# CROSSROAD'S SENIOR NEIGHBORHOOD

TOWN OF NORTH YARMOUTH, MAINE

PRELIMINARY SUBDIVISION APPLICATION

## PREPARED FOR:

A.H. GROVER

&

WALNUT HILL INVESTMENTS, LLC

# PREPARED BY:

ATLANTIC RESOURCE CONSULTANTS

541 US ROUTE ONE, SUITE 21

FREEPORT, MAINE 04032

207.869.9050

# JULY 2021





### TOWN OF NORTH YARMOUTH PLANNING BOARD REQUEST FOR HEARING

NAME OF APPLICANT:	PHONE #:
EMAIL:	ALT. PHONE#:
FULL ADDRESS:	
PROPERTY ADDRESS:	
MAP: LOT: ZONE:	
AGENT/REPRESENTATIVE (if other):	PHONE #:
EMAIL:	
FULL ADDRESS:	

The undersigned requests the North Yarmouth Planning Board consider the following application for:

Pre-application Sketch Plan Review	Major Subdivision
Minor Subdivision	Site Plan Review
Contract Zoning	
Other (Specify):	

#### NOTE TO APPLICANT:

- This form and appropriate materials must be filed at the Code Enforcement Office no later than (fourteen) 14 days prior to the regular meeting of the Board (2<sup>nd</sup> Tuesday monthly). Applications shall be accompanied by all applications fee and materials required by the applicable ordinance(s), checklists and fee schedule.
- 2. All applications shall include all materials and copies as specified on the submittal requirements form.
- 3. All materials in color shall be copied in color.

#### **Application Authorization**

I hereby make application to the Town of North Yarmouth for the above-referenced property(ies) and the development as described. To the best of my knowledge, the information provided herein is accurate and is in accordance with the Zoning and Subdivision Ordinances of the Town, except where waivers are requested. The Town of North Yarmouth Planning Board and/or town employees are authorized to enter the property(ies) for purposes of reviewing this proposal and for inspecting improvements as a result of an approval of this proposal. I understand that I am responsible for appearing, or having someone appear on my behalf, at all meetings before the Planning Board.

Signature:	Date:	
Printed Name:		
Please identify yourself (check one):	Agent*: Property Owner:	
10 VILLAGE SQUA PHONE: (2	RE ROAD, NORTH YARMOUTH, MAINE 040 07) 829-3705 * FAX: (207) 829-3743	97
REV 12/19		Page   1



PLANNING BOARD

#### MAJOR SUBDIVISION APPLICATION

(See Article 5 pages 38 through 59 of the North Yarmouth Land Use Ordinance)

NAME OF	APPLICAN	IT:	Walnut Hill In	vestments LLC	PHONE #:	207-233-6463			
EMAIL:	ben@ahgrov	ver.com			ALT. PHONE#:				
FULL ADD	ORESS:		82 Doughty Roa	82 Doughty Road North Yarmouth, Maine 04097					
PROPERTY ADDRESS:			352 Walnut H	52 Walnut HIII Road, North Yarmouth, Maine					
MAP:	<u>4</u> L	LOT:	18&24						
AGENT/REPRESENTATIVE (if other): Charlie Burnham PHONE #: 207-869-9050					207-869-9050				
EMAIL:	EMAIL: charlie@arc-maine.com								
FULL ADD	RESS:	541 U.S.	Route One, Sui	te 21 Freeport, Maine 04032	2				

- 1. Names and Addresses of ALL property owners within 500' of any and all property boundaries (use a separate sheet).
- Plan preparer information if other than property owner: Name: Charlie Burnham, Atlantic Resource Consultants, LLC
   Address: 541 U.S, Route One, Suite 21, Freeport, Maine 04032
   Phone Number: 207-869-9050
   Professional Lic. #15377
   Email: charlie@arc-maine.com
- 3. Zoning Classification of the Property

<b>/</b>	Village Center		Village Residential	 Farm and Forest
	Shoreland Residential		Resource Protection	Royal River Overlay
	Groundwater Protection Overlay	/		

- 4. Provide a General Description of the proposed use or activity, including but not limited to the type of use, square footage involved, hours of operation, types and amount of traffic to be generated **(use separate sheet)**.
- 5. Historic Structures: Are there any historic structures or areas of historical importance on the property? \_\_\_\_YES \_\_\_NO
- 6. Complete List of all chemicals, pesticides, fuels, nutrients and other potentially toxic or hazardous materials to be used or stored on the premises, and the quantities of these materials (use a separate sheet).
- 7. List of Equipment to be used, parked or stored (use a separate sheet).
- 8. To the best of my knowledge, all the above-stated information, and all prepared submissions in this application are correct.

