

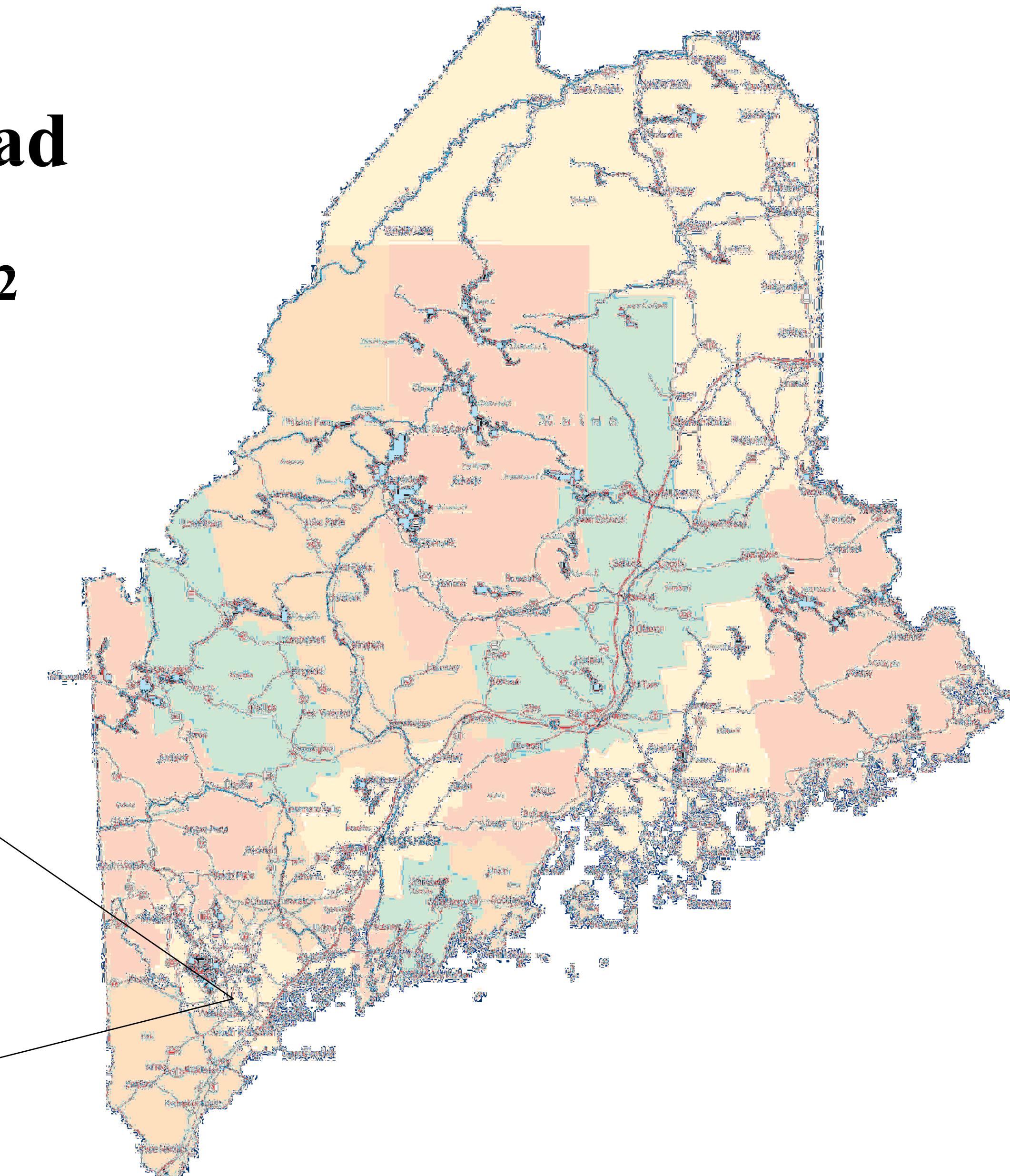
Matt Hancock Properties

PO. Box 295

Casco, Maine 04015

Owner Matt Hancock Properties PO. Box 295 Casco, Maine 04015 Tel: (207)-	Engineer of Record Kirk J. Ball, P.E. Acheron Engineering Services 147 Main Street Newport, ME 04953 Tel: 207-368-5700
Boundary Survey Plisga & Day 72 Main Street Bangor, ME, 04401 Tel: (207)-947-0019	Code Enforcement Director Town of Windham Christopher Hanson 8 School Road Windham, ME, 04062 Tel: (207)-894-5960 ext. 1

Durant Homestead Chute Road Windham, Maine 04062



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(207)-368-5700

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Acheron International, Inc.

GENERAL NOTES:

1. THE TERM "INSPECTION" BY THE ENGINEERS AS USED HEREIN SHALL MEAN, INCLUDE AND BE LIMITED TO THE FOLLOWING:
 - VISUAL OBSERVATIONS OF WORK COMPLETED BY THE CONTRACTOR,
 - MEASUREMENTS OF PHYSICAL FEATURES AND COMPONENTS COMPLETED BY THE CONTRACTOR USING LAND SURVEYING EQUIPMENT TYPICALLY USED BY ENGINEERS AND SURVEYORS AND
 - OBSERVATIONS OF LABELS ON MATERIALS AND EQUIPMENT SUPPLIED BY THE CONTRACTOR.
2. LOCATE AND MARK ALL PROJECT BOUNDARIES PRIOR TO CONSTRUCTION.
3. LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME.
4. INSTALL SEDIMENT BARRIERS PRIOR TO DISTURBING SOILS.
5. MARK SOIL DISTURBANCE LIMITS.
6. MULCH EXPOSED SOIL AS SOON AS POSSIBLE, AND REVEGETATE AS SOON AS FINAL GRADE IS ATTAINED.
7. INSPECT AND REPAIR EROSION CONTROL AND SEDIMENT TRAPPING MEASURES WEEKLY AND BEFORE AND AFTER EVERY STORM EVENT.
8. REMOVE TEMPORARY EROSION CONTROLS WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.
9. STABILIZE DITCHES WITHIN 24 HOURS OF FINAL GRADE.
10. INSTALL SEDIMENT BARRIER DOWN SLOPE OF SOIL STOCK PILES.
11. DO NOT STORE SOIL STOCK PILES IN AREA OF CONCENTRATED FLOW OR POTENTIAL FLOODING.
12. ALL FILL MUST BE FREE OF FROZEN SOIL, ROCKS OVER 6-INCHES, SOD, BRUSH, STUMPS, TREE ROOTS, WOOD OR OTHER PERISHABLE MATERIALS.
13. MULCHING:
 - A. APPLY TEMPORARY MULCH ON DISTURBED AREAS WITHIN 7 DAYS OF INITIAL DISTURBANCE OR PRIOR TO ANY STORM.
 - B. DO NOT APPLY EROSION CONTROL MIX OR HAY MULCH IN AREAS OF CONCENTRATED WATER FLOWS.
 - C. DO NOT USE EROSION CONTROL MIX, OR HAY MULCH FOR SLOPES STEEPER THAN 2:1.
 - D. USE HAY MULCH AS A TEMPORARY MEASURE TO PROTECT BARE SOILS OR TO COVER NEWLY SEEDED AREAS.
 - E. APPLY AT A RATE OF TWO SQUARE BALES (70-90 POUNDS) PER 1,000 SQ. FT.
 - F. ANCHOR HAY MULCH USING ONE OF THE FOLLOWING METHODS:
 - STAPLE JUTE OR PLASTIC NETTING OVER MULCH IN ACCORDANCE WITH MFG. INSTRUCTIONS.
 - STRETCH TWINE BETWEEN PEGS IN A CRISS-CROSS PATTERN OVER MULCH (4-6 PEGS PER SQ. YD.).
 - TRACK EQUIPMENT OVER MULCH, SUCH THAT TRACKS ARE PARALLEL TO CONTOURS. TRACKING IS SUITABLE FOR SLOPES LESS THAN 3:1.
14. SEEDING:
 - A. COMPLETE SEEDING WITHIN 7 DAYS OF FINAL GRADING.
 - B. BROADCAST SEED OVER ENTIRE DITCH AND SURFACE AND RAKE INTO SOIL.
 - C. APPLY HAY MULCH TO ALL SEEDED AREAS.
 - D. SUMMER SEEDED DATES ARE FROM APRIL 1 TO SEPTEMBER 15.
 - E. PERMANENT SEEDING SHOULD BE DONE 45 DAYS BEFORE FIRST KILLING FROST.
 - F. THE SEED MIXTURE SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:

Kentucky Bluegrass	Pounds/acre	20 lbs
Creeping Red Fescue	20 lbs	5 lbs
Perennial Ryegrass	5 lbs	
15. STABILIZATION BEFORE WINTER:

SEPTEMBER 15:
ALL DISTURBED AREA MUST BE SEDED WITH EROSION CONTROL MIX AND MULCHED.
ALL SLOPES MUST BE SEDED AND MULCHED.
ALL GRASS LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET.

OCTOBER 1:
SLOPE STABILIZED WITH EROSION CONTROL BLANKET AND SEDED WITH EROSION CONTROL MIX.

NOVEMBER 15:
ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED.
ALL RIP-RAP SLOPES MUST BE CONSTRUCTED AND STABILIZED.
SEE EROSION CONTROL & STORMWATER MANAGEMENT PLAN FOR DETAILS OF WINTER CONSTRUCTION.
16. DEWATERING:

A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. PRIOR TO ANY DEWATER ACTIVITIES SUBMIT A DEWATERING PLAN TO OWNER AND DESIGN ENGINEER FOR APPROVAL. FILTER ALL PUMPED WATER THROUGH SOIL FILTER BAG (DIRT BAG) AS SHOWN ON EROSION CONTROL PLAN.
17. EROSION CONTROL:

MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAVED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE.

IN LIEU OF SILT FENCE EROSION CONTROL MIX CAN BE USED IF CONDITIONS BELOW ARE MET:
FOLLOW MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE 2014

EROSION CONTROL MIX BERM:
THE ECM BERM SHOULD BE A MINIMUM OF 12" HIGH AND A MINIMUM OF TWO FEET WIDE. ON LONGER OR STEEPER SLOPES, THE BERM WILL NEED TO BE WIDER AND HIGHER. BERM COMPOSED OF ECM CAN BE RESHAPED WHEN NECESSARY.

EROSION CONTROL MIX:
THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).
18. WETPONDS:
 - A. INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET, UNDERDRAINED GRAVEL OUTLET, GRAVEL OUTLET FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, CLAY LINER (IF APPLICABLE), AND EMERGENCY SPILLWAY CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND.
 - B. CLAY LINER MIN THICKNESS = 1.5"
 - C. PLACE LINER IN 9" LOOSE LIFTS.
 - D. COMPACT CLAY LINER TO 95% STANDARD PROCTOR DENSITY PER ASTM D-2434.
 - E. MINIMUM LINER PERMEABILITY 1x10-6 Cm/SEC PER ASTM D-2432.
 - F. LINER PLASTICITY INDEX NOT LESS THAN 15% PER ASTM D-423/424.
 - G. SEE SHEET D-1 FOR MINIMUM & MAXIMUM GRAIN SIZE DISTRIBUTION FOR CLAY LINER. CONTRACTOR TO PROVIDE ALL TESTING RESULTS TO OWNER & ENGINEER FOR APPROVAL.
19. STONE BERMED LEVEL LIP SPREADER:

INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH LEVEL SPREADERS CONSTRUCTION, STONE BERM MATERIAL AND PLACEMENT, SETTLING BASIN FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE LEVEL SPREADER.

20. ACHERON ENGINEERING HAS USED A REASONABLE STANDARD OF CARE TO TRY TO LOCATE UNDERGROUND FACILITIES IN THE VICINITY OF THIS PROJECT. THE LOCATIONS OF UNDERGROUND FACILITIES DEPICTED ON THIS DRAWING ARE APPROXIMATE. EXCAVATORS MUST COMPLY WITH ALL REQUIREMENTS OF TITLE 23 SECTION 3360, PROTECTION OF UNDERGROUND FACILITIES BEFORE COMMENCING OPERATIONS.

21. CONSTRUCTION OVERSIGHT:

THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION MAY REQUIRE THIRD-PARTY INSPECTIONS OF THE DEVELOPMENT'S EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION AND IMMEDIATELY AFTER FINAL STABILIZATION. IN ALL CASES, THE THIRD PARTY INSPECTION PROGRAM, TO BE IMPLEMENTED BY THE APPLICANT, MUST COMPLY WITH THE "SPECIAL CONDITION FOR THIRD-PARTY INSPECTION PROGRAM" THAT WILL BE INCORPORATED AS PART OF THE DEPARTMENT ORDER ISSUED FOR THE DEVELOPMENT.

22. ALL CONSTRUCTION ACTIVITIES SHOULD FOLLOW GUIDANCE AS PRESENTED IN "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS" PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN 2014.

23. SPILL PREVENTION CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

NOTE: ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE AT: [HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/](http://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/)

24. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL, DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

NOTE: LACK OF APPROPRIATE POLLUTANT REMOVAL BEST MANAGEMENT PRACTICES (BMPS) MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARD ESTABLISHED BY 38 M.R.S.A. §465-C(1).

25. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEEP IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

26. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

NOTE: TO PREVENT THESE MATERIALS FROM BECOMING A SOURCE OF POLLUTANTS, CONSTRUCTION AND POST-CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISION OF RULES RELATED TO SOLID, UNIVERSAL, AND HAZARDOUS WASTE, INCLUDING, BUT NOT LIMITED TO, THE MAINE SOLID WASTE AND HAZARDOUS WASTE MANAGEMENT RULES; MAINE HAZARDOUS WASTE MANAGEMENT RULES; MAINE OIL CONVEYANCE AND STORAGE RULES; AND MAINE PESTICIDE REQUIREMENTS.

27. EXCAVATION DE-WATERING. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SIELTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

NOTE: DEWATERING CONTROLS ARE DISCUSSED IN THE "MAINE EROSION AND SEDIMENT CONTROL BMPS, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION."

28. AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

- (a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
- (b) FIRE HYDRANT FLUSHINGS;
- (c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
- (d) DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
- (e) ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
- (f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
- (g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
- (h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
- (i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
- (j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
- (k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
- (l) LANDSCAPE IRRIGATION.

