery Class	370	0.12	44	35	12	10	120	0.8	206	
Target Class	414	0.12	50	35	10	10	100	0.8	187	
Voyager Class	214	0.12	26	35	12	10	120	0.8	182	
RTU-3	998				34				575	575
Kitchen	995	0.12	119	20	5	7.5	38	0.8	196	
Dining	546	0.18	98	70	20	7.5	150	0.8	310	
RTU-1	1,541								506	510
<u> </u>	200	0.00	10	00	40		00	0.0	00	
Discovery Dayroom & Laundry	300 665	0.06	18 120	30	12	5 7.5	60 60	0.8	98 225	
Horizon Dayroom - Dorm Sunroom	512	0.18 0.06	31	30	8 15	7.5 5	77	0.8	134	
West GL	140	0.06	8	5	15	5	4	0.8	154	
Horizon GM	196	0.06	12	5	1	5	5	0.8	21	
Library	431	0.06	26	5	2	5	11	0.8	46	
Target DR	343	0.06	21	5	10	5	50	0.8	36	
Target GM	362	0.06	22	5	2	5	9	0.8	38	
AHU-4	2,949								613	615
Discovery Dorm	588	0.18	106	-	12	7.5	90	0.8	217	
Target Dorm	813	0.18	132	-	10	7.5	75	0.8	250	
Discovery GM	332	0.06	20	5	2	5	8	0.8	35	
Family Therapy	200 403	0.06 0.06	12 24	5 50	20	5 5	5 101	0.8 0.8	21 156	
Large Meeting	112	0.06	7	10				0.8	156	
Lobby Lockers	93	0.06	11	5	1	5 5	6 5	0.8	19	
Office	326	0.06	21	0	1	5	5	0.8	26	
Tele Health	130	0.06	8	5	1	5	3	0.8	14	
Vestibule	132	0.06	8	0	0	5	0	0.8	10	
Voyagers GM	332	0.06	20	5	2	5	8	0.8	35	
Files	77	0.06	5	0	0	5	0	0.8	6	
AHU-5	3,538					I			805	805

OCCUPANCY AND VENTILATION RATES ARE AS REQUIRED PER THE 2018 INTERNATIONAL MECHANICAL CODE (TABLE 403.3).

	AR	EA BASIS			OCCUPAN	CY BASI				
Zone/ System	A Area (ft ²)	B CFM/ft ²	C CFM (A x B)	Persons / 1000 SF	D # of People	E CFM per Person	F CFM (D x E)	G Zone Air Distribution Effectiveness	Required Ventilation Air (CFM) (C+F)/G	Design Ventilation Air (CFM)
Account Clerk	155	0.06	9	5	1	5	4	0.8	16	
A-FM	116	0.06	7	5	1	5	3	0.8	12	
ARA	107	0.06	6	5	1	5	3	0.8	11	
ARA 2	85	0.06	5	5	1	5	5	0.8	13	
M	147	0.06	9	5	1	5	4	0.8	16	
Store	144	0.06	9	5	1	5	4	0.8	15	
East Corridor	1,360	0.06	82	0	0	5	0	0.8	102	
RTU-4	2,114								186	190
\HU-1 (Gym)	2,500	0.3	750	-	-	-		0.8	938	940
Dark Room	65	0.06	4	5	1	5	5	0.8	11	
Basement Corridor	400	0.06	24	0	0	5	0	0.8	30	
East GL	168	0.06	10	5	1	5	4	0.8	18	
East RR & Shower	247	0.00	0	0	0	0	0	0.8	0	
Mechanical NE	470	0.06	28	5	2	5	12	0.8	50	
Nurse	106	0.06	6	5	1	5	3	0.8	11	
Nurse & RR	118	0.06	7	5	1	5	3	0.8	13	
Office - Lower Level	140	0.06	8	5	1	5	4	0.8	15	
Shop	550	0.06	33	5	3	5	14	0.8	58	
South Shop	567	0.06	34	5	3	5	14	0.8	60	
Snacks	113	0.06	7	5	1	5	3	0.8	12	
oyagers Dorm	871	0.18	157	-	12	7.5	90	0.8	308	
NHU-2	3,815								587	590
Art	226	0.12	27	35	8	10	79	0.8	133	
Chapel	275	0.06	17	50	6	5	30	0.8	58	
Computer Lab	268	0.12	32	35	9	10	94	0.8	157	
Ory Storage	137	0.06	8	0	0	5	0	0.8	10	
Mechanical & Storage	430	0.06	26	0	0	5	0	0.8	32	
West Corridor	1,050	0.06	63	0	0	5	0	0.8	79	
West Office	243	0.06	15	5	1	5	6	0.8	26	
West RR & Showers	210	0.00	0	0	0	0	0	0.8	0	
AHU-3	2,839								495	495
Horizons Class	355	0.12	43	35	8	10	80	0.8	153	
SAT II	207	0.06	12	5	2	5	10	0.8	28	
Title I	182	0.06	11	5	2	5	10	0.8	26	
RTU-2	744				12				207	210
Discovery Class	370	0.12	44	35	12	10	120	0.8	206	
arget Class	414	0.12	50	35	10	10	100	0.8	187	
Voyager Class	214	0.12	26	35	12	10	120	0.8	182	
RTU-3	998				34				575	575
Kitchen	995	0.12	119	20	5	7.5	38	0.8	196	
Dining	546	0.18	98	70	20	7.5	150	0.8	310	
RTU-1	1,541								506	510
Discovery Dayroom & Laundry	300	0.06	18	30	12	5	60	0.8	98	
Horizon Dayroom - Dorm	665	0.18	120	-	8	7.5	60	0.8	225	
Sunroom	512	0.06	31	30	15	5	77	0.8	134	
West GL	140	0.06	8	5	1	5	4	0.8	15	
Horizon GM	196	0.06	12	5	1	5	5	0.8	21	
Library	431	0.06	26	5	2	5	11	0.8	46	
Target DR	343	0.06	21	5	10	5	50	0.8	36	
Target GM	362	0.06	22	5	2	5	9	0.8	38	
AHU-4	2,949								613	615

ROC	OFTOP UNI	T SCHE	<u>-</u> -DIII E	-											
MARK RTU	MANUFACTURER	MODEL	AIR FLOW (CFM)	OA FLOW (CFM)	AMBIENT OAT (°F)	EXT. S.P. (IN.W.C.)	DX COOLING COIL NOMINAL TONS			ELECTRICAL VOLTS/Ø/HZ	MOTOR HP	1	MOCP (AMPS)	APPROX. WEIGHT (LBS)	REMARKS
1	TRANE	THJ102	2900	510	105	1.75	8.5	18	SCR	240/3/60	3	67	70	1000	FURNISH WITH VFD, (2) MANIFOLD SCROLL COMPRESSORS
2	TRANE	THC037	960	210	105	1.00	3	12	SCR	240/3/60	1	47	50	600	FURNISH WITH VFD
3	TRANE	THJ072	2030	575	105	1.75	6	18	SCR	240/3/60	3	67	70	1000	FURNISH WITH VFD
4	TRANE	THJ072	1250	85	105	1.00	3	6	SCR	240/3/60	1	29	30	600	FURNISH WITH VFD
2) SE 3) PR 4) PR 5) PR	COVIDE 14" HIGH FAC T MINIMUM OUTSIDE COVIDE 5 MINUTE TIM COVIDE OUTSIDE AIR I COVIDE BAROMETRIC F	AIR AS SPEC ME DELAY ON ECONOMIZER. RELIEF DAMPI	CIFIED ABO\ COMPRESS ER.	VE. OUTSII SOR RESTAF	DE AIR DAM RT.										

			OA	EXT.	DX COOLING COIL	ELECTR	IC HEAT	ELECTRICAL				APPROX.	REMARKS
		FLOW (CFM)	FLOW (CFM)	S.P. (IN.W.C.)	NOMINAL TONS	INPUT (KW)	STAGES	VOLTS/ø/HZ	MOTOR HP	MCA (AMPS)	MOCP (AMPS)	WEIGHT (LBS)	
ANE	UCCA06	2100	390	3	6	7.1	SCR	240/3/60	5	53.28	60	1200	FURNISH WITH VFD
ANE	UCCA10	4800	825	2.1	15	13.0	SCR	240/3/60	5	69.14	80	1200	FURNISH WITH VFD
ANE	UCCA10	4800	1060	2.1	15	18.4	SCR	240/3/60	5	91.11	100	1200	FURNISH WITH VFD
ANE	UCCA06	2410	510	2.5	7.5	10.5	SCR	240/3/60	3	47.37	50	900	FURNISH WITH VFD
ANE	UCCA08	4000	940	3	12.5	31.2	SCR	240/3/60	5	53.45	70	1200	FURNISH WITH VFD
A A	NE UNE UNE UNE	NE UCCA10 NE UCCA10 NE UCCA06	NE UCCA06 2100 NE UCCA10 4800 NE UCCA10 4800 NE UCCA06 2410	NE UCCA06 2100 390 NE UCCA10 4800 825 NE UCCA10 4800 1060 NE UCCA06 2410 510	NE UCCA06 2100 390 3 NE UCCA10 4800 825 2.1 NE UCCA10 4800 1060 2.1 NE UCCA06 2410 510 2.5	NE UCCA06 2100 390 3 6 NE UCCA10 4800 825 2.1 15 NE UCCA10 4800 1060 2.1 15 NE UCCA06 2410 510 2.5 7.5	NE UCCA06 2100 390 3 6 7.1 NE UCCA10 4800 825 2.1 15 13.0 NE UCCA10 4800 1060 2.1 15 18.4 NE UCCA06 2410 510 2.5 7.5 10.5	NE UCCA06 2100 390 3 6 7.1 SCR NE UCCA10 4800 825 2.1 15 13.0 SCR NE UCCA10 4800 1060 2.1 15 18.4 SCR NE UCCA06 2410 510 2.5 7.5 10.5 SCR	NE UCCA06 2100 390 3 6 7.1 SCR 240/3/60 NE UCCA10 4800 825 2.1 15 13.0 SCR 240/3/60 NE UCCA10 4800 1060 2.1 15 18.4 SCR 240/3/60 NE UCCA06 2410 510 2.5 7.5 10.5 SCR 240/3/60	NE UCCA06 2100 390 3 6 7.1 SCR 240/3/60 5 NE UCCA10 4800 825 2.1 15 13.0 SCR 240/3/60 5 NE UCCA10 4800 1060 2.1 15 18.4 SCR 240/3/60 5 NE UCCA06 2410 510 2.5 7.5 10.5 SCR 240/3/60 3	NE UCCA06 2100 390 3 6 7.1 SCR 240/3/60 5 53.28 NE UCCA10 4800 825 2.1 15 13.0 SCR 240/3/60 5 69.14 NE UCCA10 4800 1060 2.1 15 18.4 SCR 240/3/60 5 91.11 NE UCCA06 2410 510 2.5 7.5 10.5 SCR 240/3/60 3 47.37	NE UCCA06 2100 390 3 6 7.1 SCR 240/3/60 5 53.28 60 NE UCCA10 4800 825 2.1 15 13.0 SCR 240/3/60 5 69.14 80 NE UCCA10 4800 1060 2.1 15 18.4 SCR 240/3/60 5 91.11 100 NE UCCA06 2410 510 2.5 7.5 10.5 SCR 240/3/60 3 47.37 50	NE UCCA06 2100 390 3 6 7.1 SCR 240/3/60 5 53.28 60 1200 NE UCCA10 4800 825 2.1 15 13.0 SCR 240/3/60 5 69.14 80 1200 NE UCCA10 4800 1060 2.1 15 18.4 SCR 240/3/60 5 91.11 100 1200 NE UCCA06 2410 510 2.5 7.5 10.5 SCR 240/3/60 3 47.37 50 900

MARK	MANUFACTURER	MODEL	AMBIENT	NOMINAL	PHYSICA	L DATA	ELECTRICAL			APPROX. REMARKS	
CU			OA TEMP ('F DB)	TONS	NO. OF FANS	NO. OF COMP.	VOLTS/ø/HZ	MCA (AMPS)	MOCP (AMPS)	WEIGHT (LBS)	
1	TRANE	TTA	105	6	1	2	240/3/60	34	45	350	
2	TRANE	TTA	105	15	2	2	240/3/60	66	90	700	
3	TRANE	TTA	105	15	2	2	240/3/60	66	90	700	
4	TRANE	TTA	105	7.5	1	2	240/3/60	34	45	350	
5 (ALTERNATE #2)	TRANE	TTA	105	12.5	1	2	240/3/60	50	70	460	

- PROVIDE LIQUID LINE SIGHT GLASS, MOISTURE INDICATOR, AND FILTER DRYER FOR EACH CIRCUIT. PROVIDE LOW AMBIENT CONTROL TO OPERATE UNIT TO 0°F AMBIENT OUTDOOR TEMPERATURE.
- PROVIDE ACCESSORY HEAD PRESSURE CONTROL, ANTI-SHORT CYCLE CONTROL, AND TIME DELAY ON COMPRESSOR RESTART.
- FURNISH WITH DIGITAL SCROLL OR VARIABLE SPEED COMPRESSORS.

ARK	MANUFACTURER	MODEL	TYPE	NECK SIZE (L" X W")	FACE SIZE (L" X W")	FRAME TYPE	FINISH	NC	ACCESSORIES	REMARKS
Α	TITUS	TMS	SQUARE CONE DIFFUSER	SEE DWG	24×24	NOTE 1	WHITE	<30		
В	TITUS	50F	EGGCRATE RETURN GRILLE	24x12	24x12	NOTE 1	WHITE	<30		
С	TITUS	50F	EGGCRATE RETURN GRILLE	24x48	24x48	NOTE 1	WHITE	<30		

VAV TERMINAL UNIT SCHEDULE

DESV 4

DESV

DESV

DESV

200 220

OBD-OPPOSED BLADE DAMPER, LSP-LINEAR SLOT PLENUM

1) REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE.

ΛΙ	TEDNIATE	$\mathcal{I}\mathcal{I}\mathcal{I}$
\rightarrow 1	11 1X1X A 11	#/

PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT SWITCH.

10) FURNISH WITH MERV 8 FILTERS.

B) FURNISH WITH DIGITAL SCROLL OR VARIABLE SPEED COMPRESSORS.

PROVIDE FACTORY MOUNTED 120 VOLT DUPLEX SERVICE RECEPTACLE.

EXISTING UPBLAST EXHAUST FAN TO BE REMOVED AND REPLACED WITH EQUIVALENT UPBLAST EXHAST FAN. TEST AND BALANCE EXISTING FAN TO DETERMINE FAN SIZE NEEDED.

EXISTING KITCHEN HOOD EXHAUST FAN TO BE REMOVED AND REPLACED WITH EQUIVALENT EXHAUST FAN. TEST AND BALANCE EXISTING FAN TO DETERMINE FAN SIZE NEEDED.

EXISTING KITCHEN HOOD MAKEUP AIR FAN TO BE REMOVED AND REPLACED WITH NEW MAKEUP AIR FAN. TEST AND BALANCE EXISTING FAN TO DETERMINE FAN SIZE NEEDED.

<u> </u>	· . —	·/ · · · ·	• • • •	<u> </u>					
RK	MANUFACTURER	MODEL	UNIT SIZE	INLET SIZE	MAXIMUM AIR FLOW	MINIMUM AIR FLOW	HEATING CAPACITY (KW)	STEPS	REMARKS
					(CFM)	(CFM)			
1	TITUS	DESV	10	10	880	308	3.9	SCR	
2	TITUS	DESV	7	7	585	205	2.6	SCR	
3	TITUS	DESV	6	6	325	114	1.4	SCR	
1	TITUS	DESV	7	7	540	189	2.4	SCR	
5	TITUS	DESV	8	8	620	217	2.7	SCR	
3	TITUS	DESV	9	9	835	292	3.7	SCR	
7	TITUS	DESV	7	7	470	165	2.1	SCR	
8	TITUS	DESV	6	6	350	123	1.6	SCR	
9	TITUS	DESV	4	4	110	39	0.5	SCR	
)	TITUS	DESV	6	6	345	121	1.5	SCR	
1	TITUS	DESV	4	4	150	53	0.7	SCR	
2	TITUS	DESV	6	6	380	133	1.7	SCR	
3	TITUS	DESV	8	8	750	263	3.3	SCR	
1	TITUS	DESV	4	4	150	53	0.7	SCR	
5	TITUS	DESV	7	7	600	210	2.7	SCR	
3	TITUS	DESV	10	10	1000	350	4.4	SCR	
7	TITUS	DESV	10	10	1125	394	5.0	SCR	
3	TITUS	DESV	4	4	135	47	0.6	SCR	
9	TITUS	DESV	10	10	975	341	4.3	SCR	
)	TITUS	DESV	8	8	700	245	3.1	SCR	
	TITUS	DESV	4	4	200	70	0.9	SCR	
2	TITUS	DESV	7	7	600	210	2.7	SCR	
3	TITUS	DESV	4	4	200	70	0.9	SCR	
	TITUS	DESV	7	7	510	179	2.3	SCR	

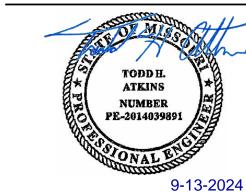
SCR

SCR

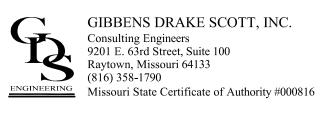
SCR

SCR SCR

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

8877707003 ASSET#

REVISION: DATE: **REVISION:** DATE: REVISION: DATE: 9/13/2024 ISSUE DATE: 9/13/2024

BID SET CAD DWG FILE: M-601 DRAWN BY: AAC CHECKED BY: THA

DESIGNED BY: GDS

SHEET TITLE:

MECHANICAL SCHEDULES

SHEET NUMBER:

28 OF 44 SHEETS

Variable Air Volume AHU/RTU Sequence of Operation Run Conditions - Requested: The unit shall run whenever: Any zone is occupied. OR a definable number of unoccupied zones need heating or cooling. The unit shall shut down and generate an alarm upon receiving an emergency shutdown High Static Shutdown: The unit shall shut down and generate an alarm upon receiving an high static shutdown signal. Return Air Smoke Detection: The unit shall shut down and generate an alarm upon receiving a return air smoke detector Supply Air Smoke Detection: The unit shall shut down and generate an alarm upon receiving a supply air smoke detector The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime. Alarms shall be provided as follows: Supply Fan Failure: Commanded on, but the status is off. Supply Fan in Hand: Commanded off, but the status is on. Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit Supply Air Duct Static Pressure Control: The controller shall measure duct static pressure and modulate the supply fan VFD speed to maintain a duct static pressure setpoint. The speed shall not drop below 30% (adj.). The static pressure setpoint shall be reset based upon the position of the zone dampers, with a goal of reducing the static pressure until at least one zone damper is nearly wide open The initial duct static pressure setpoint shall be 1.5in H2O (adj.). If no zone damper is nearly wide open, the setpoint shall incrementally reset down to a minimum of 1.3in H2O (adj.) As one or more dampers nears the wide open position, the setpoint shall incrementally reset up to a maximum of 1.8in H2O (adj.). Alarms shall be provided as follows: High Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) Low Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) less than setpoint. Supply Fan VFD Fault. Supply Air Temperature Setpoint — Optimized: The controller shall monitor the supply air temperature and shall maintain a supply air temperature setpoint reset based on zone cooling and heating requirements The supply air temperature setpoint shall be reset for cooling based on zone cooling requirements as follows: The initial supply air temperature setpoint shall be 55F (adj.). As cooling demand increases, the setpoint shall incrementally reset down to a minimum of 53F (adj.). As cooling demand decreases, the setpoint shall incrementally reset up to a maximum of 72F (adj.) If more zones need heating than cooling, then the supply air temperature setpoint shall be reset for heating as follows: The initial supply air temperature setpoint shall be 82F (adj.). As heating demand increases, the setpoint shall incrementally reset up to a maximum of 85F (adj.). As heating demand decreases, the setpoint shall incrementally reset down to a minimum of 72F (adj.). The controller shall measure the supply air temperature and stage the cooling to maintain its cooling setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime. The cooling shall be enabled whenever: Outside air temperature is greater than 60F (adj.). AND the economizer (if present) is disabled or fully open. AND the supply fan status is on. AND the heating (if present) is not active. Alarms shall be provided as follows: High Supply Air Temp: If the supply air temperature is 5F (adj.) greater than Electric Heating Stages: The controller shall measure the supply air temperature and stage the heating to maintain its heating setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime. The heating shall be enabled whenever: Outside air temperature is less than 65F (adj.) AND the supply fan status is on. AND the cooling (if present) is not active. The heating stages shall run for freeze protection whenever: Supply air temperature drops from 40F to 35F (adj.). AND the supply fan status is on. Alarms shall be provided as follows: Low Supply Air Temp: If the supply air temperature is 5F (adj.) less than setpoint. **Building Static Pressure Control:** The controller shall measure the building static pressure and modulate the exhaust air damper to maintain building static pressure setpoint of 0.05in H2O (adj.). exhaust air damper shall be enabled when the supply fan status is proven and close when the unit is off. Alarms shall be provided as follows: High Building Static Pressure: If the building static pressure is 25% (adj.) greater than setpoint. Low Building Static Pressure: If the building static pressore is 25% (adj.) less than setpoint. Economizer: The controller shall measure the mixed air temperature and modulate the economizer dampers in sequence to maintain a setpoint 2F (adj.) less than the supply air temperature setpoint. The outside air dampers shall maintain a minimum adjustable position of 20% (adj.) open whenever occupied. The economizer shall be enabled whenever: Outside air temperature is less than 65F (adj.). AND the outside air enthalpy is less than 22Btu/lb (adj.) AND the outside air temperature is less than the return air temperature. AND the outside air enthalpy is less than the return air enthalpy. AND the supply fan status is on. The economizer shall close whenever: Mixed air temperature drops from 40F to 35F (adj.) OR on loss of supply fan status. The outside and exhaust air dampers shall close and the return air damper shall open when

the unit is off. If Optimal Start Up is available the mixed air damper shall operate as described

in the occupied mode except that the outside air damper shall modulate to fully closed.

