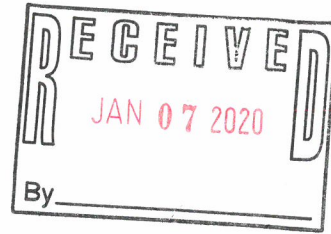


Amendment to Approved Project
City of Rochester, New Hampshire



Case # 259-56 & 38-A-05 Property Address 119 Flagg Road

Type of project: Site Plan ; Subdivision x ; Lot Line Adjustment ; Other

Project name Trinity Conservation, LLC - Phase 2 - Matildas Way

Date of original Planning Board approval June 19, 2006

Description of amendment The proposed amendment is to change the proposed stormwater management systems for

the 2nd phase of the Subdivision, known as Mitildas Way. The proposed changes to the stormwater management system is to bring

the subdivision in compliant with the City of Rochester Stormwater Regulations and the NHDES Alteration of Terrain requirements. The

proposed changes are located within the open space and would not have any impacts to the number or configuration of the proposed lots.

Would this affect a wetland or wetland buffer or require a conditional use? Yes No x

Name of applicant or agent filling out this form Norway Plains Associates, Inc.

Mailing Address: PO Box 249, Rochester NH 03866-0249

Phone Number: 603 335-3948 Email Address: slawler@norwayplains.com

Please check box: Applicant ☐ Agent ☒

Please note: There is a \$125.00 fee for amendments. They are reviewed by the Planning Board and a public hearing is held. Abutters must be renotified by the applicant. The applicant must submit any supplementary materials necessary to explain and support the amendment, such as a narrative and plans. This form, the abutter's list, the fee when applicable, and other necessary materials must be submitted at least 17 days prior to the Planning Board meeting at which the amendment will be presented (by the Friday, 2-1/2 weeks prior to the meeting to allow for public notice).

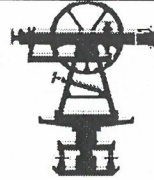
Signature of person completing form: [Signature] Date: 1/6/20

Signature of property owner (if different): [Signature] Date: 1/3/20

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS • SEPTIC SYSTEM DESIGNERS • CIVIL ENGINEERS

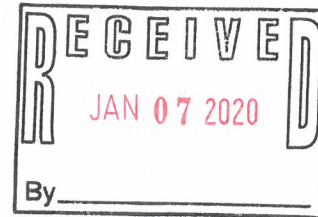
P.O. Box 249
Continental Blvd. (03867)
Rochester, NH 03866-0249
Fax (603)332-0098
slawler@norwayplains.com
Phone (603) 335-3948 / (800) 479-3948



P. O. Box 268
31 Mooney St.
Alton, NH 03809
Phone & Fax (603) 875-3948
www.norwayplains.com

January 6, 2020

James Campbell, Director
Department of Planning and Development
Second Floor, City Hall
33 Wakefield Street
Rochester, NH 03867-1917



Re: Case #259-36 & 38-A-05, Request for Subdivision Amendment for 119 Flagg Road Development, LLC; formally known as Trinity Conservation, LLC

Dear Jim:

On behalf of 119 Flagg Road Development, LLC, please accept this application to modify the approved subdivision located on Flagg Road. This subdivision was approved on June 19, 2006 by the Rochester Planning Board under the name of Trinity Conservation, LLC for a Cluster Subdivision. More specifically, the proposed amendments are in the second phase of the overall subdivision known as Mitildas Way.

As we discussed at our meeting on August 2, 2019, one of the state permits for the overall subdivision has lapsed and would need to be reissued for construction of Phase II of this approved subdivision. The NHDES Alteration of Terrain which regulates the Stormwater Management of the development during and after construction.

The original subdivision was designed and approved by the City of Rochester and NHDES based on outdated regulations and requirements. In order to meet the current regulations, several changes to the approved drainage are necessary. This includes installation of infiltration basins, treatment swales and a gravel wetlands basin. This stormwater practices will improve the quality of the stormwater leaving as well as the total volume of the stormwater leaving the property after construction is completed. All of the proposed stormwater management systems will be constructed in the open spaces and will not impact the development on the individual lots. Furthermore, the amenities for the subdivision such as the walking trails and recreational areas are not impacted by the proposed stormwater management areas.


In order to accomplish the changes to the stormwater management system, the vertical alignment of the proposed roadway was modified slightly to direct the runoff to appropriate areas. It should be noted, that none of the proposed lots or the road right of way locations or dimensions have been changed as the result of the proposed stormwater management systems. Please find the attached amended plans for this phase of the subdivision.

It should be noted, that the developer is not requesting any other amendments to the approved subdivision plans or conditions of approval at this time. Essentially, the proposed subdivision amendments are to make the development compliant with the current regulations, both at the City level and the State level. An Alteration of Terrain permit was granted by the NHDES Alteration of Terrain Bureau on October 11, 2018. Please find the attached permit, #AoT-1506.

If you have any questions regarding the revisions made to this plan set, the design itself or any supplemental material submitted, please feel free to call or email me. Thank you for your consideration.

Sincerely,

NORWAY PLAINS ASSOCIATES, INC.

By: 
Scott A. Lawler, P.E., Project Engineer

Cc: Bill Goldstein; 119 Flagg Road Development, LLC



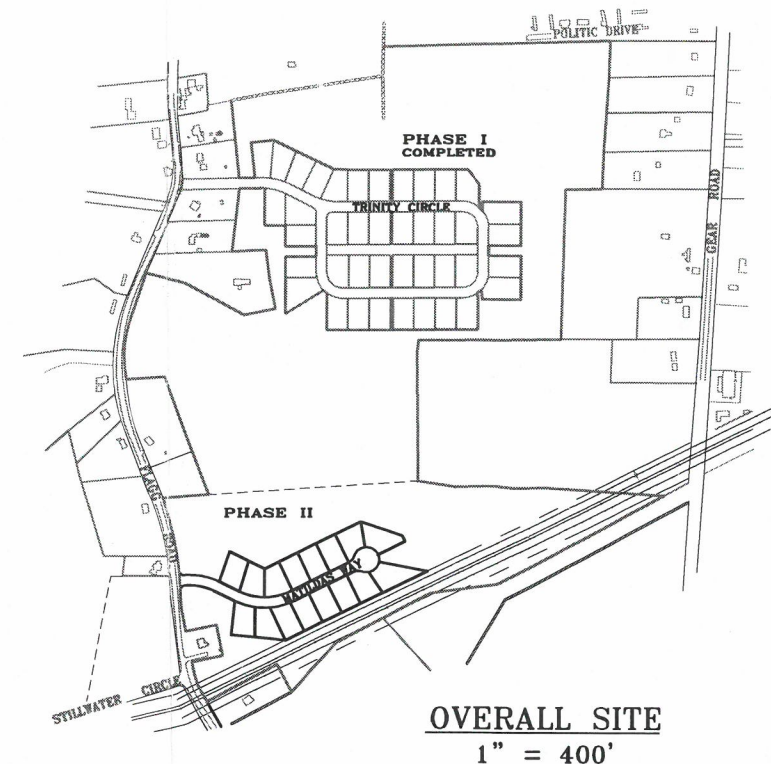
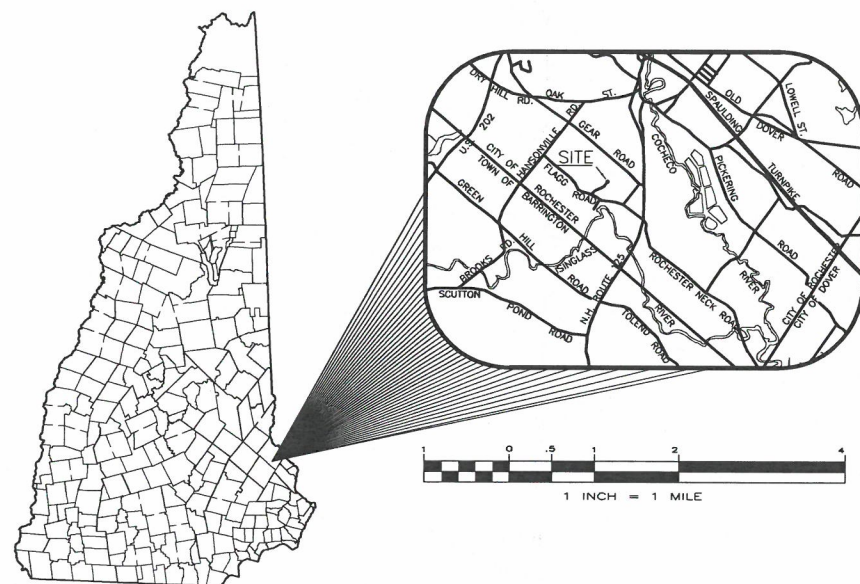
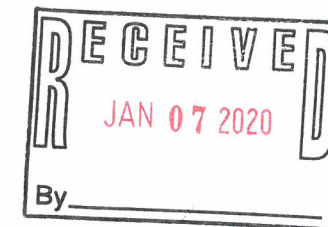
MATILDAS WAY

FLAGG ROAD, ROCHESTER, NH

PREPARED FOR

119 FLAGG ROAD DEVELOPMENT, LLC.

MARCH 2018



CIVIL ENGINEERS
 NORWAY PLAINS ASSOCIATES, INC.
 2 CONTINENTAL BOULEVARD
 ROCHESTER, NEW HAMPSHIRE 03867
 (603) 335-3948

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

OWNER OF RECORD
 TAX MAP 259, LOT 38-0 THRU 38-17
OWNER OF RECORD:
 119 FLAGG ROAD DEVELOPMENT, LLC.
 35 THIRD STREET
 DOVER, NH 03820
 SCR D BOOK 3549 , PAGE 545

APPLICANT
 119 FLAGG ROAD DEVELOPMENT, LLC
 35 THIRD STREET
 DOVER, NH 03820
 (603) 742-5300

STATE AND FEDERAL PERMITS:
 STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
 NHDES ALTERATION OF TERRAIN: REQUIRED - ALTERATION OF TERRAIN PERMIT No. AOT 180410-53
 NHDES WETLANDS PERMIT: NOT REQUIRED
 NHDES DAM PERMIT: NOT REQUIRED
 NHDES SUBDIVISION PERMIT: NOT REQUIRED
 NHDES SUBSURFACE SYSTEMS PERMIT: NOT REQUIRED
 NHDES WASTEWATER PERMIT: NOT REQUIRED
 NHDOT DRIVEWAY/ENTRANCE PERMIT: NOT REQUIRED

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):
 NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE DISTURBED AREA CRITERIA BELOW AND HAVING A POINT SOURCE STORMWATER DISCHARGE FROM THE SITE TO AN ADJACENT WETLAND OR WATER BODY (I.E. CULVERT, SWALE, ETC. OUTLETING TO A WETLAND, CREEK, STREAM OR RIVER).
 NPDES PERMIT: REQUIRED
 NPDES PERMITS CONSIST OF A NOTICE OF INTENT (NOI) FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY AT LEAST 14 DAYS PRIOR TO CONSTRUCTION COMMENCING AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BEING PREPARED, KEPT ON SITE AND FOLLOWED BY THE CONTRACTOR.
 FOR STATUS OF THIS PERMIT, CONTACT THE PROJECT GENERAL CONTRACTOR.

SHEET INDEX		
COVER		
SHEET E-1	EXISTING FEATURES	1" = 100'
SHEET S-1	EASEMENT PLAN	1" = 100'
SHEET C-1	ROAD LAYOUT PLAN AND PROFILE	1" = 50'
SHEET C-2	UTILITY PLAN AND PROFILE	1" = 50'
SHEET C-3	GRADING AND DRAINAGE PLAN	1" = 50'
SHEET C-4	EROSION AND SEDIMENTATION CONTROL PLAN	1" = 50'
SHEET C-5	ROADWAY DETAILS	AS SHOWN
SHEET C-6	UTILITY DETAILS	AS SHOWN
SHEET C-7	DRAINAGE DETAILS	AS SHOWN
SHEET C-8	INFILTRATION BASIN AND TREATMENT SWALE DETAILS	AS SHOWN
SHEET C-9	GRAVEL WETLANDS BASIN DETAILS	AS SHOWN
SHEET C-10	TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
SHEET C-11	PERMANENT EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN

FINAL APPROVAL BY
 ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

FILE NO. 134
 PLAN NO. C-2379-S2
 DWG. NO. 16231/S-8
 F.B. NO.



LEGEND	
—	PROPERTY LINE
---	LIMITS OF JURISDICTIONAL WETLANDS
---	JURISDICTIONAL WETLANDS 50 FOOT SETBACK
---	EXISTING TREE LINE
---	258
---	EXISTING CONTOUR LINE
---	EXISTING OVERHEAD WIRES
---	EXISTING EDGE OF PAVEMENT
•	EXISTING UTILITY POLE
•	EXISTING MONUMENT
TP	EXISTING TEST PIT LOCATION & NUMBER
W	EXISTING WETLANDS

REVISIONS:
5/24/18 PER NHDES A&T RFM LETTER DATED MAY 21, 2018

WETLAND LEGEND

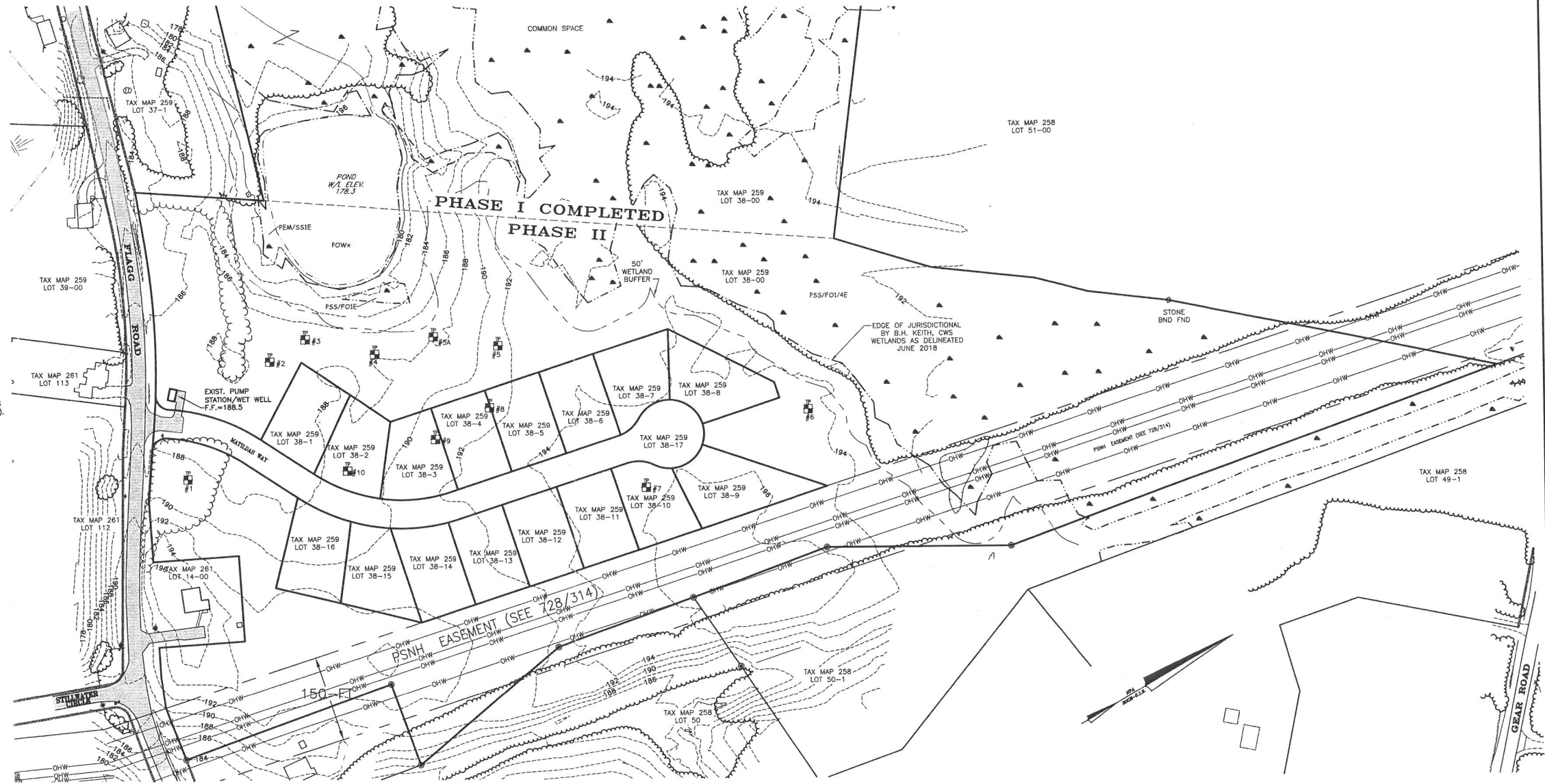
POWx:	PALUSTRINE OPEN WATER, EXCAVATED
PSS/FOIE:	PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB & FORESTED, SEASONALLY FLOODED/SATURATED
PSS/FOI/AE:	PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB & FORESTED AND NEEDLE-LEAVED EVERGREEN FORESTED, SEASONALLY FLOODED/SATURATED
PEM/SSIE:	PALUSTRINE PERSISTENT EMERGENT/BROAD-LEAVED DECIDUOUS SCRUB-SHRUB, SEASONALLY FLOODED/SATURATED

WETLAND NOTES

- STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, ON JUNE 11, 2018. WETLANDS MAPPING WAS DONE BY N.H. LICENSED LAND SURVEYORS, NORWAY PLAINS ASSOCIATES, INC. IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
1. N.H. CODE OF ADMINISTRATIVE RULES (ENV-WT 301.01) WITH THE TECHNIQUES OUTLINED IN THE 1987 'U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, TECHNICAL REPORT Y-87-1'.
 2. U.S. ARMY CORPS OF ENGINEERS, 2009, 'REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHEASTERN AND NORTHWEST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY ERDC/EL TR-09-19.'
 3. U.S. ARMY CORPS OF ENGINEERS, 2012, 'NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY.'
 4. N.H. CODE OF ADMINISTRATIVE RULES (ENV-WT 301.02) WITH THE U.S. FISH AND WILDLIFE SERVICE MANUAL FWS/OBS-79/31 ENTITLED 'CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES, COWARDIN ET AL, 1979.'
 5. NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2004, 3RD ED., 'FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND,' NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
 6. U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, 2010, 'FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0,' L.M. VASILAS, G.W. HUNT, AND C.V. NOBLE (EDS.), USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.



