NHDES Clean Water SRF Environmental Review Addendum

For

Town of Enfield/Lakeview Condominiums Municipal Sewer Extension NH Route 4A Enfield, New Hampshire Shaker Landing Pump Station

(Project No. 10068-05)

Project Applicant:

Town of Enfield Steve Schneider, Town Manager Enfield, New Hampshire

Preparation Date: June 3, 2016

Preparer:



PATHWAYS CONSULTING, LLC

Planning • Civil & Environmental Engineering • Surveying • Construction Assistance 240 Mechanic Street • Suite 100 Lebanon, New Hampshire 03766 (603) 448-2200 • Fax: (603) 448-1221

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1.0 PROJECT APPLICANT

Project Applicant: Town of Enfield

c/o Steve Schneider, Town Manager

Address: 23 Main Street

Post Office Box 373

Enfield, New Hampshire 03748

Project: Town of Enfield/Lakeview Condominiums

Municipal Sewer Extension, NH Route 4A Corridor,

Enfield, New Hampshire

County: Grafton County

State Application Identifier Number: NH 160229.043

2.0 <u>INTRODUCTION</u>

The Town of Enfield, New Hampshire, has applied for Clean Water State Revolving Loan Funds (CWSRF) through the State of New Hampshire Department of Environmental Services in accordance with provisions of Chapter Env-Wq 500 rules of the department. These rules prescribe procedures for the application process concerning the CWSRF of the department. This document will discuss the requirements of Part Env-Wq 508 of these rules, the environmental review. This document is prepared as an addendum to the Environmental Review originally issued for the main portion of the project on March 31, 2016.

3.0 BACKGROUND

3.1 Existing Systems

During the initial evaluation of the municipal sewer extension, the Option B alignment was selected for design and construction. This option limited the amount of force main installation within the Enfield Shaker Historic District by routing the forcemain along Landing Road and tying into the municipal sewer system located in the Shaker Landing Home Owner's Association (Shaker Landing) development. A portion of the existing municipal sewer system serving six existing buildings closest to Mascoma Lake is nearing the end of its useful life. As part of the municipal sewer extension project, the Town intends to install a new solids handling pump station and connect to the Option B sewer extension.

Shaker Landing is a residential housing complex located on Landing Road and located on the shoreline of Mascoma Lake. Landing Road is a privately owned road accessing NH Route 4A and serving residential and commercial development. The lowest portion of the development includes six triplex buildings originally constructed in the 1960s for use as dormitories by the Brothers of the LaSalette Community. Multiple septic tanks and an on-site leachfield originally served the buildings. When the on-site disposal system was near its typical design age, the Town of Enfield was in the process of constructing the Shaker Village sewer extension in the mid-1980's. At that time, portions of the existing on-site system were closed, including the leach fields, and the effluent

from the existing six buildings was connected to the municipal sewer system. The original septic tankage portion of this system currently remains.

A review of historic USGS maps for this location shows that the site was not developed prior to this time, although there is evidence to suggest that there was a former saw mill, mill race, and stone house located completely within the currently disturbed footprint of the Shaker Landing development (refer to "Plan showing Buildings of The Society of Shakers, Enfield N.H."). Similar maps available in the NHDHR files for Enfield, NH also identify this area as the mill site. All project improvements in this area will be wholly located within the alignment of the Landing Road or the area previously disturbed by the Shaker Landing building development dating back to the 1960s.

Our original assessment of the municipal sewer extension concluded that the proposed alignment follows the NH Route 4A corridor through the Enfield Shaker Historic District. This Historic District was added to the Federal Register of Historic Places on November 7, 1979 (NH Reference No. 79000198, ENF0039). It was our opinion that no impacts to the Historic District would occur since construction will take place within the already disturbed NH Route 4A corridor. The selection of Option B involving routing of the municipal sewer extension along Landing Road reduces potential impact to the Historic District. The majority of the mapped historic buildings are located north of the former mill brook, with the proposed sewer alignment and tie-in occurring south of the brook within the roadway and the previously disturbed land areas. It remains our assessment that no impacts to the Historic District will happen, and that any previous site buildings or resources have already been impacted by the site development and road construction.

3.2 Supplemental Project Documents

As part of ongoing project design and funding source documentation, the following documents describing the Lakeview NH Route 4A Corridor Municipal Sewer Extension project have been developed and are available for public review upon request to the Town of Enfield Town Manager. The information contained in these documents is included with this environmental review by reference.

- 1. <u>Environmental Report for Lakeview Condominiums Municipal Sewer Connection, NH Route 4A, Enfield, New Hampshire, Pathways Consulting, LLC, March 14, 2016.</u>
- 2. <u>Preliminary Engineering Report for Lakeview Condominiums Municipal Sewer Connection, NH Route 4A, Enfield, New Hampshire, Pathways Consulting, LLC, March 14, 2016.</u>
- 3. NHDES Clean Water SRF Environmental Review for Town of Enfield/Lakeview Condominiums Municipal Sewer Extension, NH Route 4A, Enfield, New Hampshire, Pathways Consulting, LLC, March 31, 2016.

4.0 PURPOSE AND NEED

The Shaker Landing septic tanks and pump station are nearing the end of their useful life. The solids handling capability of this system is minimal, at best, and the annual maintenance and operating costs are increasing as the system ages. As part of the proposed municipal sewer extension, the Town of Enfield intends to upgrade the system by taking the aging tanks out of service, cleaning and abandoning them in place, and replacing the existing pump station with a solids handling pump station that is adequately sized and designed in conformance with the current NHDES sewer regulations, the current standard of practice for pump stations, and typical energy efficiency standards for process equipment. Replacement of the system will contribute to maintaining an adequate level of sanitary sewage treatment and disposal for the existing six buildings, avoid possible future releases of sewage to the groundwater table or to Mascoma Lake due to equipment failure, and provide a properly updated system that conforms to the current NHDES regulations and design standards.

5.0 <u>ALTERNATIVES TO PROJECT ACTION</u>

The proposed project does not meet the criteria outlined in 40 CFR 6.204 "Categorical Exclusions and Extraordinarily Circumstances: and is not eligible for a Categorical Exclusion." The following No-Build Options and project alternatives were reviewed for cost effectiveness, feasibility, and potential environmental impacts in order to identify the preferred option.

