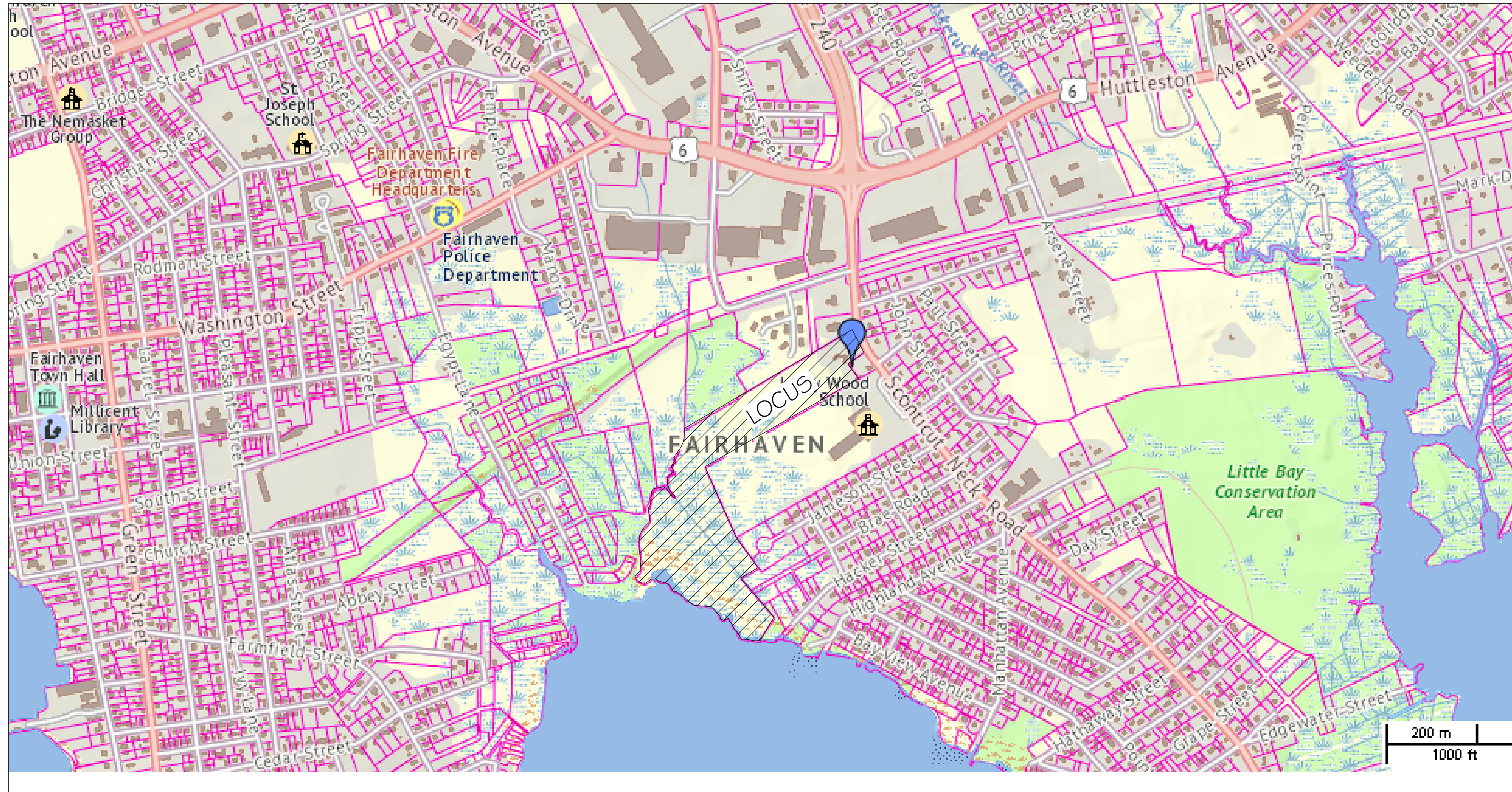


PRELIMINARY LAND DEVELOPMENT PLANS

46 SCONTICUT NECK ROAD

FAIRHAVEN, MASSACHUSETTS

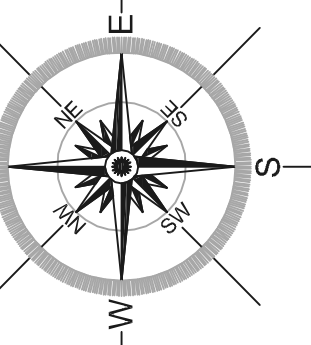


DRAWING INDEX:

SHEET	DESCRIPTION
CIVIL PLANS	
C-1	COVER SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	DEMOLITION & EROSION CONTROL PLAN
C-4	LAYOUT AND MATERIALS PLAN
C-5	GRADING PLAN
C-6	DRAINAGE PLAN
C-7	CONSTRUCTION DETAILS

**NESRA
ENGINEERING, LLC**

P.O. BOX 533
EAST TAUNTON, MA 02718
(617) 506-3772
WWW.NESRAENG.COM



Project

Subdivision of Land
46 Scouticut Neck Road
Fairhaven, Ma 02719

Client

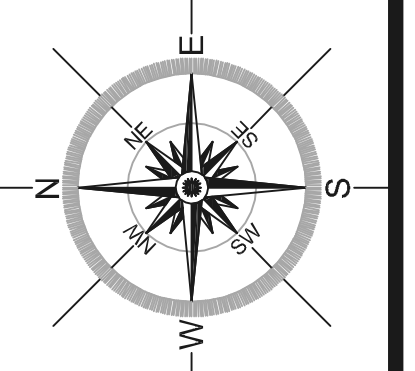
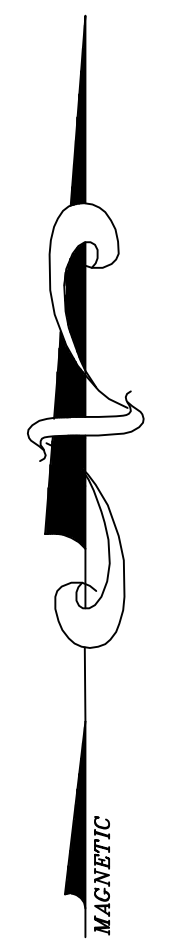
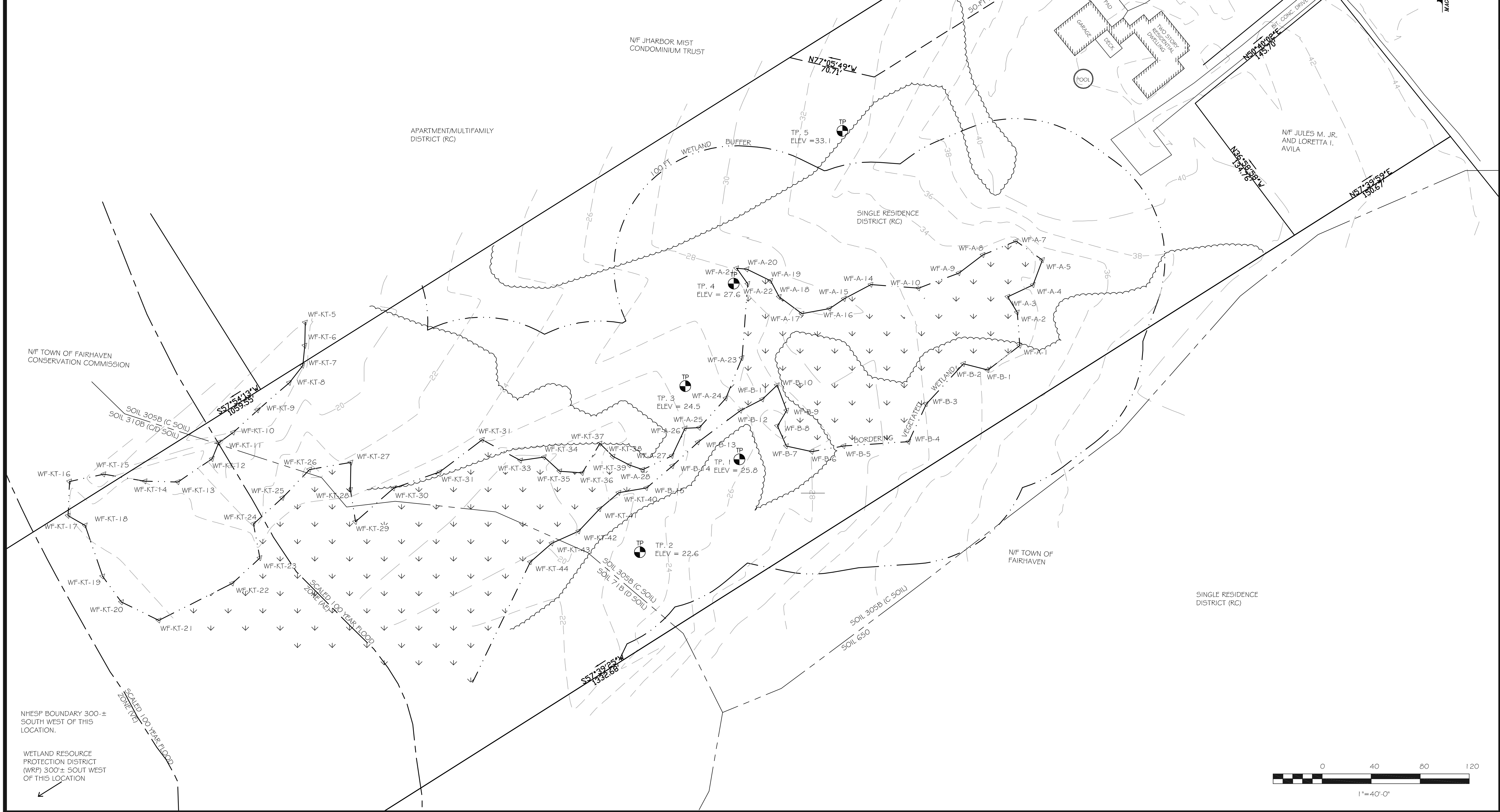
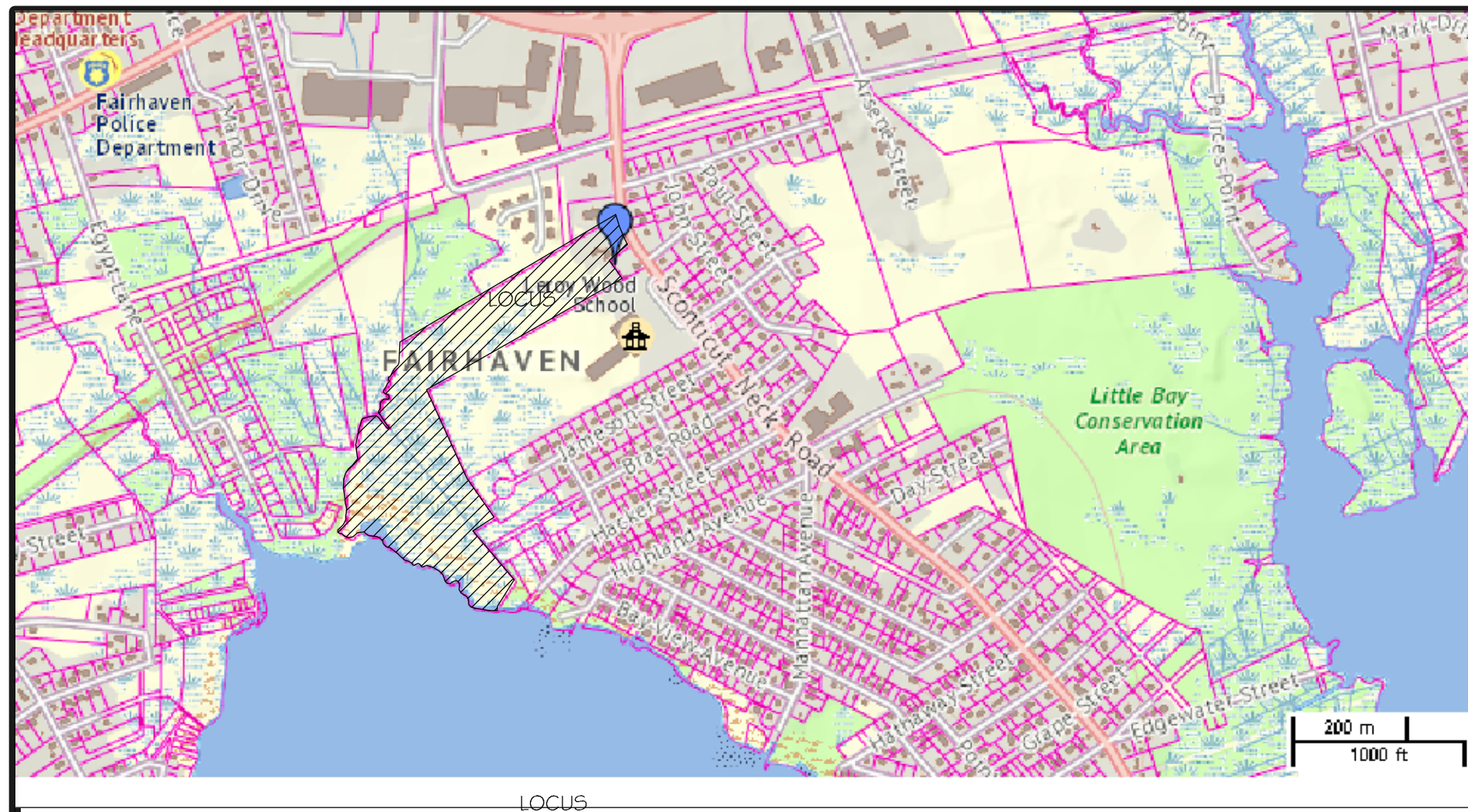
Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741

