

SECTION 21 05 00
COMMON WORK RESULTS FOR FIRE SUPPRESSION

H

1.0 GENERAL

1.01 DESCRIPTION

A. All work specified in this Section is governed by the Common Work Results for Plumbing Section 22 05 00.

B. This Section 21 05 00 and the accompanying drawings cover the provisions of all labor, equipment, appliances, and materials and performing all operations in connection with the engineering, design and construction of the fire suppression systems as specified herein and as shown.

C. Attention is called to the different hazards, classes and types of fire suppression systems required within the facility. Systems shall include, but not be limited to the following:

- Light hazard
- Ordinary hazard

D. The work included under this Section 21 05 00 shall include, but is not limited to, the following:

- Risers including all check valves, indicator valves, alarms, etc.
- Standpipes, hose connections, hose cabinets and boxes
- Siamese connections
- Piping and sprinkler heads
- Hydraulic design computations
- Shop drawings and procurement of all approvals

1.02 STANDARDS AND APPROVALS

A. The standpipes and sprinkler systems shall be designed and installed in conformance with the applicable standards of NFPA 13 (2013), NFPA 14 (2013), NFPA 15 (2013), NFPA 20 (2013), NFPA 24 (2013), NFPA 72 (2013), Underwriters Laboratories (UL), the standards of the Underwriter (RUFMISO) and local codes.

B. The hydraulic calculations, standpipes and sprinkler system design, products, materials, and installation shop drawings shall be submitted and approved by the Authority Having Jurisdiction, Owner's Insurance Underwriter, and the Fire Marshal.

C. The standpipes and sprinkler systems shall be installed by a firm which is duly licensed to install such systems in the State of North Carolina and carries a current certificate from the North Carolina State Fire Marshal's Office.

1.03 RECORD DRAWINGS

A. Upon completion of the work, provide record as-built documentation of the fire protection systems as actually installed to the Owner. Drawings shall be to scale and shall include all details required to accurately indicate the system as installed. Record drawings shall be produced in electronic format compatible with AUTOCAD. Furnish electronic copies of all drawings in dwg. format, and two (2) bond copies of all drawing sheets.

1.04 IDENTIFICATION

A. All control, check, drain, test and alarm valves and alarms shall be provided with identification signs of the standard design as adopted by the sprinkler industry and as recommended for the particular services. The signs shall be securely attached to each piece of equipment.

1.05 HOSE THREADS

A. Hose threads shall conform to the standards of the local Fire Department. The exact threads used shall be verified with the Fire Department before ordering materials.

1.06 FIRESTOPS

A. Where piping, conduit, etc. pass through fire partitions, fire walls and floors, a firestop shall be provided that will ensure an effective barrier against the spread of fire, smoke and gases. Firestop material shall be packed tight and completely fill gaps between the ductwork, piping, conduit, etc. and the perimeter of their rough openings.

B. All penetrations shall be in accordance with UL 1479 or ASTM E 814 listed systems, and products used shall be specifically applicable for the appropriate installation conditions. Assemblies shall provide a minimum rating equal to the construction penetrated. Products shall be by HILTI, 3M, or ProSeal.

C. Installation shall be by a Qualified Installer. Installer shall be certified, licensed, or otherwise qualified by the Firestopping Manufacturer as having the necessary training to install the Manufacturer's specific product. A Manufacturer or Vendor's willingness to sell the firestopping product to the Contractor or Installer does not in itself confer qualification.

D. Installer shall have at least one of the following qualifications:

- FM 4991 Approved Contractor
- UL Approved Contractor
- HILTI 3M, or ProSeal Accredited Fire Stop Specialty Contractor

E. Installing Firm shall have no less than 3 years of experience with firestop installation.

F. A Manufacturer's direct Representative (not Distributor or Agent) shall be on site during initial installation of firestop systems to train appropriate Contractor personnel in proper selection and installation procedures.

G. The Firestop Contractor or Installer shall supply As-Built documentation of each individual penetration location on the project. Documentation shall include a sequential location number, detailed description of the penetration location, size, and type, tested system number, type of assembly penetrated, and rating to be achieved. As-Built documentation shall be included with the close-out materials.

H. Identify through-penetration firestop systems with pressure-sensitive, self-adhesive, preprinted vinyl labels. Attach label permanently on both sides of penetrated construction in a visible location. The label shall include the following:

- The words "Warning - Through Penetration Firestop System-Do Not Disturb"
- Through Penetration firestop system designation and Manufacturer
- Date of Installation

2.0 PRODUCTS

2.01 MINIMUM QUALITY LEVEL

A. All equipment and materials provided under this Section 21 05 00 shall be new and of the best grade commercial quality, shall be of the latest design of the Manufacturer, and shall be listed and approved by UL and the Underwriter. Materials and equipment manufactured outside of the United States will not be acceptable. All components shall be suitable for the pressures indicated on the flow test.

