

FLAHERTY & STEFANI, INC.

ENGINEERS AND SURVEYORS
67 SAMOSET STREET
PLYMOUTH, MASSACHUSETTS 02360
(508) 747-2425
FAX (508) 747-3991

April 8, 2022

Mr. Bruce Maki, Chairman
Carver Planning Board
108 Main Street
Carver, MA 02330

Attn: Ms. Michele Bremer

Re: Preliminary Subdivision Plan Submission-Residences at Slug Bog for
Owner/Applicant Franklin Marsh LLC, Gary F. Weston, Manager
Location: Off Plymouth Street Map 38 Lot 1 and Map 34 Lot 3

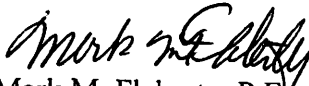
Dear Mr. Maki and Members of the Planning Board:

We are pleased to submit the attached Form B Application and Preliminary Subdivision Plans and supporting documentation. The submission is consistent with the requirements of Section 5.0 Preliminary Plans in the Carver Subdivision Rules and Regulations. And the Preliminary Plan Checklist. A project narrative is also attached that describes the two-lot residential subdivision and mentions the two requested waivers with justification that the Planning Board will be asked to consider. Concerning the above matter, enclosed please find the following:

1. Eight (8) Full Sized Set of Plans (Three Sheets).
2. One (1) 11 x 17 Sized Set of Plans.
3. PDF of Plans and Stormwater Report.
4. Complete Application Form B including MLCs for Each Parcel..
5. Brief Narrative of Project.
6. Check made payable to the Town of Carver \$700.00 for the filing fee.
7. Check made payable to the Town of Carver \$400.00 for the review fee.
8. Supporting documentation includes Quadrangle Maps Showing Priority Habitat and Estimated Habitats of Rare Wildlife/Vernal Pools; Narrative of Utilities.

Thank you for your courtesy and cooperation in this matter.

Sincerely yours,


Mark M. Flaherty, P.E.

CC: Mr. Gary Weston
Town Clerk
Board of Health





TOWN OF CARVER

Planning Board

108 Main Street, Carver, MA 02330
Phone: 508-866-3450 Fax: 508-866-3430
Email: townplanner@carverma.gov

FORM B

APPLICANT NAME: Franklin Marsh LLC FILE # _____
EMAIL: gfweston@verizon.net DATE: April 8, 2022

To The Planning Board of the Town of Carver:

The undersigned, being the applicant as defined under Chapter 41, Section 81-L, for approval of a proposed subdivision shown on a plan entitled: Residences at Slug Bogs

By Flaherty & Stefani, Inc. dated April 8, 2022
And described as follows: Carver Assessor's Maps: Map 38 Lot 1-0-R and Map 34 Lot 3-0-R
Located off Plymouth Street, number of lots proposed
2 total acreage of tract 89.7 ac, said applicant hereby submits said plan as
Preliminary subdivision plan in accordance with the Rules and Regulations of the Carver
Planning Board and makes application to the Board for approval of said plan.

The undersigned's title to said land is derived from Craig F. Weston (Lot 1) Craig F. Weston (Lot 3)

By deed dated 3/10/2003 (1); 2/11/2003 (3) and recorded in the Plymouth District Registry of Deeds
Book see below, Page _____, registered in the Plymouth Registry District of the Land
Court, Certificate of Title No. _____.

Lot 1: Bk 24710 pg 289

Lot 3: Bk 24241 pg 343

Received by Town Clerk:

Applicant's Signature

Franklin Marsh, LLC, Gary Weston, Manager

Date _____

Applicant's Address

PO Box 819,
Carver, MA 02330

Time _____

Applicant's Phone #

(508) 965-3593

Signature _____

(Owner's Signature,

Applicant is Owner

Address and Phone #

If not the Applicant)

Received by Board of Health:

Date _____

Time _____

Fee \$ _____

Review and

Signature _____

Residences at Slug Bogs

Preliminary Subdivision Plan Project Narrative, Supporting Documentation and Waiver Request

Project Narrative

The Preliminary Subdivision Plan combines two (2) existing adjoining parcels and subdivides them into 2 residential lots that comply with the Town of Carver's zoning regulations.

The proposed lots will be served by on-site drinking water wells and septic systems. Stormwater will be collected, treated and discharged on site. The lots will be served by electrical and communications infrastructure located on Plymouth Street. No connection to municipal utilities is proposed.

Supporting Documentation

Maps from the Natural Heritage and Endangered Species Program depicting the location of the project site relative to Priority Habitats of Rare Species and Estimated Habitats of Rare Wildlife and Certified Vernal Pools are included at the end of this document.

