

FIRE PROTECTION SPECIFICATIONS:

1. GENERAL:

- A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.
B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS...
C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED, WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES...
D. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. PIPE ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, STEPS AND RISES OF RUNS...
E. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL...
F. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK...
G. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES...
H. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK...
I. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK...
J. THE LOCATIONS OF THE EXISTING SERVICES ARE BELIEVED TO BE AS INDICATED ON THE DRAWINGS...
K. SALL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH A U.L.-LISTED FIRESTOPPING ASSEMBLY MATCHED TO THE RATING OF THE PENETRATED ELEMENT...
L. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPING AND EQUIPMENT...
M. ALL PRESENT MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR...
N. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS...
O. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER...
P. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS...
Q. UNLESS OTHERWISE SPECIFICALLY SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING...
R. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS...
S. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK...
T. INSURANCE: PROVIDE IN ACCORDANCE WITH BUILDING REQUIREMENTS AND POLICY SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER...
U. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

2. SCOPE OF WORK:

- A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMITY WITH THE MAINE STATE BUILDING CODE AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION...
B. THE BASE BUILDING DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLEMENTED OR SPECIFIED HEREIN...
C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT...
D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFOR...
E. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME...
F. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFOR...
G. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME...
H. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFOR...

3. SUBMITTALS:

- A. THE CONTRACTOR SHALL PREPARE FULL COORDINATED COMPOSITE DRAWINGS FOR THE MECHANICAL, ELECTRICAL AND FIRE PROTECTION TRADES...
B. INDICATE ON EACH SHOP DRAWING SUBMITTED:
1) PROJECT NAME AND LOCATION.
2) NAME OF ARCHITECT AND ENGINEER.
3) ITEM IDENTIFICATION.
4) APPROVAL STAMP OF PRIME CONTRACTOR.
C. SUBMISSIONS:
1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES...
2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT...
D. SHOP DRAWINGS:
1) PREPARE AND SUBMIT DETAILED SHOP DRAWINGS FOR PIPING WORK AND OTHER DISTRIBUTION SERVICES, INCLUDING LOCATIONS AND SIZES OF ALL OPENINGS IN FLOOR WALLS AND ROOFS.

- 2) THE WORK DESCRIBED IN ANY SHOP DRAWING SUBMISSION SHALL BE CAREFULLY CHECKED FOR ALL CLEARANCES INCLUDING THOSE REQUIRED FOR MAINTENANCE AND SERVICING...
3) EACH SUBMITTED SHOP DRAWING TO INCLUDE A CERTIFICATION THAT ALL RELATED JOB CONDITIONS HAVE BEEN CHECKED AND THAT NO CONFLICT EXISTS...
4) ALL DRAWINGS TO BE SUBMITTED SUFFICIENTLY IN ADVANCE OF FIELD REQUIREMENTS TO ALLOW AMPLIFIED TIME FOR CHECKING ALL SUBMITTALS...
5) IF SUBMITTALS DIFFER FROM THE CONTRACT DOCUMENT REQUIREMENTS, MAKE SPECIFIC MENTION OF SUCH DIFFERENCE IN A LETTER OF TRANSMITTAL...
6) REVIEW OF ANY SUBMITTED DATA OR SHOP DRAWINGS FOR MATERIAL, EQUIPMENT APPARATUS, DEVICES, ARRANGEMENT AND LAYOUT SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY OF FURNISHING SAME OF PROPER DIMENSIONS AND WEIGHT, CAPACITIES, SIZES, QUANTITY, QUALITY AND INSTALLATION DETAILS...
7) EACH SHOP DRAWING TO CONTAIN JOB TITLE, CONTRACTOR AND SUBCONTRACTOR NAMES AND PHONE NUMBERS, REFERENCE TO THE APPLICABLE DESIGN DRAWING OR SPECIFICATION ARTICLE, DATE AND SCALE...
8) UPON AWARD OF CONTRACT, CONTRACTOR SHALL SUBMIT LIST OF DRAWINGS THAT THEY WILL REQUIRE...
9) WITHIN 15 DAYS AFTER AWARD OF CONTRACT, SUBMIT FOR REVIEW, A LIST OF ALL MATERIAL AND EQUIPMENT MANUFACTURERS WHOSE PRODUCTS ARE PROPOSED...
E. RECORD DRAWINGS:
1) THE CONTRACTOR SHALL MAINTAIN ON A DAILY BASIS AT THE PROJECT SITE A COMPLETE SET OF RECORD DRAWINGS...
2) RECORD DIMENSIONS SHALL CLEARLY AND ACCURATELY DELINEATE THE WORK AS INSTALLED...
3) PRIOR TO FINAL ACCEPTANCE OF THE WORK OF THIS DIVISION, THE CONTRACTOR SHALL SUBMIT PROPERLY CERTIFIED RECORD DRAWINGS TO THE ARCHITECT AND ENGINEER...
4) DELIVERABLES BY THE CONTRACTOR TO THE OWNER SHALL INCLUDE ONE SET OF VELLUMS, THREE SETS OF BLACK LINE COPIES, ONE COPY OF THE FIELD DRAWINGS, AND ONE SET OF CD'S COMPLETE WITH ALL DRAWINGS FILES (\*.DWG) IN AUTO CAD 2000 FORMAT.

F. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

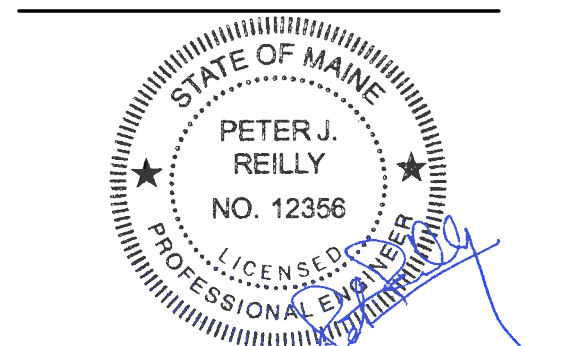
- 1) PIPE AND FITTINGS.
2) SPRINKLER HEADS AND ACCESSORIES.
3) PIPING LAYOUTS.
4) SUPPORTS, HANGERS AND GUIDES.
5) HYDRAULIC CALCULATIONS.
4. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS:
A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO OWNER PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS...
B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS...
C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER...
D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK...
5. GENERAL PROVISIONS FOR FIRE PROTECTION WORK:
A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES...
B. DEFINITIONS:
1) "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION...
2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES...
3) "TURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES...
4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION...
5) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION...
6) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE...
7) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT...
C. QUALITY ASSURANCE:
1) QUALITY AND GAUGE OF MATERIALS: NEW, BEST OF THEIR RESPECTIVE KINDS...
2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK...
D. PRODUCT DELIVERY, STORAGE AND HANDLING:
1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS...
2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR...
E. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE...
F. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL VISIBLE FIRE PROTECTION EQUIPMENT BE VERIFIED BY ARCHITECT...
G. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION...
H. SPRINKLER SYSTEM DESIGN CRITERIA:
1) LIGHT HAZARD OCCUPANCIES: 225 SQ FT/HEAD MAXIMUM COVERAGE...
2) ORDINARY HAZARD OCCUPANCIES: 130 SQ FT/HEAD MAXIMUM COVERAGE...

