

FIRE PROTECTION SPECIFICATIONS

1. GENERAL
- 1.1 REQUIREMENTS
- A. THE FIRE PROTECTION CONTRACTOR (ALSO REFERRED TO AS CONTRACTOR) SHALL BE A LICENSED, AUTHORIZED INSTALLER OF FIRE PROTECTION SYSTEMS AND SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE IN THE INSTALLATION OF FIRE PROTECTION SYSTEMS. THE SYSTEM DESIGNER SHALL BE LICENSED BY THE STATE OF NEW YORK.
- B. BEFORE SUBMITTING BID, THE FIRE PROTECTION CONTRACTOR SHALL VISIT THE SITE AND BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION TAKEN PLACE.
- C. PRIOR TO SUBMITTING THE PROPOSAL, THE CONTRACTOR SHALL INFORM THE ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES OR REQUEST CLARIFICATION IN WRITING CONCERNING THE INTENT OF THE PLANS AND SPECIFICATIONS TO PROVIDE A COMPLETE FIRE PROTECTION INSTALLATION. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA DESIGN, LABOR, EQUIPMENT OR MATERIALS SHOULD SUCH PROCEDURE NOT BE FOLLOWED.
- D. THE SCHEDULING OF THE FIRE PROTECTION WORK SHALL BE COORDINATED WITH THE BUILDING OWNER, CONSTRUCTION MANAGER AND THE OTHER TRADES.
- E. ANY NECESSARY SHUT-DOWNS OF BASE BUILDING FIRE PROTECTION SYSTEM MUST BE COORDINATED WITH THE BUILDING OWNER, FIRE DEPARTMENT AND CONSTRUCTION MANAGER.
- 1.2 WORK INCLUDED
- A. PROVIDE A COMPLETE FIRE PROTECTION SYSTEM THROUGHOUT AS INDICATED ON THE CONTRACT DRAWINGS.
- B. ALL WORK SHALL COMPLY WITH NFPA STANDARDS, LOCAL AND STATE BUILDING AND FIRE CODES, LOCAL FIRE MARSHAL REQUIREMENTS, AND OWNER'S INSURANCE COMPANY.
- C. ALL DRAIN AND TEST PIPING SHALL TERMINATE AT ARCHITECT AND/OR ENGINEER APPROVED BUILDING EXTERIOR LOCATIONS UNLESS OTHERWISE NOTED. FINISH OF EXTERIOR PIPING SHALL BE SELECTED BY ARCHITECT.
- D. PROVIDE ALL REQUIRED AUXILIARY DRAIN ASSEMBLIES FOR COMPLETE DRAINAGE OF SYSTEM PER NFPA STANDARDS.
- E. ALL PIPE AND FITTINGS SUBJECT TO INTERIOR ALTERNATING WET AND DRY CONDITIONS SUCH AS DRAIN AND FIRE DEPARTMENT CONNECTION PIPING SHALL BE GALVANIZED.
- F. PROVIDE SPRINKLER COVERAGE IN ALL COMBUSTIBLE CONCEALED SPACES IN ACCORDANCE WITH NFPA 13 REQUIREMENTS.
- G. PROVIDE SPRINKLER COVERAGE FOR ALL EXTERIOR CANOPIES OVER 4 FT. IN WIDTH, IF REQUIRED IN ACCORDANCE WITH NFPA STANDARDS.
- H. PROVIDE SPRINKLER HEADS BELOW ALL EXPOSED DUCTWORK GREATER THAN 4 FT. IN WIDTH IN ACCORDANCE WITH NFPA 13. ALSO PROVIDE COMPLETE SPRINKLER PROTECTION BELOW ALL OTHER DUCTS/OBSTRUCTIONS IN ACCORDANCE WITH THE OBSTRUCTION REQUIREMENTS IN NFPA 13.
- I. INSURE THAT PIPE SIZES ARE ADEQUATELY SIZED FOR NUMBER OF SPRINKLER HEADS ON EACH BRANCHLINE AND CROSSMAIN BY PERFORMING HYDRAULIC CALCULATIONS FOR THE SYSTEM. PROVIDE HYDRAULIC CALCULATION FOR EACH HAZARD CLASSIFICATION. PROVIDE ANY ADDITIONAL CALCULATIONS REQUESTED BY THE ENGINEER.
- J. SPRINKLER HEAD LAYOUT SHALL BE BASED ON THE LOCATIONS INDICATED ON THE PLANS AND MAY NOT NECESSARILY SHOW ALL REQUIRED HEADS. THE CONTRACTOR SHALL COORDINATE THE WORK WITH EXISTING CONDITIONS AND WITH THE NEW WORK OF ALL OTHER TRADES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS BETWEEN TRADES BEFORE INSTALLATION OF SPRINKLER SYSTEM.
