



TOWN OF MILFORD, NH
OFFICE OF COMMUNITY DEVELOPMENT

1 UNION SQUARE, MILFORD, NH 03055

TEL: (603)249-0620

WEB: WWW.MILFORD.NH.GOV

Date: March 10, 2020
To: Planning Board
From: Kellie Shamel, Town Planner
Subject: Frederick & Celia Lorden Trust (owner) and Ponemah Hills, LLC (applicant) – Review for acceptance and consideration of final approval for a major site plan to construct a 6,447 square foot, 9-unit multifamily residential building with a nine stall carport along with associated site improvements. The parcel is located at 0 Ponemah Hill Road in the Residence B District. Tax Map 43, Lot 61.

BACKGROUND/PROPOSAL:

The applicant is before the Board seeking approval of a site plan to construct a 6,447 square foot, 9-unit multifamily residential building with a nine stall carport, along with associated site improvements including service from municipal water and sewer. The property totals approximately 1.94 acres with 249 linear feet of frontage on Ponemah Hill Road. The property is currently undeveloped and lies within the Residential B zoning district.

The applicant was last before the Board on February 19th and a site walk was held on March 3rd. Revised plans have been submitted to address Board and Staff comments.

APPLICATION STATUS:

The application was accepted as complete on February 19, 2020.

NOTICES:

Notices were sent to all property abutters on February 6, 2020.

WAIVERS:

No waivers have been requested.

ZONING:

The parcel is within the Residence B District. The intent of the Residence B District is to provide areas for increased residential density and other uses which are compatible with these residential densities.

The allowable density for a multi-family use in the Residential 'B' Zoning District is determined by Section 5.03.4.A which states that multi-family dwellings shall be served by both municipal sewerage and water systems and may have a maximum of five (5) units per acre. The total maximum allowable for the property pursuant to Section 5.03.4.A is 9 units (5 units x 1.91 acres).

TRAFFIC AND ACCESS MANAGEMENT:

Vehicular egress and access to the property will be from a single curb cut off of Ponemah Hill Road. Designated parking areas have been provided internally on site. The applicant has revised the plan to include a 16 foot wide access on the southeast portion of the site for emergency vehicles.

Section 7.03 Sidewalks of the Development Regulations states that the Planning Board may require sidewalks for pedestrian traffic to provide a connection between the main entrances of business, housing or industrial establishments, parking areas and along public roadways. The Planning Board may also require sidewalks from the road to the main building entrance or along the road frontage if there is a reasonable expectation pedestrian patrons, residents, neighbors, children, shoppers or employees would be traveling to or from the site.

PARKING:

The proposed parking on site meets and exceeds the minimum requirements set forth in Section 6.05.4 Table of off Street Parking which requires two (2) spaces per unit: **9 units x 2 = 18 spaces required**. The plan shows a proposed 20 spaces plus 9 carport spots.

The Board may consider discussing with the applicant the possibility of reducing the amount of parking spaces given the amount of impervious surface onsite.

OPEN SPACE/LANDSCAPING:

As per Section 5.03.7 of the Zoning Ordinance, open space shall be provided for all uses, other than single-family and two-family dwellings in an amount equal not less than thirty (30) percent of the total lot area.

The property exceeds the minimum open space requirements (58,364 square feet / 1.340 acres) or 70% of the total parcel area.

The applicant has revised the landscape plan to include additional plantings along the frontage of Ponemah Hill Road in compliance with Section 6.08.7A.2. Additional plantings (arborvitae) have been added to the eastern buffer area as discussed at the last Planning Board meeting.

Staff would recommend installing additional vegetation buffer in areas where there may be gaps.

DRAINAGE/STORMWATER MANAGEMENT

The applicant has reduced the entrance roadway to 22 feet per staff recommendation to decrease the amount of impervious surface on site. Additionally, the applicant has revised the stormwater management area to account for the additional 16 foot wide access and other changes on site. These drainage changes are under review by KV Partners.

Subject to resolution of any additional comments from the engineering consultant, the stormwater system design adequately mitigates the increase in runoff rate and volume caused by the proposed development as required by the Town's Regulations.

BUILDING ELEVATIONS

The applicant has provided the proposed building elevations for review and consideration by the Board (see attached). The proposed elevations provide the appropriate scale, massing and form when compared to the surrounding properties and buildings.

INTERDEPARTMENTAL REVIEWS:

Ambulance: No comments.

Assessing: No comments.

Building Department: No comments

Code Enforcement/ Health: No comments.

Conservation Commission: Comments due by 3/13/2020.

Fire Department: See attached e-mail.

Heritage Commission: No comments.

Police Department: No comments.

Public Works: No comments.

Water/Sewer Utilities: No comments.

Drainage/Stormwater: Comments due 3/16/20.

Community Development / Planning:

1. Site Plan, Notes. Add a note stating sewer and driveway permits shall be obtained for this project. *Addressed.*
2. General Comment. Staff would recommend the applicant consider ways to decrease the amount of impervious surface onsite

such as reducing the number of parking spaces/carport spaces provided and/or reducing the width of the entrance roadway to 22 feet. *Addressed.*

3. General Comment. Please confirm the sight distance is adequate. There is concern about sight distance to the west while exiting the site given the curving of the road. *Addressed.*
4. Landscape Plan. Staff would recommend additional tree plantings along the frontage of Ponemah Hill Road in compliance with Section 6.08.7.A.2 requiring one tree per each 30 feet of landscaped strip along the access way (unless it can be shown that existing trees meet these requirements). *Addressed.*
5. Landscape Plan. Staff would recommend additional landscaping within the site in compliance with Section 6.08.6 requiring a minimum of 1 shrub for every 5 feet of building frontage and additional landscaping within the site that is compliant with Section 6.08.7.

STAFF RECOMMENDATIONS:

The applicant should be prepared to address the comments raised by the Planning Board, Conservation Commission, Town Consultants, Staff, and public pertaining to the Site Plan. If the Board is satisfied with the information and responses from the applicant and finds the remaining concerns can be addressed with staff, staff would recommend a conditional approval.



Ponemah Pines Site Plan

Milford, NH

1 inch = 138 Feet



February 13, 2020



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

March 15, 2020

Kellie Shamel, Town Planner
Town of Milford
1 Union Square
Milford, NH 03055

**Re: Ponemah Pines Site Plan, Ponemah Hill Road (Map 43, Lot 61)
Drainage Review**

Dear Ms. Shamel:

We reviewed the revised 9-sheet plan set dated March 9, 2020 and Stormwater Management Report dated March 9, 2020 both prepared by Fieldstone Land Consultants in accordance with our agreement with the Town. Based on that review, we find that all of our previous comments have been addressed and the project drainage design is acceptable from an engineering perspective.

If you have any questions or need any additional information, please feel free to contact me at 603-413-6650 or on my cell phone at 603-731-1562 or by email at MVignale@kvpllc.com.

Sincerely,

KV *Partners LLC*



Michael S. Vignale, P.E.
Principal Engineer

Town of Milford
CONSERVATION COMMISSION

Town Hall
1 Union Square
Milford, NH 03055-4240
(603) 249-0628
Fax (603) 673-2273
www.milford.nh.gov
conservation@milford.nh.gov



MEMORANDUM

March 13, 2020

To: Milford Planning Board

**Re: Interdepartmental Review Map 43 Lot 61
Ponemah Pines LLC Site Development Plans
19 Ponemah Hill Rd**

To the Board,

The Conservation Commission reviewed the March 2020 revised plan at their March 12, 2020 meeting. The MCC has some follow up comments.

1. The Commission members were told that the applicant proposes to use arbor vitae for their buffer plantings. These plantings could be supplemented with columnar junipers which provide winter food for birds and other wildlife. These plants are also quite hardy in challenging soils.
2. It is unclear what the surface material will be for the proposed emergency vehicle access on the north side of the building. Would the applicant consider using geogrid with grass or other hardy groundcover planting? This will promote water infiltration and a more attractive aspect for the homeowners for an access that, hopefully, will be rarely utilized by emergency services.

The Commission appreciates the opportunity to review this application. We look forward to seeing a well-designed project that improves the natural resource functionality of the site.

Very Respectfully,

Chris Costantino
Milford Conservation Commission

From: [Jason Smedick](#)
To: [Kellie Shamel](#)
Subject: RE: Planning Dept. IDR - Ponemah Hill Site Plan
Date: Wednesday, March 11, 2020 9:34:38 AM

Good morning Kellie,

After review of the redesigned site plan, our office can offer Fire Department approval.

Should you have any further questions, please do not hesitate to contact me.

Thank you.

Captain Jason A Smedick
Milford Fire Department
Bureau of Fire Prevention & Investigation
Deputy Health Officer
39 School Street
Milford NH 03055
603-249-0680

From: Jason Smedick
Sent: Friday, February 21, 2020 4:06 PM
To: Kellie Shamel
Subject: RE: Planning Dept. IDR - Ponemah Hill Site Plan

Hey Kellie,

I met with Chad yesterday and there are revisions coming back to the board.

Relative to the boards questions, The requirements are from Saf-C 6000 the NH State Fire Code, NFPA 1 Uniform Fire Code 2015 Edition, Chapter 18, Fire Department Access and Water Supply.

We have 7 or more apartment building with either 360 degree access or access on 2 to 3 sides. This is done for rescue from porches.

The access road width is required by NFPA 1 Uniform Fire Code, Chapter 18, Section 18.2.3.4.1.1.

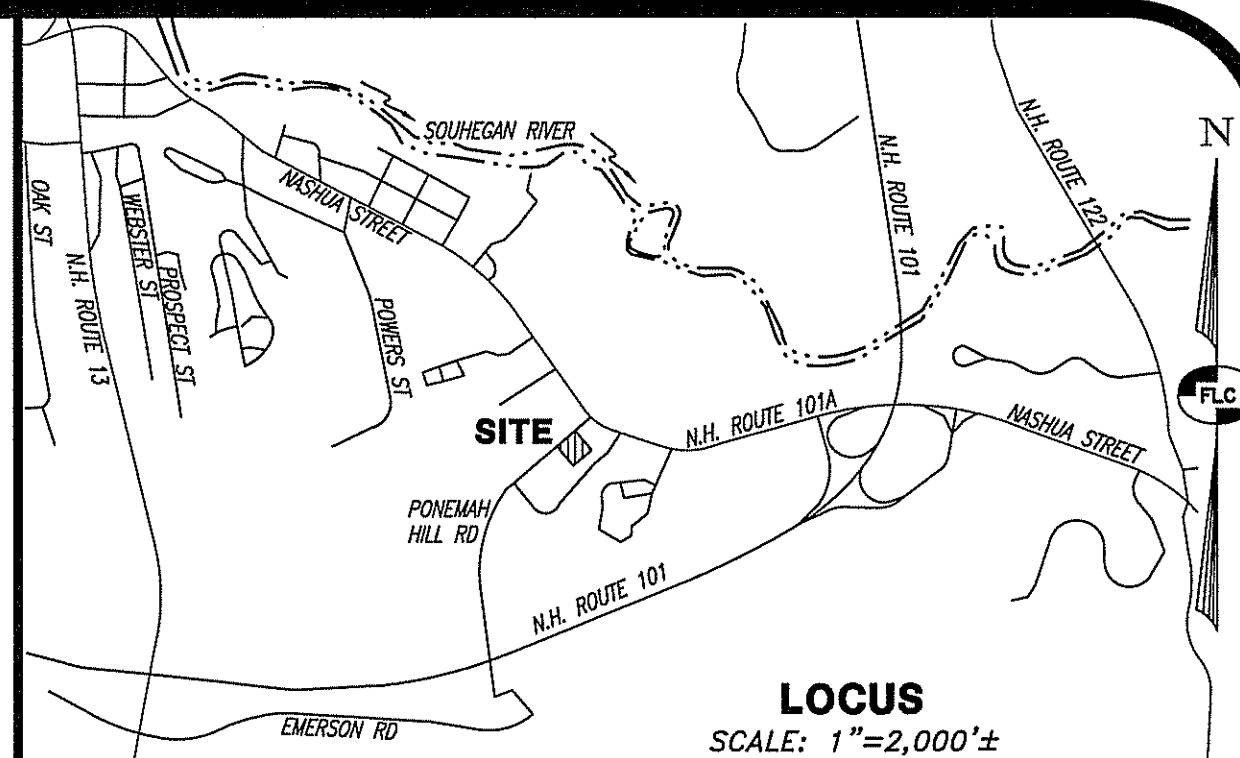
As for the grass paver system we allow and of the ones out in the industry. We offer that to help with green space and storm water requirements. Currently St. Joes urgent care id the only place we have this in place.

I hope this helps.

Let me know if you need anything else.

J

Captain Jason A Smedick
Milford Fire Department
Bureau of Fire Prevention & Investigation
Deputy Health Officer
39 School Street
Milford NH 03055
603-249-0680



- GRAPHIC SCALES
-
- 30' 15' 0 30' 60' 90'
- IMPERIAL: 1"=30'

REV.	DATE	DESCRIPTION	C/O	DR	CK

PONEMAH PINES, LLC
476 ROUTE 13 SOUTH, MILFORD NH 03055
LAND OF:
CELIA E. LORDEN REVOCABLE TRUST
19 PONEMAH HILL ROAD, MILFORD NH 03055

SCALE: 1" = 30' AUGUST 29, 2019

Surveying ♦ Engineering ♦ Land Planning ♦ Permitting ♦ Septic Designs



FILE: 2261EX00.dwg	PROJ. NO. 2261.00	SHEET: EX-1	PAGE NO. 2 OF 8
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CERTIFICATION:

"I HEREBY CERTIFY THAT THE EXISTING CONDITONS SHOWN WERE DEVELOPED FROM A FIELD SURVEY PERFORMED BY FIELDSTONE LAND CONSULTANTS, PLLC DURING THE MONTH OF AUGUST 2019 AND HAS A MAXIMUM ERROR OF CLOSURE OF ONE PART IN TEN THOUSAND (1:10,000)".

DATE: 1/20/20

REFERENCE PLAN:

"PONEMAH HILL CONDOMINIUM - PONEMAH HILL ROAD, MILFORD, N.H. - PREPARED FOR - PONEMAH HILL CONDOMINIUM - C/O ROBERT MOULON - 9 PONEMAH HILL ROAD - MILFORD, N.H. 03055", SCALE: 1"=40', DATED SEPTEMBER 3, 1998 & REVISED THROUGH AUGUST 23, 2004 BY AUSTIN PARKHURST & RECORDED AS PLAN #35894 IN THE H.C.R.D.

ADDITIONAL ABUTTERS:

43-60-C-1	43-60-C-6
43-60-C-7	GEORGE & CHRISTINA ANDONOPOULOS
ROBERT F. & STEPHANIE P. KOKKO	KOKKO REALTY
480 NASHUA STREET	480 NASHUA STREET
MILFORD, NH 03055	MILFORD, NH 03055
BK.5630 PG.1602 6/1/1995	BK.8635 PG.2148 1/17/2014
BK.5790 PG.960 2/19/1997	22 PONEMAH HILL ROAD #6)
(22 PONEMAH HILL ROAD #1 & #7)	

43-60-C-2
RKSK REALTY LLC
480 NASHUA STREET
MILFORD, NH 03055
BK.7577 PG.159 11/2/2005
(22 PONEMAH HILL ROAD #2)

<u>43-60-C-3</u>	<u>43-60-C-9</u>
<u>43-60-C-12</u>	JOAN G. THOMPSON
<u>43-60-C-19</u>	22 PONEMAH HILL ROAD #9
ROBERT F. KOKKO	MILFORD, NH 03055
480 NASHUA STREET	BK.8355 PG.37 10/3/2011
	(22 PONEMAH HILL ROAD #9)

MILFORD NH 03055
BK.5543 PG.732 4/28/1994
BK.5544 PG.559 5/2/1994
BK.8495 PG.917 11/19/2012
(22 PONEMAH HILL ROAD #3, #12, & #19)

43-60-C-4
BRIAN C. MURDOCK
2318 BOOTH ROAD
HONOLULU, HI 96813
BK.8494 PG.1227 11/15/12
(22 PONEMAH HILL ROAD #4)

43-60-C-5
STEPHANIE P. KOKKO
480 NASHUA STREET
MILFORD, NH 03055
BK.8490 PG.1814 11/5/2012
(22 PONEMAH HILL ROAD #5)

43-60-C-6
GEORGE & CHRISTINA ANDONOPOULOS
KOKKO REALTY
480 NASHUA STREET
MILFORD, NH 03055
BK.8635 PG.2148 1/17/2014
(22 PONEMAH HILL ROAD #6)

43-60-C-8
KRISTEN E. FORSLEY
33 LUCILLE AVENUE
SALEM, NH 03079
BK.7778 PG.1635 12/6/2006
(22 PONEMAH HILL ROAD #8)

43-60-C-9
JOAN G. THOMPSON
22 PONEMAH HILL ROAD #9
MILFORD, NH 03055
BK.8355 PG.37 10/3/2011
(22 PONEMAH HILL ROAD #9)

43-60-C-10
AVIS MALCUIT, TRUSTEE
MALCUIT FAMILY TRUST
12 ACORN STREET
HAVERHILL, MA 01832
BK.8202 PG.1155 5/11/2010
(22 PONEMAH HILL ROAD #10

43-60-C-11
WILLIAM & PATRICIA CHALMERS, CO-TRUSTEES
CHALMERS FAMILY REVOCABLE TRUST
P.O. BOX 1194
WILTON, NH 03086
BK.8859 PG.968 5/27/2016
(22 PONEMAH HILL ROAD #11)

43-60-C-13
JOHN F. & LISA L. BIGL
22 PONEMAH HILL ROAD #13
MILFORD, NH 03055
BK.8302 PG.1770 3/17/2011
(22 PONEMAH HILL ROAD #13

43-60-C-14
GROVE STREET VILLAS LLC
37 TUMBLE ROAD
BEDFORD, NH 03110
BK.7067 PG.912 9/17/2003
(22 PONEMAH HILL ROAD #14)

43-60-C-15
HOLLY E. PUTNAM
22 PONEMAH HILL ROAD #15
MILFORD, NH 03055
BK.6143 PG.1971 8/16/1999
(22 PONEMAH HILL ROAD #15)

43-60-C-16
ROBERT E. JELLEY
15 LAUREL HILL ROAD
HOLLIS, NH 03049
BK.6561 PG.780 1/10/2002
(22 PONEMAH HILL ROAD #16)

43-60-C-17
NANCY WOJITAS
22 PONEMAH HILL ROAD #17
MILFORD, NH 03055
BK.8944 PG.2573 2/15/2017
(22 PONEMAH HILL ROAD #17)

43-60-C-18
DAVID YORK
22 PONEMAH HILL ROAD #18
MILFORD, NH 03055
BK.8760 PG.183 6/15/2015
(22 PONEMAH HILL ROAD #18)

43-60-C-20
ERIC C. BEDELL
22 PONEMAH HILL ROAD #20
MILFORD, NH 03055
BK.8136 PG.1466 9/22/2009
(22 PONEMAH HILL ROAD #20)

LEGEND:

EXISTING FEATURES

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- STONE WALL
- EDGE OF TREE LINE
- 500- 10' CONTOUR INTERVAL
- 502- 2' CONTOUR INTERVAL
- CHAINLINK FENCE
- OH- OVERHEAD UTILITY LINE
- W- WATER LINE
- S- SEWER LINE

- D.H.(F) DRILL HOLE FOUND
- LPIN(F) IRON PIN FOUND
- LPPE(F) IRON PIPE FOUND
- P.K.(F) P.K. NAIL FOUND
- UTILITY POLE & GUY WIRE
- CATCH BASIN (SQUARE)
- SEWER MAN-HOLE
- WATER HYDRANT
- WATER VALVE
- WATER SHUT-OFF
- WELL
- SINGLE SIGN POST

