

Plot Date: 27-FEB-2019 2:41:42 PM

User: svcPW

Plot Scale: 2:1

Design Script: Carollo_Sld_Pen_v0905.pen

Color Table: gshade.ctb

Model: Layout1 Color Table: gshade.ctb

LAST SAVED BY: ascheale

1 2 3 4 5 6 7 8 9 10 11 12 13

A

B

C

D

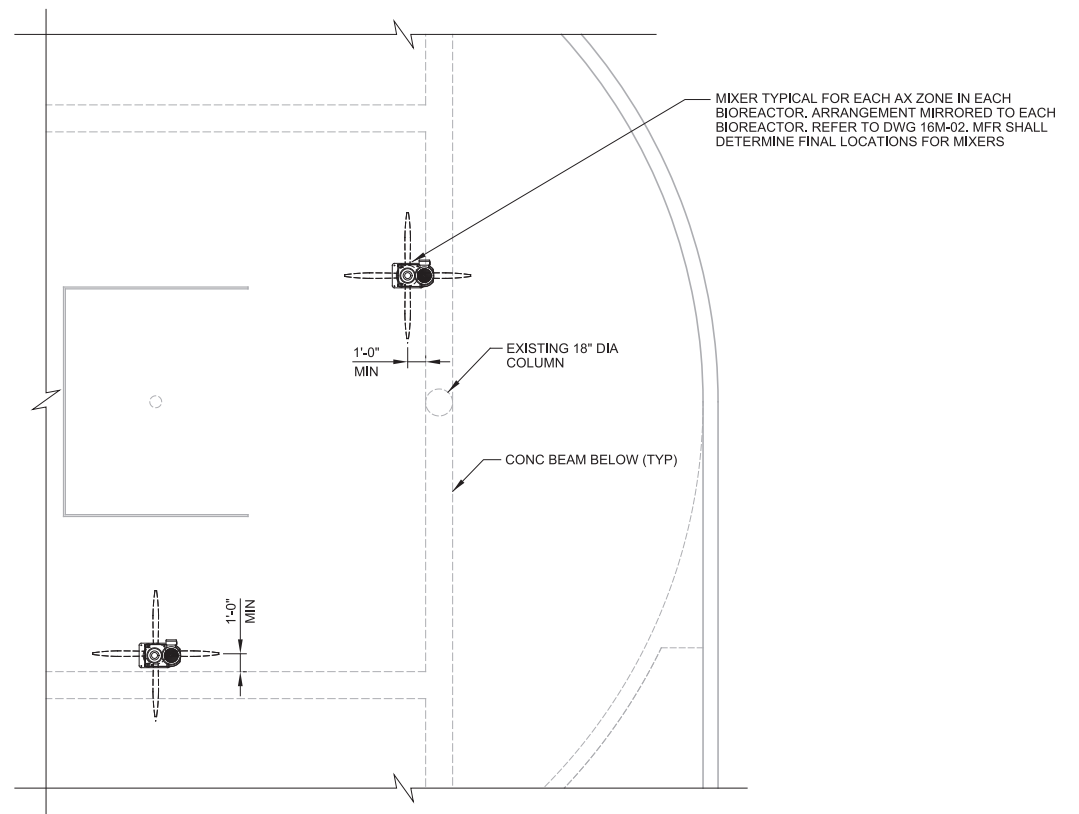
E

F

G

GENERAL NOTES:

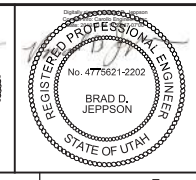
- 1. ALL IMPROVEMENTS NOTED HERE SHALL BE REQUIRED ON BIOREACTORS 2 THROUGH 4, UNLESS NOTED OTHERWISE.
- 2. ALL ANCHORS AND CONNECTIONS REQUIRED FOR THE MIXERS SHALL BE DESIGNED BY THE MANUFACTURER PER SPECIFICATION 11224C.



15 **DETAIL**
 M16-07 SCALE: 3/16" = 1'-0"
 FILE: 10548A10M16102

REV	DATE	BY	DESCRIPTION

DESIGNED JD
DRAWN KHB
CHECKED GCS
DATE MARCH 2019



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
**BIOREACTORS
 SECTIONS AND DETAILS 3**

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

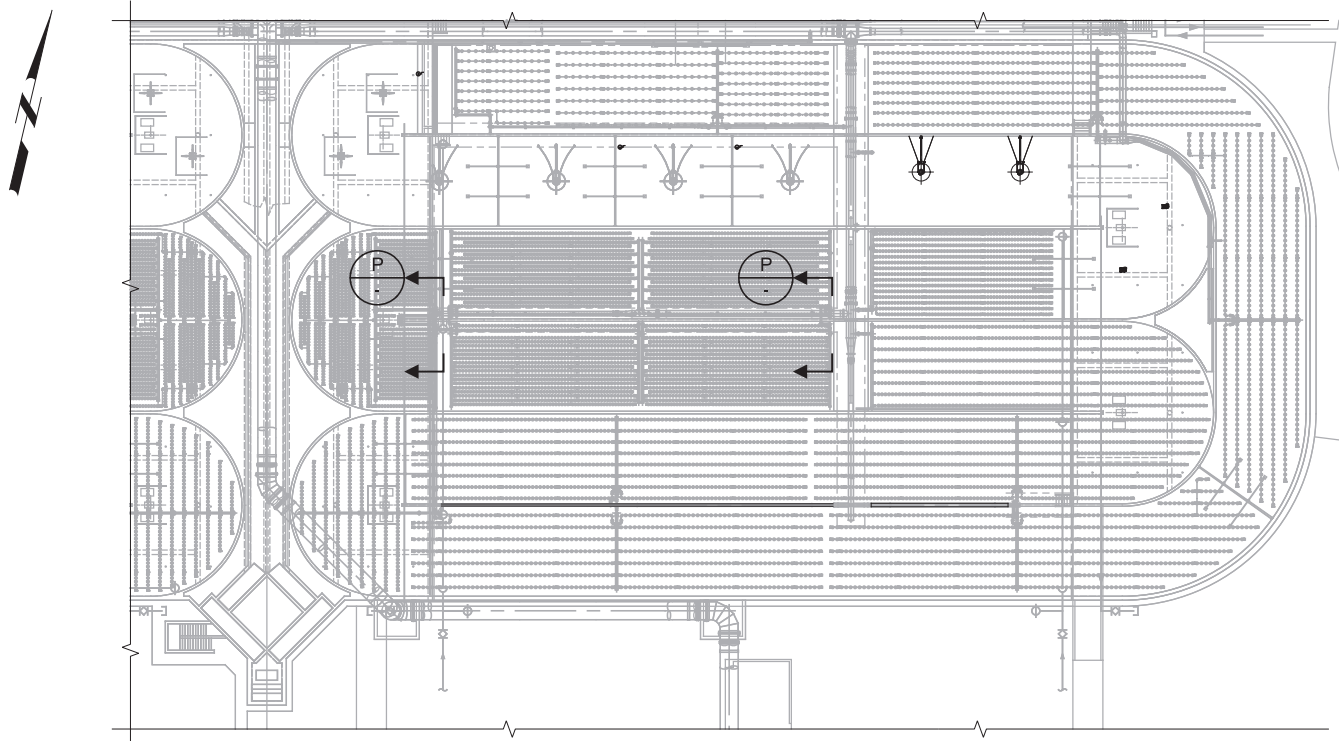
JOB NO. 10548A.10
DRAWING NO. M16-10
SHEET NO. 128 OF 159

Plot Date: 27-FEB-2019 2:41:53 PM

User: svcPW

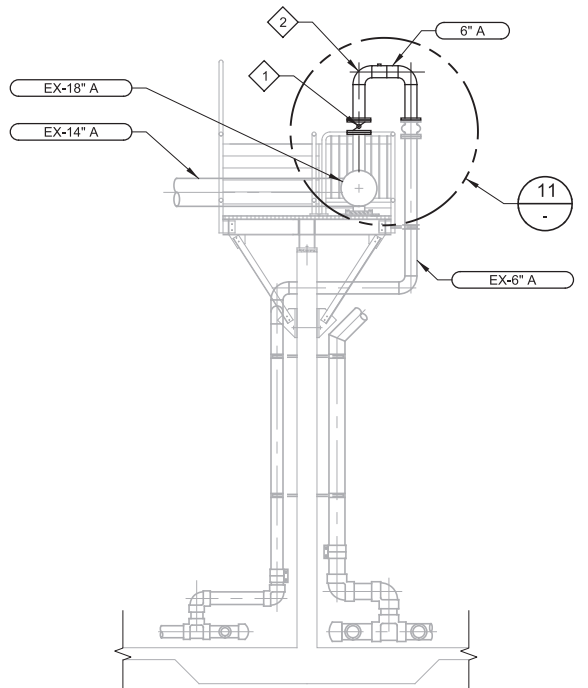
Plot Scale: 2:1

LAST SAVED BY: ascheale

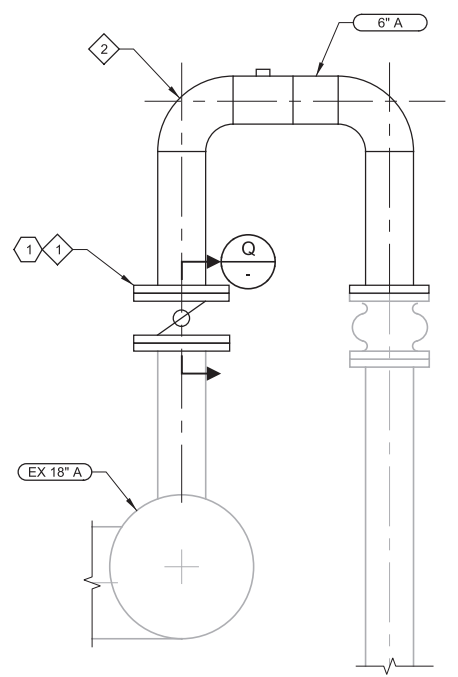


- GENERAL NOTES:**
- ALL IMPROVEMENTS NOTED HERE SHALL BE REQUIRED ON BIOREACTORS 2 THROUGH 4, UNLESS NOTED OTHERWISE.
- KEY NOTES:**
- REPLACE EXISTING 4" BUTTERFLY VALVES IN OX-6 WITH NEW 6" VALVES PER SPECIFICATION SECTION 15112. (6 TOTAL)
 - REPLACE EXISTING SST AIR PIPING PER SPECIFICATION SECTION 15286.
 - FIELD WELD NEW STAINLESS STEEL FLANGE TO BE USED WITH A BACKING RING PER SECTION 15286.
- KEY TAGS:**
- VAL 16.425/ VAL 16.426

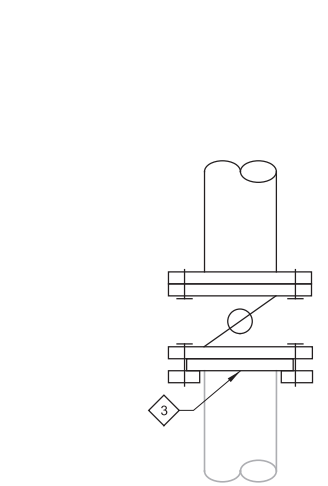
10 AIR VALVE MODIFICATIONS
 M16-07 SCALE: 1/32" = 1'-0"
 FILE: 10548A10M169101



P DROP PIPE ELEVATION
 SCALE: 1/4" = 1'-0"
 FILE: 10548A10M16320



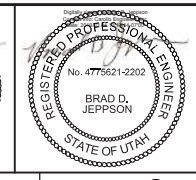
11 VALVE REPLACEMENT DETAIL
 SCALE: 1" = 1'-0"
 FILE: 10548A10M16320



Q FLANGE DETAIL SECTION
 SCALE: 1 1/2" = 1'-0"
 FILE: 10548A10M16320

REV	DATE	BY	DESCRIPTION

DESIGNED
JD
 DRAWN
MM
 CHECKED
GCS
 DATE
MARCH 2019



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
BIOREACTORS
 SECTIONS AND DETAILS 4

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

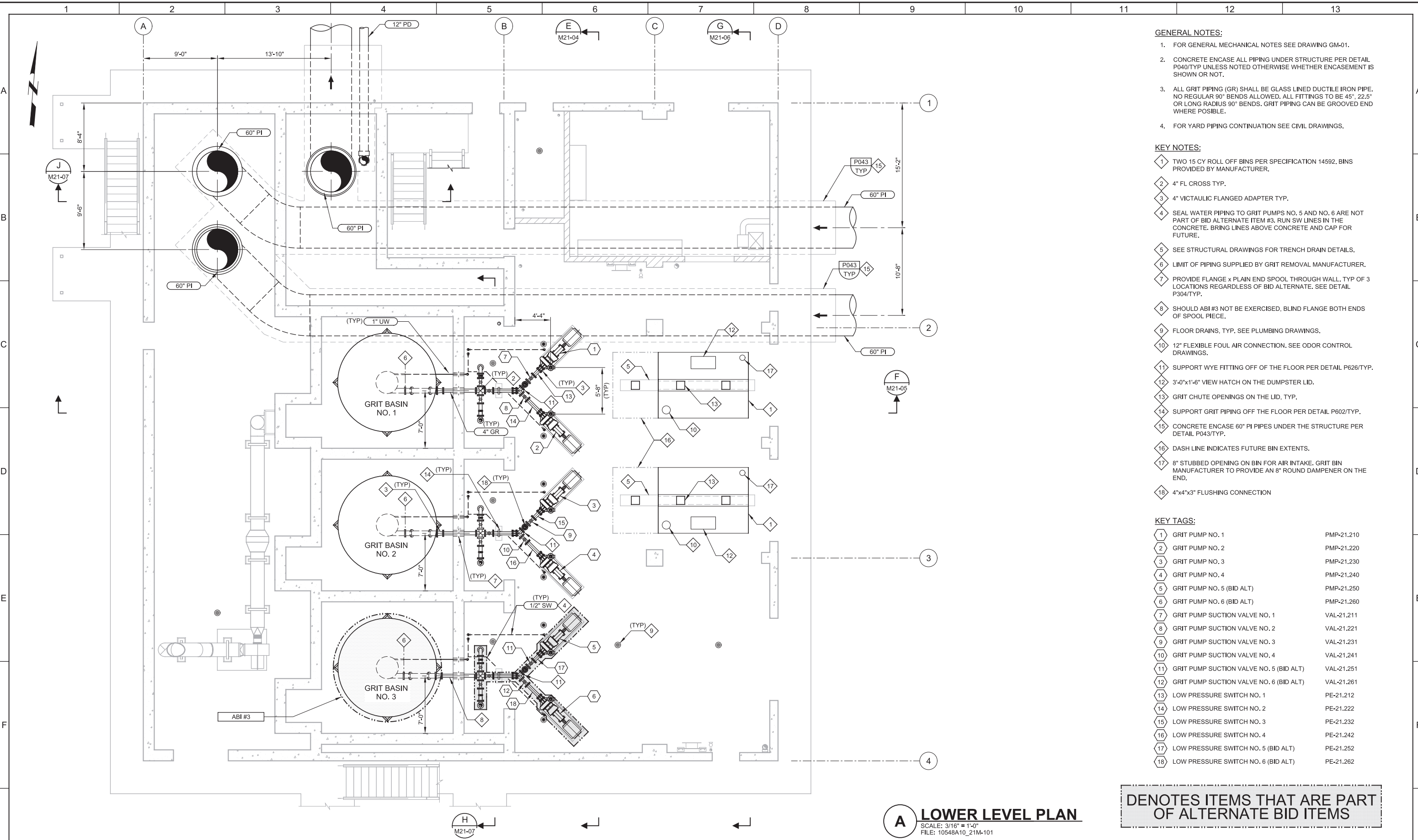
JOB NO.
10548A.10
 DRAWING NO.
M16-11
 SHEET NO.
129 OF 159

Plot Date: 27-FEB-2019 2:41:58 PM

User: svcPW

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

LAST SAVED BY: ascheale



- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE DRAWING GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASEMENT IS SHOWN OR NOT.
 - ALL GRIT PIPING (GR) SHALL BE GLASS LINED DUCTILE IRON PIPE. NO REGULAR 90° BENDS ALLOWED. ALL FITTINGS TO BE 45°, 22.5° OR LONG RADIUS 90° BENDS. GRIT PIPING CAN BE GROOVED END WHERE POSSIBLE.
 - FOR YARD PIPING CONTINUATION SEE CIVL DRAWINGS.

