Stantec Consulting Services Inc.
2211 Congress Street, Suite 380
Portland ME 04102-1955

May 22, 2023

Amanda Lessard
Planning Director
Town of Windham
8 School Road
Windham, ME 04062-4862

Dear Ms. Lessard,

Reference: Manchester School Site Access, Parking, Playfields and Utility Improvements
709 Roosevelt Trail, Windham, Maine
Major Site Plan Review Application

Please find the attached original and 2 hard copies of the Major Site Plan Review Application, Agent Letter, and relevant Sections from the Maine DEP Site Law Application Submission for the Manchester School Site Access, Parking, Playfields and Utility Improvements Project. From review of the 2023 Meeting Schedule for the Town of Windham, Stantec understands this project may be included on the June 12, 2023 Planning Board Meeting Agenda. Please contact our office for any additional information and to confirm the date this project will be reviewed by the Town of Windham. The parcel deed was included with the response to comments during sketch plan review.

We look forward to your response.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Anderson, Dwight

Digitally signed by Anderson, Dwight
Date: 2023.05.22 14:55:39 -04'00'

Dwight Anderson, P.E.
Principal
Phone: 207-887-3438
Mobile: 207-329-7644
Dwight.Anderson@stantec.com

Attachments:
Town of Windham - Major Site Plan Review Application
Original (plus 2 copies) including:

- Agent Letter
- Waiver Request Forms
- Section 1 Development Description of the Maine DEP Site Law Application Submission
- Section 2 Title, Right and Interest of the Maine DEP Site Law Application Submission
- Section 3 Financial Capacity of the Maine DEP Site Law Application Submission
- Section 4 Technical Ability of the Maine DEP Site Law Application Submission
- Section 7 Narrative of Maine DEP Site Law Application Submission
- Section 12 Stormwater Management (On file at Town with MeDEP Site Law Application)
- Section 16/17 Water and Wastewater of the Maine DEP Site Law Application Submission
- List of Abutters
- Project Drawings as Listed on the Drawing Cover Sheet

c: William Hansen, PE – RSU 14 Director of Facilities

Town of Windham
Planning Department:
8 School Road
Windham, Maine 04062
Tel: (207) 894-5960 ext. 2
Fax: (207) 892-1916 -
www.windhammaine.us

MAJOR SITE PLAN REVIEW APPLICATION

FEES FOR MAJOR SITE PLAN REVIEW ☐ Amended Site Plan - Each Revision	**APPLICATION FEE:** ($25/1,000 SF up to 5,000 SF) **AMENDED APPLICATION FEE:** **REVIEW ESCROW: (GFA)** 2,000 SF to 5,000 SF = $2,000 5,000 SF to 15,000 SF = $3,000 15,000 SF to 35,000 SF = $4,000 Over 35,000 SF = $5,000 **AMENDED REVIEW ESCROW:**	☐ $1,3000.00 ☐ $_____ ☐ $350.00 ☐ $_____ ☐ $250.00	**AMOUNT PAID:** $_____ **DATE:** _____ *Office Use:*	*Office Stamp:*			

PROPERTY DESCRIPTION	**Parcel ID**	**Map(s) #**	67	**Lot(s) #**	21	**Zoning District(s):**	C-1, RM	**Total Land Area SF:** 1,058,508 SF
	Total Disturbance. >1Ac	☑ Y ☐ N		**Est. Building SF:**	Shed 480 SF	**No Building; Est. SF of Total Development:**	871,200 SF	
	Physical Address:	709 Roosevelt Trail				**Watershed:**	Presumpscot River	
PROPERTY OWNER'S INFORMATION	**Name:**	RSU 14 c/o William Hansen, P.E.				**Name of the Business:**	RSU 14	
	Phone:	207 892-1800				**Mailing Address:**	228 Windham Center Road	
	Fax or Cell:	207 892-1805 (Fax)					Windham, Maine 04062	
	Email:	bhansen@rsu14.org						
APPLICANT'S INFORMATION (*IF DIFFERENT FROM OWNER*)	**Name:**					**Name of Business:**		
	Phone					**Mailing Address:**		
	Fax or Cell							
	Email:							
APPLICANT'S AGENT INFORMATION	**Name:**	Dwight Anderson, P.E.				**Name of Business:**	Stantec Consulting Services, Inc.	
	Phone:	207 329-7644				**Mailing Address:**	2211 Congress Street, Suite 380	
	Fax or Cell:	207 883-3376 (Fax)					Portland, Maine 04102	
	Email:	dwight.anderson@stantec.com						

PROJECT INFORMATION

Existing Land Use *(Use extra paper, if necessary)*:
The existing site is developed with the Manchester School building, which currently serves 400 students and 60 staff, the "Little Meeting House", paved access drives, a service area, sidewalks, paved and gravel parking areas, a basketball court, playfield areas and gravel access roads. The remaining area of the parcel is wooded. See attached Section 1 from the Maine DEP Site Location Permit Application for more information.

Provide a narrative description of the Proposed Project *(Use extra paper, if necessary)*:
The project includes construction of new parking areas, new play fields with irrigation, a new access drive connection to Route 115, a new parent drop-off/pick-up loop, a new bus loading/unloading area, a storage building, a new hard play area, associated storm drainage improvements, stormwater quality/quantity features, site lighting, utility improvements and upgrades, pedestrian sidewalks and reconstruction of existing access drives and parking. See attached Section 1 from the Maine DEP Site Location Application for more information.

Provide a narrative description of construction constraints (wetlands, shoreland zone, flood plain, non-conformance, etc.):
The proposed site is not located within a mapped 100 year floodplain. No impacts to the wetlands along the south property line or vernal pool are proposed. See attached MaineDEP Site Location Permit Application Section 1 for FEMA Flood Map and Section 7 Wetland, Wildlife and Fisheries narrative.

MAJOR SITE PLAN REVIEW APPLICATION REQUIREMENTS

Section 811 of the Land Use Ordinance

The submission shall contain, five (5) copies of the following information, including full plan sets. Along with one (1) electronic version of the entire submission unless a waiver of a submission requirement is granted.

The Major Plan document/map:

A) Plan size: 24" X 36"
B) Plan Scale: No greater 1":100'
C) Title block: Applicant's name and address

- Name of the preparer of plans with professional information
- Parcel's tax map identification (map and lot) and street address, if available

- Complete application submission deadline: three (3) weeks before the desired Staff Review Committee meeting.
  - Five copies of the application and plans
  - Application Payment and Review Escrow
- A pre-submission meeting with the Town staff is required.
- Contact information:
  Windham Planning Department (207) 894-5960, ext. 2
  Steve Puleo, Town Planner sjpuleo@windhammaine.us
  Amanda Lessard, Planning Director allessard@windhammaine.us

APPLICANT/PLANNER'S CHECKLIST FOR MAJOR SITE PLAN REVIEW

SUBMITTALS THAT THE TOWN PLANNER DEEMS SUFFICIENTLY LACKING IN CONTENT WILL NOT BE SCHEDULED FOR PLANNING BOARD REVIEW.

The following checklist includes items generally required for development by the Town of Windham's LAND USE ORDINANCE, Sections 811, 812, & 813. Due to projects specifics, are required to provide a complete and accurate set of plans, reports, and supporting documentation (as listed in the checklist below).

IT IS THE RESPONSIBILITY OF THE APPLICANT TO PRESENT A CLEAR UNDERSTANDING OF THE PROJECT.

Final Plan Submission Requirements:	Applicant	Staff	Plan Requirements – Existing Conditions (Continued):	Applicant	Staff
A. Completed Major Site Plan Application form	☑	☐	E. Boundaries of all contiguous property under the total or partial control of the owner or applicant.	☑	☐
B. Evidence of Payment of application & escrow fees	☑	☐	F. Tax map and lot number of the parcel(s) on which the project is located	☑	☐
C. Written information – submitted in a bounded report			G. Zoning classification(s), including overlay and/or subdistricts, of the property and the location of zoning district boundaries if the property is located in 2 or more districts or abuts a different district.	☑	☐
1. A narrative describing the proposed use or activity	☑	☐	H. Bearings and lengths of all property lines of the property to be developed, and the stamp of the	☑	☐
2. Name, address, & phone number of record owner, and applicant if different (see Agent Autorotation form).	☑	☐	I. Existing topography of the site at 2-foot contour intervals.	☑	☐
3. Names and addresses of all abutting property owners	☑	☐	J. Location and size of any existing sewer and water mains, culverts and drains, on-site sewage disposal systems, wells, underground tanks or installations, and power and telephone lines and poles on the property and on abutting streets or land that may serve the	☑	☐
4. Documentation demonstrating right, title, or interest in the property	☑	☐	K. Location, names, and present widths of existing public and/or private streets and rights-of-way within or adjacent to the proposed development.	☑	☐
5. Copies of existing proposed covenants or deed restrictions.	☑	☐	L. Location, dimensions, and ground floor elevation of all existing buildings	☑	☐
6. Copies of existing or proposed easements on the property.	☑	☐	M. Location and dimensions of existing driveways, parking and loading areas, walkways, and sidewalks on or adjacent to the site	☑	☐
7. Name, registration number, and seal of the licensed professional who prepared the plan, if applicable.	☑	☐	N. Location of intersecting roads or driveways within 200 feet of the site	☑	☐
8. Evidence of applicant's technical capability to carry out the project.	☑	☐	O. Location of the following:	☑	☐
			1) Wetlands	☑	☐

Final Plan Submission Requirements (continued)	Applicant	Staff			
9. Assessment of the adequacy of any existing sewer and water mains, culverts and drains, on-site sewage disposal systems, wells, underground tanks or installations, and power and telephone lines and poles on the property.	☑	☐	2) Stone walls	☐	☐
			3) Graveyard,	☐	☐
			4) Fences	☑	☐
			5) Stands of trees or treeline, and,	☑	☐
10. Estimated demands for water and sewage disposal.	☑	☐	6) Other important or unique natural areas and site features, including but not limited to, floodplains, deer wintering areas, significant wildlife habitats, fisheries, scenic areas, habitat for rare and endangered plants and animals, unique natural communities and natural areas, sand and gravel aquifers, and historic and/or archaeological resources	☑	☐
11. Provisions for handling all solid wastes, including hazardous and special wastes.	☑	☐	P. Location & dimensions of existing easements that encumber or benefit the site.	☑	☐
12. Detail sheets of proposed light fixtures.	☑	☐			
13. Listing of proposed trees or shrubs to be used for landscaping	☑	☐	Q. Location & dimensions of existing easements that encumber or benefit the site.	☑	☐
14. . Estimate weekday AM and PM and Saturday peak hours and daily traffic to be generated by the project.	☐	☐	R. Location of the nearest fire hydrant, dry hydrant, or other water supply.	☑	☐
15. Description of important or unique natural areas and site features, including floodplains, deer wintering areas, significant wildlife habitats, fisheries, scenic areas, habitat for rare and endangered plants and animals, unique natural communities and natural areas, sand and gravel aquifers, and historic and/or archeological resources.	☑	☐	**Plan Requirements - Proposed Development Activity**		
			1) Location and dimensions of all provisions for water supply and wastewater disposal, and evidence of their adequacy for the proposed use, including soils test pit data if on-site sewage disposal is proposed	☑	☐
a. stormwater calculations.	☑	☐	2) Grading plan showing the proposed topography of the site at 2-foot contour intervals	☑	☐
b. stormwater calculations.	☑	☐	3) The direction of proposed surface water drainage across the site and from the site, with an assessment of impacts on downstream properties.	☑	☐
c. erosion and sedimentation control measures.	☑	☐	4) Location and proposed screening of any on-site collection or storage facilities	☑	☐
17. water quality and/or phosphorous export management provisions.	☑	☐	5) Location, dimensions, and materials to be used in the construction of proposed driveways, parking, and loading areas, and walkways, and any changes in traffic flow onto or off-site	☑	☐
18. If public water or sewerage will be utilized, provide a statement from the utility district regarding the adequacy of water supply in terms of quantity and pressure for both domestic and fire flows, and the capacity of the sewer system to accommodate additional wastewater.	☑	☐	6) Proposed landscaping and buffering	☑	☐
i. Financial Capacity	☑	☐	7) Location, dimensions, and ground floor elevation of all buildings or expansions	☑	☐
ii. Estimated costs of development and itemize estimated major expenses.	☑	☐	8) Location, front view, materials, and dimensions of proposed signs together with a method for securing sign	☑	☐
a. Financing (submit one of the following)	☑	☐	9) Location and type of exterior lighting. Photometric plan to demonstrate the coverage area of all lighting may be required by the Planning Board.	☑	☐
b. Letter of commitment to fund	☑	☐	10)Location of all utilities, including fire protection systems	☑	☐
1) Self-financing	☐	☐	11)Approval block: Provide space on the plan drawing for the following words, "Approved: Town of Windham Planning Board" along with space for signatures and date	☑	☐
2) Annual corporate report	☐	☐	**Major Final Site Plan Requirements**		
3) Bank Statement	☐	☐	I. Narrative and/or plan describing how the proposed development plan relates to the sketch plan.	☑	☐

c. Other	☐	☐	II. Stormwater drainage and erosion control program shows:	☑	☐
1) Cash equity commitment of 20% of the total cost of development	☐	☐	a. The existing and proposed method of handling stormwater runoff	☑	☐
2) Financial plan for remaining financing.	☐	☐	b. The direction of the flow of the runoff, through the use of arrows and a description of the type of flow (e.g. sheet flow, concentrated flow, etc.)	☑	☐
3) Letter from institution indicating intent to finance.	☐	☐	c. Location, elevation, and size of all catch basins, dry wells, drainage ditches, swales, retention basins, and storm sewers	☑	☐
Final Plan Submission Requirements (continued):	**Applicant**	**Staff**	d. Engineering calculations were used to determine drainage requirements based on the 25-year, 24-hour storm frequency.	☑	☐
a. If a registered corporation a Certificate of Good Standing from:	☐	☐	e. Methods of minimizing erosion and controlling sedimentation during and after construction.	☑	☐
b. Secretary of State, or	☐	☐	III. A groundwater impact analysis prepared by a groundwater hydrologist for projects involving on-site water supply or sewage disposal facilities with a capacity of 2,000 gallons or more per day	☐	☐
19. the statement signed by a corporate officer	☐	☐	IV. Name, registration number, and seal of the Maine Licensed Professional Architect, Engineer, Surveyor, Landscape Architect, and/or similar professional who prepared the plan.	☑	☐
i. Technical Capacity (address both).	☑	☐	V. A utility plan showing, in addition to provisions for water supply and wastewater disposal, the location and nature of electrical, telephone, cable TV, and any other utility services to be installed on the site.	☑	☐
ii. Prior experience relating to developments in the Town. Personnel resumes or documents showing experience and qualification of development designers	☑	☐			
Plan Requirements – Existing Conditions			VI. A planting schedule keyed to the site plan indicating the general varieties and sizes of trees, shrubs, and other vegetation to be planted on the site, as well as information of provisions that will be made to retain and protect existing trees, shrubs, and other vegetation.	☑	☐
A. Location Map adequate to locate project within the municipality	☑	☐			
1) Vicinity Plan. Drawn to a scale of not over 400 feet to the inch, and showing area within 250 feet of the property line, and shall show the following:	☑	☐			
2) Approximate location of all property lines and acreage of the parcel(s).	☑	☐	VII. Digital transfer of any site plan data to the town (GIS format)	☑	☐
3) Locations, widths, and names of existing, filed, or proposed streets, easements, or building footprints.	☑	☐			
4) Location and designations of any public spaces.	☑	☐	VIII. A traffic impact study if the project expansion will generate 50 or more trips during the AM or PM peak hour, or if required by the Planning Board	☐	☐
B. Outline of the proposed subdivision, together with its street system and an indication of the future probable street system of the remaining portion of the tract.	☐	☐			
C. North Arrow identifying Grid North; Magnetic North with the declination between Grid and Magnetic; and whether Magnetic or Grid bearings were used.	☑	☐			
D. Location of all required building setbacks, yards, and buffers.	☑	☐	**PDF\Electronic Submission.**	☑	☐

The undersigned *hereby makes an application to the Town of Windham for approval of the proposed project and declares the foregoing to be true and accurate to the best of his/her knowledge.*

[signature]	5/22/2023	Dwight D. Anderson
APPLICANT OR AGENT'S SIGNATURE	DATE	PLEASE TYPE OR PRINT THE NAME

Town of Windham
Planning Department:
8 School Road
Windham, Maine 04062
Tel: (207) 894-5960 ext. 2
Fax: (207) 892-1916 -
www.windhammaine.us

APPLICANT/PLANNER'S CHECKLIST FOR MAJOR SITE PLAN REVIEW COMMERCIAL DISTRICT DESIGN STANDARDS SECTION 813

The following checklist includes Design Standards for developments within the Windham's Commercial* 1, Commercial 2, Commercial 3, and Village Commercial districts.** ***Where there is a conflict between provision of the Design Standards and any other ordinance provision, the more restrictive provision shall apply. In addition to meeting all Design Standards required in the applicable zoning districts, development must comply with he minimum of eight (8) other Design Standards.

For purposed of this section ,"development" shall mean that portion of the project that:

- ***a. Is subject to the site plan review under Section 800; or***
- ***b. Will renovate twenty percent (20%) or more of the entire wall area of a structure on the site. (For this type of renovation, the renovation will be subject to the required Design Standards in Section A. but will not be subject to other required Design Standards.)***

Design Standards Framework

			C-1	C-2	C-3	VC	Checklist	
A.	**Architecture/Building**						**Applicant**	**Staff**
	1	Building Style	R[1]	R	R	R	☐	☐
	2	Materials	R	R	R	R	☐	☐
	3	Color	R	R	R	R	☐	☐
	4	Roofline	R	R	R	R	☐	☐
	5	Façade	R	R	R	R	☐	☐
	6	Building style coordination (multi-building)	R	R	R	R	☐	☐
	7	Entrance	R	R	R	R	☐	☐
	8	Architectural Details	R	R	R	R	☐	☐
	9	LEED certification					☐	☐
B	**Site/Parking**							
	1	Parking location					☐	☐
	2	Internal traffic flow					☐	☐
	3	Interconnected Parking lots					☐	☐
	4	Orientation of Building					☐	☐
	5	Screening - Parking		R			☐	☐
	6	Screening – utilities and service areas/structures	R	R		R	☑	☐
	7	Parking Lot Landscaping					☐	☐
	8	Low – Impact Design Stormwater					☐	☐
	9	Shared Stormwater Treatment					☐	☐
C	**Landscaping/Lighting**							
	1	Lighting/Photometric Plan	R			R	☑	☐
	2	Lighting coordinated with architecture	R			R	☑	☐
	3	Light coordinated with landscaping	R			R	☑	☐
	4	Existing trees preserved			R		☑	☐
	5	Snow area designated	R	R	R	R	☑	☐
	6	Planting variety					☐	☐
	7	Planting suitability					☐	☐
	8	Mass plantings					☐	☐
	9	Illumination levels					☐	☐
D.	**Bike/Ped**							
	1	Internal walkways	R				☑	☐
	2	Links to community	R	R		R	☑	☐
	3	Outdoor activity area					☑	☐
	4	Sidewalk	R				☑	☐
	5	Crosswalk	R				☑	☐
	6	Bike parking/racks	R	R		R	☑	☐

1. Any item with a R in the Table is required Design Standards in that zoning district.

AGENT AUTHORIZATION

APPLICANT/ OWNER	**Name**	RSU 14 c/o William Hansen, P.E., 228 Windham Center Road, Windham, ME 04062			
PROPERTY DESCRIPTION	**Physical Address**	709 Roosevelt Trail Windham, Maine 04062		**Map**	67
				Lot	21
APPLICANT'S AGENT INFORMATION	**Name**	Dwight Anderson, PE - Project Manager			
	Phone	207 329-7644	**Business Name & Mailing Address**	Stantec 2211 Congress Street, Suite 380 Portland, ME 04102	
	Fax/Cell	207 883-3376			
	Email	dwight.anderson@stantec.com			

Said agent(s) may represent me/us before Windham Town officers and the Windham Planning Board to expedite and complete the approval of the proposed development for this parcel.

APPLICANT SIGNATURE — DATE

PLEASE TYPE OR PRINT NAME HERE

CO-APPLICANT SIGNATURE — DATE

PLEASE TYPE OR PRINT NAME HERE

APPLICANT'S AGENT SIGNATURE — 5/22/2023 DATE

Agent Letter Attached Dwight D. Anderson

PLEASE TYPE OR PRINT NAME HERE

WINDHAM RAYMOND SCHOOL DISTRICT
Regional School Unit 14

228 Windham Center Road
Windham, ME 04062
207-892-1800 Fax 207-892-1805
www.rsu14.org

Superintendent
Christopher S. Howell

Assistant Superintendent
Christine Frost-Bertinet

December 2, 2022

To Whom It May Concern:

Subject: Agent Authorization Letter

RSU 14 Windham Raymond School District has retained Stantec to assist in the preparation of local and state permit applications for improvements on the Manchester School site in Windham, Maine. Stantec is authorized to act as an agent in matters related to these permits.

Sincerely,

Christopher Howell
Superintendent
RSU 14 Windham Raymond Schools

William Hansen, P.E.
Director of Facilities, Property Services and Special Projects
RSU 14 Windham Raymond Schools

195211595/Manchester/Permit/Agent Letter

TOWN OF WINDHAM
SITE PLAN APPLICATION

Performance Standards Waiver Request Form
(Section 808 – Site Plan Review, Waivers)

For each waiver request from the Performance Standards detailed in Section 812 of the Town of Windham Land Use Ordinance, please submit separate completed copy of this waiver request form for all waivers requested.

Project Name: Manchester School

Tax Map: 67

Lot(s): 21

Waivers are requested from the following Performance and Design Standards (Add forms as necessary):

Ordinance Section	Standard	Mark which waiver this form is for
120-522B(2)(a)	Curb cuts and driveway openings	☑
		☐
		☐
		☐
		☐

a. Describe how a waiver from the standard indicated above will improve the ability of the project to take the property's pre-development natural features into consideration. Natural features include, but are not limited to, topography, location of water bodies, location of unique or valuable natural resources, relation to abutting properties or land uses. Attach a separate sheet if necessary.

A waiver to allow 2 curb cuts on 302 will allow access to the School, the Church and the Little Meeting House to operate as they have historically and improves access to the abutting Church property.