- 43-61 TAX MAP & LOT NUMBER
- BUILDING

PROPOSED FEATURES

- EDGE OF PAVEMENT
- EDGE OF GRANITE CURB
- PAVED AREA
- CONCRETE AREA
- BUILDING
- DECK
- WALL LIGHT
- LIMITS OF CLEARING
- TRAFFIC FLOW (NOT PAINTED ARROWS)

APPROVED

MILFORD, NH PLANNING BOARD

SUBDIVISION #:

DATE APPROVED:

SIGNED:

CONTACT DIG SAFE
72 HOURS PRIOR
TO CONSTRUCTION
DIGSAFE.COM
OR DIAL 8 1 1
IT'S SMART, IT'S FREE, IT'S THE LAW



MH #1015
RIM=508.18
INV.IN=500.21
INV.OUT=500.29
TABLE=501.19

MH #1063
RIM=494.89
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INV.OUT=494.89
TABLE=495.68

MH #1037
RIM=494.54
INV.IN=485.17
INV.OUT=485.14
TABLE=485.86

HILL

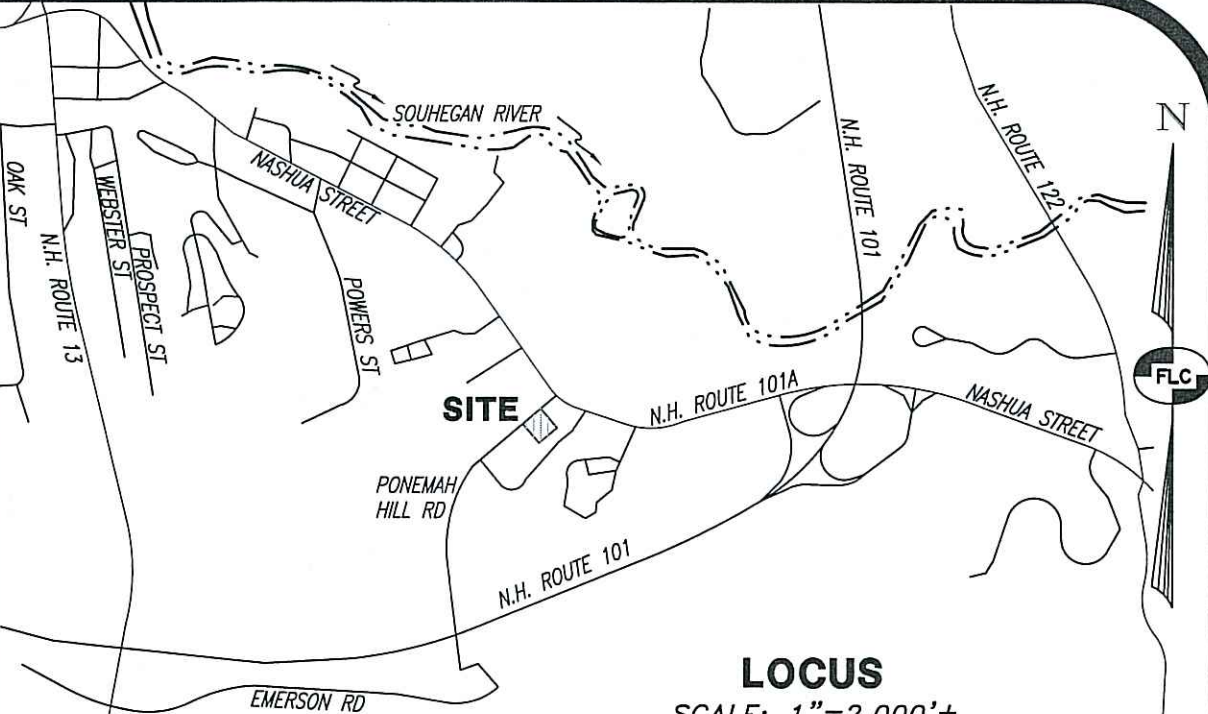
PONEMAH

ROAD

N

FLC

REF. PLAN #1



LOCUS

SCALE: 1"=2,000'±

NOTES:

- THE OWNER OF RECORD FOR TAX MAP 43 LOT 61 IS THE FREDERICK & CELIA LORDEN TRUST - 19 PONEMAH HILL ROAD, MILFORD, NH 03055. THE DEED REFERENCE FOR THE PARCEL IS VOL.5369 PG.762 DATED SEPTEMBER 16, 1992 IN THE H.C.R.D.
- THE PURPOSE OF THIS PLAN IS TO DEPICT A PROPOSED 9-UNIT, MULTI-FAMILY, 2-STORY BUILDING AND A 9 STALL CARPORT WITH ASSOCIATED SITE IMPROVEMENTS ON TAX MAP PARCEL 43-61 AS SHOWN.
- THE TOTAL AREA OF TAX MAP PARCEL 43-61 IS 1.94 ACRES OR 84,500± S.F., WITH 249± FEET OF FRONTAGE ON PONEMAH HILL ROAD.
- ZONING FOR THE ENTIRE PARCEL IS RESIDENTIAL-B DISTRICT:
MINIMUM LOT SIZE: 20,000 S.F.
MINIMUM LOT FRONTAGE: 150 FT.
MINIMUM BUILDING FRONT SETBACK: 30 FT.
MINIMUM BUILDING SIDE SETBACK: 15 FT.
MINIMUM BUILDING REAR SETBACK: 15 FT.
MINIMUM BUILDING HEIGHT: 35 FT.
MINIMUM OPEN SPACE: 30%
- THE SURFACE FEATURES AND BOUNDARY INFORMATION SHOWN WERE DEVELOPED FROM THE REFERENCE PLANS CITED AND A PRECISE FIELD SURVEY BY THIS OFFICE DURING THE MONTH OF AUGUST 2019. HORIZONTAL ORIENTATION IS BASED ON REFERENCE PLAN #1. VERTICAL DATUM IS ASSUMED.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN COMPILED IN PART FROM PLANS OF RECORD AND FIELD LOCATION. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITIES.
- THERE ARE NO JURISDICTIONAL WETLANDS ON-SITE PER FIELD INVESTIGATION BY THIS OFFICE.
- PARKING CALCULATION:
MULTI-FAMILY USE: 2 SPACES PER DWELLING UNIT.
PROPOSED BUILDING CONSISTS OF 9 DWELLING UNITS: 9 UNITS X 2 SPACES = 18 SPACES.
19 SPACES ARE PROVIDED ALONG WITH A 9 STALL CARPORT BUILDING.
- THERE IS NO PROPOSED PROJECT SIGNAGE AT THIS TIME. FUTURE SIGNAGE WILL REQUIRE PERMITTING PRIOR TO INSTALLATION.
- MINIMUM "OPEN SPACE" AREA: 30% OF LOT AREA REQUIRED OR 25,054 S.F. THIS SITE PLAN PROVIDES 62,000± S.F. (1.42± ACRES) OR 73% OF THE TOTAL PARCEL AREA OF 1.91 ACRES.
- SOIL TYPE FOR THE PROPERTY IS Hsb - HINCKLEY LOAMY SAND, 3 TO 8% SLOPES AND Cmc - CANTON FINE SANDY LOAM, 8 TO 15% SLOPES. SOURCE USDA NRCS WEB SOIL SURVEY.
- THE SITE IS LOCATED WITHIN THE LEVEL I GROUNDWATER PROTECTION DISTRICT. THE SITE LIES OUTSIDE ALL WELLHEAD SANITARY RADII.
- THE NEW MULTI-FAMILY BUILDING WILL BE SERVICED BY UNDERGROUND ELECTRIC & MUNICIPAL SEWER AND WATER AS SHOWN.
- THE SUBJECT PARCEL IS NOT LOCATED IN A FLOOD HAZARD AREA AS DETERMINED FROM THE FLOOD INSURANCE STUDY (FIRM), HILLSBOROUGH COUNTY, TOWN OF MILFORD, NEW HAMPSHIRE, COMMUNITY NO. 330096, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, MAP NUMBER: 33011C0459D, DATED: SEPTEMBER 25, 2009.
- ANY STUMPS OR DEBRIS ENCOUNTERED DURING CONSTRUCTION WILL BE GROUND AND USED FOR EROSION CONTROL OR REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

A	3/9/20	REVISION PER STAFF COMMENTS		CLR	NRC
REV	DATE	DESCRIPTION	C/O	DR	CK

SITE PLAN

PONEMAH PINES
TAX MAP 43 PARCEL 61 - PONEMAH HILL ROAD
MILFORD, NEW HAMPSHIRE

PREPARED FOR:
PONEMAH PINES, LLC
476 ROUTE 13 SOUTH, MILFORD NH 03055

LAND OF:
FREDERICK & CELIA LORDEN TRUST
19 PONEMAH HILL ROAD, MILFORD NH 03055

SCALE: 1" = 30' JANUARY 20, 2020

Surveying ♦ Engineering ♦ Land Planning ♦ Permitting ♦ Septic Designs

FIELDSTONE
LAND CONSULTANTS, PLLC

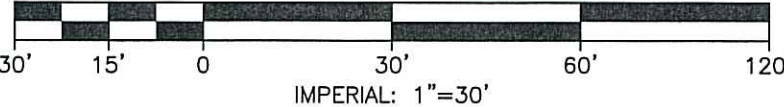
206 Elm Street, Milford, NH 03055
Phone: (603) 672-5456 Fax: (603) 413-5456
www.FieldstoneLandConsultants.com

FILE: 2261SP00A.dwg PROJ. NO. 2261.00 SHEET: SP-1 PAGE NO. 3 OF 8

NOTES (CONTINUED):

- WATER, SEWER, ROAD (INCLUDING PARKING LOT) AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF MILFORD'S WATER UTILITIES DEPARTMENT AND PUBLIC WORKS DEPARTMENT STANDARDS.
- AS-BUILT PLANS SHALL BE DELIVERED TO THE BUILDING DEPARTMENT PRIOR TO A CERTIFICATE OF OCCUPANCY BEING ISSUED.
- THE PROPOSED 9 STALL CARPORT AND PAVED APRON WILL BE CONSTRUCTED IN THE FUTURE AS NEEDED. THE AREA WILL BE GRADED AND USED FOR CONSTRUCTION STORAGE IN THE INITIAL PHASE.
- THE PROPOSED BUILDING IS SUBJECT TO POLICE IMPACT FEES WHICH ARE TO BE DETERMINED AT THE TIME OF BUILDING PERMIT APPLICATION.
- ALL EXTERIOR LIGHTING SHALL BE DOWNCAST PER THE MILFORD DEVELOPMENT REGULATIONS.
- STORMWATER WILL BE CONVEYED VIA OPEN DRAINAGE SWALES TO AN INFILTRATION BASIN LOCATED IN THE NORTHEAST CORNER OF THE PROPERTY.
- SEWER AND DRIVEWAY PERMITS SHALL BE OBTAINED PRIOR TO CONSTRUCTION.

GRAPHIC SCALES



LEGEND:

EXISTING FEATURES

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- STONE WALL
- EDGE OF TREE LINE
- 10' CONTOUR INTERVAL
- 2' CONTOUR INTERVAL
- CHAINLINK FENCE
- OH OVERHEAD UTILITY LINE
- W WATER LINE
- S SEWER LINE
- D.H.(F) DRILL HOLE FOUND
- IPIN(F) IRON PIN FOUND
- LPIPE(F) IRON PIPE FOUND
- P.K.(F) P.K. NAIL FOUND
- UTILITY POLE & GUY WIRE
- CATCH BASIN (SQUARE)
- SEWER MAN-HOLE
- WATER HYDRANT
- WATER VALVE
- WATER SHUT-OFF
- WELL
- SINGLE SIGN POST
- TAX MAP & LOT NUMBER

PROPOSED FEATURES

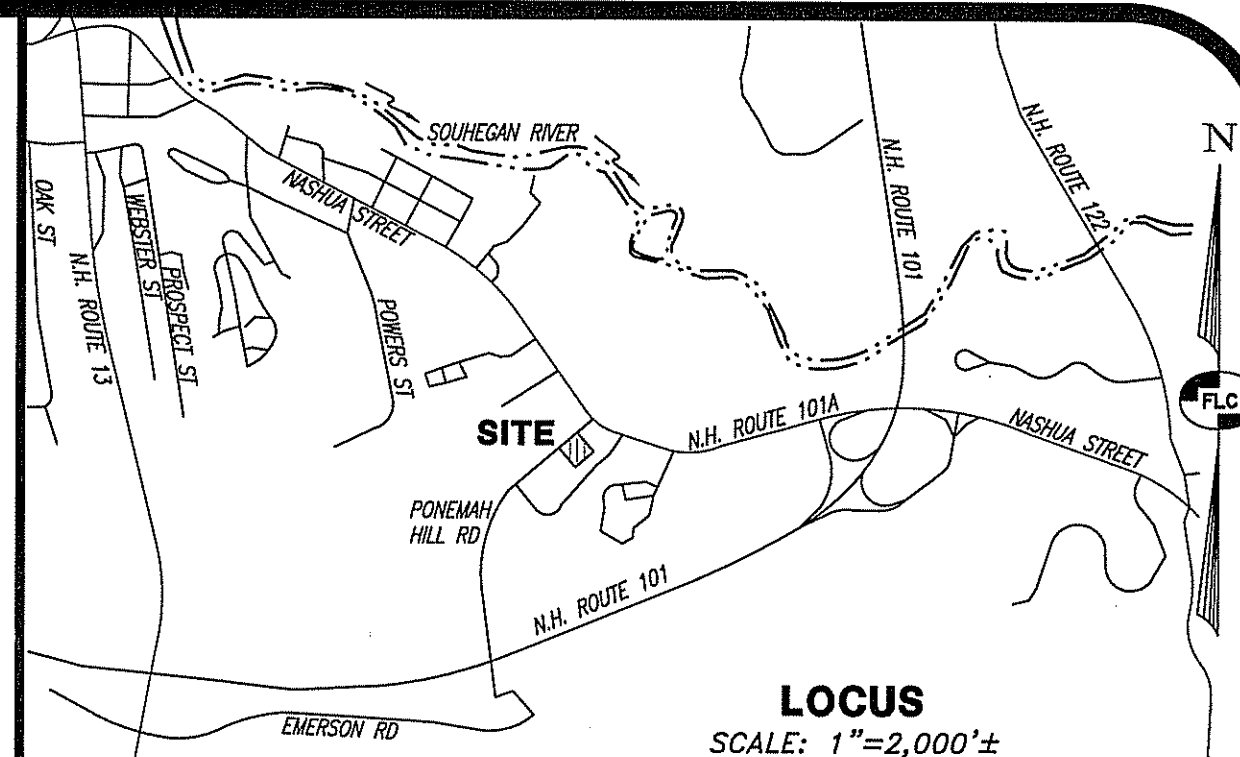
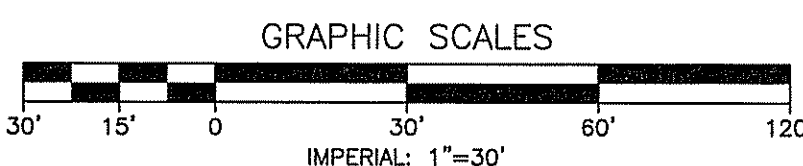
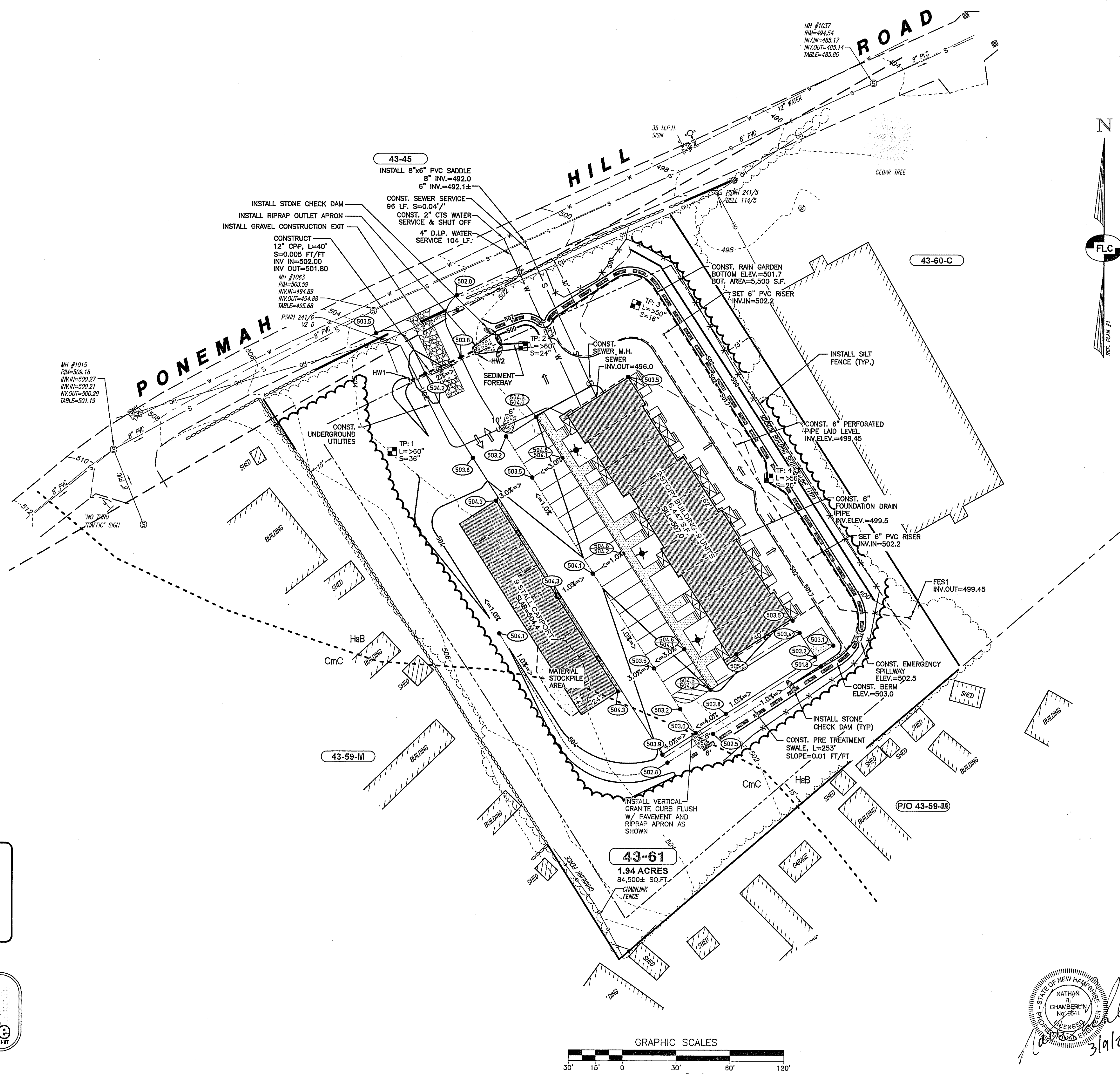
- EDGE OF PAVEMENT
- PAVED AREA
- PROPOSED BUILDING
- PROPOSED DECK
- WALL LIGHT
- 300 5 FT. CONTOUR
- 301 1 FT. CONTOUR
- 233.3 SPOT ELEVATION
- 233.5 SPOT ELEVATION AT CURB
- CAPE COD BERM
- W WATER LINE
- UGE UNDERGROUND UTILITY LINES
- S SEWER LINE
- O.C.O. SEWER SERVICE CLEAN OUT
- STONE CHECK DAM
- LIMITS OF CLEARING
- SWALE/GUTTER LINE
- DRAINAGE FLOW ARROW
- TEMPORARY SILT FENCE
- STORM WATER DRAINAGE
- TEST PIT LOCATION
- DIRECTIONAL FLOW ARROWS

NRCS SOILS LEGEND:

SOURCE: USDA NRCS WEB SOIL SURVEY

- SOIL BOUNDARY
- CmC CANTON FINE SANDY LOAM
8 TO 15% SLOPES, VERY STONY
- HsB HINCKLEY LOAMY SAND
3 TO 8% SLOPES

CONTACT DIG SAFE
72 HOURS PRIOR
TO CONSTRUCTION
DIGSAFE.COM
OR DIAL 8 1 1
IT'S SMART, IT'S FREE, IT'S THE LAW



GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF MILFORD AND SHALL BE BUILT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE TOWN OF MILFORD DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS FOR ROAD CONSTRUCTION AND SEWERS AND DRAINAGE AND THE NHDOT STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE.
2. ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS AND THE SPECIFICATIONS NOTED ABOVE. ANY ALTERATION OF THIS DESIGN OR CHANGE DURING CONSTRUCTION MAY REQUIRE APPROVAL OF VARIOUS TOWN/CITY BOARDS OR AGENCIES AND SHALL BE DISCUSSED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS AND SHALL VERIFY THAT ALL THE INFORMATION SHOWN HEREON IS CONSISTENT, COMPLETE, ACCURATE, AND CAN BE CONSTRUCTED PRIOR TO AND/OR DURING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES, ERRORS, OMISSIONS, OR EXISTING UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION SO THAT REMEDIAL ACTION MAY BE TAKEN BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACT "DIGSAFE" AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION (811).
5. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE MUNICIPAL DEPARTMENTS PRIOR TO CONSTRUCTION TO ARRANGE FOR NECESSARY INSPECTIONS.
6. BLASTING, IF REQUIRED, SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF MILFORD FIRE DEPARTMENT REGULATIONS.
7. ALL DISTURBED NON-PAVED AREAS SHALL BE LOAMED AND SEEDING IMMEDIATELY UPON BEING CONSTRUCTED.
8. ALL TRAFFIC SIGNS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES LATEST EDITION.
9. EXISTING PAVEMENT SHALL BE SAW-CUT AS NECESSARY. THE CONTRACTOR SHALL ENSURE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW PAVEMENT.
10. ALL POWER WORK SHALL CONFORM TO EVERSOURCE STANDARDS.
11. ALL TELEPHONE WORK SHALL CONFORM TO FAIRPOINT COMMUNICATIONS SPECIFICATIONS.
12. STREET RESTORATION, IF ANY, SHALL BE IN ACCORDANCE WITH TOWN OF MILFORD SPECIFICATIONS.

