

LOUVER SCHEDULE										
MARK	SERVICE	MANUFACTURER	MODEL	SIZE (W" x H")	CFM	MIN. FREE AREA (SF)	MAX. VEL. (FPM)	MAX. P.D. (IN. W.C.)	NOTES	
LV-1	INTAKE	RUSKIN	ELF375DX	34x34	2830	4.33	350	0.88	A - E	
LV-2	INTAKE	RUSKIN	ELF6375DX	108x36	12000	13.33	1000	0.1	A - E	
LV-3	EXHAUST	RUSKIN	ELF6375DX	108x36	12000	13.33	800	0.1	A - E	
LV-4	INTAKE	RUSKIN	ELF6375DX	88x36	8600	8.80	1000	0.1	A - E	
LV-5	EXHAUST	RUSKIN	ELF6375DX	88x36	8600	8.80	800	0.1	A - E	
LV-6	EXHAUST	RUSKIN	ELF6375DX	24x30	1900	2.00	800	0.1	A - E	
LV-7	INTAKE	RUSKIN	ELF6375DX	30x36	2000	3.75	1000	0.1	A - E	
LV-8	EXHAUST	RUSKIN	ELF6375DX	30x36	2000	3.75	800	0.1	A - E	

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:
 A. PROVIDE 1/4" MESH ALUMINUM BIRD SCREEN.
 B. PROVIDE STANDARD MILL FINISH.
 C. FRAME TYPE SHALL MATCH WALL CONSTRUCTION, COORDINATE WITH ARCHITECT.
 D. PROVIDE WITH INTEGRAL COUNTER-BALANCED BACKDRAFT DAMPER.
 E. PROVIDE LOUVER WITH SEISMIC RATING AND SUPPORTS TO MEET SPECIFIED PROJECT SEISMIC CRITERIA.

OP 1
OP 1

GRILLE, REGISTER AND DIFFUSER SCHEDULE										
MARK	MANUFACTURER	MODEL	FACE TYPE	MOUNTING LOCATION	FACE SIZE (IN)	MAX. NC	MAX. PRESS. DROP (IN. W.C.)	NOTES		
CD1	TITUS	TMS	LOUVERED	LAY-IN	24x24	25	0.1	A,B,C,D,E,F		
CD2	TITUS	TMS	LOUVERED	GYP CEILING	24x24	25	0.1	A,B,C,D,E,F		
CD3	TITUS	TMS	LOUVERED	GYP CEILING	12x12	25	0.1	A,B,C,D,E,F		
SD	TITUS	ML-40	1-1/2" LINEAR SLOT	GYP CEILING	48"	25	0.1	A,C,D,E,G,H		
RG1	TITUS	300RL	LOUVERED	LAY-IN	24x24	--	--	A,C,D,E,F		
RG2	TITUS	300RL	LOUVERED	GYP CEILING	24x24	--	--	A,C,D,E,F		

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:
 A. NECK SIZE SHOWN ON DRAWINGS.
 B. 4-WAY THROW PATTERN UNLESS OTHERWISE SHOWN ON DRAWINGS.
 C. BRANCH DUCT SIZE SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
 D. BAKED ENAMEL FINISH, WHITE TO MATCH CEILING COLOR.
 E. PROVIDE NECK FOR DUCT CONNECTION.
 F. FRAME TYPE TO MATCH CEILING CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLAN.
 G. PROVIDE BORDER TYPE TO MATCH CEILING CONSTRUCTION WITH CONCEALED MOUNTING, AND INSULATED PLENUM WITH NECK.
 H. PROVIDE WITH 4 SLOTS.

CHILLER SCHEDULE (WATER COOLED)																								
MARK	MANUFACTURER	MODEL	CAP. (TONS)	MAX. KW/TON	MAX. IPLV	REFR. TYPE	PASS	DESIGN GPM	MIN. GPM	EVAPORATOR EWT (°F)	LWT (°F)	MAX. PD (FT)	PASS GPM	CONDENSER EWT (°F)	LWT (°F)	MAX. PD (FT)	V/PH TYPE	DISC. TYPE	STARTER TYPE	MCA	MCCP	WEIGHT LBS	NOTES	
CH-1	SMART	WA120.48003	328	0.527	0.308	134A	2	786.3	267	55	45	6.94	2	987.5	85	95	9.69	480/3	FUSED	VFD	340	400	13907	A - F
CH-2	SMART	WA120.48003	328	0.527	0.308	134A	2	786.3	267	55	45	6.94	2	987.5	85	95	9.69	480/3	FUSED	VFD	340	400	13907	A - F

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:
 A. DISCONNECT SWITCH FURNISHED BY DIVISION 26 CONTRACTOR.
 B. FACTORY PROVIDED STARTER.
 C. EVAPORATOR BASED ON FOULING FACTOR OF 0.0001. CONDENSER BASED ON FOULING FACTOR OF 0.00025.
 D. REUSE EXISTING CONCRETE HOUSEKEEPING PAD. VERIFY EXISTING CONDITIONS.
 E. COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
 F. PROVIDE FLOW OR DIFFERENTIAL PRESSURE SWITCH FOR FIELD INSTALLATION.

