ADDENDUM No. 1

ITB No. 4568

City of Ann Arbor, Water Treatment Services Unit
WTP UV Disinfection System

Bids Due: February 28, 2019 at 2:00 P.M. (Local Time)

The following changes, additions, and/or deletions shall be made to the Invitation to Bid for WTP UV Disinfection System Project, ITB No. 4568, on which proposals will be received on/or before February 28, 2019, at 2:00 P.M. (local time).

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. **This Addendum includes 4 pages, plus Appendices.**

Bidder is to acknowledge receipt of this Addendum No. 1, including all attachments (if any) in its Bid by so indicating on page ITB-1 of the Invitation to Bid Form. Bids submitted without acknowledgment of receipt of this addendum will be considered nonconforming.

The following forms provided within the ITB document must be included in submitted bids:

- **City of Ann Arbor Prevailing Wage Declaration of Compliance**
- **City of Ann Arbor Living Wage Ordinance Declaration of Compliance**
- **Vendor Conflict of Interest Disclosure Form**
- **City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance**

Bids that fail to provide these completed forms listed above upon bid opening will be rejected as non-responsive and will not be considered for award.

I. CORRECTIONS/ADDITIONS/DELETIONS

Changes to the Bid document which are outlined below are referenced to a page or Section in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

Section/Page(s)	**Change**
Appendix	Add Asbestos Survey Results (See Attached)
Appendix	Add Bidders Checklist (See Attached)
Appendix	Add Pre-Bid Attendance Sign-In Sheet (See Attached)
44 44 73, para. 2.07.A.1	All electrical components **inside control panel** are to be housed in ~~stainless steel,~~ **painted steel,** NEMA 4X ~~or greater~~ **equivalent** rated enclosures, unless indicated otherwise. **Lamp ballast enclosure panel sections may be NEMA 12 equivalent rating as necessary to comply with Cooling and Heating requirements in Section 2.07.G.**
44 44 73, para. 2.07.E.1	House electrical components in ~~NEMA 4X~~ enclosure **as defined in Section 2.07.A.1.**
44 44 73, para. 2.08.F.1	The following signals shall be available to the UV System from the UV Master Control Panel ~~(by Others)~~ through PLC Ethernet Network as a minimum:
44 44 73, para. 2.08.F.2	The following signals are to be sent to the UV Master Control Panel ~~(by Others)~~ via Ethernet/IP:
40 27 00, Supplement 2-2, Pipe Schedule.	Add the following line item to the pipe schedule:

FW Clearwell Inter-connect Pipe	FW	30”	EXP	CLDI	40 27 00.01	FL	Note 2	100, H	“Filter Effluent”, “Finished Water”	Notes 4 and 5.

Drawing Number	Change
001-G-001, Title Sheet	Replace Sheet 001-G-001 with Addendum 1 Sheet 001-G-001.
001-G-006, Structural Notes and Project Sign Detail	Replace Sheet 001-G-006 with Addendum 1 Sheet 001-G-006.
003-N-002, UV Disinfection System P&ID	On 36" FW line to Reservoir, change "6-Inch UVE DR" to "4-Inch UVE DR".
020-D-301, Transfer Pump and UV Room Sections, Section A	Change "6-Inch V500" to "4-Inch V500 and change "6-Inch UVE DR (CLDI)" to "4-Inch UVE (CLDI)".
020-D-303, Transfer Pump and UV Room Sections, Section D	Change "6-Inch V500" to "4-Inch V500 and change "6-Inch UVE DR (CLDI)" to "4-Inch UVE (CLDI)".
020-D-221, Sub-Basement and Basement Plan – EL 967.50	Change note "30-Inch Clearwell Interconnect Pipe" to "30-Inch FW Clearwell Interconnect Pipe".
020-D-221, Sub-Basement and Basement Plan – EL 967.50	Add note to bends on 30" FW Clearwell Interconnect Pipe to read "30-Inch 45 deg bend, Typ of 2".
020-D-306, Sub-Basement and Basement Sections, Section G	Change note "30-Inch Clearwell Interconnect Pipe" to "30-Inch FW Clearwell Interconnect Pipe".
020-S-301, Transfer Pump and UV Room Sections and Details, Detail 2 (020-S-210)	Add note "Provide ¼" x 3" steel pipe strap. Fasten to concrete pipe support with ¾" adhesive anchors, 5" embedment, minimum 4" from edge of concrete."
090-STD-902, Standard Details, Detail 0553-001	Add to note 2 "Removable grating sections shall be constructed of Aluminum, 1 ¾" depth.".

