

**TINMOUTH SAND/SALT SHED  
TINMOUTH TAP TA22(2)**

**Request for Proposals  
Design Engineering Services  
Town of Tinmouth, Vermont**

**Date Issued: April 6, 2023**

**Date Due: May 8, 2023 by 4:00 pm**

**Contact person: Steffanie Bourque, Municipal Project Manager, 802-775-0871 x202 or sbourque@rutlandrpc.org.** All questions related to this request for proposal shall be addressed to this individual no later than 5 business days prior to the Date Due above.

**I. INTRODUCTION**

The Town of Tinmouth is requesting proposals for engineering services for a project to construct a new sand/salt shed (see project description in scope of work) funded in part by the Federal Highway Administration and the Town of Tinmouth, through the Vermont Agency of Transportation (VTrans) Municipal Assistance Section (MAS).

The project is managed locally by Steffanie Bourque, Municipal Project Manager. The owner of the project is the Town and the ultimate authority for the design engineering consultant during the project rests with the Town of Tinmouth Selectboard, through its Municipal Project Manager.

Project development must follow the VTrans Municipal Assistance Section (MAS) process. Questions related to the MAS project development process can be answered by the VTrans Project Supervisor, Scott Gurley, Municipal Assistance Section, by phone at (802) 498-8874 or email at [scott.gurley@vermont.gov](mailto:scott.gurley@vermont.gov).

All work will be accomplished in accordance with the following:

- MAS Guidebook for Municipally Managed Projects (found on the VTrans MAS website <https://vtrans.vermont.gov/highway/local-projects> ).
- MAS Project Development Process flow chart (found on the VTrans MAS website).
- Specifications for Contractor Services (found on the VTrans MAS website).
- VTrans CADD Manual

**II. SCOPE OF WORK**

The Town of Tinmouth has entered into an agreement with the Vermont Agency of Transportation to develop a project to construct a new sand/salt shed.

The Town completed a Public Works Improvement Study with Otter Creek Engineering in 2018. This preliminary engineering process included full site planning, public information sessions, and multiple selectboard meetings over a 3-year period. A Proposed Site Plan was completed for a new Town Garage and new Sand/Salt Shed as the original intent was to complete all public works improvements at the same time – see attached Proposed Site Plan, dated 11/4/2019.

Due to complications posed by the COVID-19 pandemic, the Town chose to separate the improvements into two projects and proceeded with construction of the Town Garage, which was completed in 2022. They are now seeking engineering services for the new Sand/Salt Shed site work and construction. The Town’s preference is to have the design engineer develop a performance specification for the sand/salt shed so the project can be bid utilizing a design-build delivery method.

This project is funded in part by the Federal Highway Administration and the Vermont Agency of Transportation. Accordingly, all aspects of project development, from developing a purpose and need statement to constructing the project, must conform to federal and state regulations.

In general, the scope of this project will follow the project development process used by the VTrans Municipal Assistance Section as follows:

- Project kick-off.
- Development of conceptual plans and submission of documentation for NEPA process.
- Development of preliminary plans.
- Develop Right of Way (ROW) plans, if necessary, and assist with ROW documents. This project is on Town-owned land, and it is unlikely the consultant will need to develop ROW plans. A site plan that shows the property boundaries should be sufficient.
- Develop contract plans, technical specifications, final engineer’s estimate and bid documents and assist with the bidding process.
- Assistance during construction.

Consultants should note that general guidance, templates, and other relevant design information can be accessed on the MAS SharePoint site found at:

<https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/SitePages/MAB-LP.aspx>

The development of Conceptual Plans through Contract Plans, Specifications and Estimates will consist of the following Scope of Work phases and tasks:

## **Phase A- PROJECT DEFINITION**

### **Task 1: Project Kick-off**

The consultant will convene a project kick-off meeting to discuss the goals and objectives of the municipality and define the project development process. The VTrans Project Supervisor will be a participant in this meeting and will provide an overview of the typical project development schedule for locally managed projects. The consultant will discuss the project schedule and arrange to collect all information relevant to the project, including all existing project files, underground utility information, tax maps of the affected properties, etc. The consultant will take notes to document the discussions and decisions made and to distribute to the MPM.

