

Plot Date: 27-FEB-2019 2:04:51 PM
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Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: lbequette


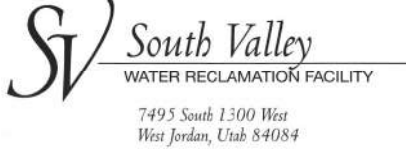



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NOTES						DUCTWORK SYMBOLS						EQUIPMENT SYMBOLS						REGISTERS, GRILLES & LOUVERS SYMBOLS							
<div>1. SIZES OF EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE TYPICAL STRUCTURAL DRAWINGS.</div> <div>2. DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.</div> <div>3. HVAC PIPING AND DUCTWORK DRAWINGS DO NOT SHOW ALL DRAINS, VENTS, OFFSETS AND FITTINGS ETC, REQUIRED FOR THE COMPLETE SYSTEM. SMALL PIPING IS SHOWN APPROXIMATELY TO SCALE BUT NOT EVERY FITTING AND OFFSET IS SHOWN. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL HVAC SYSTEMS TO PROVIDE THE COMPLETE SYSTEM.</div> <div>4. UNLESS OTHERWISE SHOWN ON THE DRAWINGS ALL FLOOR SLAB AND WALL PENETRATIONS SHALL BE AS SHOWN ON THE TYPICAL DETAILS.</div> <div>5. NOT ALL AND ONLY CERTAIN TYPES OF SUPPORTS ARE SHOWN ON THE HVAC DRAWINGS, UNLESS OTHERWISE DETAILED ON THE DRAWINGS ALL PIPE AND DUCT SUPPORTS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED.</div> <div>6. THIS IS A GENERAL LIST OF SYMBOLS. NOT ALL ITEMS SHOWN HERE APPEAR ON CONTRACT DRAWINGS.</div> <div>7. TYPICAL DETAILS SHALL BE USED FOR ALL PERMANENT WORK EVEN THOUGH THEY ARE NOT CALLED OUT AT ALL LOCATIONS WHERE THEY APPLY.</div> <div>8. COORDINATE FINAL LOUVER SIZE AND LOCATION WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.</div> <div>9. PROVIDE TURNING VANES IN ALL ELBOWS. (SHOWN OR NOT)</div>						FEATURE		SYMBOL		FEATURE		SYMBOL		FEATURE		SYMBOL									
						DIRECTION OF FLOW				A/C OR HEAT PUMP COMPRESSOR				LOUVER - PLAN											
						DUCT SIZE- FIRST NUMBER IS SIDE SHOWN				CENTRIFUGAL FAN				LOUVER - SECTION											
						ROUND DUCT				CONTROL PANEL				TRANSFER GRILLE											
						DUCT SECTION, POSITIVE PRESS FIRST NUMBER IS TOP				COOLING COIL				TO SPACE											
						DUCT SECTION, NEGATIVE PRESS FIRST NUMBER IS TOP				DIRECT EXPANSION COIL				FROM SPACE											