- KEY NOTES:**
- TWO 15 CY ROLL OFF BINS PER SPECIFICATION 14592. BINS PROVIDED BY MANUFACTURER.
 - 4" FL CROSS TYP.
 - 4" VICTAULIC FLANGED ADAPTER TYP.
 - SEAL WATER PIPING TO GRIT PUMPS NO. 5 AND NO. 6 ARE NOT PART OF BID ALTERNATE ITEM #3. RUN SW LINES IN THE CONCRETE. BRING LINES ABOVE CONCRETE AND CAP FOR FUTURE.
 - SEE STRUCTURAL DRAWINGS FOR TRENCH DRAIN DETAILS.
 - LIMIT OF PIPING SUPPLIED BY GRIT REMOVAL MANUFACTURER.
 - PROVIDE FLANGE x PLAIN END SPOOL THROUGH WALL. TYP OF 3 LOCATIONS REGARDLESS OF BID ALTERNATE. SEE DETAIL P304/TYP.
 - SHOULD ABI #3 NOT BE EXERCISED. BLIND FLANGE BOTH ENDS OF SPOOL PIECE.
 - FLOOR DRAINS, TYP. SEE PLUMBING DRAWINGS.
 - 12" FLEXIBLE FOUL AIR CONNECTION. SEE ODOR CONTROL DRAWINGS.
 - SUPPORT WYE FITTING OFF OF THE FLOOR PER DETAIL P626/TYP.
 - 3'-0"x1'-6" VIEW HATCH ON THE DUMPSTER LID.
 - GRIT CHUTE OPENINGS ON THE LID, TYP.
 - SUPPORT GRIT PIPING OFF THE FLOOR PER DETAIL P602/TYP.
 - CONCRETE ENCASE 60" PI PIPES UNDER THE STRUCTURE PER DETAIL P043/TYP.
 - DASH LINE INDICATES FUTURE BIN EXTENTS.
 - 8" STUBBED OPENING ON BIN FOR AIR INTAKE. GRIT BIN MANUFACTURER TO PROVIDE AN 8" ROUND DAMPENER ON THE END.
 - 4"x4"x3" FLUSHING CONNECTION

KEY TAGS:

1	GRIT PUMP NO. 1	PMP-21.210
2	GRIT PUMP NO. 2	PMP-21.220
3	GRIT PUMP NO. 3	PMP-21.230
4	GRIT PUMP NO. 4	PMP-21.240
5	GRIT PUMP NO. 5 (BID ALT)	PMP-21.250
6	GRIT PUMP NO. 6 (BID ALT)	PMP-21.260
7	GRIT PUMP SUCTION VALVE NO. 1	VAL-21.211
8	GRIT PUMP SUCTION VALVE NO. 2	VAL-21.221
9	GRIT PUMP SUCTION VALVE NO. 3	VAL-21.231
10	GRIT PUMP SUCTION VALVE NO. 4	VAL-21.241
11	GRIT PUMP SUCTION VALVE NO. 5 (BID ALT)	VAL-21.251
12	GRIT PUMP SUCTION VALVE NO. 6 (BID ALT)	VAL-21.261
13	LOW PRESSURE SWITCH NO. 1	PE-21.212
14	LOW PRESSURE SWITCH NO. 2	PE-21.222
15	LOW PRESSURE SWITCH NO. 3	PE-21.232
16	LOW PRESSURE SWITCH NO. 4	PE-21.242
17	LOW PRESSURE SWITCH NO. 5 (BID ALT)	PE-21.252
18	LOW PRESSURE SWITCH NO. 6 (BID ALT)	PE-21.262

DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS

A LOWER LEVEL PLAN
 SCALE: 3/16" = 1'-0"
 FILE: 10548A10_21M-101

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED
RWB

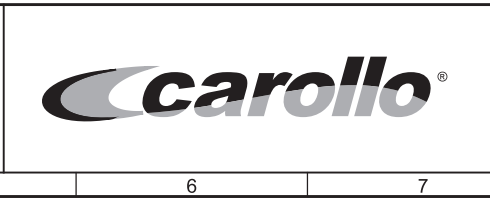
DRAWN
JRL

CHECKED
TL

DATE
MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 10171598-2202
RYAN W. BENCH
STATE OF UTAH

REGISTERED PROFESSIONAL ENGINEER
No. 4775621-2202
BRAD D. JEPSON
STATE OF UTAH



SV South Valley
 WATER RECLAMATION FACILITY

7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

MECHANICAL

**GRIT HANDLING FACILITY
 LOWER LEVEL PLAN**

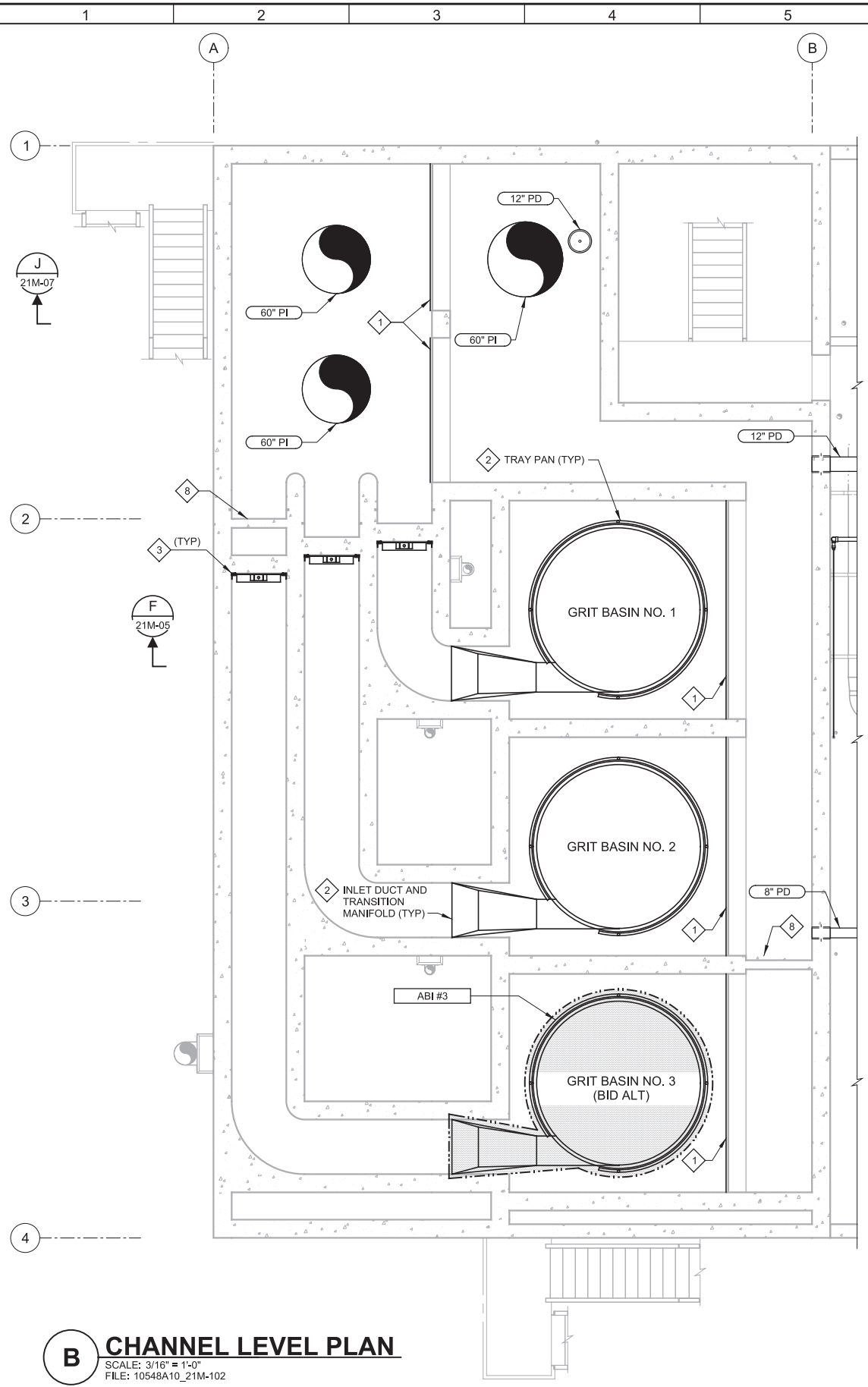
VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. M21-01
0 1"	SHEET NO. 130 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 27-FEB-2019 2:41:55 PM

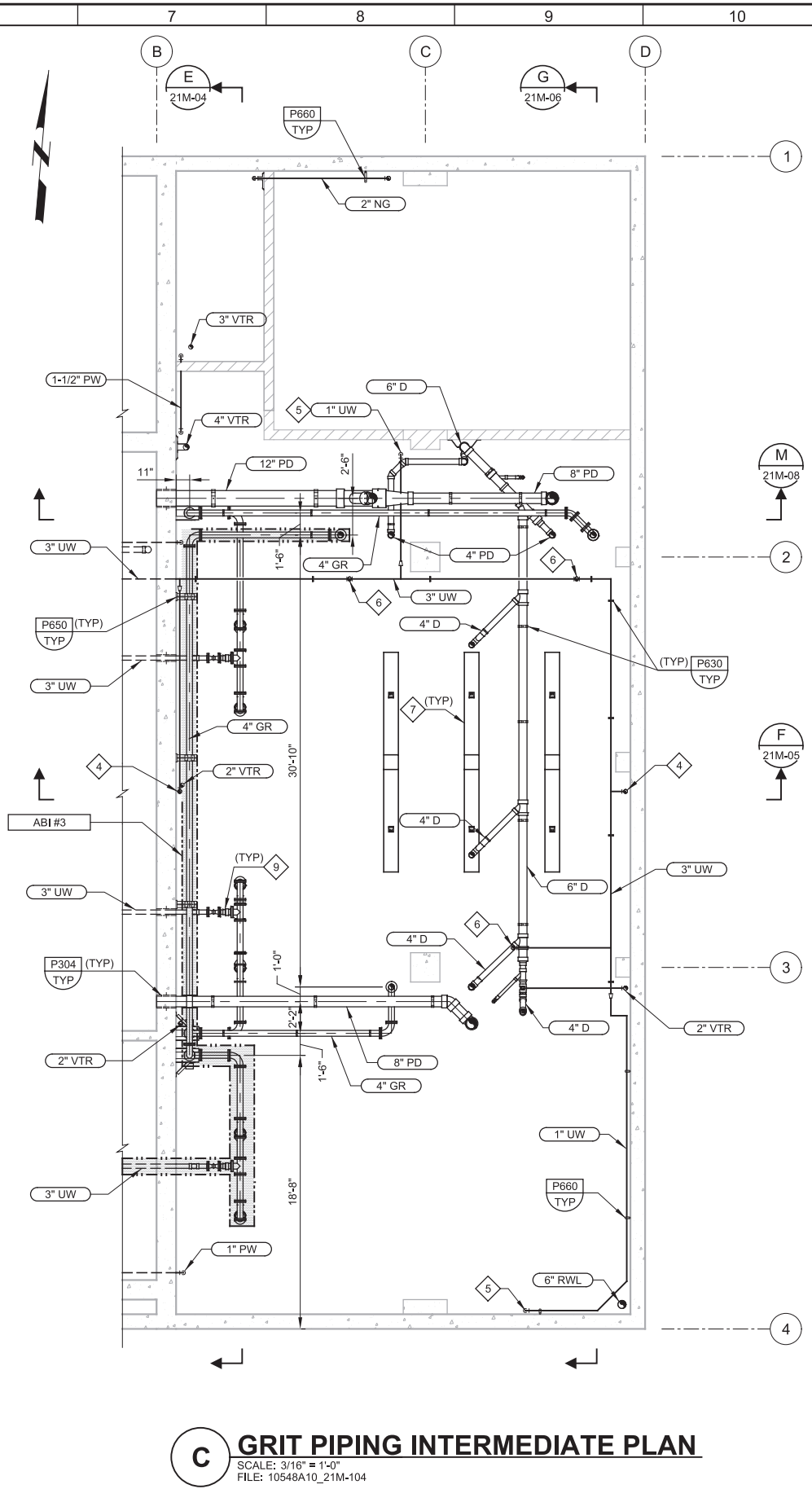
User: svcPW

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

LAST SAVED BY: dscheale



B CHANNEL LEVEL PLAN
 SCALE: 3/16" = 1'-0"
 FILE: 10548A10_21M-102



C GRIT PIPING INTERMEDIATE PLAN
 SCALE: 3/16" = 1'-0"
 FILE: 10548A10_21M-104

- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASEMENT IS SHOWN OR NOT.
 - ALL GRIT PIPING (GR) SHALL BE GLASS LINED DUCTILE IRON PIPE. NO REGULAR 90° BENDS ALLOWED. ALL FITTINGS TO BE 45°, 22.5° OR LONG RADIUS 90° BENDS. GRIT PIPING CAN BE GROOVED END WHERE POSSIBLE.
 - ALL DRAINAGE PIPE SHALL HAVE 45° BENDS AND WYE FITTINGS. NO 90° BENDS ALLOWED.
 - SUPPORT ALL PIPING UNDER SUSPENDED CONCRETE SLAB PER DETAIL P630/TYP UNLESS NOTED OTHERWISE.
 - NOT ALL PIPE SUPPORTS ARE SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATION.

- KEY NOTES:**
- PLAIN WEIR PLATE PER DETAIL M214/TYP
 - ITEMS SUPPLIED BY GRIT REMOVAL SYSTEM MANUFACTURER
 - SLIDE GATE TO BE FACE MOUNTED TO WALL PER DETAIL P710/TYP AND P720/TYP.
 - ROUTE 1" UW LINES UP TO HOSE BIBS ON UPPER LEVEL
 - ROUTE 1" UW LINES DOWN TO HOSE BIBS ON LOWER LEVEL
 - RUN 1" UW LINES TO GRIT WASHING UNITS ABOVE.
 - GRIT CHUTES
 - KNOCK OUT WALL TO BE CONSTRUCTED SHOULD ALTERNATE BID ITEM NO. 3 NOT BE EXERCISED BY OWNER. SEE STRUCTURAL DRAWINGS.
 - CHAIN OPERATED PLUG VALVE. TYP

DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED RWB	
DRAWN JRL	
CHECKED TL	
DATE MARCH 2019	



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
GRIT HANDLING FACILITY
 CHANNEL LEVEL PLAN

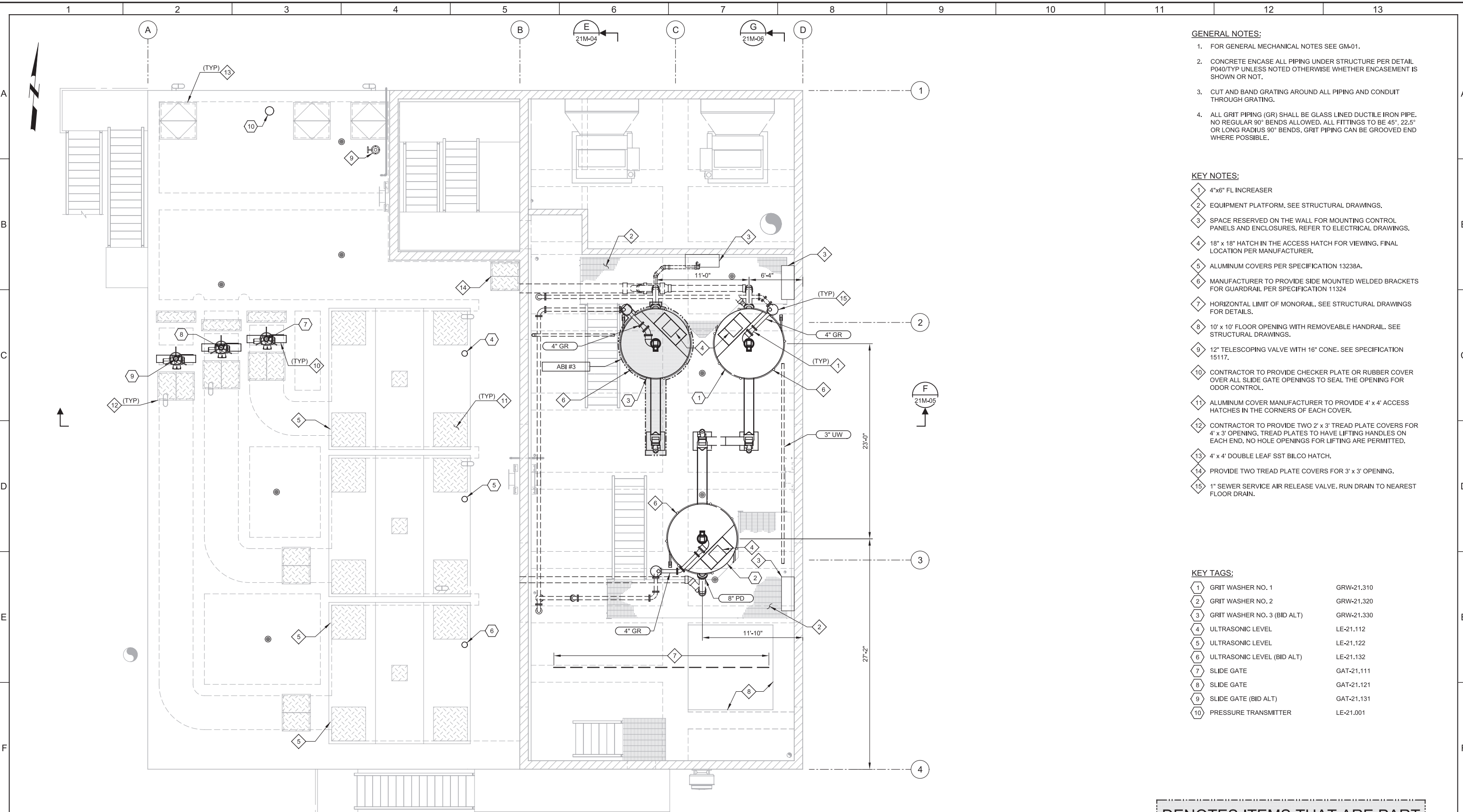
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M21-02
	SHEET NO. 131 OF 159

Plot Date: 27-FEB-2019 2:41:15 PM

User: svcBW

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

LAST SAVED BY: ascheale



- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASEMENT IS SHOWN OR NOT.
 - CUT AND BAND GRATING AROUND ALL PIPING AND CONDUIT THROUGH GRATING.
 - ALL GRIT PIPING (GR) SHALL BE GLASS LINED DUCTILE IRON PIPE. NO REGULAR 90° BENDS ALLOWED. ALL FITTINGS TO BE 45°, 22.5° OR LONG RADIUS 90° BENDS. GRIT PIPING CAN BE GROOVED END WHERE POSSIBLE.

- KEY NOTES:**
- 4"x6" FL INCREASER
 - EQUIPMENT PLATFORM. SEE STRUCTURAL DRAWINGS.
 - SPACE RESERVED ON THE WALL FOR MOUNTING CONTROL PANELS AND ENCLOSURES. REFER TO ELECTRICAL DRAWINGS.
 - 18" x 18" HATCH IN THE ACCESS HATCH FOR VIEWING. FINAL LOCATION PER MANUFACTURER.
 - ALUMINUM COVERS PER SPECIFICATION 13238A.
 - MANUFACTURER TO PROVIDE SIDE MOUNTED WELDED BRACKETS FOR GUARDRAIL PER SPECIFICATION 11324
 - HORIZONTAL LIMIT OF MONORAIL. SEE STRUCTURAL DRAWINGS FOR DETAILS.
 - 10' x 10' FLOOR OPENING WITH REMOVEABLE HANDRAIL. SEE STRUCTURAL DRAWINGS.
 - 12" TELESCOPING VALVE WITH 16" CONE. SEE SPECIFICATION 15117.
 - CONTRACTOR TO PROVIDE CHECKER PLATE OR RUBBER COVER OVER ALL SLIDE GATE OPENINGS TO SEAL THE OPENING FOR ODOR CONTROL.
 - ALUMINUM COVER MANUFACTURER TO PROVIDE 4' x 4' ACCESS HATCHES IN THE CORNERS OF EACH COVER.
 - CONTRACTOR TO PROVIDE TWO 2' x 3' TREAD PLATE COVERS FOR 4' x 3' OPENING. TREAD PLATES TO HAVE LIFTING HANDLES ON EACH END. NO HOLE OPENINGS FOR LIFTING ARE PERMITTED.
 - 4' x 4' DOUBLE LEAF SST BILCO HATCH.
 - PROVIDE TWO TREAD PLATE COVERS FOR 3' x 3' OPENING.
 - 1" SEWER SERVICE AIR RELEASE VALVE. RUN DRAIN TO NEAREST FLOOR DRAIN.

