

CONTRACT DOCUMENTS

FOR

Surveillance Cameras and Access Controls (DISTRICT PROJECT #C2602)

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Lake Whatcom Water & Sewer District
1220 Lakeway Drive
Bellingham, WA 98229
(360) 734-9224, (360) 738-8250 Fax



Request for Bid

Lake Whatcom Water & Sewer District

1220 Lakeway Drive

Bellingham, WA 98229

(360) 734-9224, (360) 738-8250 Fax

INSTRUCTIONS

Lake Whatcom Water and Sewer District ("District") has estimated the Work to be less than \$350,000 and the District has chosen to solicit bids via the District's Small Works Roster in accordance with RCW 39.04.151 to perform the Work as defined in this Request for Bid. To be eligible to bid, the contractor must be listed on the District's Small Works Roster, which is managed by Municipal Research Service Center (MRSC) (<https://mrscrosters.org/>).

The District intends to contract with an experienced, qualified, Contractor for the Surveillance Cameras and Access Controls. The work will generally include providing and installing security cameras and access controls at various District-owned facilities throughout the District service area, including all necessary integration, electrical and communications improvements required for a fully operational system.

The District intends to execute a Small Works Contract with the Contractor that provides the best bid price for the defined Work. Lake Whatcom Water and Sewer District reserves the right to accept or reject any or all bids and to waive informalities or irregularities.

Estimated project cost: \$150,000 - \$200,000 not including sales tax.

The Request for Bid includes the Contract Documents as listed on the Table of Contents.

Complete the Bid Proposal form and submit by email (greg.nicoll@lwwsd.org), mail (1220 Lakeway Drive, Bellingham, WA 98229), or to the District Office (using the exterior payment slot if delivered outside of business hours). The deadline for submittal of bids is 2:00 p.m. on October 15, 2026. District will begin evaluation of bids and select a contractor soon after.

A Pre-Bid Meeting will be held on Thursday, October 1, 2026 at 2:00 p.m. The meeting will be held at the District Administration Office at 1220 Lakeway Drive, Bellingham, Washington and will be followed by site visits to each of the project sites. Interested bidders should plan for a minimum of 2 hours for the pre-bid meeting and site visits.

For questions on the project scope and bid process, contact Greg Nicoll at 360-734-9224 or e-mail greg.nicoll@lwwsd.org.

Surveillance Cameras and Access Controls

District Project #C2602



Name of Firm _____

BID PROPOSAL (Bid Submittal Page 1 of 2)

BASE BID

Schedule A: Work within the City of Bellingham

Item	Description	Quantity	Unit	Unit Price	Amount
A-1	Mobilization and Demobilization	1	LS	\$	\$
A-2	System Integration	1	LS	\$	\$
A-3	Administration Building Surveillance Cameras and Entrance Controls	1	LS	\$	\$
A-4	Technical Support	1	LS	\$	\$
Total – Schedule A: (do not include Washington State Sales Tax)					\$

Schedule B: Work in Unincorporated Whatcom County

Item	Description	Quantity	Unit	Unit Price	Amount
B-1	Mobilization and Demobilization	1	LS	\$	\$
B-1	Agate Heights Water Treatment Plant Surveillance Cameras and Entrance Controls	1	LS	\$	\$
B-2	Sudden Valley Water Treatment Plant Surveillance Cameras and Entrance Controls	1	LS	\$	\$
B-3	Operation & Maintenance Campus Surveillance Cameras and Entrance Controls	1	LS	\$	\$
Total – Schedule B: (do not include Washington State Sales Tax)					\$
TOTAL – BASE BID (do not include Washington State Sales Tax)					\$

Surveillance Cameras and Access Controls

District Project #C2602



The Owner reserves the right to accept or reject any or all Bid prices within sixty (60) days of the Bid date.

Receipt of Addenda

Receipt of the following addenda is acknowledged:

Addendum No. _____	Addendum No. _____	Addendum No. _____
Addendum No. _____	Addendum No. _____	Addendum No. _____

Applicable Prevailing Wage Rates

State of Washington prevailing wage rates for this public works project located in Whatcom County may be found at the following website address of the Department of Labor and Industries: <https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>. Based on the Bid submittal deadline for this project, the applicable effective date for prevailing wages for this project is **October 15, 2026**

Surveillance Cameras and Access Controls

District Project #C2602



Name of Firm _____

Non-Collusion Declaration: By signing below, I hereby declare that I, firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action restraining free competitive bidding for this project.

In addition, by signing below I hereby declare that: Within the three-year period immediately preceding the date of the bid solicitation, I, firm, association or corporation has (have) not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Check One: Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

If a co-partnership, give firm name under which business is transacted:

Signed by _____, Official Capacity _____

Print Name _____

Date of Execution _____

Place of Execution _____

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

Address _____

City _____ State _____ Zip Code _____

Telephone _____ FAX _____

State of Washington Contractor's License No. _____

Federal Tax ID # _____ e-mail address: _____

Employment Security Department No. _____

PERFORMANCE BOND

KNOW ALL PEOPLE BY THESE PRESENTS, that _____ the CONTRACTOR, hereinafter known as PRINCIPAL, and _____, hereinafter known as SURETY, are held and firmly bound to the Lake Whatcom Water and Sewer District, hereinafter known as OWNER, in the penal sum of _____

_____ dollars (including Washington State Sales Tax) for the payment of which sum well and truly to be made, we do jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the PRINCIPAL entered into a Contract with the OWNER dated the _____ day of _____, 20____ to construct the Surveillance Camera and Access Controls project, and which Agreement is on file at the OWNER's office and by this reference is made a part hereof.

WHEREAS, said PRINCIPAL is required under the terms of said Agreement to furnish a bond for the faithful **performance** of said Agreement:

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such Contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this BOND, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract, the specifications or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this BOND and notice to Surety is not required and is waived for such increased obligation.

PROVIDED, FURTHER, that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, the duly authorized officers of PRINCIPAL and of SURETY execute this instrument in three counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20____.

PRINCIPAL

By

Title

Address of PRINCIPAL

SURETY

By

Title

Address of SURETY

Note: Date of Bond must not be prior to date of Contract. If PRINCIPAL is a Partnership, all Partners should execute bond. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Washington. A power of attorney must be provided which appoints the SURETY's true and lawful attorney-in-fact to make, execute, seal and deliver this bond.

PAYMENT BOND

KNOW ALL PEOPLE BY THESE PRESENTS, that _____ the CONTRACTOR, hereinafter known as PRINCIPAL, and _____, hereinafter known as SURETY, are held and firmly bound to the Lake Whatcom Water and Sewer District, hereinafter known as OWNER, in the penal sum of _____

_____ dollars (including Washington State Sales Tax) for the payment of which sum well and truly to be made, we do jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the PRINCIPAL entered into a Contract with the OWNER dated the _____ day of _____, 20____ to construct Surveillance Camera and Access Controls project, and which Agreement is on file at the OWNER's office and by this reference is made a part hereof.

WHEREAS, said PRINCIPAL is required under the terms of said Agreement to furnish a bond for the faithful payment of all laborers, mechanics, subcontractors, materialmen and all persons who shall supply said Principal or said subcontractors with provisions and supplies for the carrying on of work under said Contract:

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said Contract and pay all laborers, mechanics, subcontractors, materialmen and all persons who shall supply said Principal or said subcontractors with provisions and supplies for the carrying on of such work during the original term of said Contract and any extension thereof that may be granted by the Owner, and during the life of any guaranty required under the Contract and shall well and truly perform and fulfill the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract and pay all laborers, mechanics, subcontractors, materialmen and all persons who supply said Principal or said subcontractors with provisions and supplies for the carrying on of such modifications which may hereafter be made, then this obligation to be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this BOND, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract, the specifications or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this BOND and notice to Surety is not required and is waived for such increased obligation.

PROVIDED, FURTHER, this Bond is executed pursuant to RCW Chapter 39.08.

IN WITNESS WHEREOF, the duly authorized officers of PRINCIPAL and of SURETY execute this instrument in three counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20_____.

PRINCIPAL

SURETY

By

By

Title

Title

Address of PRINCIPAL

Address of SURETY

Note: Date of Bond must not be prior to date of Contract. If PRINCIPAL is a Partnership, all Partners should execute bond. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Washington. A power of attorney must be provided which appoints the SURETY's true and lawful attorney-in-fact to make, execute, seal and deliver this bond.

RETAINAGE BOND

KNOW ALL PEOPLE BY THESE PRESENTS, that _____ the CONTRACTOR, hereinafter known as PRINCIPAL, and _____, hereinafter known as SURETY, are held and firmly bound Lake Whatcom Water and Sewer District, hereinafter known as OWNER, and the State of Washington (STATE), and are similarly held and bound unto the beneficiaries of the trust fund created by Chapter 60.28 Revised Code of Washington (RCW), and their heirs, executors, administrators, successors and assigns in the penal sum of

_____, dollars, plus 5% of any increases in the Contract Sum that have occurred or may occur, due to change orders, increases in the quantities or the addition of any new item of work.

WHEREAS, the PRINCIPAL has executed Contract for Surveillance Camera and Access Controls project

WHEREAS, said Contract and Chapter 60.28 RCW require the OWNER to withhold from the PRINCIPAL the sum of five percent (5%) from monies earned by the PRINCIPAL on estimates during the progress of the Work, hereinafter referred to as earned retained funds; and

WHEREAS, the PRINCIPAL/SURETY has requested that the OWNER accept a bond in lieu of earned retained funds as allowed under Chapter 60.28 RCW.

NOW, THEREFORE, this obligation is such that the SURETY, its successors and assigns, are held and bound unto OWNER, STATE and unto all beneficiaries of the trust fund created by RCW 60.28.011(1) in the aforesaid sum. This bond, including any proceeds therefrom, is subject to all claims and liens and in the same manner and priority as set forth for retained percentages in Chapter 60.28 RCW. The condition of this obligation is such that if the PRINCIPAL shall satisfy all payment obligations to persons who may lawfully claim under the trust fund created pursuant to Chapter 60.28 RCW, to the STATE, and to the OWNER, and indemnify and hold the OWNER harmless from any and all loss, costs, and damages that the OWNER may sustain by release of said retainage to PRINCIPAL/SURETY, then this obligation shall be null and void provided the SURETY is notified by OWNER that the requirements of RCW 60.28.021 have been satisfied and the obligation is duly released by OWNER; otherwise it shall remain in full force and effect.

IT IS HEREBY FURTHER DECLARED AND AGREED that this obligation shall be binding upon and inure to the benefit of the PRINCIPAL, the SURETY, the OWNER, STATE and, the beneficiaries of the trust fund created by Chapter 60.28, Revised Code of Washington (RCW) and their respective heirs, executors, administrators, successors and assigns.

The laws of the State of Washington shall be applicable in the determination of the rights and obligations of the parties hereunder. Venue for any dispute or claim hereunder shall be the superior court of Whatcom County.

SIGNED, SEALED AND DATED THIS _____ day of _____, 20____.

PRINCIPAL

SURETY

By

By

Title

Title

Address of PRINCIPAL

Address of SURETY

Note: Date of Bond must not be prior to date of Contract. If PRINCIPAL is Partnership, all Partners should execute bond. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Washington. A power of attorney must be provided which appoints the SURETY's true and lawful attorney-in-fact to make, execute, seal and deliver this bond.

**LAKE WHATCOM WATER AND SEWER DISTRICT
SMALL WORKS CONTRACT**

THIS AGREEMENT is made on **MONTH & DAY, 2025**, between LAKE WHATCOM WATER AND SEWER DISTRICT ("DISTRICT"), a Washington special purpose district and **NAME OF CONTRACTOR** ("CONTRACTOR"). The District and the Contractor may be referred to herein individually as "Party" or collectively as "Parties."

In consideration of the terms and conditions contained in this Contract and attached to it, the parties agree as follows:

1. PROJECT

Contractor shall do all work and furnish all tools, materials, and equipment for the District's public works project known as **Surveillance Cameras and Access Controls (District Project #C2602)** ("Project") in accordance with and as more fully described in **Section 007100**.

2. WORK

The term Work means the entire, or any portion thereof, construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents..

3. PROJECT COST

The District shall pay Contractor not to exceed _____ (\$ _____) plus Washington State sales tax ("Project Cost"), subject to the terms herein. The Project Cost includes the cost of all Work, materials, fees, and expenses required for completion of the Project including without limitation labor, materials, overhead, administrative, and permit and regulatory costs, as stated in the Bid Proposal and attachments hereto, unless otherwise agreed to by the Parties in writing.

4. PAYMENT TERMS

The Project Cost shall be payable in the following manner: Contractor shall submit a detailed monthly pay application for all services provided describing in reasonable and understandable detail the Work completed during the previous month, the progress of the Work, and the requested payment in an amount proportionate to the Work completed. The District shall issue a warrant for payment of approved Work contained in the application within thirty (30) days after approval of the pay application, pursuant to the terms below:

- a. In cases of single payment, the District shall make payment only after all appropriate releases are submitted.
- b. In cases of multiple payments, the District shall retain monies as required by RCW 60.28 and pay the retainage as provided therein.

5. CHANGE IN THE WORK

Change in the Work, Project Cost, or Contract Time shall be incorporated into the Contract through the execution of Change Orders signed by the Contractor and District.

- a. **Change Order Processing.** The District may at any time order additions, deletions, revisions, or other changes in the Work. The Contractor will prepare and submit a Change Order Proposal to the District for consideration that details changes to the Work, Project Cost or Contract Time. If the District approves the Change Order Proposal it shall be attached to a Change Order form signed first by the Contractor, then by the District.
- b. **Changed or Unforeseen Conditions.** During the course of Work the Contractor may discover changed or unforeseen conditions not anticipated by either Party. If changed or unforeseen conditions are discovered that might affect the Work, Project Cost, or Contract Time, the Contractor shall immediately inform the District on the day of discovery. If District determines Work must continue, the District will authorize a Field Authorization allowing the Contractor to continue with Work on a time and materials basis not to exceed an estimated amount agreed to onsite by the Contractor and District. The Contractor shall submit detailed labor, equipment, and material cost documentation to the District for review within five (5) business days of the event to the District. If approved by the District, the District will prepare a Change Order form attaching Field Authorization with backup documentation for Change Order Processing. Contractor agrees to 15% overhead and 6% profit charged on Field Authorization labor, equipment, and material costs. Failure to provide Notice and cost documentation under the terms of this Contract constitutes a full and complete waiver of such claim. In no case shall a claim for equitable adjustment be allowed if submitted after the Project has reached final acceptance by the District.

6. COMPLETION DEADLINE/LIQUIDATED DAMAGES

Contractor shall commence Work under this Contract upon receipt of notice to proceed from the District. The Project must be completed no later than ninety (**90**) calendar days after receipt of notice to proceed. If the Project is not completed by

such date, then, because of the difficulty in computing the actual damages to the District arising from any delay in completing the Project Work, it is agreed by the Parties that Contractor shall pay the District liquidated damages as computed below for each calendar day the Work remains incomplete after expiration of the specified completion date. The Parties agree that such amount represents a reasonable forecast of the actual damages the District will suffer by failure of the Contractor to complete the Work within the agreed upon time. The execution of this Contract constitutes acknowledgement by the Contractor that the Contractor has ascertained and agrees that the District will actually suffer damages as computed by the following formula:

$$LD = (0.15 * C) / T$$

Where: LD = liquidated damages per calendar day (rounded to nearest dollar)

C = original Contract Award Amount

T = original Contract Time in calendar days for achieving Substantial Completion

7. WARRANTY

Contractor warrants that all materials and equipment shall be new unless otherwise specified, of good quality, and free from defective workmanship and materials. Contractor further warrants that the Work shall be free from defects in workmanship and material, and shall transfer to the District all written warranties related to the Work performed and equipment installed. The foregoing Contractor's warranty shall remain in effect for one (1) year following final acceptance.

8. PREVAILING WAGES

The Contractor shall pay prevailing wages as required and shall comply with RCW 39.12 and RCW 49.28. Notice of intent to pay prevailing wages and prevailing wage rates for the Project must be posted for the benefit of workers. The Contractor shall submit a statement of intent to pay prevailing wages, approved by the industrial statistician of the Department of Labor and Industries, with its first (or only) pay request. At the completion of the Project, the Contractor and its subcontractors shall also submit Affidavits of Wages Paid to the Department of Labor and Industries for certification. Final payment on the Contract shall be withheld until the District receives certification from the Department of Labor and Industries that prevailing wage requirements have been satisfied.

For public works projects of \$5,000 or less, the District may authorize the alternative procedure set forth in RCW 39.12.040(2) in lieu of the procedure described above.

9. PAYROLL RECORDS

In accordance with RCW 39.12.120, each contractor, subcontractor, or employer shall keep accurate payroll records for three (3) years from the date of acceptance of the public works project by the contract awarding agency, showing the employee's full name, address, social security number, trade or occupation, classification, straight and overtime rates, hourly rate of usual benefits, and hours worked each day and week, including any employee authorizations executed pursuant to RCW 49.28.065, and the actual gross wages, itemized deductions, withholdings, and net wages paid, for each laborer, worker, and mechanic employed by the contractor for work performed on a public works project.

A contractor, subcontractor, or employer shall file a copy of its certified payroll records using the Department of Labor and Industries' online system at least once per month. If the Department of Labor and Industries' online system is not used, a contractor, subcontractor, or employer shall file a copy of its certified payroll records directly with the Department of Labor and Industries in a format approved by the Department of Labor and Industries at least once per month.

10. RETAINAGE AND BONDS

Except as otherwise provided herein, Contractor shall provide performance bond and payment bond for the faithful performance and payment of all its obligations under this Contract and in accordance with RCW 39.08.010. The performance bond shall remain in effect to guarantee the repair and replacement of defective equipment, materials, and workmanship and payment of damages sustained by the District on account of such defects, discovered within one (1) year after final acceptance by the District. In lieu of performance and payment bonds for Contracts up to \$150,000, Contractor may authorize the District to retain 10%, instead of the maximum 5% as authorized under RCW 60.30.010, of the Contract amount for the period required under RCW 39.08.010.

11. INDEMNIFICATION

Contractor and its subcontractors shall defend, indemnify, and hold harmless the District, its commissioners, officers, managers, employees, engineers, agents, and volunteers from and against any and all demands, claims, losses, injuries, damages, liabilities, suits, judgment, reasonable attorneys' fees and costs, and other expenses of any kind on account of, relating to, or arising out of Contractor's Work under this Contract, except to the extent such injuries or damages are caused by the negligence of the District. For the purposes of this indemnification, Contractor specifically and expressly waives

any immunity granted under the Washington Industrial Insurance Act, Title 51 RCW. This waiver has been mutually negotiated and agreed to by the parties. If a court of competent jurisdiction determines that this Contract is subject to RCW 4.24.115, Contractor's obligation to defend, indemnify, and hold harmless the District, its officers, employees, agents and volunteers shall be limited to the extent of the District's negligence. The provisions of this paragraph shall survive the expiration or termination of this Contract.

12. INSURANCE

Contractor shall obtain, and keep in force during the term of this Contract, insurance policies as follows:

- a. **Commercial General Liability.** Limits no less than \$1,000,000.00 combined single limit per occurrence and \$2,000,000.00 aggregate for personal injury, bodily injury and property damage. Coverage shall be as broad as Insurance Services Office form number (CG 00 01) covering Commercial General Liability.
- b. **Automobile Liability Insurance.** Limits no less than \$1,000,000.00 combined single limit per accident for bodily injury and property damage. Coverage shall be as broad as Insurance Services Office form number (CA 00 01) covering Business Auto Coverage, symbol 1 "any auto"; or the combination of symbols 2, 8, and 9.
- c. **Workers' Compensation.** Coverage shall be at least as broad as Workers' Compensation coverage, as required by the Industrial Insurance Act of the State of Washington, as well as any similar coverage required for this work by applicable Federal Law.
- d. **Employer's Liability or "Washington Stop Gap".** Coverage shall be at least as broad as the protection provided by the Workers Compensation policy Part 2 (Employers Liability) or, in states with monopolistic state funds, the protection provided by the "Stop Gap" endorsement to the general liability policy.
- e. The insurance policies shall specifically name the District, its elected or appointed officials, officers, employees, and volunteers as insureds with regard to damages and defense of claims arising from (1) activities performed by or on behalf of the Contractor; or (2) products and completed operations of the Contractor; or (3) premises owned, leased, or used by the Contractor.
- f. The insurance policies (1) shall state that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability; (2) shall be primary insurance with regard to the District; and (3) shall state that the District will be given at least 45 days' prior written notice of any cancellation, suspension or material change in coverage.
- g. Before commencing work and services, Contractor shall provide to the District a Certificate of Insurance evidencing the required insurance accompanied by endorsements as are necessary to comply with the requirements of this section. The District reserves the right to request and receive a certified copy of all required insurance policies.
- h. Any payment of deductible or self-insured retention shall be the sole responsibility of Contractor.

13. JOB SAFETY/HOUSEKEEPING

All Work done shall be done in a manner that minimizes interruptions or inconvenience to the public and/or District staff. All Work shall be carried on with due regard for the safety of the public, and Contractor shall maintain strict compliance with the appropriate provisions relating to control of traffic and pedestrians through work areas as set forth in the Manual on Uniform Traffic and Control Devices (current edition) as adopted by the Washington State Department of Transportation. Property and streets adjacent to the Project site shall be kept free and clear at all times from accumulations of mud, dirt, gravel, rock, and other matters. Contractor shall be responsible for daily removal, clean up and disposal of refuse, waste and debris produced by its operation. Refuse shall not be permitted to accumulate to the extent that it interferes with free access to the Project site. Upon completion of Project, Contractor shall perform final cleanup and leave the Project site in a clean and orderly condition acceptable to the District. Should the District determine Contractor is not fulfilling its obligations under this Section, the District reserves the right to take such action as may be necessary, and to charge Contractor with any costs that may be incurred in any remedial action.

14. COMPLIANCE WITH CODES AND REGULATIONS

Contractor is expected to comply with all applicable statutes in performing Project Work, including, but not limited to all state and local laws, regulations, codes and standards that are applicable at the time Contractor performs Work.

15. PERMITS, TAXES, TEMPORARY FUNCTIONS

Contractor shall secure and pay for all permits, fees and licenses necessary for the performance of this Contract. Contractor shall pay any and all federal, state and municipal taxes, including sales taxes, if any, for which Contractor may be liable in carrying out this Contract. Contractor shall be responsible for all temporary functions associated with its Work, including but not limited to, lighting, wiring, protection, hoisting, scaffolding, rigging, flagman, drinking water, sanitation, storage, ventilation and heat.

16. TERMINATION

If Contractor: (1) fails to provide a sufficient number of properly skilled workers or a sufficient quantity of suitable materials or adequate equipment; (2) fails to diligently prosecute Work according to the Project schedule; (3) causes, by act or omission, stoppage, delay, or interference of the Work; (4) fails to correct or repair any damaged or defective Work or materials; (5) fails to comply with any provisions of this Contract; (6) becomes insolvent or adjudged bankrupt; or (7) fails to make prompt payment to lower tier subcontractors or suppliers, then the District may terminate this Contract upon two (2) business days written notice to the Contractor. If Contractor fails to cure the default within the two (2) day notice period, then Owner may terminate this Contract for default.

17. GENERAL PROVISIONS

- a. **Notices.** Any notice or demand desired or required to be given under this Contract shall be in writing and deemed given when personally delivered, sent by facsimile machine, or deposited in the United States Mail (or with an express courier), postage prepaid, sent certified or registered mail, and addressed to the Parties as set forth below or to such other address as either party shall have previously designated by such a notice:

District:

Attn: General Manager
Lake Whatcom Water and Sewer District
1220 Lakeway Drive
Bellingham, WA 98229

Phone: (360) 734-9224

Fax: (360) 738-8250

Contractor:

Attn: _____

Phone: _____

Fax: _____

- b. **Relationship Between Parties.** The Contractor is an independent Contractor with regard to performance of the details of the Work. The Contractor is responsible for its acts or omissions and acts or omissions of its agents, employees, servants, subcontractors, or otherwise during the performance of this Contract. Work in progress is subject to District inspection and review at any time.
- c. **Entire Agreement.** This Contract and its attachments contain the entire understanding between the District and Contractor relating to the Project which is the subject of this Contract. This Contract merges all prior discussions, negotiations, letters of understanding or other promises whether oral or in writing. Subsequent modification or amendment of this Contract shall be in writing and signed by the parties to this Contract.
- d. **Modification.** No modification of this Contract and no waiver of rights under this Contract shall be valid or binding on the parties unless the same is in writing.
- e. **Waiver.** Waiver of any breach or default hereunder shall not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this Contract.
- f. **Assignment.** Neither Party shall assign, transfer or otherwise dispose of this Contract in whole or in part to any individual, firm or corporation without the prior written consent of the other Party. Subject to the provisions of the preceding sentence, this Contract shall be binding upon and inure to the benefit of the respective successors and assigns of the Parties hereto: This Contract is made only for the benefit of the District and the Contractor and successors in interest and no third party or person shall have any rights hereunder whether by agency or as a third party beneficiary.
- g. **Severability.** If any term, covenant or condition of this Contract is held by a court of competent jurisdiction to be invalid, the remainder of this Contract shall remain in effect.
- h. **Dispute Resolution.** If any dispute, controversy, or claim arises out of this Contract, the Parties agree to first try to settle the dispute, controversy, or claim in non-binding mediation with the assistance of a recognized professional mediation service. The Parties shall each designate a representative with full settlement authority who will participate in the mediation. The Parties shall bear all expenses associated with the mediation equally, except for attorneys' fees. Any Claim subject to, but not resolved by, mediation shall be subject to a private arbitration which, unless the Parties mutually agree otherwise, shall be held in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement; however, irrespective of the size of the dispute, the arbitration proceedings will be conducted by a single arbitrator. A demand for arbitration shall be made in writing, and delivered to the other Party to the Contract. The Party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

- i. **Jurisdiction/Law.** This Contract shall be governed by and construed in accordance with the laws of the State of Washington. Any suit to enforce or relating to this Contract, including the enforcement of any arbitration award, shall be brought in Whatcom County Superior Court, Whatcom County, Washington.
- j. **Attorneys' Fees.** In the event that any Party commences litigation against the other Party relating to the performance, enforcement or breach of this Contract, the prevailing Party in such action shall be entitled to all costs, including attorneys' fees, expert witness fees and costs and any such fees or costs incurred on appeal.
-

("CONTRACTOR")

Contractor Registration Number: _____

Unified Business Identifier (UBI #): _____

Employment Security Department Number: _____

State Excise Tax Registration Number: _____

(Signature)

(Printed Name and Title)

Dated: _____

Lake Whatcom Water and Sewer District
("DISTRICT")

Justin Clary, General Manager

Dated: _____



SECTION 00710 – PROJECT INFORMATION AND SPECIFICATIONS

Surveillance Cameras and Access Controls

I. SUMMARY OF WORK

The District intends to contract with an experienced and qualified security system Contractor for the professional installation and integration of a surveillance camera and access control system at various District-owned facilities located in and around Bellingham, Washington, including:

Schedule A – Within City of Bellingham

- Administrative Building – 1220 Lakeway Drive

Schedule B - Unincorporated Whatcom County

- Operations & Maintenance Campus – 1010 Lakeview Street
- Sudden Valley Water Treatment Plant (WTP) – 26 Morning Beach Drive
- Agate Heights Water Treatment Plant – 3320 Sunny Cove Court

II. PROJECT SPECIFICATIONS

1.0 GENERAL REQUIREMENTS

The Project includes, but is not limited to, the following items of work:

1.1 Video Surveillance System

Design Video Surveillance System – Prior to the start of any work to procure or install any cameras, the Contractor shall:

- i. Prepare and submit a Video Surveillance System Design Report and Drawings describing and depicting the proposed video surveillance system, including:
 - a. hardware requirements;
 - b. cable and conduit routing;
 - c. required electrical and control improvements;
 - d. installation details; and
 - e. all other information required to describe the proposed complete and integrated video surveillance system.



1.2 Furnish and Install Video Surveillance System –

- i. Video surveillance cameras shall be installed at the locations as shown on the drawings. However, the Contractor shall provide recommendations for location revisions to improve coverage and effectiveness of the complete surveillance and access control system.
- ii. Contractor shall provide and install mounting hardware, enclosures, and environmental protection as required, costs of which shall be incidental to the contractor's bid.

1.3 Furnish and Install Access Control System –

- i. Network Bluetooth combined RFID card readers compatible for use with both key fobs/key cards and phone applications.
- ii. Install door controllers and credential readers where shown on the contract drawings.
- iii. All doors equipped with access controls shall include manual key access bypass to allow for entry by a manual key in the event of failure of the access control system.
- iv. Configure role-based access permissions for staff and contractors.
- v. Integrate access control events with video surveillance where applicable.
- vi. Provide mobile phone applications and credential-based (cards/fobs) access.
- vii. Ensure system design complies with applicable local, state, and federal regulations, including critical infrastructure protection guidelines for water systems.

1.4 Network Integration

- i. Provide and install all storage systems, including servers, software and system improvements, if required, for on-premises storage at each of the four sites for a minimum of 720 hours of collected video footage per camera. Contractor shall integrate the installed cameras into the provided software and assist the District with installation and configuration of the software system.



- ii. Configure secure network connectivity for all video surveillance and access control devices.
- iii. Coordinate with Owner IT staff to ensure proper VLANs, bandwidth, and cybersecurity compliance.
- iv. Implement software-based management platform for unified monitoring and control of both video surveillance and access control equipment.
- v. Ensure encrypted communication between field devices and any cloud services, if used.

1.5 Cabling & Infrastructure

- i. Provide and install all required conduit, cabling (Cat6/fiber), junction boxes, and terminations.
- ii. Ensure installations meet NEC and local electrical codes.
- iii. Provide surge protection and grounding for all outdoor and remote installations.

1.6 Installation & Commissioning

- i. Install all system components in accordance with manufacturer specifications.
- ii. Label and document all equipment and cabling.
- iii. Perform system testing, calibration, and commissioning.
- iv. Verify full functionality of cameras, access points, and cloud connectivity.

1.7 Training & Documentation

- i. Provide system training for District personnel (administrators and operators).
- ii. Deliver as-built drawings, system diagrams, and equipment manuals.
- iii. Provide user guides for cloud platform operation.

1.8 Support

- i. Provide 24 hour per day, 7 day per week technical support to troubleshoot and assist the District in repairing the installed camera system.
- ii. Two years of technical support shall be included in the contractors bid.



2.0 PRODUCTS

2.1 Video Surveillance Cameras

- i. Multi-Directional PTRZ Cameras: Shall provide a minimum of 4x5 MP resolution with 360 degree view. Suitable for continuous outdoor operation in all weather conditions. Axis Communications Model P3748-PLVE or approved equal.
- ii. Fixed Outdoor Dome Cameras: Shall provide 2 MP resolution with low light capability and multi-focal lens. Suitable for continuous outdoor operation in all weather conditions. Axis Communications M4225-LVE or approved equal.
- iii. Fixed Outdoor Dome Camera with Automatic Entrance Control: Shall provide 2 MP resolution with low light capability and license plate detection to facilitate automatic entrance control and gate activation. Axis Communications Model P3285-LVE or approved equal.
- iv. Video Intercom: Shall provide two-way communication, video identification, and remote entry control, 5 MP resolution and 140 degree field of vision. Suitable for continuous outdoor operation in all weather conditions. Axis Communications Model I8016-LVE or approved equal.
- v. 180-Degree Outdoor Panoramic Dome Camera: Shall provide 180 degree horizontal and 90 degree vertical field of view. Suitable for continuous outdoor operation in all weather conditions. Axis Communications Q3839-PVE or approved equal.
- vi. Fixed Interior Dome Camera: Shall provide 4 MP resolution, 130 degree field of vision, and low light resolution. Axis Communications Model M3086-V or approved equal.
- vii. Two Sensor Multi-Directional Camera: Shall provide 180 degree horizontal and 55 degree vertical field of view. Suitable for continuous outdoor operation in all weather conditions. Axis Communications Model P4708-PLVE or approved equal.
- viii. Hardware and Accessories: Contractor shall identify all additional hardware and accessories required for installation of the cameras as shown on the drawings and per the Contractor-prepared Video Surveillance System Design Report and Drawings.



2.2 Access Controls

- i. Network Bluetooth Reader: Reader shall be capable of reading RFID cards/fobs and credential application loaded mobile devices. Shall be capable of being integrated into the District-wide access control system to be developed by the Contractor. Axis Communications Model A4612 or approved equal.
- ii. Door Controllers and Ancillary Devices: Contractor shall identify and submit to the District for review all associated controllers and ancillary devices required for a complete and operable access control system. All readers and controllers shall be integrated into a unified cloud-based access control system.
- iii. The access control system shall be configurable for role-based access permissions for staff, vendors and contractors.

2.3 Surveillance Camera and Access Control Management Platform. Management Platform shall be a local server hosted software application capable of managing, viewing, integrating and controlling all surveillance cameras and access control devices in a single application. Axis Communications Camera Station Pro or equal.

3.0 EXECUTION

3.1 Project Site Understanding. During bidding, interested Contractors will be provided an opportunity to visit the project site during the pre-bid meetings that is scheduled during the bidding period. The date of this meeting is included in the Advertisement for Bids. By submitting a bid, bidders confirm that they are sufficiently familiar with the project sites, existing buildings and site conditions, as well as the project requirements herein, to ascertain dimensions, quantities and as-built conditions to develop a complete and informed bid.

3.2 Progress and Completion. The project time for completion is 90 calendar days to provide sufficient time to complete the required submittal reviews and to account for product lead times. All on-site work must be completed within a maximum 14 consecutive calendar day work window. The construction work window shall begin upon the Contractor's initial mobilization to any of the project sites and shall end once a complete, functional and fully-integrated video surveillance and access control system has been installed and started up.

3.3 Labor, Equipment and Materials. Contractor shall provide all labor, equipment, materials, supervision, tools, supplies, insurance, permits and all costs associated



with all other items necessary to perform the work described in these Specifications and shown on the project drawings.

- 3.4 Pre-Construction Meeting. A preconstruction meeting is required with the Contractor and Lake Whatcom Water and Sewer District staff before the start of construction.
- 3.5 Permitting. The Contractor is responsible for identifying, paying for and obtaining all permits (if any) required for completion of the project. The District will reimburse the Contractor for all permit fees paid by the Contractor.
- 3.6 Temporary Utilities. Contractor will be permitted to utilize existing power, water and sanitary services that are available at the existing facilities. However, the Contractor's use of these facilities shall not reduce, impair or impede use of the existing facilities by the District or any other users of the facilities. Contractor shall be responsible for maintaining the cleanliness and functionality of the facilities throughout the duration of their use and, once their use of each facility is complete, the Contractor shall be responsible for cleaning and restoring the facility to the original condition. Contractor shall be responsible for furnishing, maintaining and providing all utility needs not available at the existing facility throughout the duration of the construction, including but not limited to water, portable sanitation services and portable power generation.
- 3.7 Work within Active Facilities. All facilities included in this contract are active and occupied facilities critical to continuous operation and administration of the District. Facilities are generally occupied Monday through Friday, 7:00 am through 5:30 pm. Contractor shall coordinate their work to avoid disrupting District staff or customers. Although the District will make every effort to reasonably accommodate the Contractor, operation of District facilities shall have precedence over work included in this contract.
- 3.8 Site control. Contractor is responsible for maintaining a neat, sanitary and safe work area throughout construction. The contractor shall take care to minimize damage to walls, flooring, ceilings, siding, roofing, and all other components impacted by installations and shall fully repair and restore to original condition and surfaces or materials impacted by construction. Any building penetrations installed by this project shall be fully sealed to maintain a weather-tight building envelope. The site shall be cleared of all rubbish, debris and equipment and shall be left in a neat condition with surfaces restored to pre-construction conditions.



- 3.9 Shop Drawings / Submittals. Contractor shall provide submittals for all equipment and materials installed on the project. The contractor shall submit Product Manufacturer's technical data, catalogue cuts or brochures and documentation of conformance with appropriate standards and these specifications. Submittal data shall include sufficient information to determine if it is in compliance with the project requirements. Submittal review does not relieve the Contractor from responsibility for errors or omissions, or responsibility for consequences due to deviations from the contract documents. Acceptable submittals will be reviewed as promptly as possible and transmitted to the Contractor no later than 14 calendar days after receipt.

By approving and submitting shop drawings, the Contractor warrants they have determined and verified all field measurements, field construction criteria, materials, catalog numbers, and similar data, and have checked and coordinated each shop drawing with required work and with the contract documents.

Additional submittals required for this project include:

- Video Surveillance System Design Report per Section 1.1 of these Specifications.
 - Video Surveillance and Access Control Management Platform software, including a summary of all current and on-going charges.
 - Site specific safety plan
 - Project schedule.
- 3.10 Schedule. The contractor shall submit a detailed schedule of work to present at the preconstruction meeting.
- 3.11 System Design. Perform site assessments for each facility. Develop detailed system design for cable routing, camera mounting systems, server improvements, network integration requirements, and all other improvements required for a complete and operable system. Ensure system design complies with applicable local, state, and federal regulations, including critical infrastructure protection guidelines for water systems.

4.0 SAFETY

In carrying out its responsibilities, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall



comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify Districts of adjacent property and utilities when prosecution of the Work may affect them. For these purposes, the Contractor shall:

- Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the contractor and each subcontractor on the work site. The Contractor shall develop and submit a site-specific safety plan (SSSP) to the District's representative for review prior to the initial pre-construction meeting. District shall have up to 5 working days to review and comment on the SSSP. The District's review of the SSSP shall not alleviate the Contractor's sole responsibility for site safety throughout the project.
- Provide adequate safety devices and measures including, but not limited to, the appropriate safety literature, notice, training, permits, placement and use of barricades, signs, signal lights, ladders, scaffolding, ventilation, air monitoring, necessary personal protective equipment for all employees, staging, runways, hoist, temporary lighting, grounded outlets, wiring, construction processes, and equipment required by Chapter 19.27 RCW, State Building Code (Uniform Building, Electrical, Mechanical, Fire, and Plumbing Codes); Chapter 212-12 WAC, Fire Marshal Standards, Chapter 49.17 RCW, WISHA; Chapter 296-155 WAC, Safety Standards for Construction Work; Chapter 296-65 WAC; WISHA Asbestos Standard; WAC 296-62-071, Respirator Standard; WAC 296-62, General Occupation Health Standards, WAC 296-24, General Safety and Health Standards, WAC 296-24, General Safety and Health Standards, Chapter 49.70 RCW, and Right to Know Act.

5.0 MEASUREMENT AND PAYMENT

The following is a list of bid items for the project. It is the intention that performance of work under these bid items shall result in the complete construction of all work identified in the plans and specifications. Work and material not specifically listed in the proposal but required according to the plans and specifications and general practice, shall be included in the contractor's bid price. Payment for all work will be made at the contract unit price or lump sum prices as indicated in the Bid Proposal. The contract price for each item constitutes full compensation for furnishing all equipment, labor, materials, transportation, appurtenances, and incidentals and performing all work necessary to complete the various bid items in accordance with the Contract Documents. Payment for



each item shall be considered as full compensation, notwithstanding that minor features may not be mentioned herein.

SCHEDULE A: WORK WITHIN THE CITY OF BELLINGHAM

Schedule A shall include all work to be completed at locations within and subject to the sales tax rate inside City Limits of the City of Bellingham.

BID ITEM NO. A-1: MOBILIZATION AND DEMOBILIZATION

Measurement. Will be measured lump sum (LS).

Payment. The lump sum price for this bid item shall cover the complete cost of providing all mobilization and demobilization relating to construction of improvements shown on the plans and specified herein. Work includes, but is not limited to: mobilization of labor, equipment and materials, necessary permits, temporary erosion and sedimentation control, site security, move all personnel and equipment off site after contract completion and cleanup site prior to final acceptance.

BID ITEM A-2: SYSTEM INTEGRATION

Measurement. Will be measured lump sum (LS).

Payment. Payment shall cover the complete cost of all work to design, develop and provide a fully integrated access control and surveillance camera management platform for all camera systems installed by this project. Work shall include but not be limited to all costs for the labor, equipment, materials, and mobilization and demobilization required to provide a complete and operable management platform as described in the Project Specifications.

BID ITEM NO. A-3: ADMINISTRATION BUILDING SURVEILLANCE CAMERAS AND ENTRANCE CONTROLS

Measurement. Will be measured lump sum per site (LS).

Payment. Payment shall cover the complete cost for designing, providing and installing a complete surveillance camera and access control system at the Administration Building as shown on the drawings and specified herein, including but not limited to cameras, scanners, mounting hardware, cable, conduit, communications equipment, and all other ancillary materials, equipment and labor required to install a complete and operable surveillance camera and access control system. All work to design the surveillance camera and entrance control system shall be incidental to this bid item.



BID ITEM NO. A-4: TECHNICAL SUPPORT

Measurement. Will be measured lump sum per site (LS).

Payment. Payment shall cover the complete cost for providing 24 hour per day, 7 day per week technical support of all cameras, access controls, hardware and software installed by the project, including all schedules of work, for a period of two years following issuance of final physical completion of the project by the District.

SCHEDULE B: WORK IN UNINCORPORATED WHATCOM COUNTY

Schedule B shall include all work to be completed at locations within and subject to the sales tax rate in the Public Transportation Benefit Area of unincorporated Whatcom County.

BID ITEM NO. B-1: MOBILIZATION AND DEMOBILIZATION

Measurement. Will be measured lump sum (LS).

Payment. The lump sum price for this bid item shall cover the complete cost of providing all mobilization and demobilization relating to construction of improvements shown on the plans and specified herein. Work includes, but is not limited to: mobilization of labor, equipment and materials, necessary permits, temporary erosion and sedimentation control, site security, move all personnel and equipment off site after contract completion and cleanup site prior to final acceptance.

BID ITEM NO. B-2: AGATE HEIGHTS WATER TREATMENT PLANT SURVEILLANCE CAMERAS AND ENTRANCE CONTROLS

Measurement. Will be measured lump sum (LS).

Payment. Payment shall cover the complete cost for designing, providing and installing a complete surveillance camera and access control system at the Agate Heights Water Treatment Plant as shown on the drawings and specified herein, including but not limited to cameras, scanners, mounting hardware, cable, conduit, communications equipment, and all other ancillary materials, equipment and labor required to install a complete and operable surveillance camera and access control system. All work to design the surveillance camera and entrance control system shall be incidental to this bid item.

BID ITEM NO. B-3: SUDDEN VALLEY WATER TREATMENT PLANT SURVEILLANCE CAMERAS AND ENTRANCE CONTROLS

Measurement. Will be measured lump sum (LS).



Payment. Payment shall cover the complete cost for designing, providing and installing a complete surveillance camera and access control system at the Sudden Valley Water Treatment Plant as shown on the drawings and specified herein, including but not limited to cameras, scanners, mounting hardware, cable, conduit, communications equipment, and all other ancillary materials, equipment and labor required to install a complete and operable surveillance camera and access control system. All work to design the surveillance camera and entrance control system shall be incidental to this bid item.

BID ITEM NO. B-4: OPERATIONS AND MAINTENANCE CAMPUS SURVEILLANCE CAMERAS AND ENTRANCE CONTROLS

Measurement. Will be measured lump sum (LS).

Payment. Payment shall cover the complete cost for designing, providing and installing a complete surveillance camera and access control system at the Operations and Maintenance Campus as shown on the drawings and specified herein, including but not limited to cameras, scanners, mounting hardware, cable, conduit, communications equipment, and all other ancillary materials, equipment and labor required to install a complete and operable surveillance camera and access control system. All work to design the surveillance camera and entrance control system shall be incidental to this bid item.

