

# ***Acheron***

***Engineering, Environmental & Geologic Consultants***  
[www.AcheronEngineering.com](http://www.AcheronEngineering.com)

March 4, 2019

Amanda Lessard, Planner  
Town of Windham  
8 School Road  
Windham, Maine 04062

RE: Response to Comments Final Major Subdivision Application Durant Homestead, Residential Subdivision.

Dear, Amanda

The purpose of this submittal is to address Town of Windham's review comments regarding the Durant Homestead, Final Major Subdivision Application. Comments were provided in an email from Gorrill Palmer, dated February 14, 2019. Below you will find comments provided by the Windham in italic font followed by a response by Matt Hancock Properties LLC in regular font.

- 1. Final Subdivision Plan (no sheet #) – Open space areas should be labeled similar to the lot areas.*

The Final Subdivision Plan, attached has been revised to include labels for the open space areas that are similar to the lot labels.

- 2. Final Subdivision Plan (no sheet #) – As noted by Jon Earle in previous review, percentage of developable land in open space (Note 12) appears to be incorrect. The denominator does not match the total open space area provided in Note 11.*

The area of land proposed in open space equals 40.37 acres as indicated in Note 11. This figure includes areas that are not developable (wetlands and slopes over 25%). The developable area designated as open space equals 27.20 acres. This figure is the area designated as open space minus wetlands and slopes over 25% (40.37 acres - 13.17 acres). Note 12, calculates the percentage of reserved open space within the full parcel. As mentioned above the developable area in open space is 27.20 and the developable area within the full parcel is 48.53 acres (same as net residential area),  $(27.20/48.53) = 56\%$ . Note 12 has been revised to clarify.

- 3. Final Subdivision Plan (no sheet #) – Plan shall be stamped by a Maine Licensed Professional Engineer and Professional Land Surveyor.*

The attached Final Subdivision Plan include the design engineer's stamp and signature.

- 4. Final Subdivision Plan (no sheet #) – Granite Monuments shall be installed in accordance with Section 911.A.3(a).*

The Final Subdivision Plan has been revised per Section 911.A.3(a).

5. *Final Subdivision Plan (no sheet #) – Some proposed well locations are within 100’/150’ of the proposed travel way. As stated in Section 911.B.1(c)(I)(iii), wells shall not be constructed within 100’ downgradient of travelways or 50’ uphill from travelways.*

Section 911.B.1.(c)(I)(iii) requires water supply wells to be constructed 100 feet from a traveled way if located downhill from the street, or within 50 feet of a traveled way if located uphill of the street. Review of the site plan only 8 wells were identified that did not meet this requirement. As discussed with the Windham Planning and Code Enforcement the intent of this requirement makes sense for dug wells which happens to be the primary topic of this section. It is presumed that the purpose is to limit the public’s exposure to any contaminate from a travel way reaching a dug well. Based on discussions with the town staff Matt Hancock Properties is requesting the Planning Board to waive this requirement for the following reasons:

- The potable water wells shown will be constructed per CMR Chapter 232 – Well Drillers and Pump Installer Rules and sealed to prevent surface water from entering the well.
- There are no traveled way setback requirements for residential water supply well in the Maine Well Driller or the Maine Drinking Water Program Rules.
- The project is designed so that 90% of the stormwater generated on travelways will be captured by the ditches on both sides of the Penny Whistle Lane and conveyed to stormwater wet ponds for treatment. Eliminating the chance for stormwater from travelways to flow over land or the upper soil horizon to the proposed well locations.

The typical construction of a drilled well and the stormwater design will virtually eliminate the probability of stormwater cross contaminating the water supply wells of these eight wells. Therefore, Matt Hancock Properties requests that the Windham Planning Board grant a performance waiver from section 911.B.1.(c)(I)(iii) for the Durant Homestead Project.

6. *Final Subdivision Plan (no sheet #) – We recommend that the plan show all lot setbacks (front, side, rear).*

The Final Subdivision Plan has been revised to show structures setbacks.

7. *Final Subdivision Plan (no sheet #) – We recommend that the plan include all space and bulk criteria for a cluster subdivision in a farm zone.*

The space and bulk criteria for a cluster subdivision is included on the attached version of the Final Subdivision Plan.

8. *Final Subdivision Plan (no sheet #) – It should be noted that the proposed tree line does not appear to include the proposed lot development.*

During the preliminary subdivision planning board review process, the Board approved a not showing the proposed tree line for the lots that are not regraded to meet stormwater standards. The basis for this approval is the Durant Homestead Stormwater Treatment

Level Summary Table on Sheet C-5 which specifies the amount of impervious and developed area allowed on each lot. This table allows, the contractor, owner and inspectors to easily determine the limit of clearing and development for each lot in the field.

9. *Final Subdivision Plan (no sheet #) - As the stormwater system has been designed to accommodate the proposed impervious and developed areas, as shown on this plan, any changes to the proposed lot development areas may require revisions to the proposed stormwater treatment systems.*

There are no changes to the lot development that will require revisions to the stormwater management plan.

10. *Site Plan (C-6) – Construction entrance does not appear to be shown in the correct location.*

The construction location has been relocated on sheet C-6.

11. *Site Plan (C-6) – Building envelopes/setbacks should be revised to exclude any wetlands within the lots.*

Building envelopes/setbacks have been revised on C-6 to exclude wetlands.

12. *Site Plan (C-9) – Plan scale exceeds maximum scale size allowed (1" = 50'), refer to Section 911.M.5(a)(2). A waiver should be requested if you want to maintain the current scale*

Please see the attached waiver request.

13. *Site Plan (C-9) – Underground electrical and transformers are not shown on plan.*

Underground electrical and transformers are shown on the attached sheet C-2 and C-9. Sheet C-2 includes a note indicating that a utility easement must be established for each transformer location.

14. *Profile Plan (C-10) – Grade from Sta. 0+00 to 0+60 exceeds the maximum allowable slope at intersections (2% for 60') as required in Appendix B, Table 3.*

The road design has been revised to show a grade of 2% from station 0+00 to 0+60.

15. *Profile Plan (C-10) – Sag curve at Sta. 5+50 does not meet the required minimum K value in the AASHTO green book (26 minimum for 25 mph design speed). Given that this road may be submitted for acceptance as a Town Public Road, we would recommend that this vertical curb be revised to meet AASHTO requirements.*

Matt Hancock Properties understands the reasoning for this recommendation and want to point out that is a recommendation and not a requirement. The sag curve as designed has been evaluated using AASHTO green book. The sag curve shown has a "K" value of 13 which falls between 15 and 20 MPH. Matt Hancock Properties proposes to post a speed limit of 15 MPH for Penny Whistle Lane, which is a more appropriate speed limit for a clustered subdivision. Sheets C-9 and C-11 have been revised to include speed limit signs and installation detail.

*16. Typical Section (C-11) – Roadside ditching does not meet the depth requirements in Section 911.M.5(b)(8)(iii)(c).*

Typical Section on Sheet C-11 has been revised to show the ditching depth to meet the requirement of Section 911.M.5(b)(8)(iii)(c).

Please let me know if you have any questions or concerns

Sincerely,  
Acheron



Kirk J. Ball, PE

Enclosure:      Waiver Requests (5)  
                     Revised Final Subdivision Plan (5)  
                     Plan Sheets C-2, C-4, C-5, C-6, C-7, C-9, C-10 and C-11, (5)

Cc:      Matt Hancock, MHP  
            David Fowler, MHP



# TOWN OF WINDHAM SUBDIVISION & SITE PLAN APPLICATION

## Performance and Design Standards Waiver Request Form

(Section 808 – Site Plan Review, Waivers)

(Section 908 – Subdivision Review,  
Waivers)

For each waiver request from the Performance and Design Standards detailed in Section 811 or Section 911 of the Town of Windham Land Use Ordinance, as applicable, please submit a separate completed copy of this waiver request form.

**Subdivision or Project Name:** Durant Homestead Subdivision

**Tax Map:** 6                      **Lot:** 25

**Waivers are requested from the following Performance and Design Standards  
(add rows as necessary):**

Ordinance Section	Standard	Mark which waiver this form is for
911.B.1.(c)(I)(iii)	Water Supply	X
911.M.5.(a)(2)	Specific Street Design and Construction Standards	

- a. Describe how a waiver from the standard indicated above will improve the ability of the project to take the property's pre-development natural features into consideration. Natural features include, but are not limited to, topography, location of water bodies, location of unique or valuable natural resources, relation to abutting properties or land uses. Attach a separate sheet if necessary.

