30-MAN BARRACKS
CAMP CROWDER TRAINING SITE
NEOSHO, MISSOURI

OWNER: STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY
MISSOURI NATIONAL GUARD
OFFICE OF ADJUTANT GENERAL

PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION,
DIVISION OF FACILITIES MANAGEMENT,
DESIGN & CONSTRUCTION

DESIGNER: GLMV Architecture, Inc.

PROJECT NUMBER: T2049-01

SITE NUMBER: 6260

ASSET NUMBER: 8136260014
### UL-LISTED FIRE-RATED ASSEMBLIES

**NOTE:** This sheet is used for additional UL-listed fire-rated assemblies.

#### 7A. Alternate to Item 1 — For use with Item 2G, proprietary channel shaped runners, cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer as follows: Gypsum Board Protection on Each Side of Wall

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7A.</td>
<td>Furring Channels — Type SUPREME D24/30EQD and Type SUPREME D20, optional on one or both sides, not shown, for single or double layer systems, to be used in lieu of or in conjunction with lead backed gypsum wallboard and optional at remaining stud locations. Required behind vertical joints.</td>
</tr>
</tbody>
</table>

#### 7Ab. Furring Channels — Type SHX.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7Ab.</td>
<td>Furring Channels — Type SHX, optional on one or both sides, not shown, for single or double layer systems, to be used in lieu of or in conjunction with lead backed gypsum wallboard and optional at remaining stud locations. Required behind vertical joints.</td>
</tr>
</tbody>
</table>

#### 7B. Furring Channels — Type R2+.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7B.</td>
<td>Furring Channels — Type R2+, optional on one or both sides, not shown, for single or double layer systems, to be used in lieu of or in conjunction with lead backed gypsum wallboard and optional at remaining stud locations. Required behind vertical joints.</td>
</tr>
</tbody>
</table>

#### 7C. Furring Channels — Type NITROSTUD.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C.</td>
<td>Furring Channels — Type NITROSTUD, optional on one or both sides, not shown, for single or double layer systems, to be used in lieu of or in conjunction with lead backed gypsum wallboard and optional at remaining stud locations. Required behind vertical joints.</td>
</tr>
</tbody>
</table>

#### 7D. Furring Channels — Type SUPREME D20.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7D.</td>
<td>Furring Channels — Type SUPREME D20, optional on one or both sides, not shown, for single or double layer systems, to be used in lieu of or in conjunction with lead backed gypsum wallboard and optional at remaining stud locations. Required behind vertical joints.</td>
</tr>
</tbody>
</table>

#### 7E. Furring Channels — Type SUPREME D24/30EQD.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7E.</td>
<td>Furring Channels — Type SUPREME D24/30EQD, optional on one or both sides, not shown, for single or double layer systems, to be used in lieu of or in conjunction with lead backed gypsum wallboard and optional at remaining stud locations. Required behind vertical joints.</td>
</tr>
</tbody>
</table>

#### 7F. Furring Channels — Type R2+.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7F.</td>
<td>Furring Channels — Type R2+, optional on one or both sides, not shown, for single or double layer systems, to be used in lieu of or in conjunction with lead backed gypsum wallboard and optional at remaining stud locations. Required behind vertical joints.</td>
</tr>
</tbody>
</table>

### UL-LISTED ASSEMBLY NOTES:

- All components should be installed per manufacturer's instructions.
- UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions:
  1. The appearance of a company's name or product in this database does not in itself assure that products so identified are Certified.
  2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the reproduction. This applies not only to the materials themselves, but also to all supporting appendices and documentation.

---

**OFFICE OF ABSENT GENERAL DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION DEPARTMENT OF PUBLIC SAFETY Missouri Army National Guard**

Camp Crowder Training Site

Design Master Plan Facilities, Postings

Nevsium, Missouri

30-MAN BARRACKS

PROJECT #: T2649-01
SITE #: 6260
ASSET #: 8136260014

STATE OF MISSOURI

MIKE PARSON, GOVERNOR

DATE: 05/28/2020

BID DOCUMENTS

SHRFTUM: G-003

3 OF 30 SHEETS
NOTE: SET FLUSH VALVE HANDLE TO WIDE SIDE OF STALL

UNDERLAVATORY GUARD REQ'D ON ALL EXPOSED DRAIN LINES AND HOT WATER SUPPLY (TYP.)

NOTE: TYPICAL ADA ACCESSIBLE LAVATORY AND ACCESSORIES. (U.N.O.)

NOTE: TYPICAL ADA ACCESSIBLE TOILET STALL AND ACCESSORIES. (U.N.O.)