KEY TAGS:

1	GRIT WASHER NO. 1	GRW-21.310
2	GRIT WASHER NO. 2	GRW-21.320
3	GRIT WASHER NO. 3 (BID ALT)	GRW-21.330
4	ULTRASONIC LEVEL	LE-21.112
5	ULTRASONIC LEVEL	LE-21.122
6	ULTRASONIC LEVEL (BID ALT)	LE-21.132
7	SLIDE GATE	GAT-21.111
8	SLIDE GATE	GAT-21.121
9	SLIDE GATE (BID ALT)	GAT-21.131
10	PRESSURE TRANSMITTER	LE-21.001

⬢ DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS

D UPPER LEVEL PLAN
 SCALE: 3/16" = 1'-0"
 FILE: 10548A10_21M103

REV	DATE	BY	DESCRIPTION

DESIGNED RWB		
DRAWN JRL		
CHECKED TL	DATE MARCH 2019	

SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

MECHANICAL

GRIT HANDLING FACILITY

UPPER LEVEL PLAN

<p>VERIFY SCALES</p> <p>BAR IS ONE INCH ON ORIGINAL DRAWING</p> <p>0 1"</p> <p>IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY</p>	<p>JOB NO. 10548A.10</p> <p>DRAWING NO. M21-03</p> <p>SHEET NO. 132 OF 159</p>
--	---

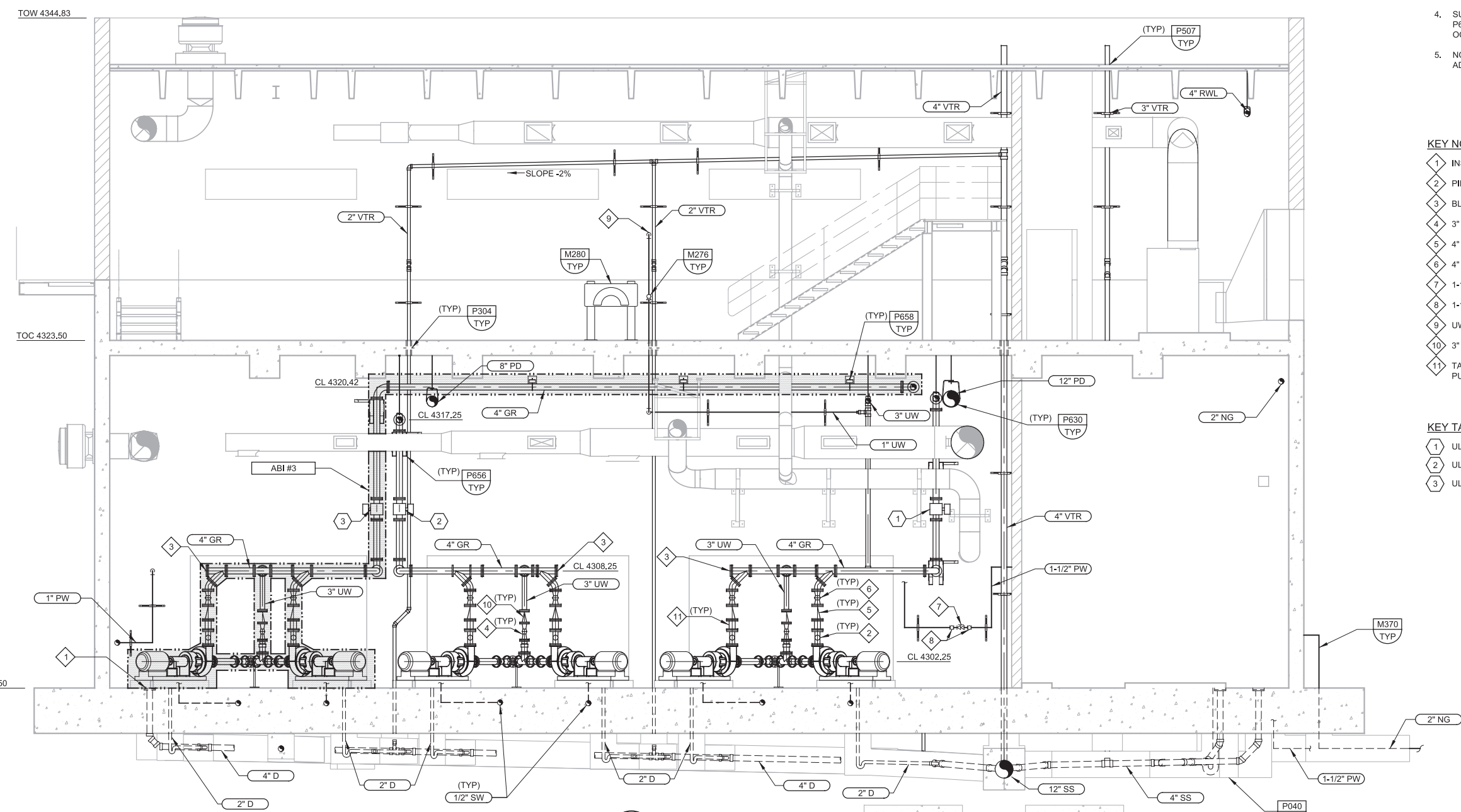
Plot Date: 27-FEB-2019 2:42:33 PM

User: svcPW

Model: Layout1

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

LAST SAVED BY: ischeele



E SECTION
 21M-01 SCALE: 1/4" = 1'-0"
 FILE: 10548A10_21M301

- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASEMENT IS SHOWN OR NOT.
 - ALL GRIT PIPING (GR) SHALL BE GLASS LINED DUCTILE IRON PIPE. NO REGULAR 90° BENDS ALLOWED. ALL FITTINGS TO BE 45°, 22.5° OR LONG RADIUS 90° BENDS. GRIT PIPING SHOULD BE GROOVED END WHERE POSSIBLE.
 - SUPPORT UW, PW, NG, AND VTR PIPING OFF THE WALL PER DETAIL P660/TYP AND P664/TYP UNLESS NOTED OTHERWISE. SPACE AT 5'-0" OC MAXIMUM.
 - NOT ALL PIPE SUPPORTS ARE SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATIONS.

- KEY NOTES:**
- INSTALL CLEANOUT PER DETAIL P004/TYP.
 - PIPE SITE GLASS.
 - BLIND FLANGE
 - 3" PLUG VALVE
 - 4" SWING CHECK VALVE
 - 4" GLASS LINED PLUG VALVE
 - 1-1/2" BACKFLOW PREVENTER
 - 1-1/2" ISOLATION BALL VALVE
 - UW LINE THROUGH WALL. SEE DRAWING M21-10.
 - 3" SWING CHECK VALVE
 - TAP FOR DISCHARGE PRESSURE GAUGE. TYPICAL ON ALL GRIT PUMPS.

- KEY TAGS:**
- | | | |
|---|--------------------------------------|-----------|
| 1 | ULTRASONIC FLOWMETER NO. 1 | FE-21.215 |
| 2 | ULTRASONIC FLOWMETER NO. 2 | FE-21.225 |
| 3 | ULTRASONIC FLOWMETER NO. 3 (BID ALT) | FE-21.235 |

DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS

REV	DATE	BY	DESCRIPTION

DESIGNED RWB		
DRAWN JRL		
CHECKED TL	DATE MARCH 2019	



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
GRIT HANDLING FACILITY
 SECTIONS AND DETAILS 1

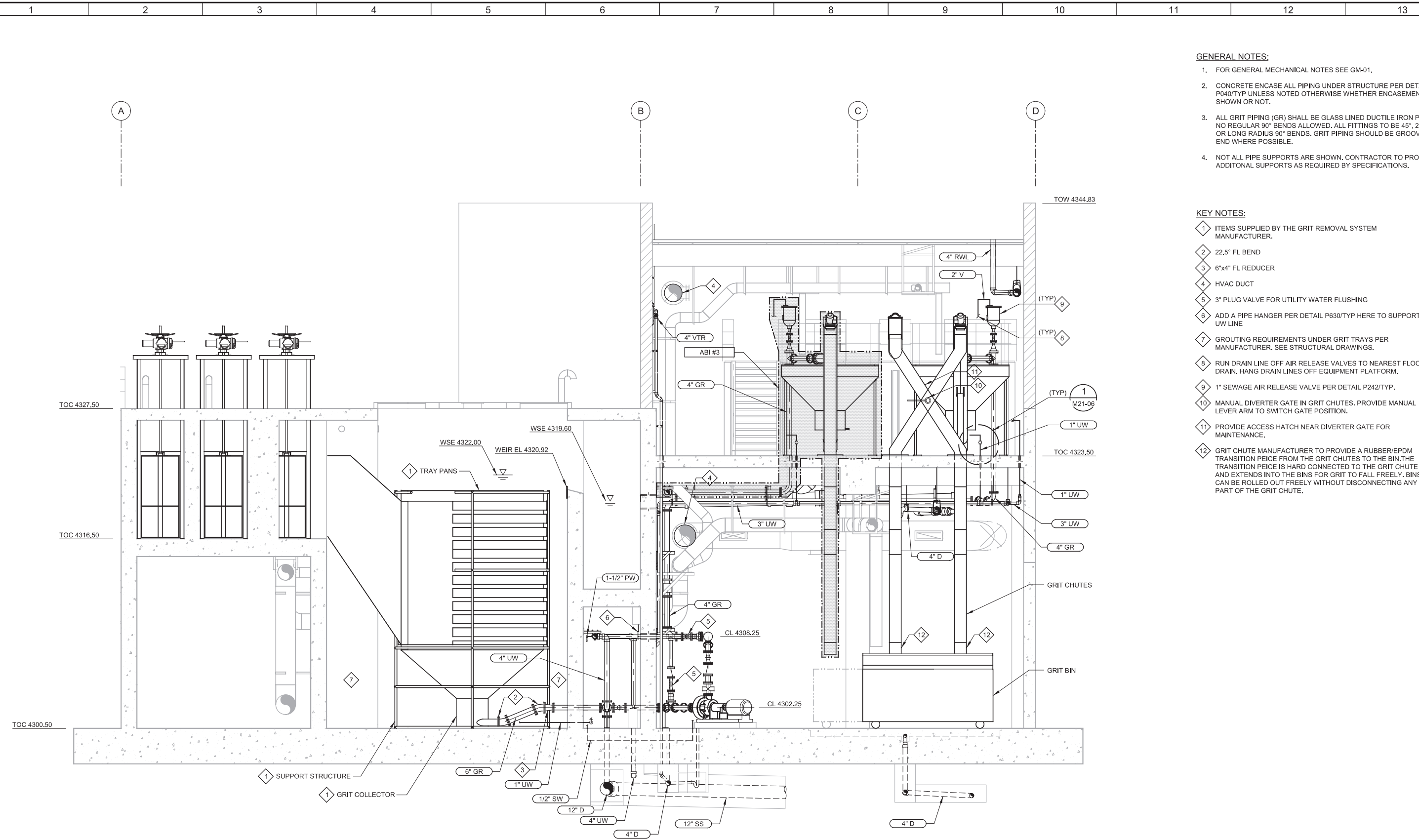
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M21-04
	SHEET NO. 133 OF 159

Plot Date: 27-FEB-2019 2:42:17 PM

User: svcPW

PlotScale: 2:1

LAST SAVED BY: ascheale



- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASMENT IS SHOWN OR NOT.
 - ALL GRIT PIPING (GR) SHALL BE GLASS LINED DUCTILE IRON PIPE. NO REGULAR 90° BENDS ALLOWED. ALL FITTINGS TO BE 45°. 22.5° OR LONG RADIUS 90° BENDS. GRIT PIPING SHOULD BE GROOVED END WHERE POSSIBLE.
 - NOT ALL PIPE SUPPORTS ARE SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATIONS.

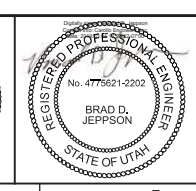
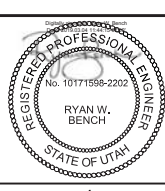
- KEY NOTES:**
- ITEMS SUPPLIED BY THE GRIT REMOVAL SYSTEM MANUFACTURER.
 - 22.5° FL BEND
 - 6"x4" FL REDUCER
 - HVAC DUCT
 - 3" PLUG VALVE FOR UTILITY WATER FLUSHING
 - ADD A PIPE HANGER PER DETAIL P630/TYP HERE TO SUPPORT 4" UW LINE
 - GROUTING REQUIREMENTS UNDER GRIT TRAYS PER MANUFACTURER. SEE STRUCTURAL DRAWINGS.
 - RUN DRAIN LINE OFF AIR RELEASE VALVES TO NEAREST FLOOR DRAIN. HANG DRAIN LINES OFF EQUIPMENT PLATFORM.
 - 1" SEWAGE AIR RELEASE VALVE PER DETAIL P242/TYP.
 - MANUAL DIVERTER GATE IN GRIT CHUTES. PROVIDE MANUAL LEVER ARM TO SWITCH GATE POSITION.
 - PROVIDE ACCESS HATCH NEAR DIVERTER GATE FOR MAINTENANCE.
 - GRIT CHUTE MANUFACTURER TO PROVIDE A RUBBER/EPDM TRANSITION PEICE FROM THE GRIT CHUTES TO THE BIN. THE TRANSITION PEICE IS HARD CONNECTED TO THE GRIT CHUTE AND EXTENDS INTO THE BINS FOR GRIT TO FALL FREELY. BINS CAN BE ROLLED OUT FREELY WITHOUT DISCONNECTING ANY PART OF THE GRIT CHUTE.

F SECTION
 21M-01 SCALE: 1/4" = 1'-0"
 FILE: 10548A10_21M303

□ DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS

REV	DATE	BY	DESCRIPTION

DESIGNED
RWB
 DRAWN
JRL
 CHECKED
TL
 DATE
MARCH 2019



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
 MECHANICAL
GRIT HANDLING FACILITY
SECTIONS AND DETAILS 2

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M21-05
	SHEET NO. 134 OF 159

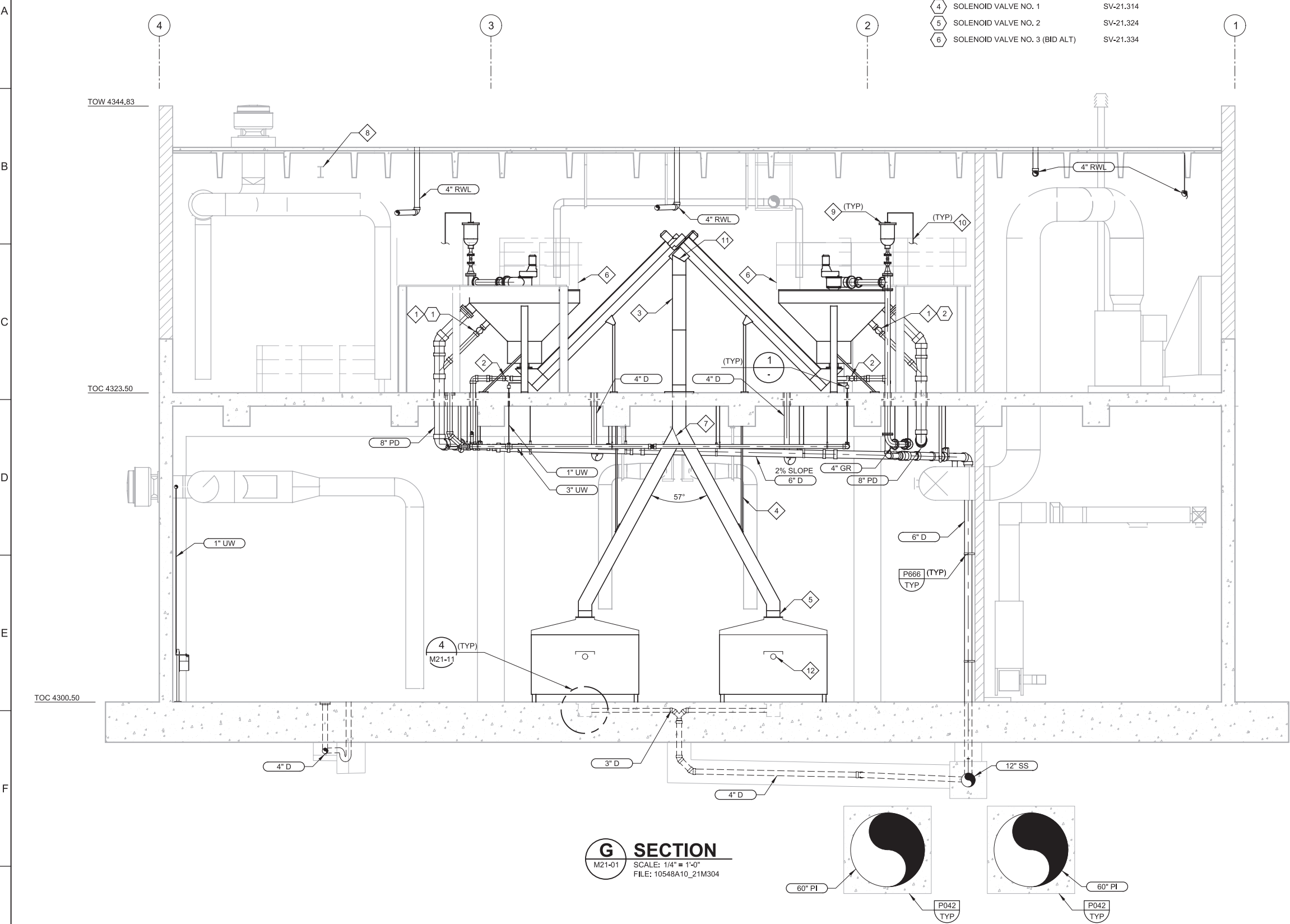
Plot Date: 27-FEB-2019 2:42:24 PM

User: svcBW

PlotScale: 2:1

LAST SAVED BY: ascheale

1 2 3 4 5 6 7 8 9 10 11 12 13

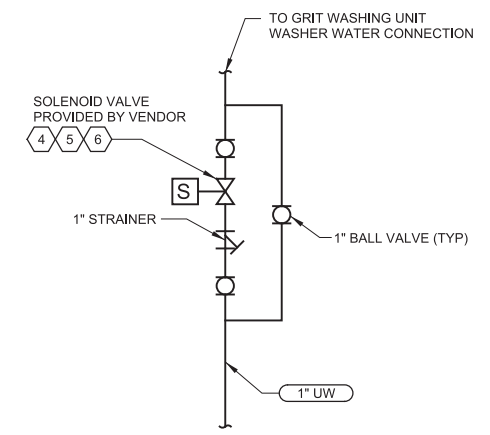


KEY TAGS:

1	ORGANIC DRAIN VALVE	VAL-21.312
2	ORGANIC DRAIN VALVE	VAL-21.322
3	ORGANIC DRAIN VALVE (BID ALT)	VAL-21.332
4	SOLENOID VALVE NO. 1	SV-21.314
5	SOLENOID VALVE NO. 2	SV-21.324
6	SOLENOID VALVE NO. 3 (BID ALT)	SV-21.334

- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASMENT IS SHOWN OR NOT.
 - ALL GRIT PIPING (GR) SHALL BE GLASS LINED DUCTILE IRON PIPE. NO REGULAR 90° BENDS ALLOWED. ALL FITTINGS TO BE 45°, 22.5° OR LONG RADIUS 90° BENDS. GRIT PIPING SHOULD BE GROOVED END WHERE POSSIBLE.
 - NOT ALL PIPE SUPPORTS ARE SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATIONS.

