APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0319

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Shimadzu Medical Systems

Manufacturer's Technical Representative: Jim Mekker / Akiharu Yamagata

Mailing Address: 25101 Chagrin Blvd. Suite 240, Beachwood, OH 44122

Telephone: (310) 217-8855 Email: mekker@shimadzu-usa.com

Product Information

Product Name: Fluoroscopy and Radiography Systems

Product Model Number(s): Sonialvision G4 and RADspeed

Product Category: Fluoroscopy and Radiography Systems

Product Sub-Category: Fluoroscopy and Radiography Systems

General Description: Multiple component digital radiography and fluoroscopy medical diagnostic imaging system.

Mounting Description: Several - See Certified Product Tables and UUT Sheet

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: W.E. GUNDY & ASOCIATES INC.

Contact Person: Travis Soppe

Mailing Address: 1199 Shoreline Drive Suite 310, Boise, ID 83702

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Title: President

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: W.E. GUNDY & ASOCIATES INC.

Name: Travis Soppe California License Number: S6115

Mailing Address: P.O. Box 9121, Boise, ID 83707

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Certification Method

☐ GR-63-Core ☒ ICC-ES AC156 ☐ IEEE 344 ☐ IEEE 693 ☐ NEBS 3

☐ Other (Please Specify):

Testing Laboratory

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513

Telephone: (972) 247-9657 Email: jeremy@etldallas.com

Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = See Attachments

S_{DS} (Design spectral response acceleration at short period, g) = See Certified Components Table

a_p (Amplification factor) = See attachments

R_p (Response modification factor) = See attachments

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 03/04/2032

Date: 3/4/2026

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: S_{DS} (g) = See above z/h = See Above

Condition of Approval (if applicable):

Table 1	SHIMADZU MEDICAL SYSTEMS SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Shimadzu Medical Systems

System: RADSPEED X-Ray and Fluoroscopy System

System Component[1]	Shimadzu Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT[2]
		Width	Depth	Height			
Wall Stands							
BR 120 Wall Stand Wireless Digital Detector	503-61800-13	24.8	14.4	84.8	264	wall/floor	UUT_y-8
BR 120 Wall Stand Wireless Digital Detector	566-16500-42	24.8	14.4	84.8	264	wall/floor	same[5]
BR 120 Wall Stand Flat Panel Detector	503-61800-13	24.8	14.4	84.8	264	wall/floor	interpolated
BR120 Wall Stand Fixed Panel Detector	503-61800-13	24.8	14.4	84.8	264	wall/floor	UUT_y-21
BR 120 Wall Stand Wireless Digital Detector	503-77185-35	26.4	14.4	85.3	283	wall/floor	interpolated
BR 120 Wall Stand Fixed Panel Detector	503-77185-35	26.4	14.4	85.3	283	wall/floor	UUT_z-5
BR 120T Tilting Wall Stand Fixed Panel Detector	566-16600-50	24.8	25.4	84.8	378	wall/floor	interpolated
BR 120T Tilting Wall Stand Wireless Detector Vertical	566-16600-50	24.8	25.4	84.8	378	wall/floor	UUT_x-1A
BR 120T Tilting Wall Stand Wireless Detector Flat	566-16600-50	24.8	25.4	84.8	378	wall/floor	UUT_x-1B
Patient Table							
BK-200 Table Wireless Digital Detector	503-61750-02	31.9	92.5	33.5	720[3]	floor	UUT_y-13
BK-200 Table Wireless Digital Detector	563-61750-81	31.9	92.5	33.5	720[3]	floor	same[5]

[1] All components are manufactured by Shimadzu Medical Systems. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component within the tested units.

[2] The units were tested at different times and the subscripts on the UUT reference the following seismic test reports:
w = 17795-R2 / x = 17550 Rev1 / y = SQ10-1205-01 / z = SQ10-1503-01

[3] Table weight listed does not include 350lb simulated patient weight included during the horizontal position tests.