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	3/9/20	REVISION PER STAFF COMMENTS		CLR	NRC

GRADING & UTILITY PLAN
PONEMAH PINES
 TAX MAP 43 PARCEL 61 - PONEMAH HILL ROAD
 MILFORD, NEW HAMPSHIRE
 PREPARED FOR:
PONEMAH PINES, LLC
 476 ROUTE 13 SOUTH, MILFORD NH 03055
 LAND OF:
FREDERICK & CELIA LORDEN TRUST
 19 PONEMAH HILL ROAD, MILFORD NH 03055

SCALE: 1" = 30' JANUARY 20, 2020

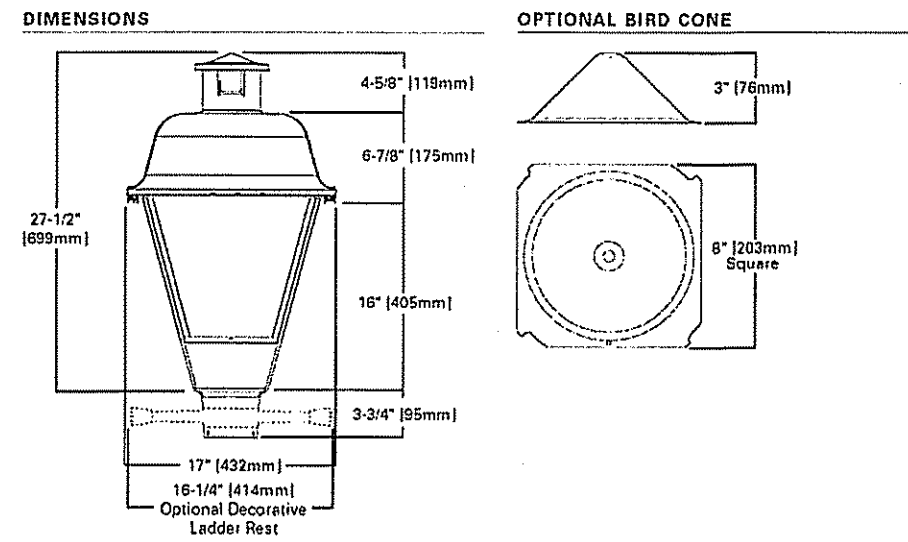
Surveying ♦ Engineering ♦ Land Planning ♦ Permitting ♦ Septic Designs

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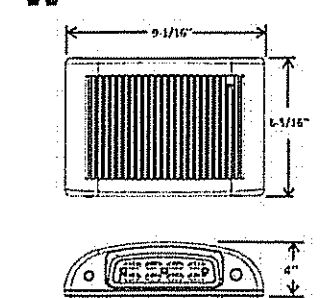
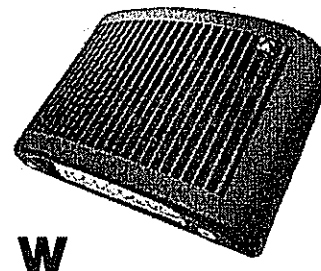
STREET WORKS

UTLD
TRADITIONAIRE
LED DOWNLIGHT

AF24
Solid State LED
P4 DECORATIVE POST TOP
LUMINAIRE



MERU SERIES

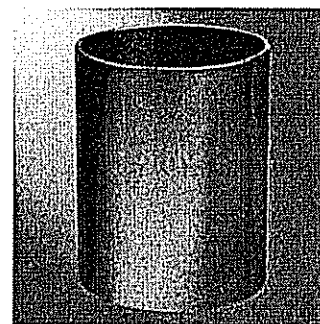


PRODUCT DESCRIPTION
The MERU Series is an architectural, low-profile outdoor light, offering "normal" 110° AC and emergency lighting with powerful LED illumination. The housing is fully sealed and protected, and has an IP65 rating. Designed for wall mounting with universal K-11 pattern in back for easy installation in most standard size junction boxes. Includes a single 12" x 12" standard size in the top center of the housing. Illumination provided by 8 high power LEDs which achieve 1,600 lumens in AC and 600 lumens in emergency. 120V and 120V/0-10V.

model	operation mode	housing color	options
MERU-LED	ACEM - General & Emergency Lighting	WH - White	WH - Infrared Heater
	AC - General Lighting	BL - Black	WH - Infrared Heater
		SK - Nickel	WH - Infrared Heater

Ordering Example: MERU-LED-AC-EM-WH-SK

STEEL POLES



RSS ROUND
STRAIGHT STEEL

ORDERING INFORMATION	ORDERING INFORMATION	ORDERING INFORMATION	ORDERING INFORMATION	ORDERING INFORMATION	ORDERING INFORMATION
Model	Operation Mode	Housing Color	Options	Model	Operation Mode
MERU-LED	ACEM - General & Emergency Lighting	WH - White	WH - Infrared Heater	MERU-LED	ACEM - General & Emergency Lighting
	AC - General Lighting	BL - Black	WH - Infrared Heater		AC - General Lighting
		SK - Nickel	WH - Infrared Heater		

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3" at 120V, 3" at 120V. 3. Tapped Hub is located 5" below the pole top and on the same side of pole as hand hole, unless specified otherwise. 4. Outlet is located 4" above base and on same side of pole as hand hole, unless specified otherwise. 5. Additional hand hole is located 12" below pole top and 10" from standard hand hole location, unless otherwise specified. 6. Available in 4" shaft size only.

ANCHORAGE DATA	ANCHORAGE DATA	ANCHORAGE DATA	ANCHORAGE DATA	ANCHORAGE DATA	ANCHORAGE DATA
Model	Operation Mode	Housing Color	Options	Model	Operation Mode
MERU-LED	ACEM - General & Emergency Lighting	WH - White	WH - Infrared Heater	MERU-LED	ACEM - General & Emergency Lighting
	AC - General Lighting	BL - Black	WH - Infrared Heater		AC - General Lighting
		SK - Nickel	WH - Infrared Heater		

Symbol	Qty	Label	Arrangement	Description
1	3	P4	SINGLE	UTLD-AF24-50-D-U-T4W-7030-HSS / RSS4A10SY9XX (10' POLE)
2	3	W	SINGLE	MERU-LED-AC-DB / MTD 9' AFG
3	1	W1	SINGLE	XTOR4B/ WALL MTD 15' QAFG

ORDERING INFORMATION

Sample Number: UTLD-AF24-50-D-U-T4W-7030

Product Family	Light Engine	Wattage Bucket	Driver	Voltage	Distribution
UTLD-Traditionaire** LED Downlight	AF24-24 LED Light Engine	20-20W** 30-30W** 40-40W** 50-50W** 60-60W** 70-70W** 80-80W** 90-90W** 100-100W**	U-Universal (0-10V) UTLD-DALI*	U-Universal (120-277V) 2-120V** 8-480V** 9-247V**	T2U-Type II Urban T2-Type III T4W-Type IV Wide SWU-Type V Square Wide

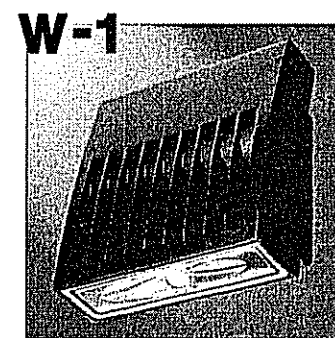
Options (Add as Suffix)	Color	Accessories (Order Separately)
(BLANK)-10V UL 1449 Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device* 4000-4000MVA Surge Protection Device*	(BLANK)-Black** AP-Grey BZ-Brass WH-White	T4B/C-Decorative Ladder Rest (for Field Installation) (Black) OAR1013-Photocontrol Shorting Cap OAR1016-NEMA Photocontrol - 120V OAR1018-NEMA Photocontrol - Multi-Tap OAR1022-NEMA Photocontrol - 480V OAR1024-NEMA Photocontrol - 347V OAT223-40W Surge Module Replacement RS-UTLD-24-Field Installed UTLD House Side Shield for AF24** HSS-Factory Install UTLD House Side Shield for AF24**

43-45

43-60-C

43-59-M

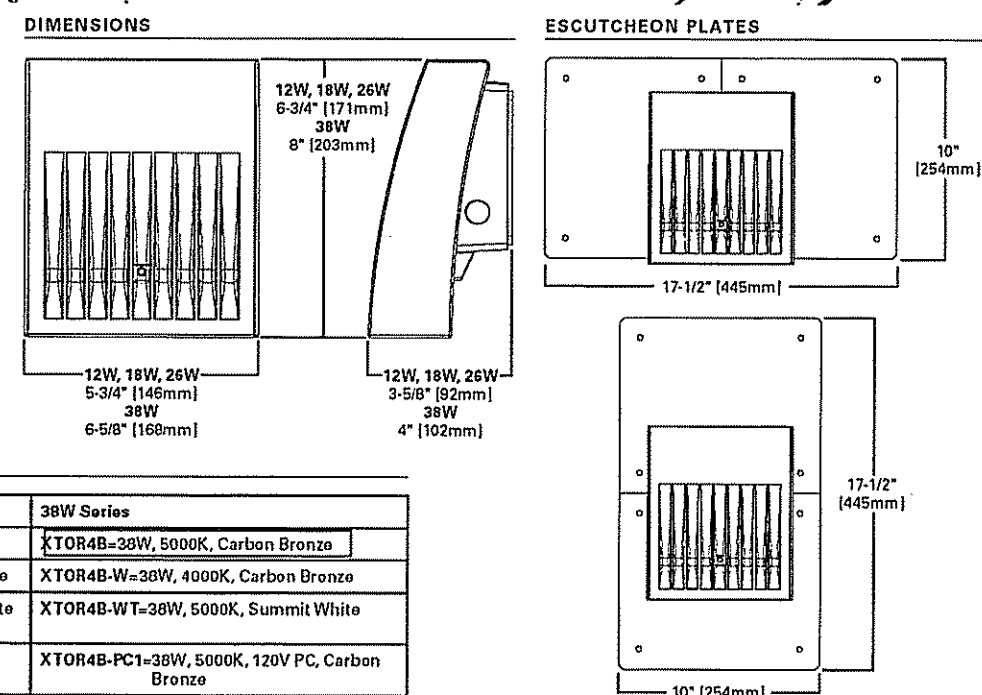
P/O 43-59-M



XTOR
CROSSTOUR LED

STOCK ORDERING INFORMATION

12W Series	16W Series	26W Series	38W Series
XTOR1B-12W, 5000K, Carbon Bronze	XTOR1B-16W, 5000K, Carbon Bronze	XTOR1B-26W, 5000K, Carbon Bronze	XTOR1B-38W, 5000K, Carbon Bronze
XTOR1B-WT-12W, 5000K, Summit White	XTOR1B-WT-16W, 5000K, Summit White	XTOR1B-WT-26W, 5000K, Summit White	XTOR1B-WT-38W, 5000K, Summit White
XTOR1B-W-12W, 5000K, Carbon Bronze	XTOR1B-W-16W, 5000K, Carbon Bronze	XTOR1B-W-26W, 5000K, Carbon Bronze	XTOR1B-W-38W, 5000K, Carbon Bronze
XTOR1B-PC1-12W, 5000K, 120V PC, Carbon Bronze	XTOR1B-PC1-16W, 5000K, 120V PC, Carbon Bronze	XTOR1B-PC1-26W, 5000K, 120V PC, Carbon Bronze	XTOR1B-PC1-38W, 5000K, 120V PC, Carbon Bronze
XTOR1B-W-PC1-12W, 5000K, 120V PC, Carbon Bronze	XTOR1B-W-PC1-16W, 5000K, 120V PC, Carbon Bronze	XTOR1B-W-PC1-26W, 5000K, 120V PC, Carbon Bronze	XTOR1B-W-PC1-38W, 5000K, 120V PC, Carbon Bronze
XTOR1B-347V-12W, 5000K, Carbon Bronze, 347V	XTOR1B-347V-16W, 5000K, Carbon Bronze, 347V	XTOR1B-347V-26W, 5000K, Carbon Bronze, 347V	XTOR1B-347V-38W, 5000K, Carbon Bronze, 347V
XTOR1B-WT-PC1-12W, 5000K, 120V PC, Summit White	XTOR1B-WT-PC1-16W, 5000K, 120V PC, Summit White	XTOR1B-WT-PC1-26W, 5000K, 120V PC, Summit White	XTOR1B-WT-PC1-38W, 5000K, 120V PC, Summit White



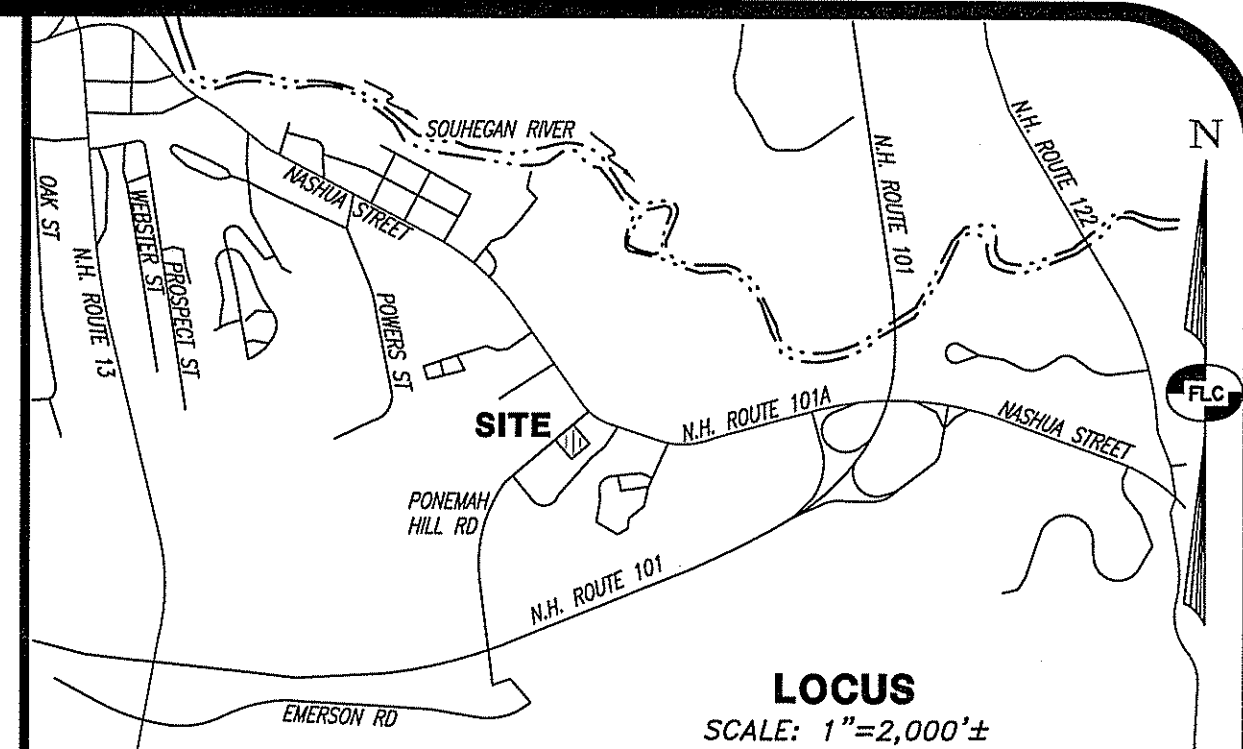
NOTES:

1. LANDSCAPING PARKING LOTS AND ACCESS WAYS CALCULATION:
190'± FT. OF LANDSCAPING BUFFER X 1 TREE PER 30' OF BUFFER
= 7 TREES

A DARK AMERICAN ARBORVITAE BUFFER TO THE EAST ALONG WITH EXISTING VEGETATION TO THE WEST PROVIDE A BUFFER TO ADJACENT LOTS. LANDSCAPING ALONG FRONTAGE AND ACCESS WAY SHALL COMPLY WITH SECTION 6.08.7.A.02. A MINIMUM OF 7 TREES (OCTOBER GLORY MAPLES OR EQUAL) SHALL BE PLANTED.

2. LANDSCAPING ALONG FRONTAGE CALCULATION:
249'± FT. OF FRONTAGE X 1 SHRUB PER 5' OF FRONTAGE
= 50 SHRUBS

DUE TO IMPERVIOUS SURFACES, THE LANDSCAPING BUFFER BETWEEN THE BUILDING AND PARKING AREA SHALL CONTAIN A MINIMUM OF 35 ADDITIONAL SHRUBS ALONG WITH 15 SHRUBS ALONG THE RIGHT OF WAY IN ORDER TO COMPLY WITH SECTION 6.08.6.



