1.0 BACKGROUND

The purpose of this document is to define the Department of Veterans Affairs' criteria for buildings that are at a "High Risk" (HR) or an "Exceptionally High Risk" (EHR) of damage during a major seismic event to assist with seismic risk prioritization for mitigation efforts. Per VA Directive 7512, VA is committed to providing life-safety protection to Veterans, employees, and other building occupants in all facilities and maintaining operations in Critical and Essential facilities, as defined in VA Handbook H-18-8, *Seismic Design Requirements*.

Per the VA accepted recommendations of the Secretary's Advisory Committee on Structural Safety of Department of Veterans Affairs Facilities, this document includes the VA seismicity levels formerly in H-18-8 and updates the definition of EHR and HR buildings, superseding the definitions in Directive 7512, until Directive 7512 is updated to reference this document.

2.0 SEISMICITY

The seismicity levels defined in Table 1 shall only be used for managing the VA seismic inventory for seismic risk mitigation prioritization (e.g., Exceptionally High Risk, High Risk buildings, etc.). Values for risk-targeted maximum considered earthquake ground motion parameters S_S and S_1 (defined in VA Handbook H-18-8 *Seismic Design Requirements*) at VA locations are shown in Table 2.

Table 1. Seismicity

Seismicity/Seismic Zone	S_S	S_1
Very High	≥ 1.250g	≥0.500g
High	< 1.250g ≥0.750g	< 0.500g ≥ 0.300g
Moderate-High	< 0.750g ≥ 0.350g	< 0.300g ≥ 0.140g
Moderate-Low	< 0.350g ≥ 0.250g	< 0.140g ≥ 0.100g
Low	< 0.250g	< 0.100g

Note: The Seismicity/Seismic Zone applies when either S_S or S_1 equals or exceeds the corresponding lower threshold value.

3.0 RISK DEFINITIONS

Exceptionally High Risk (EHR) Buildings: Typically a large main hospital building located in a high seismic zone and constructed before the adoption of H-08-8 in 1975. Specific definitions of EHR buildings are buildings that meet all the following criteria below:

(1) Located in high or very high seismic zones;

(2) Designated as a Critical or Essential facility;

(3) Designed prior to adoption of H-08-8 or is evaluated in the BSE-1N earthquake to be at high risk of major structural damage or collapse;

(4) Area is greater than 10,000 square feet, except for Critical and Essential utility plants;

(5) Building is not otherwise exempt; and

(6) The building has not been retrofitted or is evaluated in the BSE-1N earthquake to be at high risk of major structural damage or collapse.

High Risk (HR) Buildings: HR buildings, the second-tier category, have been added to identify buildings just below EHR level. They are defined as meeting one of the following:

(1) Buildings that meet the definition of EHR except they are located in an area of Moderate High seismicity;

(2) Buildings that meet the definition of EHR, except they are smaller than 10,000 square feet and greater than 1,000 square feet, except for Critical and Essential utility plants;

(3) Buildings that meet the definition of EHR, except they were retrofitted prior to the adoption of H-18-8, December 1995; or

(4) Buildings that meet the definition of EHR, except they are evaluated in the BSE-1N earthquake to be at high risk of structural damage, but not at high risk of major structural damage or collapse.

3.1 EHR AND HR RANKING SCORE SYSTEM

To help prioritize seismic mitigation efforts on the most critical buildings, VA uses a ranking system. The current scoring criteria is summarized below.

Total Score = DC + S + NB + (SZ or UP)

- DC = Deficiency Category; which broadly describes the expected damage from the Design Earthquake (2/3 Maximum Considered Earthquake). The DC is determined by engineering judgement, based on the severity of seismic deficiencies ascertained in a

seismic evaluation from a licensed professional engineer specializing in structural engineering. It is typically recommended by the engineer performing the evaluation and validated by the VA Seismic Safety Coordinator.