[4] Monitor Ceiling Suspension weight listed does not included the additional 30lbs mass attached to each monitor for simulation of varied monitor configurations.

[5] Components identified as "same" are of identical construction to the tested UUT and differ only in color / sofware

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Wall Stands	CBC 2022	2.0	1.0	1.50	1.0	1.5	2.0	2.40
		2.5	0					1.13
Patient Table	CBC 2022	2.0	1.0	1.50	1.0	1.5	2.0	2.40
		2.5	0					1.13

Table 1	SHIMADZU MEDICAL SYSTEMS SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Shimadzu Medical Systems

System: RADSPEED X-Ray and Fluoroscopy System

System Component[1]	Shimadzu Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT[2]
		Width	Depth	Height			
Ceiling Mounted Tube							
CH-200 Ceiling Tube Transverse Bridge	503-58100-27	216.5	129.9	112.2	740	ceiling	UUT_y-6
CH-200 Ceiling Tube Transverse Bridge	565-29500	157.5	102.0	68.0	845	ceiling	UUT_w-1
Monitor Ceiling Suspension							
Flat Panel Monitor Suspension	ID10000F-2WOR	38.0	80.0	68.0	294[4]	ceiling	UUT_y-5
Control / Power Cabinets							
BK-200 Control Cabinet	503-04403A	19.7	15.8	20.1	98	floor	UUT_y-14
CH-200 / BR-120 Control Cabinet	503-04427D	15.8	19.7	20.1	110	floor	UUT_y-25
CH-200 / BR-120 Control Cabinet	572-18677-02	15.8	19.7	20.1	110	floor	same[5]
80kW High Voltage Generator UD150B-40	502-23375-01	27.6	15.9	71.1	435	wall/floor	UUT_y-30
80kW High Voltage Generator UD150B-41	502-23375-01	27.6	15.9	71.1	435	wall/floor	interpolated
80kW High Voltage Generator UD150B-40/41	562-23375-79	27.6	15.9	71.1	435	wall/floor	interpolated
X-Ray High Voltage Generator Cabinet	562-29200-02	27.5	19.7	72.6	606	wall/floor	UUT_z-3

[1] All components are manufactured by Shimadzu Medical Systems. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component within the tested units.

[2] The units were tested at different times and the subscripts on the UUT reference the following seismic test reports:
w = 17795-R2 / x = 17550 Rev1 / y = SQ10-1205-01 / z = SQ10-1503-01

[3] Table weight listed does not include 350lb simulated patient weight included during the horizontal position tests.

[4] Monitor Ceiling Suspension weight listed does not included the additional 30lbs mass attached to each monitor for simulation of varied monitor configurations.

[5] Components identified as "same" are of identical construction to the tested UUT and differ only in color / sofware

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Ceiling Mounted Tube	CBC 2022	2.0	1.0	1.50	2.5	2.5	2.0	3.60
		2.5	0					1.50
Monitor Ceiling Suspension	CBC 2022	2.0	1.0	1.50	2.5	2.5	2.0	3.60
		2.5	0					1.50
Control / Power Cabinets	CBC 2022	2.0	1.0	1.50	2.5	6.0	2.0	1.50
		2.5	0					1.13

Table 1	SHIMADZU MEDICAL SYSTEMS SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Shimadzu Medical Systems

System: RADSPEED X-Ray and Fluoroscopy System

System Component[1]	Shimadzu Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT[2]
		Width	Depth	Height			
PC / User Interface							
UD150B-40 X-Ray Control Console	502-23588	12.1	8.3	13.6	9	wall	UUT_y-10A
UD150B-40 X-Ray Control Console	502-23588	12.1	8.3	13.6	9	floor	UUT_y-10B
Generator Control Console	566-27900	9.5	2.5	12.0	11	wall	UUT_w-2
Side Station Computer	502-24407-13	7.8	19.6	16.8	28	floor	UUT_y-22
Canon CXDI-NE Workstation	CXDI-NE PC	7.8	18.8	16.5	28	floor	UUT_y-24

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w = 17795-R2 / x = 17550 Rev1 / y = SQ10-1205-01 / z = SQ10-1503-01

[3] Table weight listed does not include 350lb simulated patient weight included during the horizontal position tests.