LOT AREAS IN ACRES	
LOT 38-0	= 46.44 (OPEN SPACE)
LOT 38-1	= 0.36 (HOUSE LOT)
LOT 38-2	= 0.34 (HOUSE LOT)
LOT 38-3	= 0.34 (HOUSE LOT)
LOT 38-4	= 0.34 (HOUSE LOT)
LOT 38-5	= 0.34 (HOUSE LOT)
LOT 38-6	= 0.34 (HOUSE LOT)
LOT 38-7	= 0.34 (HOUSE LOT)
LOT 38-8	= 0.40 (HOUSE LOT)
LOT 38-9	= 0.45 (HOUSE LOT)
LOT 38-10	= 0.34 (HOUSE LOT)
LOT 38-11	= 0.34 (HOUSE LOT)
LOT 38-12	= 0.34 (HOUSE LOT)
LOT 38-13	= 0.34 (HOUSE LOT)
LOT 38-14	= 0.36 (HOUSE LOT)
LOT 38-15	= 0.36 (HOUSE LOT)
LOT 38-16	= 0.36 (HOUSE LOT)
LOT 38-17	= 1.3 (ROAD EASEMENT)
TOTAL AREA	= 53.43 ACRES



TEST PIT DATA:

The soils on the referenced property were examined on 21 November 2017 so that drainage and regulatory issues can be properly addressed. The soil profiles were examined and recorded using NRCS and NHDES criteria as follows:

TP #1 11/21/17
0-10" 10yr 3/2 sandy loam, granular, friable
10-22" 7.5yr/4/6 sandy loam, granular, friable
22-40" 10yr/3/3 fine sand, massive, friable
40-55" 10yr/3/3 fine sand, blocky, firm, redox features
55-56" 7.5yr/3/4 coarse sand Orstein layer, cemented, firm
56-66" 10yr/2/2 fine sand, blocky, firm, redox features
Notes: SHWT=72". NRCS Windsor Series, Hydrologic Soil Group A

TP #2 11/21/17
0-16" 10yr/3/3 sandy loam, granular, friable
16-42" fine sandy loam fill
42-50" soil with burnt dry woody debris
Notes: SHWT 60"±. Test pit dug within an old burn pit. No evidence of seasonal water table noted. Reported past activity on this site and the soil profile horizons observed, confirmed that soils within this area of the site had been excavated and then reggraded with fill from adjacent pond bottom. Hydrologic Group not determinable. The original soils likely fit the Windsor Series.

TP #3 11/21/17
0-12" 10yr/3/3 sandy loam, granular, friable
12-22" 10yr/5/6 sandy loam, massive, firm
22-40" 10yr/3/3 fine sand, massive, friable
40-55" 10yr/3/3 fine sand, blocky, firm, redox features
55-56" 7.5yr/3/4 coarse sand Orstein layer, cemented, firm
56-66" 10yr/2/2 fine sand, blocky, firm, redox features
Notes: SHWT=40". NRCS Windsor Series, Hydrologic Soil Group A

TP #4 11/21/17
0-31" Fill (as noted in TEST PIT # 2 Notes)
31-32" 10yr/3/3 sandy loam, (buried A horizon)
32-38" 10yr/5/6 fine sandy loam, massive, friable
38-50" 10yr/4/4 fine sand, massive, friable
50-66" 10yr/6/3 fine sand, blocky, friable, redox concentrations
Notes: As noted with Test Pit #2, the upper portion of this profile is fill from adjacent pond bottom excavation. The SHWT from current soil surface is 50". The fill overlies the remains of what would fit a Deerfield Series Soil. This profile to 50" fits within Hydrologic Group B. Below 50" the proper hydrologic grouping would need to be determined.

TP #5 11/21/17
0-12" 10yr 3/3 sandy loam, granular, friable
12-18" 10yr/3/3 loamy sand, granular, friable
18-27" 10yr/5/6 medium to coarse sand, single grained, loose
27-44" 10yr/7/4 fine sand, granular, friable
44-45" Orstein layer cemented, firm, redox
45-65" 10yr/7/3 fine sand, massive, friable, redox features
Notes: SHWT=45". NRCS Windsor Series, Hydrologic Soil Group A

TP #5A 11/21/17
0-20" Fill (as noted in TEST PIT # 2 Notes)
20-32" 10yr/5/4 sandy loam to loamy sand, massive, friable
32-52" 10yr/6/6 fine sand, loose to massive, friable, roots to depth
52-60" 10yr/7/3 fine sand, massive, friable, redox concentrations
Notes: SHWT from current surface is 52". The fill overlies the remains of a Deerfield Series Soil which had a 32" SHWT (more than 24"). With the fill horizon removed, this profile fits within Hydrologic Group B.

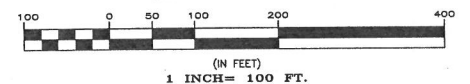
TP #6 11/21/17
0-6" 10yr/3/3 sandy loam, granular, friable
6-24" 7.5yr/4/6 fine sand, massive, granular
24-36" 10yr/5/6 sandy loam, massive, friable
36-50" 10yr/5/4 medium to coarse sand, loose, single grained, roots to 50"
50-65" 10yr/6/4 fine sand, massive, firm, redox concentrations
Notes: SHWT=50". NRCS Windsor Series, Hydrologic Soil Group A

TP #7 11/21/17
0-7" 10yr/3/3 sandy loam, granular, friable
7-13" 10yr/5/6 sandy loam, granular, friable
13-66" 10yr/7/4 fine to medium sand, loose, single grained, no redox features
Notes: SHWT=66". NRCS Windsor Series, Hydrologic Soil Group A

TP #8 11/21/17
0-15" 10yr/3/3 sandy loam, granular, friable
15-23" 10yr/5/6 loamy sand, granular, friable
23-30" 10yr/5/6 fine sand, loose, single grained
30-54" 10yr/8/4 very fine sand, massive, friable
54-70" 10yr 7/3 fine sand, granular, friable, redox features
Notes: SHWT=54". NRCS Windsor Series, Hydrologic Soil Group A

TP #9 11/21/17
0-18" 10yr/3/3 sandy loam, granular, friable
18-26" 10yr/5/6 sandy loam to loamy sand, granular, friable
26-46" 10yr/6/4 fine sand, single grained to granular, granular, friable
46-72" 10yr/5/4 medium sand, granular, very friable
72-60" 10yr/4/4 medium sand, granular, very friable
Notes: SHWT 72". NRCS Windsor Series, Hydrologic Soil Group A

EXISTING FEATURES PLAN
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT LLC
MARCH 2018



FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-B
F.B. NO.

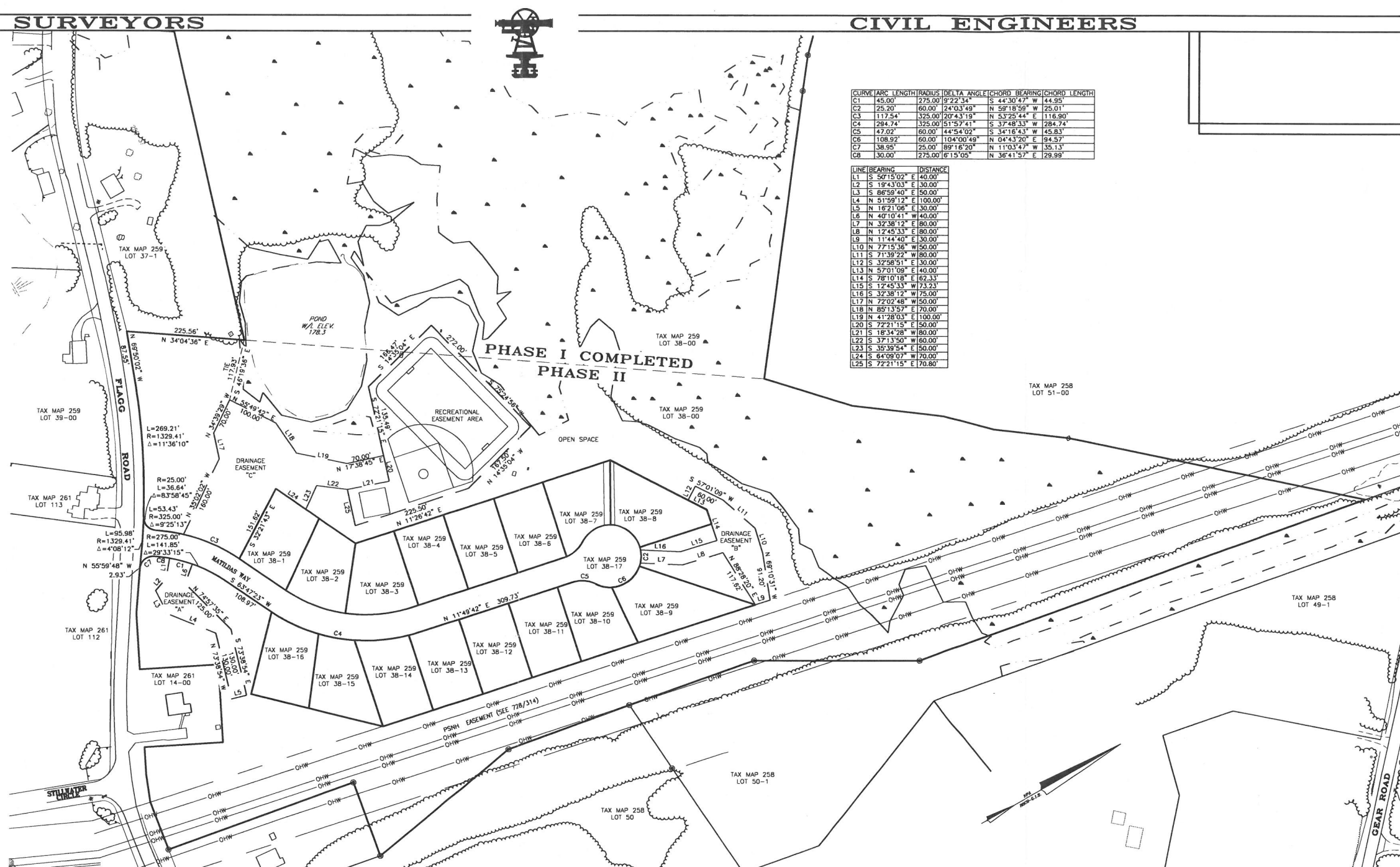
31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

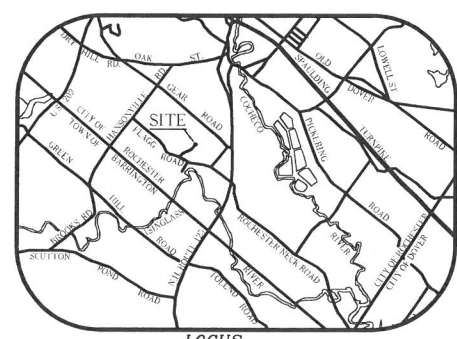
E-1

LEGEND
 - - - - - PROPERTY LINE
 - - - - - LIMITS OF JURISDICTIONAL WETLANDS
 - - - - - EXISTING TREE LINE
 - - - - - EXISTING UTILITY POLE
 - - - - - EXISTING MONUMENT
 - - - - - EXISTING WETLANDS



CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	45.00'	275.00'	9°22'34"	S 44°30'47" W 44.95'	
C2	25.20'	60.00'	24°03'49"	N 59°18'59" W 25.01'	
C3	117.54'	325.00'	20°43'19"	N 53°25'44" E 116.90'	
C4	284.74'	325.00'	51°59'41"	S 37°48'33" E 284.74'	
C5	47.02'	60.00'	44°54'02"	S 34°16'43" W 45.83'	
C6	108.92'	60.00'	104°00'49"	N 04°43'20" E 94.57'	
C7	38.95'	25.00'	89°16'20"	N 11°03'47" W 35.13'	
C8	30.00'	275.00'	6°15'05"	N 36°41'57" E 29.99'	

LINE	BEARING	DISTANCE
L1	S 50°15'02" E	40.00'
L2	S 19°43'03" E	30.00'
L3	S 66°59'40" E	50.00'
L4	S 51°59'12" E	100.00'
L5	N 15°21'06" E	30.00'
L6	N 40°10'41" W	40.00'
L7	N 32°38'12" E	80.00'
L8	N 12°45'33" E	80.00'
L9	N 11°44'40" E	30.00'
L10	N 77°15'36" W	50.00'
L11	S 71°39'22" W	80.00'
L12	S 37°58'51" E	30.00'
L13	N 57°01'09" E	40.00'
L14	S 78°10'18" E	62.33'
L15	S 12°45'33" W	73.23'
L16	S 32°38'12" W	75.00'
L17	N 72°02'48" W	50.00'
L18	N 85°13'57" E	70.00'
L19	N 41°28'03" E	100.00'
L20	S 72°21'15" E	50.00'
L21	S 18°34'28" W	80.00'
L22	S 37°13'50" W	60.00'
L23	S 35°39'54" E	50.00'
L24	S 64°09'07" W	70.00'
L25	S 72°21'15" E	70.60'

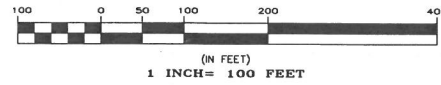


LOT AREAS IN ACRES
 LOT 38-0 = 46.44 (OPEN SPACE)
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 LOT 38-15 = 0.36 (HOUSE LOT)
 LOT 38-16 = 0.36 (HOUSE LOT)
 LOT 38-17 = 1.13 (ROAD EASEMENT)
 TOTAL AREA = 53.43 ACRES

LOT 38-0 = 46.44 (OPEN SPACE)
 DRAINAGE EASEMENT AREA = 75,732 SQUARE FEET OR 1.739 ACRES
 RECREATION EASEMENT AREA = 68,441 SQUARE FEET OR 1.71 ACRES

REFERENCE PLANS:
 1. "OVERALL CLUSTER SUBDIVISION PLAN FLAGG ROAD, ROCHESTER, N.H. FOR TRINITY CONSERVATION, LLC"
 DATED: APRIL 2006 BY: NORWAY PLAINS ASSOCIATES, INC.
 RECORDED: SORD PLAN 90 - 82.

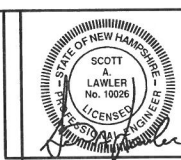
EASEMENT PLAN
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
 PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT LLC
 AUGUST 2018



FILE NO. 134
 PLAN NO. C-2379-S2
 DWG. NO. 16231/S-8
 F.B. NO.