Waivers Requested

The applicant respectfully requests a waiver from Section 5.3.2 Required Information, Item #20 of the Carver Subdivision Rules and Regulations. Item #20 requires that the Preliminary Plan shall include:

Boundaries, if any, of any area(s) which the Conservation Commission has determined to be subject to G.L. c. 131, s. 40 and the Town of Carver Wetlands Protection By-Law. These areas shall be determined through approval of an Abbreviated Notice of Resource Area Delineation with the Conservation Commission prior to filing the application for a Preliminary Plan.

The applicant has provided approximate wetland delineations on the Preliminary Plan based on publicly available data; however, an ANRAD has not yet been filed for the project. Prior to the submittal of a Definitive Subdivision Plan, the applicant will engage a professional wetland scientist to field delineate the wetland resources, and will file an ANRAD for Conservation Commission approval.

Item Subdivision Regulations Section 7.3 2(b): requires that the Street Alignment shall be offset 250 feet from streets entering on the opposite side of a major street.

The applicant has an access road to his cranberry bogs and supporting facilities nearly opposite Russell Trufant Road. We have shown a 150-foot street offset rather than 250 feet as required. In support of the Planning Board waiving this requirement, the applicant would be willing to re-locate this bog roadway to come off the cul-de-sac to lessen the number of vehicles coming on to Plymouth Street in this area and to eliminate a "curb cut".

MUNICIPAL LIEN CERTIFICATE
THE COMMONWEALTH OF MASSACHUSETTS
Town of Carver
Office of the Collector of Taxes

Requested By:
Thomas Melehan
84 Obery St., #205
Plymouth MA 02360

I certify from available information that all taxes, assessments and charges now payable that constitute liens as of the date of this certificate on the parcel of real estate specified in your application received on 04/04/2022 are listed below

DESCRIPTION OF REAL ESTATE							
Map/Parcel	38-1-0	Land	902780	Land Area	3958620	Book	24710
Unit		Building	79300	Cert #	0	Page	289
District	0	Other	13900	Doc #	0	Deed Date	04/04/2003
		Total	127700			Certificate #	3538
						Cert Date	04/05/2022
Name of person assessed	FRANKLIN MARSH LLC						
Location of Property	0 PLYMOUTH ST						Interest thru: 04/05/2022

Year	Description	Total Billed	Balance	Interest	Demand & Fees	Total Due	PerDiem
2022	RE Q4	762.78	0.00	0.00	0.00	0.00	0.00
2022	RE Q3	762.80	0.00	0.00	0.00	0.00	0.00
2022	RE Q2	840.42	0.00	0.00	0.00	0.00	0.00
2022	RE Q1	840.42	0.00	0.00	0.00	0.00	0.00
2021	RE	3,319.07	0.00	0.00	0.00	0.00	0.00
2020	RE	3,328.33	0.00	0.00	0.00	0.00	0.00
Total Taxes		9,853.82	0.00	0.00	0.00	0.00	0.00
Property Total		9,853.82	0.00	0.00	0.00	0.00	0.00