II. QUESTIONS AND ANSWERS

The following Questions have been received by the City. Responses are being provided in accordance with the terms of the ITB. Bidders are directed to take note in their review of the documents of the following questions and City responses as they affect work or details in other areas not specifically referenced here.

Question 1: On 020-D-210, can a sleeve be used for the 4" drain on the 24" UVI?

Answer 1: No, bid as shown.

Question 2: Please clarify how the UV Master Control Panel (UV MCP) is supplied in Scope of Work.

Answer 2: The UV MCP is to be supplied as part of the General Contractor Scope of Work, as specified in Section 40 90 00, and is not specified to be included as part of the UV System Supplier scope of work per Section 44 44 73, UV System. The UV System Supplier will be responsible for ensuring the minimum I/O is provided to/from the UV system to the UV MCP as described in the Contract Documents for a complete and functional system.

Question 3: Note that the UV system control/power panels are specially design and tested for the specific types of heat loads and to cool the lamp ballasts within their tolerances.

Answer 3: Noted, but panel heaters are still required. The panel heaters are thermostatically controlled, so if the ballasts are creating enough heat, the panel heater(s) will be off. When the reactors are not running and are sitting idle, the panel heaters shall be ON to prevent condensation inside the panels.

Respondents are responsible for any conclusions that they may draw from the information contained in the Addendum.

APPENDIX

ITB 4568 - WTP Disinfection System

Bid Submission Checklist

Bid Due Date: February 28, 2019 by 2:00 p.m.

- ☐ Bids: 1 original, 5 copies Bid
- ☐ Bond/Certified Check
- ☐ Invitation to Bid: ITB-1 & ITB-2
- ☐ Legal Status of Bidder: ITB-3
- ☐ Bid Form-
  - ☐ Section 1 - Schedule of Prices: BF-1
  - ☐ Section 2 - Alternate #1: BF-2
  - ☐ Section 3 -Alternate #2: BF-3
  - ☐ Section 4 - Material, Equipment, Alternate: BF-4 Section 5 - Time Alternate: BF-5
  - ☐ Section 6 - Major Subs and Suppliers: BF-6
  - ☐ Section 7 - References:
  - ☐ BF-7 through BF-9; include resumes per instructions to Bidders, page IB-3
- ☐ Prevailing Wage Declaration of Compliance
- ☐ Living Wage Ordinance Declaration of Compliance
- ☐ Vendor Conflict of Interest Disclosure Form
- ☐ Non Discrimination Ordinance Declaration of Compliance
- ☐ MDEQ DWRF Good Faith Effort Worksheets and supporting documents -One for each subcontracted discipline
- ☐ Certification Regarding Debarment, Suspension, and Other Matters
- ☐ American Iron and Steel Contract Language - Complete and signed at the bottom
- ☐ Submit in Sealed Envelope Labeled: "ITB 4568 Ann Arbor WTP UV Disinfection System"

LIMITED BUILDING MATERIAL SURVEY OF
SUSPECT ASBESTOS CONTAINING MATERIALS

CITY OF ANN ARBOR - WATER TREATMENT PLANT UV INSTALLATION PROJECT

INSPECTION DATE - 12/17/2018

HA #	ROOM# / LOCATION	FLOOR	DESCRIPTION	POS or NEG
1	**Mechanical Room**	**B**	**Pipe Gasket - Clear Well Interconnect Piping**	**Positive**
3	**Mechanical Room**	**B**	**Pipe Gasket - Transfer Pump Piping**	**Positive**
2	Mechanical Room	B	Wall Gasket - Clear Well Interconnect Piping	Negative