LAND SURVEYORS

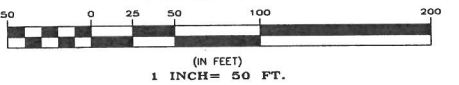
CIVIL ENGINEERS



REVISIONS:
10/21/19 ADD APPROVED RECREATION AREAS TO PLAN

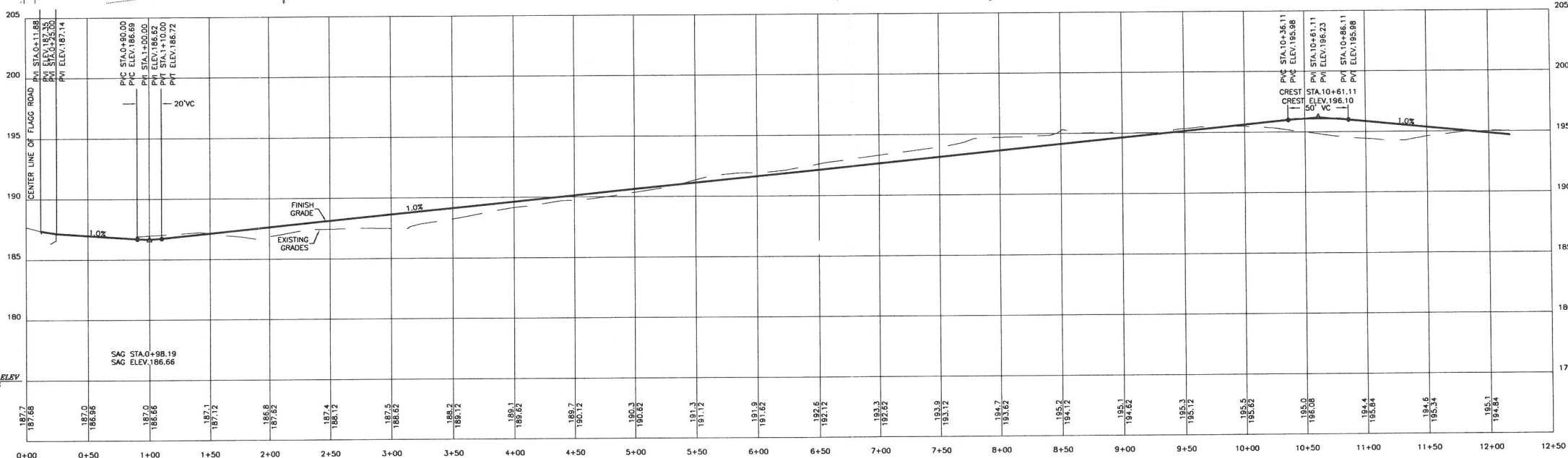
- OVERALL CONSTRUCTION AND GENERAL NOTES:
- ALL CONSTRUCTION ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:00 A.M. TO 6:00 P.M., MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 6:00 P.M. ON SATURDAY.
 - ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPPED IRON MARKERS OR APPROPRIATE MONUMENTATION AFTER THE CONSTRUCTION OF THE ROAD IS COMPLETE.
 - ALL UTILITIES MUST BE UNDERGROUND, INCLUDING UTILITIES EXTENDED ONTO THE SITE FROM EXISTING POLES NEAR THE STREET. HOWEVER, IF THE ONLY POLE NEARBY IS ACROSS THE STREET, ONE ADDITIONAL POLE MAY BE PLACED ON/NEAR THE PROPERTY TO ALLOW FOR OVERHEAD EXTENSION OF WIRES ACCESS THE STREET. UTILITIES EXTENDED FROM ANY SUCH NEW POLE MUST BE UNDERGROUND. THE APPLICANT MAY WORK WITH THE CITY STAFF AS APPROPRIATE TO ADDRESS THIS REQUIREMENT. PRIOR TO DEDICATION OF THE STREETS TO THE CITY TWO STREET TREES (DECIDUOUS SHADE TREES) MUST BE MAINTAINED OR PLANTED WITHIN THE FRONT 15 FEET OF EACH LOT. AS A PRECEDENT CONDITION, THE APPLICATION MUST IDENTIFY / FLAG APPROPRIATE, HEALTHY, INDIVIDUAL TREES ON SITE THAT MEET THIS OBJECTIVE AND/OR SHOW LOCATIONS OF PROPOSED TREES ON THE PLAN. IF TREES ARE TO BE PLANTED A 15 FOOT EASEMENT MUST BE SHOWN AT THE FRONT OF THE LOTS WHICH ALLOWS FOR THE DEVELOPER TO PLANT THOSE TREES. NEWLY PLANTED TREES MUST BE SUITABLE TO THE SITE CONDITIONS AND OF NURSERY STOCK WITH A DIAMETER AT FOUR FOOT BREAST HEIGHT OF AT LEAST 2 INCHES. SUGGESTED (BUT NOT REQUIRED) SPECIES INCLUDE MAPLE, WHITE OAK, SCARLET OAK, LINDEN, THORNLESS HONEYLOCUST, MARSHALL SEEDLESS ASH, EUROPEAN HORNBEAM, CALLERY PEAR (NOT BRADFORD), CHINESE ELM, AND JAPANESE ZELKOVA. WHERE SUITABLE COVERAGE OF EXISTING EVERGREEN TREES IS PRESENT, THESE MAY BE SUBSTITUTE FOR DECIDUOUS TREES.
 - AN ORANGE CONSTRUCTION FENCE MUST BE PLACED ON ALL LOTS THAT INCLUDES WETLAND BUFFERS PRIOR TO START OF CONSTRUCTION FOR ALL LOTS THAT CONTAIN WETLAND BUFFERS.
 - THE SIGHT DISTANCE AT THE ENTRANCE TO THE SUBDIVISION WILL BE ADEQUATE.
 - THE GRAVEL WETLAND, INFILTRATION BASIN, AND TREATMENT SWALES SHALL BE INSPECTED PRIOR TO ROADWAY ACCEPTANCE. ANY EROSION SHALL BE FIXED AND ANY SEDIMENT SHALL BE REMOVED AND VEGETATION REESTABLISHED ON THE INFILTRATION BASIN BOTTOM. THE INFILTRATION BASIN BOTTOM SHALL BE AT DESIGN ELEVATION AS SPECIFIED IN THE DETAILS ON SHEET C-8 OF THIS PLAN SET.
 - LOAM STOCKPILES SHALL BE SEEDING IN ACCORDANCE WITH THE SEEDING NOTES ON SHEET C-9. IF STORED MORE THAN 30 DAYS, SILT FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT SIDE OF THE LOAM STOCKPILE AS SHOWN IN THE PLAN VIEW AROUND AT LEAST ONE HALF THE CIRCUMFERENCE OF THE PILE.
 - DURING ALL PHASES OF CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
 - THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF ANY OFF SITE IMPACTS ARE FOUND DURING CONSTRUCTION.
 - PRIOR TO ISSUANCE OF ANY BUILDING PERMIT FOR THIS SUBDIVISION, THE DEVELOPER SHALL POST:
 - A CONSTRUCTION ZONE SIGNS PER THE MANUAL OF UNIFORMED TRAFFIC CONTROL DEVICES STANDARDS.
 - A STREET ACCEPTANCE SIGN AT THE ENTRANCE WHICH READS "POSTED. THIS SUBDIVISION IS UNDER CONSTRUCTION. THESE STREETS HAVE NOT YET BEEN ACCEPTED BY THE CITY OF ROCHESTER AND ARE NOT ELIGIBLE FOR CITY SERVICES. TRAVEL AT YOUR OWN RISK (PER THE ORDER OF PLANNING BOARD)" THE LOCATION AND DESIGN OF THIS SIGN SHALL BE AS STIPULATED BY THE PUBLIC WORKS DEPARTMENT, BUT IN NO CASE SHALL IT BE LESS THAN 2'X4' AND IT SHALL BE ERCTED PRIOR TO ISSUANCE OF ANY BUILDING PERMIT.
 - FOR MORE INFORMATION ABOUT THIS SUBDIVISION, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT, 31 WAKEFIELD STREET, ROCHESTER, 03607, (603) 335-1338.
 - ACCESS INTO THE SITE FOR FIRE APPARATUS MUST BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THIS IS THE SOLE RESPONSIBILITY OF THE APPLICANT/DEVELOPER TO MAINTAIN THIS ACCESS. PLEASE CONTACT THE FIRE DEPARTMENT AT (603) 330-7182 WITH ANY QUESTIONS ABOUT ACCESS REQUIREMENTS.
 - BUFFER MARKERS MUST BE INSTALLED ALONG THE OUTER EDGE OF THE WETLAND BUFFER ON ALL LOTS THAT CONTAIN A WETLAND BUFFER. THE MARKER MUST BE INSTALLED AT THE TIME THAT THE ORANGE CONSTRUCTION FENCE IS REMOVED. THE MARKER MUST BE IN PLACE IN ORDER FOR THE CERTIFICATE OF OCCUPANCY FOR THAT LOT TO BE ISSUED.
 - THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW - INCLUDING ALL PERTINENT PROVISIONS OF THE CITY OF ROCHESTER SUBDIVISION REGULATIONS - UNLESS OTHERWISE WAIVED.
 - ALL PROPOSED BUILDINGS SHALL LOCATED WITHIN THE CURRENT ZONING SETBACKS AS SHOWN OR A VARIANCE SHALL BE SOUGHT FOR.
 - IF WOOD TURTLE OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN THE WORK ARE, PLEASE CONTACT NHFG BIOLOGISTS MELISSA DUPERALSKIE AT 271-1738 OR JOSH MEGYESY AT 271-1125 FOR FURTHER INSTRUCTIONS.

ROAD PLAN AND PROFILE
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD DEVELOPMENT, LLC.
MARCH 2018



ROAD PROFILE

1"=50' (HORZ.) & 1"=5' (VERT.)



CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

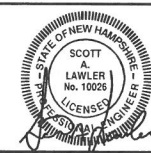
NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-1

LAND SURVEYORS

CIVIL ENGINEERS



REVISIONS:
5/24/18 PER NHDES AGT RFM LETTER DATED MAY 21, 2018

LEGEND

- EXISTING UTILITY POLE
- EDGE OF JURISDICTIONAL WETLANDS
- 50' WETLANDS BUFFER
- FENCE
- TREE LINE
- SEWER MANHOLE
- EXISTING HYDRANT
- GATE VALVE
- PROP. CATCH BASIN
- PROP. OUTLET STRUCTURE
- PROP. DRAINAGE PIPE
- PROP. SEWER MANHOLE
- PROP. LIGHT POST
- PROP. WATER MAIN
- PROP. HYDRANT

CB#1-OUTLET #1
STRUCTURE

CB#1 - 4-FT DIA. CENTER OF CUL-DE-SAC RIM 194.60' (BEEHIVE GRATE) INV. OUT 190.60' PIPE A SUMP 187.60'	PIPE A 12" DIA. CPP L=75.6'
CB#2 STA 9+06.90 12.00 R RIM 194.43' INV. IN 190.10' PIPE A INV. OUT 190.00' PIPE C SUMP 186.10'	PIPE B 12" DIA. CPP L=20.0'
CB#3 STA 12+15.32 12.00 L RIM 194.43' INV. OUT 190.40' PIPE SUMP 187.40'	PIPE C 12" DIA. CPP L=180.0'
CB#4 STA 7+22.93 12.00 R RIM 192.60' INV. IN 188.60' PIPE C INV. OUT 188.50' PIPE D SUMP 185.50'	PIPE D 15" DIA. CPP L=20.0'
CB#5 STA 7+22.93 12.00 L RIM 192.60' INV. IN 188.30' PIPE D INV. OUT 188.20' PIPE E SUMP 185.20'	PIPE E 15" DIA. CPP L=246.0'
CB#6 STA 4+47.55 12.00 R RIM 190.10' INV. IN 185.90' PIPE E INV. OUT 185.80' PIPE G SUMP 182.80'	PIPE F 12" DIA. CPP L=20.0'
CB#7 STA 4+47.55 12.00 L RIM 190.10' INV. OUT 186.10' PIPE F SUMP 182.10'	PIPE G 18" DIA. CPP L=199.2'
CB#8 STA 2+74.55 12.00 R RIM 188.10' INV. IN 183.80' PIPE G INV. OUT 183.70' PIPE I SUMP 180.70'	PIPE H 12" DIA. CPP L=20.0'
CB#9 STA 2+74.55 12.00 L RIM 188.10' INV. OUT 184.10' PIPE H SUMP 181.10'	PIPE I 24" DIA. CPP L=20.0'
CB#10 STA 0+98.19 12.00 R RIM 186.40' INV. IN 184.00' PIPE I INV. OUT 182.80' PIPE J SUMP 179.80'	PIPE J 15" DIA. CPP L=60.0'
CB#11 STA 0+98.19 12.00 L RIM 186.40' INV. IN 182.70' PIPE J INV. OUT 182.60' PIPE K SUMP 178.60' WITH ELIMINATOR	PIPE K 24" DIA. CPP L=60.0'
	PIPE L 12" DIA. CPP L=60.0'

UTILITY PLAN & PROFILE

TAX MAP 259, LOT 38

FLAGG ROAD

ROCHESTER, NH

PREPARED FOR:

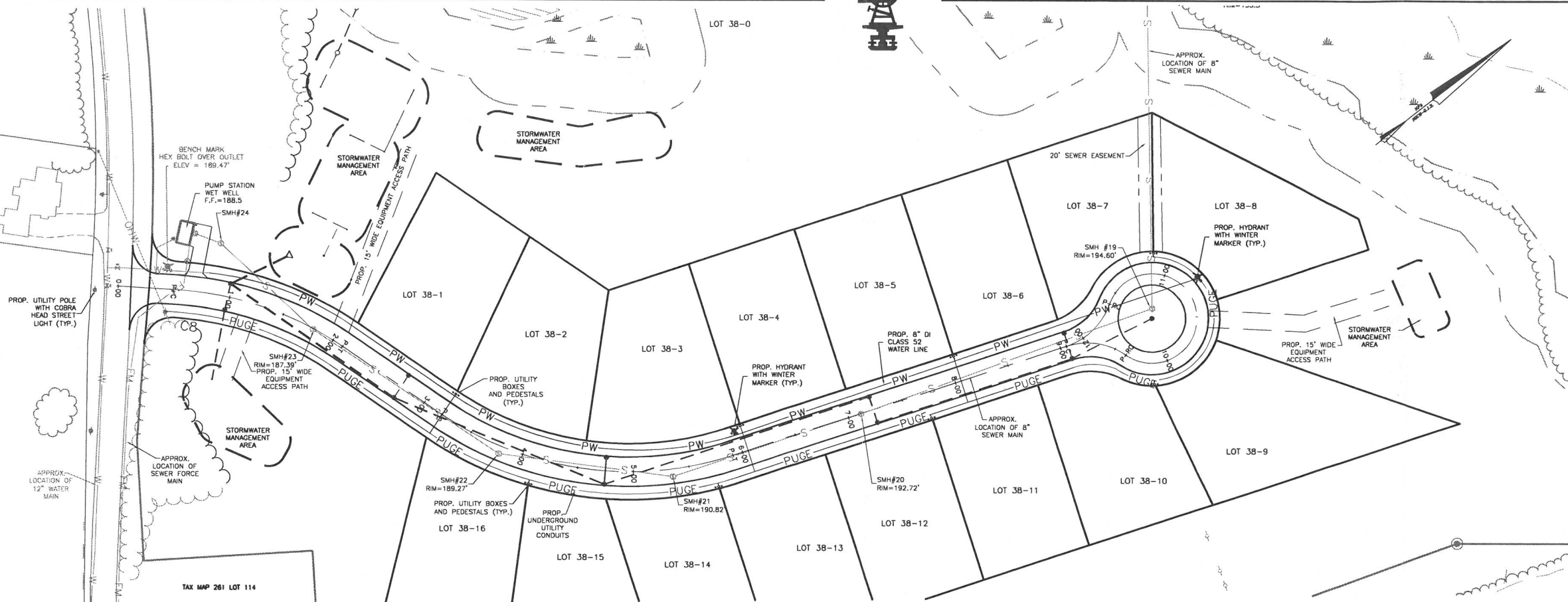
119 FLAGG ROAD

DEVELOPMENT LLC

MARCH 2018

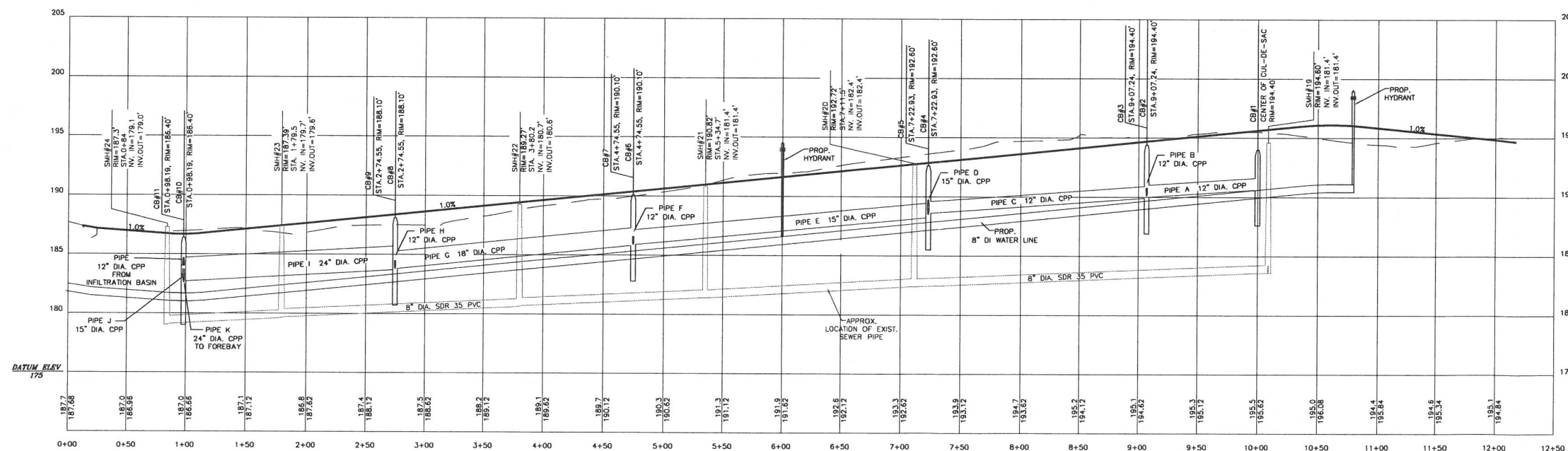
SCALE 1"=50' (HORIZ.)

1"=5' (VERT.)



PLAN

SCALE 1"=50'



PROFILE

1"=50' (HORZ.) & 1"=5' (VERT.)

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-2

LAND SURVEYORS

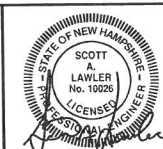
CIVIL ENGINEERS

LEGEND

PROPERTY LINE
JURISDICTIONAL WETLANDS
EXISTING TREE LINE
EXISTING DRAIN LINE
EXISTING CONTOUR LINE
PROPOSED TREE LINE
PROPOSED DRAIN LINE
PROPOSED CONTOUR LINE

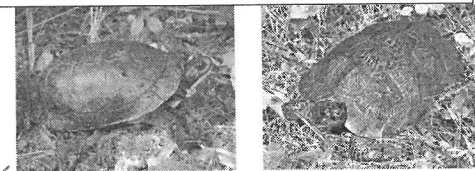
PROPOSED CATCH BASIN
PROPOSED FLARED END SECTION (FES)
CORRUGATED POLYETHYLENE PIPE
CATCH BASIN
PROPOSED OUTLET PROTECTION
EXISTING TEST PIT

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REVISIONS:
5/24/18 PER NHDES AOT RFM LETTER DATED MAY 21, 2018
10/21/19 ADD APPROVED RECREATION AREAS TO PLAN

- NOTES:
1. ALL HOUSE LOTS GRADE TO REAR SO ROOF RUN OFF IS DIRECTED SWALE.
 2. BASINS AND SWALE SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
 3. TEMPORARY WATER DIVERSION (SWALE AND BASINS) MUST BE USED AS NECESSARY UNTIL AREA ARE STABILIZED.