Charlie Burnham	10	/5	/2021
Signature of Applicant/Owner		Date	

10 VILLAGE SQUARE ROAD, NORTH YARMOUTH, MAINE 04097 PHONE: (207) 829-3705 \* FAX: (207) 829-3743 REV 12/19 Page | 1



## TOWN OF NORTH YARMOUTH PLANNING BOARD MAJOR SUBDVISION CHECKLIST Walnut Hill Investments, LLC

#### NAME OF APPLICANT:

10/25/2021 DATE:\_\_\_\_\_

This checklist has been prepared to assist applicants in developing their applications. It should be used as a guide in assembling the information necessary for a complete application. However, the checklist does not substitute for the statutory criteria or the requirements of Section IV. Site Plan Review & Conditional Use Procedures or Section X. Performance and Design Standards for Site Plan Review & Subdivision Review of the Land Use Ordinance. The Planning Board will use the checklist to make sure that your application is complete. The application need not contain separate plans as implied below. The perimeter survey, subdivision plan and engineering plans may be contained on the same drawing. However, detailed engineering drawings such as road profiles, drainage swales and erosion/sedimentation plans may best be presented on a separate sheet or sheets.

SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
GENERAL REQUIREMENTS				
1. <u>Request for Hearing Form</u>	X			
2. Fee Calculation Sheet	X			
3. Waiver or N/A Request Form, if required				Х
4. Abutter List & Notification Statement	X			
5. DEP Approval, if required (Section 3 - 3.9B)				Х
6. Subdivision Approval, if required (Section V)				Х
7. <u>Board of Zoning Appeal Approval, if required</u> Section VI - 6.2)				Х
8. MDOT Approval, if required (Section VIII – 8.4.J.2)	X			
10-1 APPLICABILITY				
10-2 GENERAL LAYOUT OF DEVELOPMENT			<u> </u>	
A. <u>Utilization of the Site</u>				
B. <u>Lots</u>		1		1
B.1 Dimensional Requirements	X			
B.2 Right of Way not included in Lot Area	X			
B.3 Side Lot Lines perpendicular to Street	X			
B.4 Lots Divided by Streams				X
B.5 Future Lot Planning (Subdivisions only)				Х



PLANNING BOARD

MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
B.6	Interconnected Development	X			
C. Bloc	ks - Utility/Pedestrian Easement	Х			
D. Utilit	ties - Underground	Х			
E. Mon	uments		1	L	•
E.1	Stone Monuments Locations	X			
E.2	Stone Monuments or Capped Iron Pipe at boundaries	X			
E.3	Stone Monuments Requirements	X			
E.4	All Others Marked by Suitable Monumentation				
10-3 BF	ROOK, POND, VERNAL POOL AND WETLAND B	UFFERS			•
A. <u>Pur</u>	pose and Applicability				
A.1	Protect Areas not covered in Section 9-1				Х
A.2	Distinguish between High and Low Value Wetlands				Х
A.3	Residential Shoreland & Resource Protection Apply				Х
B. <u>Pro</u>	tected Resources				
B.1	Stream				
B.2	Pond				
B.3	Vernal Pool				
B.4	High Value Wetlands				
B.4.a	Contain Pond or Vernal Pool				
B.4.b	Within Floodplain of Stream or Pond				
B.4.c	Wetland Plant Species				
B.5	Low Value Wetland				
C. <u>Sta</u>	ndards	<u> </u>	1		
C.1	Vegetative Buffers				

