

PLANNING BOARD MEETING

August 8, 2023 at 6:00 p.m.



Planning Department
856 Main Road
Westport, MA 02790



Planning Board

James Whitin
Robert Daylor
John K. Bullard
Mark L. Schmid
Manuel Soares

Please note, this meeting will be held in the Board of Selectmen's meeting room
on the 2nd floor of the Town Hall (816 Main Road),
not the Town Annex.

AGENDA *Tuesday, August 8, 2023*

Call to order 6:00 p.m.

1. Administrative Items

- a. **Approval Not Required (ANR) – Plat 42 Lots 1T, 7 & 8 (23-023A)** Request by applicant for endorsement of a 2-lots for a plan of land located at 82 Highridge Road, Assessors Map 42 Lots 7, 8-2 and 1T.
- b. **Approval Not Required (ANR) – A.P. 63, Lot 11-13 Sawdy & Devol Ponds (23-026A)** Request by applicant for endorsement of a 2-lot(s) plan of land located at 0 Devol Pond Drive, Assessors Map 63 Lots 11-13.
- c. **Stacy Lane (20-002C)** – Form E, Modification to Definitive Subdivision Plan
- d. **Stacy Lane (20-002C)** – request to release lots (Form O Partial Release)
- e. **Brookwood Solar – Borrego (19-005SP)** – Release of performance surety for landscaping/vegetation (\$50,000.00)
- f. **Pacheco – 0 Gifford Road (22-002SP)** – Closeout and release the Consultant Review balance of \$470 plus interest.
- g. **Plat 29 Lot 22C RRL - Pacheco (23-013B)** – Closeout and release the Consultant Review balance \$1500 plus interest.
- h. **Pre-Application Consultation (23-025PAC)** Request by VazoRealty Trust to discuss a new layout for a 10-lot Definitive Subdivision.
- i. **Short-Term Rental Bylaw Working Committee** – Recommending two Planning Board members for appointment to the Board of Selectmen requires a motion from the Board.

2. 6:15 p.m. Public Hearing

- a. **82 Highridge Road (23-023SP-FF)** – Request by the applicant to consider the Special Permit, Flexible Frontage application for Eric J. & Jillian Raposo for property located at 82 Highridge Road, Assessors Map 42, Lots 7, 8-2 & 1T.

3. Assistant/Planners report

- a. **Assistant Planners Report**
 - Harbor Water Study
 - Old H.S. Repurposing
- b. **Planners Report**
 - Grants Update

- Buzzards Bay National Estuaries Program
- Municipal Vulnerability Preparedness 2.0
- Congressional Appropriations Requests
- Southeast New England Program (SNEP) Network: Storm water Planning Series
- Route 6 Rezoning Project
- Main Road Streetscape Plan
- Housing Production Plan

4. Correspondence

- a. Zoning Board of Appeals Notices – 50 Spinnaker Way

5. Minutes

- a. June 13, 2023
- b. June 27, 2023
- c. July 11, 2023

6. Invoices

- a. WB Mason – \$14.34

7. Short/Long-term Planning Discussions

ADJOURNMENT

NOTE: Agenda is subject to change

NEXT MEETINGS:

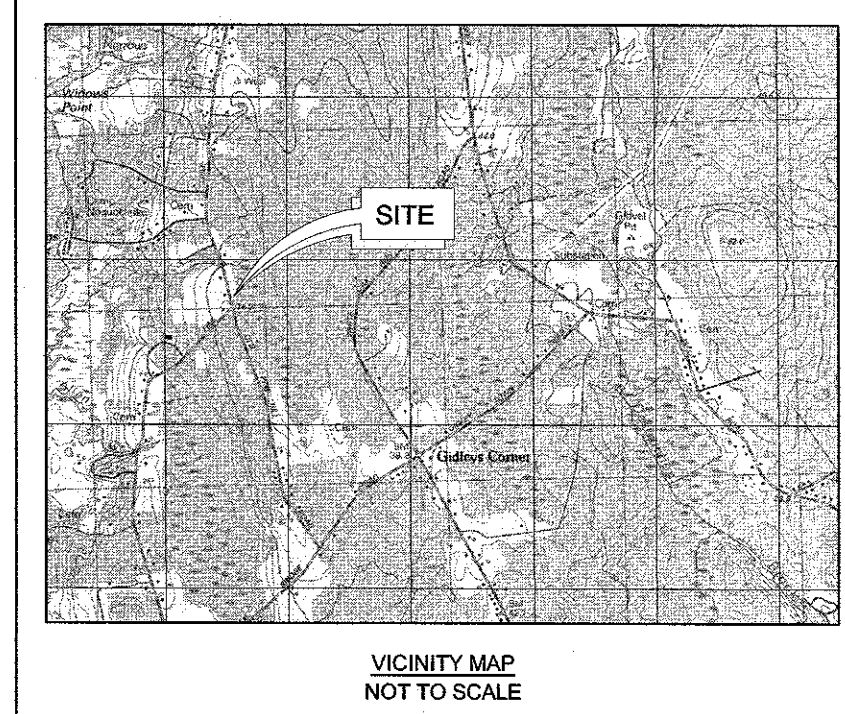
Planning Board: September 5, 2023 at 6:00 p.m.

Work Session: ?



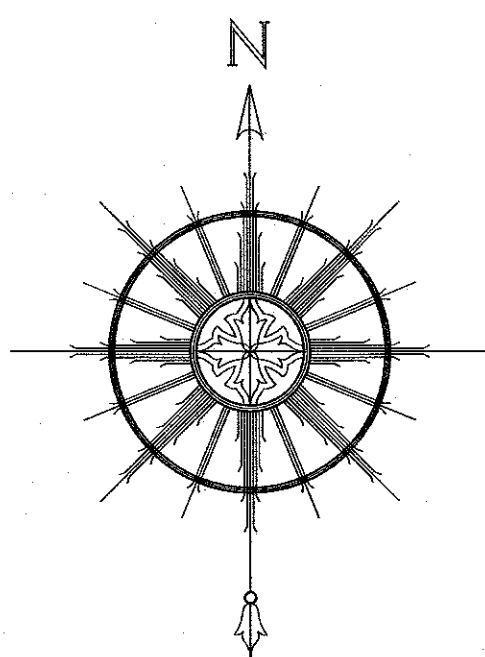
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VICINITY MAP
NOT TO SCALE

SITE/CIVIL
LAND PLANNING
WATERFRONT
SURVEYING
GEOTECHNICAL
ENVIRONMENTAL
TRANSPORTATION
STRUCTURAL
MATERIALS TESTING



APPROVAL NOT REQUIRED
UNDER THE SUBDIVISION
CONTROL LAW
WESTPORT PLANNING BOARD

DATE: _____

ENDORSEMENT BY THE WESTPORT PLANNING BOARD DOES
NOT CONSTITUTE DETERMINATION OF CONFORMANCE WITH THE
REQUIREMENTS OF THE TOWN OF WESTPORT'S ZONING BY-LAW,
NOR ASSURE THAT ANY LOT CREATED HEREIN IS BUILDABLE.

LOT SUMMARY				
LOT NUMBER	FRONTAGE	AREA	REQUIRED FLEX AREA	UPLANDS
LOT 1	54.01	251,661 SF	166,686 SF	91,109 SF (90,000)
LOT 2	50.85	372,232 SF	176,992 SF	178,591 SF (90,000)
LOT 3	132.00	80,942 SF	66,176 SF	55,553 SF (34,091)

LOCUS INFORMATION

OWNER: ERIC & JILLIAN RAPOSO
82 HIGHRIDGE ROAD
WESTPORT, MA
ASSESSORS' PLAT 42, LOT 1T, 7 & 8
DEED BOOK 11901, PAGE 38
DEED BOOK 14208, PAGE 194
DEED BOOK 14694, PAGE 177

NARRATIVE
THIS PLAN DEPICTS THE CREATION OF TWO APPROVAL NOT REQUIRED LOTS, LOTS 1, 2, & 3 MEET THE REQUIREMENTS OF THE TOWN OF WESTPORT'S ZONING BY LAWS SECTION 8.6, FLEXIBLE FRONTAGE FOR REDUCED DENSITY.

NOTES

A) "SUBJECT TO A SPECIAL PERMIT PURSUANT TO THE TOWN'S FLEXIBLE FRONTAGE BY-LAW, ARTICLE 23 GRANTED ON APRIL 7, 2015, BY THE WESTPORT PLANNING BOARD AND RECORDED IN THE BRISTOL COUNTY SOUTHERN DISTRICT REGISTRY OF DEEDS IN BOOK _____, PAGE _____."

B) LOTS 1, 2 & 3 AS SHOWN ON THIS PLAN BENEFITING FROM REDUCED FRONTAGE UNDER ZONING BY-LAW, ARTICLE 23 SHALL NOT BE FURTHER SUBDIVIDED AND NO MODIFICATION OF THE CLEARING RESTRICTIONS AND OF THE BUILDING LOCATIONS SHALL OCCUR WITHOUT A CORRESPONDING MODIFICATION OF THE FLEXIBLE FRONTAGE PERMIT.

C) NO LOT CLEARING SHALL BEGIN AND NO BUILDING PERMIT SHALL BE ISSUED FOR LOTS 1 & 2 AS SHOWN ON THIS PLAN BENEFITING FROM REDUCED FRONTAGE UNDER ZONING BY-LAW, ARTICLE 23 UNTIL THE SPECIAL PERMIT HAS BEEN DULY APPROVED, EXECUTED AND RECORDED AND EVIDENCE OF THE RECORDING HAS BEEN FILED WITH THE INSPECTOR OF BUILDINGS.

I HEREBY CERTIFY THAT THIS PLAN CONFORMS WITH
THE RULES AND REGULATIONS OF THE REGISTER OF
DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

SMJ
PROFESSIONAL LAND SURVEYOR

6/14/23
DATE

PLAN REFERENCES:

1. PLAN BOOK 149, PAGE 57
2. PLAN BOOK 158, PAGE 67
3. PLAN BOOK 178, PAGE 49

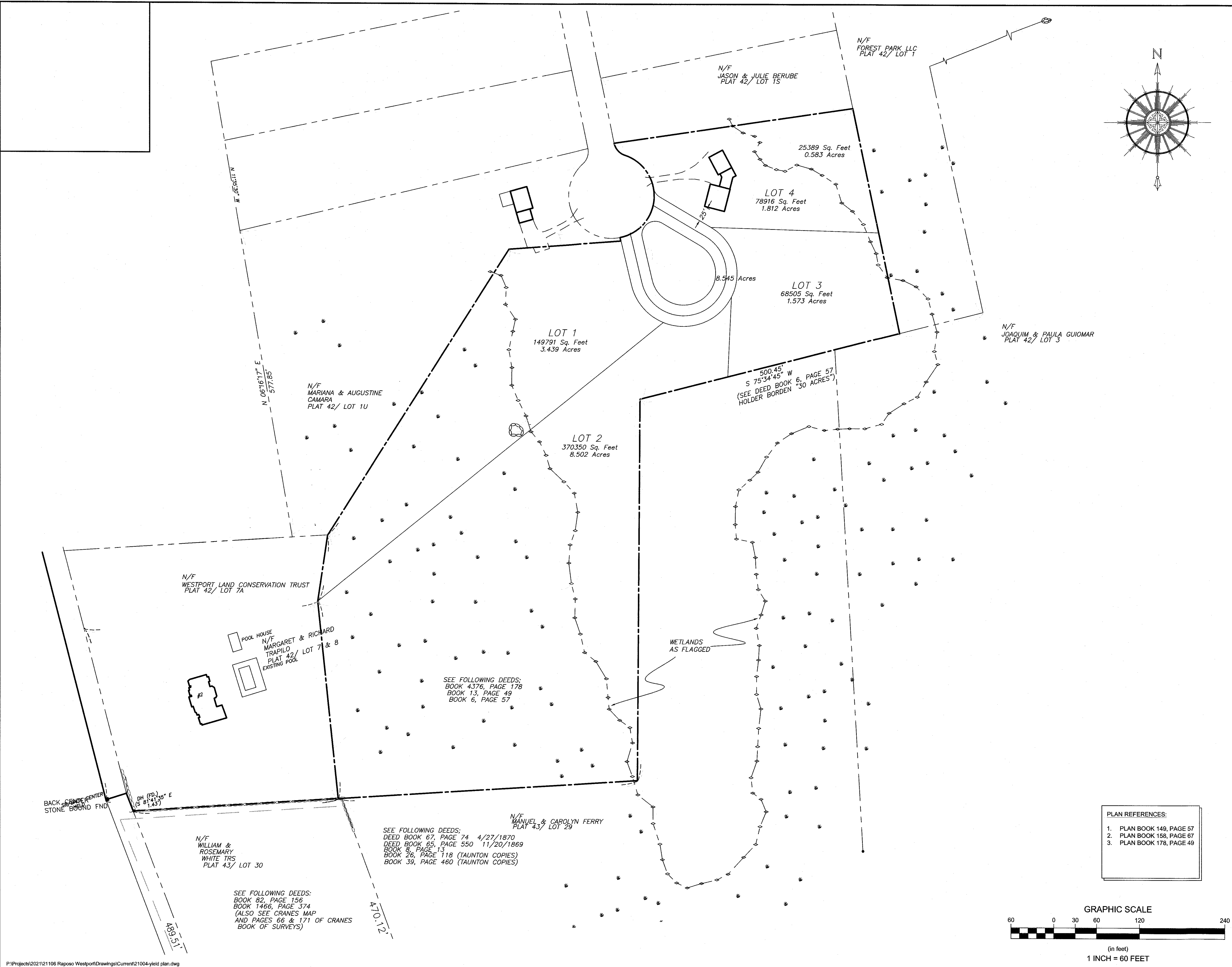


GRAPHIC SCALE

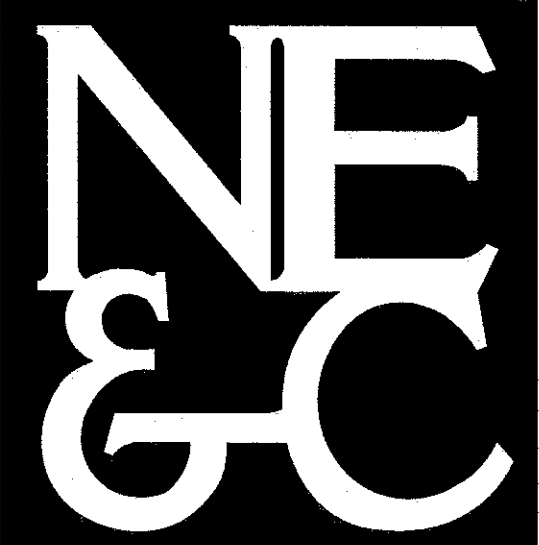


(in feet)
1 INCH = 60 FEET

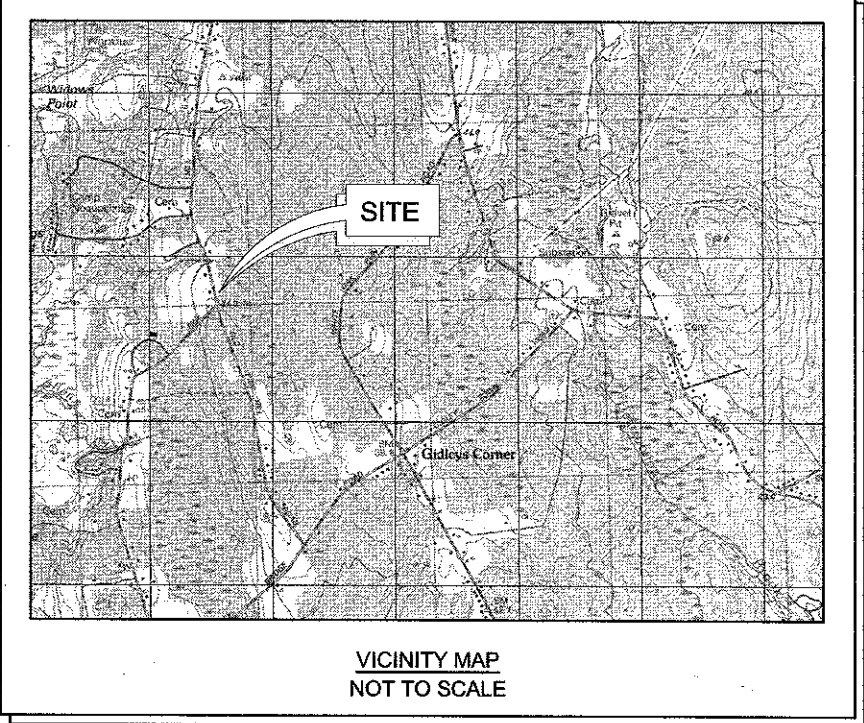
OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND
SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL
SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF
THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED,
IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR
PURPOSES, OR BY ANY OTHER PARTIES, THAN
THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT
THE EXPRESS AUTHORIZATION OF THE ENGINEER.



NORTHEAST ENGINEERS
& CONSULTANTS, INC.

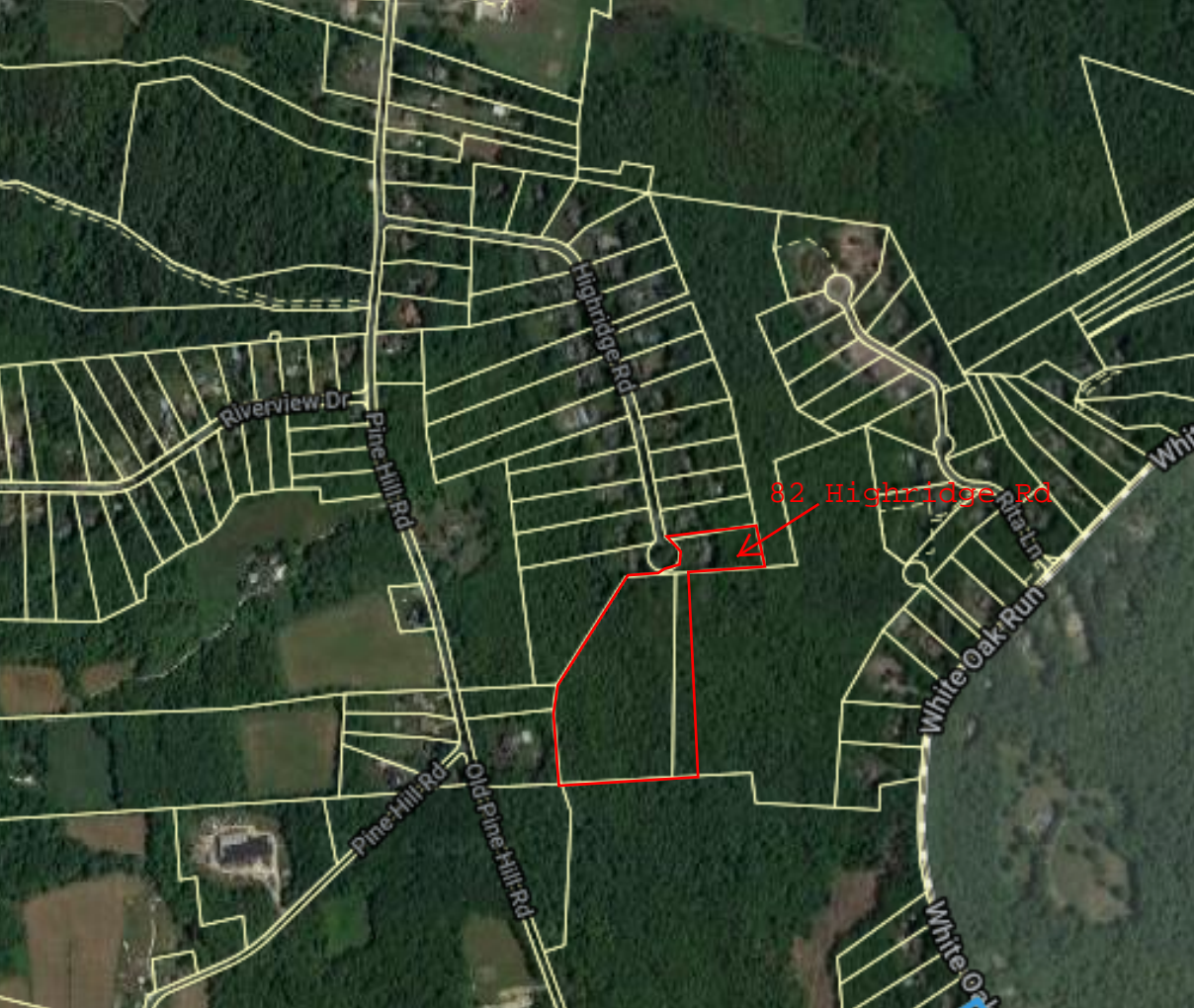


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LOCUS INFORMATION
OWNER: ERIC & JILLIAN RAPOSO
82 HIGHRIDGE ROAD
WESTPORT, MA
ASSESSORS' PLAT 42, LOT 11, 7 & 8
DEED BOOK 11901, PAGE 38
DEED BOOK 14208, PAGE 194
DEED BOOK 14694, PAGE 177

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Riverview Dr

Pine Hill Rd

Highridge Rd

82 Highridge Rd

White Oak Run

White Oak Run

Pine Hill Rd

Old Pine Hill Rd

White Oak

GENERAL NOTES:

1. EXISTING CONDITIONS ARE THE RESULT OF A FIELD SURVEY BY NORTHEAST ENGINEERS & CONSULTANTS, INC. IN JUNE 2023.

2. NORTH ARROW AND BASIS OF BEARINGS BASED ON NAD83 STATE PLANE COORDINATES AS ESTABLISHED BY GPS SURVEY.

PLAN REFERENCES:

1. PLAN ENTITLED "SUB-DIVISION PLAN OF A PART OF LAND OWNED BY EZRA M. PETTEY WESTPORT MASS.", PREPARED BY FRANK M. METCALF, SCALE: 1"=100', DATED AUGUST 1929, FILED IN THE BRISTOL COUNTY REGISTRY OF DEED PLAN BOOK 49, PAGE 63.

2. PLAN ENTITLED "APPROVAL NOT REQUIRED PLAN OF LAND IN WESTPORT, MA PREPARED FOR SIDNEY KAPLAN", PREPARED BY SITEC, INC., SCALE: 1"=60', DATED OCTOBER 20, 2004.

NARRATIVE

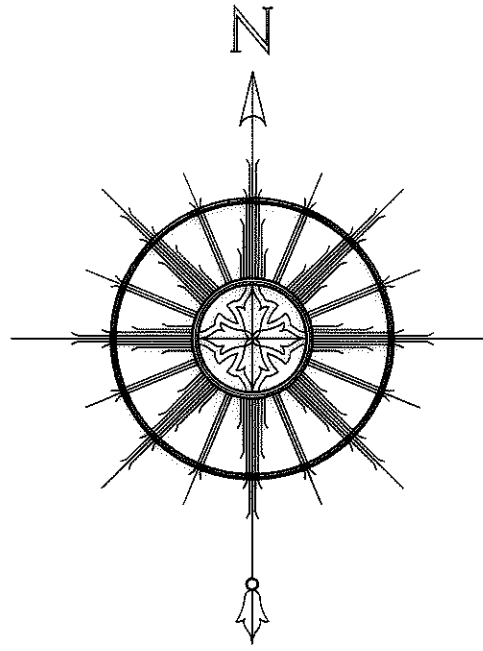
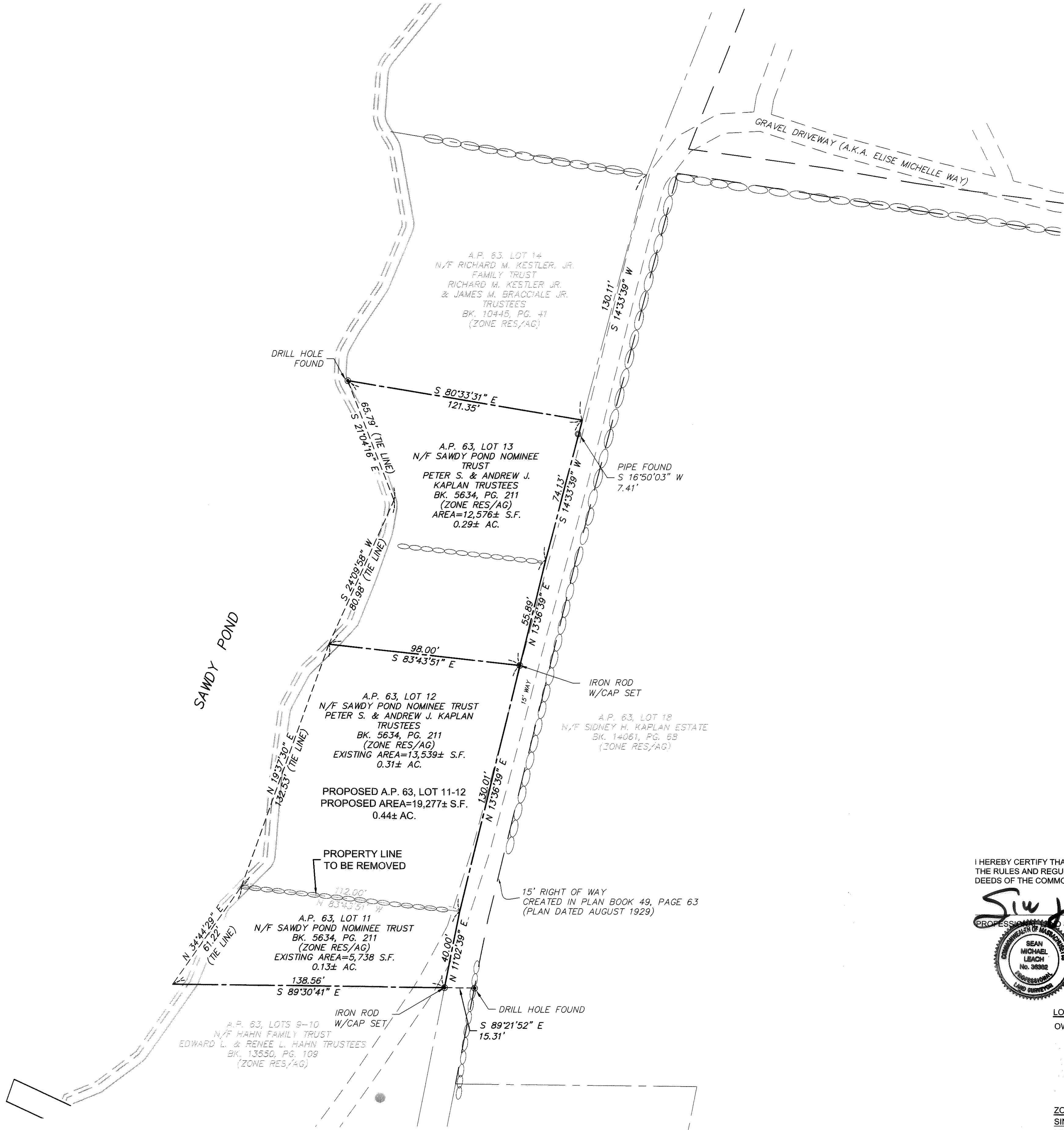
THIS PLAN DEPICTS THE COMBINATION OF ASSESSORS' PLAT 63, LOT 11-12.

