

## Village Safe Water Program

**REQUEST FOR PROPOSALS PACKAGE**

(Procurement per Article 3 of AS 36.30)

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**ISSUING OFFICE**Agency Contact & Email.....: April Akers, [april.akers@alaska.gov](mailto:april.akers@alaska.gov)

Issue Date .....: February 17, 2022

**PROJECT****RFP NUMBER** .....: 22-VSW-SNP-034

Project Numbers-State/Federal.....: 22-VSW-SNP-034

Project Site (City, Village, etc.).....: Saint Paul, Alaska

Project Title &amp; Contract Description .....: St. Paul Wastewater Lift Station Design

The State of Alaska, Department of Environmental Conservation, Village Safe Water Program (department) is issuing a Request for Proposal (RFP) for design services to replace two sewer lift stations in Saint Paul, Alaska. The resulting contractor shall provide bid-ready documents as final deliverables. The department intends to issue an Invitation to Bid for a contractor to construct based on the final design. A project to update the existing Business Plan to include these upgrades is concurrent with this RFP.

**Attachments:**

Offerors must contact the procurement officer to receive the following attachments. Attachments will be sent to offerors via [Zend To](#)

- Preliminary Engineering Report (PER) for City of Saint Paul Wastewater Lift Station, 2/16/2020

**SCHEDULE & PAYMENT**

Anticipated period for performance-Begin/End: April 30, 2022 through January 31, 2025

**Estimated amount of proposed contract:**☐ Less than \$200,000☒ \$250,000 to \$500,000☐ \$200,000 to \$250,000☐ \$500,000 to \$1,000,000☐ \$1,000,000 or greater**Proposed Method(s) of Payment:**☐ Fixed Price Plus Expenses (FPPE)☒ Firm Fixed Price (FFP)☒ Time and Expense (Construction Administration)☐ Cost Plus Fixed Fee (CPFF)**SUBMITTAL DEADLINE AND LOCATION**

*OFFERORS ARE RESPONSIBLE TO ASSURE DELIVERY PRIOR TO DEADLINE (2 AAC 12.250).  
 ONLY PROPOSALS RECEIVED PRIOR TO THE FOLLOWING DATE AND TIME WILL BE OPENED.*

**DATE: March 11, 2022****Alaska Standard Time: 2:00 PM**

Email only directly to the address listed in the following return instructions: (and person, if named).

**IMPORTANT NOTICE:** If you downloaded this solicitation from the State's Website, you must self-register with the procurement officer to receive subsequent addenda. Failure to register may adversely affect your proposal. It is the Offeror's responsibility to ensure that he has received all addenda affecting this RFP.

**Return Instructions:**

If submitting a proposal via email, the technical proposal and cost proposal must be saved as separate PDF documents and emailed to [evan.patterson@alaska.gov](mailto:evan.patterson@alaska.gov) as separate, clearly labeled attachments, such as "Vendor A – Technical Proposal.pdf" and "Vendor A – Cost Proposal.pdf" (Vendor A is the name of the offeror). The email must contain the RFP number in the subject line.

The **maximum** size of a single email (including all text and attachments) that can be received by the state is **20mb (megabytes)**. If the email containing the proposal exceeds this size, the proposal must be sent in multiple emails that are each less than 20 megabytes and each email must comply with the requirements described above.

Please note that email transmission is not instantaneous. Similar to sending a hard copy proposal, if you are emailing your proposal, the state recommends sending it enough ahead of time to ensure the email is delivered by the deadline for receipt of proposals.

It is the offeror's responsibility to contact the issuing agency at [evan.patterson@alaska.gov](mailto:evan.patterson@alaska.gov) to confirm that the proposal has been received. The state is not responsible for unreadable, corrupt, or missing attachments.

## SELECTION PROCEDURE

1. Competitive Sealed Proposals will be evaluated by a committee (2 AAC 12, Article 4). Evaluation of responses to criteria set forth in Part C results in a numerical score for each proposal. Each criterion in Part C has an assigned weight for this RFP which demonstrates its relative importance. The total of all weights is 100 (100%).
2. Scoring of proposals will be accomplished as follows:
  - 2.1 Each Evaluator will individually read and rate each Offeror's response to each criterion described in Part C - Section I - Technical Proposal. Ratings will be based solely on contents of proposal and in compliance with the Contracting Agency's standard Instructions for Evaluation Committee.
  - 2.2 After completion of individual ratings in Part C, Section 1, Technical Proposal, the Evaluation Committee will meet to discuss proposals. Evaluators may then alter their ratings; however, any changes shall be based solely on the criteria set forth in Part C.
  - 2.3 After scoring Part C - Section I - Technical Proposal, criteria scores for Part C - Section II - Preferences, and Section III - Price (if applicable), will be calculated based on criteria descriptions.
  - 2.4 The total score for each Offeror will be obtained by summing the scores determined for each criterion in Sections I, II and III of Part C. The order of ranking for negotiations shall be as follows: highest scored Offeror will be ranked first, next highest scored second, and etcetera.
3. Evaluators may discuss factual knowledge of, and may investigate Offerors' and proposed Subcontractors' prior work experience and performance, including projects referenced in proposal, available written evaluations, etcetera, and may contact listed references or other persons knowledgeable of a Contractor's and/or a Subcontractor's past performance. Factors such as overall experience relative to the proposed contract, quality of work, control of cost, and ability to meet schedules may be addressed. If any issues of significant concern to the proposed contract are discovered, the Committee may:
  - 3.1 Provide written recommendations for consideration during contract negotiations;
  - 3.2 Conduct discussions in accordance with paragraph 4, below.
4. The Committee may decide to conduct discussions (or "interviews") with responsible Offerors whose proposals are determined to be reasonably susceptible of being selected for award for the purpose of clarification to assure full understanding of, and responsiveness to, the solicitation requirements (AS 36.30.240 & 2 AAC 12.290). Offerors selected by the Committee for discussions may be permitted to submit Best and Final Offers (BAFO) for final Committee Evaluation. After discussions and any BAFOs, Evaluators will determine the final scoring and ranking for contract negotiations by evaluating written and oral responses using only the criteria set forth in Part C of this RFP (2 AAC 12.260(b)).
5. All Offerors will be advised of the Offeror selected for negotiation and, after completion of negotiations, a Notice of Intent to Award will be provided to all Offerors. If contract negotiations are unsuccessful with Offeror(s) selected for negotiation, the Contracting Agency may either cancel the solicitation or negotiate with other Offerors in the order of ranking.

## NOTICES

PART

A

1. The Contracting Agency is an equal opportunity employer.

2. Copies of contract documents are attached to the RFP.

**General Conditions** of the Professional Services Agreement are contained in the Small Procurement Standard Provisions Booklet, which is located on the Department's website under "Procurement."

The General Conditions are the **same** for both Competitive Sealed Proposals and Small Procurements.

3. Offerors are specifically advised that a contract shall not be in effect until a written agreement is executed by an authorized agent of the Contracting Agency. The Contracting Agency shall not be liable for any cost incurred by an Offeror in response to this solicitation, including any work done, even in good faith, prior to execution of a contract and issuance of a Notice to Proceed.

4. The Contracting Agency expressly reserves the right to waive minor informalities, negotiate changes or reject any and all proposals and to not award the proposed contract, if in its best interest. "Minor Informalities" means matters of form rather than substance which are evident from the submittal, or are insignificant matters that have a negligible effect on price, quantity, quality, delivery, or contractual conditions and can be waived or corrected without prejudice to other Offerors (2 AAC 12.990).

5. All proposals shall be open for public inspection (AS 36.30.230) after a Notice of Intent to Award is issued. Offerors should not include proprietary information in proposals if such information should not be disclosed to the public. Any language within a submittal purporting to render all or portions of a proposal confidential will be disregarded. Proprietary information which may be provided after selection for contract negotiations will be confidential if expressly agreed to by the Contracting Agency (AS 36.30.230).

6. Substitution for any personnel named in a proposal may result in termination of negotiations.

7. If it is discovered that a selected Offeror is in arrears on taxes due the State of Alaska, a contract may not be awarded until the Alaska Department of Revenue approves the payment provisions for the contract.

8. **Offerors and proposed subcontractors shall be in compliance with the statutory requirements for Alaska business licensing and professional registrations included in the certification statement on Page 2 of Part D in this RFP package.**

9. **PRICE COMPETITION:** Price cannot be an Evaluation Criterion in accordance with Article 3 of AS 36.30 for services that must be performed only by Architects, Engineers, Land Surveyors, or Landscape Architects (A/E, LS or LA) licensed in the State of Alaska, UNLESS the provisions of AS 36.30.270(d) apply; i.e., unless the services required are repetitious in nature, and the nature and amount of services required are thoroughly defined by measurable and objective standards to reasonably enable firms or persons making proposals to compete with a clear understanding and interpretation of the services required. If price is a factor, a majority of the evaluation committee must be registered in Alaska to perform architectural, engineering, or land surveying services.

9.1 If the services performed do not require an A/E, LS or LA, then all Offerors including any A/E, LS or LA must provide Price Proposals in accordance with AS 36.30.270(b) and 2 AAC 12.260(c).

10. An audit of the selected Offerors' and proposed Subcontractors' cost accounting systems and business records may be required to ascertain if systems are adequate for segregating contract costs; to establish a maximum allowable Indirect Cost Rate for the Agency's negotiator; and to investigate the accuracy of proposed labor rates and unit prices.

11. Standard insurance provisions for Worker's Compensation, General and Automobile Liability, and Professional Liability are contained in DOT&PF Form 25A269, Indemnification and Insurance. Coverages may be modified under very limited circumstances. Offeror should not assume any modification of coverages.

12. Professional Liability Insurance for the proposed contract: ☐ is not required

☒ is required as shown on DOT&PF Form 25A269.

13. The proposed contract ☒ will ☐ will not be a Federally Assisted Program. If it will be an assisted program, then the Offeror shall insert the following notification in all subcontract solicitations for bids or proposals pertinent to this RFP:

"In accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, CFR, U.S. Department of Transportation (U.S. DOT), Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. DOT issued pursuant to such Act, in any Subcontract entered into pursuant to this RFP, Disadvantaged Business Enterprise firms will be afforded full opportunity to submit bids or proposals and will not be discriminated against on the grounds of race, color, sex, or national origin, in consideration for an award.

14. Pre-proposal Conference: ☒ None ☐ As follows:

Not scheduled.

15. Special Notices:

15.1 MBE/WBE Preference:

This procurement is funded in part or fully through federal grants or cooperative agreements. It is a national policy to award a fair share of contracts to Minority Firms and Women's Business Enterprises through affirmative action. This solicitation incorporates a five point preference for all qualified minority firms and women's business enterprises.

15.2 Site Visit:

A pre-proposal inspection of the site is not scheduled. If offerors choose to visit the project site, they may contact the City Manager, Phil Zavadil, at [pazavadil@stpaulak.com](mailto:pazavadil@stpaulak.com) to schedule a site visit. Offerors shall comply with all COVID protocols. Offerors shall direct all project questions to the procurement officer. The onsite coordinator and any other community members are not available for project questions. The department is not responsible for travel coordination or costs.

# SUBMITTAL CHECKLIST

PART

**B**

Offeror may use left margin to check off items when completed.

**An Alaska Business License is required of Contractors who do business in Alaska at time of award (AS 36.30.210(e)).**

- [ ] 1. Offerors must carefully review this RFP Package for defects and questionable material and become familiar with submittal requirements. Submit written comments to the address shown under "Submittal Deadline and Location" on page 1 of Part A - RFP. Substantive issues will be addressed in a written addendum to all RFP recipients on record. Failure to comply with directions may result in lower score and may eliminate a submittal from consideration. Protests based on alleged improprieties or ambiguities in a solicitation may be disallowed at the discretion of the Contracting Agency if the protest is not received in writing at least ten Agency work days prior to the Submittal Deadline (AS 36.30.565).
- [ ] 2. Review Part A - RFP and the proposed Statement of Services and any other attached or referenced materials. If no Statement of Services is attached, telephone the Agency contact person identified on page 1 of Part A.
- [ ] 3. Review Part C - Evaluation Criteria. Read each criterion in light of the proposed Statement of Services. Note any project specific criteria which may have been added or any changes to standard criteria descriptions which may have been made. Be aware of the assigned weight for each criterion. If a weight is not entered for any criterion on Part C, notify the Agency contact person. Plan your proposal to address the applicable criteria. Criteria Responses shall not exceed the number of pages stated below. **Note:** If weight is applied to Criterion #11, MBE/WBE Preference, that box must be checked on page 1 of Part D, rfp-d.
- [ ] 4. Prepare a distinct Response for each criterion that has a weight more than zero. Failure to respond directly to any criteria weighted more than zero will result in an evaluation score of zero for that criteria. Any Responses to criteria weighted zero will be disregarded. Acceptable Responses must be specific and directly related to the Contracting Agency's proposed Statement of Services. Marketing brochures, federal SF330s, marketing resumes, and other non-project specific materials will be discarded without evaluation and should not be submitted.
- [ ] 5. **Each criterion Response must be titled, numbered and assembled in the order in which the criteria are listed in Part C**, so the criterion to which information applies shall be plainly evident. Material not so identified or assembled may be discarded without evaluation.

- [ ] 6. Price      ☐ is      ☒ is not      an evaluation criterion for the proposed contract.

If Price is a Criterion, prepare **Billing Rates and/or Price Proposals** as described in Criteria #12 and/or #13.

- [ ] 7. Complete all entries on Part D - Proposal Form. Note the statutory requirements for Alaska business licenses and professional registrations, and be sure to sign and date the Certification. Copies of licenses and registrations may be provided with submittal, and will not count in the requirements of #8 below.

- [ ] 8. Attach Criteria Responses (**except any Billing Rates or Price Proposals**) to Part D - Proposal Form. The maximum number of attached pages (**each printed side equals one page**) for Criteria Responses shall not exceed: **See RFP Part C**. Attached page limit does not include the four-page Part D - Proposal Form, or any Billing Rates or Price Proposals.

Criteria Responses shall be presented in **8-1/2" X 11" format**, except for a minimal number of larger sheets (e.g., 11" x 17") that may be used (e.g., for schedules) if they are folded to 8-1/2" X 11" size. Large sheets will count as multiple pages at 93.5 square inches or fraction thereof per page, unless otherwise noted.

**CAUTION:** Criteria Responses which do not comply with the required page limit or presentation size, may result in disqualification. Further, small print or typeface that is difficult to read may negatively influence evaluation of your submittal and affect scoring for "Quality of Proposal."

- [ ] 9. Cover Letter:
- Offerors must include a 1 page cover letter that provides a brief high level overview of the offerors firm. The cover letter must include a statement that the offeror meets Request for Proposal, Statement of Services, Appendix B, section 1.2 Minimum Requirements.
- [ ] 10. Parts A, B and C of Form 25A270 and the proposed Statement of Services shall not be returned to the Contracting Agency. **Submittals shall consist of the following applicable items assembled as follows and in the order listed:**
- [ ] 10.1 Completed Part D - Proposal Form (generally at least one copy with original signature) and Responses to all evaluation criteria -- **except Billing Rates, Price Proposals** – attached. Each copy shall be fastened with one staple in the upper left corner. No other form of binding shall be used.. **CAUTION:** Failure to comply with this instruction will negatively influence evaluation of Submittal.
- [ ] 10.2 Number of copies of Part D (**all pages**) and Criteria Responses (**except Billing Rates, and Price Proposals**) required is:
- [ ] 10.3 If **Billing Rates and/or Price Proposals** are required, **one copy** bound with one staple in the upper left corner separately enclosed in a sealed envelope marked on the outside to identify it as a **Billing Rates or Price Proposal** and the names of the Project and Offeror. Each **Billing Rates or Price Proposal** must be signed and dated by the person who prepares it (may be different signatures for each Subcontractor).
- [ ] 10.4 If Item 9, above, is completed for this RFP Package, any submittal items described therein. Unless otherwise stated, one copy only, bound appropriately.
- [ ] 10.5 Pre-Audit Statement, DOT&PF Form 25A257, shall **not** be provided with Submittal. (See Notice #10 on page 3 of Part A - RFP.)
- [ ] 10.6 **CAUTION:** If you replicate (other than by photocopy) Part D or any form in lieu of completing the forms provided by the Contracting Agency, provide a signed certification that lists such forms and attests that they are exact replicas of that issued by the Contracting Agency. Changed forms may result in rejection at the Contracting Agency's discretion. Any alteration – other than completion of the required entries – may be cause for rejection without recourse.
- [ ] 11. Deliver submittals in accordance with Part A - RFP. Proposals must be received prior to the specified date and time. Late proposals will not be opened (2 AAC 12.250).

# EVALUATION CRITERIA

PART

C

Criteria with a weight of zero are not applicable and should be disregarded. If a weight is not indicated for any criterion, telephone the Agency Contact person identified at the top of page 1 of Part A - RFP.

## SECTION I - TECHNICAL PROPOSAL

### 1. Project Understanding

1. Weight: 20

Page limit: 1 page

Response must demonstrate your comprehension of the objectives and services for the proposed contract. Do not merely duplicate the Statement of Services provided with this RFP. Also, consider if Statement of Services is sufficiently explicit; are expressed or implied schedules attainable/economically feasible; etcetera? Explain. Define any assumptions made in formulating Criteria Response. Describe any risks that the team perceives.

### 2. Project Approach

2. Weight: 15

Page limit: 1 page

Response must outline the methods for accomplishing the proposed contract or, if methodology is contained in the proposed Statement of Services, address its adequacy. Describe your firm's approach to executing and managing these projects. Describe what, when, where, how, and in what sequence the work will be done. What kind of timeline is reasonable to expect?

### 3. Project Manager Experience

3. Weight: 30

Page limit: 3 pages

Describe the qualifications and experience of the proposed Project Manager in accordance with the outline below.

Wastewater Design Experience:

Relevant project experience shall be identified as follows:

- a) Project title;
- b) Project description;
- c) Project start and end dates;
- d) Client name, telephone number and email address.

Experience in rural Alaska:

Relevant experience shall be identified as follows:

- a) Project title;
- b) Project description;
- c) Project start and end dates;
- d) Client name, telephone number and email address.

Construction Administration Experience:

Relevant construction administration experience shall be identified as follows:

- a) Project title;
- b) Project description;
- c) Project start and end dates;
- d) Client name, telephone number and email address.



#### 4. Project Team Qualifications and Experience

4. Weight: 25

Page limit: 8 pages

Describe the qualifications and experience of the proposed project team that will directly work on the project. Identify each proposed team member and their role.

Team Summary: Introduce the project team, including any sub consultants, by providing one or two paragraphs about each key team member, summarizing their qualifications and relevant project experience to complete the assigned work. Provide a chart that shows the organization structure and lines of authority of the project team.

Consultant may provide resumes (2-page maximum per team member) for the project manager and key staff as an attachment and doesn't count towards the technical proposal page count. The resumes must only provide relevant project experience of the individual.

Team Design Experience:

Relevant team project experience shall be identified as follows:

- a) Project title;
- b) Project description;
- c) Project start and end dates;
- d) Client name, telephone number and email address.

Team Construction Administration Experience: Provide narrative statements that explain the project teams experience with;

- a) Construction Administration;
- b) Procurement; and
- c) Project closeout activities.

#### 5. Quality of Proposal

5. Weight: 5

Page limit: N/A

**Offerors do not respond to this criterion.** Committee members will rate this criterion based on their perception of the clarity, completeness and presentation of submittal. Note: This criterion is **NOT** used to evaluate color, graphics or other visual techniques except as they may detract from legibility.

6.

6. Weight: 0

7.

7. Weight: 0

8.

8. Weight: 0

9.

9. Weight: 0

10.

10. Weight: 0

## SECTION II - PREFERENCES

**11. MBE/WBE Preference****40 CFR §33.202****11. Weight: 5**

To be granted this preference:

***Offeror must claim the MBE/WBE Preference on page one of Part D Proposal Form. In claiming the MBE/WBE Preference on page one of Part D, the Offeror is certifying that they, or subcontractor(s) meet the following requirements per 40 CFR §33.202 and/or §33.203:***

In order to qualify for the Women's Business Enterprises (WBE) or Minority Business Enterprises (MBE), the business must obtain certification from any of the following organizations:

- United States Small Business Administration,
- United States Department of Transportation,
- Indian Tribal Governments,
- State/local Governments,
- Independent private organizations.

To qualify for the federal Environmental Protection Association, Disadvantaged Business Enterprises program, an entity must be certified, and such certification must meet the criteria as stipulated in 40 CFR §33.202 and/or §33.203. If a subcontractor is used to meet the preference then the offeror claiming eligibility for this preference must pledge in their proposal that the eligible subcontractor will be guaranteed the proposed work.

Offerors may provide their MBE/WBE certification number on the proposal form. If a certification number is not available then the offeror must provide a letter from the certifying agency verifying the offerors certification status within 10 days of the State's request.

*MBE/WBE Preference will be scored: Rating x Number of Evaluators x Weight = Criterion Score.*

*Rating will be as follows:*

*MBE/WBE preference (i.e., a Rating of 5) will be assigned to the proposal of an Offeror who certifies (by claiming the preference on page one of Part D) that they are a MBE/WBE as described above.*

*No MBE/WBE preference (i.e., a Rating of 0) will be assigned to the proposal of an Offeror who does not certify (by failure to claim the preference on page one of Part D) that it qualifies as a MBE/WBE as described above.*

No narrative response to this criterion is required within the Offeror's Proposal.

## SECTION III - PRICE

Price is **not** an Evaluation Criterion and weights for **both** Criterion #12 and #13 shall be "0". State of Alaska preferences are removed from this solicitation in accordance with AS 36.30.890 and 2 CFR 200.319(c).

See item #9, under Notices in Part A – RFP, regarding statutory and regulatory provisions about price competition and item #10.3, in Part B – Submittal Checklist, regarding procedure for submittal of Billing Rates and/or Price Proposals. Cost terminology is explained on page 2 of the Pre-Audit Statement (DOT&PF Form 25A257).

CAUTION: Submittal of Offeror's or Subcontractor's "standard" rate schedules or other pricing documents which are not in required format will be non-responsive if they do not allow direct comparison with other responsive proposals.

Rates and costs proposed by the Offeror selected for contract negotiations may be investigated for reasonableness and allowability in accordance with AS 36.30.400, .420 & .480, 2 AAC 12.550 and the contract cost principles in 48 CFR Part 31. Unsupported rates and costs may be disallowed or result in termination of negotiations, or contract award. All proposed rates and the negotiated contract rates will be public information.

**12. Labor Billing Rates****12. Weight: 0**

Offerors shall provide a proposed total hourly Billing Rates (i.e., inclusive of Direct Cost of Direct Labor, all Indirect Costs, and Fee) for all personnel that will work on the project. The offerors price proposal must include all subcontractor costs for a total price proposal amount. The offeror must include all subcontractor price proposals. Subcontractor price proposals must comply with this section. The offeror and subcontractors may use their own generated price proposal format but it must include the following information:

- Official Title and First and Last Name of each staff member working on the project.
- The hourly rate for each staff member. The hourly rate must include all direct and indirect costs.
- List each task and subtask that corresponds with the scope of work stated in this RFP. The offeror must list all subtasks even if they're not outlined in the scope of work.
- The amount of hours each staff member will allocate towards each subtask.
- If applicable include any travel or other expense costs.
- Total hours and cost for each task (subtotal) and total hours and cost for the project (total).

**13. Total Price Proposal (Required Format)****13. Weight: 0**

Provide proposed costs for all labor, subcontracts, equipment, expenses, etc., and a proposed amount for Fee. Submit a separate price proposal in the following format for the Offeror and for each Subcontract (first, second, third tier, etc.) that may exceed \$25,000. Each price proposal must be signed and dated by the person who prepares it. Note that the PRICES of the next lower tier subcontracts must be listed as COSTS in Item #4 (Other Direct Costs) of the price proposal for the next higher tier contractor so that the price of all subcontracts "roll-up" into the Offeror's total price proposal.

1. Show project title, project number, and Offeror or Subcontractor Name.

2. **Direct Costs of Direct Labor (DCDL)**

Show the estimated costs for each job classification of employees proposed for the contract. List under the following headings. Names required only for key staff and/or persons in "responsible-charge" (Ref: AS 08.48). ***Hourly Rates must not include Indirect Costs or Fee.***

<u>Job Classification</u>	<u>Name</u>	<u>Total Hours</u>	<u>Rate(\$/hr)</u>	<u>Proposed Costs (\$)</u>
				Total DCDL: \$ _____

3. **Indirect Costs (IDC)**

These costs include what are generally referred to as 1) Fringe Benefits and 2) Overhead (including direct and indirect costs of Indirect Labor). Show the Proposed IDC Rate as a percentage of Direct Costs of Direct Labor and the product (IDC Amount) of that Rate multiplied by the total DCDL.

IDC Rate: \_\_\_\_\_ % IDC Amount: \$ \_\_\_\_\_

4. **Other Direct Costs (ODC)**

These costs include: subcontracts, equipment (company owned or rented), and reimbursable expenses (e.g., transportation, food and lodging, reproduction) – if not included in Indirect Costs. List proposed costs under the following headings. If multiples of an item required, list the proposed quantity, unit rate, and total cost for each. ***Costs must be based on actual costs to the offeror or the subcontractor, without any profit or other markup.***

<u>Item</u>	<u>Quantity</u>	<u>Cost (\$/Unit)</u>	<u>Proposed Costs (\$)</u>
-------------	-----------------	-----------------------	----------------------------

- |    |  |   |
|----|--|---|
| 5. | <b><u>Total Proposed Cost</u></b><br>Sum of DCDL + IDC + ODC   | Total ODC: \$ _____<br><br>Total Cost: \$ _____ |
| 6. | <b><u>Proposed Fee</u></b><br>List a <u>proposed amount</u> (Contract Fee is generally negotiated using a structured Fee analysis of proposed costs).  | Proposed Fee: \$ _____                          |
| 7. | <b><u>Total Proposed Price</u></b><br>Sum of Total Proposed Cost plus Proposed FEE.  | Total Price: \$ _____                           |
| 8. | In accordance with the Submittal Checklist ('rfp-b'), item 10.3, Price Proposals must be signed and dated by the person who prepares it (may be a different signature for each subcontractor). |   |

# Alaska Department of Environmental Conservation

## Village Safe Water Program

### PROPOSAL FORM

PART

D

**THIS FORM MUST BE THE FIRST PAGE OF PROPOSAL.** Attach criteria responses as explained in Part B - Submittal Checklist. No transmittal letter or cover sheet will be used.

