FIRE PROTECTION SPECIFICATION

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

A. PROVIDE ALL SPRINKLER AND STANDPIPE WORK SHOWN ON THE CONTRACT DOCUMENTS. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE AS ADOPTED BY NEW YORK STATE, NFPA 13-2013, NFPA 14-2013, LANDLORD'S BUILDING STANDARDS, AND ALL AUTHORITIES HAVING JURISDICTION (AHJ). APPLICABLE NATIONAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK SHALL BE INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS.

1.02 SCOPE OF WORK

A. INSTALL STANDPIPE SYSTEM, AUTOMATIC SPRINKLERS AND PIPING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, UNDERWRITERS' REQUIREMENTS, THE LOCAL AND STATE BUILDING CODES AND OTHER AUTHORITIES HAVING JURISDICTION. CONNECT NEW PIPING TO EXISTING WHERE SHOWN ON THE FLOOR PLAN. TEST ALL NEW WORK IN THE PRESENCE OF THE OWNERS' REPRESENTATIVE AND ALL AUTHORITIES HAVING JURISDICTION REMOVE EXISTING SPRINKLER HEADS AND PIPING WHERE SHOWN ON THE PLAN.

B. INSTALL NEW STANDPIPE SYSTEM, NEW SPRINKLERS HEADS AND PIPING WHERE SHOWN ON THE CONTRACT DRAWINGS. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, APPLIANCES AND PERFORM ALL OPERATIONS REQUIRED FOR A COMPLETE SPRINKLER SYSTEM AS SPECIFIED HEREIN, INCLUDING, BUT NOT LIMITED TO, CONNECTION TO EXISTING PIPING, FITTINGS, HANGERS, SUPPORTS, SLEEVES, ESCUTCHEONS, SIGNS, CUTTING AND PATCHING. THE ENTIRE SYSTEM SHALL BE MADE COMPLETE IN EVERY RESPECT.

C. BEFORE SUBMITTING HIS BID, THE FIRE PROTECTION CONTRACTOR SHALL VISIT THE SITE AND SHALL FULLY FAMILIARIZE HIMSELF WITH THE STRUCTURAL LAYOUT OF THE EXISTING BEAMS IN RELATIONSHIP TO THE NEW HVAC DUCT LAYOUT AND NEW LIGHTING FIXTURES AND HUNG CEILING HEIGHTS AND BECOME FAMILIAR WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. CONTRACTOR SHALL PERFORM THIS PRIOR TO SUBMITTING HIS BID. SUBMISSION OF A BID WILL 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 BEEN MADE.

D. UPON REVIEW OF SPRINKLER/STANDPIPE DRAWINGS PRIOR TO SUBMITTING HIS PROPOSAL, THIS CONTRACTOR SHALL INFORM ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES OR REQUEST CLARIFICATION IN WRITING, IF NECESSARY, CONCERNING THE INTENT OF THE PLANS AND SPECIFICATIONS TO PROVIDE A COMPLETE SPRINKLER INSTALLATION. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS SHOULD SUCH PROCEDURE NOT BE FOLLOWED.

E. PREPARE AND SUBMIT MANUFACTURERS DATA AND INSTALLATION SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. INSTALLATION SHOP DRAWINGS SHALL BE COORDINATED WITH NEW WORK OF OTHER TRADES AND EXISTING CONDITIONS.

F. PREPARE AS-BUILT DRAWINGS INDICATING ACTUAL LOCATIONS OF FIRE HOSE VALVES AND CABINETS, SPRINKLER HEADS AND PIPING. AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER UPON COMPLETION OF INSTALLATION AND TESTING. SUBMIT THREE SETS OF PRINTS AND ONE SET OF REPRODUCIBLES. IN ADDITION, PROVIDE ON DISK TO OWNER THE AS-BUILT CONDITIONS IN AUTOCAD FORMAT.

G. REPAIR AND/OR REPLACE ARCHITECTURAL COMPONENTS WHICH MAY BECOME DAMAGED AS A RESULT OF SYSTEM INSTALLATION.

H. THE FIRE PROTECTION CONTRACTOR SHALL EXAMINE THE PREMISES BEFORE SUBMITTING HIS BID, AND SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH CONDITIONS WHICH AFFECT HIS WORK. THE FIRE PROTECTION CONTRACTOR SHALL REPORT ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE NEW WORK TO THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF ANY INSTALLATION.

I. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN INSTALLING PIPING IN FINISHED WALLS, CEILINGS AND PARTITIONS.