RE Bill Number: 1425

Unpaid utility and other charges

Per Diem After 04/05/2022: 0.00

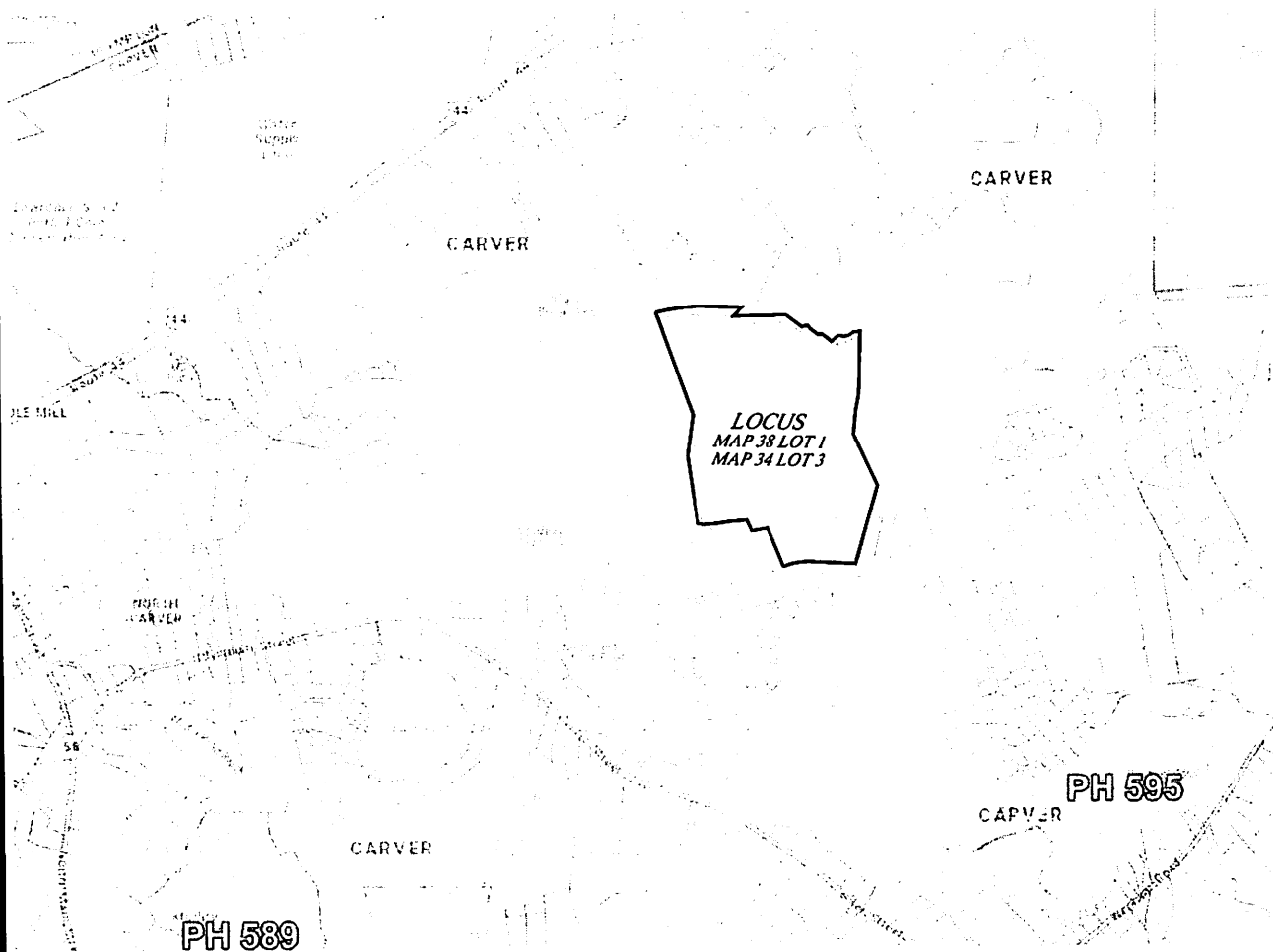
TOTAL DUE 0.00

Kathryn Kay

Collector of taxes for the

Town of Carver

Name of City or Town



NO PRIORITY HABITAT WITHIN LOCUS



FLAHERTY & STEFANI INC.
67 SAMOSET STREET
PLYMOUTH, MA. 02360
(508)747-2425

SITE LOCUS MAP 38 PCL 1
SITE LOCUS MAP 34 PCL 3
QUADRANGLE MAP
PRIORITY HABITAT AREA

RESIDENCES AT SLUG BOG
OFF PLYMOUTH STREET
CARVER, MA.

FIG-1



NO ESTIMATED HABITAT FOR RARE WILDLIFE AND VERNAL POOLS WITHIN LOCUS



FLAHERTY & STEFANI INC.
67 SAMOSET STREET
PLYMOUTH, MA. 02360
(508)747-2425

SITE LOCUS MAP 38 PCL 1
SITE LOCUS MAP 34 PCL 3
QUADRANGLE MAP
ESTIMATED HABITAT AREA

RESIDENCES AT SLUG BOG
OFF PLYMOUTH STREET
CARVER, MA.

FIG-2

Key: 1881

Town of CARVER - Fiscal Year 2022

12/10/2021 5:44 pm SEQ #: 1,836

CURRENT OWNER										PARCEL ID				LOCATION				CLASS	CLASS%	DESCRIPTION			BN ID	BN	CARD			
FRANKLIN MARSH LLC PO BOX 819 CARVER, MA 02330										38-1-0-R				0 PLYMOUTH ST				0370	85	Mixed-Comm/Chpt				1	1 of 2			
										TRANSFER HISTORY				DOS	T	SALE PRICE		BK-PG (Cert)		PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%
										FRANKLIN MARSH LLC				04/04/2003	F	1 24710-289					09/28/2021	67	61A APPL REC				0	0
WESTON CRAIG F				02/19/2003	QS	85,000 24241-343					09/26/2019	67	61A APPL REC				100	100										
ALBERGHINI ROBERT				01/01/1978	X	1 4228-495					04/01/2019	34	I & E REC'D				100	100										
											09/24/2018	67	61A APPL REC				0	0										
											09/28/2017	67	61A APPL REC				0	0										

CD	T	AC/SF/UN	Ngh	INFL1	INFL2	ADJ BASE	SAF	INFL3	Lpi	VC	CREDIT AMT	ADJ VALUE		
371	A	8.370	CB	1.00	1.00	1.00	1.00	20,000	1.00	1.00	CB	1.00 710E	149,050	18,350
100	S	60,000	NCR	1.00	1.00	1.00	1.00	94,300	1.00	1.00	NCR	1.00 716G	129,500	360
300	A	5.620	EXS	1.00	1.00	1.00	1.00	7,800	1.00	1.00	EXS	1.00 716G	42,390	1,450
300	A	7.000	EXS	1.00	Y5	0.50	1.00	3,900	1.00	1.00	EXS	1.00 716G	25,490	1,810
300	A	44.800	EXS	1.00	1.00	1.00	1.00	7,800	1.00	1.00	EXS	1.00 717G	343,030	6,410
300	A	23.710	EXS	1.00	1.00	1.00	1.00	7,800	1.00	1.00	EXS	1.00 716G	178,820	6,120