29. UNAUTHORIZED NON-STORMWATER DISCHARGES. THE DEPARTMENT'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH APPENDIX C(6). SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

- (a) WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
- (b) FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
- (c) SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
- (d) TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

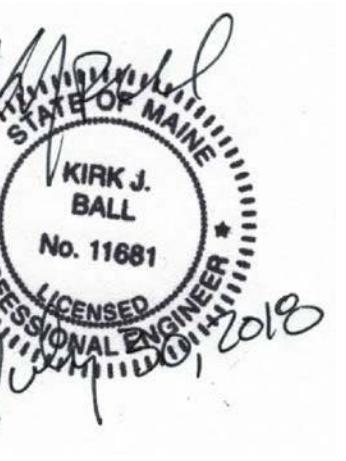
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10-9-18	Date
BPG	KJB
Drawn By: <u>BPG</u>	Checked By: <u>KJB</u>
Desg By: <u>KJB</u>	Approved By: <u>KJB</u>
Date: <u>7-30-18</u>	Date: <u>7-30-18</u>

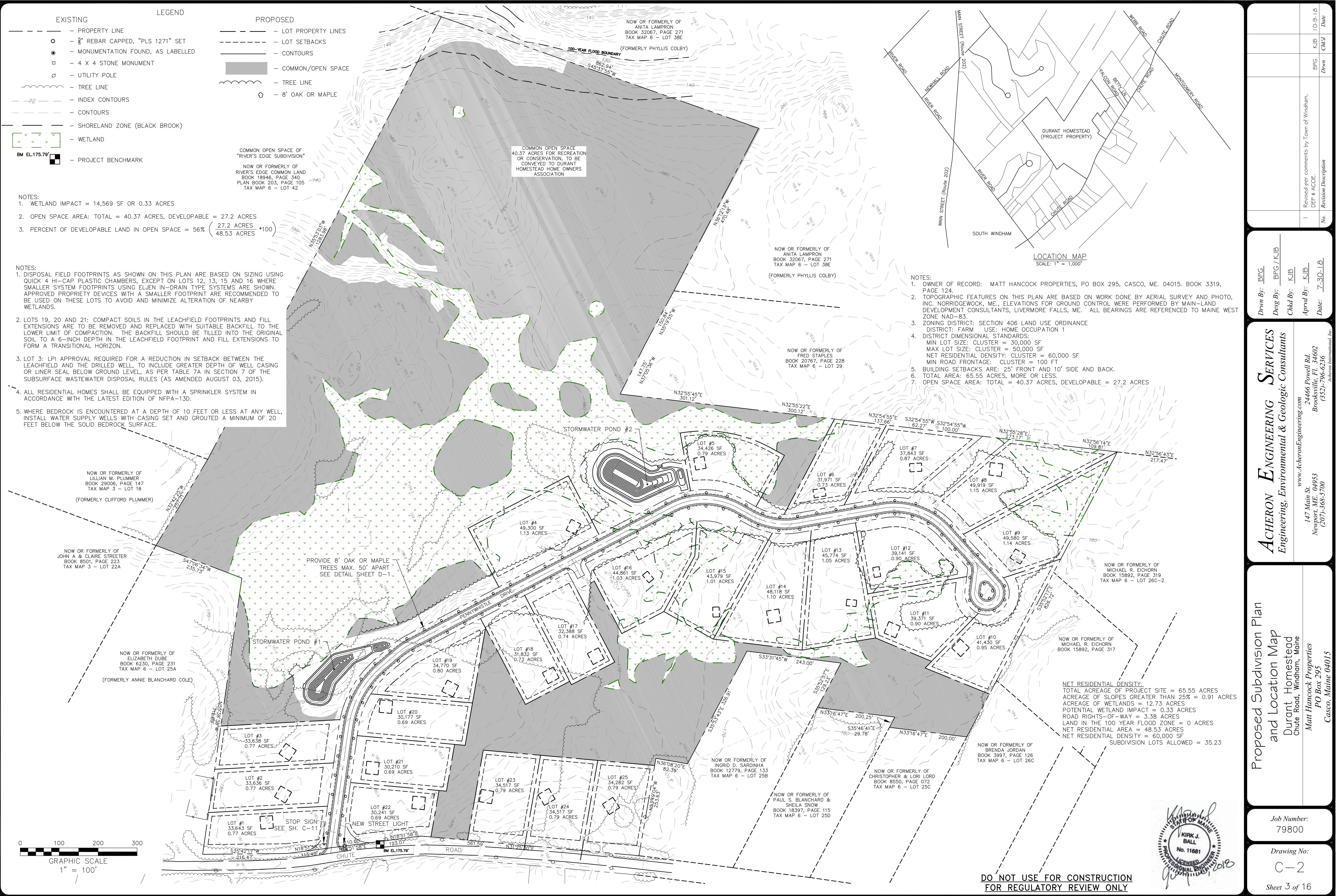
Revised per comments by Town of Windham, Def & Acc.	No. <u>11681</u>
Revision Description	Date

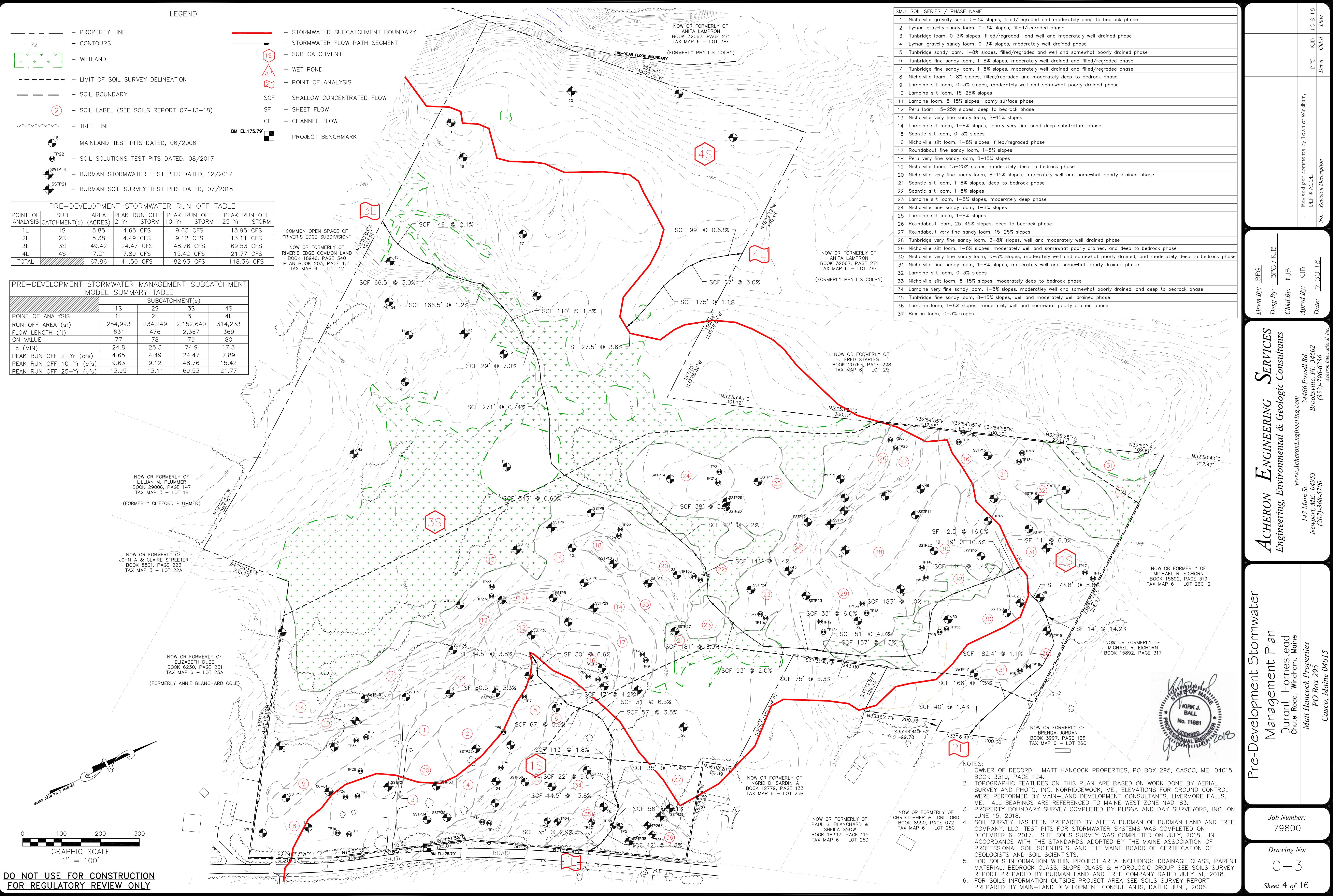
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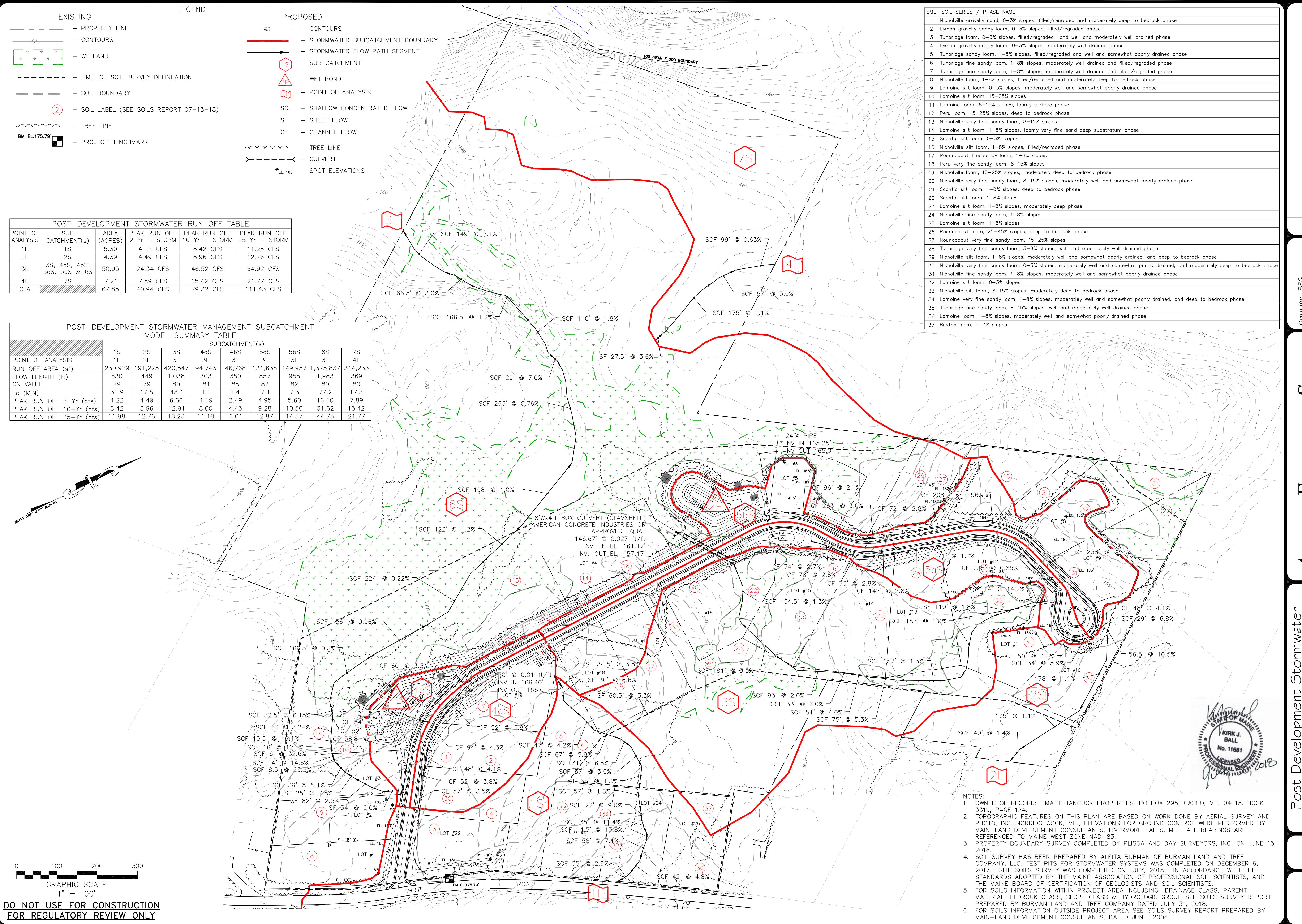
General Notes & Index

Durant Homestead
Chute Road, Windham, MaineMatt Hancock Properties
PO Box 295
Casco, Maine 04015Job Number:
79800Drawing No:
1DO NOT USE FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

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ACHERON ENGINEERING SERVICES
Engineering, Environmental & Geologic Consultants

ENGINEERING SERVICES	<i>Environmental & Geologic Consultants</i>	<i>erionEngineering.com</i>
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<i>Acheron International, Inc.</i>		
<i>Desg By: BPG / KJB</i>		
<i>Chkd By: KJB</i>		
<i>Aprvd By: KJB</i>	<i> Revised per comments by Town of Windham, DEP & ACOE.</i>	<i>BPG</i>
<i>Date: 7-30-18</i>	<i>No. Revision Description</i>	<i>Drwn C</i>

Management Plan

Durant Homestead Chute Road, Windham, Maine

Job Number.

Drawing No.

