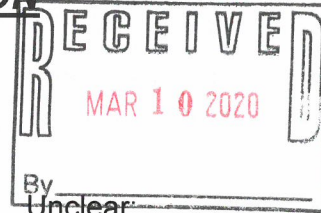




MAJOR SUBDIVISION APPLICATION

(a total of four or more lots)

City of Rochester, New Hampshire



Date: 03/10/20

Is a conditional needed? Yes: ☒ No: ☐ Unclear: ☐
(If so, we encourage you to submit an application as soon as possible.)

Property information

Tax map #: 110; Lot #'s: 10, 10-2 thru 10-18; Zoning district: Residential-1 (R1)

Property address/location: Eastern Avenue

Name of project (if applicable): Freedom Drive Subdivision

Size of site: 17.16 acres; Overlay zoning district(s)? Conservation Overlay

Property owner

Name (include name of individual): Arthur Taylor LLC

Mailing address: 479 Tovar Drive; San Jose, CA 95123

Telephone #: Email:

Applicant/developer (if different from property owner)

Name (include name of individual): Golden Oaks Development, LLC

Mailing address: 35 Jenkins Court; Lee, NH 03861

Telephone #: (603) 828-1151 Email: tports@comcast.net

Engineer/surveyor

Name (include name of individual): Norway Plains Associates, Inc. c/o Scott Lawler, PE

Mailing address: PO Box 249; Rochester, NH 03866-0249

Telephone #: (603) 335-948 Fax #:

Email address: slawler@norwayplains.com Professional license #: PE 10026

Proposed project

Number of proposed lots: 16 house lots & 1 open space lot; estimated length of new roads: 1,100 feet

Number of cubic yard of earth being removed from the site? Less than 500 cy

City water? yes ☒ no ☐; How far is city water from the site? On Eastern Ave

City sewer? yes ☒ no ☐; How far is city sewer from the site? On Eastern Ave

If city water, what are the est. total gal. per day? 7,200; Are there pertinent covenants? n/a

Where will stormwater be discharged? Infiltration Basins and Bioretention Rain Gardens

Wetlands: Is any fill proposed? Yes ; area to be filled: 4,085 sf ; buffer impact? x

Comments

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

Submission of application

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

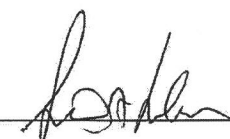
I (we) hereby submit this Subdivision application to the City of Rochester Planning Board pursuant to the City of Rochester Subdivision Regulations and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation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

Signature of property owner: _____

Date: _____

Signature of applicant/developer: 

Date: 3-6-20

Signature of agent: 

Date: 03-06-2020

Authorization to enter subject property

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

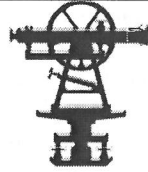
Signature of property owner: _____

Date: _____

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
Phone (603) 335-3948 / (800) 479-3948
slawler@norwayplains.com



P. O. Box 268
31 Mooney St.
Alton, NH 3809
www.norwayplains.com
Phone & Fax (603) 875-3948
rtetreault@norwayplains.com

March 9, 2020

Seth Creighton, Chief Planner
Department of Planning and Development
Second Floor, City Hall
31 Wakefield Street
Rochester, NH 03867-1917

Re: Proposed Residential Subdivision – Freedom Drive - Tax Map 110, Lots 10, 10-2 through 10-18.

Dear Mr. Creighton,

On behalf of the Golden Oaks Development, LLC, Norway Plains Associates, Inc. is pleased to submit a Subdivision Application for a 17-lot residential subdivision. Golden Oaks Development, LLC have a purchase and sales agreement with the owner of the parcels located off Eastern Avenue identified by the City of Rochester assessors as Tax Map 110, Lot 10, 10-2 through 10-18 with a total area of 17.16 acres. The parcels are located in the Residential 1 (R1) Zoning District.

The proposed project is to replicate a residential subdivision approved by the Rochester Planning Board in 2007 for Arthur Taylor. The original subdivision approval created seventeen (17) single family residential house lots with access to all but two via a new City street to be constructed as Freedom Drive. The Planning Board approval allowed for the conveyance and house construction on the two lots with frontage on Eastern Ave, Lots 10-1 and 10-17, with the condition that access would be off the new roadway.

With the downturn in the economy shortly after the approvals, construction of Freedom Drive did not commence and only one of the two lots on Eastern Avenue was sold and built up, Lot 10-1. Only minor infrastructure construction was completed, such as the water and sewer connections to the municipal utilities located in the Eastern Avenue Right-of-Way. Over time, City of Rochester Subdivision approval expired as well as all of the State permits.

Golden Oaks Development, LLC are proposing to repermit the approvals for 16 single family house lots and the new roadway. Minor adjustments to the configuration of the proposed lots are proposed, mostly to better accommodate the stormwater management systems. The limits of jurisdictional wetlands were delineated by B.H. Keith Associates and a Site Specific Soils map was prepared by Round Pond Soil Survey.

The proposed roadway alignment is the same as previously approved, as is the roadway width of 24 feet with granite curbing. Based on discussions at the Preliminary Design Review meeting last November, the applicant is proposing vertical granite curbing and paved sidewalk without a five-foot grass strip. This allows for larger front lawns.

Similar to the original approval, the proposed lots will be serviced with City water. Consistent with other smaller sized subdivision in which a traditional gravity sewer system would not be feasible, the applicants are proposing to have a low-pressure sewer force main and individual effluent pump stations on the lots. This would avoid the unnecessary cost of constructing a gravity sewer collection system within Freedom Drive, installation of a

municipal pump station and a large sewage force main back up to Eastern Avenue. This proposed sanitary sewer system was discussed with the Planning Board on two occasions last November. Per the subdivision regulations, all utilities within the subdivision will be underground. Fire hydrants have been placed in accordance with the Fire Department and there will be a couple street lights with LED fixtures.

The stormwater generated from the new street and the homes will be collected and treated in accordance with the State and City regulations. The runoff from the street and portions of the lots will be directed towards two infiltration basins located in approximately the same location as the previous approved plans. Most of the house lots will have individual rain gardens constructed to handle the runoff from the roofs. With the exception of the rain gardens, the main stormwater basins will be constructed on the open space lot with drainage easements for access and maintenance. Minor grading for the infiltration basins and drainage pipe is proposed along and inside the outer 25 feet of the Conservation Overlay District. The Conditional Use application will also request for the grading in the CO District.

The project will also require reapproval of several State permits, NHDES Wetlands and NHDES Wastewater Engineering Bureaus and a new permit from NHDES Alteration of Terrain Bureau. The total amount of impacts to the wetlands is 4,355 square feet at four locations. The impact locations are generally the same as the previous approval, but the overall amount of impacts increased slightly due to new delineation of the wetlands. The impacts to the wetlands also require a Conditional Use approval. The Alteration of Terrain Permit is necessary due to the overall earth disturbance associated with the roadway and infrastructure construction. Once the roadway and drainage systems are constructed and stabilized, the developer can start on the house construction. Lastly, the Sewer Discharge Permit is required to allow for the additional 7,200 gallons per day of design flow to the municipal sewer system.

Should the Board need additional information or have any questions, please feel free to contact our office. Otherwise we look forward to discussing this project with staff and the Planning Board. Thank you for your consideration

Sincerely,

NORWAY PLAINS ASSOCIATES, INC.



By: Scott A. Lawler, PE, Project Engineer

cc: Golden Oak Development, LLC
Arthur Taylor



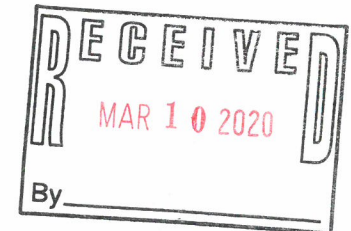
PROPOSED 17 LOT SUBDIVISION

FREEDOM DRIVE

PREPARED FOR

GOLDEN OAKS DEVELOPMENT, LLC

MARCH 2020



OVERALL SITE
1" = 200'

STATE AND FEDERAL PERMITS:
STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
NHDES ALTERATION OF TERRAIN: REQUIRED
NHDES WETLANDS PERMIT: REQUIRED
NHDES DAM PERMIT: NOT REQUIRED
NHDES SUBDIVISION PERMIT: NOT REQUIRED
NHDES SUBSURFACE SYSTEMS PERMIT: NOT REQUIRED
NHDES WASTEWATER PERMIT: 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.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

SHEET INDEX

COVER	AS SHOWN
S-1 OVERALL SUBDIVISION PLAN	1" = 80'
S-2 SUBDIVISION PLAN	1" = 50'
S-3 EASEMENT PLAN	AS SHOWN
S-4 TOPOGRAPHIC SUBDIVISION PLAN	1" = 50'
E-1 EXISTING FEATURES PLAN	1" = 80'
C-1 ROAD PLAN & PROFILE	1" = 50'
C-2 UTILITY PLAN AND PROFILES	1" = 50'
C-3 GRADING AND DRAINAGE PLAN AND PROFILES	1" = 50'
C-4 EROSION & SEDIMENTATION CONTROL	1" = 50'
C-5 ROADWAY DETAILS	AS SHOWN
C-6 UTILITY DETAILS	AS SHOWN
C-7 SEWER FORCE MAIN DETAILS	AS SHOWN
C-8 DRAINAGE DETAILS	AS SHOWN
C-9 INFILTRATION BASIN PLAN & PROFILE	AS SHOWN
C-10 INFILTRATION BASIN DETAILS AND SILT SOCK & EARTH BERM DETAIL	AS SHOWN
C-11 TEMPORARY EROSION & SEDIMENTATION CONTROL DETAILS	AS SHOWN
C-12 PERMANENT EROSION & SEDIMENTATION CONTROL DETAILS	AS SHOWN
C-13 TEST PIT DATA	1" = 100'



CIVIL ENGINEERS

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

DEVELOPER

GOLDEN OAKS DEVELOPMENT, LLC
35 JENKINS ROAD
LEE, NH 03861

OWNER

ARTHUR TAYLOR, LLC.
479 TOVAR DRIVE
SAN JOSE, CA 95123

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" CEK

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

PROPERTY LINE
LIMITS OF JURISDICTIONAL WETLANDS
EXISTING STONE WALLS
EXISTING MONUMENT
EXISTING WETLANDS
PROPOSED MONUMENT

ADJUTERS IN FIELDSTONE VILLAGE

112-0012-0033
JAMES & JOAN COLLINS
21 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0034
SONJA TANTER & ROSE ROGERS
15 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0035
REGAN & MICHELLE LAMBERT
11 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0036
MANDY & MICHELLE DANIEL-CARR
7 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0037
PAUL & ELIZABETH STYVES
3 YELLOWSTONE LN
ROCHESTER, NH 03867

112-0012-0038
ROBERT & KAYLA PEACH
46 LIMESTONE LN
ROCHESTER, NH 03867

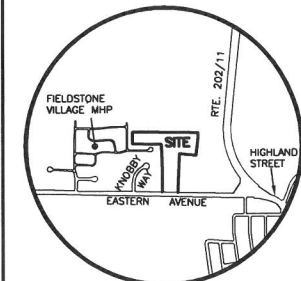
112-0012-0039
RODNEY & J.R. & CARMEN LEARY
50 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0040
JOSE & PHYLLIS MARRIQUE
54 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0042
MARK SHAW
61 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0043
ANTHONY & MICHELLE MASUTI
59 LIMESTONE LN
ROCHESTER, NH 03867

112-0012-0044
TRACI GLIDDEN & MARY PALMER
57 LIMESTONE LN
ROCHESTER, NH 03867



LOCUS
N.T.S.

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CRK"

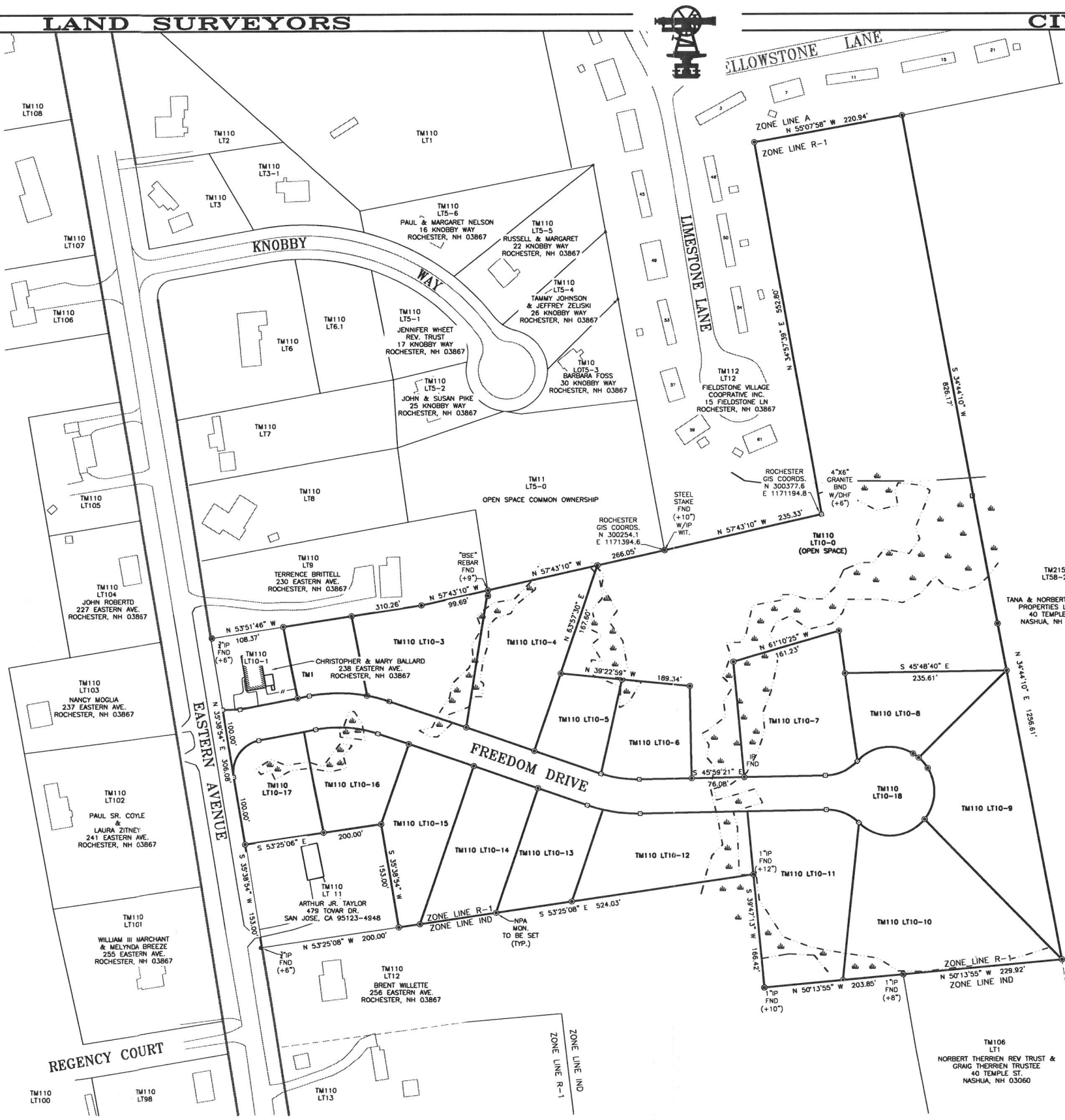
SUBDIVISION APPROVAL:
WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SUBDIVISION PLAN, THE SUBDIVISION APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS, AND SPECIFICATIONS OF THE CITY OF ROCHESTER LAND SUBDIVISION REGULATIONS, AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL, UNLESS OR EXCEPT INsofar AS EXPRESSLY WAIVED IN ANY PARTICULAR, BELOW. NON-ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FROM SUBDIVISION APPROVAL.

31 MOONEY STREET, ALTON, N.H. 603-875-3948

REFERENCE PLANS:

- "SUBDIVISION PLAN EASTERN AVENUE TAX MAP 110 - LOT 10 ROCHESTER, NH FOR ARTHUR TAYLOR, JR." RECORDED: DATED: NOVEMBER 2005 BY NORWAY PLAINS ASSOC., INC. RECORDED: SCRD 87-76

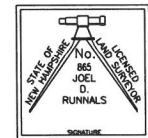
NORWAY PLAINS ASSOCIATES, INC.



NOTES:

- THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE SUBJECT PARCEL INTO 16 RESIDENTIAL LOTS WITH OPEN SPACE.
- TOTAL PARCEL AREA:
MAP 110, LOT 10-00 (OPEN SPACE) AND LOTS 10-2 THRU 10-17 (HOUSE LOTS), LOT 10-18 (ROAD RIGHT OF WAY) = 17.16 ACRES.
- PARCEL IS ZONED RESIDENTIAL-1 DISTRICT (R-1)
- MINIMUM LOT REQUIREMENTS:
(R-1 WITH CITY WATER & SEWER)
LOT SIZE = 10,000 SF
FRONTAGE = 100'
- BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
- THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
- THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C02040 DATED 5/17/05.
- FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03867, (603) 335-1338.
- STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
WETLANDS AND NON-SITE SPECIFIC PERMIT: PENDING
WASTEWATER CONNECTION PERMIT: PENDING
ALTERATION OF TERRAIN PERMIT: PENDING

I HEREBY CERTIFY THAT THIS PLAN, PREPARED UNDER MY DIRECTION, IS THE RESULT OF A SURVEY MADE ON THE GROUND AS PER RECORD DESCRIPTIONS AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THE PLAN CLOSURE EXCEEDS 1:10,000.



JOEL D. RUNNALS, L.L.S. 865

DATE

GENERAL NOTES:

- ALL CONSTRUCTION MUST BE OUTSIDE THE 50 FOOT WETLANDS BUFFER.
- ALL LOT CORNERS AND DRAINAGE EASEMENTS SHALL BE MARKED WITH CAPPED IRON MARKERS OR OTHER APPROPRIATE MONUMENTATION.
- THERE IS A 50 FOOT BUFFER REQUIREMENT FROM WETLANDS UNDER THE CITY OF ROCHESTER ZONING ORDINANCE AS SHOWN ON THIS PLAN SET. THERE MAY BE NO ENCROACHMENT WITHIN THESE BUFFERS EXCEPT AS PERMITTED UNDER THE ORDINANCE.
- PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR THIS SUBDIVISION, THE DEVELOPER SHALL POST: A) CONSTRUCTION ZONE SIGNS PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS; AND B) STREET ACCEPTANCE SIGNS WITH THE FOLLOWING LANGUAGE AT ALL ENTRY POINTS TO THE SUBDIVISION: "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 ORDER OF PLANNING BOARD)". THE LOCATION AND DESIGN OF THE SIGNS SHALL BE AS STIPULATED BY THE PUBLIC WORKS DEPARTMENT, BUT IN NO CASE SHALL THEY BE LESS THAN 2'x4'. THE SIGNS SHALL BE ERECTED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS.
- 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.
- 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.
- ALL PROPOSED DRIVEWAYS SHALL BE PLACED IN A LOCATION THAT WILL PROVIDE THE REQUIRED STOPPING SIGHT DISTANCE FOR THE POSTED SPEED LIMIT AS REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS.
- THERE WERE NO VERNAL POOLS WITHIN THE PROPOSED SUBDIVISION LOTS.



WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, IN OCTOBER AND NOVEMBER 2019. WETLANDS MAPPING WAS DONE BY N.H. LICENSED LAND SURVEYORS, NORWAY PLAINS ASSOCIATES, INC., IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:

- 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."
- U.S. ARMY CORPS OF ENGINEERS, 2009, "REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH-CENTRAL AND NORTH-EAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY ERDC/EL TR-09-19."
- U.S. ARMY CORPS OF ENGINEERS, 2012, "NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTH-EAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY."
- N.H. CODE OF ADMINISTRATIVE RULES (ENV-WT 301.02) WITH THE U.S. FISH AND WILDLIFE SERVICE MANUAL FWS/OBS-78/21 ENTITLED CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES, COWARD ET AL., 1979.
- 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.
- 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. HURT, AND C.V. NOBLE (EDS.), USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.

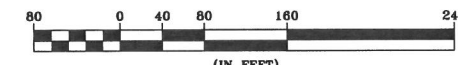
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FINAL APPROVAL BY ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

TAX MAP 110 - LOT 10-00, LOTS 10-2 THRU 10-18
OWNER OF RECORD:
ARTHUR TAYLOR, LLC.
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 3434, PG 903

OVERALL SUBDIVISION PLAN
TAX MAP 110, LOT 10-00 & LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.
MARCH 2020
GRAPHIC SCALE



(IN FEET)
1 INCH = 80 FEET

(SHEET 1 OF 3 FOR RECORDING)

S-1

2 CONTINENTAL BLVD., ROCHESTER, N.H. 603-335-3948

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND
 N 57°43'10" W
 99.69'
 --- PROPERTY LINE
 --- LIMITS OF JURISDICTIONAL WETLANDS
 --- EXISTING STONEWALLS
 --- EXISTING MONUMENT
 --- EXISTING WETLANDS
 --- PROPOSED MONUMENT



SHEET S-1

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE SUBJECT PARCEL INTO 16 RESIDENTIAL LOTS WITH OPEN SPACE.
2. TOTAL PARCEL AREA:
MAP 110, LOT 10-00 (OPEN SPACE) AND LOTS 10-2 THRU 10-17 (HOUSE LOTS),
LOT 10-18 (ROAD RIGHT OF WAY) = 17.16 ACRES.
3. PARCEL IS ZONED RESIDENTIAL-1 DISTRICT (R-1)
4. MINIMUM LOT REQUIREMENTS:
(R-1 WITH CITY WATER & SEWER)
LOT SIZE = 10,000 SF
FRONTAGE = 100'
5. BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
6. THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
7. THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C02040 DATED 5/17/05.
8. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03607, (603) 335-1338.
9. STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
WETLANDS AND NON-SITE SPECIFIC PERMIT: PENDING
WASTEWATER CONNECTION PERMIT: PENDING
ALTERATION OF TERRAIN PERMIT: PENDING

EASTERN AVENUE

FREEDOM DRIVE

TAX MAP 110 - LOT 10-00,
 LOTS 10-2 THRU 10-18
 OWNER OF RECORD:
 ARTHUR TAYLOR, LLC.
 479 TOVAR DRIVE
 SAN JOSE, CA 95123-4948
 BK 3434, PG 903

SUBDIVISION PLAN
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18

FREEDOM DRIVE
ROCHESTER, NH

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.
 MARCH 2020

GRAPHIC SCALE



(IN FEET)
 1 INCH = 50 FEET

(SHEET 2 OF 3 FOR RECORDING) S-2

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.

LINE BEARING DISTANCE
 L1 N 46°20'36" W 25.87'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	83.72'	225.00'	121°19'11"	N 45°06'26" W 83.72'	83.72'
C2	33.01'	225.00'	18°24'21"	N 30°14'41" W 32.98'	32.98'
C3	52.22'	150.00'	119°56'50"	S 36°00'56" E 51.98'	51.98'
C4	52.40'	65.00'	46°11'13"	S 69°04'57" E 50.99'	50.99'
C5	100.01'	65.00'	88°09'09"	N 48°05'58" W 90.43'	90.43'
C6	100.01'	65.00'	88°09'09"	N 42°03'10" E 90.43'	90.43'
C7	108.99'	65.00'	95°04'08"	N 47°50'12" W 98.68'	98.68'
C8	52.40'	65.00'	46°11'13"	S 22°53'44" E 50.99'	50.99'
C9	78.33'	225.00'	119°56'50"	N 36°00'55" W 77.94'	77.94'
C10	19.37'	200.00'	5°32'59"	N 28°49'00" W 19.36'	19.36'
C11	90.79'	175.00'	25°43'31"	N 40°54'16" W 89.78'	89.78'
C12	72.50'	46.89'	88°35'04"	S 79°56'28" W 65.49'	65.49'
C13	4.38'	175.00'	11°28'15"	S 26°45'37" W 4.38'	4.38'

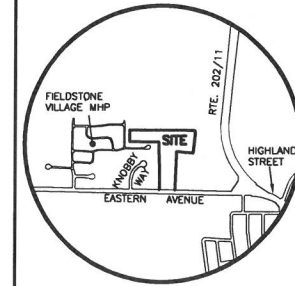
REFERENCE PLANS:

1. "SUBDIVISION PLAN EASTERN AVENUE TAX MAP 110 - LOT 10 ROCHESTER, NH FOR ARTHUR TAYLOR, JR." DATED: NOVEMBER 2005 BY NORWAY PLAINS ASSOC., INC. RECORDED: SCRD 87-76

FINAL APPROVAL BY
 ROCHESTER PLANNING BOARD

CERTIFIED BY:

DATE:



FILE NO. 166
 PLAN NO. C-3043
 DWG. NO. 19138/S-1
 P.B. NO. "33" "CEK"

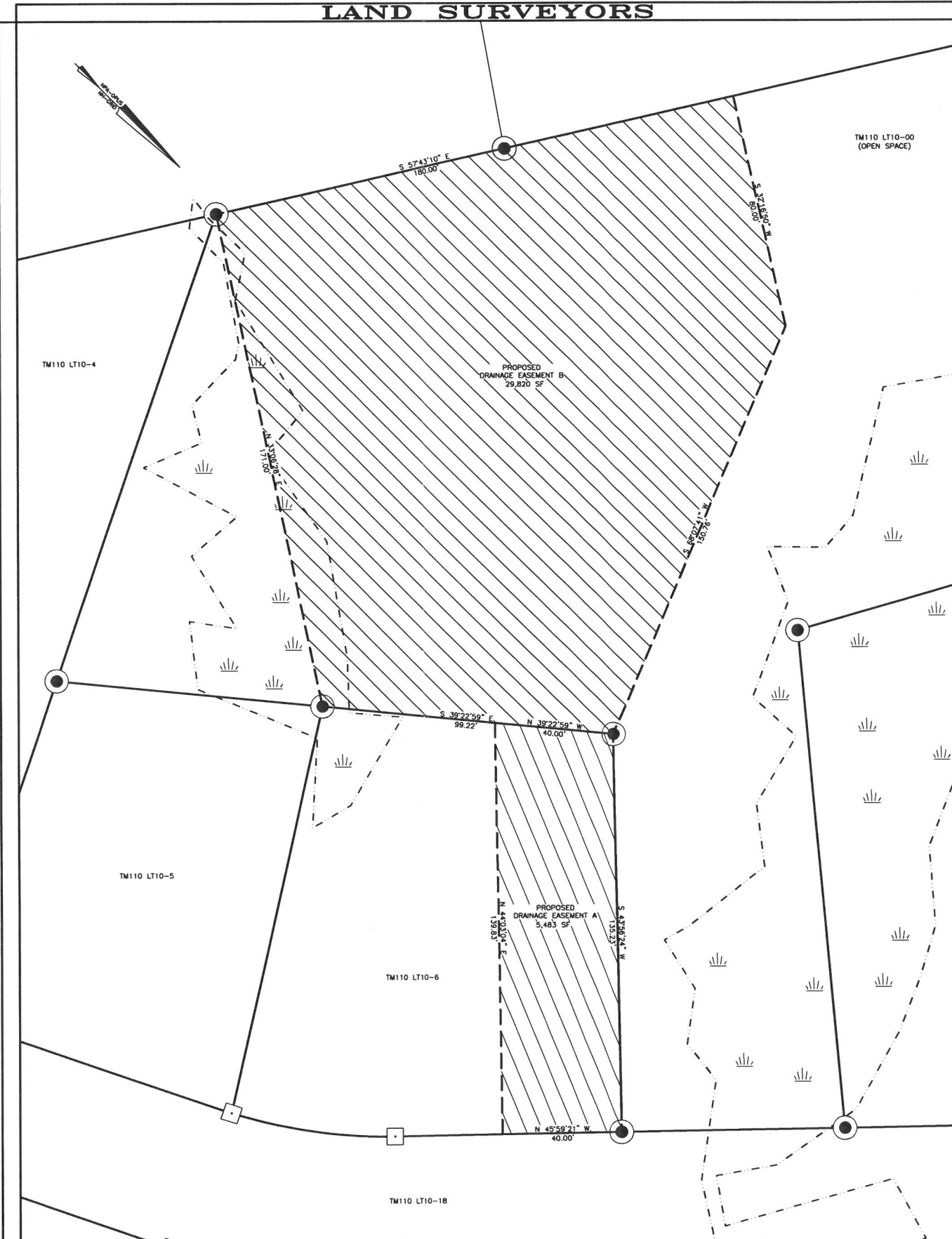
31 MOONEY STREET, ALTON, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, N.H. 603-335-3948

LAND SURVEYORS

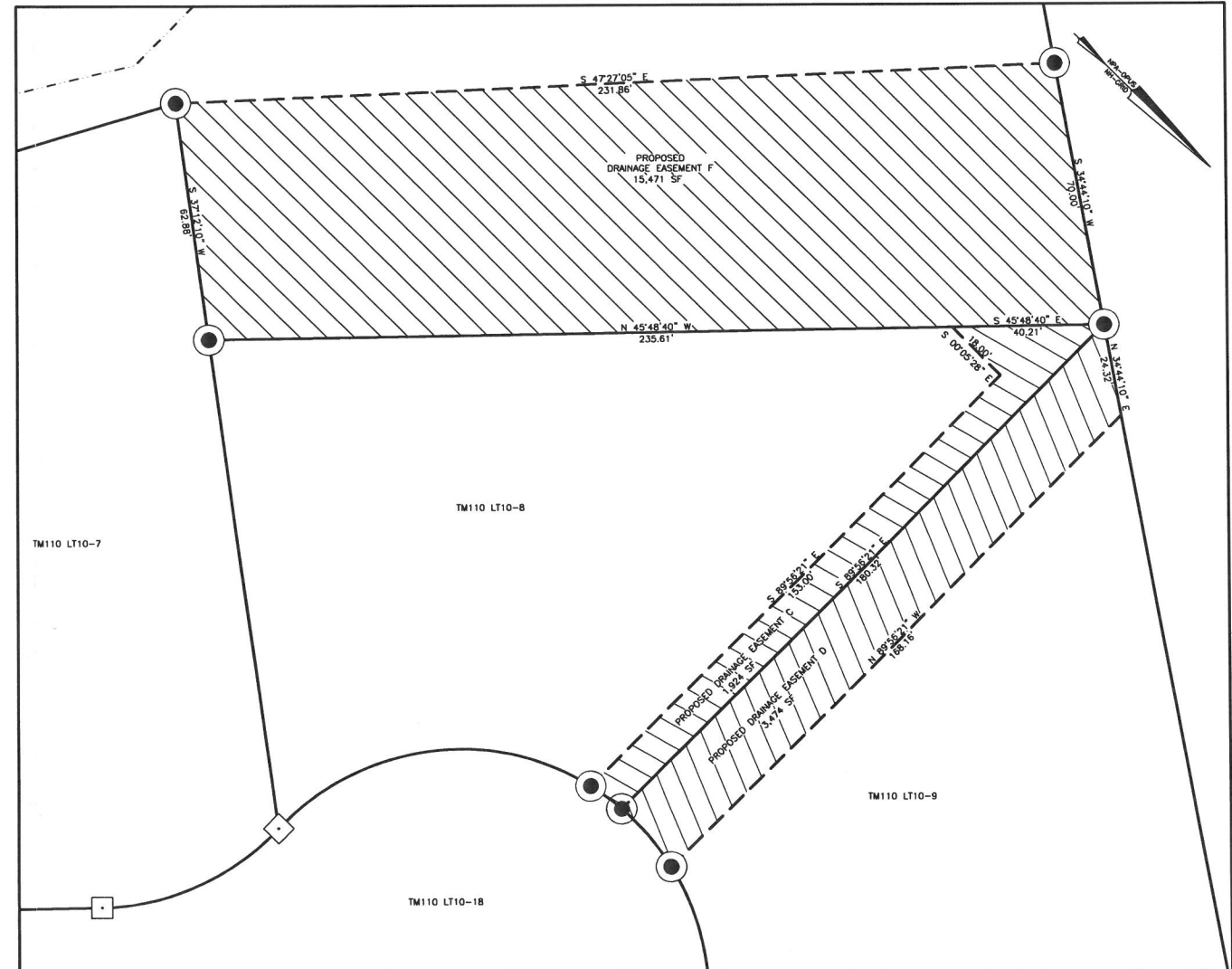
CIVIL ENGINEERS



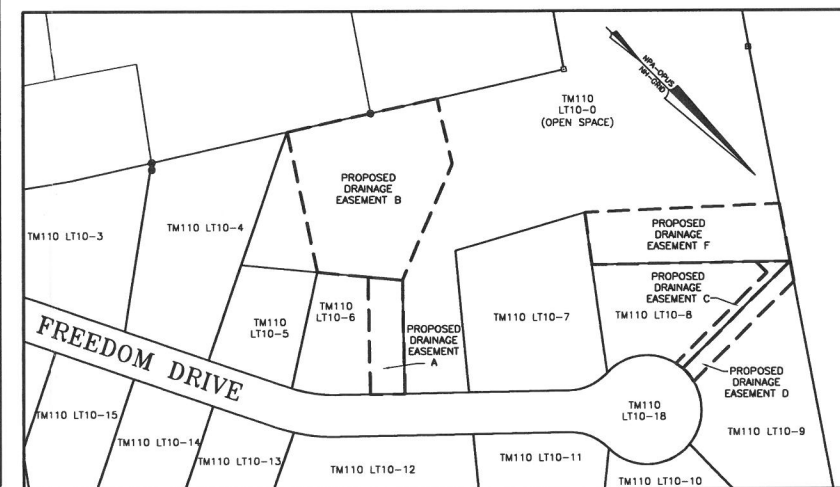
SCALE : 1 INCH = 20 FEET

FILE NO. 166
PLAN NO. C-3043
DWC. NO. 19138/S-1
F.B. NO. "33" "CEK"

31 MOONEY STREET, ALTON, N.H. 603-875-3948



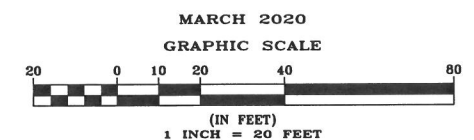
SCALE : 1 INCH = 20 FEET



SCALE : 1 INCH = 100 FEET

TAX MAP 110 - LOT 10-00,
LOTS 10-2 THRU 10-18
OWNER OF RECORD:
ARTHUR TAYLOR, LLC.
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 3434, PG 903

EASEMENT PLAN
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.



(SHEET 3 OF 3 FOR RECORDING) S-3

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, N.H. 603-335-3948

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- N 57°43'10" W 99.89' PROPERTY LINE
- LIMITS OF JURISDICTIONAL WETLANDS
- EXISTING STONEWALLS
- EXISTING MONUMENT
- EXISTING WETLANDS
- PROPOSED MONUMENT

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.



NOTES:

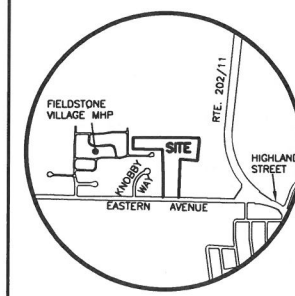
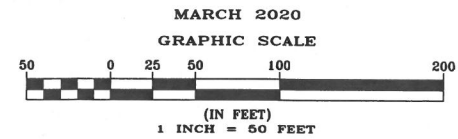
1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE SUBJECT PARCEL INTO 16 RESIDENTIAL LOTS WITH OPEN SPACE.
2. TOTAL PARCEL AREA:
MAP 110, LOTS 10-00 AND 10-2 THRU 10-18 = 17.16 ACRES.
3. PARCEL IS ZONED RESIDENTIAL-1 DISTRICT (R-1)
4. MINIMUM LOT REQUIREMENTS:
(R-1 WITH CITY WATER & SEWER)
LOT SIZE = 10,000 SF
FRONTAGE = 100'
5. BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
6. THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
7. THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C02040 DATED 5/17/05.
8. ORIENTATION: HORIZONTAL DATUM IS NAVD83 AND VERTICAL DATUM IS NGVD29
9. FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03667. (603) 335-1338.
10. STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
WETLANDS AND NON-SITE SPECIFIC PERMIT: PENDING
WASTEWATER CONNECTION PERMIT: PENDING
ALTERATION OF TERRAIN PERMIT: PENDING

LINE BEARING	DISTANCE
L1 N 48°20'38" W	125.87'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	83.72'	225.00'	171°19'11"	N 45°05'25" W	83.72'
C2	33.01'	225.00'	8°24'21"	N 30°14'41" W	32.98'
C3	52.22'	150.00'	19°56'50"	S 36°00'56" E	51.96'
C4	52.40'	65.00'	146°11'13"	S 69°04'52" E	50.99'
C5	100.01'	65.00'	88°09'09"	N 48°55'59" W	90.43'
C6	100.01'	65.00'	88°09'09"	N 49°03'10" E	90.43'
C7	108.99'	65.00'	98°04'08"	N 47°50'12" W	96.66'
C8	52.40'	65.00'	146°11'13"	S 22°53'44" E	50.99'
C9	76.33'	225.00'	19°56'50"	N 36°00'55" W	77.94'
C10	19.37'	200.00'	15°32'59"	N 28°49'00" W	19.36'
C11	90.79'	175.00'	29°43'51"	N 40°54'16" W	89.78'
C12	72.50'	46.89'	88°35'04"	S 78°56'28" W	65.49'
C13	4.39'	175.00'	11°28'15"	S 26°45'37" W	4.39'

TAX MAP 110 - LOT 10-00,
LOTS 10-2 THRU 10-18
OWNER OF RECORD:
ARTHUR TAYLOR, LLC.
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 3434, PG 903

TOPOGRAPHIC PLAN
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.



LOCUS
N.T.S.

