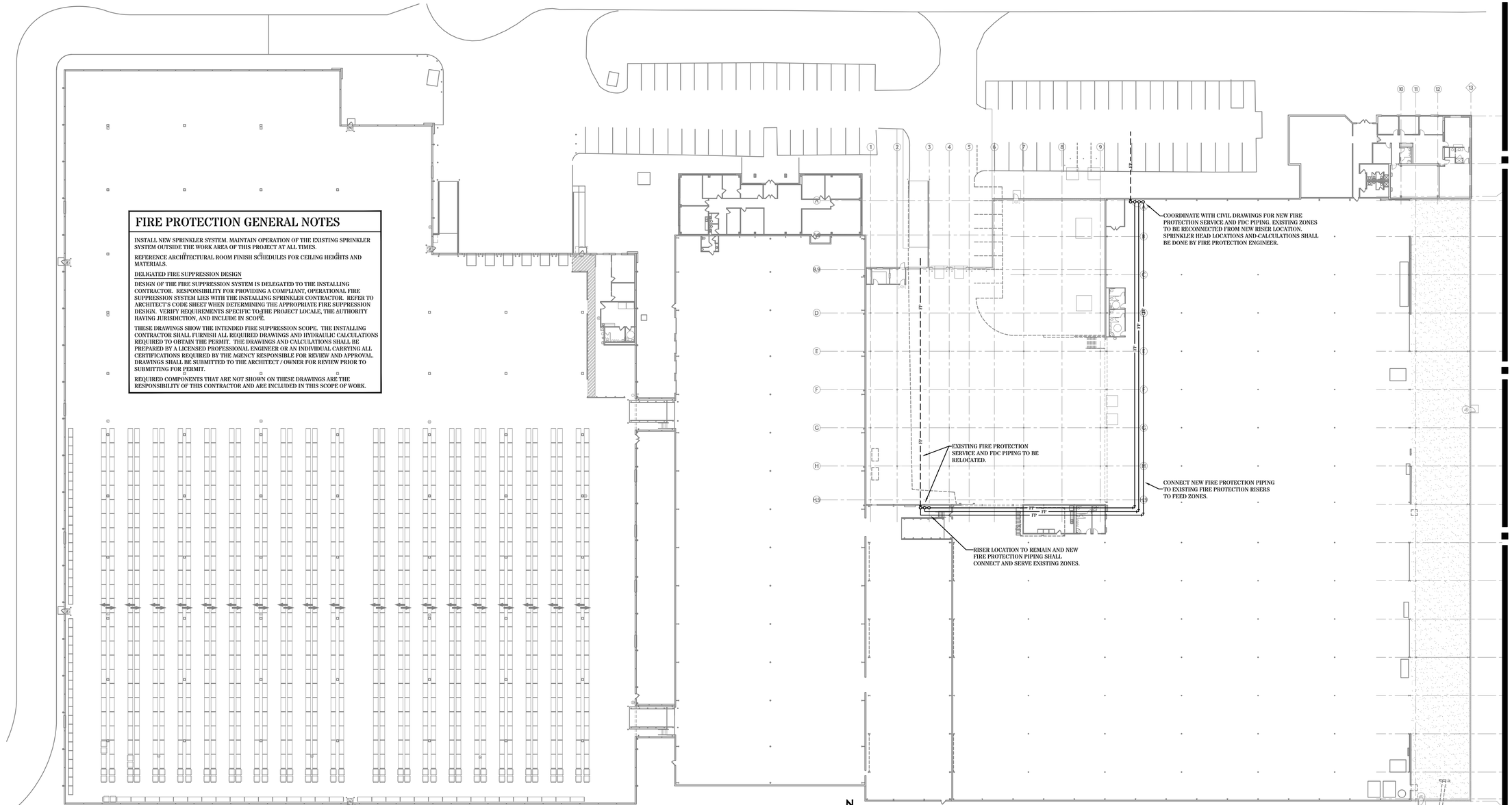
Z:\-Project Directories\6200-6299\6277 - Republic Wire\-Construction Documents\6277-FP1-0-FIRE-PROTECTION-FLOOR-PLAN.dwg-EBS, Plot Date/Time: May 25, 2017-1:47pm - By: kelly.obrien
THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONSTRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUTHORITIES HAVING JURISDICTION WITH INFORMATION TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST WITH AN OWNER, CONSTRUCTION MANAGER, GENERAL CONTRACTOR, ETC.