(continues next page)

Ordinance Section: 120-522B(2)(a)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution	☐	☑
Light pollution or glare	☐	☑
Water supply	☐	☑
Soil erosion	☐	☑
Traffic congestion or safety	☐	☑
Pedestrian safety or access	☐	☑
Supply of parking	☐	☑
Sewage disposal capacity	☐	☑
Solid waste disposal capacity	☐	☑
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas	☐	☑
Flooding or drainage issues on abutting properties	☐	☑
The Town's ability to provide the subdivision with public safety services (if subdivision)	☐	☐

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

TOWN OF WINDHAM
SITE PLAN APPLICATION

Performance Standards Waiver Request Form
(Section 808 – Site Plan Review, Waivers)

For each waiver request from the Performance Standards detailed in Section 812 of the Town of Windham Land Use Ordinance, please submit separate completed copy of this waiver request form for all waivers requested.

Project Name: Manchester School

Tax Map: 67

Lot(s): 21

Waivers are requested from the following Performance and Design Standards (Add forms as necessary):

Ordinance Section	Standard	Mark which waiver this form is for
120-522B(2)(b)(1)	Each curb cut shall be limited to 40 feet in width	☑
		☐
		☐
		☐
		☐

a. Describe how a waiver from the standard indicated above will improve the ability of the project to take the property's pre-development natural features into consideration. Natural features include, but are not limited to, topography, location of water bodies, location of unique or valuable natural resources, relation to abutting properties or land uses. Attach a separate sheet if necessary.

Curb cuts wider than 40 feet at the property line are needed to allow for two exiting and one entering turning movement at the access drive connections at Route 302 and Route 115. The wider curb cuts are needed to provide safe access and egress to the Manchester School.

(continues next page)

Ordinance Section: 120-522B(2)(b)(1)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution	☐	☑
Light pollution or glare	☐	☑
Water supply	☐	☑
Soil erosion	☐	☑
Traffic congestion or safety	☐	☑
Pedestrian safety or access	☐	☑
Supply of parking	☐	☑
Sewage disposal capacity	☐	☑
Solid waste disposal capacity	☐	☑
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas	☐	☑
Flooding or drainage issues on abutting properties	☐	☑
The Town's ability to provide the subdivision with public safety services (if subdivision)	☐	☐

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

TOWN OF WINDHAM
SITE PLAN APPLICATION

Performance Standards Waiver Request Form
(Section 808 – Site Plan Review, Waivers)

For each waiver request from the Performance Standards detailed in Section 812 of the Town of Windham Land Use Ordinance, please submit separate completed copy of this waiver request form for all waivers requested.

Project Name: Manchester School

Tax Map: 67

Lot(s): 21

Waivers are requested from the following Performance and Design Standards (Add forms as necessary):

Ordinance Section	Standard	Mark which waiver this form is for
120-812C(1)(b)	Parking and Loading	☑
		☐
		☐
		☐
		☐

a. Describe how a waiver from the standard indicated above will improve the ability of the project to take the property's pre-development natural features into consideration. Natural features include, but are not limited to, topography, location of water bodies, location of unique or valuable natural resources, relation to abutting properties or land uses. Attach a separate sheet if necessary.

This development proposes parking over the property line between the abutting Church parcel and RSU 14 parcel. This shared parking benefits both the church and the school during different events. This waiver improves the preservation of natural features by allowing for the use of shared access drives.

(continues next page)

Ordinance Section: 120-812C(1)(b)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution	☐	☑
Light pollution or glare	☐	☑
Water supply	☐	☑
Soil erosion	☐	☑
Traffic congestion or safety	☐	☑
Pedestrian safety or access	☐	☑
Supply of parking	☐	☑
Sewage disposal capacity	☐	☑
Solid waste disposal capacity	☐	☑
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas	☐	☑
Flooding or drainage issues on abutting properties	☐	☑
The Town's ability to provide the subdivision with public safety services (if subdivision)	☐	☐

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

SECTION 1

DEVELOPMENT DESCRIPTION

1.0 Project Overview

Stantec Consulting Services, Inc. has been retained by RSU 14 to prepare civil-site drawings and permit applications for the Manchester School Site Access, Parking, Playfields and Utility Improvements Project located at 709 Roosevelt Trail in Windham, Maine.

The project includes construction of new parking areas, new play field areas with irrigation, a new access drive connection to Route 115, a new parent drop-off/pick-up loop, a new bus loading/unloading area, a storage building, a new hard play area, associated storm drainage improvements, stormwater quality/quantity features, site lighting, utility improvements and upgrades, pedestrian sidewalks and reconstruction of existing access drives and parking.

A series of figures showing the project location and 24.3 acre school property are included at the end of this section.

1.1 Existing Conditions

The existing site is developed with the Manchester School building, the “Little Meeting House”, paved access drives, a service area, sidewalks, paved and gravel parking areas, a basketball court, play field areas and gravel access roads. The remaining area of the RSU #14 parcel is wooded.

The topography surrounding the school parcel is moderate to flat. Most of the on-site natural topography is flat to moderate and generally slopes from north to south. Elevations in the general area of the site proposed for the portion of the project vary from elevation 309 near Route 115 to elevation 290 at the southern parcel boundary. The subsurface conditions encountered at the site include topsoil, fill and outwash deposits. The outwash deposits are naturally deposited granular soils encountered in most of the explorations. The unit generally consists of an upper layer of yellow-brown, well-graded sand with gravel that grades with depth to a tan, poorly-graded sand with occasional layers and lenses of sandy silt. Figures 7, 8, and 9 provided at the end of this section include the USDA soils mapping, sand and gravel aquifers and surficial geology for the site.

Proposed activity is not located within a mapped 100 year floodplain based upon the FEMA mapping as shown on Figure 6.

1.2 Proposed Project

RSU #14 plans to complete several site improvements at the existing Manchester School facility originally constructed in 1972 and last expanded in 1998. The major elements of the proposed project are depicted on the 2 color Layout Plan graphics attached and are as follows:

1. The construction of a separate 42 parking space parent drop-off / pick-up loop with lighting to separate bus traffic from parent traffic;
2. The construction of a separate 10 space bus loading area with lighting;
3. The construction of a 139 parking space area between the bus loading area and Route 302 with lighting;
4. The construction of an access drive to Route 115 with a gravel shoulder to accommodate parallel parking spaces and lighting;
5. The construction of a hard play area;
6. The reconstruction of an existing little league field;
7. The construction of two new irrigated rectangular play fields with overlapping softball and little league fields and fencing with backstops;
8. The construction of water quality / quantity control features;
9. The construction of a 16 foot by 30 foot storage building;
10. The relocation of an existing pavilion;
11. The construction of a walking path and sidewalks;
12. The construction of a subsurface drip dispersal system under the grass playfields to receive effluent from an offsite Portland Water District wastewater treatment facility currently under permitting review by the MeDEP (note that a small portion of the PWD's facility for the drive connection will be on RSU 14 property); and
13. The relocation of Sposedo Road south of the school building.

1.3 Critical Areas

Critical areas of this project include wetlands along the south property line and a vernal pool (not of special significance). No impacts to the critical areas are proposed.

1.4 Project Phasing and Construction Schedule

Phase 1:

It is anticipated that this project will begin during the Summer 2023 with Phase 1 Construction including the access connection to Route 115, a portion of the drip disposal system, a

portion of playfields closest to Route 115 with irrigation, relocation of Sposedo Road and installation of utilities to serve the offsite WWTF.

Phase 1A:
A portion of the playfields and drip dispersal system east of the school building will require close coordination to provide adequate area for school recess use and may be constructed during the Summer of 2023 or 2024.

Phase 2:
During the summer of 2024 Phase 2 Construction will include the bus loading area, parking areas, access drives and preparation for additional utility connections.

Phase 3:
Phase 3 will take place during the summer of 2025 and be complete by August of 2025 when children return to school and will connect Manchester School to the new offsite WWTF, complete all utility connections and remaining construction of playfields, drip disposal and parent drop-off / pick-up loop within area of existing subsurface disposal which will no longer be connected to the Manchester School.

1.5 Figures

Figures showing the proposed development area are appended to this section and include:

Figure No.	Title
1	USGS Topographic Map
2	Tax Map
3	Zoning Map
4	Aerial Photo
5	NWI Wetlands Map
6	FEMA Flood Map
7	USDA Soils Map
8	Sand and Gravel Aquifer Map
9	Surficial Geology Map

1.6 Permits

The developed area of the site which existed in 1970 was approximately 3 acres (as shown on Figure B included in Section 12 of this application), of which 2.72 acres was impervious gravel, pavement and the roof of Arlington School. The Arlington School has since been removed. With the construction of the Manchester School building and site improvements in 1972, additions to the building in 1998 and the proposed improvements associated with the current project, the developed area of the site will increase to approximately 23 acres and the impervious area will increase by 5.13 acres to a total of 7.85 acres. With the developed area increase of 20 acres since 1970 and 5.13 acres of additional structure area since 1970, the project will require a MeDEP Site Location of Development permit

and a local site plan permit from the Town of Windham. The project will also require a street connection permit for the new access road connection to Route 115.

1.6 Project Drawings

Project drawings are included with this application as listed on the project drawings cover sheet and 2 color Layout Plan graphics of the proposed improvements follow this page.

PAVEMENT/SHOULDER LEGEND:
- VEHICULAR PAVEMENT, PLAIN CEMENT FINISH
- BITUMINOUS PAVEMENT/ROADWAY
- GRAVEL SHOULDER/ACCESS ROAD
- STONE DUST PATH

FENCE LEGEND:
- 4'-0" BLACK VINYL COATED CHAIN LINK FENCE
- WOODEN SPLIT RAIL FENCE
- RACK STOP

CURB LEGEND:
- TURNPOINT, SLOPE DOWN TOWARD CURB
- SLOPE DOWN TOWARD CURB
- CURB TYPE

NOTES:
1. REFER TO DETAIL FOR VARIOUS CHAIN LINK FENCE PROPOSED, DEMOLISH AND REPAIR/MAINTENANCE.
2. EXISTING BITUMINOUS CURB TO BE REMOVED AND REPLACED AS NECESSARY TO ACCOMMODATE PROPOSED WORK AS SHOWN.

NORTH

ROOSEVELT TRAIL ROUTE #302

TANDBERG TRAIL ROUTE #115

MANCHESTER ELEMENTARY SCHOOL (400 STUDENTS / 60 STAFF)

SOFTBALL FIELD

LITTLE LEAGUE FIELD

UTILITY FIELD 230'x220'

MULTI-PURPOSE FIELD 240'X315'

42 PARENT DROP-OFF PARKING SPACES

10 BUS PARKING SPACES

15 PARKING SPACES

139 PARKING SPACES

11 PARKING SPACES

BUFFER PLANTINGS ALONG PROPERTY LINE

4' HIGH BLACK VINYL COATED CHAIN LINK FENCE, TYP.

4' WIDE STONE DUST PATH

16' WIDE GRAVEL EMERGENCY ACCESS ROAD

EXISTING PLAY AREA

RELOCATE PORTION OF SPOSEDO ROAD (387 L.F.)

WIDEN SPOSEDO ROAD (187 L.F.)

BITUMINOUS PAVEMENT BASKETBALL COURTS

NEW TRANSFORMER PAD

10'X18' DUMPSTER ENCLOSURE

SERVICE ACCESS

16'x30' STORAGE BUILDING

BUS/EMERGENCY ACCESS ONLY

PAINTED CHEVRON ISLAND

PAINTED 10'-0" WIDE CROSS WALK, (TYP.)

PAINTED 51'-0" WIDE CROSS WALK

BOLLARD (TYP. OF 18)

10' x 22' PARKING SPACE (TYP.)

10' x 20' PARKING SPACE (TYP.)

10' x 50' BUS SPACE

24' WIDE PAVED ACCESS ROAD

6' WIDE PAINTED CHEVRON WALK

6' WIDE SIDEWALK

8' WIDE SIDEWALK (TYP.)

5' WIDE PAINTED CHEVRON ISLAND

MATCH EXISTING ROAD

MATCH EXISTING PAVEMENT

MATCH EXISTING GRADE

2'-0" WIDE PAVEMENT GRIND

PROPERTY LINE

WETLAND

STORMWATER MANAGEMENT AREA

VERNAL POOL

SERVICE ACCESS

LIGHT POLE AND FOUNDATION

PROPOSED SIGN LOCATION. REFER TO SIGN AND MARKINGS PLAN FOR SIGNAGE (TYP.)

BLACK ARROWS SHOWN ON THIS SHEET ARE PRESENTED TO CLARIFY TRAFFIC FLOW PATTERNS. ALL ARROWS SHOWN ARE NOT TO BE APPLIED TO PAVEMENT. REFER TO SIGN AND MARKINGS PLAN FOR ACTUAL PAVEMENT MARKINGS TO BE APPLIED.

GRAPHIC SCALE
0 25 50 100
(IN FEET)
1 inch = 50 ft.

Stantec

Stantec Consulting Services Inc.
30 Park Drive, Suite 200
Portland, ME 04102 USA
tel 207.883.0166
fax 207.883.3871
www.stantec.com

Consultants

Legend

Notes

PRELIMINARY NOT FOR CONSTRUCTION
DECEMBER 2, 2022

No.	Issued	By	Date
1	Submitted for Permit	MW	2022-12-02

Permit-Seal

Client/Project
RSU #14
MANCHESTER SCHOOL
SITE ACCESS, PARKING, PLAYFIELDS AND UTILITY IMPROVEMENTS
Windham, Maine

Title
GENERAL SITE PLAN COLOR RENDERING

Project No. 193211595 | Scale 1" = 50'
Drawing No. | Revision

V:\1932\active\193211595\cad\revit\site_schools_drawingsheet_BlankC3-D1_mms_site_d3.dwg Matthew 12/2/2022 2:58 PM

PAVEMENT/SHOULDER LEGEND

PARKING AND DRIVE BITUMINOUS PAVEMENT	
BITUMINOUS PAVEMENT WALKWAY	
GRAVEL SHOULDER/ACCESS ROAD	
STONE DUST PATH	

FENCE LEGEND

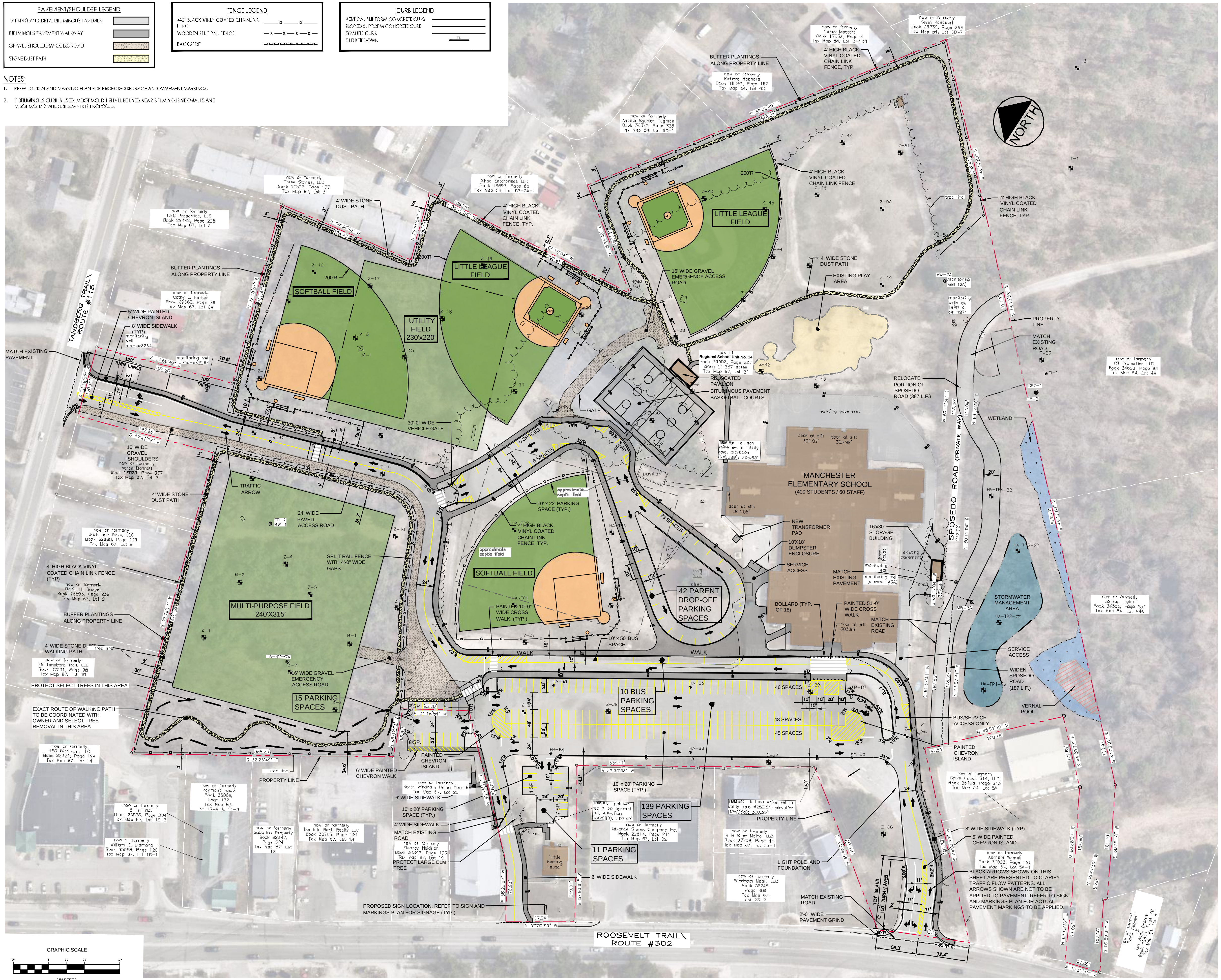
4'-0" BLACK VINYL COATED CHAINLINK FENCE	
WOODEN SPLIT RAIL FENCE	—X—X—X—X—
BACK STOP	

CURB LEGEND

VERTICAL SLIPFORM CONCRETE CURB	
SLOPED SLIPFORM CONCRETE CURB	
GRANITE CURB	
CURB TIP DOWN	TD

NOTES:

1. REFER TO SIGN AND MARKING PLAN FOR PROPOSED SIGNAGE AND PAVEMENT MARKINGS.
2. IF BITUMINOUS CURB IS USED, MDOT MOLD 1 SHALL BE USED NEAR BITUMINOUS SIDEWALKS AND MDOT MOLD 2 WHERE SIDEWALK IS PROPOSED.



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

V:\1952\active\195211595\manchester_school\9_drawing\sheet_files\C5.01_mes_site_clr.dwg ltanthony 12/2/2022 2:56 PM

Stantec

Stantec Consulting Services Inc.
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Portland ME 04102 U.S.A.
Tel. 207.883.3355
Fax. 207.883.3376
www.stantec.com

Consultants

Legend

Notes

PRELIMINARY NOT FOR CONSTRUCTION
DECEMBER 2, 2022

	By	Appd.	YY.MM.DD
SUBMITTED TO MDOT FOR APPROVAL	A	BDA	22.12.02
Issued			

File Name: 195211595_site	RH	LL	BDA	DEC 2022
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

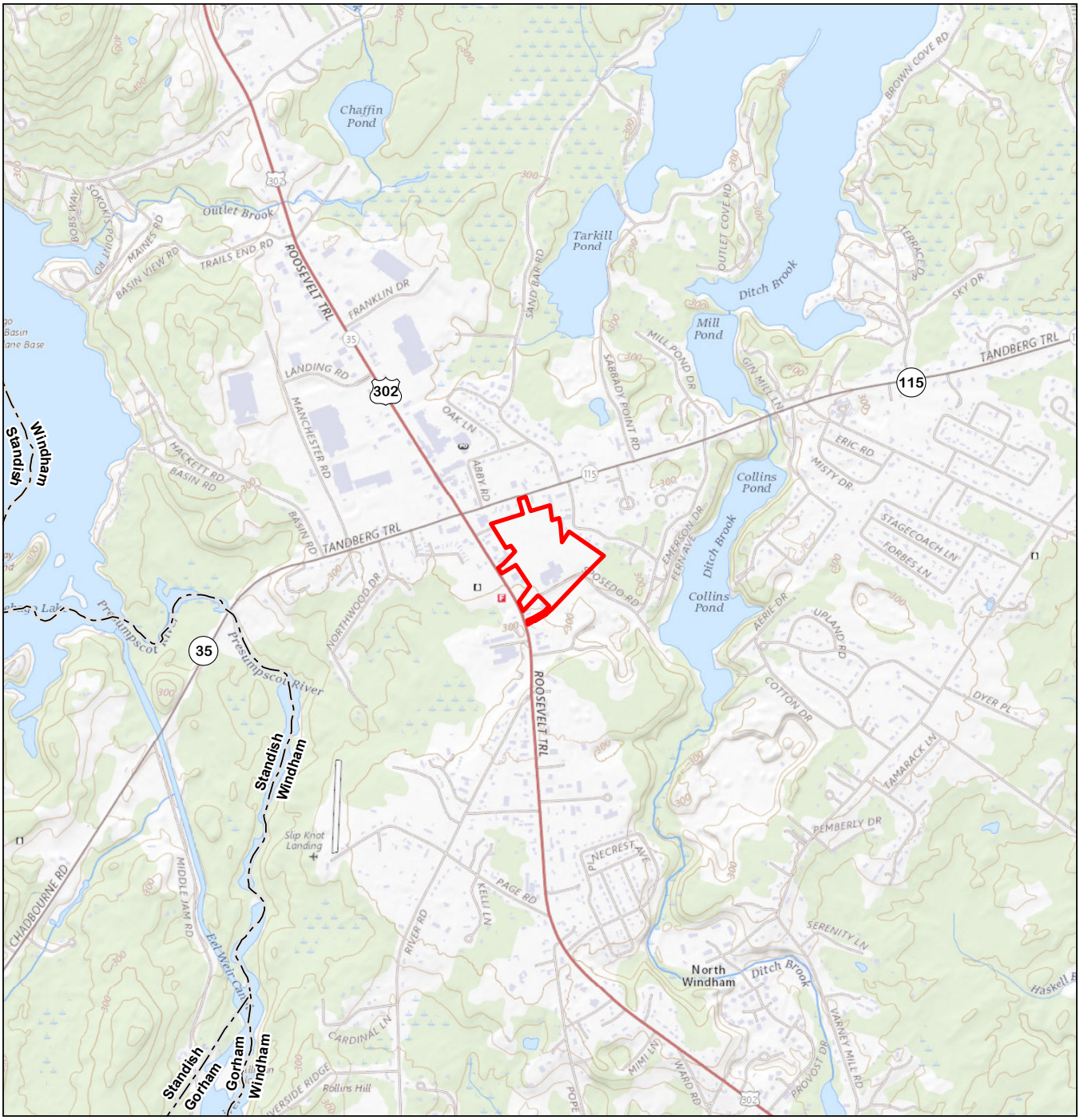
Permit-Seal

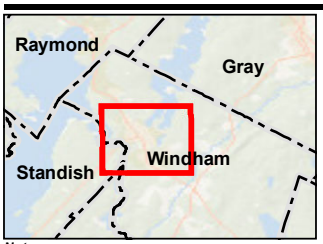
Client/Project
RSU #14
MANCHESTER SCHOOL
SITE ACCESS, PARKING, PLAYFIELDS AND UTILITY IMPROVEMENTS
Windham, Maine