[4] Monitor Ceiling Suspension weight listed does not included the additional 30lbs mass attached to each monitor for simulation of varied monitor configurations.

[5] Components identified as "same" are of identical construction to the tested UUT and differ only in color / sofware

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
PC / User Interface	CBC 2022	2.0	1.0	1.50	2.5	6.0	2.0	1.50
		2.5	0					1.13

Table 2	SHIMADZU MEDICAL SYSTEMS SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Shimadzu Medical Systems

System: SONIALVISION G4 X-Ray and Fluoroscopy System

System Component[1]	Shimadzu Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT[2]
		Width	Depth	Height			
Wall Stands							
BR 120 Wall Stand Wireless Digital Detector	503-61800-13	24.8	14.4	84.8	264	wall/floor	UUT_y-8
BR 120 Wall Stand Wireless Digital Detector	566-16500-42	24.8	14.4	84.8	264	wall/floor	same[5]
BR 120 Wall Stand Flat Panel Detector	503-61800-13	24.8	14.4	84.8	264	wall/floor	interpolated
BR 120 Wall Stand Wireless Digital Detector	503-77185-35	26.4	14.4	85.3	283	wall/floor	interpolated
BR 120 Wall Stand Fixed Panel Detector	503-77185-35	26.4	14.4	85.3	283	wall/floor	UUT_z-5
Patient Table							
ZS-200 Elevating Table Horizontal Position	503-78001	76.0	92.5	96.0	3485[3]	floor	UUT_z-1A
ZS-200 Elevating Table Vertical Position	503-78001	76.0	92.5	96.0	3485[3]	floor	UUT_z-1B
ZS-200 Elevating Table	563-78001-02	76.0	92.5	96.0	3485[3]	floor	same[5]
Monitor Ceiling Suspension							
Flat Panel Monitor Suspension	ID10000F-2WOR	38.0	80.0	68.0	294[4]	ceiling	UUT_y-5

[1] All components are manufactured by Shimadzu Medical Systems. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component within the tested units.

[2] The units were tested at different times and the subscripts on the UUT reference the following seismic test reports:
y = SQ10-1205-01 z = SQ10-1503-01

[3] Table weight listed does not include 400lb simulated patient weight included during the horizontal position tests.

[4] Monitor Ceiling Suspension weight listed does not included the additional 30lbs mass attached to each monitor for simulation of varied monitor configurations.

[5] Components identified as "same" are of identical construction to the tested UUT and differ only in color / sofware

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Wall Stands	CBC 2022	2.0	1.0	1.50	1.0	1.5	2.0	2.40
		2.5	0					1.13
Patient Table	CBC 2022	2.0	1.0	1.50	1.0	1.5	2.0	2.40
		2.5	0					1.13
Monitor Ceiling Suspension	CBC 2022	2.0	1.0	1.50	2.5	2.5	2.0	3.60
		2.5	0					1.50

Table 2	SHIMADZU MEDICAL SYSTEMS SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Shimadzu Medical Systems

System: SONIALVISION G4 X-Ray and Fluoroscopy System

System Component[1]	Shimadzu Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT[2]
		Width	Depth	Height			
Wifi Access Point							
Hewlett Packard WAP	J9650A	6.6	2.8	8.0	2	wall	UUT_z-13
PC / User Interface							
LCD Touch Screen Konica	ROM950AIII	17.0	5.3	13.8	21	wall	UUT_z-15
LCD Screen DR-300	SMD19102-SC6GF6211-	15.6	4.6	13.6	19	wall	UUT_z-16
Konica Aero X-Ray Interface	AreoDR Interface Unit2	7.0	18.0	11.3	29	floor	UUT_z-14
Side Station Computer	502-24407-13	7.8	19.6	16.8	28	floor	UUT_y-22
UD150B-40 X-Ray Control Console	502-23588	12.1	8.3	13.6	9	wall	UUT_y-10A
UD150B-40 X-Ray Control Console	502-23588	12.1	8.3	13.6	9	floor	UUT_y-10B
Konica Aero Workstation	TPC-F046-SF	4.0	14.9	13.3	16	floor	UUT_z-9
DR-300 Image Processing	562-29102	6.3	18.7	23.0	71	floor	UUT_z-7
ZS-200 Control Console Remote	563-78007-02	21.6	12.3	2.3	24	floor	UUT_z-6