*Section 911.B.1.(c)(I)(iii) requires water supply wells to be constructed 100 feet from a traveled way if located downhill from the street, or within 50 feet of a traveled way if located uphill of the street. Review of the site plan only 8 wells were identified that did not meet this requirement. As discussed with the Windham Planning and Code Enforcement the intent of this requirement makes sense for dug wells which happens to be the primary topic of this section. It is presumed that the purpose is to limit the public's exposure to any contaminate from a travel way reaching a dug well. Based on discussions with the town staff Matt Hancock Properties is requesting the Planning Board to waive this requirement for the following reasons:*

- *The potable water wells shown will be constructed per CMR Chapter 232 – Well Drillers and Pump Installer Rules and sealed to prevent surface water from entering the well.*
- *There are no traveled way setback requirements for residential water supply well in the Maine Well Driller or the Maine Drinking Water Program Rules.*
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*The typical construction of a drilled well and the stormwater design will virtually eliminate the probability of stormwater cross contaminating the water supply wells of these eight wells. Therefore, Matt Hancock Properties requests that the Windham Planning Board grant a performance waiver from section 911.B.1.(c)(I)(iii) for the Durant Homestead Project.*

Ordinance Section: Section 911.M.5(a)(2)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution		X
Light pollution or glare		X
Water supply	X	
Soil erosion		X
Traffic congestion or safety		X
Pedestrian safety or access		X
Supply of parking		X
Sewage disposal capacity		X
Solid waste disposal capacity		X
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas		X
Flooding or drainage issues on abutting properties		X
The Town's ability to provide the subdivision with public safety services (if subdivision)		X

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

*Drilled wells on Lots 1, 2, 3, 4, 5, 7, 9 and 10 will not meet the traveled way setbacks in Section 911.B.1.(c)(I)(iii).*

# TOWN OF WINDHAM SUBDIVISION & SITE PLAN APPLICATION

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(Section 808 – Site Plan Review, Waivers)

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**Subdivision or Project Name:** Durant Homestead Subdivision

**Tax Map:** 6                      **Lot:** 25

**Waivers are requested from the following Performance and Design Standards  
(add rows as necessary):**

Ordinance Section	Standard	Mark which waiver this form is for
911.B.1.(c)(l)(iii)	Water Supply	
911.M.5.(a)(2)	Specific Street Design and Construction Standards	X

- a. Describe how a waiver from the standard indicated above will improve the ability of the project to take the property's pre-development natural features into consideration. Natural features include, but are not limited to, topography, location of water bodies, location of unique or valuable natural resources, relation to abutting properties or land uses. Attach a separate sheet if necessary.

*Section 911.M.5(a)(2) limits the plan view scale for detailed construction drawings to one inch no more than fifty feet. The design engineer used best judgement in this case and elected to show the full length of Penny Whistle Lane on sheet C-9 at a scale of one inch equals sixty feet. This allows for reader to understand the full scope and layout of the road without the need to rely on match lines. The design engineer also elected to show additional plan view sections on sheets C-8, C-7, C-12 and C-13 of the project areas requiring more detail, including road stationing at scales of one inch equals thirty and twenty feet. Therefore, Matt Hancock Properties requests that the Windham Planning Board grant a waiver from Section 911.M.5(a)(2) for the Durant Homestead Project.*

Ordinance Section: Section 911.M.5(a)(2)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution		X
Light pollution or glare		X
Water supply		X
Soil erosion		X
Traffic congestion or safety		X
Pedestrian safety or access		X
Supply of parking		X
Sewage disposal capacity		X
Solid waste disposal capacity		X
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas		X
Flooding or drainage issues on abutting properties		X
The Town's ability to provide the subdivision with public safety services (if subdivision)		X

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.



(1) Documents referenced on this plan are recorded in the Cumberland County Registry of Deeds unless otherwise noted.

(3) Reference is made to the following plans:

b. Property Plan, Chute Road, Windham, Maine made for Kenneth Jordan by Robert P. Titcomb, Inc. dated April 22, 1980 recorded in Plan Book 126, Page 37.

c. Plan Showing a Standard Boundary Survey made for Edith M. Durant located on the northwesterly sideline of the Chute Road, Windham, Maine by Bruce R. Bowman, Inc. dated July 29, 1992 recorded in Plan Book 192, Page 189.

d. Plan of Property for Peter Kluchnik, Webb Road, South Windham, Maine by Land Use Consultants, Inc. dated January 19, 1977 recorded in Plan Book 116, Page 22.

(4) The premises is subject to utility easements conveyed to Central Maine Power Co. and New England Telephone and Telegraph Company as described in Volume 6103, Page 183 and Volume 6884, Page 233. See plan for approximate locations.

(5) Chute Road (f.k.a. Wyer Ledge Road) right of way is depicted hereon based on geometry contained within the description of the subject premises in Volume 33191, Page 124. No additional road research was conducted.

(6) Reference is made to the subdivision plan of the subject premises by Main-Land Development Consultants, Inc. approved September 24, 2007 recorded in Plan Book 207, Page 635 and the subsequent Vacancy and Termination Order dated October 22, 2012 recorded in Volume 30081, Page 168.

(7) Planimetric detail as provided by Aerial Survey & Mapping, Norridgewock, Maine.

(8) For source of title see deed to Matt Hancock Properties, Inc. recorded in Volume 33191, Page 124. Subject premises is identified by the Town of Windham as Tax Map 6, Lot 25.

(9) Total area subdivided equals 65.55 acres

(10) Wetland impact = 14,569 sf OR 0.33 acre

(11) Open Space area: Total = 40.37 acres, Developable = 27.2 acres

(12) Total area of reserved open space shall equal or exceed 50% of the land suitable for development, (area suitable for development/net residential area): (27.2 acres/48.53 acres)=56%

(13) Where bedrock is encountered at a depth of 10 feet or less at any well, install water supply wells with casing set and grouted a minimum of 20 feet below the solid bedrock surface.

(14) Disposal field footprints as shown on this plan are based on sizing using quick 4 hi-cap plastic chambers, except on Lots 12, 13, 15 and 16 where smaller system footprints using Eljen In-Drain type systems are shown. approved propriety devices with a smaller footprint are recommended to be used on these lots to avoid and minimize alteration of nearby wetlands.

(15) Lots 19, 20 and 21: compact soils in the leachfield footprints and fill extensions are to be removed and replaced with suitable backfill to the lower limit of compaction. The backfill should be tilled into the original soil to a 6-inch depth in the leachfield footprint and fill extensions to form a transitional horizon.

(16) Lot 3: LPI approval required for a reduction in setback between the leachfield and the drilled well, to include greater depth of well casing or liner seal below ground level, as per Table 7a in Section 7 of the Subsurface Wastewater Disposal Rules (as amended August 03, 2015).

(17) All residential homes shall be equipped with a sprinkler system in accordance with the latest edition of NFPA-13D.

(18) Buffers A-N to be marked with permanent signs describing use.

(19) Fill or alteration of wetlands other than what is shown on the plan is not authorized without prior approval from the Department of Environmental Protection.

(20) Road and stormwater design provided by Acheron Engineering, 147 Main St., Newport, ME 04953; <https://acheronengineering.com>.

(21) Applicable bulk and space criteria are as follows

Minimum lot size	30,000 sf
Maximum Lot Size	50,000 sf
Net Residential Density	60,000 sf
Minimum Frontage	100 ft; 50 ft on cul-de-sac
Minimum Front Setback	25 ft
Minimum Side Setback	10 ft
Minimum Rear Setback	10 ft
Maximum Building Height	35 ft
Maximum Building Coverage	25%

This is to certify that after reviewing the subdivision shown by this plan and considering each of the criteria set forth in 30-A M.R.S.A. § 4404, as amended, and considering each of the criteria set forth in the subdivision ordinance of the Town of Windham, the undersigned having made findings of fact establishing that the proposed subdivision meets all of the criteria set forth therein, and therefore the subdivision is approved.

