



4 Broad St
Plainville, MA 02762
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processpipeline.com

May 04, 2020

Planning & Development Department
City Hall Annex
33 Wakefield Street
Rochester, NH 03867

Subject: Site Plan - Nonresidential Application
Unitil Route 125 Station – 770 Columbus Ave

To Whom it May Concern,

Unitil is pleased to submit the accompanying plans related to the proposed project to build a new natural gas regulator station at 770 Columbus Ave.

Unitil owns both 770 and 760 Columbus Ave. Since 1991 they have maintained an existing natural gas station located on the property of 760 Columbus Ave that serves Rochester and the surrounding areas. Over the past three years Unitil has experienced significant customer growth in the Rochester area. As part of a multi-year plan to reinforce this existing natural gas network and to support continued growth Unitil is proposing to build a second natural gas station on the property of 770 Columbus Ave. The proposed new station will be located in the northern corner of the property immediately adjacent to Unitil's existing station. There is an existing road access and a gravel lot that will be used for both stations. Traffic will not increase in the area due to the new station. Unitil currently sends a gas utility truck to the existing station once every two to three weeks for general maintenance. This will continue as they maintain both stations simultaneously.

The new station will require some minor site clearing and grading of approximately 5,000 SF. The station itself will be 35 ft x 80 ft enclosed by a chain link fence with privacy slats and crushed stone covering the site. Guardrail will be placed in front of the station for protection. Inside the station there will be above and below grade piping and piping equipment. There will be small concrete sonotube foundations to support the piping. There will be no sight lighting and no generator or other sound causing equipment. The station will implement all necessary safety standards according to state and federal codes. There will be inlet and outlet isolation valves that will be a minimum of 100 FT away from the station risers and will be located in an accessible area next to the public ROW.

Unitil and PPS look forward to your review of this project. If you have any questions or comments regarding our application, please feel free to contact me.

Sincerely,
Matt Pelletier
Project Engineer
Process Pipeline Services

**NONRESIDENTIAL SITE PLAN APPLICATION****City of Rochester, New Hampshire**

Date: 01/31/2020 Is a conditional use needed? Yes: No: X Unclear:
(If so, we encourage you to submit an application as soon as possible.)

Property information

Tax map #: 137; Lot #'s: 3; Zoning district: NMU

Property address/location: 770 Columbus Ave

Name of project (if applicable): Unitil Route 125 Station

Size of site: 2.1 acres; overlay zoning district(s)? N/A

Property owner

Name (include name of individual): Northern Utilities Inc. (Mike Dunn)

Mailing address: 6 Liberty Lane West Hampton, NH 03842

Telephone #: 603-294-5115 Email: dunnm@unitil.com

Applicant/developer (if different from property owner)

Name (include name of individual): Matt Pelletier

Mailing address: 4 Broad St Plainville, MA 02762

Telephone #: 774-276-0364 Email: mpelletier@processpipeline.com

Engineer/designer

Name (include name of individual): Steve Reade

Mailing address: 4 Broad St Plainville, MA 02762

Telephone #: 508-921-4657 Fax #:

Email address: sreade@processpipeline.com Professional license #: 15580

Proposed activity (check all that apply)

New building(s): N/A Site development (other structures, parking, utilities, etc.): ✓

Addition(s) onto existing building(s): N/A Demolition: N/A Change of use: N/A

Describe proposed activity/use: Gas Utility, new station

Describe existing conditions/use (vacant land?): Gas Utility

Utility information

City water? yes ☐ no ☒; How far is City water from the site? _____

City sewer? yes ☐ no ☒; How far is City sewer from the site? _____

If City water, what are the estimated total daily needs? N/A gallons per day

If City water, is it proposed for anything other than domestic purposes? yes ☐ no ☒

If City sewer, do you plan to discharge anything other than domestic waste? yes ☐ no ☒

Where will stormwater be discharged? Ground

Building information

Type of building(s): None

Building height: N/A Finished floor elevation: N/A

Other information

parking spaces: existing: ☐ total proposed: ☐; Are there pertinent covenants? No

Number of cubic yards of earth being removed from the site ☐

Number of existing employees: N/A; number of proposed employees total: N/A

Check any that are proposed: variance ☐; special exception ☒; conditional use ☐

Wetlands: Is any fill proposed? No; area to be filled: ☐; buffer impact? ☐

Proposed <u>post-development</u> disposition of site (should total 100%)		
	Square footage	% overall site
Building footprint(s) – give for each building	–	–
Parking and vehicle circulation	6,787	7.42
Planted/landscaped areas (excluding drainage)	34,626	37.85
Natural/undisturbed areas (excluding wetlands)	50,063	54.73
Wetlands	–	–
Other – drainage structures, outside storage, etc.	–	–


Comments

Please feel free to add any comments, additional information, or requests for waivers here:


Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), and/or the agent.

I (we) hereby submit this Site Plan application to the City of Rochester Planning Board pursuant to the City of Rochester Site Plan Regulations and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.

Signature of property owner: 

Date: 1/31/20

Signature of applicant/developer: 

Date: 01/31/2020

Signature of agent: _____

Date: _____

Authorization to enter subject property

I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.

Signature of property owner: 

Date: 1/31/20

Site Plan Checklist (residential and nonresidential)

**To be filled out by applicant/agent (with notes to be inserted by staff)*

See regulations for other specific requirements

City of Rochester Planning & Development Department

Project Name: Unitil Route 125 Station Map: 137 Lot: 3 Date: 05/04/2020

Applicant/agent: Matt Pelletier Signature: 

(Staff review by: _____ Date: _____)

General items

	Yes	No	N/A	Waiver Requested	Comments
<u>4</u> sets completed application	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Total application fee	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<u>4</u> copies of narrative	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<u>3</u> sets of full-size plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<u>2</u> sets of 11 X 17 reductions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Completed abutters list	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Copy of existing covenants, easements, deed restrictions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Plan Information

Basic information including:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
• Title sheet					
• Name of Project					
• Date					
• North arrow					
• Scale					
• Legend					
• Revision block					
• Vicinity sketch -not less than 1" = 1,000'					
Name and address of developer/applicant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Name, stamp, and NH license # of land survey, engineer, and/or architect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
City tax map & lot #'s	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Notation on plans: "For more information about this site plan contact...."	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

General items Continued

	Yes	No	N/A	Waiver Requested	Comments
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Approval block (for signature by staff attesting to Planning Board approval)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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References to neighboring plans and subdivisions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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Surveyed property lines including:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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- existing and proposed bearings
- existing and proposed distances
- pins, stakes, bounds
- monuments
- benchmarks

Include error of closure statement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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Information on abutting properties:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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- owner name
- owner address
- tax map and lot #
- square footage of lots
- approximate building footprints
- use

Zoning

Zoning designations of subject tract and in vicinity of tract	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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Zoning requirements for district:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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- frontage
- lot dimensions/density
- all setbacks
- lot coverage

Zoning overlay districts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
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Existing Topographic Features:

Contour lines a (not to exceed two-foot Intervals, except on steep slopes) and spot elevations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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Soil types and boundaries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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Soil test pit locations, profiles, and Depth to water table and ledge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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Percolation test locations and results	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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Existing Topographic Features Continued:

	Yes	No	N/A	Waiver Requested	Comments
Water features (ponds, streams)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wetlands including name of certified Wetlands scientist who delineated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Statement whether located in flood area, And if so, 100 year flood elevation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Delineation of trees and open areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Overview of types of trees and vegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stone walls and archaeological features	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Locations of trails and paths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other natural/cultural resources (productive farmland, habitats, scenic views, historic structures, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Building Information

Existing buildings/structures including square footage and use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>No buildings</u>
Proposed building/structures including <ul style="list-style-type: none">• square footage• first floor elevation• use• # bedrooms per unit if residential	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Elevation drawing of proposed buildings and structures as follows: <ul style="list-style-type: none">• Showing all four sides• Drawn to scale with dimensions• Showing exterior materials• Showing exterior colors	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Circulation and Parking Plans

Existing and proposed driveways and access points including: <ul style="list-style-type: none">• Width of opening• Turning radii• Cross section of driveway	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Curbing & edge treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Traffic control devices, if appropriate:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Circulation and Parking Plans Continued:

	Yes	No	N/A	Waiver Requested	Comments
Number of parking spaces	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
• required by ordinance					
• proposed					
Parking layout and dimensions of spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Handicap spaces	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Loading area	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Pedestrian circulation plan (including existing sidewalks in vicinity, if any)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Bicycle rack, if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Buffers, landscaping & screening	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Snow storage areas/plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Utilities

Show all pertinent existing and proposed profiles, elevations, materials, sizes, and details

Water lines/well (with protective radius)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sewer lines/septic and leaching areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pump stations	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Stormwater management system: pipes, culverts,, catch basins detention/ retention basins, swales, rip rap, etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire hydrant location(s) and details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Electric, telephone, cable TV (underground or overhead)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gas lines	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire alarm connections	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Treatment of solid waste (dumpsters?)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Handling of oil, grease, chemicals hazardous materials/waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Landscaping Plan

	Yes	No	N/A	Waiver Requested	Comments
Demarcation of limits of construction, clear delineation of vegetation to be saved, and strategy for protecting vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proposed ground cover, shrubbery, and trees including: <ul style="list-style-type: none"> • botanical and common names • locations and spacing • total number of each species • size at installation 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Planting plan (size of holes, depth of planting, soil amendments, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Irrigation: system? soaker hose? Manual? underground, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Protection of landscaping from vehicles (Curb stops, berm, railroad ties, etc)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specification all finished ground surfaces and edges (greenspace, mulch, asphalt, concrete, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fencing/screening	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Signage

Location and type of signs: <ul style="list-style-type: none"> • Attached to building • Freestanding • Directional, if appropriate 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>No signs</u>
Dimensions of signs: <ul style="list-style-type: none"> • Height • Area • Setback 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Elevation drawings with colors & materials	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Type of Illumination, if proposed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Outdoor Lighting

	Yes	No	N/A	Waiver Requested	Comments
Locations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>No lights</u>
Height of fixtures	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Wattage	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Type of light (high pressure sodium, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Design/cut sheets of fixtures	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Illumination study, if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Other Elements

Traffic study, if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>unchanged</u>
Drainage study with calculations, storm Water impact analysis, and mitigation plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Grading plan (including finish grades)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Earth being removed from site(in cubic yards)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Erosion and sedimentation plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Proposed covenants, easements, And deed restrictions, if any	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fiscal impact study, if requested	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Additional Comments:



May 04, 2020

Planning & Development Department
City Hall Annex
33 Wakefield Street
Rochester, NH 03867

Subject: Site Plan - Nonresidential Application
Unitil Route 125 Station – 770 Columbus Ave
Request for Waiver

To Whom it May Concern,

We are respectfully requesting a waiver to the follow Site Plan Regulations:

Article III Section 13 – Stormwater Management

We are requesting to waive the need to conduct a drainage study. Chapter 50 Stormwater Management and Erosion Control Section 50.6.(b).(4) says construction of utilities requiring ground disturbance of greater than 20,000 SF are to provide a Construction Stormwater Management and Erosion Control Plan. The proposed disturbance of Unitil's new station is approximately 5, 000 SF. Approximately 4,000 SF will be covered in crushed stone and 1,000 SF will be returned to previous condition. The only added impervious surface will be from the 17 concrete sonotube pipe supports which accounts for approximately 30 SF.

Sincerely,
Matt Pelletier
Project Engineer
Process Pipeline Services

1/13/20 TRG Review of
770 Columbus Ave, Unitil Route 125 Station
[Map 137 Lot 3]

Date: February 13, 2020
To: Matt Pelletier
From: Michelle Mears, Senior Planner
Re: TRG's 2/13/20 review of the above referenced application

The TRG reviewed the following:

- Site Plan Application, site plan checklist, project cover letter, waiver requests, etc., submitted February 3, 2020.
- Plan Set titled, "Unitil Northern Utilities, Inc."; Route 125 Station; 770 Columbus Ave, Rochester, New Hampshire, Tax Map 137, Lot 34" prepared by Process Pipeline Services, May 2019

Project description:

Site plan to build a new natural gas regulator station at 770 Columbus Ave adjacent to Unitil's existing station. The new station will require minor site clearing and grading of approximately 5,000 SF. The station will be 35ft by 80 ft. enclosed by a chain link fence with privacy slats and crushed stone covering the site.

Waiver requests:

1) The applicant has requested a waiver of Site Plan Regulation 13 which requires that a stormwater analysis/drainage report be submitted per the specifications of Rochester's Chapter 50 rules. The applicant states it is their belief that this proposal will have adverse effect on drainage.

Staff is waiting to hear from DPW regarding this waiver request.

Conditional Use Permits:

None.

Staff's Review Comments:

Planning Dept. Comments:

- 1) This project is located in the Neighborhood Mixed Use Zone which Utility Substation use is only allowed by Special Exception in that zone per Table 18-D Industrial Storage Transportation Utility Uses. Special Exception approval shall be secured from the ZBA before the use or structure or building in which the use is conducted may be intensified, enlarged, expanded, moved, or significantly altered. Please complete a Special Exception, which is available here:
https://www.rochesternh.net/sites/rochesternh/files/uploads/special_exception_0.pdf
 - a. Special Exception was approved by the ZBA on March 11, 2020.
- 2) Please address Zoning Ordinance section 275-13.1 Flood Hazard Overlay District (FHOD). The 100 Year elevation must be shown on the site plan application to make sure that structure adheres standards within the Special Flood Hazard Overlay.
 - a. 100 Year Flood Zone has been added to the plans. 184' is shown for the elevation.
- 3) Please show a boundary surveyed Site Plan with the entire conditions of the lot.
 - a. Survey has been expanded to cover the entire property.
- 4) The Site Plan needs to be stamped by a wetlands scientist. This needs to show the wetlands and wetlands buffers (25 ft. and 50 ft.).
 - a. Wetland scientist stamp has been added to the survey plan.
- 5) Please show location of the access road on the site.
 - a. Access road was highlighted on "Site Plan Enlarged" and "Erosion and Sedimentation Control Plan".
- 6) Please show the 250 ft. Shore land Protection limits.
 - a. Shoreland Protection limits has been added. Project area is outside of the limits.

- 7) Please provide the City of Rochester with the groundwater monitoring wells on site. Are there any contaminated soils?
 - a. Monitoring wells are there due to site contamination from a former MGP. Unutil has been working with NHDES on on-going remediation efforts for the past two decades. Documents regarding the site contamination has been included. Unutil has informed NHDES of the proposed project and will be working with them for the environmental aspects.
- 8) Delineate existing zoning boundaries for the entire site and on abutting properties.
 - a. The surveyed area only captures 770 and 760 Columbus Ave, which are both entirely in the NMU zone. The properties are bordered by ROW and waterways. A Rochester GIS Boundary map has been included.
- 9) Are there any Archaeological Resources? The applicant is encouraged to mitigate the impact upon those resources, by renovating, excavating, or providing a buffer around the resource, or by other appropriate means.
 - a. A project review was conducted by NHDHR. A response was received 3/30/20 stating that no historic resources will be affected by the project.
- 10) A copy of any covenants or restrictions that are intended to cover all or a part of the land area to be developed.
 - a. A copy of the property deed has been included. There is a restrictive covenant that prohibits the operation of a liquefied petroleum gas sales, storage, and/or distribution facility on the property. This station is for natural gas and not LPG.
- 11) Please screen chain-link fence closest to Columbus Ave with landscaping or tree hedge.
 - a. Evergreen tree hedge has been added along Columbus Ave.
- 12) Please show the tree clearing limits marked on the plan clearly.
 - a. There is no tree clearing. The site survey was updated, and the tree line was adjusted. It was previously based on google earth.
- 13) Please provide test pit data for the location of the utility substation.
 - a. Boring information from previous site explorations has been included. City soil survey data was included as well.
- 14) Please provide a detailed erosion control plan for the site.
 - a. The erosion control plan has been updated based on DPW comments.
- 15) Please provide appropriate easement language for connecting to the adjacent substation shared and shared driveway for Map 137 Lot 2.
 - a. An easement plan and description has been included.
- 16) No trespassing signs are to be posted on the property.
 - a. No signs are being installed on the property.

Department of Public Works Comments:

- 1) Wetland delineation needs to be prominently shown on plans, including 25-foot and 50-foot buffer lines.
 - a) Wetland delineation is shown on the plans including 25 ft and 50 ft buffers. Project area is outside of the wetlands and wetland buffers.
- 2) Show the 250-foot Shore land Protection limits. If the project is within this area it may require a shore land protection permit.
 - a) Shoreland Protection limits has been added. Project area is outside of the limits.
- 3) Show location of existing and proposed access roads.
 - a) Existing access road has been highlighted.
- 4) There are many groundwater monitoring wells on the site. Please provide a history of the site and if there is concern of previous soil/groundwater contamination.
 - a) Monitoring wells are there due to site contamination from a former MGP. Unutil has been working with NHDES on on-going remediation efforts for the past two decades. Documents regarding the

site contamination has been included. Unitil has informed NHDES of the proposed project and will be working with them for the environmental aspects.

- 5) Will there be any excavations that produce excess fill that will need to be transported off site?
 - a) It is intended that no fill will need to be transported off site.
- 6) Provide a stone tracking pad location and detail for equipment and trucks exiting the site. If tracking pad is not required please provide explanation.
 - a) Stone tracking pad and detail has been added.
- 7) Show the existing contours where new proposed contours are shown so we can see how much cut and fill is proposed. The existing contours are truncated where there is new site work.
 - a) Existing contours have been left on proposed site plan.
- 8) Erosion & sedimentation Control:
 - a) Show sediment bags or filter fabric to be added existing catch basins near or in the project area
 - i) Sediment bags and detail has been added.
 - b) Extend the silt fence to down slope of the proposed underground gas pipe to be installed
 - i) Silt fence has been extended to cover the underground pipe work.
- 9) Permits:
 - a) A City stormwater permit will be required prior to construction
 - b) Contact the NHDOT to conduct work within their ROW
- 10) If new electrical conduit is to be installed, show it on plans.
 - a) Electrical conduit has been added.
- 11) An existing stormwater ditch is shown just outside of the limits of work. If the limits of work expand into this area, make sure the ditch is protected and restored to its existing condition.
 - a) Project area is outside of the existing stormwater ditch.

Assessing Dept. Comments:

No concerns.

Fire Dept. Comments:

- 1) If there is a locked gate we should have further discussions about the need for a knox box.
 - a. There is no locked gate to the entrance of the station area. Station fencing is locked.

Police Dept. Comments:

No concerns with proposal, fence provides security for access by individuals.

Economic Development Dept. Comments:

No concerns.

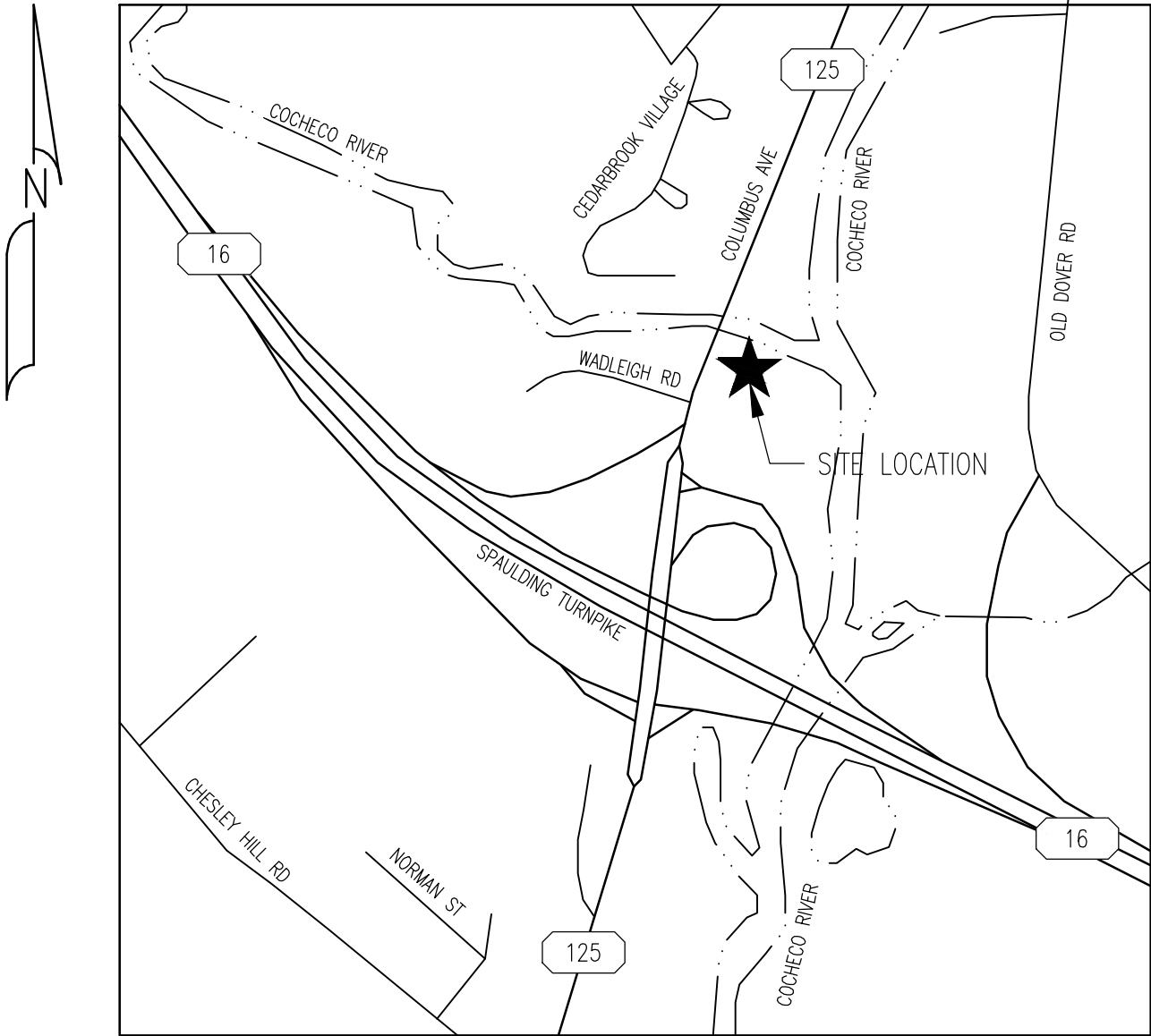
Building/Zoning/Licensing Services Dept.