#### PROJECT

Project Numbers-State/Federal ..... : 22-VSW-SNP-034  
 Project Title ..... : Saint Paul Wastewater Lift Station Design  
 RFP No. .... : 22-VSW-SNP-034

#### OFFEROR (CONTRACTOR)

Contractor..... :  
 Street..... :  
 P.O. Box ..... :  
 City, State, Zip ..... :  
 Alaska Business License Number ..... :  
 Federal Tax Identification No. .... :  
 DOT&PF DBE Certification No. (if any) ..... :  
 Individual(s) to sign contract..... :  
 Title(s)..... :  
 Type of business enterprise (check one) ... : ☐ Corporation in the state of :  
☐ Individual ☐ Partnership ☐ Other(specify) ..... :

#### FEDERAL FUNDING PREFERENCES

Check the applicable preferences that you claim for the proposed contract (reference Criteria 11, 12 & 13 in Part C):  
☐ MBE / WBE Preference

#### PROPOSED SUBCONTRACTOR(S)

<u>Service, Equipment, etc.</u>	<u>Subcontractor &amp; Office Location</u>	<u>AK Business License No.</u>	<u>DOT&amp;PF DBE Certification No.</u>

#### CERTIFICATIONS

I certify: that I am a duly authorized representative of the Contractor; that this Submittal accurately represents capabilities of the Contractor and Subcontractors identified herein for providing the services indicated; and that the requirements of the Certifications on pages 2 through 4 of this Part D for 1) Alaska Licenses/Registrations, 2) Insurance, 3) Federal-Aid Contracts exceeding \$100,000, 4) Cost and Pricing Data, 5) Trade Restrictions/Suspension/Debarment, 6) Foreign Contracting, 7) DBE Commitment, 8) Former Public Officer, 9) Telecom Prohibition, and 10) Clean Air Act – will be complied with in full. These Certifications are material representations of fact upon which reliance will be placed if the proposed contract is awarded. Failure to comply with these Certifications is a fraudulent act. The Contracting Agency is hereby authorized to request any entity identified in this proposal to furnish information deemed necessary to verify the reputation and capabilities of the Contractor and Subcontractors. This proposal is valid for at least ninety days.

Signature ..... : \_\_\_\_\_  
 Name ..... : \_\_\_\_\_ Date: \_\_\_\_\_  
 Title ..... : \_\_\_\_\_ Telephone (voice): \_\_\_\_\_  
 (fax): \_\_\_\_\_  
 Email Address: \_\_\_\_\_

## **CERTIFICATION FOR ALASKA BUSINESS LICENSES AND REGISTRATIONS**

**PART**

**D**

Contractor and all Subcontractors shall comply with the following applicable requirements of Alaska Statutes:

1. **Alaska Business License** (Form 08-070 issued under AS 43.70) at the time contract is awarded as required by AS 36.30.210(e) for Contractor and all Subcontractors. In accordance with Administrative Manual, Section 81.120, proof of application for an Alaska Business license will satisfy this requirement. Per AAM 81.120, acceptable evidence that the offeror possesses a valid Alaska business license consists of any one of the following:
  - a. Copy of the Alaska business license.
  - b. A canceled check that demonstrates payment for the Alaska business license fee.
  - c. A copy of the Alaska business license application with a receipt stamp from the State's business license office.
  - d. A sworn notarized affidavit that the bidder/offeror applied and paid for the Alaska business license.
  - e. Other forms of evidence acceptable to the Department of Law.
2. **Certificate of Registration** for each individual to be in "responsible charge" (AS 08.48.341(11-14)) for Architecture, Engineering, Land Surveying, or Landscape Architecture (Form 08-2407 issued under AS 08.48.211) issued prior to submittal of proposal. Associates, consultants, or specialists under the supervision of a registered individual in "responsible charge" are exempt from registration requirements (AS 08.48.331).
3. **Certificate of Authorization for Corporations, Limited Liability Companies, and Limited Liability Partnerships** for Contractors and Subcontractors for Architecture, Engineering, Land Surveying, or Landscape Architecture (Form 08-2407 issued under AS 08.48.241). Entities offering to provide Architectural, Engineering or Land Surveying services do not need to be registered for such disciplines at the time proposal is submitted provided they obtain registration prior to contract award (AS 08.48.241).
4. **Certificate of Incorporation** (Alaska firms) or **Certificate of Authorization for Foreign Firm** ("Out-of-State" firms). All corporations, regardless of type of services provided, must have one of the certificates (AS 10.06.218 and other sections of Title 10.06 - Alaska Corporations Code).
5. **Current Board of Director's Resolution** for incorporated Contractors and incorporated Subcontractors for Architecture, Engineering, Land Surveying or Landscape Architecture (reference AS 08.48.241) that names the person(s) designated in "responsible charge" for each discipline. Such persons shall be licensed in Alaska and shall participate as project staff in the Contract/Subcontracts.
6. **All partners** in a Partnership to provide Architectural, Engineering, Land Surveying, or Landscape Architecture **must be legally registered in Alaska** prior to submittal of proposal for at least one of those disciplines (AS 08.48.251) which the Partnership offers.
7. **Joint Ventures**, regardless of type of services provided, must be licensed/registered in the legal name of the Joint Venture as used in this proposal (AS 43.70.020 and 43.70.110(4)).
8. **Contracts for Architecture, Engineering, Land Surveying, or Landscape Architecture** may not be awarded to individuals, corporations or partnerships not in compliance, respectively, with the provisions of paragraph 2, 3, and 6, above (AS 36.90.100).

**For information about licensing, Offerors may contact the Alaska Department of Commerce, Community, and Economic Development, Division of Corporations, Business and Professional Licensing at P.O. Box 110806, Juneau, AK 99811-0806, or at Telephone (907) 465-2550, or at Internet address: <https://www.commerce.alaska.gov/web/cbpl>**

## **CERTIFICATION FOR INSURANCE**

Contractor will ensure that it and all Subcontractors have insurance coverage to effectuate the requirements of DOT&PF Form 25A269, Indemnification and Insurance.

## **CERTIFICATION FOR FEDERAL-AID CONTRACTS EXCEEDING \$100,000**

The individual signing this proposal certifies to the best of his or her knowledge and belief, that:

- (1) No federal appropriated funds have been paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Contractor shall complete and submit Standard Form-LLL, Disclosure of Lobbying Activities, in accordance with its instructions. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

This certification is a material representation of fact upon which reliance will be placed if the proposed contract is awarded. Submission of this certification is a prerequisite for making or entering into the proposed contract imposed by Section 1352, Title 31, U.S. Code. The

Contractor also agrees by submitting this proposal that Contractor shall require that the language of this certification be included in all lower tier subcontracts which exceed \$100,000 and that all such Subcontractors shall certify and disclose accordingly.

#### **CERTIFICATION – COST AND PRICING DATA**

In accordance with AS 36.30.400, any cost and pricing data submitted herewith, or in any future price proposals for the proposed contract, will be accurate, complete and current as of the date submitted and will continue to be accurate and complete during the performance of the contract, if awarded.

The Contractor certifies that all costs submitted in a current or future price proposal are allowable in accordance with the cost principles of the Federal Acquisition Regulations of Title 48, Code of Federal Regulations (CFR), Part 31 and that the price proposal does not include any costs which are expressly unallowable under the cost principles of the FAR of 48 CFR 31. In addition, all known material transactions or events that have occurred affecting the firm's ownership, organization and indirect costs rates have been disclosed.

#### **CERTIFICATION – TRADE RESTRICTIONS AND SUSPENSION AND DEBARMENT**

The individual signing this proposal certifies to the best of his or her knowledge that the Contractor and any subcontractors are in compliance with DOT&PF 25A262 Appendix A, General Conditions, Article A25 and Article A26.

#### **CERTIFICATION - FOREIGN CONTRACTING**

By signature on this solicitation, the offeror certifies that all services provided under this contract by the contractor and all subcontractors shall be performed in the United States. If the offeror cannot certify that all work is being performed in the United States, the offeror must contact the Contracts Officer to request a waiver at least 10 days prior to proposal deadline. The offeror must provide with their submission a detailed description of the portion of work being performed outside the United States, where, by whom, and the reason the waiver is necessary. Failure to comply with this requirement may cause the state to reject the bid or proposal as non-responsive, or cancel the contract.

#### **CERTIFICATION – DBE COMMITMENT**

For federal-aid projects with DBE goals: if the Contractor submits a utilization report that proposes to use certified DBE's in the performance of work, the Contractor certifies that every effort will be made to meet or exceed the proposed percentage.

In addition, the Contractor certifies that a Consultant Registration form shall be submitted to the DBE/Civil Rights Office for their firm and each subconsultant prior to award.

#### **CERTIFICATION – FORMER PUBLIC OFFICER**

Any proposer listing as a member of the proposer's team a current public officer or a former public officer who has left state service within the past two years must submit a sworn statement from that individual that the Alaska Executive Branch Ethics Act does not prohibit his or her participation in this project. If a proposer fails to submit a required statement, the proposal may be deemed nonresponsive or nonresponsible, and rejected, depending upon the materiality of the individual's proposed position.

The Ethics Act bars a public officer who leaves State service from representing, advising or assisting a person for compensation regarding a matter that was under consideration by the administrative unit in which the officer served, and in which the officer participated personally and substantially through the exercise of official action, for two years after leaving state service. See AS 39.52.180(a). "Public officer" includes a state employee, a member of a state board and commission, and a trustee of the Exxon Valdez Oil Spill Trust. "Official action" means a recommendation, decision, approval, disapproval, vote, or other similar action or inaction. Possible remedies for violating the bar include penalties against the former public officer and voiding the state grant, contract or lease in which the former public officer is involved.

Additionally, former public officers may not disclose or use information acquired in the course of their official duties that could in any way result in a benefit to the former public officers or their families, if the information has not been disseminated to the public or is confidential by law, without appropriate authorization. See AS 39.52.140.

Each current or former public officer is responsible for determining whether he or she may serve in the listed capacity on this project without violating the Ethics Act. A form that a former public officer may use to certify their eligibility is attached. Current public officers may seek advice from their designated ethics supervisors concerning the scope and application of the Ethics Act. Former public officers may, in writing, request advice from the Office of the Attorney General, Ethics Attorney concerning the application of the Ethics Act to their participation in this project. It is the responsibility of the individual and the proposer to seek resolution in a timely manner of any question concerning the individual's eligibility.

#### **PROHIBITION ON CERTAIN TELECOMMUNICATION AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT**

On projects using federal funds, the Contractor shall comply with the requirements of 2 CFR 200.216, as amended effective August 13, 2020, Federal Register, Vol. 85, No. 157, 49506 - 49582, **Prohibition on certain telecommunication and video surveillance services or equipment.**

By signature of this solicitation, the Contractor certifies the Contractor and subcontractors have not entered into a contract nor extended or renewed a contract to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system produced by:

- a. Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).



- b. Hera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- c. Any entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.
- d.

The Contractor shall further certify that it has complied the requirements of 2 CFR 200.216, as amended effective August 13, 2020, Federal Register, Vol. 85, No. 157, 49506- 49582 and that it will continue to do so throughout the term of the Contract.

**Clean Air Act**

The contractor and subcontractors shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act ([42 U.S.C. 7401-7671q](#)) and the Federal Water Pollution Control Act as amended ([33 U.S.C. 1251-1387](#)). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).



## St. Paul Wastewater Lift Station Design

### Article B1 Administrative Requirements

#### 1.1 General

The contractor shall provide services as identified and authorized by one sequentially numbered Notice to Proceed. The contractor shall not perform services or incur billable expense except as authorized by an NTP.

#### 1.2 Minimum Qualifications

In order for offers to be considered responsive offerors must meet the following minimum qualification requirements. Offerors must state in their cover letter that they meet these requirements.

1. The proposing firm shall be in the business of providing engineering design services and construction administration services for water and wastewater system projects.
2. The proposing firm shall have experience working in remote Alaskan villages.
3. The project manager shall have at least five (5) years of project management experience.
4. The project manager shall be a current licensed professional engineer in the State of Alaska.
5. The project manager shall have at least five (5) years of design experience as a P.E. in the State of Alaska.
6. The project manager shall have experience with Construction Administration on designs they completed in this time frame.

An offeror's failure to meet these minimum qualification requirements will cause their proposal to be considered non-responsive and rejected.

#### 1.3 Project Staff

All services must be performed by or under the direct supervision of the following individuals. Replacement of, or addition to, the Project Staff named below shall be accomplished only by prior written approval from the department:

#### Name

#### Project Responsibilities

#### 1.4 Definitions and Project Responsibility

The department's project manager or designee shall be the contractor's main point of contact. The contractor shall not deal directly with other department personnel or the subsequent construction contractor without the project manager's approval.

Department or Contracting Agency  
Contractor  
Project Manager  
Construction Contractor

Village Safe Water Program (Department)  
Selected Design Contractor  
VSW Engineer  
Subsequent Construction Contractor

#### General Terms:

- The Contractor herein is the "Engineer".
- The "Department" is the Owner with the rights and privileges that pertain to the Owner.
- The "Builder" herein refers to a contractor under contract with the Department for services to the project.
- The Engineer shall act as the Department's Representative during construction with respect to the Builder.
- The Engineer shall administer the Builder's contract with the Department to the degree defined herein. Engineer shall act on behalf of the Department only as specifically stipulated herein.
- Construction Administration services includes Assistance during Bidding, Services during Construction, and Services during Closeout and Warranty.

#### 1.5 Project Location and Travel

The project location is St. Paul, Alaska. Travel under the resulting contract shall be in accordance with the State's travel policies [AAM 60 Travel](#). Travel must be pre-approved by the project manager. The awarded contractor shall not change travel terms with any contract amendment.

### 1.6 Schedule

The RFP schedule set out herein represents the State of Alaska's best estimate of the schedule that will be followed. If a component of this schedule, such as contract execution, is delayed, the rest of the schedule may be shifted accordingly. Calendar days are used unless otherwise noted.

<b>Event/Deliverable</b>	<b>Event or Deliverable Deadline</b>
Contract execution/Notice to Proceed (NTP)	Estimated April 30, 2022
Design Analysis memo, and 35% Design Documents	5 weeks after NTP
65% Design Documents	9 weeks after 35%
95% Design Documents, amend contract for CA	9 weeks after 65%
Finalize Permitting	4 weeks after 95%
Bid-Ready Documents, Approval to Construct (ATC)	1 week after finalize permitting
Construction Start	3 months after ATC
Construction Complete	24 months after construction start

### 1.7 General Standards

The contractor shall perform all services in accordance with applicable codes, regulations and standards, professional practice procedures, and commonly recognized construction methods. The contractor shall consider the geographical location, intent of the project and any site-specific constraints when performing work.

### 1.8 Unit of Measure

The contractor shall use U.S. Customary units of measure throughout the project.

### 1.9 Professional Registration

All reports, plans, specification, estimates and similar work products provided by the contractor shall be prepared by or under the supervision of the Registered Alaskan Engineer or Architect in responsible charge for the services. These Engineers or Architects shall be currently registered in the State of Alaska, and they shall sign, seal, and certify as to the accuracy of each final work product for which they are responsible.

### 1.10 Billing Reports

The contractor shall provide a two-page (typical) report with each monthly billing for months in which services are performed. The report shall specifically describe the services and other items for which the billing is submitted and shall estimate the percent the services are complete. Any delayed costs from previous billing periods that are included in the current billing must be clearly explained in the report.

### 1.11 Correspondence

All correspondence prepared by the contractor shall bear the department's assigned project name and numbers (State & Federal).

### 1.12 Documents and Reports

Documents and Reports shall be printed with solid black letters that are double spaced on white, 8.5 inch x 11 inch bond or "Xerox Copy" paper. Other size paper may be used for illustrations if they are folded to 8.5 inch x 11-inch size. Original documents and reports shall be printed on one side of the paper only and shall be ready for copying. Documents and reports shall have no black and white photographs, color photographs, or multicolored graphics except as specifically approved by the Contracting Agency. Original, camera ready, copies of final documents and reports shall be submitted to the Contracting Agency for a check before printing.

### 1.13 Copies

When the Contract calls for multiple copies of documents or reports, the copies shall be printed on both sides of the paper. However, the cover and pages with approved illustrations, multicolored graphics, or photographs shall be printed on one side of the page only. All copies - except for originals - shall be bound.

### 1.14 Page Numbers

All documents shall be page numbered to allow every major Section, Chapter, Appendix, etc., to begin on a "right hand," odd numbered page.

### 1.15 Covers

The cover of all documents and reports shall include the following information:

- a. Name of document or report

- b. Date
- c. Indicate whether draft or final
- d. Project Name
- e. State and Federal Project Number(s)
- f. Prepared for: Department of Environmental Conservation, Village Safe Water Program
- g. Prepared by
- h. Map and/or picture of project area

#### 1.16 Contractor Name on Plan Sheets and Documents

No contractor logos shall be allowed on any electronic or hard copy document produced for the department. The contractor company name shall be included in the box above or below the engineer's seal on each plan sheet. Documents produced for the department shall include the contractor's company name at the bottom right of the first page, cover sheet or title sheet only. Contractor letterhead shall be allowed only as exhibits in document appendices. The contractor name shall be in the same font as other lettering on the plan sheet or document, shall be 1/16" or less in height on 11"x17" plan sheets, and shall be in the following format:

PLANS DEVELOPED BY:  
COMPANY NAME  
ADDRESS  
TELEPHONE NO.  
CERTIFICATION OF AUTHORIZATION NO.

#### 1.17 Plans, Maps, and Plats

Plans, Maps, and Plats shall be submitted with solid black ink on 11 x 17 inch bond paper. Submit final drawings on 11 x 17 inch bond paper and in pdf format. Digital Copies

#### 1.18 Digital Copies

The department uses Microsoft Windows (Word, Excel) and AutoCAD Civil 3D 2016 software. The contractor shall submit all digital files in formats fully compatible with the department's software. Formal submittals shall be on CD-R(W) or as approved by the department. Provide informal digital submittals as approved by the department.

#### 1.19 Drafting

Design submittal plan sets shall be provided as PDF. The 100% drawings shall be submitted in either Autocad, current format, or DXF format to the department as a resource file. All submissions shall include the Autocad drawing files, or DXF drawing files, on CD ROM discs or thumb drive.

#### 1.20 Specifications and Estimates

Specifications and Estimates shall be submitted with solid black letters that are single spaced, double spaced between sections, and new divisions should start at the top of a new page, on white, 8.5 inch x 11-inch bond or "Xerox Copy" paper. They shall be printed on one side of the paper only and shall be ready for copying. Specifications and estimates shall contain no graphics and no photographs except as specifically approved by the Contracting Agency. All Specifications shall also be submitted on CD ROM discs or thumb drive as document files for Microsoft Word current edition. It is the contractor's responsibility to ensure all document files are virus free.

#### 1.21 Revisions

The Contractor shall modify work products in response to direction from the Contracting Agency. Corrections, adjustments, or modifications necessitated by the review/approval process, but which do not substantially affect the scope, complexity, or character of the services, shall be considered a normal part of the Contractor's services.

#### 1.22 Errors and Omissions

Except as described in this Statement of Services, work products shall be essentially complete when submitted to the Contracting Agency. Work products having significant errors or omissions will not be accepted until such problems are corrected.

#### 1.23 Review Meetings

Following each review the Contracting Agency will provide written comments and may hold a meeting to discuss the issues. The Contractor's personnel who are in-responsible-charge for the work products under review shall attend the meeting and they may be asked to interpret and provide explanations of the content.

#### 1.24 Comment Resolution

The Contractor shall provide a written response with subsequent submittals that address all written and oral comments from the Contracting Agency. All changes from previous submittals shall be clearly explained.

#### 1.25 Reproduction and Distribution

When the contract requires only the original or only one copy of a work product to be delivered, the Contracting Agency will reproduce and distribute any other copies required. Items delivered for reproduction shall be organized and camera ready for copying and not stapled or otherwise bound.

#### 1.26 Engineer Estimate

The contractor shall provide their best construction estimate for each design phase. The contractor shall not release any information pertinent to the engineer's estimate without the prior written authorization by the department's project manager.

#### 1.27 Cost Effective Design

When developing the design the contractor shall advise the department of any cost effective solutions such as minimum or desirable design criteria.

#### 1.28 Specifications

The contractor shall not specify sole source materials unless the department first obtains a sole source approval. The contractor shall not specify brand name materials unless a minimum of three (3) are named, and if "Department approved equivalent" is used, specify the criteria for judging equivalence.

#### 1.29 Attachments

The following are attached to this RFP.

- a. VSW Design Review Procedures
- b. Lift Station Standard 2006 B&W
- c. Design Analysis Review TOC
- d. Basic Plan Set Requirements
- e. Preliminary Engineering Report (PER):Send request to procurement officer to receive through ZendTo.

## **ARTICLE B2 BACKGROUND & SCOPE OF SERVICE**

### **Background:**

The City of Saint Paul, Alaska (City) is a second-class city located on Saint Paul Island in the Bering Sea off the west coast of Alaska. It is approximately 750 miles west of Anchorage and is only accessible by air or sea. The City is home to roughly 359 residents and has 145 non-seasonal homes.

Sewer lift stations to be replaced were originally constructed in 1988 and 1989 and serve many of the residents of the City. Since they were constructed, the lift stations have degraded significantly because of corrosion of their steel tanks, pumps, piping, and electrical controls. Due to the design of the lift stations, there are significant challenges and risks associated with maintenance. The drywells do not allow ease of access to individual components and are considered confined spaces requiring a minimum of two City staff be present to access them during maintenance activities. Wastewater transferred by the lift stations is eventually directed to an out fall pipe that discharges into the Bering Sea.

### **Scope of Service:**

This Request for Proposal (RFP) is for design services to replace two City sewer lift stations that have exceeded their useful life. In 2020, a Preliminary Engineering Report (PER) and Environmental Report (ER) were completed to assess the condition of two existing sewer lift stations in the City. The PER alternative selected by the community (Option D) includes replacing the two existing lift station with new lift stations with new concrete vault, pumps, and controls and a new building over the wet well to house controls and safe access for maintenance. The resulting contractor shall provide bid-ready documents as final deliverables. The department intends to issue an Invitation to Bid for a contractor to construct based on the final design.

Construction funds will be released upon approval of the Business Plan and completion of an environmental review. A contract resulting from this RFP may be amended for construction administration services.

## **PHASE 1 – Design and Specification Development**

The contractor shall design the replacement of two sewer lift stations in accordance with the following:

### **2.1 Design and Specification Development**

#### **Task 1 – Kick-Off and Review Meetings**

The contractor shall schedule and facilitate a kick-off meeting within 10 days of contract execution. The contractor shall provide a high-level overview of the project and can also use this meeting to ask any clarifying questions. The contractor shall schedule one (1) initial site visit and coordinate this with the department and the City.

A VSW design review team shall review each design phase submittal. See attached Design Review Procedures for example. A design review meeting shall be held with the Engineer. In order to expedite the design, comments will be incorporated concurrently with design work. Design production schedule is critical so anything holding up progress, shall be a priority to resolve. The Engineer shall respond to and incorporate design review comments as follows:

- a) Pre-Meeting Comment Responses. The department will provide the contractor a list of compiled comments two (2) days before each review meeting. The contractor shall provide preliminary responses to the comments before the review meeting to facilitate a quicker review.
- b) Post-Meeting Comment Resolution. The contractor shall revise any draft responses pursuant to the design review meeting determination.
- c) The contractor shall incorporate changes as reflected in the comments and responses in the next design phase submittal.
- d) At the 65% stage, the review will include a 3<sup>rd</sup> party design/plan review of Civil, Mechanical, Electrical, Control, Structural, and Architectural. Any questions or concerns shall follow the above procedure a. – c. The contractor employing the designer(s) of record is not eligible to be awarded the 3<sup>rd</sup> party design/plan review service contract.
- e) At the 95% stage, the review will include a 3<sup>rd</sup> party review of Civil, Mechanical, Electrical, Control, Structural, and Architectural.

#### **Task 1 – Review Meetings Deliverables**

Document Type	Format
Pre-Meeting Comment Responses	Emailed Microsoft Excel
Post Meeting Comment Resolution	Emailed Microsoft Excel

## Task 2 – 35% Submittal

The contractor shall provide the following submittals at the 35% design phase. The lift station design shall conform substantially to the attached VSW Lift Station Standard.

- a) Basis of design criteria. Present the design analysis summary in a technical memorandum format that incorporates pertinent elements from the standard VSW Design Analysis Report (DAR). See the attached DAR table of contents for example criteria. The purpose of a DAR is to document the process and outcome of the design.
- b) 35% schematic drawings. Prepare draft contract documents addressing the primary elements of the project in accordance with the attached VSW Basic Plan Set Requirements. The following is a list of potential sheets to be included by final planset:
  - i. General Sheets
  - ii. Survey Sheets
  - iii. Geotechnical Sheets
  - iv. Civil Sheets
  - v. Architectural Sheets
  - vi. Structural Sheets
  - vii. Mechanical Sheets
  - viii. Electrical Sheets
  - ix. Control Sheets
- c) Outline specifications
- d) Identify permitting associated with the project, such as:
  - i. ADEC/Wastewater Plan Review
  - ii. Construction General Discharge Permit and SWPPP
  - iii. U.S. Army Corps of Engineers (COE) permit
  - iv. Fire Marshall Review
  - v. Easements (if needed)
  - vi. Other (if needed)
- e) 35% design cost estimate

## Task 2 – 35% Submittal Deliverables

Document Type	Format
DAR Memo	Emailed PDF
Schematic Drawings	Emailed PDF
Outline Specifications	Emailed Microsoft Word
Identified Permitting List	Emailed Microsoft Word
35% Design Cost Estimate	Emailed Microsoft Excel
Review Meeting and Responses	See Task 1 deliverable format

## Task 3 – 65% Submittal

- a) The 65% submittal shall include the following 65% Plans:
  - i. See above for list of sheets by discipline.
  - ii. All sheets should be included in the 65% plans.
  - iii. The Survey, Civil, Architectural, and Structural, should be substantially complete.
  - iv. The Mechanical, Electrical, and Control sheets may be less advanced and may still require coordination.
- b) The 35% submittal shall be in draft form at this stage and shall include draft Division 01 General Requirements.
- c) Draft Construction and Operational cost estimates.
- d) Draft Construction schedule.
- e) Updated environmental and permitting concerns list.
- f) 65% Design Review Comments and Responses.
- g) Procurement Package for long lead items.
- h) General Contractor Procurement Planning.