J. INTERRUPTION OF EXISTING BUILDING SERVICES IN ORDER TO CONNECT NEW PIPING TO EXISTING SHALL BE MADE AT SUCH TIME AS TO CAUSE THE LEAST INTERFERENCE WITH ESTABLISHED BUILDING OPERATING PROCEDURE. THE CONTRACTOR SHALL NOT INTERRUPT THE SERVICE WITHOUT WRITTEN PERMISSION OF BUILDING MANAGEMENT. LOCATION AND SIZES OF ALL EXISTING PIPING SHALL BE VERIFIED IN THE FIELD.

K. LOCATION AND SIZES OF ALL EXISTING PIPING SHALL BE VERIFIED IN THE FIELD.

L. CLEAN-UP AND RUBBISH REMOVAL FROM THE JOB SITE DIRECTLY RELATED TO AND AS A RESULT OF THIS CONTRACT SHALL BE DONE DAILY AS WORK PROGRESSES AS NOT TO CAUSE INTERFERENCE WITH THE NORMAL BUILDING OPERATION.

M. FURNISH ALL LABOR AND MATERIALS FOR ALL TESTS AS REQUIRED BY CODES OR AUTHORITIES HAVING JURISDICTION.

N. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND OBTAIN ALL APPROVALS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION.

O. THE NEW STANDPIPE AND SPRINKLER SYSTEM SHALL BE CONNECTED TO THE EXISTING PIPING AS SHOWN ON THE CONTRACT DRAWINGS.

P. INSTALL NEW AUXILIARY FIRE STANDPIPE HOSE CABINETS AND PIPING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, UNDERWRITERS' REQUIREMENTS, THE LOCAL BUILDING CODE AND OTHER AUTHORITIES HAVING JURISDICTION. CONNECT NEW PIPING TO EXISTING WHERE SHOWN ON THE FLOOR PLAN. TEST ALL NEW WORK IN THE PRESENCE OF THE OWNERS' REPRESENTATIVE AND ALL AUTHORITIES HAVING JURISDICTION.

Q. INSTALL A SYSTEM OF NEW AUTOMATIC PREACTION SPRINKLERS AND PIPING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, UNDERWRITERS' REQUIREMENTS, THE LOCAL BUILDING CODE, AND PER LOCAL FIRE DEPARTMENT, AND OTHER AUTHORITIES HAVING JURISDICTION. TEST ALL NEW WORK IN THE PRESENCE OF THE OWNERS' REPRESENTATIVE AND ALL AUTHORITIES HAVING JURISDICTION.

1. INSTALLATION: THIS CONTRACTORS ELECTRICIAN SHALL BE FULLY FAMILIAR WITH THE OPERATION OF THE PRE-ACTION SYSTEM AND ITS INTERCONNECTION TO THE BUILDING'S CLASS "E" SYSTEM AND SHALL BE AVAILABLE FOR ANY AND ALL TESTS OR DEMONSTRATIONS AS REQUIRED BY THE FIRE DEPARTMENT.

1.03 OTHER WORK INCLUDED

A. ALL PRIME PAINTING AND FACTORY APPLIED FINISHES.

B. ROUGH CUTTING

C. ROUGH PATCHING

1.04 QUALITY ASSURANCE

A. ALL PIPES SHALL BE MARKED TO INDICATE MANUFACTURER AND ASTM STANDARD. EACH FULL PIPE LENGTH SHALL HAVE THE MANUFACTURER'S NAME CAST, STAMPED OR ROLLED ON.

B. EACH FITTING SHALL HAVE THE MANUFACTURER'S SYMBOL AND PRESSURE RATING CAST, STAMPED OR ROLLED ON.

C. ALL NEW COMPONENTS OF THE STANDPIPE AND SPRINKLER SYSTEMS MUST CONFORM TO NFPA 13, NFPA 14 AND LOCAL BUILDING CODES, ASTM AND NEMA. ALL NEW PIPING AND SPRINKLER HEADS MUST BE U.L. LISTED AND FACTORY MUTUAL AND APPROVED.

D. ALL GROOVED JOINTS COUPLINGS, FITTINGS, VALVES, AND SPECIALTIES SHALL BE THE PRODUCTS OF A SINGLE MANUFACTURER. GROOVING TOOLS SHALL BE OF THE SAME MANUFACTURER AS THE GROOVED COMPONENTS.

1.05 SUBMITTALS

A. PRIOR TO PURCHASING EQUIPMENT, SUBMIT A LIST OF ALL PROPOSED PIPING MATERIALS AND EQUIPMENT.

B. SUBMIT COMPLETE BACK-UP MATERIAL WHERE MANUFACTURING SPECIFICATION STANDARDS OF PROPOSED MATERIAL DIFFER FROM THOSE SPECIFIED.