6. PRODUCTS:

- A. ESCUTCHEONS:
1) ALL EXPOSED PIPING PASSING THROUGH WALLS, FLOORS, PARTITIONS AND CEILINGS SHALL BE PROVIDED WITH CHROME PLATED CAST BRASS ESCUTCHEONS HELD IN PLACE WITH SET SCREWS...
4. PIPE AND FITTINGS:
A. PIPE:
1) ALL SPRINKLER PIPING ABOVE GRADE: STANDARD WEIGHT BLACK STEEL PIPE, SCHEDULE 40, WELDED OR SEAMLESS...
2) SPRINKLER PIPING UP TO 2" SHALL BE SCHEDULE 40 PIPING...
3) SPRINKLER PIPING 2-1/2" AND UP SHALL BE SCHEDULE 10 PIPING...
4) ALL SPRINKLER MAIN PIPING ABOVE GRADE WITH MAXIMUM WORKING PRESSURE OF 175 PSI...
B. FITTINGS:
1) THREADED: STANDARD CAST IRON COUPLINGS WITH FLAT BAND...
2) ROLLED GROOVE LOCK:
a. "T'S, ELBOWS, NIPPLES, CAPS AND CROSSES OF DUCTILE OR MALLEABLE IRON; VICTAULIC PRODUCTS OR APPROVED EQUALS...
3) DUCTILE FITTINGS SHALL NOT BE PERMITTED...
C. JOINTS:
1) THREADED (SCHEDULE 40 ONLY) WITH APPROVED COMPOUND...
2) CUT GROOVE (SCHEDULE 40 ONLY) WITH RIGID MALLEABLE IRON BOLTED COUPLINGS WITH EPDM GASKETS...
3) ROLL GROOVE (SCHEDULE 40 OR SCHEDULE 10) WITH RIGID MALLEABLE IRON BOLTED COUPLINGS WITH EPDM GASKETS...
D. APPLICATIONS:
1) THREADED: ALL SPRINKLER AND FIRE STANDPIPE SYSTEMS...
2) GROOVED (ROLL OR CUT): ALL SPRINKLER RISERS/MAINS AND FIRE STANDPIPE SYSTEMS...
E. ACCEPTABLE MANUFACTURERS: VICTAULIC CO., INTERFIT, SPRINK.
8. SPRINKLER HEADS:
A. ALL SPRINKLER HEADS SHALL BE AS SCHEDULED ON THE PLANS...
B. INSTALLATION:
1) COORDINATE SPRINKLER HEAD LOCATIONS WITH THE CEILING GRID...
C. INSTALL SPRINKLER HEADS IN THE CENTER OF CEILING TILES...
D. SUSPENDED HORIZONTAL PIPING:
1) SUPPORT ALL PIPING INDEPENDENTLY FROM STRUCTURE...
2) PROVIDE ELECTROPLATED SOLID BAND HANGERS...
3) PROVIDE WALL BRACKETS FOR WALL SUPPORTED PIPING...
4) SUSPEND PIPING FROM INSERTS...
5) SUSPEND PIPING BY RODS WITH DOUBLE NUTS...
6) PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED...
7) MAXIMUM HANGER SPACING AS INDICATED...
8) VERTICAL PIPING:
a. PROVIDE EXTENSION PIPE CLAMPS BOLTED TO BARE PIPE...
D. EXPANSION ANCHORS:
1) PROVIDE SMOOTH WALL, NON-SELF-DRILLING INTERNAL PLUG EXPANSION TYPE ANCHORS...
2) DO NOT EXCEED 1/4 OF AVERAGE VALUES FOR A SPECIFIC ANCHOR SIZE...
3) PROVIDE SPACING AND INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS...
4) EXPANSION ANCHORS SHALL BE UL LISTED AND SIMILAR TO HILTI HIL...
10. INSTALLATION:
A. DURING CONSTRUCTION, PROPERLY CAP ALL LINES AND EQUIPMENT NOZZLES...
B. EACH SYSTEM OF PIPING SHALL BE FLUSHED...
11. TESTS:
A. FIRE PROTECTION SYSTEM PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF 200 PSI...
B. DEFECTS DISCLOSED BY THE TESTS SHALL BE REPAIRED OR REPLACED...
C. TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE BUILDING...
D. ARRANGE AND COORDINATE TESTS WITH OWNER 48 HOURS IN ADVANCE...
TITLE
FIRE PROTECTION SPECIFICATIONS

CONSULTANTS
AKF GROUP LLC
99 Bedford St., 2nd Floor
Boston, MA 02111
1617.237.1111
1617.237.4311

STRUCTURAL
SGH INC.
41 Seyon St.
Waltham, MA 02453
1781.907.8000
1781.907.9009



PROJECT
ACCU
RELOCATION
22 Bramhall Street
Portland, Maine 04102

Maine Medical Center
MaineHealth
MAINE MEDICAL CENTER
22 Bramhall Street
Portland, Maine 04102

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