

REQUEST FOR QUOTATION

Corporation of the Township of the North Shore
Pronto East Water Treatment Plant UV System Replacement



Issued April 2025
KEC Project: 2445

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INSTRUCTION TO BIDDERS

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1.0 EXAMINATION OF QUOTATION DOCUMENTS

Each bidder shall be responsible for checking the Quotation Documents to ensure that the Set of Documents is complete. Immediately notify Kresin Engineering Corporation (KEC), the Engineer, of any omission.

2.0 REQUEST FOR QUOTATIONS

Quotations are invited from Contractors to perform the work described in the Quotation Documents listed hereunder:

- a. Instructions to Bidders
- b. Quotation Form
- c. Contractor Agreement
- d. Specifications
- e. Contract Drawings
- f. Sample Photographs
- g. SCG Process Equipment Information
- h. Addenda as may be issued

This Request for Quotation is by invite only. Quotations received from Contractors other than those invited to submit a quotation will not be opened.

3.0 PROJECT IDENTIFICATION

Project:	Corporation of the Township of the North Shore Pronto East Water Treatment Plant UV System Replacement
Location:	Short Street, Pronto East Subdivision Township of the North Shore Algoma Mills, Ontario P0R 1K0
General Description:	Decommission the existing UV treatment system at the Pronto East Water Treatment Plant and provide the SCG Process UV treatment system pre-mounted on a steel support frame.
Owner:	Corporation of the Township of the North Shore

4.0 ENGINEER

Kresin Engineering Corporation
536 Fourth Line East
Sault Ste. Marie, Ontario, P6A 6J8
Telephone: (705) 949-4900
Fax: (705) 949-9965

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5.0 PROJECT MANAGER

PUC Services Inc.
500 Second Line East
Sault Ste. Marie, Ontario, P6A 6P2
Telephone: 705-759-6576

6.0 SITE EXAMINATION

Prior to submitting a quotation for proposed work, Bidders shall fully satisfy themselves of all existing conditions and include in their quotation a sum to cover the cost of all items contemplated in the Contract. No claim for extra payment will be allowed for difficulties encountered due to conditions of the site which were visible or reasonably inferable, prior to the date of Quotation Submission.

Additional work required for the proper performance of the Contract not expressly stipulated in the Quotation Documents but necessitated by site conditions discernible through site inspection and not specifically noted in the contract documents, shall not qualify for extra payment. Bidders shall accept sole responsibility for any error or neglect on their part in this respect.

A mandatory site visit is not scheduled for this work. Any Contractor wishing to visit the site prior to submitting a quotation for this work shall contact the Engineer.

7.0 QUOTATION SUBMISSION

Sealed quotations, clearly marked as to contents and addressed to the Clerk, will be received by the Municipal Clerk until:

2:00 P.M., Thursday, May 8, 2025

A public opening of the quotations will commence at 2:10 p.m. on the same day in the presence of the Clerk and another office staff employee.

One copy of the Form of Quotation (provided) together with the specified attachments, duly completed and sealed in an envelope marked "Quotation for Corporation of the Township of the North Shore – Pronto East Water Treatment Plant UV System Replacement" must be delivered by mail, or otherwise to the above address, not later than the closing date and time noted above. Electronic and/or facsimile submissions will not be accepted.

The Clerk shall refuse to accept any quotation submission that is:

- Not sealed
- Received after the closing deadline. The unopened envelope will be returned to the bidder.
- Submitted after a quotation has been cancelled.
- Any bid irregularity noted in the attached APPENDIX "B" TO BYLAW 04-35

The Owner reserves the right to reject any or all bids and the lowest bidder will not necessarily be

INSTRUCTION TO BIDDERS

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accepted. Bids will be evaluated on price, contractor qualifications, Canadian content, local manpower, and the contractor's previous experience/performance on similar projects.

8.0 BID DEPOSIT

Every quotation shall be accompanied by a bid deposit in the form of a certified cheque, bank draft irrevocable letter of credit, money-order or a bid bond issued by an approved guarantee company properly licensed in the Province of Ontario, on bond forms acceptable by Council, payable to the Township of the North Shore in the minimum amount of:

20% of the Quotation Price

as a guarantee for the execution of the contract.

Such deposit shall be security to the Owner that the Bidder, if notified of intent to award the Contract, will supply bonds, insurance documents and a WSIB Clearance Certificate, and will execute the agreement, all within the timeframes specified herein, and start work as specified. The security will be forfeited to the Owner if the selected Bidder fails to comply.

Bid deposits of all Bidders except the first and second choice of the Owner to carry out the work, will be returned within ten (10) working days after the date of opening quotations. The bid deposit of the two chosen Bidders will be retained until a quotation has been accepted by the Owner and the contract properly executed. If the Bidder has not been notified of intent to award the Contract within sixty (60) days after the date of opening quotations, their bid deposit will be returned on demand.

Except as otherwise herein provided, the Bidder guarantees that if their quotation is withdrawn before the Owner shall have considered the quotations or before or after they have been notified that their bidder has been recommended to the Owner for acceptance or that if the Owner does not for any reason receive within the specified timeframes as stipulated and as required herein, the Agreement executed by the Bidder, insurance documents, the Performance Bond (if required) and the Payment Bond (if required) executed by the Bidder and the surety company and the other documents required herein, the Owner may retain the bid deposit for the use of the Owner and may accept any quotation, advertise for new quotations, negotiate a contract or not accept any quotation as the Owner may deem advisable.

9.0 BASE BID

Contractors shall base their quotations on the materials and equipment named in the Scope of Work. No deviation will be allowed without written approval of the Engineer.

10.0 ACCEPTANCE OF QUOTATION

The Owner reserves the right to reject any or all quotations and the lowest or any quotation will not necessarily be accepted.

INSTRUCTION TO BIDDERS

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The Quotation shall be valid and subject to acceptance by the Owner and no adjustment shall be made to the quoted amount for a period of sixty (60) days from the date of receipt of the quotations.

11.0 HARMONIZED SALES TAX

The Total Quotation Price shall be calculated excluding the Harmonized Sales Tax (HST).

The HST will be shown on each Payment Certificate and will be paid to the Contractor by the Owner in addition to the amount certified for payment.

12.0 SCOPE OF WORK

The Scope of Work shall include all required labour material and equipment to complete the work as specified in the Quotation Documents, and as generally outlined below. Related items not listed but necessary for the completion of the work shall be included by the Bidder as required.

1. General Requirements.
2. Performance Security.
3. Mobilize and demobilize to and from the site.
4. Decommission existing UV treatment system.
5. Provide SCG Process UV treatment system.
6. Electrical and control work.
7. Restoration.

The successful bidder will also be responsible to coordinate the work so as to not interfere with normal operations at the plant. All work must be coordinated with the drinking water treatment system operator (PUC Services Inc.).

13.0 CONTRACT

An agreement to complete the work as herein described shall be formed if and only if the Owner accepts the submitted Quotation Form. All of the Quotation Documents any addenda shall constitute the Contract.

14.0 CLARIFICATION OF DOCUMENTS

The Quotation Documents shall be read in conjunction with one another. Should any discrepancies, omissions or conflicts occur, the Bidder shall advise the Engineer and, if necessary, an Addendum shall be issued by the Engineer.

Inquiries regarding the Documents shall be directed to the Engineer:

Kresin Engineering Corporation
536 Fourth Line East

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Sault Ste. Marie, ON
Tel: (705) 949-4900
Fax: (705) 949-9965
Attention: Ryan Wilson, P.Eng.

Inquiries made after 5:00pm EST on May 6, 2025 may not be responded to.

15.0 ADDENDA

All communications to the Bidders will be in the form of Addenda. All Addenda shall become an integral part of the Quotation Documents and shall be included by the Bidders in their quotations. Bidders shall insert in the space provided in the Quotation Form, the number and date of the last Addenda received. If none have been issued, insert the words "None" in the space provided.

Neither the Owner nor the Engineer will be responsible for oral instructions.

16.0 BONDS

The successful Bidder, together with a surety company approved by the Owner and authorized by law to carry on business in the Province of Ontario, shall, unless otherwise directed, furnish the following to the Owner, within ten (10) days after notification of intent to award the Contract:

- a) a Performance Bond in the amount of 100% of the Contract Price; and
- b) a Labour and Material Payment Bond in the amount of 50%, of the Contract Price.

Such bonds shall be in accordance with the requirements of the Construction Act and approved by and acceptable to the Owner. The bonds shall be maintained in good standing until the fulfilment of the Contract.

For the purposes of bonding, the Contract Price shall equal the Total Quotation Price, calculated as the Total Quotation Price as submitted by the Bidder at the Closing Date, plus HST. Notwithstanding this, the Owner, Bidder and surety company may agree to an adjusted the value of the bonds. The Bidder shall note that financial guarantees (lien bonds, maintenance bonds, letters of credit, etc.) will not be accepted as a form of statutory holdback as required in the Construction Act. Maintenance bonds may be accepted in lieu of cash warranty holdbacks following the initial 12 months of the warranty period in accordance with the Special Provisions – General.

17.0 AGREEMENT TO BOND

Each quotation must be accompanied by a consent of surety or agreement to bond from a surety company approved by the Owner and authorized by law to carry on business in the Province of Ontario as assurance that the bidder can obtain the required bonds.

The agreement to bond shall be in a form that is acceptable to the Owner and shall include the following information (at a minimum):

INSTRUCTION TO BIDDERS

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- a) Date of the consent;
- b) Name, address and telephone number of the surety company;
- c) Names of the Bidder and Owner;
- d) Contract Name and, if applicable, Contract Number;
- e) Surety's reference number for the consent;
- f) Confirmation that the consent will remain valid for tenders awarded up to 60 days from the Closing Date and that bonds will be provided within the specified time;
- g) Type and value of each bond to be provided;
- h) Name and title of the signor; and,
- i) Signature and seal binding the surety company.

18.0 SCHEDULE

Time is of the essence for this work. Work shall commence within 10 days of notification of Award of Contract. The work shall be substantially completed by **August 29, 2025**.

19.0 INSURANCE

Bidders shall provide proof of general and liability insurance in the minimum amount of \$5 million and carry the Owner, PUC Services Inc. and Engineer as insured parties with their Quotation.

20.0 WSIB

Bidders shall provide a copy of a valid and up-to-date WSIB Clearance Certificate with their Quotation. A further up-to-date WSIB Clearance Certificate shall be submitted to the Engineer with each invoice.

21.0 Acceptance or Rejection of Bidders

Neither the Consulting Engineer nor any officer or employee of the Owner has authority to make or accept an offer or to enter into a contract on behalf of the Owner or to create any rights against or to impose any obligations on the Owner. The recommendation by the Consulting Engineer of a quotation to the Owner for acceptance, or issue of a letter of intent to award the Contract, does not constitute acceptance of the quotation by the Owner.

A quotation is accepted by the Owner and a contract is made thereby between the Owner and a Bidder only when an Agreement in the form bound herein is executed by the Owner and by the Bidder, and the acceptance of the quotation and the execution of the Agreement by the Owner are subject to the express condition that the Owner receive the required documents, within ten (10) days after notification of intent to award the Quotation by the Owner. Quotations shall be open for acceptance for a period of sixty (60) days after the closing date. After this time the quotation may only be accepted with the consent of the Bidder.

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The Owner shall not be responsible for any liabilities, costs, expenses, loss or damage incurred, sustained or suffered by any Bidder before or after, or by reason of, the acceptance or the non-acceptance by the Owner of any quotation, or by reason of any delay in the acceptance of a quotation, save as provided in the Contract. Quotations are subject to a formal contract being prepared and executed. The Owner reserves the right to reject any or all quotations and to waive formalities as the interests of the Owner may require without stating reasons therefore and the lowest or any quotation will not necessarily be accepted.

The Owner may reject a Quotation solely on the Owner's determination of the Contractor's ability and experience.

Bid irregularities are further classified as "major irregularities" or "minor" irregularities. **See Appendix "B" attached to and forming part of this Request for Quotation for types of irregularities and their classification.**

Major irregularity is a deviation from the bid request that affects the price, quality, quantity or delivery, and is material to the award. If the deviation is permitted, the bidder could gain an unfair advantage over competitors. The municipality must reject any bid, which contains a major irregularity.

Minor irregularity is a deviation from the bid request, which affects form, rather than substance. The effect on the price, quality, quantity or delivery is not material to the award. If the deviation is permitted or corrected, the bidder would not gain an unfair advantage over competitors. The municipality may permit the bidder to correct a minor irregularity.

The Clerk will be responsible for all action taken in dealing with bid irregularities, and acts in accordance with the nature of the irregularity:

- Major irregularity - automatic rejection
- Minor irregularity - bidder may rectify
- Errors in calculations (including errors in taxes) - may be corrected and the unit prices will govern

In the event that the successful bidder withdraws its bid due to the identification of a major irregularity before Council enters into a written contract with that bidder, Council, by resolution, may disqualify such vendor from participating in further quotations and tenders for a period of up to one year.