- **No Build Option:** The No Build Option assumes that no new systems will be constructed to serve the existing six buildings at the Shaker Landing development closest to Mascoma Lake, but that continued system maintenance, cleaning, and repair will be used to restore the systems to operating condition. This option is not feasible in the long-term for the site following reasons:
 - The equipment associated with this system was partly installed in the 1960s, and it was upgraded when the municipal sewer was located in Lower Shaker Village in the mid-1980s. This type of system has a typical operating life of 40 years. Portions of the system have exceeded this life expectancy, and increased groundwater infiltration and/or sewage leakage can be expected as concrete structures continue to deteriorate.
 - The systems as installed do not meet current NHDES sewer regulations, typical energy or control standards, or engineering standards of practice. While some improvements may be possible by replacing equipment components, there is no adequate method to facilitate future integrity of aging concrete tanks.
 - System operating and maintenance costs will continue to increase as the systems age. The systems currently have no capability to handle solids and transfer them into the municipal sewer collection system. This process requires the installed solids handling tanks to be closely monitored and emptied on an annual basis to prevent maintenance issues due to solids blockage or buildup.
- **5.2 Equipment Upgrade and Replacement:** The only viable option is to replace the existing systems and upgrade them in accordance with current standards and codes. This option assumes the following:

- A single duplex pump station with either sufficient storage capacity or emergency power backup systems will be sited within the currently disturbed area adjacent to the six existing buildings.
- The pumps will be sized to handle current regulatory flow rates and will be solids handling-type pumps to eliminate the need for solids handling tanks.
- A new forcemain will be routed into the municipal sewer extension serving the Lakeview Condominiums and tied into a receiving manhole.
- The collected sewage will be transferred within the existing municipal gravity sewer serving Lower Shaker Village, and through that sewer to the Town pump station.
- Flow will be pumped from this location for ultimate treatment and disposal in the City of Lebanon Wastewater Treatment Facility.

6.0 <u>DETAILS OF PROJECT</u>

The following project documents are included with this Addendum to describe the project:

- Exhibit 1, USGS map for site location showing Option B connection point.
- Exhibit 2A, aerial overall context plan showing main sewer alignment and Option B tie-in point.
- Exhibit 4A, aerial context map showing Option B tie-in point.
- Exhibit 4C, GoogleEarth image, April 2011, showing the six buildings to be connected to the sewer extension.
- Town of Enfield Tax Assessor's Map showing the general project tie-in area.

Other site documentation and a photographic log of the project area are included in the New Hampshire Division of Historical Resources (NHDHR) Request for Project Review (RPR).

7.0 ENVIRONMENTAL CONCERNS AND MITIGATION

The project area (Option B tie-in) was included in the original identification of potential environmental or sensitive natural resources that were present on, or adjacent to, the proposed project alignment. As the project has progressed and design details are being worked out in further detail, the project was described and submitted to the following State agencies for additional review and input:

- The New Hampshire Natural Heritage Bureau (NHNHB) on May 13, 2016 requesting review of endangered species, habitat, or other mapped environmental resources at this portion of the project. The response (NHB 16-1502) concluded that although natural resources were present in the general project vicinity, the project, as proposed, would have no impact on those resources. This response is included as an attachment to this addendum.
- An RPR to the NHDHR on May 27, 2016 providing additional information regarding the Option B tie-in location including the new service for the existing six buildings. Although this tie-in location was already reviewed by the NHDHR as part of the original project submittal, we felt that it was prudent to provide additional available information and details to determine if the original conclusion of "no impact" remained valid, and to allow further definition of possible

conditions or procedures to be used during construction. A copy of the NHDHR RPR, additional information is included as an attachment to this addendum.

The previously submitted identification and evaluation of resources is fully applicable to this addendum, with the following clarifications.

7.1 Historical Properties

The Town NH Shaker Historic District is listed on the National Register of Historic Places. The project alignment along NH Route 4A goes through this Historic District, and specifically includes a tie-in to the municipal sewer system within the Shaker Landing road corridor. As noted previously, an RPR has been sent to the NHDHR for comment on the additional design details now available for this portion of the project. No further contact with the Town Heritage Commission was conducted because this location was already part of the original evaluation, and it was determined that there would be no impact to Town Historic Resources.

A review of the NHDHR files was originally conducted on January 20, 2016. At that time, no additional historic or archaeologic sites have been identified that could be impacted by the project. We reviewed additional available historic mapping for the Shaker Landing portion of the project and determined that the development was constructed on the site of the former Saw Mill, mill pond, and a stone residence. These historic resources were reviewed at the time of original construction, and the sites are now fully disturbed by the Shaker Landing development. No further impact is anticipated as part of this sewer tie-in project. The NHDHR may require field screening during construction, but no significant requirements are anticipated for the project area.

7.2 Biological Resources

As noted previously, an online request was made through the datacheck tool of the NH Department of Resources and Economic Development, Natural Heritage Bureau (DRED-NHB) on May 13, 2016 to identify potential impacts from the project to known species, habitat, or other biological resources. The online check indicated that there were mapped resources in the project area and that further evaluation would be required. We requested an additional review, and a final letter from the DRED-NHB concluded that no impacts to these resources would occur with the implementation of the project, even though mapped resources are within the general project.

Due to the fact that all project work will occur within the Shaker Landing road corridor or within the previously disturbed areas associated with the Shaker Landing development, no further review is required for this project.

7.3 Conclusion

This project does not significantly alter the original Option B alignment or tie-in point. The changes included in this addendum constitute a minor project and no significant environmental impacts are anticipated. We, therefore, propose that the previously recommended finding of No Significant Impact (FONSI) remain valid with this addendum.

8.0 INTERGOVERNMENTAL REVIEW

This addendum was originally included in the Intergovernmental Review Process coordinated by the New Hampshire Office of Energy and Planning (NH-OEP) and no additional documentation or review is required under this process.

9.0 PUBLIC REVIEW

The existing Shaker Landing development sewer tie-in project as presented in this addendum is the replacement of an existing aging system as part of the ongoing Town capital improvements program. Town review and approval of the municipal sewer extension has already taken place, and no additional public review or comment is required for this addendum.

