DUCT SILENCER SCHEDULE

UNIT NO	LOCATION	SERVICE BUILDING	SERVICE ROOM	CFM	DIMENSIONS W X D X L	PD IN. WC	MANUFACTURER/ MODEL NO	REMARKS
W-CS-107-ST-01	MECH ROOM 107	LVEA	LASER AREA - 1	10,500	48 X 36 X 120	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-02	MECH ROOM 107	LVEA	LASER AREA - 2	15,000	48 X 60 X 120	0.10	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-03	MECH ROOM 107	LVEA	LASER AREA - 3	15,000	48 X 60 X 120	0.10	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-04	MECH ROOM 107	LVEA	LASER AREA - 4	10,000	48 X 36 X 120	0.15	INDUSTRIAL ACOUSTICS CO MS	OMIT
W-CS-107-ST-05	MECH ROOM 107	LVEA	LASER AREA - 5	10,000	48 X 36 X 120	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-06	MECH ROOM 107	LVEA	MECHANICAL ROOM 107	6,000	48 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-07	MECH ROOM 107	LVEA	GENERAL RETURN OF LVEA	20,300	60 X 60 X 84	0.10	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-08	MECH ROOM 107	LVEA	GENERAL RETURN OF LVEA	20,300	60 X 60 X 84	0.10	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-09	MECH ROOM 107	LVEA	GENERAL RETURN OF LVEA	20,300	60 X 60 X 84	0.10	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-10	MECH ROOM 107	OSB	OSB COLD AIR DECK	24,000	60 X 48 X 84	0.25	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-11	MECH ROOM 107	OSB	OSB WARM AIR DECK	24,000	60 X 48 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-12	MECH ROOM 107	OSB	OSB RETURN AIR	24,000	60 X 60 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-CS-160-ST-13	MECH ROOM 160	OFFICES	SUPPLY AIR	9,700	42 X 18 X 60	0.40	INDUSTRIAL ACOUSTICS CO MS	
W-CS-160-ST-14	MECH ROOM 160	OFFICES	RETURN AIR	9,000	42 X 18 X 60	0.36	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-15	MECH ROOM 107	LVEA	OUTSIDE AIR	2,600	24 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	OMIT
W-CS-107-ST-16	MECH ROOM 107	LVEA	OUTSIDE AIR	2,600	24 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-17	MECH ROOM 107	OSB	OUTSIDE AIR	650	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-18	MECH ROOM 107	OSB	OUTSIDE AIR	650	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-CS-107-ST-19	ROOM 149	OFFICES	TOILET EXHAUST	950	14"Ø X 36	0.05	INDUSTRIAL ACOUSTICS CO FCL	
W-CS-107-ST-20	ROOM 149	OFFICES	TOILET EXHAUST	950	14"Ø X 36	0.05	INDUSTRIAL ACOUSTICS CO FCL	
W-CS-107-ST-21	ROOM 137	OFFICES	TOILET EXHAUST	200	12"Ø X 36	0.02	INDUSTRIAL ACOUSTICS CO FCL	
W-CS-107-ST-22	ROOM 137	OFFICES	TOILET EXHAUST	200	12"Ø X 36	0.02	INDUSTRIAL ACOUSTICS CO FCL	
W-CS-107-ST-23	ROOM 169	OSB	EF-04 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
W-CS-107-ST-24	ROOM 169	OSB	EF-04 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
W-CS-107-ST-25	ROOM 168	OSB	EF-03 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
W-CS-107-ST-26	ROOM 168	OSB	EF-03 (FUME HOOD)	800	20 X 20 X 36	0.05	INDUSTRIAL ACOUSTICS CO TXS/TXL	304 S/S PACKLESS CONSTRUCTION, 12"Ø
W-MA-203-ST-01	MECH ROOM 203	MIDSTATION - A	EXPERIMENT EG.	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-02	MECH ROOM 203	MIDSTATION - A	CLEANING AREA	840	12 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-03	MECH ROOM 203	MIDSTATION - A	VEA	8,400	30 X 36 X 84	0.20	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-04	MECH ROOM 203	MIDSTATION - A	INSPECTION	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-05	MECH ROOM 203	MIDSTATION - A	MECH.RM	2,200	18 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-06	MECH ROOM 203	MIDSTATION - A	RETURN	8,400	36 X 36 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-07	MECH ROOM 203	MIDSTATION - A	RETURN	4,200	24 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-08	MECH ROOM 203	MIDSTATION - A	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-09	MECH ROOM 203	MIDSTATION - A	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-10	MECH ROOM 203	MIDSTATION - A	VE	1680	12 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-01	MECH ROOM 203	MIDSTATION - B	EXPERIMENT EG.	