### **Task 2: Topographic Survey and Base Mapping**

#### **2.1 Right-of-Way and Deed Information**

The consultant is to develop a base map that shows the approximate limits of the existing Right-of-Way. The municipality will provide available roadway plans, land records, property deeds and tax maps on file for the properties within the project limits. The purpose will be to document the property lines and owners within the project limits for subsequent Right-of-Way use. This right of way and property information will be compiled and presented on the plans.

#### **1.2 Utility Location**

The consultant shall identify all existing overhead and underground utilities that may be affected by project construction and depict their location on project plans.

#### **2.3 Ground Survey**

A topographic survey of the property was completed by Otter Creek in 2019. It is the Town's preference that it be used for this project and will make it available to the successful bidder. The survey is available in .dwg format. A .pdf of the survey is attached for reference only.

### **Task 3: Conceptual Plans**

The consultant will prepare Conceptual Plans and a conceptual construction cost estimate for the improvements. The Conceptual Plans will indicate the existing topography and other base information and illustrate the proposed work. The design will be in accordance with the Vermont Pedestrian and Bicycle Facility Planning and Design Manual, 2018 VTrans Standard Specifications for Construction, the current editions of the Vermont State Standards, the Public Rights of Way Accessibility Guidance issued by the US Access Board, and the most recent edition of the Manual on Uniform Traffic Control Devices. Identified rights-of-ways, utilities, natural and cultural resources, and other features affecting the design will be indicated on the plans. The basis for project pay items will be the 2018 VTrans Standard Specifications for Construction. Note that if the project falls primarily within the right of way of a state highway, the plans shall be developed using MicroStation software and shall generally follow the 2014 VTrans CADD Standards and Procedure - <http://vtranscaddhelp.vermont.gov/> .

The Conceptual Plans are anticipated to consist of:

- Title Page
- Layout Sheets showing existing and proposed features
- Preliminary profiles
- Approximate right of way lines and construction limits (consultant shall provide supporting information addressing how right of way limits were determined)
- Typical Sections for the proposed improvements
- Cross Sections

Together, these drawings illustrate the information necessary to define the project and will include information such as:

- Roadway, sidewalk and/or path design (Cross Slope, material type, and Thickness)
- New or modified subsurface drainage
- Limits of Construction
- Pavement Markings and signs
- Conceptual Traffic Control (at a minimum, plans shall reference VTrans standard drawings or Typical Applications from the MUTCD that illustrate how work zone traffic will be addressed)

The consultant will submit two full size copies of the Conceptual Plans and construction cost estimate to the municipality, along with one set of the plans and estimate for VTrans in .pdf format. VTrans distributes plans electronically for review and they must be in .pdf format for this purpose. The conceptual cost estimate must be prepared in a complete and concise tabular format and will be submitted in .pdf format. The consultant will develop the construction cost estimate utilizing individual items and unit prices consistent with the 2018 VTrans Standard Specifications for Construction, including any revisions, supplements or addenda.

The consultant will also submit a written assessment of the possible impacts of the project on existing vehicle, pedestrian and bicycle traffic. Based on the [VTrans Work Zone Safety and Mobility Policy and Guidance document](#):

- Determine project significance (Project Type - A, B, C or D).
- All Project Types require the design engineer to fill out and submit the Traffic Management Plan (TMP) checklist to the MAS Project Supervisor / Manager.
- Depending on significance, the selected firm must be prepared to develop Temporary Traffic Control (TTC) plans, Traffic Operations (TO) requirements and Public Information (PI) strategies.
- Submit TMP checklist and supporting documentation with Conceptual Plans.

If traffic control measures, including any needed temporary pedestrian facilities, are needed, their cost shall be included in the project cost estimate.