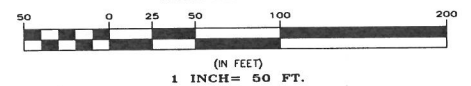
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CB#1-OUTLET#1 STRUCTURE

PIPE	
PIPE A 12" DIA. CPP L=75.6'	CB#1 - 4-FT DIA. CENTER OF CUL-DE-SAC RIM 194.60' (SEEING GRATE) INV. OUT 190.60' PIPE A SUMP 187.60'
PIPE B 12" DIA. CPP L=20.0'	CB#2 STA 9+06.90 12.00 R RIM 194.43' INV. IN 190.10' PIPE A INV. IN 190.10' PIPE B INV. OUT 190.00' PIPE C SUMP 186.10'
PIPE C 12" DIA. CPP L=180.0'	CB#3 STA 12+15.32 12.00 L RIM 194.43' INV. IN 190.40' PIPE C INV. OUT 190.40' PIPE SUMP 187.40'
PIPE D 12" DIA. CPP L=180.0'	CB#4 STA 7+22.93 12.00 R RIM 192.60' INV. IN 188.60' PIPE C INV. OUT 188.50' PIPE D SUMP 185.50'
PIPE E 12" DIA. CPP L=246.0'	CB#5 STA 7+22.93 12.00 L RIM 192.60' INV. IN 188.30' PIPE D INV. IN 188.30' PIPE E INV. OUT 185.20' PIPE SUMP 185.20'
PIPE F 12" DIA. CPP L=20.0'	CB#6 STA 4+47.55 12.00 R RIM 190.10' INV. IN 185.90' PIPE E INV. IN 185.90' PIPE G INV. OUT 185.80' PIPE SUMP 182.80'
PIPE G 18" DIA. CPP L=199.2'	CB#7 STA 4+47.55 12.00 L RIM 190.10' INV. OUT 186.10' PIPE F SUMP 182.10'
PIPE H 12" DIA. CPP L=20.0'	CB#8 STA 2+74.55 12.00 R RIM 188.10' INV. IN 183.80' PIPE H INV. IN 183.80' PIPE I INV. OUT 183.70' PIPE SUMP 180.70'
PIPE I 24" DIA. CPP L=174.2'	CB#9 STA 2+74.55 12.00 L RIM 188.10' INV. OUT 184.10' PIPE H INV. OUT 184.10' PIPE SUMP 181.10'
PIPE J 15" DIA. CPP L=20.0'	CB#10 STA 0+98.19 12.00 R RIM 186.40' INV. IN 184.00' PIPE L INV. OUT 182.80' PIPE J SUMP 179.80'
PIPE K 24" DIA. CPP L=60.0'	CB#11 STA 0+98.19 12.00 L RIM 186.40' INV. IN 182.70' PIPE J INV. IN 182.70' PIPE I INV. OUT 182.60' PIPE K SUMP 178.60' WITH ELIMINATOR
PIPE L 12" DIA. CPP L=60.0'	

**GRADING & DRAINAGE
PLAN**
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
**119 FLAGG ROAD
DEVELOPMENT, LLC.**

MARCH 2018



FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-3

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

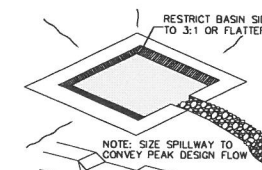
- PROPERTY LINE
- - - JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING CONTOUR LINE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE
- PROPOSED SILTATION FENCE
- PROPOSED CATCH BASIN
- ▷ PROPOSED FLARED END SECTION (FES)
- PROPOSED TEMPORARY CATCH BASIN FILTERS
- PROPOSED TEMPORARY STABILIZED CONSTRUCTION EXIT
- PROPOSED TEMPORARY STONE CHECK DAMS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

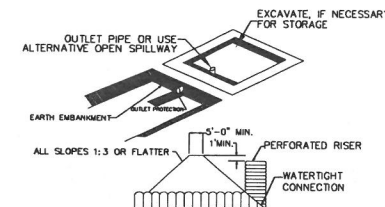


NOTE: IF WOOD TURTLE OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, PLEASE CONTACT NHFG BIOLOGISTS MELISSA DOPERALSKE AT 271-1738 OR JOSH MEYER AT 271-1125 FOR FURTHER INSTRUCTIONS.

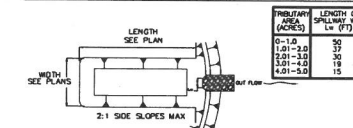
IF THE USE OF SEDIMENTATION CONTROL BERM, FILTREX OR DUAL FILTER SOCK, USE WILDLIFE FRIENDLY OPTION SUCH AS WOVEN ORGANIC MATERIAL. DO NOT USE WELDED PLASTIC OR BIODEGRADABLE PLASTIC NETTING OR THREAD MATTING ON SITE.



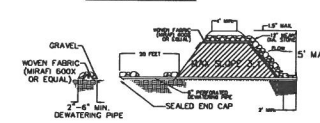
TYPICAL OPEN SPILLWAY



EMBANKMENT SECTION THRU RISER



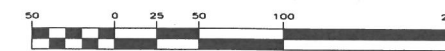
PLAN VIEW



OUTLET PROFILE

SEDIMENT TRAP
NOT TO SCALE

**EROSION & SEDIMENTATION
CONTROL PLAN**
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.
GRAPHIC SCALE
MARCH 2018



(IN FEET)
1 INCH = 50 FT.

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

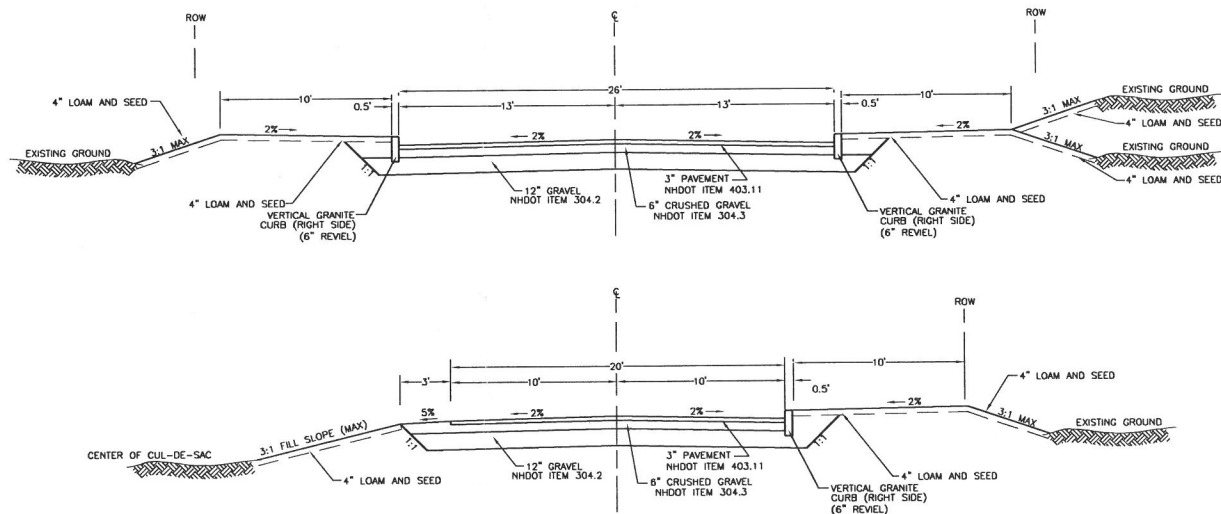
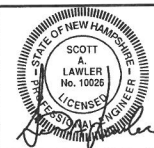
C-4

LAND SURVEYORS



CIVIL ENGINEERS

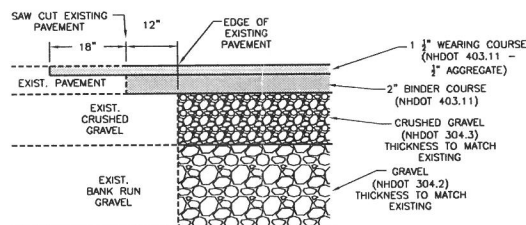
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TYPICAL ROADWAY CROSS SECTION (AT CUL-DE-SAC)

SCALE: 1"=5'

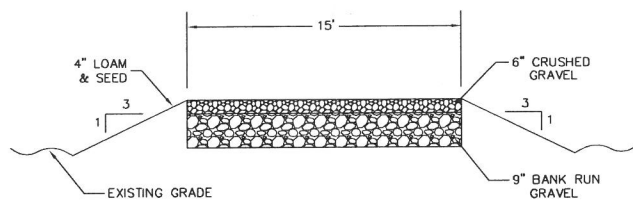
- CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH NHDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE CITY OF ROCHESTER CONSTRUCTION SPECIFICATIONS.
- THE ENTIRE AREA OF THE STREET WITHIN ITS RIGHT-OF-WAY LINES AND ITS ADJOINING SLOPED AREAS SHALL BE CLEARED OF ALL STUMPS, BRUSH, ROOTS, ROCKS, BOULDERS, AND LIKE MATERIALS AND ALSO OF ALL TREES NOT INTENDED FOR PRESERVATION.
- CONTRACTOR IS TO CONTACT CITY ENGINEER, TO REVIEW CONDITION OF THE ROUGHED IN ROAD, 72 HOURS PRIOR TO THE INSTALLATION PAVEMENT.
- ALL BACK FILL IN TRENCHES AND FILL FOR THE ROAD BEDS SHALL BE COMPACTED TO 95% OPTIMUM DENSITY.
- UNDERDRAIN SHALL BE INSTALLED IN AREAS DEEMED NECESSARY AS DETERMINED BY SUBDRAINAGE CONDITIONS OR AS REQUIRED BY THE CITY ENGINEER. (NHDOT ITEM 605.56)
- AGGREGATE #4 (NHDOT ITEM 703) SHALL BE WRAPPED IN A SUPPORT MEMBRANE (FILTER FABRIC).
- UNDERDRAIN SHALL BE TIED IN TO THE PROPOSED DRAINAGE STRUCTURES.



TYPICAL PAVEMENT MATCHING DETAIL

NOT TO SCALE

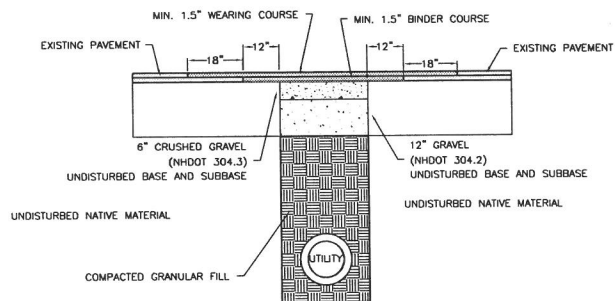
- PAVEMENT MATCHING NOTES:
- BINDER COURSE PAVEMENT EDGES SHALL BE STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
 - WEARING COURSE PAVEMENT EDGES SHALL BE DEFINED BY A MILLED EDGE.
 - SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY.
 - ALL BACKFILL MATERIAL TO BE USED SHALL MATCH EXISTING MATERIALS UNLESS OTHERWISE SPECIFIED BY CITY ENGINEER OR THEIR DESIGNER.
 - ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAVEMENTS SHALL BE TACK COATED.
 - PAVEMENT THICKNESS SHALL MATCH EXISTING BUT IN CASES SHALL BE LESS THAN 3 1/2" IN TOTAL THICKNESS.
 - PAVEMENT FOR TRENCH PATCHES SHALL BE PLACED IN TWO PHASES:
 - THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED AREA AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD.
 - THE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5" WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.
 - ANY EXCAVATION WITHIN A CITY RIGHT-OF-WAY REQUIRES PRE-APPROVAL BY THE DEPARTMENT OF PUBLIC WORKS AND IS SUBJECT TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.



MAINTENANCE PATH CROSS-SECTION

NOT TO SCALE

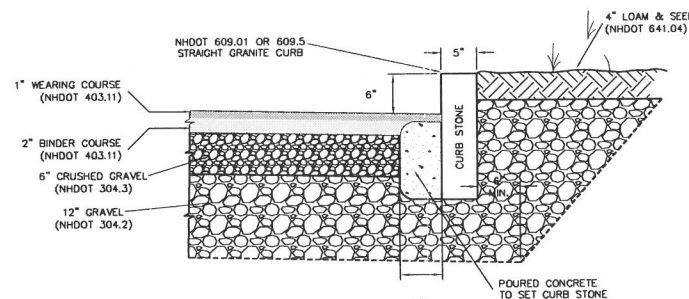
FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-B
F.B. NO.



- NOTES:
- PAVEMENT EDGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
 - TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL AND COMPACTED TO 95% OF ITS DRY DENSITY.
 - TOP 18" OF BACKFILL SHALL BE 6" OF COMPACTED 3/4" CRUSHED GRAVEL (NHDOT 304.3) SUPPORTED BY 12" OF COMPACTED GRAVEL (NHDOT 304.2).
 - ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAVEMENTS SHALL BE TACK COATED.
 - PAVEMENT THICKNESS SHALL MATCH EXISTING BUT IN NOT CASE SHALL BE LESS THAN 3" THICK TOTAL.
 - PAVEMENT SHALL BE PLACED IN TWO PLACES:
 - THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED TRENCH AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD SURFACE.
 - THE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5". WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.
 - ANY TRENCH PATCH REQUIRES PRE-APPROVAL BY DPW AND IS SUBJECT TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.

TRENCH PATCH PROFILE

NOT TO SCALE



GRANITE CURB DETAIL

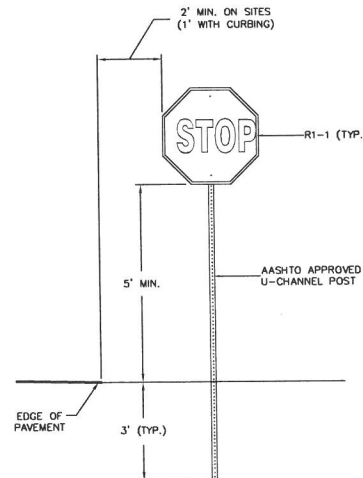
NOT TO SCALE

ITEM NO.	SIGN SIZE		TEXT	NO. SIGNS REQ'D
	HEIGHT	WIDTH		
R1-1	30"	30"	STOP	1
R4-7b	30"	24"	KEEP RIGHT	1
W14-1	30"	30"	DEAD END	1
ROCHESTER STREET SIGN	9" HIGH (GREEN) W/ 6" WHITE LETTERS		MATILDAS WAY	1

NOTES:
1. ALL SIGNS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

SIGN SCHEDULE

NOT TO SCALE



- NOTES:
- SIGN POST SHALL BE AASHTO APPROVED U-CHANNEL OR OTHER PER AASHTO "SPECIFICATIONS FOR STRUCTURAL SUPPORT OF HIGHWAY SIGNS, LUMINARIES AND SIGNALS", LATEST EDITION.
 - SIGNS SHALL BE MOUNTED 5 FT FROM GROUND TO BOTTOM EDGE WHERE PARKING AND PARKING LOT MOVEMENTS TAKE PLACE.
 - SIGNS SHALL BE PLACED SO THAT NEAREST EDGE IS 2 FT. FROM EDGE OF PAVEMENT UNLESS CURBED.