ENDORSEMENT BY THE WESTPORT PLANNING BOARD DOES NOT CONSTITUTE DETERMINATION OF CONFORMANCE WITH THE REQUIREMENTS OF THE TOWN OF WESTPORT'S ZONING BY-LAW, NOR ASSURE THAT ANY LOT CREATED HEREIN IS BUILDABLE.

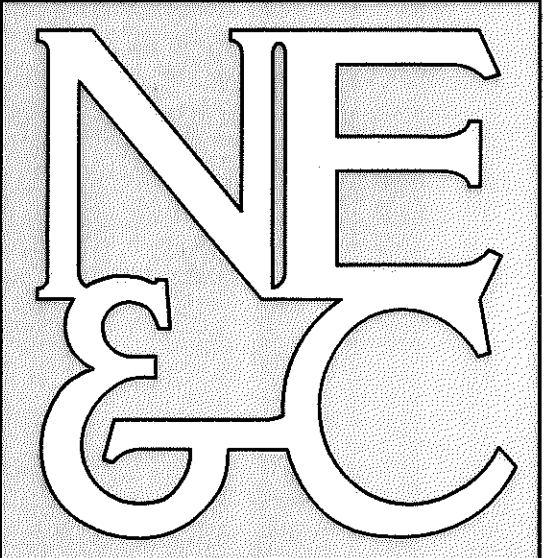
APPROVAL NOT REQUIRED
UNDER THE SUBDIVISION
CONTROL LAW

WESTPORT PLANNING BOARD

DATE: _____

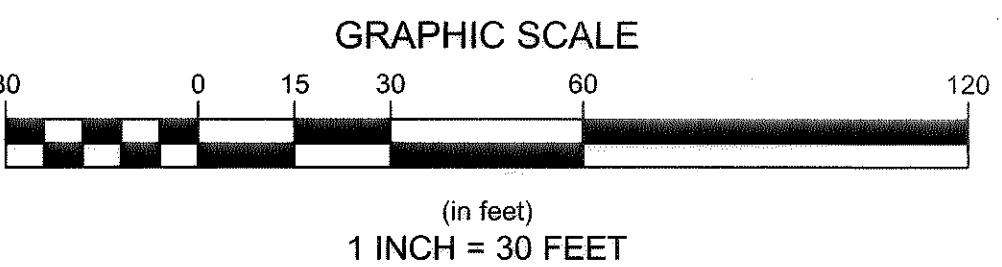
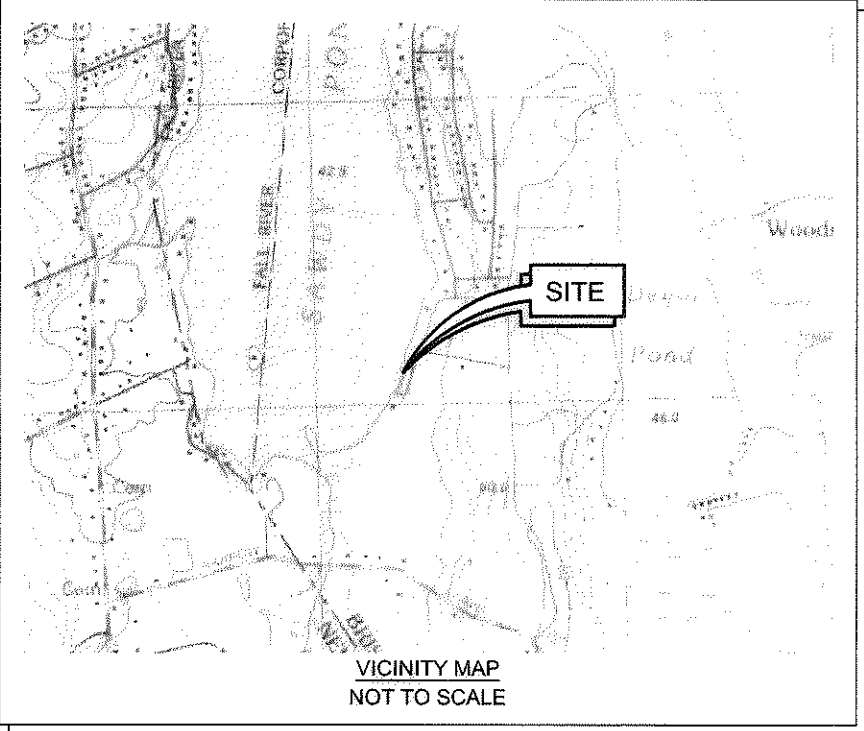


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No.	Revision	Date	App.
Designed By:	Drawn by:	VAL	Checked by: SML
Scale:	1"=30'	Date:	29JUN2023
Project Title:			
A.P. 63, LOT 11-13 SAWDY & DEVOL PONDS WESTPORT, MASSACHUSETTS			
Client/Owner:			
ANDREW KAPLAN 6 CHAUNCEY ROAD KITTERY POINT, ME 03905			
Issued for:			
Drawing Title:			
APPROVAL NOT REQUIRED PLAN OF LAND IN WESTPORT, MA SHOWING A DIVISION OF A.P. 63, LOT 11-13			
Drawing Number:		ANR-1	
Sheet 1 of 1		Project Number:	
		23052.0	
Survey Index:		WSP- 63 - 11-13	
OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.			

I HEREBY CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Signature of Surveyor

PROFESSIONAL LAND SURVEYOR



7/26/23

DATE

LOCUS INFORMATION

OWNER: SAWDY POND NOMINEE TRUST
PETER S. & ANDREW J. KAPLAN
199 WRIGHT ROAD
CONCORD, MA 01742
ASSESSORS' PLAT 63, LOT 11-13
DEED BOOK 5634, PAGE 211

ZONING REQUIREMENTS

SINGLE FAMILY
MINIMUM AREA = 60,000 SQ. FT. (30,000 SQ. FT. UPLAND)
MINIMUM FRONTAGE = 150'
MINIMUM WIDTH = 50'
MULTI FAMILY
MINIMUM AREA = 80,000 SQ. FT. (40,000 SQ. FT. UPLANDS)
MINIMUM FRONTAGE = 200'
MINIMUM WIDTH = 50'



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Amos Pelly Way

Beechwood Dr

Daniel Dr

Robert St

Sawdy Dr

Devol Pond Dr

Granada Dr

Harry Gibbs Ln

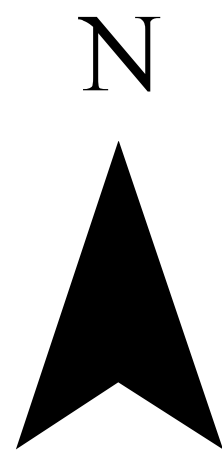
Elise Michelle Wy

Paisy Ln

Amos Pelly Way

Devol Pond

Project Locus with Plan Overlay



Ronald Oliveira
5 Archers Way
Acushnet, MA 02743
508-733-5931
ronoliveira2010@gmail.com



July 25, 2023

Town of Westport
Planning Board Department

RE: Release of Lots: Lot 7, 8, 9, 11, 12, 13 Stacy Lane (20-002C)

To whom it may concern,

I am writing to request the release of the above referenced lots on Stacy Lane to be presented before the August 8th, planning board meeting.

If you have any questions; feel free to contact me @ 508-733-5931.

Respectfully,

A handwritten signature in black ink, appearing to be "R. Oliveira".

Ronald Oliveira

RECEIVED

June 29, 2023

**WESTPORT
PLANNING BOARD**

June 19, 2023

Project No. 12408.480.1

Mr. James T. Whitin, Chairman
Town of Westport Planning Board
Town Hall Annex
856 Main Road
Westport, MA 02790

**Re: Site Status Review
Stacey Lane Subdivision (20-002C)
Fisher Road
Westport, Massachusetts**

Dear Chairman Whitin,

In accordance with a request from Amy Messier, Assistant Town Planner, and the Developer, Ron Oliveira, for a project status and surety estimate for completion, S.W. Cole Engineering, Inc. (S.W.COLE) has performed a site review in conjunction with a review of estimate to complete the project provided by Robert Roderiques of Fairhaven Excavating Inc.

Relevant comments are as follows:

- The roadway and cul-de-sac have been constructed to a “binder” HMA pavement grade. S.W. Cole Engineering was present during the installation of the roadway which included the observation of the subgrade, and installation of the roadway gravel. The roadway gravel was sampled prior to installation and found to meet Mass DOT specifications for Reclaimed Pavement Borrow, which also meets the Westport Highway Dept’s standard specifications, and Planning Board Rules and Regulations. The gravel was tested for compaction prior to asphalt installation and found to be compacted to greater than 95% of its maximum dry density. S.W.COLE was also present during the installation of the binder course asphalt. The installation was noted to be in compliance with the signed plans, and in accordance with applicable MassDOT standards for Asphalt installation under the Section 460 Specification in the Standard Specifications 2022 version.
- Roadway and site drainage has been installed, which includes all piping and structures within the roadway as the well as infiltration basin No. 1 located behind lots No’s 12 & 13, and Infiltration basin No. 2 located behind lot No. 9 at the terminus of the cul-de-sac. The roadway drainage has not been active as silt control within the structures had been installed to prevent any infiltration to the basins during construction of the site.

- Roadway structures are currently being raised to surface asphalt grade in anticipation of roadway surface paving to be scheduled.
- Infiltration basins No. 1 & No. 2 are constructed and have substantial vegetation on the slope's edges. The sand layer may need to be re-graded due to washouts from the winter weather before final acceptance. Both outlet control structures, have been installed without the grate.
- The top of berms is constructed, and appear to have a gravel access way, the access way could have some crushed stone to address any concerns for washing or rutting when being accessed.
- Spillway at Basin No. 2 is constructed, with rip rap/Rockfill installed and appears to be stable.
- Roadway shoulders are loam and seeded from the entrance from Fisher Road to approximately Sta 3+25, as well as the sloped edge from Sta 7+50 to Sta 9+00 on the right side of the roadway. Grass growth is currently minimal, and the sloped edge at Sta 7+50 requires stabilization such as jute matting to prevent erosion until substantial grass growth is achieved. The remainder of the roadway requires loam and seed; however, this should not be completed until the majority of the private residences have been substantially completed.
- Electrical and telecom work has been completed, and S.W. Cole has been advised that the connection to the power utility has been completed. It's noted that there is a utility pole that still needs to be removed from the proposed roadway entrance.
- The fire cistern has been installed and was witnessed by S.W. Cole. The Fire Dept. has reported issues performing testing. A meeting was conducted with the Fire Dept. and S.W. Cole to discuss options for accessing the tank seeing that its location is not ideal. It was agreed that an asphalt access pad behind the cape cod berm would be sufficient for the Fire Dept to access the tank as needed. This work will be done in conjunction with the surface course paving work.
- Roadway Entrance work is currently incomplete and will require appropriate signage as per the signed approved plans. Additionally, there may be a line of site conflict with the existing vegetation looking north on Fisher Road and should be addressed before final acceptance.
- The retaining wall along the roadway edge is installed from Sta 0+25 to approximately Sta 3+50. It was noted in a site meeting, that the wall beyond Sta 3+50 may not be required and the site contractor would install the wall to a point where the natural topography remained natural.



S.W. Cole was provided an estimate for the completion of the roadway (See attached) and concurs with the estimate provided by Fairhaven Excavation with the following comments:

No consideration was made in the estimate for final engineering which includes the installation of the roadway monuments, and as-built drawings. S.W. Cole suggests that the board accept the roadway completion estimate for project completion of \$76,500.00 and request an additional \$5000.00 for engineering services and a contingency of 20%.

S.W.COLE suggests that a Surety of \$97,800.00 be considered.

Sincerely,
S.W. COLE ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'DGM', is written over the company name.

Derek G. Mello
Construction Services Manager

cc: Nadine Castro, Westport Planning Board
Amy Messier, Westport Planning Board
Ron Oliveira,

























Division of Ace Asphalt Co., Inc.

15 Oliver Street Fairhaven, MA 02719
(508) 999-6749 Office (508) 999-0033 Fax

BALANCE OF WORK

LOCATION: Stacy Lane

- Top Coat Roadway	\$ 49,000.00
- Seed Shoulders	\$ 7,600.00
- ADJ Structures	\$ 4,000.00
- Cape Cod Borm	\$ 15,900.00
TOTAL	\$ 76,500.00

Report of Field Density

ASTM D6938

Project: **WESTPORT MA - 431 FISHER ROAD - STACY LANE RESIDENTIAL SUBDIVISION -** Project Number: **2408.480.1**
CONSTRUCTION INSPECTION AND OBSERVATION

Client: **TOWN OF WESTPORT, MASSACHUSETTS**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
1	11/8/2022	MPK	ROADWAY IN CUL-DE-SAC AT LOT 8	6" BELOW FG	6	5542T	131.6	6.2	99.5	95
2	11/8/2022	MPK	ROADWAY IN CUL-DE-SAC AT LOT 9	6" BELOW FG	6	5542T	130.7	5.7	98.8	95
3	11/8/2022	MPK	ROADWAY IN CUL-DE-SAC AT LOT 10	6" BELOW FG	6	5542T	130.5	9.7	98.6	95
4	11/8/2022	MPK	ROADWAY STATION +50 RIGHT SIDE	6" BELOW FG	6	5542T	129.7	5.7	98.0	95
5	11/8/2022	MPK	ROADWAY STATION +50 LEFT SIDE	6" BELOW FG	6	5542T	128.9	6.2	97.4	95
6	11/8/2022	MPK	ROADWAY STATION 1+50 RIGHT SIDE	6" BELOW FG	6	5542T	129.5	5.8	97.9	95
7	11/8/2022	MPK	ROADWAY STATION 1+50 LEFT SIDE	6" BELOW FG	6	5542T	130.1	6.1	98.3	95
8	11/8/2022	MPK	ROADWAY STATION 2+50 RIGHT SIDE	6" BELOW FG	6	5542T	130.9	5.4	98.9	95
9	11/8/2022	MPK	ROADWAY STATION 2+50 LEFT SIDE	6" BELOW FG	6	5542T	131.7	5.7	99.5	95
10	11/8/2022	MPK	ROADWAY STATION 3+50 RIGHT SIDE	6" BELOW FG	6	5542T	130.5	6.4	98.6	95
11	11/8/2022	MPK	ROADWAY STATION 3+50 LEFT SIDE	6" BELOW FG	6	5542T	132.0	5.8	99.8	95
12	11/8/2022	MPK	ROADWAY STATION 4+50 RIGHT SIDE	6" BELOW FG	6	5542T	130.6	4.9	98.7	95
13	11/8/2022	MPK	ROADWAY STATION 4+50 LEFT SIDE	6" BELOW FG	6	5542T	131.7	4.2	99.5	95

Report of Field Density

ASTM D6938

Project: **WESTPORT MA - 431 FISHER ROAD - STACY LANE RESIDENTIAL SUBDIVISION -** Project Number: **2408.480.1**
CONSTRUCTION INSPECTION AND OBSERVATION

Client: **TOWN OF WESTPORT, MASSACHUSETTS**

14	11/8/2022	MPK	ROADWAY STATION 5+50 RIGHT SIDE	6" BELOW FG	6	5542T	130.2	6.0	98.4	95
15	11/8/2022	MPK	ROADWAY STATION 5+50 LEFT SIDE	6" BELOW FG	6	5542T	128.6	6.2	97.2	95
16	11/8/2022	MPK	ROADWAY STATION 6+50 RIGHT SIDE	6" BELOW FG	6	5542T	127.9	5.8	96.7	95
17	11/8/2022	MPK	ROADWAY STATION 6+50 LEFT SIDE	6" BELOW FG	6	5542T	131.8	5.6	99.6	95
18	11/8/2022	MPK	ROADWAY STATION 7+50 RIGHT SIDE	6" BELOW FG	6	5542T	127.7	4.8	96.5	95
19	11/8/2022	MPK	ROADWAY STATION 7+50 LEFT SIDE	T.O.D.G.	6	5542T	132.2	7.0	99.9	95
20	11/8/2022	MPK	ROADWAY STATION 8+50 RIGHT SIDE	T.O.D.G.	6	5542T	127.7	4.8	96.5	95
21	11/8/2022	MPK	ROADWAY STATION 8+50 LEFT SIDE	T.O.D.G.	6	5542T	126.7	6.0	95.8	95
22	11/8/2022	MPK	ROADWAY STATION 9+50 RIGHT SIDE	T.O.D.G.	6	5542T	125.7	6.0	95.0	95
23	11/8/2022	MPK	ROADWAY STATION 9+50 LEFT SIDE	T.O.D.G.	6	5542T	126.9	5.6	95.9	95
24	11/8/2022	MPK	ROADWAY STATION 10+50 RIGHT SIDE	T.O.D.G.	6	5542T	128.5	5.1	97.1	95
25	11/8/2022	MPK	ROADWAY STATION 10+50 LEFT SIDE	T.O.D.G.	6	5542T	129.4	6.0	97.8	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
5542T	11/3/2022	Ace Asphalt- stockpile #1	Gravel	ASTM D-1557 Modified B	132.3	6.6	



Report of Field Density **ASTM D6938**

Project: **WESTPORT MA - 431 FISHER ROAD - STACY LANE RESIDENTIAL SUBDIVISION -** Project Number: **2408.480.1**
CONSTRUCTION INSPECTION AND OBSERVATION

Client: **TOWN OF WESTPORT, MASSACHUSETTS**

Elevation Notes:

Comments:

A handwritten signature in dark ink, appearing to read 'JGM', is positioned above a horizontal line.

Reviewed By

Report of Field Density

ASTM D6938

Project: **WESTPORT MA - 431 FISHER ROAD - STACY LANE RESIDENTIAL SUBDIVISION -** Project Number: **2408.480.1**
CONSTRUCTION INSPECTION AND OBSERVATION

Client: **TOWN OF WESTPORT, MASSACHUSETTS**

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Dry Density	Moisture Content Percent	Compaction Percent	Required Compaction
26	11/10/2022	EM	CUL-DE-SAC LOT 10	SG	4	5543T	120.5	6.5	95.0	95
27	11/10/2022	EM	CUL-DE-SAC LOT 8	SG	4	5543T	120.6	6.1	95.1	95
28	11/10/2022	EM	CUL-DE-SAC LOT 11+50	SG	4	5543T	121.9	6.6	96.1	95
29	11/10/2022	EM	STACEY LANE 10+50	SG	4	5543T	120.6	6.4	95.1	95
30	11/10/2022	EM	STACEY LANE DMH #8	SG	4	5543T	120.8	6.8	95.3	95
31	11/10/2022	EM	STACEY LANE DMH 8+50	SG	4	5543T	122.1	6.8	96.3	95
32	11/10/2022	EM	STACEY LANE LOT 12	SG	4	5543T	121.2	6.0	95.6	95
33	11/10/2022	EM	STACEY LANE 5+00	SG	4	5543T	122.0	6.8	96.2	95
34	11/10/2022	EM	STACEY LANE 4+15	SG	4	5543T	121.1	6.7	95.5	95
35	11/10/2022	EM	STACEY LANE 3+00	SG	4	5543T	120.5	6.5	95.0	95
36	11/10/2022	EM	STACEY LANE 2+15	SG	4	5543T	119.8	7.5	95.5	95
37	11/10/2022	EM	STACEY LANE 1+00	SG	4	5543T	123.2	8.6	97.2	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
5543T	11/3/2022	Ace Asphalt- stockpile #2	Gravel	ASTM D-1557 Modified C	126.8	4.1	

Elevation Notes:

Comments:

SG = SUBGRADE

Reviewed By

July 14, 2023

Project No. 12408.350.1

Mr. James T. Whitin - Chairman
Town of Westport Planning Board
856 Main Road
Westport, MA 02790

Subject: **Progress Report Site Vegetation**
Brookwood Solar Development (19-005SP)
Westport, Massachusetts

Dear Mr. Whitin,

As requested by Amy Messier Assistant Town Planner, S.W. Cole made a site visit on Friday July 7, 2023. S.W. Cole was provided access to the site to observe the current state of the overall site vegetation growth. S.W. Cole noted that there is substantial vegetation growth throughout the entire footprint of the site. This includes under the solar panels and along the access roadways within the gated area. Detention areas and slopes also have substantial vegetation growth.

Please see attached photos for your use in consideration of reduction of the current surety for this project.

Please let me know if you have any questions.

Sincerely,

S.W. COLE ENGINEERING, INC.

Derek Mello



Construction Service Manager











July 13, 2023

Amy Messier
Town of Westport Planning Board
Town Hall Annex
856 Main Road
Westport, MA 02790



**Re: Special Permit File #19-005SP-S; Low Impact Development Permit File #19-005SPA-LID
4.99 MW (AC) Ground Mounted Solar System
0 Brookwood Drive, Westport, Massachusetts**

Request for Surety Release

Dear Ms. Messer,

Please find this letter as a formal request for the release of the surety check, in the amount of \$50,000.00, that was provided to the board by Borrego Energy. At this time the vegetative growth is sufficient and stable per the site visit and report by S.W. Cole. Borrego Energy requests the surety be returned to the address noted below.

Borrego Energy
1455 Frazee Rd, #500
San Diego, CA 92108

Thank you,

DocuSigned by:
Erin Grenier
81174B784196451...

Erin Grenier – Project Manager

55 Technology Drive, Suite
Lowell, MA 01851
www.borregosolar.com

Borrego. Powering your growth.™

DEFINITIVE RESIDENTIAL SUBDIVISION

"FRANCIS ESTATES" OFF CHARLOTTE WHITE ROAD

WESTPORT, MASSACHUSETTS

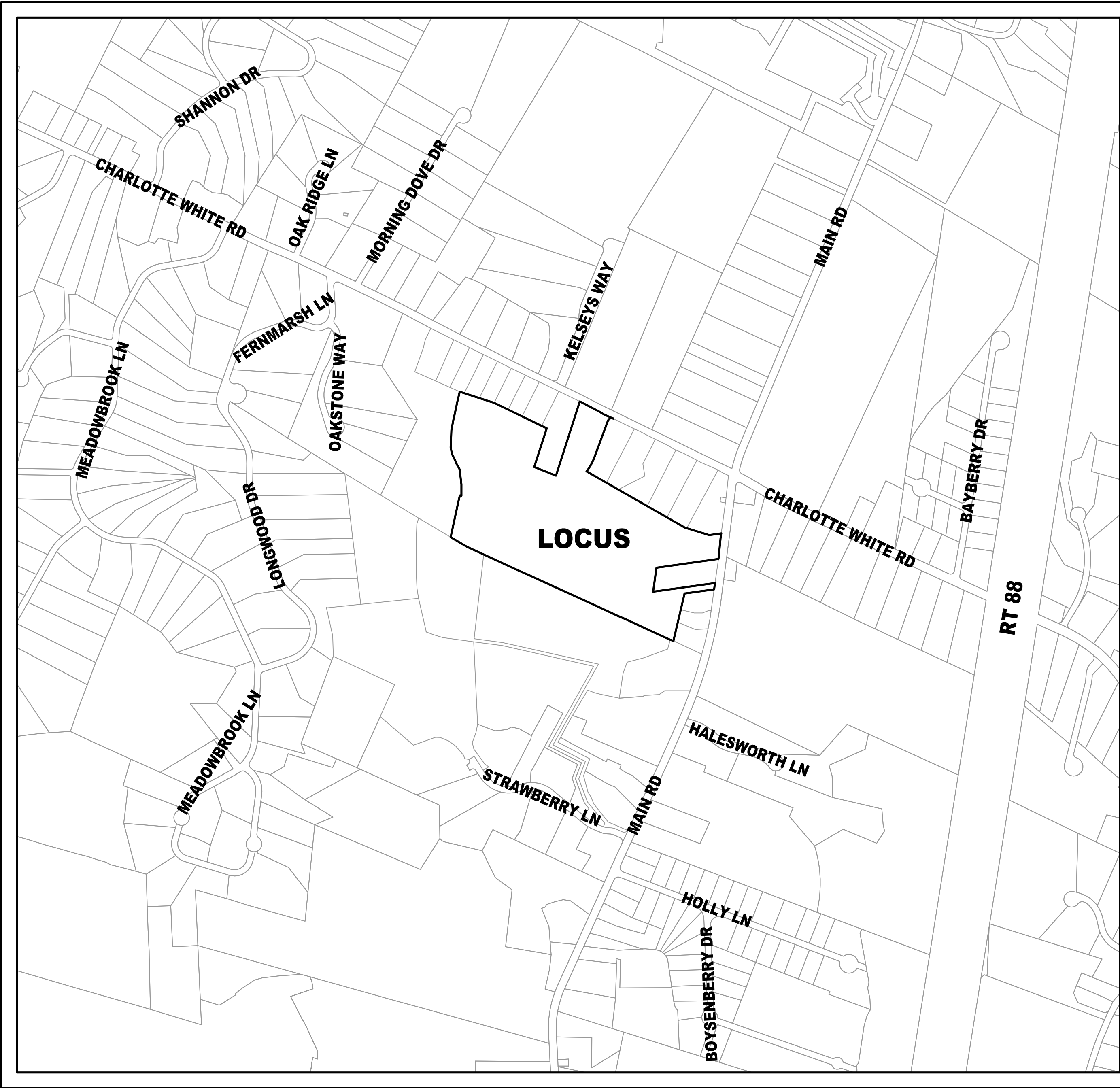
SITE NOTES:

- THE SITE IS LISTED ON THE TOWN OF WESTPORT ASSESSORS PROPERTY RECORD CARDS AS PARCEL ID 68-7.
- PROPERTY LINE INFORMATION, WETLAND LINES AND LOCATION OF EXISTING ON-SITE CEMETERY WAS TAKEN FROM A FIELD SURVEY BY ZENITH LAND SURVEYORS, LLC.
- BRISTOL - NEW BEDFORD COUNTY REGISTRY OF DEEDS:
DEED REFERENCE: BOOK 7073 PAGE 138
- PROPERTY LINE INFORMATION, EXISTING CONDITION INFORMATION WITHIN CHARLOTTE WHITE ROAD, 200'+ ON EITHER SIDE OF THE PROPOSED INTERSECTION, AND LIMITS OF THE EXISTING CEMETERY IS TAKEN FROM A FIELD SURVEY PERFORMED BY ZENITH LAND SURVEYORS, LLC.
 - OTHER TOPOGRAPHIC INFORMATION IS TAKEN FROM 2021 LIDAR TERRAIN DATA.
 - OTHER EXISTING CONDITION INFORMATION INCLUDING BUILDINGS, UTILITIES, PAVEMENT, PATHS, ETC. TAKEN FROM "OPEN SPACE RESIDENTIAL DEVELOPMENT FOR FRANCIS ESTATES" DATED 9-8-17, REVISED THROUGH 5-29-18 PREPARED BY SITE DESIGN ENGINEERING. THESE FEATURED SHOULD BE CONSIDERED APPROXIMATE.
- ABUTTING PROPERTY LINES AND EXISTING CONDITIONS ARE SUPPLEMENTED BY MASS GIS DATALAYER INFORMATION.
- THE SUBJECT PROPERTY IS LOCATED IN ZONE X, AS SHOWN ON THE FLOOD INSURANCE RATE MAP (F.I.R.M.) NUMBER 25005C0452G, MAP REVISED 7-6-21.
- THE SITE IS NOT LOCATED IN A PRIORITY HABITAT AND ESTIMATED HABITAT AS SHOWN ON THE MASSACHUSETTS NATURAL HERITAGE ATLAS 15TH EDITION EFFECTIVE DATE AUGUST, 2021.
- THE WETLANDS SHOWN HEREON WERE DERIVED FROM AN ORDER OF RESOURCE AREA DELINEATION (ORAD) THAT WAS ISSUED ON OCTOBER 27, 2007. DEP FILE NUMBER SE 80-1627.
- THE PROJECT IS NOT LOCATED WITHIN AN AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC).
- THE SITE IS NOT LOCATED IN A ZONE II TO A PUBLIC WATER SUPPLY WELL.
- THE SITE IS NOT IN A ZONE A TO A SURFACE WATER SUPPLY AREA.
- THE SITE IS NOT LOCATED IN AN OUTSTANDING RESOURCE WATER AREA (ORW).
- ALL UNDERGROUND UTILITIES ARE TO BE CONSIDERED APPROXIMATE. LOCATIONS WERE TAKEN FROM PLANS OF RECORD WITH THE MUNICIPALITY, DIG SAFE LOCATIONS OR FIELD EVIDENCE. IT IS THE CONTRACTORS' RESPONSIBILITY TO CONTACT DIG SAFE (1-888-DIG SAFE) AND ALL UTILITY COMPANIES TO CONFIRM LOCATIONS AND ELEVATIONS PRIOR TO THE START OF WORK.