The consultant will attend a public information meeting to present the Conceptual Plans. The consultant will take notes to document the discussions and decisions made and distribute to the MPM.

#### **Task 4: Resource Constraints and CE Documentation**

The consultant is expected to identify natural and cultural resources on the project plans to support the municipality in satisfying the NEPA process which is expected to be at the level of Categorical Exclusion (CE).

##### **4.1 Natural Resource Identification**

The consultant will confirm the presence or absence of any known natural resources in the project vicinity and will identify these resources on plans of the project area. Please refer to the MAS Share point site at <https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/SitePages/Environmental.aspx> for a detailed outline of the requirements for Natural Resource Identification.

##### **4.2 Historical/Archaeological**

The consultant will determine any historical or archaeological impacts and VTrans staff will provide concurrence as part of completing the CE. Please refer to MAS Share point site at <https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/SitePages/Environmental.aspx> for a detailed outline of the requirements for Historical/Archaeological identification.

##### **4.3 Other Permitting and Investigations**

The consultant will determine the need for other environmental permits and will assist the municipality in acquiring all necessary federal, state, and local environmental permits necessary to complete the project. The municipality is generally responsible for any permit fees, although these are waived for some permits.

##### **4.4 Preparation of the Categorical Exclusion Document**

Because federal funding is involved with this project, the National Environmental Policy Act (NEPA) process and requirements must be followed. To meet the requirements of this act, a Categorical Exclusion (CE) Document must be completed. The consultant will prepare the VTrans environmental analysis sheet and supporting documentation will be submitted to VTrans for review and concurrence. VTrans will complete the process with the FHWA.

#### **Phase B- PROJECT DESIGN**

##### **Task 5: Preliminary Plans**

Once the NEPA process has concluded, the consultant will develop preliminary plans for the project. The preliminary plans will include all the information from the conceptual plans and will add further detail, including any stormwater drainage and required erosion prevention and sediment control measures. The preliminary plans will contain:

- Title Sheet
- Typical Section
- Base Plan with a project centerline and existing ROW information
- Profiles
- Cross Sections
- Driveway treatments
- Drainage details
- Erosion Prevention measures and details
- Signs and pavement markings
- Lighting
- Traffic control plans for motor vehicles, bicycles (if accommodated separately from motor vehicles) and pedestrians including any details not covered by VTrans standard drawings or MUTCD Typical Applications. Submit revised/ updated TMP checklist and supporting documentation with Preliminary Plans.

In addition to the preliminary plans, the consultant will develop a revised Engineer's Estimate.

A submittal to VTrans is expected at this stage for VTrans review. The plans, estimate and draft TMP (if applicable) will be submitted to VTrans in a .pdf format. All comments and changes resulting from the review will be addressed by the consultant in the following set of plans.

#### **Task 6: Right-of-Way Plans and Acquisition Process**

Using the project construction limits and any anticipated need for temporary rights during construction, the need for additional right of way will be confirmed by the consultant. They will determine if any additional right-of-way (ROW), including all permanent and temporary easements, beyond the existing ROW is required to construct the project. If the project is in a state highway ROW, it will require a VTrans State Highway Access and Work Permit, and the consultant will work with the town to obtain this permit from VTrans.

#### **6.1 Right of Way Plans**

Existing ROW, and all areas of additional ROW, whether temporary or permanent, will be clearly indicated on ROW plans prepared by the consultant in accordance with standard survey practices. Draft ROW plans and draft easements will be submitted to VTrans for review and approval prior to negotiating with property owners. Easement language must be consistent with guidance provided by the VTrans ROW section.

Easements are typically developed by municipal attorneys, but their content must match information shown on the ROW plans. ROW plans must include all the elements of preliminary plans with the addition of the following:

- Right-of-Way detail sheet
- Property Acquisition Table

If Right-of-Way acquisition is simple and/or does not involve many parcels, it is acceptable to include Right-of-Way information on the project plan sheets.