## FIRE PROTECTION GENERAL NOTES

INSTALL NEW SPRINKLER SYSTEM. MAINTAIN OPERATION OF THE EXISTING SPRINKLER SYSTEM OUTSIDE THE WORK AREA OF THIS PROJECT AT ALL TIMES.

REFERENCE ARCHITECTURAL ROOM FINISH SCHEDULES FOR CEILING HEIGHTS AND MATERIALS.

DELIGATED FIRE SUPPRESSION DESIGN

DESIGN OF THE FIRE SUPPRESSION SYSTEM IS DELEGATED TO THE INSTALLING CONTRACTOR. RESPONSIBILITY FOR PROVIDING A COMPLIANT, OPERATIONAL FIRE SUPPRESSION SYSTEM LIES WITH THE INSTALLING SPRINKLER CONTRACTOR. REFER TO ARCHITECT'S CODE SHEET WHEN DETERMINING THE APPROPRIATE FIRE SUPPRESSION DESIGN. VERIFY REQUIREMENTS SPECIFIC TO THE PROJECT LOCALE, THE AUTHORITY HAVING JURISDICTION, AND INCLUDE IN SCOPE.

THESE DRAWINGS SHOW THE INTENDED FIRE SUPPRESSION SCOPE. THE INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND HYDRAULIC CALCULATIONS REQUIRED TO OBTAIN THE PERMIT. THE DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR AN INDIVIDUAL CARRYING ALL CERTIFICATIONS REQUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AND APPROVAL. DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT / OWNER FOR REVIEW PRIOR TO SUBMITTING FOR PERMIT.

REQUIRED COMPONENTS THAT ARE NOT SHOWN ON THESE DRAWINGS ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED IN THIS SCOPE OF WORK.

## FIRE PROTECTION OVERALL PLAN

SCALE: 1/32" = 1'-0"