						SIDE MOUNT DEVICE				DUCT SMOKE DETECTOR				SUPPLY DIFFUSER OR GRILLE ARROWS INDICATE FLOW DIRECTION											
						ELEVATION CHANGE (R) RISE, (D) DROP				ELECTRIC HEATER				RETURN DIFFUSER OR GRILLE ARROWS INDICATE FLOW DIRECTION											
						ACCESS DOOR				FILTER				EXHAUST DIFFUSER OR GRILLE ARROWS INDICATE FLOW DIRECTION											
						BOTTOM MOUNT DEVICE REGISTER, GRILLE, DIFFUSER OR DUCT TAKEOFF				AIR FLOW SWITCH				<div>LEGEND FOR REGISTERS & GRILLES</div> <div>TYPE OF REGISTER OR GRILLE (AS DESCRIBED IN SPECIFICATIONS)</div> <div>SR-1(B)/12x12</div> <div>400/4</div> <div>CFM</div> <div>BOOT (IF REQ'D)</div> <div>NECK SIZE</div> <div>FLOW PATTERN; SIDEWALL-ADJUSTABLE; C-CORNER</div>											
FLEXIBLE CONNECTION				GAS HEATER																					
FLEXIBLE DUCT				HUMIDISTAT																					
DUCT INSULATION				INLINE/AXIAL FAN																					
TURNING VANES				MOTOR OPERATED VALVE																					
RECTANGULAR TO RECTANGULAR TRANSITION				ROOF/SIDEWALL FAN																					
RECTANGULAR TO ROUND TRANSITION				ROOF VENT OR ROOF FAN																					
POSITIVE PRESSURE DUCT - ELBOW TURNED UP (USE ONE DIAGONAL FOR NEGATIVE PRESSURE)				SOLENOID VALVE																					
POSITIVE PRESSURE DUCT - ELBOW TURNED DOWN (USE ONE DIAGONAL FOR NEGATIVE PRESSURE)				THERMOSTAT 60" ABOVE FINISH FLOOR																					
SMOKE DETECTOR CONFIRM ORIENTATION OF INSTALLATION				UNIT HEATER (HORIZONTAL TYPE)																					
		DAMPERS		<div>NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.</div>		UNIT HEATER (VERTICAL TYPE)																			
		BACKDRAFT				PRESSURE DIFFERENTIAL SWITCH																			
		BALANCING																							
		FIRE W/ ACCESS DOOR																							
		MOTORIZED																							
SMOKE CONFIRM ORIENTATION OF INSTALLATION																									
COMBINATION SMOKE AND FIRE CONFIRM ORIENTATION OF INSTALLATION																									
