



## ADDENDUM NUMBER 1

### **CULLMAN WWTP ULTRAVIOLET DISINFECTION SYSTEM REPLACEMENT FOR THE CITY OF CULLMAN, ALABAMA FEMA PROJECT NO. 4251-DR-AL GMC PROJECT NO. CHUN160038**

#### 1. REVISIONS TO PROJECT MANUAL

- 1.1 The following revisions are hereby added as Addendum No. 1 to the referenced Project Manual and Plans and shall be considered when preparing bids.

#### 2. BID OPENING

- 2.1 The date and time of the bid opening is hereby changed to **10:00 A.M., Thursday, April 6<sup>th</sup> at the Cullman City Hall located at 204 2<sup>nd</sup> Avenue NE, Cullman, AL 35055**. Bids shall be received by the City of Cullman until this time.

#### 3. CLARIFICATIONS

- 3.1 The existing UV disinfection equipment is not currently active. The facility has been using liquid chlorine since December 2015 to achieve its disinfection requirements. Effluent flow is currently passing through the existing UV channels. Chlorine is applied upstream of the existing UV basin, and dechlorinating agent is applied at the top of the effluent cascade prior to discharge into the receiving stream.
- 3.2 The value of bid bond shall be five percent (5%) of the maximum bid price, not to exceed \$10,000.00, as shown in the Owner's Instructions To Contractor Concerning Bonds and Insurance for Construction (pg. 00400-1).
- 3.3 Please contact Mr. Jeff Adams, WWTP manager, at (256) 739-2410 to schedule a site visit.
- 3.4 The elevations of the metal platform and roof as shown on sheets S-304 and D-301 shall be 660.23 and 670.23, respectively, in lieu of 560.23 and 570.23.
- 3.5 The minimum daily flow through the facility is approximately 1 MGD. The annual average daily flow through the facility is approximately 4 MGD. The maximum daily flow through the facility can exceed 40 MGD. Bidders shall be aware that the upstream collection system receives a large amount of groundwater infiltration and surface water inflow, and that flow through the plant is subject to significant variability depending on the intensity and duration of rain events within the area. The stated maximum daily flow through the facility has historically been experienced at least once per year.
- 3.6 All questions shall be submitted by close of business Friday, March 31, 2017. Questions received after this time may not be answered.

#### 4. QUESTIONS

- 4.1 **Question: On Bid Item #12 of the Bid Form, Engineering Startup, references sect. 01210, Allowances, of the specs. In sect. 01210 an "Engineering Startup" allowance is not mentioned. Is there supposed to be an allowance for this item?**  
Answer: No, there is no allowance for "Engineering Startup". The revised bid form is included as an attachment to this addendum.

- 4.2 **Question: Did Trojan send any drawings? If so, can the drawings be provided?**  
Answer: Yes, Trojan's drawings are attached.
- 4.3 **Question: Since Trojan is the only acceptable manufacturer, and Trojan's proposal is included in the bid documents, it is our understanding that the Owner and Engineer accepts Trojan's supply complete, with warranty, T&C's, etc., as noted in their proposal. Please verify.**  
Answer: Yes that is correct.
- 4.4 **Question: Sect. 01590 doesn't specify any furnishings for the Engineer's Field Office (i.e. desk, chairs, tables). Please verify if any furnishings are required, or if the Field Office is necessary at all.**  
Answer: The Engineer's Field Office is not necessary.
- 4.5 **Question: Are there any particular requirements for Builder's Risk Insurance in the specs?**  
Answer: No buildings are to be constructed; therefore, no builder's insurance is required.
- 4.6 **Question: Sect. 02275 specifies the Class 2 Rip-Rap layer be installed at 12" thickness. Vulcan Materials tells me that Class 2 is as large as 24" stone, and that we would need Class 1 which is smaller. Please clarify.**  
Answer: Specification 02275, Section 3.1.B states that the rip-rap shall have a minimum thickness of 12".
- 4.7 **Question: What is the finished grade elevation of the #57 stone area?**  
Answer: Finished grade is 651.73 at the point where the #57 stone meets the retaining wall.
- 4.8 **Please clarify the extent of the Asphalt work. Is the intent to just resurface the existing asphalt, or is it to demo all the way down to and including the existing stone base coarse and replace complete road section?**  
Answer: The existing asphalt road is to be completely demoed, including the base course, and replaced.
- 4.9 **Question: Where is the 480 volt and 120 volt panels located that we are to pick power from? I am unable to locate them on any of the drawings.**  
Answer: The existing 480V panel and 120V panel are in the maintenance building to the northeast of the UV system approximately 200 feet away. The panels are PP-MB and RP-MB and are located inside the building.
- 4.10 **Question: Where is the SCADA equipment located at that is to connect to the new equipment? I am unable to locate this also.**  
Answer: The SCADA equipment is located at the UV system by the parshall flume. The Contractor shall relocate this existing SCADA equipment to the new platform where the new equipment will be located. The contractor shall install the relocated equipment on a new equipment rack (per detail 2/E-501) to the left of the SCC (when looking at sheet E-104) and intercept and extend the existing control circuits and communications cabling as required to the new location. The contractor shall integrate the new parshall flume flow meters and UV equipment into the relocated SCADA equipment as required by specification 16300 and 16330.
- 4.11 **Question: There is a concrete curb on the N.E. side of the asphalt work. Does any of the curb get replaced?**  
Answer: Yes, the curb shall be replaced.
- 4.12 **Question: We need to know the desired top elevation of the retaining wall. Is the desired elevation constant the entire length of the wall, or does the top elevation just stay some dimension (what is that dimension?) above finished grade?**

Answer: The top of the wall shall be 4 – 6 in. above finished grade as depicted by the contours and it will generally follow the contour of the ground. The purpose of the grading behind the wall is to create a small swale to divert water around the wall with area around the manhole being the high point.