NOTE: TYPICAL MOUNTING HEIGHTS & CLEARANCES

NOTE: TYPICAL MOUNTING HEIGHTS- SHOWER

NOTE: TYPICAL TOILET ACCESSORIES MOUNTING HEIGHTS

MOUNTING HEIGHTS NOTES

1. THESE PLANS & ELEVATIONS ARE INTENDED TO SHOW TYPICAL ACCESSIBLE (ADA) & NON-ACCESSIBLE FIXTURES & ACCESSORIES.

2. NOT ALL DEVICES, FixTURES, ACCESSORIES, ETC. SHOWN IN THESE DIAGRAMS ARE APPLICABLE TO THE PROJECT. REFER TO INSTRUCTIONS ON DRAWINGS & PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION. INCLUDE THE SPECIFICATIONS, FIXTURES AND ACCESSORIES REQUIRED UNDER THIS CONTRACT.

3. COMPLY WITH THE MOUNTING HEIGHTS SHOWN ON THESE DIAGRAMS UNLESS SPECIFICALLY DIMENSIONED PARALLELY ON THESE DRAWINGS.

4. ALL EMBLEMS ARE PROVIDED MATERIAL.

5. UNDERLAVATORY GUARD REQUIRED ON ALL EXPOSED DRAIN LINES AND HOT WATER SUPPLY (TYP.)

6. CONTRACTOR TO PROVIDE A SUITABLE FITTING FOR TREATMENT NO. 1274 AS REQUIRED TO ENSURE PROPER DISTRIBUTION FOR THE TEMPORARY ACCESSIBILITY/buttons/SEATS/GRAB BARS/ACCESSORIES/STANDARDS/STRUCTURAL SUPPORT DESIGNATED AND IRONWORK PROJECT & BUILD. THE CONTRACTOR DESIGNATES ANY AND ALL EMBLEMS AS REQUIRED.

7. SHEET TITLE: TYPICAL MOUNTING HEIGHTS

8. SHEET NUMBER: A-002

9. OF 30 SHEETS
STATE OF MISSOURI
MIKE PARSON, GOVERNOR

ROOM FINISH SCHEDULE

REFER TO INTERIOR FINISH NOTES FOR ADD ALTERNATE INFORMATION.

<table>
<thead>
<tr>
<th>ROOM NUMBER</th>
<th>ROOM NAME</th>
<th>FLOOR FINISH</th>
<th>BASE FINISH</th>
<th>NORTH WALL FINISH</th>
<th>WEST WALL FINISH</th>
<th>CEILING FINISH</th>
<th>INTERIOR FINISH NOTES</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>BARRACKS (1)</td>
<td>SC1</td>
<td>RB1</td>
<td>P1, P3</td>
<td>P1, P3</td>
<td>P1, P3</td>
<td>APC1</td>
<td>3, 4, 5</td>
</tr>
<tr>
<td>101A</td>
<td>SHOWERS</td>
<td>SRF1</td>
<td>SRB1</td>
<td>EPW1</td>
<td>EPW1</td>
<td>EPW1</td>
<td>GYP, PC1</td>
<td>2, 6, 7</td>
</tr>
<tr>
<td>102</td>
<td>BARRACKS (2)</td>
<td>SC1</td>
<td>RB1</td>
<td>P1, P3</td>
<td>P1, P3</td>
<td>P1, P3</td>
<td>APC1</td>
<td>3, 4, 5</td>
</tr>
<tr>
<td>103</td>
<td>JANITOR</td>
<td>SC1</td>
<td>RB1</td>
<td>P1</td>
<td>P1</td>
<td>P1</td>
<td>EXP, PC1</td>
<td>4</td>
</tr>
<tr>
<td>104</td>
<td>MECHANICAL</td>
<td>SC1</td>
<td>RB1</td>
<td>P1</td>
<td>P1</td>
<td>P1</td>
<td>EXP, PC1</td>
<td>3</td>
</tr>
<tr>
<td>105</td>
<td>BARRACKS (3)</td>
<td>SC1</td>
<td>RB1</td>
<td>P1, P3</td>
<td>P1, P3</td>
<td>P1, P3</td>
<td>APC1</td>
<td>3, 4, 5</td>
</tr>
<tr>
<td>105A</td>
<td>SHOWER</td>
<td>SRF1</td>
<td>SRB1</td>
<td>EPW1</td>
<td>EPW1</td>
<td>EPW1</td>
<td>GYP, PC1</td>
<td>2, 6, 7</td>
</tr>
<tr>
<td>105B</td>
<td>TOILET</td>
<td>SC1</td>
<td>RB1</td>
<td>P3</td>
<td>P1</td>
<td>P1</td>
<td>APC1</td>
<td>1, 4</td>
</tr>
</tbody>
</table>