<div>ABBREVIATIONS</div> <div><div>A</div><div>@</div><div>AFF</div><div>AFS</div><div>AT</div><div>ABOVE FINISHED FLOOR</div><div>AIR FLOW SWITCH</div></div> <div><div>B</div><div>BD</div><div>BDD</div><div>BOD</div><div>BALANCING DAMPER</div><div>BACKDRAFT DAMPER</div><div>BOTTOM OF DUCT</div></div> <div><div>C</div><div>CO</div><div>CARBON MONOXIDE DETECTOR</div></div> <div><div>D</div><div>DG</div><div>DOOR GRILLE</div></div> <div><div>E</div><div>EA</div><div>EXHAUST AIR</div></div> <div><div>F</div><div>FA</div><div>FOUL AIR</div><div>FD</div><div>FIRE DAMPER</div></div> <div><div>N</div><div>NC</div><div>NORMALLY CLOSED</div><div>NO</div><div>NORMALLY OPEN</div></div> <div><div>O</div><div>OA</div><div>OUTSIDE AIR</div></div> <div><div>R</div><div>RA</div><div>RETURN AIR</div><div>RR</div><div>RETURN REGISTER OR GRILLE</div></div> <div><div>S</div><div>SA</div><div>SUPPLY AIR</div><div>SD</div><div>SMOKE DAMPER OR SMOKE DETECTOR</div><div>SFD</div><div>SMOKE & FIRE DAMPER COMBINATION</div><div>SR</div><div>SUPPLY REGISTER, GRILLE OR DIFFUSER</div></div>						DESIGNED TCL		<div>Digitally signed by Chad A. Green DN: cn=CHAD A. GREEN, o=Carollo, ou=Carollo, email=chad.a.green@carollo.com, c=US No. 10396275-2202</div> <div>REGISTERED PROFESSIONAL ENGINEER STATE OF UTAH</div>		<div>carollo</div>		<div>SV South Valley</div> <div>WATER RECLAMATION FACILITY</div> <div>7495 South 1300 West West Jordan, Utah 84084</div>		SOUTH VALLEY WATER RECLAMATION FACILITY				VERIFY SCALES		JOB NO. 10548A.10					
						PROJECT 5								BAR IS ONE INCH ON ORIGINAL DRAWING		DRAWING NO. GH-01									
						HVAC										SHEET NO.									
						HVAC LEGEND, ABBREVIATIONS AND SYMBOLS								IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		149 OF 159									
						REV								DATE		BY		DESCRIPTION							
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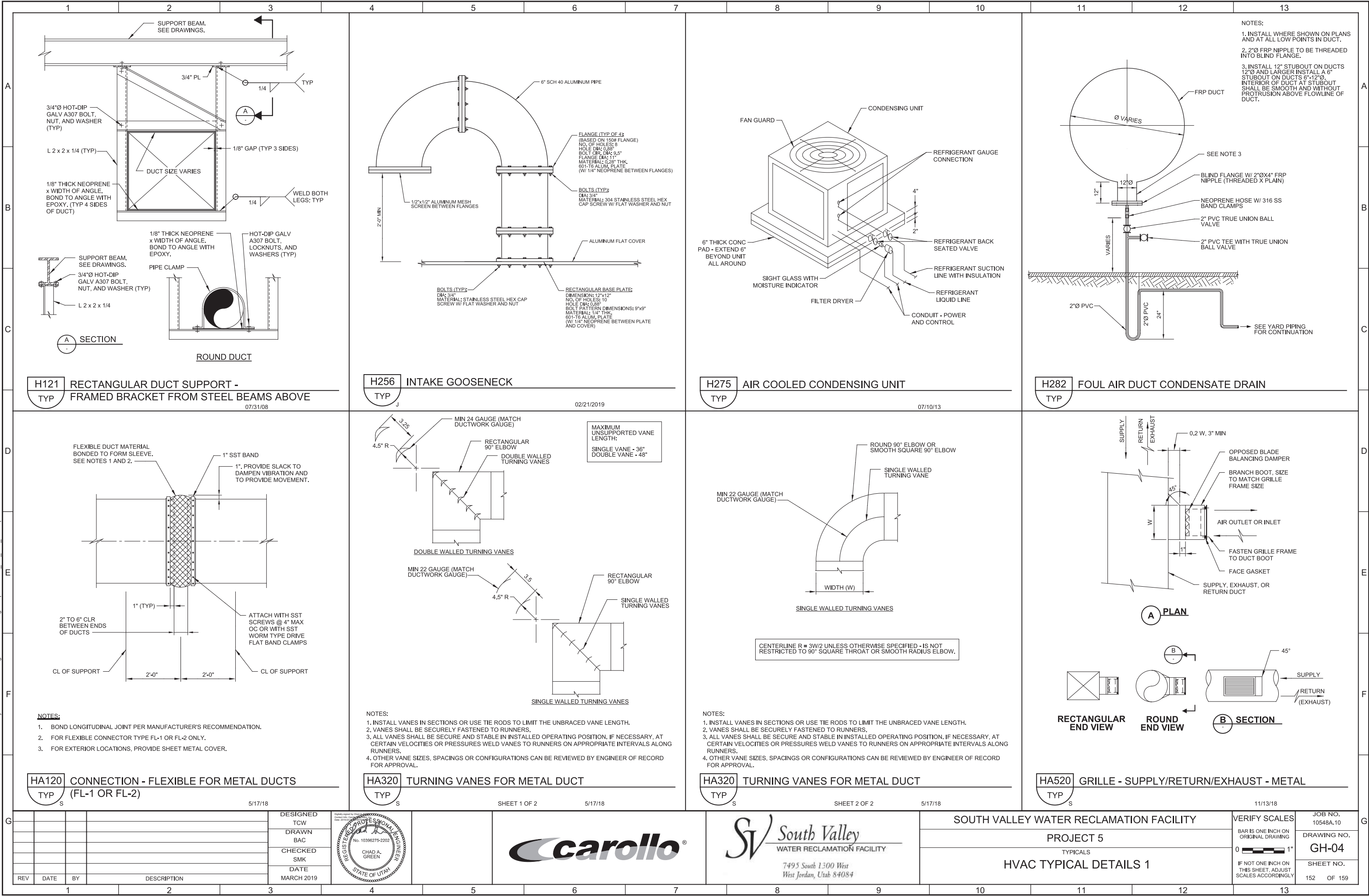
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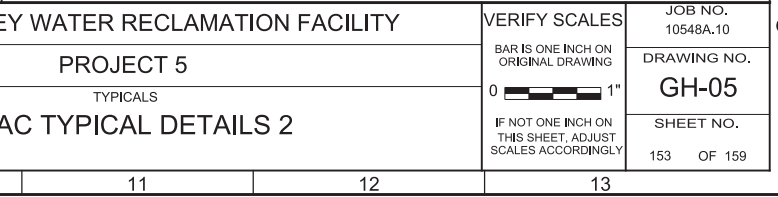
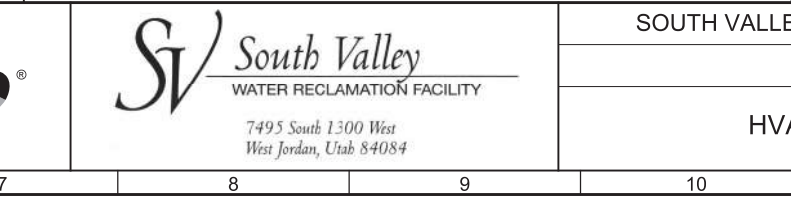
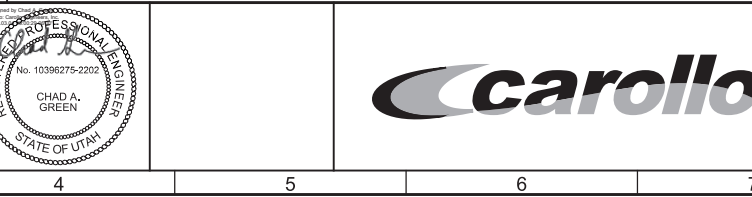
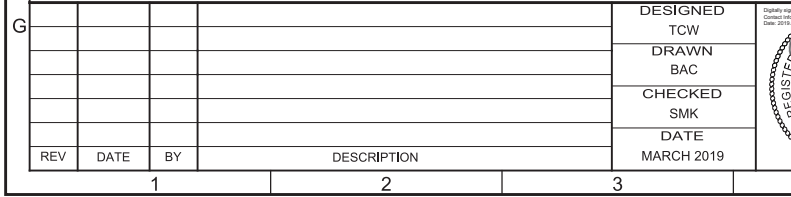
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LAST SAVED BY: BCastro