- KEY NOTES:**
- 4" ORGANICS DRAIN VALVE TO BE PROVIDED BY GRIT WASHING MANUFACTURER. VALVE FOR UNIT NO. 3 NOT SHOWN.
 - 3" RESIDUAL OUTLET WITH PVC BALL VALVE AND FEMALE THREAD BY MANUFACTURER. CONTRACTOR TO THREAD PVC MALE CONNECTOR.
 - GRIT WASHER MANUFACTURER TO PROVIDE 316 STAINLESS STEEL CHUTE FOR GRIT DISPOSAL TO BINS.
 - MANUFACTURER TO PROVIDE 304 SST SUPPORTS FOR GRIT CHUTE.
 - RUBER END TO ALLOW GRIT TO FALL INTO BIN. GRIT CHUTE IS NOT PHYSICALLY CONNECTED TO GRIT BIN.
 - GRIT WASHER MANUFACTURER TO PROVIDE WELDED BRACKETS FOR GUARDRAIL PER SPECIFICATION 11324. CONTRACTOR TO COORDINATE WITH GRIT WASHER MANUFACTURER FOR LOCATION OF BRACKETS AND INSTALL CIRCULAR 3 RAIL GUARDRAIL PER DETAIL A343/TYP.
 - MANUAL DIVERTER GATE. PROVIDE PULL LEVELS THAT COME 6'-0" AFF. TYPICAL OF 2 FOR BASE BID.
 - TWO-TON MONORAIL. SEE STRUCTURAL DRAWINGS.
 - 2" SEWAGE AIR RELEASE VALVE PER DETAIL P242/TYP.
 - RUN DRAIN LINE OFF AIR RELEASE VALVE TO NEAREST FLOOR DRAIN.
 - CONTRACTOR TO COORDINATE WITH GRIT CHUTE AND GRIT WASHER MANUFACTURER FOR FLANGE CONNECTION TRANSITION BETWEEN CHUTES AND GRIT WASHER.
 - GRIT BIN MANUFACTURER TO COORDINATE WITH REPUBLIC SERVICES FOR ROLL OFF BIN AND TRUCK CONNECTION.



G SECTION
M21-01 SCALE: 1/4" = 1'-0"
FILE: 10548A10_21M304

1 WASHER WATER FEED DETAIL
SCALE: NO SCALE
FILE: 10548A10_21M401

REV	DATE	BY	DESCRIPTION

DESIGNED RYB
DRAWN JRL
CHECKED TL
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 10171558-2202
RYAN W. BENCH
STATE OF UTAH

REGISTERED PROFESSIONAL ENGINEER
No. 4775621-2202
BRAD D. JEPSON
STATE OF UTAH



SV South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
MECHANICAL
GRIT HANDLING FACILITY
SECTIONS AND DETAILS 3

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. M21-06
SHEET NO. 135 OF 159

Plot Date: 27-FEB-2019 2:42:23 PM

User: svcPW

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

LAST SAVED BY: ascheale

GENERAL NOTES:

- FOR GENERAL MECHANICAL NOTES SEE GM-01.
- CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASEMENT IS SHOWN OR NOT.
- NOT ALL PIPE SUPPORTS SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATIONS.

KEY NOTES:

- SUPPORT PIPES ON THE WALL PER DETAIL P660/TYP AND P662/TYP.
- RUN 1/2" SW LINES THROUGH THE CONCRETE SLAB TO GRIT PUMPS. SEE DWG M21-01 FOR CONTINUATION.
- LONG RADIUS 90° BEND. TYP OF 3.
- SHOULD ABI #3 NOT BE EXERCISED BY OWNER BRING 4" PD LINE THROUGH THE FLOOR AND BLIND FLANGE. ALSO RUN 1/2" SW LINES IN THE SLAB, BRING ABOVE FLOOR AND CAP.

KEY NOTES:

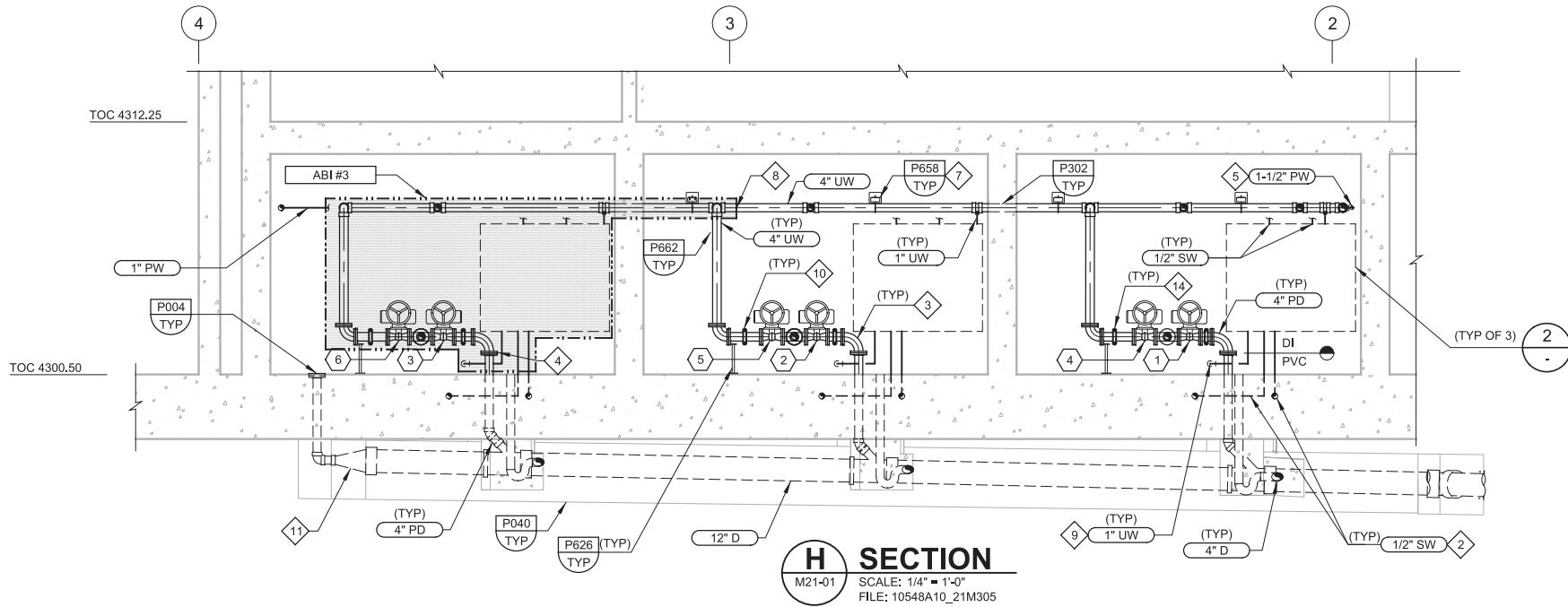
- RUN 1-1/2" PW LINE BEHIND UW LINE. PW HEADER IS NOT A PART OF ABI #3.
- STEEL x STEEL FLANGE CONNECTION
- SUPPORT 4" UW LINE AND 1-1/2" PW LINE OFF WALL ON THE SAME PIPE SUPPORT OR SIMILAR.
- SHOULD ABI #3 NOT BE EXERCISED BY OWNER. CAP 4" UW TEE.
- LOCATION OF 1" UW LINE THROUGH THE WALL PER GRIT REMOVAL MANUFACTURER, TYP.

KEY NOTES:

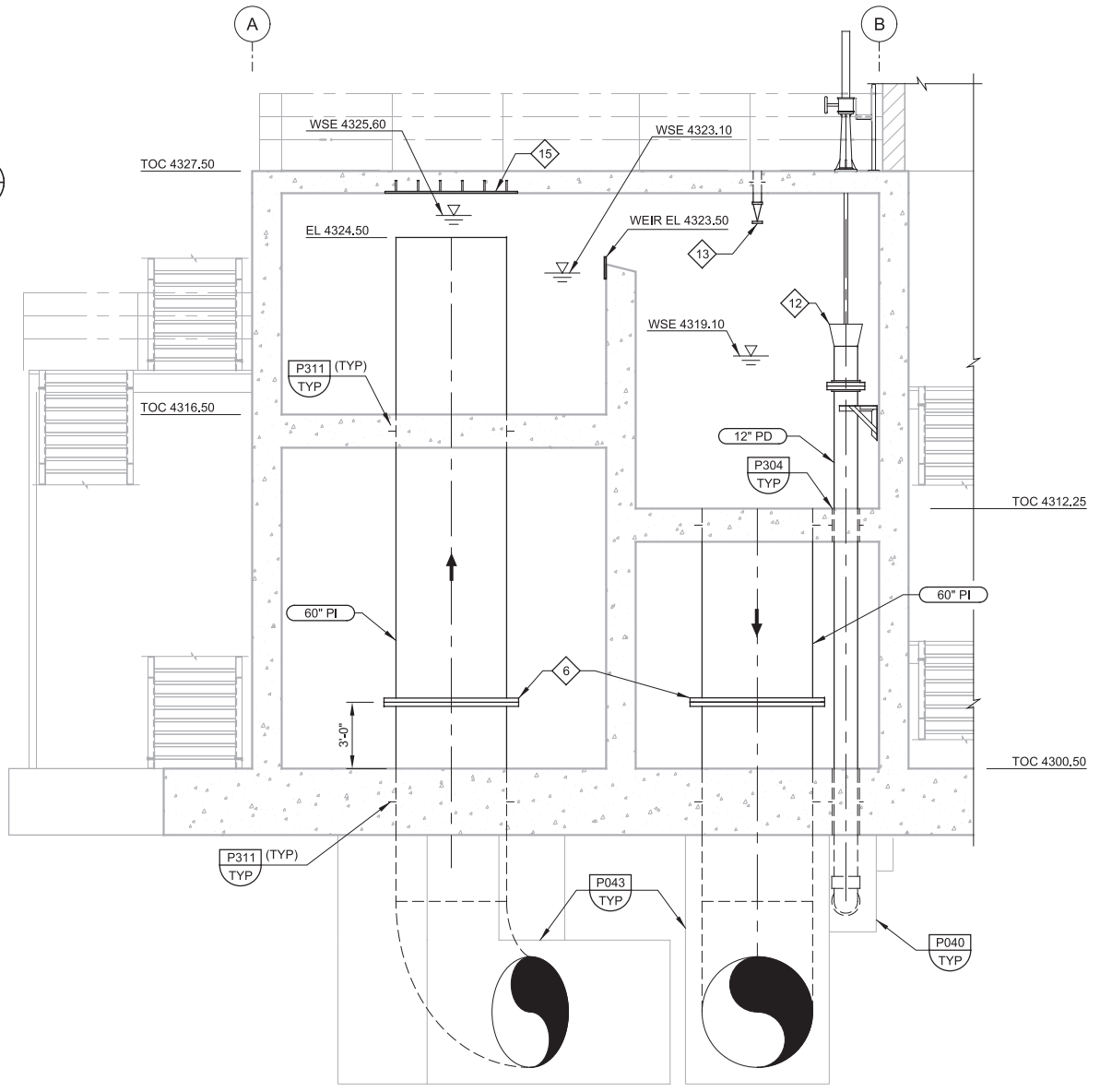
- GROOVED TYPE COUPLING
- 4" x 12" INCREASER
- 12" TELESCOPING VALVE WITH 16" CONE
- 4" DUCKBILL CHECK VALVE
- VICTAULIC COUPLING
- SEE STRUCTURAL DRAWINGS FOR 6"x6" SST PLATES EMBEDDED IN SLAB ABOVE 60" PI LINES.
- ROTOMETER PROVIDED BY GRIT REMOVAL MANUFACTURER.

KEY TAGS:

- | | | |
|---|--|------------|
| 1 | GRIT BASIN NO. 1 DRAIN VALVE | VAL-21.116 |
| 2 | GRIT BASIN NO. 2 DRAIN VALVE | VAL-21.126 |
| 3 | GRIT BASIN NO. 3 DRAIN VALVE (BID ALT) | VAL-21.136 |
| 4 | GRIT BASIN NO. 1 FILL VALVE | VAL-21.115 |
| 5 | GRIT BASIN NO. 2 FILL VALVE | VAL-21.125 |
| 6 | GRIT BASIN NO. 3 FILL VALVE (BID ALT) | VAL-21.135 |



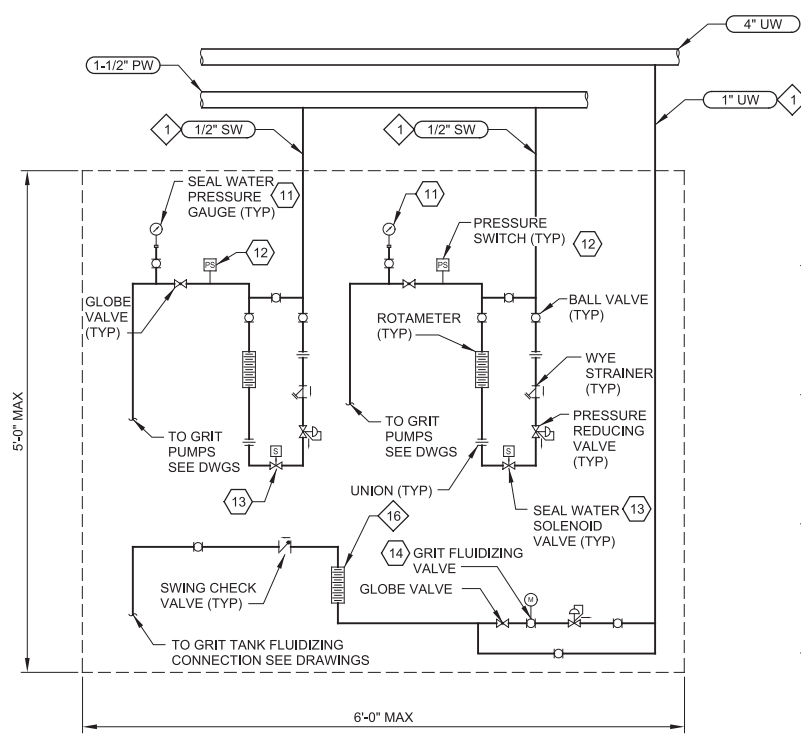
H SECTION
M21-01 SCALE: 1/4" = 1'-0"
FILE: 10548A10_21M305



J SECTION
M21-01 SCALE: 1/4" = 1'-0"
FILE: 10548A10_21M306

DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS

2 SEAL WATER AND GRIT TANK FLUIDIZING PANEL
SCALE: NO SCALE
FILE: 10548A10_21M401



- KEY TAGS:**
- | | | |
|----|--------------------------------|------------|
| 11 | SEAL WATER PRESSURE INDICATORS | PI-21.218 |
| | GRIT PUMP NO. 1 | PI-21.228 |
| | GRIT PUMP NO. 2 | PI-21.238 |
| | GRIT PUMP NO. 3 | PI-21.248 |
| | GRIT PUMP NO. 4 | PI-21.258 |
| | GRIT PUMP NO. 5 (BID ALT) | PI-21.268 |
| | GRIT PUMP NO. 6 (BID ALT) | |
| 12 | LOW FLOW PRESSURE SWITCH | FE-21.216 |
| | GRIT PUMP NO. 1 | FE-21.226 |
| | GRIT PUMP NO. 2 | FE-21.236 |
| | GRIT PUMP NO. 3 | FE-21.246 |
| | GRIT PUMP NO. 4 | FE-21.256 |
| | GRIT PUMP NO. 5 (BID ALT) | FE-21.266 |
| | GRIT PUMP NO. 6 (BID ALT) | |
| 13 | SEAL WATER SOLENOID VALVES | SV-21.214 |
| | GRIT PUMP NO. 1 | SV-21.224 |
| | GRIT PUMP NO. 2 | SV-21.234 |
| | GRIT PUMP NO. 3 | SV-21.244 |
| | GRIT PUMP NO. 4 | SV-21.254 |
| | GRIT PUMP NO. 5 (BID ALT) | SV-21.264 |
| | GRIT PUMP NO. 6 (BID ALT) | |
| 14 | GRIT FLUIDIZING VALVES | VAL-21.113 |
| | GRIT BASIN NO. 1 | VAL-21.123 |
| | GRIT BASIN NO. 2 | VAL-21.133 |
| | GRIT BASIN NO. 3 (BID ALT) | |

REV	DATE	BY	DESCRIPTION

DESIGNED RWB	
DRAWN JRL	
CHECKED TL	
DATE MARCH 2019	



SV South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
MECHANICAL
GRIT HANDLING FACILITY
SECTIONS AND DETAILS 4

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M21-07
	SHEET NO. 136 OF 159