The controller shall monitor the mixed air temperature and use as required for economizer

High Mixed Air Temp: If the mixed air temperature is greater than 90F (adj.). Low Mixed Air Temp: If the mixed air temperature is less than 45F (adj.).

The outside air dampers shall maintain a minimum adjustable position during building

Minimum Outside Air Ventilation — Fixed Percentage:

control (if present) or preheating control (if present).

Alarms shall be provided as follows:

occupied hours and be closed during unoccupied hours.

Return Air Carbon Dioxide (CO2) Concentration Monitoring:

The controller shall measure the return air CO2 concentration.

Alarms shall be provided as follows:

Alarms shall be provided as follows:

or economizer control (if present).

Supply Air Temperature:

supply fan status is on.

Run Conditions - Scheduled:

Alarms shall be provided as follows:

Alarms shall be provided as follows:

(if present) or humidity control (if present).

is greater than 1000ppm (adj.) when in the unit is running.

The controller shall monitor the supply air temperature.

Variable Air Volume Terminal Unit Sequence of Operation

Reversing Variable Volume Terminal Unit — Flow Control:

Unoccupied Mode (night setback): The unit shall maintain

Occupied Mode: The unit shall maintain

A 75F (adj.) cooling setpoint

A 70F (adj.) heating setpoint.

A 85F (adj.) cooling setpoint.

A 55F (adj.) heating setpoint.

airflow (adj.) until the zone is satisfied.

cooling airflow (adj.) until the zone is satisfied.

The reheating shall be enabled whenever:

AND sufficient airflow is provided.

air temperature is more than 95F (adj.).

Alarms shall be provided as follows:

Outside air temperature is less than 65F (adj.).

The controller shall monitor the discharge air temperature.

AND the zone temperature is below setpoint.

Reheating - High Discharge Air Temperature Limit:

Alarms shall be provided as follows:

user definable amount (adj.).

user definable amount (adj.).

Zone Setpoint Adjust:

Occupied:

zone is satisfied.

zone is satisfied.

Electric Reheating Stage:

(adj.) minimum runtime.

Discharge Air Temperature:

unoccupied airflow (adj.)

High Return Air Carbon Dioxide Concentration: If the return air CO2 concentration

High Return Air Humidity: If the return air humidity is greater than 70% (adj.). Low Return Air Humidity: If the return air humidity is less than 35% (adj.).

High Return Air Temp: If the return air temperature is greater than 90F (adj.).

High Supply Air Temp: If the supply air temperature is greater than 120F (adj.).

Low Supply Air Temp: If the supply air temperature is less than 45F (adj.).

The unit shall run according to a user definable time schedule in the following modes:

High Zone Temp: If the zone temperature is greater than the cooling setpoint by a

The occupant shall be able to adjust the zone temperature heating and cooling setpoints at

When zone temperature is greater than its cooling setpoint, the zone damper shall

When zone temperature is less than its heating setpoint, the controller shall enable

modulate between the minimum occupied airflow (adj.) and the maximum cooling

setpoint, the zone damper shall maintain the minimum required zone ventilation

heating to maintain the zone temperature at its heating setpoint. Additionally, if warm air is available from the AHU, the zone damper shall modulate between the

minimum occupied airflow (adj.) and the maximum heating airflow (adj.) until the

When the zone is unoccupied the zone damper shall control to its minimum

shall modulate between the minimum unoccupied airflow (adj.) and the maximum

shall enable heating to maintain the zone temperature at the setpoint. Additionally, if warm air is available from the AHU, the zone damper shall modulate between the minimum unoccupied airflow (adj.) and the auxiliary heating airflow (adj.) until the

The controller shall measure the zone temperature and stage the reheating to maintain

The controller shall measure the discharge air temperature and limit reheating if the discharge

High Discharge Air Temp: If the discharge air temperature is greater than 120F

Low Discharge Air Temp: If the discharge air temperature is less than 40F (adj.).

its setpoint. To prevent short cycling, the stage shall have a user definable

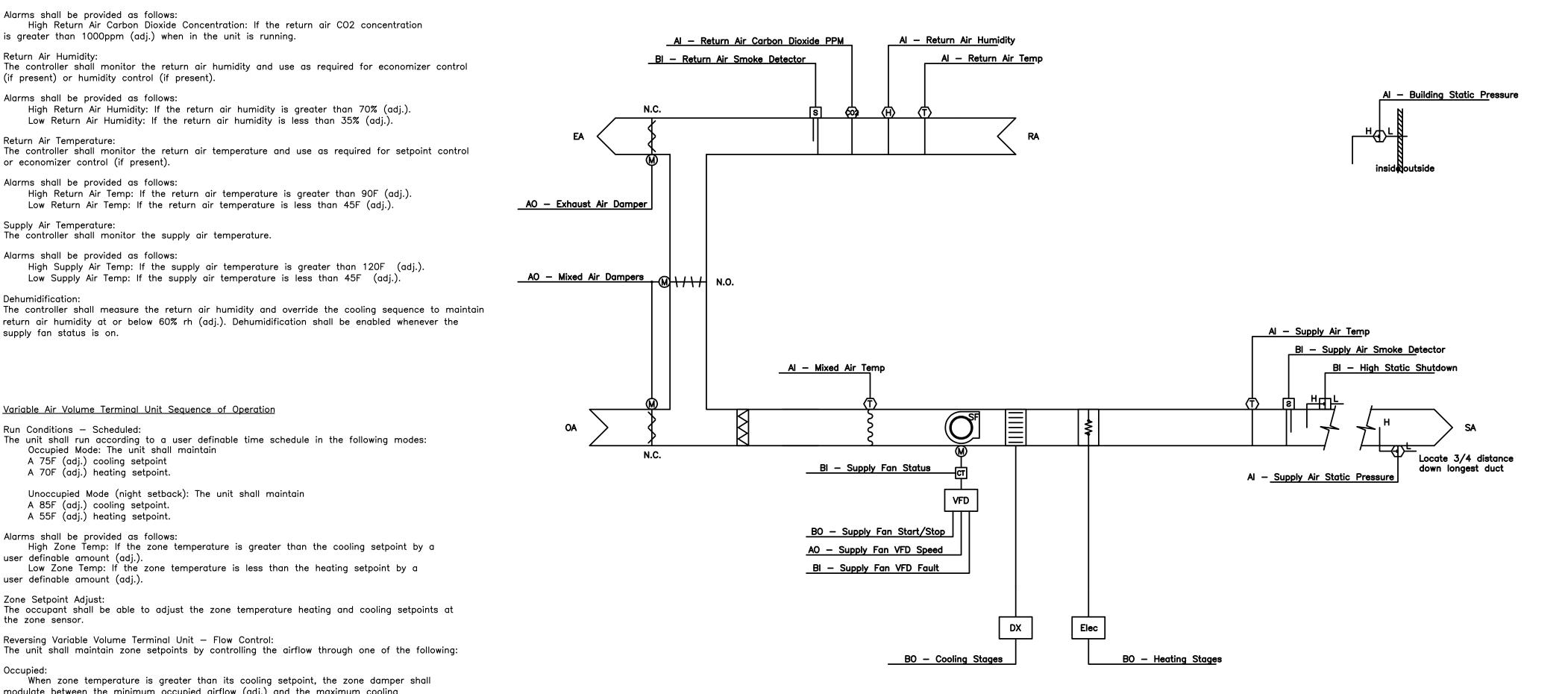
When the zone temperature is greater than its cooling setpoint, the zone damper

When zone temperature is less than its unoccupied heating setpoint, the controller

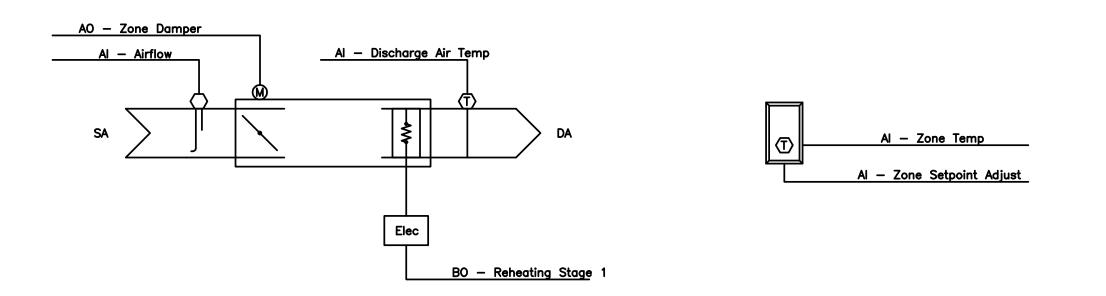
When the zone temperature is between the cooling setpoint and the heating

Low Zone Temp: If the zone temperature is less than the heating setpoint by a

Low Return Air Temp: If the return air temperature is less than 45F (adj.).



VAV AHU/RTU CONTROL DIAGRAM



VAV BOX WITH REHEAT CONTROL DIAGRAM NO SCALE





TODD H. ATKINS LICENSE # E-2014039891 PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY

GIBBENS DRAKE SCOTT, INC Consulting Engineers 9201 E. 63rd Street, Suite 100 Raytown, Missouri 64133 (816) 358-1790 Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01

7707 8877707003 ASSET#

> REVISION: **REVISION** DATE: **REVISION:** DATE: 9/13/2024 ISSUE DATE: 9/13/2024 BID SET

CAD DWG FILE: M-602 DRAWN BY: CHECKED BY: DESIGNED BY: GDS

SHEET TITLE:

MECHANICAL CONTROLS

SHEET NUMBER:

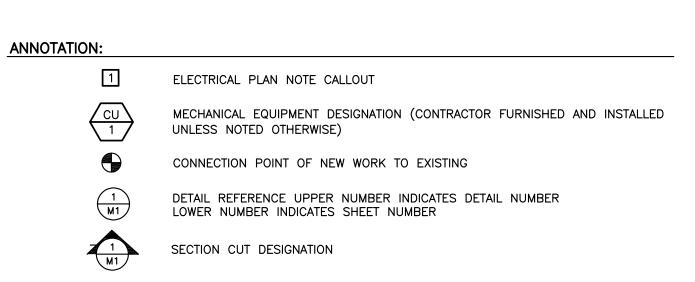
CONDUITS:		SWITCHES:	
ə\III531	HOME RUN TO PANEL. CIRCUIT NUMBERS, PHASE, NEUTRAL AND GROUND CONDUCTORS INDICATED. ALL CONDUCTORS TO BE #12 EXCEPT WHERE NOTED.	\$ °	SINGLE POLE SWITCH COMPATIBLE WITH LIGHT FIXTURES AND LIGHTING CONTROLS. INSTALL +3'-10" OR AS NOTED. LOWERCASE LETTER NEXT TO FIXTURE DESIGNATES CONTROL SWITCH.
	CONDUIT TO BE 1/2" OR AS NOTED ON PLANS AND SPECIFICATIONS. CONDUIT WITH 3 #12 CONDUCTORS	\$ ²	DOUBLE POLE SWITCH, +3'-10" OR AS NOTED.
1	PARTIAL CIRCUIT	\$ ³	THREE-WAY SWITCHED, +3'-10" OR AS NOTED.
	CONDUIT INSTALLED CONCEALED ABOVE CEILING OR IN WALL — UNLESS NOTED OTHERWISE	\$ ⁴	FOUR-WAY SWITCH, +3'-10" OR AS NOTED.
	CONDUIT INSTALLED CONCEALED IN/BELOW FLOOR SLAB OR UNDERGROUND	\$ ^K	KEY OPERATED SWITCH, +3'-10" OR AS NOTED.
	CONDUIT INSTALLED EXPOSED.	\$ ^P	PILOT LIGHT SWITCH, 3'-10" OR AS NOTED.
—LV —	LOW VOLTAGE WIRING	\$ ^T	MANUAL TIMER SWITCH, +5'-4" OR AS NOTED.
——DC——	DIRECT CURRENT WIRING	\$ ^M	MANUAL MOTOR SWITCH
0	CONDUIT UP OR DOWN AS MARKED	\$ ^D	DIMMER SWITCH. COMPATIBLE WITH LIGHT FIXTURES AND LIGHTING CONTROLS.
=	GROUND CONNECTION EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT	\$ ^{LV}	LOW VOLTAGE SWITCH
	(GREEN INSULATION OR BARE)	©	CEILING MOUNTED MOTION SENSOR. SET ALL DEVICES TO MAXIMUM SETTING.
	ISOLATED GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION WITH YELLOW TRACER)	s os	WALL MOUNTED MOTION SENSOR
IGHTING:		\$ ^{DOS}	WALL MOUNTED MOTION SENSOR WITH DIMMER. COMPATIBLE WITH LIGHT FIXTURES AND LIGHTING CONTROLS.
XA X	CEILING LIGHT FIXTURE, LETTER INDICATES FIXTURE TYPE. LOWERCASE LETTER NEXT TO FIXTURE DESIGNATES CONTROL SWITCH	ELECTRICAL EQUIPA	AENIT.
<u> </u>	WALL MOUNTED LIGHT FIXTURE, LETTER INDICATES FIXTURE TYPE.	ELECTRICAL EQUIPM	PANELBOARD, TOP AT 6'-0".
A a a	LIGHT FIXTURE (SEE LIGHT FIXTURE SCHEDULE) a = SWITCHED BY SWITCH "a" A = LIGHT FIXTURE TYPE "A"		TERMINAL CABINET, TOP 6'-0".
тэ тэ тэ	LOWERCASE LETTER NEXT TO FIXTURE DESIGNATES CONTROL SWITCH	æ	CT CABINET AND METER.
T2 T2 T2 T1 V V	LIGHTING TRACK WITH LIGHT FIXTURE TYPES AS INDICATED T1 = TRACK TYPE "T1" T2 = TRACK HEAD TYPE "T2"		
_	T2 = TRACK HEAD TYPE "T2" LOWERCASE LETTER NEXT TO FIXTURE DESIGNATES CONTROL SWITCH		MAIN DISTRIBUTION PANEL OR SWITCHBOARD GROUND BAR (PLAN VIEW)
	EMERGENCY LIGHT FIXTURE	VFD	VARIABLE FREQUENCY DRIVE
	STRIP LIGHT FIXTURE.	200/3/150	
<\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	WALL WASHER LIGHT FIXTURE—ARROW INDICATES DIRECTION. A=LIGHT FIXTURE TYPE "A". LOWERCASE LETTER NEXT TO FIXTURE DESIGNATES CONTROL SWITCH	· · · -	DISCONNECT SWITCH-"200/3/150" (WHERE APPLICABLE) DENOTES AMPERES/POLES/FUSE, NF=NON-FUSED CB=CIRCUIT BREAKER (200/3/CB)
○ □	SITE LIGHTING FIXTURE (SEE LIGHT FIXTURE SCHEDULE)	■ •	DISCONNECT SWITCH FURNISHED W/ EQUIPMENT (INSTALLED BY ELEC. CONTRACTOR).
$\bar{\otimes} \bar{\otimes} \bar{\otimes} \bar{\otimes}$	CEILING MOUNTED EXIT LIGHT WITH FACES AND CHEVRONS AS INDICATED		MAGNETIC STARTER FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
⊗ <u>\</u> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	WALL MOUNTED EXIT LIGHT, $+7$ ' -6 " OR AS NOTED WITH FACES AND CHEVRONS AS INDICATED.	30/3/15/1 ⊠	COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER "30/3/15/1" DENOTES AMPERES/POLES/FUSE/NEMA STARTER SIZE NF=NON-FUSED CB=CIRCUIT BREAKER (30/3/CB/1)
₩ 4 <u>+</u>	EMERGENCY BATTERY PACK LIGHT FIXTURE — CEILING/WALL MOUNTED.	= 2	MAGNETIC MOTOR STARTER, NEMA SIZE AS NOTED, 3—POLE, UNO.
Ē	REMOTE EMERGENCY LIGHTING HEAD.		
ECEPTACLES:			
=====================================	20 AMP DUPLEX RECEPTACLE, TO TOP MOUNTING SCREW, OR AS NOTED.	COMMUNICATIONS:	
-	SIMPLEX RECEPTACLE, +18" OR AS NOTED.	\mapsto	T.V. OUTLET, +18" WITH 3/4" CONDUIT TO ABOVE CEILING WITH 90 DEGREE ELBOW, BUSHING, AND PULL STRING.
IG O	ISOLATED GROUND SIMPLEX RECEPTACLE, +18" OR AS NOTED.	▼	TELEPHONE OUTLET, +18" WITH 3/4" CONDUIT TO ABOVE CEILING 90 DEGREE ELBOW, BUSHING, AND PULL STRING.
₩₽	WEATHERPROOF GFI RECEPTACLE, +18" OR AS NOTED. MOUNT HORIZONTAL.	¥	TELEPHONE/DATA OUTLET, +18" WITH 3/4" CONDUIT TO ABOVE CEILING 90 DEGREE ELBOW, BUSHING, AND PULL STRII
DF	DUPLEX GFCI RECEPTACLE FOR ELECTRIC WATER COOLER; VERIFY EXACT LOCATION	∇	DATA OUTLET, +18" WITH 3/4" CONDUIT TO ABOVE CEILING 90 DEGREE ELBOW, BUSHING, AND PULL STRING.
⊕	AND MOUNTING HEIGHT WITH PLUMBING CONTRACTOR.	₹	TELEPHONE OUTLET, 6" ABOVE COUNTER TOP OR AS NOTED ON ARCH WITH 3/4" CONDUIT TO ABOVE CEILING 90 DEGREE ELBOW, BUSHING, AND PULL STRING.
₩	GROUND FAULT DUPLEX RECEPTACLE, +18" OR AS NOTED.	₹	TELEPHONE/DATA OUTLET, 6" ABOVE COUNTER TOP OR AS NOTED 3/4" CONDUIT TO ABOVE CEILING ON ARCH. DRAWINGS 90 DEGREE ELBOW, BUSHING, AND PULL STRING.
₩	GROUND FAULT DUPLEX RECEPTACLE, MOUNTED 6" ABOVE COUNTER TOP OR AS NOTED ON ARCH. DRAWINGS.	₹	DATA OUTLET, 6" ABOVE COUNTER TOP OR AS NOTED ON WITH 3/4" CONDUIT TO ABOVE CEILING. ARCH. DRAWINGS 90 DEGREE ELBOW, BUSHING, AND PULL STRING.
⇒	ISOLATED GROUND DUPLEX RECEPTACLE, +18" OR AS NOTED.	⊗ ^	ABOVE CEILING. ARCH. DRAWINGS 90 DEGREE ELBOW, BUSHING, AND PULL STRING. FLUSH FLOOR DATA OUTLET, LETTER TO INDICATE BOX TYPE (SEE SPEC.).
=	EMERGENCY DUPLEX RECEPTACLE, +18" OR AS NOTED.	©	CEILING SPEAKER.
s *	SURGE PROTECTED RECEPTACLE, +18" OR AS NOTED.	H	P.A. SYSTEM CALL—IN PUSHBUTTON. +3'—10".
+⊕	HORIZONTALLY MOUNTED RECEPTACLE.	<u>M</u>	WALL MICROPHONE OUTLET, +18" OR AS NOTED.
€	20A DUPLEX RECEPTACLE WITH TWO USB PORTS.	Ÿ [V]	VOLUME CONTROL, +48" OR AS NOTED.
-⊕	RECEPTACLE MOUNTED 6" ABOVE COUNTER TOP OR AS NOTED ON ARCH. DRAWINGS	[AMP]	AMPLIFIER
=	FOURPLEX RECEPTACLE, +18" OR AS NOTED		
==	ISOLATED GROUND FOURPLEX RECEPTACLE, +18" OR AS NOTED		SATELLITE DISH
G =	GROUND FAULT FOURPLEX RECEPTACLE, +18" OR AS NOTED		
==	EMERGENCY FOURPLEX RECEPTACLE, +18" OR AS NOTED		
	MULTI-OUTLET RACEWAY		
⊙ [^]	FLUSH FLOOR MOUNTED POKE THROUGH DEVICE — LETTER (WHERE APPLICABLE) TO INDICATE TYPE	SECURITY:	
[^]	SPECIAL RECEPTACLE, NEMA STYLE AS NOTED, +18" OR AS NOTED.	<u>32001(111.</u>	SECURITY CAMERA.
™ ^A	MULTI-SERVICE FLUSH FLOOR BOX, LETTER (WHERE APPLICABLE) INDICATES BOX TYPE.		
=	SPLIT-YOKE SWITCHED RECEPTACLE.		CPU & MONITOR (ELEVATION) WITH PERIPHERAL DEVICES
+	RECEPTACLE INSTALLED IN CEILING.	<u> </u>	CPU & MONITOR (PLAN VIEW) WITH PERIPHERAL DEVICES
			REQUEST TO EXIT BUTTON
		(RE)	ELECTRIC DOOR LOCK
		(B)	PANIC BUTTON (D=DESK W=WALL F=FLOOR)
		(CR)	CARD READER
		⊙ M∕ ⓒ B	DOOR MONITOR GLASS BREAK
		(P)	KEY PAD
			MOTION DETECTOR