GENERAL INTERIOR NOTES

4. REFER TO INTERIOR FINISH NOTES FOR ALTERNATE 1 INFORMATION.
D. FUEL SOURCE FOR GAS HEATER IS NATURAL GAS.

C. AIR VELOCITY ACROSS THE COOLING COIL SHALL NOT EXCEED 500 FPM.

A. PROVIDE MINIMUM EFFICIENCY OF MERV 6 FOR FILTERS DURING CONSTRUCTION AND CHANGE MONTHLY AFTER UNIT START-UP. FINAL FILTER CHANGE AT OWNER OCCUPANCY SHALL BE MERV 8.

B. MAXIMUM BHP FOR FANS SHALL NOT EXCEED 90% OF THE MOTOR NAMEPLATE RATING AT OPERATING CONDITIONS.

4. PROVIDE WITH MANUFACTURER'S CONCENTRIC VENTING KIT.

5. PROVIDE WITH MANUFACTURER'S NEUTRALIZATION KIT.

1. ESP DOES NOT INCLUDE DIRTY FILTER PRESSURE DROP. ADD 0.5" TO INTERNAL PRESSURE DROP FOR DIRTY FILTERS FOR VARIABLE AIR VOLUME UNITS.

B. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS, REFER TO SPECIFICATIONS.

F. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND WALL LOCATIONS, ETC. WITH THE ARCHITECTURAL TRADES.

G. DUCTWORK SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT OR FITTINGS AND SPECIAL RADIUS OR MITRED ELBOWS WHICH ARE REQUIRED DUE TO SPACE CONSTRAINTS OR OTHER CONDITIONS.

H. DUCTWORK DOWNSTREAM OF SUPPLY TERMINAL UNITS SHALL BE BOX FITTINGS AND SPECIAL RADIUS OR MITRED ELBOWS WHICH ARE REQUIRED DUE TO SPACE CONSTRAINTS OR OTHER CONDITIONS.

K. PROVIDE ACCESS DOORS IN HARD CEILING AREAS FOR ACCESS TO OPERABLE OPENINGS INTO BUILDING. MOUNT TERMINATION 10'-0' FROM ANY EXHAUST LOUVER SHALL BE MOUNTED AT LEAST 3'-0" FROM ANY SAFE ROOM/STORM SHELTER APPLICATIONS, AND BE ISO 9001:2015 ICC-500 2014/FEMA P-361 MISSILE IMPACT RATING 250+ MPH FOR SAFE ROOM/STORM SHELTER LID AND PENETRATIONS INTO ROOF VAULT BY THE SAME MANUFACTURER, BE 3RD PARTY TESTED TO MEET SIZE AS REQUIRED TO ACCOMMODATE DUCTS. VAULT MOUNTING TO SIZE DAMPER NOTES

CONDENSING UNITS

MOUNT CONCENTRIC VENT TERMINATIONS AT LEAST 10'-0" FROM ANY EXHAUST LOUVER SHALL BE MOUNTED AT LEAST 3'-0" FROM ANY PROPER INSTALLATION OF ALL MECHANICAL SYSTEMS. VERIFY ALL CLEARANCES WHERE SHOWN TO PENETRATE TO SERVE RESTROOMS.

NOTE:

- PROTECTED DUCTWORK OPENINGS INTO SHELTER.
- REQUIRED DUE TO SPACE CONSTRAINTS OR OTHER CONDITIONS.
- GRILLE, REGISTER, & DIFFUSER SCHEDULE
- LOUVER SCHEDULE
- FAN SCHEDULE
- GENERAL NOTES

MARK MANUFACTURER MODEL CFM ESP DEW PB HSP CE MCA MOCF MARK MODEL SDE HF CB VPH MCA MOCF NOTES

MARK MANUFACTURER MODEL SERVICE FACE SIZE NCH SIZ

MARK MANUFACTURER MODEL CFM ESP DEW PB HSP CE MCA MOCF MARK MODEL SDE HF CB VPH MCA MOCF NOTES

MARK MANUFACTURER MODEL CFM ESP DEW PB HSP CE MCA MOCF MARK MODEL SDE HF CB VPH MCA MOCF NOTES

FIRST FLOOR MECHANICAL PLAN

D. UNLESS NOTED OTHERWISE, COLOR SHALL BE STANDARD WHITE.

E. FOUR-WAY THROW PATTERN FOR SQUARE DIFFUSERS UNLESS NOTED OTHERWISE.
1. ACTUAL LAYOUT OF DUCTWORK, PIPING, EQUIPMENT LOCATIONS, ETC., SHALL VARY

2. REFER TO FLOOR PLANS FOR BRANCH LOCATIONS REQUIRING BALANCING DAMPERS.

3. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

1. ARRANGEMENT SHOWN IN SCHEMATIC. REFER TO PLANS FOR LOCATION OF CONDENSING UNITS AND PIPING TO MATCH.

3. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
GENERAL PLUMBING NOTES:

1. All fixtures, connections, and fittings shall be installed in accordance with the materials specified and the plumbing code of the jurisdiction in which the project is located.