2.02 VALVES

A. All fittings shall be products of a domestic Manufacturer and made in the USA.

B. Materials shall be as follows:

- Valves 2" and smaller: Bronze body
- Valves over 2": Iron body with bronze trim

C. Connections shall be as follows:

- Valves 4" and smaller: Threaded or flanged
- Valves over 4": Flanged

D. Gate valves shall be double seat; type as follows:

- Valves 2" and smaller: Rising stem type, except where space requires non-rising stem, solid wedge with union bonnet and replaceable seat rings
- Valves over 2": Outside screw and yoke type with solid wedge and replaceable seat rings

E. Butterfly valves shall have bronze or ductile iron discs, stainless steel shaft and lock bolts, Buna N liner and as follows:

- Valves through 6": Full lug type with wheel operators
- Valves over 6": Full lug type, gear operators

F. Fire Department Connections (FDC) shall be 2 1/2" screwed, UL approved, brass hose valves for working pressure of 175 psig with 2 1/2" male hose threads, 1 1/2" removable reducer, polished brass cap and chain. Contractor shall confirm this meets the local Fire Department requirements.

G. Provide and install Test Headers of quantity, location, and type as required by the local Fire Department and AHJ.

H. Swing checks shall be gravity operated with renewable composition discs. Wafer checks shall have renewable clapper facings and non-stick coated clappers, valve shall be approved for both horizontal and vertical installation.

I. All valves shall comply with requirements of NFPA and shall be Underwriters' Laboratories, Inc. (UL) listed.

J. Working pressure of all valves shall be minimum 175 psig at 70°F water temperature.

K. All valves utilized for shut-off service shall be lockable in the open position.

L. Alarm valves shall have electrical circuit closers.

2.03 ROOF MANIFOLDS

A. Roof manifolds shall be Y-type, 4" x 2 1/2" x 2 1/2", brass construction complete with caps and chains. Contractor shall confirm connections with the local Fire Department and AHJ.

2.04 FIRE DEPARTMENT SIAMSESE CONNECTIONS

A. Provide 2-1/2" x 2-1/2" x 4", chrome plated, lettered "Standpipe & Auto-Sprk", threads to match local Fire Department, with caps and chains. Contractor shall confirm connections with the local Fire Department and AHJ.

2.05 DRAINS

A. Drains shall be provided in all risers and auxiliary drains at all low points in the system. Inspector's test drains shall be installed on each sprinkler system.

B. Pipe the main drain and test lines full size to the outside. Do not spill on walkways. Branch drain lines that are expected to be seldom used may be provided with standard size hose end connections if allowed by the local Fire Department and the AHJ.

C. Pipe small drips and drains to the outside of the building or to an indirect drain within the building.

2.06 WATER FLOW SWITCHES

A. Water flow switches with normally closed electrical contacts shall be provided in all required locations to open the electrical contacts at any time water flows in the associated riser or zone piping system.

2.07 TAMPER SWITCHES

A. Tamper switches with normally closed electrical contacts shall be provided in all required locations to open the electrical contacts at any time the associated valve is not fully open.

2.08 ALARM SYSTEM

B. Provide interlocks to the building fire alarm system to provide automatic signaling to an approved remote location with adequate dialing and communication system to alert the local fire department. Connection and leased line shall be provided by Owner. Alarm system shall be monitored by two dedicated phone lines, see electrical for coordination.

2.09 SPRINKLER HEADS

A. All sprinkler heads shall be automatic, closed-type, quick-response, standard spray heads.

B. Sprinkler Heads in Ceilings

- All public areas shall be provided with concealed, fully recessed heads. Finish shall be as selected by the Architect.
- All hard and specialty ceiling areas, including metal panel and plank ceilings, shall be provided with concealed, fully recessed heads. Cover finish shall be as selected by the Architect. Finish shall be by the Manufacturer and be incorporated in the manufacturing facility.

C. Sprinkler heads installed in storage, utility, mechanical equipment rooms and similar "back-of-house" areas without ceilings shall be bronze heads in the upright position unless otherwise noted.

D. The temperature rating of the sprinkler heads shall be in accordance with applicable code and the recommendations of the Underwriter. Specific attention is called to sprinkler heads within cooking areas, generator rooms, or other areas with temperature levels over 120°F expected.

E. Sprinkler guards shall be provided for all heads within seven feet of the floor, in mechanical, electrical and storage rooms, and elsewhere as required by the Underwriter.

F. Provide to the Owner a cabinet containing two (2) head wrenches and a minimum of six (6) spare heads of each type and temperature rating used in the systems.

G. All heads installed in areas with tile ceilings shall have the heads centered in the tile.

2.10 PIPING

A. All piping shall be products of a domestic Manufacturer and made in the USA.

B. Piping shall be Schedule 40, grade A53 or A120; except that Schedule 10 piping is acceptable on pipe sizes 2 1/2" and larger where permitted by the applicable codes and standards. Schedule 10 piping shall not be threaded in the field, nor shall be cut-ground in the field or by a Manufacturer. Couplings and fittings shall be threaded or grooved, Viking, Victaulic, or approved equal.

C. The use of light-wall threaded pipe such as Allied XL is prohibited.

D. At the Contractor's option, individual drops to sprinkler heads may be flexible corrugated stainless steel hose with stainless steel braid, approved by both Factory Mutual and UL. Flexible hose shall be secured above the ceiling with galvanized sheetmetal brackets and clamps. Flexible hose, brackets and clamp shall be as manufactured by Flexhead Industries, Inc. or an approved equal.