MOTION DETECTOR

WATCH TOUR

FIRE ALARM:	
[FACP]	FIRE ALARM PANEL, TOP +6'-0".
ANN	F.A. SYSTEM REMOTE ANNUCIATOR, TOP +6'-0".
F	MANUAL FIRE ALARM PULL STATION AND ZONE NUMBER, +3'-10".
⊠⊲	FIRE ALARM SPEAKER AND STROBE. WHERE WALL MOUNTED: +80" TO BOTTOM OF DEVICE
	EXTERIOR FIRE ALARM HORN.
	FIRE ALARM STROBE ONLY. WHERE WALL MOUNTED: +80" TO BOTTOM OF DEVICE
异	BELL (GONG)
•	SMOKE DETECTOR.
O	DUCT TYPE SMOKE DETECTOR WITH SAMPLING TUBES. REMOTE ALARM LIGHT MOUNTED BELOW DETECTOR FLUSH IN CEILING.
\$	SPRINKLER FLOW SWITCH AND TAMPER SWITCH, TWO SEPARATE ZONES REQUIRED (PROVIDED BY PLUMBING CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR).
(FSD)	FIRE SMOKE DAMPER
D	DOOR HOLD OPEN DEVICE, FURNISHED AND INSTALLED WITH DOOR HARDWARE.
Φ	THERMAL DETECTOR.
©	CEILING MOUNTED COMBINATION FIRE ALARM SPEAKER/STROBE, CD DENOTES CANDELA
©	CEILING MOUNTED FIRE ALARM SPEAKER
© cD	CEILING MOUNTED FIRE ALARM STROBE ONLY, CD DENOTES CANDELA

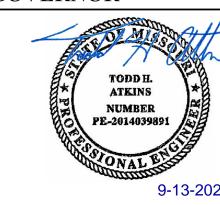
ISCELLANEOUS DE	VICFS:
①	THERMOSTAT (FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR).
R	CONTROL RELAY.
C	LIGHTING CONTACTOR.
TR	CONTROL TRANSFORMER.
⊡	PUSHBUTTON, TOP +54".
<u>©</u>	CLOCK, TOP +8'-4" OR AS NOTED.
<u>©</u> S	COMBINATION CLOCK-SPEAKER UNIT, BOTTOM AT 7'-2" OR AS NOTED.
P	PHOTOCELL MOUNTED ON ROOF FACING NORTH.
T	TIME CLOCK, +6'-2" OR AS NOTED.
H	HAND DRYER, HEIGHT AS DIRECTED BY ARCHITECT.
	MUSHROOM-TYPE PUSH BUTTON
(JUNCTION BOX.
♦	MOTOR CONNECTION.
×	OVERHEAD PADDLE FAN



DEMOLITION	/FYISTING	/NFW·
DEMOLITION	/ EXISTING	/ INE W

€ \$ □▣□	SYMBOLS SHOWN WITH THICK HEAVY DASHED LINES INDICATED EQUIPMENT OR DEVICES TO BE REMOVED.
€ \$ □•	SYMBOLS SHOWN WITH THIN LIGHT LINES INDICATES EXISTING EQUIPMENT OR DEVICES TO REMAIN.
€ \$ □	SYMBOLS SHOWN WITH THICK HEAVY SOLID LINES INDICATES NEW EQUIPMENT OR





9-13-2024

TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01

SITE # 7707 ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
PATE: 9/13/2024
ISSUE DATE: 9/13/2024

ISSUE DATE: 9/13/2024 BID SET CAD DWG FILE: E-000 DRAWN BY: JHD

CAD DWG FILE: E-000
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

ELECTRICAL SYMBOLS

SHEET NUMBER:

E-00(

- ELECTRICAL GENERAL NOTES
- A. ALLOWANCES ARE TO BE INCLUDED FOR UNFORSEEN CONDITIONS THAT MAY EFFECT THE CONTRACTOR'S SCOPE OF WORK. MINOR DEVIATIONS REQUIRED FOR ACCOMPLISHING THE INTENT OF THIS DESIGN ARE TO BE INCLUDED IN THAT ALLOWANCE.
- B. ELECTRICAL DESIGN HAS BEEN BASED ON THE INSTALLATION OF 75°C CONDUCTORS CONNECTED TO TERMINAL LUGS AND EQUIPMENT U.L. LISTED FOR A MINIMUM OF 75°C CONDUCTORS TERMINATED ON EQUIPMENT WITH A LOWER RATING (60°C) OR NO RATING SHOWN TO HAVE CONDUCTOR SIZE INCREASED
- TO CONFORM TO N.E.C. TABLE 310-16 ANDU.L. NO. 489 REQUIREMENTS.

 C. SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND CONTACTORS ARE TO BE "LISTED" AND "IDENTIFIED" AS RATED FOR A MINIMUM OF 75°C CONUCTOR TERMINATION.
- D. ALL CONDUIT INSTALLED INDOORS SHALL BE ELECTRICAL METALLIC TUBING (EMT), MINIMUM 1/2" OR AS NOTED OTHERWISE. CONDUCTORS TO BE A MINIMUM OF #12 THHN/THWN, COPPER UNLESS NOTED OTHERWISE. BRANCH CIRCUIT RUNS WITH NO MARKS OR IDENTIFICATION ARE TO BE PROVIDED WITH ONE HOT, ONE NEUTRAL AND ONE EQUIPMENT GROUND CONDUCTOR.
- E. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING INSTALLED AND PLASTIC GROMMET.
- F. ALL LOW VOLTAGE CABLING TO BE PLENUM RATED OR INSTALLED WHERE LOCATED ABOVE CEILINGS.
- G. THE CONTRACTOR TO INCLUDE GROUND WIRE IN ALL RACEWAYS. SIZE RACEWAYS AS NECESSARY TO COMPLY WITH N.E.C.
- H. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND DETAILS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND ANY OTHER EQUIPMENT INSTALLED IN THE CEILING SYSTEM. VERIFY EXACT MOUNTING HEIGHTS AND FINISHES WITH ARCHITECT PRIOR TO ROUGH—IN.
- . CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION.
- J. THE CONTRACTOR TO VERIFY EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH MECHANICAL DRAWINGS PRIOR TO FINAL PLACEMENT.
- K. BRANCH CIRCUITS SHOWN WITH TWO GROUND CONDUCTORS SHALL HAVE ONE EQUIPMENT GROUND CONDUCTOR (GREEN) AND ONE ISOLATED GROUND CONDUCTOR (GREEN WITH YELLOW STRIPE) INSTALLED IN RACEWAY.
- L. ALL PANELBOARDS ARE TO BE INSTALLED WITH A MINIMUM OF (2) 3/4" CONDUITS STUBBED UP TO ACCESSIBLE CEILING SPACE FOR FUTURE USE.
- M. ALL WORK SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE LATEST ADOPTED NATIONAL ELECTRICAL CODE, UNDERWRITER'S LABORATORIES, INC., OCCUPATIONAL SAFETY AND HEALTH ACT, AND ALL STATE, LOCAL, MUNICIPAL, AND STATUTORY REQUIREMENTS.
- N. EACH INDIVIDUAL BRANCH CIRCUIT SHALL BE PROVIDED WITH ITS OWN HOT, NEUTRAL, AND GROUND CONDUCTOR. MULTI-WIRE BRANCH CIRCUITS (SHARED NEUTRALS) SHALL NOT BE ALLOWED UNLESS OTHERWISE NOTED. WHERE MULTI-WIRE BRANCH CIRCUITS ARE REQUIRED, CIRCUIT BREAKERS SERVING MULTI-WIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH HANDLE-TIES IN ACCORDANCE WITH 240.15(B)(1).
- O. ALL 120 VOLT CIRCUITS LONGER THAN 100 FEET IN LENGTH SHALL USE #10 AWG CONDUCTORS.
- P. ALL CIRCUITS SHALL HAVE A SEPARATE GROUNDED CONDUCTOR SIZED PER N.E.C. SECTION 250.122.
- Q. THE CONTRACTOR SHALL PROVIDE CIRCUIT DIRECTORY WITH TYPED CIRCUIT DESIGNATION CARD UNDER PLASTIC COVER ON THE INSIDE OF EACH PANEL DOOR. ELECTRICAL CONTRACTOR SHALL ALSO FURNISH AND INSTALL NAMEPLATES ON ALL DISCONNECT SWITCHES, PANELBOARDS AND SWITCHBOARDS.
- R. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND PERFORM ALL WORK AND SERVICES NECESSARY FOR OR INCIDENTAL TO THE FURNISHING AND INSTALLATION, COMPLETE OF ALL WIRING MATERIALS AND METHODS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED, IN ACCORDANCE WITH PROVISIONS OF THE CONTRACT DOCUMENTS AND COMPLETELY COORDINATED WITH WORK OF ALL OTHER TRADES.
- S. CIRCUITS SHOWN ON DRAWINGS WITH ONLY A PANEL DESIGNATION SHALL BE CONNECTED TO A 20A-1P SPARE CIRCUIT BREAKER FOR EACH HOMERUN SHOWN IN PANEL UNLESS NOTED OTHERWISE.
- T. FIELD COORDINATE ALL FURNITURE POWER FEED LOCATIONS PRIOR TO ROUGH—IN.
- U. ALL DUPLEX RECEPTACLES WITHIN 6'-0" OF A SINK OR LAVATORY SHALL BE
- V. ALL FIRE ALARM HORN/STROBE DEVICES LOCATED IN THE SAME ROOM OR OPEN OFFICE AREA SHALL BE SEQUENCED TO FLASH AT THE SAME RATE PER LATEST FIRE ALARM CODE.
- W. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITIONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.
- X. CONDUIT SHALL NOT BE RUN IN RIGID INSULATION.

ELECTRICAL DEMOLITION GENERAL NOTES

- A. ANY EXISTING DEVICE AND/OR CIRCUIT SHOWN ARE INDICATED ONLY FOR INFORMATION PURPOSES. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL CONDITIONS AS THEY EXIST AND SHALL REMOVE, RELOCATE AND/OR REWORK ANY ELECTRICAL EQUIPMENT OR CIRCUITS NECESSARY FOR A COMPLETE REWIRING SYSTEM, UNLESS NOTED OTHERWISE.
- B. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL WORK TO BE DONE BY OBSERVATION OF THE SITE. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR PERFORMING ALL WORK NECESSARY TO PROVIDE A WORKMANLIKE INSTALLATION.
- C. ALL WORK SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE LATEST ADOPTED NATIONAL ELECTRICAL CODE, UNDERWRITER'S LABORATORIES, INC., OCCUPATIONAL SAFETY AND HEALTH ACT, AND ALL STATE, LOCAL, MUNICIPAL, AND STATUTORY REQUIREMENTS.
- D. THERE SHALL NOT BE ANY INTERRUPTIONS TO THE EXISTING BUILDING SERVICES (ELECTRICAL POWER, FIRE ALARM, LIGHTING CONTROLS, ETC.) WITHOUT A (7) BUSINESS DAY PRIOR NOTICE OF SUCH OUTAGE(S) TO THE ARCHITECT, BUILDING OPERATIONS MANAGER, AND ALL OTHER PARTIES INVOLVED.
- E. THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ANY MODIFICATIONS TO THE EXISTING SYSTEMS WHICH ARE TO REMAIN AND SHALL, UPON COMPLETION OF THIS PROJECT, DELIVER "RECORD" DRAWINGS TO THE ARCHITECT INDICATING ALL SUCH CHANGES. THE CONTRACTOR SHALL MAINTAIN IN THE PROJECT OFFICE, AS WORK PROGRESSES, AN UP-TO-DATE NEATLY MARKED COPY OF THESE DRAWINGS FOR REVIEW BY THE APPROPRIATE PARTIES.
- F. WHERE FEEDERS OR OTHER CIRCUITS ARE ABANDONED AND ARE CONCEALED WITHIN WALLS OR FLOORS, SUCH CIRCUITS SHALL BE DISCONNECTED AT BOTH ENDS AND LABELED. ALL EXPOSED CONDUITS, CONDUITS ABOVE LAY—IN CEILINGS OR EQUIPMENT WHICH IS ABANDONED SHALL BE REMOVED, UNLESS NOTED OTHERWISE.
- G. WHERE NEW WORK INTERFERES WITH CIRCUITS IN ROOMS OTHERWISE UNDISTURBED, EXISTING CIRCUITS SHALL BE REWORKED AS REQUIRED TO MAINTAIN SERVICE.
- H. ALL EQUIPMENT, FIXTURES, PANELS, ETC. WHICH ARE REMOVED SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, UNLESS NOTED OTHERWISE

PIPES. ETC.

- I. COORDINATE THE ROUTING OF ALL CONDUITS AND THE LOCATIONS OF ALL EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICTS WITH DUCTS,
- J. CIRCUITS ROUTINGS SHOWN IN REMODELED AREAS MAY BE MODIFIED TO SUIT FIELD CONDITIONS, HOWEVER, CARE SHOULD BE TAKEN TO KEEP DEVICES AND/OR FIXTURES AND CIRCUITS APPROXIMATELY AS INDICATED TO AVOID EXCESSIVE VOLTAGE DROP OF FEEDERS OR BRANCH CIRCUITS.
- K. UNLESS NOTED OTHERWISE, WHERE DEVICES (WITH CONCEALED CONDUITS) ARE REMOVED LEAVING EXPOSED RACEWAYS, ETC. AFTER THE FINAL SURFACE IS APPLIED THEN BLANK STAINLESS STEEL COVER PLATES SHALL BE INSTALLED.
- L. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES, THE CONDITION OF EXISTING BUILDING DEVICES AND MATERIALS, AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE SAME DURING THE COURSE OF THIS WORK. EXISTING UTILITIES, EXISTING BUILDING, AND/OR MATERIALS WHICH ARE DAMAGED BY NEGLIGENCE ON THIS CONTRACTOR'S PART OR ANY PARTIES ASSOCIATED WITH THIS CONTRACTOR, SHALL BE REPAIRED OR REPLACED AT THIS CONTRACTOR'S EXPENSE, IN A TIMELY MANNER, AND TO THE ARCHITECT'S AND OWNER'S WRITTEN ACCEPTANCE.
- M. REMOVE ALL ROMEX, BX, AND OTHER FLEXIBLE CONDUIT OR CABLE SYSTEMS, EXPOSED WIRING, ETC. FOR ALL ABANDONED CIRCUITS. INSTALL ALL NEW AND REMAINING FEEDER CIRCUITS IN EMT, IMC OR RIGID CONDUIT, AS DICTATED BY SITE CONDITIONS.
- N. ALL NEW AND EXISTING DEVICES AND EQUIPMENT LOCATED IN EXISTING REMAINING WALLS, FLOORS, AND CEILINGS SHALL BE CONNECTED WITH CONCEALED CONDUIT. THE CONTRACTOR SHALL INCLUDE ALL ASSOCIATED COSTS IN BID TO CUT, CHANNEL, AND PATCH TO MATCH EXISTING WALLS, FLOORS, AND CEILINGS TO CONCEAL ALL CONDUIT.
- O. IT IS THE INTENT THAT ALL FIXTURES, EQUIPMENT AND DEVICES IN THE REMODEL AREAS ARE TO BE REWIRED WITH NEW WIRING. ALL DEVICES SUCH AS SWITCHES, RECEPTACLES, TELEPHONE JACKS, ETC. SHALL BE REPLACED WITH NEW DEVICES. WHERE EXISTING CIRCUITS ARE IN CONDUIT, PULL NEW WIRE. ONLY WHERE ABSOLUTELY NECESSARY DUE TO EXISTING BUILDING CONDITIONS SHOULD SURFACE MOUNTED WIREMOLD BE INSTALLED WRITTEN APPROVAL SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO ANY SUCH INSTALLATION.
- P. WHERE EXISTING ELECTRICAL LIGHTING AND DISTRIBUTION PANELBOARDS ARE TO BE REMOVED, THE CONTRACTOR SHALL PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN POWER TO BRANCH AND FEEDER CIRCUITS UNTIL A PERMANENT PANEL IS INSTALLED TO RECONNECT THE EXISTING REMAINING CIRCUITS.
- Q. COORDINATE THE REMOVAL OF ALL MECHANICAL AND PLUMBING EQUIPMENT WITH THE CONTRACTORS. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL POWER AND CONTROL CIRCUITS FOR EQUIPMENT BEING REMOVED. WHERE EXISTING EQUIPMENT IS BEING REPLACED WITH NEW EQUIPMENT OR RELOCATED EQUIPMENT, THE CONTRACTOR MAY REUSE THE EXISTING CONDUIT AND ROUGH—IN LOCATIONS IF POSSIBLE, BUT NEW CONDUCTORS SHALL BE
- R. WHERE EQUIPMENT IS REMOVED FROM OR RELOCATED TO A LOCATION WHICH PENETRATES A FIRE RATED STRUCTURE, THIS CONTRACTOR SHALL PROVIDE THE APPROPRIATE FIRE STOPPING MATERIALS SUCH THAT THE RATING OF THE STRUCTURE WILL BE MAINTAINED.
- S. WHERE DEVICES, FIXTURES, OR EQUIPMENT ARE EXISTING IN SUITABLE LOCATION(S) FOR NEW CONSTRUCTION WORK AS INDICATED ON PLANS, EXISTING ROUGH—IN BOXES AND CONDUIT MAY BE UTILIZED IF THEY ARE OF PROPER SIZE, MATERIAL, AND NEW DEVICES AND WIRING ARE INSTALLED.
- T. THE EXISTING CONDITIONS REPRESENTED IN THIS DRAWING SET ARE A REPRESENTATION OF THE INFORMATION GATHERED THROUGH SITE INVESTIGATION, INTERVIEWS, AND ENGINEERING JUDGEMENT. THE DESIGN TEAM PROVIDES NEITHER GUARANTEE NOR WARRANTY AS TO THE ACCURACY OF THE EXISTING CONDITIONS REPRESENTED HEREIN. CONTRACTOR FIELD INVESTIGATION WILL BE REQUIRED.