C. WHERE MANUFACTURER'S CATALOG INFORMATION DOES NOT SATISFACTORY DESCRIBE MATERIALS, ENGINEERING DESIGN, QUALITY OF CONSTRUCTION OR AESTHETICS OF PROPOSED MATERIALS, SAMPLES MUST BE SUBMITTED AS REQUESTED AT NO ADDITIONAL COST TO THE OWNER.

D. MANUFACTURER'S SPECIFICATIONS AND ENGINEERING DATA SHALL CONSIST OF A COMPLETE DESCRIPTION OF MATERIALS, PARTS, DEVICES, FINISHES AND PERFORMANCE.

E. SUBMIT HYDRAULIC CALCULATIONS FOR REVIEW WITH SPRINKLER SYSTEM LAYOUT SHOP DRAWINGS.

F. SPRINKLERS SHALL BE REFERRED TO ON DRAWINGS AND SHALL BE SPECIFICALLY IDENTIFIED BY THE LISTED MANUFACTURER'S STYLE OR SERIES DESIGNATION. TRADE NAMES AND ABBREVIATIONS ARE NOT PERMITTED.

1.06 MATERIAL DELIVERY, STORAGE AND HANDLING

A. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE ON-TIME DELIVERY OF HIS MATERIALS.

B. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE STORAGE OF ALL HIS MATERIALS EITHER ON THE SITE AS DESIGNATED BY THE OWNER'S REPRESENTATIVE OR IN HIS OWN WAREHOUSE.

C. ANY MATERIALS DAMAGED DURING HANDLING, STORAGE OR INSTALLATION SHALL BE REPLACED OR REPAIRED BY THE FIRE PROTECTION CONTRACTOR AT NO COST TO THE OWNER.

1.07 GUARANTEE

A. THE MANUFACTURER OF MATERIALS AND INSTALLER FOR THE WORK OF THIS CONTRACT SHALL, AS PART OF THIS CONTRACT, GUARANTEE AND CERTIFY THAT ALL NEW WORK IS FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF OWNER'S FINAL ACCEPTANCE. FINAL ACCEPTANCE BY THE OWNER SHALL BE THE DATE OF THE FINAL PAYMENT TO THE CONTRACTOR.

1.08 SHOP DRAWINGS

A. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS OF THE NEW STANDPIPE AND SPRINKLER WORK TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE STANDPIPE/SPRINKLER DRAWING SHALL SHOW FIRE HOSE VALVES, SPRINKLER PIPING AND HEAD LOCATIONS, IN COORDINATION WITH ALL EXISTING CONDITIONS. SUBMIT SHOP DRAWINGS IN TIME TO ALLOW ONE WEEK REVIEW PERIOD. STANDPIPE/SPRINKLER PLANS SHALL CONSIST OF FULLY DIMENSIONED DRAWINGS FOR THE NEW WORK INCLUDING RELATED EXISTING PIPING, COMPONENTS AND SPRINKLER HEADS. SHOP DRAWINGS SHALL BE SUBMITTED IN QUANTITIES AS DIRECTED BY THE ARCHITECT.

B. SUBMIT SHOP DRAWINGS AND/OR SAMPLES OF SPRINKLER HEADS, ESCUTCHEON PLATES, PIPES, FITTINGS, HANGERS AND SLEEVES. SUBMIT HYDRAULIC CALCULATIONS FOR REVIEW WITH SPRINKLER SYSTEM LAYOUT SHOP DRAWINGS. SUBMITTALS SHALL INCLUDETAMPER SWITCHES, INSPECTOR'S TEST DRAIN AND WATER FLOW SWITCH.

C. SUBMIT SHOP DRAWINGS OF PRE-ACTION SYSTEM LAYOUTS, COMPONENTS AND WIRING DIAGRAMS.

D. UPON REQUEST, THE ENGINEER MAY FURNISH DESIGN DRAWINGS TO THE CONTRACTOR TO AID IN DEVELOPMENT OF PIPING SHOP DRAWINGS. THESE SHALL BE FURNISHED IN THE SAME FORMAT FOR WHICH THE DESIGN DRAWINGS WERE CREATED.

1.09 SUBSTITUTION

A. THE PRODUCTS AND/OR MATERIALS LISTED IN THESE SPECIFICATIONS REPRESENT DESIRED MATERIALS AND CONSTRUCTION STANDARDS FOR THE VARIOUS ITEMS OF WORK. MANUFACTURER NAMES AND MODEL NUMBERS ARE USED TO DESCRIBE TYPES, STYLES AND QUALITY MATERIALS SUBMITTED FOR APPROVAL OTHER THAN SPECIFIED HEREIN MUST MEET OR EXCEED THESE STANDARDS.