- 4.13 **Question: We need more info on the existing manholes and sewer pipe west of the proposed retaining wall. It appears the retaining wall is close enough that shoring will be required for the wall construction. We need invert elevations of all three manholes near the proposed wall.**

Answer: Looking at C-101, the invert elevation in the western-most manhole is 647.95, the invert in elevation of the middle manhole is 647.47, and the invert elevation of the eastern-most manhole is 650.49.

- 4.14 **Question: Near the existing water spigot there is a buried irrigation valve and valve box. Is the irrigation line in use, and does it need to be replaced?**

Answer: No it does not need to be replaced.

- 4.15 **Question: Would there be a need for grounding of the new platform/roof? Plans don't show any.**

Answer: The platform will need to be bonded to the grounding system. In this case, Use a #4 AWG copper conductor from the ground terminal in the SCC, and each PDC, and exothermically weld them to the platform structure.

5. ACKNOWLEDGMENT

- 5.1 Receipt of Addendum No. 1 should be acknowledged in the following way:

5.1.1 ***Immediately fax notice of receipt of Addendum No. 1 to Lauren Faulkner at 205-879-4493.***

6. CONCLUSION

- 6.1 This is the end of Addendum Number 1, dated Friday, March 24, 2017.

## BID PROPOSAL

**PROJECT: WASTEWATER TREATMENT PLANT  
ULTRAVIOLET DISINFECTION SYSTEM  
REPLACEMENT  
CITY OF CULLMAN  
FEMA PROJECT NUMBER 4251-DR-AL  
GMC PROJECT NUMBER CHUN160038**

### BIDDER:

Bidder agrees to perform the work described in the plans and specifications for the following lump sum prices:

#### LUMP SUM BID ITEMS

<u>ITEM</u>	<u>SECTION / DIVISION</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>	<u>TOTAL PRICE</u>
1	DIV. 1 & 2	SITWORK, DEMOLITION GRADING AND CLEANUP	N/A	\$ _____
2	01210 & 02222	MATERIALS TESTING ALLOWANCE	N/A	\$ 3,000.00
3	02274	EROSION AND SEDIMENT CONTROL	N/A	_____
4	02275	RIP RAP INSTALLATION	N/A	\$ _____
5	02832	RETAINING WALL	See Specification	\$ _____
6	02900	ROAD REPLACEMENT	N/A	\$ _____
7	05100	METAL PLATFORM	N/A	_____
8	DIV. 5	MISCELLANEOUS METALS	N/A	\$ _____
9	11410	UV EQUIPMENT ALLOWANCE	Trojan	\$ 1,311,000.00
10	13122	PRE-ENGINEERED METAL ROOF SYSTEM	See Specification	\$ _____
11	DIV. 16	GRIT SYSTEM CONTROL PANEL RELOCATION	N/A	\$ _____
12	DIV. 16	ELECTRICAL	See Specification	\$ _____
13	DIV. 16	SCADA, INSTRUMENTATION AND INTEGRATION	Cross	\$ _____
14	N/A	ALL OTHER ITEMS	N/A	\$ _____
			<b>TOTAL BASE BID</b>	<b>\$ _____</b>

Review Instructions for Bidders for Explanation of Bid Items

Where two (2) or more manufacturers are listed in the Manufacturer Column, circle the name of the manufacturer in which your installed price is based or write adjacent to the price if not listed.

Lump sum prices shall include the cost of contractor mobilization, excavation, trenching, shoring, bailing, installation, purchase and delivery of materials to the site, backfilling an clean-up. Prices shall also include incidental items not listed above as required to complete installation as specified.

The bid shall include all overhead, profit, insurance, etc. to cover the finished work of the several kinds call for.

Bidder understands that the Owner reserves the right to waive any informalities, or to reject any or all bids, and to award the contract to the lowest and most responsible bidder. All bidders shall submit upon request a list of projects "successfully completed" in the last 2 years, having the same scope of work and approximate construction cost as specified in this project. All bidders must comply with requirements of the Contractor's Licensing law of the State of Alabama and can be certified for the type of work on which the proposal is submitted. Each bidder must deposit with his bid, security in the amount, form and subject to the conditions provided in the Instruction to Bidders.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Bidder, by make his bid, represents that he has read and understands the Bid and Contract Documents, that he has visited the site of the work, familiarized himself with all conditions, ordinances, and permit requirements that may affect cost, progress, and performance for furnishing the work.