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
P.B. NO. "33" "CEK"

SUBDIVISION APPROVAL:
WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SUBDIVISION PLAN, THE SUBDIVISION APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBOWNER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS, AND SPECIFICATIONS OF THE CITY OF ROCHESTER LAND SUBDIVISION REGULATIONS, AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL, UNLESS OR EXCEPT INsofar AS EXPRESSLY WAIVED IN ANY PARTICULAR. BELOW, NON-ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FROM SUBDIVISION APPROVAL.

REFERENCE PLANS:

1. "SUBDIVISION PLAN EASTERN AVENUE TAX MAP 110 - LOT 10 ROCHESTER, NH FOR ARTHUR TAYLOR, JR." DATED: NOVEMBER 2005 BY NORWAY PLAINS ASSOC., INC. RECORDED: SCRD 87-76

31 MOONEY STREET, ALTON, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, N.H. 603-335-3948

Drawing Location: M:\2019\19138\DWG\19138-S-1.dwg
Date: 10 May 2020 - 8:55am

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- N 53° 12' 22" W
100
- PROPERTY LINE
 - LIMITS OF JURISDICTIONAL WETLANDS
 - EXISTING TREE LINE
 - EXISTING STONE WALLS
 - EXISTING RAILROAD TRACKS
 - EXISTING CONTOUR LINE
 - EXISTING DRAIN LINE
 - EXISTING OVERHEAD WIRES
 - EXISTING WATER LINE
 - EXISTING SEWER LINE
 - EXISTING UTILITY POLE
 - EXISTING SEWER MANHOLE
 - EXISTING MONUMENT
 - EXISTING HYDRANT
 - EXISTING WATER GATE OR SHUT-OFF VALVE
 - EXISTING TEST PIT LOCATION & NUMBER
 - EXISTING WETLANDS
 - EXISTING INFILTRATION TEST LOCATION



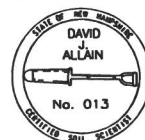
WETLAND NOTES

STATE AND FEDERAL JURISDICTIONAL WETLANDS WERE DELINEATED BY N.H. CERTIFIED WETLAND SCIENTIST, BARRY H. KEITH, IN OCTOBER AND NOVEMBER 2019. WETLANDS MAPPING WAS DONE BY N.H. LICENSED LAND SURVEYORS, NORWAY PLAINS ASSOCIATES, INC., IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:

- 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.
- U.S. ARMY CORPS OF ENGINEERS, 2009, REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHEASTRAL AND NORTHEAST REGION, U.S. ARMY CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT CENTER, ENVIRONMENTAL LABORATORY ERDC/EL TR-09-19.
- 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.
- 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, COMARIN ET AL., 1979."
- 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.
- 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. HURT, AND C.V. NOBLE (EDS.), USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.

WETLAND LEGEND

- PSS1E - PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB, SEASONALLY FLOODED/SATURATED
PF01E - PALUSTRINE BROAD-LEAVED DECIDUOUS FORESTED, SEASONALLY FLOODED/SATURATED
PSS/F01E - PALUSTRINE BROAD-LEAVED DECIDUOUS SCRUB-SHRUB/FORESTED, SEASONALLY FLOODED/SATURATED
PF04E - PALUSTRINE NEEDLE-LEAVED EVERGREEN FORESTED, SEASONALLY FLOODED/SATURATED
R3UBH - RIVERINE, UPPER PERENNIAL, UNCONSOLIDATED BOTTOM, PERMANENTLY FLOODED
U - UPLAND



NOTES:

- THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING SITE FEATURE ON THE SUBJECT PARCEL AND ADJUTING PARCELS.
- TOTAL PARCEL AREA: MAP 110, LOT 10-0 (OPEN SPACE) AND LOTS 10-2 THRU 10-7 (HOUSE LOTS) AND LOT 10-18 (ROAD RIGHT-OF-WAY) = 17.16 ACRES OR 747,489.6 SQ.FT.
- THE PARCEL IS ZONED RESIDENTIAL-1 DISTRICT (R-1)
- MINIMUM LOT REQUIREMENTS:
LOT SIZE = 10,000 SF
FRONTAGE = 100'
- BUILDING SETBACKS: FY. = 10', SY. = 10', RY. = 20'
- THE PROPOSED LOTS WILL BE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
- THE PROPOSED LOTS ARE NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 33017C0204D DATED 5/17/05.
- ORIENTATION: HORIZONTAL DATUM IS NAVD83 AND VERTICAL DATUM IS NAVD29
- FOR MORE INFORMATION ABOUT THIS SUBDIVISION CONTACT THE ROCHESTER PLANNING DEPARTMENT, 33 WAKEFIELD STREET, ROCHESTER, NH 03867. (603) 335-1338.

SOIL NOTES:

SEE SHEET D-1 SITE SPECIFIC SOILS PLAN FOR SOIL BOUNDARY

A. THIS SITE-SPECIFIC SOIL MAP WAS COMPLETED IN MARCH 2020 BY DAVID J. ALLAN, NH CERTIFIED SOIL SCIENTIST #13, ROUND POND SOIL SURVEY, 374 POND HILL ROAD, BARRINGTON NH 03825. "SITE-SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT", VERSION 5.0, DECEMBER 2017, SSSNNE SPECIAL PUBLICATION NO.3 WAS USED AS A REFERENCE AND GUIDE IN DEVELOPING THIS MAP. "THE DISTURBED SOIL MAPPING SUPPLEMENT FOR NEW HAMPSHIRE DES AOT SITE SPECIFIC SOIL MAPS" DECEMBER 2017 WAS ALSO CONSIDERED TO COMPLY WITH THE SOIL MAPPING REQUIREMENTS OF RSA 485 A:17 AND NHDES ENV-WQ 1500, ALTERATION OF TERRAIN (AOT) PROGRAM. THE SOILS WERE IDENTIFIED USING THE "NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND" PREPARED BY THE USDA NRCS, DURHAM NH, ISSUE #10, JANUARY 2011.

B. THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR USE IN PLANNING AND CONSTRUCTING INFILTRATION STRUCTURES OR PRACTICES CONSISTENT WITH NHDES ALTERATION OF TERRAIN PROGRAM REQUIREMENTS PER ENV-WQ 1500 RULES. THIS MAP WAS PRODUCED BY A NH CERTIFIED SOIL SCIENTIST AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE.

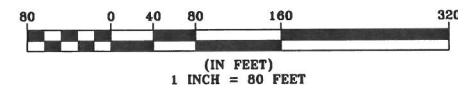
SEE SHEET D-1 SITE SPECIFIC SOILS PLAN FOR SOIL BOUNDARY

SEE SHEET C-13 FOR TEST PIT DATA

TAX MAP 110 - LOTS
10-0, 10-2 THRU 10-18
OWNER OF RECORD:
ARTHUR TAYLOR, LLC.
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 1400, PG 649

EXISTING FEATURES PLAN
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.

MARCH 2020
GRAPHIC SCALE



FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

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. 186
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" CEK

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

NORWAY PLAINS ASSOCIATES, INC.

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

E-1

Drawing Location: M:\2019\19138\DWG\19138 S-1.dwg
Date: 10 Mar 2020 - 9:34am

LAND SURVEYORS

CIVIL ENGINEERS

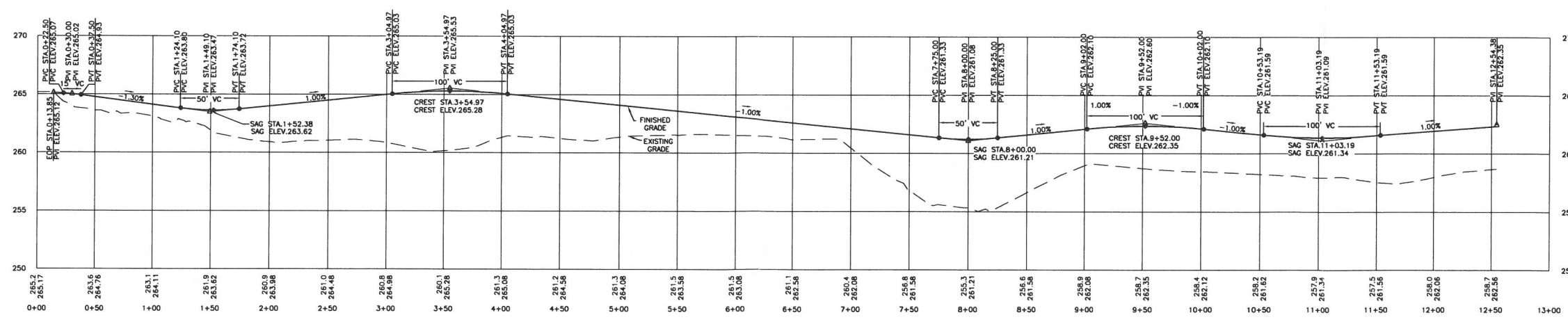
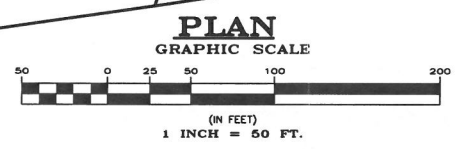
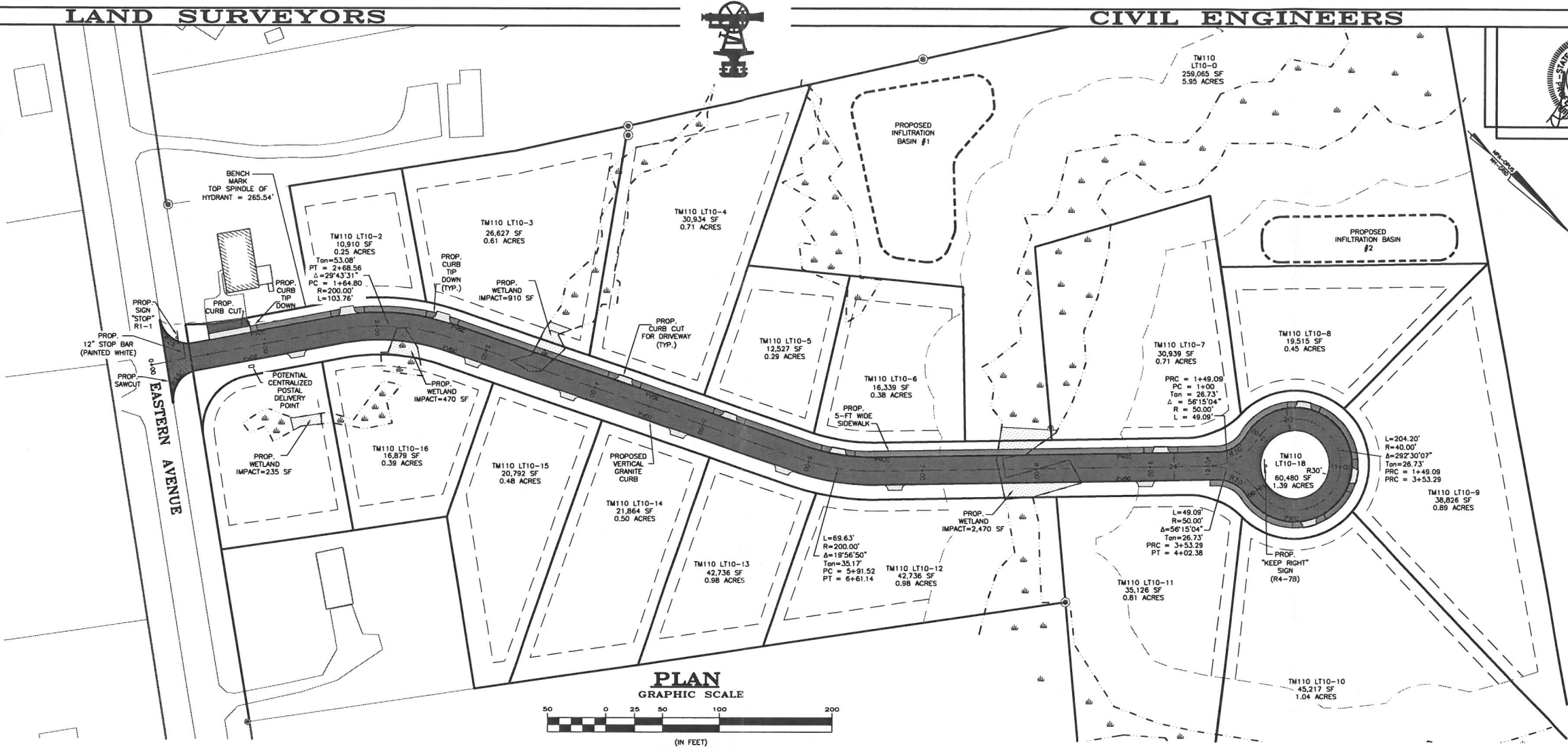


LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE

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 SITE. 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.
- 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. NO IMPEDIMENT IS CREATED BY THE ALIGNMENT OR GRADE OF ENGLAND ROAD OR THE GRADE PROPOSED ENTRANCE.
- THE INFILTRATION BASINS 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-3 OF THIS PLAN SET.
- LOAM STOCKPILES SHALL BE SEED IN ACCORDANCE WITH THE SEEDING NOTES ON SHEET C-12. IF STORED MORE THAN 30 DAYS, SLT 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.
B.) 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 QTY 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 ERECTED PRIOR TO ISSUANCE OF ANY BUILDING PERMIT.
- FOR MORE INFORMATION ABOUT THIS SUBDIVISION, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT, 31 WAKEFIELD STREET, ROCHESTER, 03667, (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 ROADWAY SIGNS SHALL BE INSTALLED AT THE DEVELOPER'S EXPENSE.



SCALE 1" = 50' (HORIZ.)
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 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.

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
P.B. NO. "33" CEK

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

NORWAY PLAINS ASSOCIATES, INC.

ROAD PLAN AND PROFILE
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.
MARCH 2020

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

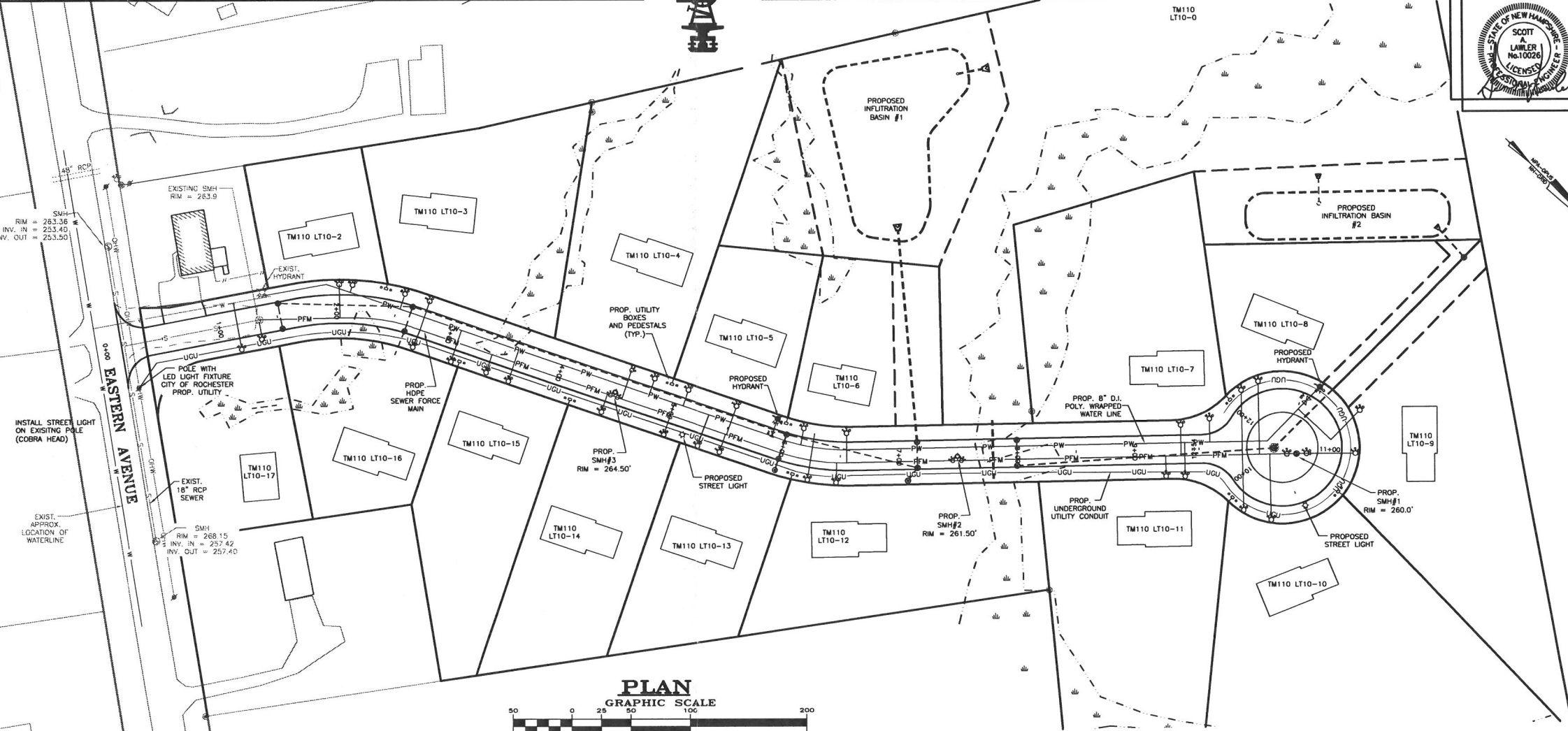
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Tue, 10 Mar 2020 - 9:54am

LAND SURVEYORS

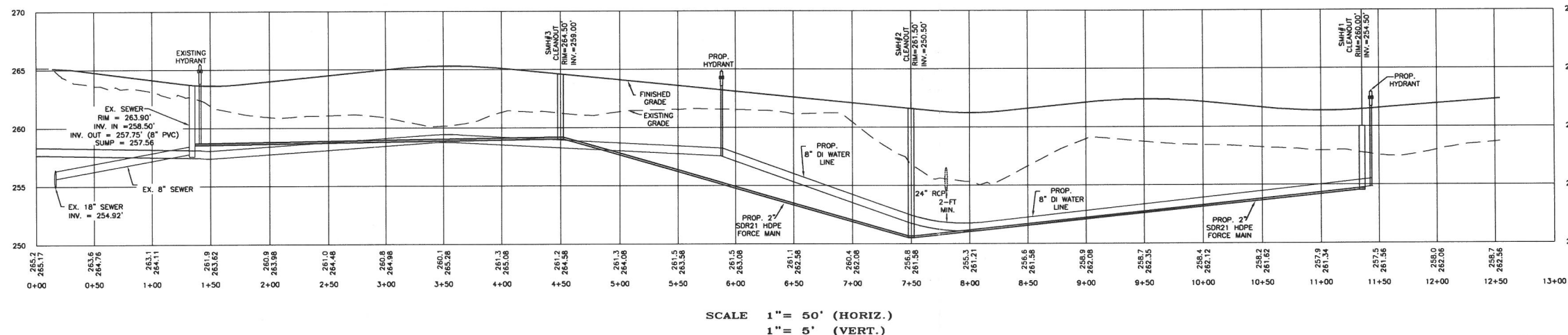
CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING OVERHEAD WIRES
- EXISTING WATER MAIN
- EXISTING GRAVITY SEWER MAIN
- EXISTING SEWER FORCE MAIN
- EXISTING UNDERGROUND ELECTRIC WIRES
- EXISTING UNDERGROUND UTILITY WIRES
- EXISTING GAS PIPE
- EXISTING DRAIN LINE
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MANHOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED DRAIN LINE
- PROPOSED WATER SERVICE
- PROPOSED SEWER LINE
- PROPOSED SEWER FORCE MAIN PIPE HOPE SDR 11
- PROPOSED PROPANE GAS LINE
- PROPOSED UNDERGROUND UTILITY WIRES
- PROPOSED HYDRANT
- PROPOSED WATER VALVE
- PROPOSED WATER SHUT-OFF VALVE
- PROPOSED SEWER SHUT-OFF VALVE
- PROPOSED UTILITY POLE
- PROPOSED SEWER MANHOLE
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED LIGHT POLES
- PROPOSED BUILDING LIGHT FIXTURES



- NOTES:
- CONSTRUCTION WILL CONFORM TO THE FOLLOWING UTILITIES STANDARDS AND SPECIFICATION:
 - A) SANITARY SEWER DISPOSAL - NHDES
 - B) ELECTRIC DISTRIBUTION - EVERSOURCE
 - C) TELEPHONE - FAIRPOINT
 - D) CABLE - ATLANTIC BROADBAND
 - E) WATER - CITY OF ROCHESTER, STANDARDS
 - ALL PROPOSED ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
 - ALL WATER SHUT-OFF VALVES SHALL BE PAINTED BLUE AND STAMPED "WATER".
 - ALL SEWER SHUT-OFF VALVE SHALL BE PAINTED GREEN AND STAMPED "SEWER".