10 VILLAGE SQUARE ROAD, NORTH YARMOUTH, MAINE 04097 PHONE: (207) 829-3705 \* FAX: (207) 829-3743



## PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
C.2	Location, Species, Height, Canopy				
C.3	Buffer Width Related to Slope (SEE TABLE)				
C.4	Natural State to Greatest Extent Practical				
C.5	Buffer Strips Maintained in Natural State				
C.5.a	Clearing of Dead and Diseased Trees				
C.5.b	Underlying Vegetation (must not be removed)				
C.6	Building and Structure Setback				
C.7	Permanent Markers (must be installed)				
D. <u>Plar</u>	n Submittals	1			
D.1	Site plan, Topo, Wetlands, Buffers	X			
D.2	Existing Vegetation Described	X			
D.3	Buffer (Any new buffers described)	X			
D.4	Maintenance and Restrictions of Buffers	X			
D.5	Deed restrictions and covenants	X			
D.6	Plat	X			
E. <u>Exe</u>	mptions				
E.1	Buffer and setbacks are not required adjacent to the	e following a	rea:		
E.1.a	Swales and ditches	X			
E.1.b	Artificial impoundments				Х
E.1.c	Low value wetlands				Х
E.2	Buffers and setbacks do not apply to				Х
E.2.a	Storm water management facilities	X			
E.2.b	Road crossings, bridges, culverts, utilities	X			
E.2.c	Docks, boat ramps, direct access				Х



## TOWN OF NORTH YARMOUTH PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
10-4 Bl	JILDING DESIGN STANDARDS				
A. <u>Pu</u>	rpose	Х			
В. <u>А</u>	oplicability	Х			
	<u>NTS</u>		1		
A. Ge	eneral Building Standards	X			
B. Pri	imary Building Types	X			
C. Ac	cessory Building Types				Х
D. Co	omponents	X			
E. Ro	of Types	Х			
F. Sp	ecial Definitions		I		
10-5 C( A	OMMUNITY FACILITIES IMPACT ANALYSIS ND MITIGATION				Х
10-6 DF	RIVE THROUGH FACILITIES				X
10-7 EF	ROSION AND SEDIMENTATION CONTROL				
А. <u>Тор</u>	ography and Natural Surroundings	Х			
B. <u>Bes</u>	t Management Practices		1		1
B.1	Stripping, Removal, Re-Grading	X			
B.2	Exposure to a Minimum				
B.3	Temporary Measures	X			
B.4	Permanent Measures				
B.5	Sediment Basins or Silt Traps				
B.6	Adjoining property and slope	X			
B.7	Dust control				
B.8	No grading or filling near water body				X
B.9	Measures monitored periodically	X			



PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
10-8 EN	AISSIONS				X
10-9 E>	(TERIOR LIGHTING				
Α.	Adequate for nighttime hours	X			
В.	Street lighting	Х			
C.	Lighting does not produce deleterious effects	X			
D.	Fixtures shielded or hooded				
E.	Blinking lights prohibited	X			
F.	Maximum height	X			
G.	Spotlights prohibited	X			
10-10 F	INANCIAL AND TECHNICAL CAPACITY	1			
Α.	Adequate financial resources	X			
В.	Qualified contractors and consultants				
10-11 F	LOODPLAIN MANAGEMENT	1	Ι	I	
A. <u>Con</u>	sistent with Floodplain Ordinance	X			
B. <u>Dev</u> e	elopment/Subdivision Requirement	X			
C. <u>Buil</u>	ding Prohibited on Floodplains		I		
C.1	Building prohibited in floodplain				Х
C.2	Statement and restriction				
C.3	Woodlands, grassland, pastureland, recreation				Х
C.4	Piers, docks, wharves, bridges and boat ramps				Х
10-12 H	AZARDOUS, SPECIAL AND RADIOACTIVE MAT	ERIALS			
Α.	Handling, storage and use per standards				X
В.	Reporting Requirement				X
10-13 H	IISTORIC AND ARCHAEOLOGICAL SITES	1	1		
Α.	Protect resources				