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[2] The units were tested at different times and the subscripts on the UUT reference the following seismic test reports:
y = SQ10-1205-01 z = SQ10-1503-01

[3] Table weight listed does not include 400lb simulated patient weight included during the horizontal position tests.

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Wifi Access Point	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44
		2.5	0					1.13
PC / User Interface	CBC 2022	2.0	1.0	1.50	2.5	6.0	2.0	1.50
		2.5	0					1.13

Table 2	SHIMADZU MEDICAL SYSTEMS SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Shimadzu Medical Systems

System: SONIALVISION G4 X-Ray and Fluoroscopy System

System Component[1]	Shimadzu Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT[2]
		Width	Depth	Height			
Control / Power Cabinets							
CH-200 / BR-120 Control Cabinet	503-04427D	15.8	19.7	20.1	110	floor	UUT_y-25
ZS-200 Cabinet	502-29300-02	27.5	19.7	72.6	569	wall/floor	UUT_z-2
ZS-200 Cabinet	562-29300-12	27.5	19.7	72.6	569	wall/floor	same[5]
X-Ray High Voltage Cabinet	562-29200-02	27.5	19.7	72.6	606	wall/floor	UUT_z-3
X-Ray High Voltage Cabinet	562-29200-12	27.5	19.7	72.6	606	wall/floor	same[5]
DR-300 Digital Cabinet	562-29101	27.5	19.7	72.6	654	wall/floor	UUT_z-4
DR-300 Digital Cabinet	562-29101-01	27.5	19.7	72.6	654	wall/floor	same[5]

[1] All components are manufactured by Shimadzu Medical Systems. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component within the tested units.

[2] The units were tested at different times and the subscripts on the UUT reference the following seismic test reports:
y = SQ10-1205-01 z = SQ10-1503-01

[3] Table weight listed does not include 400lb simulated patient weight included during the horizontal position tests.

[5] Components identified as "same" are of identical construction to the tested UUT and differ only in color / sofware

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Control / Power Cabinets	CBC 2022	2.0	1.0	1.50	2.5	6.0	2.0	1.50
		2.5	0					1.13

UUT_z-1A	**UNIT UNDER TEST (UUT) SUMMARY SHEET**	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with (4) ¾" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: ZS-200 Elevating Table	**Test Date:** October 12-16, 2015
Model Number: 503-78001	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Patient table with integrated x-ray system. Tested in horizontal position	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system, includes seismic option kits SV-G4.	

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
3,885	76.0	92.5	96	4.0	3.4	4.1

The patient table moves horizontally and vertically to accommodate different patients and procedures. The system was tested in the normal horizontal operating position with total simulated patient weight of 400lbs.

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-1B	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with (4) ¾" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: ZS-200 Elevating Table	**Test Date:** October 12-16, 2015
Model Number: 503-78001	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Patient table with integrated x-ray system. Tested in vertical position	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system, includes seismic option kits SV-G4.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
3,485	76.0	92.5	96	4.4	4.4	5.1

The patient table moves horizontally and vertically to accommodate different patients and procedures. The system was tested in the normal vertical operating position.

