

SECTION 15C: AUTOMATIC SPRINKLER SYSTEM:

15C GENERAL

15C GENERAL REQUIREMENTS

ALL REQUIREMENTS UNDER THE GENERAL AND SUPPLEMENTARY CONDITIONS OF THESE SPECIFICATIONS SHALL BE A PART OF THIS SECTION. EACH CONTRACTOR SHALL BE RESPONSIBLE TO THOROUGHLY BECOME FAMILIAR WITH ALL ITS CONTENTS AS TO CODES AND REQUIREMENTS THAT AFFECT THIS DIVISION OR SECTION. THE WORK REQUIRED UNDER THIS SECTION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, TRANSPORTATION, SERVICES, AND LABOR REQUIRED TO COMPLETE THE ENTIRE SYSTEM AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.

THE SPECIFICATIONS WRITTEN HEREIN AND THE ASSOCIATED DRAWINGS ARE COMPLEMENTARY, AND ANY PORTION OF THE WORK DESCRIBED IN ONE, SHALL BE PROVIDED AS IF DESCRIBED IN BOTH. IN THE EVENT OF DISCREPANCIES ON THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF SAME PRIOR TO PROCEEDING WITH THE WORK INVOLVED, IN ORDER THAT CORRECT PROGRESS OF THE WORK MAY BE ENSURED. REFER TO SECTION 15B PLUMBING FOR ADDITIONAL REQUIREMENTS THAT APPLY TO THIS INSTALLATION THAT ARE NOT WRITTEN HEREIN.

15C DEFINITIONS

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

FURNISHED BY OWNER OR FURNISHED BY OTHERS: THE ITEM WILL BE FURNISHED BY THE OWNER OR OTHERS. IT IS TO BE INSTALLED AND CONNECTED UNDER THE REQUIREMENTS OF THIS DIVISION, COMPLETE AND READY FOR OPERATION, INCLUDING ITEMS INCIDENTAL TO THE WORK, INCLUDING SERVICES NECESSARY FOR PROPER INSTALLATION AND OPERATION. THE INSTALLATION SHALL BE INCLUDED UNDER THE GUARANTEE REQUIRED BY THIS DIVISION.

ENGINEER: WHERE REFERENCED IN THIS DIVISION, "ENGINEER" IS THE ENGINEER OF RECORD AND THE DESIGN PROFESSIONAL FOR THE WORK UNDER THIS DIVISION, AND IS A CONSULTANT TO, AND AN AUTHORIZED REPRESENTATIVE OF, THE ARCHITECT, AS DEFINED IN THE GENERAL AND/OR SUPPLEMENTARY CONDITIONS. WHEN USED IN THIS DIVISION, IT MEANS INCREASED INVOLVEMENT BY, AND OBLIGATIONS TO, THE ENGINEER, IN ADDITION TO INVOLVEMENT BY, AND OBLIGATIONS TO, THE "ARCHITECT."

AHJ: THE CODE AND/OR INSPECTION AGENCY (AUTHORITY) HAVING JURISDICTION OVER THE WORK.

THE TERMS "APPROVED EQUAL", "EQUIVALENT", OR "EQUAL" ARE USED SYNONYMOUSLY AND SHALL MEAN "ACCEPTED BY OR ACCEPTABLE TO THE ENGINEER AS EQUIVALENT TO THE ITEM OR MANUFACTURER SPECIFIED". THE TERM "APPROVED" SHALL MEAN LABELED, LISTED, OR BOTH, BY A NATIONALLY RECOGNIZED TESTING LABORATORY (E.G. UL, ETL, CSA), AND ACCEPTABLE TO THE AHJ OVER THIS PROJECT.

15C INSPECTION OF SITE

THE CONTRACTOR SHALL PERSONALLY INSPECT THE SITE OF THE PROPOSED WORK AND BECOME FULLY INFORMED AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. FAILURE TO DO SO WILL NOT BE CONSIDERED SUFFICIENT JUSTIFICATION TO REQUEST OR OBTAIN EXTRA COMPENSATION OVER AND ABOVE THE CONTRACT PRICE.