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-02	MECH ROOM 203	MIDSTATION - B	CLEANING AREA	840	12 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-03	MECH ROOM 203	MIDSTATION - B	VEA	8,400	30 X 30 X 84	0.20	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-04	MECH ROOM 203	MIDSTATION - B	INSPECTION	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-05	MECH ROOM 203	MIDSTATION - B	MECH.RM	2,200	18 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-06	MECH ROOM 203	MIDSTATION - B	RETURN	8,400	32 X 32 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-07	MECH ROOM 203	MIDSTATION - B	RETURN	4,200	24 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-08	MECH ROOM 203	MIDSTATION - B	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MB-203-ST-09	MECH ROOM 203	MIDSTATION - B	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-MA-203-ST-10	MECH ROOM 203	MIDSTATION - B	VE	1680	12 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-01	MECH ROOM 203	ENDSTATION - A	EXPERIMENT EG.	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-02	MECH ROOM 203	ENDSTATION - A	CLEANING AREA	840	12 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-03	MECH ROOM 203	ENDSTATION - A	VEA	8,400	30 X 30 X 84	0.20	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-04	MECH ROOM 203	ENDSTATION - A	INSPECTION	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-05	MECH ROOM 203	ENDSTATION - A	MECH.RM	2,200	18 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-06	MECH ROOM 203	ENDSTATION - A	RETURN	8,400	32 X 32 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-07	MECH ROOM 203	ENDSTATION - A	RETURN	4,200	24 X 24 X 84	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-08	MECH ROOM 203	ENDSTATION - A	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-09	MECH ROOM 203	ENDSTATION - A	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EA-203-ST-10	MECH ROOM 203	ENDSTATION - A	VE	1680	12 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-01	MECH ROOM 203	ENDSTATION - B	EXPERIMENT EG.	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-02	MECH ROOM 203	ENDSTATION - B	CLEANING AREA	840	12 X 24 X 84	0.07	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-03	MECH ROOM 203	ENDSTATION - B	VEA	8,400	30 X 30 X 84	0.20	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-04	MECH ROOM 203	ENDSTATION - B	INSPECTION	560	12 X 24 X 84	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-05	MECH ROOM 203	ENDSTATION - B	MECH.RM	2,200	18 X 24 X 60	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-06	MECH ROOM 203	ENDSTATION - B	RETURN	8,400	32 X 32 X 84	0.15	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-07	MECH ROOM 203	ENDSTATION - B	RETURN	4,200	24 X 24 X 84	0.12	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-08	MECH ROOM 203	ENDSTATION - B	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-09	MECH ROOM 203	ENDSTATION - B	OUTSIDE AIR	400	18 X 12 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	
W-EB-203-ST-10	MECH ROOM 203	ENDSTATION - B	VE	1680	12 X 24 X 60	0.05	INDUSTRIAL ACOUSTICS CO MS	