*** END OF PROJECT INFORMATION AND SPECIFICATIONS ***

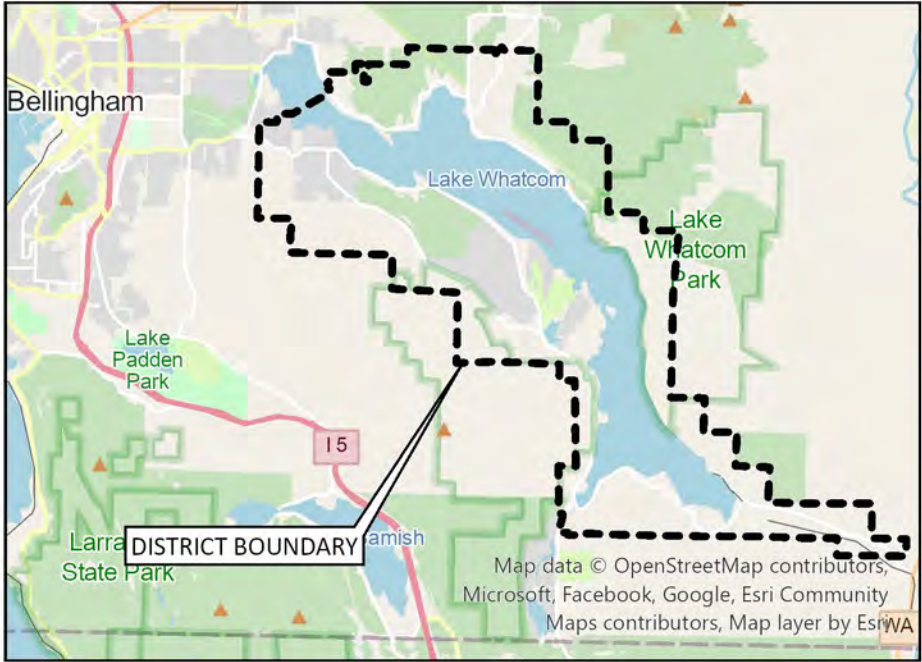


ATTACHMENT A

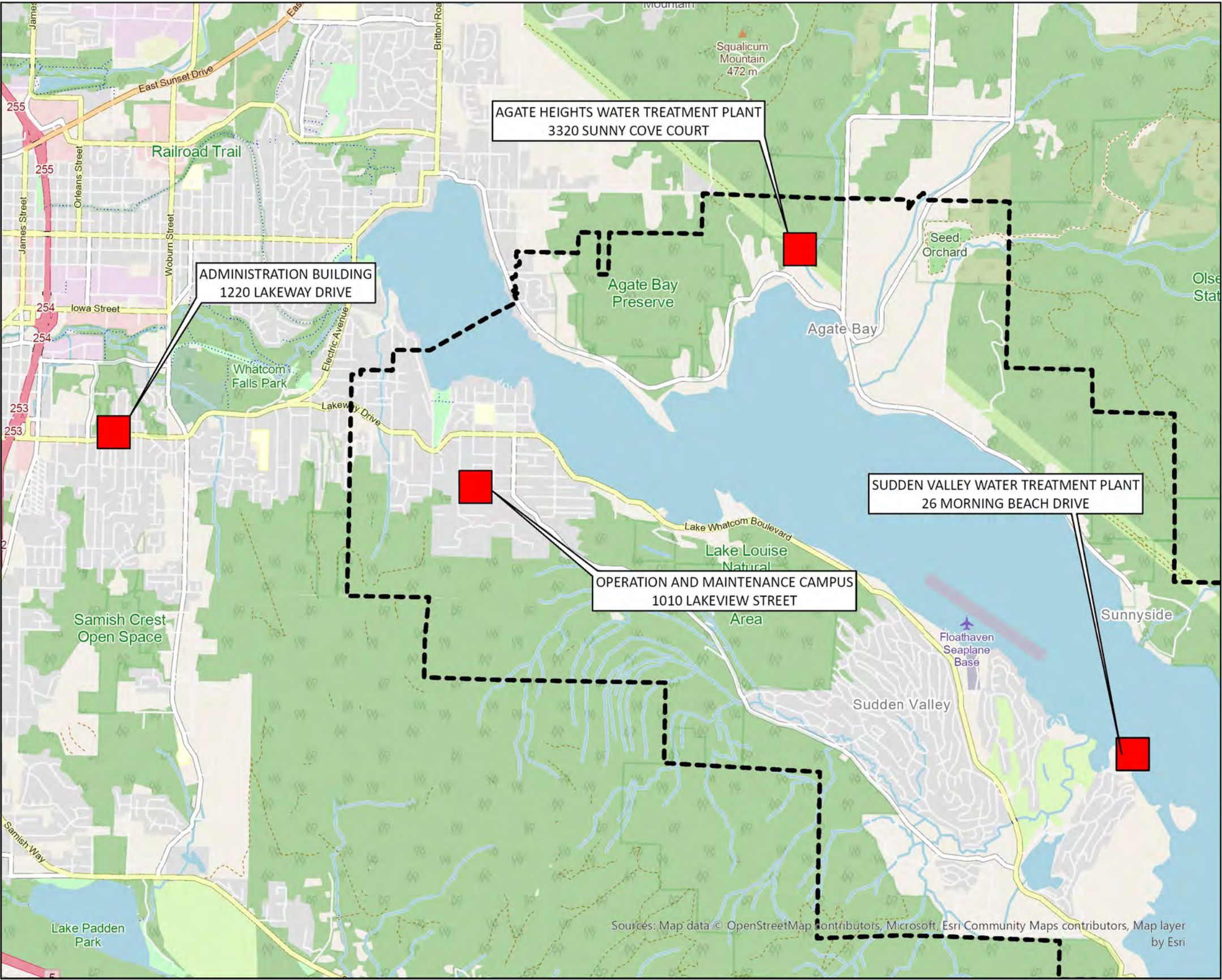
DRAWINGS



LOCATION



VICINITY

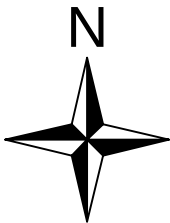


LEGEND:

- 1 MULTI-DIRECTIONAL PTRZ CAMERA
- 2 FIXED OUTDOOR DOME CAMERA
- 3 FIXED OUTDOOR DOME CAMERA WITH AUTOMATIC ENTRANCE CONTROL
- 4 VIDEO INTERCOM
- 5 180-DEGREE OUTDOOR PANORAMIC DOME CAMERA
- 6 NETWORK/BLUETOOTH CARD READER
- 7 FIXED INTERIOR DOME CAMERA
- 8 TWO SENSOR MULTI-DIRECTIONAL CAMERA
- VIDEO SURVEILLANCE AREA



LOCATION MAP



DRAWN BY:
GAN
7/7/2026
2 OF 5

SECURITY CAMERAS AND ACCESS CONTROLS

Agate Heights Water Treatment Plant Site Plan

SHEET #:
2

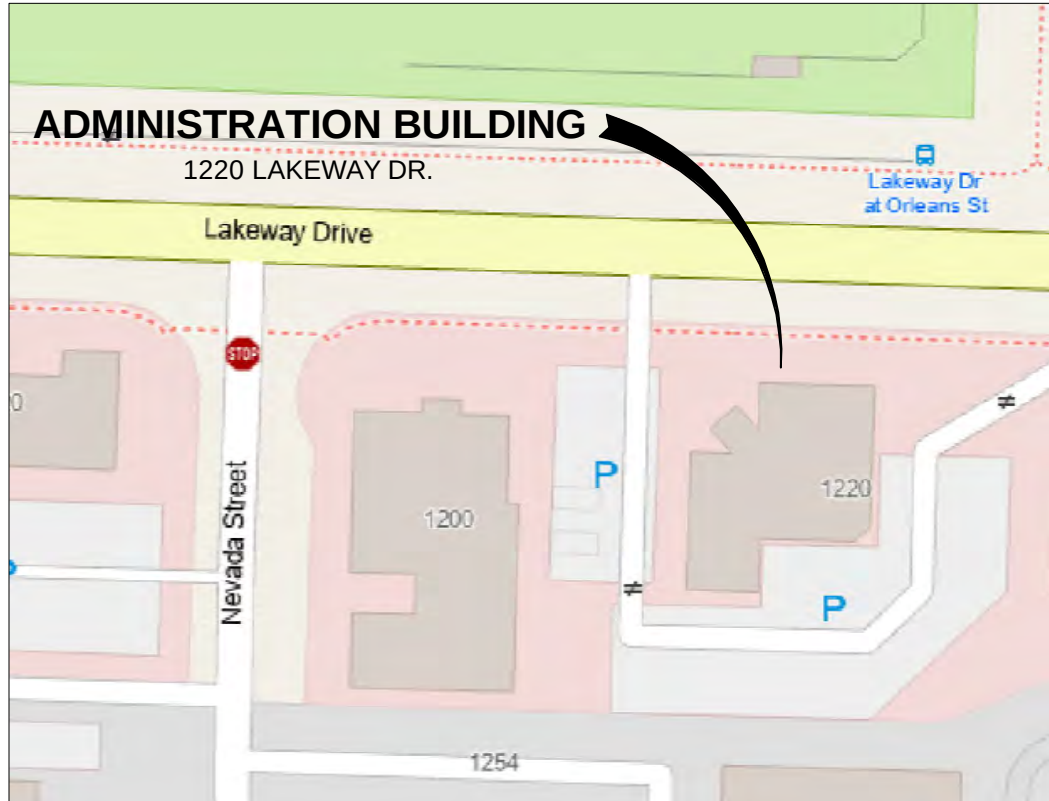


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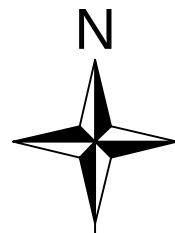
- ① MULTI-DIRECTIONAL PTRZ CAMERA
- ② FIXED OUTDOOR DOME CAMERA
- ③ FIXED OUTDOOR DOME CAMERA WITH AUTOMATIC ENTRANCE CONTROL
- ④ VIDEO INTERCOM
- ⑤ 180-DEGREE OUTDOOR PANORAMIC DOME CAMERA
- ⑥ NETWORK/BLEETOOTH CARD READER
- ⑦ FIXED INTERIOR DOME CAMERA
- ⑧ TWO SENSOR MULTI-DIRECTIONAL CAMERA
-  VIDEO SURVEILLANCE AREA

NOTES:

1. INSTALL CARD READER ON EXISTING CARD READER PEDESTAL. CONTRACTOR SHALL MODIFY PEDESTAL AS NEEDED TO ACCOMMODATE NEW CARD READER.



LOCATION MAP



DRAWN BY:

GAN
7/7/2026

3 OF 5

SECURITY CAMERAS AND ACCESS CONTROLS

Administration Building Site Plan

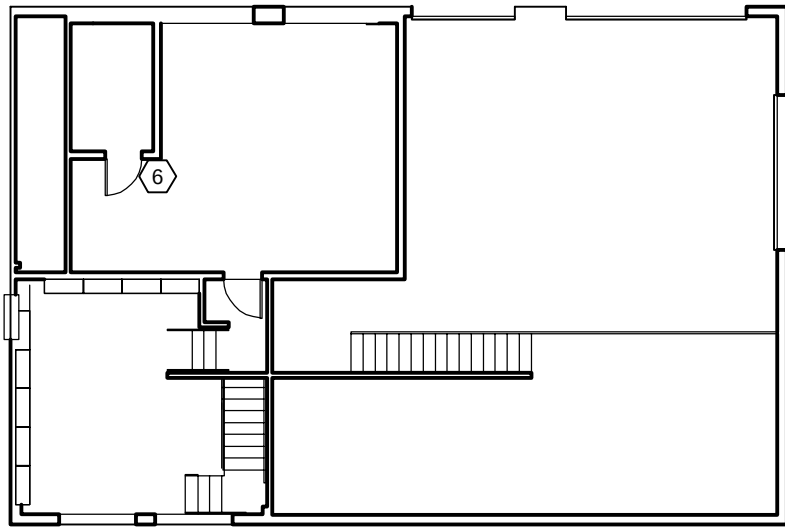
SHEET #:

3

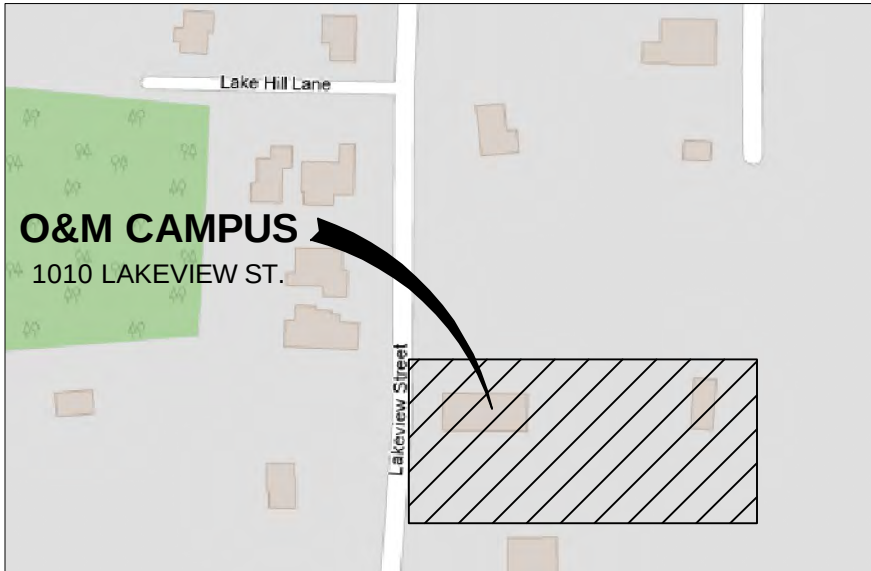


LEGEND:

- 1 MULTI-DIRECTIONAL PTRZ CAMERA
- 2 FIXED OUTDOOR DOME CAMERA
- 3 FIXED OUTDOOR DOME CAMERA WITH AUTOMATIC ENTRANCE CONTROL
- 4 VIDEO INTERCOM
- 5 180-DEGREE OUTDOOR PANORAMIC DOME CAMERA
- 6 NETWORK/BLUETOOTH CARD READER
- 7 FIXED INTERIOR DOME CAMERA
- 8 TWO SENSOR MULTI-DIRECTIONAL CAMERA
- VIDEO SURVEILLANCE AREA



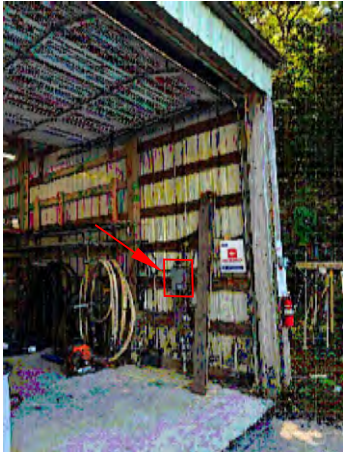
SECOND FLOOR PLAN



LOCATION MAP



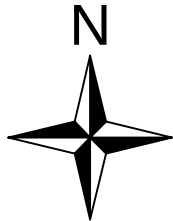
POLE BUILDING ELECTRICAL PHOTOS



BREAKER PANEL LOCATION



BREAKER PANEL



DRAWN BY:
GAN
7/7/2026
4 OF 5

SECURITY CAMERAS AND ACCESS CONTROLS

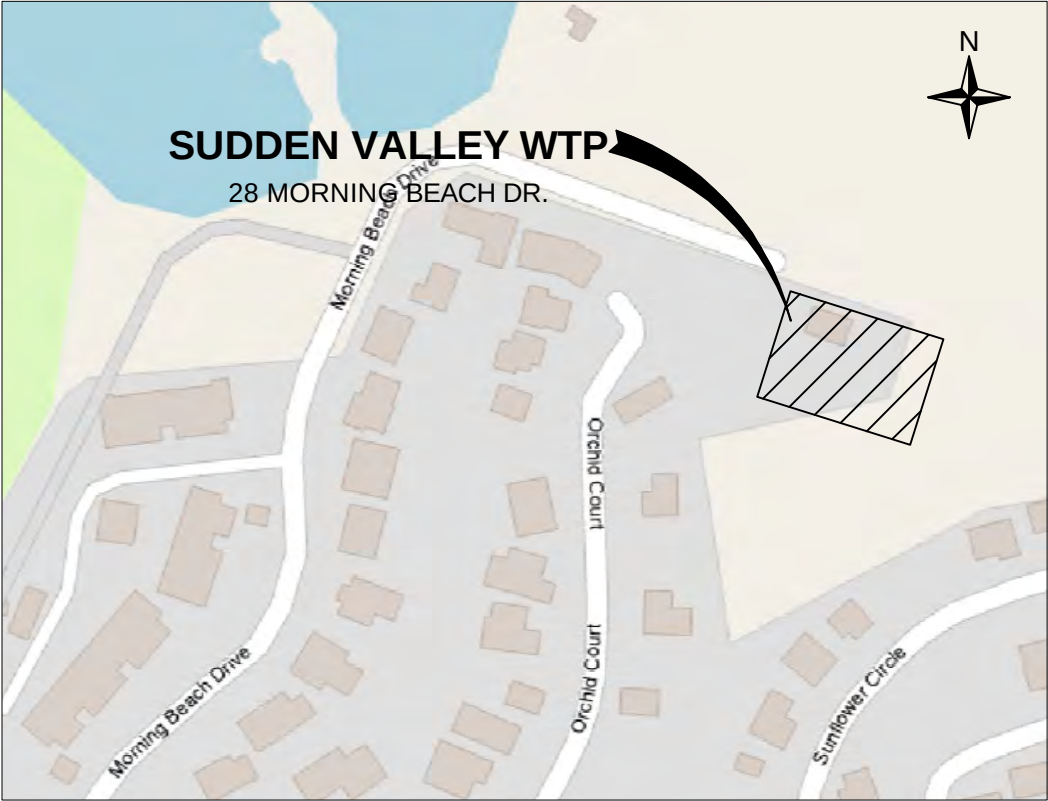
Operations & Maintenance Campus Site Plan

SHEET #:
4



LEGEND:

- 1 MULTI-DIRECTIONAL PTRZ CAMERA
- 2 FIXED OUTDOOR DOME CAMERA
- 3 FIXED OUTDOOR DOME CAMERA WITH AUTOMATIC ENTRANCE CONTROL
- 4 VIDEO INTERCOM
- 5 180-DEGREE OUTDOOR PANORAMIC DOME CAMERA
- 6 NETWORK/BLUETOOTH CARD READER
- 7 FIXED INTERIOR DOME CAMERA
- 8 TWO SENSOR MULTI-DIRECTIONAL CAMERA
- VIDEO SURVEILLANCE AREA



LOCATION MAP



DRAWN BY:
GAN
7/7/2026
5 OF 5

SECURITY CAMERAS AND ACCESS CONTROLS
Sudden Valley WTP Site Plan

SHEET #:
5





ATTACHMENT B

REFERENCE DOCUMENTS

Administrative Building

- FOR DOOR INFORMATION, SEE 1/16.0
- FOR WINDOW INFORMATION, SEE 1/16.1
- FOR DETAILS OF WALL TYPES SEE DETAIL 1/13.2
- FOR WALLS WITH ACOUSTICAL INSULATION, PROVIDE 3" MIN. ACOUSTICAL INSULATION UP WALLS TO STRUCTURE OR ACROSS CEILING OF THE SPACE TO BE ISOLATED. PROVIDE COMPLETE ACOUSTICAL SEPARATION & SEAL ALL JOINTS ACOUSTICALLY. PROVIDE ACOUSTICAL SEALANT FOR ALL OPENINGS AND @ BASE OF WALLS. ACOUSTICALLY ISOLATE THE FOLLOWING ROOMS FROM EACH OTHER & OTHER ROOMS & AREAS: ALL FOUR OFFICES, LUNCH ROOM, BOARD ROOM, MEETING ROOM, ALL THREE TOILET ROOMS AND SHOWER ROOM.
- OFFICE FURNITURE AND SYSTEMS FURNITURE ARE F.O.I.O.
- PROVIDE FIRE EXTINGUISHERS AND CABINET AS REQUIRED BY THE FIRE MARSHALL. COORDINATE AND RECEIVE APPROVAL FROM ARCHITECT PRIOR TO INSTALLATION.
- FOR CASEWORK FINISHES, SEE FINISH AND FURNITURE PLAN 1/12.3
- FOR INTERIOR FINISH AND MATERIAL SELECTIONS SEE MATERIAL AND ROOM FINISH SCHEDULES SHEET A6.2
- PROVIDE BARRIER FREE SIGNS & ROOM SIGNS WHERE REQUIRED BY LOCAL JURISDICTION. PROVIDE SIGNS AT ALL TOILET ROOMS, SHOWER ROOM, ELECTRICAL ROOM AND MECHANICAL ROOM.
- OFFICE FURNITURE, SYSTEMS FURNITURE AND COMPUTER EQUIPMENT IS F.O.I.O.
- PROVIDE FOR NIGHT DEPOSITORY (DROP BOX), HAMILTON MODEL 125-SEDS H SLOT WITH STAINLESS STEEL EXTERIOR AND BLACK POWDER COATED INTERIOR. DETAILS PER 1/13.0
- EXISTING WALLS TO RECEIVE NEW FINISHES AND PAINT.
- COLORED CONCRETE C-2 IS PER ALTERNATE A3.
- VERIFY ALL EXISTING DIMENSIONS TO WALLS & COMPONENTS. DIMENSIONS MAY OR MAY NOT REFLECT EXISTING CONDITIONS. BRING CONFLICTS & VARIANCES TO THE ATTENTION OF ARCHITECT BEFORE PROCEEDING W/ NEW CONSTRUCTION.
- SLOPE NEW CONCRETE SLAB TO ALL NEW FLOOR DRAINS.
- PROVIDE HYDRAULIC CEMENT UNDERLAYMENT OVER ALL EXISTING FLOORS THAT DO NOT HAVE NEW CONCRETE.

ALTERNATE A3: PROVIDE COLORED CONCRETE C-2 FOR CONC. WALL, PAVING AND SIDEWALK AT THE PATIO AND FRONT ENTRANCE.

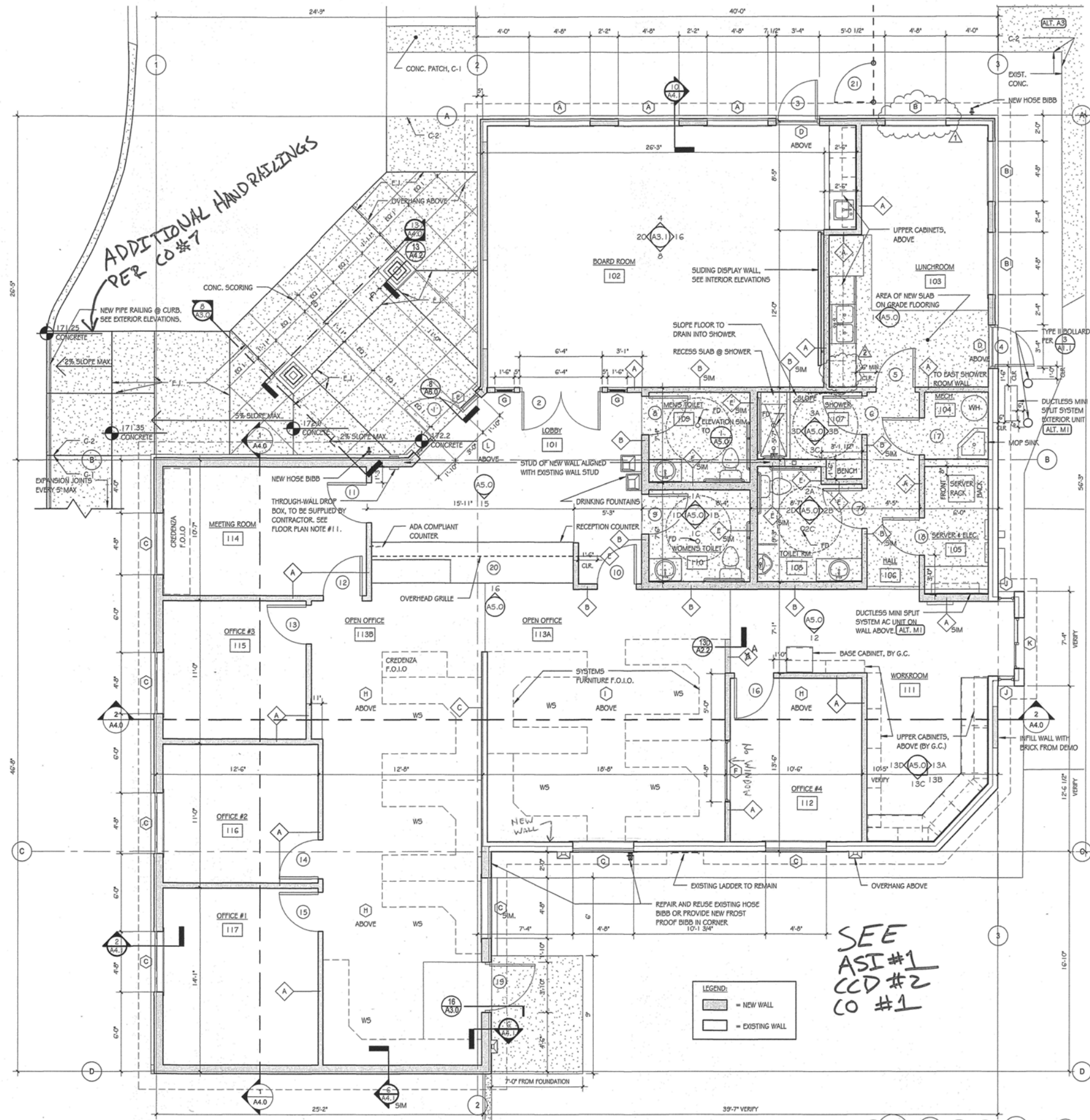
ALTERNATE M1: ADD DUCTLESS MINI SPLIT SYSTEM TO ELECTRICAL ROOM.

FLOOR PLAN NOTES

SCALE
1/1/2" = 1'-0"

13

DETAIL 14 ADDED PER CCD#2
SKYLIGHT FRAMING PLAN



LEGEND:
- NEW WALL
- EXISTING WALL

SEE
ASI #1
CCD #2
CO #1



The
Driftmiller
Architects, P.S.
7983 Leary Way NE
Redmond, WA 98052
(425) 881-7506
mail@driftmiller.com

**LAKE WHATCOM WATER &
SEWER DISTRICT**
1220 LAKEWAY DRIVE
BELLINGHAM, WA 98229
LAKEWAY OFFICE REMODEL/ADDITION

FLOOR PLAN

REGISTERED
ARCHITECT
STATE OF WASHINGTON

THIS DOCUMENT REPRESENTS A PROPRIETARY DESIGN OWNED BY THE ARCHITECT AND SHALL NOT BE USED ON OTHER PROJECTS FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THIS PROJECT BY OTHERS EXCEPT BY WRITTEN AGREEMENT IN WRITING.

Revision Schedule			
NO.	TYPE	REVISION	DATE
1	ADDENDUM	#1	12-08-09
2	ADDENDUM	#2	12-11-09

ISSUE DATE: 11/18/09
DRAWN BY: LRD
CHECKED BY: DRS

PROJECT NUMBER
20908

SHEET NUMBER
A2.0

FLOOR PLAN
SCALE
1/1/2" = 1'-0"

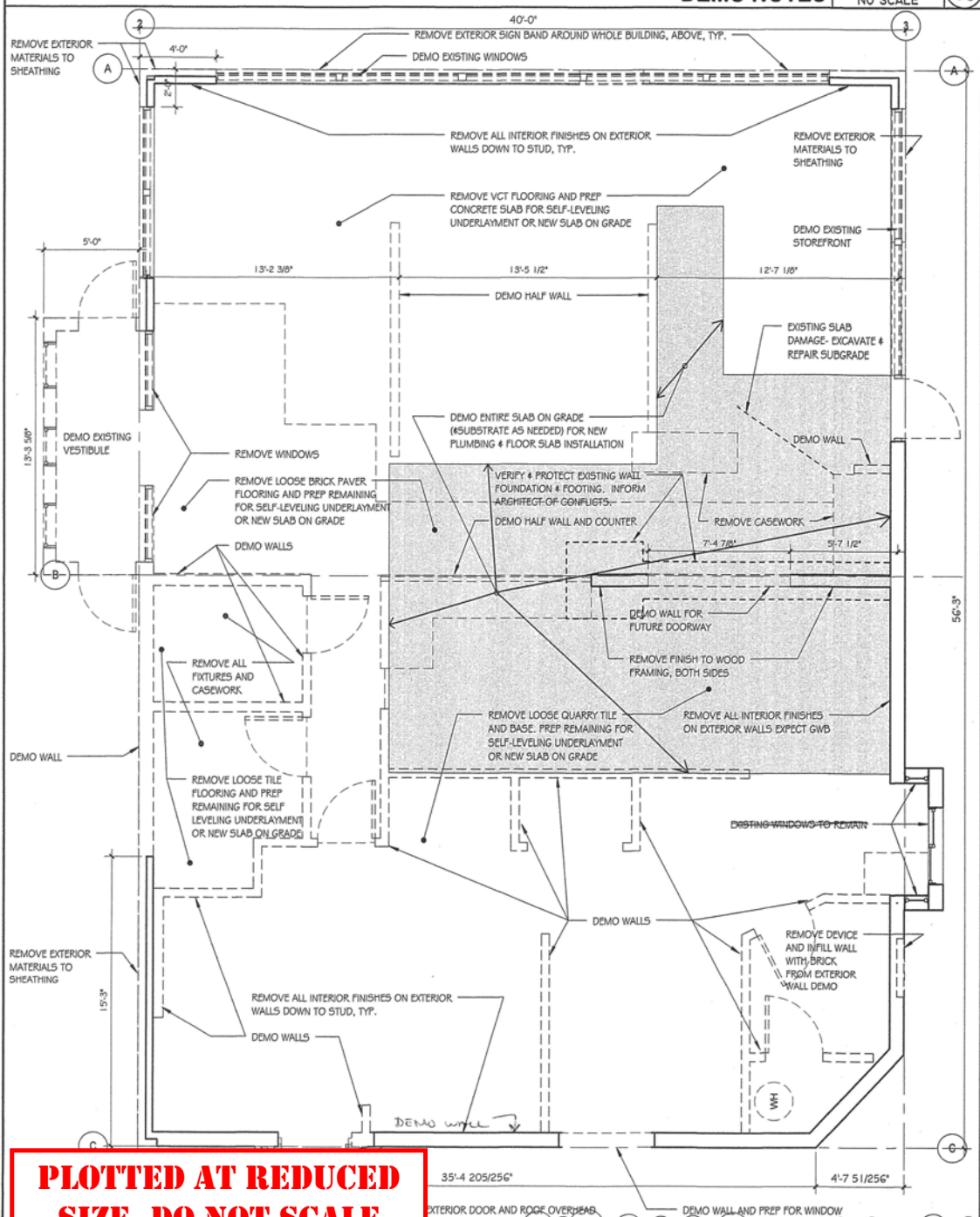
1

**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

- (10) REMOVE EXISTING INTERIOR WALLS, PARTITIONS AND DOORS AS SHOWN.
 - (11) REMOVE ALL EXISTING CEILING TILES, LIGHT FIXTURES, TRACT LIGHTS, SOFFITS, CEILING FINISHES, INCLUDING SUPPLY SYSTEMS.
 - (12) REMOVE ALL LIGHT FIXTURES IN AREAS OF WORK. RETAIN HANGER WIRES AS NEEDED.
 - (13) REMOVE EXISTING FIRE ALARM SYSTEM, HOSE CABINETS AND FIRE EXTINGUISHERS. RETAIN FOR REINSTALLATION.
 - (15) REMOVE EXISTING HVAC BRACH SUPPLY DUCTS, DIFFUSERS AND EQUIPMENT NOT REQUIRED FOR NEW WORK.
 - (16) REMOVE ALL HVAC EQUIPMENT NOT REQUIRED FOR NEW SYSTEM.
 - (17) IDENTIFY AND TAG ALL ELECTRICAL WIRING & DEVICES, PHONE WIRING AND DEVICES, COMPUTER CABLENG, ETC. THAT IS TO BE RETAINED. REMOVE ALL OTHER WIRING & DEVICES NOT REQUIRE FOR NEW WORK.
 - (18) REMOVE ALL EXISTING FLOOR FINISH TO EXISTING CONCRETE SLAB OR SUBFLOOR AND PREPARE FLOOR OR SUBFLOOR FOR NEW FLOORING.
 - (19) REMOVE ALL EXISTING PLUMBING FIXTURES. SAWCUT CONCRETE AND REMOVE FOR NEW UNDER SLAB PLUMBING AND UTILITY WORK.
 - (20) PATCH EXISTING CONCRETE SLAB AND DEMISING WALLS AS REQUIRED.
 - (21) REMOVE EXISTING FURNISHINGS, EQUIPMENT AND FIXTURES NOT REQUIRED FOR NEW WORK.
 - (22) MAINTAIN ACCESS TO EXISTING PLUMBING CLEAN-OUTS ON PLUMBING TO REMAIN. VERIFY EXISTING LOCATIONS.
 - (23) EXISTING BRICK: BRICK TO BE REMOVED & CLEANED FOR REUSE TO EXTENT NEEDED. THE REST OF THE FACE BRICK TO BE SALVAGED & GIVEN TO OWNER IF DESIRED, OR REMOVED & DISPOSED OF REST
- [ALTERNATE A.I.O.: INSTALL A CEILING MOUNTED PROJECTION SCREEN IN THE BOARDROOM.]

SCALE	13
0 SCALE	

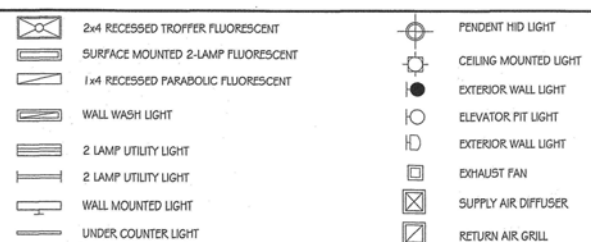
SCALE	13
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SIZE, DO NOT SCALE**

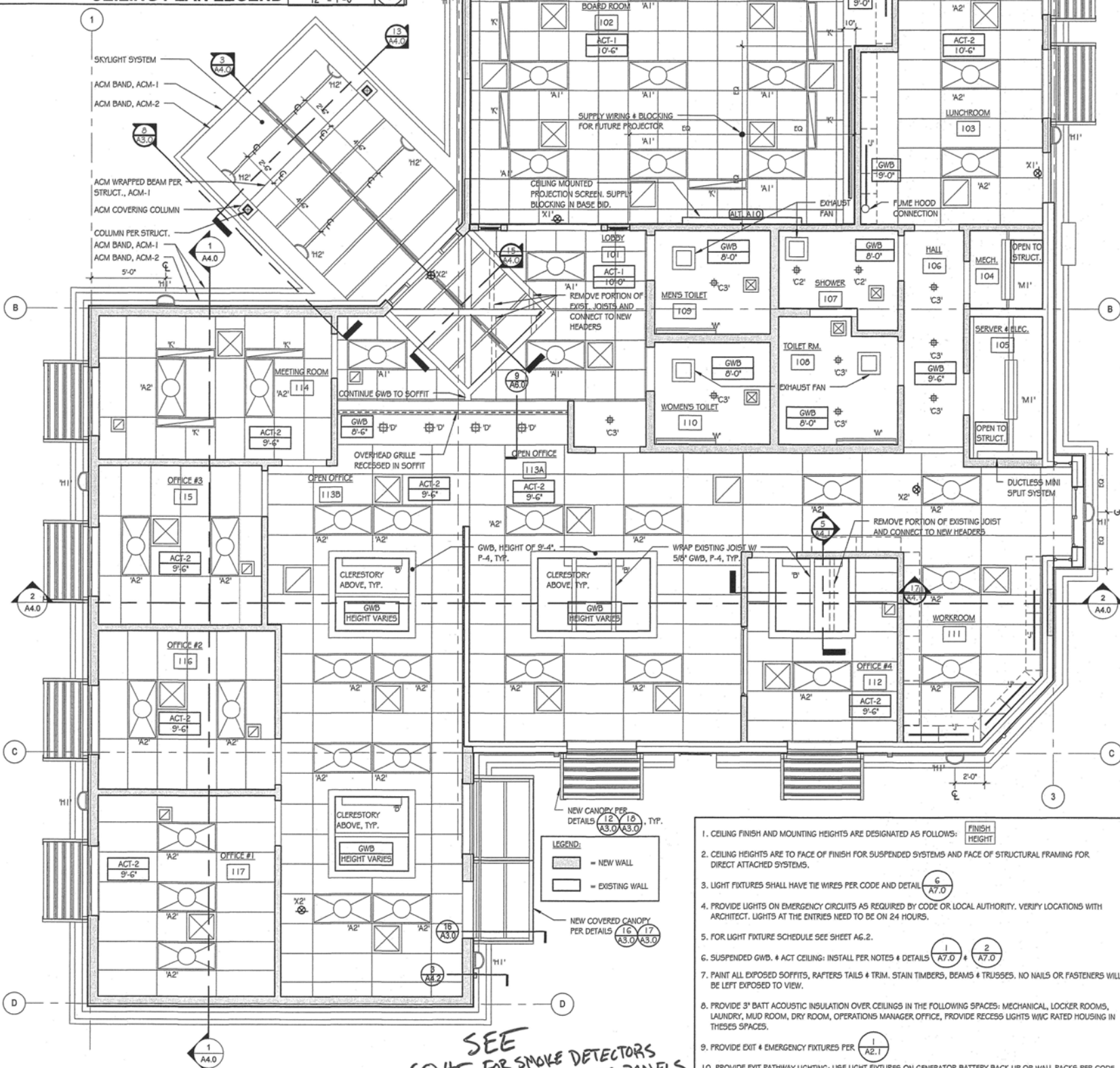
SCALE	14
1/4" = 1'-0"	

SCALE	14
1/4" = 1'-0"	



SCALE	9
12" = 1'-0"	

SCALE	9
12" = 1'-0"	



SEE
CO-15 FOR SMOKE DETECTORS
ATTIC ACCESS PANELS

SCALE	1
1" = 11'-0"	

SCALE	1
1" = 11'-0"	

SCALE	4
NO SCALE	

SCALE	4
NO SCALE	



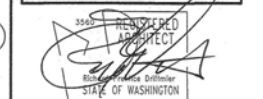
The
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**LAKE WHATCOM WATER &
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1220 LAKEWAY DRIVE
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REFLECTED
CEILING & DEMO
PLAN



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Revision Schedule		
NO.	TYPE REVISION	DATE
1	ADDENDUM #1	12-08-09
2	ADDENDUM #2	12-11-09

ISSUE DATE: 11/18/09

ISSUE DATE:	11/16/93
DRAWN BY:	LRD

DRAWN BY:	LRD
CHECKED BY:	DRS

PROJECT NUMBER

PROJECT NUMBER
20908

106

SHEET NUMBER

A2.1

7/12/11

- Ⓢ SINGLE RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
- Ⓛ DUPLEX RECEPTACLE
X" = HEIGHT ABOVE FINISHED FLOOR
B = CLOCK HANGER
C = FLUSH CEILING MOUNTED
D = DEDICATED
F = ARC FAULT PROTECTED BY BREAKER
G = GROUND FAULT CIRCUIT INTERRUPTER
H = HOSPITAL GRADE
K = CHILD RESISTANT COVER
L = ISOLATED GROUND
P = PENDANT MOUNTED WITH CORD GRIPS. VERIFY PENDANT LENGTH
S = SPLIT WIRED
T = TAMPER RESISTANT SHUTTERED RECEPTACLE
W = WEATHER PROOF CONTINUOUS COVER AND GFCI PROTECTED
? = DESIGNER DEFINED
- Ⓛ DUPLEX RECEPTACLE, 1/2 SWITCHED. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
- Ⓛ QUADRUPLEX RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
- Ⓛ SPECIAL PURPOSE RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
- Ⓛ DUPLEX RECEPTACLE, FLUSH FLOOR
- Ⓛ TVCABLE OUTLET
- Ⓛ SINGLE TELEPHONE OUTLET
- Ⓛ COMB. COMM. OUTLET TELE/DATA
- Ⓛ J-BOX
- Ⓛ COMM. CONTROLS
- Ⓛ PLUG MOLD UNDER COUNTER
- Ⓛ TRANSFORMER
- Ⓛ THERMOSTAT
- Ⓛ EXIT SIGN, CEILING MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN
- Ⓛ EXIT SIGN, WALL MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN
- Ⓛ RECESSED EXHAUST FAN, 60 CFM V.T.O.S.
- Ⓛ FIRE EXTINGUISHER
- Ⓛ ALARM BUTTON
- Ⓛ CLOSED CIRCUIT CAMERA
- Ⓛ GATHERING BOX
- Ⓛ GROMMET HOLE (VERIFY LOCATIONS W/ OWNER)
- Ⓛ ALARM ENUNCIATOR
- Ⓛ MOTION DETECTOR
- Ⓛ DOOR CONTACT
- Ⓛ FIRE EXTINGUISHER, SIZE 2A: 10BC MOUNTED IN CABINET
- Ⓛ SECURITY SYSTEM KEY PAD

ELECTRICAL LEGEND

SCALE
NO SCALE

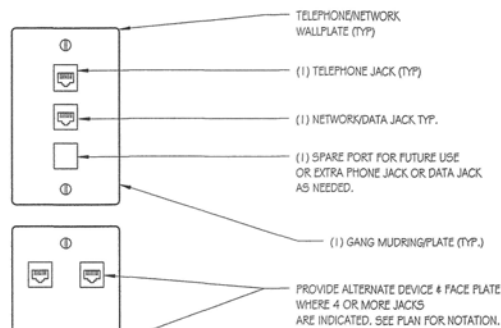
13

- FOR DOOR INFORMATION, SEE DOOR SCHEDULE SHEET AG.0.
 - FOR WINDOW INFORMATION, SEE WINDOW SCHEDULE SHEET AG.1.
 - OFFICE FURNITURE AND SYSTEMS FURNITURE ARE F.O.I.O.
 - PROVIDE FIRE EXTINGUISHERS AND CABINETS AS REQUIRED BY THE FIRE MARSHALL. COORDINATE AND RECEIVE APPROVAL FROM ARCHITECT PRIOR TO INSTALLATION.
 - FOR CASEWORK FINISHES, SEE INTERIOR ELEVATION SHEET AS.0.
 - FOR INTERIOR FINISH AND MATERIAL SELECTIONS SEE MATERIAL AND ROOM FINISH SCHEDULES SHEET AG.2.
 - PROVIDE FLUSH FLOORING TRANSITIONS PER DETAIL 14 AG.2.
 - PROVIDE ALL BLOCKING AND BRACING IN WALLS FOR F.O.I.O. FURNITURE AND EQUIPMENT.
 - PROVIDE ALL NECESSARY ELECTRICAL FOR F.O.I.O. FURNITURE AND CASEWORK INCLUDING UNDER COUNTER LIGHTS WHERE SHOWN.
 - BASE BID: WOOD TRIM IN LOBBY, RECEPTION AND BOARD ROOM TO BE STAINED WD-1, U.N.O. ALL OTHER WOOD TRIM TO BE PAINTED P-1, U.N.O.
11. ALL WINDOWS MARKED BL-# ON ELECTRICAL AND FINISH PLAN TO RECEIVE BLINDS OR ROLLER SHADES. BLIND TYPE PER 13 A2.3
12. ALL BLINDS IN THE BOARD ROOM TO BE "BLACKOUT" TYPE.
13. PLUMBING FIXTURES AND EQUIPMENT ARE LABELED PER PLUMBING FIXTURE SCHEDULE AS.2
14. B-1 TO BE INSTALLED THROUGHOUT BUILDING ON EXPOSED GWS. EXCEPTIONS: LOBBY BASE TO BE B-1, BOARD ROOM TO BE B-3, TOILET AND SHOWER ROOM TO BE L-1.
15. ELECTRICAL RECEPTACLES AND OUTLETS TO BE AT A HEIGHT OF 18" U.N.O.
- ALTERNATE A1.1: SUBSTITUTE SHEET CARPET FOR CARPET SQUARES.
- ALTERNATE A1.3: ADD WOOD TRIM STAINED IN ALL OFFICE AREAS.

ELECTRICAL AND FINISH PLAN NOTES

SCALE
12" = 1'-0"

14



- ALL TELEPHONE CABLE TO BE CATEGORY 5E. NETWORK CABLE TO BE CATEGORY 5E OR BETTER. VIDEO CONNECTION CABLE TO BE SHIELDED CATEGORY 5E.
- GENERAL CONTRACTOR TO PROVIDE A SINGLE MUD RING W/ FULL STRING AT EACH LOCATION FOR TELEPHONE OUTLETS. STUB CONDUIT INTO CEILING SPACE. ALL NON-ACCESSIBLE AREAS TO BE IN CONDUIT.

TYP. PHONE/DATA WALLPLATE

SCALE
1 1/2" = 1'-0"

15

PLUMBING FIXTURE COUNT (PER IBC TABLE 2902.1):

OCCUPANCY:

GROUP A - CONFERENCE ROOMS

PLUMBING OCCUPANT LOAD FACTOR: 30 S.F.

PLUMBING OCCUPANT LOAD: 538/30 = 18 OCCUPANTS

MALE WATER CLOSETS: 1

FEMALE WATER CLOSETS: 1

MALE LAVATORIES: 1

FEMALE LAVATORIES: 1

GROUP B - CLERICAL OR ADMINISTRATIVE

PLUMBING OCCUPANT LOAD FACTOR: 200 S.F.

PLUMBING OCCUPANT LOAD: 2,858/200 = 14 OCCUPANTS

WATER CLOSETS: 1

LAVATORIES: 1

(PER SEC2902.3.1 ONLY ONE TOILET FACILITY IS REQUIRED FOR 15 OR FEWER PERSONS.)