No.	Revision	Date

Scale: AS NOTED
Date: 4/10/19
Professional Seal

COVER SHEET

C-1



**NESRA
ENGINEERING, LLC**

170 BUNGAY ROAD
N. ATTLEBORO, MA 02760
(508) 221-7174
WWW.NESRAENG.COM

Project
**Subdivision of Land
46 Sconticut Neck Road
Fairhaven, Ma 02719**

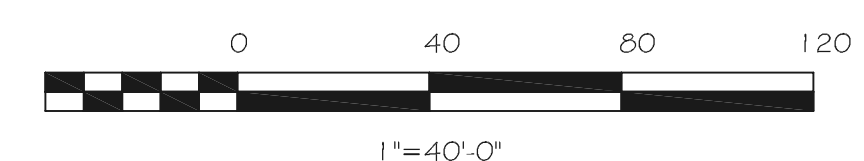
Client
**Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741**

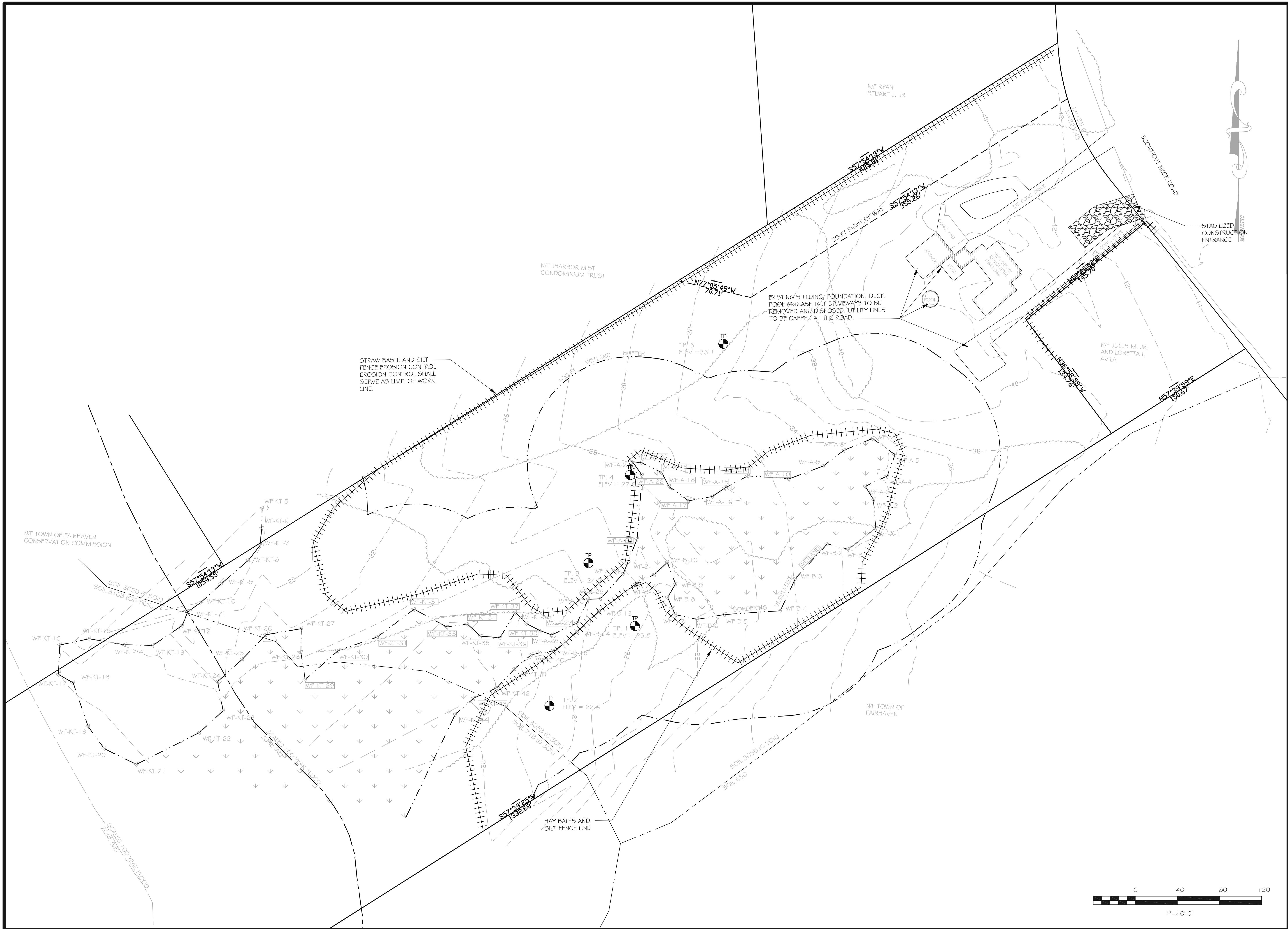
No.	Revision	Date
1.	REVISIONS PER PEER REVIEW COMMENTS.	8/10/19

Scale: 1"=40'-0"
Date: 4/10/19
Professional Seal

**EXISTING
CONDITIONS
PLAN**

C-2





NESRA ENGINEERING, LLC

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Project

Subdivision of Land
46 Scoticut Neck Road
Fairhaven, Ma 02719

Client

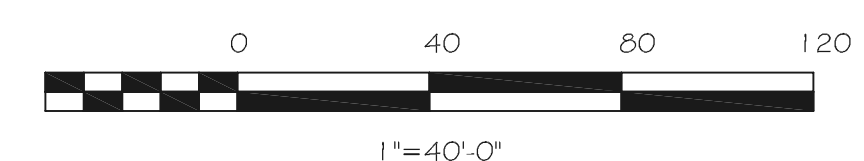
Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741