No comments have been issued by this department. Please contact Director Jim Grant.

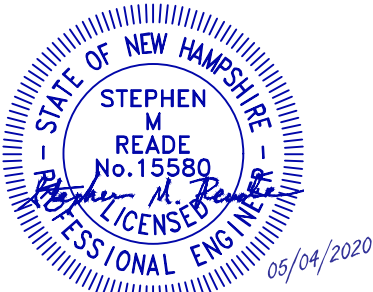


ROUTE 125 STATION
770 COLUMBUS AVE
ROCHESTER, NH 03867

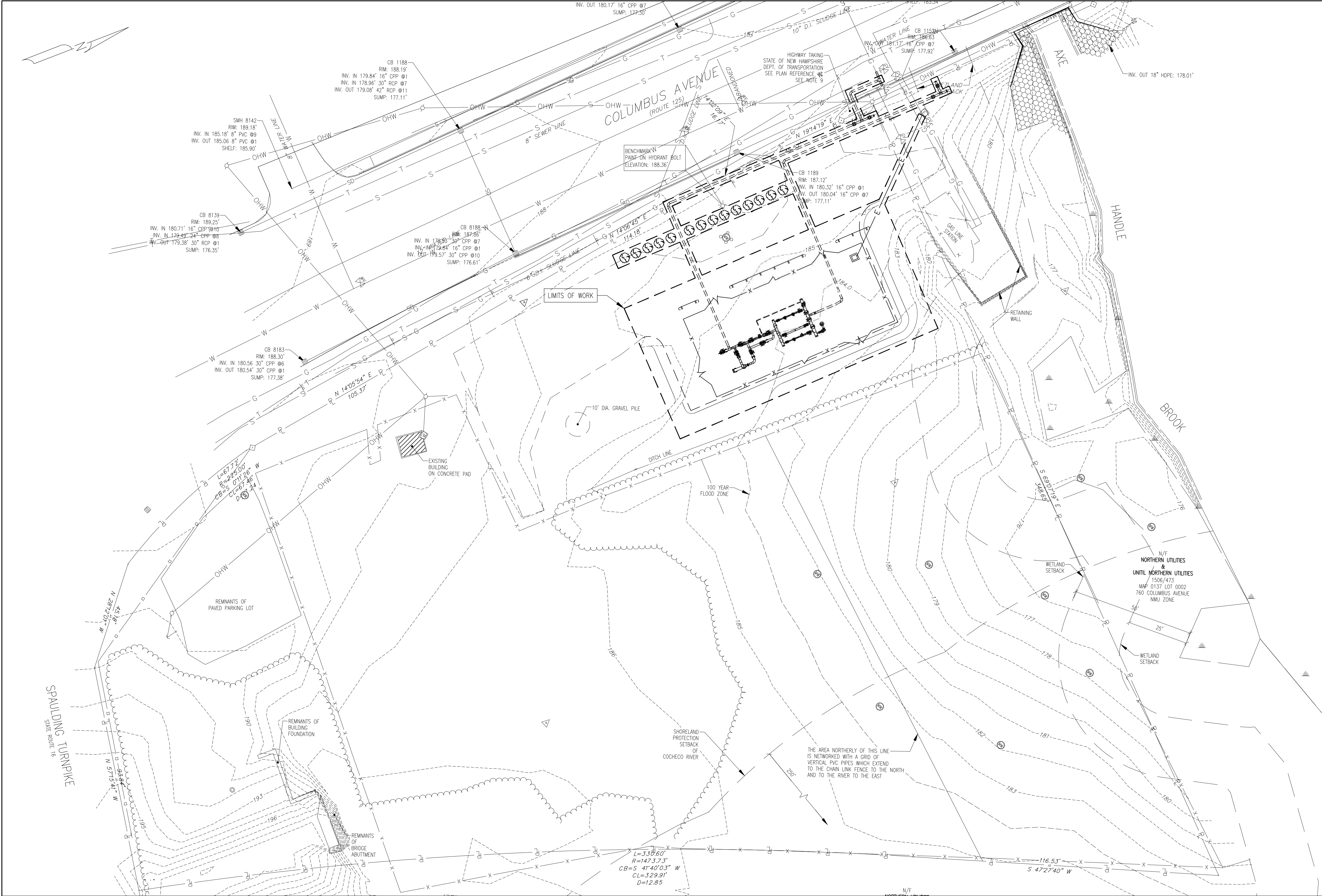
INDEX OF SHEETS		
SHEET	NAME	TITLE
1	T001	COVER SHEET
2	A001	EXISTING CONDITIONS
3	A002	SITE PLAN
4	A003	SITE PLAN ENLARGED
5	A004	EROSION AND SEDIMENTATION CONTROL PLAN
6	A005	GRADING AND FOUNDATION PLAN
7	C001	STANDARD DETAILS – 1 OF 3
8	C002	STANDARD DETAILS – 2 OF 3
9	C003	STANDARD DETAILS – 3 OF 3
1 OF 1	17196	TOPOGRAPHIC PLAN



LOCUS
SCALE: NTS



P E R M I T T I N G				
ISSUE STATUS	DATE	REVIEWED	CHECKED	APPROVED
25% SUBMISSION				
50% SUBMISSION				
75% SUBMISSION				
90% SUBMISSION				
PERMITTING	01/31/20			
ISSUED FOR BID				
ISSUED FOR CONSTRUCTION				
AS CONSTRUCTED				
FILE NAME: 5266_C100.DWG		SIZE	NAME	REV
PLOT DATE: 05/04/2020 9:43 AM		22X34	T001	1
SHEET 1 OF 9				



EXISTING		LEGEND		PROPOSED	
	BOUNDARY LINE				
	CONTOUR MAJOR				
	CONTOUR MINOR				
	DRAINAGE				
	EASEMENT				
	ELECTRIC				
	FENCE CHAIN LINK				
	FENCE POST				
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	EDGE OF GRAVEL				
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	RETAINING WALL				
	RIGHT OF WAY				
	SEWER				
	SILT FENCE				
	STONEWALL				
	STREAM				
	TELEPHONE				
	TREELINE				
	WATER				

APPROVED BY ROCHESTER, NH
PLANNING BOARD

CHAIRMAN _____ DATE _____

- NOTES:
- THE EXISTING CONDITIONS ARE BASED ON THE PLAN TITLED "TOPOGRAPHIC PLAN, OF: NORTHERN UTILITIES PROPERTY, 770 COLUMBUS AVENUE, ROCHESTER, NEW HAMPSHIRE; FOR: PROCESS PIPELINE SERVICES, INC., 1600 PROVIDENCE HIGHWAY WALPOLE, MA 02081" PREPARED BY SEBAGO TECHNICS, 75 JOHN ROBERTS RD. SUITE 1A SOUTH PORTLAND, ME 04106, DATED 08-09-17, SCALE 1" = 20'.
 - THE RECORD OWNER OF THE PARCEL IS NORTHERN UTILITIES, INC. AND UNTIL NORTHERN UTILITIES BY DEED DATED SEPTEMBER 20, 2004 AND RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS IN BOOK 3069, PAGE 53.
 - THE PROPERTY IS SHOWN AS LOT 003 ON THE CITY OF ROCHESTER TAX MAP 0137 AND IS LOCATED IN THE NMU ZONING DISTRICT.
 - PLAN ORIENTATION IS GRID NORTH, NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM, NAD83. ELEVATIONS ARE NAVD88.
 - FOR MORE INFORMATION ABOUT THIS SITE PLAN CONTACT MATT PELLETIER OF PROCESS PIPELINE SERVICES.
5.1. EMAIL: mpelletier@processpipeline.com
5.2. CELL: 774-276-0364

1	MPP	05/04/20	REVISED PER ROCHESTER TRG COMMENTS		
REV	BY	DATE	DESCRIPTION		

SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD	
PRJ ENGINEER: MATT PELLETIER	
PRJ NAME: ROUTE 125 STATION	
PRJ NUMBER: 5266	
PRJ MILESTONE: PERMITTING	
PRJ PHASE: PERMITTING	
DESIGNED BY: MDW	01/31/20
DRAFTED BY: MPP	01/31/20
CHECKED BY: SMR	01/31/20
APPROVED BY: MDW	01/31/20

CLIENT INFORMATION

DESIGN MANAGER: TIM BICKFORD	REVIEWED BY:	
DESIGN ENGINEER: MIKE DUNN	CHECKED BY:	
ACTIVATION ORDER:	APPROVED BY:	

GRAPHIC SCALE
20' 10' 0 20' 40' 60'

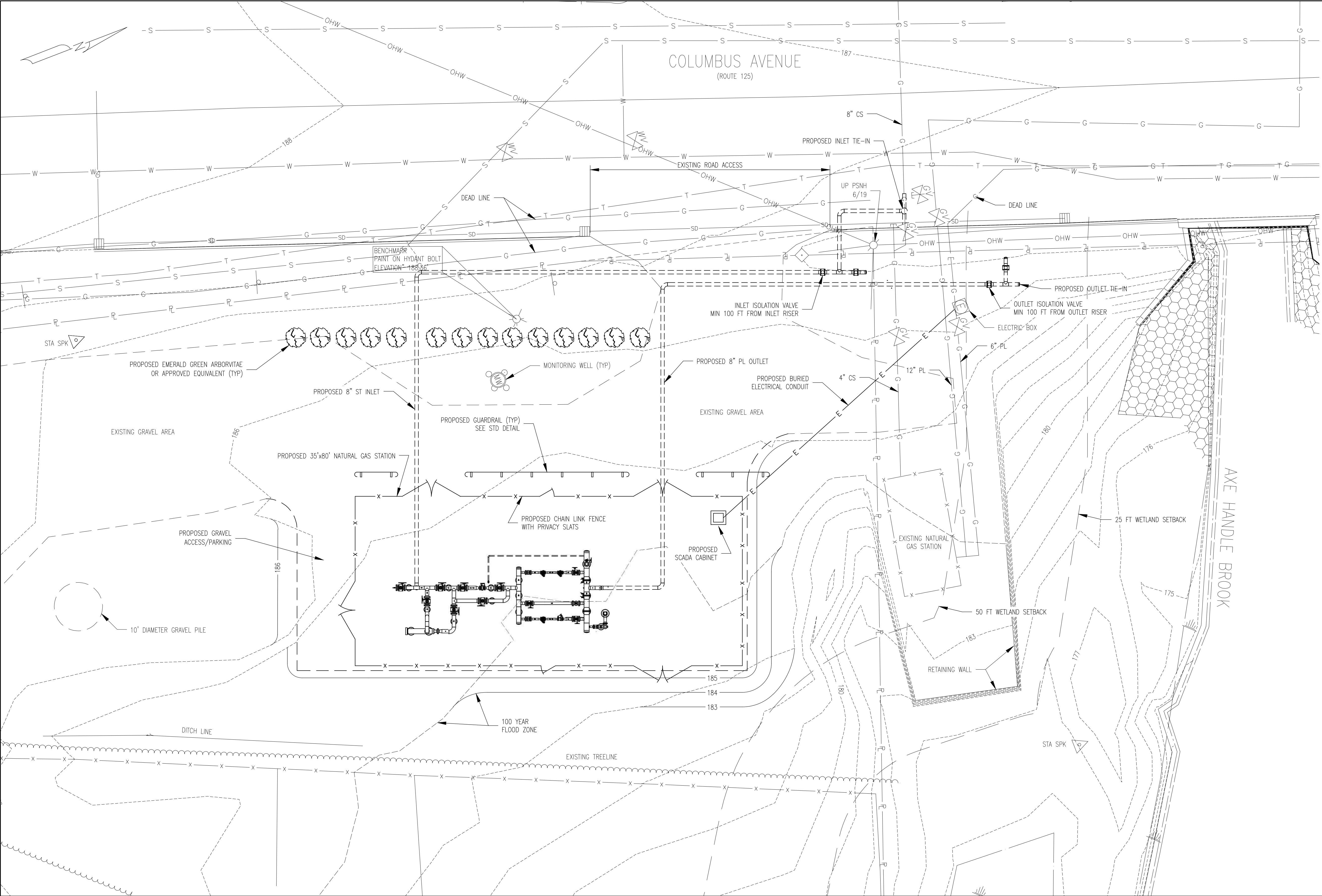
1" = 20'-0"

PERMITTING

SHEET TITLE	SITE PLAN
PROJECT NAME	ROUTE 125 STATION
PROJECT LOCATION	770 COLUMBUS AVE ROCHESTER, NH 03867

4 Broad Street
Plainville, MA 02762
781.829.0524
processpipelineservices.com

FILE NAME: 5266_C100.DWG	SIZE	NAME	REV
PLOT DATE: 05/04/2020 9:43 AM	22X34	A002	1
SCALE: 1" = 20'-0"	SHEET 3 OF 9		



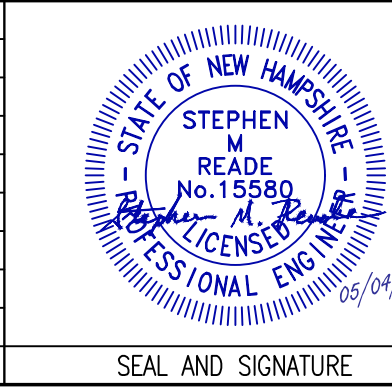
LEGEND	
EXISTING	PROPOSED

APPROVED BY ROCHESTER, NH
PLANNING BOARD

CHAIRMAN _____ DATE _____

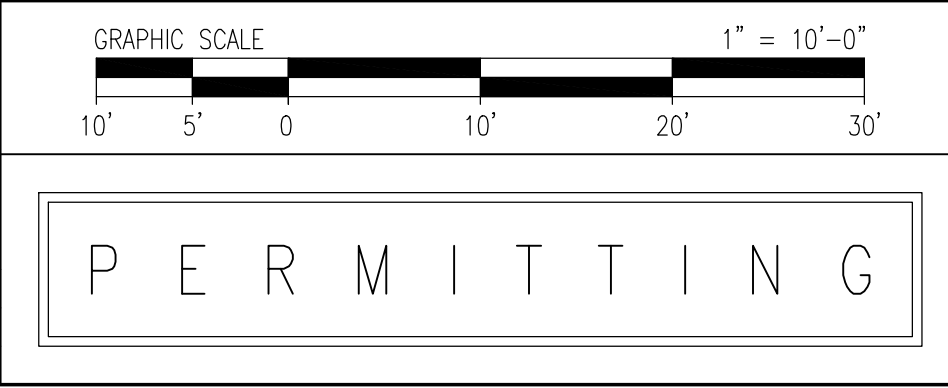
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5.1. EMAIL: MPELLETIER@PROCESSPIPELINE.COM
5.2. CELL: 774-276-0364

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1	MPP	05/04/20	REVISED PER ROCHESTER TRG COMMENTS



PRJ MANAGER: MARK D. WOOD	DESIGNED BY: MDW	01/31/20
PRJ ENGINEER: MATT PELLETIER	DRAFTED BY: MPP	01/31/20
PRJ NAME: ROUTE 125 STATION	CHECKED BY: SMR	01/31/20
PRJ NUMBER: 5266	APPROVED BY: MDW	01/31/20
PRJ MILESTONE: PERMITTING		
PRJ PHASE: PERMITTING		

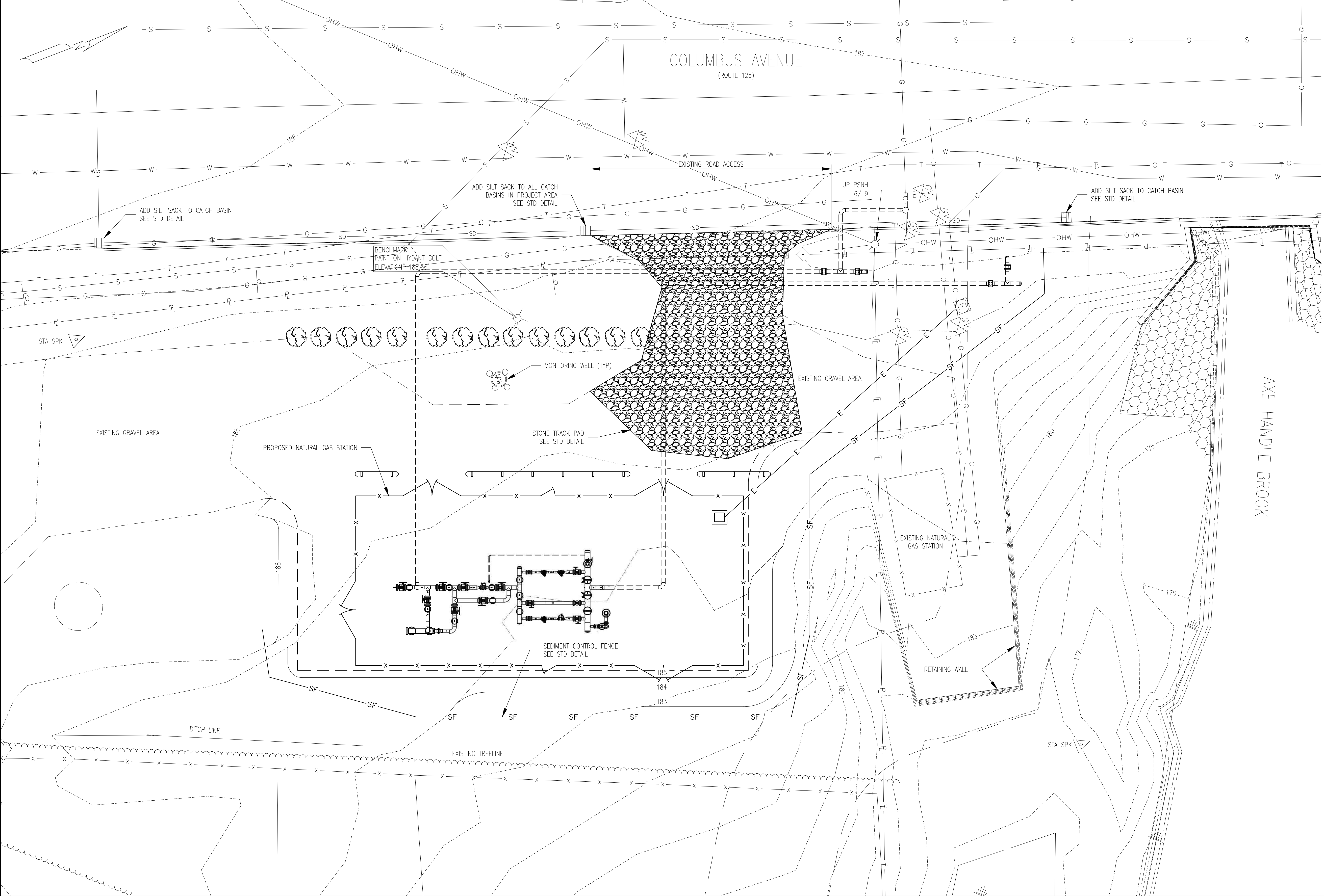
CLIENT INFORMATION	DESIGN MANAGER: TIM BICKFORD	REVIEWED BY:		
	DESIGN ENGINEER: MIKE DUNN	CHECKED BY:		
Northern Utilities, Inc.	ACTIVATION ORDER:	APPROVED BY:		



SHEET TITLE	SITE PLAN ENLARGED
PROJECT NAME	ROUTE 125 STATION
PROJECT LOCATION	770 COLUMBUS AVE ROCHESTER, NH 03867

4 Broad Street
Plainville, MA 02762
781.829.0524
processpipelineservices.com

FILE NAME: 5266_C100.DWG	SIZE	NAME	REV
PLOT DATE: 05/04/2020 9:44 AM	22X34	A003	1
SCALE: 1" = 10'-0"	SHEET 4 OF 9		



EXISTING		LEGEND		PROPOSED	
	BOUNDARY LINE		BOUNDARY LINE		BOUNDARY LINE
	CONTOUR MAJOR		CONTOUR MINOR		CONTOUR MAJOR
	DRAINAGE		DRAINAGE		DRAINAGE
	EASEMENT		EASEMENT		EASEMENT
	ELECTRIC		ELECTRIC		ELECTRIC
	FENCE CHAIN LINK		FENCE CHAIN LINK		FENCE CHAIN LINK
	FENCE POST		FENCE POST		FENCE POST
	FENCE STOCKADE		FENCE STOCKADE		FENCE STOCKADE
	EDGE OF GRAVEL		EDGE OF GRAVEL		EDGE OF GRAVEL
	EDGE OF PAVEMENT		EDGE OF PAVEMENT		EDGE OF PAVEMENT
	EDGE OF RIVER		EDGE OF RIVER		EDGE OF RIVER
	EDGE OF WETLAND		EDGE OF WETLAND		EDGE OF WETLAND
	GAS		GAS		GAS
	GUARDRAIL		GUARDRAIL		GUARDRAIL
	OVER HEAD WIRES		OVER HEAD WIRES		OVER HEAD WIRES
	OVER HEAD TELEPHONE		OVER HEAD TELEPHONE		OVER HEAD TELEPHONE
	OVER HEAD ELECTRIC		OVER HEAD ELECTRIC		OVER HEAD ELECTRIC
	PROPERTY LINE		PROPERTY LINE		PROPERTY LINE
	RETAINING WALL		RETAINING WALL		RETAINING WALL
	RIGHT OF WAY		RIGHT OF WAY		RIGHT OF WAY
	SEWER		SEWER		SEWER
	SILT FENCE		SILT FENCE		SILT FENCE
	STONEWALL		STONEWALL		STONEWALL
	STREAM		STREAM		STREAM
	TELEPHONE		TELEPHONE		TELEPHONE
	TREELINE		TREELINE		TREELINE
	WATER		WATER		WATER

- GENERAL EROSION CONTROL NOTES**
1. SOIL DISTURBANCE SHALL BE CONDUCTED IN A MANNER AS TO MINIMIZE EROSION TO ONLY AREAS OF ACTIVE CONSTRUCTION. STABILIZE ALL AREAS THAT HAVE REACHED FINISH GRADE AS SOON AS POSSIBLE.
 2. IF SEDIMENT IS TRANSPORTED OFF-SITE IT IS TO BE MONITORED. CONSTRUCT STABILIZED STONE PAD TO HELP REMOVE SEDIMENT FROM TIRES BEFORE LEAVING SITE.
 3. IF MATERIAL IS STOCKPILED ON-SITE IT SHALL BE ENCOMPASSED BY A SEDIMENT CONTROL FENCE. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS, WETLANDS, OR BUFFERS.
 4. IF DEWATERING IS REQUIRED, CONTRACTOR IS TO PREVENT SEDIMENT LADEN WATER FROM EXITING THE PROJECT SITE AND IS TO CREATE A NON EROSION CONVEYANCE OF THE WATER AS REQUIRED. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS.
 5. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED.
 6. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
 7. THE EROSION CONTROL MEASURES INDICATED ON THESE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED.
 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RETURNING ALL EXISTING AREAS AFFECTED BY CONSTRUCTION ACTIVITIES TO THE ORIGINAL UNDISTURBED CONDITIONS.