- K. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. ANY DIMENSIONS NOT SHOWN SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS. FOR EXACT LOCATIONS, MOUNTING HEIGHTS, ETC., REFER TO ARCHITECTURAL DRAWINGS AND DETAILS. ALL DIMENSIONS AND LOCATIONS OF EXISTING SPRINKLER HEADS AND PIPING SHALL BE FIELD VERIFIED.
- L. SUBMIT A COMPLETE SET OF DRAWINGS AND HYDRAULIC CALCULATIONS FOR REVIEW AND RECEIVE APPROVAL PRIOR TO ORDERING OR INSTALLING ANY PIPE, FITTINGS, DEVICES AND EQUIPMENT.
- M. PROVIDE CURRENT (WITHIN ONE YEAR) MUNICIPAL WATER SUPPLY DATA ON SHOP DRAWINGS INCLUDING HYDRANT LOCATIONS AND ELEVATION OF GAUGED HYDRANT. IF CURRENT TEST IS NOT AVAILABLE, CONTRACTOR SHALL REQUEST AND PAY FOR NEW WATERFLOW TEST.
- N. PROPERLY REMOVE AND DISPOSE OF FIRE PROTECTION DEMOLITION AND/OR UNUSED REMAINING MATERIALS FROM SITE.
- O. IF HAZARDOUS MATERIALS ARE SUSPECTED OR DISCOVERED, IMMEDIATELY CONTACT THE OWNER IN WRITING SO THAT OWNER CAN ARRANGE FOR INVESTIGATION AND ANY REQUIRED ABATEMENT OF MATERIALS.
- P. CONTRACTOR SHALL PROVIDE AN ALLOWANCE FOR AN ADDITIONAL 10 HEADS ALONG WITH 10 FT. OF ASSOCIATED PIPE, FITTINGS & HANGER ASSEMBLY AS PART OF THE BASE BID TO ACCOMMODATE FIELD CONDITIONS.
- 1.3 SUBMITTALS AND SHOP DRAWINGS
- A. THE CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL PRIOR TO INSTALLATION FOR THE FOLLOWING: MATERIAL SUBMITTALS, HYDRAULIC CALCULATIONS, AND FULLY COORDINATED SHOP DRAWINGS INCLUDING:
- SHOP DRAWINGS SHALL BE PREPARED IN AUTOCAD. SUCH DRAWINGS AND ALL ASSOCIATED ELECTRONIC FILES SHALL BE PROPERTY OF THE OWNER.
 - COMPLETE SCHEMATIC RISER DIAGRAM, SITE PLAN, AND FULL HEIGHT BUILDING CROSS-SECTION
 - BACKFLOW PREVENTER, IF PART OF CONTRACT
 - SPRINKLER HEADS
 - PIPE, FITTINGS, AND COUPLINGS
 - CONTROL VALVE WITH BUILT IN TAMPER SWITCH AND OTHER VALVES
 - HORN STROBE
 - RISER CHECK VALVE ASSEMBLY
 - FIRE DEPARTMENT CONNECTION
 - SPRINKLER HEAD CABINET & WRENCH
 - VALVE TAGS AND SIGNAGE
 - HANGERS AND SUPPORTS INCLUDING SEISMIC BRACING, IF REQUIRED
 - FIRE STOPPING ASSEMBLY
 - ALL OTHER DEVICES AND EQUIPMENT, ETC.
 - HYDRAULIC CALCULATIONS SIGNED AND SEALED BY A PE OR NICET (LEVEL III or IV) CERTIFIED IN FIRE SPRINKLER DESIGN
- B. SHOP DRAWINGS/SUBMITTALS SHALL BE REVIEWED UP TO TWO TIMES BY ENGINEER. SHOULD CONTRACTOR FAIL TO MAKE ALL CORRECTIONS REQUIRED BY ENGINEER OR SHOULD ADDITIONAL REVIEWS BE REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR BACK CHARGES FOR ADDITIONAL REVIEW TIME/OR CORRECTIONS PERFORMED BY ENGINEER.
- C. PROVIDE AS-BUILT RECORD DRAWINGS. AS-BUILT DRAWINGS SHALL BE PREPARED USING AUTOCAD AND SUBMITTED ELECTRONICALLY (DWG AND PDF FORMATS) ALONG WITH HARD COPIES FOR REVIEW BY OWNER AND ENGINEER. ALL APPROVED DRAWINGS, CALCULATIONS, MATERIAL DATA SHEETS, ETC., SHALL BECOME PROPERTY OF THE OWNER.