PLUMBING FIXTURES	REQUIRED	PROVIDED
MALE WATER CLOSETS:	1	1
FEMALE WATER CLOSETS:	1	1
UNISEX WATER CLOSETS:	1	1
MALE LAVATORIES:	1	1
FEMALE LAVATORIES:	1	1
UNISEX LAVATORIES:	1	1

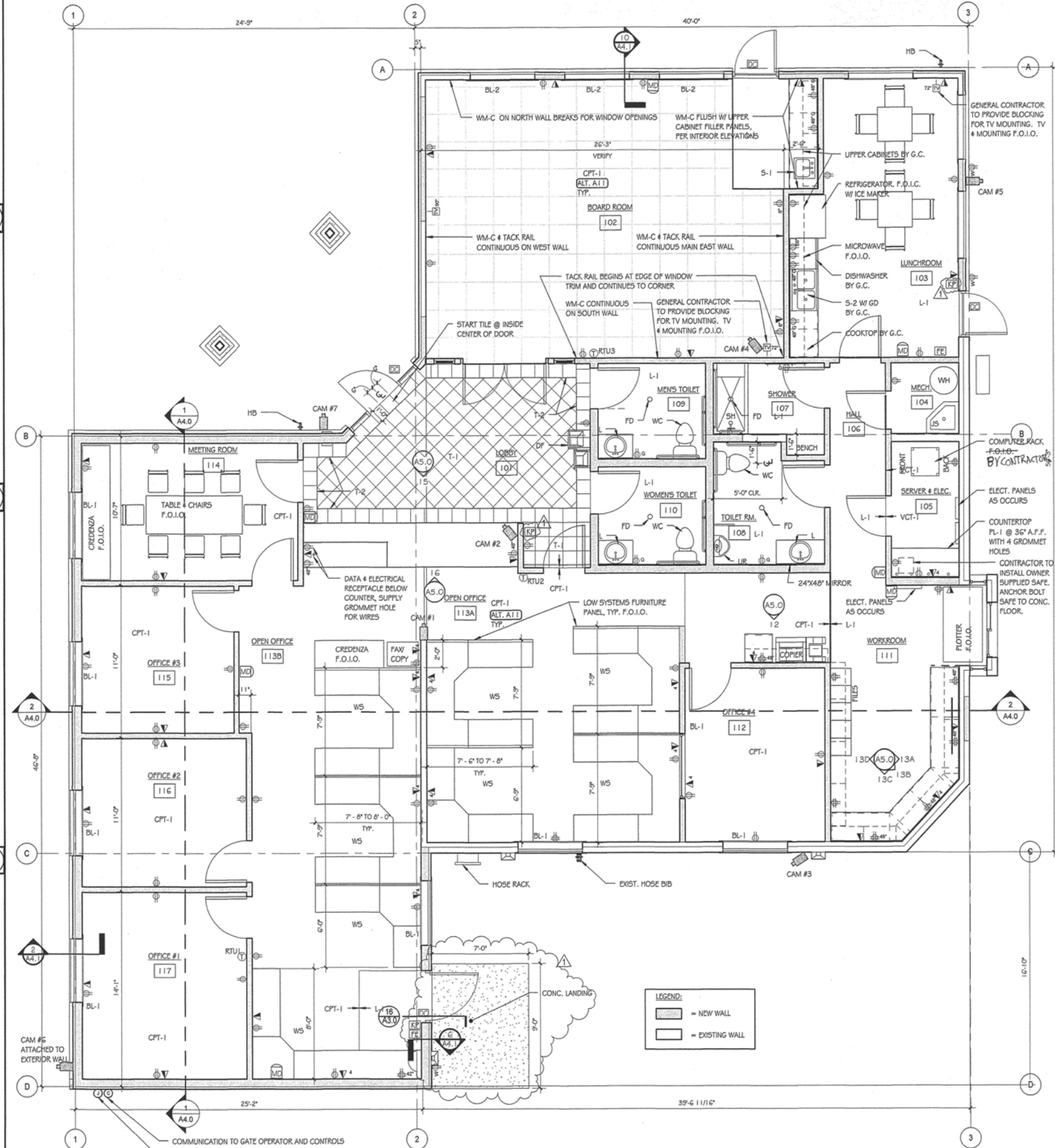
DRINKING FOUNTAINS (PER IBC2903.4):

REQUIRED	PROVIDED
2 (1 + 1 ACCESSIBLE)	2 (1 + 1 ACCESSIBLE)

PLUMBING FIXTURE COUNT

SCALE
NO SCALE

16



ELECTRICAL AND FINISH PLAN

SCALE
1/4" = 1'-0"

1

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LAKEWAY OFFICE REMODEL/ADDITION

**FINISH,
FURNITURE,
ELECT. PLAN**

SEAL
Driftmier
STATE OF WASHINGTON

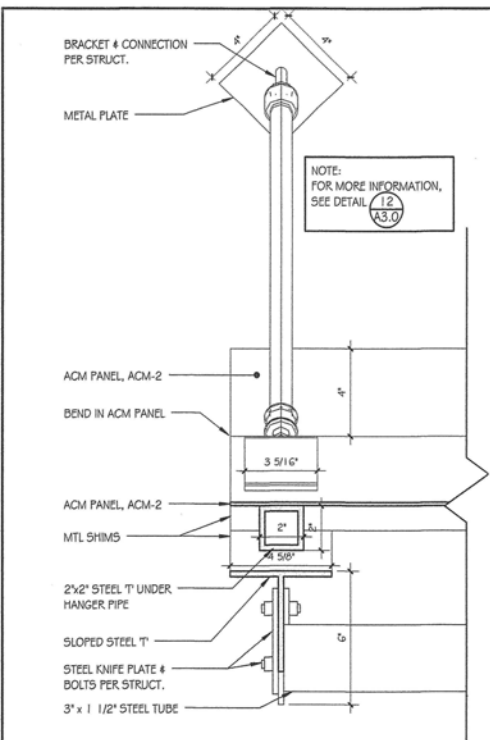
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Revision Schedule		
NO.	TYPE	REVISION DATE
1	ADDENDUM #1	12-08-09
2	ADDENDUM #2	12-11-09

ISSUE DATE: 11/18/09
DRAWN BY: LRD
CHECKED BY: DRS

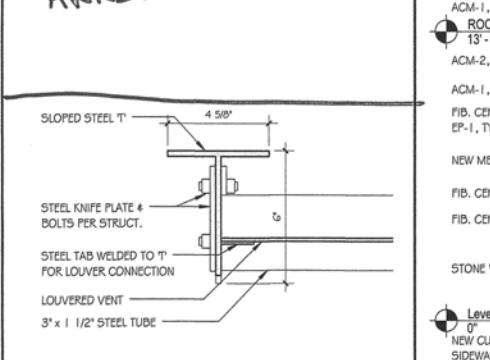
PROJECT NUMBER
20908

SHEET NUMBER
A2.3

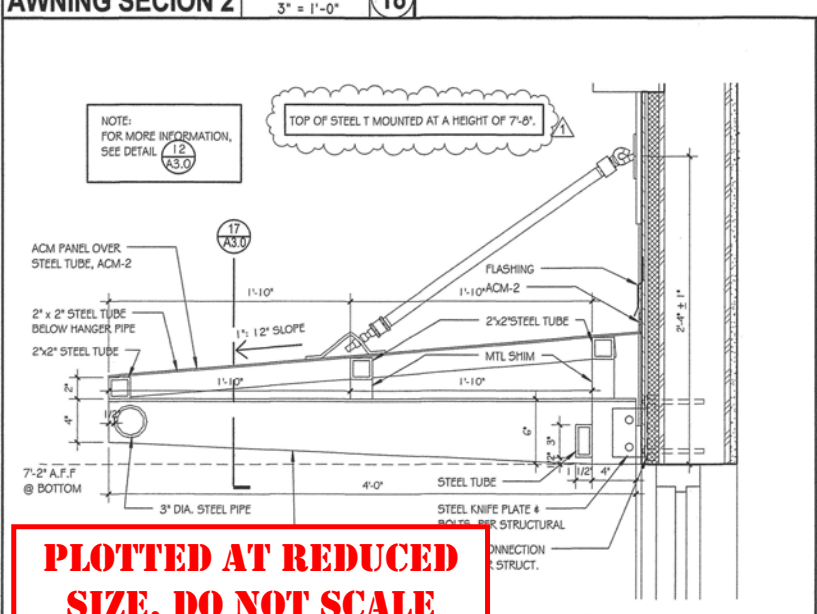


ATL A5
COVERED AWNING SEC. 2
SCALE 3" = 1'-0" **17**

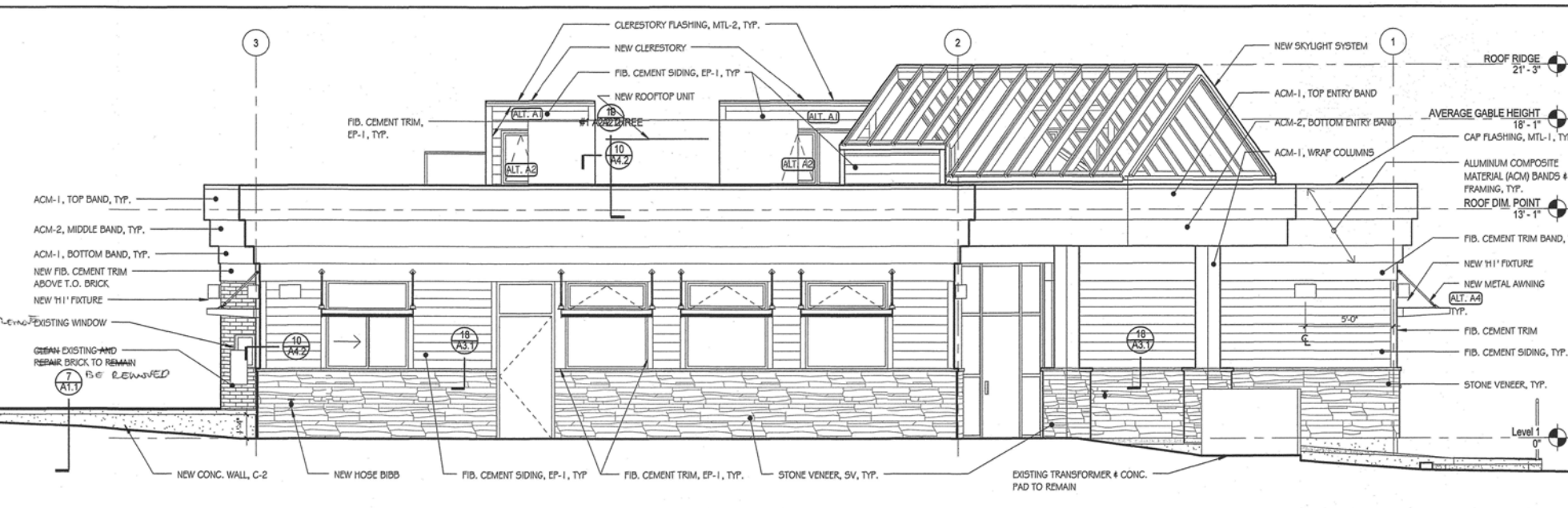
DETAIL 20 ADDED PER ASI #5
AWNING EXTENSION PLATE



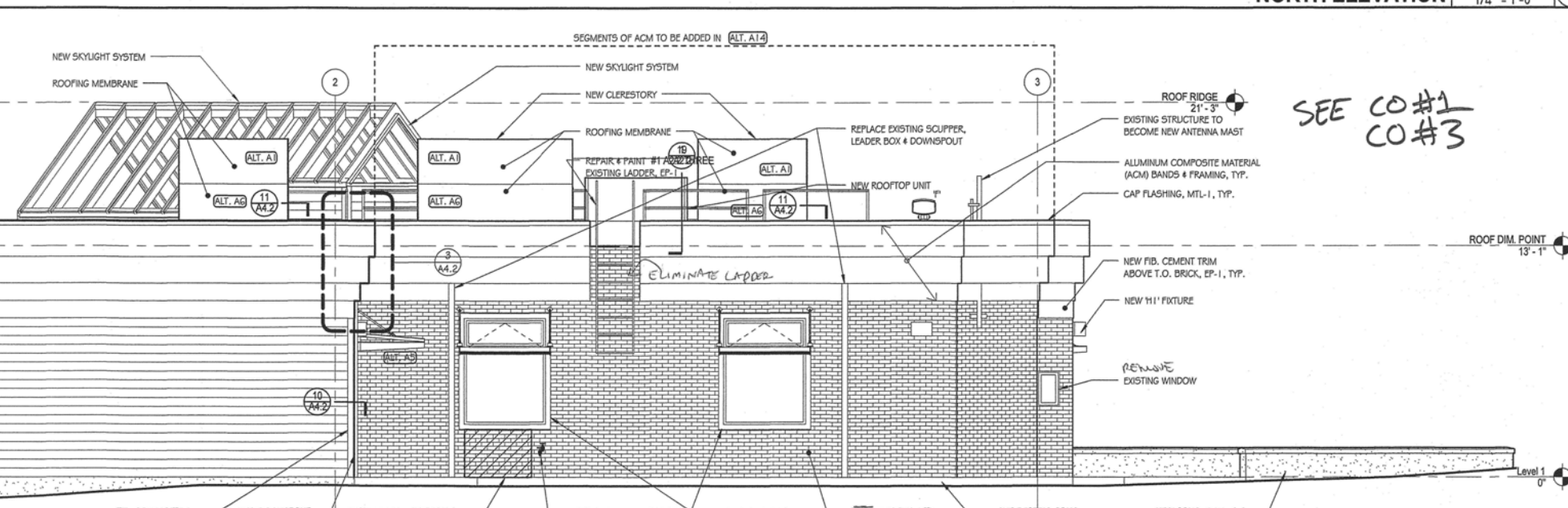
ATL A4
AWNING SECTION 2
SCALE 3" = 1'-0" **18**



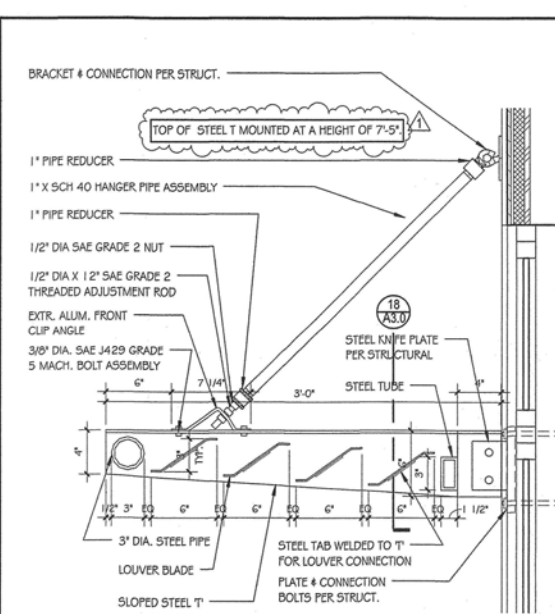
SECTION 1
SCALE 1 1/2" = 1'-0" **16**



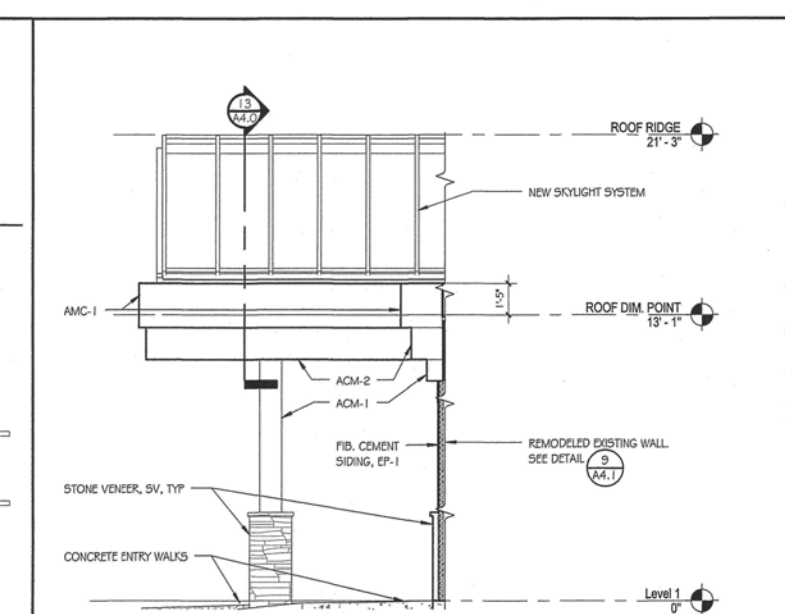
NORTH ELEVATION
SCALE 1/4" = 1'-0" **1**



SOUTH ELEVATION
SCALE 1/4" = 1'-0" **2**



ATL A4
AWNING SECTION 1
SCALE 1 1/2" = 1'-0" **12**



ENTRY SIDE ELEVATION
SCALE 1/4" = 1'-0" **8**

EXTERIOR ELEVATION NOTES
SCALE 12" = 1'-0" **4**

- FOR EXTERIOR MATERIALS, FINISHES, & COLORS SEE 9 A6.2
- PAIN ALL SURFACES THAT ARE NOT FACTORY PREFINISHED. COLORS ARE AS INDICATED ON THIS SHEET OR AS DIRECTED BY ARCHITECT. GENERALLY, THE FOLLOWING APPLY:
 - FIBER CEMENT SIDING: EP-X (LOW WALL ACCENT)
 - FIBER CEMENT HORIZONTAL TRIM, WINDOW AND DOOR TRIM: EP-X
 - SOFFITS, OVERHANGS: EP-X (WOOD STAIN @ TRELLISED ENTRIES)
 - METAL AND STEEL: EP-X
 - FASCIA AND GABLES: EP-X
- USE EXIST. SALVAGED BRICK FOR PATCHING EXIST. WALL OPENING IN BRICK AREAS TO REMAIN.

ALTERNATE A1: PROVIDE ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE FOUR CLERESTORIES, INCLUDING AWNING WINDOWS WITH POLE CRANK.

ALTERNATE A2: IN ADDITION TO THE FOUR CLERESTORIES, PROVIDE ELECTRIC OPERATORS FOR AWNING WINDOWS IN CLERESTORIES.

ALTERNATE A4: ADDITION OF ALL AWNINGS TO EXTERIOR WINDOWS ONLY.

ALTERNATE A5: ADDITION OF LARGER AWNING TO SOUTH ENTRANCE AND ADJACENT WINDOW.

ALTERNATE A14: ADDITION OF ACM BANDS TO EXISTING SOUTH AND SOUTHEAST EXTERIOR WALLS.



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1220 LAKEWAY DRIVE
BELLINGHAM, WA 98229
LAKWAY OFFICE REMODEL/ADDITION

EXTERIOR BUILDING ELEVATIONS

3540 REGISTERED ARCHITECT
STATE OF WASHINGTON

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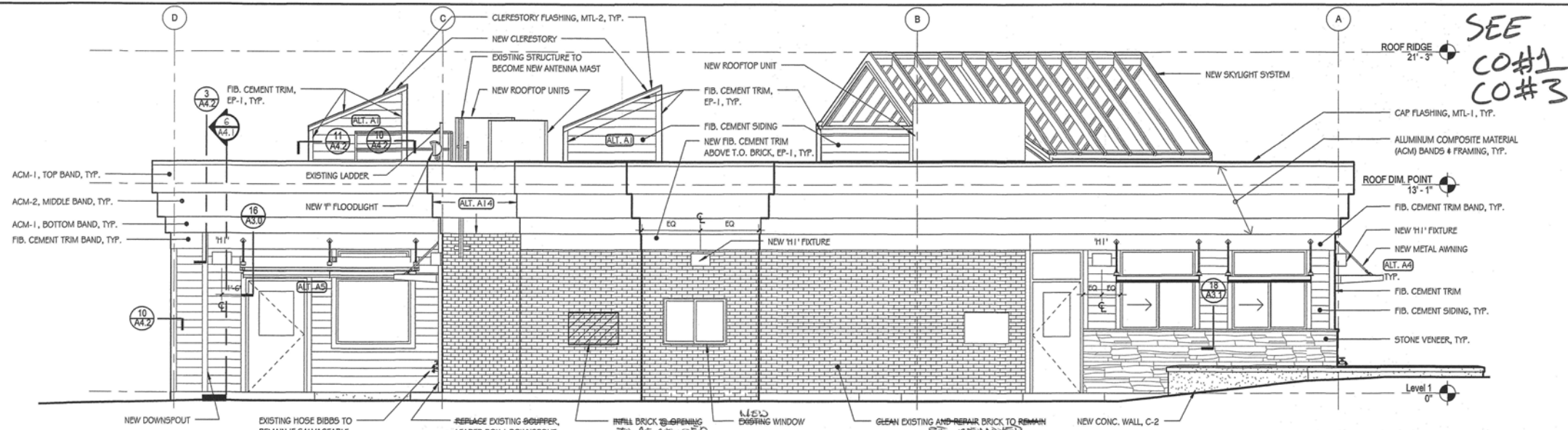
Revision Schedule		
NO.	TYPE	REVISION DATE
ADDENDUM #1		12-08-09
ADDENDUM #2		12-11-09

ISSUE DATE: 11/18/09
DRAWN BY: LRD
CHECKED BY: DRS

PROJECT NUMBER
20908
SHEET NUMBER
A3.0

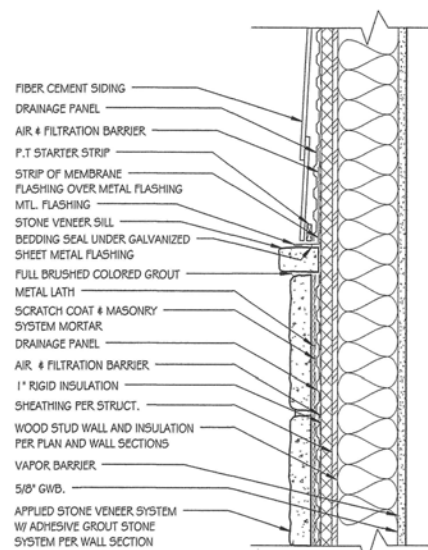
PLOTTED AT REDUCED SIZE, DO NOT SCALE

- ALTERNATE A1: PROVIDE ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE FOUR CLERESTORIES, INCLUDING AWNING WINDOWS WITH POLE CRANK.
- ALTERNATE A4: ADDITION OF ALL AWNINGS TO EXTERIOR WINDOWS ONLY.
- ALTERNATE A5: ADDITION OF LARGER AWNING TO SOUTH ENTRANCE AND ADJACENT WINDOW.
- ALTERNATE A14: ADDITION OF ACM BANDS TO EXISTING SOUTH AND SOUTHEAST EXTERIOR WALLS.



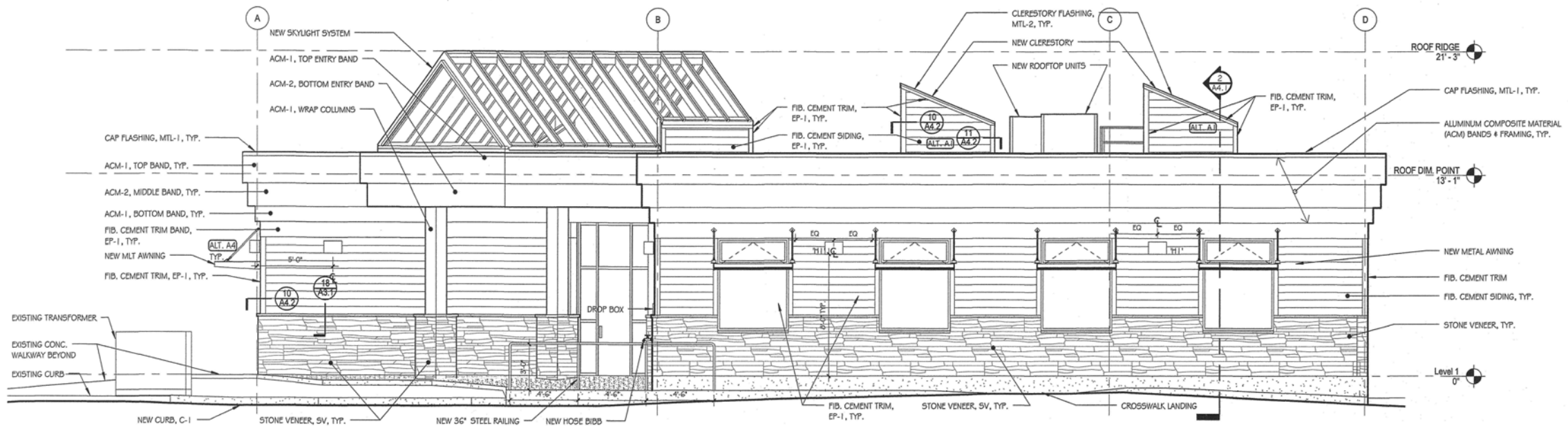
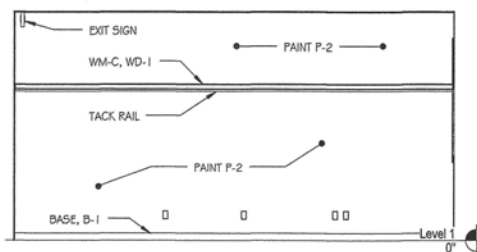
EXTERIOR ELEVATION NOTES

SCALE
12" = 1'-0"



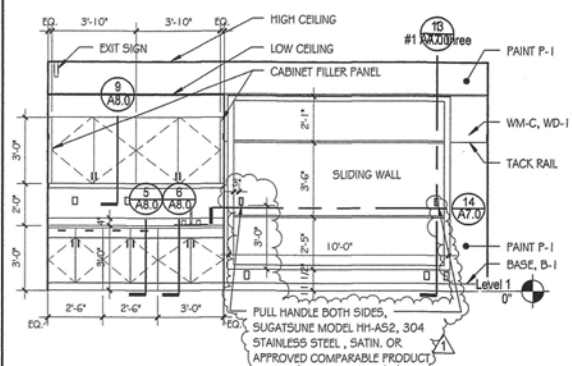
STONE/ SIDING TRANS.

SCALE
1 1/2" = 1'-0"



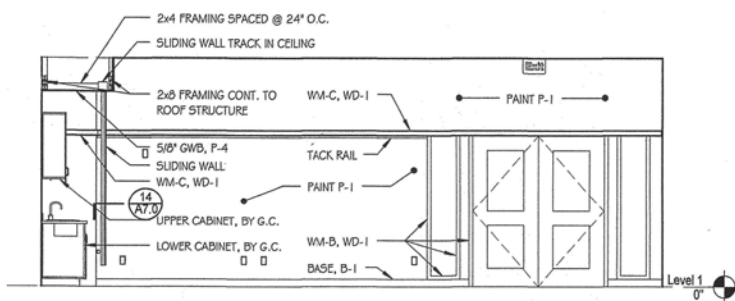
WEST ELEVATION

SCALE



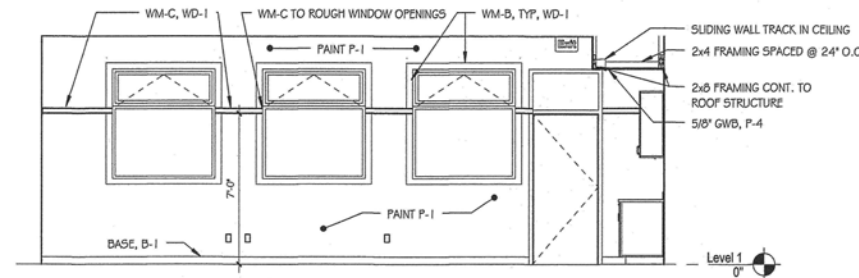
BOARDROOM- EAST WALL

SCALE
1/4" = 1'-0"



BOARDROOM- SOUTH WALL

SCALE



BOARDROOM- NORTH WALL

SCALE

SEE
CO#1
CO#3

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BELLINGHAM, WA 98229

LAKEWAY OFFICE REMODEL/ADDITION

EXTERIOR
BUILDING
ELEVATIONS

3560 REGISTERED
ARCHITECT
David Franklin Dittmer
STATE OF WASHINGTON

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DRAWN BY:	LRD
CHECKED BY:	DRG

PROJECT NUMBER

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SHEET NUMBER

A3.1

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SIZE, DO NOT SCALE**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Operations & Maintenance Buildings

ELECTRICAL LEGEND

LIGHTING

- RECESSED FLUORESCENT TROFFER
(Aa = FIXTURE TYPE A CONTROLLED
BY SWITCH Ss, TYPICAL, NL = NIGHTLIGHT)
- FLUORESCENT LUMINAIRE, SURFACE MTD.
- INCANDESCENT OR CFL, RECESSED DOWNLIGHT
- LUMINAIRE, WALL MTD
- FLOODLIGHT, WALL MTD
- FLOODLIGHT, WALL MTD
- LIGHTED EXIT SIGN
- LIGHTED EXIT SIGN (ARROWS SHOW
DIRECTIONAL INDICATION WHERE REQUIRED)

SWITCHING

- S SINGLE-POLE SWITCH
- S3 THREE-WAY SWITCH
- S11 MANUAL MOTOR STARTER
- S215 MOTION SENSOR SWITCH, DUAL POLE
- T THERMOSTAT
- P PHOTOCELL
- LD LIGHTING MOTION DETECTOR, CEILING MTD.

ANCILLARIES

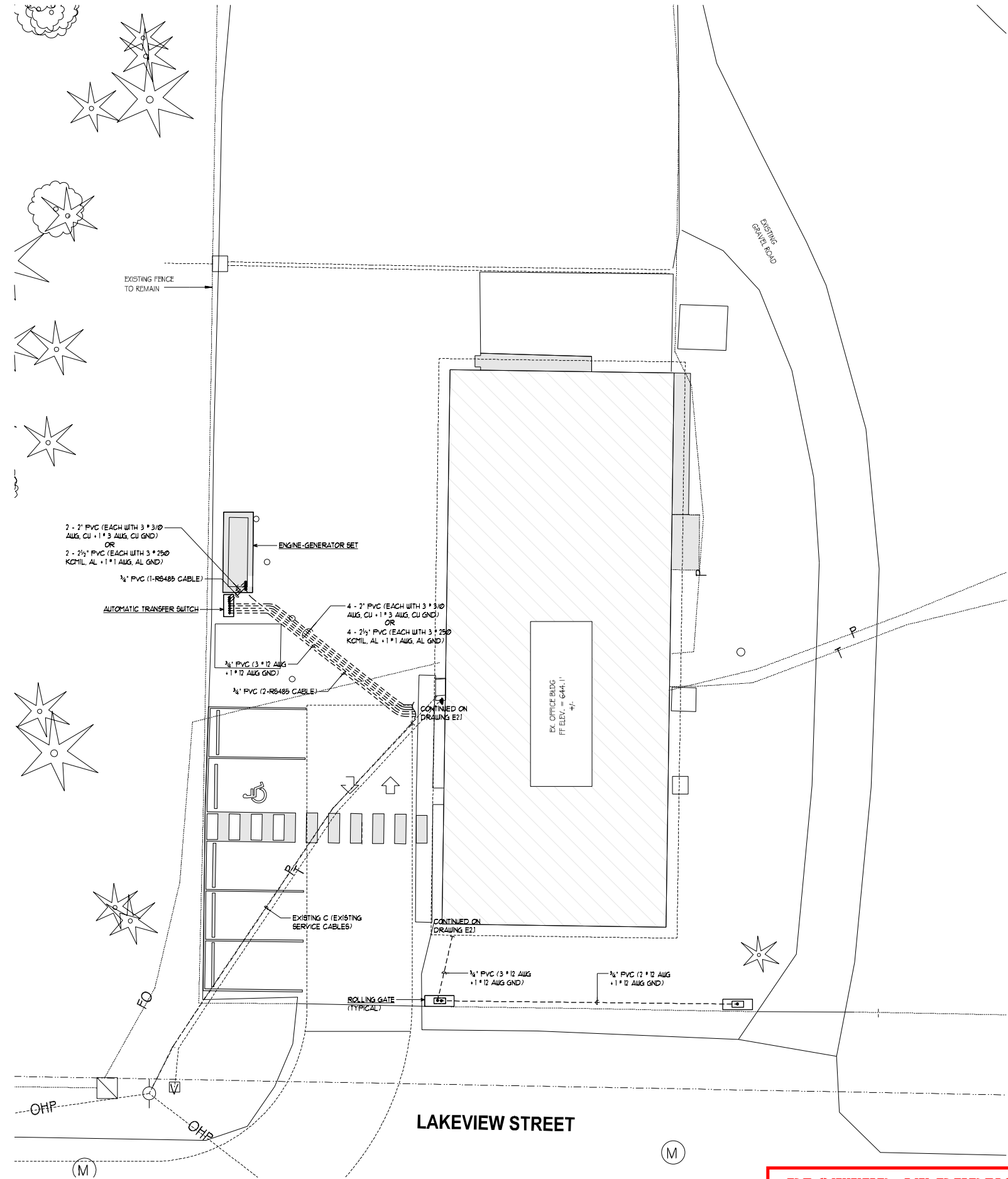
- SS SECURITY SYSTEM CONTACT SWITCH
- SSD SECURITY SYSTEM MOTION DETECTOR, WALL MTD.
- C-3 SECURITY CAMERA WALL MTD.
(C-3 = CAMERA NUMBER, TYPICAL)

OUTLETS

- DUPLEX OUTLET
- DOUBLE DUPLEX OUTLET
- DUPLEX OUTLET, CEILING MTD.
- DUPLEX OUTLET, GROUND FAULT INTERRUPTING
- DUPLEX OUTLET, ISOLATED GROUND
- DUPLEX OUTLET, WEATHERPROOF
- SPECIAL PURPOSE OUTLET
- SPECIAL PURPOSE CONNECTION
- TELECOMMUNICATIONS OUTLET, FLUSH MOUNTED
(4C = 2 VOICE 4 2 DATA CABLES, TYPICAL)

MISCELLANEOUS

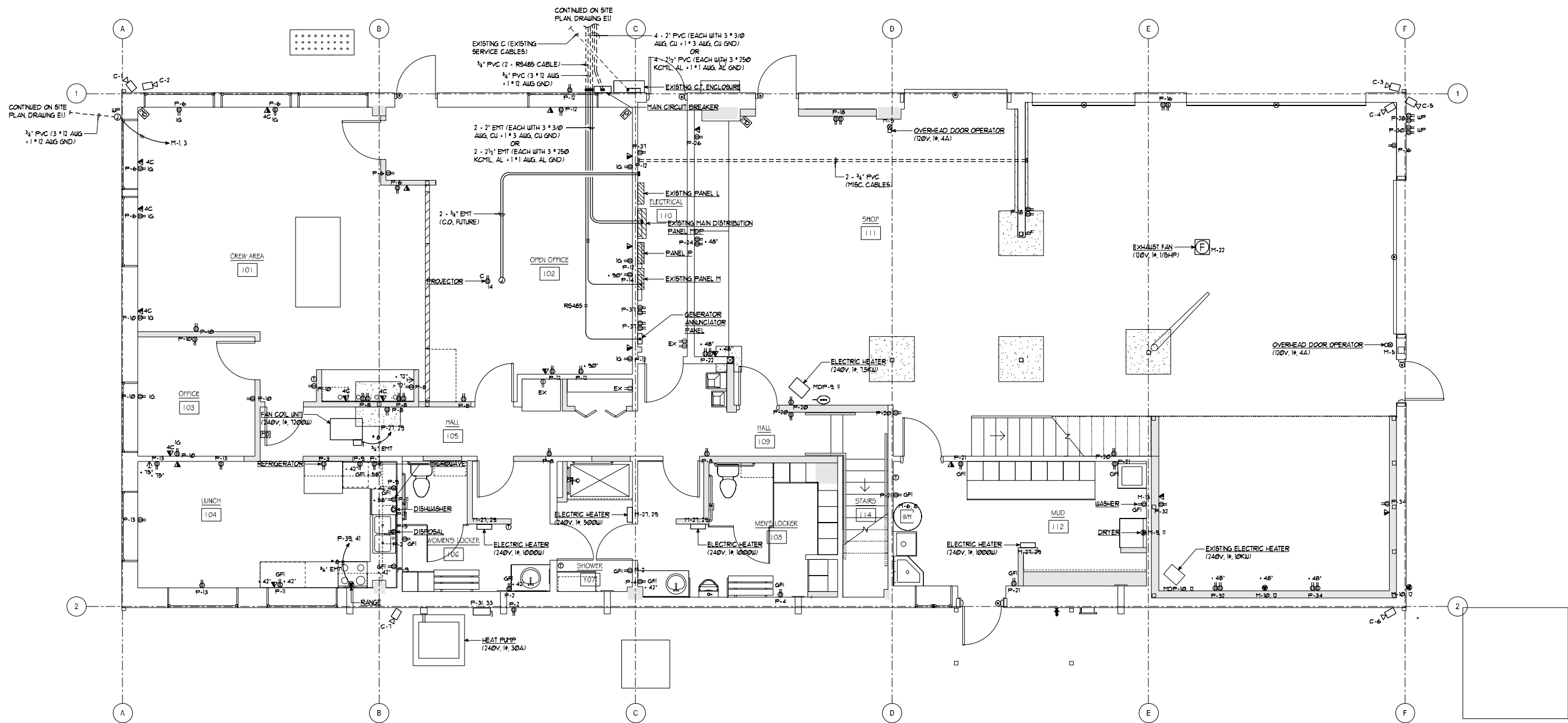
- BRANCH CIRCUIT, ABOVE GRADE, CONCEALED (OR SIMILAR
SLASHES = NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
- BRANCH CIRCUIT, ABOVE GRADE EXPOSED (OR SIMILAR
SLASHES = NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
- HOMERUN TO LOCATION INDICATED, CONCEALED (TYPICAL)
- HOMERUN TO LOCATION INDICATED, EXPOSED (TYPICAL)
- BRANCH CIRCUIT, CONDUIT BODY
- BELOW FLOOR/GRADE CONDUIT
- GROUND CABLE
- JUNCTION BOX
- DISCONNECT SWITCH
- PANELBOARD
- EXHAUST FAN
- WEATHER PROOF
- EXISTING TO REMAIN



ELECTRICAL - SITE PLAN
SCALE: 1" = 10'-0"

PLOTTED AT REDUCED
SIZE, DO NOT SCALE

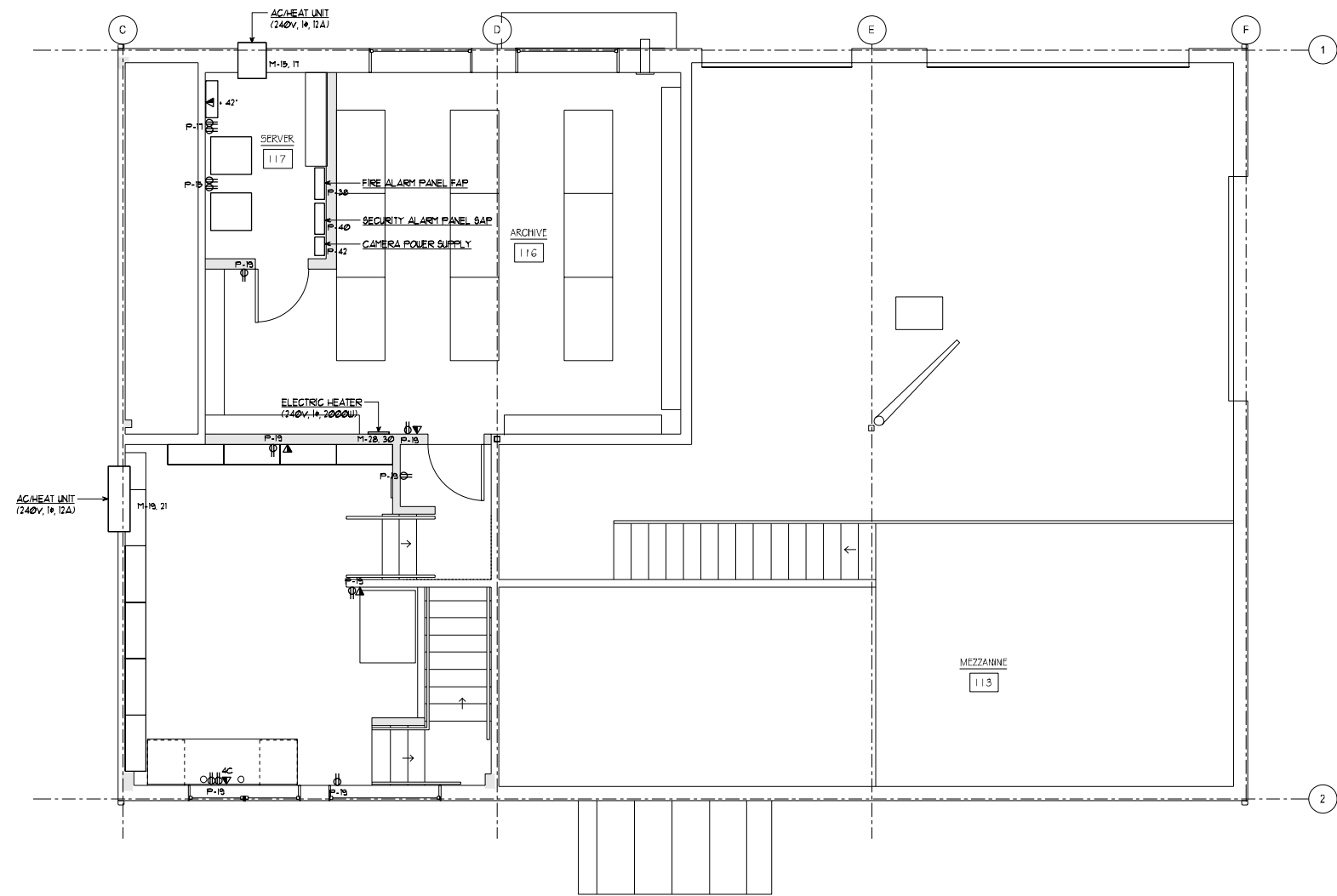
REVISIONS	BY
	
K ENGINEERS INC. 208 Third Street Lynden, WA 99229 Phone (360) 354-4757 Fax (360) 354-6794	
LAKE WHATCOM WATER & SEWER DISTRICT 1010 LAKEVIEW STREET BELLINGHAM, WA 98229 OPERATIONS CENTER REMODEL	
ELECTRICAL - SITE PLAN	
DATE: 21 APRIL 2011	
SCALE: 1" = 10'-0"	
DRAWN: KL	
DESIGNED: KK	
JOB No: 1463	
SHEET E1.1 OF 1 SHEETS	



ELECTRICAL - MAIN FLOOR POWER PLAN
SCALE: 1/4" = 1'-0"

**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

REVISIONS	BY
	
K ENGINEERS INC. 208 Third Street Lynden, WA 99229 Phone (360) 354-4757 Fax (360) 354-6794	
LAKE WHATCOM WATER & SEWER DISTRICT 100 LAKEVIEW STREET BELLINGHAM, WA 98229 OPERATIONS CENTER REMODEL	
ELECTRICAL - MAIN FLOOR POWER PLAN	
DATE: 21 APRIL 2011	
SCALE: 1/4" = 1'-0"	
DRAWN: KL	
DESIGNED: KAKA	
JOB No: 1463	
SHEET E2.1 OF . SHEETS	



ELECTRICAL - UPPER FLOOR POWER PLAN
SCALE: 1/4" = 1'-0"



**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

REVISIONS	BY

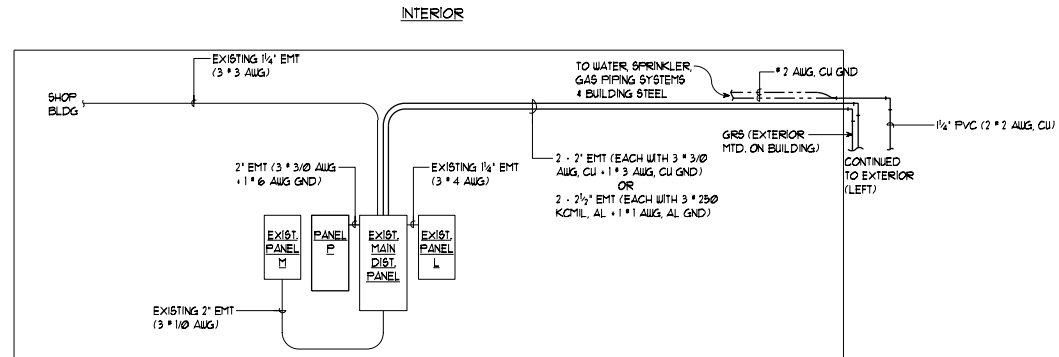
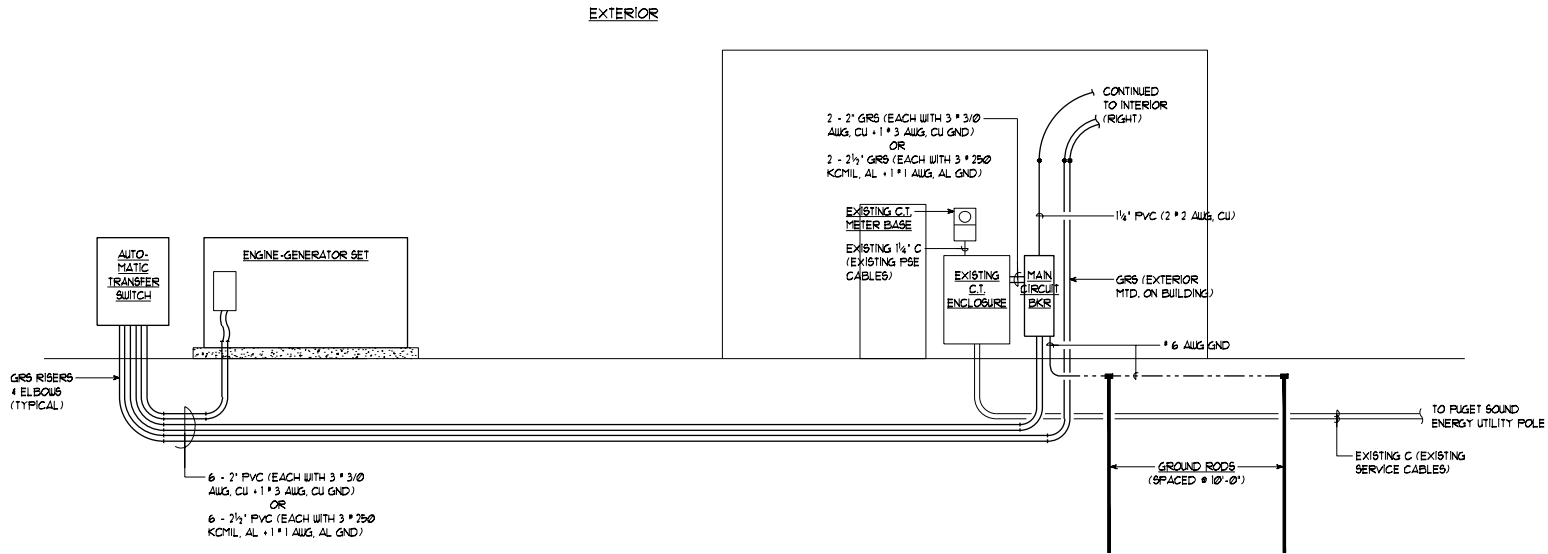


K ENGINEERS INC.
208 Third Street
Bellingham, WA 98229
Phone (360) 354-4757
Fax (360) 354-6794

**LAKE WHATCOM WATER &
SEWER DISTRICT**
1010 LAKEVIEW STREET BELLINGHAM, WA 98229
OPERATIONS CENTER REMODEL

**ELECTRICAL -
UPPER FLOOR POWER PLAN**

DATE: 21 APRIL 2011
SCALE: 1/4" = 1'-0"
DRAWN: KL
DESIGNED: KK
JOB No: 1463
SHEET OF E2.2 SHEETS



ELECTRICAL - POWER SYSTEM RISER DIAGRAM

NO SCALE

EXISTING CURRENT TRANSFORMER ENCLOSURE				EXTERIOR			
VOLTAGE:	120/240V, 1 PH, 3 W						
ENCLOSURE:	NEMA 3R						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
PER PUGET SOUND ENERGY REQUIREMENTS							
SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT							

MAIN CIRCUIT BREAKER				EXTERIOR			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	CIRCUIT BREAKER						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	42,000 A						
SERIES AC RATING:	NONE						

ENGINE-GENERATOR SET				EXTERIOR/GENERATOR			
VOLTAGE:	120/240V, 1 PH, 3 W						
RATING:	80 KW, 80 KVA						
TYPE:	DIESEL						
ENCLOSURE:	SEE SUBMITTAL						
MOUNTING:	SEE SUBMITTAL						
HEATER:	SEE SUBMITTAL						
FUEL TANK:	SEE SUBMITTAL						

NOTES:
(1) ENGINE-GENERATOR LOAD SHEDDING CONTACTS SHALL BE PROVIDED TO INTERLOCK WITH THE MECHANICAL CONTROL SYSTEM TO LIMIT MECHANICAL EQUIPMENT LOAD WHEN THE DEMAND ON THE GENERATOR IS HIGH.