JOB NO.
10548A.10

DRAWING NO.
GH-06

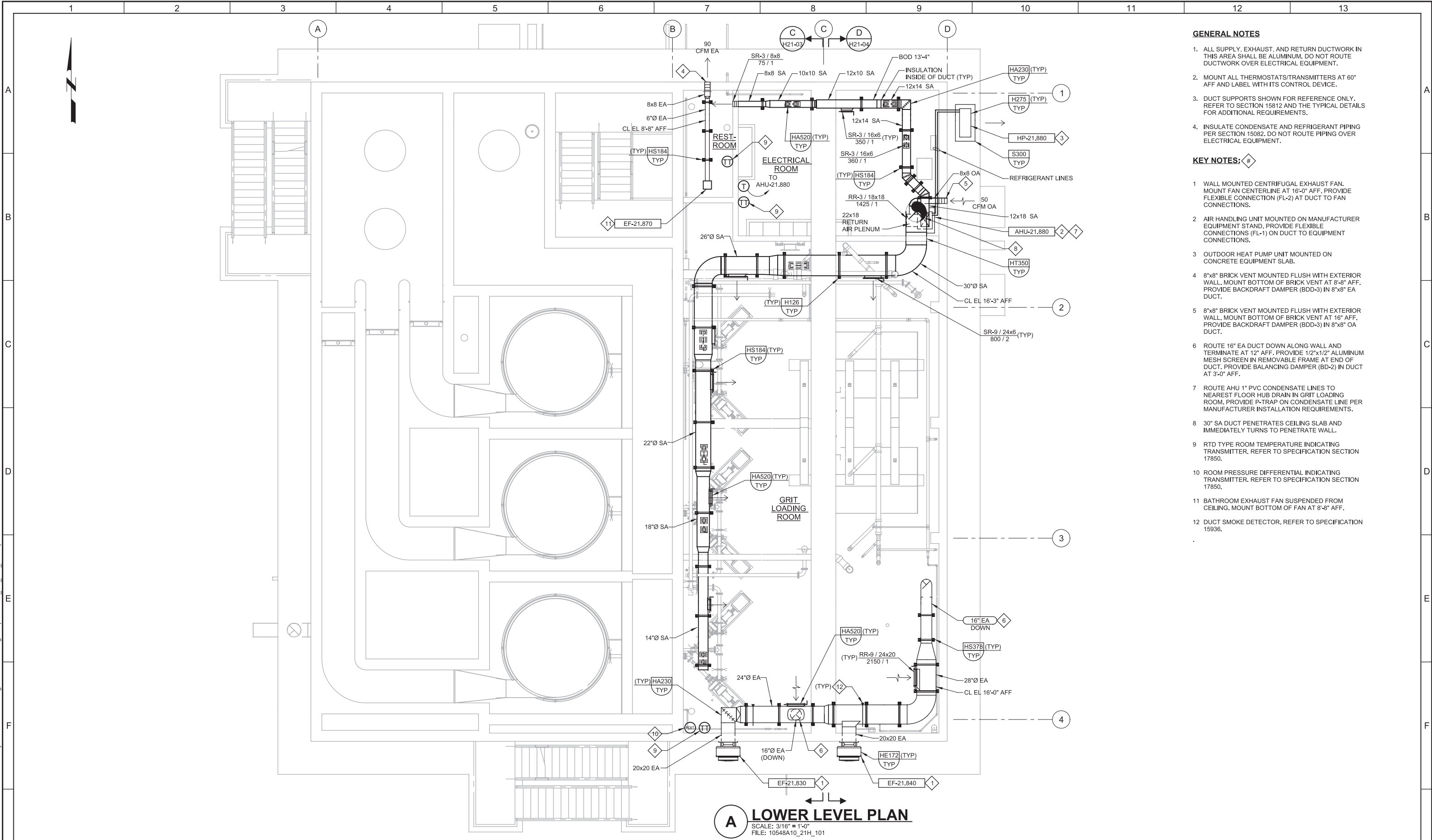
SHEET NO.
154 OF 159

Plot Date: 27-FEB-2019 2:04:52 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1

LAST SAVED BY: lbequette



GENERAL NOTES

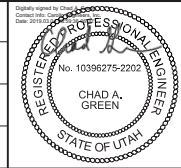
1. ALL SUPPLY, EXHAUST, AND RETURN DUCTWORK IN THIS AREA SHALL BE ALUMINUM. DO NOT ROUTE DUCTWORK OVER ELECTRICAL EQUIPMENT.
2. MOUNT ALL THERMOSTATS/TRANSMITTERS AT 60" AFF AND LABEL WITH ITS CONTROL DEVICE.
3. DUCT SUPPORTS SHOWN FOR REFERENCE ONLY. REFER TO SECTION 15812 AND THE TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS.
4. INSULATE CONDENSATE AND REFRIGERANT PIPING PER SECTION 15082. DO NOT ROUTE PIPING OVER ELECTRICAL EQUIPMENT.

