# HIGHLAND VIEWS

# A 24 UNIT MANUFACTURED HOUSING PARK & 10 UNIT MIXED USE DEVELOPMENT

19 ROOSEVELT TRAIL - WINDHAM, MAINE

# APPLICANT:

CHASE CUSTOM HOMES & FINANCE 290 BRIDGTON ROAD WESTBROOK, MAINE 04092

# OWNER:

CHASE CUSTOM HOMES & FINANCE 290 BRIDGTON ROAD WESTBROOK MAINE 04092

# PROJECT PARCEL SITE

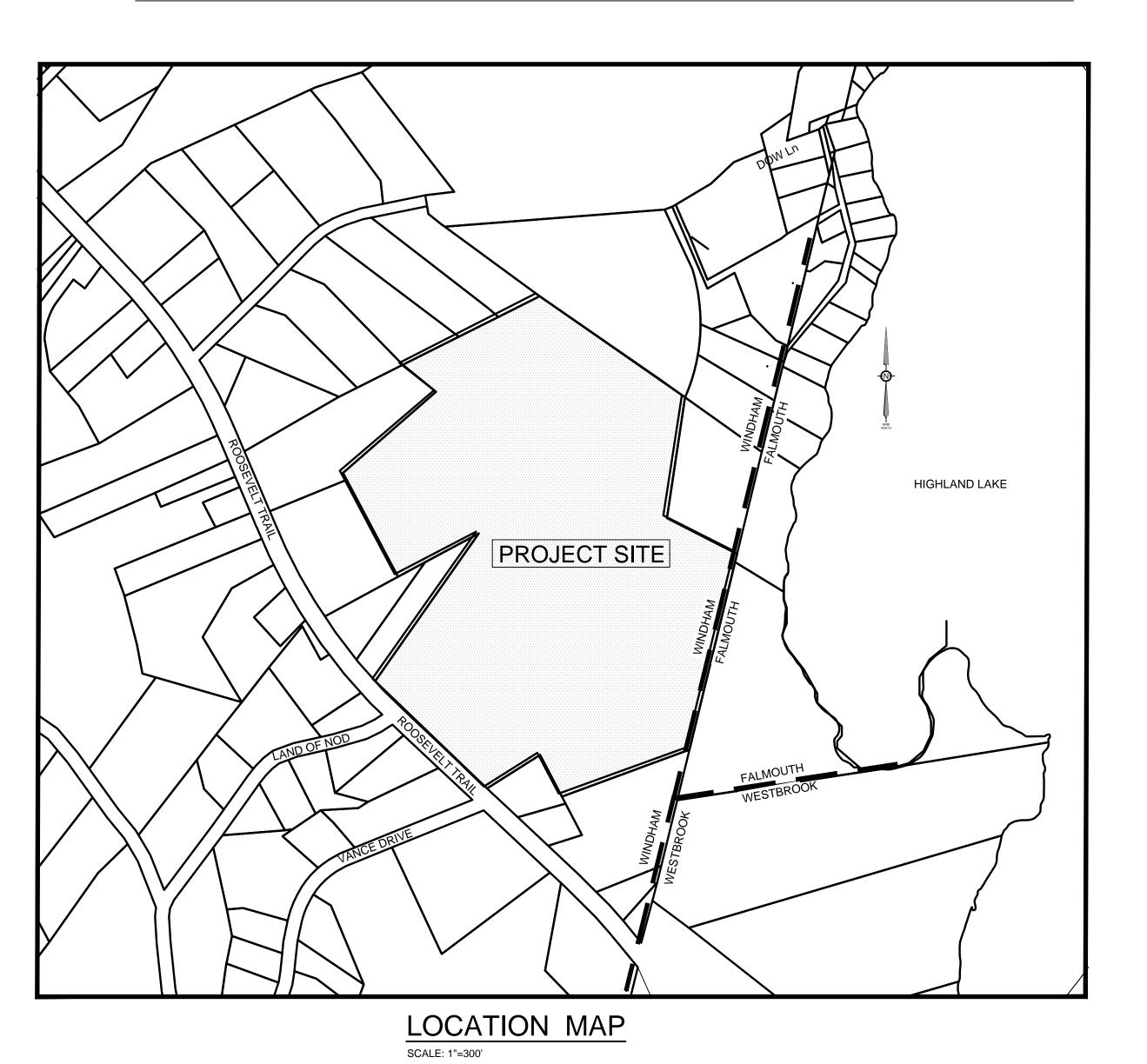
TOWN OF WINDHAM TAX ASSESSOR'S MAP & LOT NUMBERS  $\frac{\text{MAP}}{7} \qquad \qquad \frac{\text{LOTS}}{63 \& 66}$ 

# PREPARED BY:

CIVIL ENGINEER: TERRADYN CONSULTANTS, LLC P.O. BOX 339 NEW GLOUCESTER, MAINE 04260 (207) 632-9010

SURVEYOR: WAYNE WOOD & CO. 30 WOOD DRIVE GRAY MAINE 04039 207-657-3330

SEPTIC DESIGN & SOIL EVALUATION:
MARK CENCI GELOLOGIC
93 MILL ROAD
NORTH YARMOUTH, MAINE 04097



PERMITS		
TYPE OF PERMIT	GOVERNING BODY	STATUS
SITE PLAN & SUBDIVISION APPROVAL	TOWN OF WINDHAM, MAINE PLANNING DEPARTMENT 8 SCHOOL ROAD WINDHAM, ME 04062 TEL. 207-892-1900	SUBMITTED: 12/19/2016 APPROVED:
BUILDING PERMIT	TOWN OF WINDHAM, MAINE CODE ENFORCEMENT OFFICER 8 SCHOOL ROAD WINDHAM, ME 04062 TEL. 207-892-1900	

# SHEET INDEX

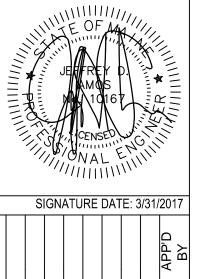
C-0.0	COVER SHEET & LOCATION MAP
C-1.0	SUBDIVISION PLAN
C-1.1	SUBDIVISION PLAN
C-2.0	SITE PLAN
C-2.1	MIXED USE SITE PLAN
C-3.0	GRADING & EROSION CONTROL PLAN
C-3.1	GRADING & EROSION CONTROL PLAN
C-4.0	UTILITY PLAN
C-5.0	DEMOLITION PLAN
C-6.0	PROFILES
C-7.0	DETAILS & NOTES
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C-7.2	DETAILS & NOTES
C-7.3	DETAILS & NOTES
C-7.4	STORMWATER DETAILS & NOTES
C-7.5	STORMWATER DETAILS & NOTES

LEGEND

124	PROPOSED CONTOUR
SD	EXISTING STORMDRAIN
—— SD ——	PROPOSED STORMDRAIN
S	EXISTING SANITARY SEWER
s	PROPOSED SANITRY SEWER
	EXISTING WATER LINE
W	PROPOSED WATER LINE
UD	EXISTING UNDERDRAIN
UD	PROPSED UNDERDRAIN
OHE	EXISTING OVERHEAD ELECTRIC
	& TELEPHONE
—— OHE ——	PROPOSED OVERHEAD ELECTRIC
	& TELEPHONE
UGE	EXISTING UNDERGROUND
	ELECTRIC & TELEPHONE
——— UGE ———	PROPOSED UNDERGROUND
	ELECTRIC & TELEPHONE
	EXISTING EDGE OF PAVEMENT
	PROPOSED EDGE OF PAVEMENT
	EXISTING EDGE OF GRAVEL
	PROPOSED EDGE OF GRAVEL
	EXISTING CURB
	PROPOSED CURB
	PROPOSED FENCE
———SF ———	SILT FENCE
TP-A	TEST PIT
$\bowtie$	EXISTING VALVE
H	PROPOSED VALVE
- <b>Q</b> -	EXISTING HYDRANT
ф	EXISTING LIGHT POLE
*	PROPOSED LIGHT POLE
-0-	EXISTING UTILITY POLE
	EXISTING CATCH BASIN
	PROPOSED CATCH BASIN
D	EXISTING DRAIN MANHOLE
0	PROPOSED DRAIN MANHOLE
<u>(S)</u>	EXISTING SEWER MANHOLE
(D) (D) (S) (S)	PROPOSED SEWER MANHOLE
+ 30.20	EXISTING SPOT GRADE
×30.20	PROPOSED SPOT GRADE
^	SURVEY CONTROL POINT
	EXISTING MONUMENT
0	EXISTING IRON PIPE
	EXISTING SIGN
<del></del>	PROPOSED SIGN
	EXISTING BUILDING
	PROPOSED BUILDING
	PROPOSED CONCRETE PAD
30 0 T 1 T41 3 12 13 11 1	
	PROPOSED PAVEMENT

EXISTING PROPERTY LINE

EXISTING MAJOR CONTOUR



3/31/2017 REVISED PER TOWN & MDEP COMMENTS - SUBMITTED FOR PRELIM. APPROVAL
1/10/2017 SUBMITTED TO MDEP & REVISED PER TOWN COMMENTS

DATE

DATE

REVISIONS

BY

111 Elderberry Lane
<sup>7</sup> Gloucester, ME 04260
Office: (207) 926-5111
Fax: (207) 221-1317
rradynconsultants.com



WINDHAM ME.

ND VIEWS SEVELT TRAIL, WINE SHEET & LOCATION

19 ROOSE COVER SH PREPARED FOR CHASE CU

DATE: 3/31/2017

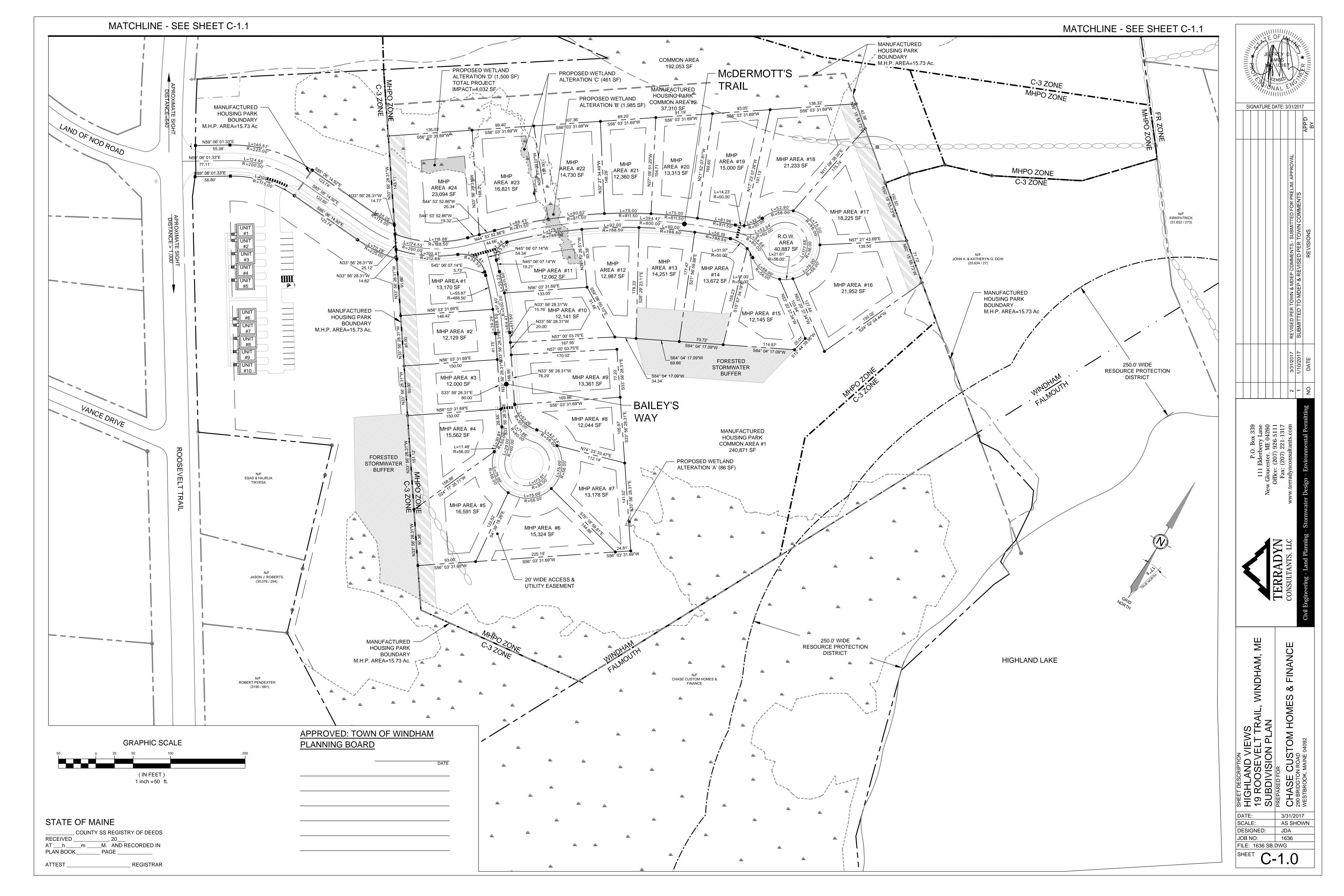
SCALE: AS SHOWN

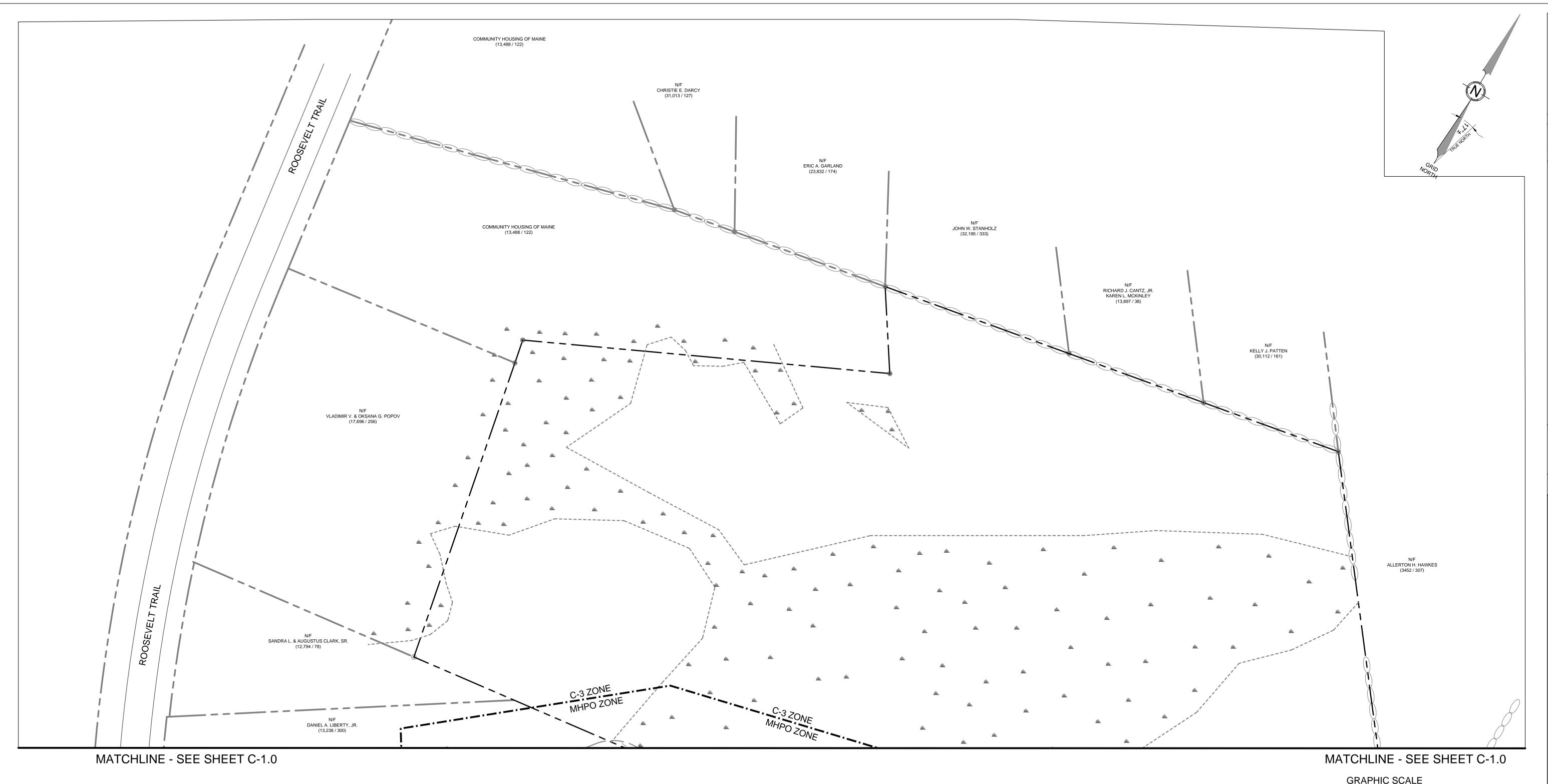
DESIGNED: JDA

JOB NO: 1636

FILE: 1636 COVER.DWG

C-0.0





LOCATED AT 30 WOOD DRIVE, GRAY MAINE 04039, DATED AUGUST 2016.

4. TOPOGRAPHIC INFORMATION SHOWN HEREON IN ALL DEVELOPMENT IS BASED UPON A TOPOGRAPHIC SURVEY PERFORMED BY WAYNE T. WOOD & COMPANY, INC. IN JUNE 2016. ALL OTHER TOPOGRAPHY IS BASED UPON LIDAR

DERIVED INFORMATION OBTAINED FROM THE STATE OF MAINE DEPARTMENT OF GIS. 5. SPACE AND BULK CRITERIA:

COMMERCIAL III STANDARDS MIN. LOT SIZE: 80,000 SF (DWELLING MIXED USE) NET RESIDENTIAL DENSITY: 60,000 SF/LOT 200' (DWELLING) MIN. FRONTAGE: MIN. FRONTAGE: 100' (NON RESIDENTIAL) MIN. FRONT SETBACK: 60' (ON ARTERIAL) MIN. FRONT SETBACK: 40' (NON-ARTERIAL) MIN. FRONT LANDSCAPED BUFFER: MIN. SIDE SETBACK:

MAX. BUILDING HEIGHT: MANUFACTURED HOUSING PARK OVERLAY ZONE (MHPO) STANDARDS MIN LOT SIZE: 12,000 SF (WITH CENTRAL SEWAGE SYSTEM)

NET RESIDENTIAL DENSITY MIN. FRONTAGE . MIN. FRONT SETBACK .

MIN. REAR SETBACK:

20,000 SF/UNIT 75' (WITH CENTRAL SEWAGE SYSTEM) 14. REFERENCE IS MADE TO THE ENGINEERING PLANS AS PREPARED BY TERRADYN CONSULTANTS, LLC SUBMITTED AS PART

6. THE PROPERTY DOES NOT CONTAIN ANY FLOOD HAZARD AREAS ACCORDING TO FLOOD INSURANCE RATE MAPS 230045

9. ALL MONUMENTS WITHIN THIS SUBDIVISION SHALL BE SET IN ACCORDANCE WITH THE TOWN OF WINDHAM LAND USE ORDINANCE SECTION 911.A.3.

10. ANY HOUSE WITHIN THIS SUBDIVISION SHALL BE CONSTRUCTED WITH A POSITIVE FREE OUTLET FOUNDATION DRAIN.

11. STORMWATER RESTRICTIONS: • THE MAXIMUM IMPERVIOUS SURFACE COVERAGE FOR LOTS 1, 2 & 3 IS 2,800 SF. ALL OTHER LOTS ARE LIMITED TO 3,000 SF.

 A RAIN GARDEN SHALL BE CONSTRUCTED ON LOTS 10 & 12 UNLESS SUITABLE ALTERNATIVE MEASURES ARE APPROVED BY THE TOWN PLANNING DEPARTMENT. ROOF DRAIN FILTER STRIPS SHALL BE INSTALLED ON THE REAR OF EACH MANUFACTURED HOUSING UNIT UNLESS

SUITABLE ALTERNATIVE MEASURES ARE APPROVED BY THE TOWN PLANNING DEPARTMENT.

12. ANY NEED FOR ADDITIONAL UNDERDRAIN / GEOTEXTILE FABRIC WILL BE ADDRESSED DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 911.M.5.B.8.III OF THE LAND USE ORDINANCE.

13. THE FORESTED BUFFERS SHOWN ON THIS PLAN ARE INTENDED TO REMAIN IN A NATURAL VEGETATIVE STATE. ONLY DEAD OR DISEASED TREES MAY BE REMOVED. THESE BUFFERS SHALL BE MARKED OUT WITH PERMANENT SIGNAGE AND PROTECTED BY DISTURBANCE IN ACCORDANCE WITH THE MAINE DEP CHAPTER 500 SUGGESTED TEMPLATES FOR DEED RESTRICTIONS PRIOR TO CONSTRUCTION.

3/31/2017 **AS SHOWN** JDA 1636 FILE: 1636 SB.DWG

SCALE: DESIGNED: JOB NO:

SIGNATURE DATE: 3/31/2017

1 inch =60 ft. **GENERAL NOTES** 1. THE RECORD OWNER OF THE PARCEL IS CHASE CUSTOM HOMES & FINANCE BY DEED RECORDED IN THE APPROVED: TOWN OF WINDHAM CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 33,226, PAGE 279. 0006 B, 230045 0010 B, 230054 0001 B & 230189 0030 B. PLANNING BOARD 2. THE PROPERTY IS SHOWN AS LOT 63 & 66 ON THE TOWN OF WINDHAM TAX MAP 7 AND IS LOCATED IN THE 7. THE WETLANDS ON THIS PLAN WERE DELINEATED BY MARK CENCI OF MARK CENCI GEOLOGIC, INC. COMMERCIAL III (C3) ZONE. A PORTION OF THE PROPERTY IS ALSO LOCATED WITHIN THE MANUFACTURED HOUSING NET RESIDENTIAL AREA CALCULATION MHP OVERLAY 8. THESE LOTS ARE TO BE SERVICED BY PUBLIC WATER, A COMMON PRIVATE SEPTIC SYSTEM AND UNDERGROUND UTILITIES. 3. BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON A STANDARD BOUNDARY BY WAYNE WOOD & CO.

MINIMUM N.R.A. PER LOT NET RESIDENTIAL AREA CALCULATION C-3 DISTRICT TOTAL PARCEL AREA OUTSIDE OF MHPO. . . . . 960,370 SF (22.05 AC) NET RESIDENTIAL AREA RIGHTS OF WAY . 17,852 SF SLOPES > 25% (NOT LOCATED WITHIN RP DISTRICT).