- 1.4 BUILDING DEPARTMENT FILING, PERMITS AND CERTIFICATES
- A. THE CONTRACTOR SHALL FILE ALL REQUIRED DRAWINGS, MATERIAL DATA, AND SPECIFICATIONS WITH THE AUTHORITIES HAVING JURISDICTION AND BE RESPONSIBLE FOR OBTAINING PERMITS AND FINAL APPROVALS.
- B. ARRANGE FOR INSPECTIONS AND TESTS OF ANY AND ALL PARTS OF THE WORK AS REQUIRED BY AUTHORITIES HAVING JURISDICTION AND PAY ALL CHARGES FOR SAME. INCLUDE ALL SIGNED-OFF INSPECTIONS AND TEST CERTIFICATES WITH AS-BUILT DOCUMENTS.
2. MATERIALS
- 2.1 GENERAL
- A. THE FIRE PROTECTION SYSTEM SHALL BE COMPLETE WITH ALL PIPE, FITTINGS, VALVES, DRAINAGE SYSTEM AND VALVES, SPRINKLER HEADS, HANGERS AND SUPPORTS INCLUDING MISCELLANEOUS WORK ITEMS SUCH AS SIGNAGE, VALVE TAGS, ETC. AND ALL OTHER RELATED EQUIPMENT, APPARATUS AND MATERIAL ITEMS NECESSARY FOR A COMPLETE, FULLY OPERABLE, AND APPROVED FIRE PROTECTION SYSTEM.
- B. ALL PIPE FITTINGS, HANGERS, SUPPORTS, SPRINKLER HEADS, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE NATIONAL FIRE PROTECTION ASSOCIATION'S REQUIREMENTS AS TO TYPES OF MATERIALS, ARRANGEMENT, SIZES AND INSTALLATION. THREADED REDUCING BUSHINGS ARE NOT PERMITTED. REDUCING FITTINGS SHALL BE PROVIDED IN LIEU OF BUSHINGS.
- C. ALL MATERIALS MUST BE RATED FOR HIGHEST ANTICIPATED PRESSURES AND IN NO CASE LESS THAN 175 PSI.
- 2.2 FIRE PROTECTION PIPING AND FITTINGS
- A. ALL SPRINKLER PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE ALL FLANGED AND THREADED FITTINGS SHALL BE BLACK CAST IRON. GROOVED FITTINGS SHALL BE DUCTILE IRON.
- B. ALL EXPOSED PIPE & FITTINGS SHALL BE PROPERLY PREPPED FOR PAINTING BY OTHERS UNLESS OTHERWISE NOTED. PAINTING IS NOT PART OF THE FIRE PROTECTION SCOPE OF WORK.
- 2.3 SPRINKLER HEADS
- A. ALL SPRINKLER HEADS SHALL BE U.L. LISTED, F.M. APPROVED, AND QUICK RESPONSE TYPE UNLESS OTHERWISE NOTED. ARCHITECT TO SELECT ALL FINISHES AND COLORS FOR SPRINKLER HEADS.
- B. SPRINKLER HEADS INSTALLED IN CEILINGS SHALL BE CONCEALED PENDENT TYPE WITH FACTORY PAINTED COVER PLATES SIMILAR TO RELIABLE G5-56 OR APPROVED EQUAL.
- C. SPRINKLER HEADS INSTALLED IN CEILING WITH FIBERGLASS PANELS SHALL BE QUICK RESPONSE STANDARD PENDENT STYLE WITH ESCUTCHEON SIMILAR TO RELIABLE F1FR OR APPROVED EQUAL.
- D. SPRINKLER HEADS INSTALLED ON EXPOSED PIPING SHALL BE BRASS EITHER UPRIGHT OR PENDENT TYPE SIMILAR TO RELIABLE MODEL F1FR OR APPROVED EQUAL.
- E. SIDEWALL SPRINKLER HEADS SHALL BE HORIZONTAL TYPE WITH CHROME FINISH SIMILAR TO RELIABLE MODEL F1FR OR APPROVED EQUAL.
- F. DRY HORIZONTAL SIDEWALL AND PENDENT SPRINKLER HEADS AND ESCUTCHEONS SHALL HAVE A NON-CORROSIVE COATING AND BE SIMILAR TO RELIABLE MODEL F3QR OR APPROVED EQUAL.
- G. CONTRACTOR SHALL FURNISH A MINIMUM OF SIX SPRINKLER HEADS IN A SPRINKLER HEAD CABINET WITH A SPRINKLER WRENCH IN ACCORDANCE WITH NFPA 13. SPRINKLERS SHALL CORRESPOND TO THE TYPE AND TEMPERATURE RATINGS OF THE SPRINKLER HEADS ON THE PROPERTY.