The undersigned also declares that neither he nor any of his employees, agents, intended suppliers or subcontractors have relied upon any verbal representations, allegedly authorized or unauthorized from the Owner, his employees or agents, including engineers, in preparing the proposal, and that the entire proposal is based solely upon the Construction Contract Documents bound herein together with any properly issued written addenda and not upon any other written representation.

Upon receipt of written notice of the acceptance of this bid, bidder will execute the formal contract within 15 days and deliver a Surety Bond or Bonds as required by Paragraph 5.1 of the General Conditions. The bid security attached in the sum of FIVE PERCENT OF BID, \$\_\_\_\_\_ (not to exceed \$10,000) is to become the property of the Owner in the event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

00300 - 2

Respectfully submitted:

By: \_\_\_\_\_

\_\_\_\_\_  
(Typed or Printed Name)

Title: \_\_\_\_\_

\_\_\_\_\_  
(Company)

\_\_\_\_\_  
License No.

\_\_\_\_\_  
(Business Address & Zip code)

\_\_\_\_\_  
Telephone No.

Attested by: \_\_\_\_\_

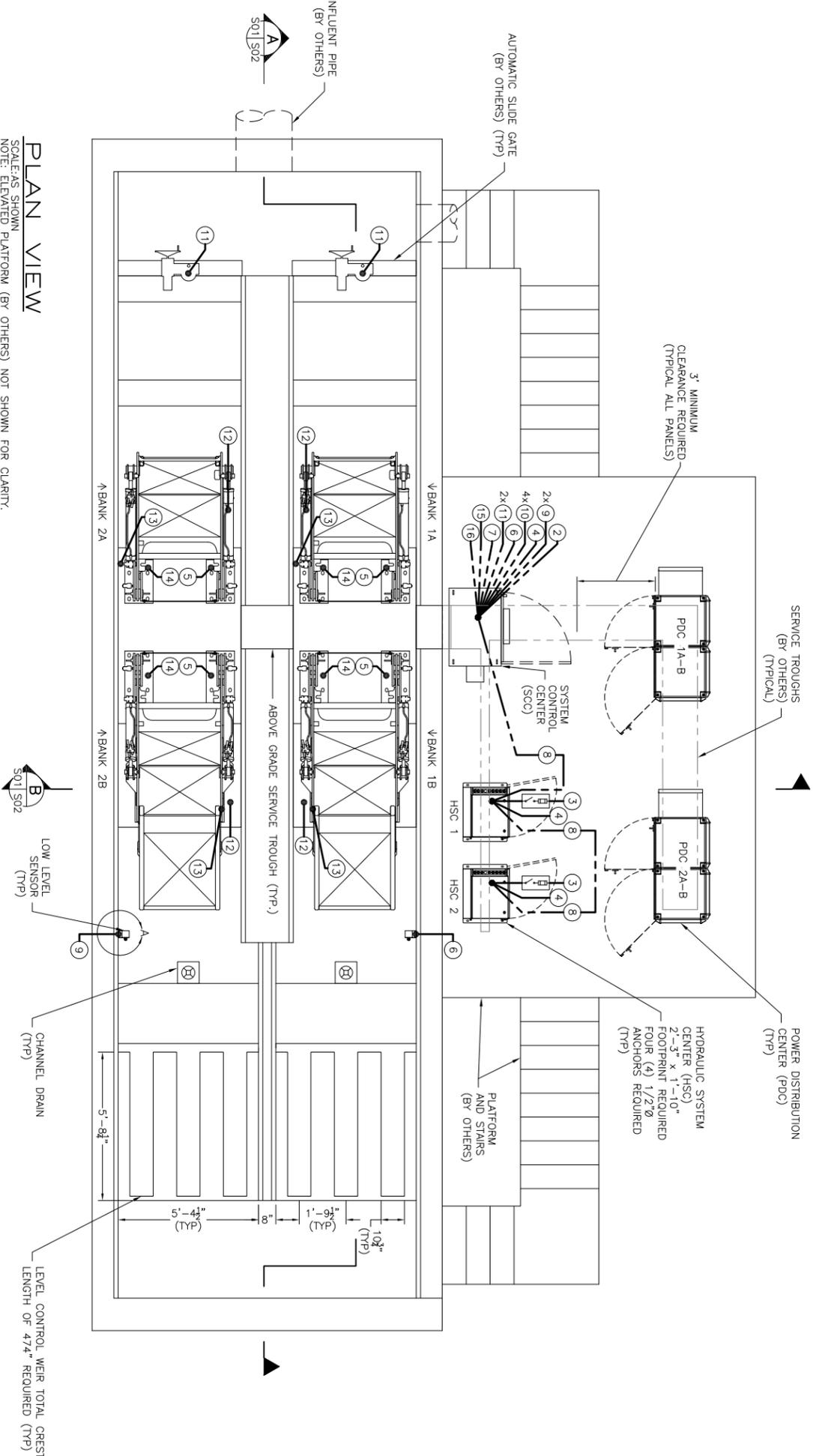
(SEAL - IF BID IS BY A CORPORATION)