AUTOMATIC TRANSFER SWITCH				EXTERIOR/GENERATOR			
VOLTAGE:	120/240V, 1 PH, 3 W						
RATING:	400 AMPS, 3 POLE, 4 WIRE						
APPLICATION:	UTILITY TO GENERATOR						
ENCLOSURE:	NEMA 3R						
MOUNTING:	SURFACE						
MASTER NAMEPLATE	SEE SUBMITTAL						

EXISTING MDP				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

MAIN LUGS ONLY LOCATION: TOP				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

PANEL P				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

MAIN LUGS ONLY LOCATION: TOP				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

NOTES:
(1) FAN COIL UNIT AND HEAT PUMP SHALL BE INTERLOCKED TO ALLOW FOR ONLY THE FAN COIL UNIT OR HEAT PUMP TO OPERATE AT ONE TIME.
(2) CIRCUITS RELOCATED FROM PANEL M (CIRCUITS 1, 3, 23 & 25)
(3) EXISTING CIRCUITS TO BE RELOCATED TO PANEL M (CIRCUITS 23 & 25)

EXISTING PANEL L				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

MAIN LUGS ONLY LOCATION: TOP				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

EXISTING PANEL M				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

MAIN LUGS ONLY LOCATION: BOTTOM				ELECTRICAL ROOM			
VOLTAGE:	120/240V, 1 PH, 3 W						
TYPE:	PANELBOARD						
ENCLOSURE:	NEMA 1						
MOUNTING:	SURFACE						
CONTINUOUS RATING:	400 A						
FULL AC RATING:	22,000 A						
SERIES AC RATING:	NONE						

NOTES:
(1) CIRCUIT RELOCATED FROM PANEL P (CIRCUITS 27 & 29)
(2) EXISTING CIRCUITS TO BE RELOCATED TO PANEL P (CIRCUITS 27 & 29)
(3) EXISTING GATE CIRCUIT TO BE RELOCATED TO CIRCUIT 1, ADD ADDITIONAL GATE CIRCUIT ON CIRCUIT NUMBER 3

PLOTTED AT REDUCED
SIZE, DO NOT SCALE

REVISIONS

BY



K ENGINEERS INC.

208 Third Street
Lynden, WA 99229
Phone (360) 354-4757
Fax (360) 354-6794

LAKE WHATCOM WATER &
SEWER DISTRICT

100 LAKEVIEW STREET BELLINGHAM, WA 98229

OPERATIONS CENTER REMODEL

ELECTRICAL -
POWER SYSTEM RISER
DIAGRAM & PANEL SCHEDULES

DATE: 21 APRIL 2011

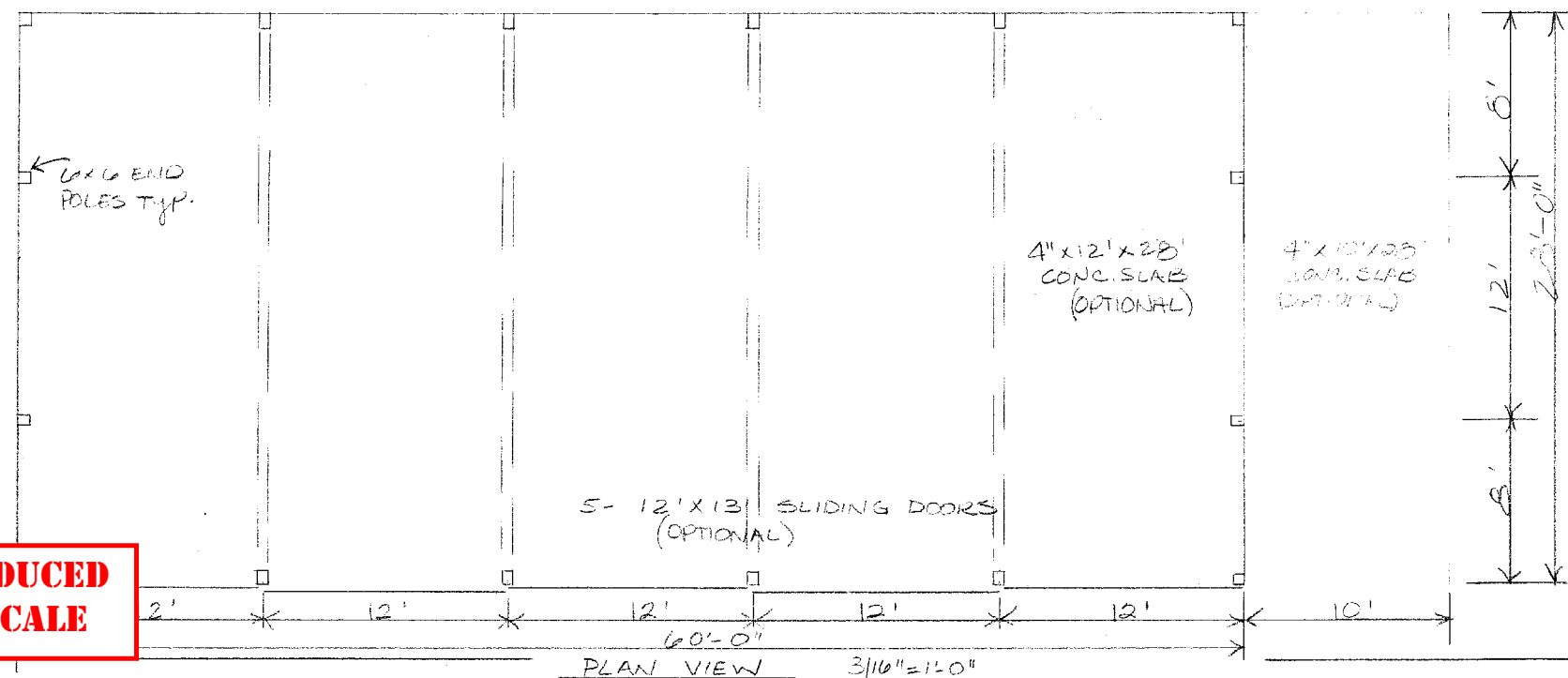
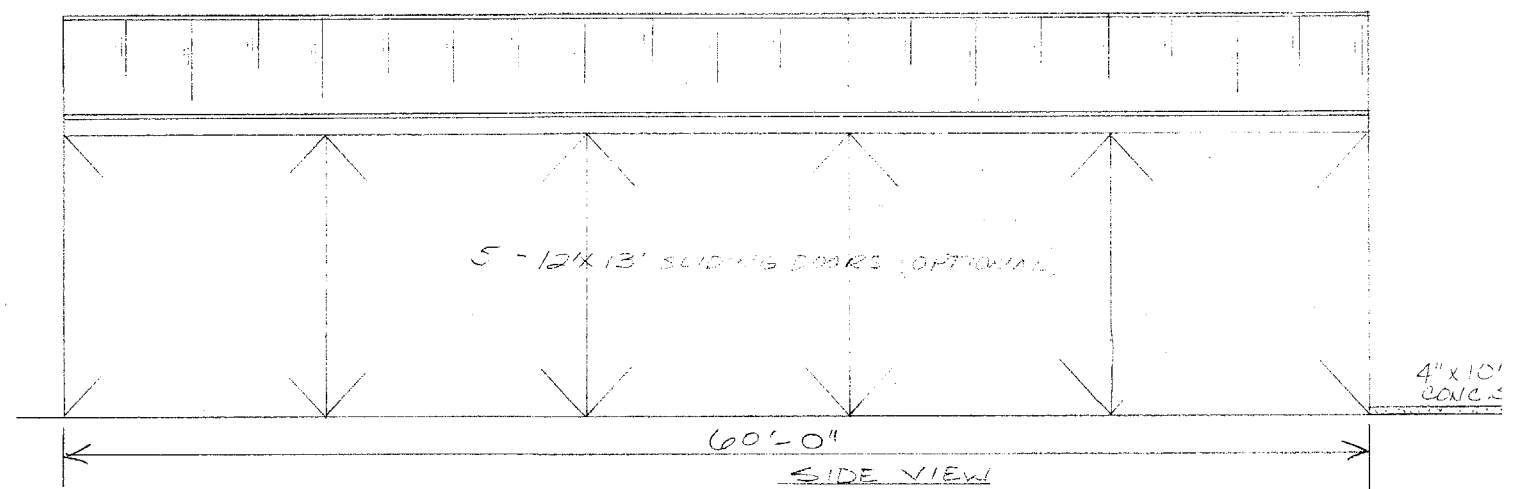
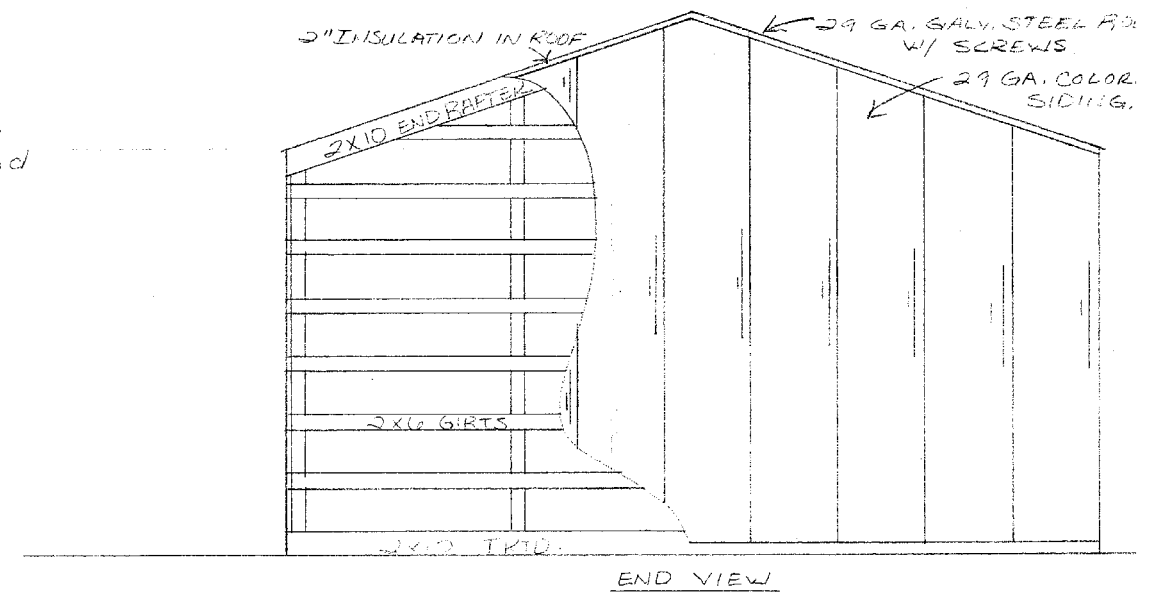
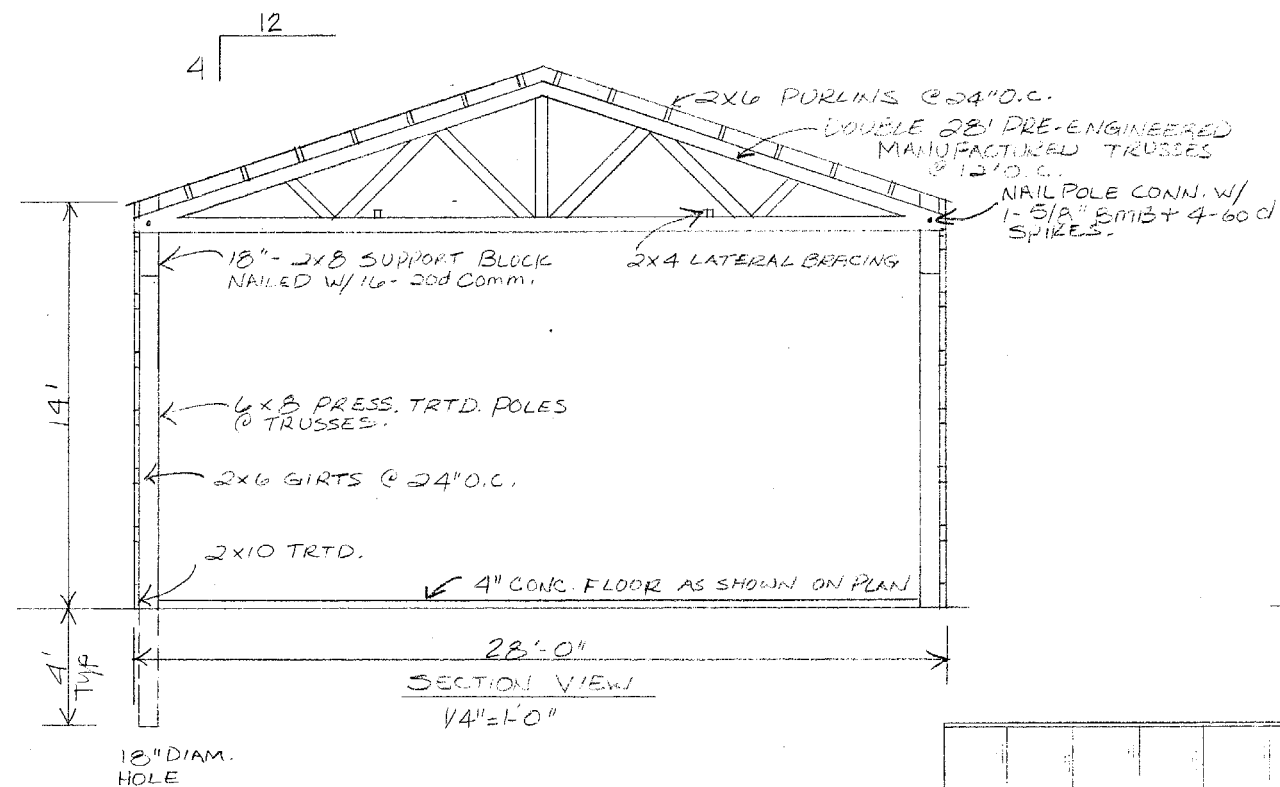
SCALE: NO SCALE

DRAWN: KL

DESIGNED: KK

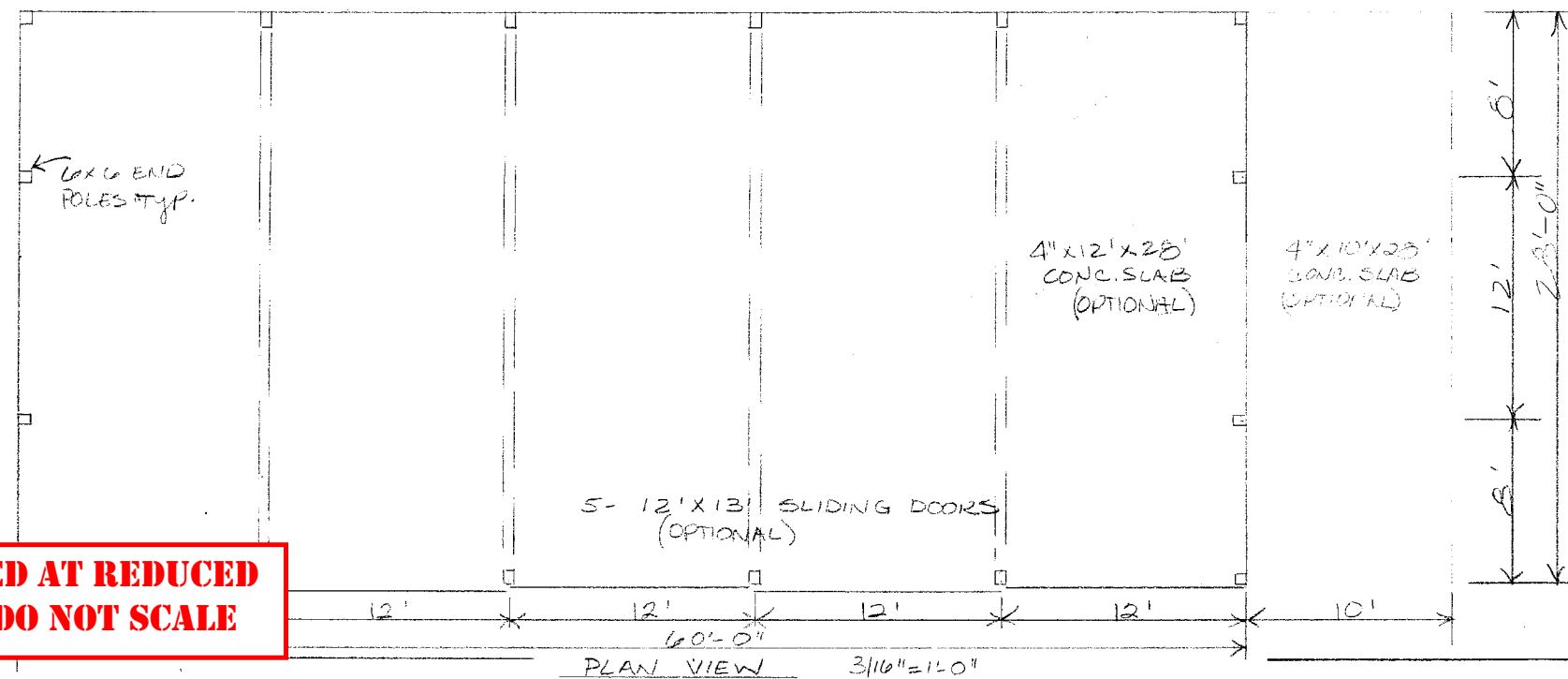
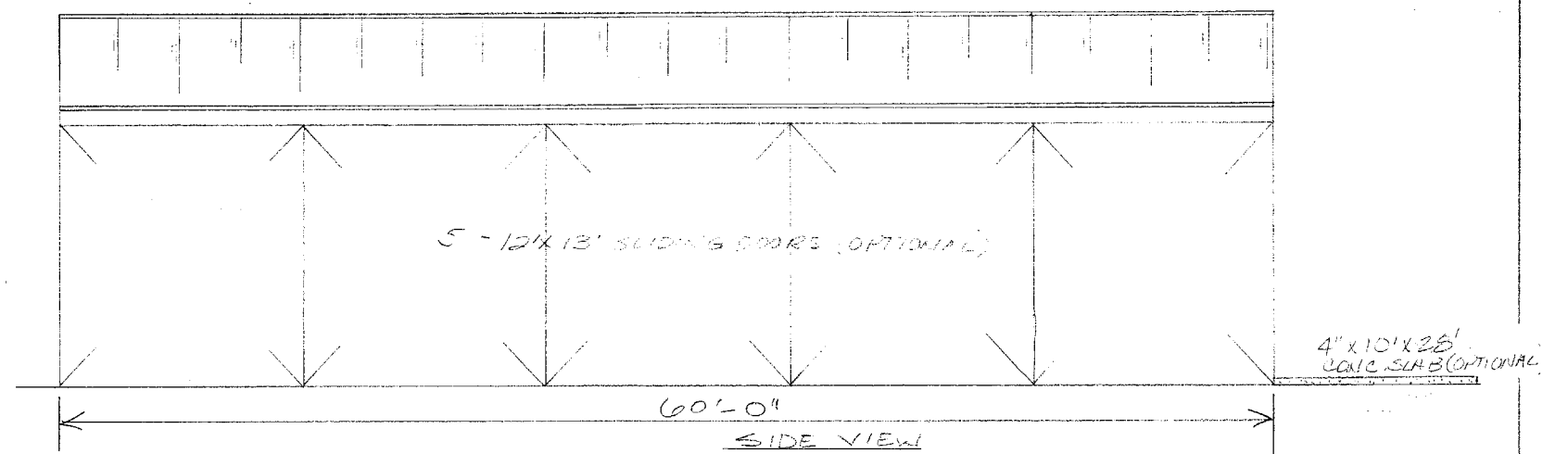
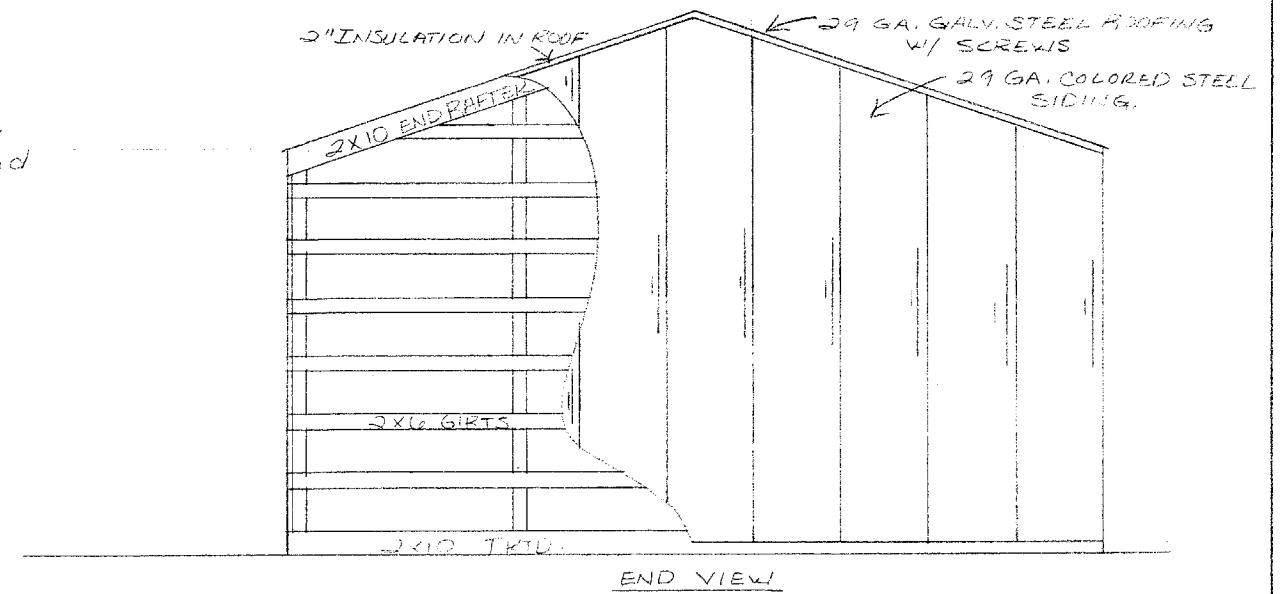
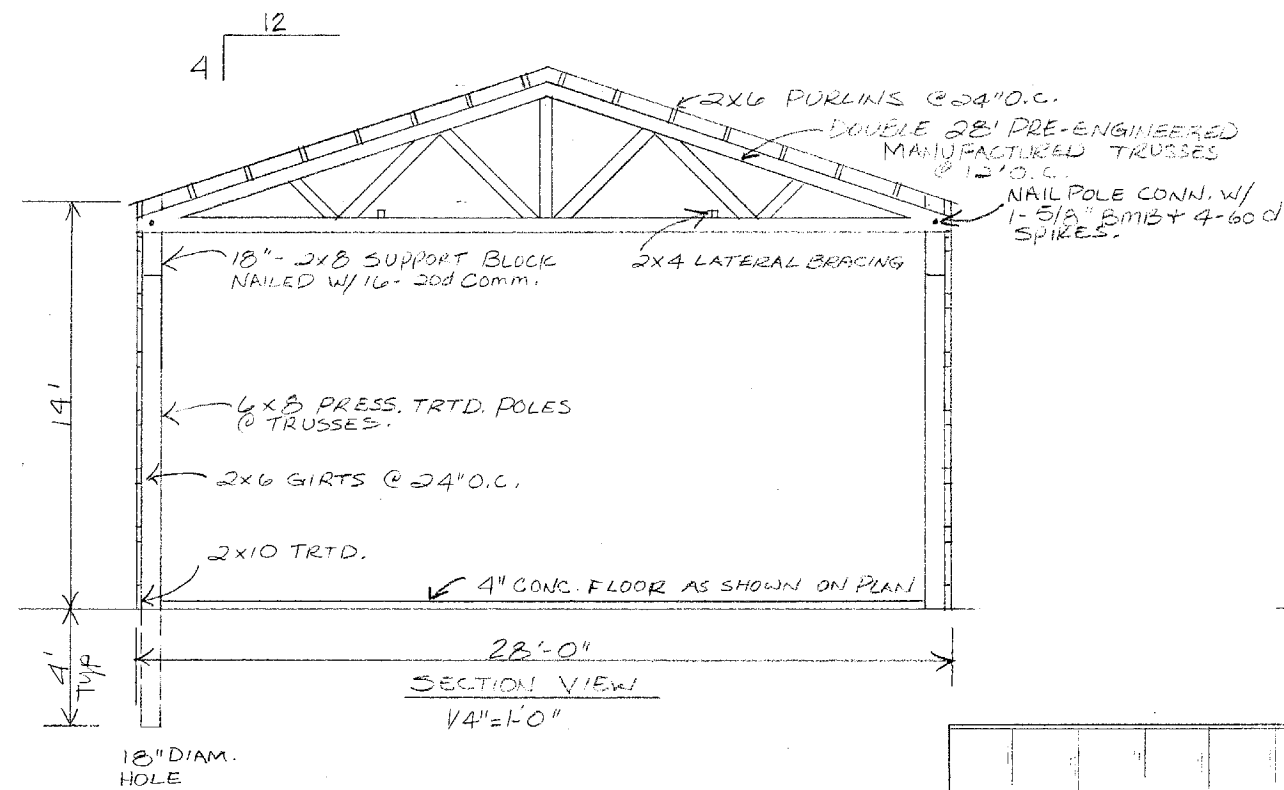
JOB No: 1463

SHEET
E6.1
OF SHEETS



**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

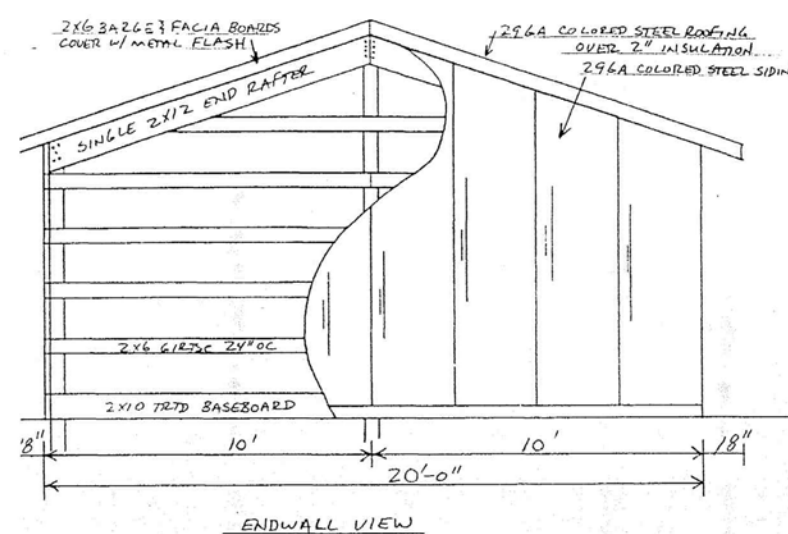
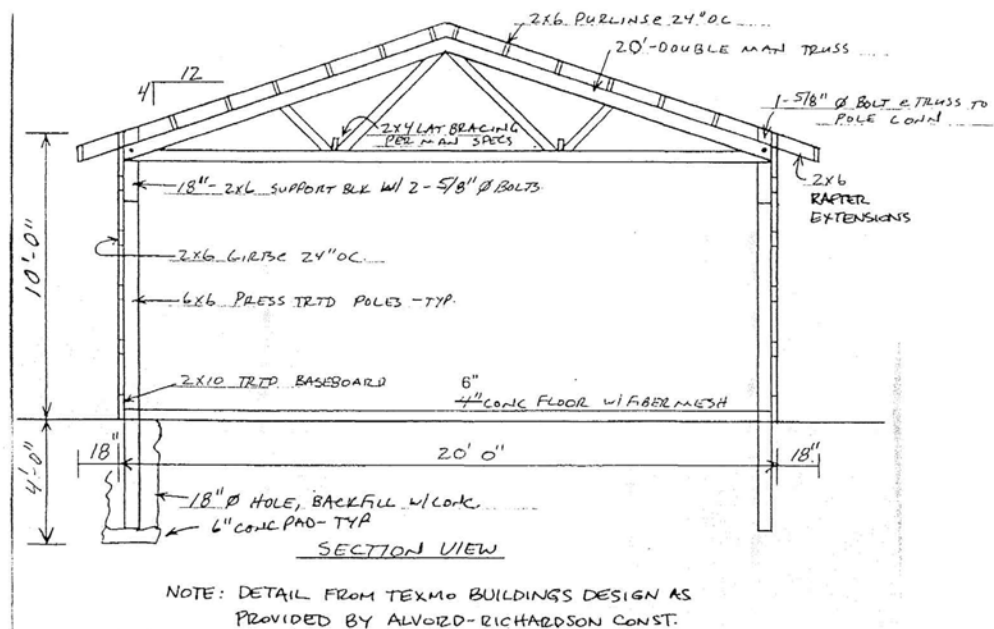
TEXMO BUILDINGS	BLVARD - F CONSTR. I
	P.O. BOX 876 BELL 734-3406
28' X 60' BUILDING	
FOR: WATER DISTRICT #10 1010 LAKEVIEW ST. BELLINGHAM, WA	
DRAWN BY KIM	DATE 10-4-89



**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

TEXMO BUILDINGS	ALVORD - REYNOLDS CONSTR. CO., INC. P.O. BOX 272 BELLINGHAM, WA 734-3490
	28' X 60' BUILDING
FOR: WATER DISTRICT #10 1010 LAKEVIEW ST. BELLINGHAM, WA	
DRAWN BY KIM	CHECKED

Agate Heights Water Treatment Plant



NOTES:

1. HEATING, INSULATION, AND LIGHTING OF THE BUILDING SHALL COMPLY WITH THE WASHINGTON STATE NON-RESIDENTIAL ENERGY CODE. BUILDING WALLS SHALL BE INSULATED WITH R-19 RATED INSULATION.
2. THE BUILDING SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES ADOPTED BY WHATCOM COUNTY AND THE GENERAL REQUIREMENTS FOR GROUP S-2 OCCUPANCY PER SECTION 311 OF THE UNIFORM BUILDING CODE (CURRENT EDITION).
3. A BUILDING PERMIT SHALL BE OBTAINED FROM WHATCOM COUNTY PRIOR TO CONSTRUCTION.
4. STANDARD STRUCTURAL AND MATERIAL SPECIFICATIONS IN DETAIL 5 TO BE USED FOR 12'x16' POLE BUILDING AT THE TANK SITE AND 20'x20' POLE BUILDING AT THE WATER TREATMENT SYSTEM/WELL SITE.
5. THE SLAB SUBGRADE SHALL CONSIST OF 6\"

WATER TREATMENT SYSTEM/ WELL BOOSTER PUMP BUILDING ⑤
(SEE NOTES)

NOTE: DETAIL FROM TEXMO BUILDINGS DESIGN
PROVIDED BY ALVORD-RICHARDSON CONST.

1	REVISED PER WC & WD#10 REVIEW	TEB	3/22/00
2	REVISED PER WC & WD#10 2nd REVIEW	TEB	4/13/00
3	AS-BUILT RECORD DRAWINGS	TEB/KRK	APR. 2001



BEK
BEK ENGINEERING &
ENVIRONMENTAL, INC.

CIVIL GEOTECHNICAL
ENVIRONMENTAL
2138 Humboldt Street
Bellingham, WA 98225
Ph: (360) 676-9589
Ph: (800) 859-5597
Fax: (360) 676-4625

JOB NO.:	98236
DWG. NAME:	200043-MECH
DESIGNED BY:	MLI
DRAWN BY:	KRK
CHECKED BY:	TEB

RICALOU ESTATES
S 1/2, SEC. 24, T 38 N, R 03 E
WHATCOM COUNTY, WASHINGTON

AS-BUILT WATER TREATMENT
SYSTEM DETAILS
PLS89-0009/ VAR93-0017

DATE: 12/10/99 SCALE: H: AS SHOWN V: N/A

DRAWING:
M-5
SHEET:
26 of 29

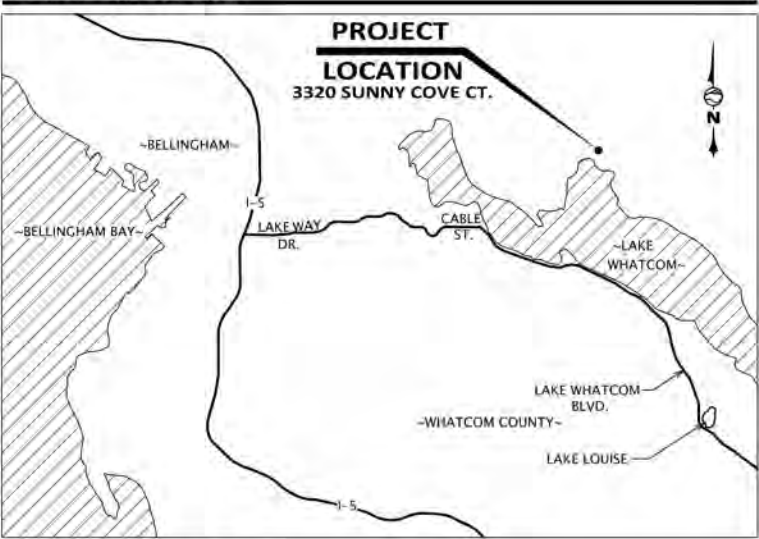
**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

LAKE WHATCOM WATER & SEWER DISTRICT

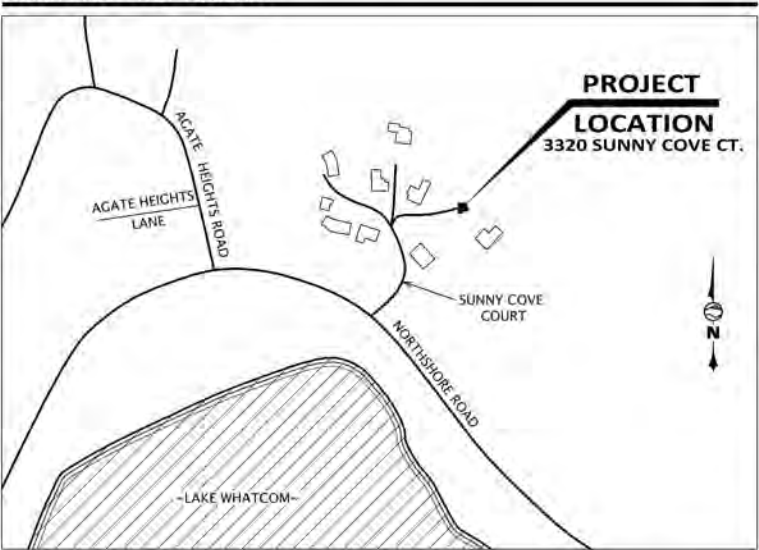
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES

DISTRICT PROJECT #C1814-CON

AREA MAP - NOT TO SCALE



VICINITY MAP - NOT TO SCALE



CONTACT INFORMATION

CIVIL ENGINEER

WILSON ENGINEERING, LLC

BRIAN SMITH, PE
bsmith@wilsonengineering.com
AND
MELANIE MANKAMYER, PE
mmankamy@wilsonengineering.com
360-733-6100

OWNER

LAKE WHATCOM WATER & SEWER DISTRICT:

JUSTIN CLARY, PE
GENERAL MANAGER
justin.clary@lwwsd.org
360-734-9224

BILL HUNTER, PE
bill.hunter@lwwsd.org
360-734-9224
CELL: 360-296-4577

ELECTRICAL ENGINEER:
K ENGINEERS, INC.
STEVE TEVELDE, PE
stevelevelde@k-engineers.com
360-354-4757

SYSTEM INTEGRATION:
QUALITY CONTROLS CORPORATION
JAMES CROSS
jamesc@quality-controls.com
425-778-8280

EMERGENCY CONTACTS

PUGET SOUND ENERGY:
REPAIR DEPARTMENT 888-225-5773
CONST. SERVICES 888-321-7779

INDEX TO DRAWINGS

1.	SHEET C0.1	COVER SHEET
2.	SHEET C0.2	LEGEND & ABBREVIATIONS
3.	SHEET C0.3	OVERALL SITE PLAN
4.	SHEET C0.4	LWWSD STANDARD NOTES
5.	SHEET C1.1	DEMOLITION PLAN
6.	SHEET C2.1	WATER PROCESS SCHEMATIC
7.	SHEET C3.1	TEMPORARY BYPASS PLAN
8.	SHEET C4.1	MECHANICAL PIPING
9.	SHEET C4.2	MECHANICAL DETAILS
10.	SHEET C4.3	MECHANICAL DETAILS
11.	SHEET C4.4	SECTIONS
12.	SHEET C5.1	CIVIL DETAILS
13.	SHEET E1.0	ELECTRICAL - NOTES & LEGEND
14.	SHEET E2.0	ELECTRICAL - DEMOLITION PLAN
15.	SHEET E2.1	ELECTRICAL - POWER & CONTROLS PLAN
16.	SHEET E6.1	ELECTRICAL - POWER SYSTEM RISER DIAGRAM & PANEL SCHEDULES
17.	SHEET E7.1	ELECTRICAL - CONTROL DRAWINGS
18.	SHEET E7.2	ELECTRICAL - CONTROL DRAWINGS
19.	SHEET E7.3	ELECTRICAL - BILL OF MATERIALS

PROJECT SPECIFIC NOTES

1. ALL PIPE AND FITTINGS SHALL BE FULLY RESTRAINED.
2. CUSTOMERS SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY SERVICE INTERRUPTION.
3. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER FOR ANY PROPOSED CHANGES IN PLANS PRIOR TO CONSTRUCTION OF THAT CHANGE. CONTRACTOR SHALL KEEP RECORD OF DEVIATIONS AND FORWARD TO THE ENGINEER AND DISTRICT.
4. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
5. ANY DAMAGE TO EXISTING EQUIPMENT SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER.



DESIGNED BY	BMS
DRAWN BY	JCS
CHECKED BY	MM/EAS

LAKE WHATCOM WATER & SEWER DISTRICT

WASHINGTON
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES

DATE
7-20-2021

SCALE
AS SHOWN

SHEET
C0.1

PAGE
1 OF 19

COVER SHEET



AS-BUILT

**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

PLOT SETTINGS: DWG To PDF.pc3, Plot area: 11.00 x 11.00 inches, Port: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

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LEGEND & ABBREVIATIONS- SIZE & SCALE MAY VARY

EXISTING HATCH PATTERNS	DESCRIPTION
	EXIST. CONCRETE
	EXIST. BUILDING
	EXIST. EARTH
	EXIST. GRAVEL
	EXIST. SAND
PROPOSED HATCH PATTERNS	DESCRIPTION
	PROP. CONCRETE
	PROP. TOP COURSE GRAVEL
	PROP. GRAVEL
	PROP. SAND
	PROP. QUARRY SPALLS
	WETLAND HATCH

SURFACE FEATURES EXISTING PLAN LINETYPES

EXISTING PLAN LINETYPES	DESCRIPTION
	BRIDGE
	BUILDING LINE
	BUILDING COLUMN
	BUILDING OVERHANG
	BULKHEAD
	CONCRETE EDGE
	CREEK EDGE
	CROWN OF ROAD
	CURB
	DITCH CENTERLINE
	DECK
	DOCK
	EDGE OF SAWCUT
	EDGE OF PAVEMENT
	FENCE
	GATE
	GRADE
	GRAVEL
	GUARDRAIL
	JERSEY BARRIER
	LAKE/POND WATER EDGE
	LIP OF CURB
	MISC SURFACE FEATURE
	MISC TRAFFIC
	PLANTER
	PATH
	RAILROAD
	RAMP (WOOD)
	HANDRAIL
	RETAINING WALL
	ROAD STRIPING
	ROCKERY
	RIVERBANK/SHORELINE
	THALWEG LINE
	TOP OF BANK/SLOPE
	TOE OF BANK/SLOPE
	VEGETATION/SHRUB LINE
	WETLAND/SWAMP PERIMETER
	WETLAND BUFFER

PROPOSED PLAN LINETYPES	DESCRIPTION
	BRIDGE
	BUILDING LINE
	CONCRETE
	CURB
	DITCH CENTERLINE
	EDGE OF BIKE LANE
	EDGE OF PAVEMENT
	FENCE
	GATE
	GRAVEL
	GUARDRAIL
	JERSEY BARRIER
	LIP OF CURB
	REBAR
	RETAINING WALL
	ROCKERY
	ROAD STRIPING
	HANDRAIL

SURFACE FEATURES PROPOSED PLAN LINETYPES

PROPOSED PLAN LINETYPES	DESCRIPTION
	BRIDGE
	BUILDING LINE
	CONCRETE
	CURB
	DITCH CENTERLINE
	EDGE OF BIKE LANE
	EDGE OF PAVEMENT
	FENCE
	GATE
	GRAVEL
	GUARDRAIL
	JERSEY BARRIER
	LIP OF CURB
	REBAR
	RETAINING WALL
	ROCKERY
	ROAD STRIPING
	HANDRAIL

UTILITIES EXISTING PLAN LINETYPES

EXISTING PLAN LINETYPES	DESCRIPTION
	CABLE TELEVISION (AERIAL)
	CABLE TELEVISION (BURIED)
	SURVEILLANCE CAMERA (BURIED)
	FIBER OPTIC/COMMUNICATIONS LINE (AERIAL)
	FIBER OPTIC/COMMUNICATIONS LINE (BURIED)
	TELEPHONE/COMMUNICATIONS (AERIAL)
	TELEPHONE/COMMUNICATIONS (BURIED)
	TRAFFIC SIGNAL CONDUIT LINE
	POWER (AERIAL)
	POWER (BURIED)
	UTILITY (AERIAL)
	UTILITY (BURIED)
	POWER DUCT BANK (BURIED)
	DRAIN FIELD
	SANITARY SEWER
	APPROXIMATE SANITARY SEWER
	SANITARY SEWER (FORCE MAIN)
	APPROXIMATE SANITARY SEWER (FORCE MAIN)
	STORM DRAINAGE
	APPROXIMATE STORM DRAINAGE
	CULVERT (Ø WIDTH)
	RECLAIMED WATER
	IRRIGATION
	WATER
	APPROXIMATE WATER
	8" WATER
	OVERFLOW
	STEAM
	GAS
	GAS TANK/STRUCTURE
	OIL
	AIR LINE
	BURIED UTILITY APPROX. EXTENTS
	MISC UTILITY (BURIED)

PROPOSED PLAN UTILITY LINETYPES

PROPOSED PLAN UTILITY LINETYPES	DESCRIPTION
	WATER
	8" WATER
	IRRIGATION
	RECLAIMED WATER
	POTABLE WATER
	WATER SERVICE
	WATER STRUCTURE
	FIRE DEPARTMENT CONNECTION
	FIRE PROTECTION LINE
	SANITARY SEWER
	SEWER
	8" SEWER
	FORCE MAIN
	DRAIN FIELD
	SEWER SERVICE
	SEWER STRUCTURE

STORM DRAIN	DESCRIPTION
	STORM DRAIN
	STORM DRAIN
	STORM DRAIN
	STORM SERVICE
	FOOTING DRAIN
	STORM STRUCTURE

MISC. UTILITIES	DESCRIPTION
	GAS
	POWER
	TELEPHONE/COMMUNICATIONS

EROSION CONTROL

EROSION CONTROL	DESCRIPTION
	EROSION TRIANGULAR SILT DIKE
	EROSION CONTROL COMPOST BERM
	EROSION CONTROL MINOR CONTOUR
	EROSION CONTROL MAJOR CONTOUR
	ORANGE BARRIER FENCE
	SILT FENCE
	STRAW WATTLE
	EROSION CONTROL FLOWLINE
	STRAW BALE
	INLET PROTECTION
	CHECK DAM

SURVEY PLAN LINETYPES

PLAN LINETYPES	DESCRIPTION
	CENTERLINE (EXISTING)
	CENTERLINE (CONSTRUCTION)
	CENTERLINE (PROPOSED)
	CONTOUR (EXISTING MINOR)
	CONTOUR (EXISTING INDEX)
	HYDRO CONTOUR (EXISTING INDEX)
	CONTOUR (PROPOSED INDEX)
	CONTOUR (PROPOSED MINOR)
	DONATION LAND CLAIM (EXIST.)
	EASEMENT (PROPOSED)
	EASEMENT (EXISTING)
	MEANDER LINE
	ORDINARY HIGH WATER LINE
	MEAN LOW LEVEL WATER LINE
	OWNERSHIP LINE
	PROPERTY LINE (RECORD OR ADJACENT)
	PROPERTY LINE
	QUARTER SECTION LINE
	RANGE/TOWNSHIP LINE
	RESERVATION/PARK/FOREST (EX)
	RIGHT-OF-WAY (EXISTING)
	RIGHT-OF-WAY (EXISTING USED)
	RIGHT-OF-WAY (PROPOSED)
	RIGHT-OF-WAY (EX. RECORD) (RECORD OR ADJACENT)
	RIGHT-OF-WAY (LIMITED ACCESS)
	SECTION LINE
	SETBACK LINE (EXISTING)
	SIXTEENTH SECTION LINE
	STATE/COUNTY/CORPORATE LIMIT
	VACATED RIGHT-OF-WAY
	EASEMENT (RECORD)
	RIGHT-OF-WAY CENTER (RECORD)
	DONATION LAND CLAIM (RECORD)
	MEANDER LINE (RECORD)
	PARK LINE (RECORD)
	SECTION LINE (RECORD)
	QUARTER SECTION LINE (RECORD)
	SIXTEENTH SECTION LINE (RECORD)
	STATE LINE (RECORD)
	RANGE LINE (RECORD)

PROFILE LINETYPES

PROFILE LINETYPES	DESCRIPTION
	PROFILE EX. GRID
	PROFILE FINISH GRID
	PROFILE GRID
	PROFILE VERTICAL GRID
	PROFILE EX. GROUND LEFT
	PROFILE EXISTING GROUND RIGHT
	FIBER OPTIC PROFILE (EXISTING)
	GAS PROFILE (EXISTING)
	POWER PROFILE (EXISTING)
	RAILROAD PROFILE (EXISTING)
	SANITARY PROFILE (EXISTING)
	SANITARY PROFILE (PROPOSED)
	STORM PROFILE (EXISTING)
	TELEPHONE PROFILE (EXISTING)
	STORM PROFILE (PROPOSED)
	TV PROFILE (EXISTING)
	UTILITY PROFILE (EXISTING)
	WATER PROFILE (EXISTING)
	WATER PROFILE (PROPOSED)

DEMOLITION

DEMOLITION	DESCRIPTION
	SURFACE FEATURE OR UTILITY TO BE REMOVED
	SAWCUT
	CLEARING LIMIT
	TREE OR BUSH TO BE REMOVED

GRADING

GRADING	DESCRIPTION
	GRADE BREAK
	CATCHLINE
	CUT LINE
	FILL LINE
	SLOPE ARROWS

SECTION / DETAIL CALL-OUTS

SECTION / DETAIL CALL-OUTS	DESCRIPTION
	SECTION CALL-OUTS: (A) REPRESENTS THE SECTION LABEL, (B) INDICATES THE SHEET ON WHICH THE SECTION APPEARS.
	DETAIL CALL-OUTS: (A) REPRESENTS THE DETAIL LABEL, (B) INDICATES THE SHEET ON WHICH THE DETAIL APPEARS.