TOTAL	90.877 Acres	ZONING	RA	FRNT	685	ASSESSED	CURRENT	PREVIOUS
Ngh	CRAN BOG	N MUST CONTACT OWNER BEFORE ENTERING				LAND	34,500	35,080
INFL1	NO ADJUST.	O PROPERTY AS OF 1-22-2010				BUILDING	31,700	30,800
INFL2	NO ADJUST.					DETACHED	13,900	15,400
						OTHER	47,600	43,100
						TOTAL	127,700	124,380

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD	PHOTO	06/10/2008
SHM	A	1.00	50 0.50 8X40 MTL TRL	1970	320	6.90	1,100		
SHF	A	1.00	10 0.90 10X10 RED	2000	100	12.90	1,200		
SHF	A	1.00	10 0.90 10X12 GREY	2000	120	12.90	1,400		
SHF	A	1.00	10 0.90 5X8 GREY	2000	40	12.90	500		
TN2	A	1.00	10 0.90 2000 GAL JET	1990	2,000	1.50	2,700		
LNT	A	1.00	60 0.40 11X11 W/ TAN	1970	121	12.70	600		
LNT	A	1.00	60 0.40 10X20 ON DGF	1930	200	12.70	1,000		
DGF	A	1.00	60 0.40 WHITE 20X20	1930	400	33.80	5,400		

BUILDING	CD	ADJ	DESC	MEASURE	6/10/2008	EB	BLDG COMMENTS
MODEL	6		INDUSTRIAL				HELICOPTER HANGAR - JOE BRIGHAM
STYLE	61	0.28	HANGAR - STG [100%]	LIST	8/25/2009		
QUALITY	C	1.00	AVERAGE [100%]				
FRAME	6	1.05	STRUCT STEEL [100%]	REVIEW			

YEAR BLT	1990	SIZE ADJ	1.150	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	63,361
NET AREA	2,340	DETAIL ADJ	0.241	FOUNDATION	2	SLAB	1.02	A	BAS	L	BAS AREA	2,340	1990	27.08	63,361		
SNLA(RCN)	\$27	OVERALL	1.000	EXT. COVER	18	CORR STEEL	0.95										
				ROOF SHAPE	11	BOW	1.00										
				ROOF COVER	10	METAL	0.98										
				FLOOR COVER	10	CONCRETE	0.98										
				INT. FINISH	8	MINIMUM	0.93										
				HEATING/COOLING	1	FORCED AIR	1.00										
				FUEL SOURCE	2	GAS	1.00										
				PARTITION	0		1.00										

CAPACITY	UNITS	ADJ	EFF.YR/AGE	1990 / 30
STORIES	1	1.00	COND	50 50 %
% HEATED	100	1.00	FUNC	0
% CENTRAL A/C	0	1.00	ECON	0
% SPRINKLERS	0	1.00	DEPR	50 % GD 50
			RCNLD	\$31,700

* -- Previous value excludes abatement.

(A)
BAS

78

30

Town of CARVER - Fiscal Year 2022

12/10/2021 5:44 pm SEQ #: 1,790

[illegible]

**Preliminary Subdivision Plan
In
Carver, Massachusetts
Map 38 Parcel 1 & Map 34 Parcel 3**

Storm Water Analysis & Drainage Report

Owner/Applicant: Franklin Marsh, LLC
Gary F. Weston
PO Box 819
Carver, MA 02330

Prepared by: Flaherty & Stefani, Inc.
67 Samoset Street
Plymouth, Ma 02360

April 6, 2022





Drainage Project Overview:

Stormwater from this proposed subdivision road will be collected from the two watersheds that include impervious pavement areas and will be routed through two separate drainage systems on each end of this cul-de-sac. The drainage system will consist of catch basins to a drain manhole to a water quality tank and then to an infiltration/recharge system of leaching chambers surrounded by crushed stone. The systems have been designed to capture and infiltrate a 100-year storm event.

Table 1 – WATER QUALITY VOLUME TO BE TREATED		
(BMP Required Water Quality Treatment = 0.5" of Runoff over the total impervious area)		
BMP	Required Treatment Vol.	Proposed Treatment Vol.
	Watershed Total Impervious Pavement Area = 14,693 s.f. Req' Treatment Vol.=612 ft ³	Provided Water Quality Treatment 6000 WQ Tank Provided Treatment Volume 802 ft ³

Drainage Methodologies and Peak Flow Results

The infiltration systems were designed for the post-development conditions to handle a 100-year storm event. The peak flow and volume of these storms discharged after development will be less than the pre-development peak flows and volumes. The pre-development watershed drains to the existing cranberry bogs within the site. All post development runoff will be contained on-site.