CONTRACTOR IS REQUIRED TO IMPLEMENT ALL APPLICABLE EROSION CONTROL MEASURES IN ACCORDANCE WITH GUIDELINES ESTABLISHED WITHIN THE CURRENT "NH STORMWATER MANUAL, VOL. 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" DATED 10/2008 OR LATER.

REV	BY	DATE	DESCRIPTION
1	MPP	05/04/20	REVISED PER ROCHESTER TRG COMMENTS

SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD	DESIGNED BY: MDW	01/31/20
PRJ ENGINEER: MATT PELLETIER	DRAFTED BY: MPP	01/31/20
PRJ NAME: ROUTE 125 STATION	CHECKED BY: SMR	01/31/20
PRJ NUMBER: 5266	APPROVED BY: MDW	01/31/20
PRJ MILESTONE: PERMITTING		
PRJ PHASE: PERMITTING		

CLIENT INFORMATION

DESIGN MANAGER: TIM BICKFORD	REVIEWED BY:	
DESIGN ENGINEER: MIKE DUNN	CHECKED BY:	
ACTIVATION ORDER:	APPROVED BY:	

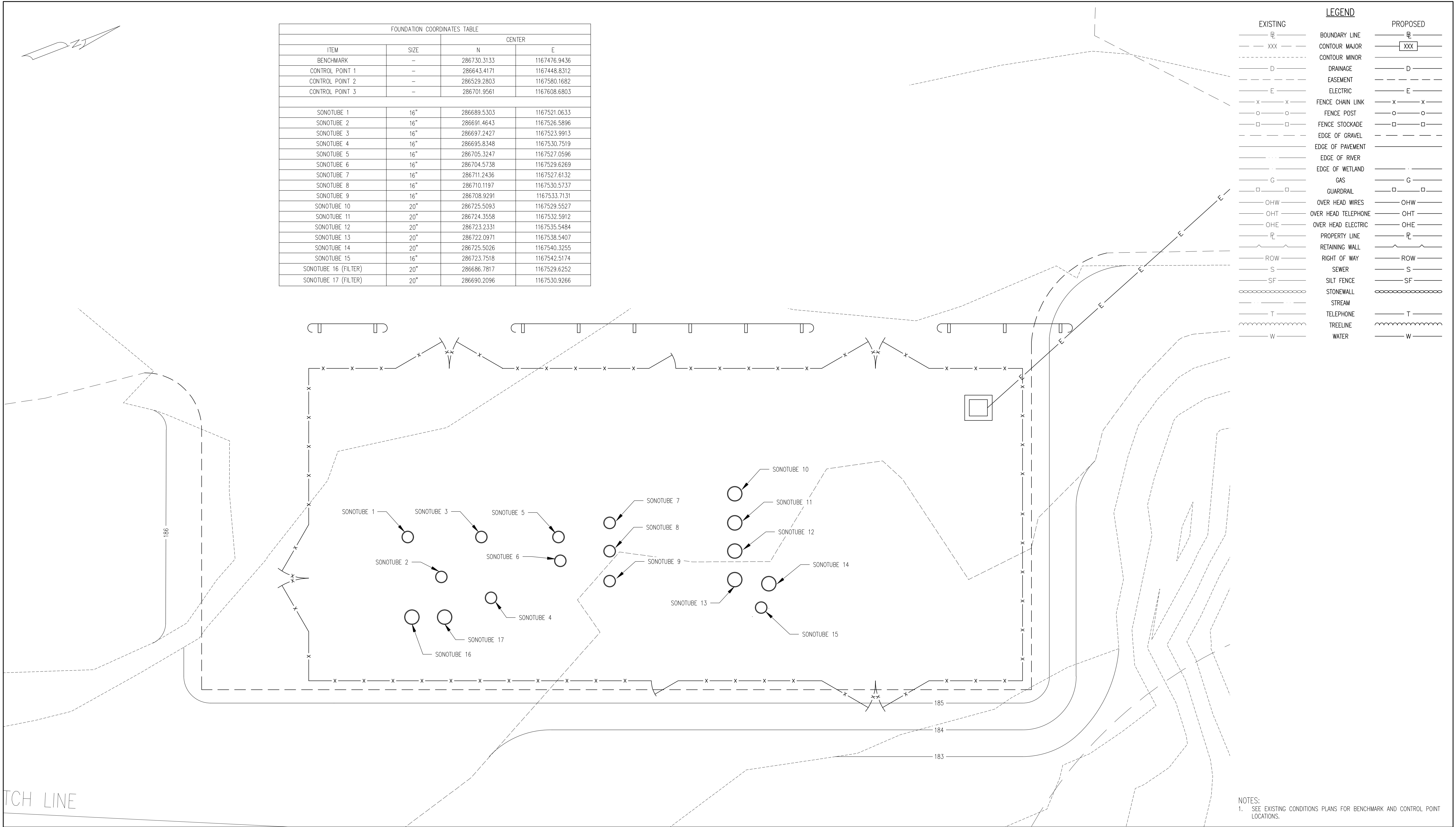
1" = 10'-0"

PERMITTING

SHEET TITLE	EROSION AND SEDIMENTATION CONTROL PLAN
PROJECT NAME	ROUTE 125 STATION
PROJECT LOCATION	770 COLUMBUS AVE ROCHESTER, NH 03867

4 Broad Street
Plainville, MA 02762
781.829.0524
processpipelineservices.com

FILE NAME: 5266_C100.DWG	SIZE	NAME	REV
PLOT DATE: 05/04/2020 9:44 AM	22X34	A004	1
SCALE: 1" = 10'-0"			SHEET 5 OF 9



FOUNDATION COORDINATES TABLE			
		CENTER	
ITEM	SIZE	N	E
BENCHMARK	-	286730.3133	1167476.9436
CONTROL POINT 1	-	286643.4171	1167448.8312
CONTROL POINT 2	-	286529.2803	1167580.1682
CONTROL POINT 3	-	286701.9561	1167608.6803
SONOTUBE 1	16"	286689.5303	1167521.0633
SONOTUBE 2	16"	286691.4643	1167526.5896
SONOTUBE 3	16"	286697.2427	1167523.9913
SONOTUBE 4	16"	286695.8348	1167530.7519
SONOTUBE 5	16"	286705.3247	1167527.0596
SONOTUBE 6	16"	286704.5738	1167529.6269
SONOTUBE 7	16"	286711.2436	1167527.6132
SONOTUBE 8	16"	286710.1197	1167530.5737
SONOTUBE 9	16"	286708.9291	1167533.7131
SONOTUBE 10	20"	286725.5093	1167529.5527
SONOTUBE 11	20"	286724.3558	1167532.5912
SONOTUBE 12	20"	286723.2331	1167535.5484
SONOTUBE 13	20"	286722.0971	1167538.5407
SONOTUBE 14	20"	286725.5026	1167540.3255
SONOTUBE 15	16"	286723.7518	1167542.5174
SONOTUBE 16 (FILTER)	20"	286686.7817	1167529.6252
SONOTUBE 17 (FILTER)	20"	286690.2096	1167530.9266

EXISTING		PROPOSED
	BOUNDARY LINE	
	CONTOUR MAJOR	
	CONTOUR MINOR	
	DRAINAGE	
	EASEMENT	
	ELECTRIC	
	FENCE CHAIN LINK	
	FENCE POST	
	FENCE STOCKADE	
	EDGE OF GRAVEL	
	EDGE OF PAVEMENT	
	EDGE OF RIVER	
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	WATER	

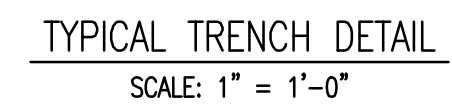
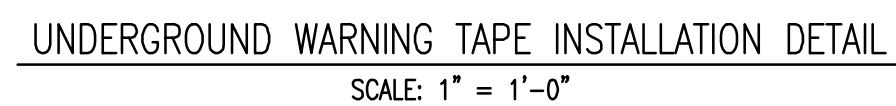
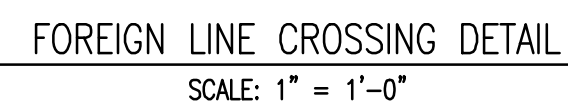
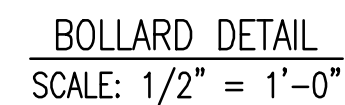
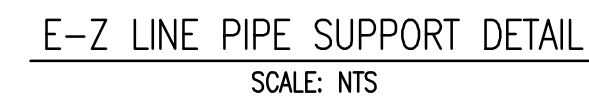
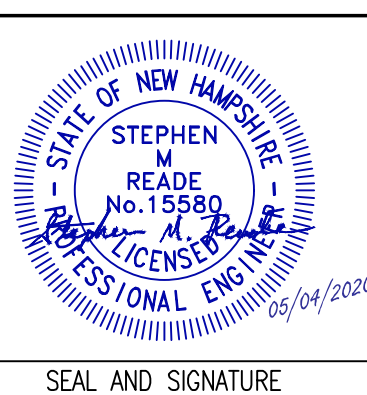
NOTES:
1. SEE EXISTING CONDITIONS PLANS FOR BENCHMARK AND CONTROL POINT LOCATIONS.

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SCALE: 1" = 5'-0"																																																																																																																												
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SHEET 6 OF 9																																																																																																																												



E-Z LINE PIPE SUPPORT SCHEDULE							
PIPE SIZE	MODEL #	BASE PLATE SIZE		THICK	HOLE CENTER		HOLE SIZE
		"N"	"p"		"T"	"S"	
2"	204	8"	6"	1/2"	5"	3-1/2"	5/8"
2-1/2"	204	8"	6"	1/2"	5"	3-1/2"	5/8"
3"	204	8"	6"	1/2"	5"	3-1/2"	5/8"
3-1/2"	204	8"	6"	1/2"	5"	3-1/2"	5/8"
4"	204	8"	6"	1/2"	5"	3-1/2"	5/8"
6"	510	10"	8"	1/2"	7"	5-1/2"	5/8"
8"	510	10"	8"	1/2"	7"	5-1/2"	5/8"
10"	510	10"	8"	1/2"	7"	5-1/2"	5/8"
12"	1218	12"	10"	5/8"	9"	7-1/2"	5/8"
14"	1218	12"	10"	5/8"	9"	7-1/2"	3/4"

E-Z LINE PIPE SUPPORT SCHEDULE							
PIPE SIZE	MODEL #	BASE PLATE SIZE		THICK	HOLE CENTER		HOLE SIZE
		"N"	"P"		"T"	"S"	
16"	1218	12"	10"	5/8"	9"	7-1/2"	3/4"
18"	1218	12"	10"	5/8"	9"	7-1/2"	3/4"
20"	2024	12"	10"	5/8"	9"	7-1/2"	7/8"
22"	2024	12"	10"	5/8"	9"	7-1/2"	7/8"
24"	2024	12"	10"	5/8"	9"	7-1/2"	7/8"
26"	2636	14"	12"	3/4"	11"	9-1/2"	7/8"
28"	2636	14"	12"	3/4"	11"	9-1/2"	7/8"
30"	2636	14"	12"	3/4"	11"	9-1/2"	7/8"
32"	2636	14"	12"	3/4"	11"	9-1/2"	7/8"
36"	2636	14"	12"	3/4"	11"	9-1/2"	7/8"

[illegible]

PRJ MANAGER: MARK D. WOOD		
PRJ ENGINEER: MATT PELLETIER		
PRJ NAME: ROUTE 125 STATION		
PRJ NUMBER: 5266		
PRJ MILESTONE: PERMITTING		
PRJ PHASE: PERMITTING		
DESIGNED BY:	MDW	01/31/20
DRAFTED BY:	MPP	01/31/20
CHECKED BY:	SMR	01/31/20
APPROVED BY:	MDW	01/31/20

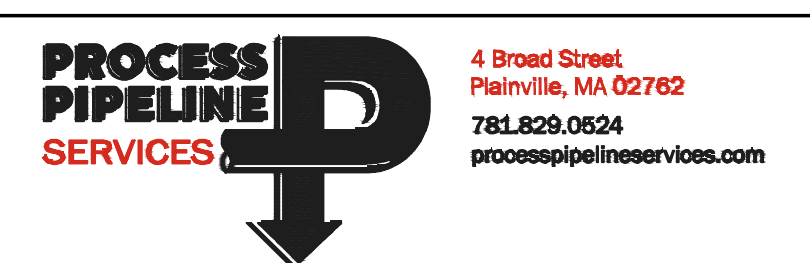
CLIENT INFORMATION



DESIGN MANAGER: TIM BICKFORD	REVIEWED BY:		
DESIGN ENGINEER: MIKE DUNN	CHECKED BY:		
ACTIVATION ORDER:	APPROVED BY:		

P E R M I T T I N G

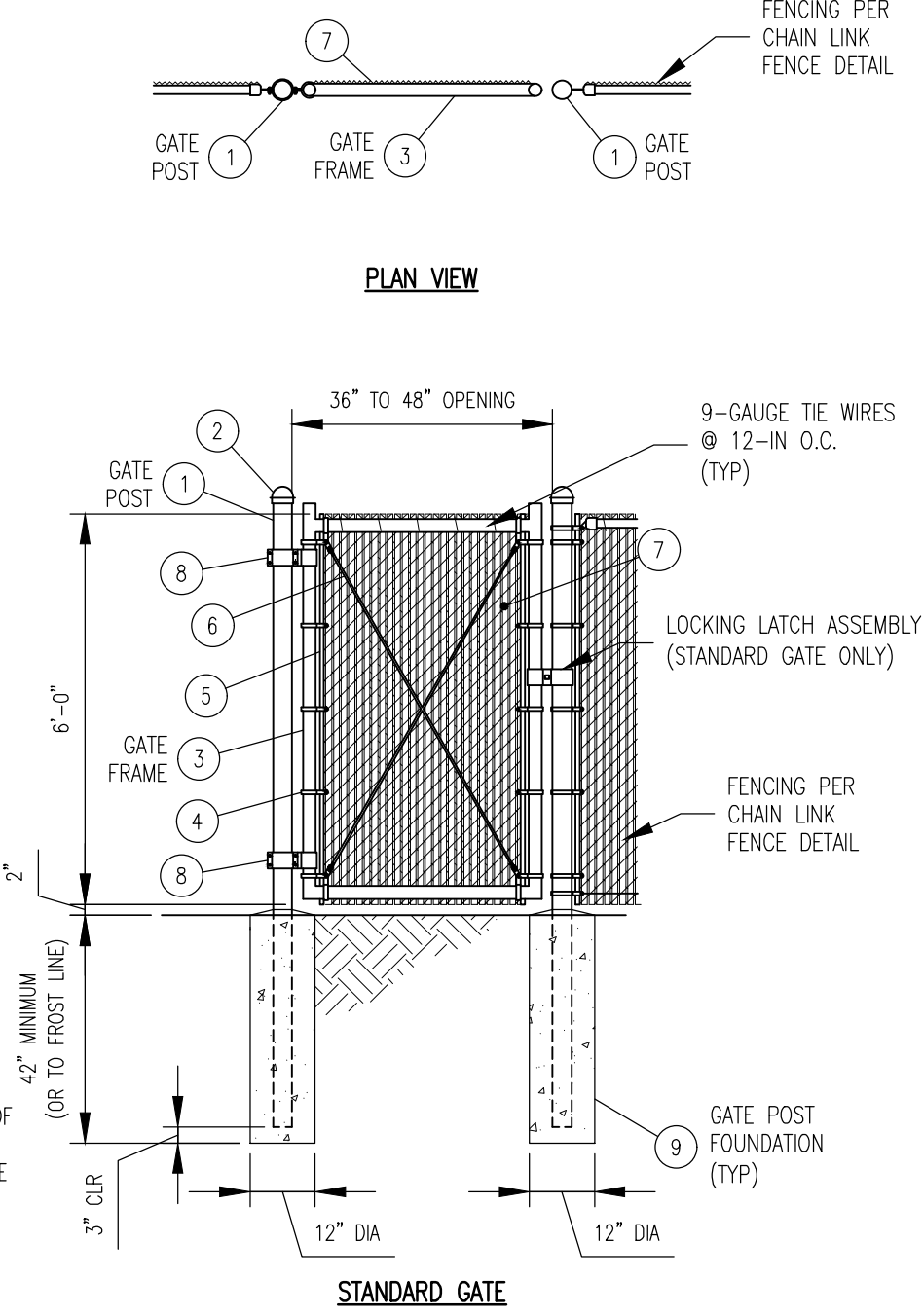
SHEET TITLE	STANDARD DETAILS 1 OF 3
PROJECT NAME	ROUTE 125 STATION
PROJECT LOCATION	770 COLUMBUS AVE ROCHESTER, NH 03867



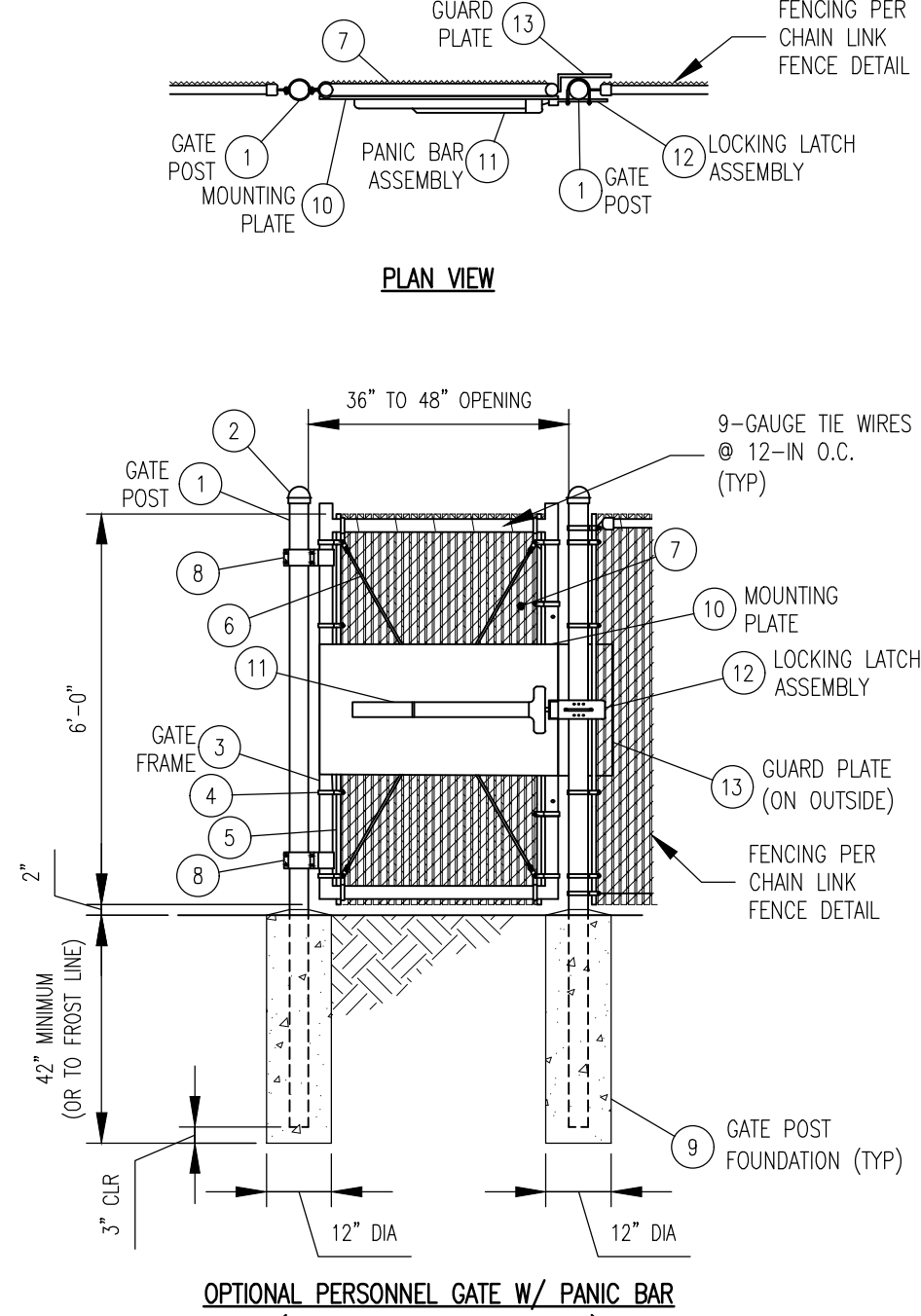
FILE NAME: 5266_C100.DWG	SIZE	NAME	REV
PLOT DATE: 05/04/2020 9:44 AM	22X34	C001	1
SCALE: AS SHOWN	SHEET 7 OF 9		