APPENDIX

Exhibits

The following Exhibits are attached in this Appendix:

Exhibit 1 USGS Location Map

Exhibit 2A Overall Context Plan (aerial)

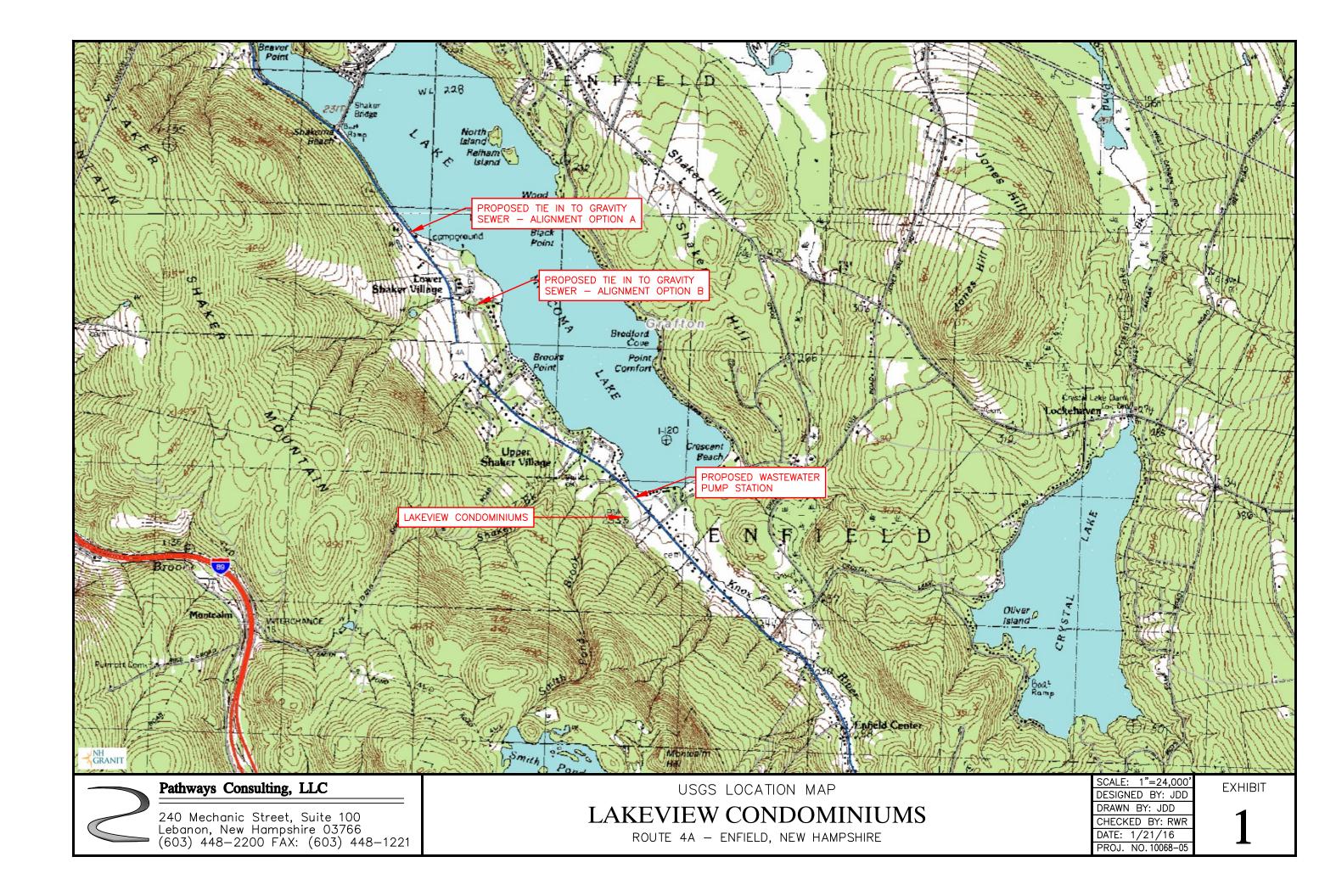
Exhibit 4A Alignment Option B Context Plan (aerial)

Exhibit 4C GoogleEarth image, April 2011

Town of Enfield Tax Assessor's Map

NHNHB 16-1502 finding of no impact

NHDHR RPR submittal







240 Mechanic Street, Suite 100 Lebanon, New Hampshire 03766 (603) 448-2200 FAX: (603) 448-1221 OVERALL CONTEXT PLAN

LAKEVIEW CONDOMINIUMS

ROUTE 4A - ENFIELD, NEW HAMPSHIRE

SCALE: 1"=700'
DESIGNED BY: JDD
DRAWN BY: ISM
CHECKED BY: RWR
DATE: 5/27/16
PROJ. NO. 10068-05

EXHIBIT







240 Mechanic Street, Suite 100 Lebanon, New Hampshire 03766 (603) 448-2200 FAX: (603) 448-1221 ALIGNMENT OPTION B REVISED CONTEXT PLAN

