



The Palmer Center

at Alvirne High School
200 Derry Road
Hudson, NH 03051
603-886-1237

Eric Frauwirth
CTE Director



TO: Elvis Dhima, P.E., Town Engineer
Brian Groth, AICP, Town Planner
Planning Board
School Board
Board of Selectmen

RECEIVED

MAY 18 2022

**TOWN OF HUDSON
PLANNING DEPARTMENT**

FROM: Ben Marshall, Forestry & Wildlife Instructor
Eric Frauwirth, CTE Director

DATE: May 2, 2022

RE: Proposed asphalt pad for forestry

We are requesting your support/approval for the construction of a poured pad to house two shipping containers and associated structure to contain forestry equipment and saw mill.

Currently the Palmer Center is conducting timber harvesting, agriculture and sawmill related activities adjacent to the area marked on the plan, please see attachment. This is currently done at an open and unlevelled field, while the students, equipment and instructors are subject to weather elements. Our intent is to grade and construct a level pad, approximately 50 feet by 100 feet, which will provide a solid and level surface for our operations. We are hoping that this area will eventually be paved in the near future, through a donation by companies that work in or around Town of Hudson.

In addition, our future plans include adding a pole barn erected building with the help of building trades and donations. This structure will be approximately 30 feet by 40 feet and will provide better and safer storage conditions for our equipment and logs, in addition to providing the students with the ability to mill during inclement weather. In completing this project, students will have a safer work environment, better hands-on experience with the small-scale sawmill industry, an industry that is thriving in New Hampshire.

Per RSA 674:54, see attachment, this project is classified as "governmental use" and therefore is exempt from local land use ordinance and regulations. The project is scheduled to start construction in late May 2022.



Approximate Location of Proposed Work (50' X 100')

Denny Rd

0 20 40 FT
-71.535833, 42.816250



TOWN OF HUDSON

Engineering Department



12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-816-1291

TO: Brian Groth, AICP, Town Planner
Planning Board

FROM: Elvis Dhima, P.E., Town Engineer

DATE: May 25, 2022

RE: Proposed Booster Station Upgrades

The Town Marsh Road water booster station is currently underground and in need of upgrades. This metal structure is located within the same easement that the Marsh Road water storage tank is located and it was installed in the 70s.

The proposed work will consist removing the booster pumps that are located underground and install a new pre-fabricated building which will house the new pumps and control system. This upgrade will address our current needs for domestic and fire services required for the service area. Please see attached plan for additional information.

In addition, a secondary communication system will be installed and it will consist of a 60 foot tall antenna installation at the site. This will provide the Town with the ability to communicate through the radio equipment in case the wireless routers get compromised or hacked.

Per RSA 674:54, see attachment, this project is classified as “governmental use” and therefore is exempt from local land use ordinance and regulations. The project is scheduled to start construction in late July 2022.



Vector Solutions
 Vector Solutions, Inc.
 100 Park Avenue, Suite 100
 Paramus, NY 10765
 TEL: 212-261-1000
 www.vectorsolutions.com