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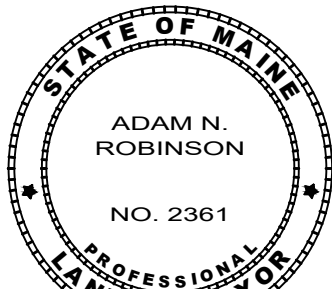
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Dated: \_\_\_\_\_  
The Town of Windham Planning Board

72 MAIN STREET  
BANGOR, MAINE  
DATE: March 4, 2019  
PROJ. NO. 17010

Email: [info@WeMapIt.com](mailto:info@WeMapIt.com)  
Phone: (207) 947-0019  
Toll-Free: 1-800-734-0019

DRAWING FILE: 17010.dwg



These plans were prepared from information obtained by a survey conforming substantially to the requirements of Technical Standards contained in Chapter 90, Part 2, of the Rules of the Board of Licensure for Professional Land Surveyors, effective April 1, 2001. Monuments not set at all angle points. Records research conducted from 2006 to the present.

Adam T. Robinson

Adam N. Robinson, Maine Licensed  
Professional Land Surveyor No. 2361

Description	Impervious Area (sf)	Developed Area (sf)
Lot #1	3,040	25,956
Lot #2	3,040	25,787
Lot #3	3,040	13,040
Lot #4	3,040	13,040
Lot #5	3,040	22,194
Lot #6	3,040	13,040
Lot #7	3,040	23,716
Lot #8	3,040	28,231
Lot #9	3,040	22,096
Lot #10	4,015	14,015
Lot #11	4,015	27,457
Lot #12	4,015	20,794
Lot #13	4,015	14,015
Lot #14	4,015	14,015
Lot #15	4,015	14,015
Lot #16	3,040	13,040
Lot #17	4,015	30,040
Lot #18	4,015	28,775
Lot #19	4,015	14,015
Lot #20	4,015	14,015
Lot #21	4,015	14,015
Lot #22	4,015	29,327
Lot #23	4,015	14,015
Lot #24	4,015	14,015
Lot #25	4,015	14,015
Totals	90,625	477,081

Curve	Radius	Arch length	Chord bearing	Chord length
C1	60.00'	78.03'	N 18° 23' 20" W	72.64'
C2	275.00'	199.38'	N 34° 52' 25" W	195.04'
C3	205.00'	45.63'	N 07° 43' 24" W	45.54'
C4	205.00'	202.93'	N 27° 00' 36" E	194.75'
C5	205.00'	108.43'	N 08° 14' 30" E	108.41'
C6	205.00'	68.90'	N 26° 01' 32" E	68.57'
C7	6.00'	5.24'	N 10° 38' 31" E	5.07'
C8	6.00'	11.56'	S 69° 34' 18" E	9.85'
C9	205.00'	66.26'	N 64° 29' 09" E	65.97'
C10	57.00'	228.81'	S 08° 44' 23" W	103.32'
C11	155.00'	108.14'	N 08° 14' 30" E	108.14'
C12	155.00'	155.14'	S 45° 04' 17" W	148.75'
C13	205.00'	139.44'	S 35° 52' 59" W	136.76'
C14	125.00'	123.74'	S 27° 00' 36" W	118.75'
C15	155.00'	34.50'	N 07° 43' 34" E	34.43'
C16	225.00'	163.13'	S 34° 52' 25" E	159.58'
C17	205.00'	110.77'	N 07° 43' 24" W	110.77'
C18	275.00'	15.19'	S 54° 03' 24" W	15.19'
C19	205.00'	62.76'	N 07° 25' 17" E	62.52'
C20	205.00'	140.17'	N 35° 46' 50" E	137.46'
C21	155.00'	75.65'	S 41° 23' 11" W	74.90'
C22	155.00'	79.78'	S 21° 54' 22" E	28.73'
C23	155.00'	154.88'	N 08° 14' 30" E	154.88'
C24	57.00'	73.09'	N 66° 55' 31" E	68.86'
C25	205.00'	68.55'	N 25° 58' 37" E	68.23'
C26	205.00'	80.89'	N 45° 22' 02" E	70.53'
C27	125.00'	72.81'	S 46° 27' 26" E	81.40'
C28	125.00'	74.63'	S 08° 39' 59" E	70.65'
C29	125.00'	68.50'	N 08° 14' 30" E	68.54'
C30	225.00'	90.53'	N 43° 35' 45" W	93.93'

Lands n/f of  
**River's Edge Common Land**  
 Volume 18946, Page 340  
 Plan Book 203, Page 105  
 Tax Map 6 - Lot 42

River's Edge Subdivision - Common Open Space  
See plan reference a.

Net Residential Density:  
Total acreage of project site = 65.55 acres  
Acreage of slopes greater than 25% = 0.91 acres  
Acreage of wetlands = 12.73 acres  
Potential wetland impact = 0.33 acres  
Road rights-of-way = 3.38 acres  
Land in the 100 year flood zone = 0 acres  
Net residential area = 48.53 acres  
Net residential density = 60,000 sf  
Subdivision lots allowed = 35.23

Lands n/f of  
**Lillian M. Plummer**  
Volume 29006, Page 147  
Tax Map 3 - Lot 18

Lands n/f of  
**John A. & Claire H. Streeter**  
Volume 8501, Page 223  
Tax Map 3 - Lot 22A

Lands n/f of  
**Elizabeth W. Dube**  
Volume 6230, Page 231  
Tax Map 6 - Lot 25A

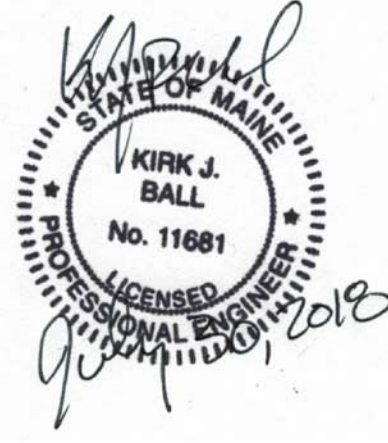
STATE OF MAINE  
CUMBERLAND, ss, REGISTRY OF DEEDS  
Received \_\_\_\_\_  
at \_\_\_\_\_ h \_\_\_\_\_ m \_\_\_\_\_ M, and recorded  
in Plan File \_\_\_\_\_  
  
ATTEST:  
  
\_\_\_\_\_  
REGISTER

Adam N. Robinson, Maine Licensed  
Professional Land Surveyor No. 2361

Record owner:  
Matt Hancock Properties, LLC  
PO Box 295  
Casco, ME 04015

property of  
**Hancock Properties, LLC**  
Cumberland County Registry of Deeds  
Volume 33191, Page 124  
Chute Road - Windham, Maine





Drawn By: BFC  
 Desg By: BPG / KJB  
 Chkd By: KJB  
 Apprd By: KJB  
 Date: 7-30-18