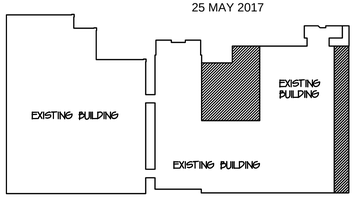
**DIVISION 21 - FIRE SUPPRESSION**

1. General Fire Suppression Requirements
   a. Refer to architectural drawings, general notes, and instructions to bidders, general conditions, supplementary general conditions, specifications and drawings, and as-built plans, which apply in all respects to this section.
   b. All work shall be performed in strict accordance with NFPA, and all applicable state, local codes and ordinances. In case of conflict between the drawings/specifications and the codes and ordinances, the highest standard shall apply. The fire suppression/sprinkler contractor shall satisfy code requirements as a minimum standard.
   c. The fire suppression/sprinkler contractor must be licensed by the State of this project to install new fire suppression systems.
   d. Delegated Design - Provide a complete and fully operational fire protection system, including all labor, material and equipment necessary to complete the fire suppression work. Responsibility for providing a compliant, operational fire suppression system lies with the installing sprinkler contractor. Refer to architect's code sheet when determining the appropriate fire suppression design. Verify requirements specific to project locality/authority having jurisdiction and include in scope. The drawings and these specifications describe the intended fire suppression scope. Installing contractor shall furnish all required drawings and hydraulic calculations required for fire protection permit. Drawings and calculations shall be prepared by a licensed professional engineer or an individual carrying all certifications required by the agency responsible for review and approval. All required components are the responsibility of this contractor and are included in this scope of work.
   e. The fire suppression/sprinkler contractor shall submit shop drawings with piping and sprinkler locations to the architect for review concurrently with submitting for building department approval. Architect may require sprinkler locations to be moved for coordination purposes or aesthetic reasons.
   f. The fire suppression/sprinkler contractor shall thoroughly examine all areas where equipment and piping will be installed and report any condition that prevents the proper installation of the fire suppression work prior to bid. Contractor shall also examine the drawings and specifications of other branches of work, making reference to them for details of new or existing building conditions. All work shall be done at times convenient to the owner and only during normal working hours, unless specified otherwise. Fire suppression/sprinkler contractor shall take their own measurements.
   g. Raise and/or rework all existing sprinkler piping as needed to coordinate with new walls, ceilings, and bulkheads. Reference architectural drawings for proposed ceiling heights and raise piping if necessary.
   h. Procure and pay for all permits, fees, taxes and inspections necessary to complete the fire suppression work. Furnish certificate of approval for work from inspection authority to owner before final acceptance for work. Certificate of final inspection and approval shall be submitted with the contractor's request for payment. No final payment will be approved without this certificate.
   i. All work shall be accurately laid-out with other trades, prior to installation & fabrication, to avoid all conflicts and obtain a neat and workmanlike installation which will afford maximum accessibility for equipment operation, maintenance clearances and headroom.
2. Use Of Drawings And Specifications
   a. EBS drawings and specifications are intended to convey design intent only. All means and methods, sequences, techniques, and procedures of construction as well as any associated safety precautions and programs, and all incidental and temporary devices required to construct the project, and to provide a complete and fully operational fire protection system are the responsibility of the fire protection contractor.
3. Contractor Coordination
   a. The fire protection drawings and specifications convey design intent only. Means and methods, sequences, techniques, and procedures of construction as well as any associated safety precautions and programs, and all incidental and temporary devices required to construct the project are the responsibility of the fire protection contractor. Coordination drawings showing system and component installation layout, routing, details, etc. Shall be produced by the fire protection contractor and under the supervision of the general contractor/construction manager, or appropriate party as applicable. All systems installed by each sub-contractor shall be coordinated with one another and approved by general contractor/construction manager, etc. prior to installation and/or fabrication. If questions concerning design intent arise during coordination, EBS can assist where appropriate.
4. System Design
   a. Fire suppression system shall be designed according to NFPA 13.
   b. Contractor is responsible for obtaining their own flow test information. Flow test information is provided to give the contractor the most recent information available on file, and may no longer be accurate. Changes in design and associated additional costs incurred for use of inaccurate flow test information are the responsibility of the Contractor.
5. Monitoring
   a. Fire Suppression contractor is responsible for all monitoring and alarm devices for the sprinkler system. For projects that do not have a fire alarm system, sprinkler contractor shall provide a dialer and all wiring needed to make the monitoring and alarm devices functional. Coordinate with owner's requirements.
6. Exterior Piping