PART 2 MATERIALS

2.01 SLEEVES

A. PROVIDE SLEEVES FOR ALL PIPES PASSING THROUGH WALLS. SLEEVES WITHIN FURRED OUT ENCLOSURES, THROUGH STUD PARTITIONS AND BLOCK WALLS SHALL BE 18 GAUGE GALVANIZED SHEETMETAL.

B. PROVIDE OPENINGS WITH AN I.D. AT LEAST 2" GREATER THAN THE OUTSIDE OF THE PIPE SERVED. PASSING THROUGH SLEEVE OR MINIMUM OF 1" CLEARANCE BETWEEN.

C. PACK THE SPACE BETWEEN PIPES AND SLEEVES WITH FIBER-GLASS AND FINISH WITH NON-HARDENING MASTIC OR SILICONE SEALANT.

D. SLEEVES THROUGH WALLS AND PARTITIONS SHALL BE EQUAL TO THE DEPTH OF CONSTRUCTION AND TERMINATED FLUSH WITH FINISHED SURFACES.

E. SLEEVE SIZES SHALL BE TWO PIPE SIZES LARGER THAN THE PIPE SERVED.

2.02 ESCUTCHEONS

A. PROVIDE ESCUTCHEON ON ALL EXPOSED PIPING PASSING THROUGH WALLS, PARTITIONS AND CEILINGS.

B. ESCUTCHEONS SHALL BE HELD IN PLACE BY SET SCREWS.

C. ESCUTCHEON APPLICATION SCHEDULE:

D. LOCATION	ESCUTCHEON MATERIAL
E. FINISH SPACE	CHROME PLATED BRASS
F. UNFINISHED SPACE	PLAIN BRASS OR CAST IRON

2.03 SPRINKLER PIPING AND FITTINGS

A. PIPING 2" AND BELOW SHALL BE SCHEDULE 40 STANDARD WEIGHT BLACK STEEL PIPE CONFORMING TO ASTM A 795. PIPING SHALL BE THREADED OR GROOVED FOR MECHANICAL COUPLINGS.

1. VICTAULIC FIRELOCK IGS SYSTEM WITH "INSTALLATION-READY™ FITTINGS AND COUPLINGS MAY BE USED FOR 1" SCHEDULE 10 AND SCHEDULE 40 CARBON STEEL PIPE IN FIRE PROTECTION APPLICATIONS. SYSTEM RATED FOR A WORKING PRESSURE TO 365 PSI.
   (a) GROOVE: IGS "INNOVATIVE GROOVE SYSTEM" GROOVE WITH SHORTENED "A" DIMENSION AND TAPERED GROOVE BACKSIDE FOR EASE OF INSTALLATION.
   (b) GROOVING TOOL: VICTAULIC RG2100, WITH IGS CONFIRMATION GAUGE.
   (c) FITTINGS:
      a) DUCTILE IRON HOUSING CONFORMING TO ASTM A-536, GRADE 65-45-12. ORANGE ENAMEL COATED OR GALVANIZED.
      b) VICTAULIC STYLE 101 (90-DEGREE ELBOW), STYLE 102 (TEE), AND STYLE 108 (COUPLING) WITH INSTALLATION-READY™ ENDS.
      c) STYLE 108 SINGLE-BOLT COUPLING PROVIDED WITH EPDM TYPE A PRESSURE RESPONSIVE GASKET WITH VIC-PLUS LUBRICANT, AND ASTM A449 COMPLIANT ELECTROPLATED STEEL BOLT AND NUT. CRMO ALLOY STEEL COUPLING LINKAGE.
2. THREAD X GROOVE ADAPTER FITTINGS AND WELDED OUTLETS WITH IGS GROOVED END, ASTM A53, GRADE A.
3. VICTAULIC FIRELOCK INSTALLATION-READY FITTINGS FOR SCHEDULE 10 AND SCHEDULE 40 GROOVED END CARBON STEEL PIPING IN FIRE PROTECTION APPLICATIONS SIZES 1½" THRU 2½". FITTINGS SHALL CONSIST OF A DUCTILE IRON HOUSING CONFORMING TO ASTM A-536, GRADE 65-45-12, WITH INSTALLATION-READY ENDS, ORANGE ENAMEL COATED. FITTINGS COMPLETE WITH PRELUBRICATED GRADE "E" EPDM TYPE 'A' GASKET, AND ASTM A449 ELECTROPLATED STEEL BOLTS AND NUTS. SYSTEM SHALL BE UL LISTED FOR A WORKING PRESSURE TO 365 PSI.