Materials containing >1% asbestos are regulated asbestos containing materials

(1)

Pre-Bid Conference Attendee List

ITB No. 4568

City of Ann Arbor, Water Treatment Services Unit
WTP UV Disinfection System

Pre-Bid Meeting: February 12, 2019 at 1:00 P.M. (Local Time), Ann Arbor WTP, 919 Sunset Road, 1st Floor Conference Room, Ann Arbor, MI 48103

The following acknowledges attendance of the pre-bid conference for the City of Ann Arbor WTP UV Disinfection System project.

Name	Company/ Agency	Email	Discipline (i.e. General, Electrical, Mechanical)
Dan Vendlinski	E+L Construction Group	danv@eandlgroup.com	General
Jayden Ajin	J. Ranck Electric, Inc	jajin@jranck.com	& Electrical
Bud Provenzano	Clark Const.	bud@clarkcc.com	General
Gary Schmidt	JFC	gary@JFCAC.com	G.C/Mech.
Kyle Bartley	Peterson and Rate Trojan UV	Kyle.Bartley@petersonandrate.com	Trojan Rep.
Tom Porter	Arcadis	TOM.Porter@ARCADIS.COM	General
Jason Loucks	HVE	Jloucks@huronvalleyelectric.com	Elec
Tim Gross	John Darr Mechanical	timgross@johndarrmechanical.com	Mech.
Eric Hine	CCI	ehine@commercecontrols.com	I&C
Tim Seegert	Boone & Darr	tim.seegert@boone-darr.com	Mech.
SAM DAVIS	WEISS CONSTRUCTION	sdavis@weiss-construction.com	GC/MECH

(2)

Pre-Bid Conference Attendee List

ITB No. 4568

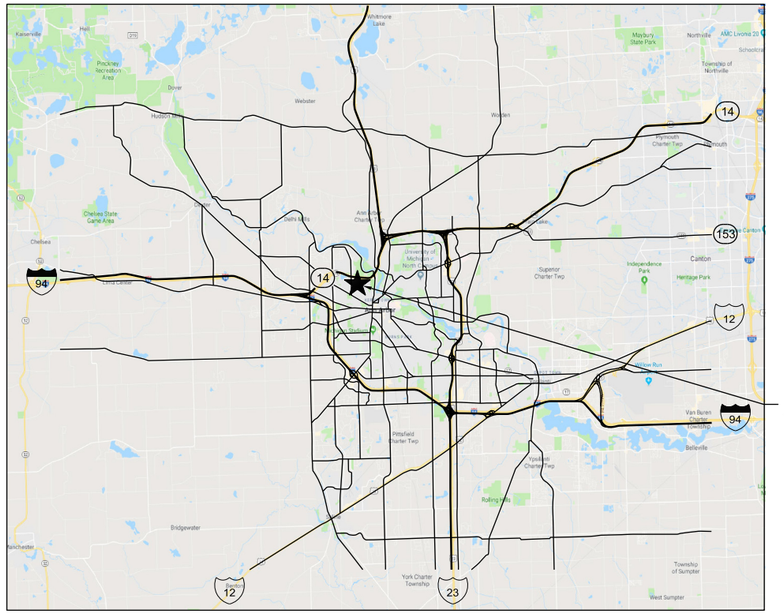
City of Ann Arbor, Water Treatment Services Unit
WTP UV Disinfection System

Pre-Bid Meeting: February 12, 2019 at 1:00 P.M. (Local Time), Ann Arbor WTP, 919 Sunset Road, 1st Floor Conference Room, Ann Arbor, MI 48103

The following acknowledges attendance of the pre-bid conference for the City of Ann Arbor WTP UV Disinfection System project.