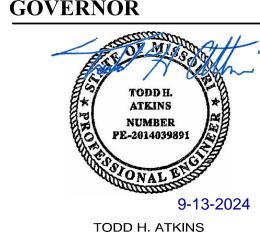
FIRE ALARM GENERAL NOTES:

- A. THE CONTRACTOR SHALL HIRE THE FACTORY AUTHORIZED LOCAL FIRE ALARM SYSTEM AGENCY (FOR THIS BUILDING) AS A SUB-CONTRACTOR TO PROVIDE FIRE ALARM SYSTEM ENGINEERED DRAWINGS, FIRE ALARM SYSTEM DEVICES AND CABLING TO MATCH THE EXISTING EQUIPMENT, PREPARE SHOP DRAWINGS, AND CONNECT THE EQUIPMENT TO THE EXISTING FIRE ALARM SYSTEM FOR PROPER OPERATION.
- B. INSTALLING CONTRACTOR SHALL PREPARE SHOP DRAWINGS AND SUBMIT THEM TO THE FIRE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO STARTING ANY WORK.
- C. EXISTING FIRE ALARM POWER SUPPLIES TO BE REMOVED AND REPLACED WITH NEW. (FIELD VERIFY QUANTITY.)
- D. REMOVE ALL EXISTING ABANDONED FIRE ALARM WIRE BACK TO SOURCE OR LAST USED DEVICE. PULL NEW WIRE TO NEW DEVICE LOCATIONS.
- E. ALL FIRE ALARM HORN/STROBE DEVICES LOCATED IN THE SAME ROOM OR OPEN OFFICE AREA SHALL BE SEQUENCED TO FLASH AT THE SAME RATE PER LATEST FIRE ALARM CODE.
- F. CONTRACTOR SHALL PROVIDE COMMISSIONING OF THE FIRE ALARM SYSTEM WITHIN THE COMPLETE SPACE AND DELIVER DRAWINGS AND THE REPORT TO THE ARCHITECT.
- G. ALL CONDUIT INSTALLED INDOORS SHALL BE ELECTRICAL METALLIC TUBING (EMT), MINIMUM 1/2".
- H. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND PERFORM ALL WORK AND SERVICES NECESSARY FOR OR INCIDENTAL TO THE FURNISHING AND INSTALLATION, COMPLETE OF ALL WIRING MATERIALS AND METHODS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED, IN ACCORDANCE WITH PROVISIONS OF THE CONTRACT DOCUMENTS AND COMPLETELY COORDINATED WITH WORK OF ALL OTHER TRADES.
- I. THE CONTRACTOR TO VERIFY EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH MECHANICAL DRAWINGS PRIOR TO FINAL PLACEMENT.
- J. ALL OPENINGS THROUGH FLOOR CONSTRUCTION, FIRE WALLS OR SMOKE PARTITIONS, SHALL BE SEALED WITH AN APPROVED SEALANT HAVING FIRE RATING EQUAL TO THAT OF STRUCTURAL MEMBER PENETRATED.
- K. PROVIDE TRANSIENT PROTECTION TO REDUCE THE POSSIBILITY OF DAMAGE BY INDUCED TRANSIENTS, CIRCUITS AND EQUIPMENT SHALL BE PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE.
- L. THE FIRE ALARM SHALL BE RESPONSIBLE FOR INCLUDING THE COST FOR ALL REQUIRED 120 VOLT CIRCUITS REQUIRED FOR THE FIRE ALARM CONTROL PANELS, SUPPLEMENTAL POWER SUPPLY PANELS AND ALL FIRE ALARM SYSTEM REQUIRED 120 VOLT CIRCUITS.

ABBREVIATIONS (REFER TO SPECIFICATIONS FOR ADDITIONAL ABBREVIATIONS THAT MAY APPLY)

/C	AMPERES ALTERNATING CURRENT	MCA MCB	MINIMUM CIRCUIT AMPACITY MAIN CIRCUIT BREAKER
ADA	AMERICANS WITH DISABILITIES ACT	мсс	MOTOR CONTROL CENTER
\F	AMPERE FUSE	MDF	MAIN DISTRIBUTION FRAME
AFCI	AMPERE FRAME (CIRCUIT BREAKER) ARC FAULT CIRCUIT INTERRUPTER	MDP MFR	MAIN DISTRIBUTION PANEL MANUFACTURER
AFCI AFF	ABOVE FINISHED FLOOR.	MH	MANHOLE
AFG	ABOVE FINISHED GRADE	MICRO.	MICROWAVE
λНJ	AUTHORITY HAVING JURISDICTION	MIN	MINIMUM
AIC	AMPERE INTERRUPTING CURRENT	MLO MOCB	MAIN LUGS ONLY
NL NS	ALUMINIUM AMP SWITCH	MOCP MOCPD	MAXIMUM OVERCURRENT PROTECTION MAXIMUM OVERCURRENT PROTECTIVE DEVICE
√ 5 √ T	AMP SWITCH AMPS TRIP	MSB	MAIN SWITCHBOARD
ATL	ACROSS-THE-LINE	MSWB	MAIN SWITCHBOARD
ATS	AUTOMATIC TRANSFER SWITCH	MTD	MOUNTED
W.	AUDIO VISUAL		
\WG	AMERICAN WIRE GAUGE	N/A	NOT APPLICABLE
В		N/C	NOT AFFLICABLE NORMALLY CLOSED
BAS	BUILDING AUTOMATION SYSTEM	N.C.	NORMALLY CLOSED
BFF	BELOW FINISHED FLOOR	NC	NOISE CRITERIA
BFG BKR	BELOW FINISHED GRADE	NEC NF	NATIONAL ELECTRICAL CODE
BTU	BREAKER BRITISH THERMAL UNIT	NFPA	NON-FUSED NATIONAL FIRE PROTECTION ASSOCIATION, INC.
	···· — · · · · · ·	NIC	NOT IN CONTRACT
С		NL .	NIGHT LIGHT
	CONDUIT	N/0	NORMALLY OPEN
CAT	CATEGORY	N.O.	NORMALLY OPEN
CATV	CABLE TELEVISION SYSTEM		
CB CT	CIRCUIT BREAKER CURRENT TRANSFORMER	os	OCCUPANCY SENSOR
CCTV	CLOSED CIRCUIT TELEVISION	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CKT	CIRCUIT	OSP	OUTSIDE PLANT
CPT	CONTROL POWER TRANSFORMER	P	
CVD	COPPER CUMULATIVE VOLTAGE DROP	P	POLE
, V U	COMOLATIVE VOLTAGE DRUP	PBX	PRIVATE BRANCH EXCHANGE RETURN
D		PDU	POWER DISTRIBUTION UNIT
В	DECIBELS	PH	PHASE
DDC	DIRECT DIGITAL CONTROL	Ø PIV	PHASE POST INDICATOR VALVE
OIV	DIVISION	PNL	PANEL
)PDT	DOUBLE POLE, DOUBLE THROW	PNLBD	PANELBOARD
PST	DOUBLE-POLE, SINGLE-THROW	POE	POWER OVER ETHERNET
Е		POTS	STANDARD ANALOG TELEPHONE LINE
(E)	EXISTING	POTS PT	PLAIN OLD TELEPHONE SERVICE POTENTIAL TRANSFORMER
EM	EMERGENCY	PTZ	PAN TILT ZOOM
EMI	ELECTROMAGNETIC INTERFERENCE	PVC	POLYVINYL CHLORIDE
EMS	ENERGY MANAGEMENT SYSTEM		
EMT EPO	ELECTRICAL METALLIC TUBING EMERGENCY POWER OFF	Q	
ETR	EXISTING TO REMAIN	QTY	QUANTITY
EWC	ELECTRIC WATER COOLER	R	
EX	EXISTING	RCPT	RECEPTACLE
EXIST	EXISTING	RCP	REFLECTED CEILING PLAN
F		REV	REVISION
-A	FIRE ALARM	RF RLA	RETURN FAN RUNNING LOAD AMPS
FACP	FIRE ALARM CONTROL PANEL	RMC	RIGID METAL CONDUIT
FCA	FAULT CURRENT AMPS	RPM	REVOLUTIONS PER MINUTE
TLA TLR	FULL LOAD AMPS FLOOR		
□ 1 \	. 2001.	SB	SWITCHBOARD
G		SF	SQUARE FEET
GC	GENERAL CONTRACTOR	SPDT	SINGLE-POLE, DOUBLE-THROW
GFCI NEED	GROUND FAULT FOLUBRIANT PROTECTION	SPST	SINGLE-POLE, SINGLE-THROW
GFEP GFR	GROUND FAULT EQUIPMENT PROTECTION GROUND FAULT RELAY	SS	STAINLESS STEEL
3F.K	GROUND FAULT RELAT	S/S ST	STAINLESS STEEL SHUNT TRIP
SND	GROUND	SWBD	SHUNT TRIP SWITCHBOARD
GRS	GALVANIZED RIGID STEEL	SCCR	SHORT CIRCUIT CURRENT RATING
SYP	GYPSUM BOARD		
Н		TDD	
HOA AOH	HAND-OFF-AUTOMATIC	TBD	TO BE DETERMINED TEMPERATURE CONTROLS CONTRACTOR
HP	HORSEPOWER	TGB	TELECOMMUNICATIONS GROUND BUS BAR
HTG	HEATING	TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
HTR HZ	HEATER HERTZ	TMGB	TELECOMMUNICATIONS MAIN GROUND BUS BAR
· 仁	HENVE	TX	TRANSFORMER
ĺ		TYP	TYPICAL
G	ISOLATED GROUND	U	
MC P	INTERMEDIATE MENTAL CONDUIT INTERNET PROTOCOL	UG	UNDERGROUND
P SC	SHORT CIRCUIT CURRENT	UL	UNDERWRITERS LABORATORIES, INC.
SP	INTERNET SERVICE PROVIDER	UNO UPS	UNLESS NOTED OTHERWISE UNINTERRUPTIBLE POWER SUPPLY
		UTP	UNSHIELDED TWIST PAIR
J			
JB J-BOX	JUNCTION BOX JUNCTION BOX	\ \ \ \ \ \	
		V VAC	VOLTS VOLTS ALTERNATING CURRENT
K		VAC VD	VOLTAGE DROP
kemil	1000 CIRCULAR MILS	VDC	VOLTS DIRECT CURRENT
Κ	KIRK KEY	VFD	VARIABLE FREQUENCY DRIVE
(V (VA	KILOVOLT KILOVOLT-AMPS		
KVA KVAR	KILOVOLT-AMPS REACTIVE	w w	WIRE
k W	KILOWATT	W/	WITH
кWH	KILOWATT-HOUR	w/o	WITHOUT
1		WAP	WIRELESS ACCESS POINT
.ED	LIGHT-EMITTING DIODE	WP	WEATHER PROOF COVER
.F	LINEAR FEET	WR	WEATHER RESISTANT
.RA	LOCKED ROTOR AMPS	X	
		XP	EXPLOSION-PROOF
		_	

STATE OF MISSOURI MICHAEL L. PARSON,



LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT
CONSIDERED SIGNED AND SEALED AND THE
SIGNATURE MUST BE VERIFIED ON ANY
ELECTRONIC COPIES

GIBBENS DRAKE SCOTT, INC.

GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
PATE: 9/13/2024
ISSUE DATE: 9/13/2024

ASSET#

CAD DWG FILE: E-001
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

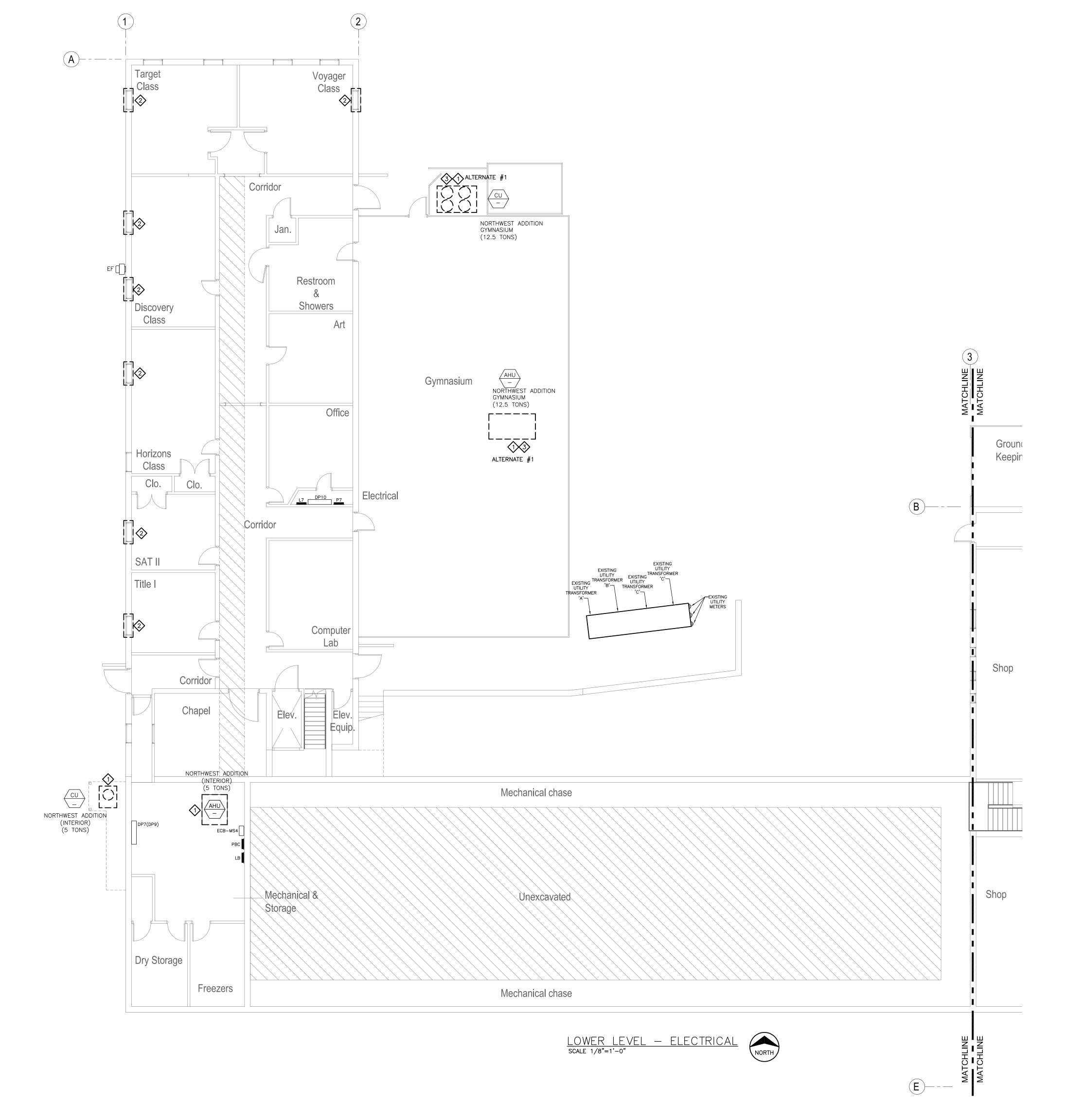
SHEET TITLE:

ELECTRICAL NOTES, ABBREVIATIONS

BID SET

SHEET NUMBER:

E-0031 OF 44 SHEETS



ELECTRICAL DEMOLITION GENERAL NOTES

A. REFER TO SHEET E-001 FOR DEMOLITION GENERAL NOTES.

ELECTRICAL PLAN DEMOLITION NOTES NOTE: NOTES APPLY TO SHEETS ED-101 AND ED-102. ALL NOTES MAY NOT APPLY TO THIS SHEET.

- REMOVE MECHANICAL EQUIPMENT NOT REQUIRED TO REMAIN. WHERE FEASIBLE, EXISTING CIRCUITING MAY BE REUSED TO POWER NEW MECHANICAL EQUIPMENT. FIELD VERIFY EXISTING CIRCUITING AND COORDINATE WITH NEW EQUIPMENT REQUIREMENTS. DISCONNECT AND REMOVE ALL ASSOCIATED CIRCUITING NOT REQUIRED TO REMAIN BACK TO SOURCE, UPDATE PANEL SCHEDULE, REFER TO MECHANICAL DRAWINGS AND NARRATIVE FOR EQUIPMENT TO BE REMOVED.
- REMOVE EXISTING PTAC UNIT. REMOVE ASSOCIATED RECEPTACLE AND CIRCUITING BACK TO SOURCE. PATCH AND REPAIR SURFACES TO MATCH ARCHITECTURAL FINISHES.
- 3 ALTERNATE ASSOCIATED WITH THIS EQUIPMENT. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

MISCELLANEOUS NOTES

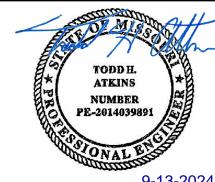
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

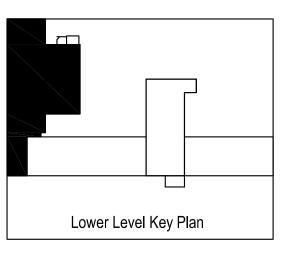
STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 9201 E. 63rd Stree Raytown, Missouri (816) 358-1790 Raytown, Missouri 64133 Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707 SITE#

8877707003

REVISION: REVISION: REVISION: DATE: 9/13/2024 ISSUE DATE: 9/13/2024 BID SET

CAD DWG FILE: ED-101 DRAWN BY: JHD CHECKED BY: THA DESIGNED BY: GDS

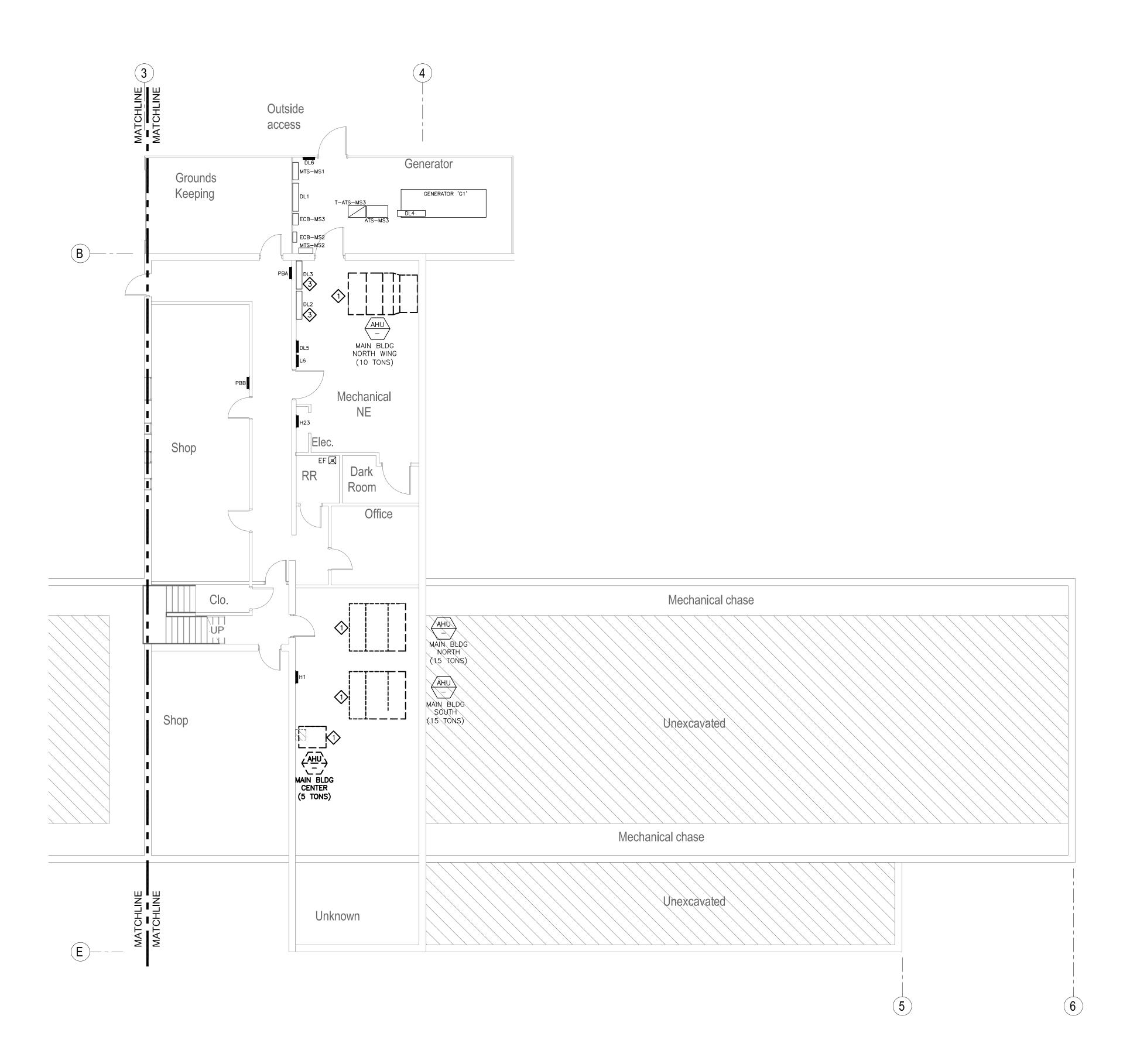
SHEET TITLE:

ASSET#

LOWER LEVEL **ELECTRICAL DEMO** PLAN

SHEET NUMBER:

32 OF 44 SHEETS



LOWER LEVEL— ELECTRICAL SCALE 1/8"=1'-0"



ELECTRICAL DEMOLITION

A. REFER TO SHEET E-001 FOR DEMOLITION GENERAL NOTES.

GENERAL NOTES

ELECTRICAL PLAN DEMOLITION NOTES NOTE: NOTES APPLY TO SHEETS ED-101 AND ED-102. ALL NOTES MAY NOT APPLY TO THIS SHEET.