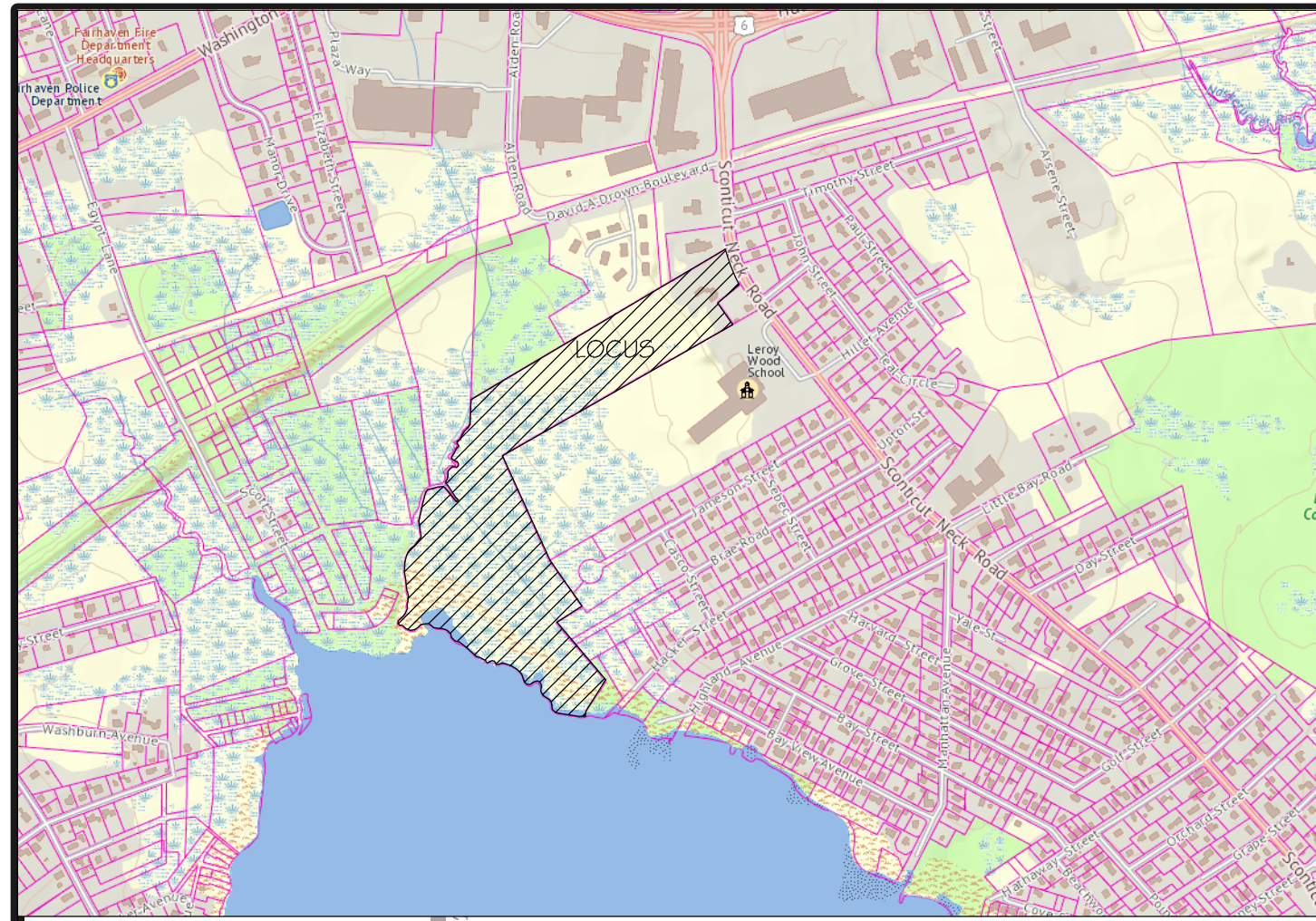
No.	Revision	Date

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Date: 4/10/19
Professional Seal

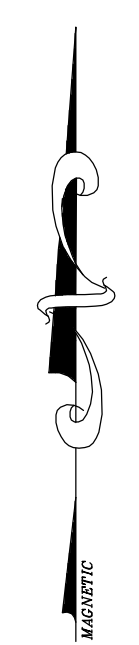
DEMOLITION AND
EROSION
CONTROL PLAN

C-3





LOCUS

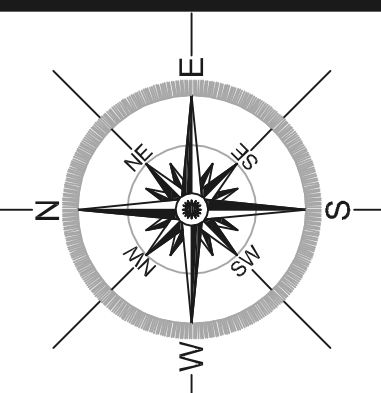


ZONING SETBACKS	RA4RB
LOT AREA (S.F.)	15,000
FRONTAGE (FT)	100.00
CONTIGUOUS UPLAN (% OF MIN. LOT AREA)	90%



**NESRA
ENGINEERING, LLC**

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N. ATTLEBORO, MA 02760
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Project
**Subdivision of Land
46 Sconticut Neck Road
Fairhaven, Ma 02719**

Client
**Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741**

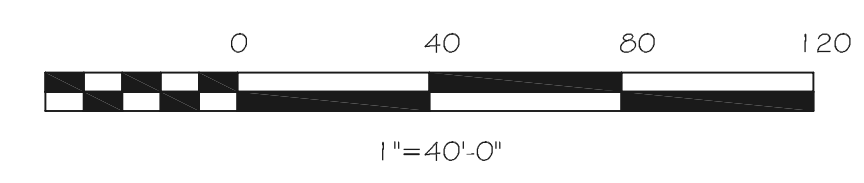
1.	REVISED LOT 6, ADD LOT 7 BEING DONATED TO THE TOWN OF FAIRHAVEN FILL 2,380 S.F. OF WETLAND (TO BE RESTORED ON SITE)	6/10/19
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No. Revision Date

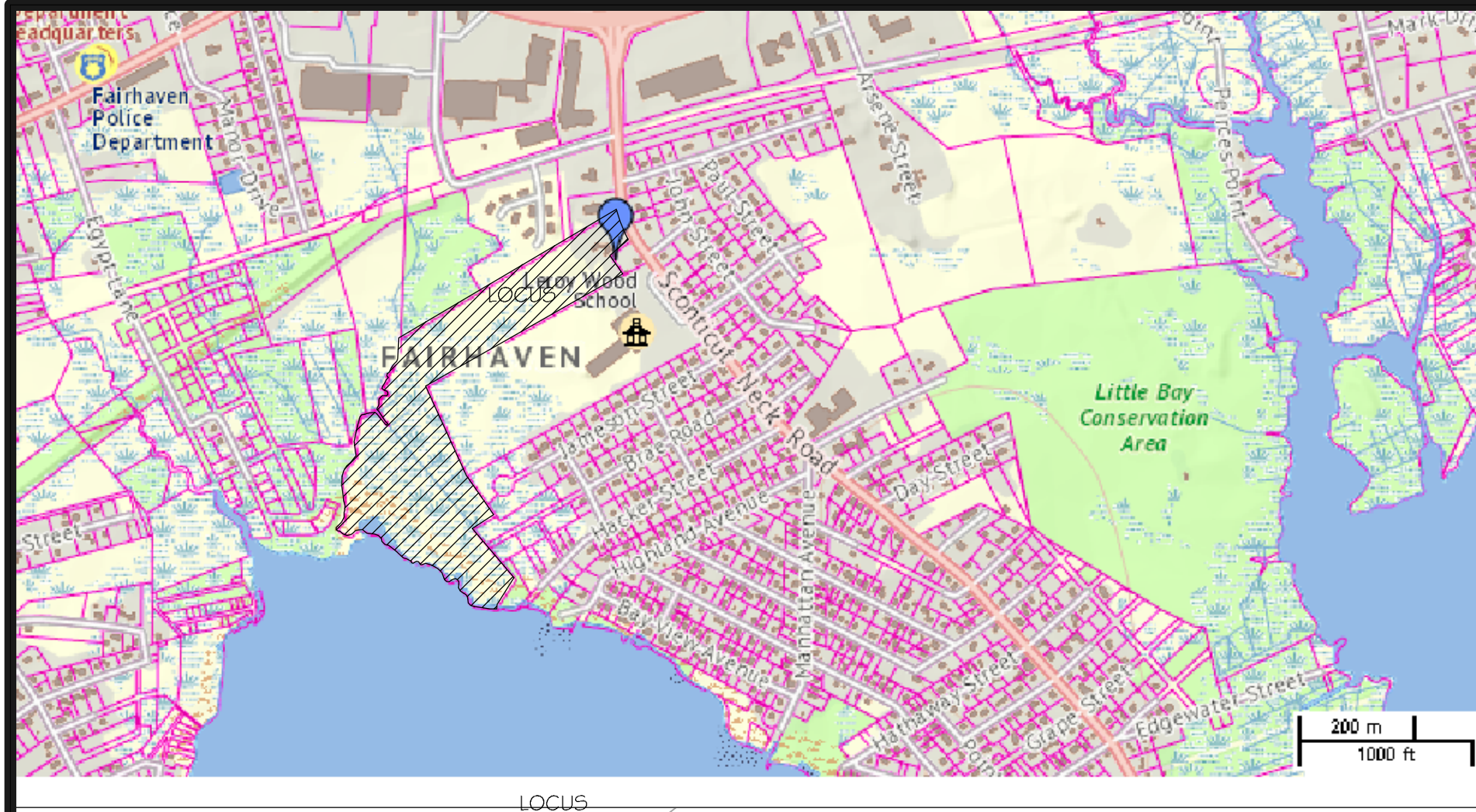
Scale: 1"=40'-0"
Date: 4/10/19
Professional Seal

**LAYOUT AND
MATERIALS PLAN**

- NOTES:
1. WETLAND DELINEATION WAS COMPLETED BY KENNETH THOMSON, A BOTANIST AND WETLAND SCIENTIST.
 2. PROPERTY LINE INFORMATION IS COMPILED FROM RECORD INFORMATION AND ON THE GROUND SURVEY CONDUCTED BY NESRA ENGINEERING LLC.
 3. SURVEY COORDINATES ARE BASED ON MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM (NAD83)
 4. SURVEY ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



C-4



ZONING SETBACKS	RA4RB
LOT AREA (S.F.)	15,000
FRONTAGE (FT)	100.00
CONTIGUOUS UPLAND (% OF MIN. LOT AREA)	90%



NESRA ENGINEERING, LLC

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Project

Subdivision of Land
46 Scoticut Neck Road
Fairhaven, Ma 02719

Client

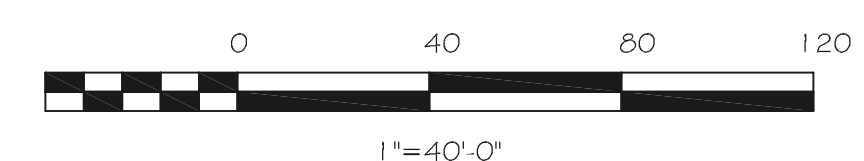
Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741