FLOOD PLAIN (NOT LOCATED WITHIN RP DISTRICT) . SURFACE WATER STATE OF MAINE MDIF&W SIGNIFICANT HABITAT . . . . . . . . MDOC ENDANGERED SPECIES AREA COUNTY SS REGISTRY OF DEEDS RECEIVED \_ \_\_\_\_, 20\_\_\_ AT \_\_\_h \_\_\_\_m \_\_\_\_M. AND RECORDED IN NET RESIDENTIAL AREA (N.R.A.) MINIMUM N.R.A. PER LOT PLAN BOOK \_\_\_\_\_ PAGE \_\_\_

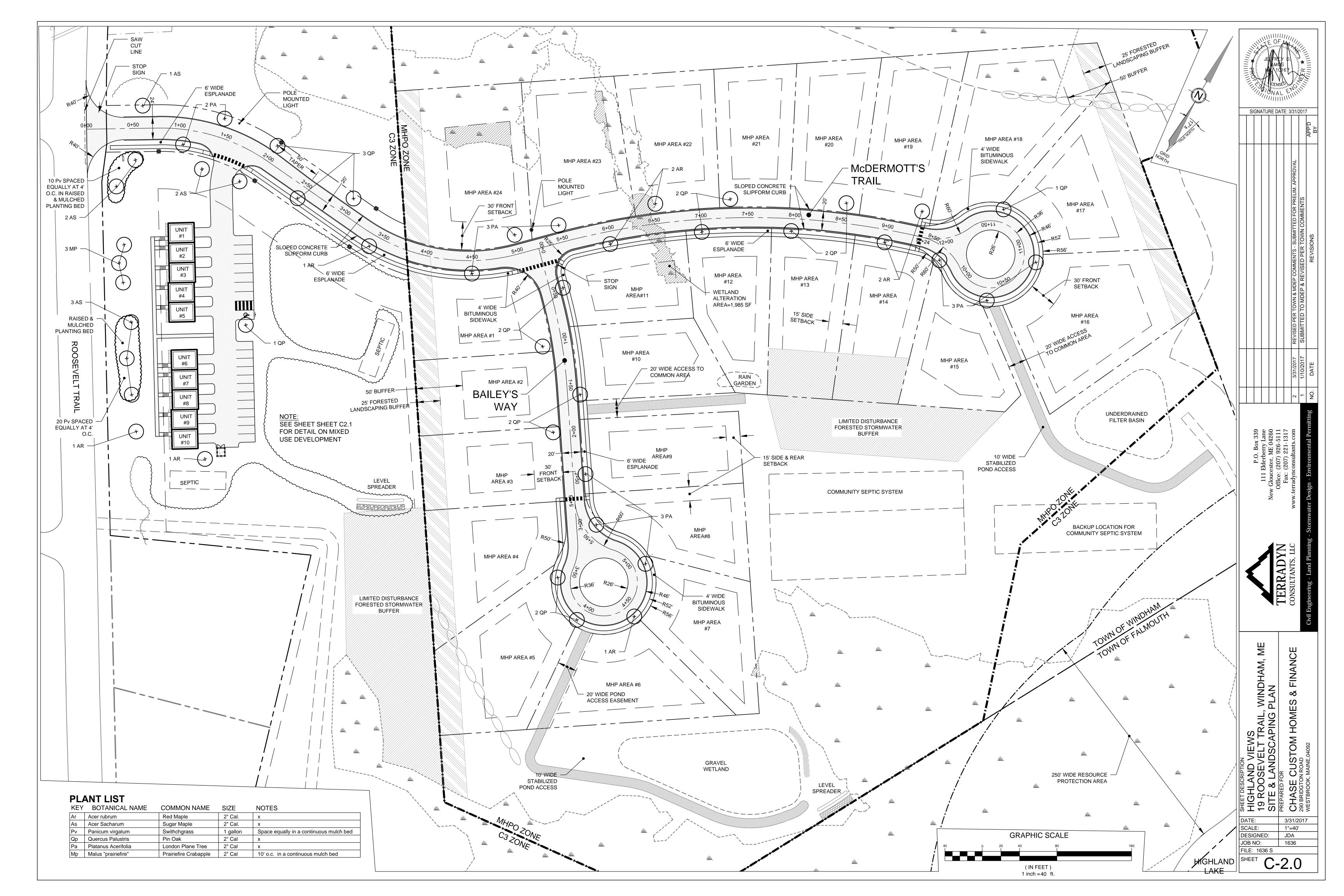
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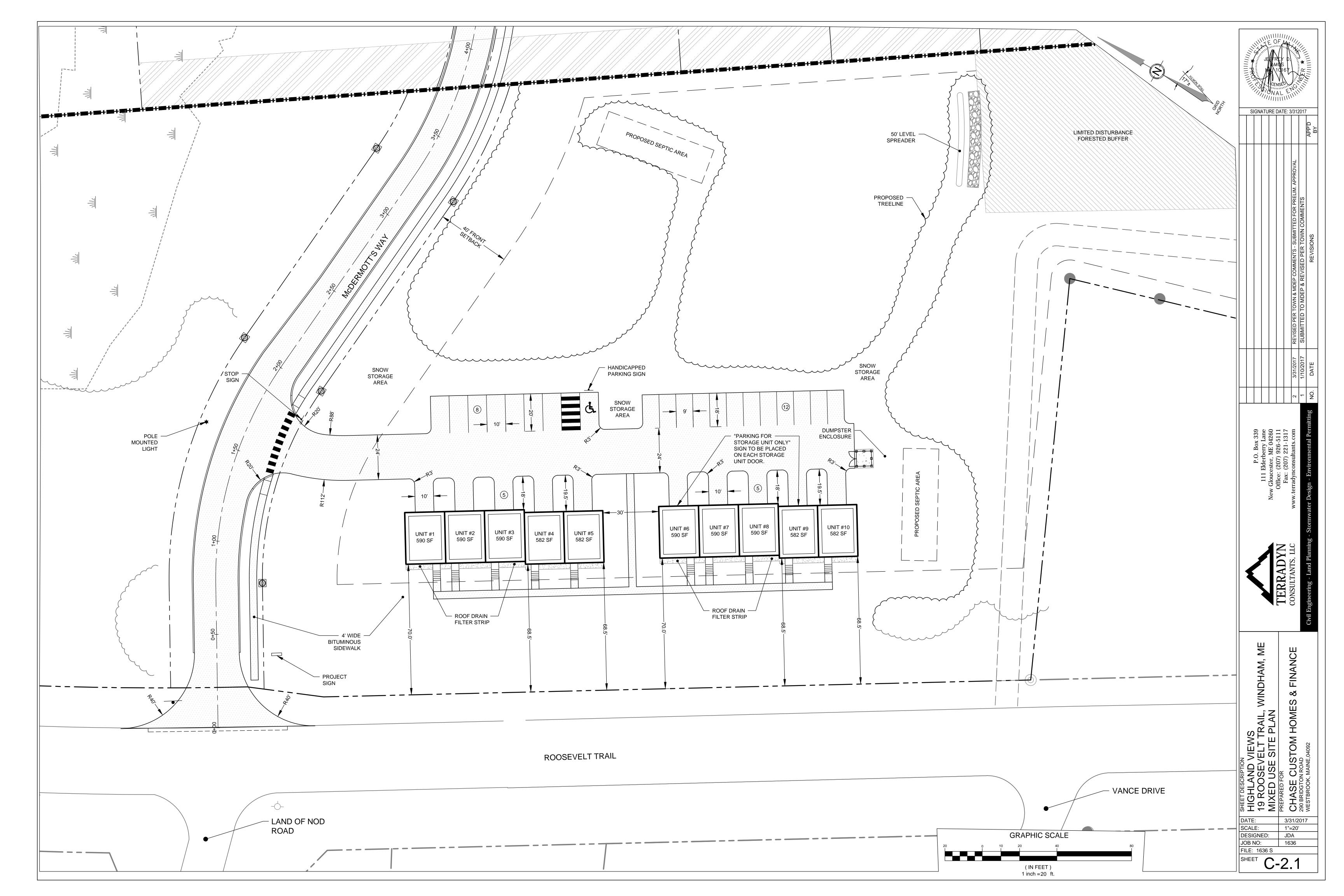
ATTEST\_

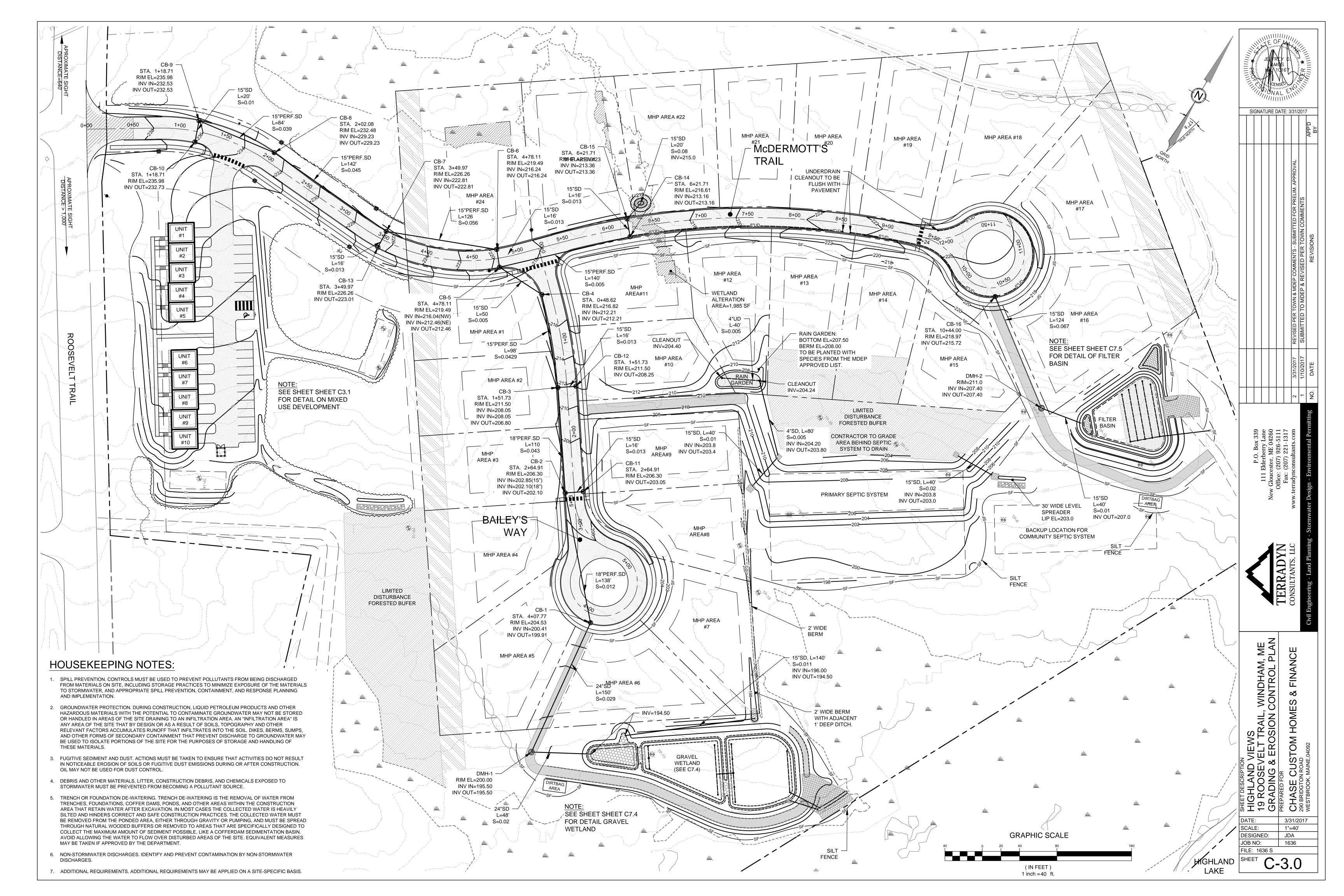
. . . . . . . . 60,000 SF TOTAL PERMITTED LOTS/UNITS . . . . . . 10.2 

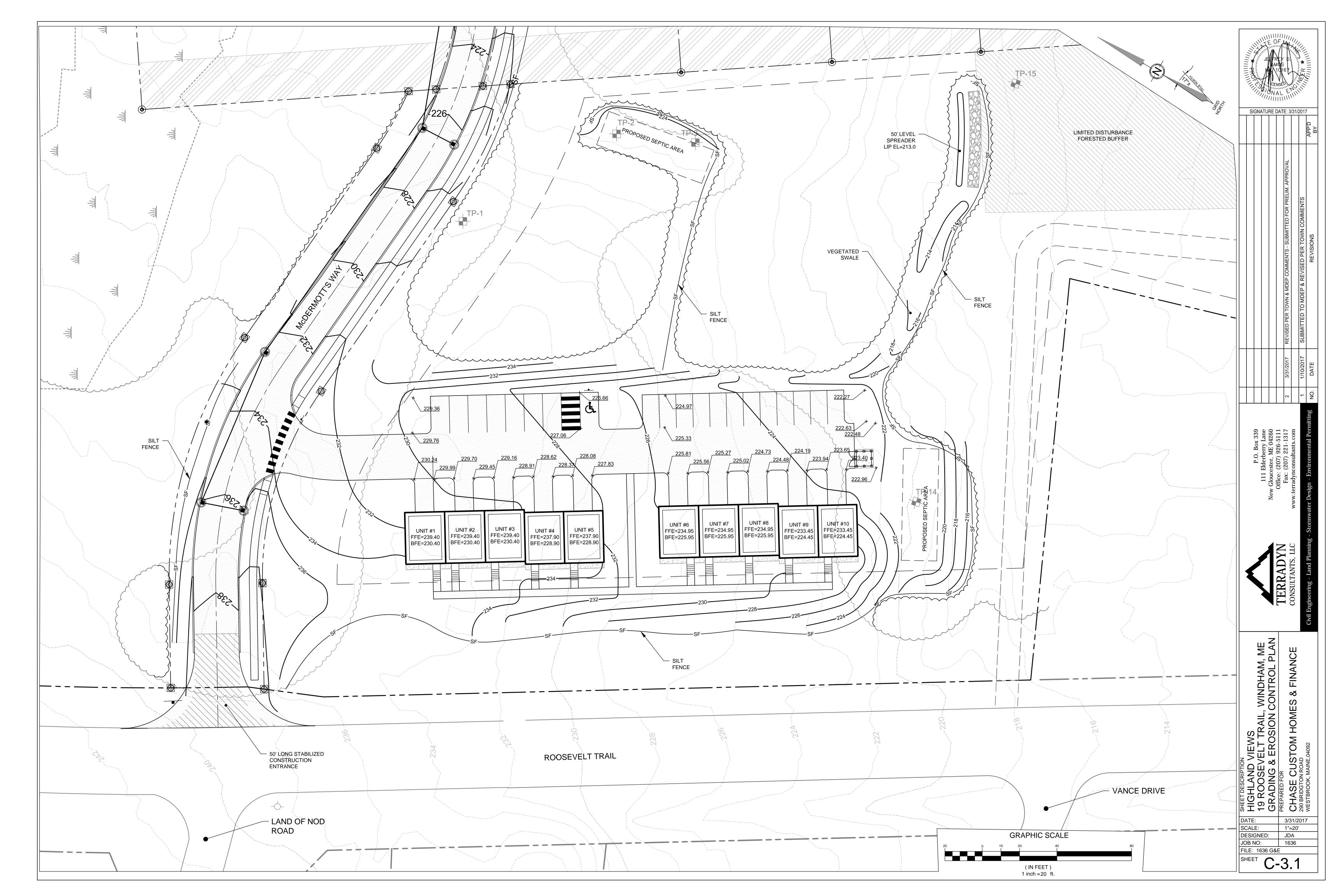
MIN. SIDE SETBACK

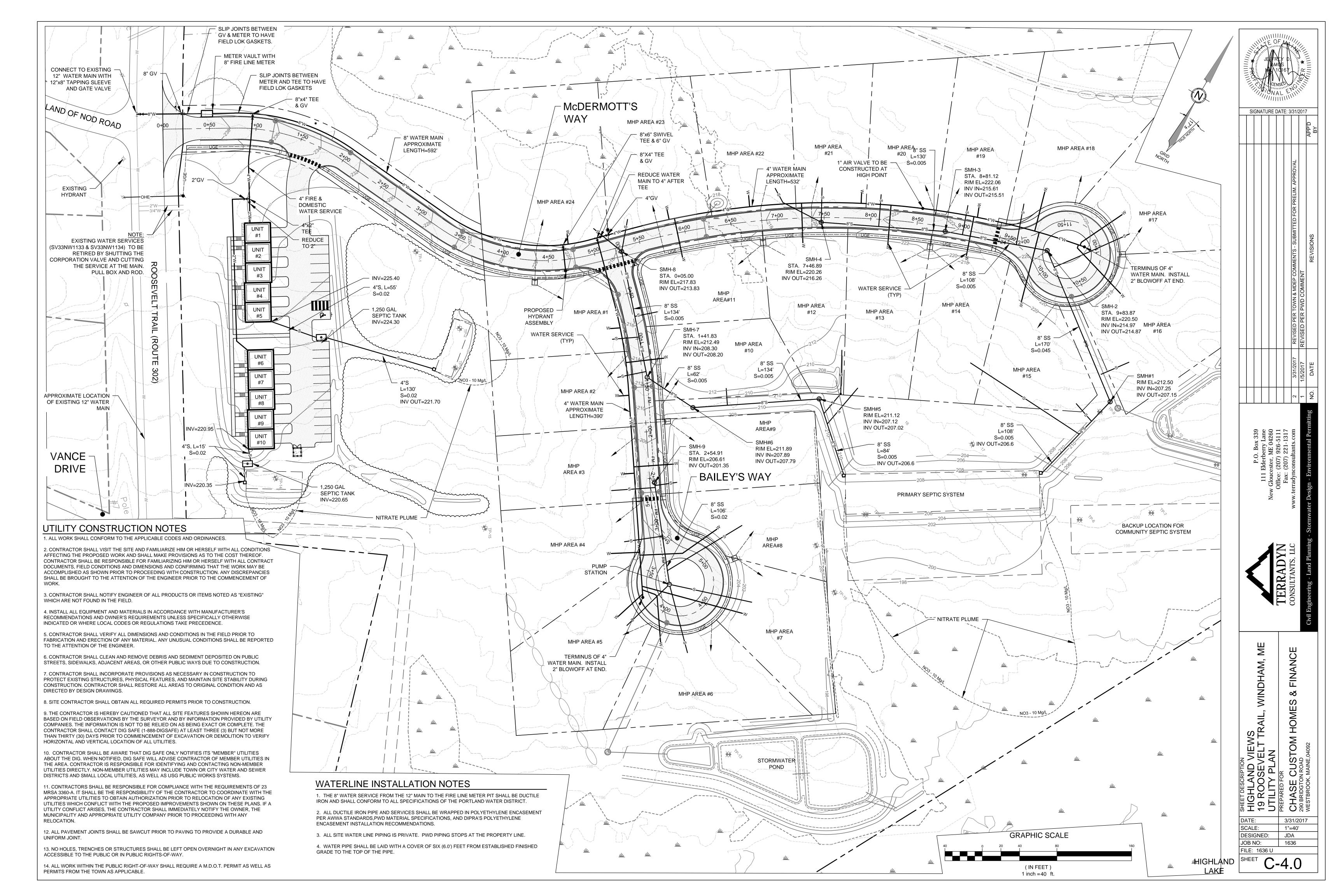
MIN. REAR SETBACK . . . 15'

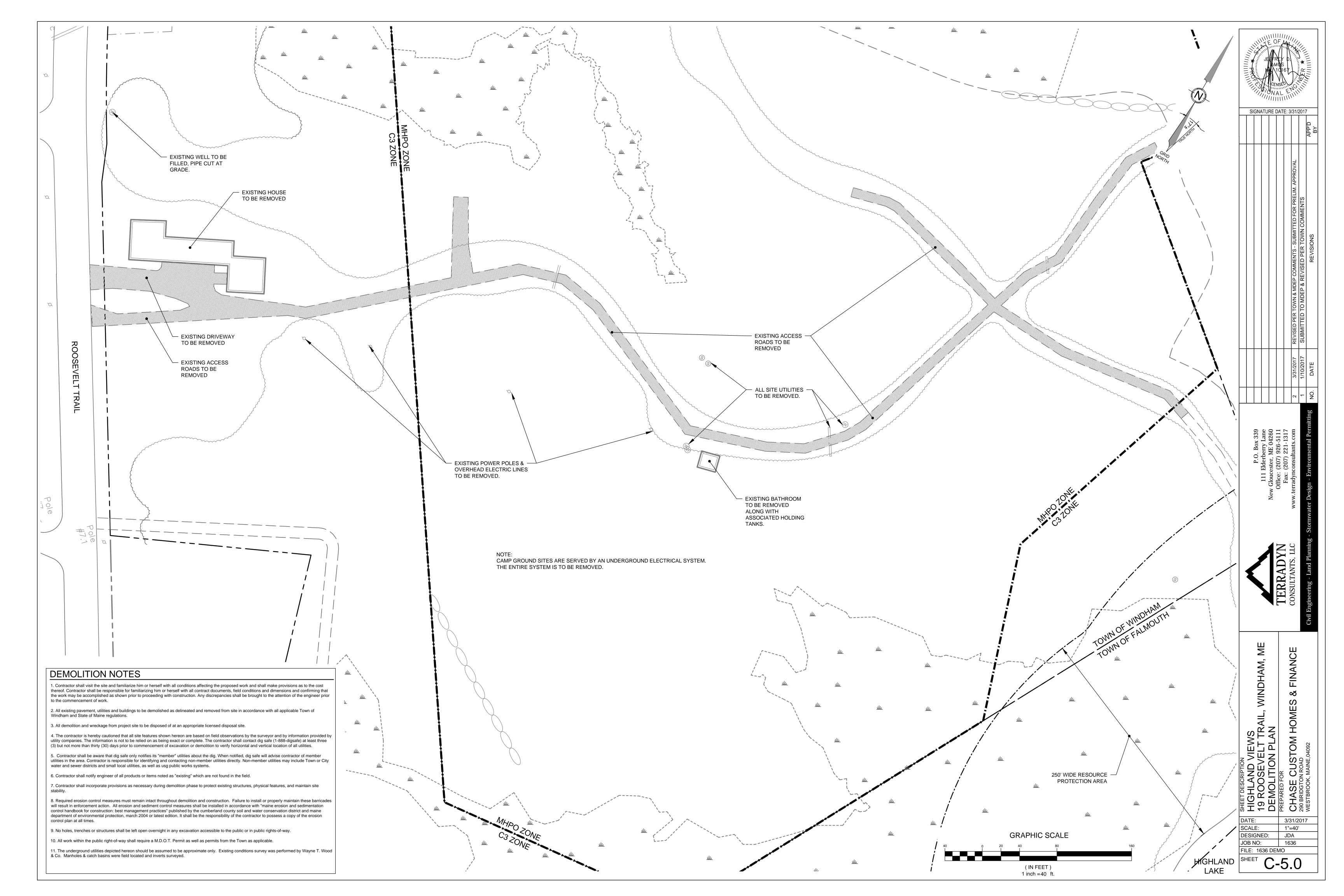


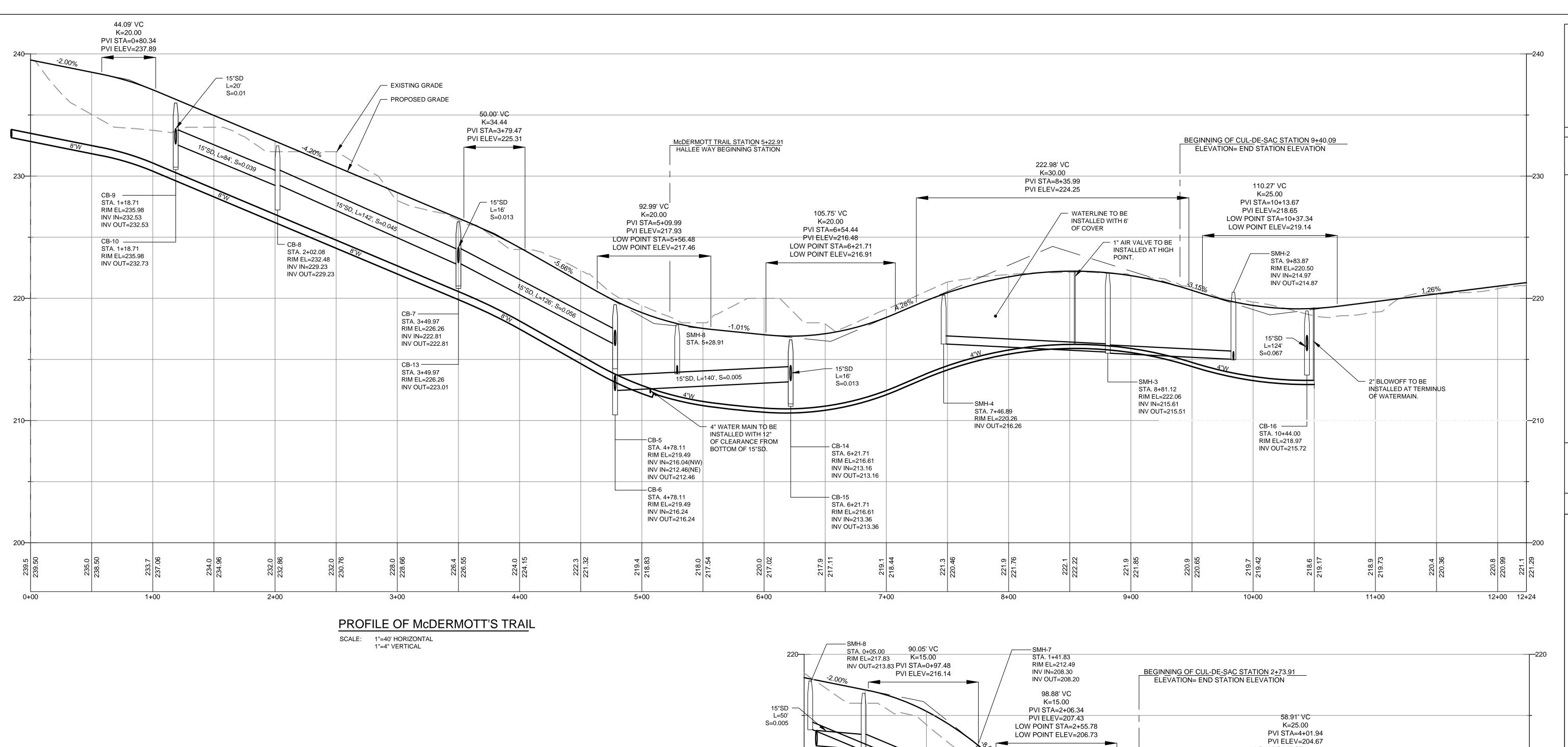












0+00

1+00

2+00

LOW POINT STA=4+07.77 LOW POINT ELEV=204.83 L=16' S=0.013 EXISTING GRADE - PROPOSED GRADE 2" BLOWOFF TO BE -INSTALLED AT TERMINUS – CВ-4 OF WATERMAIN. STA. 0+48.62 RIM EL=216.82 INV IN=212.21 INV OUT=212.21 L=16' S=0.013 STA. 1+51.73 RIM EL=211.50 18"SD, L=138', S=0.012 L=150' INV IN=208.05 S=0.029 INV IN=208.05 INV OUT=206.80 200-CB-12 ----STA. 1+51.73 - CB-2 SMH-9 — RIM EL=211.50 STA. 2+64.91 STA. 2+54.91 INV OUT=208.25 RIM EL=206.30 RIM EL=206.61 STA. 4+07.77 INV IN=202.85(15") INV OUT=201.35 RIM EL=204.53 INV IN=202.10(18") INV IN=200.41 INV OUT=202.10 INV OUT=199.91