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.

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

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

NORWAY PLAINS ASSOCIATES, INC.

UTILITY PLAN & PROFILE
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR: GOLDEN OAKS DEVELOPMENT, LLC.

MARCH 2020

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

C-2

Drawing Location: M:\2019\19138\DWG\19138-S-1.dwg
File: 10 Mar 2020 - 10:09am

LAND SURVEYORS

CIVIL ENGINEERS



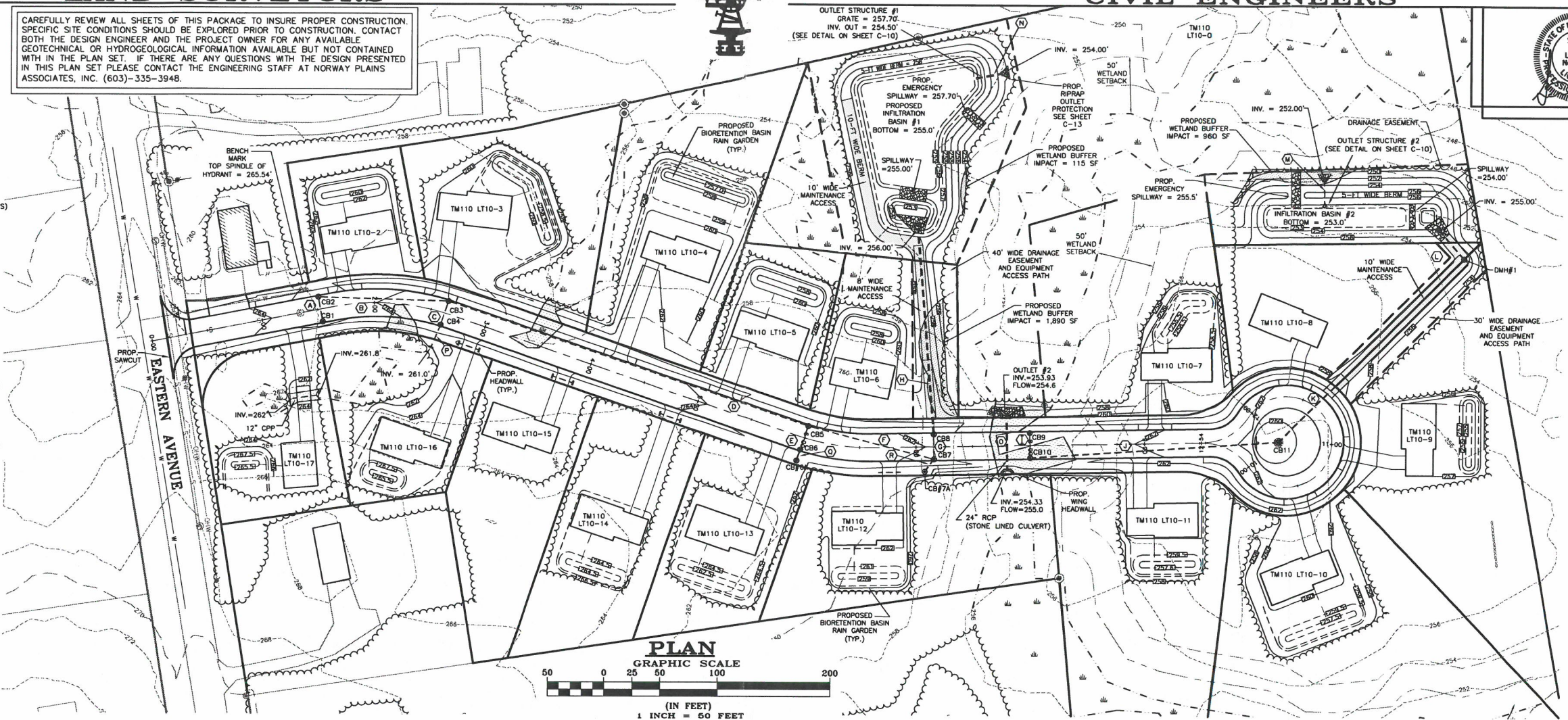
- LEGEND**
- PROPERTY LINE
 - JURISDICTIONAL WETLANDS
 - EXISTING TREE LINE
 - EXISTING DRAIN LINE
 - EXISTING CONTOUR LINE
 - EXISTING TEST PIT
 - EXISTING SPOT GRADE
 - PROPOSED SPOT GRADE
 - PROPOSED TREE LINE
 - PROPOSED DRAIN LINE
 - PROPOSED CONTOUR LINE
 - PROPOSED CATCH BASIN
 - PROPOSED FLARED END SECTION (FES)
 - CORRUGATED POLYETHYLENE PIPE
 - REINFORCED CONCRETE PIPE
 - CATCH BASIN
 - SLOPE GRANITE CURB
 - PROPOSED OUTLET PROTECTION
 - PROPOSED HOUSE

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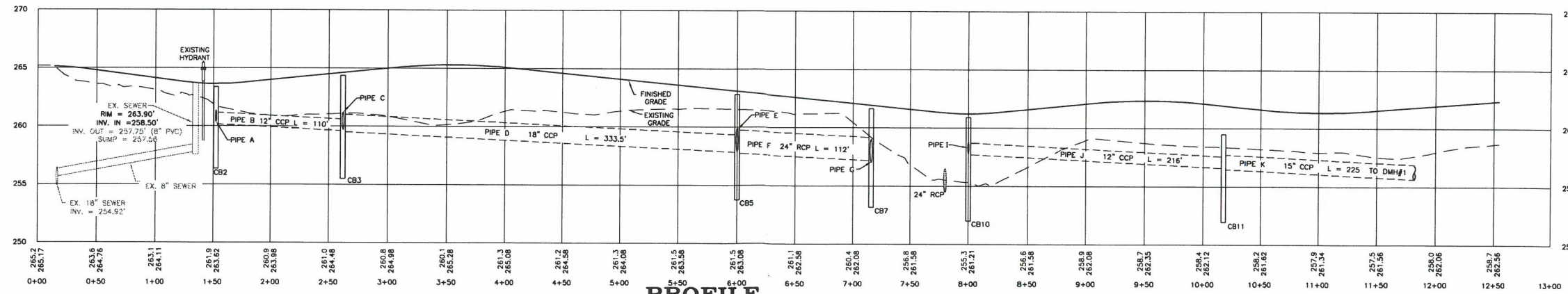
- NOTES:**
- LOTS 10-2 THRU 10-7 AND LOTS 10-9 THRU 10-14 AND LOT 10-16 AND 10-17 HOUSES' ROOF RUNOFF DIRECTED TO BIORETENTION BASIN BY GUTTER OR DRIP EDGE.
 - BASINS AND SWALE SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
 - TEMPORARY WATER DIVERSION (SWALE AND BASINS) MUST BE USED AS NECESSARY UNTIL AREA ARE STABILIZED.
 - WETLAND BUFFERS LINES BY SURVEY LOCATED AND MARKED WITH ORANGE SNOW FENCE PRIOR TO ANY ON-SITE ACTIVITY.
 - THE INNER 25-FOOT WETLAND BUFFER SHALL BE POSED WITH WETLAND CONSERVATION TAGS EVERY 100-FOET. TAGS ARE AVAILABLE FOR PURCHASE FROM THE PLANNING DEPARTMENT.

PROPOSED RAIN GARDEN

- LOT 10-2
BOTTOM = 260.0'
BERM = 262.0'
- LOT 10-3
BOTTOM = 258.5'
BERM = 260.5'
- LOT 10-4
BOTTOM = 257.0'
BERM = 259.0'
- LOT 10-5
BOTTOM = 258.0'
BERM = 260.0'
- LOT 10-6
BOTTOM = 258.0'
BERM = 260.0'
- LOT 10-7
BOTTOM = 256.5'
BERM = 258.5'
- LOT 10-9
BOTTOM = 255.5'
BERM = 257.5'
- LOT 10-10
BOTTOM = 257.5'
BERM = 259.5'
- LOT 10-11
BOTTOM = 257.6'
BERM = 259.6'
- LOT 10-12
BOTTOM = 259.5'
BERM = 261.5'
- LOT 10-13
BOTTOM = 262.5'
BERM = 264.5'
- LOT 10-14
BOTTOM = 264.5'
BERM = 266.5'
- LOT 10-16
BOTTOM = 265.5'
BERM = 267.5'
- LOT 10-17
BOTTOM = 265.5'
BERM = 267.5'



PLAN
GRAPHIC SCALE
1 INCH = 50 FEET



PROFILE
SCALE 1" = 50' (HORIZ.) 1" = 5' (VERT.)

PROPOSED DRAINAGE STRUCTURES

- 1- CB#1 4" R STA. 1+52.38 R INV. IN = 260.35' TO CB#2 INV. OUT = 256.35' L = 18' (PIPE A) 12" RCP
- 2- CB#2 4" R STA. 1+52.38 L INV. IN = 260.25' FROM CB#2 INV. OUT = 260.15' TO CB#3 SUMP = 256.15' L = 110.0' (PIPE B) 12" CPP
- 3- CB#3 4" R STA. 2+42.23 L INV. IN = 259.80' FROM CB#2 INV. IN = 259.70' FROM CB#4 INV. OUT = 259.50' TO CB#5 SUMP = 255.50' L = 333.5' (PIPE D) 18" CPP
- 4- CB#4 4" R STA. 2+42.23 R INV. IN = 259.90' FROM PIPE P INV. IN = 259.80' FROM CB#3 ELIMINATOR SUMP = 255.80' L = 18' (PIPE C) 18" CPP
- 5- CB#5 4" R STA. 6+00 L INV. IN = 257.83' FROM CB#3 INV. IN = 257.91' FROM CB#6 INV. OUT = 257.73' TO CB#7 SUMP = 253.73' L = 112.0' (PIPE F) 24" RCP
- 6- CB#6 4" R STA. 6+00 R INV. IN = 258.10' FROM CB#6A INV. IN = 258.00' FROM CB#5 ELIMINATOR SUMP = 255.90' L = 18' (PIPE E) 24" CPP
- 6A- CB#6A 4" R STA. 6+00 R INV. IN = 260.20' (BEE HIVE GRATE) INV. OUT = 256.15' TO CB#6 ELIMINATOR SUMP = 254.15' L = 5' (PIPE D) 18" CPP
- 7A- CB#7A 4" R STA. 7+16 R INV. IN = 259.0' (BEE HIVE GRATE) INV. OUT = 257.22' TO CB#7 ELIMINATOR SUMP = 257.22' L = 10' (PIPE R) 15" CPP
- 7- CB#7 4" R STA. 7+16 R INV. IN = 257.17' FROM CB#5 INV. IN = 257.17' FROM CB#7A INV. OUT = 257.07' TO CB#8 SUMP = 253.07' L = 18' (PIPE G) 24" RCP
- 8- CB#8 4" R STA. 7+16 L INV. IN = 256.98' FROM CB#7 INV. OUT = 256.88' TO FOREBAY ELIMINATOR SUMP = 252.88' L = 170' (PIPE H) 24" CPP
- 9- CB#9 4" R STA. 8+00 L INV. IN = 257.90' TO CB#10 INV. IN = 256.57' FROM CB#10 INV. OUT = 255.90' TO FOREBAY ELIMINATOR SUMP = 252.47' L = 18' (PIPE I) 12" RCP
- 10- CB#10 4" R STA. 8+00 R INV. IN = 257.80' FROM CB#9 INV. IN = 256.57' FROM CB#10 INV. OUT = 256.47' TO DMH#1 ELIMINATOR SUMP = 252.47' L = 225' (PIPE J) 15" CPP
- 11- CB#11 4" R STA. 11+80 L INV. IN = 255.30' FROM CB#10 INV. OUT = 255.20' TO FOREBAY ELIMINATOR SUMP = 252.47' L = 30' (PIPE M) 15" CPP
- M- PROP. PIPE M STA. 8+00 R INV. IN = 257.80' FROM CB#9 INV. IN = 256.57' FROM CB#10 INV. OUT = 256.47' TO DMH#1 ELIMINATOR SUMP = 252.47' L = 225' (PIPE J) 15" CPP
- N- PROP. PIPE N STA. 12+00 R INV. IN = 257.70' FROM CB#11 INV. OUT = 257.70' TO DMH#1 ELIMINATOR SUMP = 252.47' L = 20' (PIPE K) 15" CPP
- P- PROP. PIPE P STA. 7+80 R INV. IN = 255.30' FROM CB#10 INV. OUT = 255.20' TO FOREBAY ELIMINATOR SUMP = 252.47' L = 30' (PIPE M) 15" CPP

PROPOSED DRAINAGE PIPES

- M- PROP. PIPE M STA. 8+00 R INV. IN = 257.80' FROM CB#9 INV. IN = 256.57' FROM CB#10 INV. OUT = 256.47' TO DMH#1 ELIMINATOR SUMP = 252.47' L = 225' (PIPE J) 15" CPP
- N- PROP. PIPE N STA. 12+00 R INV. IN = 257.70' FROM CB#11 INV. OUT = 257.70' TO DMH#1 ELIMINATOR SUMP = 252.47' L = 20' (PIPE K) 15" CPP
- P- PROP. PIPE P STA. 7+80 R INV. IN = 255.30' FROM CB#10 INV. OUT = 255.20' TO FOREBAY ELIMINATOR SUMP = 252.47' L = 30' (PIPE M) 15" CPP

**GRADING & DRAINAGE
PLAN & PROFILE
TAX MAP 110, LOT 10-00,
LOTS 10-2 THRU LOT 10-18
FREEDOM DRIVE
ROCHESTER, NH**

PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.
MARCH 2020

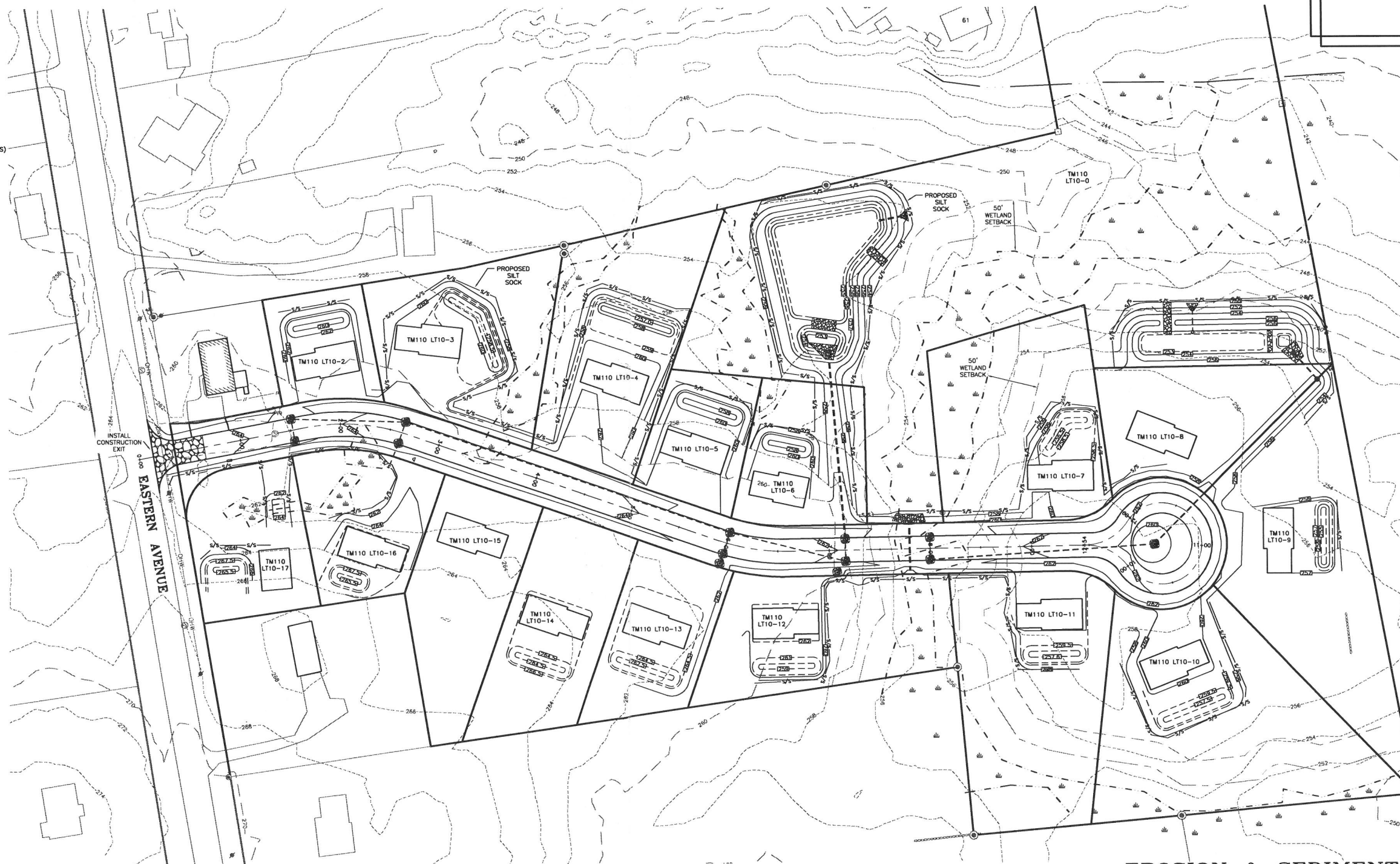
DIG SAFE

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

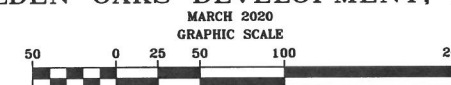


LEGEND

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



**EROSION & SEDIMENTATION
CONTROL PLAN**
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.



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FILE NO. 186
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" CEK

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

NORWAY PLAINS ASSOCIATES, INC.