22.0 Withdrawal or Qualifying of Tenders

A Bidder who has already submitted a quotation may submit a further quotation at any time up to the official closing time. The last quotation received shall supersede and invalidate all quotations previously submitted by that Bidder for this contract.

A senior official of the Bidder may withdraw their quotation at any time up to the official closing time by directing requests to the Clerk in writing by letter or email or in person, with a signed

INSTRUCTION TO BIDDERS

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Withdrawal confirming the details. Telephone requests will not be considered. The withdrawal of a quotation does not disqualify the bidder from submitting another quotation on the same contract.

23.0 Health and Safety and Insurance Requirements

Prior to the commencement of work, evidence of a health and safety policy; and employee health and safety orientation training, satisfactory to the Owner must be provided. Proof of valid liability and workplace safety insurance coverage shall be provided ensuring indemnification of the Owner from any and all claims, demands, losses, costs or damages resulting from the performance of a bidder's obligations under the contract and from any risk determined by the Owner as requiring coverage.

APPENDIX "B" TO BYLAW 04-35

Description of Irregularity	Major	Minor	Action to be Taken
Late bid (by any amount of time)	x		Automatic rejection
Bids completed in pencil	x		Automatic rejection
Bid surety not submitted with the bid when the bid request (or any addenda) indicated that such surety is required	x		Automatic rejection
Execution of Agreement to bond: a) bond company corporate seal or equivalent proof of authority to bind company or signature missing b) surety company not licensed to do business in Ontario	x		Automatic rejection
Execution of Bid Bonds: a) corporate seal or equivalent proof of authority to bind company or signature of the BIDDER or both missing b) corporate seal or equivalent proof of authority to bind company or signature of BONDING COMPANY missing	x		Automatic rejection
Other Bid Security: Cheque has not been certified	x		Automatic rejection
Bidders not attending mandatory site meeting	x		Automatic rejection
Unsealed tender envelopes	x		Automatic rejection
Proper response envelope or label not used		x	Acceptable if officially received on time
Pricing or signature pages missing	x		Automatic rejection
Insufficient financial security (i.e. no deposit or Bid bond or insufficient deposit)	x		Automatic rejection
Bid received on documents other than those Provided in request	x		Not acceptable unless specified otherwise in the request
Execution of bid document - proof of authority to Bind corporation is missing	x		Automatic rejection
Part bids (all items not bid)	X or	x	Acceptable unless complete bid has been Specified in the request
Bids containing minor clerical errors		X	2 Working days to correct errors and initial changes. Township of The North Shore reserves the right to waive initialling and accept bid
Changes bit initialled in the bid that are minor (i.e. the bidder's address is amended by Overwriting but not initialled		X	2 Working days to correct errors and initial changes. Township of The North Shore reserves the right to waive initialling and accept bid
Unit prices in the schedule of prices have been changed but not initialled		X	2 Working days to correct errors and initial changes. Township of The North Shore reserves the right to waive initialling and accept bid
Other mathematical errors which are not consistent with the unit prices		X	2 Working days to correct errors and initial changes. Unit prices will prevail
Pages requiring completion of information by vendor are missing	x		Automatic rejection
Bid documents which suggest that the bidder has made a major mistake			Consultation with a solicitor on a case-by-case basis and referenced within the staff report if applicable.

NOTE: The above list of irregularities should no be considered all-inclusive. The Clerk in consultation with Council will review minor irregularities not listed. The Clerk may then accept the bid, or request that the bidder rectify the deviation.

QUOTATION FORM

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1.0 QUOTATION FOR: Pronto East Water Treatment Plant UV System Replacement

2.0 SUBMITTED TO: Corporation of the Township of the North Shore
P.O. Box 108, 1385 Highway 17
Algoma Mills, ON
P0R 1A0

3.0 SUBMITTED BY: _____
(Name of Company)

(Address)

(Telephone) (Fax)

4.0 QUOTATION AMOUNT

I/We, the undersigned, having carefully examined the site and requirements of the project and the following which constitute the Quotation Documents:

- a. Instructions to Bidders
- b. Quotation Form
- c. Contractor Agreement
- d. Specifications
- e. Contract Drawings
- f. Sample Photographs
- g. SCG Process Equipment Information
- h. Addenda up to and including Addendum No. _____ dated _____.
(Insert number of last Addendum received).

We/I the undersigned hereby offer to furnish labour, tools, plant, services and materials, including applicable taxes (except the Harmonized Sales Tax) and duties in force at the time of Quotation submission required to complete the above project in accordance with the requirements of the Quotation Documents for the Total Quotation Price excluding HST of:

* _____ and ____/100 Dollars

(\$ * _____)

in lawful money of Canada if awarded a Contract on acceptance of this Quotation within sixty (60) days from the time set for the Quotation submission.

*** provide the amount in words and numerals.**

QUOTATION FORM

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4.1 And also agree that our Total Quotation Price consists of the following Price Breakdown:

Price Breakdown

Pronto East Water Treatment Plant UV System Replacement

No.	Item Description	Unit	Total Price
1.	General Requirements	L.S.	\$ _____
2.	Performance Security	L.S.	\$ _____
3.	Mobilization and Demobilization	L.S.	\$ _____
4.	Decommission Existing UV Treatment System	L.S.	\$ _____
5.	SCG Process UV Treatment System	L.S.	\$ _____
6.	Electrical and Control	L.S.	\$ _____
7.	Restoration	L.S.	\$ _____
Total Quotation Price			\$ _____

- Note:
1. Bidder to fill in Total Prices and Total Quotation Price.
 2. Total Quotation Price to be carried to Page 1 of the Quotation Form.
 3. L.S. denotes Lump Sum.
 4. Total Quotation Price excludes HST.

4.2 And also agree that this Quotation shall remain open for acceptance for the said time whether any other Quotation has previously been accepted or not.

4.3 And also agree that in submitting this Quotation, I/we recognize the Owner's right to accept any Quotation submitted or to reject all Quotations or to proceed with all or a portion of the work.

4.4 And also agree that an acceptance of this Quotation, based on the Owner's endorsement of the

QUOTATION FORM

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Contractor's Quotation Form, shall constitute a binding agreement with the Contractor to complete the work. Notice of acceptance shall be deemed to have occurred when a copy of the endorsed Quotation form, executed by the Owner, is provided to the Contractor.

4.5 And also clearly understand time is of the essence.

4.6 And also agree the price quotation includes all equipment, plant, labour and materials to complete the work as outlined and in a good and workmanlike manner by appropriately certified tradespeople.

4.7 And also agree to carry out all work in strict compliance to the Occupational, Health and Safety Act and all other relevant Regulations in respect of the work.

5.0 HARMONIZED SALES TAX (HST)

HST shall be calculated as 13% of the Total Quotation Price. This amount shall not be included in the Total Quotation Price. The amount of HST payable is listed for the Owner's information.

HST on Total Price: \$_____

Bidder's HST Registration Number: _____

6.0 SIGNATURE OF BIDDER

Name of Company

Signature
(signing officer with Authority to bind the Company.)

Title

Date

Signature of Witness

Title

Date

CONTRACTOR AGREEMENT

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THIS CONTRACTOR CONTRACT FOR SERVICES MADE THIS ____ DAY OF _____, 2025.

BETWEEN:

Corporation of the Township of the North Shore
(hereinafter referred to as “**Owner**”)

-and-

Contractor’s Name
(hereinafter referred to as “**Contractor**”)

For the provision of Services referred to as:

Pronto East Water Treatment Plant UV System Replacement
(hereinafter referred to as the “**Project**”)

NOW THEREFORE, the Contractor and the Owner, for the consideration herein named, agree as follows:

Article 1. General

- 1.1 The Contractor shall perform the above-named Project as herein set forth and as outlined in the Contract Documents, in accordance with the forms and conditions set forth herein.

Article 2. Description of the Project

- 2.1 Decommission the existing UV treatment system at the Pronto East Water Treatment Plant and provide the SCG Process UV treatment system pre-mounted on a steel support frame.

Article 3. Scope of Work

- 3.1 The Scope of Work is generally described in Section 11.0 of the Instructions to Bidders.

Article 4. Project Schedule

- 4.1 The Contractor shall commence work within 10 days of notification of Award of Contract and the work shall be substantially performed by no later than **August 29, 2025**. The work shall continue uninterrupted until substantially performed.
- 4.2 Where delays beyond the control of the Owner and the Contractor are encountered, the project schedule may be amended upon the agreement of both parties.

Article 5. Fees, Disbursements and Payment

- 5.1 The Owner shall pay to the Contractor an amount for his services based on the unit and lump

CONTRACTOR AGREEMENT

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sum prices indicated on the Quotation Form.

- 5.2 Payment to the Contractor will be made on a monthly basis and only for the amount of work completed to the satisfaction of the Engineer prior to the monthly cut-off date. The monthly cut-off date shall be agreed upon by the Owner and the Contractor prior to initiating work. The second and subsequent applications for payments shall be accompanied by a duly signed Statutory Declaration similar to CCDC form 9A.

Article 6. Holdbacks

- 6.1 Holdbacks shall be retained as indicated herein and in accordance with the Construction Act. The Statutory Holdback Release Payment Certificate shall be a payment certificate releasing to the Contractor the statutory holdback due in respect of Work performed up to the date of Substantial Performance. Payment of such statutory holdback shall be due 61 days after the date of publication of the Certificate of Substantial Performance but subject to the provisions of the *Construction Act* and the submission by the Contractor of the following documents:
- a) a release by the Contractor in a form satisfactory to the Engineer releasing the Owner from all further claims relating to the Contract, qualified by stated exceptions such as outstanding work;
 - b) a statutory declaration in a form satisfactory to the Engineer that all liabilities incurred by the Contractor and the Contractor's Subcontractors in carrying out the Contract have been discharged except for statutory holdbacks properly retained;
 - c) a satisfactory Certificate of Clearance from the Workplace Safety and Insurance Board; and,
 - d) proof of publication of the Certificate of Substantial Performance.

Article 7. Employment Insurance, WSIB, etc.

- 7.1 The Contractor is responsible for remission to Government authorities of all amounts owing for employment insurance, WSIB, Canada Pension, income tax, harmonized sales tax, and any other legislative requirements.

Article 8. Insurance

- 8.1 When requested by the Owner or its Engineer, the Contractor shall supply a summary of insurance coverage presently being maintained by the Contractor including but not exclusive to Comprehensive General Liability Insurance. Such summary shall include the name of the Insurance Company, type of insurance and amount of such coverage. The Owner, PUC Services Inc. and the Engineer shall be named as insured parties.

Article 9. Disputes

- 9.1 In the event of a dispute, the decision of the Engineer shall be final.

CONTRACTOR AGREEMENT

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Article 10. Warranty

- 10.1 The Contractor shall provide a warranty for all materials and workmanship for a period of one year following the date of substantial completion. The Contractor shall provide to the Owner for the duration of the warranty, a warranty security the value of which shall be 3% of the contract value. The warranty security is at no time part of the statutory holdback.
- 10.2 The warranty security shall be retained by the Owner in equal increments from monies that would otherwise be payable to the Contractor, so that by the date of substantial performance of the contract the full value of the warranty security has been retained.
- 10.3 The Contractor shall be notified by the Engineer in writing of any defects and deficiencies observed during the one-year warranty period. The Contractor shall correct promptly, at no extra cost to the Owner, all defects and deficiencies in the work which appear during the warranty period. The applicable warranty period for items repaired during the warranty period shall commence from the date of acceptance of the corrected work by the Engineer.
- 10.4 On the expiration of a period of 12 months from the date of Substantial Completion, and after all known imperfect work has been rectified to the satisfaction of the Engineer, the warranty security, less any deduction as provided for in the Contract, shall be paid to the Contractor following the approval by the Engineer.

Article 11. Successors and Assignments

- 11.1 This agreement shall ensure to the benefit of and be binding upon the parties hereto and except as otherwise provided herein, upon their executors, administrators, successors and assigns.
- 11.2 If a party to this Agreement who is an individual should desire to bring in a partner or partners or if a party which is a partnership should desire to bring in a new partner or partners to share the benefits and obligations of this Agreement, they may do so by properly notifying the other party in writing of such intended action.
- 11.3 If a party to this Agreement is a partnership, and a partner thereof dies or retires then the remaining partner therein shall form a new successor partnership to share the benefits and obligations of the Agreement.
- 11.4 Except as foresaid, neither party shall assign this Agreement without the prior consent in writing of the other.

Article 12. Termination and Suspension

- 12.1 The Owner may at any time by notice in writing to the Contractor suspend or terminate the Work or any portion thereof at any stage of the Undertaking. Upon receipt of such written notice, the Contractor shall perform no further services other than those reasonably necessary to close out the Contractor's services. In such event the Contractor shall be paid by the Owner for all services

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Article 13. Indemnification

Accepted _____
 Corporation of the Township of the North Shore signature Name (please print) Date

SPECIFICATIONS

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Note: "Provide" means design, supply, install, terminate, commission and test.

All new equipment and materials being installed under this contract that are or will be in contact with drinking water shall be disinfected in accordance with American Water Works Association (AWWA) C653.