## Task 3 – 65% Submittal Deliverables

Document Type	Format
Draft Drawings	Emailed PDF
Draft Specifications	Emailed Microsoft Word
Draft Cost Estimates	Emailed Microsoft Excel
Updated environmental and permitting concerns list	Emailed Microsoft Word
Draft Construction Schedule including major milestones	Emailed MS Project or Microsoft Excel
Work Description	Emailed Microsoft Word
Review Meeting and Responses	See Task 1 Deliverables Format



#### **Task 4 – 95% Submittal**

Plans and specifications for all disciplines shall be substantially complete. The 95% submittal shall include the following:

- a) Department of Environmental Conservation, Wastewater Authorization and APDES Program (Wastewater) Plan Review package:
  - Engineer stamped and signed “not for construction” drawings and specifications are required for this review.
  - A cover letter and/or engineers report describing the project, including design flow calculations, etc., shall be sealed and submitted to the department to accompany the review package. Include other supporting documents as needed.
- b) Final Cost Estimate.
- c) Final Construction Schedule.
- d) 65% Design Review Comments and Responses.
- e) Procurement Package for the General Contractor.

#### **Task 4 – 95% Submittal Deliverables**

Document Type	Format
Wastewater Plan Review Package	Emailed PDF
Final Cost Estimate	Emailed PDF
Final Construction Schedule	Emailed MS Project or Microsoft Excel
Adjudicated Plan Review Comments	Emailed PDF
Significant Change Memo	Emailed PDF

#### **Task 5 – 100% Submittal**

The contractor shall 100% finalize the contract documents based on comments from the review phase. Include the indicated products that were listed for changes in a previous review. Documents will not be accepted until comments have been addressed to the department's satisfaction. Prepare documents that are ready for advertising for construction bids as identified below.

- a) Final Check Set. Provide a final unsigned planset for final comments by the department. Incorporate any comments received into the plans before signing and sealing the final plan sheets per Task 5b).
- b) Engineering Seals. Submit final plan sheets sealed by an appropriate Professional Engineer currently registered in the State of Alaska who is in charge for the project work. Sign plan sheets in blue waterproof ink. Digital signatures will not be accepted.
- c) Issued for Construction Plans.
- d) Final Specifications.

#### **Task 5 – 100% Submittal Deliverables**

Document Type	Format
Final Check Set	Emailed PDF
Final Sealed Plans	Emailed PDF

#### **Task 6 – Permitting**

The contractor shall obtain the following permits, final list to be determined at the 35% submittal. Fees to be paid by VSW.

- a) Wastewater Plan Review / Approval to Construct.
  - see Task 4, 95% Submittal for submittal requirements.
- b) Construction General Discharge permit and Storm Water Pollution Prevention Plan (SWPPP).
- c) U.S. Army Corps of Engineers (COE) permit.
- d) Fire Marshall Review.
- e) Easements, if needed.
- f) The contractor shall assist with department obtaining the State Historic Preservation Office (SHPO) Determination to include but not limited to providing a drawing of the proposed project area.

#### **Task 6 – Deliverables**

Final Permits	Emailed PDF
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## PHASE 2 – Bidding and Contracting Assistance

### I. Construction Administration services by the Engineer

#### 1) Task 1 – Assistance During Bidding:

The Engineer shall assist the Department as requested during project bidding. Engineer's personnel who were responsible for design drawing and specification development shall be available during this phase.

- a) As requested by the department, the Engineer shall participate in department meetings including but not limited to pre-bid teleconferences and evaluation of bids.
- b) The Engineer shall prepare responses to questions from bidders concerning clarification or interpretations of bidding documents when requested by the Department. The Engineer shall assist the Department with any required bid addenda. The Engineer shall respond and issue documents to the Department within 2 business days to avoid a long solicitation period. The Engineer shall not communicate information about this project with potential bidders. All correspondence and documents shall be through the Department and not directly with a bidder unless authorized by the Department.
- c) The Engineer shall review the Schedule of Values and assess if it is properly proportioned and detailed for the work.
- d) At the discretion of the Department, the Engineer shall review the Builder's list of subcontractors as provided by the Builder, which list is typically provided within five days of issuance of the Apparent Low Bidder. The Engineer shall promptly apprise the Department if it deems the Builder's subcontractors satisfactory or unsatisfactory in their respective areas of building expertise.
- e) Within one month after bid opening the Engineer shall submit the conformed drawings and specification.

#### Task 1 – Assistance During Bidding Deliverables

1. As needed department meetings.
2. Assistance during bidding to include interpretation, clarification and change order documents and review and approve shop drawings.

#### 2) Task 2 – Engineering Services During Construction

These services are provided after the Builder's contract with the Department has been executed and ends when the services hereunder are complete, or the period of performance has lapsed.

- a) Communication:
  - i. Meetings: The Engineer shall facilitate regular meetings with the Builder and the Department to provide project updates and address conditions or events that may affect schedule or price. During construction, "regular" is weekly.
  - ii. Monthly reports: Engineer shall summarize progress and expenditures monthly. It is anticipated that this would follow or coincide with the Builders progress payment.
  - iii. Routine or special reports and photos provided by the Builder to the Engineer on a daily, weekly, or intermittent basis, shall in turn be made available to the Department directly or through appropriate software.
- b) Submittal Review Services: The Engineer shall promptly review material submittals, equipment submittals, shop drawings, test results, samples and other submissions provided by the Builder for conformance with the design specifications and drawings. As required by the specifications, the Engineer shall approve or not approve submittals requiring acknowledgment or approval, and file submittals for the record.

The Engineer shall maintain a submittal log and shall promptly notify the department concerning submittals, or lack of submittals, which may delay construction progress. The Engineer shall use the following convention when responding to submittals:

- i. "No Exceptions Taken" – denotes the submittal is generally consistent with the requirements of the contract documents. A resubmittal is not required.

- ii. “Make Corrections Noted” – denotes the submittal is generally consistent with the requirements of the contract documents but only as conditioned by notes and corrections made on the submittal. A resubmittal is not required.
- iii. “Rejected” – denotes that the submittal does not meet the requirements of the contract documents. The department will indicate on the returned submittal deficiencies that must be remedied. A resubmittal is required.

The Engineer shall make submittals and associated approval correspondence available through appropriate software to the Department.

c) Design Clarification and Variation Requests (DCVRs) and Requests for Information (RFIs):

- i. The Engineer shall respond to Builder DCVRs and RFIs regarding the design specifications and drawings. The Engineer shall prepare appropriate clarifications and instructions or modifications to the contract documents as required.
- ii. The Engineer shall not approve variation requests that affect site utilization, and or increase cost or schedule without consultation with the Department.
- iii. The Engineer shall copy the Department with any DCVR and RFI responses to the Builder.

d) Delay by Engineer Avoided:

The Engineer shall respond and issue documents to the department in a timely manner to avoid project delays or stoppage. The Engineer shall provide all responses within 7 calendar days to the department. The Engineer shall notify the department if more time is needed within 2 calendar days of receiving initial request from the department.

e) Progress Site Visits:

- i. Engineer shall make work site visits at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Builder’s executed work. Based on information obtained during such visits and observations, Engineer, for the benefit of Department, will determine, in general, if the work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the work. Engineer’s efforts will be directed toward providing for Department a greater degree of confidence that the completed work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer shall keep Department informed of the progress of the work and will endeavor to guard Department against defective work.
- ii. Engineer shall provide daily written (digital) reports while at the work site highlighting progress, issues, and including annotated photos.
- iii. During Site Visits and in the course of observations of Builder’s work, Engineer shall not supervise, direct, control, or have authority over or be responsible for Builder’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Builder to comply with Laws and Regulations applicable to the performance of the work.

f) Observation and Inspection of the work:

- i. The Engineer shall observe the work for conformance with the contract documents for progress payment approval.
- ii. Acceptability of work: Engineer will render decisions regarding the requirements of the contract documents and judge the acceptability of the work. (In rendering such decisions and judgments, Engineer will not show partiality to Department or Builder, and will not be liable to Department, Builder, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.)
- iii. Additional Inspections: Engineer has authority to require inspections or testing if in the opinion of the Engineer they are required.
- iv. Concealed Conditions: Engineer shall investigate and make recommendations to the Department regarding concealed conditions.

- v. Defective Work: Engineer has the authority to determine whether work is defective, and to reject defective work.
  - vi. Stopping the Work: The Engineer does not have authority to stop work. The Engineer may recommend such to the Department.
  - vii. Performance: Interprets and decides matters concerning performance.
- g) Inspections, Testing, and Commissioning:
- i. Substantial Completion: Engineer conducts inspections for, determines the date of Substantial Completion, and issues a *Substantial Completion Punch List* pursuant to such inspection.
  - ii. Final Completion: Engineer conducts inspections for, determines the date of, and provides a notice of Final Completion.
  - iii. Special Inspections and Systems Commissioning: Engineer shall perform special inspections and testing as required in the specifications. Engineer shall observe commissioning to confirm system performance as provided in the specifications. Engineer shall provide a commissioning or performance report.
- h) Changes: Engineer shall recommend and draft changes to the Contract Documents as required:
- i. Recommends and prepares Change Orders and construction Change Directives to be approved, formalized, and executed by the Department.
  - ii. Approves or directs changes that do not affect price, scope of work or schedule, and reports them to the Department.
  - iii. Serves as initial decision maker in responding to claims and promptly communicates such to the Department.
- i) Processing Pay Applications:
- i. The Engineer shall review and certify payment requests from the Builder. If certified, the payment requests shall be forwarded to the Department for final approval and payment. If not certified, the Engineer shall inform the Builder and the Department.
  - ii. The Engineer shall maintain a record of payment requests, cumulative payment, and retainage.

#### Task 2 – Engineering Services During Construction Deliverables

1. Weekly meetings
2. Monthly Reports
3. As needed Special Reports
4. Submittal Review
5. Submittal Log
6. DCVR and RFI Review and Response
7. As needed Progress Site Visits
8. Observation and Inspection of the Work
9. Inspections, Testing, and Commissioning
10. Change Order review
11. Processing Pay Applications

### 3) Task 3 – Services during Closeout and Warranty

a) Substantial Completion: The Engineer shall determine Substantial Completion.

The Engineer shall confirm that the following submittals and requirements have been met prior to determining the date of Substantial Completion.

- i. Operation and Maintenance submittals and data have been provided by the Builder.
- ii. Satisfactory performance of facility systems has been demonstrated by the Builder, including commissioning, testing, and training of the facility operators.
- iii. Evidence bearing on the Record Documents has been provided by the Builder as required in the Contract Documents.

b) Final Completion: The Engineer shall determine Final Completion.

- i. The Engineer shall confirm that the Substantial Completion punch list has been completed.
- ii. The Engineer shall review and certify (when the application is complete) final application and payment. Because of need to reconcile unit prices, stipulated payments, Engineering costs associated with failed tests, or other Builder contract provisions that affect price, final payment may include a final change order. The Engineer shall draft the substance of the final change order and submit it to the Department to execute.

c) Closeout:

- i. The Engineer shall execute and stamp Record Drawings to include all field recorded redline changes.
- ii. The Engineer shall obtain final permitting and close permitting which has been issued to the Department, on behalf of the Department.
- iii. Final Record Drawings shall be submitted to ADEC Wastewater. The Engineer shall complete and sign the Certification of Construction form (PDF) for Final Approval to Operate.
- iv. The Engineer shall compile operation and maintenance manuals from information provided by the Builder and draft an Operation and Maintenance manual that is readily understandable by key operations stakeholders.
- v.

d) Warranty:

- i. The Engineer shall act on behalf of the Department in regard to issues that come up during the course of Warranty period, which may be 1 or 2 years subject to provisions in the Builders contract.

#### Task 3 – Services during Closeout and Warranty Deliverables

- 1. Substantial Completion
- 2. Final Completion
- 3. Closeout
- 4. Warranty

# PROFESSIONAL SERVICES AGREEMENT

Agreement No: 22-VSW-SNP-034  
IRIS Program No: N/A  
Federal Project No: N/A

Project Title:

To this Agreement between **THE STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, VILLAGE SAFE WATER PROGRAM**

hereafter the CONTRACTING AGENCY, and

hereafter the CONTRACTOR, effective on the last date executed by its parties, in consideration of the terms, conditions and promises of Articles 1 through 7 in this document, the parties hereby agree.

## CONTRACTOR

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_ Date \_\_\_\_\_  
Title: \_\_\_\_\_

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_ Date \_\_\_\_\_  
Title: \_\_\_\_\_

## CONTRACTING AGENCY

Contract Manager

Contracting Officer

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_ Date \_\_\_\_\_  
Title: \_\_\_\_\_

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_ Date \_\_\_\_\_  
Title: Procurement Specialist

## **ARTICLE 1 - PURPOSE**

1.1 The purpose of this contract is for the contractor to

## **ARTICLE 2 - COMPENSATION**

2.1 The maximum amount payable under this Agreement as set out in Appendix C, shall not exceed:

\$

## **ARTICLE 3 - PERIOD OF PERFORMANCE**

3.1 CONTRACTOR shall commence services under this Agreement as authorized by written *Notice(s) to Proceed* and shall complete the services in accordance with any time schedule required by Appendices. This Agreement is of no force or effect until executed by the CONTRACTOR and the CONTRACTING AGENCY and no services shall be undertaken or performed until a Notice to Proceed is issued.

3.2 The Period of Performance under this Agreement shall end:

## ARTICLE 4 - APPENDICES

4.1 The following Appendices are attached to this document and incorporated herein:

<u>Appendix</u>	<u>Title</u>	<u>Date Prepared</u>	<u>No. Pages</u>
A	General Conditions, Form 25A262		
B	Statement of Services		
C	Compensation, Form 25A280, plus Exhibits:		
D	Indemnification & Insurance, Form 25A269, plus Certificates of Insurance (for the prime CONTRACTOR)		
E	Certification of Compliance		
F	Contractor's Proposal		

## ARTICLE 5 - CONTRACTING AGENCY DATA

### Office Address

Street: 555 Cordova Street  
PO Box:  
City, State, Zip: Anchorage, AK 99501  
Phone-Voice: (907) 269-7612  
Phone-FAX:  
Email:

Appeals Officer: Commissioner,  
DEC  
Authorization: AS 46.07.040

Funding Source: **Federal**

☐ State

☐ IHS

☐ EPA

☐ Other: \_\_\_\_\_

(Check all that apply)

## ARTICLE 6 - CONTRACTOR DATA

Manager:  
Title: Member

Alaska Business License No.:  
Federal Tax Identification No.:

### Office Address

Street:  
PO Box:  
City, State, Zip:  
Phone-Voice:  
Phone-FAX:  
Email:

### Type of Firm

☐ Individual

☐ Partnership

☐ Corporation in state of:

Other (specify):

## ARTICLE 7 - SUBCONTRACTORS

7.1 CONTRACTOR shall perform all professional services required under this Agreement except as may be performed by the Subcontractors listed below or as may be allowed under Appendix A, Article A19.

Service or Engineering Discipline

Subcontractor

# GENERAL CONDITIONS

## APPENDIX A

PSA No:22-VSW-SNP-034  
IRIS Program No: N/A  
Federal Project No:N/A  
Date Prepared: 2/17/2022

### INDEX

#### Article Number and Title

A1	Definitions
A2	Information and Services from Others
A3	Hold Harmless
A4	Insurance
A5	Occupational Safety and Health
A6	Equal Employment Opportunity
A7	Payments to the CONTRACTOR
A8	Changes
A9	Audits and Records
A10	CONTRACTING AGENCY Inspections
A11	Termination or Suspension
A12	Officials Not to Benefit
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A14	Proselytizing
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A16	Precedence of Documents
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A20	Claims and Disputes
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A23	Governing Law
A24	Federal Aid Certification (Highways)
A25	Trade Restrictions
A26	Suspension and Debarment
A27	Additional Provisions

### **ARTICLE A1 DEFINITIONS**

A1.1 Additional or Extra Services – Services, work products or actions required of the CONTRACTOR above and beyond provisions of the Agreement.

A1.2 Agreement – This Professional Services Agreement and its appendices that outline the terms and conditions regarding Contractor's services during the authorized period of performance.

A1.3 Amendment – A written change to this Agreement.

A1.4 Change – A revision in services, complexity, character, or duration of the services or provisions of this Agreement.

A1.5 Commissioner – Commissioner of DEC.

A1.6 CONTRACTING AGENCY – The Department of Environmental Conservation (DEC).

A1.7 Contracting Officer – The individual or a duly appointed successor designated as the official representative to administer contracts for the CONTRACTING AGENCY.

A1.8 CONTRACTOR – The firm (person or any business combination) providing services.

A1.9 Contractor's Manager – The CONTRACTOR's representative in responsible charge of the project(s) and directly answerable for the required services.

A1.10 Contract Manager – CONTRACTING AGENCY's representative and the CONTRACTOR's primary point of contract with the CONTRACTING AGENCY.

A1.11 Contracts Officer – CONTRACTING AGENCY's representative within the Contracts/Professional Services section.

A1.12 Funding Agency – An agency of a Federal, State, Political subdivision, or Local Government which furnishes funds for the CONTRACTOR's compensation under this Agreement and which may have established regulations and requirements binding upon the CONTRACTING AGENCY and the CONTRACTOR.

A1.13 Notice to Proceed (NTP) – Written authorization from the CONTRACTING AGENCY to the CONTRACTOR to provide all or specified services in accordance with an existing Agreement.

A1.14 Statement of Services – Services and work products required of the CONTRACTOR by this Agreement.

A1.15 Subcontractor – CONTRACTOR engaged to provide a portion of the services by subcontract with the firm which is a party to this Agreement.

### **ARTICLE A2 INFORMATION AND SERVICES FROM OTHERS**

A2.1 The CONTRACTING AGENCY may, at its election or in response to a request from the CONTRACTOR, furnish information or services from other contractors. If, in the CONTRACTOR's opinion, such information or services is inadequate, the CONTRACTOR must notify the CONTRACTING AGENCY of the specific service or material deemed inadequate and the extent of the inadequacy prior to use in the performance of this Agreement. The CONTRACTING AGENCY will then evaluate and resolve the matter in writing. Unless so notified by the CONTRACTOR, the CONTRACTING



AGENCY may assume the information or services provided are adequate.

### **ARTICLE A3 HOLD HARMLESS**

A3.1 See Appendix D, "Indemnification and Insurance".

### **ARTICLE A4 INSURANCE**

A4.1 See Appendix D, "Indemnification and Insurance".

### **ARTICLE A5 OCCUPATIONAL SAFETY AND HEALTH**

A5.1 The CONTRACTOR and its Subcontractors shall observe and comply with the Federal Occupational Safety and Health act of 1970 and with all safety and health standards promulgated by the Secretary of Labor under authority thereof and with all State of Alaska Occupational Safety and Health Laws and regulations.

### **ARTICLE A6 EQUAL EMPLOYMENT OPPORTUNITY**

A6.1 The CONTRACTOR shall comply with the following applicable laws and directives and regulations of the CONTRACTING AGENCY which effectuate them; all of which are incorporated herein by reference:

Title VI of Federal Civil Rights Act of 1964;

Federal Executive Order 11625 (Equal Employment Opportunity);

Title 41, Code of Federal Regulations, Part 60 (Equal Employment Opportunity);

Title 49 Code of Federal Regulations, Part 21 (Discrimination);

Title 49, Code of Federal Regulations, Part 26 (Minority Business Enterprises);

Office of Management and Budget (OMB) circular 102, Attachment O (Procurement Standards);

Alaska Statute (AS) 18.80.200-300 (Discrimination).

A6.2 The CONTRACTOR may not discriminate against any employee or applicant for employment because of race, religion, color, national origin, age, physical disability, sex, or marital status, change in marital status, pregnancy or parenthood when the reasonable demands of the position do not require distinction on such basis. The CONTRACTOR shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, national origin, age, physical disability, sex, or marital status. This action must include, but need not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of

compensation, and selection for training including apprenticeship. The CONTRACTOR shall post in conspicuous places, available employees and applicants for employment, notices setting out the provisions of this paragraph.

A6.3 The CONTRACTOR shall state, in all solicitations or advertisements for employees to work in performance of this Agreement, that it is an equal opportunity employer and that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age, physical disability, sex, or marital status.

A6.4 The CONTRACTOR shall send to each labor union or representative or workers with which the CONTRACTOR has a collective bargaining Agreement or other contract or understanding a notice advising the labor union or workers' representative of the CONTRACTOR's commitments under this article and post copies of the notice in conspicuous places available to all employees and applicants for employment.

A6.5 In the event the CONTRACTOR subcontracts any part of the services to be performed under this Agreement, the CONTRACTOR agrees to make good faith efforts to utilize Disadvantaged Business Enterprises, to affirmatively solicit their interest, capability and prices and to furnish documentation of the results of all such direct contacts on forms provided by or acceptable to the CONTRACTING AGENCY.

A6.6 The CONTRACTOR shall make, keep and preserve such records necessary to determine compliance with equal employment opportunity obligations and shall furnish required information and reports. All records must be retained and made available in accordance with Article A9, Audits and Records.

A6.7 The CONTRACTOR shall include the provisions of this article in every contract, and shall require the inclusion of these provisions in every contract entered into by any of its Subcontractors, so that these provisions will be binding upon each Subcontractor.

### **ARTICLE A7 PAYMENTS TO THE CONTRACTOR**

A7.1 Payments shall be based on approved CONTRACTOR's invoices submitted in accordance with this article and the provisions of Appendix C. The sum of payments shall not exceed allowable compensation stated in Notice(s) to Proceed and no payments shall be made in excess of the maximum allowable total for this Agreement.

A7.2 The CONTRACTING AGENCY will exert every effort to obtain required Funding Agency approvals and to issue authorizations in a timely manner. CONTRACTOR shall not perform any services without a Notice to Proceed therefore. Accordingly, the CONTRACTING AGENCY will not pay the CONTRACTOR for services or associated

reimbursable costs performed outside those which are authorized by a Notice to Proceed.

A7.3 CONTRACTOR's invoices shall be submitted when services are completed or monthly, for months during which services are performed, as applicable, in a format provided by or acceptable to the CONTRACTING AGENCY.

A7.4 In the event items on an invoice are disputed, payment on those items will be held until the dispute is resolved. Undisputed items will not be held with the disputed items.

A7.5 The CONTRACTOR shall submit a final invoice and required documentation within 90 days after final acceptance of services by the CONTRACTING AGENCY. The CONTRACTING AGENCY will not be held liable for payment of invoices submitted after this time unless prior written approval has been given. Total payment of all Subcontractors and satisfactory compliance with Article A22, Taxes, are conditions precedent to final payment.

## **ARTICLE A8 CHANGES**

A8.1 Changes (including "Supplemental Agreements") in the period of performance, general conditions, statement of services, or other provisions established by this Agreement may be made by written Amendment only. If such changes cause an increase or a decrease in the CONTRACTOR's cost, an equitable adjustment shall be made and specified in the Amendment. The CONTRACTOR shall not perform any additional or extra services prior to receiving a fully executed copy of an Amendment and a Notice to Proceed, except as the CONTRACTOR may be directed under the provisions of Article A20, Claims and Disputes.

A8.2 If at any time the CONTRACTING AGENCY through its authorized representatives, either verbally or in writing, requests or issues instructions for Additional or Extra Services or otherwise directs actions which conflict with any provision of this Agreement, the CONTRACTOR shall, within 30 days of receipt and prior to pursuing such instructions, so notify the CONTRACTING AGENCY in writing, and to the extent possible, describe the services and estimated cost of any Additional or Extra Services. The CONTRACTING AGENCY will then evaluate and, if appropriate, negotiate an Amendment. Unless so notified by the CONTRACTOR, the CONTRACTING AGENCY will conclude such instructions have not changed any provisions of this Agreement nor require additional compensation. No additional payments shall be made to the CONTRACTOR without such notice.

## **ARTICLE A9 AUDITS AND RECORDS**

A9.1 The CONTRACTOR shall maintain records of performances, communications, documents, correspondence and costs pertinent to this Agreement

and the Funding or CONTRACTING AGENCY's authorized representatives shall have the right to examine such records and accounting procedures and practices.

A9.2 The Funding or CONTRACTING AGENCY's authorized representatives shall have the right to examine all books, records, documents and other data of the CONTRACTOR related to the negotiation, pricing and performance of this Agreement and any modification or change for the purpose of evaluating the accuracy, completeness and currency of the data submitted. The right of examination shall extend to all documents necessary to permit adequate evaluation of the data, computations and projections used.

A9.3 The materials described in this article shall be made available at a business office of the CONTRACTOR at all reasonable times for inspection, audit or reproduction, for a minimum of 3 years from the date of any resulting final settlement.

A9.3.1 If this Agreement is completely or partially terminated, records relating to the services terminated shall be made available for a minimum of three (3) years from the date of any termination or resulting final settlement, whichever is later.

A9.3.2 Records which relate to appeals under Article A20, Claims and Disputes, or litigation or the settlement of Claims arising out of the performance of this Agreement shall be made available until such appeals, litigation or Claims have been concluded.\*

## **ARTICLE A10 CONTRACTING AGENCY INSPECTIONS**

A10.1 The CONTRACTING AGENCY has the right to inspect, in the manner and at reasonable times it considers appropriate during the period of this Agreement, all facilities and activities of the CONTRACTOR as may be engaged in the performance of this Agreement.

## **ARTICLE A11 TERMINATION OR SUSPENSION**

A11.1 This Agreement may be terminated by either party upon 10 days written notice if the other party fails substantially to perform in accordance with its terms through no fault of the party initiating the termination (default termination). If the CONTRACTING AGENCY terminates this Agreement, the CONTRACTING AGENCY will pay the CONTRACTOR a sum equal to the percentage of work completed that can be substantiated in whole or in part either by the CONTRACTOR to the satisfaction of the CONTRACTING AGENCY or by the CONTRACTING AGENCY. If the CONTRACTING AGENCY becomes aware of any non-conformance with this Agreement by the CONTRACTOR, the CONTRACTING AGENCY will give prompt written notice thereof to the CONTRACTOR. Should the CONTRACTOR's services remain in non-conformance,

the percentage of total compensation attributable to the nonconforming work may be withheld.