# TROJAN UV SIGNA™ EQUIPMENT INTERCONNECTIONS

No.	DESCRIPTION	FROM	TO
1	POWER DISTRIBUTION CENTER (PDC) 480V/277V, 3 PHASE, 4 WIRE + GROUND 60.3 KVA/PDC POWER DRAIN 74.1 AMPS MAXIMUM CURRENT/PHASE	DISTRIBUTION PANEL (DP) (BY OTHERS) (NOT SHOWN)	PDC(S) (DP) (BY OTHERS) (TOP OF PANEL)
2	SYSTEM CONTROL CENTER (SCC) POWER SUPPLY 120V, 1 PHASE, 2 WIRE + GROUND 1.8 KVA	(DP) (BY OTHERS) (NOT SHOWN)	SCC
3	HYDRAULIC SYSTEM CENTER (HSC) POWER SUPPLY 480V, 3 PHASE, 3 WIRE + GROUND 2.5 KVA	(DP) (BY OTHERS) (NOT SHOWN)	HSC(S)
4	GROUND LINK 8 AWG TYPE THW STRANDED	PLANT GRID (BY OTHERS) (NOT SHOWN)	PDC(S) (TOP OF PANEL) SCC
5	BONDING CONDUCTOR 8 AWG TYPE THW STRANDED	PDC(S) (UNDERSIDE OF PANEL)	UV BANK(S)
6	FLOW METER 4-20 mA, DC ANALOG INPUT (BY OTHERS)	FLOW METER PANEL (NOT SHOWN) (BY OTHERS)	SCC
7	MODBUS BELDEN 31064 OR EQUIVALENT	PDC(S) (Daisy Chained) (UNDERSIDE OF PANEL)	PDC(S) (Daisy Chained) (UNDERSIDE OF PANEL)
8	MODBUS BELDEN 31064 OR EQUIVALENT	HSC(S) (Daisy Chained)	HSC(S)
9	DISCRETE LOW LEVEL SIGNAL 12 VDC - 2 CONDUCTORS	LOW LEVEL SENSOR	SCC
10	DISCRETE WATER LEVEL SIGNAL 2 CONDUCTORS	SCC	PDC(S) (UNDERSIDE OF PANEL)
11	DISCRETE GATE OPEN CONTROL INPUT 2 CONDUCTORS DISCRETE GATE CLOSED CONTROL INPUT 2 CONDUCTORS DISCRETE OPEN COMMAND OUTPUT 2 CONDUCTORS DISCRETE CLOSE COMMAND OUTPUT 2 CONDUCTORS DISCRETE GATE READY INPUT 2 CONDUCTORS	SLIDE GATE (BY OTHERS) SLIDE GATE (BY OTHERS) SCC SLIDE GATE (BY OTHERS) SLIDE GATE (BY OTHERS) SCC	SCC
12	SEAL IN PLACE PROXIMITY SENSOR 3 CONDUCTOR CABLES (SUPPLIED)	PROXIMITY SENSOR(S)	PDC(S) (UNDERSIDE OF PANEL)
13	BANK IN PLACE PROXIMITY SENSOR 3 CONDUCTOR CABLES (SUPPLIED)	PROXIMITY SENSOR(S)	PDC(S) (UNDERSIDE OF PANEL)
14	UV INTENSITY 4-20mA ANALOG INPUT	UV BANK(S)	PDC(S) (UNDERSIDE OF PANEL)
15	ETHERNET/IP COMMUNICATION SHIELDED CATSE CABLE CONNECTORS: RJ45	SCC	PLANT SCADA (BY OTHERS) (NOT SHOWN)
16	UV MONITOR (FUTURE) 4-20 mA, DC ANALOG INPUT (BY OTHERS)	UV MONITOR (FUTURE) (NOT SHOWN) (BY OTHERS)	SCC (RESERVED)

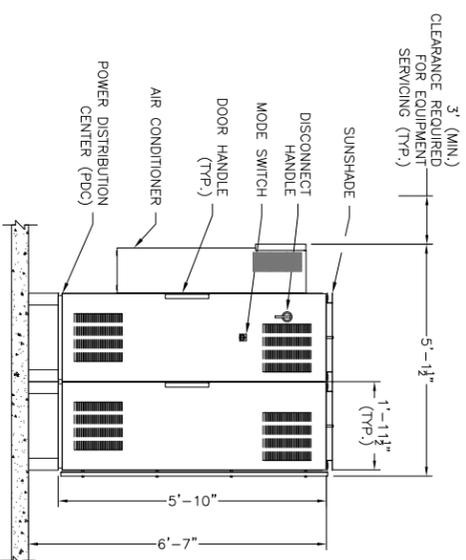
## NOTES:

- : CULVERT FLOOR ELEVATION TO BE KEPT WITHIN A TOLERANCE OF +/- 1/2" AND CENTERED WITHIN THE UV CHANNEL.
- : TOP OF WER ELEVATION MUST BE KEPT WITHIN A TOLERANCE OF +/- 1/2".
- : ANCHOR BOLTS ARE NOT SUPPLIED BY TROJAN TECHNOLOGIES.
- : SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS.
- : ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY.
- : ELECTRICAL INRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
- : INSTRUCTIONS TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION.
- : INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.
- : CONDUIT RUN BETWEEN HSC AND UV BANK(S) IS 45' MAXIMUM.
- : HYDRAULIC CONDUIT LINE ELEVATIONS NOT TO EXCEED 12" ABOVE HSC ELEVATION.
- : MAXIMUM DISTANCE FROM PDC TO UV BANK IS 57'.
- : SITE TO PROVIDE APPROVED (ENGINEERED) ANCHOR POINTS FOR PERSONNEL TO USE AS PART OF THEIR FALL RESTRAINT SYSTEM AROUND OPEN CHANNELS. THE ANCHOR POINTS MUST BE POSITIONED SO THAT THE PREFERRED RETRACTABLE LIFELINE OF 8 FEET IS OF SUFFICIENT LENGTH TO ACCESS THE WORK AT THE CHANNEL.
- \*\*SOLID GRATING MUST BE PROVIDED AS SHOWN TO BLOCK UV LIGHT.



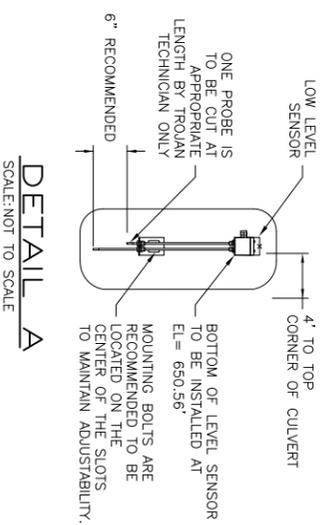
## PLAN VIEW

SCALE: AS SHOWN  
NOTE: ELEVATED PLATFORM (BY OTHERS) NOT SHOWN FOR CLARITY.