- 2.4 VALVES
- A. INTERIOR CONTROL VALVES 2" AND SMALLER
1. BUTTERFLY TYPE SLOW CLOSE INDICATING VALVE WITH BUILT-IN TAMPER SWITCH, 300 PSI OR,
 2. OS&Y GATE TYPE THREADED BRONZE, 300 PSI, (WITH EXTERNAL TAMPER SWITCH).
- B. INTERIOR CONTROL VALVES 2½" TO 6"
1. TIGHT CLOSING, EPOXY COATED DUCTILE IRON, ELASTOMER ENCAPSULATED DISC, GROOVED TYPE BUTTERFLY VALVES, 300 PSI, WITH STAINLESS STEEL SHAFT, LIFETIME BEARINGS, HAND WHEEL GEAR OPERATOR WITH POSITION INDICATOR, AND BUILT-IN TAMPER SWITCH. SIMILAR TO: VICTAULIC "FIRELOOK", SERIES 705W WRD OR APPROVED EQUAL.
 2. O.S.&Y, BOLTED BONNET, RESILIENT WEDGE, EPOXY COATED BODY INSIDE AND OUT, FLANGED END CONNECTIONS, LISTED BY UL, FM APPROVED, 300 PSI SIMILAR TO NIBCO F-697-0 OR APPROVED EQUAL.
- C. 2½" FIRE HOSE VALVES SUBJECT TO APPROVAL BY AHJ
1. HOSE VALVES SHALL BE 2½" NTS.
 2. 2½" CAST BRASS VALVE WITH RED HANDWHEEL, FEMALE NPT INLET BY MALE HOSE THREAD, OUTLET, 300 PSI, ANGLE VALVE. SIMILAR TO: POTTER ROEMER MODEL 4065.
 3. PROVIDE A BRASS, WITH ROCKER LUGS, FEMALE THREAD LARGER THAN MALE THREAD 2½" X 1½" REDUCER. SIMILAR TO: POTTER ROEMER MODEL 2810RL.
 4. PROVIDE A 1½" CAST BRASS CAP WITH FEMALE HOSE THREAD, ROCKER LUGS AND CHAIN. SIMILAR TO: POTTER ROEMER MODEL 4615SL.
- 2.5 FIRE DEPARTMENT CONNECTION
- A. FLUSH MOUNTED CHROME PLATED 4" x 2½" x 2½" FIRE DEPARTMENT CONNECTION. STYLE AND LOCATION TO BE APPROVED BY THE LOCAL FIRE DEPARTMENT; FINISH TO BE APPROVED BY THE ARCHITECT.
- 2.6 SUPERVISORY AND ALARM ACTUATING DEVICES
- A. CLOSED CIRCUIT OS&Y TYPE VALVE TAMPER SWITCHES TO OPERATE WITHIN TWO REVOLUTIONS OF VALVE WHEEL, SIMILAR TO POTTER ELECTRIC SIGNAL CO. MODEL OSYSU-2.
- B. CLOSED CIRCUIT BALL TYPE VALVE TAMPER SWITCHES TO MONITOR FULL OPEN POSITION OF BALL VALVE, BUILT-IN MODEL, SIMILAR TO POTTER ELECTRIC SIGNAL CO. MODEL RBVS.
- C. CLOSED CIRCUIT PADDLE-TYPE WATERFLOW INDICATORS WITH RETARDING DEVICE TO PREVENT FALSE ALARMS FROM SURGES:
1. 1½" AND SMALLER SIMILAR TO POTTER ELECTRIC SIGNAL, MODEL VSR-S
 2. 2" AND LARGER SIMILAR TO POTTER ELECTRIC SIGNAL, MODEL VSR-FE-2.
- D. ALL WIRING FROM DEVICES TO MAIN FIRE ALARM PANEL BY ELECTRICAL CONTRACTOR.
- 2.7 ALARM INDICATING DEVICES
- A. PROVIDE A U.L. LISTED HORN STROBE AND COORDINATE EXTERIOR LOCATION WITH FIRE DEPARTMENT AND ARCHITECT. WIRING FROM DEVICE TO MAIN FIRE ALARM PANEL BY ELECTRICAL CONTRACTOR.
- 2.8 HANGERS
- A. HANGER COMPONENTS SHALL BE CARBON STEEL TYPE.
- B. HANGER RINGS SHALL BE SWIVEL RING OR CLEVIS TYPE.
- C. ANCHORS USED IN CONCRETE INSTALLATIONS SHALL BE LISTED FOR CRACKED CONCRETE AND BE SIMILAR TO POWERS SNAKE+ OR APPROVED EQUAL. ANCHOR LOCATIONS TO BE APPROVED BY STRUCTURAL ENGINEER.

