FIRE PROTECTION SYMBOL LIST

FIRE PROTECTION SYMBOLS

(NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT)

- F — FIRE STANDPIPE PIPING
- SPKR — SPRINKLER PIPING
- DSP — DRY SPRINKLER PIPING
- PA — PRE-ACTION SPRINKLER PIPING
- DR — DRAIN PIPING
- PIPING BELOW SLAB
- EXISTING PIPING
- EXISTING WORK TO BE REMOVED
- PIPING w/FREEZE PROTECTION CABLE & INSULATION
- SLOPED CHANGE IN PIPE ELEVATION
- WATER PROOF SLEEVE
- SLEEVE
- FE-X — FIRE EXTINGUISHER
  - A – WATER
  - B – DRY CHEMICAL
  - C – GASEOUS (CO_2 OR HALON 1211 – SEE SPEC.)
- FE-X — FIRE EXTINGUISHER IN CABINET
- FIRE HOSE VALVE
- FIRE HOSE VALVE IN CABINET
- FIRE HOSE VALVE w/HOSE IN CABINET
- FE-X — FIRE HOSE VALVE w/FIRE EXTINGUISHER
- ROOF MANIFOLD (3-WAY)
- SPRINKLER CONTROL VALVE ASSEMBLY
- XX — VALVE ASSEMBLY
  - AC – ALARM CHECK
  - DR – DRY PIPE
  - PA – PRE ACTION
- CONNECT TO EXISTING
- DISCONNECT FROM EXISTING
- FIRE DEPARTMENT SIAMESE CONNECTION (WALL MOUNTED)
- EXISTING FIRE HYDRANT
- NEW FIRE HYDRANT
- TEMPERATURE AND PRESSURE RELIEF VALVE
- PLUG VALVE
- MIXING VALVE
- RELIEF VALVE
- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- OUTSIDE SCREW & YOKE (OS & Y) VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE (PRV)
- SOLENOID VALVE
- FLOAT VALVE
- BACKWATER VALVE
- Y STRAINER w/BLOW-OFF VALVE
- RPZ — REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY
- DCV — DETECTOR CHECK VALVE ASSEMBLY
- # # — HYDRAULIC REF. POINTS #=ELEMENT #=NODE
- T — TAMPER SWITCH
- WATERFLOW SWITCH
- PRESSURE GAUGE w/GAUGE COCK
- TEMPERATURE GAUGE
- X / XX — RISER DESIGNATION — RISER SERVICE / RISER NUMBER

FIRE PROTECTION ABBREVIATIONS

(NOT ALL ABBREV. ARE NECESSARILY USED ON THIS PROJECT)

ABD	AUTOMATIC BALL DRIP
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
BOP	BOTTOM OF PIPE
CFM	CUBIC FEET PER MINUTE
CV	CHECK VALVE
DIA	DIAMETER
DR	DRAIN
DN	DOWN (PENETRATES FLOOR SLAB)
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FHVC	FIRE HOSE VALVE CABINET
FD	FLOOR DRAIN
FL	FLOOR
FP	FIRE PUMP
FSP	FIRE STANDPIPE
FT	FEET
GC	GENERAL CONTRACTOR
GV	GATE VALVE
GAL	GALLONS
GPM	GALLONS PER MINUTE
HD	HEAT DETECTOR
ID	INSIDE DIAMETER
IN	INCH
JP	JOCKEY PUMP
MAX	MAXIMUM
MIN	MINIMUM
NC	NORMALLY CLOSE
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
PSI	POUNDS PER SQUARE INCH (GAUGE)
PRV	PRESSURE REDUCING VALVE
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO BE REMOVED AND RETURN TO OWNER
SD	SMOKE DETECTOR
SPKR	SPRINKLER
TOP	TOP OF PIPE
TS	TAMPER SWITCH
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
WFS	WATER FLOW SWITCH
Z	ZONE

DEMOLITION NOTES

1. REMOVE EXISTING SPRINKLER HEADS AND PIPING IN THE AREA OF WORK, BACK TO EXISTING SPRINKLER MAINS. ALL ABANDONED PIPING TO BE REMOVED.
2. MAKE ANY NECESSARY TEMPORARY CONNECTIONS BETWEEN EXISTING AND NEW WORK TO MAINTAIN CONTINUOUS SERVICE OF ALL EXISTING SYSTEMS. MINIMIZE SHUTDOWNS. OBTAIN WRITTEN APPROVAL FROM ARCHITECT/OWNER FOR SHUTDOWNS. ALL SHUT-DOWNS REQUIRE 48 HOUR NOTICE TO OWNER.
3. CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING CONDITIONS BEFORE STARTING ANY WORK.
4. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER BEFORE REMOVING OR RELOCATING ANY EXISTING PIPING NOT INDICATED ON DRAWINGS.