LEGEND:

EXISTING FEATURES

RIGHT-OF-WAY LINE	EDGE OF PAVEMENT
BOUNDARY LINE	PAVED AREA
ABUTTING LOT LINE	PROPOSED BUILDING
BUILDING SETBACK LINE	PROPOSED DECK
EDGE OF PAVED ROAD	WALL LIGHT
STONE WALL	CAPE COD BERM
EDGE OF TREE LINE	WATER LINE
10' CONTOUR INTERVAL	UG- UNDERGROUND UTILITY LINES
502' 2' CONTOUR INTERVAL	S- SEWER LINE
CHAINLINK FENCE	o.c.o. SEWER SERVICE CLEAN OUT
OH- OVERHEAD UTILITY LINE	LIMITS OF CLEARING
W- WATER LINE	
S- SEWER LINE	

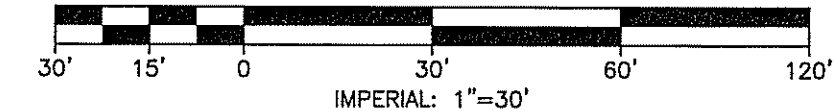
PROPOSED FEATURES

EDGE OF PAVEMENT	PAVED AREA
PROPOSED BUILDING	PROPOSED DECK
WALL LIGHT	CAPE COD BERM
WATER LINE	UG- UNDERGROUND UTILITY LINES
S- SEWER LINE	o.c.o. SEWER SERVICE CLEAN OUT
LIMITS OF CLEARING	

LANDSCAPING LEGEND:

SYRINGA PATULA: 18"-24" B&B (MISS KIM LILAC) OR EQUAL	ACER RUBRUM
OCTOBER GLORY MAPLE OR EQUAL	2-1/2" CAL / 9 FEET WHEN PLANTED
THUJA O. NIGRA: 7"-8" B&B (DARK AMERICAN ARBORVITAE) OR EQUAL	

GRAPHIC SCALES



A	3/9/20	REVISION PER STAFF COMMENTS	CLR	NRC
REV.	DATE	DESCRIPTION	C/O	DR

LIGHTING & LANDSCAPING PLAN

PONEMAH PINES

TAX MAP 43 PARCEL 61 - PONEMAH HILL ROAD

MILFORD, NEW HAMPSHIRE

PREPARED FOR:

PONEMAH PINES, LLC
476 ROUTE 13 SOUTH, MILFORD NH 03055

LAND OF:

FREDERICK & CELIA LORDEN TRUST
19 PONEMAH HILL ROAD, MILFORD NH 03055

SCALE: 1" = 30'

JANUARY 20, 2020

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206 Elm Street, Milford, NH 03055
Phone: (603) 672-5456 Fax: (603) 413-5456
www.FieldstoneLandConsultants.com

- ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF MILFORD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS AND SHALL VERIFY THAT ALL THE INFORMATION SHOWN HEREON IS CONSISTENT, COMPLETE, ACCURATE, AND CAN BE CONSTRUCTED PRIOR TO AND/OR DURING CONSTRUCTION. FIELDSTONE LAND CONSULTANTS, PLLC, AS THE DESIGN ENGINEER, SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES, ERRORS, OMISSIONS, OR EXISTING UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION SO THAT REMEDIAL ACTION MAY BE TAKEN BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL CONTACT "DIGSAFE" 72 HOURS PRIOR TO THE START OF CONSTRUCTION (1-800-255-4977 IN NH, 1-888-344-7233 IN MA).
- COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND SPECIAL CONDITIONS OF TOWN/CITY AGENCIES, SUCH AS THE PLANNING BOARD, ZONING BOARD, CONSERVATION COMMISSION, AND OTHERS, IS MANDATORY AND IS THE RESPONSIBILITY OF THE OWNER.
- ANY ALTERATION OF THIS DESIGN OR CHANGE DURING CONSTRUCTION MAY REQUIRE APPROVAL OF VARIOUS TOWN/CITY BOARDS OR AGENCIES AND SHALL BE DISCUSSED WITH THE OWNER AND FIELDSTONE LAND CONSULTANTS, PLLC PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE CITY DEPARTMENTS PRIOR TO CONSTRUCTION TO ARRANGE FOR NECESSARY INSPECTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCURATE AS-BUILT INFORMATION OF ALL WORK, ESPECIALLY UNDERGROUND CONSTRUCTION OF UTILITY LINES, SERVICES, CONNECTIONS, ETC. AND APPROPRIATE TIES TO ABOVE GROUND PERMANENT STRUCTURES, FIELD SURVEY COORDINATES, OR SOME OTHER METHOD OF ESTABLISHING THE AS-BUILT CONDITION OF ALL CONSTRUCTION.
- THE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR OBSERVING AND MANAGING THE PROJECT PER RSA 430:53 AND AGR 3800 REGARDING INVASIVE SPECIES (PLANTS AND INSECTS). NO INVASIVE SPECIES PLANT OR INSECT SHALL BE INTRODUCED ONTO THE SITE.

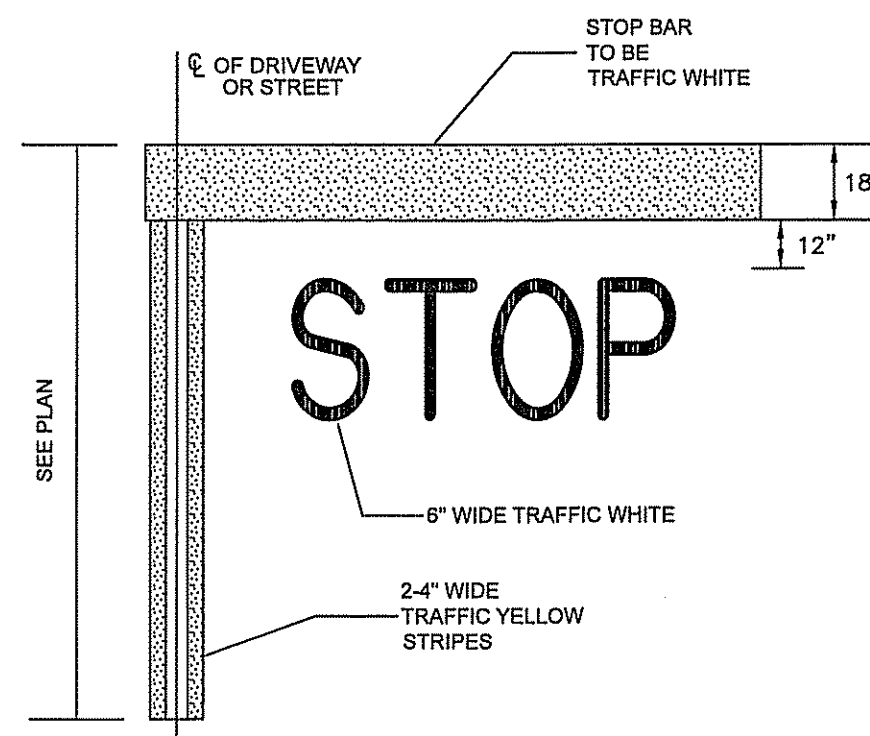
GENERAL CONSTRUCTION NOTES

1
DT-1

- CATCH BASINS, PIPE INLETS, DRAINAGE BASINS AND SPILLWAYS SHALL BE INSPECTED AFTER EVERY MAJOR STORM FOR POLLUTANT BUILD-UP. POLLUTANTS CONSIST OF SEDIMENTS, DEBRIS AND/OR FLOATING HYDROCARBONS.
- IN THE ABSENCE OF A MAJOR STORM, THE SYSTEM MUST BE CHECKED AT LEAST TWICE A YEAR, IN THE SPRING AND FALL FOR HYDROCARBON ACCUMULATION.
- IF, UPON INSPECTION, A SIGNIFICANT AMOUNT OF POLLUTANTS HAVE ACCUMULATED IN ANY OF THE CATCH BASINS, THEN THE POLLUTANTS MUST BE REMOVED AND DISPOSED OF PROPERLY.
- A SIGNIFICANT AMOUNT OF POLLUTANTS SHALL BE DEFINED AS A NOTICEABLE SHEEN ON THE WATER SURFACE IN THE SUMPS OF ANY CATCH BASINS AND/OR WHEN SEDIMENTS HAVE ACCUMULATED TO WITHIN 6 INCHES BELOW THE OUTLET OF ANY OF THE CATCH BASINS. WHEN EITHER OF THESE SITUATIONS ARE DISCOVERED UPON THE REQUIRED SEMIANNUAL INSPECTION, THEN THE STEPS STATED ABOVE SHALL BE COMPLETED.
- THE DRAINAGE BASIN EMBANKMENTS SHOULD BE INSPECTED FOR RODENT BURROWS, BARE SPOTS, WET AREAS OR EROSION. ANY DEFICIENCIES SHALL BE CORRECTED TO PREVENT ADDITIONAL DAMAGE.
- PIPE OUTLETS SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. THE CONDITION OF THE PIPES SHOULD BE NOTED AND REPAIRS MADE AS NECESSARY. IF EROSION IS TAKING PLACE THEN MEASURES SHOULD BE TAKEN TO STABILIZE AND PROTECT THE ERODED AREA OF THE OUTLET.