- D. TOP BEAM CLAMPS USED FOR STEEL BEAM INSTALLATIONS SHALL HAVE RETAINING STRAPS.
3. INSTALLATION
- 3.1 CUTTING AND PATCHING
- A. DO ALL CUTTING NECESSARY FOR THE INSTALLATION OF THE FIRE PROTECTION WORK. ACCURATELY LAY OUT WORK FOR WHICH CUTTING IS REQUIRED TO AVOID UNNECESSARY LARGE OPENINGS. CUTTING OF BEAMS, JOISTS, FLOORS OR WALLS OF THE BUILDING WILL NOT BE PERMITTED EXCEPT AFTER RECEIVING WRITTEN APPROVAL FROM THE BUILDING OWNER OR CONSTRUCTION MANAGER.
- B. PROVIDE FIRE STOPPING AT ALL PENETRATIONS THROUGH RATED CONSTRUCTION. FIRE STOPPING SHALL BE A UL LISTED ASSEMBLY SIMILAR TO HILTI FIRESTOP SYSTEMS.
- 3.2 SPRINKLER HEADS
- A. WHERE MAXIMUM CEILING TEMPERATURES EXCEED 100°F, PROVIDE PROPER TEMPERATURE SPRINKLER HEADS IN ACCORDANCE WITH NFPA 13.
- B. INSTALL SPRINKLER HEADS AT CEILING ALIGNED WITH ADJACENT HEADS AND OTHER CEILING FEATURES. ALL HEADS SHALL BE INSTALLED CENTER-OF-TILE.
- C. LOCATE AND INSTALL SPRINKLER HEADS IN ACCORDANCE WITH NFPA AND MANUFACTURER SPECIFICATIONS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND CONTRACT DRAWINGS FOR SPRINKLER HEAD LOCATION. NOTIFY ARCHITECT AND ENGINEER IN WRITING IF THERE ARE ANY DISCREPANCIES.
- 3.3 INSERTS, HANGERS, ETC.
- A. ALL PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN ACCORDANCE WITH NFPA STANDARDS, LOCAL CODES AND THE AUTHORITY HAVING JURISDICTION.
- B. FIRE PROTECTION PIPING OR HANGERS SHALL NOT BE USED TO SUPPORT NON-SYSTEM COMPONENTS.
- C. FIRE PROTECTION PIPING SHALL NOT BE ATTACHED DIRECTLY TO THE ROOF DECKING.
- D. WHEN FIRE PROTECTION PIPING IS INSTALLED BELOW DUCTWORK, PIPING SHALL BE SUPPORTED FROM THE BUILDING'S STRUCTURE, NOT FROM THE DUCTWORK OR THE CEILING SHEATHING.
- E. THE MAXIMUM DISTANCE BETWEEN HANGERS SHALL NOT EXCEED 12 FEET FOR 1" AND 1-1/4" PIPE SIZES AND 15 FEET FOR PIPE SIZES 1-1/2" AND LARGER
- G. PROVIDE AND INSTALL SEISMIC BRACES ON ALL SPRINKLER PIPING AS REQUIRED BY CODE.
- 3.4 ESCUTCHEONS
- A. PROVIDE CHROME PLATED METAL ESCUTCHEONS ON ALL EXPOSED PIPING PASSING THROUGH WALLS, PARTITIONS, FLOORS AND CEILINGS. ESCUTCHEONS SHALL BE HELD IN PLACE BY INTERNAL TENSION DEVICE OR A SET SCREW.
- 3.5 INSPECTIONS AND TESTING
- A. THE FIRE PROTECTION SYSTEM SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AND STATE BUILDING CODES.
- B. THE FIRE PROTECTION SYSTEM SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE TEST FOR A PERIOD OF TWO HOURS AT A PRESSURE OF AT LEAST 200 PSI (300 PSI FOR STANDPIPE SYSTEMS IN NYC) OR 50 PSI OVER THE HIGHEST WORKING PRESSURE (WHICHEVER IS GREATER).
- C. BEFORE THE SPRINKLER SYSTEM IS CONCEALED, THE BUILDING AND FIRE DEPARTMENTS SHALL BE NOTIFIED THAT THE SYSTEM IS READY FOR INSPECTIONS AND TESTING. THE BUILDING AND/OR FIRE DEPARTMENT INSPECTOR SHALL WITNESS THE TEST. THE CONTRACTOR SHALL OBTAIN FINAL APPROVAL OF THE FIRE PROTECTION SYSTEM FROM THE BUILDING AND/OR FIRE DEPARTMENTS AS REQUIRED.
- D. SPECIAL INSPECTIONS FOR FIRE PROTECTION SYSTEMS SHALL BE IN ACCORDANCE WITH NYC BUILDING CODE 1704.21. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH OWNER'S INSPECTOR RELATED TO COMPLETION OF REQUIRED TR-1.
- E. CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING AND COORDINATING ALL REQUIRED PROGRESS INSPECTIONS WITH THE OWNER'S APPROVED INSPECTOR. A MINIMUM 72 HOURS NOTICE SHALL BE PROVIDED PRIOR TO THE INSPECTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER/OWNER. INSPECTIONS MUST BE MADE BEFORE WORK IS COVERED.
- F. IN ACCORDANCE WITH SECTION BC109.9 WHERE AN INSPECTION OR TEST FAILS, THE CORRECTION MUST BE MADE AND RE-INSPECTED BY THE PROGRESS INSPECTOR UNTIL IT COMPLIES.
- G. PROVIDE TRAINING TO OWNER DESIGNATED REPRESENTATIVE(S) FOR OPERATING, TESTING AND MAINTENANCE OF PUMPS; ALLOW EIGHT HOURS FOR TRAINING.
- 3.6 OPERATION AND MAINTENANCE MANUALS
- A. PROVIDE FOUR OPERATION AND MAINTENANCE (O&M) MANUALS. O&M MANUALS SHALL INCLUDE AS-BUILT RECORD DRAWINGS AND HYDRAULIC CALCULATIONS WITH HYDRAULIC SUMMARY, VALVE TAG CHARTS, SIGNED AND WITNESSED COPIES OF ALL TESTING AND INSPECTION FORMS, MATERIALS SUBMITTALS WITH OPERATION AND MAINTENANCE INFORMATION, AND AN INDEX OF ALL PAGES. FURTHER, PROVIDE A CD CONTAINING ALL CAD FILES AND HYDRAULIC CALCULATIONS. INCLUDE A COPY OF NFPA 25.
- 3.7 GUARANTEE
- A. GUARANTEE ALL WORK, MATERIALS AND DEVICES FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER, REPLACE OR REPAIR IN A MANNER APPROVED BY THE ARCHITECT, ENGINEER OR OWNER WITHOUT ANY COST TO THE OWNER, ANY PART OR PARTS OF THE WORK WHICH MAY PROVE DEFECTIVE OR UNSATISFACTORY WITHIN THE PERIOD OF THE GUARANTEE.