15C SCOPE

PROVIDE COMPLETE WITH ALL RELATED ITEMS, A WET-PIPE, AUTOMATIC FIRE SPRINKLER SYSTEM FOR THE AREA OF WORK SHOWN ON THE DRAWINGS. CONTRACTOR SHALL BE APPROVED AND STATE LICENSED FOR DESIGN AND INSTALLATION OF FIRE PROTECTION SYSTEMS. THE WORK DONE UNDER THIS SECTION SHALL BE PERFORMED ONLY BY A CONTRACTOR WHOSE WORKMEN ARE EXPERIENCED AND REGULARLY ENGAGED IN THE INSTALLATION OF FIRE PROTECTION SYSTEMS. CONTRACTOR SHALL BE CAPABLE OF PREPARING HYDRAULIC CALCULATIONS AND SYSTEM LAYOUTS.

PROVIDE ALL FIRE SPRINKLER ALARM DEVICES INCLUDING WATERFLOW ALARM AND VALVE TAMPER SWITCHES FOR ALL SYSTEM CONTROL VALVES AS REQUIRED. COORDINATE ALL WIRING AND CONDUIT FOR A COMPLETE AND FUNCTIONAL INSTALLATION.

SYSTEM SHALL, AT A MINIMUM, BE IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13, UNDERWRITERS LABORATORIES (UL), AND MUST BE ACCEPTABLE TO THE ARCHITECT AND ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES AND STANDARDS. WHERE THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE REFERENCED CODES, STANDARDS, ETC., THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE.

WORK SHALL INCLUDE, BUT SHALL NOT NECESSARILY BE LIMITED TO THE FOLLOWING:

- 1) DESIGN AND INSTALLATION OF A COMPLETE WET-PIPE, AUTOMATIC FIRE SPRINKLER SYSTEM FOR THE AREA OF WORK SHOWN ON THE DRAWINGS AS SPECIFIED HEREIN.
- 2) PORTIONS OF SYSTEMS SUBJECT TO FREEZING OR TEMPERATURES BELOW 40° F SHALL BE PROTECTED AGAINST FREEZING AS REQUIRED BY NFPA 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS AND FOR ALL COSTS INCURRED FROM DAMAGE CAUSED BY FREEZING OF THE FIRE PROTECTION SYSTEM.

15C SYSTEM DESIGN

CONTRACTOR SHALL VERIFY DESIGN CRITERIA AND RATING HAZARDS WITH THE OWNER'S INSURER PRIOR TO DESIGNING THE SYSTEM. WATERFLOW AND PRESSURE TEST DATA SHALL BE ACQUIRED BEFORE SYSTEM IS CALCULATED AND BE DATED NOT MORE THAN 12 MONTHS PRIOR TO THE SUBMITTAL OF SPRINKLER SHOP DRAWINGS. ARRANGEMENTS FOR AND COST OF FLOW TESTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

HYDRAULIC CALCULATIONS SHALL BE PERFORMED AND PROVIDED TO REVIEWING AUTHORITY INCLUDING SUPPLY AND DEMAND GRAPH; ALL HYDRAULIC REFERENCE POINTS AND AREA OF APPLICATION SHALL APPEAR ON THE PLAN. CONTRACTOR SHALL VERIFY WITH AHJ ANY MINIMUM SAFETY FACTOR REQUIREMENTS. DEMAND SHALL NOT BE LESS THAN 5% BELOW THE SUPPLY AT THE DEMAND POINT.

PROTECT RESTROOMS AND OFFICES, UNLESS NOTED OTHERWISE WITH A WET TYPE SPRINKLER SYSTEM DESIGNED IN ACCORDANCE WITH NFPA 13. DESIGN SYSTEM FOR LIGHT HAZARD, 0.10 GPM/SF OVER THE HYDRAULICALLY REMOTE 1500 SF AREA. INCLUDE MINIMUM 100 GPM HOSE ALLOWANCE ADDED AT THE BASE OF RISER.