Title
GENERAL SITE PLAN
COLOR RENDERING

Project No. 195211595
Scale 1" = 50'
Drawing No.
Revision

Figure 1
USGS Topographic Map





Legend
- Project Limits
- Municipal Boundary
- USGS Quad: North Windham

0 2,000 Feet
(At original document size of 8.5x11)
1" = 2,000'

N

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Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

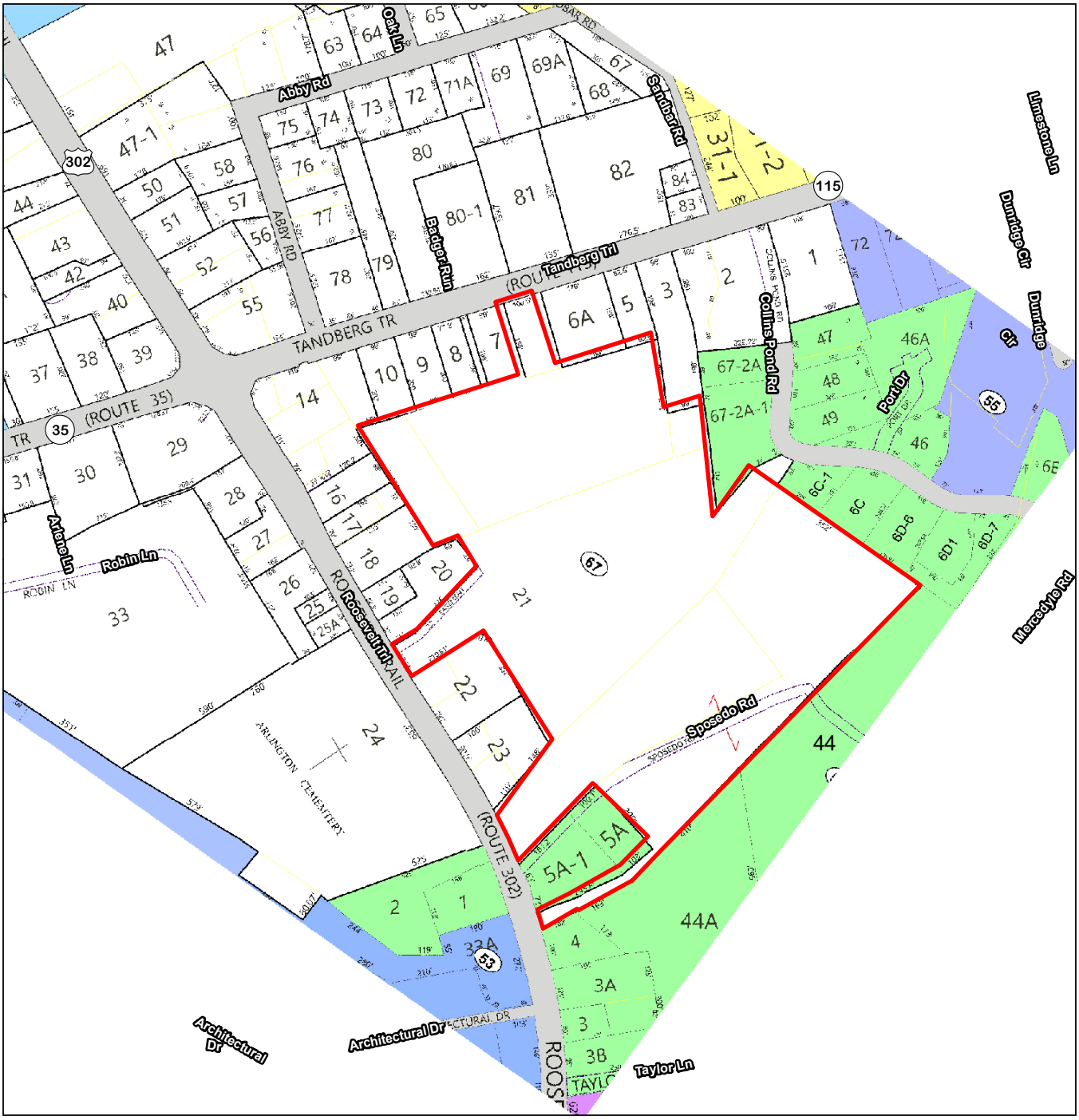
Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

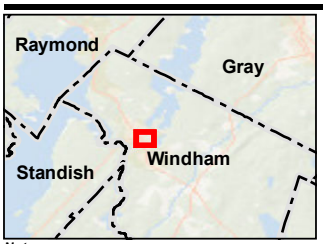
Figure No.
1

Title
USGS Topographic Map

Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: Base features obtained from the Maine Office of GIS (MEGIS).
3. Background: USGS Topo provided by The National Map Mapping Service (http://basemap.nationalmap.gov/arcgis/services/USGSImageryTopo).

Figure 2
Tax Map





Legend
- Project Limits
- Tax Parcel
- Town of Windham

0 400 Feet
(At original document size of 8.5x11)
1" = 400'

N

Stantec

Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

Client/Project
195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

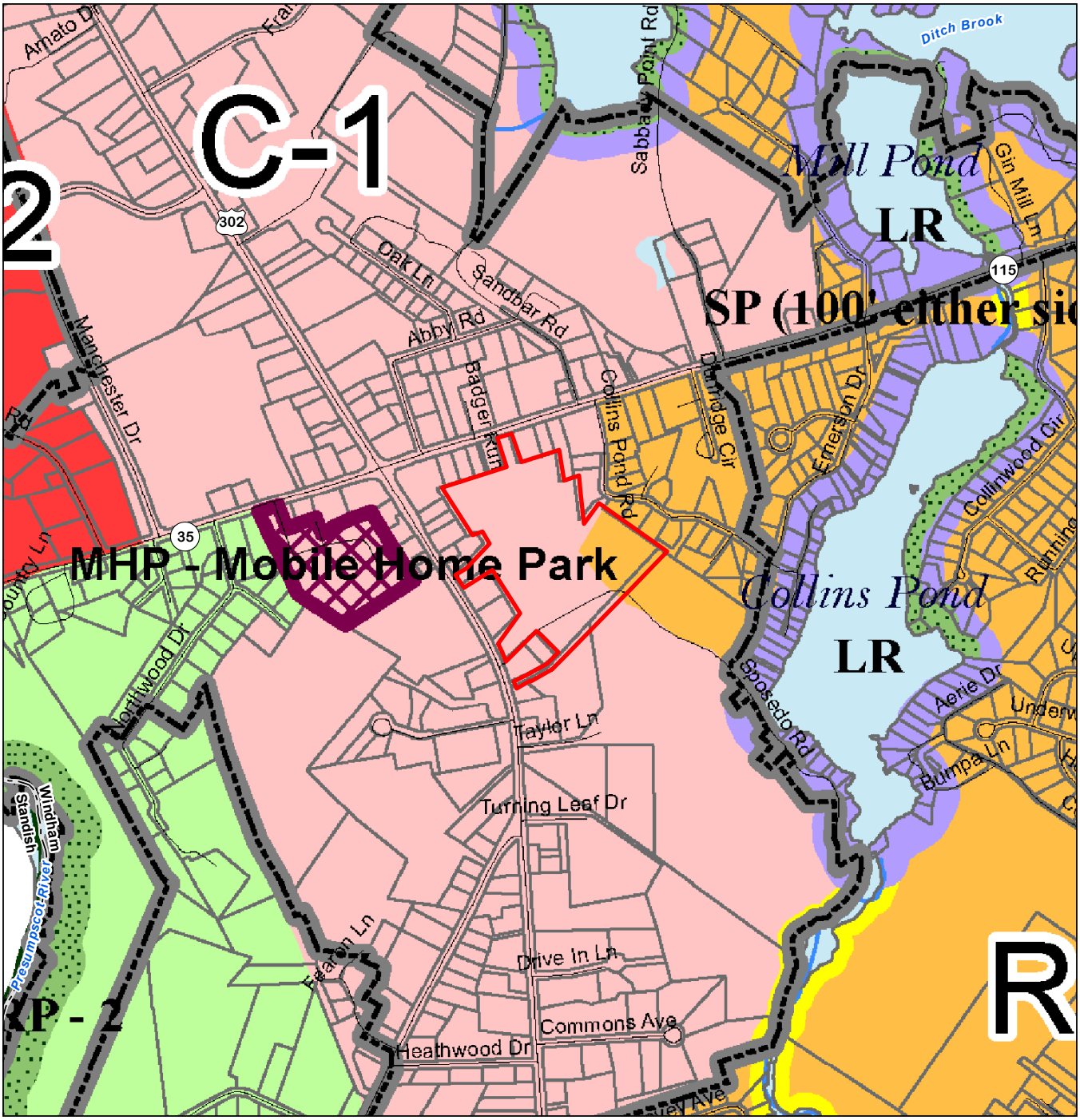
Figure No.
2

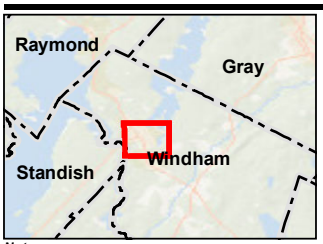
Title
Tax Map

Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: Town of Windham 2021 Tax Map 67.

V:\11956\active_Task Owner and other Non-BC\1956.Jobs\195211595\03_data\gis_cad\gis\MXDs\DEP\111595_02_ManchesterSchool_Tax_Map.mxd Revised: 2022-11-03 By: pbarbera

Figure 3
Zoning Map





Legend
- Project Limits
- C-1 Commercial 1
- C-2 Commercial 2
- FR Farm Residential
- RP Resource Protection District
- RM Residential Medium

0 1,000 Feet
(At original document size of 8.5x11)
1" = 1,000'

N

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Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

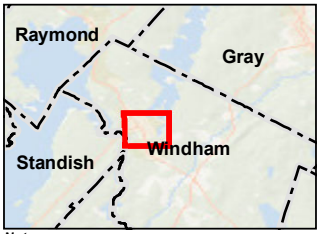
Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

Figure No.
3

Title
Zoning Map

Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: "Town of Windham Land Use Map", 2022.

Figure 4
Aerial Photo



Legend
- Project Limits
- Municipal Boundary

0 1,000 Feet
(At original document size of 8.5x11)
1" = 1,000'

N

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Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

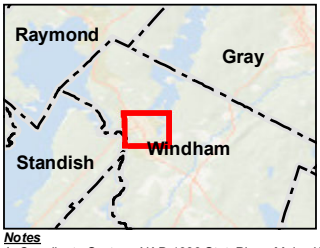
Figure No.
4

Title
Aerial Photo

Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: Base features obtained from the Maine Office of GIS (MEGIS).
3. Background: Maine Orthoimagery Regional, 2018.

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195211595\03 data\gis cad\gis\MXDs\DEP\11595_04 ManchesterSchool_Aerial.mxd Revised: 2022-11-03 By: pbarbera

Figure 5
NWI Wetlands Map



Legend
- Project Limits
- National Wetlands Inventory Wetlands
- Municipal Boundary

0 1,000 Feet
(At original document size of 8.5x11)
1" = 1,000'

N

Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: MEGIS.
3. Background: Maine Orthoimagery Regional, 2018.

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Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

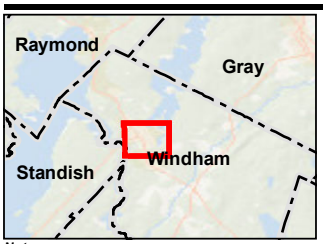
Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

Figure No.
5

Title
NWI Wetlands Map

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195211595\03 data\gis cad\gis\MXDs\DEP\111595_05_ManchesterSchool_NWI.mxd Revised: 2022-11-03 By: pbarbera

Figure 6
FEMA Flood Map



Legend

- Project Limits
- 100 Year Flood Zone (Zone A and AE)
- Municipal Boundary

0 1,000 Feet

(At original document size of 8.5x11)
1" = 1,000'

N

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Notes

1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: Flood hazard data provided by FEMA. Panel 0015
3. Background: Maine Orthoimagery Regional, 2018.

Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

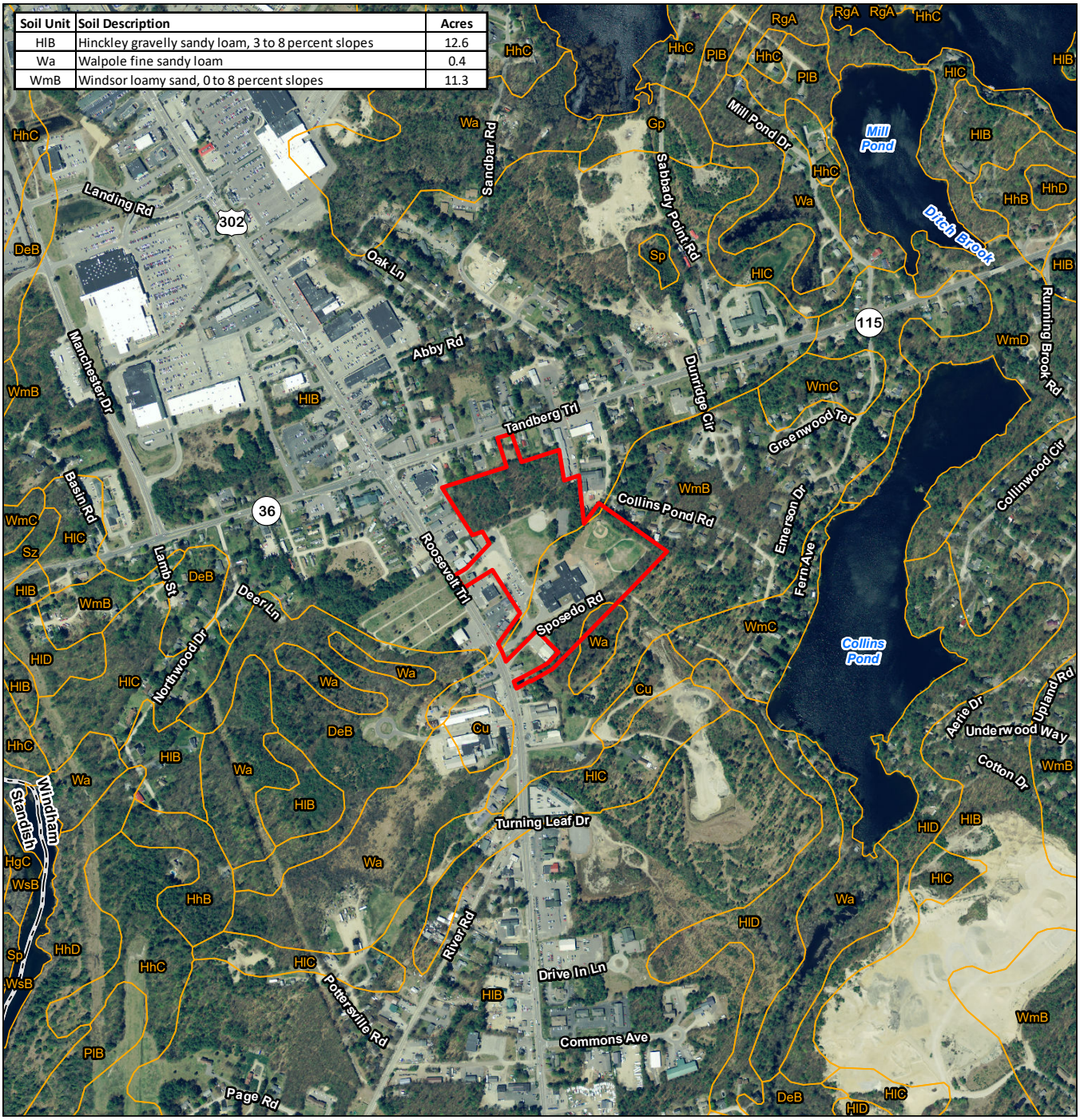
Figure No.
6

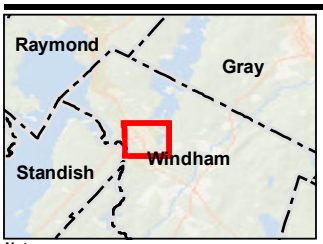
Title
FEMA Flood Map

V:\11956\active\ Task Owner and other Non-BC\1956 Jobs\195211595\03 data\gis cad\gis\MXDs\DEP\11595_06 ManchesterSchool_FEMA.mxd Revised: 2022-11-03 By: pbarbera

Figure 7
USDA Soils Map

Soil Unit	Soil Description	Acres
HIB	Hinckley gravelly sandy loam, 3 to 8 percent slopes	12.6
Wa	Walpole fine sandy loam	0.4
WmB	Windsor loamy sand, 0 to 8 percent slopes	11.3





Legend
- Project Limits
- SSURGO Soil Boundary
- Township Boundary

0 1,000 Feet
(At original document size of 8.5x11)
1" = 1,000'

N

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Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: SSURGO Soils data obtined from the Natural Resource Conservation Service (NRCS).
3. Background: Maine Orthoimagery Regional, 2018.

Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

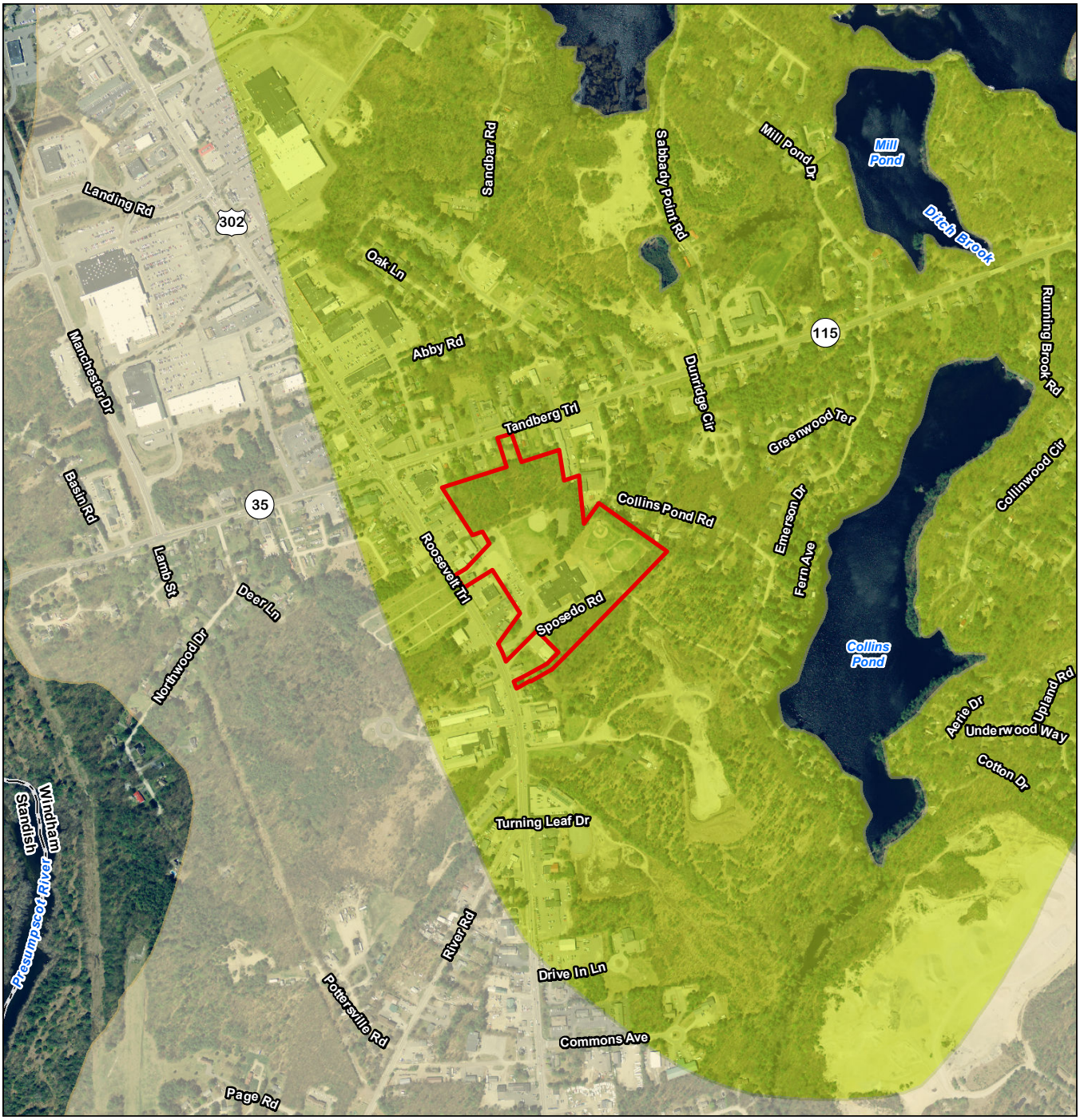
Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

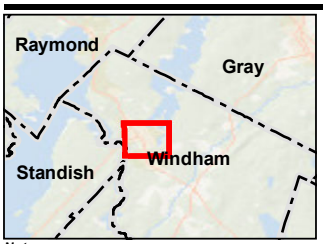
Figure No.
7

Title
USDA Soils Map

V:\1956\active_Task Owner and other Non-BC\1956.Jobs\195211595\03_data\gis_cad\gis\MXDs\DEP\111595_07_ManchesterSchool_Soils.mxd Revised: 2022-11-03 By: pbarbera

Figure 8
Sand and Gravel Aquifer Map





Legend
- Sand & Gravel Aquifer (10 - 50 gpm)
- Sand & Gravel Aquifer (> 50 gpm)
- Project Limits
- Township Boundary

0 1,000 Feet
(At original document size of 8.5x11)
1" = 1,000'

N

Stantec

Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: MaineGeological Survey.
3. Background: Maine Orthoimagery Regional, 2018.

Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

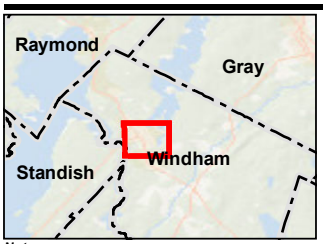
Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

Figure No.
8

Title
Sand and Gravel Aquifer Map

V:\1956\active\ Task Owner and other Non-BC\1956 Jobs\195211595103 data\gis cad\gis\MXDs\DEP\111595_08_ManchesterSchool_Aquifer.mxd Revised: 2022-11-03 By: pbarbera

Figure 9
Surficial Geology Map



Legend
- Project Limits
- Glaciomarine
- Till
- Water
- Township Boundary

0 1,000 Feet
(At original document size of 8.5x11)
1" = 1,000'

N

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Project Location
Windham, Maine

Prepared by PWB on 2022-11-01
TR Review by KWH on 2022-11-01
IR Review by AS on 2022-11-01

Client/Project 195211595
RSU 14 Manchester School
709 Roosevelt Trail
Windham, Maine

Figure No.
9

Title
Surficial Geology Map

Notes
1. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
2. Data Sources: Maine Geological Survey.
3. Background: Maine Orthoimagery Regional, 2018.