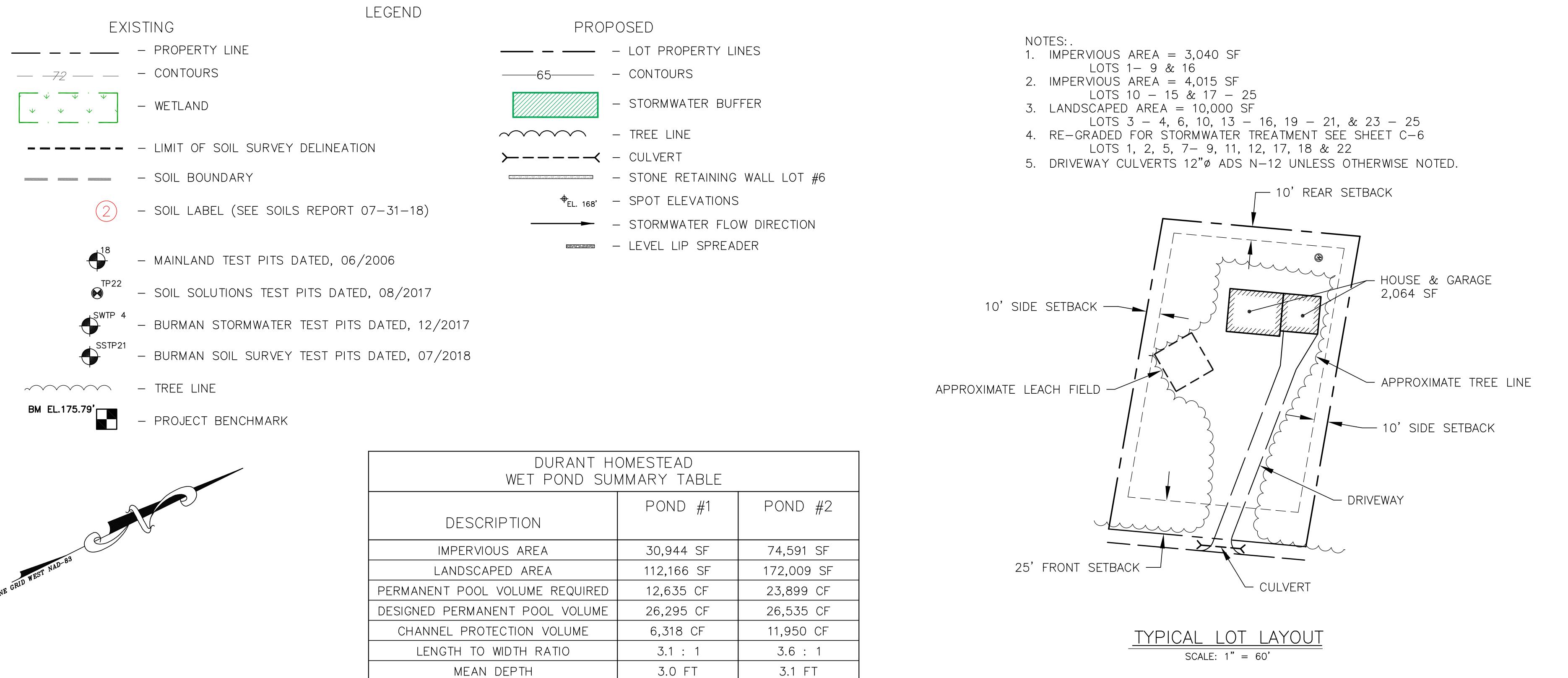
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DURANT HOMESTEAD PROJECT TREATMENT LEVEL SUMMARY					
DESCRIPTION	IMPERVIOUS AREA (SF)	DEVELOPED AREA (SF)	TREATMENT BMP	IMPERVIOUS AREA TREATED (SF)	DEVELOPED AREA TREATED (SF)
LOT #1	3,040	25,956	BUFFER A MEADOW	3,040	21,063
LOT #2	3,040	25,787	BUFFER B MEADOW	3,040	23,534
LOT #3	3,040	13,040	BUFFER C FORESTED	1,512	9,512
LOT #4	3,040	13,040	WET POND #1	1,528	3,528
LOT #5	3,040	22,194	WET POND #2	3,040	14,168
LOT #6	3,040	13,040	BUFFER D FORESTED	3,040	13,040
LOT #7	3,040	23,716	BUFFER E FORESTED	0	6,294
LOT #8	3,040	28,231	WET POND #2	3,040	19,443
LOT #9	3,040	22,096	WET POND #2	3,040	17,131
LOT #10	4,015	14,015	BUFFER F FORESTED	4,015	14,015
LOT #11	4,015	27,457	BUFFER G FORESTED	4,015	22,227
LOT #12	4,015	20,794	WET POND #2	4,015	11,372
LOT #13	4,015	14,015	BUFFER H FORESTED	2,065	4,065
LOT #14	4,015	14,015	WET POND #2	1,950	9,950
LOT #15	4,015	14,015	BUFFER I FORESTED	4,015	14,015
LOT #16	3,040	13,040	BUFFER J FORESTED	2,065	13,822
LOT #17	4,015	30,438	BUFFER K FORESTED	2,007	18,692
LOT #18	4,015	28,775	WET POND #2	2,008	11,746
LOT #19	4,015	14,015	BUFFER L MEADOW	1,065	12,875
LOT #20	4,015	14,015	WET POND #2	2,950	15,901
LOT #21	4,015	14,015	BUFFER M MEADOW	0	2,000
LOT #22	4,015	29,327	BERM, SPREADER & BUFFER	4,015	23,058
LOT #23	4,015	14,015	BUFFER N MEADOW	4,015	14,015
LOT #24	4,015	14,015	BUFFER O MEADOW	4,015	14,015
LOT #25	4,015	14,015	BUFFER P MEADOW	4,015	14,015
ROAD STA. 0+00 TO 2+01	6,446	14,893	N/A	0	0
ROAD STA. 2+01 TO 7+80	17,371	71,229	WET POND #1	17,371	58,454
ROAD STA. 7+80 TO END	51,508	177,120	WET POND #2	51,508	136,695
POND BACK SLOPES	0	23,691	N/A	0	0
TOTALS	165,950	764,014	TOTALS	151,474	598,792
			TREATMENT LEVEL	91%	78%
			TREATMENT LEVEL REQUIRED	90%	75%

NOTES:

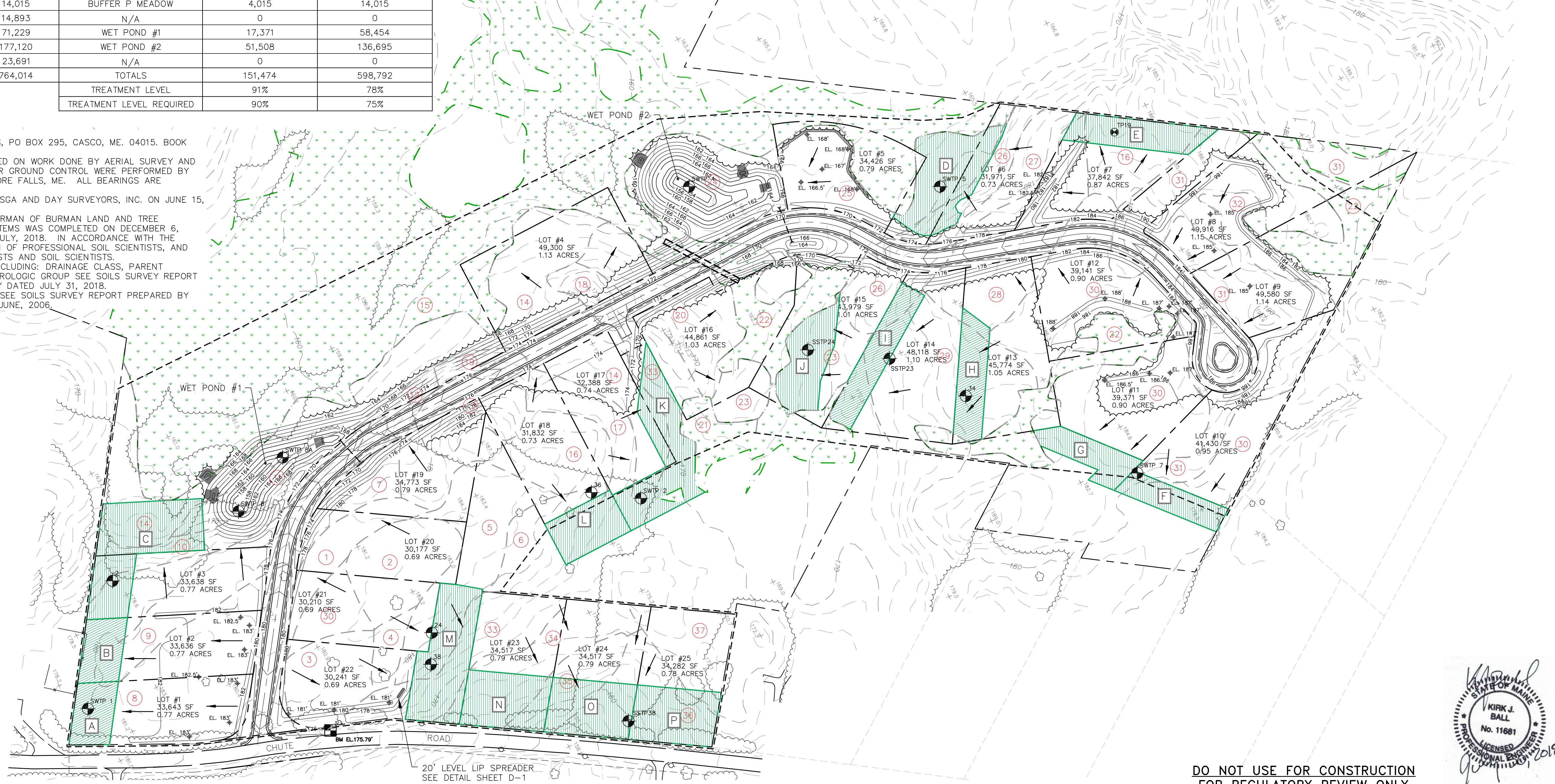
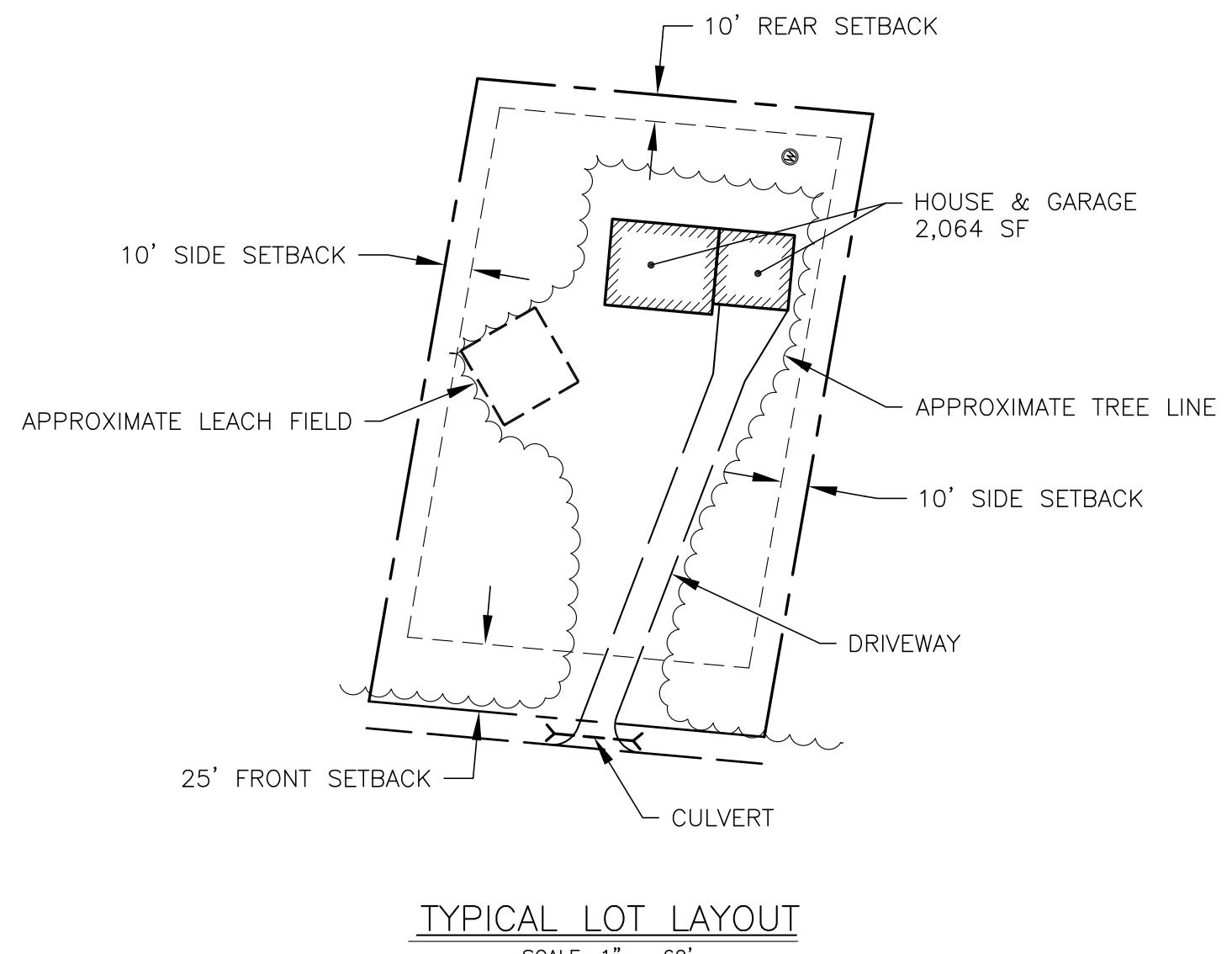
- OWNER OF RECORD: MATT HANCOCK PROPERTIES, PO BOX 295, CASCO, ME. 04015. BOOK 3319, PAGE 124.
- TOPOGRAPHIC FEATURES ON THIS PLAN ARE BASED ON WORK DONE BY AERIAL SURVEY AND PHOTO, INC. NORRIGEWOCK, ME., ELEVATIONS FOR GROUND CONTROL WERE PERFORMED BY MAIN-LAND DEVELOPMENT CONSULTANTS, LIVERMORE FALLS, ME. ALL BEARINGS ARE REFERENCED TO MAINE WEST ZONE NAD-83.
- PROPERTY BOUNDARY SURVEY COMPLETED BY PLISCA AND DAY SURVEYORS, INC. ON JUNE 15, 2018.
- SOIL SURVEY HAS BEEN PREPARED BY ALEITA BURMAN OF BURMAN LAND AND TREE COMPANY, LLC. TEST PITS FOR STORMWATER SYSTEMS WAS COMPLETED ON DECEMBER 6, 2017. SITE SOILS SURVEY WAS COMPLETED ON JULY, 2018. IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, AND THE MAINE BOARD OF CERTIFICATION OF GEOLOGISTS AND SOIL SCIENTISTS.
- FOR SOIL INFORMATION WITHIN PROJECT AREA INCLUDING: DRAINAGE CLASS, PARENT MATERIAL, BEDROCK CLASS, SLOPE CLASS & HYDROLOGIC GROUP SEE SOILS SURVEY REPORT PREPARED BY BURMAN LAND AND TREE COMPANY DATED JULY 31, 2018.
- FOR SOILS INFORMATION OUTSIDE PROJECT AREA SEE SOILS SURVEY REPORT PREPARED BY MAIN-LAND DEVELOPMENT CONSULTANTS, DATED JUNE, 2006.

0 100 200 300
GRAPHIC SCALE
1" = 100'



NOTES:

- IMPERVIOUS AREA = 3,040 SF LOTS 1-9 & 16
- IMPERVIOUS AREA = 4,015 SF LOTS 10-15 & 17 - 25
- LANDSCAPED AREA = 10,000 SF LOTS 3 - 4, 6, 10, 13 - 16, 19 - 21, & 23 - 25
- RE-GRADED FOR STORMWATER TREATMENT SEE SHEET C-6 LOTS 1, 2, 5, 7- 9, 11, 12, 17, 18 & 22
- DRIVEWAY CULVERTS 12"Ø ADS N-12 UNLESS OTHERWISE NOTED.