MISC. SYMBOLS

MISC. SYMBOLS	DESCRIPTION
	SOIL BORING
	MONITORING WELL
	TEST WELL
	TEST PIT
	EMBANKMENT
	MAIL BOX
	SIGN
	RIP RAP
	BOULDER
	SHRUB
	TREE (Conifer)*
	TREE (Deciduous)*
	STUMP-PLAN VIEW
	YARD LIGHT
	WELL
	PILE
	ROCKERY
	WHEEL STOP
	SPLASH BLOCK
	GAS METER
	GAS VALVE
	PAD MOUNTED TRANSFORMER
	POWER VAULT
	TRANSMISSION TOWER
	POWER METER
	GUY POLE
	UTILITY POLE
	UTILITY POLE ANCHOR
	TELE RISER
	CABLE RISER
	FIBER OPTIC RISER
	FIBER OPTIC MANHOLE
	TELEPHONE MANHOLE
	TELEPHONE VAULT
	STEAM MANHOLE
	PARKING METER
	POST
	PUMP

SANITARY SEWER SYMBOLS

SANITARY SEWER SYMBOLS	DESCRIPTION
	SAN. SEWER CLEAN OUT
	SAN. SEWER MANHOLE
	STORM DRAIN CLEAN-OUT
	STORM DRAIN CLEAN-OUT
	STORM DOWNSPOUTS

PIPE CALL-OUT

PIPE CALL-OUT	DESCRIPTION
	PIPE CALL-OUTS: (A) REPRESENTS THE PIPE SIZE IN INCHES, (B) INDICATES THE UTILITY TYPE (C) REPRESENTS THE PIPE LENGTH IN LINEAL FEET

SPOT ELEVATIONS

SPOT ELEVATIONS	DESCRIPTION
	SPOT ELEVATIONS: (1) = ELEVATION, (2) = DESCRIPTION - SEE DEFINED ABBREVIATIONS ABOVE

SYMBOLS

SYMBOLS	DESCRIPTION
	DEGREES
	PLUS/MINUS
	DIAMETER
	DELTA
	CENTERLINE
	FLOWLINE
	PROPERTY LINE

WATER SYMBOLS

WATER SYMBOLS	DESCRIPTION
	AIR VALVE
	GLOBE VALVE, FL.
	BALL CHECK VALVE, FL.
	BLOW-OFF VALVE
	SWING CHECK VALVE, FL.
	BUTTERFLY VALVE, FL.
	HOSE BIB/SPIGOT
	DOUBLE LEAF CHECK VALVE
	PLUG VALVE
	BALL VALVE
	FLOAT VALVE
	PINCH VALVE
	PRESSURE & VACUUM RELIEF VALVE
	VACUUM RELIEF VALVE
	PRESSURE RELIEF VALVE
	PRESSURE REGULATING VALVE (SELF CONTAINED)
	BACK PRESSURE REGULATING VALVE (SELF CONTAINED)
	IN-LINE SPRING LOADED RELIEF VALVE
	CAP/PLUG
	GUARD POST
	THRUST BLOCK
	WATER METER
	FIRE DEPARTMENT CONNECTION
	WATER VALVE
	FIRE HYDRANT
	WATER MANHOLE
	POST INDICATOR VALVE
	11-1/4 BEND, MJ-FL.
	22-1/2 BEND, MJ-FL.
	45 BEND, MJ-FL.
	90 BEND, MJ-FL.
	FLX MJ ADAPTER
	COUPLER
	BLIND FLANGE
	GATE VALVE, FLX MJ
	GATE VALVE, MJ
	REDUCER, MJ/FL.
	REDUCER, MJ
	TEE, FL.
	TEE, MJ
	TEE, MJ/FL.
	TEE, FLX MJ
	CROSS, FL.
	CROSS, MJ

WATER SYMBOLS

WATER SYMBOLS	DESCRIPTION
	BRASS SURFACE MONUMENT
	CONCRETE MONUMENT
	FOUND REBAR
	SET REBAR
	MONUMENT IN CASE
	TRAVERSE POINT

WATER SYMBOLS

WATER SYMBOLS	DESCRIPTION
	NORTH
	NORTHEAST
	EAST
	SOUTHEAST
	SOUTH
	SOUTHWEST
	WEST
	NORTHWEST

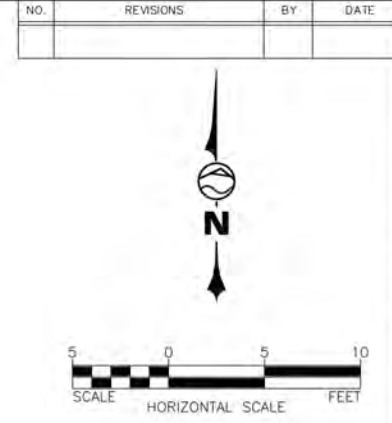
WATER SYMBOLS

WATER SYMBOLS	DESCRIPTION
	SECTION SHEET LABELS: (A) REPRESENTS THE SECTION LABEL, (B) INDICATES THE SHEET ON WHICH THE SECTION IS CALLED OUT.
	DETAIL SHEET LABELS: (A) REPRESENTS THE DETAIL LABEL, (B) INDICATES THE SHEET(S) ON WHICH THE DETAIL IS CALLED OUT.

ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
AB	AS-BUILT (RECORD)
AC	ASBESTOS CEMENT
AL	ALIGNMENT
ANC	UTILITY POLE ANCHOR
APPROX.	APPROXIMATE
ASPH or AC	ASPHALT
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BVCS	BEGIN VERTICAL CURVE STATION
BVCE	BEGIN VERTICAL CURVE ELEVATION
CB	CATCH BASIN
CD	CHECK VALVE
C/L	CENTERLINE
CESCL	CERTIFIED EROSION SEDIMENT CONTROL LEAD
COL	COLUMN
CMP	CORRUGATED METAL PIPE
C.O. or CO	CLEAN OUT
CONC. C.	CONCRETE
COR	CORNER
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CRP	CORRUGATED POLYETHYLENE PIPE

PLOT SETTINGS: Adobe PDF, 63, Letter, Portrait, 1/2, WE, APWA_SCREENED.ctb
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1 WALL IMPROVEMENT DETAIL
NOT TO SCALE



2 6" GATE VALVE - AS-BUILT
NOT TO SCALE

- BUILDING IMPROVEMENTS:**
1. REMOVE AND REPLACE BOTTOM 4 FEET OF DRYWALL ON NORTH AND EAST WALLS OF BUILDING INTERIOR PER DETAIL 1, THIS SHEET.
 2. PAINT ALL INTERIOR WALLS PER SPECIFICATIONS.

811 Call 811
two business days
before you dig

AS-BUILT

**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

SHEET C0.3	DATE 7-20-2021	LAKE WHATCOM WATER & SEWER DISTRICT		 WILSON ENGINEERING 
	SCALE AS SHOWN	BELLINGHAM WASHINGTON		
PAGE 3	JOB NUMBER 2018-110	AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES		DESIGNED BY BMS
OF 19		OVERALL SITE PLAN		DRAWN BY JCS
				CHECKED BY MMM/EAS

PLT SETTINGS: DWG TO PDF, sct3, Previous paper size (17.00 x 11.00 inches), Portion, 1 of 2, WE: APWA_UNSCREENED.ctb
W:\2018\2018-110 LWSD AGATE WTP UPGRADES\DWG\AS-BUILT\AS-BUILT_2018-110 CD 4 LWSD STD DETAILS.DWG - 7/23/2021 8:42 AM - Joseph Ford

GENERAL NOTES		GENERAL NOTES		GENERAL NOTES	
1. All work and materials shall meet the requirements of the most current editions of the Lake Whatcom Water and Sewer District (District) Design and Construction Standards, Lake Whatcom Water and Sewer District Construction Contract Documents and Project Specifications (for Public Works Projects), the instructions and recommendations of the Manufacturer of the material concerned and select specifications within the Standard Specifications for Road, Bridge and Municipal Construction as prepared by Washington State Department of Transportation (WSDOT) and with all other regulatory agency requirements and permits including but not limited to work within Whatcom County right-of-way shall meet Whatcom County (County) design and construction requirements. In case of a conflict between the above standards, the more stringent shall apply. All work and materials shall be subject to the approval of the District Engineer.		11. All pipe shall be bedded in bedding material meeting the requirements of WSDOT 9-03.12(3). The bedding cross-section shall be blocked with Control Density Fill (CDF) per WSDOT 2-09.3(1)E a minimum of every 800 feet and the trench drained to daylight or to a storm drain in accordance with District Standard Detail G11.		19. Contractor shall remove all debris and excess excavation; repair all damage, and restore the site, public or private, to pre-construction conditions.	
2. Contractor shall obtain encroachment permits or other permissions which may be required from the County, Sudden Valley Community Association, or other entity having jurisdiction over roads and streets, prior to commencing work.		12. Backfill above the pipe zone bedding within County ROW, within the roadway section or at driveway crossings shall consist of crushed surfacing top course material meeting the requirements of WSDOT 9-03.9(3). Backfill within private roadways shall consist of material meeting the requirements of WSDOT 9-03.19. Backfill in other areas shall consist of material meeting the requirements of WSDOT 9-03.19, except as shown on the plans or details. Backfilling of trenches shall be in accordance with WSDOT 7.08.3(3).		20. Where mains or service lines are placed within a ditch area, the buried depth shall be at least 30-inches below the bottom of the ditch, measured from the crown of the pipe to the bottom of the ditch.	
3. Contractor shall provide and maintain all Temporary Erosion Control and Sedimentation (TESC) in accordance with the most current edition of the Storm Water Management Manual for Western Washington (SWMMWW), Volume II, by the Washington State Department of Ecology, Publication Number 14-10-055. Contractor shall use required and necessary Best Management Practices (BMPs) described therein and as may be further described or detailed on the project drawings.		13. Pea gravel shall not be used for pipe bedding or trench/excavation backfill material. The District may approve limited use of pea gravel where hazardous site conditions exist that pose an immediate threat to workers or public. Pea gravel, if approved for use by the Engineer, shall be a clean mixture free from organic matter meeting the following gradation (passing by weight a US standard sieve): 100% passing 1/2", 95-100% passing 3/8", 0-10% passing #8, and 0-3% passing #200.		21. All work within Whatcom County Right Of Way (ROW) shall meet the requirements of the most current edition of the Whatcom County Development Standards, Section 512.	
4. Contractor shall call 1-800-424-5555 48 hours before construction for utility locations. Contractor shall not begin excavation until utility notification period is complete.		14. Backfill shall be compacted to minimum 95% modified Proctor within traffic areas and minimum 90% modified Proctor in landscape and open areas.		22. The Lake Whatcom Water and Sewer District is located within the Lake Whatcom Watershed where seasonal clearing activity limitations established by Whatcom County Code 20.51.410 are in force. Clearing activity, which includes trench excavation/backfill and other land disturbance, that will result in exposed soils exceeding 500 square feet are not permitted from October 1 through May 31.	
5. A preconstruction meeting is required with the District and Contractor performing the work a minimum of 2-days before the start of construction.		15. Tracer wire installation is required on all District owned pipe, electrical conduits and communication lines/conduits. Tracer wire is also required on private side sewers. Install tracer wire per District Standard Detail E6. In addition to tracer wire, install 2-inch wide detectable marking tape 8 to 12 inches below the finish surface. Detectable marking tape shall meet the requirements of WSDOT 9-15.18 and be color coded blue for water, green for sewer, red for electrical and orange for telecommunication.		23. References to the Uniform Plumbing Code (UPC) shall be to the edition, amendments, standards and exemptions adopted by Whatcom County, as detailed in the most current edition of the Whatcom County Code, Chapter 15.04, Building Codes.	
6. Authority of Engineer, its appointees, assistants and inspectors, shall be per WSDOT 1-05.1. All references to the Engineer or District Engineer shall also mean its appointees, assistants and inspectors as per WSDOT 1-05.2.		16. Public water lines and any sanitary sewer line or other non-potable conveyance system shall maintain a minimum of 10-feet horizontal separation (parallel alignment) and a minimum 18-inch vertical separation (parallel alignment and crossings at angles including perpendicular with the sewer line below the water line), measured as the closest distance between outside of pipes, in accordance with the most current editions of the Washington State Department of Health (DOH) Water System Design Manual Section 8.4.4 and the Department of Ecology (DOE) Criteria for Sewage Works Design Section C1-9.			
7. The Contractor shall be responsible for the safety of all workers and shall comply with all appropriate state safety and health standards, codes, rules, and regulations, including, but not limited to, those promulgated under the Washington Industry Safety and Health Act RCW 49.17 (WISHA) and as set forth in Title 296 WAC (Department of Labor and Industries). In particular the Contractor's attention is drawn to the requirements of WAC 296.800 which requires employers to provide a safe and healthful workplace.		When local conditions prevent these separations, with the approval of the District Engineer, installations shall follow the requirements outlined for unusual conditions in the referenced DOH and DOE manuals which includes details for specific pipe materials, pipe segment lengths, joint separation requirements, concrete encasement and/or pipe casings. If a pressure sewer cannot be installed with a minimum 18-inch separation from a water line at a crossing, then the pressure sewer shall be constructed only under the water line with ductile iron pipe or standard sewer pipe in a casing (casing material per the DOE manual) extending at least 10-feet on each side of the crossing.			
8. Inspection of work and materials shall be in accordance with WSDOT 1-05.6. Removal of unauthorized or defective work shall be in accordance with WSDOT 1-05.7.		17. Control Density Fill (CDF), if required, shall meet the requirements of WSDOT 2-09.3(1)E.			
9. The Contractor shall take all steps necessary to ensure that the existing facilities remain fully operational during all stages of construction, including but not limited to providing bypass pumping, standby storage, emergency generators and pump trucks, as necessary during service interruptions or outages.		18. From the main to the property line, sewer pipes and water pipes shall maintain a minimum horizontal separation of 10-feet. When local conditions prevent the 10-feet separation, separation shall be per District Standard Detail G10, Water Line and Sewer Line Trench Detail, Unusual Conditions. Separation of water service lines and sewer pipes within private property shall be per District Standard Detail G9.			
10. No inspections or tie-ins to District's facilities shall be performed on a Friday, Weekend or District Holiday.					
	STANDARD DETAIL G1 3/11/2020		STANDARD DETAIL G2 3/11/2020		STANDARD DETAIL G3 3/11/2020

WATER SYSTEM NOTES		the rate of disposal does not overload the District's sewer system.	
1. Water distribution system materials, trenching, bedding, installation, backfilling, disinfection, and testing shall meet the requirements of WSDOT 7-09.		10. New services shall be pressure tested along with the new main. No use of water through a newly installed service shall be allowed until water main and service installation has been inspected, pressure tested, chlorinated and a satisfactory bacteria test received. After installation, the service connection shall be flushed prior to connecting the meter. No service is to be covered until the District's inspector has inspected the initial installation. All corporations must be in an ON position and all angle valves must be in the OFF position.	
2. All water piping and appurtenances in contact with potable water shall be certified under NSF-61 for potable water use in accordance with WAC 246-290-220.		11. Service flow testing shall be done after water main pressure testing. During the inspection, every service shall be turned on to its full capacity to check flow and guarantee that each service line has been flushed.	
3. Water main pipe shall be class 52 ductile iron per WSDOT 9-30.1(1) and encased in polyethylene encasement per WSDOT 9-30.1(2). Fittings for ductile iron pipe shall meet the requirements of WSDOT 9-30.2 (1).		12. Water service lines on the customer side of the water meter shall meet the requirements of the Uniform Plumbing Code (UPC).	
4. Water Main Appurtenances: Valves shall have a minimum pressure rating of 200 psi. Gate valve installation shall conform to WSDOT 7-12. Gate valves shall be resilient-seated gate valves conforming to WSDOT 9-30.3(1) and AWWA C515 Standard for Resilient Seated Gate Valves. A cast iron valve box with a commercial concrete collar (18" x 18" x 6") shall be installed with each valve. An approved marking post shall be installed with each valve in accordance with WSDOT 7-12.3(1) for all valves not installed in pavement. Valves not in pavement shall have a 24" x 24" x 6" concrete collar cast around the valve box. Where a valve operating nut is more than 4-feet lower than grade, an American Flow Control Trench Adapter valve box and stem extension combination (or approved equal) must be installed.		13. In accordance with District Administrative Code Section 4.3.6, all customers are required to install a Pressure Reducing Valve (PRV) downstream of the meter and dual check valve on the customer side of service to protect their plumbing systems from high pressure surges. A PRV inspection by District personnel is required prior to occupancy. See detail W11.	
5. Pressure reducing valves (2" and larger) shall be manufactured by Cla-Val, Watts, or approved alternate.		14. In accordance with WAC 246-290-490 and District Resolution No. 858, all cross-connections between the District's water distribution system and a consumer's water system shall be eliminated or controlled by the installation of a District approved backflow preventer commensurate with the degree of hazard. The District's Cross-Connection Control Program is available for review at the District office or on the District website (www.lwswd.org).	
6. Service connections shall be installed per WSDOT 7-15. Lot corners shall be staked prior to service connection installations to assure services are installed in correct locations as shown on the approved plans.			
7. The District Engineer shall witness pressure testing. Bacteriological sampling shall be conducted by a District certified operator (employee). Contractor shall provide the District Engineer 48-hours notice prior to conducting tests or sampling.			
8. Water lines and appurtenances shall be pressure tested in accordance with WSDOT 7-09.3(23).			
9. Before being placed into service, new water mains and repaired portions of, or extensions to, existing mains shall be flushed and disinfected by the Contractor in accordance with WSDOT 7-09.3(24) and the most current edition of the American Water Works Association (AWWA) Standard C651, Disinfecting Water Mains. As stated therein, the District requires two set of samples, either a) taken 16 hours apart or b) two samples are taken 15 minutes apart after a 16 hour rest period, satisfactorily passing bacteriological testing requirements (testing includes but is not limited to testing for total coliforms, fecal coliforms and E.coli found in the water sample) meeting current Washington State Department of Health (DOH) Standards, before connecting the new or repaired portion of main. Costs of bacteriological testing shall be borne by the Contractor. In addition, Contractor shall provide two chlorine concentration test reports to show the initial chlorine concentration is at least 50 mg/L, and to show the 24-hour residual chlorine concentration is at least 25 mg/L. All tests must be performed by a DOH-certified testing laboratory and sample-taking shall be performed by a District certified operator (employee). Bacteriological samples must be collected by the District. Chlorinated flush water must be dechlorinated and disposed of in accordance with WSDOT 7-09.3(24)A. If disposal is to the District's sanitary sewer system, Contractor shall coordinate with District staff to ensure			
	STANDARD DETAIL W1 3/11/2020		STANDARD DETAIL W2 3/11/2020

**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

NO	REVISIONS	BY	DATE

**WILSON**
ENGINEERING



DESIGNED BY
BMS

DRAWN BY
JCS

CHECKED BY
MM/EA

LAKE WHATCOM WATER & SEWER DISTRICT

BELLINGHAM

AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES

LWSD STANDARD NOTES

DATE
7-20-2021

SCALE
AS SHOWN

JOB NUMBER
2018-110

C0.4

PAGE
4 OF **19**



AS-BUILT

PLOT SETTINGS: DWG To PDF.pc3, Previous paper size (17.00 x 11.00 inches), Portrait, 1:2, W: APWA_UNSCREENED.ctb
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**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

- NOTES:
1. SEE SHEET E2.0 FOR ELECTRICAL DEMOLITION PLAN
 2. PROTECT ALL EXISTING EQUIPMENT THAT IS TO REMAIN
 3. REMOVE THE BOTTOM 4 FT OF INTERNAL BUILDING DRYWALL ON THE ENTIRE NORTH AND EAST WALLS

1
C0.3

EXISTING OVERHEAD
DOOR FOR ACCESS: 107"
WIDE BY 95" TALL

REMOVE ALL EXISTING
TREATMENT EQUIPMENT &
ASSOCIATED PIPING AND
PIPE SUPPORTS

AB: KEPT EXISTING
PRESSURE TRANSDUCER,
CONNECTED TO NEW SYSTEM

REMOVE PIPE TO
EXISTING 4-INCH
CAP WITH 2-INCH
THREADED TAP

EXISTING ONLINE
CHLORINE ANALYZER,
TO BE RELOCATED

EXISTING RAW WATER
INTAKE LINE - TO
REMAIN IN PLACE

REMOVE EXISTING
PRESSURE SUSTAINING
VALVE AND DOWNSTREAM
PIPING AS SHOWN

DECOMMISSION AND REMOVE
EXISTING SODIUM SULFITE
INJECTION SYSTEM
(TANK, DOSING PUMP, TUBING,
INJECTION QUILL, PLUG
INJECTION POINT)

811 Call 811
two business days
before you dig

AS-BUILT

SCALE
HORIZONTAL SCALE
FEET



EXISTING RAW AND FINISHED
WATER SAMPLE TAPS AND
DRAIN. RAW SAMPLE TAP AND
1" PVC DRAIN LINE TO REMAIN
FUNCTIONAL DURING
CONSTRUCTION. CONTRACTOR TO
RE-ROUTE 1" PVC DRAIN LINE
AS NEEDED TEMPORARILY
DURING CONSTRUCTION AND FOR
PERMANENT INSTALLATION AND
MAINTAIN POSITIVE DRAINAGE.

SODIUM HYPOCHLORITE
STORAGE (TO REMAIN)

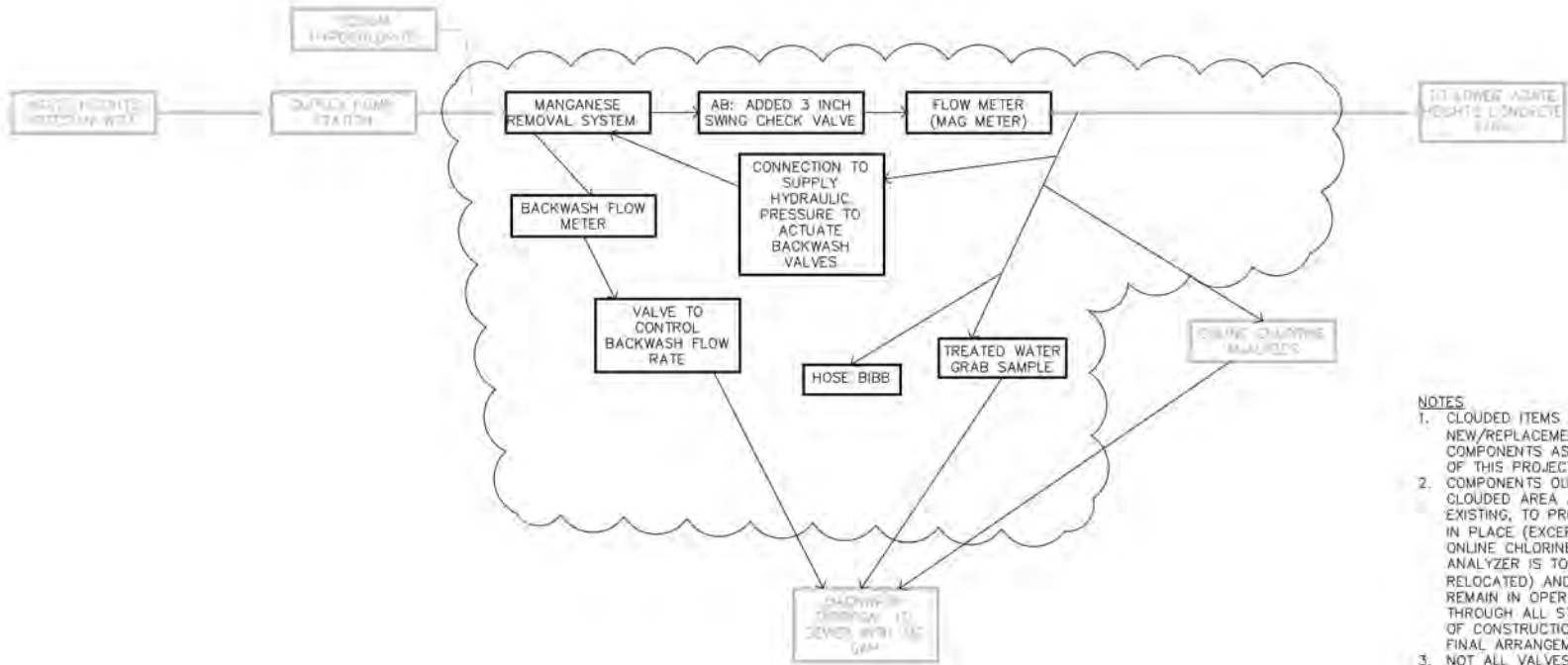
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LAKE WHATCOM WATER & SEWER DISTRICT					
WASHINGTON					
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES					
BELLINGHAM					
DEMOLITION PLAN					
SHEET	C1.1	DATE	7-20-2021	SCALE	AS SHOWN
PAGE	5	JOB NUMBER	2018-110	OF	19

PLT SETTINGS: DWG TO PLT and3, Previous paper size (17.00 x 11.00 inches), Portrait, 1/2, No, APWA_UNSCREENED.ctb
W:\2018\2018-110 LAWSO AGATE WTP UPGRADES\DWG\AS-BUILT\AB_2018-110 C2.1 WATER PROCESS SCHEMATIC_VEN2019.DWG - 7/23/2021 8:42 AM - Joseph Ford

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- NOTES
1. CLOUDED ITEMS ARE NEW/REPLACEMENT COMPONENTS AS PART OF THIS PROJECT
 2. COMPONENTS OUTSIDE CLOUDED AREA ARE EXISTING, TO PROTECT IN PLACE (EXCEPT THAT ONLINE CHLORINE ANALYZER IS TO BE RELOCATED) AND TO REMAIN IN OPERATION THROUGH ALL STAGES OF CONSTRUCTION TO FINAL ARRANGEMENT.
 3. NOT ALL VALVES AND INSTRUMENTATION ARE SHOWN



- DESIGN PARAMETERS
- DESIGN CAPACITY OF TREATMENT EQUIPMENT = 60 GPM
 - AFTER PROPOSED REPLACEMENTS/IMPROVEMENTS, PLANT PRODUCTION CAPACITY ANTICIPATED TO BE 34 GPM
 - FUTURE PUMP REPLACEMENT PROJECT WILL BRING SYSTEM PRODUCTION CAPACITY TO 60 GPM

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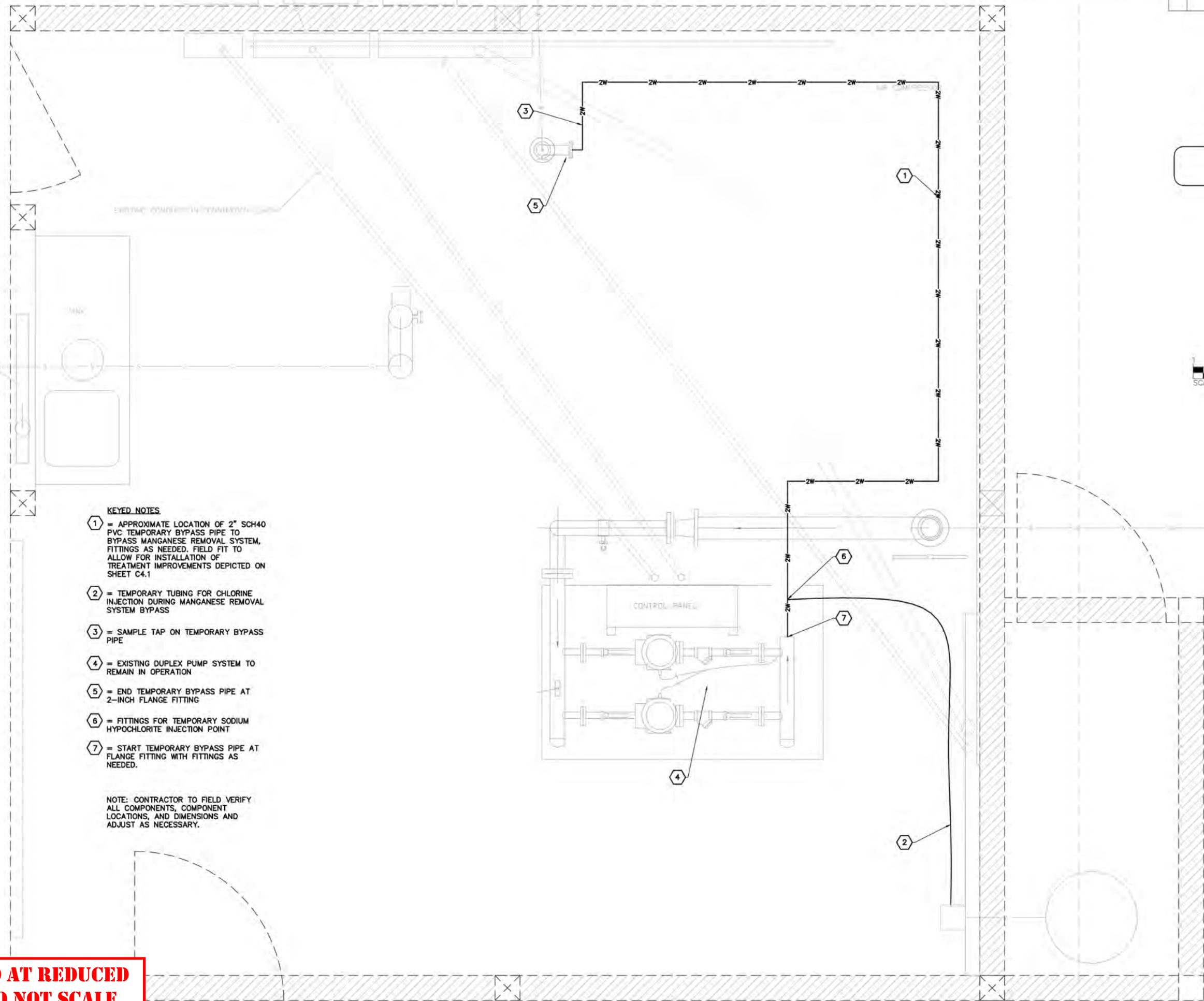
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LAKE WHATCOM WATER & SEWER DISTRICT
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES
WATER PROCESS SCHEMATIC

SHEET	C2.1
DATE	7-20-2021
SCALE	AS SHOWN
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PAGE	6 OF 19

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W:\2018\2018-110 LAWS\AGATE WTP UPGRADES\DWG\AS-BUILT\AB_2018-110 C3.1 TEMPORARY BYPASS PLAN_VER2019.DWG - 7/23/2021 8:42 AM - Joseph Ford

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- KEYED NOTES**
- ① = APPROXIMATE LOCATION OF 2" SCH40 PVC TEMPORARY BYPASS PIPE TO BYPASS MANGANESE REMOVAL SYSTEM, FITTINGS AS NEEDED. FIELD FIT TO ALLOW FOR INSTALLATION OF TREATMENT IMPROVEMENTS DEPICTED ON SHEET C4.1
 - ② = TEMPORARY TUBING FOR CHLORINE INJECTION DURING MANGANESE REMOVAL SYSTEM BYPASS
 - ③ = SAMPLE TAP ON TEMPORARY BYPASS PIPE
 - ④ = EXISTING DUPLEX PUMP SYSTEM TO REMAIN IN OPERATION
 - ⑤ = END TEMPORARY BYPASS PIPE AT 2-INCH FLANGE FITTING
 - ⑥ = FITTINGS FOR TEMPORARY SODIUM HYPOCHLORITE INJECTION POINT
 - ⑦ = START TEMPORARY BYPASS PIPE AT FLANGE FITTING WITH FITTINGS AS NEEDED.

NOTE: CONTRACTOR TO FIELD VERIFY ALL COMPONENTS, COMPONENT LOCATIONS, AND DIMENSIONS AND ADJUST AS NECESSARY.

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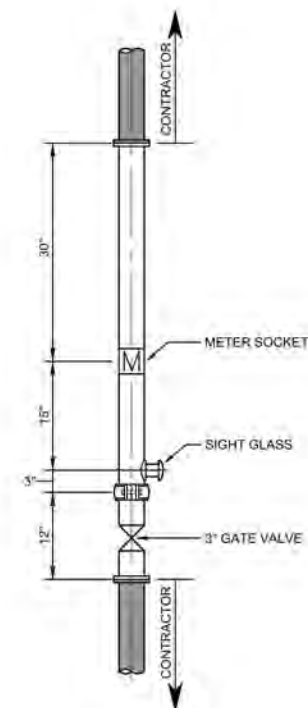
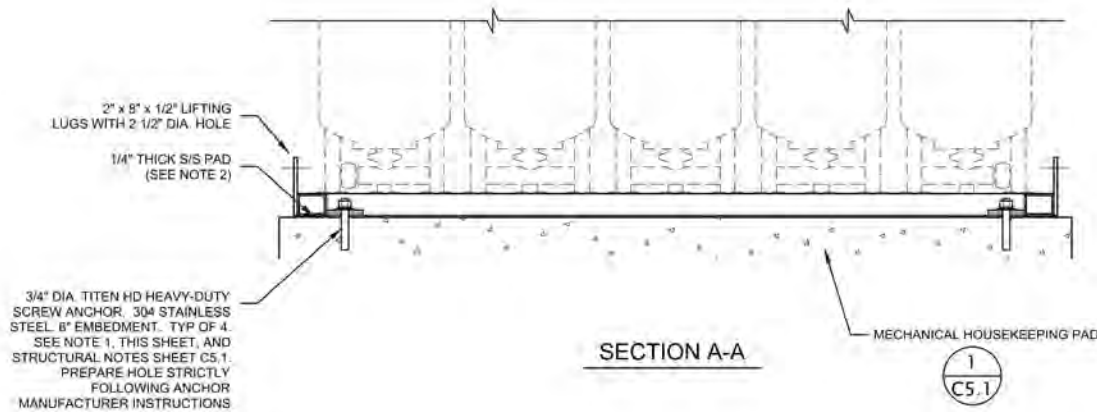

SCALE HORIZONTAL SCALE FEET

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AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES					
BELLINGHAM					
TEMPORARY BYPASS PLAN					
SHEET	DATE	SCALE	AS SHOWN	JOB NUMBER	2018-110
C3.1	7-20-2021	AS SHOWN	AS SHOWN	2018-110	
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BRIAN MARTIN SMITH
WASHINGTON
STATE OF WASHINGTON
LICENSE NO. 34431
MECHANICAL ENGINEERING
PROFESSIONAL
7/23/21

KEYWORDS: 3D printing; additive manufacturing; digital fabrication; mechanical design; rapid prototyping



BILL OF MATERIALS			
ITEM			
1	4	PFS-CPL02	3" GROOVED COUPLING, CAST IRON W/ BOLTS & GASKET
2	11	PFS-CA05	3" GROOVED COUPLING
3	1	PFS-HMP6	6"x8" HAND HOLE PLATE
4	1	PFS-HHG6	6"x8" HAND HOLE GASKET
5	1	PFS-HH080	8"x8" HAND HOLE BOLT SET
6	1	PFS-HHCR0	8"x8" HAND HOLE HOLD DOWN CRAB
7	1	V-BBF2	2"x2"x2" BACKFLUSH VALVE, BERMAID
8	1	UASS18	UNDER-DRAIN ASSEMBLY 31G, S.S. W/ SCH 80 CAP COMPLETE
9	1	73PPBYZCM24VAC	SOLENOID VALVE, PETER PAUL (NOT SHOWN)
10	1	PFS-CPL05	8" GROOVED COUPLING, CAST IRON, W/BOLTS & GASKET
11	1	PFS-CA08	8" GROOVED END CAP

NOTE: QUANTITIES SHOWN ARE FOR (1) ONE TANK



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NGHAM

ACATE HEIGHTS WATER TREATMENT PLANT UPGRADES

MECHANICAL DETAILS

MECHANICAL DETAILS

SHEET	C4.3	DATE	7-20-2021
		SCALE	AS SHOWN
PAGE	10 OF 19	JOB NUMBER	2018-110

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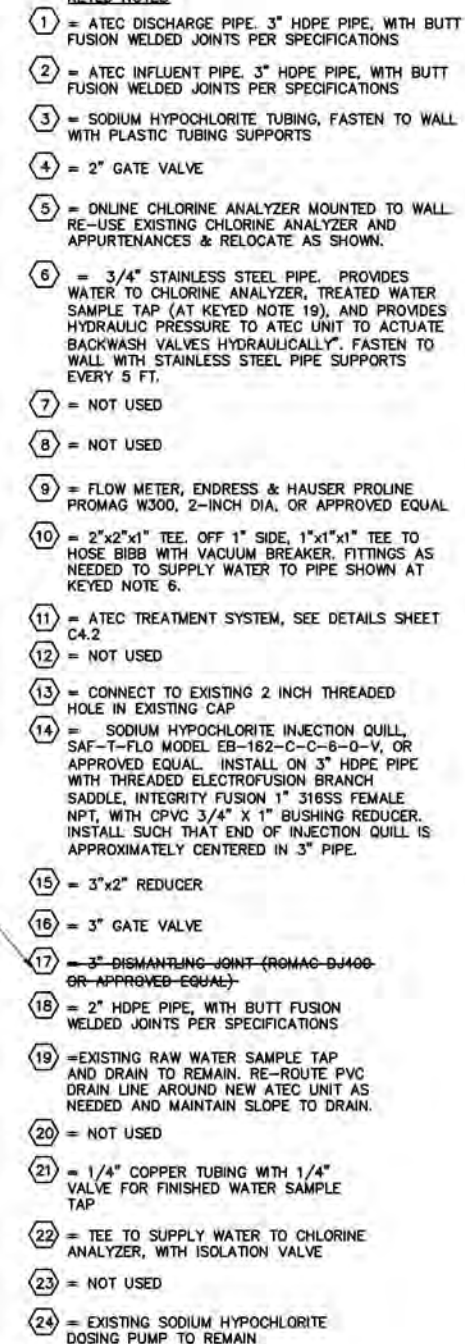
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SECTIONS

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STRUCTURAL NOTES

- 01000 GENERAL
1. EMPLOY GOOD STANDARDS OF WORKMANSHIP THROUGHOUT. PROVIDE ALL MATERIALS AND PERFORM ALL CONSTRUCTION AS INDICATED. SECURE THE APPROVAL OF THE ENGINEER OF RECORD FOR SUBSTITUTIONS.
 2. SEE THE SPECIFICATIONS FOR DETAILED MATERIAL AND METHODS NOT CALLED OUT HERE. IN CASE OF CONFLICT BETWEEN APPLICABLE CODES, THESE NOTES, THE SPECIFICATIONS, AND THE DRAWINGS, THE MOST SPECIFIC WILL GOVERN. IN CASES WHERE CONFLICTS EXIST BETWEEN EQUALLY SPECIFIC PROVISIONS, THE MOST STRINGENT WILL GOVERN.
 3. VERIFY ALL DIMENSIONS IN THE FIELD, AND UPON DISCOVERY OF ANY DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND FIELD CONDITIONS OR OTHER DRAWINGS, NOTIFY THE PROJECT MANAGER.
 4. USE THESE DRAWINGS IN CONJUNCTION WITH THE OTHER DISCIPLINES DRAWINGS. THEY ARE NOT TO STAND ALONE. THESE DRAWINGS AND THE DESIGNS HEREIN ARE FOR USE ON THIS PROJECT ONLY.
 5. DO NOT SCALE DRAWINGS.
 6. USE TYPICAL DETAILS AND SCHEDULES WHEREVER APPLICABLE. SPECIFIC NOTES AND DETAILS SHALL GOVERN OVER TYPICAL DETAILS, BUT ANY PARTS OF TYPICAL DETAILS NOT SO ALTERED WILL STILL APPLY.
 7. THE STRUCTURE AS SHOWN ON THESE DRAWINGS IS DESIGNED TO BE STABLE AND TO RESIST IT'S LOADS IN THE COMPLETED CONDITION. THE DRAWINGS DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR TEMPORARY BRACING AND SHORING, AND FOR SAFETY PROGRAMS, METHODS, AND PROCEDURES OF OPERATION FOR THE CONSTRUCTION OF THE DESIGN.

03100 FORMWORK

1. CHAMFER ALL ABOVE GRADE EDGES 3/4" X 3/4".
2. BUILD FORMWORK TO STANDARDS CALLED OUT IN THE SPECIFICATIONS SO AS TO MINIMIZE FINS OR BULGES.

03200 REINFORCING

1. REINFORCING BARS SHALL BE ASTM A615, GRADE 60
2. BAR DETAILING AND SUPPORT OF REINFORCING BARS SHALL CONFORM TO THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE. REBAR WHICH IS MARKED "CONTINUOUS" ON DRAWINGS SHALL EXTEND AS FAR AS POSSIBLE AND TERMINATE IN A 12-DIAMETER BEND OR PER TYPICAL DETAILS. SHOP-FABRICATE ALL BENDS.
3. WELDING OF REINFORCING IS NOT PERMITTED.
4. PROVIDE THE FOLLOWING MINIMUM COVER FROM FACE OF BAR TO FACE OF CONCRETE, AS DETAILED; PROVIDE NECESSARY ACCESSORIES TO MAINTAIN CLEARANCES.

03300 CONCRETE

1. MATERIALS SHALL BE:
AGGREGATE: STONE (NOT GRAVEL) AGGREGATE PER ASTM C33
CEMENT: TYPE I OR II PER ASTM C150
ADMIXTURES: AIR: ASTM C260 HRWDA: ASTM C494 TYPE A
ALL CONCRETE SHALL BE READY-MIX. COMPLY WITH ASTM C 94 AND AS SPECIFIED.
2. PROPERTIES INCLUDING 28-DAY STRENGTHS SHALL BE AS FOLLOWS:

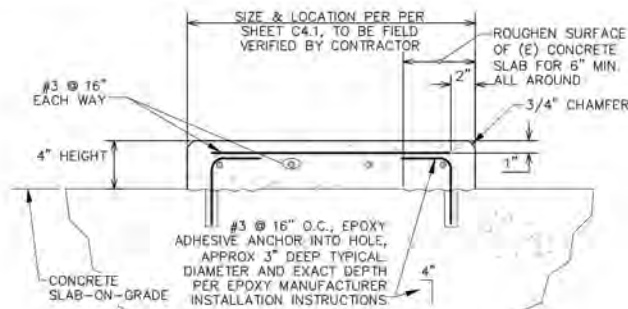
APPLICATION	F'C (PSI)	W/C (MAX)	AGG (MAX)
MECHANICAL HOUSEKEEPING PAD:	3500	0.55	1"

NOTE: CONTRACTOR SHALL DEMONSTRATE THAT CONCRETE STRENGTH HAS ACHIEVED 75% OF SPECIFIED COMPRESSIVE STRENGTH PRIOR TO INSTALLATION OF EQUIPMENT ON TOP OF MECHANICAL HOUSEKEEPING PAD

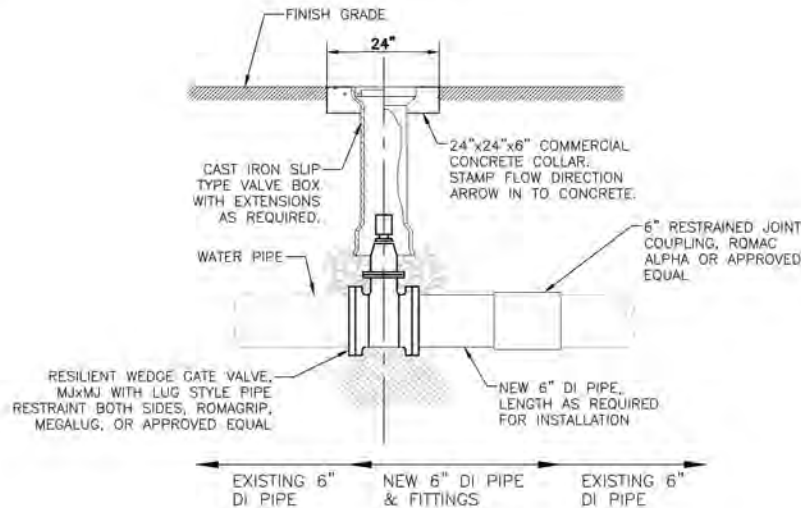
3. DRYPACK: PORTLAND CEMENT, ASTM C150, TYPE I, AND CLEAN, NATURAL SAND, ASTM C404. MIX AT RATIO OF 1.0 PART CEMENT TO 3.0 PARTS SAND, BY VOLUME, WITH MINIMUM WATER REQUIRED FOR PLACEMENT AND HYDRATION. MINIMUM STRENGTH OF GROUT, 5000 PSI AT 28 DAYS.
4. ALL CONSTRUCTION JOINTS, INCLUDING CONNECTIONS TO PRE-EXISTING CONCRETE, SHALL BE CLEAN AND FREE FROM FOREIGN SUBSTANCES, LOOSE MATERIAL OR LAITANCE. WHERE NOTED ON DRAWINGS AS "ROUGHENED," MECHANICALLY ROUGHEN TO FRACTURE COARSE AGGREGATE ON THE ENTIRE SURFACE TO AT LEAST 1/4" AMPLITUDE AND REMOVE ALL LOOSE MATERIAL. DAMPEN JOINTS FOR AT LEAST ONE-HALF HOUR PRIOR TO CONCRETE PLACEMENT BUT LEAVE NO STANDING WATER.
5. PLACE CONSTRUCTION JOINTS PERPENDICULAR TO MAIN REINFORCEMENT. CONTINUE REINFORCEMENT ACROSS CONSTRUCTION JOINTS. DO NOT PLACE CONSTRUCTION JOINTS IN HORIZONTAL PLANE IN SLABS.
6. HOLD BOLTS, ANCHORS, DOWELS, REINFORCING, AND METAL INSERTS FIRMLY AND ACCURATELY IN PLACE BEFORE CONCRETE IS PLACED; DO NOT INSERT ("STAB") AFTER PLACING CONCRETE.
7. SEE MECHANICAL DRAWINGS FOR ALL SLAB FINISH DETAILS, EXACT LOCATION OF DEPRESSED AREAS, DRAINS, AND SLOPES.
8. DO NOT PLACE HORIZONTAL RUNS OF CONDUIT IN SLABS.

