
Wetland Conservation District Conditional Use Permit Application

HERITAGE LANDING

**Tax Map 140; Lots 2 & 3
112 & 114 Greeley Street
Hudson, New Hampshire**

May 12, 2021

KNA Project No. 20-1001-1

Prepared For: K&M Developers, LLC
46 Lowell Road
Hudson, New Hampshire 03051

Prepared By: Keach-Nordstrom Associates, Inc.
10 Commerce Park North, Suite 3
Bedford, New Hampshire 03110
(603) 627-2881
(603) 627-2915 (fax)

KNA KEACH-NORDSTROM ASSOCIATES, INC.

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1. CONDITIONAL USE PERMIT APPLICATION

APPLICANT INFORMATION

Date of Application: 5/19/2021 Tax Map #: 140 Lot #: 2 & 3

Site Address: 112 & 114 Greeley Street

Name of Project: Heritage Landing

Zoning District: General (G) General CUP#: _____
(For Town Use Only)

Z.B.A. Action: _____

PROPERTY OWNER:

DEVELOPER:

Name: K&M Developers, LLC

Address: 46 Lowell Road

Address: Hudson, NH 03051

Telephone # 603-880-7799

Email: msousa@sousarealty.com

PROJECT ENGINEER or SURVEYOR:

CERTIFIED WETLANDS SCIENTIST:

Name: Keach-Nordstrom Associates Inc.

Keach-Nordstrom Associates Inc.

Address: 10 Commerce Park North

10 Commerce Park North

Address: Suite 3, Bedford, NH 03110

Suite 3, Bedford, NH 03110

Telephone # 603-627-2881

603-627-2881

Email: alewis@keachnordstrom.com

jbrien@keachnordstrom.com

PURPOSE OF PLAN:

The purpose of this application and plan set is to request a conditional use permit for wetland and wetland buffer impacts for the proposed age restricted detached condominium development at 112 and 114 Greeley Street

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

Department: _____

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___ Fire: ___ DPW: ___ Consultant: ___

SITE DATA SHEET

PLAN NAME: Heritage Landing

PLAN TYPE: (Site Plan, Subdivision, or other) Other

LEGAL DESCRIPTION: MAP 140 LOT 2&3

DATE: _____



Location by Street: 112 & 114 Greeley Street

Zoning: General (G)

Proposed Land Use: Age restricted condominium development

Existing Use: Residential

Total Site Area: S.F.: 737,572 Acres: 16.931

Total Wetland Area (SF): 40,050 SF

Permanent Wetland Impact Area (SF): 2,650 SF

Permanent Wetland Buffer Impact Area (SF): 41,700

Temporary Wetland Impact Area (SF): 0 SF

Temporary Wetland Buffer Impact Area (SF): 0 SF

Flood Zone Reference: Map 33011C016D

Proposed Mitigation:

(For Town Use Only)
Data Sheets Checked By: _____ Date: _____

2. WETLAND CONDITIONAL USE PERMIT CHECKLIST

Yes	No	NA	Questions/Information Needed	HCC COMMENTS
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Estimated water quality characteristics of runoff at each point of discharge for both pre- and post-development	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Erosion control practices	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> If using rip-rap, attach documentation explaining why other erosion control methods are not feasible 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> How storm water runoff will be handled 	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	If backyards or lots include a buffer area, buffer restriction wording shall be included in each deed (A physical marker may be requested to designate buffer boundaries at site)	

Mitigation

<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Square footage of mitigation – wetland and upland areas	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Wetland or upland plants identified to replace any losses	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> Restoration plan for planting and vegetation 	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Conservation easements, including location and aesthetic, wildlife and vegetative values	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<ul style="list-style-type: none"> If easement is on or added to the site(s), a copy of the legal document shall be given to the HCC (HCC conservation easement markers may also be required along the easement) 	

CONCEPTUAL SITE PLAN/DRAWING

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Locus map depicting project site and vicinity within approximately ½ mile and also on a larger scale	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	All prime and other wetlands in the vicinity	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Wetland(s) impacted (identified as prime or other) and the wetland boundaries with 50' buffer areas highlighted in color	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Assessor's sheet(s), lot(s), and property account number(s)	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Existing and proposed structures	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Square footage listed for temporary and permanent impact	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Erosion control plan (Suggested: Biodegradable silt fences so area won't be disturbed again and no hay to avoid invasive species)	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Topographical map with contours	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Storm water treatment swales and basins highlighted in color if in buffer area	
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Conservation and utility easements	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Grading plan	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Culvert, arch, bridge - sizes, material, etc.	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vegetative cover types	
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Vernal pools	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Existing and proposed stone walls, tree lines, and unusually large, rare or beautiful trees, and other notable site features	

WETLAND CONDITIONAL USE PERMIT CHECKLIST

Yes	No	NA	QUESTIONS/INFORMATION NEEDED	HCC Comments
NARRATIVE REPORT				
Existing Conditions				
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Has a DES Dredge and Fill Permit been issued for any part of this site? If yes, provide number, date, and description.	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Is there evidence of altered wetlands or surface waters on site?	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	All prime and other wetlands in the vicinity, plus any wetlands/watersheds past the immediate vicinity affected by this project	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Description of each wetland and associated values	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Wetland mapping results – Including the flagging date and technique plus the name, company and qualifications of the wetland scientist	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Was property surveyed? If yes, the date of survey. (Please attach the survey plan)	
National Wetland Inventory				
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Vegetative cover types	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Existence of vernal pools and associated habitat	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Unique geological and cultural features	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• NH Natural Heritage inventory – For list of rare and endangered species, contact the NH Division of Forests and Lands (603)271-3623	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Wildlife and fauna species, including estimated number and locations (large projects)	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Public or private wells located within the vicinity	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Monitoring well(s) located on site	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Current land use and zoning district	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Photos of existing area (please use color photos)	
Proposed Project Description				
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Entire project and associated activities	
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Time table of project and anticipated phasing	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Land use	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Grading plan	
Impact to Wetlands and/or Buffers				
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	• Depending on size and proposed impacts, a report from a biologist may be appropriate	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Removing, filling, dredging, or altering (Area square ft. and locations)	
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Intercepting or diverging of ground or surface water (Locations and size)	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	• Change in run-off characteristics	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Delineation of drainage area contributing to each discharge point	

3. CONDITIONAL USE PERMIT APPLICATION AUTHORIZATION

CONDITIONAL USE PERMIT APPLICATION AUTHORIZATION

I hereby apply for *Conditional Use Permit* and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the *Conditional Use Permit* specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s) by the filing of this application as indicated above, hereby given permission for any member of the Hudson Planning Board, the Hudson Conservation Commission, the Town Planner, the Town Engineer, and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim to or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: Manuel J. Sousa Date: 5/26/21
Print Name of Owner: MANUEL J. SOUSA

- ❖ If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: Manuel J. Sousa Date: 5/26/21
Print Name of Developer: MANUEL J. SOUSA

- ❖ The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

4. OWNER AFFIDAVIT

Owner Affidavit

I, Manuel Sousa, authorized representative of Sousa Realty & Development and owner of the properties referenced on Tax Map 140 as Lots 2 & 3, located along Greeley Street, Hudson, New Hampshire, hereby verify that I have authorized Keach-Nordstrom Associates, Inc. to submit on my behalf, any and all applicable State and local permit applications as they pertain to improvements on said property.

Additionally, I authorize Keach-Nordstrom Associates, Inc. to aid in the representation of these applications throughout the approval process.

Signature of Owner: Manuel J. Sousa

Printed Name of Owner: MANUEL J. SOUSA

Address of Owner: 46 Lowell Road

Hudson, NH 03051

Date: 5/26/21

5. ABUTTERS LIST

**Abutter's List
Greeley Street
Hudson, NH
KNA #20-1001-1
Updated 5-27-21**

Tax Map	Lot	Owner/Applicant
140	2	K&M Developers, LLC
	3	46 Lowell Road Hudson, NH 03051
Tax Map	Lot	Direct Abutter
140	1	Brox Industries, Inc.
141	1	1471 Methuen Street Dracut, MA 01826
140	4	Pond View Subdivision Associates c/o Sousa Realty & Development 46 Lowell Road Hudson, NH 03051
149	1	Highland Woods Condominium c/o Harvard Management P.O. Box 2019 Merrimack, NH 03054
Tax Map	Lot	Indirect Abutter
140	5	Jeremy & Kelly Huntoon 4 Sousa Boulevard Hudson, NH 03051
140	6	Frances A. & Michael T. Tedeschi 6 Sousa Boulevard Hudson, NH 03051
140	7	Patrick D. & Christina L. Whalen 8 Sousa Boulevard Hudson, NH 03051
140	8	Michael & Dawn Kimball Trustees Michael & Dawn Kimball Trust 10 Sousa Boulevard Hudson, NH 03051

140	9	Renate M. Knight, Trustee Renate M. Knight Trust 12 Sousa Boulevard Hudson, NH 03051
140	10	Kevin T. & Melanie A. Dewitt 14 Sousa Boulevard Hudson, NH 03051
140	11	Sousa Realty and Development Corp. 46 Lowell Road Hudson, NH 03051
140	12	John E. & Stephanie J. Izzo 4 Sutherland Drive Hudson, NH 03051
140	13	Donald S. & Jennifer Buchanan 6 Sutherland Drive Hudson, NH 03051
140	19	Ellen B. & Michael P. Haight, Trustees 1 Sutherland Drive Hudson, NH 03051
140	29	Pond View Subdivision Associates c/o Sousa Realty & Development 46 Lowell Road Hudson, NH 03051

Professionals to be notified:

Engineer/Surveyor
Keach-Nordstrom Associates Inc.
10 Commerce Park North, Suite 3B
Bedford, NH 03110

6. PROJECT NARRATIVE

May 14, 2021

Town of Hudson
Conservation Commission
12 School Street
Hudson, New Hampshire 03051

Subject: Heritage Landing
Application for Conditional Use Permit for Wetland Impact
Map 140 Lots 2 & 3
112 & 114 Greeley Street, Hudson, New Hampshire
KNA #20-1001-1

To Members of the Conservation Commission:

Project Narrative:

The proposed project entails the construction of a 47-unit detached single family age restricted condominium development. The project will include a loop roadway with access from Greeley Street. The proposed development is situated on a two lots of record (Lots 2 & 3) with frontage on Greeley Street that will be consolidated into a single parcel. Development will include the construction of individual driveways, clubhouse, and associated parking. Onsite improvements will include the construction of stormwater ponds, landscaping, and site lighting.

The parcel, found within the General (G) Zoning District, is currently primarily undeveloped, with the only development being an existing residential home, sheds, and its driveway. The site is 16.931 acres in total and contains almost one acre (0.919 AC) of wetlands that run through the middle of the property. Approximately 8.5 acres of the developable portion of the site is completely separated from the proposed access drive due to jurisdictional wetlands, which bisect the lot. Consequently, in order to use more than half of the property's buildable area, permanent impacts are required.

The wetland proposed for impact has two classifications. The majority of the wetland is classified as palustrine forested, broad-leafed, deciduous, seasonally flooded/saturated. Within the southern portion is an ephemeral stream that is classified as riverine, intermittent with an unconsolidated cobble gravel bottom as determined by Joshua Brien (New Hampshire Certified Wetland Scientist #256) of Keach-Nordstrom Associates. The permanent impacts will support the installation of two wetland crossings and two stormwater ponds.

The New Hampshire Natural Heritage Inventory has been notified and asked to check their database for any know occurrences of threatened or endangered species within the

project site. Their response dated March 4, 2021 states that there are records of blanding's turtle, eastern box turtle, and eastern hognose snake in the general area. NHDES Best Management Practices will be used throughout the construction process to minimize soil erosion and downstream pollution by stormwater. As part of the project approval process, a Standard Dredge and Fill Application will be submitted to NHDES.

Although the project proposes wetland crossings to access the large upland portion of the property, the areas will be restabilized following construction. The crossings are situated at two of the thinnest portions of the wetland to accomplish the least amount of impact. These crossings amount to 2,950 SF of wetland impact and 25,800 SF of buffer impact. Two stormwater ponds are located within the wetland buffer but will not require any wetland impact. The proposed buffer impact to construct the stormwater ponds is 16,650 SF. The total wetland impact on the site is 2,950 SF and buffer impact is 42,450 SF.

The construction of the stormwater ponds will ensure that no untreated water is sent to the wetland. The proposed roadway is curbed with closed drainage, thus directing all untreated water to the stormwater ponds. The two ponds are a proposed pocket pond and surface sand filter that will treat the water before flowing into the wetland. There will be no increase in run-off between pre-development conditions and post-development. Stormwater design and calculations will follow the Town of Hudson stormwater management regulations and NHDES Alteration of Terrain regulations.

Additionally, in submitting the enclosed application for conditional use permit, the applicant recognizes the need to successfully demonstrate to the satisfaction of the Town of Hudson Conservation Commission, that each of following criteria have been or will be fulfilled. Specifically:

A. Support fish and wildlife;

The wetland is characterized as seasonally flooded and an intermittent stream. As such, there are no fish in this wetland. The New Hampshire Natural Heritage Bureau report has found records of rare species within the area. The Blanding's turtle, Eastern box turtle, and eastern hognose snake have been found in the vicinity of the project and can be seen in the attached NHB report. Wildlife including these three species will be able to re-populate the area once the roadway has been constructed and stabilized.

B. Attenuate flooding;

The stormwater ponds proposed on the site ensure that post development run-off conditions will not be increased compared to pre-development conditions. The roadway crossings have been evaluated in a 50-year storm event and cause no flooding issues.

C. Supply and protect surface and groundwater resources;

The stormwater ponds on site are there not only to help attenuate flooding, but to also ensure the protection of surface and groundwaters. The closed drainage system captures sediment and debris that may be harmful to these water

resources. The run-off then flows through sediment forebays before reaching the individual treatment ponds. All of these items are in place to protect natural water resources.

D. Remove sediments;

The proposed pocket pond and surface sand filter pond on the site have sediment forebays that water is directed to before entering the pond itself. The sediment forebays help to remove sediment from any of the run-off before entering the ponds. The forebays and ponds help to limit the amount sediment that enters the wetlands.

E. Remove pollutants;

Both ponds (one surface sand and one pocket pond) remove pollutants in accordance with all applicable standards. According to the New Hampshire Stormwater Manual Volume 2, pocket ponds are designed to remove urban pollutants, trace metals, hydrocarbons, BOD, nutrients, and pesticides. The surface sand filter removes pollutants through the 18 inches of filter media below the pond. This filter media absorbs pollutants as the water filters through it. With these two ponds in use, pollutants will be removed before run-off reaches the wetland.

F. Support wetland vegetation;

With the exception of the two roadway crossings the wetlands will be left untouched. Wetland vegetation will be left to grow unencumbered once the crossings have been stabilized.

G. Promote public health and safety.

The ponds in association with the wetland will improve natural water quality, provide flood protection, and maintain a natural vegetated area for the residents of the proposed development. These factors all promote public health and safety.

H. Moderate fluctuations in surface water levels.

This is a seasonally flooded wetland, so there will be fluctuations in surface water levels. This proposed design will not be adding any more run-off than is already contributing to this wetland. This decrease in peak run-off will help to moderate the fluctuations.

I. No increase to potential for erosion, siltation, and turbidity of surface waters.

This site has been designed with erosion control measures to ensure there is no increase to erosion potential. The stormwater ponds and roadway crossings have been designed in a way to limit all possible siltation and turbidity of surface waters in the wetland.

J. No loss of fish and wildlife habitat.

As stated above, there is no fish in this specific location. Once the crossings have been finished and stabilized there will be no loss to wildlife habitat.

K. No loss of unique habitat having demonstrable natural, scientific, or educational value.

This is not a unique wetland; this is a fairly common type of wetland for the New Hampshire area. Therefore, any permanent impacts to the wetland or wetland buffer will cause no loss to unique habitats.

L. No loss or decrease of beneficial aquatic organisms and wetland plants and their habitat.

The wetland and surrounding buffer will be able to grow once the site is stabilized. This means there will be no decrease in organisms or wetland plants.

M. No increased danger of flooding and/or transport of pollutants

As stated earlier, the stormwater ponds ensure that flooding and transportation of pollutants will not be an issue on this site.

N. No destruction of the economic, aesthetic, recreational, and other public and private uses and values of the wetland to the community

The two roadway crossings, while permanent, will not aid in the destruction of private or public uses of the wetland. The wetland will still be able to flow as it has and maintain its aesthetic and recreational value. Any buffer impacts work to ensure that there are no harmful impacts to the wetland either.

7. SURFACE WATER IMPAIRMENTS

Map By

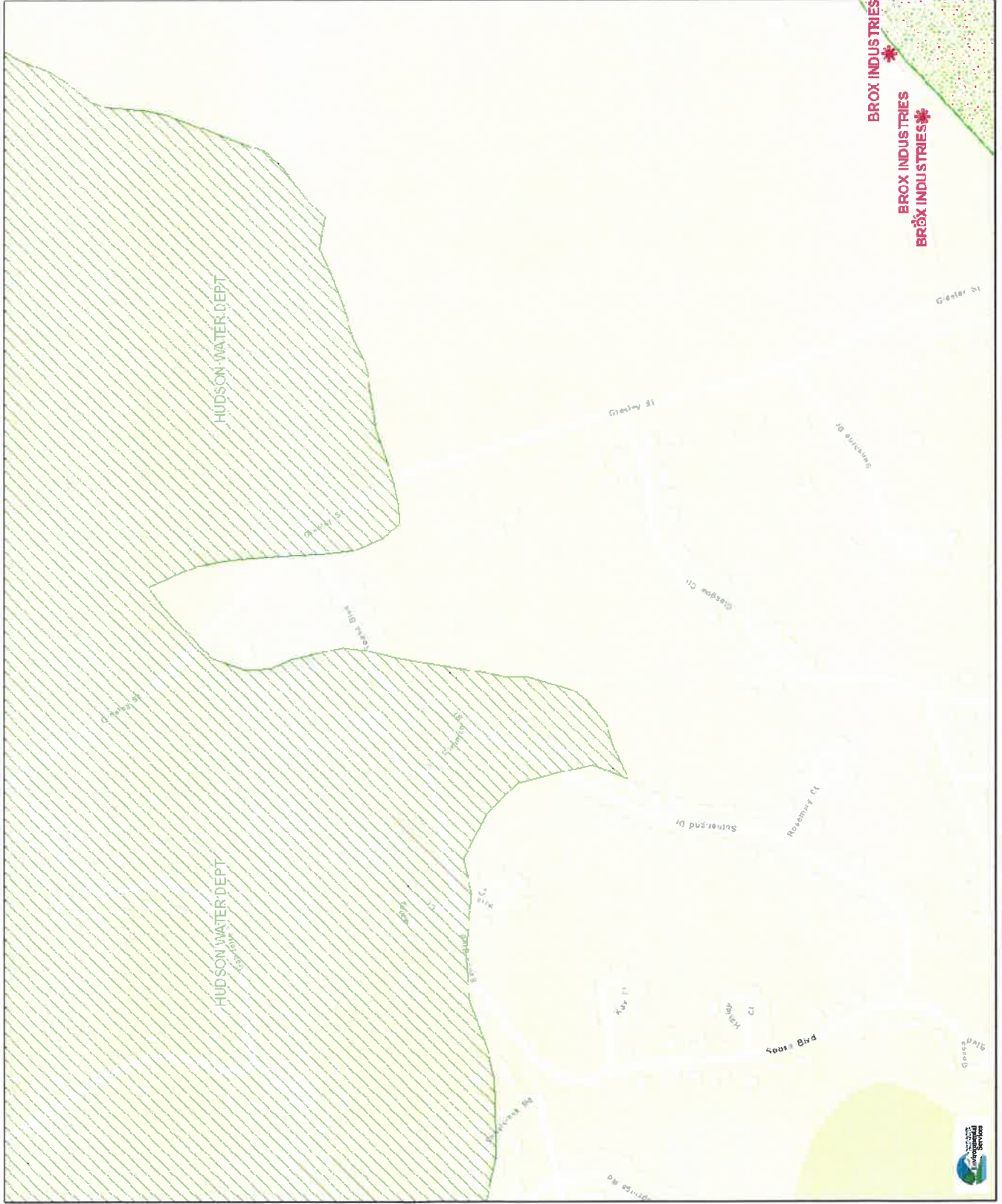
Legend

- Remediation Sites
- ☐ Coastal and Great Bay Regional Communities
- ☐ Designated Rivers Quarter Buffer
- Public Water Supply Wells
- ☐ Groundwater Classification / GA1
- ☐ Groundwater Classification / GA2
- ☐ Water Supply Intake Protect Areas
- ☐ Wellhead Protection Areas
- ☐ Class A Lakes with a Quarter Buffer
- ☐ Class A - All Features
- ☐ All Lakes, with a Quarter Mile Buffer
- ☐ Outstanding Resource Watersheds
- ☐ Surface Waters with Impairment 2016 with Quarter Mile Buffer
- ☐ Watersheds with Chloride Impairments 2016