Post Development Stormwater Treatment Site Plan
Durant Homestead
Chute Road, Windham, Maine
Matt Hancock Properties
PO Box 295
Casco, Maine 04015

Job Number: 79800
Drawing No: C-5
Sheet 6 of 16

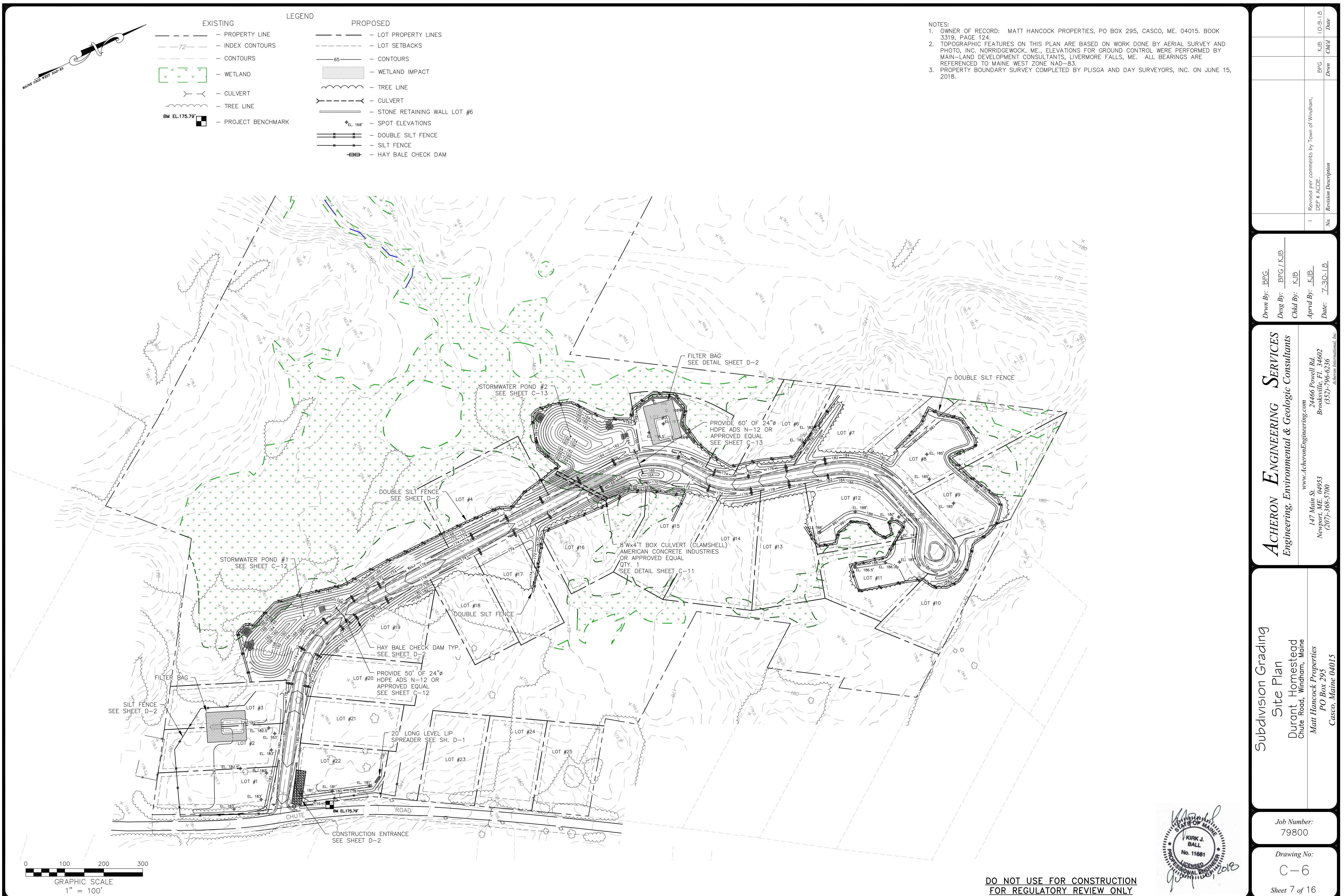
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Newport, ME 04953
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Brooksville, FL 34602
(352) 796-6336

Acheron International, Inc.

Drawn By: BPG	Revised per comments by Town of Windham, DEP & ACOE
Design By: BPG / KJB	Chkd By: KJB
Date: 7-30-18	



DO NOT USE FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

A circular stamp with a decorative border. The outer ring contains the text "STATE OF MAINE" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by vertical lines. The center of the circle contains the text "KIRK J. BALL" on top and "No. 11681" below it. The entire stamp is signed over with a cursive signature.

Job Number:
79800

Drawing No.:

Sheet 7 of 16





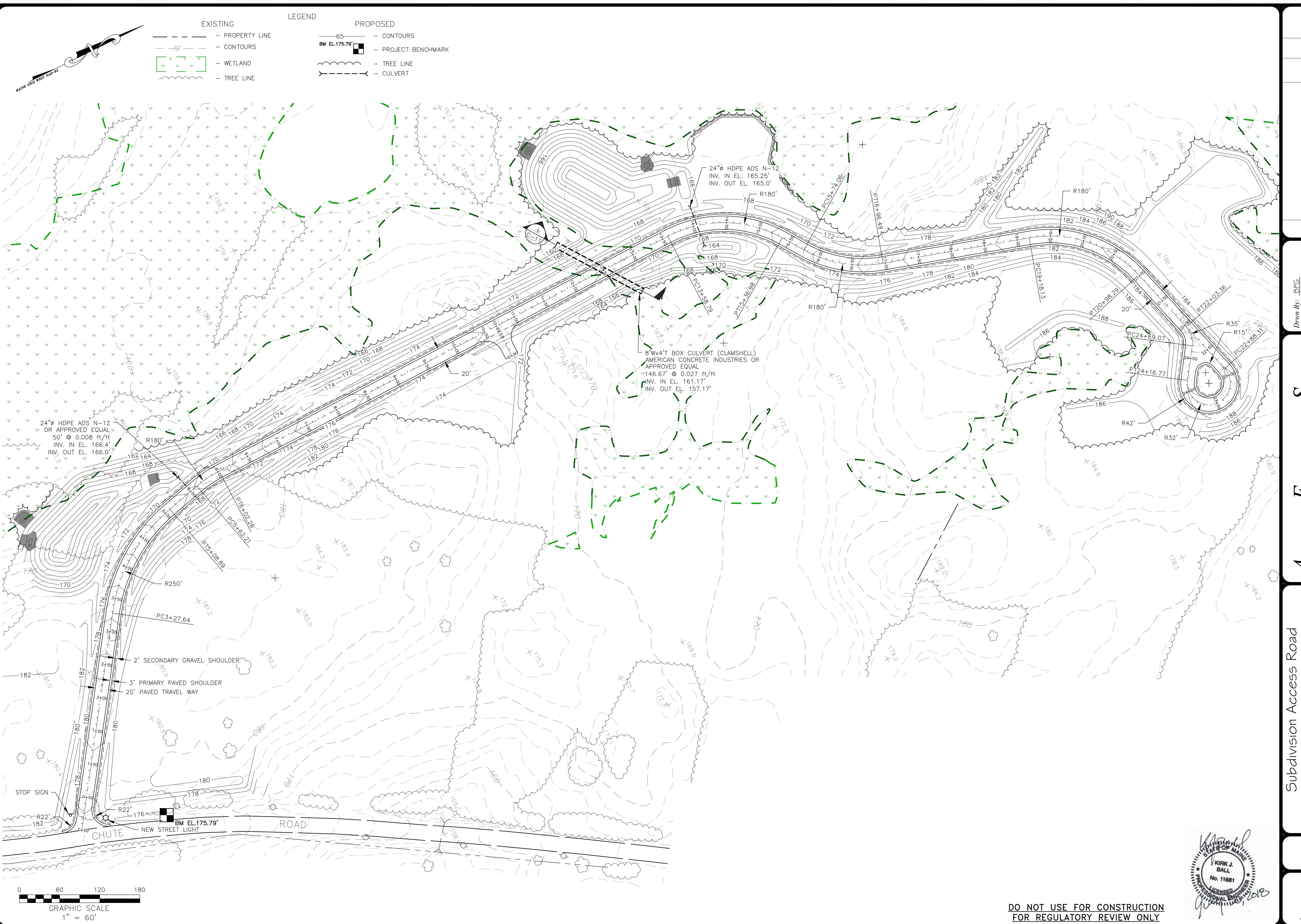
DO NOT USE FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

A circular stamp with a decorative border. The outer ring contains the text "STATE OF MAINE" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by a wavy line. The center of the circle contains the name "KIRK J. BALL" above the number "No. 11681". The entire stamp is surrounded by a hand-drawn signature.

Job Number.
79800

Drawing No.

Sheet 9 of 10



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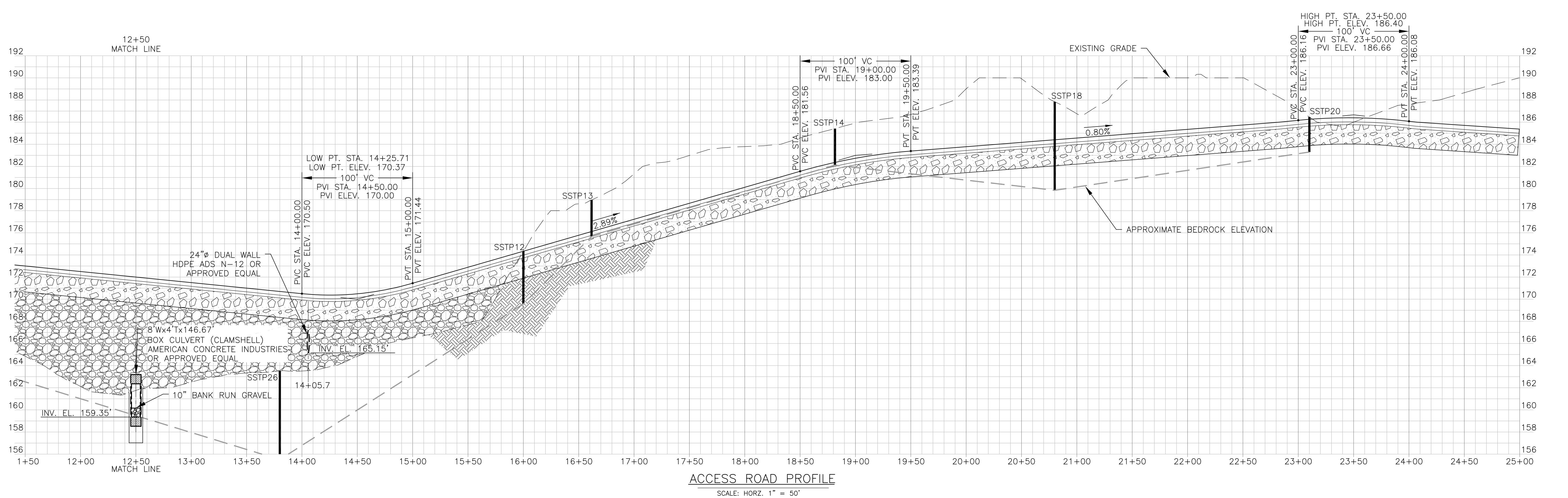
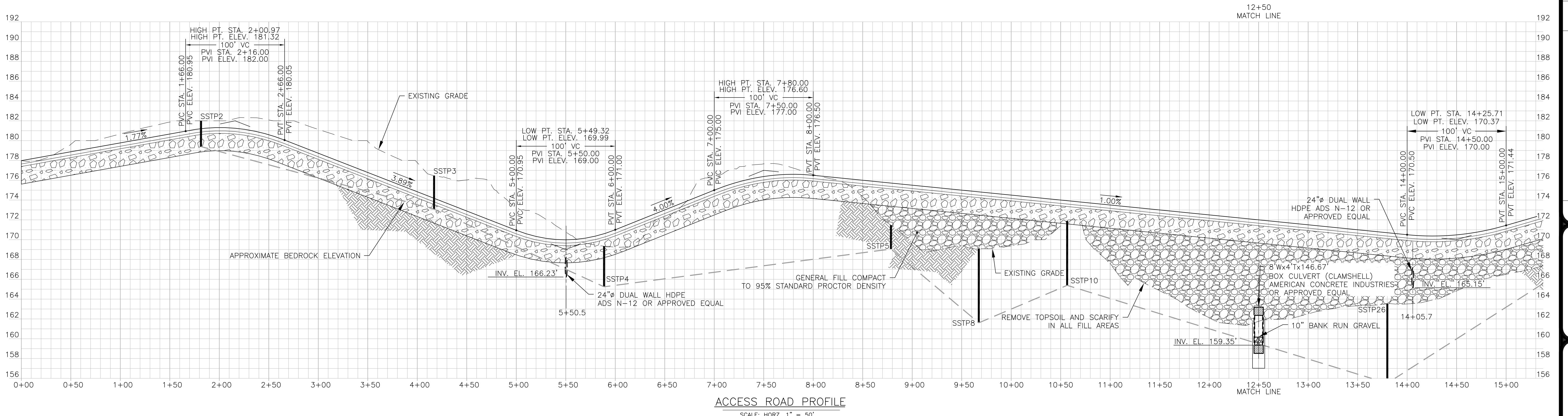
A circular stamp with a decorative border. The outer ring contains the text "STATE OF MAINE" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by a wavy line. The center of the circle contains the name "KIRK J. BALL" above the number "No. 11681". The entire stamp is surrounded by a hand-drawn signature.

Job Number:

Drawing No:

Sheet 10 of 16

Sheet 10 of 16



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Job Number:
79800

Drawing No.:

Sheet 11 of 16

Sheet 11 of 16

Sheet 11 of 16

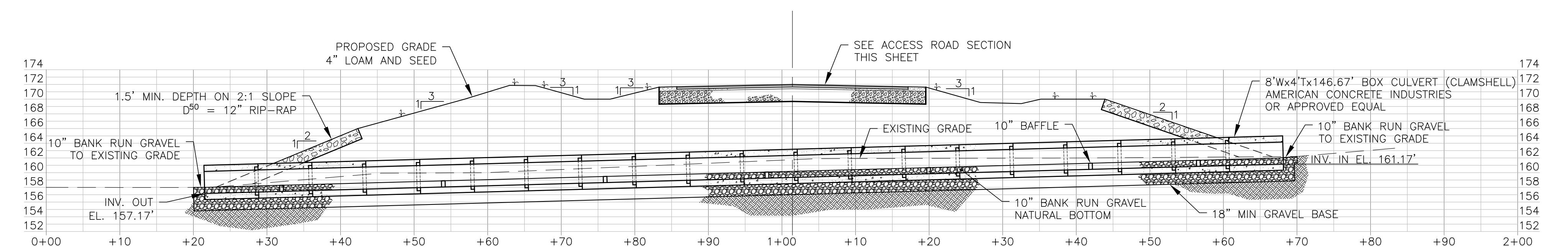
YOUNG, YOUNG, AND YOUNG

BOX CULVERT DESIGN NOTES:
 CONCRETE:
 COMPRESSION STRENGTH MIN. 5,000PSI @ 28 DAYS
 AIR-ENTRAINMENT MIN. 5%-6%

STRUCTURAL REINFORCEMENT:
 REBAR PER ASTM A615, GRADE 60
 WWF PER ASTM A1064, GRADE 70
 INTEGRATE REBAR WITH LIFTING INSERTS

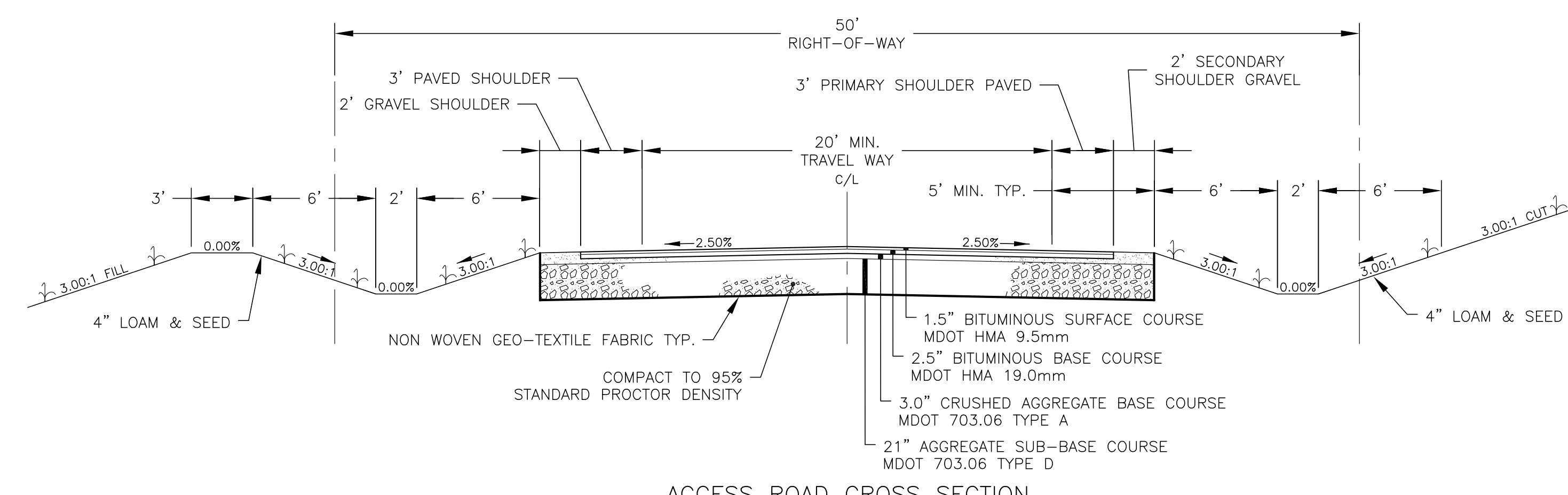
BAR CLEARANCE:
 2" CLR EXTERIOR; 1.5" CLR INTERIOR