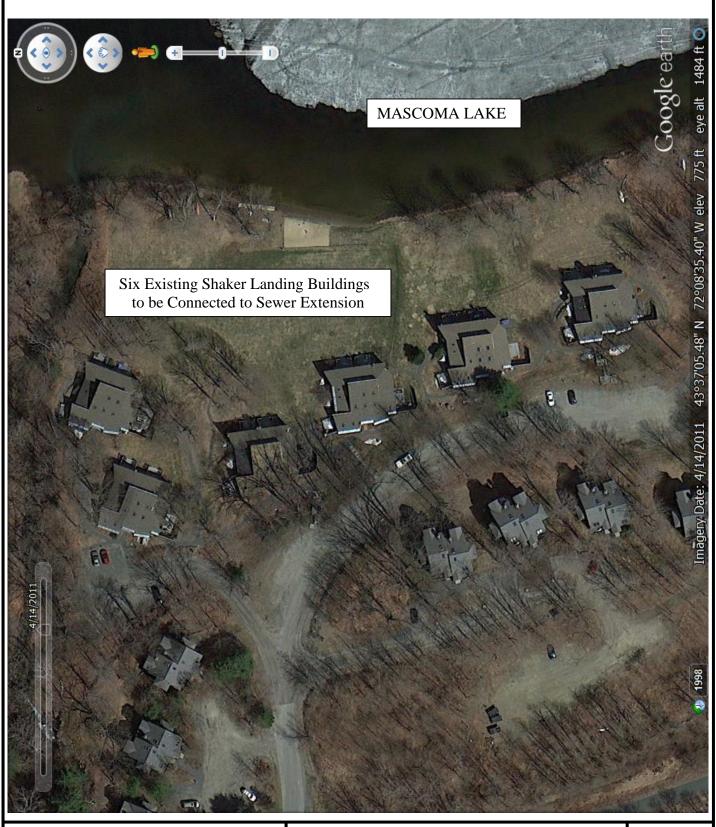
LAKEVIEW CONDOMINIUMS

ROUTE 4A - ENFIELD, NEW HAMPSHIRE

SCALE: 1"=500'
DESIGNED BY: JDD
DRAWN BY: ISM
CHECKED BY: RJF
DATE: 5/27/16
PROJ. NO. 10068-05

EXHIBIT





PATHWAYS CONSULTING, LLC 240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03766 (603) 448-2200 FAX (603) 448-1221 GOOGLE EARTH IMAGE 4/14/2011 SHAKER LANDING BUILDINGS LAKEVIEW CONDOMINIUMS SEWER PROJECT ENFIELD, NEW HAMPSHIRE **EXHIBIT**

4C

PREPARED BY: RWR DATE: MAY 2016 PROJECT NUMBER: 10068-05





NEW HAMPSHIRE NATURAL HERITAGE BUREAU NHB DATACHECK RESULTS LETTER

To: Russell Rohloff, Pathways Consulting, LLC

240 Mechanic Street

Suite 100

Lebanon, NH 03766

From: NH Natural Heritage Bureau

Date: 5/25/2016 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau of request submitted 5/13/2016

NHB File ID: NHB16-1502 Applicant: Russell Rohloff

Location: Enfield

Tax Maps: Tax Map 011 Lot 043-000

Project

Description: Replace existing gravity sewer components with pump station and

force main as part of Town of Enfield municipal sewer extension in

route 4A corridor

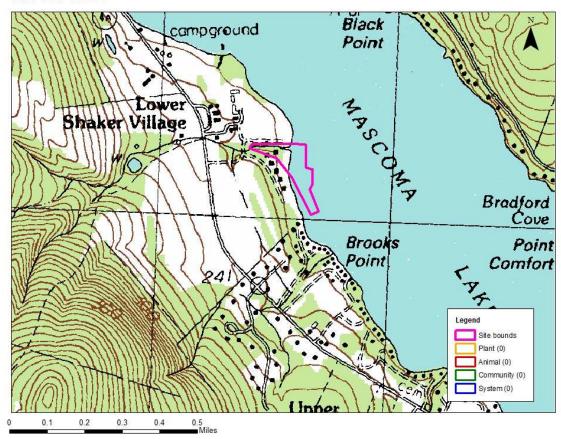
The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 5/13/2016, and cannot be used for any other project.



MAP OF PROJECT BOUNDARIES FOR: NHB16-1502

NHB16-1502



Please mail the completed form and required material to:

New Hampshire Division of Historical Resources State Historic Preservation Office Attention: Review & Compliance 19 Pillsbury Street, Concord, NH 03301-3570

DHR Use Only	
R&C#	
Log In Date	//
Response Date	/
Sent Date	//

Request for Project Review by the New Hampshire Division of Historical Resources

☐ This is a new submittal ☐ This is additional information relating to DHR Review & Compliance (R&C) #: 7402					
GENERAL PROJECT INFORMATION					
Project Title Lakeview Condominiums Sewer Extension - NH Rte 4A					
Project Location Shaker Landing, 33 Landing Road					
City/Town Enfield Tax Map 011 Lot # 043-000					
NH State Plane - Feet Geographic Coordinates: Easting 858,086 Northing 407,892 (See RPR Instructions and R&C FAQs for guidance.)					
Lead Federal Agency and Contact (if applicable) (Agency providing funds, licenses, or permits) Permit Type and Permit or Job Reference #					
State Agency and Contact (if applicable) NHDES, Dan Fenno, CWSRF Program Manager					
Permit Type and Permit or Job Reference #					
APPLICANT INFORMATION					
Applicant Name Town of Enfield, c/o Steve Schneider, Town Manager					
Mailing Address Post Office Box 373 Phone Number (603) 632-5026					
City Enfield State NH Zip 03748 Email sschneider@enfield.nh.us					
CONTACT PERSON TO RECEIVE RESPONSE					
Name/Company Russell W. Rohloff, P.E., Pathways Consulting, LLC					
Mailing Address 240 Mechanic Street, Suite 100 Phone Number (603) 448-2200					
City Lebanon State NH Zip 03766 Email Russ.Rohloff@pathwaysconsult.com					

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. Please refer to the Request for Project Review Instructions for direction on completing this form. Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION Project Boundaries and Description Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) indicating the defined project boundary. (See RPR Instructions and R&C FAQs for guidance.) Attach a detailed narrative description of the proposed project. Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation. Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) (Informative photo captions are requested.) A DHR file review must be conducted to identify properties within or adjacent to the project area. Provide file review results in **Table 1**. (Blank table forms are available on the DHR website.) File review conducted on 01/20/2016. <u>Architecture</u> Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? Yes No If no, skip to Archaeology section. If yes, submit all of the following information: Approximate age(s): Photographs of each resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.) If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.) <u>Archaeology</u> Does the proposed undertaking involve ground-disturbing activity? \square Yes \square No If yes, submit all of the following information: Description of current and previous land use and disturbances. Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.) Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process. DHR Comment/Finding Recommendation This Space for Division of Historical Resources Use Only Additional information is needed in order to complete review. Insufficient information to initiate review. ☐ No Potential to cause Effects ☐ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect Comments: If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation. Authorized Signature: Date:

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources State Historic Preservation Office Attention: Review & Compliance 19 Pillsbury Street, Concord, NH 03301-3570