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Combined rigid wall mounted with (2) ¼" diameter bolts and rigid floor mounted with (4) ½" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: ZS-200 Cabinet	**Test Date:** October 12-16, 2015
Model Number: 502-29300-02	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Power distribution to ZS-200 Table	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
569	27.5	19.7	72.6	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Combined rigid wall mounted with (2) ¼" diameter bolts and rigid floor mounted with (4) ½" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: X-Ray High Voltage Cabinet	**Test Date:** October 12-16, 2015
Model Number: 562-29200-02	**Report Number:** SQ10-1503-1 REV 1
UUT Function: X-ray high voltage generator cabinet	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
606	27.5	19.7	72.6	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-4	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Combined rigid wall mounted with (2) ¼" diameter bolts and rigid floor mounted with (4) ½" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: DR-300 Digital Cabinet	**Test Date:** October 12-16, 2015
Model Number: 562-29101	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Electrical cabinet	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
654	27.5	19.7	72.6	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-5	**UNIT UNDER TEST (UUT) SUMMARY SHEET**	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Combined rigid wall mounted with (2) ¼" diameter bolts and rigid floor mounted with (4) 3/8" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: BR-120 Wall Stand Fixed Panel Detector	**Test Date:** October 12-16, 2015
Model Number: 503-77185-35	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Radiographic wall stand for X-ray exposures	
UUT Description: Component of the RADSPEED and SONIALVISION G4 X-Ray and Flouroscopy system. Tested with Konica Aero XE Flat Panel Detector	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
283	14.4	26.4	85.3	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-6	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid base mounted with (6) ¼" machine screws.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: ZS-200 Control Console Remote	**Test Date:** October 12-16, 2015
Model Number: 563-78007-02	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Control console remote for X-ray system	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
24	21.6	12.3	2.3	> 33.0	>33.0	32.3

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-7	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with (4) 3/8" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: DR-300 Image Processing PC	**Test Date:** October 12-16, 2015
Model Number: 562-29102	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Imaging system PC	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
71	6.3	18.7	23.0	>33.0	17.9	> 33.0

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-9	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with (2) 1" wide hand-tightened nylon cam buckle straps (200lb WLL) through slots in (4) L2.5x2.5x1/4" x 2.5" long brackets. Angle brackets anchored with (1) 3/8" diameter bolt each.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: Konica Aero Workstation	**Test Date:** October 12-16, 2015
Model Number: TPC-F046-SF	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Imaging System PC	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
16	4.0	14.9	13.3	>33.0	>33.0	> 33.0

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-13	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (3) #10 machine screws

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: Hewlett Packard WAP	**Test Date:** October 12-16, 2015
Model Number: J9650A	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Wireless access point	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
2	6.6	2.8	8.0	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-14	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with (2) 3/8" diameter bolts

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: Konica AERO X-Ray Interface	**Test Date:** October 12-16, 2015
Model Number: AeroDR Interface Unit2	**Report Number:** SQ10-1503-1 REV 1
UUT Function: X-ray interface	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
29	7.0	18.0	11.3	12.0	14.3	11.5

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-15	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (4) #10 machine screws

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: LCD Touch Screen - Konica	**Test Date:** October 12-16, 2015
Model Number: ROM950AIII	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Wall mounted display for x-ray system	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
21	17.0	5.3	13.8	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-16	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (4) #10 machine screws

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: LCD Screen - DR-300	**Test Date:** October 12-16, 2015
Model Number: SMD19102-SC6GF6211-2CH51	**Report Number:** SQ10-1503-1 REV 1
UUT Function: Wall mounted display for x-ray system	
UUT Description: Component of the SONIALVISION G4 X-Ray and Flouroscopy system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
19	15.6	4.6	13.6	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-5	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rails and connecting parts of the component bolt with 2 – ½" bolts (20 bolts total) to a Unistrut grid spaced at approximately 22" on center. The Unistrut grid consisted of Unistrut P1001 rails anchored with 2 - 3/8" bolts at each intersection to the ceiling fixture framing spaced at approximately 24" on center.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: Flat Panel Monitor Suspension	**Test Date:** October 16-19, 2012
Model Number: ID1000F-2WOR	**Report Number:** SQ10-1205-01
UUT Function: Suspension of monitors used for medical equipment	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

*Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
294	38.0	80.0	68.0	N/A	N/A	N/A

*Weight listed does not include additional 30lb masses attached to each monitor for simulation of varied monitor configurations.