PLANNING BOARD

MAJOR SUBDVISION CHECKLIST

		Received	Applicant	Waiver	Applicant
	SITE PLAN PERFORMANCE &	by	Requests	Approved by	Requests
	DESIGN STANDARDS	Planning	to be	Planning	Not
		Board	Waived	Board	Applicable
В.	Maine Historic Preservation Commission	X			
	review				
10-14 L	ANDSCAPING, BUFFERS AND SCREENING	1	I	L	
A. <u>Pu</u>	pose	X			
B. <u>Sta</u>	ndards			-	
B.1	Landscaping	X			
B.1.a	Natural State Preserved	Х			
B.1.b	Public roads, areas, recreation sites, buildings				
B.1.c	Newly Planted Deciduous Tree Requirements				
B.1.d	Plan should include Landscapes				
B.2	Buffers and Screening	X			
B.2.a	Adjacent uses and screening	X			
B.2.b	Year-round visual screen				
B.2.c	Parking lots and areas				Х
B.2.d	Garbage collection areas buffered				Х
B.2.e	Sufficient buffering	X			
B.2.f	Width of buffer				
10-15 N	IATURAL BEAUTY AND AESTHETICS IN THE				X
F	ARM AND FOREST DISTRICT, RESIDENTIAL				^
5	SHORELAND DISTRICT AND RESOURCE				
F	PROTECTION DISTRICT				
10-16 N	IOISE	_	<u> </u>		
Α.	Control Levels for Neighboring Properties	X			
В.	Sound Pressure Level Limits (SEE TABLE)				X
C.	Measured by a Meter				X
10-17 S	EWAGE DISPOSAL				
A. Sub	surface Sewage Disposal				
<u>Sub</u>	Sanaso Comago Diopodui				



## PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
A.1	Follow State of Maine Rules	Х			
A.2	Hydrogeologic Assessment	Х			
A.2.a	Suitable soils	Х			
A.2.b	Water supplies	X			
A.2.c	Groundwater quality				Х
A.2.d	Monitoring wells				Х
A.2.e	Operation and maintenance manual	X			
B. <u>Pub</u>	lic Sewer System Disposal				
B.1	Not allowed in Farm and Forest District, Residential Shoreland District or Resource Protection District				Х
B.2	Sewer District statement of capacity				Х
10-18 S	IGNS				
Α.	<u>General Requirements</u>				Х
В.	Village Center District				
C.	Identify or Advertise Must be on Premises				
D.	Sign Area				
E.	Installation and Height				
F.	Height and Location by Roads				
G.	Attached to Structure				
Н.	Maintenance and Removal				
I.	Illumination				
J.	Nonconforming Signs				
К.	Special Event Signs				
L.	Home Occupation Signs				