MANUFACTURING & MATERIALS:
 CONFORM STRICTLY TO ASTM C1433 & AASHTO
 MINIMUM SOIL COVER 2'
 DESIGNED FOR H20 WHEEL LOAD RATING



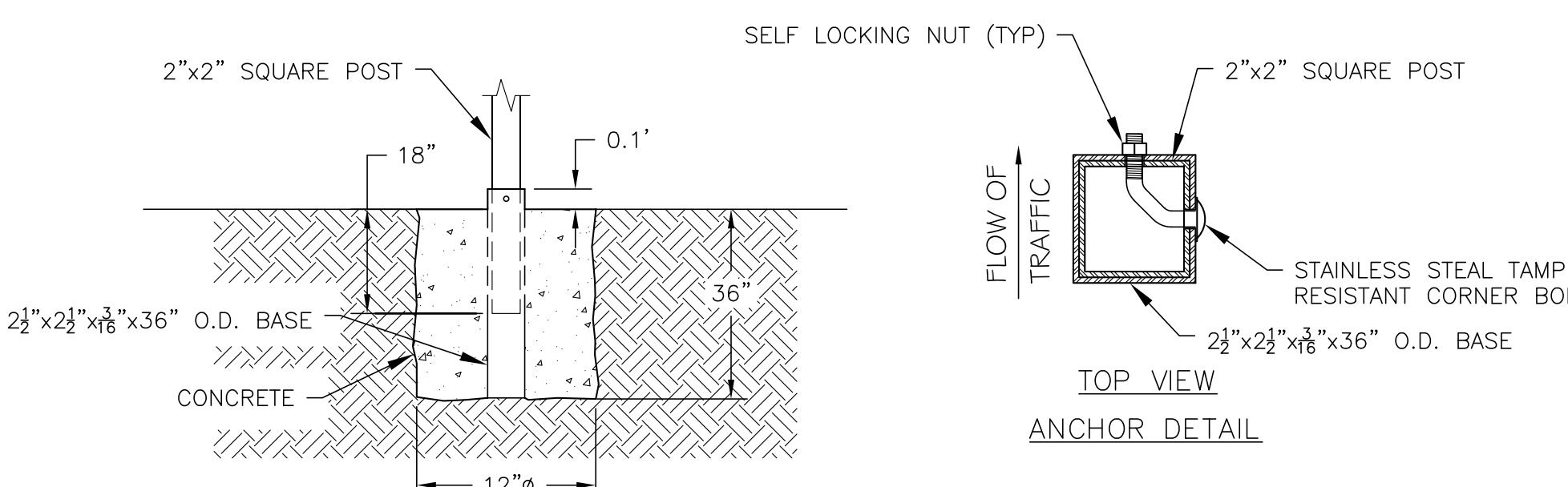
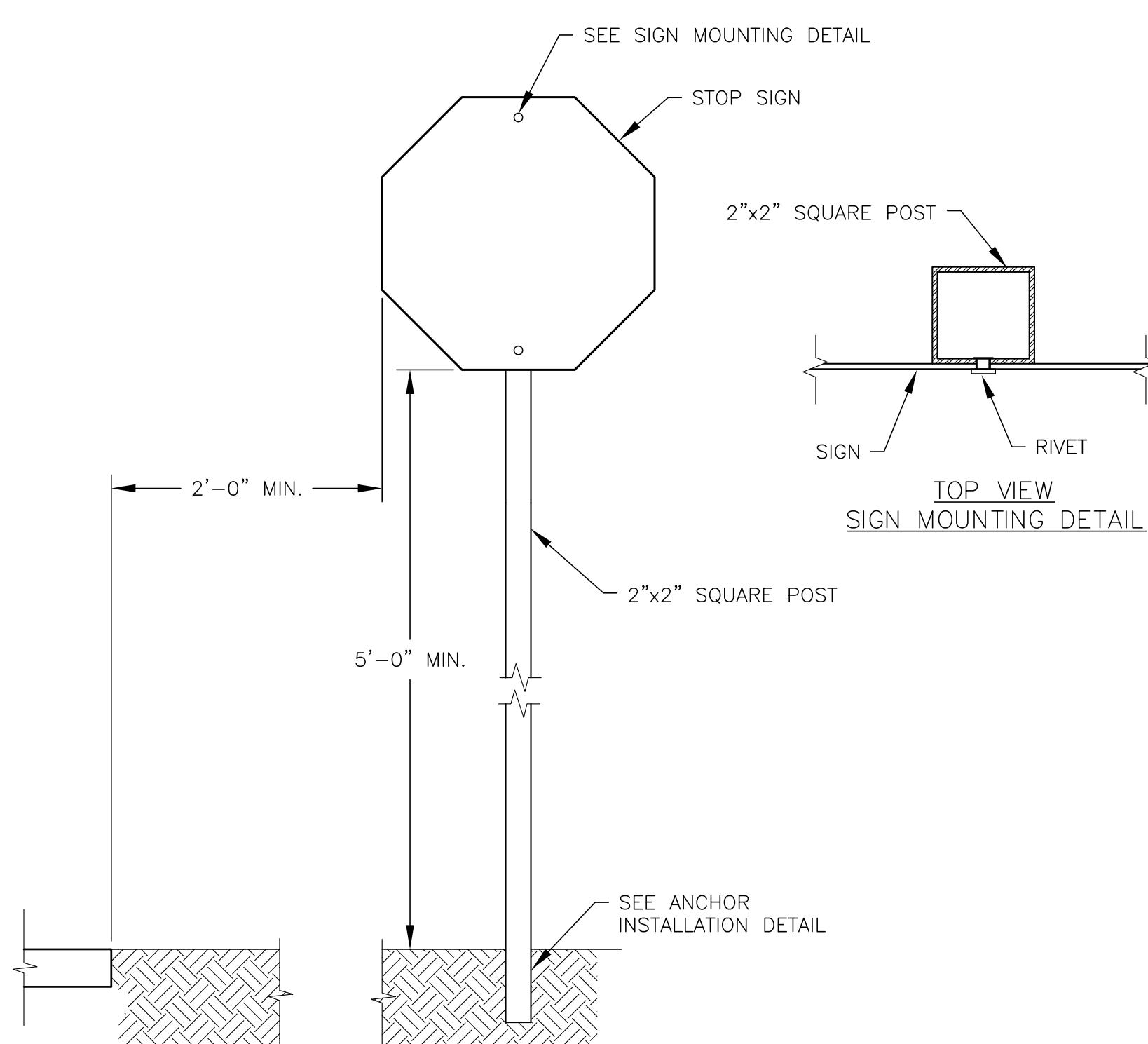
ROAD CROSSING SECTION 1

SCALE: HORZ. 1" = 10'
 VERT. 1" = 10'



ACCESS ROAD CROSS SECTION

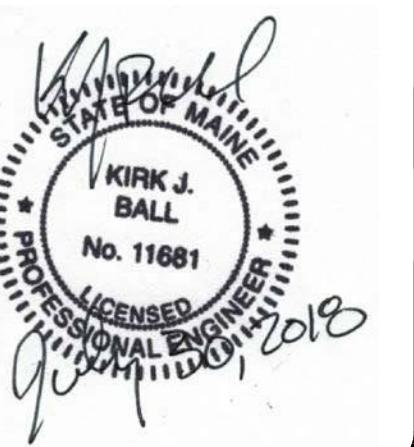
SCALE: 1" = 5'



ANCHOR INSTALLATION DETAIL

SIGN POST DETAIL
 NOT TO SCALE

DO NOT USE FOR CONSTRUCTION
 FOR REGULATORY REVIEW ONLY



Job Number:
 79800

Drawing No:
 C-11

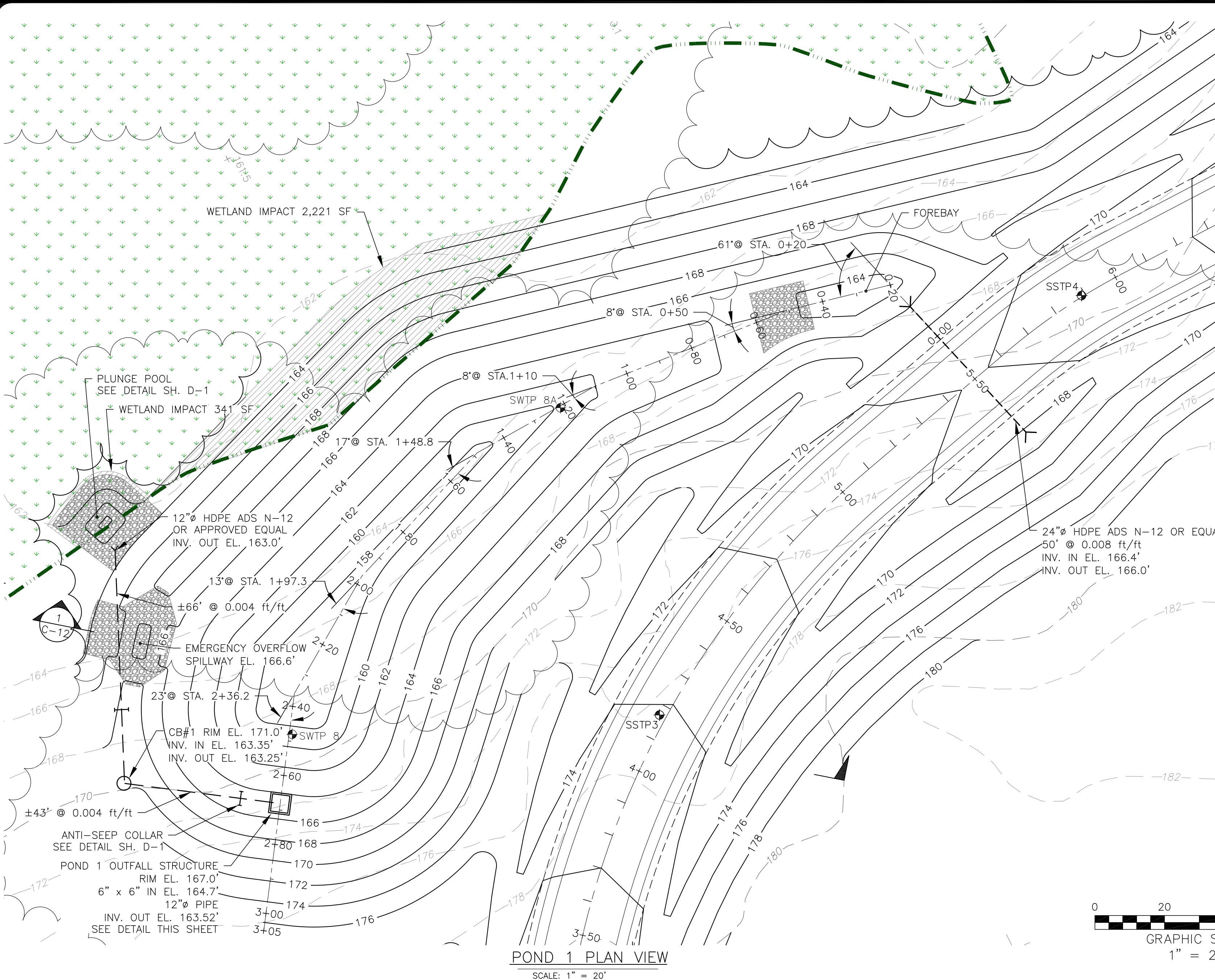
Sheet 12 of 16

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 Newport, ME 04953
 (207)-368-5700

