detail no. ———————————————————————————————————	×	+	O _P	0	•	▼ CTE			<u>Symbol</u> <u>Abbrev.</u>
DETAIL REFERENCE	EXISTING SPRINKLER HEAD TO BE RELOCATED	EXISTING SPRINKLER HEAD TO BE REPLACED IN SAME LOCATION	EXISTING SPRINKLER HEAD TO BE REMOVED AND PLUG PIPING ABOVE CEILING	NEW UPRIGHT SPRINKLER HEAD (TYPE TO MATCH BUILDING STANDARDS UNLESS OTHERWISE NOTED ON DRAWINGS)	NEW PENDENT OR CONCEALED SPRINKLER HEAD (TYPE TO MATCH BUILDING STANDARDS UNLESS OTHERWISE NOTED ON DRAWINGS)	CONNECT TO EXISTING	EXISTING WET SPRINKLER PIPING	WET SPRINKLER PIPING	Description

NOTES:

- CONNECT TO EXISTING PIPING AT SPRINKLER HEAD BEING REMOVED. EXTEND EXISTING PIPING TO NEW SPRINKLER HEAD LOCATION. HYDRAULICALLY VERIFY CAPACITY OF PIPE FOR EXTENSION TO MULTIPLE SPRINKLER HEADS. TAP OFF MAIN IF NECESSARY.
- REPLACE EXISTING PENDENT SPRINKLER W/NEW CONCEALED SPRINKLER TO ACCOMODATE NEW SHEETROCK CEILING.
- REMOVE EXISTING SPRINKLER HEAD AND CUT PIPE TO ABOVE NEW CEILING AND CAP.

FIRE PROTECTION GENERAL NOTES

- THE FIRE PROTECTION CONTRACTOR SHALL BE FAMILIAR WITH ALL CONTRACT DOCUMENTS FOR ALL TRADES AND COORDINATE WITH OTHER CONTRACTORS.
- DRAWINGS ARE DIAGRAMMATIC ONLY, FINAL ROUTING OF PIPING AND EQUIPMENT LOCATIONS SHALL BE DETERMINED IN THE FIELD. ADDITIONAL OFFSETS, ELBOWS, ETC., SHALL BE PROVIDED AND INSTALLED WITHOUT ADDITIONAL COST TO THE OWNER. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE ALL ELECTRICAL, PLUMBING & HVAC REQUIREMENTS WITH THE ELECTRICAL, PLUMBING AND HVAC CONTRACTORS.
- THE FIRE PROTECTION CONTRACTOR SHALL FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE FIRE PROTECTION WORK COMPLETE AND READY FOR OPERATION.
- THE FIRE PROTECTION CONTRACTOR SHALL INFORM AND COORDINATE WITH THE OWNER ALL NECESSARY INTERRUPTIONS TO EXISTING BUILDING SYSTEMS AND SERVICE THAT MAY AFFECT THE NORMAL OPERATION OF OCCUPIED PORTIONS OF THE BUILDING. THE OWNER SHALL BE INFORMED OF ANY INTERRUPTIONS AT LEAST 24 HOURS IN ADVANCE, AND GRANT PERMISSION OF EACH SHUT—DOWN.

FIRE PROTECTION SPECIFICATIONS

LEGEND:

- Summary: Complete, tested and operational automatic wet-pipe type sprinkler system, including but not limited to a. Alteration and addition to the existing automatic wet-pipe type sprinkler system to accommodate the renovated b. Protect all spaces within the building (limit of work), including telephone and electric closets, but excluding elevator rooms, main electrical rooms, and elevator machine rooms.

 c. Obtain and pay for permits and certificate of inspection for fire protection work.

 d. Floor and wall penetration systems.

 e. Fire protection contractor shall be responsible for engineering, design, and hydraulic calculations of the sprinkler f. Coordination with work of all other trades.

 g. Refer to Architectural Reflected Plan for location of sprinkler heads. automatic wet—pipe type sprinkler system, including but not limited to the following: omatic wet—pipe type sprinkler system to accommodate the renovated space. it of work), including telephone and electric closets, but excluding elevator shafts, er elevator machine rooms.
- system.

1000 Massachusetts Avenue Cambridge, Massachusetts 02138 617.547.5400 Fax 617.354.5758

- nents of work. Additional work not shown but rec
- Contract Drawings are diagrammatic and indicate only the general arrangen complete fire protection system shall be included as part of this Contract.