The work shall be carried out in accordance with the Ontario Building Code, Ontario Electrical Code and all other applicable laws, regulations, standards and codes.

The installation of the equipment shall include all appurtenances and shall comply with the recommendations and requirements of the manufacturer.

Provide an operation and maintenance manual binder for all equipment supplied under this contract, complete with index and tabs for each piece of equipment.

The site is an operating water treatment plant. The plant must remain operational at all times. The Contractor is responsible for coordination of the work so as to not interfere with normal operations of the plant. All work must be coordinated with the drinking water treatment system operator, PUC Services Inc. No extended system outages will be permitted. All equipment/system downtimes shall be kept to an absolute minimum and coordinated with the plant operator and Engineer.

The contractor is responsible for obtaining all required permits and inspections.

The "ITEM" numbers below correspond with those shown on the Quotation Form.

1.0 ITEM No. 1 – GENERAL REQUIREMENTS

The lump sum bid for this item shall include all general requirements including but not limited to insurance, project management, meetings, preparing invoices, construction documentation, permits, project closeout documentation, and other similar work.

2.0 ITEM No. 2 – PERFORMANCE SECURITY

The lump sum bid for this item shall include all costs to obtain, and hold in force for the duration of the Contract, a performance bond in the amount of 100% of the Contract price, as well as a Labour and Materials Payment Bond in the amount of 50% of the Contract Price.

The Owner, at their sole discretion, may waive the requirement for this item, or select a bonding company of their choice.

Payment for this item shall be made following submission of a true copy of the invoice from the bonding company.

SPECIFICATIONS

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3.0 ITEM No. 3 – MOBILIZATION AND DEMOBILIZATION

The lump sum bid for this item shall include the mobilization and demobilization to the job site of all equipment, labour, materials, temporary facilities and all other items not required to form part of the permanent works.

Payment for this item shall be as follows (unless agreed otherwise by the Engineer and Bidder):

- (a) On complete mobilization, determined by the Engineer, 50% of the Contract price for this item.
- (b) On complete demobilization, determined by the Engineer, 50% of the Contract price for this item.

4.0 ITEM No. 4 – DECOMMISSION EXISTING UV TREATMENT SYSTEM

The lump sum bid for this item shall include all labour, materials and equipment required for the decommissioning, removal and disposal of all piping, valves, fittings, supports and appurtenances as well as electrical and control, associated with the existing UV treatment system as indicated herein and as per the Contract Drawings. Coordinate the scope of removals with the proposed equipment being provided under the Contract. The Owner shall be given the opportunity to retain any of the items which have been removed by the Contractor. Should the Owner not wish to retain any or all of the removed items, the Contractor shall dispose of the same.

5.0 ITEM No. 5 – SCG PROCESS UV TREATMENT SYSTEM

The lump sum bid for this item shall include all labour, materials and equipment required to provide the proposed SCG Process UV treatment system including all piping, tubing, valves, fittings, supports and appurtenances as per the Contract Drawings, as indicated herein and as required for a complete and functioning system.

The SCG Process UV treatment system shall have three (3) UV units (2 duty/1 standby arrangement), pre-assembled, pre-mounted, pre-piped and pressure tested (24 hours), with an automatic switchover controller. The steel support frame shall be anchored as required in the specified location on the Contract Drawings using suitable anchors, as approved by the Engineer. Bolted connections on steel support frame and unions shall be provided for disassembly purposes if required. See the SCG Process Equipment Information section and Contract Drawings for more information.

All piping shall be ASTM A-778 Type 316L Stainless Steel Schedule 10S material conforming to ASTM A-240. All fittings shall conform to ASTM A-774 Type 316L. Provide shop drawings for all piping showing proposed piping layout, valves, fittings, etc. Provide flanged connections as shown on the drawings and as required for constructability.

Flange faces shall be flat faced and serrated.

SPECIFICATIONS

Page 3 of 4

Gaskets shall be full faced neoprene, NSF61 certified, suitable for potable water.

Provide insulation on PVC manifold located above the proposed UV units as recommended by SCG Process.

Purge valve discharge line tubing shall be secured to the wall to prevent movement during the purging cycle and routed to a floor drain as recommended by SCG Process.

Provide pipe identification and directional arrow labels for all piping. Pipe identification and directional arrow labels shall match the colour, size and appearance of the existing labels.

All new piping, valves and appurtenances (excluding the UV units) shall be pressure tested and disinfected. Test pressure shall be 1,035kPa (150psi) for a duration of 2 hrs with zero leakage. Disinfect all piping and components in contact with process/drinking water in accordance with AWWA C651, including bacteriological testing (collection of samples by Operator).

All materials in contact with water shall be NSF 61 certified.

All metal components (fasteners, supports, brackets, etc.) shall be stainless steel.

The Contractor shall be responsible for start-up and commissioning of the SCG UV treatment system. Costs associated with start-up and commissioning shall be included under this item. Provide adequate training for the operational staff for all equipment provided under this item.

Contractor shall provide a start-up, commissioning and training plan at a minimum of 1 week prior to the scheduled date.

Provide a shop submission for review by the Engineer of all equipment and materials under this item. Only order the equipment specified under this item following receipt of the Engineer's acceptance of the shop submission.

6.0 ITEM No. 6 – ELECTRICAL AND CONTROL WORK

Provide all required electrical power, process control wiring, conduit, etc. as required for a complete and functional system.

Remove the existing 6 UV receptacles, including electrical wiring/conduit back to source, and make safe.

Rework/revise three of the existing receptacles, rotate them vertically, and install GFCI receptacles complete with extra duty 'While-In-Use' weather-proof clear plexi-guard flip up covers.

Revise and rework UV receptacle feeds, such that each new UV reactor unit, has its own dedicated 20A/120V t-slot GFCI receptacle. (Total of three 20A/1P circuits).

SPECIFICATIONS

Page 4 of 4

Provide new circuit breakers on existing electrical panel "LP A" at the motor control centre to feed the proposed GFCI receptacles.

The Contractor shall provide a new typewritten (updated) panel legend, as well as provide P-Touch labeling on the new receptacle indicating panel/circuit feed.

The proposed SCG Process UV treatment system shall be powered by a single UPS power supply (Cyberpower CP1000AVRLCD UPS or equivalent approved by the Engineer) complete with battery backup and surge protection. The UPS power supply shall be wall mounted adjacent to the UV treatment system steel support frame. Provide a wall-mounting bracket for installation of the UPS power supply. The exact location shall be confirmed onsite with the Engineer prior to installation.

All available warnings and alarm outputs for each UV unit shall be tied into the existing PLC located in the motor control centre.

The Contractor shall provide all required grounding / bonding provisions, as per the Ontario Electrical Safety Code and shall meet the UV treatment unit manufacturer's installation instructions.

The Contractor shall be responsible for and pay for ESA Electrical Permit. Submit copy of Final ESA Inspection Certificate to the Engineer.

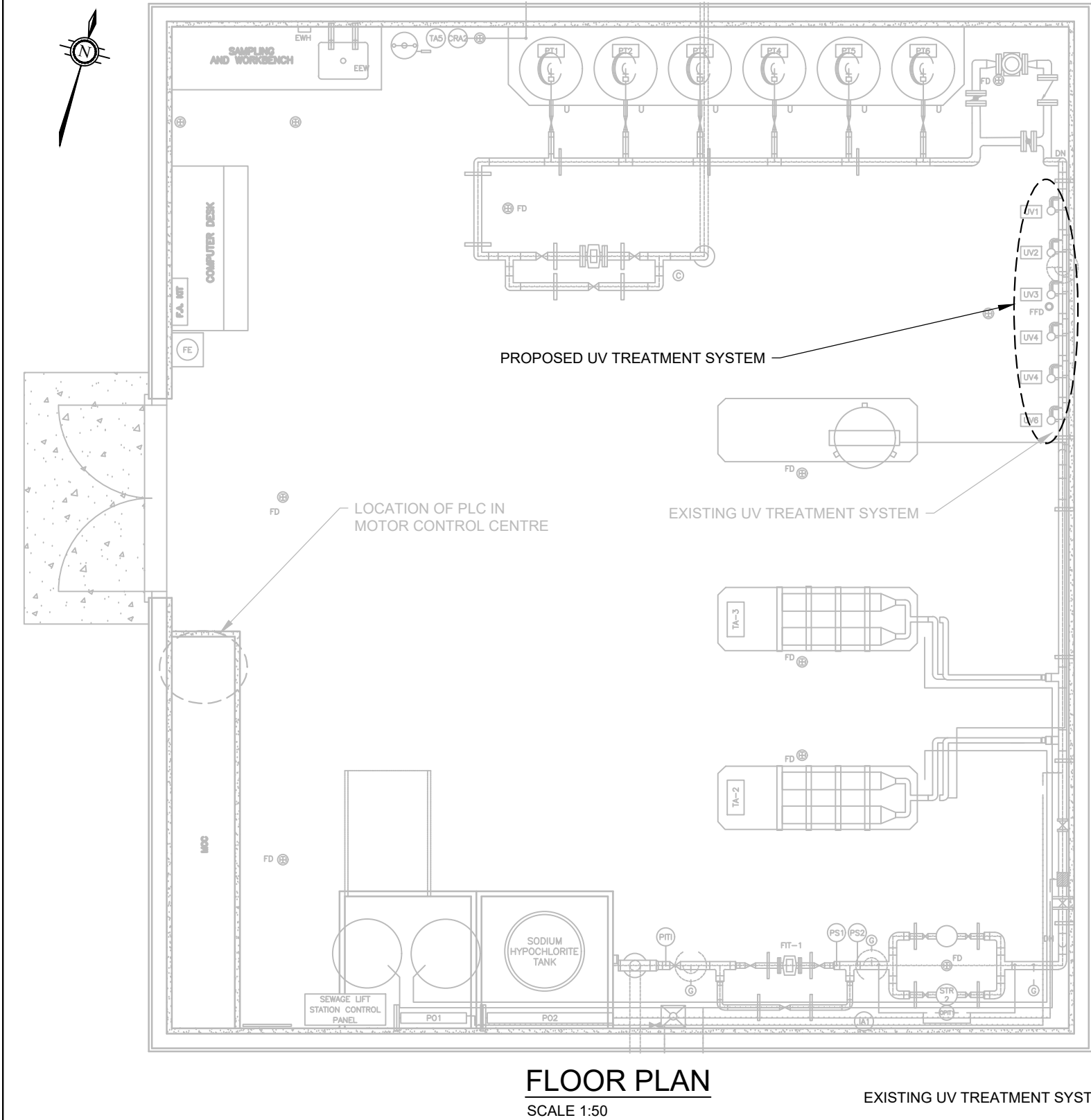
7.0 ITEM No. 7 – RESTORATION

Supply all labour, materials and equipment for the full restoration of all areas disturbed by the work. All disturbed areas shall be restored to an equivalent or better condition than existing prior to the commencement of construction and to the satisfaction of the Engineer. Restored areas shall match or exceed existing conditions as determined by the Engineer.

CORPORATION OF THE TOWNSHIP OF THE NORTH SHORE

PRONTO EAST WATER TREATMENT PLANT UV SYSTEM REPLACEMENT

CONTRACT DRAWINGS



FLOOR PLAN
SCALE 1:50

NOTES:

1. BASE DRAWING FROM WM. R. WALKER ENGINEERING INC. A1-2007-25-G2 REV. 1 (APRIL 2008) WITH REVISIONS MADE TO MEMBRANE FILTERS AND BOOSTER PUMP BASED ON WSP DRAWING NO. P003 (Nov. 2018) AS WELL AS SITE OBSERVATIONS.

NOTES			
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED.			
2. DO NOT SCALE DRAWING.			
3. DRAWING SHOWS PROPOSED CONSTRUCTION EMPHASIZED.			
4. EXISTING CONDITIONS APPEAR SCREENED IN BACKGROUND.			
5. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY AND MUST BE VERIFIED BY CONTRACTOR.			