> PROFILE OF BAILEY'S WAY SCALE: 1"=40' HORIZONTAL

3+00

1"=4" VERTICAL

- CB-11

STA. 2+64.91

RIM EL=206.30

INV OUT=203.05

-PUMP STATION

RIM EL=205.00

INV IN=200.00

4+00

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			REVISED PER TOWN & MDEP COMMENTS - SUBMITTED FOR PRELIM. APPROVAL	SUBMITTED TO MDEP & REVISED PER TOWN COMMENTS	REVISIONS	
			3/31/2017	1/10/2017	DATE	
					О.	



FINANCE WINDHAM, I ∞ర SHEET DESCRIPTION
HIGHLAND VIEWS
19 ROOSEVELT TRAIL, WIN
PROFILES
PREPARED FOR
CHASE CUSTOM HOMES &
290 BRIDGTON ROAD
WESTBROOK, MAINE, 04092

3/31/2017

SCALE: AS SHOWN DESIGNED: JDA JOB NO: 1636 FILE: 1636 B

5+93

5+00

C-6.0

### **EROSION AND SEDIMENT CONTROL PLAN**

### **Pre-Construction Phase**

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 mrsa § 480-b. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

### **BMP Construction Phase**

A. Sediment barriers. Prior to the beginning of any construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the proposed disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

B. Construction entrance: Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

C. Riprap: Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum delay. Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate. Maintain temporary riprap, such as temporary check dams until the disturbed area is permanently stabilized.

D. Temporary stabilization. Stabilize with temporary seeding, mulch, or other non-erodable cover any exposed soils that will remain unworked for more than 14 days except, stabilize areas within 100 feet of a wetland or waterbody within 7 days or prior to a predicted storm event, whichever comes first. If hay or straw mulch is used, the application rate must be 2 bales (70-90 pounds) per 1000 sf or 1.5 to 2 tons (90-100 bales) per acre to cover 75 to 90% of the ground surface. Hay mulch must be kept moist or anchored to prevent wind blowing. An erosion control blanket or mat shall be used at the base of grassed waterways, steep slopes (15% or greater) and on any disturbed soil within 100 feet of lakes, streams and wetlands. Grading shall be planned so as to minimize the length of time between initial soil exposure and final grading. On large projects this should be accomplished by phasing the operation and completing the first phase up to final grading and seeding before starting the second phase, and so on.

E. Vegetated waterway. Upon final grading, the disturbed areas shall be immediately seeded to permanent vegetation and mulched and will not be used as outlets until a dense, vigorous vegetative cover has been obtained. Once soil is exposed for waterway construction, it should be immediately shaped, graded and stabilized. Vegetated waterways need to be stabilized early during the growing season (prior to september 15). If final seeding of waterways is delayed past september 15, emergency provisions such as sod or riprap may be required to stabilize the channel. Waterways should be fully stabilized prior to directing runoff to them.

A. Seeded areas. For seeded areas, permanent stabilization means an 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.

B. Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

C. Permanent mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

D. Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

E. Agricultural use. For construction projects on land used for agricultural purposes (e.G., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

F. Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

G. Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well-graded riprap, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow. There must be no evidence of slumping of the lining, undercutting of the banks, or down-cutting of the channel.

The following erosion control measures shall be followed by the contractor throughout construction of this project:

A. All topsoil shall be collected, stockpiled, seeded with rye at 3 pounds/1,000 sf and mulched, and reused as required. Silt fencing shall be placed down gradient from the stockpiled loam. Stockpile to be located by designation of the owner and

B. The inspecting engineer at his/her discretion, may require additional erosion control measures and/or supplemental vegetative provisions to maintain stability of earthworks and finish graded areas. The contractor shall be responsible for providing and installing any supplemental measures as directed by the inspecting engineer. Failure to comply with the engineer's directions will result in discontinuation of construction activities.

C. Erosion control mesh shall be applied in accordance with the plans over all finish seeded areas as specified on the design

D. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are adequately stabilized.

E. All erosion, and sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved erosion and sediment control plan.

F. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.

G. Areas shall be scarified to a minimum depth of 3 inches prior to placement of topsoil.

H. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or

I. All fills shall be placed and compacted in layers not to exceed 8 inches in thickness.

J. Except for approved landfills or non-structural fills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory lifts.

K. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.

L. Fill shall not be placed on a frozen foundation.

M. Seeps or springs encountered during construction shall be handled appropriately.

N. All graded areas shall be permanently stabilized immediately following finished grading.

O. Remove any temporary control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

### Permanent vegetation

Permanent vegetative cover should be established on disturbed areas where permanent, long lived vegetative cover is needed to stabilize the soil, to reduce damages from sediment and runoff, and to enhance the environment.

A. Grade as feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.

B. Apply limestone and fertilizer according to soil tests such as those offered by the university of maine soil testing laboratory. Soil sample mailers are available from the local cooperative extension service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 800 pounds per acre or 18.4 pounds per 1,000 square feet using 10-20-20 (n-p2o5-k2o) or equivalent. Apply ground limestone (equivalent to 50% calcium plus magnesium oxide) at

a rate of 3 tons per acre (138 lb. Per 1,000 sq. Ft).

C. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow or other suitable equipment. The final harrowing operation should be on the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared. All but clay or silty soils and coarse sands should be rolled to firm the seedbed wherever feasible.D. Remove from the surface all stones 2 inches or larger in any dimension. Remove all other debris, such as wire, cable, tree roots, concrete, clods, lumps or other unsuitable material.

E. Inspect seedbed just before seeding. If traffic has left the soil compacted; the area must be tilled and firmed as above.

F. Permanent seeding should be made 45 days prior to the first killing frost or as a dormant seeding with mulch after the first killing frost and before snowfall. When crown vetch is seeded in later summer, at least 35% of the seed should be hard seed (unscarified). If seeding cannot be done within the seeding dates, mulch according to the temporary mulching bmp and overwinter stabilization and construction to protect the site and delay seeding until the next recommended seeding period.

G. Following seed bed prepartation, swale areas, fill areas and back slopes shall be seeded at a rate of 3 lbs./1,000 s.F. With a mixture of 35% creeping red h. Fescue, 6% red top, 24% kentucky bluegrass, 10% perennial ryegrass, 20% annual ryegrass and 5% white dutch clover.

I. Areas which have been temporarily or permanently seeded shall be mulched immediately following seeding.

J. Areas which cannot be seeded within the growing season shall be mulched for over-winter protection and the area should be seeded at the beginning of the growing season.

If an area is not stabilized with temporary or permanent measures by november 15, then the site must be protected with

A. Permanent stabilization consists of at least 90% vegetation, pavement/gravel base or riprap.

additional stabilization measures.

B. Do not expose slopes or leave slopes exposed over the winter or for any other extended time of work suspension unless fully protected with mulch.

C. Apply hay mulch at twice the standard rate (150 lbs. Per 1,000 sf). The mulch must be thick enough such that the ground surface will not be visible and must be anchored.

D. Use mulch and mulch netting or an erosion control mulch blanket or all slopes greater than 8 % or other areas exposed to direct wind.

E. Install an erosion control blanket in all drainageways (bottom and sides) with a slope greater than 3 %.

F. See the vegetation measures for more information on seeding dates and types.

G. Winter excavation and earthwork shall be completed so that no more than 1 acre of the site is without stabilization at

H. An area within 100 feet of a protected natural resource must be protected with a double row of sediment barrier.

I. Temporary mulch must be applied within 7 days of soil exposure or prior to any storm event, but after every workday in areas within 100 feet from a protected natural resource.

J. Areas that have been brought to final grade must be permanently mulched that same day.

K. If snowfall is greater than 1 inch (fresh or cumulative), the snow shall be removed from the areas due to be seeded

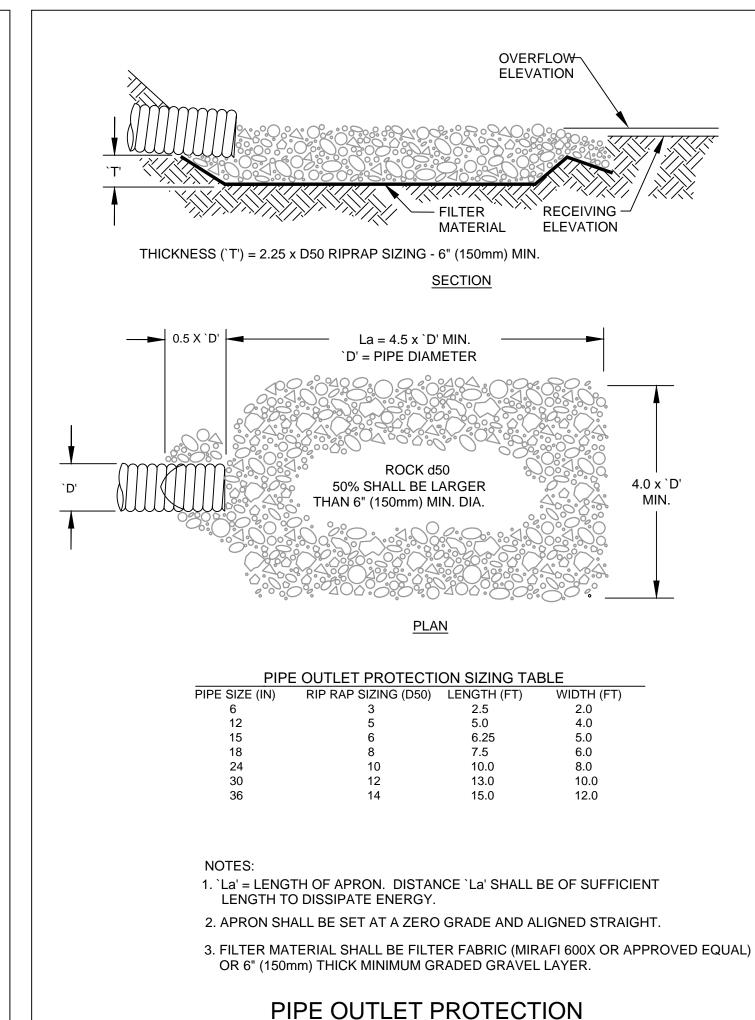
L. Loam shall be free of frozen clumps before it is applied.

M. All vegetated ditch lines that have not been stabilized by november 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the department.

### Maintenance and inspection phase

A. Contractor shall inspect disturbed and impervious areas, and erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the parcel at least once a week and before and after a storm event, prior to completion of permanent stabilization. A person with knowledge of erosion and stormwater must conduct the inspection. This person must be identified in the inspection log. If best management practices (bmps) need to be modified or if additional bmps are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

B. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: bmps that need to be maintained; location(s) of bmps that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional bmps are needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.



NOT TO SCALE

NORTH AMERICAN GREEN S150

EQUAL, WITH STAPES PER

MANUFACTURER'S **RECOMMENDATIONS -**

SLOPE VARIES

EROSION CONTROL BLANKET, OR

BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.

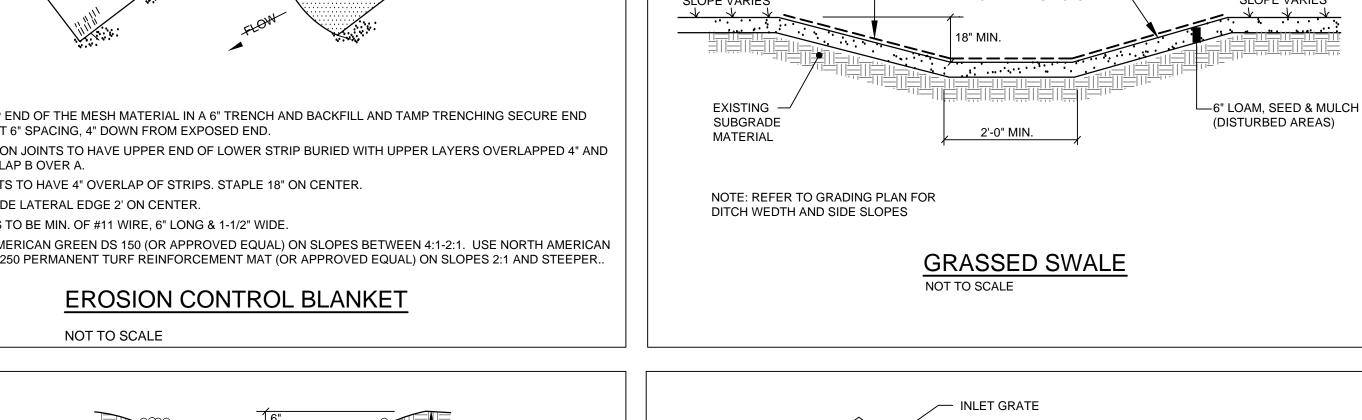
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.

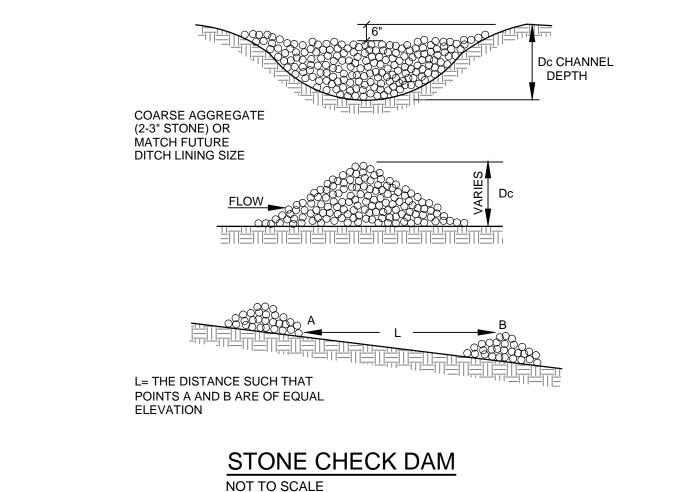
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.

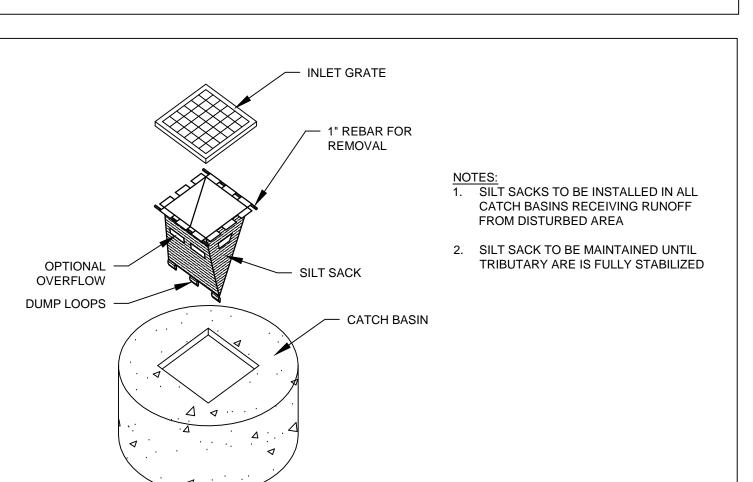
4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.

5. WIRE STAPLES TO BE MIN. OF #11 WIRE, 6" LONG & 1-1/2" WIDE.

6. USE NORTH AMERICAN GREEN DS 150 (OR APPROVED EQUAL) ON SLOPES BETWEEN 4:1-2:1. USE NORTH AMERICAN GREEN VMAX SC250 PERMANENT TURF REINFORCEMENT MAT (OR APPROVED EQUAL) ON SLOPES 2:1 AND STEEPER...

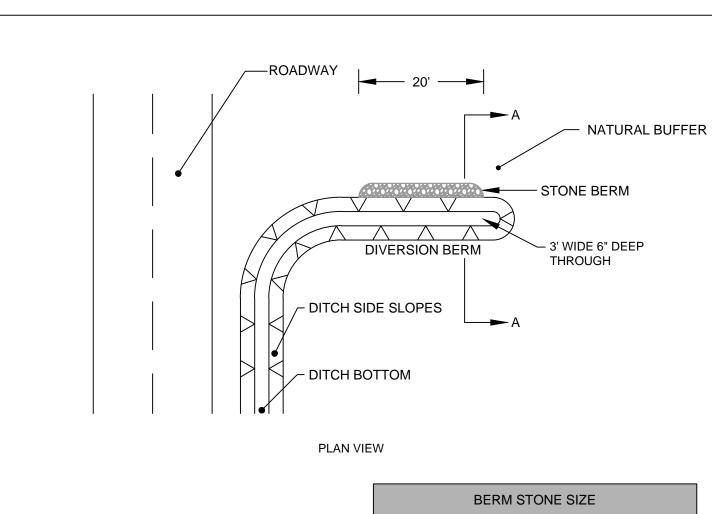


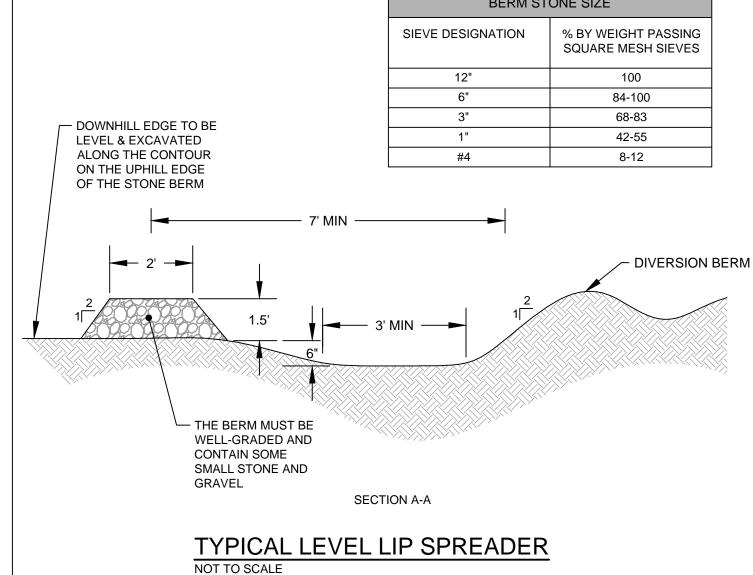


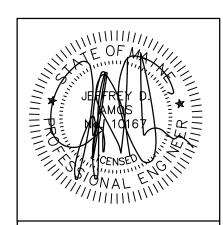


SILT SACK DETAIL

3:1 MAXIMUM SLOPE







THICKNESS ('d') =  $2.25 \times D50 \text{ RIPRIP SIZING - 6" (150mm) MIN.}$ 

1. GEOTEXTILE FILTER FABRIC BENEATH STONE BASED ON

2. GEOTEXTILE TO BE MIRAFI 600X OR APPROVED EQUAL

FREE OF FINES, CLAYS, SILTS.

UNDISTURBED SOILS, OR 6" OF 4" MINUS BAN RUN GRAVEL

**SECTION** 

HARD ANGULAR ROCK D50 SELECTION PER

<u>PLAN</u>

8.75

3.0

3.75

4.5

6.0

7.5

PIPE INLET PROTECTION SIZING TABLE

1. IN DEFINED CHANNELS, APRON SHALL EXTEND FULL WIDTH OF BOTTOM AND ONE

PIPE INLET PROTECTION

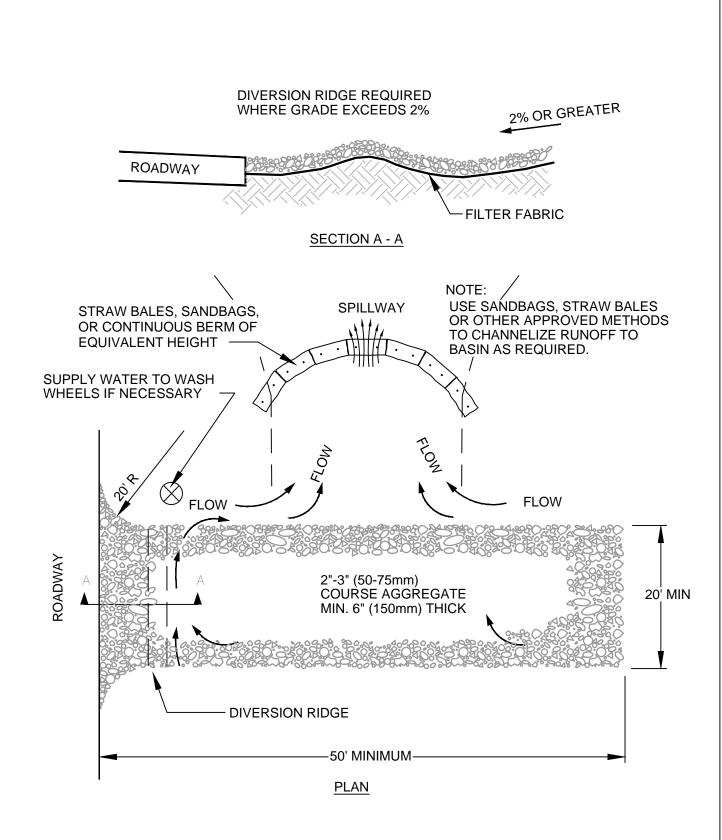
FOOT ABOVE MAX. HEADWATER OR UP TO BANK FULL, WHICHEVER IS LESS.