TYPICAL TRAFFIC SIGN

NOT TO SCALE

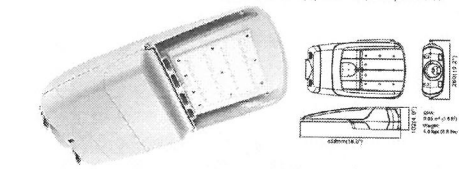
ROADWAY DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.
MARCH 2018



CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

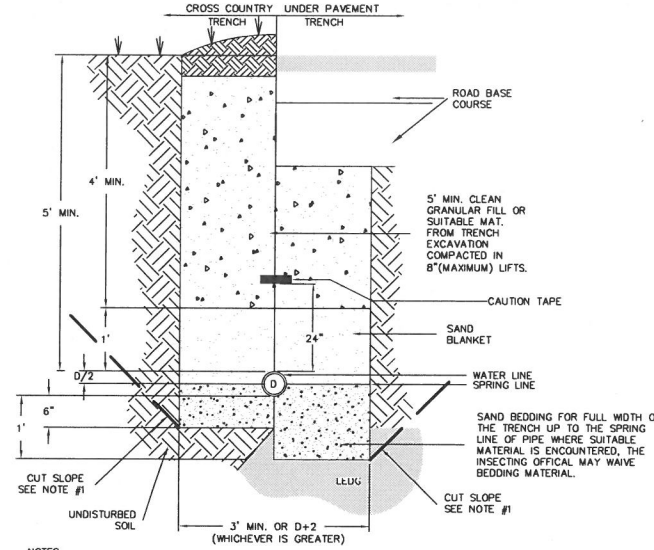
GENERAL UTILITY NOTES

- 1.) CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888 344-7233) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- 2.) ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND ELEVATIONS.
- 3.) THESE PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON THE DATE OF THE SURVEY. THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. FROM THIS PLAN, BUT IN EXISTENCE IS NOT INTENDED OR IMPLIED.
- 4.) ANY UTILITY POLES THAT NEED TO BE RELOCATED SHALL BE COORDINATED WITH EVERSOURCE OR VERIZON, WHOM EVER HAS CONTROL OVER THEM.
- 5.) PROPOSED UTILITIES ARE TO BE UNDERGROUND. COORDINATE LOCATION OF UNDERGROUND UTILITIES AND TRANSFORMER PADS WITH PSNH AND OTHER PERTINENT UTILITY COMPANIES.
- 6.) WATER AND SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10'-FT APART HORIZONTALLY.
- 7.) WHERE SEWER AND WATER LINES MUST CROSS, SEWER PIPE JOINTS SHALL BE LOCATED A MINIMUM 9'-FT HORIZONTALLY FROM THE WATER LINE AND A VERTICAL SEPARATION OF 18-INCHES SHALL BE MAINTAINED.
- 8.) SEWER PIPE JOINTS SHALL BE TESTED WITH ZERO LEAKAGE AT 25 POUNDS PER SQUARE INCH FOR GRAVITY SEWER AND AT 1-1/2 TIMES WORKING PRESSURE FOR ALL FORCE MAINS.
- 9.) WATERLINE CONSTRUCTION:
 - A.) ALL PROPOSED WATER LINE MATERIAL USED SHALL MEET ROCHESTER WATER DEPARTMENT AND ROCHESTER ENGINEERING DEPARTMENT SPECIFICATIONS. WATER LINES SHALL BE A.W.W.A. C 151, CLASS 52, CEMENT LINED, DUCTILE IRON PIPE.
 - B.) PROPOSED WATER GATE VALVES SHALL BE MANUFACTURED BY KENNEDY OF AMERICAN FLOW CONTROL, RESILIENT SEAT TYPE.
 - C.) ALL WATER LINES SHALL BE BURIED A MINIMUM OF 5'.
 - D.) IF 5' OF COVER IS NOT AVAILABLE WATER LINE SHALL BE INSULATED AS SHOWN IN THE "SHALLOW COVER TRENCH DETAIL FOR INSULATED WATER PIPE".
 - E.) ALL WATER FITTINGS SHALL BE CLASS 52.
 - F.) PROPOSED WATER GATE VALVE SHALL OPEN CLOCKWISE (RIGHT).
- 10.) WORK TO CONNECT INTO THE WATER OR SEWER MAINS REQUIRES A PERMIT FROM THE ROCHESTER PUBLIC WORKS DEPARTMENT. CONTRACTORS ARE TO BE PRE-QUALIFIED.



CITY OF ROCHESTER LIGHT FIXTURE

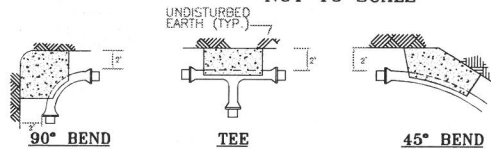
- NOT TO SCALE
- NOTES:
1. PROPOSED COBRA HEAD LIGHT SHALL BE MOUNTED ON THE PROPOSED UTILITY POLE AT THE ENTRANCE OF THE PROPOSED ROADWAY. COORDINATE INSTALLATION WITH EVERSOURCE UTILITY COMPANY.
 2. THE PROPOSED COBRA HEAD STYLE LIGHT FIXTURE SHALL BE AN AFFINITY MODEL S800-25W-30K-CCT-10V WITH WHITE HEADS.
 3. CONTRACTOR SHALL CONTACT THE CITY OF ROCHESTER PUBLIC WORKS DEPARTMENT PRIOR TO ORDERING AND INSTALLING THE FIXTURE TO VERIFY THE FIXTURE SPECIFICATIONS.



- NOTES:
1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4'-FT. INSTALLATIONS DEEPER THAN 4'-FT REQUIRE THE USE OF A TRENCH BOX.
 2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
 3. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

WATER PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE



PIPE SIZE	90° BEND	TEE	PLUG	45° BEND	2 1/2" / 2" & SMALLER
6"	5	4	3	2	2
8"	10	8	6	4	3
12"	24	18	12	8	6

NOTE: SIZE OF THRUST BLOCKS MAY BE INCREASED BY THE ENGINEER TO MEET SOIL CONDITIONS FOUND DURING CONSTRUCTION.

WATER MAIN THRUST BLOCK DETAILS

NOT TO SCALE

DUCTILE IRON MECHANICAL RETAINED LENGTH (FEET)																			
PIPE DIAMETER (INCHES)	BENDS																DEAD END		
	11 1/4"				22 1/2"				45°				90°						
	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi
2"	0	0	1	1	0	1	1	1	1	2	3	2	4	5	7	4	8	12	17
6"	0	0	1	1	1	2	2	1	2	3	4	3	5	8	10	6	12	18	23
8"	0	1	1	1	1	2	3	1	3	4	6	3	7	10	13	8	15	23	31
10"	0	1	1	2	1	2	3	2	3	5	7	4	8	12	16	9	19	28	37
12"	0	1	1	2	1	2	3	4	2	4	6	5	9	14	19	11	22	33	44
TEE*																			
REDUCER																			
SAME SIZE				ONE SIZE SMALLER				ONE SIZE SMALLER				TWO SIZE SMALLER							
50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi	50 psi	100 psi	150 psi	200 psi
2"	1	1	1	1	1	1	1	1	1	3	4	5	-	-	-	-	-	-	-
6"	1	1	1	4	1	1	1	1	3	6	9	12	4	8	12	16	-	-	-
8"	1	1	3	11	1	1	1	1	3	6	10	13	6	11	17	22	-	-	-
10"	1	1	8	17	1	1	1	1	6	3	6	10	13	6	11	17	23	-	-
12"	1	2	13	24	1	1	4	13	5	11	16	22	6	12	18	23	-	-	-

* BASED ON A MINIMUM ATTACHED PIPE ALONG RUN (L) = 5 FEET

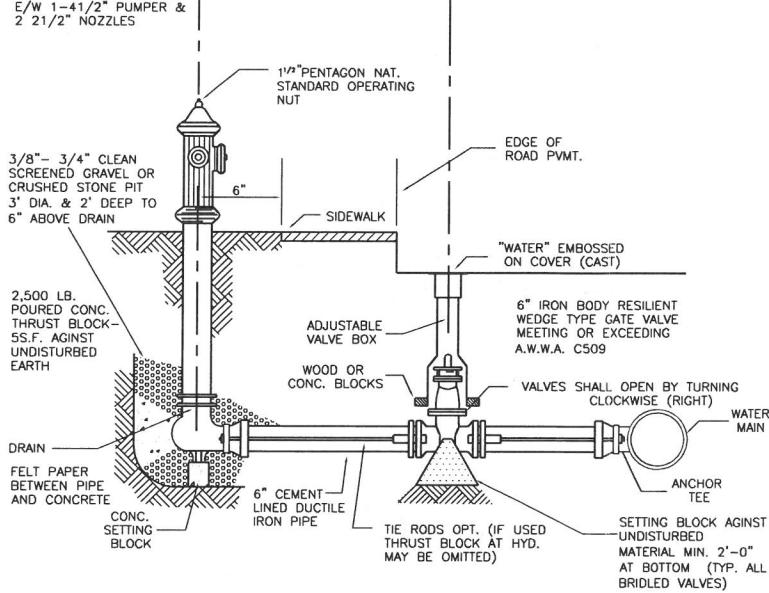
MECHANICAL RETRAINED LENGTH SCHEDULE

NOT TO SCALE

- NOTES:
1. PIPE IS BURIED TO A DEPTH OF 6 FEET WITH A MINIMUM OF 4 INCHES OF COMPACTED GRANULAR MATERIAL UNDER THE PIPE TO THE SPRING LINE OF THE PIPE.
 2. THE EXISTING SOIL IS POORLY GRADED GRAVEL AND GRAVEL SAND MIXTURE WITH LITTLE TO NO FINES.
 3. ALL CALCULATIONS ARE BASED ON A FACTOR OF SAFETY OF 1.5 TO 1.
 4. ALL CALCULATIONS ARE BASED ON THE "RESTRAINED LENGTH CALCULATION PROGRAM" BY EBAA IRON, INC., RELEASE 3.1.

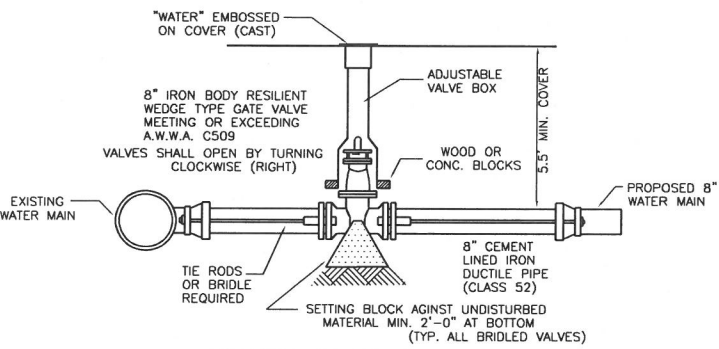
HYDRANTS ARE TO BE KENNEDY GUARDIAN MODEL #K81A W/6" MECHANICAL JOINT SHOE W/BREAK FLANGE TO BE PROVIDED W/DRAIN-OPENING CLOCKWISE (RIGHT). HYDRANTS SHALL MEET OR EXCEED ALL REQ. OF A.W.W.A. STANDARD SPEC. C502

HYDRANTS TO BE OSHA RED W/WHITE FLOURESCENT BONNET & NOZZLE CAPS E/W 1-4 1/2" PUMPER & 2 2 1/2" NOZZLES



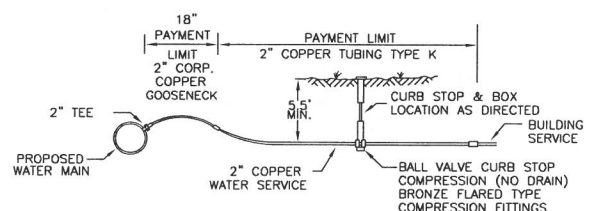
TYPICAL HYDRANT SECTION

NOT TO SCALE



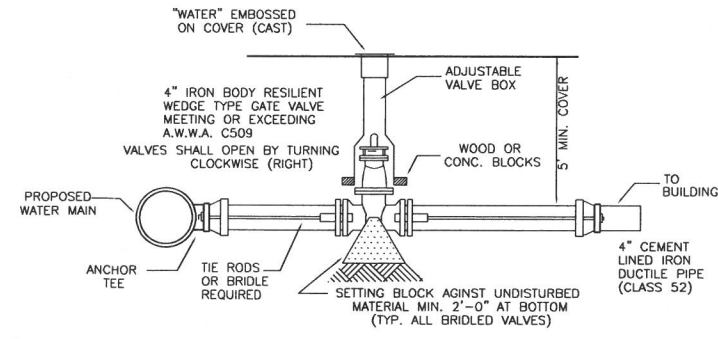
WATER MAIN CONNECTION

NOT TO SCALE



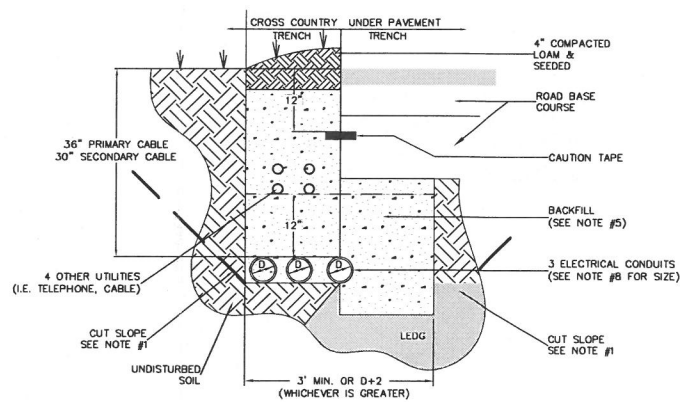
TYPICAL DOMESTIC SERVICE CONNECTION

NOT TO SCALE



TYPICAL FIRE SERVICE CONNECTION

NOT TO SCALE



- NOTES:
1. ALL NON-METALLIC CONDUIT AND FITTINGS SHALL BE ELECTRICAL GRADE, SCHEDULE 40 PVC, AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NFPA 70-1990 AND BE UL LISTED. ONLY GRADE-1 SHALL BE ACCEPTED. ANY PVC CONDUIT NOT HAVING THE PROPER NEMA AND UL MARKINGS WILL NOT BE ACCEPTED. ALL STEEL CONDUITS SHALL CONFORM TO ASTM A750 AND BE RIGID GALVANIZED STEEL. ALL PVC JOINTS MUST BE CEMENTED. STEEL FITTINGS SHALL BE SEALED WITH COMPOUND.
 2. ALL 90 DEGREE SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES. ALL STEEL SWEEPS WITHIN 18\" OF THE SURFACE SHALL BE PROPERLY GROUNDING.
 3. A 10-FOOT HORIZONTAL SECTION OF RIGID GALVANIZED STEEL CONDUIT WILL BE REQUIRED AT EACH SWEEP, UNLESS IN THE OPINION OF THE PSNH DESIGNER, THE SWEEP-PVC JOINT IS NOT SUBJECT TO FAILURE DURING CABLE PULLING.
 4. THE CONDUIT SHALL CROSS PAVED AREAS AT APPROXIMATELY 90 DEGREES.
 5. BACKFILL MAY BE MADE WITH EXCAVATED MATERIAL OR COMPACTABLE, UNLESS MATERIAL IS DEEMED UNSUITABLE BY PSNH. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE THOROUGHLY COMPACTED IN 6-INCH LAYERS.
 6. A SUITABLE PULL STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE PSNH IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
 7. THE ROUTING OF THE CONDUIT AND INSPECTION PRIOR TO BACKFILL WILL BE PROVIDED BY PSNH. INSTALLATION OF THE CONDUIT WILL BE DONE BY THE CONTRACTOR. THE PSNH SUPERVISOR MUST BE NOTIFIED 2 BUSINESS DAYS PRIOR TO BACKFILLING THE TRENCH. IN THE EVENT THAT A CABLE CANNOT BE SUCCESSFULLY PULLED THROUGH THE COMPLETED CONDUIT SYSTEM DUE TO A CONSTRUCTION ERROR, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND REPAIR THE INVOLVED CONDUIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL RESULTING EXPENSES.
 8. NORMAL CONDUIT SIZES FOR PSNH ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY.
 9. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE THE NATIONAL ELECTRIC CODE.
 10. CONDUIT MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4'-FT. INSTALLATIONS DEEPER THAN 4'-FT REQUIRE THE USE OF A TRENCH BOX.

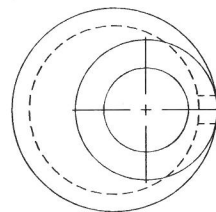
ELECTRICAL & UNDERGROUND UTILITY TRENCH INSTALLATION DETAIL

NOT TO SCALE

UTILITY DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.
MARCH 2018

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

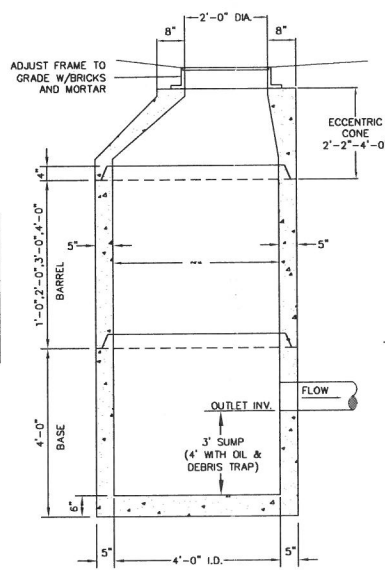
31 Mooney Street, Alton, N.H. 603-875-3948



PLAN VIEW

DRAIN LINE DIAMETER	SUM OF DRAIN LINE DIAMETER	CATCH BASIN DIAMETER
15" TO 18"	LESS THAN 54"	4'
21" TO 27"	LESS THAN 72"	5'
30" TO 33"	LESS THAN 90"	6'
36" & LARGER	GREATER THAN 90"	REFER TO THE STANDARD

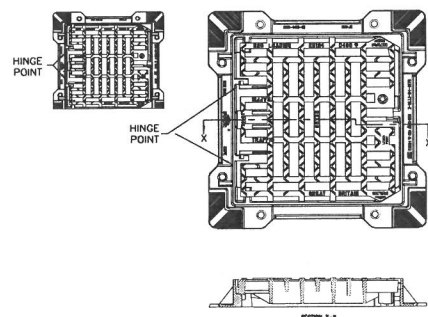
- NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
 2. REINFORCING: SHALL BE PROVIDED FOR H-20 LOADING.
 3. SHIFLAP JOINTS SEALED WITH 1 STRIP OF BUTYL RUBBER SEALANT.
 4. PIPE OPENINGS CAST IN AS REQUIRED.
 5. RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH.
 6. PIPE CONNECTIONS SHALL BE MORTARED.
 7. PRECAST SECTIONS SHALL CONFORM TO ASTM C-478.
 8. SEE SLAB TOP DETAIL FOR STRUCTURES REQUIRING SLAB TOPS, I.E. DOUBLE GRATE AND FRAME STRUCTURES.