Name	Company/ Agency	Email	Discipline (i.e. General, Electrical, Mechanical)
Brad Napier SDVOB Napier DBE	Napier Industries	brad@napierdbe.net	Demo, Abatement
Eric Lawson	Shaw Electric	elawson@shawelectric.com	ELECTRICAL
Brett Lora	Spence Brothers	Brett.Lora@Spencebrothers.com	GC
Chas Mann	OME	Chas@OME-Toledo.com	Paint

CITY OF ANN ARBOR, MICHIGAN
WATER TREATMENT SERVICES UNIT
WTP UV DISINFECTION SYSTEM
ITB NO. 4568



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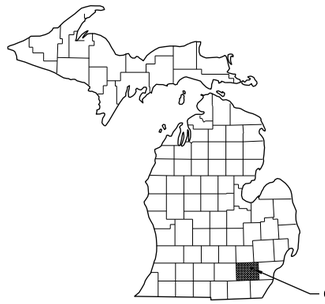
VICINITY MAP
NTS



CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

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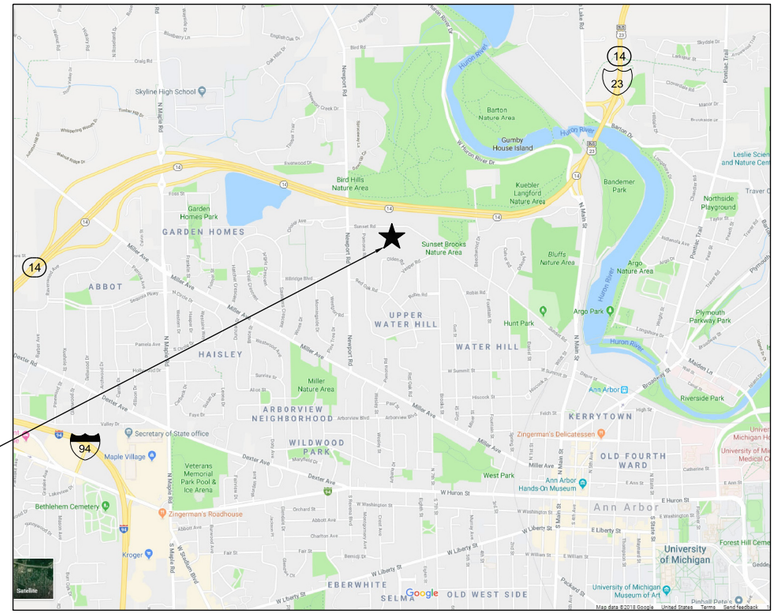
MICHIGAN

PROJECT LOCATION

PROJECT LOCATION
919 SUNSET RD,
ANN ARBOR, MI 48103



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LOCATION MAP
NTS

SIGNATURE AND ENGINEER SEAL

ANTHONY MYERS, P.E.

INDEX TO DRAWINGS

GENERAL

SHEET NO.	DRAWING NO.	DESCRIPTION
1	001-G-001	TITLE SHEET, VICINITY AND LOCATION MAPS, INDEX TO DRAWINGS, AND SIGNATURE AND ENGINEER SEAL
2	001-G-002	ABBREVIATIONS
3	001-G-003	ABBREVIATIONS (CONTINUED) AND DESIGNATIONS
4	001-G-004	INSTRUMENTATION AND CONTROL LEGEND 1
5	001-G-005	INSTRUMENTATION AND CONTROL LEGEND 2
6	001-G-006	STRUCTURAL NOTES, AND PROJECT SIGN DETAIL (1)
7	001-G-007	PROCESS MECHANICAL LEGEND
8	001-G-008	ELECTRICAL LEGEND