No	DESCRIPTION	DATE	INITIAL
0	FOR QUOTATION	04/25	RW
REVISIONS			



KRESIN
Engineering Corporation

Sault Ste. Marie, Ontario
(705) 949-4900

GENERAL NOTES:

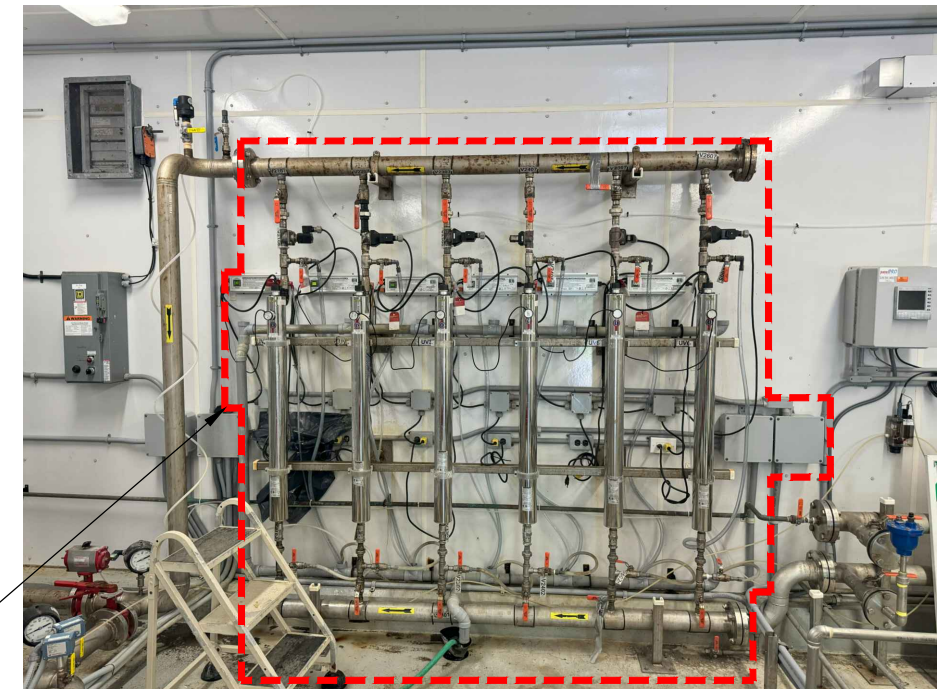
1. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITION, OR BETTER AND TO THE SATISFACTION OF THE ENGINEER.
2. THE POSITION AND SIZE OF CONDUITS, PIPES, DUCTS AND OTHER UTILITIES AND EQUIPMENT ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND EQUIPMENT IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE EXACT LOCATION AND SIZE OF ALL SUCH UTILITIES AND EQUIPMENT AND SHALL ASSUME LIABILITY FOR DAMAGE TO THEM.
3. THE MAKE AND QUALITY OF ALL MATERIALS USED SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES AND STANDARDS, BE NEW AND FREE FROM DEFECTS AND SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEERS AND LOCAL AUTHORITIES HAVING JURISDICTION.
4. ALL MATERIALS USED IN WET OR CORROSIVE ENVIRONMENT SHALL BE CORROSION RESISTANT (SS OR APPROVED ALTERNATIVE). ALL FASTENERS SHALL BE STAINLESS STEEL.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ONSITE PRIOR TO CONSTRUCTION.
6. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF APPLICABLE CODES, STANDARDS AND REGULATIONS.
7. WORK TO COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE. THE ONTARIO PLUMBING CODE, FIRE UNDERWRITER'S REQUIREMENTS AND LOCAL CODES HAVING JURISDICTION.
8. ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER BY FIRST CLASS LICENSED TRADESMEN.
9. INSTALL ALL PIPING ALONG WALL IN EITHER TRUE VERTICAL OR HORIZONTAL ORIENTATION.
10. PROPERLY SUPPORT ALL PIPING, VALVES, EQUIPMENT, ETC.
11. PROVIDE PIPE IDENTIFICATION AND DIRECTIONAL ARROWS LABELS FOR ALL PIPING.
12. ALL NEW PIPE SHALL BE ASTM A-778 TYPE 316L STAINLESS STEEL SCHEDULE 10S WITH ALL NEW FITTINGS CONFORMING TO ASTM A-774 TYPE 316L.

PLUMBING NOTES:

1. A PLUMBING INSPECTOR'S TEST CERTIFICATE SHALL BE REQUIRED.
2. PROVIDE VENTS AND DRAINS AS REQUIRED.

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL CONFORM TO ALL LAWS AND REGULATIONS OF CANADA AND THE PROVINCE OF ONTARIO INCLUDING, BUT NOT LIMITED TO, THE ONTARIO ELECTRICAL SAFETY CODE (LATEST EDITION) AND THE ONTARIO BUILDING CODE.
2. ALL GROUNDING SHALL BE COMPLETE AS PER CODE WHETHER SHOWN ON THESE DRAWINGS OR NOT.
3. ELECTRICIAN IS RESPONSIBLE FOR ESA ELECTRICAL PERMIT.
4. SUPPLY ALL EQUIPMENT NECESSARY FOR A COMPLETE AND FUNCTIONING INSTALLATION.
5. EQUIPMENT SHALL BE NEW AND CSA CERTIFIED.
6. PROVIDE DISCONNECTS AS REQUIRED BY CODE.
7. REMOVE THE EXISTING SIX (6) UV RECEPTACLES, INCLUDING ELECTRICAL WIRING/CONDUIT BACK TO SOURCE, AND MAKE SAFE.
8. REWORK/REVISE THREE OF THE EXISTING RECEPTACLES, ROTATE THEM VERTICALLY, AND INSTALL GFCI RECEPTACLES COMPLETE WITH EXTRA DUTY 'WHILE-IN-USE' WEATHERPROOF CLEAR PLEX-GUARD FLIP UP COVERS.
9. REVISE AND REWORK UV RECEPTACLE FEEDS, SUCH THAT EACH NEW UV REACTOR UNIT HAS ITS OWN DEDICATED 20A/120V T-SLOT GFCI RECEPTACLE. (TOTAL OF 3 20A/1P CIRCUITS).



UV TREATMENT SYSTEM



CORPORATION OF THE TOWNSHIP OF THE NORTH SHORE
PRONTO EAST WATER TREATMENT PLANT UV SYSTEM REPLACEMENT

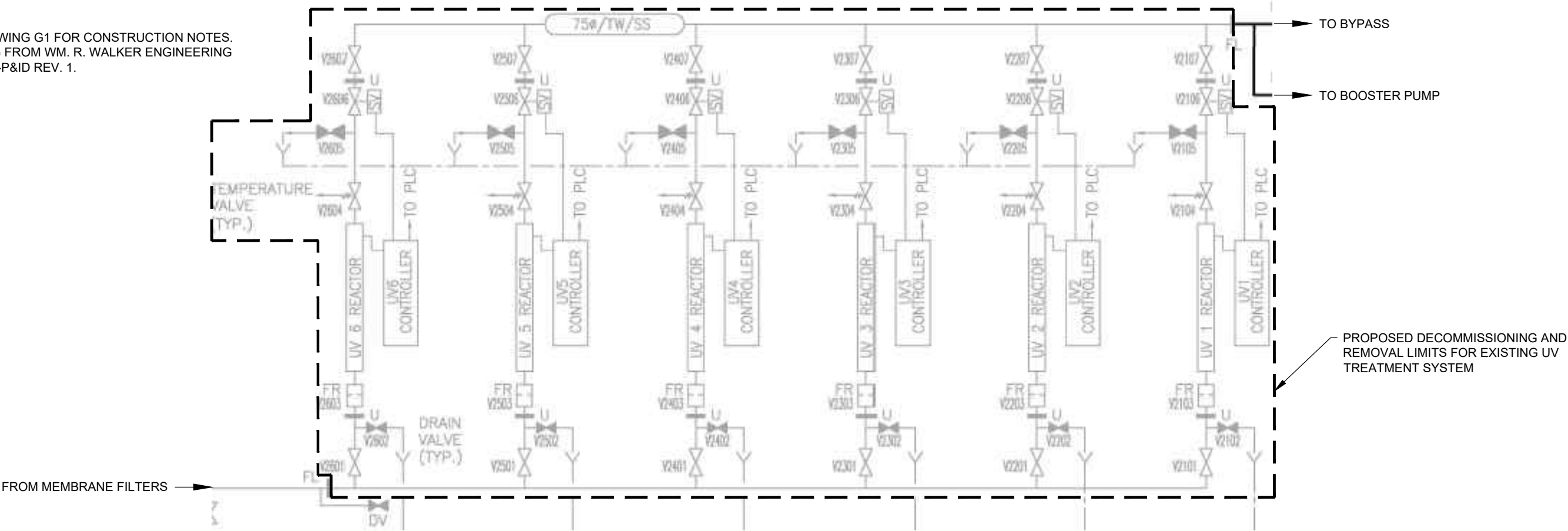
GENERAL PLAN

G1

Rev 0

NOTES:

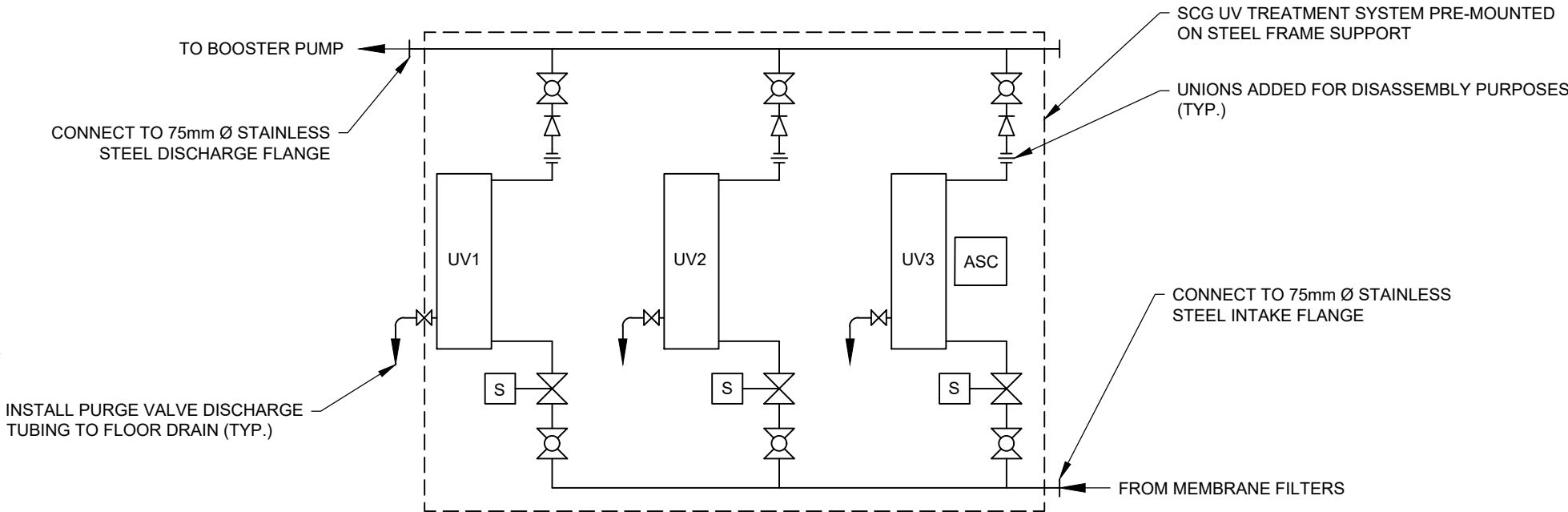
1. REFER TO DRAWING G1 FOR CONSTRUCTION NOTES.
2. BASE DRAWING FROM WM. R. WALKER ENGINEERING INC. A1-2007-25-P&ID REV. 1.



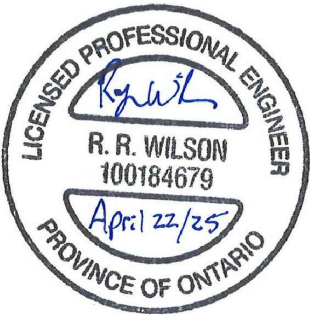
EXISTING UV TREATMENT SYSTEM

LEGEND

- ⊗ BALL VALVE
⊗ SOLENOID VALVE
⊗ CHECK VALVE
⊗ PURGE VALVE
|| UNION
UV UV PURE HALLETT 1000PN UV UNIT
ASC AUTOMATIC SWITCHOVER CONTROLLER
→ FLOW DIRECTION



PROPOSED UV TREATMENT SYSTEM



NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED.
2. DO NOT SCALE DRAWING.
3. DRAWING SHOWS PROPOSED CONSTRUCTION EMPHASIZED.
4. EXISTING CONDITIONS APPEAR SCREENED IN BACKGROUND.
5. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY AND MUST BE VERIFIED BY CONTRACTOR.