A11.2 The CONTRACTING AGENCY may at any time terminate (convenience termination) or suspend this Agreement for its needs or convenience. In the event of a convenience termination, or suspension for more than 3 months, the CONTRACTOR will be compensated for authorized services and authorized expenditures performed to the date of receipt of written notice of termination or suspension plus reasonable expenses. No fee or other compensation for the uncompleted portion of the services will be paid except for already incurred indirect costs which the CONTRACTOR can establish and which would have been compensated for over the life of this Agreement, but because of the termination or suspension would have to be absorbed by the CONTRACTOR without further compensation.

A11.3 If federal funds support this Agreement, settlement for default or convenience termination must be approved by the Funding Agency.

A11.4 In the event of termination or suspension, the CONTRACTOR shall deliver all work products, reports, estimates, schedules and other documents and data prepared pursuant to this Agreement to the CONTRACTING AGENCY.

#### **ARTICLE A12 OFFICIALS NOT TO BENEFIT**

A12.1 No member of or delegate to Congress, United States Commissioner or other officials of the Federal, State, Political subdivision or Local Government shall be admitted to any share or part of this Agreement or any benefit to arise therefrom.

#### **ARTICLE A13 INDEPENDENT CONTRACTOR**

A13.1 The CONTRACTOR and its agents and employees shall act in an independent capacity and not as officers or agents of the CONTRACTING AGENCY in the performance of this Agreement except that the CONTRACTOR may function as the CONTRACTING AGENCY's agent as may be specifically set forth in this Agreement.

A13.2 Any and all employees of the CONTRACTOR, while engaged in the performance of any work or services required by the CONTRACTOR under this Agreement, shall be considered employees of the CONTRACTOR only and not of the CONTRACTING AGENCY and any and all Claims that may or might arise under the Worker's Compensation Act on behalf of said employees, while so engaged and any and all Claims made by a third party as a consequence of any negligent act or omission on the part of the CONTRACTOR's employees, while so engaged on any of the services to be rendered herein, shall be the sole obligation and responsibility of the CONTRACTOR.

A13.3 This Agreement will be declared null and void should the CONTRACTING AGENCY determine that by Internal Revenue Service definitions the CONTRACTOR is an employee of the CONTRACTING AGENCY.

#### **ARTICLE A14 PROSELYTIZING**

A14.1 The CONTRACTOR agrees that it will not engage on a full or part time basis, during the period of this Agreement, any person or persons who are or have been employed by the CONTRACTING AGENCY during the period of this Agreement or during the 90 days immediately preceding the date of this Agreement except those who have been regularly retired or approved in writing by the CONTRACTING AGENCY.

#### **ARTICLE A15 COVENANT AGAINST CONTINGENT FEES**

A15.1 The CONTRACTOR shall comply with the Copeland "Anti-Kickback" Act (18 USC 874) as supplemented in Federal Department of Labor regulations (29 CFR, part 3), which are incorporated by reference and made a part of this Agreement.

A15.2 The CONTRACTOR warrants that it has not employed or retained any organization or person, other than a bona fide employee, to solicit or secure this Agreement and that it has not paid or agreed to pay any organization or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the CONTRACTING AGENCY has the right to annul this Agreement without liability or, in its discretion, to deduct from the allowable compensation the full amount of such commission, percentage, brokerage or contingent fee.

A15.3 The CONTRACTING AGENCY warrants that the CONTRACTOR or the CONTRACTOR's representative has not been required, directly or indirectly as an express or implied condition in obtaining or carrying out this Agreement, to employ or retain, or agree to employ or retain, any organization or person or to make a contribution, donation or consideration of any kind.

#### **ARTICLE A16 PRECEDENCE OF DOCUMENTS**

A16.1 Components of this Agreement shall stand and prevail in the following order: Agreement over General Conditions; General Conditions over Statement of Services; Statement of Services over Basis of Compensation; Basis of Compensation over any appendices beyond Appendix C.

A16.2 If a "Request for Proposal" (RFP) and/or a proposal are appended to this Agreement, the components described in paragraph A16.1 shall stand and prevail over the proposal and the proposal over the RFP.

**ARTICLE A17**  
**ENDORSEMENT ON DOCUMENTS**

A17.1 Endorsements and professional seals, if applicable, must be included on all final drawings, specifications, cost estimates and reports prepared by the CONTRACTOR. Preliminary copies of such documents submitted for review must have seals affixed without endorsement (signature).

**ARTICLE A18**  
**OWNERSHIP OF WORK PRODUCTS**

A18.1 Work products produced under this Agreement, except items which have pre-existing copyrights, are the property of the CONTRACTING AGENCY. Payments to the CONTRACTOR for services hereunder include full compensation for all work products produced by the CONTRACTOR and its Subcontractors and the CONTRACTING AGENCY shall have royalty free non-exclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use, such work products.

A18.2 Should the CONTRACTING AGENCY elect to reuse work products provided under this Agreement for other than the original project and/or purpose, the CONTRACTING AGENCY will indemnify the CONTRACTOR and its Subcontractors against any responsibilities or liabilities arising from such reuse. Additionally, any reuse of design drawings or specifications provided under this Agreement must be limited to conceptual or preliminary use for adaptation and the original CONTRACTOR's or Subcontractor's signature, professional seals and dates removed. Such reuse of drawings and specifications, which require professional seals and dates removed, will be signed, sealed and dated by the professional who is in direct supervisory control and responsible for all adaptation.

**ARTICLE A19**  
**SUBCONTRACTORS, SUCCESSORS AND ASSIGNS**

A19.1 The CONTRACTING AGENCY must concur in the selection of any person or firm that may be engaged in performance of this Agreement to provide negotiable professional or technical services, products, etc., (vs. commodity items available to the general public in stores at market prices).

A19.2 If this Agreement includes named firms or individuals, then such firms or individuals shall be employed for the designated services, unless the Agreement is changed by Amendments.

A19.3 The CONTRACTOR shall not assign, sublet or transfer any interest in this Agreement without the prior written consent of the CONTRACTING AGENCY.

A19.4 The CONTRACTOR binds itself, its partners, its Subcontractors, assignees and legal representatives to this Agreement and to the successors, assignees and

legal representatives of the CONTRACTING AGENCY with respect to all covenants of this Agreement.

A19.5 The CONTRACTOR shall include provisions appropriate to effectuate the purposes of this Appendix A in all subcontracts executed to perform services under this Agreement which may exceed a cost of \$25,000.

**ARTICLE A20**  
**CLAIMS AND DISPUTES**

A20.1 If the CONTRACTOR becomes aware of any act or occurrence which may form the basis of a Claim by the CONTRACTOR for additional compensation or an extension of time for performance, or if any dispute arises regarding a question of fact or interpretation of this Agreement, the CONTRACTOR shall immediately inform the Contracts Officer. If the matter cannot be resolved within 7 days, the CONTRACTOR shall, within the next 14 days, submit an "Intent to Claim" in writing to the Contracts Officer.

A20.1.1 If the CONTRACTOR believes additional compensation is warranted, the CONTRACTOR shall immediately begin to keep and maintain complete, accurate and specific daily records concerning every detail of the potential Claim including actual costs incurred. The CONTRACTOR shall give the CONTRACTING AGENCY access to any such record and, when so requested, shall forthwith furnish the CONTRACTING AGENCY copies thereof.

A20.1.2 The Claim, if not resolved, shall be presented to the Contracting Officer, in writing, within 60 days following receipt of the "Intent to Claim". Receipt of the Claim will be acknowledged in writing by the Contracting Officer.

A20.1.3 The CONTRACTOR agrees that unless these written notices are provided, the CONTRACTOR will have no entitlement to additional time or compensation for such act, event or condition. The CONTRACTOR shall in any case continue diligent performance under this Agreement.

A20.2 The Claim shall specifically include the following:

A20.2.1 The act, event or condition giving rise to the Claim.

A20.2.2 The provisions of the Agreement which apply to the Claim and under which relief is provided.

A20.2.3 The item or items of project work affected and how they are affected.

A20.2.4 The specific relief requested, including Contract Time if applicable, and the basis upon which it was calculated.

A20.3 The Claim, in order to be valid, must not only show that the CONTRACTOR suffered damages or delay but that those conditions were actually a result of the act, event or condition complained of and that the Agreement

provides entitlement to relief to the CONTRACTOR for such act, event, or condition.

A20.3.1 The CONTRACTING OFFICER reserves the right to make written requests to the CONTRACTOR at any time for additional information which the CONTRACTOR may possess relative to the Claim. The CONTRACTOR agrees to provide the Contracting Officer such additional information within 30 days of receipt of such a request. Failure to furnish such additional information may be regarded as a waiver of the Claim.

A20.3.2 If the Claim is not resolved by Agreement within 90 days of its receipt, the Contracting Officer will issue a written decision to the CONTRACTOR.

A20.3.3 The CONTRACTOR shall certify that the Claim is made in good faith, that the supporting cost and pricing data are accurate and complete to the best of the CONTRACTOR's knowledge and belief, and that the amount requested accurately reflects the adjustment to the Agreement for which the CONTRACTOR believes the CONTRACTING AGENCY is liable.

A20.4 The CONTRACTOR will be furnished a written signed copy of the Contracting Officer's decision within 90 days, unless additional information is requested by the Contracting Officer. The Contracting Officer's decision is final unless, within 14 days of receipt of the decision, the CONTRACTOR delivers a written Notice of Appeal to the Commissioner designated on Page 2 of this Agreement.

A20.5 Procedures for appeals and hearings are covered under AS 36.30.625 and AS 36.30.630.

#### **ARTICLE A21 EXTENT OF AGREEMENT**

A21.1 This Agreement including appendices represents the entire and integrated Agreement between the CONTRACTING AGENCY and the CONTRACTOR and supersedes all prior negotiations, representations or Agreements, written or oral.

A21.2 Nothing contained herein may be deemed to create any contractual relationship between the CONTRACTING AGENCY and any Subcontractors or material suppliers; nor may anything contained herein be deemed to give any third party Claim or right of action against the CONTRACTING AGENCY or the CONTRACTOR which does not otherwise exist without this Agreement.

A21.3 This Agreement may be changed only by written Amendment executed by both the CONTRACTING AGENCY and the CONTRACTOR.

A21.4 All communications that affect this Agreement must be made or confirmed in writing and must be sent to the addresses designated in this Agreement.

A21.5 The CONTRACTOR on receiving final payment will execute a release, if required, in full of all Claims against the CONTRACTING AGENCY arising out of or by

reason of the services and work products furnished and under this Agreement.

#### **ARTICLE A22 TAXES**

A22.1 As a condition of performance of this Agreement, the CONTRACTOR shall pay all Federal, State and Local taxes incurred by the CONTRACTOR and shall require their payment by any Subcontractor or any other persons in the performance of this Agreement.

#### **ARTICLE A23 GOVERNING LAW**

A23.1 This Agreement is governed by the laws of the State of Alaska and Federal and Local Laws and Ordinances applicable to the work performed. The CONTRACTOR shall be cognizant and shall at all times observe and comply with such laws which in any manner affect those engaged or employed in the performance, or which in any way affects the manner of performance, of this Agreement.

#### **ARTICLE A24 FEDERAL AID CERTIFICATION (For Agreements exceeding \$100,000)**

A24.1 The CONTRACTOR certifies, by executing this Agreement, to the best of his or her knowledge and belief, that:

A24.1.1 No federal appropriated funds have been paid or will be paid, by or on behalf of the CONTRACTOR, to any person for influencing or attempting to influence an officer or employees of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative Agreement, and at the extension, continuation, renewal, Amendment, or modification of any Federal contract, grant, loan, or cooperative Agreement.

A24.1.2 If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress in connection with this Federal contract, grant, loan, or cooperative Agreement, the undersigned shall complete and submit Standard Form LLL, Disclosure of Lobbying Activities, in accordance with its instructions. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

A24.2 This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code.

A24.3 The CONTRACTOR also agrees by executing this Agreement that the CONTRACTOR shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

## **ARTICLE A25 TRADE RESTRICTIONS**

The CONTRACTOR or Subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. Has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
- c. Has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the CONTRACTOR knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.

Further, the CONTRACTOR agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The CONTRACTOR may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

The CONTRACTOR shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the CONTRACTOR or subcontractor knowingly rendered an erroneous

certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally posed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

## **ARTICLE A26 SUSPENSION AND DEBARMENT**

The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offeror/contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/ proposal.

## **ARTICLE A27 ADDITIONAL PROVISIONS**

*(Any deletion or modification of Articles A1 through A26 shall be approved "as to form" by the CONTRACTING AGENCY's legal section, acknowledged in writing, and attached as an Exhibit to this Appendix.)*

A27.1 Contractor shall comply, and ensure subcontractors comply, with the attached Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment per 2 CFR 200.216.

A27.2 The contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

# COMPENSATION

## APPENDIX C EXHIBIT C-1, METHOD(S) OF PAYMENT

VSW Program No: 22-VSW-SNP-034  
Federal Project No: N/A  
Date Prepared:

1. Payments will be made in accordance with Article A7 (Basic Agreement), Articles C1 - C9 (Appendix C), the following, and the applicable discussions of Methods of Payment presented below.

<u>CONTRACTOR &amp; SUBCONTRACTORS</u>	<u>SUBCONTRACTOR TO: (FIRM)</u>	<u>METHOD OF PAYMENT</u>	<u>ESTIMATED COST</u>	<u>FEE</u>	<u>ESTIMATED PRICE</u>
--	-------------------------------------	------------------------------	---------------------------	------------	----------------------------

Total Agreement Amount: \_\_\_\_\_

Note: If a Method of Payment is "Fixed Price", then the amount listed under "Estimated Price" is the Fixed Price.

2. **FIXED PRICE(S)** payments will be a single lump sum payment equal to the Fixed Price upon acceptable completion of this Agreement, or progress payments not to exceed the Fixed Price.

3. **FIXED PRICE(S) PLUS EXPENSES** payments will be as follows:

3.1 Payments of the **FIXED PRICE** will be a single lump sum payment equal to the Fixed Price upon acceptable completion of services, or progress payments not to exceed the Fixed Price(s).

3.2 Payments for Other Direct Costs (**EXPENSES**) will be made for actual substantiated costs not to exceed the total specified amount for expenses that are directly chargeable to and necessary for performance of the services assuming they are not recovered through the Indirect Cost Rate.

4. **COST PLUS FIXED FEE** payments will be made according to the following:

4.1 Payments for **DIRECT COST OF DIRECT LABOR** will be equivalent to the number of hours expended by each job classification multiplied by the applicable Direct Labor Rate. Job Classifications, Labor Hours and Direct Hourly Rates are estimated for this contract. Work shall be performed by the lowest paid qualified personnel. Further, when performing work for which they are over qualified, individuals will charge time at rates equivalent to skill levels commensurate with the work they perform. Contract payments will be based on the actual Direct Labor Rates paid to employees in any direct labor job classification who work on the contract, except that no Direct Hourly Rate shall exceed \$ **PER HOUR** except for the following individuals whose rates are capped (fixed) as listed below for the duration of this Agreement:

<u>FIRM</u>	<u>JOB CLASSIFICATION</u>	<u>PERSON'S NAME</u>	<u>DIRECT RATE (\$/HR)</u>
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4.2 Payments for **INDIRECT COSTS** shall be equivalent to the amounts for Direct Cost of Direct Labor multiplied by the following applicable **INDIRECT COST RATES (IDCR)**:

<u>CONTRACTOR/ SUBCONTRACTOR</u>	<u>IDCR (%)</u>	<u>IDCR TYPE (F, F/P, P)</u>
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4.2.1 IDCR with "F" is Fixed for the duration of this Agreement.

4.2.2 IDCR with "F/P" is Fixed for the last half of the firm's current fiscal year plus not to exceed six months of its next fiscal year, after which the IDCR becomes a Provisional Rate until an audit is completed and a Fixed IDCR is established for each successive twelve month interval.

4.2.3 IDCR with "P" is Provisional until completion of post performance audit to establish actual incurred rate which is used to establish a final IDCR for the period covered by the audit. Post performance audits may be done after each fiscal year of a multi-year contract or once after completion of the contract. Audit findings and other

rationale will be used to establish a final IDCR that appropriately allocates Indirect Costs to this Agreement for each fiscal year.

4.2.4 Revisions to any IDCR may be implemented only by a contract Amendment. Further, adjustment of any payments made based on Provisional IDCRs will not be done without a contract Amendment that fully explains the amount of the adjustments.

4.3 Payments for **OTHER DIRECT COSTS** (Expenses) will be made for actual substantiated costs which are directly chargeable to and necessary for performance of services assuming they are not recovered through the Indirect Cost Rate. "Markup" of Other Direct Costs is prohibited (reference paragraph C8).

4.4 If not defined elsewhere in this Appendix C, progress payments for a firm's (Contractor or any Subcontractor) **FIXED FEE** will be equivalent to the ratio of the firm's Direct Cost of Direct Labor to date, divided by the firm's total estimated Direct Cost of Direct Labor, multiplied by the total amount of the firm's Fixed Fee. The Fee amount for each firm participating in this Agreement was determined as follows:

5. **TIME AND EXPENSES** payments will be made according to the following:

5.1 Payments for **TIME** will be equivalent to the number of hours expended by each job classification multiplied by the applicable Billing Rate. Work will be performed by personnel with the lowest reasonable skill levels and hourly rates. Further, when performing work for which they are over qualified, individuals will charge time at rates equivalent to skill levels commensurate with the work they perform.

5.1.1 **BILLING RATES** for persons who work on this contract shall be the sum of the person's actual Direct Labor Rate plus an allowance for Indirect Cost at the then current Agency-approved Indirect Cost Rate for the person's employer (firm) plus a fee (profit) of eight percent (e.g.,  $8\% = \$23 + (1.50 \times \$23) + (.08 \times [\$23 + (1.50 \times \$23)]) = \$67.50 = \$68.75$ ); however, this rate shall not exceed \$ **PER HOUR** except for the following individuals whose rates are capped (fixed) as listed below for the duration of this Agreement.

<u>FIRM</u>	<u>JOB CLASSIFICATION</u>	<u>PERSON'S NAME</u>	<u>BILLING RATE (\$/HR)</u>
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5.1.2 **BILLING RATES** are negotiated hourly labor rates which include compensation for all Costs (Direct Cost of Direct Labor and all Indirect Costs) plus Fee, except for allowable direct Expenses.

5.1.3 **Time & Expenses Overtime** shall be calculated at 1.5 times the base labor rate (DL & IDCR) and then the profit factor added.

5.2 Payments for Other Direct Costs (**EXPENSES**) will be made for actual substantiated costs that are directly chargeable to and necessary for performance of services assuming they are not recovered through the Indirect Cost Rate. "Markup" of Expenses is prohibited (reference paragraph C8).

5.3 A time and expense contract resulting from this RFP will include the following price adjustment clause. If the contract combines other methods of compensation for certain contract phases then this clause only pertains to the time and expense phase of the contract.

**Consumer Price Index (CPI):** Contract prices will remain firm until the department amends for construction administration services.

The contractor may request price adjustments, in writing, 30 days prior to March 31st. Requests must be in writing and must be received 30 days prior to the above date. If the contractor fails to request a CPI price adjustment 30 days prior to the above date, the adjustment will be effective 30 days after the state receives their written request.

Price adjustments will be made in accordance with the percentage change in the U.S. Department of Labor Consumer Price Index (CPI-U) for All Urban Consumers, All Items, Urban Alaska.

The price adjustment rate will be determined by comparing the percentage difference between the CPI in effect for the base year six-month average July through December 2021; and each July through December six-month average thereafter. The percentage difference between those two CPI issues will be the price adjustment rate. No retroactive contract price adjustments will be allowed.



All price adjustments must be approved by the procurement officer prior to the implementation of the adjusted pricing. Approval shall be in the form of a contract amendment issued by the department.

**6. SPECIAL CONSIDERATIONS:**

6.1 Travelers are permitted actual costs, or an allowance, for lodging (as negotiated and detailed below) and an allowance for meal and incidental expenses (M&IE). Refer to AAM 60.250 for policies regarding travel.

6.2 Employees shall be considered in travel status from the time an authorized trip begins until it ends. An authorized trip is a trip approved in accordance with a NTP issued under the contract. The duty station of the employee is the city, town, or village, or within a 50-mile radius thereof, where the employee spends the majority of their working time.

6.3 M&IE allowances shall be limited to the State rate of \$60.00 per day. The duration of the trip must be more than 12 hours in order for the traveler to be eligible for M&IE allowances. Additionally, the traveler will receive 75% of the full allowable daily allowance on the initial date of departure and the final date of arrival for contract-approved travel, regardless of time of departure/arrival.

6.4 If paying actuals for Lodging, Lodging shall be at the hotel's "government" rate (when applicable) and for single occupancy, not to exceed \$300.00 per day. Lodging receipts are required.



# NOTICE TO PROCEED & BILLING SUMMARY

NTP No:  
Agreement No:  
IRIS Program No:  
Federal No:  
PSA Expiration Date:

(This form is for any COST REIMBURSEMENT Agreement, generally one that will exceed \$250,000.)

Contractor:

Project Title:

## NOTICE TO PROCEED

Provide services for the Tasks Group(s) and specific Tasks enumerated below in the Billing Summary. Any services beyond the written scope and/or any costs above the price estimate for **each Task Group** in our Agreement, require prior Agency approval and a contract Amendment. Actual cost underrun of Contract Amount for any Task Group shall not routinely accumulate for other Groups. The Contracting Agency reserves the right to retain or reallocate any remaining funds resulting from such cost underruns.

***This NTP is cumulative and it supersedes all prior NTPs for this Agreement.***

The Agency Contract Manager for this NTP is:

Tel No.

Issued for the Contracting Agency per ADOT&PF Policy #01.01.050 by:

Accepted for the Contractor by:

Signature  
Name:

Date

Signature  
Name:

Date

## BILLING SUMMARY

This Invoice is for [ ] Progress OR [ ] Final Payment. **Sequential Invoice # for this Agreement is: [ ]**.

Total Contract Amounts	Authorized Task Groups and Tasks Number(s)	Authorized To - Date	Prior Aprv'd Payments	This Billing	Total To - Date
	A, Tasks No(s):				
	B, Tasks No(s):				
	C, Tasks No(s):				
	D, Tasks No(s):				
	Total Authorized Amount for All Groups				
	Sum of Prior APPROVED Payments				
	Sum for THIS INVOICE				
	Sum of Prior Payments and this Invoice				
	Balance of Authorized Amount				

Template

Object

Activity

Phase

PAYMENT REQUEST (Contractor):

Signature  
Name:

Date

## APPROVAL FOR PAYMENT

PAYMENT RECOMMENDED: I certify this Invoice to be valid and accurate and that services were performed substantially in conformance with the contract requirements and schedule.

Signature  
Name:

Date

PAYMENT APPROVED: Based upon the Contract Manager's recommendation and certification, I hereby approve payment.

Signature  
Name:

Date

# INSTRUCTIONS TO CONTRACTOR for COST REIMBURSEMENT NOTICE TO PROCEED (NTP) & BILLING SUMMARY

1. **RETAIN AN UNMARKED**, as issued, **COPY OF THIS FORM** to be used for reproduction and billing.
  2. If this NTP is unacceptable, notify the Contracting Agency immediately. If acceptable, acknowledge by signature where indicated on a copy of this NTP and return it within ten days after your receipt.
  3. Submit monthly Invoices to the Agency Contract Manager named in this NTP. **Provide a copy of page one of this form as the FACE PAGE of each invoice submitted and with the following entries accurately completed:**
    - a) Indicate if the Invoice is for Progress or Final Payment and show the Sequential Invoice Number for this NTP.
    - b) Entries in the following columns: Prior Appr'd Payments, This Billing, and Total to Date for each Task Group; plus the SUM TOTALS for: Authorized To - Date, Prior APPROVED Payments, THIS INVOICE, Prior Payments plus this Invoice, and Balance of Authorized Amount.
- Note "Prior APPROVED Payments" amounts may NOT be the same as the total of all your prior invoices if some items were disallowed or adjustments were made. If a prior billing has not been acknowledged with any payment, or a different amount from your billing was paid without notification to you of the reason(s), attach a request for an explanation and remedial action.
4. Sign, date and enter printed or typed name under "PAYMENT REQUEST (Contractor)" thereby attesting to the following:

"By signature on this form, the Contractor certifies entries to be true and correct for the services performed to date under or by virtue of said Agreement and in accordance with AS 36.30.400. The Contractor further certifies that all applicable Federal, State and Local taxes incurred by the Contractor in the performance of the services have been paid and that all Subcontractors engaged by the Contractor for the services included in any invoice shall be fully compensated by the Contractor for such services."
  5. **ATTACH A CURRENT COPY OF EXHIBIT C-4, COST REIMBURSEMENT BILLING DETAIL FORM (from Appendix C of the Agreement) to each invoice. Internally, check the form and correct mathematical extensions. The Contracting Agency may return erroneous invoices for correction before processing for payment.**
  6. Substantiate all charges in each billing, other than for Fixed Prices or Fixed Fees, by attaching a summary of hours expended and hourly labor rate per employee; summary of units completed; subcontractor invoices; expense receipts, etc.; or other proof of expenditures.
  7. ***Prime Contractor's Labor and Indirect Cost shall be billed to the Contracting Agency within 45 days of performance. Subcontractors' Labor and Indirect Cost shall be billed to the Contracting Agency within 60 days of performance. All of the Contractor's and Subcontractors' Other Direct Costs (Expenses) shall be billed to the Contracting Agency within 90 days of being incurred. Charges submitted after the above stated times will, at the Contracting Agency's discretion, not be paid.***
  8. When each NTP is approximately 75% complete, the Contractor shall determine if the Authorized Amount(s) might be exceeded; and, if so, shall provide an estimate of cost to complete. The Contracting Agency will determine after discussion with the Contractor if additional cost is reasonable and does not include costs that should be absorbed by the Contractor. If additional cost is validated, a negotiated Amendment will be executed which either (1) reduces the scope of services/work products required commensurate with the Authorized Amount(s), or (2) increases the Authorized Amount(s) to that required for completion of the original contract scope.

# INDEMNIFICATION AND INSURANCE

## Appendix D in Professional Services Agreements

VSW Program No:22-VSW-SNP-034  
Federal Project No:N/A  
Date Prepared:2/17/2022

CONTRACTOR shall include the provisions of this form in all subcontracts that exceed \$25,000 and shall ensure Subcontractor's compliance with such provisions.