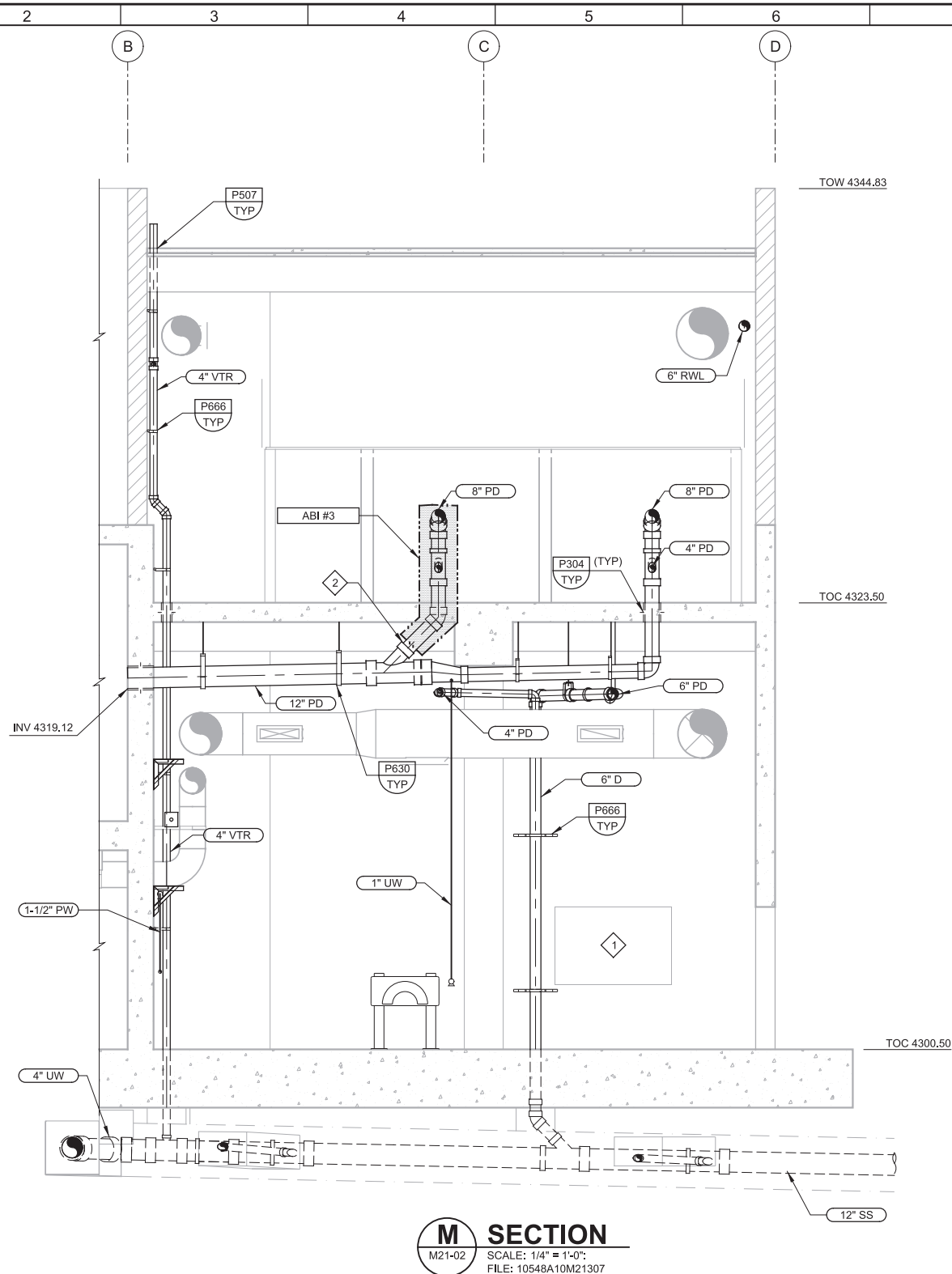
Plot Date: 27-FEB-2019 2:42:45 PM

User: svcPW

PlotScale: 2:1

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

LAST SAVED BY: ascheele



M SECTION
 M21-02 SCALE: 1/4" = 1'-0"
 FILE: 10548A10M21307

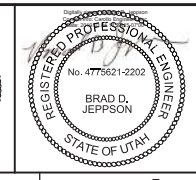
- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE DRAWING GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASEMENT IS SHOWN OR NOT.
 - SLOPE ALL DRAIN LINES AT A MINIMUM OF 2% OR 1/4" PER FOOT.
 - NOT ALL PIPE SUPPORTS SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATIONS.

- KEY NOTES:**
- WINDOW INTO ELECTRICAL ROOM. SEE ARCHITECTURAL DRAWINGS.
 - SHOULD ALTERNATE BID ITEM NO. 3 NOT BE EXERCISED, CAP WYE.

⬡ DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS

REV	DATE	BY	DESCRIPTION

DESIGNED
RYB
 DRAWN
JRL
 CHECKED
TL
 DATE
MARCH 2019



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
**GRIT HANDLING FACILITY
 SECTIONS AND DETAILS 5**

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

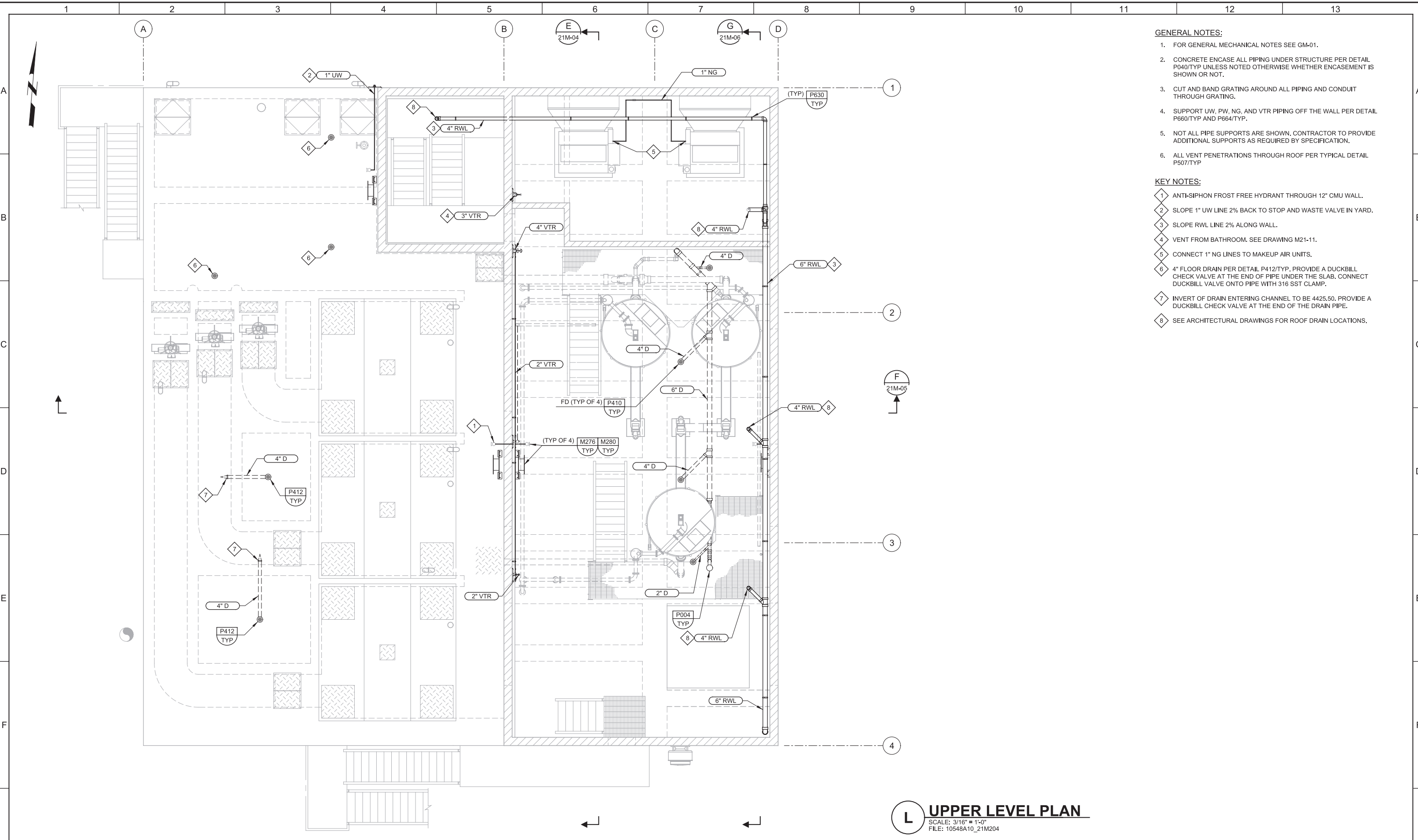
JOB NO.
10548A.10
 DRAWING NO.
M21-08
 SHEET NO.
137 OF 159

Plot Date: 27-FEB-2019 2:42:40 PM

User: svcPW

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

LAST SAVED BY: ascheale



- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP UNLESS NOTED OTHERWISE WHETHER ENCASEMENT IS SHOWN OR NOT.
 - CUT AND BAND GRATING AROUND ALL PIPING AND CONDUIT THROUGH GRATING.
 - SUPPORT UW, PW, NG, AND VTR PIPING OFF THE WALL PER DETAIL P660/TYP AND P664/TYP.
 - NOT ALL PIPE SUPPORTS ARE SHOWN, CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATION.
 - ALL VENT PENETRATIONS THROUGH ROOF PER TYPICAL DETAIL P507/TYP

- KEY NOTES:**
- ANTI-SIPHON FROST FREE HYDRANT THROUGH 12" CMU WALL.
 - SLOPE 1" UW LINE 2% BACK TO STOP AND WASTE VALVE IN YARD.
 - SLOPE RWL LINE 2% ALONG WALL.
 - VENT FROM BATHROOM. SEE DRAWING M21-11.
 - CONNECT 1" NG LINES TO MAKEUP AIR UNITS.
 - 4" FLOOR DRAIN PER DETAIL P412/TYP. PROVIDE A DUCKBILL CHECK VALVE AT THE END OF PIPE UNDER THE SLAB. CONNECT DUCKBILL VALVE ONTO PIPE WITH 316 SST CLAMP.
 - INVERT OF DRAIN ENTERING CHANNEL TO BE 4425.50. PROVIDE A DUCKBILL CHECK VALVE AT THE END OF THE DRAIN PIPE.
 - SEE ARCHITECTURAL DRAWINGS FOR ROOF DRAIN LOCATIONS.

L UPPER LEVEL PLAN
 SCALE: 3/16" = 1'-0"
 FILE: 10548A10_21M204

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED
RWB

DRAWN
JRL

CHECKED
TL

DATE
MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 10171558-2202
RYAN W. BENCH
STATE OF UTAH

REGISTERED PROFESSIONAL ENGINEER
No. 4775621-2202
BRAD D. JEPSON
STATE OF UTAH



SV South Valley
 WATER RECLAMATION FACILITY

7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
 GRIT HANDLING FACILITY
 UPPER LEVEL PLUMBING AND DRAINAGE PLAN

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M21-10
	SHEET NO. 139 OF 159

Plot Date: 27-FEB-2019 2:42:35 PM

User: svcPW

PlotScale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Sld_Pen_v0905.pen

LAST SAVED BY: ascheale

1 2 3 4 5 6 7 8 9 10 11 12 13

A

B

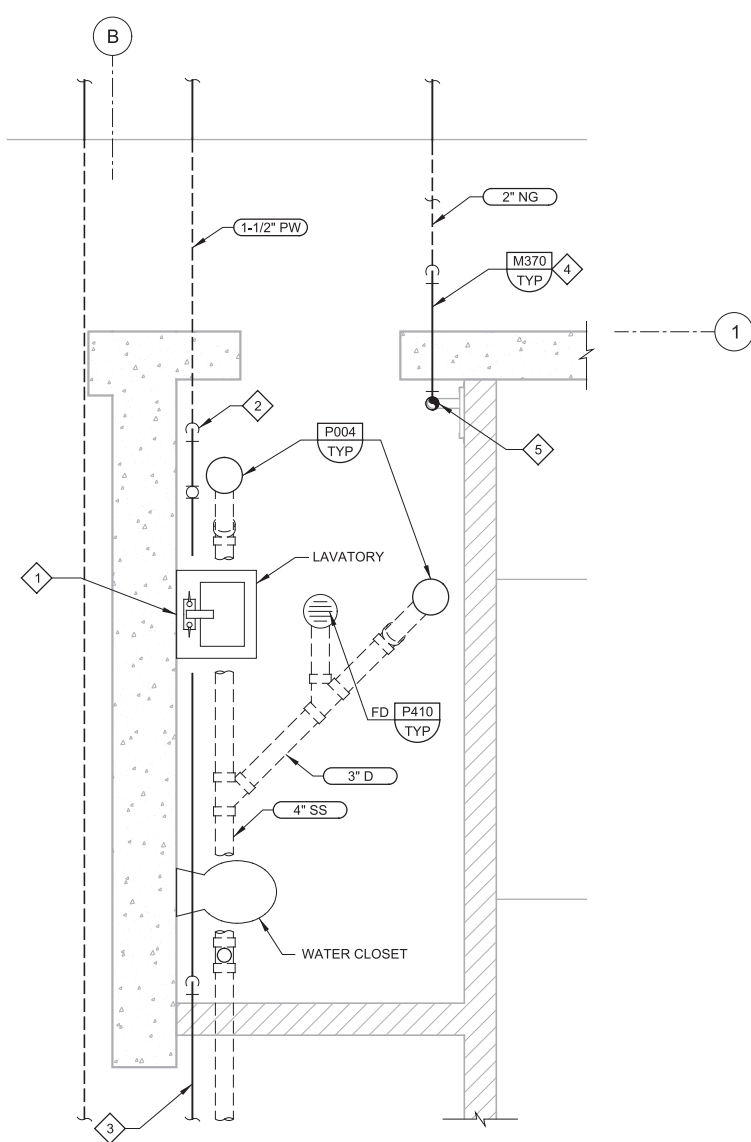
C

D

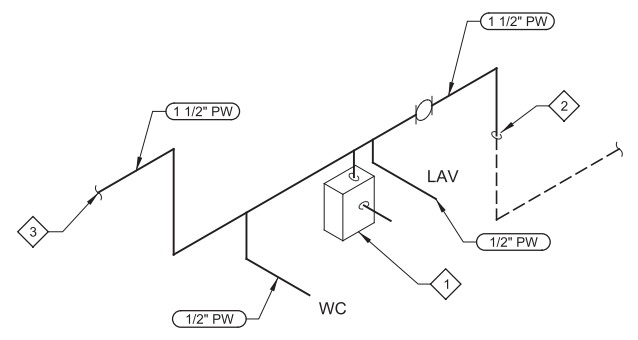
E

F

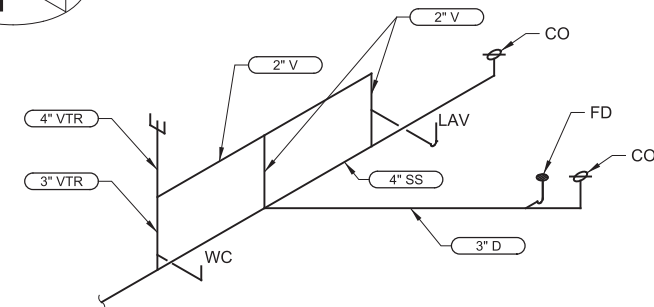
G



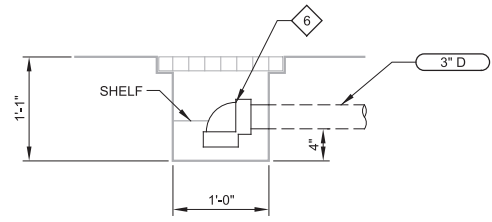
3 RESTROOM PARTIAL PLAN
M21-09 SCALE: 1/2" = 1'-0"
FILE: 10548A10M21201



POTABLE WATER ISOMETRIC
SCALE: NTS
FILE: 10548A10M21203



SANITARY SEWER ISOMETRIC
SCALE: NTS
FILE: 10548A10M21202



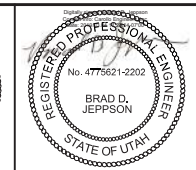
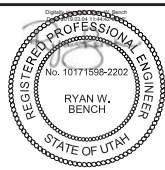
4 DETAIL
M21-06 SCALE: 1" = 1'-0"
FILE: 10548A10M21401

- GENERAL NOTES:**
- FOR GENERAL MECHANICAL NOTES SEE DRAWING GM-01.
 - CONCRETE ENCASE ALL PIPING UNDER STRUCTURE PER DETAIL P040/TYP WHETHER ENCASMENT IS SHOWN OR NOT.
 - SLOPE ALL DRAIN LINES AT A MINIMUM OF 2% OR 1/4" PER FOOT.
 - ALL ABOVE GRADE PIPING SHALL BE EXPOSED IN THE RESTROOM AND SUPPORTED PER DETAIL P660/TYP OR P662/TYP.
 - NOT ALL PIPE SUPPORTS SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY SPECIFICATIONS.

- KEY NOTES:**
- TANKLESS ELECTRICAL WATER HEATER MOUNTED ON WALL BELOW LAVATORY. INSULATE HOT WATER LINE TO LAVATORY.
 - BRING 1-1/2" PW LINE THROUGH FLOOR AND ROUTE ALONG WALL EXPOSED.
 - CONTINUE WATER LINE IN THE BUILDING. SEE DWG M21-09 FOR CONTINUATION.
 - PROVIDE NATURAL GAS METER ANODELESS RISER SHUTOFF VALVE AND PSI REGULATOR. SEE SPECIFICATION SECTION 15118. 1000 MBH SET PRESSURE TO 12" W.C.
 - RUN NG LINE ON WALL TO HVAC ROOM.
 - REMOVEABLE 90° BEND PVC FITTING FOR CLEANING. DO NOT SOLVENT WELD FITTING.