No	DESCRIPTION	DATE	INITIAL
0	FOR QUOTATION	04/25	RW
REVISIONS			



Sault Ste. Marie, Ontario
(705) 949-4900

DESIGN	RW	04/25
DRAWN	RW	04/25
CHECKED	CK	04/25
PROJECT	2445	
FILENAME	2445 G1 and M1	
SCALE	N.T.S	

CORPORATION OF THE TOWNSHIP OF THE NORTH SHORE
PRONTO EAST WATER TREATMENT PLANT UV SYSTEM REPLACEMENT

UV TREATMENT SYSTEM SCHEMATIC

M1

Rev 0

CORPORATION OF THE TOWNSHIP OF THE NORTH SHORE

PRONTO EAST WATER TREATMENT PLANT UV SYSTEM REPLACEMENT

SAMPLE PHOTOGRAPHS

Corporation of the Township of the North Shore
Pronto East Water Treatment Plant UV System Replacement
SAMPLE PHOTOGRAPHS



Photograph 1: Standing near entrance doors and looking northeast towards UV treatment system

Corporation of the Township of the North Shore
Pronto East Water Treatment Plant UV System Replacement
SAMPLE PHOTOGRAPHS



Photograph 2: Looking southwest towards MCC and entrance doors

Corporation of the Township of the North Shore
Pronto East Water Treatment Plant UV System Replacement
SAMPLE PHOTOGRAPHS



Photograph 3: Standing near compressor and looking northeast towards UV treatment system

Corporation of the Township of the North Shore
Pronto East Water Treatment Plant UV System Replacement
SAMPLE PHOTOGRAPHS



Photograph 4: Standing near compressor and looking east towards UV treatment system

Corporation of the Township of the North Shore
Pronto East Water Treatment Plant UV System Replacement
SAMPLE PHOTOGRAPHS



Photograph 5: Standing near compressor and looking east towards UV treatment system and membrane filter components

Corporation of the Township of the North Shore
Pronto East Water Treatment Plant UV System Replacement
SAMPLE PHOTOGRAPHS



Photograph 6: Looking northeast towards compressor for membrane filters

CORPORATION OF THE TOWNSHIP OF THE NORTH SHORE

PRONTO EAST WATER TREATMENT PLANT UV SYSTEM REPLACEMENT

SCG PROCESS EQUIPMENT INFORMATION



Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
2024-11-15	Page	1 / 11	Quote No. RV-0075022 R1

TOWNSHIP OF NORTH SHORE - PRONTO EAST WTP – UV REACTORS

Kresin Engineering Corp.

Proposal Date

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Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
2024-11-15	Page	2 / 11	Quote No. RV-0075022 R1

PROPOSAL

To	Kresin Engineering Corp.	Attention	Ryan Wilson
	536 Fourth Line East, Sault Ste. Marie, ON, P6A 6J8	Email	ryan@kresinengineering.ca
		Phone	705-949-4900

Project Name	Township of North Shore - Pronto East WTP – UV Replacement
Subject	Budgetary Quotation
Scope	UV Reactors
Prepared By	Radostina Vassileva
Sales Contact	David Howes

Dear Ryan Wilson,

As per your request, SCG Process is pleased to submit the following proposal for your consideration and approval.

SCG Process is a provider of smart solutions for water, wastewater, and process applications through the delivery of customized design packages. As an experienced manufacturer, distributor, and service provider, SCG Process is confident that our proposal will provide the right solution for your application requirements.

Our scope of supply is limited to the sections referenced AND the notes, and/or exceptions (if applicable) outlined in our proposal.

Should you have any questions concerning this proposal or require any additional information, please do not hesitate to contact us.

Kind Regards,

Radostina Vassileva

Applications Specialist

o: 289-459-1897 | e: rvassileva@scgprocess.com

C.C. David Howes

Regional Sales Manager

c: 416.579.1938 | e: dhowes@scgprocess.com

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Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
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TERMS & CONDITIONS.....	9

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SCOPE OF SUPPLY

ITEM #1 – UV REACTORS

Quantity Three (3) UV Pure Ultraviolet Disinfection Units

Model Hallett 1000P (P/No. G24-420), each comes complete as follows:

- ☐ Each UV unit can treat up to 68 gpm flow
- ☐ UVT: 80% minimum
- ☐ Dose: 40 mJ/cm²
- ☐ Power supply: 120VAC, 1 phase, 60 Hz
- ☐ Power consumption (nominal): 403 W
- ☐ Interface: Colour LCD resistive touchscreen display
- ☐ Dry contacts: built-in – 2 provided (warning and alarm)
- ☐ Remote start/stop
- ☐ Each UV reactor is equipped with an electronically powered quartz cleaning system that will automatically function without operator intervention (the wiping cycle occurs on power up of the lamps and then once every 4 hours by default (the wiping cycle is adjustable and can also be initiated at any time by an operator)
- ☐ With Modbus and 4-20mA output
- ☐ Wetted parts: Meets NSF/ANSI/CAN 61 & NSF/ANSI 372 for water up to 73°F (23°C)
- ☐ Inlet/outlet ports: 2" MNPT stainless steel
- ☐ With automatic purging system: each UV reactor is equipped with a purge valve to regulate water temperature within the UV reactor during periods of no flow. The purge valve will also discharge water from the UV reactor if low UVT water is detected within the UV chamber.
- ☐ Water temperature range: 1 to 35°C
- ☐ Water pressure range: 5 - 100 psig (34 - 690 kPa)
- ☐ Relative humidity (air): 70% max
- ☐ Maximum solids content (turbidity): 1 NTU
- ☐ Maximum hardness: 855 mg/L
- ☐ Maximum iron concentration: 3 mg/L
- ☐ Maximum manganese concentration: 0.05 mg/L
- ☐ Dimensions: 55.8 x 11.5 x 8.6 in (1418 x 291 x 218 mm)
- ☐ Body configuration: double door with side hinges, for vertical mounting
- ☐ Weight: 52lb (dry); 58.3 lb (wet)
- ☐ Each supplied with two flexible, 2" dia., SS hoses (P/No. GD17) and one 2" solenoid valve (P/No. 550231)



Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
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ITEM #2 - OPTIONAL PRICE ADDER TO PANEL MOUNT UV REACTORS ON A HDPE BACKBOARD

- ☐ Includes mounting the UV reactors on the HDPE backboard (configuration: 2 duty/1 standby), each UV will come with a solenoid valve that will shut down if an alarm is triggered. A local terminal box is included which will send a start command to the standby unit. The panel accessories include:
 - ☐ Three (3) 2" solenoid valves, 550231
 - ☐ Six (6) flexible hoses, 2" OD x 18" long, GD17
 - ☐ Four (4) 2" CPVC manual ball valves, 21C020VS
 - ☐ Three (3) 2" CPVC check valves, BTC020VS
 - ☐ Five (5) 2" PVC manual ball valves, 21A020VS
 - ☐ One (1) lot of interconnection piping and fittings
 - ☐ One (1) local terminal box for switchover capability
- ☐ Panel Weight (Dry): Approx. 280 lbs
- ☐ Panel Weight (Wet): Approx. 350 lbs

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Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
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QUOTATION PRICE

DESCRIPTION	ITEM PRICE (CAD)
ITEM #1 – UV REACTORS	
ITEM #2 - OPTIONAL PRICE ADDER TO PANEL MOUNT UV REACTORS	
One (1) Day /One (1) Trip to Site for Start-up, Commissioning & Training	
QUOTE TOTAL	



Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
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NOTES

- Hallett units to be plugged into GFCI outlets, 120VAC/60Hz (provided by others).
- Purge valve discharge line tubing by others. Please note that the purge valve tubing should be secured to the wall to prevent it from moving during the purging cycle and purge lines should be run to drain.
- Pipe insulation (supply and install by others) is recommended for any overhead piping to prevent condensation from dripping onto unit.
- Unloading and installation by others

EXCEPTIONS

- Not applicable

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Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
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START-UP, COMMISSIONING AND TRAINING

START-UP, COMMISSIONING AND TRAINING

A daily rate for start-up, commissioning, and training is provided above.

Our certified Field Technicians provide commissioning and start-up services, practical hands-on training, and technical support on SCG Process provided products.

****To inquire about Technical Services provided by SCG Process, please contact us at 866-924-7802 or email sales@scgprocess.com**

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Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
2024-11-15	Page	9 / 11	Quote No. RV-0075022 R1

TERMS & CONDITIONS

QUOTATION SUBJECT TO <u>SCG PROCESS STANDARD TERMS & CONDITIONS</u> UNLESS OTHERWISE NOTED	
Quotation Validity:	30 days from date of quotation
Payment Terms:	Net 30 days from date of invoice, subject to prior credit approval
Submittals:	2 - 4 weeks after receipt of order
Delivery Schedule:	2 - 4 weeks after approval of submittals
Terms of Delivery:	FCA Site (Unloading by others)
Start-up, Commissioning & Training:	As noted above
Warranty (Equipment & Service):	FCA Concord, ON, for 12 months after Start- up or 18 months after Delivery whichever comes first
Notes: Payment Terms: <ul style="list-style-type: none">▪ 25% upon drawing submittal▪ 75% upon shipment of equipment	



Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
2024-11-15	Page	10 / 11	Quote No. RV-0075022 R1

TERMS & CONDITIONS

1. DEFINITIONS: The following defined terms mean:

“Company” means Smith Cameron Pump Solutions Inc., d.b.a. SCG Process.

“Purchaser” means party named on the order confirmation as the purchaser of the Goods or Services.

“Agreement” means the order confirmation, together with all documents, drawings and specifications referred to therein, including these Terms and Conditions.

“Equipment” means all supplies, goods, materials, equipment, components and spares required to be supplied by the Company in accordance to the Agreement.

“Services” means all labour, supervision, administration, supplies, tools, equipment and other work and materials to be supplied, installed performed or otherwise used by the Company as required by the Agreement.

“Substantial Completion” means that a substantial part of the work is ready for use or is being used for the purpose intended.

“Completion” means

- in relation to Services, that the Services have been fully performed and completed; and
- in relation to Equipment, the Equipment has been fully completed, supplied and delivered, each in accordance with the Agreement.

2. EFFECT: These terms and conditions form part of every Agreement entered into by the Company with a Purchaser. If the Purchaser authorizes the Company to supply Services or Equipment, then these terms and conditions shall apply, unless an authorized representative of the Company agrees in writing to different terms and conditions. Any variation will affect only those terms and conditions specified, and the remainder will remain in force without amendment. Company’s acknowledgement of Purchaser’s purchase order shall not constitute acceptance of any terms and conditions therein regardless of how such terms and conditions may be prefaced or described.

3. LAW: The contract between the Company and the Purchaser shall be construed under and governed by the laws of the Province of British Columbia and Canada, regardless of where the contract is made or performed. Subject to paragraph 18, the courts of the Province of British Columbia shall have exclusive jurisdiction over any dispute arising from or regarding this Agreement. Compliance with local laws or standards relating to the location, use or operation of the Equipment, by itself or in conjunction with other equipment, and including any fines or penalties, shall be the sole responsibility of the Purchaser.

4. TITLE AND RISK: Title and risk of loss of or damage to the Equipment shall pass to the Purchaser when the Equipment is shipped, whether from the manufacturing facility or the Company’s premises. The Purchaser agrees to insure the Equipment with the Company named as loss payee until the Company has been paid in full.

5. CREDIT AND PAYMENT TERMS: The Purchaser shall furnish to Company all financial information reasonably requested by Company from time to time for the purpose of establishing or continuing Purchaser’s credit limit. The Purchaser agrees that the Company shall have the right to decline to extend credit to Purchaser and to require that the applicable purchase price be paid prior to shipment. The Purchaser shall promptly notify the Company of all changes to the Purchaser’s name, address, or the sale of substantially all of its assets. The Company shall have the right from time to time, without notice, to change or revoke the Purchaser’s credit limit on the basis of changes in the Company’s credit policies or the Purchaser’s financial conditions and/or payment record. Unless the Company has made a contrary agreement in writing, payment for the Services and Equipment is due within 30 days following the earliest of:

- Shipment or offer to ship the Equipment to the Purchaser;
- Substantial Completion of the Services;
- The date of the Company’s invoice to the Purchaser.

Overdue amounts will bear interest at 2% per month, compounded monthly (26.82% per annum) until paid. Payment is due without set off or counter-claims for any amounts claimed by the Purchaser or any affiliate of the Purchaser from the Company, whether or not such claim arises out of this agreement.

Company shall issue its invoice upon shipment or upon readiness to ship, whichever is earlier. Depending on the value of the order, the Company may at its sole discretion require progress payments.

6. SECURITY INTEREST: The Company retains a security interest in the Equipment, and any proceeds derived from the sale or exchange of the Equipment, until the price has been paid in full. The Purchaser agrees to notify the Company immediately of any change in the location of the Equipment, and to take all steps requested by the Company to establish, perfect, continue, and enforce the security interest. The Purchaser waives the right to receive copies of any financing statement, financing change statement, or verification statement.

7. DELIVERY: Any delivery date specified is an estimate only, and subject to delay caused by labour disputes, shortages of material, transportation or manufacturing delays, inclement weather or other cause beyond the reasonable control of the Company. The Company will take commercially reasonable steps to meet any delivery date specified, but will not be liable for the consequences of delay in delivery.

8. TAXES AND DUTIES: The price does not include any present or future federal, provincial, state or local licenses, permits, sales taxes or assessments which may be applicable to or result from the sale of Equipment or Services. Unless otherwise stated, the price does include customs or import duties. Tax exemptions must be clearly noted on Purchaser purchase orders or the appropriate documentation must be presented to Company.

9. PRICES: Unless specified on the quote, prices are guaranteed for 30 days from date of quote.

10. CANCELLATION POLICY: Order cancellation requires written consent from Company. Cancellation of standard product normally stocked and without modification will incur a 25% cancellation charge. Nonstandard or modified product cannot be cancelled without written consent. The Purchaser will agree to pay for all cancellation costs, expenses, commitments, liabilities, and other costs including overhead incurred with respect to all uncompleted goods.