### ARTICLE D1 INDEMNIFICATION

D1.1 The CONTRACTOR shall indemnify, hold harmless, and defend the CONTRACTING AGENCY from and against any claim of, or liability for negligent acts, errors or omissions of the CONTRACTOR under this Agreement. The CONTRACTOR shall not be required to indemnify the CONTRACTING AGENCY for a claim of, or liability for, the independent negligence of the CONTRACTING AGENCY. If there is a claim of, or liability for, the joint negligent error or omission of the CONTRACTOR and the independent negligence of the CONTRACTING AGENCY, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "CONTRACTOR" and "CONTRACTING AGENCY", as used within this article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "Independent Negligence" is negligence other than in the CONTRACTING AGENCY's selection, administration, monitoring, or controlling of the CONTRACTOR and in approving or accepting the CONTRACTOR's Work.

D1.2 The CONTRACTOR shall exercise that degree of skill, care and judgment commensurate with the professional standards for the services of a similar nature. When such standards are in dispute, they shall be established by a panel of three qualified, impartial professionals objectively selected and appointed by the Appeals Officer.

D1.3 The CONTRACTOR shall correct, through re-performance at its expense, any services which are deficient or defective because of the CONTRACTOR's failure to perform said services in accordance with professional standards, provided the CONTRACTING AGENCY has notified the CONTRACTOR in writing within a reasonable time, not to exceed 60 days, of the discovery of any such deficiency during the performance of the services and within 12 months of the date of final payment under this Agreement.

### ARTICLE D2 INSURANCE

D2.1 Without limiting the CONTRACTOR's indemnification, it is agreed that CONTRACTOR shall purchase at its own expense and maintain in force at all times for the duration of this Agreement, plus one year

following the date of final payment, the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the CONTRACTOR's policy contains higher limits, the CONTRACTING AGENCY shall be entitled to coverage to the extent of such higher limits. Certificates of insurance must be furnished to the CONTRACTING AGENCY and incorporated into this Agreement with copies attached to this document. Certificates must provide for the CONTRACTING AGENCY to receive notice of any policy cancellation or reduction per AS 21.36 Sections 210-310. Failure to furnish certificates of insurance or lapse of the policy is a material breach and grounds for termination of the CONTRACTOR's services and may preclude other Agreements between the CONTRACTOR and the CONTRACTING AGENCY.

D2.1.1 Worker's Compensation Insurance: The CONTRACTOR shall provide and maintain, for all employees engaged in work under this Agreement, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal USL&H and Jones Act requirements. The policy(s) must waive subrogation against the State of Alaska.

D2.1.2 Commercial General Liability Insurance: Such policy shall have **minimum** coverage limits of \$300,000 combined single limit per occurrence, covering all business premises and operations used by the Contractor in the performance of services under this agreement. The policy shall be written on an "occurrence" form and shall not be written as a "claims-made" form unless specifically reviewed and agreed to by the CONTRACTING AGENCY.

D2.1.3 Comprehensive Automobile Liability Insurance: Such policy shall have **minimum** coverage of \$300,000 combined single limit per occurrence covering all vehicles used by the Contractor in the performance of services under this agreement.

D2.1.4 Professional Liability (E&O) Insurance: Covering all negligent errors or omissions, and negligent acts, which the CONTRACTOR, Subcontractor or anyone directly or indirectly employed by them, make in the performance of this Agreement which result in financial loss to the State of Alaska. Limits required are per the following schedule:

<u>Contract Amount</u>	<u>Combined Single Limit, Per Occurrence &amp; Annual Aggregate</u>
Under \$25,000	As Available
\$25,000 to \$100,000	\$300,000
\$100,000 to \$499,999	\$500,000
\$500,000 to \$999,000	\$1,000,000
\$1,000,000 and over	Negotiable

\$ 500,000.00
---------------

(Article D3 is completed only when some of the standard insurance coverages are not applicable.)

D3.1 ☐ **Workers Compensation Insurance** is not required because the CONTRACTOR is an Independent Contractor, Sole Proprietor or Self-Employed Person having no employees in any sense of AS 23.30.045.

D3.2 ☐ **Comprehensive or Commercial General Liability Insurance** is not required because the general public and clients do not have any business access to a place of business or home office maintained by the CONTRACTOR.

D3.3 ☐ **Comprehensive Automobile Liability Insurance** is not required because only public transportation, or a rented passenger vehicle with business use insurance, will be used to accomplish requirements of this Agreement.

***When services may apply to fire, life safety or structural aspects and/or wherever the services should safeguard life, limb, health or property, Professional Liability Insurance shall be required.***

D3.4 ☐ **Professional Liability (E&O) Insurance** is not required because: 1) the CONTRACTING AGENCY's use of the services or Work products obtained from the CONTRACTOR will not result in significant exposure to any third party claims for loss or damage; and 2), the CONTRACTOR services will not apply to any construction, alteration, demolition, repair or direct use of any highway, airport, harbor, building or other structure.

D3.5 ☐ **Professional Liability (E&O) Insurance** is not required because this Agreement is for one of the following applicable (*checked*) services for which E&O coverage is not needed:

- ☐ Right-of-Way Fee Appraisals
- ☐ Photogrammetric Mapping Services
- ☐ Architectural/Engineering review of Construction Bid Documents wherein design responsibility clearly remains with the designer of record.

D3.6 ☐ Attached Exhibit D-1 identifies and provides justification for insurance modifications.

**CONTRACTING OFFICER**    Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

# CERTIFICATION OF COMPLIANCE

## APPENDIX E

VSW Program No:22-VSW-SNP-034  
Federal Project No:N/A  
Date Prepared:2/17/2022

Contractor and all Subcontractors shall comply with the following applicable requirements:

1. For Procurements over the Small Procurement Limits, **Alaska Business License** (Form 08-070 issued under AS 43.70) at the time designated for award as required by AS 36.30.210(e) for Contractor and all Subcontractors.
2. **Certificate of Registration** for each individual to be in "responsible charge" (AS 08.48.341(14)) for Architecture, Engineering, Land Surveying or Landscape Architecture (Form 08-2407 issued under AS 08.48.211) issued prior to submittal of proposal. Associates, consultants, or specialists under the supervision of a registered individual in "responsible charge" are exempt from registration requirements (AS 08.48.331).
3. **Certificate of Incorporation (Alaska firms) or Certificate of Authorization** for Foreign Firm ("Out-of-State" firms). All corporations, regardless of type of services provided, must have one of the certificates (AS 10.06.218 and other sections of Title 10.06 - Alaska Corporations Code).
4. **Current Board of Director's Resolution** for incorporated Contractors and incorporated Subcontractors for Architecture, Engineering, Land Surveying, or Landscape Architecture (AS 08.48.241), which names the person(s) designated in "responsible charge" for each discipline. Such persons shall be licensed in Alaska and shall participate as project staff in the Contract / Subcontracts.

5. **Corporations, limited liability companies, and limited liability partnerships** shall have a valid Certificate of Authorization under 08.48.241 prior to award.
6. **All partners** in a Partnership to provide Architecture, Engineering, Land Surveying, or Landscape Architecture **must be legally registered in Alaska** prior to submittal of proposal for at least one of those disciplines (AS 08.48.251) that the Partnership offers.
7. **Joint Ventures**, regardless of type of services provided, must be licensed/registered in the legal name of the Joint Venture as used in this proposal (AS 43.70.020 and 43.70.110(4)).
8. The Contractor certifies that firms or individuals **debarred or suspended by the Department, State or Federal agencies** are not employed or subcontracted under this Professional Services Agreement.

The Contractor will ensure that it and all Subcontractors have insurance coverage to effectuate the requirements of Appendix D, "Indemnification and Insurance", DOT&PF Form 25A269, as prepared for this Agreement.

**I certify that I am a duly authorized representative of the Contractor and that the above requirements will be complied with in full. This certification is a material representation of fact upon which reliance will be placed if the proposed contract is awarded.**

\_\_\_\_\_  
Signature  
Name.....:  
Title .....

\_\_\_\_\_  
Date

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# Village Safe Water

## Design Review Procedures

Revised March 6, 2013

### *Objective*

These procedures standardize the review of designs of sanitation facilities projects managed by the Alaska Department of Environmental Conservation Village Safe Water (VSW) Program. The ultimate goal of these procedures is to **achieve excellence** in building **sustainable sanitation facilities** for communities in rural Alaska. Standardized design review procedures will:

- Provide guidance for the complete development of quality design documents
- Promote efficiency
- Provide continuity and consistent methodology
- Minimize project risk.

VSW is responsible for the development of design, administering the construction and assisting in the operation of sustainable sanitation facilities that meet the following goals:

- Designs that are simple but reliable – as fail safe as reasonably possible
- Construction that is cost effective yet results in quality improvements
- Operation that is affordable and protects human health and the environment

To this end, the State of Alaska Legislature added the following intent language in the SFY 06 Capital Budget for funding VSW projects:

*It is the intent of the Legislature that the Department of Environmental Conservation (DEC) will establish guidelines for deciding whether proposed project costs are reasonable and whether proposed projects are sustainable; ensure that projects are limited to systems that are reasonable and sustainable; and exercise final decision authority as to project costs and the types and extent of projects to be constructed.*

## ***Procedures***

The design review process consists of four distinct phases:

- Phase I – Design Project Setup
- Phase II - Conceptual Design
- Phase III – Design Analysis Report and 35% Design Drawings
- Phase IV – Production Drawings

The design review phases are illustrated in the “*VSW Design Review Flowchart*” (Attachment 1). Design reviews are a key element of quality assurance in the design development process. These reviews must be documented to create a record of the comments that were received and how the designer addressed them.

The VSW Project Manager will be responsible to make arrangements for setting up the design review meeting and distribution of the design plans and associated documents. Each member of the Design Review Team will receive an invitation to the design review meeting. The meeting will be scheduled to allow team members at least 15-business days to review the design – this amount of review time is required for all phases of design. However, depending on the complexity of the project and critical time constraints, the design review period can be decreased or increased subject to the concurrence of the VSW Lead Engineer. and the “Gate Keeper.”

The VSW Project Manager is responsible for the initiation and maintenance of a checklist and schedule, referred to as the “*Design Phases and Tasks Checklists/Schedule*” (Attachment 2). The checklist is to be used for documenting the completion of the design phases and associated tasks.

The design review process incorporates a quality control measure consisting of a series of review gates. Completion of a review gate and transition to the next review gate is a key milestone in the design project’s life cycle. All gates require the submission of summary documents (defined herein) to the “Gate Keeper” (VSW Program Manager or his/her designee) and the Lead Engineer for review. A review gate identifies a point at which clear decisions are made about projects, and whether to continue the project or modify parameters of the project, such as project scope, schedule and/or resources.

Although written approval from the Gate Keeper is not required for gate passage, the Gate Keeper has the authority within **5-business days** of receipt of the summary documents to stop the progress of the design review process. The Gate Keeper clock does not begin until Lead Engineer has completed summary document review. If the Gate Keeper determines the summary documents are deficient, he/she may require the submission of additional documentation to demonstrate that the project outcomes at that specific point in the design review process have been achieved and that the project is ready to proceed to the next review gate.



The review gates are shown as “diamond” shaped steps on the aforementioned flowchart. The following list presents the design review summary documents that are required for passage through each of the five review gates:

- ✓ Review Gate 1 - Design Execution Plan in Phase I
- ✓ Review Gate 2 – Conceptual Design Review Memorandum in Phase II
- ✓ Review Gate 3 – 35% Design Review Memorandum in Phase III
- ✓ Review Gate 4 – 65% Design Review Memorandum in Phase IV
- ✓ Review Gate 5 - 95% Design Review Memorandum in Phase IV

The remainder of this procedures document describes in detail the requirements for design review under each phase. The individual tasks noted under each phase are provided for guidance, and may vary depending on the scope of the work for each design project. The VSW Project Manager, with the concurrence of the VSW Lead Engineer will determined the specific design review tasks.

All design reviews will incorporate the use of the “VSW Design Review Comments and Response Form” (Attachment 5), for the assembly and documentation of design questions, comments and requested modifications. The form will be distributed via the internet. All members of the Design Review Team will provide their comments in writing on the design review form. The VSW Project Manager will collect all review comment forms from the design review team and submit them to the Design Engineer for a response.

Comments can be collected from a number of individuals (as email attachments) and simply sorted and pasted (consolidated) into a single document. The form allows for easy sorting of comments and eliminates duplicate comments. Written comments also require the reviewer to provide a more well thought out and coherent review thus minimizing the possibility of misinterpretation.

### ***Design Dispute Resolution Process***

In the event that there are unresolved design disputes that can’t be resolved by the design review team, such disputes may be elevated to the VSW Program Manager for resolution and final decision.

Upon concurrence from the VSW Lead Engineer, the process starts with the VSW Project Manager notifying the VSW Program Manager with a request to intervene and resolve the design disputes by providing a written narrative of each dispute and information supporting the opposing views of each dispute. Within 5-business day, the VSW Program Manager will schedule a meeting to hear verbal arguments on each dispute. Besides the VSW Program Manager, this meeting will be attended by the following:

- VSW Project Manager
- VSW Lead Engineer
- Consultant (Project Manager and/or Design Engineer)
- Third Party Expert (optional)

Within 10 business days of either the written request or if in effect, the meeting, the VSW Program Manager will make a final decision based on the written request and if held, the information presented at the meeting. The VSW Program Manager will document each decision in writing.

## ***Phase I – Design Project Setup***

### **1.1 Assign VSW Project Engineer, Feasibility Study Completed and Design Engineer Hired**

The first step in the design review process is initiated subsequent to the following actions:

- VSW Project Manager is assigned –

VSW Program Manager will assign a qualified engineer to serve as the VSW Project Manager for managing the design of the sanitation facility proposed for a designated community. The VSW Project Manager will be the primary point of contact for the community for the duration of the design project including the construction phase of work.

- Feasibility Study Completed –

The VSW Project Manager will procure an engineering firm to prepare the feasibility study (or Sanitation Master Plan). The feasibility study should recommend the design and development of sustainable sanitation improvements that effectively balance the following needs:

- ✓ Design simplicity and reliability
- ✓ Accomplish desired function, such as water treatment.
- ✓ Cost, quality, and ease of construction
- ✓ Cost and ease of operation
- ✓ Standardized regional designs, equipment, and materials to promote and create opportunities for improving the efficiency and quality of service delivery

The engineering firm responsible for the preparation of the feasibility study should collect baseline design data including but not limited to the following: house counts, population projections, water demands, water source characteristics, sewage flows, solid waste generation, environmental conditions, land status, soil material borrow sources, electrical power generation, bulk fuel storage, existing archaeological or historic reports, record drawings of existing facilities, and background information on erosion, flooding and seismic activity. VSW will review and approve the feasibility study in accordance with VSW Program Policies and Procedures.

- ✓ Attachment 8: Sanitation Facilities Master Plan Outline (Feasibility Study) – Table of Contents
- Design Engineer Hired –

The VSW Project Manager will initiate the procurement of services of an engineering firm (referred to as the Design Engineer in this document) to prepare the design of the proposed sanitation facility recommended in the feasibility study. The design engineering firm will complete all field investigations, pilot studies, and sampling necessary to design the proposed sanitation facility. Also, all of the applicable pertinent site information necessary for design that was beyond the scope of the feasibility study should be collected and compiled by the Design Engineer.

Before the contract for architectural and/or engineering design services has been awarded, the Design Engineer prepares and submits a proposal for these services to the VSW Project Manager based on a request for proposal prepared by the VSW Project Manager. After negotiations are completed between the Design Engineer, VSW and the community, a contract is executed and a notice to proceed is issued. In some cases, an NTP may depend on funding and, in other cases, the NTP may be dependent on the outcome of work performed under a previous NTP. Regardless, the contract needs to reference and follow these design review procedures in Phases II, III and IV.

## 1.2 Prepare Project Design Notebook

A Project Design Notebook will be prepared and maintained by the VSW Project Manager for each design project. The Design Notebook will consist of a three-ring binder with the VSW project number provided on the notebook's front cover and spine. The notebook shall be prepared in accordance with the assembly information provided in the "*Project Design Notebook Requirements and Notebook Index*" (Attachment 3).

Proper documentation is required for all design projects. The Design Notebook is a repository for all relevant design information. The notebook will be completed as the work progresses. A permanent record must be maintained for all communications, meetings, and other applicable design information. This information will be invaluable in future years as a reference for design calculations, significant correspondence, and documentation of decisions. Documentation of the design is useful in explaining why certain actions were taken, and why certain decisions were made.

## 1.3 Designate Design Review Team

The project Design Review Team will be identified early in the project. The VSW Project Manager will select the members of the design review team. The team will vary in composition depending on the project's size, complexity and timing, and should typically include the following individuals as team members:

- ✓ VSW Project Manager
- ✓ VSW Lead Engineer
- ✓ VSW Engineer(s) (subject to availability and related expertise)
- ✓ VSW Construction Observer
- ✓ ADEC Operations Assistance Program Representative

- ✓ Regional Remote Maintenance Worker (RMW) subject to availability
- ✓ ADEC Regulatory/Permitting Staff (selected by region and applicable regulation)
- ✓ ADEC Facilities Environmental Review Person (Program NEPA Compliance Officer)
- ✓ Specialty Term Contractor as necessary to represent professional design disciplines (mechanical, electrical, structural, geotechnical, cost estimator, etc.)

Other individual(s) whose expertise or knowledge could improve project constructability or sustainability may be included on the project team.

#### 1.4 Prepare Design Execution Plan (Review Gate 1)

The VSW Project Manager and the Design Engineer shall prepare a Design Execution Plan (DEP) that will clearly define the project scope. The project scope must be developed in a concise format that will ensure consistency with the scope of the funding source(s) and which is achievable within the project budget. The DEP will include a summary of the project objectives, proposed scope of work, budget, preliminary project schedule, designated Design Review Team members and other pertinent information that define the design project. Depending on the complexity of the design, the DEP will vary in content. For instance, for the more complicated designs, additional information may be needed to identify data gaps and sensitive issues.

As a guide for the preparation of the Design Execution Plan, it is recommended the table of contents follow the outline *Example of Table of Contents for Design Execution Plan* (Attachment 4).

At this first review gate, the Design Execution Plan will be submitted to the Lead Engineer and to the “Gate Keeper” (VSW Program Manager or his/her designee) for review. Upon passing Review Gate 1, the Design Execution Plan will be distributed to the design review team and the community representatives. The Design Execution Plan will be saved to the electronic community folder project file, and a hard copy inserted in the Design Notebook.

## ***Phase II - Conceptual Design***

#### 2.1 Conduct Design Project Kickoff Meeting

A design project kickoff meeting will be held to provide an overview of the project, discuss the Design Execution Plan and involve the community. Community involvement is imperative early in the design process to ensure that the scope of work properly addresses the needs of the community. If it is feasible, project kickoff meeting should be held in the community with the governing council of the community, or a community designated “planning committee.”

The kickoff meeting is intended to review the project scope (what will be built by the design), introduce the key members of the project design team, and obtain design-related

input from the community. The VSW Project Manager is responsible for coordinating the design project kickoff meeting and determining attendees.

## 2.2 Prepare Conceptual Design

**The conceptual design establishes and clarifies the design scope of work of the project based on a previous plan or study.** In essence, the conceptual design of the project is the beginning layout of what is planned. Taking existing planning information and updating the information as needed, the Design Engineer will prepare and submit a conceptual design for review. For instance, this may include proposed routings (overlaid on land status mapping), building plan views or basic site plans. Also, the conceptual design would include some of the following elements, if applicable:

- ✓ Identify basic project design criteria (environmental, water usage, population)
- ✓ Identify processes that will be incorporated in the project design
- ✓ Define the primary function of each process
- ✓ Prepare the first draft of the water and sewer system schematic
- ✓ Identify the required agencies approvals and permits
- ✓ Define project budget and schedule and any unusual project constraints such as community/operator capacity, etc.
- ✓ Prepare a conceptual construction cost estimate to verify that sufficient funding is available for the proposed scope of work.
- ✓ Incorporate pertinent information solicited during the design kick-off meeting.

## 2.3 Conduct Conceptual Design Meeting

A conceptual design meeting with the Design Engineer and Design Review Team will be coordinated by the VSW Project Manager to discuss an overview of the project and discuss any unique issues or project requirements including funding limits/restrictions. The purpose of this meeting is to gain consensus on the scope of the project and identify any major technical issues affecting the design scope, where more alternative analysis is needed before deciding on a type of component(s) of the system or facility that will be designed. The design schedule in the contract with the Design Engineer and an updated construction cost estimate will be discussed and revised, if needed.

Information that should be available for review at the conceptual design meeting will include the following:

- ☑ Aerial photographs of the community
- ☑ Detailed scope of work
- ☑ Photographs of existing structures, proposed building sites, community equipment, material borrow sites and other pertinent site conditions.
- ☑ Copies of record drawings of past projects as applicable
- ☑ Copy of feasibility study and/or sanitation master plan for the project

In some cases where the design requirements are not complex, the Design Review Team can determine if 35% drawings are needed for review. Subject to the conceptual design results, the Design Review Team may request to skip the preparation and review of Phase III documents and instead, direct the Design Engineer to prepare and submit the final designs of Phase IV.

## 2.4 Technical Memorandums and Review Meetings (as required)

As a result of the conceptual design and subsequent conceptual design meeting, major technical issues affecting the design scope and approach may be identified and they would need to be resolved prior to Phase III. Examples include but are not limited to:

- ☒ Site Control & Access
- ☒ Water Source
- ☒ Thermal Analysis
- ☒ Water Treatment Process
- ☒ Facility Siting
- ☒ Above Ground Versus Buried Piping
- ☒ Water and Sewer System Routing
- ☒ Geotechnical
- ☒ Permitting and Plan Approval (including environmental review)

Separate technical memorandums would address each technical issue. These memorandums would be incorporated into the design scope of Phase III.

## 2.5 Prepare Conceptual Design Review Memorandum (Review Gate 2)

The VSW Project Manager and the Design Engineer will prepare a Conceptual Design Review Memorandum (DRM) that will clearly define the project scope based on the results of 2.1, 2.2, 2.3, and 2.4. The project scope must be developed in a concise format that will ensure consistency with the intent of the funding source(s) and which is achievable within the project budget. Comments received and issues discussed during the meetings shall be summarized and documented in the DRM. All design reviews must be formally documented in the DRM for the record with the comment/response sheet as an attachment.

At Review Gate 2, the Conceptual DRM will be submitted to the VSW Lead Engineer and the “Gate Keeper” (VSW Program Manager or his/her designee) for review. Upon passing Review Gate 2, the Conceptual DRM will be saved to the electronic community folder project file, and a hard copy inserted in the Design Notebook.

## ***Phase III – Design Analysis Report and 35% Design Drawings***

### 3.1 Prepare Design Analysis Report (DAR)

The Design Engineer will be responsible for the preparation of the Design Analysis Report (DAR).

The DAR further develops the conceptual design of Phase II by analyzing and documenting the design approach, design requirements, and construction considerations. Specifically, the DAR addresses all applicable design elements such as site control, environmental impacts, water treatment process, well capacity, pumping and horsepower calculations, thermodynamic calculations, power requirements, hydraulic calculations, foundation design calculations, calculations of capital and operating costs, wastewater treatment loading calculations, and pipeline configuration and sizing.

However, the DAR does not evaluate alternatives of major importance to the design. If applicable, such alternative analyses are addressed and determined in Phase II. Examples include, but not limited to, evaluating floor plan alternatives, site plan options, and buried versus above ground piping options.

As a general guide for the preparation of the DAR, it is recommended the table of contents follow the outline *Example of Table of Contents for Design Analysis Report for Water and Sewer System Design* (Attachment 6). The table of contents will be modified as needed to fit the scope of work.

### 3.2 Review DAR

The VSW Project Engineer, with the concurrence of the VSW Lead Engineer, will select representative members from the Design Review Team to review the DAR. The DAR review team should include members who have appropriate disciplines and expertise related to the scope of the design analysis. The VSW Project Manager is responsible for coordinating the review process with the Design Engineer, and reaching a consensus on the acceptance of the DAR. The design criteria, alternatives considered, calculations, and code/regulation requirements and cost estimates must be documented and filed in the Design Notebook.

The VSW Project Manager will ensure that environmental review requirements and permits are identified in the DAR per the DAR Table of Contents (attachment 6). These requirements will be confirmed by the ADEC Facilities Environmental Review Person. The environmental review level, Categorical Exclusion or Environmental Assessment, will be identified by the end of this phase.

### 3.3 Prepare 35% Design Drawings

The 35% design package must include the appropriate drawing sheets listed in “*Basic Plan Set Requirements*” (Attachment 7). A 35% construction cost estimate will be prepared by the Cost Estimating Contractor to verify that sufficient funding is available for the proposed scope of work.

The Design Engineer shall prepare permit applications that do not require stamped plans. Some agencies, including the Alaska Department of Environmental Conservation (ADEC) and State Fire Marshall require stamped plans for review; pre-application meeting is

suggested with these agencies. The permit application package for these agencies must be completed when construction documents are final and stamped by the engineer.

#### 3.4 Review 35% Design Drawings – Conduct Design Review Team Meeting 2

The VSW Project Manager will coordinate the 35% design drawings review meeting. Invitation and review material requirements will follow the procedures previously described in Section 2.3.

#### 3.5 Prepare DAR and 35% Design Review Memorandum (Review Gate 3)

The VSW Project Manager will prepare a DAR and 35% Design Review Memorandum (DRM) that describes the results of the DAR and 35% design and serves as a decision document to proceed with the preparation of the production drawings (Phase IV) or terminate the project because the project is not sustainable. At Review Gate 3, the DAR and 35% DRM will be submitted to the VSW Lead Engineer and the “Gate Keeper” (VSW Program Manager or his/her designee) for review. Upon passing Review Gate 3, the DAR and 35% DRM will be saved to the electronic community folder project file, and a hard copy inserted in the Design Notebook.

### ***Phase IV - Production Drawings***

If the outcome of Phase III is to proceed with design, the next and final phase is the Phase IV - Production Drawings. This phase produces final design drawings based on the completed DAR and 35% design drawings of Phase III. The 65%, 95%, and 100% design documents are completed during this phase. Prior to commencing with this phase of the work, the VSW Project Manager must ensure that all design issues are resolved, and critical aspects of the design have been identified.

#### 4.1 Prepare 65% Design Drawings (Preliminary)

At the 65% design stage, most of the main drawings (plan views, profiles, structure plans, and elevations) are substantially complete. Details and annotations are typically outlined. Site control work is substantially complete. Construction and materials specifications are provided in draft form on the plan sheets. The 65% design package must include the appropriate drawing sheets listed in “*Basic Plan Set Requirements*” (Attachment 7).