SECTION 2

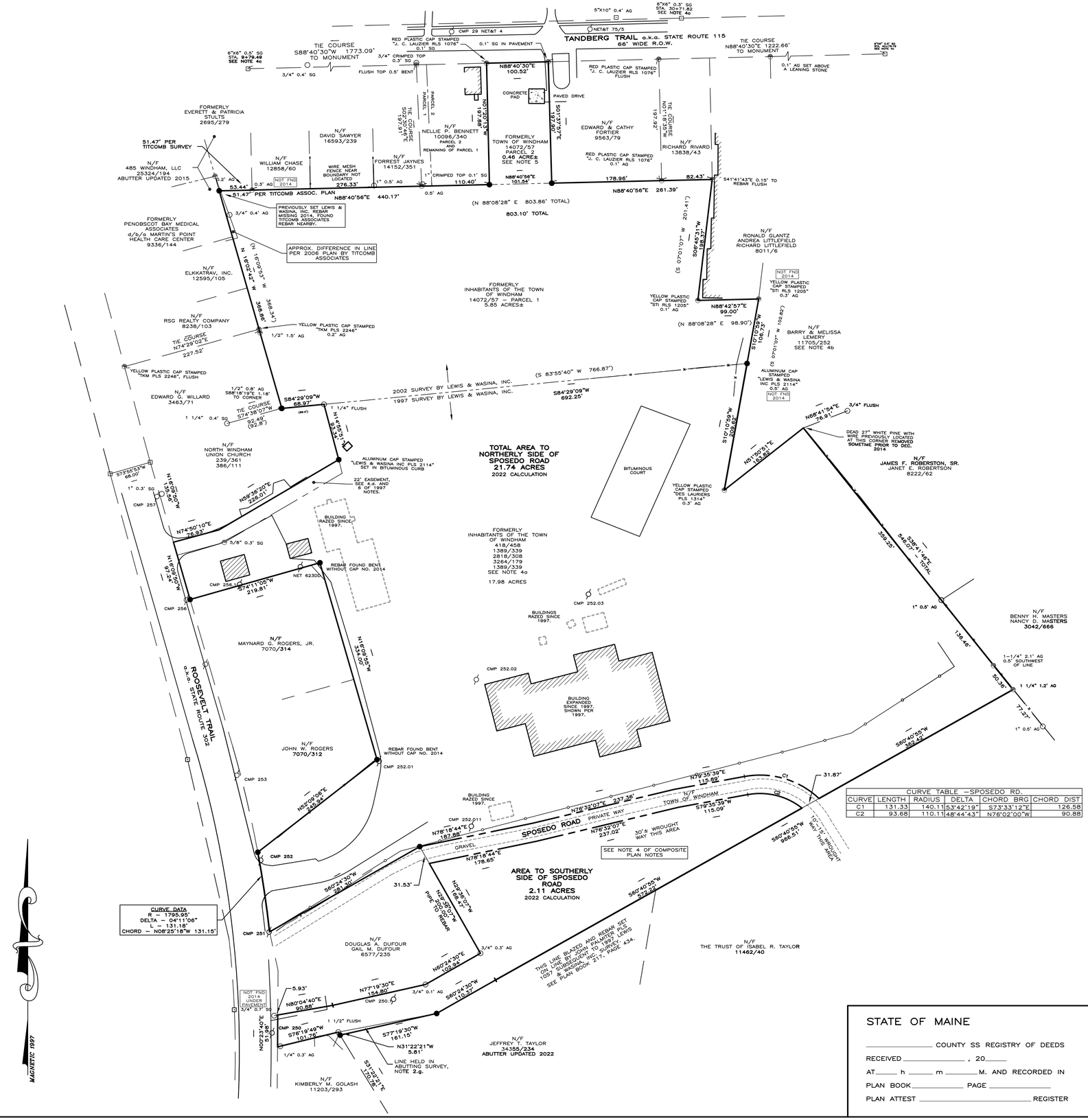
TITLE, RIGHT OR INTEREST

RSU 14 owns the 24.3 acre property where the Manchester School Site Access, Parking, Playfields and Utility Improvements project will take place. See Exhibit 2-1 for the Composite Boundary Survey of the subject property prepared and stamped by Lewis & Wasina, Inc. Professional Land Surveyors dated 3/30/2022.

Figures

Exhibit 2-1 Composite Boundary Survey dated 3/30/2022 by Lewis & Wasina

Exhibit 2-1
Composite Boundary Survey



NOTES (FOR 2015 COMPOSITE, REVISED 2022)

1. THIS IS A COMPOSITE OF THE TWO PLANS PREPARED FOR THE TOWN OF WINDHAM BY LEWIS & WASINA, INC. REFERENCED IN NOTE 2 BELOW WITH UPDATES TO SPOSEDO ROAD AND THE NORTHWEST CORNER. ADJOINING OWNERS ONLY UPDATED IF NOTES AS SUCH. BUILDINGS AND OTHER FEATURES ONLY UPDATED IF NOTED.

2. PLAN REFERENCES:
   a. STANDARD BOUNDARY SURVEY OF MANCHESTER–ARLINGTON SCHOOL PREPARED FOR THE INHABITANTS OF THE TOWN OF WINDHAM BY LEWIS & WASINA, INC. REVISED THROUGH DECEMBER 16, 1997 PROJECT No. 9757 AND RECORDED IN PLAN BOOK 197, PAGE 542.
   b. BOUNDARY SURVEY OF PROPERTIES ON TANBERG TRAIL PREPARED FOR THE TOWN OF WINDHAM BY LEWIS & WASINA, INC. REVISED THROUGH DECEMBER 6, 2002, PROJECT 22041.
   c. PLAN OF LAND PREPARED FOR WINDHAM III ASSOC. BY OWEN HASKELL, INC. PROJECT 8693WI DATED SEPTEMBER 29, 1986.
   d. PLAN OF LAND OF ELIZABETH STURGIS BY DOUGLAS L. MARSTON DATED JULY 24, 1966 AND RECORDED IN PLAN BOOK 71, PAGE 36.
   e. ALTA/ACSM LAND TITLE SURVEY PREPARED FOR RICHMOND WINDHAM DEVELOPMENT, LLC BY TITCOMB ASSOCIATES REVISED MAY 9, 2006 JOB No. 205075.
   f. PLAN PREPARED FOR WILLIAM G.SPOSEDO DATED AUGUST 4, 1930 RECORDED IN PLAN BOOK 19, PAGE 41.
   g. PARTIAL SURVEY PLAN PREPARED FOR ISABEL R. TAYLOR TRUST RECORDED IN PLAN BOOK 217, PAGE 434.
   h. SITE PLAN OF MANCHESTER SCHOOL, WINDHAM ELEMENTARY SCHOOL, PREPARED BY BUNKER AND SAVAGE ARCHITECTS REVOSED THROUGH DECEMBER 15, 1973.

3. CURRENT DEED REFERENCE:
   FROM THE INHABITANTS OF THE TOWN OF WINDHAM, a/k/a INHABITANTS OF WINDHAM, a/k/a INHABITANTS OF THE MUNICIPALITY OF WINDHAM TO REGIONAL SCHOOL UNIT No. 14 DATED OCTOBER 1, 2012 AND RECORDED IN BOOK 30002, PAGE 222. THE MANCHESTER SCHOOL PROPERTIES ARE DESCRIBED ON PAGES 224 AND 225.

4. THE DEED TO REGIONAL SCHOOL UNIT No. 14 REFERENCED IN NOTE 3 SPECIFICALLY EXCLUDES FEE INTEREST IN SPOSEDO ROAD (PRIVATE WAY). THIS WAY IS SHOWN AS PART OF THE TOWN PROPERTY SUBJECT TO RIGHTS OF OTHERS ON THE PLAN IN NOTE 2.a ABOVE. RIGHTS OF INGRESS/EGRESS AND UTILITES WERE CONVEYED TO REGIONAL SCHOOL UNIT No. 14.

   WIDTH IS SHOWN AS 30 FEET WIDE BASED ON A SCALED DISTANCE OF SPODEDO ROAD ON THE PLAN OF NOTE 2.f. RECORDED IN PLAN BOOK 19, PAGE 41. DEEDS FROM SPOSEDO FOR PARCELS ON OR NEAR COLLINS POND CALL FOR "CONVENIENT WIDTH", NO SPECIFIC WIDTH AND THE LEAST NUMBER OF DEEDS CALL FOR 15 FEET WIDE. THE SITE PLAN OF NOTE 2.h. SHOWS THE RELOCATION OF SPOSEDO ROAD TO THE CURRENT LOCATION AND THE PREVIOUS LOCATION. THE PRIOR LOCATION HAS A SCALED WIDTH OF 10 FEET AND THE RELOCATED LOCATION, SCALED AND HAS, A DIMENSIONED WIDTH OF 10 FEET. (FROM 2022 SURVEY OF NORTHERLY PARCEL)

   THE BOUNDARY IS SHOWN AS 30 FEET WIDE BASED ON A WROUGHT WIDTH (ROADWAY AND GRADING) OF APPROXIMATELY 30 FEET AS OF 2019, BUT UP TO 35 FEET. THE TRAVELLED WAY IS APPROXIMATELY 15 FEET WIDE. THE RIGHT OF WAY TO THE LOTS TO THE EAST FALLS WITHIN THE 30 FEET SHOWN AND IS SHOWN 15 FEET WIDE.

NOTES

1. THE BASIS OF BEARING FOR THIS SURVEY IS THE OBSERVED MAGNETIC MERIDIAN OF 1997.

2. THIS SURVEY WAS PERFORMED USING THE DEED FOUND FROM NELLIE P. BENNETT AND LLOYD P. BENNETT TO THE TOWN OF WINDHAM, DATED AUGUST 11 1998 AND RECORDED IN BOOK 14072, PAGE 57.

3. THE LOCUS PARCEL IS SHOWN AS LOTS 10A, 10A–1, AND 6 ON THE TOWN ASSESSOR'S MAP 67.

4. REFERENCE IS MADE TO THE FOLLOWING PLANS:
   a. STANDARD BOUNDARY SURVEY FOR THE INHABITANTS OF THE TOWN OF WINDHAM BY LEWIS & WASINA INC., DATED NOVEMBER 26,1997 AND LAST REVISED 12/16/97 AND RECORDED IN PLAN BOOK 197, PAGE 542.
   b. STANDARD BOUNDARY SURVEY FOR BARRY & MELISSA LEMERY, DATED NOVEMBER 3, 1994 BY DES LAURIERS & ASSOC. RECORDED IN PLAN BOOK 194, PAGE 441.
   C. PLAN OF A PORTION OF ROUTES #35 & #115 AS REDEFINED BY THE COMMISSIONERS OF CUMBERLAND DATED SEPTEMBER 2, 1964 BY H.H. SWEETSER, H.I. & E.C. JORDAN SURVEYORS OBTAINED FROM THE MAINE DEPT. OF TRANSPORTATION, RIGHT OF WAY DIVISION.

5. TANDBERG TRAIL (ROUTE #115) IS 66 FEET WIDE PER THE PLAN REFERENCED IN NOTE 4c ABOVE. AREA CALCULATIONS ARE LIMITED TO THE SIDELINE AS SHOWN. DEED LINES WERE NOT DETERMINED WITHIN THE RIGHT OF WAY LIMITS AS A RESULT OF THIS SURVEY.

6. PARCEL 2 IS SUBJECT TO A BUFFER ZONE OF 20 FEET PER THE LOCUS DEED, (REFERENCED IN NOTE 2 ABOVE). REFER TO DEED FOR FURTHER DETAILS.

NOTES (from 1997 survey of southerly parcels)

1. THE BASIS OF BEARING FOR THIS SURVEY IS THE MAGNETIC MERIDIAN OF 1997.

2. RECORD OWNERSHIP OF THE PARCEL SURVEYED CAN BE FOUND IN THE FOLLOWING DEEDS TO THE INHABITANTS OF THE TOWN OF WINDHAM, RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS :
   a. FROM JOAN W. BABB, DATED AUGUST 13, 1875, BOOK 418, PAGE 458.
   b. FROM CHARLES L. MANN, DATED MAY 17, 1932, BOOK 1389, PAGE 339.
   c. FROM DON P. PROCTOR AND MARION B. PROCTOR, DATED APRIL 30, 1964, BOOK 2818, PAGE 308.
   d. FROM JOHN H. TAYLOR AND ISABEL R. TAYLOR, DATED APRIL 25, 1972, BOOK 3264, PAGE 179.

3. REFERENCE IS MADE TO THE FOLLOWING DEEDS RECORDED AT SAID REGISTRY:
   a. AN EASEMENT FOR A ROADWAY FROM MAYNARD G. ROGERS AND MARIE ROGERS TO THE INHABITANTS OF THE TOWN OF WINDHAM, DATED DECEMBER 31, 1951, RECORDED IN BOOK 2067, PAGE 467.
   b. AN EASEMENT TO PORTLAND WATER DISTRICT FROM THE INHABITANTS OF THE TOWN OF WINDHAM, DATED OCTOBER 7, 1937, RECORDED IN BOOK 1538, PAGE 245.

4. REFERENCE IS MADE TO THE FOLLOWING PLANS:
   a. STANDARD BOUNDARY SURVEY FOR BARRY & MELISSA LEMERY, DATED NOVEMBER 3, 1994 AND RECORDED IN PLAN BOOK 194, PAGE 441.
   b. MAINE DEPARTMENT OF TRANSPORTATION, RIGHT OF WAY MAP, RECORDED IN PLAN BOOK 128, PAGES 37 AND 38.
   c. LAND OF MARIE E. ROGERS BY TIMOTHY O. BROWN, DATED DEC. 1975.
   d. STANDARD BOUNDARY SURVEY, PLAN OF EASEMENT FOR NORTH WINDHAM UNION CHURCH DATED 7/19/1990.

5. UTILITY EASEMENTS WERE NOT ADDRESSED AS A RESULT OF THIS SURVEY.

6. NO DEEDED EASEMENT WAS FOUND TO THE NORTH WINDHAM UNION CHURCH FROM THE SUBJECT PARCEL. TIM LORING, DIRECTOR OF MAINTAINANCE AND TRANSPORTION FOR THE SCHOOL DEPARTMENT STATED A VERBAL AGREEMENT DOES EXIST.

7. ENCROACHMENTS WERE OBSERVED AT THE TIME OF THIS SURVEY, NEAR THE SOUTHWESTERLY CORNER OF THE SUBJECT PARCEL, AS FOLLOWS:
   a. A BOARD FENCE AT THE LANDS OF KIMBERLY M. GOLASH.
   b. PAVEMENT AT THE LANDS OF OF DOUGLAS A. AND GAIL M. DUFOUR.

LEGEND

○	FOUND IRON PIPE (DETAILS AS NOTED)
◓	FOUND 5/8 INCH REBAR (DETAILS AS NOTED)
●	5/8 INCH REBAR WITH ALUMINUM CAP STAMPED "LEWIS & WASINA PLS 2114" OR "LEWIS & WASINA PLS 2288", PREVIOUSLY SET
ø	UTILITY POLE
⊡	FOUND 6"X6" GRANITE MONUMENT (UNLESS OTHERWISE NOTED)
———	BOUNDARY LINE, PREVIOUS SURVEYS
— — — — —	ABUTTER / RIGHT OF WAY LINE
N/F	NOW OR FORMERLY OWNED BY
AG	ABOVE GRADE
SG	SUB GRADE/BELOW GRADE
14072/57	DEED BOOK AND PAGE
( )	RECORD DEED INFORMATION
▨	BUILDING/STRUCTURE
— — —	APPARENT BOUNDARY, SPOSEDO ROAD

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 ft.

CURVE TABLE —SPOSEDO RD.					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG	CHORD DIST
C1	131.33	140.11	53°42'19"	S73°33'12"E	126.58
C2	93.68	110.11	48°44'43"	N76°02'09"W	90.88

REV.	BY	DATE	STATUS
3	BEL	3/30/2022	COMPOSITE NOTE 4, SPOSEDO RD. BOUNDARY, MINOR CHANGES
2	BEL	2/6/2022	GENERAL CHANGES
1	BEL	1/16/2015	PROGRESS

STATE OF MAINE

_____ COUNTY SS REGISTRY OF DEEDS

RECEIVED _____, 20____

AT____ h ____ m ____ M. AND RECORDED IN

PLAN BOOK _____ PAGE _____

PLAN ATTEST _____ REGISTER

BRUCE E. LEWIS PLS 2114
LAND SURVEYOR
PROFESSIONAL
BRUCE E. LEWIS
2114
STATE OF MAINE
NOT VALID WITHOUT EMBOSS AND SIGNATURE

Lewis & Wasina, Inc.
PROFESSIONAL LAND SURVEYORS
64 Fore Street
Oxford, ME 04270
Tel (207) 838-2250
PO Box 515
Waterboro, ME 04087-0515
Tel (207) 329-1958

Designed:	N/A
Drawn:	BEL
Checked:	BEL
Date:	1/3/2015
Scale:	1"=80'
Field Book:	FILE
Project:	22041
File Name:	22041COM
Contour Int.:	N/A

SHEET 1 OF 1

COMPOSITE BOUNDARY SURVEY

TANDBERG TRAIL (ROUTE 115), ROOSEVELT TRAIL (ROUTE 302), AND SPOSEDO ROAD,
TOWN OF WINDHAM, CUMBERLAND COUNTY, STATE OF MAINE

FOR RECORD OWNER:
WINDHAM RAYMOND SCHOOL DISTRICT REGIONAL SCHOOL UNIT No. 14
228 Windham Center Road
Windham, ME 04062–4862

SECTION 3

FINANCIAL CAPACITY

The Engineer's Opinion of Construction Cost of the Manchester School Site Access, Parking, Playfields and Utility Improvements project is $4,476,774.70 (Exhibit 3-1).

A portion of the project costs will be paid for by The Town of Windham and the Portland Water District. RSU 14 will plan to meet the financial needs of the project by funding in the future years annual operating budgets, allocating funding from year end balances, transferring funding from the existing reserve funds, and/or bonding the project per the attached letter (Exhibit 3-2).

Figures

Exhibit 3-1 Engineer's Opinion of Construction Cost dated December 2, 2022
Exhibit 3-2 RSU 14 Project Funding Letter dated December 2, 2022

Exhibit 3-1
Engineer's Opinion of Construction Cost

Manchester School
Engineer's Opinion of Construction Cost
Site Access, Parking, Playfield and Utility Improvements
Windham, Maine
December 2, 2022

General Conditions	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Mobilization and Insurances (12%)	1	LS	$ 437,469.84	$ 437,469.84
Bonds and Insurances (0.8%)	1	LS	$ 29,164.66	$ 29,164.66

Demolition/Relocation	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Clearing / Grubbing Site Preparation	20.5	acres	$ 2,000.00	$ 41,000.00
Fence Demo	2,900	LF	$ 10.00	$ 29,000.00
Fence Backstop/Duggout Demo	2	EA	$ 500.00	$ 1,000.00
Remove Posts at Fields	4	EA	$ 100.00	$ 400.00
Sawcut Pavement	340	LF	$ 7.00	$ 2,380.00
Pavement Removal	12,000	SY	$ 3.00	$ 36,000.00
Pavement Milling	400	SY	$ 12.00	$ 4,800.00
Relocate Pavilion	1	EA	$ 22,500.00	$ 22,500.00
Misc. Demo	1	LS	$ 10,000.00	$ 10,000.00
Subtotal				$ 147,080.00

Cuts and Fills and Grading	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Rock Removal	0	CY	$ -	$ -
Test Pit	50	CY	$ 75.00	$ 3,750.00
Export Waste Material	1	LS	$ 65,000.00	$ 65,000.00
Placement of Onsite Fills	1	LS	$ 95,000.00	$ 95,000.00
Fine Grading	22,000	SY	$ 1.50	$ 33,000.00
Common Excavation	1	LS	$ 111,000.00	$ 111,000.00
Subtotal				$ 307,750.00

Gravels for Roads, Driveways and Walkways	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Base Gravel	4,025	CY	$ 48.00	$ 193,200.00
Subbase Gravel	7,400	CY	$ 28.00	$ 207,200.00
3/4" Crushed Stone	50	CY	$ 60.00	$ 3,000.00
Subtotal				$ 403,400.00

Pavement and Concrete Areas	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Hot Bituminous Surface Pavement 9.5MM Sidewalk - 2-inch	470	TON	$ 200.00	$ 94,000.00
Hot Bituminous Surface Pavement 12.5MM Road - 1.5-inch	1,792	TON	$ 100.00	$ 179,200.00
Hot Bituminous Binder Pavement 19MM Road - 1.5-inch Parking 2.5-inch Roads	2,614	TON	$ 95.00	$ 248,292.00
Pavement Markings	1	LS	$ 18,000.00	$ 18,000.00
Dumpster Pad and Enclosure	1	LS	$ 22,000.00	$ 22,000.00
Granite Curb	100	LF	$ 100.00	$ 10,000.00
Slipform Concrete Curb	4,900	LF	$ 18.00	$ 88,200.00
Subtotal				$ 659,692.00

Manchester School
Engineer's Opinion of Construction Cost
Site Access, Parking, Playfield and Utility Improvements
Windham, Maine
December 2, 2022

Drainage	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Remove CB or DMH	10	EA	$ 400.00	$ 4,000.00
Remove SD up to 24-inch	950	LF	$ 15.00	$ 14,250.00
6" Diameter UD HDPE	50	LF	$ 40.00	$ 2,000.00
12" Diameter Storm Drain HDPE	2,790	LF	$ 65.00	$ 181,350.00
15" Diameter Storm Drain HDPE	390	LF	$ 85.00	$ 33,150.00
18" Diameter Storm Drain HDPE	420	LF	$ 110.00	$ 46,200.00
Water Quality Filter including OCS	1	LS	$ 125,000.00	$ 125,000.00
2ft by 2 ft Field Inlet	8	EACH	$ 2,500.00	$ 20,000.00
4' Dia. Catch Basin	20	EACH	$ 4,200.00	$ 84,000.00
4' Dia. Drainge Manhole	5	EACH	$ 5,500.00	$ 27,500.00
Riprap Apron (Inlet/Outlet)	8	EACH	$ 500.00	$ 4,000.00
Subtotal				$ 541,450.00

