

**UNIVERSITY OF ROCHESTER  
ENVIRONMENTAL HEALTH & SAFETY**

<b>Policy No.: FS017-A</b>	<b>Approved by: Mark Cavanaugh</b>
<b>Title: SMH Main Drain Testing Procedure</b>	<b>Date: 11/19/2020</b>
<b>Revision No.: 5</b>	<b>Page 1 of 5</b>
<b>Prepared by: Scott Miller</b>	

**I. PURPOSE**

This procedure identifies how to conduct a sprinkler system main drain test for Strong Memorial Hospital.

**II. PERSONNEL AFFECTED**

Fire Safety Unit

**III. DEFINITIONS**

EH&S- Environmental Health and Safety Department of the University of Rochester

Fire Safety Unit – Representatives of the University Fire Marshal’s Office out of the EH&S department.

**IV. RESPONSIBILITIES**

The Fire Safety Unit representative conducting this test is responsible for following the proper procedures related to testing 2” main drains and for contacting Public Safety when the test begins and ends. Failure to do so may result in injury, damage or prevent the proper operation of equipment.

**V. PROCEDURES**

- A. Contact the University Public Safety Communications Center and advise them you will be testing the sprinkler system main drain in SMH and to ignore water flow alarms from the SMH and G-3000 fire alarm panels.
- B. Contact Facilities Work Center (ext. 34567) and advise them you will testing the sprinkler system main drain in SMH.
- C. Disable SMH (1-3452) fire alarm panel, G-3000 Simplex and Johnston Fire panels per the fire alarm disconnect/reconnect procedures.
- D. Proceed to the fire pump room (B-1250).
- E. Shut both the Fire pump and Jockey pump off for the test per “Fire Pump disconnect” procedure.
- F. Close pet cock and remove the gauge from the supply side. Open pet cock and purge any excess debris/air from the port before installing the calibrated gauge.

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- G. Install calibrated gauge on supply side.
- H. Open the 2” main drain to release the pressure from the weekly pump test to street pressure.
- I. Close the 2” main drain.
- J. Observe and document the static pressure on the supply side and Start Test Time on Appendix 1.
- K. Open the 2” main drain fully and watch the supply side calibrated pressure gauge to see how much lower the pressure drops. When the pressure stabilizes, note and document the residual pressure on Appendix 1.
- L. When the pressure gauge stops dropping and stabilizes, close the main drain fully, note the time on Appendix 1 as Time Test Completed.
- M. Watch the calibrated gauge as it returns to match the actual street pressure and record static pressure and time on Appendix 1 under Time System Stabilized.
- N. The flow-testing portion is completed.
- O. The pressure should not drop 10%. If so, refer to Fire Marshal. Example: Street pressure is 60 psi X 10% = 6 psi. The calibrated gauge should not drop past 54 psi during the stabilized timed flow test.
- P. Once the main drain is closed, turn the jockey pump back on and wait for the system pressure to return to normal. **Caution:** If the fire pump is turned on, it will activate and slam the system pressure quickly and possibly cause damage and/or multiple flow alarms.
- Q. Remove the calibrated gauge from the street side. Open the pet cock and purge any excess debris/air from the port before re-installing the system gauge.
- R. Complete the Main Drain-UR test form (Appendix 1). Turn this form into the Fire Marshal for review.
- S. Once the entire system pressure is returned to normal, turn the fire pump back on and return SMH (1-3452), and G-3000 fire alarm panels back to normal per the system disconnect/reconnect procedures.

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- T. Contact the University Public Safety Communication Center and advise them the test is completed.
  
- U. Contact facilities work center (ext. 34567) and advise them the testing in completed.

**VI. REFERENCES**

NFPA 25 (2017) Standard for Inspection, Testing and Maintenance of Water-Based Fire Protection Systems

**VII. APPENDICES/FORMS**

Fire alarm procedures – Word documents  
    SMH City Tie  
    SMH  
Test Form – Excel document  
    Main Drain

**VIII. REVISION HISTORY**

Date	Revision No.	Description
2/13/2009	1	Added Step J and amended Step K
6/27/2011	2	Review of policy
4/18/2013	3	Add calibrated gauge and reduce weekly pump test pressure
8/17/2017	4	Complete re-write of procedure
11/19/2020	5	Triennial review and updated reference editions.

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Appendix 1

<b>DATE</b>	_____	<b>BUILDING</b>	_____
<b>SYSTEM</b>	_____	<b>LOCATION</b>	_____
<b>TEST POINT</b>	_____	<b>TEST FREQUENCY</b>	Quarterly
<b>VALVE MODEL</b>	_____	<b>VALVE NUMBER</b>	_____

**TEST INFORMATION**

<b>STATIC PRESSURES</b>	<input type="text"/>	<b>PSI (BELOW CHECK VALVE)</b>	
<b>RESIDUAL PRESSURES</b>	<input type="text"/>	<b>PSI (BELOW CHECK VALVE)</b>	
<b>SYSTEM FLUSHED</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	<b>PIPING SATISFACTORY</b> <input type="checkbox"/> YES <input type="checkbox"/> NO	
<b>SYSTEM INSPECTED</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	<b>VALVE OPERATED</b> <input type="checkbox"/> YES <input type="checkbox"/> NO	
<b>START TEST TIME</b>	<input type="text"/>	<b>STOP TEST TIME</b>	<input type="text"/>
<b>RECOVERY TIME</b>	<input type="text"/>	<b>TIME SYSTEM STABILIZED</b>	<input type="text"/>
<b>FINAL STATIC PRESSURE</b>	<input type="text"/>	<b>PSI</b>	

**SPRINKLER HEAD INFORMATION**

<b>SPARE HEADS PROVIDED</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	<b>CHANGING TOOLS</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO
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CLEAN OF DEPOSITS	<input type="checkbox"/> YES	<input type="checkbox"/> NO	SPECIAL HEADS IDENTIFIED	<input type="checkbox"/> YES	<input type="checkbox"/> NO
NUMBER OF HEADS	<input type="text"/>	PENDANT	PENDANT HEADS GREATER THAN 8' AFF HAVE CAGES	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	<input type="text"/>	UPRIGHT			
	<input type="text"/>	SIDEWALL			

**SPRINKLER SIGNAGE INFORMATION**

FLOW DIRECTION LABELS ON PIPING	<input type="checkbox"/> YES	<input type="checkbox"/> NO	SIGNAGE IDENTIFYING AREA OF PROTECTION	<input type="checkbox"/> YES	<input type="checkbox"/> NO
HYDRAULIC CALCULATIONS ON RISER	<input type="checkbox"/> YES	<input type="checkbox"/> NO	FIRE DEPT CONNECTION PROPERLY IDENTIFIED	<input type="checkbox"/> YES	<input type="checkbox"/> NO

**COMMENTS/CORRECTIVE ACTIONS**

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INSPECTOR