FIRE PROTECTION GENERAL NOTES

1. GENERAL NOTES, SYMBOLS LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS MARKED F.
2. ALL FIRE PROTECTION WORK SHALL BE IN ACCORDANCE WITH THE CURRENT FIRE PROTECTION CODE AND ALL APPLICABLE LOCAL CODES AND DRAWINGS.
3. PROVIDE WET-PIPE SPRINKLERS IN ALL AREAS.
4. SECURE WATER FLOW TEST DATA TAKEN FROM FIRE HYDRANTS NEAREST SITE. IF RECENT FLOW TEST DATA IS NOT AVAILABLE FROM CITY RECORDS, MAKE NECESSARY TESTS AS REQUIRED BY NFPA STANDARDS TO DETERMINE CHARACTER OF WATER SUPPLY. MINIMUM OF 20 PSI DROP IN PRESSURE BETWEEN STATIC AND RESIDUAL PRESSURE SHALL BE REQUIRED IN ORDER TO OBTAIN ACCURATE DATA.
5. SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED.
6. ADD 10% CONTINGENCY FACTOR TO HYDRAULIC CALCULATIONS.
7. EXACT LOCATION OF SPRINKLER HEADS IN FINISHED AREAS WITH SUSPENDED CEILING SHALL BE AS INDICATED ON REFLECTED CEILING PLANS.
8. MINIMUM PRESSURE AT END SPRINKLER HEAD 7 PSI.
9. EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA STANDARD NO. 13.
   A. WHEREVER FITTINGS ARE USED IN CONJUNCTION WITH LIGHTWALL PIPE, EQUIVALENT FITTING LENGTHS INDICATED IN NFPA-13 SHALL BE INCREASED BY 39%.
10. MAXIMUM FLOW VELOCITY SHALL NOT EXCEED 20 F.P.S.
11. ALL AUTOMATIC SPRINKLER HEADS, PIPE FITTINGS, PIPE HANGERS, AUTOMATIC CONTROL VALVES AND MANUAL CONTROL VALVES SHALL BE UL LISTED AND BEAR FACTORY MUTUAL APPROVAL AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
12. ALL EXPOSED PIPE, FITTINGS, HANGERS AND SUPPLEMENTARY STEEL SHALL BE PAINTED.
13. ENDS OF ALL CROSS MAINS SHALL BE PROVIDED WITH THREADED FLUSHING CONNECTION NO MORE THAN 2 INCHES IN DIAMETER.
14. PROVIDE AUXILIARY DRAINS FOR ALL PIPING BELOW DUCT SPRINKLERS AND OPEN TRAPPED SECTIONS. PIPING TO ONE SINGLE SPRINKLER IS EXCLUDED.
15. PROVIDE FLUSHING CONNECTIONS WHERE REQUIRED BY NFPA AND F.M.
16. COORDINATE WITH OWNER FOR ALL SHUTDOWNS.
17. PROVIDE TEST CONNECTIONS AT HIGHEST POINT OF MAIN PORTION OF EACH SPRINKLER SYSTEM, WITH 1" PIPE AND VALVE. TEST PIPE SHALL BE CONNECTED TO SPRINKLER PIPE AT LEAST 1-1/4" IN SIZE AND SHALL DISCHARGE OUTSIDE BUILDING OR THROUGH 1/2" SMOOTH BORE BRASS OUTLET, WHERE IT CAN BE EASILY SEEN.
18. PROVIDE ADDITIONAL HEADS UNDER DUCTWORK LARGER THAN 48" WIDE.
19. THE REUSE OF EXISTING SPRINKLER HEADS SHALL BE PROHIBITED.
20. NEW SPRINKLER HEAD TYPE AND TEMPERATURE RATING SHALL BE IN ACCORDANCE WITH SCHEDULE UNLESS NOTED OTHERWISE AND/OR REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
21. COORDINATE ALL PIPE PENETRATIONS AND CORING WITH STRUCTURAL ENGINEER AND IN ACCORDANCE WITH DIVISION 01.
22. REFER TO ARCHITECTURAL DRAWINGS FOR ALL CEILING RELATED WORK.
23. COORDINATE ALL NEW FIRE PROTECTION WORK WITH ALL EXISTING AND/OR NEW DUCTWORK, PIPING AND UTILITIES OF ANY SYSTEMS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE INTENT OF THE DESIGN. REROUTE ANY PIPING AROUND EXISTING AND/OR NEW SYSTEMS INCLUDING ALL REQUIRED FITTINGS AND SUPPORTS TO MAKE THE INSTALLATION OF THE PIPING AND SPRINKLER HEADS POSSIBLE. RESEAL ANY FIRE AND/OR SMOKE RATED PENETRATIONS THAT HAVE BEEN AFFECTED AS A RESULT OF THE MODIFICATION.
24. ALL COMPONENTS USED IN FIRE PROTECTION SYSTEMS SHALL BE IN ACCORDANCE WITH THE OWNER'S GUIDELINES, STANDARDS AND SPECIFICATIONS.