REV	DATE	BY	DESCRIPTION

DESIGNED
RYB
DRAWN
JRL
CHECKED
TL
DATE
MARCH 2019



SV South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
MECHANICAL
GRIT HANDLING FACILITY
PLUMBING AND DRAINAGE DETAILS

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.
M21-11
SHEET NO.
140 OF 159

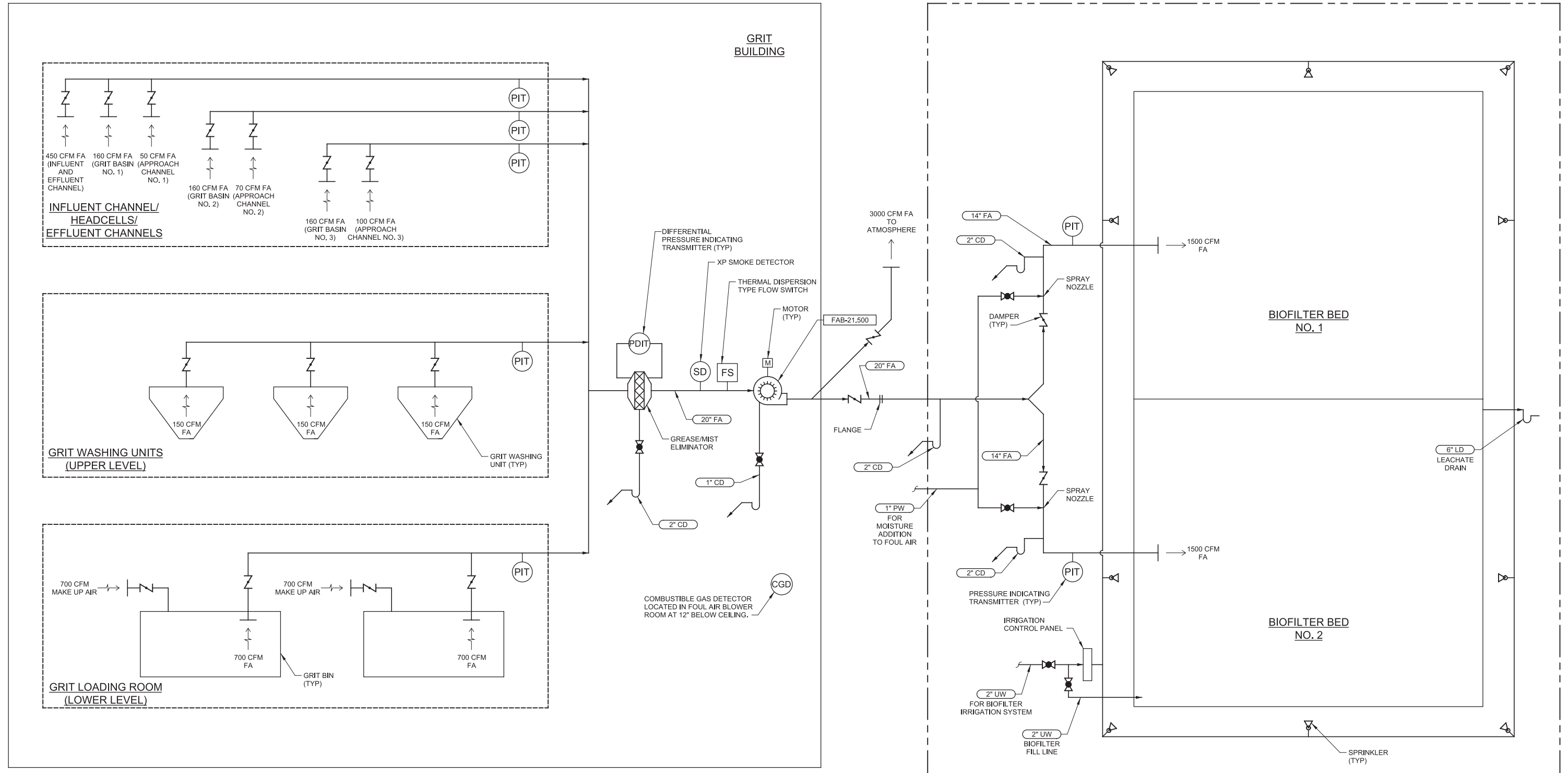
Plot Date: 27-FEB-2019 2:42:13 PM

User: svcBW

PlotScale: 2:1

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

BID ALTERNATE NO. 4 REFER TO SECTION 01230



REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED
CAG

DRAWN
KHB

CHECKED
JEA

DATE
MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
CHAD A. GREEN
No. 10396275-2202
STATE OF UTAH

REGISTERED PROFESSIONAL ENGINEER
BRAD D. JEPSON
No. 4775621-2202
STATE OF UTAH



SV South Valley
WATER RECLAMATION FACILITY

7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
HVAC
GRIT HANDLING FACILITY ODOR CONTROL
PROCESS FLOW SCHEMATIC

VERIFY SCALES
JOB NO. 10548A.10
DRAWING NO. M21-12
SHEET NO. 141 OF 159

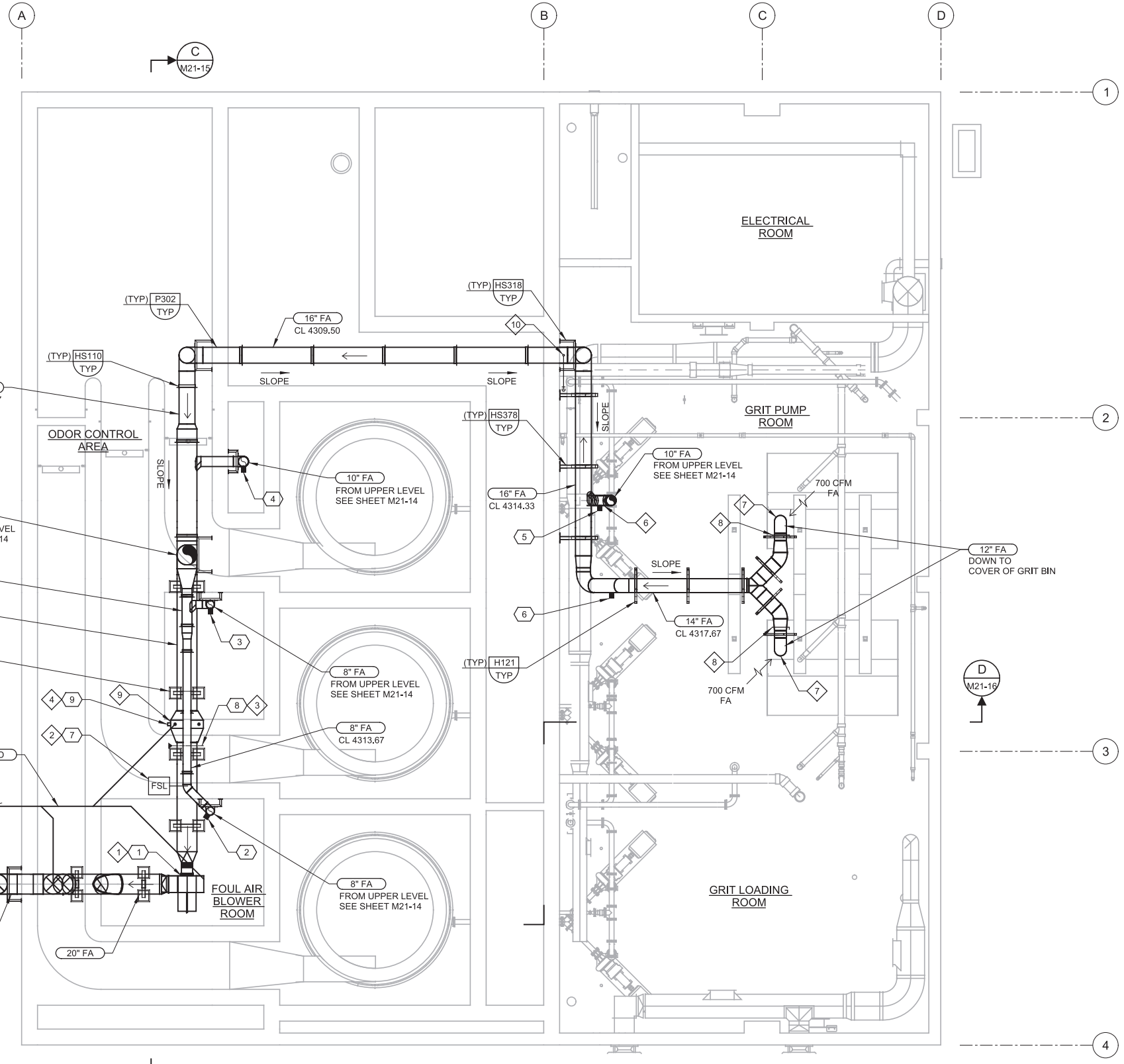
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

Plot Date: 27-FEB-2019 2:42:08 PM

User: svcPW

PlotScale: 2:1

LAST SAVED BY: jscheele



GENERAL NOTES

1. ALL ABOVE GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE COATED STAINLESS STEEL PER SECTION 15816. DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA CHAPTER 13 AND THE TYPICAL DETAILS AS INDICATED.
2. ALL BELOW GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE FRP PER SECTION 15814.

KEY NOTES

- 1 FOUL AIR BLOWER FAN MOUNTED ON SPRING VIBRATION ISOLATOR RAILS, PROVIDE FLEXIBLE CONNECTIONS (FL-3) ON FAN INLET AND FAN OUTLET. FAN SCHEDULE ON SHEET GH-03.
- 2 THERMAL DISPERSION TYPE FLOW SWITCH MOUNTED ON DUCT. REFER TO SECTION 17301.
- 3 EXPLOSION PROOF DUCT SMOKE DETECTOR, REFER TO SECTION 15936.
- 4 PRESSURE DIFFERENTIAL INDICATING TRANSMITTER TO MEASURE DIFFERENTIAL PRESSURE ACROSS THE GREASE/MIST ELIMINATOR. REFER TO SECTION 17406.
- 5 TERMINATE 20\"/>

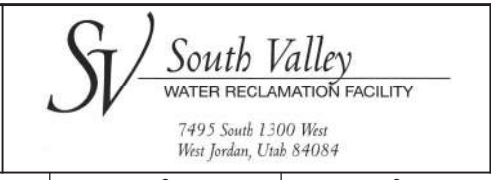
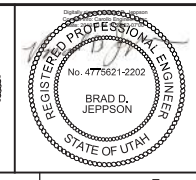
KEY TAGS:

- | | | |
|---|--|-------------|
| 1 | FOUL AIR BLOWER NO. 1 | FAB-21.500 |
| 2 | PRESSURE INDICATING TRANSMITTER NO. 1 | PIT-21.511 |
| 3 | PRESSURE INDICATING TRANSMITTER NO. 2 | PIT-21.512 |
| 4 | PRESSURE INDICATING TRANSMITTER NO. 3 | PIT-21.513 |
| 5 | PRESSURE INDICATING TRANSMITTER NO. 4 | PIT-21.514 |
| 6 | PRESSURE INDICATING TRANSMITTER NO. 5 | PIT-21.515 |
| 7 | THERMAL DISPERSION AIRFLOW SWITCH NO. 1 | FSL-21.502 |
| 8 | DUCT XP SMOKE DETECTOR NO. 1 | XSH-21.504 |
| 9 | PRESSURE DIFFERENTIAL INDICATING TRANSMITTER NO. 1 | PDIT-21.503 |

A LOWER LEVEL PLAN
 SCALE: 3/16" = 1'-0"
 FILE: 10548A10_21M_111

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED
DCB
 DRAWN
KHB
 CHECKED
JEA
 DATE
MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
 GRIT HANDLING FACILITY ODOR CONTROL
 LOWER LEVEL PLAN

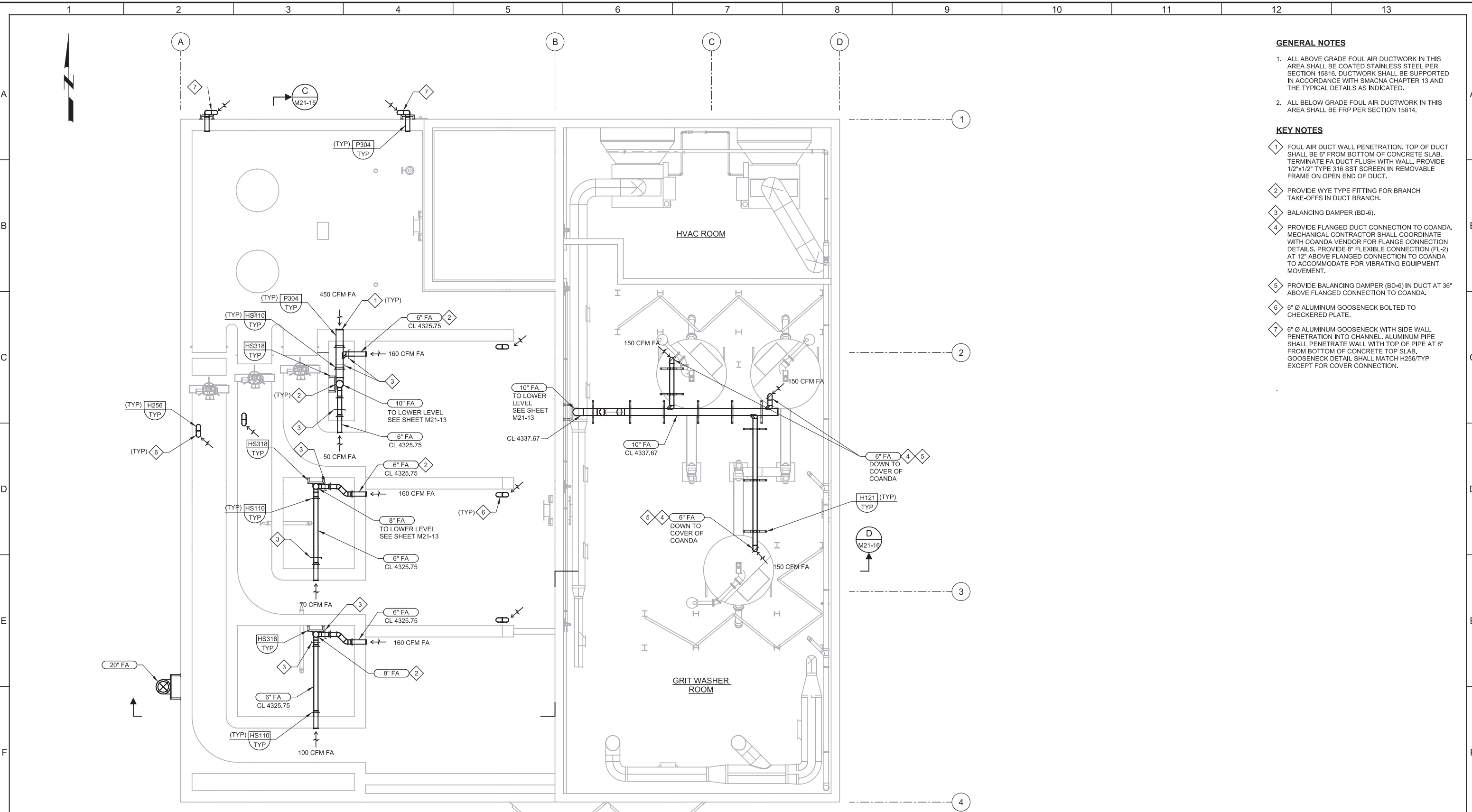
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M21-13
	SHEET NO. 142 OF 159

Plot Date: 27-FEB-2019 2:42:09 PM

User: svcBW

PlotScale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen



B UPPER LEVEL PLAN
 SCALE: 3/16" = 1'-0"
 FILE: 10548A10_21M112

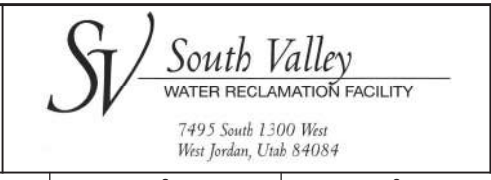
- GENERAL NOTES**
- ALL ABOVE GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE COATED STAINLESS STEEL PER SECTION 15816. DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA CHAPTER 13 AND THE TYPICAL DETAILS AS INDICATED.
 - ALL BELOW GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE FRP PER SECTION 15814.

- KEY NOTES**
- FOUL AIR DUCT WALL PENETRATION. TOP OF DUCT SHALL BE 6" FROM BOTTOM OF CONCRETE SLAB. TERMINATE FA DUCT FLUSH WITH WALL. PROVIDE 1/2"x1/2" TYPE 316 SST SCREEN IN REMOVABLE FRAME ON OPEN END OF DUCT.
 - PROVIDE WYE TYPE FITTING FOR BRANCH TAKE-OFFS IN DUCT BRANCH.
 - BALANCING DAMPER (BD-6).
 - PROVIDE FLANGED DUCT CONNECTION TO COANDA. MECHANICAL CONTRACTOR SHALL COORDINATE WITH COANDA VENDOR FOR FLANGE CONNECTION DETAILS. PROVIDE 8" FLEXIBLE CONNECTION (FL-2) AT 12" ABOVE FLANGED CONNECTION TO COANDA TO ACCOMMODATE FOR VIBRATING EQUIPMENT MOVEMENT.
 - PROVIDE BALANCING DAMPER (BD-6) IN DUCT AT 36" ABOVE FLANGED CONNECTION TO COANDA.
 - 6" Ø ALUMINUM GOOSENECK BOLTED TO CHECKERED PLATE.
 - 6" Ø ALUMINUM GOOSENECK WITH SIDE WALL PENETRATION INTO CHANNEL. ALUMINUM PIPE SHALL PENETRATE WALL WITH TOP OF PIPE AT 6" FROM BOTTOM OF CONCRETE TOP SLAB. GOOSENECK DETAIL SHALL MATCH H256/TYP EXCEPT FOR COVER CONNECTION.