E. Underground sprinkler entrance piping shall be Class 150 ductile iron pipe with mechanical joints. Underground piping shall have thrust blocks at changes in direction.

2.11 PIPE HANGERS AND SUPPORTS

A. Provide all necessary hangers, supports, bracing, accessories, etc., as required for proper installation of the work, and only approved type hangers shall be used. All sprinkler piping shall be supported from building structure; sprinkler lines under ducts shall not be supported from ductwork but shall be supported from building structure with trapeze hangers where necessary.

B. At a minimum, sprinkler piping supports shall be at intervals defined by code.

C. Piping supported from floors shall be provided with steel support bases.

2.12 ESCUTCHEONS

A. Each penetration through walls and ceilings shall be equipped with an escutcheon, finish to be selected by the Architect, at the point the pipe passes through the wall or ceiling.

3.0 EXECUTION

3.01 DESIGN AND INSTALLATION

A. The design and installation of the fire suppression systems shall be based on the hazards and classes required by the occupancies indicated.

B. Underground piping shall be provided with a minimum of 3'-0" of ground cover or below the first line, whichever is deeper. Concrete thrust blocks shall be provided at all changes of direction. Provide restraining rods at all mechanical joints.

3.02 CLEANING, LUBRICATION AND ADJUSTMENT

A. The exterior surfaces of all equipment, piping, conduit, etc., shall be cleaned and free of all dirt, grease, oil, paint splatter, and other construction debris.

B. Bearings that require lubrication shall be lubricated in strict accordance with the manufacturer's recommendations.

C. All control equipment, valves, equipment settings, pressure tanks, etc. shall be adjusted to the settings required for the performance specified.

D. All materials, equipment, etc. subject to weather, corrosion, dust, debris, water etc. to be installed or utilized for the project shall be fully protected. This is inclusive of piping and duct openings and internal fan ventilation intakes and discharges. This Division's scope includes protection and remediation of any and all Division materials, etc. including cleaning, waxing, dusting, etc. required for a clean system and operation. Insulation and equipment with electrical connections subject to water shall be replaced in their entirety. Coordinate with all other trades and schedules.

3.03 PAINTING

A. Steel items exposed outside the building, such as equipment supports, uninsulated piping and hangers, which are not factory painted or galvanized, shall be cleaned and painted with one coat of rust inhibiting primer and two coats of asphaltic base aluminum paint. Insulated steel pipes outside the building shall be cleaned and painted with one coat of rust inhibiting primer before installing insulation.

B. Items in exposed ceiling areas shall be painted a colour in coordination with the Architect as allowed by code.

3.04 SUBMITTALS

A. Before preparing submittals, study all Contract Drawings and specifications in detail, obtain manufacturer's recommended instructions, and have submittals prepared based on specific equipment and material proposal for installation. An officer of the contracting firm shall sign all shop drawings (certifying conformance with plans and specifications) before submitting to the Architect or releasing to the field.

B. The submittal process shall not be utilized as an avenue to substitute products after the execution of the contract. Should an unspecified or unequal product be submitted, it will be rejected. If a second attempt at substitution is made during the resubmittal of the same product, then no more reviews of that product will be performed without direct compensation to the Engineer being paid for the additional services required for the third review and any further reviews.

C. All submittals shall be submitted and returned electronically.

D. Submittals will not be accepted for review unless they:

- Comply with the requirements of Division 1.
- Include complete information pertaining to all appurtenances and accessories.
- Are submitted as complete packages which pertain to all related items in Division 21. Separate packages shall be submitted as follows:
 - All fire protection equipment, piping, specialties, and components
- Are properly marked with equipment, service or function identification as related to the project and are marked with pertinent specification paragraph number.

E. Submit catalog information, factory assembly drawings, field installation drawings and certifications as required for complete explanation and description of all items of equipment. The submittal data shall provide ample, unquestionable compliance with the Contract Documents.

F. Review of submittals shall not be construed as authorizing any deviations from the plans and specifications unless such deviations are clearly identified and separately submitted in the form of a letter that is enclosed with the submittals.

G. Submittals are required on all manufactured equipment, especially energy consuming equipment. Submittals shall include, but are not limited to, the following items of equipment:

- Piping and Piping Specialties
- Sprinkler Heads
- Piping Shop Drawings
- Hydraulic Calculations

3.05 FLUSHING

A. All underground lines, before connecting to the sprinkler systems, shall be flushed thoroughly in accordance with NFPA procedures.