FAN SCHEDULE														
MARK	SERVICE (EA, RA, SA)	MANUFACTURER	MOUNTING	MODEL	CFM	ESP (IN)	DRIVE (BELT/DIRECT)	MIN. HP	FAN RPM	VFD (Y/N)	V/PH	DISC. TYPE	ELECTRICAL STARTER TYPE	NOTES
EF-P1	EA	COOK	ROOFTOP	ACRU-D	2830	0.25	DIRECT	3/4	1429	N	120/1	FACTORY	----	A - D
EF-P2	EA	COOK	ROOFTOP	ACE-D	560	0.25	DIRECT	1/8	1331	N	120/1	FACTORY	----	A - D

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:
 A. PROVIDE WITH MINIMUM 8" HIGH ROOF CURB, BIRDSCREEN AND BACKDRAFT DAMPER.
 B. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
 C. DIVISION 23 CONTRACTOR TO FURNISH STARTER.
 D. INTERLOCK FAN OPERATION WITH BUILDING AUTOMATION SYSTEM AND REFRIGERANT MONITOR.

PUMP SCHEDULE															
MARK	SERVICE	MANUFACTURER	MODEL	SIZE	MOUNTING	FLOW (GPM)	HEAD (FT)	NPSHA (FT)	MIN. HP	RPM	V/PH	DISCONNECT TYPE	STARTER TYPE	VFD (Y/N)	NOTES
CWP-1	CHILLED WATER	ARMSTRONG	SERIES 4302	8x8x11.5	INLINE	787	110	15	30	1800	480/3	FUSED	VFD	Y	A-F
CWP-2	CHILLED WATER	ARMSTRONG	SERIES 4302	8x8x11.5	INLINE	787	110	15	30	1800	480/3	FUSED	VFD	Y	A-F
CTP-1	CONDENSER WATER	ARMSTRONG	SERIES 4300	6x6x13	INLINE	988	50	4	20	1170	480/3	FUSED	VFD	Y	A-E
CTP-2	CONDENSER WATER	ARMSTRONG	SERIES 4300	6x6x13	INLINE	988	50	4	20	1170	480/3	FUSED	VFD	Y	A-E

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:
 A. PROVIDE WITH AIR SEPARATOR AND THREE WAY VALVE.
 B. SUPPORT PUMP FROM PIPING.
 C. DISCONNECT SWITCH FURNISHED BY DIVISION 26 CONTRACTOR.
 D. VFD FURNISHED BY PUMP MANUFACTURER.
 E. PUMP MOTOR SHALL BE NON-OVERLOADING THROUGHOUT THE FULL RANGE OF THE PUMP CURVE.
 F. DUALARM STYLE VERTICAL INLINE PUMP.

JASON D. ZOELLER



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION DRYDEN FLIGHT RESEARCH CENTER EDWARDS, CA		APPROVALS Chief, Facilities Engineering & Asset Mgmt. Office <i>[Signature]</i> 7-2-13 Project Engineer/Contractor <i>[Signature]</i> 7-2-13 Facility Project Manager <i>[Signature]</i> 7/2/13 Chief, Office of Operations <i>[Signature]</i> 7/2/13 Chief, Science, Health & Environmental Office <i>[Signature]</i> 7-2-13 Chief, Cost Information Office <i>[Signature]</i> 7/3/13	DATE 02/21/2013
DRAWING TITLE MECHANICAL SCHEDULES		DATE STRTD: 02/21/2013 DATE PRINTD: 02/21/2013	
PROJECT TITLE MISSION CONTROL INFRASTRUCTURE REVITALIZATION 100% FINAL DESIGN		DRAWN BY: HEJ SCALE: AS SHOWN FILE NAME: EDM-1715 M-301.DWG	TRADE SH. No. M 301 SHEET No. 42 of 24
07-02-13 F REVISED PER RFI 01 02-21-13 E 100% FINAL DESIGN 01-07-13 D 95% NEAR-FINAL DESIGN SUBMITTAL 10-27-12 C 60% DEVELOPED DESIGN SUBMITTAL 05-12-12 B 30% PRELIMINARY DESIGN SUBMITTAL	DATE SYM REVISION BY A/PD		