PROTECT ENTIRE AREA OF WORK, UNLESS NOTED OTHERWISE WITH A WET TYPE SPRINKLER SYSTEM DESIGNED IN ACCORDANCE WITH NFPA 13. DESIGN SYSTEM FOR ORDINARY HAZARD GROUP 2, 0.20 GPM/SF OVER THE HYDRAULICALLY REMOTE 1500 SF AREA. INCLUDE MINIMUM 250 GPM HOSE ALLOWANCE ADDED AT THE BASE OF RISER.

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE HYDRAULIC CALCULATIONS, THE FINAL SYSTEM DESIGN, AND THE LAYOUT OF ALL COMPONENTS OF THE SYSTEM AS REQUIRED FOR APPROVAL BY THE OWNER'S INSURER AND THE AHJ.

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR COORDINATING SYSTEM LAYOUT WITH OTHER CONTRACTORS. CHANGES TO SYSTEM DESIGN DUE TO LACK OF COORDINATION SHALL BE PAID FOR BY THIS CONTRACTOR.

DESIGNS REQUIRING CUTTING OF STRUCTURAL MEMBERS FOR PASSAGE OF SPRINKLER PIPES OR HANGERS SHALL NOT BE ACCEPTED. WHEN DESIGN APPEARANCE OR SIMILAR ASPECTS REQUIRE CUTTING, DUE TO ECONOMY, IT SHALL BE HELD TO AN ABSOLUTE MINIMUM AND DONE ONLY WITH THE ARCHITECT AND STRUCTURAL ENGINEER'S WRITTEN APPROVAL. ANY EXCESSIVE REQUIREMENTS OF THIS TYPE SHALL BE IDENTIFIED DURING THE BID PERIOD.

SPRINKLER SPACING SHALL CONFORM TO NFPA 13. EXTENDED COVERAGE SPRINKLERS SHALL NOT BE USED IN UNFINISHED (SHELL) SPACES.

THE HYDRAULIC AREA OF OPERATION SHALL NOT BE REDUCED AS ALLOWED BY NFPA 13 FOR AREAS UTILIZING QUICK RESPONSE SPRINKLERS.

15C SHOP DRAWINGS

SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE FURNISHED TO THE AUTHORITY HAVING JURISDICTION, FOR HIS APPROVAL. SUBMIT SHOP DRAWINGS AS EARLY AS REQUIRED TO SUPPORT THE PROJECT SCHEDULE.

SUBMITTALS AND SHOP DRAWINGS SHALL NOT CONTAIN THE FIRM NAME OR LOGO, NOR SHALL IT CONTAIN THE HEI'S ENGINEER'S SEAL AND SIGNATURE. THEY SHALL NOT BE COPIES OF HEI'S WORK PRODUCT. IF THE CONTRACTOR DESIRES TO USE ELEMENTS OF SUCH PRODUCT, REFER TO PARAGRAPH "ELECTRONIC DRAWING FILES" FOR PROCEDURES TO BE USED.

SHOP DRAWINGS SHALL MEET THE REQUIREMENTS OF NFPA 13 FOR WORKING LEVEL DRAWINGS AND SHALL INCLUDE THE FOLLOWING:

- 1) SUBMIT WORKING PLANS PER NFPA 13 INCLUDING LAYOUT DRAWINGS OF THE COMPLETE OVERHEAD SPRINKLER SYSTEM INDICATING RELATIONSHIP OF SPRINKLER PIPING AND SPRINKLERS TO ALL OTHER OVERHEAD ITEMS INCLUDING CEILING GRID AND TILES, LIGHT FIXTURES, DIFFUSERS, REGISTERS, GRILLES, DUCTWORK, STRUCTURE, SOFFITS, OBSTRUCTIONS, ETC. LOCATION OF RISER PIPING, ETC., SHALL BE AS INCONSPICUOUS AS POSSIBLE AND SHALL FULFILL ALL FUNCTIONAL REQUIREMENTS. SYSTEM DESIGN CAPABILITIES AND DEMAND SHALL ALSO BE NOTED ON THE DRAWINGS.
- 2) SUBMIT COMPLETE DETAILS AND SECTIONS AS REQUIRED TO CLEARLY DEFINE AND CLARIFY THE DESIGN. INCLUDING A MATERIALS LIST DESCRIBING ALL PROPOSED MATERIALS, MANUFACTURER NAME AND CATALOG NUMBER.
- 3) HYDRAULIC CALCULATIONS.
- 4) PRODUCT DATA FOR ALL FIRE SPRINKLER SYSTEM COMPONENTS. CLEARLY INDICATE COMPONENTS TO BE USED WHERE MULTIPLE COMPONENTS APPEAR ON THE SAME CIST SHEET.

WHERE REQUIRED BY THE AHJ, CONTRACTOR IS RESPONSIBLE FOR OBTAINING A PROFESSIONAL ENGINEER'S NICET STAMP AND SIGNATURE ON THEIR DRAWING SUBMITTAL. HEI IS NOT RESPONSIBLE AND WILL NOT PROVIDE THIS.

15C ELECTRONIC DRAWINGS

IN PREPARATION OF SHOP DRAWINGS OR RECORD DRAWINGS, CONTRACTOR MAY, AT HIS OPTION, OBTAIN ELECTRONIC DRAWING FILES IN AUTOCAD VERSION 14, 2006 OR DXF FORMAT, AS DESIRED, FROM THE ENGINEER FOR A FEE OF \$200 FOR A DRAWING SET UP TO 12 SHEETS AND \$15 PER SHEET FOR A SET OF MORE THAN 12 SHEETS. CONTRACTOR SHALL CONTACT THE ENGINEER TO OBTAIN THE NECESSARY RELEASE AGREEMENT FORM AND TO SPECIFY SHIPPING METHOD AND DRAWING FORMAT. PAYMENT MUST BE RECEIVED BEFORE ELECTRONIC DRAWING FILES WILL BE SENT.

15C RECORD DRAWINGS

DURING PROGRESS OF THE WORK OF THIS SECTION, THIS CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE INSTALLATION OF THE SYSTEM. UPON COMPLETION OF THE WORK, ACCURATELY TRANSFER ALL RECORD INFORMATION TO A SET OF THE APPROVED SHOP DRAWINGS. FINAL RECORD SET SHALL BE PROVIDED TO OWNER UPON COMPLETION.

15C GUARANTEE

THE ENTIRE INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION, LABOR (INCLUDING TRAVEL EXPENSES) TO TROUBLE-SHOOT, REPAIR, REPROGRAM, OR REPLACE COMPONENTS SHALL BE FURNISHED BY THIS CONTRACTOR AT NO CHARGE DURING THE WARRANTY PERIOD.

15C MATERIALS AND INSTALLATION

15C PRODUCTS

ALL FIRE PROTECTION SYSTEM COMPONENTS SHALL BE UNDERWRITER'S LABORATORIES LISTED FOR THEIR INTENDED USE.

15C PIPING AND COMPONENTS

SPRINKLER PIPING 2-1/2" AND LARGER SHALL BE SCHEDULE 10 OR SCHEDULE 40 BLACK STEEL. SPRINKLER PIPING 2" AND SMALLER SHALL BE SCHEDULE 40. HANGERS SHALL HAVE WELDED, THREADED, OR MECHANICALLY JOINED FITTINGS, BASED ON THE PIPE MATERIAL AND SIZE PER NFPA 13 REQUIREMENTS.