The Design Engineer will prepare an O&M cost estimate based on the 65% design drawings and conduct a user rate analysis to determine if the user fees are within the recommended 5% of Median Household Income as defined by the Alaska Department of Community Advocacy.

#### 4.2 Review 65% Design – Conduct Design Review Team Meeting 3



**The 65% review is typically the most important review during the design process.** The 65% design review will address unique project issues and focus the design review on operability, constructability and code review.

A cost estimator will prepare the 65% construction cost estimate for the proposed scope of work. The VSW Project Manager will check the construction budget to ensure funds are available to complete the proposed facility as designed.

The VSW Project Manager will coordinate the 65% design review meeting. Invitation and review material requirements will follow the procedures previously described in Section 2.3.

#### 4.3 Present 65% Design to Community

The 65% plans should be presented to the community to allow an opportunity for review and comment. The VSW Project Manager is responsible for coordinating the community meeting. It is not required, but is recommended that the community approve the 65% plans via written concurrence. The VSW Project Manager is responsible for summarizing the meeting and generating a memorandum and/or trip report to the file to document meeting highlights. Comments received and issues discussed during the meeting will be summarized in the memo/report and distributed to each team member and the community.

#### 4.4 Prepare Environmental Review Approval

Project Manager should ensure that Design Engineer provides environmental review documentation at this time. Project Manager should forward to the Facilities Environmental review person such documentation including record of public notice, checklists associated with the environment review, and other agencies correspondence. The Facilities Environmental Review person should have the necessary information to dialogue with SHPO at this time and, subject to that clearance, draft the environmental approval.

Permits that require stamped plans such as Fire Marshal review, or Drinking Water or Wastewater Plan Approval, should be clearly identified during this phase.

#### 4.5 Prepare 65% Design Review Memorandum (Review Gate 4)

The VSW Project Manager and the Design Engineer will prepare a 65% Design Review Memorandum (DRM) that describes the 65% design and includes the memo/trip report on the community meeting and capital and O&M cost estimates and the results of the design reviews. At this fourth review gate, the 65% DRM will be reviewed and documented as complete for proceeding to the preparation of the 95% design drawings.

#### 4.6 Prepare 95% Design Drawings (Issue for Agency Review)

At 95%, all main drawings, details, and specifications are complete. The 95% design package must include the appropriate drawing sheets listed in “*Basic Plan Set Requirements*” (Attachment 7). The last 5% of the design drawing development should be reserved for

correcting errors and ensuring that all references in the plan set and specifications documents are coordinated and correct.

As a rule, the 95% design plans are submitted by the Design Engineer to the appropriate ADEC regulatory program for review and issuance of a certificate to construct.

A 95% construction cost estimate will be prepared to verify that sufficient funding is available for the proposed scope of work and will include a construction schedule and a capital and O&M cost estimates.

#### 4.7 Review 95% Design Drawings – Conduct Design Review Team Meeting 4

The VSW Project Manager will coordinate the 95% design review meeting. Invitation and review material requirements will follow the procedures previously described in Section 2.3. This review is mainly for quality control to check correction of errors and references. The review will include an operability, constructability and code review.

#### 4.8 Prepare 95% Design Review Memorandum (Review Gate 5)

The VSW Project Manager and the Design Engineer will prepare a 95% Design Review Memorandum (DRM) that describes the 95% design and includes the results of the design reviews, construction schedule and cost estimates. At this fifth review gate, the 95% DRM will be reviewed and documented as complete for proceeding to preparation of 100% final drawings.

#### 4.9 Complete 100% Final Drawings (Issue For Construction)

The Design Engineer Manager will prepare the 100% final construction plans and documents. The 100% design package must include the appropriate drawing sheets listed in “*Basic Plan Set Requirements*” (Attachment 7). Comments received from the 95% review will be addressed in detail, and all land rights required for site control must have been acquired.

A 100% construction cost estimate will be prepared by the Design Engineer to verify that sufficient funding is available for the proposed scope of work and a review of the schedule will be made. Also, the Design Engineer will provide an O&M cost estimate based on the Issue for Construction drawings, which will be used to update the business plan for the project.

Construction plans will be sealed by each design discipline. All seals will be signed and dated by the respective registrant before the plans are submitted for construction.

The Environmental Review and public notice process must be completed at this stage. All regulatory permits must be obtained and all site control issues must be resolved before construction can proceed. The Design Engineer shall provide a written notice of receipt for all permits to the VSW Project Engineer.

The Design Engineer will coordinate with the ADEC regulatory program on the design submittal and review in accordance with department policy. The ADEC regulatory program will review and approve design submittals for completeness and compliance with ADEC drinking water (18 AAC 80) and wastewater (18 AAC 72) regulations.

The Design Engineer will be responsible for engineering review and receiving approval (certificates) to construct before construction can begin on the project. A minimum of 30 days for ADEC to review the plans and provide comments should be allowed.

In most cases, plan modifications that are required by ADEC can be accommodated through field direction and recorded. Changes to engineering plans for construction purposes will be made using the revision block on the approved plans and annotated and clouded per industry standards.

### ***List of Attachments***

- **Attachment 1:** *VSW Design Review Flowchart*
- **Attachment 2:** *Design Phases and Tasks Checklists/Schedule*
- **Attachment 3:** *Project Design Notebook Requirements*
- **Attachment 4:** *Example of Table of Contents for Design Execution Plan*
- **Attachment 5:** *VSW Design Review Comments and Responses Form*
- **Attachment 6:** *Example of Table of Contents for Design Analysis Report*
- **Attachment 7:** *Basic Plan Set Requirements*
- **Attachment 8:** Sanitation Facilities Master Plan – Table of Contents

## **Proposed Table of Contents (TOC)**

### **Design Analysis Report Water/Wastewater Facilities \_\_\_\_\_, Alaska**

This TOC is general and comprehensive. Use this outline in creating a TOC that is applicable for the planned improvements.

- 1. Executive Summary**
- 2. Introduction**
- 3. Background**
  - 3.1. Location**
  - 3.2. Existing Site Conditions**
    - 3.2.1. Existing Facilities**
    - 3.2.2. Land Status**
- 4. Water Source**
- 5. Site Plan**
- 6. Design Requirements and Considerations**
  - 6.1. Building**
    - 6.1.1. Site Civil and Foundation**
      - 6.1.1.1. Soil Conditions**
      - 6.1.1.2. Select Fill Material and Source**
      - 6.1.1.3. Site Grade**
      - 6.1.1.4. Foundation Type**
    - 6.1.2. Architectural**
      - 6.1.2.1. Building Form**
      - 6.1.2.2. Exterior and Interior Materials**
      - 6.1.2.3. Thermal Envelope (Wall and Roof Systems)**
    - 6.1.3. Structural**
      - 6.1.3.1. Design Criteria**
      - 6.1.3.2. Footings and Structural Members**
    - 6.1.4. Mechanical**
      - 6.1.4.1. Design Criteria**
      - 6.1.4.2. Mechanical Systems and Equipment**
    - 6.1.5. Electrical**
      - 6.1.5.1. Electric Utility's Current Capacity and Conditions**
      - 6.1.5.2. Added Electrical Load**
      - 6.1.5.3. Electrical Service and Equipment**
  - 6.2. Water Storage**
    - 6.2.1. Design Criteria**
    - 6.2.2. Tank Size**
    - 6.2.3. Foundation**
  - 6.3. Water Treatment**
    - 6.3.1. Well Water Quality**



# Basic Plan Set Requirements

DRAWING CATEGORY & CONTENT	35%	65%, 95% and Stamped
<b>GENERAL</b>		
Cover Sheet & Sheet Index	x	x
General Legend & Vicinity Map	x	x
Abbreviations & General Notes	x	x
Scope of Work & Community/Climate Data	x	x
Overall Site Plan with Topography	x	x
System Schematic(s)	x	x
Soil Boring Data	x	x
<b>SURVEY</b>		
Easement Index Map	x	x
Basis of Bearing Map		x
Parcel Boundary Map		x
<b>CIVIL</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
General Material & Installation Notes	x	x
Individual Site Plans	x	x
Plan & Profile Index Map	x	x
Plan & Profiles	x	x
Standard Details	x	x
Project Specific Details		x
Grading Plan		x
Fencing Plan		x
<b>PROCESS</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
Piping Floor Plans	x	x
Piping & Instrumentation Diagram	x	x
Operation Description	x	x
General Material & Installation Notes	x	x
Standard Details	x	x
Equipment Schedule & Specifications		x
Equipment Floor Plans		x
Project Specific Details		x
<b>MECHANICAL</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
Equipment Floor Plan	x	x
Piping & Instrumentation Diagram		x
Operation Description		x

General Material & Installation Notes		x
Equipment Schedule & Specifications		x
Piping Floor Plans		x
Standard Details		x
Project Specific Details		x
<b>ARCHITECTURAL</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
Code Analysis	x	x
Floor Plans	x	x
General Material & Installation Notes	x	x
Elevations	x	x
Equipment Schedule & Specifications		x
Sections		x
Standard Details		x
Project Specific Details		x
<b>STRUCTURAL</b>		
Design Criteria & Loads	x	x
Legend & Abbreviations	x	x
Code Analysis	x	x
Foundation Plan	x	x
General Material & Installation Notes	x	x
Equipment Schedule & Specifications		x
Elevations		x
Sections		x
Standard Details		x
Project Specific Details		x
<b>ELECTRICAL</b>		
Design Criteria & Loads		x
Legend & Abbreviations	x	x
Code Analysis	x	x
Operation Description		x
General Material & Installation Notes	x	x
Power One Line & Panel List	x	x
Equipment Schedule & Specifications		x
Floor Plans		x
Elevations		x
Sections		x
Panel Faces		x
Panel Wiring Diagrams		x
Standard Details		x
Project Specific Details		x

## **GENERAL REQUIREMENTS FOR PLAN SHEETS**

A typical set of drawings will contain many of the following sheets in the order in which they appear in the list.. The type of sheets contained in the plan set will vary depending on the scope of work for the project and the complexity of the proposed facility.

- Cover Sheet and Sheet Index
- General (G Sheets)
- Survey (V Sheets)
- Geotechnical (B Sheets)
- Civil (C Sheets)
- Structural (S Sheets)
- Architectural (A Sheets)
- Plumbing (P Sheets)
- Process (D Sheets)
- Mechanical (M Sheets)
- Electrical (E Sheets)
- Contractor/Shop Drawings (Z Sheets)

The following provides a detailed overview of the type of information that is normally included on drawings in the plan set:

### **I. Cover Sheet and Sheet Index**

VSW's standard cover sheet will be used for all VSW projects.

### **II. General Legend and Vicinity Map (G Sheet)**

VSW's standard General Legend and Vicinity Map format will be used for all VSW projects.

### **III. Scope of Work and Community/Climate Data (G Sheet)**

The project scope of work, community data, climate data and project phasing plan is provided on this sheet.

### **IV. System Schematic and Project Specific Design Criteria (G Sheet)**

Separate Schematic Sheets should be drawn for water and sewerage systems. The Schematic Sheet will serve as a line diagram of the overall systems. The schematic sheets should include the following:

#### **A. Water**

1. General perspective view of the entire water system with major features



2. Storage tanks with base and overflow elevations and capacities
3. Major points of use
4. Major elevation references
5. Operational pressures during both minimum and maximum flows

#### B. Well Data

1. Pump House/Washeteria location and note the source of power
2. Date of construction, contractor, well number, and surface elevation
3. Depth and size of bore hole
4. Static water level and the date of measurement

#### C. Sewerage

##### 1. General

- a. General perspective view of the entire sewerage system designating direction of flow, major features, and force-mains
- b. Lagoon(s) with the number of cells, capacities of each cell, dimensions, floor elevations, overflow elevations, if applicable
- c. Community septic tanks with number of chambers, capacities of each chamber, dimensions, and inlet/outlet elevations, if applicable
- d. Community drainfield information with areas, materials, soil type, percolation rate, and elevations, if applicable
- e. Outfall lengths, materials, elevations, and diffuser type, if applicable
- f. Major points of use
- g. Major elevation references
- h. All manholes
- i. All lift stations

##### 2. Lift Stations

- a. Type of lift station
- b. Make, model, horsepower, voltage, phasing and capacity of pump(s)
- c. Static, dynamic, and total discharge heads

#### **V. Survey (V Sheets)**

- A. Survey Easement Index Map
- B. Basis of Bearing and Vertical Control Map (including coordinates of monuments used)
- C. Parcel Boundary Map
- D. Project Right-of-Ways and Easements

## **VI. Geotechnical (B Sheets)**

- A. Site plan with test hole locations and legend
- B. Test boring/hole logs with reference to boring/hole locations

## **VII. Civil Drawings (C Sheets)**

- A. Civil/Survey Legend
- B. Civil General Material and Installation Notes
- C. Civil System Layout and Sheet Locator Map(s)

The System Layout Sheet(s) will be a plan view of the water and/or sewer system(s) showing all (or a large portion) of the system on one sheet. For larger systems, the scale should be between 1" = 400' and 1" = 1,000', depending on the density of services provided. For smaller systems, the scale should be as needed in order to show sufficient detail on one sheet. If the system cannot be put on one sheet, an index sheet should be provided that shows the waterline locations (without valves), major features such as roads, rivers, etc. and a reference to the areas covered by each layout sheet.

The system layout and sheet locator map will provide the following:

1. Highways, roads, streets, major drainage features, and major buildings. Aerial photographs can be used as a map base if the overlays are readable.
2. Sketch of the community sewer system(s) and wastewater treatment system location(s)
3. Reference areas designating which plan or plan and profile view sheet numbers apply to specific areas of the system
4. House numbers and names of homeowners in tabular form
5. Dwelling locations, with house numbers
6. Identity and approximate location of existing subsurface utilities
7. Main line gate valves (without markers and/or tie-ins)
8. North arrow and bar scale
9. Dimensional data for pipeline material used. (Example: ID., O.D., SDR, ASTM specification and pressure rating designation for each size of pipe used.) Pipeline distances between gate valves and appurtenances can be shown if desired but is not mandatory.
10. Topography existing & proposed contours. Proposed grade contours are shown on final stamped construction plans

### **D. Civil Plan and Profile Views**

#### **1. General**

- a. North arrow with drawings oriented so that the north arrow is pointing more toward the top of the sheet than the bottom
- b. A bar scale
- c. Individual homes to be served and corresponding house numbers.

- d. Adequate information (coordinates, distance to property lines, etc.) to stake the designed improvements in the field
- e. Profile views are generally “left to right” but in certain instances to require them to go “right to left”.

## 2. Water

- a. Fire hydrants
  - Distance to the mainline and shut-off valve from the hydrant
  - Size of the hydrant
- b. Gate Valves, Air Release Valves, and Pressure Reducing Valves (PRV)
  - Location of each valve with respect to at least two permanent points (i.e., buildings, hydrants, power poles, etc.) within 100 feet, if available
  - Size of the valves
  - Approximate depths of bury
  - Size of PRV valve(s) including incoming and outgoing pressures, and ground elevations
- c. Water main
  - Proposed marker post locations on the plans, when appropriate. markers should be located at line of sight intervals or 1,500 feet apart (maximum)
  - Nominal pipe size, material, type of joints, class, pressure rating, etc. (Example: 6”X 12” Aluminum Jacketed Arctic Pipe, HDPE, SDR 11, 160 psi, butt fused joints)
  - Description and location of tees, elbows, crosses, bends, and reducers
  - Profiles for 1) all road crossings, 2) any wash crossing which requires casing, 3) steep sections of water line where the slope exceeds 10%, 4) any area where the waterline is not at standard bury depth and 5) flow lines of deep ditch lines or drainages
- d. Water Services
  - Routing of service line with "dots" designating location of curb stop, meter, and corporation or domestic stop as applicable
  - Use appropriate symbol from the “tool palette” and assign line type to the W/S layer

## 3. Sewer

- a. Manholes and Cleanouts
  - Ground, rim and invert (in and out) elevations
  - Distances between manholes and/or cleanouts
  - Number & type of each manhole and cleanout.

b. Sewer main

- Materials, type of joints, size, length, SDR, class, schedule, slope, etc.

c. Sewer Services

- Service/main connection location distances from a downstream manhole or stationing
- Routing of the sewer service line, indicating the cleanouts with "dots" use symbol from tool palette

d. Lift Stations

- Site map information similar to that of a well site
- Elevation and plan view with pump type, make, capacity, total discharge head (show both static and dynamic heads), voltage, phase, and horse power

e. Force mains

- Proposed pipeline marker locations on the plans (when appropriate)
- Nominal pipe size, material, type of joints, class, pressure rating, etc. (Example: 6" DI, Class 51, 350 psi, integral bell)
- Description and location of elbows, valves, reducers, and cleanouts
- Profiles for all road crossings, any wash crossing which requires casing, steep sections of force main where the slope exceeds 10% or any area where the force main is not at standard bury depth

E. Civil Site Plan and Elevation Views

1. Water Source

- a. Site plan of the well and/or pump house/washeteria, proposed grading plan, drainage, access and power source
- b. Date of construction, contractor, well number, and surface elevation
- c. Depth and size of bore hole
- e. Size, depth, type, and location of casing
- f. Length, location, type, and slot size of screen, if applicable
- g. Gradation of gravel pack, if applicable
- h. Depth of grout envelope
- i. Static water level and date of measurement
- j. Make, model, horsepower, voltage, phasing, full load amperage of pump(s), and elevation of the pump probes. Actual or estimated pumping depth for the planned pumping rate.
- k. Depth of setting of the water level indicator and type

- l. Type and size of drop pipe and size of submersible cable
- m. Type, size, etc., of a pitless unit, if applicable

## 2. Water Storage Tank

- a. Size of the tank including the thickness of the floor, wall, and roof members
- b. Tank manufacturer
- c. Paint system and paint/primer brands used on the tank.
- d. Map of operational valves, fencing, surface drainage plan, and maintenance access
- e. Telemetry or controls if applicable
- f. Elevations of floor, inlet, outlet, overflow, and probes, if used
- g. Details of complex features such as controls, cathodic protection, if applicable
- h. Details of the foundation
- i. Overflow and drain locations and erosion protection

## 3. Pump House/Washeteria/Water Treatment Facility/Lift Station

- a. Building footing drain and discharge location
- b. Finish floor elevations
- c. Site plan of the building site, road access with curve radius, buried utilities, surface drainage, ditching, fencing, danger trees/site clearing, etc.
- d. Elevation view with classified fill, excavation limits, compaction, etc.

## 4. Wastewater Treatment System

- a. Site plan showing drainage and horizontal dimensions
- b. Side slopes, wave protection detail
- c. Number of cells, surface area per cell, maximum liquid volume per cell, and depth of cells
- d. Piping sizes and materials
- e. Fence and gate location and sign detail
- f. Location and lengths of inlet and outlet structures
- g. Locations of liquid level control structures, over-flow lines and surface drainage ditches, and sewage flow routing
- h. Elevations of top of berm, lagoon floor, overflow structure, and inlet(s)

## 5. Individual Site Plans

- a. Site plan, drawn to visual scale, for each structure served including homeowner name, house number, if appropriate, and a north arrow.
- b. Water Service
  - Service saddle location
  - Size, length, and type of service line materials used

- Appurtenances (curb stop, meter can, and domestic stop) tied to dwelling corners if within 100 feet
- c. Sewer Service
  - Cleanout locations
  - Size, length, and type of pipe used
- d. Septic tank and drainfield
  - Size of the septic tank and the material it is made of
  - Tie to the septic tank inspection manhole(s) and the corners of the drainfield to at least two permanent points (i.e., building corners, power poles, trees, etc.) within 100 feet, if available
  - Configuration and depth of the drainfield, and the type of materials used (e.g., 4-inch D3034 PVC, slip-on joint)

## **VIII. Structural Drawings (S Sheets)**

### **A. Structural Legend, Design Criteria and General Notes**

### **B. Structural Plan Views**

1. Foundation plan
2. Floor framing plan
3. Roof framing plan
4. Diaphragm schedule

### **C. Structural Elevations and Sections**

1. Foundation sections
2. Wall sections
3. Shear wall schedule
4. Header elevations and schedule

### **D. Structural Details**

1. Splice details
2. Wall intersections
3. Miscellaneous connections
4. Bracket details
5. Fastener details
6. Anchor details
7. Tie down details

## **IX. Architectural Drawings (A Sheets)**

### **A. Architectural Legend and General Notes**

1. Architectural Plan Views All building and room dimensions
2. Room name and numbering
3. Interior finish schedule
4. Exterior finish schedule
5. Wall Types
6. Door schedule
7. Window schedule
8. Roof plan

9. Code design data
- B. Architectural Elevations and Sections
  1. Front, rear, left side and right side views
  2. Wall sections
  3. Foundation sections
  4. Bathroom/Laboratory/Treatment room/etc. elevations
  5. Cabinet elevations
- C. Architectural Details
  1. Headers (internal and external)
  2. Sills (internal and external)
  3. Jams (internal and external)
  4. Door frame schedule
  5. Handrails and guard rails
  6. Cabinet details
  7. Stair and landing details
  8. Ridge detail
  9. Eave detail
  10. Rake detail
  11. Valley detail
  12. Vent detail
  13. Vapor barriers
  14. Window seal
  15. Insulation
  16. Access hatch

## **X. Plumbing Drawings (P Sheets)**

- A. Plumbing Legend and General Notes
- B. Plumbing Equipment Schedule
- C. Plumbing Plan Views
- D. Plumbing Elevation Views and Sections
  1. Plumbing Isometrics
- E. Plumbing Details
  1. Equipment details
  2. Equipment mounting
  3. Equipment locations
  4. Piping installation
  5. Piping supports

## **XI. Process Drawings (D Sheets)**

- A. Process Diagram Legend
- B. Treatment Process Diagram and Operational Narrative
- C. Treatment Piping and Instrumentation Diagram
- D. Heating and Ventilation Process Diagram and Operational Narrative
- E. Heating and Ventilation Piping and Instrumentation Diagram

## **XII. Mechanical Drawings (M Sheets)**

- A. Mechanical Legend and General Notes
- B. Mechanical Equipment Schedule and Operational Description
- C. Mechanical Plan Views
  - 1. Piping plan
  - 2. Heating plan
  - 3. Ventilation plan
- D. Mechanical Elevation Views and Sections
  - 1. Piping Isometrics
  - 2. Equipment elevations and sections
- E. Mechanical Details
  - 1. Equipment details
  - 2. Equipment mounting
  - 3. Equipment locations
  - 4. Piping installation
  - 5. Piping supports
  - 6. Equipment control interface
  - 7. Fuel oil
  - 8. Ducting

## **XIII. Electrical Systems (E Sheets)**

- A. Electrical Legend, Design Criteria and Loads
- B. Electrical Code Analysis and Operation Description
- C. Electrical Equipment Schedule
- D. Electrical Power One Line and Panel List
- E. Electrical Plan View
  - 1. Exterior electrical site plan
  - 2. Power floor plan
  - 3. Electrical control device plan
  - 4. Electrical equipment plan
  - 5. Electrical signal plan
- F. Electrical Elevation Views
  - 1. Electrical panel layout
  - 2. Electrical panel wiring diagram
  - 3. Panel schedule
  - 4. Ladder diagram for all control panels
- G. Electrical Details
  - 1. Panel Faces

## **XIV. Contractor/Shop Drawings (Z Sheets)**

- A. Drawings of water storage tank construction, premanufactured buildings, foundation design, filter construction, or other fabricated equipment
- B. Vendor cut sheets such as pumps, wall mounted instruments or other equipment



[illegible]

7. CONCRETE COVER FOR THE REINFORCING STEEL SHALL BE 3" FOR FOOTINGS AND 2" FOR WALLS AND SLABS.

- 15** FIBERGLASS SUMP AVAILABLE FOR 6 FOOT DIAMETER WET WELL ONLY. ALTERNATE DESIGN INCLUDES MOUNTING PUMP BRACKET TO BASE AND GROUTING OF BASE TO MOVE SOLIDS TOWARDS THE PUMPS.



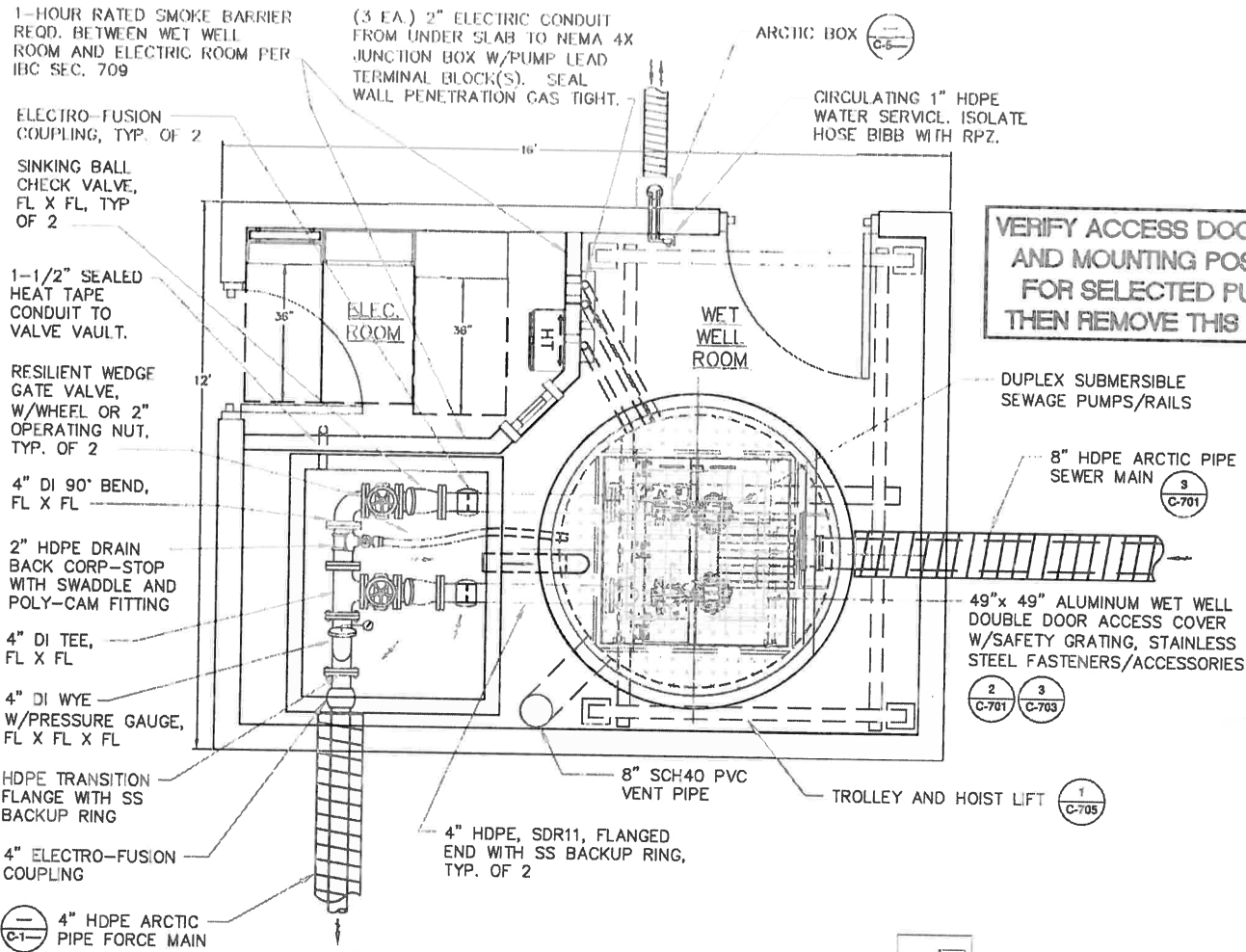
THE INSTALLATION WILL ALLOW THE USE OF UNCLASSIFIED EQUIPMENT AND WIRING METHODS IN THE CONTROL ROOM. HOWEVER, THE SENSING TRANSDUCER MUST HAVE THE RACEWAY SEALED AT THE BOUNDARY INTO THE CLASS 1, DIVISION 1 WET WELL.