- REMOVE MECHANICAL EQUIPMENT NOT REQUIRED TO REMAIN. WHERE FEASIBLE, EXISTING CIRCUITING MAY BE REUSED TO POWER NEW MECHANICAL EQUIPMENT. FIELD VERIFY EXISTING CIRCUITING AND COORDINATE WITH NEW EQUIPMENT REQUIREMENTS. DISCONNECT AND REMOVE ALL ASSOCIATED CIRCUITING NOT REQUIRED TO REMAIN BACK TO SOURCE. UPDATE PANEL SCHEDULE. REFER TO MECHANICAL DRAWINGS AND NARRATIVE FOR EQUIPMENT TO BE REMOVED.
- 3 ALTERNATE ASSOCIATED WITH THIS EQUIPMENT. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES.
THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

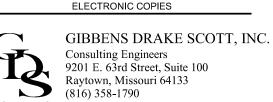
CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

MICHAEL L. PARSON, **GOVERNOR** ATKINS

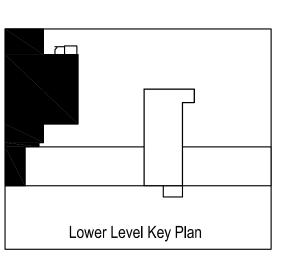
STATE OF MISSOURI

NUMBER

TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707 SITE#

ASSET#

8877707003

REVISION: REVISION: REVISION:

DATE: 9/13/2024 ISSUE DATE: 9/13/2024 BID SET

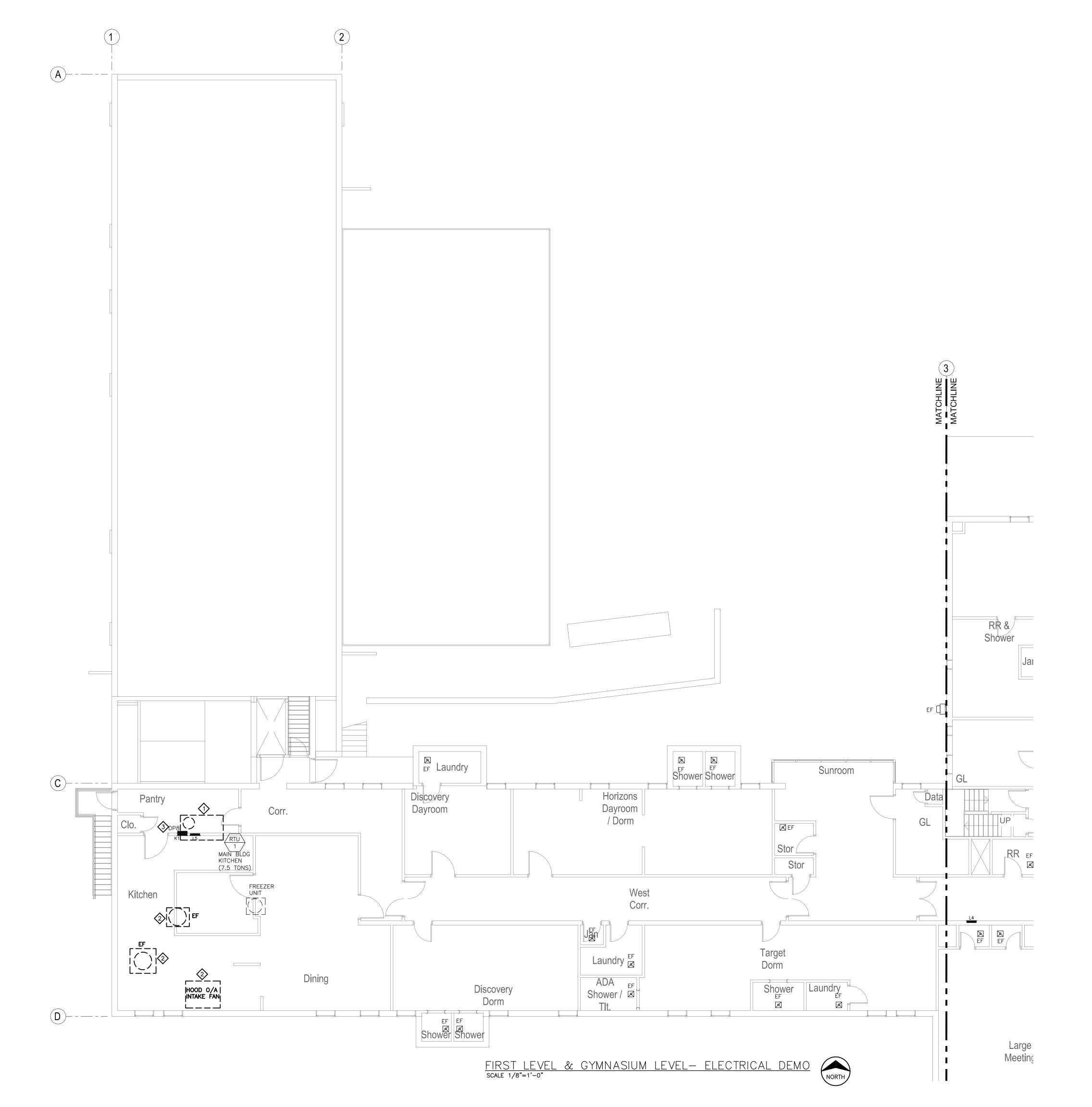
CAD DWG FILE: ED-102
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

LOWER LEVEL ELECTRICAL DEMO PLAN

SHEET NUMBER:

33 OF 44 SHEETS



ELECTRICAL DEMOLITION GENERAL NOTES

A. REFER TO SHEET E-001 FOR DEMOLITION GENERAL NOTES.

ELECTRICAL PLAN DEMOLITION NOTES
NOTE: NOTES APPLY TO SHEETS ED-111 AND ED-112. ALL NOTES MAY NOT APPLY TO THIS SHEET.

- 1) REMOVE MECHANICAL EQUIPMENT NOT REQUIRED TO REMAIN. WHERE FEASIBLE, EXISTING CIRCUITING MAY BE REUSED TO POWER NEW MECHANICAL EQUIPMENT. FIELD VERIFY EXISTING CIRCUITING AND COORDINATE WITH NEW EQUIPMENT REQUIREMENTS. DISCONNECT AND REMOVE ALL ASSOCIATED CIRCUITING NOT REQUIRED TO REMAIN BACK TO SOURCE. UPDATE PANEL SCHEDULE. REFER TO MECHANICAL DRAWINGS AND NARRATIVE FOR EQUIPMENT TO BE REMOVED.
- 2 ALTERNATE #2. DISCONNECT FROM POWER AND REMOVE EXISTING UPBLAST EXHAUST FAN, KITCHEN HOOD EXHAUST FAN, AND MAKEUP AIR FAN. REMOVE ASSOCIATED CIRCUITING THAT CANNOT BE REUSED. CIRCUIT NEW FANS PER MANUFACTURE'S INSTRUCTIONS. REFERENCE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 3 ALTERNATE ASSOCIATED WITH THIS EQUIPMENT. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

MISCELLANEOUS NOTES

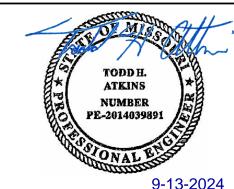
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

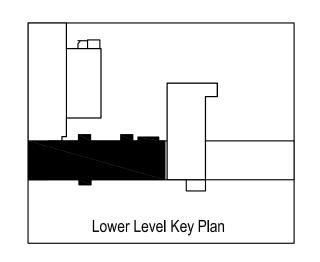
STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 Raytown, Missouri 64133 Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

8877707003 ASSET#

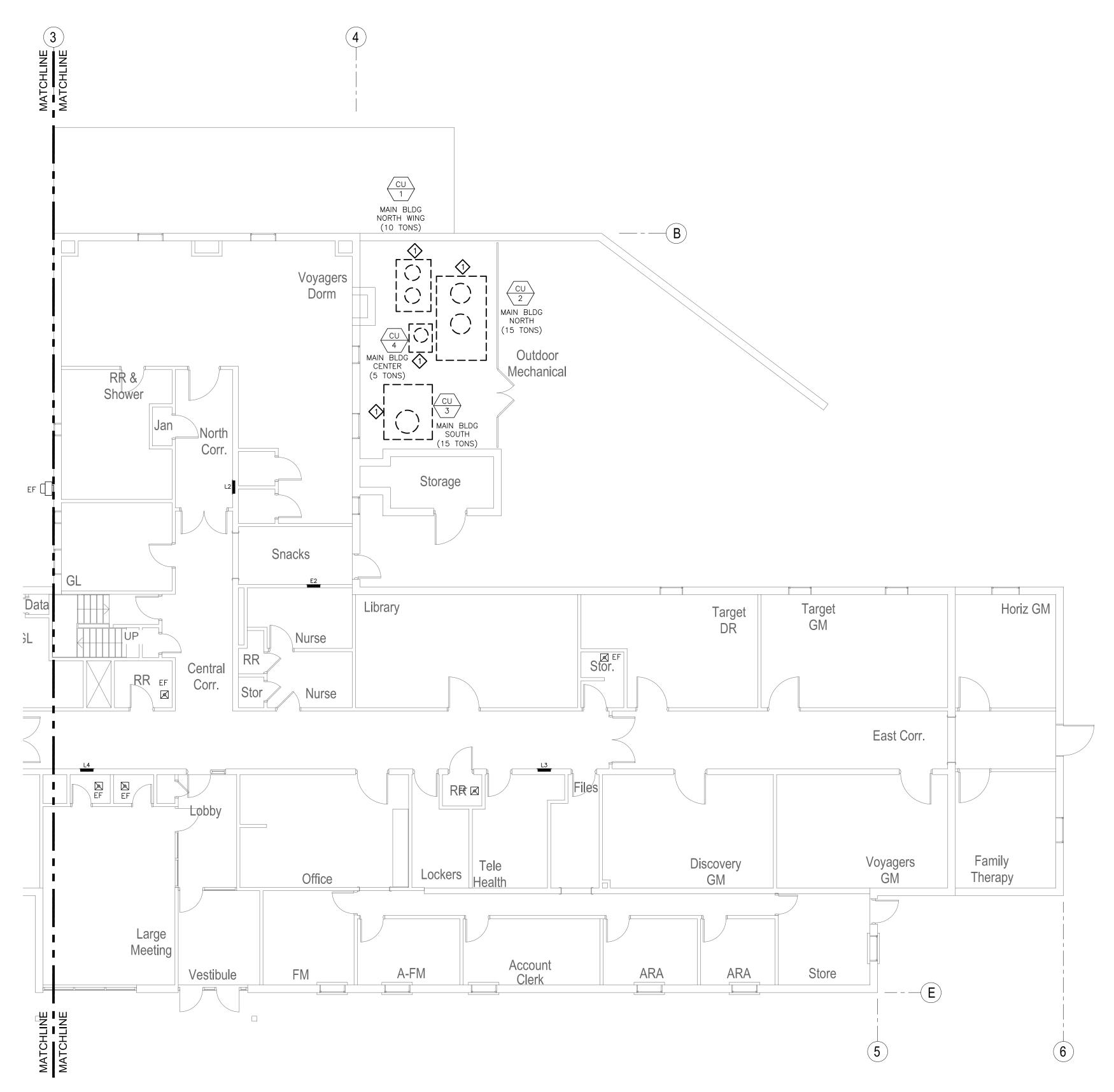
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE: 9/13/2024
ISSUE DATE: 9/13/2024

CAD DWG FILE: ED-111
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE: FIRST LEVEL & GYMNASIUM LEVEL

ELECTRICAL **DEMO PLAN**

SHEET NUMBER:



FIRST LEVEL— ELECTRICAL DEMO SCALE 1/8"=1'-0"



ELECTRICAL DEMOLITION GENERAL NOTES

A. REFER TO SHEET E-001 FOR DEMOLITION GENERAL NOTES.

ELECTRICAL PLAN DEMOLITION NOTES
NOTE: NOTES APPLY TO SHEETS ED-111 AND ED-112. ALL NOTES MAY NOT APPLY TO THIS SHEET.

REMOVE MECHANICAL EQUIPMENT NOT REQUIRED TO REMAIN. WHERE FEASIBLE, EXISTING CIRCUITING MAY BE REUSED TO POWER NEW MECHANICAL EQUIPMENT. FIELD VERIFY EXISTING CIRCUITING AND COORDINATE WITH NEW EQUIPMENT REQUIREMENTS. DISCONNECT AND REMOVE ALL ASSOCIATED CIRCUITING NOT REQUIRED TO REMAIN BACK TO SOURCE. UPDATE PANEL SCHEDULE. REFER TO MECHANICAL DRAWINGS AND NARRATIVE FOR EQUIPMENT TO BE REMOVED.

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

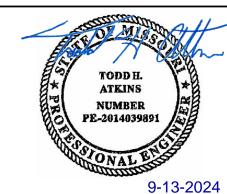
FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

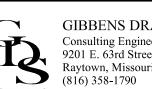
CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

STATE OF MISSOURI MICHAEL L. PARSON,

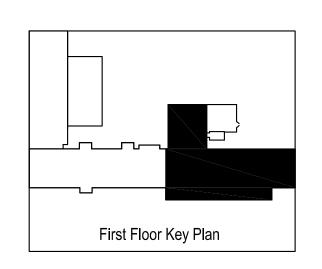
GOVERNOR



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 Raytown, Missouri 64133 Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

ASSET#

8877707003

REVISION: REVISION: REVISION: DATE: 9/13/2024 ISSUE DATE: 9/13/2024 BID SET

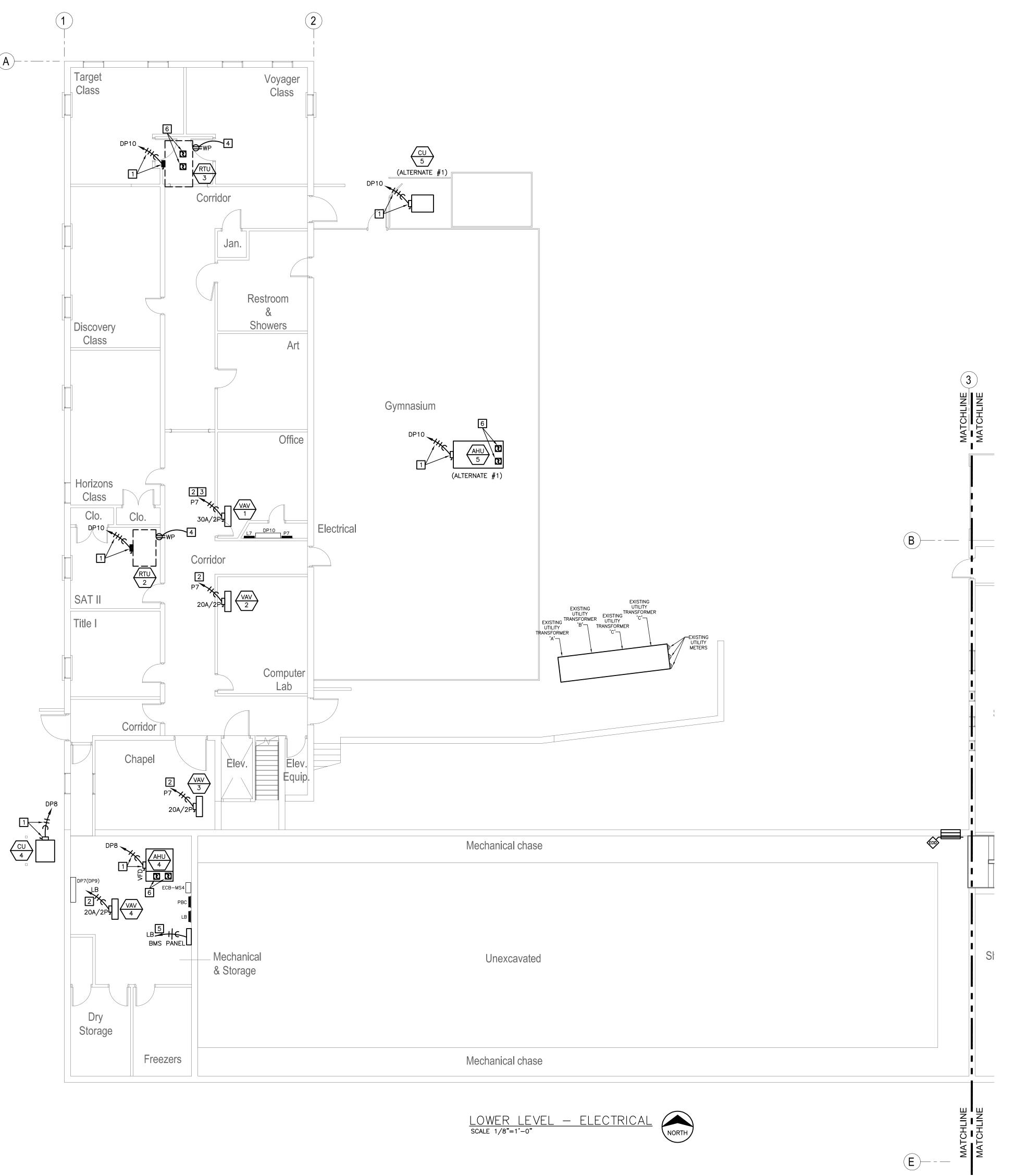
CAD DWG FILE: ED-112
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE: FIRST LEVEL &

GYMNASIUM LEVEL **ELECTRICAL DEMO** PLAN

SHEET NUMBER:





A. REFER TO SHEET E-001 FOR ELECTRICAL GENERAL NOTES. B. REFER TO SHEET E-001 FOR FIRE ALARM GENERAL NOTES.

ELECTRICAL PLAN NOTES

- REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR CIRCUITING AND DISCONNECT INFORMATION.
- 2 CONNECT TO NEW OR SPARE 20A/2P CIRCUIT BREAKER. FIELD VERIFY AND PROVIDE NEW BREAKER AS REQUIRED.
- $\boxed{3}$ PROVIDE 2-#10, 1-#10 GROUND IN 3/4" CONDUIT.
- FACTORY MOUNTED RECEPTACLE. CONNECT TO NEAREST CIRCUIT SERVING RECEPTACLES ON THE ROOF OR TO NEW OR SPARE CIRCUIT BREAKER IN NEAREST 120V PANEL.
- 5 CONNECT TO NEW OR SPARE 20A/1P CIRCUIT BREAKER.
- 6 PROVIDE DUCT SMOKE DETECTOR. COORDINATE REQUIREMENTS WITH HVAC EQUIPMENT MANUFACTURER. PROVIDE CONNECTION TO EXISTING FIRE ALARM SYSTEM AS REQUIRED.