ACCEPTABLE ALTERNATIVES TO SCHEDULE 10 AND SCHEDULE 40 PIPE SHALL BE MANUFACTURED TO STANDARDS RECOGNIZED BY NFPA 13. PIPE SHALL HAVE A CORROSION RESISTANCE RATING OF 1.0 OR GREATER. CRIMP-TYPE COUPLINGS SHALL NOT BE USED. THREADED THINWALL PIPE WITH CORROSION RESISTANCE RATING LESS THAN 1.0 NOT PERMITTED.

ALL PIPING ON THE EXTERIOR OF THE BUILDING AND/OR EXPOSED TO THE ELEMENTS SHALL BE EXTERNALLY GALVANIZED.

15C SPRINKLERS

SPRINKLERS IN AREAS WITH FINISHED CEILINGS SHALL BE CHROME PLATED RECESSED TYPE WITH CHROME PLATED ESCUTCHEONS.

SPRINKLERS IN AREAS WITH EXPOSED PIPING MAY BE PENDENT OR UPRIGHT TYPES WITH ROUGH BRASS FINISH.

PROVIDE QUICK RESPONSE SPRINKLERS IN ALL LIGHT HAZARD AREAS.

15C SERVICE ENTRANCE

FIRE PROTECTION SERVICE ENTRANCE IS EXISTING TO REMAIN. THE SERVICE SHALL BE EQUIPPED WITH A UL LISTED BACKFLOW PREVENTER ASSEMBLY AS REQUIRED BY THE AHJ. ASSEMBLY SHALL INCLUDE APPROVED OUTSIDE SCREW AND YOKE (OS&Y) VALVES WITH TAMPER SWITCHES. NOTIFY ARCHITECT AND/OR ENGINEER UPON ANY EXISTING CONDITION CODE DEFICIENCIES PRIOR TO STARTING WORK.

PROVIDE NEXT TO THE SPRINKLER RISER, A PRINTED SHEET, PROTECTED BY GLASS OR A TRANSPARENT PLASTIC COVER, GIVING BRIEF INSTRUCTIONS REGARDING CONTROL, EMERGENCY PROCEDURE AND OTHER DATA AS REQUIRED BY NFPA 13. FOR HYDRAULICALLY DESIGNED SYSTEMS, A PLACARD MUST BE PERMANENTLY ATTACHED TO THE RISER INDICATING THE LOCATION, AND THE BASIS OF DESIGN (DISCHARGE DENSITY AND SYSTEM DEMAND).

ALL CONTROL VALVE SUPERVISORY SWITCHES, WATERFLOW ALARM SWITCHES AND SPRINKLER SYSTEM EQUIPMENT PANELS REQUIRING INTERCONNECTION TO THE FIRE ALARM SYSTEM SHALL BE PROVIDED BY THIS CONTRACTOR.

PROVIDE A CABINET CONTAINING SPARE SPRINKLERS AND APPROPRIATE WRENCH(ES) PER NFPA 13, AT THE FIRE SPRINKLER SYSTEM SERVICE ENTRANCE AREA.

15C EXECUTION

15C PIPING AND FINISHES

PIPING IN AREAS HAVING CEILINGS, OTHER THAN THE UNDERSIDE OF THE ROOF DECK, SHALL BE CONCEALED. PIPING IN AREAS WITH FINISHED CEILINGS MAY BE EXPOSED BUT KEPT AT A MINIMUM DISTANCE FROM THE DECK. ALL PIPING SHALL BE CLEAN AND FREE OF RUST. INSTALL SYSTEM SUCH THAT ALL PIPING IS RIGIDLY SECURED AND SUPPORTED. ALL DUCTWORK, LIGHTS, STRUCTURAL MEMBERS AND MAIN RUNS OF PIPING SHALL TAKE PRECEDENCE OVER SPRINKLER PIPING. CUTTING OF STRUCTURAL MEMBERS FOR PASSAGE OF SPRINKLER PIPES OR HANGERS WILL NOT BE PERMITTED. ALL HORIZONTAL PIPING IN CEILING SPACE SHALL BE AT ELEVATION ABOVE THE TOP OF LIGHT FIXTURES AND AIR OUTLETS TO ALLOW FOR ACCESS TO LIGHT FIXTURES AND AIR OUTLETS WITHOUT REMOVING HORIZONTAL PIPING. ROUTE ALL SPRINKLER PIPING AND PROVIDE ALL OFFSETS, BENDS, AND ELBOWS AROUND ALL MECHANICAL, ELECTRICAL, AND STRUCTURAL MEMBERS AS REQUIRED.