03150 POST-INSTALLED CONCRETE ANCHOR BOLTS & REINFORCING

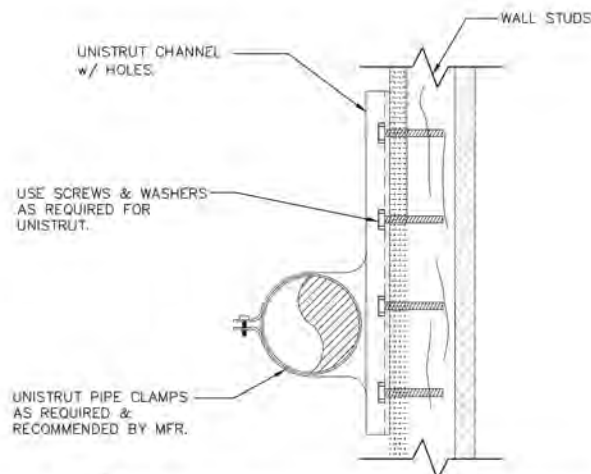
1. POST-INSTALLED ADHESIVE ANCHORS BOLTS SHALL BE OF STEEL CONFORMING TO THE REQUIREMENTS OF THE APPLICABLE ICC-ES REPORT FOR THE ADHESIVE SYSTEM. MAKE AND CLEAN HOLES WITH EQUIPMENT PER THE ICC-ES REPORT. DO NOT PLACE ANY ANCHOR WITHIN SIX INCHES (6") OF A FREE EDGE OF CONCRETE. SEE THE DRAWINGS FOR EMBEDMENT.
ACCEPTED ADHESIVE PRODUCTS INCLUDE:
A. ITW-RAMSET COMPANY: EPCON C6 SYSTEM
B. HILTI INC: RE-500 SD SYSTEM
C. SIMPSON STRONG-TIE COMPANY: SET-XP EPOXY
D. OTHER SYSTEMS WITH WRITTEN APPROVAL OF THE ENGINEER OF RECORD
ACCEPTED NON-ADHESIVE ANCHOR PRODUCTS INCLUDE SIMPSON TITEN HD, PER ICC ES REPORT ER-493.



1 TYPICAL MECHANICAL HOUSEKEEPING PAD
NOT TO SCALE

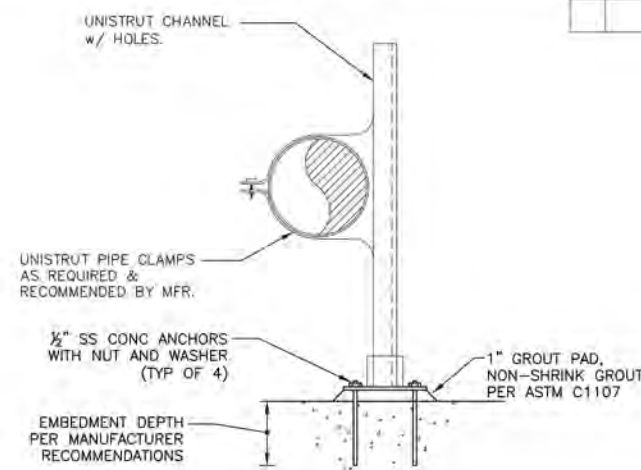


2 BURIED GATE VALVE DETAIL
NOT TO SCALE



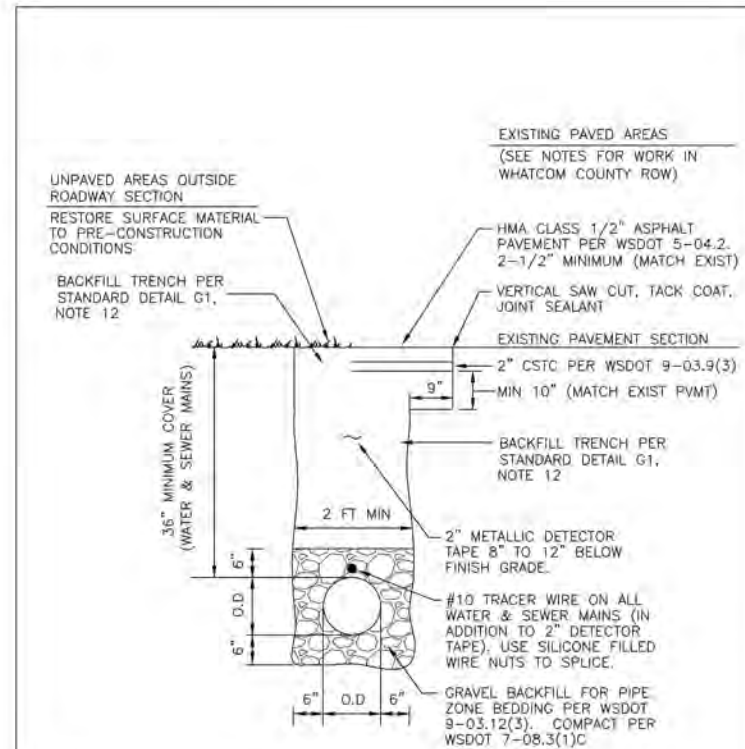
- NOTES:
1. ALL HARDWARE (CHANNEL, PIPE CLAMPS, WASHERS, SCREWS, NUTS, BOLTS, ETC.) SHALL BE OF THE SAME MATERIAL AND FROM THE SAME MANUFACTURER. UNISTRUT DEFENDER PRODUCT LINE OR APPROVED EQUAL.
 2. PIPE SUPPORT SPACING SHALL BE PER SPECIFICATIONS.

3 TYPICAL PIPE SUPPORT TO WALL
NOT TO SCALE



- NOTES:
1. ALL HARDWARE (CHANNEL, PIPE CLAMPS, WASHERS, SCREWS, NUTS, BOLTS, ETC.) SHALL BE OF THE SAME MATERIAL AND FROM THE SAME MANUFACTURER. UNISTRUT DEFENDER PRODUCT LINE OR APPROVED EQUAL.
 2. PIPE SUPPORT SPACING SHALL BE PER SPECIFICATIONS.

4 TYPICAL SELF-SUPPORTED PIPE SUPPORT
NOT TO SCALE



- NOTES:
1. With respect to trench repairs and pavement overlays, in the event of conflict between this detail and Whatcom County Standard Drawing Numbers 512.F-1 and 512.F-2, the more stringent standard shall apply.
 2. Standard utility locations within county-maintained public road prisms as shown in the 2012.09.25 version of Whatcom County Standard Drawing No. 512.D-1 shall apply.



TYPICAL TRENCH AND BACKFILL DETAIL

STANDARD DETAIL
G4
3/11/2020

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WASHINGTON
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES
BELLINGHAM
CIVIL DETAILS

DATE
7-20-2021
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2018-110
SHEET
C5.1
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NOTES (APPLICABLE TO ALL ELECTRICAL DRAWINGS):

1. ALL SYSTEMS, EQUIPMENT, DEVICES, RACEWAYS, CABLES, ETC. INDICATED ARE NEW UNLESS SPECIFICALLY NOTED AS EXISTING.
2. THE ELECTRICAL WORK SHALL INCLUDE ALL WORK SHOWN ON THE DRAWINGS, DETAILS, DIAGRAMS, SCHEDULES, ETC., AND AS DESCRIBED IN THE SPECIFICATIONS.
3. PLAN DRAWINGS ARE DIAGRAMMATIC IN FORM AND DO NOT ATTEMPT TO SHOW COMPLETE DETAILS OR LIST EVERY ITEM OF THE ELECTRICAL SYSTEM, EQUIPMENT, OR BUILDING CONSTRUCTION; HOWEVER, THE ROUTING OF RACEWAYS AND CIRCUITS, THE LOCATIONS OF EQUIPMENT, DEVICES AND FIXTURES REPRESENT THE DESIRED FINISHED ARRANGEMENT.
4. OBTAIN APPROVAL FROM ENGINEER PRIOR TO PROCEEDING WITH ALTERNATE CONDUIT ROUTES.
5. DETAIL DRAWINGS SHALL BE CONSIDERED APPLICABLE TO ALL PLAN DRAWINGS AND SIMILAR CONDITIONS EVEN IF THE DETAILS ARE NOT SPECIFICALLY REFERENCED
6. RACEWAYS AND CABLES THROUGHOUT THE FACILITY SHALL BE RUN CONCEALED IN THE WALLS, ABOVE THE CEILING OR BELOW THE FLOOR WHERE POSSIBLE, EXCEPT, EXPOSED WITHIN UTILITY & OTHER NON-PUBLIC SPACES. WITHIN PUBLIC SPACES, WHERE DUE TO THE BUILDINGS CONSTRUCTION, IT IS NOT POSSIBLE TO ROUTE RACEWAYS & CABLES CONCEALED, RACEWAYS MAY BE RUN EXPOSED. (EXPOSED CABLES ARE NOT ALLOWED EXCEPT IN TELECOMMUNICATIONS ROOMS.) EXPOSED RACEWAYS SHALL BE RUN AS NEATLY & UNOBTRUSIVELY AS POSSIBLE, SUPPORTED AS REQUIRED, PARALLEL OR AT RIGHT ANGLES TO CEILINGS, WALLS & STRUCTURAL MEMBERS.
7. RACEWAYS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

A. INTERIOR ACCESSIBLE CONCEALED SPACES - ELECTRICAL METALLIC TUBING (EMT).

B. INTERIOR EXPOSED - ELECTRICAL METALLIC TUBING (EMT) WITH LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC) FOR FINAL CONNECTIONS TO VIBRATING EQUIPMENT. LIQUIDTIGHT FLEX SHALL TRANSITION TO A PVC CORED GRIP BASE FITTING (CGB0)

C. INTERIOR NON-ACCESSIBLE CONCEALED SPACES - FLEXIBLE METAL CONDUIT (FLEX) MAY BE "FISHED" FROM ONE POINT OF CONNECTION TO ANOTHER.

D. INTERIOR, EXPOSED IN TELECOM ROOMS, UTILITY ROOMS & OTHER NON-PUBLIC SPACES - ELECTRICAL METALLIC TUBING (EMT).

E. INTERIOR, EXPOSED IN ROOMS, CORRIDORS & THE LIKE WHERE READILY VISIBLE TO BUILDING OCCUPANTS - SURFACE METAL RACEWAY (SMR).

F. EXTERIOR ABOVE GRADE - PVC COATED GALVANIZED RIGID STEEL CONDUIT (GRS).
8. RACEWAYS SHALL BE SIZED SO THAT THE CABLE FILL DOES NOT EXCEED 40%, EXCEPT, MINIMUM CONDUIT SIZES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

A. 3/4" - BRANCH CIRCUITS AND SYSTEM RACEWAYS, EXCEPT AS NOTED BELOW.

B. 1/2" - RUNS WITH #12 AWG OR SMALLER CIRCUIT CABLE TERMINATING IN A SINGLE DEVICE.

C. 1" - POWER & LIGHTING HOMERUNS.

D. 1" - UNDERGROUND CONDUITS.
9. DEVICE BOX SIZES SHALL BE SIZED IN ACCORDANCE WITH NEC FOR BOX FILL, EXCEPT MINIMUM SHALL BE AS FOLLOWS, UNLESS SPECIFICALLY NOTED OTHERWISE:

A. POWER & LIGHTING - 4" x 4" x 1 1/2"
10. DEVICE MOUNTING HEIGHTS SHALL BE AS FOLLOWS, UNLESS SPECIFICALLY NOTED OTHERWISE. MOUNTING HEIGHTS SHOWN ON THE DRAWINGS ARE TO THE CENTER OF THE BACK BOX FROM THE INTERIOR FINISHED FLOOR.

A. POWER, TELECOMMUNICATIONS, ETC. RECEPTACLES - 18"

B. LIGHTING SWITCHES, CONTROL STATIONS, ETC. - 46"
11. TELECOMMUNICATIONS CONDUITS SHALL BE PROVIDED WITH PULL ROPES BELOW GRADE AND PULL STRINGS ABOVE GRADE. EXISTING CONDUITS TO BE USED SHALL BE FISHED AND CLEANED PRIOR TO INSTALLATION OF CABLES.
12. BELOW GRADE SERVICE & FEEDER CABLE SHALL BE 1/C COPPER (UNLESS SPECIFICALLY NOTED OTHERWISE) WITH 600V TYPE XHHW INSULATION.
13. BRANCH CIRCUIT CABLES, EQUIPMENT GROUND CABLES AND ABOVE GRADE FEEDER CABLES SHALL BE 1/C COPPER, #12 AWG UNLESS NOTED OTHERWISE, WITH 600V TYPE XHHW OR THHN/THWN INSULATION.
14. IN ADDITION TO THE CIRCUIT CONDUCTORS INDICATED, CONTRACTOR SHALL PROVIDE AN EQUIPMENT GROUND CABLE (SIZED THE SAME AS THE LARGEST CIRCUIT CONDUCTOR UNLESS SPECIFICALLY NOTED OTHERWISE) WITHIN EACH RACEWAY WITH THE CIRCUIT CONDUCTORS.
15. SEE ELECTRICAL SPECIFICATION FOR SYSTEMS CABLE TYPES.
16. ALL WIRING SHALL BE ENCLOSED WITHIN THE RACEWAY SYSTEM.
17. FLOOR, WALL AND CEILING PENETRATIONS BY OPEN CABLES WILL NOT BE ALLOWED. PROVIDE CONDUIT SLEEVES WHERE OPEN CABLES PASS THROUGH WALLS, DRAFTSTOPS, CEILINGS, FLOORS, ETC.
18. VERIFY ALL EQUIPMENT, DEVICE, ETC. LOCATIONS WITH THE ENGINEER PRIOR TO ROUGH-IN. SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT, DRAWINGS FOR SPECIALTY EQUIPMENT, CASEWORK, ETC. THE OWNER RESERVES THE RIGHT TO RELOCATE OUTLETS, ETC. WITHIN 10' OF THE LOCATION INDICATED, PRIOR TO INSTALLATION, WITHOUT INCREASE IN COST.

19. CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE MOUNTING HEIGHT FOR ALL WALL MOUNTED AND PENDANT MOUNTED LIGHTING FIXTURES PRIOR TO ROUGH-IN.
20. SEE ENGINEER SPEC. SECTIONS (E.G. DOOR HARDWARE, APPLIANCES, DOORS, ETC.), ENTIRE DIVISION 11 - EQUIPMENT, & ENTIRE DIVISION 15 - MECHANICAL, FOR ADDITIONAL REQUIREMENTS, FURTHER CLARIFICATIONS, ETC. OF EQUIPMENT ELECTRICAL REQUIREMENTS.
21. CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE FIRE RESISTIVE RATINGS FOR WALLS, PARTITIONS AND OTHER BUILDING STRUCTURES. INSTALLATION OF SYSTEM COMPONENTS AND RACEWAYS MUST MAINTAIN THE FIRE RESISTIVE RATING OF THE BUILDING.
22. POWER, FIRE ALARM, SECURITY & TELECOMMUNICATIONS SYSTEMS INTERRUPTIONS (WHETHER TO THE ENTIRE SYSTEM OR TO INDIVIDUAL PANELS, EQUIPMENT, ROOMS, DEVICES, ETC.) SHALL BE KEPT TO AN ABSOLUTE MINIMUM, AND SHALL NOT BE DONE WITHOUT PRIOR APPROVAL & SCHEDULING WITH THE OWNER & ENGINEER A MINIMUM OF 14 DAYS IN ADVANCE AND CONFIRMED 48 HOURS IN ADVANCE.
23. LABELING & NAMEPLATES:

A. OUTLETS SHALL BE LABELED WITH THE PANEL AND CIRCUIT NUMBER FROM WHICH ITS FED. LABELS SHALL BE HEAVY DUTY ADHESIVE TYPE, CLEAR TAPE WITH BLACK LETTERING, MADE WITH A LABEL PRINTING DEVICE.

B. JUNCTION BOXES SHALL BE LABELED WITH THE PANEL AND CIRCUIT NUMBER CONTAINED WITHIN. MARKING SHALL BE LEGIBLY HAND-WRITTEN WITH BLACK INDELIBLE MARKER.

C. REFER TO SPECIFICATIONS FOR PANELS, DISCONNECT SWITCHES, STARTERS, ETC. NAMEPLATES AND LABELING.

24. CONTRACTOR SHALL VERIFY THAT ALL EXISTING EQUIPMENT TO BE RE-USED IS SECURELY ATTACHED TO THE BUILDING STRUCTURE. EQUIPMENT THAT IS NOT SECURELY ATTACHED SHALL BE RE-ATTACHED WITH MOUNTING SCREWS.

DEMOLITION NOTES (APPLICABLE TO ALL ELECTRICAL DRAWINGS):

1. CONTRACTOR SHALL REMOVE ALL EXISTING EQUIPMENT, DEVICES, ETC. WHERE INDICATED. EXISTING DEVICES NOT SHOWN ON THE DRAWINGS SHALL REMAIN. ALL ASSOCIATED CONDUIT, BOXES, CABLES, ETC. SHALL BE REMOVED TO THEIR POINT OF ORIGIN &/OR DESTINATION, EXCEPT, CONDUITS MAY BE RE-USED IF IN GOOD CONDITION & SUITABLE FOR THE NEW INSTALLATION, &/OR CONCEALED CONDUITS MAY BE LABELED & ABANDONED IN PLACE. EXISTING CABLES SHALL BE REMOVED OR REPLACED. EXISTING FLUSH BOXES SHALL BE PROVIDED WITH SUITABLE COVERS OR WALLPLATES.
2. EXISTING EQUIPMENT, FIXTURES, DEVICES, ETC. TO BE RE-USED IN THE NEW WORK SHALL BE REMOVED CAREFULLY, & PROTECTED FROM DAMAGE AS REQUIRED DURING DEMOLITION & CONSTRUCTION.
3. EXISTING EQUIPMENT, FIXTURES, DEVICES, ETC. TO REMAIN SHALL BE PROTECTED AS REQUIRED DURING DEMOLITION AND CONSTRUCTION.
4. EXISTING CIRCUITS, CONDUITS, CABLES, ETC. INTERRUPTED DUE TO THE REMODEL SHALL BE RE-CONNECTED AS REQUIRED TO MAINTAIN THE CIRCUIT.
5. ALL SURPLUS MATERIAL REMOVED DURING THE DEMOLITION SHALL BE INSPECTED BY THE OWNER, AND THOSE ITEMS SELECTED SHALL REMAIN THE PROPERTY OF THE OWNER. ALL REMAINING SURPLUS MATERIALS SHALL BE REMOVED FROM THE SITE & DISPOSED OF BY THE CONTRACTOR.

ELECTRICAL LEGEND

LIGHTING

-  LUMINAIRE, SURFACE MTD.
-  LUMINAIRE, WALL MTD.

SWITCHING

-  SINGLE-POLE SWITCH
-  LOW VOLTAGE SWITCH
-  THREE WAY SWITCH
-  DOUBLE POLE SWITCH
-  MOTION SENSOR SWITCH (SEE SPECIFICATIONS FOR TYPE)
-  PRESSURE SWITCH

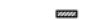
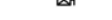
OUTLETS

-  DUPLEX OUTLET
-  DOUBLE DUPLEX OUTLET
-  DUPLEX OUTLET, GROUND FAULT INTERRUPTING
-  DUPLEX OUTLET, WEATHERPROOF

ANCILLARIES

-  DOOR CONTACT OR FLOOD SWITCH
-  SMOKE DETECTOR
-  RATE OF RISE HEAT DETECTOR

MISCELLANEOUS

-  BRANCH CIRCUIT, ABOVE GRADE, CONCEALED (OR SIMILAR, SLASHES + NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
-  BRANCH CIRCUIT, ABOVE GRADE, EXPOSED (OR SIMILAR, SLASHES + NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
-  HOMERUN TO LOCATION INDICATED, CONCEALED (TYPICAL)
-  HOMERUN TO LOCATION INDICATED, EXPOSED (TYPICAL)
-  BELOW FLOOR/GRADE CONDUIT
-  GROUND CABLE
-  CABLE RUN "OPEN" IN ACCESSIBLE CEILING SPACE (SLASHES + No. & TYPE OF CABLES WHERE APPLICABLE)
-  EXISTING CONDUIT, NEW CABLE
-  JUNCTION BOX
-  JUNCTION BOX WITH EXPLOSION PROOF SEAL OFF LOCATED BELOW
-  EXPLOSION PROOF SEAL OFF
-  PANELBOARD
-  DISCONNECT SWITCH
-  COMBINATION MOTOR STARTER
-  PUSHBUTTON OR CONTROL STATION
-  MOTORIZED LOUVER
-  EXHAUST FAN
-  FIRE ALARM MONITOR MODULE
-  FIRE ALARM CONTROL MODULE
-  SOLENOID
-  PRESSURE VALVE
-  THERMOSTAT
-  WEATHER PROOF
-  EXISTING TO REMAIN
-  REPLACE EXISTING WITH NEW
-  RELOCATE EXISTING
-  FUTURE
-  EXPLOSION PROOF
-  SHIELDED CABLE
-  EMERGENCY POWER OFF

DEMOLITION

(DASHED INDICATES EXISTING TO BE REMOVED)

-  SWITCH
-  TIMER SWITCH
-  DUPLEX OUTLET
-  DOUBLE DUPLEX OUTLET
-  BRANCH CIRCUIT CONDUIT, SURFACE MTD.
-  BRANCH CIRCUIT CONDUIT, CONCEALED

NO.	REVISIONS	BY	DATE
1	AS BUILT PER CONTRACTOR FIELD NOTES	STV	7/7/2021

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LAKE WHATCOM WATER & SEWER DISTRICT

BELLINGHAM WASHINGTON
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES

ELECTRICAL – NOTES & LEGEND

DATE
11-13-2020

SCALE
AS SHOWN

JOB NUMBER
2069

SHEET
E1.0 R1

PAGE
13 OF 19

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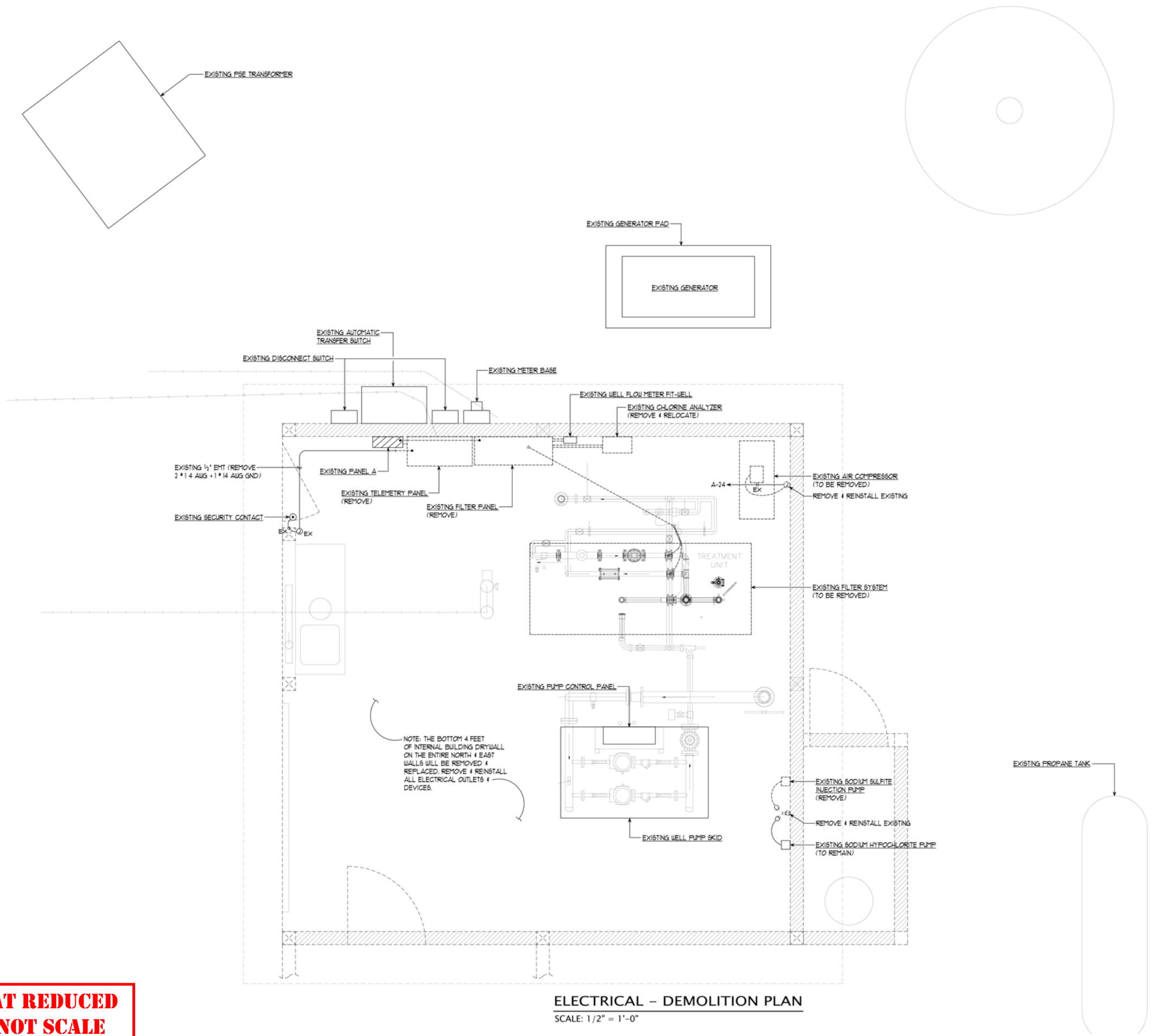
LAKE WHATCOM WATER & SEWER DISTRICT

BELLINGHAM WASHINGTON

AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES

ELECTRICAL - DEMOLITION PLAN

SHEET	E2.0 R1
DATE	11-13-2020
SCALE	1/2" = 1'-0"
JOB NUMBER	2069
PAGE	14 OF 19



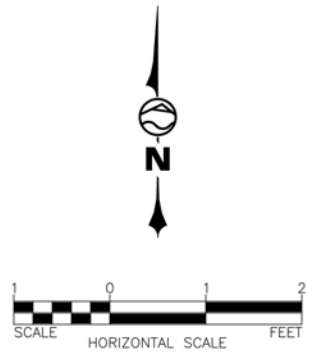
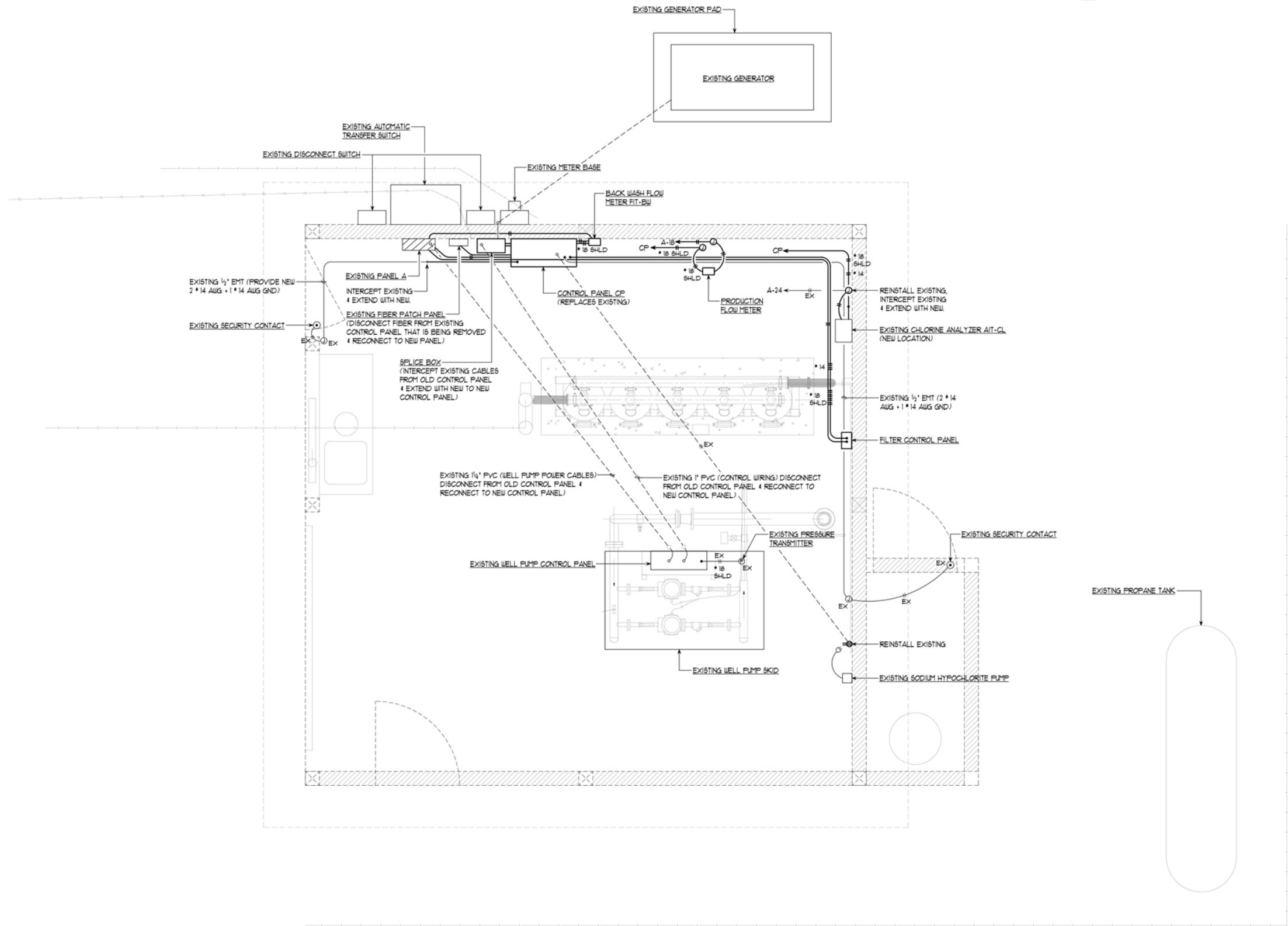
ELECTRICAL - DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

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ELECTRICAL – POWER & CONTROLS PLAN
SCALE: 1/2" = 1'-0"

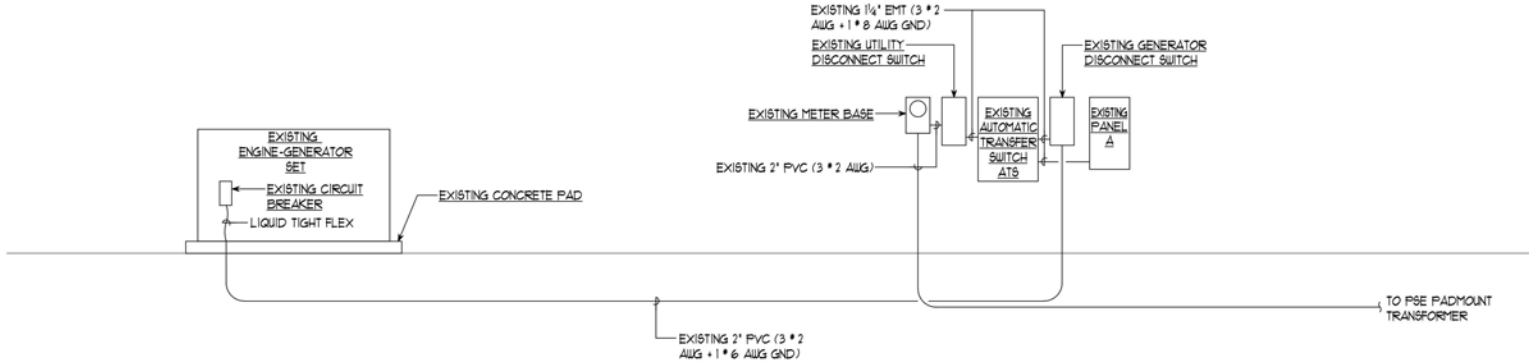
LAKE WHATCOM WATER & SEWER DISTRICT
BELLINGHAM WASHINGTON
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES
ELECTRICAL – POWER & CONTROLS PLAN

DATE	11-13-2020
SCALE	AS SHOWN
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SHEET	E2.1 R1
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ELECTRICAL – POWER SYSTEM RISER DIAGRAM
SCALE: NONE

EXISTING METER BASE		BUILDING EXTERIOR					
VOLTAGE: 120/240V, 1 PH, 3 W		ELECTRICAL LOAD CALCULATION		CONN. LOAD (VA)		DEMAND FACTOR	DEMAND LOAD (VA)
ENCLOSURE: NEMA 3R		Lighting	322.0	0.0	322.0	1.25	402.5
MOUNTING: SURFACE		Gen. Purpose Outlets (First 10 KVA)	720.0	0.0	720.0	1.00	720.0
CONTINUOUS RATNG: 100 A		Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
PER PUGET SOUND ENERGY REQUIREMENTS		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT		Mechanical Equipment	8692.0	0.0	8692.0	1.00	8692.0
		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
		Miscellaneous	6010.0	600.0	6610.0	1.00	6610.0
		25% Largest Motor					977.5
		TOTAL LOAD	15744.0	600.0	16344.0		17402.0
		TOTAL AMPS	65.6	2.5	68.1		72.5

EXISTING DISCONNECT SWITCH		BUILDING EXTERIOR					
VOLTAGE: 120/240V, 1 PH, 3 W		ELECTRICAL LOAD CALCULATION		CONN. LOAD (VA)		DEMAND FACTOR	DEMAND LOAD (VA)
SWITCH TYPE: GENERAL DUTY, FUSIBLE		Lighting	322.0	0.0	322.0	1.25	402.5
FUSES TYPE: SIEMENS		Gen. Purpose Outlets (First 10 KVA)	720.0	0.0	720.0	1.00	720.0
ENCLOSURE: NEMA 1		Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
MOUNTING: SURFACE		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
SWITCH RATING: 100 A		Mechanical Equipment	8692.0	0.0	8692.0	1.00	8692.0
FUSES RATING: 100 A		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
FULL AIC RATING: 10,000 A		Miscellaneous	6010.0	600.0	6610.0	1.00	6610.0
SERIES AIC RATING: NONE		25% Largest Motor					977.5
		TOTAL LOAD	15744.0	600.0	16344.0		17402.0
		TOTAL AMPS	65.6	2.5	68.1		72.5

EXISTING ENGINE-GENERATOR SET		BUILDING EXTERIOR					
VOLTAGE: 240/120V, 1 PH, 3 W		ELECTRICAL LOAD CALCULATION		CONN. LOAD (VA)		DEMAND FACTOR	DEMAND LOAD (VA)
RATING: 20 KW, 25 KVA		Lighting	322.0	0.0	322.0	1.25	402.5
TYPE: PROPANE		Gen. Purpose Outlets (First 10 KVA)	720.0	0.0	720.0	1.00	720.0
ENCLOSURE: OUTDOOR WEATHERPROOF		Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
SKID MOUNTED		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
SOUND ATTENUATED		Mechanical Equipment	8692.0	0.0	8692.0	1.00	8692.0
HEATER: ENGINE COOLANT (120V)		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
FUEL TANK: REMOTE PROPANE TANK		Miscellaneous	6010.0	600.0	6610.0	1.00	6610.0
		25% Largest Motor					977.5
		TOTAL LOAD	15744.0	600.0	16344.0		17402.0
		TOTAL AMPS	65.6	2.5	68.1		72.5

EXISTING AUTOMATIC TRANSFER SWITCH		BUILDING EXTERIOR					
VOLTAGE: 240/120V, 1 PH, 3 W		ELECTRICAL LOAD CALCULATION		CONN. LOAD (VA)		DEMAND FACTOR	DEMAND LOAD (VA)
RATING: 100 AMPS, 2 POLE, 3 WIRE		Lighting	322.0	0.0	322.0	1.25	402.5
APPLICATION: UTILITY TO GENERATOR		Gen. Purpose Outlets (First 10 KVA)	720.0	0.0	720.0	1.00	720.0
ENCLOSURE: NEMA 3R		Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
MOUNTING: SURFACE		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
EXERCISER CLOCK		Mechanical Equipment	8692.0	0.0	8692.0	1.00	8692.0
BATTERY CHARGER		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
MASTER NAMEPLATE		Miscellaneous	6010.0	600.0	6610.0	1.00	6610.0
		25% Largest Motor					977.5
		TOTAL LOAD	15744.0	600.0	16344.0		17402.0
		TOTAL AMPS	65.6	2.5	68.1		72.5

EXISTING DISCONNECT SWITCH		BUILDING EXTERIOR					
VOLTAGE: 120/240V, 1 PH, 3 W		ELECTRICAL LOAD CALCULATION		CONN. LOAD (VA)		DEMAND FACTOR	DEMAND LOAD (VA)
SWITCH TYPE: GENERAL DUTY, FUSIBLE		Lighting	322.0	0.0	322.0	1.25	402.5
FUSES TYPE: SIEMENS		Gen. Purpose Outlets (First 10 KVA)	720.0	0.0	720.0	1.00	720.0
ENCLOSURE: NEMA 1		Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
MOUNTING: SURFACE		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
SWITCH RATING: 100 A		Mechanical Equipment	8692.0	0.0	8692.0	1.00	8692.0
FUSES RATING: 100 A		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
FULL AIC RATING: 10,000 A		Miscellaneous	6010.0	600.0	6610.0	1.00	6610.0
SERIES AIC RATING: NONE		25% Largest Motor					977.5
		TOTAL LOAD	15744.0	600.0	16344.0		17402.0
		TOTAL AMPS	65.6	2.5	68.1		72.5

EXISTING PANEL A (MODIFY)		BUILDING INTERIOR					
VOLTAGE: 120/240V, 1 PH, 3 W		ELECTRICAL LOAD CALCULATION		CONN. LOAD (VA)		DEMAND FACTOR	DEMAND LOAD (VA)
TYPE: LOAD CENTER		Lighting	322.0	0.0	322.0	1.25	402.5
ENCLOSURE: NEMA 1		Gen. Purpose Outlets (First 10 KVA)	720.0	0.0	720.0	1.00	720.0
MOUNTING: SURFACE		Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
BUSSING: MANUFACTURER'S STANDARD		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
CONTINUOUS RATING: 100 A		Mechanical Equipment	8692.0	0.0	8692.0	1.00	8692.0
FULL AIC RATING: 10,000 A		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
SERIES AIC RATING: NONE		Miscellaneous	6010.0	600.0	6610.0	1.00	6610.0
		25% Largest Motor					977.5
		TOTAL LOAD	15744.0	600.0	16344.0		17402.0
		TOTAL AMPS	65.6	2.5	68.1		72.5

CONN. LOAD (VA)	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	BKR AMP/P	CKT NO	BUS (PHASE)	CKT NO	BKR AMP/P	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	CONN. LOAD (VA)
300.0	CONTROL PANEL CP	(3)	20/1	1	A	2	20/1	SPARE	(5)	0.0
0.0	SPARE	(5)	20/1	3	A	4	20/1	SPARE	(5)	0.0
750.0	WALL HEATER - BATHROOM		15/2	5	A	6	15/1	SPARE	(5)	0.0
750.0						8	15/1	BACKWASH FLOW METER FIT-BW	(3)	300.0
750.0	WATER HEATER - BATHROOM		20/2	9	A	10	20/1	LTG. OUTLET & EXHAUST FAN - BATHROOM		292.0
750.0						12	20/1	CHEMICAL FEED PUMPS		300.0
600.0	GENERATOR BATTERY CHARGER		15/1	13	A	14	30/2	HEATER - PUMP ROOM		1500.0
1100.0	LTG & HEAT - CHEMICAL ROOM		15/1	15	A	16	1			1500.0
300.0	RESIDUAL ANALYZER		15/1	17	A	18	40/2	PUMP CONTROL PANEL - PUMP ROOM	(1)	1955.0
300.0	SPARE (FORMERLY TELEMETRY PANEL)	(4)	15/1	19	A	20	1			1955.0
842.0	LTG & OUTLETS		20/1	21	A	22	20/1	SPARE (FORMERLY FLTRONICS PANEL)	(4)	300.0
1500.0	HOT WATER TANK		20/1	23	A	24	20/1	CHLORINE ANAL. AIT-CL (FORMERLY AIR COMPRE	(2)	300.0
MAIN LUGS										

- NOTES:
- (1) ONLY 1 PUMP RUNS AT A TIME. 2ND PUMP IS A BACKUP PUMP ONLY.
 - (2) REMOVE EXISTING AIR COMPRESSOR AND RENAME CIRCUIT.
 - (3) PROVIDE NEW CIRCUIT AND CIRCUIT BREAKER IN EXISTING SPACE.
 - (4) REMOVE EXISTING CIRCUIT AND MAKE CIRCUIT BREAKER SPARE.
 - (5) PROVIDE NEW SPARE CIRCUIT BREAKER IN EXISTING SPACE.

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SIZE, DO NOT SCALE**

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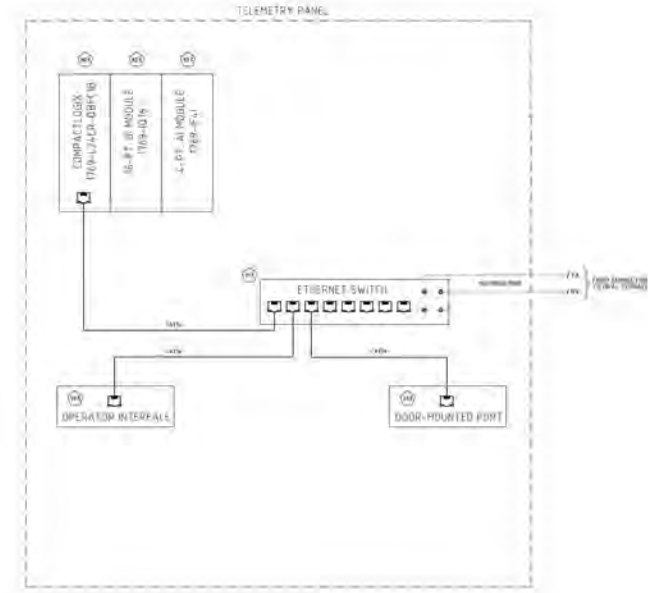
LAKE WHATCOM WATER & SEWER DISTRICT
WASHINGTON
AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES
ELECTRICAL – POWER SYSTEM RISER DIAGRAM
& PANEL SCHEDULES

NO.	REVISIONS	BY	DATE
1	AS BUILT PER CONTRACTOR FIELD NOTES	STV	7/7/2021

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DRAWING NAME	DESCRIPTION	DRAWING TYPE
N-00	COMMUNICATIONS LAYOUT	NETWORK WIRING DIAGRAM
P-00	TELEMETRY PANEL	PANEL LAYOUT DIAGRAM
F-00	TELEMETRY PANEL	POWER DISTRIBUTION
Z-01	TELEMETRY PANEL	PLC DIGITAL INPUTS
Z-02	TELEMETRY PANEL	PLC DIGITAL OUTPUTS
Z-03	TELEMETRY PANEL	PLC ANALOG INPUTS
Z-04	TELEMETRY PANEL	PLC ANALOG OUTPUTS

WIRING SPECIFICATIONS
(MAIN SUPPLY SOURCE)
VAC POWER: STRANDED COPPER, MTW, BLACK W/ PHASES COLORED
VAC CONTROL: STRANDED COPPER, MTW, RED
VAC NEUTRAL: STRANDED COPPER, MTW, WHITE
GROUND: STRANDED COPPER, MTW, GREEN
VDC CONTROL: STRANDED COPPER, MTW, BLUE
VDC COMMON: STRANDED COPPER, MTW, WHITE W/ BLUE STRIPE
VDC ANALOG: TWISTED SHIELDED PAIR, BLACK AND CLEAR

(EXTERNAL SUPPLY SOURCE, ENERGIZED WITH MAIN DISCONNECT OFF)
FOREIGN CONTROL: STRANDED COPPER, MTW, YELLOW
FOREIGN GROUNDING NEG: STRANDED COPPER, MTW, WHITE W/ YELLOW STRIPE

WIRE SIZED AT MINIMUM PER UL508A, TABLES 281 AND 381
FIELD WIRING SHALL BE COPPER WIRE WITH MINIMUM 60 DEG. C INSULATION RATING
UNDER 100 AMPS, 75 DEG. C INSULATION RATING 100 AMPS OR MORE
TORQUE SCREWS AT FIELD WIRING AND FUSED TERMINAL BLOCKS TO 7 LB. IN.
TORQUE SCREWS AT CIRCUIT BREAKERS TO 21 LB. IN.
OR TORQUE AS INDICATED ON LABEL NEAR TERMINALS

CONTROL PANEL LABELS
THE FOLLOWING LABELS WILL BE PLACED WITHIN THE CONTROL PANEL
IF LISTED IN THE CONTROL PANEL LAYOUT (P) DRAWING

- 1 DCC NAMEPLATE (FRONT DOOR)
- 2 MAIN POWER NAMEPLATE (INTERIOR)
- 3 FIELD WIRING SPECIFICATION (INTERIOR)
- 4 NON-UL COMPONENT (NEAR NON-UL ITEM)
- 5 MULTIPLE POWER SOURCES (FRONT DOOR)
- 6 INSTANTANEOUS TRIP CIRCUIT BREAKER (2 LABELS NEAR DEVICE)
- 7 HIGH FAULT SCCR BRANCH CIRCUIT TRIP (NEAR CB)
- 8 INTRINSICALLY SAFE FIELD WIRING (NEAR I.S. FIELD TERMINALS)
- 9 INTERFACE TO HAZARDOUS LOCATIONS (2 LABELS ON FRONT DOOR)
- 10 ARC FLASH (FRONT DOOR)
- 11 UPS POWER (FRONT DOOR)
- 12 NON-UL LOW VOLTAGE COMPONENT, EXTERNALLY POWERED (NEAR FUSE)

LEGEND
② BILL OF MATERIALS ITEM NO.
--- WIRING BY OTHERS
▲ EQUIPMENT BY OTHERS
▲ MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PROVIDED IN THE FIELD BY OTHERS
▲ INSTALL IN ACCORDANCE WITH ARTICLE 504 OF THE N.E.C.
CABLE LENGTH SHALL NOT EXCEED 1,000 FT.