CONSTRUCTION NOTES:

- A NPDES FILING MUST BE SUBMITTED FOR THIS PROJECT PRIOR TO CONSTRUCTION.
- CONTRACTOR TO VERIFY BENCHMARKS FOR CONSISTENCY PRIOR TO CONSTRUCTION AND SHALL NOTIFY ZENITH CONSULTING ENGINEERS, LLC. OF ANY DISCREPANCIES.
- CONTRACTOR SHALL VERIFY WATER TABLE ELEVATIONS AND NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES FROM THE PLAN.
- IT IS THE CONTRACTORS' RESPONSIBILITY TO CONTACT DIG SAFE (1-888-DIG SAFE) PRIOR TO THE COMMENCEMENT OF WORK AND ALL UNDERGROUND UTILITY COMPANIES TO CONFIRM LOCATIONS AND ELEVATIONS.
- SITE IS TO BE SERVICED BY PRIVATE WELLS AND PRIVATE SEPTIC SYSTEMS.
- ALL PAVEMENT MARKING AND SIGNAGE SHALL CONFORM TO MUTCD STANDARDS.
- PROPOSED UTILITIES AND CONSTRUCTION METHODS UNDER AREAS SUBJECT TO TRAFFIC LOADING SHALL BE INSTALLED TO WITHSTAND H-20 LOADING TRAFFIC STANDARDS. CONTRACTOR SHALL VERIFY THAT ALL STRUCTURES COMPLY TO THIS STANDARD.
- WHERE ALL CONCRETE STRUCTURES INTERCEPT THE SEASONAL HIGH GROUNDWATER TABLE, THE CONTRACTOR SHALL SEAL THE ENTIRE STRUCTURE WITH WATERPROOF SEALER.
- IF APPLICABLE, ANY RETAINING WALLS SHALL BE DESIGNED BY A MASSACHUSETTS REGISTERED PROFESSIONAL STRUCTURAL ENGINEER.
- ALL WORK SHALL CONFORM TO THE TOWN OF WESTPORT RULES AND REGULATIONS AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY AND BRIDGES, MOST CURRENT VERSION OF PLAN SET.

ZONING SUMMARY TABLE (RESIDENCE & AGRICULTURE DISTRICT)	
CRITERIA	REQUIRED
LOT AREA	60,000 S.F.
CONTIGUOUS UPLAND	30,000 S.F.
FRONTAGE	150'
MINIMUM WIDTH	50'
FRONT BUILDING SETBACK	25'
SIDE BUILDING SETBACK	10'
REAR BUILDING SETBACK	6'
BUILDING HEIGHT	2.5 STORIES OR 40'
IMPERVIOUS COVER	50%



LOCUS PLAN

SCALE: 1"=500'

OWNER
VAZRO REALTY TRUST
5 ARCHERS WAY
ACUSHNET, MA 02743

APPLICANT
RONALD OLIVEIRA
5 ARCHERS WAY
ACUSHNET, MA 02743

SURVEY COMPANY OF RECORD:



ZENITH LAND SURVEYORS, LLC
1162 ROCKDALE AVENUE
NEW BEDFORD, MA 02740
(508) 995-0100

TOWN OF WESTPORT PLANNING BOARD

APPROVED UNDER "SUBDIVISION CONTROL LAW"

BOARD MEMBERS	
CHAIRMAN	PRELIM. DATE FILED
VICE CHAIRMAN	DEF. DATE FILED
	PUBLIC HEARING
	DEF. PLAN APPROVED
	DEF. PLAN ENDORSED
DATE:	

SIGNATURES OF THE PLANNING BOARD DO NOT ENSURE THAT ANY LOT SHOWN HEREIN IS BUILDABLE. ENDORSEMENT OF THIS PLAN SHALL NOT BE DEEMED TO CONSTITUTE DETERMINATION OF THE COMPLIANCE WITH THE REQUIREMENTS OF THE TOWN OF WESTPORT'S ZONING BY-LAW.

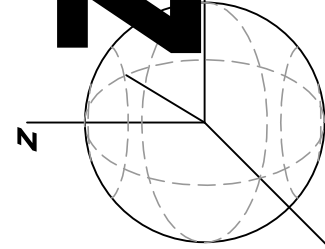
SUBJECT TO A PERFORMANCE GUARANTEE FORM F COVENANT, DATED _____, TO RECORDED HEREWITH.

SCHEDULE OF DRAWINGS		
SHEET ID	PLAN TITLE	LATEST REVISION DATE
C	COVER SHEET	-
X	EXISTING CONDITIONS PLAN	-
L	LOTTING PLAN	-
G	GRADING AND DRAINAGE PLAN	-
P	ROADWAY PROFILE PLAN	-

DRAFT

P.E. STAMP

ZCE
ZENITH CONSULTING ENGINEERS, LLC
3 MAIN STREET LAKEVILLE, MA 02347
PHONE: (508) 947-4208



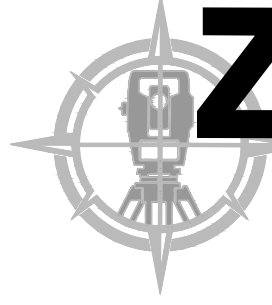
SHEET NAME:	FRANCIS ESTATES COVER SHEET
PROJECT SITE:	CHARLOTTE WHITE ROAD WESTPORT, MASSACHUSETTS
OWNER INFO:	VAZRO REALTY TRUST 5 ARCHERS WAY ACUSHNET, MA 02743
DATE:	7-12-23
PROJECT NUMBER:	0222-13-01
DRAWING SCALE:	1" = 500'
SHEET ID:	C
DRAWN BY:	TEM
DESIGNED BY:	TEM
CHECKED BY:	JLB
APPROVED BY:	JLB

JULY 12, 2023

SITE NOTES:

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DEED REFERENCE: BOOK 7073 PAGE 138
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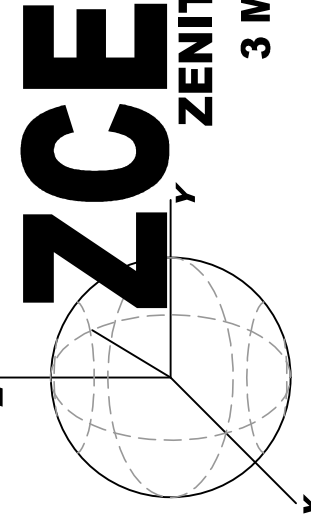
SURVEY COMPANY OF RECORD:



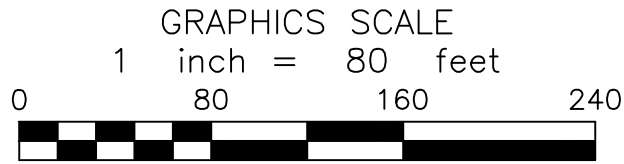
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NEW BEDFORD, MA 02740
(508) 995-0100

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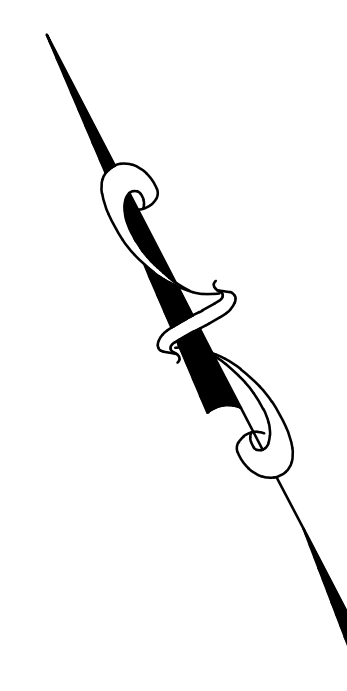
ZENITH CONSULTING ENGINEERS, LLC
3 MAIN STREET LAKEVILLE, MA 02347
PHONE: (508) 947-4208



SHEET NAME: FRANCIS ESTATES EXISTING CONDITIONS PLAN CHARLOTTE WHITE ROAD WESTPORT, MASSACHUSETTS VAZRO REALTY TRUST 5 ARCHERS WAY ACUSHNET, MA 02743	DRAWN BY:	DATE:	REV.	DATE	DESCRIPTION	BY	APP.
	TEM	7-12-23					
	DESIGNED BY:	PROJECT NUMBER					
	TEM	0222-13-01					
OWNER INFO:	CHECKED BY:	DRAWING SCALE					
	JLB	1" = 80'					
APPROVED BY:	APPROVED BY:	SHEET ID					
	JLB	X					

S:\Civil Engineering Projects\Westport\Charlotte White Road\Francis Estates\WMC\Subdivision Plan - Francis Estates - Westport.dwg

ZONING SUMMARY TABLE (RESIDENCE & AGRICULTURE DISTRICT)	
CRITERIA	REQUIRED
LOT AREA	60,000 S.F.
CONTIGUOUS UPLAND	30,000 S.F.
FRONTAGE	150'
MINIMUM WIDTH	50'
FRONT BUILDING SETBACK	25'
SIDE BUILDING SETBACK	10'
REAR BUILDING SETBACK	6'
BUILDING HEIGHT	2.5 STORIES OR 40'
IMPERVIOUS COVER	50%



FOR REGISTRY USE ONLY

TOWN OF WESTPORT PLANNING BOARD
APPROVED UNDER "SUBDIVISION CONTROL LAW"

BOARD MEMBERS	
CHAIRMAN	PRELIM. DATE FILED
VICE CHAIRMAN	DEF. DATE FILED
	PUBLIC HEARING
	DEF. PLAN APPROVED
DATE: _____	DEF. PLAN ENDORSED

SIGNATURES OF THE PLANNING BOARD DO NOT
ENSURE THAT ANY LOT SHOWN HEREIN IS BUILDABLE.
ENDORSEMENT OF THIS PLAN SHALL NOT BE DEEMED TO
CONSTITUTE DETERMINATION OF THE COMPLIANCE WITH THE
REQUIREMENTS OF THE TOWN OF WESTPORT'S ZONING BY-LAW

SUBJECT TO A PERFORMANCE GUARANTEE FORM F COVENANT,
DATED _____, TO RECORDED HEREWITH.



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P.F. STAMP

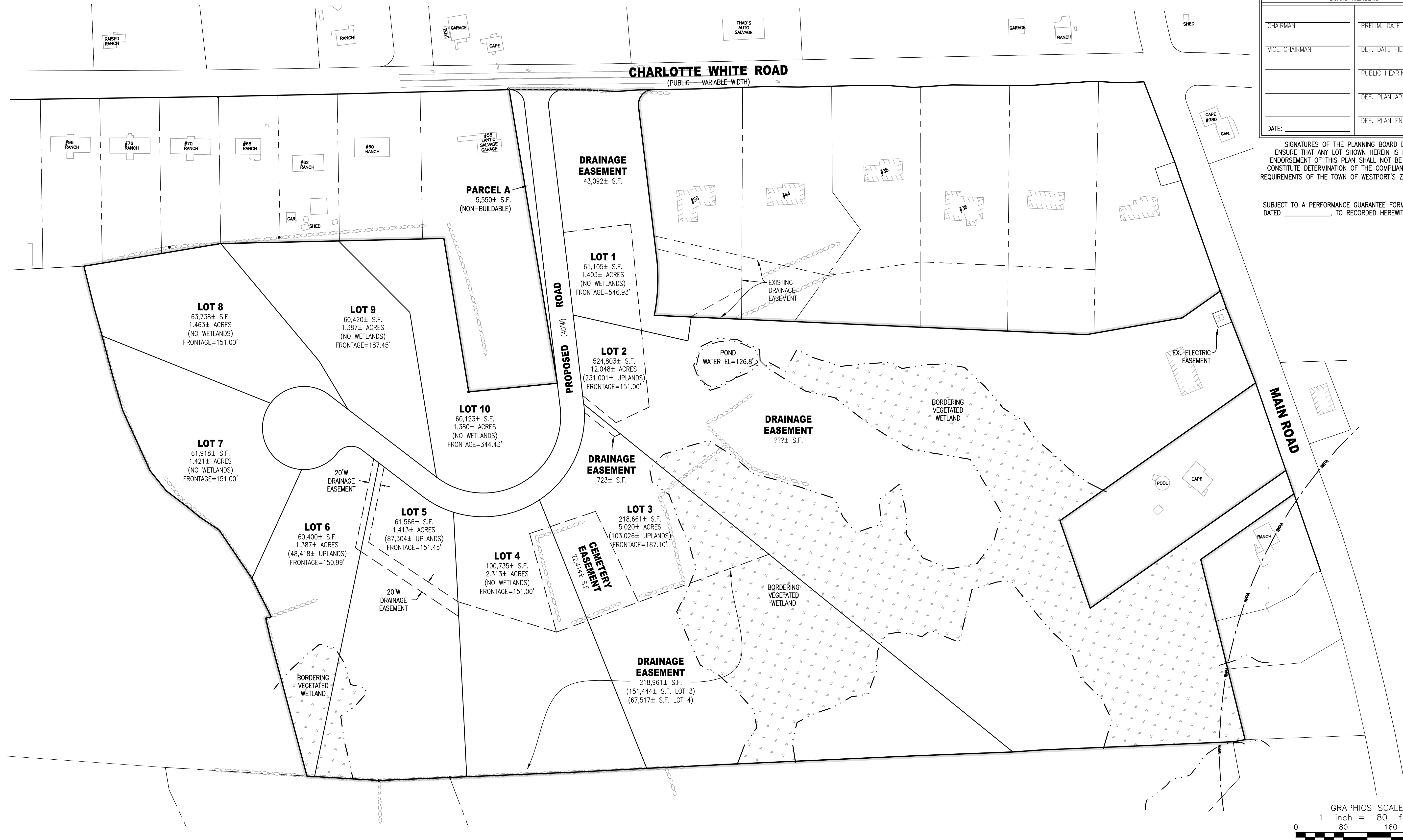
ZENITH CONSULTING ENGINEERS, LLC
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PHONE: (508) 947-4208

DRAWN BY:	DATE:	REV.	DATE	DESCRIPTION	BY	APP.
TEM	7-12-23					
DESIGNED BY:	PROJECT NUMBER					
TEM	0222-13-01					
CHECKED BY:	DRAWING SCALE					
JLB	1" = 80'					
APPROVED BY	SHEET ID					
JLB	L					

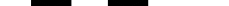
**FRANCIS ESTATES
LOTTING PLAN**

SHEET NAME:
PROJECT SITE:
OWNER INFO:

S.N	Civil Engineering	Projects\Wentnot\Charlotte	White Road\Eranno	Eranno	Eranno	Wentnot dwn



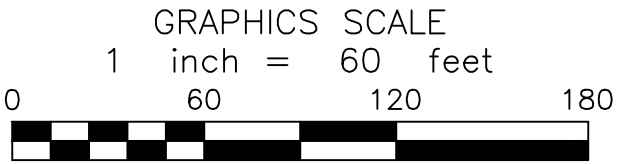
GRAPHICS SCALE
1 inch = 80 feet
0 80 160 240





PRE DEVELOPMENT STORMWATER FLOWS			
STORM	TO BWV	TO #58	TO #50 & CHARLOTTE WHITE RD
2 YEAR	4.70 CFS	1.64 CFS	2.70 CFS
10 YEAR	10.94 CFS 1.223 AF	3.74 CFS 0.411 AF	5.82 CFS 0.423 AF
25 YEAR	16.21 CFS	5.49 CFS	8.38 CFS
100 YEAR	27.47 CFS	9.20 CFS	13.71 CFS

SEE HYDROCAD CALCULATIONS



SHEET NAME: FRANCIS ESTATES
PRE-DEVELOPMENT DRAINAGE PLAN
PROJECT SITE: CHARLOTTE WHITE ROAD
WESTPORT, MASSACHUSETTS
OWNER INFO: VAZRO REALTY TRUST
5 ARCHERS WAY
ACUSHNET, MA 02743

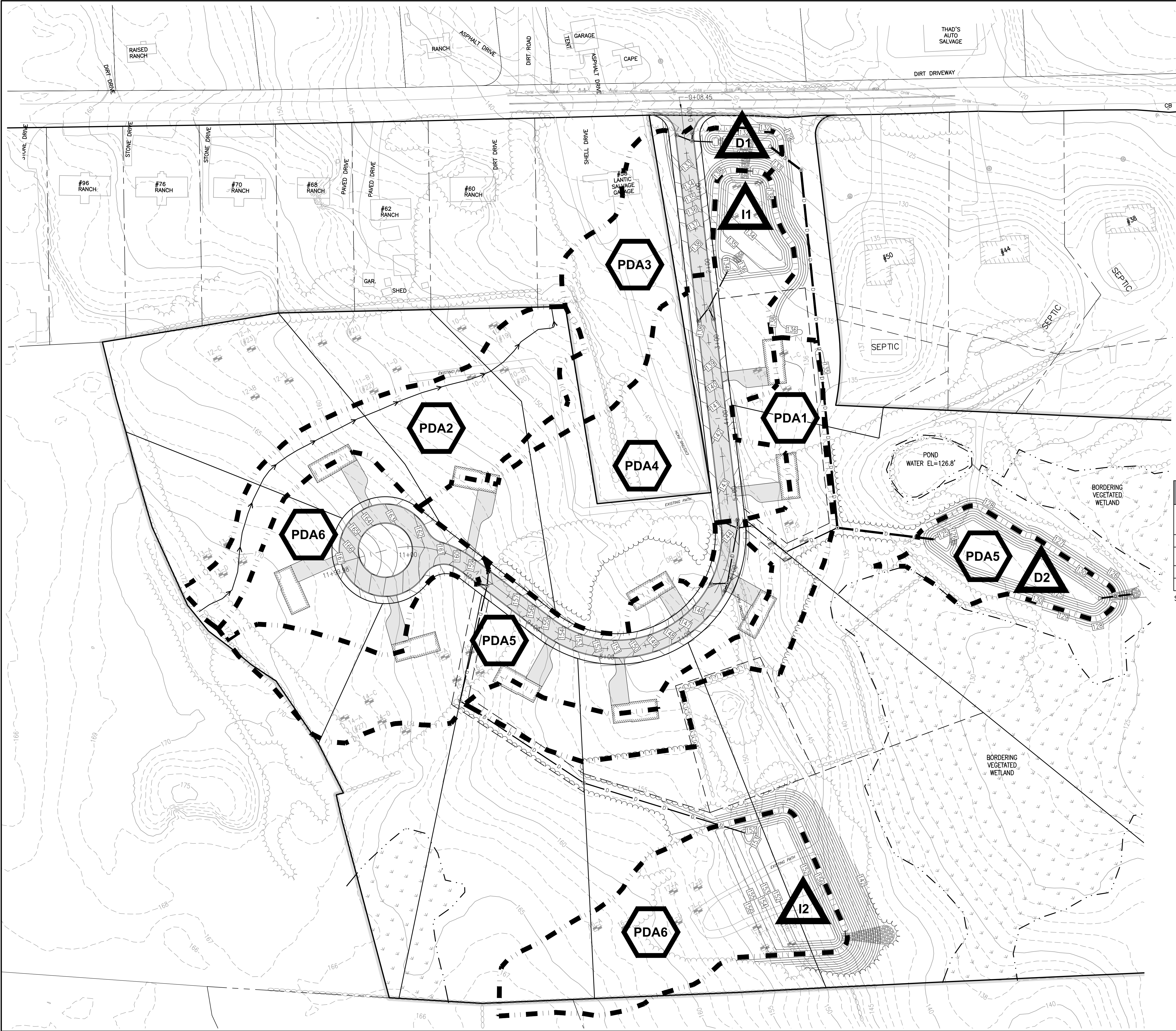
DRAWN BY: TEM
DESIGNED BY: TEM
CHECKED BY: JLB
APPROVED BY: JLB

REV.	DATE	DESCRIPTION	BY	APP.

DATE: 7-12-23
PROJECT NUMBER: 0222-13-01
DRAWING SCALE: 1" = 60'
SHEET ID: PRE

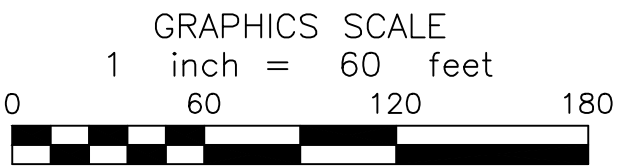
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PHONE: (508) 947-4208

DRAFT
P.E. STAMP



PRE VS. POST DEVELOPMENT STORMWATER FLOWS						
STORM	TO BWV		TO #58		TO #50 & CHARLOTTE WHITE RD	
	PRE	POST	PRE	POST	PRE	POST
2 YEAR	4.70 CFS	1.89 CFS	1.64 CFS	0.99 CFS	2.70 CFS	-
10 YEAR	10.94 CFS	4.01 CFS	3.74 CFS	2.20 CFS	5.82 CFS	-
25 YEAR	16.21 CFS	5.64 CFS	5.49 CFS	3.20 CFS	8.38 CFS	-
100 YEAR	27.47 CFS	11.73 CFS	9.20 CFS	5.31 CFS	13.71 CFS	-

SEE HYDROCAD CALCULATIONS



FRANCIS ESTATES
POST-DEVELOPMENT DRAINAGE PLAN

CHARLOTTE WHITE ROAD
WESTPORT, MASSACHUSETTS

VAZRO REALTY TRUST
5 ARCHERS WAY
ACUSHNET, MA 02743

DATE: 7-12-23

PROJECT NUMBER: 0222-13-01

DRAWING SCALE: 1" = 60'

SHEET ID: PRE

DRAWN BY: TEM

DESIGNED BY: TEM

CHECKED BY: JLB

APPROVED BY: JLB

DESCRIPTION

BY

APP.