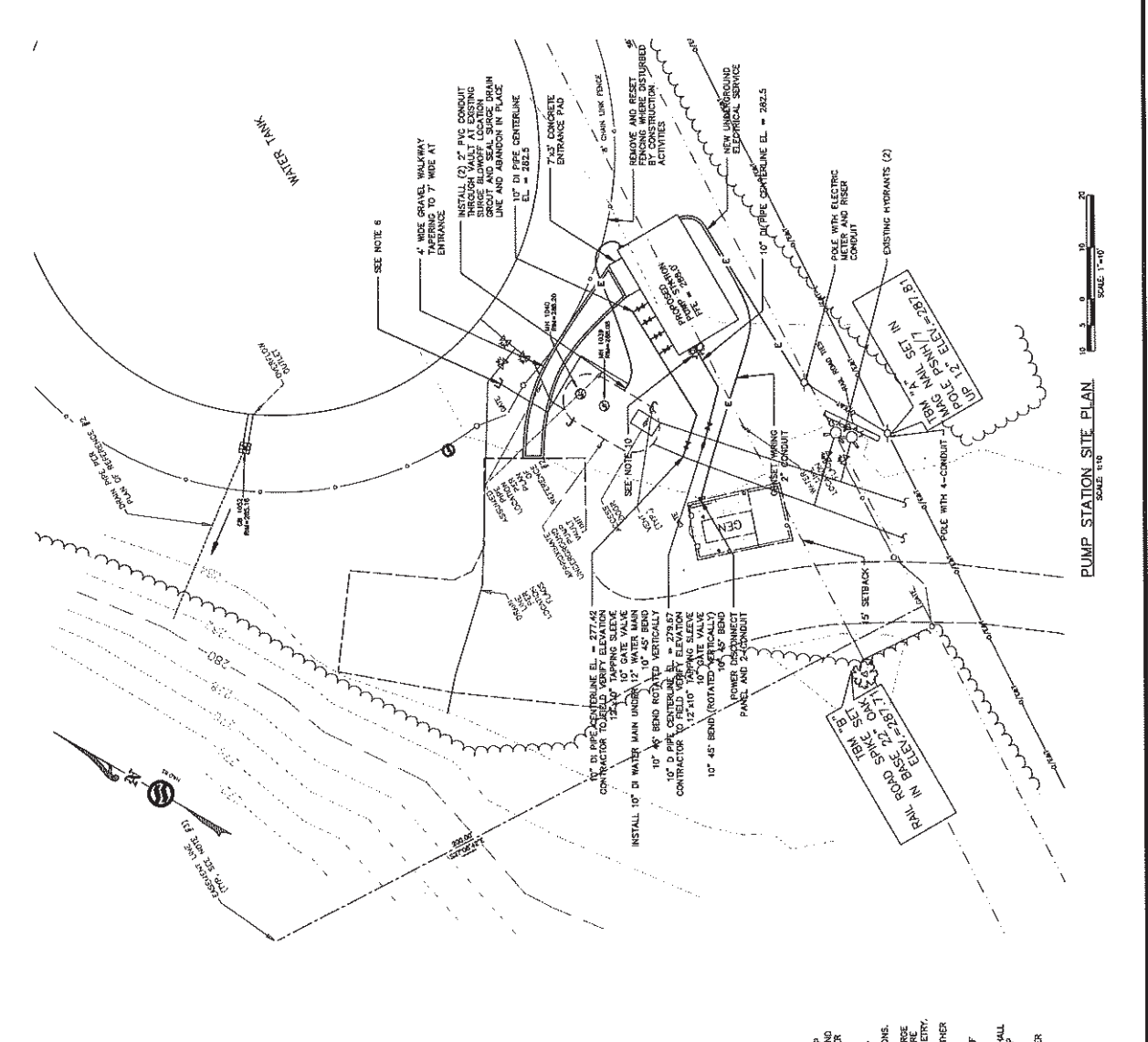
No.	Date	Description

DRAFT DOCUMENTS

DATE: 07/20/22
 DRAWN BY: JPK
 CHECKED BY: JPK
 APPROVED BY: JPK
 943 Project No.: DMS2-0301
 943 Rev. No.: 047-100

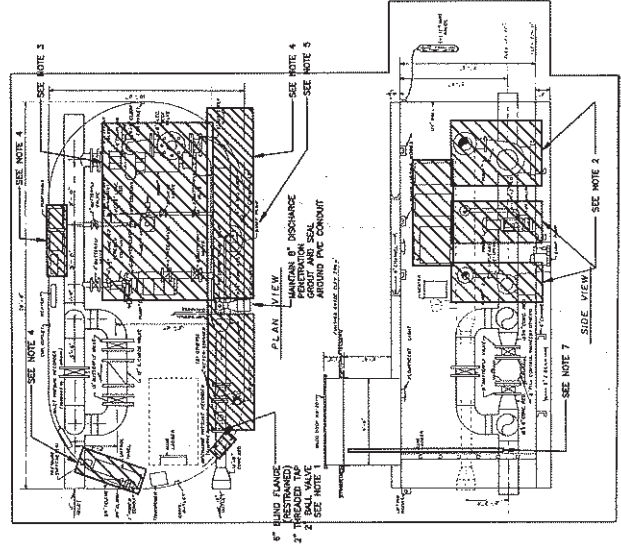
MARSH ROAD PUMP STATION - DEMOLITION & SITE PLAN

C001



DRAWING INDEX

SHEET	TITLE
C001	MARSH ROAD PUMP STATION - DEMOLITION & SITE PLAN
M001	MARSH ROAD PUMP STATION - PROCESS PLAN
M002	MARSH ROAD PUMP STATION - ELEVATION VIEWS
S001	GENERAL NOTES 1
S101	FOUNDATION PLAN
E800	ELECTRICAL ONE LINE



MECHANICAL DEMO PLAN
 SCALE: N.T.S.