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	SCH 40 GALVANIZED STEEL GATE POST, OR APPROVED EQUAL
2	GALVANIZED STEEL POST CAP
3	GALVANIZED STEEL GATE FRAME
4	GALVANIZED STEEL TENSION BAND
5	GALVANIZED STEEL TENSION BAR
6	DOUBLE TRUSS ROD ASSEMBLY
(FOUR) GALVANIZED STEEL TRUSS TIGHTENERS	
(TWO) 3/8"Ø GALVANIZED STEEL TRUSS RODS	
7	9-GAUGE, ASTM-392, CLASS I, 2" MESH, GALVANIZED CHAIN LINK FABRIC
8	INDUSTRIAL HINGE ASSEMBLY
9	ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 300 PSI
BILL OF MATERIALS FOR EMERGENCY GATE ONLY	
10	24" TALL GALVANIZED STEEL MOUNTING PLATE, PLATE IS TO SPAN WIDTH OF GATE AND TO BE WELDED TO THE INSIDE OF THE VERTICAL GATE FRAME
11	PANIC BAR ASSEMBLY W/ SS MOUNTING HARDWARE
12	LOCKING LATCH ASSEMBLY W/ SS MOUNTING HARDWARE
13	24" TALL GALVANIZED STEEL PL OR ANGLE WELDED TO THE OUTSIDE OF THE VERTICAL GATE FRAME SO THAT IT OVERLAPS THE ADJACENT GATE POST WHEN GATE IS IN THE CLOSED POSITION TO PREVENT INTRUSION OR ACCESS TO LATCH ASSEMBLY BETWEEN THE FRAME AND POST

- NOTES:
- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
 - ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
 - ALL WELDING SHALL CONFORM TO AWS D1.1.
 - ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
 - GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
 - PRIVACY SLATS SHALL BE INSTALLED TO PROVIDE A TIGHT FIT IN FENCE FABRIC AND PROVIDE A 98% (APPROX) PRIVACY. THE SLATS SHALL BE PROVIDED IN FOREST GREEN COLOR. PRIVACY SLATS SHALL BE MANUFACTURED AND INSTALLED PER ASTM F3000/F3000M.
 - CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



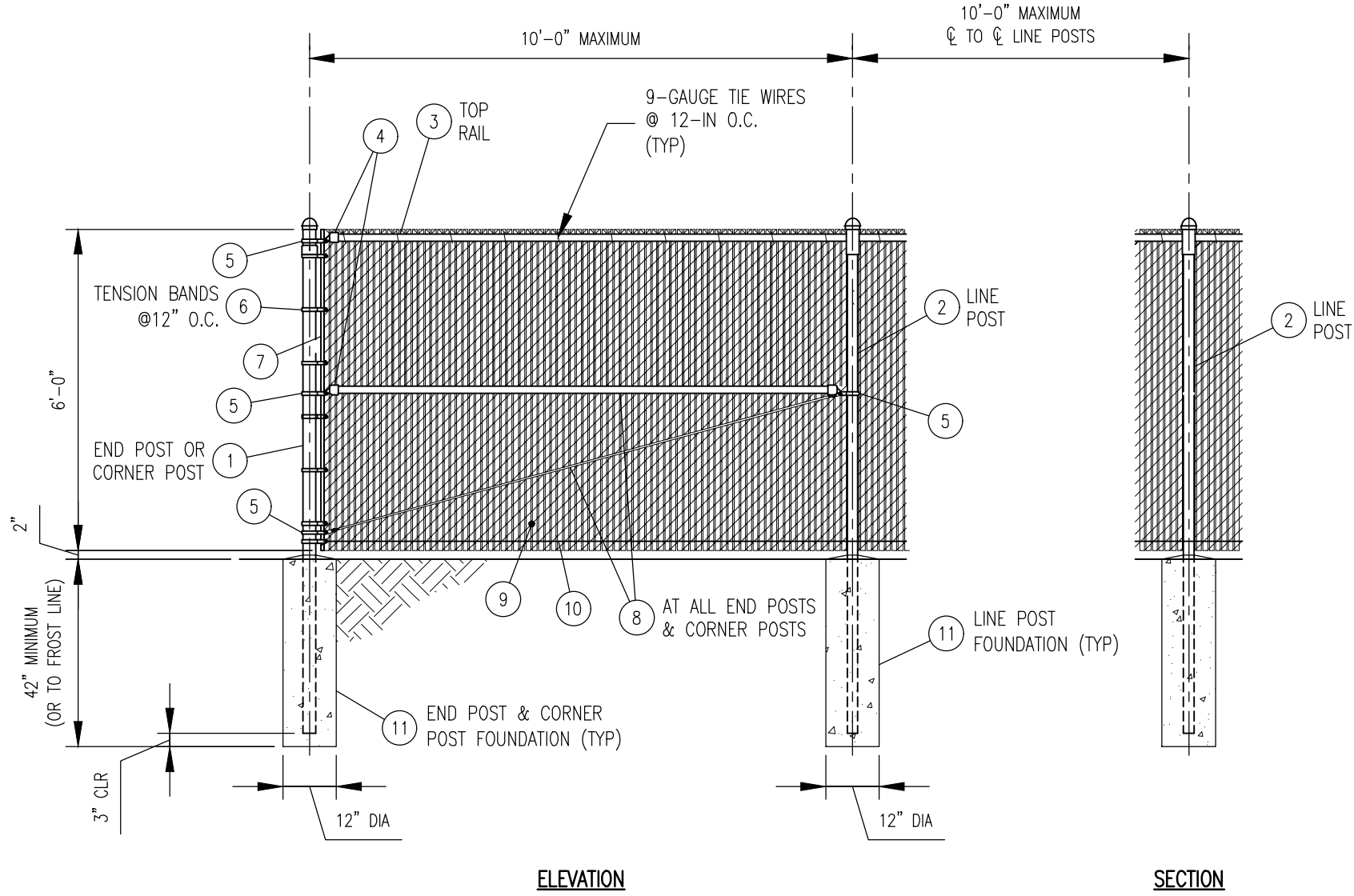
PANIC BAR PERSONNEL GATE DETAIL
WITH PRIVACY SLATS
SCALE: NTS



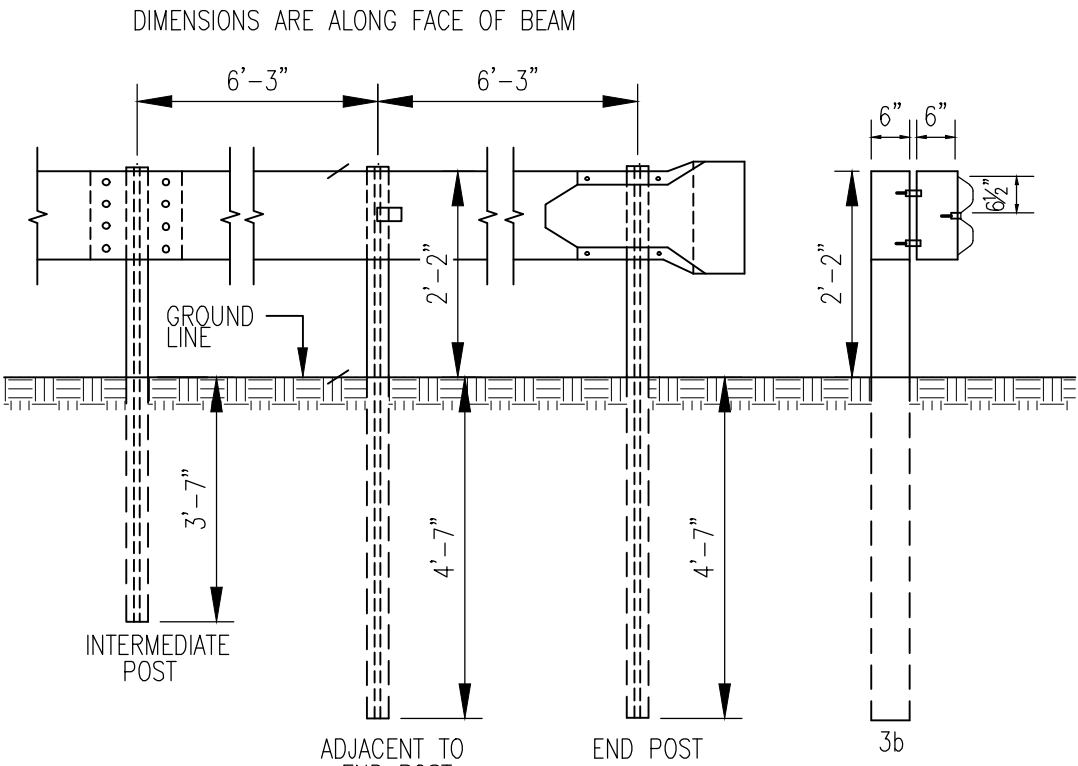
OPTIONAL PERSONNEL GATE W/ PANIC BAR
(IF SPECIFICALLY REQUESTED)

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	2-1/2" SCH 40 GALVANIZED STEEL PIPE
2	2" SCH 40 GALVANIZED STEEL PIPE
3	1-1/4" SCH 40 GALVANIZED STEEL PIPE
4	1-1/4" GALVANIZED STEEL RAIL END CAP
5	GALVANIZED STEEL BRACE BAND
6	GALVANIZED STEEL TENSION BAND
7	GALVANIZED STEEL TENSION BAR
8	BRACE RAIL & TRUSS ASSEMBLY
1-1/4" SCH 40 GALVANIZED STEEL PIPE	
GALVANIZED STEEL TRUSS TIGHTENERS	
5/16" DIA GALVANIZED STEEL TRUSS ROD	
9	9-GAUGE, ASTM-392, CLASS I, 2" MESH, GALVANIZED CHAIN LINK FABRIC
10	7-GAUGE GALVANIZED STEEL TENSION WIRE
11	ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI

- NOTES:
- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
 - ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
 - ALL WELDING SHALL CONFORM TO AWS D1.1.
 - ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
 - GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
 - PRIVACY SLATS SHALL BE INSTALLED TO PROVIDE A TIGHT FIT IN FENCE FABRIC AND PROVIDE A 98% (APPROX) PRIVACY. THE SLATS SHALL BE PROVIDED IN FOREST GREEN COLOR. PRIVACY SLATS SHALL BE MANUFACTURED AND INSTALLED PER ASTM F3000/F3000M.
 - CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



CHAIN LINK FENCE DETAIL
WITH PRIVACY SLATS
SCALE: NTS

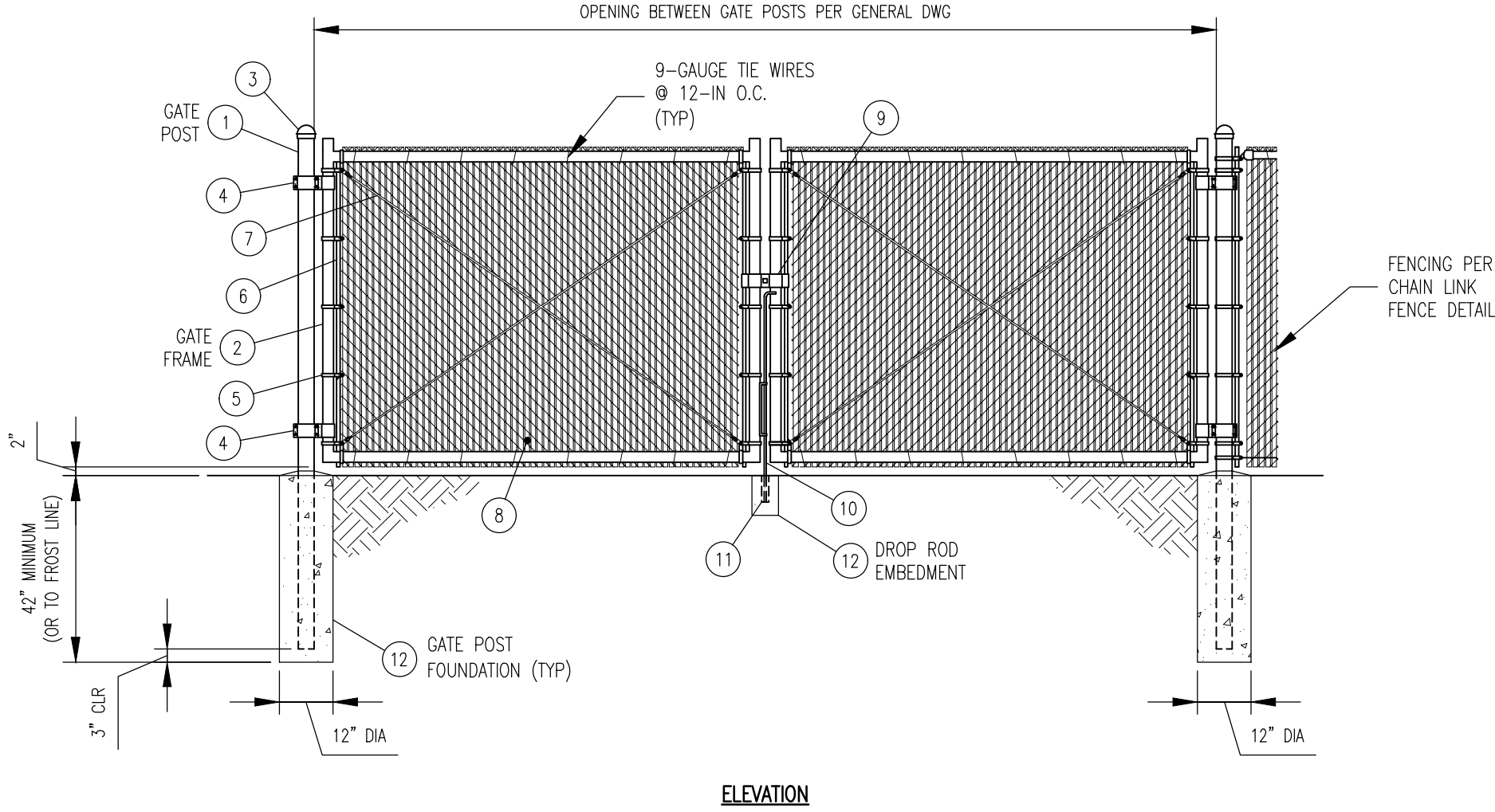


- NOTES:
- INTERMEDIATE POST SPACING SHALL BE 6'-3" UNLESS OTHERWISE SHOWN.
 - POSTS AND OFFSET BRACKETS FOR TYPE 3b GUARD RAIL SHALL BE W 6x6.5 OR APPROVED EQUAL.
 - ALL HOLES IN BEAM TO BE SHOP-PUNCHED BEFORE GALVANIZING.

GUARDRAIL TYPE 3b
SCALE: NTS

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	3" SCH 40 GALVANIZED STEEL PIPE
2	2" SCH 40 GALVANIZED STEEL PIPE
3	GALVANIZED STEEL POST CAP
4	1-1/4" INDUSTRIAL GATE POST HINGE
5	GALVANIZED STEEL TENSION BAND
6	GALVANIZED STEEL TENSION BAR
7	DOUBLE TRUSS ROD ASSEMBLY
(FOUR) GALVANIZED STEEL TRUSS TIGHTNERS	
(TWO) 3/8"Ø GALVANIZED STEEL TRUSS RODS	
8	9-GAUGE, ASTM-392, CLASS I, 2" MESH, GALVANIZED CHAIN LINK FABRIC
9	GALVANIZED STEEL LOCKING LATCH ASSEMBLY
10	GALVANIZED STEEL DROP ROD ASSEMBLY
11	GALVANIZED STEEL DROP ROD SLEEVE
12	ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI

- NOTES:
- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
 - ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
 - ALL WELDING SHALL CONFORM TO AWS D1.1.
 - ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
 - GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
 - PRIVACY SLATS SHALL BE INSTALLED TO PROVIDE A TIGHT FIT IN FENCE FABRIC AND PROVIDE A 98% (APPROX) PRIVACY. THE SLATS SHALL BE PROVIDED IN FOREST GREEN COLOR. PRIVACY SLATS SHALL BE MANUFACTURED AND INSTALLED PER ASTM F3000/F3000M.
 - CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



SWING GATE DETAIL
WITH PRIVACY SLATS
SCALE: NTS

REV	BY	DATE	DESCRIPTION

SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD	
PRJ ENGINEER: MATT PELLETIER	
PRJ NAME: ROUTE 125 STATION	
PRJ NUMBER: 5266	
PRJ MILESTONE: PERMITTING	
PRJ PHASE: PERMITTING	
DESIGNED BY:	MDW 01/31/20
DRAFTED BY:	MPP 01/31/20
CHECKED BY:	SMR 01/31/20
APPROVED BY:	MDW 01/31/20

CLIENT INFORMATION	
DESIGN MANAGER: TIM BICKFORD	REVIEWED BY:
DESIGN ENGINEER: MIKE DUNN	CHECKED BY:
ACTIVATION ORDER:	APPROVED BY:

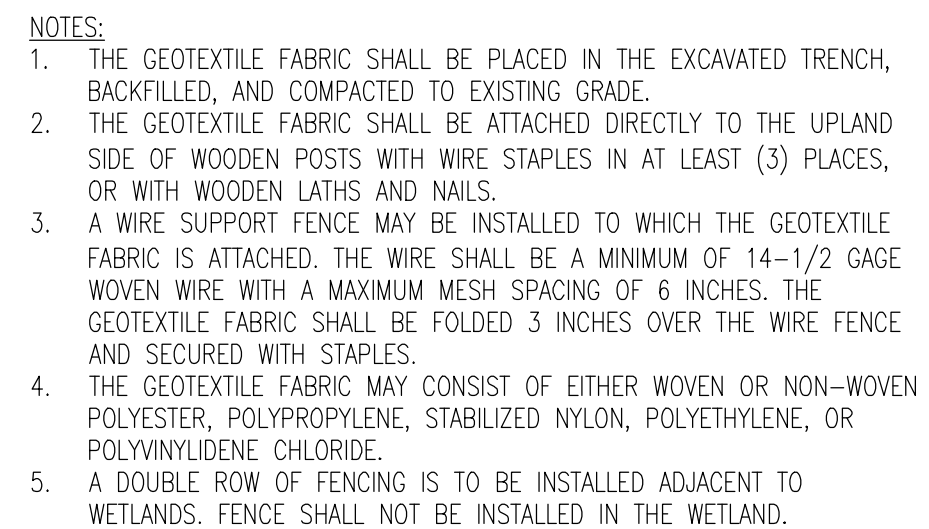
PERMITTING

SHEET TITLE	
STANDARD DETAILS 2 OF 3	
PROJECT NAME	
ROUTE 125 STATION	
PROJECT LOCATION	
770 COLUMBUS AVE ROCHESTER, NH 03867	

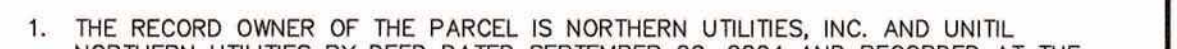
PROCESS PIPELINE SERVICES

4 Broad Street
Plainville, MA 02762
781.829.0524
processpipelineervices.com

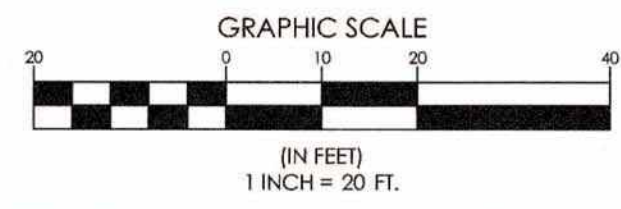
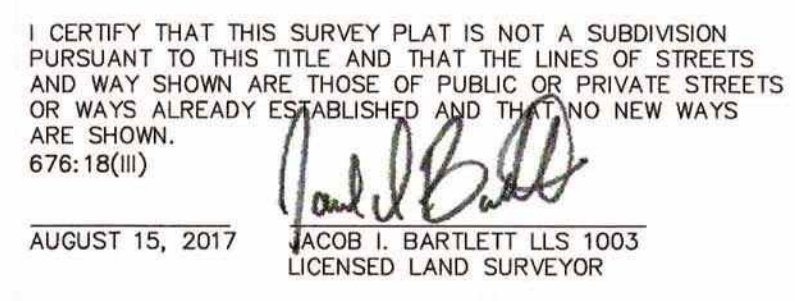
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PLOT DATE: 05/04/2020 9:44 AM	22X34	C002	1
SCALE: AS SHOWN	SHEET 8 OF 9		

[illegible]

A diagram showing a coordinate system. A vector labeled 'GRID' points towards the bottom-left. A vector labeled 'Z' points towards the top-right. The two vectors are perpendicular to each other, meeting at a central point marked with a small circle and a crosshair.