ZCE

ZENITH CONSULTING ENGINEERS, LLC
3 MAIN STREET LAKEVILLE, MA 02347
PHONE: (508) 947-4208

DRAFT

P.E. STAMP



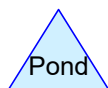
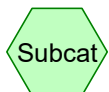
Flow to #58



Flow to #50 / Charlotte
White Rd



Flow to BVW



Routing Diagram for Pre-Development

Prepared by Zenith Consulting Engineers LLC, Printed 7/12/2023
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Pre-Development

Type III 24-hr 2-Year Rainfall=3.30"

Prepared by Zenith Consulting Engineers LLC

Printed 7/12/2023

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Page 2

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA1: Flow to BVW

Runoff Area=313,290 sf 0.00% Impervious Runoff Depth=0.94"
Flow Length=780' Tc=21.9 min CN=71 Runoff=4.70 cfs 0.563 af

Subcatchment EDA2: Flow to #58

Runoff Area=101,395 sf 0.00% Impervious Runoff Depth=0.99"
Flow Length=670' Tc=21.4 min CN=72 Runoff=1.64 cfs 0.192 af

Subcatchment EDA3: Flow to #50 /

Runoff Area=96,865 sf 0.68% Impervious Runoff Depth=1.10"
Flow Length=350' Tc=6.5 min CN=74 Runoff=2.70 cfs 0.205 af

Total Runoff Area = 11.744 ac Runoff Volume = 0.960 af Average Runoff Depth = 0.98"
99.87% Pervious = 11.729 ac 0.13% Impervious = 0.015 ac

Pre-Development

Type III 24-hr 2-Year Rainfall=3.30"

Prepared by Zenith Consulting Engineers LLC

Printed 7/12/2023

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Page 3

Summary for Subcatchment EDA1: Flow to BVW

Runoff = 4.70 cfs @ 12.34 hrs, Volume= 0.563 af, Depth= 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
123,295	70	Woods, Good, HSG C
* 123,265	72	Lawn w/ 4" soil amendment
27,270	70	Woods, Good, HSG C
* 39,460	72	Lawn w/ 4" soil amendment
313,290	71	Weighted Average
313,290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	50	0.0300	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
11.6	730	0.0440	1.05		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.9	780	Total			

Summary for Subcatchment EDA2: Flow to #58

Runoff = 1.64 cfs @ 12.33 hrs, Volume= 0.192 af, Depth= 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
2,420	70	Woods, Good, HSG C
* 98,975	72	Lawn w/ 4" soil amendment
101,395	72	Weighted Average
101,395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

Pre-Development

Type III 24-hr 2-Year Rainfall=3.30"

Prepared by Zenith Consulting Engineers LLC

Printed 7/12/2023

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Page 4

Summary for Subcatchment EDA3: Flow to #50 / Charlottle White Rd

Runoff = 2.70 cfs @ 12.10 hrs, Volume= 0.205 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

	Area (sf)	CN	Description
*	655	98	Roof
*	8,920	95	Gravel
*	87,290	72	Lawn w/ 4" soil amendment
	96,865	74	Weighted Average
	96,210		99.32% Pervious Area
	655		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	50	0.0900	0.27		Sheet Flow, Grass: Short n= 0.150 P2= 3.30"
3.5	300	0.0420	1.43		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
6.5	350	Total			

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Type III 24-hr 10-Year Rainfall=4.90"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA1: Flow to BVW

Runoff Area=313,290 sf 0.00% Impervious Runoff Depth=2.04"
Flow Length=780' Tc=21.9 min CN=71 Runoff=10.94 cfs 1.223 af

Subcatchment EDA2: Flow to #58

Runoff Area=101,395 sf 0.00% Impervious Runoff Depth=2.12"
Flow Length=670' Tc=21.4 min CN=72 Runoff=3.74 cfs 0.411 af

Subcatchment EDA3: Flow to #50 /

Runoff Area=96,865 sf 0.68% Impervious Runoff Depth=2.28"
Flow Length=350' Tc=6.5 min CN=74 Runoff=5.82 cfs 0.423 af

Total Runoff Area = 11.744 ac Runoff Volume = 2.058 af Average Runoff Depth = 2.10"
99.87% Pervious = 11.729 ac 0.13% Impervious = 0.015 ac

Pre-Development

Type III 24-hr 10-Year Rainfall=4.90"

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Summary for Subcatchment EDA1: Flow to BVW

Runoff = 10.94 cfs @ 12.31 hrs, Volume= 1.223 af, Depth= 2.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
123,295	70	Woods, Good, HSG C
* 123,265	72	Lawn w/ 4" soil amendment
27,270	70	Woods, Good, HSG C
* 39,460	72	Lawn w/ 4" soil amendment
313,290	71	Weighted Average
313,290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	50	0.0300	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
11.6	730	0.0440	1.05		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.9	780	Total			

Summary for Subcatchment EDA2: Flow to #58

Runoff = 3.74 cfs @ 12.30 hrs, Volume= 0.411 af, Depth= 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
2,420	70	Woods, Good, HSG C
* 98,975	72	Lawn w/ 4" soil amendment
101,395	72	Weighted Average
101,395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

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Type III 24-hr 10-Year Rainfall=4.90"

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Summary for Subcatchment EDA3: Flow to #50 / Charlotte White Rd

Runoff = 5.82 cfs @ 12.10 hrs, Volume= 0.423 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

	Area (sf)	CN	Description
*	655	98	Roof
*	8,920	95	Gravel
*	87,290	72	Lawn w/ 4" soil amendment
	96,865	74	Weighted Average
	96,210		99.32% Pervious Area
	655		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	50	0.0900	0.27		Sheet Flow, Grass: Short n= 0.150 P2= 3.30"
3.5	300	0.0420	1.43		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
6.5	350	Total			

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Type III 24-hr 25-Year Rainfall=6.10"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA1: Flow to BVW

Runoff Area=313,290 sf 0.00% Impervious Runoff Depth=2.98"
Flow Length=780' Tc=21.9 min CN=71 Runoff=16.21 cfs 1.786 af

Subcatchment EDA2: Flow to #58

Runoff Area=101,395 sf 0.00% Impervious Runoff Depth=3.08"
Flow Length=670' Tc=21.4 min CN=72 Runoff=5.49 cfs 0.597 af

Subcatchment EDA3: Flow to #50 /

Runoff Area=96,865 sf 0.68% Impervious Runoff Depth=3.27"
Flow Length=350' Tc=6.5 min CN=74 Runoff=8.38 cfs 0.606 af

Total Runoff Area = 11.744 ac Runoff Volume = 2.988 af Average Runoff Depth = 3.05"
99.87% Pervious = 11.729 ac 0.13% Impervious = 0.015 ac

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Type III 24-hr 25-Year Rainfall=6.10"

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Summary for Subcatchment EDA1: Flow to BVW

Runoff = 16.21 cfs @ 12.31 hrs, Volume= 1.786 af, Depth= 2.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

Area (sf)	CN	Description
123,295	70	Woods, Good, HSG C
* 123,265	72	Lawn w/ 4" soil amendment
27,270	70	Woods, Good, HSG C
* 39,460	72	Lawn w/ 4" soil amendment
313,290	71	Weighted Average
313,290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	50	0.0300	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
11.6	730	0.0440	1.05		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.9	780	Total			

Summary for Subcatchment EDA2: Flow to #58

Runoff = 5.49 cfs @ 12.30 hrs, Volume= 0.597 af, Depth= 3.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

Area (sf)	CN	Description
2,420	70	Woods, Good, HSG C
* 98,975	72	Lawn w/ 4" soil amendment
101,395	72	Weighted Average
101,395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

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Type III 24-hr 25-Year Rainfall=6.10"

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Summary for Subcatchment EDA3: Flow to #50 / Charlotte White Rd

Runoff = 8.38 cfs @ 12.10 hrs, Volume= 0.606 af, Depth= 3.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

	Area (sf)	CN	Description
*	655	98	Roof
*	8,920	95	Gravel
*	87,290	72	Lawn w/ 4" soil amendment
	96,865	74	Weighted Average
	96,210		99.32% Pervious Area
	655		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	50	0.0900	0.27		Sheet Flow, Grass: Short n= 0.150 P2= 3.30"
3.5	300	0.0420	1.43		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
6.5	350	Total			

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Type III 24-hr 100-Year Rainfall=8.50"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EDA1: Flow to BVW

Runoff Area=313,290 sf 0.00% Impervious Runoff Depth=5.02"
Flow Length=780' Tc=21.9 min CN=71 Runoff=27.47 cfs 3.007 af

Subcatchment EDA2: Flow to #58

Runoff Area=101,395 sf 0.00% Impervious Runoff Depth=5.14"
Flow Length=670' Tc=21.4 min CN=72 Runoff=9.20 cfs 0.996 af

Subcatchment EDA3: Flow to #50 /

Runoff Area=96,865 sf 0.68% Impervious Runoff Depth=5.38"
Flow Length=350' Tc=6.5 min CN=74 Runoff=13.71 cfs 0.996 af

Total Runoff Area = 11.744 ac Runoff Volume = 4.999 af Average Runoff Depth = 5.11"
99.87% Pervious = 11.729 ac 0.13% Impervious = 0.015 ac

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Type III 24-hr 100-Year Rainfall=8.50"

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Summary for Subcatchment EDA1: Flow to BVW

Runoff = 27.47 cfs @ 12.29 hrs, Volume= 3.007 af, Depth= 5.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

Area (sf)	CN	Description
123,295	70	Woods, Good, HSG C
* 123,265	72	Lawn w/ 4" soil amendment
27,270	70	Woods, Good, HSG C
* 39,460	72	Lawn w/ 4" soil amendment
313,290	71	Weighted Average
313,290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	50	0.0300	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
11.6	730	0.0440	1.05		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.9	780	Total			

Summary for Subcatchment EDA2: Flow to #58

Runoff = 9.20 cfs @ 12.29 hrs, Volume= 0.996 af, Depth= 5.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

Area (sf)	CN	Description
2,420	70	Woods, Good, HSG C
* 98,975	72	Lawn w/ 4" soil amendment
101,395	72	Weighted Average
101,395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

Pre-Development

Type III 24-hr 100-Year Rainfall=8.50"

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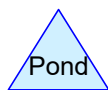
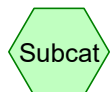
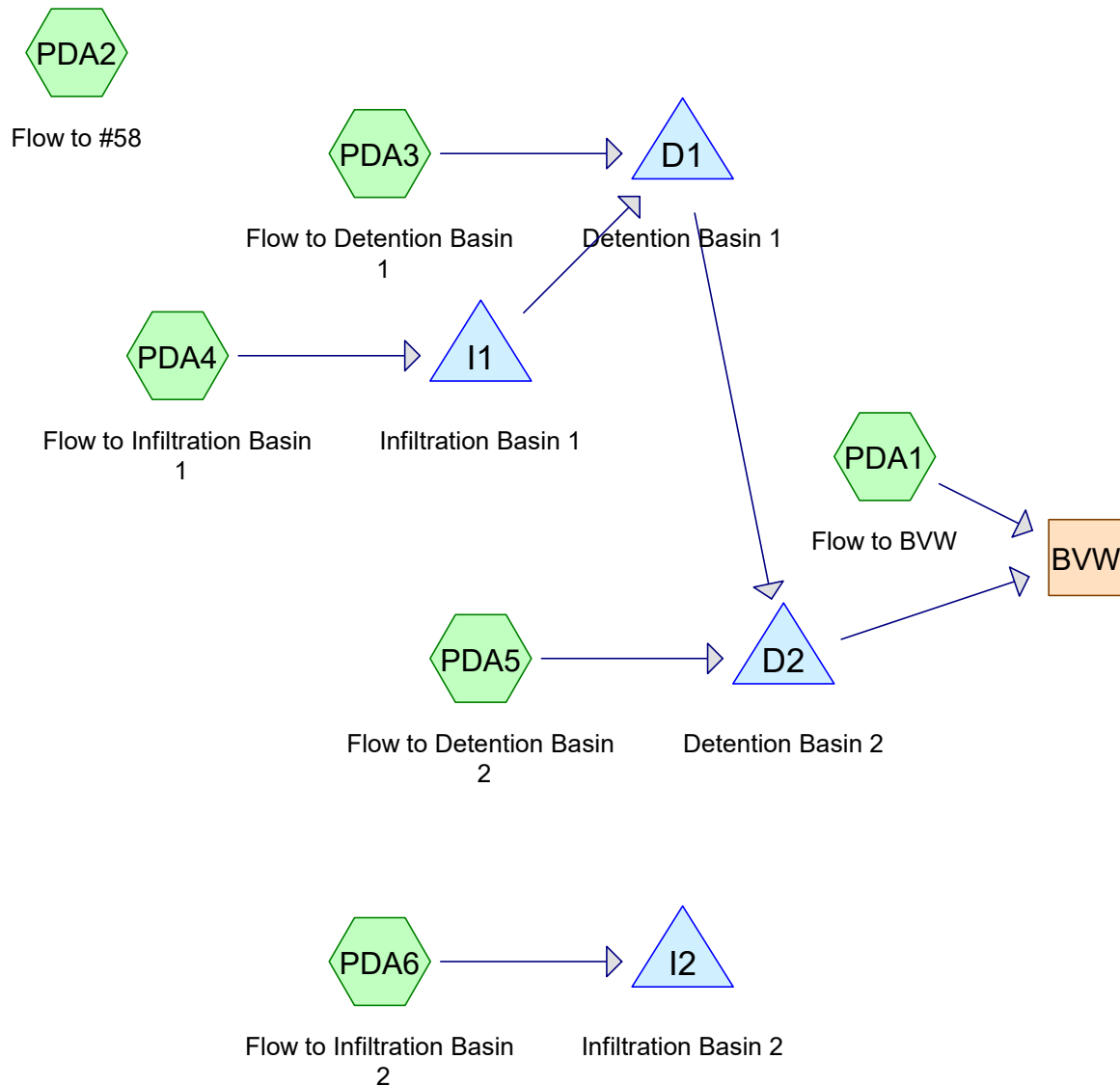
Summary for Subcatchment EDA3: Flow to #50 / Charlotte White Rd

Runoff = 13.71 cfs @ 12.09 hrs, Volume= 0.996 af, Depth= 5.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

	Area (sf)	CN	Description
*	655	98	Roof
*	8,920	95	Gravel
*	87,290	72	Lawn w/ 4" soil amendment
	96,865	74	Weighted Average
	96,210		99.32% Pervious Area
	655		0.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	50	0.0900	0.27		Sheet Flow, Grass: Short n= 0.150 P2= 3.30"
3.5	300	0.0420	1.43		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
6.5	350	Total			



Post-Development

Type III 24-hr 2-Year Rainfall=3.30"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA1: Flow to BVW Runoff Area=52,620 sf 9.50% Impervious Runoff Depth=1.10"
Tc=6.0 min CN=74 Runoff=1.49 cfs 0.111 af

Subcatchment PDA2: Flow to #58 Runoff Area=57,275 sf 3.49% Impervious Runoff Depth=1.05"
Flow Length=670' Tc=21.4 min CN=73 Runoff=0.99 cfs 0.115 af

Subcatchment PDA3: Flow to Detention Runoff Area=53,660 sf 9.85% Impervious Runoff Depth=1.35"
Tc=6.0 min CN=78 Runoff=1.91 cfs 0.138 af

Subcatchment PDA4: Flow to Infiltration Runoff Area=122,365 sf 15.76% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=76 Runoff=3.91 cfs 0.286 af

Subcatchment PDA5: Flow to Detention Runoff Area=109,075 sf 27.54% Impervious Runoff Depth=1.41"
Tc=6.0 min CN=79 Runoff=4.10 cfs 0.295 af

Subcatchment PDA6: Flow to Infiltration Runoff Area=116,555 sf 17.43% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=76 Runoff=3.72 cfs 0.273 af

Reach BVW: Inflow=1.89 cfs 0.541 af
Outflow=1.89 cfs 0.541 af

Pond D1: Detention Basin 1 Peak Elev=129.91' Storage=905 cf Inflow=1.91 cfs 0.138 af
Outflow=1.46 cfs 0.138 af

Pond D2: Detention Basin 2 Peak Elev=125.90' Storage=7,846 cf Inflow=5.17 cfs 0.433 af
Outflow=0.76 cfs 0.430 af

Pond I1: Infiltration Basin 1 Peak Elev=135.39' Storage=7,161 cf Inflow=3.91 cfs 0.286 af
Discarded=0.16 cfs 0.286 af Primary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.286 af

Pond I2: Infiltration Basin 2 Peak Elev=152.66' Storage=5,653 cf Inflow=3.72 cfs 0.273 af
Outflow=0.22 cfs 0.273 af

Total Runoff Area = 11.744 ac Runoff Volume = 1.217 af Average Runoff Depth = 1.24"
83.99% Pervious = 9.863 ac 16.01% Impervious = 1.881 ac

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Type III 24-hr 2-Year Rainfall=3.30"

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Summary for Subcatchment PDA1: Flow to BVW

Runoff = 1.49 cfs @ 12.10 hrs, Volume= 0.111 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

	Area (sf)	CN	Description
*	5,000	98	Roof (2000/lot)
*	47,620	72	Lawn w/ 4" soil amendment (30,500/lot)
	52,620	74	Weighted Average
	47,620		90.50% Pervious Area
	5,000		9.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA2: Flow to #58

Runoff = 0.99 cfs @ 12.32 hrs, Volume= 0.115 af, Depth= 1.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

	Area (sf)	CN	Description
*	2,000	98	Roof (2000/lot)
*	52,855	72	Lawn w/ 4" soil amendment (30,500/lot)
	2,420	70	Woods, Good, HSG C
	57,275	73	Weighted Average
	55,275		96.51% Pervious Area
	2,000		3.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow,
					Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

Summary for Subcatchment PDA3: Flow to Detention Basin 1

Runoff = 1.91 cfs @ 12.09 hrs, Volume= 0.138 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

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Type III 24-hr 2-Year Rainfall=3.30"

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	Area (sf)	CN	Description
*	4,630	98	Prop Pavement
*	655	98	Roof Existing
*	39,455	72	Lawn w/ 4" soil amendment (30,500/lot)
*	8,920	95	Gravel Existing
	53,660	78	Weighted Average
	48,375		90.15% Pervious Area
	5,285		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA4: Flow to Infiltration Basin 1

Runoff = 3.91 cfs @ 12.09 hrs, Volume= 0.286 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

	Area (sf)	CN	Description
*	7,790	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	4,000	98	Roof (2000/lot)
*	88,860	72	Lawn w/ 4" soil amendment (30,500/lot)
	14,215	70	Woods, Good, HSG C
	122,365	76	Weighted Average
	103,075		84.24% Pervious Area
	19,290		15.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA5: Flow to Detention Basin 2

Runoff = 4.10 cfs @ 12.09 hrs, Volume= 0.295 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

Post-Development

Type III 24-hr 2-Year Rainfall=3.30"

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	Area (sf)	CN	Description
*	11,035	98	Prop Pavement
*	9,000	98	Roof (2000/lot)
*	72,365	72	Lawn w/ 4" soil amendment (30,500/lot)
	6,675	70	Woods, Good, HSG C
*	10,000	98	Prop Drive/Walk (2500/lot)
	109,075	79	Weighted Average
	79,040		72.46% Pervious Area
	30,035		27.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA6: Flow to Infiltration Basin 2

Runoff = 3.72 cfs @ 12.09 hrs, Volume= 0.273 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.30"

	Area (sf)	CN	Description
*	9,810	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	3,000	98	Roof (2000/lot)
*	28,720	72	Lawn w/ 4" soil amendment (30,500/lot)
	795	70	Woods, Good, HSG C
	27,270	70	Woods, Good, HSG C
*	39,460	72	Lawn w/ 4" soil amendment
	116,555	76	Weighted Average
	96,245		82.57% Pervious Area
	20,310		17.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Reach BVW:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.753 ac, 17.65% Impervious, Inflow Depth > 0.84" for 2-Year event

Inflow = 1.89 cfs @ 12.11 hrs, Volume= 0.541 af

Outflow = 1.89 cfs @ 12.11 hrs, Volume= 0.541 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Post-Development

Type III 24-hr 2-Year Rainfall=3.30"

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Summary for Pond D1: Detention Basin 1

Inflow Area = 4.041 ac, 13.96% Impervious, Inflow Depth = 0.41" for 2-Year event
 Inflow = 1.91 cfs @ 12.09 hrs, Volume= 0.138 af
 Outflow = 1.46 cfs @ 12.16 hrs, Volume= 0.138 af, Atten= 24%, Lag= 4.2 min
 Primary = 1.46 cfs @ 12.16 hrs, Volume= 0.138 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 129.91' @ 12.16 hrs Surf.Area= 1,249 sf Storage= 905 cf

Plug-Flow detention time= 23.9 min calculated for 0.138 af (100% of inflow)

Center-of-Mass det. time= 24.1 min (871.6 - 847.5)

Volume	Invert	Avail.Storage	Storage Description
#1	129.00'	4,833 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
129.00	765	0	0	765
130.00	1,305	1,023	1,023	1,317
131.00	1,900	1,593	2,616	1,928
132.00	2,550	2,217	4,833	2,599

Device	Routing	Invert	Outlet Devices
#1	Primary	129.00'	30.0" Round Culvert L= 620.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 129.00' / 125.90' S= 0.0050 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	129.00'	4.0" W x 9.0" H Vert. Orifice/Grate C= 0.600
#3	Device 1	129.75'	36.0" W x 15.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.46 cfs @ 12.16 hrs HW=129.91' TW=125.54' (Dynamic Tailwater)

1=Culvert (Passes 1.46 cfs of 4.12 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.86 cfs @ 3.43 fps)
 3=Orifice/Grate (Orifice Controls 0.60 cfs @ 1.27 fps)

Summary for Pond D2: Detention Basin 2

Inflow Area = 6.545 ac, 19.15% Impervious, Inflow Depth = 0.79" for 2-Year event
 Inflow = 5.17 cfs @ 12.11 hrs, Volume= 0.433 af
 Outflow = 0.76 cfs @ 13.00 hrs, Volume= 0.430 af, Atten= 85%, Lag= 53.6 min
 Primary = 0.76 cfs @ 13.00 hrs, Volume= 0.430 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 125.90' @ 13.00 hrs Surf.Area= 9,416 sf Storage= 7,846 cf

Plug-Flow detention time= 190.6 min calculated for 0.430 af (99% of inflow)

Center-of-Mass det. time= 186.9 min (1,040.0 - 853.0)

Post-Development

Type III 24-hr 2-Year Rainfall=3.30"

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Volume	Invert	Avail.Storage	Storage Description
#1	125.00'	59,986 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
125.00	8,065	0	0	8,065
126.00	9,575	8,809	8,809	9,611
127.00	11,140	10,348	19,157	11,217
128.00	12,760	11,941	31,098	12,883
129.00	14,440	13,591	44,689	14,613
130.00	16,170	15,297	59,986	16,398

Device	Routing	Invert	Outlet Devices
#1	Primary	125.00'	24.0" Round Culvert L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 125.00' / 124.60' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	125.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	127.75'	24.0" W x 15.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.76 cfs @ 13.00 hrs HW=125.90' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.76 cfs of 3.49 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.76 cfs @ 3.88 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond I1: Infiltration Basin 1

Inflow Area = 2.809 ac, 15.76% Impervious, Inflow Depth = 1.22" for 2-Year event
 Inflow = 3.91 cfs @ 12.09 hrs, Volume= 0.286 af
 Outflow = 0.16 cfs @ 16.07 hrs, Volume= 0.286 af, Atten= 96%, Lag= 238.4 min
 Discarded = 0.16 cfs @ 16.07 hrs, Volume= 0.286 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 135.39' @ 16.07 hrs Surf.Area= 6,903 sf Storage= 7,161 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 516.4 min (1,370.2 - 853.8)

Volume	Invert	Avail.Storage	Storage Description
#1	134.00'	30,960 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
134.00	3,310	0	0	3,310
135.00	6,055	4,614	4,614	6,065
136.00	8,320	7,158	11,772	8,350
137.00	9,620	8,962	20,734	9,693
138.00	10,845	10,226	30,960	10,969

Post-Development

Type III 24-hr 2-Year Rainfall=3.30"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	134.00'	1.020 in/hr Exfiltration over Wetted area
#2	Primary	136.40'	8.0' long x 10.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.16 cfs @ 16.07 hrs HW=135.39' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.16 cfs)**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=134.00' TW=129.00' (Dynamic Tailwater)↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Pond I2: Infiltration Basin 2**

Inflow Area = 2.676 ac, 17.43% Impervious, Inflow Depth = 1.22" for 2-Year event
 Inflow = 3.72 cfs @ 12.09 hrs, Volume= 0.273 af
 Outflow = 0.22 cfs @ 15.01 hrs, Volume= 0.273 af, Atten= 94%, Lag= 175.1 min
 Discarded = 0.22 cfs @ 15.01 hrs, Volume= 0.273 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 152.66' @ 15.01 hrs Surf.Area= 9,398 sf Storage= 5,653 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 277.9 min (1,131.7 - 853.8)

Volume	Invert	Avail.Storage	Storage Description
#1	152.00'	51,727 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
152.00	7,825	0	0	7,825
153.00	10,275	9,022	9,022	10,298
154.00	12,855	11,541	20,563	12,906
155.00	15,570	14,191	34,754	15,654
156.00	18,415	16,973	51,727	18,536

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.00'	1.020 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.22 cfs @ 15.01 hrs HW=152.66' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

Post-Development

Type III 24-hr 10-Year Rainfall=4.90"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA1: Flow to BVW Runoff Area=52,620 sf 9.50% Impervious Runoff Depth=2.28"
Tc=6.0 min CN=74 Runoff=3.22 cfs 0.230 af

Subcatchment PDA2: Flow to #58 Runoff Area=57,275 sf 3.49% Impervious Runoff Depth=2.20"
Flow Length=670' Tc=21.4 min CN=73 Runoff=2.20 cfs 0.241 af

Subcatchment PDA3: Flow to Detention Runoff Area=53,660 sf 9.85% Impervious Runoff Depth=2.63"
Tc=6.0 min CN=78 Runoff=3.80 cfs 0.270 af

Subcatchment PDA4: Flow to Infiltration Runoff Area=122,365 sf 15.76% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=76 Runoff=8.07 cfs 0.574 af

Subcatchment PDA5: Flow to Detention Runoff Area=109,075 sf 27.54% Impervious Runoff Depth=2.72"
Tc=6.0 min CN=79 Runoff=7.98 cfs 0.567 af

Subcatchment PDA6: Flow to Infiltration Runoff Area=116,555 sf 17.43% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=76 Runoff=7.69 cfs 0.547 af

Reach BVW: Inflow=4.01 cfs 1.098 af
Outflow=4.01 cfs 1.098 af

Pond D1: Detention Basin 1 Peak Elev=130.15' Storage=1,222 cf Inflow=3.80 cfs 0.304 af
Outflow=3.46 cfs 0.304 af

Pond D2: Detention Basin 2 Peak Elev=126.81' Storage=17,031 cf Inflow=11.22 cfs 0.871 af
Outflow=1.18 cfs 0.868 af

Pond I1: Infiltration Basin 1 Peak Elev=136.45' Storage=15,615 cf Inflow=8.07 cfs 0.574 af
Discarded=0.21 cfs 0.540 af Primary=0.20 cfs 0.034 af Outflow=0.41 cfs 0.574 af