SECTION VIEW

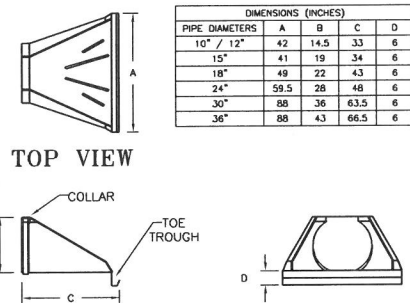
PRE-CAST REINFORCED CATCH BASIN

NOT TO SCALE



24" REXUS DI CB F & GRATE 62114 CB3R

NOT TO SCALE



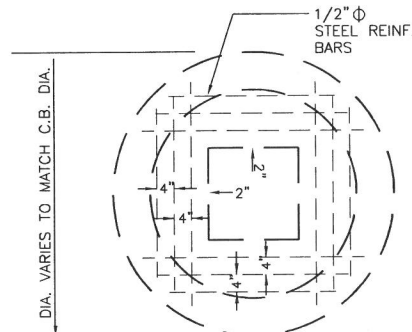
TOP VIEW

SIDE VIEW

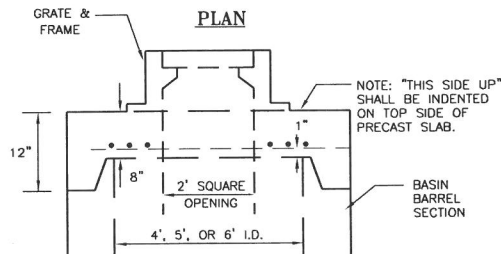
FRONT VIEW

FLAIED END SECTION DETAIL

NOT TO SCALE



PLAN



ELEVATION

- NOTE:
1. SLAB TO BE PLACED IN LIEU OF TAPERED SECTION WHERE PIPE WOULD OTHERWISE ENTER INTO TAPERED SECTION OF THE STRUCTURE AND WHERE PERMITTED.
 2. SLAB TOP MAY BE CASTED WITH MINIMUM OR NO INTERLOCKING CHANNEL. HOWEVER, THE CONTRACTOR MUST ENSURE THE SLAB TOP IS FIRMLY ATTACHED TO THE STRUCTURE.

REINFORCED CONCRETE SLAB COVER

NOT TO SCALE

- INSTALLATION NOTES:
1. ANTI-SEEP COLLARS SHALL BE MADE PLASTIC IF BEING USED WITH PLASTIC PIPE. ANTI-SEEP COLLARS SHALL BE GALVANIZED SHEET STEEL IF BEING USED WITH CORRUGATED METAL PIPE AND SHALL BE POURED CONCRETE IF BEING USED WITH REINFORCED CONCRETE PIPE.
 2. ANTI-SEEP COLLAR SHALL BE WATERPROOF AND HAVE A WATERPROOF CONNECTION TO THE OUTLET PIPE.
 3. A NUMBER OF ANTI-SEEP COLLARS SHALL BE PLACED ALONG THE PIPE IN A SPACING THAT INCREASES THE PIPE LENGTH BY 15%.

SOURCES FOR PLASTIC ANTI-SEEP COLLARS FOR USE WITH PLASTIC PIPE:
1. THE FOLLOWING ARE A FEW MANUFACTURERS OF PLASTIC ANTI-SEEP COLLARS.
COLLARS FROM THESE MANUFACTURERS MAY BE USED WITH BOTH SMOOTH WALLED AND CORRUGATED OUTSIDE WALLED PIPE.

MCRIP MANUFACTURING
16 MESERVE ROAD
DURHAM, NH 03824
PHONE: (603) 868-5176
FAX: (603) 868-2074
E-MAIL: info@renchdom.com

SCHIEB DRAINAGE PRODUCTS
203 SOUTH MONROE STREET
OREGON, MO 64473
PHONE: (660)-446-2343

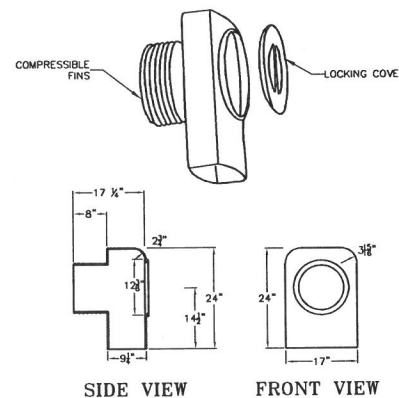
2. IT IS ALSO SUGGESTED THAT LOCAL SUPPLIERS BE CONTACTED TO ENQUIRE ABOUT SUITABLE ANTI-SEEP COLLAR PRODUCTS. IF A POSSIBLE ALTERNATIVE IS FOUND CONTACT THE DESIGN ENGINEER TO ENSURE ITS APPROPRIATENESS AND TO GET APPROVAL FOR ITS USE.

COLLAR DIMENSION TABLE

D	W	H
12	10"	6"
18	10.25"	6"
24	12"	7.5"
30	12"	7.5"

ANTI-SEEP COLLAR DETAIL

NOT TO SCALE



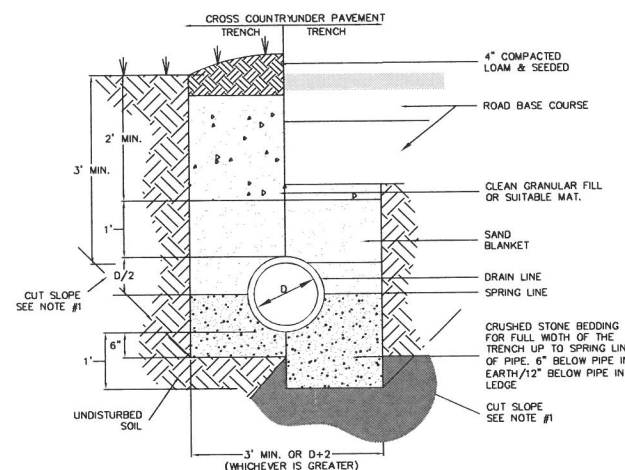
SIDE VIEW

FRONT VIEW

ELIMINATOR CATCH BASIN OIL AND DEBRIS TRAP DETAIL

NOT TO SCALE

- NOTES:
1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM
 2. AVAILABLE IN 8", 10", 12", 15" AND 18" DIAMETERS.



- NOTES:
1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4'-FT. INSTALLATIONS DEEPER THAN 4'-FT REQUIRE THE USE OF A TRENCH BOX.
 2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
 3. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

DRAINAGE PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE

DRAINAGE DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MARCH 2018

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-7

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.



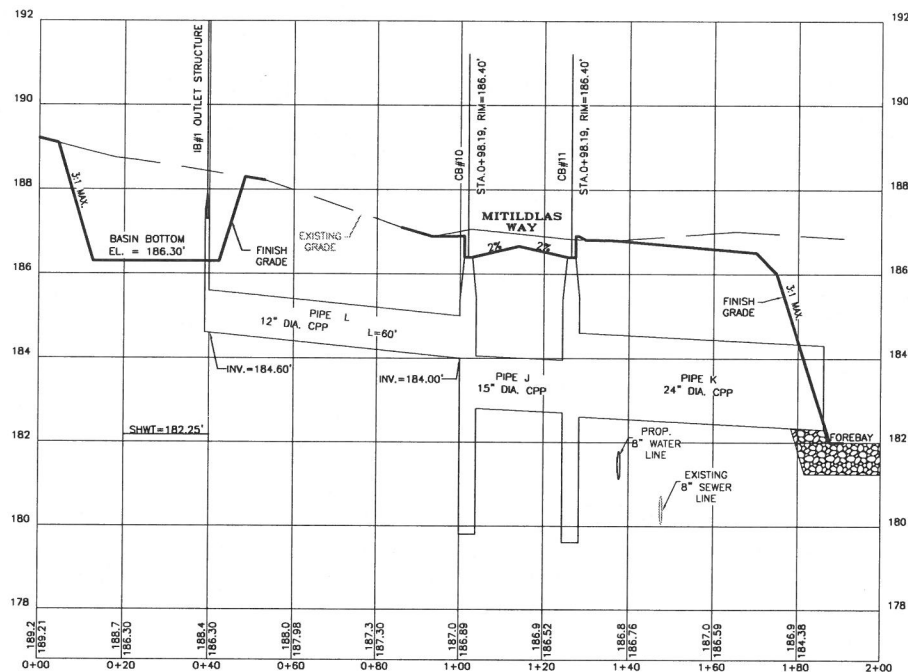
INFILTRATION BASIN:

SPECIFICATIONS:

- DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE INFILTRATION BASIN.
- DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION BASIN.
- AFTER THE BASIN IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
- VEGETATION SHALL BE ESTABLISHED IMMEDIATELY AFTER FINAL GRADING IS COMPLETED.
- CONSTRUCT THE INFILTRATION BASIN TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
- LOAM AND SEED ONLY THE SLOPES OF THE INFILTRATION BASIN AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-11. SEED MIXTURE = A
- DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

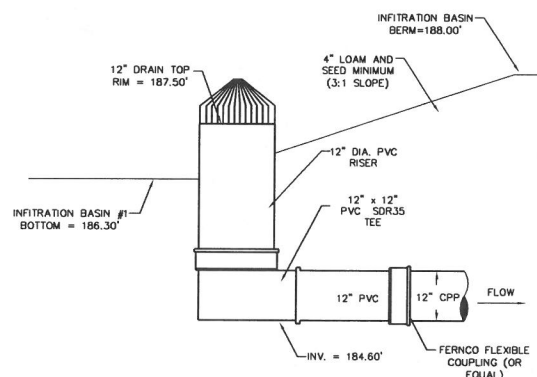
MAINTENANCE REQUIREMENTS:

- INSPECT PRETREATMENT MEASURES (I.E. SEDIMENT FOREBAY(S), HOODED CATCH BASINS, ETC.) AT LEAST TWICE A YEAR AND AFTER EVERY STORM GREATER THAN 2.5 INCHES OF RAIN OVER A 24-HOUR PERIOD.
- INSPECT INFILTRATION SURFACE BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
- INSPECT INFILTRATION SURFACE AFTER ANY RAINFALL EVENT OF 2.5-INCHES OR GREATER IN A 24-HOUR PERIOD.
- REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. REPAIR AREA OF REMOVAL AS NECESSARY TO RESTORE INFILTRATION CAPACITY.
- PERFORM MAINTENANCE AND REHABILITATION BASED ON INSPECTIONS.
- REMOVE DEBRIS (IF ANY) FROM INFILTRATION BASIN INLET BASED ON INSPECTION.
- CONDUCT PERIODIC MOWING OF THE INFILTRATION BASIN SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE INFILTRATION BASIN EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
- IF THE INFILTRATION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL (I.E. PROFESSIONAL ENGINEER, CERTIFIED SOILS SCIENTIST, ETC.) SHALL ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE INFILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE INFILTRATION SURFACE.



INFILTRATION BASIN #1 CROSS SECTION

1" = 20' (HORZ.) & 1" = 2' (VERT.)

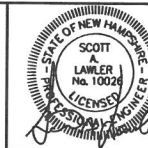
INFILTRATION BASIN #1
OUTLET STANDPIPE DETAIL

NOT TO SCALE

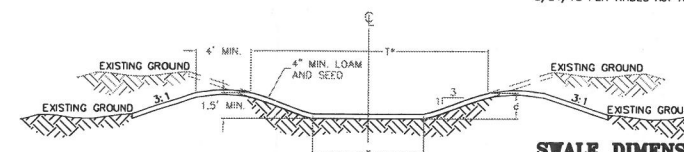
FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



REVISIONS:
5/24/18 PER NHDES Aot RFMI LETTER DATED MAY 21, 2018



SWALE DIMENSION TABLE

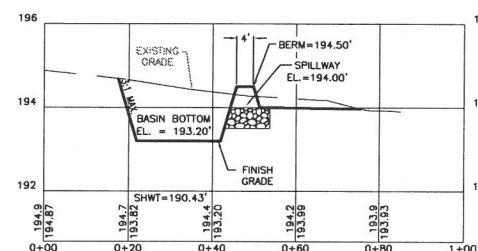
LOCATION	L	Z	T
TREATMENT SWALE 1 DISCHARGE TO IB#1	175'	3'	4'
TREATMENT SWALE 2 DISCHARGE TO IB#2	315'	3'	6.5'
TREATMENT SWALE 2A DISCHARGE TO IB#2	214'	3'	4'
TREATMENT SWALE 3 DISCHARGE TO IB#3	160'	3'	4'

MAINTENANCE NOTES:

- THE SWALE(S) SHALL BE MOWED WITH THE REST OF THE SITE'S LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT THE ENCROACHMENT OF WEEDS AND WOODY VEGETATION. DO NOT MOW GRASS IN SWALE(S) SHORTER THAN 4-INCHES. THIS WILL REDUCE THE SWALES FILTERING ABILITY.
- THE SWALE(S) SHOULD BE FERTILIZED ON AN AS NECESSARY BASIS, TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION COULD RESULT IN THE SWALE(S) BECOMING A SOURCE OF POLLUTION TO THE SURROUNDING WETLAND AREAS.
- THE SWALE(S) SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

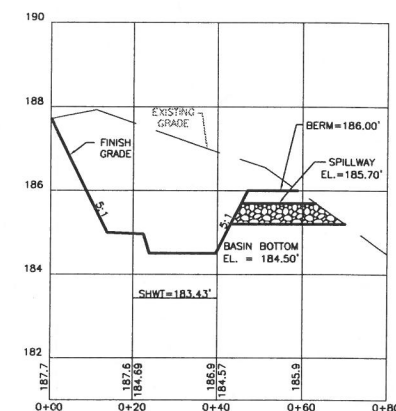
VEGETATED TREATMENT SWALE DETAIL

NOT TO SCALE



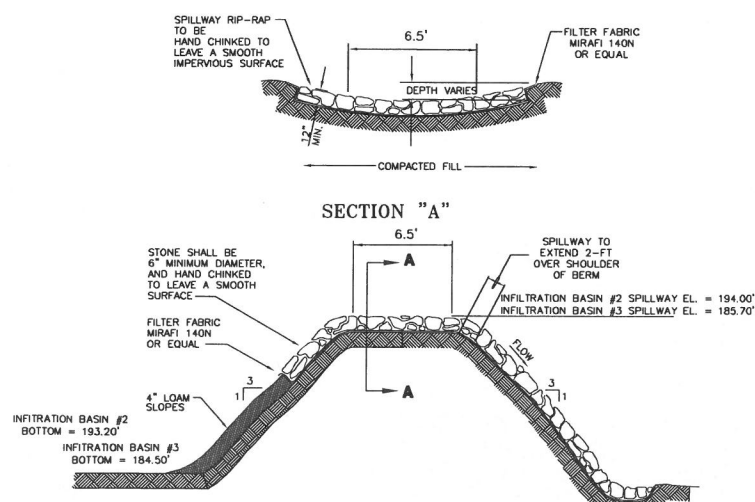
INFILTRATION BASIN #2 CROSS SECTION

1" = 20' (HORZ.) & 1" = 2' (VERT.)



INFILTRATION BASIN #3 CROSS SECTION

1" = 20' (HORZ.) & 1" = 2' (VERT.)



SPILLWAY DETAIL FOR INFILTRATION BASIN #2 AND #3

INFILTRATION BASIN
& TREATMENT SWALE DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MARCH 2018

LAND SURVEYORS

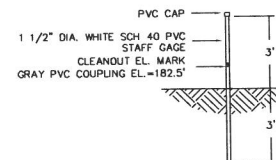


CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



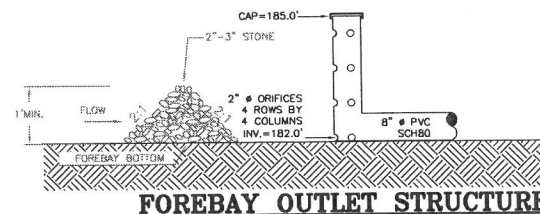
REVISIONS:
5/24/18 PER NHDES A&T RFLM LETTER DATED MAY 21, 2018



SEDIMENT FOREBAY GAUGE DETAIL
NOT TO SCALE
NOTES:
1. STAFF GAUGE TO BE SCHEDULE 40 WHITE PVC DRIVEN OR PLACED IN GROUND A MINIMUM 3'-FT.
2. CLEANOUT MARK ON STAFF TO BE GRAY PVC COUPLING SET 6-INCHES FROM BOTTOM OF BASIN.

SEDIMENT FOREBAY:

- SPECIFICATIONS:**
- CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
 - LOAM AND SEED THE SLOPES AND BOTTOM OF THE SEDIMENT FOREBAY AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-11.
- MAINTENANCE REQUIREMENTS:**
- INSPECT SEDIMENT FOREBAY BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE SEDIMENT FOREBAY EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
 - REMOVE DEBRIS FROM THE OUTLET STRUCTURE OF THE SEDIMENT FOREBAY (I.E. STONE CHECK DAM) AT LEAST ONCE ANNUALLY.
 - REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. WHEN SEDIMENT HAS REACHED THE RED MARK ON THE SEDIMENT STAFF GAUGE INSTALLED IN THE FOREBAY, REMOVE SEDIMENT AND DISPOSE OF IT OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- ELEVATION OF GRAY PVC COUPLING CLEANOUT MARK ON STAFF GAUGE = 182.5'



FOREBAY OUTLET STRUCTURE

GRAVEL WETLAND:

- SPECIFICATIONS:**
- CONSTRUCT THE GRAVEL WETLAND TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION. OVER EXCAVATE THE 3/4-INCH STONE MEDIA BED AS DEPICTED TO ACCOMMODATE THE 24-INCHES OF STONE AND 3-INCHES OF 3/8" PEA GRAVEL AS SHOWN IN THE CROSS-SECTION.
 - INSTALL THE WETLAND SOIL IN AN 8-INCH LAYER COMPRISED THE SPECIFICATION BELOW OF:
- WETLAND SOILS MIX:**
- COMPOST = 25%
 - LOAM = 25%
 - PEAT MOSS = 25%
 - COARSE SAND (SEPTIC) = 25%
- SEED THE BOTTOM OF THE GRAVEL WETLAND BASIN AS PRESCRIBED NOTES FOUND ON SHEET C-11. SEED MIXTURE = A.
 - LOAM AND SEED ONLY THE SLOPES OF THE GRAVEL WETLAND AS PRESCRIBED NOTES FOUND ON SHEET C-11. SEED MIXTURE = B.
 - PLANT THE BOTTOM OF THE GRAVEL WETLAND AS PRESCRIBED ON SHEET C-11.