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

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

VERTICAL GRANITE CURB

CURB TIP DOWN 6' MIN.

EDGE OF PAVEMENT

NO CURB

CURB TIP DOWN 6' MIN.

VERTICAL GRANITE CURB

CONCRETE OR BITUMINOUS SIDEWALK

1:12

TRANSITION OR SCORE LINE

PROPOSED 12' DRIVEWAY

CONCRETE OR BITUMINOUS SIDEWALK

1:12

TRANSITION OR SCORE LINE

Diagram illustrating a pavement overlay cross-section. The overlay width is 25' OR VARIABLE AS SHOWN. The cold planing of bituminous surfaces has a taper depth of 12 TO 17 inches. The diagram also shows the existing surface, the beginning or end of the overlay, and the location of a saw or wheel cut (ITEM 626.3).

A cross-sectional diagram of a road construction project. On the left, a vertical line indicates a 'SAW CUT EXISTING PAVEMENT' with a '1' foot dimension. The existing pavement structure consists of 'EXIST. PAVEMENT' (a thin dark layer), 'EXIST. CRUSHED GRAVEL' (a layer of small stones), and 'EXIST. BANK RUN GRAVEL' (a layer of larger stones). To the right of the saw cut, the proposed construction layers are shown: 'WEARING COURSE (NHDOT 403.11)' (a thin dark layer), 'BINDER COURSE (NHDOT 403.11)' (a thin dark layer), 'CRUSHED GRAVEL (NHDOT 304.3)' (a layer of small stones), and 'GRAVEL (NHDOT 304.2)' (a layer of larger stones). The bottom of the diagram is labeled 'CLEAN FILL MATERIAL'.

[illegible]

Diagram illustrating the required clearances and slopes for a 12" DIA. CULVERT MINIMUM installation. The diagram shows the culvert centered under the existing ground, with a 12" DIA. CULVERT MINIMUM opening. The required clearances are:

- 6.0-FT. MINIMUM clearance from the EDGE OF TRAVELED WAY to the centerline of the culvert.
- 12-FT. MINIMUM clearance from the PLATFORM to the centerline of the culvert.
- 1 FT. MINIMUM clearance from the centerline of the culvert to the CENTERLINE DITCH.

The slopes are indicated as follows:

- 2% slope from the EDGE OF TRAVELED WAY to the centerline of the culvert.
- 3" slope from the centerline of the culvert to the CENTERLINE DITCH.
- 4% slope from the centerline of the culvert to the CENTERLINE DITCH.
- 2%-4% slope from the centerline of the culvert to the CENTERLINE DITCH.
- 15% MAXIMUM slope from the centerline of the culvert to the CENTERLINE DITCH.

DRIVEWAY NOTES:

1. THE OWNER OF THE LOT WILL BE RESPONSIBLE FOR OBTAINING A DRIVEWAY PERMIT FROM ROCHESTER PUBLIC WORKS.
2. DRIVEWAY CULVERTS SHALL BE 12" MIN. AND SHALL EXTEND 5 FEET BEYOND BOTH SIDES OF THE DRIVEWAY UNLESS CONCRETE HEADWALLS ARE PROVIDED.
3. GRADES BEYOND PLATFORM SHALL NOT EXCEED 15% NOR SHALL THEY BE LESS THAN 0.5%.
4. THE VERTICAL DIFFERENCE BETWEEN TWO ADJACENT GRADE CHANGES SHOULD NOT EXCEED 10%.
5. DITCHES ARE RECOMMENDED FOR UNCURBED DRIVEWAYS IN CUT SLOPES.
6. USE RUBBLE MASONRY OR PRECAST HEADWALLS OR SLOPE END SECTIONS ON CULVERT PIPES.

4" LOAM AND SEED

EXISTING GROUND

3:1 MAX

6" CRUSHED GRAVEL

2" PAVEMENT 18

5' SIDEWALK

12" VERTICAL GRANITE CURB (6" REVEAL)

24'

12" VERTICAL GRANITE CURB (6" REVEAL)

3'

3:1 CUT SLOPE (MAX)

EXISTING GROUND

4" LOAM AND SEED

3:1 MAX

3" PAVEMENT MHDT ITEM 403.11

6" CRUSHED GRAVEL MHDT ITEM 304.3

12" GRAVEL MHDT ITEM 304.2

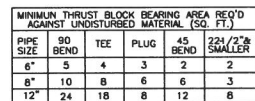
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Diagram illustrating a stop sign installation on a site with curbing. The sign is octagonal and labeled "STOP". It is mounted on a post. The diagram shows the sign positioned 2' MIN. ON SITES (1' WITH CURBING) from the edge of the pavement. The sign is also 5' MIN. from the edge of the pavement. The post is labeled "AASHTO APPROVED U-CHANNEL POST". The sign is labeled "R1-1 (TYP.)". The edge of the pavement is indicated by a line labeled "EDGE OF PAVEMENT". The distance from the edge of the pavement to the sign is labeled "3' (TYP.)".

C-5



NOT TO SCALE



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

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		
2"	0	0	1	1	0	1	1	1	1	2	3	4	5	7	4	8	12	17
6"	0	0	1	1	1	1	2	2	1	2	3	4	3	5	8	10	16	18
8"	0	1	1	1	1	2	3	1	3	4	6	3	7	10	13	8	15	23
10"	0	1	1	2	1	2	3	2	3	5	7	4	8	12	16	9	19	28
12"	0	1	1	2	1	2	3	4	2	4	6	8	5	9	14	19	22	33
TEE*																		
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	200 psi
2"	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	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_r) = 5 FEET

NOT TO SCALE

NOTES:

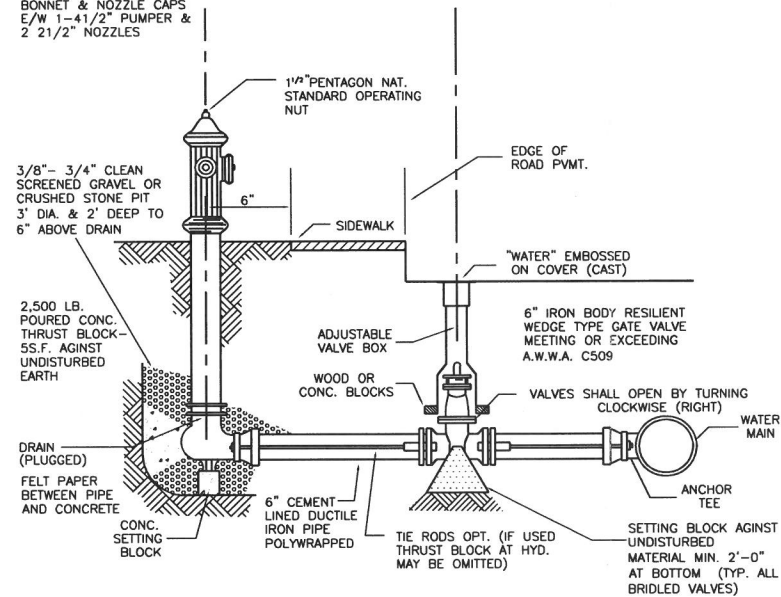
1. PIPE IS BURIED TO A DEPTH OF 6 FEET WITH A MINIMUM OF 4 INCHES OF COMPACTED GRANULAR MATERIAL UNDER THE PIPE TO THE SPRING LINE OF THE PIPE.
2. THE EXISTING SOIL IS POORLY GRADED GRAVEL AND GRAVEL SAND MIXTURE WITH LITTLE TO NO FINES.
3. ALL CALCULATIONS ARE BASED ON A FACTOR OF SAFETY OF 1.5 TO 1.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

FILE NO. 166
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DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

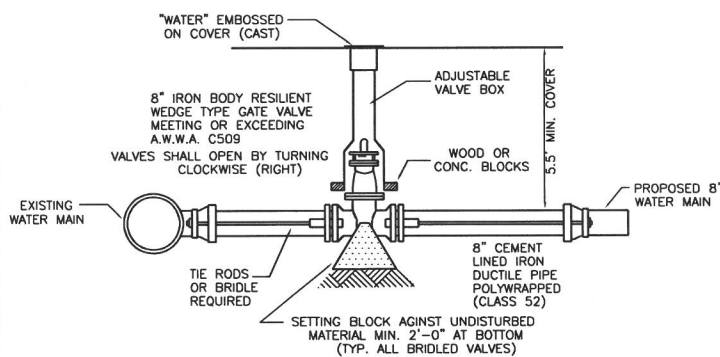
31 Mooney Street, Alton, N.H. 603-875-3948

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

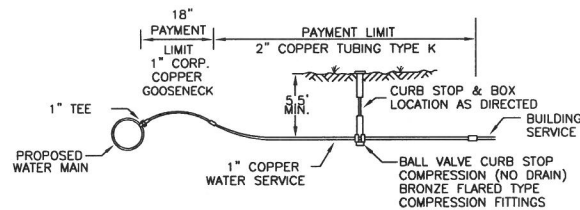
HYDRANTS TO BE OSHA RED
W/WHITE FLOURESCENT
BONNET & NOZZLE CAPS
E/W 1-41/2" PUMPER &
2 21/2" NOZZLES



NOT TO SCALE



NOT TO SCALE

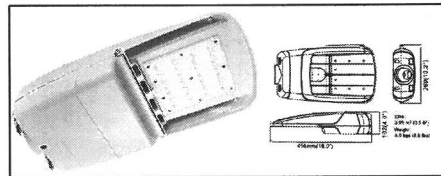


NOTE: SERVICE LINE SHALL BE TYPE K COPPER CONFORMING TO ASTM-D88

NOT TO SCALE



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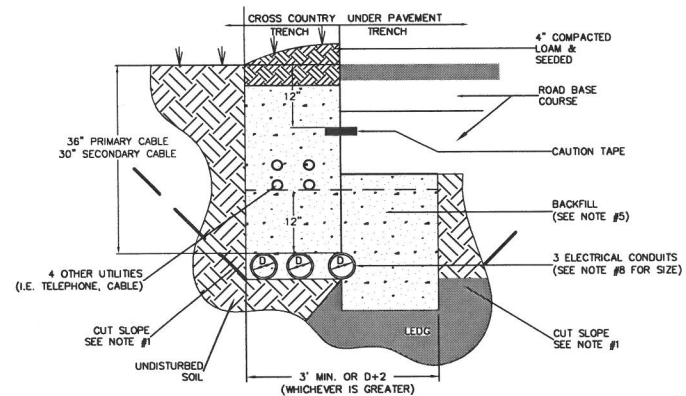
NOT TO SCALE

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 LIGHT FIXTURE SHALL BE AN AFFINITY MOOLE SERIES 25W-10-CT-10V-10 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.

- 1) CONTRACTOR SHALL NOTIFY DIO-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 LOCATION AND ELEVATIONS
- 3) THESE PLANS SHOW 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 GUARANTEED OR IMPLIED
- 4) ANY UTILITY POLES THAT NEED TO BE RELOCATED SHALL BE COORDINATED WITH EVERSOURCE OR VERIZON, WHOM EVER HAS CONTROL OVER THE UTILITY
- 5) PROPOSED UTILITIES SHALL CROSS THE UNDERGROUND, COORDINATE LOCATION OF UNDERGROUND UTILITIES AND TRANSFER PADS WITH PSNM AND OTHER PERTINENT UTILITY COMPANIES.
- 6) WATER AND SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10'-FT. HORIZONTALLY.
- 7) SEWER LINES 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 NEW YORK STATE ENGINEERING SPECIFICATIONS. WATER LINES SHALL BE A.W.W.A. C 151, CLASS 52, CEMENT LINER, DUCTILE IRON PIPE.
 - B) PROPOSED WATER GATE VALVES SHALL BE MANUFACTURED BY KENNEDY OF AMERICAN FLOW CONTROL.
 - C) RESILIENT SEAT TYPE
 - D) ALL WATER LINES SHALL BE BURIED A MINIMUM OF 5'.
 - E) IF 5' OF COVER IS NOT AVAILABLE, WATER LINE SHALL BE INSULATED AS SHOWN IN THE "SHALLOW COVER TRENCH" DETAIL FOR INSULATED WATER LINE.
 - F) ALL WATER FITTINGS SHALL BE CLASS 52.
 - G) PROPOSED WATER GATE VALVE SHALL OPEN CLOCKWISE (RIGHT).
- 10) WORK TO CONNECT INTO THE WATER MAINS SHALL BE PERFORMED BY THE ROCHESTER PUBLIC WORKS DEPARTMENT. CONTRACTORS ARE TO BE PRE-QUALIFIED.

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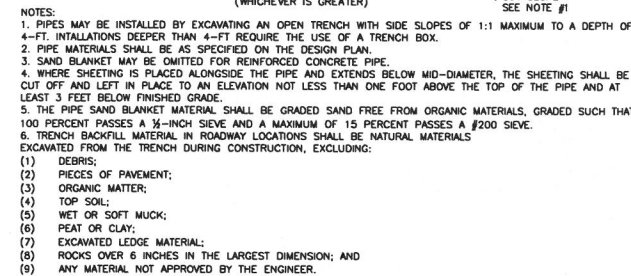
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UTILITY DETAILS
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS LLC.

MARCH 2020

C-6

NORWAY PLAINS ASSOCIATES, INC.

[illegible]

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

MINIMUM THRUST BLOCK BEARING AREA REQ'D AGAINST UNDISTURBED MATERIAL (SQ. FT.)					
PIPE SIZE	90 BEND	TEE	PLUG	45 BEND	22½/2" & SMALLER
2"	5	4	3	2	2

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

Diagram illustrating a sewer connection to a house lot. The diagram shows a vertical 2" PRESSURE MAIN pipe on the left. A 2" x 1 1/2" SERVICE TEE connects this main to a horizontal SERVICE LINE TO HOUSE LOTS 1-1/2". The service line includes a CHECK VALVE and a CURB STOP BALL TYPE valve. The service line terminates at an ADJUSTABLE VALVE BOX C.I. WITH "SEWER" CAP PAINTED GREEN IN COLOR, which is shown partially buried in the ground.

MORTAR USED IN MANHOLE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:

MORTAR SHALL BE COMPOSED OF TYPE I PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION.

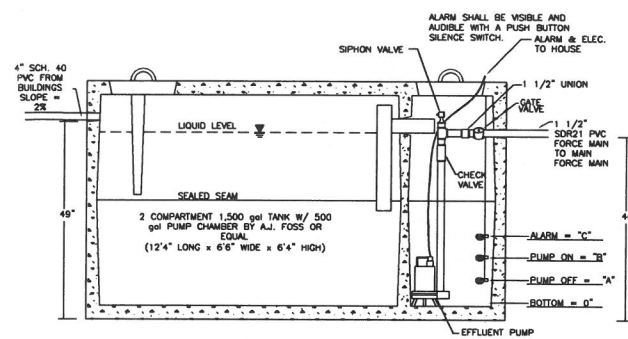
PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE AS SHOWN BELOW:

HYDRATED LIME	SAND	TYPE II PORTLAND CEMENT
NONE	4.5 PARTS	1.5 PARTS
0.5 PARTS	4.5 PARTS	1 PART

CEMENT SHALL BE TYPE I PORTLAND CEMENT THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C150/C150M STANDARD IN EFFECT AT THE TIME THE CEMENT WAS MANUFACTURED.

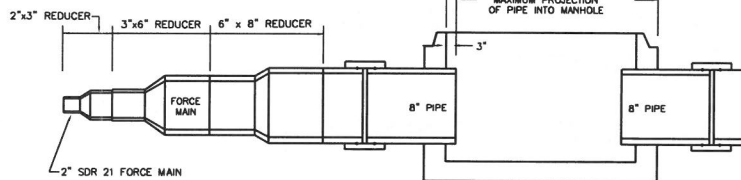
HYDRATED LIME SHALL BE TYPE S THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C207 STANDARD IN EFFECT AT THE TIME THE LIME WAS MANUFACTURED.

SAND SHALL CONSIST OF INERT NATURAL SAND THAT IS CERTIFIED BY ITS SUPPLIER AS CONFORMING TO THE ASTM C33 STANDARD IN EFFECT AT THE TIME THE SAND IS PROCESSED BY STANDARD SPECIFICATIONS FOR CONCRETE.



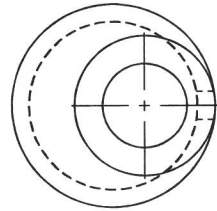
NOTES:

1. INSTALL 2" PVC VENT FROM THE PUMP CHAMBER TO THE HOUSE.
2. INSTALL THE GATE VALVE ON A 45 DEGREE FROM VERTICAL.
3. ALL PUMPING SYSTEMS ELECTRICAL COMPONENTS SHALL COMPLY WITH NEC AND NFPA REQUIREMENTS AND MEET ALL CITY OF ROCHESTER REQUIREMENTS.
4. PUMPS SHALL BE SIZED TO PROVIDE A MINIMUM VELOCITY WITHIN ALL OF THE FORCE MAIN PIPES OF 2 FEET PER SECOND.
5. THE CONTRACTOR SHALL PROVIDE ENGINEERED PUMP SPECIFICATIONS AND SEPTIC TANK SIZES TO THE ROCHESTER DEPARTMENT OF PUBLIC WORKS FOR APPROVAL PRIOR TO INSTALLATION.