Site Electrical	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Light Poles (Sidewalk & Parking Lot)	48	EA	$ 2,750.00	$ 132,000.00
2" Conduit for Lighting	5,000	LF	$ 25.00	$ 125,000.00
2" Conduit for Storage Building	250	LF	$ 30.00	$ 7,500.00
Lighting Branch Circuit Conductors	14,000	LF	$ 2.50	$ 35,000.00
Storage Building Branch Circuit Conductors	900	LF	$ 2.50	$ 2,250.00
Removal of Existing Utility Pole	2	EA	$ 500.00	$ 1,000.00
Removal of Existing Utility Overhead Electrical	435	LF	$ 5.00	$ 2,175.00
3-Phase Utility Primary Ductbank	400	LF	$ 80.00	$ 32,000.00
Comm/Telephone Ductbank (3-way, 2-in)	410	LF	$ 45.00	$ 18,450.00
5 ft by 7 ft Utility Handhole	4	EA	$ 4,250.00	$ 17,000.00
Elec. Handhole	9	EA	$ 2,500.00	$ 22,500.00
Utility Coordination, New Transformer & New Riser Utility Pole	1	LS	$ 60,000.00	$ 60,000.00
Subtotal				$ 454,875.00

Soil Erosion and Sediment Control	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Erosion & Sediment Control	1	LS	$ 15,000.00	$ 15,000.00
Seed for Irrigated Playfields	285	UNIT	$ 30.00	$ 8,550.00
Seed for Non-Irrigated Areas	170	UNIT	$ 30.00	$ 5,100.00
Loam for Playfields (6in)	5,300	CY	$ 32.00	$ 169,600.00
Loam for Non-Playfields (4in)	2,100	CY	$ 32.00	$ 67,200.00
Mulch for Irrigated Playfields	285	UNIT	$ 27.00	$ 7,695.00
Mulch for Non-Irrigated Playfields	170	UNIT	$ 27.00	$ 4,590.00
Subtotal				$ 277,735.00

Irrigation:	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Sprinkler Heads, Lateral Piping and Main Piping	1	LS	$ 85,000.00	$ 85,000.00
Power for Irrigation	1	LS	$ 5,000.00	$ 5,000.00
Booster Pump, Controller & Rain Guage	1	LS	$ 20,000.00	$ 20,000.00
Subtotal				$ 110,000.00

Manchester School
Engineer's Opinion of Construction Cost
Site Access, Parking, Playfield and Utility Improvements
Windham, Maine
December 2, 2022

Misc. Items	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
Little League Infield	2	EACH	$ 3,000.00	$ 6,000.00
Softball Infield	2	EACH	$ 4,000.00	$ 8,000.00
Paved Basketball Courts (With hoops, internal Drain and Edge Curb)	1	LS	$ 62,200.00	$ 62,200.00
Storage Building (16' x 30')	1	EACH	$ 50,000.00	$ 50,000.00
Bury 4-each 1,000 Gallon Propane Tanks	1	LS	$ 25,000.00	$ 25,000.00
2-inch N. Gas Service	350	LF	$ 30.00	$ 10,500.00
6-inch Sanitary Sewer	310	LF	$ 75.00	$ 23,250.00
New 2-inch and 8-inch Water Service to School Building	400	LF	$ 180.00	$ 72,000.00
Fire Hydrant	1	EACH	$ 7,500.00	$ 7,500.00
Bollards	30	EACH	$ 750.00	$ 22,500.00
Split Rail Fence	850	LF	$ 35.00	$ 29,750.00
5-ft Black Vinyl Coated Chain Link Fence	4,400	LF	$ 60.00	$ 264,000.00
Back Stop Black Vinyl	4	EACH	$ 10,500.00	$ 42,000.00
Gates	6	EACH	$ 1,200.00	$ 7,200.00
Street Signs	40	EACH	$ 300.00	$ 12,000.00
Raised Crosswalks	2	EACH	$ 2,500.00	$ 5,000.00
Stone Dust Path	4,000	LF	$ 10.00	$ 40,000.00
Traffic Warning Lights at Route 115 Connection	1	LS	$ 12,500.00	$ 12,500.00
New Buffer Plantings	1	LS	$ 40,000.00	$ 40,000.00
Relocate Tree	12	EACH	$ 350.00	$ 4,200.00
Subtotal				$ 743,600.00

Subtotal without General Conditions	$	3,645,582.00
10% Contingency	$	364,558.20
General Conditions	$	466,634.50
TOTAL CONSTRUCTION COST WITH GENERAL CONDITIONS and CONTINGENCY	**$**	**4,476,774.70**

Notes:

1) Unit prices have been adjusted to reflect phased construction which will take place over 3 years with most work being completed during the off school period during the months of June, July and August in 2023, 2024 and 2025.

2) Costs for the drip dispersal system to be connected to the PWD's offsite WWTF are not included in this estimate as those costs will be the responsibility of the PWD.

3) Costs for the removal of the PWD building near the church are not included in this estimate as those costs will be the responsibility of the PWD.

4) With stormwater management pushed to the southern portion of the site due to setbacks required from the PWD's proposed drip dispersal system and the requirement to remove the existing infiltration structures receiving stormwater runoff from the roof of the existing school building, a portion of the drainage system cost for this project is the reponsibility of the PWD.

Exhibit 3-2
RSU 14 Project Funding Letter

WINDHAM RAYMOND SCHOOL DISTRICT
Regional School Unit 14

228 Windham Center Road
Windham, ME 04062
207-892-1800 Fax 207-892-1805
www.rsu14.org

Superintendent
Christopher S. Howell

Assistant Superintendent
Christine Frost-Bertinet

December 2, 2022

Maine Department of Environmental Protection
312 Canco Road
Portland, ME 04103

Subject: Funding for RSU #14 Windham Manchester School Site Improvement Project - Windham, ME - Site Location of Development Act Permit Amendment Application

Dear Sir or Madam,

The RSU #14 Windham Manchester School Site improvement project is a phased project that is anticipated to occur over the next three years with a majority of the work occurring during the summers of 2023 and 2024.

The total project estimate is $4.5 million and a portion of these costs will be paid for by the Town of Windham and the Portland Water District. The RSU will plan to meet the financial needs of the project by funding in the future years annual operating budgets, allocating funding from year end balances, transferring funding from the existing reserve funds, and/or bonding the project.

Kind Regards,

Christopher Howell
Superintendent
RSU #14 Windham Raymond Schools

cc: Bill Hansen, P.E. Director of Facilities RSU #14
Dwight Anderson, P.E. Stantec

SECTION 4

TECHNICAL ABILITY

4.1 Design Professionals

RSU 14 retained Stantec Consulting Services, Inc. to provide engineering and permit support for the subject project. Listed below are the professional firms working on this project:

- Stantec: Civil & Electrical Engineering, Wetland Survey and Permitting
- Haley & Aldrich: Geotechnical Consultant
- Plisga & Day: Survey
- Gorrill Palmer: Traffic Engineering

4.2 Operating Staff

Once constructed, these facilities will be operated and maintained by the RSU 14 facility staff. These staff currently maintain facilities at the school.

4.3 Prior Experience

Stantec has provided civil site design and permitting support for several school, private development, and transportation projects in the State of Maine. Refer to attached resumes for more information.

Dwight Anderson PE

Senior Associate / Project Manager
26 years of experience · Portland, Maine

As a Project Manager within our transportation practice, Dwight performs project engineering management and the preparation of preliminary and final design as well as permit applications for school improvements and a variety of civil/site engineering and environmental projects. His technical expertise includes peer review, civil/site design, environmental permitting, hydrologic and hydraulic analysis, and construction administration.

EDUCATION

B.S.C.E., University of Maine, Orono, Maine, 1994

REGISTRATIONS

Professional Engineer #9275, State of Maine

PROJECT EXPERIENCE

K-12

RSU #14 Windham Raymond School District

For 20 years, Dwight has assisted RSU #14 by providing civil engineering, permitting, and environmental services support. Dwight is familiar with all of RSU's facilities and has provided engineering support for projects on the main campus at the Windham High School, Middle School, Primary School and Field Allen School as well as other locations including the Manchester School off Route 302 in Windham and the Raymond Elementary and Jordan Small Schools off Route 85 in Raymond. With over 25 year's of engineering experience at schools throughout Maine, including those in Windham, Cumberland, Gorham, Bridgton, Naples, Portland, Standish, Buxton, Hollis, Standish, Gray, Poland, Caribou, South Portland, Auburn and Limington Dwight has a well rounded understanding and engineering issues and associated solutions related to school projects. In addition to school projects Dwight has provided civil design support or managed serval large scale civil airport improvement projects, hospital projects, a sustainable airport master plan and wind/solar utility projects providing him a strong understanding current infrastructure design and permitting practices.

Dwight has provided civil engineering design and/or management of environmental services for the following projects with RSU #14:

- Windham Middle School ADA Access Improvements – required analysis of multiple route options to provide the most appropriate configuration of ADA accessible ramps and walkways between the Windham Middle School, High School, and Field Allen School.
- Windham Primary School Bus Loop/Parking and Playground Upgrades - multi-phase project required creative project phase delineation to meet available project funding by year and remain in compliance with permit approvals.
- Raymond Elementary School Playfield and Trails Project – required timely site visits to assist with planning, provided construction management and satisfy local code inspection requirements.
- 8 Pavilion Sites (4 in Windham and 4 in Raymond): required streamlined coordination of site visits, owner approval process, and local permit submissions to complete each site at an accelerated schedule to meet the funding deadline.
- Gravel Parking Area at the former Strout Parcel off Windham Center Road – required preservation of buffering, lighting design and design of a vegetated water quality filter meeting MeDEP guidelines.
- Other engineering and environmental projects Dwight has supported for RSU #14 include portable classrooms near the High School, Field Allen School, and Primary School; wayfinding mapping; sanitary sewer base mapping; and site lighting improvements for existing access drives, pedestrian routes, and parking areas.

MSAD #51 Greely Middle School | Cumberland, Maine

Design, permitting and construction administration services for construction of a 750-student middle school on a 52-acre parcel. The project included water quantity and quality ponds, athletic fields, infrastructure upgrades and parking for over 180 vehicles. The stormwater quantity analysis for this project was complicated due to poor drainage conditions in a residential neighborhood downgradient from the school site and ultimately a closed conduit offsite drainage improvement was required to satisfy the concerns of local residents. Contaminated soils with arsenic at the site required a VRAP and burial plan coordinated to avoid future development areas. Dwight has also provided design and permitting support of improvements at the High School and for the track.

system design and street design. This project required special consideration to minimize impacts to abutting neighbors to the front of the site and railroad tracks to the back of the site.

COMMUNITY INSTITUTIONAL

Boy Scouts of America Headquarters Building | Portland, Maine

Design and permitting for the construction of an 11,800 square foot Headquarters building and associated site improvements located in existing wetlands between airport and MTA property on the border between the City of Portland and South Portland. The project included sewer force main and effluent pump analysis and stormwater analysis. The overall project included disturbance of nearly one acre of wetland to construct the 11,800 square foot building, paved access drive and 50-space parking area.

HEALTHCARE

Martin’s Point Health Care | Portland, Maine

Civil design and permitting for a 42,000 square foot Medical Office Building constructed over a 2-level parking garage. The project involved careful planning and design consideration to preserve the historic values of the adjacent existing Marine Hospital building, to provide separate access drives to each level of the facility, and to provide safe pedestrian access routes and drop-off zones. The design required phasing for building demolition and consideration of and connection to existing on-site water, sewer, electric and communication utilities. Permitting efforts for the project involved the City of Portland Planning Board, Historic Preservation Board and the Maine Department of Environmental Protection.

Thomas Tetreau

Project Manager, Environmental Scientist
16 years of experience · Topsham, Maine

Tom is a Project Manager and Environmental Scientist responsible for leading and coordinating a variety of natural resource projects, including wetland delineations, vernal pool surveys, functional assessments, wildlife monitoring, construction and compliance monitoring, and invasive species management. He also assists in the preparation of federal and state permit applications and GIS map production. Tom is a Certified Profession in Erosion and Sediment Control (CPESC) and often provides environmental compliance monitoring and erosion control inspections on large-scale construction projects.

Tom has worked on a variety of natural community and rare plant survey projects ranging from general reconnaissance-level surveys to quantitative, community- and species-specific surveys involving natural community mapping and analysis for transportation projects, utility corridors, and development sites.

PROFESSIONAL EXPERIENCE

- Stantec Consulting. 2008-Present. Project Manager and Environmental Scientist.
- Stantec Consulting. 2007-2008. Project Technician.
- Woodlot Alternatives, Inc. 2006-2007. Project Technician.
- DeLorme Mapping. 2005. Map Technician.
- HNTB Corporation. 2004. Traffic Engineering and Transportation Planning Assistant.

EDUCATION

BA, Environmental Planning and Policy, University of Maine, Farmington, Maine, 2005

40-hour HAZWOPER Certified, OSHA, Topsham, Maine, 2008

United States Army Corps of Engineers Wetland Delineator Methods, University of New Hampshire, Durham, New Hampshire, 2007

REGISTRATIONS

Certified Professional in Erosion and Sediment Control #5826, Certified Professional in Erosion and Sediment Control, Inc., 2013

Commercial Operator #COA44344/5, 6A, 6B, Maine Board of Pesticides Control

Certified Wetland Scientist #283, State of New Hampshire Board of Natural Scientists

Professional Wetland Scientist #2884, Society of Wetland Scientists

MEMBERSHIPS

Member, Association of State Wetland Managers

Member, Society of Wetland Scientists

Member, Maine Association of Wetland Scientists

PROJECT EXPERIENCE

NATURAL RESOURCE SERVICES

Bingham Wind Project | Somerset and Piscataquis County, Maine | 2009-2016 | Project Scientist and Field Lead, Environmental Monitor

Led field crews and conducted wetland delineations and vernal pool surveys on over 10,000 acres of ridgeline and over 30 miles of transmission line corridor. Conducted data analysis and quality review of field data. Assisted with the completion of MDEP and Corps permit applications including wetland, wildlife, and fisheries reports and alternatives analysis. Provided environmental compliance monitoring for the entire duration of construction of 56 wind turbines and associated 17 mile transmission line. Provided environmental training orientation to new contractors, inspected erosion controls, interpreted strict permit conditions, met with DEP personnel onsite, and helped the client and contractors maintain permit compliance.

SunRaise Solar Projects | Maine | 2019-2021 | Technical Lead

Led initial field investigations at several proposed solar sites. Helped the client determine which site were best suited for solar based on natural resource constraints and permitting. Successfully permitted several solar projects through the MDEP, Corps, and municipalities. Conducted environmental monitoring visits during the construction phase of several projects to help client and contractors maintain permit compliance.

Various Solar Projects | Maine and New Hampshire | 2020-2011 | Technical Lead

Coordinated and led natural resources assessments, including wetland and watercourse delineations and vernal pool surveys on over 1,000 acres of potential solar development sites in Maine in New Hampshire.

Confidential Transmission Line Project | New Hampshire | 2020-2022 | Project Manager, Permitting Lead

Provided environmental services in support of proposed transmission line work in New Hampshire. Managed project schedule and field work for wetland and watercourse delineations and endangered species surveys and associated reporting. Led preparation and submission of federal, state, and local permit applications and consulted with regularly with agencies resulting in successful permitting of the critical infrastructure project.

Running Tide Technologies Shellfish Hatchery | Harpswell, Maine | 2018 | Project Manager, Scientist

Conducted a coastal wetland characterization and site condition report in support of MDEP permit applications for a shellfish hatchery with project components located in Casco Bay.

Israel 6th Pipeline Protection and Streambank Stabilization Design and Permitting, Portland-Montreal Pipe Line | Lancaster, New Hampshire | 2020-2021 | Wetland Scientist, Technical Lead

For Portland Pipe Line Corporation (PPLC), Tom is working closely with Stantec engineering and leading environmental assessments and NHDES permitting to address necessary pipeline protection and streambank stabilization associated with three existing pipelines that cross Israel River (“Israel 6th) in Lancaster, NH. This includes leading pre-application meetings and permitting with NHDES, the Corps, and the Town of Lancaster and coordinating required endangered species surveys.

Ellis Spring Pipeline Project | Rumford, Maine | 2019 | Environmental Monitor

Provided environmental monitoring for the construction of an approximately 3-mile water pipeline from the spring boreholes to the loadout facility. Conducted weekly monitoring and post-storm visits to check for adequate erosion controls and permit/environmental compliance. Prepared weekly monitoring reports to client and provided maintenance recommendations to contractors.

Northern Maine Regional Airport | Presque Isle, Maine | 2018 | Lead Wetland Scientist

Conducted natural resource delineations on the approximately 675-acre airport property for use in future development of the site. Worked with project and airport management to gain safe access to areas adjacent to active runways. Prepared wetland delineation report documenting the resources and conditions within the project area.

Restoration Monitoring, York Connector Road | York, Maine | 2018-2019 | Project Manager and Wetland Scientist

Provided ongoing vegetation monitoring of restoration areas that resulted from inadvertent clearing of vernal pool and stormwater buffers. Monitored woody plant density and evaluated the restoration areas based on predetermined performance standards. Compiled data into yearly monitoring reports sent to the Maine DEP and U.S. Army Corps of Engineers.

Valley Riders Snowmobile Trail Permitting | Somerset County, Maine | 2016 | Project Manager

Provided the client with support to develop a snowmobile trail route that avoided and minimized environmental impacts. Consulted with regulatory agencies and prepared the necessary permit applications resulting in successful permitting of the trail.

MB Bark Recycling Facility | Androscoggin County, Maine | 2017 | Project Manager, Lead Wetland Scientist

Conducted wetland delineations and vernal pool surveys on approximately 150-acre site for a proposed expansion of the solid waste recycling facility. Worked closely with client and project engineers to design expansion areas to minimize wetland impacts and avoid impacts to vernal pools. Completed Maine Natural Resource Protection Act and US Army Corps of Engineers permit applications. Permits were granted by both agencies with minimal requests for supplemental information.

RSU 14, Raymond Elementary School | Maine | 2020| Wetland Scientist

Led wetland delineations and reporting efforts in support of MDEP NRPA permit applications for various development activities associated with the school complex.

Lewiston Public Schools | Maine | 2017-2020 | Project Manager, Wetland Scientist

Led wetland delineations, vernal pool surveys, functional assessments, and reporting in support of MDEP NRPA permit applications for a proposed new school location and expansion of and existing school in the Town of Lewiston.

Spring Harbor Hospital | Maine | 2017-2018 | Project Manager, Wetland Scientist

Led vernal pool surveys and verified wetland boundaries that were over 5 years old in support of MDEP NRPA permitting for expansion if the existing hospital.

Gorham School Department | Maine | 2019 | Project Manager

Project manager responsible for managing wetland delineations and associated reporting in support of MDEP NRPA permitting for proposed school expansion/development activities at the Gorham High School.

Yarmouth School Sites | Maine | 2018 | Project Manager, Wetland Scientist

Managed and led wetland delineations at 4 schools in Yarmouth, ME to provide an inventory of natural resources for planned development and expansion activities at all 4 sites. Conducted wetland delineations, vernal pool surveys, functional assessments, and agency correspondence to assist with MDEP NRPA permitting.

Bowdoinham Public Works | Maine | 2019 | Project Manager, Wetland Scientist

Managed and led wetland delineations and vernal pool surveys on land owned by the Town of Bowdoinham proposed for a public park. Identified shoreline areas on the Cathance River that were previous disturbed by commercial activities and could be suitable for shoreline enhancement/restoration. Data collected were used in support of MDEP NRPA and Corps permit applications.

SECTION 7

WETLANDS, WILDLIFE, AND FISHERIES

7.0 Project Overview

The Project site is located near the intersection of Route 302 and Route 115 in Windham, Maine. The topography of the Project site is generally sloped to the south with elevations varying from 309 feet above sea level, near Route 115, to 290 feet above sea level at the southern parcel boundary. The project includes construction of new parking areas, new play field areas with irrigation, a new access drive connection to Route 115, a new parent drop-off/pick-up loop, a new bus loading/unloading area, a storage building, a new hard play area, associated storm drainage improvements, stormwater quality/quantity features, site lighting, utility improvements and upgrades, pedestrian sidewalks and reconstruction of existing access drives and parking.

7.1 Agency Consultation

Stantec Consulting Services, Inc. contacted agencies (Exhibit 7-1) to request information regarding sensitive natural resources, including Essential Habitat, Significant Wildlife Habitat, records of rare, threatened, and endangered wildlife, rare and exemplary botanical features, and vernal pools that have been documented in the vicinity of the Project. Consultation responses from the Maine Department of Inland Fisheries and Wildlife (MDIFW), Bureau of Land Resources, and U.S. Fish and Wildlife Service (USFWS) are included.

The USFWS did not identify any critical habitats within the Project area. (USFWS, Exhibit 7-2)

The Maine Department of Inland Fisheries and Wildlife did not identify any essential habitats that the Project would inadvertently affect and does not anticipate significant impacts to any protected bat species as a result of the Project. (MDIFW, Exhibit 7-3)

The MDIFW also suggested a survey of vernal pools, which was conducted by the Bureau of Land resources. The Bureau of Land Resources confirmed the vernal pool located within the Project area as not significant. (Exhibit 7-4). A wetland and watercourse delineation and vernal pool survey report is also included (Exhibit 7-5).

Figures

Exhibit 7-1 Agency Requests for Significant Natural Resources, dated June 22, 2022
Exhibit 7-2 USFWS Threatened and Endangered Species Correspondence dated June 22, 2022
Exhibit 7-3 MDIFW Special Concern Species and Wildlife Habitat Correspondence dated July 26, 2022
Exhibit 7-4 Vernal Pool Significance Determination Correspondence dated July 5, 2022
Exhibit 7-5 Wetland and Watercourse Delineation and Vernal Pool Survey Report dated June 20, 2022

Exhibit 7-1
Agency Requests for Significant Natural Resources

June 22, 2022
File: 195211595

Attention: John Perry
Environmental Review Coordinator
Maine Department of Inland Fisheries and Wildlife
284 State Street, 41 SHS
Augusta, ME 04333

VIA EMAIL: IFWEnvironmentalreview@maine.gov

Reference: Significant Natural Resources Information Requests – Manchester Elementary School, Windham, Maine

Dear John,

The purpose of this letter is to request information on any significant natural resources associated with the location depicted on the attached map and associated kmz file. We are assisting RSU 14 with evaluating this site for proposed improvements to the Manchester Elementary School.