2. Piping shall not be located over electrical equipment or other fixtures, unless provided for by the same code.

3. Sprinkler heads shall be white semi-recessed for areas with exposed structure. Sprinkler heads in ceilings, air terminal units, terminal heating coils, or other equipment shall be rough brass for areas with finished ceilings. Sprinkler heads shall be provided at each hole to assure effectiveness of sensors with the electrical and architectural trades to coordinate the location of the sprinkler piping.

4. The contractor shall not locate piping below duct mounted panels. Provide the code required working clearance around equipment.

5. Plumbing vent piping through the roof shall be located away from any fresh air intake location and finished ceilings. Sprinkler heads shall be rough brass for areas with finished ceilings. Sprinkler heads, etc. as required for a complete operable system.

6. Sprinkler piping 2½" and larger may be schedule 10 black iron, black steel, or Schedule 40. Minimum pipe size shall be 1".

7. The contractor shall coordinate the location of the plumbing systems with the architect and engineer.

8. General Fire Protection Notes:

   A. Provide a complete automatic sprinkler system to serve the 90 GPM water softener. See detail on sheet P401 for typical water softener connection.

   B. See Civil Plans for continuation.

   C. Coordinate the installation of plumbing and piping with the architectural plans.

   D. The systems shall be designed by a licensed fire protection engineer and installed by a licensed sprinkler contractor.

   E. Piping shall not be located over electrical equipment or other fixtures, unless provided for by the same code.

   F. The contractor shall not locate piping below duct mounted panels. Provide the code required working clearance around equipment.

   G. Seal all fire protection floor, wall and roof penetrations watertight and weathertight. Caulk around fire protection equipment.

   H. Provide and install backflow prevention equipment as required by local codes.

   I. Plumbing vent piping through the roof shall be located away from any fresh air intake location and finished ceilings. Sprinkler heads shall be rough brass for areas with finished ceilings.

   J. Provide a complete automatic sprinkler system to serve the water softener. See detail on sheet P401 for typical water softener connection.

   K. Minimum underground pipe size shall be 2".

   L. Coordinate all scheduling and work with other trades so as to avoid conflicts.

   M. Sprinkler heads, etc. as required for a complete operable system.

   N. Minimum pipe size shall be 1".

   O. Piping shall not be located over electrical equipment or other fixtures, unless provided for by the same code.

   P. Plumbing vent piping through the roof shall be located away from any fresh air intake location and finished ceilings. Sprinkler heads shall be rough brass for areas with finished ceilings.

   Q. Provide and install backflow prevention equipment as required by local codes.

   R. General Fire Protection Notes:

   S. Provide a complete automatic sprinkler system to serve the 90 GPM water softener. See detail on sheet P401 for typical water softener connection.

   T. Coordinate all scheduling and work with other trades so as to avoid conflicts.

   U. Provide and install backflow prevention equipment as required by local codes.

   V. Plumbing vent piping through the roof shall be located away from any fresh air intake location and finished ceilings. Sprinkler heads shall be rough brass for areas with finished ceilings.

   W. Minimum pipe size shall be 1".

   X. Piping shall not be located over electrical equipment or other fixtures, unless provided for by the same code.

   Y. Plumbing vent piping through the roof shall be located away from any fresh air intake location and finished ceilings. Sprinkler heads shall be rough brass for areas with finished ceilings.