- Existing Conditions:

 a. Before submitting prices or beginning work, thoroughly examine the site and Contract Documents. No claim for extra compensation will be recognized if difficulties which an examination of site conditions and Contract Documents prior to executing Contract would have revealed.

 b. Obtain hydrant or fire pump flow test results as required by the Authority Having Jurisdiction and in accordance with NFPA requirements. If none are available, perform the appropriate test as required by the local fire department.
- Reference Standards: Equipment, specialties, accessories, installation, and testing complying a. International Building Code 2003.

 b. NFPA 13 "Standard for the Installation of Sprinkler Systems".

 c. NFPA 25 "Inspection, Testing and Maintenance of Water Based Fire Protection Systems".

 d. Local ordinances and regulations of Authorities Having Jurisdiction. xcessories, installation, and testing complying with the applicable edition of the following:

- 5. Hydraulic Design:
 a. Minimum density requirements:
 Light Hazard Occupancy: 0.10 GPM over 1500 sq. ft. area.
 Ordinary Hazard, Group 1 Occupancy: 0.15 GPM over 1500 sq. ft. area.
 b. Maximum Sprinkler Spacing:
 Light Hazard Areas: 225 sq. ft./sprinkler.
 Ordinary Hazard Group 1: 130 sq. ft./sprinkler.
 Electrical Equipment Rooms: 130 sq. ft./sprinkler.
 Other Areas: According to NFPA 13.
 c. Minimum working pressure rating: 175 psig.

OWNER REVIEW

DATE

- Submittals:

 a. Obtain latest hydrant flow test or fire pump to the control of th p test to support hydraulic calculations as required by Authorities Having Jurisdiction. seal of Registered Professional from State of Maine. Hydraulic calculations shall include hose hydraulic balance points, and pipe sizes. to local authorities for review and approval before submitting to the Architect. sample. etc.
- Closeout Submittals:
 Test reports and certifications as described in
 Record Drawings of existing piping system and
 Upon completion of all work, furnish, in duplic
 Provide (3) spare sprinkler heads matching he bed in NFPA 13 and 25. m and modifications to support new layout, including sizes and source. duplicate, certificates of inspection from all inspectors and authorities having jurisdiction. ing heads installed.

- Piping:
 a. ASTM A 53, Schedule 40 with threaded ends
 b. ASTM A 135, Schedule 10 with rolled groove Quality Assurance:
 a. Furnish products that are U.L. Listed and labeled and FM approved.
 b. Comply with requirements of Authority Having Jurisdiction for submittals, approvals, materials, installation, inspections, and testing.
 c. Comply with requirements of Owner's insurance underwriter for submittals, approvals, materials, installation, inspections and testing.
 d. Professional Engineer: P. E. licensed in the state where the Project is located, and experienced in providing engineering design services for fire protection systems.

for sizes 2 inch and smaller. ends for sizes 2 1/2 inch and larger.

- 10. Fittings:
 a. Cast-Iron Threaded Fittings: ASME B16.4, Class 250, standard pattern, with threads according to ASME B1.20.1
 b. Malleable-Iron Threaded Fittings: ASME B16.3, Class 300, standard pattern, with threads according to ASME B1.20.1.
 c. Grooved-End Fittings: UL-Listed and FM-Approved, ASTM A 536, Grade 65-45-12 ductile iron or ASTM A 47 Grade 32510 malleable iron, with grooves or shoulders designed to accept groove couplings.
- prinklers: Automatic sprinklers with heat—responsive element conforming to UL 199, with nominal 1/2 inch orifice for "Ordinary" emperature classification rating; UL listed and FM approved. Refer to plans for sprinkler type and application.

 Manufacturers: Victaulic, Viking Corp, Reliable Automatic Sprinkler Co., or Central Sprinkler Corp.

 Concealed, for rooms with drywall ceilings: Pendent style automatic sprinkler, 165° F rated, 1/2 inch nominal orifice, adjustable type, with rough brass finished sprinkler and recessed type mounting cup, with white ceiling cover plate, Reliable Automatic Sprinkler Co. Model G4A.