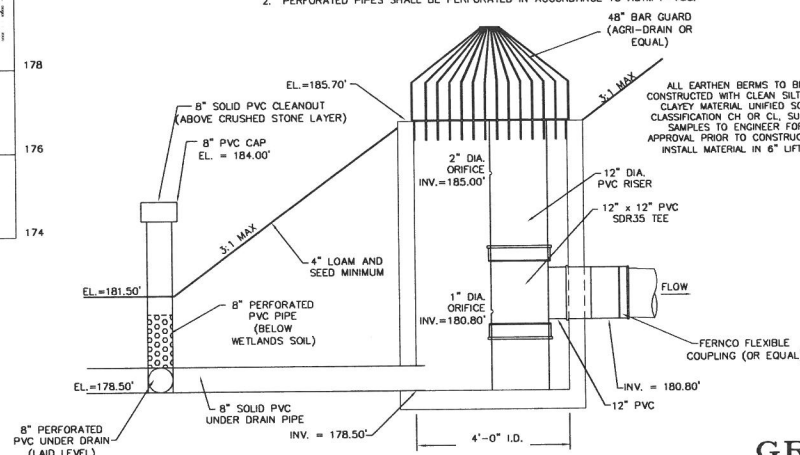
RECOMMENDED SEEDING RATES:
SUPPLEMENTAL LLB/6,000 SQ. FT. OR STRAIGHT LLB/3,000 SQ.FT.

- MAINTENANCE REQUIREMENTS:**
- INSPECT PRETREATMENT MEASURES (I.E. SEDIMENT FOREBAY(S), HOODED CATCH BASINS, ETC.) BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - INSPECT GRAVEL WETLAND SURFACE BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 - INSPECT GRAVEL WETLAND AFTER ANY RAINFALL EVENT OF 2.5-INCHES IN A 24-HOUR PERIOD OR GREATER.
 - REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. REPAIR AREA OF REMOVAL AS NECESSARY.
 - PERFORM MAINTENANCE AND REHABILITATION BASED ON INSPECTIONS.
 - REMOVE DEBRIS (IF ANY) FROM INFILTRATION BASIN INLET BASED ON INSPECTION.
 - CONDUCT PERIODIC MOWING OF THE INFILTRATION BASIN SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE INFILTRATION BASIN EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
 - REMOVE PLANT MATERIAL THAT DIES BACK IN THE FALL FROM THE GRAVEL WETLAND SURFACE (I.E. GRASSES, REEDS, ETC.). ONLY REMOVE THE ABOVE GROUND GROWTH THAT HAS DIED BACK. LEAVE THE ROOT MASS INTACT.
 - IF THE GRAVEL WETLAND DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL (I.E. PROFESSIONAL ENGINEER, CERTIFIED WETLAND OR SOILS SCIENTIST OR LANDSCAPE ARCHITECT, ETC.) SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE STONE BED AND PIPE MANIFOLD.

GRAVEL WETLANDS INLET STRUCTURE DETAIL

SCALE: NOT TO SCALE

- NOTES:**
- 8" PERFORATED PIPE SHALL BE SUPPLIED WITH 4 ROWS OF 1" TO 2" DIAMETER HOLES EVERY 3 INCHES.
 - PERFORATED PIPES SHALL BE PERFORATED IN ACCORDANCE TO ASTM F-758.



GRAVEL WETLANDS OUTLET STRUCTURE DETAIL

SCALE: NOT TO SCALE

GRAVEL WETLAND DETAILS
TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC
MARCH 2018

PROPOSED GRAVEL WETLAND BASIN DRAINAGE STRUCTURES

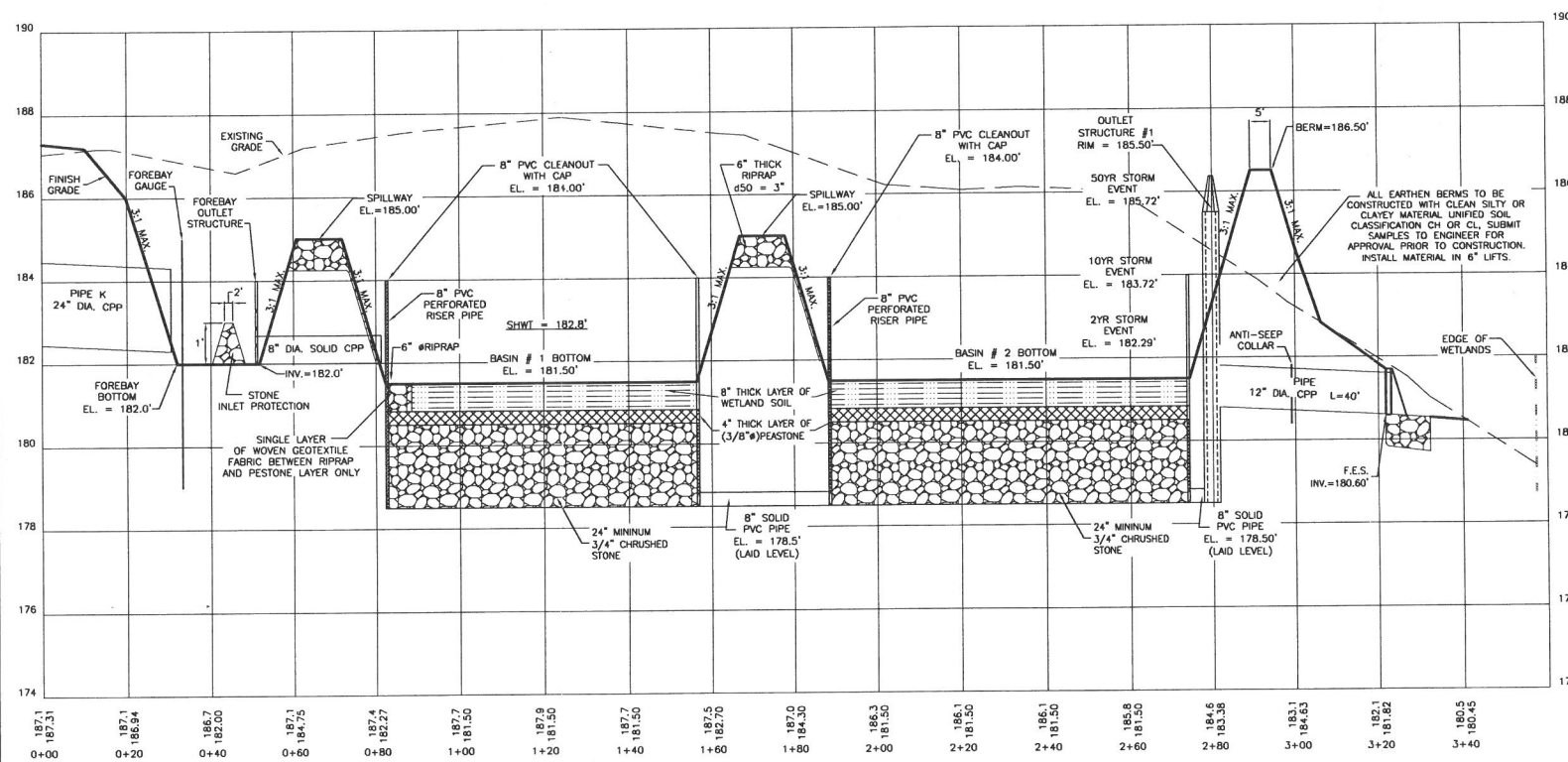
- PROP. 8" PERF. PVC UNDER DRAIN INV. = 178.50' (LAID LEVEL)
- PROP. 8" PERF. PVC RISER GRADE = 184.0'
- PROP. 8" PERF. PVC TO ELEV. 304.33' & SOLID PVC ABOVE CAP = 184.0'
- PROP. 8" SOLID PVC INV. = 178.51' (LAID LEVEL)
- PROP. 4" CONCRETE OUTLET STRUCTURE TOP EL. = 185.70'

CONTACT INFORMATION FOR AGRI-DRAIN CORPORATION:

- THE BAR GUARD SCREEN ON TOP OF THE INLET CONTROL STRUCTURE IS AGRI-DRAIN CORPORATION PRODUCTS (OR EQUAL). AGRI-DRAIN CORPORATION CAN BE CONTACTED AT THE FOLLOWING ADDRESS: TELEPHONE NUMBER, FAX NUMBER AND EMAIL ACCOUNT: AGRI-DRAIN CORPORATION P.O. BOX 458 1462 340TH STREET ADAIR, IOWA 50002 PHONE: 1-800-232-4742 FAX: 1-800-282-3353 EMAIL: INFO@AGRIDRAIN.COM WEB: WWW.AGRIDRAIN.COM
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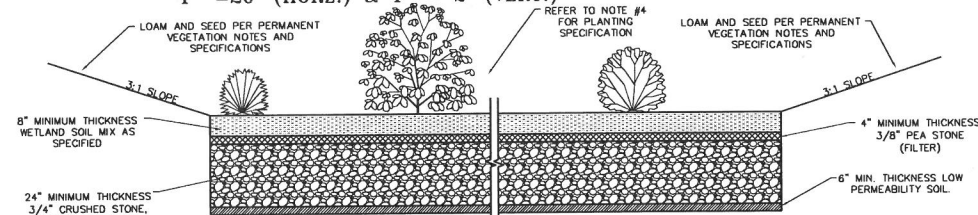
GRAVEL WETLANDS BASIN PLAN

1" = 20'



GRAVEL WETLANDS BASIN CROSS SECTION

1" = 20' (HORZ.) & 1" = 2' (VERT.)



GRAVEL WETLAND MATERIALS CROSS-SECTION

NOT TO SCALE

LOW PERMEABILITY MATERIAL GRADATION:	
SIEVE SIZE	PASSING
#4	95-100
#10	60-90
#100	40-60
#200	25-45

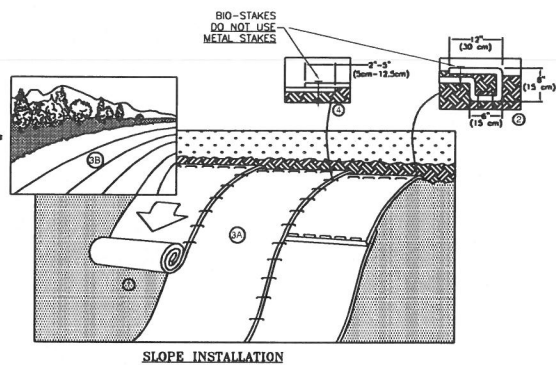
FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 603-335-3948

C-9

NORTH AMERICAN GREEN
EROSION CONTROL PRODUCTS
Guaranteed SOLUTIONS
14840 HIGHWAY 41 NORTH
ENNSVILLE, IN 47725
800-772-2040
www.nagreen.com



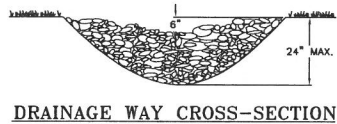
SLOPE INSTALLATION

- MAINTENANCE REQUIREMENTS:**
- ALL BLANKET AND MATS SHALL BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.
 - ANY FAILURE SHALL BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEED, AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED.
- CONSTRUCTION SPECIFICATIONS:**
- MANUFACTURE'S INSTALLATION INSTRUCTIONS:
 - PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
 - NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF BIO-STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF BIO-STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
 - ROLL THE RECP's (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING BIO-STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, BIO-STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 - THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
 - CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.
 - NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
 - SITE PREPARATION:
 - PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL. GRADE AND SHAPE AREA IF INSTALLATION.
 - REMOVE ALL ROCKS, CLOUDS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
 - PREPARE SEEDING BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
 - INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.
 - SEEDING:
 - SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATIONS. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEED.
 - WHEN SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

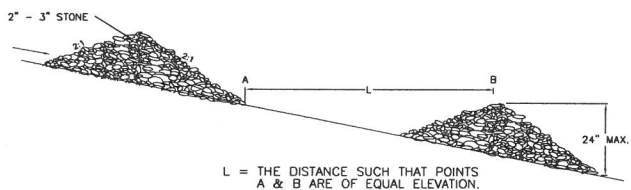
TEMPORARY EROSION CONTROL BioNet SC150BN BIODEGRADABLE DETAIL

NOT TO SCALE

SPACING BETWEEN CHECK DAMS	
SLOPE (FT/FT)	LENGTH (FT)
0.020	75
0.030	50
0.040	37
0.050	30
0.060	19
0.100	15
0.120	13
0.150	10



DRAINAGE WAY CROSS-SECTION



SPACING BETWEEN STONE CHECK DAMS

- CONSTRUCTION SPECIFICATIONS:**
- STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
 - CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION, AIR AND WATER POLLUTION WILL BE MINIMIZED.
 - STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

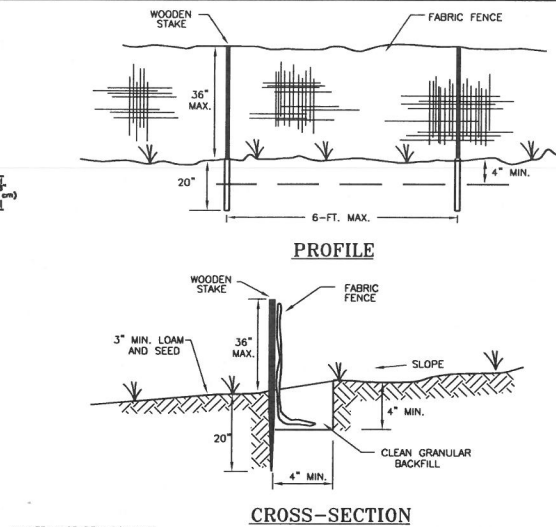
- MAINTENANCE NOTES:**
- TEMPORARY GRADE STABILIZATION STRUCTURES SHALL BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.
 - PARTICULAR ATTENTION SHALL BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.
 - WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEED, AND MULCHED.
 - SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE.

STONE CHECK DAM INSTALLATION DETAIL

NOT TO SCALE

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948



CROSS-SECTION

- MAINTENANCE REQUIREMENTS:**
- FENCES SHALL BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALLS.
 - SEDIMENT DEPOSITION SHALL BE REMOVED, AT A MINIMUM, WHEN DEPOSITION ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FENCE, AND MOVED TO AN APPROPRIATE LOCATION SO THE SEDIMENT IS NOT READILY TRANSPORTED BACK TOWARD THE SILT FENCE.
 - SILT FENCES SHALL BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.
 - SHALL THE FABRIC ON A SILT FENCE BECOME OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
 - ANY SEDIMENT DEPOSITION REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE PREPARED AND SEED.
 - IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXISTING BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT BARRIERS UPHILL OR CONSIDER REPLACING THEM.
 - SILT FENCES HAVE A USEFUL LIFE OF ONE SEASON, ON LONGER CONSTRUCTION PROJECTS, SILT FENCE SHALL BE REPAIRED PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS.
- CONSTRUCTION SPECIFICATIONS:**
- FENCES SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE FENCE. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE ON THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
 - THE MAXIMUM CONTRIBUTING DRAINAGE AREA ABOVE THE FENCE SHALL BE LESS THAN 1 ACRE PER 100 LINEAR FEET OF FENCE.
 - THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHALL BE 100 FEET.
 - THE MAXIMUM SLOPE ABOVE THE FENCE SHALL BE 2:1.
 - FENCES SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, AND
 - THE ENDS OF THE FENCE SHALL BE FLARED UPSLOPE.
 - THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 4 INCHES IN DEPTH AND INCHES IN WIDTH IN A TRENCH EXCAVATED INTO THE GROUND, OR IF SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, THE BASE OF THE FABRIC SHALL BE EMBEDDED WITH A MINIMUM THICKNESS OF 8 INCHES OF 3/4-INCH STONE.
 - THE SOIL SHALL BE COMPACTED OVER THE EMBEDDED FABRIC.
 - SUPPORT POSTS SHALL BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SPACING OF 6 FEET.
 - ADJOINING SECTIONS OF THE FENCE SHALL BE OVERLAPPED BY A MINIMUM OF 6 INCHES (24 INCHES IS PREFERRED), FOLDED AND STAPLED TO A SUPPORT POST. IF METAL POSTS ARE USED, FABRIC SHALL BE WIRE-TIED DIRECTLY TO THE POSTS WITH THREE DIAGONAL TIES.
 - SILT FENCING SHALL NOT BE STAPLED OR NAILED TO TREES.
 - THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
 - THE FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
 - POSTS FOR SILT FENCES SHALL BE EITHER 4-INCH DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM. POSTS SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE FABRIC.
 - THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES AS HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
 - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL OUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MINIMUM 8-INCH OVERLAP, AND SECURELY SEALED.
 - A MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
 - POST SPACING SHALL NOT EXCEED 6 FEET.
 - A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UP GRADIENT FROM THE BARRIER.
 - THE STANDARD STRENGTH OF FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE POST, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
 - THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
 - SILT FENCE MAY BE INSTALLED BY "SLICING" USING MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PROCEDURE. THE SLICING METHOD USES AN IMPLEMENT TOWED BEHIND A TRACTOR TO "FLOW" OR SLICE THE SILT FENCE MATERIAL INTO THE SOIL. THE SLICING METHOD MANUALLY DISRUPTS THE SOIL UPWARD AND SLIGHTLY DISPLACES THE SOIL, MAINTAINING THE SOIL'S PROFILE AND CREATING AN OPTIMAL CONDITION FOR SUBSEQUENT MECHANICAL COMPACTION.
 - SILT FENCES SHALL BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND.
 - THE ENDS OF THE FENCE SHALL BE TURNED UPHILL.
 - SILT FENCES PLACED AT THE TOE OF A SLOPE SHALL BE SET AT LEAST 8 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW FLOODING AND TO ALLOW FOR MAINTENANCE ACCESS WITHOUT DISTURBING THE SLOPE.
 - SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SILTATION CONTROL FENCE DETAIL

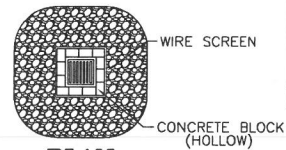
NOT TO SCALE

TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

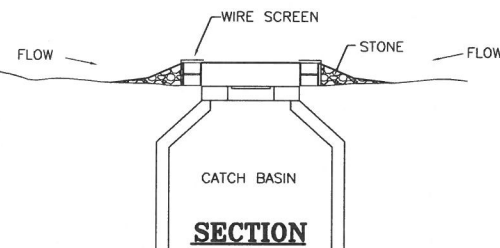
SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU OR 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYE GRASS	40 LBS.	1.0 LB.	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYE GRASS	30 LBS.	0.7 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.