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



TODD H. ATKINS

LICENSE # E-2014039891

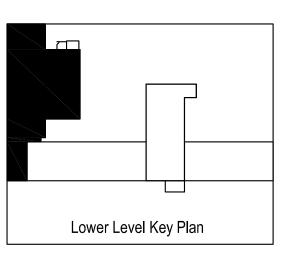
PRINTED COPIES OF THIS DOCUMENT ARE NOT

CONSIDERED SIGNED AND SEALED AND THE

SIGNATURE MUST BE VERIFIED ON ANY



Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
POINT PROVIDED NOT PRO

ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE: E-101
DRAWN BY: JHD
CHECKED BY: THA

DESIGNED BY: GDS

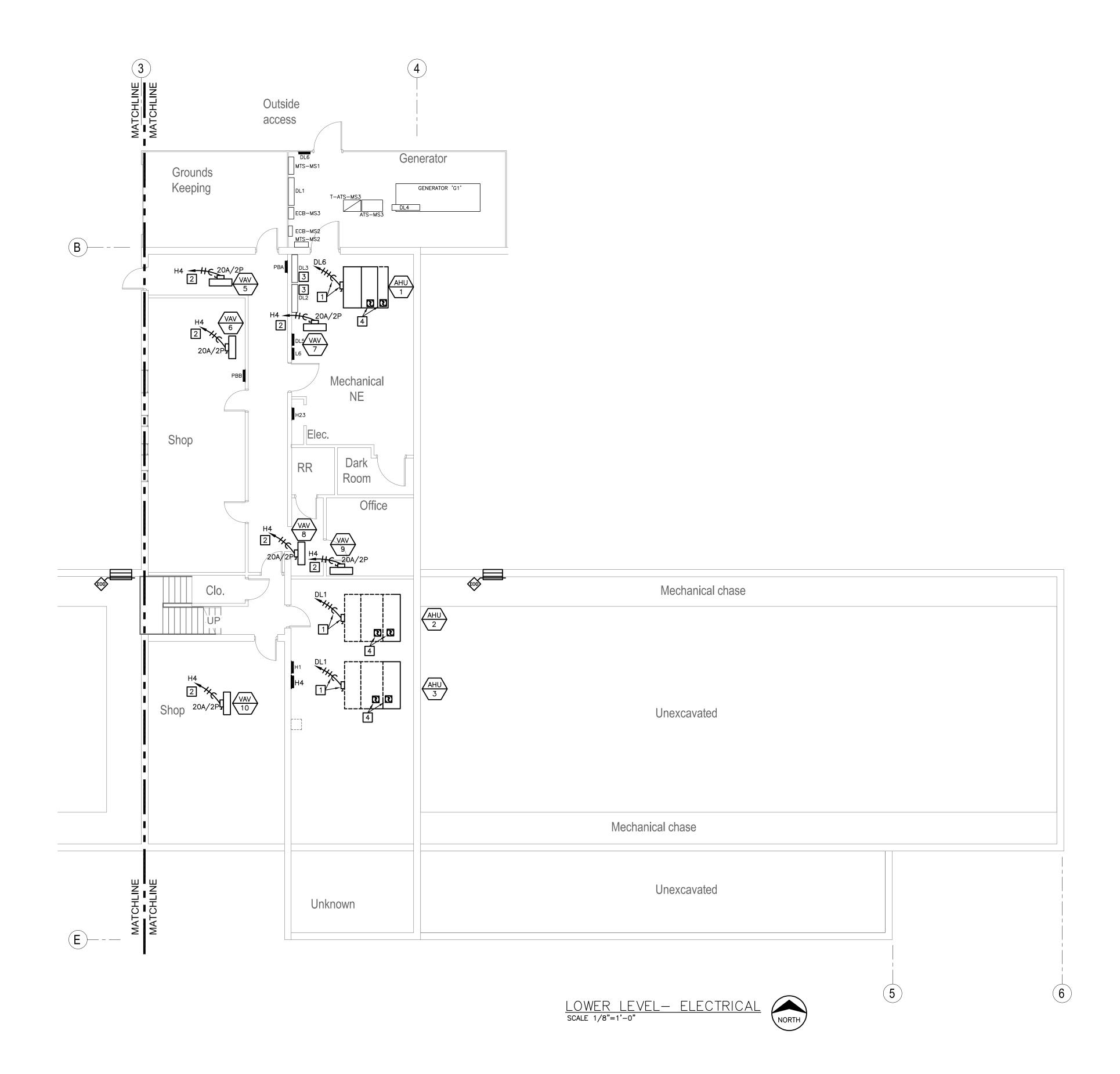
SHEET TITLE:

LOWER LEVEL

ELECTRICAL PLAN

SHEET NUMBER:

E-101



A. REFER TO SHEET E-001 FOR ELECTRICAL GENERAL NOTES. B. REFER TO SHEET E-001 FOR FIRE ALARM GENERAL NOTES.

ELECTRICAL PLAN NOTES

- REFER TO ELECTRICAL ONE—LINE DIAGRAM FOR CIRCUITING AND DISCONNECT INFORMATION.
- 2 CONNECT TO NEW OR SPARE 20A/2P CIRCUIT BREAKER.
- 3 ALTERNATE ASSOCIATED WITH THIS EQUIPMENT. REFER TO ONE—LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 4 PROVIDE DUCT SMOKE DETECTOR. COORDINATE REQUIREMENTS WITH HVAC EQUIPMENT MANUFACTURER. PROVIDE CONNECTION TO EXISTING FIRE ALARM SYSTEM AS REQUIRED.

MISCELLANEOUS NOTES

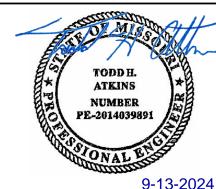
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



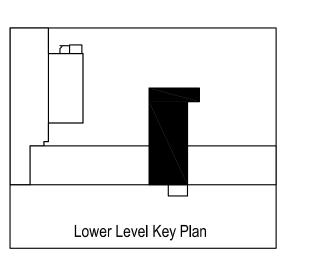
TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED ON ANY



Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
9/13/2024
ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE:E-102
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

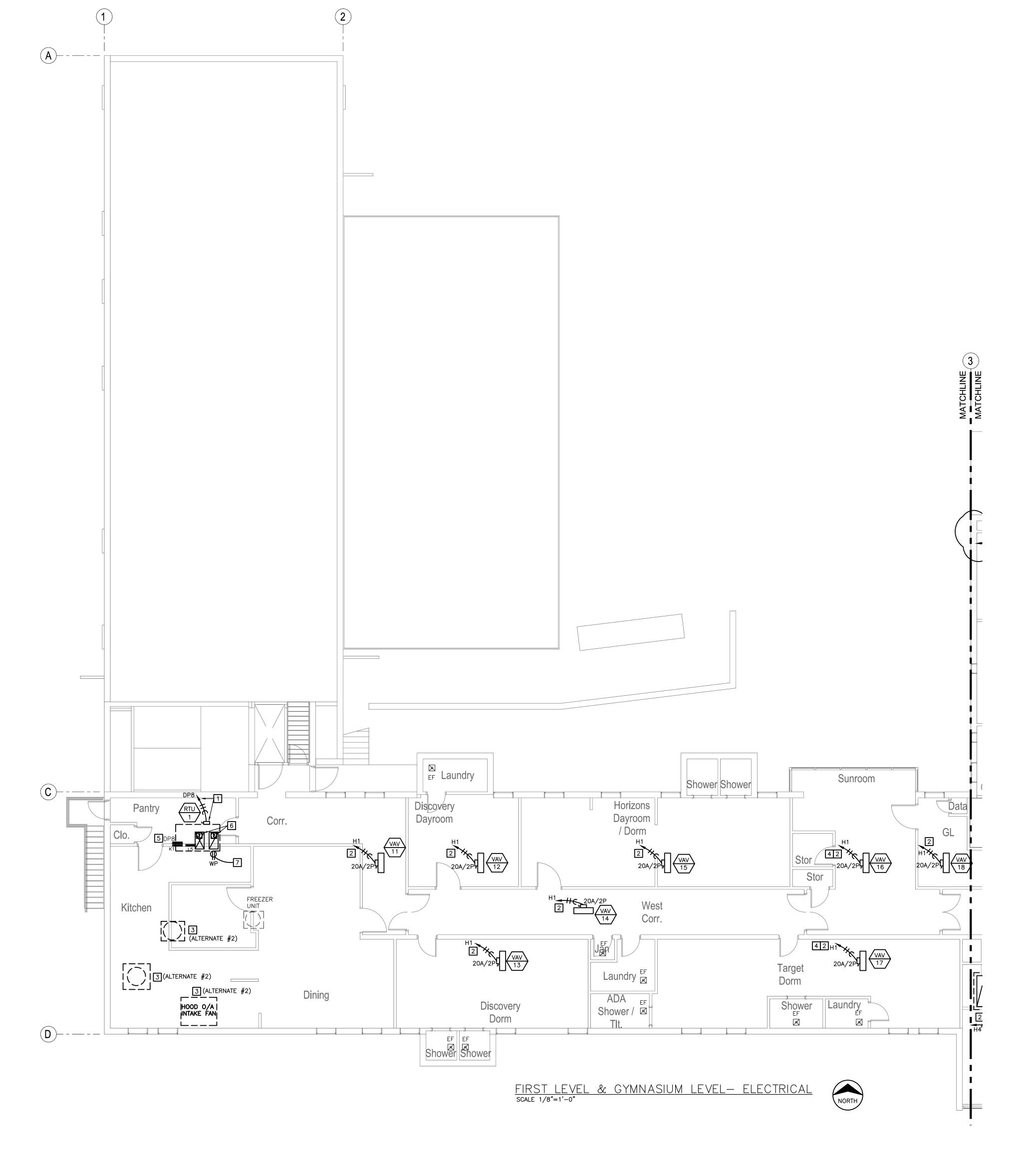
SHEET TITLE:

09/13/24

LOWER LEVEL ELECTRICAL PLAN

SHEET NUMBER:

E-102
37 OF 44 SHEETS



A. REFER TO SHEET E-001 FOR ELECTRICAL GENERAL NOTES. B. REFER TO SHEET E-001 FOR FIRE ALARM GENERAL NOTES.

ELECTRICAL PLAN NOTES

- REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR CIRCUITING AND DISCONNECT INFORMATION.
- 2 CONNECT TO NEW OR SPARE 20A/2P CIRCUIT BREAKER. FIELD VERIFY AND PROVIDE NEW BREAKER AS REQUIRED.
- ALTERNATE #2. DISCONNECT FROM POWER AND REMOVE EXISTING UPBLAST EXHAUST FAN, KITCHEN HOOD EXHAUST FAN, AND MAKEUP AIR FAN. REMOVE ASSOCIATED CIRCUITING THAT CANNOT BE REUSED. CIRCUIT NEW FANS PER MANUFACTURE'S INSTRUCTIONS. REFERENCE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 4 PROVIDE 2-#10, 1-#10 GROUND IN 3/4" CONDUIT.
- 5 ALTERNATE ASSOCIATED WITH THIS EQUIPMENT. REFER TO ONE—LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 6 PROVIDE DUCT SMOKE DETECTOR. COORDINATE REQUIREMENTS WITH HVAC EQUIPMENT MANUFACTURER. PROVIDE CONNECTION TO EXISTING FIRE ALARM SYSTEM AS REQUIRED.
- 7 FACTORY MOUNTED RECEPTACLE. CONNECT TO NEAREST CIRCUIT SERVING RECEPTACLES ON THE ROOF OR TO NEW OR SPARE CIRCUIT BREAKER IN NEAREST 120V PANEL.

MISCELLANEOUS NOTES

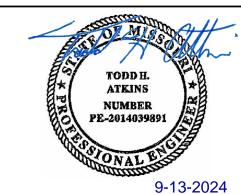
CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



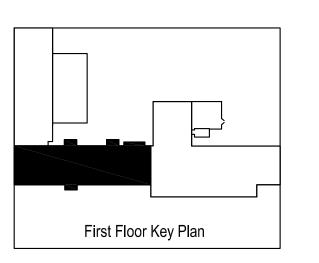
TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE



GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET#

8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
9/13/2024
ISSUE DATE: 9/13/2024
BID SET

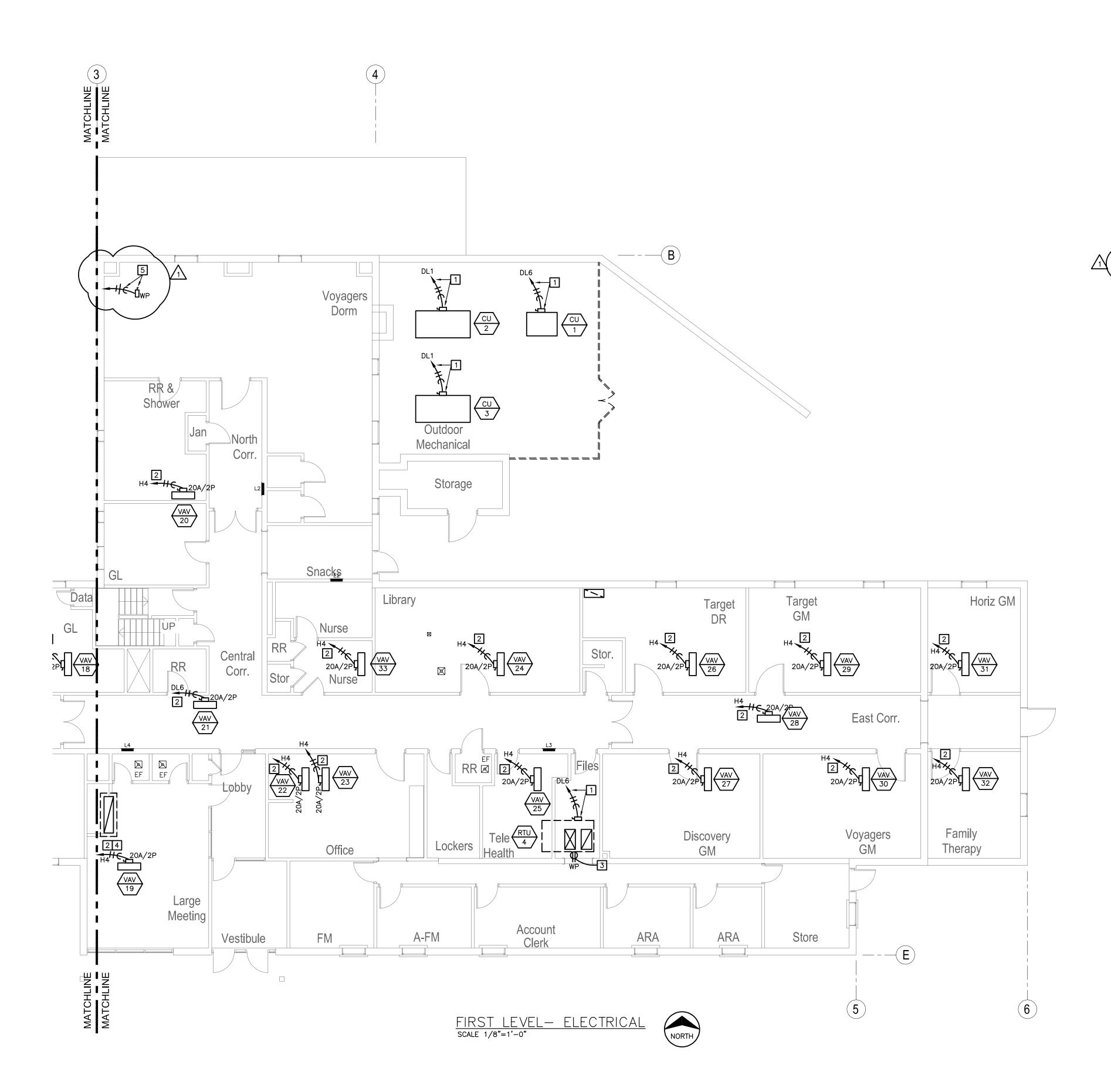
CAD DWG FILE: E-111
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

FIRST LEVEL &
GYMNASIUM LEVEL
ELECTRICAL PLAN

SHEET NUMBER:

E-111 38 OF 44 SHEETS 09/13/24



A. REFER TO SHEET E-001 FOR ELECTRICAL GENERAL NOTES. B. REFER TO SHEET E-001 FOR FIRE ALARM GENERAL NOTES.

ELECTRICAL PLAN NOTES

- REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR CIRCUITING AND DISCONNECT INFORMATION.
- 2 CONNECT TO NEW OR SPARE 20A/2P CIRCUIT BREAKER.
- FACTORY MOUNTED RECEPTACLE. CONNECT TO NEAREST CIRCUIT SERVING RECEPTACLES ON THE ROOF OR TO NEW OR SPARE CIRCUIT BREAKER IN NEAREST 120V PANEL.

5 ALTERNATE #1: PROVIDE POWER CONNECTION ON ROOF FOR ROOF-MOUNTED CRANE. COORDINATE LOCATION WITH CRANE INSTALLER AND MAKE FINAL CONNECTIONS TO CRANE AS REQUIRED. WEATHER-PROOF ANY PENETRATIONS. PROVIDE DEDICATED CIRCUIT CONNECTING TO SPARE OR NEW 20A/1P BREAKER IN NEAREST 120V PANEL. COORDINATE EXACT ELECTRICAL BREAKER SIZE AND REQUIREMENTS WITH CRANE MANUFACTURER'S SPECIFICATIONS.

MISCELLANEOUS NOTES

CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIR OF ANY DAMAGED ITEMS OR SURFACES RESULTING FROM THEIR WORK ACTIVITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGES INCURRED DURING DEMOLITION, CONSTRUCTION, INSTALLATION, OR ANY OTHER RELATED TASKS. THE CONTRACTOR IS EXPECTED TO PROMPTLY IDENTIFY AND ADDRESS ANY DAMAGES, ENSURING THAT THE AFFECTED AREAS ARE RESTORED TO THEIR ORIGINAL CONDITION OAT THEIR OWN EXPENSE. IT IS IMPERATIVE THAT ALL NECESSARY REPAIRS ARE COMPLETED TO THE SATISFACTION OF THE FMDC PROJECT MANAGER.

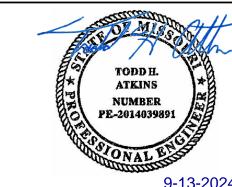
FIRE CAULK AROUND THE PERIMETER OF ALL NEW FLOOR, CEILING, AND WALL PENETRATIONS RESULTING FROM THIS NEW WORK, REGARDLESS OF FLOOR/WALL/CEILING/ROOF ASSEMBLY REQUIREMENT. PATCH OPEN AREAS IN EXISTING PLASTER CEILINGS WITHIN CEILING AREAS EXPOSED BY THIS NEW WORK. REFERENCE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS.

CONTRACTOR SHALL PROVIDE DAILY CLEANING, VANDAL PROTECTION, AND BARRIER PROTECTION BETWEEN WORK AND NON-WORK AREAS.

CONFIDENTIALITY NOTICE: BUILDING OCCUPANT PRIVACY IS PARAMOUNT. NO PHOTOGRAPHY, VIDEOGRAPHY, OR COMMUNICATION WITH BUILDING OCCUPANTS IS PERMITTED. THIS RESTRICTION APPLIES TO ALL AREAS WITHIN THE PREMISES, INCLUDING BUT NOT LIMITED TO CLASSROOMS, HALLWAYS, COMMON AREAS, AND OUTDOOR SPACES.

