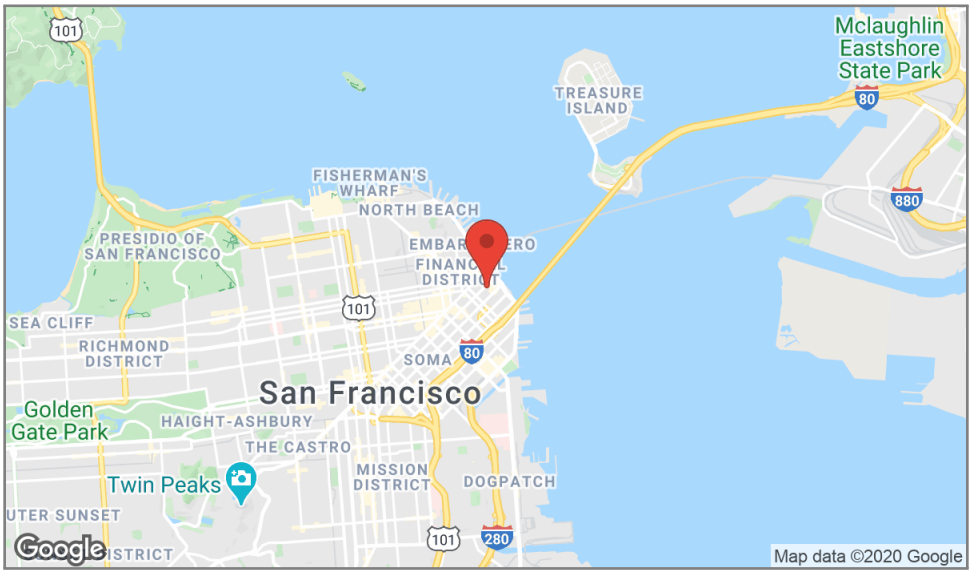
SEISMIC RISK ASSESSMENT REPORT

Created with the SP3-RiskModel

Executive Summary Report



Report Generated for:

123 Main Street, San Francisco, CA, 94105

Latitude: 37.79177°

Longitude: -122.39443°

Report Generated by:

The SP3-RiskModel Software v1.2.0 of the

Seismic Performance Prediction Program (SP3)

December 18, 2020

Seismic Performance Prediction Program

by Haselton Baker Risk Group

SP3-RiskModel EXECUTIVE SUMMARY

RISK MODEL INPUTS

The following are the user inputs used to generate the SP3-RiskModel Report.

Primary

Project Name:	SF Example Report
Model Name:	SF Example Report
Building Type:	Steel: BRBF CoreBrace with Back-up Frame
Year of Construction:	2016
Number of Stories:	8
Occupancy:	Commercial Office
Address:	
123 Main Street	
San Francisco, CA, 94105	
Latitude:	37.79177°
Longitude:	-122.39443°

Analysis Options

Include Collapse in Analysis:	Yes
Consider Residual Drift:	Yes

Building Layout Information

Cost per Square Foot:	–
Total Square Feet:	–
Aspect Ratio:	–
First Story Height (ft):	–
Upper Story Heights (ft):	–
Vertical Irregularity:	–
Plan Irregularity:	–
Site Class:	–

Building Design Info

Level of Detailing (Dir. 1, 2):	–, –
Drift Limit (Dir. 1, 2):	–, –
Risk Category:	–
Seismic Importance Factor, I_e:	–
Component Importance Factor, I_p:	–
Include Retrofit Information?	No

Structural Properties

Property	Dir. 1	Dir. 2
Base Shear Strength (g):	–	–
1^{st} Mode Period (T_1) (s):	–	–

Component Information

Do your stairs have seismic joints?	–
Is your ceiling laterally supported?	–
Is your lighting seismically rated?	–
Is your piping seismically rated?	–
Is your HVAC system seismically anchored?	–
Is your electrical equipment seismically rated?	–
Percent of Building Glazed:	–

Component Modifiers

Group	Repair Cost	Capacity
Structural:	–	–
Partition Walls:	–	–
Exterior Finishes:	–	–
Ceilings:	–	–
Lighting:	–	–
Elevators:	–	–
Piping:	–	–
HVAC:	–	–

EXPECTED LOSS

The repair cost results of the SP3-RiskModel analysis are presented in the table below.

Expected loss in percent of total building value

Shaking Intensity	Return Period	SEL (%)	SUL (%)
90% in 50 years	22 Years	1	2
50% in 30 years	43 Years	2	4
50% in 50 years	72 Years	3	5
50% in 75 years	108 Years	4	6
50% in 100 years	144 Years	4	7
20% in 50 years	224 Years	5	9
DE	267 Years	6	9
10% in 50 years	475 Years	8	12
MCE_R	623 Years	9	15
5% in 50 years	975 Years	17	23
2% in 50 years	2475 Years	46	77

Repair Time

The repair time results of the SP3-RiskModel analysis are presented in the table below.

Median repair time, without impeding factors

Intensity	FEMA P-58 Parallel	FEMA P-58 Series	REDi Re-Occupancy	REDi Functional Recovery	REDi Full Recovery
90% in 50 years	1 days	1 days	0 days	2 days	2 days
50% in 30 years	4 days	5 days	0 days	10 days	10 days
50% in 50 years	7 days	12 days	1 days	2.3 weeks	2.3 weeks
50% in 75 years	9 days	2.5 weeks	2 days	2.7 weeks	2.7 weeks
50% in 100 years	11 days	3.2 weeks	3 days	3.0 weeks	3.0 weeks
20% in 50 years	14 days	4.4 weeks	6 days	3.4 weeks	3.4 weeks
DE	2.2 weeks	5.0 weeks	7 days	3.7 weeks	3.7 weeks
10% in 50 years	2.8 weeks	6.9 weeks	14 days	4.4 weeks	4.4 weeks
MCE_R	3.2 weeks	1.9 months	3.1 weeks	5.1 weeks	5.1 weeks
5% in 50 years	3.9 weeks	2.7 months	5.2 weeks	6.6 weeks	6.6 weeks
2% in 50 years	6.5 weeks	5.1 months	2.6 months	2.6 months	2.6 months