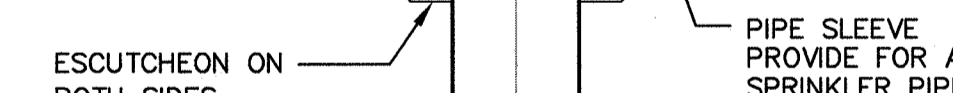
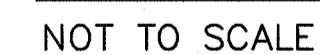
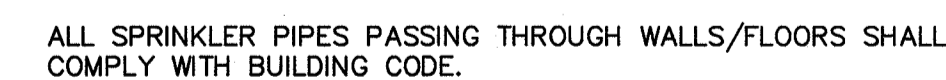
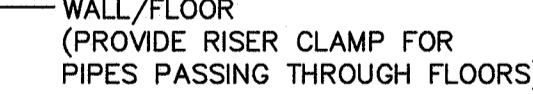
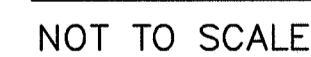
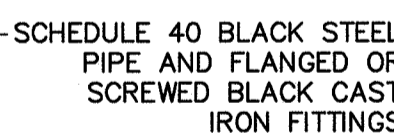
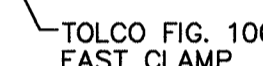
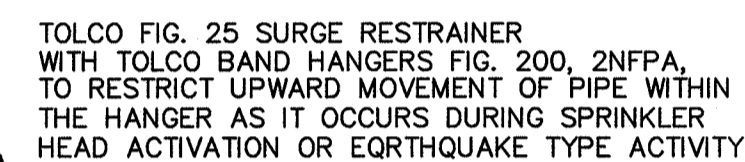
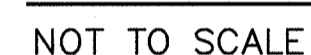
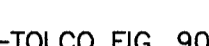
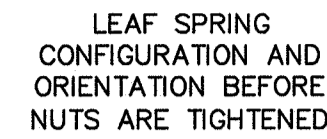
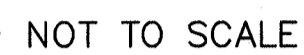
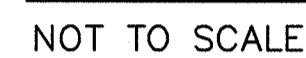
- SAFETY NOTES:
1. PERFORM WORK IN ACCORDANCE WITH ALL STATE AND LOCAL BUILDING AND FIRE CODES.
 2. WORK SHALL BE PERFORMED DURING NORMAL WORKING HOURS MONDAY TO FRIDAY UNLESS DIRECTED OTHERWISE.
 3. NO MEANS OF EGRESS SHALL BE BLOCKED.
 4. BUILDING SERVICES SHALL BE MAINTAINED WHILE WORK IS BEING INSTALLED.
 5. CONFINE DUST TO WORK AREA ONLY.
 6. CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS SO THAT EQUIPMENT ON THIS APPLICATION AND ITS INSTALLATION WILL NOT AFFECT FIRE SAFETY IN THE BUILDING, EGRESS AND ENTRY TO THE BUILDING, AND STRUCTURAL SAFETY OF THE BUILDING.
 7. CONTRACTOR SHALL LEAVE THE WORK SITE BROOM CLEAN EACH DAY.
 8. THE FIRE PROTECTION SYSTEM MUST BE MAINTAINED IN EGRESS STAIRS AND HALLWAYS. RETURN AS MUCH OF THE EXISTING SPRINKLER SYSTEM AS POSSIBLE BACK TO OPERATING STATUS AT THE END OF EACH WORKING DAY. PROVIDE ANY REQUIRED CAPS OR TEMPORARY PIPING NECESSARY TO MAXIMIZE THE OPERABLE PORTION OF THE SPRINKLER SYSTEM. NOTIFY AND COORDINATE ANY FIRE PROTECTION SYSTEM IMPAIRMENTS WITH THE LOCAL FIRE DEPARTMENT. IF THESE CONDITIONS CANNOT BE MET, PROVIDE A CERTIFIED FIRE GUARD/WATCH AS REQUIRED IN ACCORDANCE WITH LOCAL CODES.