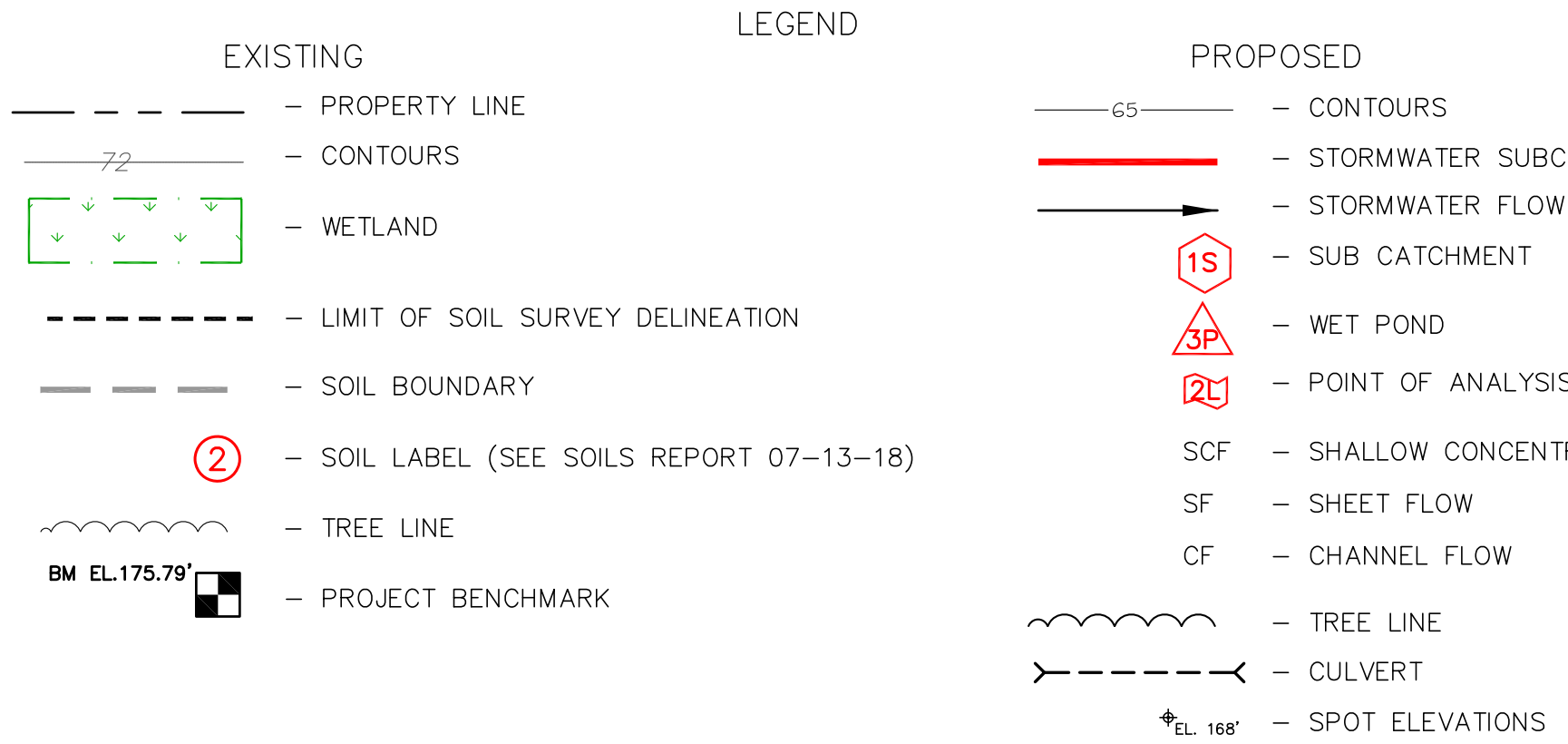
Proposed Subdivision Plan  
and Location Map  
Durant Homestead  
Chute Road, Windham, Maine  
Matt Hancock Properties  
PO Box 295  
Casco, Maine 04015

Job Number:  
79800

Drawing No:  
C-2

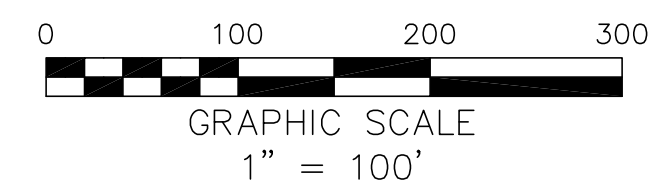
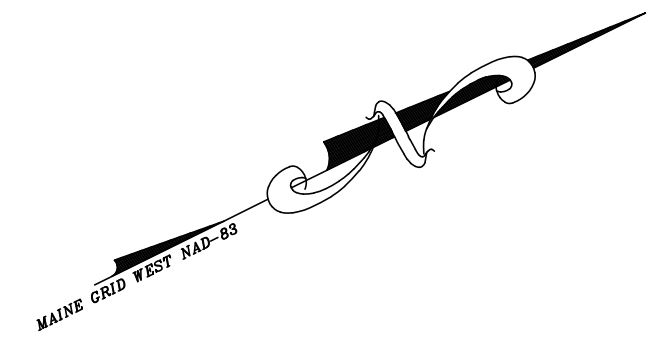
Sheet 3 of 16



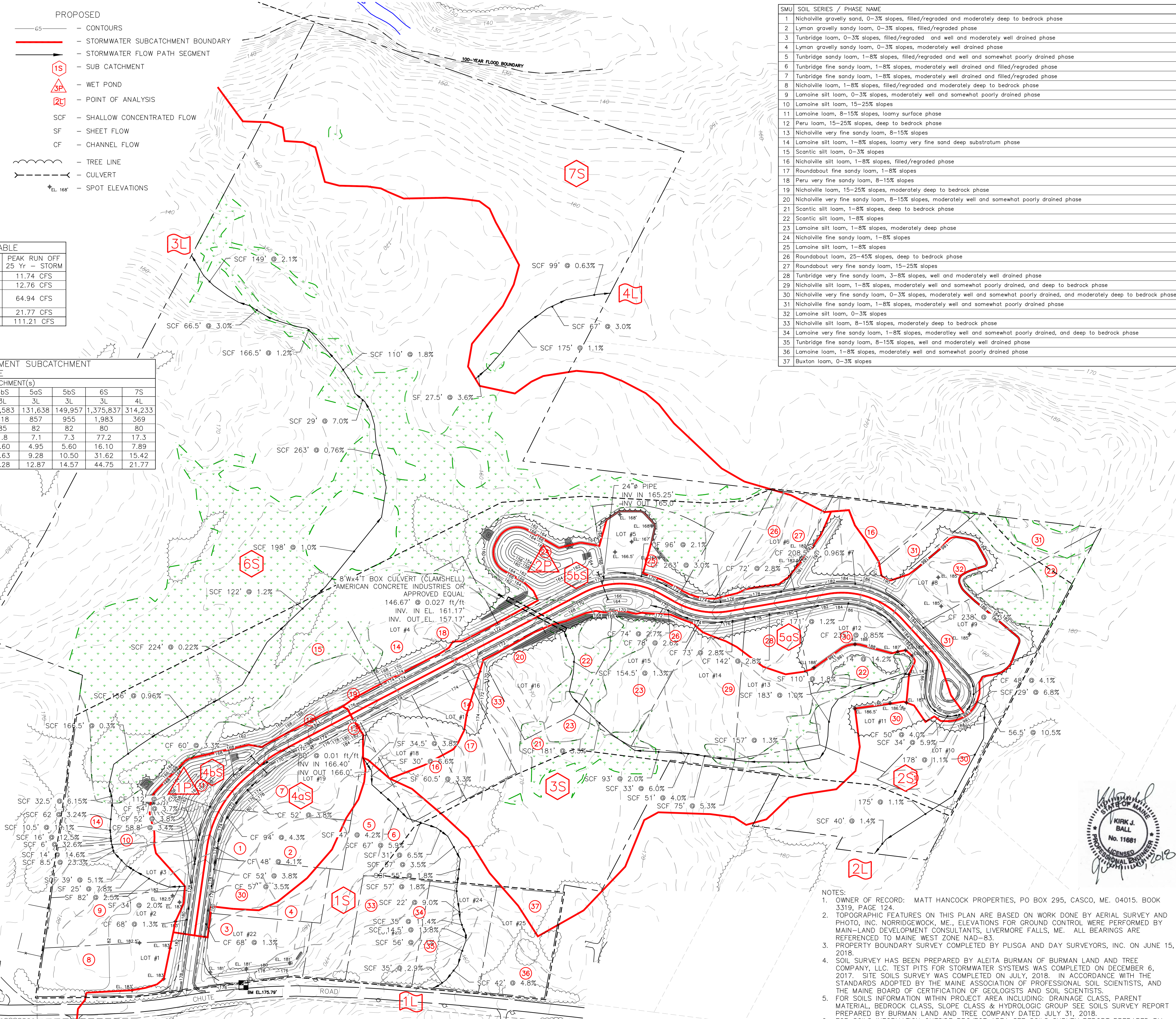


POST-DEVELOPMENT STORMWATER RUN OFF TABLE					
POINT OF ANALYSIS	SUB CATCHMENT(s)	AREA (ACRES)	PEAK RUN OFF 2 Yr - STORM	PEAK RUN OFF 10 Yr - STORM	PEAK RUN OFF 25 Yr - STORM
1L	1S	5.19	4.13 CFS	8.24 CFS	11.74 CFS
2L	2S	4.39	4.49 CFS	8.96 CFS	12.76 CFS
3L	3S, 4aS, 4bS, 5aS, 5bS & 6S	51.06	24.36 CFS	46.54 CFS	64.94 CFS
4L	7S	7.21	7.89 CFS	15.42 CFS	21.77 CFS
TOTAL		67.85	40.87 CFS	79.16 CFS	111.21 CFS