KEY NOTES: #

- 1 WALL MOUNTED CENTRIFUGAL EXHAUST FAN. MOUNT FAN CENTERLINE AT 16'-0" AFF. PROVIDE FLEXIBLE CONNECTION (FL-2) AT DUCT TO FAN CONNECTIONS.
- 2 AIR HANDLING UNIT MOUNTED ON MANUFACTURER EQUIPMENT STAND. PROVIDE FLEXIBLE CONNECTIONS (FL-1) ON DUCT TO EQUIPMENT CONNECTIONS.
- 3 OUTDOOR HEAT PUMP UNIT MOUNTED ON CONCRETE EQUIPMENT SLAB.
- 4 8"x8" BRICK VENT MOUNTED FLUSH WITH EXTERIOR WALL. MOUNT BOTTOM OF BRICK VENT AT 8'-8" AFF. PROVIDE BACKDRAFT DAMPER (BDD-3) IN 8"x8" EA DUCT.
- 5 8"x8" BRICK VENT MOUNTED FLUSH WITH EXTERIOR WALL. MOUNT BOTTOM OF BRICK VENT AT 16" AFF. PROVIDE BACKDRAFT DAMPER (BDD-3) IN 8"x8" OA DUCT.
- 6 ROUTE 16" EA DUCT DOWN ALONG WALL AND TERMINATE AT 12" AFF. PROVIDE 1/2"x1/2" ALUMINUM MESH SCREEN IN REMOVABLE FRAME AT END OF DUCT. PROVIDE BALANCING DAMPER (BD-2) IN DUCT AT 3'-0" AFF.
- 7 ROUTE AHU 1" PVC CONDENSATE LINES TO NEAREST FLOOR HUB DRAIN IN GRIT LOADING ROOM. PROVIDE P-TRAP ON CONDENSATE LINE PER MANUFACTURER INSTALLATION REQUIREMENTS.
- 8 30" SA DUCT PENETRATES CEILING SLAB AND IMMEDIATELY TURNS TO PENETRATE WALL.
- 9 RTD TYPE ROOM TEMPERATURE INDICATING TRANSMITTER. REFER TO SPECIFICATION SECTION 17850.
- 10 ROOM PRESSURE DIFFERENTIAL INDICATING TRANSMITTER. REFER TO SPECIFICATION SECTION 17850.
- 11 BATHROOM EXHAUST FAN SUSPENDED FROM CEILING. MOUNT BOTTOM OF FAN AT 8'-8" AFF.
- 12 DUCT SMOKE DETECTOR. REFER TO SPECIFICATION 15936.

REV	DATE	BY	DESCRIPTION

DESIGNED TCL
DRAWN KHB
CHECKED SMK
DATE MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
HVAC
GRIT HANDLING FACILITY LOWER LEVEL PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

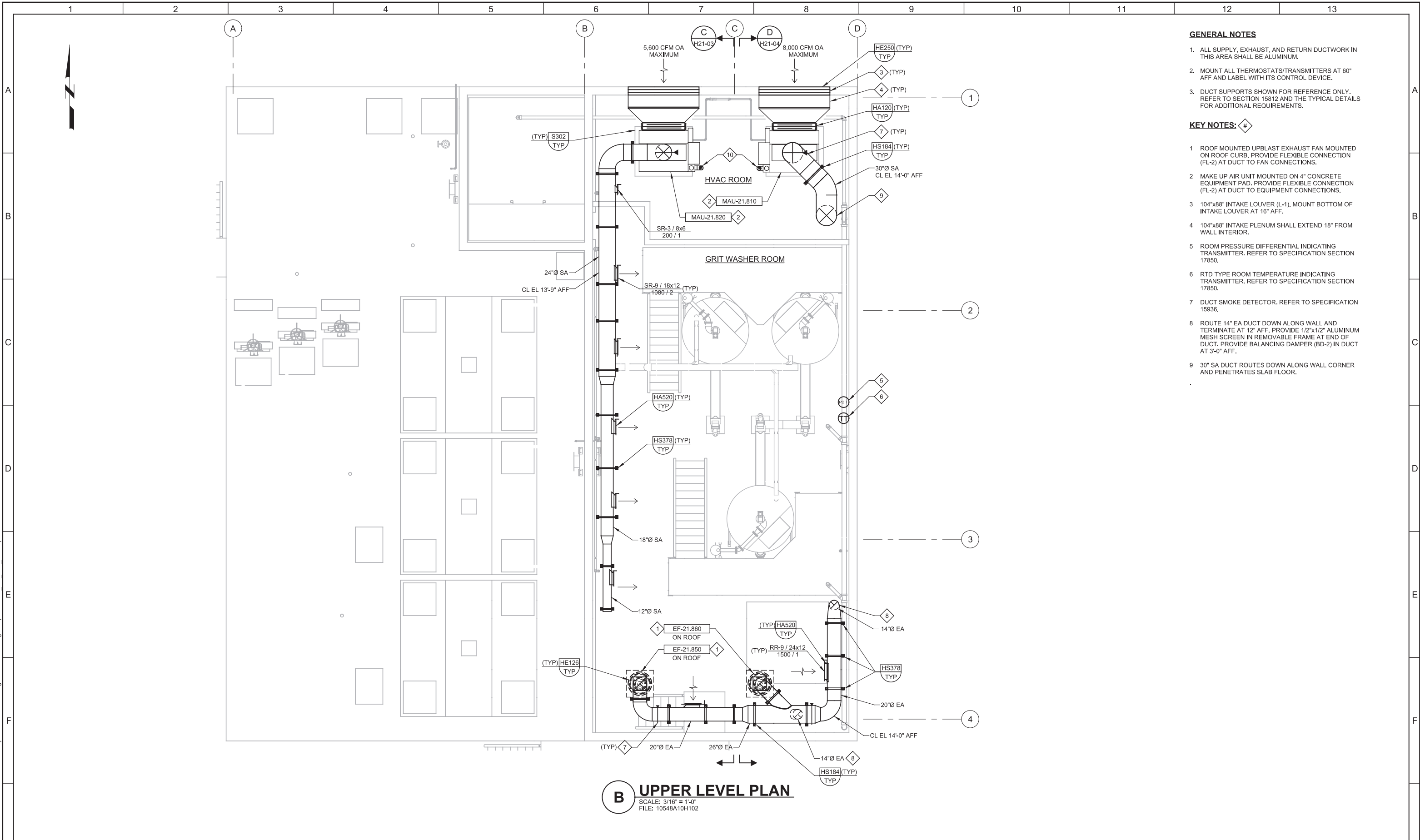
JOB NO. 10548A.10
DRAWING NO. H21-01
SHEET NO. 155 OF 159