Quality Controls Corporation
5015 208th St. SW, Suite 1-B
Lynden, WA 98264
(360) 354-4200
www.QualityControls.com

DRAWN BY: N. DEBOLDT
APP'D BY: J. YAG
DATE: 1/22/21

END USER: LAKE WHATCOM WTP DISTRICT
CUSTOMER: EDDY BUILDERS
CONSULTANT: QCC

**AGATE HEIGHTS WTP UPGRADES
INSTRUMENTATION & CONTROLS**

DCC PROJECT NO: **P2009**
DWS NO: **D-00**

DRAWING LIST

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DRAWN BY: N. DEBOLDT
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DATE: 1/22/21

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CUSTOMER: EDDY BUILDERS
CONSULTANT: QCC

**AGATE HEIGHTS WTP UPGRADES
COMMUNICATIONS LAYOUT**

DCC PROJECT NO: **P2009**
DWS NO: **N-00**

NETWORK WIRING DIAGRAM

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APP'D BY: J. YAG
DATE: 1/22/21

END USER: LAKE WHATCOM WTP DISTRICT
CUSTOMER: EDDY BUILDERS
CONSULTANT: QCC

**AGATE HEIGHTS WTP UPGRADES
TELEMETRY PANEL**

DCC PROJECT NO: **P2009**
DWS NO: **P-00**

PANEL LAYOUT DIAGRAM

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CUSTOMER: EDDY BUILDERS
CONSULTANT: QCC

**AGATE HEIGHTS WTP UPGRADES
TELEMETRY PANEL
POWER DISTRIBUTION**

DCC PROJECT NO: **P2009**
DWS NO: **F-00**

CONTROL WIRING DIAGRAM

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LAKE WHATCOM WATER & SEWER DISTRICT

BELLINGHAM WASHINGTON

AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES

ELECTRICAL - CONTROL DRAWINGS

DATE: 11-13-2020

SCALE: AS SHOWN

SHEET: **E7.1**

JOB NUMBER: 2069

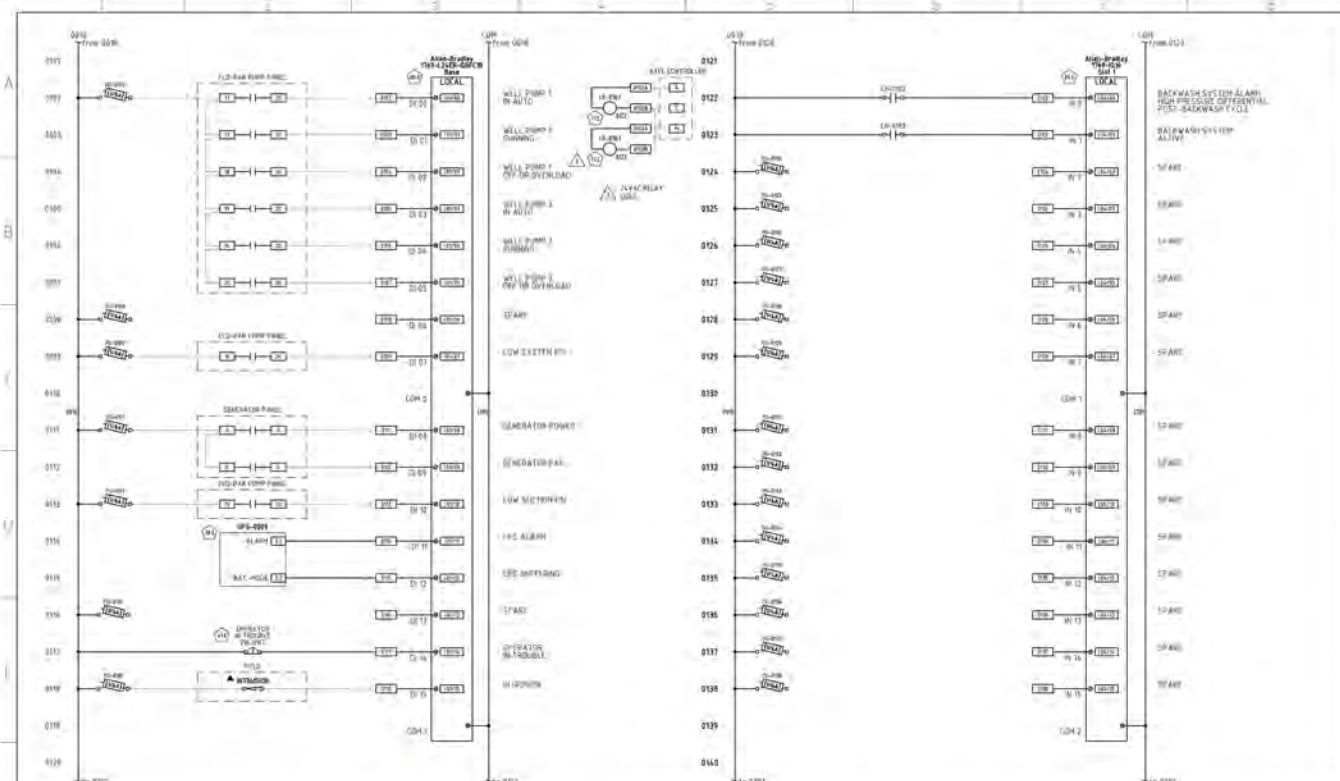
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NO.	REVISIONS	BY	DATE
1	AS BUILT PER CONTRACTOR FIELD NOTES	STV	7/7/2021

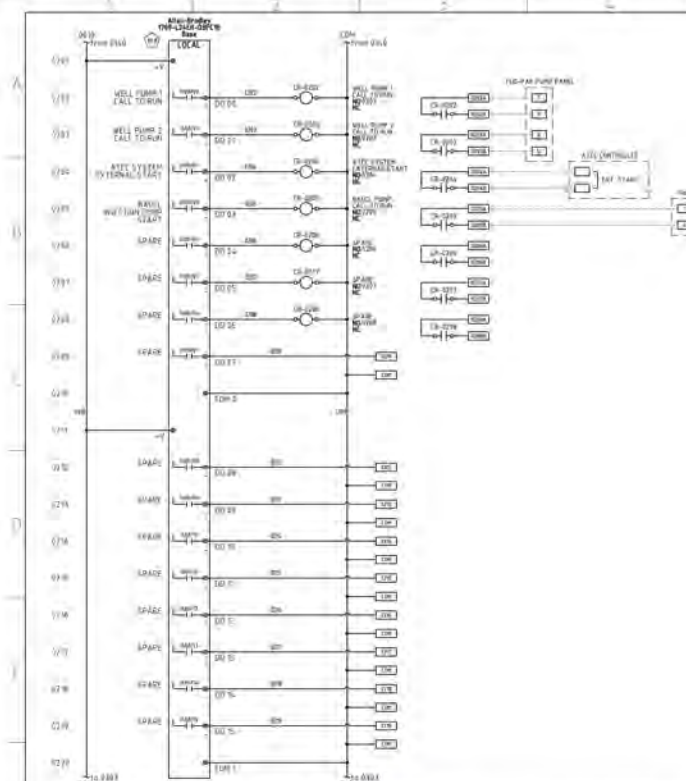
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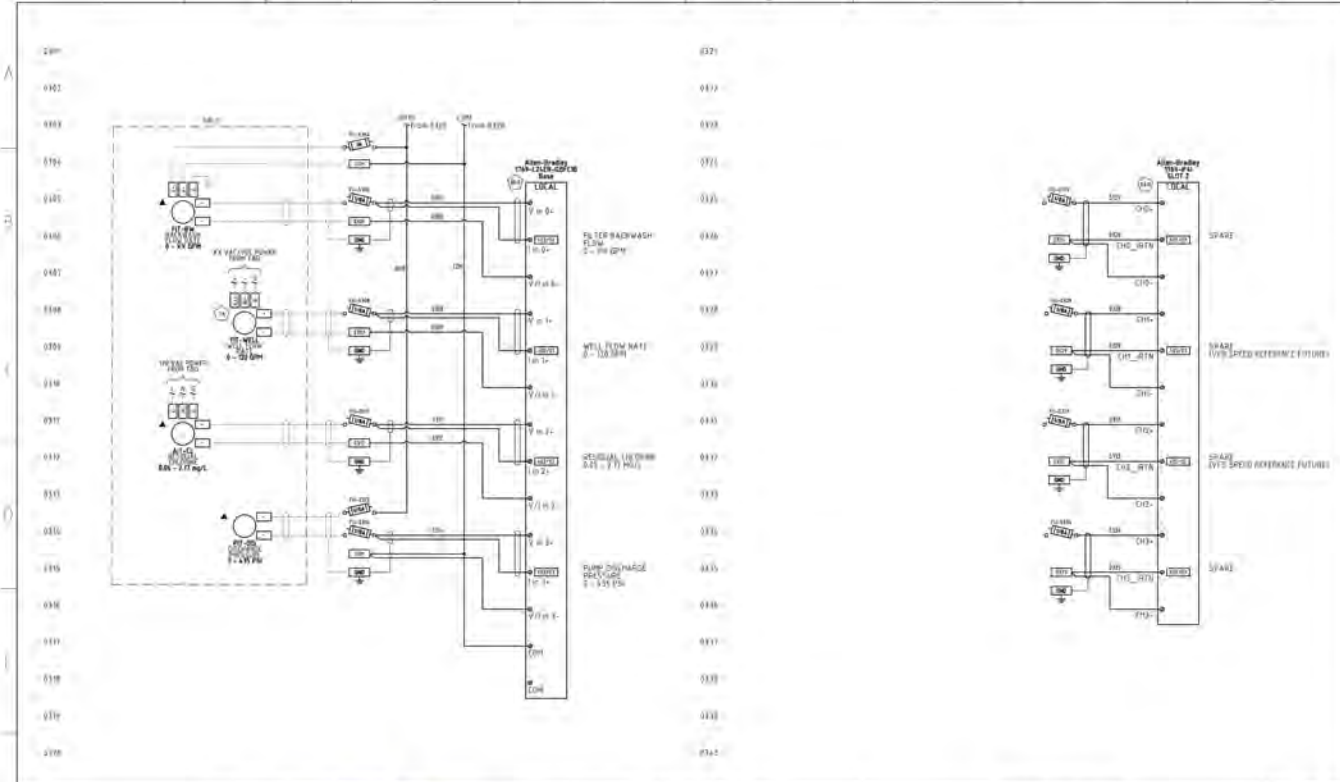
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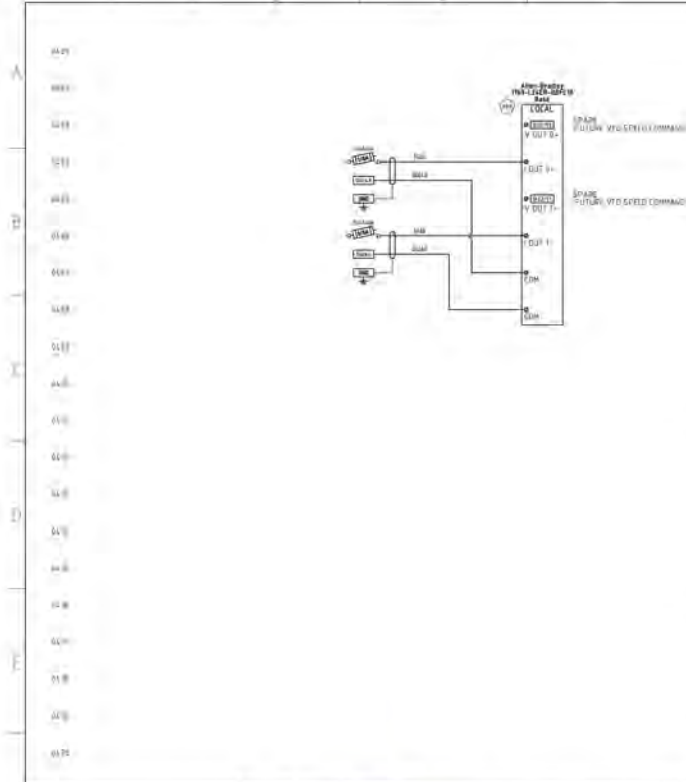
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	SCALE AS SHOWN	JOHN NUMBER 2069		PROJECT LAKE WHATCOM WATER & SEWER DISTRICT BELLINGHAM WASHINGTON AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES		ELECTRICAL - CONTROL DRAWINGS	

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SIZE, DO NOT SCALE

Bill of Materials				Quality Controls Corporation	
PROJECT NAME: LWWSO Agate Heights Water Treatment Plant Upgrades				5015 208th St. SW, Unit 1-B, Lynnwood, WA 98036 (425)778-8280	
QCC PROJECT NO.: P2009					
Item No Name / Tag No.	Qty.	Description	Manufacturer	Man. Part No.	Vendor
CONTROL PANEL INSTRUMENTATION					
1.0 FE/FIT-PROD	1	Magnetic Inductive Flowmeter, DN50 2" PROMAG W 300 Cl. 150, carbon steel flange ASME B16.5 Hard Rubber Lining St. Steel 1.4435/316L Electrodes	Endress + Hauser	5W3B50-CSEIBAD0FADHA1KGAA1+AA4	Field Instruments & Controls
1.1 Flow Meter - Magnetic Grounding Rings	1	Grounding Rings: 2", 150#, 316SS, Pair	ENCO Manufacturing	GRSS-2	ENCO Manufacturing
CONTROL PANEL INSTRUMENTATION					
22.0 Enclosure - Wall Mount Type 4X Fiberglass	1	Enclosure: NEMA 4X, Fiberglass, Gray, 3-Point Latching Hardware, 40"H x 32"W x 12"D	Allied Moulded Products	AMXL403212L3PT	Platt Electric
22.1 Enclosure - Wall Mount Type 4X Fiberglass	1	Backpanel: 37.0"H x 29.0"W, Steel, White	Allied Moulded Products	P4032	Platt Electric
26.0 LT-0005	1	Light Fixture: LED, 285 mm (11.2"), with Power Cable, On/Off Switch	Banner	WLB322C285PBQ MB	WESCO
26.1 ZS-0005	1	Light Switch: Door Activated	Hoffman	ALFSWD	North Coast Electric
33.0 RECP-0006	1	Receptacle: Panel Interface Port, Type 12/4/4X, 120VAC Outlet and RJ-45	Automation Direct	ZP-PSA-16-101	Quantum Automation
35.0 SPD-0002	1	Surge Suppressor: 120 VAC Nominal Voltage, Status Indication, Base Included	Phoenix	2907918	Stoneway
36.0 UPS-0009	1	Uninterruptible Power Supply: TRIO Series, Integrated 24VDC Power Supply, 120VAC Input, 10A, Battery Required	Phoenix	2907161	Stoneway
36.1 BATT-0012	1	UPS Battery: 24VDC, 7.2 AH	Phoenix	2320319	Stoneway
40.0 CB-0001	1	Circuit Breaker: 20A, 1 Pole, Thermal Magnetic UL489	Eaton	FAZ-C20/1-NA-SP	Platt Electric
40.1 CB-0010 CB-0011	2	Circuit Breaker: 10A, 1 Pole, Thermal Magnetic UL489	Eaton	FAZ-C10/1-NA-SP	Platt Electric

Page 1 of 3

2/1/20213:00 PM

Bill of Materials					Quality Controls Corporation	
PROJECT NAME: LWWSO Agate Heights Water Treatment Plant Upgrades					5015 208th St. SW, Unit 1-B, Lynnwood, WA 98036 (425)778-8280	
QCC PROJECT NO.: P2009						
Item No Name / Tag No.	Qty.	Description	Manufacturer	Man. Part No.	Vendor	
40.2 CB-0006 CB-0007 CB-0008 CB-0014	4	Circuit Breaker: 5A, 1 Pole, Thermal Magnetic UL489	Eaton	FAZ-C5/1-NA-SP	Platt Electric	
40.3 CB-XXXX	6	Circuit Breaker: 2A, 1 Pole, Thermal Magnetic UL489	Eaton	FAZ-C2/1-NA-SP	Platt Electric	
61.0 PB-0117	1	Pushbutton: Mushroom Head, 30.5 mm, Maintained, Red, NEMA 4X, 1 N.C. Contact	Allen-Bradley	800H-FRXT6D4	North Coast Electric	
71.0 CR-0004	1	Control Relay: 120VAC, DPDT, Indicator Light	Idec	RJ2S-CL-A120	Industrial Controls Supply	
71.1 CR-XXXX	7	Control Relay: 24VDC, DPDT, Indicator Light	Idec	RJ2S-CL-D24	Industrial Controls Supply	
71.2 CR-0121	2	Control Relay: 24VAC, DPDT, Indicator Light	Idec	RJ2S-CL-A24	Industrial Controls Supply	
71.3 Control Relay - DPDT Slim	10	Relay Socket: DPDT Blade, DIN Rail Mount	Idec	SJ2S-07LW	Industrial Controls Supply	
75.0 Terminals	90	Terminals: 600V, 25A, #12-#30 AWG	Allen-Bradley	1492-J3	North Coast Electric	
75.1 Terminals	11	Terminals: Grounding, #12-#30 AWG	Allen-Bradley	1492-JG3	North Coast Electric	
76.0 Terminals - Fused	34	Terminal: Fused, 1/4" x 1-1/4", Indicating 24 VDC LED	Allen-Bradley	1492-H5	North Coast Electric	
76.1 Fuses	22	Fuses: 1/4 Amp, 1/4"x 1-1/4", Glass, Fast Acting	Bussmann	AGC-1/4-R	Industrial Controls Supply	
76.2 Fuses	12	Fuses: 1/8 Amp, 1/4"x 1-1/4", Glass, Fast Acting	Bussmann	AGC-1/8-R	Industrial Controls Supply	
78.0 Fuses - Drawer	1	Utility Box: DIN Mount, Drawer	Wago	709-591	Industrial Controls Supply	
79.0 Ground Bar	1	Ground Bar: 12 terminal, copper alloy, Wire range #6 - #14 AWG.	Electric Motion	EM4251-12-SS-O	Electric Motion	

Page 2 of 3

2/1/20213:00 PM

Bill of Materials					Quality Controls Corporation	
PROJECT NAME: LWWSO Agate Heights Water Treatment Plant Upgrades					5015 208th St. SW, Unit 1-B, Lynnwood, WA 98036 (425)778-8280	
QCC PROJECT NO.: P2009						
Item No Name / Tag No.	Qty.	Description	Manufacturer	Man. Part No.	Vendor	
80.0 PLC-0013	1	Programmable Logic Controller: CompactLogix, 2 Ethernet and 1 USB Ports, 24VDC Embedded 16 DC Inputs, 16 DC Digital Outputs, 4 High-Speed Counters, 4 High-Speed Counter Outputs, 4 Universal Analog Inputs, 2 Analog Outputs 8 I/O Expansion	Allen-Bradley	1769-L24ER-QBFC1B	North Coast Electric	
82.0 PLC DI	1	Digital Input Module: 16 Inputs, 24 VDC	Allen-Bradley	1769-IQ16	North Coast Electric	
83.0 PLC AI	1	Analog Input Module: 4 Isolated Inputs, 0/4-20 mA	Allen-Bradley	1769-IF4I	North Coast Electric	
90.0 OIT-0014	1	Operator Interface: PanelView Plus 7 Standard Terminal, 10.4", Touch, 24VDC	Allen-Bradley	2711P-T10C21DBS	North Coast Electric	
91.0 ETH-0015	1	Ethernet Switch: Managed, 24VDC Powered, 6 10/100base TX RJ 45, 2 Fiber Optic Multimode ST	N-iron	708FX2-ST	Industrial Controls Supply	

Page 3 of 3

2/1/20213:00 PM

NO.	REVISIONS	BY	DATE
1	AS BUILT PER CONTRACTOR FIELD NOTES	STV	7/7/2021

K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794



DESIGNED BY

STV

DRAWN BY

KL

CHECKED BY

STV

DATE

11-13-2020

SCALE

AS SHOWN

JOB NUMBER

2069

WILSON
ENGINEERING

WILSONENGINEERING.COM

LAKE WHATCOM WATER & SEWER DISTRICT

BELLINGHAM

WASHINGTON

AGATE HEIGHTS WATER TREATMENT PLANT UPGRADES

ELECTRICAL – BILL OF MATERIALS

SHEET

E7.3

R1

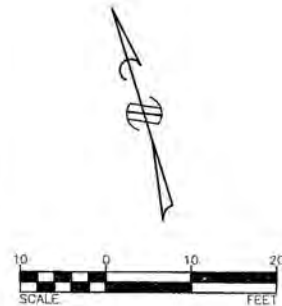
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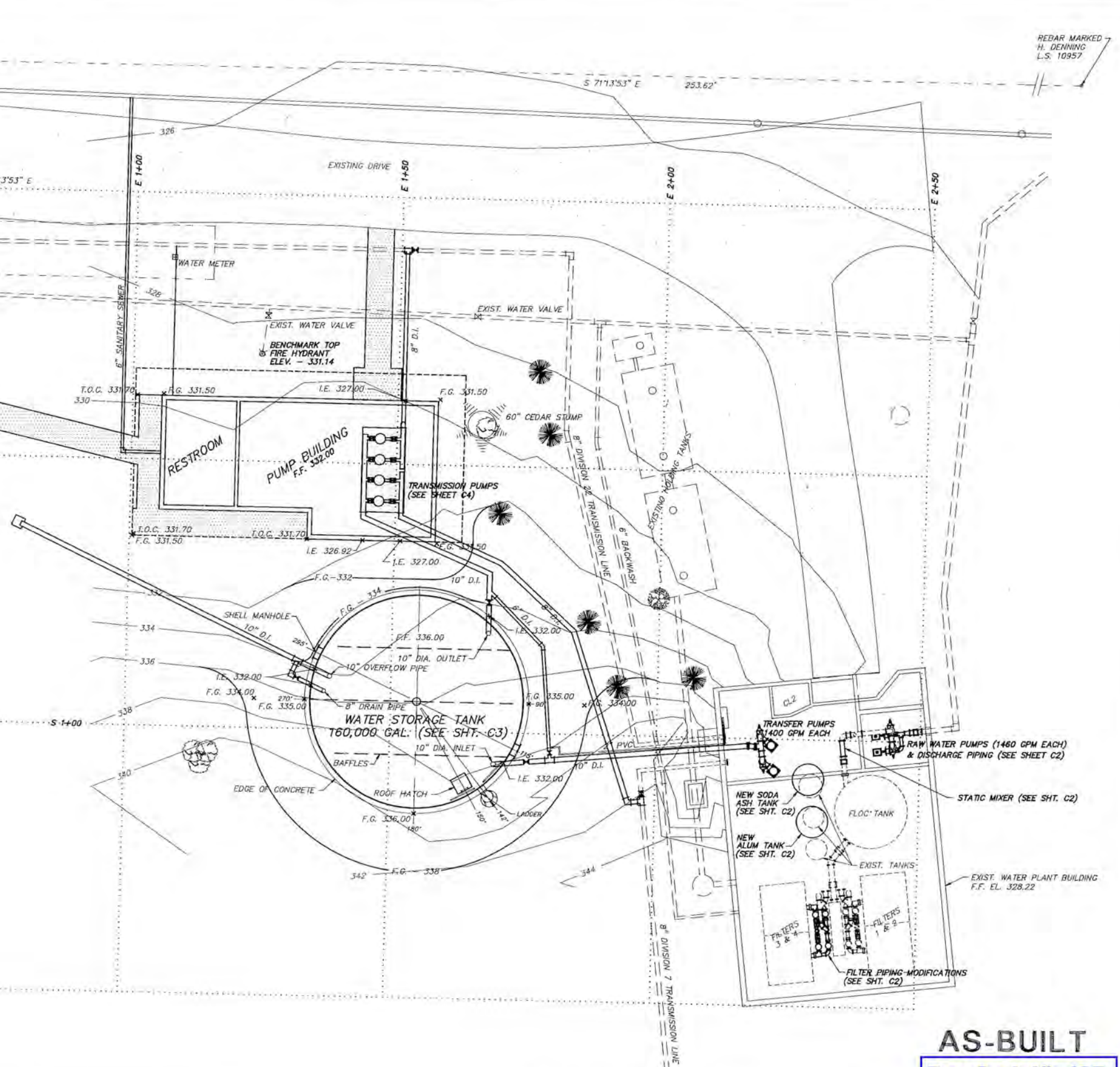
OF 19

AS BUILT

Sudden Valley Water Treatment Plant



LEGEND	
	PIPE & FITTINGS
	GATE VALVES
	EXISTING PIPE & EQUIPMENT
	FINISHED GRADE
	EXISTING CONTOUR
	FINISHED FLOOR ELEVATION
	TOP OF CONCRETE
	PIPE INVERT ELEVATION
	FOOT DRAIN



AS-BUILT
DwgSerial#: 485

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Wilson Engineering
CONSULTING ENGINEERS & SURVEYORS

805 DUPONT STREET #7
BELLINGHAM, WA 98225
(206) 733-6100
FAX: (206) 647-9061



DESIGNED BY:
MAC
DRAWN BY:
RAM
CHECKED BY:
MAC

WHATCOM CO. WATER DIST NO. 10
WATER TREATMENT PLANT AS-BUILT
SITE PLAN

DATE	SHEET
FEB 94	A01
SCALE	OF
AS SHOWN	
JOB NUMBER	
92006	4



PERSPECTIVE SKETCH

WATER TREATMENT PLANT CONTROL BUILDING

Morning Beach Drive, Sudden Valley, Washington

Water District 10
Sudden Valley
Water Treatment Plant Control Bldg.
Morning Beach Drive
Sudden Valley, WA

Job Number 9210
Drawn By KCG
Checked By RCR
Date 6-15-92
Revisions

A1

ARCHITECTURAL ABBREVIATIONS

SYMBOLS USED AS ABBREVIATIONS	ABBREVIATIONS	CLR	FE	LT, LITE	PCF	SYS
angle	ABV above	CLR clear	FE fire extinguisher	LT, LITE light	PCF pounds per cubic foot	SYS system
centerline	AFF above finished floor	COL column	FEC fire extinguisher cabinet	LW lightweight	PFL pounds per linear foot	TKBD teleboard
channel	ADC access	COMB combination	FPL fireplace	LP low point	PSF pounds per square foot	TEL telephone
panny	AC, ACQUIS acoustical	COMPOS composite	FLG, FLASH flashing	M B machine bolt	PSI pounds per square inch	TV television
perpendicular	ACT acoustical tile	COMP compress (adj.)	FLR floor (ing)	M H manhole	PFT prefinished	THK thick (ness)
plate	ADD addendum	(em), (ble) (em), (ble)	FD floor drain	M FR manufacture (er)	PL property line	THR threshold
round, diameter	ADJ adjacent	CONC concrete	FTG, FOOT footing	M KB marker board	PROVIDE furnish & install	TP toilet partition
	AGG aggregate	CMU concrete masonry unit	FND, FOUND foundation	M KBD marker board		T & G tongue and groove
	ALT alternate	CONST construction	FR, FRM frame (s), (ing)	MAS masonry		TOS top of slab
	AL, ALUM aluminum	CONT continuous or continue	FURNISH supply only	MO masonry opening		TB towel bar
	DIAM diameter	CONTR contract (or)		MTL material (s)		T tread
	DIMEN dimension	CJ control joint		MAX maximum		TYP typical
	DR door	C G corner guard		MECH machine (s)		
	DS downspout	C CORR corrugated, corrider		MC medicine cabinet		
	DRAIN drain	CTR counter		MBR member, membrane		
	DWG drawing	CTSK countersunk		MET metal		
	DF drinking fountain	CRS course (s)		MWK milwork		
		DEMO demolish, demolition		MIN minimum		
		DTL detail		MIR mirror		
		DIAG diagonal		MISC miscellaneous		
		ALUM aluminum		MOD modular		
		ANCHOR anchor bolt		MOLD molding		
		ANOD anodized		MT mount (adj), (ing)		
		APPROVAL written approval by the Architect		MULL mullion		
		ARCH architect		NAT natural		
		ASB asbestos		NR noise reduction		
		ASPH asphalt		NRG noise reduction coefficient		
		AUTO automatic		NOM nominal		
				N north		
				NIC not in contract		
				NTS not to scale		
				OBS obscure		
				OC on center (s)		
				OPN opposite		
				SHTH sheathing		
				SHT sheet		
				SH, SHLV shelf, shelving as shown or noted on the drawings		
				SIM similar		
				SKL, SKLT skylight		
				SC solid core		
				SP soundproof		
				S south		
				SPEC specification (s)		
				SO square		
				SST stainless steel		
				STD standard		
				STA station		
				ST, STL steel		
				SD storm drain		
				STR structural		
				SUSP suspended		
				SYM symmetry (cal)		

Abbreviations and graphic symbols shown are in general compliance with building industry standards. Request clarifications, if necessary, before proceeding with the work.

REFERENCE SYMBOLS

	North
	True North (if not called North)
	Finish Grade Elevation
	Existing Contour
	New Contour
	Level Line
	Center Line
	Match Line, Cut Line
	Property Line
	Project Limit Line
	Grid Number/Letter
	Building Section Letter
	Sheet Where Shown
	Wall Section Letter
	Sheet Where Shown
	Detail Number
	Sheet Where Shown
	Interior Elevation Key Numbers
	Sheet Where Shown
	Room Number
	Door Number
	Window/Refr. Letter
	Revision

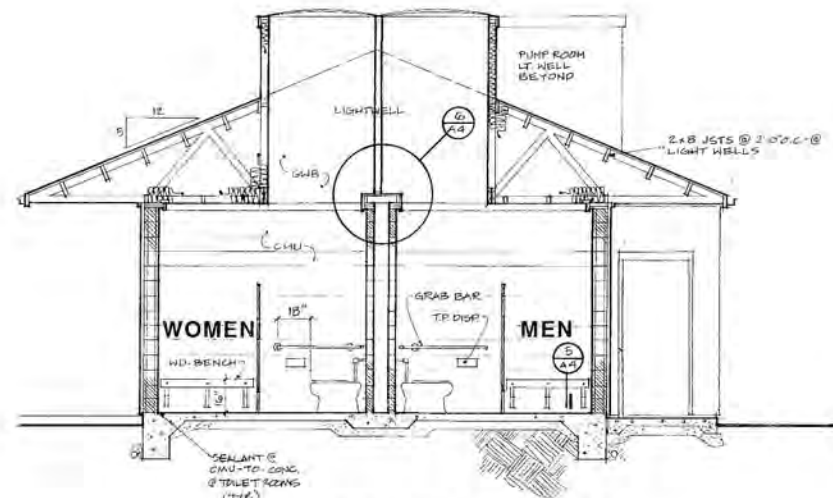
MATERIALS

	Acoustic Tile or Board
	Brick
	Ceramic Tile or
	Concrete
	Concrete Masonry
	Earth
	Glass
	Gypsum Wall Board
	Batt Insulation
	Rigid Insulation
	Metal
	Plaster on Metal Lath
	Mortar, Plaster or Grout
	Plywood
	Rock Fill
	Sand
	Stone
	Finish Wood
	Framing Lumber
	Blocking Lumber

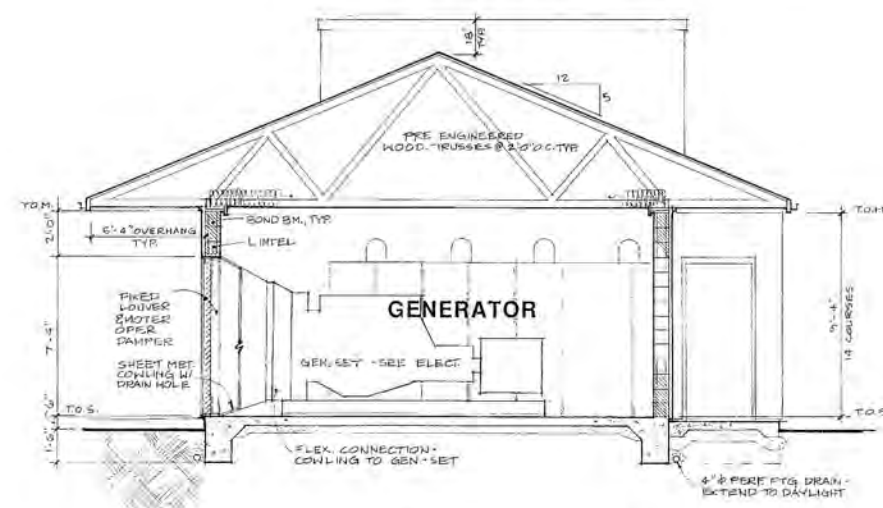
The Drawings, Specifications and other portions of the Contract Documents are instruments of the Architect's service for use solely with respect to this Project and, unless otherwise authorized in writing by the Architect, any use or re-use is strictly prohibited. Written Dimensions have precedence over scaled measurements. Dimensions and detail conditions shall be verified by the Contractor with the Architect before proceeding with the work.

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SIZE, DO NOT SCALE

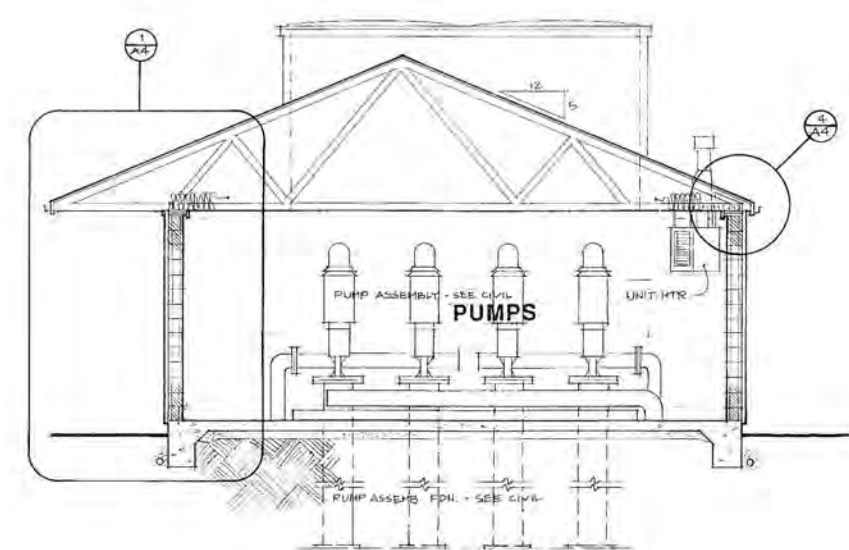
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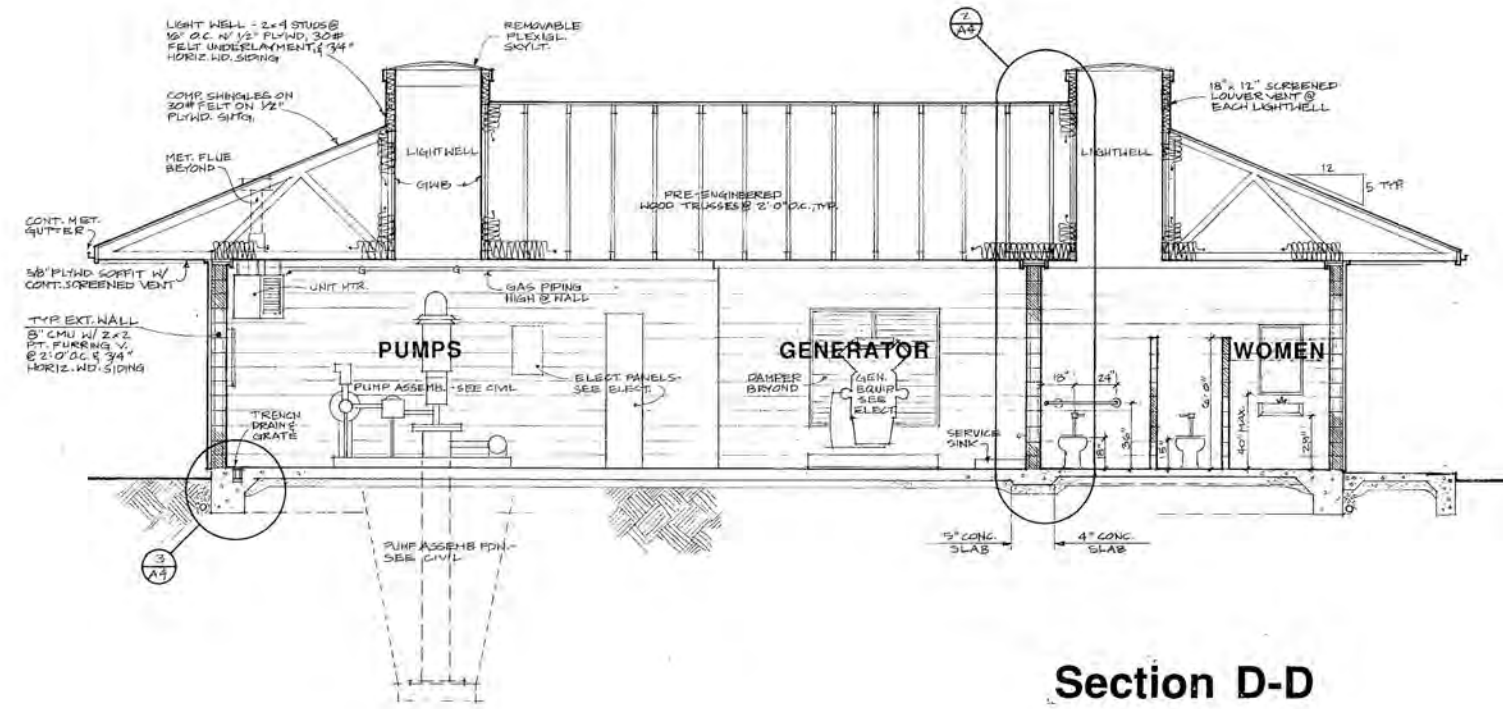
Section C-C



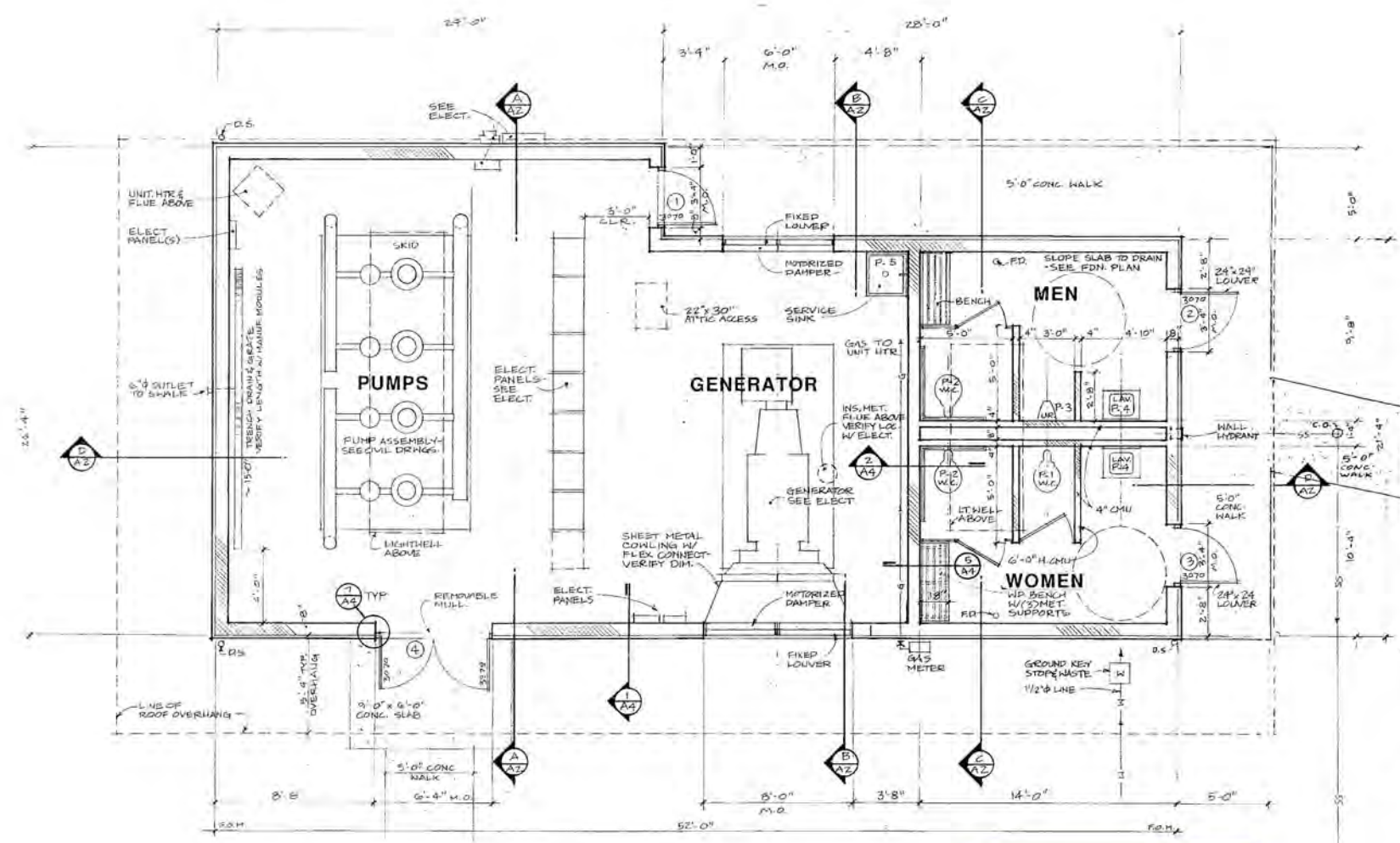
Section B-B



Section A-A



Section D-D



DwgSerial#: 490

Floor Plan



**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

ARCHITECTS
ROSS & Mc Clure
Bellingham, Washington 98225
(360) 675-7733

2708
REGISTERED
ARCHITECT
MICHAEL C. ROSS
574-209-8620
6/15/12

Water District 10 Sudden Valley
Water Treatment Plant Control Bldg.
Morning Beach Drive Sudden Valley, WA

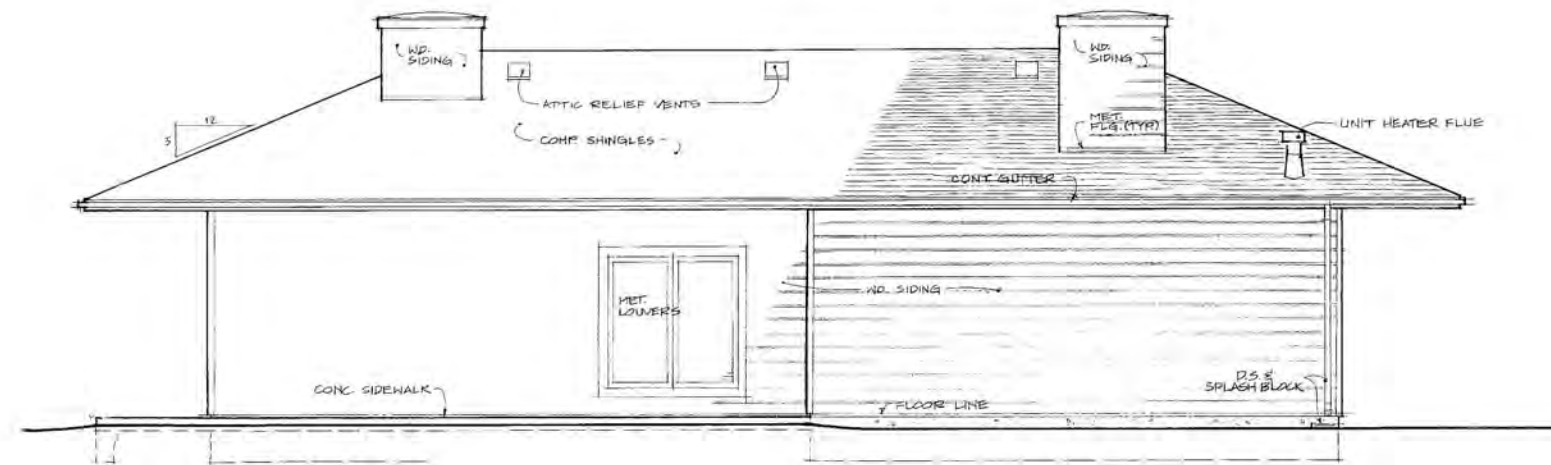
Job Number 9210
Drawn By KCG
Checked By RCR
Date 6/15/12
Revisions

A2

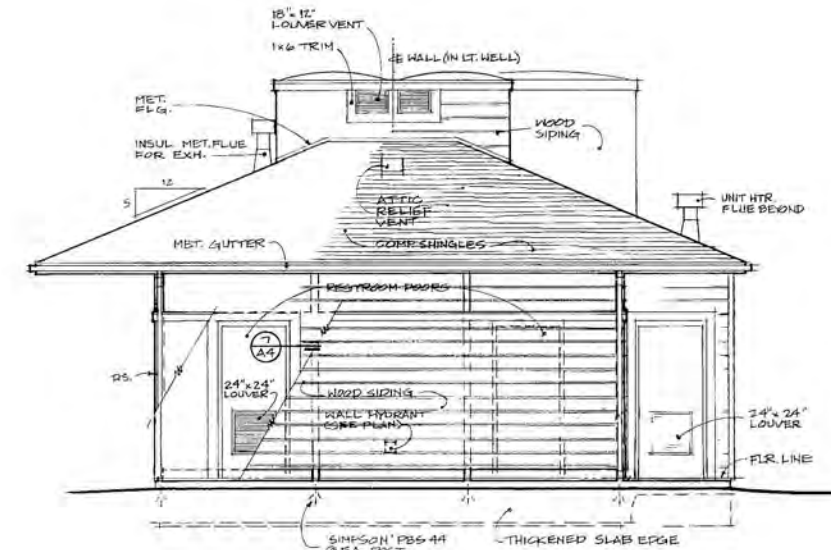
Water District 10 Sudden Valley
Water Treatment Plant Control Bldg.
Morning Beach Drive Sudden Valley, WA

Job Number 7210
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Checked By RCR
Date 6/15/92
Revisions