Map Scale
1: 6,494

© NH DES, <http://des.nh.gov>
Map Generated: 5/19/2021

Notes



8. NHDES WELL INVENTORY MAP

9. NWI MAP



U.S. Fish and Wildlife Service

National Wetlands Inventory

Heritage Landing



Source: Earthstar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

May 20, 2021

Wetlands

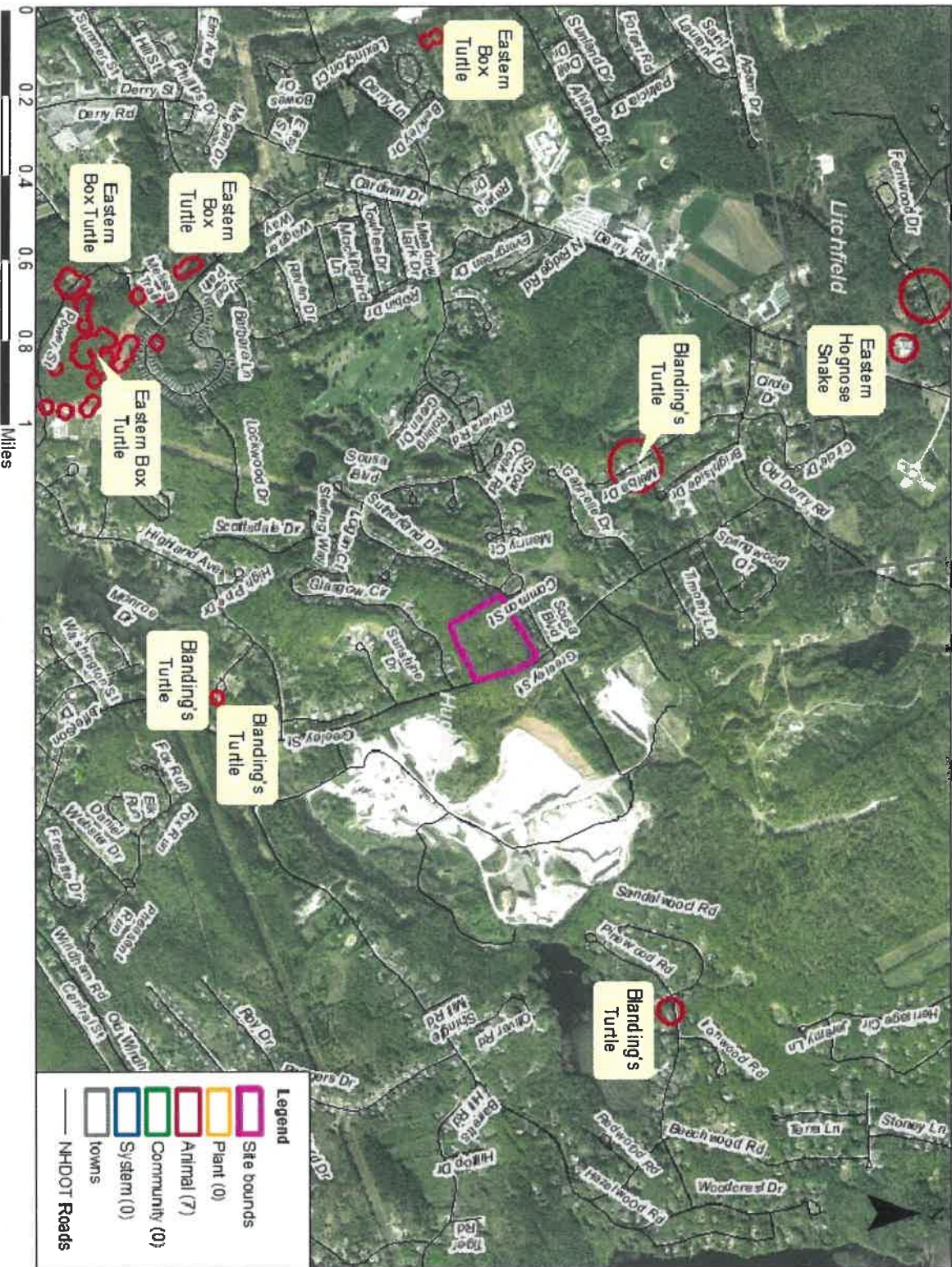
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

10. NEW HAMPSHIRE NATURAL HERITAGE INVENTORY LETTER

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB21-0624



New Hampshire Natural Heritage Bureau - Animal Record

Eastern Hognose Snake (*Heterodon platirhinos*)

Legal Status

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
 Comments on Rank: --

Detailed Description: 2013: Area 13481: 1 adult observed sex unknown. 2011: Area 12922: 3 hatchlings observed. 2005: Area 11711: 1 adult seen.

General Area: 2013: Area 13481: Residential area with coniferous forest. 2011; Area 12922: At door of school. 2005: Area 11711: Residential garden.

General Comments: 2013: Area 13481: Observation comment: snake was killed by landowner.

Management: --
 Comments:

Location

Survey Site Name: Cutler Road, Litchfield
 Managed By:

County: Hillsborough

Town(s): Litchfield

Size: 11.5 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2013: Area 13481: Between #65 and #61 Page Road, Litchfield. 2011: Area 12922: Tabernacle Christian School in Litchfield. 2005: Area 11711: 21 Cutler Road, approx 200' off of road in garden.

Dates documented

First reported: 2005-08-15

Last reported: 2013-05-10

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Apparently secure but with cause for concern
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
 Comments on Rank: --

Detailed Description: 2009: Area 12302: 1 observed; shell was 10-12" long.
 General Area: 2009: Area 12302: Backyard water garden.
 General Comments: --
 Management: --
 Comments:

Location

Survey Site Name: Robinson Pond
 Managed By:

County: Hillsborough
 Town(s): Hudson
 Size: 7.7 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2009: Area 12302: 16 Melba Drive, Hudson.

Dates documented

First reported: 2009-06-27 Last reported: 2009-06-27

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Apparently secure but with cause for concern
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
 Comments on Rank: --

Detailed Description: 2011: Area 13123M: 1 adult female observed, laying 8-9 eggs.

General Area: 2011: Area 13123M: Nesting in residential yard.

General Comments: --

Management: --

Comments:

Location

Survey Site Name: Robinson Pond

Managed By:

County: Hillsborough

Town(s): Hudson

Size: 1.9 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2011: Area 13123M: 28 Pinewood Road, Hudson.

Dates documented

First reported: 2011-06-20

Last reported: 2011-06-20

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Apparently secure but with cause for concern
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
 Comments on Rank: --

Detailed Description: 2014: Area 13571: 1 adult male observed.
 General Area: 2014: Area 13571: Marshy area leading to small stream. Roads surrounding the marshy area.
 General Comments: --
 Management: --
 Comments:

Location

Survey Site Name: Robinson Pond
 Managed By:

County: Hillsborough
 Town(s): Hudson
 Size: .4 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2014: Area 13571: Greeley Street, Hudson, at crossing of Glover Brook.

Dates documented

First reported: 2014-05-02 Last reported: 2014-05-02

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

New Hampshire Natural Heritage Bureau - Animal Record

Eastern Box Turtle (*Terrapene carolina*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2017-2019: Turtle 7010: Radiotracked female. Turtle 7011: Radiotracked male. Turtle 7012: Radiotracked male. Turtle 7013: Radiotracked female. Turtle 7014: Radiotracked female. 2016: Adult male tracked via telemetry. Initial capture on 6/2. First recapture on 6/7. Second recapture on 6/30. Second adult male captured and tagged on 9/9. 2014: Adult female tracked via telemetry. Believed to have laid eggs during telemetry survey, but no direct evidence.

General Area: 2016: Powerline right-of-way with dense shrub cover. Appalachian oak - pine forest on either side of right-of-way. 2014: Moving between woods and adjacent powerline corridor.

General Comments: --
Management: --
Comments:

Location

Survey Site Name: Musquash Brook
Managed By: Hamblett

County: Hillsborough
Town(s): Hudson
Size: 45.5 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: --

Dates documented

First reported: 2014-06-18 Last reported: 2019-09-10

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

New Hampshire Natural Heritage Bureau - Animal Record

Eastern Box Turtle (*Terrapene carolina*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2020: Area 14583: 2 nesting females observed. Area 14660: 1 adult observed, sex unknown.
General Area: 2020: Area 14583: Gravel area in construction site. Area 14660: Edge of development construction area within clear-cut, leveled area.

General Comments: --
Management: --
Comments:

Location

Survey Site Name: Reeds Brook
Managed By:

County: Hillsborough
Town(s): Hudson
Size: .9 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: --

Dates documented

First reported: 2020-05-31
Last reported: 2020-06-05

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

11. WETLAND/WETLAND BUFFER IMPACT PLAN

12. WETLAND PHOTO PLAN AND ASSOCIATED WETLAND PHOTOS

Photo No. 1: Looking west at the wetlands.



Photo No. 2: Looking south along the wetland.



Photo No. 3: Looking south along the wetlands toward the property line.



Photo No. 4: Looking west at the wetland.



Photo No. 5: Looking west at the wetland

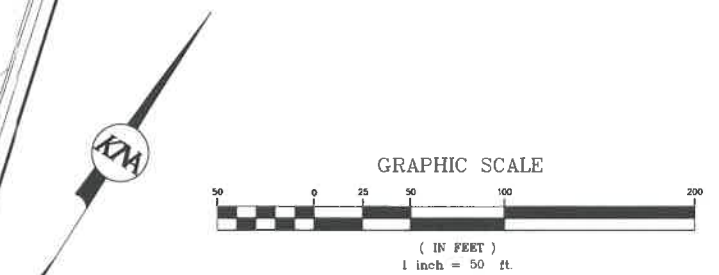
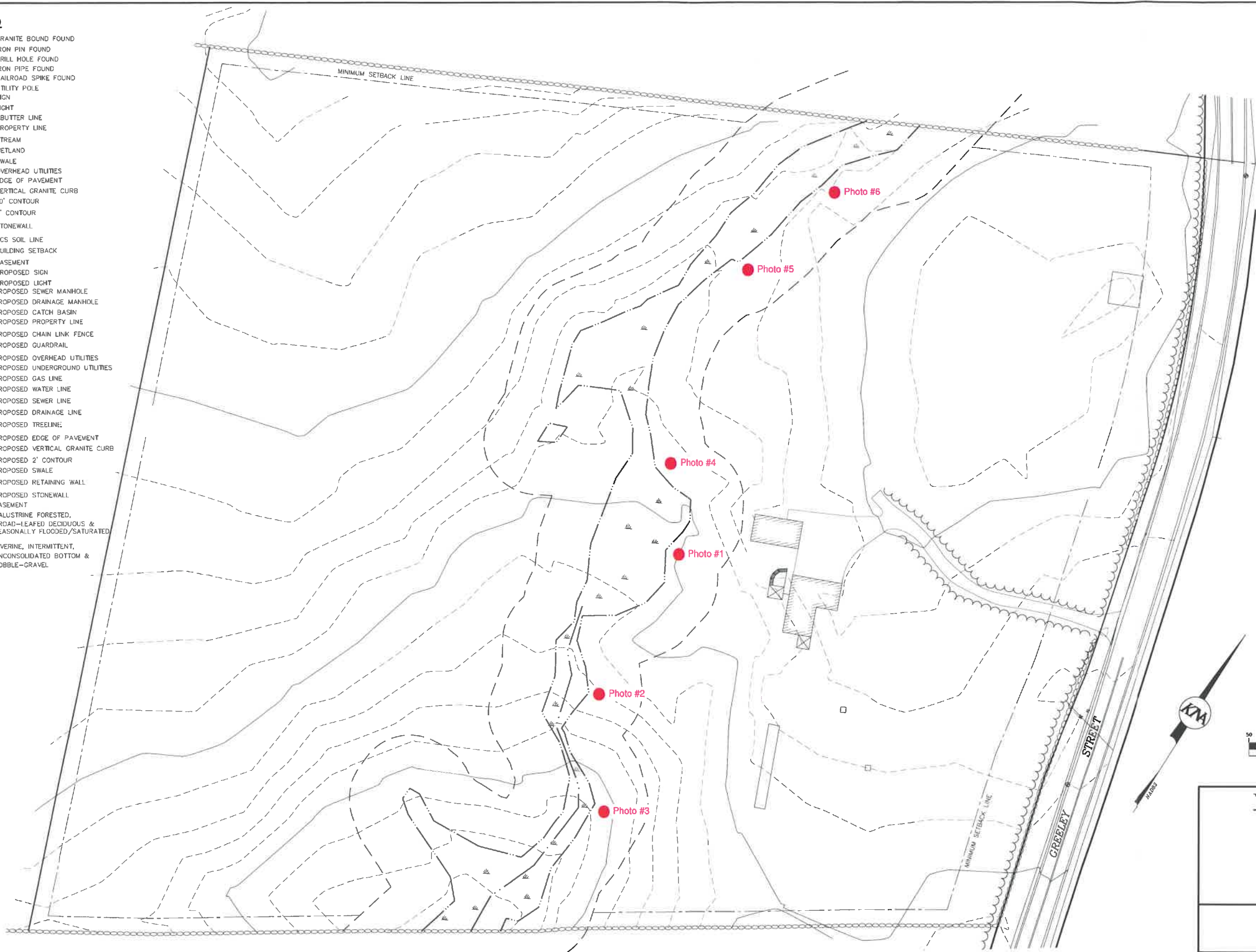


Photo No. 6: Looking north at the wetland and property line.



LEGEND

- ⊙ GB-F GRANITE BOUND FOUND
- ⊙ IPN-F IRON PIN FOUND
- ⊙ DH-F DRILL HOLE FOUND
- ⊙ IPP-F IRON PIPE FOUND
- △ RRS-F RAILROAD SPIKE FOUND
- ⊙ UTY UTILITY POLE
- ⊙ SIGN
- ⊙ LIGHT
- ABUTTER LINE
- PROPERTY LINE
- STREAM
- WETLAND
- SWALE
- OHU OVERHEAD UTILITIES
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- BUILDING SETBACK
- EASEMENT
- ⊙ PROPOSED SIGN
- ⊙ PROPOSED LIGHT
- ⊙ PROPOSED SEWER MANHOLE
- ⊙ PROPOSED DRAINAGE MANHOLE
- ⊙ PROPOSED CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL
- OHU PROPOSED OVERHEAD UTILITIES
- UGU PROPOSED UNDERGROUND UTILITIES
- G-G PROPOSED GAS LINE
- W-W PROPOSED WATER LINE
- S-S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED 2' CONTOUR
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- PROPOSED STONEWALL
- EASEMENT
- PFO1E PALUSTRINE FORESTED, BROAD-LEAFED DECIDUOUS & SEASONALLY FLOODED/SATURATED
- R4UB1 RIVERINE, INTERMITTENT, UNCONSOLIDATED BOTTOM & COBBLE-GRAVEL



WETLAND PHOTO PLAN
HERITAGE LANDING
 MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

OWNER/APPLICANT:
 K&M DEVELOPERS, LLC
 46 LOWELL ROAD
 HUDSON, N.H. 03051

KM KEACH-NORDSTROM ASSOCIATES, INC.
 Civil Engineering Land Surveying Landscape Architecture
 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2801

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
 DATE OF MEETING: _____
 _____ SIGNATURE DATE: _____
 _____ SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.



WETLAND SCIENTIST'S CERTIFICATION:
 JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN OCTOBER OF 2020 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

 CERTIFIED WETLAND SCIENTIST DATE

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: APRIL 23, 2021 SCALE: 1"=50'
 PROJECT NO: 20-1001-1 SHEET 1 OF 23

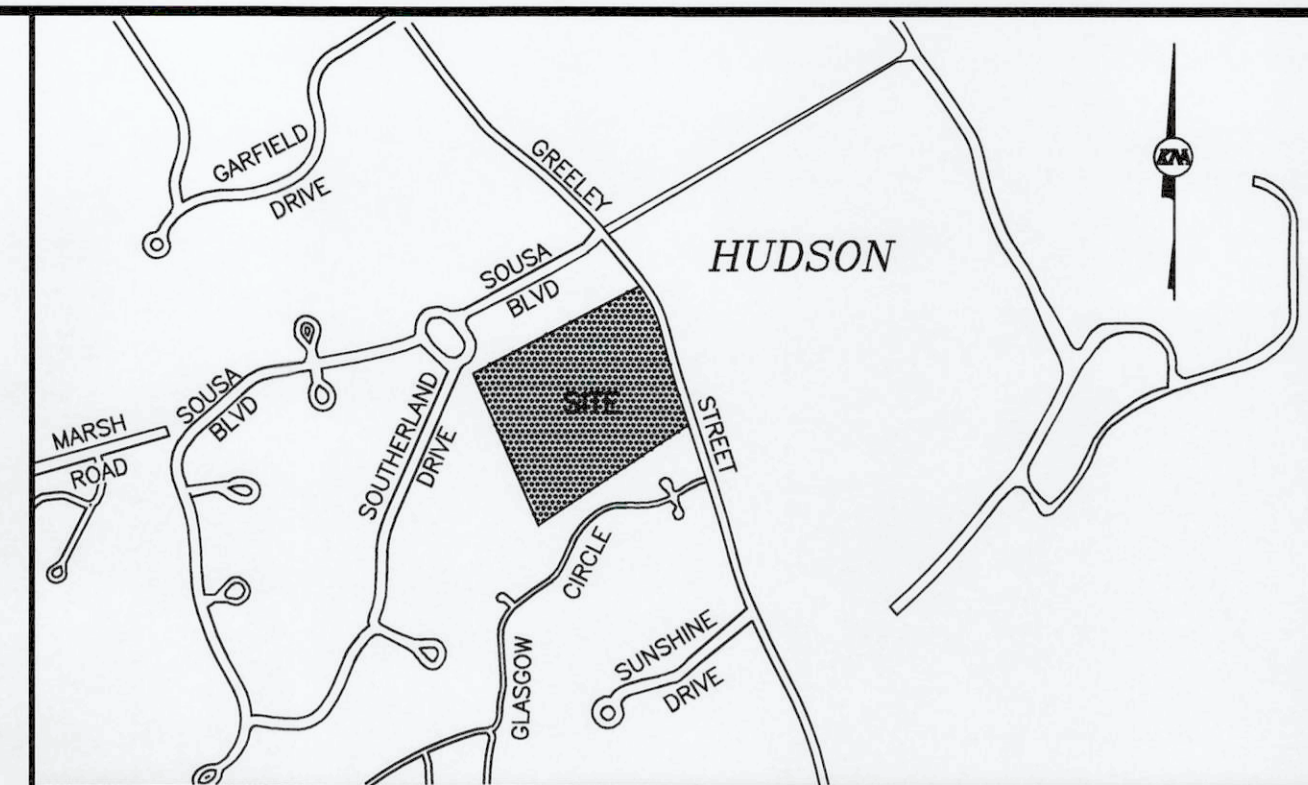
13. PLANS

LEGEND

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- IPP-F IRON PIPE FOUND
- ▲ RRS-F RAILROAD SPIKE FOUND
- UTILITY POLE
- ▽ SIGN
- LIGHT
- ABUTTER LINE
- PROPERTY LINE
- STREAM
- WETLAND
- SWALE
- OHU OVERHEAD UTILITIES
- EDP EDGE OF PAVEMENT
- VGC VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- BUILDING SETBACK
- EASEMENT
- ▽ PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL
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- UGU PROPOSED UNDERGROUND UTILITIES
- G PROPOSED GAS LINE
- W PROPOSED WATER LINE
- S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED 2' CONTOUR
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- PROPOSED STONEWALL
- EASEMENT

REFERENCE PLANS:

1. "PLAN OF LAND IN HUDSON, N.H." SCALE: 1"=200'. DATED: 1967. PREPARED BY: DAVID M. HAMILTON. H.C.R.D. PLAN #3605
2. "SURVEY OF OLD ORIGINAL LAND SUBDIVISION, A & W SAND & GRAVEL CORP." SCALE 1"=200'. DATED: DECEMBER 15, 1972. PREPARED BY: ROLAND P. THIERRIEN. H.C.R.D. PLAN #14653
3. "CONSOLIDATION & SUBDIVISION PLAN, HIGHLAND ACRES." SCALE: 1"=100'. DATED: JUNE, 1977. PREPARED BY: A.E. MAYNARD CIVIL ENGINEER H.C.R.D. PLAN #10317
4. "POND VIEW ESTATES LOT LINE RELOCATION & CONSOLIDATION PLAN." SCALE: 1"=100'. DATED: FEBRUARY 26, 1996. PREPARED BY: HAYNER/SWANSON, INC. H.C.R.D. PLAN #28726

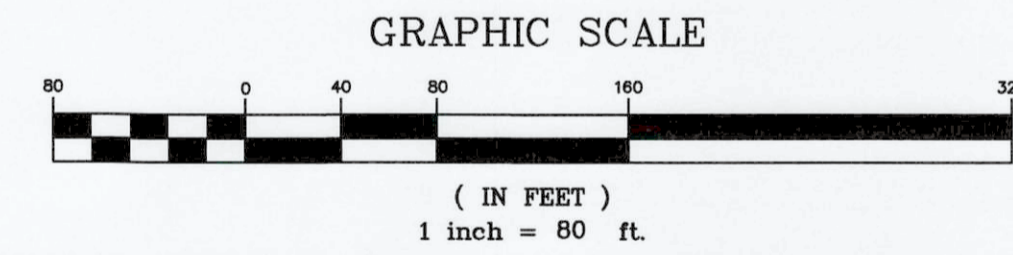


VICINITY MAP
SCALE: 1" = 1,000'

- NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT CONSOLIDATED LOTS 2 & 3 AND AN OVERVIEW OF A PROPOSED 62 AND OLDER HOUSING DEVELOPMENT ON ASSESSORS MAP 140 LOTS 2 & 3 AT 112 & 114 GREELEY STREET IN HUDSON, NEW HAMPSHIRE AS SHOWN HEREON AND NO OTHER PURPOSE.
 2. EXISTING AREA OF PARCELS IS, LOT 2: 418,552 SF, OR 9.608 ACRES. LOT 3: 319,020 SF, OR 7.323 ACRES.
 3. OWNER OF RECORD: K&M DEVELOPERS, LLC 46 LOWELL ROAD HUDSON, N.H. 03051
 4. THE SUBJECT PARCELS ARE SITUATED ENTIRELY WITHIN THE GENERAL (G) ZONING DISTRICT AND ARE SUBJECT TO THE FOLLOWING DIMENSIONAL REQUIREMENTS:
MINIMUM BUILDING SETBACKS:
- FRONT 50 FT
- SIDE 15 FT
- REAR 15 FT
 5. PROPOSED USE: AGE RESTRICTED 62 AND OLDER HOUSING.
 6. SUBJECT PARCEL WILL BE SERVICED BY MUNICIPAL WATER AND SEWER.
 7. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN OCTOBER OF 2020.
 8. HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88 FROM GPS SURVEY METHODS.
 9. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0516D, PANEL NUMBER 516 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
 10. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE OWNER OR CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
 11. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.
 12. PROPER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED (IE. HAY BALES, SILT FENCES, ETC.) PRIOR TO CLEARING AND EXCAVATION. THE CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL COMPLETION OF CONSTRUCTION. THE TOWN OF HUDSON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION, IF NECESSARY.
 13. ALLOWABLE DENSITY:

TOTAL LOT AREA	WETLAND AREA	AREA >25% SLOPE	BUILDABLE AREA	FRONTAGE
737,572 SF OR 16.931 AC	40,050 SF OR 0.919 AC	0 SF OR 0 AC	697,522 SF OR 16.013 AC	434.78 FT

MAXIMUM DENSITY OF HOMES = 1 BEDROOM/7,500 SF OF BUILDABLE LAND = 737,572SF/7,500SF = 98.3 BEDROOMS = 98.3 BEDROOMS/2 BEDROOMS PER HOME = 49.17 HOMES
PROPOSED DENSITY OF HOMES = 47 HOMES (2 BEDROOMS EACH)



NOTES (CONTINUED):

14. WAIVERS REQUIRED:
15. STATE PERMITS REQUIRED:
- AOT PERMIT
- SEWER CONNECTION PERMIT
16. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 AM AND 7:00 PM, MONDAY THROUGH SATURDAY. CONSTRUCTION ACTIVITIES SHALL BE PROHIBITED ON SUNDAYS.
17. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES ARE PROHIBITED ON SATURDAY AND SUNDAY.
18. THE ROAD NAME SHALL BE POSTED AT THE BEGINNING OF THE ROAD FOR CERTIFICATION OF OCCUPANCY SIGN BY THE HUDSON FIRE DEPARTMENT.
19. OPEN SPACE:
REQUIRED = 40%
PROVIDED = 74%
20. BUILDING COVERAGE:
REQUIRED=20%
PROVIDED:
TOTAL BUILDING COVERAGE SF = 95,685 SF
TOTAL BUILDING COVERAGE =13%
21. ALL SITE IDENTIFICATION SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE XII OF THE HUDSON ZONING ORDINANCE.
22. AFTER THE ISSUANCE OF THE FOUNDATION PERMIT FOR EACH OF THE STRUCTURES INCLUDED IN THIS SITE PLAN AND PRIOR TO THE FOUNDATION "AS-BUILT" PLANS ON A TRANSPARENCY AND TO THE SAME SCALE AS THE APPROVED SITE PLAN. EACH FOUNDATION "AS-BUILT" PLAN SHALL INCLUDE ALL STRUCTURAL DIMENSIONS AND LOT LINE SETBACK MEASUREMENTS TO THE FOUNDATION AND BE STAMPED BY A LICENSE LAND SURVEYOR. ANY DISCREPANCY BETWEEN THE APPROVED SITE PLAN AND FOUNDATION "AS-BUILT" PLAN SHALL BE DOCUMENTED BY THE APPLICANT AND BE PART OF THE FOUNDATION "AS-BUILT" SUBMISSION.
23. PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY, A L.L.S. CERTIFIED "AS-BUILT" SITE PLAN SHALL BE PROVIDED TO THE TOWN OF HUDSON COMMUNITY DEVELOPMENT DEPARTMENT, CONFIRMING THAT THE SITE CONFORMS WITH THE RECORD SITE PLAN.
24. IF DURING LOT DEVELOPMENT, SLOPES OF 2:1 EXCEED 20 FEET, 3:1 EXCEEDS 30 FEET, OR 4:1 EXCEEDS 40 FEET THE CONTRACTOR SHALL ADD BENCHING PER NHDES REQUIREMENTS.
25. THE PROPOSED PROJECT HAS BEEN DESIGNED TO MEET THE 2018 AND 2019 M54 REQUIREMENTS.

NPDES NOTE

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.



WETLAND SCIENTIST'S CERTIFICATION:

JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN OCTOBER OF 2020 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BY THIS OFFICE DURING OCTOBER OF 2020. SAID SURVEY HAS AN ERROR OF CLOSURE BETTER THAN ONE PART IN TEN THOUSAND (1:10,000).

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE DATE: _____

SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

THE SITE-SPECIFIC SOIL MAPPING WAS PERFORMED IN DECEMBER 2009 BY JAMES GOVE, CERTIFIED SOIL SCIENTIST #4, OF GOVE ENVIRONMENTAL SERVICES INC. IN EXETER, NEW HAMPSHIRE. THIS MAPPING WAS PERFORMED ACCORDING TO THE STANDARDS OF THE "SITE-SPECIFIC SOIL MAPPING STANDARDS OF NEW HAMPSHIRE AND VERMONT," VERSION 4.0, FEBRUARY 2011, PUBLISHED BY THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND, SPECIAL PUBLICATION NO. 3.

OWNER OF MAP 140 LOTS 2 & 3

SIGNATURE: _____

DATE: _____

MASTER PLAN
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: APRIL 23, 2021
PROJECT NO: 20-1001-1
SCALE: 1"=50'
SHEET 1 OF 23



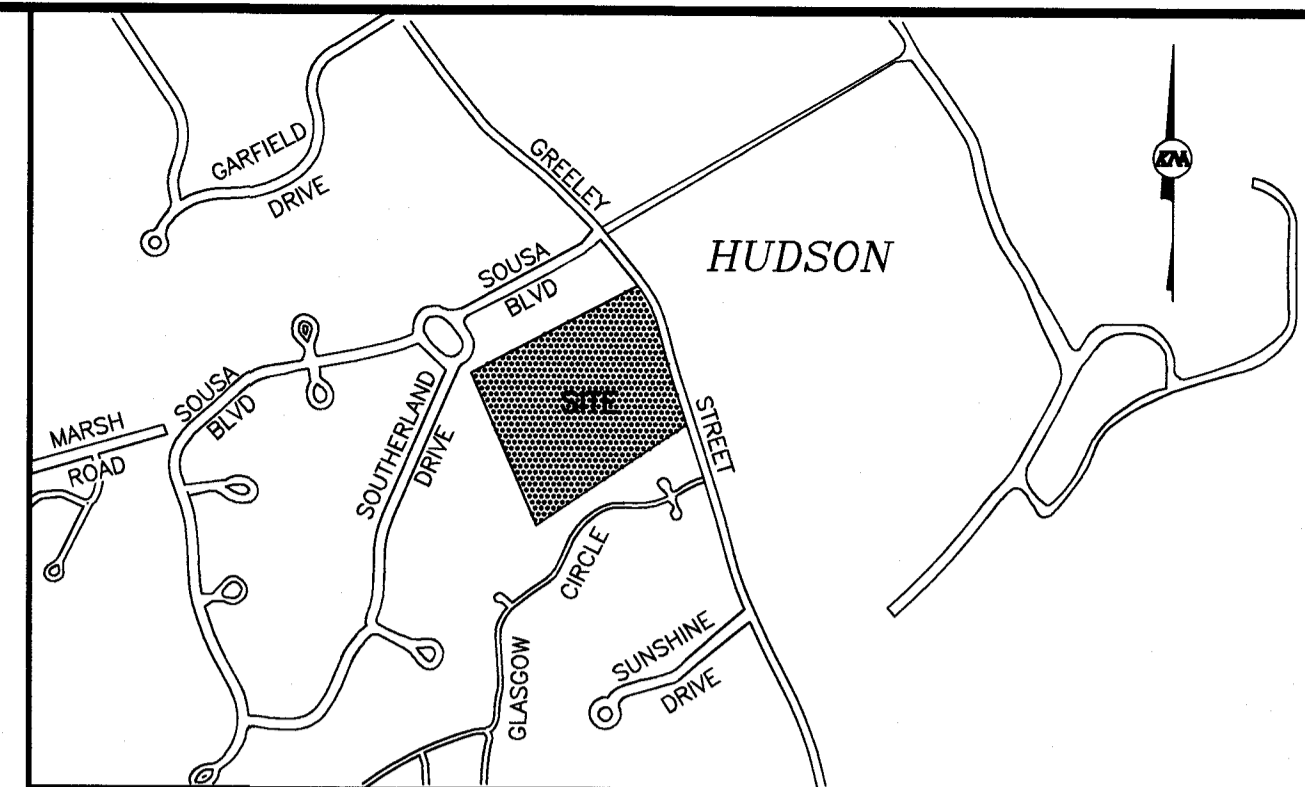
LEGEND

- SB-F STONE BOUND FOUND
- IPP-F IRON PIPE FOUND
- IP-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- BENCHMARK
- UTILITY POLE
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- WETLAND BUFFER
- CHU OVERHEAD UTILITIES
- G GAS LINE
- W WATER LINE
- TREELINE
- ECF EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- SSSM SOIL LINE
- SETBACK

SCS SOILS LEGEND

- CaB** CANTON FINE SANDY LOAM 0 TO 8 PERCENT SLOPES
- CmC** CANTON FINE SANDY LOAM 8 TO 15 PERCENT SLOPES, VERY STONY
- CmD** CANTON FINE SANDY LOAM 15 TO 25 PERCENT SLOPES, VERY STONY
- MoB** MONTAUK FINE SANDY LOAM 3 TO 8 PERCENT SLOPES

SOURCE: USDA-SCS WEB SOIL SURVEY HILLSBOROUGH COUNTY



VICINITY MAP
SCALE: 1" = 1,000'

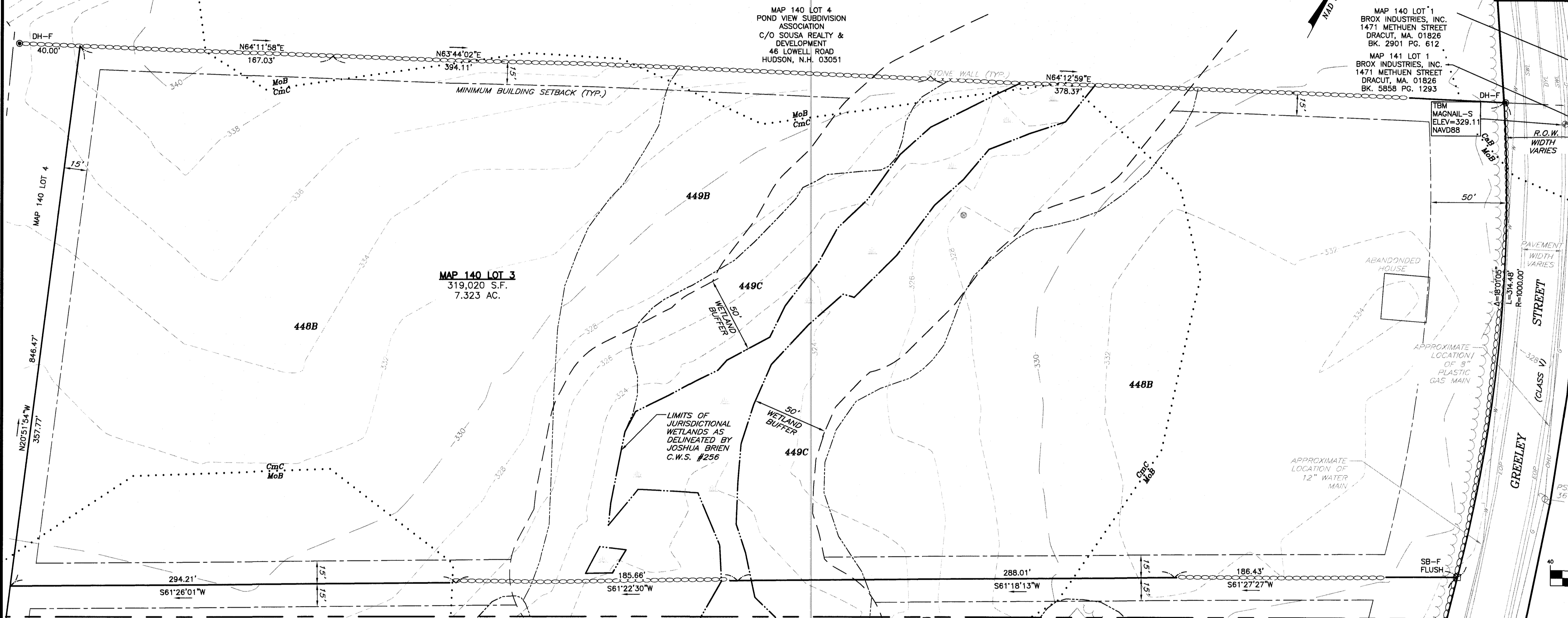
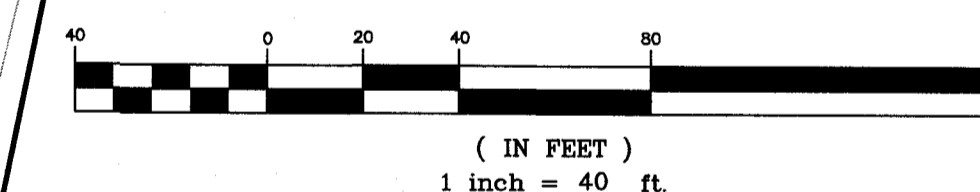
NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS ON ASSESSORS MAP 140 LOTS 2 & 3 AT 112 & 114 GREELEY STREET IN HUDSON, NEW HAMPSHIRE AS SHOWN HEREON AND NO OTHER PURPOSE.
2. EXISTING AREA OF PARCELS IS, LOT 2: 418,552 SF, OR 9.608 ACRES. LOT 3: 319,020 SF, OR 7.323 ACRES.
3. OWNER OF RECORD:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051
4. THE SUBJECT PARCELS ARE SITUATED ENTIRELY WITHIN THE GENERAL (G) ZONING DISTRICT AND ARE SUBJECT TO THE FOLLOWING DIMENSIONAL REQUIREMENTS:
MINIMUM BUILDING SETBACKS:
- FRONT 50 FT
- SIDE 15 FT
- REAR 15 FT
5. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN OCTOBER OF 2020.
6. HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88 FROM GPS SURVEY METHODS.
7. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C051D, PANEL NUMBER 516 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
8. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE OWNER OR CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
9. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.

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3. "CONSOLIDATION & SUBDIVISION PLAN, HIGHLAND ACRES." SCALE: 1"=100'. DATED: JUNE, 1977. PREPARED BY: A.E. MAYNARD CIVIL ENGINEER H.C.R.D. PLAN #10317
4. "POND VIEW ESTATES LOT LINE RELOCATION & CONSOLIDATION PLAN." SCALE: 1"=100'. DATED: FEBRUARY 26, 1996. PREPARED BY: HAYNER/SWANSON, INC. H.C.R.D. PLAN #28726

GRAPHIC SCALE



MATCH TO SHEET 3

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTHERTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
448C	SCITUATE	8-15%	MODERATELY WELL
449B	SCITUATE, VERY STONY	0-8%	MODERATELY WELL
449C	SCITUATE, VERY STONY	8-15%	MODERATELY WELL
657B	RIDGEBURY, VERY STONY	0-8%	MODERATELY WELL

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY. JAMES P. GOVE, CSS #604 OF GOVE ENVIRONMENTAL SERVICES INC. PERFORMED THE SOIL MAPPING IN JANUARY 15 OF 2021.

THE SITE-SPECIFIC SOIL MAPPING WAS PERFORMED IN DECEMBER 2009 BY JAMES GOVE, CERTIFIED SOIL SCIENTIST #4, OF GOVE ENVIRONMENTAL SERVICES INC. IN EXETER, NEW HAMPSHIRE. THIS MAPPING WAS PERFORMED ACCORDING TO THE STANDARDS OF THE "SITE-SPECIFIC SOIL MAPPING STANDARDS OF NEW HAMPSHIRE AND VERMONT," VERSION 4.0, FEBRUARY 2011, PUBLISHED BY THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND, SPECIAL PUBLICATION NO. 3.

EXISTING CONDITIONS PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:

K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051
BK. 9411 PG. 2460



Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

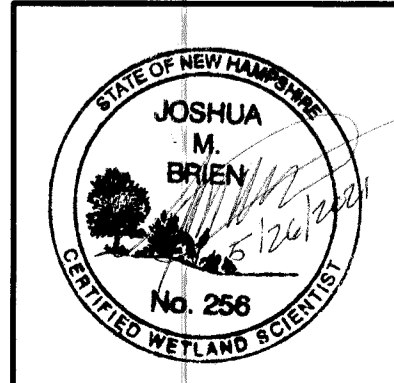
SIGNATURE DATE: _____

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UTILITY NOTE

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WETLAND SCIENTIST'S CERTIFICATION:

JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN OCTOBER OF 2020 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

CERTIFIED WETLAND SCIENTIST

5/26/21
DATE

CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BY THIS OFFICE DURING OCTOBER OF 2020. SAID SURVEY HAS AN ERROR OF CLOSURE BETTER THAN ONE PART IN TEN THOUSAND (1:10,000).

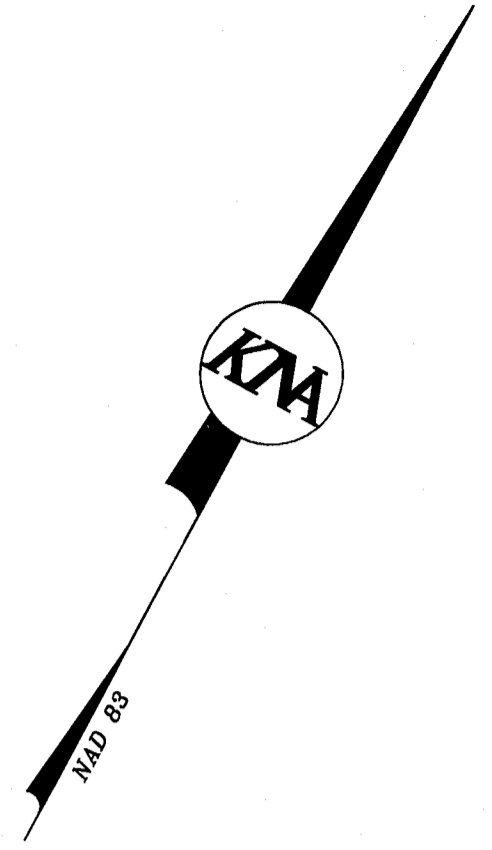
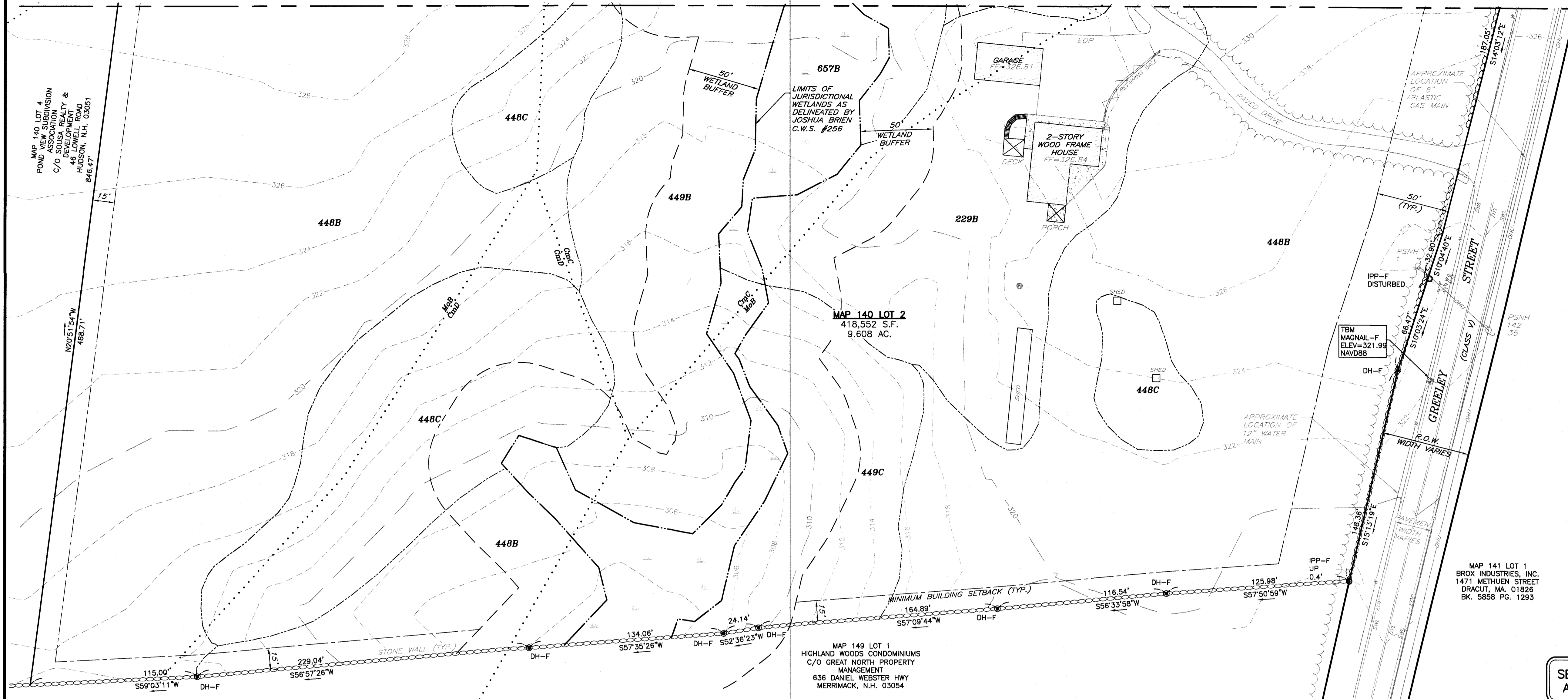
LICENSED LAND SURVEYOR