Plot Date: 27-FEB-2019 2:04:53 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 2:1

LAST SAVED BY: lbequette



GENERAL NOTES

1. ALL SUPPLY, EXHAUST, AND RETURN DUCTWORK IN THIS AREA SHALL BE ALUMINUM.
2. MOUNT ALL THERMOSTATS/TRANSMITTERS AT 60" AFF AND LABEL WITH ITS CONTROL DEVICE.
3. DUCT SUPPORTS SHOWN FOR REFERENCE ONLY. REFER TO SECTION 15812 AND THE TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS.

KEY NOTES: #

- 1 ROOF MOUNTED UPBLAST EXHAUST FAN MOUNTED ON ROOF CURB, PROVIDE FLEXIBLE CONNECTION (FL-2) AT DUCT TO FAN CONNECTIONS.
- 2 MAKE UP AIR UNIT MOUNTED ON 4" CONCRETE EQUIPMENT PAD, PROVIDE FLEXIBLE CONNECTION (FL-2) AT DUCT TO EQUIPMENT CONNECTIONS.
- 3 104"x88" INTAKE LOUVER (L-1), MOUNT BOTTOM OF INTAKE LOUVER AT 16" AFF.
- 4 104"x88" INTAKE PLENUM SHALL EXTEND 18" FROM WALL INTERIOR.
- 5 ROOM PRESSURE DIFFERENTIAL INDICATING TRANSMITTER, REFER TO SPECIFICATION SECTION 17850.
- 6 RTD TYPE ROOM TEMPERATURE INDICATING TRANSMITTER, REFER TO SPECIFICATION SECTION 17850.
- 7 DUCT SMOKE DETECTOR, REFER TO SPECIFICATION 15936.
- 8 ROUTE 14" EA DUCT DOWN ALONG WALL AND TERMINATE AT 12" AFF, PROVIDE 1/2"x1/2" ALUMINUM MESH SCREEN IN REMOVABLE FRAME AT END OF DUCT, PROVIDE BALANCING DAMPER (BD-2) IN DUCT AT 3'-0" AFF.
- 9 30" SA DUCT ROUTES DOWN ALONG WALL CORNER AND PENETRATES SLAB FLOOR.