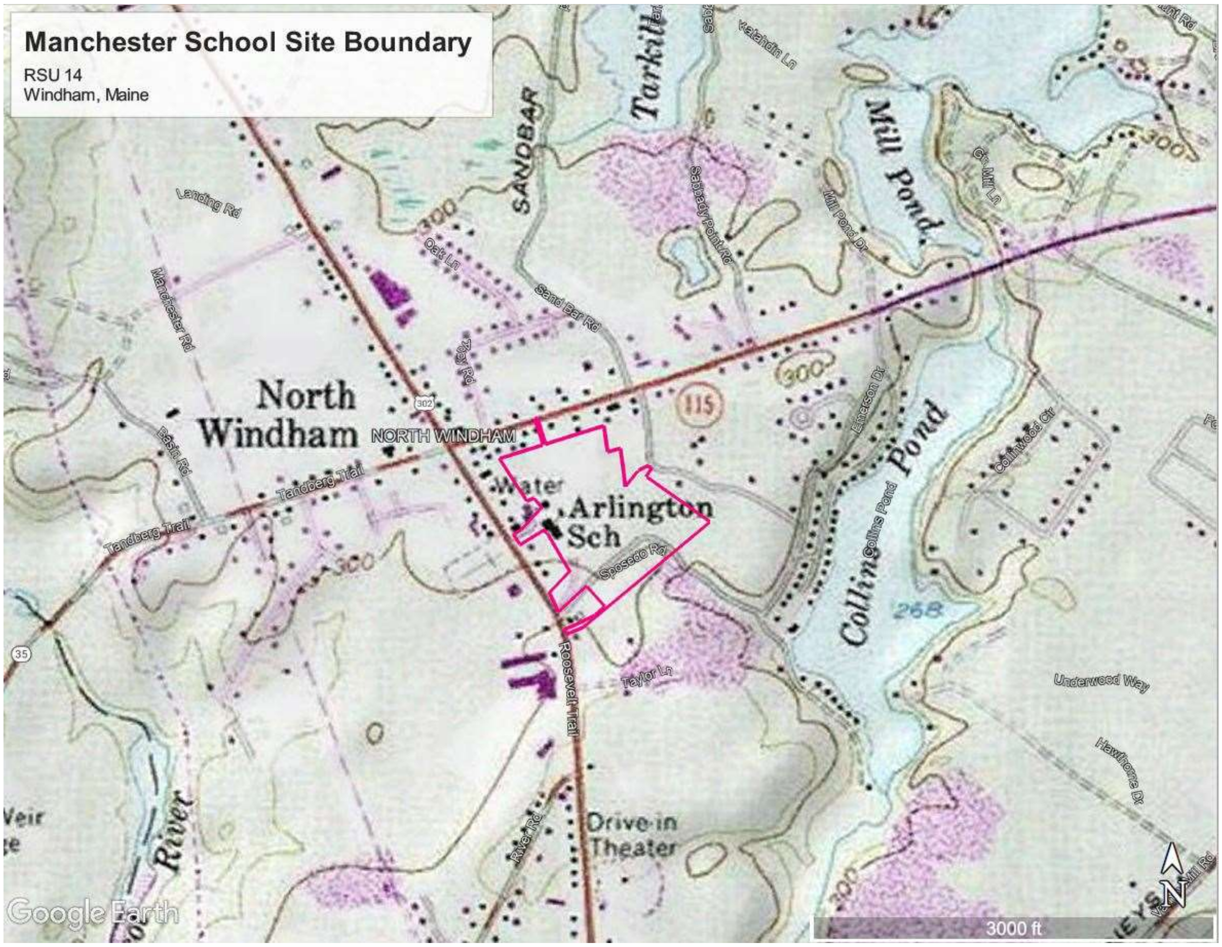
Please review the project location and let me know if there are any known or suspected locations of rare, threatened, or endangered plants or wildlife, Significant Wildlife Habitat, or other significant natural resources within the outlined area associated with this potential development area. We are also reaching out to MDEP and MNAP. Should you have any questions or want further information, please feel free to contact me.
Thank you for your assistance in obtaining this information.

Regards,

Stantec Consulting Services Inc.

Tom Tetreau PWS, NHCWS
Associate, Environmental Scientist
Phone: 207 504 7231
Tom.tetreau@stantec.com

Attachments: Project Location Map and .kmz File


Manchester School Site Boundary
RSU 14
Windham, Maine
North Windham
NORTH WINDHAM
Water
Arlington Sch
SANDBAR
Mill Pond
Collins Pond
Landing Rd
Oak Ln
Sand Bar Rd
Tandberg Trail
Roosevelt Trail
Taylor Ln
Drive-in Theater
River
Underwood Way
Hawthorne Dr
300
268
302
115
35
3000 ft
Google Earth
N

June 22, 2022
File: 195211595

Attention: Lisa St. Hilaire
Maine Natural Areas Program
177 State House Station
Augusta, ME 04333

VIA EMAIL: lisa.st.hilaire@maine.gov

Reference: Significant Natural Resources Information Requests – Manchester Elementary School, Windham, Maine

Dear Lisa,

The purpose of this letter is to request information on any significant natural resources associated with the location depicted on the attached map and associated kmz file. We are assisting RSU 14 with evaluating this site for proposed improvements to the Manchester Elementary School.

Please review the project location and let me know if there are any known or suspected locations of rare plants, natural communities, or other significant natural resources within the outlined area associated with this potential development area. We are also reaching out to MDEP and MDIFW.
Should you have any questions or want further information, please feel free to contact me. In your invoicing, please refence Stantec Job # 195211595.

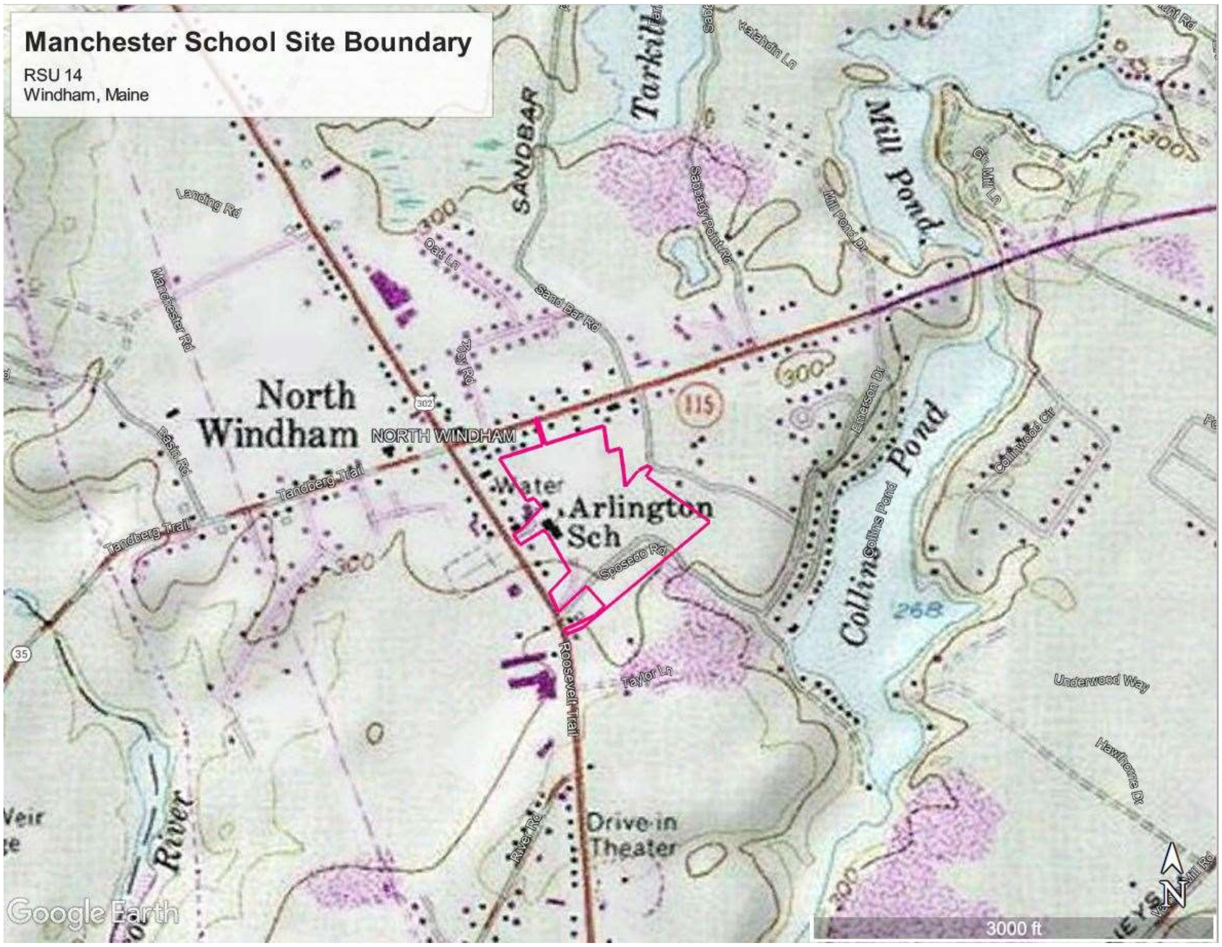
Thank you for your assistance in obtaining this information.

Regards,

Stantec Consulting Services Inc.

Tom Tetreau PWS, NHCWS
Associate, Environmental Scientist
Phone: 207 504 7231
Tom.tetreau@stantec.com

Attachments: Project Location Map and .kmz File


Manchester School Site Boundary
RSU 14
Windham, Maine
North Windham
NORTH WINDHAM
Arlington Sch
Water
Mill Pond
Collins Pond
SANDBAR
Drive-in Theater
River
Landing Rd
Oak Ln
Sand Bar Rd
Tandberg Trail
Roosevelt Trail
Taylor Ln
Sposedo Rd
Underwood Way
Hawthorne Dr
302
115
35
300
268
Google Earth
3000 ft

June 22, 2022
File: 195211595

Attention: Dawn Hallowell
Maine Department of Environmental Protection
Southern Maine Regional Office
312 Canco Road
Portland, ME 04103

VIA EMAIL: dawn.hallowell@maine.gov

Reference: Significant Natural Resources Information Requests – Manchester Elementary School, Windham, Maine

Dear Ms. Hallowell,

The purpose of this letter is to request information on any significant natural resources associated with the location depicted on the attached map and associated kmz file. We are assisting RSU 14 with evaluating this site for proposed improvements to the Manchester Elementary School.

Please review the project location and let me know if there are any known or suspected locations of rare, threatened, or endangered plants or wildlife, Significant Wildlife Habitat, or other significant natural resources within the outlined area associated with this potential development area. We are also reaching out to MDIFW and MNAP. Should you have any questions or want further information, please feel free to contact me.
Thank you for your assistance in obtaining this information.

Regards,

Stantec Consulting Services Inc.

Tom Tetreau PWS, NHCWS
Associate, Environmental Scientist
Phone: 207 504 7231
Tom.tetreau@stantec.com

Attachments: Project Location Map and .kmz File

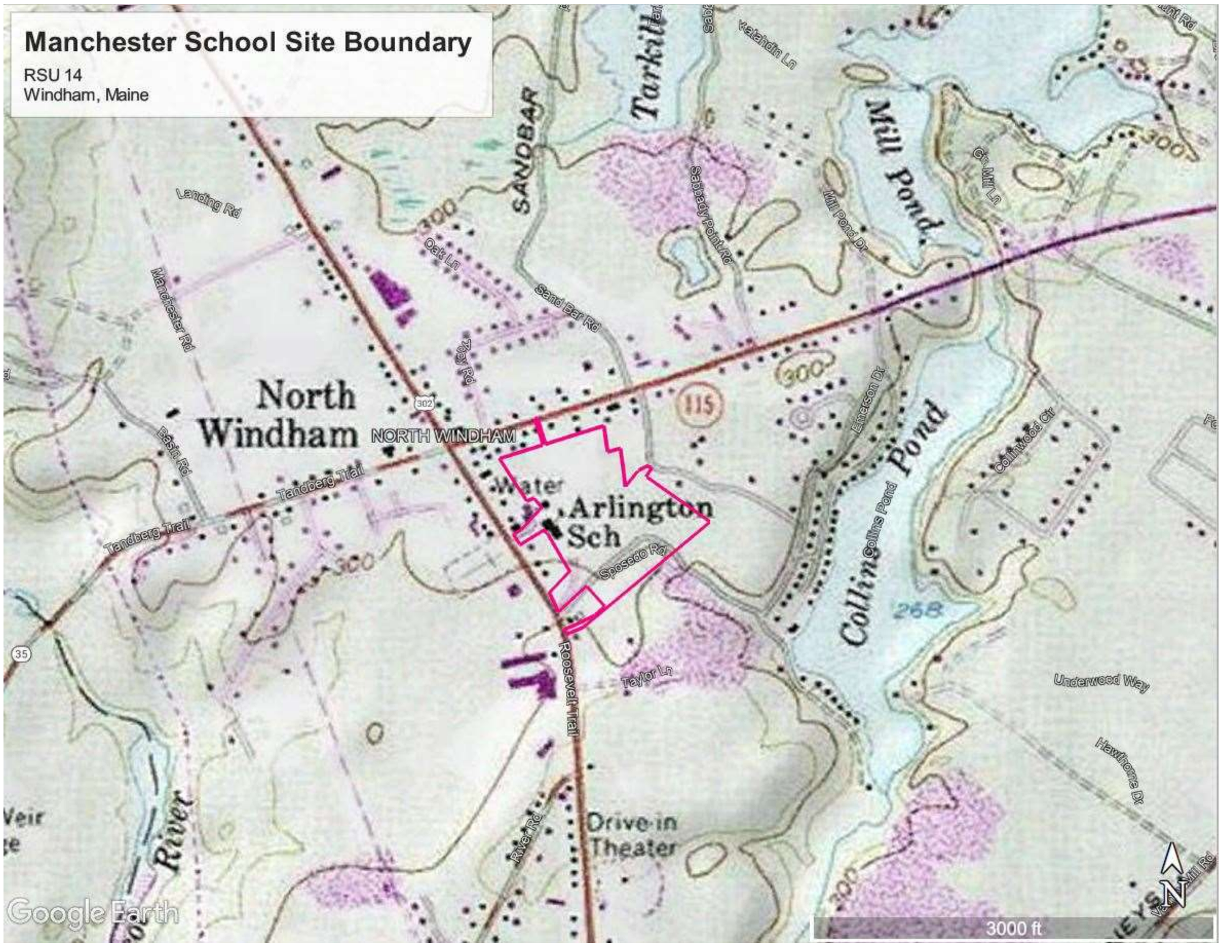

Manchester School Site Boundary
RSU 14
Windham, Maine
North Windham
NORTH WINDHAM
Arlington Sch
Water
Mill Pond
Collins Pond
Tarkill
SANDBAR
Landing Rd
Manchester Rd
Oak Ln
Sand Bar Rd
Tandberg Trail
Roosevelt Trail
Taylor Ln
Underwood Way
Drive-in Theater
River
300
268
302
115
35
3000 ft
Google Earth

Exhibit 7-2
USFWS Threatened and Endangered Species

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588

In Reply Refer To:
Project Code: 2022-0056792
Project Name: Manchester Elementary School

June 22, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Project Code: 2022-0056792
Event Code: None
Project Name: Manchester Elementary School
Project Type: Government / Municipal (Non-Military) Construction
Project Description: Improvements to the existing elementary school site, including tree clearing and site development. No proposed wetland impacts.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.83258415,-70.43388456338165,14z

Counties: Cumberland County, Maine

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Windham town
Name: Tom Tetreau
Address: 30 Park Drive
City: Topsham
State: ME
Zip: 04086
Email tom.tetreau@stantec.com
Phone: 2074065496

Lead Agency Contact Information

Lead Agency: Department of Education

Exhibit 7-3

MDIFW Special Concern Species and Wildlife Habitat

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

July 26, 2022

Tom Tetreau
Stantec
30 Park Drive
Topsham, ME 04086

RE: Information Request – Windham Center Road Project, Windham

Dear Tom:

Per your request received on June 23, 2022, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *Windham Center Road* project in Windham. For purposes of this review we are assuming tree clearing will be part of your project.

Our Department has not mapped any Essential Habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bat Species – Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine's Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are listed as Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Significant Vernal Pools - At this time MDIFW Significant Wildlife Habitat (SWH) maps indicate no known presence of SWHs subject to protection under the Natural Resources Protection Act (NRPA) within the project area, which include Waterfowl and Wading Bird Habitats, Seabird Nesting Islands, Shorebird Areas, and Significant Vernal Pools. However, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Fisheries Habitat

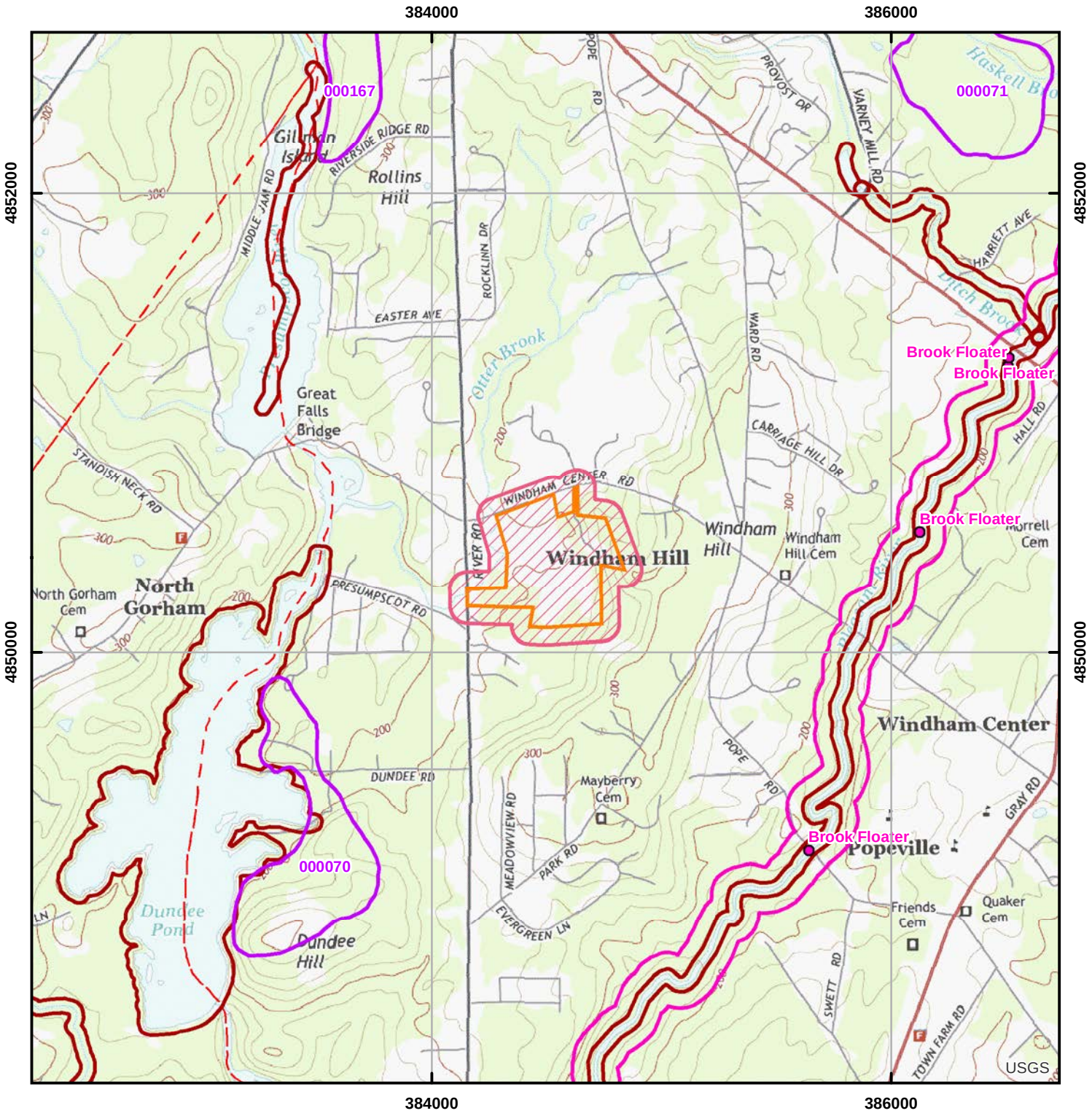
We generally recommend maintaining 100-foot undisturbed vegetated buffers from the upland edge of all intermittent and perennial streams and any contiguous wetlands. Maintaining and enhancing buffers along these resources is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support fish and other aquatic species. Riparian buffers also provide critical habitat and important travel corridors for a variety of wildlife species. Stream crossings should be avoided, but if a stream crossing is necessary, or an existing crossing needs to be modified, it should be designed to provide for full aquatic passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis. Undersized crossings may inhibit these functions and become a frequent maintenance problem that causes reoccurring damage to the resource. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least 1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e. natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in providing habitat connectivity for fish and other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils can travel significant distances as well as transport other pollutants resulting in direct impacts to fish, other aquatic life, and their habitats. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

Becca Settele
Wildlife Biologist



Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: Windham Center Road, Windham (Version 1)

Miles

0 0.125 0.25 0.5 0.75 1

Projection: UTM, NAD83, Zone 19N

Date: 6/24/2022

Maine Department of Inland Fisheries and Wildlife

- ProjectSearchAreas - All Versions
- Maine Cliff and Talus Areas
- Deer Winter Area
- LUPC p-fw
- Cooperative DWAs
- Seabird Nesting Islands
- Shorebird Areas
- Inland Waterfowl and Wading Bird
- 2008 Iwwh - Shoreland Zoning
- Tidal Waterfowl and Wading Bird
- Significant Vernal Pools
- Environmental Review Polygons
- Roseate Tern
- Piping Plover and Least Tern
- Aquatic ETSc - 2.5 mi review
- Rare Mussels - 5 mi review
- Maine Heritage Fish Waters
- Arctic Charr Habitat
- Redfin Pickerel and Swamp Darter Habitats - buffer100ft
- Special Concern occupied habitats - 100ft buffer
- Wild Lake Trout Habitats

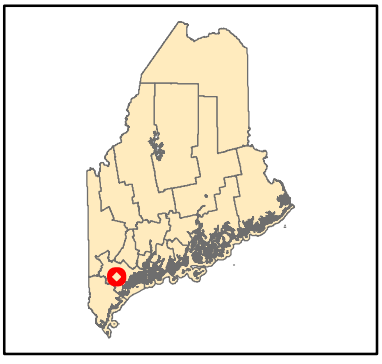


Exhibit 7-4
Vernal Pool Significance Determination

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

July 5, 2022

Thomas Tetreau
Stantec Consulting
30 Park Drive
Topsham, ME 04086

Re: Vernal Pool Significance Determination, Pool ID # 4838–Windham

Dear Thomas Tetreau:

Vernal pools are temporary to semi-permanent wetlands occurring in shallow depressions that typically fill during the spring and dry during the summer or in drought years. They provide important breeding and foraging habitat for a wide variety of specialized wildlife species including several rare, threatened, and endangered species.