Table 2 – Post-Development Peak Runoff Rates

Post-Construction Watershed Area	2 Year 24 Hour Storm Event	10 Year 24 Hour Storm Event	25 Year 24 Hour Storm Event	100 Year 24 Hour Storm Event
DA P-1	0.0 cfs	0.0 cfs	0.0 cfs	0.0 cfs

Flaherty & Stefani, Inc. performed all drainage calculations using the SCS TR-20 method for a Type III 24-hour storm with the "HydroCAD version 8.0 program" from Applied Microcomputer Systems (See Appendix A). The software uses National Resource Conservation Service (NRCS) methodology and IDF curves. The curve numbers (CN's)

and times of concentration for the existing and proposed catchment areas are based on soil type and cover conditions at the proposed site (a minimum time of concentration of 6 minutes was used to perform all calculations). Applied Microcomputer Systems states that TR 20 program is more precise in determining Tc and runoff than TR 55 method.

Stormwater runoff from the site is collected within each catchment area.

The site drainage system was designed in consideration of the standards and techniques of the Best Management Practices outlined in the Massachusetts Department of Environmental Protection Stormwater Management Guidelines in the Stormwater Policy Handbook.

Groundwater recharge is a factor in the design of all drainage systems. Table – 3 below presents the minimum recharge required and the proposed recharge of stormwater based upon the BMP methods of the MA Department of Environmental Protection Stormwater Management Guidelines. The proposed recharge quantities meet or exceed the required minimum recharges.

Table 3 - Drainage Recharge Calculation		
(BMP Required Recharge = 0.6" Total Site Runoff for Class-A Soils)		
BMP	Required Recharge	Proposed Recharge
100-Year Storms	14,693 (Total Impervious Area) x 0.6" = 734 ft ³	4578 ft ³ (100 Yr) Infiltration systems

BMP Guidelines for Total Suspended Solids (TSS) Removal

The stormwater management system will conform to the standards of the Massachusetts DEP Stormwater Management Guidelines for Total Suspended Solids (TSS) discharges. The system includes:

1. Deep Sump Catch Basin 25% removal
2. Water Quality Inlet 25% removal
3. Infiltration System 80%

In total, the applicant's activity will result in a 88% of the TSS in the flow discharge and thus reducing potential for sedimentation effects downstream. These calculations are presented below.

1. $(.25) \times 1.00 = 0.25$ with $(1.00 - 0.25)$ 0.75 remaining;
2. $(.25) \times 0.75 = 0.18$ with $(0.75 - 0.18)$ 0.57 remaining.
3. $(.80) \times 0.57 = 0.45$ with $(0.57 - 0.45)$ 0.12 remaining

Total = $(1.0 - 0.12) = 0.88 \times 100 = 88\%$ TSS removed
BMP of 80% TSS removal is met.

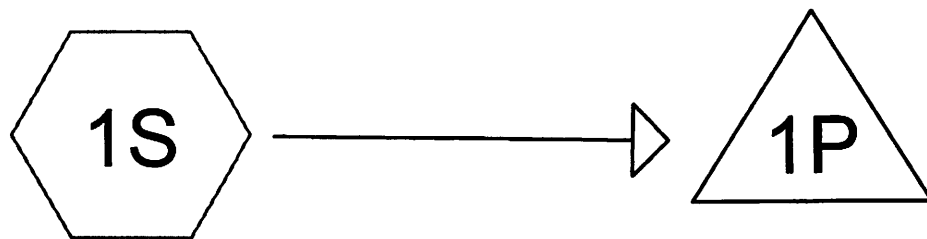
Drawdown Calculations

Infiltration System #1 : Recharge Volume = 4578 ft³

Rawls Rate = 8.27 inches/hour

Bottom Area = 24.98 x 109.68 = 2740 SF

Drawdown Rate = $4578 / (8.27 / 12) / 2740 = 2.4$ Hr.