## **6.2 Right of Way Coordination**

The municipality will be responsible for appraisals, negotiations and completing the acquisitions. The consultant will provide assistance and work closely with the municipality throughout the ROW phase, including any Necessity and Condemnation procedures. ROW acquisition must conform to Public Law 91-646 and 100-17, which together are referred to as the “Uniform Act.”

## **Task 7: Final Design/Bidding**

The consultant will prepare the final construction design of the project. Final Design will include final plans, an updated construction cost estimate, and draft special provisions. These provisions will supplement the VTrans Standard Specifications for Construction (2018) which will serve as the basis for the construction of the project. Final plans will be submitted to VTrans for review and comments. All comments and changes resulting from the review will be addressed by the consultant in the following set of plans. The contract plans will include all information necessary to put the project out to bid.

### **7.1 Final (85%) Plans**

The consultant will submit Final plans along with an updated listing of items and quantities, and an associated cost estimate for municipal and VTrans review and concurrence. These plans will incorporate all comments and conditions received from permitting agencies. Final utility relocations will be shown. ROW plans (if necessary) showing acquisition lines and any agreements made with property owners will be included. The consultant will certify through the signature of an engineer registered in the state of Vermont to practice “structural or civil” engineering that these plans and subsequent 100% plans meet all applicable standards, codes and requirements for design and public safety (design certification.) The consultant will also provide a “Utility & Railroad Clearance” that indicates that all necessary utility coordination has been completed. Submit revised/ updated TMP checklist and supporting documentation with Final Plans.

### **7.2 Special Provisions**

The consultant will develop any project special provisions to cover items not contained in the VTrans 2018 Standard Specifications for Construction or those items that vary from the standard specifications.

### **7.3 Final Estimate**

The consultant will develop a final engineer’s estimate.

## **Task 8: Contract Plans, Construction Bidding and Award**

The consultant will take all the necessary steps to provide the municipality with a complete package which can be put out to bid. The municipality is responsible for the bid advertising process.

## **8.1 Contract Plans**

The consultant will submit Contract (100%) Plans along with an updated list of items, quantities and an associated cost estimate for municipal and VTrans review and concurrence. These plans will incorporate any final changes since the review and acceptance of 85% Plans. These plans will be signed and stamped by the consultant's licensed PE.

## **8.2 Construction Bid Package**

Once the Contract Plans are approved, the consultant will be responsible for assembling the Construction Bid Package. The complete Construction Bid Package will include all of the following items:

- Complete Contract (100%) plans.
- Construction cost estimate.
- Final utility relocations, clearances, and special provisions.
- Right-of-way clearances and special agreements.
- Construction special provisions.
- All necessary permits acquired, and conditions noted.
- Construction Contract specifications.
- Include Final TMP checklist and supporting documentation in the project bid documents.
- Bid Documents including instructions to bidders, bid form and all required federal documents (Note: VTrans has developed a bid document template that should be used as a starting point.)

## **8.3 Bid Process**

The consultant will be available during the bidding process to answer any technical questions about the project design. Once bids are opened, the consultant will confirm that all required components of the bid have been submitted. The consultant will conduct an analysis of the bids and will provide a recommendation to the municipality and VTrans on award of the contract after review of the bids. The bid analysis will generally follow FHWA's Guidelines on Preparing Engineer's Estimate, Bid Reviews and Evaluation dated January 20, 2004. This can be found at <https://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm>. Additionally, please refer to the MAS – Recommended Bid Analysis Procedures in SharePoint for detailed instructions.

## **Task 9: Construction Services**

The consultant shall be prepared to hand off the responsibility for the TMP checklist and supporting documentation to the construction inspector at the pre-construction conference. The consultant will provide limited assistance during the construction phase, primarily to answer any design questions that come up. The consultant will also review for conformance any required material and drawing submittals. It is anticipated that three to six visits to the project site during construction will be required.



### III. RESPONSE FORMAT

Responses to this RFP shall consist of a separate Technical Proposal and Cost Proposal.