SOURCES:

- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 4-1
- MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)



PLAN



SECTION

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER

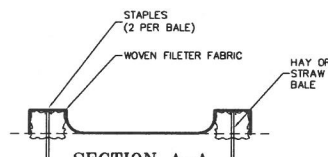
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CONSTRUCTION SPECIFICATIONS

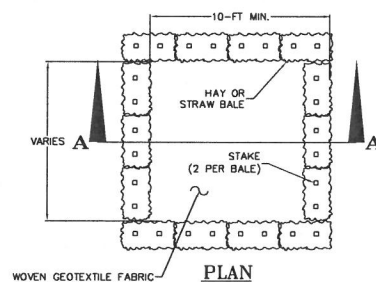
- PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDE IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4-INCH, 8-INCH AND 12-INCH WIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH AND NO GREATER THAN 24 INCHES HIGH.
- WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED.
- STONE SHALL BE PAILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN IN FIGURE 16.7. STONE GRADATION SHALL BE WELL GRADED WITH THE MAXIMUM STONE SIZE OF 8 INCHES AND MINIMUM STONE SIZE OF 1 INCH.
- IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.

MAINTENANCE

- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



SECTION A-A



PLAN

CONSTRUCTION SPECIFICATIONS:

- THE DE-WATERING AREA WILL BE CONSTRUCTED BEFORE ANY PUMPING OCCURS AT THE SITE.
- TEMPORARY DE-WATERING AREA TYPE, ABOVE GRADE, WILL BE CONSTRUCTED AS SHOWN ABOVE, WITH A RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 20-FT.
- THE DE-WATERING AREA WILL BE LOCATED AS SHOWN OR AS DIRECTED BY THE ENVIRONMENTAL CONSULTANT.
- GEOTEXTILE LINING WILL BE FREE OF TEARS, OR OTHER DEFECTS THAT COMPROMISE THE DURABILITY OF THE MATERIAL.

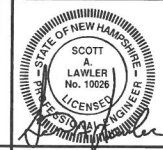
MAINTENANCE NOTES:

- THE DE-WATERING AREA(S) WILL BE INSPECTED DAILY TO ENSURE THAT ALL SEDIMENT IS BEING DISCHARGED INTO THE HAYBALE DAM AREA, NO TEARS ARE PRESENT AND TO IDENTIFY WHEN SEDIMENT NEED OT BE REMOVED.
- THE DE-WATERING AREA(S) WILL BE CLEANED OUT ONCE THE AREA IS FILLED TO 75 PERCENT OF ITS HOLDING CAPACITY.
- ONCE THE HOLDING CAPACITY HAS BEEN REACHED THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATION.
- THE GEOTEXTILE LINING WILL BE REPLACED IF TEARS OCCUR DURING REMOVAL OF SEDIMENT FROM THE DE-WATERING AREA.

DE-WATERING AREA DETAIL

NOT TO SCALE

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



REVISIONS:
5/24/18 PER NHDES Aot RFMI LETTER DATED MAY 21, 2018

TEMPORARY VEGETATION:

SITE PREPARATION:

- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
- GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
- RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
- ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDING PREPARATION:

- STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
- APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIME MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

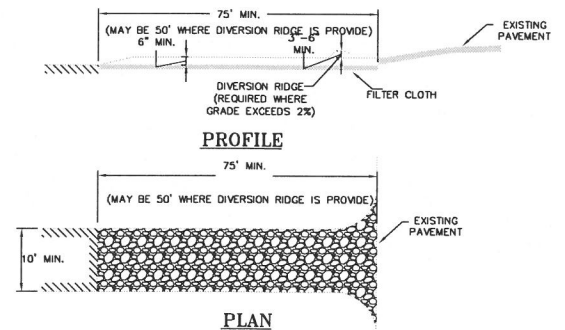
FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)*
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

SEEDING:

- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
- TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
- AREAS SEED BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

MAINTENANCE REQUIREMENTS:

- TEMPORARY SEEDING SHALL BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHALL BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
- BASED ON INSPECTION, AREAS SHALL BE RESEED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED.
- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.



PROFILE

PLAN

TEMPORARY CONSTRUCTION EXIT

NOT TO SCALE

MAINTENANCE REQUIREMENTS:

- WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHALL THEN BE RECONSTRUCTED.
- THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
- WHEN WHEEL WASHING IS REQUIRED, IT SHALL BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

CONSTRUCTION SPECIFICATIONS:

- THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
- THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
- THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
- THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY.
- THE PAD SHALL BE AT LEAST 6 INCHES THICK.
- THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
- THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
- NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

TEMPORARY EROSION AND SEDIMENTATION CONTROL

TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MARCH 2018

LAND SURVEYORS

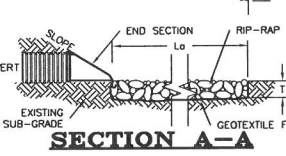
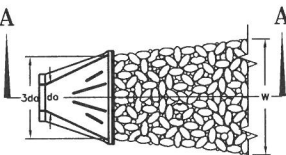
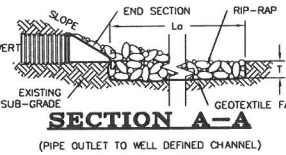
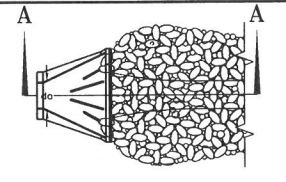
RIP-RAP GRADATION

d50 = 3"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)	
100	5	TO 6
85	4	TO 5
50	3	TO 5
15	1	TO 2

d50 = 4"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)	
100	6	TO 8
85	5	TO 7
50	4	TO 6
15	1	TO 2

APRON DIMENSION TABLE

OUTLET PROT #	PIPE OUTLET	W ₀	W	L ₀	T	d50
GRAVEL WETLAND	12" CPP	3'	15.3'	10.8'	9"	3"
PIPE K	24" CPP	6'	13.1'	18'	9"	3"



- NOTES:
- ALL PIPE CULVERTS SHALL HAVE END SECTIONS OR HEADWALLS. END SECTION MATERIAL AND MANUFACTURER SHALL MATCH THAT OF THE PIPE CULVERT.
 - THE LARGEST RIP-RAP SIZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND SIMPLICITY.
 - APRON LENGTHS, WIDTHS AND THICKNESSES HAVE BEEN ROUNDED UP TO WHOLE NUMBERS FOR EASE OF CONSTRUCTION.

- CONSTRUCTION SPECIFICATIONS:
- PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
 - MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
 - THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
 - GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF 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 (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
 - 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.
 - RIP-RAP SIZE CHOSEN FOR THE WORST CASE OF ALL OUTLETS. ALL RIP-RAP USED FOR PIPE OUTLET PROTECTION WILL HAVE THE SAME GRADATION AND THICKNESS.

- MAINTENANCE NOTES:
- OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO THE RIP-RAP SHALL BE REPAIRED IMMEDIATELY.
 - THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING.
 - THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

PIPE OUTLET PROTECTION DETAIL

DUST CONTROL PRACTICES:

- APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.
- WATER APPLICATION:
 - MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
 - AVOID EXCESSIVE APPLICATION OF WATER THAT WOULD RESULT IN MOBILIZING SEDIMENT AND SUBSEQUENT DEPOSITION IN NATURAL WATERBODIES.
- STONE APPLICATION:
 - COVER SURFACE WITH CRUSHED OR COARSE GRAVEL.
 - IN AREAS NEAR WATERWAYS USE ONLY CHEMICALLY STABILIZED OR WASHED AGGREGATE.
- REFER TO "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" FOR OTHER ALLOWABLE DUST CONTROL PRACTICES (E.G. COMMERCIAL TACKIFIERS OR CHEMICAL TREATMENTS SUCH AS CALCIUM CHLORIDE, ETC.)

- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
- PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
- STOCKPILES SHALL BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NHSM VOL. 3 TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
- IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
- PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.

- PROTECTION OF INACTIVE STOCKPILES:
- INACTIVE SOIL STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (E.G. SILT FENCE, ETC.) AT ALL TIMES.
 - INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHALL BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (E.G. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHALL ALSO BE COVERED.

- PROTECTION OF ACTIVE STOCKPILES:
- ALL STOCKPILES SHALL BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (E.G. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHALL BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHALL BE INSPECTED AT THE END OF EACH WORKING DAY.
 - WHEN A STORM IS PREDICTED, STOCKPILES SHALL BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

FILE NO. 134
PLAN NO. C-2379-S2
DWG. NO. 16231/S-8
F.B. NO.

31 Mooney Street, Alton, N.H. 603-875-3948

PERMANENT VEGETATION:

SPECIFICATIONS:

- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
- GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
- RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
- ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDBED PREPARATION:

- WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHALL BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY AND SILT SOILS SHALL BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
- REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
- INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
- WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
- IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*

*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)*

*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

SEEDING:

- INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.
- WHERE FEASIBLE EXCEPT WHERE EITHER CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
- SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHALL BE COMPLETED 45 DAYS PRIOR TO FIRST KILLING FROST. WHEN CROWN VETCH IS SEEDING IN LATE SUMMER AT LEAST 35% OF THE SEED SHALL BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSM, VOL. 3, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- AREAS SEEDING BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSM, VOL. 3.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO SEPTEMBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

HYDROSEEDING:

- WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
- SLOPES MUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTALLY BY 1 FOOT VERTICALLY).
- LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
- SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

MAINTENANCE REQUIREMENTS:

- PERMANENT SEEDING AREAS SHALL BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTION, MAINTENANCE, AND CORRECTIVE ACTIONS SHALL CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
- SEEDING AREAS SHALL BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER.
- BASED ON INSPECTION, AREAS SHALL BE RESEED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.
- AT A MINIMUM 85% OF THE SOIL SURFACE SHALL BE COVERED BY VEGETATION.
- IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEED, WITH OTHER TEMPORARY MEASURES (E.G. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./1,000-SF
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		RED TOP	2	0.05
		TOTAL	42	0.95
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		RED TOP	2	0.05
		TOTAL	42	0.95
LIGHTLY USED PARKING LOTS, OOD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		RED TOP	2	0.05
		TOTAL	42	0.95
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF)	F	CREeping RED FESCUE	50	1.15
		KENTUCKY BLUEGRASS	50	1.15
		TOTAL	100	2.30

SOURCES:

- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3
- MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)



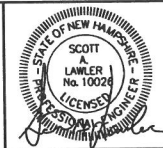
GENERAL CONSTRUCTION PHASING:

- STABILIZATION: A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
 - A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
 IN AREAS TO BE PAVED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED.
- TEMPORARY STABILIZATION: ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
- PERMANENT STABILIZATION: ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
- MAXIMUM AREA OF DISTURBANCE: THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREA ARE STABILIZED.
- ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION. FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED. EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CONSTRUCTION AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN DEPICTED ON SHEET C-3.
- ALL EROSION AND SEDIMENT CONTROL: CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET C-4.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
- STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".
- SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SUBSIDENCE OR OTHER RELATED DAMAGE.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
- IN THE NHSM, VOL. 3, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO SEPTEMBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.
- IN GENERAL, FILLS SHALL BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHALL REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.
- ANY AND ALL FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (E.G. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
- THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NHSM, VOL. 3.
- ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
- USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHALL BE REVISED TO PROPERLY MANAGE THE CONDITION.
- STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
- THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 3800 RELATIVE TO INVASIVE SPECIES.
- LOT DEVELOPMENT, OTHER THAN 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.

ABOVE NOTES EXCERPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NHSM, VOL. 3)

CIVIL ENGINEERS

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



REVISIONS:
5/24/18 PER NHDES A6T RFM LETTER DATED MAY 21, 2018

PROJECT SPECIFIC CONSTRUCTION PHASING:

- REFER TO THE "GENERAL CONSTRUCTION PHASING" NOTES PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING PHASING: THE "GENERAL CONSTRUCTION PHASING" NOTES APPLY TO THE OVERALL CONSTRUCTION AND SHALL BE ADHERED TO.
- INSTALL ALL TEMPORARY SEDIMENT CONTROL BARRIERS (E.G. SILT FENCE, EROSION CONTROL MIX BERM, STONE CHECK DAMS, ETC.) AROUND THE OUTER PERIMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET C-4 PRIOR TO EARTH MOVING OPERATIONS.
- INSTALL ORANGE SNOWFENCE AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.
- INSTALL A TEMPORARY CONSTRUCTION EXIT AT THE LOCATION OF THE PROPOSED DRIVEWAY CONNECTION TO FLAGG ROAD. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXIT DETAIL.
- STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILE PRACTICES". MAINTAIN THE STOCKPILES AS DIRECTED IN THE "SOIL STOCKPILE PRACTICES".
- PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE GRAVEL WETLAND AND INFILTRATION BASIN AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE INFILTRATION BASIN DETAILS SHOWN ON SHEET C-4.
- PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE INFILTRATION BASIN AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE INFILTRATION BASIN DETAILS SHOWN ON SHEET C-4.
- CONSTRUCT THE GRAVEL WETLAND BASIN, SEDIMENT FOREBAY AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS.
- IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
- PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING AND PARKING LOT AREAS. INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY.
- AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.).
- INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (E.G. PIPE CULVERTS) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-3 AND C-6. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING.
- CONSTRUCT THE INFILTRATION BASINS AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS AND TEMPORARY SEDIMENT CONTROL BARRIER DEPICTED ON SHEET C-3.
- ALL CUT AND FILL SLOPES AND LAWN AREAS NOT TO BE PAVED SHALL BE LOAMED AND SEED FOR PERMANENT VEGETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VEGETATION PRACTICES" WITHIN 3 DAYS OF CONSTRUCTION.
- INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PAVED AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.
- THE PAVED AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.
- INSTALL PAVEMENT SURFACES AS SOON AS POSSIBLE AFTER THE INSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL. IN ORDER TO LIMIT THE SOIL EROSION AND POLLUTION OF THE GRAVEL MATERIALS WITH ORGANIC MATERIALS, IN NO CASE SHALL AREAS TO BE PAVED BE LEFT UNPROTECTED THROUGHOUT THE WINTER MONTHS.
- ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE. IN NO CASE SHALL ANY DISTURBED AREA BE LEFT UN-STABILIZED FOR LONGER THAN 21 DAYS. IF NECESSARY TEMPORARY STABILIZATION MEASURES AS DISCUSSED IN THE "GENERAL CONSTRUCTION PHASING NOTES" AND NHSM, VOL. 3 SHOULD BE EMPLOYED.
- DURING CONSTRUCTION OF THE TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE INSPECTED WEEKLY, AFTER EVERY 1/2 INCH OF RAINFALL, AND ANNUALLY.
- EXCESS SEDIMENT SHOULD BE REMOVED FROM TEMPORARY SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES WHEN IT REACHES PRESCRIBED THRESHOLDS DISCUSSED IN THE DETAILS FOR EACH PRACTICE.
- ALL DAMAGED TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE REPAIRED OR REPLACED IMMEDIATELY UPON NOTICE.
- SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE. PROJECT COMPLETION AND STABILIZATION.
- UPON PROJECT COMPLETION, ONCE THE SITE IS DEEMED STABILIZED (VEGETATION IS GERMINATED), THE TEMPORARY SEDIMENT CONTROL BARRIERS AND EROSION CONTROL PRACTICES SHALL BE REMOVED. ANY DISTURBANCE CREATED DURING REMOVAL SHALL BE REPAIRED IN AN APPROPRIATE MANNER.
- ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE SLOPE AND THE SEDIMENT FOREBAYS TO THE INFILTRATION BASIN.

PERMANENT EROSION AND SEDIMENTATION CONTROL

TAX MAP 259, LOT 38
FLAGG ROAD
ROCHESTER, NH
PREPARED FOR:
119 FLAGG ROAD
DEVELOPMENT, LLC.

MAY 2016

2 Continental Blvd., Rochester, N.H. 603-335-3948

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NORWAY PLAINS ASSOCIATES, INC.