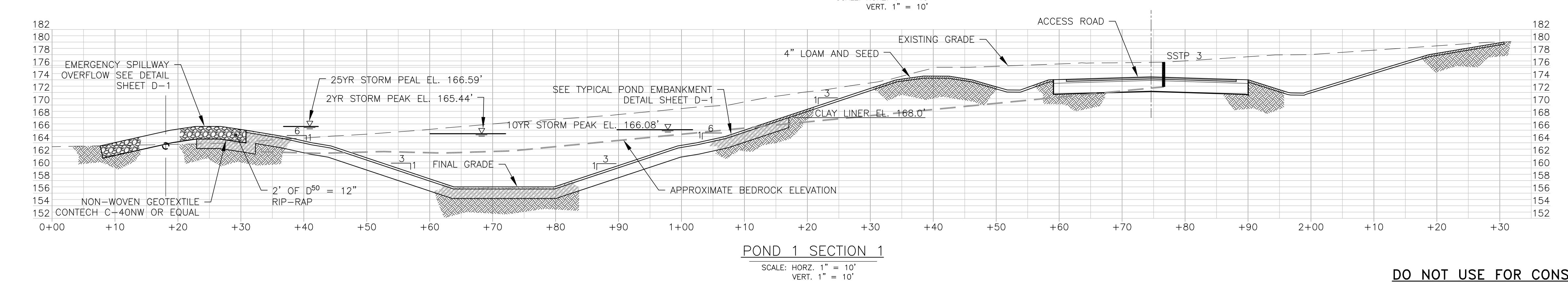
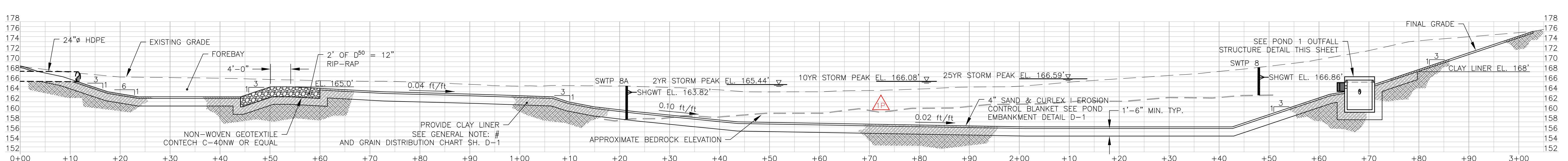
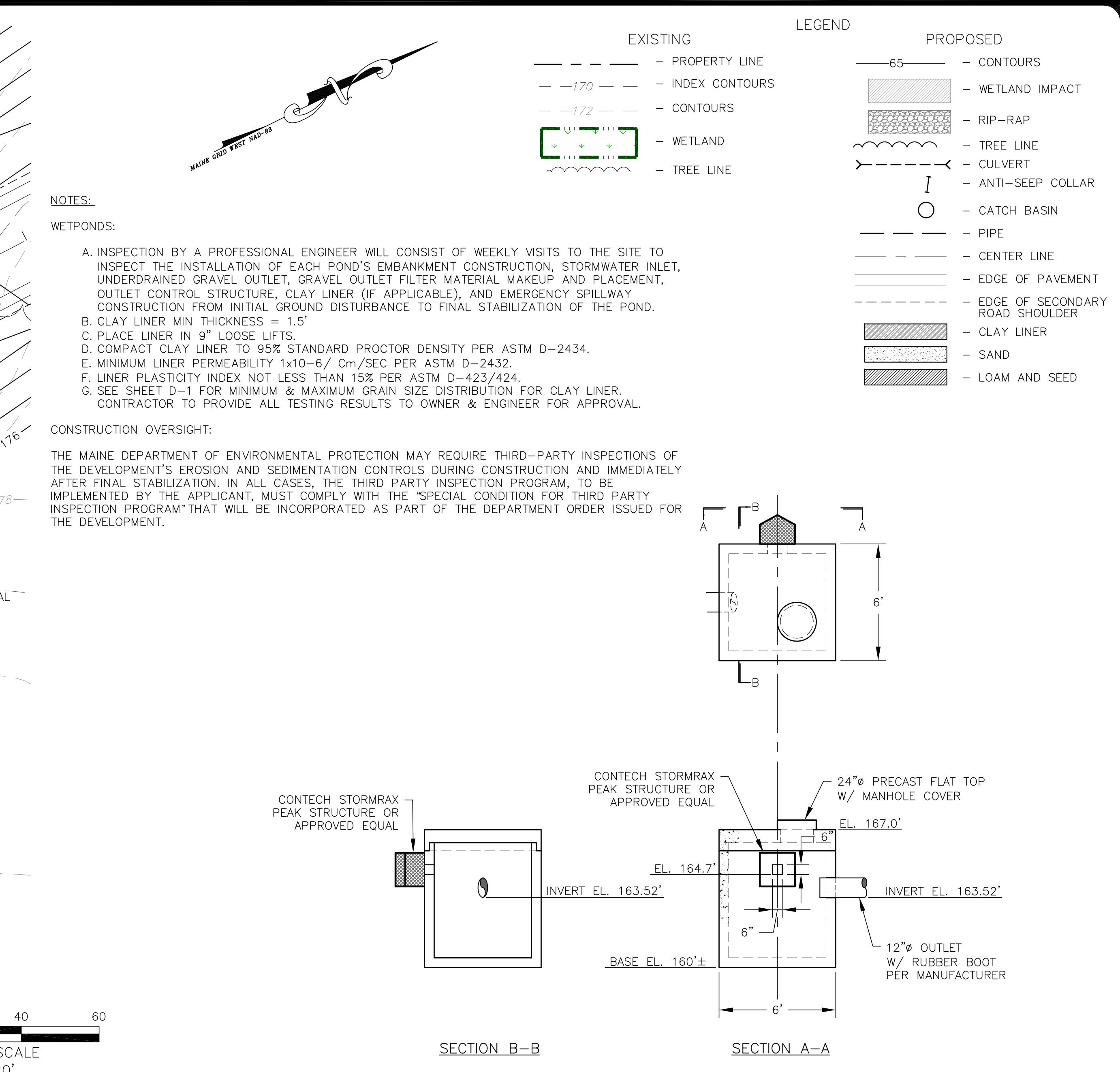
Subdivision Access Road
 Typical Section and Culvert Crossing
 Durant Homestead
 Chute Road, Windham, Maine
 Matt Hancock Properties
 PO Box 295
 Casco, Maine 04015

Drawn By:	BPG
Dsgn By:	BFG / KJB
Chkd By:	KJB
Aprvd By:	KJB
Date:	7-30-18

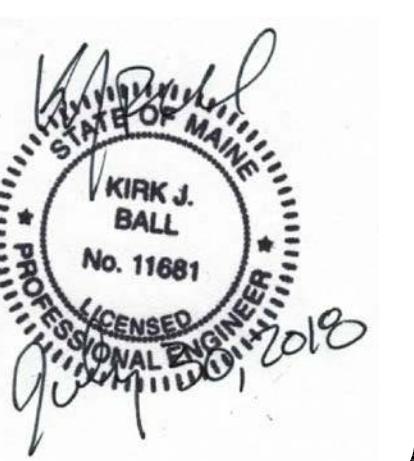
Reviewed per comments by Town of Windham, DEF & ACOE.
No. Revision Description



0 20 40 60
GRAPHIC SCALE
1" = 20'



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Job Number:
79800

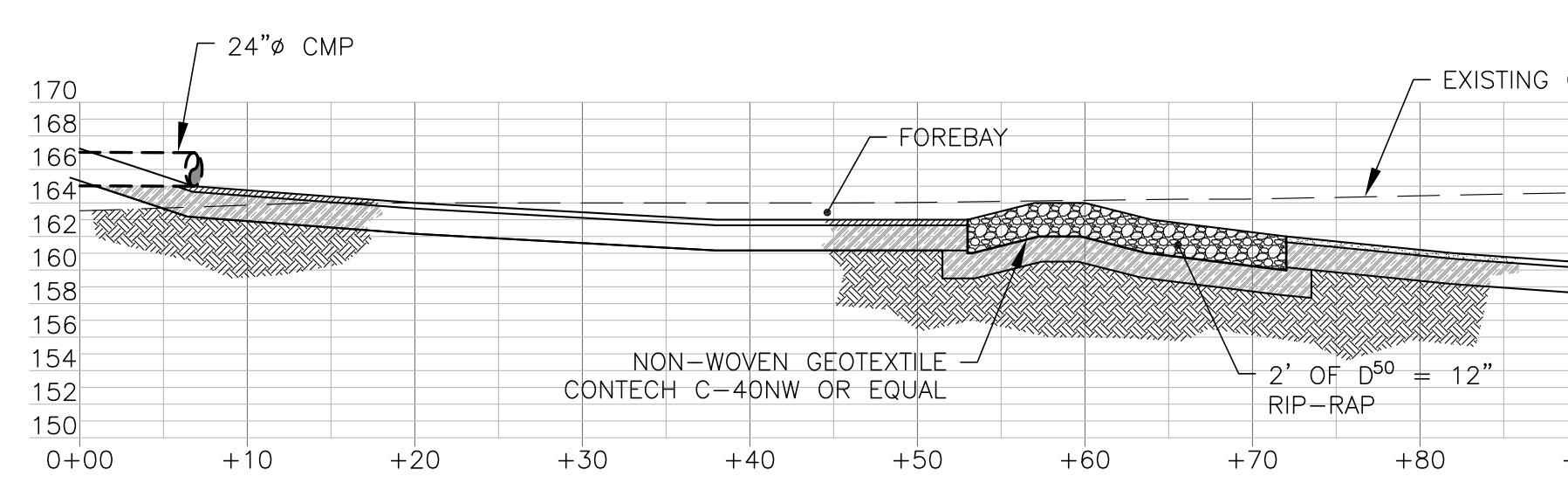
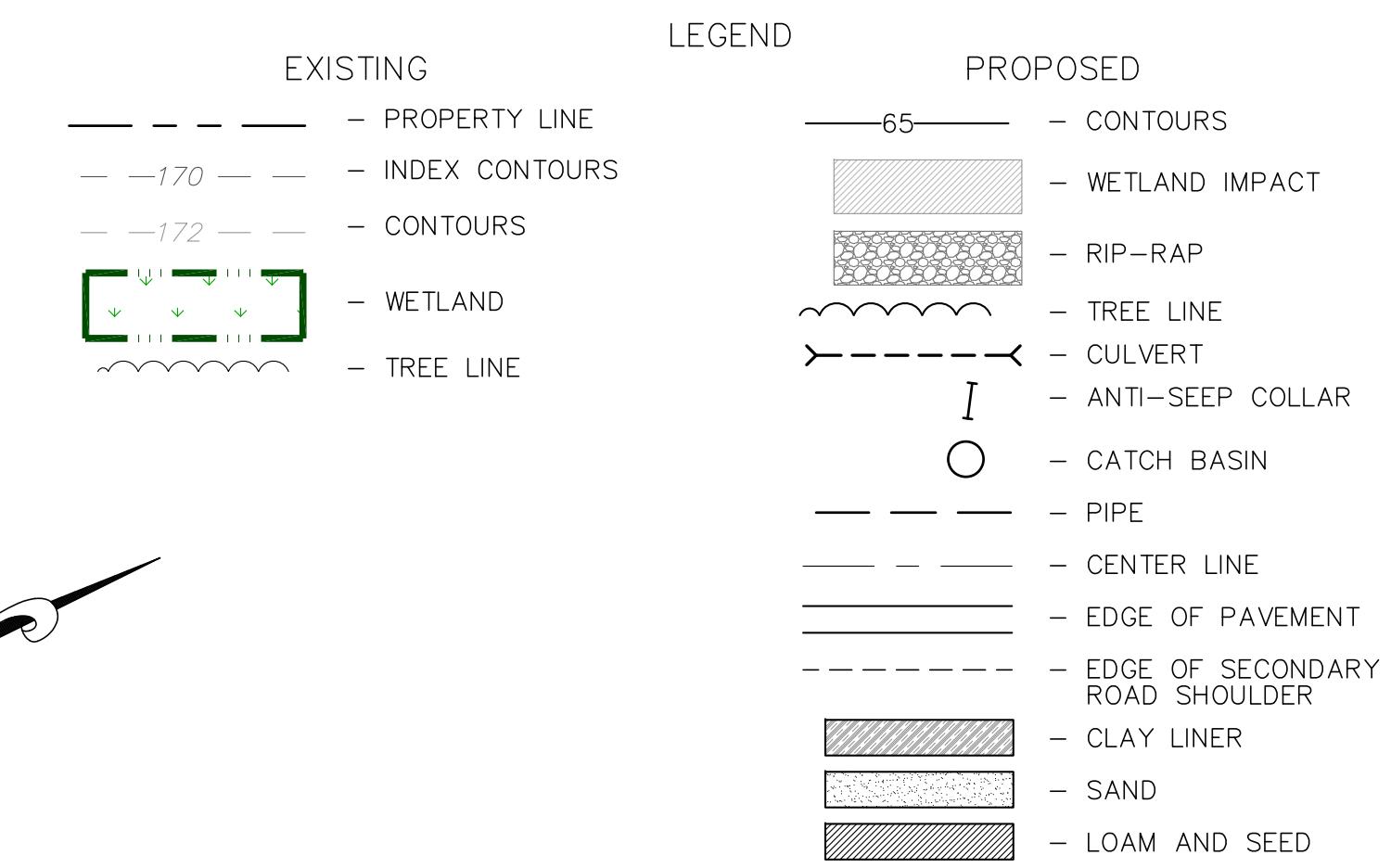
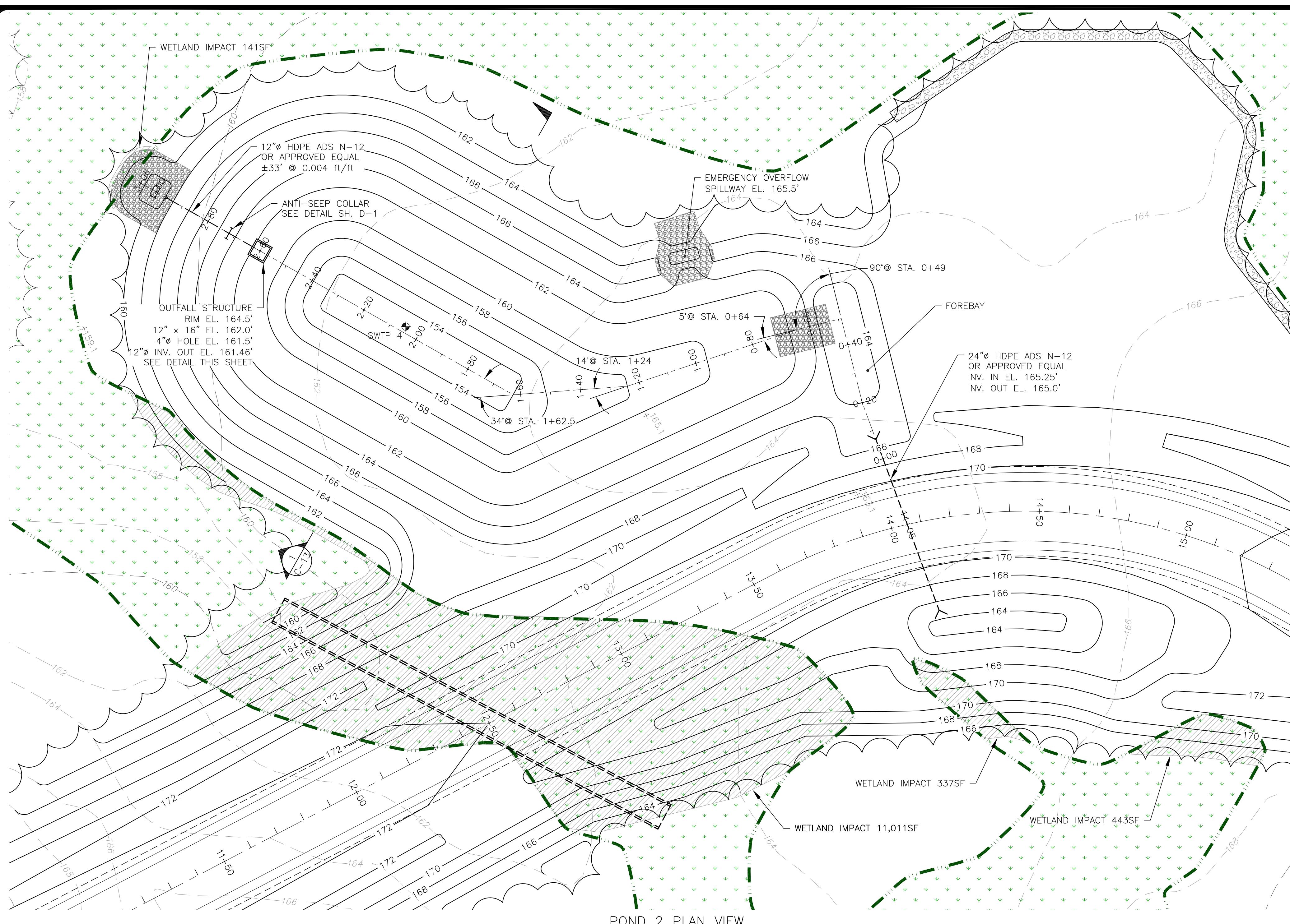
Drawing No:
C-12

Sheet 13 of 16

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(352) 796-6236
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Acheron International, Inc.