A. A **technical proposal** consisting of:

1. A cover letter expressing the firm's interest in working with the Town of Tinmouth including identification of the principal individuals that will provide the requested services.
2. A description of the general approach to be taken toward completion of the project, an explanation of any variances to the proposed scope of work as outlined in the RFP, and any insights into the project gained as a result of developing the proposal.
3. A scope of work that includes detailed steps to be taken, including any products or deliverables resulting from each task.
4. A list of individuals that will be committed to this project and their professional qualifications including the names and qualifications of any sub-consultants. The individual's names, titles and expected duties should be included. Any personnel not specified in the proposal will require the approval of the MPM prior to utilization or invoicing.
5. A summary of estimated labor hours by task that clearly identifies the project team members and the number of hours performed by each team member by task.
6. A proposed schedule that indicates project milestones and overall time for completion. Federal Aid projects often take at least 4 years from Grant award to construction completion. See the MAS Project Development Process flow chart at <https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/MAB%20Documents%20Library/MAB%20Process%20Flowchart.pdf> for additional information.
7. Demonstration of success on similar projects, including a brief project description and a contact name and address for reference.

Please note that Items 1 – 5 should be limited to a total of 15 pages. Resumes, professional qualifications and work samples are not included in this total.

B. A separate **cost proposal** consisting of:

1. A composite schedule by task of direct labor hours, direct labor cost per class of labor, overhead rate, and fee for the project. If the use of sub-consultants is proposed, a separate schedule must be provided for each.

#### IV. CONSULTANT SELECTION

The Selection Committee is made up of the Tinmouth Selectboard, 3 additional municipal representatives, and the MPM. The Selection Committee will make a recommendation to the MAS Project Supervisor and the Town Selectboard to award a contract.

The proposal will be evaluated considering the following weighted criteria:

Review Criteria	Weight	Maximum Points	Weighted Points
Understanding the Scope of Work	5	5	25
Knowledge of Project Area	2	5	10
Qualifications/Experience of Proposed Staff	3	5	15
Availability of Technical Disciplines	2	5	10
Past Performance on Similar Projects	5	5	25
Reasonableness of Proposed Schedule and Labor Hour Estimates	3	5	15
TOTAL			100

Once the Technical Proposals are discussed and ranked, the cost proposals will then be opened and reviewed for consistency with, and considering, the evaluation of the Technical Proposals. The Selection Committee may elect to interview consultants prior to final selection. The Town of Tinmouth reserves the right to seek clarification of any proposal submitted and to select the proposal considered to best promote the public interest.

The proposal will be evaluated and awarded based on the personnel presented. Should the awarded consultant propose any substitutions to the project personnel in the future, they must submit a letter to VTrans for review in consultation with the Municipality, requesting approval of such a change.

The Selection Committee will make a recommendation to the Selectboard regarding award on or about May 25, 2023 to perform the services outlined in the scope of work. The rates that are proposed will be in effect for the complete term of the contract. Also, at that time, a notice of intent to issue the contract to the selected proposer will be mailed to all parties who submitted a proposal.

#### V. SUBMISSION

Consultants interested in this project should submit their proposal to the contact name and address indicated.

Submit as an electronic submission via e-mail with the technical and cost proposals submitted as two separate files, clearly marked as such, including the project name. Please inform the Contact Person prior to submission to avoid proposal being relegated to their spam or junk email files.

Proposals and/or modifications received after the date and time due will not be accepted or reviewed. No facsimile - machine transmitted proposals will be accepted.

All proposals, upon submission, become the property of the Town of Tinmouth. The cost of preparing, submitting and presenting is the sole expense of the firm. The Town of Tinmouth reserves the right to reject any and all proposals received as a result of this solicitation, to negotiate with any qualified source, or cancel this RFP in part or in its entirety, if it is in the best interest of the Town. This Request for Proposals in no way obligates the Town of Tinmouth to award a contract.