5/26/21
DATE

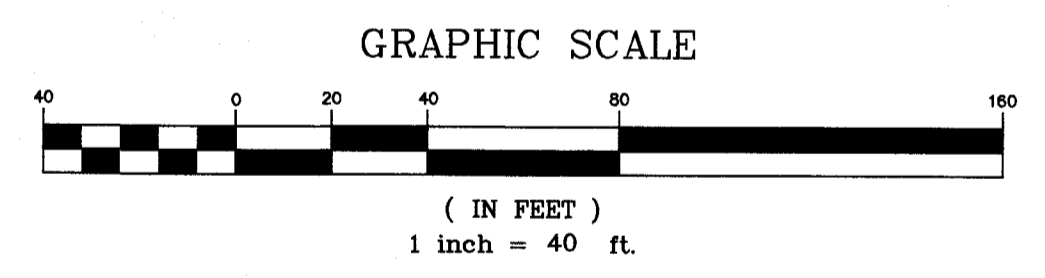
REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: JANUARY 10, 2021 SCALE: 1" = 40'
PROJECT NO: 20-1001-1 SHEET 2 OF 23

MATCH TO SHEET 2



SEE SHEET 1 FOR NOTES AND REFERENCE PLANS



SCS SOILS LEGEND

- CaB** CANTON FINE SANDY LOAM 0 TO 8 PERCENT SLOPES
 - CmC** CANTON FINE SANDY LOAM 8 TO 15 PERCENT SLOPES, VERY STONY
 - CmD** CANTON FINE SANDY LOAM 15 TO 25 PERCENT SLOPES, VERY STONY
 - MoB** MONTAUK FINE SANDY LOAM 3 TO 8 PERCENT SLOPES
- SOURCE: USDA-SCS WEB SOIL SURVEY HILLSBOROUGH COUNTY

LEGEND

- SB-F STONE BOUND FOUND
- IPP-F IRON PIPE FOUND
- IP-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- BENCHMARK
- UTILITY POLE
- WATER VALVE
- HYDRANT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- WETLAND BUFFER
- OVERHEAD UTILITIES
- GAS LINE
- WATER LINE
- TREELINE
- EOP
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- SSSM SOIL LINE
- SETBACK

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTENTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
448C	SCITUATE	8-15%	WELL
449B	SCITUATE, VERY STONY	0-8%	WELL
449C	SCITUATE, VERY STONY	8-15%	WELL
657B	RIDGEBURY, VERY STONY	0-8%	WELL

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THE SITE-SPECIFIC SOIL MAPPING WAS PERFORMED IN DECEMBER 2009 BY JAMES GOVE, CERTIFIED SOIL SCIENTIST #4, OF GOVE ENVIRONMENTAL SERVICES INC. IN EXETER, NEW HAMPSHIRE. THIS MAPPING WAS PERFORMED ACCORDING TO THE STANDARDS OF THE "SITE-SPECIFIC SOIL MAPPING STANDARDS OF NEW HAMPSHIRE AND VERMONT," VERSION 4.0, FEBRUARY 2011, PUBLISHED BY THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND, SPECIAL PUBLICATION NO. 3.



UTILITY NOTE

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WETLAND SCIENTIST'S CERTIFICATION:



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[Signature] 5/26/2021
CERTIFIED WETLAND SCIENTIST DATE

CERTIFICATION:

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[Signature] 5/26/21
LICENSED LAND SURVEYOR DATE

EXISTING CONDITIONS PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051
BK. 9411 PG. 2460



Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS

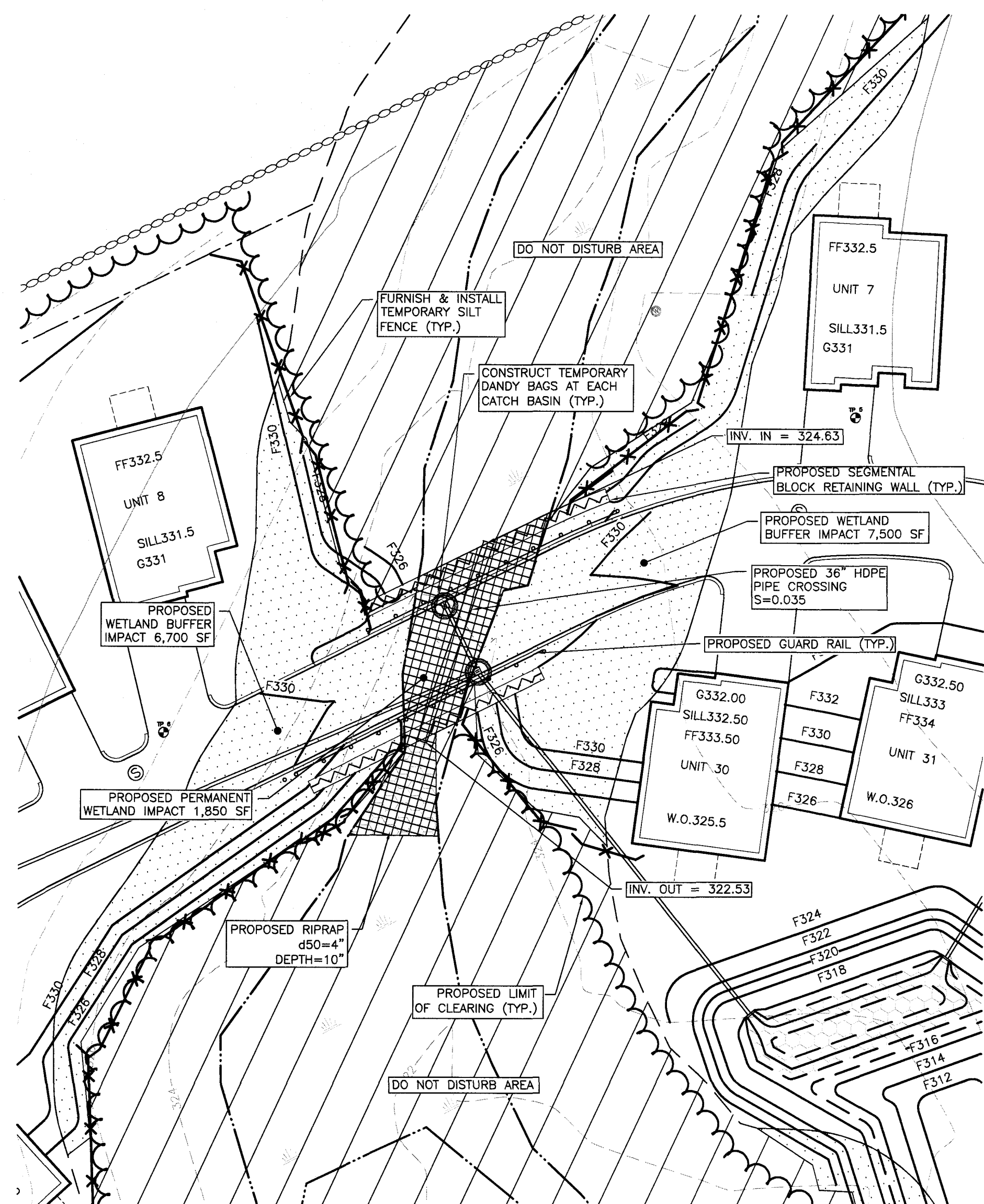
No.	DATE	DESCRIPTION	BY

DATE: JANUARY 10, 2021 SCALE: 1" = 40'
PROJECT NO: 20-1001-1 SHEET 3 OF 23

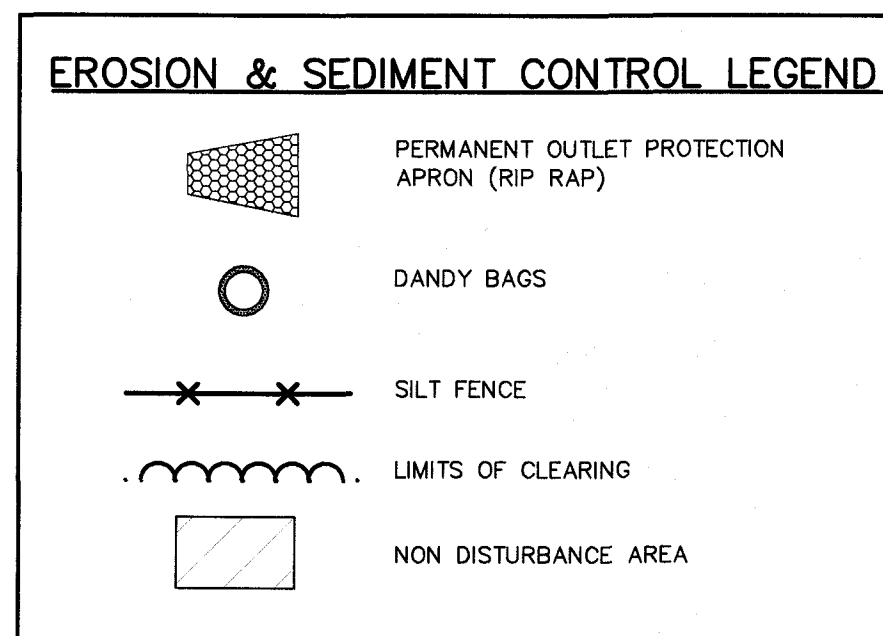
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____
SIGNATURE DATE: _____
SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.



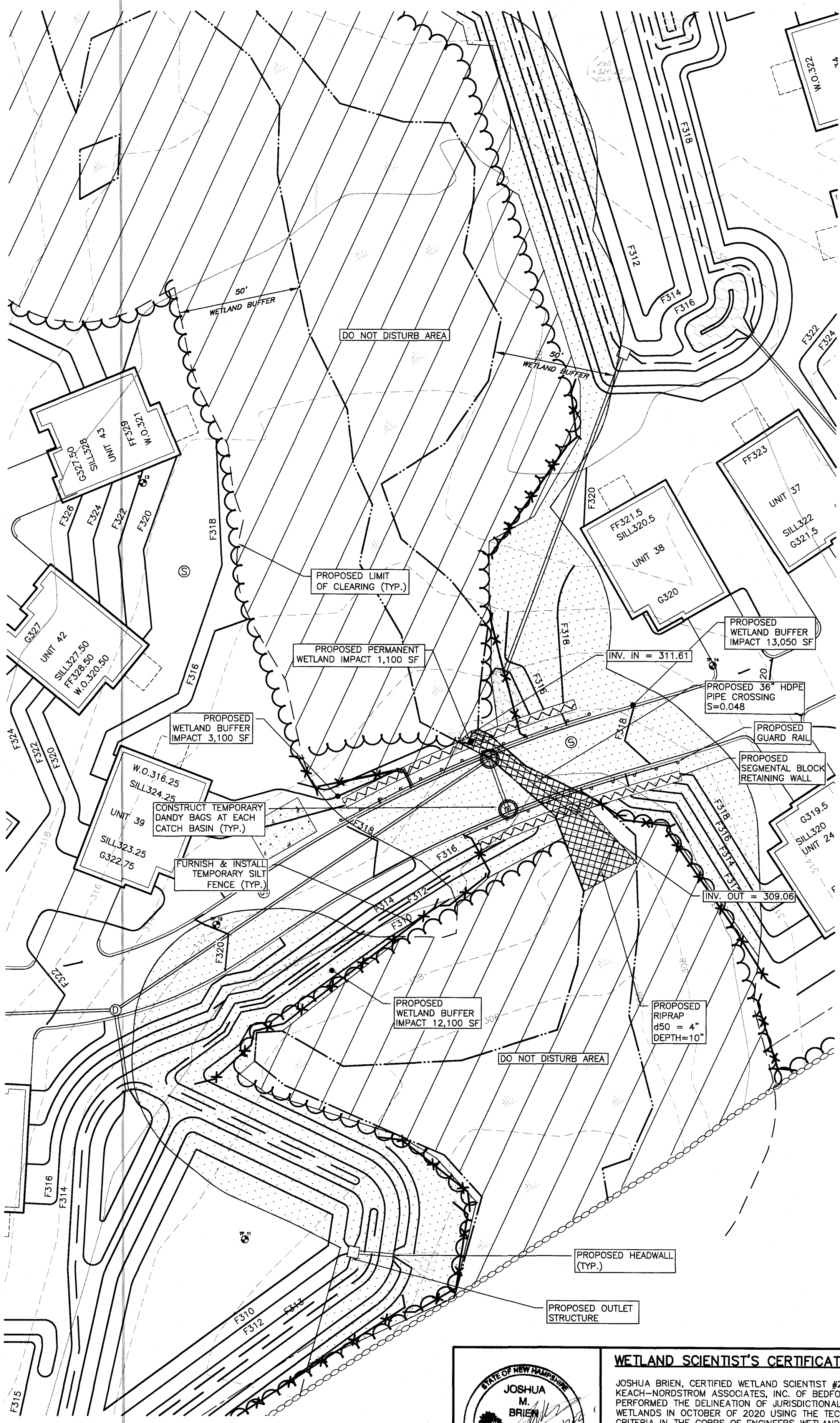
NORTHERN ROADWAY CROSSING
SCALE: 1" = 30'



LOAM & SEED ALL DISTURBED AREAS (TYP.)

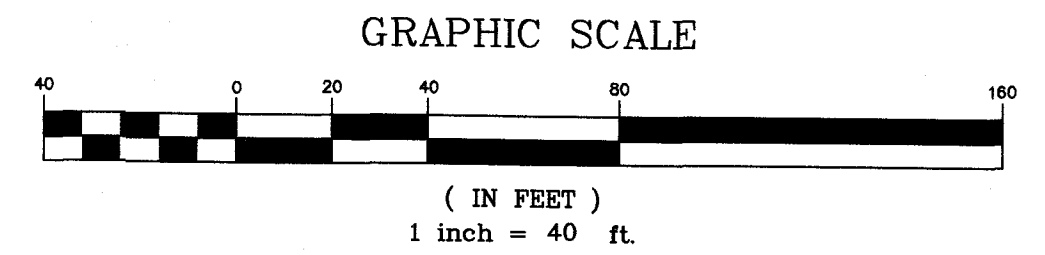
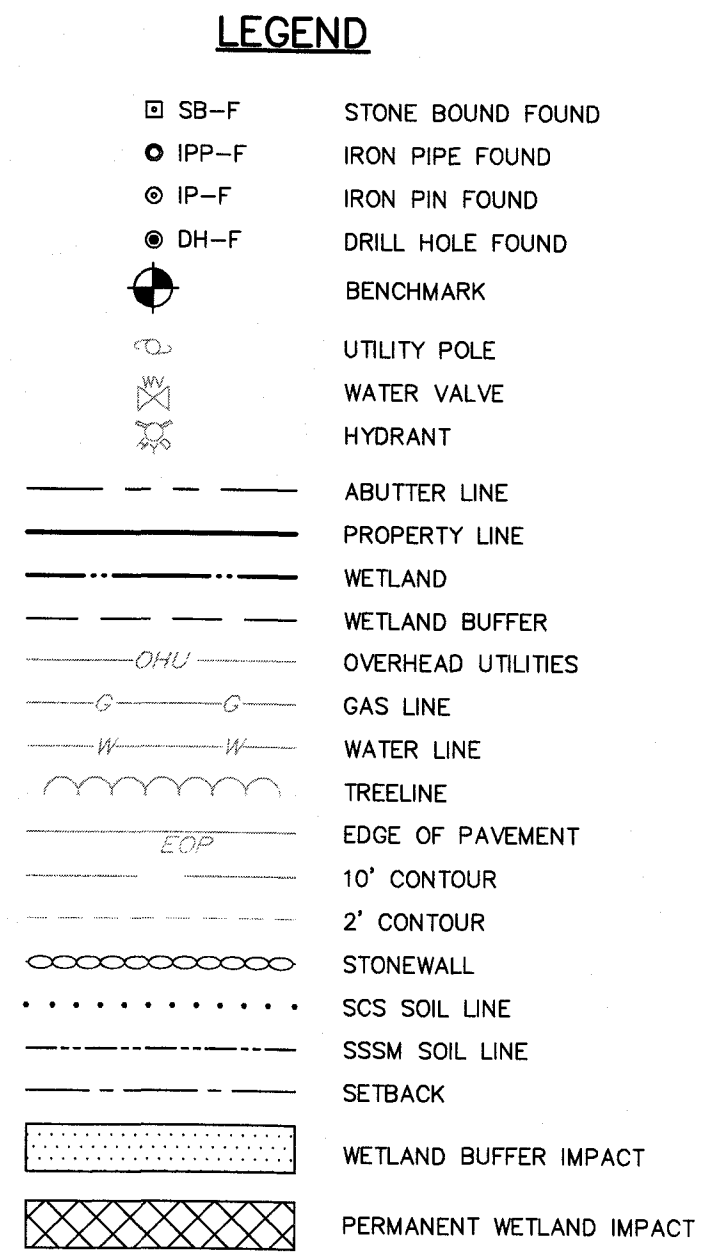
FURNISH & INSTALL EROSION CONTROL BLANKETS ON ALL SLOPES 3:1 OR STEEPER (TYP.)

FOR CONSERVATION COMMISSION ONLY (NOT FOR CONSTRUCTION)



SOUTHERN ROADWAY CROSSING
SCALE: 1" = 30'

- NOTES:**
- THE PURPOSE OF THIS PLAN IS TO DEPICT THE PERMANENT WETLAND AND WETLAND BUFFER IMPACTS ASSOCIATED WITH THE CONSTRUCTION OF TWO ROADWAY WETLAND CROSSINGS AND TWO STORMWATER PONDS.
 - WETLAND MAPPING PERFORMED BY JOSHUA BRIEN CWS#256 IN OCTOBER OF 2020.
 - TOTAL PERMANENT WETLAND IMPACT = 2,950 SF
 - TOTAL WETLAND BUFFER IMPACT = 42,450 SF
 - PROPER EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED (I.E. SILT FENCE, HAY BALES, ETC.) PRIOR TO COMMENCING EXCAVATION EFFORTS. THE CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL COMPLETION OF CONSTRUCTION. THE TOWN OF HUDSON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION, IF NECESSARY.
 - TEMPORARY EROSION CONTROLS SHALL BE REMOVED UPON FINAL STABILIZATION OF DISTURBED AREAS.
 - THE CONTRIBUTING WATERSHED AREA FOR THE ON-SITE WETLAND IS 12.8 ACRES.



WETLAND/WETLAND BUFFER IMPACT PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
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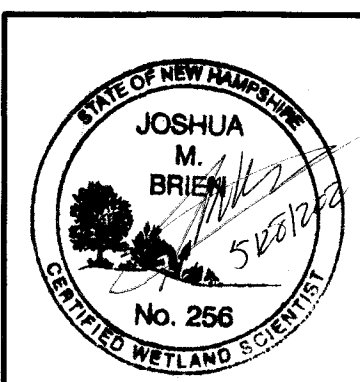
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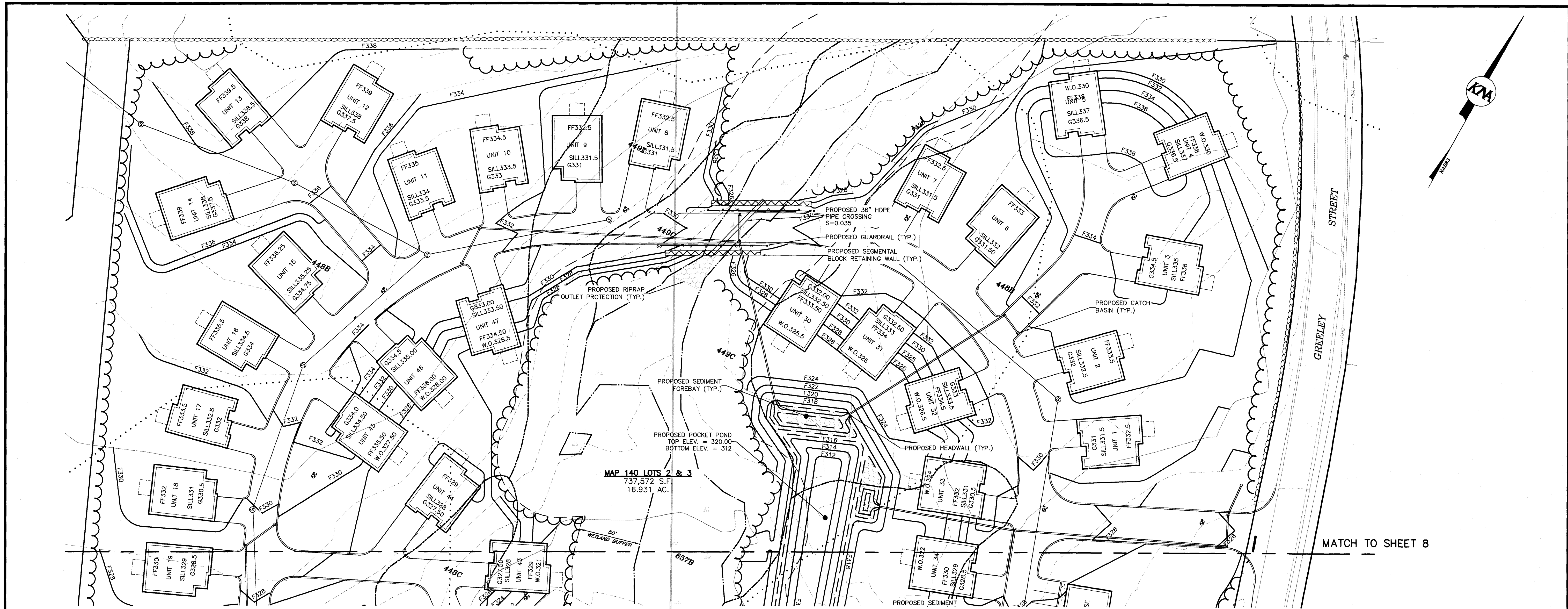
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Joshua Brien
DATE: 5/10/2021
CERTIFIED WETLAND SCIENTIST

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: JANUARY 10, 2021 SCALE: 1" = 40'
PROJECT NO: 20-1001-1 SHEET 3 OF 23



MAP 140 LOTS 2 & 3
737,572 S.F.
16,931 AC.