Based on your field survey, it has been determined that the vernal pool identified above on the property of RSU 14 is NOT SIGNIFICANT because either: 1. the feature does not meet the definition of a vernal pool under the Significant Wildlife Habitat rules, 06-096 CMR 335(9) or 2. the vernal pool does not meet the biological standards for exceptional wildlife use of the Significant Wildlife Habitat rules, 06-096 CMR 335(9)(B). Therefore, activities within 250 feet of the pool are not regulated under the Natural Resources Protection Act (NRPA) unless there are other protected natural resources nearby such as streams or freshwater wetlands. I have attached a copy of the database printout that verifies the State's findings with respect to your survey.

I want to also advise you that the pool area on the property can be considered a freshwater wetland and therefore direct pool alterations may require permitting under the NRPA.

The Department will notify the landowner of the pool status under separate cover. If you have any questions or need further clarification, please contact Mark Stebbins at 207-592-4810 or email at: Mark.N.Stebbins@maine.gov

Sincerely,

Nicholas D. Livesay, Director
Bureau of Land Resources

cc. town file

IFW Recommendations for Significant Vernal Pool Determinations

The following is a list of pools and IFW's recommendations for whether or not they qualify as Significant Vernal Pools, one of Maine's Significant Wildlife Habitats.

Data current as of: Tuesday, July 05, 2022

IFW's Pool ID: 4838 Twp: Windham
Observer's ID: VP01TT

UTM Coordinates of Pool Center: 384722 E, 4854088 N
ProjectType: Manchester School Site

Landowner:	Bill Hansen - RSU 14	Contact:	Thomas Tetreau - Stantec Consulting
	228 Windham Center Road		30 Park Drive
	Windham, ME 04062		Topsham, ME 04086
	(207) 892-1800 bhansen@rsu14.org		(207) 729-1199 thomas.tetreau@stantec.com

Survey Date: 4/14/2022 Additional Survey Dates: 05/03/2022

IFW's Recommendation: RED: NOT SIGNIFICANT, does not meet the biological criteria

IFW Comments: Pool provides some habitat for wood frogs and spotted salamanders but does not meet biological criteria.

Exhibit 7-5

Wetland and Watercourse Delineation and Vernal Pool Survey Report

Wetland and Watercourse Delineation and Vernal Pool Survey Report

Manchester Elementary School Site – Windham, Maine

June 20, 2022

Prepared for:

Regional School Unit 14
228 Windham Center Road
Windham, ME 04062

Prepared by:

Tom Tetreau, PWS, NHCWS
Stantec Consulting Services Inc.
30 Park Drive
Topsham, ME 04086

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LIST OF APPENDICES

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) was contracted to perform a wetland and watercourse delineation and vernal pool survey on a parcel in Windham, Maine (Project Site). The Project Site is located at the existing school site east of Roosevelt Trail, just south of the intersection of Roosevelt Trail and Tandberg Trail. (Appendix A: Figure 1. Wetland and Watercourse Delineation Map).

On April 14, 2022, Stantec performed on-site wetland delineation, vernal pool survey, and mapping services at the Project Site. Vernal pool second visits were conducted on May 3, 2022. This report includes descriptions of the wetland and watercourse delineation and vernal pool survey methods, results, and an overview of relevant federal and state regulations.

2.0 METHODS

2.1 WETLAND AND WATERCOURSE DELINEATION

Wetlands within the Project Site were identified in accordance with the definitions detailed in Maine State Statute 38 M.R.S.A. Sec. 480-B of the Natural Resources Protection Act (NRPA).[1] Wetland boundaries were determined using the technical criteria described in the United States Army Corps of Engineers (Corps) *Corps of Engineers Wetlands Delineation Manual*[2] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0).*[3] Wetland communities were classified according to the *Classification of Wetlands and Deepwater Habitats of the United States.*[4] Hydric soil determinations were made in accordance with the Corps wetland delineation manuals and the *Field Indicators for Identifying Hydric Soils in New England (Version 4).*[5] Wetlands of Special Significance (WoSS), if present, were identified based on criteria in Chapter 310 of the NRPA[6] and Chapter 335 Significant Wildlife Habitat.[7] Identification of WoSS was limited to observable conditions within the Project Site. Wetland delineations were conducted under seasonally appropriate conditions.

[1] Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-a: Natural Resources Protection Act
[2] Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.
[3] U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0),* ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
[4] *Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.*
[5] New England Hydric Soils Technical Committee. 2017. Field Indicators for Identifying Hydric Soils in New England (Version 4).
[6] Maine Department of Environmental Protection. 26 January 2009. Natural Resources Protection Act Chapter 310: Wetlands and Waterbodies Protection Rules. Bureau of Land and Water Quality, DEPLW0297-D2009.
[7] Maine Department of Environmental Protection. 7 January 2014. Natural Resources Protection Act Chapter 335: Significant Wildlife Habitat.

Watercourses, if present, (e.g., river, stream, or brook) were identified based on the technical guidance available from the Corps on the identification of an ordinary high water mark,[8] definition of a tributary as described in the Clean Water Act,[9] and as detailed in the Maine Department of Environmental Protection (MDEP) watercourse identification guidance document.[10] Typical data collected includes flow regime, bankfull and ordinary high water mark width, dominant substrates, and evidence of biological use.

Each delineated resource was assigned a unique alpha-numeric code. Wetland boundaries and watercourses were not marked in the field. A Global Positioning System (GPS) receiver capable of sub-meter accuracy was used to locate the wetland and watercourse boundaries. Representative photographs were taken of each wetland and watercourse and are included in Appendix C.

2.2 VERNAL POOL SURVEY

Stantec conducted seasonally appropriate vernal pool surveys of the Project Site in 2022. The vernal pool surveys were conducted in accordance with the Maine Association of Wetland Scientists' 2014 Vernal Pool Survey Protocol.[11] The presence, absence, and number of egg masses presented in this report reflect the results of these surveys. The perimeter of the vernal pool basin was located with a GPS receiver. Photographs were taken of the vernal pool identified and are included in Appendix C.

Vernal pools are dynamic habitats that vary in water level, vegetative cover, and other physical characteristics during the course of a year, as well as from year to year. In addition, the breeding activity of amphibians, particularly the initiation of breeding, depends upon seasonal environmental parameters, such as temperature and precipitation. Due to this variability, the presence and number of egg masses may differ between breeding seasons and during a given breeding season. Based on observed field conditions, Stantec determined that the field surveys in 2022 were conducted at an appropriate time of year and coincided with the obligate vernal pool species respective breeding periods.

The surveys involved searching for amphibian breeding activity, primarily the presence of egg masses and use by other vernal pool-dependent species. Information was collected on the physical characteristics of the pool such as the likely hydro-period (i.e., how long surface water will remain in the pool) and the presence and/or type of inlet and outlet. Information on the biological and physical characteristics of the pool was then used to determine if the vernal pool met the criteria of a Significant Vernal Pool (SVP), as defined in Chapter 335 of the NRPA. According to Chapter 335, a vernal pool is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanently flowing inlet

[8] U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter: Ordinary High Water Mark Identification. December 8, 2005. No. 05-05.
[9] U.S. Army Corps of Engineers. 2020. *85 Code of Federal Regulations 22250, "Waters of the United States"*. April 21, 2020.
[10] Danielson, T. J. 2018. Natural Resource Protection Act Streams, Rivers, and Brooks. Maine Department of Environmental Protection, Augusta, ME.
[11] Maine Association of Wetland Scientists Vernal Pool Technical Committee. 2014. Vernal Pool Survey Protocol. April 2014.

or outlet and no viable populations of predatory fish. In addition, an SVP contains one or any combination of the following:

- 40 or more wood frog (*Lithobates sylvaticus*) egg masses;
- 20 or more spotted salamander (*Ambystoma maculatum*) egg masses;
- 10 or more blue-spotted salamander (*Ambystoma laterale*) egg masses;
- Fairy shrimp (*Eubranchipus* spp.); and/or
- Documented use by a state-listed rare, threatened, or endangered species that commonly require a vernal pool to complete a critical portion of their life-history, such as Blanding's turtle (*Emydoidea blandingii*), spotted turtle (*Clemmys guttata*), ringed boghaunter dragonfly (*Williamsonia lintneri*), wood turtle (*Clemmys insculpta*), ribbon snake (*Thamnophis sauritus*), swamp darner dragonfly (*Epiaeschna heros*), and comet darner dragonfly (*Anax longipes*).

The characteristics of the pools were also compared to the regulatory definition of a vernal pool used by the Corps. In Maine, vernal pools are regulated by the Corps according to the Maine General Permit (GP), which provides the following definition for vernal pools:

> *A vernal pool, also referred to as a seasonal forest pool, is a temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet or outlet and no viable populations of predatory fish.*
>
> *A vernal pool may provide the primary breeding habitat for wood frogs (Lithobates [sylvatica] sylvaticus), spotted salamanders (Ambystoma maculatum), blue-spotted salamanders (Ambystoma laterale), and fairy shrimp (Eubranchipus spp.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition. For the purposes of this GP, the presence of any of the following species in any life stage in any abundance level/quantity would designate the waterbody as a vernal pool: fairy shrimp, blue-spotted salamanders, spotted salamanders or wood frogs.*

3.0 SURVEY RESULTS

3.1 GENERAL SITE DESCRIPTION

The Project Site is approximately 25-acres and surrounds the existing Manchester Elementary School building and associated playgrounds and fields. Forested areas are located along the northern and southern boundaries of the site. Topography is generally flat with a slight decrease in elevation along the southern boundary.

The forested upland portions of the Project Site are dominated by mature trees with a relatively sparse understory. Tree species in the upland forested areas include eastern white pine (*Pinus strobus*), northern red oak (*Quercus rubra*), eastern hemlock (*Tsuga canadensis*), and red maple (*Acer rubrum*). The upland sapling and shrub layer is dominated by regenerating species present in the forest canopy, as well as Morrow's honeysuckle (*Lonicera morrowii*). The upland herbaceous layer was sparse at the

time of the delineation and contains bunchberry (*Cornus canadensis*), lowbush blueberry (*Vaccinium angustifolium*), and evergreen wood fern (*Dryopteris intermedia*).

The U.S. Department of Agriculture Soil Survey of Cumberland County, Maine[12] depicts three major soil types within the Project Site: Hinckley gravelly sandy loam (excessively drained), Windsor loamy sand (somewhat excessively drained), and Walpole fine sandy loam (poorly drained).

3.2 WETLAND, WATERCOURSE DELINEATION AND VERNAL POOL SURVEY

During the on-site fieldwork conducted on April 14, 2022, one wetland and one vernal pool were identified within the Project Site. A second visit to the vernal pool was conducted on May 3, 2022, during which time it was determined that the vernal pool did not meet the criteria to be considered a SVP. These results are summarized below. Representative Corps wetland determination data forms were prepared at one location in the wetland and are included in Appendix B. Representative photographs of identified natural resources are included in Appendix C. The Maine State Vernal Pool Assessment Form for the identified vernal pool are included in Appendix D and has been submitted to the Maine Department of Inland Fisheries and Wildlife (MDIFW) for their determination and concurrence that the vernal pool is not a SVP. The MDIFW determination response will be forwarded once received.

Wetland W01TTA is a forested wetland located along the southeastern boundary of the Project Site. The wetland is located in an area of lower elevation than the surrounding landscape that extends off-site. Red maple is the dominant tree species in the wetland. Highbush blueberry (*Vaccinium corymbosum*), common winterberry (*Ilex verticilata*), and red maple make up the sapling and shrub layer. The herbaceous layer was sparse at the time of the delineation and included interrupted fern (Osmunda *claytoniana*) and sensitive fern (*Onoclea sensibilis*). Hydric soils were indicated by the presence of a Histosol with over 20 inches of organic material observed. Hydrology indicators observed at the time of the delineation included saturation at the soil surface, a high water table, surface water, and water stained leaves.

Vernal Pool VP01TT is an approximately 100-foot long by 50-foot wide depression located at the southwestern end of wetland W01TTA. Water depth within the vernal pool ranged from 6 to 12 inches near the edges of the pool, to approximately 3 to 4 feet deep near the center of the pool. Based on the lack of vegetation within the pool's center, the hydroperiod of a portion of the pool may be permanent or semi-permanent. Eight wood frog egg masses were observed on the first and second survey visits. Two spotted salamander egg masses were observed on the second survey visit. No other vernal pool species were observed. The boundary of the vernal pool extends off-site to the south approximately 50 to 75-feet.

[12] Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Available at: http://websoilsurvey.nrcs.usda.gov/. Accessed May 2022.

4.0 WETLAND REGULATIONS

4.1 STATE AND FEDERAL REGULATIONS

The Corps and MDEP regulate the wetlands and waterbodies (e.g., streams) identified within the Project Site. Under the provisions of Section 404 of the Clean Water Act, the Corps regulates dredging or filling within Waters of the United States, which include navigable waters and all their tributaries, adjacent wetlands, and other waters or wetlands where degradation or destruction could affect interstate or foreign commerce. The Corps has recently reissued a GP for the State of Maine (October 13, 2020) that merges the federal and state permit review process for many projects.

In Maine, wetlands and waterbodies, as well as other protected natural resources, are regulated under 38 M.R.S.A. §§ 480-A – 480-JJ, the NRPA. Projects that do not impact a wetland or projects that impact less than 4,300 square feet of wetland are usually exempt from state NRPA Tier permitting requirements. This exemption does not apply if the impact is:

1. in, on, or over a coastal wetland, great pond, river, stream, or brook;
2. within 25 feet of those resources identified above, or is more than 25 feet and no erosion control is used;
3. in a shoreland zone or a wetland protected by the shoreland zone;
4. part of a wetland with more than 20,000 square feet of open water or emergent vegetation, except artificial impoundments;
5. in a peatland;
6. part of a larger project; or
7. in Significant Wildlife Habitat.

Typically, projects with cumulative impacts to freshwater wetlands between 4,300 but less 15,000 square feet are eligible for review under the Tier 1 NRPA permitting process. Wetland alterations between 0 and 15,000 square feet require a Corps Self Verification Form submittal, assuming the project meets the thresholds for activities for this level of review. Alterations that affect between 15,000 and 43,560 square feet (1 acre) of freshwater wetlands are eligible for the NRPA Tier 2 review process and Corps Pre-Construction Notification. Cumulative freshwater wetland impacts that exceed 1 acre typically require a NRPA Tier 3 review. Impacts to WoSS, rivers, streams and brooks, great ponds, and Significant Wildlife Habitat typically require an Individual Corps Permit. Specifics of how the agencies will regulate this Project can be determined with preliminary plans and consultation with the agencies.

Based on observations made during the wetland delineation and vernal pool survey, wetland W01TTA would not be considered a WoSS.

Full identification of WoSS involves contacting natural resource agencies such as the Maine Natural Areas Program (MNAP), MDIFW, and MDEP to determine if there are any documented occurrences of rare, threatened, or endangered species and communities within or in the vicinity of the Project Site. Stantec is initiating these consultations and responses will be forwarded once received.

4.2 VERNAL POOLS

Maine NRPA Chapter 335, Significant Wildlife Habitat, regulates SVPs as Significant Wildlife Habitat. Chapter 335 details specific definitions and standards regarding characterization and protection of SVPs in Maine.

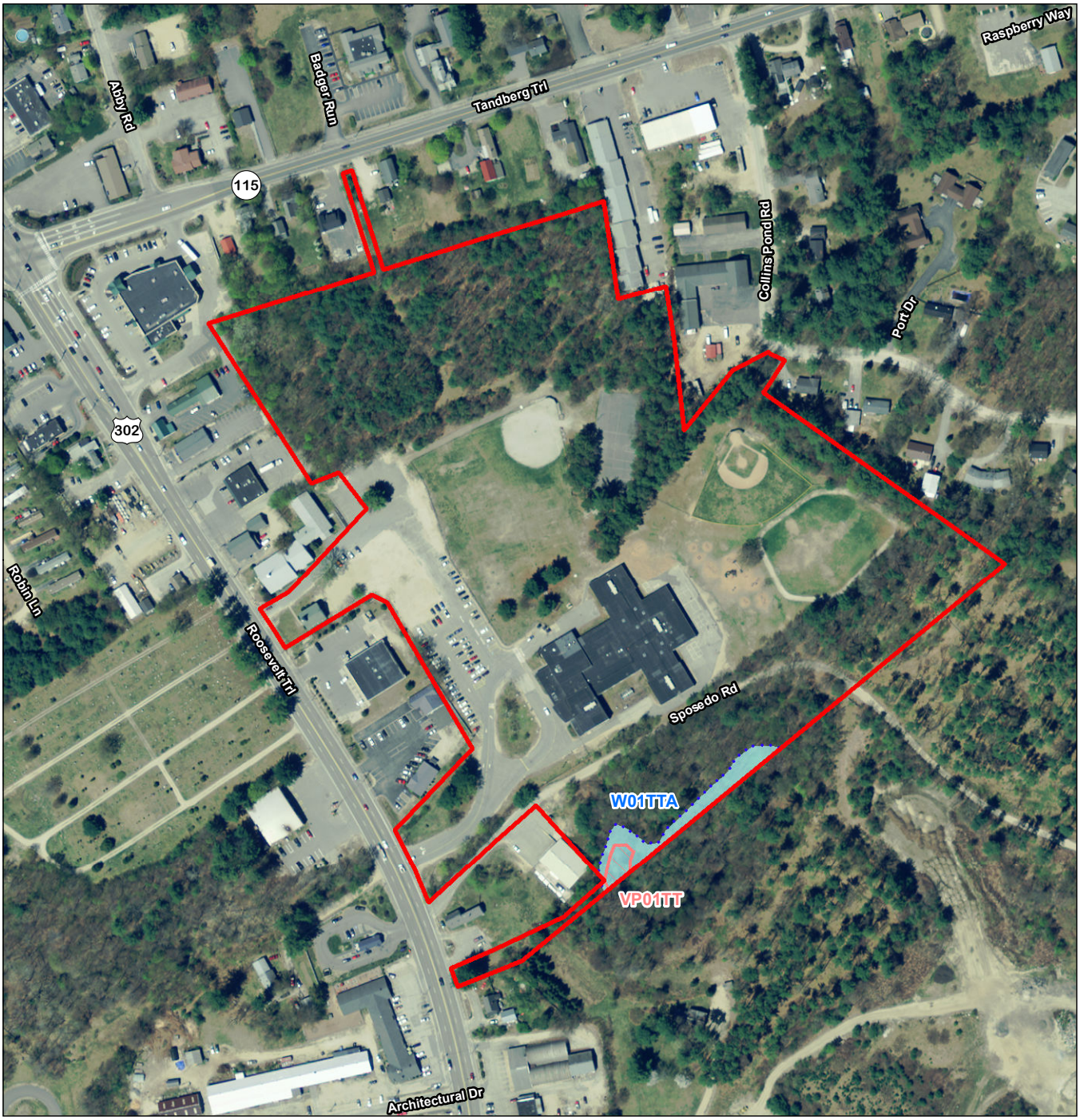
Certain development projects in Maine may also be regulated under Chapter 375, Site Location of Development Act (Site Law). Under Site Law, MDEP may regulate vernal pools that are ecologically significant on a landscape level but do not meet the definition of an SVP. Under some circumstances, MDEP will review and possibly limit development within or beyond 250 feet of these high-functioning vernal pools.

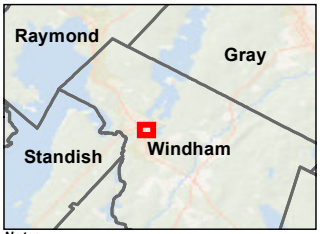
The vernal pool meets the Corps definition of a vernal pool. The Corps update to the GP, which went into effect in October 2020, indicates that the Corps only regulates impacts to vernal pools if the pool is (a) located within a jurisdictional wetland and (b) there is a discharge of dredged or fill material proposed for the vernal pool depression. Only in the case that both (a) and (b) are met would compensatory mitigation potentially be required.

Based on Stantec's survey, vernal pool VP01TT would not be considered an SVP because it does not have a sufficient number of egg masses to be considered an SVP and may also be partially permanent. Under the NRPA, MDEP would treat impacts to the vernal pool the same as wetland impacts. Impacts to vernal pool would be regulated by the Corps and it is recommended that the vernal pool depression be avoided. Impacts to the vernal pool depression would likely trigger compensation for the impacts within the pool itself, as well as impacts within 750-feet of the vernal pool.

APPENDICES

Appendix A FIGURES





Legend
- Vernal Pool Boundary
- Delineated Wetland
- Delineation Boundary

0 300 Feet

(At original document size of 8.5x11)
1:3,600

N

Stantec

Notes

1. Recon wetland resources were identified from limited onsite field observations. The results are approximate and should be used for planning purposes only.
2. Wetland boundaries and streams were located utilizing an EOS Arrow GNSS/GPS Receiver. Expected accuracy of GPS data is within 1-2 meters of actual position.
3. Coordinate System: NAD 1983 StatePlane Maine West FIPS 1802 Feet
4. Data Sources: Base features obtained from the Maine Office of GIS (MEGIS).
5. Background: Maine Orthoimagery Regional, 2018

Project Location
Windham, Maine

Prepared by PWB on 2022-05-13
TR Review by GC on 2022-05-13
IR Review by TT on 2022-05-13

Client/Project
195211595

RSU 14 Windham Raymond Schools
Manchester School

Figure No.
1

Title
Wetland and Watercourse Delineation Map

Appendix B CORPS WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Windham School Sites City/County: Windham/Cumberland Sampling Date: 4/14/2022

Applicant/Owner: RSU 14 State: ME Sampling Point: Upland

Investigator(s): Tom Tetreau Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 2 - 3

Subregion (LRR or MLRA): LRR R Lat: 43.831449 Long: -70.433097 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Is the Sampled Area within a Wetland? Yes No X

if yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes	No X	Depth (inches)
Saturation Present?	Yes	No X	Depth (inches)

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W01TTA**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	35	X	FAC
Pinus strobus	10	X	FACU
Fagus grandifolia	5		FACU
	50	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Pinus strobus	15	X	FACU
Acer rubrum	10	X	FAC
Fagus grandifolia	10	X	FACU
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Parathelypteris noveboracensis	10	X	FAC
Dryopteris intermedia	5	X	FAC
Pinus strobus	3		FACU
	18	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	60	x 3	180	
FACU species	43	x 4	172	
UPL species	0	x 5	0	
Column Totals	103	(A)	352	(B)

Prevalence Index = B/A = 3.42

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-W01TTA**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-18	5YR 3/3	100					Peat	
18-22	10YR 3/3	100					Peat	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Windham School Sites City/County: Windham/Cumberland Sampling Date: 4/14/2022

Applicant/Owner: RSU 14 State: ME Sampling Point: Wetland

Investigator(s): Tom Tetreau Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 1

Subregion (LRR or MLRA): LRR R Lat: 43.831343 Long: -70.432967 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	if yes, optional Wetland Site ID: W01TTA
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsley Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	
Water Table Present?	Yes X	No ____	Depth (inches) 1	Wetland Hydrology Present? Yes X No ____
Saturation Present?	Yes X	No ____	Depth (inches) 0	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W01TTA**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	60	X	FAC
Fagus grandifolia	5		FACU
	65	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	20	X	FAC
Pinus strobus	10	X	FACU
Vaccinium corymbosum	10	X	FACW
Fagus grandifolia	5		FACU
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vaccinium corymbosum	5	X	FACW
Dryopteris intermedia	5	X	FAC
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	15	x 2	30	
FAC species	85	x 3	255	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	120	(A)	365	(B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- ___ 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-W01TTA**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-12	10YR 2/2	100					Peaty Muck	
12-20	5YR 3/3	100					Mucky Peat	

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Appendix C REPRESENTATIVE PHOTOGRAPHS

Photo 1. Upland forest in the northern portion of the Project Site.
Stantec, April 14, 2022.