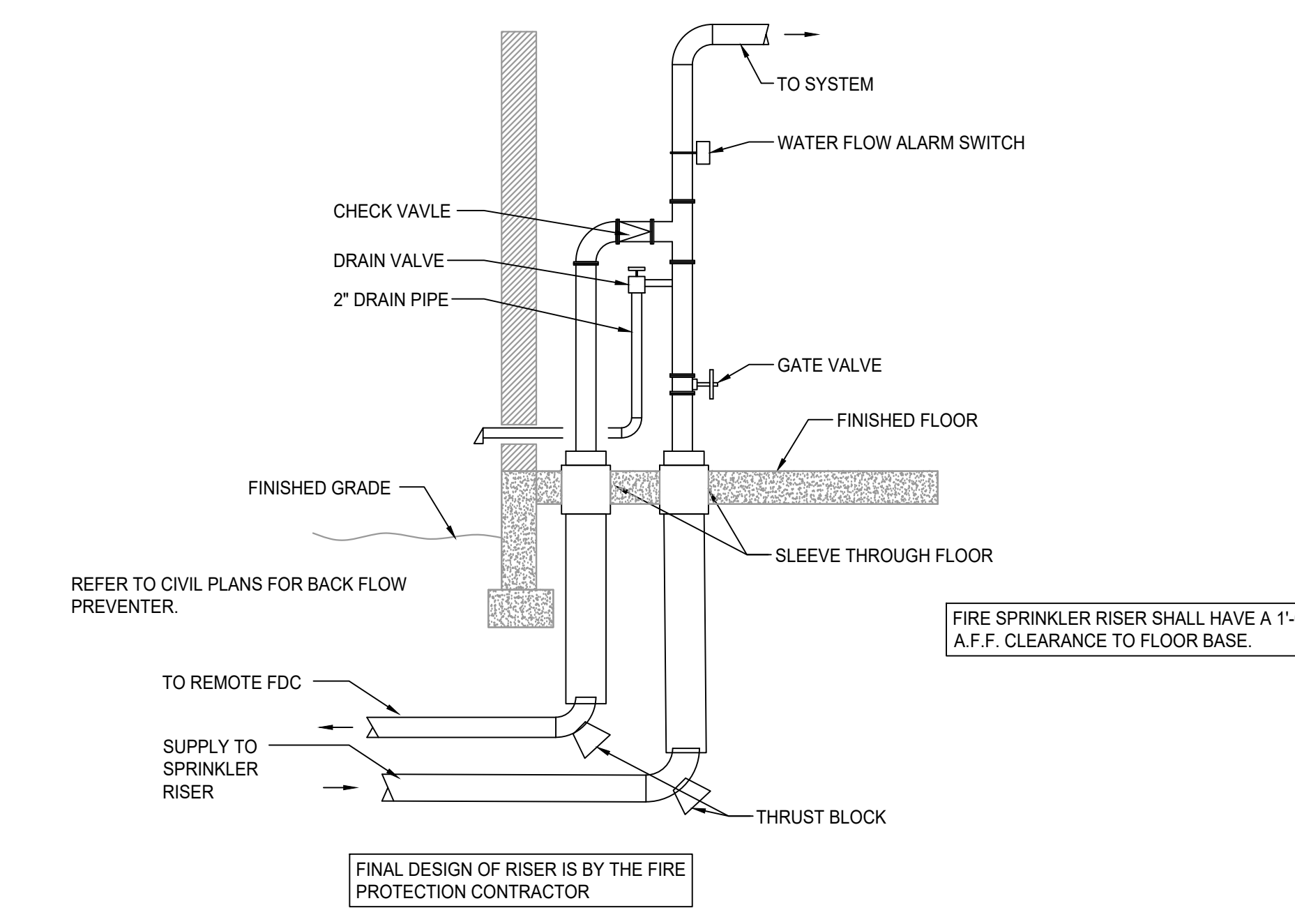
3.06 TESTING

A. The entire sprinkler system shall be tested at not less than 200 psi for not less than 2 hours. The 300 psi sections shall be tested at not less than 300 psi for not less than 2 hours. All leaks discovered shall be repaired by tightening, replacing or re-working the leaking component or joint. Caulking or similar is not permitted.

3.07 WARRANTY

A. All work provided under this Division 21 shall be subject to a minimum one year warranty. The warranty shall include prompt repair or replacement of equipment or system failures and shall include all parts and labor. In addition, all compressors shall carry an additional four year parts-only warranty. Extended warranties shall be provided on all other equipment so specified or other Sections.

END OF SECTION



1
FIRE RISER DIAGRAM
NOT TO SCALE

THERE IS NO SPRINKLER WORK IN THE HATCHED AREAS.

LEGEND	
NEW SPRINKLER (SEMI-RECESSED)	Q _N
NEW SPRINKLER (CONCEALED-HEAD)	Q _{N-C}
NEW SPRINKLER (TURNED-UP)	Q _{N-U}

DRAWING NO.
CFD-XXX-F-0001-XXXXXX

MAILING ADDRESS:
P.O. BOX 1107
CHARLOTTE, NC 28201

Safety Expectations:

Reduce Risk
Remove Exposures to Hazards
Reinforce Safe Behavior

BW & A Barrett, Woodward and Associates, Inc.
License # C-2226
420 Minuet Ln.
Charlotte, North Carolina 28217
(p) 704-357-9333 (f) 704-357-9385
© This drawing is copyrighted. It may not be reproduced nor used in any other form or on any other project.
BWA JOB # 2022-0632

SEAL 08/24/2023

DUNN OPERATIONS CENTER

1269 JONESBORO RD.
HARNETT COUNTY, NC 28334

MOBILE SUB. STORAGE

MARK	DATE	DRN BY	REVISION	ISSUED FOR CONSTRUCTION
▲				05/24/23

PROJECT NO:
DRAWING NUMBER
CFD-XXX-F-0001-XXXXXX

ELECTRONIC FILE NAME: F0001.DWG

DRAWN BY: TAYLOR SUBER

CHK'D BY: DAVID CONDON

E-MAIL: DCONDON@barrettwoodward.com

THIS DESIGN IS THE EXCLUSIVE PROPERTY OF BWA. ANY REUSE, REPRODUCTION, OR DISSEMINATION OF THIS DESIGN WITHOUT THE WRITTEN CONSENT OF BWA IS PROHIBITED. THIS DESIGN SHALL BE USED ONLY FOR THE SPECIFIC PROJECT SHOWN.