B UPPER LEVEL PLAN
SCALE: 3/16" = 1'-0"
FILE: 10548A10H2102.dgn

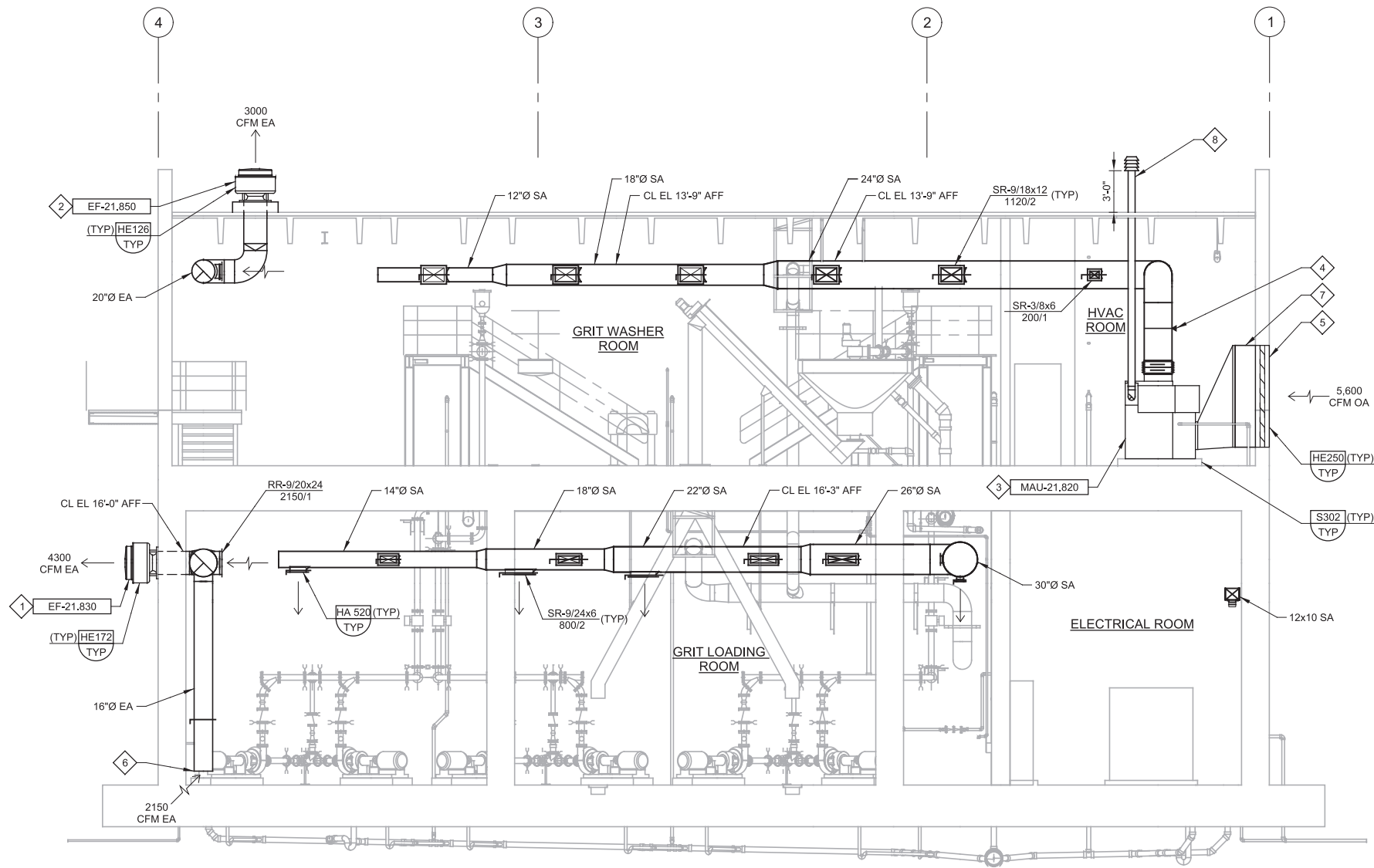
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Plot Date: 27-FEB-2019 2:05:00 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1

LAST SAVED BY: lbequette



C SECTION
H21-01 SCALE: 3/16" = 1'-0"
FILE: 10548A10H21301

GENERAL NOTES

1. ALL SUPPLY, EXHAUST, AND RETURN DUCTWORK IN THIS AREA SHALL BE ALUMINUM. DO NOT ROUTE DUCTWORK OVER ELECTRICAL EQUIPMENT.
2. MOUNT ALL THERMOSTATS/TRANSMITTERS AT 60" AFF AND LABEL WITH ITS CONTROL DEVICE.
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KEY NOTES:

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- 4 DUCT SMOKE DETECTOR. REFER TO SPECIFICATION 15936.
- 5 88"x104" INTAKE LOUVER (L-1). MOUNT BOTTOM OF INTAKE LOUVER AT 16" AFF.
- 6 ROUTE EA DUCT DOWN ALONG WALL AND TERMINATE AT 12" AFF. PROVIDE 1/2"x1/2" ALUMINUM MESH SCREEN IN REMOVABLE FRAME AT END OF DUCT. PROVIDE BALANCING DAMPER (BD-2) IN DUCT AT 3'-0" AFF.
- 7 88"x104" INTAKE PLENUM SHALL EXTEND 18" FROM WALL INTERIOR.
- 8 MAU BURNER EXHAUST FLUE ROUTED UP THROUGH ROOF. INSTALL PER MANUFACTURER AND MECHANICAL CODE REQUIREMENTS. TERMINATE WITH VENT CAP.