No.	Revision	Date
2.	REVISIONS PER PEER REVIEW COMMENTS.	8/10/19
1.	REVISED LOT 6, ADD LOT 7 BEING DONATED TO THE TOWN OF FAIRHAVEN. FILL 2,380 S.F. OF WETLAND (TO BE RESTORED ON SITE)	6/10/19

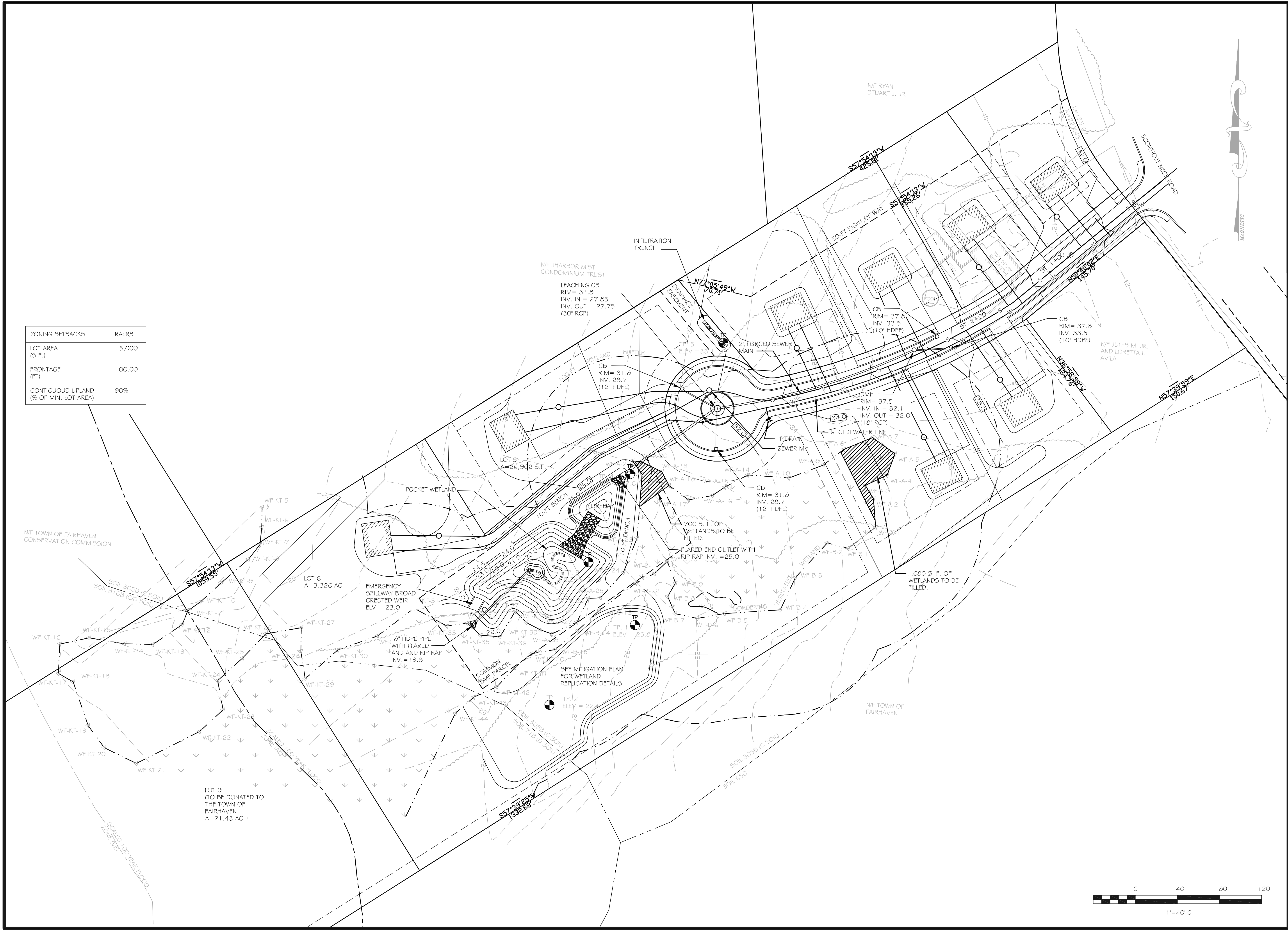
Scale: 1"=40'-0"
Date: 4/10/19
Professional Seal

GRADING PLAN

C-5



ZONING SETBACKS	RA4RB
LOT AREA (S.F.)	15,000
FRONTAGE (FT)	100.00
CONTIGUOUS UPLAND (% OF MIN. LOT AREA)	90%



NESRA ENGINEERING, LLC

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N. ATTLEBORO, MA 02760
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Project

Subdivision of Land
46 Scoticut Neck Road
Fairhaven, Ma 02719

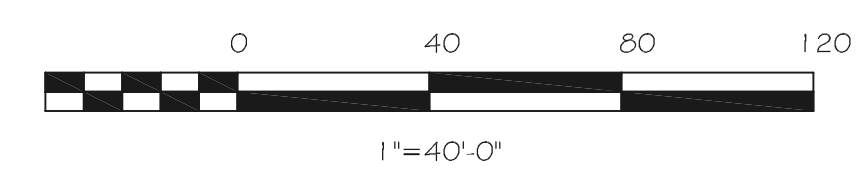
Client

Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741

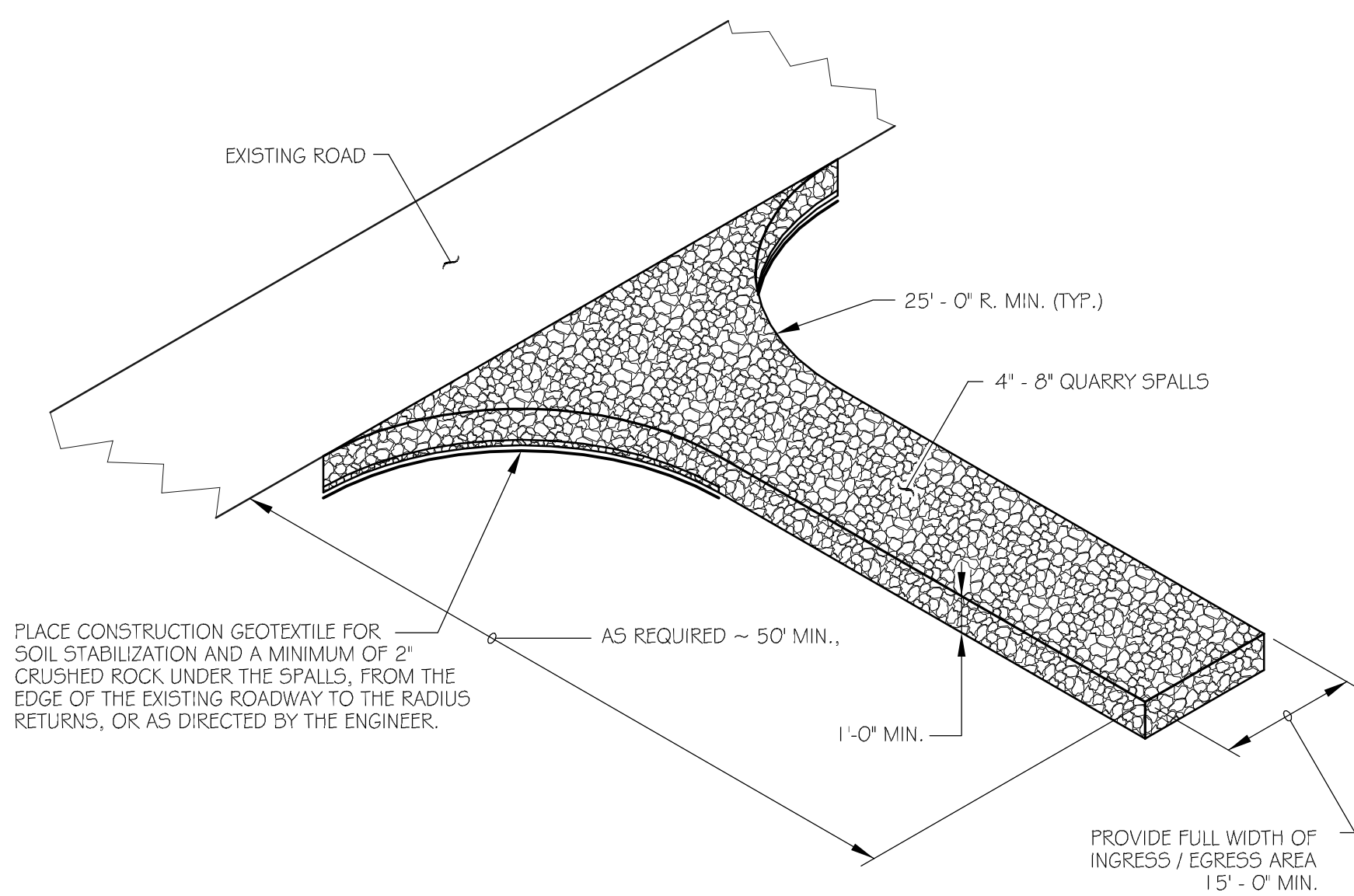
No.	Revision	Date
3.	REVISIONS PER SECOND ROUND OF PEER REVIEW COMMENTS.	9/18/19
2.	REVISIONS PER PEER REVIEW COMMENTS.	8/10/19
1.	REVISED LOT 6. ADD LOT 7 BEING DONATED TO THE TOWN OF FAIRHAVEN. FILL 2,380 S.F. OF WETLAND (TO BE RESTORED ON SITE)	6/10/19