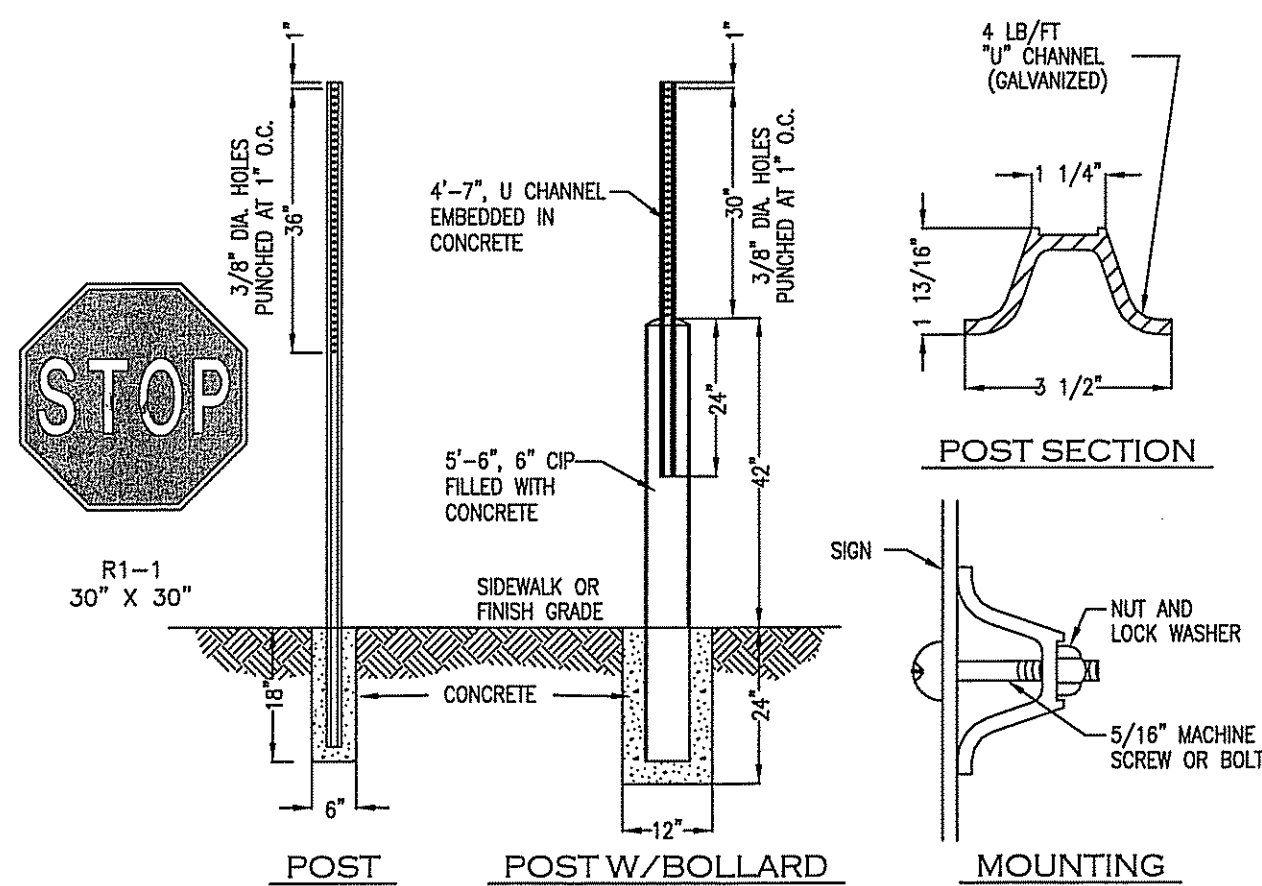
STORMWATER MAINTENANCE NOTES

2
DT-1



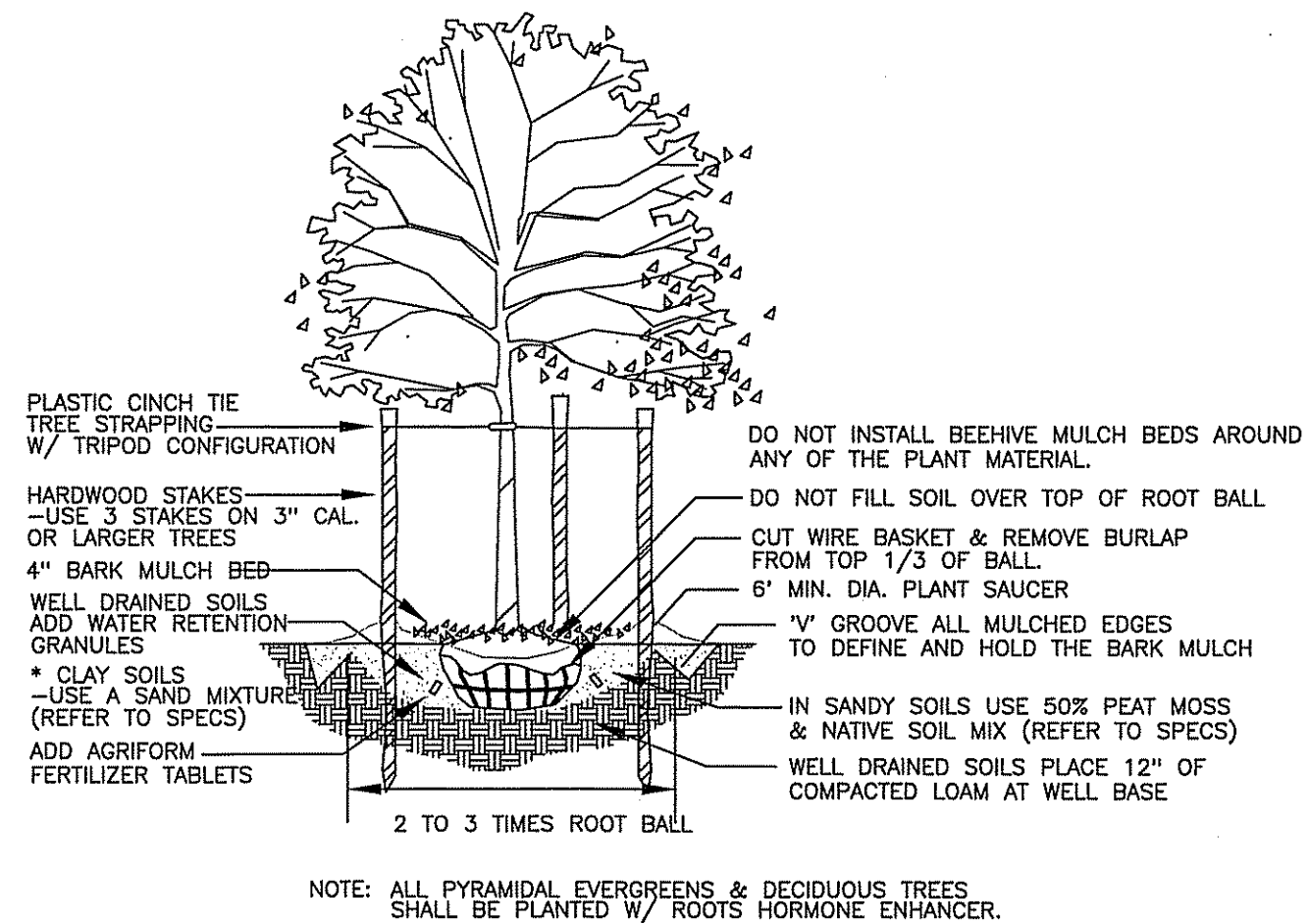
STOP BAR DETAIL

3
DT-1



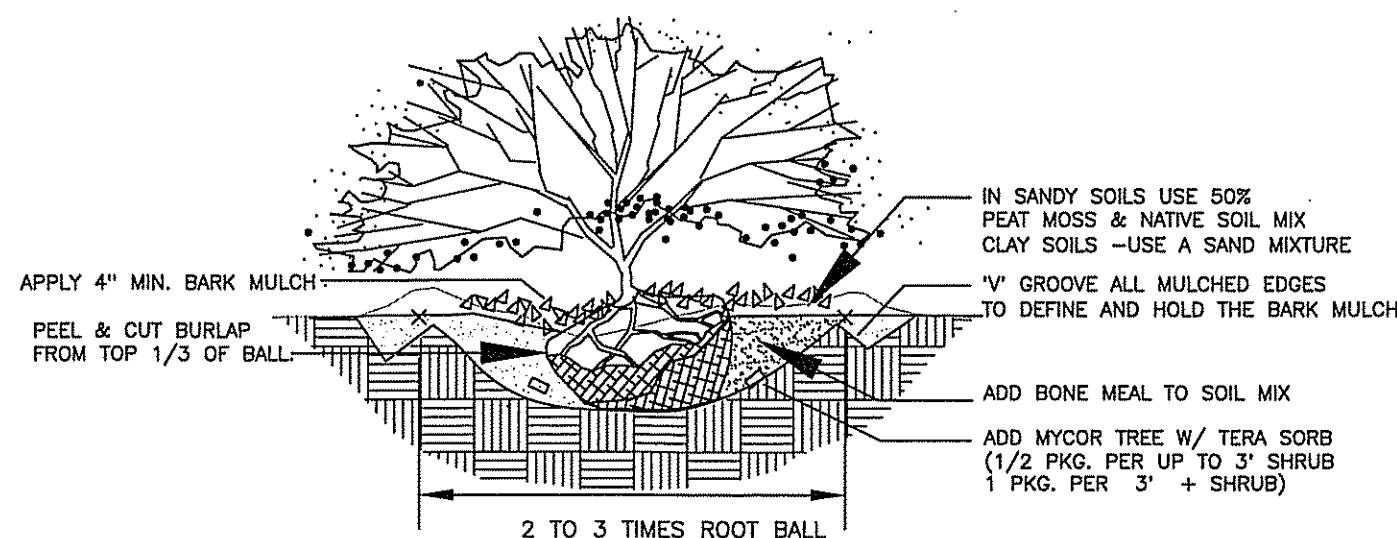
SIGN POST - STANDARD & W/BOLLARD

4
DT-1



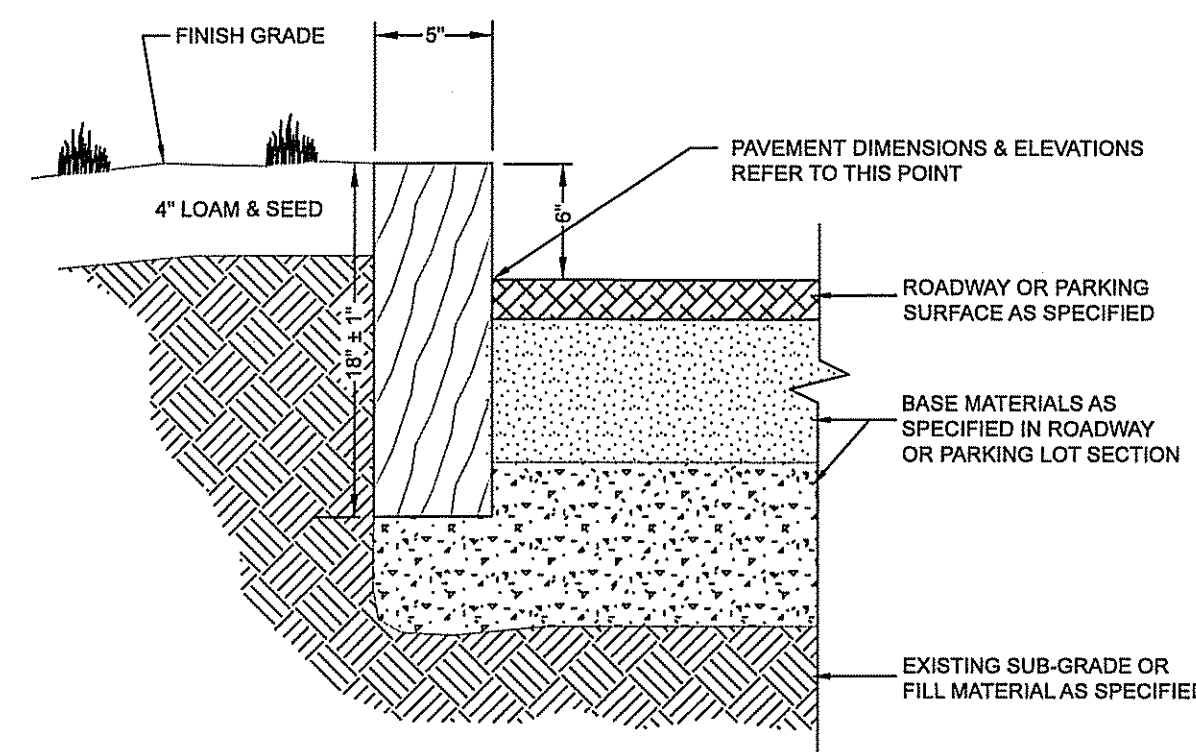
DECIDUOUS TREE PLANTING DETAIL

5
DT-1



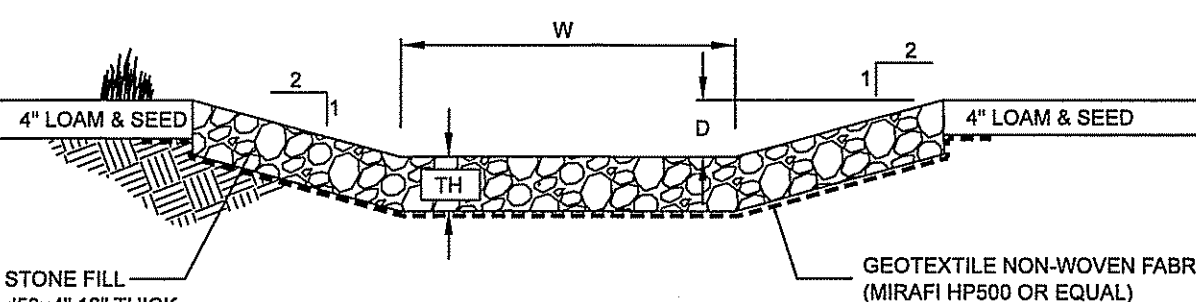
B & B SHRUB PLANTING DETAIL

6
DT-1



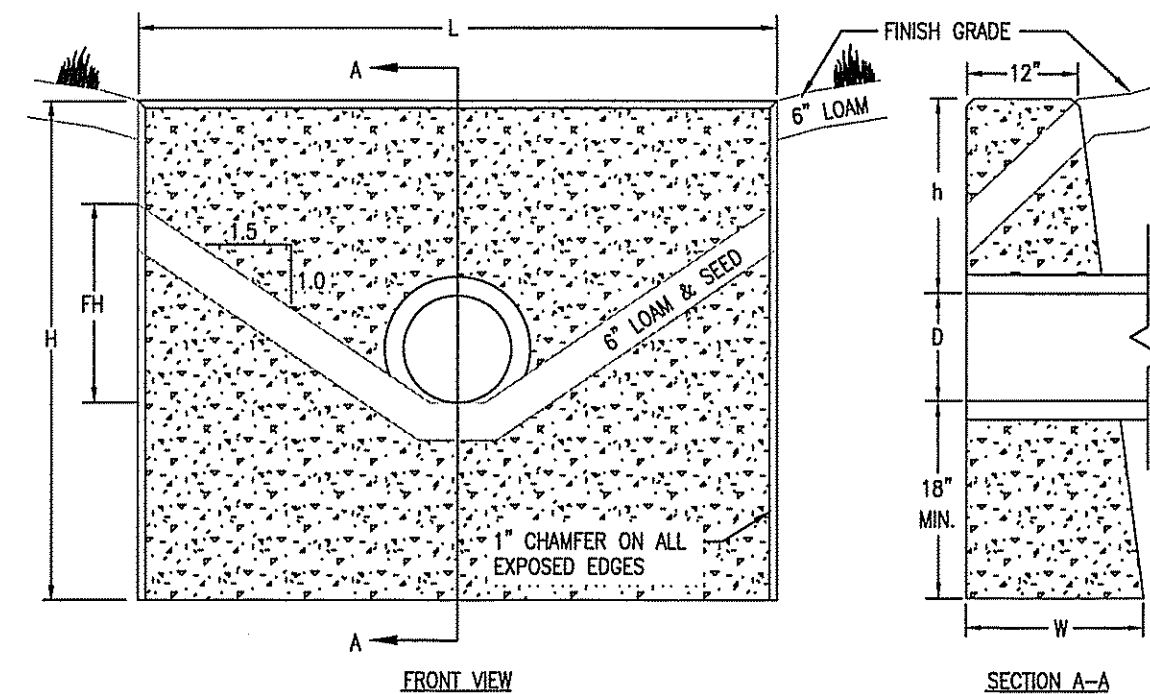
CURB - VERTICAL GRANITE

7
D-1



EMERGENCY SPILLWAY DETAIL

8
DT-1

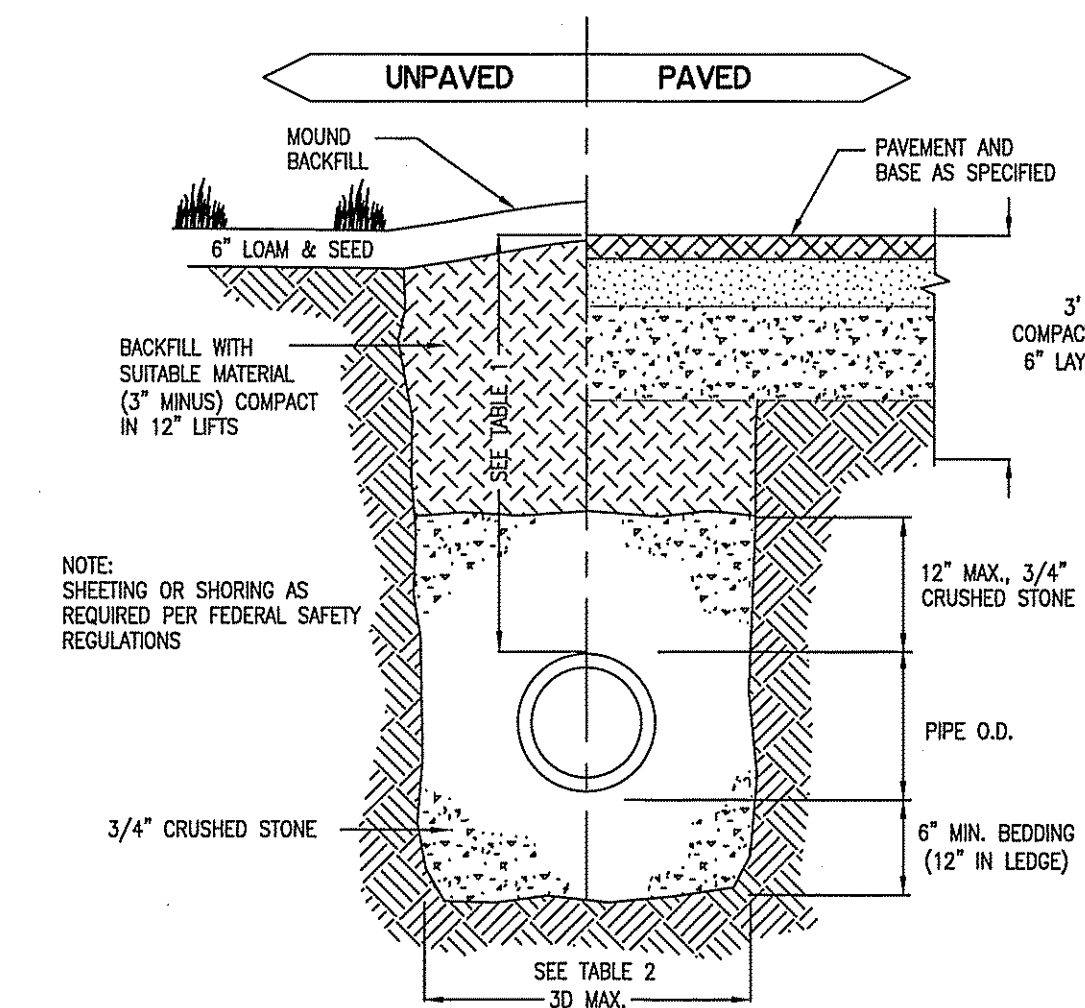


CULVERT DIAM.	HEADWALL LENGTH	HEADWALL HEIGHT	FILL HEIGHT	TOP HEIGHT	HEADWALL BOTTOM
D	L	H	FH	h	W
INCHES	FEET & INCHES	FEET & INCHES	FEET & INCHES	FEET & INCHES	FEET & INCHES
12	4'-3"	3'-9"	1'-1"	1'-3"	1'-11.25"
15	6'-0"	4'-3"	1'-7"	1'-6"	2'-0.75"
18	7'-0"	4'-6"	1'-10"	1'-6"	2'-1.50"
24	9'-0"	5'-0"	2'-4"	1'-6"	2'-3.00"

HEADWALL SHALL BE STEEL REINFORCED AND CONFORM TO NHDOT STANDARD PLAN HW-2, LAST REVISED JUNE 16, 2010.

HEADWALL - PRECAST CONCRETE (HW1 & HW2)

9
DT-1

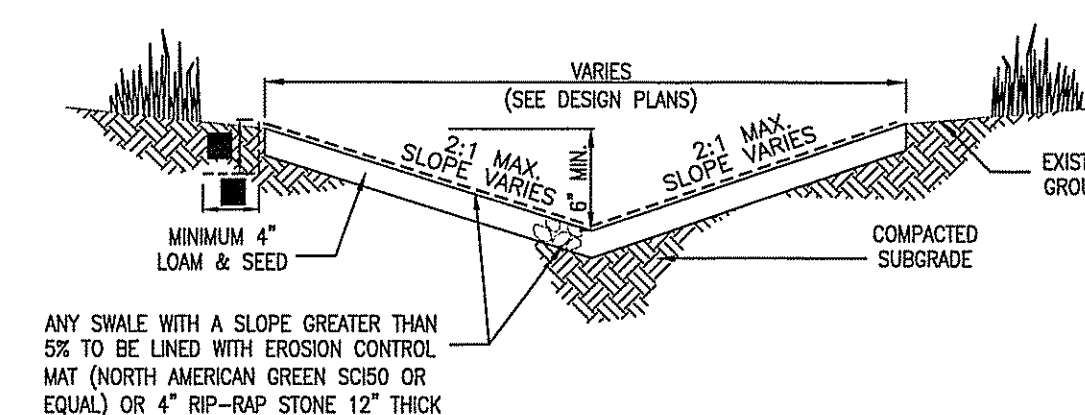


LOCATION	PIPE MATERIAL	MINIMUM COVER
PAVED ROADS	ALL	3 FT.
GRAVEL ROADS	ALL	2 FT.
DRIVEWAYS	ALL	1 FT.
UNPAVED AREAS	ALL	2 FT.

INSIDE DIAMETER	TOTAL WIDTH
12" TO 24"	I.D. + 24"
OVER 24"	2 X I.D.

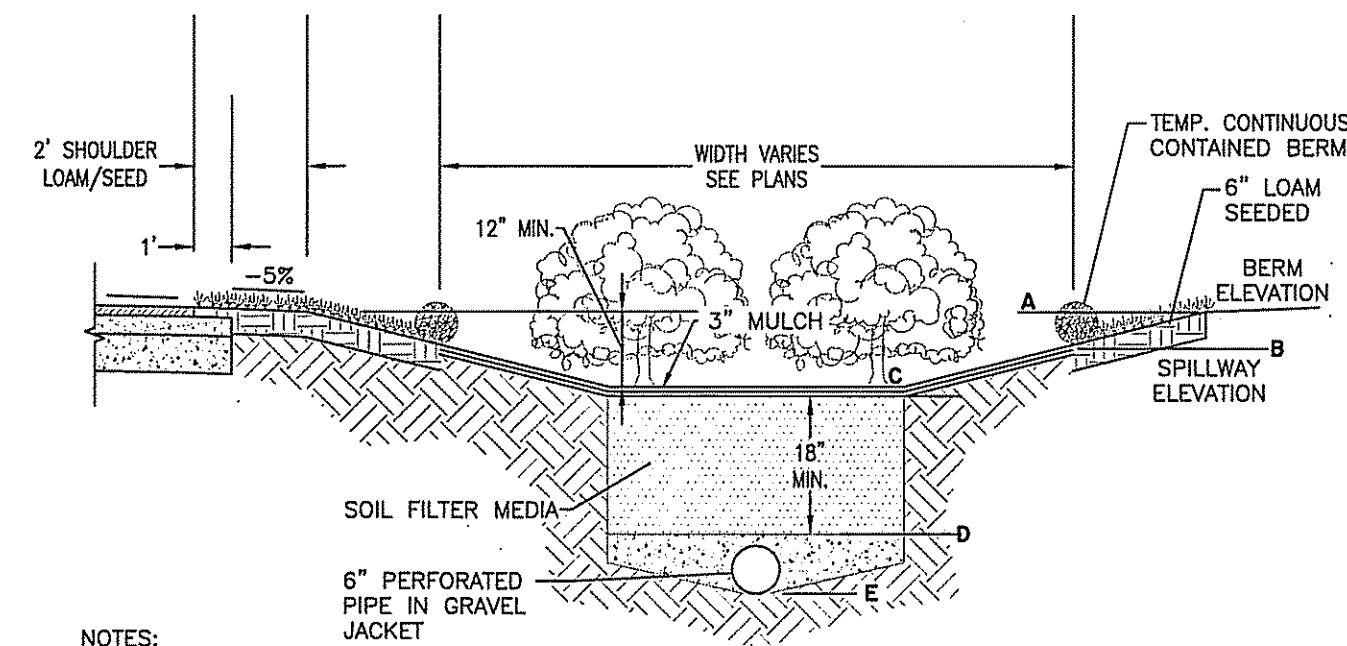
DRAINAGE TRENCH (TYPICAL)

10
DT-1



TYPICAL SWALE DETAIL

11
DT-1



NOTES:

- DO NOT PLACE RAIN GARDEN SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING DRAINAGE AREA(S) HAVE BEEN FULLY STABILIZED.
- TO PREVENT DEGRADATION OF INFILTRATION FUNCTION:
 - DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
 - DO NOT COMPACT THE EXCAVATION.
 - DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE RAIN GARDEN AREA DURING ANY STAGE OF CONSTRUCTION.

FROM UNHSC BIORETENTION SOIL SPECIFICATION FEBRUARY 2017.

- SOIL MEDIA SPECIFIED ACCORDING TO PERFORMANCE REQUIREMENTS: PARTICLE SIZE DISTRIBUTION ACCORDING TO ASTM D422 (STANDARD TEST METHOD FOR PARTICLE-SIZE ANALYSIS OF SOILS).

TABLE 1: ACCEPTABLE PARTICLE SIZE DISTRIBUTION OF FINAL BIORETENTION SOIL MIX.

SIEVE #	SIEVE SIZE (mm)	% PASSING
4	0.187 (4.76)	100
10	0.075 (2)	95
40	0.017 (0.42)	40-15
200	0.003 (0.075)	10-20
>200	PAN	0-5

GARDEN #	RAIN GARDEN INVERT INFORMATION				
	A	B	C	D	E
RG1	503.00	502.50	501.70	500.20	499.45

RAIN GARDEN TYPICAL SECTION

12
DT-1

A	3/9/20	REVISION PER STAFF COMMENTS		CLR	NRC
REV.	DATE	DESCRIPTION	C/O	DR	CK

CONSTRUCTION DETAILS

PONEMAH PINES

TAX MAP 43 PARCEL 61 - PONEMAH HILL ROAD
MILFORD, NEW HAMPSHIRE

PREPARED FOR:
PONEMAH PINES, LLC
476 ROUTE 13 SOUTH, MILFORD NH 03055

LAND OF:
FREDERICK & CELIA LORDEN TRUST
19 PONEMAH HILL ROAD, MILFORD NH 03055

SCALE: NOT TO SCALE JANUARY 20, 2020

Surveying + Engineering + Land Planning + Permitting + Septic Designs

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206 Elm Street, Milford, NH 03055
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- NOTES:
1. MINIMUM SIZE PIPE FOR SEWER SERVICE SHALL BE 6 INCHES.
 2. PIPE AND JOINT MATERIALS
 - A. PLASTIC SEWER PIPE
 1. PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