- NOTES:**
1. REMEDIATION WORK TO BE CONSIDERED UPON FINAL COMPLETION OF PUMP STATION CONSTRUCTION. FINAL COMPLETION SHALL INCLUDE ACCEPTANCE OF REQUIRED START-UP TESTING, ACCEPTABLE OPERATION OF PUMP STATION FOR FOUR WEEK PERIOD, AND APPROVAL FROM THE OWNER AND ENGINEER. INSTALLATION OF 6" BLIND PRESSURE RECORDING, SUMP PRESSURE INDICATOR, MAINTAIN EXISTING STATION INSTRUMENTS AND TEMPERATURE ALARMS, ENVIRONMENT CONTROL/THERMOSTAT, DEHUMIDIFIER, UNIT HEATER, COOLING, AND WALK LEVEL TELEMETRY. CONTRACTOR TO INVESTIGATE LOCATION OF SUMP PUMP DISCHARGE THROUGH THE USE OF DYE WATER OR OTHER WATER TRACING METHODOLOGIES.
 2. REMOVE AND DISPOSE OF EXISTING DOMESTIC SERVICE BOOSTER PUMPS, FIRE PUMP AND ASSOCIATED PIPING.
 3. CLOSE ISOLATION VALVES ON PUMP SUCTOR BRANCHES AND FURNISH AND INSTALL BLIND FLANGE CONNECTIONS.
 4. REMOVE AND DISPOSE EXISTING DISCHARGE PIPING, PUMP STARTERS, PUMP CONTROL PANEL, DISCHARGE PRESSURE RECORDING, SUMP PRESSURE INDICATOR, MAINTAIN EXISTING STATION INSTRUMENTS AND TEMPERATURE ALARMS, ENVIRONMENT CONTROL/THERMOSTAT, DEHUMIDIFIER, UNIT HEATER, COOLING, AND WALK LEVEL TELEMETRY. CONTRACTOR TO INVESTIGATE LOCATION OF SUMP PUMP DISCHARGE THROUGH THE USE OF DYE WATER OR OTHER WATER TRACING METHODOLOGIES.
 5. INSTALL 6" 1/4" CAP ON EXISTING DRAIN LINE AND ABANDON IN PLACE BRICK AND BLOCK SEAL SURGE RELIEF DRAIN LINE.
 6. CONTRACTOR TO INSTALL LEADER-UP SAFETY POST WITH EXISTING UNDERGROUND SYSTEM. SAFETY POST SHALL BE 12" DIA. WITH 1/2" WALL THICKNESS. SAFETY POST SHALL BE MANUFACTURED BY THE BILCO COMPANY OR APPROVED EQUAL.
 7. ALL PROPOSED WATER MAIN SHALL BE ZINC COATED, POLYETHYLENE ENCASED, CLASS 52 DUCTILE IRON WATER MAIN.
 8. CONDUIT TO BE SCHEDULE 80 PVC.
 9. CONTRACTOR TO PROVIDE 2 CUBIC YARDS OF RIP RAP FOR SURGE RELIEF BLOW OFF TO PREVENT GROUND SCOUR.
 10. ALL CONSTRUCTION SHALL MEET TOWN OF HUDSON, NY WATER UTILITY AND ENGINEERING CONSTRUCTION SPECIFICATION.