INSTRUMENTATION AND CONTROL

9	003-N-001	UV DISINFECTION SYSTEM OVERALL P&ID
10	003-N-002	UV DISINFECTION SYSTEM P&ID

DEMOLITION

11	020-X-110	TRANSFER PUMP AND UV ROOM PLAN - EL 966.50
12	020-X-121	SUB-BASEMENT AND BASEMENT PLAN - EL 967.50 AND EL 981.50
13	020-X-301	TRANSFER PUMP AND UV ROOM SECTIONS
14	020-X-302	TRANSFER PUMP AND UV ROOM SECTION
15	020-X-501	TRANSFER PUMP AND UV ROOM PHOTOS
16	020-X-502	SUB-BASEMENT AND BASEMENT PHOTOS

STRUCTURAL

17	020-S-210	TRANSFER PUMP AND UV ROOM PLAN - EL 966.50
18	020-S-211	TRANSFER PUMP AND UV ROOM PLAN - EL 972.50
19	020-S-220	TRANSFER PUMP AND UV ROOM PLAN - EL 981.50
20	020-S-301	TRANSFER PUMP AND UV ROOM SECTIONS AND DETAILS

ARCHITECTURAL

SHEET NO.	DRAWING NO.	DESCRIPTION
21	020-A-201	TRANSFER PUMP AND UV ROOM PLANS

PROCESS MECHANICAL

22	020-D-210	TRANSFER PUMP AND UV ROOM PLAN - EL 966.50 AND ISOMETRIC
23	020-D-211	TRANSFER PUMP AND UV ROOM PLAN - EL 972.50 AND ISOMETRIC
24	020-D-220	TRANSFER PUMP MOTOR ROOM PLAN - EL 981.50 AND PHOTO
25	020-D-221	SUB-BASEMENT AND BASEMENT PLAN - EL 967.50 AND EL 981.50
26	020-D-301	TRANSFER PUMP AND UV ROOM SECTIONS
27	020-D-302	TRANSFER PUMP AND UV ROOM SECTION AND DETAIL
28	020-D-303	TRANSFER PUMP AND UV ROOM SECTION
29	020-D-304	TRANSFER PUMP AND UV ROOM SECTION
30	020-D-305	TRANSFER PUMP AND UV ROOM SECTION
31	020-D-306	SUB-BASEMENT AND BASEMENT SECTION

PROCESS MECHANICAL - ALTERNATE BID

22A	A20-D-210	TRANSFER PUMP AND UV ROOM ALTERNATE BID PLAN - EL 966.50 AND ISOMETRIC
23A	A20-D-211	TRANSFER PUMP AND UV ROOM ALTERNATE BID PLAN - EL 972.50 AND ISOMETRIC
27A	A20-D-302	TRANSFER PUMP AND UV ROOM ALTERNATE BID SECTION
28A	A20-D-303	TRANSFER PUMP AND UV ROOM ALTERNATE BID SECTION
29A	A20-D-304	TRANSFER PUMP AND UV ROOM ALTERNATE BID SECTION

ELECTRICAL

SHEET NO.	DRAWING NO.	DESCRIPTION
32	020-E-001	ONE-LINE DIAGRAM AND PANELBOARD SCHEDULES
33	020-E-002	CONTROL BLOCK DIAGRAM
34	020-E-003	UV MASTER CONTROL PANEL UV-MCP SCHEMATIC AND ELEVATION
35	020-E-210	TRANSFER PUMP AND UV ROOM POWER PLAN - EL 966.50
36	020-E-211	TRANSFER PUMP AND UV ROOM POWER PLAN - EL 972.50
37	020-E-212	TRANSFER PUMP AND UV ROOM LIGHTING PLAN - EL 972.50 AND LIGHTING FIXTURE SCHEDULE
38	020-E-220	TRANSFER PUMP MOTOR ROOM POWER PLAN - EL 981.50
39	020-E-221	SUB-BASEMENT POWER PLAN - EL 967.50