REV	DATE	BY	DESCRIPTION

DESIGNED TCL
DRAWN KHB
CHECKED SMK
DATE MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
HVAC
GRIT HANDLING FACILITY SECTION 1

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. H21-03
SHEET NO. 157 OF 159

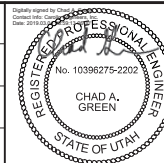


D SECTION

H21-01 SCALE: 3/16" = 1'-0"
FILE: 10548A1021302

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REV	DATE	BY	DESCRIPTION	

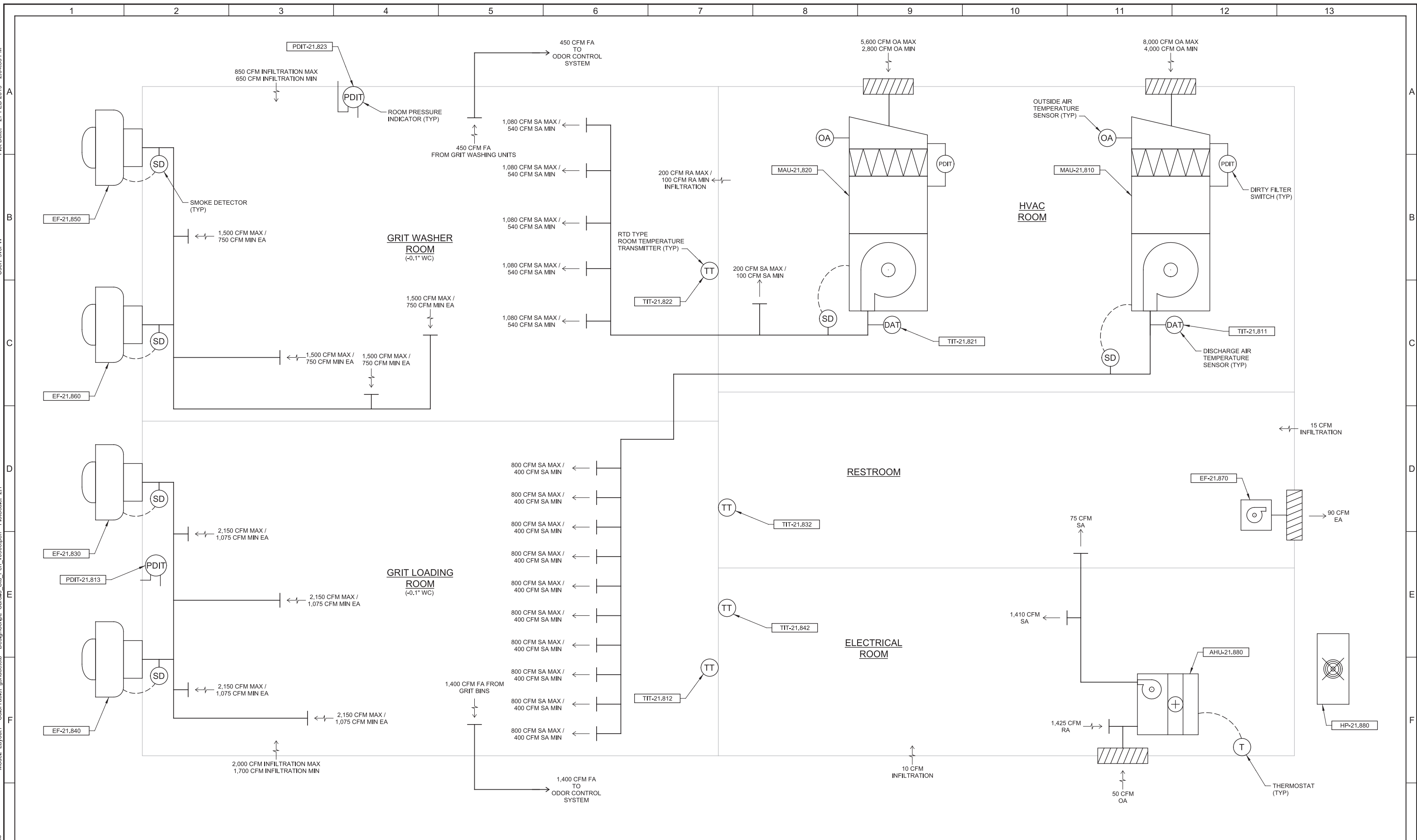
DESIGNED	TCL
DRAWN	KHB
CHECKED	SMK
DATE	MARCH 2019



HVAC
GRIT HANDLING FACILITY
SECTION 2

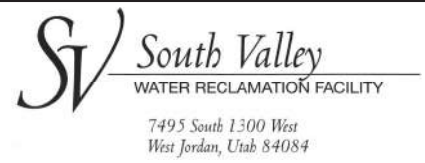
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY

58 OF 159



REV	DATE	BY	DESCRIPTION


DESIGNED
TCL
DRAWN
KHB
CHECKED
SMK
DATE
MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
HVAC
GRIT HANDLING FACILITY
AIRFLOW SCHEMATICS

VERIFY SCALES

BAR IS ONE INCH ON
ORIGINAL DRAWING

0  1"

IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY

JOB NO.
10548A.10

DRAWING NO.
H21-05

SHEET NO.
159 OF 159