- EXISTING



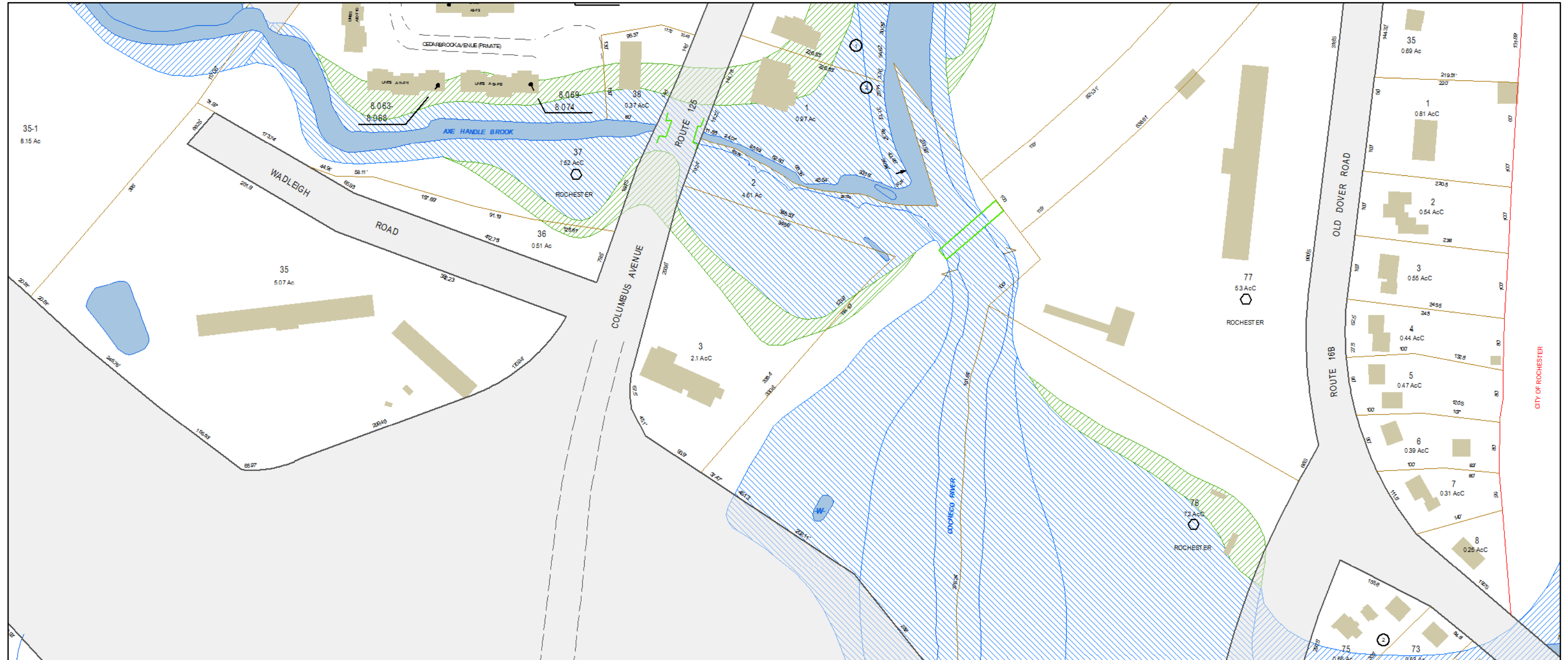


Rochester, NH

1 inch = 150 Feet



January 24, 2020



100-PROPERTYLINE	BRIDGE	0.2 PCT ANNUAL CHANCE FLOOD HAZARD
PWATER	WATER	100 Yr - Zone A
RAILROAD	tanno_poly	100 Yr - Zone AE
ROAD	Buildings	
100-HOOKS	Right of Ways	
100-RW	Water-poly	

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

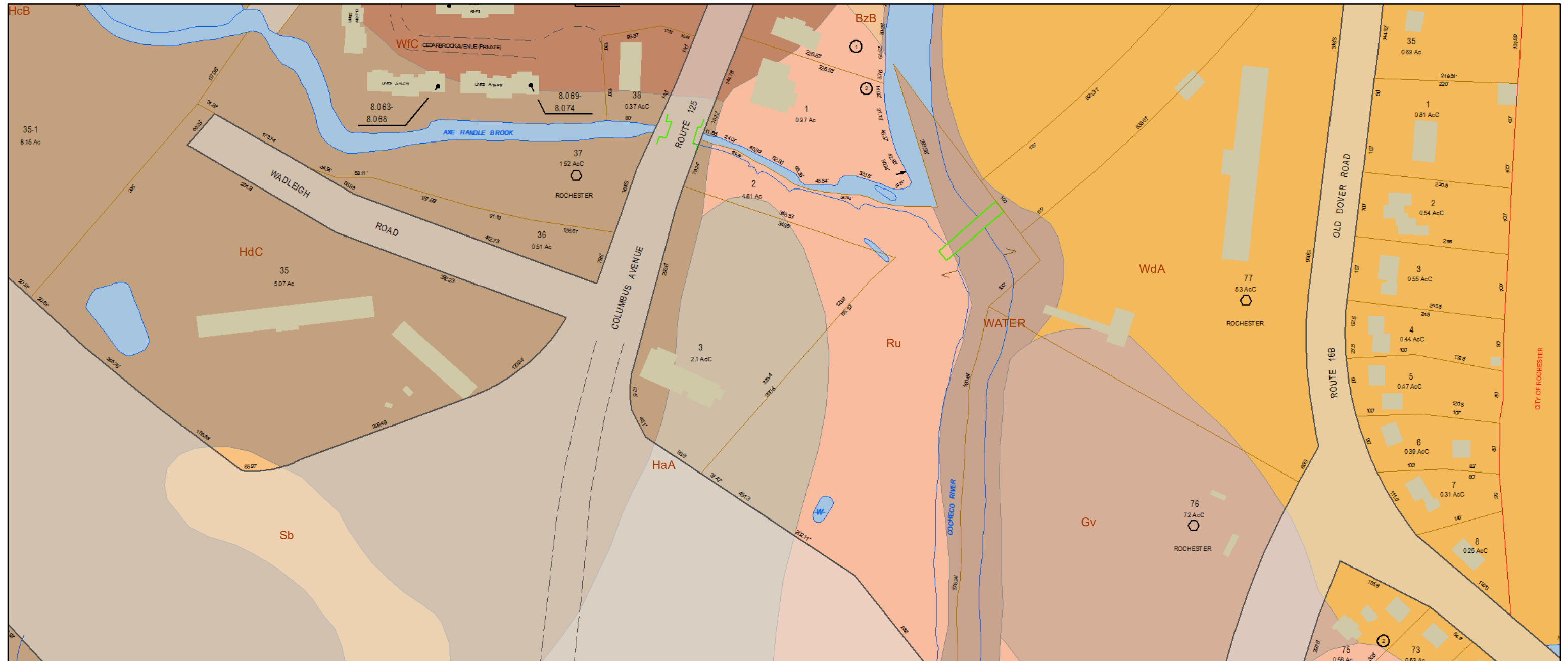


Rochester, NH

1 inch = 150 Feet



January 24, 2020



100-PROPERTYLINE	BRIDGE	BzB	Sb
PWATER	WATER	Gv	WATER
RAILROAD	tanno_poly	HaA	WdA
ROAD	Buildings	HcB	WfC
100-HOOKS	Right of Ways	HdC	
100-RW	Water-poly	Ru	

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

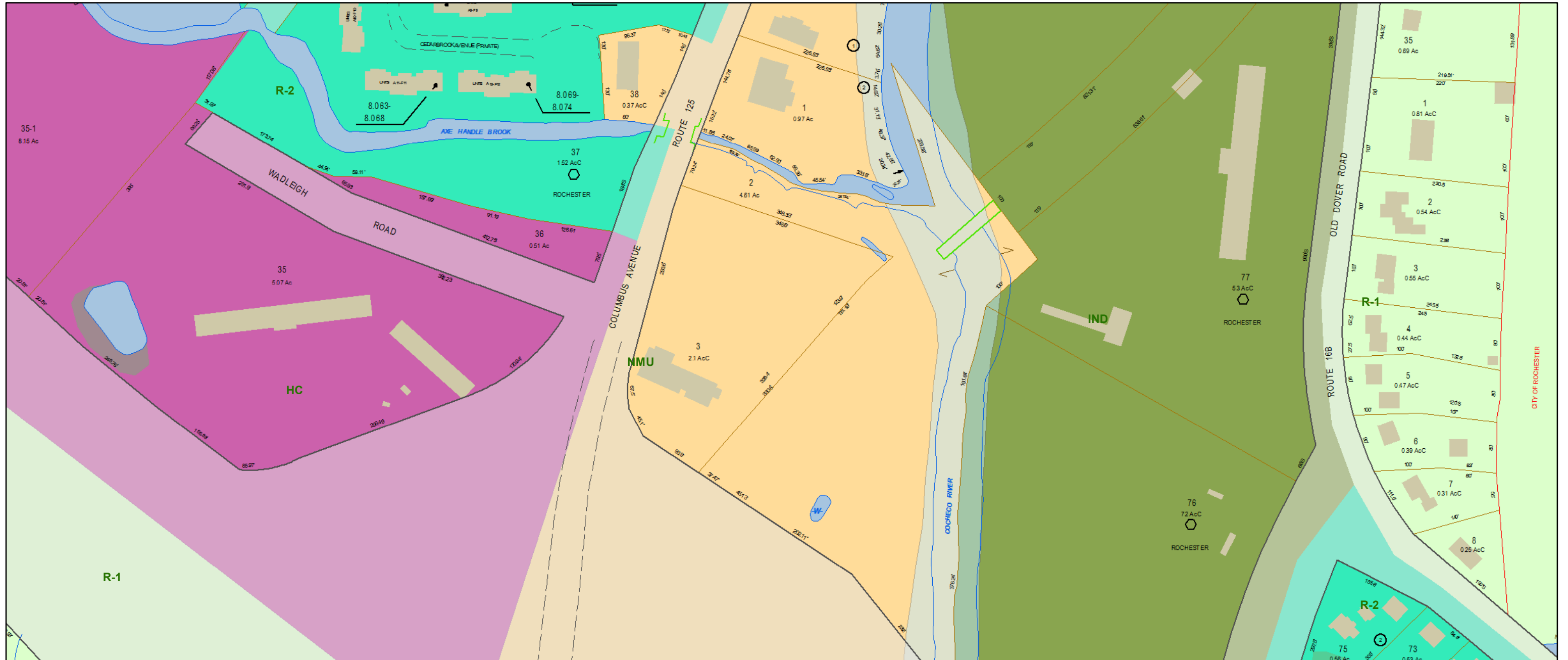


Rochester, NH

1 inch = 150 Feet

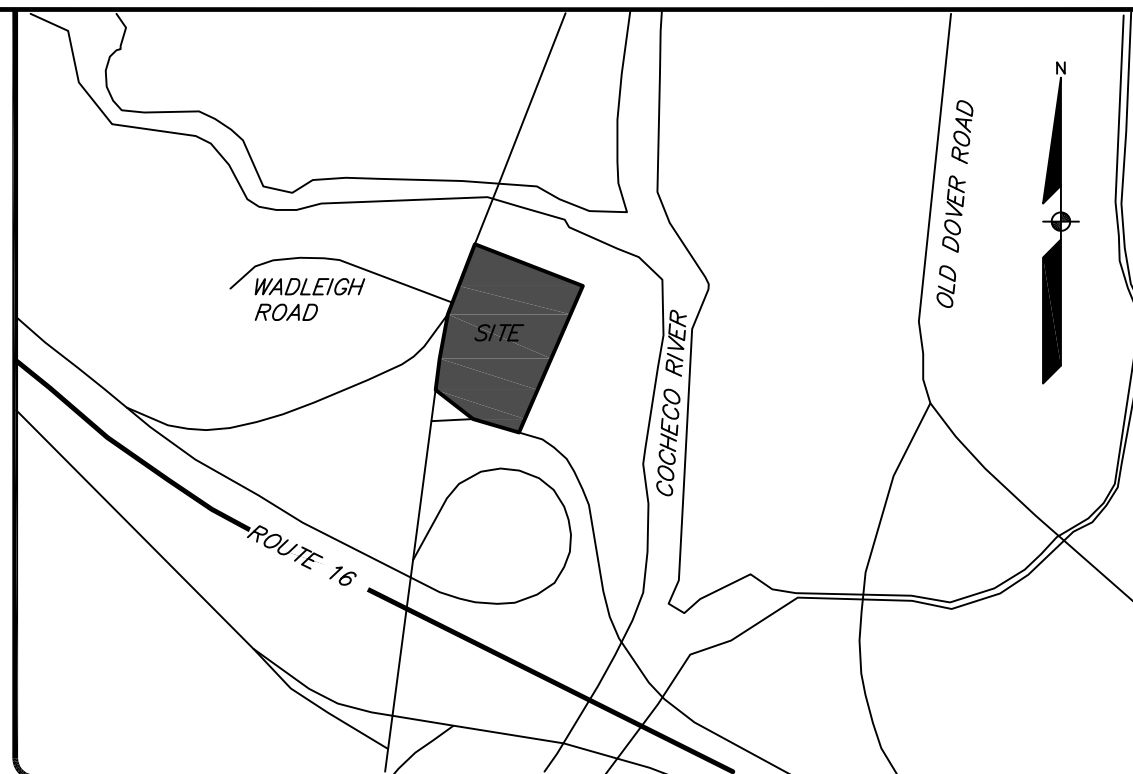
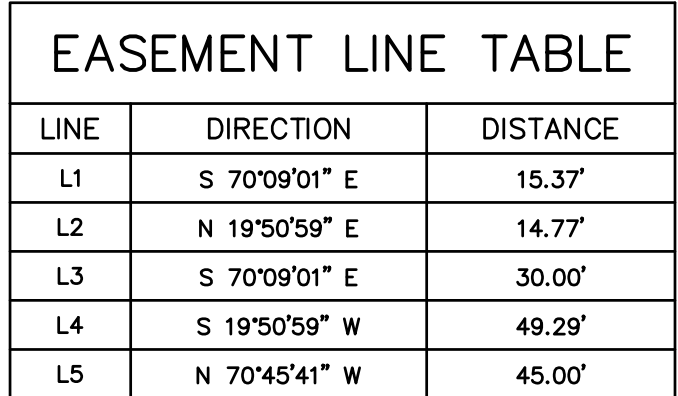


January 24, 2020



100-PROPERTYLINE	BRIDGE	LACUSTRINE	Industrial
PWATER	WATER	PALUSTRINE	
RAILROAD	tanno_poly	Residential-1	
ROAD	Buildings	Residential-2	
100-HOOKS	Right of Ways	Neighborhood Mixed Use	
100-RW	Water-poly	Highway Commercial	

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.





















LOCATION MAP N.T.S.

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS NORTHERN UTILITIES, INC. AND UNITIL NORTHERN UTILITIES BY DEED DATED SEPTEMBER 20, 2004 AND RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS IN BOOK 3069, PAGE 53.
2. THE PROPERTY IS SHOWN AS LOT 003 ON THE CITY OF ROCHESTER TAX MAP 0137 AND IS LOCATED IN THE ANU ZONING DISTRICT.
3. NO BOUNDARY SURVEY WAS PERFORMED AS PART OF THE SCOPE FOR THIS PROJECT. THE BOUNDARY DEPICTED HEREON IS AS DEPICTED ON PLAN REFERENCE 4A AND 4C. NO RECORDS RESEARCH HAS BEEN PERFORMED BY SEBAGO TECHNICS, INC. IN PREPARING THIS PLAN. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. IN JULY AND AUGUST OF 2017.
4. PLAN REFERENCES:
 - A. "PLAN OF LAND ON LOT 255 ROCHESTER N.H. MADE FOR NORTHERN UTILITIES "SHOWING UTILITIES AND USE RESTRICTIONS" DATED JULY 2, 2002 BY OWEN HASKELL INC. FILE NO. 99270R-NH. THIS PLAN IS RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS IN PLAN DRAWER 67, PAGE 20.
 - B. "STATE OF NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS PLANS OF PROPOSED LS 1926 (1) N.H. NO. P-2692-T SPAULDING TURNPIKE" DATED FEBRUARY 7, 1985.
 - C. "STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY PLANS NH PROJECT NO. 10620-D (CONSTRUCTION CONTRACTS & K) SPAULDING TURNPIKE NH ROUTE 16" DATED MARCH 17, 2004.
5. PLAN ORIENTATION IS GRID NORTH. NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD83. ELEVATIONS DEPICTED HEREON ARE NAVD83, BASED ON DUAL FREQUENCY GPS OBSERVATIONS.
6. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE (1-800-485-5149) AND THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION TO CONSTRUCTION AND/OR EXCAVATION.
7. PORTIONS OF THE LOCUS PROPERTY AS DEPICTED HEREON DOES FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR STRAFFORD COUNTY, NEW HAMPSHIRE, COMMUNITY-PANEL NUMBER 33017C02210, HAVING AN EFFECTIVE DATE OF MAY 17, 2005. THE LOCUS FALLS WITHIN AN AREA DESIGNATED AS ZONE A AREAS WITH A 100 YEAR FLOOD ELEVATION OF 102.00.
8. A WETLAND DELINEATION WAS PERFORMED ON THIS PROJECT SITE IN JULY 2017 BY GARY M. FULLERTON, CERTIFIED SOIL SCIENTIST OF SEBAGO TECHNICS, INC. THIS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN THE 1987 EDITION OF THE DELINEATION MANUAL FOR WETLANDS, SURFACE WATER, AND TIDE INFLUENCED WATERS, PREPARED BY THE U.S. ARMY CORPS OF ENGINEERS, WETLAND FLAGS WITHIN PROPOSED DEVELOPMENT AREAS WERE LOCATED BY GROUND SURVEY. WETLAND FLAGS OUTSIDE OF PROPOSED DEVELOPMENT AREA WERE LOCATED USING GLOBAL POSITIONING SYSTEM (GPS). THE GPS COORDINATES OF WETLANDS ARE LISTED HEREON.
9. PLAN REFERENCE 6C SHOWS A TAKING BY THE STATE OF NEW HAMPSHIRE FOR HIGHWAY PURPOSES WHICH IS DEPICTED HEREON.

LEGEND

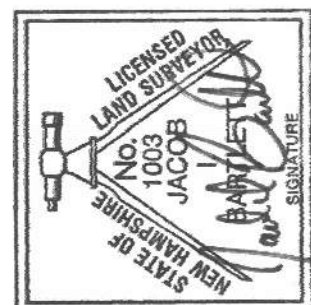
EXISTING	PROPOSED
_____	PROPERTY LINE/R.O.W.
_____	ABUTTER LINE/R.O.W.
_____	DEED LINE/R.O.W.
_____	EASEMENT
	MONUMENT
 MW-1	MONITORING WELL
	BUILDING
	EDGE WETLAND
	WETLANDS
_____	EDGE PAVEMENT
_____	EDGE CONCRETE
_____	EDGE GRAVEL
_____	CURB LINE
_____	EDGE OF WATER
	TREELINE
_____	WOVEN WIRE FENCE
_____	CHAIN LINK FENCE
_____	GUARD RAIL
	RETAINING WALL
_____	BOLLARD
	SIGN
	GAS GATE VALVE
	WATER GATE VALVE
_____	HYDRANT
_____	SANITARY SEWER
	SANITARY MANHOLE
_____	STORM DRAIN
	DRAINAGE MANHOLE
	CATCH BASIN
_____	OVERHEAD UTILITY
	ELECTRICAL METER
	ELECTRICAL BOX
	UTILITY POLE
	GUY WIRE
	RIPRAP

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION
PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS
AND WAY SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS
OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS
ARE SHOWN.

MARCH 18, 2020

JACOB I. BARTLETT LLS 1003
LICENSED LAND SURVEYOR

JACOB I. BARTLETT, LLS 1003



	DRAWN	CHECKED
	CDM	JIB
A	JIB	ISSUED TO CLIENT FOR REVIEW
REV:	JIB	DATE: STATUS:
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.		

75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

EASEMENT PLAN
OF:
NORTHERN UTILITIES PROPERTY
7770 COLUMBUS AVENUE
ROCHESTER, NEW HAMPSHIRE
FOR:
PROCESS PIPELINE SERVICES, INC.
1600 PROVIDENCE HIGHWAY

PROJECT NO.	SCALE
17196	1" = 20'

SHEET 1 OF 1

Proposed Access Easement

A certain access easement situated on the southeasterly side of Columbus Avenue, in the City of Rochester, County of Strafford, State of New Hampshire bounded and described as follows:

Beginning at a 4-inch by 4-inch concrete New Hampshire highway bound on the southeasterly sideline of Columbus Avenue at land now or formerly of Northern Utilities, Inc. as described in a deed recorded at the Strafford County Registry of Deeds (SCRD) in Book 3069, Page 53;

Thence S 70°09'01" E, through land now or formerly of Northern Utilities, Inc. a distance of 15.37 feet;

Thence N 19°50'59" E, through land now or formerly of Northern Utilities, Inc. a distance of 14.77 feet to other land now or formerly of Northern Utilities, Inc. as described in a deed recorded at the SCRD in Book 1506, Page 473;

Thence S 70°09'01" E, along land now or formerly of Northern Utilities, Inc. a distance of 30.00 feet;

Thence S 19°50'59" W, through land now or formerly of Northern Utilities, Inc. a distance of 49.29 feet;

Thence N 70°45'41" W, through land now or formerly of Northern Utilities, Inc. a distance of 45.00 feet to the southeasterly sideline of Columbus Avenue;

Thence N 19°14'19" E, along Columbus Avenue a distance of 35.00 feet to the Point of Beginning.

The access easement containing approximately 2,014 Square Feet.

Bearings herein are based upon Grid North, New Hampshire State Plane Coordinate System, Zone 2800-NAD 83.

Reference is made to a plan entitled **"Easement Plan of Northern Utilities Property 770 Columbus Avenue, Rochester, New Hampshire, For: Process Pipeline Services, Inc."** dated March 18, 2020 by Sebago Technics, Inc.