POST-DEVELOPMENT STORMWATER MANAGEMENT SUBCATCHMENT MODEL SUMMARY TABLE										
	SUBCATCHMENT(s)									
	1S	2S	3S	4aS	4bS	5aS	5bS	6S	7S	
POINT OF ANALYSIS	1L	2L	3L	3L	3L	3L	3L	3L	4L	
RUN OFF AREA (sf)	226,186	191,225	420,547	96,671	49,583	131,638	149,957	1,375,837	314,233	
FLOW LENGTH (ft)	630	449	1,038	384	418	857	955	1,983	369	
CN VALUE	79	79	80	81	85	82	82	80	80	
Tc (MIN)	31.9	17.8	48.1	1.7	1.8	7.1	7.3	77.2	17.3	
PEAK RUN OFF 2-Yr (cfs)	4.13	4.49	6.60	4.19	2.60	4.95	5.60	16.10	7.89	
PEAK RUN OFF 10-Yr (cfs)	8.24	8.96	12.91	8.01	4.63	9.28	10.50	31.62	15.42	
PEAK RUN OFF 25-Yr (cfs)	11.74	12.76	18.23	11.19	6.28	12.87	14.57	44.75	21.77	



DO NOT USE FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY



SMU	SOIL SERIES / PHASE NAME
1	Nicholville gravelly sand, 0-3% slopes, filled/regraded and moderately deep to bedrock phase
2	Lyman gravelly sandy loam, 0-3% slopes, filled/regraded phase
3	Tunbridge loam, 0-3% slopes, filled/regraded and well and moderately well drained phase
4	Lyman gravelly sandy loam, 0-3% slopes, moderately well drained phase
5	Tunbridge sandy loam, 1-8% slopes, filled/regraded and well and somewhat poorly drained phase
6	Tunbridge fine sandy loam, 1-8% slopes, moderately well drained and filled/regraded phase
7	Tunbridge fine sandy loam, 1-8% slopes, moderately well drained and filled/regraded phase
8	Nicholville loam, 1-8% slopes, filled/regraded and moderately deep to bedrock phase
9	Lamoine silt loam, 0-3% slopes, moderately well and somewhat poorly drained phase
10	Lamoine silt loam, 15-25% slopes
11	Lamoine loam, 8-15% slopes, loamy surface phase
12	Peru loam, 15-25% slopes, deep to bedrock phase
13	Nicholville very fine sandy loam, 8-15% slopes
14	Lamoine silt loam, 1-8% slopes, loamy very fine sand deep substratum phase
15	Scantic silt loam, 0-3% slopes
16	Nicholville silt loam, 1-8% slopes, filled/regraded phase
17	Roundabout fine sandy loam, 1-8% slopes
18	Peru very fine sandy loam, 8-15% slopes
19	Nicholville loam, 15-25% slopes, moderately deep to bedrock phase
20	Nicholville very fine sandy loam, 8-15% slopes, moderately well and somewhat poorly drained phase
21	Scantic silt loam, 1-8% slopes, deep to bedrock phase
22	Scantic silt loam, 1-8% slopes
23	Lamoine silt loam, 1-8% slopes, moderately deep phase
24	Nicholville fine sandy loam, 1-8% slopes
25	Lamoine silt loam, 1-8% slopes
26	Roundabout loam, 25-45% slopes, deep to bedrock phase
27	Roundabout very fine sandy loam, 15-25% slopes
28	Tunbridge very fine sandy loam, 3-8% slopes, well and moderately well drained phase
29	Nicholville silt loam, 1-8% slopes, moderately well and somewhat poorly drained, and deep to bedrock phase
30	Nicholville very fine sandy loam, 0-3% slopes, moderately well and somewhat poorly drained, and moderately deep to bedrock phase
31	Nicholville fine sandy loam, 1-8% slopes, moderately well and somewhat poorly drained phase
32	Lamoine silt loam, 0-3% slopes
33	Nicholville silt loam, 8-15% slopes, moderately deep to bedrock phase
34	Lamoine very fine sandy loam, 1-8% slopes, moderately well and somewhat poorly drained, and deep to bedrock phase
35	Tunbridge fine sandy loam, 8-15% slopes, well and moderately well drained phase
36	Lamoine loam, 1-8% slopes, moderately well and somewhat poorly drained phase
37	Buxton loam, 0-3% slopes

- 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. NORRIDGEWOCK, 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 PLUSGA 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 SOILS 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.

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(352)-796-6236  
Acheron International, Inc.

Post Development Stormwater  
Management Plan  
Durant Homestead  
Chute Road, Windham, Maine

Matt Hancock Properties  
PO Box 295  
Casco, Maine 04015

Job Number:  
79800

Drawing No:  
C-4

Sheet 5 of 16

Drwn By: BFG  
Desg By: BFG / KJB  
Chkd By: KJB  
Aprd By: KJB  
Date: 7-30-18

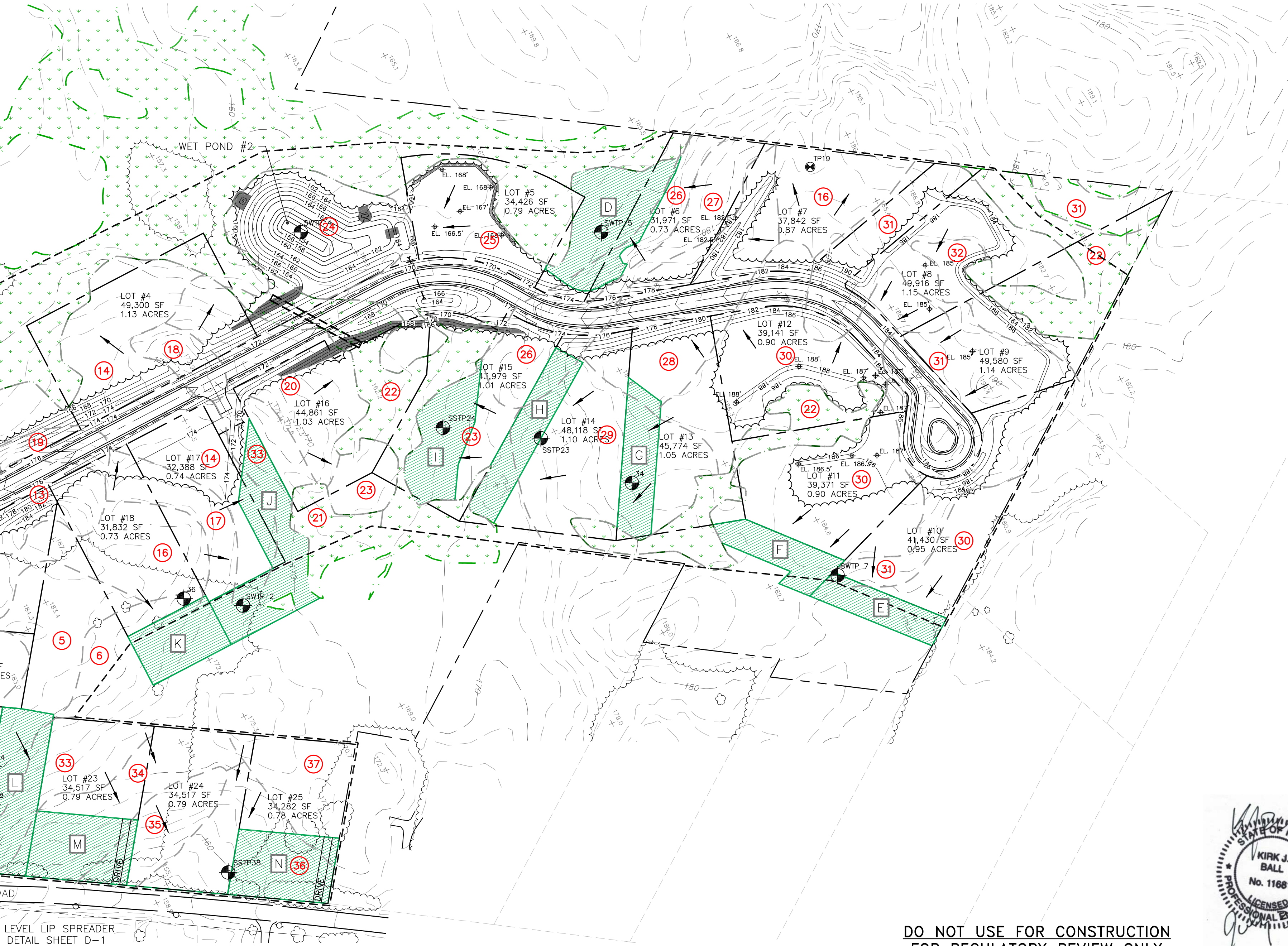
Revised per comments by Town of Windham, DEP & ACOE.  
Revised per comments by DEP for Stormwater.  
Revised per comments by Gerrill Palmer 2-14-19.