PUMP STATION SITE PLAN
 SCALE: 1"=10'

TOWN OF HUDSON, NH
 13 SCHOOL ST.
 HUDSON, NH 03051

Western Engineering, Inc.
 100 International, Suite 102
 Portsmouth, NH 03801
 603.832.3996
 www.westerneng.com

REVISIONS

No.	Description

DRAFT DOCUMENTS

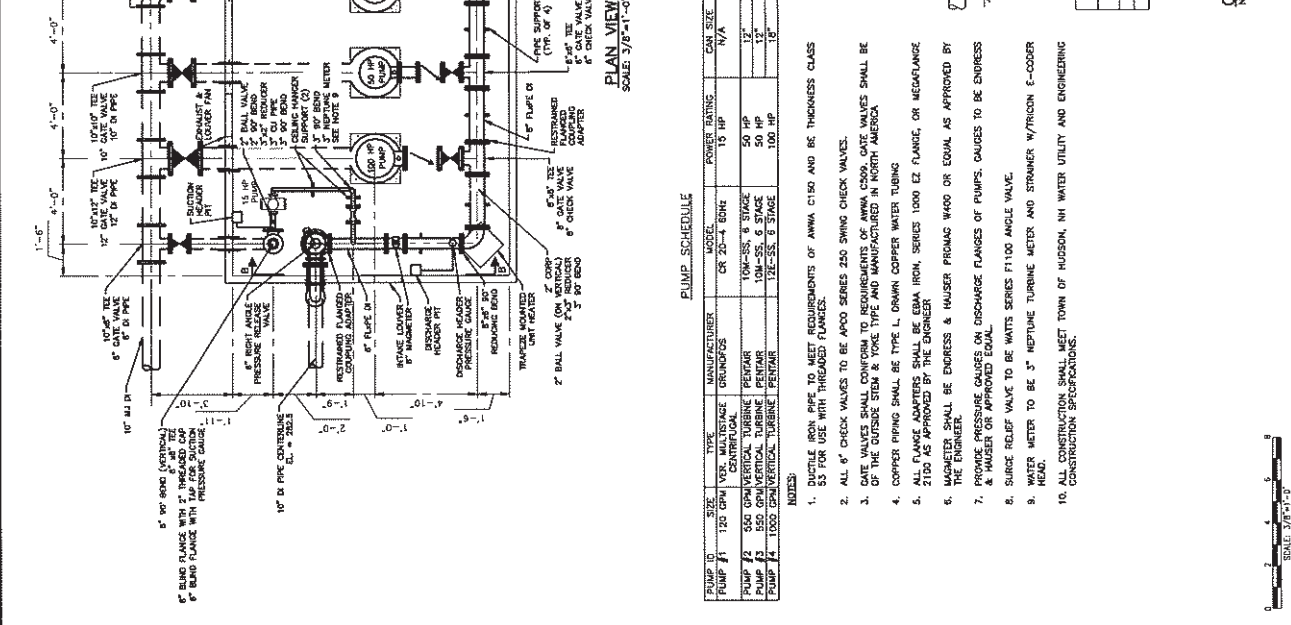
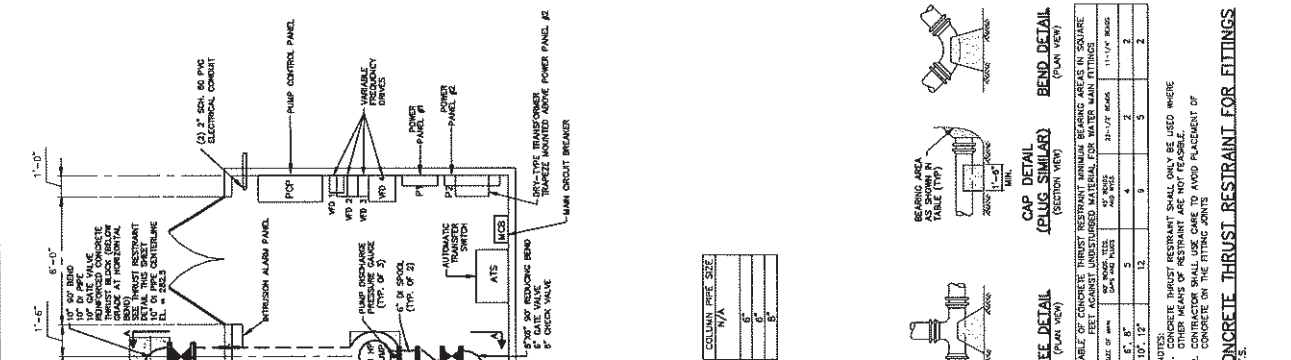
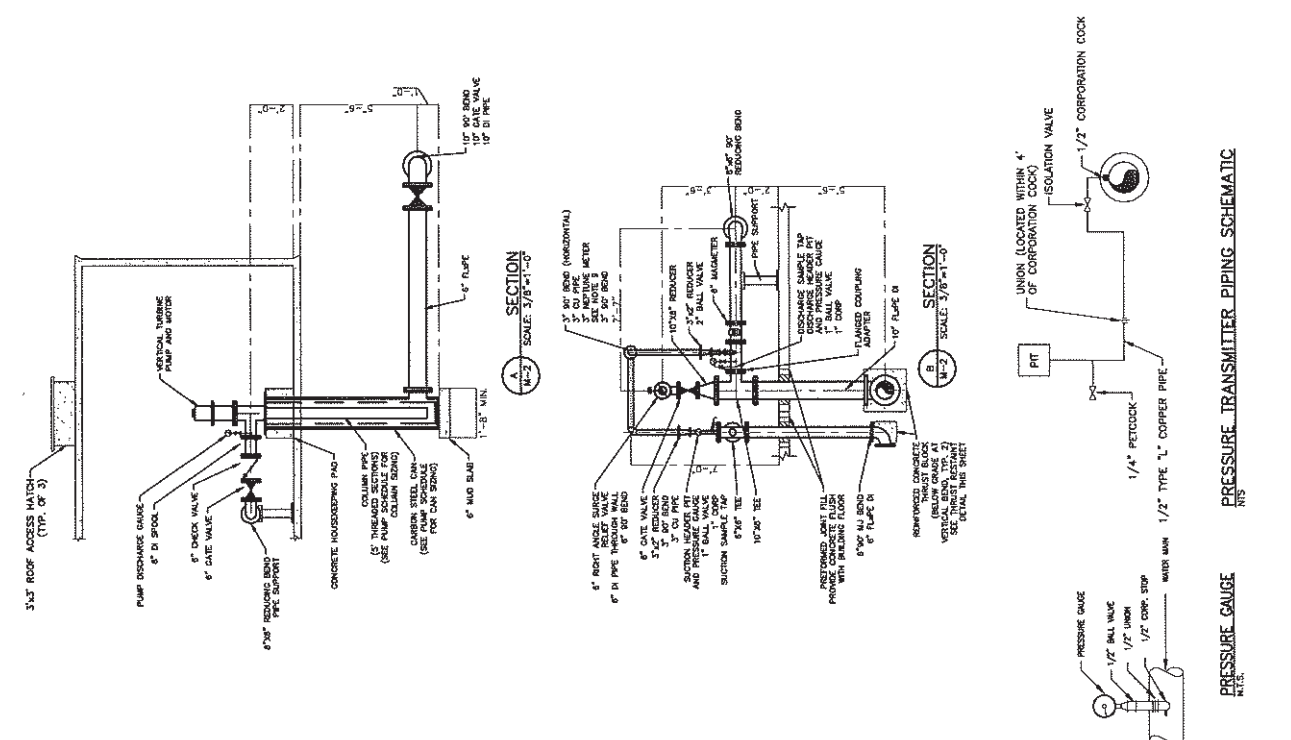
Scale	NOTED
Date	2/19/2022
Drawn By	JFK
Reviewed By	JFK
Approved By	JFK
FILE Name	ENGR11801
PLT File No.	21099
Drawn By	JFK