PLANNING BOARD

MAJOR SUBDVISION CHECKLIST

		Received	Applicant	Waiver	Applicant	
	SITE PLAN PERFORMANCE &	by	Requests	Approved by	Requests	
	DESIGN STANDARDS	Planning	to be	Planning	Not	
		Board	Waived	Board	Applicable	
м	Signs in the Resource Protection District and				V	
	the Residential Shoreland District				<b>^</b>	
N.	Municipal and Public Safety Signs				Х	
10-19 \$						
10-20 \$	SOLID WASTE DISPOSAL			L		
Α.	Disposal at Licensed Facility	X				
B.	Alternative Arrangements					
10-21 \$	STORAGE OF MATERIALS	1				
Α.	Sufficient Setbacks and Screening				Х	
В.	<u>Dumpsters</u>				Х	
C.	Physical Screening				Х	
D.	Buffers and Screening				Х	
10-22 STORM WATER CONTROL						
10-22 \$	STORM WATER CONTROL	1				
10-22 \$ A. <u>Des</u>	STORM WATER CONTROL	X				
10-22 § A. <u>Des</u> B. <u>Rec</u>	STORM WATER CONTROL signed to Minimize Runoff quirements	X				
10-22 \$ A. <u>Des</u> B. <u>Rec</u> B.1	STORM WATER CONTROL signed to Minimize Runoff quirements Design by Maine engineer	X				
10-22 \$ A. <u>Des</u> B. <u>Rec</u> B.1 B.2	STORM WATER CONTROL Signed to Minimize Runoff Quirements Design by Maine engineer Easement width	X				
10-22 \$ A. Des B. Rec B.1 B.2 B.3	STORM WATER CONTROL  signed to Minimize Runoff guirements Design by Maine engineer Easement width Oil and grease traps	X			X	
10-22 \$ A. Des B. Rec B.1 B.2 B.3 B.4	STORM WATER CONTROL         signed to Minimize Runoff         guirements         Design by Maine engineer         Easement width         Oil and grease traps         Designing engineer statement	X X X			X	
10-22 \$ A. <u>Des</u> B. <u>Rec</u> B.1 B.2 B.3 B.4 B.5	STORM WATER CONTROL         signed to Minimize Runoff         quirements         Quirements         Design by Maine engineer         Easement width         Oil and grease traps         Designing engineer statement         Designed to Town Roadway Criteria	X X X X X			X	
10-22 \$ A. Des B. Rec B.1 B.2 B.3 B.3 B.4 B.5 B.6	STORM WATER CONTROL         signed to Minimize Runoff         guirements         Design by Maine engineer         Easement width         Oil and grease traps         Designing engineer statement         Designed to Town Roadway Criteria         Maintenance Plan	X X X X X			X	
10-22 \$ A. Des B. Rec B.1 B.2 B.3 B.4 B.5 B.6 10-23 F	STORM WATER CONTROL         signed to Minimize Runoff         guirements         Design by Maine engineer         Easement width         Oil and grease traps         Designing engineer statement         Designed to Town Roadway Criteria         Maintenance Plan         RECREATION AND OPEN SPACE LAND IN DEVE	X X X X X LOPMENTS			X	
10-22 \$ A. Des B. Rec B.1 B.2 B.3 B.3 B.4 B.5 B.6 10-23 F A. App	STORM WATER CONTROL         signed to Minimize Runoff         quirements         Design by Maine engineer         Easement width         Oil and grease traps         Designing engineer statement         Designed to Town Roadway Criteria         Maintenance Plan         RECREATION AND OPEN SPACE LAND IN DEVE         Oplicability and Purpose	X X X X LOPMENTS			X	
10-22 \$ A. Des B. Rec B.1 B.2 B.3 B.3 B.4 B.5 B.6 10-23 F A. AF B. Re	STORM WATER CONTROL         signed to Minimize Runoff         quirements         Design by Maine engineer         Easement width         Oil and grease traps         Designing engineer statement         Designed to Town Roadway Criteria         Maintenance Plan         RECREATION AND OPEN SPACE LAND IN DEVE         Oplicability and Purpose         etention of Useable Open Space/Recreation Land	X X X X X LOPMENTS			X	
10-22 \$ A. Des B. Rec B.1 B.2 B.3 B.3 B.4 B.5 B.6 10-23 F A. AF B. Re B.1	STORM WATER CONTROL         signed to Minimize Runoff         guirements         Design by Maine engineer         Easement width         Oil and grease traps         Designing engineer statement         Designed to Town Roadway Criteria         Maintenance Plan         RECREATION AND OPEN SPACE LAND IN DEVE         oplicability and Purpose         etention of Useable Open Space/Recreation Land         Planning Board may Require Reservation of Land	X X X X X LOPMENTS X			X	



PLANNING BOARD

MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
C. Wa Sp	aivers of Minor Subdivisions of Mandatory Open ace				X
D. Ov	vnership and Maintenance of Common Open Spa	ice and/or R	ecreation L	and	
D.1	Facilities & Property Ownership	Х			
D.1.a	Lot Owners' Association	Х			
D.1.b	Association Principal Purpose				
D.1.c	The Town				
D.2	Subdivision of the Common Open Space Prohibited	Х			
D.3	Monitoring Fee (Planning Board May Require)				
E. Ho	meowners Association Requirements	X			
10-24 V	VATER SUPPLY	1			
A. <u>Pub</u> l	lic Water Supply				
A.1	Written statement from Yarmouth Water District				
A.2	System approved by Yarmouth Water District and North Yarmouth Fire Chief				
B. <u>Req</u>	uired Connection to Public Water Supply	Х			
C. <u>Indi</u>	vidual Wells Regulations				
D. <u>Fire</u>	Protection	I			
D.1	Hydrant locations	X			
D.2	Storage capacity				
D.3	Hydrant specifications				
D.4	Easement				
10-25	WATER QUALITY	1		L	I
A. <u>Wat</u>	er Quality				
A.1	No discharge in surface or groundwater	Х			
A.2	Maine DEP and Fire Marshal's Office standards				
A.3	License from Maine DEP				