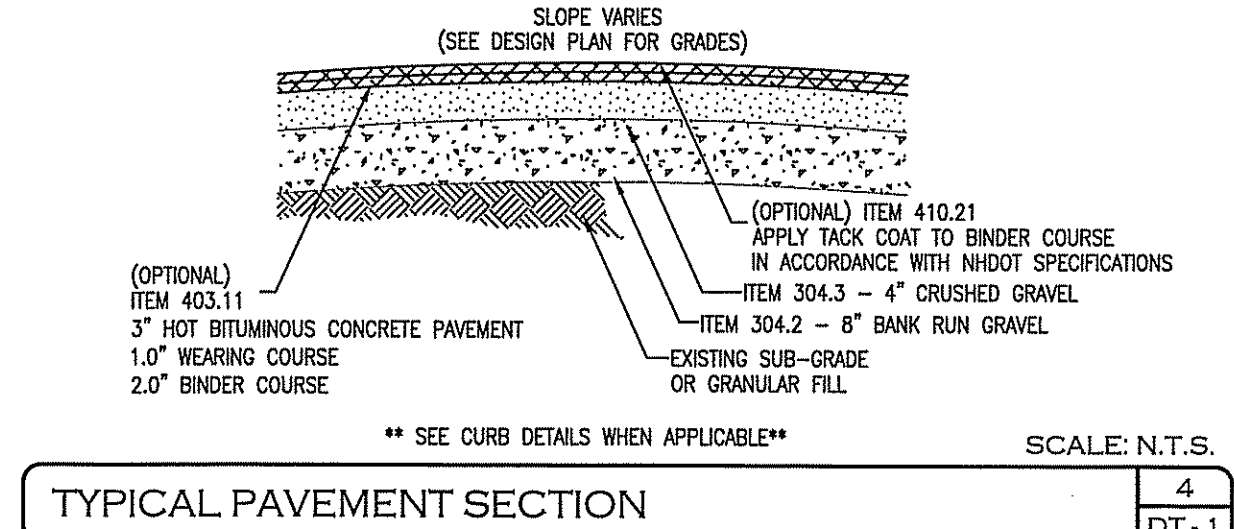
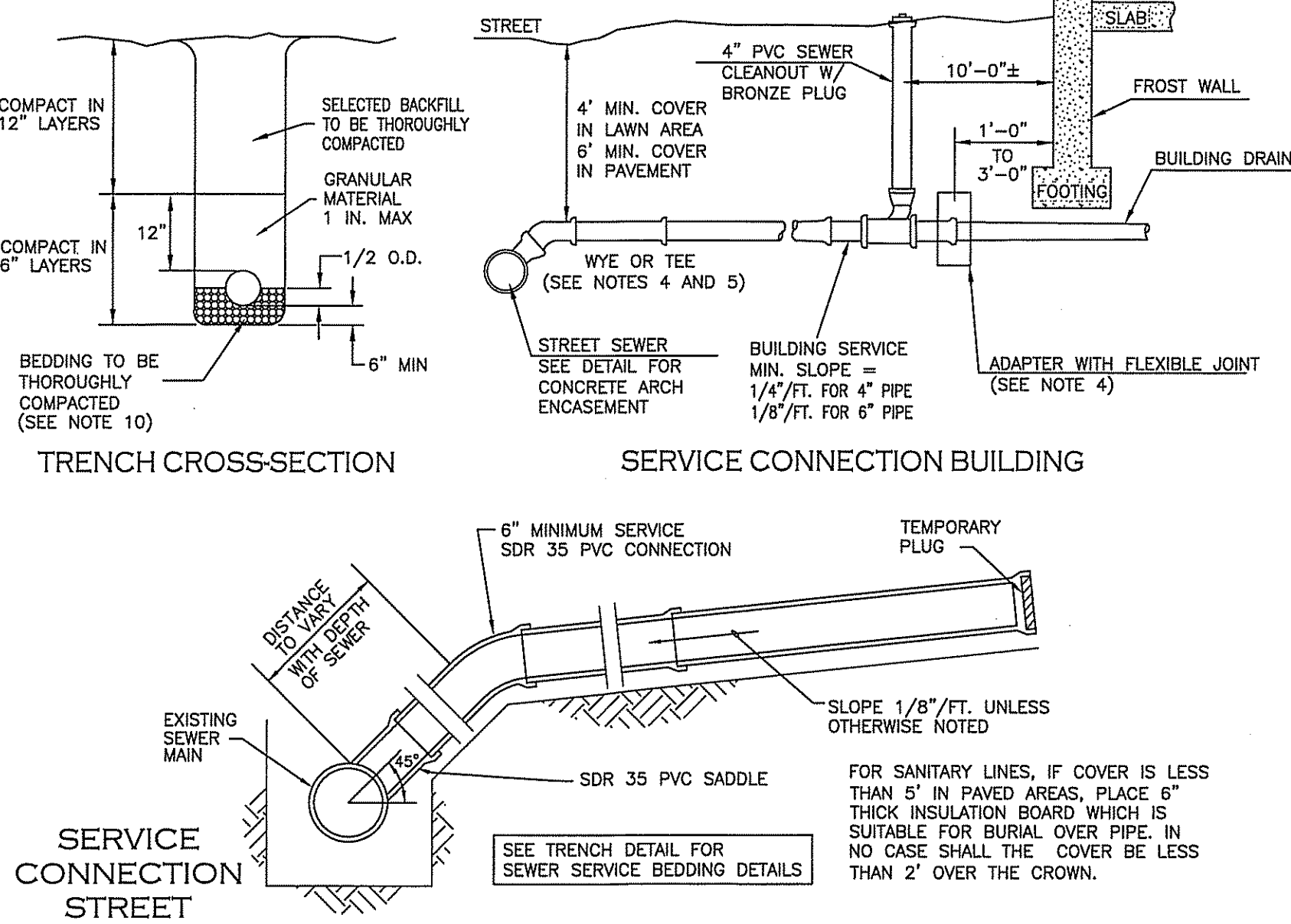
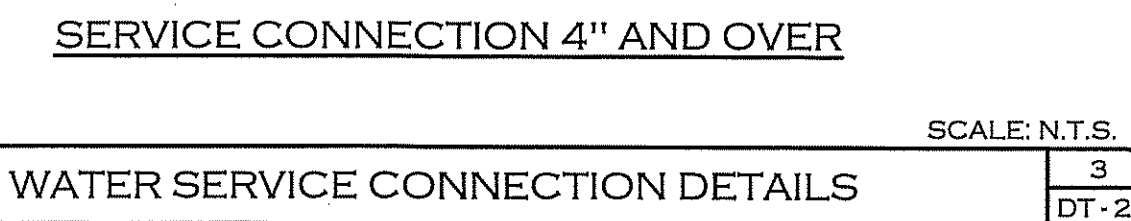
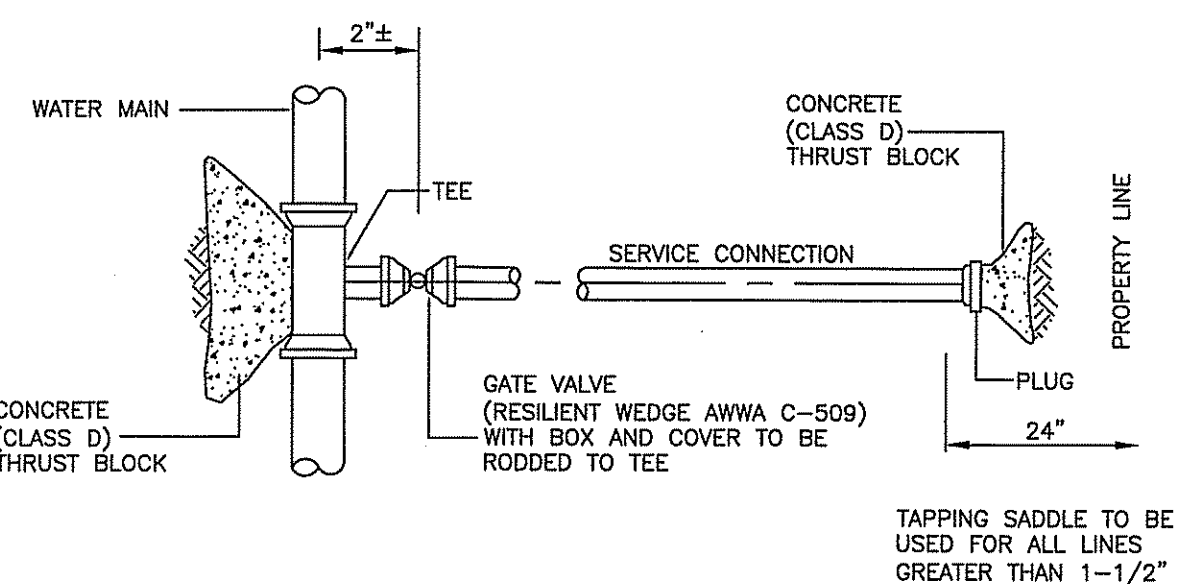
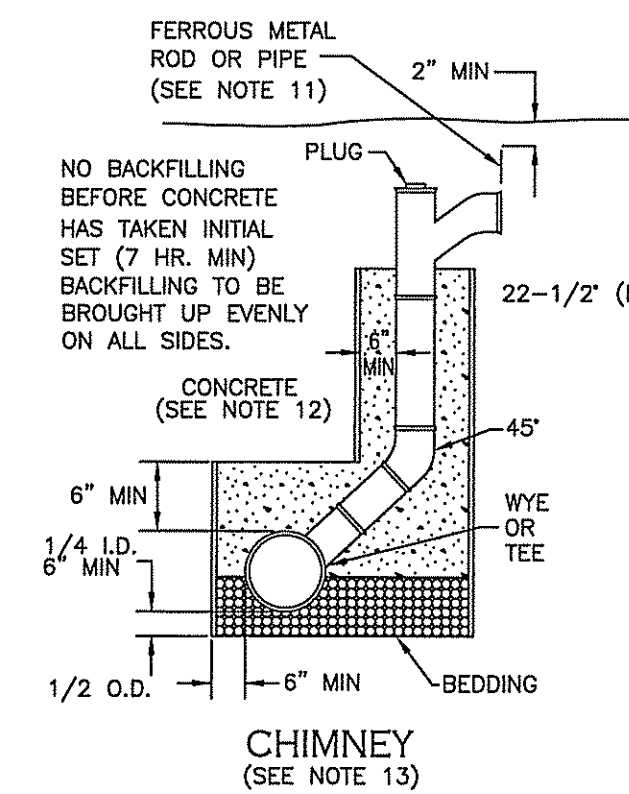
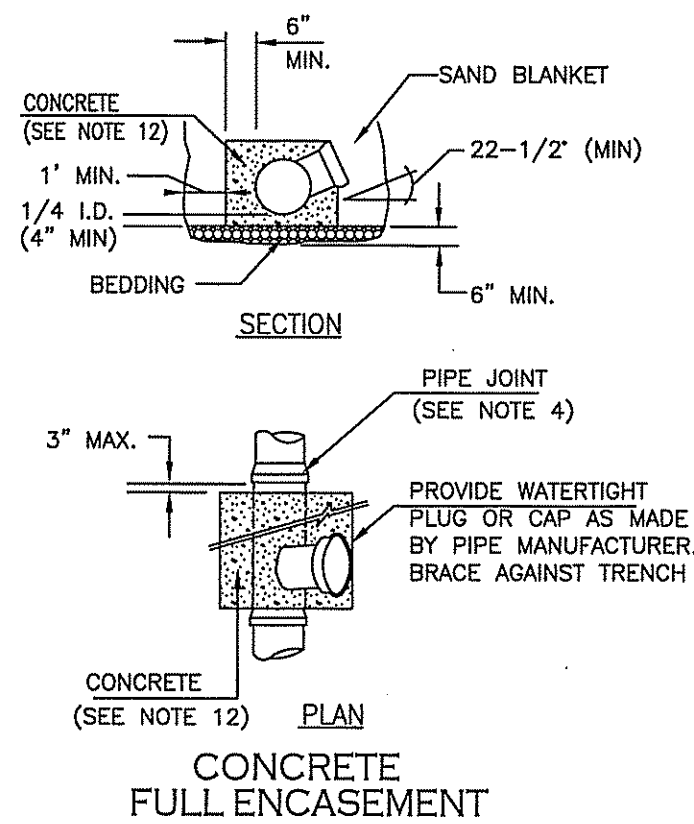
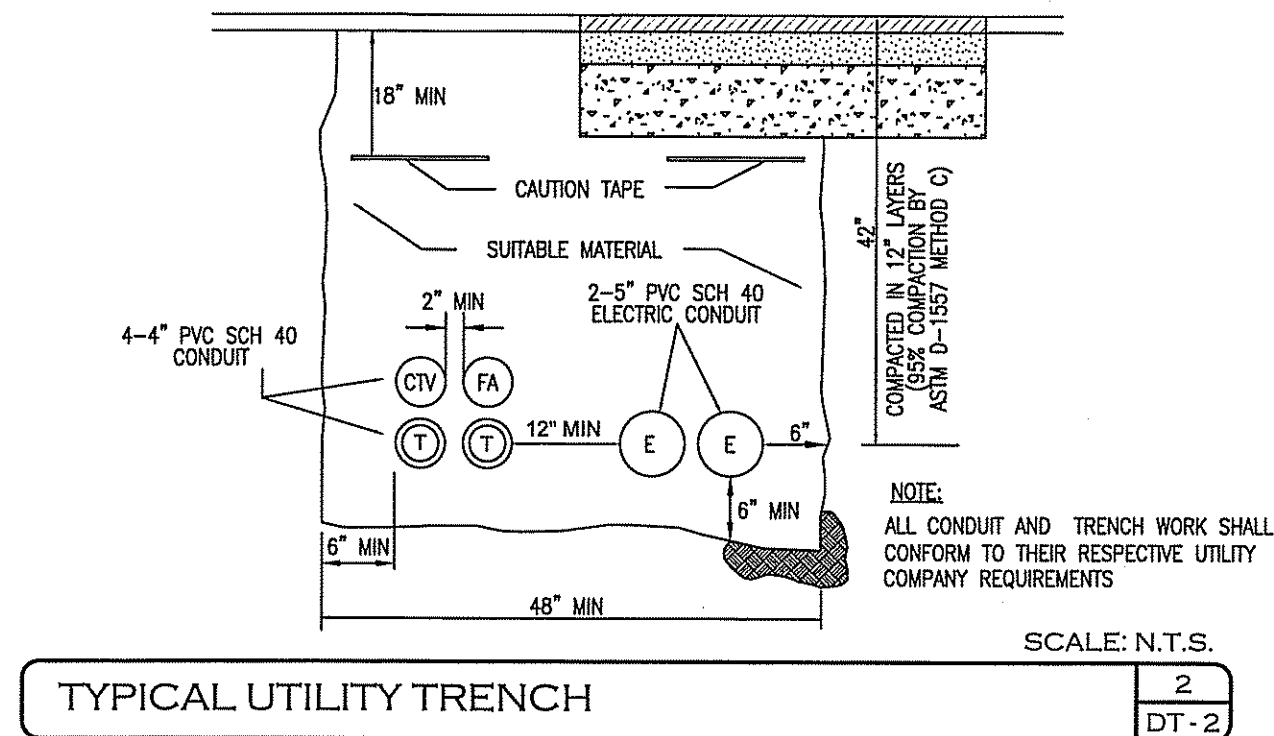
ASTM STANDARDS	GENERIC PIPE	SIZES	APPROVED MATERIAL
D3034	PVC (SOLID WALL)	6" THROUGH 15"	(SDR 35)
F798	PVC (SOLID WALL)	18" THROUGH 27"	(T-1 & T-2)
F799	PVC (SOLID WALL)	4" THROUGH 18"	(T-1 TO T-3)
F794	PVC (ROBBER WALL)	8" THROUGH 36"	
D2680	ABS (COMPOSITE WALL)	8" THROUGH 15"	
	*PVC: POLY VINYL CHLORIDE		
	*ABS: ACRYLONITRILE-BUTADIENE-STYRENE		
 2. JOINTS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-ON, BELL AND SPIGOT TYPE.
 3. ABS TRUSS PIPE AND FITTINGS SHALL CONFORM TO ASTM D-2680, POLYMER COMPOUNDING SHALL BE TO ASTM D-1789 (CLASS 322).
 4. JOINTS FOR ABS TRUSS PIPE SHALL BE CHEMICAL WELDED COUPLINGS TYPE SC IN ACCORDANCE WITH ASTM D-2680, FORMING A CHEMICAL WELDED JOINT.
 - B. DUCTILE-IRON PIPE, FITTINGS AND JOINTS
 1. DUCTILE-IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE:

ASTM STANDARDS	GENERIC PIPE	SIZES	APPROVED MATERIAL
A21.50	DUCTILE-IRON CASTINGS	6" THROUGH 15"	
A21.51	DUCTILE-IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS FOR WATER OR OTHER LIQUIDS	6" THROUGH 15"	
 2. JOINTS SHALL BE OF THE MECHANICAL OR PUSH-ON TYPE. JOINTS AND GASKETS SHALL CONFORM TO A21.11 RUBBER GASKETS JOINTS FOR CAST IRON PRESSURE PIPE AND FITTINGS.
 3. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
 4. JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER "Y" OR AT THE FOUNDATION WALL, APPROPRIATE ADAPTERS SHALL BE USED.
 5. "T" AND "Y" WHERE A "T" OR "Y" IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE IN THE SEWER, FOLLOWING MANUFACTURERS' INSTRUCTIONS USING A BOLTED, CLAMPED, OR EPOXY CEMENTED SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING. THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH (OR OTHER SUCH MATERIAL) AROUND THE JOINT OR APPLYING MORTAR TO HOLD THE CONNECTION AND ANY OTHER SIMILAR CRUDE PRACTICES OR INEPT OR HASTY IMPROVISATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED, AS SHOWN IN THE DETAIL, UP TO AND INCLUDING 15" DIAMETER.
 6. BUILDING SEWER INSTALLATION SHALL BE MADE IN THE SEWER, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL, AS SPECIFIED IN NOTE 10, BEDDING AND FILL FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES. THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE HOUSE FOUNDATION AT A GRADE OF NOT LESS THAN 1/4 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH. A CLEANOUT SHALL BE INSTALLED OUTSIDE THE BUILDING (SEE DETAIL) AND A MINIMUM OF ONE (1) EVERY ONE-HUNDRED (100) FEET THEREAFTER.
 7. TESTING THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS (PRIOR TO BACKFILLING):
 - A. AN OBSERVATION "T" SHALL BE INSTALLED AS SHOWN. WHEN READY TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE "T". AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
 - B. THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER TO SIMULATE AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS. IF THE TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.
 - C. DRY FLUORESCENT DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER. IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST UNWINDLE DOWNSTREAM. LEAKAGE OBSERVED IN ANY OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE AND THE PIPE SHALL BE DUG UP, IF NECESSARY, AND RE-LAID SO AS TO ASSURE WATER TIGHTNESS.
8. ILL-USE CONNECTIONS. NOTHING BUT SANITARY WASTE FLOW FROM THE BUILDING TOILETS, SINKS, KITCHEN, ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.
9. BUILDING WATER SERVICE. SHALL NOT BE LAID IN THE SAME TRENCH AS THE SEWER SERVICE.
10. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LDM, ORGANIC MATERIAL AND MEETING ASTM C33-67:

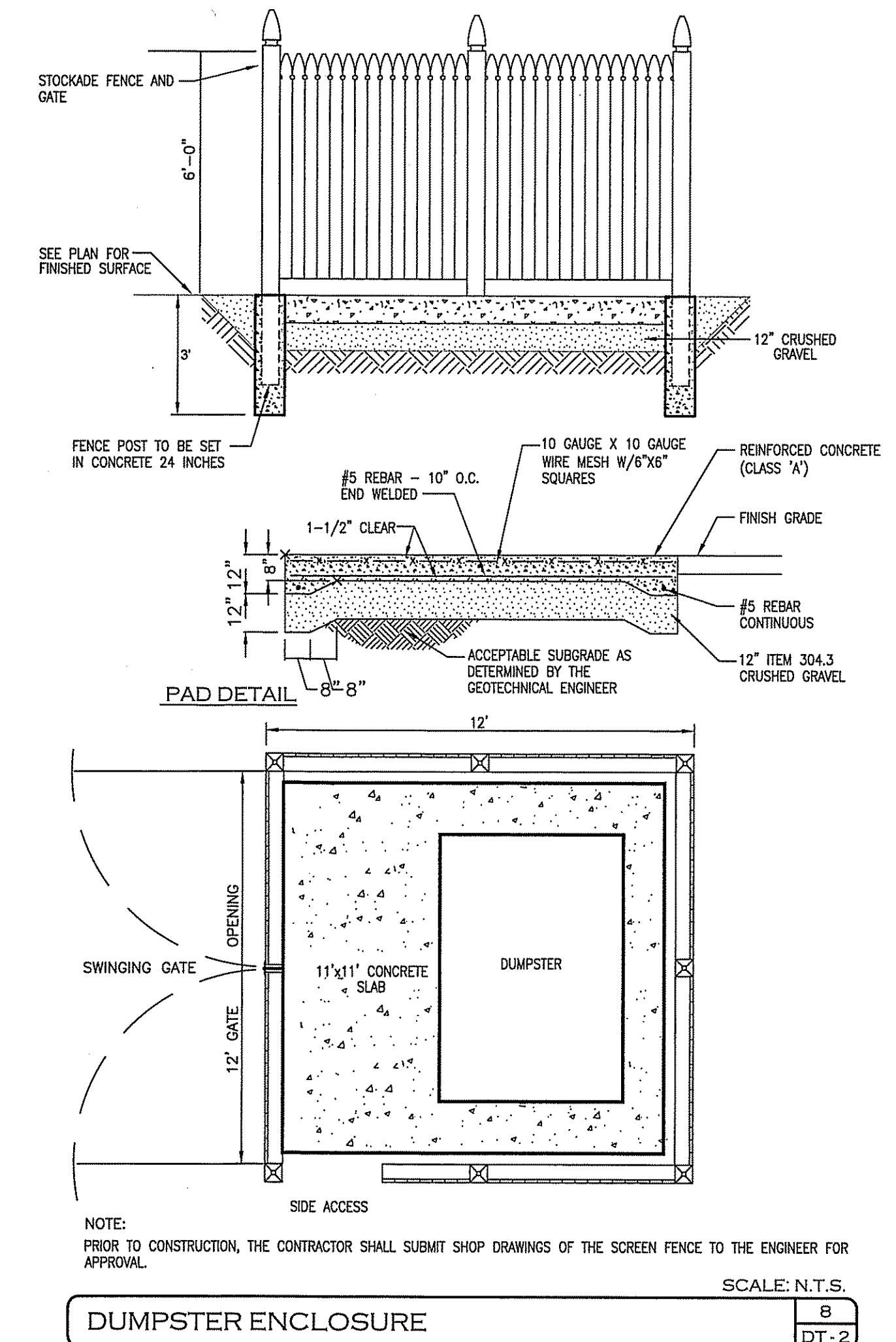
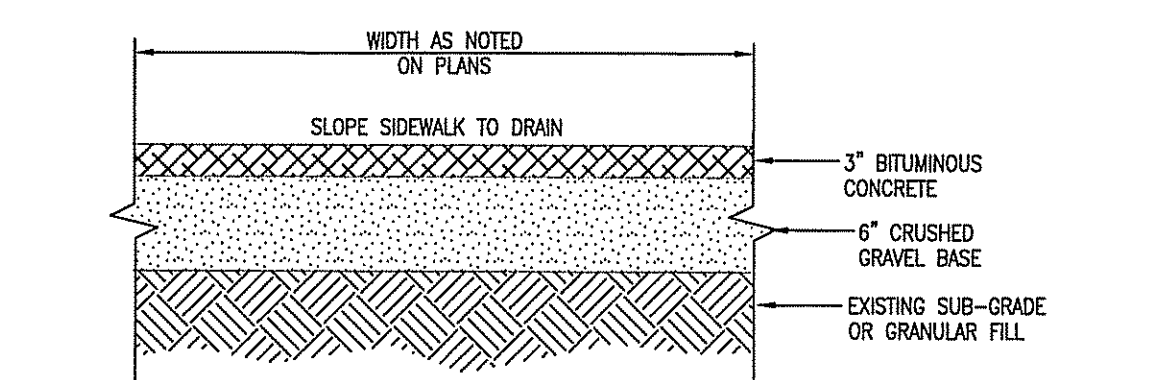
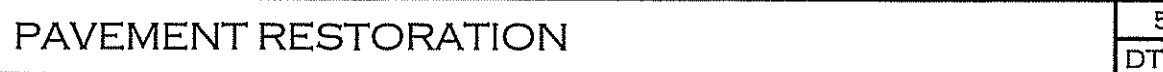
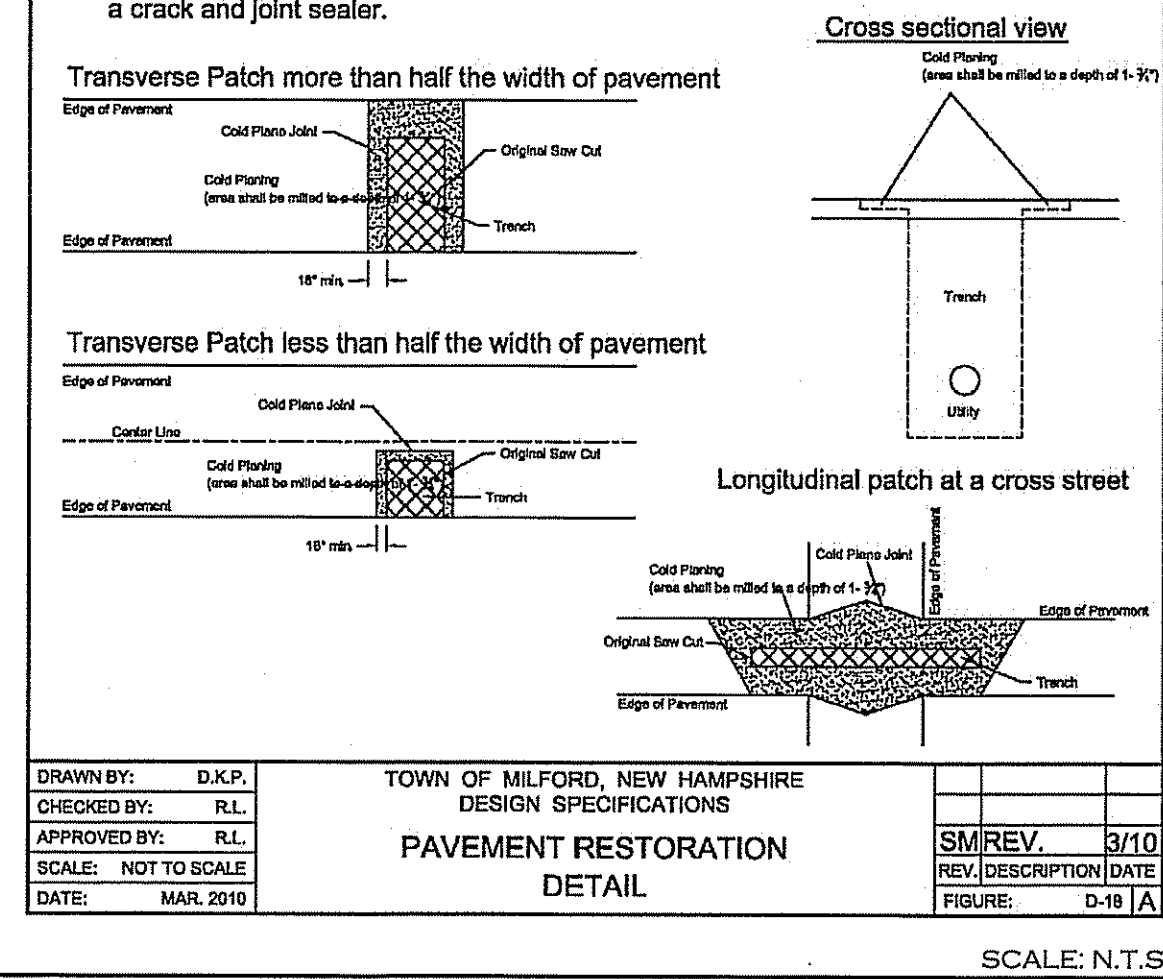
SIZE	PERCENT PASSING
100% PASSING 1" INCH SCREEN	90-100%
90-100% PASSING 3/4" INCH SCREEN	20-55%
20-55% PASSING 3/8" INCH SCREEN	0-10%
0-10% PASSING #4 SIEVE	0-5%
0-5% PASSING #8 SIEVE	

WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, SCREENED GRAVEL OR CRUSHED STONE (1-1/2 TO 1/2 INCH) SHALL BE USED.
11. LOCATION: THE LOCATION OF THE "T" OR "Y" SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE "T" OR "Y", AS DESCRIBED IN THE TYPICAL CHIMNEY DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPEFINDER.
12. CONCRETE: CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE VT. AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS:

COMPONENT	AMOUNT
CEMENT	6.0 BAGS/C.Y.
WATER	5.75 GALS/BAG CEMENT
AGGREGATE	1 INCH MAX
13. CHIMNEYS: IF VERTICAL DROP INTO THE SEWER IS GREATER THAN 4 FEET, A CHIMNEY SHALL BE CONSTRUCTED FOR THE BLDG. CONNECTION. CHIMNEY INSTALLATION AS RECOMMENDED BY THE PIPE MANUFACTURER MAY BE USED IF APPROVED BY THE ENGINEER.



- Procedures for repairs of trench cuts on City roads**
1. Pavement shall be sawcut along the ditch line. Any undermined areas that inadvertently develop shall have the projecting pavement saw cut and removed.
 2. Trench backfill shall be compacted in exceptional lifts according to Street Opening Permit or approved plans.
 3. A 4 inch depth - 3/4" type B hot bituminous patch shall be laid in two (2") inch depth lifts.
 4. The patch shall be allowed to settle for a minimum of 60 days (or time determined by Director of DPW).
 5. After suitable exposure to traffic compaction as determined by the Director of Public Works, the pavement shall be milled to a depth of 1 3/4" providing a minimum 18 inch overlap onto existing undisturbed pavement.
 6. Care must be taken to identify and offset the location of the joint before cold planing.
 7. The milled area shall be paved with 1/2" type E hot bituminous pavement meeting NH DOT 401 pavement specifications. The new to old pavement joints shall be sealed with a crack and joint sealer.



CONSTRUCTION DETAILS

PONEMAH PINES

TAX MAP 43 PARCEL 61 - PONEMAH HILL ROAD

MILFORD, NEW HAMPSHIRE

PREPARED FOR:

PONEMAH PINES, LLC

476 ROUTE 13 SOUTH, MILFORD NH 03055

LAND OF:

FREDERICK & CELIA LORDEN TRUST

19 PONEMAH HILL ROAD, MILFORD NH 03055

SCALE: NOT TO SCALE JANUARY 20, 2020

Surveying ♦ Engineering ♦ Land Planning ♦ Permitting ♦ Septic Designs

FIELDSTONE

LAND CONSULTANTS, PLLC

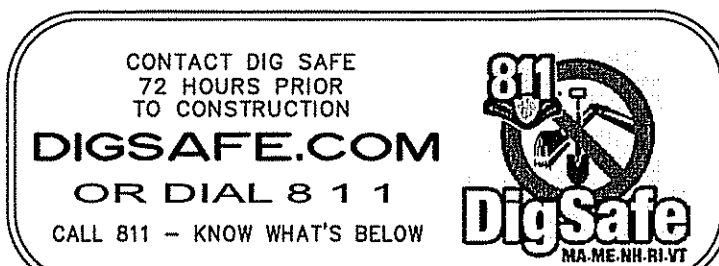
206 Elm Street, Milford, NH 03055
Phone: (603) 672-5456 Fax: (603) 413-5456
www.FieldstoneLandConsultants.com

FILE: 2261DT00.dwg PROJ. NO. 2261.00 SHEET: DT-2 PAGE NO. 7 OF 8

1. PRIOR TO STARTING ANY WORK ON THE SITE THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS THEREOF IN NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICE STORM WATER MANUALS, VOLUME 1-3, LATEST EDITION.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PER PLANS AND DETAILS. PERIMETER CONTROLS SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF EARTH DISTURBING ACTIVITIES.
4. INSTALL INLET PROTECTION AROUND ALL STORM DRAIN STRUCTURES. INLET PROTECTION BMP'S SHALL REMAIN UNTIL THE SITE IS STABILIZED. CONSTRUCTION OF DETENTION BASINS AND TREATMENT SWALES SHALL OCCUR PRIOR TO AND EARTH MOVING OPERATION THAT WILL INFLUENCE STORM WATER RUNOFF.
5. THE WORK AREA SHALL BE GRADED, SHAPED AND OTHERWISE DRAINED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE THE LIMITS OF THE WORK AREA.
6. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEN POSSIBLE.
7. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK AND AFTER EVERY 0.25-INCH OR GREATER RAINFALL. SEDIMENTS SHALL BE DISPOSED OF IN AN UPLAND AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND BE PERMANENTLY STABILIZED.
8. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION. AT NO TIME SHALL THE TOTAL UNSTABILIZED DISTURBED AREA, INCLUDING LOT DISTURBANCES, BE GREATER THAN FIVE (5) ACRES.
9. THE LAND AREA EXPOSED SHALL BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. ALL NON-ACTIVE DISTURBED AREAS SHALL BE STABILIZED WITHIN 30 DAYS OF THE DISTURBANCE. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF FINAL GRADING.
10. DITCHES, SWALES AND DRAINAGE BASINS SHALL BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
11. AN AREA SHALL BE CONSIDERED STABILIZED IF ONE OF THE FOLLOWING HAS OCCURRED:
A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
C. A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL, SUCH AS STONE OR RIPRAP, HAS BEEN INSTALLED; OR
D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
12. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES THAT ARE STEEPER THAN 3:1 (HORIZONTAL / VERTICAL). UNLESS OTHERWISE SPECIFIED THE CONTRACTOR SHALL USE NORTH AMERICAN GREEN SC150, OR APPROVED EQUAL.
13. ALL AREAS RECEIVING EROSION CONTROL STONE OR RIPRAP SHALL HAVE A GEOTEXTILE MATERIAL INSTALLED BELOW THE STONE (SEE APPROPRIATE DETAILS).
14. ALL DISTURBED AREAS TO TURF FINISHED SHALL BE COVERED WITH A MINIMUM THICKNESS OF 6 INCHES OF COMPACTED LOAM. LOAM SHALL BE COVERED WITH THE APPROPRIATE SEED MIXTURE AS INDICATED BELOW.
- | PERMANENT SEED (LAWN AREAS) | LBS. / 1,000 SQ. FT. | PERMANENT SLOPE SEED MIX | LBS. / 1,000 SQ. FT. |
|-----------------------------|----------------------|--------------------------|----------------------|
| CREeping RED FESCUE | 0.92 LBS | CREeping RED FESCUE | 0.80 LBS |
| PERENNIAL RYEGRASS | 1.15 LBS | PERENNIAL RYEGRASS | 0.80 LBS |
| KENTUCKY BLUEGRASS | 0.58 LBS | REDTOP | 0.12 LBS |
| REDTOP | 0.12 LBS | ALSKIE CLOVER | 0.12 LBS |
| | | BIRDFOOT TREFOIL | |
- **APPLICATION RATE TOTALS
2.8 LBS PER 1,000 SF**
15. TEMPORARY STABILIZATION OF DISTURBED AREAS:
STRIPPED SOIL SHALL BE STOCKPILED UNCOMPACTED, AND STABILIZED AGAINST EROSION AS OUTLINED BELOW:
SEED BED PREPARATION: 10-10-10 FERTILIZATION TO BE SPREAD AT THE RATE OF 7 LBS. PER 100 SF AND AGRICULTURAL LIMESTONE AT A RATE OF 90 LBS PER 1000 SF AND INCORPORATED INTO THE SOIL. THE SOIL, FERTILIZER AND LIMESTONE SHALL BE TILLED TO PREPARE FOR SEEDING.
- A. SEED MIXTURE: USE ANY OF THE FOLLOWING:
- | SPECIES | RATE PER 1,000 SF | DEPTH | SEEDING DATES |
|-----------------|-------------------|-----------|---------------|
| WINTER RYE | 2.5 LBS | 1 INCH | 8/15 TO 9/15 |
| OATS | 2.5 LBS | 1 INCH | 4/15 TO 10/15 |
| ANNUAL RYEGRASS | 1.0 LBS | 0.25 INCH | 8/15 TO 9/15 |
- B. MULCHING: MULCH SHOULD BE USED ON HIGHLY ERODIBLE AREAS, AND WHERE CONSERVATION OF MOISTURE WILL FACILITATE PLANT ESTABLISHMENT AS FOLLOWS:
- | TYPE | RATE PER 1,000 SF | USE AND COMMENTS |
|-----------------------------------|---------------------------------------|---|
| STRAW | 70 TO 90 LBS | MAY BE USED WITH PLANTINGS, MUST BE ANCHORED TO BE USED ALONE |
| WOOD CHIPS OR BARK MULCH | 460 TO 920 LBS | USED WITH TREE AND SHRUB PLANTINGS |
| FIBROUS MATTING | AS RECOMMENDED BY MANUFACTURER | MUST BE BIODEGRADABLE, USE IN SLOPE AREAS AND AREAS DIFFICULT TO VEGETATE |
| CRUSHED STONE 1/4" TO 1-1/2" DIA. | SPREAD TO GREATER THAN 1/2" THICKNESS | USE IN SPECIFIC AREAS AS SHOWN ON PLAN OR AS NEEDED |
16. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NOT FEASIBLE (CRITICAL TIME FRAMES OR VARIABLE SITES) THEN APPLY FERTILIZER AT A RATE OF 11 POUNDS PER 1,000 SF AND LIMESTONE AT A RATE OF 90 POUNDS PER 1,000 SF. FERTILIZER SHALL BE LOW PHOSPHATE (LESS THAN 2% PHOSPHORUS).
17. CAUTION SHOULD BE TAKEN WHEN THE PROPERTY IS LOCATED WITHIN 250 FEET OF A WATER BODY. IN THIS CASE ALL FERTILIZERS SHALL BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER. SLOW RELEASE FERTILIZERS MUST BE AT LEAST 50% SLOW RELEASE NITROGEN COMPONENT. NO FERTILIZER EXCEPT LIMESTONE SHALL BE APPLIED WITHIN 25 FEET OF THE SURFACE WATER. THESE ARE REGULATED LIMITATIONS.
18. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS (SEE WINTER CONSTRUCTION NOTES). NO DISTURBED AREAS SHALL BE LEFT EXPOSED DURING THE WINTER MONTHS.
19. A VIGOROUS DUST CONTROL PROGRAM SHALL BE APPLIED BY THE SITE CONTRACTOR. DUST SHALL BE MANAGED THROUGH THE USE OF WATER AND/OR CALCIUM CHLORIDE.
20. IN NO WAY ARE THE MEASURES INDICATED ON THE PLANS OR IN THESE NOTES TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGMENT TO INSTALL ADDITIONAL EROSION CONTROL MEASURES AS SITE CONDITIONS, WEATHER OR CONSTRUCTION METHODS WARRANT.
21. FOLLOWING PERMANENT STABILIZATION, TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND ACCUMULATED SEDIMENTATION IS TO BE DISPOSED OF IN AN APPROVED LOCATION, OUTSIDE OF JURISDICTIONAL WETLANDS.
22. LOT DISTURBANCE OTHER THAN SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.
23. THE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR OBSERVING AND MANAGING THE PROJECT PER RSA 430:53 AND AGR 3800 REGARDING INVASIVE SPECIES (PLANTS AND INSECTS). NO INVASIVE SPECIES PLANT OR INSECT SHALL BE INTRODUCED ONTO THE SITE.

EROSION CONTROL NOTES

1
DT-3



1. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED. STABILIZATION METHODS SHALL INCLUDE SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL OR PROPERLY INSTALLED EROSION CONTROL BLANKETS COVERED WITH HAY. OTHER STABILIZATION OPTIONS ARE TO BE APPROVED BY THE APPROPRIATE AGENCIES AND THE DESIGN ENGINEER. IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER MONTHS THEN THE ROAD SHOULD BE CLEARED OF ACCUMULATED SNOW AFTER EACH STORM EVENT.