March 24, 2020

JIB/lg

NOTICE OF ACTIVITY AND USE RESTRICTION

The following Activity and Use Restrictions are hereby placed upon the property belonging to Northern Utilities, Inc., a New Hampshire Corporation (the "Owner" or the "Grantor"), of 300 Friberg Parkway, Westborough, Massachusetts as to the property located on or near Gonic Road, City of Rochester, Strafford County, State of New Hampshire (the "Property"). The Property being certain tracts of the premises conveyed by warranty deed at Book 1506/Page 473 as described in Exhibit A and recorded in the Strafford County Registry of Deeds. The Property is the location of the "Former Rochester Manufactured Gas Plant (MGP) Site", or "Site" which has been assigned site number 871202 by the New Hampshire Department of Environmental Services ("NHDES").

Grantor has conducted site investigation and remediation at the Former Rochester MGP Site to remove coal gasification-related materials ("CGRM") that were generated and accidentally released and/or spilled when the Site was used as a manufactured gas plant between 1903 and 1957. For purposes of these Activity and Use Restrictions, CGRM is defined as any coal, oil and other petroleum wastes and other related products or byproducts of manufacturing gas from coal, oil, or other petroleum products.

The purpose of these Activity and Use Restrictions is to limit direct human exposure to any residual CGRM that was not removed from Grantor's Property. These restrictions shall continue and run with the land until expressly modified or terminated by or on behalf of NHDES and the Grantor and notice of such modifications or termination shall be recorded in the Registry of Deeds. These Activity and Use Restrictions shall be incorporated either in full or by reference into all subsequent deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instrument conveying an interest in or a right to use that portion of the Grantor's Property.

Restricted Uses and Activities: No use of or activity on the Grantor's Property is permitted which is inconsistent with the objectives of this Activity and Use Restriction, or which might result in a significant risk of harm to health, safety, public welfare or the environment, or in a substantial hazard.

- a) The Owner will not use ground water in a manner inconsistent with the prevailing Groundwater Permit issued by the NHDES.
- b) To adequately protect neighbors, the general public, and the environment, the Owner shall not excavate or permit other parties to excavate soils within the subject Property, including taking samples for testing and evaluations, unless Owner:

BK 2582 PG 0335

- i) Notifies NHDES prior to commencing excavation and provides a description of the conditions and intended nature of the excavation;
 - ii) Limits disturbance of CGRM-impacted media to the minimum reasonable necessary for the intended purpose;
 - iii) Ensures that excavation workers are adequately protected in accordance with prevailing industrial hygiene standards (including federal OSHA standards) associated with excavations involving CGRM;
 - iv) Ensures that CGRM-impacted soil and other regulated materials are excavated and handled in accordance with applicable federal and NHDES standards for CGRM-impacted media, including, but not limited to, hazardous waste requirements, if appropriate;
 - v) Engages the services of an environmental professional to prepare and implement or supervise the preparation and implementation of a written plan for excavating and handling CGRM-impacted soils and restoring the Property to a condition consistent with this Notice of Activity and Use Restriction;
 - vi) Restores the Property to a condition consistent with this Notice of Activity and Use Restriction as determined by the NHDES, including proper disposal of any CGRM-impacted media; and
 - vii) Provides copies of any relevant plan or review and evaluation, and related correspondence to NHDES for approval prior to commencement of excavation activities.
- c) Owner shall not permit growing of food on the Property.
 - d) Owner shall not permit residential use of the Property.
 - e) Owner shall not permit day care activities, a playground, or children's school on the Property.
 - f) The Owner shall not permit outdoor recreational activities that disturb landscaping or groundcover.

BK2582PG0336

Permitted Uses and Activities: The following uses of and activities on the Property are allowed, so long as they do not result in a disturbance of landscaping, groundcover, or pavement on Grantor's Property, or involve extraction of groundwater:

- a) Retail/commercial uses;
- b) Industrial uses;
- c) Construction, maintenance, or repair of above-ground improvements, including utility related activities;
- d) Maintenance of landscaping and floral gardens and grass;
- e) Outdoor recreation uses that do not disturb the landscaping or groundcover (including but not limited to uses such as walking and bird watching); and
- f) Any work which may disturb the grounds, excavation, or relocation of contaminated soils undertaken with the written approval of the NHDES.

Emergency Activities: The Owner may conduct excavations within the subject Restricted Area in emergency circumstances that require immediate excavation without obtaining prior written approval of the NHDES in order to repair underground utility lines or other infrastructure or to respond to other types of emergencies. The Owner must meet the conditions outlined in paragraphs (b)(i) through (b)(vi) above under "Restricted Uses and Activities". NHDES shall be afforded a reasonable opportunity to review and comment on any relevant plan developed by an acceptable environmental professional.

Obligations and Conditions Necessary for Implementation: The Owner shall perform the following or ensure that the following actions are taken with respect to the Property:

- a) Prevent all excavation on Grantor's Property, except that associated with allowed activities and uses with the written approval of the NHDES;
- b) Prevent removal of soils from Grantor's Property, unless authorized by the NHDES;
- c) Prevent the use or extraction of groundwater from Grantor's Property, except that associated with allowed uses and activities;
- d) Maintain all landscaping, groundcover, and pavement on Grantor's Property in good repair, and fully and immediately repair or replace any landscaping, groundcover, or pavement disturbed as a result of allowed activities and uses; and

BK2582PG0337

- e) Maintain all existing fences on Grantor's Property in good repair and prevent unauthorized individuals from entering Grantor's Property.

Proposed Changes in Activities and Uses. Any changes in activities and uses at the Grantor's Property that might result in higher levels of exposure to CGRM than currently exist, including undertaking a prohibited activity or use, must be reflected in a change to this Activity and Use Restriction, approved by the NHDES in accordance with relevant laws, regulations, policies and procedures.

The undersigned officer of Northern Utilities, Inc. warrants under oath that he/she has the actual authority to execute this instrument on behalf of said corporation.

Northern Utilities, Inc.,
A New Hampshire Corporation

By: Kenneth M. Margossian

Name: Kenneth M. Margossian

Title: Executive Vice President

ACKNOWLEDGMENT

Commonwealth of Massachusetts
County of Worcester

On this the 12th day of September, 2002, before me, William MacGillivray, the undersigned officer, personally appeared Kenneth M. Margossian, who acknowledged him/herself to be the Executive Vice President of Northern Utilities, Inc. a New Hampshire Corporation, and that he/she, as such Executive Vice President, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by him/herself as Northern Utilities, Inc.

In witness whereof I hereunto set my hand and official seal.

William D. MacGillivray
Notary Public
My commission expires May 7, 2004

BK2582PG0338

EXHIBIT A

Three tracts or parcels of land situate easterly of New Hampshire Route 125, the road from Rochester to Gonic, in Rochester, near Gonic Village, County of Strafford and State of New Hampshire, bounded and described as follows:

TRACT I: Beginning at a point on the easterly sideline of New Hampshire Route 125 at the northwesterly corner of land now or formerly of Pyrofax Gas Corp.; thence running North Eighteen Degrees Twenty-Four Minutes Fifty-Five Seconds East (N 18° 24' 55" E) a distance of Seventy-Nine and Twenty-Four Hundredths (79.24) feet to a point in the center of Axe Handle Brook, so-called; thence turning and running South Sixty-Five Degrees Eleven Minutes Ten Seconds East (S 65° 11' 10" E) along the center of Axe Handle Brook, so-called, a distance of One-Hundred Twenty-Six and Seventy-Five Hundredths (126.75) feet to a point; thence turning and running South Seventy-Six Degrees Forty-Six Minutes Twenty Seconds East (S 76° 46' 20" E) along the center of Axe Handle Brook, so-called, a distance of Two Hundred Fifty-Seven and Eighty-Four Hundredths (257.84) feet to a point in the center of the Cocheco River; thence turning and running South Forty Degrees Fifty-One Minutes Twenty Seconds East (S 40° 51' 20" E) along the center of the Cocheco River a distance of Fourteen and Three Hundredths (14.03) feet to a point on the northwesterly sideline of land now or formerly of the Boston and Maine Corporation; thence turning and running South Forty-Seven Degrees Twenty-One Minutes Twenty Seconds West (S 47° 21' 20" W) feet along the Boston and Maine Corporation land to the northeasterly corner of said Pyrofax Gas Corp. land; thence turning and running North Seventy-One Degrees Eight Minutes Twenty Seconds West (N 71° 08' 20" W) a distance of Three Hundred Forty-Eight and Thirty-Three Hundredths (348.33) feet along said Pyrofax Gas Corp. land to the point of beginning, be all said measurements, more or less. Meaning and intended to describe Tract I in deed Book 1606 Page 473.

TRACT II: Beginning at a point at the southwesterly corner of the tract herein conveyed at land now or formerly of the Boston and Maine Corporation and land now or formerly of the State of New Hampshire adjacent to the Spaulding Turnpike; thence running northeasterly on a curve to the right having a radius of One Thousand Three Hundred Ninety-One and Twenty-Five Hundredths (1,391.25) feet, a distance of Three Hundred Eight and Thirty Hundredths (308.30) feet along said Boston and Maine Corporation land to a point; thence continuing North Forty-Seven Degrees Twenty-Two Minutes Fifteen Seconds East (N 47° 22' 15" E) along said Boston and Maine Corporation land a distance of One Hundred Fifty-Three and Eighty-Four Hundredths (153.84) feet to a point; thence turning and running South Fifty-Two Degrees Fifty Minutes Five Seconds East (S 52° 50' 05" E) a distance of Seventy-Five and Ninety-Five Hundredths (75.95) feet along said Boston and Maine Corporation land to a point in the center of the Cocheco River; thence turning and running South Ten Degrees Twenty-

BK 2582 PG 0339

Three Minutes Fifty Seconds West (S 10° 23' 50" W) a distance of Three Hundred Seventy-Six and Twenty-Four Hundredths (376.24) feet along the center of the Cocheco River to a point on the northeasterly sideline of said State of New Hampshire land; thence turning and running North Forty-Three Degrees Three Minutes Zero Seconds West (N 43° 03' 00" W) a distance of Two Hundred Thirty-Two and Zero Hundredths (232.00) feet along said State of New Hampshire land to a New Hampshire Highway bound; thence turning and running North Fifty-Eight Degrees Thirty-Eight Minutes Twenty-Five Seconds West (N 58° 38' 25" W) a distance of Two Hundred Two and Eleven Hundredths (202.11) feet along said State of New Hampshire land to said Boston and Maine Corporation land to the point of beginning, be all said measurements, more or less. Meaning and intended to describe Tract II in deed Book 1606 Page 473.

TRACT IIIA: Beginning at a New Hampshire Highway Department concrete bound located North Fifty-Eight Degrees Thirty-Eight Minutes Twenty-Five Seconds West (N 58° 38' 25" W), Three and Eight-One Hundredths (3.81) feet westerly from Station 4895+45+/- of the centerline of location of the Boston and Maine Corporation; thence turning North Fifty-Seven Degrees Twenty-Eight Minutes Fifty Seconds West (N 57° 28' 50" W) a distance of Thirty-Seven and Forty-Seven Hundredths (37.47) feet to a point at land now or formerly of Pyrofax Gas Corp.; thence turning and running northeasterly along a curve to the right having a radius of One Thousand Four Hundred Seventy Three and Seventy-Five Hundredths (1,473.75) feet a distance of Three Hundred Thirty and Sixty Hundredths (330.60) feet to a point of tangency; thence turning and running North Forty-Seven Degrees Twenty-Two Minutes Fifteen Seconds East (N 47° 22' 15" E) a distance of Two Hundred Fourteen and Seventeen Hundredths (214.17) feet to a point located in the Cocheco River; thence turning and running southeasterly by the center of the Cocheco River One Hundred Sixty-Five (165) feet, more or less, to a point; thence turning and running North Fifty-Two Degrees Fifty Minutes Fifteen Seconds West (N 52° 50' 15" W) a distance of Seventy-Five and Ninety-Five Hundredths (75.95) feet to a point on the westerly bank of the Cocheco River; thence turning and running South Forty-Seven Degrees Twenty-Two Minutes Fifteen Seconds West (S 47° 22' 15" W), a distance of One Hundred Fifty-Three and Eighty-Four Hundredths (153.84) feet to a point of curvature located opposite Station 4898+39.6 of the centerline of location of the Boston and Maine Corporation; thence running along a curve to the left having a radius of One Thousand Three Hundred Ninety-One and Twenty-Five Hundredths (1,391.25) feet a distance of Three Hundred Eight and Thirty Hundredths (308.30) feet to a point at said New Hampshire Highway Department land; thence turning and running North Fifty-Eight Degrees Thirty-Eight Minutes Twenty-Five Seconds West (N 58° 38' 25" W) a distance of Forty-Five and Thirteen Hundredths (45.13) feet to the point of beginning, be all said measurements, more or less. Meaning and intending to describe that part of Tract III in deed Book 1506 Page 473 which lies southwesterly of the center of the Cocheco River.

Said tracts of land are shown on "Plan of Land on Route 125 Rochester, NH for Northern Utilities Showing Activity and Use Restriction Areas, July 02, 2002 Owen Haskell, Inc." to be recorded.

Plan #67-20



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Robert R. Scott, Commissioner

EMAIL ONLY

July 2, 2018

Thomas Murphy
Unitil Service Corp.
6 Liberty Lane West
Hampton, NH 03842

Subject: **Rochester** – Petrolane/Northern Utilities, Inc., Route 125
DES Site #198712002, Project #432

Groundwater Management Permit Renewal, prepared by AECOM, dated March 12, 2018

2016 and 2017 Biennial Water Quality Report and November 2017 Water Monitoring Data Submittal, prepared by AECOM, dated February 7, 2018

Dear Mr. Murphy:

Please find enclosed Groundwater Management Permit Number **GWP-198712002-R-006**, approved by the New Hampshire Department of Environmental Services (NHDES). This Permit is issued for a period of five (5) years to monitor the effects of past discharges of coal gasification waste, and is a renewal of your Permit that expired on June 10, 2018.

All monitoring summaries and all required sampling results shall be submitted to the Groundwater Management Permits Coordinator at the address below. All correspondence must contain a cover letter that clearly shows the NHDES identification number for the site (DES Site #198712002, Project #432).

In a letter to responsible parties, site owners, and/or permittees dated May 18, 2017, as clarified in a follow-up letter dated October 19, 2017, NHDES is requesting waste sites to complete an initial screening for the presence of *per-* and *polyfluoroalkyl substances* (collectively known as "PFAS") per the provisions of the NH Code of Administrative Rules, Chapters Env-Or 600 and Env-Or 700, as applicable. If sampling has yet to be completed at this site, PFAS sampling should be performed before the end of 2018. At this time we respectfully request the status of your intent to sample per our October 19, 2017 letter.

Based on our review of the data and AECOM's conclusions on the Site's conditions, NHDES has the following comments:

- We concur with AECOM that current concentrations of the Site's contaminants are generally consistent with historical results, and that the overall peak concentrations have decreased overtime. However, NHDES' review of the monitoring results observed increasing trends in contaminant concentrations starting from approximately 2012 (source area) and 2013 (downgradient areas). These increasing trends do not appear to fit with the predictions expected at this stage in the model presented by Retec Group, Inc, in July 2002.

www.des.nh.gov

PO Box 95, 29 Hazen Drive, Concord, NH 03302-0095

Telephone: (603) 271-2908 Fax: (603) 271-2181 TDD Access: Relay NH 1-800-735-2964

- NHDES notes that the contaminant concentration gradient between the two downgradient monitoring wells MW-03S and MW-04S, and the surface water sampling location SW-2, range from several hundreds of µg/L in groundwater to below detection limits in surface water. Hence, in the absence of other intermediate monitoring points, NHDES requires AECOM to collect “pore” samples from piezometers PZ-402S and PZ-403S during the November 2018 monitoring event. Based on the results, NHDES will provide guidance to whether these two locations should be included in the Permit requirements. In addition, please note that a description of the conditions found during sampling at SW-2 were not recorded on the sampling location form attached to the biennial report; please provide with future reporting.
- NHDES understands that the vegetative growth at the phytoremediation areas appear to be fully established. Based on the data reported in Table 4 of the 2016-2017 biennial summary report, concurs with AECOM that the phytoremediation system appears to have successfully modified (decreased) the groundwater hydraulic gradient to achieve a slower yearly groundwater flow across the site. However, these conditions do not appear to have had a significant effect on the reduction in contaminant concentrations which, instead, appear to have increased in the last five to six years.
- Based on the data reported in Table 2 of the 2016-2017 biennial summary report, the oxidation reduction potential (ORP) and dissolved oxygen (DO) values recorded at impacted monitoring wells appear to be significantly different from those recorded at non-impacted wells (i.e., MW-02S and MW-103S). NHDES also noted that since the remedial actions completed in 2000 and 2004, ORP declined over time from positive to negative values. As noted by AECOM, DO values in the plume area are relatively low (at or less than 0.5 mg/L) which combined with the observed negative ORP values, may indicate an oxygen depleted environment in the plume area. Although in specific cases anaerobic conditions may be favorable to naturally degrade some hydrocarbons contaminants, current literature and the recent increasing trends at the Site do not appear to support such assumption.

In conclusion, NHDES requires a re-evaluation of the current remedial methods and determine if additional remedial actions are necessary to achieve the condition of no significant risk. These evaluations shall be submitted with the November 2018 data submittal. Any additional remedial actions should be focused on reducing the overall concentrations of dissolved contaminants and limiting the impact to the downgradient surface water.

Should you have any questions, please contact me at NHDES' Waste Management Division.

Sincerely,



Sam Quattrini, P.G.
Hazardous Waste Remediation Bureau
Tel: (603) 271-2890
Fax: (603) 271-2181
Email: Samuele.Quattrini@des.nh.gov

cc: Paul Rydel, P.G., HWRB
Ryan McCarthy, AECOM
Attention Health Officer, City of Rochester



The
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
hereby issues
GROUNDWATER MANAGEMENT PERMIT NO. GWP-198712002-R-006
to the permittee
NORTHERN UTILITIES, INC.
to monitor the past discharge of
Coal Gasification Wastes
at
PETROLANE/NORTHERN UTILITIES, INC. SITE
(Route 125)
in ROCHESTER, N.H.
via the groundwater monitoring system comprised of
six (6) monitoring wells and two (2) surface water sampling points
as depicted on the Site Plan entitled
Figure 1, Site Plan
dated January 25, 2018, prepared by AECOM

TO: NORTHERN UTILITIES, INC
6 LIBERTY LANE WEST
HAMPTON, NH 03842

Date of Issuance: July 2, 2018
Date of Expiration: July 1, 2023

Pursuant to authority in N.H. RSA 485-C:6-a, the New Hampshire Department of Environmental Services (NHDES), hereby grants this permit to monitor past discharges to the groundwater at the above described location for five years subject to the following conditions:

(continued)

STANDARD MANAGEMENT PERMIT CONDITIONS

1. The permittee shall not violate Ambient Groundwater Quality Standards adopted by NHDES (N.H. Admin. Rules Env-Or 600) in groundwater outside the boundaries of the Groundwater Management Zone, as shown on the referenced site plan.
2. The permittee shall not cause groundwater degradation that results in a violation of surface water quality standards (N.H. Admin. Rules Env-Wq 1700) in any surface water body.
3. The permittee shall allow any authorized staff of NHDES, or its agent, to enter the property covered by this permit for the purpose of collecting information, examining records, collecting samples, or undertaking other action associated with this permit.
4. The permittee shall apply for renewal of this permit prior to its expiration date but no more than 90 days prior to expiration.
5. This permit is transferable only upon written request to, and approval of, NHDES. Compliance with the existing Permit shall be established prior to permit transfer. Transfer requests shall include the name and address of the person to whom the permit transfer is requested, the signatures of the current and future permittees, and a summary of all monitoring results to date.
6. NHDES reserves the right, under N.H. Admin. Rules Env-Or 600, to require additional hydrogeologic studies and/or remedial measures if NHDES receives information indicating the need for such work.
7. The permittee shall maintain a water quality monitoring program and submit monitoring results to NHDES no later than 45 days after sampling. Samples shall be taken from the monitoring wells and surface water sampling points as shown and labeled on the referenced site plan, and listed on the following table in accordance with the schedule outlined herein:

Monitoring Locations	Sampling Frequency	Parameters
MW-2S, MW-2D, MW-3S, MW-4S and MW-103S	November of each year	Field Geochemistry Parameters*, NHDES Waste Management Division Full List of Analytes for Volatile Organics (VOCs), Polynuclear Aromatic Hydrocarbons (PAHs), and Static Water Elevation
MW-102S	November of each year	Field Geochemistry Parameters*, VOCs, PAHs, Static Water Elevation, and Total & Amenable Cyanide
SW-1 (Axe Handle Brook, upstream) & SW-2 (Cocheco River downstream of facility)	November of each year	Field Geochemistry Parameters*, VOCs, and PAHs

*Temperature, Specific Conductance @25 °C, pH, oxidation reduction potential (ORP), dissolved oxygen (DO), and turbidity.

(continued)

GWP-198712002-R-006

Sampling shall be performed in accordance with the documents listed in Env-Or 610.02 (e). Samples shall be analyzed by a laboratory certified by the U.S. Environmental Protection Agency, or NHDES pursuant to Env-C 300.

Summaries of water quality shall be submitted in January 2020 and January 2022 to NHDES' Waste Management Division using a format acceptable to NHDES. The Summary Report shall include the information listed in Env-Or 607.04 (a), as applicable.

The Periodic Summary Report shall be prepared and stamped by a professional engineer or professional geologist licensed in the State of New Hampshire.