10 VILLAGE SQUARE ROAD, NORTH YARMOUTH, MAINE 04097 PHONE: (207) 829-3705 \* FAX: (207) 829-3743



PLANNING BOARD

MAJOR SUBDVISION CHECKLIST

		SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
	A.4	Discharge treated	X			
в.	Gro	undwater				
C.	<u>Wel</u>	Ihead Protection				
D. <u>Requirements for Hydrogeologic Assessments</u>						
	D.1	Class A (high intensity) Soil Survey		Х		
	D.2	Water table				
	D.3	Drainage conditions	X			
	D.4	Existing groundwater quality	X			
	D.5	Analysis and evaluation				
	D.6	Map of wastewater systems and wells				Х
E.	<u>Pro</u>	jections of Groundwater Quality		Х		
F.	Dri	nking Water Standards		Х		
G.	Der	nonstrate Treatment				
н.	Cor	<u>itaminants</u>				
I.	<u>Cor</u>	nstruction Standards				
J.	<u>Sys</u>	tem and Well Zones				
10	-26 F	PROTECTION OF SIGNIFICANT WILDLIFE HABIT	AT	<u>I</u>		1
Α.	Desi	gned to Protect				Х
В.	lden	tify and Map Wildlife Habitats				Х
C.	Con	sult and Obtain Written Report				Х
D.	Dee	r Wintering Areas				Х
Ε.	Deed	d Restrictions				
10-	-27 F	PUBLIC ACCESS TO THE SHORELINE				
10	-28 E	BACK LOTS AND ACCESS				
Α.	Rig	ht-of-Way				



## PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
A.1	Width and frontage	X			
A.2	Emergency vehicles	X			
A.3	Existing lot and right-of-way				
A.4	Backlots prohibited in subdivisions				
A.5	Private Roads Serving Three or More Residential Units and/or Non-residential Uses	Х			
A.6	In the Farm and Forest District, Residential Shoreland District and Resource Protection District – lot size and width				
A.7	In the Village Center District and Village Residential District – dimensional requirements	Х			
10-29 A	CCESS MANAGEMENT STANDARDS		1		
A. <u>App</u>	licability	X			
B. <u>Ade</u>	quacy of the Public Road System	X			
C. <u>Safe</u>	Sight Distances				
C.1.	Designed	X			
C.2	Measurements				
C.2.a	Sight Distance Speed				
C.2.b	Height				
C.2.c	Truck traffic				
C.2.d	Recreational vehicle traffic				
C.3	Placement				
C.4	Site triangle				
D. <u>Acce</u>	ess Management and Safety Standards	·			
D.1	Hazardous conflicts				
D.2	Residential Lots				



## TOWN OF NORTH YARMOUTH PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable	
D.2.a	Farm and Forest District, Residential Shoreland District and Resource Protection District					
D.2.b	Village Center District and Village Residential District	Х				
D.3	Commercial and Other Non-Residential Lots					
D.3.a	Farm and Forest District, Residential Shoreland District and Resource Protection District					
D.3.b	Village Center District and Village Residential District	Х				
D.4	Shared Driveways				Х	
D.5	Road, Pedestrian and Bicycle Connections Between Developments				Х	
D.6	Subdivisions					
D.7	Corner Lot Access					
D.8	Access Ways to Non-Residential Developments or to Multiplex Developments					
D.9	Driveway Turn-Around Area					
D.10	Driveway Grades					
D.11	Access Way Location and Spacing					
D.11.a	Location from intersection					
D.11.b	Existing private roads					
D.11.c	Demonstration of No Alternative					
10.30 S DISTICT	10.30 SUBDIVISION STREET CONNECTIVITY REQUIRED IN THE VILLAGE CENTER AND VILLAGE RESIDENTAL DISTICTS					
A. Pu	rpose	X				
B. Ap	plicability	X				
C. <b>Re</b>	quirements					
C.1	Proposed Subdivision Streets	Х				