SHEET TITLE:
SPECIFICATIONS & DETAILS - FIRE PROTECTION

SHEET NO.
F-0001

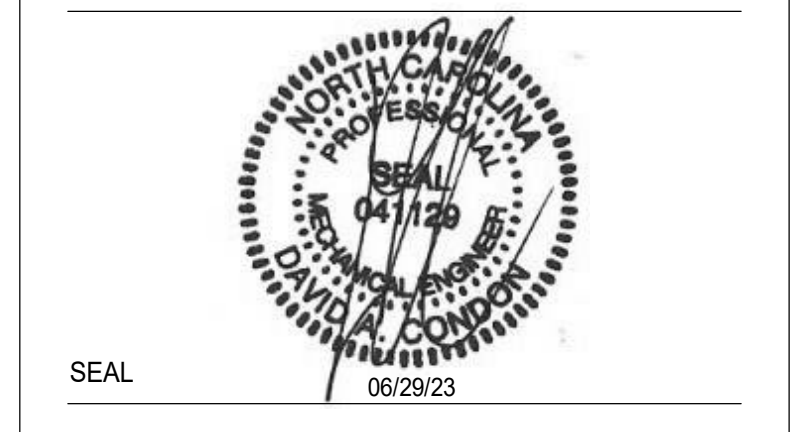


MAILING ADDRESS:
P.O. BOX 1007
CHARLOTTE, NC 28201

Safety Expectations:
 Reduce Risk
 Remove Exposures to Hazards
 Reinforce Safe Behavior



BW & A Barrett, Woodward and Associates, Inc.
 License # C-2228
 420 Minnet LN.
 Charlotte, North Carolina 28217
 (p) 704-537-9333 (f) 704-557-9385
 © This drawing is copyrighted. It may not be reproduced or used in any other form or on any other project.
 BWA JOB #2022-0632



DUNN OPERATIONS CENTER

1269 JONESBORO RD.
HARNETT COUNTY, NC 28334

MOBILE SUB. STORAGE

MARK	DATE	REVISION	DRN BY	ISSUED FOR
1	06/29/23	OWNER CHANGES		ISSUED FOR CONSTRUCTION
2	05/24/23			
3				
4				
5				
6				
7				
8				
9				
10				
11				