STANDARD DETAILS

40	090-STD-901	STANDARD DETAILS
41	090-STD-902	STANDARD DETAILS
42	090-STD-903	STANDARD DETAILS
43	090-STD-904	STANDARD DETAILS
44	090-STD-905	STANDARD DETAILS
45	090-STD-906	STANDARD DETAILS

VOLUME II OF II - DRAWINGS

NO.	DATE	REVISION	CHK	APVD
1	02/2019	ADDENDUM NO. 1	CJD	TJE
DSGN	CJ DAHL	DR	CJ DAHL	AG MYERS

BY APVD AG MYERS

CITY OF ANN ARBOR, MICHIGAN
WATER TREATMENT SERVICES UNIT
WTP UV DISINFECTION SYSTEM

JACOBS

GENERAL

TITLE SHEET, VICINITY AND LOCATION MAPS, DRAWING INDEX, AND SIGNATURE AND ENGINEER SEAL

NOT TO SCALE
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JANUARY 2019
PROJ	709084
DWG	001-G-001
SHEET	1 of 45

ADDENDUM

$PWURL

FILENAME: 001-G-0001_709084.dgn PLOT DATE: 2019\02\13 PLOT TIME: 12:02:29 PM

DESIGN CRITERIA

1. APPLICABLE CODE: 2015 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF MICHIGAN AND ALL OTHER APPLICABLE LOCAL AGENCIES.
2. REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND REQUIREMENTS.
3. ALL LOADS SHOWN ARE SERVICE LEVEL (UNFACTORED) UNLESS SPECIFICALLY NOTED OTHERWISE.
4. DEAD LOADS:
   A. SELF WEIGHT
5. LIVE LOADS:

GRATING PLATFORM	250 PSF
CORRIDORS, EXITS, STAIRS	100 PSF

6. SEISMIC LOADS:

MAPPED SPECTRAL RESPONSE ACCELERATIONS	
S_S	= 0.093g
S_1	= 0.047g
DESIGN SPECTRAL RESPONSE ACCELERATIONS	
S_{DS}	= 0.099g
S_{D1}	= 0.076g
SITE CLASS	= D
SEISMIC USE GROUP	= III
SEISMIC DESIGN CATEGORY	= B
IMPORTANCE FACTOR, Ie	= 1.50

GENERAL INFORMATION

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS: PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.
3. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.
4. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
5. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.
6. INFORMATION (DETAILING, DIMENSIONS, CONFIGURATIONS, AND ELEVATIONS, ETC.) OF EXISTING CONSTRUCTION SHOWN REFLECTS AVAILABLE EXISTING DESIGN DOCUMENTS, AND DOES NOT NECESSARILY REPRESENT THE AS-CONSTRUCTED CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS, ELEVATIONS AND DETAILING OF THE EXISTING STRUCTURES PRIOR TO UNDERTAKING ANY WORK THAT IS AFFECTED BY THE EXISTING STRUCTURE. NOTIFY ENGINEER IF CONDITIONS VARY FROM THAT SHOWN PRIOR TO STARTING WORK.

INSPECTION AND TESTING

1. SPECIAL INSPECTION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL SCHEDULE BOTH INSPECTIONS.
2. SPECIFIED CONCRETE AND OTHER MATERIAL TESTING RELATED TO SPECIAL INSPECTION DURING CONSTRUCTION WILL BE OWNER FURNISHED.
3. SPECIFIED LABORATORY TEST MIXES AND SIMILAR TEST RESULTS TO VERIFY MATERIAL QUALITY AND CONFORMANCE TO SPECIFICATIONS, AND SUBMITTED FOR REVIEW PRIOR TO ACCEPTANCE FOR USE ON THE PROJECT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. SPECIAL INSPECTION, TESTING AND OBSERVATION (OWNER FURNISHED) IS REQUIRED IN ACCORDANCE WITH IBC SECTIONS 110 AND 1704 AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS.