10 VILLAGE SQUARE ROAD, NORTH YARMOUTH, MAINE 04097 PHONE: (207) 829-3705 \* FAX: (207) 829-3743



## PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
C.2	Proposed Street System	X			
C.3	Proposed Transportation System				Х
C.4	Redevelopment and Road Improvements				Х
C.5	Future Street Extension				Х
C.6	Reserved Streets for Future Street Connections				Х
C.7	Waivers				Х
C.7.a	Dead End Streets				Х
C.7.b	Hammerhead Turn-around				Х
C.7.c	Turn-Around				Х
C.7.d	Emergency Access	X			
10.31 S	UBDIVISION STREET LENGTH AND CONNECTION F	REQUIREMEN	TS IN THE FA	ARM AND FORE	ST
		V	1		
A. Pu	Irpose	X			
A. Pu B. Sta	andards	X X			
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A.         Pu           B.         Sta           B.1         B.2	andards 12 Residential Units or Lots Dead-End Street	X X X X			X
<b>A. Pu</b> <b>B. Sta</b> B.1 B.2 B.3	andards 12 Residential Units or Lots Dead-End Street Connectivity Requirements	X X X X X			X
<ul> <li>A. Pu</li> <li>B. Sta</li> <li>B.1</li> <li>B.2</li> <li>B.3</li> <li>10.32 P</li> </ul>	andards 12 Residential Units or Lots Dead-End Street Connectivity Requirements PEDESTRIAN WAYS AND BICYCLE ACCESS, CIRCULA	X X X X X	ACILITIES		X
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10 VILLAGE SQUARE ROAD, NORTH YARMOUTH, MAINE 04097 PHONE: (207) 829-3705 \* FAX: (207) 829-3743



PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
B.5	Site Plan	X			
B.6	Parking Plans				
B.6.a	Bicycle parking				
B.6.b	Pedestrian Way Locations	X			
B.6.c	Village Center District and Village Residential District sidewalks on frontage with 10 or more parking spaces				X
10-33 II	NTERNAL VEHICULAR CIRCULATION		1	L	
A. <u>Safe</u>	Movement				
A.1	Clear route and Turning Area	X			
A.2	Emergency Vehicles, Routes and Signage	Х			
A.3	Layout and Design of Parking Area	X			
A.4	Designed to harmonize with site	X			
10-34 C	OFF STREET PARKING				
А. <u>Арр</u>	licability	X			
B. <u>Gen</u>	eral Requirements				
C. <u>Park</u>	ing Layout and Design	1	1		
C.1	On lot or adjacent lot	X			
C.2	Arranged so not necessary to back out on road		X		
C.3	Location of Parking				
C.4	Landscaping Plan Providing Screening				
C.5	Joint use of Parking Area Approval				
C.6	Durable surface				
C.7	Parking space size				
C.8	Diagonal parking				



## TOWN OF NORTH YARMOUTH PLANNING BOARD MAJOR SUBDVISION CHECKLIST

	SITE PLAN PERFORMANCE & DESIGN STANDARDS	Received by Planning Board	Applicant Requests to be Waived	Waiver Approved by Planning Board	Applicant Requests Not Applicable
D. <u>Park</u>	king Space Requirements				
D.1	Sufficient to accommodate				
D.2	Size of structure				
D.3	Reduce structure for sufficient parking				
D.4	On-street parking				
D.5	Availability of parking				
D.6	Pedestrian and bicycle safety				
D.7	Other standards				
E. <u>Waiv</u>	/ers				
10-35 C	OFF STREET LOADING REQUIREMENTS				
A. <u>Spe</u>	cific Uses				
A.1	Maximum number of trucks				
A.2	Type of business				
A.3	Location of loading facility				
A.4	Screening				
A.5	Desirability of service roads or alleys				
A.6	Other characteristics				
A.7	Traditional layout and historical character				
A.8	Minimize noise impacts				