[illegible]

C-701

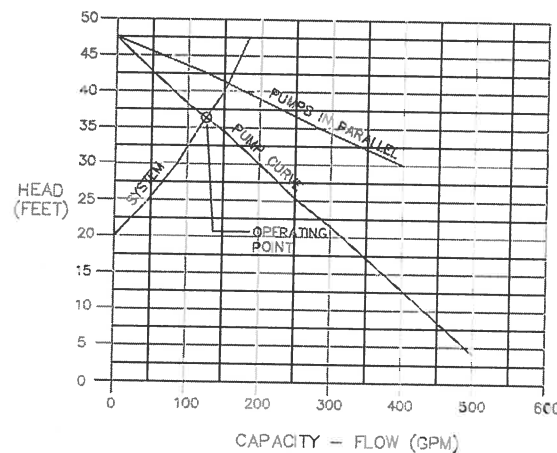
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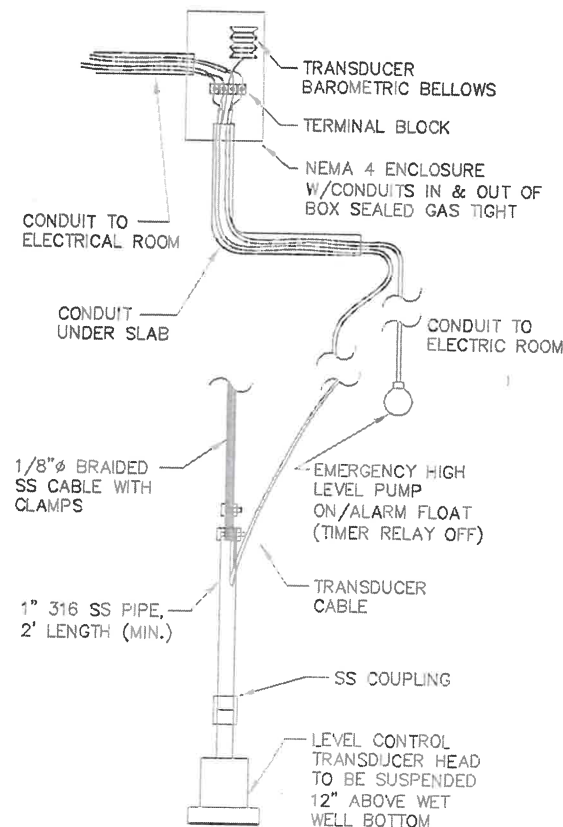


**1 PIPING PLAN**  
Scale: NTS

EXAMPLE DETAIL ONLY  
REDRAW CURVE TO MATCH  
SELECTED PUMPS  
THEN REMOVE THIS NOTE.

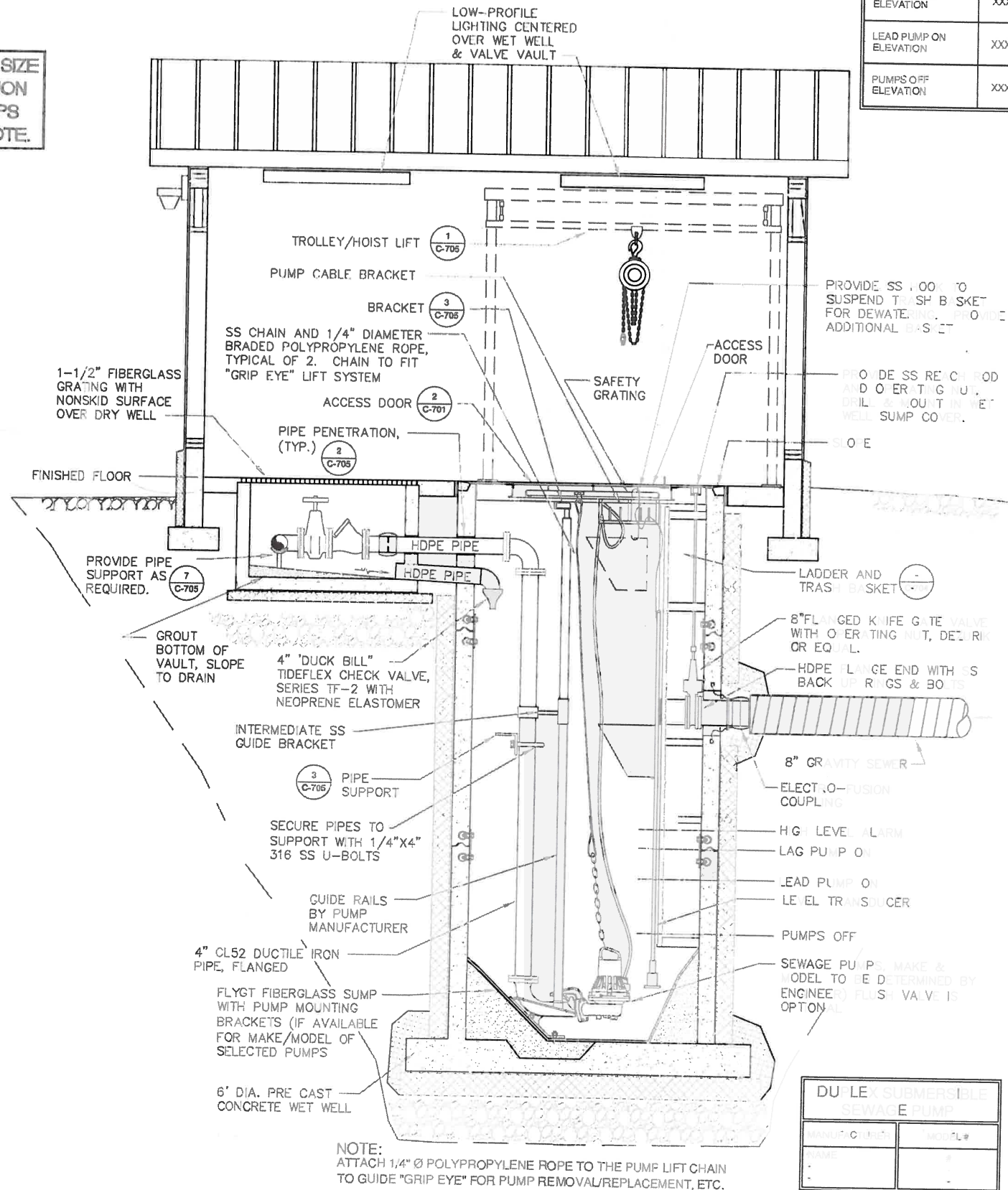


**2 PUMP AND SYSTEM CURVE**  
Scale: NTS



**3 TRANSDUCER DETAIL**  
Scale: NTS

ADAPT BUILDING FOR  
SITE SPECIFIC  
CONDITIONS THEN  
REMOVE THIS NOTE



**4 WET WELL/SUBMERSIBLE PUMP DETAIL**  
Scale: NTS

ELEVATION TABLE	
HIGH LEVEL ALARM ELEVATION	XXX.XX
LAG PUMP ON ELEVATION	XXX.XX
LEAD PUMP ON ELEVATION	XXX.XX
PUMPS OFF ELEVATION	XXX.XX

DUPLUX SUBMERSIBLE SEWAGE PUMP	
MANUFACTURER	MODEL#
MAKE	MODEL#

DATE	REVISIONS	INIT

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

DIVISION OF ENVIRONMENTAL HEALTH AND ENGINEERING

1901 Bragaw Street, SUITE 200  
ANCHORAGE, ALASKA 99508-3440  
(907) 729-3600



VILLAGE, ALASKA  
SANITARY SEWER SYSTEM  
LIFT STATION PUMPS AND PIPING  
PLAN AND PROFILE

ANXX-XXX

DATE: 1/31/2006  
DRAWN BY: JE ADAR  
CHECKED BY: J. WARREN, B. REA  
FILE: VILLAGE\_AK\_LIFT\_STATION\_3-2842006: PUMPS-PIPING C-702

PROJ. MGR:  
PROJ. ENG:  
TUS. ENG:

C-702

SHEET OF

ANTHC / VSW STANDARD DETAIL





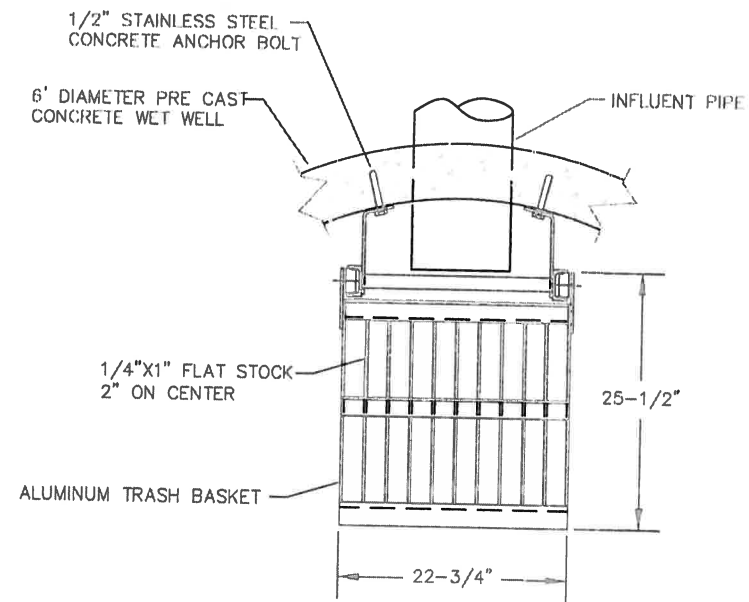
NOTES:

1. PRE MANUFACTURED LADDER AND BASKET WITH VERTICAL BAR SCREEN. SIMILAR TO HALLIDAY PRODUCTS, LADDER LIB & TRASH BASKET B1B, OR APPROVED EQUAL. STANDARD FEATURES SHALL INCLUDE:

- ALL ALUMINUM BASKET AND RAILS
- SOLID ALUMINUM WHEELS AND STAINLESS STEEL AXLES
- HEAVY DUTY LADDER/GUIDERAIL COMBINATION
- SLIP RESISTANT RUNGS
- BAR SCREEN STYLE BASKET

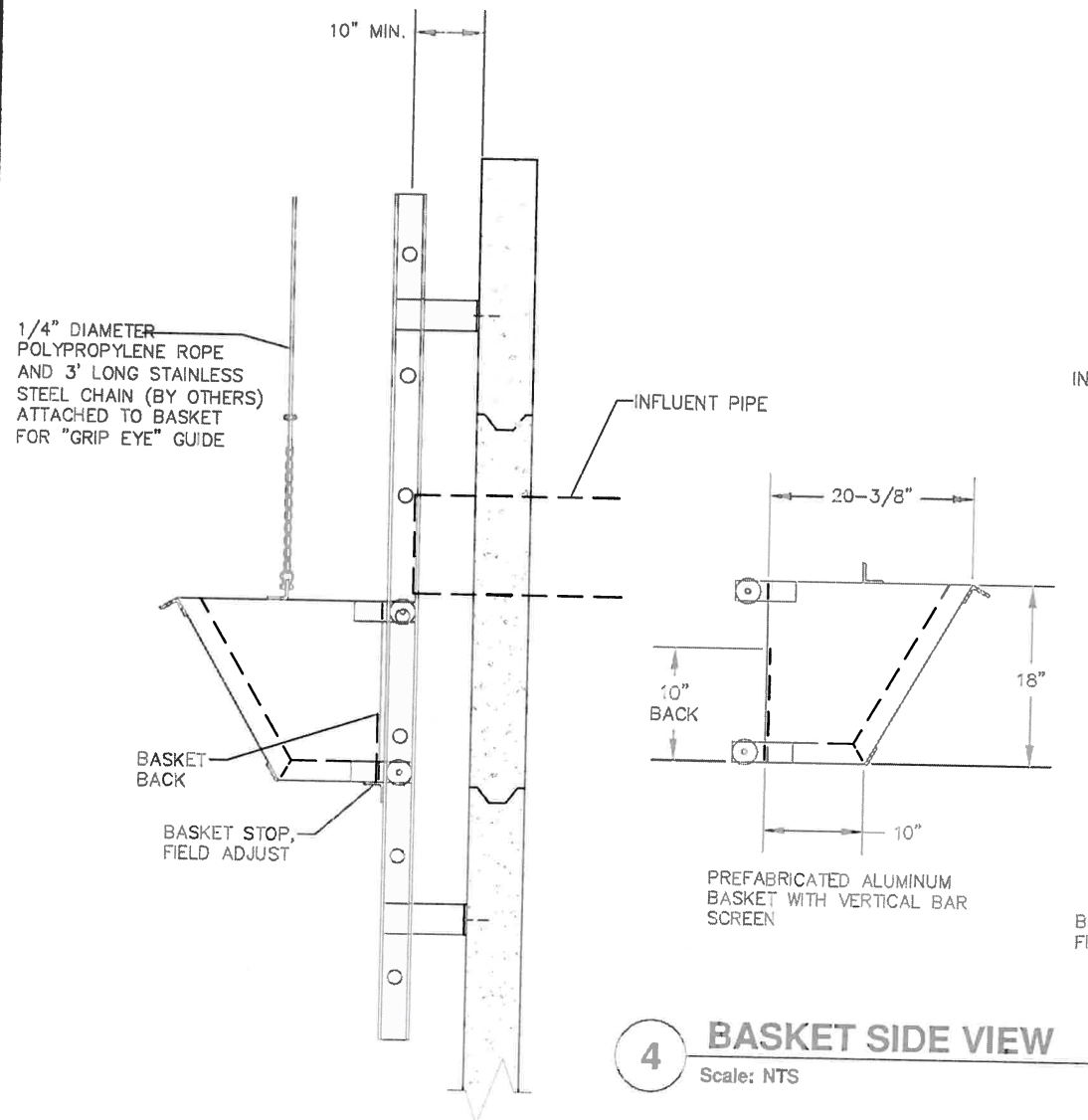
- ## 2. REQUIRED INFORMATION

- WET WELL DIAMETER
  - RAIL/LADDER LENGTH
  - STANDOFF LENGTH (10" MIN FOR LADDER COMBO)
- FIELD VERIFY DISTANCE REQUIRED FOR BASKET TO CLEAR THE FINISH ACCESS OPENING.

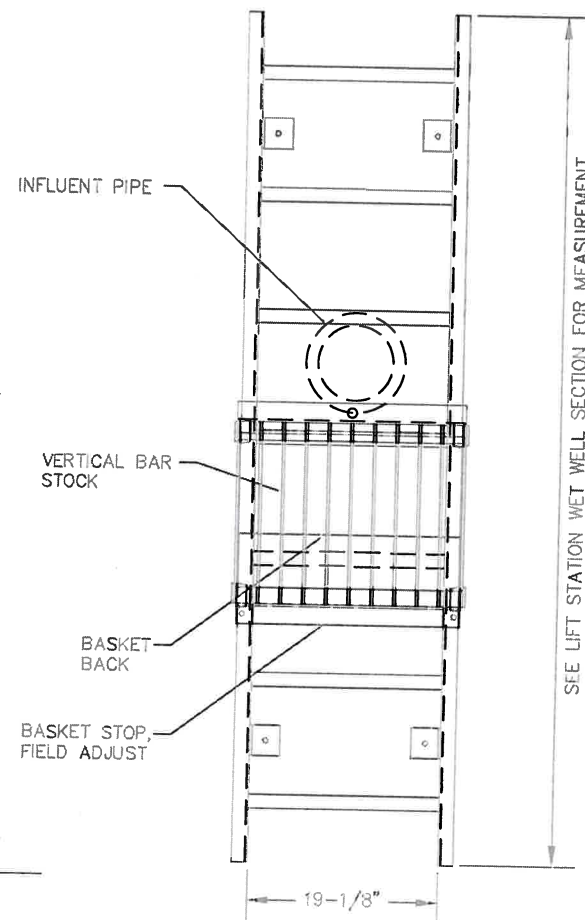


# 1 PLAN VIEW

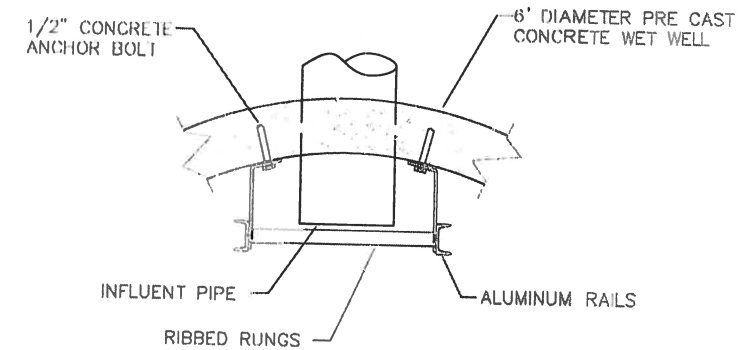
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### 4 BASKET SIDE VIEW

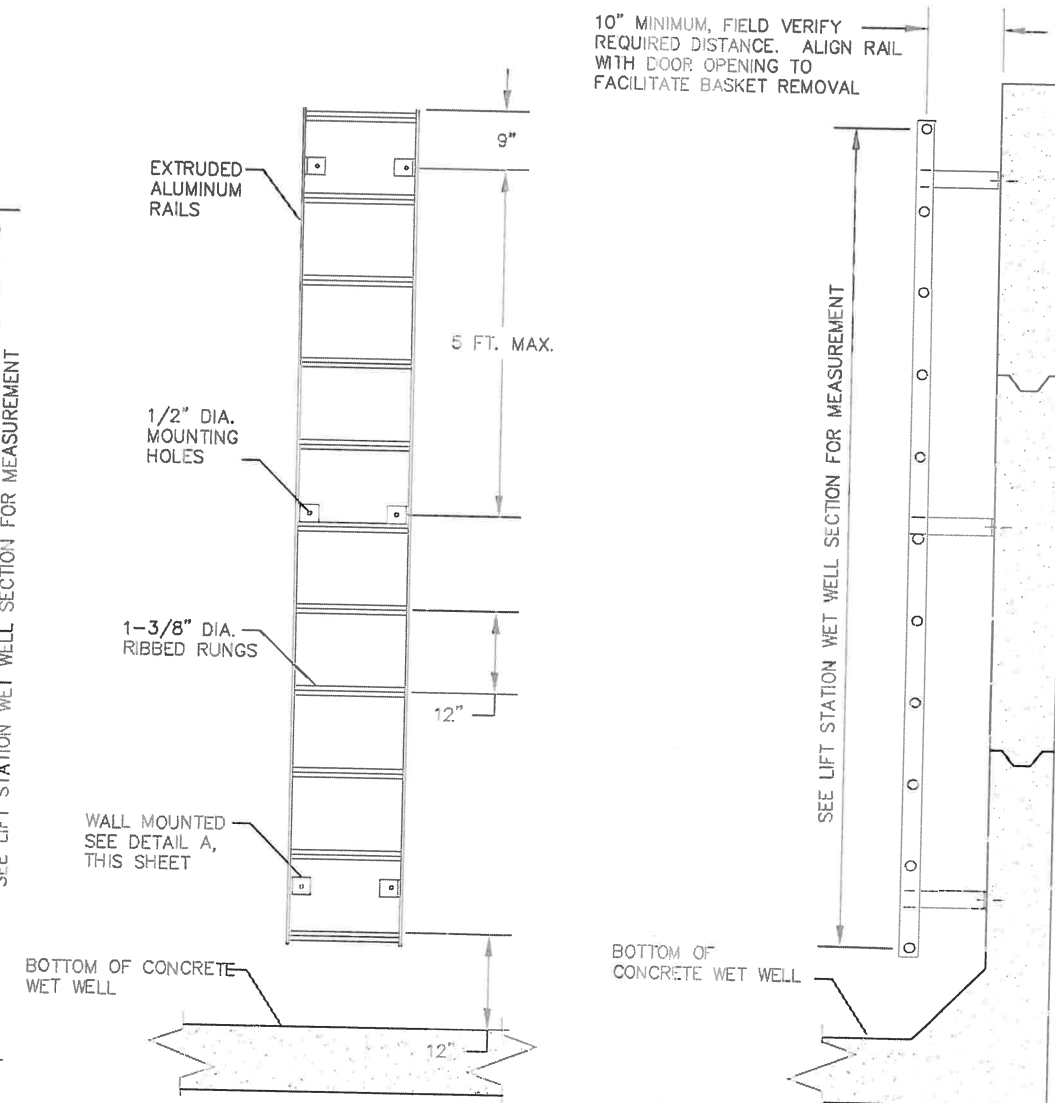


**5 LADDER/BASKET FRONT VIEW**  
Scale: NTS



## 2 LADDER SUPPORT DETAIL

Scale: NTS



**6 LADDER FRONT VIEW**  
Scale: NTS

**7 LADDER SIDE VIEW**  
Scale: NTS

[illegible]

**ALASKA NATIVE TRIBAL  
HEALTH CONSORTIUM**

**DIVISION OF ENVIRONMENTAL  
HEALTH AND ENGINEERING**

1901 Bragway Street, SUITE 200  
ANCHORAGE, ALASKA 99508-3440  
(907) 729-3600



VILLAGE, ALASKA  
SANITARY SEWER SYSTEM  
LIFT STATION BASKET AND LADDER  
DETAILS  
ANXX-XXX

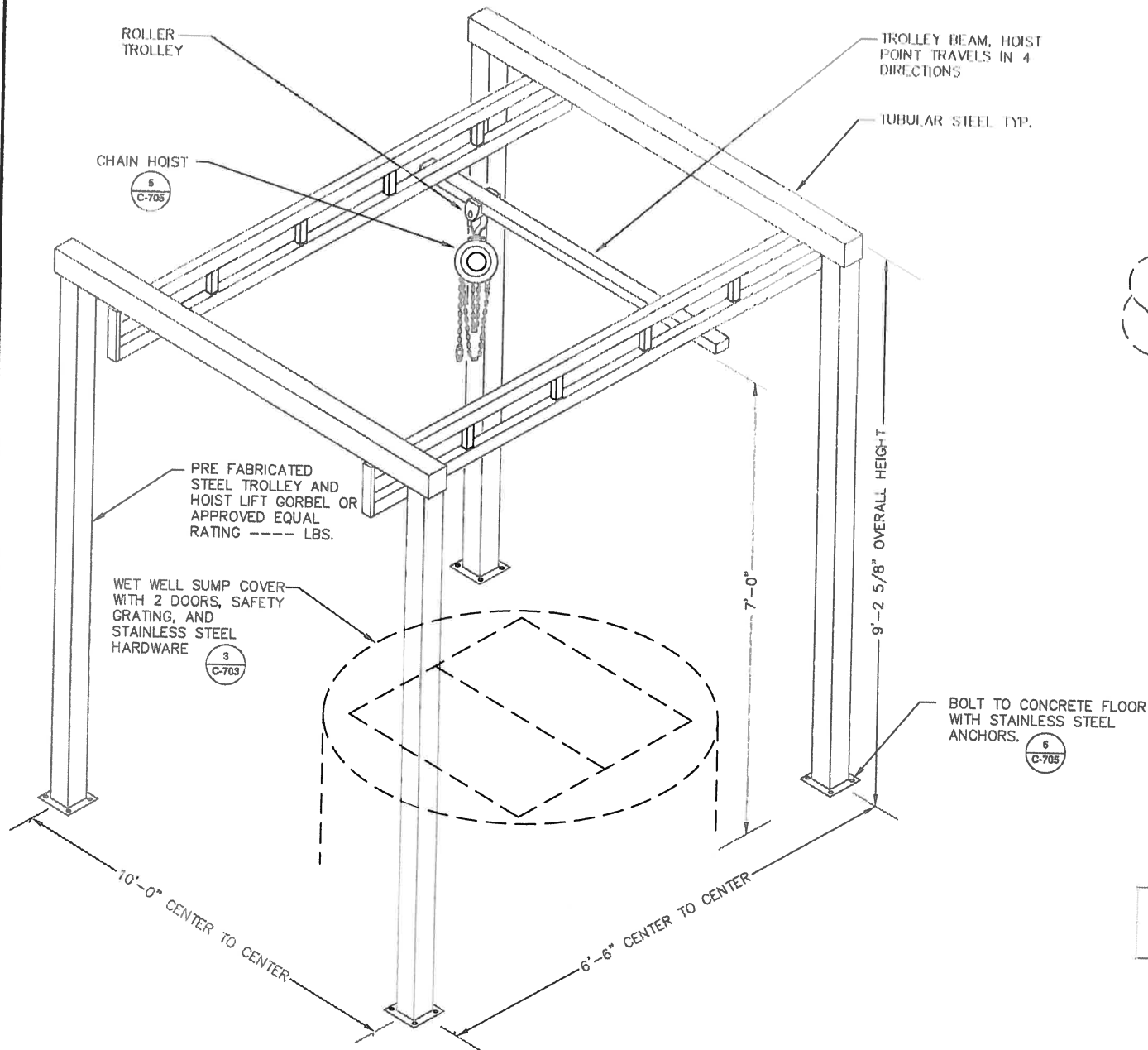
DATE: 2/1/2006	PROJ MGR:
DRAWN BY: JE ADAIR	PROJ ENG:
CHECKED BY: J. WARREN, B. REA	TUS ENG:
FILE: VILLAGE_AK_LIFT_STATION_3-28A0006: B	