WHERE EXPOSED PIPING PASSES THROUGH FINISH WORK, CHROME PLATED OR OTHER FINISH ACCEPTABLE TO THE ARCHITECT) SPLIT WALL PLATES OR ESCUTCHEONS SHALL BE INSTALLED TO FIT SNUGLY AROUND THE PIPING. WHERE PIPING IS CONCEALED OR INSTALLED IN UNFINISHED AREAS, SUITABLE PLATES SHALL BE PROVIDED AT EACH PENETRATION TO ASSURE EFFECTIVENESS OF CONSTRUCTION AS A FIRE STOP.

ALL OPENINGS FOR PIPING SHALL BE ANTICIPATED AND INDICATED ON THE APPROVED SHOP DRAWINGS. ANY ADDITIONAL CUTTING OF OPENINGS MUST HAVE THE WRITTEN APPROVAL OF THE ARCHITECT.

PIPING SHALL BE ROUTED PARALLEL TO MAJOR BUILDING LINES.

DESIGN SHALL ALLOW FOR SUITABLE DRAINAGE OF SYSTEM, ALL TO MEET WITH THE APPROVAL OF THE AFOREMENTIONED AUTHORITIES. PROVIDE ACCESS PANELS AS REQUIRED. ALL DRAIN LOCATIONS REQUIRING ACCESS PANELS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.

SPRINKLERS IN SUSPENDED CEILINGS SHALL BE NOT LESS THAN 6-INCHES FROM THE GRID IN ALL DIRECTIONS.

15C COORDINATION

CONTRACTOR SHALL COORDINATE THE CONNECTION OF THE FIRE SPRINKLER ALARM DEVICES TO THE FIRE ALARM SYSTEM OR FIRE SPRINKLER MONITORING PANEL AS REQUIRED.

COORDINATE ALL SCHEDULING AND WORK WITH OTHER TRADES SO AS TO PREVENT CONFLICTS, AND TO ENSURE ORDERLY PROGRESS OF THE WORK, WITH A MINIMUM OF DELAYS. WHEN SPRINKLER PIPING IS INSTALLED WITHOUT COORDINATING WITH OTHER TRADES AND CONFLICTS OCCUR, SPRINKLER PIPING SHALL BE RELOCATED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER TO RESOLVE THE CONFLICTS.

15C PENETRATIONS

SEAL ALL FIRE PROTECTION FLOOR, WALL AND ROOF PENETRATIONS WATER TIGHT AND WEATHER TIGHT. CALL OUT FIRE PROTECTED PENETRATIONS WITH 3M CP-25, OR APPROVED EQUAL FIRE BARRIER CAULK (THICKNESS AS REQUIRED AND RECOMMENDED BY MANUFACTURER) TO MAINTAIN FIRE RESISTANCE RATING OF FIRE-RATED ASSEMBLIES.

15C TESTING AND ACCEPTANCE

CONTRACTOR SHALL COMPLETE THE AUTOMATIC FIRE SPRINKLER SYSTEM, AS SOON AS POSSIBLE, WHEN BUILDING CONSTRUCTION ALLOWS. FOLLOWING SYSTEM INSTALLATION, THE CONTRACTOR SHALL PLACE THE SYSTEM IN SERVICE. AFTER THE SYSTEM HAS BEEN PLACED IN SERVICE FOR CONTINUOUS USE, WATER CHARGES, IF ANY WILL BE PAID BY OWNER.