STATE OF MISSOURI MICHAEL L. PARSON,

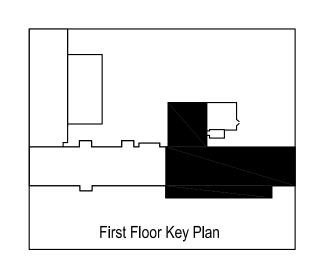
GOVERNOR



TODD H. ATKINS LICENSE # E-2014039891
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



GIBBENS DRAKE SCOTT, INC. Consulting Engineers 9201 E. 63rd Street, Suite 100 Raytown, Missouri 64133 Missouri State Certificate of Authority #000816



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 7707

ASSET#

8877707003

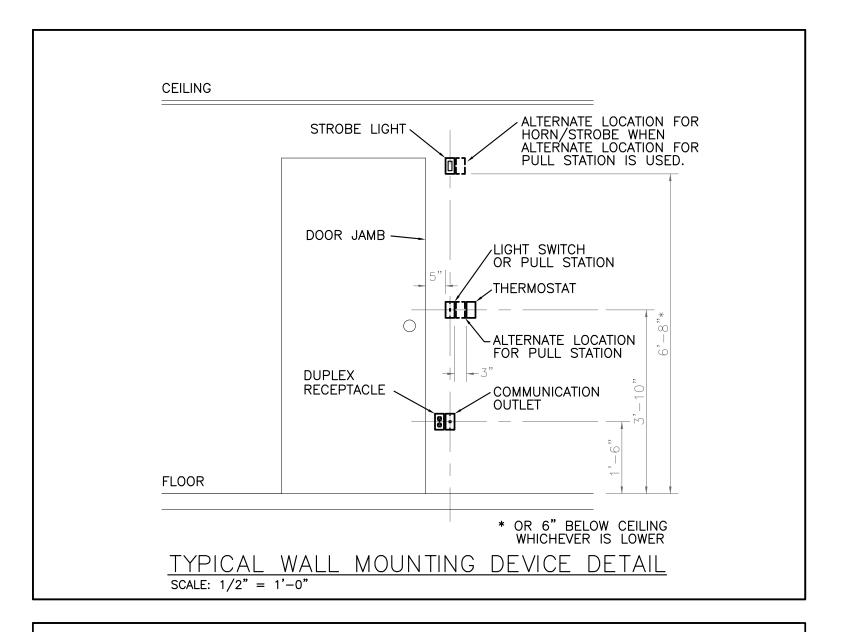
REVISION: REVISION: REVISION: DATE: 9/13/2024 ISSUE DATE: 9/13/2024 BID SET

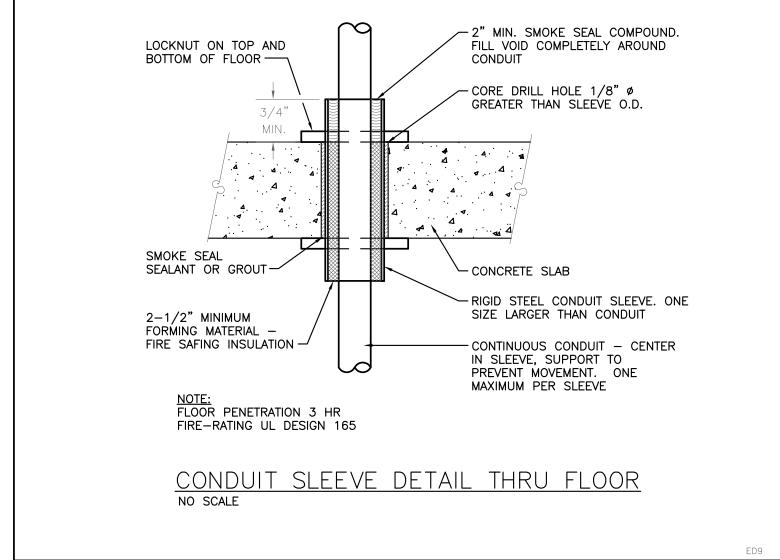
CAD DWG FILE: E-112
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

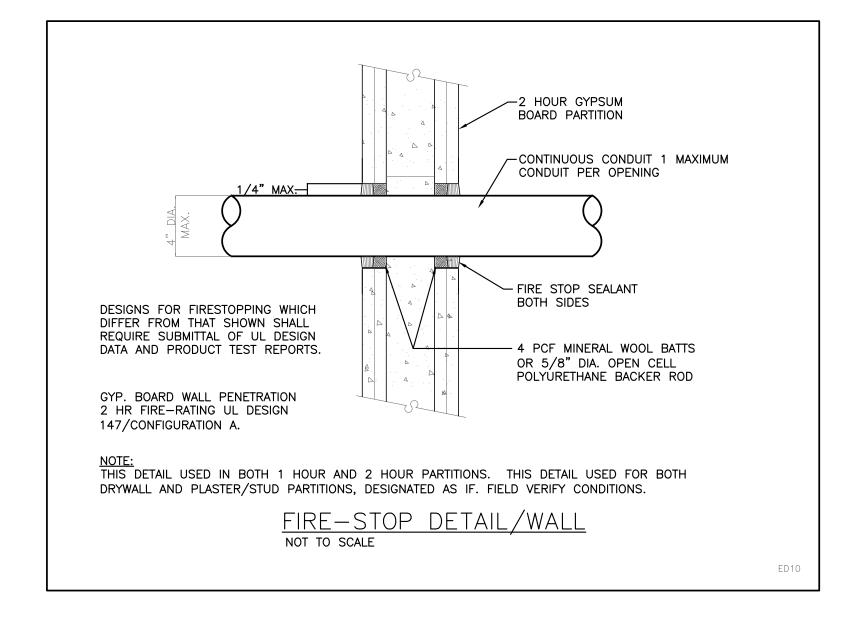
SHEET TITLE:

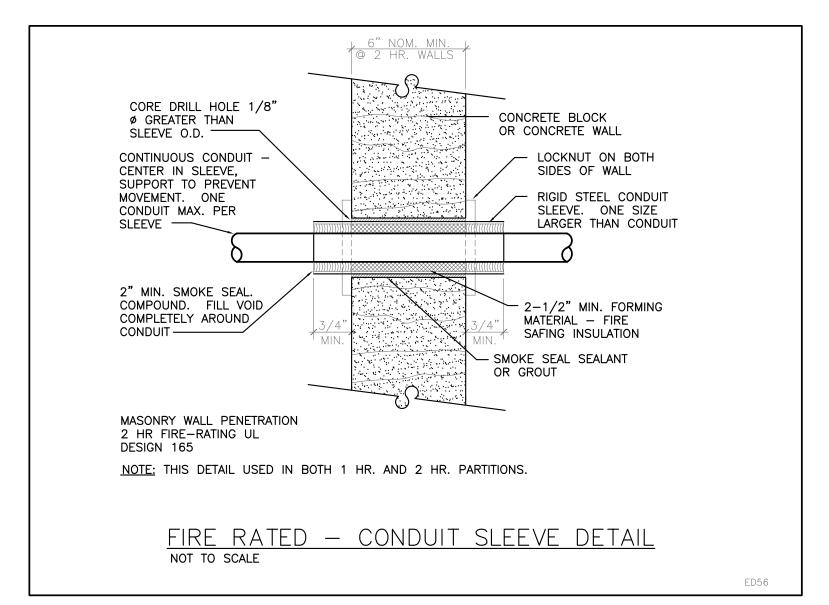
FIRST LEVEL & GYMNASIUM LEVEL **ELECTRICAL PLAN**

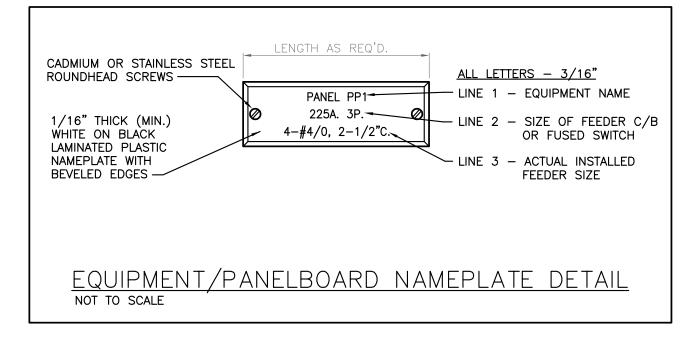
SHEET NUMBER:









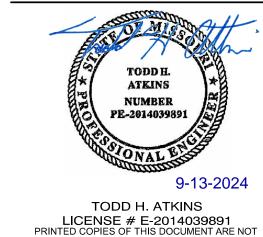


CONCRETE OR MASONRY GYPSUM BOARD/FRAME								
TYPE OF PENETRATION	FLOORS UL SYSTEM #	WALLS UL SYSTEM #	FLOORS UL SYSTEM #	WALLS UL SYSTEM #	"SPECSEAL FIRESTOP" PRODUCTS			
METAL CONDUITS	CAJ1079	WJ1055	FC1010	WJ1049	SSS100 SEALAN			
ANY SIZE	CAJ1213	CAJ1213		WJ1088	LC150 SEALANT			
	CAJ1198	CAJ1198		WL1062	PENSOO SILICON			
PVC CONDUIT 2" AND SMALLER	CAJ2031	WJ2018	FC2032	WL2093	SSS100 SEALAN			
PVC CONDUITS	CAJ2038	CAJ2038	FC2033	FC2029	FIRESTOP COLLA			
2" THRU 4"	CAJ2045	CAJ2045			FIRESTOP COLLA			
	CAJ2124	CAJ2124	FC2033	WL2059	WRAP STRIPS			
CABLE TRAY	CAJ4029	CAJ4029		WL4008	FIRESTOP PILLO			
STEEL OR ALUMINUM	CAJ4020	CAJ4020			FIRESTOP MORT			
		CAJ4009		WL4005	SSS100 SEALAN			
ELECTRICAL BUS DUCT	CAJ6009	CAJ6009			FIRESTOP MORT			
	CAJ6008	CAJ6008		WL6001	SSS100 SEALAN			

NOTES:

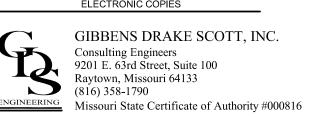
- ALL U.L. LISTED SYSTEMS SHOWN ABOVE ARE BASED ON PROVIDING A 1 & 2 HOUR RATED FIRESTOP.
 WHERE 3 HOUR RATING IS REQUIRED, CONTACT FIRESTOP PRODUCT MANUFACTURER FOR DESIGN
 MODIFICATIONS.
- 2. ALL U.L. LISTED SYSTEMS SHOWN ABOVE ARE BASED ON "SpecSeal Firestop" PRODUCTS FROM SPECIFIED TECHNOLOGIES, INC. OR APPROVED EQUAL PRODUCTS FROM "3-M" OR HILTI, INC.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



CONSIDERED SIGNED AND SEALED AND THE

SIGNATURE MUST BE VERIFIED ON ANY



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 7707 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE: 9/13/2024
ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE:E-501
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

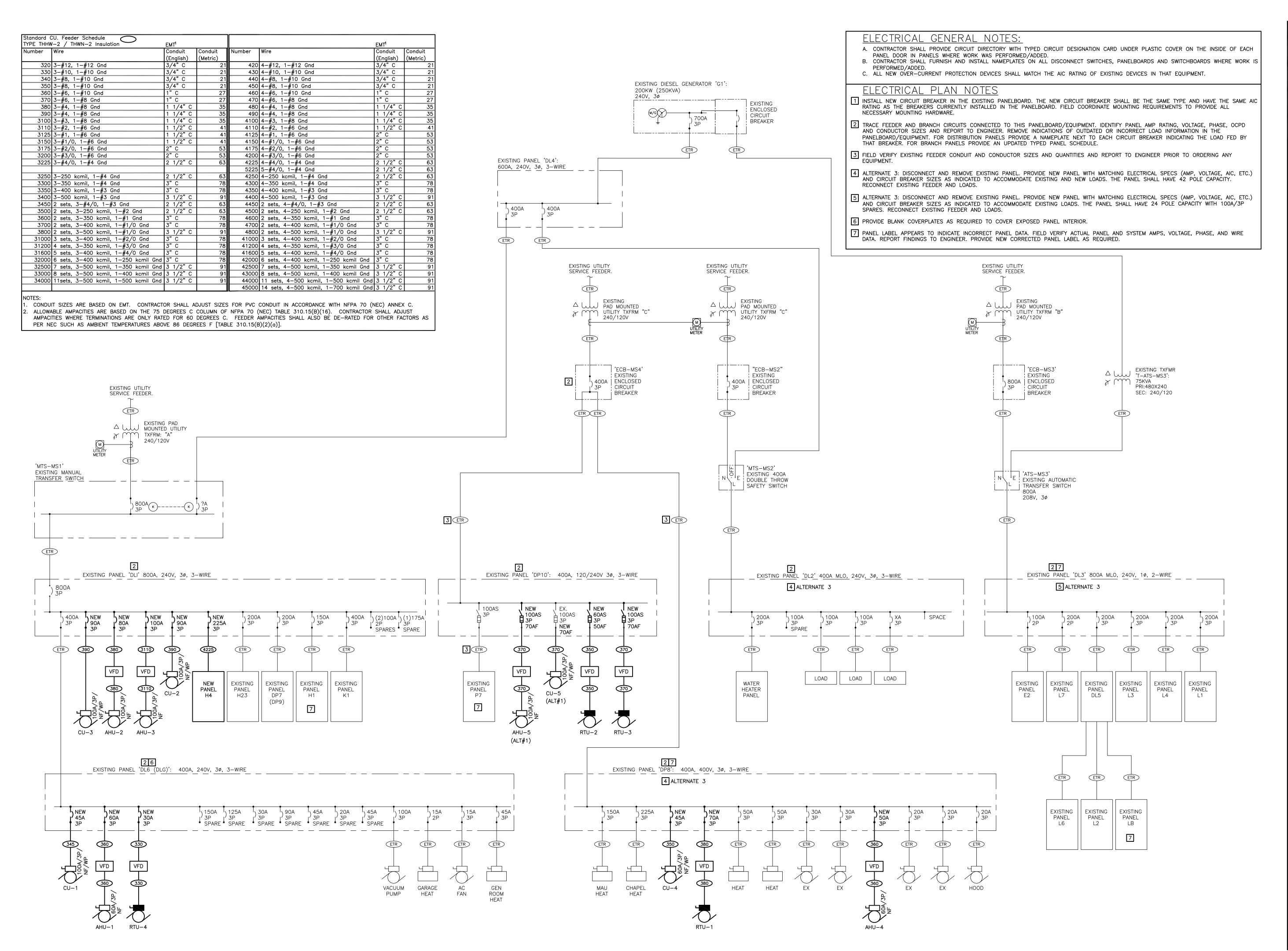
SHEET TITLE:

ELECTRICAL DETAILS

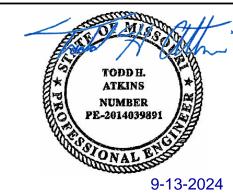
SHEET NUMBER:

09/13/24

E-50



STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT

CONSIDERED SIGNED AND SEALED AND THE

SIGNATURE MUST BE VERIFIED ON ANY

GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790

Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE: 9/13/2024
ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE:E-601 DRAWN BY: JHD CHECKED BY: THA

DESIGNED BY: GDS

SHEET TITLE:

ELECTRICAL
ONE-LINE DIAGRAM

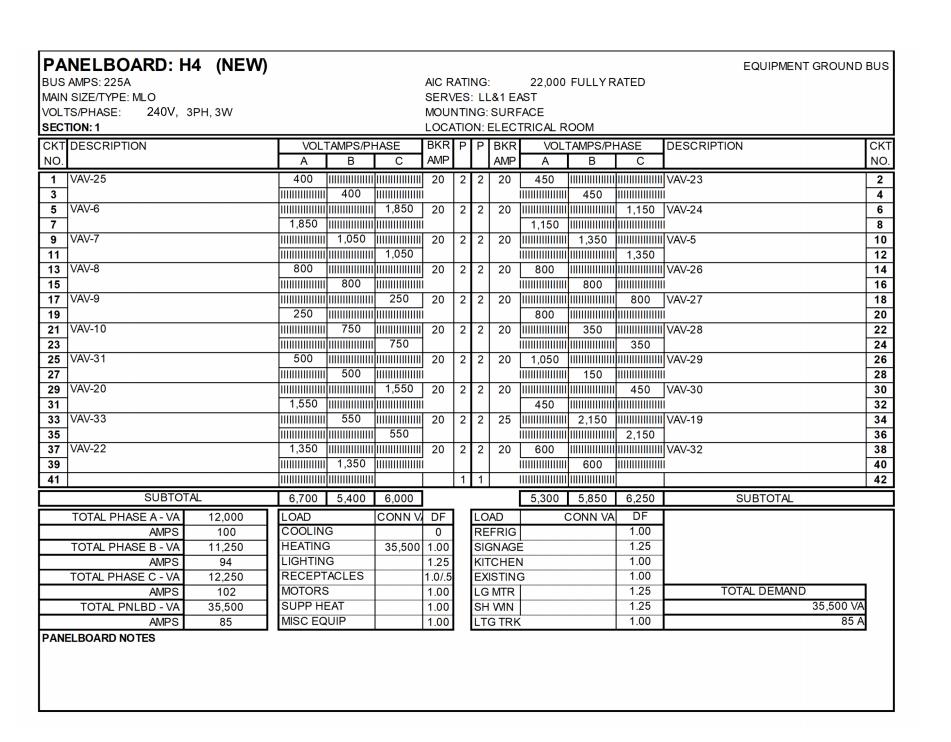
SHEET NUMBER:

E-60

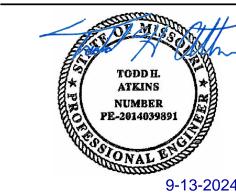
PANELBOARD: DL1 (EX US AMPS: 800A		NT GROUND BUS
AIN SIZE/TYPE: MLO	SERVES: FIRST FLOOR	
DLTS/PHASE: 240V, 3PH, 3W	MOUNTING: SURFACE	
ECTION: 1	LOCATION: ELECTRICAL ROOM	
KT DESCRIPTION	VOLTAMPS/PHASE BKR P P BKR VOLTAMPS/PHASE DESCRIPTION	CK
0.	A B C AMP AMP A B C	NC
1	9,145	2
3 CU-3		4
5		6
7 PNLBD H4	12,000	8
9		10
11		12
13		14
SPARE		16
17	3 200 10,650	18
PNLBD H1	18,470	20
21		22
23		24
PNLBD DL6	8,961	26
27		28
29	3 80	30
31	7,687	32
PANEL K1		34
35	3 110 10,122 AHU-3	36
37		38
SUBTOTAL	48,576 45,626 44,506 37,454 40,454 37,604 SUBTOTAL	
TOTAL PHASE A - VA 86,030	LOAD CONN V DF LOAD CONN VA DF	
AMPS 717	COOLING 69,003 0 REFRIG 1.00	
TOTAL PHASE B - VA 86,080	HEATING	
AMPS 717	LIGHTING 1.25 KITCHEN 1.00	
TOTAL PHASE C - VA 82,110	RECEPTACLES 1.0/.5 EXISTING 1.00	
AMPS 684	MOTORS 25,959 1.00 LG MTR 1.25 TOTAL DEMAN	
TOTAL PNLBD - VA 254,220	SUPP HEAT 1.00 SH WN 1.25	199,350 VA
AMPS 612	MISC EQUIP	480 A

/AIN	AMPS: 400A I SIZE/TYPE: MLO TS/PHASE: 240V, 3PH, 3W TION: 1	1				MOUN	ITIN	۱G: ۱	SURF	LEVEL N' FACE TRICAL R				
	DESCRIPTION			TAMPS/P		BKR	Р				TAMPS/PI		DESCRIPTION	CK
10.			Α	В	С	AMP	_	=	AMP	Α	В	С		NO
1	VAV-21				111111111111111111111111111111111111111	, ,	2	2	15				GARGE HEAT	2
3			111111111111111111111111111111111111111		111111111111111111111111111111111111111		_					111111111111111111111111111111111111111		4
5						_								6
7	SPARE				111111111111111111111111111111111111111	1	3	3	15		111111111111111111111111111111111111111			8
9			111111111111111111111111111111111111111			<u> </u>	_	_				111111111111111111111111111111111111111	 	10
11	 SPARE		111111111111111111111111111111111111111				ړ	ارا					CDADE	12 14
13 15	JOPANE		1111111111111111			J 1	3	3	20	<u> </u> 				14
17							\dashv	\dashv		<u> </u>	l .		T	18
19	I ISPARE				' <u> </u> 	45	3	3	45		1111111111111111		SDARE	20
21			111111111111111111111111111111111111111			1 1	ĬΙ	٦		<u> </u>				22
23			11111111111111111			i 	┪	\dashv		11111111111111111			T	24
5	VACUUM PUMP					100	3	3	45				GEN ROOM HEAT	26
7						, ,	Ĭ	١		<u> </u>		1111111111111111		28
9							┪	\dashv						30
31	AHU-1					60	3	3	30		111111111111111111111111111111111111111	,	RTU-4	32
33			111111111111111111111111111111111111111		111111111111111111111111111111111111111	, ,	- 1							34
35			111111111111111111111111111111111111111	11111111111111111	4,711		┪				111111111111111111111111111111111111111			36
37	CU-1		4,711	11111111111111111	111111111111111111111111111111111111111	45	3				111111111111111111111111111111111111111	111111111111111111111111111111111111111	SPACE	38
39			111111111111111111111111111111111111111	4,711	111111111111111111111111111111111111111	i	- 1					111111111111111111111111111111111111111	i i	40
11	SPACE						1	1					SPACE	42
	SUBTOTAL		11,090	11,090	10,640					2,582	2,582	2,582	SUBTOTAL	
	TOTAL PHASE A - VA 13,6	72	LOAD		CONN V	DF	Γ	LOA	٩D	(CONN VA	DF		
	AMPS 11	4	COOLIN	G	14,133	0	1	REF	FRIG			1.00	1	
	TOTAL PHASE B - VA 13,6	72	HEATING	3	20,901	1.00	1	SIG	NAG			1.25		
	AMPS 11		LIGHTIN	G		1.25		KIT	CHE	١		1.00		
	TOTAL PHASE C - VA 13,2		RECEPT			1.0/.5			STIN	3		1.00		
	AMPS 11		MOTORS		5,532	1.00			MTR			1.25	TOTAL DEMAND	
	TOTAL PNLBD - VA 40,5		SUPP HE			1.00			MN			1.25	26,433	
	AMPS 98		MISC EQ	UIP		1.00	L	LTG	3 TRK			1.00	6	64 A
	ELBOARD NOTES NEW OVERCURRENT PROTEC	TION DE	VICES SH	ALL MAT	CH AIC RA	ATING	OF	EXI	STIN	G DEVICE	S.			