AIR INLET & OUTLET SCHEDULE

UNIT NO	DESCRIPTION	FACE SIZE	NECK SIZE IN X IN	CONSTRUCTION	MANUFACTURER/ MODEL NO	REMARKS
HF-1	HEPA FILTER	48 X 24	12"Ø	STEEL	AMERICAN AIR FILTER PHARMA-GEL PGA-83	5" DEEP FILTER, (1), (2)
HF-2	HEPA FILTER	24 X 24	10"Ø	STEEL	AMERICAN AIR FILTER PHARMA-GEL PGA-43	5" DEEP FILTER, (1), (2)
CD-1	CEILING DIFFUSER	24 X 24	(3)	ALUMINUM	TITUS PDS	W/OBD
CD-2	CEILING DIFFUSER	N/A	(3)	ALUMINUM	TITUS TMR-4A	W/BUTTERFLY DAMPER
RR-1	RETURN RIGISTER	(3)	N/A	ALUMINUM	TITUS 3FL	W/OBB
RR-2	RETURN RIGISTER	(3)	N/A	ALUMINUM	TITUS 4FL	W/OBB
RG-1	RETURN GRILLE	24 X 24	N/A	ALUMINUM	TITUS 8L	
RG-2	RETURN GRILLE	(3)	(3)	ALUMINUM	TITUS 350FRL	
SR-1	SUPPLY REGISTER	(3)	(3)	ALUMINUM	TITUS 300F	W/OBD

(1) PROVIDE WITH HANGING TAPS, STAINLESS STEEL TRIM, $1\frac{1}{2}$" INSULATION WITH ALUMINUM FOIL
(2) INITIAL PRESSURE DROP = 0.50" WC, REPLACEMENT PRESSURE DROP = 2.0" WC
(3) SEE PLANS