B. PIPING 2 ½" AND ABOVE SHALL BE SCHEDULE 10 STEEL PIPE CONFORMING WITH ASTM A 795 WITH VICTAULIC COUPLINGS.

C. STANDARD WEIGHT CAST IRON FITTINGS SHALL BE 175 PSIG WWP IN ACCORDANCE WITH NFPA 13 AS AMENDED BY THE LOCAL BUILDING CODE. FITTINGS SHALL BE THREADED OR GROOVED FOR MECHANICAL COUPLINGS.

D. PRE-ACTION AND DRY PIPE SYSTEMS PIPING: SPRINKLER PIPING 2½" AND ABOVE SHALL BE SCHEDULE 10 GALVANIZED STEEL PIPE WITH VICTAULIC COUPLINGS. SPRINKLER PIPING 2" AND BELOW SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE. ALL FITTINGS AND FLANGES SHALL BE AMERICAN STANDARD GALVANIZED STEEL SPRINKLER FITTINGS, FLANGED OR SCREWED AS REQUIRED, DESIGNED AND MANUFACTURED FOR A WATER WORKING PRESSURE OF 175 POUNDS.

2.04 MECHANICAL COUPLINGS

A. THE FOLLOWING FIRE PROTECTION COUPLINGS ARE TAKEN FROM THE CATALOG OF VICTAULIC AND ARE REPRESENTATIVE OF THE STYLE AND CONSTRUCTION REQUIRED (2" AND LARGER). ASTM A449 COMPLIANT NUTS AND BOLTS USED WITH MECHANICAL COUPLINGS SHALL BE ZINC-ELECTROPLATED.

B. FLEXIBLE - 75, 77 INSTALLATION-READY 177 (BASED ON PSI REQUIREMENTS)

C. RIGID: COUPLING HOUSINGS WITH OFFSETTING, ANGLE-PATTERN BOLT PADS SHALL BE USED TO PROVIDE SYSTEM RIGIDITY AND SUPPORT AND HANGING IN ACCORDANCE WITH NFPA-13, FULLY INSTALLED AT VISUAL PAD-TO-PAD OFFSET CONTACT. COUPLINGS THAT REQUIRE GAPPING OF BOLT PADS OR SPECIFIC TORQUE RATINGS FOR PROPER INSTALLATION ARE NOT PERMITTED. INSTALLATION-READY, FOR DIRECT STAB INSTALLATION WITHOUT FIELD DISASSEMBLY.

D. FIRELOCK RIGID - INSTALLATION READY 009N

E. INSTALLATION-READY STYLE 107

F. STYLE 920 / 920N

G. STYLE 922

2.05 THE FOLLOWING PRODUCTS ARE NOT ACCEPTABLE:

A. FIT STYLE 96, 963, 969, 719, 966, 960, & 929

2.06 HANGERS AND SUPPORTS

A. HANGERS FOR THE NEW HORIZONTAL PIPES SHALL BE LOCATED AT EVERY 12'-0" ON CENTER. BRANCH RUNOUTS WITHOUT HANGERS SHALL NOT EXCEED 2'-0" IN LENGTH.

B. CHAIN STRAPS, PERFORATED BARS OR WIRE HANGERS SHALL NOT BE PERMITTED.

C. PIPE HANGERS SHALL BE FASTENED ONLY TO THE BUILDING STRUCTURE. WHERE PIPING IS TO BE HUNG FROM EXISTING CONCRETE DECK, INSTALL A "HILTI" OR OTHER APPROVED EXPANSION BOLT,C-CLAMPS MUST BE INSTALLED WITH RETAIN STRAPS.

D. ALL ANCHORS INSTALLED IN SHALL HAVE AN ICC-ES LISTING.(ADD IF REQUIRED) PROVIDE SEISMIC RESTRAINTS FOR ALL PIPING SYSTEMS AND EQUIPMENT AS REQUIRED BY LOCAL AND STATE CODES. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER.

2.07 SLEEVE FIRE STOPPING

A. ALL SLEEVES THROUGH RATED WALLS OR PARTITIONS SHALL FORM A U.L (UL 1479 & ASTM E814 ASTM TESTED) CLASSIFIED FIRESTOP CAPABLE OR RETURNING THE WALL OR PARTITION BACK TO ITS UNPENETRATED FIRE RESISTANCE.

B. FIRESTOPPING CAULK SHALL BE SIMILAR TO 3M CP 25WB & CAULK.

C. FIRESTOPPING WRAP SHALL BE SIMILAR TO 3M FS-195 + WRAP/STRIP

2.08 SPRINKLER HEADS

A. PROVIDE AUTOMATIC SPRINKLER HEADS OF FINISH AND TYPE AS APPROVED BY THE OWNER AND THE AUTHORITIES AND INSURING AGENCIES HAVING JURISDICTION. ALL NEW SPRINKLER HEADS SHALL BE "QUICK RESPONSE TYPE" WITH STANDARD 1/2" DISCHARGE ORIFICE (5.62 K FACTOR) AND SHALL BE OF BRONZE CONSTRUCTION, UL LISTED/FM APPROVED.