11. RETURNS: The Purchaser shall not return any Equipment to the Company without prior written authorization. Any authorized returns will be subject to a minimum 20% re-stocking charge. Returns must be prepaid, unopened, unused and ready for resale. Product shall be deemed suitable and not returnable after 60 days from delivery date.

12. WARRANTY: The Company warrants that the Equipment and Services will be free of defects in material and workmanship for a period of twelve months from the date the Purchaser begins to operate the Equipment, or eighteen months from the date of shipment to the Purchaser, whichever shall first occur. The Company may, at its option, repair or replace the Equipment and Services. This warranty specifically excludes:

- any claim where the Purchaser has not stored, installed, maintained or operated the Equipment in accordance with the manufacturer’s specifications or instructions;
- the cost of any repairs, replacements, or adjustments (including labour) to the Equipment performed by the Purchaser or others;
- the effects of corrosion, erosion, or normal wear and tear;
- any claim which the Purchaser has not immediately reported, in writing, to the Company;
- any claim where the Purchaser has not complied with specific recommendations of the Company or the manufacturer of the Equipment;

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Project Name	Township of North Shore - Pronto East WTP – UV Reactors		
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f) any warranty with respect to the performance of the Equipment, unless given by the Company in writing, and in that event, the Company's sole obligation shall be as specified in this paragraph 12, as limited by paragraph 13.

13. LIMITATION OF LIABILITY: The warranty given in paragraph 12 excludes all other warranties, whether express, implied, contractual, statutory or otherwise. All implied warranties, including any warranty of merchantability or fitness for a particular purpose, are hereby disclaimed. The Company makes no other warranty or representation of any kind whatsoever, except as to title to the Equipment.

The maximum liability of the Company with respect to this contract, the Equipment and the Services, whether based on contract, warranty, negligence, indemnity, strict liability or otherwise, shall not exceed the price of the Equipment or Services upon which such liability is based.

The Company shall in no event be liable to the Purchaser for any consequential, incidental, indirect, special or punitive damages arising out of this contract, any breach thereof, any defect in, failure or malfunction of the Equipment and Services, whether based upon lost goodwill, lost profits or revenue, interest, work stoppage, impairment of other goods, loss by reason of shutdown or non-operation, increased expenses of operation of the Equipment, loss of use of electrical systems, cost of purchase of replacement power, claims of the Purchaser or customers of the Purchaser for service interruption, or otherwise, and whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability or otherwise.

14. SURVIVAL OF AGREEMENT: The effect of these terms and conditions shall survive the delivery and completion of the purchase contemplated by this agreement.

15. SEVERABILITY: If any provision in these terms and conditions is held by a court of competent jurisdiction to be contrary to law, the remaining provisions will remain in full force and effect.

16. FORCE MAJEURE: Neither Purchaser nor Company shall hold the other responsible for damages or delays in performance caused by Force Majeure or other events beyond the control of the other Party which could not reasonably have been anticipated or prevented. Force Majeure shall include, but not be limited to, unusually severe weather, floods, power outages, epidemics, war, acts of terrorism, riots, strikes, lockouts, exercise of police power, condemnation, or eminent domain. The foregoing shall not give rise to any claims or damages or be considered a waiver by either Party of the obligations of this Agreement.

17. NO WAIVER: Failure of the Company to enforce these terms and conditions, on any occasion, shall not operate as a waiver of such provisions or rights on future occasions.

18. ARBITRATION: Any dispute between the Company and the Purchaser concerning the purchase of Services or Equipment, or these terms and conditions, shall be resolved by a single arbitrator appointed and acting under the Arbitration Act; the arbitrator's decision shall be final and binding upon the parties. The arbitration shall be held in Vancouver, British Columbia.

19. ENTIRE AGREEMENT: These terms and conditions and the Company's order confirmation contain the entire agreement between the parties, and supersede all prior contracts or negotiations. There are no representations, warranties, conditions, collateral agreements, understandings, or inducements which are not contained in these terms and conditions, or the order confirmation.

20. ASSIGNMENT: Neither party shall assign its interest in this contract without the written consent of the Company.

21. GENERAL: These terms and conditions are the official terms and conditions for sale between the Company and Purchaser and may be amended from time to time without notice at Company's sole discretion.

ISO 9001:2015 Certified

Head Office: 19855 98th Ave, Langley, BC V1M 2X5 | P: 604-596-5522 | F: 604-596-4505 | sales@scgprocess.com

Technical Data Sheet Hallett™ 1000P

www.uvpure.com

Potable Water Applications



Model

Hallett 1000P

Validation protocol

US EPA UVDGM
IECEE CB + CE Mark

Operating Range

Flow (single unit)*	Up to 100 US gpm (378 lpm)
UV dose	16 - 200 mJ/cm ²
UV Transmittance [UVT] (water)	50 - 95% UVT
Hardness (water)	Maximum 855 mg/L (50 gpg)
Iron (water)	Maximum 3 mg/L (3 ppm)
Temperature (air)	34 - 104°F (1 - 40°C)
Temperature (water)	34 - 95°F (1 - 35°C)
Water pressure	5 - 100 psig (34 - 690 kPa)
Relative humidity (air)	Maximum 70%

Features

Quartz sleeve cleaning
Wiper position switch
Purge valve
Cooling
Flow restrictor
Shut-off valve

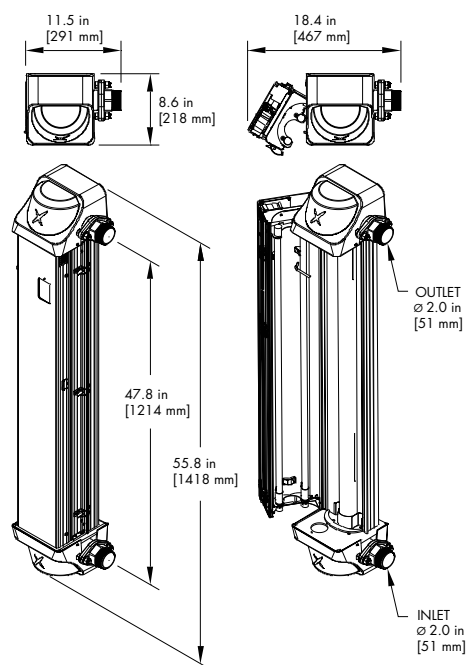
Built-in - automatic mechanical wiper
Built-in
Built-in
Built-in - forced air
Optional - external
Optional - automatic solenoid

Electrical/Instrumentation

Voltage	120/230 V AC, 50/60 Hz
Power consumption (nominal)	403 W
Certifications	UL 979
UV lamps	Dual amalgam - air mounted
Lamp life (typical)	12,000 hours
Lamp cycles (recommended)	Maximum 6 to 12 cycling per 24 hours
Sensors	Quad UV - calibrated to NIST standards
Dry contacts	Built-in - 2 provided (warning and alarm)
Interface	Colour LCD resistive touchscreen display
Alarming	Indicator light and audible alarms
Remote start/stop	Built-in
Onboard diagnostics	Built-in
4-20mA Output & Modbus	Optional

Physical

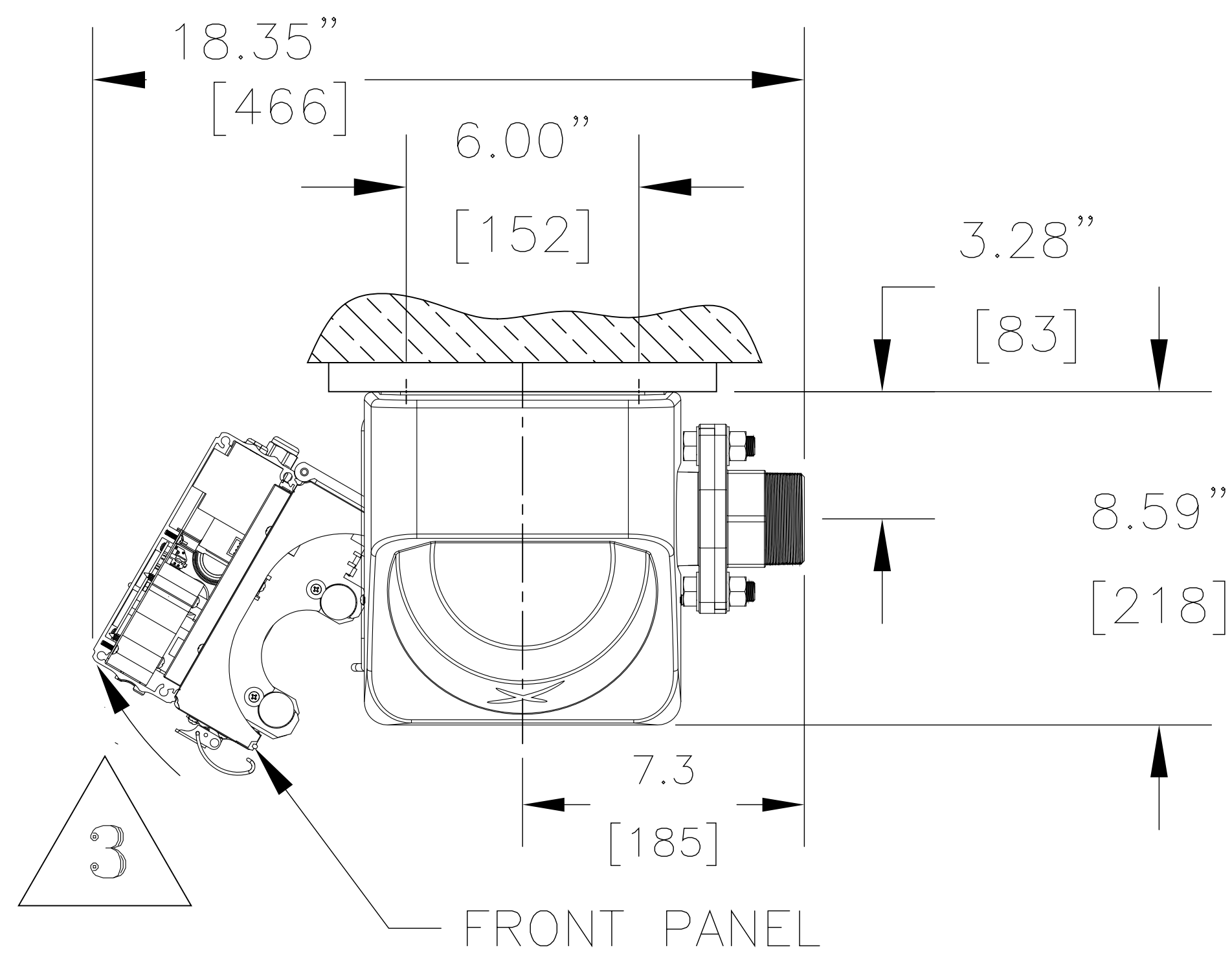
Dimensions (H x W x D)	55.8 x 11.5 x 8.6 in (1418 x 291 x 218 mm)
Weight (dry)	52 lb (23.5 kg)
Weight (wet)	58.3 lb (26.4 kg)
Wetted parts	Meets NSF/ANSI/CAN 61 & NSF/ANSI 372 for water up to 73°F (23°C)
Body materials	Anodized aluminum and 316 Stainless Steel
Body configuration	Double door with side hinges
Inlet/outlet ports	2" MNPT Stainless Steel, optional - Stainless Steel hose
Ingress Protection rating	IP 51, optional - IP 66 for NEMA cabinet systems
Multiple units	Multiplex manifold and cabinets available
Warranty	5-year limited warranty for structural, hardware and mechanical components; 3-year limited warranty on electrical components and quartz sleeves; 16-month limited warranty on bulbs; and 1-year limited warranty on sensor probes



Contact a UV Pure representative to confirm product operating parameters for specific applications.

info@uvpure.com

*Maximum flow for single unit is 100 gpm (378 L/min). Multiplex manifold and cabinet systems available for flows up to 1 MGD (3,800 m³/day).