- Deficiency Category 1 (35 points) – Building is in danger of collapse
- Deficiency Category 2 (20 points) – Building may not collapse, but will be heavily damaged
- Deficiency Category 3 (10 points) – Building will be damaged
- Deficiency Category 4 (5 points) – Building is structurally compliant, but may have non-structural seismic deficiencies
- Not yet studied (10 points)

- S = Seismicity score; which uses a non-linear ranking of relative seismic hazard based on the ASCE 7 mapped spectral response acceleration parameter, S_s. The ranking system is designed to give an appropriately higher weight to sites in higher seismic zones.
  - $S = 11.5*S_s^{1.5}$
    - Maximum of 35 points
    - Minimum of 4 points
- NB = Number of beds; which gives higher weight to buildings with more inpatient beds.
  - >150 Beds: 25 points
  - 100 – 150 Beds: 20 points
  - 50 – 100 Beds: 15 points
  - <50 Beds: 10 points
  - 0 Beds or unknown: 5 points
  - Utility Plant: 10 points
- SZ = Size; which considers larger buildings to be more of a life safety risk due to the number of occupants likely to be inside a building during a seismic event. This formula is not used for utility plants that have a separate formula.
  - >300,000 GSF: 20 points
  - 100,000 – 300,000 GSF: 15 points
  - 50,000 – 100,000 GSF: 10 points
  - <50,000 GSF: 5 points
- UP = Utility Plant; scoring for utility plants (e.g., boiler plants, chiller plants, central energy plants, etc.) is based on the number of authorized inpatient beds the facility supports across the campus. This score is normalized by 70, the approximate average number of authorized inpatient beds on VA medical campuses. In addition, the final score for utility plants is linked to the facilities supported such that the utility plant cannot have a score less than the score of the highest ranked facility the plant supports. This reflects the role that utility plants play in ensuring major VA Critical and Essential facilities are able to achieve continuous operation after a major seismic event.
  - 5 + (No. beds supported on campus)/70 points

4.0 SEISMICITY AT VA LOCATIONS

Values of S_s and S_1 in Table 2 have been obtained from the U.S. Geological Survey Seismic Design Geodatabase for ASCE/SEI 7-22. Site acronyms indicated within Table 2 are: NCA (National Cemetery Administration), VAMC (VA Medical Center), VBA (Veterans Benefits Administration).

Table 2. Spectral Response Accelerations at VA Facilities

Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
Abraham Lincoln	915	IL	41.392	-88.123	0.18	0.079	L
Albany	528A8	NY	42.651	-73.772	0.21	0.052	L
Albuquerque	501	NM	35.055	-106.578	0.42	0.12	MH
Alexandria	502	LA	31.355	-92.437	0.14	0.073	L
Alexandria	825	LA	31.322	-92.433	0.14	0.072	L
Alexandria	826	VA	38.802	-77.058	0.15	0.042	L
Alton	800	IL	38.885	-90.163	0.52	0.16	MH
Altoona	503	PA	40.489	-78.396	0.11	0.041	L
Amarillo	504	TX	35.205	-101.906	0.19	0.037	L
American Lake	663A4	WA	47.137	-122.574	1.5	0.47	VH
Anchorage	463	AK	61.233	-149.744	1.5	0.66	VH
Ann Arbor	506	MI	42.287	-83.716	0.11	0.052	L
Annapolis	801	MD	38.976	-76.506	0.15	0.04	L
Asheville	637	NC	35.588	-82.484	0.36	0.098	MH
Atlanta	508	GA	33.802	-84.312	0.25	0.094	ML
Augusta	509	GA	33.472	-81.99	0.38	0.11	MH
Augusta (Lenwood)	509A0	GA	33.465	-82.026	0.37	0.11	MH
Balls Bluff	827	VA	39.126	-77.586	0.15	0.042	L
Baltimore	512	MD	39.29	-76.624	0.16	0.041	L
Baltimore	802	MD	39.277	-76.707	0.16	0.041	L
Baltimore (Loch Raven)	512GD	MD	39.336	-76.596	0.16	0.041	L
Barrancas	828	FL	30.352	-87.286	0.11	0.062	L
Batavia	528A4	NY	43.012	-78.199	0.19	0.043	L
Bath	803	NY	42.347	-77.349	0.15	0.04	L
Bath	528A6	NY	42.343	-77.346	0.15	0.04	L
Baton Rouge	829	LA	30.449	-91.169	0.12	0.064	L
Battle Creek	515	MI	42.345	-85.292	0.14	0.058	L
Bay Pines	516	FL	27.811	-82.779	0.063	0.029	L
Bay Pines	830	FL	27.813	-82.766	0.063	0.029	L
Beaufort	831	SC	32.44	-80.679	0.84	0.21	H
Beckley	517	WV	37.765	-81.193	0.25	0.074	ML
Bedford	518	MA	42.505	-71.273	0.3	0.059	ML

Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
Beverly	804	NJ	40.054	-74.916	0.21	0.045	L
Big Spring	519	TX	32.231	-101.473	0.078	0.024	L
Biloxi	520	MS	30.414	-88.944	0.13	0.066	L
Biloxi	832	MS	30.409	-88.946	0.13	0.066	L
Birmingham	521	AL	33.504	-86.801	0.33	0.12	ML
Black Hills	884	SD	44.344	-103.449	0.13	0.031	L
Boise	531	ID	43.621	-116.191	0.34	0.1	ML
Bonham	549A4	TX	33.566	-96.166	0.17	0.071	L
Boston	523	MA	42.327	-71.111	0.25	0.054	ML
Brevard	675GA	FL	28.255	-80.743	0.077	0.034	L
Brockton	523A5	MA	42.063	-71.054	0.22	0.05	L
Bronx	526	NY	40.868	-73.906	0.28	0.051	ML
Brooklyn	630A4	NY	40.609	-74.024	0.27	0.05	ML
Buffalo	528	NY	42.952	-78.813	0.18	0.041	L
Butler	529	PA	40.874	-79.944	0.11	0.048	L
Calverton	805	NY	40.923	-72.82	0.19	0.044	L
Camp Butler	806	IL	39.867	-89.653	0.3	0.12	ML
Camp Nelson	833	KY	37.895	-84.564	0.26	0.1	ML
Canandaigua	528A5	NY	42.901	-77.2712	0.17	0.043	L
Castle Point	620A4	NY	41.544	-73.963	0.23	0.049	L
Cave Hill	834	KY	38.245	-85.728	0.31	0.12	ML
Charleston	534	SC	32.784	-79.954	1.62	0.37	VH
Chattanooga	835	TN	35.036	-85.245	0.51	0.13	MH
Cheyenne	442	WY	41.148	-104.786	0.17	0.039	L
Chicago (Lakeside CBOC)	537GD	IL	41.893	-87.622	0.15	0.07	L
Chicago (Westside)	537	IL	41.87	-87.678	0.15	0.07	L
Chillicothe	538	OH	39.389	-83.019	0.18	0.072	L
Cincinnati	539	OH	39.139	-84.508	0.22	0.088	L
City Point	836	VA	37.306	-77.298	0.19	0.049	L
Clarksburg	540	WV	39.27	-80.362	0.13	0.057	L
Cleveland (Brecksville)	541A0	OH	41.294	-81.629	0.13	0.053	L
Cleveland (Wade Park)	541	OH	41.514	-81.614	0.14	0.052	L
Coatesville	542	PA	39.998	-75.796	0.22	0.046	L
Cold Harbor	837	VA	37.589	-77.28	0.22	0.05	L
Columbia	544	SC	33.975	-80.959	0.45	0.12	MH
Columbia	589A4	MO	38.937	-92.328	0.27	0.11	ML
Columbus VAACC	757	OH	39.982	-82.911	0.16	0.067	L
Corinth	838	MS	34.925	-88.508	0.66	0.21	MH
Crown Hill	807	IN	39.826	-86.176	0.25	0.1	ML
Culpeper	839	VA	38.471	-77.991	0.18	0.051	L

Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
Cypress Hills	808	NY	40.687	-73.882	0.27	0.05	ML
Dallas	549	TX	32.693	-96.792	0.12	0.058	L
Dallas (Fort Worth)	916	TX	32.716	-96.942	0.12	0.057	L
Danville	550	IL	40.132	-87.592	0.26	0.11	ML
Danville	809	IL	40.127	-87.58	0.26	0.11	ML
Danville	840	KY	37.65	-84.769	0.26	0.1	ML
Danville	841	VA	36.725	-78.132	0.16	0.058	L
Dayton	552	OH	39.743	-84.264	0.2	0.08	L
Dayton	810	OH	39.748	-84.258	0.2	0.08	L
Denver	554	CO	39.732	-104.936	0.18	0.043	L
Des Moines	636A6	IA	41.628	-93.661	0.088	0.058	L
Detroit	553	MI	42.356	-83.06	0.11	0.049	L
Dublin	557	GA	32.536	-82.943	0.26	0.088	ML
Durham	558	NC	36.009	-78.938	0.17	0.067	L
Eagle Point	906	OR	42.462	-122.789	0.68	0.31	H
East Orange	561	NJ	40.753	-74.236	0.27	0.05	ML
El Paso	756	TX	31.821	-106.463	0.38	0.11	MH
Erie	562	PA	42.102	-80.063	0.11	0.044	L
Fargo	437	ND	46.906	-96.775	0.062	0.015	L
Fayetteville	564	AR	36.081	-94.157	0.26	0.11	ML
Fayetteville	565	NC	35.088	-78.877	0.23	0.078	L
Fayetteville	842	AR	35.068	-94.165	0.26	0.11	ML
Finn's Point	811	NJ	39.608	-75.551	0.22	0.045	L
Florence	843	SC	34.223	-79.628	0.42	0.12	MH
Florida	911	FL	28.606	-82.21	0.082	0.035	L
Fort Bayard	885	NM	32.798	-108.154	0.27	0.076	ML
Fort Bliss	886	TX	31.826	-106.428	0.39	0.11	MH
Fort Custer	909	MI	42.337	-85.318	0.14	0.059	L
Fort Gibson	844	OK	35.806	-95.23	0.21	0.089	L
Fort Harrison	436	MT	46.616	-112.1	0.48	0.13	MH
Fort Harrison	845	VA	37.429	-77.366	0.22	0.05	L
Fort Howard	512GF	MD	39.198	-76.445	0.16	0.041	L
Fort Leavenworth	887	KS	39.352	-94.931	0.13	0.071	L
Fort Logan	888	CO	39.649	-105.053	0.2	0.045	L
Fort Lyon	889	CO	38.085	-103.142	0.15	0.042	L
Fort McPherson	890	NE	41.023	-100.524	0.09	0.027	L
Fort Meade	568	SD	44.412	-103.469	0.13	0.03	L
Fort Meade	891	SD	44.374	-103.472	0.13	0.03	L
Fort Mitchell	908	AL	32.346	-85.024	0.17	0.079	L
Fort Richardson	910	AK	61.266	-149.681	1.5	0.66	VH

Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
Fort Rosecrans	892	CA	32.69	-117.245	1.37	0.42	VH
Fort Sam Houston	846	TX	29.476	-98.433	0.056	0.024	L
Fort Scott	893	KS	37.83	-94.713	0.17	0.087	L
Fort Sill	920	OK	34.766	-98.352	1.2	0.25	H
Fort Smith	847	AR	35.384	-94.429	0.25	0.1	ML
Fort Snelling	894	MN	44.864	-93.222	0.053	0.035	L
Fort Thomas	539A	OH	39.065	-84.446	0.22	0.088	L
Fort Wayne	610A4	IN	41.031	-85.143	0.16	0.071	L
Fresno	570	CA	36.773	-119.779	0.7	0.23	MH
Gainesville	573	FL	29.636	-82.345	0.11	0.053	L
Glendale	848	VA	37.436	-77.235	0.2	0.049	L
Golden Gate	895	CA	37.633	-122.428	2.6	1.03	VH
Grafton	812	WV	39.336	-80.031	0.13	0.055	L
Grand Island	636A4	NE	40.942	-98.359	0.096	0.044	L
Grand Junction	575	CO	39.066	-108.533	0.22	0.048	L
Gulfport	520A0	MS	30.414	-88.944	0.13	0.066	L
Hampton	590	VA	37.016	-76.333	0.12	0.04	L
Hampton	849	VA	37.019	-76.335	0.12	0.04	L
Hampton (VAMC)	850	VA	37.016	-76.333	0.12	0.04	L
Hines	578	IL	41.864	-87.838	0.16	0.071	L
Hines VBA	201	IL	41.864	-87.838	0.16	0.071	L
Honolulu	459	HI	21.361	-157.889	0.53	0.15	MH
Hot Springs	896	SD	43.432	-103.474	0.2	0.038	L
Hot Springs	568A4	SD	43.437	-103.475	0.2	0.038	L
Houston	580	TX	29.706	-95.39	0.08	0.043	L
Houston	851	TX	29.932	-95.453	0.082	0.045	L
Houston VBA	362	TX	29.702	-95.388	0.08	0.043	L
Huntington	581	WV	38.384	-82.484	0.2	0.076	L
Indianapolis	583	IN	39.777	-86.187	0.26	0.1	ML
Indianapolis (CS Rd)	583A4	IN	39.802	-86.203	0.26	0.1	ML
Indiantown Gap	813	PA	40.33	-76.515	0.16	0.042	L
Iowa City	636A8	IA	41.631	-91.496	0.12	0.068	L
Iron Mountain	585	MI	45.811	-88.063	0.049	0.032	L
Jackson	586	MS	32.328	-90.168	0.24	0.1	ML
Jackson VBA	323	MS	32.327	-90.166	0.24	0.1	ML
Jefferson Barracks	852	MO	38.502	-90.287	0.65	0.19	MH
Jefferson City	853	MO	38.566	-92.162	0.32	0.13	ML
Kansas City	589	MO	39.064	-94.527	0.15	0.078	L
Keokuk	814	IA	40.398	-91.407	0.19	0.091	L
Kerrville	854	TX	30.047	-99.14	0.053	0.023	L

Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
Kerrville	671A4	TX	30.014	-99.117	0.053	0.022	L
Knoxville	855	TN	35.976	-83.926	0.56	0.12	MH
Knoxville	636A7	IA	41.32	-93.099	0.1	0.064	L
Lake City	573A4	FL	30.182	-82.637	0.13	0.059	L
Las Vegas	593	NV	36.283	-115.083	0.67	0.19	MH
Leavenworth	897	KS	39.267	-94.89	0.13	0.073	L
Leavenworth	589A6	KS	39.267	-94.89	0.13	0.073	L
Lebanon	595	PA	40.312	-76.406	0.17	0.043	L
Lebanon	856	KY	37.57	-85.253	0.28	0.11	ML
Lexington	857	KY	38.061	-84.509	0.25	0.099	ML
Lexington (CD)	596A4	KY	38.03	-84.507	0.25	0.099	ML
Lexington (LD)	596	KY	38.075	-84.539	0.25	0.099	ML
Lincoln	636A5	NE	40.796	-96.625	0.091	0.05	L
Little Rock	598	AR	34.733	-92.316	0.53	0.17	MH
Little Rock	858	AR	34.723	-92.259	0.54	0.17	MH
Livermore	640A4	CA	37.626	-121.763	2.13	0.7	VH
Loma Linda	605	CA	34.05	-117.251	2.75	1	VH
Long Beach	600	CA	33.777	-118.119	1.76	0.68	VH
Long Island	815	NY	40.753	-73.402	0.23	0.046	L
Los Angeles	898	CA	34.061	-118.455	2.28	0.74	VH
Los Angeles	691GE	CA	34.05	-118.45	2.28	0.74	VH
Loudon Park	816	MD	39.28	-76.675	0.16	0.041	L
Louisville	603	KY	38.27	-85.697	0.3	0.12	ML
Lyons	561A4	NJ	40.666	-74.55	0.25	0.049	ML
Madison	607	WI	43.074	-89.43	0.091	0.055	L
Manchester	608	NH	43.012	-71.441	0.39	0.069	MH
Marietta	859	GA	33.951	-84.538	0.27	0.097	ML
Marion	610	IN	40.52	-85.637	0.18	0.081	L
Marion	817	IN	40.52	-85.637	0.18	0.081	L
Marion	657A5	IL	37.716	-88.95	1.06	0.29	H
Martinez (NCSC)	612	CA	37.994	-122.116	2.18	0.88	VH
Martinsburg	613	WV	39.418	-77.911	0.14	0.042	L
Massachusetts	818	MA	41.672	-70.571	0.18	0.044	L
McClellan	612GH	CA	38.673	-120.39	0.79	0.24	H
Memphis	614	TN	35.144	-90.025	1.3	0.35	VH
Memphis	860	TN	35.174	-89.941	1.27	0.34	VH
Menlo Park	640A0	CA	37.466	-122.16	1.71	0.66	VH
Miami	546	FL	25.792	-80.217	0.049	0.021	L
Miles City	436GJ	MT	46.406	-105.829	0.091	0.025	L
Mill Springs	861	KY	37.056	-84.815	0.28	0.11	ML