Stormwater Management Plan
Pond #1 Plan & Sections
Durant Homestead
Chute Road, Windham, Maine
Matt Hancock Properties
PO Box 295
Casco, Maine 04015

Revise per comments by Town of Windham, DEP & AOE.	Drawn By: BPG	Design By: BPG / KJB	Checked By: KJB	Approved By: KJB	Date: 7-30-18
I	I	I	I	I	I



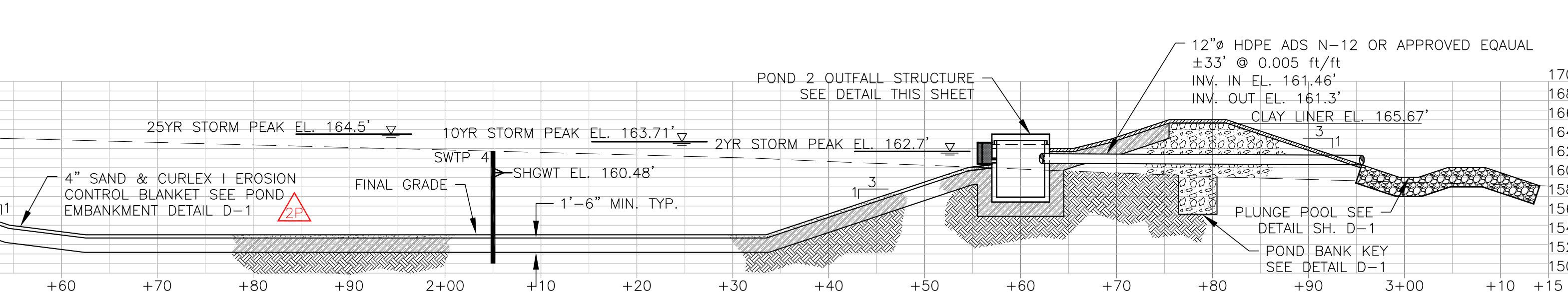
NOTES:

WETPONDS:

A. INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET, UNDERDRAINED GRAVEL OUTLET, GRAVEL OUTLET FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, CLAY LINER (IF APPLICABLE), AND EMERGENCY SPILLWAY CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND.
 B. CLAY LINER MIN THICKNESS = 1.5'
 C. PLACE LINER IN 9" LOOSE LIFTS.
 D. COMPACT CLAY LINER TO 95% STANDARD PROCTOR DENSITY PER ASTM D-2434.
 E. MINIMUM LINER PERMEABILITY 1x10-6 / Cm/SEC PER ASTM D-2432.
 F. LINER PLASTICITY INDEX NOT LESS THAN 15% PER ASTM D-423/424.
 G. SEE SHEET D-1 FOR MINIMUM & MAXIMUM GRAIN SIZE DISTRIBUTION FOR CLAY LINER.
 CONTRACTOR TO PROVIDE ALL TESTING RESULTS TO OWNER & ENGINEER FOR APPROVAL.

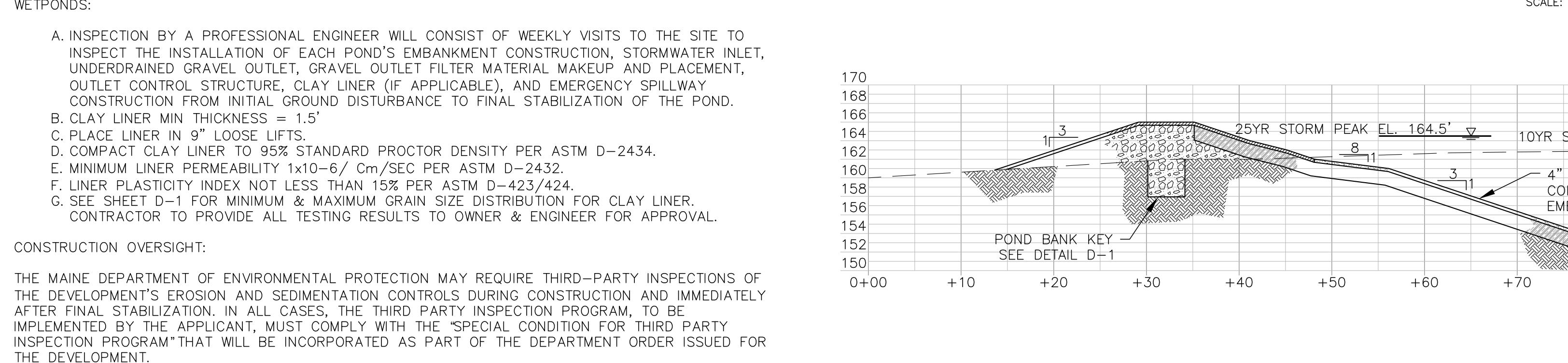
CONSTRUCTION OVERSIGHT:

THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION MAY REQUIRE THIRD-PARTY INSPECTIONS OF THE DEVELOPMENT'S EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION AND IMMEDIATELY AFTER FINAL STABILIZATION. IN ALL CASES, THE THIRD PARTY INSPECTION PROGRAM, TO BE IMPLEMENTED BY THE APPLICANT, MUST COMPLY WITH THE SPECIAL CONDITION FOR THIRD PARTY INSPECTION PROGRAM* THAT WILL BE INCORPORATED AS PART OF THE DEPARTMENT ORDER ISSUED FOR THE DEVELOPMENT.



SECTION B-B
SECTION A-A
POND 2 OUTFALL STRUCTURE DETAIL
NOT TO SCALE

0 20 40 60
GRAPHIC SCALE
1" = 20'



POND 2 SECTION 1
SCALE: HORIZ. 1" = 10'
VERT. 1" = 10'

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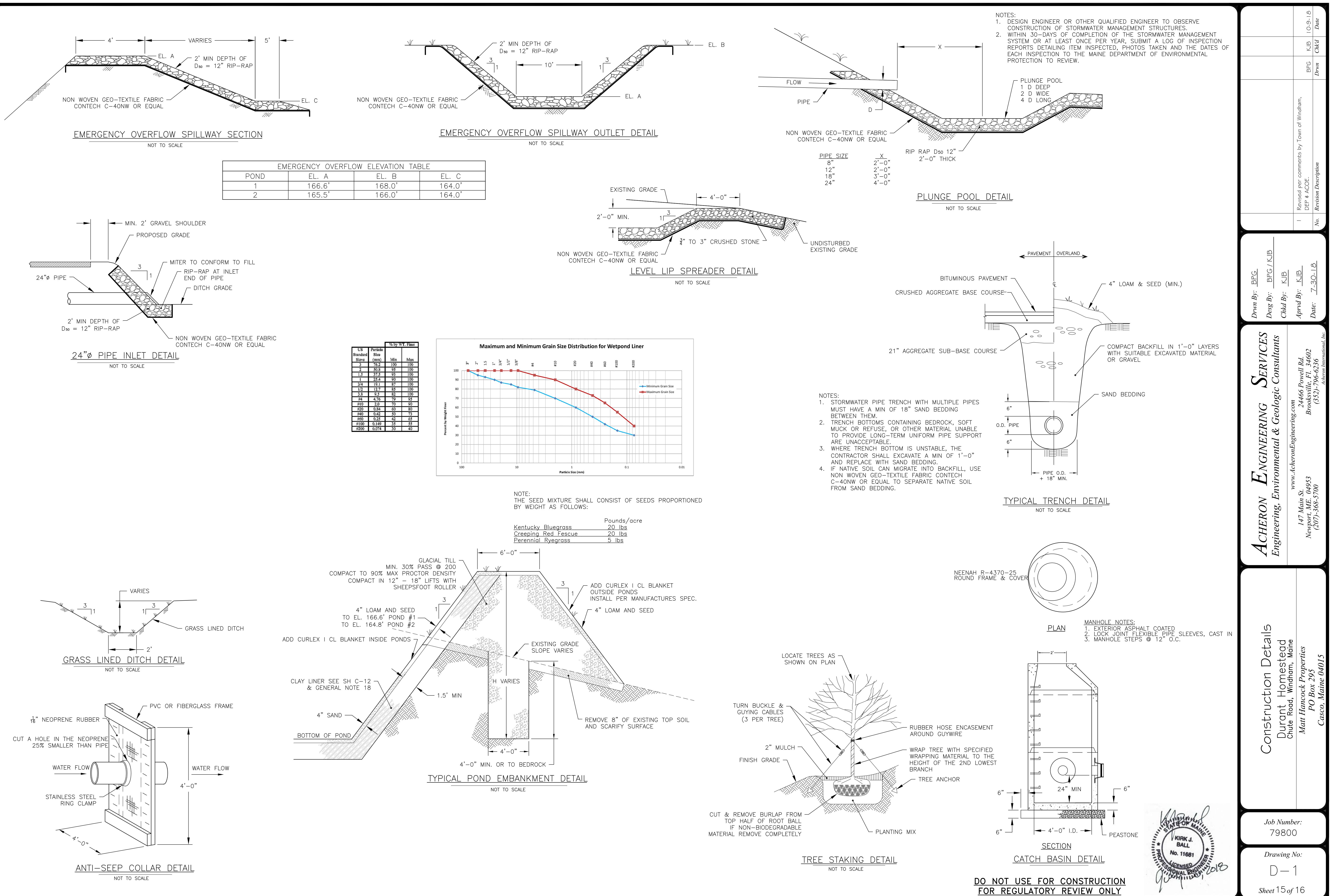
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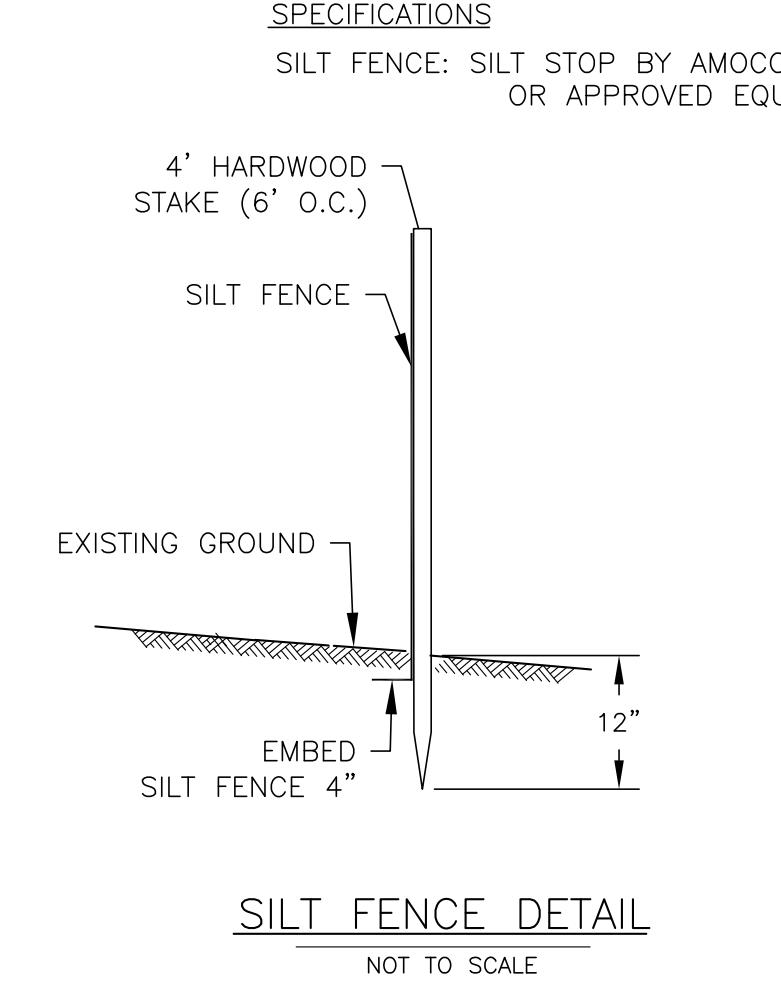
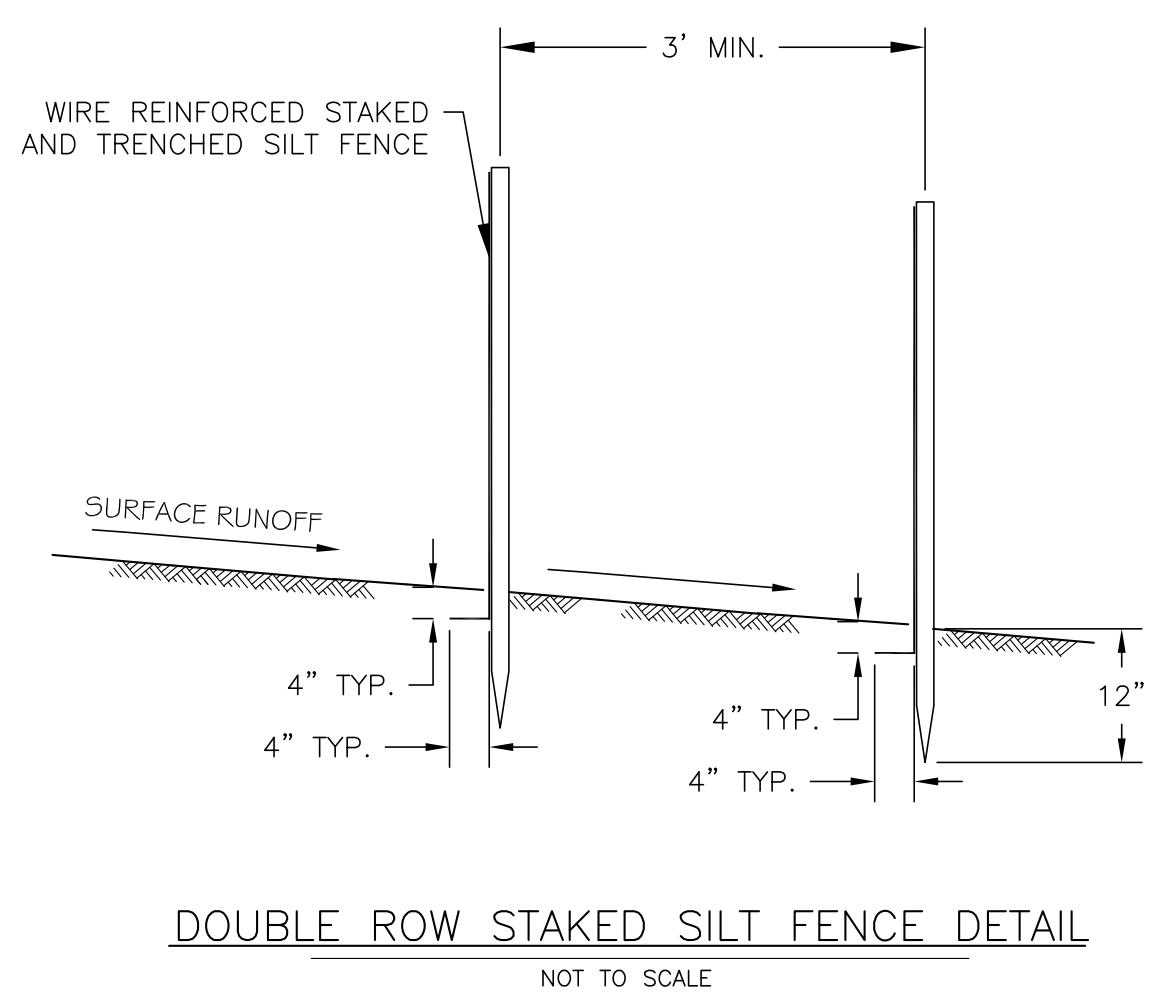
Sheet 14 of 16

Drawn By: BPG	Desg By: BPG / KJB	Chkd By: KJB	Apvd By: KJB	Date: 7-30-18
I Revised per comments by Town of Windham, DEP & AOE.	No. Revision Description			