C-704

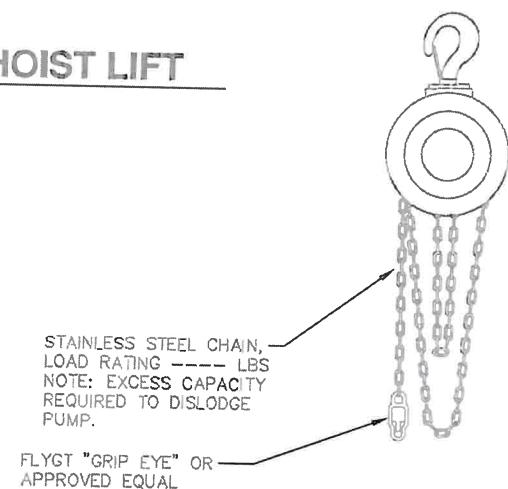
SHEET OF

ANTHC / VSW STANDARD DETAIL

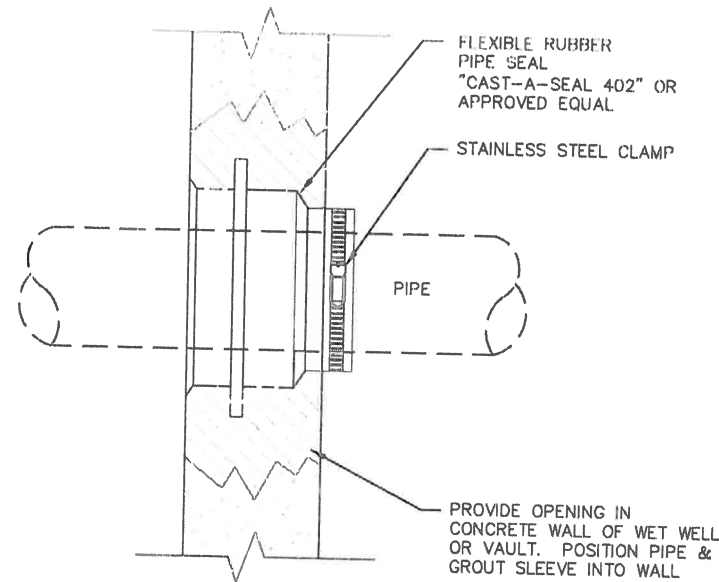




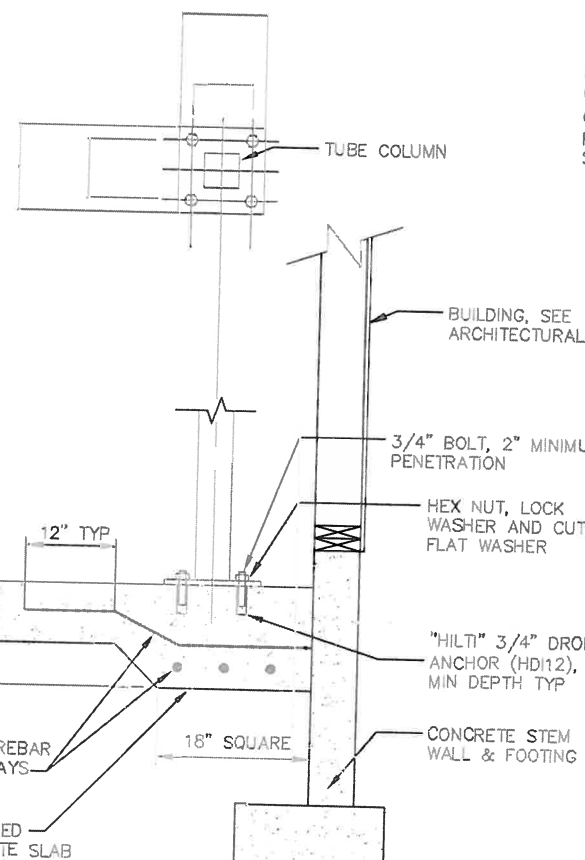
**1 TROLLEY & HOIST LIFT**  
Scale: NTS



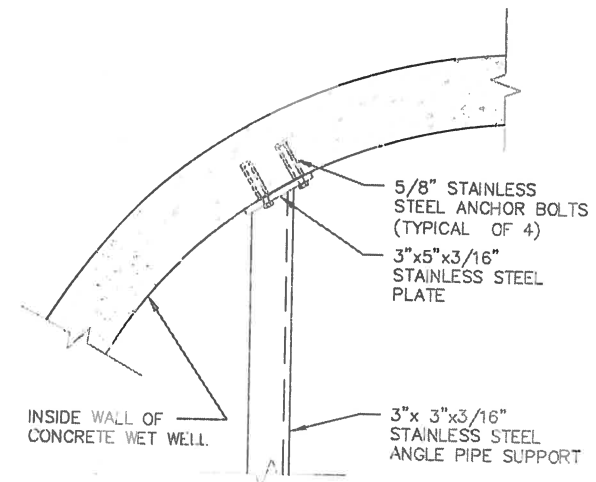
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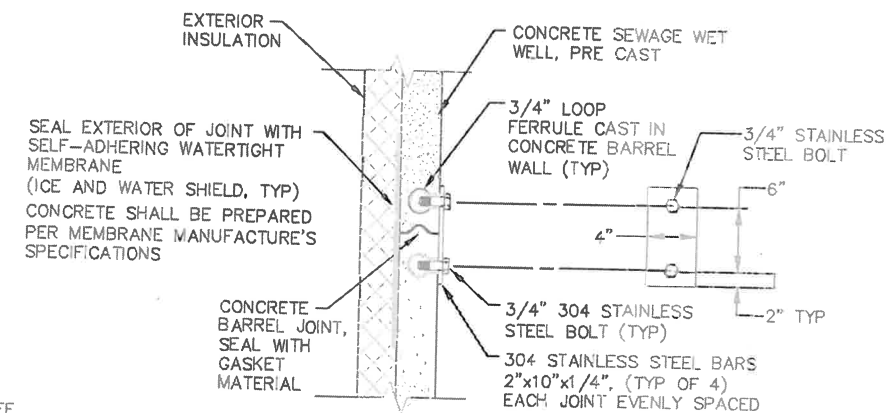
**2 PIPE SLEEVE DETAIL**  
Scale: NTS



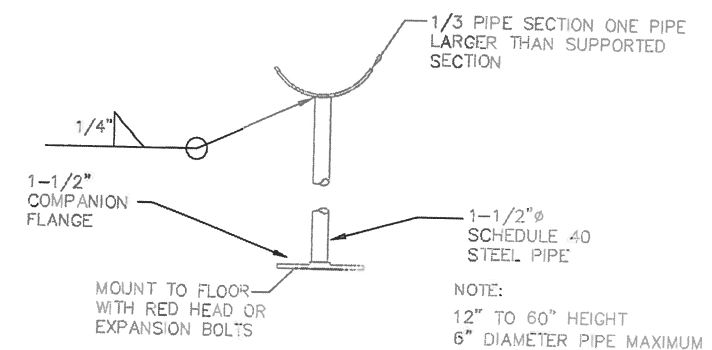
**6 HOIST SUPPORT DETAIL**  
Scale: NTS



**3 PIPE SUPPORT DETAIL**  
Scale: NTS



**4 WET WELL JOINT STRAP DETAIL**  
Scale: NTS



**7 FLOOR MOUNT PIPE SUPPORT DETAIL**  
Scale: NTS

DATE	REVISIONS	INIT

ALASKA NATIVE TRIBAL  
HEALTH CONSORTIUM  
DIVISION OF ENVIRONMENTAL  
HEALTH AND ENGINEERING  
1901 Bragaw Street, Suite 200  
ANCHORAGE, ALASKA 99508-3440  
(907) 729-3600



VILLAGE, ALASKA  
SANITARY SEWER SYSTEM  
LIFT STATION HOIST AND PIPE SUPPORTS  
DETAILS  
ANXX-XXX  
DATE: 2/2/2006  
DRAWN BY: JE ADAR  
CHECKED BY: J. WARREN, B. REA  
FILE: VILLAGE\_AK\_LIFT-STATION\_3-28A-2006- SUPPORT DETAILS C-705  
PROJ MGR:  
PROJ ENG:  
TUS ENG:

## **Proposed Table of Contents (TOC)**

### **Design Analysis Report Water/Wastewater Facilities \_\_\_\_\_, Alaska**

This TOC is general and comprehensive. Use this outline in creating a TOC that is applicable for the planned improvements.

- 1. Executive Summary**
- 2. Introduction**
- 3. Background**
  - 3.1. Location**
  - 3.2. Existing Site Conditions**
    - 3.2.1. Existing Facilities**
    - 3.2.2. Land Status**
- 4. Water Source**
- 5. Site Plan**
- 6. Design Requirements and Considerations**
  - 6.1. Building**
    - 6.1.1. Site Civil and Foundation**
      - 6.1.1.1. Soil Conditions**
      - 6.1.1.2. Select Fill Material and Source**
      - 6.1.1.3. Site Grade**
      - 6.1.1.4. Foundation Type**
    - 6.1.2. Architectural**
      - 6.1.2.1. Building Form**
      - 6.1.2.2. Exterior and Interior Materials**
      - 6.1.2.3. Thermal Envelope (Wall and Roof Systems)**
    - 6.1.3. Structural**
      - 6.1.3.1. Design Criteria**
      - 6.1.3.2. Footings and Structural Members**
    - 6.1.4. Mechanical**
      - 6.1.4.1. Design Criteria**
      - 6.1.4.2. Mechanical Systems and Equipment**
    - 6.1.5. Electrical**
      - 6.1.5.1. Electric Utility's Current Capacity and Conditions**
      - 6.1.5.2. Added Electrical Load**
      - 6.1.5.3. Electrical Service and Equipment**
  - 6.2. Water Storage**
    - 6.2.1. Design Criteria**
    - 6.2.2. Tank Size**
    - 6.2.3. Foundation**
  - 6.3. Water Treatment**
    - 6.3.1. Well Water Quality**



# Basic Plan Set Requirements

DRAWING CATEGORY & CONTENT	35%	65%, 95% and Stamped
<b>GENERAL</b>		
Cover Sheet & Sheet Index	x	x
General Legend & Vicinity Map	x	x
Abbreviations & General Notes	x	x
Scope of Work & Community/Climate Data	x	x
Overall Site Plan with Topography	x	x
System Schematic(s)	x	x
Soil Boring Data	x	x
<b>SURVEY</b>		
Easement Index Map	x	x
Basis of Bearing Map		x
Parcel Boundary Map		x
<b>CIVIL</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
General Material & Installation Notes	x	x
Individual Site Plans	x	x
Plan & Profile Index Map	x	x
Plan & Profiles	x	x
Standard Details	x	x
Project Specific Details		x
Grading Plan		x
Fencing Plan		x
<b>PROCESS</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
Piping Floor Plans	x	x
Piping & Instrumentation Diagram	x	x
Operation Description	x	x
General Material & Installation Notes	x	x
Standard Details	x	x
Equipment Schedule & Specifications		x
Equipment Floor Plans		x
Project Specific Details		x
<b>MECHANICAL</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
Equipment Floor Plan	x	x
Piping & Instrumentation Diagram		x
Operation Description		x



General Material & Installation Notes		x
Equipment Schedule & Specifications		x
Piping Floor Plans		x
Standard Details		x
Project Specific Details		x
<b>ARCHITECTURAL</b>		
Design Criteria	x	x
Legend & Abbreviations	x	x
Code Analysis	x	x
Floor Plans	x	x
General Material & Installation Notes	x	x
Elevations	x	x
Equipment Schedule & Specifications		x
Sections		x
Standard Details		x
Project Specific Details		x
<b>STRUCTURAL</b>		
Design Criteria & Loads	x	x
Legend & Abbreviations	x	x
Code Analysis	x	x
Foundation Plan	x	x
General Material & Installation Notes	x	x
Equipment Schedule & Specifications		x
Elevations		x
Sections		x
Standard Details		x
Project Specific Details		x
<b>ELECTRICAL</b>		
Design Criteria & Loads		x
Legend & Abbreviations	x	x
Code Analysis	x	x
Operation Description		x
General Material & Installation Notes	x	x
Power One Line & Panel List	x	x
Equipment Schedule & Specifications		x
Floor Plans		x
Elevations		x
Sections		x
Panel Faces		x
Panel Wiring Diagrams		x
Standard Details		x
Project Specific Details		x

## **GENERAL REQUIREMENTS FOR PLAN SHEETS**

A typical set of drawings will contain many of the following sheets in the order in which they appear in the list.. The type of sheets contained in the plan set will vary depending on the scope of work for the project and the complexity of the proposed facility.

- Cover Sheet and Sheet Index
- General (G Sheets)
- Survey (V Sheets)
- Geotechnical (B Sheets)
- Civil (C Sheets)
- Structural (S Sheets)
- Architectural (A Sheets)
- Plumbing (P Sheets)
- Process (D Sheets)
- Mechanical (M Sheets)
- Electrical (E Sheets)
- Contractor/Shop Drawings (Z Sheets)

The following provides a detailed overview of the type of information that is normally included on drawings in the plan set:

### **I. Cover Sheet and Sheet Index**

VSW's standard cover sheet will be used for all VSW projects.

### **II. General Legend and Vicinity Map (G Sheet)**

VSW's standard General Legend and Vicinity Map format will be used for all VSW projects.

### **III. Scope of Work and Community/Climate Data (G Sheet)**

The project scope of work, community data, climate data and project phasing plan is provided on this sheet.

### **IV. System Schematic and Project Specific Design Criteria (G Sheet)**

Separate Schematic Sheets should be drawn for water and sewerage systems. The Schematic Sheet will serve as a line diagram of the overall systems. The schematic sheets should include the following:

#### **A. Water**

1. General perspective view of the entire water system with major features

2. Storage tanks with base and overflow elevations and capacities
3. Major points of use
4. Major elevation references
5. Operational pressures during both minimum and maximum flows

#### B. Well Data

1. Pump House/Washeteria location and note the source of power
2. Date of construction, contractor, well number, and surface elevation
3. Depth and size of bore hole
4. Static water level and the date of measurement

#### C. Sewerage

##### 1. General

- a. General perspective view of the entire sewerage system designating direction of flow, major features, and force-mains
- b. Lagoon(s) with the number of cells, capacities of each cell, dimensions, floor elevations, overflow elevations, if applicable
- c. Community septic tanks with number of chambers, capacities of each chamber, dimensions, and inlet/outlet elevations, if applicable
- d. Community drainfield information with areas, materials, soil type, percolation rate, and elevations, if applicable
- e. Outfall lengths, materials, elevations, and diffuser type, if applicable
- f. Major points of use
- g. Major elevation references
- h. All manholes
- i. All lift stations

##### 2. Lift Stations

- a. Type of lift station
- b. Make, model, horsepower, voltage, phasing and capacity of pump(s)
- c. Static, dynamic, and total discharge heads

#### **V. Survey (V Sheets)**

- A. Survey Easement Index Map
- B. Basis of Bearing and Vertical Control Map (including coordinates of monuments used)
- C. Parcel Boundary Map
- D. Project Right-of-Ways and Easements

## **VI. Geotechnical (B Sheets)**

- A. Site plan with test hole locations and legend
- B. Test boring/hole logs with reference to boring/hole locations

## **VII. Civil Drawings (C Sheets)**

- A. Civil/Survey Legend
- B. Civil General Material and Installation Notes
- C. Civil System Layout and Sheet Locator Map(s)

The System Layout Sheet(s) will be a plan view of the water and/or sewer system(s) showing all (or a large portion) of the system on one sheet. For larger systems, the scale should be between 1" = 400' and 1" = 1,000', depending on the density of services provided. For smaller systems, the scale should be as needed in order to show sufficient detail on one sheet. If the system cannot be put on one sheet, an index sheet should be provided that shows the waterline locations (without valves), major features such as roads, rivers, etc. and a reference to the areas covered by each layout sheet.

The system layout and sheet locator map will provide the following:

1. Highways, roads, streets, major drainage features, and major buildings. Aerial photographs can be used as a map base if the overlays are readable.
2. Sketch of the community sewer system(s) and wastewater treatment system location(s)
3. Reference areas designating which plan or plan and profile view sheet numbers apply to specific areas of the system
4. House numbers and names of homeowners in tabular form
5. Dwelling locations, with house numbers
6. Identity and approximate location of existing subsurface utilities
7. Main line gate valves (without markers and/or tie-ins)
8. North arrow and bar scale
9. Dimensional data for pipeline material used. (Example: ID., O.D., SDR, ASTM specification and pressure rating designation for each size of pipe used.) Pipeline distances between gate valves and appurtenances can be shown if desired but is not mandatory.
10. Topography existing & proposed contours. Proposed grade contours are shown on final stamped construction plans

### **D. Civil Plan and Profile Views**

#### **1. General**

- a. North arrow with drawings oriented so that the north arrow is pointing more toward the top of the sheet than the bottom
- b. A bar scale
- c. Individual homes to be served and corresponding house numbers.

- d. Adequate information (coordinates, distance to property lines, etc.) to stake the designed improvements in the field
- e. Profile views are generally “left to right” but in certain instances to require them to go “right to left”.

## 2. Water

- a. Fire hydrants
  - Distance to the mainline and shut-off valve from the hydrant
  - Size of the hydrant
- b. Gate Valves, Air Release Valves, and Pressure Reducing Valves (PRV)
  - Location of each valve with respect to at least two permanent points (i.e., buildings, hydrants, power poles, etc.) within 100 feet, if available
  - Size of the valves
  - Approximate depths of bury
  - Size of PRV valve(s) including incoming and outgoing pressures, and ground elevations
- c. Water main
  - Proposed marker post locations on the plans, when appropriate. markers should be located at line of sight intervals or 1,500 feet apart (maximum)
  - Nominal pipe size, material, type of joints, class, pressure rating, etc. (Example: 6”X 12” Aluminum Jacketed Arctic Pipe, HDPE, SDR 11, 160 psi, butt fused joints)
  - Description and location of tees, elbows, crosses, bends, and reducers
  - Profiles for 1) all road crossings, 2) any wash crossing which requires casing, 3) steep sections of water line where the slope exceeds 10%, 4) any area where the waterline is not at standard bury depth and 5) flow lines of deep ditch lines or drainages
- d. Water Services
  - Routing of service line with "dots" designating location of curb stop, meter, and corporation or domestic stop as applicable
  - Use appropriate symbol from the “tool palette” and assign line type to the W/S layer

## 3. Sewer

- a. Manholes and Cleanouts
  - Ground, rim and invert (in and out) elevations
  - Distances between manholes and/or cleanouts
  - Number & type of each manhole and cleanout.

b. Sewer main

- Materials, type of joints, size, length, SDR, class, schedule, slope, etc.

c. Sewer Services

- Service/main connection location distances from a downstream manhole or stationing
- Routing of the sewer service line, indicating the cleanouts with "dots" use symbol from tool palette

d. Lift Stations

- Site map information similar to that of a well site
- Elevation and plan view with pump type, make, capacity, total discharge head (show both static and dynamic heads), voltage, phase, and horse power

e. Force mains

- Proposed pipeline marker locations on the plans (when appropriate)
- Nominal pipe size, material, type of joints, class, pressure rating, etc. (Example: 6" DI, Class 51, 350 psi, integral bell)
- Description and location of elbows, valves, reducers, and cleanouts
- Profiles for all road crossings, any wash crossing which requires casing, steep sections of force main where the slope exceeds 10% or any area where the force main is not at standard bury depth

E. Civil Site Plan and Elevation Views

1. Water Source

- a. Site plan of the well and/or pump house/washeteria, proposed grading plan, drainage, access and power source
- b. Date of construction, contractor, well number, and surface elevation
- c. Depth and size of bore hole
- e. Size, depth, type, and location of casing
- f. Length, location, type, and slot size of screen, if applicable
- g. Gradation of gravel pack, if applicable
- h. Depth of grout envelope
- i. Static water level and date of measurement
- j. Make, model, horsepower, voltage, phasing, full load amperage of pump(s), and elevation of the pump probes. Actual or estimated pumping depth for the planned pumping rate.
- k. Depth of setting of the water level indicator and type

- l. Type and size of drop pipe and size of submersible cable
- m. Type, size, etc., of a pitless unit, if applicable

## 2. Water Storage Tank

- a. Size of the tank including the thickness of the floor, wall, and roof members
- b. Tank manufacturer
- c. Paint system and paint/primer brands used on the tank.
- d. Map of operational valves, fencing, surface drainage plan, and maintenance access
- e. Telemetry or controls if applicable
- f. Elevations of floor, inlet, outlet, overflow, and probes, if used
- g. Details of complex features such as controls, cathodic protection, if applicable
- h. Details of the foundation
- i. Overflow and drain locations and erosion protection

## 3. Pump House/Washeteria/Water Treatment Facility/Lift Station

- a. Building footing drain and discharge location
- b. Finish floor elevations
- c. Site plan of the building site, road access with curve radius, buried utilities, surface drainage, ditching, fencing, danger trees/site clearing, etc.
- d. Elevation view with classified fill, excavation limits, compaction, etc.

## 4. Wastewater Treatment System

- a. Site plan showing drainage and horizontal dimensions
- b. Side slopes, wave protection detail
- c. Number of cells, surface area per cell, maximum liquid volume per cell, and depth of cells
- d. Piping sizes and materials
- e. Fence and gate location and sign detail
- f. Location and lengths of inlet and outlet structures
- g. Locations of liquid level control structures, over-flow lines and surface drainage ditches, and sewage flow routing
- h. Elevations of top of berm, lagoon floor, overflow structure, and inlet(s)

## 5. Individual Site Plans

- a. Site plan, drawn to visual scale, for each structure served including homeowner name, house number, if appropriate, and a north arrow.
- b. Water Service
  - Service saddle location
  - Size, length, and type of service line materials used

- Appurtenances (curb stop, meter can, and domestic stop) tied to dwelling corners if within 100 feet
- c. Sewer Service
  - Cleanout locations
  - Size, length, and type of pipe used
- d. Septic tank and drainfield
  - Size of the septic tank and the material it is made of
  - Tie to the septic tank inspection manhole(s) and the corners of the drainfield to at least two permanent points (i.e., building corners, power poles, trees, etc.) within 100 feet, if available
  - Configuration and depth of the drainfield, and the type of materials used (e.g., 4-inch D3034 PVC, slip-on joint)

## **VIII. Structural Drawings (S Sheets)**

### **A. Structural Legend, Design Criteria and General Notes**

### **B. Structural Plan Views**

1. Foundation plan
2. Floor framing plan
3. Roof framing plan
4. Diaphragm schedule

### **C. Structural Elevations and Sections**

1. Foundation sections
2. Wall sections
3. Shear wall schedule
4. Header elevations and schedule

### **D. Structural Details**

1. Splice details
2. Wall intersections
3. Miscellaneous connections
4. Bracket details
5. Fastener details
6. Anchor details
7. Tie down details

## **IX. Architectural Drawings (A Sheets)**

### **A. Architectural Legend and General Notes**

1. Architectural Plan Views All building and room dimensions
2. Room name and numbering
3. Interior finish schedule
4. Exterior finish schedule
5. Wall Types
6. Door schedule
7. Window schedule
8. Roof plan



9. Code design data
- B. Architectural Elevations and Sections
  1. Front, rear, left side and right side views
  2. Wall sections
  3. Foundation sections
  4. Bathroom/Laboratory/Treatment room/etc. elevations
  5. Cabinet elevations
- C. Architectural Details
  1. Headers (internal and external)
  2. Sills (internal and external)
  3. Jams (internal and external)
  4. Door frame schedule
  5. Handrails and guard rails
  6. Cabinet details
  7. Stair and landing details
  8. Ridge detail
  9. Eave detail
  10. Rake detail
  11. Valley detail
  12. Vent detail
  13. Vapor barriers
  14. Window seal
  15. Insulation
  16. Access hatch

## **X. Plumbing Drawings (P Sheets)**

- A. Plumbing Legend and General Notes
- B. Plumbing Equipment Schedule
- C. Plumbing Plan Views
- D. Plumbing Elevation Views and Sections
  1. Plumbing Isometrics
- E. Plumbing Details
  1. Equipment details
  2. Equipment mounting
  3. Equipment locations
  4. Piping installation
  5. Piping supports

## **XI. Process Drawings (D Sheets)**

- A. Process Diagram Legend
- B. Treatment Process Diagram and Operational Narrative
- C. Treatment Piping and Instrumentation Diagram
- D. Heating and Ventilation Process Diagram and Operational Narrative
- E. Heating and Ventilation Piping and Instrumentation Diagram

## **XII. Mechanical Drawings (M Sheets)**

- A. Mechanical Legend and General Notes
- B. Mechanical Equipment Schedule and Operational Description
- C. Mechanical Plan Views
  - 1. Piping plan
  - 2. Heating plan
  - 3. Ventilation plan
- D. Mechanical Elevation Views and Sections
  - 1. Piping Isometrics
  - 2. Equipment elevations and sections
- E. Mechanical Details
  - 1. Equipment details
  - 2. Equipment mounting
  - 3. Equipment locations
  - 4. Piping installation
  - 5. Piping supports
  - 6. Equipment control interface
  - 7. Fuel oil
  - 8. Ducting

## **XIII. Electrical Systems (E Sheets)**

- A. Electrical Legend, Design Criteria and Loads
- B. Electrical Code Analysis and Operation Description
- C. Electrical Equipment Schedule
- D. Electrical Power One Line and Panel List
- E. Electrical Plan View
  - 1. Exterior electrical site plan
  - 2. Power floor plan
  - 3. Electrical control device plan
  - 4. Electrical equipment plan
  - 5. Electrical signal plan
- F. Electrical Elevation Views
  - 1. Electrical panel layout
  - 2. Electrical panel wiring diagram
  - 3. Panel schedule
  - 4. Ladder diagram for all control panels
- G. Electrical Details
  - 1. Panel Faces

## **XIV. Contractor/Shop Drawings (Z Sheets)**

- A. Drawings of water storage tank construction, premanufactured buildings, foundation design, filter construction, or other fabricated equipment
- B. Vendor cut sheets such as pumps, wall mounted instruments or other equipment