Sprinkler Assessment Report

245 QUICK TRCE
RICHMOND VA 23234
RICHMOND CITY COUNTY

RISK ID: **45 VA97 007937** ON-SITE SURVEY: **1/4/2021** LAST UPDATE: **1/4/2021**

EXECUTIVE SUMMARY

Building Sprinkler Credit: **Sprinkler Credit Received**

Sprinkler Design Standard: **NFPA 13 Design**

Sprinkler Grade: **57** (out of 100)

Percent of Building Sprinklered: **100%**

Sprinkler Demand Met: **92%**

Hose Stream Demand Met: **0%**

Automatic Sprinkler Grade Components	Deficiency Points
Water Supply	**21**
Sprinkler Components	**15**
Sprinkler Testing	**5**
Non-Sprinklered Areas	**2**
Rack Storage Obstructions	**0**
Building Conditions	**0**
Total Deficiency Points (Maximum of 100)	**43**
Automatic Sprinkler Grade (Range 0-100, 100 being best)	**57**

The Automatic Sprinkler Grading is based on a 100-point scale, with scores below 100 indicating that deficiencies exist in the system. The final grading is the difference between 100 and the sum of the points for each identified deficiency. Six major categories of sprinkler protection features are evaluated to arrive the final sprinkler grading.

* This assessment report is based on observations made by Verisk Field Representative's using Verisk's SCOPES methodology as the technical basis.

WATER SUPPLY

This section evaluates the adequacy of water supply available with respect to the sprinkler system demand, including details about system design, available water supply sources, and related deficiencies.

DESIGN INFORMATION & SPRINKLER DEMAND

Ground Floor Area:	**30,299 Square Feet**
Building Combustibility Class:	**2**
Elevation to the highest line of sprinklers:	**60 Feet x 0.434 = 26 Elevation PSI**
Sprinkler Design Method:	**Hydraulic Calculation Method - Density/Area Curve**

HYDRAULICALLY CALCULATED SYSTEM

Building Sprinkler Occupancy Class:	**2**
Sprinkler System Demand:	**361 GPM at 74 PSI at base of riser**
Hose Stream Demand:	**250 GPM**
Water Duration:	**60 minutes**

Determination of Sprinkler Occupancy Class (SPOC)		
	Square Feet	Percentage
SPOC 3	**2,522**	**2%**
SPOC 2	**3,450**	**2%**
SPOC 1	**145,523**	**96%**
Total	**151,495**	**100%**

SPOC is a determination of the overall occupancy hazard for the building for sprinkler system design, similar to the occupancy classifications (e.g., light hazard, ordinary hazard, etc.) in NFPA 13, Standard for the Installation of Sprinkler Systems.

Hydraulically Designed Systems Information	
Density	**0.200 GPM/sq.ft.**
Remote Area	**1,500 sq.ft.**
Demand	**361 GPM at 74 PSI at POC, Excluding 250 GPM Hose, 60 minutes duration**
Information source	**CALC**
ESFR	**No**

EVALUATION OF WATER SUPPLIES

Water Supply Sources

Source	Supply Source / Location	Static Pressure (PSI)	Residual Pressure (PSI)	Flow (GPM)	Limited Storage Volume	Test Date	Feet Gauge Above/Below Riser
1	**245 Quick Trace**	**68**	**59**	**2140**		**9/29/2020**	

HYDRAULICALLY CALCULATED SYSTEMS

Water Supply Deficiency Evaluation							
Supply Source	Flow at Intersection (GPM)	Pressure at Intersection (PSI)	Storage Deficiency Percent	Deficient Storage Adjustment Factor	Deficient Pressure Adjustment Factor	Water Supply Deficiency Percentage	Points
Supply Source 1	**333**	**68**	**N/A**	**1**	**1**	**8**	**6**

System with worst demand: **Hydraulic**

Primary water supply source: **1**

DEFICIENCY DETAILS

Water Supply	Deficiency Points
Primary water supply deficiency	**6**
Secondary water supply deficiency • No or insufficient secondary water supply	**10**
Hose stream supply deficiency • Insufficient hose stream supply	**5**
Water Supply	**21**

SPRINKLER SYSTEM COMPONENTS

This section evaluates key system components and lists related deficiencies identified. Key components evaluated include those items that may have direct effects on sprinkler system performance, such as the condition and layout of valves, piping and sprinklers, and miscellaneous items of design, installation and maintenance.

DEFICIENCY DETAILS

Sprinkler System Components	Deficiency Points
Deficiency for miscellaneous items and maintenance • No documentation for above ground hydrostatic test • No documentation for underground hydrostatic and/or flushing test • Insufficient spare sprinklers and/or no sprinkler wrench provided	**15**
Sprinkler System Components	**15**

SPRINKLER SYSTEM TESTING

This section reviews the initial and periodic tests conducted for the sprinkler system in accordance with NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-based Fire Protection, including the initial flushing and hydrostatic testing of underground and aboveground piping, annual main drain test, dry-pipe valve trip test, fire pump discharge test and internal pipe exam.