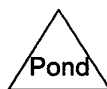
FRONT WATERSHED LEACHING SYSTEM #1 #1



Subcat



Reach



Pond



Link

Routing Diagram for MELEHAN Weston Solar WATERSHED 4-8-2022
Prepared by {enter your company name here}, Printed 4/11/2022
HydroCAD® 10.10-4b s/n 01387 © 2020 HydroCAD Software Solutions LLC

MELEHAN Weston Solar WATERSHED 4-8-2022

Prepared by {enter your company name here}

Printed 4/11/2022

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	25 Year Storm	Type III 24-hr		Default	24.00	1	6.22	2
2	100 Year Storm	Type III 24-hr		Default	24.00	1	9.04	2

MELEHAN Weston Solar WATERSHED 4-8-2022

Prepared by {enter your company name here}

Printed 4/11/2022

HydroCAD® 10.10-4b s/n 01387 © 2020 HydroCAD Software Solutions LLC

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.448	39	>75% Grass cover, Good, HSG A (1S)
0.307	98	Roadway Pavement (1S)
0.030	98	Sidewalk (1S)
0.186	30	Woods (1S)
0.972	58	TOTAL AREA

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: FRONT WATERSHED #1 Runoff Area=42,336 sf 34.71% Impervious Runoff Depth=1.90"
Tc=6.0 min CN=58 Runoff=2.02 cfs 0.154 af

Pond 1P: LEACHING SYSTEM #1 Peak Elev=37.08' Storage=1,268 cf Inflow=2.02 cfs 0.154 af
Outflow=0.58 cfs 0.154 af

Total Runoff Area = 0.972 ac Runoff Volume = 0.154 af Average Runoff Depth = 1.90"
65.29% Pervious = 0.635 ac 34.71% Impervious = 0.337 ac

Summary for Subcatchment 1S: FRONT WATERSHED #1

Runoff = 2.02 cfs @ 12.10 hrs, Volume= 0.154 af, Depth= 1.90"

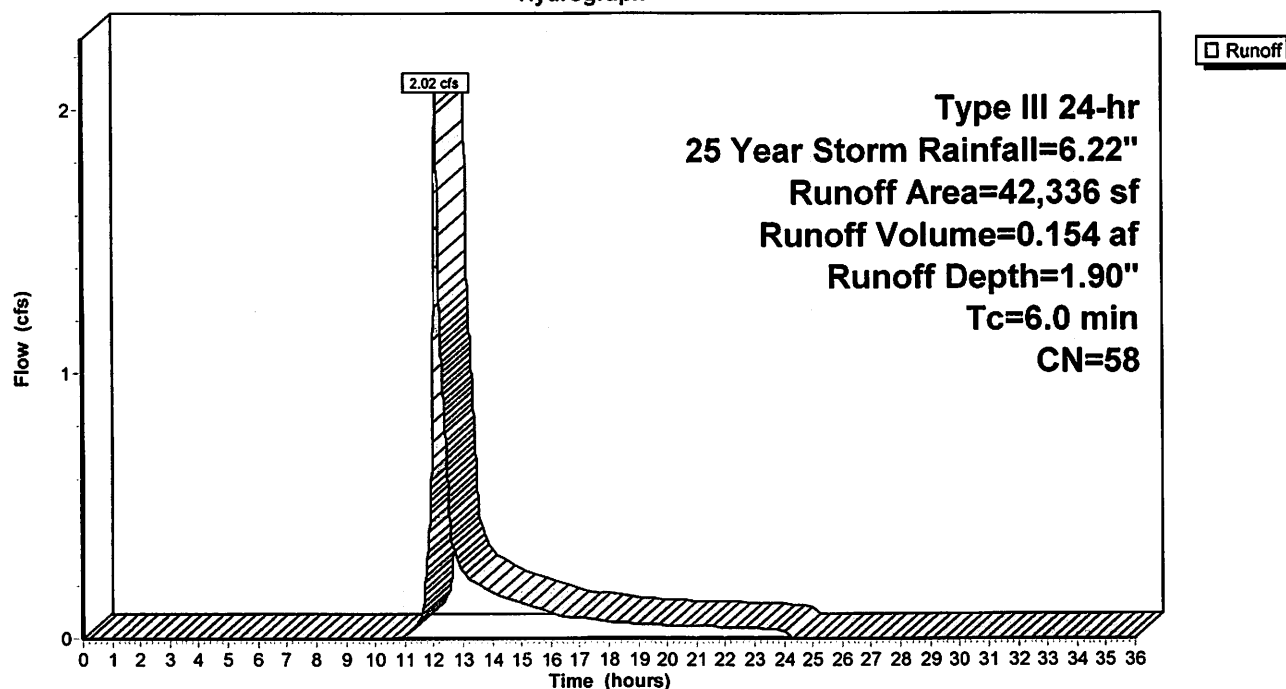
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25 Year Storm Rainfall=6.22"

	Area (sf)	CN	Description
*	13,391	98	Roadway Pavement
	19,520	39	>75% Grass cover, Good, HSG A
*	1,302	98	Sidewalk
*	8,123	30	Woods
	42,336	58	Weighted Average
	27,643		65.29% Pervious Area
	14,693		34.71% Impervious Area

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

Subcatchment 1S: FRONT WATERSHED #1

Hydrograph



Summary for Pond 1P: LEACHING SYSTEM #1

Inflow Area = 0.972 ac, 34.71% Impervious, Inflow Depth = 1.90" for 25 Year Storm event
 Inflow = 2.02 cfs @ 12.10 hrs, Volume= 0.154 af
 Outflow = 0.58 cfs @ 12.50 hrs, Volume= 0.154 af, Atten= 71%, Lag= 24.4 min
 Discarded = 0.58 cfs @ 12.50 hrs, Volume= 0.154 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 37.08' @ 12.50 hrs Surf.Area= 2,740 sf Storage= 1,268 cf