MATCH TO SHEET 8

LEGEND

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ GB-F GRANITE BOUND FOUND ● IPIN-F IRON PIN FOUND ⊙ DH-F DRILL HOLE FOUND ⊙ IRP-F IRON PIPE FOUND ▲ RRS-F RAILROAD SPIKE FOUND ⊙ UTILITY POLE SIGN ⊙ LIGHT — ABUTTER LINE — PROPERTY LINE — STREAM — WETLAND — SWALE — OHU OVERHEAD UTILITIES — EDGE OF PAVEMENT — VERTICAL GRANITE CURB — 10' CONTOUR — 2' CONTOUR — STONEWALL — SCS SOIL LINE — BUILDING SETBACK — EASEMENT ⊙ PROPOSED SIGN ⊙ PROPOSED LIGHT ⊙ PROPOSED SEWER MANHOLE ⊙ PROPOSED DRAINAGE MANHOLE ⊙ PROPOSED CATCH BASIN — PROPOSED PROPERTY LINE — PROPOSED CHAIN LINK FENCE — PROPOSED GUARDRAIL | <ul style="list-style-type: none"> — OHU PROPOSED OVERHEAD UTILITIES — UGU PROPOSED UNDERGROUND UTILITIES — G PROPOSED GAS LINE — W PROPOSED WATER LINE — S PROPOSED SEWER LINE — PROPOSED DRAINAGE LINE — PROPOSED TREELINE — PROPOSED EDGE OF PAVEMENT — PROPOSED VERTICAL GRANITE CURB — PROPOSED 2' CONTOUR — PROPOSED SWALE — PROPOSED RETAINING WALL — PROPOSED STONEWALL — EASEMENT |
|---|--|

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTMENTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
448C	SCITUATE	8-15%	WELL
449B	SCITUATE, VERY STONY	0-8%	WELL
449C	SCITUATE, VERY STONY	8-15%	WELL
657B	RIDGEBURY, VERY STONY	0-8%	WELL

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SEE SHEET 4 FOR NOTES & REFERENCE PLANS

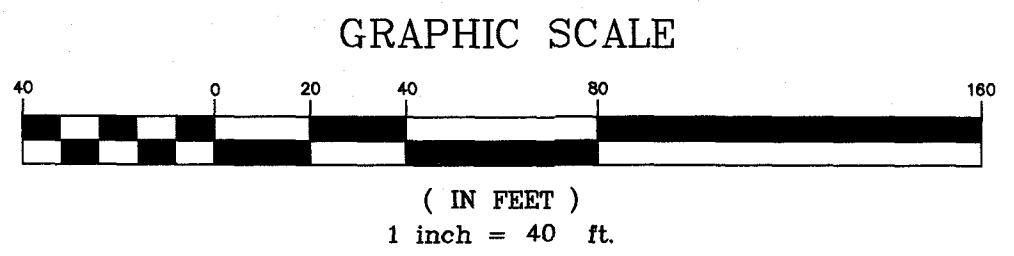
GRADING, DRAINAGE & UTILITIES PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



PURSUANT TO THE REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

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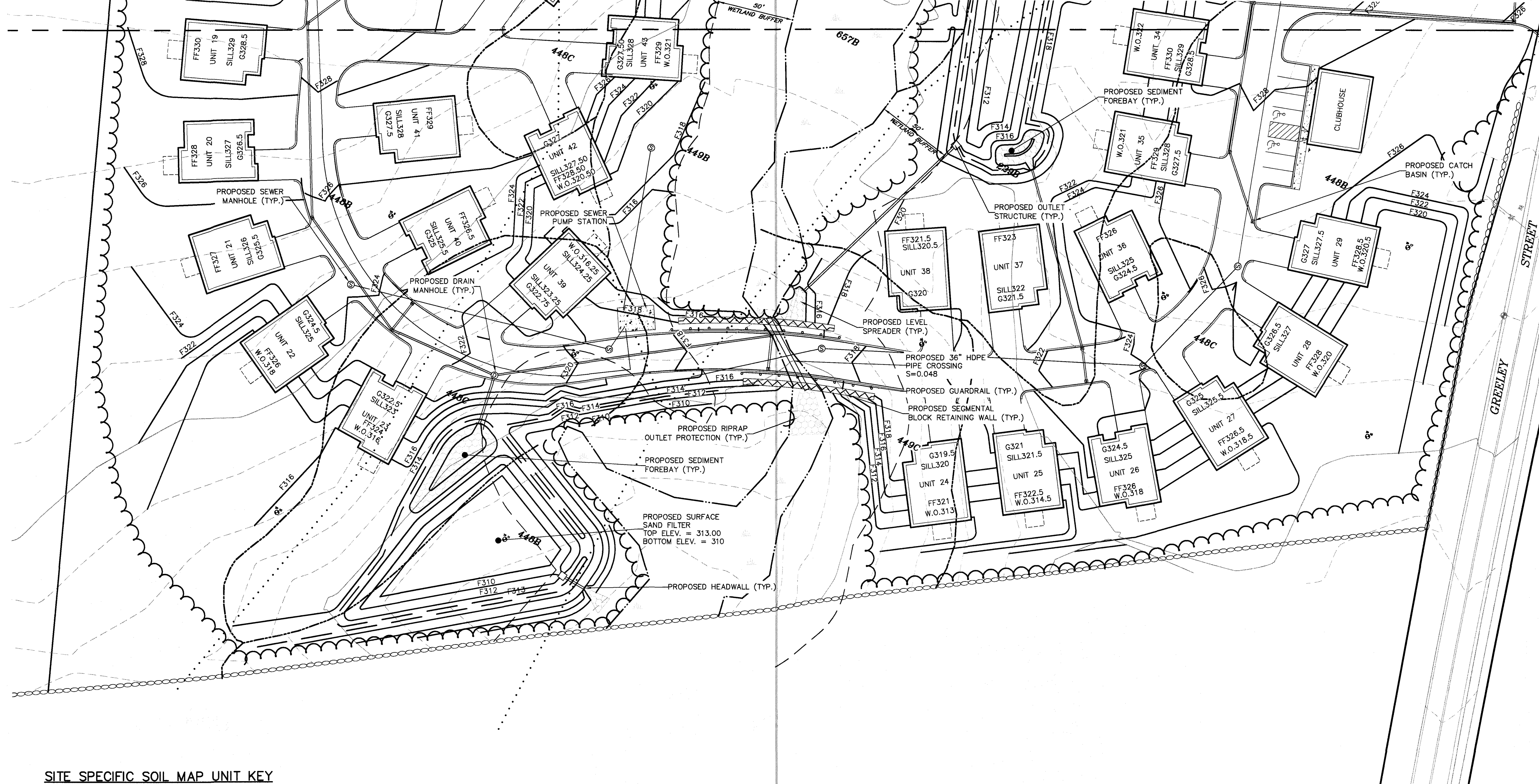
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REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: APRIL 23, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 7 OF 23

MATCH TO SHEET 7



SEE SHEET 4 FOR NOTES & REFERENCE PLANS

LEGEND

■ GB-F	GRANITE BOUND FOUND
● IPIN-F	IRON PIN FOUND
⊙ DH-F	DRILL HOLE FOUND
⊙ IPP-F	IRON PIPE FOUND
⊙ RRS-F	RAILROAD SPIKE FOUND
⊙	UTILITY POLE
+	SIGN
⊙	LIGHT
---	ABUTTER LINE
---	PROPERTY LINE
---	STREAM
---	WETLAND
---	SWALE
---	OVERHEAD UTILITIES
---	EDGE OF PAVEMENT
---	VERTICAL GRANITE CURB
---	10' CONTOUR
---	2' CONTOUR
---	STONEWALL
---	SCS SOIL LINE
---	BUILDING SETBACK
---	EASEMENT
+	PROPOSED SIGN
⊙	PROPOSED LIGHT
⊙	PROPOSED SEWER MANHOLE
⊙	PROPOSED DRAINAGE MANHOLE
⊙	PROPOSED CATCH BASIN
---	PROPOSED PROPERTY LINE
---	PROPOSED CHAIN LINK FENCE
---	PROPOSED GUARDRAIL
---	PROPOSED OVERHEAD UTILITIES
---	PROPOSED UNDERGROUND UTILITIES
---	PROPOSED GAS LINE
---	PROPOSED WATER LINE
---	PROPOSED SEWER LINE
---	PROPOSED DRAINAGE LINE
---	PROPOSED TREELINE
---	PROPOSED EDGE OF PAVEMENT
---	PROPOSED VERTICAL GRANITE CURB
---	PROPOSED 2' CONTOUR
---	PROPOSED SWALE
---	PROPOSED RETAINING WALL
---	PROPOSED STONEWALL
---	EASEMENT

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTHENTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
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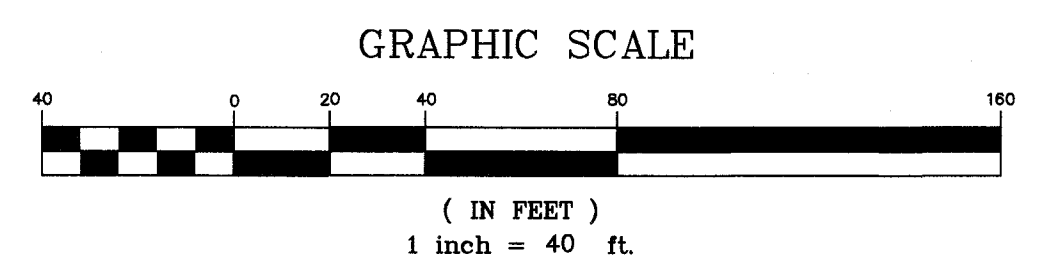
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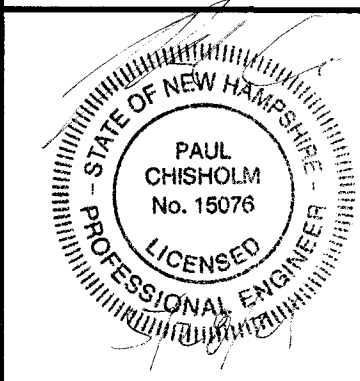
GRADING, DRAINAGE & UTILITIES PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

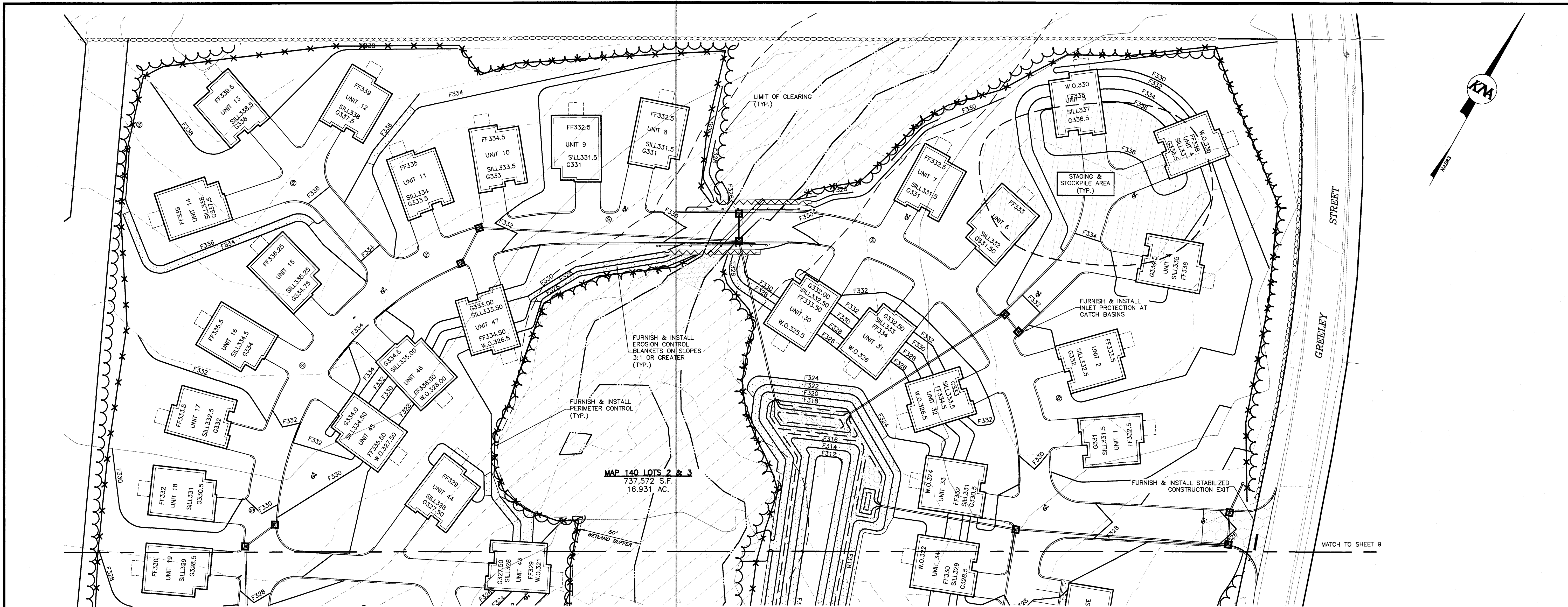
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REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: APRIL 23, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 8 OF 23



LEGEND

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- ⊙ DH-F DRILL HOLE FOUND
- ⊙ IPP-F IRON PIPE FOUND
- ▲ RRS-F RAILROAD SPIKE FOUND
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- W PROPOSED WATER LINE
- S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED 2' CONTOUR
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- PROPOSED STONEWALL
- EASEMENT

EROSION & SEDIMENT CONTROL LEGEND

- ▨ PERMANENT OUTLET PROTECTION APRON (RIP RAP)
- TEMPORARY INLET PROTECTION AT ALL CATCH BASINS
- PERIMETER CONTROLS
- LIMITS OF CLEARING
- ▨ STABILIZED CONSTRUCTION EXIT
- ▨ NON DISTURBANCE AREA
- ▨ STAGING AND STOCKPILE AREA
- ▨ EROSION CONTROL BLANKETS

EROSION CONTROL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES AS WELL AS THE PERMANENT EROSION CONTROL MEASURES.
2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION," DATED DECEMBER 2010, AS AMENDED FROM TIME TO TIME.
3. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION, WHEN NECESSARY, SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
4. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
5. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
6. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
7. OFFSITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE OR CARRIED NON-EROSIVELY THROUGH THE PROJECT AREA. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
10. THE TOWN OF HUDSON SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.

SEE SHEET 4 FOR NOTES & REFERENCE PLANS

LOAM & SEED ALL DISTURBED AREAS (TYP.)

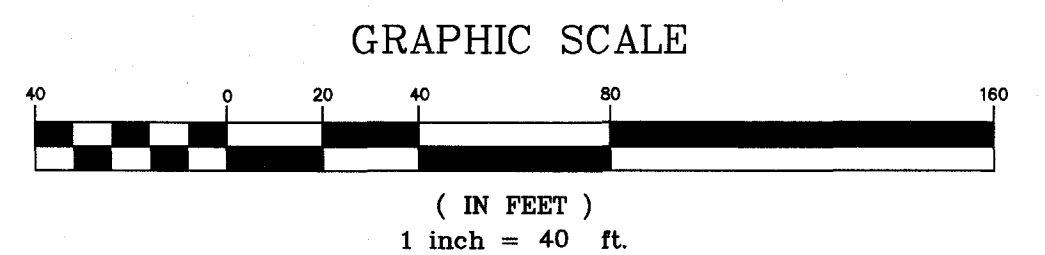
EROSION CONTROL PLAN

HERITAGE LANDING

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HILLSBOROUGH COUNTY

OWNER/APPLICANT:
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46 LOWELL ROAD
HUDSON, N.H. 03051

KM KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



NPDES NOTE

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

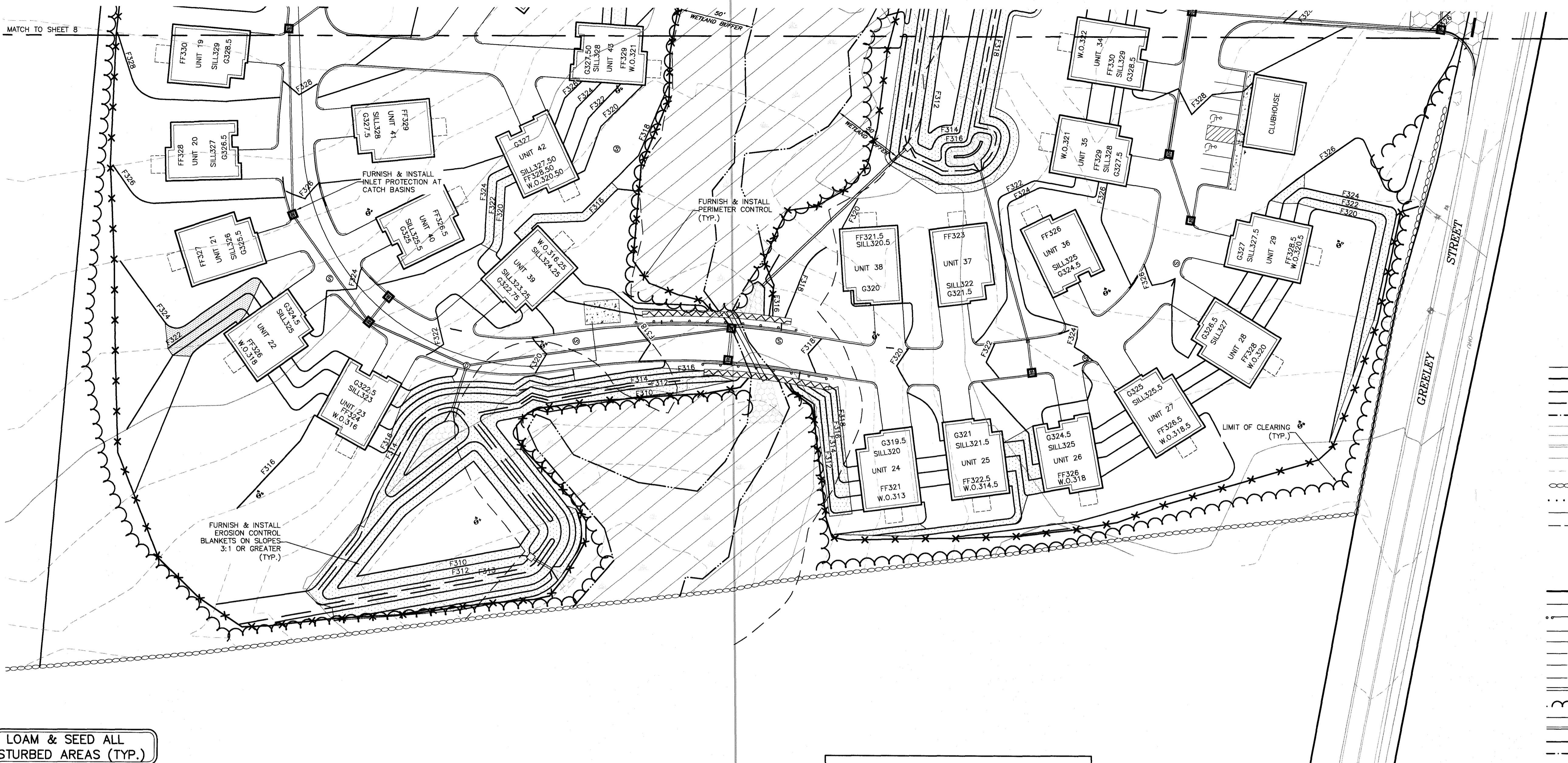
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SIGNATURE DATE: _____
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: APRIL 23, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 9 OF 23



SEE SHEET 4 FOR NOTES & REFERENCE PLANS

LEGEND

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- IPP-F IRON PIPE FOUND
- ▲ RRS-F RAILROAD SPIKE FOUND
- UTILITY POLE FOUND
- SIGN
- LIGHT
- ABUTTER LINE
- PROPERTY LINE
- STREAM
- WETLAND
- SWALE
- OHU OVERHEAD UTILITIES
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- BUILDING SETBACK
- EASEMENT
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL
- OHU PROPOSED OVERHEAD UTILITIES
- UGU PROPOSED UNDERGROUND UTILITIES
- G PROPOSED GAS LINE
- W PROPOSED WATER LINE
- S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED 2' CONTOUR
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- PROPOSED STONEWALL
- EASEMENT

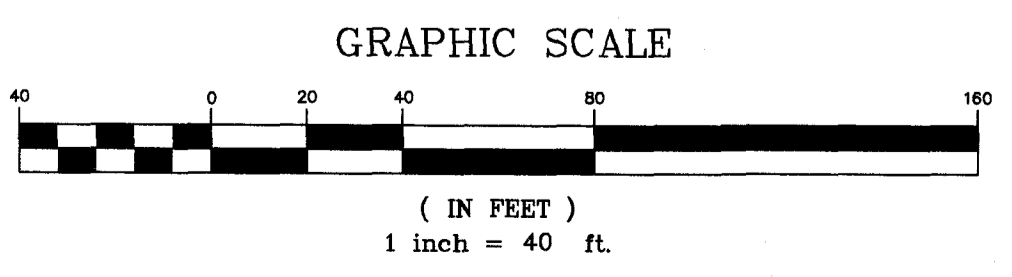
LOAM & SEED ALL DISTURBED AREAS (TYP.)