Periodic Test Information		
	Date Installed	Date Tested
Main Drain	**N/A**	**10/29/2019**
Dry Pipe Valve	**N/A**	**N/A**
Fire Pump Perf	**N/A**	**N/A**
Internal Pipe Exam	**N/A**	**N/A**

Dry pipe system covers less than 5,000 Square Feet and less than 25% of protected building area: **No**

DEFICIENCY DETAILS

Sprinkler System Testing	Deficiency Points
Deficiency for required periodic tests • Outdated main drain test(s)	**5**
Sprinkler System Testing	**5**

NON SPRINKLERED/OBSTRUCTED AREAS

This section identifies all unused and usable areas that lack required sprinkler protection in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, and the specific requirements of the Specific Commercial Property Evaluation Schedule (SCOPES).

Used Non-Sprinklered Area							
Description	Area in Sq.Ft.	% Total Occupied/Used Area	Area Adjustment Factor Type	Area Adjustment Factor Value	Adjusted Area Value	Listed In FRF 51?	Widely Scattered
Exercise room	**356**	**0.2**	**All Others**	**1.0**	**356**	**Yes**	**No**
Total	**356**				**Total**	**356**	

DEFICIENCY DETAILS

Non-Sprinklered/Obstructed Areas	Deficiency Points
Deficiency for used unsprinklered area • No sprinkler protection for used area that requires sprinklers	**2**
Non-Sprinklered/Obstructed Areas	**2**

RACK STORAGE OBSTRUCTIONS

DEFICIENCY DETAILS

Rack Storage Obstruction	Deficiency Points
No deficiencies observed	**0**
Rack Storage Obstruction	**0**

BUILDING CONDITIONS

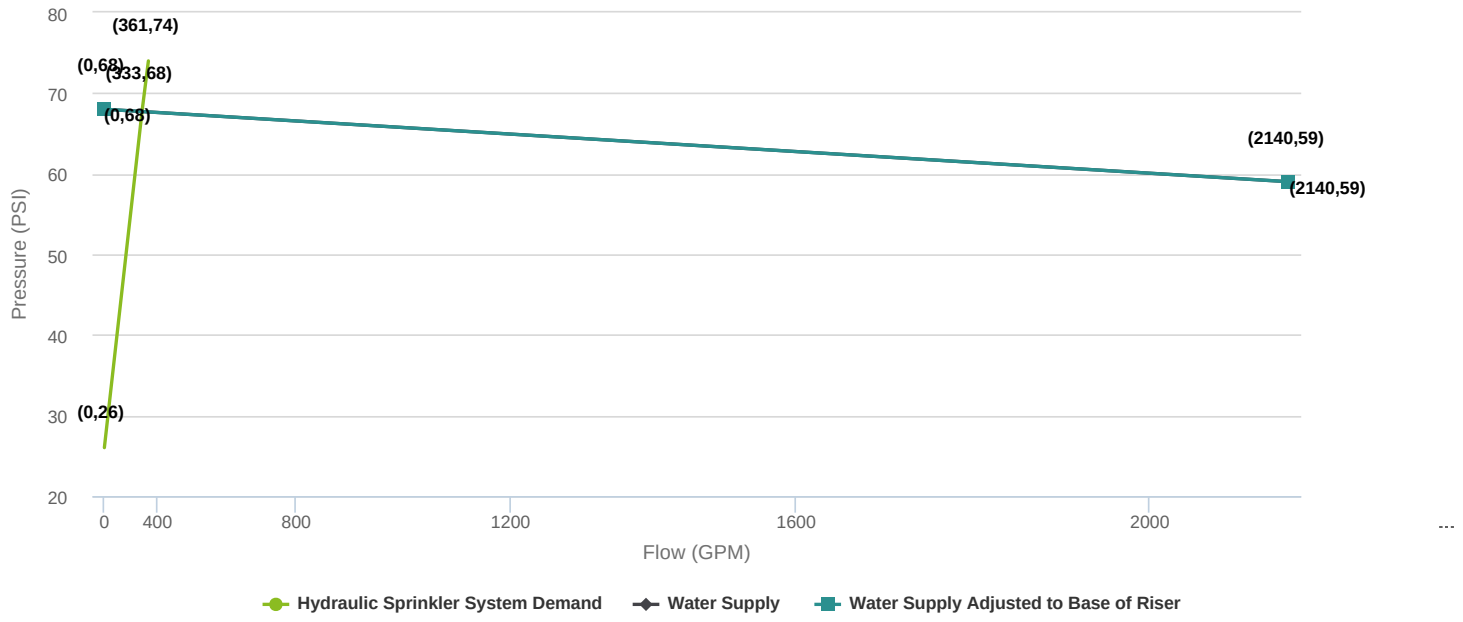
This section evaluates structural conditions in the building that can have negative impact on the effectiveness and efficiency of the sprinkler system, including unprotected floor openings, open sided levels and stories that have excessive single story height.

DEFICIENCY DETAILS

Building Condition	Deficiency Points
No deficiencies observed	**0**
Building Condition	**0**

HYDRAULIC GRAPH

Hydraulic graph is a graphical comparison of the available water supply and sprinkler system demand, which also displays the key variables used in the water supply assessment.



POLICY#/INSURED: **N/A** ORDERED BY: **ISO RISK DECISION SVCS (K. LOWERY)**

ProMetrix

Verisk