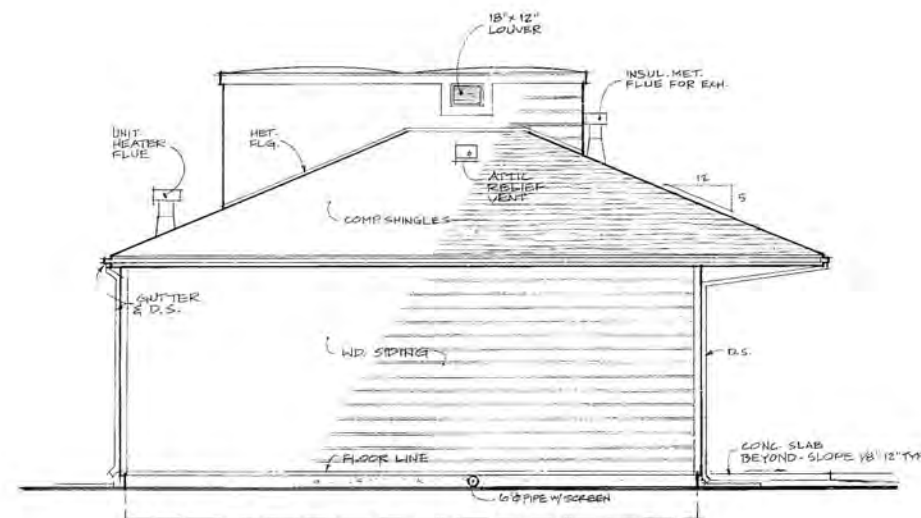
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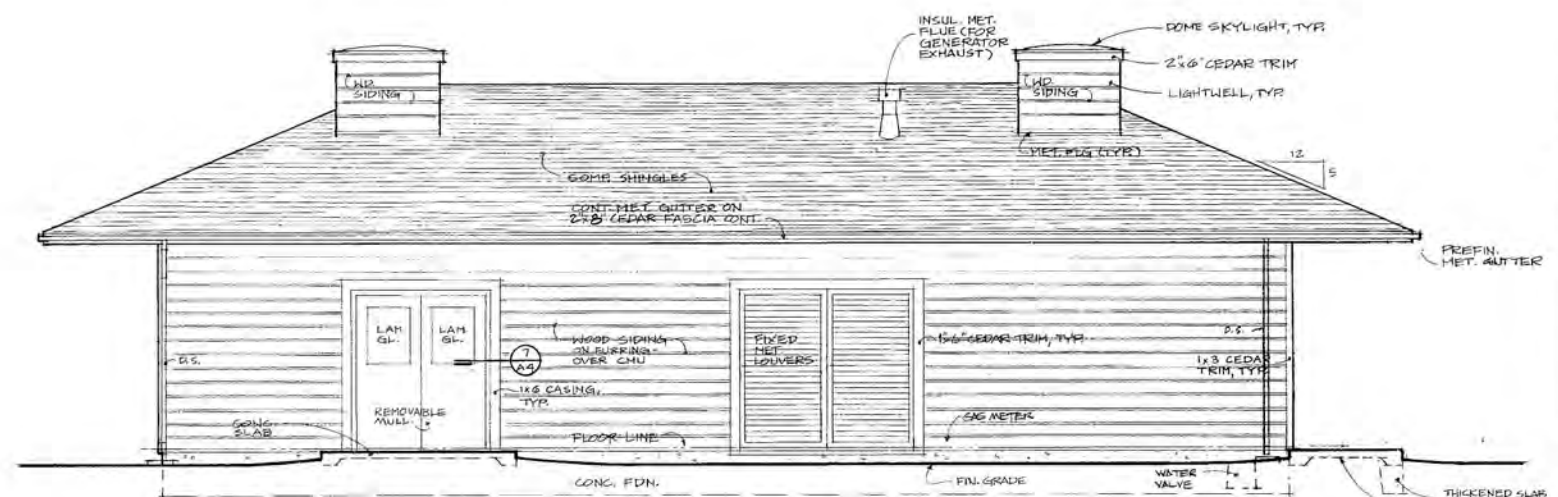
South



West



East

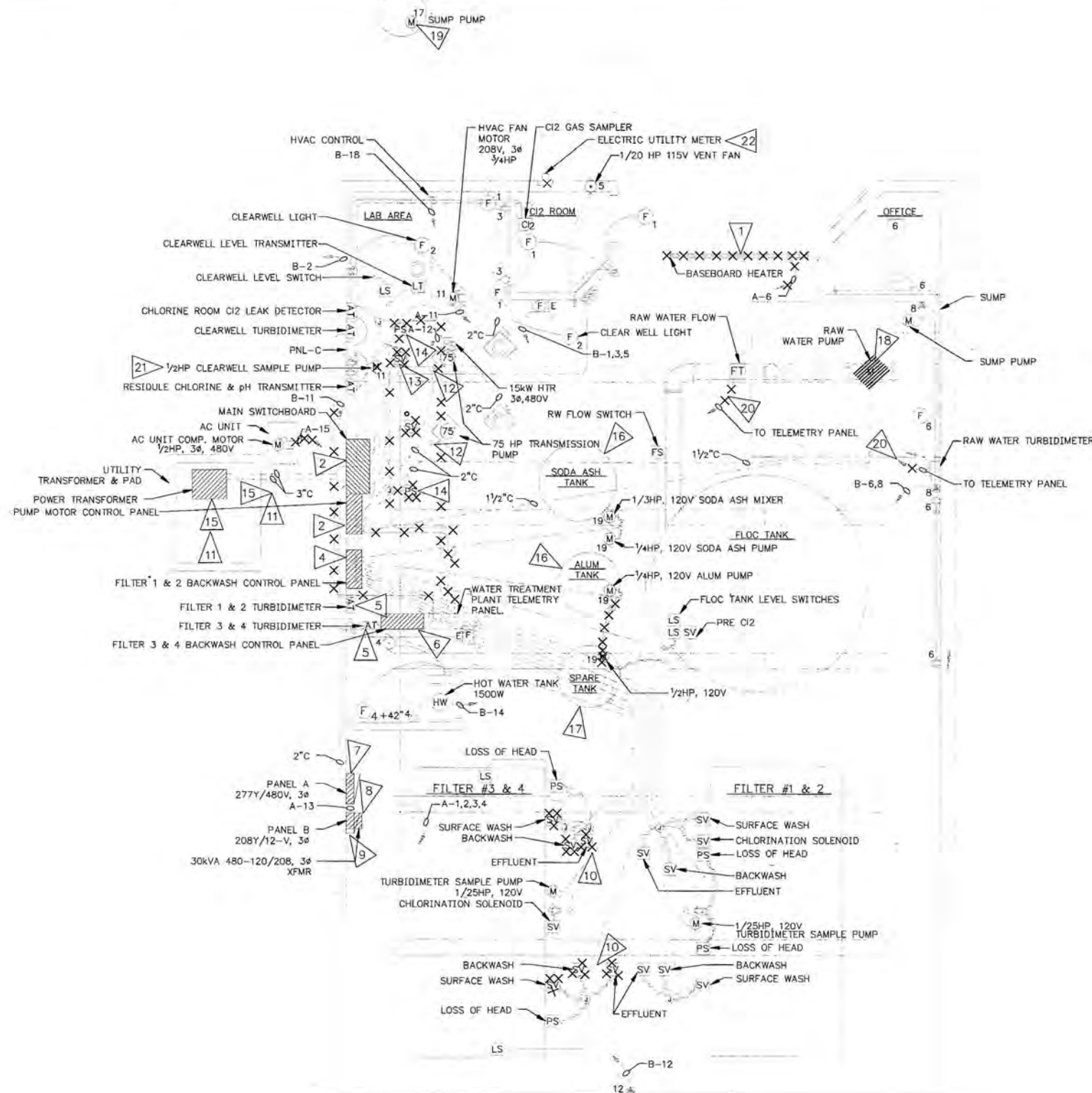


North

**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

DwgSerial#: 491

Elevations
SCALE: 1/4" = 1'-0"
ALL DRAWINGS THIS SHEET



GENERAL NOTES:

- 1 REMOVE BASE BOARD HEATER AND ASSOCIATED WIRE, CAP CONDUIT.
- 2 REMOVE SERVICE ENTRANCE SWITCHBOARD AND SERVICE CONDUCTORS.
- 3 REMOVE MOTOR CONTROL CENTER - DISCONNECT AND STARTER MOUNTED ABOVE MCC.
- 4 REMOVE FILTER 1 & 2 BACKWASH CONTROL PANEL.
- 5 REMOVE FILTER 1 & 2 AND 3 & 4 TURBIDIMETERS, CONDUIT, & WIRE TO BE REUSED.
- 6 REMOVE FILTER 3 & 4 BACKWASH CONTROL PANEL AND ALL ASSOCIATED CONDUIT AND WIRE.
- 7 REMOVE PANEL A.
- 8 REMOVE PANEL B TRANSFORMER AND SERVICE CONDUIT/WIRE TRANSFORMER TO BE REUSED. MOUNT ABOVE NEW MCC.
- 9 REMOVE PANEL B.
- 10 REMOVE FILTER 3 & 4 SOLENOID VALVES - REUSE CONDUIT & WIRE.
- 11 SEE SWITCH-OVER SEQUENCE IN THE SPECIFICATIONS.
- 12 REMOVE CONDUCTORS & FLEX CONDUIT FOR 75 HP TRANSMISSION PUMPS.
- 13 REMOVE TRANSMISSION PUMP SOLENOID VALVES, FLEX CONDUIT AND WIRE. (2 SOLENOIDS PER PUMP)
- 14 REMOVE TRANSMISSION PUMP, PRESSURE SWITCHES, CONDUIT AND WIRE.
- 15 REMOVE SERVICE CONDUCTORS FROM POWER XFMR. TO SWITCHBOARD PUGET POWER TO REMOVE XFMR.
- 16 EXISTING SODA ASH & ALUM TANKS TO BE REMOVED AND REPLACED. ASSOCIATED MIXER & METERING PUMPS TO BE REMOVED AND REINSTALLED ON NEW TANKS.
- 17 REMOVE 1/2HP PUMP AND ASSOCIATED CONDUCTORS & FLEX CONDUIT.
- 18 DISCONNECT RAW WATER PUMP AND REMOVE CONDUCTORS.
- 19 EXISTING SUMP PUMP IS NOT OPERATIONAL - TO REMAIN AS IS.
- 20 EXISTING CONDUIT & WIRE TO TELEMETRY PANEL TO BE REMOVED.
- 21 SAMPLE PUMP TO BE REMOVED AND TURNED OVER TO OWNER.
- 22 REMOVE EXISTING METER, BASE, AND ASSOCIATED CONDUIT & WIRE TO C.T. ENCLOSURE.

DEMOLITION PLAN
EXISTING POWER CONTROL, REC. & LIGHTING
SCALE: 1/4"=1'-0"



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SIZE, DO NOT SCALE**

Wilson Engineering
CONSULTING ENGINEERS & SURVEYORS

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(206) 733-6100
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CASNE ENGINEERING, INC.
P.O. BOX 7207
BELLEVUE, WA 98008
(206) 454-3555

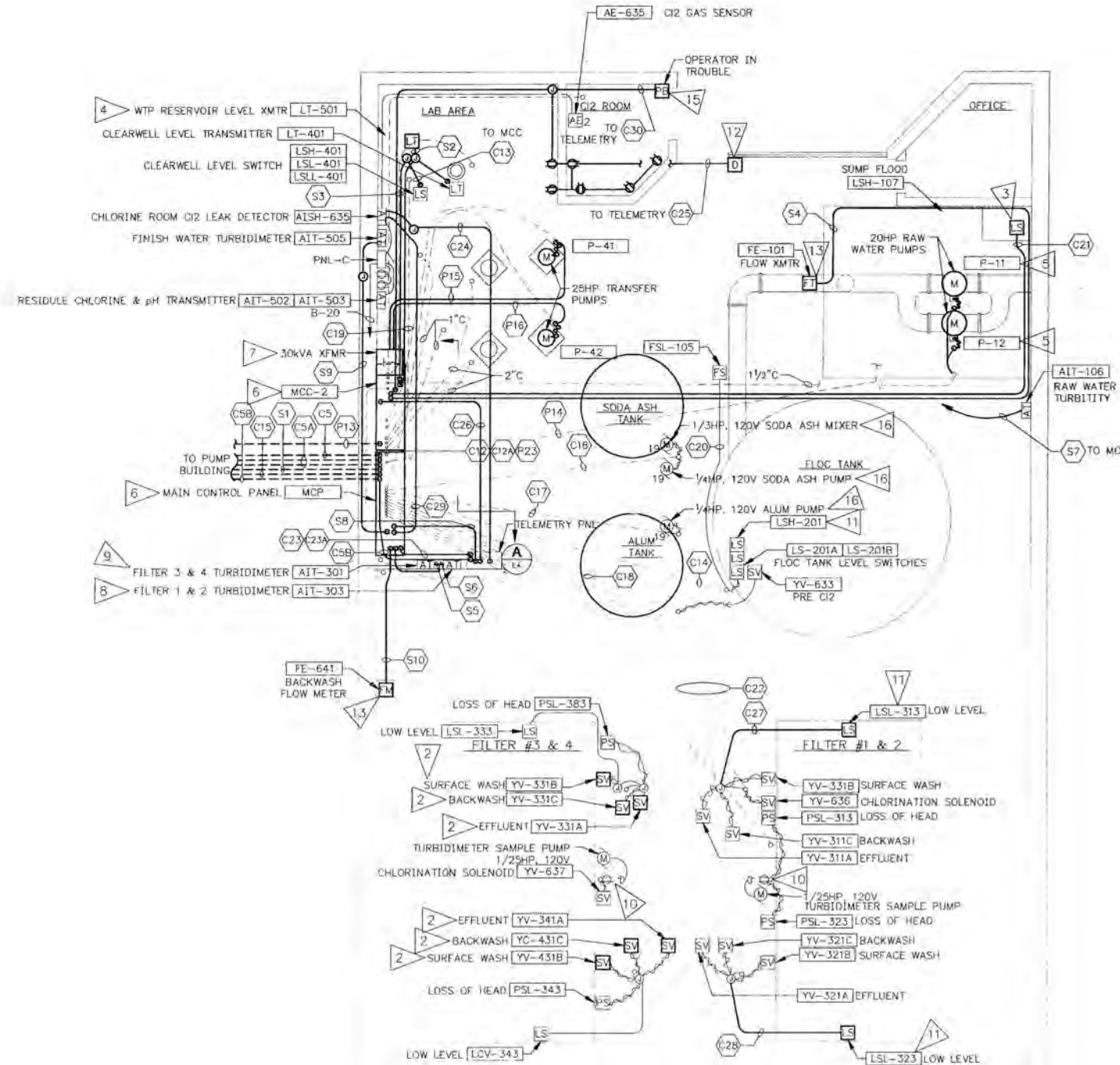
DESIGNED BY:
DMB/VMF
DRAWN BY:
TEO
CHECKED BY:
KLA

WHATCOM COUNTY
WATER TREATMENT PLANT
EXIST. POWER & CONTROL DEMO. PLAN

DATE	July 1992	SHEET	E06
SCALE	AS SHOWN	OF	
JOB NUMBER	92021A		16

FLAG NOTES:

- 1 RECONNECT ALL EXISTING EQUIPMENT REUSE EXISTING CONDUIT AND WIRE WHEN POSSIBLE.
- 2 PROVIDE SIX NEW SOLENOID VALVES AND TWO LEVEL SWITCHES FOR FILTERS.
- 3 PROVIDE SUMP FLOOD SWITCH.
- 4 PROVIDE RESERVOIR LEVEL TRANSMITTER.
- 5 PROVIDE CONDUCTORS TO NEW RAW WATER PUMPS AND NEW TRANSFER PUMPS.
- 6 PROVIDE NEW MCP & MCC-2.
- 7 RELOCATE EXISTING 30kVA 480-120/208, 3Ø, XFMR. MOUNT ABOVE MCC.
- 8 RELOCATE FILTER 1 & 2 TURBIDIMETER.
- 9 RELOCATE FILTER 3 & 4 TURBIDIMETER.
- 10 SEE CONTROL PANEL SCHEMATICS FOR CIRCUIT DESIGNATIONS.
- 11 PROVIDE NEW LEVEL SWITCH
- 12 PROVIDE NEW DOOR SWITCH
- 13 PROVIDE NEW ROCKWELL "HSP" HEAD FOR EXISTING FLOW METER
- 14 CAP ALL UNUSED RACEWAYS AT FLOOR STUB-UP.
- 15 NEMA 4X, NON-METALIC, MAINTAINED CONTACT RED MUSHROOM HEAD PUSHBUTTON TO SEND CLOSED CONTACT TO TELEMETRY WHEN PUSHED.
- 16 EXISTING MOTORS TO BE DISCONNECTED FOR REMOVAL OF EXISTING TANKS. RECONNECT AFTER INSTALLATION OF NEW TANK.



WATER TREATMENT PLANT NEW POWER & CONTROL PLAN

SCALE: 1/4"=1'-0"



DwgSerial#: 499

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Wilson Engineering
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E
CASNE
ENGINEERING,
INC.
P.O. BOX 7207
BELLINGHAM, WA 98208
(206) 454-3555

DESIGNED BY:
DMB/VMF
DRAWN BY:
TEO
CHECKED BY:
KLA

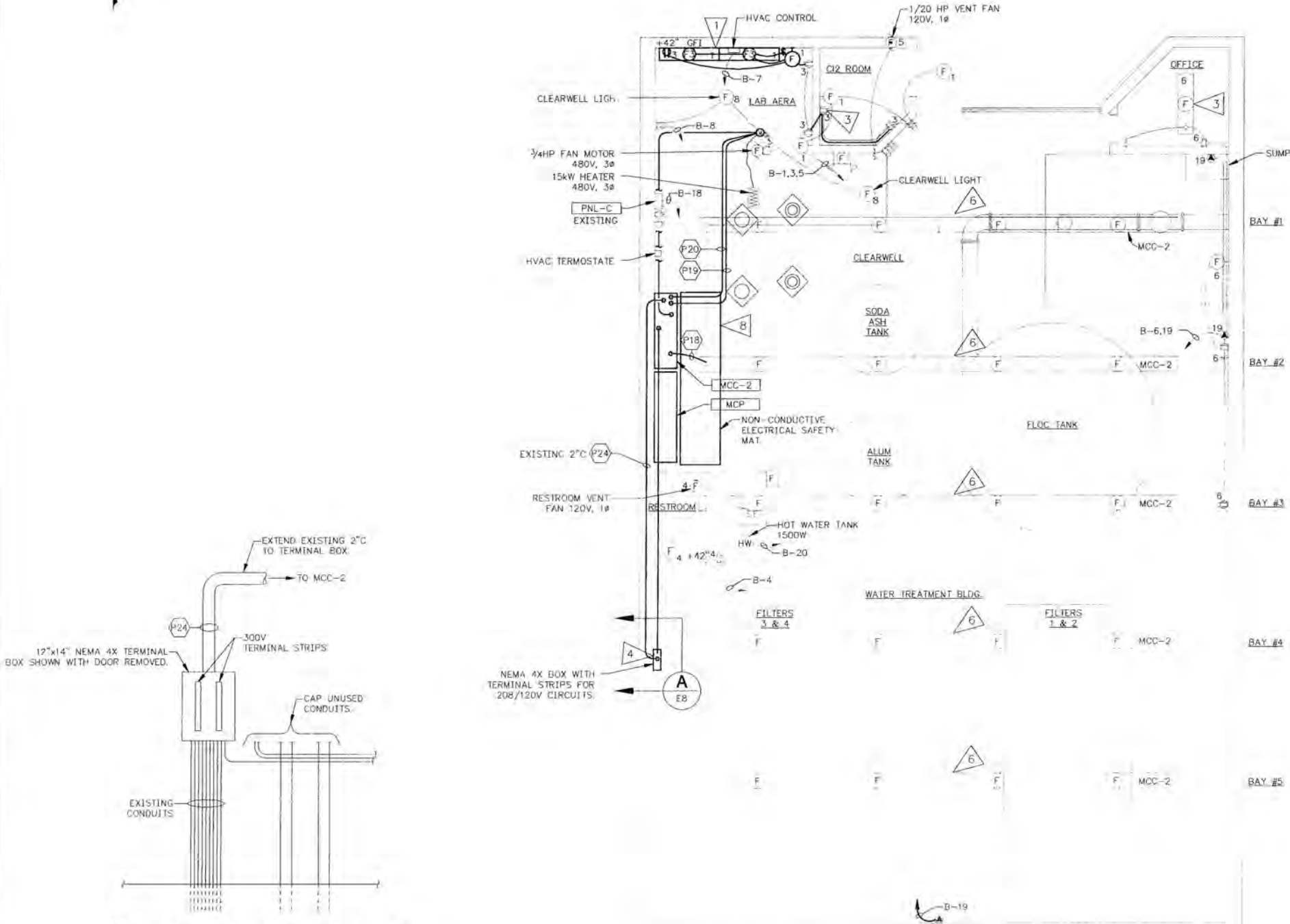
WHATCOM COUNTY
WATER TREATMENT PLANT
NEW POWER & CONTROL PLAN

DATE
July 1992
SCALE
AS SHOWN
JOB NUMBER
92021A
SHEET
E07
OF
14

GENERAL NOTES:

- 1 PROVIDE LAB AREA LIGHTS & RECEPTACLE.
- 2 PROVIDE C12 ROOM RECEPTACLES.
- 3 HARD WIRE EXISTING LIGHT IN OFFICE TO EXISTING SWITCH.
- 4 PROVIDE TERMINAL BOX FOR EXISTING CIRCUITS TO 120/208V LOADS. LAND ALL EXISTING CIRCUITS ON TERMINALS IN BOX. EXTEND EXISTING 2" C AND PULL NEW CONDUCTORS FROM MCC/PNL-B TO TERMINAL BOX. CIRCUITS AS SHOWN ON DRAWING AND PANEL SCHEDULE B.
- 5 EXTEND ALL OTHER HOME RUN CONDUITS (NOT INCLUDED IN NOTE #4) TO NEW MCC - REUSE EXISTING CONDUCTORS IF POSSIBLE.
- 6 REWIRE EXISTING 277V BAY LIGHTS - SEE MCC LAYOUT & ONE - LINE FOR DETAILS.
- 7 SEE FIXTURE SCHEDULE SHEET E4.
- 8 PROVIDE NON-CONDUCTIVE SAFETY MAT IN FRONT OF ENTIRE CONTROL PANEL AND MCC.

PANEL SCHEDULE									
NO. B		LOCATION: WTP BUILDING MCC2		120/208 VOLTS		3 PHASE		4 WIRE	
SERVING: -		100 AMP with MAIN		CB 80/3					
CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS	TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.	TRIP AMPS	TRIP AMPS
1	WALL LIGHTS	0.6	20	20	0.4	SPARE	2	20	20
3	REC. LAB AREA/C12 ROOM	0.6	20	20	0.8	RESTROOM	4	20	20
5	FAN CHLORINE ROOM	0.3	20	20	0.8	OFFICE/SUMP LIGHTS & REC.	6	20	20
7	HVAC CONTROL	0.2	20	20	0.2	CLEARWELL LIGHTS	8	20	20
9	MCP	0.5	20	20	-	SPARE	10	20	20
11	TELEMETRY CONTROL POWER	0.3	20	20	1.4	SODA ASH METER PUMP & MIXER	12	20	20
13	MCP	0.5	20	20	0.7	ALUM METER PUMP	14	20	20
15	MCP	0.5	20	20	1.0	MCP SPARE	16	20	20
17	TURBIDITY ANALYSERS	0.2	20	20	0.6	PANEL C FEED	18	20	20
19	208V RECEPTACLES	1.4	20	20	1.5	HOT WATER TANK	20	20	20
21	SPARE	-	20	20	-	SPARE	22	20	20
23	SPARE	-	20	20	-	SPARE	24	20	20
25	SPARE	-	20	20	-	SPARE	26	20	20
27	SPARE	-	20	20	-	SPARE	28	20	20
29	SPARE	-	20	20	-	SPARE	30	20	20
31	SPARE	-	20	20	-	SPARE	32	20	20
33	SPARE	-	20	20	-	SPARE	34	20	20
35	SPARE	-	20	20	-	SPARE	36	20	20
37	SPARE	-	20	20	-	SPARE	38	20	20
39	SPARE	-	20	20	-	SPARE	40	20	20
41	SPARE	-	20	20	-	SPARE	42	20	20
DESCRIPTION		CONNECTED LOAD	DEMAND FACTOR	DEMAND					
LARGEST MOTOR		0.7	1.25	0.9					
OTHER MOTORS		1.9	1.00	1.9					
LIGHTS		1.3	1.25	1.7					
MISC.		6.8	1.00	6.8					
* VIA STARTERS IN MCP		TOTAL	10.7	KVA	11.3				
			29	AMPS	31				



LIGHTING, RECEPTACLE AND HVAC POWER PLAN

SCALE: 1/4"=1'-0"

DwgSerial#: 500

PLOTTED AT REDUCED SIZE, DO NOT SCALE

Wilson Engineering
CONSULTING ENGINEERS & SURVEYORS

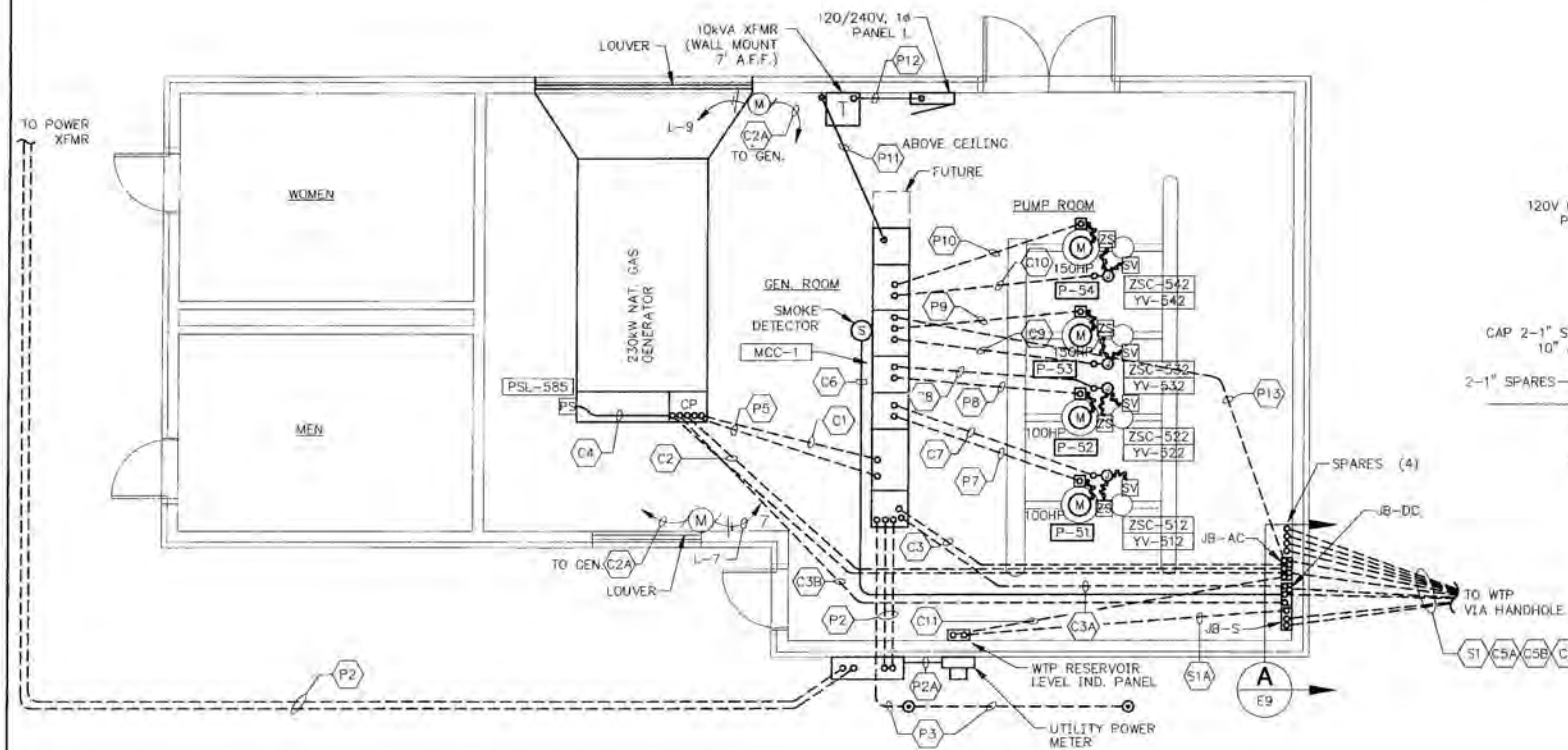
805 DUPONT STREET #7
BELLINGHAM, WA 98225
(206) 733-6100
FAX: (206) 647-9061

E
CASNE
ENGINEERING,
INC.
P.O. BOX 7207
BELLINGHAM, WA 98208
(206) 454-3555

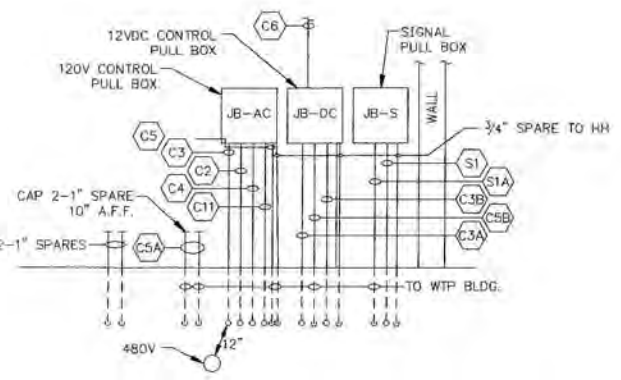
DESIGNED BY:
DMB/VMF
DRAWN BY:
TEO
CHECKED BY:
KLA

WHATCOM COUNTY
WATER TREATMENT PLAN
LIGHTING, RECPT., & HVAC POWER PLAN
PANEL B SCHEDULE

DATE
July 1992
SCALE
AS SHOWN
JOB NUMBER
92021A
SHEET
E08
OF
14



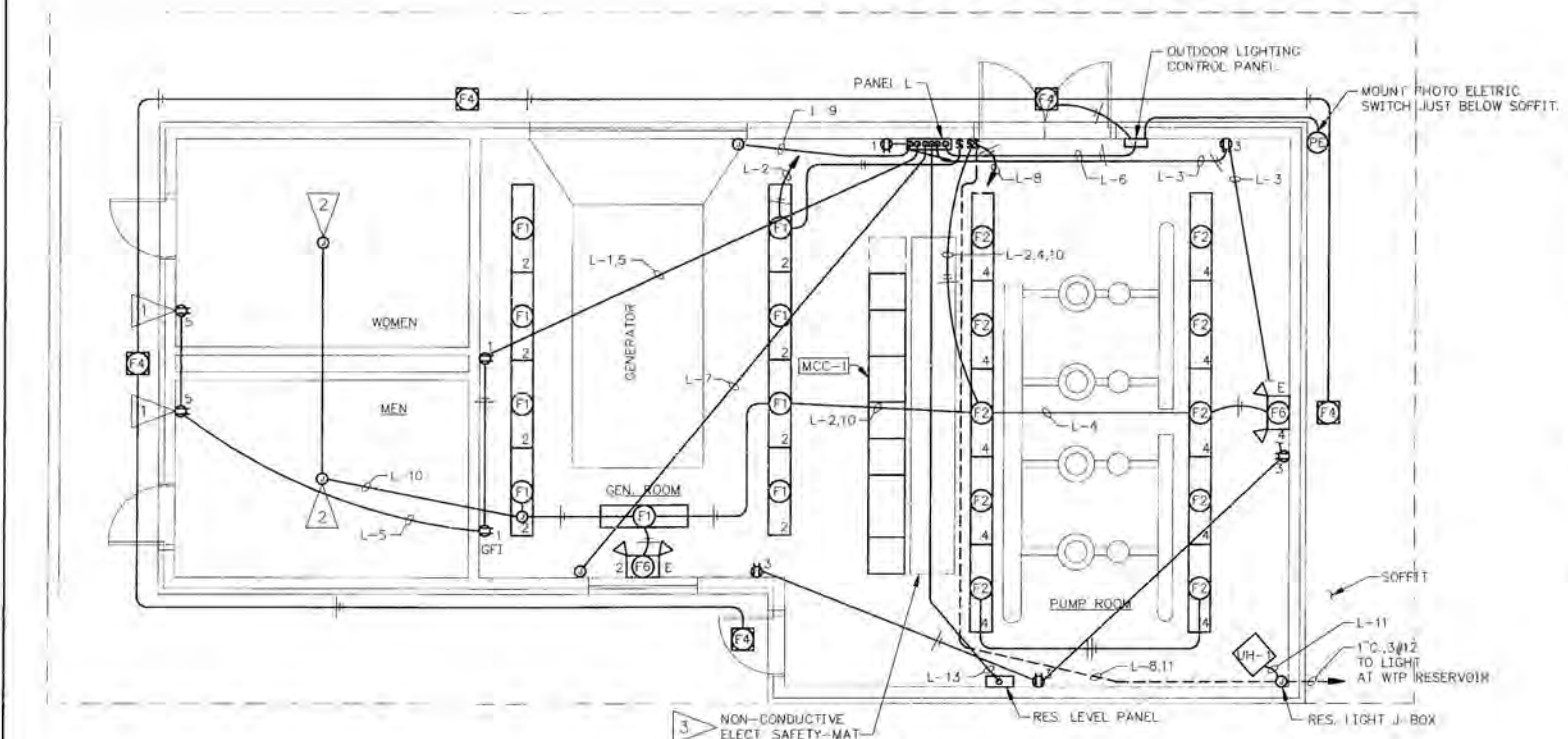
**PUMP BUILDING
CONDUIT & EQUIP. PLAN**
SCALE: 1/4"=1'-0"



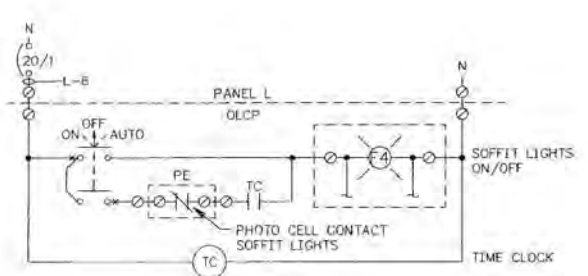
**PUMP BUILDING
EAST WALL ELEVATION**

- GENERAL NOTES:**
1. CONDUITS SHOWN SOLID SHALL BE ROUTED ABOVE CEILING OR WITHIN WALLS WHEN EVER POSSIBLE.
- FLAG NOTES:**
- 1 PROVIDE RESTROOM RECEPTACLES WITH LOCKING COVER. PASS & SEYMOUR LEGRAND #WP-26L OR EQUAL.
 - 2 PROVIDE CONDUCTORS AND JUNCTION BOX FOR FUTURE LIGHTS.
 - 3 PROVIDE NON-CONDUCTIVE MAT ENTIRE LENGTH OF MOTOR CONTROL CENTER.

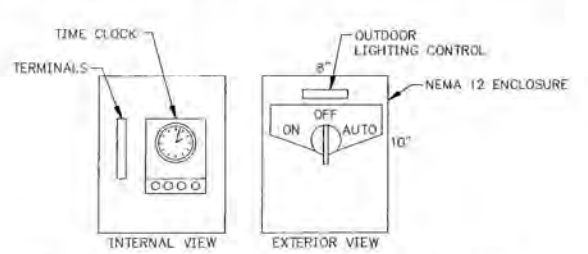
PANEL SCHEDULE									
NO. L		LOCATION: WTP PUMP BLDG.		120/208 VOLTS		1 PHASE		3 WIRE	
CKT NO.		LOAD DESCRIPTION		KVA	TRIP AMPS	TRIP AMPS		KVA	CKT NO.
1	REC. GEN ROOM	0.6	20	20	20	1.0	LIGHTS GEN ROOM	2	2
3	REC. PUMP ROOM	0.8	20	20	20	0.9	LIGHTS PUMP ROOM	4	4
5	RESTROOM	0.4	20	20	20	0.5	LIGHTS EXTERIOR	6	6
7	LOUVER MOTORS	1.0	20	20	20	0.1	RESERVOIR FLOOD LIGHT	8	8
9	LOUVER MOTORS	1.0	20	20	20	1.0	(FUTURE RESTROOM LIGHTS)	10	10
11	UNIT HEATER CONTROL/FAN	0.2	20	20	20		SPARE	12	12
13	WTP RES LV IND. PNL	0.1	20	20	20		SPARE	14	14
15	SPACE		20	20	20		SPARE	16	16
17	SPACE		20	20	20		SPARE	18	18
19	SPACE		20	20	20		SPARE	20	20
DESCRIPTION				CONNECTED LOAD	DEMAND FACTOR	DEMAND			
LARGEST MOTOR - (LOUVER)				1.0	1.25	1.3			
OTHER MOTORS				1.2	1.00	1.2			
LIGHTS				2.5	1.25	3.2			
MISC.				1.9	1.00	1.9			
TOTAL				6.6	KVA	7.6 KVA			
				35	AMPS	64 AMPS			



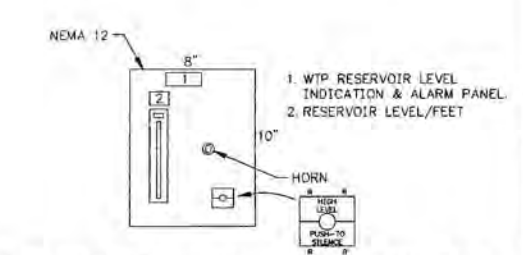
**PUMP BUILDING
120V RECEPT. & LIGHTING PLAN**
SCALE: 1/4"=1'-0"



OUTDOOR LIGHT CONTROL DIAGRAM
N.T.S.



OUTDOOR LIGHTING CONTROL PNL
N.T.S.



WTP RESERVOIR LEVEL INDICATION PNL
N.T.S.

**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

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DESIGNED BY:
DMB/VMF
DRAWN BY:
TMC/SKM
CHECKED BY:
KLA

DwgSerial#: 501

WHATCOM COUNTY
WATER TREATMENT PLANT
PUMP BUILDING POWER & LTG. PLANS

DATE
July 1992
SCALE
AS SHOWN
JOB NUMBER
92021A

SHEET
E09
OF
14

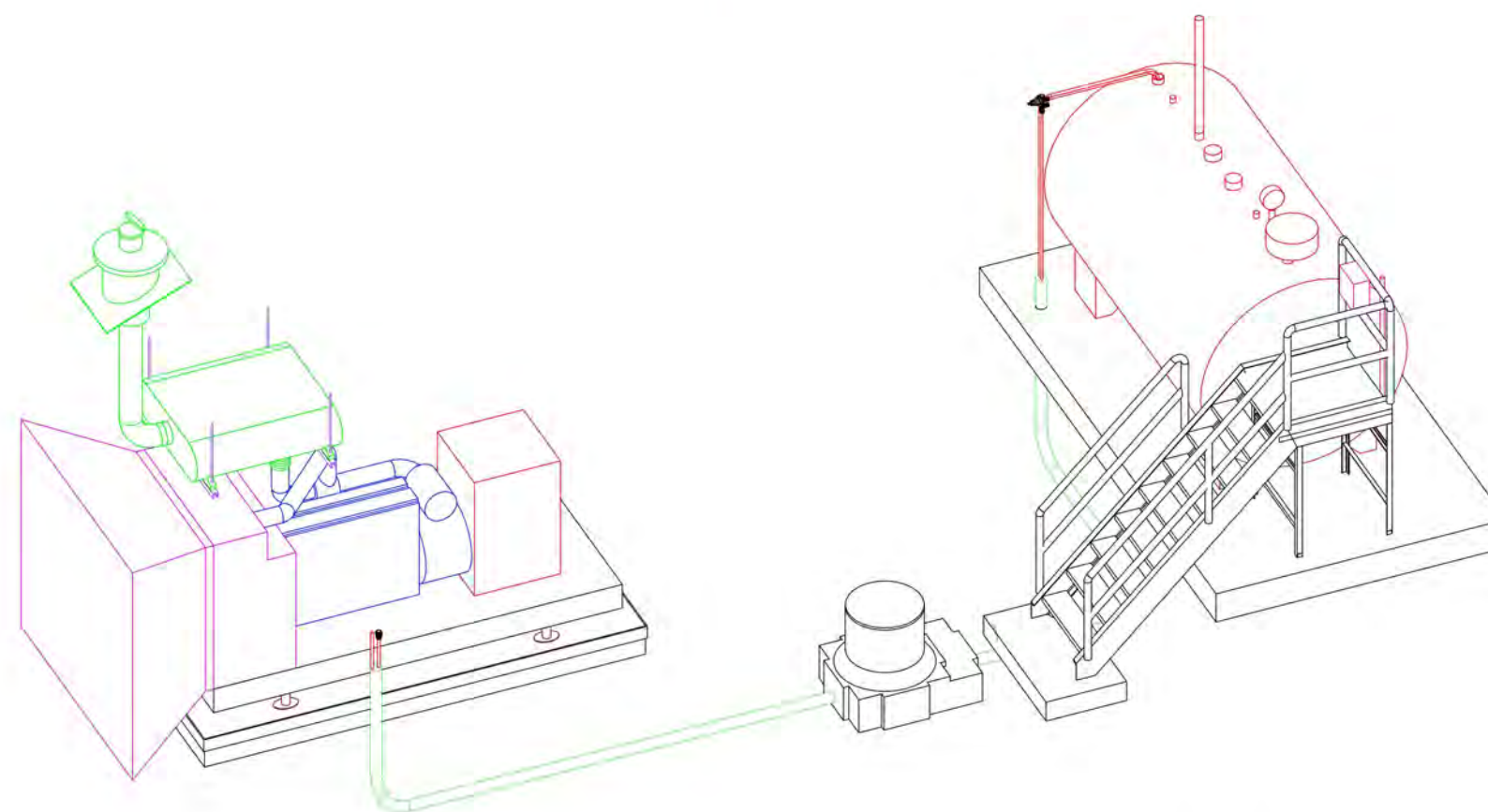


LAKE WHATCOM WATER AND SEWER DISTRICT

SUDDEN VALLEY WATER TREATMENT PLANT GENERATOR SET REPLACEMENT

SUMMER - FALL 2013

CONFORMED FOR CONSTRUCTION



GENERATOR SET

FUEL TANK



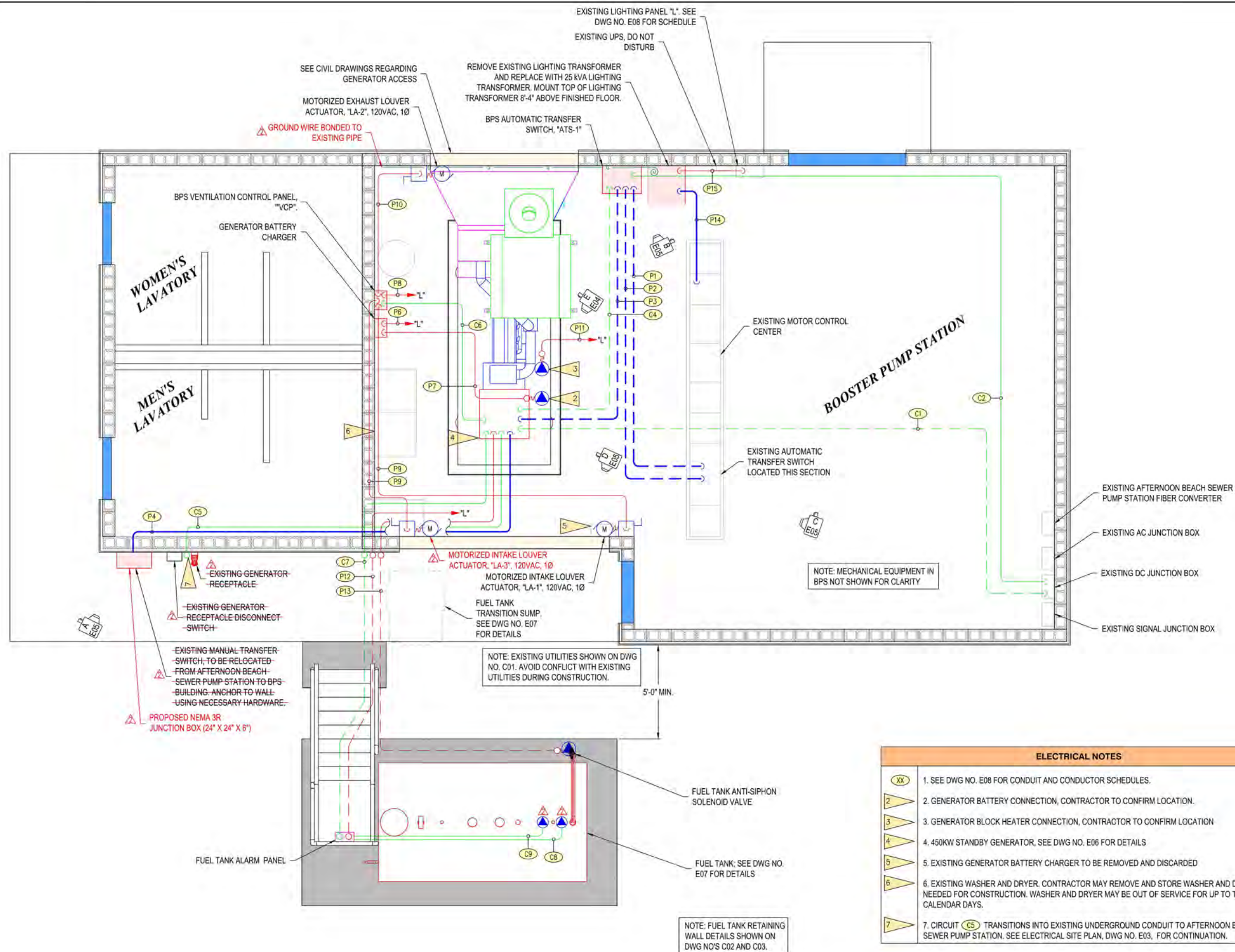
**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**

DISTRICT PROJECT #C1303 SVWTP GENERATOR

REVISED TO CONFORM
TO CONSTRUCTION RECORDS
05/10/14
DATE
RH2 ENGINEERING INC.



**PLOTTED AT REDUCED
SIZE, DO NOT SCALE**



POWER DISTRIBUTION AND SIGNAL PLAN

3/8" = 1'-0"

ELECTRICAL NOTES	
1	SEE DWG NO. E08 FOR CONDUIT AND CONDUCTOR SCHEDULES.
2	GENERATOR BATTERY CONNECTION, CONTRACTOR TO CONFIRM LOCATION.
3	GENERATOR BLOCK HEATER CONNECTION, CONTRACTOR TO CONFIRM LOCATION.
4	450KW STANDBY GENERATOR, SEE DWG NO. E06 FOR DETAILS.
5	EXISTING GENERATOR BATTERY CHARGER TO BE REMOVED AND DISCARDED.
6	EXISTING WASHER AND DRYER. CONTRACTOR MAY REMOVE AND STORE WASHER AND DRYER AS NEEDED FOR CONSTRUCTION. WASHER AND DRYER MAY BE OUT OF SERVICE FOR UP TO TEN (10) CALENDAR DAYS.
7	CIRCUIT C5 TRANSITIONS INTO EXISTING UNDERGROUND CONDUIT TO AFTERNOON BEACH SEWER PUMP STATION. SEE ELECTRICAL SITE PLAN, DWG NO. E03, FOR CONTINUATION.

REVISED TO CONFORM
TO CONSTRUCTION RECORDS

RH2 ENGINEERING INC. 05/10/14
DATE

LAKE WHATCOM WATER AND SEWER DISTRICT
**SUDEN VALLEY WATER TREATMENT
PLANT GENERATOR SET REPLACEMENT**
**POWER DISTRIBUTION AND SIGNAL
PLAN**

NO.	DATE	DESCRIPTION	BY	REVIEW
1	5/10/14	CONFORMED FOR CONSTRUCTION	JCS	DWB

SCALE: SHOWN	1" = 10'
DRAWING IS FULL SCALE WHEN BAR MEASURES 1"	
DWG NO. E04	SHEET NO. 12

RH2 ENGINEERING INC.
1800 221 6552
BELLINGHAM, WA
4164 Meridian Street, Suite 202

REVISIONS

05/09/14 SIGNED: 05/09/14