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-6	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rails and connecting parts of the component bolt with 2 – ½" bolts (20 bolts total) to a Unistrut grid spaced at approximately 22" on center. The Unistrut grid consisted of Unistrut P1001 rails anchored with 2 - 3/8" bolts at each intersection to the ceiling fixture framing spaced at approximately 24" on center.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: CH-200 Ceiling Tube Transverse Bridge	**Test Date:** October 16-19, 2012
Model Number: 503-58100-27	**Report Number:** SQ10-1205-01
UUT Function: Ceiling suspended X-ray tube for use in radiographic imaging	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
740	216.5	129.9	112.2	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-8	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Combined rigid wall mounted with (2) 3/8" diameter bolts and rigid floor mounted with (4) 3/8" diameter bolts

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: BR-120 Wall Stand - Wireless Detector	**Test Date:** October 16-19, 2012
Model Number: 503-61800-13	**Report Number:** SQ10-1205-01
UUT Function: Radiographic wall stand for X-ray exposures	
UUT Description: Component of the RADSPEED and SONIALVISION G4 X-Ray and Flouroscopy system, includes seismic option kit SMK1059. Tested with Canon CXDI-70C Wireless Digital Detector.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
264	24.8	14.4	84.8	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test. Seismic enhancements made to the test unit shall be incorporated into the production units.

UUT_y-10A	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (6) #10 hex bolts

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: UD150B-40 X-Ray Control Console	**Test Date:** October 16-19, 2012
Model Number: 502-23588	**Report Number:** SQ10-1205-01
UUT Function: Generator controls	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
9	12.1	8.3	13.6	N/A	N/A	N/A

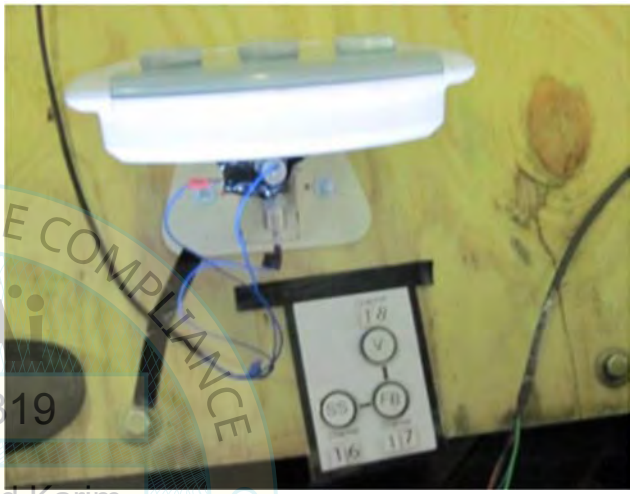
SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-10B	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid base mounted with (2) ¼" diameter hex bolts



Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: UD150B-40 X-Ray Control Console	**Test Date:** October 16-19, 2012
Model Number: 502-23588	**Report Number:** SQ10-1205-01
UUT Function: Generator controls	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	Width	Depth
9	12.1	8.3	13.6	19.2	18.9	16.2