MARCH 2020

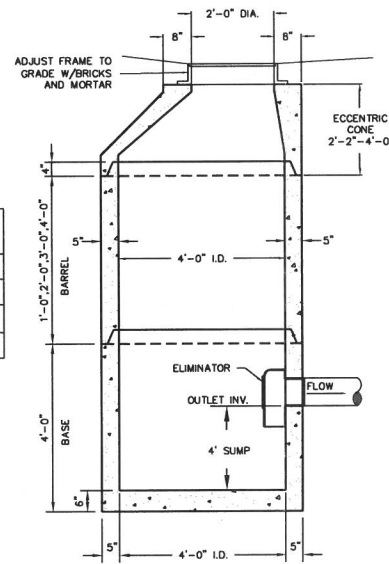
2 Continental Blvd., Rochester, N.H. 603-335-3948



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

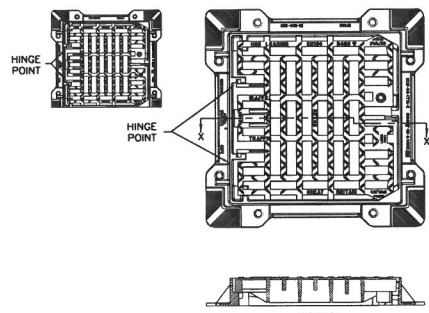
- NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
 2. REINFORCING: SHALL BE PROVIDED FOR H-20 LOADING.
 3. SHIPLAP JOINTS SEALED WITH 1 STRIP OF BUTYL RUBBER SEALANT.
 4. PIPE OPENINGS CAST IN AS REQUIRED.
 5. RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH.
 6. PIPE CONNECTIONS SHALL BE MORTARED.
 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

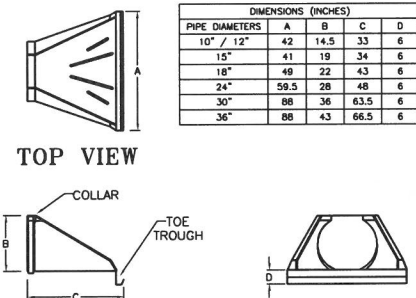
PRE-CAST REINFORCED CATCH BASIN

NOT TO SCALE



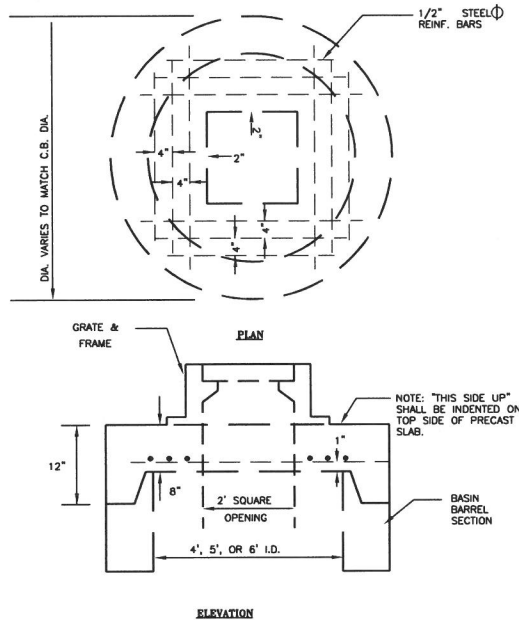
24" REXUS DI CB F & GRATE 62114 CB3R

NOT TO SCALE



FLARED END SECTION DETAIL
NOT TO SCALE

PIPE DIAMETERS	A	B	C	D
10" / 12"	42	14.5	33	6
15"	41	19	34	6
18"	49	22	43	6
24"	58.5	28	48	6
30"	68	36	63.5	6
36"	88	43	66.5	6

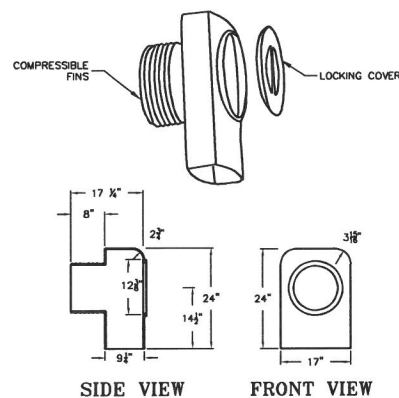


ELEVATION

- 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

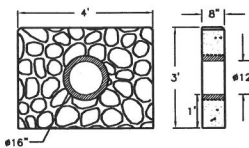
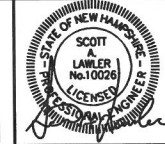


ELIMINATOR CATCH BASIN
OIL AND DEBRIS TRAP DETAIL
NOT TO SCALE

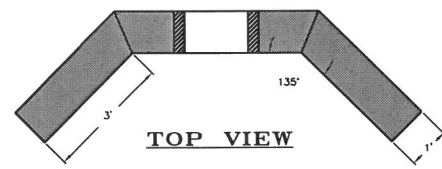
- NOTES:
1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM
 2. AVAILABLE IN 8", 10", 12", 15" AND 18" DIAMETERS.



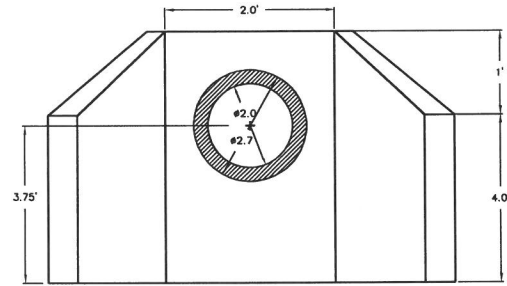
CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN 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.



TYPICAL DRIVE HEADWALL
NOT TO SCALE

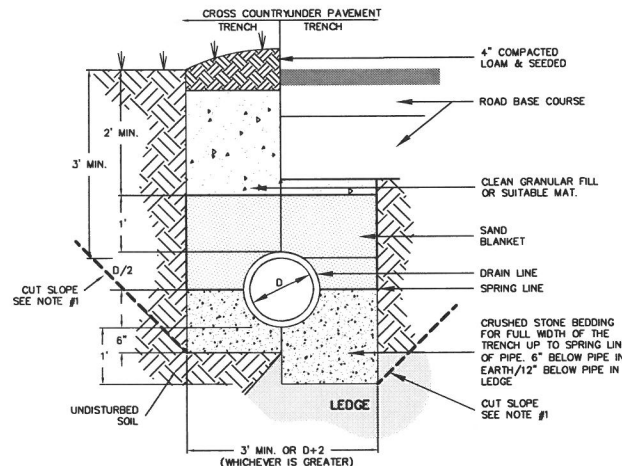


TOP VIEW



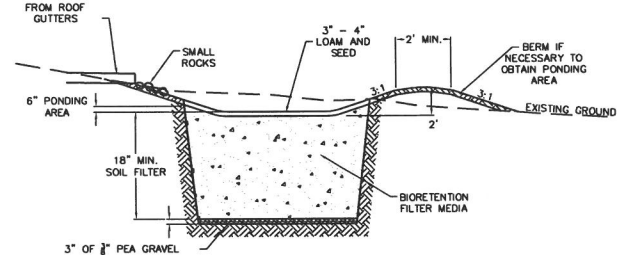
FRONT VIEW

PRE-CAST HEADWALL



- 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



CROSS SECTION
RAIN GARDEN DETAIL
NOT TO SCALE

- VEGETATED RESIDENTIAL RAIN GARDEN CONSTRUCTION AND MAINTENANCE NOTES FOR LOTS 10-2 THRU 10-7 AND LOTS 10-8 THRU 10-14 AND LOTS 10-16 AND 10-17.
1. RAIN GARDEN AREAS SHOULD BE LOCATED CLOSE TO THE SOURCE OF RUNOFF.
 2. DO NOT PLACE RAIN GARDEN SYSTEMS INTO SERVICE UNTIL THE BASIN AND THE ADJACENT AREAS ARE FULLY ESTABLISHED.
 3. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENTS EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION AS WARRANTED BY SUCH INSPECTION.
 4. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
 5. AT LEAST ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAINAGE TIME. IF THE RAIN GARDEN DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITIONS OF THE GARDEN TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.

BIORETENTION FILTER MEDIA			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COURSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

DRAINAGE DETAILS
TAX MAP 110, LOT 10-00 & LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS LLC.

MARCH 2020

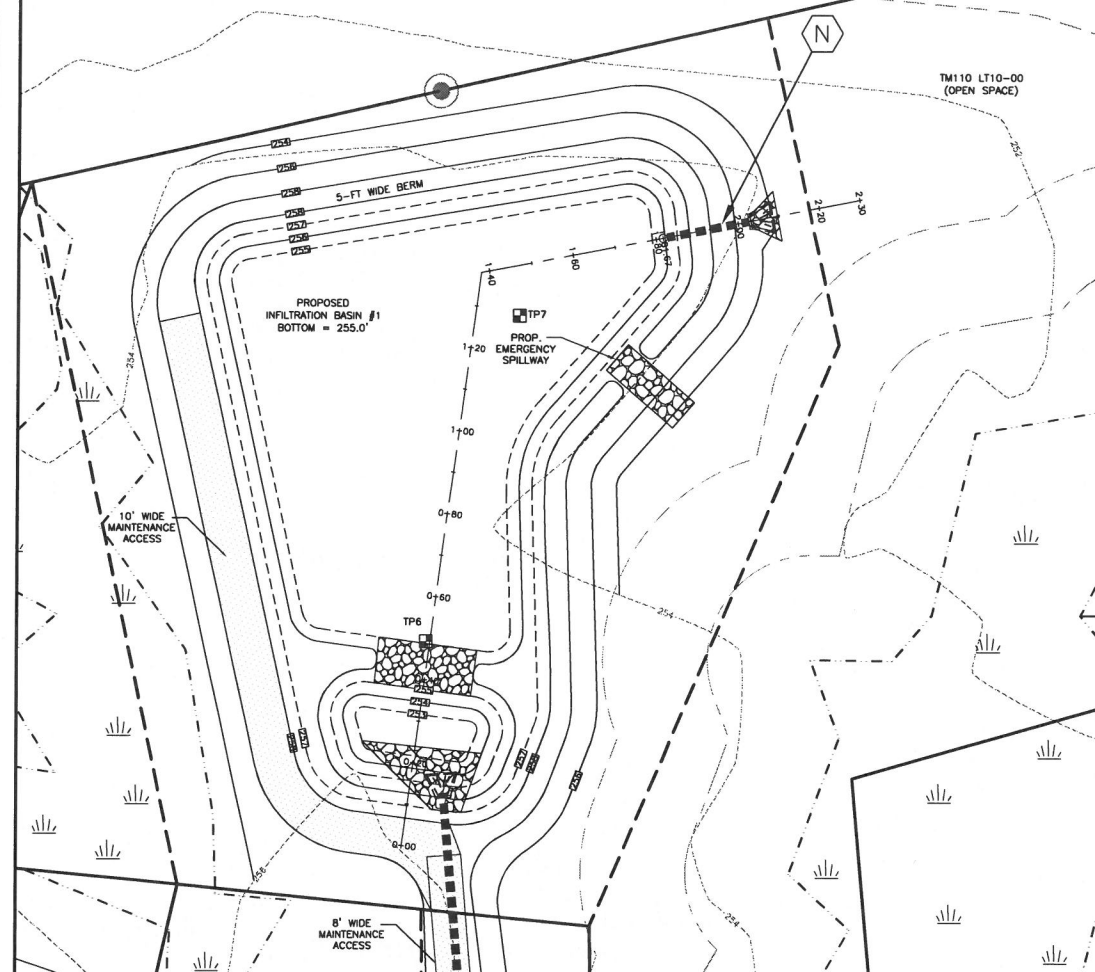
FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" "CEK"

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

NORWAY PLAINS ASSOCIATES, INC.

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

LAND SURVEYORS



INFILTRATION BASIN #1

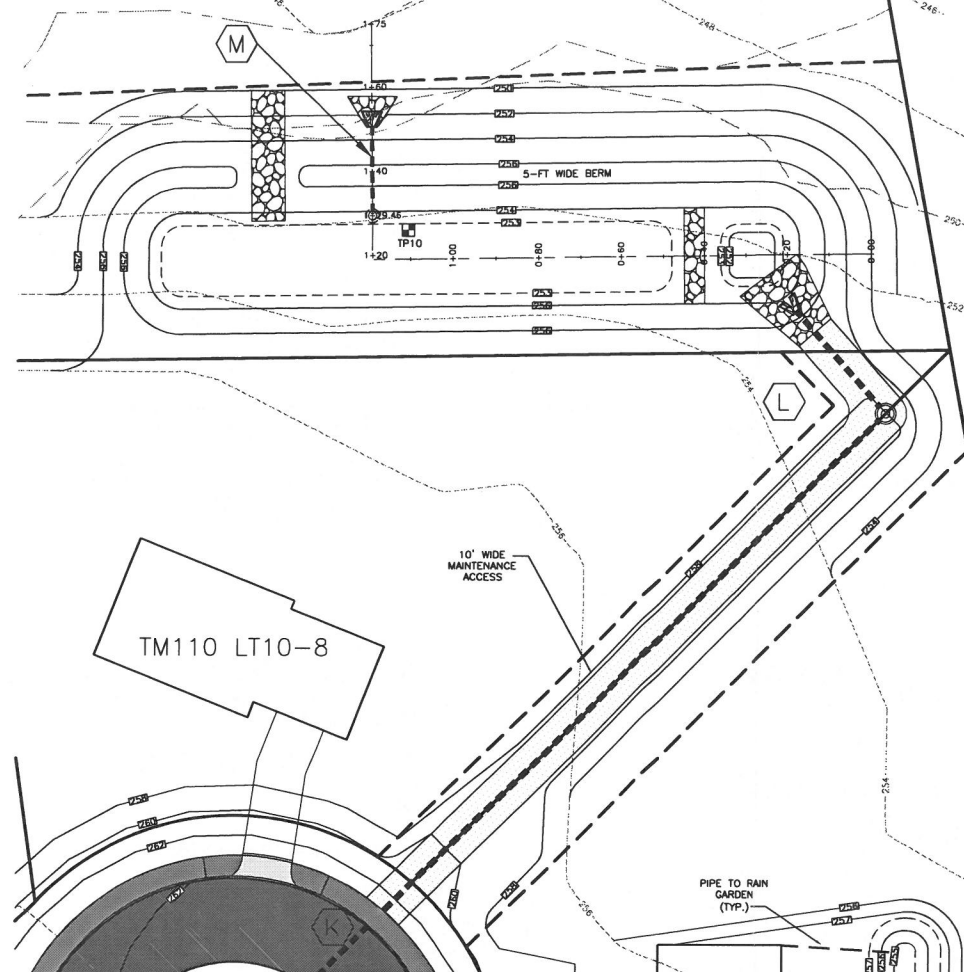
1" = 20'

INFILTRATION BASIN NOTES

- 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-12. 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.

CIVIL ENGINEERS



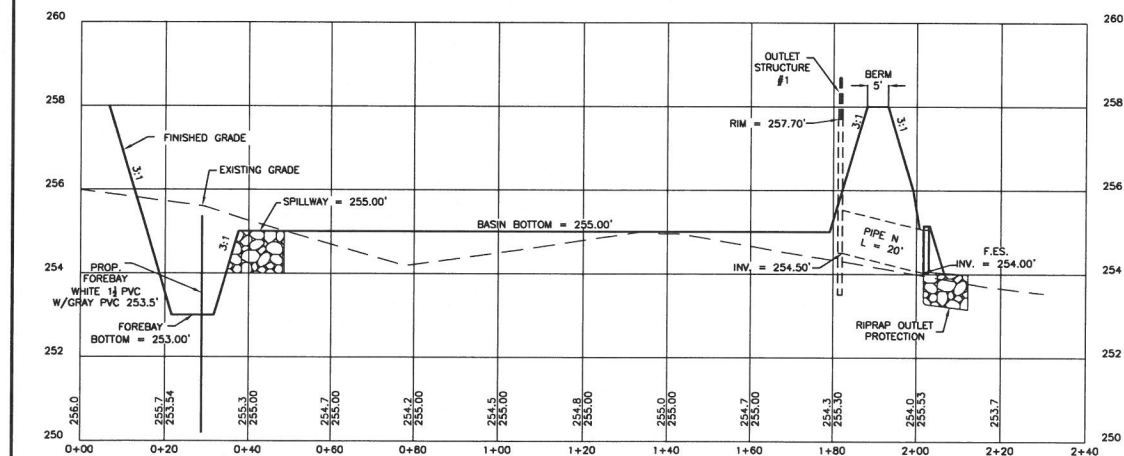
INFILTRATION BASIN #2

1" = 20'

TEST PIT DATA:

THE SOILS ON THE REFERENCED PROPERTY WERE EXAMINED BY DAVID J. ALLAIN CSS#13 ON FEBRUARY 24 AND 28, 2020 TO PROPERLY ADDRESS DRAINAGE AND REGULATORY REQUIREMENTS. THE SOIL PROFILES WERE EXAMINED AND RECORDED USING NRCS, SSSNIE AND NHDOS CRITERIA AS FOLLOWS:

- TP # 6 (2-24-2020)**
 0-3' 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE.
 3-8' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
 8-38' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.
 38-58' 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
 NOTES: SHWT 38', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.
- TP # 7 (2-24-2020)**
 0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
 2-7' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
 7-30' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.
 30-82' 10YR 5/3 LOAMY SANDS, MASSIVE, GRANULAR, FRIABLE, REDOX CONCENTRATIONS AND DEPLETIONS.
 NOTES: SHWT 30', OBSERVED WATER AT 58', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.
- TP # 10 (2-24-2020)**
 0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE.
 2-8' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE.
 8-30' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE.
 30-58' 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.
 NOTES: SHWT 30', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.



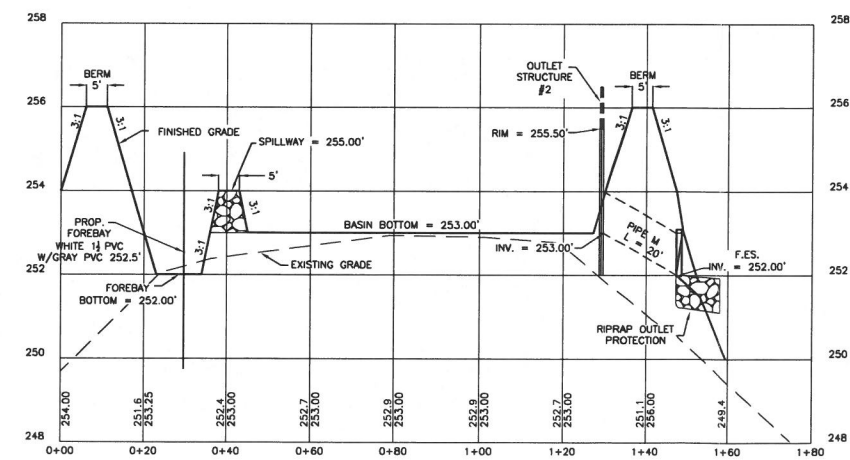
PROFILE

HORIZONTAL: 1" = 20'
 VERTICAL: 1" = 2'

INFILTRATION BASIN #1

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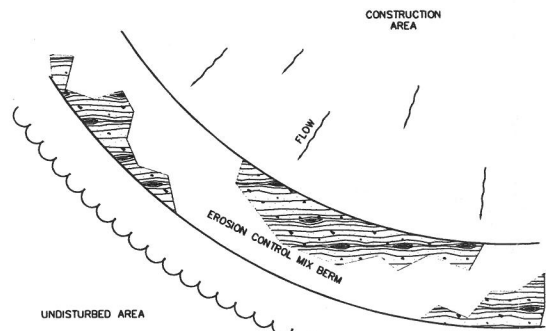
PROFILE

HORIZONTAL: 1" = 20'
 VERTICAL: 1" = 2'

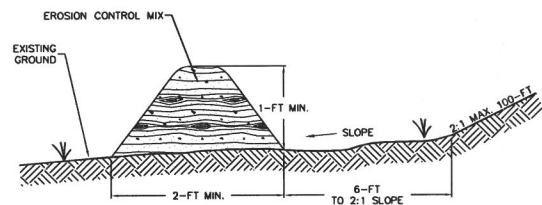
INFILTRATION BASIN #2

**INFILTRATION BASIN
 PLAN & PROFILE
 TAX MAP 110, LOT 10-00 &
 LOTS 10-2 THRU 10-18
 FREEDOM DRIVE
 ROCHESTER, NH
 PREPARED FOR:
 GOLDEN OAKS LLC.
 MARCH 2020**

C-9



EROSION CONTROL MIX BERM CROSS-SECTION



EROSION CONTROL MIX BERM CROSS-SECTION

- MAINTENANCE REQUIREMENTS:**
1. EROSION CONTROL MIX BERMS SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
 2. EROSION CONTROL MIX BERMS SHOULD BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM.
 3. IF THERE ARE SIGNS OF BREACHING OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, THE EROSION CONTROL MIX BERMS SHOULD BE REPLACED WITH OTHER MEASURES TO INTERCEPT AND TRAP SEDIMENT (SUCH AS A DIVERSION BERM DIRECTING RUNOFF TO A SEDIMENT TRAP OR BASIN).
 4. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT.
 5. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD (1/3) OF THE HEIGHT OF THE BARRIER.
 6. EROSION CONTROL MIX BERMS SHOULD BE RESHAPED OR REAPPLIED AS NEEDED.
 7. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEED.