Pond I2: Infiltration Basin 2 Peak Elev=153.47' Storage=14,151 cf Inflow=7.69 cfs 0.547 af
Outflow=0.27 cfs 0.547 af

Total Runoff Area = 11.744 ac Runoff Volume = 2.429 af Average Runoff Depth = 2.48"
83.99% Pervious = 9.863 ac 16.01% Impervious = 1.881 ac

Post-Development

Type III 24-hr 10-Year Rainfall=4.90"

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Summary for Subcatchment PDA1: Flow to BVW

Runoff = 3.22 cfs @ 12.09 hrs, Volume= 0.230 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

	Area (sf)	CN	Description
*	5,000	98	Roof (2000/lot)
*	47,620	72	Lawn w/ 4" soil amendment (30,500/lot)
	52,620	74	Weighted Average
	47,620		90.50% Pervious Area
	5,000		9.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA2: Flow to #58

Runoff = 2.20 cfs @ 12.30 hrs, Volume= 0.241 af, Depth= 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

	Area (sf)	CN	Description
*	2,000	98	Roof (2000/lot)
*	52,855	72	Lawn w/ 4" soil amendment (30,500/lot)
	2,420	70	Woods, Good, HSG C
	57,275	73	Weighted Average
	55,275		96.51% Pervious Area
	2,000		3.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow,
					Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

Summary for Subcatchment PDA3: Flow to Detention Basin 1

Runoff = 3.80 cfs @ 12.09 hrs, Volume= 0.270 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Post-Development

Type III 24-hr 10-Year Rainfall=4.90"

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	Area (sf)	CN	Description
*	4,630	98	Prop Pavement
*	655	98	Roof Existing
*	39,455	72	Lawn w/ 4" soil amendment (30,500/lot)
*	8,920	95	Gravel Existing
	53,660	78	Weighted Average
	48,375		90.15% Pervious Area
	5,285		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA4: Flow to Infiltration Basin 1

Runoff = 8.07 cfs @ 12.09 hrs, Volume= 0.574 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

	Area (sf)	CN	Description
*	7,790	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	4,000	98	Roof (2000/lot)
*	88,860	72	Lawn w/ 4" soil amendment (30,500/lot)
	14,215	70	Woods, Good, HSG C
	122,365	76	Weighted Average
	103,075		84.24% Pervious Area
	19,290		15.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA5: Flow to Detention Basin 2

Runoff = 7.98 cfs @ 12.09 hrs, Volume= 0.567 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Post-Development

Type III 24-hr 10-Year Rainfall=4.90"

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	Area (sf)	CN	Description
*	11,035	98	Prop Pavement
*	9,000	98	Roof (2000/lot)
*	72,365	72	Lawn w/ 4" soil amendment (30,500/lot)
	6,675	70	Woods, Good, HSG C
*	10,000	98	Prop Drive/Walk (2500/lot)
	109,075	79	Weighted Average
	79,040		72.46% Pervious Area
	30,035		27.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA6: Flow to Infiltration Basin 2

Runoff = 7.69 cfs @ 12.09 hrs, Volume= 0.547 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

	Area (sf)	CN	Description
*	9,810	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	3,000	98	Roof (2000/lot)
*	28,720	72	Lawn w/ 4" soil amendment (30,500/lot)
	795	70	Woods, Good, HSG C
	27,270	70	Woods, Good, HSG C
*	39,460	72	Lawn w/ 4" soil amendment
	116,555	76	Weighted Average
	96,245		82.57% Pervious Area
	20,310		17.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Reach BVW:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.753 ac, 17.65% Impervious, Inflow Depth > 1.70" for 10-Year event

Inflow = 4.01 cfs @ 12.10 hrs, Volume= 1.098 af

Outflow = 4.01 cfs @ 12.10 hrs, Volume= 1.098 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Post-Development

Type III 24-hr 10-Year Rainfall=4.90"

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Summary for Pond D1: Detention Basin 1

Inflow Area = 4.041 ac, 13.96% Impervious, Inflow Depth = 0.90" for 10-Year event
 Inflow = 3.80 cfs @ 12.09 hrs, Volume= 0.304 af
 Outflow = 3.46 cfs @ 12.13 hrs, Volume= 0.304 af, Atten= 9%, Lag= 2.2 min
 Primary = 3.46 cfs @ 12.13 hrs, Volume= 0.304 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 130.15' @ 12.13 hrs Surf.Area= 1,386 sf Storage= 1,222 cf

Plug-Flow detention time= 18.3 min calculated for 0.304 af (100% of inflow)

Center-of-Mass det. time= 18.5 min (858.8 - 840.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	129.00'	4,833 cf	Custom Stage Data (Conic) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
129.00	765	0	0	765	
130.00	1,305	1,023	1,023	1,317	
131.00	1,900	1,593	2,616	1,928	
132.00	2,550	2,217	4,833	2,599	

Device	Routing	Invert	Outlet Devices		
#1	Primary	129.00'	30.0" Round Culvert L= 620.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 129.00' / 125.90' S= 0.0050 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf		
#2	Device 1	129.00'	4.0" W x 9.0" H Vert. Orifice/Grate C= 0.600		
#3	Device 1	129.75'	36.0" W x 15.0" H Vert. Orifice/Grate C= 0.600		

Primary OutFlow Max=3.46 cfs @ 12.13 hrs HW=130.15' TW=126.08' (Dynamic Tailwater)

1=Culvert (Passes 3.46 cfs of 6.33 cfs potential flow)

2=Orifice/Grate (Orifice Controls 1.05 cfs @ 4.19 fps)

3=Orifice/Grate (Orifice Controls 2.41 cfs @ 2.02 fps)

Summary for Pond D2: Detention Basin 2

Inflow Area = 6.545 ac, 19.15% Impervious, Inflow Depth = 1.60" for 10-Year event
 Inflow = 11.22 cfs @ 12.10 hrs, Volume= 0.871 af
 Outflow = 1.18 cfs @ 13.09 hrs, Volume= 0.868 af, Atten= 89%, Lag= 59.7 min
 Primary = 1.18 cfs @ 13.09 hrs, Volume= 0.868 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 126.81' @ 13.09 hrs Surf.Area= 10,828 sf Storage= 17,031 cf

Plug-Flow detention time= 210.8 min calculated for 0.868 af (100% of inflow)

Center-of-Mass det. time= 208.6 min (1,045.7 - 837.0)

Post-Development

Type III 24-hr 10-Year Rainfall=4.90"

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Volume	Invert	Avail.Storage	Storage Description
#1	125.00'	59,986 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
125.00	8,065	0	0	8,065
126.00	9,575	8,809	8,809	9,611
127.00	11,140	10,348	19,157	11,217
128.00	12,760	11,941	31,098	12,883
129.00	14,440	13,591	44,689	14,613
130.00	16,170	15,297	59,986	16,398

Device	Routing	Invert	Outlet Devices
#1	Primary	125.00'	24.0" Round Culvert L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 125.00' / 124.60' S= 0.0100 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	125.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	127.75'	24.0" W x 15.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.18 cfs @ 13.09 hrs HW=126.81' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 1.18 cfs of 10.79 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.18 cfs @ 6.01 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond I1: Infiltration Basin 1

Inflow Area = 2.809 ac, 15.76% Impervious, Inflow Depth = 2.45" for 10-Year event
 Inflow = 8.07 cfs @ 12.09 hrs, Volume= 0.574 af
 Outflow = 0.41 cfs @ 15.03 hrs, Volume= 0.574 af, Atten= 95%, Lag= 176.5 min
 Discarded = 0.21 cfs @ 15.03 hrs, Volume= 0.540 af
 Primary = 0.20 cfs @ 15.03 hrs, Volume= 0.034 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 136.45' @ 15.03 hrs Surf.Area= 8,889 sf Storage= 15,615 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 789.3 min (1,622.5 - 833.3)

Volume	Invert	Avail.Storage	Storage Description
#1	134.00'	30,960 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
134.00	3,310	0	0	3,310
135.00	6,055	4,614	4,614	6,065
136.00	8,320	7,158	11,772	8,350
137.00	9,620	8,962	20,734	9,693
138.00	10,845	10,226	30,960	10,969

Post-Development

Type III 24-hr 10-Year Rainfall=4.90"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	134.00'	1.020 in/hr Exfiltration over Wetted area
#2	Primary	136.40'	8.0' long x 10.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.21 cfs @ 15.03 hrs HW=136.45' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.21 cfs)**Primary OutFlow** Max=0.20 cfs @ 15.03 hrs HW=136.45' TW=129.50' (Dynamic Tailwater)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 0.20 cfs @ 0.54 fps)**Summary for Pond I2: Infiltration Basin 2**

Inflow Area = 2.676 ac, 17.43% Impervious, Inflow Depth = 2.45" for 10-Year event
 Inflow = 7.69 cfs @ 12.09 hrs, Volume= 0.547 af
 Outflow = 0.27 cfs @ 16.10 hrs, Volume= 0.547 af, Atten= 96%, Lag= 240.9 min
 Discarded = 0.27 cfs @ 16.10 hrs, Volume= 0.547 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 153.47' @ 16.10 hrs Surf.Area= 11,457 sf Storage= 14,151 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 569.3 min (1,402.5 - 833.3)

Volume	Invert	Avail.Storage	Storage Description
#1	152.00'	51,727 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
152.00	7,825	0	0	7,825
153.00	10,275	9,022	9,022	10,298
154.00	12,855	11,541	20,563	12,906
155.00	15,570	14,191	34,754	15,654
156.00	18,415	16,973	51,727	18,536

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.00'	1.020 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.27 cfs @ 16.10 hrs HW=153.47' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Post-Development

Type III 24-hr 25-Year Rainfall=6.10"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA1: Flow to BVW Runoff Area=52,620 sf 9.50% Impervious Runoff Depth=3.27"
Tc=6.0 min CN=74 Runoff=4.63 cfs 0.329 af

Subcatchment PDA2: Flow to #58 Runoff Area=57,275 sf 3.49% Impervious Runoff Depth=3.17"
Flow Length=670' Tc=21.4 min CN=73 Runoff=3.20 cfs 0.348 af

Subcatchment PDA3: Flow to Detention Runoff Area=53,660 sf 9.85% Impervious Runoff Depth=3.67"
Tc=6.0 min CN=78 Runoff=5.29 cfs 0.376 af

Subcatchment PDA4: Flow to Infiltration Runoff Area=122,365 sf 15.76% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=76 Runoff=11.42 cfs 0.811 af

Subcatchment PDA5: Flow to Detention Runoff Area=109,075 sf 27.54% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=79 Runoff=11.04 cfs 0.786 af

Subcatchment PDA6: Flow to Infiltration Runoff Area=116,555 sf 17.43% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=76 Runoff=10.88 cfs 0.773 af

Reach BVW: Inflow=5.64 cfs 1.730 af
Outflow=5.64 cfs 1.730 af

Pond D1: Detention Basin 1 Peak Elev=130.28' Storage=1,416 cf Inflow=5.29 cfs 0.617 af
Outflow=4.90 cfs 0.617 af

Pond D2: Detention Basin 2 Peak Elev=127.86' Storage=29,369 cf Inflow=15.68 cfs 1.404 af
Outflow=1.77 cfs 1.401 af

Pond I1: Infiltration Basin 1 Peak Elev=136.61' Storage=17,051 cf Inflow=11.42 cfs 0.811 af
Discarded=0.22 cfs 0.571 af Primary=1.87 cfs 0.241 af Outflow=2.09 cfs 0.812 af

Pond I2: Infiltration Basin 2 Peak Elev=154.08' Storage=21,591 cf Inflow=10.88 cfs 0.773 af
Outflow=0.31 cfs 0.773 af

Total Runoff Area = 11.744 ac Runoff Volume = 3.424 af Average Runoff Depth = 3.50"
83.99% Pervious = 9.863 ac 16.01% Impervious = 1.881 ac

Post-Development

Type III 24-hr 25-Year Rainfall=6.10"

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Summary for Subcatchment PDA1: Flow to BVW

Runoff = 4.63 cfs @ 12.09 hrs, Volume= 0.329 af, Depth= 3.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

	Area (sf)	CN	Description
*	5,000	98	Roof (2000/lot)
*	47,620	72	Lawn w/ 4" soil amendment (30,500/lot)
	52,620	74	Weighted Average
	47,620		90.50% Pervious Area
	5,000		9.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA2: Flow to #58

Runoff = 3.20 cfs @ 12.29 hrs, Volume= 0.348 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

	Area (sf)	CN	Description
*	2,000	98	Roof (2000/lot)
*	52,855	72	Lawn w/ 4" soil amendment (30,500/lot)
	2,420	70	Woods, Good, HSG C
	57,275	73	Weighted Average
	55,275		96.51% Pervious Area
	2,000		3.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow,
					Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

Summary for Subcatchment PDA3: Flow to Detention Basin 1

Runoff = 5.29 cfs @ 12.09 hrs, Volume= 0.376 af, Depth= 3.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

Post-Development

Type III 24-hr 25-Year Rainfall=6.10"

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	Area (sf)	CN	Description
*	4,630	98	Prop Pavement
*	655	98	Roof Existing
*	39,455	72	Lawn w/ 4" soil amendment (30,500/lot)
*	8,920	95	Gravel Existing
	53,660	78	Weighted Average
	48,375		90.15% Pervious Area
	5,285		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA4: Flow to Infiltration Basin 1

Runoff = 11.42 cfs @ 12.09 hrs, Volume= 0.811 af, Depth= 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

	Area (sf)	CN	Description
*	7,790	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	4,000	98	Roof (2000/lot)
*	88,860	72	Lawn w/ 4" soil amendment (30,500/lot)
	14,215	70	Woods, Good, HSG C
	122,365	76	Weighted Average
	103,075		84.24% Pervious Area
	19,290		15.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA5: Flow to Detention Basin 2

Runoff = 11.04 cfs @ 12.09 hrs, Volume= 0.786 af, Depth= 3.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

Post-Development

Type III 24-hr 25-Year Rainfall=6.10"

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	Area (sf)	CN	Description
*	11,035	98	Prop Pavement
*	9,000	98	Roof (2000/lot)
*	72,365	72	Lawn w/ 4" soil amendment (30,500/lot)
	6,675	70	Woods, Good, HSG C
*	10,000	98	Prop Drive/Walk (2500/lot)
	109,075	79	Weighted Average
	79,040		72.46% Pervious Area
	30,035		27.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA6: Flow to Infiltration Basin 2

Runoff = 10.88 cfs @ 12.09 hrs, Volume= 0.773 af, Depth= 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.10"

	Area (sf)	CN	Description
*	9,810	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	3,000	98	Roof (2000/lot)
*	28,720	72	Lawn w/ 4" soil amendment (30,500/lot)
	795	70	Woods, Good, HSG C
	27,270	70	Woods, Good, HSG C
*	39,460	72	Lawn w/ 4" soil amendment
	116,555	76	Weighted Average
	96,245		82.57% Pervious Area
	20,310		17.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Reach BVW:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.753 ac, 17.65% Impervious, Inflow Depth > 2.68" for 25-Year event

Inflow = 5.64 cfs @ 12.09 hrs, Volume= 1.730 af

Outflow = 5.64 cfs @ 12.09 hrs, Volume= 1.730 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Post-Development

Type III 24-hr 25-Year Rainfall=6.10"

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Summary for Pond D1: Detention Basin 1

Inflow Area = 4.041 ac, 13.96% Impervious, Inflow Depth = 1.83" for 25-Year event
 Inflow = 5.29 cfs @ 12.09 hrs, Volume= 0.617 af
 Outflow = 4.90 cfs @ 12.12 hrs, Volume= 0.617 af, Atten= 7%, Lag= 2.0 min
 Primary = 4.90 cfs @ 12.12 hrs, Volume= 0.617 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 130.28' @ 12.12 hrs Surf.Area= 1,463 sf Storage= 1,416 cf

Plug-Flow detention time= 13.6 min calculated for 0.617 af (100% of inflow)
 Center-of-Mass det. time= 13.7 min (840.7 - 826.9)

Volume	Invert	Avail.Storage	Storage Description
#1	129.00'	4,833 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
129.00	765	0	0	765
130.00	1,305	1,023	1,023	1,317
131.00	1,900	1,593	2,616	1,928
132.00	2,550	2,217	4,833	2,599

Device	Routing	Invert	Outlet Devices
#1	Primary	129.00'	30.0" Round Culvert L= 620.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 129.00' / 125.90' S= 0.0050 ' S= 0.0050 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	129.00'	4.0" W x 9.0" H Vert. Orifice/Grate C= 0.600
#3	Device 1	129.75'	36.0" W x 15.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=4.89 cfs @ 12.12 hrs HW=130.28' TW=126.54' (Dynamic Tailwater)

1=Culvert (Passes 4.89 cfs of 7.73 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.14 cfs @ 4.56 fps)
 3=Orifice/Grate (Orifice Controls 3.75 cfs @ 2.35 fps)

Summary for Pond D2: Detention Basin 2

Inflow Area = 6.545 ac, 19.15% Impervious, Inflow Depth = 2.57" for 25-Year event
 Inflow = 15.68 cfs @ 12.10 hrs, Volume= 1.404 af
 Outflow = 1.77 cfs @ 13.83 hrs, Volume= 1.401 af, Atten= 89%, Lag= 103.8 min
 Primary = 1.77 cfs @ 13.83 hrs, Volume= 1.401 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 127.86' @ 13.83 hrs Surf.Area= 12,532 sf Storage= 29,369 cf

Plug-Flow detention time= 254.1 min calculated for 1.401 af (100% of inflow)
 Center-of-Mass det. time= 252.7 min (1,079.5 - 826.8)

Post-Development

Type III 24-hr 25-Year Rainfall=6.10"

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Volume	Invert	Avail.Storage	Storage Description
#1	125.00'	59,986 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
125.00	8,065	0	0	8,065
126.00	9,575	8,809	8,809	9,611
127.00	11,140	10,348	19,157	11,217
128.00	12,760	11,941	31,098	12,883
129.00	14,440	13,591	44,689	14,613
130.00	16,170	15,297	59,986	16,398

Device	Routing	Invert	Outlet Devices
#1	Primary	125.00'	24.0" Round Culvert L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 125.00' / 124.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	125.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	127.75'	24.0" W x 15.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.77 cfs @ 13.83 hrs HW=127.86' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 1.77 cfs of 16.30 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.53 cfs @ 7.78 fps)
 3=Orifice/Grate (Orifice Controls 0.24 cfs @ 1.08 fps)

Summary for Pond I1: Infiltration Basin 1

Inflow Area = 2.809 ac, 15.76% Impervious, Inflow Depth = 3.47" for 25-Year event
 Inflow = 11.42 cfs @ 12.09 hrs, Volume= 0.811 af
 Outflow = 2.09 cfs @ 12.55 hrs, Volume= 0.812 af, Atten= 82%, Lag= 28.0 min
 Discarded = 0.22 cfs @ 12.55 hrs, Volume= 0.571 af
 Primary = 1.87 cfs @ 12.55 hrs, Volume= 0.241 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 136.61' @ 12.55 hrs Surf.Area= 9,097 sf Storage= 17,051 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 606.2 min (1,429.5 - 823.3)

Volume	Invert	Avail.Storage	Storage Description
#1	134.00'	30,960 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
134.00	3,310	0	0	3,310
135.00	6,055	4,614	4,614	6,065
136.00	8,320	7,158	11,772	8,350
137.00	9,620	8,962	20,734	9,693
138.00	10,845	10,226	30,960	10,969

Post-Development

Type III 24-hr 25-Year Rainfall=6.10"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	134.00'	1.020 in/hr Exfiltration over Wetted area
#2	Primary	136.40'	8.0' long x 10.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.22 cfs @ 12.55 hrs HW=136.61' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.22 cfs)**Primary OutFlow** Max=1.87 cfs @ 12.55 hrs HW=136.61' TW=130.09' (Dynamic Tailwater)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 1.87 cfs @ 1.13 fps)**Summary for Pond I2: Infiltration Basin 2**

Inflow Area = 2.676 ac, 17.43% Impervious, Inflow Depth = 3.47" for 25-Year event
 Inflow = 10.88 cfs @ 12.09 hrs, Volume= 0.773 af
 Outflow = 0.31 cfs @ 16.84 hrs, Volume= 0.773 af, Atten= 97%, Lag= 285.3 min
 Discarded = 0.31 cfs @ 16.84 hrs, Volume= 0.773 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 154.08' @ 16.84 hrs Surf.Area= 13,061 sf Storage= 21,591 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 761.9 min (1,585.2 - 823.3)

Volume	Invert	Avail.Storage	Storage Description
#1	152.00'	51,727 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
152.00	7,825	0	0	7,825
153.00	10,275	9,022	9,022	10,298
154.00	12,855	11,541	20,563	12,906
155.00	15,570	14,191	34,754	15,654
156.00	18,415	16,973	51,727	18,536

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.00'	1.020 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.31 cfs @ 16.84 hrs HW=154.08' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.31 cfs)

Post-Development

Type III 24-hr 100-Year Rainfall=8.50"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA1: Flow to BVW Runoff Area=52,620 sf 9.50% Impervious Runoff Depth=5.38"
Tc=6.0 min CN=74 Runoff=7.58 cfs 0.541 af

Subcatchment PDA2: Flow to #58 Runoff Area=57,275 sf 3.49% Impervious Runoff Depth=5.26"
Flow Length=670' Tc=21.4 min CN=73 Runoff=5.31 cfs 0.576 af

Subcatchment PDA3: Flow to Detention Runoff Area=53,660 sf 9.85% Impervious Runoff Depth=5.85"
Tc=6.0 min CN=78 Runoff=8.35 cfs 0.601 af

Subcatchment PDA4: Flow to Infiltration Runoff Area=122,365 sf 15.76% Impervious Runoff Depth=5.61"
Tc=6.0 min CN=76 Runoff=18.35 cfs 1.314 af

Subcatchment PDA5: Flow to Detention Runoff Area=109,075 sf 27.54% Impervious Runoff Depth=5.98"
Tc=6.0 min CN=79 Runoff=17.27 cfs 1.247 af

Subcatchment PDA6: Flow to Infiltration Runoff Area=116,555 sf 17.43% Impervious Runoff Depth=5.61"
Tc=6.0 min CN=76 Runoff=17.48 cfs 1.252 af

Reach BVW: Inflow=11.73 cfs 3.097 af
Outflow=11.73 cfs 3.097 af

Pond D1: Detention Basin 1 Peak Elev=130.95' Storage=2,523 cf Inflow=14.59 cfs 1.312 af
Outflow=14.18 cfs 1.312 af

Pond D2: Detention Basin 2 Peak Elev=128.94' Storage=43,838 cf Inflow=26.82 cfs 2.559 af
Outflow=10.16 cfs 2.556 af

Pond I1: Infiltration Basin 1 Peak Elev=136.98' Storage=20,577 cf Inflow=18.35 cfs 1.314 af
Discarded=0.23 cfs 0.604 af Primary=9.59 cfs 0.711 af Outflow=9.82 cfs 1.314 af

Pond I2: Infiltration Basin 2 Peak Elev=155.21' Storage=38,092 cf Inflow=17.48 cfs 1.252 af
Outflow=0.38 cfs 1.252 af

Total Runoff Area = 11.744 ac Runoff Volume = 5.531 af Average Runoff Depth = 5.65"
83.99% Pervious = 9.863 ac 16.01% Impervious = 1.881 ac

Post-Development

Type III 24-hr 100-Year Rainfall=8.50"

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Summary for Subcatchment PDA1: Flow to BVW

Runoff = 7.58 cfs @ 12.09 hrs, Volume= 0.541 af, Depth= 5.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

	Area (sf)	CN	Description
*	5,000	98	Roof (2000/lot)
*	47,620	72	Lawn w/ 4" soil amendment (30,500/lot)
	52,620	74	Weighted Average
	47,620		90.50% Pervious Area
	5,000		9.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA2: Flow to #58

Runoff = 5.31 cfs @ 12.29 hrs, Volume= 0.576 af, Depth= 5.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

	Area (sf)	CN	Description
*	2,000	98	Roof (2000/lot)
*	52,855	72	Lawn w/ 4" soil amendment (30,500/lot)
	2,420	70	Woods, Good, HSG C
	57,275	73	Weighted Average
	55,275		96.51% Pervious Area
	2,000		3.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	50	0.0140	0.06		Sheet Flow,
					Woods: Light underbrush n= 0.400 P2= 3.30"
7.4	620	0.0400	1.40		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
21.4	670	Total			

Summary for Subcatchment PDA3: Flow to Detention Basin 1

Runoff = 8.35 cfs @ 12.09 hrs, Volume= 0.601 af, Depth= 5.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

Post-Development

Type III 24-hr 100-Year Rainfall=8.50"

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	Area (sf)	CN	Description
*	4,630	98	Prop Pavement
*	655	98	Roof Existing
*	39,455	72	Lawn w/ 4" soil amendment (30,500/lot)
*	8,920	95	Gravel Existing
	53,660	78	Weighted Average
	48,375		90.15% Pervious Area
	5,285		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA4: Flow to Infiltration Basin 1

Runoff = 18.35 cfs @ 12.09 hrs, Volume= 1.314 af, Depth= 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

	Area (sf)	CN	Description
*	7,790	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	4,000	98	Roof (2000/lot)
*	88,860	72	Lawn w/ 4" soil amendment (30,500/lot)
	14,215	70	Woods, Good, HSG C
	122,365	76	Weighted Average
	103,075		84.24% Pervious Area
	19,290		15.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA5: Flow to Detention Basin 2

Runoff = 17.27 cfs @ 12.09 hrs, Volume= 1.247 af, Depth= 5.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

Post-Development

Type III 24-hr 100-Year Rainfall=8.50"

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Page 26

	Area (sf)	CN	Description
*	11,035	98	Prop Pavement
*	9,000	98	Roof (2000/lot)
*	72,365	72	Lawn w/ 4" soil amendment (30,500/lot)
	6,675	70	Woods, Good, HSG C
*	10,000	98	Prop Drive/Walk (2500/lot)
	109,075	79	Weighted Average
	79,040		72.46% Pervious Area
	30,035		27.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment PDA6: Flow to Infiltration Basin 2