B. SPRINKLER HEADS SHALL BE AS MANUFACTURED BY GLOBE SPRINKLER CORPORATION, RELIABLE AUTOMATIC SPRINKLER CO., VICTAULIC AND VIKING SPRINKLER CORPORATION OR APPROVED EQUAL.

C. SPRINKLERS SHALL BE GLASS BULB TYPE, WITH HEX SHAPED WRENCH BOSS INTEGRALLY CAST INTO THE SPRINKLER BODY TO REDUCE THE RISK OF DAMAGE DURING INSTALLATION. (WRENCHES SHALL BE PROVIDED BY THE SPRINKLER MANUFACTURER THAT DIRECTLY ENGAGE THE CAST WRENCH BOSS.) BASIS OF DESIGN: VICTAULIC.

D. FINISHES: ALL SPRINKLER HEAD AND COVERPLATE FINISHES SHALL BE AS SPECIFIED BY ARCHITECT.

E. ALL NEW HEADS SHALL CONFORM TO THE ACTUAL CONDITION REQUIREMENTS.

F. WET SYSTEMS - AREAS WITH NO HUNG CEILING - AUTOMATIC UPRIGHT AND PENDENT HEADS SHALL BE RELIABLE AUTOMATIC SPRINKLER CO. MODEL F1FR, OR VICTAULIC V2704-08, CHROME PLATED FINISH.

G. WET SYSTEMS - GYP. BD. OR ACOUSTICAL CEILING TILE - CONCEALED PENDENT AUTOMATIC SPRINKLER HEADS SHALL BE RELIABLE AUTOMATIC SPRINKLER CO. MODEL G5-56, OR VICTAULIC V3802, WHITE COVER PLATE.

H. WET SYSTEMS - ACOUSTICAL CEILING TILE W/ SURFACE MOUNTED LIGHTS - PENDENT SPRINKLER HEADS WITH DEEP BELL ESCUTCHEONS-RELIABLE MODEL 'GFR' OR VICTAULIC V2708 WITH CHROME PLATED HB ESCUTCHEON.

I. WET SYSTEMS -SIDEWALL APPLICATIONS - HORIZONTAL SIDEWALL SPRINKLER HEADS WITH RECESSED F1 ESCUTCHEON - RELIABLE MODEL 'F1FR56' OR VICTAULIC V2710 WITH RECESSED ESCUTCHEON SHALL BE STANDARD CHROME PLATED FINISH.

I. WET SYSTEMS -EXTENDED COVERAGE SIDEWALL APPLICATIONS - CONCEALED HORIZONTAL SIDEWALL SPRINKLER HEADS - RELIABLE MODEL G6-80' WITH WHITE COVER PLATE.

J. WET SYSTEM -CONTROL MODE DENSITY AREA SPRINKLERS - AS/RS WAREHOUSE AND STORAGE AREAS - AUTOMATIC SPRINKLERS SHALL BE RELIABLE AUTOMATIC SPRINKLER CO. MODEL G VELO PENDANT OR SIMILAR.

J. WET SYSTEM -CONTROL MODE DENSITY AREA SPRINKLERS - 10 DUNNIGAN WAREHOUSE AND STORAGE AREAS - AUTOMATIC SPRINKLERS SHALL BE RELIABLE AUTOMATIC SPRINKLER CO. MODEL GXLO UPRIGHT OR VIKING VK530 ELO UPRIGHT OR SIMILAR.

J. WET SYSTEM -CONTROL MODE SPECIFIC APPLICATION SPRINKLERS - 20 DUNNIGAN WAREHOUSE AND STORAGE AREAS - AUTOMATIC SPRINKLERS SHALL BE VIKING VK540 OR TYCO MODEL LD OR SIMILAR.

K. DRY OR PREACTION SYSTEMS - GYP. BD. OR ACOUSTICAL CEILING TILE - CONCEALED DRY PENDENT AUTOMATIC SPRINKLER HEADS SHALL BE RELIABLE AUTOMATIC SPRINKLER MODEL G5-56 OR VICTAULIC V33 DRY PENDENT. USE THIS SPRINKLER HEAD FOR PRE-ACTION AND DRY TYPE SPRINKLER SYSTEM APPLICATIONS.