RIRAP SIZING (D50)

			N, VIII	NSE AL III	I EII			,
SI	GN/	\TU	RE [	DAT	E: 3	/31/2	2017	7
								APP'D BY
						REVISED PER TOWN & MDEP COMMENTS - SUBMITTED FOR PRELIM. APPROVAL	SUBMITTED TO MDEP & REVISED PER TOWN COMMENTS	REVISIONS

WINDHAM, S

3/31/2017 SCALE: AS SHOWN **DESIGNED:** JDA JOB NO: 1636 FILE: 1636 D

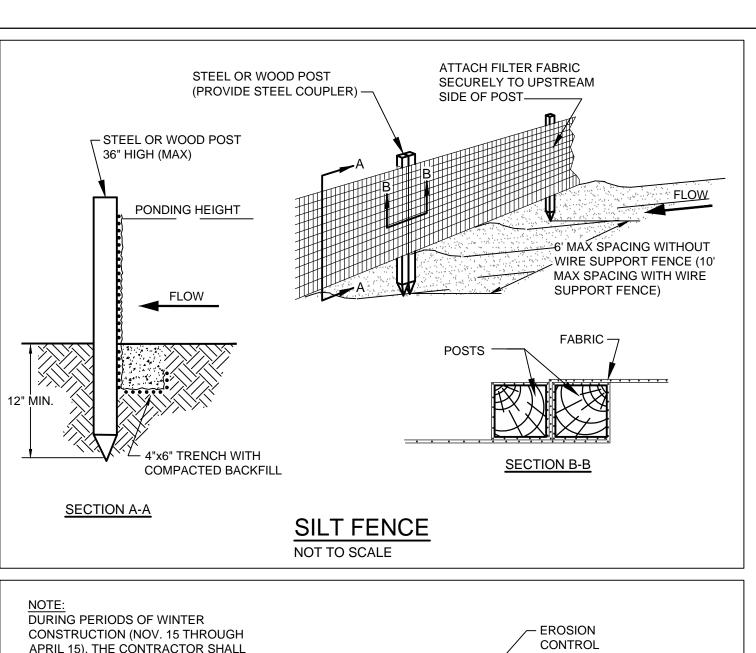


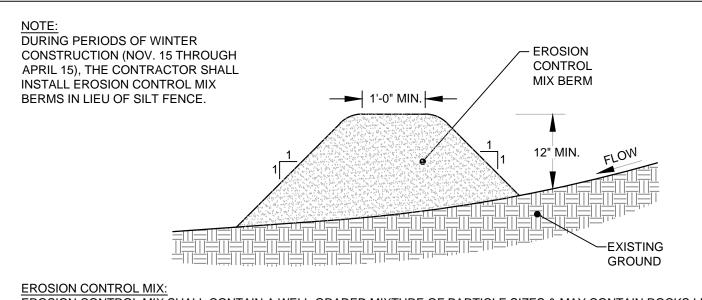
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. 3. 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.

## STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

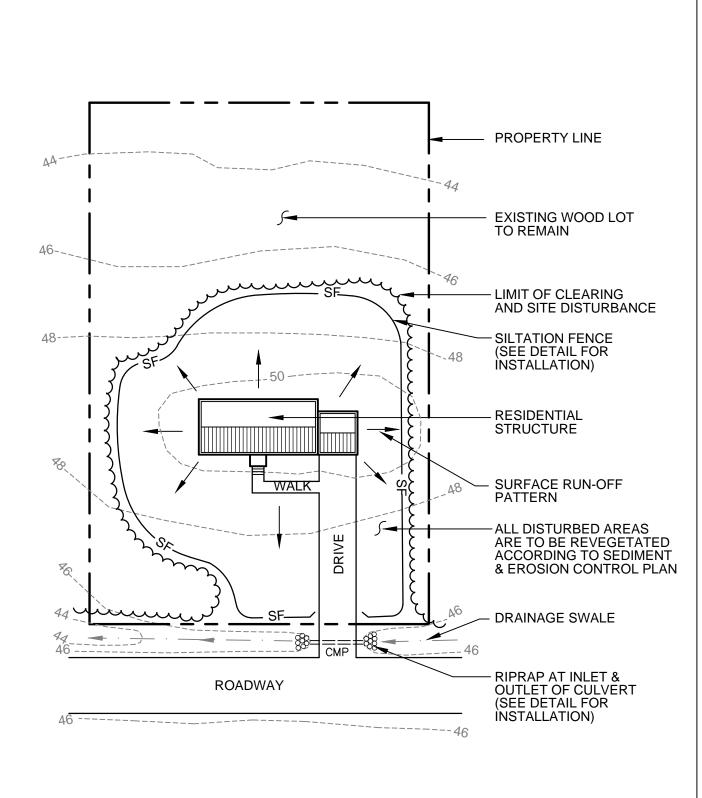




EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS: - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80% - 100% DRY WEIGHT BASIS - PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85% PASSING A 0.75" SCREEN

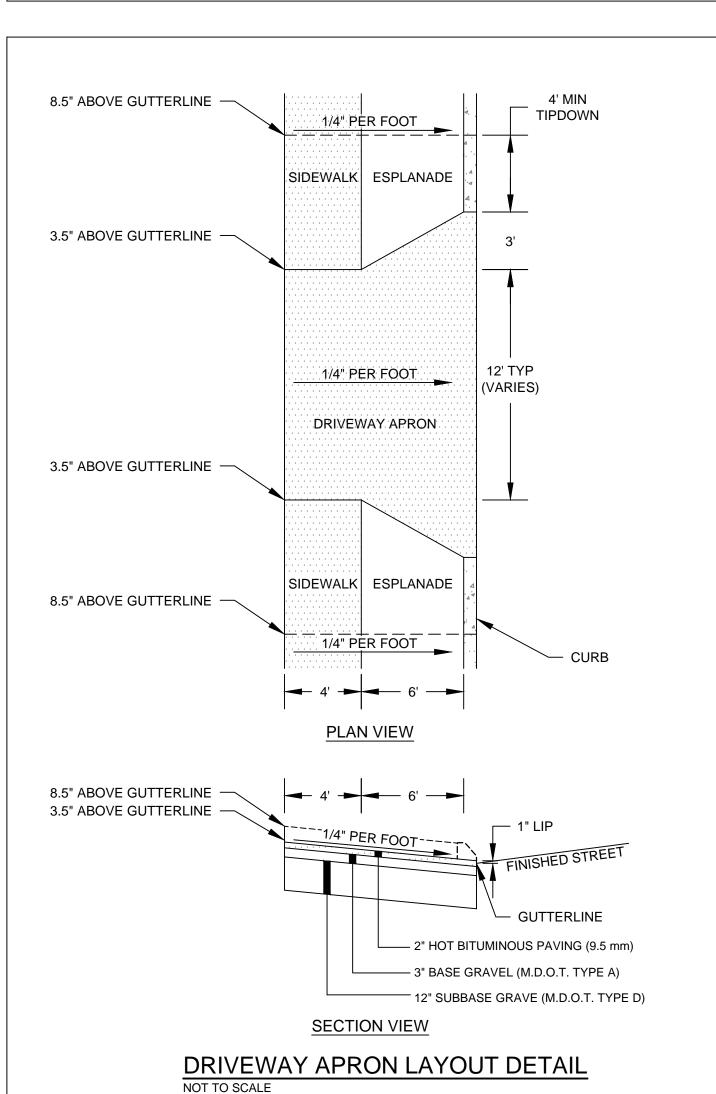
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED - LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX. - SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm. - ph SHALL FALL BETWEEN 5.0 - 8.0.

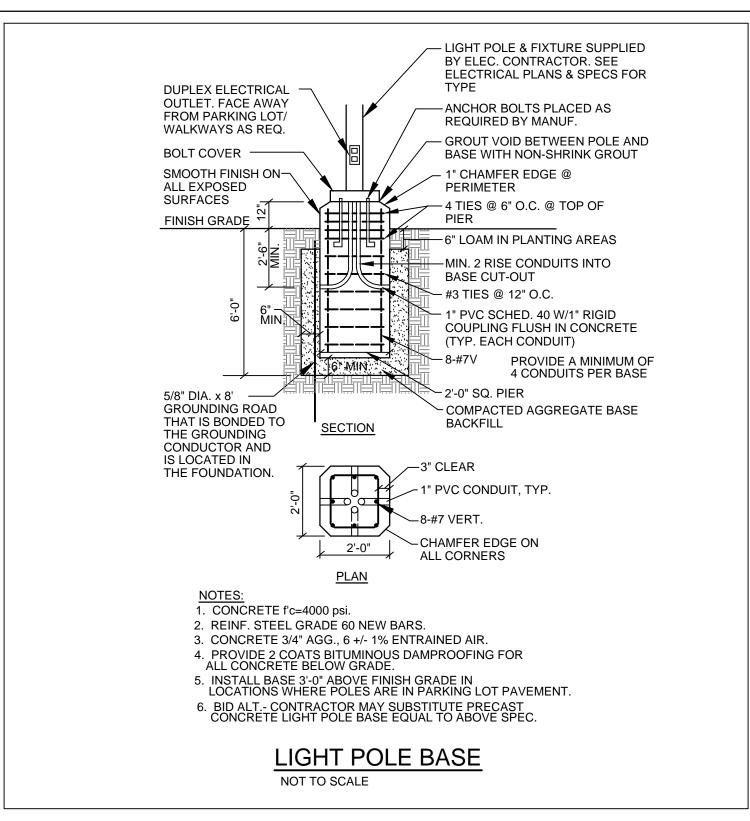
# **EROSION CONTROL MIX BERM**

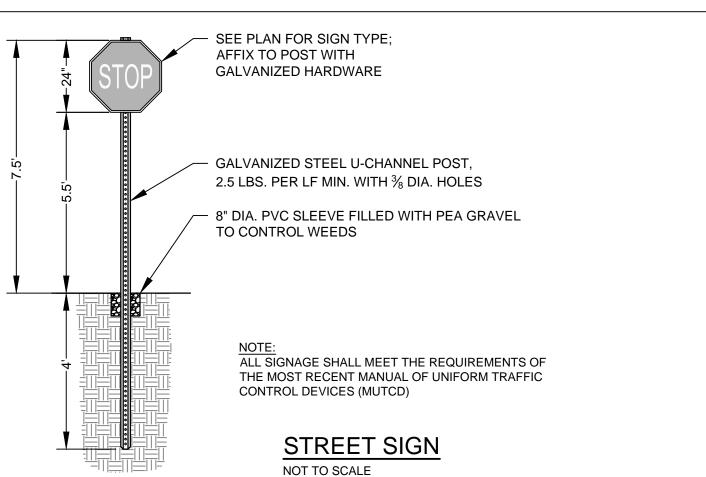


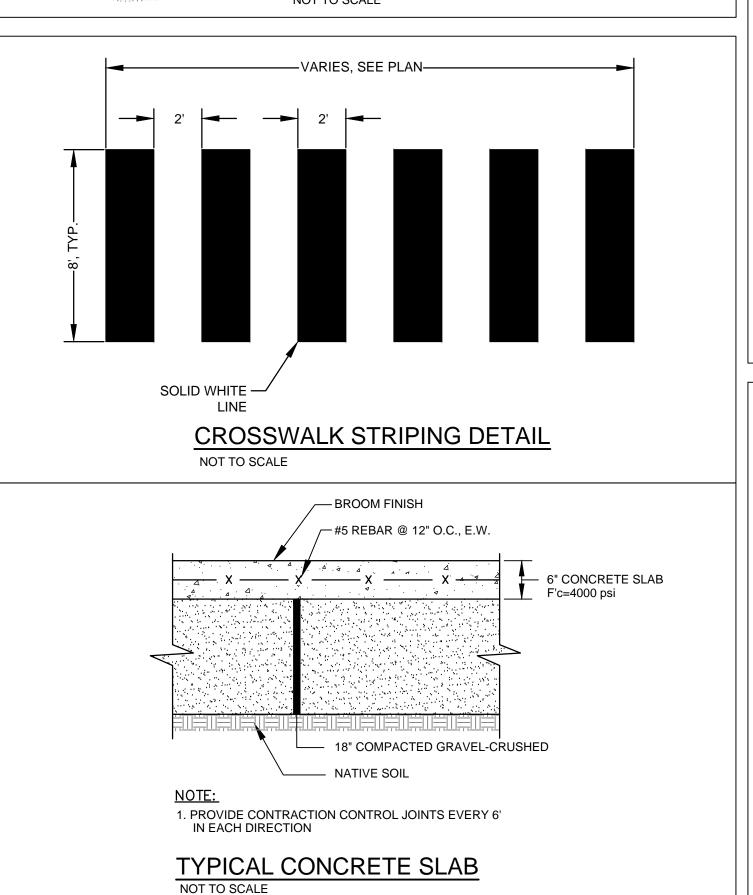
Inspection Notes for Lot Grading and Driveway location Inspections by a professional engineer shall consist of a visit to the site prior to construction to consult with the earthwork contractor and a post construction meeting to confirm grading on lots and for all driveways to ensure runoff is directed according to plans and to oversee the re-stabilization of the lot into a vegetated cover.

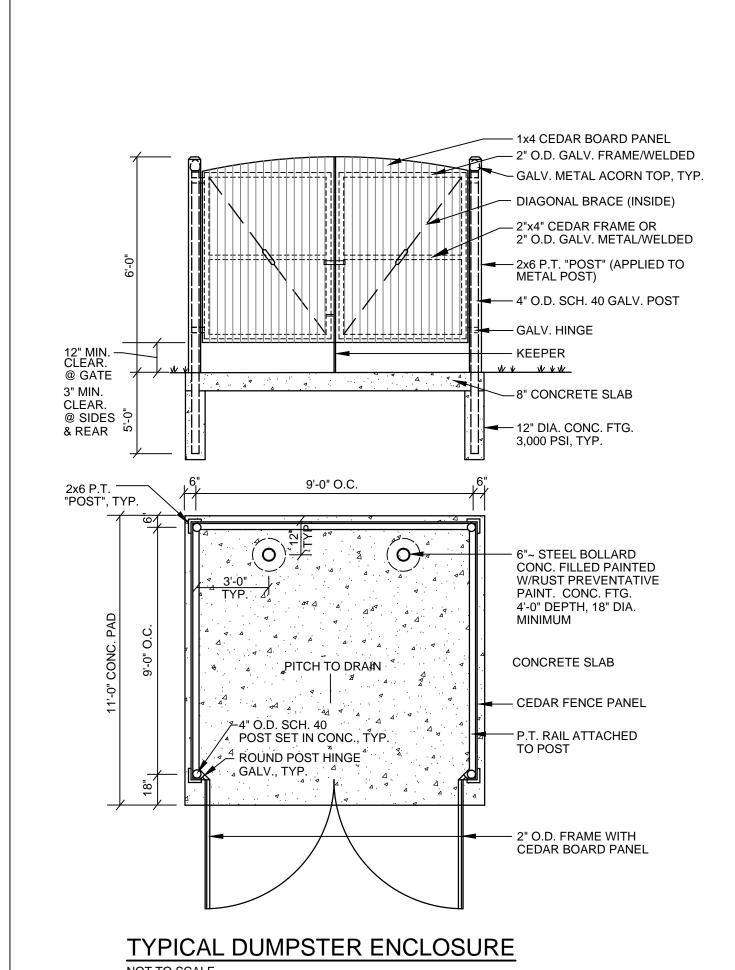
> TYPICAL EROSION CONTROL MEASURES FOR DWELLING UNITS NOT TO SCALE

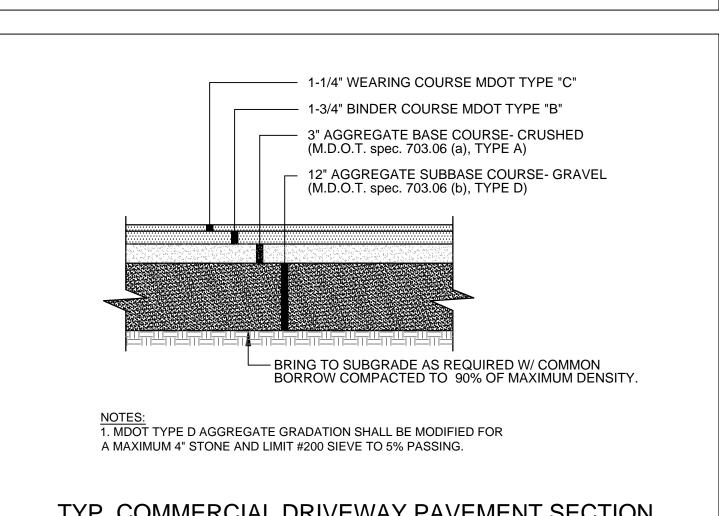




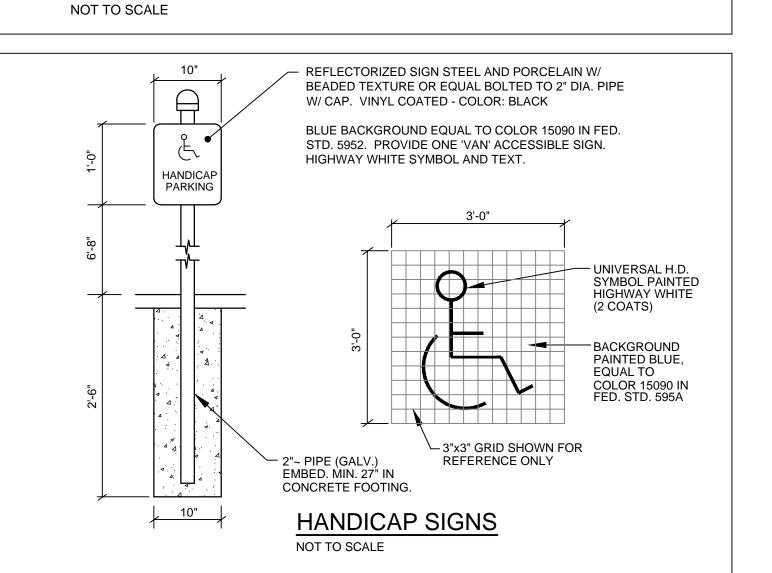


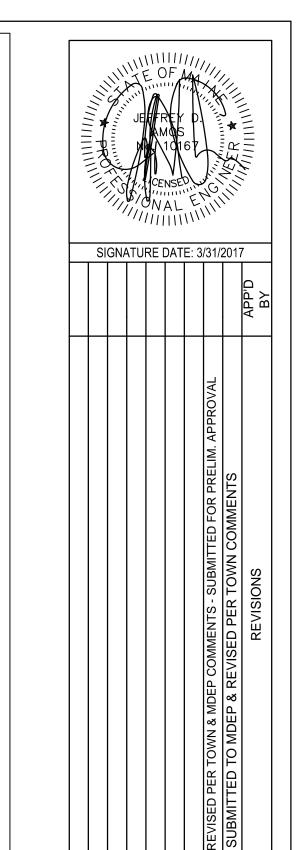








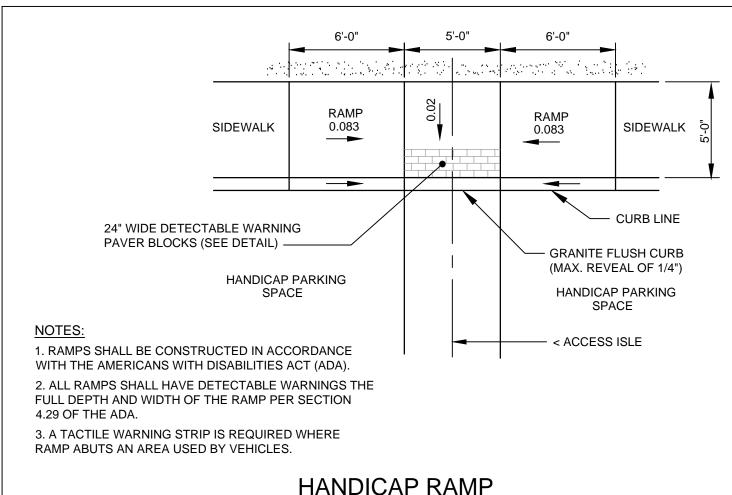




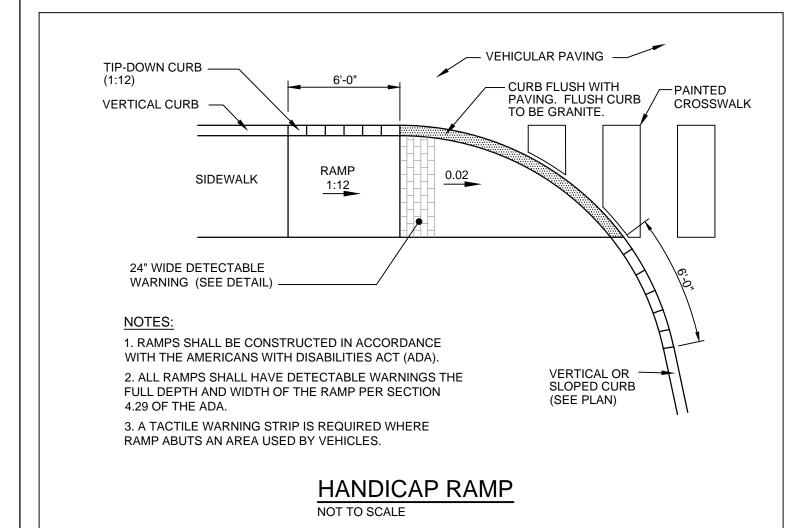
WINDHAM, ∞ర S O VIEWS EVELT TRAIL, ' & NOTES CUSTOM CHASE
290 BRIDGTON

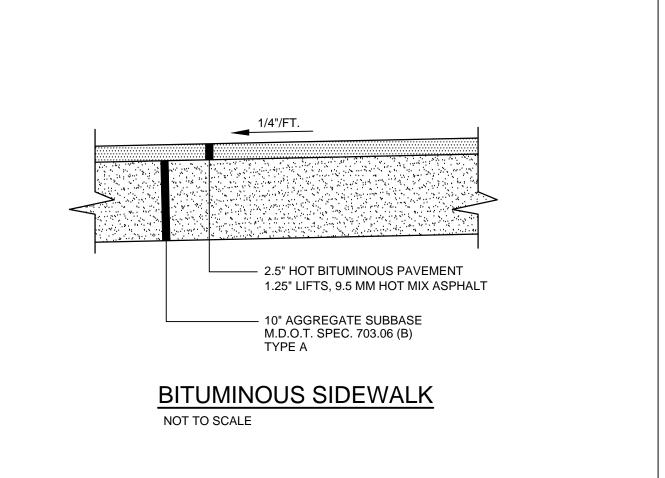
3/31/2017 SCALE: **AS SHOWN DESIGNED:** JDA JOB NO: 1636 FILE: 1636 D

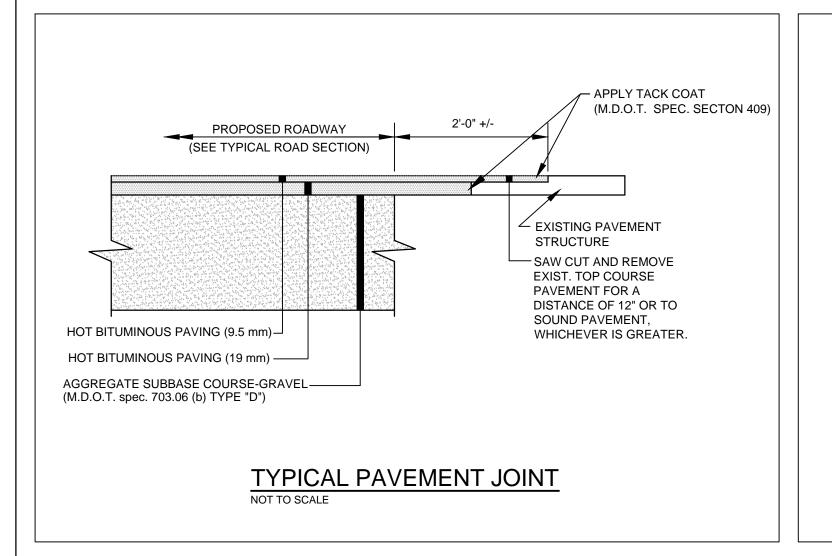
SHEET



# HANDICAP RAMP NOT TO SCALE







### CONSTRUCTION NOTES

### 1. All work shall conform to the applicable codes and ordinances.

2. Contractor shall visit the site and familiarize him or herself with all conditions affecting the proposed work and shall make provisions as to the cost thereof. Contractor shall be responsible for familiarizing him or herself with all contract documents, field conditions and dimensions and confirming that the work may be accomplished as shown prior to proceeding with construction. Any discrepancies shall be brought to the attention of the engineer prior to the commencement of work.