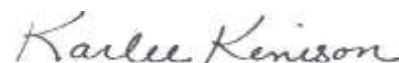
8. Issuance of this permit is based on the Groundwater Management Permit Renewal Application dated March 12, 2018, and the historical documents found in NHDES file DES DES #198712002. NHDES may require additional hydrogeologic studies and/or remedial measures if invalid or inaccurate data are submitted.
9. Within 30 days of discovery of a violation of an ambient groundwater quality standard at or beyond the Groundwater Management Zone boundary, the permittee shall notify NHDES in writing. Within 60 days of discovery, the permittee shall submit recommendations to correct the violation. NHDES shall approve the recommendations if NHDES determines that they will correct the violation.
10. All monitoring wells at the site shall be properly maintained and secured from unauthorized access or surface water infiltration.

SPECIAL CONDITIONS FOR THIS PERMIT

11. Recorded property within the Groundwater Management Zone includes the lots as listed and described in the following table:

Tax Map / Lot No.	Property Address	Owner Name and Address	Deed Reference (Book / Page)
137 / 2	Old Dover Road Rochester, NH 03867	Northern Utilities, Inc 6 Liberty Lane West Hampton, NH 03842	1506 / 473
137 / 3	32 Gonic Road Rochester, NH 03867	Northern Utilities, Inc 6 Liberty Lane West Hampton, NH 03842	3069 / 53

12. The permittee shall update ownership information required by Env-Or 607.03(a)(20) for all properties within the Groundwater Management Zone prior to renewal of the permit or upon a recommendation for site closure.



Karlee A. Kenison, P.G., Administrator
Hazardous Waste Remediation Bureau
Waste Management Division

Any person aggrieved by any terms or conditions of this permit may appeal to the N.H. Waste Management Council ("Council") by filing an appeal that meets the requirements specified in RSA 21-O:14 and the rules adopted by the Council, Env-WMC 200. The appeal must be filed **directly with the Council within 30 days** of the date of this decision and must set forth fully **every ground** upon which it is claimed that the decision complained of is unlawful or unreasonable. Only those grounds set forth in the notice of appeal can be considered by the Council.

Information about the Council, including a link to the Council's rules, is available at <http://nhec.nh.gov/> (or more directly at <http://nhec.nh.gov/waste/index.htm>). Copies of the rules also are available from NHDES' Public Information Center at (603) 271-2975.

GWP-198712002-R-006

Please mail the completed form and required material to:

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

RECEIVED
MAR 24 2020

DHR Use Only

R&C #

11588

Log In Date

3/24/20

Response Date

3/30/20

Sent Date

4/8/20

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

- ☒ This is a new submittal
☐ This is additional information relating to DHR Review & Compliance (R&C) #:

GENERAL PROJECT INFORMATION

Project Title Unitil Route 125 Station

Project Location 770 Columbus Ave

City/Town Rochester

Tax Map 137

Lot # 3

NH State Plane - Feet Geographic Coordinates: Easting 1167445 Northing 286642 ✓
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact (if applicable) N/A TECHNICAL ASSISTANCE
(Agency providing funds, licenses, or permits)

Permit Type and Permit or Job Reference #

State Agency and Contact (if applicable) City of Rochester

Permit Type and Permit or Job Reference # Site Plan App.

APPLICANT INFORMATION

Applicant Name Mike Dunn

Mailing Address 325 West Road

Phone Number 603-294-5115

City Portsmouth

State NH

Zip 03801

Email dunnm@unitil.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Matt Pelletier

Mailing Address 4 Broad Street

Phone Number 774-276-0364

City Plainville

State MA

Zip 02762

Email mpelletier@processpipeline.com

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

Project Boundaries and Description

- ☒ Attach the Project Mapping *using EMMIT or relevant portion of a 7.5' USGS Map. (See RPR Instructions and R&C FAQs for guidance.)*
 - ☒ Attach a detailed narrative description of the proposed project.
 - ☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
 - ☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
 - ☒ A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in Table 1. *(Blank table forms are available on the DHR website.)*
- EMMIT or in-house records search conducted on 03/17/2020.

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? ☐ Yes ☒ No

If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s):

- ☐ Photographs of *each* resource or streetscape located within the project area, with captions, along with a mapped photo key. *(Digital photographs are accepted. All photographs must be clear, crisp and focused.)*
- ☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. *(i.e. Detail photo of windows if window replacement is proposed.)*

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☒ Yes ☐ No

If yes, submit all of the following information:

- ☒ Description of current and previous land use and disturbances.
- ☐ Available information concerning known or suspected archaeological resources within the project area *(such as cellar holes, wells, foundations, dams, etc.)*

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation *This Space for Division of Historical Resources Use Only*

- ☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.
- ☐ No Potential to cause Effects ☒ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

Comments: REVIEWED AS TECHNICAL ASSISTANCE. PROJECT AREA EXHIBITS
EXTENSIVE PRIOR IMPACT FROM PREVIOUS LAND USES.

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

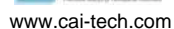
Authorized Signature: [Signature]

Date: 3.30.2020

770 Columbus Ave – Unitil Route 125 Station



Town of Rochester, NH



Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

COMMONWEALTH LAND TITLE INSURANCE CO.
1001 ELM STREET, SUITE 302
MANCHESTER, NH 03101

PS. 18-
SL 2-

STATE OF NEW HAMPSHIRE			
DEPARTMENT OF REVENUE ADMINISTRATION		REAL ESTATE TRANSFER TAX	
****8	THOUSAND	1	HUNDRED AND 00 DOLLARS
MO	DAY	YR	AMOUNT
09	21	2004	680604 \$ ****8100.00
VOID IF ALTERED			

QUITCLAIM DEED

AMERIGAS PROPANE, L. P., a Delaware limited partnership, having a mailing address of P. O. Box 965, Valley Forge, PA 19482 ("**GRANTOR**") for consideration paid, grants to **NORTHERN UTILITIES, INC.**, a New Hampshire corporation, having a mailing address of 3000 Friberg Parkway, Westborough, MA 01581 ("**GRANTEE**"), with quitclaim covenants, that certain property located in the City of Rochester, County of Strafford, State of New Hampshire and being more particularly described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE

This conveyance is subject to ad valorem taxes, mineral interests or mining rights, water rights, zoning and land use restrictions and ordinances, taxes and assessments not yet due and payable, any and all easements, whether public or private, encroachments, restrictions, covenants, conditions, leases or other encumbrances, all reservations and exceptions of record, all prior conveyances, leases or transfers of any interests in minerals, including oil, gas and other hydrocarbons, and any such matters or defects as would be disclosed in a Commitment for Title Insurance or as would be shown in a survey of said property.

The above described property is further subject to a restrictive covenant that shall run with the land from the date of recording prohibiting the operation of a liquefied petroleum gas sales, storage and/or distribution facility on the property in perpetuity, or in the alternative for the maximum period of time permissible by applicable law. The foregoing restrictive covenant shall not, however, prohibit or restrict the use or storage of liquefied petroleum gas for the sole consumption of the owner or individual in possession of the property.

To be dated, signed, sealed and acknowledged by Grantor this 20th day of Sept. 2004.

AMERIGASPROPANE, L. P.

By: AmeriGas Propane, Inc.,
as its general partner

By: *Robert H. Knauss*
Robert H. Knauss
Vice President and General Counsel

COMMONWEALTH OF PENNSYLVANIA :

SS

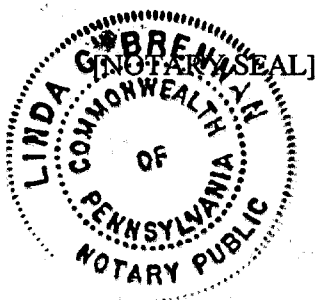
COUNTY OF MONTGOMERY :

The foregoing instrument was acknowledged before me on this 20th day of September 2004, by
ROBERT H. KNAUSS, Vice President and General Counsel of AmeriGas Propane, Inc., the general
partner of AmeriGas Propane, L. P.

My Commission Expires

Notarial Seal
Linda G. Brennan, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires Apr. 12, 2006
Member, Pennsylvania Association Of Notaries

Linda G. Brennan
Notary Public



BK3069PG0054

EXHIBIT "A"

A certain tract or parcel of land situate in Rochester, Stafford County, New Hampshire, on the easterly side of a highway known as New Hampshire Route #125, together with all structures, improvements and materials and supplies located thereon, bounded and described as follows:

Beginning at a point on the westerly side of the location of the Boston & Maine Railroad (formerly Worcester, Nashua & Rochester Railroad) at land acquired by The State of New Hampshire for the Spaulding Turnpike at the southeasterly corner of the tract; thence North 57° 29' West 93.9 feet, more or less, to a point, thence North 26° 40' West 45.1 feet, more or less, to a point; thence on a curve to the right having a radius of 225 feet and a distance of 67.5 feet to a point (the chord of said curve having a bearing of North 0° 26' East and a length of 67.3 feet); thence North 16° 25' East 293.6 feet through a New Hampshire Department bounded to a stake and stones at the northwesterly corner of tract on said Route #125; thence South 70° 56' East through an old elm tree a distance of 345.6 feet to a stake and stones in the westerly line of said Boston & Maine Railroad location; thence South 48° 11' West 123.9 feet to a point; thence on a curve to the left having a radius of 1,473.9 feet, a distance of 328.4 feet along the westerly line of said Railroad location to the point of beginning.

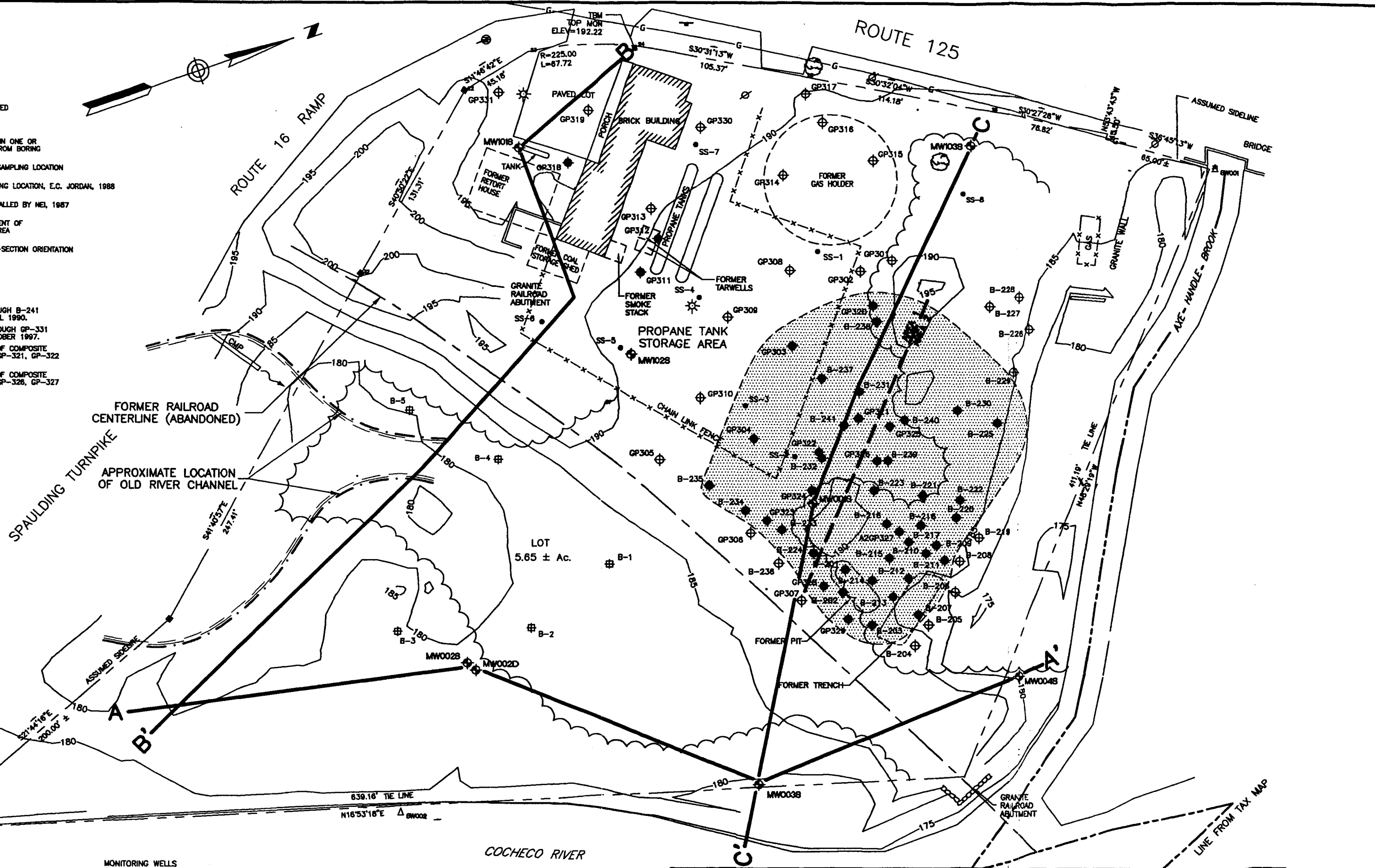
Said tract of land is shown on "Plan of Land on Route 125 Rochester, NH for Northern Utilities Showing Activity and Use Restriction Areas, July 02, 2002 Owen Haskell, Inc." which is recorded in at the Registry of Deeds for Strafford County as Plan #67-20.

BEING the same land and premises granted and conveyed by Petrolane Incorporated, a California corporation by deed dated April 19, 1995 and recorded in Strafford County Registry of Deeds Book 1802, Page 437, unto AmeriGas Propane, L.P., a Delaware limited partnership.

BK 3069PG0055

- LEGEND:**
- ⊕ MONITORING WELL
 - ⊕ SOIL BORING NO CORM OBSERVED IN BORING
 - ⊕ SOIL BORING CORM OBSERVED IN ONE OR MORE SAMPLES FROM BORING
 - Δ SURFACE WATER SAMPLING LOCATION
 - SHALLOW SCREENING LOCATION, E.C. JORDAN, 1988
 - ⊕ SOIL BORING INSTALLED BY NEI, 1987
 - ⊕ APPROXIMATE EXTENT OF TLM RESIDUALS AREA
 - C—C' GEOLOGIC CROSS-SECTION ORIENTATION

- NOTE:**
1. SOIL BORINGS B-201 THROUGH B-241 INSTALLED BY ABB-ES, APRIL 1990.
 2. SOIL BORINGS GP-301 THROUGH GP-331 INSTALLED BY ABB-ES, OCTOBER 1997.
 3. AREA 1 SAMPLE CONSISTS OF COMPOSITE FROM LOCATIONS GP-320, GP-321, GP-322 GP-323 AND GP-324.
 4. AREA 2 SAMPLE CONSISTS OF COMPOSITE FROM LOCATIONS GP-325, GP-326, GP-327 GP-328 AND GP-329.



0 30 60
Scale in feet

- NOTES:**
1. BASED ON FIELD SURVEY PERFORMED BY OWEN HASKELL, INC. PORTLAND, ME.

HLA

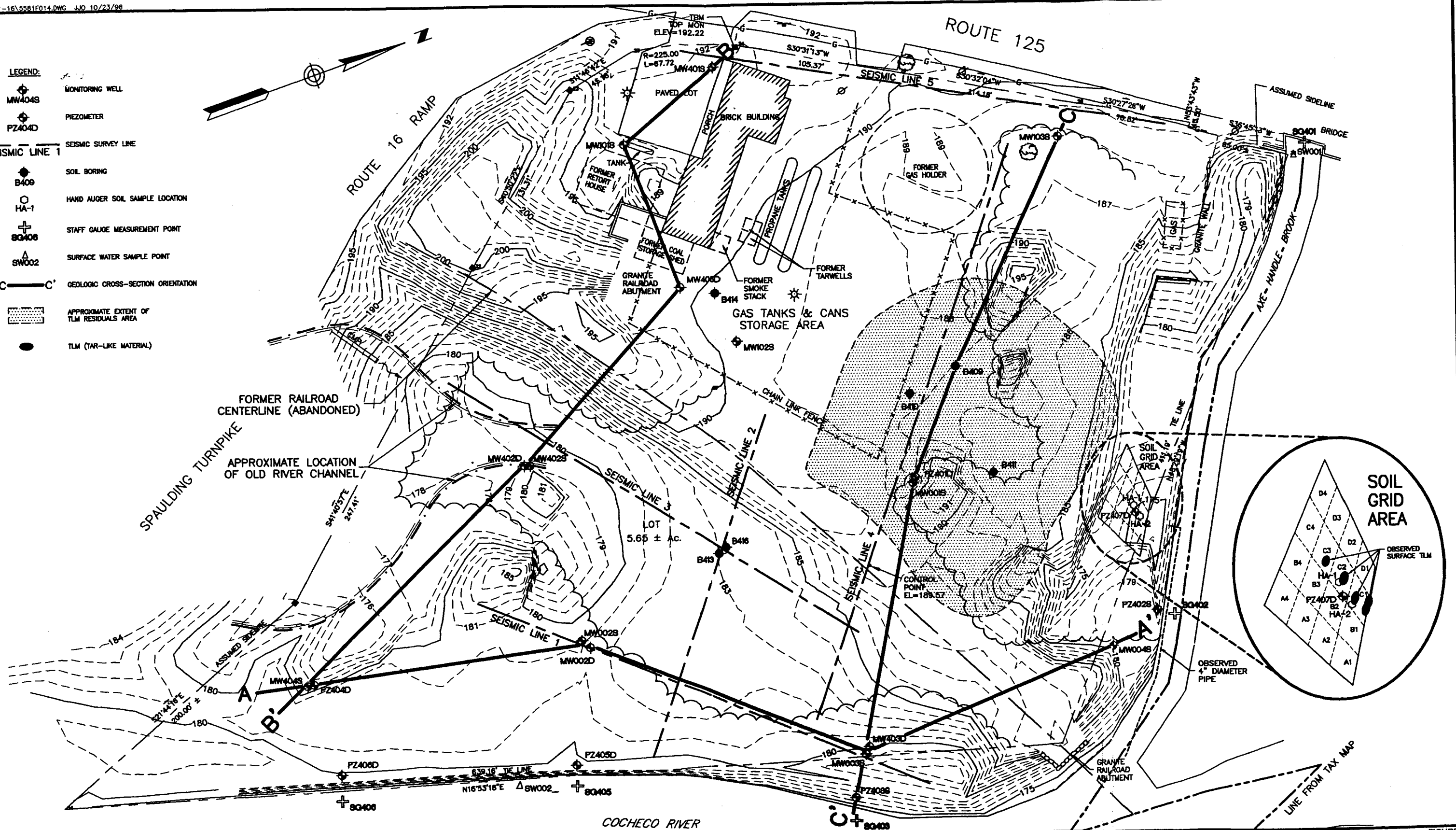
Harding Lawson Associates
Engineering and
Environmental Services

DRAWN JJO JOB NUMBER 5581-16

**PREVIOUS SITE EXPLORATIONS
FORMER ROCHESTER MGP
NORTHERN UTILITIES
ROCHESTER, NEW HAMPSHIRE**

APPROVED DATE 12/7/98
REVISED DATE 12/11/98

FIGURE
1-2



A horizontal scale bar with tick marks at 0, 30, and 60. Below the bar is the text "Scale in feet".