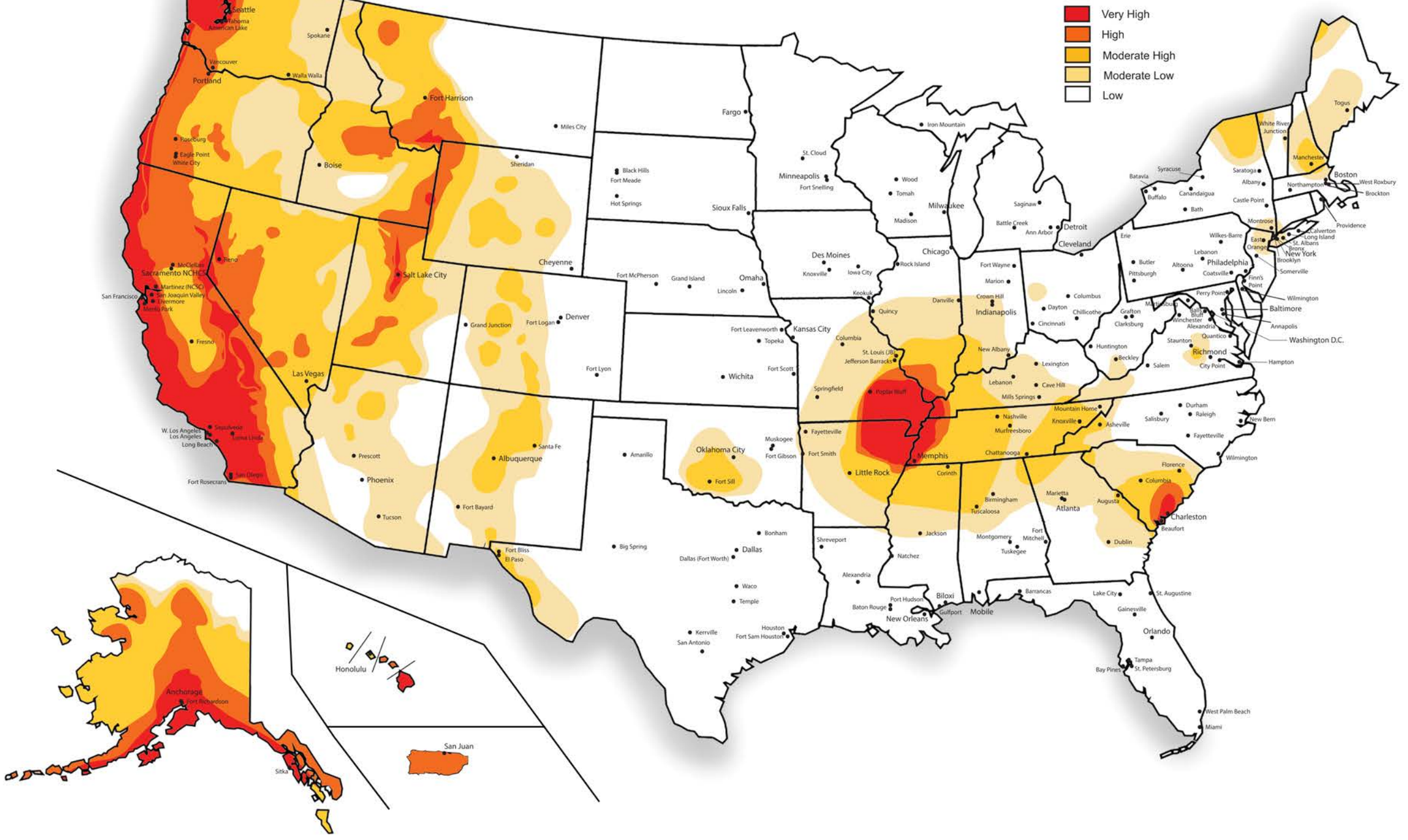
Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
Milwaukee (Wood)	695	WI	43.02	-87.975	0.096	0.055	L
Minneapolis	618	MN	44.902	-93.205	0.053	0.035	L
Mobile	862	AL	30.673	-88.063	0.13	0.068	L
Montgomery	619	AL	32.377	-86.244	0.19	0.086	L
Montgomery VBA	322	AL	32.376	-86.246	0.19	0.086	L
Montrose	620	NY	41.249	-73.926	0.27	0.051	ML
Mound City	863	IL	37.088	-89.178	2.87	0.73	VH
Mountain Home	621	TN	36.311	-82.373	0.34	0.094	ML
Mountain Home	864	TN	36.31	-82.373	0.34	0.094	ML
Murfreesboro	626A4	TN	35.91	-86.384	0.4	0.15	MH
Muskogee	623	OK	35.763	-95.413	0.2	0.087	L
Nashville	626	TN	36.142	-86.804	0.47	0.17	MH
Nashville	865	TN	36.241	-86.725	0.46	0.16	MH
Natchez	866	MS	31.581	-91.395	0.16	0.082	L
NCA Operations Support	786	VA	38.478	-77.433	0.18	0.045	L
New Albany	867	IN	38.299	-85.804	0.31	0.12	ML
New Bern	868	NC	35.124	-77.052	0.14	0.052	L
New Orleans	629	LA	29.954	-90.079	0.11	0.06	L
New York	630	NY	40.737	-73.977	0.28	0.05	ML
Newington	689A4	CT	41.702	-72.741	0.21	0.048	L
NMCA	914	AZ	33.696	-112.029	0.22	0.065	L
NMCP	899	HI	21.313	-157.843	0.53	0.15	MH
North Chicago	556	IL	42.305	-87.859	0.13	0.064	L
North Little Rock	598A0	AR	34.755	-92.321	0.53	0.17	MH
Northampton	631	MA	42.35	-72.682	0.19	0.05	L
Northport	632	NY	40.894	-73.309	0.22	0.046	L
Oklahoma City	635	OK	35.483	-97.496	0.34	0.082	ML
Omaha	636	NE	41.243	-95.974	0.086	0.051	L
Orlando	675	FL	28.579	-81.321	0.086	0.036	L
Palo Alto	640	CA	37.405	-122.14	2.15	0.87	VH
Perry Point	512A5	MD	39.552	-76.064	0.19	0.043	L
Philadelphia	642	PA	39.948	-75.2	0.21	0.045	L
Philadelphia	819	PA	39.926	-75.228	0.22	0.045	L
Phoenix	644	AZ	33.497	-112.067	0.18	0.058	L
Pittsburgh (Heinz Div.)	646A4	PA	40.495	-79.889	0.11	0.049	L
Pittsburgh (Highland Dr.)	646A5	PA	40.482	-79.903	0.11	0.049	L
Pittsburgh (Univ. Dr.)	646	PA	40.446	-79.963	0.11	0.049	L
Poplar Bluff	657A4	MO	36.772	-90.418	1.3	0.35	VH
Port Hudson	870	LA	30.66	-91.287	0.12	0.067	L
Portland	648	OR	45.497	-122.684	0.95	0.36	H

Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
Prescott	649	AZ	34.555	-112.453	0.33	0.089	ML
Prescott	900	AZ	34.547	-112.448	0.33	0.089	ML
Providence	650	RI	41.832	-71.434	0.21	0.048	L
Quantico	872	VA	38.561	-77.382	0.17	0.044	L
Quincy	820	IL	39.932	-91.356	0.23	0.1	ML
Raleigh	873	NC	35.774	-78.621	0.17	0.067	L
Reno	654	NV	39.516	-119.799	2	0.61	VH
Richmond	652	VA	37.496	-77.466	0.24	0.053	L
Richmond	874	VA	37.514	-77.393	0.23	0.051	L
Riverside	901	CA	33.953	-117.396	1.5	0.58	VH
Rock Island	821	IL	41.51	-90.57	0.14	0.074	L
Roseburg	653	OR	43.224	-123.366	1.02	0.46	H
Roseburg	902	OR	43.215	-123.37	1.02	0.46	H
Sacramento NCHCS	612A4	CA	38.572	-121.296	0.54	0.21	MH
Saginaw	655	MI	43.445	-83.962	0.08	0.044	L
Salem	658	VA	37.274	-80.019	0.23	0.07	L
Salisbury	659	NC	35.684	-80.486	0.24	0.081	L
Salisbury	876	NC	35.661	-80.475	0.24	0.081	L
Salt Lake City	660	UT	40.758	-111.841	1.41	0.48	VH
San Antonio	671	TX	29.506	-98.58	0.055	0.023	L
San Antonio	877	TX	29.422	-98.467	0.056	0.023	L
San Diego	664	CA	32.875	-117.232	1.42	0.45	VH
San Francisco	662	CA	37.782	-122.505	2.11	0.81	VH
San Francisco	903	CA	37.801	-122.463	1.69	0.64	VH
San Joaquin Valley	913	CA	37.115	-121.078	2.31	0.67	VH
San Juan	672	PR	18.391	-66.079	0.99	0.34	H
Santa Fe	904	NM	35.697	-105.95	0.42	0.12	MH
Saratoga	917	NY	43.026	-73.615	0.22	0.055	L
Seattle	663	WA	47.564	-122.305	1.65	0.66	VH
Sepulveda	691A4	CA	34.244	-118.482	2.63	0.87	VH
Seven Pines	878	VA	37.521	-77.302	0.22	0.05	L
Sheridan	666	WY	44.827	-106.986	0.24	0.046	L
Shreveport	667	LA	32.503	-93.722	0.16	0.081	L
Sioux Falls	438	SD	43.531	-96.755	0.09	0.038	L
Sitka	905	AK	57.054	-135.322	0.89	0.55	VH
Somerville AMS	796	NJ	40.538	-74.62	0.24	0.048	L
Spokane	668	WA	47.703	-117.478	0.32	0.094	ML
Springfield	879	MO	37.174	-93.264	0.32	0.13	ML
St. Albans	630A5	NY	40.691	-73.769	0.26	0.049	ML
St. Augustine	875	FL	29.886	-81.309	0.13	0.05	L