SPRINKLER HEAD SCHEDULE

TYPE	DESIGNATION	UPRIGHT	PENDENT	CONCEALED	RECESSED	SIDEWALL	DRY	QUICK RESPONSE	EXTENDED COVERAGE	EXIST SPKR HD TO BE REMOVED	EXIST SPRINKLER HD	MANUFACTURER: RELIABLE	MANUFACTURER: GRINNELL	MANUFACTURER: STAR	MANUFACTURER: VIKING	MODEL NUMBER	REMARKS
	○										●						
	⊠									●							
	●		●	●				●								G5-56	K=5.6, ½" ORIFICE 155° RATING
	◁																
	◀																
	⊙																
	⊙																
	◢																
	◢																
	⊘																

NOTES:

1. EXPOSED UPRIGHT HEADS IN OCCUPIED SPACES SHALL BE CHROME FINISH.
2. PROVIDE ESCUTCHEONS WHEN PENETRATING EXPOSED WALL.
3. PROVIDE SPRINKLER GUARDS AT ALL HEADS 7'-0" AND LOWER.
4. COLOR SELECTION BY ARCHITECT.

SPRINKLER SYSTEM DESIGN CRITERIA

AREA OF SERVICE	GENERAL AREAS	MECHANICAL SPACES
OCCUPANCY CLASSIFICATION	LIGHT HAZARD	ORDINARY GROUP I
MOST REMOTE AREA	1500 ø	1500 ø
DENSITY	0.10 GPM/ø	0.15 GPM/ø
COVERAGE	225 ø/HEAD	130 ø/HEAD
HOSE ALLOWANCE	100 GPM	250 GPM
SPRINKLER HEAD	SEE SCHEDULE	PENDENT/UPRIGHT
SPRINKLER TYPE	QUICK RESPONSE	STANDARD RESPONSE
TEMPERATURE RATING	155° F	212° F
K-FACTOR	5.6	5.6
ORIFICE	½"	½"
SYSTEM TYPE	WET	WET

NOTES:

1. NEW BRANCH PIPE SIZING AS FOLLOWS:

1 SP. HEAD	1"
2 SP. HEAD	1"
3 SP. HEAD	1¼"
4 SP. HEAD	1½"
5 SP. HEAD	1½"
6 SP. HEAD	2"
|	|
10 SP. HEAD	2"
11 SP. HEAD	2½"

DRAWING INDEX

DRAWING NO.	DRAWING TITLE
F-000	FIRE PROTECTION COVER SHEET
F-100	FIRE PROTECTION DEMOLITION SPRINKLER PLAN
F-200	FIRE PROTECTION SPRINKLER PLAN
F-300	FIRE PROTECTION DETAILS
F-400	FIRE PROTECTION SPECIFICATIONS

PERKINS + WILL

225 Franklin St., Suite 1100
Boston, MA 02110
t 617.478.0300
f 617.478.0321
www.perkinswill.com

Maine Medical Center
MaineHealth

RETAIL PHARMACY

22 Bramhall Street, Portland, ME

MEP ENGINEER

AKF ENGINEERS

99 Bedford Street, 2nd Floor
Boston, MA 02111
t 617.737.1111
f 617.737.4311

STRUCTURAL ENGINEER

SIMPSON GUMPERTZ & HEGER
41 Seyon Street, Building 1, Suite 500
Waltham, MA 02453
t 781.907.9000
f 781.907.9009

STATE OF MAINE — PETER J. REILLY — NO. 12356 — LICENSED PROFESSIONAL ENGINEER

Revisions

NO	ISSUE	DATE
4	ISSUED FOR PERMIT	08.11.14
1	ADDENDUM #1	07.28.14
	ISSUE FOR BID	07.11.14

Sheet Information

Date	JULY 11, 2014
Job #	152168.010
Drawn	
Checked	
Approved	

Title

FIRE PROTECTION COVER SHEET

Sheet

F-000

Copyright © 2011 Perkins+Will

AKF Job # B140153-000