RECEIVED

Request for Project Review05y the New Hampshire Division of Historical Resources

This is a new submittalThis is additional information relating to DHI	R Review & Cor	npliance (R&C) #: 7402					
GENERAL PROJECT INFORMATION	4						
Project Title Lakeview Condominiums Sewer Extension - NH Rt	e 4A	22.					
Project Location NH Rte 4A Highway Corridor, from 750 NH R	Rte 4A to 413 NH Rte	4A					
City/Town Enfield	Tax Map 7&1	0 Lot # Multiple, see Exhibits 5,6,7 and 8					
NH State Plane - Feet Geographic Coordinates: (See RPR Instructions and R&C FAQs for guidan	Easting ce.)	Northing Varies					
Lead Federal Agency and Contact (if applicable) (Agency providing funds, licenses, or permits) Permit Type and Permit or Job Reference #							
State Agency and Contact (if applicable)							
Permit Type and Permit or Job Refer	ence#	and the second s					
APPLICANT INFORMATION							
Applicant Name Town of Enfield, c/o Steve Schneider, Town Manager							
Mailing Address Post Office Box 373		Phone Number (603) 632-5026					
City Enfield State NH	Zip 03748	Email sschneider@enfield.nh.us					
CONTACT PERSON TO RECEIVE RESPONSE							
Name/Company Russell W. Rohloff, P.E., Pathways Consulting	ng, LLC						
Mailing Address 240 Mechanic Street, Suite 100		Phone Number 603-448-2200					
City Lebanon State NH	Zip 03766	Email russ.rohloff@pathwaysconsult.com					

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□ No Potential to cause Effects □ No Historic Properties Affected □ No Adverse Effect □ Adverse Effe	ct				
Comments: Mon Avy In Monding Comments					
from the Expelled Huxage Connumer.					
If the project will impact in any way the 17.83 acres protected by preserve tion easement consultation with NH DHR and NH OFP must be juitiated and any needed approvals given before work commences.	1,34				
If plans change or resources are discovered in the course of this project, you must contact the Division of Historic					
Resources as required by federal law and regulation.	.u.L				
Authorized Signature: Michael Jouver DJ Date: 01 28 284	8				

Lakeview Condominiums Municipal Sewer Connection - NH Route 4A Enfield, New Hampshire

Request for Project Review – Additional Information Relating to R&C #7402 New Hampshire Division of Historical Resources (NHDHR)

PROJECT BOUNDARIES AND DESCRIPTION

<u>USGS Map:</u> The site is shown on the USGS North Grantham quadrant, a 7.5 minute series map last revised and issued in 2015. We have included a portion of that map (Exhibit 1) with annotations for the starting point and ending point of the sewer extension project. The Town of Enfield (Town) has since chosen to pursue the Option B alignment with a connection at the municipal sewer line adjacent to Shaker Landing. As part of the project, the Town intends to connect the six existing condominium buildings of Shaker Landing to the sewer extension project. This request for project review is to focus on the proposed Shaker Landing portion.

9-1-1 Address: 33 Landing Road, Enfield, NH
 Latitude/Longitude: 72.14327W Lat.; 43.61841N Long.
 State Plane Coordinates: X 856,231.51; Y 409,711.47

Narrative Project Description: The Town intends to construct a municipal sewer extension from the Lakeview Condominiums site along the NH Route 4A corridor to a municipal sewer connection point located in the Lower Shaker Village area on Landing Road. The project is being funded by the USDA Rural Development program and the New Hampshire Clean Water State Revolving Loan Fund. This project has previously been submitted for review to the NHDHR and assigned Review and Compliance #7402. Since that initial review, the project design has progressed to the point where Option B has been identified as the preferred alternative, and the Town is pursuing upgrading the effluent connection to the municipal sewer for the six existing buildings closest to Mascoma Lake with a solids handling pump station. The project team felt that it was prudent to request a review of the most recent design alignments from the NHDHR in order to confirm earlier conclusions.

The Shaker Landing Home Owner's Association (Shaker Landing) is a residential housing complex located on Landing Road and located on the shoreline of Mascoma Lake. Landing Road is a privately owned road accessing NH Route 4A and serving residential and commercial development. The lowest portion of the development includes six triplex buildings originally constructed in the 1960s for use as dormitories by the Brothers of the LaSalette Community. A review of historic USGS maps for this location shows that the site was not developed prior to this time, although there is evidence to suggest that there was a former saw mill, mill race, and stone house located completely within the currently disturbed footprint of the Shaker Landing development (refer to "Plan showing Buildings of The Society of Shakers, Enfield N.H."). Similar mapping available in the NHDHR files for Enfield, NH also identify this area as the mill site. All project improvements in this area will be wholly located within the alignment of the Landing Road or the area previously disturbed by the Shaker Landing building development dating back to the 1960s.

Our original assessment of the municipal sewer extension concluded that the proposed alignment follows the NH Route 4A corridor through the Enfield Shaker Historic District. This Historic

District was added to the Federal Register of Historic Places on November 7, 1979, (NH Reference No. 79000198, ENF0039). It was our opinion that no impacts to the Historic District would occur since construction will occur within the already disturbed NH Route 4A corridor. The selection of Option B involving routing of the municipal sewer extension along Landing Road reduces potential impact to the Historic District. The majority of the mapped historic buildings are located north of the former mill brook, with the proposed sewer alignment and tie-in occurring south of the brook within the roadway and the previously disturbed land areas. It remains our assessment that no impacts to the Historic District will occur, and that any previous site buildings or resources have already been impacted by the site development and road construction.

<u>Site Plan:</u> The project is currently seeking Federal and/or State funding, and no preliminary design has been completed at this time. Attached are three aerial context plans (Exhibits 2, 2A, and 4A) that show the proposed area of construction and tie-in. As noted in the original RPR, sewer of this type is typically installed with an open cut methodology (six to ten feet wide and six to eight feet deep). The area of construction is located wholly within the already disturbed Landing Road access corridor, within previously installed municipal underground utility corridors, or within the site disturbance caused by the construction of the Shaker Landing development.

Project Photographs: Exhibit 4B is a photographic location plan that also shows the location of the six existing buildings to be connected to the municipal sewer. The plan also shows the location of the existing sewer collection system and pump station serving the six buildings. We have also included Exhibit 4C, a Google Earth image from April 2011 showing the six buildings prior to full tree growth. This sanitary sewer system serving the six buildings will be replaced by an upgraded pump station system since the existing components are nearing the end of their useful life. The six existing triplex buildings are essentially identical in terms of layout and floor plan. They vary slightly based on the use of open patios or closed patio extensions, screening, and landscaping. All buildings date back to the 1960s. We have taken representative photographs of the Project area and the six buildings in relation to the access road and Mascoma Lake. The locations of the photographs are shown on Exhibit 4B and inventories on the RPR Photo Log form that is attached to this submittal.