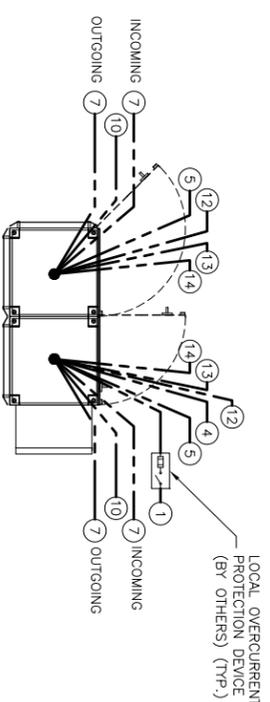
## FRONT VIEW PDC

SCALE: NOT TO SCALE



## DETAIL A

SCALE: NOT TO SCALE



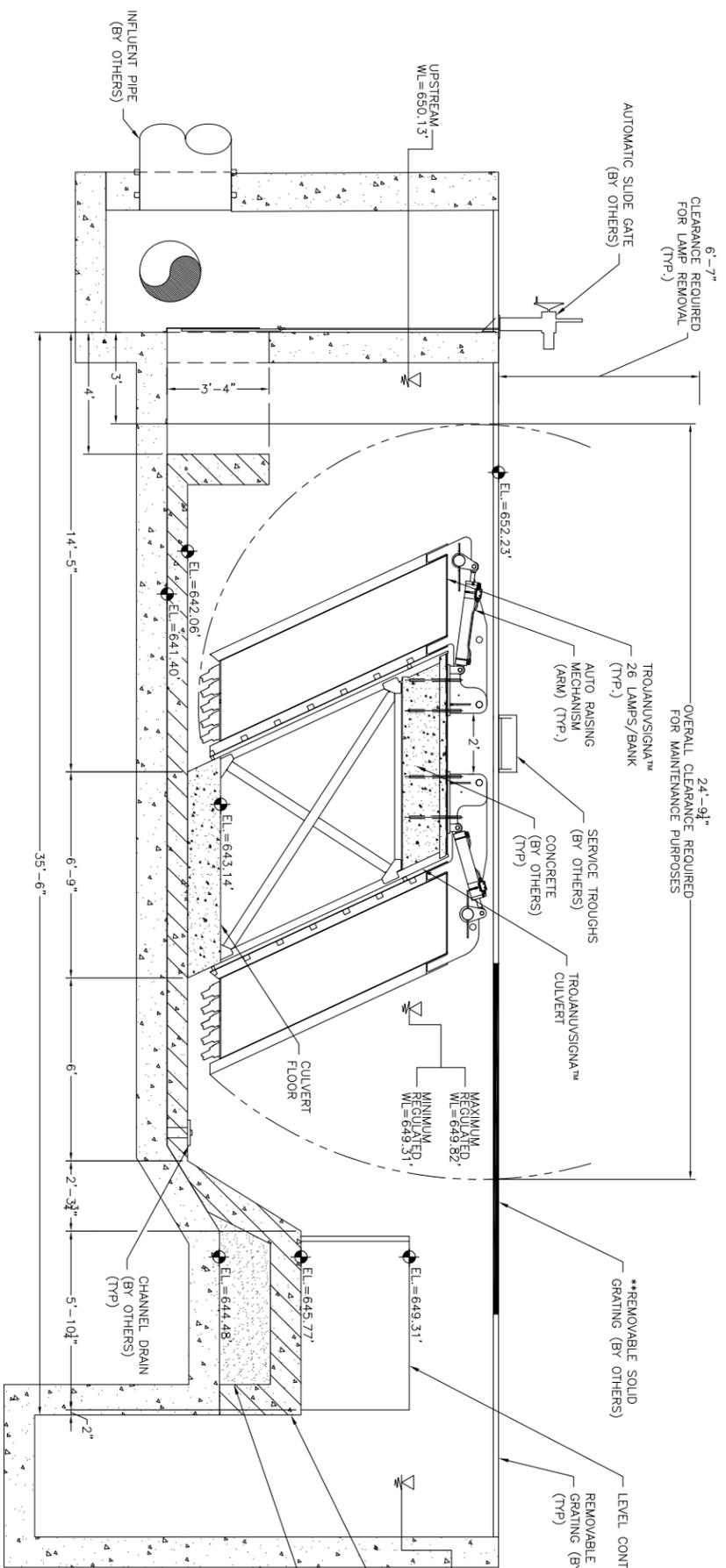
## PDC INTERCONNECT DETAIL

SCALE: NOT TO SCALE

DESIGN CRITERIA		TROJAN UV	
PEAK FLOW	40 MGD	CONFIDENTIALITY NOTICE	Copyright © 2017 by Trojan Technologies. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form, without the written permission of Trojan Technologies.
UV TRANSMITTANCE AT 253.7 nm	65 %	CONFIDENTIALITY NOTICE	Copyright © 2017 by Trojan Technologies. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form, without the written permission of Trojan Technologies.
SUSPENDED SOLIDS	30 mg / L	CONFIDENTIALITY NOTICE	Copyright © 2017 by Trojan Technologies. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form, without the written permission of Trojan Technologies.
DISINFECTION STANDARD	200 FC / 100mL (30 DAY GEO MEAN)	CONFIDENTIALITY NOTICE	Copyright © 2017 by Trojan Technologies. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form, without the written permission of Trojan Technologies.

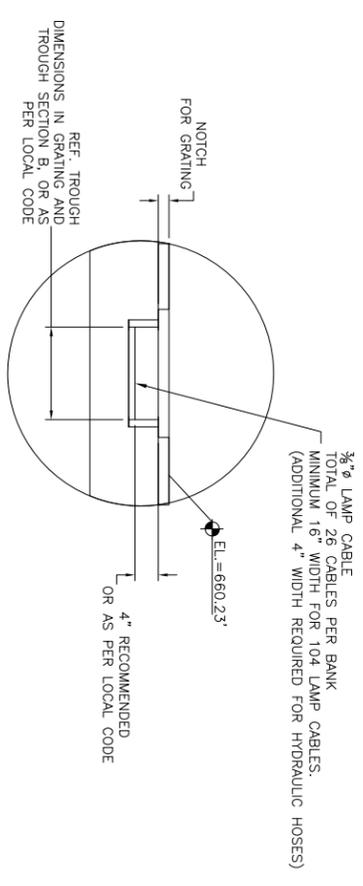
DESCRIPTION: LAYOUT, TROJANUVSIGNA CULLMAN AL

QUOTE NO.	PROJECT NO.	DATE	DATE	DATE	DATE	DATE	DATE
209385	810035	17FET3	17FET15	17FET15	17FET15	17FET15	17FET15
		MMB	RLM	RB	RB	RB	RB
		DRAWN BY :	CHECKED BY :	APPROVED BY :	APPROVED BY :	APPROVED BY :	APPROVED BY :
		SCALE (11x17) : 3/16"=1'-0"	LOG NUMBER : N/A				



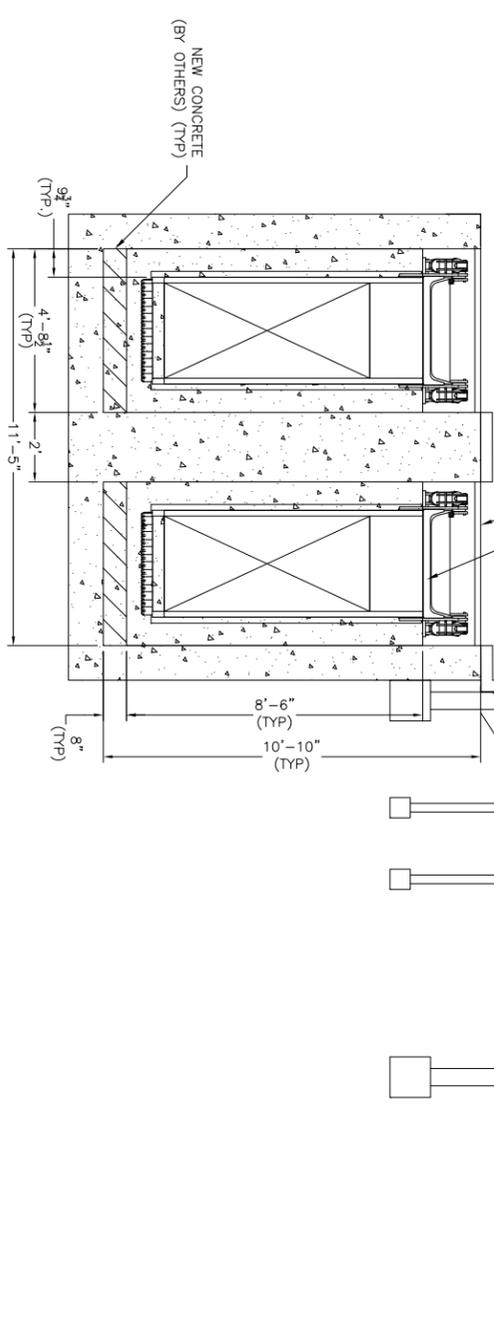
**A SECTION**

SCALE: AS SHOWN  
 S011 S02 NOTE: ELEVATED PLATFORM (BY OTHERS), CANOPY (BY OTHERS) AND ELECTRICAL PANELS NOT SHOWN FOR CLARITY.