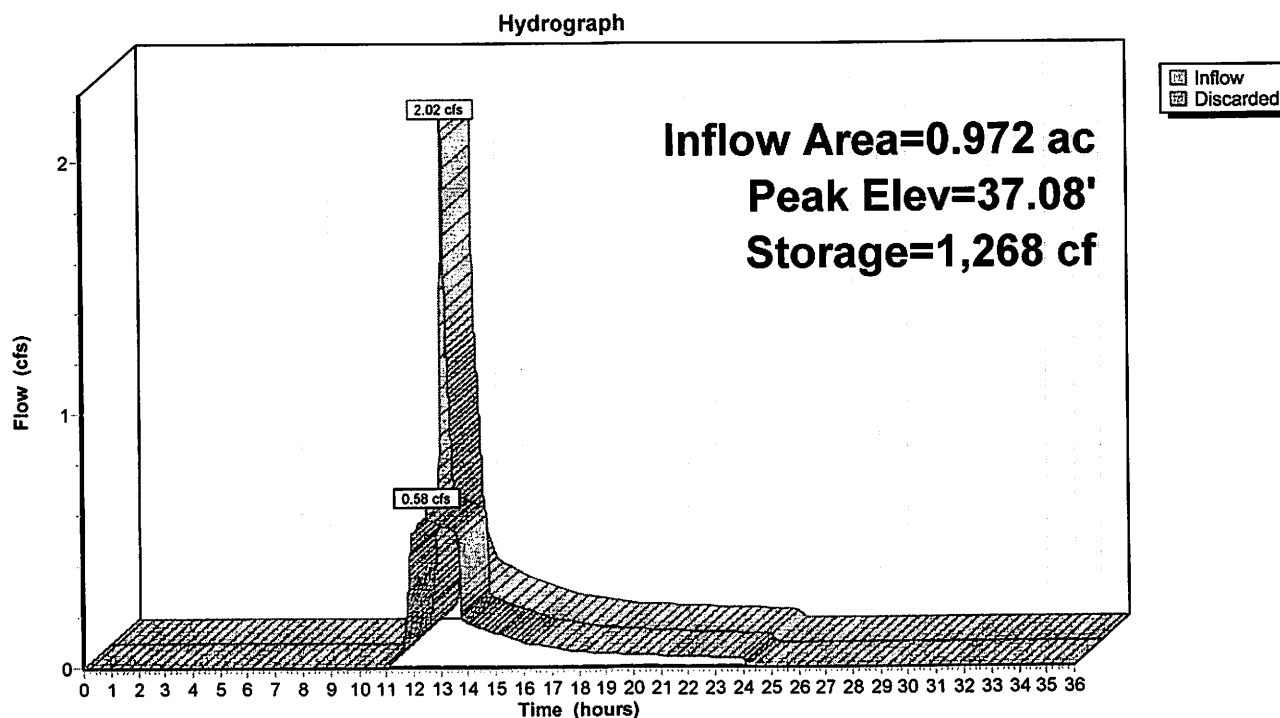
Plug-Flow detention time= 12.2 min calculated for 0.153 af (100% of inflow)
 Center-of-Mass det. time= 12.2 min (878.0 - 865.9)

Volume	Invert	Avail.Storage	Storage Description
#1	36.00'	3,030 cf	24.98'W x 109.68'L x 3.33'H Prismatoid 9,124 cf Overall - 1,548 cf Embedded = 7,576 cf x 40.0% Voids
#2	37.00'	1,548 cf	ADS_StormTech SC-310 x 105 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap
		4,578 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	36.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.58 cfs @ 12.50 hrs HW=37.08' (Free Discharge)
 ↑=Exfiltration (Exfiltration Controls 0.58 cfs)

Pond 1P: LEACHING SYSTEM #1



MELEHAN Weston Solar WATERSHED 4-8-2022 Type III 24-hr 100 Year Storm Rainfall=9.04"

Prepared by {enter your company name here}

Printed 4/11/2022

HydroCAD® 10.10-4b s/n 01387 © 2020 HydroCAD Software Solutions LLC

Page 7

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: FRONT WATERSHED #1 Runoff Area=42,336 sf 34.71% Impervious Runoff Depth=3.89"

Tc=6.0 min CN=58 Runoff=4.38 cfs 0.315 af

Pond 1P: LEACHING SYSTEM #1

Peak Elev=39.03' Storage=4,245 cf Inflow=4.38 cfs 0.315 af

Outflow=0.68 cfs 0.315 af

Total Runoff Area = 0.972 ac Runoff Volume = 0.315 af Average Runoff Depth = 3.89"