No. Revision Description  
Date



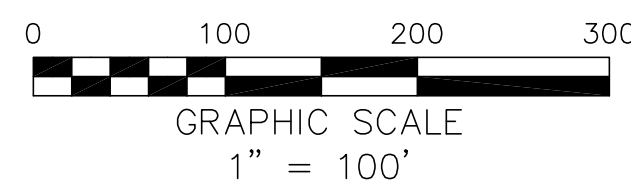
- NOTES:
1. OWNER OF RECORD: MATT HANCOCK PROPERTIES, PO BOX 295, CASCO, ME. 04015. BOOK 3319, PAGE 124.
2. TOPOGRAPHIC FEATURES ON THIS PLAN ARE BASED ON WORK DONE BY AERIAL SURVEY AND PHOTO, INC. NORRIDGEWOCK, ME., ELEVATIONS FOR GROUND CONTROL WERE PERFORMED BY MAIN-LAND DEVELOPMENT CONSULTANTS, LIVERMORE FALLS, ME. ALL BEARINGS ARE REFERENCED TO MAINE WEST ZONE NAD-83.
3. PROPERTY BOUNDARY SURVEY COMPLETED BY PLUSGA AND DAY SURVEYORS, INC. ON JUNE 15, 2018.
4. 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.
5. FOR SOILS 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.
6. FOR SOILS INFORMATION OUTSIDE PROJECT AREA SEE SOILS SURVEY REPORT PREPARED BY MAIN-LAND DEVELOPMENT CONSULTANTS, DATED JUNE, 2006.

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3. PROPERTY BOUNDARY SURVEY COMPLETED BY PLUSGA AND DAY SURVEYORS, INC. ON JUNE 15, 2018.
4. 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.
5. FIELDS FORMATION TYPICAL OF THIS AREA INCLUDING STRATIGRAPHIC CLASS, PARENT MATERIAL, BEDROCK CLASS, SLOPE CLASS & HYDROLOGIC GROUP SEE SOILS SURVEY REPORT PREPARED BY BURMAN LAND AND TREE COMPANY DATED JULY 31, 2018.
6. FOR SOILS INFORMATION OUTSIDE PROJECT AREA SEE SOILS SURVEY REPORT PREPARED BY MAIN-LAND DEVELOPMENT CONSULTANTS, DATED JUNE, 2006.

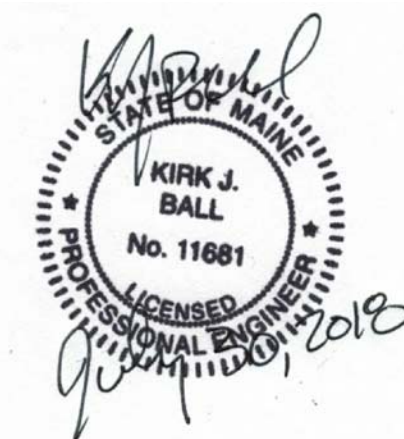


A detailed site plan diagram of a property. The property is bounded by a dashed line. A solid line indicates the 'APPROXIMATE TREE LINE'. A 'HOUSE & GARAGE' measuring '2,064 SF' is shown as a shaded rectangle. A 'DRIVEWAY' leads from the bottom right towards the house. A 'CULVERT' is located at the bottom center, crossing a road. Setback lines are marked with arrows: '10' REAR SETBACK' at the top, '10' SIDE SETBACK' on the left and right, and '25' FRONT SETBACK' at the bottom. An 'APPROXIMATE LEACH FIELD' is indicated by a dashed outline on the left side of the property.

TYPICAL LOT LAYOUT  
SCALE: 1" = 60'



DO NOT USE FOR CONSTRUCTION  
FOR REGULATORY REVIEW ONLY



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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Drawn By: BPG  
Desg By: BPG / KJB

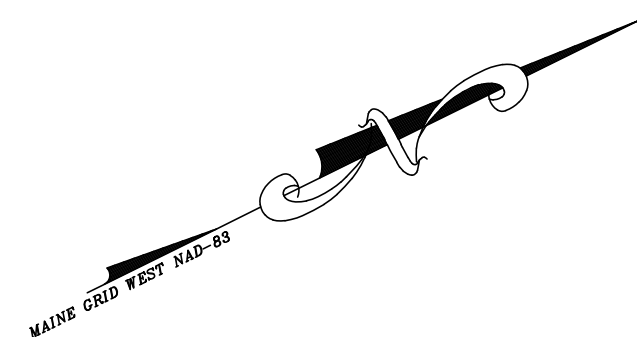
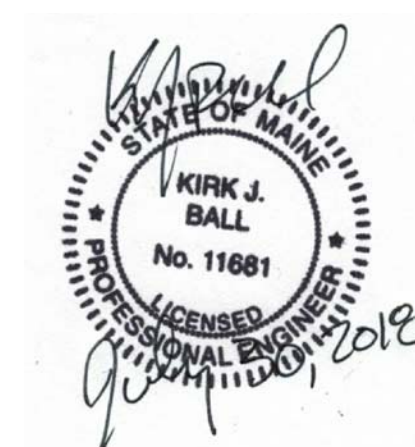
Chkd By: KJB

Aprvd By: KJB  
Date: 7-30-18

	I	Revised per comments by Town of Windham,
--	---	--

1	Revised per comments by Town of Williston, DEP & ACOE.
2	Revised per comments by DEP for Stormwater
3	Revised per comments by Gorrill Palmer 2-14
No.	Revision Description



[illegible]

1	Revised per comments by Town of Windham, DEP & ACOE.	BPG	KJB	10-3-18
2	Revised per comments by DEP for Stormwater.	BPG	KJB	10-22-18
3	Revised per comments by Gorrill Palmer 2-14-19.	BPG	KJB	2-20-19
No.	<i>Revision Description</i>	<i>Drawn</i>	<i>Check'd</i>	<i>Date</i>

Drwn By: BPG  
 Desg By: BPG / KJB  
 Chkd By: KJB  
 Aprvd By: KJB  
 Date: 7-30-18

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# Subdivision Grading Site Plan