NHDHR File Review: An NHDHR file review was conducted on January 20, 2016 by Pathways Project Engineer, Russell W. Rohloff, P.E. The results of the file review are included in Table 1. In summary, there are mapped historic resources or structures greater than 50 years old within the project corridor, but it is our opinion that the project can be designed and constructed to avoid all impact to these historic resources. Construction is taking place within the already developed and disturbed road corridor or Shaker Landing development. Typically, road construction will disturb subsurface to a depth of four feet below ground surface. The planned utilities will likely be six to eight feet below ground surface, which will likely create subsurface disturbance. The proximity to the road surface, and the lack of mapped historic or archaeological sites within this corridor make it unlikely that any resources will be impacted.

ARCHITECTURE

As previously noted, the connection of the six existing buildings to the municipal sewer system within the Shaker Landing Development will be upgraded, and these buildings, originally constructed as dormitories serving the LaSallette Community, were constructed in the 1960s. All site work will take place underground and the existing conditions will be restored after

installation of the underground utilities. No disturbance of buildings, stone walls, landscape features, or other potential historic resources will occur as part of this project. Due to all the structures being constructed at the same time, using the same building materials and floor plan footprints, we have provided representative photographs of the development showing each of the typical building faces, entrances, and adjacent amenities.

ARCHAEOLOGY

As previously noted, the project involves the installation of a sanitary sewer forcemain or gravity sewer with access and maintenance structures at recommended intervals. All work will take place within the NH Route 4A highway or Landing Road ROW and adjacent to a project corridor previously disturbed by roadway and subbase construction. It is probable that subsurface disturbance associated with roadway construction extended as much as four feet below ground surface. The proposed sewer will be installed six to eight feet below ground surface, and it is anticipated that some new ground disturbance will occur. However, the proximity to the already disturbed roadway corridor makes it unlikely that significant archaeological artifacts, sites, or resources will be encountered during construction.

Information related to existing resources has been identified in the previously mentioned NHDHR file research.

NHDOT Project and Number and/or Project Title:				DHR R&C #: 7402	
Town of Enfield Municipal Sewer Extension – NH Route					
RPR Table 1: PREVIOUSLY SURVEYED OR LISTED PROPERTIES					
NH DHR Property Name / Historic District Name	NH DHR	National	Date of	National Register	
	Inventory #	Register-listed,	Determination	Criteria of	
		Eligible, or Not	(mm/dd/yy)	Significance	
		Eligible		(if applicable)	
Enfield NH Shaker Historic District (includes 29	79000198	Registered Listed	11/7/79		
buildings)					
Small Shaker Cemetery located off Bassy Lane (Note 1)	Not Assigned	Probably Eligible			
Bassy Lane Lakefront Camps (Note 1)	Not Assigned	Probably Eligible			
**Add rows as necessary					

Notes:

- 1. A review of buildings was completed during the Shaker Bridge rebuilding project (DOT/FHWA BRO-X-145003, 12967, 10652). These properties were identified as potentially eligible for listing, but no further information was located in the NH DHR files.
- 2. All other listed properties in the general vicinity (Enfield Village or Enfield Center Village) are well outside the proposed project limits and were not identified in this table since there is no possibility of impact.
- 3. NHDHR File Review was conducted on January 20, 2016.

NHDOT N	ame and Number and/or Project Title:	DHR R&C #: 7402			
	nfield Municipal Sewer Extension – NH Route 4A				
	RPR PHOTO LOG				
Photo #	Photo # NHDHR Inventory # and/or locational information; Include a brief description of the photograp				
	if necessary.				
1	Looking southeast along Landing Road (private access road) to Shake 45, 47, and 49 visible on left with Mascoma Lake on far left.	r Landing. Buildings 43,			
2	Looking north at Building 43 (south face) with Building 41 in background right. All condominium units are essentially the same except for lands				
3	Looking southeast at Building 47 (west face). Typical building entryveutout.				
4	Looking southwest at Building 45 (east face). Buildings 47 and 49 are Lake to left.	e also visible. Mascoma			
5	Looking west at Building 43 (east face). Elevation difference between building site is visible. Building 41 is visible on right.	n Landing Road and main			
6	Looking northwest. Buildings 43, 41, and 39 are visible left to right.				
7	Looking north along Landing Road at parking lot. Building 47, 45, 43 left.	3, and 41 visible right to			
8	Looking southeast at Building 49 (west face) to illustrate minor variat and landscaping.	ion in pedestrian access			
9	Looking northwest at Building 47 (east face). This building has patio on south face. Buildings 45, 43, 41, and 39 are visible left to right.	rather than enclosed patio			
10					
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20					
	**Add rows as necessary.				
	Informative photo captions can be used in place of a photo log.				