PROJECT NO: 9900019.00
DRAWING NUMBER

CFD-XXX-F-101-XXXXX

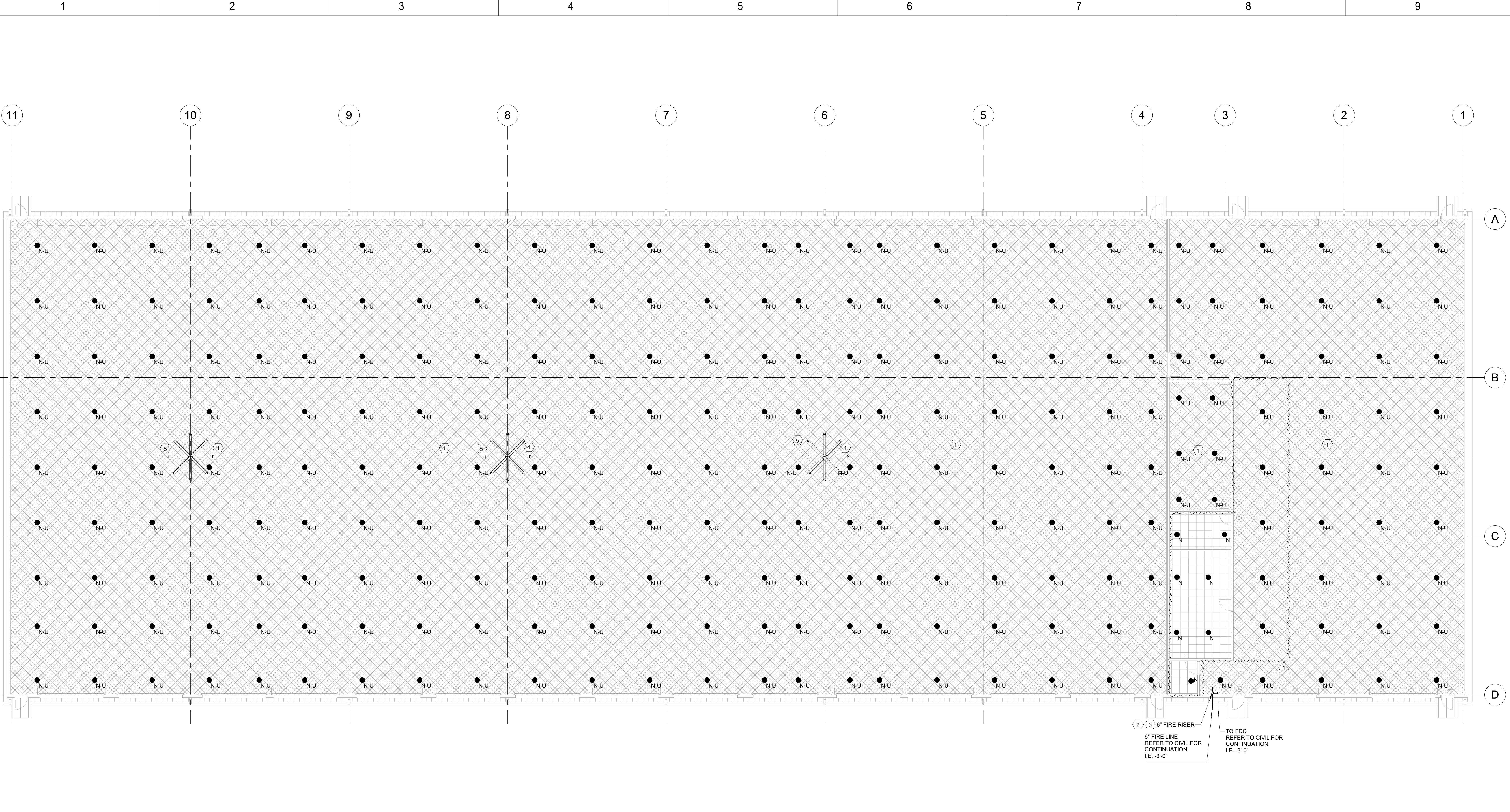
ELECTRONIC FILE NAME:
DRAWN BY: Author

CHK'D BY: Checker DATE:
E-MAIL: Checker

THIS DESIGN DRAWING IS THE EXCLUSIVE PROPERTY OF DUNN OPERATIONS CENTER. IT IS TO BE USED ONLY FOR THE SPECIFIC PROJECT INTENDED. IT SHALL NOT BE REPRODUCED, COPIED, OR DISTRIBUTED WITHOUT PRIOR APPROVAL. THE INFORMATION SHOULD ONLY BE USED FOR THE SPECIFIC PROJECT INTENDED.

SHEET TITLE:
FIRST FLOOR PLAN - FIRE PROTECTION

SHEET NO.
F-101



1 FIRST FLOOR PLAN - FIRE PROTECTION
F-101 / 3/32" = 1'-0"

KEY NOTES:
(APPLY THIS SHEET ONLY)

GENERAL NOTES:

- IT IS THE FIRE PROTECTION CONTRACTOR'S RESPONSIBILITY TO INSTALL, RELOCATE AND REMOVE SPRINKLER HEADS AS REQUIRED TO MEET CODE. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
- NO SPRINKLER HEAD SHALL BE CLOSER THAN 6'-0" TO ANOTHER SPRINKLER HEAD OR 4" TO A WALL. NO SPRINKLER HEAD SPACING SHALL EXCEED 15'-0" FROM ANOTHER SPRINKLER HEAD OR 7'-6" FROM A WALL.
- HEADS SHALL BE INSTALLED FOLLOWING NFPA 13 - 2013 EDITION AND MANUFACTURER'S RECOMMENDATIONS.
- ALL SPRINKLER HEADS IN THE SPACE SHALL BE THE SAME TYPE. CHANGE OUT HEADS AS NECESSARY.
- COORDINATE WITH ENTIRE DESIGN PACKAGE FOR NEW/EXISTING/DEMO WALL CONSTRUCTION
- ALL SPRINKLER HEADS IN LAY-IN, HARD OR SPECIALTY CEILINGS SHALL BE FULLY RECESSED CONCEALED HEADS. SPRINKLER HEAD COVER COLOR SHALL BE COORDINATED WITH ARCHITECT. SPRINKLER HEADS IN AREAS WITHOUT CEILING SHALL BE TURNED UP.

- CONTRACTOR TO PROVIDE HEADS TURNED UP IN AREAS OPEN TO STRUCTURE. HEADS ARE TO BE INSTALLED TIGHT TO STRUCTURE PER NFPA13.
- FIRE PROTECTION RISER. INSTALLATION SHALL BE PER NFPA GUIDELINES. ALL PREVAILING CODES AND APPROVED BY LOCAL AUTHORITY, FIRE MARSHALL AND UNDERWRITER. PROVIDE A FIRE DEPARTMENT HOSE CONNECTION AT EACH RISER. COORDINATE SIZE WITH FIRE DEPARTMENT. FINAL LOCATION SHALL BE DETERMINED BY FIRE PROTECTION SUBCONTRACTOR.
- PLUMBING CONTRACTOR TO PROVIDE 6" FIRE MAIN STUB-UP 12" ABOVE FINISHED FLOOR. FIRE PROTECTION CONTRACTOR SHALL TIE-IN AT THIS POINT.
- CONTRACTOR TO INTERLOCK FAN WITH FIRE ALARM SYSTEM TO SHUT DOWN UPON FIRE ALARM SYSTEM ENGAGING.
- CONTRACTOR SHALL ROUTE FIRE LINES SUCH THAT THERE IS NO INTERFERENCE WITH BAF-A. PER NFPA 72, 2013 SPRINKLER HEADS SHALL BE INSTALLED WITH A THREE (3) FOOT CLEARANCE OF BAF-A. COORDINATE MOUNTING HEIGHT OF SPRINKLER LINES AND BAF-A WITH ARCHITECT AND OWNER'S REP. PRIOR TO INSTALLATION OF FIRE LINES.