FIRE PROTECTION LEGEND			
	NEW FIRE PROTECTION PIPING		CAP
	EXISTING FIRE PROTECTION PIPING		PLUG
	FIRE PROTECTION PIPING TO BE REMOVED		ELBOW DOWN
	CONCEALED SPRINKLER HEAD		ELBOW UP
	PENDENT SPRINKLER HEAD		TEE DOWN
	UPRIGHT SPRINKLER HEAD		TEE UP
	PENDENT SPRINKLER HEAD WITH CAGE GUARD		FLOW ARROW
FP	FIRE PROTECTION		OS&Y VALVE W/ TAMPER SWITCH
SPK	SPRINKLER		BUTTERFLY VALVE W/ TAMPER SWITCH
NAS	NO AUTOMATIC SPRINKLERS		WATERFLOW SWITCH (WFS)
FDC	FIRE DEPARTMENT CONNECTION		CHECK VALVE
STP	STANDPIPE		FIRE DEPARTMENT CONNECTION (FDC)
SCA	SPRINKLER CONTROL ASSEMBLY		LOCAL ALARM - HORN STROBE
ABD	AUTOMATIC BALL DRIP		FIRE DEPARTMENT VALVE W/ HOSE
FDV	FIRE DEPARTMENT VALVE		CONNECT NEW TO EXISTING
FHC	FIRE HOSE CABINET		POINT OF DEACTIVATION