CONCRETE REINFORCING

1. REINFORCING STEEL:
   TYPICAL: ASTM A615, GRADE 60
   WELDED: WELDING NOT PERMITED
2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE"AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
3. CONCRETE COVER FOR REINFORCING, UNLESS SHOWN OTHERWISE, SHALL BE 2".
4. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 318 STANDARD HOOKS.
5. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,000 PSI MIN AT 28 DAYS[3] GRADE 60 REINFORCING STEEL										
BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
LAP SPLICE LENGTH										
SPACING = 3"	TOP BAR [2]	1'-4"	1'-8"	2'-1"	3'-0"	5'-2"	6'-8"	8'-6"	10'-10"	`13'-4"
	OTHER BAR	1'-4"	1'-4"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
SPACING = 4"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-10"	5'-0"	6'-5"	8'-1"	10'-0"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
SPACING ≥ 6"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-2"	7'-5"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
EMBEDMENT LENGTH										
SPACING = 3"	TOP BAR [2]	1'-0"	1'-3"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-10"	3'-1"	4'-0"	5'-1"	6'-5"	7'-11"
SPACING = 4"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-4"	3'-0"	3'-10"	4'-10"	5'-11"
SPACING ≥ 6"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-1"	2'-5"	3'-0"	3'-8"	4'-5"

1. LAP LENGTHS ARE BASED ON MINIMUM CONCRETE COVER OF 2".
2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
3. WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16 PERCENT. WHERE 3500 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 7 PERCENT.

CAST IN PLACE CONCRETE

1. 28-DAY COMPRESSIVE STRENGTHS (TO MEET STRUCTURAL STRENGTH REQUIREMENTS):
   TYPICAL: 4500 PSI
2. DESIGN STRENGTHS ARE SAME AS 28-DAY COMPRESSIVE STRENGTHS.
3. COORDINATE PLACEMENT OF OPENINGS, PIPE PENETRATIONS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.
4. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

WELDING

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS):
   D1.1, STRUCTURAL WELDING CODE STEEL
   D1.2, STRUCTURAL WELDING CODE ALUMINUM
   D1.6, STRUCTURAL WELDING CODE STAINLESS STEEL
2. REPAIR WELDS FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.
3. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.

STRUCTURAL STEEL AND METAL FABRICATIONS

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

W-SHAPES	A992
MISCELLANEOUS SHAPES INCLUDING ANGLES, CHANNELS, PLATES, ETC.	
HOLLOW STRUCTURAL SECTIONS (HSS)	A500, GRADE B
STEEL PIPE	A53, GRADE B
STAINLESS STEEL SHAPES	A276

2. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, CURRENT EDITION, AND CURRENT OSHA STANDARDS.
3. FASTENERS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO THE FOLLOWING ASTM STANDARDS EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE:

UNLESS SHOWN OTHERWISE	A325-N
ANCHOR BOLTS (AB)	
STAINLESS STEEL	F593, AISI TYPE 316, CONDITION CW
STEEL OR GALVANIZED STEEL	F1554, GR 36 / A153
MACHINE BOLTS (MB)	
STEEL	A307
STAINLESS STEEL	F593, AISI TYPE 316, CONDITION CW
GALVANIZED STEEL	A307 / A153

4. ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF OIL, DIRT AND PAINT.
5. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL IS PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