### 3. Contractor shall notify engineer of all products or items noted as "existing" which are not found in the field.

4. Install all equipment and materials in accordance with manufacturer's recommendations and owner's requirements unless specifically otherwise indicated or where local codes or regulations take precedence.

5. Contractor shall verify all dimensions and conditions in the field prior to fabrication and erection of any material. Any unusual conditions shall be reported to the attention of the engineer.

6. Contractor shall clean and remove debris and sediment deposited on public streets, sidewalks, adjacent areas, or other public ways due to construction.

7. Contractor shall incorporate provisions as necessary in construction to protect existing structures, physical features, and maintain site stability during construction. Contractor shall restore all areas to original condition and as directed by

### 8. Site contractor shall obtain all required permits prior to construction.

9. All erosion and sediment control measures shall be installed in accordance with "Maine Erosion and Sedimentation Control BMP's" published by the Maine DEP in 2003.. A copy of the manual can be found at http://maine.gov/dep/blwq/docstand/escbmps/index.htm. It shall be the responsibility of the contractor to possess a copy of the erosion control plan at all times.

10. The contractor is hereby cautioned that all site features shown hereon are based on field observations by the surveyor and by information provided by utility companies. The information is not to be relied on as being exact or complete. The contractor shall contact dig safe (1-888-digsafe) at least three (3) but not more than thirty (30) days prior to commencement of excavation or demolition to verify horizontal and vertical location of all utilities. Contractor shall be aware that dig safe only notifies its "member" utilities about the dig. When notified, dig safe will advise contractor of member utilities in the area. Contractor is responsible for identifying and contacting non-member utilities directly. Non-member utilities may include town or city water and sewer districts and small local utilities, as well as usg public works systems.

11. Contractors shall be responsible for compliance with the requirements of 23 mrsa 3360-a. It shall be the responsibility of the contractor to coordinate with the appropriate utilities to obtain authorization prior to relocation of any existing utilities which conflict with the proposed improvements shown on these plans. If a utility conflict arises, the contractor shall immediately notify the owner, the municipality and appropriate utility company prior to proceeding with any relocation

# 12. All pavement markings and directional signage shown on the plan shall conform to the manual of uniform traffic control devices (mutcd) standards.

13. All pavement joints shall be sawcut prior to paving to provide a durable and uniform joint.

14. No holes, trenches or structures shall be left open overnight in any excavation accessible to the public or in public rights-of-way.

15. All work within the public right-of-way shall require a M.D.O.T. Permit as well as permits from the town as applicable.

16. The proposed limits of clearing shown hereon are approximate based upon the proposed limits of site grading. The applicant reserves the right to perform normal forest management activities outside of the clearing limit as shown. Tree removal outside of the limits of clearing may be necessary to remove dead or dying trees or tree limbs. This removal is due to potential safety hazards and to promote proper forest growth.

17. Immediately upon completion of cuts/fills, the contractor shall stabilize disturbed areas in accordance with erosion control notes and as specified on plans.

18. The contractor shall be fully and solely responsible for the removal, replacement and rectification of all damaged and defective material and workmanship in connection with the contract work. The contractor shall replace or repair as directed by the owner all such damaged or defective materials which appear within a period of one year from the date of substantial completion.

19. All work performed by the general contractor and/or trade subcontractor shall conform to the requirements of local, state or federal laws, as well as any other governing requirements, whether or not specified on the drawings.

21. Where the terms "approved equal", "other approved", "equal to", "acceptable" or other general qualifying terms are used in these notes, it shall be understood that reference is made to the ruling and judgment of Terradyn Consultants, LLC

22. The general contractor shall provide all necessary protection for the work until turned over to the owner. Before the final acceptance of the project, the contractor shall remove all equipment and materials, repair or replace private or public property which may have been damaged or destroyed during construction, clean the areas within and adjacent to the project which have been obstructed by his/her operations, and leave the project area neat and presentable.

23. The general contractor shall maintain a current and complete set of construction drawings on site during all phases of construction for use of all trades.

24. The contractor shall take full responsibility for any changes and deviation of approved plans not authorized by the architect/engineer and/or client/owner.

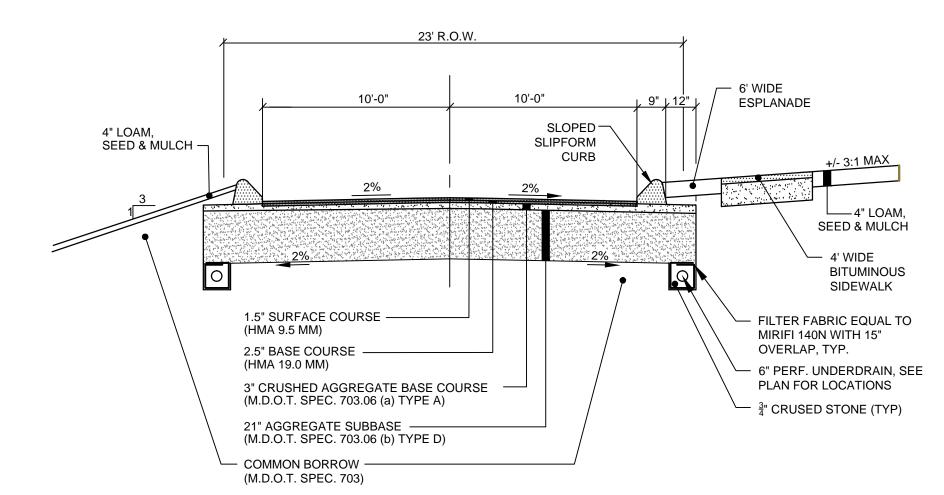
25. Details are intended to show end result of design. Any modification to suit field dimension and condition shall be

submitted to the engineer for review and approval prior to any work.

26. The applicant will retain the services of a professional engineer to inspect the construction and stabilization of all stormwater management structures. If necessary, the inspecting engineer will interpret the pond's construction plan for the contractor. Once all stormwater management structures are constructed and stabilized, the inspecting engineer will notify the department in writing within 30 days to state that the pond has been completed. Accompanying the engineer's notification must be a log of the engineer's inspections giving the date of each inspection, the time of each inspection, and the items inspected on each visit, and include any testing data or sieve analysis data of every mineral soil and soil media specified in the plans and used on site.

COMPOSITE DETECTABLE WARNING PANEL DETAIL

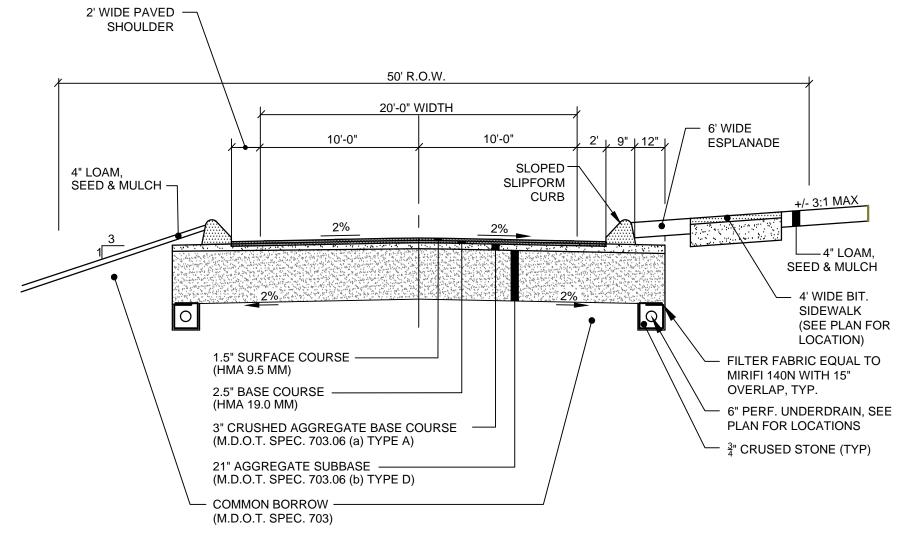
NOT TO SCALE



NOTE: FILL AREAS BENEATH DRIVING SURFACE SHALL BE GRANULAR BORROW. ALL OTHER FILL AREAS SHALL BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUB-GRADE CONSTRUCTION. EXCAVATED ONSITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. GRANULAR BORROW AND COMMON BORROW SHALL ADHERE TO MDOT SPECIFICATIONS 703.19 AND 703.18 RESPECTIVELY. ROCKS LARGER THAN 8" IN DIAMETER WILL NOT BE USED FOR EMBANKMENT CONSTRUCTION WITHIN A DEPTH OF 2 FEET BENEATH THE FINISHED ROADWAY SUBGRADE (PER MDOT SPECIFICATIONS 203.10)

### TYPICAL M.H.P. STREET SECTION

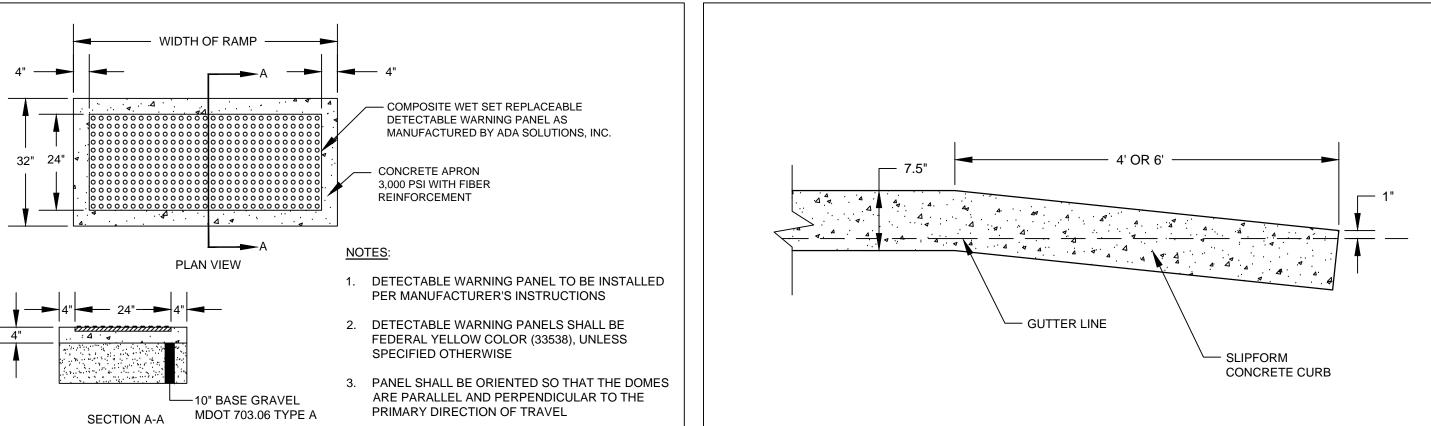
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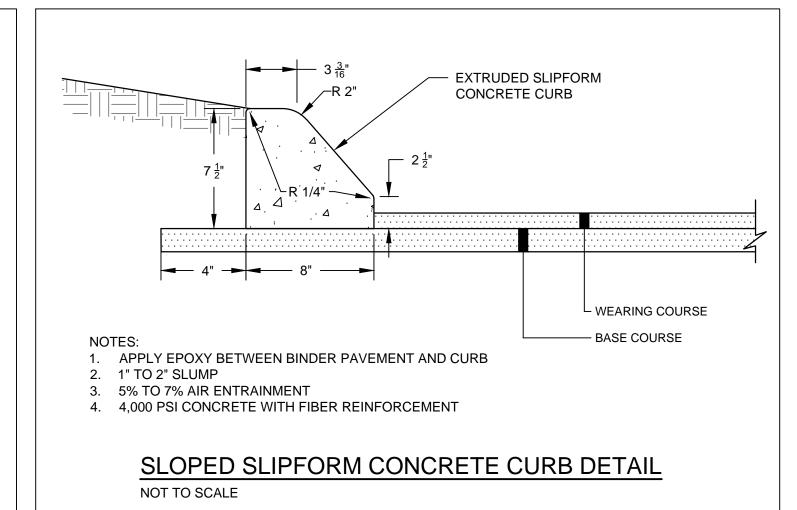
NOTE: FILL AREAS BENEATH DRIVING SURFACE SHALL BE GRANULAR BORROW. ALL OTHER FILL AREAS SHALL BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUB-GRADE CONSTRUCTION. EXCAVATED ONSITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. GRANULAR BORROW AND COMMON BORROW SHALL ADHERE TO MDOT SPECIFICATIONS 703.19 AND 703.18 RESPECTIVELY. ROCKS LARGER THAN 8" IN DIAMETER WILL NOT BE USED FOR EMBANKMENT CONSTRUCTION WITHIN A DEPTH OF 2 FEET BENEATH THE FINISHED ROADWAY SUBGRADE (PER MDOT SPECIFICATIONS 203.10)

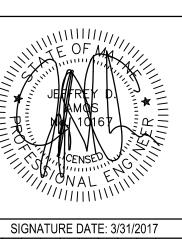
### TYPICAL MAJOR PRIVATE ROAD SECTION

NOT TO SCAL









ED PER TOWN & MDEP COMMENTS - SUBMITTED FOR PRELIM. APPROVAL

AITTED TO MDEP & REVISED PER TOWN COMMENTS

REVISIONS

BY

BY

. Box 339
erry Lane
ME 04260
926-5111
221-1317
tants.com

P.O. Box 35 111 Elderberry Lar New Gloucester, ME 0426 Office: (207) 926-51 Fax: (207) 221-133

ERRADYN

SEVELT TRAIL, WINDHAM, MES & NOTES

CUSTOM HOMES & FINANCE

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DATE: 3/31/2017

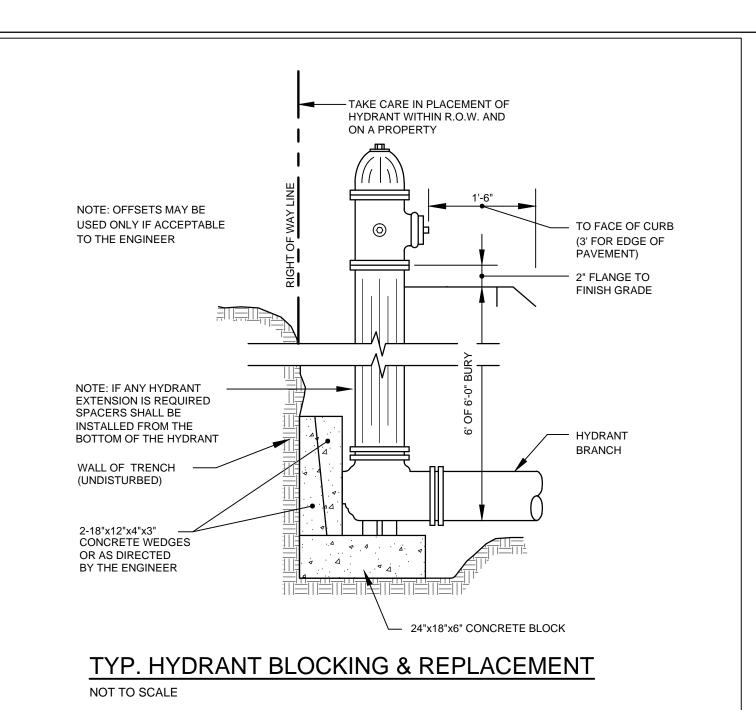
SCALE: AS SHOWN

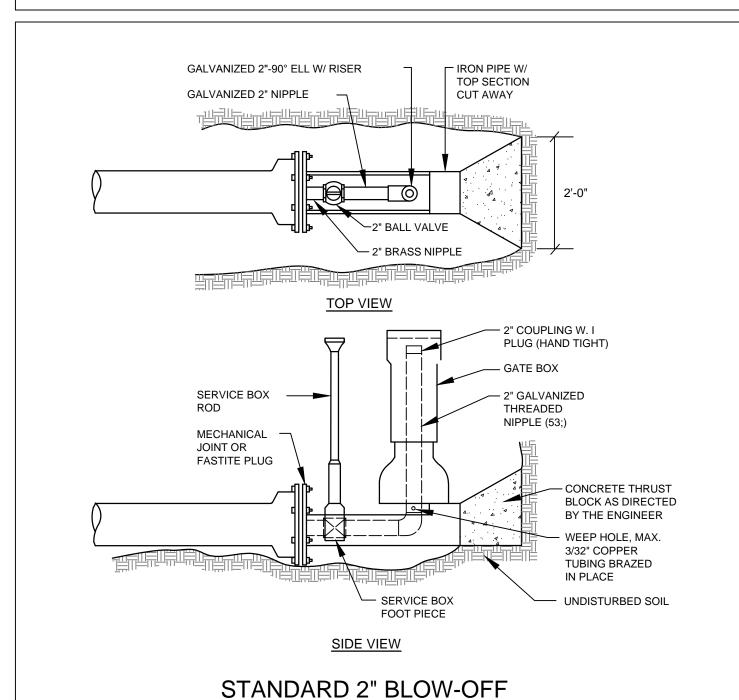
DESIGNED: JDA

JOB NO: 1636

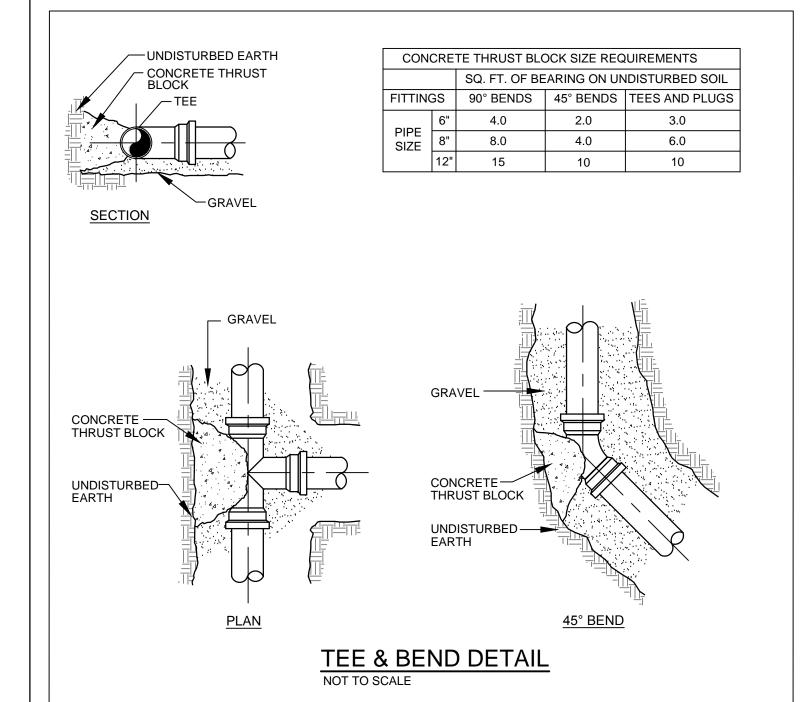
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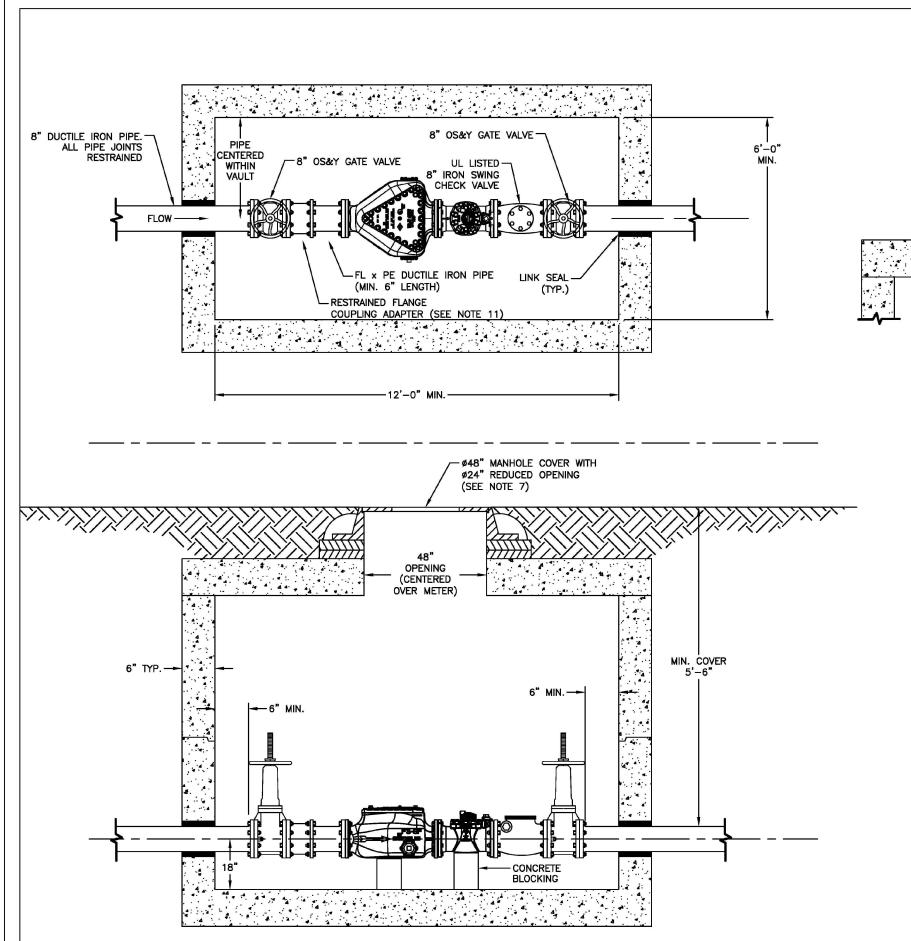
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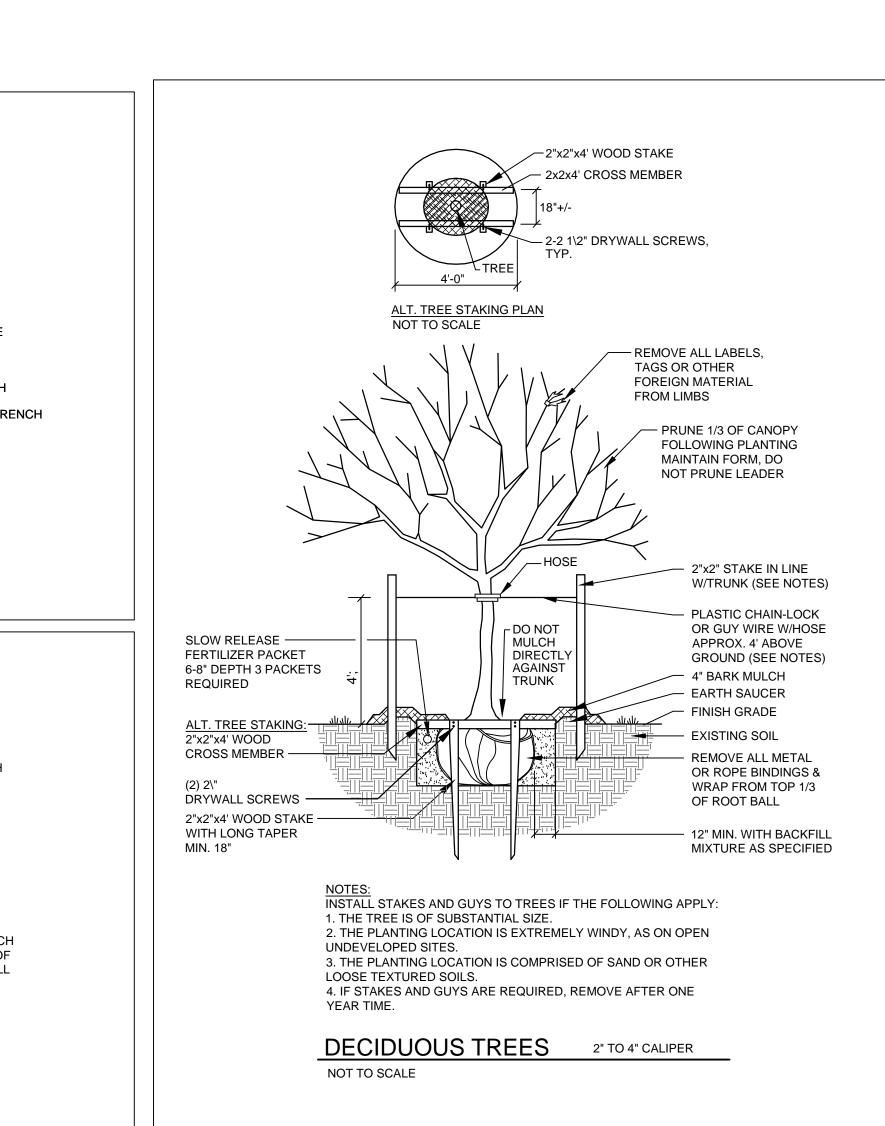




NOT TO SCALE







ALTERNATE OPENING

(NON-PAVED SURFACES ONLY)

THE PROPERTY LINE UNLESS OTHERWISE APPROVED BY PWD.