UPON COMPLETION OF THE SYSTEMS INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE ENGINEER AND OWNER, THIS CONTRACTOR SHALL MAKE GENERAL OPERATING TESTS TO DEMONSTRATE THAT ALL EQUIPMENT AND SYSTEMS ARE IN PROPER WORKING ORDER, AND ARE FUNCTIONING IN CONFORMANCE WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

ABOVE GROUND PIPING SHALL BE TESTED IN ACCORDANCE WITH NFPA 13. ALL SPRINKLER PIPING SHALL BE HYDROSTATICALLY TESTED AT A MINIMUM PRESSURE OF 200-PSI FOR A MINIMUM 2-HOUR PERIOD OF TIME. CORRECT ANY FAULTY OR LEAKING JOINTS AND PIPE. THE USE OF ANY SUBSTANCE OR MATERIAL ADDED TO THE WATER TO CORRECT LEAKS SHALL NOT BE PERMITTED. CAULKING OF DETECTIVE JOINTS, CRACKS OR HOLES WILL NOT BE PERMITTED. TESTS SHALL BE REPEATED AFTER DEFECTS HAVE BEEN ELIMINATED. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE AHJ AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE.

UPON COMPLETION OF EACH PHASE OF THE INSTALLATION, EACH SYSTEM SHALL BE TESTED IN CONFORMANCE WITH LOCAL CODE REQUIREMENTS. THE CONTRACTOR SHALL FURNISH ALL LABOR AND EQUIPMENT REQUIRED TO PROPERLY TEST ALL SPRINKLER EQUIPMENT INSTALLED UNDER THIS CONTRACT, AND HE SHALL ASSUME ALL COSTS INVOLVED IN MAKING THE TESTS, AND REPAIRING AND/OR REPLACING ALL DAMAGE RESULTING THEREFROM.

THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND THE AUTHORITY HAVING JURISDICTION, THREE (3) WORKING DAYS PRIOR TO MAKING SPRINKLER SYSTEM TESTS. CONCEALED WORK SHALL REMAIN UNCOVERED UNTIL THE REQUIRED TESTS HAVE BEEN COMPLETED, BUT IF NECESSARY DUE TO CONSTRUCTION PROCEDURE, TESTS ON PORTIONS OF THE WORK MAY BE MADE, AND IF SATISFACTORY, THE WORK MAY BE CONCEALED.

15C INSTRUCTIONS

AFTER COMPLETION OF ALL INSTALLATION, TESTS, ETC., AND PRIOR TO THE FINAL ACCEPTANCE DATE, THE CONTRACTOR SHALL INSTRUCT THE BUILDING OWNER AND HIS SELECTED PERSONNEL IN THE OPERATION OF THE SPRINKLER SYSTEM AND THE PROCEDURE TO CONDUCT QUARTERLY MAIN DRAIN TESTS AS REQUIRED BY NFPA 13. SPECIAL CARE SHALL BE TAKEN TO MAKE SURE THE BUILDING PERSONNEL WILL IMMEDIATELY RECOGNIZE WHETHER THE MAIN VALVE IS IN AN OPEN POSITION, WILL KNOW HOW TO TEST THE SYSTEM, WILL KNOW HOW TO TEST THE SYSTEM. THE BUILDING PERSONNEL SHALL ALSO BE MADE FAMILIAR WITH THE EXISTENCE AND CONTENTS OF THE SYSTEM MANUAL DESCRIBED IN THIS SPECIFICATION.

END OF SECTION 15C

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Sprint

#1408 DURHAM

2707 GUESS RD, SUITE 110
DURHAM, NC 27705

MARK	DATE	DESCRIPTION

SPRINKLER PERFORMANCE SPECIFICATIONS

PROJECT NUMBER: SPR1408

DATE: 02/16/08

CHAD GLEASON

DESIGNED BY: DON RETHMAN

DATE: SEPTEMBER 26, 2017

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