DEFERRED SUBMITTALS

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE PERMITTING AGENCY FOR ACCEPTANCE PRIOR TO INSTALLATION OF THAT PORTION OF THE WORK OR ARE REQUIRED TO BE SUBMITTED FOR REVIEW ONLY BY THE ENGINEER.
2. WHERE DEFERRED SUBMITTALS INCLUDE ADDITIONAL MATERIALS, INSTALLATION, ANCHORAGE, OR CERTIFICATION OF COMPONENTS THAT REQUIRE SPECIAL INSPECTION AND/OR STRUCTURAL OBSERVATION TO MEET CODE REQUIREMENTS, THE DEFERRED SUBMITTAL SHALL INCLUDE SPECIFIC LINE ITEMS TO BE ADDED TO THE APPROPRIATE TABLES IN THE PROJECT'S STATEMENT OF SPECIAL INSPECTIONS PLAN IF THEY ARE NOT ALREADY IDENTIFIED.
3. THE FOLLOWING IS A LIST OF DEFERRED SUBMITTALS PER IBC SECTION THAT ARE EXPECTED TO CONTAIN STRUCTURAL CALCULATIONS OR SAFETY RELATED SYSTEM INFORMATION FOR REVIEW TO MEET BUILDING PERMITTING REQUIREMENTS FOR DESIGNED SYSTEMS. PRIOR TO INSTALLATION OF THE INDICATED STRUCTURAL ELEMENT, EQUIPMENT, DISTRIBUTION SYSTEM, OR COMPONENT OR ITS ANCHORAGE, THE CONTRACTOR SHALL SUBMIT THE REQUIRED CALCULATIONS AND SUPPORTING DATA AND DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER. ADDITIONALLY, ACCEPTANCE INDICATED ON THE ENGINEER'S COMMENT FORM, ALONG WITH THE COMPLETED, FINAL SUBMITTAL SHALL THEN BE SUBMITTED BY THE CONTRACTOR TO THE PERMITTING AGENCY AND APPROVED PRIOR TO INSTALLATION OF THESE ITEMS.

SPECIFICATION SECTION	CODE REQUIRED DEFERRED SUBMITTALS FOR REVIEW BY PERMITTING AGENCY
01 88 15	ANCHORAGE AND BRACING
40 05 15	PIPING SUPPORT SYSTEMS
OTHER	ANY EQUIPMENT OR COMPONENT IN WHICH A TECHNICAL SPECIFICATION REQUIRES SUBMITTAL OF EQUIPMENT OR ANCHORAGE SYSTEM CALCULATIONS

8' - 0"

WATER TREATMENT PLANT
UV DISINFECTION SYSTEM PROJECT
ITB NO. 4568

OWNER:
CITY OF ANN ARBOR
PUBLIC SERVICES DEPARTMENT
WATER TREATMENT SERVICES UNIT

CONTRACTORS:

ENGINEER:
JACOBS
MILWAUKEE, WI

PROPOSED CONSTRUCTION SCHEDULE:

FOR MORE INFORMATION, PLEASE CONTACT GLEN WICZOREK, P.E., CITY OF ANN ARBOR AT (734) 794-6496 EXT. 43958, OR GWiczorek@a2gov.org

4' - 0"

NOTES:
1. CONSTRUCTION SIGN SHALL BE BAKED ENAMEL ALUMINUM SHEET LAMINATED ONTO 2 SIDES OF A TRUSS TYPE CORRUGATED SHEET OF POLYMER CORE.
2. CONSTRUCTION SIGN SHALL BE STANDARD WHITE.
3. LETTERING SHALL BE DIE CUT VINYL (BLACK) LAMINATED ONTO THE PANEL. VINYL SHALL BE SUITABLE FOR EXTERIOR APPLICATIONS.
4. 1 EACH OF SIGN, LOCATION TO BE DETERMINED IN FIELD.
5. SECURE WITH TWO (2) 4X4 SET INTO CONCRETE.

1 PROJECT SIGN DETAIL
SCALE: NOT TO SCALE

NO.	DATE	REVISION	DR	CHK	APVD
1	02/2019	ADDENDUM NO. 1	CJD	BY	TJE
DSGN	DR LANGE	CJ DAHL	DR LANGE		AG MYERS

CITY OF ANN ARBOR, MICHIGAN
WATER TREATMENT SERVICES UNIT
WTP UV DISINFECTION SYSTEM

JACOBS

GENERAL
STRUCTURAL NOTES, AND PROJECT SIGN DETAIL
1

NO SCALE
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JANUARY 2019
PROJ	709084
DWG	001-G-006
SHEET	6 of 45

ADDENDUM