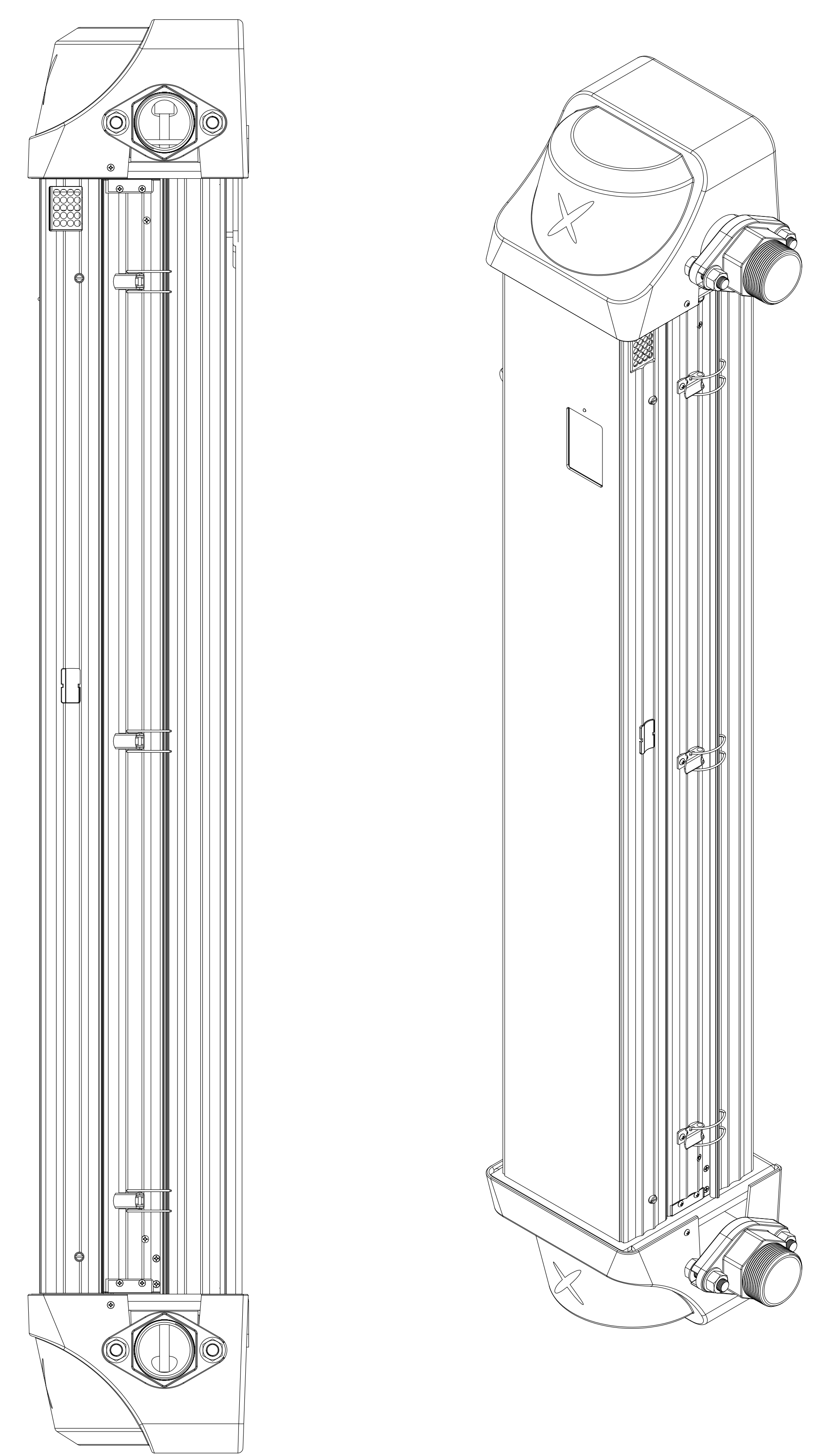
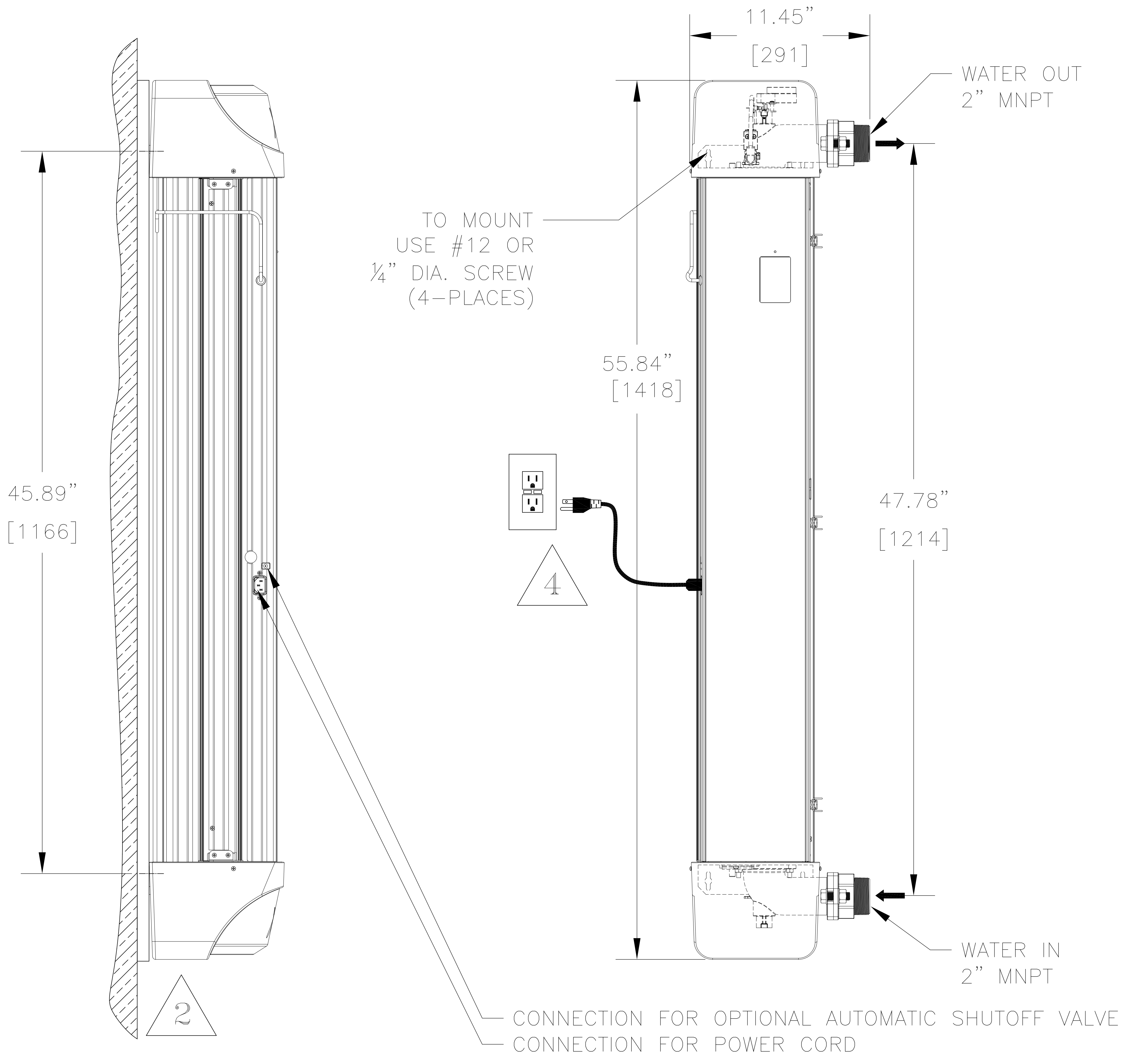


PRODUCT SPECIFICATIONS	
MODEL:	HALLETT 1000
OPERATING PRESSURE:	5–100 psig (34–690 kPa)
WATER TEMPERATURE:	34–104° F (1–40° C)
AIR TEMPERATURE:	34–104° F (1–40° C)
VOLTAGE:	120 Vac
POWER CONSUMPTION:	403 W (max.)
WEIGHT:	52 LBS (23.5kg)

THIS DRAWING, ITS SPECIFICATIONS AND DESIGNS, IS THE PROPERTY OF UV PURE TECHNOLOGIES INC. AND IS SUBJECT TO RETURN UPON REQUEST. IT IS SUBMITTED ON THE CONDITION THAT IT WILL NOT BE USED OR REPRODUCED IN ANY WAY WITHOUT UV PURE'S WRITTEN APPROVAL.

REVISIONS			
REV	DESCRIPTION	DATE	APPV'D
A			
B			
C			
D			
E			

- NOTES
- 1– ALL DIMENSIONS ARE IN INCHES, APPROX. EQUIV. IN METRIC [mm] INSIDE PARENTHESIS.
 - 2– UNIT TO BE MOUNTED VERTICALLY ON A SOLID WALL.
 - 3– FRONT PANEL SWINGS OPEN TO LEFT FOR UV LAMP REPLACEMENT.
 - 4– UNIT TO BE PLUGGED IN GROUND–FAULT CIRCUIT–INTERRUPTER (GFCI).



ISOMETRIC VIEW

FINISH

MATERIAL

DIMENSIONS IN INCHES (unless otherwise specified)		
TOLERANCES (unless otherwise specified)		
ANGULAR	±0°30'	DECIMAL 2 PLACES ±.010
FRACTIONAL	±1/32	DECIMAL 3 PLACES ±.005
DECIMAL 1 PLACE	±.015	DECIMAL 4 PLACES ±.0005



UV PURE TECHNOLOGIES INC.
455 MILNER AVE., UNIT 1
TORONTO, ONTARIO
M1B 2K4

	NAME	SIGN.	DATE
DRAFT.	S.P.		18 JUL 19
DESIGN.			
CHECK			
APPR.			
TITLE HALLETT 1000 LAYOUT DRAWING			
SHEET No.	SHEET 1 OF 1		SCALE NONE
DWG. No.	GJ11		REV. —

Hallett® 1000P UV disinfection system

USEPA VALIDATED

Engineer's Specification

Customer: _____

Prepared by: _____

Date: _____

1 General

1.0 INTENT

- 1.01 To provide the specific requirements for a high intensity amalgam ultraviolet (UV) pressurized/enclosed treatment equipment including performance, components, installation, and submittal requirements.

1.1 DEFINITIONS

- 1.11 The term "UV equipment" shall refer to all components of the UV system including the UV reactor, control & power system, monitoring devices, automatic quartz cleaning system, and automatic purging system.
- 1.12 The term "wiping cycle" refers to 5-6 revolutions of automatic quartz cleaning system.

1.2 SUBMITTALS

- 1.21 Validation certificate accredited by third party validating the performance of the UV system conducted at an independent test location in accordance with the United States Environmental Protection Agency's (USEPA) Ultraviolet Disinfection Guidance Manual (UVDGM) using MS2.
- 1.211 The validation certificate shall list the operating range of the equipment, minimum and maximum flows, minimum and maximum ultraviolet transmittance (UVT) levels, and minimum and maximum UV dose.
- 1.22 Equipment layout drawings indicating overall dimensions, connection ports, and clearance for maintenance.

1.3 STORAGE, AND PROTECTION

- 1.31 All UV equipment shall be stored indoors in a dry location until time of installation.

2 Product Description

2.0 NSF/ANSI 61 REQUIREMENTS

- 2.01 The UV reactor, including all wetted components shall be certified to the NSF/ANSI 61 standard by third party independent body.

2.1 PERFORMANCE / OPERATIONAL REQUIREMENTS

- 2.11 Design UV equipment for continuous and intermittent operation in environments and conditions that are typically found in a water treatment facility.
- 2.12 Design UV equipment containing UV reactor, control system, and power supply inclusively to maintain small footprint.
- 2.13 Design UV equipment for easy access to serviceable items such as, but not limited to, UV lamps, UV sensors, and ballasts.
- 2.14 Water Quality and Operating Range

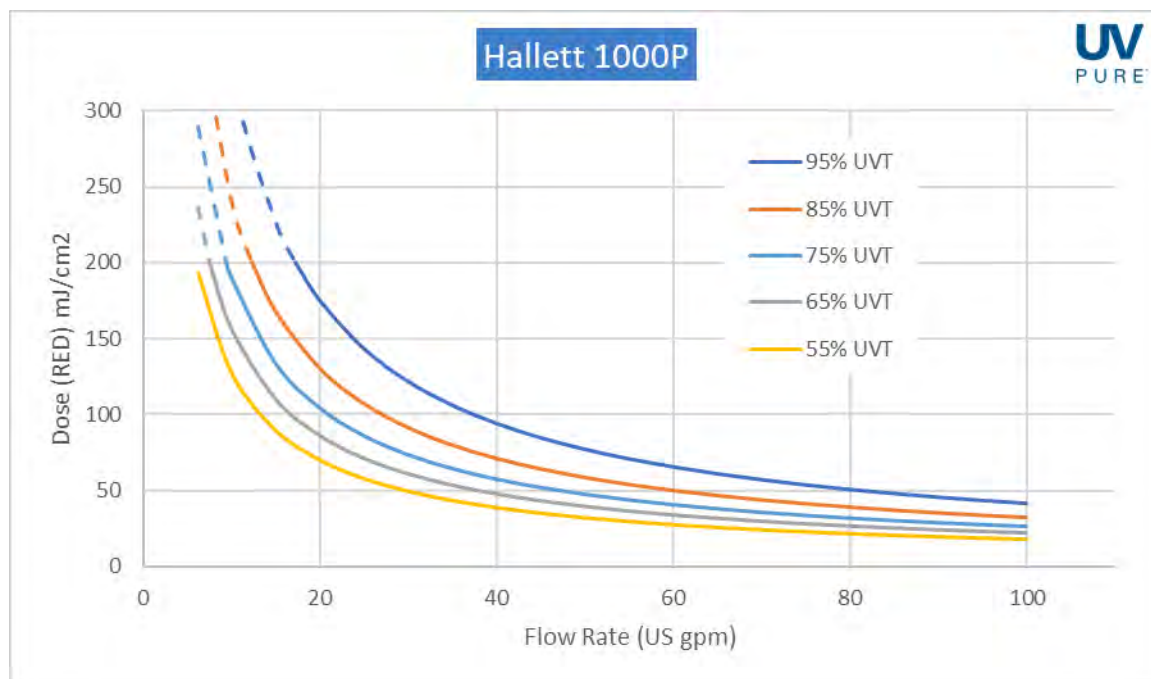
Maximum Solids Content (Turbidity)	1 NTU
Maximum Hardness	855 mg/L
Maximum Iron Concentration	3 mg/L
Maximum Manganese Concentration	0.05 mg/L
UV Transmittance (UVT) Range @ 253.7 nm	50-99%*
Water Temperature Range	34-95°F (1-35°C)
Ambient Air Temperature Range	34-104°F (1-40°C)
Relative Humidity	30% to 70%
Flow Range	0-100 USgpm (0-378 Lpm)*
Water Pressure Range	5-100 psi (34-690kPa)

*The UV dose is dependent on the min. UVT and max. water flow - see UV Dose Curves.