Site	Station Number	State	Latitude	Longitude	S_S	S_1	Seismicity
St. Cloud	656	MN	45.574	-94.214	0.056	0.016	L
St. Louis (JB)	657A0	MO	38.493	-90.283	0.65	0.19	MH
St. Louis (JC)	657	MO	38.642	-90.231	0.61	0.18	MH
St. Petersburg VBA	317	FL	27.813	-82.772	0.063	0.029	L
Staunton	880	VA	38.14	-79.05	0.17	0.058	L
Syracuse	528A7	NY	43.039	-76.139	0.16	0.046	L
Tahoma	919	WA	47.388	-122.095	1.43	0.48	VH
Tampa	673	FL	28.065	-82.428	0.07	0.031	L
Temple	674	TX	31.077	-97.347	0.075	0.044	L
Togus	402	ME	44.28	-69.704	0.31	0.068	ML
Togus	822	ME	44.277	-69.711	0.31	0.068	ML
Tomah	676	WI	44.003	-90.493	0.063	0.044	L
Topeka	589A5	KS	39.026	-95.723	0.13	0.068	L
Tucson	678	AZ	32.181	-110.965	0.29	0.077	ML
Tuscaloosa	679	AL	33.191	-87.486	0.35	0.12	MH
Tuskegee	619A4	AL	32.444	-85.711	0.18	0.083	L
Vancouver	648A4	WA	45.639	-122.658	0.88	0.34	H
W. Los Angeles	691	CA	34.053	-118.453	2.28	0.74	VH
Waco	674A4	TX	31.512	-97.164	0.084	0.047	L
Walla Walla	687	WA	46.054	-118.356	0.38	0.11	MH
Washington, DC	688	DC	38.929	-77.01	0.15	0.042	L
West Haven	689	CT	41.283	-72.959	0.21	0.047	L
West Palm Beach	548	FL	26.784	-80.113	0.055	0.025	L
West Roxbury	523A4	MA	42.275	-71.172	0.24	0.053	L
West Virginia	912	WV	39.334	-80.073	0.13	0.055	L
White City	692	OR	42.442	-122.836	0.71	0.32	H
White River Junction	405	VT	43.648	-72.342	0.26	0.062	ML
Wichita	589A7	KS	37.681	-97.275	0.12	0.061	L
Wilkes-Barre	693	PA	41.248	-75.836	0.15	0.041	L
Willamette	907	OR	45.46	-122.543	0.93	0.34	H
Wilmington	460	DE	39.74	-75.607	0.23	0.046	L
Wilmington	881	NC	34.238	-77.922	0.24	0.073	L
Winchester	882	VA	39.184	-78.157	0.14	0.046	L
Wood	823	WI	43.029	-87.98	0.096	0.055	L
Woodlawn	824	NY	42.112	-76.827	0.13	0.039	L
Zachary Taylor	883	KY	38.275	-85.643	0.3	0.12	ML

U.S. Department of Veterans Affairs Seismic Zone Map

Note: Seismicity is based on Spectral Response Accelaration parameters from ASCE/SEI 7-22



July 2023

CFM Office of Facilities Planning - 003C2