- CONSTRUCTION SPECIFICATIONS:**
1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF OF THE PROJECT SITE.
 2. EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS.
 3. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

- 4. COMPOSITION OF THE EROSION CONTROL MIX SHOULD BE AS FOLLOWS:**
- A. EROSION CONTROL MIX SHALL BE A WELL GRADED MIXTURE OF PARTICLE SIZES FREE OF REFUSE, PHYSICAL CONTAMINANTS, MATERIAL TOXIC TO PLANT GROWTH AND MAY NOT CONTAIN ROCKS LESS THAN 4-INCHES IN DIAMETER.

B. ORGANIC MATTER = 25-65% DRY WEIGHT BASIS

C. PARTICLES PASSING BY WEIGHT:

SCREEN-PASSING BY WEIGHT:	
3-INCH	100%
1-INCH	90-100%
3/4-INCH	70-100%
1/4-INCH	30-75%

E. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.

F. THE MIX SHOULD CONTAIN NO SILTS, CLAYS OR FINE SANDS.

G. SOLUBLE SALTS CONTENT < 4.0 mmhos/cm

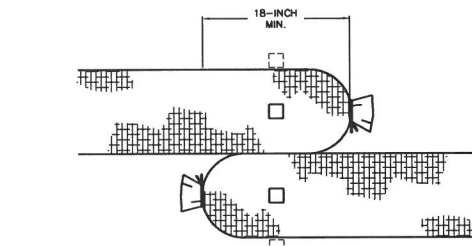
H. pH OF THE MIX SHOULD BE BETWEEN 5.0 AND 8.0

5. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
6. IT MAY BE NECESSARY TO CUT TALL GRASSES AND WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES IN THE BARRIER THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
7. THE BARRIER MUST BE A MINIMUM OF 12-INCHES TALL AS MEASURED ON THE UPHILL SIDE OF THE BARRIER.
8. THE BARRIER MUST BE A MINIMUM OF 2-FT WIDE.

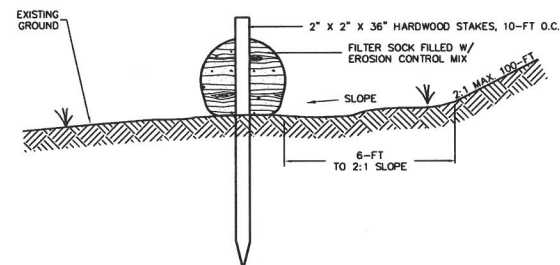
EROSION CONTROL MIX BERM DETAIL

NOT TO SCALE

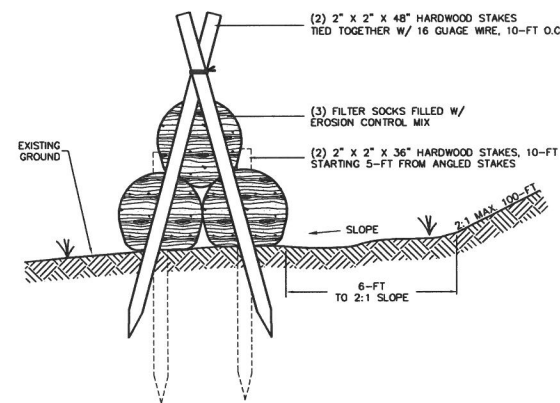
OR



FILTER SOCK CONNECTION PLAN VIEW



FILTER SOCK CROSS-SECTION



HEAVY DUTY PYRAMID FILTER SOCK CROSS-SECTION

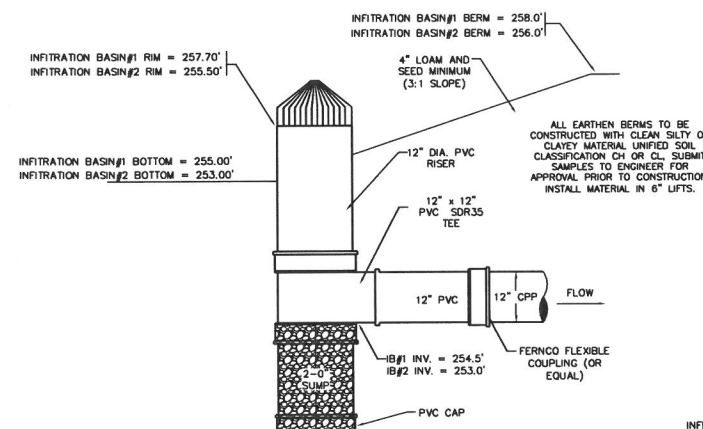
- CONTINUOUS CONTAINED BERM (FILTER SOCK ALTERNATIVE):**
1. AN ALTERNATIVE PRODUCT, THE CONTINUOUS CONTAINED BERM (OR "FILTER SOCK") CAN BE AN EFFECTIVE SEDIMENT BARRIER AS IT ADDS CONTAINMENT AND STABILITY TO A BERM OF EROSION CONTROL MIX.
 2. IN THE EVENT THAT USE OF CONTINUOUS CONTAINED BERM IS DESIRED, THE PRODUCT SELECTED SHOULD BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER.
 3. INSTALLATION OF CONTINUOUS CONTAINED BERMS SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE MANUFACTURER.

- MAINTENANCE REQUIREMENTS:**
1. FILTER SOCK MAINTENANCE SHALL FOLLOW THE SAME SCHEDULE AS EROSION CONTROL MIX BERMS.

- CONSTRUCTION SPECIFICATIONS:**
1. COMPOSITION OF THE EROSION CONTROL MIX SHALL EITHER BE THE SAME AS EROSION CONTROL MIX BERM MATERIAL OR AS SPECIFIED BY THE FILTER SOCK MANUFACTURER.
 2. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
 3. IT MAY BE NECESSARY TO CUT TALL GRASSES AND WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES IN THE BARRIER THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
 4. FILTER SOCK DIAMETER (HEIGHT) SHALL BE PER THE MANUFACTURER RECOMMENDATION FOR THE AREA OF INSTALLATION.

CONTINUOUS CONTAINED BERM "FILTER SOCK" DETAIL

NOT TO SCALE

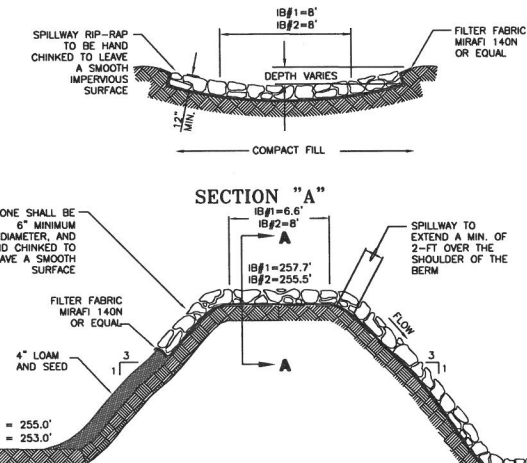


INFILTRATION BASIN #1 & #2 OUTLET STANDPIPE DETAIL

NOT TO SCALE

- SPECIFICATIONS:**
1. CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
 2. LOAM AND SEED THE SLOPES AND BOTTOM OF THE SEDIMENT FOREBAY AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-12.
- SEED MIXTURE = A**
- MAINTENANCE REQUIREMENTS:**
1. INSPECT SEDIMENT FOREBAY BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 2. 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.
 3. REMOVE DEBRIS FROM THE OUTLET STRUCTURE OF THE SEDIMENT FOREBAY (I.E. STONE CHECK DAM) AT LEAST ONCE ANNUALLY.
 4. REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. WHEN SEDIMENT HAS REACHED THE RED MARK ON THE SEDIMENT STAFF GAGE INSTALLED IN THE FOREBAY, REMOVE SEDIMENT AND DISPOSE OF IT OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. ELEVATION OF RED CLEANOUT MARK ON STAFF GAUGE FOREBAY #1=253.5', ELEVATION OF RED CLEANOUT MARK ON STAFF GAUGE FOREBAY #2=252.5'.

SEDIMENT FOREBAY



INFILTRATION BASIN #1 & #2 EMERGENCY SPILLWAY DETAIL

NOT TO SCALE

INFILTRATION BASIN #1 & #2 SEDIMENT FOREBAY GAUGE DETAIL

NOT TO SCALE

- NOTES:**
1. STAFF GAGE 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.

INFILTRATION BASIN DETAIL SHEET AND SILT SOCK AND EARTH BERM DETAIL
TAX MAP 110, LOT 10-00 & LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS LLC.
MARCH 2020

FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
P.B. NO. "33" "CBK"

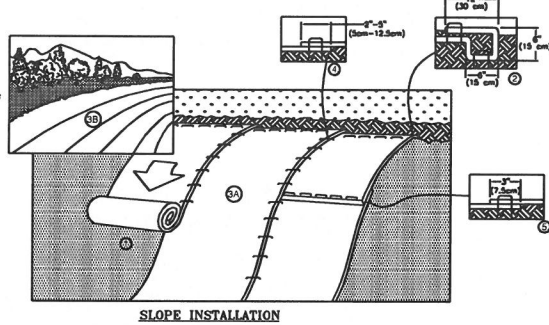
31 Mooney Street, Alton, N.H. 603-875-3948

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 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.

LAND SURVEYORS



NORTH AMERICAN GREEN
EROSION CONTROL PRODUCTS
Guaranteed SOLUTIONS
14646 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-775-2040
www.norgreen.com



SLOPE INSTALLATION

MAINTENANCE REQUIREMENTS:

1. 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.
2. 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:

1. MANUFACTURE'S INSTALLATION INSTRUCTIONS:
- A. 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.
- B. 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" (30 CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/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 STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
- C. 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 STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- D. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
- E. CONSECUTIVE RECP'S SPUNCE 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:

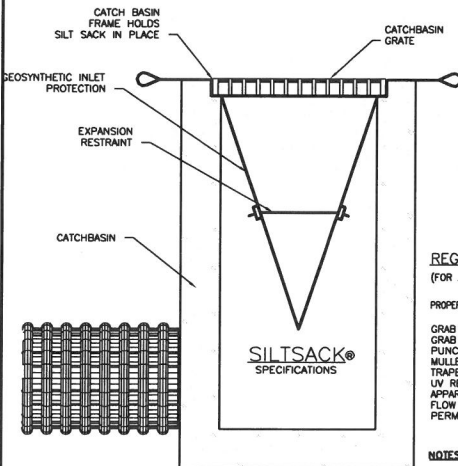
1. PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL. GRADE AND SHAPE AREA IF INSTALLATION.
2. REMOVE ALL ROCKS, CLODS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
3. PREPARE SEEDING BY LOOSING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
4. INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.

SEEDING:

1. 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 STOPS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEDED.
2. 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 BLANKET DETAIL

NOT TO SCALE



REGULAR FLOW SILTSACK®

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4633	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4633	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 U.S. SIEVE
FLOW RATE	ASTM D-4481	0.5 SEC - 1
PERMITTIVITY	ASTM D-4481	0.55 SEC - 1

NOTES:

1. GEOSYNTHETIC SEDIMENT FILTER TRAP SHALL BE "REGULAR FLOW SILTSACK®" OR APPROVED EQUAL. SPECIFICATIONS FOR SILTSACK® ARE DETAILED.
2. FILTER TRAPS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF 0.25" OR GREATER AND SEDIMENTS SHALL BE REMOVED FROM TRAP WHEN SEDIMENT HAS REACHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF PONDING OF WATER AT SURFACE BEGINS TO OCCUR. DO NOT PUNCTURE FILTER TRAP TO MITIGATE PONDING.
3. INSTALL SILT SACKS IN CATCH BASIN UPON INSTALLATION OF STRUCTURE.

CATCH BASIN GEOSYNTHETIC SEDIMENT TRAP

NOT TO SCALE

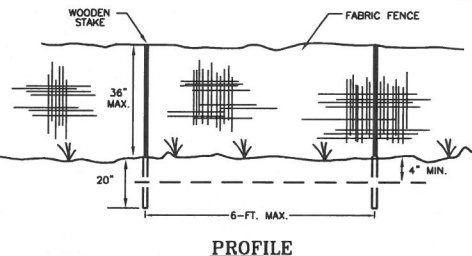
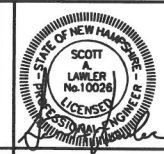
FILE NO. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
F.B. NO. "33" CEK

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

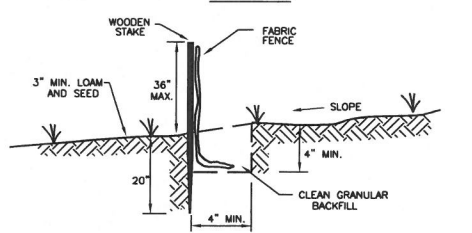


CIVIL ENGINEERS

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.



PROFILE



CROSS-SECTION

MAINTENANCE REQUIREMENTS:

1. FENCES SHALL BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALLS.
2. 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.
3. 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 IMPONDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.
4. SHALL THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
5. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE PREPARED AND SEED.
6. IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
7. SILT FENCES HAVE A USEFUL LIFE OF 1 YEAR. ON LONGER CONSTRUCTION PROJECTS, SILT FENCE SHALL BE REPAIRED PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS.

CONSTRUCTION SPECIFICATIONS:

1. 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 OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
2. 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.
3. THE MAXIMUM SLOPE ABOVE THE FENCE SHALL BE 2:1.
4. FENCES SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, AND
- A. THE EDGES OF THE FENCE SHALL BE FLARED UPSLOPE.
- B. 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.
- C. THE SOIL SHALL BE COMPACTED OVER THE EMBEDDED FABRIC.
- D. SUPPORT POSTS SHALL BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURE'S INSTRUCTIONS WITH MAXIMUM SPACING OF 6 FEET.
- E. 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.
6. SILT FENCING SHALL NOT BE STAPLED OR NAILED TO TREES.
7. THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
8. THE FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSUMER LIFE AT A TEMPERATURE RANGING FROM 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
9. 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.
10. 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.
11. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPUNCE TOGETHER ONLY AT SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED.
12. A MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
13. POST SPACING SHALL NOT EXCEED 6 FEET.
14. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UP GRADIENT FROM THE BARRIER.
15. THE STANDARD STRENGTH OF FILTER FABRIC SHALL BE STAPLED OR WIRE 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.
16. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
17. SILT FENCE MAY BE INSTALLED BY "SLUING" USING MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PROCEDURE. THE SLUING METHOD USES AN IMPLEMENT TOWED BEHIND A TRACTOR TO "PLOW" OR SLICE THE SILT FENCE MATERIAL INTO THE SOIL. THE SLUING METHOD MINIMALLY DISRUPTS THE SOIL UPWARD AND SLIGHTLY DISPLACES THE SOIL, MAINTAINING THE SOIL'S PROFILE AND CREATING AN OPTIMAL CONDITION FOR SUBSEQUENT MECHANICAL COMPACTION.
18. SILT FENCES SHALL BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND.
19. THE ENDS OF THE FENCE SHALL BE TURNED UPHILL.
20. SILT FENCES PLACED AT THE TOE OF A SLOPE SHALL BE SET AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND TO ALLOW FOR MAINTENANCE ACCESS WITHOUT DISTURBING THE SLOPE.
21. 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

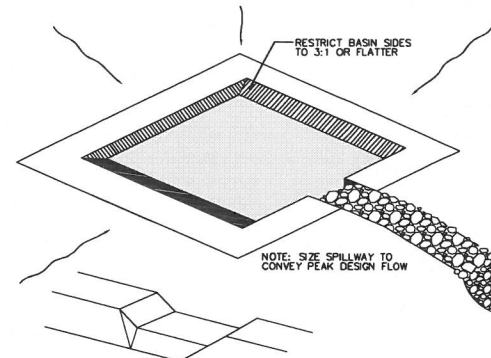
NOT TO SCALE

TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

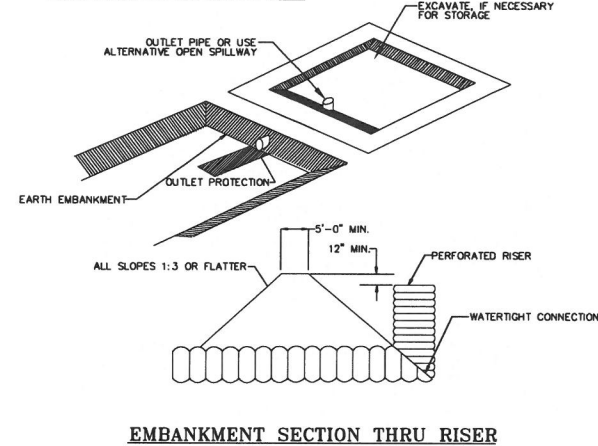
SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. 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:

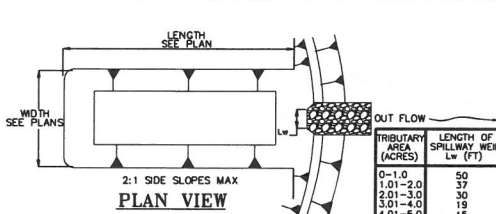
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 1-1.
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)



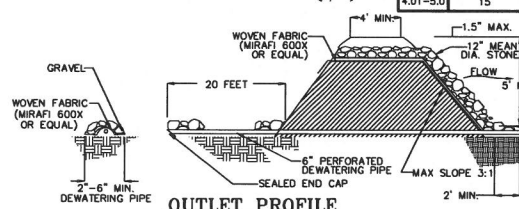
TYPICAL OPEN SPILLWAY



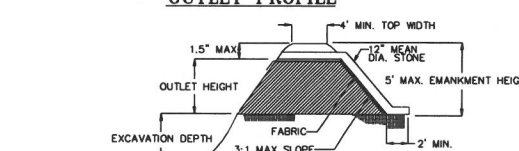
EMBANKMENT SECTION THRU RISER



PLAN VIEW



OUTLET PROFILE



ALTERNATE OUTLET PROFILE

SEDIMENT TRAP

TEMPORARY VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

1. INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
2. GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
3. RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
4. 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:

1. STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
2. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
3. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
4. 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

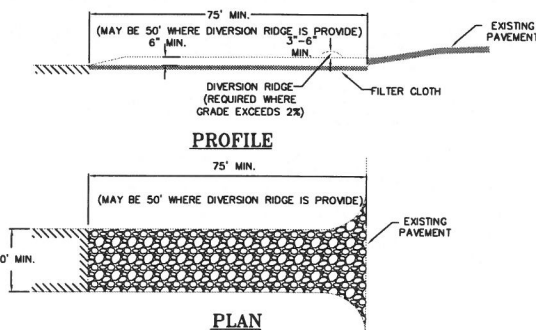
FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

SEEDING:

1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER 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 2:1 FOR WHEN HYDROSEEDING.
2. TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
3. AREAS SEED BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "MULCHING" PRACTICE DESIGN DETAIL IN THE NHSSM, VOL. 3.
4. 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:

1. 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.
2. BASED ON INSPECTION, AREAS SHALL BE RESEDED 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.
3. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEDED, 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:

1. 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.
2. THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
3. 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:

1. THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
2. 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.
3. THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
4. THE PAD SHALL SLOPE AWAY FROM THE EASTERN AVENUE.
5. THE PAD SHALL BE AT LEAST 6 INCHES THICK.
6. THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
7. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT DRIVING AND SOIL PARTICLES ARE TRACKED OFF-SITE.
8. 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 & SEDIMENTATION CONTROL DETAILS

TAX MAP 110, LOT 10-00 & LOTS 10-2 THRU 10-18

FREEDOM DRIVE
ROCHESTER, NH

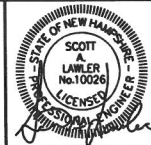
PREPARED FOR:
GOLDEN OAKS LLC.