Scale: 1"=40'-0"
Date: 4/10/19
Professional Seal

UTILITY PLAN

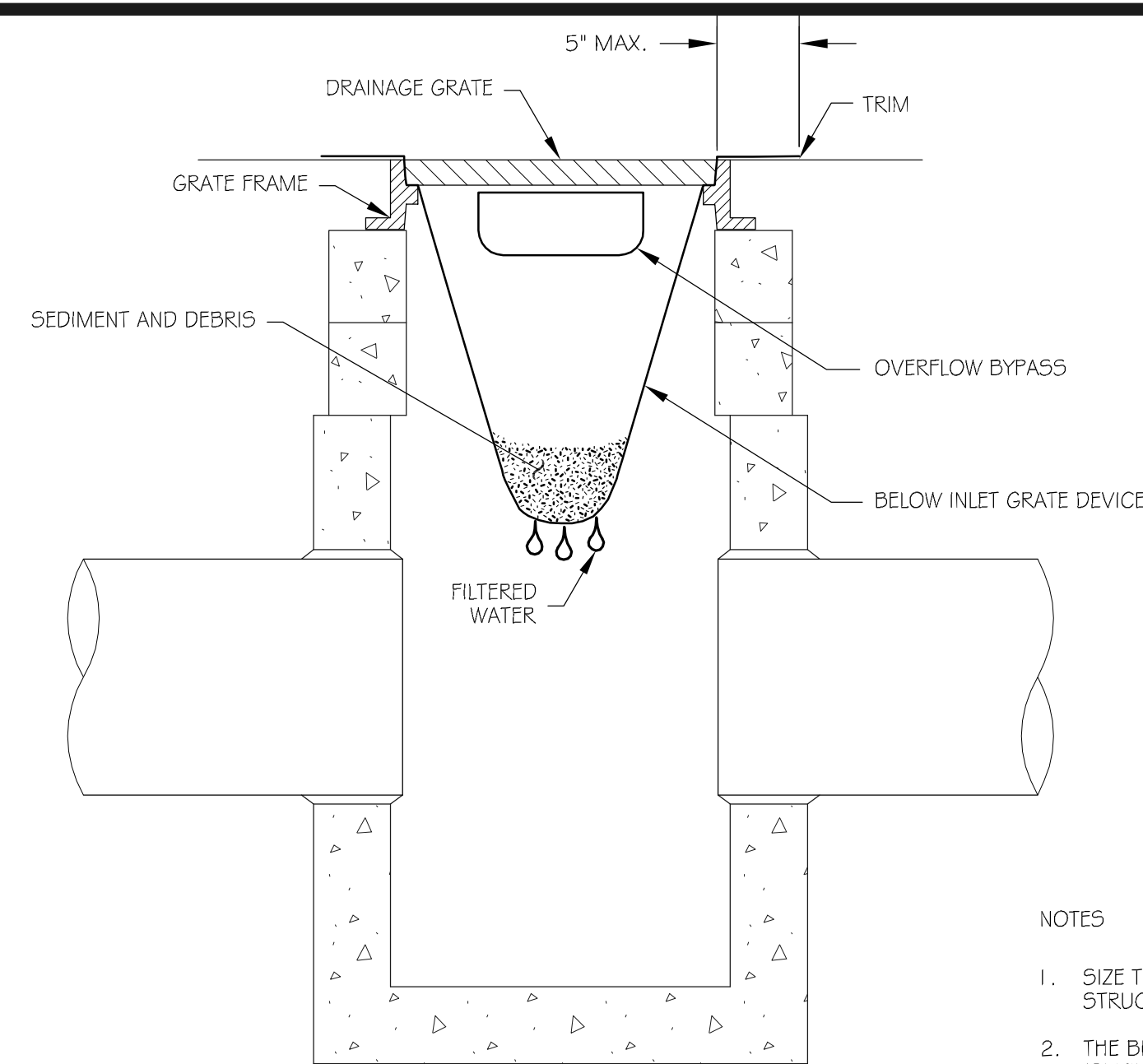


C-6

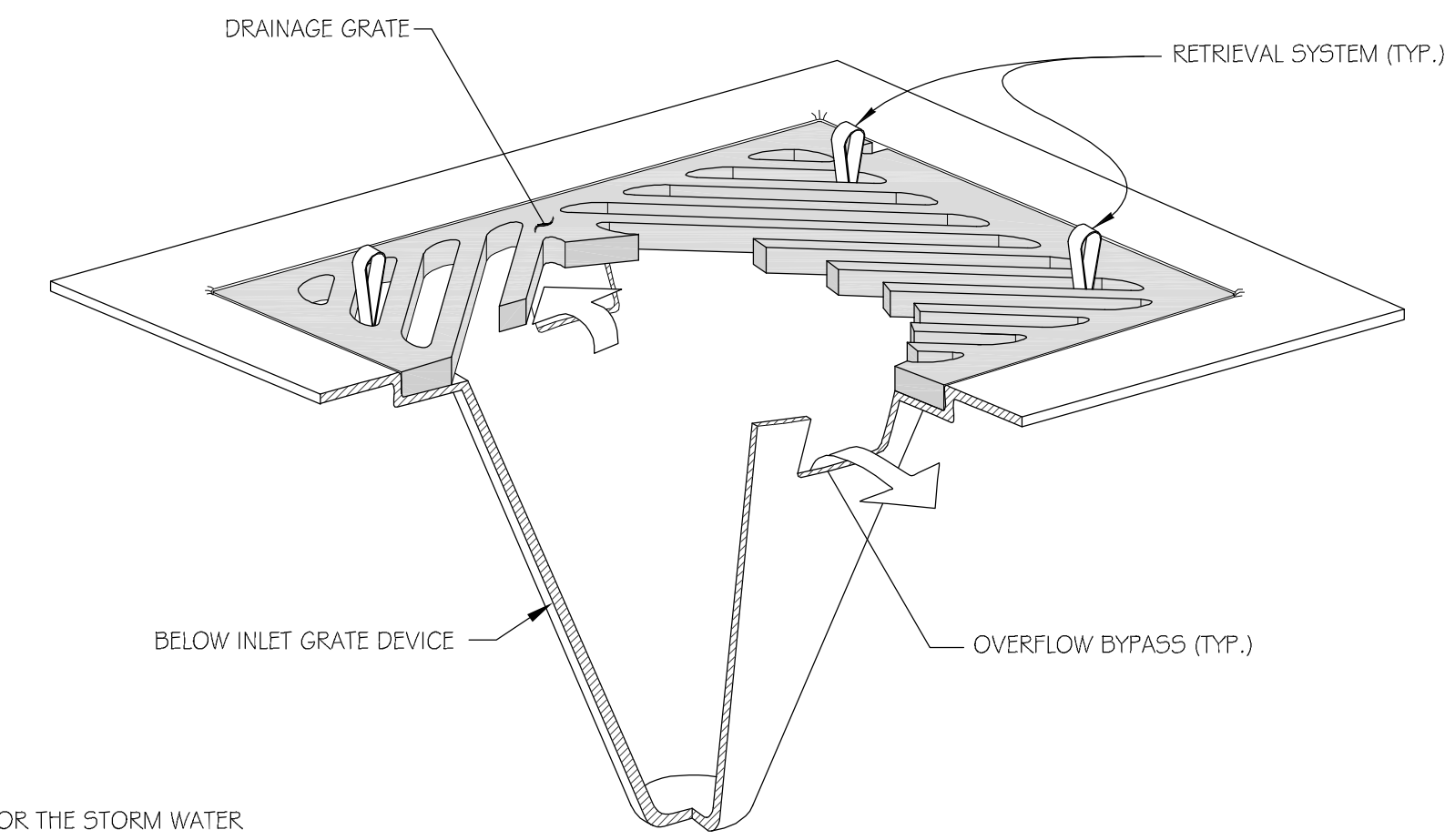


STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



SECTION VIEW



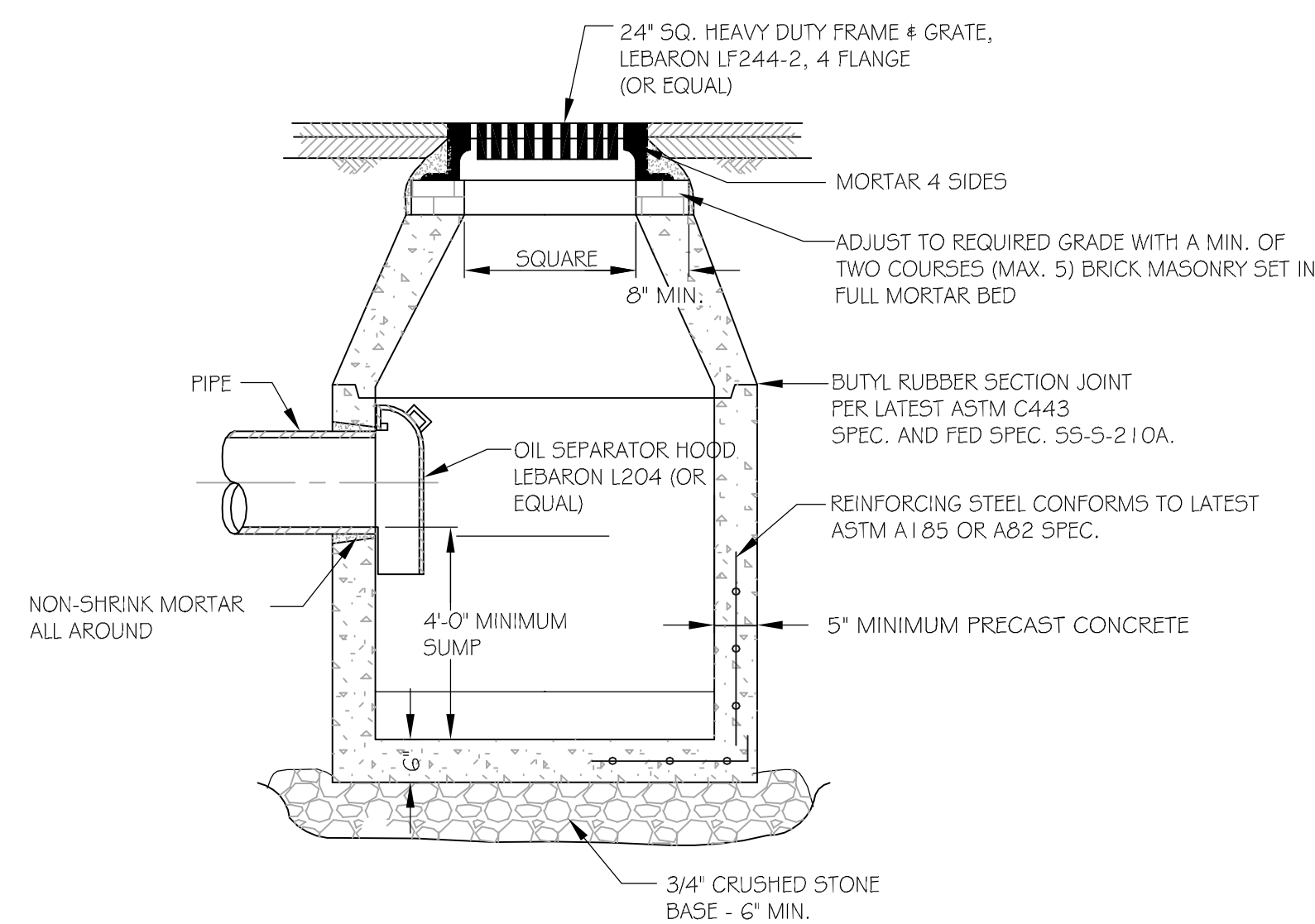
ISOMETRIC VIEW

NOTES

1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
2. THE BIGD SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH STORMWATER POLLUTION PREVENTION PLAN, TO BE PREPARED BY THE CONTRACTOR.