REV	DATE	BY	DESCRIPTION

DESIGNED DCB	
DRAWN KHB	
CHECKED JEA	
DATE MARCH 2019	

--



SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
 GRIT HANDLING FACILITY ODOR CONTROL
 UPPER LEVEL PLAN

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M21-14
	SHEET NO. 143 OF 159

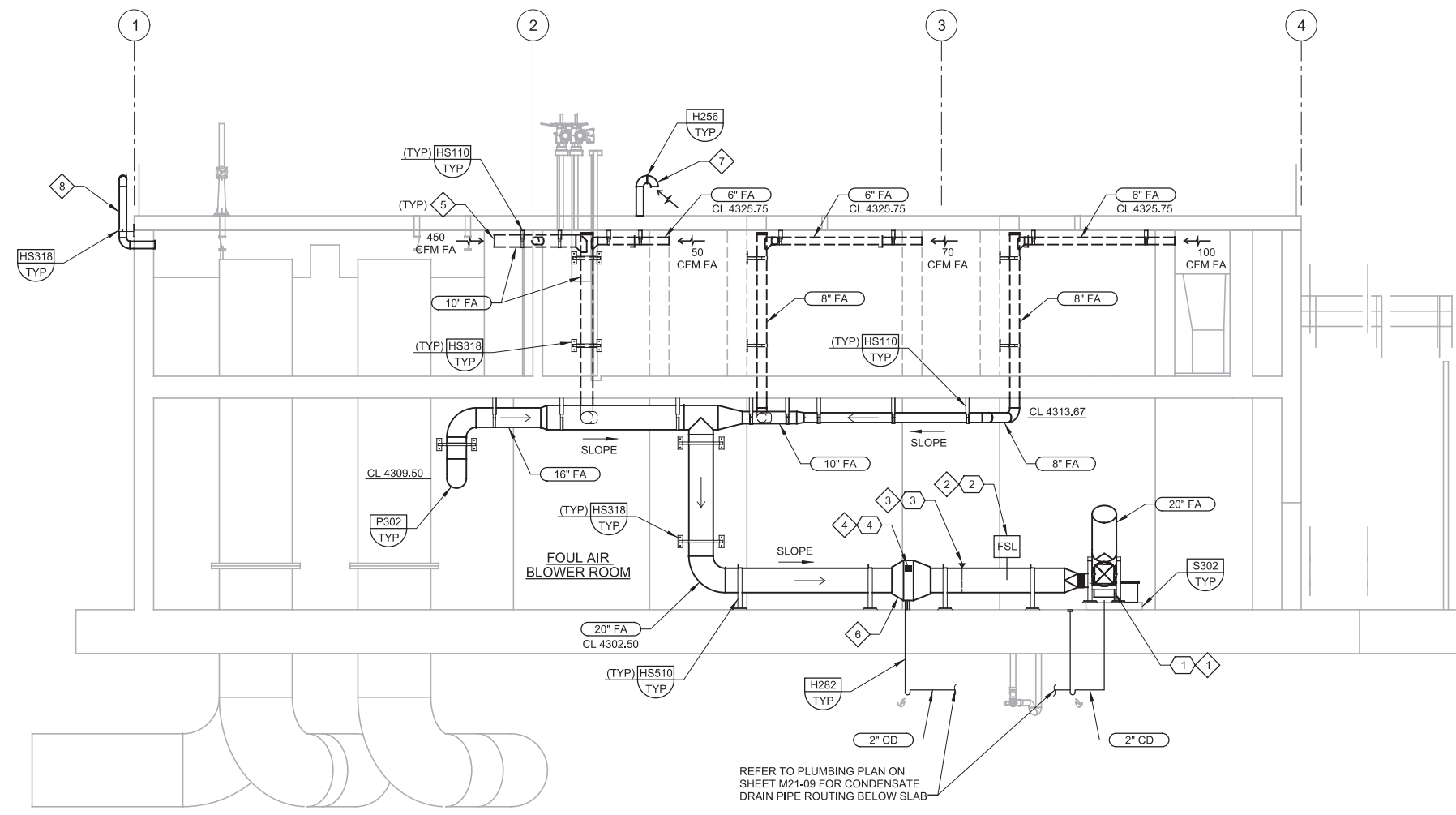
Plot Date: 27-FEB-2019 2:42:12 PM

User: svcBW

Plot Scale: 2:1

Model: Layout1

Last Saved By: ascheale



C SECTION
 M21-13 SCALE: 3/16" = 1'-0"
 FILE: 10548A10M21311

GENERAL NOTES

1. ALL ABOVE GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE COATED STAINLESS STEEL PER SECTION 15816. DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA CHAPTER 13 AND THE TYPICAL DETAILS AS INDICATED.
2. ALL BELOW GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE FRP PER SECTION 15814.

KEY NOTES

- 1 FOUL AIR BLOWER FAN MOUNTED ON SPRING VIBRATION ISOLATOR RAILS, PROVIDE FLEXIBLE CONNECTIONS (FL-3) ON FAN INLET AND FAN OUTLET.
- 2 THERMAL DISPERSION TYPE FLOW SWITCH MOUNTED ON DUCT. REFER TO SECTION 17301.
- 3 EXPLOSION PROOF DUCT SMOKE DETECTOR, REFER TO SECTION 15936.
- 4 PRESSURE DIFFERENTIAL INDICATING TRANSMITTER TO MEASURE DIFFERENTIAL PRESSURE ACROSS THE FILTER. REFER TO SECTION 17406.
- 5 FOUL AIR DUCT WALL PENETRATION. TOP OF DUCT SHALL BE 6" FROM TOP OF CONCRETE. TERMINATE FA DUCT FLUSH WITH WALL. PROVIDE 1/2"x1/2" TYPE 316 SST SCREEN IN REMOVABLE FRAME ON OPEN END OF DUCT.
- 6 GREASE/MIST ELIMINATOR. PROVIDE CONDENSATE DRAIN ON BOTTOM PER DETAIL. REFER TO SECTION 13251.
- 7 6" Ø ALUMINUM GOOSENECK BOLTED TO CHECKERED PLATE.
- 8 6" Ø ALUMINUM GOOSENECK WITH SIDE WALL PENETRATION INTO CHANNEL. ALUMINUM PIPE SHALL PENETRATE WALL WITH TOP OF PIPE AT 6" FROM BOTTOM OF CONCRETE TOP SLAB. GOOSENECK DETAIL SHALL MATCH H256/TYP EXCEPT FOR COVER CONNECTION.

KEY TAGS:

- | | | |
|---|--|-------------|
| 1 | FOUL AIR BLOWER NO. 1 | FAB-21.500 |
| 2 | THERMAL DISPERSION AIRFLOW SWITCH NO. 1 | FSL-21.502 |
| 3 | DUCT XP SMOKE DETECTOR NO. 1 | XSH-21.504 |
| 4 | PRESSURE DIFFERENTIAL INDICATING TRANSMITTER NO. 1 | PDIT-21.503 |

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED
DCB

DRAWN
KHB

CHECKED
JEA

DATE
MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
CHAD A. GREEN
No. 10396275-2202
STATE OF UTAH

REGISTERED PROFESSIONAL ENGINEER
BRAD D. JEPSON
No. 4775621-2202
STATE OF UTAH



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
 PROJECT 5
 MECHANICAL
 GRIT HANDLING FACILITY ODOR CONTROL
 SECTIONS 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.
M21-15

SHEET NO.
144 OF 159

Plot Date: 27-FEB-2019 2:42:16 PM

User: svcPW

PlotScale: 2:1

Model: Layout1

ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen

1 2 3 4 5 6 7 8 9 10 11 12 13

A

B

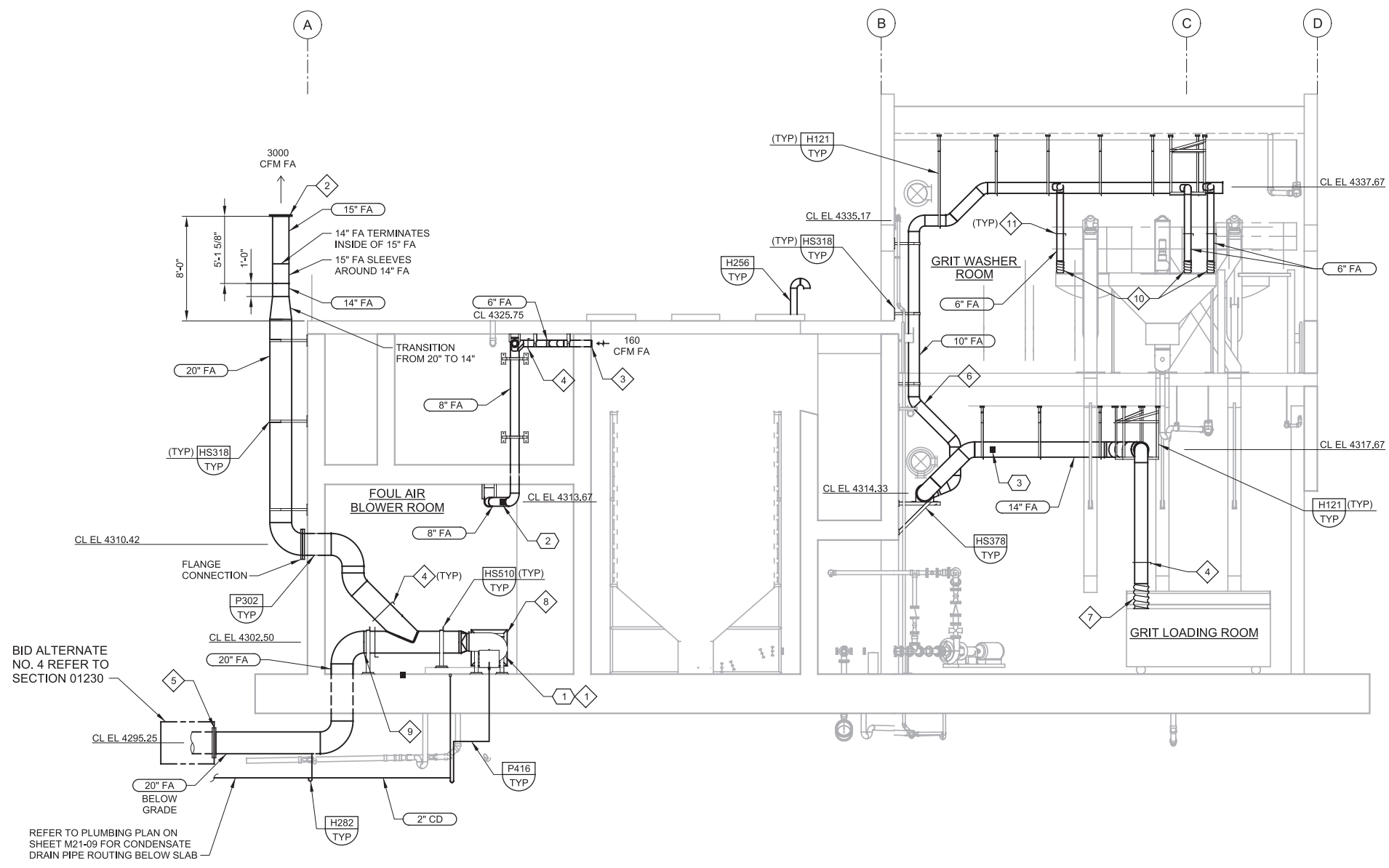
C

D

E

F

G



GENERAL NOTES

1. ALL ABOVE GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE COATED STAINLESS STEEL PER SECTION 15816. DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA CHAPTER 13 AND THE TYPICAL DETAILS AS INDICATED.
2. ALL BELOW GRADE FOUL AIR DUCTWORK IN THIS AREA SHALL BE FRP PER SECTION 15814.

KEY NOTES

- 1 FOUL AIR BLOWER FAN MOUNTED ON SPRING VIBRATION ISOLATOR RAILS, PROVIDE FLEXIBLE CONNECTIONS (FL-3) ON FAN INLET AND FAN OUTLET.
- 2 NO LOSS FOUL AIR EXHAUST STACK. CONSTRUCT STACK TO MATCH EXACT DIMENSIONS SHOWN. END OF DUCT SHALL BE PROVIDED WITH ANGLE RING FOR GUY WIRE TIES.
- 3 FOUL AIR DUCT WALL PENETRATION. TOP OF DUCT SHALL BE 6" FROM TOP OF CONCRETE. TERMINATE FA DUCT FLUSH WITH WALL, PROVIDE 1/2"x1/2" TYPE 316 SST SCREEN IN REMOVABLE FRAME ON OPEN END OF DUCT.
- 4 BALANCING DAMPER (BD-6).
- 5 TERMINATE 20" FRP FOUL AIR DUCT BELOW GRADE WITH A BLIND FLANGE. DUCT SHALL BE UTILIZED WHEN BID ALTERNATE BIOFILTER IS CONSTRUCTED.
- 6 ROUTE 10" FA AROUND HVAC SUPPLY AIR DUCT. 10" FA DUCT SHALL PENETRATE UPPER LEVEL FLOOR SLAB AT 6" FROM INTERIOR WALL.
- 7 12" FA SHALL CONNECT TO DUMPSTER COVER EXHAUST AIR CONNECTION PORT WITH SST FLEXIBLE DUCT AS SPECIFIED IN SECTION 15815. TERMINATE 12" FA DUCT AT 3'-0" ABOVE DUMPSTER COVER AND PROVIDE LENGTH OF FLEX DUCT TO CONNECT TO EXHAUST PORT. PROVIDE 12" STAINLESS STEEL DUCT CLAMP TO SECURE FLEX DUCT TO EXHAUST PORT WITH AN AIRTIGHT SEAL. SUBMIT MATERIALS AND CONNECTION DETAIL TO ENGINEER FOR APPROVAL.
- 8 GREASE/MIST ELIMINATOR. PROVIDE CONDENSATE DRAIN ON BOTTOM PER DETAIL. REFER TO SECTION 13251.
- 9 COATED SST FA DUCT SHALL TRANSITION TO FRP AT FLANGE LOCATION.
- 10 PROVIDE FLANGED DUCT CONNECTION TO COANDA. MECHANICAL CONTRACTOR SHALL COORDINATE WITH COANDA VENDOR FOR FLANGE CONNECTION DETAILS. PROVIDE 8" FLEXIBLE CONNECTION (FL-2) AT 12" ABOVE FLANGED CONNECTION TO COANDA TO ACCOMMODATE FOR VIBRATING EQUIPMENT MOVEMENT.
- 11 PROVIDE BALANCING DAMPER (BD-6) IN DUCT AT 36" ABOVE FLANGED CONNECTION TO COANDA.

KEY TAGS:

- | | | |
|---|---------------------------------------|------------|
| 1 | FOUL AIR BLOWER NO. 1 | FAB-21.500 |
| 2 | PRESSURE INDICATING TRANSMITTER NO. 1 | PIT-21.511 |
| 3 | PRESSURE INDICATING TRANSMITTER NO. 5 | PIT-21.515 |

D SECTION
 M21-13 SCALE: 3/16" = 1'-0"
 FILE: 10548A10M21312

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED DCB	
DRAWN BAC	
CHECKED JEA	
DATE MARCH 2019	



SV South Valley
 WATER RECLAMATION FACILITY
 7495 South 1300 West
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
 MECHANICAL
GRIT HANDLING FACILITY ODOR CONTROL
SECTIONS 2

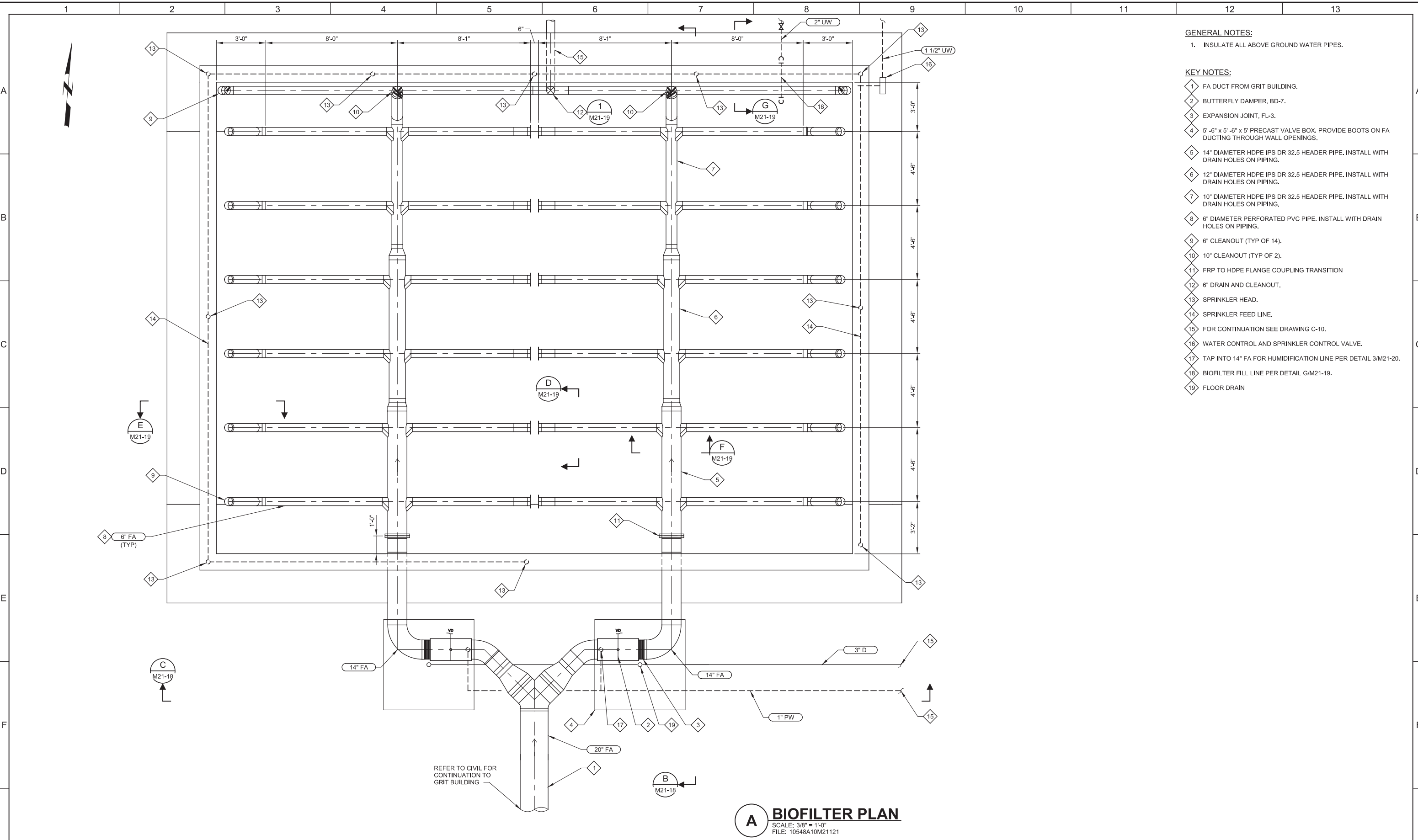
VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. M21-16
0 1"	SHEET NO. 145 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 27-FEB-2019 2:42:51 PM