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VIBRATION ISOLATOR SCHEDULE

UNIT NO	NAME	LOCATION	(2) ISOLATOR TYPE	(3) SPRING DEFLECTION (INCH)	(2) FRAME TYPE	(2) SEISMIC RESTRAINT	REMARKS
W-CS-107-SF-01,02,03,04	VANE AXIAL FAN	CORNER STATION	B	1.0	S	SL	(TYP 4) FANS
W-CS-107-SF-05,06	VANE AXIAL FAN	CORNER STATION	B	1.0	S	SL	(TYP 2) FANS
W-MA-203-SF-01,02	VANE AXIAL FAN	MID STATION-A	B	1.0	S	SL	(TYP 2) FANS
W-MB-203-SF-01,02	VANE AXIAL FAN	MID STATION-B	B	1.0	S	SL	(TYP 2) FANS
W-EA-203-SF-01,02	VANE AXIAL FAN	END STATION-A	B	1.0	S	SL	(TYP 2) FANS
W-EB-203-SF-01,02	VANE AXIAL FAN	END STATION-B	B	1.0	S	SL	(TYP 2) FANS
W-CS-190-CH-01,02,03	AIR-COOLED WATER CHILLER	CORNER STATION	C	1.0		(1)	(TYP 3) CHILLERS
W-MA-200-CH-01,02	AIR-COOLED WATER CHILLER	MID STATION-A	C	1.0	-	(1)	(TYP 2) CHILLERS
W-MB-200-CH-01,02	AIR-COOLED WATER CHILLER	MID STATION-B	C	1.0	-	(1)	(TYP 2) CHILLERS
W-EA-200-CH-01,02	AIR-COOLED WATER CHILLER	END STATION-A	C	1.0	-	(1)	(TYP 2) CHILLERS
W-EB-200-CH-01,02	AIR-COOLED WATER CHILLER	END STATION-B	C	1.0	-	(1)	(TYP 2) CHILLERS
W-CS-190-WP-01,02,03	CHILLED WATER PUMP	CORNER STATION	C	1.0	S	SL	(TYP 3) PUMPS
W-MA-200-WP-01,02	CHILLED WATER PUMP	MID STATION-A	C	1.0	S	SL	(TYP 2) PUMPS
W-MB-200-WP-01,02	CHILLED WATER PUMP	MID STATION-B	C	1.0	S	SL	(TYP 2) PUMPS
W-EA-200-WP-01,02	CHILLED WATER PUMP	END STATION-A	C	1.0	S	SL	(TYP 2) PUMPS
W-EB-200-WP-01,02	CHILLED WATER PUMP	END STATION-B	C	1.0	S	SL	(TYP 2) PUMPS
W-CS-107-AC-01,02	AIR COMPRESSOR	CORNER STATION	C	1.0	S	SL	(TYP 2) COMPRESSORS
W-MA-203-AC-01,02	AIR COMPRESSOR	MID STATION-A	C	1.0	S	SL	(TYP 2) COMPRESSORS
W-MB-203-AC-01,02	AIR COMPRESSOR	MID STATION-B	C	1.0	S	SL	(TYP 2) COMPRESSORS
W-EA-203-AC-01,02	AIR COMPRESSOR	END STATION-A	C	1.0	S	SL	(TYP 2) COMPRESSORS
W-EB-203-AC-01,02	AIR COMPRESSOR	END STATION-B	C	1.0	S	SL	(TYP 2) COMPRESSORS
W-CS-160-AH-04	PACKAGED AIR HANDLER	CORNER STATION	B	1.0	S	SL	
W-CS-149-EF-01	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	U	SC	
W-CS-137-EF-02	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	U	SC	
W-CS-168-EF-03	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	U	SC	
W-CS-169-EF-04	IN-LINE EXHAUST FAN	CORNER STATION	D	1.0	U	SC	
W-MA-208-EF-01	IN-LINE EXHAUST FAN	MID STATION-A	D	1.0	U	SC	
W-MB-208-EF-01	IN-LINE EXHAUST FAN	MID STATION-B	D	1.0	U	SC	
W-EA-208-EF-01	IN-LINE EXHAUST FAN	END STATION-A	D	1.0	U	SC	
W-EB-208-EF-01	IN-LINE EXHAUST FAN	END STATION-B	D	1.0	U	SC	
W-CS-107-GP-01	GLYCOL FEED PUMP	CORNER STATION	C	1.0	S	SL	
W-MA-203-GP-01	GLYCOL FEED PUMP	MID STATION-A	C	1.0	S	SL	
W-MB-203-GP-01	GLYCOL FEED PUMP	MID STATION-B	C	1.0	S	SL	
W-EA-203-GP-01	GLYCOL FEED PUMP	END STATION-A	C	1.0	S	SL	
W-EB-203-GP-01	GLYCOL FEED PUMP	END STATION-B	C	1.0	S	SL	
W-CS-195-FP-01	FIRE PUMP	CORNER STATION	C	1.0	S	SL	
W-CS-195-FP-02	FIRE PUMP	CORNER STATION	C	1.0	S	SL	
W-CS-195-JP-03	JOCKY PUMP	CORNER STATION	C	1.0	S	SL	
W-CS-196-DP-04	DOMESTIC WATER PUMP	CORNER STATION	C	1.0	S	SL	
W-CS-196-DP-05	DOMESTIC WATER PUMP	CORNER STATION	C	1.0	S	SL	
W-CS-196-AH-05	PACKAGED AIR HANDLER	CORNER STATION	D	1.0	NONE	SC	

(1) ISOLATOR HOUSING INCLUDES SEISMIC RESTRAINTS
(2) SEE SPECIFICATIONS FOR CODE LETTER
(3) STATIC DEFLECTION 3 HZ

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NOTES:

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEETS WA-H-001 AND WA-H-002.

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REFERENCES

DRAWING NO.	DESCRIPTION

REVISIONS

NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
A	4-19-96	CLP	ME	AA		FINAL DESIGN REVIEW & BID

DRAWN	CLP
CHECKED	
ENGINEER	
PROJ	

PARSONS
100 WEST WALNUT STREET
PASADENA, CALIFORNIA

LIGO
CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LASER INTERFEROMETER
GRAVITATIONAL-WAVE OBSERVATORY
SITE NO. 1 - HANFORD, WASHINGTON

TITLE: HVAC EQUIPMENT SCHEDULES SHEET 4

SCALE	CONTRACT NUMBER	PROJECT NUMBER
NONE	PP150969	8094

SHEET NUMBER: WA-H-006 REVISIONS: A

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