LIGHT STORAGE - ORDINARY 1 HAZARD 0.15 GPM/SF @ 1500 SF

2 3 6" FIRE RISER
6" FIRE LINE REFER TO CIVIL FOR CONTINUATION I.E. -3'-0"
TO FDC REFER TO CIVIL FOR CONTINUATION I.E. -3'-0"

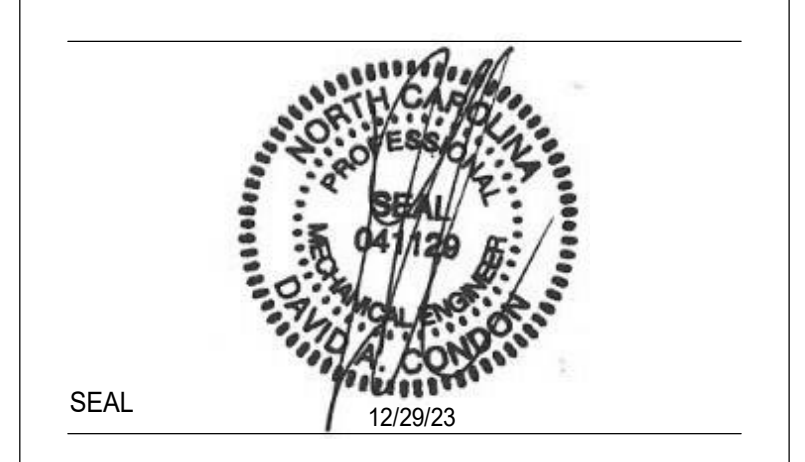


MAILING ADDRESS:
P.O. BOX 1007
CHARLOTTE, NC 28201

Safety Expectations:
 Reduce Risk
 Remove Exposures to Hazards
 Reinforce Safe Behavior



BW & A Barrett, Woodward and Associates, Inc.
 License # C-2228
 420 Minnet Ln.
 Charlotte, North Carolina 28217
 (p) 704-537-9333 (f) 704-557-9385
 © This drawing is copyrighted. It may not be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Barrett, Woodward and Associates, Inc.
 BWA JOB #2022-0632



DUNN OPERATIONS CENTER

1269 JONESBORO RD.
HARNETT COUNTY, NC 28334

MOBILE SUB-STORAGE

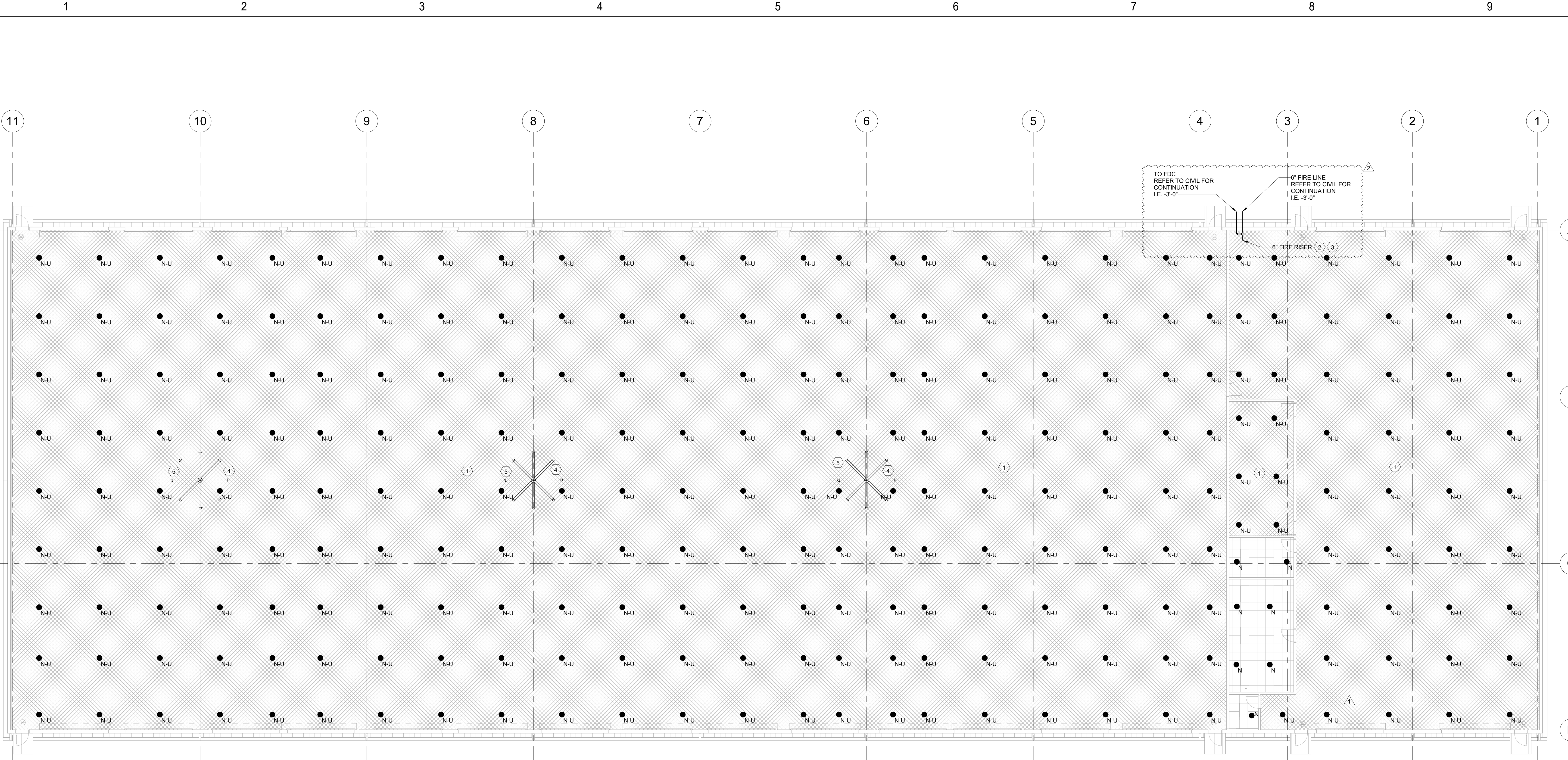
MARK	DATE	REVISION	DRN BY
1	12/29/23	MSS-RFI-005	
2	05/29/23	OWNER CHANGES	
3	05/24/23	ISSUED FOR CONSTRUCTION	