EROSION CONTROL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES AS WELL AS THE PERMANENT EROSION CONTROL MEASURES.
2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION," DATED DECEMBER 2010, AS AMENDED FROM TIME TO TIME.
3. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION, WHEN NECESSARY, SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
4. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
5. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
6. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
7. OFFSITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE OR CARRIED NON-EROSIVELY THROUGH THE PROJECT AREA. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
10. THE TOWN OF HUDSON SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.

EROSION & SEDIMENT CONTROL LEGEND

- PERMANENT OUTLET PROTECTION APRON (RIP RAP)
- TEMPORARY INLET PROTECTION AT ALL CATCH BASINS
- PERIMETER CONTROLS
- LIMITS OF CLEARING
- STABILIZED CONSTRUCTION EXIT
- NON DISTURBANCE AREA
- STAGING AND STOCKPILE AREA
- EROSION CONTROL BLANKETS



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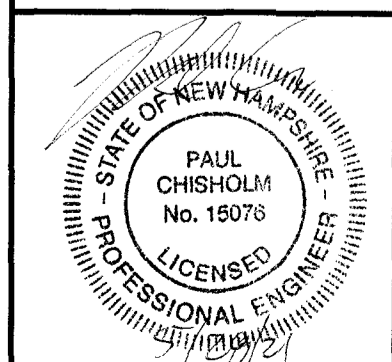
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EROSION CONTROL PLAN
HERITAGE LANDING

MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

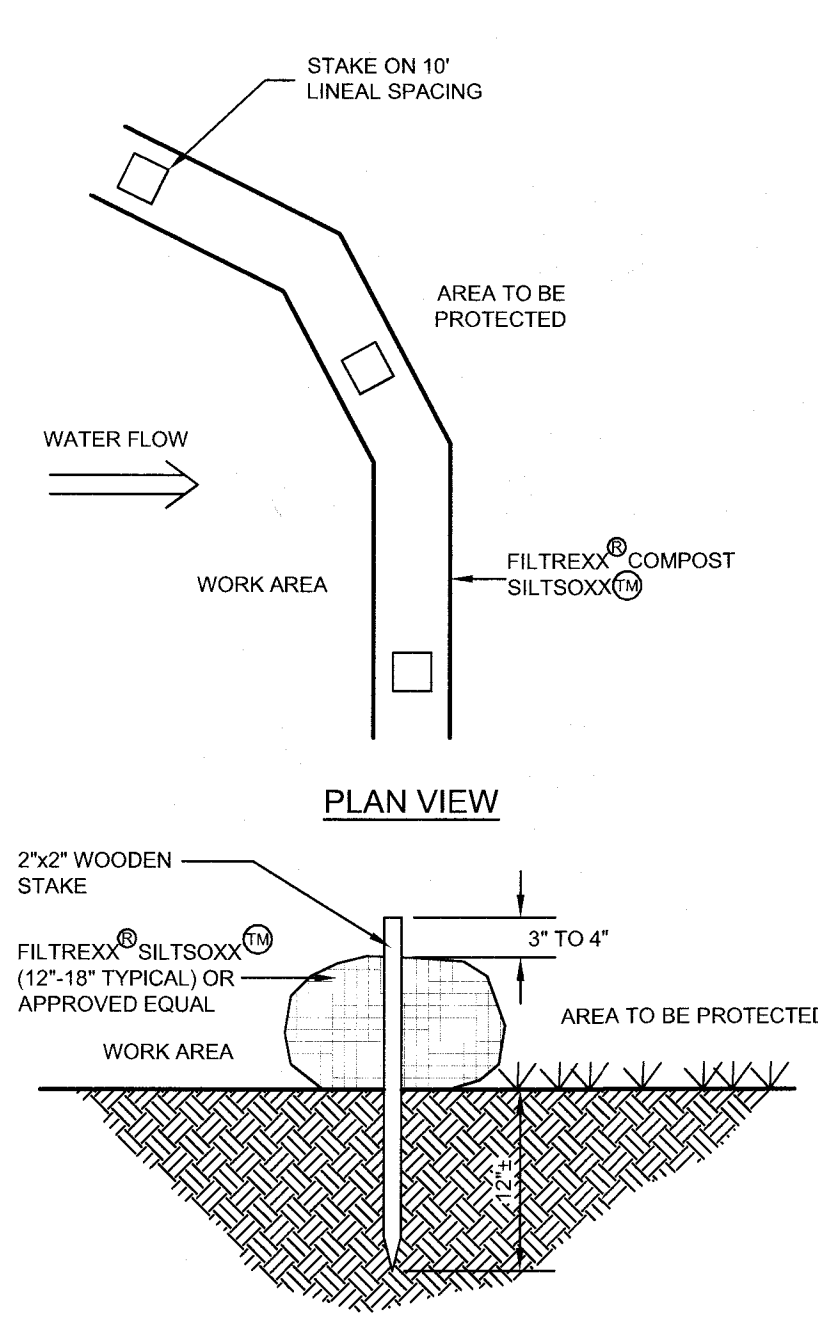
OWNER/APPLICANT:
 K&M DEVELOPERS, LLC
 46 LOWELL ROAD
 HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
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REVISIONS			
No.	DATE	DESCRIPTION	BY

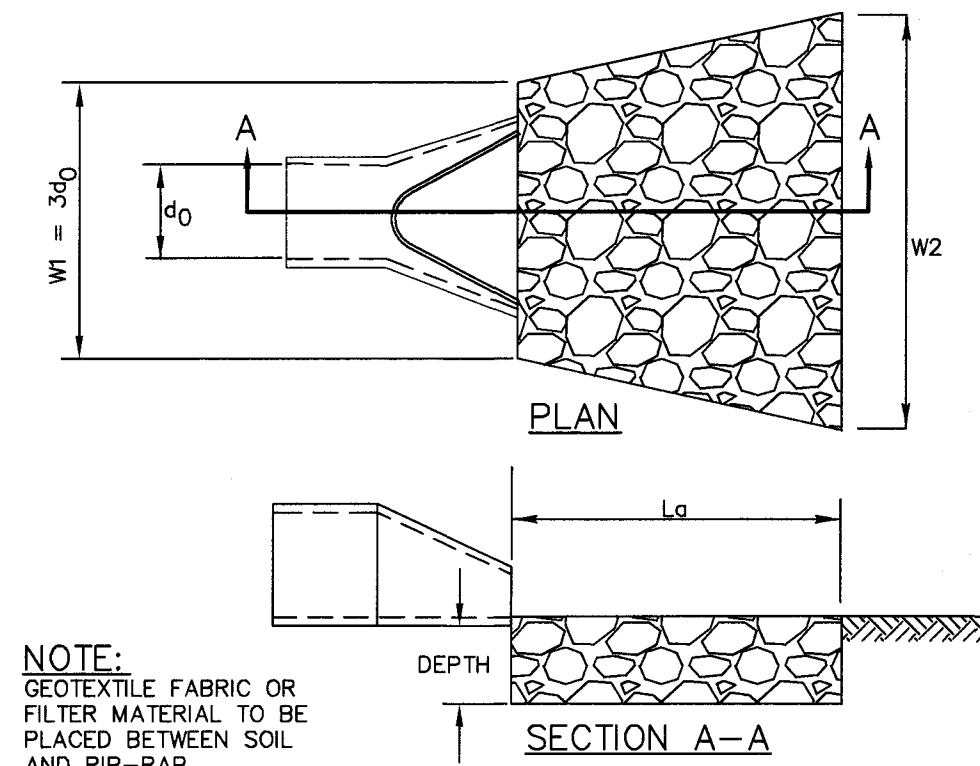
DATE: APRIL 23, 2021 SCALE: 1"=40'
 PROJECT NO: 20-1001-1 SHEET 10 OF 23



NOTES:

1. ALL MATERIAL TO MEET FILTREX® SPECIFICATIONS.
2. SILTISOXX® COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. SILTISOXX® DEPICTED IS FOR MINIMUM SLOPES. GREAT SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREX® SILTISOXX® DETAIL
NOT TO SCALE
(AUGUST 2011)



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL
NOT TO SCALE

TABLE 7-24 -- RECOMMENDED RIP RAP GRADATION RANGES

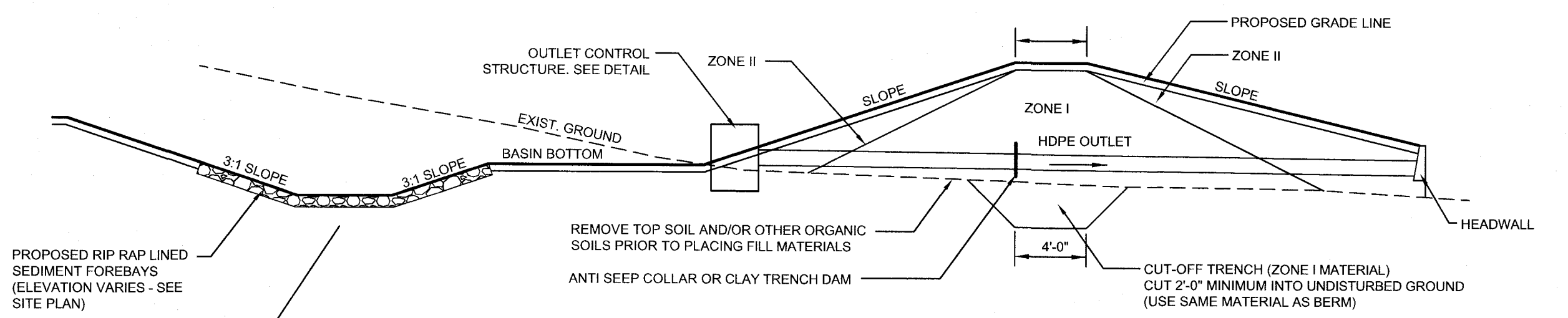
PERCENT OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (RELATIVE TO #6)
100%	(1.5 TO 2.0) x #50
85%	(1.3 TO 1.8) x #50
50%	(1.0 TO 1.5) x #50
15%	(0.3 TO 0.5) x #50

CONSTRUCTION SPECIFICATIONS:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

MAINTENANCE:

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR RAIN EVENT. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR FLOW DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.



STORMWATER PONDS CONSTRUCTION SEQUENCE

1. CONTRACTOR TO NOTIFY DIG-SAFE 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CUT AND CLEAR TREES AND BRUSH FROM CONSTRUCTION AREAS TO THE EXTENT NECESSARY. ALL BRANCHES, TOPS AND BRUSH TO BE PROPERLY DISPOSED OF BY CONTRACTOR.
3. PRIOR TO GRUBBING OF CLEARED AREAS, ALL SILTATION BARRIERS DESIGNED FOR USE AS TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS.
4. COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR DEBRIS SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLAND AREAS. ALL STOCKPILES SHALL BE SEEDED WITH WINTER RYE AND, IF NECESSARY, SURROUNDED WITH HAY BALES IN ORDER TO PREVENT LOSS DUE TO EROSION.
5. CONSTRUCT TEMPORARY CULVERTS AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES. ALL SUCH CROSSINGS SHALL BE PROTECTED WITH HAY BALE BARRIERS TO LIMIT EROSION.
6. CONSTRUCT CUT-OFF TRENCH (PART OF ZONE I).
7. CONSTRUCT OUTLET AND OVERFLOW STRUCTURE, CULVERT, ANTI SEEP COLLARS, HEADWALL, AND RIP RAP OUTLET PROTECTION AS SHOWN ON PLANS.
8. CONSTRUCT ZONE I PORTION OF EARTH EMBANKMENT.
9. CONSTRUCT ZONE II PORTION OF EARTH EMBANKMENT.
10. APPLY TOPSOIL TO SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USED MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ROOTS, BRANCHES, STONES, AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS HAS BECOME ESTABLISHED.
11. MAINTAIN, REPAIR, AND REPLACE AS NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE CONSTRUCTION AREA HAS BEEN STABILIZED (A MINIMUM OF ONE WINTER SHALL HAVE PASSED).
12. AFTER STABILIZATION, REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES.
13. MONITOR CONSTRUCTION ACTIVITIES TO INSURE CONSTRUCTION ACTIVITIES ARE BEING PERFORMED IN SUCH A WAY AS NOT TO ENDANGER THE INTEGRITY OF EARTH EMBANKMENTS, STORMWATER CONTROL STRUCTURE, CULVERT AND RIP RAP OUTLET PROTECTION.

MATERIAL TYPE/SPECIFICATIONS

ZONE I

WELL GRADED MIXTURE OF GRAVEL, SAND, SILT OR CLAY WITH MAX. 6-INCH SIZE STONE AND GEADATION AS INDICATED BELOW. PLACE IN MAX. 12-INCH THICK LIFTS TO 95% OF MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

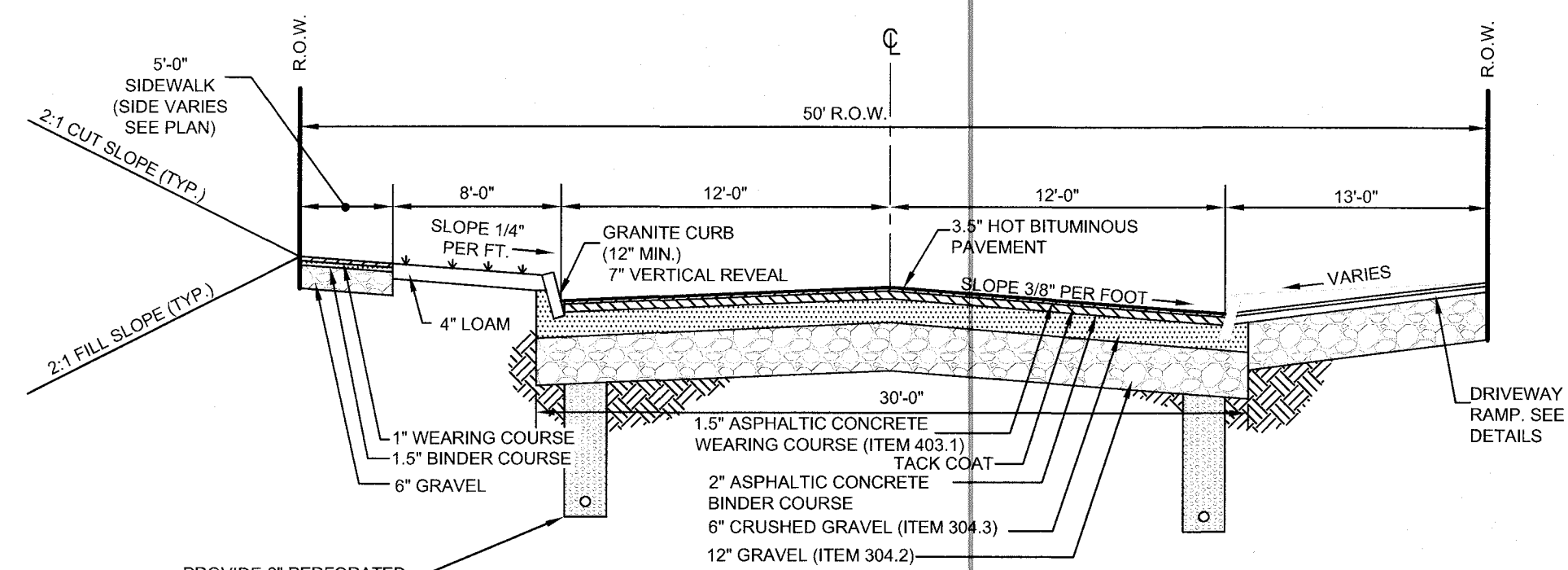
SCARIFY SURFACE PRIOR TO PLACING SUBSEQUENT LIFT. IN ADDITION, REMOVE ORGANIC SOILS.

SIEVE SIZE	PERCENT BY WEIGHT PASSING
NO. 4	50 TO 100
NO. 40	30 TO 70
NO. 200	20 TO 40

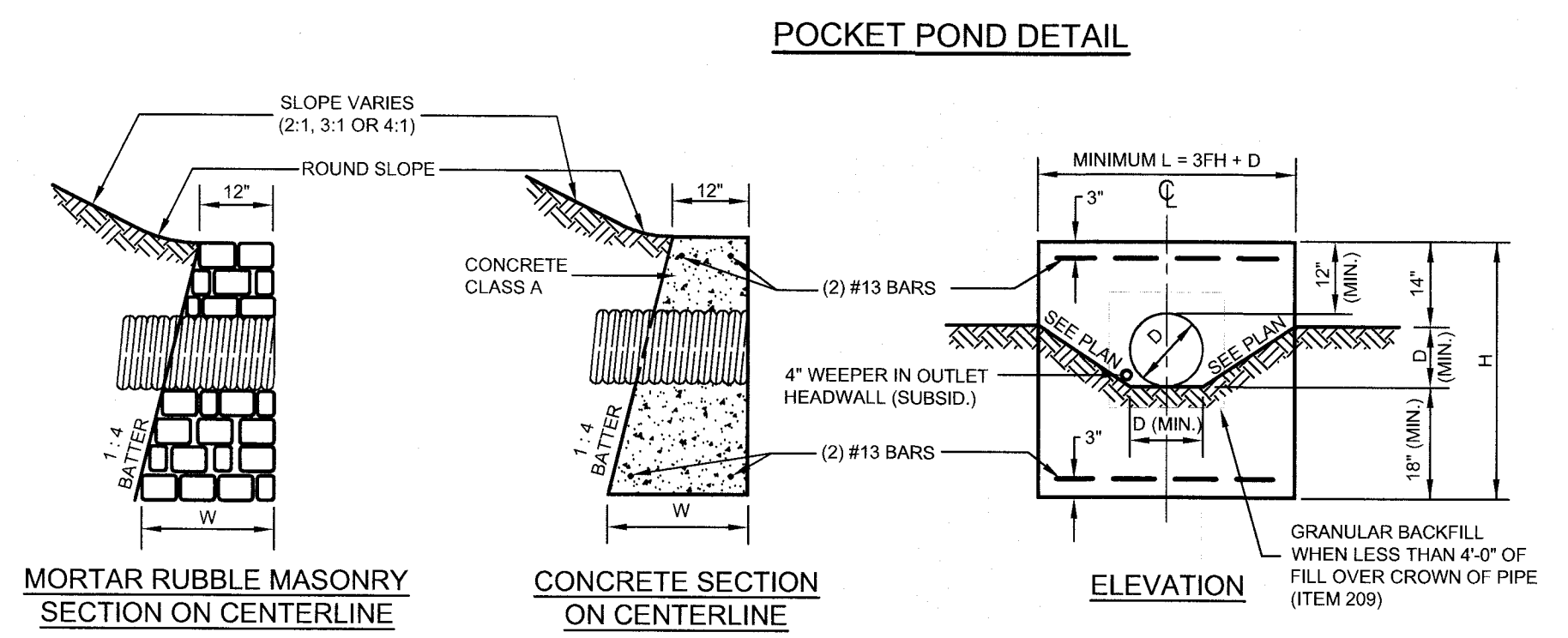
ZONE II

DRAINAGE LAYER: PLACE IN MAX. 12-INCH THICK LIFTS TO 95% OF MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

SIEVE SIZE	PERCENT BY WEIGHT PASSING
1-INCH	100
NO. 4	70-100
NO. 200	0-12 (IN SAND PORTION ONLY)



TYPICAL ROADWAY CROSS SECTION FOR TERRACIEVE DRIVE
NOT TO SCALE

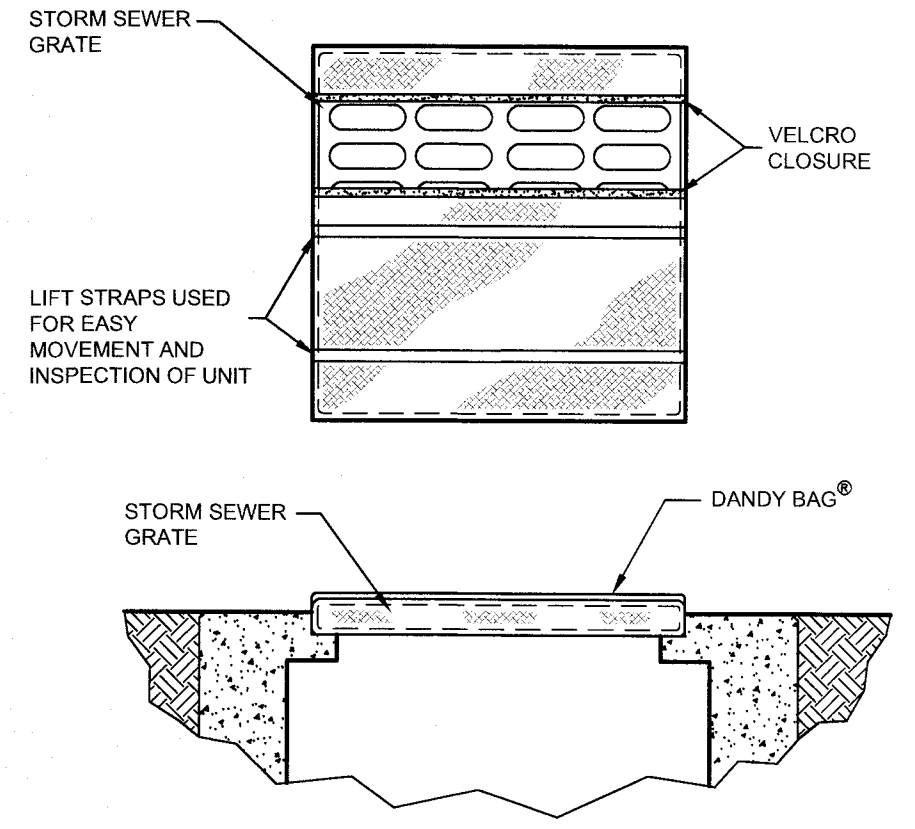


NOTE: DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

DIAMETER D (INCH)	AREA OF PIPE (SF)	MASONRY PER FOOT OF WALL (CU. YD.)	MASONRY PER HOLE (CU. FT.)	MASONRY PER STANDARD HEADER (CU. YD.)	STEEL PER STANDARD HEADER (LB)	LENGTH OF BARS	PIPE EXC. 1' DEPTH (CU. YD.)	HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)	ITEM 209 PER LINEAR FOOT	HEADER LENGTH L	HEADER HEIGHT H	FILL HEIGHT FH	WIDTH AT BOTTOM OF HEADER W	MASONRY IN CORNER FRUSTRUM (CU. YD.)	HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)
15"	1.23	0.202	1.73	0.85	11	3'-10"	0.120	0.947	0.35	4'-6"	3'-9"	1'-1"	1'-11 1/4"	0.31	1.232
18"	1.77	0.222	2.52	1.13	14	5'-2"	0.130	1.111	0.39	5'-6"	4'-0"	1'-4"	2'-0"	0.35	1.406
30"	4.91	0.301	7.67	2.58	25	9'-2"	0.185	1.810	0.65	9'-6"	5'-0"	2'-4"	2'-3"	0.51	2.164

NOTE: STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY.