 Recessed, for rooms with suspended ceilings: Pendent style automatic sprinkler, 165° F rated, 1/2 inch nominal orifice, adjustable type, with chrome sprinkler and chrome recessed type ceiling escutcheon, Reliable Automatic Sprinkler Co. Model F1FR.

 Sprinklers for Light Hazard application shall be "quick—response" type.
- 12. Sprinkler Cabinets: Finished steel cabinet and hinged cover, with space for minimum of 6 spare sprinklers plus sprinkler wrench, suitable for wall mounting. Include number of sprinklers required by NFPA 13 and 1 wrench for sprinklers. Include separate cabinet with sprinklers and wrench for each style sprinkler on Project.
- 13. Hangers and Supports for Horizontal Piping: Adjustable swivel rings, band type, MSS type 10. accordance with NFPA 13 requirements.
- Preparation for Installation:

 Protect all new and existing work before, during and after installation.
 Protect all new and existing work before, during and after installation.
 Minimize interruption of services in areas which will be occupied during the construction period. Before interrupting such services, provide written notification to Owner and obtain written consent and perform work at a time outside normal working hours. Refer to the overall scheduling of work of the project. Schedule work to conform to this schedule and install work to not delay nor interfere with the progress of the project.

D Banknorth

449 Forest Avenue Portland, ME 04101-2029

ELOG CHANGE

DATE

DESCRIPTION

- 16. Piping Applications: Use pipe, fittings, and joining methods according to the following applications. Piping may be joined with flanges instead of indicated joints.
 a. 2 inches and Smaller: Schedule 40 steel pipe with threaded ends, cast—iron or malleable iron threaded fittings.
 b. 2 1/2 inches and Larger: Schedule 10 steel pipe with ductile iron or malleable iron rolled grooved fittings.

- 17. Valve Applications1. Shut—Off Duty: Use gate or butterfly.2. Line Drain: Use gate valves for drains only.3. Inspector's Test: use specialty test, or drain
- 18. Piping Installation: Drawings (plans, schematics, and diagrams) indicate general location and arrangement of piping. Any deviation from approved shop drawings for sprinkler piping requires written approval from the authority having jurisdiction. File written approval with the Architect prior to deviating from approved shop drawings
 a. Use approved fittings to make changes in direction, branch take—offs from mains and reductions in pipe sizes.
 b. Support piping on hangers spaced as required by NFPA 13.
 c. Provide seismic restraints at all locations to comply NFPA 13, for new and existing piping within the "Project Limit of Work".
- prinkler Installation: Install sprinklers in general patterns indicated on Plans. Locate sprinklers in strict accordance with NFPA 13.

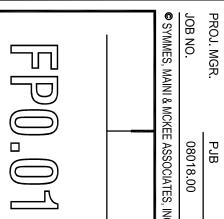
 For suspended ceilings, locate sprinklers in center of ceiling panel.

 For drywall ceilings, locate sprinklers in straight line and in line with other devices, light fixtures, etc.

 After installation, clean dirt and debris from sprinklers. Replace sprinklers having paint other than factory finish with new sprinklers.
- ce of the Architect's Repr esentative and local fire departr ent, perform field acceptance tests of each fire
- 20. Field Quality Control: In presence of protection system.

 a. Flush, test, and inspect sprinkler b. Replace piping system component until satisfactory results are obtain c. Report test results promptly and ler piping syst ents that do otained. nd in writing tems according to NFPA 13 Chapter "System Acceptance". not pass test procedures specified, then retest to demonstrate co to Architect, Owner, and Owner's insurance company.
- t-up Procedures: Follow manufacturer's written procedures. If no procedures are prescribed by manufacturer, proceed as follows: Verify that existing specialty valves, trim, fittings and accessories have been installed correctly and operate correctly. Verify that specified tests of piping and equipment are complete. Check that damaged sprinklers and sprinklers with paint or coating not specified have been replaced with new, correct type of sprinklers. Check that sprinklers are correct type, have correct finish and temperature ratings, and have guards where required for applications. Fill wet-pipe sprinkler systems with water. Energize circuits to electrical equipment and devices. Adjust operating controls and pressure settings.

 Coordinate with fire alarm system tests. Operate systems as required.



CHECKED BY
PROJ. ARCH. / ENGR.
PROJ. MGR.

DRAWN BY

NTS MVR

NOTES

SPECIFICATIONS, LEGEND AND