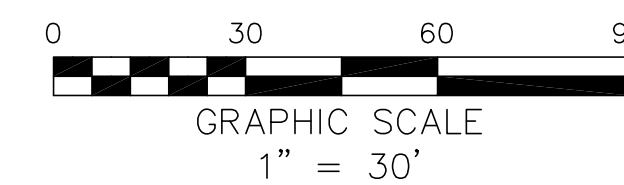
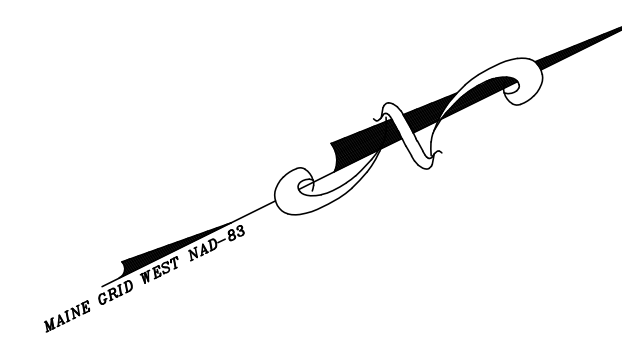
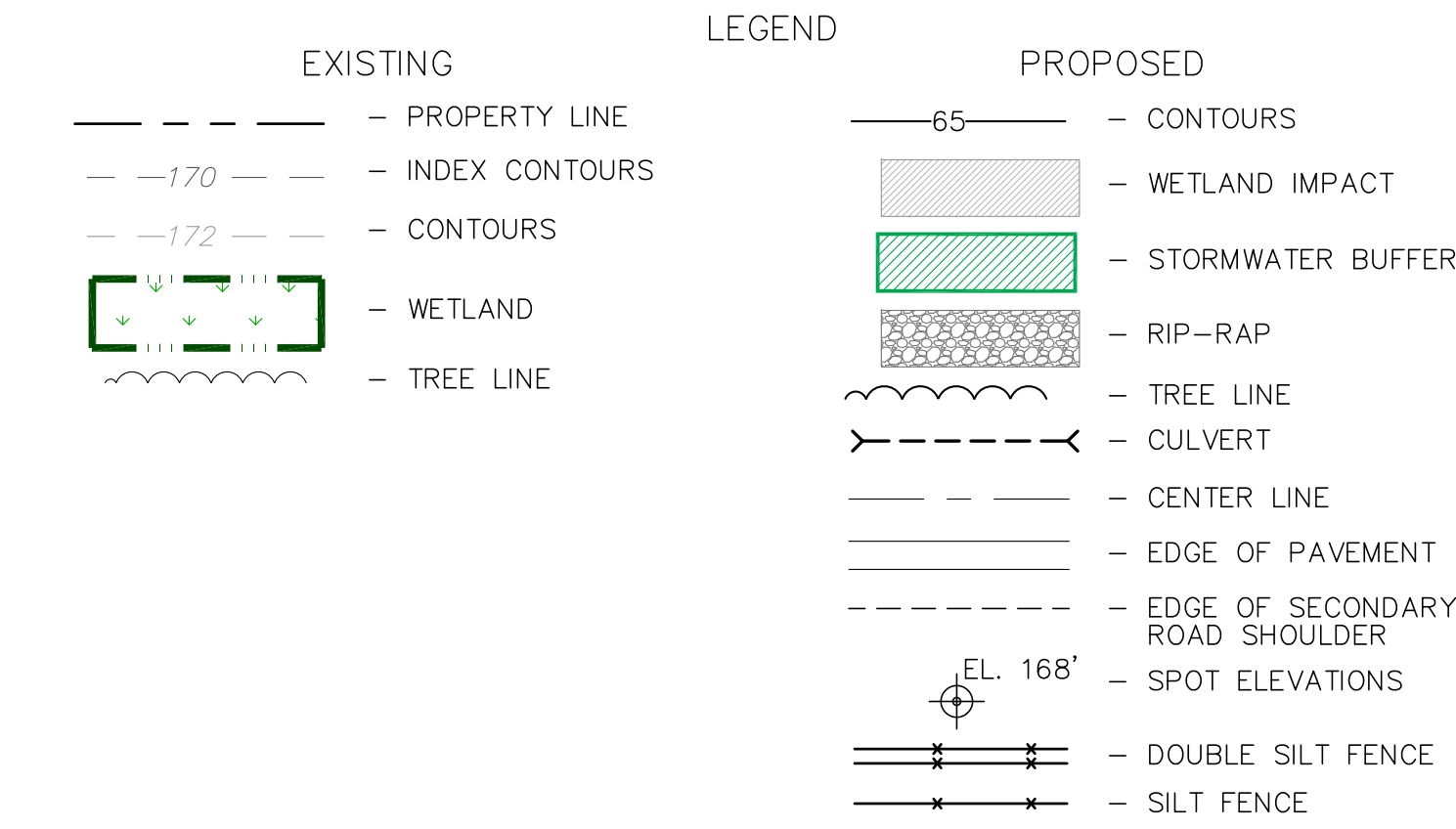
Durant Homestead  
Whute Road, Windham, Maine  
*Matt Hancock Properties*  
*PO Box 295*  
*Casco, Maine 04015*

Job Number:  
79800

Drawing No:  
C-6

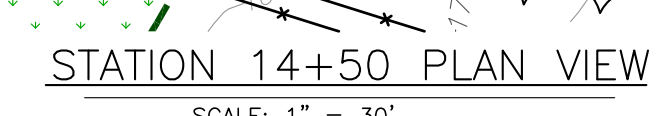
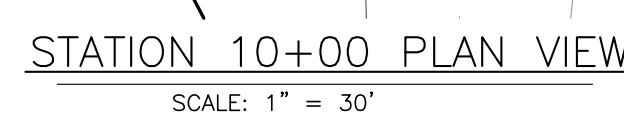
Sheet 7 of 16





ENTRANCE PLAN VIEW

SCALE: 1" = 30'



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Proposed Lot Grading  
Lots 1-3, 5, 17 & 22  
Durant Homestead  
Chute Road, Windham, Maine  
Matt Hancock Properties  
PO Box 295  
Casco, Maine 04015

Job Number:  
79800

Drawing No:  
C 7

Sheet 8 of 16

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*Acheron International, Inc.*

*Drwn By:* BPG  
*Desg By:* BPG / KJB  
*Chkd By:* KJB  
*Aprvd By:* KJB  
*Date:* 7-30-18

[illegible]