65.29% Pervious = 0.635 ac 34.71% Impervious = 0.337 ac

Summary for Subcatchment 1S: FRONT WATERSHED #1

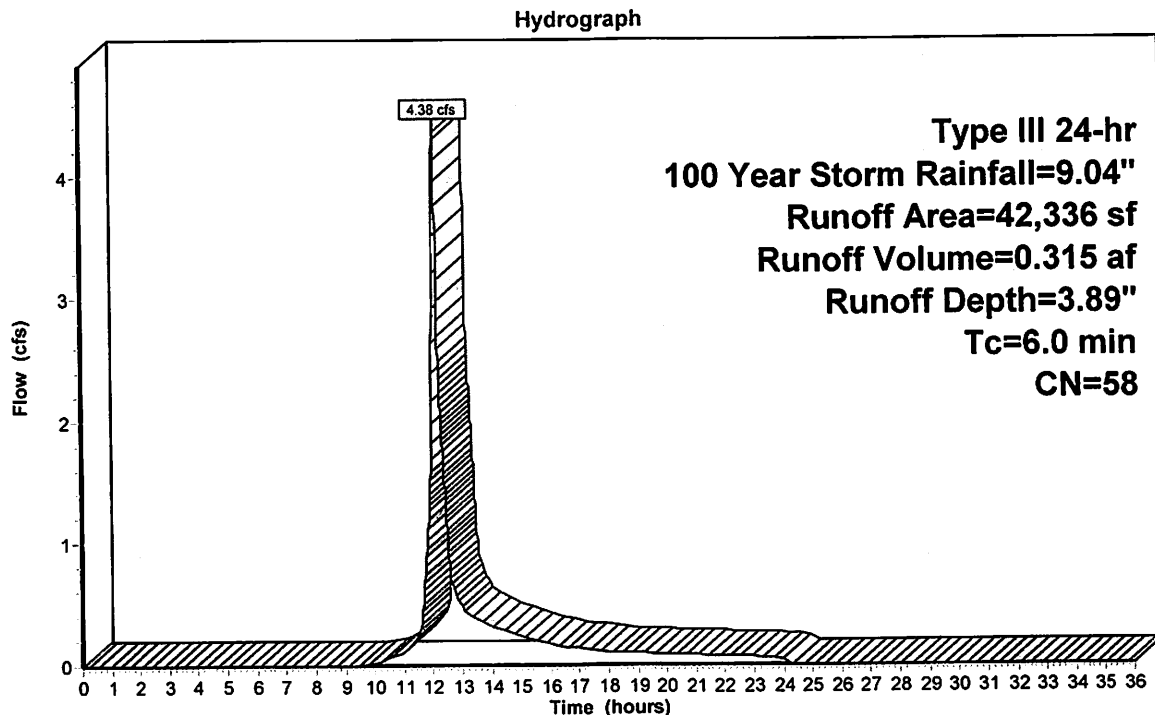
Runoff = 4.38 cfs @ 12.09 hrs, Volume= 0.315 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100 Year Storm Rainfall=9.04"

	Area (sf)	CN	Description
*	13,391	98	Roadway Pavement
	19,520	39	>75% Grass cover, Good, HSG A
*	1,302	98	Sidewalk
*	8,123	30	Woods
	42,336	58	Weighted Average
	27,643		65.29% Pervious Area
	14,693		34.71% Impervious Area

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

Subcatchment 1S: FRONT WATERSHED #1



Summary for Pond 1P: LEACHING SYSTEM #1

Inflow Area = 0.972 ac, 34.71% Impervious, Inflow Depth = 3.89" for 100 Year Storm event
 Inflow = 4.38 cfs @ 12.09 hrs, Volume= 0.315 af
 Outflow = 0.68 cfs @ 12.64 hrs, Volume= 0.315 af, Atten= 84%, Lag= 32.9 min
 Discarded = 0.68 cfs @ 12.64 hrs, Volume= 0.315 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 39.03' @ 12.64 hrs Surf.Area= 2,740 sf Storage= 4,245 cf

Plug-Flow detention time= 49.4 min calculated for 0.315 af (100% of inflow)
 Center-of-Mass det. time= 49.4 min (893.5 - 844.1)

Volume	Invert	Avail.Storage	Storage Description
#1	36.00'	3,030 cf	24.98'W x 109.68'L x 3.33'H Prismatoid 9,124 cf Overall - 1,548 cf Embedded = 7,576 cf x 40.0% Voids
#2	37.00'	1,548 cf	ADS_StormTech SC-310 x 105 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap
		4,578 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	36.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.68 cfs @ 12.64 hrs HW=39.03' (Free Discharge)
 ↑=Exfiltration (Exfiltration Controls 0.68 cfs)

Pond 1P: LEACHING SYSTEM #1