PROJECT NO: 9900019.00
DRAWING NUMBER
CFD-XXX-F-101-XXXXX

ELECTRONIC FILE NAME:
DRAWN BY: Author
CHK'D BY: Checker DATE:
E-MAIL: Checker

SHEET TITLE:
FIRST FLOOR PLAN - FIRE PROTECTION

SHEET NO.
F-101



1 FIRST FLOOR PLAN - FIRE PROTECTION
F-101 / 3/32" = 1'-0"

GENERAL NOTES:

- IT IS THE FIRE PROTECTION CONTRACTOR'S RESPONSIBILITY TO INSTALL, RELOCATE AND REMOVE SPRINKLER HEADS AS REQUIRED TO MEET CODE. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
- NO SPRINKLER HEAD SHALL BE CLOSER THAN 6'-0" TO ANOTHER SPRINKLER HEAD OR 4" TO A WALL. NO SPRINKLER HEAD SPACING SHALL EXCEED 15'-0" FROM ANOTHER SPRINKLER HEAD OR 7'-6" FROM A WALL.
- HEADS SHALL BE INSTALLED FOLLOWING NFPA 13 - 2013 EDITION AND MANUFACTURER'S RECOMMENDATIONS.
- ALL SPRINKLER HEADS IN THE SPACE SHALL BE THE SAME TYPE. CHANGE OUT HEADS AS NECESSARY.
- COORDINATE WITH ENTIRE DESIGN PACKAGE FOR NEW/EXISTING/DEMO WALL CONSTRUCTION.
- ALL SPRINKLER HEADS IN LAY-IN, HARD OR SPECIALTY CEILINGS SHALL BE FULLY RECESSED CONCEALED HEADS. SPRINKLER HEAD COVER COLOR SHALL BE COORDINATED WITH ARCHITECT. SPRINKLER HEADS IN AREAS WITHOUT CEILING SHALL BE TURNED UP.

KEY NOTES:
(APPLY THIS SHEET ONLY)

- CONTRACTOR TO PROVIDE HEADS TURNED UP IN AREAS OPEN TO STRUCTURE. HEADS ARE TO BE INSTALLED TIGHT TO STRUCTURE PER NFPA13.
- FIRE PROTECTION RISER. INSTALLATION SHALL BE PER NFPA GUIDELINES. ALL PREVAILING CODES AND APPROVED BY LOCAL AUTHORITY, FIRE MARSHALL AND UNDERWRITER. PROVIDE A FIRE DEPARTMENT HOSE CONNECTION AT EACH RISER. COORDINATE SIZE WITH FIRE DEPARTMENT. FINAL LOCATION SHALL BE DETERMINED BY FIRE PROTECTION SUBCONTRACTOR.
- PLUMBING CONTRACTOR TO PROVIDE 6" FIRE MAIN STUB-UP 12" ABOVE FINISHED FLOOR. FIRE PROTECTION CONTRACTOR SHALL TIE-IN AT THIS POINT.
- CONTRACTOR TO INTERLOCK FAN WITH FIRE ALARM SYSTEM TO SHUT DOWN UPON FIRE ALARM SYSTEM ENGAGING.
- CONTRACTOR SHALL ROUTE FIRE LINES SUCH THAT THERE IS NO INTERFERENCE WITH BAF-A. PER NFPA 72, 2013 SPRINKLER HEADS SHALL BE INSTALLED WITH A THREE (3) FOOT CLEARANCE OF BAF-A. COORDINATE MOUNTING HEIGHT OF SPRINKLER LINES AND BAF-A WITH ARCHITECT AND OWNER'S REP. PRIOR TO INSTALLATION OF FIRE LINES.

LIGHT STORAGE - ORDINARY 1 HAZARD 0.15 GPM/SF @ 1500 SF