NOTES:

1. BASED ON FIELD SURVEY PERFORMED BY
OWEN HASKELL, INC. PORTLAND, ME

HLA

Harding Lawson Associates
Engineering and
Environmental Services

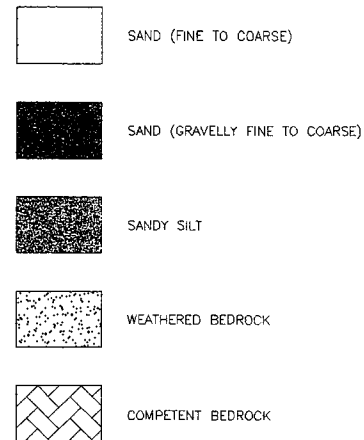
DRAWN	JOB NUMBER
JJO	5581-16

**PHASE II AND II A SI - EXPLORATION LOCATIONS
FORMER ROCHESTER MGP
NORTHERN UTILITIES
ROCHESTER, NEW HAMPSHIRE**

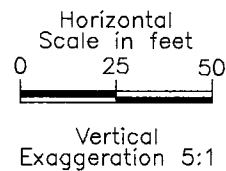
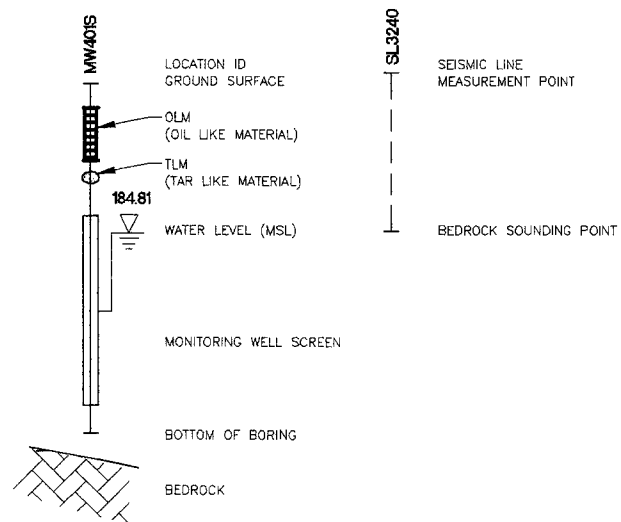
APPROVED DATE
10/13/98

REVISED DATE
12/11/98

KEY



LEGEND:



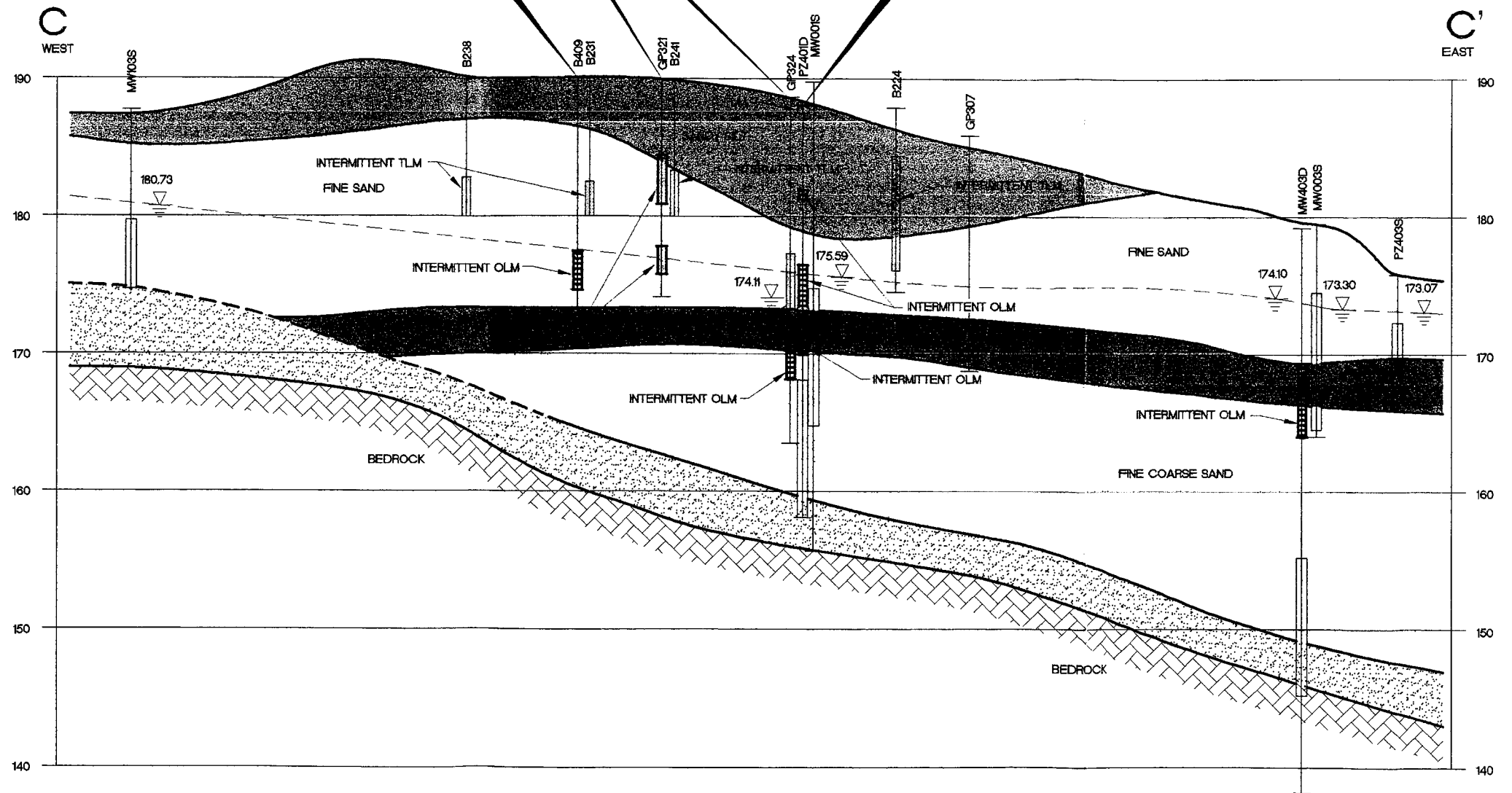
NOTES:

1. BASED ON FIELD SURVEY PERFORMED BY OWEN HASKELL, INC. PORTLAND, ME.
2. WATER LEVELS MEASURED ON 6/11/98.
3. SEE FIGURES 1-2 AND 2-1 FOR CROSS SECTION ORIENTATION.
4. GROUNDWATER NOT DETECTED IN MW-405D AFTER INSTALLATION.

AREA 1 COMPOSITE (INCLUDES GP320, GP321, GP322, GP323 AND GP324 COMPOSITE)		
COMPOUND	DATE	CONC. mg/kg
Benzene	10/17/97	44
Naphthalene (SVOC)	10/17/97	1330
Benzo(a)Pyrene	10/17/97	110

B-409		CONC. mg/kg	
COMPOUND	DATE	0'-10' BGS	10'-16.5' BGS
Benzene	5/26/98	6	0.48
Naphthalene (VOC)	5/26/98	96	160
Naphthalene (SVOC)	5/26/98	91	64
Benzo(a)Pyrene	5/26/98	20	22

FZ-401D/B-405		CONC. mg/kg	
COMPOUND	DATE	0'-13' BGS	13'-30' BGS
Benzene	5/22/98	38	35
Naphthalene (VOC)	5/22/98	510	840
Naphthalene (SVOC)	5/22/98	520	960
Benzo(a)Pyrene	5/22/98	16	52



Harding Lawson Associates
Engineering and
Environmental Services

GEOLOGIC CROSS SECTION C-C'
FORMER ROCHESTER MGP
NORTHERN UTILITIES
ROCHESTER, NEW HAMPSHIRE

FIGURE

2-5

DRAWN JJO	JOB NUMBER 5581-16	APPROVED	DATE 10/14/98	REVISED DATE 12/11/98
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Table 2-1
Summary of Soil Analytical Results - Phase II and IIA

Former Rochester MGP Site
Rochester, New Hampshire

LOCATION: SAMPID: DEPTH: DATE:			B406 BS406US02X 0 - 13 05/20/98	B406 BS406ST02X 13 - 30 05/21/98	B409 BS409US02X 0 - 10 05/25/98	B409 BS409ST02X 10 - 18.5 05/25/98	B410 BS410US02X 0 - 12 05/25/98	B410 BS410ST02X 12 - 24 05/25/98	B411 BS411US02X 0 - 12 05/21/98	B411 BS411ST02X 12 - 24.6 05/21/98	B411 BS411ST02D 12 - 24.6 05/21/98 DUP	B414 BS4141396X 11 - 13 05/21/98	B415 BS4151298X 10 - 12 09/02/98	B415 BS4151298D 10 - 12 09/02/98 DUP	HA001 HC4C10102X 0 - 1 05/21/98	HA002 HC4C20102X 0 - 2 05/21/98
NH Leaching Standard																
Semi-volatile Organic Compounds																
		Units														
2-Methylnaphthalene	150.	mg/kg	140.	670.	76.	92.	590.	350.	31.	270.	300.	-	6.7	4.4	0.49	2.2 J
Acenaphthene	270.	mg/kg	5.8 J	21.	6.1	8.4	26. J	17.	1.3	13. J	14. J	-	0.84	0.46	0.61	2.1 J
Acenaphthylene	300.	mg/kg	69.	270.	36.	58.	300.	200.	18.	150.	160.	-	1.7	1.	2.4	17.
Anthracene	1,700.	mg/kg	51.	190.	30.	65.	210.	100.	12.	75.	72.	-	1.6	1.	2.	26.
Benzo(a)anthracene	NS	mg/kg	21.	70.	25.	38.	79.	58.	6.4	39.	46.	-	1.1	0.63	8.8	54.
Benzo(a)pyrene	NS	mg/kg	16.	52.	20.	22.	47.	34.	5.1	33.	33. J	-	0.87	0.46	12.	55.
Benzo(b)fluoranthene	NS	mg/kg	6. J	23.	12. J	11.	18. J	15. J	2.7	13. J	13. J	-	0.47	0.46	4.7	30.
Benzo(g,h,i)perylene	NS	mg/kg	7.8 J	29.	6.1	7.7	17. J	12. J	1.6	19. J	19. J	-	0.37 J	0.23 J	3.6	26.
Benzo(k)fluoranthene	NS	mg/kg	11. J	33.	15. J	13.	28. J	19.	3.2	20. J	23. J	-	-	0.27 J	4.9	33.
Bis(2-ethylhexyl)phthalate	NS	mg/kg	-	1.2	0.24 J	-	-	-	0.43 J	-	-	-	-	-	0.58	2. J
Carbazole	NS	mg/kg	-	8.9	2.4	2.1 J	10. J	7.2 J	0.94	-	5.4 J	-	-	-	-	-
Chrysene	NS	mg/kg	17.	57.	27.	32.	70.	49.	5.1	35.	41.	-	0.93	0.67	8.9	51.
Dibenzo(a,h)anthracene	NS	mg/kg	-	4.6	2.4	2.1 J	8.1 J	3. J	0.99	-	1.1 J	-	-	-	1.7	11.
Dibenzofuran	NS	mg/kg	6.8 J	33.	4.9	14.	37.	27.	2.4	18. J	19. J	-	0.38 J	0.24 J	0.47	3.2 J
Fluoranthene	NS	mg/kg	39.	130.	50.	75.	190.	150.	12.	74.	94.	-	2.5	1.5	13.	64.
Fluorene	510.	mg/kg	50.	170.	35.	68.	220.	160.	14.	98.	110.	-	3.9	2.3	1.1	12.
Indeno(1,2,3-cd)pyrene	NS	mg/kg	8. J	22.	6.6	7.4	20. J	13. J	2.	16. J	20. J	-	0.37 J	-	4.1	29.
Naphthalene	5.	mg/kg	520.	960.	91.	64.	1,100.	800.	44.	640.	550.	-	9.4	6.1	0.69	1.6 J
Phenanthrene	NS	mg/kg	110.	420.	100.	210.	470.	500.	34.	240.	280.	-	7.1	4.6	4.3	44.
Pyrene	NS	mg/kg	56.	200.	69.	110.	230.	160.	16.	110.	120.	-	4.6	2.3	23.	130.
Volatile Organic Compounds*																
Alkylbenzenes:																
1,2,4-Trimethylbenzene	69	mg/kg	16.	28.	3.5 J	6.6 J	18. E	26. E	1.8	81. E	100.	-	3.2	2.1	-	-
1,3,5-Trimethylbenzene	27	mg/kg	4.8	7. E	1.3 J	2.6 J	9.4	11. E	0.76	36. E	28. E	-	2.8	1.7	-	-
4-Isopropyltoluene	NS	mg/kg	0.1 J	0.13 J	0.31 J	-	0.38	-	-	0.78	0.94	-	-	-	-	-
n-Butylbenzene	18	mg/kg	0.37	0.49	-	0.32 J	0.42	0.44	-	2.4	2.2	-	0.18 J	0.13 J	-	-
n-Propylbenzene	10	mg/kg	0.63	0.92	-	0.34 J	0.58	1.2	-	6.	4.7	-	0.18 J	0.12 J	-	-
sec-Butylbenzene	7	mg/kg	-	-	-	-	-	-	-	0.31 J	0.3 J	-	-	-	-	-
Benzene	0.3	mg/kg	36.	36.	6. J	0.48 J	6.2	9.8	4.4	61. E	100.	-	-	-	-	-
Ethylbenzene	140.	mg/kg	6. E	9.5 E	7.1 J	1.4 J	11.	6.3	5.	30. E	26. E	-	0.54	0.32	-	-
Isopropylbenzene	123.	mg/kg	0.14	0.22	0.23 J	-	0.46	0.2 J	-	1.3	1.	-	-	-	-	-
m,p-Xylenes	1,100.	mg/kg	40.	31. E	6.6 J	5.8 J	36. E	58. E	4.5	140. E	250.	-	-	-	-	-
m-Xylene/p-Xylene	1,100.	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	5.	mg/kg	510.	840.	96. J	160. J	540.	1,200.	77.	4,300.	3,000.	0.45	46.	43.	0.26	0.25
o-Xylene	1,100.	mg/kg	16.	-	2.4 J	2.6 J	14. E	26. E	1.6	68. E	92.	-	1.8	1.1	-	-
Styrene	14.	mg/kg	43.	72.	0.51 J	3.5 J	36. E	49. E	1.3	390.	270.	-	0.51	0.3	-	-
Tetrachloroethene	2.	mg/kg	-	-	-	-	-	-	-	0.41	-	-	-	-	-	-
Total Xylenes	1,100.	mg/kg	56.	31.	9.2	9.4	50.	84.	5.2	208.	342.	-	5.7	3.3	-	-
Toluene	100.	mg/kg	67.	96.	2.8 J	2.8 J	29. E	50. E	4.4	420.	300.	-	1.5	0.86	-	-

Notes:

Table presents only constituents detected above detection limits. Bold font represents exceedance of NHDES standard based on leaching.

*** = Based on trends observed in other blanks associated with this analytical set, detection of 2-butanone, methylene chloride, and acetone likely represent field sampling or laboratory introduced contamination.

Therefore, these compounds are not shown in this summary. Complete analytical data is included in Appendix D.

.- = Constituent not detected above detection limits.

J = estimated value, detected at concentrations less than quantitation limits established by the laboratory.

E = estimated value, concentration exceeds calibration range of the analytical instrumentation.

mg/kg = milligram per kilogram

NS = No Standard

Table 2-2
Summary of Soil Boring Completion Data

Former Rochester MGP Site
Rochester, New Hampshire

BORING ID	SITE LOCATION	INSTALLATION METHOD	REFUSAL DEPTH (ft bgs)	ROCK CORE DEPTH (ft bgs)	COMPLETION TYPE	ANALYTICAL SAMPLE INTERVAL
B-401 / MW-401S	Eastern portion of the site (Former Field Property)	4.25" HSA	18.5	None	Well	Not sampled
B-403 / MW-402D	Eastern portion of the site (Former Field Property)	4.25" HSA/Drive & Wash	30.3	None	Well	Not sampled
B-404 / MW-402S	Eastern portion of the site (Former Field Property)	4.25" HSA	13	None	Well	Not sampled
B-405 / PZ-401D	Former coal tar residual disposal area	4.25" HSA	30	None	Piezometer	0-13 ft bgs, 13-30 ft bgs
B-406 / PZ-404D	Eastern portion of the site (Former Field Property)	4.25" HSA/Drive & Wash	44.5	44.5 to 49.5	Piezometer	Not sampled
B-407 / MW-404S	Eastern portion of the site (Former Field Property)	4.25" HSA	12	None	Well	Not sampled
B-408 / MW-403D	Eastern portion of the site (Former Field Property)	4.25" HSA/Drive & Wash	34	34 to 41	Well	Not sampled
B-409	Former coal tar residual disposal area	4.25" HSA	16.5	None	Backfill	0-10 ft bgs, and 10-16.5 ft bgs
B-410	Former coal tar residual disposal area	4.25" HSA	23	None	Backfill	0-12 ft bgs, and 12-24 ft bgs
B-411	Former coal tar residual disposal area	4.25" HSA	24.5	None	Backfill	0-12 ft bgs, and 12-24.5 ft bgs
B-412 / PZ-407D	Former coal tar residual disposal area	4.25" HSA/Drive & Wash	13.5	13.5 to 18.5	Piezometer	Not sampled
B-413	Eastern portion of the site (Former Field Property)	4.25" HSA/Drive & Wash	29.3	None	Backfill	Not sampled
B-414	East of Amerigas Building	4.25" HSA/Drive & Wash	15	15 to 20	Backfill	13-15 ft bgs
B-415 / MW-405D	East of Amerigas Building	4.25" HSA/Drive & Wash	20	20 to 25	Well	10-12 ft bgs
B-416	Eastern portion of the site (Former Field Property)	4" Drive & Wash	37	37 to 41.5	Backfill	12-14 ft bgs
PZ-402S	Eastern portion of the site (Former Field Property)	Hand/Slide Hammer	4	None	Piezometer	Not sampled
PZ-403S	Eastern portion of the site (Former Field Property)	Hand/Slide Hammer	6	None	Piezometer	Not sampled
PZ-405D	Eastern portion of the site (Former Field Property)	3" Drive & Wash	41	None	Piezometer	Not sampled
PZ-406D	Eastern portion of the site (Former Field Property)	3" Drive & Wash	42	None	Piezometer	Not sampled

Notes:

HSA = Hollow-stem auger

bgs = below ground surface

SOIL BORING LOG					Study Area:			
Client: NORTHERN UTILITIES		Project No. 5581.16		Boring No.: B-414				
Contractor: NHB		Date Started: 9-3-98		Protection: D				
Method: HSA/ DRIVE + WASH		Casing Size:		Completed: 9-3-98				
Ground Elev.:		Soil Drilled:		PI Meter:				
Logged by: BAL		Checked by: [Signature]		Total Depth: 14.5				
Screen: (ft.)		Riser: (ft.)		Diam: (ID)		Below Ground: ∇		
Material:		Page		of: 1				
DEPTH (FT)	SAMPLE NUMBER	SAMPLE DEPTH	CLP/SCREENING	RECOVERY	PID (ppm)	SOIL/ROCK/DISCHARGE WATER DESCRIPTION	SOIL CLASS	WELL DATA
0.2	1			1.0 2.0	0.0	GRAVELLY SAND WELL GRADED TOP 0.8" LOOSE, DRY, LIGHT BROWN. THEN RED BRICK 0.2" THEN SILT, FIRM, SLIGHTLY PLASTIC, GRAY, DAMP. 1.2" FILL	SW	HSA 4.25" FROM 0-5" 2-5" NO RECOVERY
5.1	2			1.2 2.0	0.0	MEDIUM SAND WELL GRADED SLIGHTLY PLASTIC, FIRM, DAMP BROWN FILL	SW	DRIVE + WASH 7' TO 13'. 4" CASING
7-10								DRIVE AND WASH 4" CASING
10-12	3	12'		2.0 2.0	15.8	CLAY, FIRM, PLASTIC, WET GRAY	CH	B5414139BX VOC SVOC
						WEATHERED ROCK 13'-14.5' [OLM]		PHYLITE
REFUSAL AT 15'								

FIGURE 4-3
SOIL BORING LOG
FORMER ROCHESTER MGP SITE
ROCHESTER, NEW HAMPSHIRE
NORTHERN UTILITIES, INC.
ABB Environmental Services, Inc.

ROCK CORING LOG

Project: ROCHESTER MGP		Study Area: B-414		Project No. 5581.16	
Client: NORTHERN UTILITIES		Driller's Name: JAY GARSIDE		Logged by: BBB	Checked by:
Drilling Contractor: NHB		Protection Level: D		Rig Type: TRUCK-MOUNTED	Start Date: 9-3-98
Drilling Method: DRIVE + WASH		P.I.D. (gV): TE 580-8		Casing Size:	Finish Date: 9-3-98
Bit type/size: NX		Bit Use: MODERATE		Core Interval (to/from)(ft): 15'-20'	

Depth (feet) Below GRD Surf.	Sample No. & Penetration/ Recovery (feet)	Graphic Log	Natural Core Breaks ✓ = Natural x = Mechanical		Weathered Condition	Rock Quality			Drilling Rate min/ft	Color	Rock Description and Comments on Drilling
			Type/Dip	Surface Condition		Total 4" Core	RQD (%)	Rock Quality Description			
15	Run #1		x			0.85 2.8'	30%	POOR	4	BLACK	PHYLLITE WITH SMALL GARNET INCLUSIONS
16			x						2	BLACK & WHITE	
17			x						5		QUARTZ VEIN FRACTURED AND DISCOLORED ORANGE
18	Run #2		x			0.42 1.9'	22%	VERY POOR	4	BLACK & WHITE	GRAVITE-FRACTURES DISCOLORED ORANGE
19			x						5		
20			x								

ABB Environmental Services, Inc.



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Strafford County, New Hampshire**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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Soil Map





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MAP LEGEND




















Area of Interest (AOI)






Area of Interest (AOI)

Soils

-  Soil Map Unit Polygons
-  Soil Map Unit Lines
-  Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 19, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 12, 2019—Aug 30, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HaA	Hinckley loamy sand, 0 to 3 percent slopes	0.3	68.4%
HdC	Hollis-Charlton very rocky fine sandy loams, 8 to 15 percent slopes	0.1	27.0%
Ru	Rumney fine sandy loam	0.0	4.5%
Totals for Area of Interest		0.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Strafford County, New Hampshire

HaA—Hinckley loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svm7

Elevation: 0 to 1,420 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, kame terraces, outwash plains, outwash terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex, concave, linear

Across-slope shape: Linear, concave, convex

Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 8 inches: loamy sand

Bw1 - 8 to 11 inches: gravelly loamy sand

Bw2 - 11 to 16 inches: gravelly loamy sand

BC - 16 to 19 inches: very gravelly loamy sand

C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 5 percent
Landform: Outwash terraces, kame terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear, concave
Across-slope shape: Linear, concave, convex
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Kame terraces, outwash deltas, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear, convex, concave
Across-slope shape: Concave, linear, convex
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash terraces, kame terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Linear, concave, convex
Across-slope shape: Linear, concave, convex
Hydric soil rating: No

HdC—Hollis-Charlton very rocky fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d7n
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 40 percent
Charlton and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam

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H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent

Percent of area covered with surface fragments: 1.6 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: very stony fine sandy loam

H2 - 13 to 36 inches: fine sandy loam

H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent

Percent of area covered with surface fragments: 1.6 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 10 percent

Hydric soil rating: No

Rock outcrop

Percent of map unit: 10 percent

Hydric soil rating: No

Woodbridge

Percent of map unit: 5 percent

Hydric soil rating: No

Sutton

Percent of map unit: 5 percent

Hydric soil rating: No

Ru—Rumney fine sandy loam

Map Unit Setting

National map unit symbol: 9d8q

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of local importance

Map Unit Composition

Rumney and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rumney

Setting

Landform: Flood plains

Parent material: Sandy and/or coarse-loamy alluvium derived from granite, gneiss or schist

Typical profile

H1 - 0 to 34 inches: fine sandy loam

H2 - 34 to 41 inches: stratified loamy fine sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Available water storage in profile: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

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Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 10 percent

Landform: Flood plains

Hydric soil rating: Yes

Podunk

Percent of map unit: 5 percent

Hydric soil rating: No

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