1. VICTAULIC VICFLEX DRY SPRINKLER ALLOWED IN LIEU OF RIGID CONNECTIONS TO DRY SPRINKLER HEADS, A VICTAULIC VICFLEX™ DRY SPRINKLER, MODEL VS1, MAY BE USED. THE SPRINKLER SHALL PROVIDE A VERTICAL OR HORIZONTAL FLEXIBLE CONNECTION WITH A BEND RADIUS TO 2", AND ALLOW FOR UP TO 4 BENDS.

L. DRY OR PREACTION SYSTEMS - ACOUSTICAL CEILING TILE W/ SURFACE MOUNTED LIGHTS - PENDENT SPRINKLER HEADS WITH DEEP BELL ESCUTCHEONS-RELIABLE MODEL 'F3QR' OR VICTAULIC V36 WITH CHROME PLATED HB ESCUTCHEON.

M. DRY OR PREACTION SYSTEMS - SIDEWALL APPLICATIONS - HORIZONTAL SIDEWALL SPRINKLER HEADS WITH RECESSED F1 ESCUTCHEON-RELIABLE MODEL 'F3QR' OR VICTAULIC V2710 W/ V27 RECESSED CHROME PLATED FINISH.

N. SPRINKLER HEADS WITHIN THE MECHANICAL, ELECTRICAL, TELEPHONE AND ELEVATOR MACHINE ROOMS AND WHERE ADDITIONALLY INDICATED SHALL BE RATED AT 200°F - 212°F.

O. ALL HEADS SHALL HAVE TEMPERATURE RATING OF 155°F OR 165°F UNLESS OTHERWISE NOTED.

P. SPRINKLER HEADS IN SKYLIGHTS SHALL HAVE AN INTERMEDIATE TEMPERATURE RATING.

Q. WHERE PARTIAL ALTERATION WORK OCCURS IN A ROOM OR SPACE THAT HAS EXISTING SPRINKLER TO REMAIN, THE NEW SPRINKLERS SHALL MATCH EXISTING.

2.09 AUXILIARY FIRE STANDPIPE SYSTEM

A. RECESSED FIRE HOSE CABINETS SHALL BE 20 GAUGE STEEL WITH DUO-PANEL W/ TEMPERED SAFETY GLASS DOOR AND POSITIVE LATCH DEVICE. CABINET SHALL BE SIMILAR TO POTTER ROEMER FIG. # 1106-DW.

B. HOSE RACK ASSEMBLY SHALL BE CODE APPROVED WITH 125 FEET OF RUBBER LINED SYNTHETIC HOSE, BRASS FOG NOZZLE, 2-1/2" ANGLE HOSE VALVE, SIMILAR TO POTTER ROEMER FIG. #2712 NYFD.

C. FURNISH AND INSTALL AN ADJUSTABLE RESTRICTING DEVICE ON EACH FIRE HOSE VALVE. THE DEVICE SHALL BE SIMILAR TO POTTER ROEMER FIG. #2766.

D. PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH 500 PSI WWP STEEL FITTINGS. PIPING AND FITTINGS SHALL BE GROOVED FOR MECHANICAL COUPLINGS. FITTINGS SHALL BE AS MANUFACTURED BY VICTAULIC. MECHANICAL COUPLINGS SHALL BE VICTAULIC STYLE177' OR '77' OR INSTALLATION-READY RIGID STYLE 107N OR 009N.

E. PIPING FROM FIRE STAIR ENCLOSURE TO THE AUXILIARY HOSE CABINET SHALL BE ENCLOSED WITHIN A 2 HOUR FIRE RATED ENCLOSURE AS REQUIRED BY CODE. THIS CONTRACTOR SHALL INCLUDE THIS IN THEIR BID AND ALL COORDINATION THAT IS REQUIRED TO INSTALL THIS ENCLOSURE.

2.10 TAMPER SWITCHES

A. WHERE INDICATED ON THE DRAWINGS, FURNISH AND INSTALL VALVE TAMPER SWITCHES FOR SUPERVISION OF O.S & Y. SHUT OFF VALVES. TAMPER SWITCHES SHALL BE SYSTEM SENSOR, ADT, ITT GRINNELL CORP., AUTO-CALL. ALTERNATE -VICTAULIC 705, 765 BUTTERFLY VALVE WITH INTERNAL TAMPER SWITCH OR APPROVED OTHER. ACTUATOR HOUSING SHALL BE WETHERPROOF.

B. THE BUTTERFLY VALVE SEAT SHALL BE PRESSURE RESPONSIVE, AND THE STEM OFFSET FROM THE DISC CENTERLINE TO PROVIDE COMPLETE 360-DEGREE CIRCUMFERENTIAL SEATING.