CONCRETE HEADWALLS



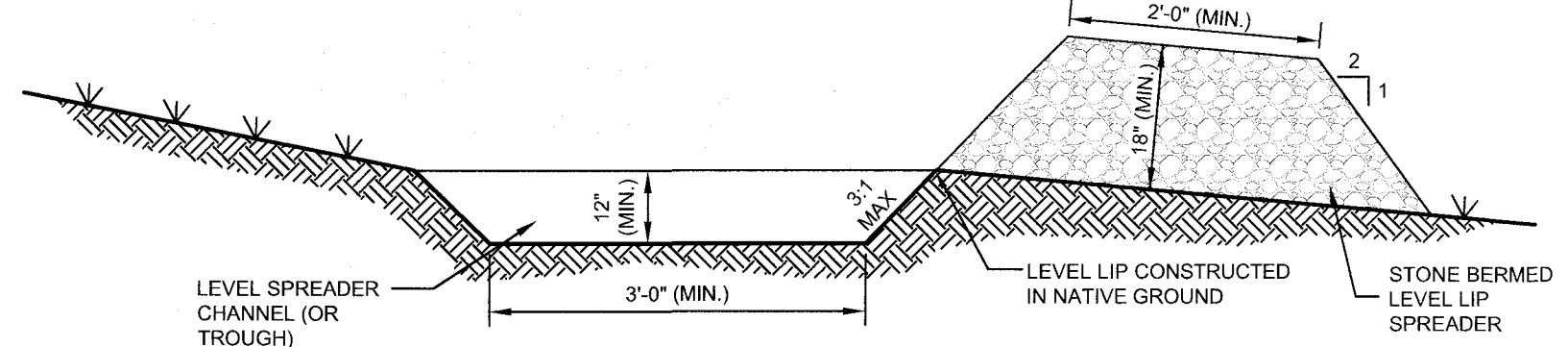
HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.62 (365) ± 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 ± 10
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4365	%	90
APPARENT OPENING SIZE	ASTM D 4751	mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	1/min/m ² (gal/min/ft ²)	5907 (145)
PERMITTIVITY	ASTM D 4491	Sec-1	2.1

DANDY BAG®
NOT TO SCALE
(APRIL 2010)

GRADATION OF STONE FOR LEVEL SPREADER BERM

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES
12 INCH	100%
6 INCH	84 - 100%
3 INCH	68 - 83%
1 INCH	42 - 55%
NO. 4	8 - 12%



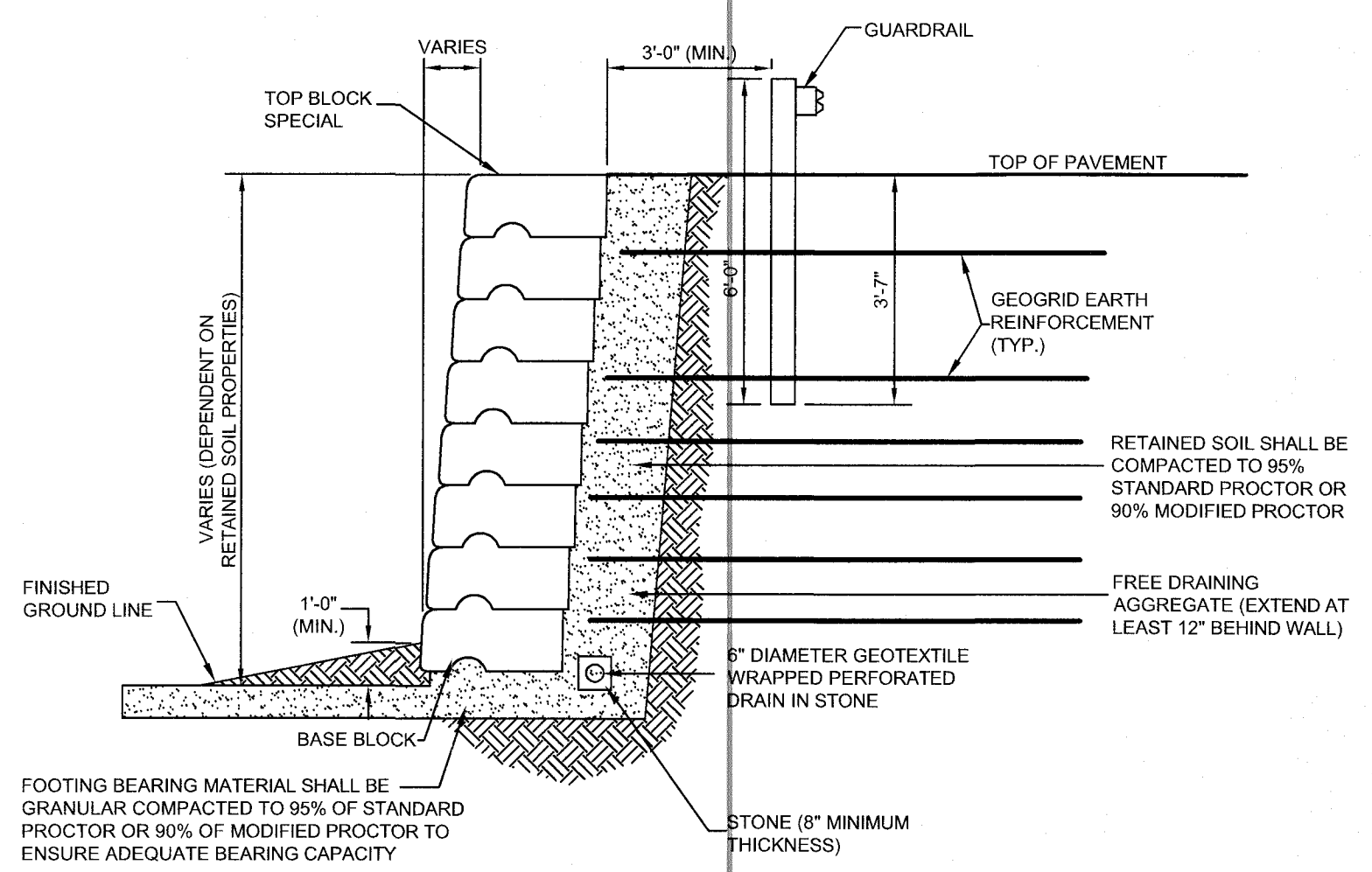
NOTES:

1. CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF RUN-OFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET INTO STABILIZED AREAS. WATER SHOULD NOT RECONCENTRATE IMMEDIATELY BELOW THE SPREADER.
4. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PERFORMED.

MAINTENANCE REQUIREMENTS:

1. INSPECT AT LEAST ONCE ANNUALLY FOR ACCUMULATION OF SEDIMENT AND DEBRIS AND FOR SIGNS OF EROSION WITHIN APPROACH CHANNEL, SPREADER CHANNEL OR DOWN-SLOPE OF THE SPREADER.
2. REMOVE DEBRIS WHENEVER OBSERVED DURING INSPECTION.
3. REMOVE SEDIMENT WHEN ACCUMULATION EXCEEDS 25% OF SPREADER CHANNEL DEPTH.
4. MOW AS REQUIRED BY LANDSCAPE DESIGN. AT A MINIMUM, MOW ANNUALLY TO CONTROL WOODY VEGETATION WITHIN THE SPREADER.
5. SNOW SHOULD NOT BE STORED WITHIN OR DOWN-SLOPE OF THE LEVEL SPREADER OR ITS APPROACH CHANNEL.
6. REPAIR ANY EROSION AND RE-GRADE AS WARRANTED BY INSPECTION.
7. RECONSTRUCT THE SPREADER IF DOWN-SLOPE CHANNELIZATION INDICATES THAT THE SPREADER IS NOT LEVEL OR THAT DISCHARGE HAS BECOME CONCENTRATED, AND CORRECTIONS CANNOT BE MADE THROUGH MINOR RE-GRADEING.

LEVEL SPREADER DETAIL
NOT TO SCALE



NOTES:

1. AS PERMISSIBLE, THE STRUCTURAL ENGINEER CHARGED WITH RETAINING WALL DESIGN SHALL SPECIFY SALT RESISTANT BLOCK CONSTRUCTION WHERE WALLS ARE TO BE CONSTRUCTED NEAR ROADWAYS OR PARKING AREAS.
2. RETAINING WALL DRAIN TO "DAYLIGHT" AT LOW POINT OR TIE TO DRAIN STRUCTURE AS SHOWN IN PLAN VIEW.

REDI-ROCK RETAINING WALL WITH GUARDRAIL
(TO BE DESIGNED BY OTHERS)
NOT TO SCALE
(SEPTEMBER 2010)

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APPROVED BY THE HUDSON, NH PLANNING BOARD

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CONSTRUCTION DETAILS

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

KM KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: APRIL 23, 2021 SCALE: AS SHOWN
PROJECT NO: 20-1001-1 SHEET 19 OF 23

PAUL CHISHOLM
No. 15076
LICENSED PROFESSIONAL ENGINEER

TURF ESTABLISHMENT SCHEDULE

PURPOSE:

TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE GROWTH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL EROSION.

PREPARATION AND EXECUTION:

- 1. RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STONES LARGER THAN 1 INCH. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
2. FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES INDICATED. TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR FROZEN.
3. IF THE PH OF THE SOIL NEEDS TO BE RAISED, APPLY LIME EVENLY OVER LOAM SURFACE AND THOROUGHLY INCORPORATE LIME INTO THE LOAM BY HEAVY RAKING TO AT LEAST ONE-HALF THE DEPTH OF THE LOAM.
4. APPLY FERTILIZER AND MIX WITH THE UPPER 2 INCHES OF LOAM.
5. DETERMINE APPROPRIATE MIXTURE FOR AREA TO BE SEEDDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. IF BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL. IF HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. AFTER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE SPRAY.
6. SEEDING AND INITIAL FERTILIZING SHALL BE DONE BETWEEN APRIL 1 AND JUNE 1 OR BETWEEN AUGUST 15 AND OCTOBER 14, OR AS PERMITTED. SEEDING SHALL NOT BE DONE DURING WINDY WEATHER OR WHEN THE GROUND IS FROZEN, EXCESSIVELY WET OR OTHERWISE UNTILTABLE. WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH STRAW, ANCHOR MULCH ON ALL SLOPES EXCEEDING 3:1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER.
7. PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY REGRADED AND RESEDED.
8. WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY OCTOBER 14, A TEMPORARY SEED MIXTURE SHALL BE USED. WHEN TEMPORARY SEEDING CANNOT ESTABLISH VISIBLE GROWTH, THE DISTURBED AREA SHALL BE COVERED WITH SIX INCHES OF MULCH FOR THE WINTER.
9. MAINTENANCE:
10. ALL SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

APPLICATION RATES:

- 1. LOAM SHALL BE APPLIED AT A MINIMUM COMPACTED THICKNESS OF 4 INCHES.
2. LIME SHALL BE USED WHEN NECESSARY TO RAISE THE PH OF THE SOIL AND APPLIED AT ONE OF THE FOLLOWING RATES:

Table with 3 columns: EXISTING SOIL Ph, TONS/ACRE, POUNDS/CUBIC YARD. Rows for Ph ranges 4.0-4.4, 4.5-4.9, 5.0-5.4.

Table with 3 columns: INITIAL APPLICATION, POUNDS/1,000 SF, MEASUREMENT FACTOR. Rows for application dates 10-10-10, 15-15-15, 19-19-19.

Table with 3 columns: REFERTILIZATION, POUNDS/1,000 SF, MEASUREMENT FACTOR. Rows for refertilization dates 10-3-6, 12-2-8, 12-4-8.

- 3. FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE:

Table with 3 columns: KIND OF SEED, MINIMUM PURITY (%), MINIMUM GERMINATION (%), POUNDS/ACRE (TOTAL 120 POUNDS).

- 4. MULCH SHALL BE APPLIED AT A RATE OF 13 CUBIC YARDS PER 1,000 S.F. OF LANDSCAPE BED.

MATERIALS:

- 1. LOAM SHALL BE CONSIST OF LOOSE, FRIABLE TOPSOIL WITH NO ADMXTURE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH. LOAM SHALL BE FREE OF VISIBLE PARTS OF PROHIBITED INVASIVE PLANTS AND BE GENERALLY FREE OF STONES, LUMPS, STUMPS AND SIMILAR OBJECTS LARGER THAN 2 INCHES IN GREATEST DIAMETER.
2. LIME SHALL BE CALICIC OR DOLOMITIC GROUND AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 85% OF EITHER CALCIUM OR MAGNESIUM CARBONATE.
3. FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE FERTILIZER CONFORMING TO ALL STATE AND FEDERAL RULES AND REGULATIONS.
4. GRASS SEED SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE AGRICULTURAL AND VEGETABLE SEED LAWS AND SHALL INCLUDE NO "PRIMARY NOXIOUS WEED SEEDS."
5. SEED MIXTURE FOR LAWN AREAS SHALL CONSIST OF THE FOLLOWING:

Table with 4 columns: KIND OF SEED, MINIMUM PURITY (%), MINIMUM GERMINATION (%), POUNDS/ACRE (TOTAL 95 POUNDS).

- 6. SEED MIXTURE FOR SLOPE AREAS SHALL CONSIST OF THE FOLLOWING:

Table with 4 columns: KIND OF SEED, MINIMUM PURITY (%), MINIMUM GERMINATION (%), POUNDS/ACRE (TOTAL 95 POUNDS).

WINTER CONSTRUCTION NOTES:

- 1. ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3 OR, IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.
4. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED.
B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR
D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

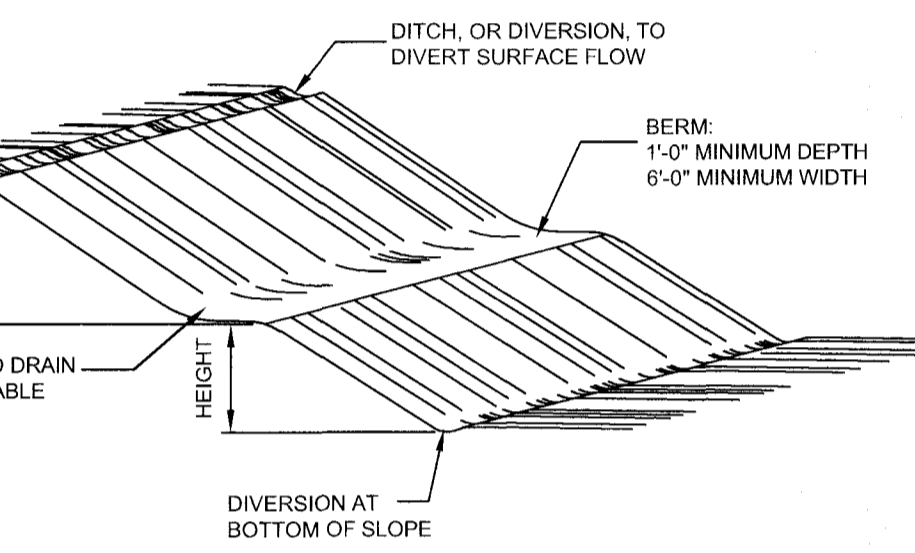
APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING:
SIGNATURE DATE:
SIGNATURE DATE:
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL.

- 7. TEMPORARY SEEDING MIXTURE SHALL BE APPLIED AT A RATE OF 2 POUNDS PER 1,000 SF AND SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE FOLLOWING:
15% BLACKWELL OR SHELTER SWITCHGRASS
30% NIAGRA OR KAW BIG BLUESTEM
30% CAMPER OR BLAZE LITTLESTEM
15% NE-27 OR BLAZE SAND LOVEGRASS
10% VIKING BIRDSFOOT TREFLOIL
INOCULUM SPECIFIC TO BIRDSFOOT TREFLOIL MUST BE USED WITH THIS MIXTURE. IF SEEDING BY HAND, A STICKING AGENT SHALL BE USED. IF SEEDING WITH A HYDROSEEDER, USE FOUR TIMES THE RECOMMENDED AMOUNT OF INOCULUM.

- 8. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES, SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 POUNDS PER 1,000 SF, AND SHALL CONSIST OF THE FOLLOWING:
25% CREEPING RED FESCUE
15% SWITCH GRASS
15% FOX SEDGE
15% CREEPING BENTGRASS
10% FLATPEA
20% WILDFLOWER VARIETY

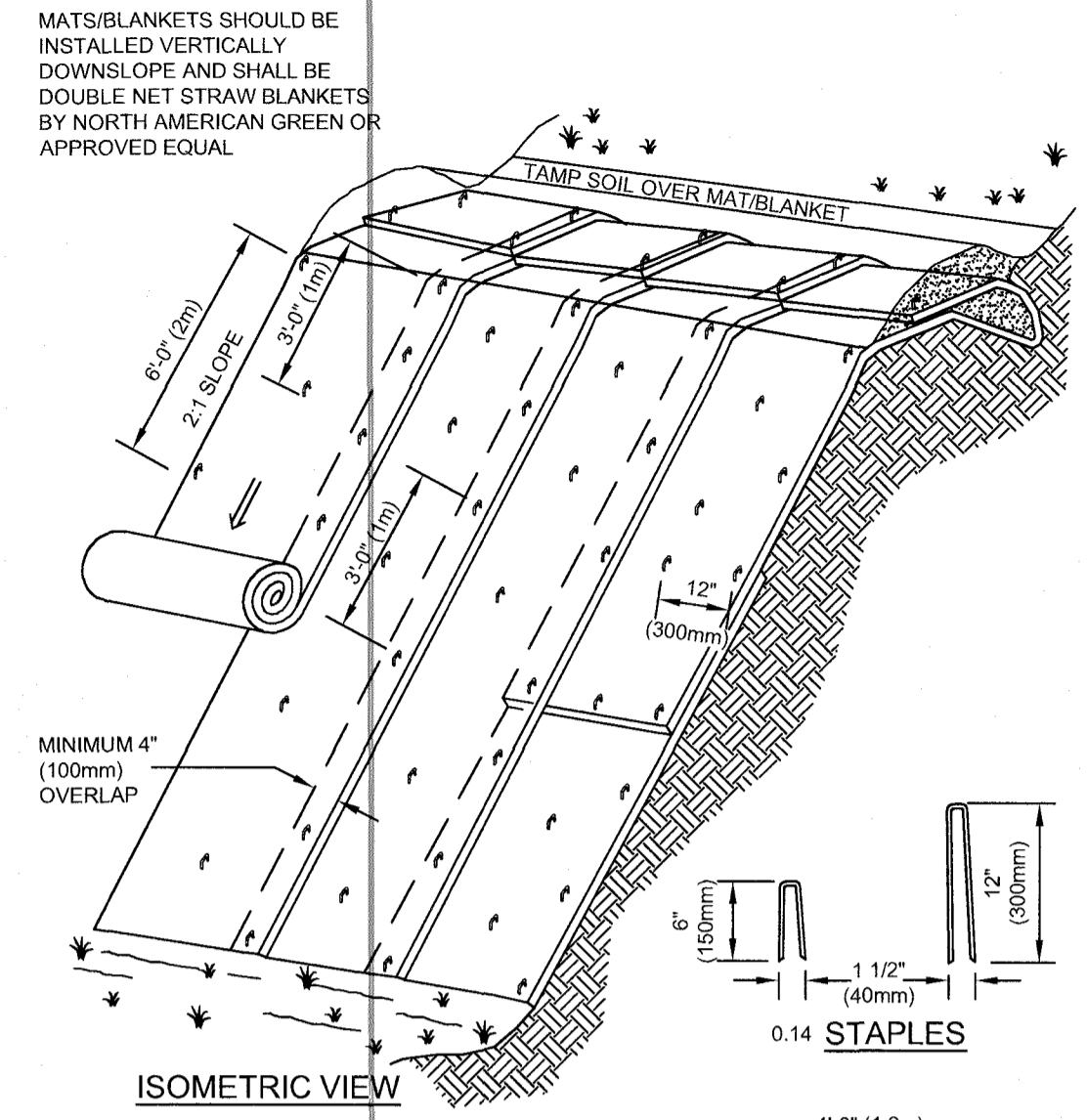
SOD SPECIFICATIONS:

- 1. SOD SHALL BE PROVIDED WITH A STRONG ROOT SYSTEM, NOT LESS THAN TWO YEARS OLD AND SHALL BE FREE OF ANY UNDESIRABLE NATIVE GRASSES OR WEEDS.
2. SOD SHALL BE MACHINE CUT TO A THICKNESS NOT LESS THAN 3/4", EXCLUDING THATCH, AND SHALL BE CAPABLE OF VIGOROUS GROWTH WHEN PLANTED.
3. SOD PADS SHALL BE OF UNIFORM SIZE AND COMPOSED OF AT LEAST TWO LOCAL GRASS VARIETIES.
4. LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS, DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES.
5. WATER WITHIN ONE HOUR OF PLANTING WITH A FINE SPRAY.