## **VI. CONTRACTING**

The consultant, prior to being awarded a contract, shall apply for registration with the Vermont Secretary of State's Office to do business in the State of Vermont, if not already so registered. The registration form may be obtained from the Vermont Secretary of State, 128 State Street Montpelier, VT 05633-1101, PH: 802-828-2363, Toll-free: 800-439-8683; Vermont Relay Service – 711; web site: <https://www.vtsosonline.com/online>

The contract will not be executed until the consultant is registered with the Secretary of State's Office. The successful consultant will be expected to execute sub-agreements for each sub-consultant named in the proposal upon award of this contract.

The consultant's attention is directed to the VTrans' Disadvantaged Business Enterprise (DBE) Policy Requirements. These requirements outline the State's and the consultant's responsibility with regard to the utilization of DBEs for the work covered in the RFP. It is expected that all consultants will make good faith efforts to solicit DBE sub-consultants.

If the award of the contract aggrieves any firms, they may appeal in writing to the Town of Tinmouth Selectboard, 515 North End Road, Tinmouth, VT 05773. The appeal must be post-marked within seven (7) calendar days following the date of written notice to award the contract. Any decision of the Town Selectboard is final.

Prior to beginning any work, the consultant shall obtain Insurance Coverage in accordance with the Specifications for Contractor Services located on the Municipal Assistance Section website. The certificate of insurance coverage shall be documented on forms acceptable to the Town.

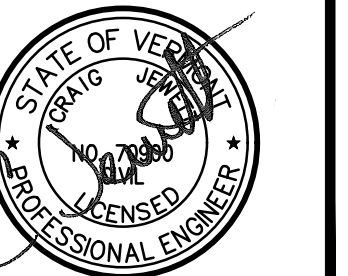


**OTTER CREEK ENGINEERING**

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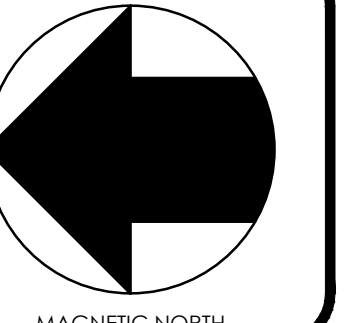
STAMP AND SIGNATURE:



DESIGN ENGINEER

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OTTER CREEK ENGINEERING, INC.