Runoff = 17.48 cfs @ 12.09 hrs, Volume= 1.252 af, Depth= 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.50"

	Area (sf)	CN	Description
*	9,810	98	Prop Pavement
*	7,500	98	Prop Drive/Walk (2500/lot)
*	3,000	98	Roof (2000/lot)
*	28,720	72	Lawn w/ 4" soil amendment (30,500/lot)
	795	70	Woods, Good, HSG C
	27,270	70	Woods, Good, HSG C
*	39,460	72	Lawn w/ 4" soil amendment
	116,555	76	Weighted Average
	96,245		82.57% Pervious Area
	20,310		17.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Reach BVW:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 7.753 ac, 17.65% Impervious, Inflow Depth = 4.79" for 100-Year event
 Inflow = 11.73 cfs @ 12.49 hrs, Volume= 3.097 af
 Outflow = 11.73 cfs @ 12.49 hrs, Volume= 3.097 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Post-Development

Type III 24-hr 100-Year Rainfall=8.50"

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Summary for Pond D1: Detention Basin 1

Inflow Area = 4.041 ac, 13.96% Impervious, Inflow Depth = 3.90" for 100-Year event
 Inflow = 14.59 cfs @ 12.17 hrs, Volume= 1.312 af
 Outflow = 14.18 cfs @ 12.21 hrs, Volume= 1.312 af, Atten= 3%, Lag= 2.5 min
 Primary = 14.18 cfs @ 12.21 hrs, Volume= 1.312 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 130.95' @ 12.21 hrs Surf.Area= 1,868 sf Storage= 2,523 cf

Plug-Flow detention time= 9.5 min calculated for 1.312 af (100% of inflow)
 Center-of-Mass det. time= 9.4 min (822.6 - 813.2)

Volume	Invert	Avail.Storage	Storage Description		
#1	129.00'	4,833 cf	Custom Stage Data (Conic) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
129.00	765	0	0	765	
130.00	1,305	1,023	1,023	1,317	
131.00	1,900	1,593	2,616	1,928	
132.00	2,550	2,217	4,833	2,599	

Device	Routing	Invert	Outlet Devices		
#1	Primary	129.00'	30.0" Round Culvert L= 620.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 129.00' / 125.90' S= 0.0050 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf		
#2	Device 1	129.00'	4.0" W x 9.0" H Vert. Orifice/Grate C= 0.600		
#3	Device 1	129.75'	36.0" W x 15.0" H Vert. Orifice/Grate C= 0.600		

Primary OutFlow Max=14.18 cfs @ 12.21 hrs HW=130.95' TW=128.11' (Dynamic Tailwater)

1=Culvert (Passes 14.18 cfs of 15.29 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.51 cfs @ 6.03 fps)
 3=Orifice/Grate (Orifice Controls 12.67 cfs @ 3.52 fps)

Summary for Pond D2: Detention Basin 2

Inflow Area = 6.545 ac, 19.15% Impervious, Inflow Depth = 4.69" for 100-Year event
 Inflow = 26.82 cfs @ 12.12 hrs, Volume= 2.559 af
 Outflow = 10.16 cfs @ 12.56 hrs, Volume= 2.556 af, Atten= 62%, Lag= 26.0 min
 Primary = 10.16 cfs @ 12.56 hrs, Volume= 2.556 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 128.94' @ 12.56 hrs Surf.Area= 14,338 sf Storage= 43,838 cf

Plug-Flow detention time= 184.6 min calculated for 2.556 af (100% of inflow)
 Center-of-Mass det. time= 183.8 min (996.8 - 813.0)

Post-Development

Type III 24-hr 100-Year Rainfall=8.50"

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Volume	Invert	Avail.Storage	Storage Description
#1	125.00'	59,986 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
125.00	8,065	0	0	8,065
126.00	9,575	8,809	8,809	9,611
127.00	11,140	10,348	19,157	11,217
128.00	12,760	11,941	31,098	12,883
129.00	14,440	13,591	44,689	14,613
130.00	16,170	15,297	59,986	16,398

Device	Routing	Invert	Outlet Devices
#1	Primary	125.00'	24.0" Round Culvert L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 125.00' / 124.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	125.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	127.75'	24.0" W x 15.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=10.16 cfs @ 12.56 hrs HW=128.94' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 10.16 cfs of 20.48 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.82 cfs @ 9.25 fps)
 3=Orifice/Grate (Orifice Controls 8.34 cfs @ 3.50 fps)

Summary for Pond I1: Infiltration Basin 1

Inflow Area = 2.809 ac, 15.76% Impervious, Inflow Depth = 5.61" for 100-Year event
 Inflow = 18.35 cfs @ 12.09 hrs, Volume= 1.314 af
 Outflow = 9.82 cfs @ 12.22 hrs, Volume= 1.314 af, Atten= 46%, Lag= 7.9 min
 Discarded = 0.23 cfs @ 12.22 hrs, Volume= 0.604 af
 Primary = 9.59 cfs @ 12.22 hrs, Volume= 0.711 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 136.98' @ 12.22 hrs Surf.Area= 9,598 sf Storage= 20,577 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 401.8 min (1,211.4 - 809.5)

Volume	Invert	Avail.Storage	Storage Description
#1	134.00'	30,960 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
134.00	3,310	0	0	3,310
135.00	6,055	4,614	4,614	6,065
136.00	8,320	7,158	11,772	8,350
137.00	9,620	8,962	20,734	9,693
138.00	10,845	10,226	30,960	10,969

Post-Development

Type III 24-hr 100-Year Rainfall=8.50"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	134.00'	1.020 in/hr Exfiltration over Wetted area
#2	Primary	136.40'	8.0' long x 10.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.23 cfs @ 12.22 hrs HW=136.98' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.23 cfs)**Primary OutFlow** Max=9.59 cfs @ 12.22 hrs HW=136.98' TW=130.95' (Dynamic Tailwater)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 9.59 cfs @ 2.05 fps)**Summary for Pond I2: Infiltration Basin 2**

Inflow Area = 2.676 ac, 17.43% Impervious, Inflow Depth = 5.61" for 100-Year event
 Inflow = 17.48 cfs @ 12.09 hrs, Volume= 1.252 af
 Outflow = 0.38 cfs @ 17.60 hrs, Volume= 1.252 af, Atten= 98%, Lag= 331.1 min
 Discarded = 0.38 cfs @ 17.60 hrs, Volume= 1.252 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 155.21' @ 17.60 hrs Surf.Area= 16,149 sf Storage= 38,092 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 1,095.5 min (1,905.1 - 809.5)

Volume	Invert	Avail.Storage	Storage Description
#1	152.00'	51,727 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
152.00	7,825	0	0	7,825
153.00	10,275	9,022	9,022	10,298
154.00	12,855	11,541	20,563	12,906
155.00	15,570	14,191	34,754	15,654
156.00	18,415	16,973	51,727	18,536

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.00'	1.020 in/hr Exfiltration over Wetted area


Discarded OutFlow Max=0.38 cfs @ 17.60 hrs HW=155.21' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.38 cfs)



Project Locus with Plan Overlay

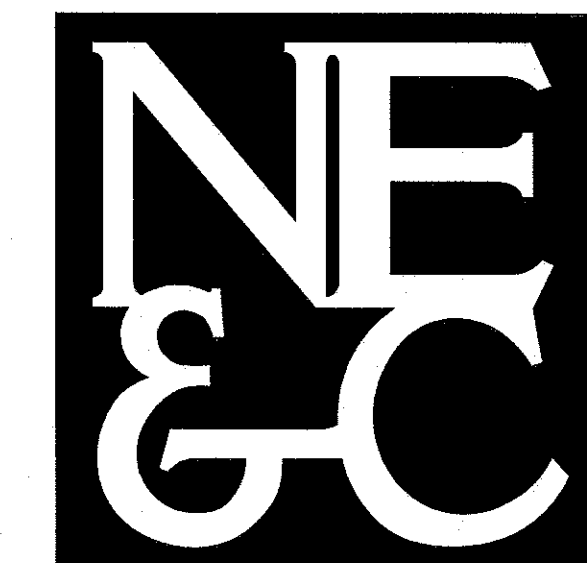


N

A black north arrow pointing upwards, consisting of a vertical line with a triangular arrowhead at the top.

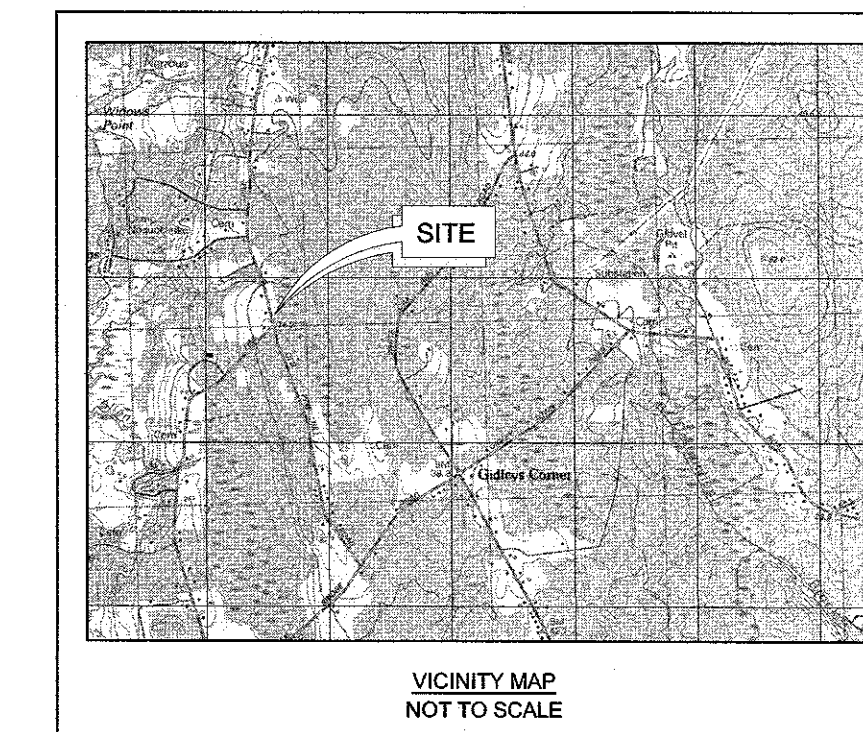
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LOCUS INFORMATION

OWNER: ERIC & JILLIAN RAPOSO
82 HIGHRIDGE ROAD
WESTPORT, MA
ASSESSORS' PLAT 42, LOT 1T, 7 & 8
DEED BOOK 11901, PAGE 38
DEED BOOK 14208, PAGE 194
DEED BOOK 14694, PAGE 177

No.	Revision	Date	App.
Designed By:	Drawn by:	Checked by:	SML
Scale:	1"=80'	Date:	01JUNE2023

Project Title:
**A.P. 42, LOTS 7, 8-2 & 1T
HIGHRIDGE ROAD
WESTPORT, MASSACHUSETTS**

Client/Owner:
ERIC & JILLIAN RAPOSO
82 HIGHRIDGE ROAD
WESTPORT, MA

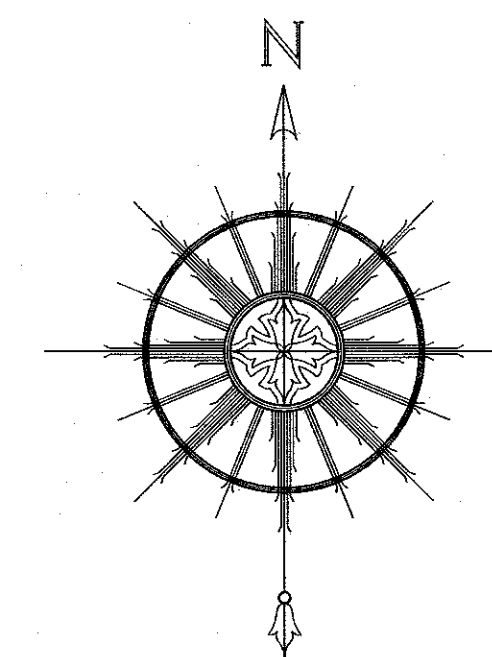
Issued for:

Drawing Title:
**FLEXIBLE FRONTAGE PLAN
ASSESSORS PLAT 42 LOTS 1T, 7 & 8
IN
WESTPORT, MA**

Drawing Number:
FLEX 1
Sheet 1 of 1
Project Number:
21106
Survey Index:
WSP- 42 - 7 & 8

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GEOTECHNICAL
ENVIRONMENTAL
TRANSPORTATION
STRUCTURAL
MATERIALS TESTING



LOT NUMBER	FRONTAGE	AREA	REQUIRED FLEX AREA	UPLANDS
LOT 1	54.01	251,661 SF	166,686 SF	91,109 SF (90,000)
LOT 2	50.85	372,232 SF	176,992 SF	178,591 SF (90,000)
LOT 3	132.00	80,942 SF	66,176 SF	55,553 SF (34,091)

NARRATIVE
THIS PLAN DEPICTS THE CREATION OF TWO APPROVAL NOT REQUIRED LOTS, LOTS 1, 2, & 3 MEET THE REQUIREMENTS OF THE TOWN OF WESTPORT'S ZONING BY LAWS SECTION 8.6, FLEXIBLE FRONTAGE FOR REDUCED DENSITY.

NOTES

- A) "SUBJECT TO A SPECIAL PERMIT PURSUANT TO THE TOWN'S FLEXIBLE FRONTAGE BY-LAW, ARTICLE 23 GRANTED ON APRIL 7, 2015, BY THE WESTPORT PLANNING BOARD AND RECORDED IN THE BRISTOL COUNTY SOUTHERN DISTRICT REGISTRY OF DEEDS IN BOOK _____, PAGE _____."
- B) LOTS 1, 2 & 3 AS SHOWN ON THIS PLAN BENEFITING FROM REDUCED FRONTAGE UNDER ZONING BY-LAW, ARTICLE 23 SHALL NOT BE FURTHER SUBDIVIDED AND NO MODIFICATION OF THE CLEARING RESTRICTIONS AND OF THE BUILDING LOCATIONS SHALL OCCUR WITHOUT A CORRESPONDING MODIFICATION OF THE FLEXIBLE FRONTAGE PERMIT.
- C) NO LOT CLEARING SHALL BEGIN AND NO BUILDING PERMIT SHALL BE ISSUED FOR LOTS 1 & 2 AS SHOWN ON THIS PLAN BENEFITING FROM REDUCED FRONTAGE UNDER ZONING BY-LAW, ARTICLE 23 UNTIL THE SPECIAL PERMIT HAS BEEN DULY APPROVED, EXECUTED AND RECORDED AND EVIDENCE OF THE RECORDING HAS BEEN FILED WITH THE INSPECTOR OF BUILDINGS.

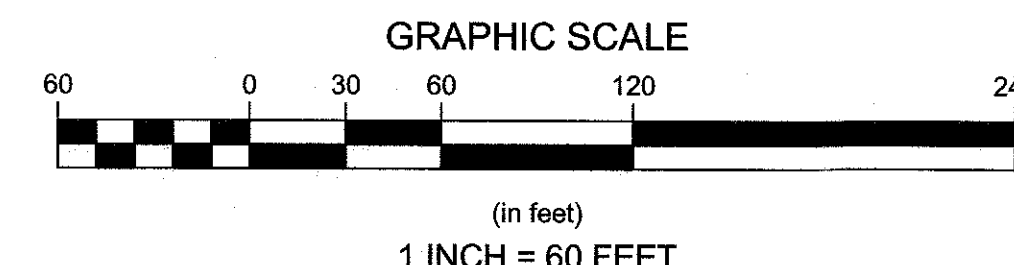
I HEREBY CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Signature
PROFESSIONAL LAND SURVEYOR

6/4/23
DATE



PLAN REFERENCES:
1. PLAN BOOK 149, PAGE 57
2. PLAN BOOK 158, PAGE 67
3. PLAN BOOK 178, PAGE 49

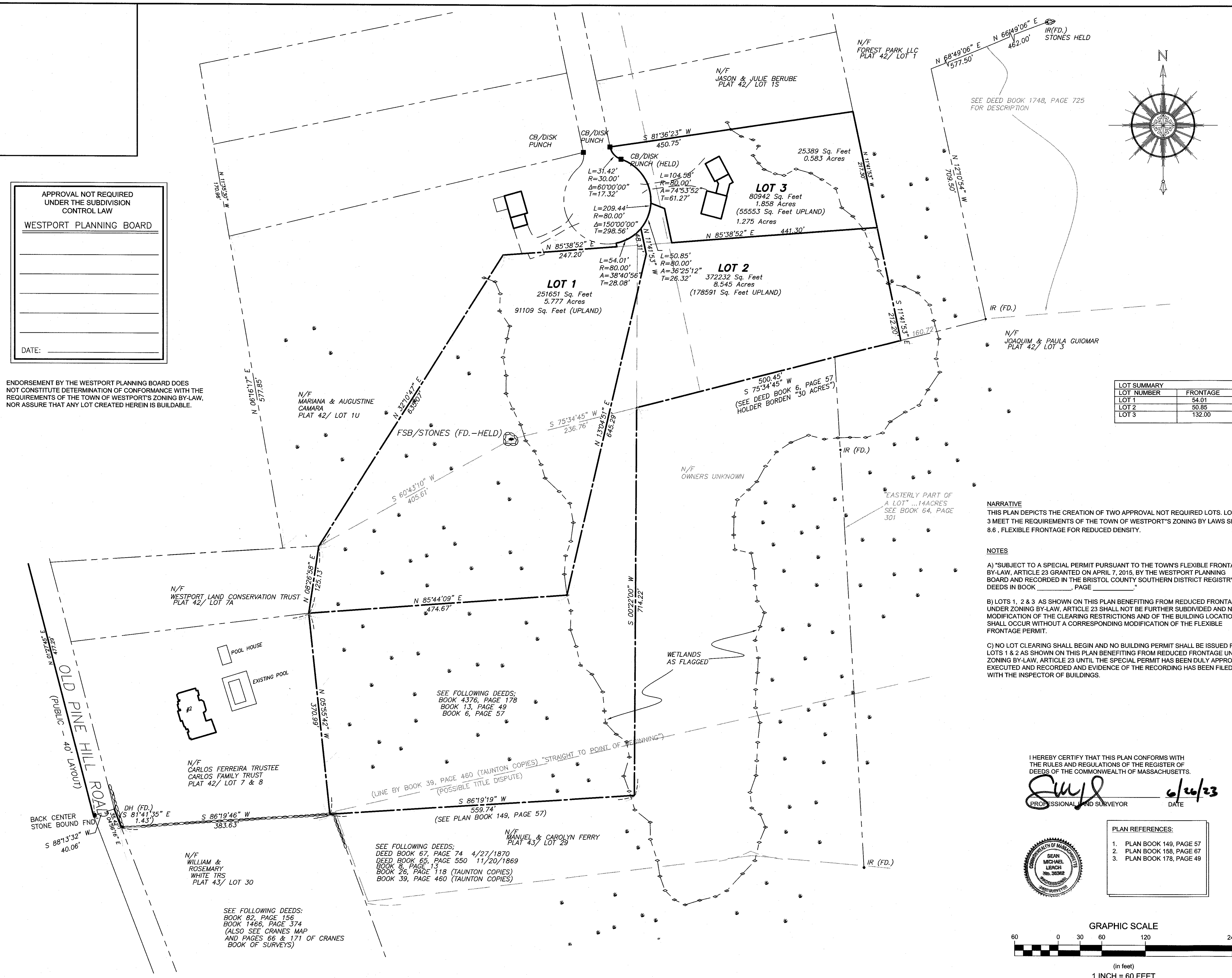


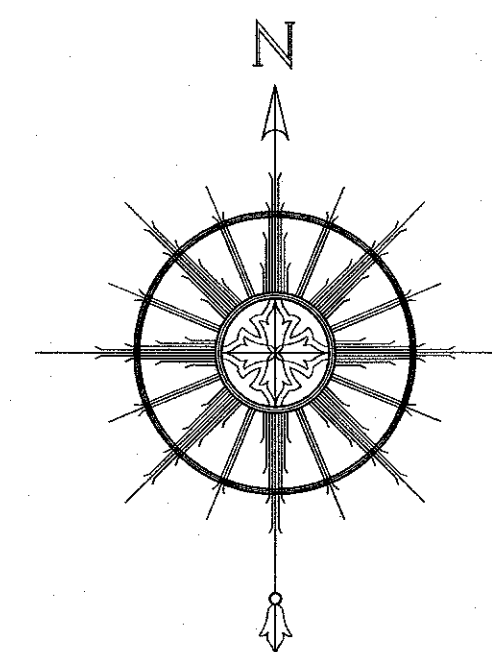
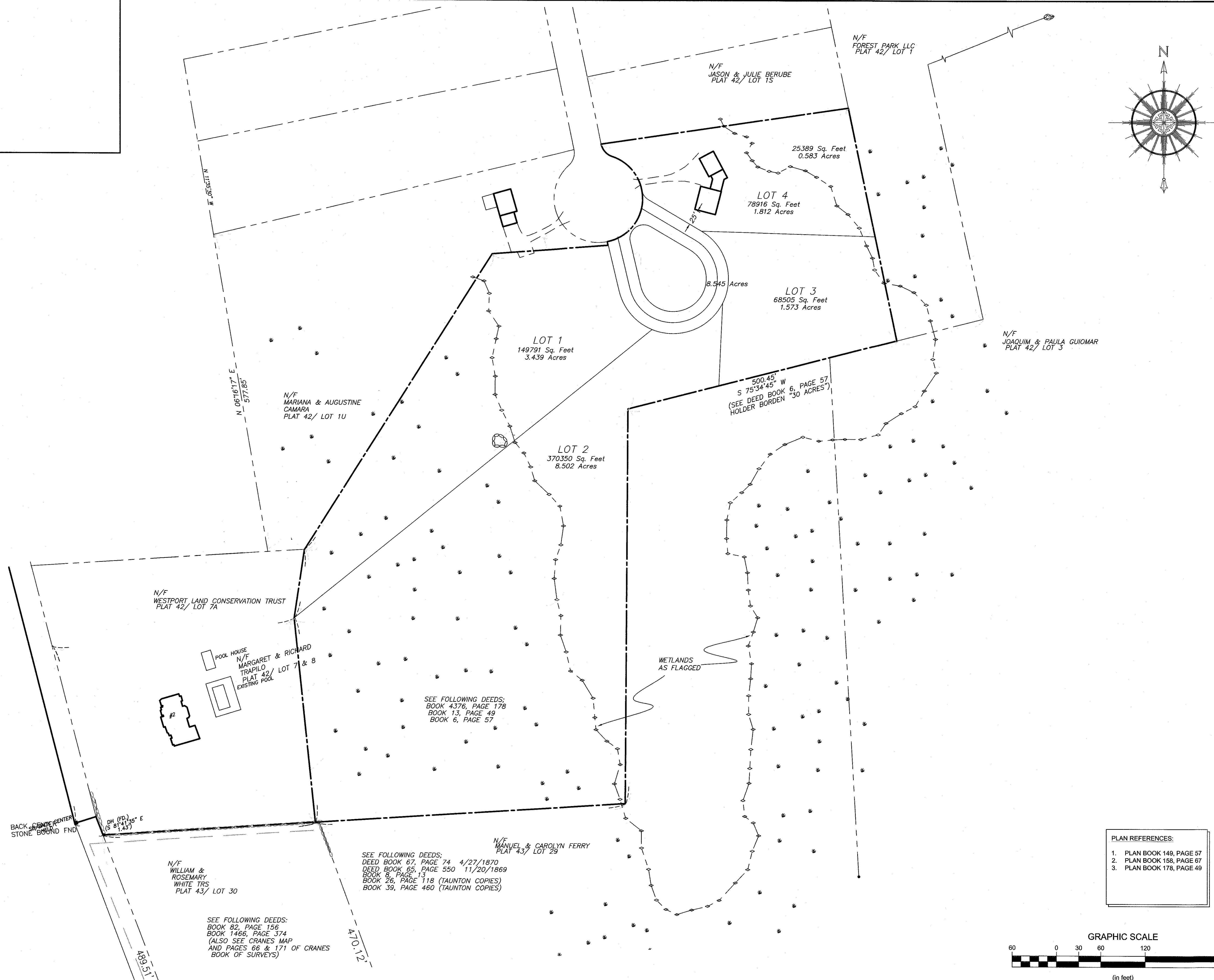
APPROVAL NOT REQUIRED
UNDER THE SUBDIVISION
CONTROL LAW

WESTPORT PLANNING BOARD

DATE: _____

ENDORSEMENT BY THE WESTPORT PLANNING BOARD DOES NOT CONSTITUTE DETERMINATION OF CONFORMANCE WITH THE REQUIREMENTS OF THE TOWN OF WESTPORT'S ZONING BY-LAW, NOR ASSURE THAT ANY LOT CREATED HEREIN IS BUILDABLE.