STORM DRAIN INLET PROTECTION

N.T.S.

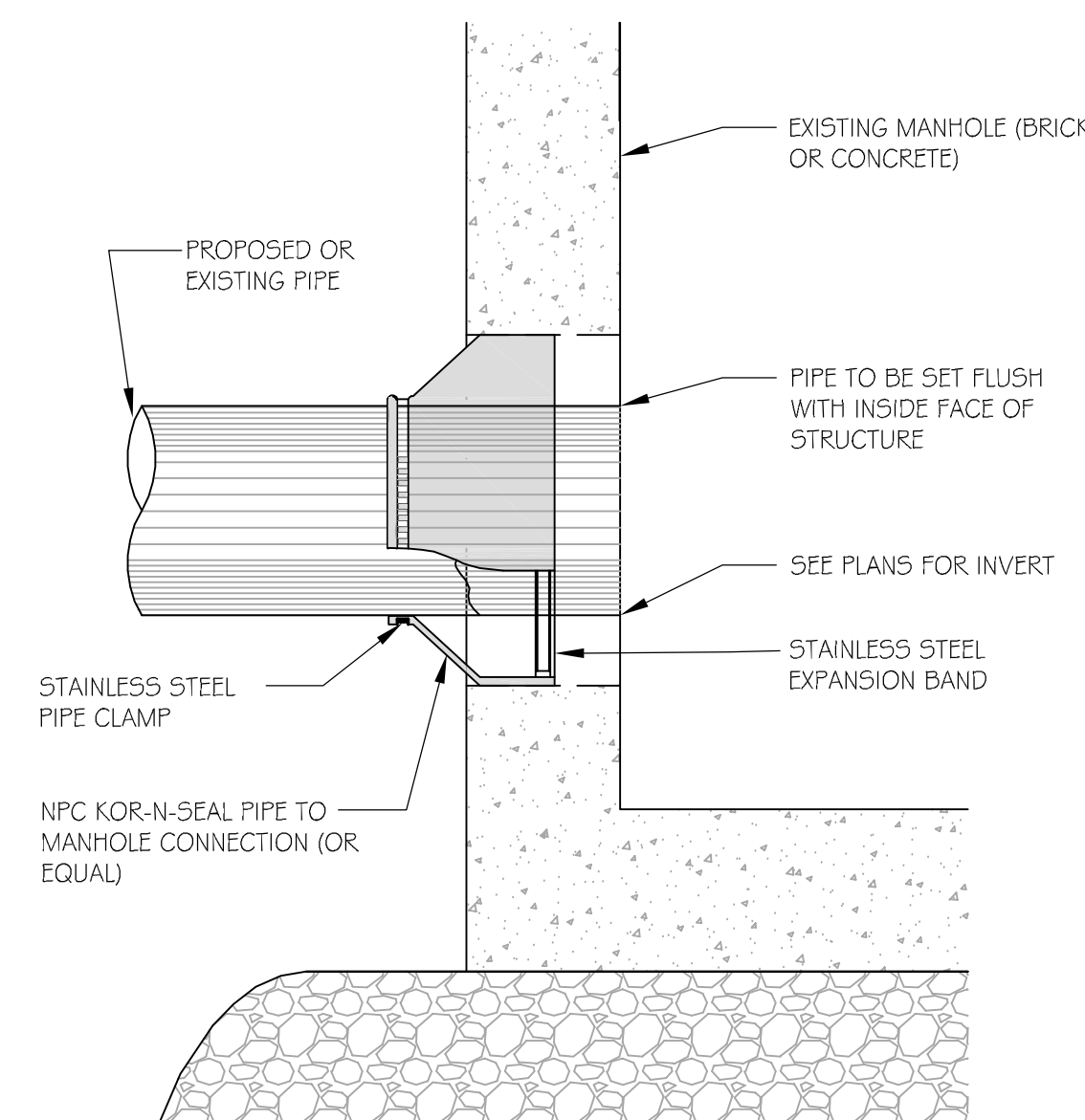


NOTES:

1. MANHOLE DESIGN TO CONFORM TO LATEST ASTM C-478 SPECIFICATIONS FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
2. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C-478.

PRECAST CONCRETE CATCH BASIN

N.T.S.

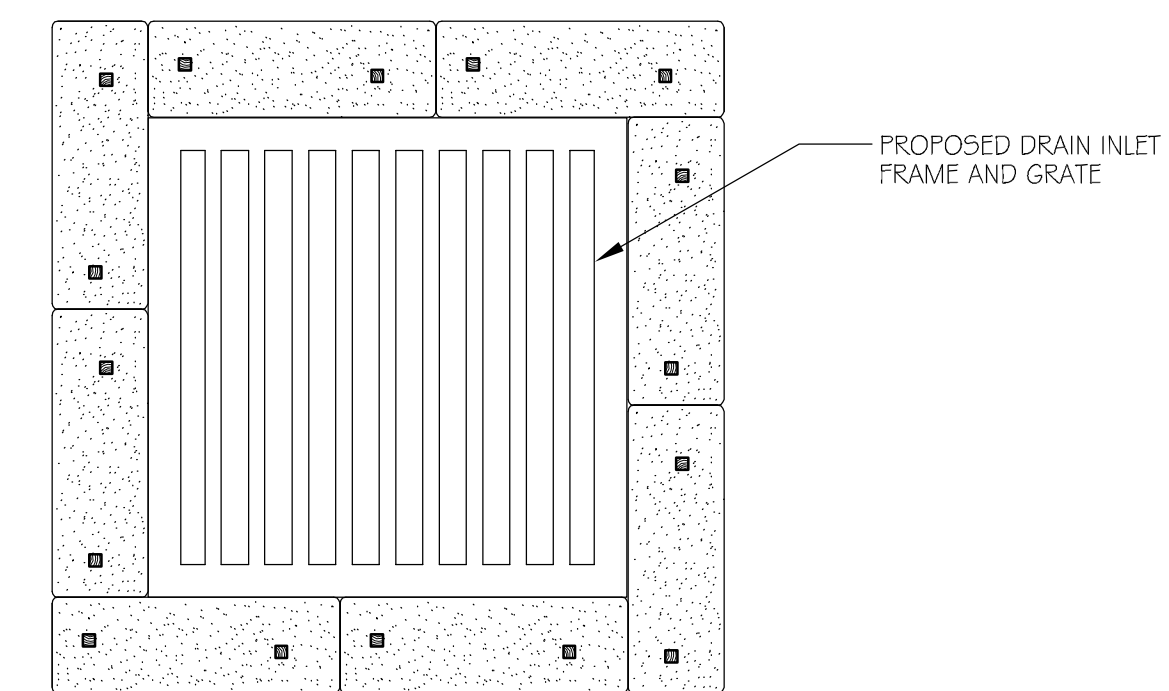


NOTES:

1. ALL METAL FIXTURES SHALL BE STAINLESS STEEL
2. SERVICE LINE SHALL BE FLUSH WITH THE INSIDE OF THE MANHOLE.
3. FOR PROPOSED MANHOLE INSTALLATION AT EXISTING PIPE, CONTRACTOR SHALL EXTEND PIPE INTO NEW MANHOLE USING A SPOOL PIECE OF SAME PIPE MATERIAL WITH FERNCO COUPLERS.

CONNECTION TO EXISTING MANHOLE

N.T.S.



NOTES:

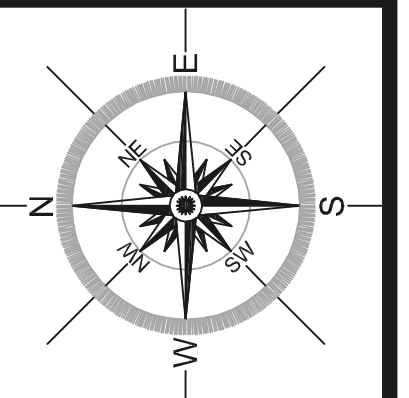
1. BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE ALES TOGETHER.
3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

CATCH BASIN HAYBALE FILTER DETAIL

N.T.S.