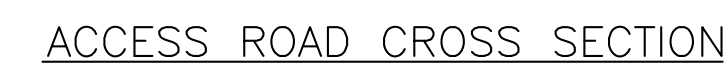




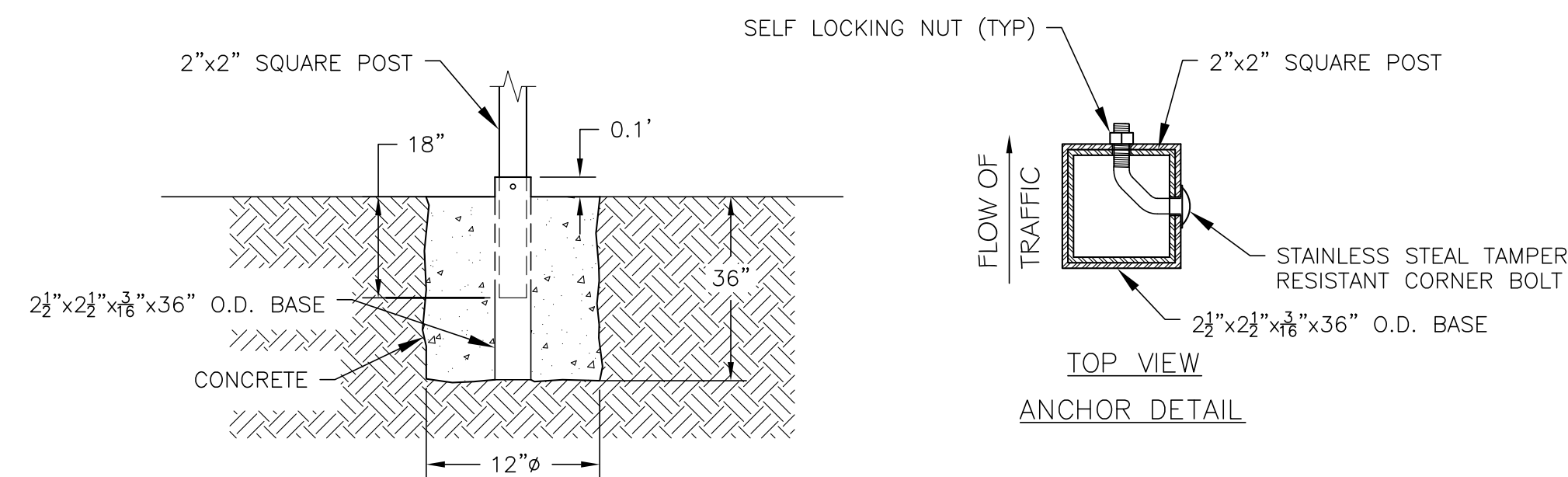
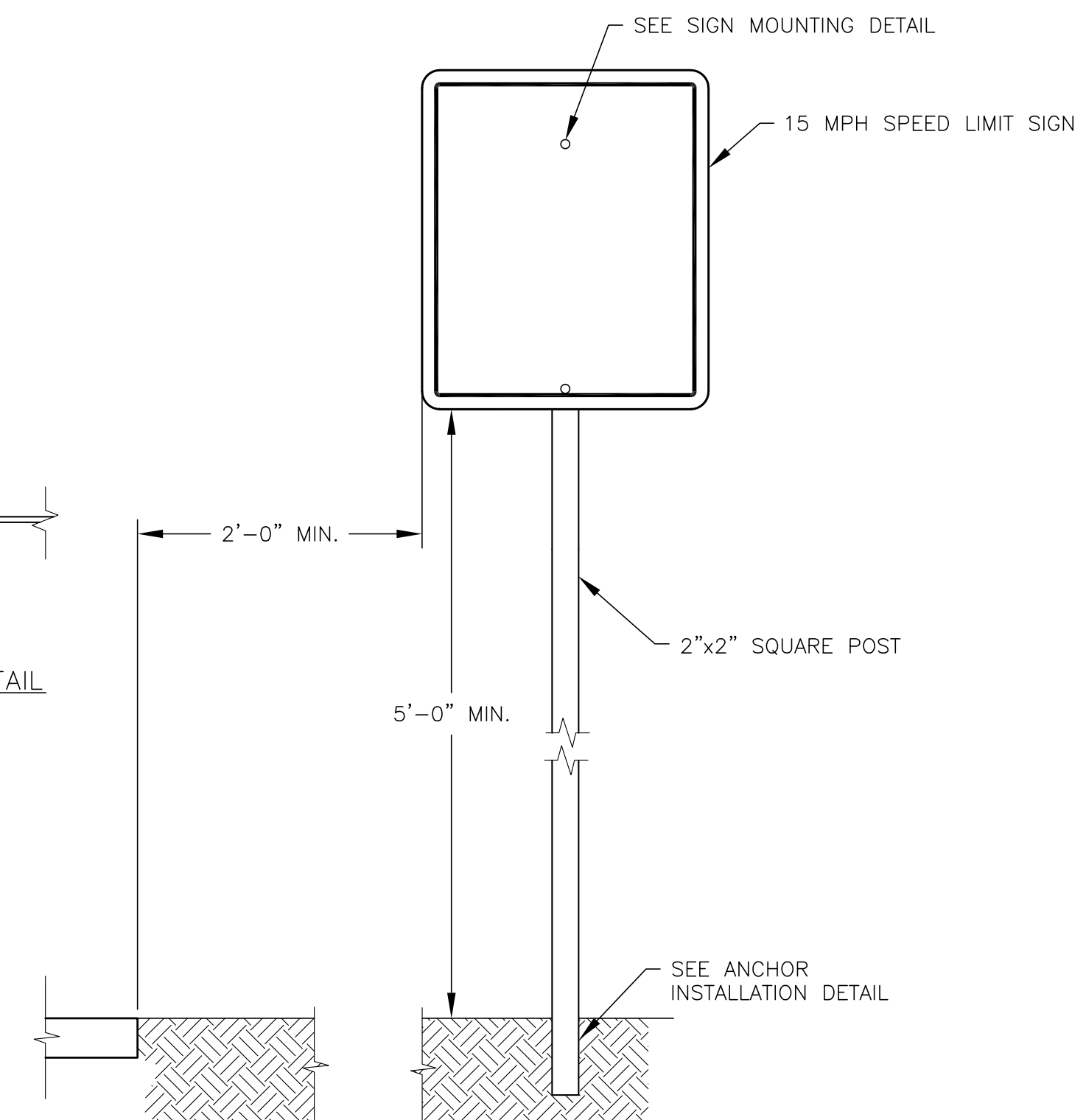
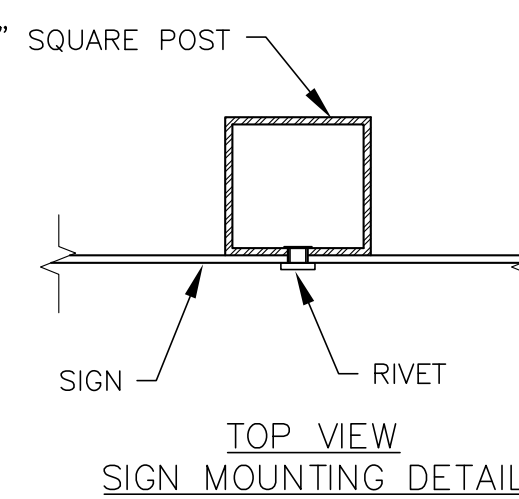
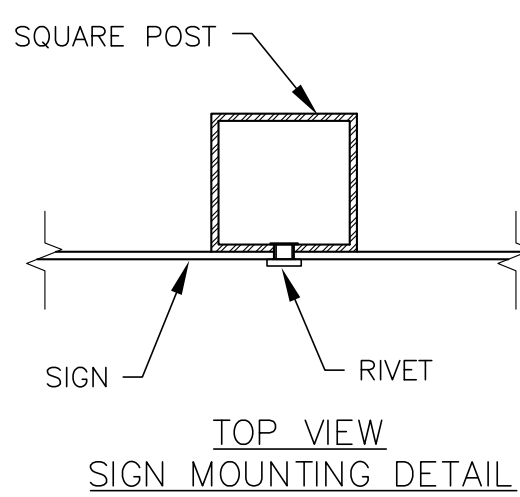




SCALE: HORZ. 1" = 10'  
VERT. 1" = 10'

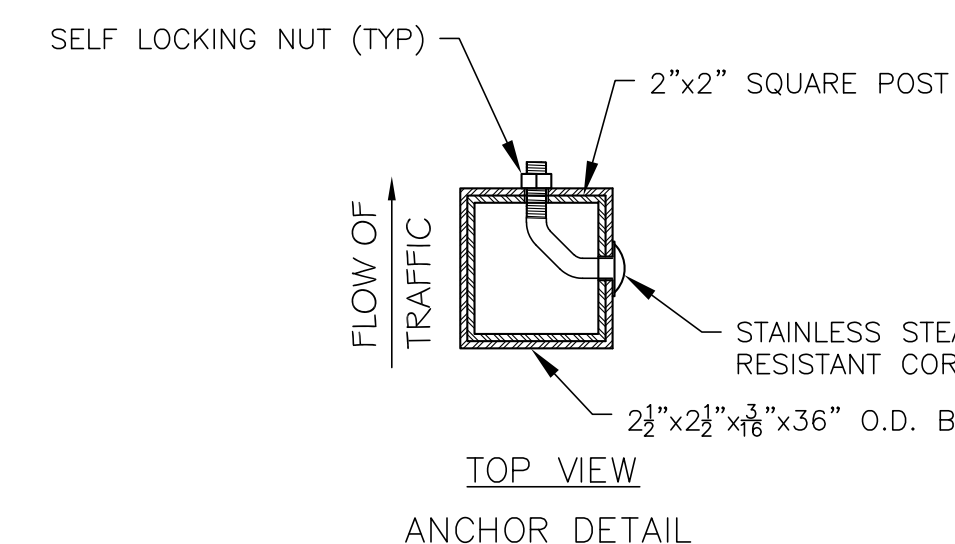


SCALE: 1" = 5'

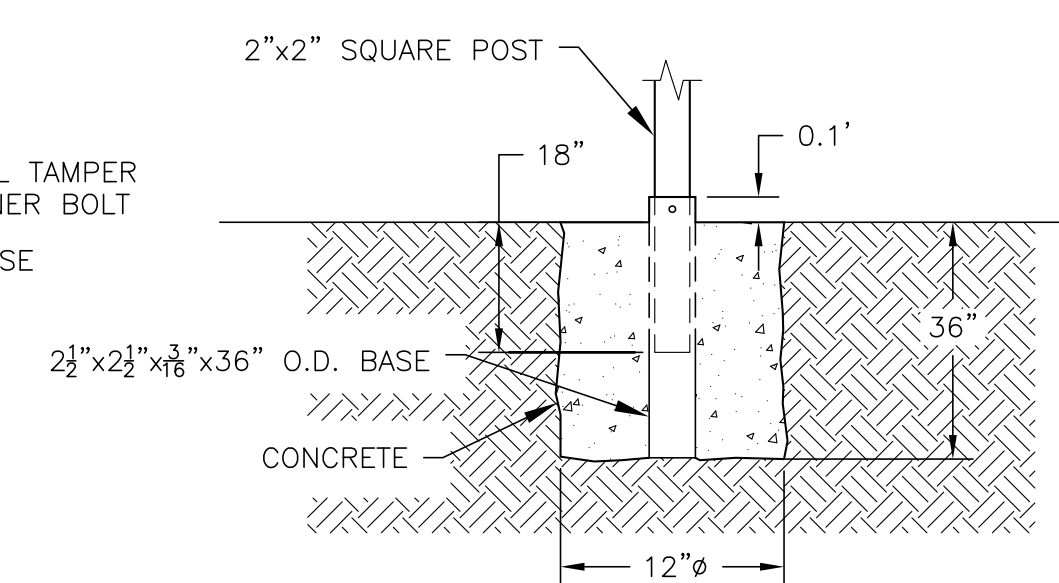


STOP SIGN POST DETAIL

NOT TO SCALE



TOP VIEW



SPEED LIMIT SIGN POST DETAIL  
NOT TO SCALE

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

				BPG	KJB 10-9-18
				BPG	KJB 2-20-19
No.	Revision Description	Drawn	Checked	Date	
1	Revised per comments by Town of Windham, DEP & ACOE.				
3	Revised per comments by Gornall Palmer 2.14.19.				