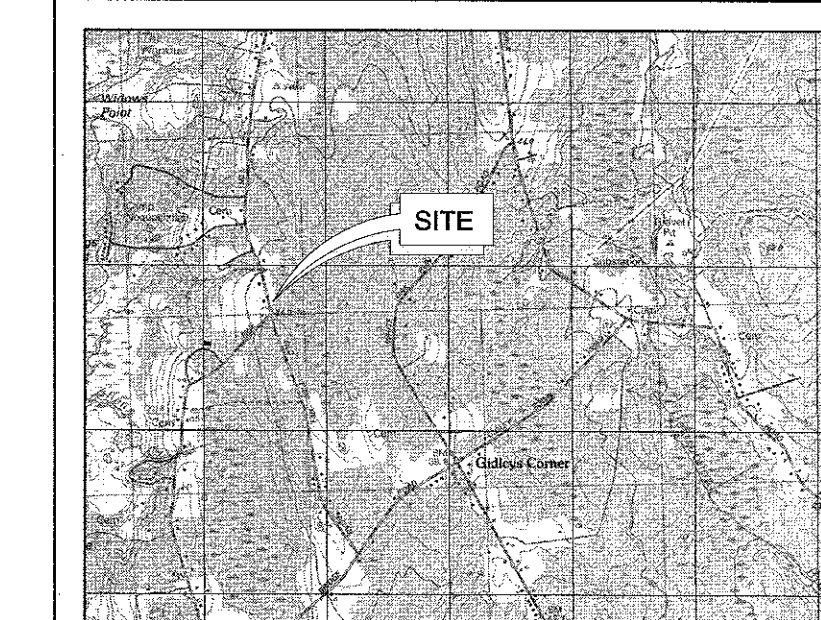


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VICINITY MAP
NOT TO SCALE

LOCUS INFORMATION

OWNER: ERIC & JILLIAN RAPOSO
82 HIGHRIDGE ROAD
WESTPORT, MA
ASSESSORS' PLAT 42, LOT 1T, 7 & 8
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Scale:	1-50	Date:	01JUNE202
Project Title:			

A.P. 42, LOTS 7, 8 & 1T
HIGHRIDGE ROAD
WESTPORT, MASSACHUSETTS

Client/Owner: ERIC & JILLIAN RAPOSO
82 HIGHRIDGE ROAD
WESTPORT, MA

Issued for:

Drawing Title:

YIELD PLAN
ASSESSORS PLAT 42 LOTS 7 & 8
IN
WESTPORT, MA

Drawing Number:

CONC-1

Sheet of 1

Project Number:

21106

Survey Index:

WSP- 42 - 7 & 8

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82 Highridge Road
Flexible Frontage Narrative
Plat 42, lots 1T, 7&8-2

The purpose and intent of the Flexible Frontage Special Permit is to encourage reduction in potential residential development density, reduce future vehicular trips, road congestion, demand for public services and the number of curb cuts onto Town roadways; preserve the natural and cultural resources visible along these roadways; facilitate the movement of wildlife; protect traditional access to “backland” open space; and improve the design and site planning of smaller residential neighborhoods.

This Project involves the combination and re-division of an existing parcel(s) of Land located at the end of Highridge Road. The two parcels consist of an existing residence located at 82 Highridge Road, (PLAT 42 LOT 1T) and a vacant parcel of land (PLAT 42 LOT 7&8) that abuts the residential parcel but has no frontage on any road.

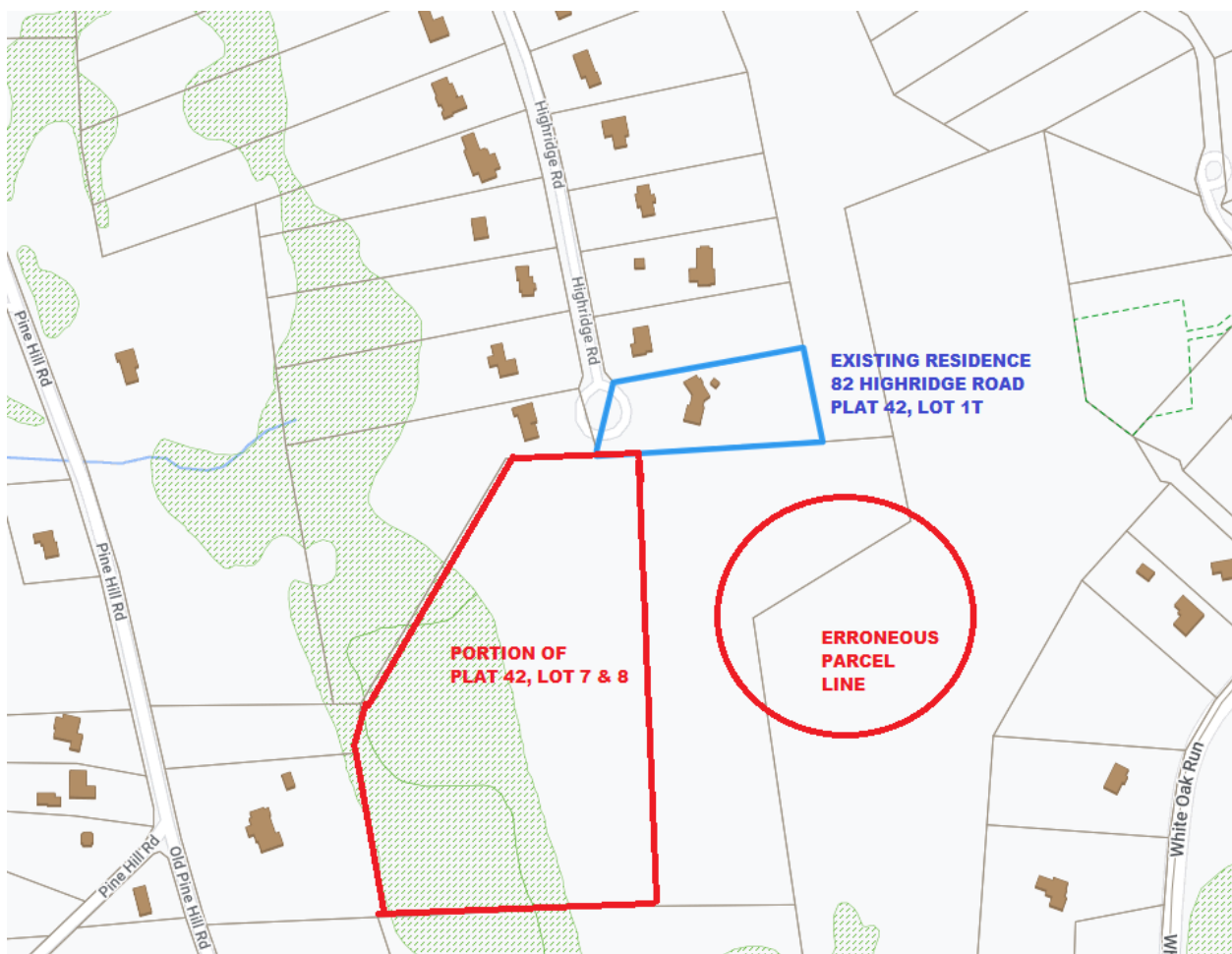


Figure 1 – Portion of Assessors' Plat 42

It should be noted that Land surveying work yielded discrepancies and inconsistencies with the Assessors' Plat and lines of ownership.

The applicant had previously appeared in front of the Board on a pre-application consultation to extend Highridge Road to create frontage for three lots. This plan is shown in Figure 2.

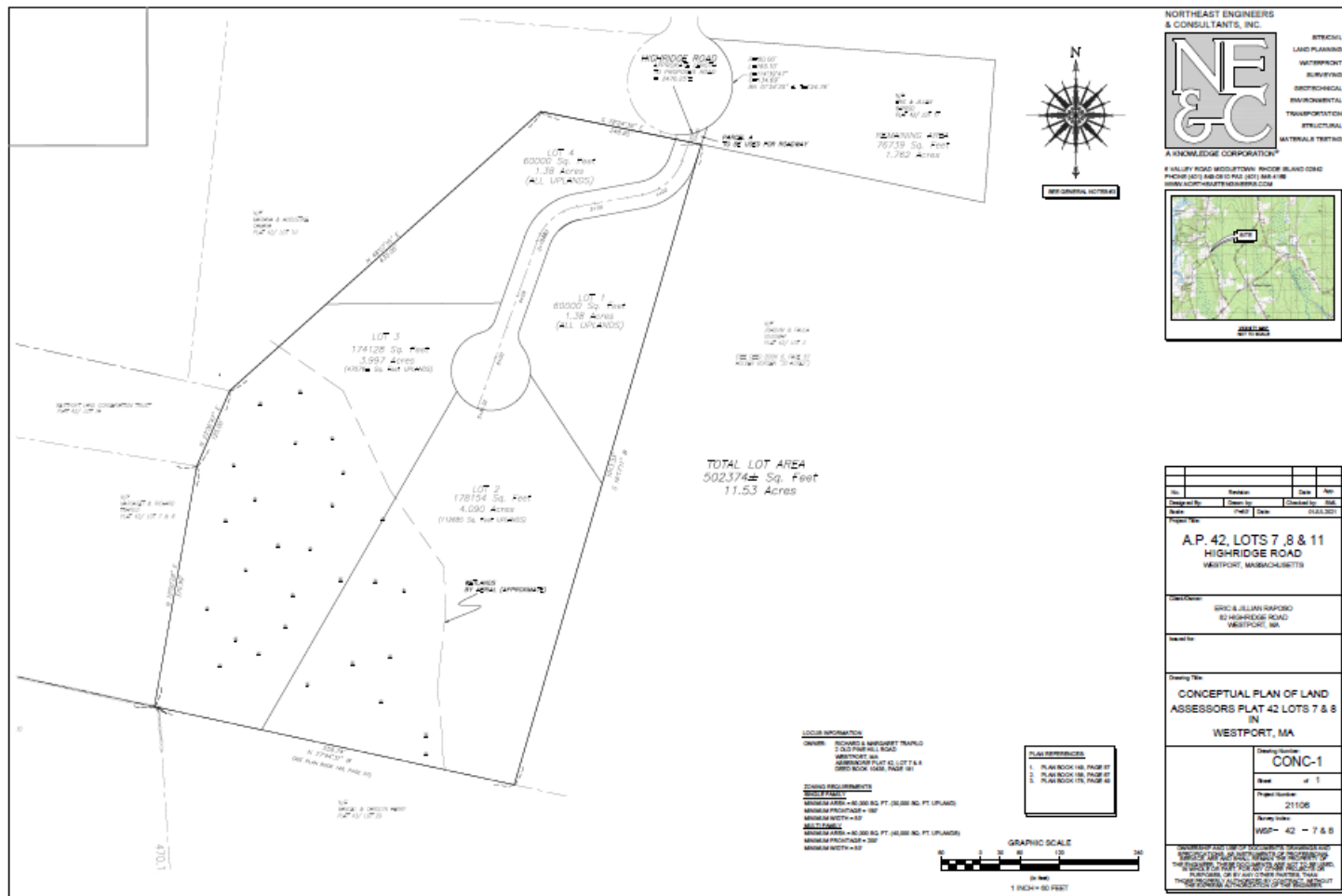


Figure 2 – Previous application Concept Pan

The opinion of the board at the time was not favorable as to allow extending an existing road of 2500'. It was suggested to provide an alternative development scheme with possibly less impact.

The applicant is proposing to do a Flexible Frontage plan consisting of three lots. The proposed plan will consist of creating two new lots, and reconfiguring the existing house lot. (See plan). All the lots will conform to the Flexible Frontage subdivision regulations/permit requirements. Additionally, a future request will be made to provide access to Lots 1 & 2, through the use of a common drive.

The statistics of the Lots are as follows;

Lot	Frontage	Area	Upland Area
Lot 3 (existing residence)	132.00'	80,942 Sq. Ft	55,553 Sq. Ft.
Lot 2(vacant)	50.85'	372,232 Sq. Ft.	178,591± Sq. Ft.
Lot 1 (Vacant)	54.01'	251,661 Sq. Ft.	91,109,165± Sq. Ft.

The lots significantly exceed the dimensional requirements of the by-law.

Performance Standard

The proposed division yields many benefits in maintain the rural character and open space that is the intent of the by-law.

This application meets those goals by limiting the number of new lots proposed to two. The yield plan submitted with the application shows 4 lots, but meets the standards of a traditional subdivision, without increasing the dead-end length of the existing subdivision Road. The proposed three lots (only two additional) are less than the yield thereby reducing traffic, drainage and congestion.

The lots are generously proportioned to take advantage of the natural landscape and discourage over development. The protection and monitoring of resource areas while keeping a corridor for wildlife within the Westport River Watershed. Wildlife would continue to flourish in the preserved area, adjacent to farms. It is expected the larger of the lots would become a family farm in congruency with Westport's Historical heritage. Housing sites will be well away from resource areas and trees would buffer the view from the existing subdivision Road. The existing vistas from roadways would be preserved virtually as is, thereby keeping the traditional drive on Pine Hill and Highridge road unchanged.

There are no historic walls, or other historic resources that would be affected by the division.

**Please RETURN To Planning Board No Later Than
July 28, 2023**

FROM: Assessors Dept

DATE: July 11, 2023



TO: The Westport Planning Board

FORM M-1 PLAN REVIEW FORM

Application No. 23-023SP-FF

SUBJECT: Comments and recommendations regarding **the Special Permit applications of Eric and Jillian Raposo for property located at 82 Highridge Road, Westport, MA 02790, Assessor's Map 42, Lots 1T, 7 & 8-2, pursuant to Westport Zoning By-Law Section 8.6 Special Permit for Flexible Frontage for Reduced Density requesting approval to reduce otherwise applicable frontage requirements on a public way in exchange for a corresponding reduction in the re-division of two (2) lots with an existing residential structure and two (2) new buildable lots.**

A public meeting is scheduled for **August 8, 2023** at **6:15** p.m. at the Westport Town Hall Annex.

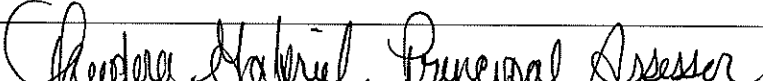
Your response is greatly appreciated no later than July 28, 2023.

The undersigned recommends:

- ☒ Approval
☐ Approval with modifications
☐ Disapproval

☒ No Comment

of the above-named plan insofar as its area of jurisdiction is concerned. The reasons for this recommendation are as follows:

Click or tap here to enter text.
Click or tap here to enter text.
Click or tap here to enter text.


Click or tap here to enter text.
Name of officer, agency or board

Note: The Planning Board will take into consideration any recommendations made hereon before taking final action on the definitive subdivision plan. Lack of a timely report by any officer, agency, or board will be so recorded in the minutes of the Planning Board.

Please RETURN To Planning Board No Later Than
July 28, 2023

30

FROM: Board of Selectman

DATE: July 11, 2023

RECEIVED

July 25, 2023

WESTPORT
PLANNING BOARD

TO: The Westport Planning Board

FORM M-1 PLAN REVIEW FORM

Application No. 23-023SP-FF

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- ☐ Approval
☐ Approval with modifications
☐ Disapproval

☒ No Comment

Paula Brown

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Click or tap here to enter text.

Click or tap here to enter text.

Click or tap here to enter text.

Click or tap here to enter text.
Name of officer, agency or board

Note: The Planning Board will take into consideration any recommendations made hereon before taking final action on the definitive subdivision plan. Lack of a timely report by any officer, agency, or board will be so recorded in the minutes of the Planning Board.

Please RETURN To Planning Board No Later Than

July 28, 2023

FROM: Conservation Dept

DATE: July 11, 2023



TO: The Westport Planning Board

FORM M-1 PLAN REVIEW FORM

Application No. 23-023SP-FF

SUBJECT: Comments and recommendations regarding the **Special Permit applications of Eric and Jillian Raposo for property located at 82 Highridge Road, Westport, MA 02790, Assessor's Map 42, Lots 1T, 7 & 8-2, pursuant to Westport Zoning By-Law Section 8.6 Special Permit for Flexible Frontage for Reduced Density requesting approval to reduce otherwise applicable frontage requirements on a public way in exchange for a corresponding reduction in the re-division of two (2) lots with an existing residential structure and two (2) new buildable lots.**

A public meeting is scheduled for **August 8, 2023** at **6:15** p.m. at the Westport Town Hall Annex.

Your response is greatly appreciated no later than July 28, 2023.

The undersigned recommends:

- ☐ Approval ☐ No Comment
☒ Approval with modifications
☐ Disapproval

of the above-named plan insofar as its area of jurisdiction is concerned. The reasons for this recommendation are as follows:

This wetland line is not approved by Conservation at this time.

Christopher Capone
Name of officer, agency or board

Note: The Planning Board will take into consideration any recommendations made hereon before taking final action on the definitive subdivision plan. Lack of a timely report by any officer, agency, or board will be so recorded in the minutes of the Planning Board.

Please RETURN To Planning Board No Later Than
July 28, 2023

FROM: Zoning Board of Appeals

DATE: July 11, 2023

TO: The Westport Planning Board

FORM M-1 PLAN REVIEW FORM

Application No. 23-023SP-FF

SUBJECT: Comments and recommendations regarding the **Special Permit applications of Eric and Jillian Raposo for property located at 82 Highridge Road, Westport, MA 02790, Assessor's Map 42, Lots 1T, 7 & 8-2, pursuant to Westport Zoning By-Law Section 8.6 Special Permit for Flexible Frontage for Reduced Density requesting approval to reduce otherwise applicable frontage requirements on a public way in exchange for a corresponding reduction in the re-division of two (2) lots with an existing residential structure and two (2) new buildable lots.**

A public meeting is scheduled for **August 8, 2023** at **6:15** p.m. at the Westport Town Hall Annex.

Your response is greatly appreciated no later than July 28, 2023.

The undersigned recommends:

- | | |
|--|--|
| <input type="checkbox"/> Approval | <input checked="" type="checkbox"/> No Comment |
| <input type="checkbox"/> Approval with modifications | |
| <input type="checkbox"/> Disapproval | |

of the above-named plan insofar as its area of jurisdiction is concerned. The reasons for this recommendation are as follows:

Roger Menard
Name of officer, agency or board

Note: The Planning Board will take into consideration any recommendations made hereon before taking final action on the definitive subdivision plan. Lack of a timely report by any officer, agency, or board will be so recorded in the minutes of the Planning Board.

Planners Report

- Grants Update
 - Buzzards Bay National Estuaries Program
 - Submitted two applications to one of BBNEP's grant programs.
 - Application #1 is for assistance with municipal separate storm sewer system (MS4) investigations. This is a \$25,000 request. It would help the town to identify source pollutants entering the groundwater and help determine where infrastructure upgrades are needed.
 - Application #2 we are preparing with Buzzards Bay Coalition and is a \$290,000 request to design a community nitrogen-reducing septic system at The Let neighborhood. This area includes 58 single-family homes and one restaurant. The funds would be used to develop the engineered designs and assess the cost effectiveness of the system. The Town would then need to decide whether it has the capacity of move forward with permitting, construction, and operations.
 - Municipal Vulnerability Preparedness 2.0
 - We were selected to participate in the MVP 2.0 program and awarded \$95,000 for program implementation.
 - The first phase of the project is for revisiting climate resilience priorities with a focus on social resilience and engaging with populations that are more vulnerable, such as Westport's environmental justice neighborhood.
 - The second phase will fund a small pilot project. The pilot project will be identified using the results of the grant program's first phase.
 - Congressional Appropriations Requests
 - Worked with Bob Daylor to submit a \$5.5 million Senate Appropriations Request to Senators Warren and Markey's offices to fund the Route 6 Sewer project.
 - The Senate Appropriations Committee did not select our project in the bill that was approved in the committee late last month.
 - However, Representative Keating's office recommended the Town for \$959,752 for the sewer project. The House Appropriations Committee approved the bill. This will then need to make its way through Congress – next comes a vote from the House of Representatives and then following there is typically reconciliation with the Senate's bill.
- Southeast New England Program (SNEP) Network: Stormwater Planning Series
 - We are working with the Westport Land Conservation Trust to apply to this program. If our application is selected, the Town would receive a free design of a green stormwater infrastructure project. The program also includes trainings for Town staff for help with identifying low-cost stormwater solutions.
 - Chris Capone identified a drainage ditch on Gifford Road on land that the City of Fall River owns next to Forge Pond. He and Ross Moran at WLCT think it's a good candidate for a nature-based stormwater solution because it discharges to the East Branch of the Westport River. The City of Fall River is supportive of the project and will provide a support letter.

- Route 6 Rezoning Project
 - Met with BSC Group on July 26 to discuss their public engagement session presentation. The engagement event will be oriented around getting public feedback on what participants like and don't like in the rezoning framework.
 - We will be meeting in late August to finalize the presentation.
- Main Road Streetscape Plan
 - Working on interviewing residents and business owners in the project locus area. The purpose of these interviews is to have one-on-one conversations with area stakeholders about what they kind of improvements they would like to see in the neighborhood and what their thoughts on change are.
 - After the interviews are completed, we'll be moving on to forming a work group and then begin public engagement.
- Housing Production Plan
 - The HPP survey period closed on August 1. SRPEDD will process the survey results and then draft housing goals and strategies based on the survey feedback and assessment of housing needs data.



TOWN OF WESTPORT
Westport Town Hall
816 Main Road, Westport, MA 02790
Zoning Board of Appeals
Tel: 508-636-1003 or Fax 508-636-1147

RECEIVED

AUG - 1 2023

WESTPORT
PLANNING BOARD

REVISED
ABUTTER NOTIFICATION

TO: Abutter of 50 Spinnaker Way, Westport, MA

DATE: July 21, 2023

A public hearing will be held on Wednesday, August 23, 2023 at 6:30 p.m. at the Westport Town Hall, 2nd Floor Meeting Room, 816 Main Road, Westport, MA 50 SPINNAKER WAY LLC, Administrative Appeal from the cease and desist order of the Building Commissioner dated June 29, 2023 that the use of the property at 50 Spinnaker Way for a short-term rental is not allowed in a Residential/Agricultural zoning district as mandated by Zoning Bylaw Article 5, Section 5.1. The subject property is located at 50 Spinnaker Way, Westport, MA and is shown on Assessor's Map 22, Lots 2Y and 20K.



PLANNING BOARD MEETING MINUTES

Date/time of Meeting: June 13, 2023, at 6:00 p.m.

Place: Town Hall Annex, 856 Main Road

Call to order: The regular meeting of the Westport Planning Board was called to order at 6:00 PM by Chairman, Jim Whitin.

ATTENDEES

Chairman Jim Whitin, Vice-Chair Bob Daylor, and members, Manuel Soares, Mark L. Schmid, Town Planner, Michael Burris, and Assistant Town Planner, Ms. Messier.

ABSENT

John Bullard

Chair's Announcement – Under M.G.L. Chapter 30A, section 20(f) – The meeting was recorded.

1. Administrative Items

a. Preliminary Subdivision Plan – Rural Road (23-013B-RRL)

Request by the applicant to consider a Preliminary Subdivision plan entitled **“Preliminary Plan – Rural Road”** prepared for **Emanuel B. Pacheco** and located on the west side of Gifford Road, south of **225 Gifford Road**, Assessor's Map 29 Lot 22C proposing to divide the property into two (2) lots.

Emanuel Pacheco and his father, Emanuel Pacheco Sr., attended the meeting held by the Board. They were there to provide feedback regarding a two-lot subdivision plan for a Rural Residential Road. Specifically, they requested two waivers related to the road radius and cross-section. The Assistant Town Planner noted that if the plan moves from Preliminary to Definitive status, a consultant will review the waivers. The Planners expressed no concerns about the proposal. Daylor suggested that an update on the swale be provided, including how it diverts water away from the road.

Motion

Daylor moved to approve the preliminary subdivision plan entitled “Preliminary Plan 0 Rural Road” for Emanuel B. Pacheco because it conforms to the Planning Board's requirements. Seconded by Schmid. 4-0-0.

b. Pre-Application Consultation (23-018PAC) Request by David Santos of Pare Corporation for an installation of a 15' x 30' commercial garage at 146 State Road, Map 3 Lot 40-40A.

David Santos, of Pare Engineering, was representing the applicant, Junior Burke, who was also present. They presented their proposal for building a commercial motorcycle restoration repair garage on a residential lot in the business district. David Santos, also from Pare Engineering, was also present. Santos mentioned that the septic system would be upgraded if necessary, while Daylor pointed out that a new state permit would be required for a new curb cut. Santos clarified that they plan to use the existing curb cut. Whitin reminded the group that state approval is still necessary for the project to move forward.

Ms. Messier commented that they will need to check with MassDOT to confirm that it is permitted for use and they will need to go before the Board of Health for septic upgrade.

Before filing with MassDOT and requesting a building permit, Soares stated that the Planning Board would need to authorize the curb cut location first.

- c. Approval Not Required (ANR) A.P. 45 Lots 8 & 15 (23-014A)** Request by the applicant for endorsement of a Plan of Land showing 2 Lots for land located at 0 Division Road, Map 45 Lots 8 & 15.

Attorney Neil B. Smola was representing New Leaf Energy. He mentioned a new lot line would show the division of land and it would not create a buildable lot due to lack of frontage. Whitin asked if it would be conveyed for conservation. Smola replied it would be conveyed to the Westport Land Trust.

Motion

Daylor moved to approve the endorsement of the plan entitled “A.P. 45, Lots 8 & 15 0 Division Road, Westport, Massachusetts” for Westport Land Conservation Trust, dated April 24, 2023, Assessor’s Map 45 Lots 8 & 15, 0 Division Road because the plan complies with the provisions of M.G.L. Ch. 41 Section 81P. Seconded by Schmid. 4-0-0

- d. Approval Not Required (ANR) Gifford Road and Mouse Mill Road (23-016A)** Request by the applicant for endorsement of a Plan of Land showing 2 Lots for land located at 0 Gifford Road, Map 31 Lot 11.

Greg Nicholas of Southcoast Engineering was present on behalf of Michael and Debbie Ferry. They are proposing the division of Map 31, Lot 11 into two (2) Lots. A.P. 31 Lot 11 (Lot 2) has 32.2 acres that would be protected by an Agricultural Preservation Restriction (APR) and remain in Chapter 61A pending the Planning Board’s approval. A.P. Map 31 Lot 11 (Lot 1) has 3.36 acres, adequate frontage, and will remain in Chapter 61A. If someone buys Map 31 Lot 11 (also known as Lot 1), they must follow the necessary steps to confirm if the lot has enough uplands to be considered a buildable lot.

Motion

Daylor moved to approve the endorsement of the plan entitled “Plan of Land at Gifford Road and Mouse Mill Road, Westport, MA” for Michael P. Ferry, dated December 15, 2022, Assessor’s Map 31 Lot 11 because the plan complies with the provisions of M.G.L. Ch. 41 Section 81P. Seconded by Schmid. 4-0-0.

- e. Approval Not Required (ANR) Approval Not Required Plan of Land in Westport, Massachusetts, Carricorp Industries (23-017A)** Request by the applicant for endorsement of a Plan of Land reconfiguring 4 Lots, for land located at 0 Granite Post Road, Map 69 Lot 116.

Mark Boucher of Boucher & Associates was present on behalf of the applicant. The applicant is requesting to modify Lot 121 by adding adjacent parcels to the south to ensure continued access to the Brookwood Drive Solar farm owned by Carricorp Industries. The 30-year lease for the abutting property is set to expire and will return to the ownership of Carricorp Industries.