NESRA ENGINEERING, LLC

170 BUNGAY ROAD
N. ATTLEBORO, MA 02760
(508) 221 - 7174
WWW.NESRAENG.COM



Project

Subdivision of Land
46 Sconticut Neck Road
Fairhaven, Ma 02719

Client

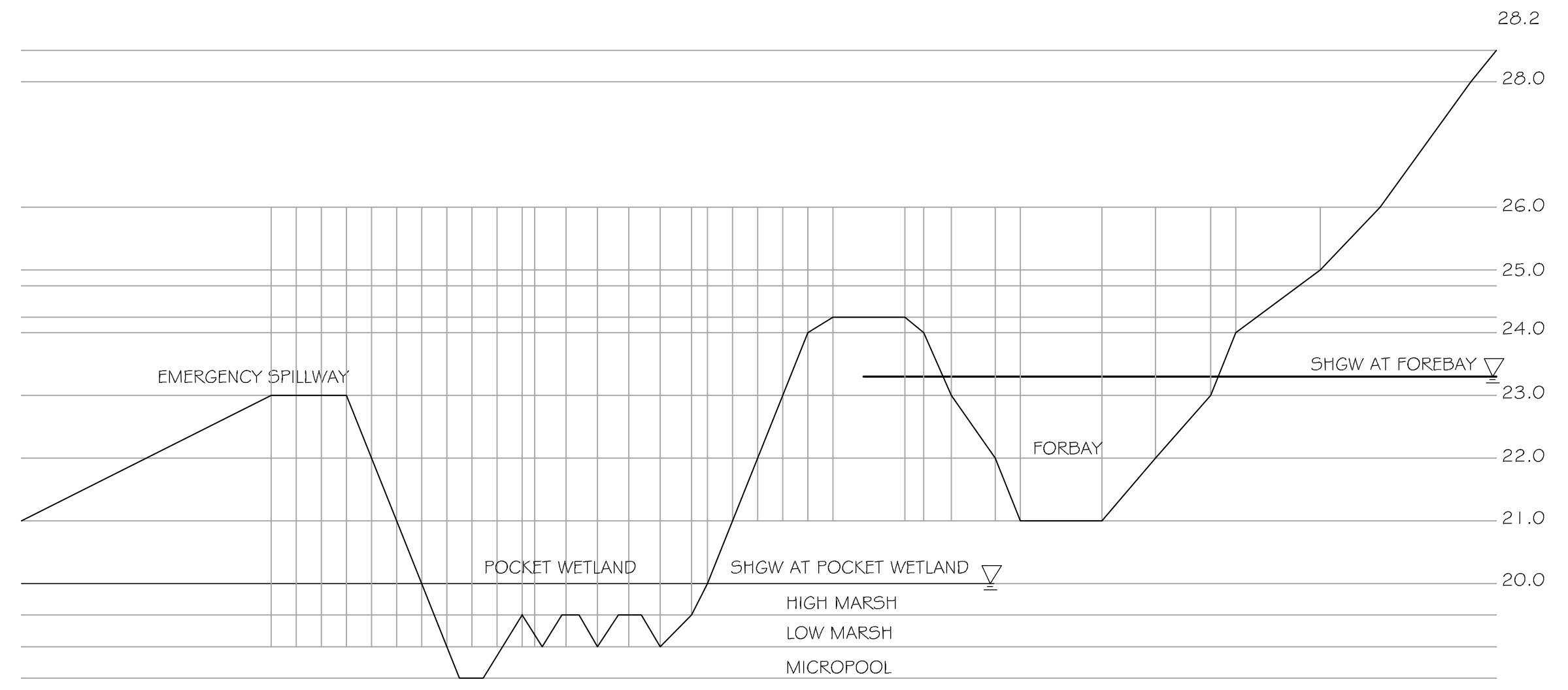
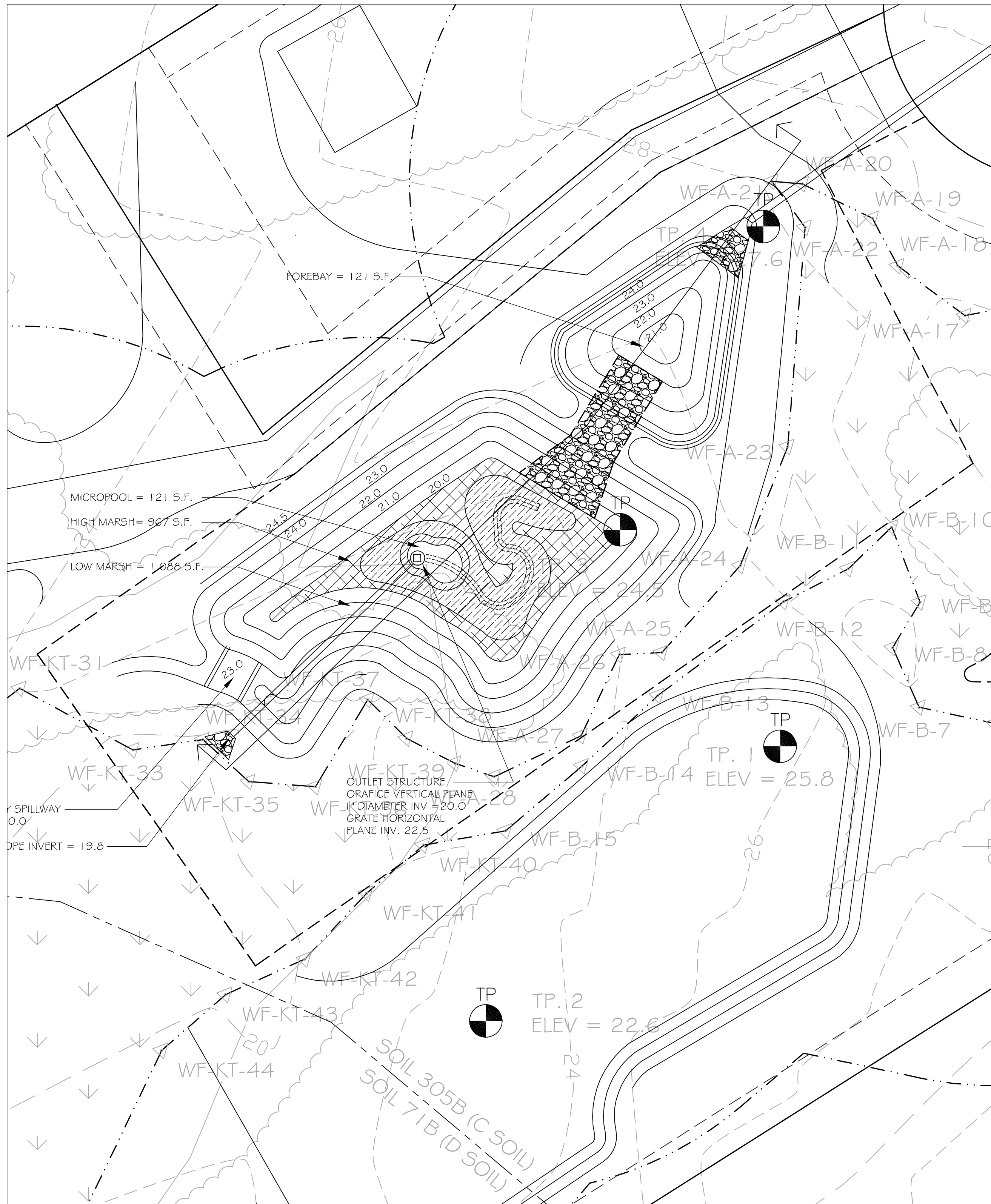
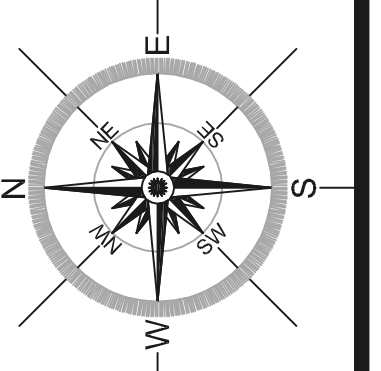
Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741

No.	Revision	Date

Scale: 1"=40'-0"
Date: 4/10/19
Professional Seal

**CONSTRUCTION
DETAILS**

C-7



CROSS SECTION

SCALE: 1"=20'-0" HORIZONTAL
1"= 2'-0" VERTICAL

Project

Subdivision of Land
46 Sconticut Neck Road
Fairhaven, Ma 02719

Client

Alexander Gray
Development, LLC
28 Tracy Street
Acushnet, MA 02741

3.	REVISIONS PER SECOND ROUND OF PEER REVIEW COMMENTS.	9/18/19
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1.	REVISED LOT 6. ADD LOT 7 BEING DONATED TO THE TOWN OF FAIRHAVEN. FILL 2,380 S.F. OF WETLAND (TO BE RESTORED ON SITE)	6/10/19

No.	Revision	Date
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Scale: 1"=40'-0"
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Professional Seal

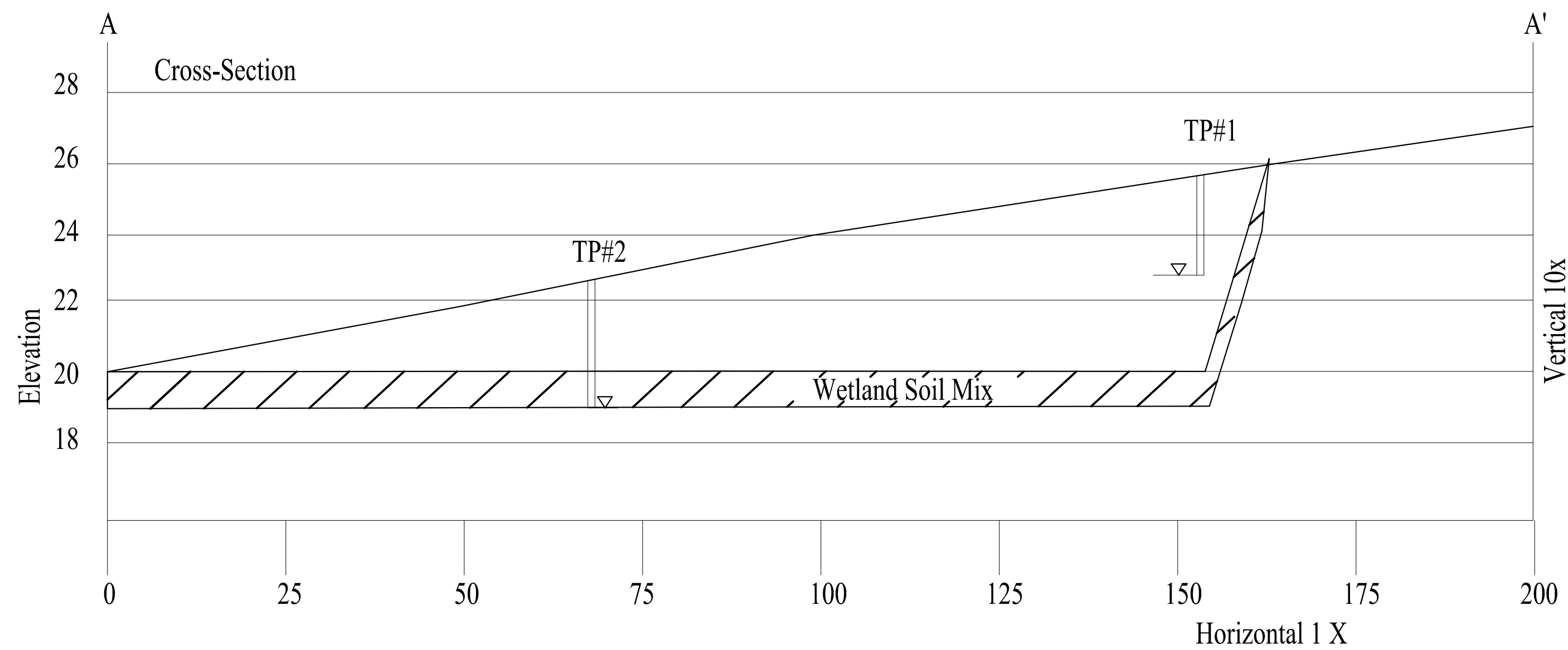
POCKET
WETLAND DESIGN

SK-1

Plant Schedule

Symbol	Common Name	Latin Name	Size	Quantity
	Red Maple	Acer Rubrum	4-6 Ft.	50
	Black Tupelo	Nyssa sylvatica	4-6 Ft.	50
	American Elm	Ulmus americana	4-6 Ft.	34
	Yellow Birch	Betula alleghaniensis	4-6 Ft.	33
	Silky Dogwood	Cornus amomum	18-24 In	51
	Speckled Alder	Alnus incana	18-24 In	80
	Arrow-wood	Viburnum dentatum	18-24 In	50
	Bebbs Willow	Salix bebbiana	18-24 In	80