	NELBOARD: H1	(EXIST	ING)							EQUIPMENT (ROUND BL
	AMPS: 225A				AIC RA			10,000 FULLYR	ATED		
	SIZE/TYPE: 150A MCB	11. 41.47					IEATER				
	S/PHASE: 208Y/120V, 3P	H, 4 VV			MOUN.						
	ION: 1							TRICAL ROOM			
CKT NO.	DESCRIPTION		VOLTAMPS/F	PHASE C	BKR	$P \mid P$	BKR	VOLTAMPS/PH A B	IASE C	DESCRIPTION	C
	EX. WATER HEATER					2 2				BBH - TOILET	
3	EX. VV/(IEICTIE/(IEIC		1,020 11111111111			- -				J	H
-	EX. CUH - ENTRY LOBBY	,				2 2					
7						- -		1,500	,]	
9	EX. CUH - S. ENTRY		1,800			2 2	20	<u>'</u>		BBH - TOILET	
11				1,800							
13	EX. CUH - S. ENTRY		1,800	<u> </u>	20	2 2				BBH - TOILET	
15			1,800						111111111111111111111111111111111111111	3	
17	EX. CUH - E. ENTRY		111111111111111111111111111111111111111	1,800	20	2 2	20		1,350	VAV - 15	
19			1,800	11 111111111111111111111111111111111111				1,350	111111111111111111111111111111111111111	i	
21	VAV-11		350	111111111111111111111111111111111111111	20	2 2			111111111111111111111111111111111111111	VAV-16	
23				350					2,200		
	VAV-12			11 111111111111111111111111111111111111		2 2		2,500		J	
27			850	111111111111111111111111111111111111111		\perp		-,	1111111111111111111		
	VAV-13			-		2 2	20			VAV-18	
31			1,650					300			
	VAV-14				20	2 1			111111111111111111111111111111111111111	<u> </u>	
35						1					
37				<u> </u>		1 1					
39 41				<u> </u>		1 1 1 1			111111111111111111	I I	
41	SUBTOTAL			_		1 1			0.050	CURTOTAL	
	TOTAL PHASE A - VA	18.470	9,820 7,070 LOAD	7,750 CONN V	DF	1.0	OAD	8,650 9,200 CONN VA	6,850 DF	SUBTOTAL	
	AMPS	154	COOLING	CONN	0		EFRIG	COMIN VA	1.00		
	TOTAL PHASE B - VA	16,270	HEATING	49,340			IGNAGE	<u></u>	1.25	•	
	AMPS	136	LIGHTING	43,340	1.25		ITCHEN		1.00	•	
	TOTAL PHASE C - VA	14.600	RECEPTACLES		1.0/.5		XISTIN		1.00		
	AMPS	122	MOTORS		1.00		G MTR	j I	1.25	TOTAL DEMAND	
	TOTAL PNLBD - VA	49.340	SUPP HEAT		1.00		H WIN		1.25	4	19,340 VA
	AMPS	137	MISC EQUIP		1.00		TGTRK		1.00		137 A
	LBOARD NOTES										



STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR

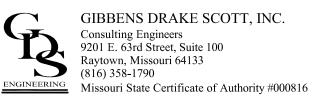


9-13-2024

TODD H. ATKINS

LICENSE # E-2014039891

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY



OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
PATE: 9/13/2024
ISSUE DATE: 9/13/2024
BID SET

CAD DWG FILE: E-602
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

ELECTRICAL PANEL SCHEDULES

SHEET NUMBER:

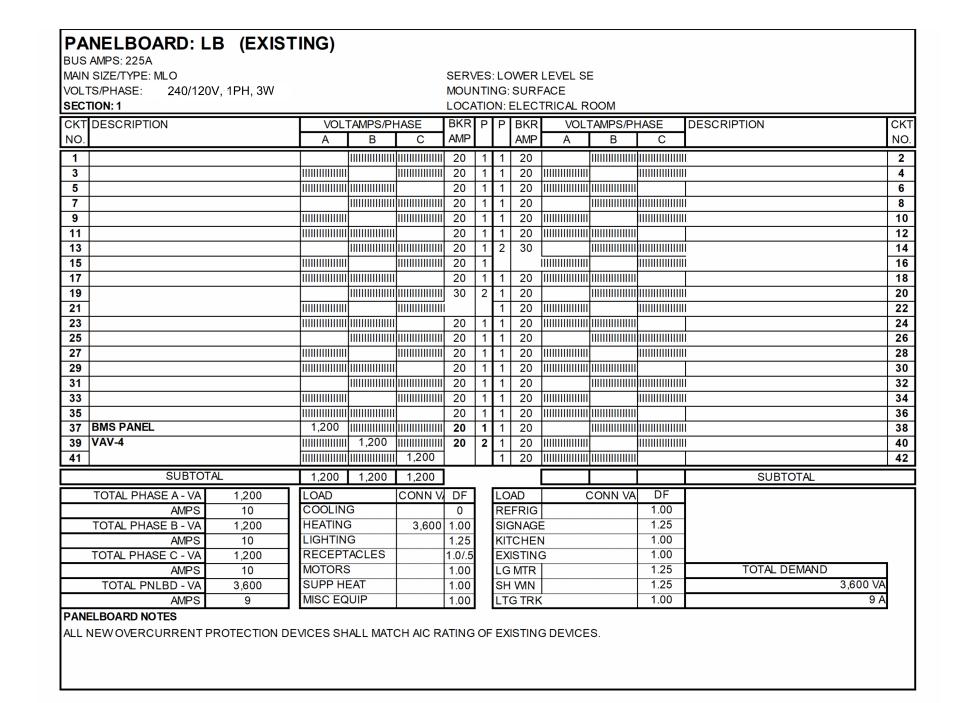
E-602

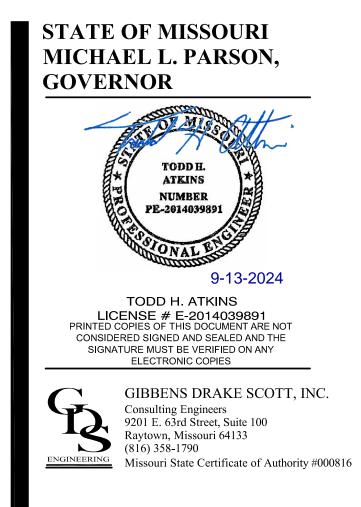
42 OF 44 SHEETS

PANELBOARD: D	P10 (EX	(ISTING)										
BUS AMPS: 400A MAIN SIZE/TYPE: MLO				SERV	ÆS:	.10	M/ER	LEVEL				
VOLTS/PHASE: 240V, 3	BPH.3W			MOUN								
SECTION: 1	,							TRICAL ROO	M, RO	OM#:100)	
CKT DESCRIPTION		VOLTAMPS	/PHASE	FUSE							DESCRIPTION	СКТ
NO.		A B	C	AMP	Ė		AMP	A	В	C		NO.
1		5,949			\dashv			6,928			1	2
3 AHU-6					3	3	70	0,320 1111			_	4
5				'	اٽ∣				,			6
7					\dashv			4,582			<u> </u> 	8
9 RTU-3		7,329	I		3	3	70					10
11				'								12
13			<u>,</u> !!!! !!!!!!!!!!!!!!!!		\dashv	\vdash					PNLBD P7	14
15 EX. GYM AHU		111111111111111	111111111111111111111111111111111111111	i	3	3		111111111111111111111111111111111111111			1	16
17			IIII	1					111111111111	2,650]	18
19			IIII IIIIIIIIIIIIII		1	1			111111111111	111111111111111111111111111111111111111	İ	20
21		111111111111111	1111111111111111	ı	1	1		11111111111111111		111111111111111111111111111111111111111	I	22
23			I		1	1						24
25		IIIIIIIIII	III IIII IIII III	i	1	1		IIIII			İ	26
27		111111111111111	111111111111111111111111111111111111111	ı	1	1					I	28
29			IIII		1	1						30
31				I	1	1					I	32
33		111111111111111		I	1	1					1	34
35					1	1		111111111111111111111111111111111111111				36
37			1111 1111111111111111111111111111111		1	1		l I				38
39		111111111111111	1111111111111111		1	1		111111111111111111111111111111111111111			1	40
41					1	1						42
SUBTOT	AL	13,278 13,27	8 13,278]				13,510 14	4,760	14,160	SUBTOTAL	
TOTAL PHASE A - VA	26,788	LOAD	CONN V	DF		LO	AD	CON	NN VA	DF		
AMPS	223	COOLING	20,784	0		RE	FRIG			1.00		
TOTAL PHASE B - VA	28,038	HEATING	45,901	1.00		SIG	NAGI			1.25		
AMPS	234	LIGHTING		1.25		KIT	CHE	١		1.00		
TOTAL PHASE C - VA	27,438	RECEPTACLES		1.0/.5		EXI	STIN	G		1.00		
AMPS	229	MOTORS	15,579	1.00		LG	MTR			1.25	TOTAL DEMAND	
TOTAL PNLBD - VA	82,264	SUPP HEAT		1.00			MN			1.25	61,4	180 VA
AMPS	198	MISC EQUIP		1.00		LTC	G TRK			1.00		148 A
PANELBOARD NOTES												
ALL NEW OVERCURRENT F	ROTECTION D	EVICES SHALL MA	ATCH AIC R	ATING	OF	EXI	ISTIN	G DEVICES.				

	SIZE/TYPE: MLO									LOOR				
	S/PHASE: 400V, 3F	PH, 3W				MOU								
	10N: 1									TRICAL R				
	DESCRIPTION			AMPS/PI			Р	P	BKR		TAMPS/PH		DESCRIPTION	(
10.			Α	В	С	AMP	Щ	Щ	AMP	Α	В	С		
1					111111111111111111111111111111111111111	_					11111111111111111			
3	MAU HEAT		111111111111111111111111111111111111111		111111111111111111111111111111111111111	150	3	3	I	111111111111111111111111111111111111111			ISPARE	-
5 7			4,706					Н		7 220				
	CU-5		4,700				3	3	70	7,330	7 330		_	-
ข 11	CO-3					45	•	$ $		 				F
13					4,700	 		Н			111111111111111			-+
	AHU-5				11111111111111111		3	3	50	111111111111111111111111111111111111111			_	
17														F
19					111111111111111111111111111111111111111			П			111111111111111111111111111111111111111		ĺ	
21	EX. LOAD		11111111111111111		111111111111111111111111111111111111111	30	3	3	30	111111111111111111111111111111111111111		111111111111111111111111111111111111111	EX. LOAD	
23										<u> </u>	111111111111111111111111111111111111111			
25					111111111111111111111111111111111111111						111111111111111111111111111111111111111			
	EX. LOAD				111111111111111111111111111111111111111	20	3	3		111111111111111111111111111111111111111			EX. LOAD	
29			11111111111111111				Ш	Ш						
31	EVICAD				111111111111111111111111111111111111111						111111111111111111111111111111111111111		_	
	EX. LOAD		111111111111111111111111111111111111111		111111111111111111111111111111111111111	20	3	3	I	111111111111111111111111111111111111111			HOOD	-
35			111111111111111111111111111111111111111				Н	\vdash					1	-+
								Н		<u> </u> 				-+
			11111111111111111			<u> </u>		H						-+
	SUBTOTAL		9.980	9.980	9,980					7,330	7,330	7,330	SUBTOTAL	
	TOTAL PHASE A - VA	17,310	LOAD	3,300	CONN V	DF			AD		CONN VA	7,550 DF	COBTOTAL	
	AMPS	144	COOLING	3	14,118				FRIG		JONIN VA	1.00		
	TOTAL PHASE B - VA	17,310	HEATING		29,001				SNAGE	<u> </u>		1.25		
	AMPS	144	LIGHTING	G		1.25			CHE			1.00		
	TOTAL PHASE C - VA	17,310	RECEPT	ACLES		1.0/.5			ISTING			1.00		
	AMPS	144	MOTORS		8,811				MTR			1.25	TOTAL DEMAND	
	TOTAL PNLBD - VA	51,930	SUPP HE			1.00		SH	WN			1.25	37,81	
	AMPS	125	MISC EQ	UIP		1.00		LT	G TRK			1.00		91 A

4	NELBOARD: P	P7 (EXIS	TING)													
	AMPS: 100A	•	,			AIC RATING:										
N	I SIZE/TYPE: MLO					SERVES: LOWER LEVEL SOUTH										
		3PH, 3W				MOUNTING: SURFACE										
-	TION: 1					LOCATION: ELECTRICAL ROOM										
Γ	DESCRIPTION		VOL	VOLTAMPS/PH/		BKR	P	Р		VOL	TAMPS/PH	HASE	DESCRIPTION	СКТ		
			Α	В	С	AMP			AMP	Α	В	С		NO.		
	VAV-2		1,300	111111111111111111111111111111111111111			2	2	20			11111111111111111		2		
			111111111111111111111111111111111111111		111111111111111111111111111111111111111	i				immummi			<u> </u>	4		
	VAV-3					20	2	2	20		111111111111111111111111111111111111111			6		
_				111111111111111111111111111111111111111							111111111111111111111111111111111111111			8		
_			1111111111111111		11111111111111111	20	2	2		111111111111111111	,		VAV-1	10		
_										IIII IIIIIIIIII	111111111111111111111111111111111111111	,		12		
				111111111111111111111111111111111111111			2	\vdash					-	14		
_			111111111111111111		11111111111111111	l	\Box	1					<u> </u>	16		
_							1	1			111111111111111111111111111111111111111			18		
_				111111111111111111111111111111111111111			1	1			111111111111111111111111111111111111111			20		
_		11111111111111111		111111111111111111111111111111111111111	!	1	1		111111111111111111111111111111111111111				22			
_			11111111111111111111111111111111111111	111111111111111111111111111111111111111			1	1			111111111111111111111111111111111111111			24		
_				111111111111111111111111111111111111111			1	1			111111111111111111111111111111111111111			26		
_			11111111111111111		111111111111111111111111111111111111111		1	1		111111111111111111111111111111111111111			1	28		
_				111111111111111111111111111111111111111			1	1			111111111111111111111111111111111111111			30		
_				111111111111111111111111111111111111111			1	1						32		
_			111111111111111111111111111111111111111		111111111111111111111111111111111111111		1	1		111111111111111111111111111111111111111			1	34		
_						<u> </u>	1	1			111111111111111111111111111111111111111			36		
_				111111111111111111111111111111111111111			1	1			111111111111111111111111111111111111111			38		
_					111111111111111111		1	1		<u> </u>			 	40		
=							1	1			111111111111111111111111111111111111111			42		
_	SUBTOT	ΓAL	2,000	1,300	700	<u> </u>					1,950	1,950	SUBTOTAL			
_	TOTAL PHASE A - VA	2,000	LOAD		CONN V			LOA		(CONN VA	DF				
_	AMPS	17	COOLIN			0			FRIG			1.00				
_	TOTAL PHASE B - VA	3,250	HEATING		7,900				SNAGE			1.25				
_	AMPS	27	LIGHTIN			1.25			CHEN	-		1.00				
_	TOTAL PHASE C - VA	2,650	RECEPT			1.0/.5			STIN	3 		1.00		_		
_	AMPS	22	MOTORS			1.00			MTR			1.25	TOTAL DEMAND	_		
_	TOTAL PNLBD - VA	7,900	SUPP HE			1.00	- 1		MN			1.25	7,900 VA			
_	AMPS	19	MISC EQ	!UIP		1.00	l	LTC	G TRK			1.00	19 A	N.		
V	ELBOARD NOTES															
. 1	NEW OVERCURRENT F	PROTECTION D	EVICES SH	ALL MATO	CH AIC RA	ATING	OF	EXI	STING	G DEVICE	S.					





OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707

ASSET# 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
PATE: 9/13/2024
ISSUE DATE: 9/13/2024
BID SET

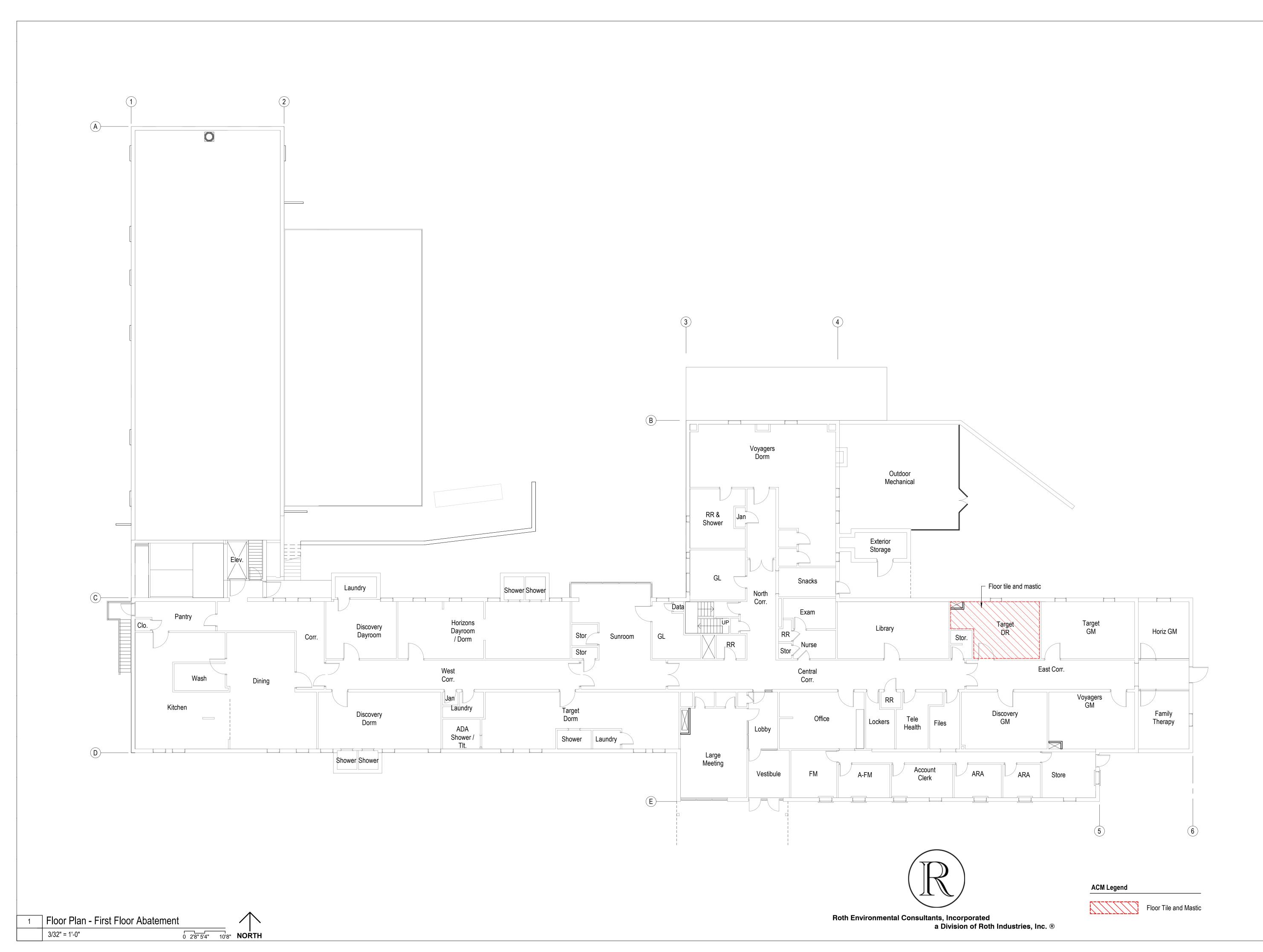
CAD DWG FILE:E-603
DRAWN BY: JHD
CHECKED BY: THA
DESIGNED BY: GDS

SHEET TITLE:

ELECTRICAL PANEL SCHEDULES

SHEET NUMBER:

E-603
43 OF 44 SHEETS



STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



GIBBENS DRAKE SCOTT, INC.
Consulting Engineers
9201 E. 63rd Street, Suite 100
Raytown, Missouri 64133
(816) 358-1790
Missouri State Certificate of Authority #000816

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

WAVERLY REGIONAL YOUTH CENTER

HVAC & BAS REPLACEMENT

WAVERLY REGIONAL YOUTH CENTER WAVERLY, MO

PROJECT # H2314-01 SITE # 7707 FACILITY # 8877707003

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 9/13/2024
BID PACKAGE

CAD DWG FILE: H-121.dwg
DRAWN BY: JKy
CHECKED BY: SR
DESIGNED BY: GW&

SHEET TITLE:

Abatement Plan - First Floor

SHEET NUMBER:

H-12

44 OF 44 SHEETS