11. RESTRAINED FLANGE COUPLING ADAPTER SHALL BE FORD MODEL RFAD UNLESS

METER INSTALLATION

12. ONLY PWD PERSONNEL ARE AUTHORIZED TO INSTALL WATER METERS. PWD PERSONNEL ARE ADDITIONALLY AUTHORIZED TO OPERATE METER VALVES AS NEEDED FOR INSTALLATION AND MAINTENANCE.

13. PWD WILL SUPPLY THE WATER METER. ALL OTHER FITTINGS SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER.

PWD MAY REQUIRE THAT A FLANGED METER SPOOL PIECE BE INSTALLED PRIOR TO METER SET TO ENSURE PROPER SPACING. IF SO, THE METER SPOOL WILL BE PROVIDED BY PWD AND CAN BE PICKED UP AT PWD CUSTOMER SERVICE, 225

14. METER LAYING LENGTH SHOULD BE CONFIRMED WITH PWD PRIOR TO SETTING PIPE

DOUGLASS STREET, PORTLAND DURING NORMAL BUSINESS HOURS.

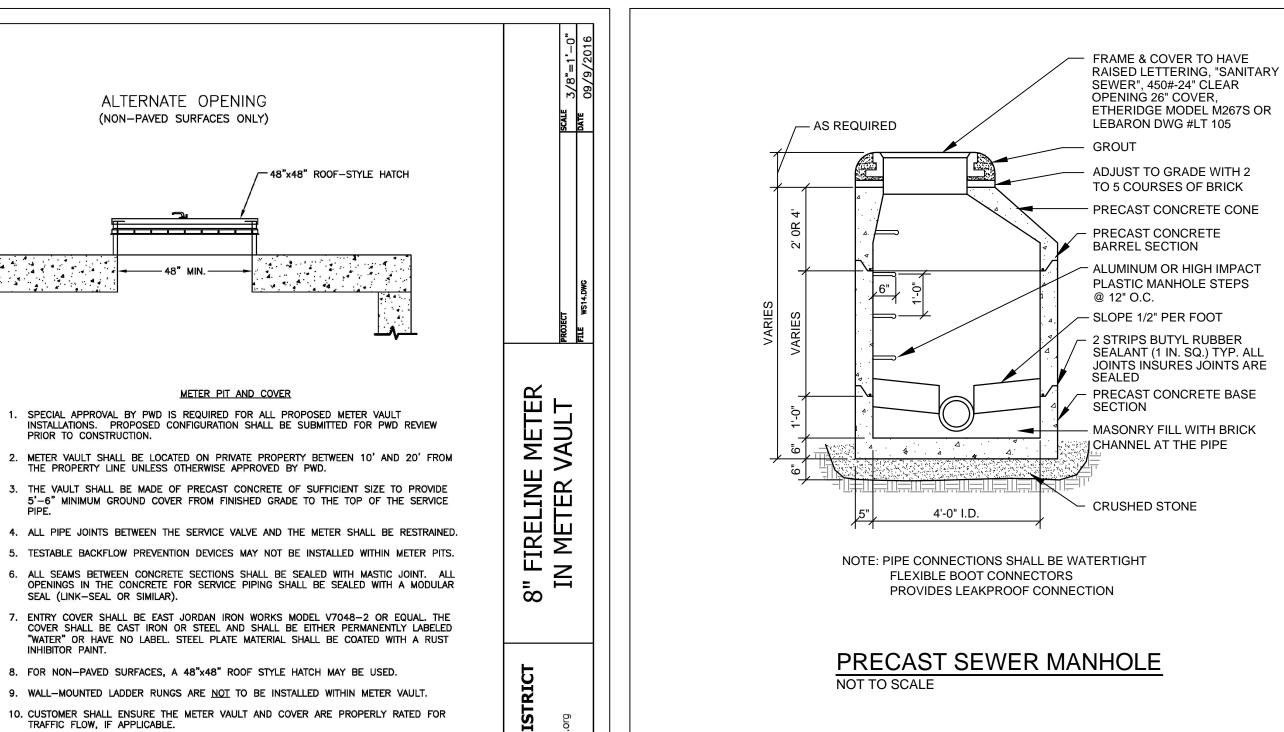
PRIOR TO CONSTRUCTION.

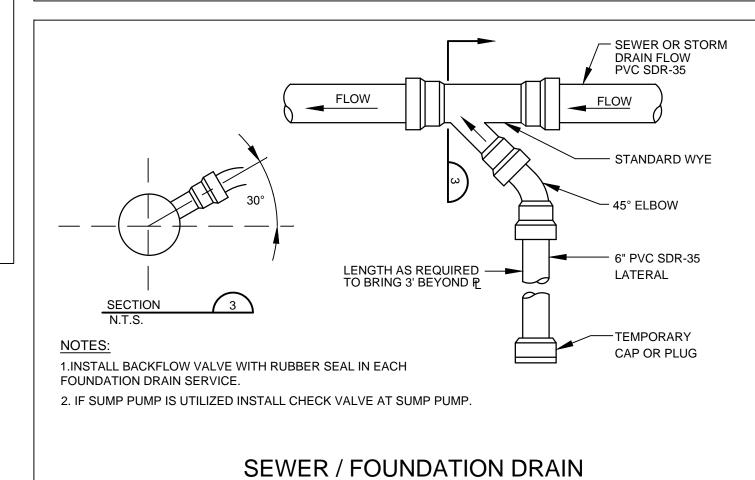
SEAL (LINK-SEAL OR SIMILAR).

TRAFFIC FLOW, IF APPLICABLE.

OTHERWISE APPROVED BY PWD.

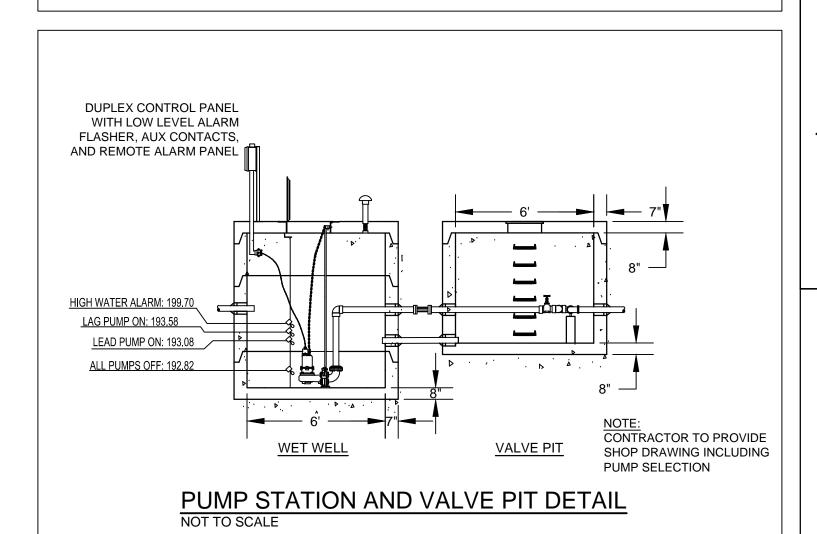
METER PIT AND COVER

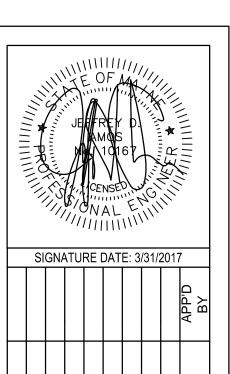




SERVICE CONNECTION

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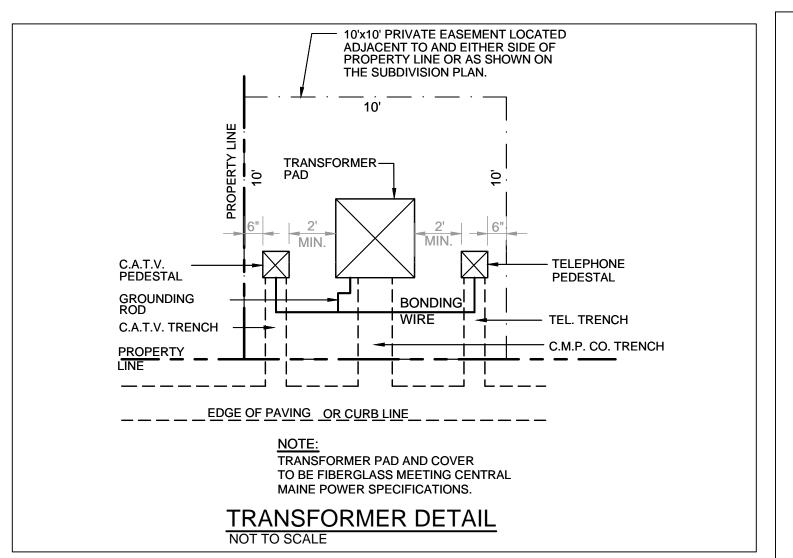
FINANCE WINDHAM,

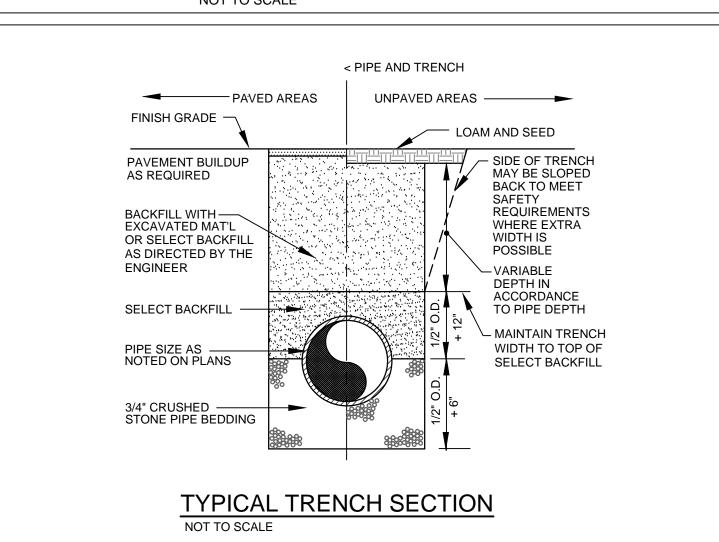
∞ర S CHA 290 BRIE 3/31/2017 **AS SHOWN** 

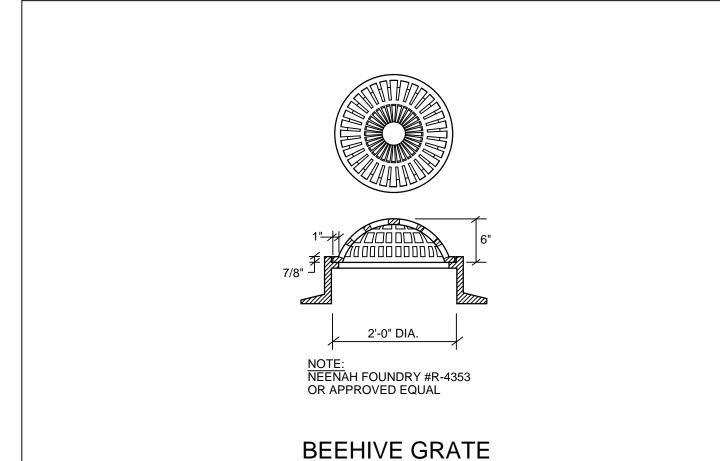
O VIEWS EVELT TRAIL, & NOTES

DATE: SCALE: JDA 1636

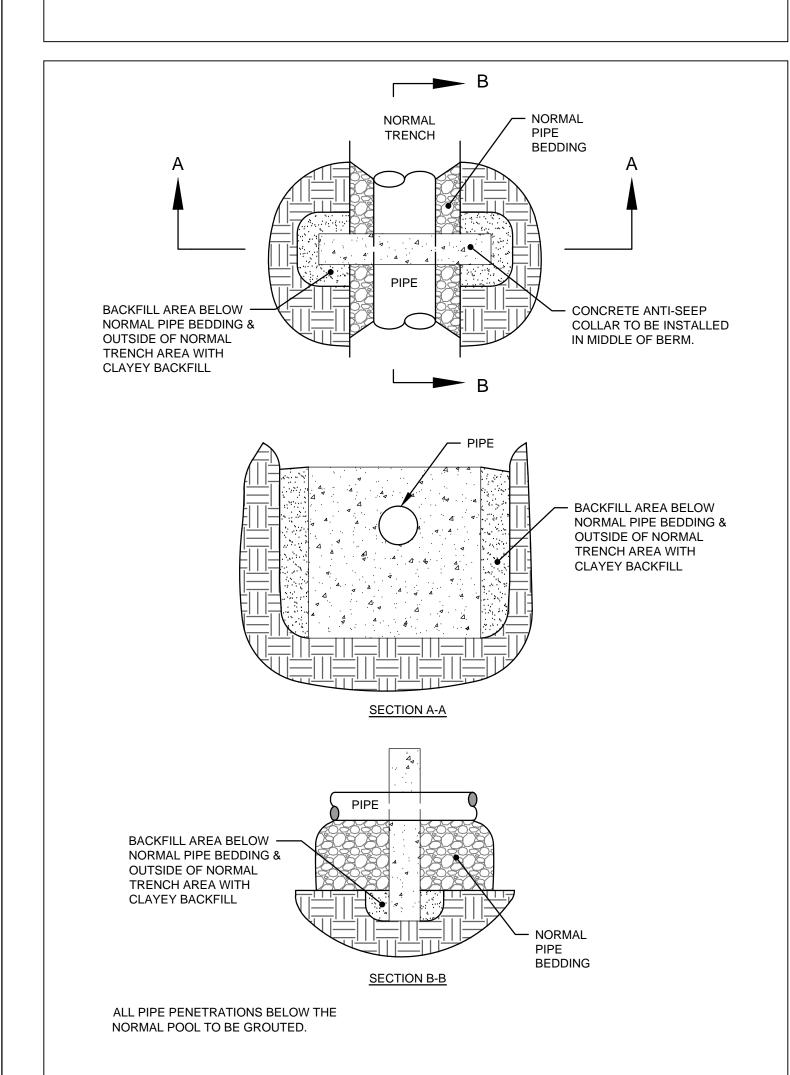
DESIGNED: JOB NO: FILE: 1636 D

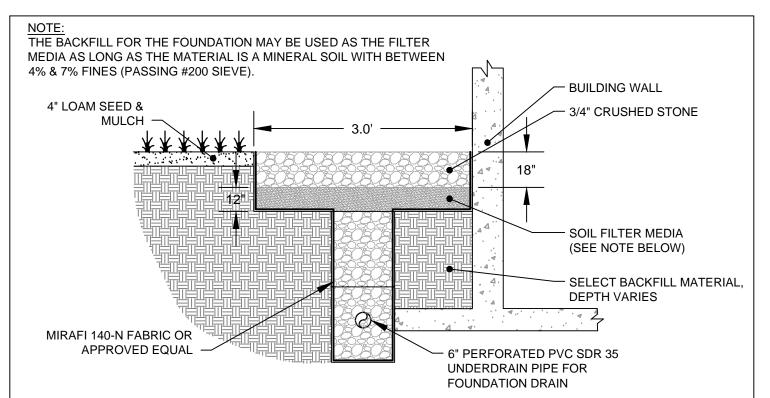






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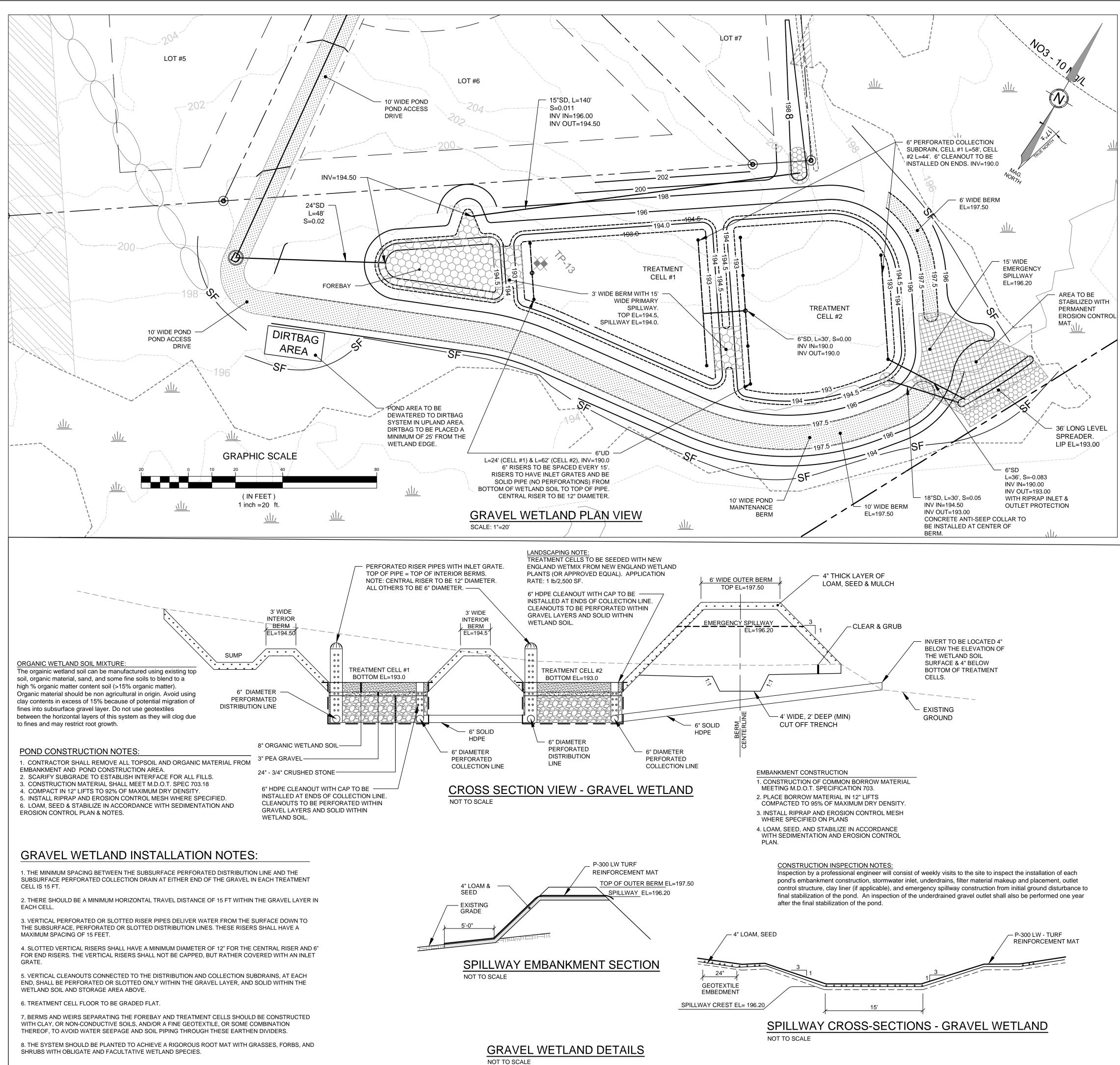




CONCRETE ANTI-SEEP COLLAR

CONSTRUCTION INSPECTION NOTES:
Inspections by a professional engineer shall consist of weekly visits to the site to inspect each the roof drip edge filter's underdrain construction, filter material placement, and overflow from initial ground disturbance to final stabilization of the filter.