MAGNETIC NORTH

**TOWN OF TINMOUTH  
PUBLIC WORKS FACILITY  
IMPROVEMENTS  
TINMOUTH, VERMONT**

**PERMITTING**

DATE ISSUED: 11/4/2019

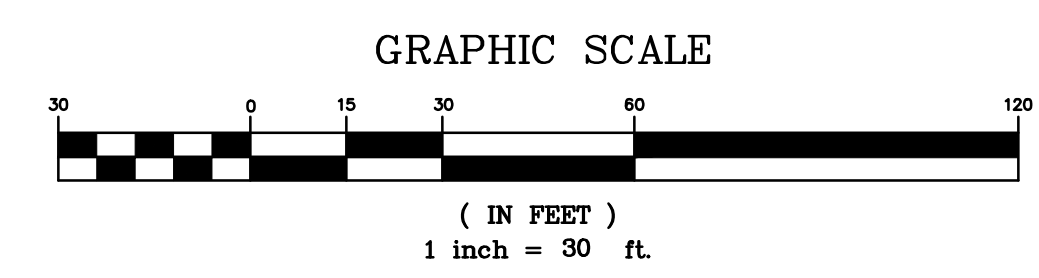
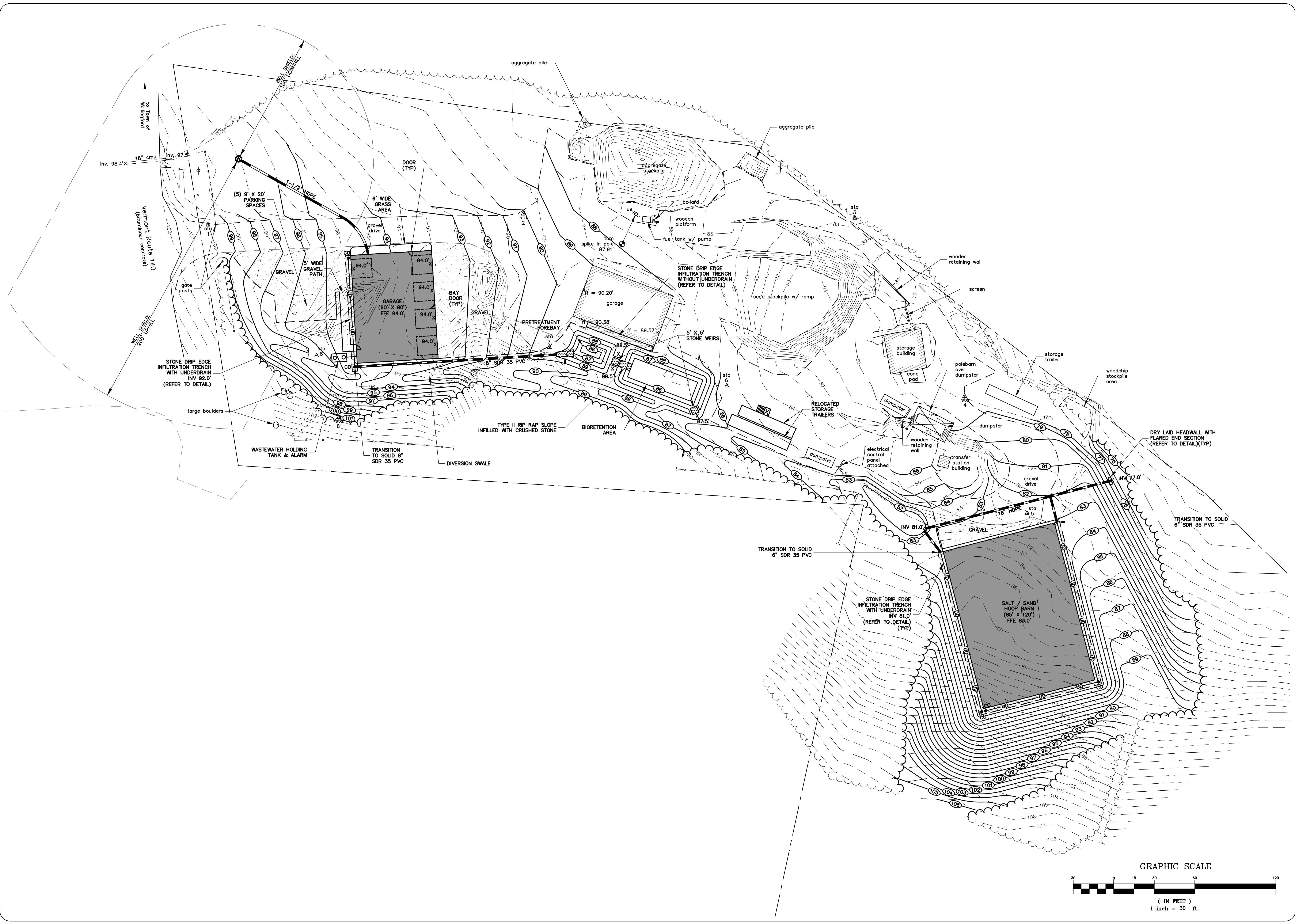
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CHECKED BY: CJ  
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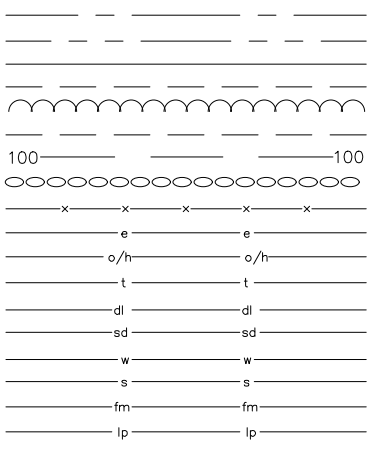
**PROPOSED  
SITE PLAN**

DRAWING NO.