Motion

Daylor moved to approve the endorsement of the plan entitled “Approval Not Required Plan of Land in Westport, Massachusetts” for Carricorp Industries, Ltd. Trustee of 190 C.W. Trust, dated May 31, 2023, Assessor’s Map 69 Lot 116 because the plan complies with the provisions of M.G.L. Ch. 41 Section 81P. Seconded by Soares. 4-0-0.

- f. Committee re-appointments.**
1. Climate Resilience Committee
Jim Whitin

Motion

Daylor moved to nominate Jim Whitin to serve as a member of the Climate Resilience Committee.

- 2. Ag/Open Space Preservation Trust/Climate Resilience Committee**
John Bullard

Motion

Daylor moved to nominate John Bullard to serve as a member of the Ag/Open Space Preservation Trust and Climate Resilience Committee.

- 3. Community Preservation Committee/Long-term Planning Town Building Evaluation**
Mark Schmid

Motion

Daylor moved to nominate Mark Schmid to serve as a member of the Community Preservation Committee & Long-term Planning Town Building evaluation.

- 4. Cable Advisory/Climate Resilience Committee/Infrastructure Oversight Committee Subcommittee**
Bob Daylor

Motion

Whitin moved to nominate Bob Daylor to serve as a member of the cable advisory/Climate Resilience Committee/Infrastructure Oversight Committee Subcommittee.

- 5. Economic Development Task Force/Infrastructure Oversight Committee/Tax Incentive Program Committee**
Manny Soares

Motion

Daylor moved to nominate Manny Soares to serve as a member of the Economic Development Task Force, Infrastructure Oversight Committee, and Tax Incentive Program Committee.

2. 6:15 p.m. Public Hearing

- a. Stoneridge: A Private Community (23-002SP-ILF-SPA-LID) (continued March 7, 2023)**

Whitin announced that the attorney representing the applicant has submitted a letter requesting the withdrawal of their application.

Motion

Daylor moved to accept the withdrawal without prejudice. Seconded by Soares. 4-0-0.

3. 6:30 p.m. Public Hearing

- a. Inheritance Lane (23-010C-RRL)**

Request by the applicant to consider a definitive subdivision plan entitled "Inheritance Lane", located between 99 and 115 Old Pine Hill Road proposing to divide the property into four (4) lots, Assessors Map 43 Lot 3.

Representatives from Northeast Engineers and Consultants, Inc., Sean Leach and Jon Connell, spoke on behalf of the applicant who was also in attendance. Leach briefly explained their proposal, which includes building a roadway that will create two additional buildable house lots, a gravel driveway, and an extended driveway with a hammerhead with drainage, swale, and retention ponds.

Whitin read the department comments and S.W. Cole's report dated May 25, 2023, into the record. Leach and Connell discussed the department reviews and addressed the comments and concerns mentioned in S.W. Cole's report.

Ms. Messier and Soares both agreed that a 16-foot wide driveway would be sufficient, even though the requirement was for a 20-foot width. Soares also pointed out that the trees needed to be maintained by the Fire Department's requirements.

Ms. Messier has recommended the approval of the definitive subdivision, along with the waivers and conditions.

Motion

Daylor moved to close the definitive subdivision public hearing for Inheritance Lane. Seconded by Soares. 4-0-0

Motion

Daylor moved to approve the Definitive Subdivision plan entitled "Inheritance Lane" as defined under section 81L of the subdivision control law subject to additional revisions to the hammerhead turn-around and radius. Seconded by Soares. 4-0-0.

Motion

Daylor move to approve the waivers as requested. Seconded by Soares. 4-0-0

4. Assistant/Planners report

Ms. Messier's report was based on the ANRs at the start of the meeting.

Burris updated the Board regarding the following:

- Grants update
 - One Stop
 - Worked with Roger Fernandes to submit a \$1,750,000 request for construction of the Route 6 sewer
 - We also still have outstanding Federal Appropriations Requests for this project, the decisions for which should be released on July 31
 - A combined \$64,000 request through the Rural and Small Town Fund and the Commonwealth Places Grant to plan for streetscape improvements on Main Road in Central Village.
 - Coastal Resilience Grant Program
 - Working with the Southeastern Regional Planning and Economic Development District to apply to the Coastal Resilience Grant Program. Grant funds would be used to study Westport's marshes for their migration potential, develop a prioritization plan, and design a pilot project for future implementation.
 - Buzzards Bay National Estuaries Program – 2nd funding round to be released soon
 - Funds for operations and maintenance of the municipal storm sewer system
 - Funds to design a community septic system for The Let neighborhood
 - 3 additional grants still outstanding: Municipal Vulnerability 2.0, Department of Environmental Resources Culvert Replacement Grant, Hazard Mitigation Grant Program

5. Correspondence

- a. Motion to Dismiss – 533 Horseneck Road – *Noted.*
- b. Chapter 91 – Yule 1380-J Drift Road – *Noted.*
- c. Chapter 91 – Carrigg – 1702-C Drift Road – *Noted.*
- d. Zoning Board of Appeals notices – *Noted.*

6. Invoices

- a. W.B. Mason – keyboard and mouse \$28.44

Motion

Daylor moved to approve the WB Mason invoice for \$28.44. Seconded by Soares. 4-0-0.

- b. SRPEDD Annual Meeting travel reimbursement – Nadine Castro - \$39.39
- c. SRPEDD Annual Meeting travel reimbursement – Ms. Messier - \$39.39
- d. SRPEDD Annual Meeting travel reimbursement – Michael Burris - \$39.39

Motion

Daylor moved to approve the invoice for SRPEDD travel reimbursements. Seconded by Soares. 4-0-0

6. Minutes

May 16, 2023

Motion

Schmid moved to approve the May 16, 2023 minutes as written. Seconded by Daylor. 3-0-1.

7. Short/Long-term Planning Discussions

During the meeting, Whitin, Mark Schmid, Michael Burris, and Ms. Messier discussed the rezoning of Route 6 with Russell Burke from The BSC Group. They plan on scheduling a public meeting to gather feedback from the community, tentatively towards the end of July.

Daylor recommended repurposing a section of the former high school for either senior living or housing for veterans, while also utilizing the cafeteria and library for events and gatherings.

ADJOURNMENT

The Board unanimously voted to adjourn at 7:54 p.m.

NOTE: Agenda is subject to change

NEXT MEETINGS:

Planning Board: June 27, 2023, at 6:00 p.m.

Work Session: ?



PLANNING BOARD MEETING MINUTES

Date/time of Meeting: June 27, 2023, at 6:03 p.m.

Place: Town Hall Annex, 856 Main Road

Call to order: The regular meeting of the Westport Planning Board was called to order at 6:03 PM by Chairman, Jim Whitin.

ATTENDEES

Chairman Jim Whitin, Vice-Chair Bob Daylor, and members, John Bullard, Manuel Soares, Mark L. Schmid, Town Planner, Michael Burris, and Assistant Town Planner, Amy Messier.

Chair's Announcement – Under M.G.L. Chapter 30A, section 20(f) – The meeting was recorded.

1. Administrative Items

- a. **Bentley Estates II (15-009C)** (continued from May 16, 2023) – Request to eliminate the sidewalk in phase II.

Attorney Mark L. Levin, of Levin and Levin, 138 Rock Street was present representing the applicant, Robert Kfoury. Attorney Levin discussed the original Bentley Estates subdivision approved in 2002. A waiver is being requested to allow them to eliminate the sidewalks in phase II of the subdivision. In his view, sidewalks were unnecessary as the road was 20 feet wide and pedestrians could walk on the grass if necessary since the street doesn't have much traffic. Due to the fact that they have to maintain the sidewalks in front of their homes, homeowners would prefer not to have sidewalks installed.

The developer, Mr. Robert Kfoury, presented the Board and the Planners with a GIS marked-up plan outlining the two distinct phases. Phase I has 12 house lots without sidewalks, Mr. Kfoury noted, because the waivers were disregarded and not put in place.

He noted that 10 out of the 12 current homeowners who responded to him do not want the sidewalks on Phase II's 19 house lots.

In response to Mr. Kfoury's statement that only 2 out of 12 homeowners support sidewalks, Whitin clarified that all homeowners would need to consent to not having sidewalks installed. Additionally, it was emphasized that the purpose of the meeting was to vote on the proposed modification, not to discuss whether sidewalks should be put in place.

According to Burris, in order to amend a definitive subdivision, a Form E-1 certificate must be filled out and submitted, along with an updated subdivision plan. Additionally, permission from the property owners in Phase II and the mortgage holders should be obtained. Whitin raised a question about Mr. Kfoury's authority to remove sidewalks, given his ownership stake of less than 50% in the subdivision. Burris clarified that the signatures of all homeowners are necessary for any such modifications to be made.

- b. SRPEDD presentation – Westport priority development/Conservation areas.

Philip Hu, the Principal Comprehensive Planner at the Southeastern Regional Planning & Economic Development District (SRPEDD), presented an update on the regional Priority Development Areas (PDA) and Priority Protection Areas (PPA) to the Board. These areas aim to accommodate additional growth, meet regional needs, and have good transportation infrastructure while also safeguarding important areas like habitats, water resources, and farms.

During the discussion, Whitin revealed that certain individuals from the Planning Board, the Zoning Board of Appeals, and the Town Planners are collaborating with Russell Burke from the BSC Group to rezone Route 6. To explore further improvements that can be made to Route 6, it may be useful to involve SRPEDD. Whitin suggested involving Dartmouth town officials in the meetings as well. In response, Hu agreed that it would be wise to engage multiple communities in this process.

Chris Capone, the Conservation Agent for Westport, expressed interest in meeting with the Town Planner to review and discuss the protected areas involved. Capone also suggested including a member of the Conservation Commission in the committee to ensure the designated areas are usable. The Chairman invited Capone to attend Rezoning meetings as needed.

- c. **Medeiros Farm (07-002C)** Close out and release the Consultant Review Fees (\$749.60 + interest) and Surety balance (\$85,132.60 + interest).

Motion

Bullard moved to close out and release the consultant review fees of \$749.60 plus interest and the Surety balance of \$85,132.60 plus interest to the town. Seconded by Daylor. 5-0-0

- d. **Gifford Road (23-013B-RRL)** Endorse Form B-1

The Board endorsed Form B-1.

- e. **Inheritance Lane (23-010C-RRL)** Endorse Form F-RRL Covenant and Form C-2

The Board endorsed the Forms F-RRL and C-2.

Item 6a – Zoning Board of Appeals notice for short-term rental was discussed at this time.

2. Assistant/Planners report

Assistant Planners Report

Bentley Estates II:

- Applicant is requesting a modification to the Definitive Subdivision plan to eliminate the sidewalk
- The applicant must submit an application to modify the definitive subdivision
- All homeowners must be in agreement with the requested modification to eliminate the sidewalk in order for the modification to be granted

Old High School Repurposing:

- Contacted SRPEDD about laser interior scans, several factors to determine the cost/ number of hours needed, which include the following;
 - Size of building
 - Final product? (tour able 3-D scans or scaled, building blueprint documents)

- Contacted Grant King about a cost estimate
- Spoke to Jim Hartnett who voiced that the first step is to figure out what the re-purpose of the building will be for
- There was \$200,000.00 appropriated for a consultant for this undertaking

Harbor Water Study:

- Frank Getchell provided an update regarding the temporary installment of data loggers at the two test wells and piezometers at the River Road Property as well as the Barnham dig well. Eddy plans to be on site on Thursday 6/29 between 8:30-9:30 a.m. to set the transducers at the River Road wells and will wait for people to take him over to the Barnham well. They plan to leave the transducers in place until the following week, then he will come and pick them up.

Whitin commented he spoke with Thomas Gephardt decided to acquire the services of Weston and Sampson for the development of the wells.

Public Meeting on 7/11/23 for Override:

- Staff recommendation: to not cancel the regular meeting of the Planning Board on that date at the request of the override committee, however, if there are numerous Planning Board members that would like to be present at the override meeting and there is a lack of quorum, the meeting would have to be cancelled.
 - 7/18/23: Conservation has a scheduled meeting
 - 7/25/23: special election taking place
 - Next regular scheduled meeting of the Planning Board is: 8/8/23 (due to summer schedule)
 - Public hearings scheduled on 7/11/23: Oakridge Condominiums major modification to SP to eliminate the sidewalks

Planner's report:

- Coastal Resilience Grant Applications
 - Meeting with Westport River Watershed Alliance to discuss collaboration on a coastal resilience grant application to study Westport's salt marshes for their migration potential.
 - Meeting with EA Engineering to coordinate a second CZM application to study use of dredged material off the coast of Westport for a salt marsh restoration pilot project.
- Buzzards Bay National Estuaries Program applications
 - Grant application period opened and due on August 1. Applying for municipal storm sewer system maintenance funds and to study a community septic system at The Let.
- Resilient Westport Plan
 - For those on the Climate Resilience Committee, we circulated an outline to guide drafting the Resilient Westport plan. Asked all committees to draft goals and actions for each topic area of concern.
- Former Stoneridge notice of zoning violation
 - The building inspector issued a notice of zoning violation to the property owner of the parcel of the former Stoneridge project. The letter was drafted in consultation with the Planning Office. The property owner has 30 days from receipt of the violation letter to initiate a Low Impact Development. Afterward, fines will be issued.
- BSC Group draft public engagement materials
 - Draft presentation ready for Planning Board review and comment.

Agenda item 6a was moved in front of agenda item 2.

3. Correspondence

- a. Zoning Board of Appeals notice
- b. Chapter 91 License (23-019CH91) – 1702-E Drift Road – Mooney - *Noted*
- c. Chapter 91 License (23-020CH91) – 2015 Main Road – Branca – *Noted*.
- d. Chapter 91 License (23-021CH91) – 21 Valentine Lane – Christiano - *Noted*.

4. Minutes

June 13, 2023

The minutes were not complete and will be added to the August 8, 2023 agenda.

5. Invoices

W.B. Mason – Folders - \$25.16

Motion

Bullard moved to approve the W.B. Mason invoice of \$25.16. Seconded by Daylor. 5-0-0

6. Short/Long-term Planning Discussions

- a. Discussion with Roger Menard of the Zoning Board of Appeals Regarding Short-Term Rental Bylaws

During the meeting, Roger Menard and Gerry Coutinho from the Zoning Board of Appeals discussed the topic of short-term rentals. Menard referred to Town Counsel's review of the current Town By-laws, which concluded that short-term rentals are not allowed in Westport. In order to address this issue, Menard proposed the formation of a working group to create an article for the 2024 Annual Town Meeting. This group would consist of two members each from the Planning Board and Zoning Board of Appeals, as well as the Town Planners. The Board of Health would also be represented. The attendees came to a consensus on this approach.

Motion

A motion was made by Bullard to authorize the Chairman to appoint two members from the Planning Board to work with two members from the Zoning Board to draft an ordinance for submission to the next town meeting regarding a short-term rental bylaw amendment. Seconded by Daylor. 5-0-0

- b. Westport River Days – Climate Resilience Committee public engagement.

ADJOURNMENT

The Board unanimously agreed to adjourn at 8:05.

NOTE: Agenda is subject to change

NEXT MEETINGS:

Planning Board: July 11, 2023 at 6:00 p.m.
Work Session: ?



PLANNING BOARD MEETING MINUTES

Date/time of Meeting: July 11, 2023, at 6:00 p.m.

Place: Town Hall, 816 Main Road
This meeting was held in the Board of Selectmen's meeting room, not the Town Hall Annex.

Call to order: The regular meeting of the Westport Planning Board was called to order at 6:02 PM by Chairman, Jim Whitin.

ATTENDEES

Chairman Jim Whitin, Vice-Chair Bob Daylor, and members, John Bullard, Manuel Soares, Mark L. Schmid, Town Planner, Michael Burris, and Assistant Town Planner, Amy Messier.

Chair's Announcement – Under M.G.L. Chapter 30A, section 20(f) – The meeting was recorded.

1. Administrative Items

- a. **Approval Not Required (ANR) – Parcel 23-47 & 47B (23-022A)** Request by the applicant for endorsement of a 2-lot plan of land located at 17 Franklin Street, Assessors Map 23 Lots 7 & 47B.

John Romanelli from Zenith Land Surveyors was present representing the applicant. The applicant would like to subdivide the property that has two houses on one lot into two separate lots. There was some misunderstanding since Option 4 instead of Option 2 was inadvertently picked on Form A. Burris clarified that the application is still valid, but the correct option to circle on Form A is option 2.

Whitin asked if the property could be subdivided. According to Burris, the lots satisfy the Approval Not Required criteria and can be divided accordingly. However, doing so results in the creation of two non-conforming lots.

Romanelli proposed that the Board support the Approval Not Required, but refrain from recording it with the registry of deeds until they receive the Building Inspector's opinion on whether it would be beneficial to proceed with the subdivision or not. The proposed idea was agreed upon by the applicant.

MOTION

Bullard moved to approve the endorsement of the plan entitled "Plan of Land showing the division of Parcels 23-47 & 47B" because the plan complies with the provisions of MGL Ch. 41 Section 81P. Seconded by Daylor. 5-0

b. Definitive Subdivision – 431 Fisher Rd. “Stacy Lane” (20-002SPA-C) Vote on surety amount for incomplete work.

Ms. Messier noted that S.W. Cole submitted a site review letter dated June 19, 2023, and also provided a surety estimate of \$97,800. Ms. Messier recommended the surety be set at \$100,000.

Motion

Bullard motion set surety for 431 Fisher Road “Stacy Lane” for \$100,000 with one year to complete. Seconded by Schmid. 5-0

2. 6:15 p.m. Public Hearing

a. Westport Horizons Development Corp. - Oakridge (06-001SP-MAJOR)*(continued from February 22, 2022, April 19, 2022, June 28, 2022, March 7, 2023, May 16, 2023)*

Attorney Mark Levin from the Law Offices of Levin & Levin was present on behalf of the Applicant Westport Horizons Development Corp./Richard LeBlanc and reiterated that his client had made a mistake with not installing the sidewalks within the Oakridge Development in 2006 when it was originally approved by the Planning Board due to lack attention paid to the contractors work. According to Mr. Levin, he proposed to his client the idea of painting a stripe on one side of Windsor and Crestview Drive to establish a designated space for pedestrians and bicycles. Mr. Levin stated that his client was in favor of that suggestion and willing to provide the stripes along one side of the road since installing a sidewalk at this point would be difficult due to the grades that would have to be altered and the sprinkler systems that have been installed by the residents of the Oakridge community. Whitin stated that the Planning Office consulted with Town Council since the last public hearing on May 16, 2023, regarding what the Planning Board can rule on. Town Council made the following findings/suggestions to the Planning Board;

- Richard Leblanc can be personally held liable for the failure to comply with the approved plan since he signed the original application in 2006, making him a co-applicant along with the now dissolved “Westport Horizons Development Corp.”
- The only decision the Planning Board should be voting on is whether or not to accept the request for the major modification of the special permit to eliminate the sidewalks on the plan.
- The Planning Board does not have the authority to intervene any further than accepting or rejecting the elimination of sidewalks due to the following; the application by the applicant did not ask for anything other than sidewalks and the other shortcomings brought to light in the public hearing by the residents do not pertain to the application and public hearing and are a civil matter between the applicant and the residents of Oakridge.
- The Planning Board is not the enforcement entity of the decision that is made, and all enforcement for this project has to be issued by the Building Inspector/Zoning Enforcement Officer.

Ms. Messier read her recommendation into the record, in which she recommended that the Planning Board deny the applicant's request for the major modification to the special permit along with sample findings.

Ms. Messier recommended the following actions by the Planning Board;

- The Planning Board makes a motion to close the public hearing.
- The Planning Board makes findings
- The Planning Board **denies** the major modification by the applicant to modify the Special Permit for the elimination of sidewalks within the Oakridge Condominium development.
- Ms. Messier recommended denying the major modification due to the following findings;
 - Since Oakridge is an already developed community with residents, Mr. Leblanc would have to obtain the consent of every resident and owner within the community to show that everyone agrees with the elimination of sidewalks – it is evident through the public hearing process that the residents of the community are not unanimously in agreement with the elimination of sidewalks.
 - The purpose and intent of the Zoning By-law of Assisted and Independent Living Facilities is to provide a residential living environment that offers supportive services for people that either need supervision and/or assistance with basic activities within their daily life and/or offer congregate living arrangements to persons over the age of fifty-five. The majority of the Oakridge condominiums are single-family and are therefore not connected. During the public hearing process, numerous residents within the Oakridge Community expressed the need for the development of sidewalks, stating that the current absence of sidewalks creates an unsafe walking environment for the residents due to the speed of passing delivery vehicles that frequent the development, and the lack of an ADA compliant surface to safely use for means of getting from one facility/ home to another. The elimination of sidewalks within the Oakridge development deviates from the intent of the By-law by failing to offer a basic supportive service for the residents by compromising their safety during a basic and necessary activity, such as walking within the private community.
 - The Special Permit that was issued by the Planning Board in 2006, under “Special Permit Criteria” lists that all paths were to be attractively designed for convenience, separation of vehicular, bicycle, and pedestrian traffic, adequate connectivity, completeness of access to amenities and facilities on site and to pathways on adjacent sites. The current walking paths within the development are composed of crushed shells, which lack stability and ADA compliance. During the public hearing process, numerous residents stated safety concerns relating to the pathways that are established as being unstable and unsuitable for safe walking and handicapped use. Given that the current pathways are not attractively designed for convenience, and are unsafe and unusable by some of the handicapped residents, it renders the walking paths deficient in providing adequate connectivity and completeness of access to amenities and facilities on site. This deficiency deviates from the Special Permit Criteria at the time of the Special Permit approval and creates an environment where the residents cannot safely walk within the development on the walking paths to have access to amenities and facilities.

Motion

After Ms. Messier read her recommendation into the record, Bullard made a motion to close the public hearing for File No. 06-001SP-MAJOR for Richard Leblanc and Westport Horizons Development Corp. for the Major Modification to a Special Permit for the Independent Living Facility known as Oakridge Condominiums, Seconded by Daylor, with no further discussion and all five members in favor, the motion carried unanimously.

Motion

Bullard then made a motion to accept the findings read by Ms. Messier, seconded Daylor, with all five members in favor, and the motion carried unanimously.

Motion

Bullard made a motion to accept the Major Modification of the original Special Permit for the Independent Living Facility and associated Site Plan for Richard Leblanc and Westport Horizons Development Corp. File No. 06-001SP-MAJOR known as Oakridge Condominiums for the elimination of sidewalks, seconded by Soares. Bullard stated that should the applicant and the residents of Oakridge find another means to resolve the problem that doesn't involve the construction of sidewalks, it would be up to the Building Inspector/ Zoning Enforcement Officer to decide on whether to take any enforcement action since the applicant would technically violate his special permit. Schmid reiterated that our By-law requires the construction of sidewalks for developments like Oakridge for safety reasons and convenience, and are an important and necessary feature. With no members voting in favor, and all five voting against, the motion did not pass, and the Major Modification is denied.

3. Assistant/Planner's report

a. Assistant Planner's report

Harbor Water Study:

- Reached out to Frank Getchell of Weston & Sampson on 7/6/23 for an update on the placement of the data loggers, waiting to hear back.

Borrego Solar – Main Rd./ Brookwood Drive:

- Applicant submitted an update with photos of the grass and vegetation growing on site. Messier directed S.W. Cole to do a site visit to ensure that the growth is adequate. Once a report is submitted to the office by S.W. Cole, an item on a future agenda will be the request to release the \$50,000.00 in performance surety that the applicant had provided to us.
- S.W. Cole did a site visit today (7/11) and established that there is adequate vegetative growth – Derek Mello has committed to providing a review letter by the end of this week.

Repurposing of the old H.S.:

- Messier reached out to Grant King/ Kevin Ham and requested a quote for the 3-D tourable model and scaled building blueprint docs. Kevin Ham (Homeland Security Manager & leader of SRPEDD's drone program and 3D modeling work) is currently working on a similar project for the Taunton schools. Mark L. Schmid inquired about the estimated time for completion.
- SRPEDD will provide an estimate for the work within the next two weeks.

b. Planner's report

- Salt marsh grant updates
 - We were looking into applying to the Coastal Resilience grant program for funds for two different projects.
 - The first was to study our salt marshes for their migration potential. After meeting with the Westport River Watershed Alliance to collaborate on the grant application, they let us know that the Mass Coastal Resilience program has been working on modeling marsh migration areas for the state. This was essentially what we were going to apply to the program to develop, so we're meeting with their staff to learn further.
 - EA Engineering is looking into developing a proposal to the U.S. Army Corps of Engineers to evaluate alternatives for the beneficial reuse of dredged materials for

sediment dredged from the Westport River. More time was needed to develop a baseline with existing studies and data for future analysis.

- Any application was due yesterday, so we're slowly making progress to design a fundable project, just not through the CZM this year.
- Westport drone photos
The southeastern regional planning and economic development district provided the Town with drone photos of different features and locations in Westport. We are welcome to use these photos in plans and documents but please provide attribution to the relevant SRPEDD staff member.
- Next rezoning meeting with BSC Group
Revisions were requested to be made to the draft of the public engagement presentation before our August 8th meeting.

4. Correspondence

None.

5. Minutes – June 27th, 2023

The incomplete June 27th minutes will be on the agenda for August 8, 2023.

6. Short/Long-term Planning Discussions

Whitin said that Mark L. Schmid and Bob Daylor offered their services as members of the committee for short-term rentals. Ms. Messier mentioned that the Board of Health voted at their meeting that Tanja Ryden will be the representative, and the Zoning Board of Appeals will vote to appoint a member at their next meeting. A letter will be sent by Ms. Messier to the Board of Selectmen requesting the creation of this new committee, and in the letter, she will ask that a member of the Board of Selectmen be appointed to the committee as well.

Whitin received a request from Mark Rasmussen for an update on the funding for the water and sewer. Due to the project's limitations and the lack of time, Whitin believes additional funding sources are very important. There was a discussion about the next steps.

ADJOURNMENT

The Board members unanimously adjourned at 7:37 p.m.

Respectfully submitted,



Nadine Castro, Assistant Town Planner II

NOTE: *Agenda is subject to change*

NEXT MEETINGS:

PLANNING BOARD: August 8, 2023, @ 6:00 P.M.

WORK SESSION: ?