ROOF DRIPLINE FILTER BED



SIGNATURE DATE: 3/31/2017

WINDHAM, S & NOTES

O VIEWS EVELT TRAIL, ATER DETAIL

SCALE:

DESIGNED:

FILE: 1636 D

JOB NO:

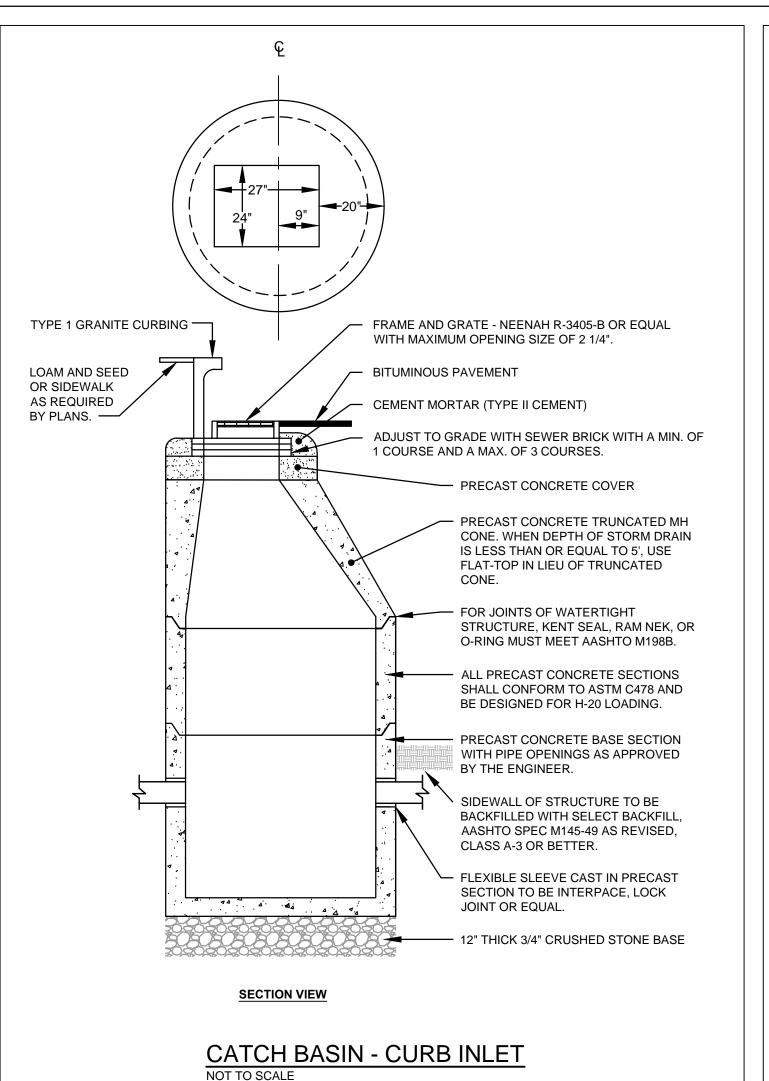
SHEET DESCRIPTION HIGHLAND 19 ROOSEV STORMWAT PREPARED FOR CHASE CUS 290 BRIDGTON ROAL WESTBROOK, MAINE

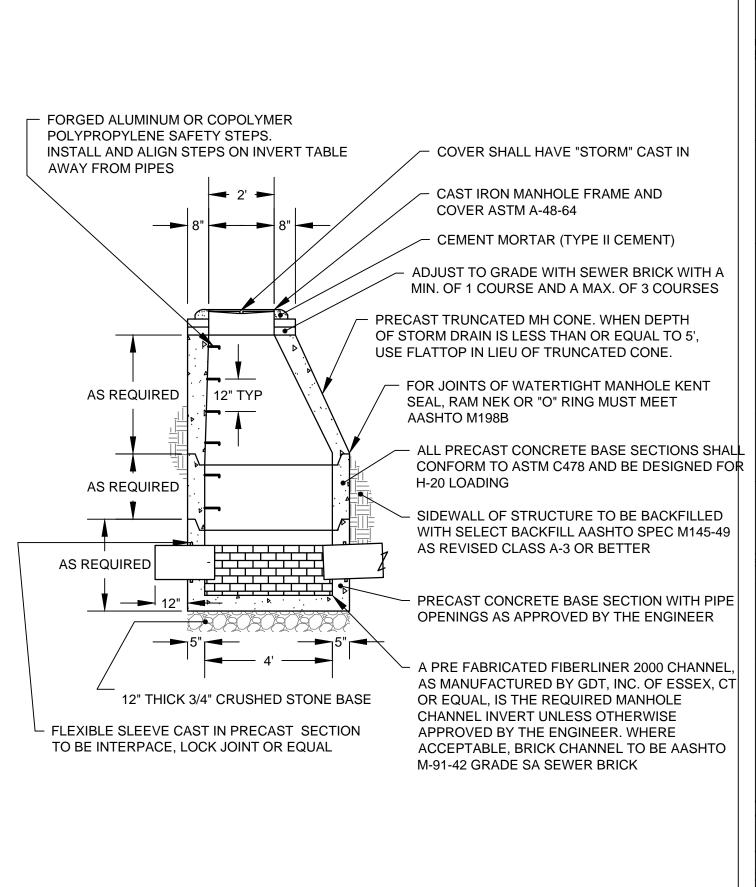
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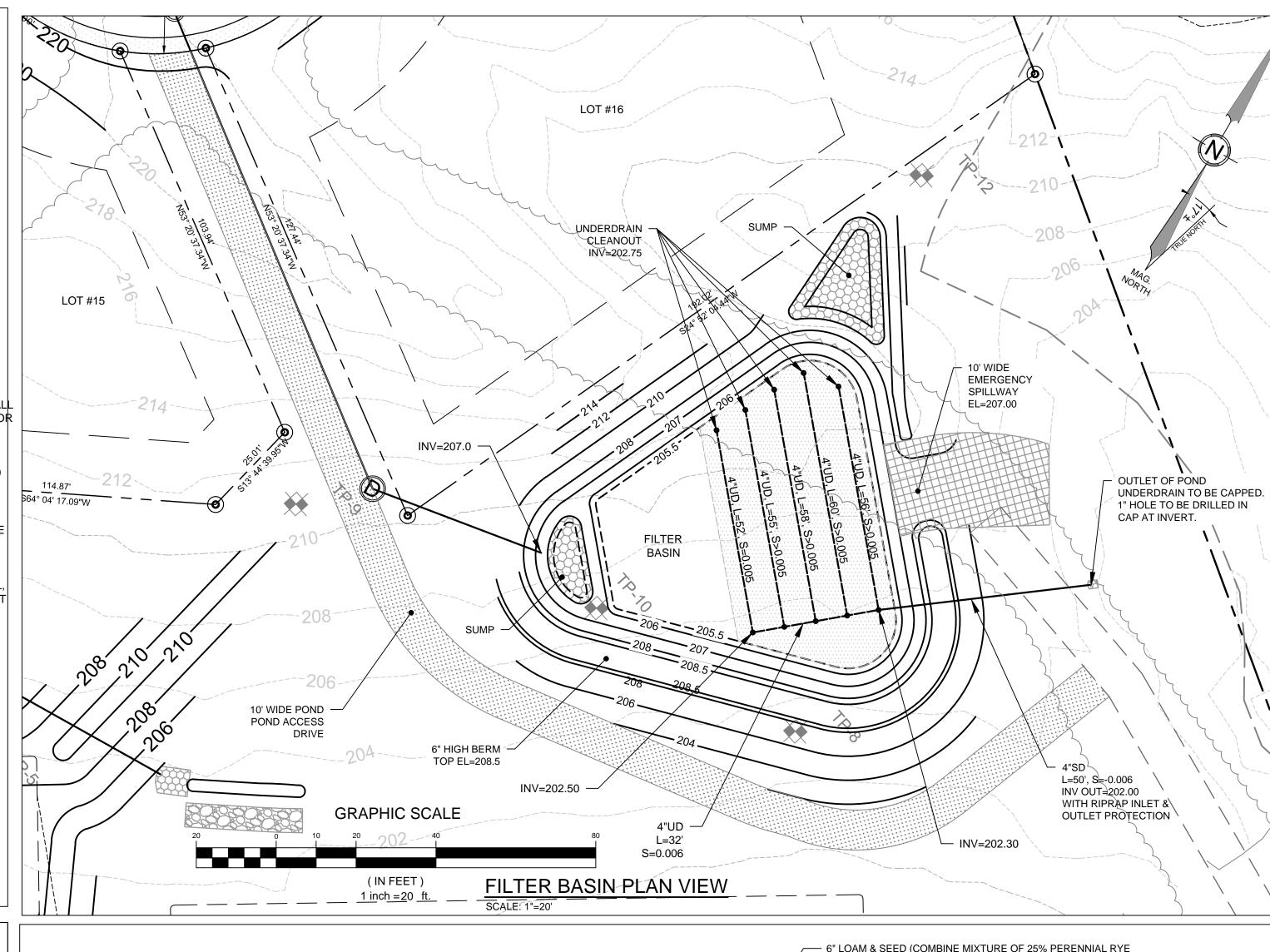
3/31/2017

1636

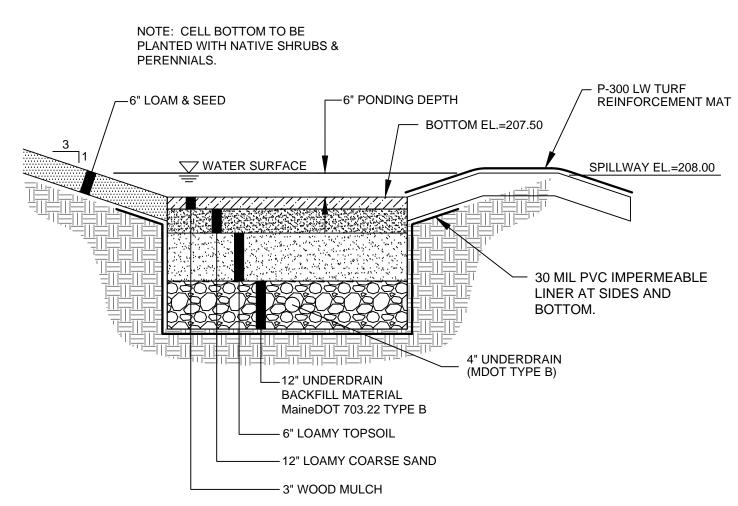
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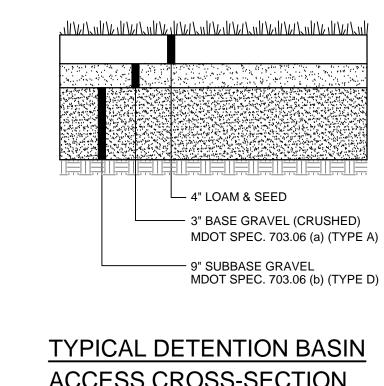


SHOWN IN SOIL FILTER MEDIA TABLE.



CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.

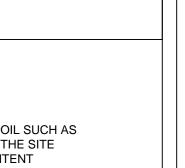
- 2. COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.
- 3. CONSTRUCTION OVERSIGHT: INSPECTION BY A PROFESSIONAL ENGINEER WILL OCCUR AT A MINIMUM: AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE
- INSTALLED BUT NOT BACKFILLED, AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA,
- AFTER THE FILTER MEDIA HAS BEEN INSTALLED, PLANTED, AND MULCHED. BIO-RETENTION CELLS MUST BE STABILIZED PER THE PROVIDED PLANTING SCHEME AND DENSITY FOR THE CANOPY COVERAGE OF 30 AND 50%. AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
- 4.  $\,$  ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.
- TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT
- ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL: • SELECT SAMPLES FOR SAMPLING OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM A SIEVE ANALYSIS CONFORMING TO STM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COURSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
- PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.



4' DIAMETER PRECAST STORM DRAIN MANHOLE

**ACCESS CROSS-SECTION** NOT TO SCALE

- LOAMY TOPSOIL LAYER SHALL BE A NON-CLAYEY (<2% CLAY CONTENT), LOAMY TOPSOIL SUCH AS USDA LOAMY SAND TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER. TOPSOIL FROM THE SITE MAY BE APPROPRIATE BUT MUST BE TESTED FOR ORGANIC CONTENT AND CLAY CONTENT (HYDROMETER TEST). THE SOIL MUST BE SCREENED, LOOSE, FRIABLE, AND SHALL BE FREE FROM ADMIXTURES OF SUBSOIL, REFUSE, STONES (GREATER THAN 2 INCHES IN DIAMETER), CLOGS, ROOT AND OTHER UNDESIRABLE FOREIGN MATTER.
- 2. TOPSOIL SHALL BE GENTLY MIXED WITH THE LOAMY COARSE SAND LAYER TO A DEPTH OF 2"-3".
- 3. LOAMY COARSE SAND SHALL MEET THE GRADATION REQUIREMENTS OF MaineDOT 703.01.
- 4. WOOD MULCH SHALL BE A MODERATELY FINE, SHREDDED BARK MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE.



Construction Sequence: The soil filter media and vegetation must not be installed until the area that drains to the filter has been permanently stabilized with pavement or other structure, 90% vegetation cover, or other permanent stabilization unless the runoff from the contributing drainage area is diverted around the filter until stabilization is completed.

Compaction of Soil Filter: Filter soil media and underdrain bedding material must be compacted to between 90% and 92% standard proctor. The bed should be installed in at least 2 lifts of 9 inches to prevent pockets **Construction Oversight:** Inspection by a professional engineer will occur at a minimum:

SPILLWAY SECTION - FILTER BASIN

P-300 LW TURF

REINFORCEMENT MAT

TOP OF BERM EL=208.50

SPILLWAY EL.=207.00

- After the preliminary construction of the filter grades and once the underdrain pipes are installed but not
- After the drainage layer is constructed and prior to the installation of the filter media, • After the filter media has been installed and seeded. Bio-retention cells must be stabilized per the provided

planting scheme and density for the canopy coverage of 30 and 50%.

EMBANKMENT CONSTRUCTION

WHERE SPECIFIED ON PLANS

1. CONSTRUCTION OF COMMON BORROW MATERIAL

COMPACTED TO 95% OF MAXIMUM DRY DENSITY.

3. INSTALL RIPRAP AND EROSION CONTROL MESH

4. LOAM, SEED, AND STABILIZE IN ACCORDANCE

WITH SEDIMENTATION AND EROSION CONTROL

MEETING M.D.O.T. SPECIFICATION 703.

2. PLACE BORROW MATERIAL IN 12" LIFTS

4" LOAM &

SEED

- EXISTING

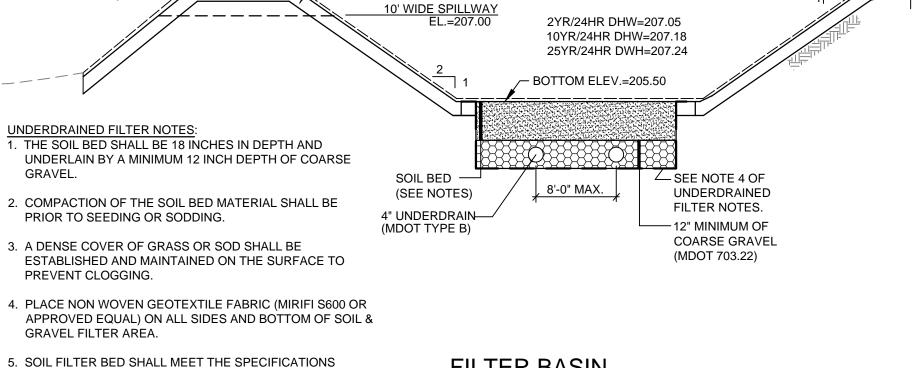
**CONSTRUCTION PHASE NOTES:** 

- After one year to inspect health of the vegetation and make corrections, and All the material used for the construction of the filter basin must be confirmed as suitable by the design
- engineer. Testing must be done by a certified laboratory to show that they are passing DEP specifications.

**Testing and Submittals:** The contractor shall identify the location of the source of each component of the filter media. All results of field and laboratory testing shall be submitted to the project engineer for confirmation. The contractor shall:

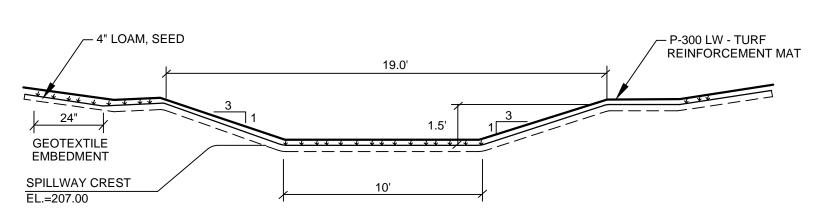
• Select samples for sampling of each type of material to be blended for the mixed filter media and samples

- of the underdrain bedding material. Samples must be a composite of three different locations (grabs) from the stockpile or pit face. Sample size required will be determined by the testing laboratory.
- Perform a sieve analysis conforming to STM C136 (Standard Test Method for Sieve Analysis of fine and Course Aggregates 1996A) on each type of the sample material. The resulting soil filter media mixture must have 8% to 12% by weight passing the #200 sieve, a clay content of less than 2% (determined hydrometer grain size analysis) and have 10% dry weight of organic matter.
- Perform a permeability test on the soil filter media mixture conforming to ASTM D2434 with the mixture compacted to 90-92% of maximum dry density based on ASTM D698.



GRASS 50% CANOPY REED GRASS, 25% CREEPING RED

FILTER BASIN



# SPILLWAY CROSS-SECTION - FILTER BASIN

			SOIL FILTER MEDIA TABLE
	FILTER MEDIA	MIXTURE BY VOLUME	SPECIFICATION
	SAND	50%-55%	MEDOT SPEC. 703.01 FINE AGGREGATE FOR CONCRETE
	TOPSOIL	20%-30%	LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15-25% FINES PASSING THE #200 SIEVE.
	MULCH	20%-30%	MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE
FILTER BASIN DETAILS		ļ	

SIGNATURE DATE: 3/31/2017

WINDHAM, S & NOTES

DATE:

SCALE:

DESIGNED:

FILE: 1636 D

JOB NO:

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TOM

CHA 290 BRIE

3/31/2017

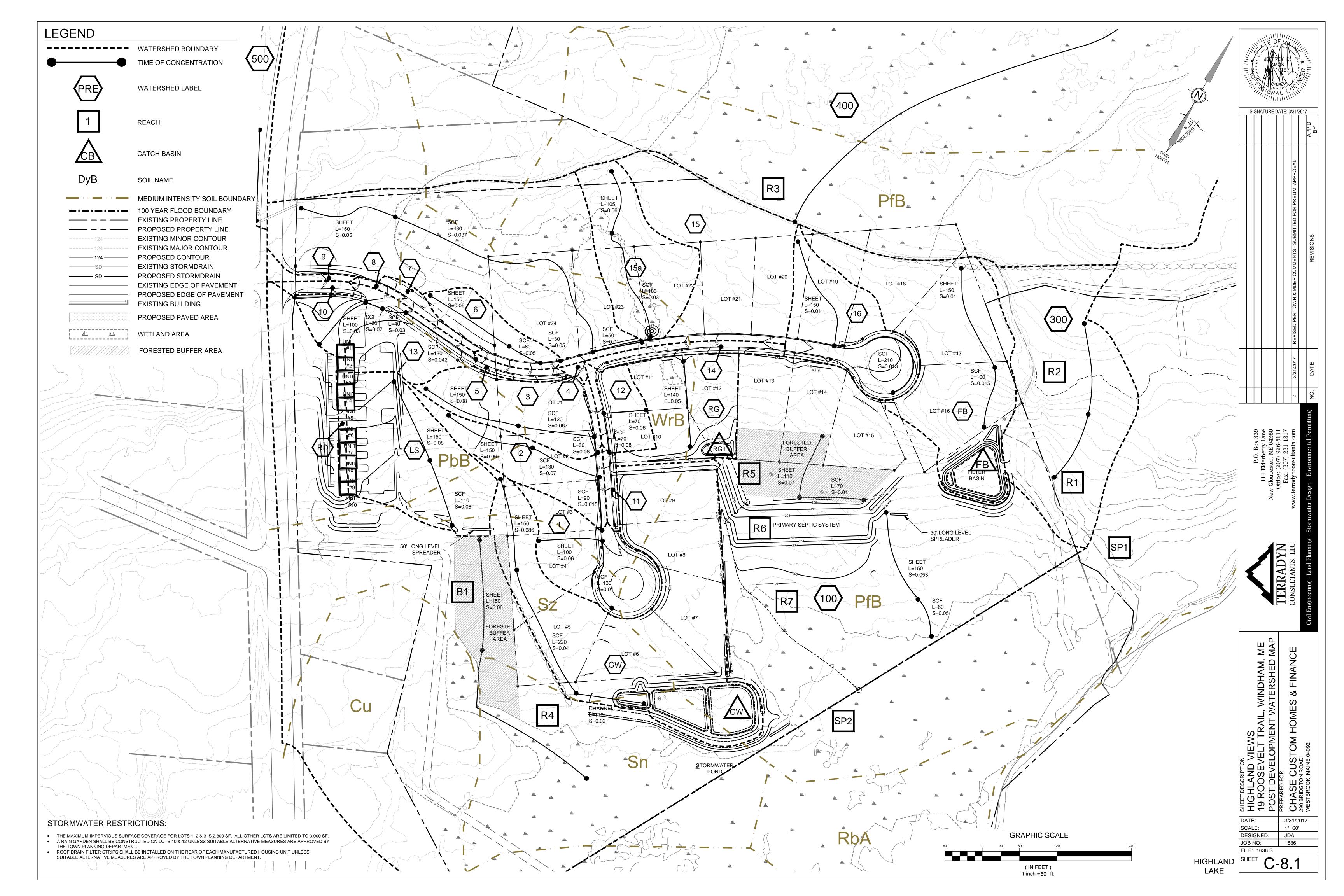
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**AS SHOWN** 