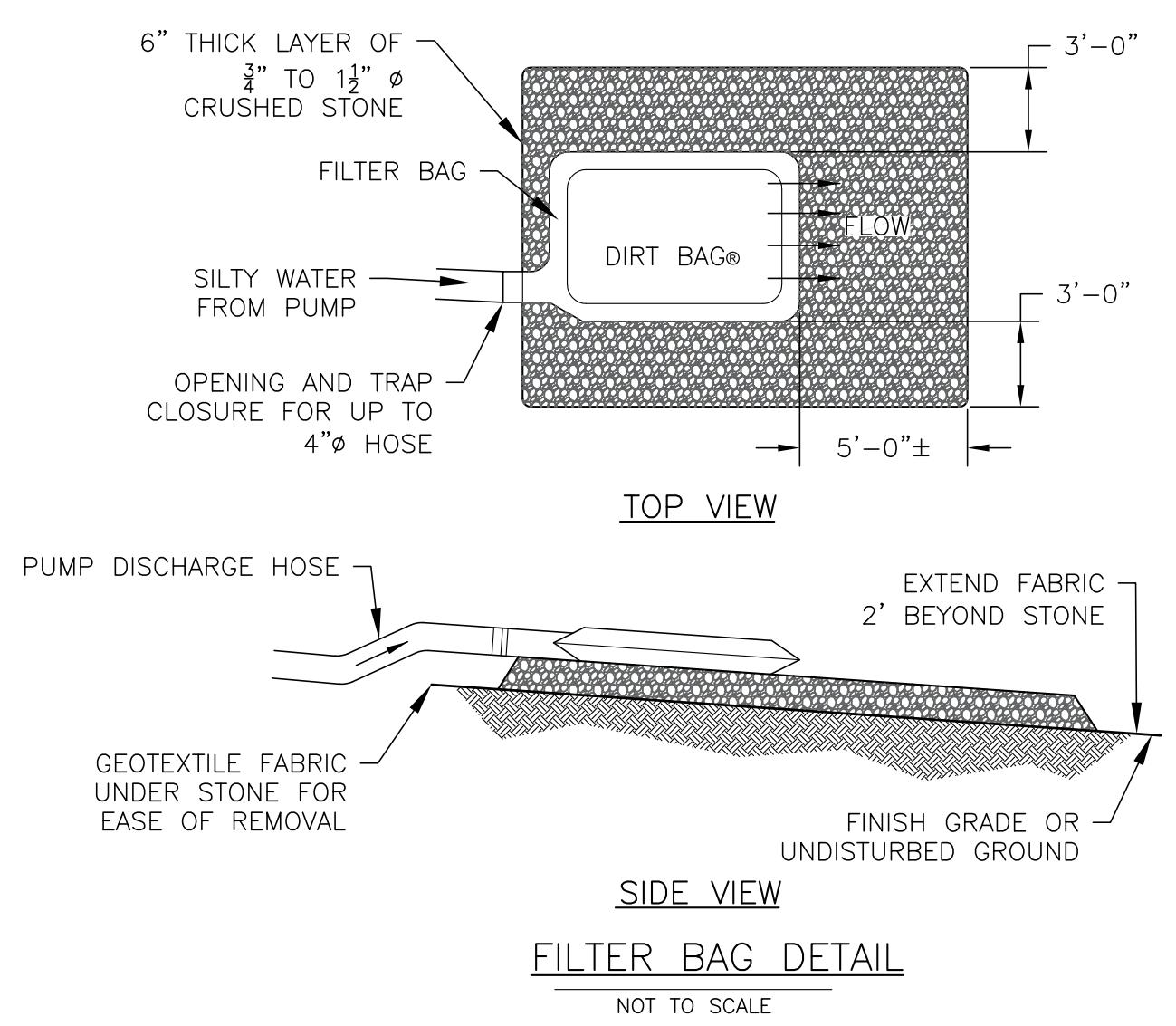
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Stormwater Management Plan
Pond #2 Plan & Sections
Durant Homestead
Chafee Road, Windham, Maine
Matt Hancock Properties
P.O. Box 395
Casco, Maine 04015

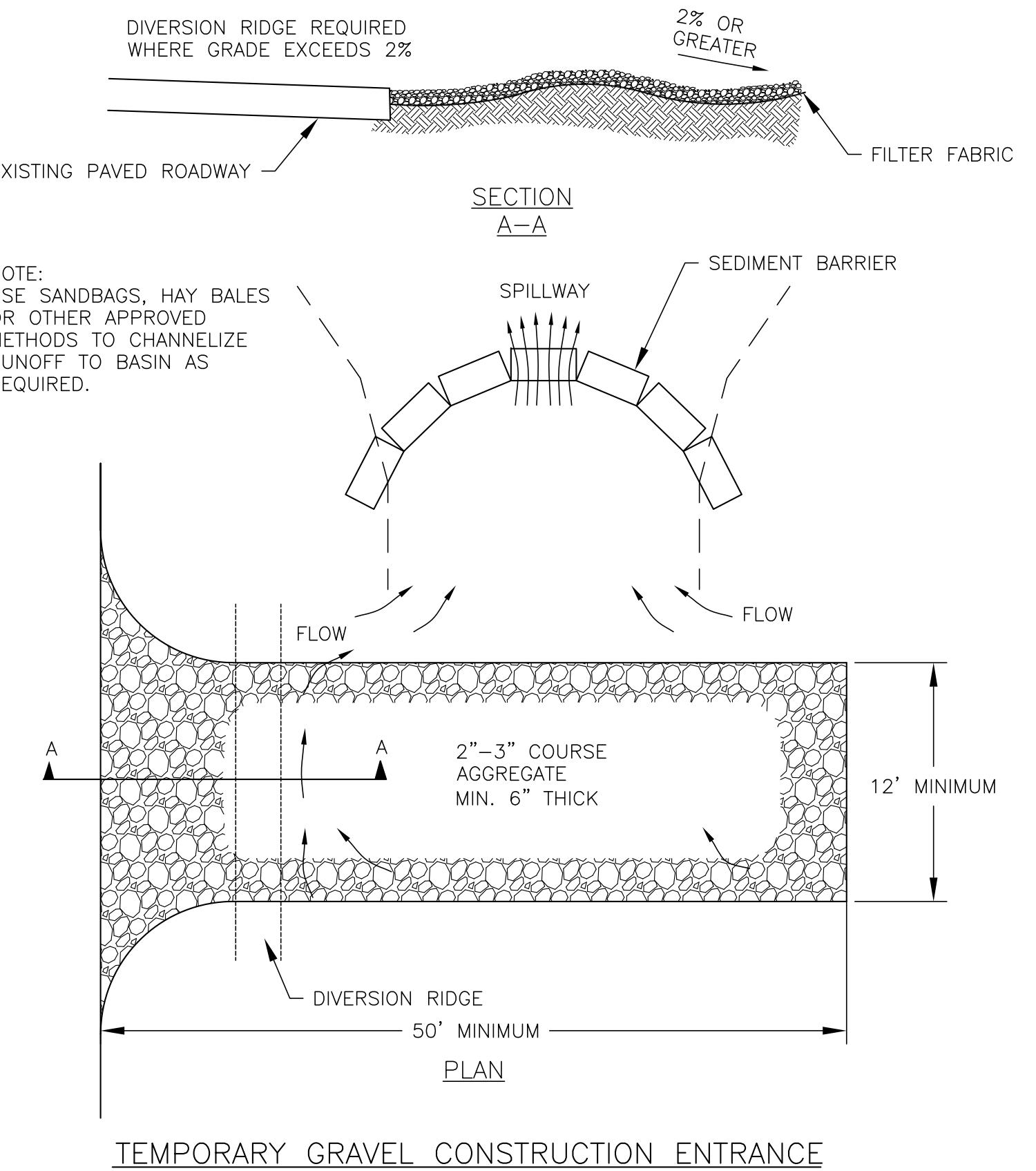
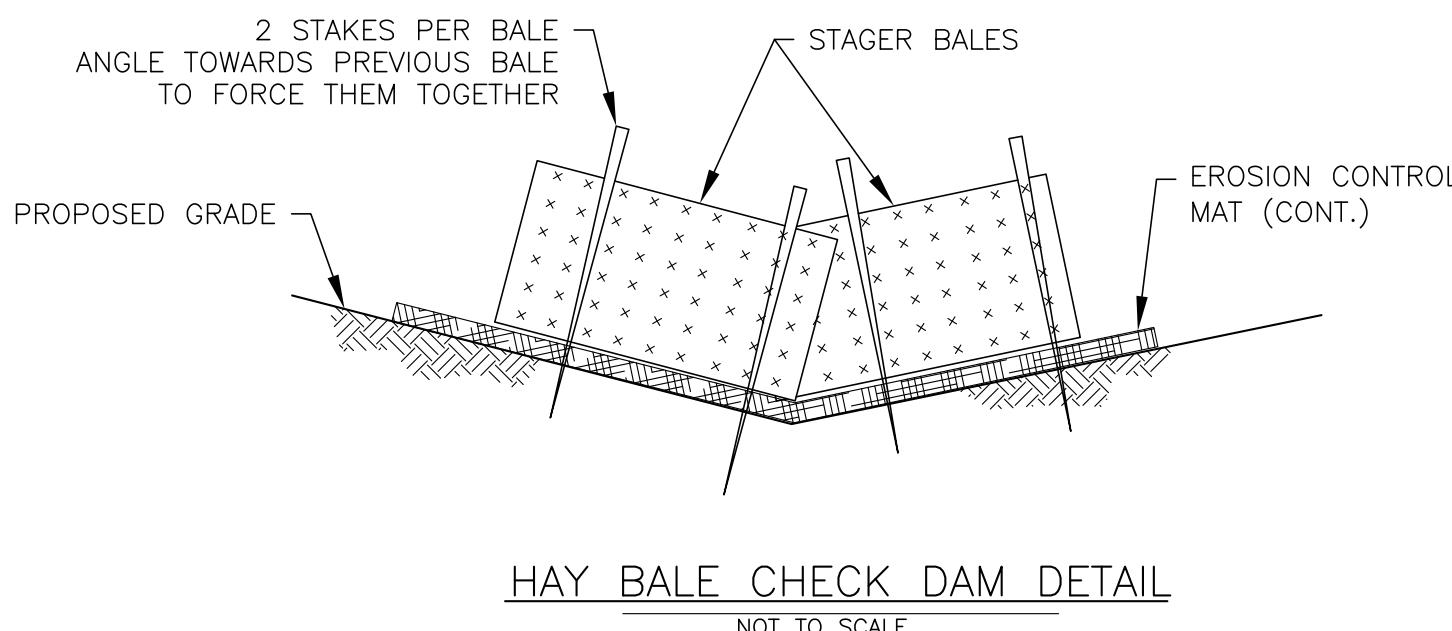
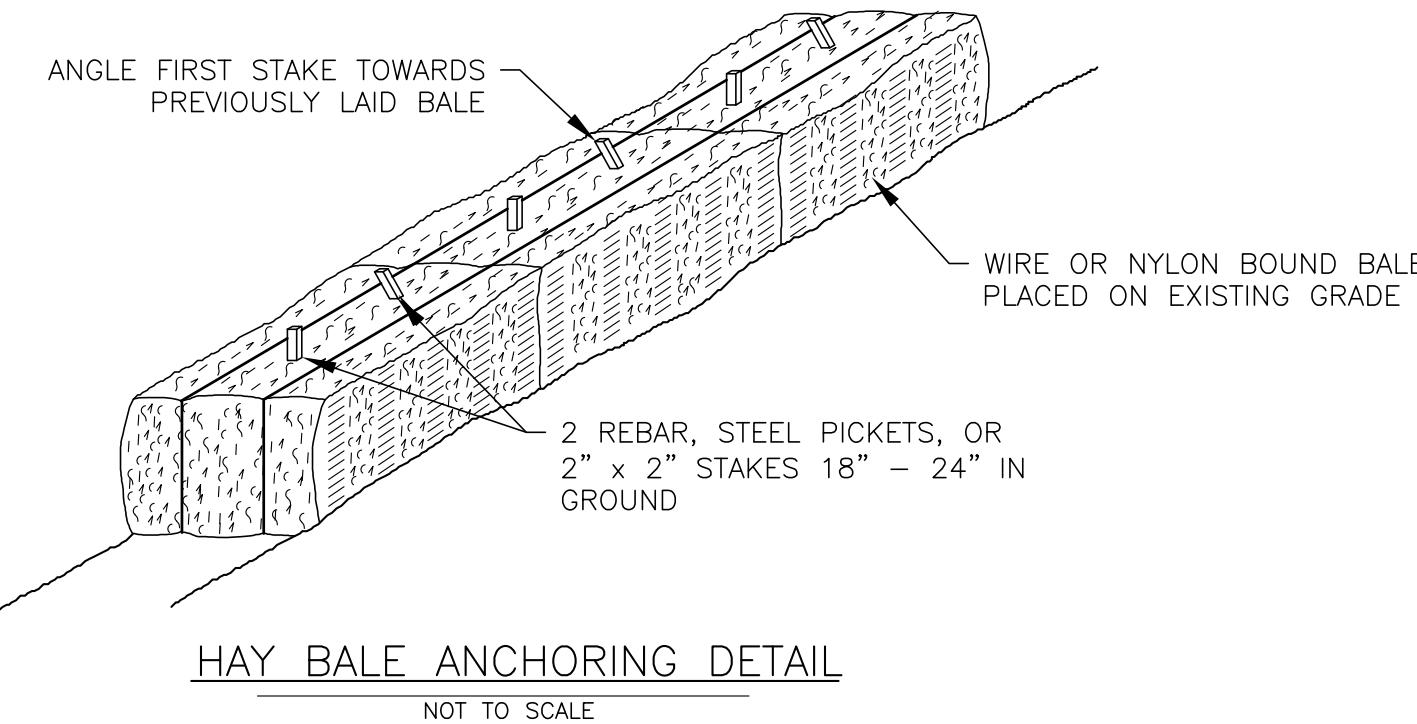




NOTE:
IN LIEU OF SILT FENCE EROSION CONTROL MIX CAN BE USED IF CONDITIONS BELOW ARE MET:
EROSION CONTROL MIX MAY NOT BE USED WITHIN 20 FT OF A WETLAND.
FOLLOW MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE 2014.
EROSION CONTROL MIX BERM:
THE ECM BERM SHOULD BE A MINIMUM OF 12" HIGH AND A MINIMUM OF TWO FEET WIDE. ON LONGER OR STEEPER SLOPES, THE BERM WILL NEED TO BE WIDER AND HIGHER. BERMS COMPOSED OF ECM CAN BE RESHAPED WHEN NECESSARY.
EROSION CONTROL MIX:
THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).



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



NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT 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.

Drawn By:	BPG
Desg By:	BFG / KJB
Chkd By:	KJB
Apvd By:	KJB
Date:	7-30-18

Drawn By:	BPG
Desg By:	BFG / KJB
Chkd By:	KJB
Apvd By:	KJB
Date:	7-30-18

Subdivision Access Road	Erosion Control Details
Durant Homestead	Durant Homestead
Chute Road, Windham, Maine	Chute Road, Windham, Maine

Job Number:	79800
Drawing No:	D-2
Sheet 16 of 16	