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6



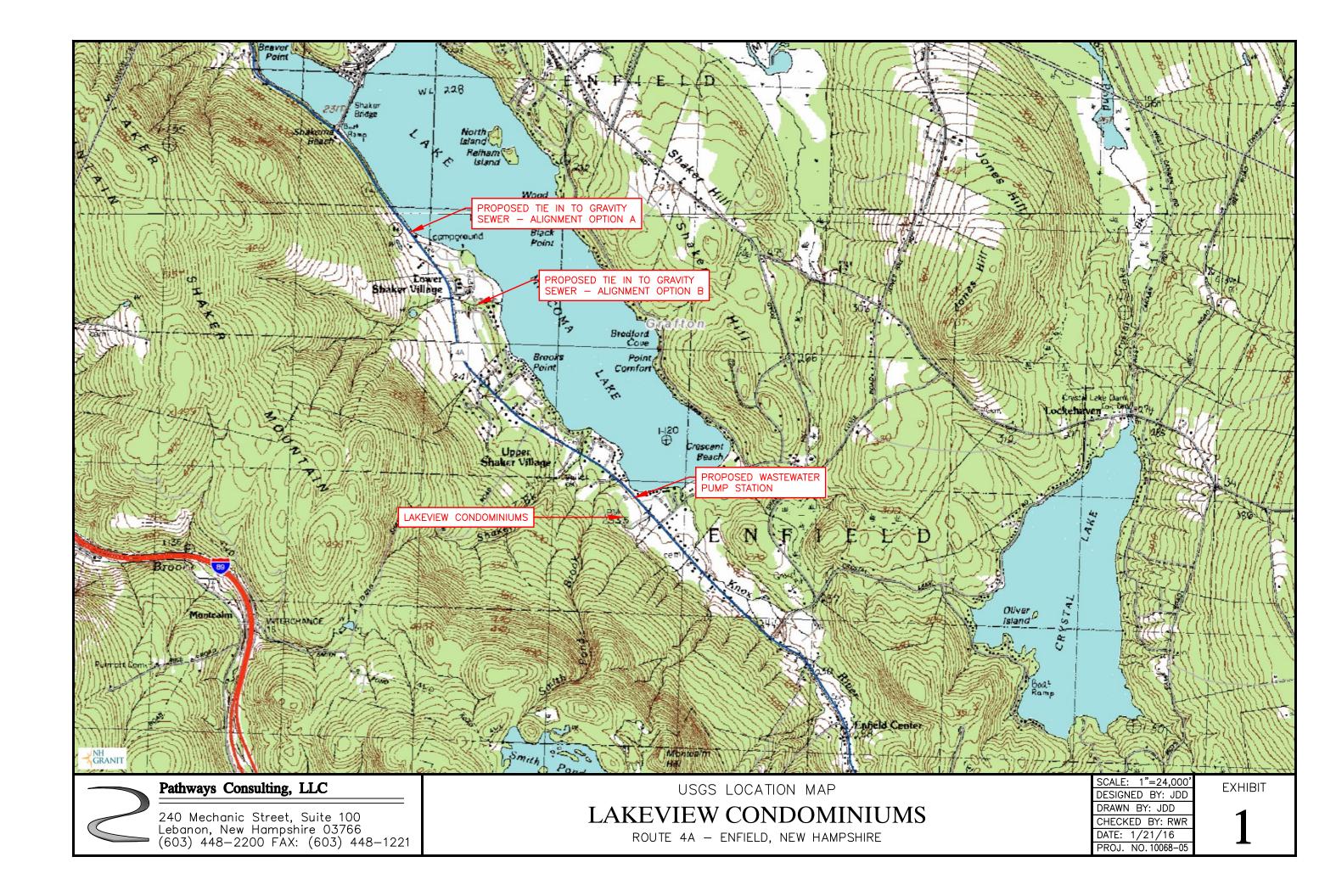
Photograph 7



Photograph 8



Photograph 9







240 Mechanic Street, Suite 100 Lebanon, New Hampshire 03766 (603) 448-2200 FAX: (603) 448-1221 OVERALL CONTEXT PLAN

LAKEVIEW CONDOMINIUMS

ROUTE 4A - ENFIELD NEW HAMPSHIRE

SCALE: 1"=700'
DESIGNED BY: JDD
DRAWN BY: JDD
CHECKED BY: RWR
DATE: 1/21/16
PROJ. NO. 10068-01

EXHIBIT

2





240 Mechanic Street, Suite 100 Lebanon, New Hampshire 03766 (603) 448-2200 FAX: (603) 448-1221 OVERALL CONTEXT PLAN

LAKEVIEW CONDOMINIUMS

ROUTE 4A - ENFIELD, NEW HAMPSHIRE

SCALE: 1"=700'
DESIGNED BY: JDD
DRAWN BY: ISM
CHECKED BY: RWR
DATE: 5/27/16
PROJ. NO. 10068-05

EXHIBIT







240 Mechanic Street, Suite 100 Lebanon, New Hampshire 03766 (603) 448-2200 FAX: (603) 448-1221 ALIGNMENT OPTION B CONTEXT PLAN

LAKEVIEW CONDOMINIUMS

ROUTE 4A - ENFIELD NEW HAMPSHIRE

SCALE: 1"=500'
DESIGNED BY: JDD
DRAWN BY: JDD
CHECKED BY: RWR
DATE: 1/21/16
PROJ. NO.10068-01

EXHIBIT

4





240 Mechanic Street, Suite 100 Lebanon, New Hampshire 03766 (603) 448-2200 FAX: (603) 448-1221 ALIGNMENT OPTION B REVISED CONTEXT PLAN