Photo 2. Upland area near the northeast boundary of the Project Site.
Stantec, April 14, 2022.

Photo 3. Upland area near the eastern boundary of the Project Site, near Sposedo Road.
Stantec, April 14, 2022.

Photo 4. Northeastern portion of wetland W01TTA.
Stantec, April 14, 2022.

Photo 5. Southwestern portion of wetland W01TTA and vernal pool VP01TTA.
Stantec, April 14, 2022.

Photo 6. Vernal pool VP01TT.
Stantec, May 3, 2022.

Photo 7. Off-site portion of vernal pool VP01TT.
Stantec, May 3, 2022.

Appendix D MAINE STATE VERNAL POOL ASSESSMENT FORMS

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: VP01TT **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Tom Tetreau

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

c. Project Name: Manchester School Site

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ◉ Yes ○ No

b. Landowner's contact information (required)

Name: Bill Hansen, RSU 14 Phone: (207) 892-1800 E-mail: bhansen@rsu14.org

Street Address: 228 Windham Center Road City: Windham State: ME Zip: 04062

c. ☐ Large Projects: check if separate project landowner data file submitted

The Maine Department of Environmental Protection will e-mail official status letters to the project contact and landowner. Please check these data for completeness and accuracy to prevent delay in mailings. E-mail is the preferred method of notification; please provide e-mail addresses for the project contact and the landowner when available.

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Windham

Brief site directions to the pool (using mapped landmarks):

From the red plumbing supply building near the intersection of Route 302 and Sposedo Road, the pool is directly behind the eastern corner of the building.

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -70.433758 Latitude/Northing: 43.830858

Coordinate system: NAD83

Check one: ◉ GIS shapefile (Best)
- send to VernalPool.MDIFW@maine.gov; observer has reviewed shape accuracy

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ◉ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☑ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☑ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ◉ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ◉ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Center of pool is quite deep with no vegetation visible. Edges are shallower and contain terrestrial vegetation.

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ◉ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 50 ○ m ◉ ft Length: 100 ○ m ◉ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ◉ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☑ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☑ Wet site ferns (e.g. royal fern, marsh fern)
- ☑ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☑ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ◉ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/14/22, 5/3/22

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◉ Yes ○ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	8	8		3	3		M	A							
Spotted Salamander	0	2		3	3		-	M							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☑ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool extends approximately 50 feet beyond parcel boundary, but whole pool was surveyed (boundary line not visible in field).

Send completed form and supporting documentation to: VernalPool.MDIFW@maine.gov

NOTE: Digital submissions are preferred but if not possible, please mail to: Maine Department of Inland Fisheries and Wildlife
Attn: Vernal Pools
106 Hogan Road, Suite 1
Bangor, ME 04401

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Photo 1. VP01TT, natural pool in forested wetland.
Stantec, April 14, 2022.

Photo 2. Off-site portion of VP01TT.
Stantec, April 14, 2022.

Photo 3. Wood frog egg masses in VP01TT.
Stantec, April 14, 2022.

Photo 4. Spotted salamander egg mass in VP01TT.
Stantec, April 14, 2022.

SECTION 16

WATER SUPPLY

16.0 Overview

The existing Manchester School will continue to be served by a connection to the public water main on Route 302. Water for irrigation to the new play fields will also be provided from the Portland Water District's public water main on Route 302. A backflow preventor will be installed on the irrigation supply line.

16.1 Usage

The maximum daily flow anticipated to be required at full build-out of the Manchester School is calculated as follows:

Water Supply for Students and Staff:
600 Students at 18 gpd = 10,800 gpd (School with Gym and Cafeteria per Table 4C Maine Subsurface Disposal Rules)
80 Staff at 12 gpd = 960 gpd
Total Maximum Daily Flow 11,760 gpd

Irrigation requirements have been estimated as shown in the attached computations and are estimated at 111 gallons/minute peak with a nightly use of about 53,000 gallons per night.

This is based upon an assumption that the irrigation is applied over an 8-hour period each night of the week.

16.2 Ability to Serve

The Portland Water District has provided an e-mail concerning their ability to serve the project. The e-mail is attached and contains supplemental information used for planning and design of the project.

16.3 Exhibits

Exhibit 16-1	Portland Water District Correspondence dated 11/29/2022
Exhibit 16-2	Computation of Irrigation Volumes

Exhibit 16-1
Portland Water District Correspondence

From: Andrew Weaver
To: Anderson, Dwight
Cc: Greg Pellerin; Robert Bartels
Subject: 709 Roosevelt Trail, Windham - PWD Water & Sewer Capacity
Date: Tuesday, November 29, 2022 8:47:31 AM
Attachments: WI - 709 Roosevelt Trail - Infrastructure Map - 2022.pdf

Hello Mr. Anderson,

This email does not give final approval of the proposed water and sewer services from PWD, however it can be used to satisfy Site Law Statute §484 - Standards for Development, Site Law Rule Chapter 375(18), and Site Law Rule Chapter 375(6) granted that the applicant meet all applicable standards set forth by DEP. Attached is a copy of PWD's infrastructure map noting the location, type, and size of the public water and wastewater infrastructure near your site, demonstrating a sufficient- and healthful water supply exists, and sewerage facilities may be utilized by the development. Based on the demand provided by the applicant, the district has sufficient supply to serve the proposed water and sewer services and adequate capacity to ensure satisfactory treatment without an unreasonable adverse impact on the infrastructure shown in the attached Infrastructure Map, as long as the proposed water and sewer services are designed and installed in accordance with PWD standards. This email shall serve as PWD's acknowledgement of the project and the start of design coordination with the development team; In no way shall this information be interpreted as a determination of PWD's ability to serve the project at this time as this is only a determination of the capacity of the existing system based on the proposed development. As your project progresses, we require that you submit design plans to MEANS for review of the proposed water and wastewater improvements. An Ability to Serve Determination letter is required from the District in order to receive final approval from the District and the municipality having jurisdiction.

Please let me know if you have any questions.

Andrew Weaver
Associate Engineer
Portland Water District
Phone:
E-mail: aweaver@pwd.org
http://www.pwd.org

Exhibit 16-2
Computation of Irrigation Volumes

COMPUTATION OF IRRIGATION VOLUMES/RATES

Manchester School Play Fields

(Based upon 1.5 Inches of Water/Week)

Irrigation Areas (includes a 10 ft. safety zone)

Lacrosse/Soccer Field:	87,100 s.f.
Softball FIeld:	32,987 s.f.
Utility Field with LL and SB Field:	99,600 s.f.
Little League Field:	34,165 s.f.
Total:	253,852 s.f
Average:	63,463 s.f

$$253{,}852 \text{ s.f.} \times \frac{1.5"}{12} = 31{,}731.5 \text{ c.f./week} = 237{,}352 \text{ gallons/week}$$

If applied in 56 hours (*8 hrs per night*) this requires 70.6 gpm.

But adjust for largest field 70.6 gpm x $\frac{99{,}600}{63{,}463}$ = 111 gpm or 53,185 gallons per night

SECTION 17

WASTEWATER DISPOSAL

17.0 Overview

The existing Manchester School will continue to be served through June/July of 2025 by an existing subsurface disposal system approved by the MeDEP for 450 students as documented in Exhibit 17-1. The Portland Water District (PWD) is in the process of designing and permitting a new WWTF to the south of the RSU 14 property which the PWD has indicated will have capacity to serve the Manchester School beginning in August of 2025 as documented in Exhibit 17-2. Effluent from the PWD's WWTF will discharge on RSU 14 property via a drip dispersal system as shown on the project drawings and in compliance with the MeDEP permit not yet issued to the PWD for the WWTF.

17.1 Usage

The maximum daily flows anticipated to be required at full build-out of the Manchester School is calculated as follows:

Design flow for Students and Staff:

600 Students at 18 gpd = 10,800 gpd (School with Gym and Cafeteria per Table 4C Maine Subsurface Disposal Rules)

80 Staff at 12 gpd = 960 gpd

Total Maximum Daily Flow 11,760 gpd

The maximum daily flow within the last 2 years was calculated to be 3,209 gpd (Exhibit 17-3). The design flow of 4,420 gpd (Exhibit 17-1) exceeds the calculated maximum daily flow.

17.2 Ability to Serve

The Portland Water District has provided an e-mail concerning their ability to serve the project. The e-mail is attached and contains supplemental information used for planning and design of the project.

17.3 Exhibits

Exhibit 17-1	MeDEP Subsurface System Approval for current sanitary flow dated 03/31/1998
Exhibit 17-2	Portland Water District Correspondence dated 11/29/2022 for future sanitary flows
Exhibit 17-3	Portland Water District Monthly Water Consumption Data for Manchester School, dated 10/13/2020 to 10/13/2022

Exhibit 17-1
MeDEP Subsurface System Approval

STATE OF MAINE
DEPARTMENT OF HUMAN SERVICES
11 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0011

ANGUS S. KING, JR.
GOVERNOR

KEVIN W. CONCANNON
COMMISSIONER

March 31, 1998

98102

Pinkham & Greer
Attn.: Allan L. Burnell, SE
170 Route One
Falmouth, Maine 04105

Subject: Manchester and Arlington Schools, Town of Windham

Dear Mr. Burnell:

Thank you for your letter of February 23, 1998. I apologize for taking so long to respond.

In your letter, you stated that the Town of Windham is considering an expansion of the Manchester Elementary School, to accommodate 450 students. The existing onsite sewage disposal system was installed in 1973. You provided a copy of an as-installed plan for the system, which shows a trench-style disposal area, a dual discharge cycle pump station, and a 12,000 gallon septic tank. You calculated the effective infiltrate surface of the system at 11,492 square feet, and determined that soils on the site are 5-B and 6-B per the Maine State Plumbing Code, Subsurface Wastewater Disposal Rules (Rules). Based upon the more conservative sizing criterion of 5-B soils, you calculated that the existing system could accommodate 4,420 gallons per day (gpd) design flow. According to 12 months of water use records you provided, the Manchester School and the Arlington School, which also uses the system, generate a combined average flow of 2,080 gpd.

You have asked that the Division review the data mentioned above and indicate whether the Division concurs with your conclusions.

Based upon your letter, the as-built plan for the existing system, and the water use records, the Division agrees with your calculations, and with your conclusion that the existing system could accommodate as much as 4,420 gpd of wastewater under current provisions of the Rules. Absent local ordinances or regulations to the contrary, the Division concurs that the system could accommodate the proposed expansion of the Manchester School. Water use records should be continued to be kept, to ensure that the actual flow does not exceed the design limits.

If you have any questions please feel free to contact me at (207) 287-5695.

Sincerely,

James A. Jacobsen

James A. Jacobsen, Manager
Wastewater and Plumbing Control Program
Division of Health Engineering
e-mail: james.jacobsen@state.me.us

xc: File

Exhibit 17-2
Portland Water District Correspondence

From: Andrew Weaver
To: Anderson, Dwight
Cc: Greg Pellerin; Robert Bartels
Subject: 709 Roosevelt Trail, Windham - PWD Water & Sewer Capacity
Date: Tuesday, November 29, 2022 8:47:31 AM
Attachments: WI - 709 Roosevelt Trail - Infrastructure Map - 2022.pdf

Hello Mr. Anderson,

This email does not give final approval of the proposed water and sewer services from PWD, however it can be used to satisfy Site Law Statute §484 - Standards for Development, Site Law Rule Chapter 375(18), and Site Law Rule Chapter 375(6) granted that the applicant meet all applicable standards set forth by DEP. Attached is a copy of PWD's infrastructure map noting the location, type, and size of the public water and wastewater infrastructure near your site, demonstrating a sufficient- and healthful water supply exists, and sewerage facilities may be utilized by the development. Based on the demand provided by the applicant, the district has sufficient supply to serve the proposed water and sewer services and adequate capacity to ensure satisfactory treatment without an unreasonable adverse impact on the infrastructure shown in the attached Infrastructure Map, as long as the proposed water and sewer services are designed and installed in accordance with PWD standards. This email shall serve as PWD's acknowledgement of the project and the start of design coordination with the development team; In no way shall this information be interpreted as a determination of PWD's ability to serve the project at this time as this is only a determination of the capacity of the existing system based on the proposed development. As your project progresses, we require that you submit design plans to MEANS for review of the proposed water and wastewater improvements. An Ability to Serve Determination letter is required from the District in order to receive final approval from the District and the municipality having jurisdiction.

Please let me know if you have any questions.

Andrew Weaver
Associate Engineer
Portland Water District
Phone:
E-mail: aweaver@pwd.org
http://www.pwd.org

Exhibit 17-3

Portland Water District Monthly Water Consumption Data for Manchester School

Monthly Consumption
Manchester Elementary School
709 Roosevelt Trail, Windham

Read Date	**Consumption Volume** *HCF*	**Monthly** *GPD*	**Days**	**Average Daily Flow** *GPD*	**Adjusted for 5 day flow** *GPD*
10/13/2022	95	71060	31	2292	3209
9/12/2022	26	19448	32	608	851
8/11/2022	17	12716	29	438	614
7/13/2022	15	11220	27	416	582
6/16/2022	74	55352	34	1628	2279
5/13/2022	37	27676	29	954	1336
4/14/2022	43	32164	29	1109	1553
3/16/2022	36	26928	30	898	1257
2/14/2022	37	27676	31	893	1250
1/14/2022	35	26180	37	708	991
12/8/2021	34	25432	26	978	1369
11/12/2021	45	33660	28	1202	1683
10/15/2021	58	43384	38	1142	1598
9/7/2021	21	15708	29	542	758
8/9/2021	15	11220	27	416	582
7/13/2021	18	13464	28	481	673
6/15/2021	44	32912	35	940	1316
5/11/2021	23	17204	26	662	926
4/15/2021	35	26180	34	770	1078
3/12/2021	24	17952	30	598	838
2/10/2021	22	16456	26	633	886
1/15/2021	19	14212	31	458	642
12/15/2020	24	17952	32	561	785
11/13/2020	28	20944	31	676	946
10/13/2020	29				

Max Daily for Last 2 years = 3,209 GPD

Town of Windham Manchester School Site Access, Parking, Playfields and Utility Improvements

Abbuters List

Map/Block/Lot	Parcel Address	Owner	Co-Owner	Address	City	State	Zip
54/ 44/ / /	Taylor Ln	Irt Properties Llc		15 Taylor Lane	Windham	Maine	04062
53/ 33/ A/ /	690 Roosevelt Tr	Ademi Llc		102 Yale St	Portland	Maine	04103
54/ 1/ / /	704 Roosevelt Tr	J & K Investments Llc		8 Duffy Drive	Windham	Maine	04062
54/ 2/ / /	708 Roosevelt Tr	Cidre Kevin L &	Cidre Rebecca L	708 Roosevelt Trail	Windham	Maine	04062
54/ 4/ / /	701 Roosevelt Tr	Debree David E &	Debree Lee Anne	701 Roosevelt Trail	Windham	Maine	04062
54/ 5/ A/ /	5 Sposedo Rd	Spike Houck 314 Llc		46 Southern Ave	Spruce Head	Maine	04859
54/ 6/ C/ /	17 Collins Pond Rd	Roghelia Richard L Jr		17 Collins Pond Road	Windham	Maine	04062
54/ 6/ C01/ /	15 Collins Pond Rd	Saucier-Tugman Angela		15 Collins Pond Rd	Windham	Maine	04062
54/ 6/ D01/ /	23 Collins Pond Rd	Walker Jotham H &	Walker Kathleen M	23 Collins Pond Road	Windham	Maine	04062
54/ 6/ D06/ /	21 Collins Pond Rd	Masters Nancy D &	Tubbs Brenda L	21 Collins Pond Road	Windham	Maine	04062
54/ 6/ D07/ /	25 Collins Pond Rd	Rancourt Kevin J		25 Collins Pond Rd	Windham	Maine	04062
54/ 49/ / /	10 Collins Pond Rd	Damon Richard G &	Damon Debra J	10 Collins Pond Rd	Windham	Maine	04062
54/ 67/ 2/ A/	7 Collins Pond Rd	Shad Enterprises Llc		92 Mayberry Road	Gray	Maine	04039
54/ 67/ 2/ A01/	11 Collins Pond Rd	Shad Enterprises Llc		11 Collins Pond Road	Windham	Maine	04062
67/ 2/ / /	95 Tandberg Tr	C B P Llc		43 Pilgrim Road	Standish	Maine	04084
67/ 3/ / /	91 Tandberg Tr	Three Stones Llc		225 Pope Road	Windham	Maine	04062
67/ 5/ / /	89 Tandberg Tr	Kec Properties Llc	C/O Ken Clark	135 Trails End Road	Windham	Maine	04062
67/ 6/ A/ /	85 Tandberg Tr	Fortier Cathy L		85 Tandberg Tr	Windham	Maine	04062
67/ 7/ / /	81 Tandberg Tr	Bennett Aaron S		1426 Islington St	Portsmouth	New Hampshire	03801-4238
67/ 8/ / /	79 Tandberg Tr	Jack And Rose Llc		780 Broadway	South Portland	Maine	04106
67/ 9/ / /	77 Tandberg Tr	Sawyer David H		77 Tandberg Trail	Windham	Maine	04062
67/ 10/ / /	75 Tandberg Tr	75 Tandberg Trail Llc		37 Shaw Acres Ext	Standish	Maine	04084
67/ 14/ / /	741 Roosevelt Tr	485 Windham Llc	C/O Walgreen Co #10428	Po Box 901	Deerfield	Illinois	60015
67/ 17/ / /	731 Roosevelt Tr	Sabattus Property	Management Llc	1 Militia Dr Suite 203	Lexington	Massacusetts	02421
67/ 18/ / /	727 Roosevelt Tr	Dominic Reali Realty Llc	C/O Amatos Sandwich Shops Inc	312 St John St, 2nd Floor	Portland	Maine	04102
67/ 19/ / /	725 Roosevelt Tr	Heidrich Eleanor		434 Main Street	Oxford	Maine	04270
67/ 20/ / /	723 Roosevelt Tr	No Windham Union Church		723 Roosevelt Trail	Windham	Maine	04062
67/ 21/ / /	709 Roosevelt Tr	Regional School Unit No 14	Manchester Schl & Little Meetng Hse	228 Windham Center Road	Windham	Maine	04062
67/ 22/ / /	715 Roosevelt Tr	Advance Stores Company Incorporated		5008 Airport Rd, Pob 2710	Roanoke	Virginia	24012
67/ 24/ / /	718-720 Roosevelt Tr	Town Of Windham	Arlington Cemetery/No Windham Fire Station	8 School Road	Windham	Maine	04062
67/ 80/ / /	2,4,6,8,10 Badger Run	Robie Holdings Llc		Po Box 1508	Windham	Maine	04062
67/ 81/ / /	86 Tandberg Tr	Southern Maine Alternative	To Residential Treatment	Po Box 1360	Windham	Maine	04062-1360
54/ 46/ A01/ /	6 Port Dr	Livingston Charles T &	Livingston Susan G	6 Port Drive	Windham	Maine	04062
54/ 46/ A03/ /	9 Port Dr	Carson Sandra L		9 Port Dr	Windham	Maine	04062
54/ 46/ A02/ /	8 Port Dr	Ham Frank G		8 Port Dr	Windham	Maine	04062
67/ 80/ 1/ /	1 Badger Run	Keeper-Windham Llc		One City Center, 4th Floor	Portland	Maine	04101
54/ 46/ A04/ /	7 Port Dr	Guerin Susan		7 Port Drive	Windham	Maine	04062
67/ 16/ 1/ /	733 Roosevelt Tr #1	Great Maine Day Llc		7 Edgewater Dr	Scarborough	Maine	04074
67/ 16/ 2/ /	733 Roosevelt Tr #2	Great Day Maine Llc		7 Edgewater Drive	Scarborough	Maine	04074
67/ 16/ 4/ /	733 Roosevelt Tr #4	Roux Raymond R Revoc Trust &	Roux Jacqueline A Revoc Trust	6 Jeffrey Woods Road	Windham	Maine	04062
67/ 16/ 3/ /	733 Roosevelt Tr #3	Roux Raymond R Revoc Trust &	Roux Jacqueline A Revoc Trust	6 Jeffrey Woods Road	Windham	Maine	04062
54/ 5/ A01/ /	705 Roosevelt Tr	Wilmot Abram J		765 Roosevelt Tr #16	Windham	Maine	04062
67/ 23/ 1/ /	711 Roosevelt Tr	M R S Of Maine Llc		Po Box 1810	Windham	Maine	04062
67/ 23/ 2/ /	713 Roosevelt Tr	Windham Modbl Llc		713 Roosevelt Tr	Windham	Maine	04062
54/ 44/ A/ /	10 Taylor Ln	Taylor Jeffrey T		10 Taylor Lane	Windham	Maine	04062
45/ 4/ / /	8 School Rd	Town of Windham	Town Office	8 School Road	Windham	Maine	04062

TRUCK MOVEMENT EXHIBIT – 45 FOOT LADDER TRUCK

BLACK – VEHICLE

YELLOW – TIRES

MAGENTA – VEHICLE PATH

GREEN – BODY PATH

ORANGE – FRONT WHEEL PATH

RED – REAR WHEEL PATH

MANCHESTER ELEMENTARY SCH
(400 STUDENTS / 60 ST

approximate septic field

approximate septic field

TANDBERG TRAIL
ROUTE #115

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.