2.11 WATERFLOW DETECTOR

A. WHERE INDICATED ON THE DRAWINGS FURNISH AND INSTALL WATER FLOW ALARMS. WATER FLOW ALARMS SHALL BE PADDLE TYPE NON-CODED, RATED AT 120 VOLTS AD, 10 AMPS NORMALLY CLOSED SWITCH, ACME TYPE 430, SYSTEM SENSOR SERIES WDF OR APPROVED OTHER.

2.12 PRESSURE REDUCING VALVE

A. WHERE INDICATED ON THE DRAWINGS, PROVIDE U.L. LISTED / FM APPROVED, WATER PRESSURE REDUCING VALVE, ALL BRONZE CONSTRUCTION, BRONZE AND STAINLESS STEEL TRIM U.L. LISTED, 300 P.S.I. WORKING PRESSURE. VALVE SHALL BE VICTAULIC 867-427 AND 857-70L OR CLA-VAL MODEL 90-21.

2.13 FLOOR CONTROL DRAIN VALVE ASSEMBLY

A. SPRINKLER COMBINATION TEST AND DRAIN VALVE SHALL BE AGF MODEL #1000 BRONZE TYPE, OR VICTAULIC 747M RISER MANIFOLD.,

B. FURNISH AND INSTALL A ONE INCH INSPECTORS TEST VALVE ASSEMBLY WITH SIGHT GLASS AND A 1¼" SYSTEM DRAIN VALVE ALL IN ACCORDANCE WITH NFPA-13. ALL ASSOCIATED DRAINAGE PIPING SHALL BE HARD PIPE TO THE SPRINKLER DRAIN RISER, OR TO SHALL SPILL INDIRECTLY TO A DESIGNATED WASTE RECEPTOR IF ASSEMBLY IS NOT LOCATED IN THE STAIR.

2.14 FLOOR CONTROL VALVE ASSEMBLY

A. IN LIEU OF INDIVIDUAL COMPONENTS, CONTRACTOR MAY INSTALL A MANUFACTURED COMBINATION FLOOR CONTROL VALVE ASSEMBLY SIMILAR TO GLOBE UNIVERSAL MANIFOLD CHECK (UMC) ASSEMBLY CONTAINING BUTTERFLY VALVE WITH TAMPER SWITCH, WATERFLOW SWITCH, CHECK VALVE, TEST AND DRAIN VALVE.

2.15 FIRE DEPARTMENT CONNECTION

A. SIAMESE BODY SHALL BE CROKER, OR APPROVED OTHER, MODEL NO. 6030 BOTTOM OUTLET, CAST BRASS BODY WITH TWO INLETS. INLET SIZES AND THREADS TO CONFORM TO LOCAL FIRE DEPARTMENT STANDARD.

B. SIAMESE WALL PLATE SHALL BE POLISHED CHROME PLATED CAST BRASS WITH CAST BRASS DOUBLE FEMALE SNOOTS WITH RIGID END 3" NPT X 2½" PIN LUG HOSE THREAD, PIN LUG CAPS AND CHAINS.

C. WALL PLATE SHALL BE LETTERED "AUTOMATIC SPRINKLER."

D. AT THE LOW POINT NEAR EACH FIRE DEPARTMENT CONNECTION, PROVIDE A 90-DEGREE ELBOW WITH DRAIN CONNECTION TO ALLOW FOR LOCALIZED SYSTEM DRAINAGE TO PREVENT FREEZING. BASIS OF DESIGN: VICTAULIC FIRELOCK #10-DR.

2.16 AUTOMATIC BALL DRIP

A. WHERE INDICATED ON THE DRAWINGS, FOR SIAMESE CONNECTIONS, PROVIDE A ½" AUTOMATIC BALL DRIP, INSTALLED BETWEEN THE FIRE DEPARTMENT SIAMESE CONNECTION AND THE CHECK VALVE TO PREVENT LINE FROM FREEZING.

B. AUTOMATIC BALL DRIP SHALL BE CROKER NO. 6781, OR APPROVED OTHER.

2.17 ALARM CHECK VALVE

A. FOR THE WET PIPE SPRINKLER SYSTEM, PROVIDE VICTAULIC SERIES 751 ALARM CHECK WITH SERIES 752 RETARD CHAMBER OR RELIABLE AUTOMATIC SPRINKLER CO., OR APPROVED OTHER, MODEL "E" ALARM CHECK VALVE COMPLETE WITH VERTICAL ALARM TRIM PACKAGE AND A MODEL "E-1" RETARD CHAMBER. VALVE INTERNAL COMPONENTS SHALL BE REPLACEABLE WITH VALVE IN THE INSTALLED POSITION.

2.18 DETECTOR CHECK VALVE

A. WHERE INDICATED ON THE DRAWINGS, PROVIDE AMES COMPANY, INC. OR APPROVED O