PROJECT: MARSH ROAD PUMP STATION - PROCESS PLAN

PROJECT NO.: M001

DATE: 2/19/2022

SCALE: 3/8" = 1'-0"



PUMP SCHEDULE

PUMP ID	SIZE	TYPE	MANUFACTURER	MODEL	POWER RATING	CAN SIZE	COLLUM PIPE SIZE
PUMP #1	120 GPM	VSD MULTISTAGE	GRUNDOS	CR 20-4 BONE	15 HP	N/A	N/A
PUMP #2	550 GPM	VERTICAL TURBINE	REYNOLDS	10M-SS, 8 STAGE	50 HP	12"	6"
PUMP #3	550 GPM	VERTICAL TURBINE	PENTAIR	10M-SS, 6 STAGE	50 HP	12"	6"
PUMP #4	1500 GPM	VERTICAL TURBINE	PENTAIR	12E-SS, 6 STAGE	100 HP	18"	8"

- NOTES:
- DUCTILE IRON PIPE TO MEET REQUIREMENTS OF ANNA C150 AND BE THICKNESS CLASS 55 FOR USE WITH THREADED FLANGES.
 - ALL 6" CHECK VALVES TO BE APOD SERIES 250 SWING CHECK VALVES.
 - GATE VALVES SHALL CONFORM TO REQUIREMENTS AS ANNA C200. GATE VALVES SHALL BE OF THE OUTSIDE SEAM & YORK TYPE AND MANUFACTURED IN NORTH AMERICA.
 - COPPER PIPING SHALL BE TYPE L DRAIN COPPER WATER TUBING.
 - ALL FLANGE ADAPTERS SHALL BE EBAA IRON, SERIES 1000 EZ FLANGE, OR MEGAFRANGE 2150 AS APPROVED BY THE ENGINEER.
 - MAGNETER SHALL BE ENDRESS & HAUSER PROMAG W400 OR EQUAL AS APPROVED BY THE ENGINEER.
 - PROMAG PRESSURE GAUGES ON DISCHARGE FLANGES OF PUMPS. GAUGES TO BE ENDRESS & HAUSER ON APPROVED EQUAL.
 - SURGE RELIEF VALVE TO BE WATTS SERIES F1100 ANGLE VALVE.
 - WATER METER TO BE 3" METLINE TURBINE METER AND STRAINER W/TRIGON E-COOR HEAD.
 - ALL CONSTRUCTION SHALL MEET TOWN OF HUDSON, NH WATER UTILITY AND ENGINEERING CONSTRUCTION SPECIFICATIONS.

CONCRETE THRUST RESTRAINT FOR FITTINGS

SIZE OF FITTING	MINIMUM BORE	MINIMUM BORE	MINIMUM BORE	MINIMUM BORE	MINIMUM BORE
6"	5"	4"	3"	2"	2"
8"	7"	6"	5"	4"	4"
10", 12"	9"	8"	7"	6"	6"

NOTES:

- CONCRETE THRUST RESTRAINT SHALL ONLY BE USED WHERE THE FITTING IS NOT SUPPORTED BY A WALL OR OTHER STRUCTURE.
- CONTRACTOR SHALL USE CARE TO AVOID PLACEMENT OF CONCRETE ON THE FITTING JOINTS.



PRESSURE TRANSMITTER PIPING SCHEMATIC

PRESSURE GAUGE

CONCRETE THRUST RESTRAINT FOR FITTINGS

CONCRETE THRUST RESTRAINT FOR FITTINGS

SCALE: 3/8" = 1'-0"



New Hampshire Small MS4 Regulation Assessment Report Town of Hudson, NH

Sections 2.3.6.c and 2.3.6.d require that the permittee develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover or the implementation of low impact development practices. The report should confirm that appropriate reductions in impervious area and green infrastructure practices are allowable. The following list with associated action items may serve as this report.

- 1) Where in municipal code are public street widths regulated?

Public street widths are specified in Section 515.7 of the Town's Engineering Design Guidelines and Typical Details Guidance Document produced for the Town Engineering Department and last updated in August 2019.

- a. Do regulations allow for/encourage lane width reductions where appropriate?

The use of Low Impact Development measures is encouraged for new and redevelopment projects to the maximum extent practical as part of the Chapter 290 Stormwater Management provisions of the Site Plan Regulations. However, there appears to be limited flexibility in the street width specifications included in Town's Design Guidelines to allow for narrower lane-widths or roadways for new public or private streets, where appropriate.

- b. If not, determine where adjustments in code may be appropriate to allow for this reduction in impervious area:

The Town should consider modifying or amending the street width requirements in Section 515.7 of the Town's Engineering Design Guidelines and Typical Details Guidance Document to describe situations/conditions that would allow for and encourage narrower roadways where appropriate (e.g., small subdivisions and low traffic roads with few homes).

- 2) Where in municipal code are private street widths regulated?