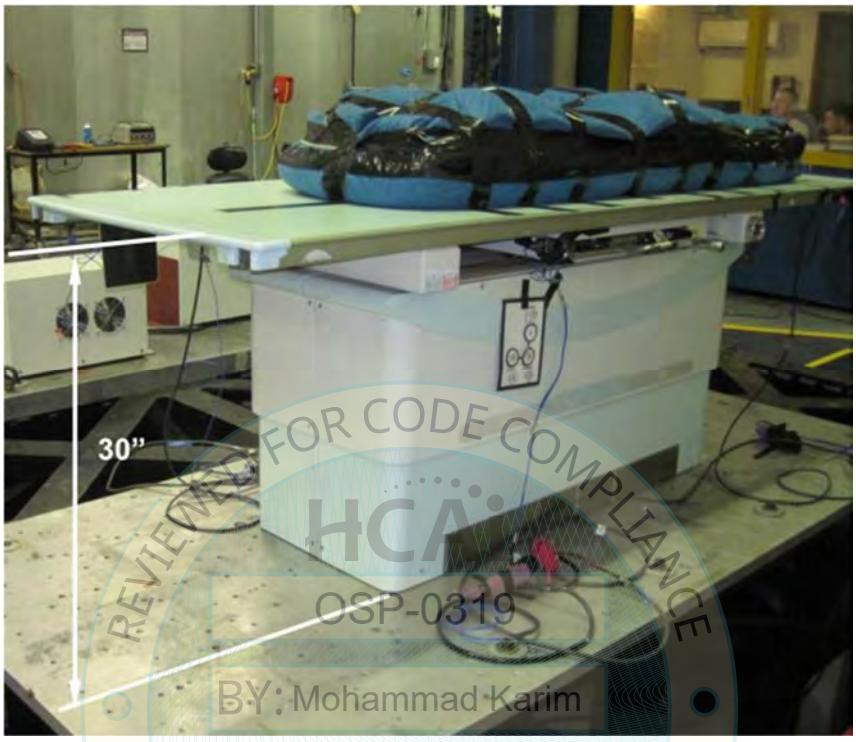
SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT$_y$-13	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with (4) ½" diameter bolts



Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: BK-200 Table – Wireless Detector	**Test Date:** October 16-19, 2012
Model Number: 503-61750-02	**Report Number:** SQ10-1205-01
UUT Function: Motorized patient table for support and positioning for image acquisition	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System, includes seismic option kit SMK1059. Tested with Canon CDXI-70C Wireless Digital Detector.	

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,070	31.9	92.5	33.5	>33.0	4.5	9.6

The patient table moves vertically and horizontally to accommodate different patients and procedures. The system was tested in the normal operating position with a vertical height of 30″ and a total simulated patient weight of 350lbs.

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test. Seismic enhancements made to the test unit shall be incorporated into the production units.

UUT$_y$-14	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with 2 - 11gauge bent steel plates (12" x 2") on both sides of the UUT anchored to the floor with (4) ¼" diameter bolts and connected to the UUT with 2" wide industrial Velcro tape at the top of the 12" leg.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: BK-200 Control Cabinet	**Test Date:** October 16-19, 2012
Model Number: 503-04403A	**Report Number:** SQ10-1205-01
UUT Function: Continuous rotating x-ray to generate diagnostic imaging	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
98	19.7	15.8	20.1	>33.0	8.5	> 33.0

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-21	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (2) 3/8" diameter bolts and rigid floor mounted with (4) 3/8" diameter bolts

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: BR-120 Wall Stand Fixed Panel Detector	**Test Date:** October 16-19, 2012
Model Number: 503-61800-13	**Report Number:** SQ10-1205-01
UUT Function: Radiographic wall stand for X-ray exposures	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System. Tested with Canon CXDI-70C Wireless Digital Detector.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
264	24.8	14.4	84.8	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-22	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with 2 - 11gauge bent steel plates (12" x 2") on both sides of the UUT anchored to the floor with (4) 3/8" diameter bolts and connected to the UUT with 2" wide industrial Velcro tape at the top of the 12" leg.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: Side Station Computer	**Test Date:** October 16-19, 2012
Model Number: 502-24407-13	**Report Number:** SQ10-1205-01
UUT Function: PC for radiography system	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
28	7.8	19.6	16.8	19.0	8.2	>33.0

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT$_y$-24	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with 2 - 11gauge bent steel plates (12" x 2") on both sides of the UUT anchored to the floor with (4) 3/8" diameter bolts and connected to the UUT with 2" wide industrial Velcro tape at the top of the 12" leg.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: Canon CXDI-NE Workstation	**Test Date:** October 16-19, 2012
Model Number: CXDI-NE PC	**Report Number:** SQ10-1205-01
UUT Function: PC for radiography system	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
28	7.8	18.8	16.5	26.5	9.1	10.8