MARCH 2020

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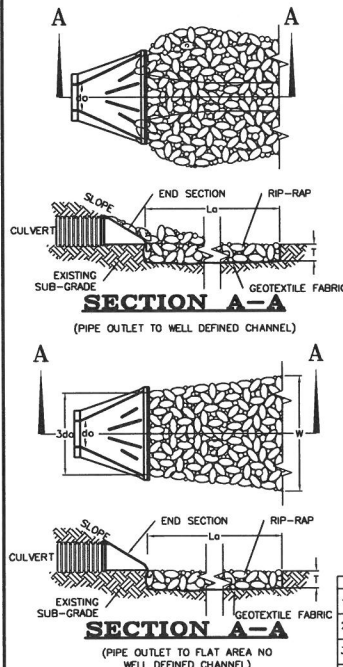
NORWAY PLAINS ASSOCIATES, INC.

2 Continental Blvd., Rochester, N.H. 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 WITHIN THIS 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.

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 4
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

d50 = 6"	
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)
100	9 TO 12
85	7.8 TO 10.8
50	6 TO 9
15	1.8 TO 3

d50 = 9"	
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)
100	13.5 TO 18
85	11.7 TO 16.2
50	9 TO 13.5
15	2.7 TO 4.5

APRON DIMENSION TABLE

OUTLET PROT. #	PIPE OUTLET	W ₀	W	L ₀	L	d50
1 - FB#1 PIPE H	24" CPP	6'	23'	17'	12"	3"
2 - OS#1 PIPE L	15" CPP	4'	15'	11'	12"	3"
3 - OS#1 PIPE M	12" CPP	3'	12'	7'	12"	3"
4 - OS#1 PIPE N	12" CPP	3'	12'	7'	12"	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 IF 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.
- SIDING 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 (I.E. COMMERCIAL TACKPERS OR CHEMICAL TREATMENTS SUCH AS CALCIUM CHLORIDE, ETC.)

STOCKPILE PRACTICES:

- 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 BEFORE 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 (I.E. 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 (I.E. 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 (I.E. 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. 166
PLAN NO. C-3043
DWG. NO. 19138/S-1
P.B. NO. "33" "CEK"

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

PERMANENT VEGETATION:

SPECIFICATIONS:

- INSTALL NEEDLE 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 PERIMETER SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDBED PREPARATION:

- WORK LINE 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 CLOS, 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 LINES OF SEED 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 VARIOUS 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 CULPACKER 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 CULPACKER 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 A LEAST 50% 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.
- AREAS COVERED WITH MULCH SHALL BE INSPECTED AT LEAST MONTHLY DURING THE PERIOD OF CONSTRUCTION. 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 SEDIMENT 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 MUST BE MONITORED 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 SOIL.
- 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 (I.E. MULCH, ETC.) USED TO PROMOTE 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
		REDTOP	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
		REDTOP	2	0.05
		TOTAL	42	0.95
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP	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 BARRIERS 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, NO MORE THAN 5 ACRES SHALL BE DISTURBED (NOT STABILIZED) AT ANY TIME. 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 CLEARING AND CONSTRUCTION WITH APPROVED GRADING AND DRAINAGE PLAN DEPICTED ON SHEET C-3.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE 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 SPOLS 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, SURFACE SETTLEMENT, 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 OF 3-INCHES DEPTH PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
- ALL FILLS SHALL BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SURFACE SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- 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 LIFTS.
- FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. 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 (GREAT 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.

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)

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 (I.E. 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 SHAW FELS AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.
- CLEAR, GRUB AND STRIP THE SITE. STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- 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-3.
- CONSTRUCT THE INFILTRATION BASINS, SEDIMENT FOREBAY, THE TREATMENT SWALE AND OUTLET PROTECTION. LOAN SEED AND MULCH THE SLOPES OF THE BASINS AND TREATMENT SWALE, AS DIRECTED IN THE INFILTRATION BASIN DETAILS AND TREATMENT SWALE DETAILS.
- ALL DITCHES/SWALES/AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE ROADWAY.
- 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 (I.E. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATON BASINS, ETC.).
- INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. PIPE CULVERTS, CATON BASINS, SEWER AND REMAINING WATER MAIN) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-6, C-7, C-8 AND C-9. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING SEDIMENTATION CONTROL MEASURE.
- 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 ACHIEVING FINAL GRADE.
- INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE ROADWAY AS SPECIFIED IN THE CORRESPONDING DETAILS.
- 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.

MAINTENANCE AND INSPECTION:

- DURING CONSTRUCTION ALL 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 GERMNATED), 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 CATCH BASINS AND THE SEDIMENT FOREBAY.

WINTER STABILIZATION & CONSTRUCTION PRACTICES:

MAINTENANCE REQUIREMENTS:

- MAINTENANCE MEASURES SHALL BE PERFORMED THROUGHOUT CONSTRUCTION, INCLUDING OVER THE WINTER PERIOD. AFTER EACH RAINFALL, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE SITE FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHALL CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF THE VEGETATION AND REPAIR ANY DAMAGED AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, WOOGROUS GROWTH.)

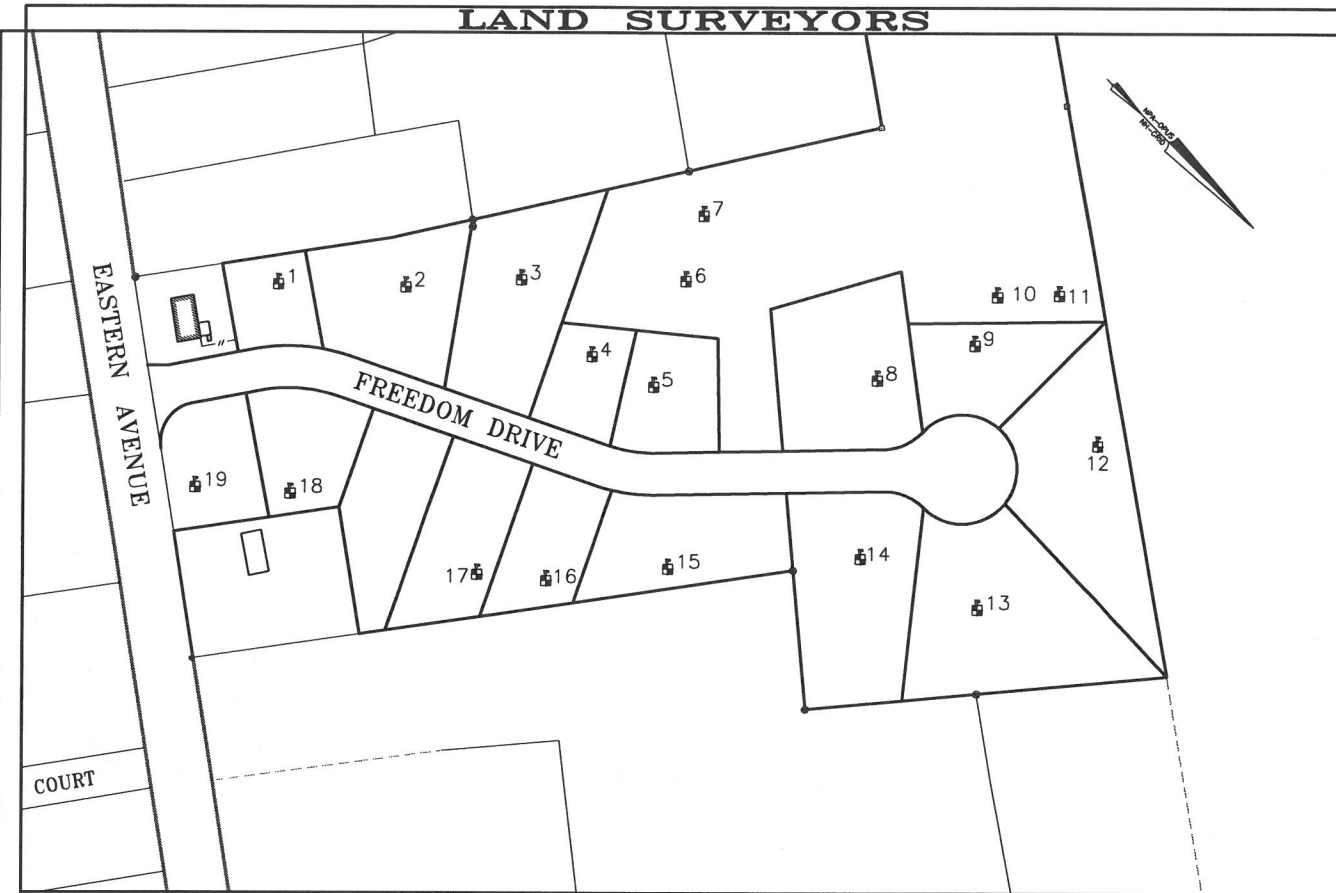
SPECIFICATIONS:

- THE FOLLOWING STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 15.
 - THE AREA OF EXPOSED UNSTABILIZED SOIL SHALL BE LIMITED TO 1-ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DISCUSSED IN NHSM, VOL. 3 AND ELSEWHERE IN THIS PLAN SET. PRIOR TO ANY THAW OR SPRING MELT EVENT.
 - STABILIZATION AS FOLLOWS SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
 - ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX (I.E. NHSM, VOL. 3 SPECIFICATION).
 - ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15 SHALL BE SEEDED AND COVERED WITH A PROPERLY INSTALLED EROSION CONTROL BLANKET OR WITH A MINIMUM OF 4 INCHES OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHALL NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
 - ALL STONE COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
 - INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
 - ALL MULCH APPLIED DURING WINTER SHALL BE ANCHORED (I.E. BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
 - WITHIN 24 HOURS OF STOCKPILING SOIL MATERIALS SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A 4 INCH LAYER OF EROSION CONTROL MIX. MULCH SHALL BE REESTABLISHED PRIOR TO ANY RAIN OR SNOWFALL. NO SOIL STOCKPILE SHALL BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100-FT. OF ANY WETLAND OR OTHER WATER RESOURCE AREA.
 - FROZEN MATERIAL (I.E. FROST LAYER REMOVED DURING WINTER CONSTRUCTION) SHALL BE STOCKPILED SEPARATELY AND IN A LOCATION AWAY FROM ANY AREA NEEDING PROTECTION. FROZEN MATERIAL STOCKPILES CAN MELT IN SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO HIGH SOIL MOISTURE CONTENT.
 - INSTALLATION OF EROSION CONTROL BARRIERS SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
 - ALL GRASS-LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED BY SEPTEMBER 1. ALL DITCHES AND SWALES

LAND SURVEYORS



CIVIL ENGINEERS



TEST PIT DATA:

THE SOILS ON THE REFERENCED PROPERTY WERE EXAMINED BY DAVID J. ALLAIN CSS#13 ON FEBRUARY 24 AND 28, 2020 TO PROPERLY ADDRESS DRAINAGE AND REGULATORY REQUIREMENTS. THE SOIL PROFILES WERE EXAMINED AND RECORDED USING NRCS, SSSNNE AND NHDES CRITERIA AS FOLLOWS:

TP# 1 (2-24-2020)

0-3' 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE
3-12' 10YR3/4 LOAMY SAND, GRANULAR, FRIABLE
12-48' 10YR6/2 LOAMY SAND, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.

NOTES: SHWT AT 12' NO OBSERVED WATER, (915) DEERFIELD VARIANT, SOMEWHAT POORLY DRAINED, BECAUSE THE SHWT IS LESS THAN 24', THE HYDROLOGIC SOIL GROUP IS D.

TP# 2 (2-24-2020)

0-2' 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE
2-25' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE
25-60' 10YR6/2 LOAMY SAND, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.

NOTES: SHWT AT 25', OBSERVED WATER AT 29', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC GROUP B.

TP# 3 (2-24-2020)

0-5' 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE
5-36' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE
36-58' 10YR6/2 LOAMY SAND, MASSIVE, FRIABLE, REDOX CONCENTRATIONS AND DEPLETIONS.

NOTES: SHWT AT 36', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 4 (2-24-2020)

0-3' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
3-24' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE
24-64' 10YR6/2 LOAMY SAND, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.

NOTES: SHWT AT 24', OBSERVED WATER AT 48', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 5 (2-24-2020)

0-3' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
3-18' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE
18-48' 10YR6/2 LOAMY SAND, MASSIVE, FRIABLE, REDOX CONCENTRATIONS AND DEPLETIONS.

NOTES: SHWT AT 18', OBSERVED WATER AT 46', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, BECAUSE THE SHWT IS LESS THAN 24', THE HYDROLOGIC SOIL GROUP IS D.

TP# 6 (2-24-2020)

0-3' 10YR3/2 SANDY LOAM, GRANULAR, FRIABLE
3-8' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
8-38' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.

NOTES: SHWT 38', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 7 (2-24-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-7' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
7-30' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.

NOTES: SHWT 30', OBSERVED WATER AT 58', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 8 (2-24-2020)

0-6' 10YR4/4 SANDY LOAM, GRANULAR, FRIABLE
6-18' 10YR 5/6 LOAMY SAND, GRANULAR, FRIABLE
18-28' 10YR5/4 LOAMY SAND, MASSIVE, FRIABLE

NOTES: SHWT 28', OBSERVED WATER AT 62', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 9 (2-24-2020)

0-10' 10YR5/4 SANDY LOAM, GRANULAR, FRIABLE
10-33' 10YR 5/6 LOAMY SAND, GRANULAR, FRIABLE
33-64' 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM, REDOX CONCENTRATIONS AND DEPLETIONS.

NOTES: SHWT 33', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 10 (2-24-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-8' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
8-30' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE

NOTES: SHWT 30', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 11 (2-24-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-16' 10YR 5/6 LOAMY SAND, GRANULAR, FRIABLE
16-24' 10YR5/3 LOAMY SAND, GRANULAR, FRIABLE

NOTES: SHWT 24', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 12 (2-24-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-4' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
4-30' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.

NOTES: SHWT 30', OBSERVED WATER AT 58', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 13 (2-24-2020)

0-3' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
3-12' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
12-23' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE

NOTES: SHWT 23', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, BECAUSE THE SHWT IS LESS THAN 24', THE HYDROLOGIC SOIL GROUP IS D.

TP# 14 (2-24-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-12' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
12-23' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE

NOTES: SHWT 23', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, BECAUSE THE SHWT IS LESS THAN 24', THE HYDROLOGIC SOIL GROUP IS D.

TP# 15 (2-24-2020)

0-12' 10YR5/4 SANDY LOAM, GRANULAR, FRIABLE
12-28' 10YR 5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES
28-85' 10YR 6/2 LOAMY SANDS, MASSIVE, FIRM IN PLACE FRIABLE IN HAND, REDOX CONCENTRATIONS AND DEPLETIONS.

NOTES: SHWT 28', OBSERVED WATER AT 32', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 16 (2-24-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-9' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
9-26' 10YR5/6 LOAMY SAND, MASSIVE, FRIABLE

NOTES: SHWT 26', OBSERVED WATER AT 46', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 17 (2-24-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-8' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
8-28' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE

NOTES: SHWT 28', OBSERVED WATER AT 50', (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 18 (2-28-2020)

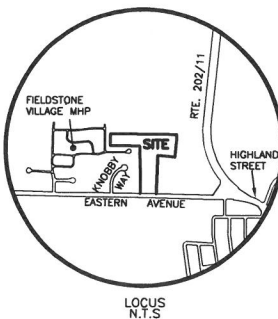
0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-8' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
8-25' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, FEW COBBLE SIZE STONES.

NOTES: SHWT 25', NO OBSERVED WATER, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.

TP# 19 (2-28-2020)

0-2' 10YR2/2 SANDY LOAM, GRANULAR, FRIABLE
2-8' 10YR 5/4 LOAMY SAND, GRANULAR, FRIABLE
8-25' 10YR5/6 LOAMY SAND, GRANULAR, FRIABLE, MANY COBBLE SIZE STONES.

NOTES: SHWT 25', OBSERVED WATER ENTERING RAPIDLY FROM DOWN HILL SIDE, (313) DEERFIELD SERIES, MODERATELY WELL DRAINED, HYDROLOGIC SOIL GROUP B.



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.

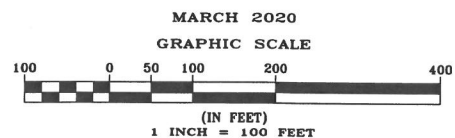
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E.B. NO. "33" "CEK"

31 MOONEY STREET, ALTON, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

TAX MAP 110 - LOT 10-00,
LOTS 10-2 THRU 10-18
OWNER OF RECORD:
ARTHUR TAYLOR, JR.
479 TOVAR DRIVE
SAN JOSE, CA 95123-4948
BK 3434, PG 903

TEST PIT DATA
TAX MAP 110, LOT 10-00 &
LOTS 10-2 THRU 10-18
FREEDOM DRIVE
ROCHESTER, NH
PREPARED FOR:
GOLDEN OAKS DEVELOPMENT, LLC.



2 CONTINENTAL BLVD., ROCHESTER, N.H. 603-335-3948