**DETAIL B**

SCALE: NOT TO SCALE  
 NOTE: TROUGH TO BE INSTALLED BELOW WALKING SURFACE WHEN POSSIBLE. TROJAN RECOMMENDS THE USE OF DRAINS OR VENTED TROUGH TO DETERMINING WATER TROUGH INSTALLATION REQUIREMENTS WILL BE DETERMINED BY TROUGH MANUFACTURER, CONSULT SUPPLIER FOR DETAILS.

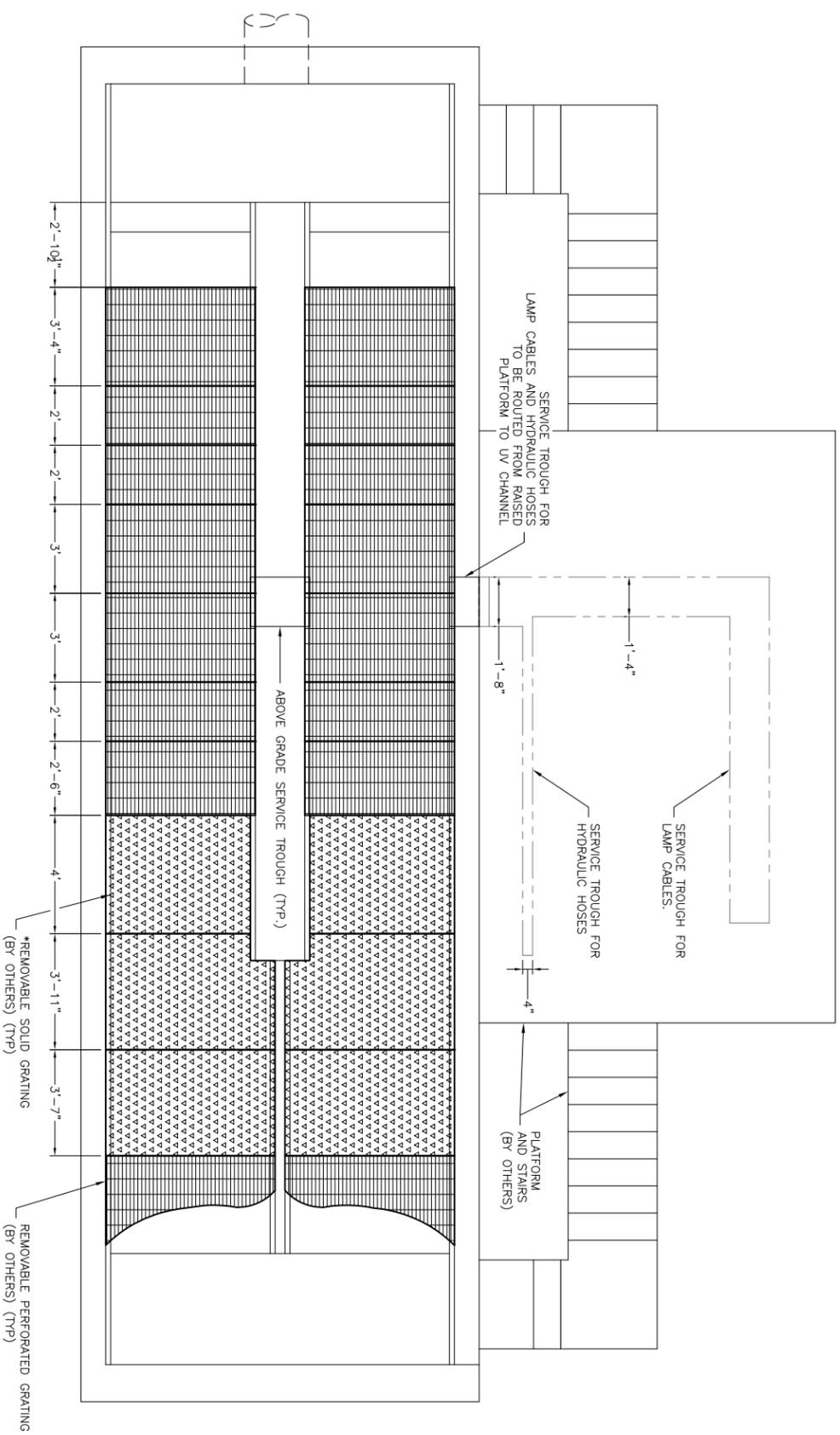


**B SECTION**

SCALE: AS SHOWN  
 S011 S02 NOTE: CANOPY (BY OTHERS), HSCs, SCC, PDCs AND AUTOMATIC SLIDE GATES (BY OTHERS) NOT SHOWN FOR CLARITY.