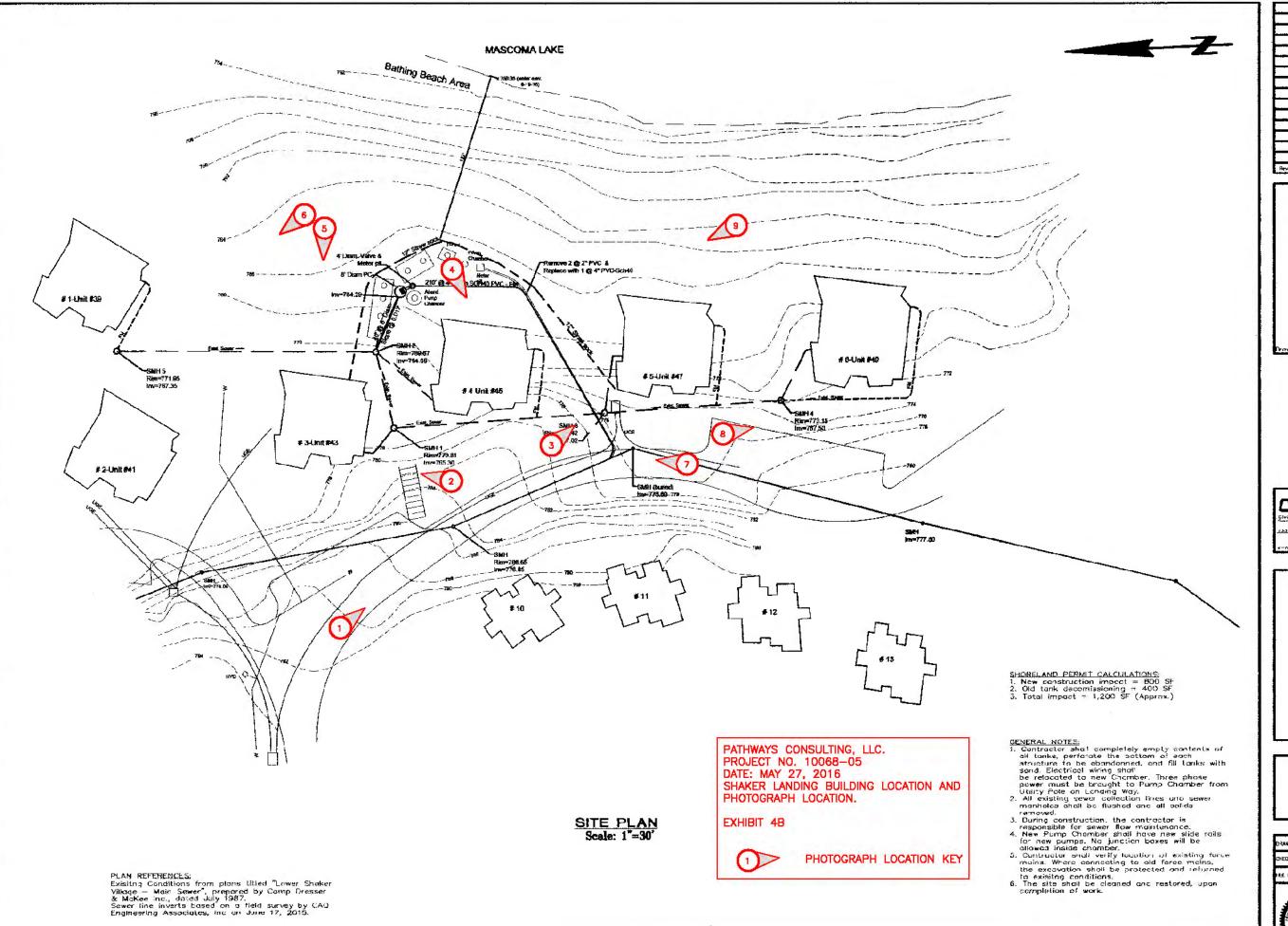
LAKEVIEW CONDOMINIUMS

ROUTE 4A - ENFIELD, NEW HAMPSHIRE

SCALE: 1"=500'
DESIGNED BY: JDD
DRAWN BY: ISM
CHECKED BY: RJF
DATE: 5/27/16
PROJ. NO. 10068-05

EXHIBIT





Rev. Doesristo Date



Engineering Associates, inc.

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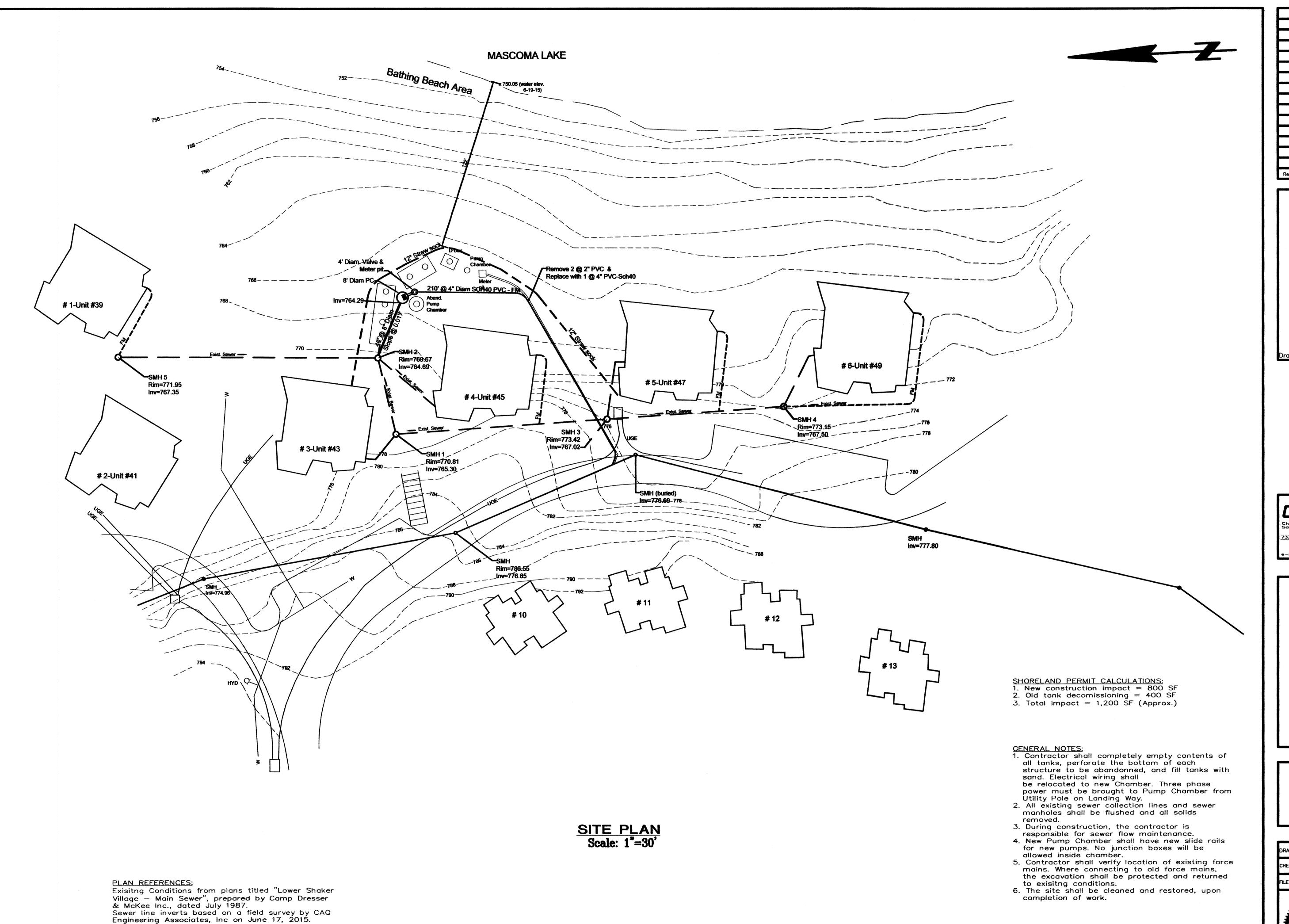
SHAKER VILLAGE

MPTELD, NH

EFFLUENT LIFT STATION

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Rev. Description Date

Drawing No. 428—WP68

Engineering Associates, Inc.
Civil Engineers • Environmental Consultant
Sanitary Designers • Land Surveyors

733 Turnpike St. #261 N. Andover, MA. 0184
(978) 689-7272 FAX (978) 689-8181

e-mail: CAQEAGAOL.COM

SHAKER VILLAGE

ENFELD, NH

EFFLUENT LIFT STATION

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