   a. Fire-suppression water-service piping from the tap to the meter pit and to the fire department connection (where applicable) shall be:
      i. Push-on-Joint, Ductile-Iron Pipe (AWWA C151) with cement-mortar lining (AWWA C104), with push-on-joint bell and plain spigot end.
      ii. Push-on-Joint, Ductile-Iron Fittings: AWWA C153, ductile-iron compact pattern.
      iii. Gaskets: AWWA C111, rubber.
      iv. Flanges: ASME B16.1, Class 125, cast iron.
   b. Fire-suppression water-service piping from downstream of the meter pit to the building, and to all private fire hydrants downstream of the meter pit shall be:
      i. PVC Pipe: AWWA C900, Class 200, with bell end with gasket, and with spigot end.
      ii. PVC Fittings: AWWA C900, Class 200, with bell-and-spigot or double-bell ends. Include elastomeric gasket in each bell.
   c. Above ground piping at location of fire department connection and post indicator valve shall be galvanized Schedule 40 steel (ASTM A795); provide flange above grade at transition.
7. Interior Piping
   a. Where CPVC piping is not allowed:
      i. Piping smaller than 2" shall be schedule 40 black steel pipe with class 125, cast-iron threaded fittings.
      ii. Piping larger than 2" shall be schedule 10 black steel pipe with mechanical grooved pipe couplings (cut-groove type).
      iii. 2" piping can be schedule 40 black steel pipe with class 125, cast-iron threaded fittings or schedule 10 black steel pipe with mechanical grooved pipe couplings (cut-groove type).
8. Sprinklers
   a. Sprinklers shall be fully recessed with cover plate].
   b. Sprinklers in areas with no ceilings shall be upright.
9. Hangers & Supports
   a. The fire suppression/sprinkler contractor shall furnish all pipe supports required for their work. All piping shall be supported per code. Additional supports shall be provided where required to prevent sagging. Where alternative piping materials are used, hanger spacing can be reduced as recommended by the manufacturer and where allowed by code.
10. Escutcheon Plates
   a. Install one piece chrome plated brass wall plate equipped with set screw around all exposed pipe passing through walls in finished areas.
11. Access Panels
   a. Provide access panels or provide access panel quantities & locations to the general contractor concurrent with bidding.
12. Fire Stopping
   a. Provide fire stopping at all penetrations through rated separations per local codes & regulations & per UL recommendations for assemblies encountered in project.
   b. The fire stopping material shall meet the integrity of the fire rated wall, floor, ceiling & roof being penetrated. Refer to architect's drawings for wall, floor, ceiling & roof fire ratings prior to bidding work.
13. Cathodic Protection
   a. Provide dielectric insulation at points where copper or brass pipe comes in contact with ferrous piping, reinforcing steel or other dissimilar metal in structure.
14. Excavation, Trenching & Backfill
   a. Do all excavation, trenching & backfill required for the installation of all fire suppression work.
   b. All backfill shall be compacted & brought to finished grade and shall match surrounding conditions.
   c. Restore all disturbed flooring to original condition.
   d. All piping shall be laid on a bed of sand, 6" thick minimum. Backfill under building and all drives, roads and walks with bank-run gravel.
15. Cutting and Patching
   a. Cut and patch walls and floors to match building construction where required to install all fire suppression work.
16. Installation
   a. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, and concrete floor slabs. Seal pipe penetrations through rated construction with firestopping sealant material.
17. Testing
   a. All fire suppression work shall be tested & approved by inspector prior to being backfilled, concealed & put into service.
18. Shop Drawings
   a. Submit to the architect pdf file copies of complete & certified shop drawings, descriptive data, performance data & ratings, diagrams and specifications on all specified piping, devices, and equipment, including accessories, and materials for review.
   b. The make, model number, type, finish & accessories of all equipment and materials shall be reviewed & approved by the fire suppression/sprinkler contractor & general contractor prior to submitting to the architect for their review & approval.
   c. Review of shop drawings does not relieve the fire suppression/sprinkler contractor/vendor from compliance with the requirements of the contract drawings, specifications & applicable codes.
19. Owner's Instructions
   a. Provide two sets of complete operating and maintenance instructions with drawings, typewritten instructions and operating sequences and descriptive data sheets. Assemble each set in a hard-bound cover.
20. Warranty
   a. The fire suppression contractor shall unconditionally warrant all work to be free of defects in equipment, material and workmanship for a period of one (1) year from the date of final acceptance by owner and the fire suppression contractor will repair or replace any defective work promptly and without charge to the owner.
   b. Restore any other existing work damaged in the course of repairing defective equipment, materials and workmanship.

END OF DIVISION 21 - FIRE SUPPRESSION

STATE OF OHIO
SCOTT SEVERT STILKEY
E-77755
REGISTERED PROFESSIONAL ENGINEER

25 MAY 2017

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Checked by SSS

| Issue/ Revision | Revision Number | Date |
|---|---|---|
| BID / PERMIT | | 05/25/17 |

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RENOVATIONS AND ADDITIONS
FOR
Republic Wire
UNION CENTRE DRIVE
WEST CHESTER, OHIO 45069

Sheet Title
FIRE PROTECTION PLANS

Project No. 97333.33
Scale AS NOTED
Sheet No. FP1.0