2.15 UV Equipment Requirements

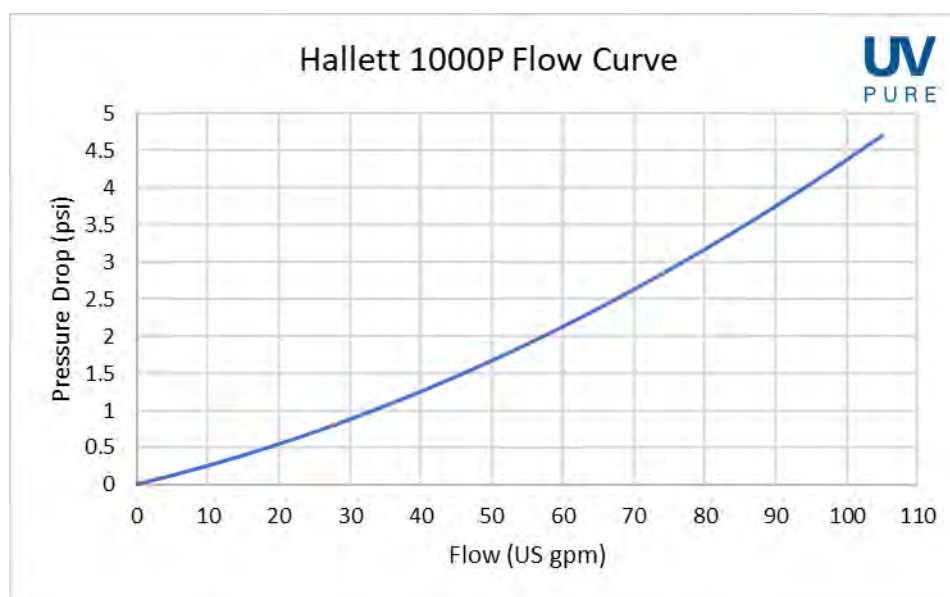
Inlet Connection Required	2" Female NPT
Outlet Connection Required	2" Female NPT
Input Power	120Vac, 1phase, 60Hz, 403W (max) (2 wire + ground)
Maximum Headloss (@100gpm, 378 lpm) – see Flow Curve for flow characteristic	4.4 psi (30kPa)
Minimum Lamp aging factor	0.85

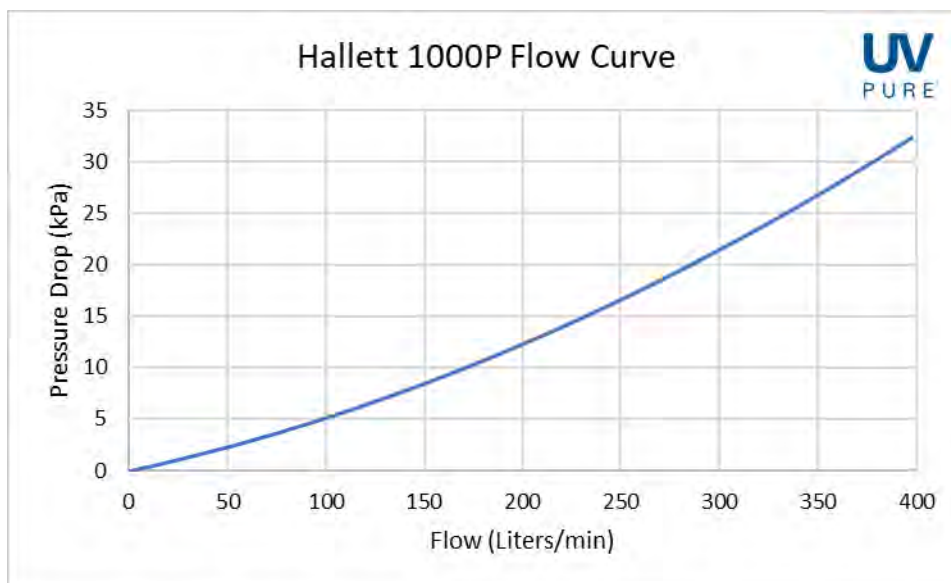
2.16 UV Dose Curves at end of lamp life (EOLL)



The Hallett 1000P has been validated from 16.8 to 200.6 mJ/cm² in flows ranging from 6.2 to 101.5 USgpm and Ultraviolet Transmittance (UVT) ranges of 34.3 to 98.9%. The default UV dose alarm setting is 40mJ/cm², at the end of lamp life, and this can be adjusted for application specific requirements.

2.17 Flow Characteristics





2.2 PRODUCT REQUIREMENTS

2.21 General

- 2.211 The UV equipment shall be installed indoors, in a dry location.
- 2.212 The UV equipment shall operate in an enclosed reactor and use high output amalgam UV lamps.
- 2.213 Draining of the UV equipment shall not be required to change UV lamps or to perform calibration checks on the UV intensity sensors.
- 2.214 All wetted materials exposed to UV light shall be 316 stainless steel, quartz equivalent to GE Type 214, FKM, or other suitable UV resistant material.
- 2.215 The electrical system shall be designed to provide maximum reliability of the UV equipment.
- 2.216 All heat sensitive components shall be adequately cooled with forced dry air.
- 2.217 The UV equipment shall be equipped with safety devices to prevent over temperature conditions should any cooling device fails.
- 2.218 The UV equipment shall be designed to allow operators to perform routine maintenance such as lamp replacement, without the use of special tools.
- 2.219 The UV equipment shall be equipped with a safety interlock to prevent accidental exposure to UV light in the event the system is not powered down during lamp replacement.

2.22 UV Lamps

- 2.221 The UV Lamp shall be rated for minimum useful life of 12,000 hours.
- 2.222 The UV Lamp shall be able to be cycled up to 12 times within a 24 hour period.
- 2.223 The UV Lamp shall use high purity quartz such as GE type 219 or equivalent with coating to ensure constant UV output over complete lamp lifetime.
- 2.224 The UV Lamp shall use bases of ceramic construction, resistant to UV light with electrical connection at one end only.
- 2.225 The UV Lamp filament shall be rugged to withstand shock and vibration.
- 2.226 The UV Lamp shall have monochromatic spectral output with the emissions peaking at 253.7nm and shall be non-ozone producing.

- 2.227 The UV Lamps shall maintain a steady output over water temperature range of 34-95°F (1-35°C).
- 2.228 The UV Lamps shall be removable with the quartz sleeve and automatic quartz cleaning device remaining in place.
- 2.229 The UV Lamps shall be able to startup and reach full power without water flow for up to 15 minutes in ambient conditions.

2.23 UV Reactor

- 2.231 The 2" male NPT ports of UV reactor shall be connected through a 2-bolt pump flange for convenient installation and disassembly.
- 2.232 The UV chamber within the UV reactor shall be easily accessible without tools to allow inspection of quartz sleeve and automatic quartz cleaning device without draining of the reactor.
- 2.233 The UV lamps within the UV reactor shall be mounted in air to minimize effect from changes in water temperature.
- 2.234 The UV chamber within the UV reactor shall contain reflective panels to ensure 360° coverage of UV radiation to prevent shadowing.
- 2.235 The quartz sleeve shall be clear fused quartz GE Type 214 or equivalent with a minimum UV transmissibility of 88 percent.

2.24 Automatic Quartz Cleaning System

- 2.241 Each UV reactor shall be equipped with an electronically powered quartz cleaning system that will automatically function without operator intervention.
- 2.242 The automatic quartz cleaning system shall consist of 316 stainless steel wipers for mechanical cleaning.
- 2.243 The automatic quartz cleaning system shall not use any chemicals.
- 2.244 The wiping cycle shall occur on power up of the lamps and then once every 4 hours by default. The wiping cycle shall be adjustable and also be initiated at any time by an operator.
- 2.245 The wiped portion of the quartz sleeve shall consist of the entire length of the exposed quartz within the UV chamber.
- 2.246 The automatic quartz cleaning system shall contain a sensor to confirm operation and also return wipers to correct park position.

2.25 UV Intensity Monitoring System

- 2.251 Each individual UV lamp shall be continuously monitored by its own UV intensity sensor.
- 2.252 Each UV intensity sensor shall be mounted in air to prevent water fouling from affecting its performance.
- 2.253 The UV intensity sensor shall be removable from the UV reactor for reference checking with a factory calibrated spare without interrupting the disinfection process or draining of the UV reactor.
- 2.254 The UV intensity sensor shall measure the germicidal portion of the light emitted by the UV lamps at 253.7nm.
- 2.255 The UV intensity sensor shall be factory calibrated. Calibration shall be valid for a minimum of one (1) year from beginning of service.

2.26 Automatic Purging System

- 2.261 Each UV reactor shall be equipped with a purge valve to regulate water temperature within the UV reactor during periods of no flow.
- 2.262 The setpoint for purge valve operation shall be adjustable.

- 2.263 The purge valve shall discharge water from the UV reactor if low UVT water is detected within the UV chamber.
- 2.27 Electrical Enclosure
 - 2.271 The UV equipment shall be powered and controlled by one electrical enclosure.
 - 2.272 The electrical enclosure shall be mounted to the UV reactor and contain the microcontroller, electronic ballasts, and power distribution devices.
 - 2.273 A power supply of 120Vac, single phase, two wire plus a ground, 60Hz, shall be provided in a ground-fault circuit-interrupter (GFCI) receptacle by others in the vicinity of the UV equipment.
 - 2.274 The electrical enclosure shall be powered by a detachable power cord.
- 2.28 Electronic Ballasts
 - 2.281 Each ballast shall drive one UV lamp.
 - 2.282 Ballasts shall incorporate a filament pre-heat circuit to improve reliability of lamp startup and allow for multiple on/off lamp cycles per day.
 - 2.283 Ballasts shall be installed with polarized connectors for ease of maintenance.
 - 2.284 Operating power factor for the ballasts shall be 0.98 or higher.
- 2.29 Instrumentation and Controls
 - 2.291 The control system shall continuously monitor and control the UV equipment's functions.
 - 2.292 Complete control and monitoring of the UV equipment shall be accomplished through the operator interface.
 - 2.293 The operator interface shall be a color touchscreen and display the following information: UV system status, UV Dose, UV Intensity, UVT prediction, UV lamp lifetime, maximum prescribed flow rate, countdown for warm up and power down, UV Lamp cycles, power cycles, cycle time of automatic quartz cleaning device, unit temperatures including water, pcb, lamp and overall system.
 - 2.294 The control system shall provide warnings and alarms for all critical devices and functions in both visual and audible format.
 - 2.295 The control system shall contain a real time clock.
 - 2.296 The control system shall maintain a log of the last 100 events and record the time of the event and all critical parameters.
 - 2.297 The control system shall provide discrete outputs in the form of dry contacts for warning and alarm conditions for remote monitoring.
 - 2.298 The control system shall allow remote operation of the UV lamps with the UV reactor on standby when not in use.
 - 2.299 The control system shall be able to provide analog outputs for UV Dose, or UV Intensity, or predicted UVT, and Modbus connectivity.
 - 2.2910 The control system shall be able to provide continuous data logging every 30 seconds onto a USB drive.
 - 2.2911 The control system shall be able to connect to and control a solenoid valve for automatic shutdown of untreated water.
- 2.30 Safety Warnings and Alarms
 - 2.301 The control system shall provide the following warnings at a minimum:
 - i) End of lamp life approaching
 - ii) End of lamp life exceeded

- iii) Lamps cycling too often
 - iv) Quartz Cleaning device not operating
 - v) Water temperature approaching high limit
 - vi) System temperature approaching high limit
 - vi) Temperature sensor failure
- 2.302 The control system shall provide the following alarms at a minimum:
- i) Low UV Dose
 - ii) Low UV Intensity
 - iii) UV Lamp failure
 - iv) Lamps Not Starting
 - v) UV Door Open
 - vi) PCB temperature too high
 - vii) System temperature too high
 - viii) Water temperature too high
 - xi) UV sensor failure
 - x) Microprocessor failure

3 Warranty

- 3.01 UV lamps shall be warranted for a minimum of 12,000 hours operating time under the conditions specified herein and for a maximum of 12 on/off cycles per 24 hour period.