User: svcPW

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

LAST SAVED BY: ascheale



- GENERAL NOTES:**
- INSULATE ALL ABOVE GROUND WATER PIPES.
- KEY NOTES:**
- 1 FA DUCT FROM GRIT BUILDING.
 - 2 BUTTERFLY DAMPER, BD-7.
 - 3 EXPANSION JOINT, FL-3.
 - 4 5'-6" x 5'-6" x 5' PRECAST VALVE BOX. PROVIDE BOOTS ON FA DUCTING THROUGH WALL OPENINGS.
 - 5 14" DIAMETER HDPE IPS DR 32.5 HEADER PIPE. INSTALL WITH DRAIN HOLES ON PIPING.
 - 6 12" DIAMETER HDPE IPS DR 32.5 HEADER PIPE. INSTALL WITH DRAIN HOLES ON PIPING.
 - 7 10" DIAMETER HDPE IPS DR 32.5 HEADER PIPE. INSTALL WITH DRAIN HOLES ON PIPING.
 - 8 6" DIAMETER PERFORATED PVC PIPE. INSTALL WITH DRAIN HOLES ON PIPING.
 - 9 6" CLEANOUT (TYP OF 14).
 - 10 10" CLEANOUT (TYP OF 2).
 - 11 FRP TO HDPE FLANGE COUPLING TRANSITION
 - 12 6" DRAIN AND CLEANOUT.
 - 13 SPRINKLER HEAD.
 - 14 SPRINKLER FEED LINE.
 - 15 FOR CONTINUATION SEE DRAWING C-10.
 - 16 WATER CONTROL AND SPRINKLER CONTROL VALVE.
 - 17 TAP INTO 14" FA FOR HUMIDIFICATION LINE PER DETAIL 3/M21-20.
 - 18 BIOFILTER FILL LINE PER DETAIL G/M21-19.
 - 19 FLOOR DRAIN

A BIOFILTER PLAN
 SCALE: 3/8" = 1'-0"
 FILE: 10548A10M21121

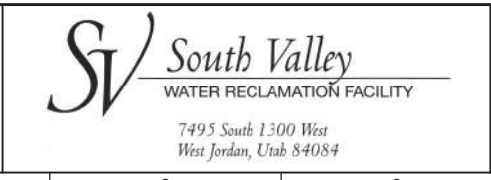
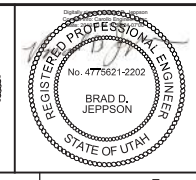
REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED
DCB

DRAWN
KHB

CHECKED
JEA

DATE
MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

MECHANICAL

BIOFILTER ODOR CONTROL PLAN

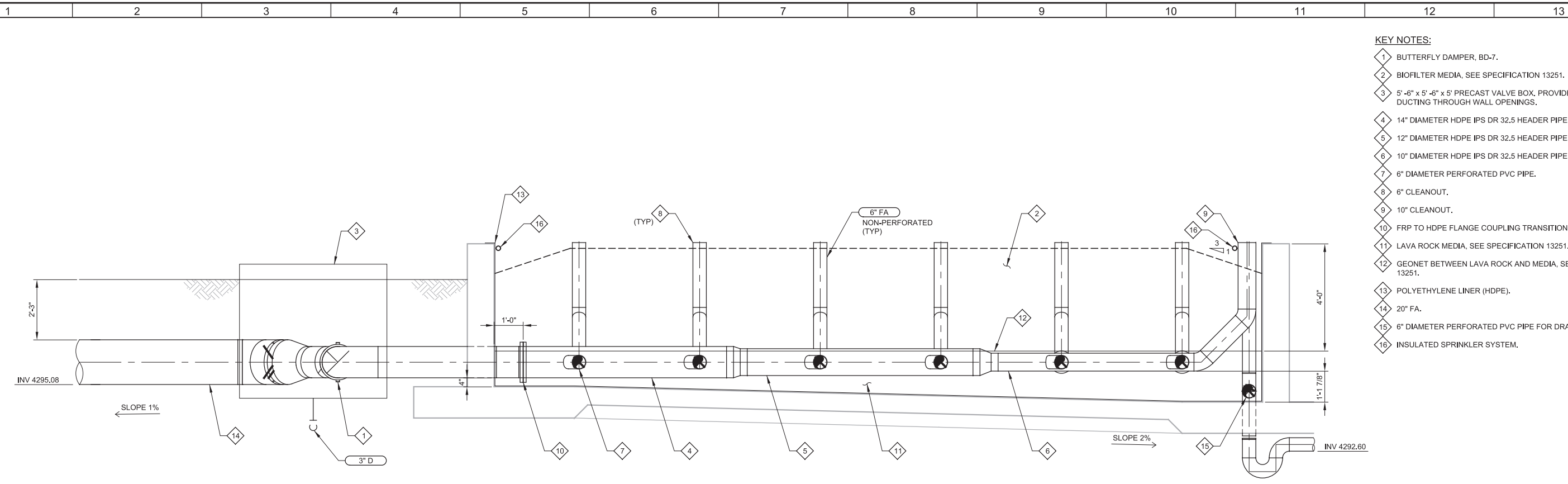
VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. M21-17
0 1"	SHEET NO. 146 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 27-FEB-2019 2:42:57 PM

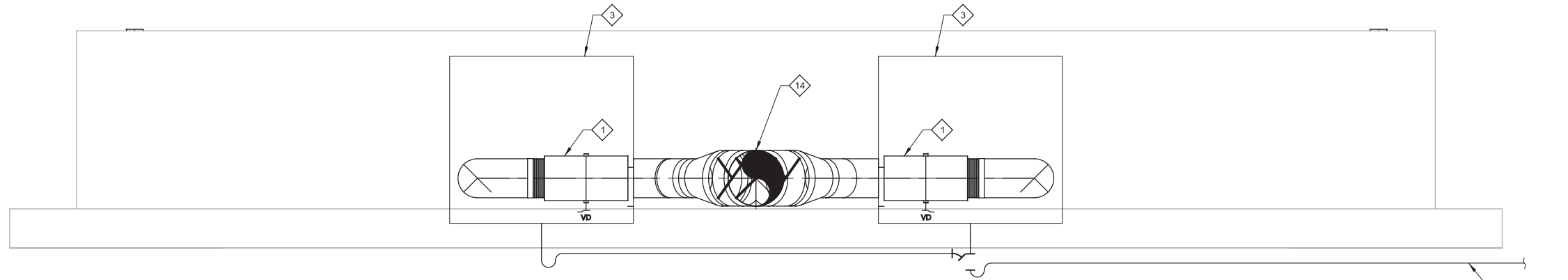
User: svcBW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Sld_Pen_v0905.pen PlotScale: 2:1

LAST SAVED BY: jscheele



B SECTION
 M21-17 SCALE: 1/2" = 1'-0"
 FILE: 10548A10M21321



C SECTION
 M21-17 SCALE: 1/2" = 1'-0"
 FILE: 10548A10M21322

- KEY NOTES:**
- 1 BUTTERFLY DAMPER, BD-7.
 - 2 BIOFILTER MEDIA, SEE SPECIFICATION 13251.
 - 3 5'-6" x 5'-6" x 5' PRECAST VALVE BOX, PROVIDE BOOTS ON FA DUCTING THROUGH WALL OPENINGS.
 - 4 14" DIAMETER HDPE IPS DR 32.5 HEADER PIPE.
 - 5 12" DIAMETER HDPE IPS DR 32.5 HEADER PIPE.
 - 6 10" DIAMETER HDPE IPS DR 32.5 HEADER PIPE.
 - 7 6" DIAMETER PERFORATED PVC PIPE.
 - 8 6" CLEANOUT.
 - 9 10" CLEANOUT.
 - 10 FRP TO HDPE FLANGE COUPLING TRANSITION.
 - 11 LAVA ROCK MEDIA, SEE SPECIFICATION 13251.
 - 12 GEONET BETWEEN LAVA ROCK AND MEDIA, SEE SPECIFICATION 13251.
 - 13 POLYETHYLENE LINER (HDPE).
 - 14 20" FA.
 - 15 6" DIAMETER PERFORATED PVC PIPE FOR DRAINAGE.
 - 16 INSULATED SPRINKLER SYSTEM.

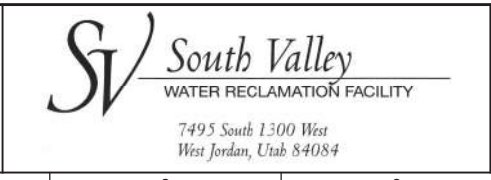
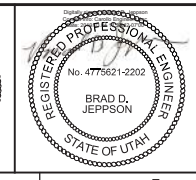
REV	DATE	BY	DESCRIPTION

DESIGNED
DCB

DRAWN
KHB

CHECKED
JEA

DATE
MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

MECHANICAL

BIOFILTER ODOR CONTROL SECTIONS

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.
M21-18

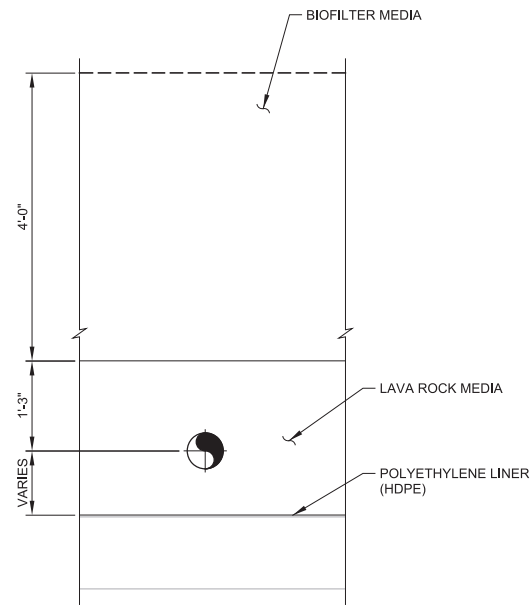
SHEET NO.
147 OF 159

Plot Date: 27-FEB-2019 2:42:42 PM

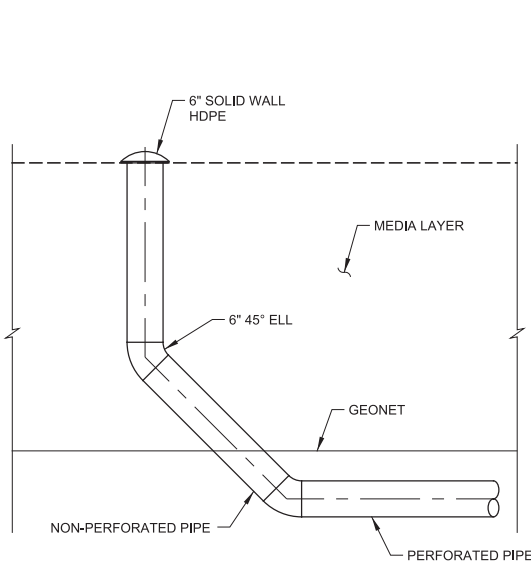
User: svcBW

PlotScale: 2:1

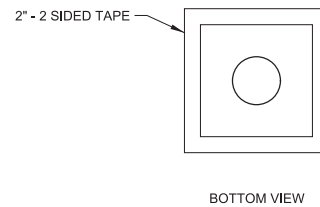
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Sld_Pen_v0905.pen PlotScale: 2:1



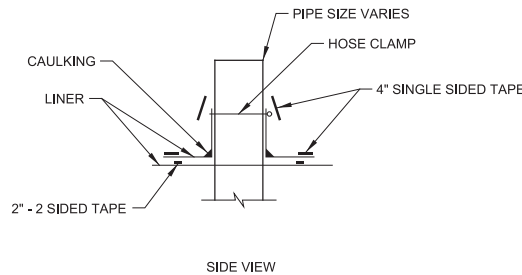
D SECTION
M21-17 SCALE: 3/4" = 1'-0"
FILE: 10548A10M21421



E SECTION
M21-17 SCALE: 3/4" = 1'-0"
FILE: 10548A10M21421

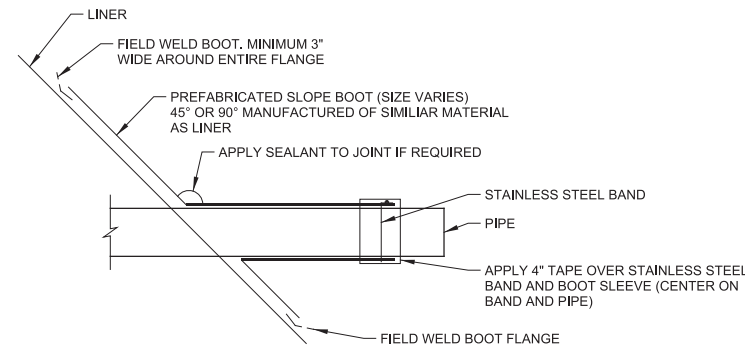


BOTTOM VIEW



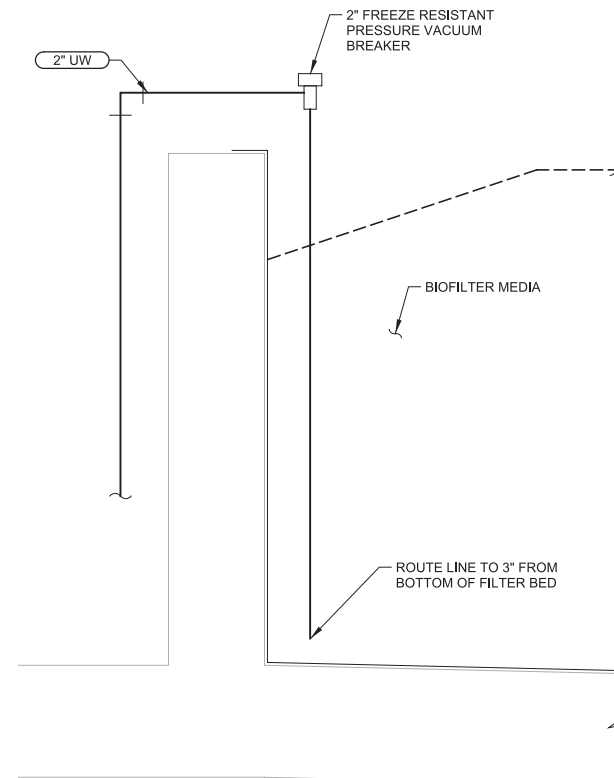
SIDE VIEW

TYPICAL TAPE ON BOOT DETAIL

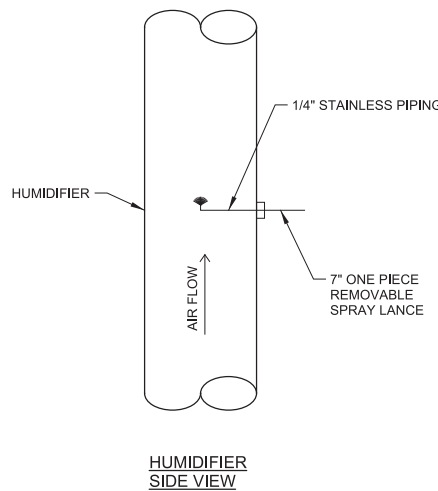


TYPICAL PIPE PENETRATION

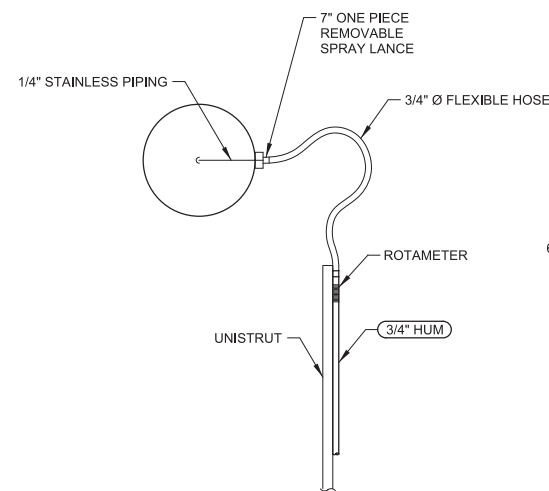
1 DETAIL
M21-17 SCALE: 1" = 1'-0"
FILE: 10548A10M21421



G BIOFILTER FILL DETAIL
M21-17 SCALE: 1" = 1'-0"
FILE: 10548A10M21421

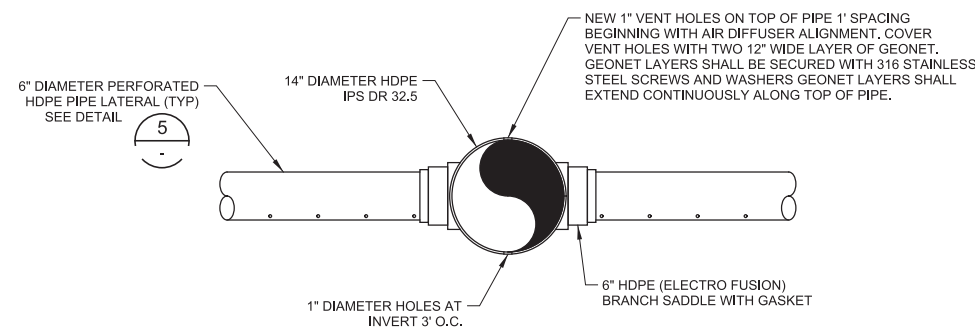


HUMIDIFIER SIDE VIEW

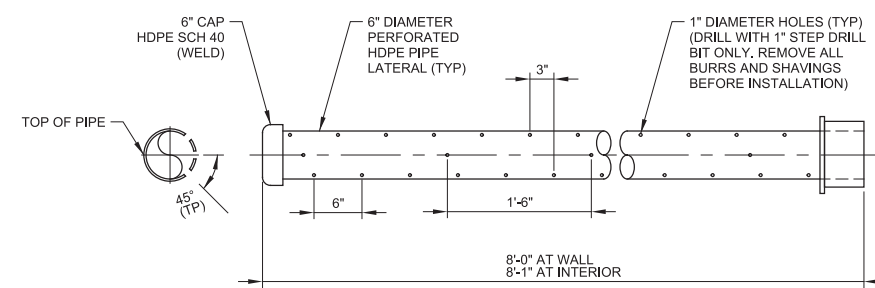


HUMIDIFIER SECTION VIEW

3 DETAIL
M21-17 SCALE: 1" = 1'-0"
FILE: 10548A10M21421



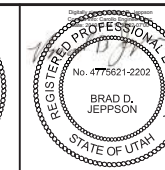
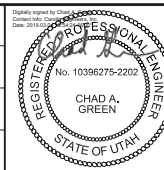
F MANIFOLD SECTION
M21-17 SCALE: 1" = 1'-0"
FILE: 10548A10M21421



5 PERFORATED PIPE LATERAL DETAIL
M21-17 SCALE: 1" = 1'-0"
FILE: 10548A10M21421

REV	DATE	BY	DESCRIPTION

DESIGNED
DCB
DRAWN
KHB
CHECKED
JEA
DATE
MARCH 2019



SV South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

MECHANICAL

BIOFILTER ODOR CONTROL SECTIONS AND DETAILS

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. M21-19

SHEET NO. 148 OF 159