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-25	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with 2 - 11gauge bent steel plates (12" x 2") on both sides of the UUT anchored to the floor with (4) ¼" diameter bolts and connected to the UUT with 2" wide industrial Velcro tape at the top of the 12" leg.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: CH-200 / BR-120 Control Cabinet	**Test Date:** October 16-19, 2012
Model Number: 503-04427D	**Report Number:** SQ10-1205-01
UUT Function: Control cabinet for radiography system	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
110	19.7	15.8	20.1	18.8	1.4	>33.0

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT$_y$-30	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (2) 1/4" diameter bolts and rigid floor mounted with (4) 3/8" diameter bolts

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: 80kW High Voltage UB150B-40 Generator Cabinet	**Test Date:** October 16-19, 2012
Model Number: 502-23375-01	**Report Number:** SQ10-1205-01
UUT Function: Generator for radiography system	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
435	27.6	15.9	71.1	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.60	0.0	1.5	--	--	1.74	0.70

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test. Seismic enhancements made to the test unit shall be incorporated into the production units.

UUT_x-1A	**UNIT UNDER TEST (UUT) SUMMARY SHEET**	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (2) 5/16" diameter grade 5 bolts and rigid floor mounted with (4) 1/2" diameter bolts

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: BR-120T Tilting Wall Stand Wireless Detector Vertical	**Test Date:** November 11, 2024
Model Number: 566-16600-50	**Report Number:** 17550 Rev 1
UUT Function: Radiographic tilting wall stand for X-ray exposures	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System. Tested with Canon CXDI-720C Wireless Detector in the vertical orientation.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
378	24.8	25.4	84.8	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.50	0.0	1.5	--	--	1.67	0.67

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_x-1B	**UNIT UNDER TEST (UUT) SUMMARY SHEET**	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (2) 5/16" diameter grade 5 bolts and rigid floor mounted with (4) 1/2" diameter bolts

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: BR-120T Tilting Wall Stand Wireless Detector Flat	**Test Date:** November 11, 2024
Model Number: 566-16600-50	**Report Number:** 17550 Rev 1
UUT Function: Radiographic tilting wall stand for X-ray exposures	
UUT Description: Component of the RADSPEED X-Ray and Flouroscopy System. Tested with Canon CXDI-720C Wireless Detector in the flat / horizontal orientation.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
378	24.8	25.4	84.8	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.50	0.0	1.5	--	--	1.67	0.67

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_w-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rails and connecting parts of the component bolt with 2 – M8 bolts (20 bolts total) to a Unistrut grid spaced at approximately 22" on center. The Unistrut grid consisted of Unistrut P1001 rails anchored with 2 - 3/8" bolts at each intersection to the ceiling fixture framing spaced at approximately 24" on center.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: CH-200 Ceiling Tube Transverse Bridge	**Test Date:** June 24, 2025
Model Number: 565-29500	**Report Number:** 17795-R2
UUT Function: Ceiling suspended X-ray tube for use in radiographic imaging	
UUT Description: Component of the RADSPEED X-Ray and Fluoroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
845	157.5	102.0	68.0	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.50	0.0	1.5	--	--	1.67	0.67

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_w-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted with (4) 3/8" diameter bolts.

Manufacturer: Shimadzu Medical Systems	**Test Location:** ETL (Dallas, TX)
Component: Generator Control Console	**Test Date:** June 24, 2025
Model Number: 566-27900	**Report Number:** 17795-R2
UUT Function: Generator controls	
UUT Description: Component of the RADSPEED X-Ray and Fluoroscopy System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
11	9.5	2.5	12.0	N/A	N/A	N/A

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	--	--
	2.50	0.0	1.5	--	--	1.67	0.67

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.