Seed with New England Wet Mix at 1 lb./2500 sq. ft (7 lbs)

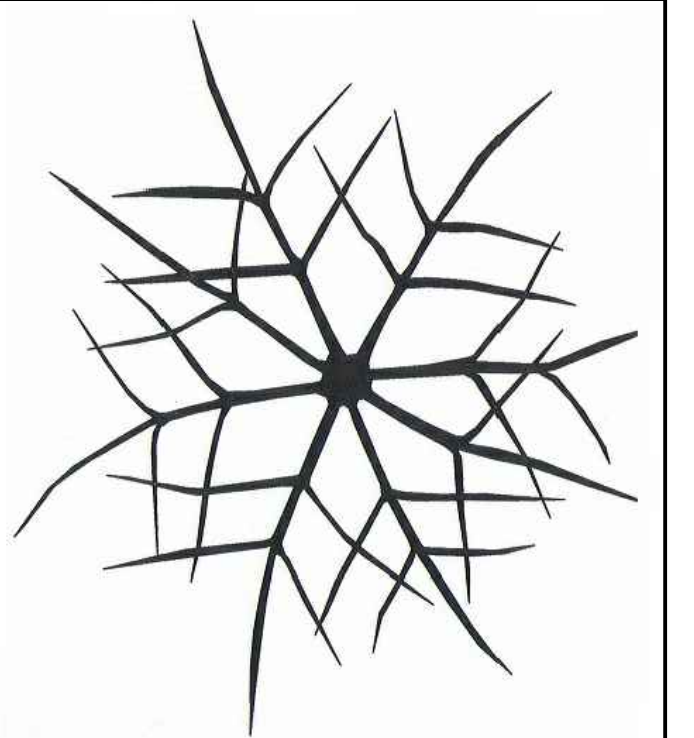


TEST PIT #1

Horizon	Depth (Inches)	Munsell Color	Texture	Redox
A	0-4	10YR3/2	Fine Sandy Loam	
Bw1	4-18	10YR4/6	Fine Sandy Loam	
Bw2	18-42	10YR5/4	Fine Sandy Loam	
C	42-75	10YR5/4	Loamy Fine Sand	7.5YR5/8 30% (Many) Coarse
	75	GW Weeping	Layer is Extremely Dense (Massive, Firm)	

TEST PIT #2

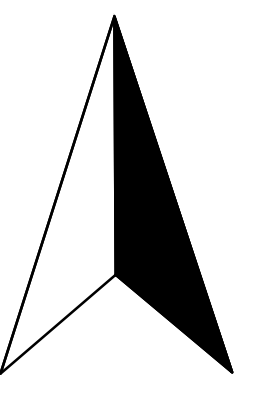
Horizon	Depth (Inches)	Munsell Color	Texture	Redox
A	0-7	10YR2/1	Fine Sandy Loam	
Bw1	7-28	10YR4/6	Fine Sandy Loam	
Bw2	28-36	10YR5/6	Fine Sandy Loam	
C	36-65	10YR5/3	Loamy Fine Sand	7.5YR5/8 30% (Many) Coarse
	65	GW Weeping	Layer is Extremely Dense (Massive, Firm)	



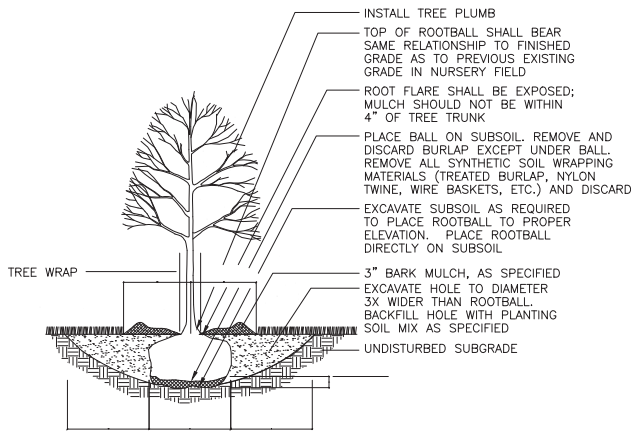
Mitigation Area
46 Sconticut Neck Road, Fiarhaven, MA

Rev	Description
4/9/19	Rev 1
6/13/19	Additional buffer mitigation
8/10/19	Final Mitigation Planting

Design by:
Ken Thomson Botanist
5wetlands@gmail.com
781 929 1203

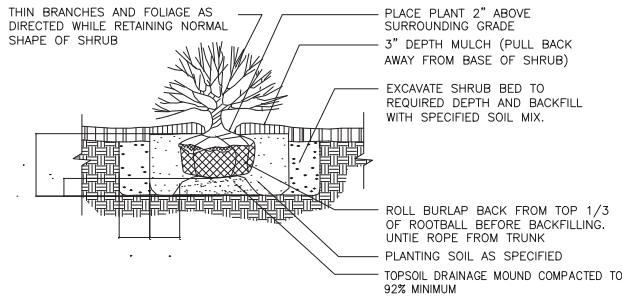


Mitigation 1



GRADING AND SOIL MANAGEMENT

1. Contractor shall secure all permits required for the work from any city departments, utility companies or other jurisdictions affected by work.
2. The Contractor shall be responsible to coordinate the demolition work and related utilities with all trades, if applicable.
3. Contractor is responsible for any damage inside and outside the limit of work due to his contract operations.
4. All refuse; debris and miscellaneous items to be removed shall be legally disposed of off-site by Contractor.
5. Prior to any excavation and erosion barrier will be installed along the wetland edge and the Isolated Wetland in accordance with the site erosion control plan.
6. The Wetland Scientist has final say on all matters concerning buffer zone mitigation construction and has stop work authority.
7. The wetland Scientist will be on-site during all phases of the buffer zone mitigation operation.
8. Restoration of organic soils within the mitigation area will include a 12 inch layer of an approved soil mixture will be spread within the mitigation area.



PLANTING NOTES

1. All new plant material shall conform to the minimum guidelines established by the American Standard for Nursery Stock published by the American Association of Nurserymen, Inc. In addition, all new plant material for the project shall be of Specimen quality.
2. All new plants to be balled and burlapped or container-grown, unless otherwise noted on Plant List.
3. If discrepancies exist between the number of plants drawn on the planting plans and the number of plants in the plant list, the plans shall govern.
4. The Contractor shall supply all new plant material in quantities sufficient to complete the planting shown on the Drawings.
5. Any proposed substitutions of plant species shall be made with plants of equivalent overall form, height, branching habit, flower, leaf, color, fruit and culture only as approved by the Project Engineer and Wetland Scientist.
6. All new plants shall be tagged and approved by the Project Engineer and Wetland Scientist at the nursery prior to digging or delivery to site.
7. Contractor shall locate and verify all existing utility lines prior to planting and shall report any conflicts to the Project Engineer.
8. Stake location of all proposed planting for approval by the Project Engineer and Wetland Scientist prior to the commencement of planting.
9. New plant material branching and roots shall bear the same relationship to grade as they bore to previous grade at the Nursery.
10. All plant beds to receive three inches (3") of shredded bark mulch per Tree and Shrub Specifications.
11. With the exception of Buffer Zone Mitigation Areas, Contractor shall prepare all shrub and tree planting beds to a minimum depth of twenty-four inches (24") with planting soil.
12. Contractor shall install erosion controls up slope of wetlands.

NEW ENGLAND WETMIX

The wetland seeds in this mix can be sown by hand, with a hand held spreader, or hydro-seeded on large or hard to reach sites. Lightly rake to insure good seed to soil contact. Seeding can take place on frozen soil, as the freezing and thawing weather of late fall and late winter will work the seed into the soil. If spring conditions are drier than usual watering may be required. If sowing during the summer months supplemental watering will likely be required until germination. A light mulch of clean, weed free straw is recommended.

APPLICATION RATE: 1 lb./2500 sq. ft.
18 lbs./acre

SPECIES:

Fox Sedge (*Carex vulpinoidea*), Lurid Sedge (*Carex lurida*), Blunt Broom Sedge (*Carex scoparia*), Blue Vervain (*Verbena hastata*), Fowl Bluegrass (*Poa palustris*), Hop Sedge (*Carex lupulina*), Green Bulrush (*Scirpus atrovirens*), Creeping Spike Rush (*Eleocharis palustris*), Fringed Sedge (*Carex crinita*), Soft Rush (*Juncus effusus*), Spotted Joe Pye Weed (*Eupatorium maculatum*), Rattlesnake Grass (*Glyceria canadensis*), Swamp aster (*Aster puniceus*), Blueflag (*Iris versicolor*), Swamp Milkweed (*Asclepias incarnata*), Square stemmed Monkey Flower (*Mimulus ringens*).

Mitigation 2

Scale

Planting Details
46 Sconticut Neck Road, Fairhaven, MA

Design by:
Ken Thomson Botanist
5wetlands@gmail.com
781 929 1203

4/9/19	Rev 1