**C-2**



**LEGEND**



**GENERAL NOTES**

1. THESE PLANS ARE BASED ON A TOPOGRAPHIC SURVEY CONDUCTED WITH A THREE SECOND TOTAL STATION ON 8/22/2019 AND 8/23/2019 BY OTTER CREEK ENGINEERING, INC.
2. ELEVATION IS BASED ON AN ASSUMED 100.00 FT. ELEVATION BASE POINT AT TIME OF SURVEY.
3. COORDINATE SYSTEM IS BASED ON AN ASSUMED 5000N,5000E BASE POINT AND MAGNETIC NORTH AT TIME OF SURVEY.
4. FOR CLARITY, TEXT DENOTING EXISTING ITEMS IS SHOWN IN LOWER CASE, AND TEXT DENOTING PROPOSED ITEMS IS UPPERCASE AND BOLD.
5. REFER TO LEGEND LOCATED ON THIS SHEET FOR SYMBOL DESIGNATIONS.
6. ALL UNDERGROUND UTILITIES ARE SHOWN AS APPROXIMATE LOCATIONS.
7. THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINE INFORMATION BASED ON:  
 A) A SURVEY BY ALLAN HOPKINS TITLED, "LANDS OF TIMMOTHY AND JOSEPH J. PRZYPEK FOR A BOUNDARY LINE ADJUSTMENT, MOUNTAIN ROAD (T.M. #2), TIMMOTHY, VERMONT" DATED 28 MARCH, 2006.  
 B) A SURVEY BY ALLAN HOPKINS TITLED, "TOPOGRAPHIC SURVEY OF TOWN OF TIMMOTHY MAINTENANCE AREA AND TRANSFER STATION, VERMONT RT. #140, TIMMOTHY, VERMONT" DATED JULY 2006.  
 C) A SURVEY BY MICHAEL ENGINEERING COMPANY TITLED, "SUB-DIVISION OF LAND OF CHARLES BERENDZEN, TIMMOTHY, VERMONT" REVISION DATE 12-02-76.
8. TECHNICAL SPECIFICATIONS ACCOMPANY THESE PLANS AND ARE ESSENTIAL FOR CONSTRUCTION OF THIS PROJECT.

**ABBREVIATIONS**

BD	= BELOW DECK	MM	= MANHOLE
CI	= CAST IRON	MJ	= MECHANICAL JOINT
CB	= CATCH BASIN	NFL	= NOT FIELD LOCATED
CL	= CLASS	NLD	= NO LEDE TO DEPTH
CMP	= CORRUGATED METAL PIPE	NTS	= NOT TO SCALE
CS	= CURB STOP	PVC	= POLYVINYL CHLORIDE
DI	= DUCTILE IRON	ROW	= RIGHT OF WAY
DH	= DRAIN MANHOLE	SCH	= SCHEDULE
FL	= FLANGE	SD	= STORM DRAIN
FM	= FORCE MAIN	SMH	= SEWER MANHOLE
FRP	= FIBERGLASS REINFORCED PLASTIC	TBM	= TEMPORARY BENCH MARK
GPM	= GALLONS PER MINUTE	TBR	= TO BE ABANDONED
GSP	= GALVANIZED SERVICE PIPE	TBR	= TO BE REMOVED
GV	= GATE VALVE	TMH	= TELEPHONE MANHOLE
HDPE	= HIGH DENSITY POLYETHYLENE	WMH	= WATER MANHOLE
INV	= INVERT	UE	= UNDERGROUND ELECTRIC
IP	= IRON PIPE/PIN FOUND	U.N.O.	= UNLESS NOTED OTHERWISE
IPF	= IRON PIPE/PIN FOUND		