GENERAL DRAWING ABBREVIATIONS			
W/	WITH	W/O	WITHOUT
TYP	TYPICAL	NIC	NOT IN CONTRACT
EX	EXISTING	DN	DOWN
AD	ACCESS DOOR	VIF	VERIFY IN FIELD
AFF	ABOVE FINISH FLOOR	C/L	CENTER LINE
DWG	DRAWING	UON	UNLESS OTHERWISE NOTED

DESIGN CRITERIA – SPK SYSTEM	
1. LIGHT HAZARD SEATING AREA, BATHROOM, OFFICE, ETC. 0.10 GPM/SQ. FT. FOR MOST REMOTE 1500 SQ. FT. 225 SQ. FT. MAXIMUM COVERAGE PER SPRINKLER HEAD; FOR OTHER THAN SMOOTH CEILING AREAS, REFER TO NFPA 13 FOR SQ. FT. COVERAGE PER SPRINKLER HEAD PLUS 100 GPM OUTSIDE HOSE	
2. ORDINARY HAZARD GROUP I MECHANICAL ROOMS, ETC. 0.15 GPM/SQ. FT. FOR MOST REMOTE 1500 SQ. FT. 130 SQ. FT. MAXIMUM COVERAGE PER SPRINKLER HEAD PLUS 250 GPM OUTSIDE HOSE	
3. ORDINARY HAZARD GROUP II PREP AREA, BACK ROOM, ETC. 0.2 GPM/SQ. FT. FOR MOST REMOTE 1500 SQ. FT. 130 SQ. FT. MAXIMUM COVERAGE PER SPRINKLER HEAD PLUS 250 GPM OUTSIDE HOSE	
INCLUDE ALL MODIFICATIONS TO REMOTE AREA IN ACCORDANCE WITH NFPA 13.	

Revisions & Issues			Client / Project		M.E.P. Engineer		Seal		Issue Date		Sheet No.:		Architect:			
No.	Description	Date	 Purchase College STATE UNIVERSITY OF NEW YORK		 AT SUNY PURCHASE 735 Anderson Hill Road Purchase, NY 10577		 Southport Engineering Associates, PC 11 Bailey Avenue Ridgefield, CT 06877 Tel.: (203) 431-6844 Fax: (203) 431-6877		 It is a violation of the New York State Education Law to alter these documents in any way once the seal and signature have been affixed by the Architect.		June. 7, 2016		SP-1.1		DAVID A. TETRO ARCHITECT P.C. AIA - LEED A.P. - NCARB 302 Lewis Avenue Yorktown Heights, NY 10598 914-962.3113 - tel. 914-962.3393 - fax dtdesign@verizon.net www.DavidTetroArchitect.com	
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Client / Project	
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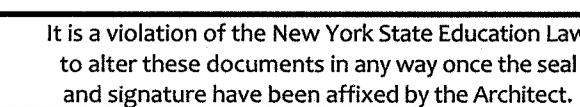
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Issue Date:

Sheet Title:

1

ISSUED FOR CONSTRUCTION

Sheet No.:

SP-1.2

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- ① NEW UPRIGHT SPRINKLER HEAD.
- ② NEW CONCEALED PENDENT SPRINKLER HEAD
- ③ NEW UPRIGHT SPRINKLER HEAD ABOVE WOOD CEILING PANEL.
- ④ NEW PENDENT SPRINKLER HEAD WITH CAGE GUARD UNDER DUCTWORK.
- ⑤ COORDINATE ALL SPRINKLER PIPING, HEADS, ETC WITH MECHANICAL DRAWINGS.

[illegible]

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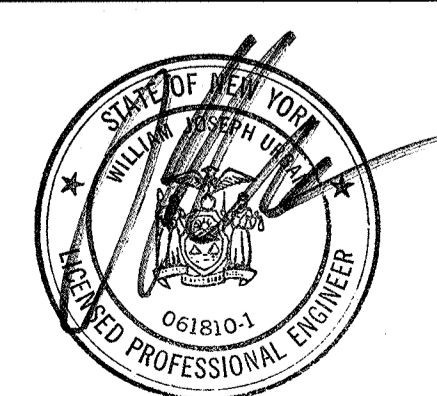
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M.E.P. Engineer

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Issue Date: June. 7, 2016

Project No.: 15.44

Sheet Titles

Sheet No.:

SP-2.1

Sprinkler Construction Plans

ISSUED FOR CONSTRUCTION

Architect

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