- a. Do regulations allow for/encourage lane width reductions where appropriate?

Private streets are regulated the same as public roads as described above.

- b. If not, determine where adjustments in code may be appropriate to allow for this reduction in impervious area:

See response to Question 1.b above.

3) Where in municipal code are parking space sizes regulated?

- a. Do regulations allow for/encourage parking space size reductions where appropriate?

Parking space size dimensions are regulated in Section 275-8 (Item 4) of the Site Plan Review Submission Requirements. The current requirements require parking spaces to be 10 feet by 20 feet but will allow spaces to be reduced to 9 feet by 18 feet subject to Planning Board approval. Access aisle width requirements range from 11 feet to 24 feet depending on the parking space angle and traffic flow. The current regulations do not specifically encourage the use of permeable pavement or concrete materials. Item 7 (Landscaping requirements) of the same section require that a minimum of 10% of the parking lot area be used for landscape islands with shade trees at a rate of 1 tree per 1,600 sq. ft. of parking area or one tree per 5 parking spaces, whichever is greater. In addition, one shrub shall be planted with one shrub per 200 square feet of parking area or 1.6 shrubs for each parking area. These plantings should help to intercept and transpire precipitation.

- b. If not, determine where adjustments in code may be appropriate to allow for this reduction in impervious area:

The Town should consider revisiting the parking space requirements to allow for a reduced number and/or size of the required parking spaces, where appropriate.

4) Where in municipal code are the number of required parking spaces regulated?

- a. Do regulations allow for/encourage parking space reductions where appropriate?

Item C of Section 275-8 Application Submission requirements of the Site Plan Regulations specifies the number of parking spaces that should be provided for various types of facilities. The Regulations allow the Applicant to demonstrate that fewer parking spaces than required would be appropriate and consistent with the intended use and is subject to Planning Board approval.

- b. If not, determine where adjustments in code may be appropriate to allow for this reduction in impervious area:

No further adjustments considered necessary at this time.

5) Where in municipal code are allowable stormwater Best Management Practices (BMPs) regulated?

- a. Do regulations allow/encourage low impact development design options?
Specifically confirm that the following practices are allowable by code:
- Infiltration practices such as rain gardens
 - Curb extensions
 - Planter gardens
 - Porous and pervious pavements

The Chapter 290 Stormwater Management regulations require the use of Low Impact Development (LID) measures for new and redevelopment projects to the maximum extent practical and if not considered practical, the Applicant shall document the reasons or the constraints as to why they are not practical. Part A Item 3 of Section 290-5 Basic Post-Construction Stormwater Requirements outlines various types of LID measures that should be considered including infiltration measures, permeable pavement, stormwater capture/reuse, bioretention and vegetated measures.

- b. If not, note impediment to the use of the practices and determine where adjustments in code may be appropriate to allow for these practices:

The number and type of LID measures implemented in new development projects going forward will depend in large part on the Planning Board and Technical Review Committee members' due diligence in requiring Applicants to include LID measures in the site design and, if considered not practical, to request documentation as to why they are not practical.

- 6) Are green roofs allowed by building code and other applicable regulations?

- a. If not, note impediment to the use of the practices and determine where adjustments in code may be appropriate to allow for this practice.

Green roofs are mentioned in the LID definition as an example of an LID measure but are not specifically mentioned or encouraged within the Regulation code itself. The Town should consider adding language to the Post-Construction Stormwater Management Chapter 290 to allow and encourage the use of Green Roofs in appropriate commercial facilities as a means of reducing stormwater runoff.

- 7) Is water harvesting and the use of stormwater for non-potable uses allowed by building/plumbing code and other applicable regulations?

- a. If not, note impediment to the use of the practices and determine where adjustments in code may be appropriate to allow for these practices.

The Town should consider adding language that allows for and encourages the use of water harvesting for irrigation and other non-potable uses especially for larger commercial sites that will require relatively large areas of impervious surfaces.

If the above assessment indicates that code adjustments are necessary, outline the steps needed to adjust/amend code as needed and estimate timelines for that process. Identify and involve any pertinent planning board, transportation committee, building department, etc. needed to amend applicable codes. The permittee shall report on its findings and the progress towards making the practices allowable as part of the MS4 annual report.