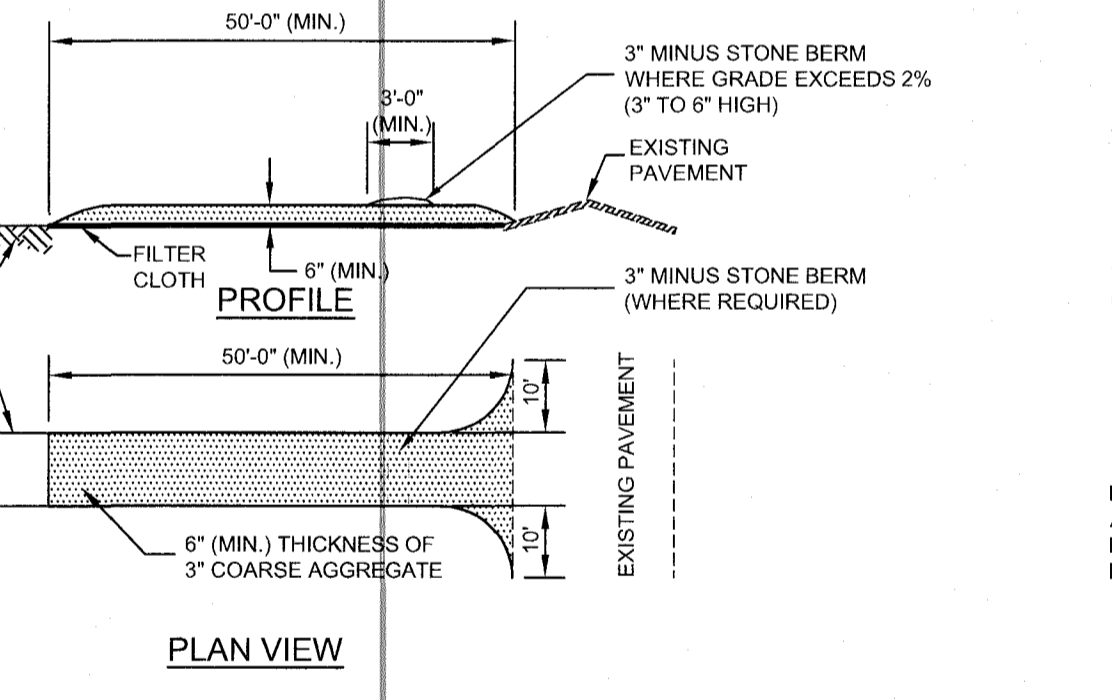
- NOTES:
1. DIVERSIONS AND BERMS MUST EMPTY INTO STABLE OUTLETS.
2. BERMS SHOULD BE A MINIMUM OF 1'-0" DEEP AND 6'-0" WIDE.
3. SEEPS AND/OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHOULD BE HANDLED WITH SUBSURFACE DRAINS.
4. ALL DISTURBED AREAS SHOULD BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION USING APPROPRIATE EROSION CONTROL MEASURES.
5. IF DURING LOT DEVELOPMENT, SLOPES OF 2:1 EXCEED 20 FEET, 3:1 EXCEEDS 30 FEET, OR 4:1 EXCEEDS 40 FEET THE CONTRACTOR SHALL ADD BENCHING PER RHDES REQUIREMENTS.

TYPICAL BENCHING SLOPE DETAIL NOT TO SCALE



- NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

EROSION CONTROL BLANKETS - SLOPE INSTALLATION NOT TO SCALE (AUGUST 2011)

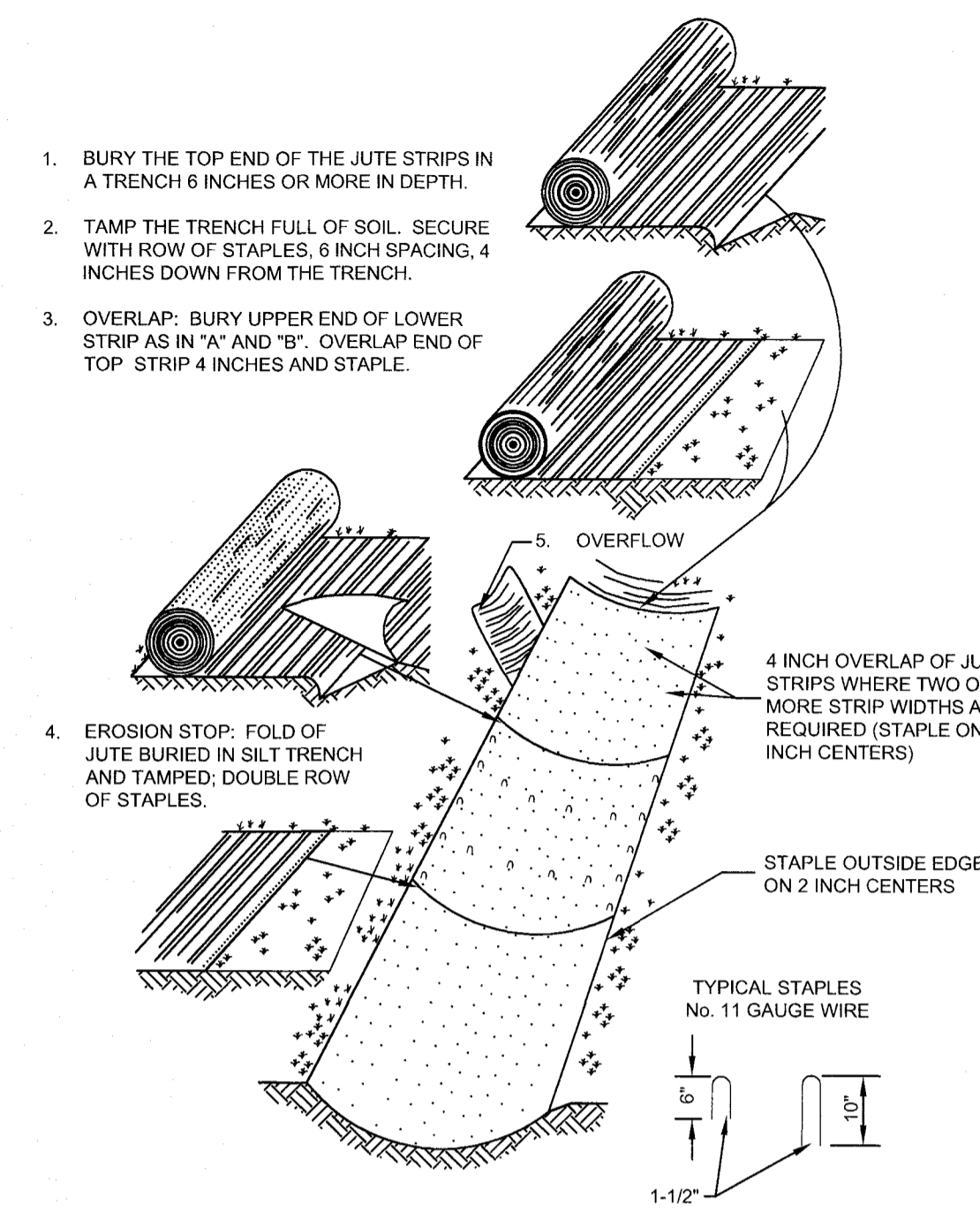


STABILIZED CONSTRUCTION EXIT DETAIL NOT TO SCALE (APRIL 2018)

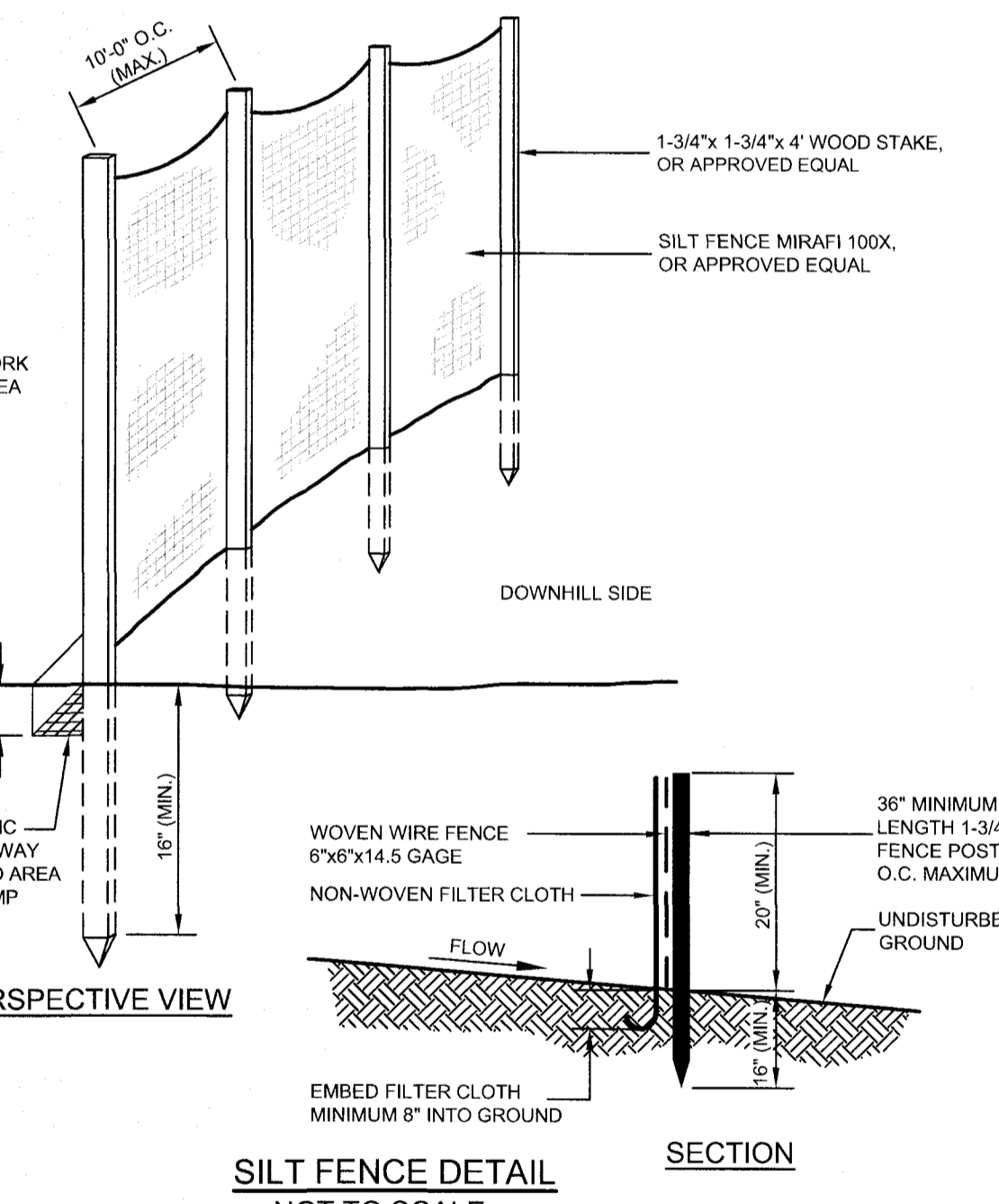
- MAINTENANCE:
MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE CRUSHED STONE AND THE EFFECTIVENESS OF THE CRUSHED STONE PAD WILL NOT BE SATISFACTORY. WHEN THIS OCCURS, THE PAD SHOULD BE TOPDRESSED WITH NEW CRUSHED STONE OR COMPLETE REPLACEMENT OF THE PAD MAY BE NECESSARY WHEN THE PAD BECOMES COMPLETELY CLOGGED.
IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADEQUATE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO INSURE A VIGOROUS STAND OF VEGETATION AT ALL TIMES.

CONSTRUCTION SPECIFICATIONS:

- 1. STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED EXIT SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED EXIT SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE EXIT SHALL NOT BE LESS THAN THE FULL WIDTH OF THE AREA WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT OR DUPLEX.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH THE EXIT. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE GROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.



EROSION CONTROL BLANKETS - SWALE INSTALLATION NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

- 1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIE OR STAPLES WHERE NOTED OR AS DIRECTED BY DESIGN ENGINEER.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MIDSECTION AND BOTTOM.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

MAINTENANCE:

- 1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

CONSTRUCTION SEQUENCE

- 1. CONTRACTOR TO NOTIFY DIG-SAFE 72-HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. PRIOR TO GRUBBING OF CLEARED AREAS, ALL SILTATION BARRIERS DESIGNED FOR USE AS TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS. INSTALL STABILIZED CONSTRUCTION EXIT AT LOCATION OF CONSTRUCTION ACCESS AT LOCATION OF INTERSECTION WITH EXISTING PAVEMENT.
3. CUT AND CLEAR TREES AND BRUSH FROM CONSTRUCTION AREAS TO THE EXTENT NECESSARY. ALL BRANCHES, TOPS AND BRUSH TO BE PROPERLY DISPOSED OF BY CONTRACTOR. THIS PROJECT IS MANAGED TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
4. COMPLETE GRUBBING OPERATIONS UNDER THE ROADWAY AND SLOPE SECTIONS. ALL STUMPS AND SIMILAR DEBRIS SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLAND AREAS. ALL STOCKPILES SHALL BE SEEDDED WITH WINTER RYE AND, IF NECESSARY, SURROUNDED WITH HAY BALES IN ORDER TO PREVENT LOSS DUE TO EROSION.
5. CONSTRUCT TEMPORARY CULVERTS AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES. ALL SUCH CROSSINGS SHALL BE PROTECTED WITH HAY BALE BARRIERS TO LIMIT EROSION. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BEST MANAGEMENT PRACTICES ARE STABILIZED. DO NOT DIRECT RUNOFF TO TREATMENT SWALES UNTIL THE SWALES AND ALL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
6. STABILIZE ALL DITCHLINES PRIOR TO DIRECTING FLOW INTO THEM. CONSTRUCT DRAINAGE SYSTEM, SEWER AND OTHER SUBSURFACE UTILITIES.
7. PONDS/SWALES MUST BE INSTALLED BEFORE ROUGH GRADING OF THE SITE.
8. COMMENCE CONSTRUCTION OF ROADWAY. PERFORM EXCAVATION ACTIVITIES REQUIRED TO ACHIEVE SUBGRADE ELEVATION. ALL EXCAVATED EMBANKMENTS, DITCHES, SWALES AND ROADWAY CROSS CULVERTS SHALL BE INSTALLED AND STABILIZED. ALL SWALES AND DITCHLINES SHALL BE PROTECTED FROM EROSION BY IMPLEMENTATION OF HAY BALE SILTATION FENCES AS SHOWN ON PROJECT PLANS. DIVERT STORMWATER RUNOFF THROUGH THE USE OF TEMPORARY CULVERTS, OR OTHER MEANS NECESSARY PRIOR TO THE COMPLETION OF A FUNCTIONAL STORM DRAINAGE SYSTEM. SLOPES AND EMBANKMENTS SHALL BE STABILIZED BY TRACKING AND TEMPORARY SEEDING WITH WINTER RYE PRIOR TO TURF ESTABLISHMENT. ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.
9. COMPLETE CONSTRUCTION OF ROADWAY EMBANKMENTS BY ADDING APPROPRIATE BASE MATERIALS GRADED TO PROPER ELEVATION.
10. APPLY TOPSOIL TO ROADWAY SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USE MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ROOTS, BRANCHES, STONES AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TURF LIMED, SEEDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS HAS BECOME ESTABLISHED.
11. PERFORM FINE GRADING OF ROADWAY BASE MATERIALS.
12. MAINTAIN, REPAIR AND REPLACE AS NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE CONSTRUCTION AREA HAS BEEN STABILIZED (A MINIMUM OF ONE WINTER SHALL HAVE PASSED).
13. AFTER STABILIZATION, REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES.
14. MONITOR CONSTRUCTION ACTIVITIES ON INDIVIDUAL LOTS TO INSURE CONSTRUCTION ACTIVITIES ARE BEING PERFORMED IN SUCH A WAY AS NOT TO ENDANGER THE INTEGRITY OF ROADWAY EMBANKMENTS, STORMWATER SYSTEMS AND UTILITIES. ALL DRAINAGE SYSTEMS AND UTILITIES SHALL BE FULLY STABILIZED AND STABLE.
15. LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.
16. PRIOR TO CONSTRUCTION A STORMWATER PROTECTION PLAN SHALL BE PREPARED PER FEDERAL REGULATIONS.
17. SINCE THIS SITE WILL DISTURB MORE THAN 5 ACRES AT ONE TIME WEEKLY INSPECTION SHALL OCCUR, AS WELL AS DURING ANY RAIN EVENT IN WHICH 0.5 INCH OF PRECIPITATION OR MORE FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT INSPECTION IS LIMITED TO PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT.
18. A REPORT FOR EACH INSPECTION SHALL BE STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST AND SUBMITTED WITHIN 24 HOURS OF EACH INSPECTION.

EROSION CONTROL NOTES:

- 1. EXPOSED EARTHWORK SHALL BE CONFINED TO AS LIMITED AN AREA AS IS PRACTICAL AT ANY GIVEN TIME THROUGHOUT THE CONSTRUCTION SEQUENCE. AT NO TIME SHALL MORE THAN FIVE (5) ACRES OF SITE AREA BE IN AN UNSTABLE CONDITION. NO GIVEN AREA OF THE SITE SHALL BE LEFT IN AN UNSTABILIZED CONDITION FOR A PERIOD OF TIME EXCEEDING THIRTY (30) CALENDAR DAYS.
2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD OPERATION OF THE INDIVIDUAL SITE CONTRACTOR, MAY WARRANT. ALL TEMPORARY EROSION CONTROL MEASURES USED SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OF RAINFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER THROUGHOUT THE CONSTRUCTION PERIOD.
3. ALL DISTURBED AREAS DESIGNATED TO BE TURF SHALL RECEIVE A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED THICKNESS) PRIOR TO FINAL SEEDING AND MULCHING.
4. ALL SWALES AND DITCHLINES SHALL BE PERIODICALLY CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR TO HAVING STORMWATER DIRECTED TOWARDS THEM.
5. IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, THE CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
6. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED.
B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR
D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
7. DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH ENVA 100.
8. IN NO WAY ARE THOSE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
9. AREAS HAVING FINISH GRADE SLOPES OF 3:1 OR STEEPER, SHALL BE STABILIZED WITH JUTE MATTING WHEN AND IF FIELD CONDITIONS WARRANT, OR IF SO ORDERED. JUTE MATTING INSTALLED TO CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL. EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION.
10. ALL DETENTION PONDS AND TREATMENT SWALES SHALL BE CONSTRUCTED PRIOR TO ANY EARTH MOVING ACTIVITIES THAT WILL INFLUENCE STORMWATER RUNOFF.
11. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
12. ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

CONSTRUCTION DETAILS HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWE ROAD
HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

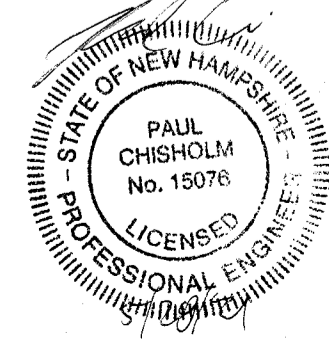


Table with 4 columns: No., DATE, DESCRIPTION, BY. Includes REVISIONS and a footer with DATE: APRIL 23, 2021, SCALE: AS SHOWN, PROJECT NO: 20-1001-1, SHEET 20 OF 23.