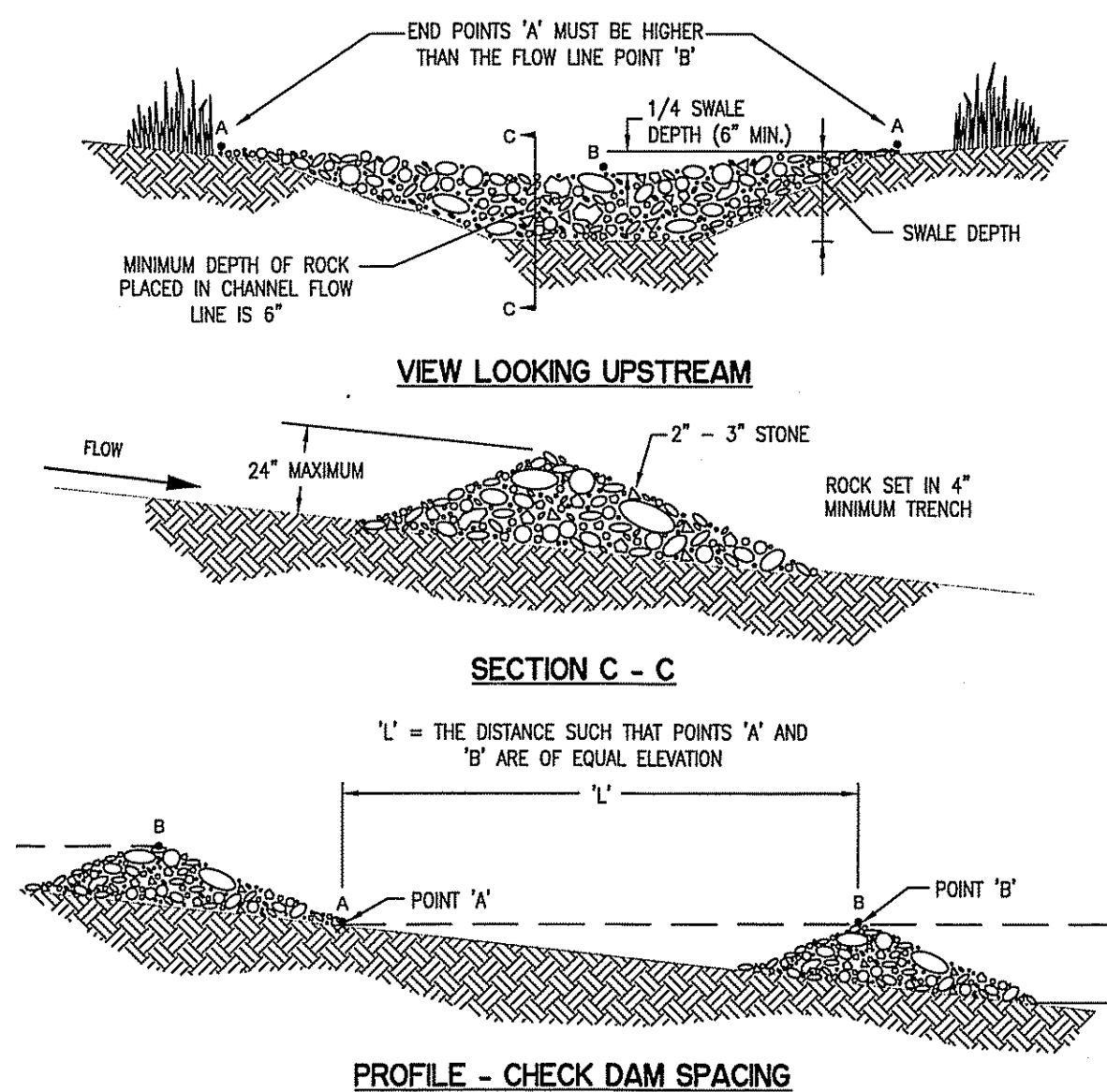
WINTER CONSTRUCTION NOTES

2
DT-3

1. INSTALL SILTATION CONTROL FENCES IN LOCATIONS SHOWN HEREON. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATION.
2. INSTALL STABILIZED CONSTRUCTION EXIT(S).
3. CUT AND CLEAR TREES; DISPOSE OF DEBRIS. STUMPS ARE TO BE GROUND AND USED FOR EROSION CONTROL OR REMOVED AND DISPOSED OF PROPERLY. STUMPS SHALL BE COMPACTED AND ALL VOIDS FILLED WITH SUITABLE MATERIAL. COVER WITH 4" OF LOAM AND SEED PER THE EROSION CONTROL NOTES.
4. REMOVE TOPSOIL AND STOCKPILE AWAY FROM ANY WETLAND. STABILIZE STOCKPILE IMMEDIATELY BY SEEDING. PLACE SILT FENCE AROUND THE DOWN SLOPE SIDE OF EARTH STOCKPILES.
5. ROUGH GRADE SITE - CONSTRUCT DRAINAGE BASINS AND DRAINAGE SWALES DURING INITIAL PORTION OF CONSTRUCTION. STABILIZE IMMEDIATELY PER THE CONSTRUCTION AND EROSION CONTROL DETAILS. DO NOT DIRECT STORM WATER RUNOFF TO THESE STRUCTURES UNTIL A HEALTHY VEGETATIVE COVER IS ESTABLISHED.
6. BEGIN BUILDING CONSTRUCTION.
7. CONSTRUCT GRAVEL PARKING AREA (PAVEMENT OPTIONAL) AND BUILDING PAD. INSTALL UTILITIES AND STRUCTURES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED UPON COMPLETION OF ROUGH GRADING PER THE EROSION CONTROL NOTES.
8. INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS AND AFTER EVERY 0.25" OR GREATER RAINFALL.
9. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, CULVERTS, DITCHES, SILTATION FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
10. FINISH GRADING TO PREPARE FOR PAVING (IF ANY) AND LOAMING. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
11. FINISH PAVING (IF ANY). PERMANENT SEEDING SHALL BE PERFORMED UPON COMPLETION OF PARKING AREA (SEE EROSION CONTROL NOTES).
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED.
14. ALL STRUCTURES SHALL BE CLEARED OF SEDIMENTS ONCE CONSTRUCTION IS COMPLETE.

CONSTRUCTION SEQUENCE

3
DT-3

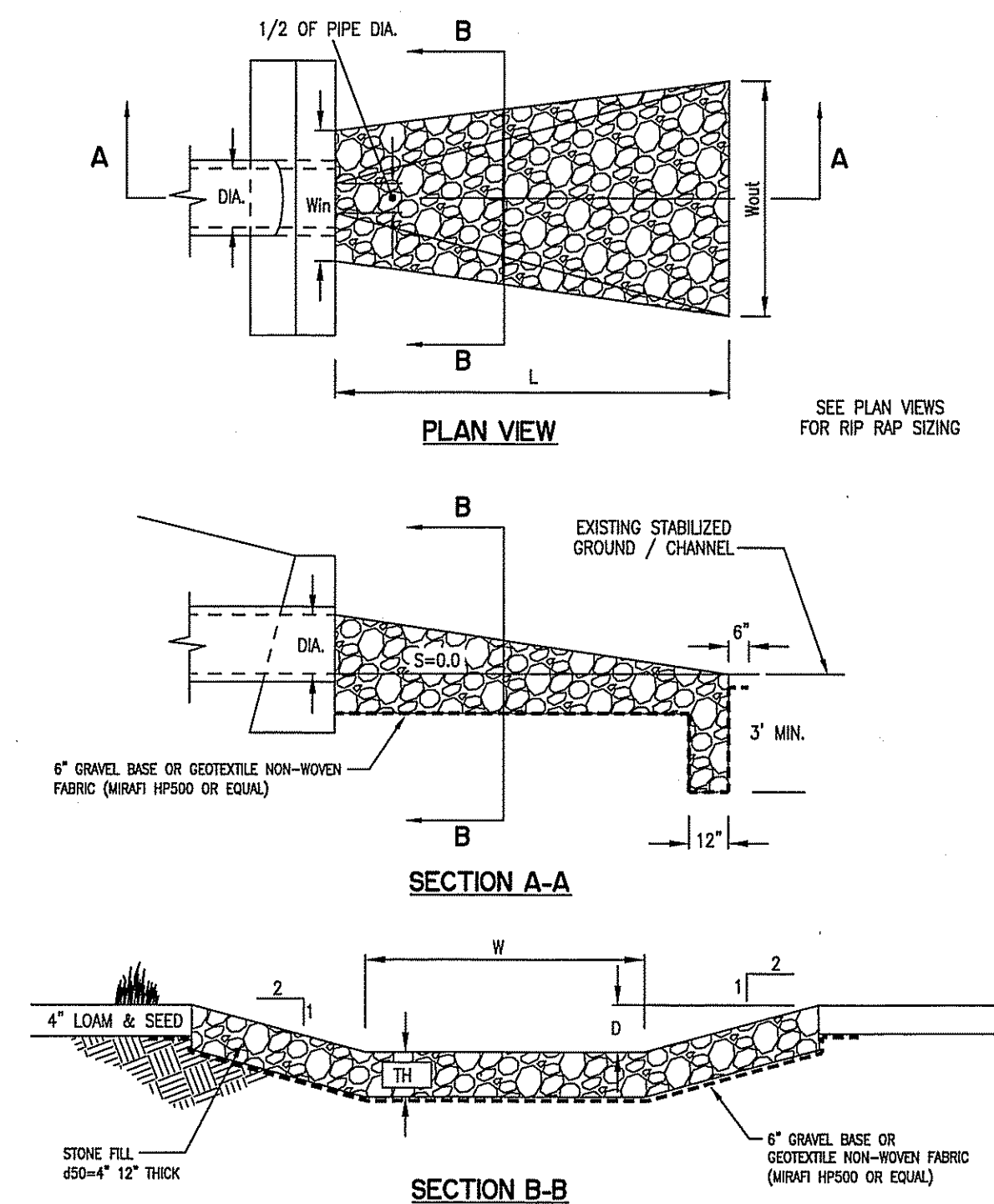


NOTES:

1. STONE CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE CHECK DAM SHOULD BE LESS THAN ONE ACRE.
3. STONE CHECK DAMS SHOULD NOT BE USED IN A FLOWING STREAM.
4. STONE CHECK DAMS SHOULD BE CONSTRUCTED OF WELL-GRADED ANGULAR 2 TO 3 INCH STONE. THE INSTALLATION OF 3/4-INCH STONE ON THE UPGRADIENT FACE IS RECOMMENDED FOR BETTER FILTERING.
5. WHEN INSTALLING STONE CHECK DAMS THE CONTRACTOR SHALL KEY THE STONE INTO THE CHANNEL BANKS AND EXTEND THE STONE BEYOND THE ABUTMENTS A MINIMUM OF 18-INCHES TO PREVENT FLOW AROUND THE DAM.
6. STONE CHECK DAMS SHOULD BE REMOVED ONCE THE SWALE OR DITCH HAS BEEN STABILIZED UNLESS OTHERWISE SPECIFIED.

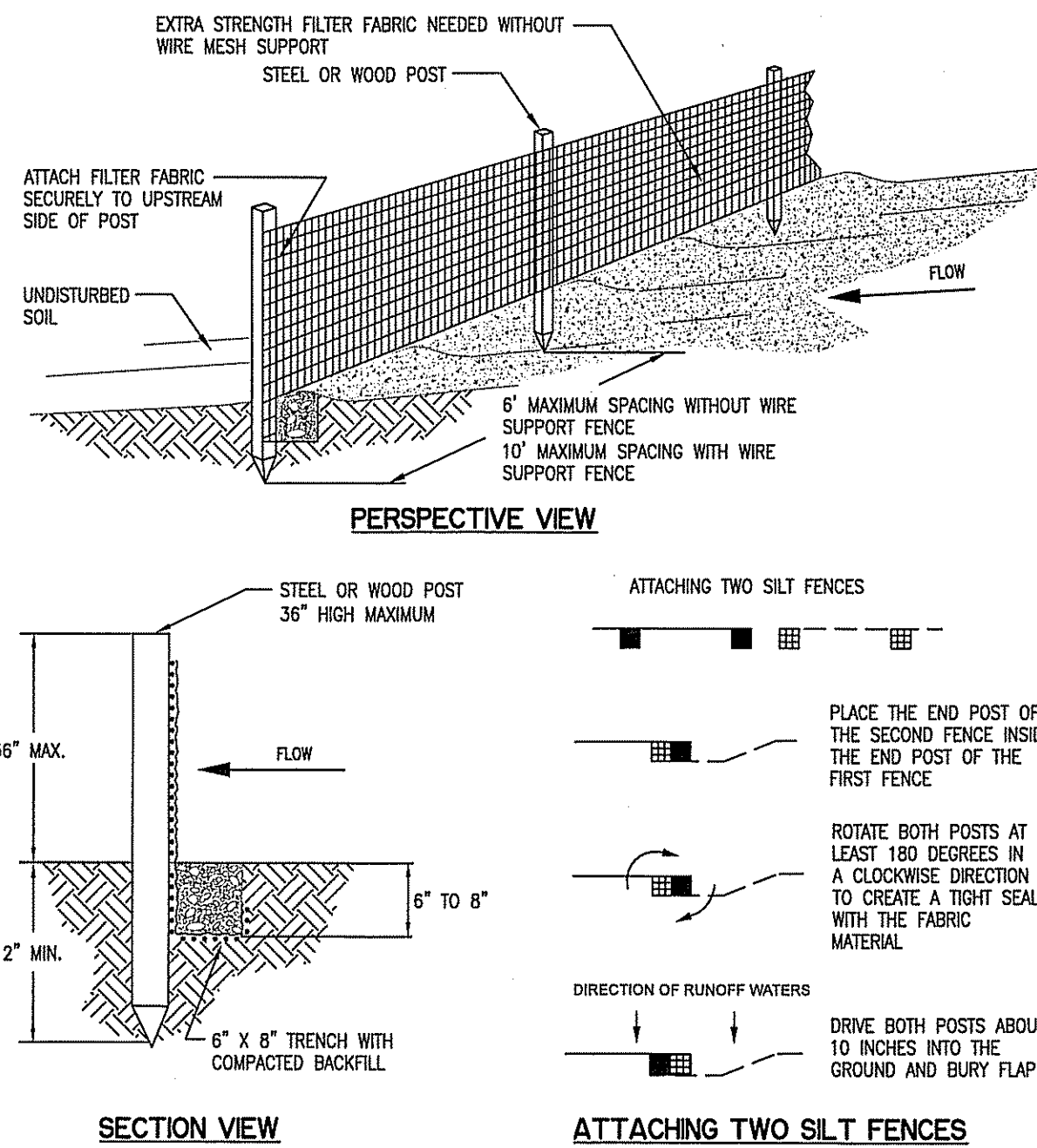
STONE CHECK DAM

4
DT-3



RIP-RAP OUTLET PROTECTION

5
DT-3



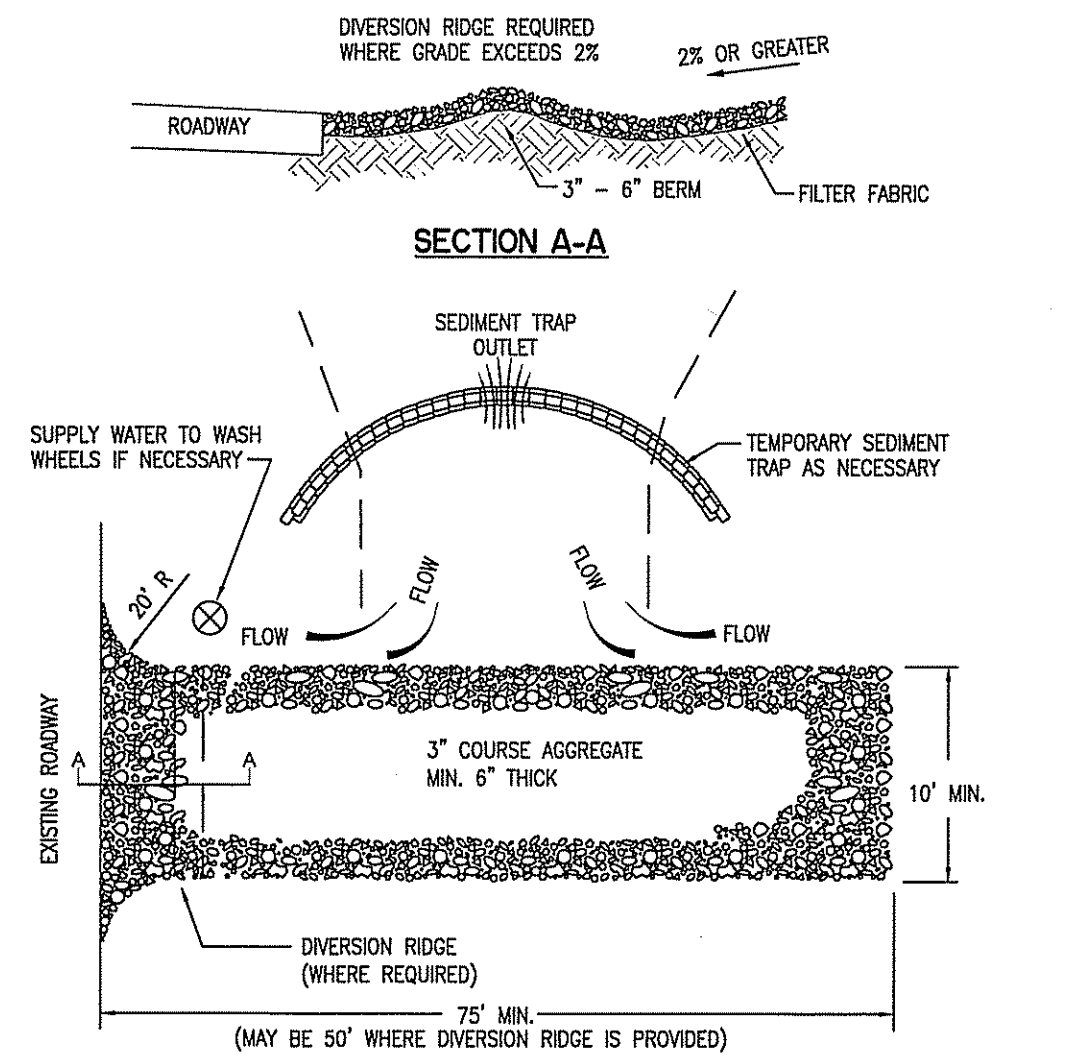
SECTION VIEW

NOTES:

1. SILT FENCES SHOULD NOT BE USED ACROSS STREAMS, CHANNELS, SWALES, DITCHES OR OTHER DRAINAGE WAYS.
2. SILT FENCE SHOULD BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE AND THE ENDS OF THE SILT FENCE SHOULD BE FLARED UPSLOPE.
3. IF THE SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE OR THE PRESENCE OF HEAVY ROOTS THE BASE OF THE FABRIC SHOULD BE EMBEDDED WITH A MINIMUM THICKNESS OF 8 INCHES OF 3/4-INCH STONE.
4. SILT FENCES PLACED AT THE TOE OF SLOPES SHOULD BE INSTALLED AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND ACCESS FOR MAINTENANCE.
5. THE MAXIMUM SLOPE ABOVE THE FENCE SHOULD BE 2:1 AND THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHOULD BE 100 FEET.
6. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
7. SILT FENCES SHOULD BE REMOVED WHEN THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SILT FENCE

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DT-3



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. THE MINIMUM STONE USED SHOULD BE 3-INCH CRUSHED STONE.
3. THE MINIMUM LENGTH OF THE PAD SHOULD BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH HIGH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
4. THE PAD SHOULD EXTEND THE FULL WIDTH OF THE CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
5. THE PAD SHOULD SLOPE AWAY FROM THE EXISTING ROADWAY.
6. THE PAD SHOULD BE AT LEAST 6-INCHES THICK.
7. THE GEOTEXTILE FILTER FABRIC SHOULD BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
8. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
9. NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHOULD BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.
10. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
11. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

GRAVEL CONSTRUCTION EXIT

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REV.	DATE	DESCRIPTION	C/O	DR	CK
A	3/9/20	REVISION PER STAFF COMMENTS		CLR	NRC

EROSION CONTROL DETAILS
PONEMAH PINES
TAX MAP 43 PARCEL 61 - PONEMAH HILL ROAD
MILFORD, NEW HAMPSHIRE

PREPARED FOR:
PONEMAH PINES, LLC
476 ROUTE 13 SOUTH, MILFORD NH 03055

LAND OF:
FREDERICK & CELIA LORDEN TRUST
19 PONEMAH HILL ROAD, MILFORD NH 03055

SCALE: NOT TO SCALE JANUARY 20, 2020

Surveying ♦ Engineering ♦ Land Planning ♦ Permitting ♦ Septic Designs

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