- NOTES:**
- : CULVERT FLOOR ELEVATION TO BE KEPT WITHIN A TOLERANCE OF +/- 3" AND CENTERED WITHIN THE UV CHANNEL.
  - : TOP OF WEIR ELEVATION MUST BE KEPT WITHIN A TOLERANCE OF +/- 1".
  - : ANCHOR BOLTS ARE NOT SUPPLIED BY TROJAN TECHNOLOGIES.
  - : SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS.
  - : ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY.
  - : ELECTRICAL IRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
  - : CONTRACTOR TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.
  - : CONDUIT RUN BETWEEN HSC AND UV BANK(S) IS 45' MAXIMUM.
  - : HYDRAULIC CONDUIT LINE ELEVATIONS NOT TO EXCEED 12" ABOVE HSC ELEVATION.
  - : MAXIMUM DISTANCE FROM PDC TO UV BANK IS 57'.
  - : SITE TO PROVIDE APPROVED (ENGINEERED) ANCHOR POINTS FOR PERSONNEL TO USE AS PART OF THEIR FALL RESTRAINT SYSTEM AROUND OPEN CHANNELS. THE ANCHOR POINTS MUST BE POSITIONED SO THAT THE PREFERRED RETRACTABLE LIFE LINE OF 8 FEET IS OF SUFFICIENT LENGTH TO ACCESS THE WORK AT THE CHANNEL.
  - : SOLID GRATING MUST BE PROVIDED AS SHOWN TO BLOCK UV LIGHT.

<p><b>TROJANUV</b>  <small>TECHNOLOGIES</small></p> <p>CONFIDENTIALITY NOTICE        Copyright © 2017 by Trojan Technologies. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form, without the written permission of Trojan Technologies.</p>		<p>DESCRIPTION:  <b>LAYOUT, TROJANUVISIGNA CULLMAN AL</b></p>		<p>QUOTE NO:  <b>209385</b></p>
<p>DRAWN BY :  <b>MMB</b></p>	<p>CHECKED BY :  <b>RLM</b></p>	<p>DATE :  <b>17FET3</b></p>	<p>DATE :  <b>17FET5</b></p>	<p>PROJECT NO:  <b>810035</b></p>
<p>APPROVED BY :  <b>RB</b></p>	<p>DATE :  <b>17FET5</b></p>	<p>SCALE (11x17) :  <b>3/16"=1'-0"</b></p>	<p>LOG NUMBER :  <b>N/A</b></p>	<p>DWG NO:  <b>S02</b></p>
				<p>REV:  <b>B</b></p>



**GRATING AND TROUGH PLAN VIEW**

SCALE: AS SHOWN  
 NOTE: GRATING DIVISIONS SHOWN ARE RECOMMENDED LOCATIONS TO ALLOW FOR UV EQUIPMENT SERVICING. DESIGN OF GRATING SECTIONS SHOULD BE SIZED TO ALLOW FOR EASY REMOVAL BY SERVICING TECHNICIANS. SOLID GRATING MUST BE PROVIDED IN AREA INDICATED TO BLOCK UV LIGHT. TYPICAL FOR BOTH CHANNELS.

- NOTES:**
- : CURVERT FLOOR ELEVATION TO BE KEPT WITHIN A TOLERANCE OF +/- 1/2" AND CENTERED WITHIN THE UV CHANNEL.
  - : TOP OF WEIR ELEVATION MUST BE KEPT WITHIN A TOLERANCE OF +/- 1".
  - : ANCHOR BOLTS ARE NOT SUPPLIED BY TROJAN TECHNOLOGIES.
  - : SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS.
  - : ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY.
  - : ELECTRICAL IRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
  - : CONTRACTOR TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.
  - : CONDUIT RUN BETWEEN HSG AND UV BANK(S) IS 45" MAXIMUM.
  - : HYDRAULIC CONDUIT LINE ELEVATIONS NOT TO EXCEED 12" ABOVE HSG ELEVATION.
  - : MAXIMUM DISTANCE FROM PDC TO UV BANK IS 57'.
  - : SITE TO PROVIDE APPROVED (ENGINEERED) ANCHOR POINTS FOR PERSONNEL TO USE AS PART OF THEIR FALL RESTRAINT SYSTEM AROUND OPEN CHANNELS. THE ANCHOR POINTS MUST BE POSITIONED SO THAT THE PREFERRED RETRACTABLE LIFELINE OF 8 FEET IS OF SUFFICIENT LENGTH TO ACCESS THE WORK AT THE CHANNEL.
  - \*\*SOLID GRATING MUST BE PROVIDED AS SHOWN TO BLOCK UV LIGHT.

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DESCRIPTION: <b>LAYOUT, TROJANUVSIGNA CULLMAN AL</b>		PROJECT NO.: <b>810035</b>
DRAWN BY : MMB	DATE : 17FET13	DWG NO.: <b>810035</b>
CHECKED BY : RLM	DATE : 17FET15	REV.: <b>B</b>
APPROVED BY : RB	DATE : 17FET15	
SCALE (11x17) : 3/16"=1'-0"	LOG NUMBER : N/A	