   Z. Minimum pipe size shall be 1".
PLUMBING FIXTURE SCHEDULE

NOTE:
1. CONCENTRIC VENT KIT SHALL INCLUDE RAIN CAP AND WYE CONCENTRIC FITTINGS.
2. PROVIDE DIELECTRIC CONNECTIONS AT WATER HEATER.
3. PROVIDE WITH MANUFACTURER'S CONCENTRIC VENT KIT.
4. PROVIDE ASME PRESSURE AND TEMPERATURE RELIEF VALVE.
5. PROVIDE WITH MANUFACTURER'S IN-WALL CARRIER ACCESSORY.
6. PROVIDE SURESEAL SSX000V INLINE FLOOR DRAIN TRAP SEAL WITH ASSE 1072 RATING.
7. FIXTURE ASSEMBLY MUST BE APPROVED BY AN INSTALLED PER ADA.
8. PROVIDE OPERATING ROD ASSEMBLY PER MANUFACTURER'S RECOMMENDATIONS BASED ON WALL THICKNESS.
9. PROVIDE ANY REQUIRED CERTIFICATION TEST OF BFP TO LOCAL AUTHORITIES. ALL ITEMS SHALL BE APPROVED FOR DOMESTIC WATER SERVICE.
10. BUILDINGS OVER TO OWNER. PROVIDE ANY REQUIRED CERTIFICATION TEST OF BFP TO LOCAL AUTHORITIES. ALL ITEMS SHALL BE APPROVED FOR DOMESTIC WATER SERVICE.

WATER HEATER SCHEDULE - GAS

PUMP SCHEDULE

GENERAL NOTES:
1. CONCENTRIC VENT KIT SHALL INCLUDE RAIN CAP AND WYE CONCENTRIC FITTINGS.
2. PROVIDE DIELECTRIC CONNECTIONS AT WATER HEATER.
3. PROVIDE WITH MANUFACTURER'S CONCENTRIC VENT KIT.
4. PROVIDE ASME PRESSURE AND TEMPERATURE RELIEF VALVE.
5. PROVIDE WITH MANUFACTURER'S IN-WALL CARRIER ACCESSORY.
6. PROVIDE SURESEAL SSX000V INLINE FLOOR DRAIN TRAP SEAL WITH ASSE 1072 RATING.
7. FIXTURE ASSEMBLY MUST BE APPROVED BY AN INSTALLED PER ADA.
8. PROVIDE OPERATING ROD ASSEMBLY PER MANUFACTURER'S RECOMMENDATIONS BASED ON WALL THICKNESS.
9. PROVIDE ANY REQUIRED CERTIFICATION TEST OF BFP TO LOCAL AUTHORITIES. ALL ITEMS SHALL BE APPROVED FOR DOMESTIC WATER SERVICE.
10. BUILDINGS OVER TO OWNER. PROVIDE ANY REQUIRED CERTIFICATION TEST OF BFP TO LOCAL AUTHORITIES. ALL ITEMS SHALL BE APPROVED FOR DOMESTIC WATER SERVICE.
LIGHTING CONTROLS SCHEDULE

CONTROL NOTES:
1. REFLECTIVE SURFACES IN ROOM MAY CAUSE OVERSSENSING OF SENSOR. INSTALLATION OF THE SENSOR IN A ROOM WITH HIGH REFLECTIVITY SURFACES MAY REQUIRE THE USE OF A SENSOR WITH A LOWER AMBIENT LIGHT LEVEL SETPOINT (E.G., HET-200). THE AMBIENT LIGHT LEVEL SETPOINT MAY NEED TO BE APPROVED BY THE OWNER.
2. AMBIENT LIGHT LEVEL SETPOINT SHALL BE ADJUSTED TO MATCH THE AMBIENT LIGHT LEVEL IN THE ROOM.

GENERAL NOTES (APPLIES TO ALL ABOVE):
1. AMBIENT LIGHT LEVEL SETPOINT SHOULD BE SET TO MATCH THE AMBIENT LIGHT LEVEL IN THE ROOM.
2. AMBIENT LIGHT LEVEL SETPOINT MAY NEED TO BE ADJUSTED TO MATCH THE AMBIENT LIGHT LEVEL IN THE ROOM.

LIGHT FIXTURE SCHEDULE

MARK MANUFACTURER MODEL COMB.SHEET NUMBER LAMP DATA

DESCRIPTION: 200 A 100% Neutral Bus
VOLTAGE: 120/208 3 PH 4 WIRE

NOTES NO LOAD DESCRIPTION

Total Est. Demand: 29797 VA
Total Conn.: 28846 VA
83 A
9229 Ward Parkway, Kansas City, MO 64114

MO State Certificate of Authority #F00364807

ELECTRICAL SHE SCHEDULES AND DETAILS

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

BID DOCUMENTS

OFFICE OF THE GOVERNOR
DEPARTMENT OF PUBLIC SAFETY
Missouri Army National Guard
Camp Crowder Training Site
Design Master Plan Facilities, Prototype
Nevose, Missouri

PROJECT # T2049-01
SITE # 6260
FACILITY # 8136260014

REVISION: E-501
DATE: 05/28/20

CAD SPECFILE: T2049-01
MANBY: CANCELLED
DESIGNER:

E-501
30 OF 9 SHEETS
05/28/20