### UNDERDRAINED RAIN GARDEN DETAILS AND NOTES NOT TO SCALE





	Funant Bus Tractment Bost	Lot 5 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Worksheet 1		
Land Surface Type or Lot #(s)	Export   Pre-   Treatment   Post-     Acres   Coefficient   treatment   Factor for   treatment     or # of   from   Algal Av. P   BMP(s)   Algal Av. P   Description of BMPs	Lot 5 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Project name: Highland Views		TE OF AM
with description	lots Table 3.1 Export from Export Table 3.2 (lbs P/year) Chapter 6 (lbs P/year)	Lot 5 Roof (Rear)         0.017         0.5         0.0085         0.16         0.00136         Gravel Wetland + Roof Filter           Lot 5 Grass         0.111         0.3         0.0333         0.25         0.008325         Gravel Wetland	Lake name: Highland Lake	Forested Buffer with Level Lip Spreader	
		Lot 6 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Town name: Windham	The buffer contains soils that are consistent with Soil Group C sandy loam or loamy sand. <i>Table 6</i>	
WS-1	Subdivision	Lot 6 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Standard Calculation	<ul> <li>Sizing Requirements for a buffer with 0-8% slope and stone bermed level lip spreader of Chapter</li> <li>500 shows that standard sizing requires that the berm length for a forested buffer must be 75'</li> <li>per acre of impervious area and 25' per acre of lawn. Evaluation of the watershed shows that it</li> </ul>	
Roadway Impervious	0.164 1.25 0.205 0.25 0.05125 Gravel Wetland	Lot 6 Roof (Rear)         0.017         0.5         0.0085         0.16         0.00136         Gravel Wetland + Roof Filter           Lot 6 Grass         0.203         0.3         0.0609         0.25         0.015225         Gravel Wetland	Windham Area	contains the following: Impervious area = 13,068 SF (0.30 Ac)	ONAL ENIL
Roadway Pervious	0.093 0.3 0.0279 0.25 0.006975 Gravel Wetland	Lot 6 Grass 0.203 0.3 0.0609 0.25 0.015225 Gravel Wetland  Lot 7 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland		Lawn area = $5,000 \text{ SF } (0.11 \text{ Ac})$ Standard sizing: $75(0.30) + 0.11(25) = 22.5' + 2.9' = 25.4'$ . $25.4'$ would yield a treatment factor of $0.4$ .	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
WS-2 Roadway Impervious	0.029 1.25 0.03625 0.25 0.0090625 Gravel Wetland	Lot 7 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Watershed per acre phosphorus budget (Appendix C): PAPB 0.027   Ibs P/acre/year  Total acreage of development parcel: TA 38.3   acres	Oversized to TF of 0.2: BMP <sub>TF</sub> =0.4(BMP <sub>TF</sub> / TF) = 0.4(25.4/0.2)=50'	SIGNATURE DATE: 3/31/2017
Roadway Pervious	0.002 0.3 0.0006 0.25 0.00015 Gravel Wetland	Lot 7 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Gravel Wetland + Roof Filter	NWI wetland acreage: WA acres	Forested Buffer Adjacent to Residential Lot	
Apartment Pervious	0.046 0.3 0.0138 0.25 0.00345 Gravel Wetland	Lot 7 Grass 0.203 0.3 0.0609 0.25 0.015225 Gravel Wetland  Lot 8 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Steep slope acreage:  SA 0 acres  Existing developed area  O acres	The buffer contains soils that are consistent with Soil Group C sandy loam or loamy sand. <i>Table 9</i> – Buffer Size Requirements Based on Soil & Vegetative Cover Types of Chapter 500 shows that	t
WS-3		Lot 8 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Project acreage: A = TA - (WA + SA )  A 38.3 acres	standard sizing requires that the standard length of flow path for a forested buffer to be 75'. We are proposing a buffer with a 100' long flow path which yields a treatment factor of 0.2:	
Roadway Impervious  Roadway Pervious	0.026         1.25         0.0325         0.25         0.008125         Gravel Wetland           0.002         0.3         0.0006         0.25         0.00015         Gravel Wetland	Lot 8 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Gravel Wetland + Roof Filter	Project Phosphorus Budget: PPB = P x A PPB	Oversized to 110' flow path: TF = 0.4 (BMP <sub>st</sub> /BMP <sub>TF</sub> )= $0.4(75/110)$ =0.27	VAL
Apartment Pervious	0.034 0.3 0.0102 0.25 0.00255 Gravel Wetland	Lot 8 Grass 0.23 0.3 0.069 0.25 0.01725 Gravel Wetland  Lot 9 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland		Treatment Factors for Multiple BMPS  TF=(most efficient BMP) x (least efficient BMP) <sup>1/2</sup>	PPRO
WS-4		Lot 9 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Falmouth Area	Roof drain filter strip with gravel wetland or filter basin: $0.25 \times (0.4^{1/2}) = 0.158 = 0.16$	IM. A
Roadway Impervious  Roadway Pervious	0.018         1.25         0.0225         0.25         0.005625         Gravel Wetland           0.001         0.3         0.0003         0.25         0.000075         Gravel Wetland	Lot 9 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Gravel Wetland + Roof Filter	Watershed per acre phosphorus budget (Appendix C): PAPB 0.027 lbs P/acre/year  Total acreage of development parcel: TA 15.02 acres	Roof drain filter strip with 110' long buffer: $0.27 \times (0.4^{1/2}) = 0.171 = 0.17$	PREL
WS-5		Lot 9 Grass 0.203 0.3 0.0609 0.25 0.015225 Gravel Wetland  Lot 10 Impervious 0.024 1.25 0.03 0.25 0.0075 Gravel Wetland	NWI wetland acreage:  WA 12.72 acres	Observation Hole # TP 4 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Boring   Observation Hole # TP 5 1 Test Pit   Observation Hole # 5 1 Test Pit   Observation Hole	FOR
Roadway Impervious	0.046 1.25 0.0575 0.25 0.014375 Gravel Wetland	Lot 10 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Steep slope acreage: SA  0 acres	Depth of organic horizon above mineral soil Depth of organic horizon above mineral soil	
Roadway Pervious WS-6	0.02 0.3 0.006 0.25 0.0015 Gravel Wetland	Lot 10 Grass 0.07 0.3 0.021 0.25 0.00525 Gravel Wetland	Existing developed area 0 acres	Texture Consistency Color Mottling  Texture Consistency Color Mottling  Texture Consistency Color Mottling  Texture Consistency Color Mottling	
Roadway Impervious	0.031 1.25 0.03875 0.25 0.0096875 Gravel Wetland	Lot 11 Impervious 0.025 1.25 0.03125 0.25 0.0078125 Gravel Wetland  Lot 11 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Project acreage: A = TA - (WA + SA )  Project Phosphorus Budget: PPB = P x A  PPB 0.0621   Ibs P/vear	THE TOTAL TO	13-8
Roadway Pervious	0.042 0.3 0.0126 0.25 0.00315 Gravel Wetland	Lot 11 Grass 0.07 0.3 0.021 0.25 0.00525 Gravel Wetland	Total Project Phosphorus Budget	18 ISPON SEMMON SOMMON	J J J J J J J J J J J J J J J J J J J
WS-7	0.024 4.05 0.0405 0.05 0.040025 0.75 0.040415774	Lot 20 Grass 0.078 0.3 0.0234 0.25 0.00585 Gravel Wetland	PPB 1.0962	is the second se	
Roadway Impervious  Roadway Pervious	0.034         1.25         0.0425         0.25         0.010625         Gravel Wetland           0.035         0.3         0.0105         0.25         0.002625         Gravel Wetland	Lot 21 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland  Lot 21 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Land Surface Type Acres Coefficient treatment Factor for treatment  Or Lot #(s) Or # of from Algal Av. P. RMP(s) Algal Av. P. Description of RMPs	SAND SAND BROWN NOWE & 36 BROWN	
WS-8		Lot 21 Roof         0.017         0.5         0.0085         0.25         0.002125         Gravel Wetland           Lot 21 Roof (Rear)         0.017         0.5         0.0085         0.16         0.00136         Gravel Wetland + Roof Filter	or Lot #(s) or # of from Algal Av. P BMP(s) Algal Av. P Description of BMPs with description lots Table 3.1 Export from Export Table 3.2 (lbs P/year) Chapter 6 (lbs P/year)	42 CPA 6 42 PT 18 17 = -48"	
Roadway Impervious	0.019 1.25 0.02375 0.25 0.0059375 Gravel Wetland	Lot 21 Grass 0.203 0.3 0.0609 0.25 0.015225 Gravel Wetland		Soil Classification Slope Limiting Factor Groundwater 48 Soil Classification Slope Limiting Factor Groundwater 5 6 Restrictive Layer Bedrock	
WS-9  Roadway Impervious	0.029 1.25 0.03625 0.25 0.0090625 Gravel Wetland	Lot 22 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Subdivision  Existing House 0.079 1.25 0.09875 0.5 0.049375 50% of the house that drains to ditches	Profile Condition Percent Depth Pri Depth Profile Condition Percent Depth Pri Depth	
WS-10	, , , , , , , , , , , , , , , , , , ,	Lot 22 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland  Lot 22 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Gravel Wetland + Roof Filter	Existing Roads 0.392 0.5 0.196 0.5 0.098 50% of roads that have channelized flow		
Roadway Impervious	0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Lot 22 Grass 0.203 0.3 0.0609 0.25 0.015225 Gravel Wetland	Tatal Tatal	Observation Hole # TP- C  Test Pit  Boring  Observation Hole # TP- 7  Test Pit  Boring    " Depth of organic horizon above mineral soil   " Depth of organic horizon above min	
Roadway Pervious WS-11	0.017   0.3   0.0051   0.25   0.001275   Gravel Wetland	Lot 23 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Total   Total   Pre-PPE   0.29475   PostPPE   0.147375	Texture Consistency Color Mottling Texture Consistency Color Mottling	710
Roadway Impervious	0.04 1.25 0.05 0.25 0.0125 Gravel Wetland	Lot 23 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland  Lot 23 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Gravel Wetland + Roof Filter	(Ibs P/year) (Ibs P/year)	TOM FRIABLE PED TO THE TOTAL TOT	//31/20
Roadway Pervious	0.017 0.3 0.0051 0.25 0.001275 Gravel Wetland	Lot 23 Grass 0.203 0.3 0.0609 0.25 0.015225 Gravel Wetland	Project name: Highland Views	& COMM I PLANT DES	
WS-12	0.040 4.05 0.0575 0.05 0.044075 0.00 0.044075	Lot 24 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Project Phosphorus Budget - Worksheet 1 PPB 1.10 lbs P. / woor	18 SICT CIPM COMMON IS 18 18 18 18 18 18 18 18 18 18 18 18 18	
Roadway Impervious  Roadway Pervious	0.046         1.25         0.0575         0.25         0.014375         Gravel Wetland           0.018         0.3         0.0054         0.25         0.00135         Gravel Wetland	Lot 24 Roof 0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland  Lot 24 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Gravel Wetland + Roof Filter	Project Phosphorus Budget - Worksheet 1 PPB 1.10 lbs P / year	THE STATE OF THE S	
WS-13		Lot 24 Grass 0.134 0.3 0.0402 0.25 0.01005 Gravel Wetland	Total Pre-Treatment Phosphorus Export - Worksheet 2 Pre-PPE 4.66 lbs P / year	10 SIG FIRM	
Roadway Impervious	0.084 1.25 0.105 0.25 0.02625 Gravel Wetland	Lots to Filter Basin	Total Post-Treatment Phosphorus Export - Worksheet 2 Post-PPE 1.18 lbs P / year	Soil Classification Slope Limiting Factor Groundwater  Soil Classification Slope Limiting Factor Groundwater  Restrictive Layer  Restrictive Layer	339 ane 260 111 317 com
Roadway Pervious  Apartment Impervious	0.056         0.3         0.0168         0.25         0.0042         Gravel Wetland           0.093         1.25         0.11625         0.25         0.0290625         Gravel Wetland	Lot 16 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Filter Basin  Lot 16 Roof 0.017 0.5 0.0085 0.25 0.002125 Filter Basin		Profile Condition Percent Depth   Pit Depth   Profile Condition   Percent Depth   Pit Dept	Box 3 rry La E 042 26-51 21-13 nts. c
Apartment Roof	0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Lot 16 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Filter Basin + Roof Filter	Total Phosphorus Mitigation Credit - Worksheet 3 TMC 0.15 lbs P / year	Site Evaluator Signature SE # Date	2.0. erbei sr, M 77) 93 77) 23 sulta
Apartment Pervious	0.22 0.3 0.066 0.25 0.0165 Gravel Wetland	Lot 16 Grass 0.203 0.3 0.0609 0.25 0.015225 Filter Basin	Project Phosphorus Export (Post-PPE - TMC) PPE 1.03 lbs P / year	PAGE OF FORM F Rev. 07/11  SOIL PROFILE / CLASSIFICATION INFORMATION DETAILED DESCRIPTION OF SUBSUPERIOR OF COUNTY OF THE PROFILE OF THE P	1 Elda ceste ceste :: (20 :: (20 ncon
WS-14 Roadway Impervious	0.103 1.25 0.12875 0.25 0.0321875 Gravel Wetland	Lot 17 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Filter Basin  Lot 17 Roof 0.017 0.5 0.0085 0.25 0.002125 Filter Basin		Project Name:  DEER POND SELF STORE PATCO CONSTRUCTION SUBSURFACE CONDITIONS AT PROJECT SITES  Project Location (municipality):  HOLLIS	1111 Glouc Office Fax: radyr
Roadway Pervious	0.042 0.3 0.0126 0.25 0.00315 Gravel Wetland	Lot 17 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Filter Basin + Roof Filter	Is the Project Phosphorus Export sufficiently reduced?  (PPE< PPB)  -0.06   lbs P / year	Exploration Symbol # TP-L Stest Pit  Boring  Probe  Exploration Symbol # TP-L Stest Pit  Boring  Probe	New Gl Off F Ww.terra
WS-15		Lot 17 Grass 0.111 0.3 0.0333 0.25 0.008325 Filter Basin	If PPE is less than or equal to PPB, the project meets its phosphorus budget (neg. #)	"Depth of exploration or to refusal "Depth of exploration or to refusal  Texture Consistency Color Redox Features  Texture Consistency Color Redox Features	[ MW.
Roadway Impervious  Roadway Pervious	0.085         1.25         0.10625         0.25         0.0265625         Gravel Wetland           0.012         0.3         0.0036         0.25         0.0009         Gravel Wetland	Lot 18 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Filter Basin  Lot 18 Roof 0.017 0.5 0.0085 0.25 0.002125 Filter Basin	If PPE is more than PPB, more reduction in phosphorus export may be required (pos. #)  GRAVEL WETLAND  FILTER BASIN	SAND BROWN	
WS-15A		Lot 18 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Filter Basin + Roof Filter	WATERSHED IMPERVIOUS AREA= 83150 SF WATERSHED IMPERVIOUS AREA= 60702 SF	MEDIUM YELLOW LOAMY LOUSE DARK 820 SAND	ð
Roadway Impervious	0 1.25 0 0.25 0 Gravel Wetland	Lot 18 Grass 0.203 0.3 0.0609 0.25 0.015225 Filter Basin	WATERSHED LANDSCAPED AREA= 126850 SF WATERSHED LANDSCAPED AREA= 70738 SF  REQUIRED WQV= 11158 CF REQUIRED WQV= 7416 CF	See SAND BROWN & 20 SAND BROWN	<b>1</b> → 0
Roadway Pervious WS-16	0 0.3 0 0.25 0 Gravel Wetland	Lot 19 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Filter Basin  Lot 19 Roof 0.017 0.5 0.0085 0.25 0.002125 Filter Basin	PROVIDED WQV= 17963 CF PROVIDED WQV= 7515 CF  TREATMENT FACTOR= 0.25 (0.25 Max) TREATMENT FACTOR= 0.39 (0.25 Max)	S 30 GENERAL STATURES STATURES SAND FIRM ROUND WATER	S, LI S
Roadway Impervious	0.203 1.25 0.25375 0.25 0.0634375 Filter Basin	Lot 19 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Filter Basin + Roof Filter	STAGE AREA STORAGE	40 AT AT -7'	AD
Roadway Pervious	0.108 0.5 0.054 0.25 0.0135 Filter Basin	Lot 19 Grass 0.203 0.3 0.0609 0.25 0.015225 Filter Basin	STAGE   AREA   STORAGE   (FT) (SF) (CF)	\$ 50 GOASSE!	R. S. TILL
WS-FB Roadway Impervious	0 1.25 0 0.25 0 Gravel Wetland	Lot 20 Impervious 0.035 1.25 0.04375 0.25 0.0109375 Filter Basin  Lot 20 Roof 0.017 0.5 0.0085 0.25 0.002125 Filter Basin	193 900 0 WQV EL= 71.3 5066 3694	60 S.E. Soli Classification Slope Limiting Factor Groundwater S.E. Soli Classification Slope Limiting Factor Groundwater	TER
Roadway Pervious	0 0.3 0 0.25 0 Gravel Wetland	Lot 20 Roof (Rear) 0.017 0.5 0.0085 0.16 0.00136 Filter Basin + Roof Filter	194 1300 1100 194.5 1500 1800 71.8 5626 6367 72 5850 7515	Profile Condition Percent Depth Bedrock  Soll Series (Phase Name)  Soll Series (Phase Name)	<b>L</b> 33
WS-GW		Lot 20 Grass 0.125 0.3 0.0375 0.25 0.009375 Filter Basin	Cell #1 STAGE AREA STORAGE  (FT) (SF) (CF)  Rain Garden #1	Soil Group  Soil Group  Nor-hydric Soil Group	
Roadway Impervious  Roadway Pervious	0         1.25         0         0.25         0         Gravel Wetland           0         0.3         0         0.25         0         Gravel Wetland	Lots to Other BMPs  Lot 10 Impervious  0.01  1.25  0.0125  0.4  0.005  Rain Garden	193 4350 0 WATERSHED IMPERVIOUS AREA 2875 SF  194 195 4350 0 WATERSHED LANDSCAPED AREA 15000 SF	Observation Hole # TP-18  Test Pit  Boring  Observation Hole # TP-19  Test Pit  Boring	
WS-LS		Lot 10 Roof (Rear) 0.017 0.5 0.0085 0.4 0.0034 Roof Drain Filter	194.5 5500 7388 PROVIDED WQV= 773 CF	Depth of organic horizon above mineral soil  Texture Consistency Color Mottling  Texture Consistency Color Mottling  Texture Consistency Color Mottling	<u> </u>
Roadway Impervious	0 1.25 0 0.2 0 150' Long Buffer with Level Spreader	Lot 10 Grass 0.133 0.3 0.0399 0.4 0.01596 Rain Garden	Cell #2 STAGE AREA STORAGE  (FT) (SF) (CF)  TREATMENT FACTOR= 0.38 (0.25 Max)		Z Z B
Roadway Pervious  Apartment Impervious	0         0.3         0         0.2         0         150' Long Buffer with Level Spreader           0.224         1.25         0.28         0.2         0.056         150' Long Buffer with Level Spreader	Lot 11 Impervious         0.01         1.25         0.0125         0.4         0.005         Rain Garden #4           Lot 11 Roof Rear         0.017         0.5         0.0085         0.4         0.0034         Roof Drain Filter	193 5300 0 STAGE AREA STORAGE (CF)	3 12 SICT BRAND COMMON	AN ED
Apartment Impervious  Apartment Roof	0.224 1.25 0.28 0.2 0.096 150 Long Buffer with Level Spreader  0.067 0.5 0.0335 0.2 0.0067 150' Long Buffer with Level Spreader	Lot 11 Grass 0.11 0.3 0.033 0.4 0.0132 Rain Garden #4	194 6033 5667 194.5 6400 8775 WQV EL= 206 916 773	18 18 COM FIRM CROY COMMON TO REPORT	X H N N N N N N N N N N N N N N N N N N
Apartment Pervious	0.129 0.3 0.0387 0.2 0.00774 150' Long Buffer with Level Spreader	Lot 12 Impervious 0.043 1.25 0.05375 0.4 0.0215 Rain Garden #4	Total Pond STAGE AREA STORAGE	BROW BROW 30	ÄN ⊗
WS-RD Apartments Roof	0.067 0.5 0.0335 0.4 0.0134 Roof Drain Filter	Lot 12 Roof         0.017         0.5         0.0085         0.4         0.0034         Rain Garden #4           Lot 12 Roof Rear         0.017         0.5         0.0085         0.4         0.0034         Roof Drain Filter	(FT)         (SF)         (CF)           193         10550         0           Map unit symbol         Map unit name         Rating		W   X   S
ots to Gravel Wetland	, 5.55,   5.5   5.5500   5.7   5.0154  Root Dialit Filler	Lot 12 Grass 0.18 0.3 0.054 0.4 0.0016 Rain Garden #4	194 12450 11500  194.5 13400 17963  Cu Cut and fill land	VIEVEN = -45"	NIL, T W
Lot 1 Impervious	0.03 1.25 0.0375 0.25 0.009375 Gravel Wetland	Lot 13 Impervious 0.035 1.25 0.04375 0.27 0.0118125 110' Forested Buffer, HSG C	194.51 13200 17963 sandy loam, 8 to 20 percent slopes	Soil Classification Slope Limiting Factor of Groundwater  Soil Classification Slope Limiting Factor of Groundwater  Classification Slope Limiting Factor of Groundwater  Soil Classification Slope Limiting Factor of Groundwater  Restrictive Layer  Bedrock  Profile Condition Percent Depth Pri Depth	\( \frac{1}{2} \frac{1}{2} \frac{1}{2} \rightarrow \)
Lot 1 Roof  Lot 1 Roof (Rear)	0.017         0.5         0.0085         0.16         0.00136         Gravel Wetland + Roof Filter           0.017         0.5         0.0085         0.25         0.002125         Gravel Wetland	Lot 13 Roof 0.017 0.5 0.0085 0.27 0.002295 110' Forested Buffer, HSG C  Lot 13 Roof Rear 0.017 0.5 0.0085 0.17 0.001445 100' Forested Buffer + Roof Filte	196 15773 39547 197 17500 56425  HSE Hollis very rocky fine sandy loam, 20 to 35 percent slopes		M M
Lot 1 Grass	0.017         0.5         0.0085         0.25         0.002125         Gravel Wetland           0.139         0.3         0.0417         0.25         0.010425         Gravel Wetland	Lot 13 Grass 0.172 0.3 0.0516 0.27 0.013932 110' Forested Buffer, HSG C	PbB Paxton fine sandy loam, C 3 to 8 percent slopes	Observation Hole # Test Pit Boring Observation Hole # Test Pit Boring	
Lot 2 Impervious	0.03 1.25 0.0375 0.25 0.009375 Gravel Wetland	Lot 14 Impervious 0.035 1.25 0.04375 0.27 0.0118125 110' Forested Buffer, HSG C	PfB Paxton very stony fine C sandy loam, 3 to 8 percent slopes	Depth of organic horizon above mineral soil Depth of organic horizon above mineral soil	FOUR VEL
Lot 2 Roof	0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Lot 14 Roof 0.017 0.5 0.0085 0.27 0.002295 110' Forested Buffer, HSG C  Lot 14 Roof Rear 0.017 0.5 0.0085 0.17 0.001445 100' Forested Buffer + Roof Filte	PfC Paxton very stony fine sandy loam, 8 to 15 percent slopes	Texture Consistency Color Mottling  Texture Consistency Color Mottling  Texture Consistency Color Mottling	AN OSI OSI FOR TON R
Lot 2 Roof (Rear) Lot 2 Grass	0.017         0.5         0.0085         0.16         0.00136         Gravel Wetland + Roof Filter           0.082         0.3         0.0246         0.25         0.00615         Gravel Wetland	Lot 14 Grass 0.169 0.3 0.0507 0.27 0.013689 110' Forested Buffer, HSG C	RbA Ridgebury fine sandy loam, 0 to 3 percent slopes	12 9g 12	HE SO
Lot 3 Impervious	0.03 1.25 0.0375 0.25 0.009375 Gravel Wetland	Lot 15 Impervious 0.035 1.25 0.04375 0.27 0.0118125 110' Forested Buffer, HSG C	RgA Ridgebury very stony fine sandy loam, 0 to		HEET IN A PARAMETER OF THE PARAMETER OF
Lot 3 Roof	0.017 0.5 0.0085 0.25 0.002125 Gravel Wetland	Lot 15 Roof Rear 0.017 0.5 0.0085 0.27 0.002295 110' Forested Buffer, HSG C	Sn Scantic sit loam, 0 to 3 percent slopes	30 30	
I	0.017 0.5 0.0085 0.16 0.00136 Gravel Wetland + Roof Filter	Lot 15 Roof Rear 0.017 0.5 0.0085 0.17 0.001445 100' Forested Buffer + Roof Filte   Lot 15 Grass 0.088 0.3 0.0264 0.27 0.007128 110' Forested Buffer, HSG C	Sp Sebago mucky peat A/D	. 36	DATE: 3/31/2017 SCALE: NTS
Lot 3 Roof (Rear)	0.139   0.3   0.0417   0.25   0.010425   Graph Wetland	1	Sz Swanton fine sandy C/D		
Lot 3 Roof (Rear)  Lot 3 Grass  Lot 4 Impervious	0.139         0.3         0.0417         0.25         0.010425         Gravel Wetland           0.035         1.25         0.04375         0.25         0.0109375         Gravel Wetland		loam   W Water		DESIGNED: JDA
Lot 3 Grass		Total Total Pre-PPE 4.66305 PostPPE 1.179024	W Water  WrB Woodbridge fine sandy loam, 0 to 8 percent	48 Soil Classification Slope Limiting Factor Groundwater Restrictive Layer 48 Soil Classification Slope Limiting Factor Groundwater Restrictive Layer	JOB NO: 1636 FILE: 1636 S
Lot 3 Grass  Lot 4 Impervious	0.035 1.25 0.04375 0.25 0.0109375 Gravel Wetland	Total Total	W Water WrB Woodbridge fine sandy C	Soil Classification Slope Limiting Factor Groundwater Restrictive Layer Depth Profile Condition Percent Depth Pri Depth	JOB NO: 1636