#### TABLE OF CONTENTS

APPLICATION FORM AND CHECKLIST

SECTION 1 - PROJECT DESCRIPTION

SECTION 2 – PERFORMANCE STANDARDS

ATTACHMENT A – PURCHASE OF SALE AGREEMENT

ATTACHMENT B – DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS

ATTACHMENT C – AGENCY LETTERS

ATTACHMENT D – STORMWATER MANAGEMENT REPORT

ATTACHMENT E – EROSION AND SEDIMENTATION CONTROL PLAN

ATTACHMENT F – SOILS REPORT

ATTACHMENT G – TECHNICAL CAPACITY LETTER

ATTACHMENT H – CAPACITY TO SERVE LETTER

ATTACHMENT I – PLAN SET



# PROJECT DESCRIPTION

The following package is an application for a Preliminary Plan review meeting with Town of North Yarmouth Planning Board. The application is for a 14-lot senior housing subdivision off Gray Road (Route 115). The site is gradually sloping from west to east. The road will bisect the parcel to allow for building lots on either side of the road. The lots will be served by a community wastewater system. The intent is to have the subdivision served by public water (Yarmouth Water District). The proposed stormwater treatment measures include two infiltration basins fed by a closed stormwater system.

# SECTION 2

# PERFORMANCE AND DESIGN STANDARDS

#### 10-2 GENERAL LAYOUT OF DEVELOPMENT

The proposed project includes 13-senior housing lots and several areas of open space. The lots will be served by public water and community septic. The lots have been kept small to provide functional open space for recreational uses. As a senior housing neighborhood, the open space will support pickle ball courts and several outdoor seating areas.

#### 10-3 BROOK, POND, VERNAL POOL, AND WETLAND BUFFERS

There are no wetlands, streams, ponds, etc associated with this property.

#### **10-4 BUILDING DESIGN STANDARDS**

The elevations and floor plans for the proposed buildings are included as Attachment I.

#### 10-5 COMMUNITY FACILITIES IMPACT ANALYSIS AND MITIGATION

The impact to the community facilities will be negligible. The senior housing neighborhood will create no additional burden on schools and the proximity to the emergency service garage will allow for easy and timely response.

#### 10-6 EROSION AND SEDIMENT CONTROL

An Erosion Control Plan has been provided in Attachment F.

#### **10-7 EMISSIONS**

There will no emissions outside of vehicular and HVAC exhaust. Therefore, it is our belief there will be no negative emissions because of the project.



#### **10-8 EXTERIOR LIGHTING**

There are 4 streetlights proposed as part of the project. One at each entrance and one at the center point of each curve.

#### **10-9 FINANCIAL AND TECHNICAL CAPACITY**

A technical capacity letter has been included as Attachment G. A financial capacity letter will be provided at final if the board finds that acceptable.

#### 10-10 FLOODPLAIN MANAGEMENT

The proposed subdivision has been designed to meet the standards set forth by the Maine Department of Environmental Protection (DEP). There will be negligible impacts to any flood plains.

#### 10-11 HAZARDOUS, SPECIAL, AND RADIOACTIVE MATERIALS

There are no hazardous, special, or radioactive materials associated with the project.

#### **10-12 HISTORIC AND ARCHAEOLOGICAL SITES**

The correspondence with the MHPC and NAP are included in Attachment C.

#### 10-13 LANDSCAPING, BUFFERS, AND SCREENING

As many trees as possible have been kept with the majority of those being around the perimeter of the site. Street trees are proposed through the neighborhood.

#### 10-14 NATURAL BEAUTY AND AESTHETICS IN THE FARM AND FOREST DISTRICT, RESIDENTIAL SHORELAND

#### DISTRICT, AND RESOURCE PROTECTION DISTRICT

Not applicable.

#### 10-15 NOISE

The project will not have any noise impacts once the construction is complete.

#### 10-16 SEWAGE DISPOSAL

Two community septic systems are proposed. One will serve Lots 1-6 and 13. The second will serve the remaining 6 lots. Both systems will be in the same open space along Route 9. Each lot will have a FUJI septic tank and pump that will connect to one of the two force mains.

#### 10-17 SIGNS

The signs for the property will be no larger than 24 square feet and will be set off from Route 115 and 9 as not to impede any lines of site.

#### **10-18 SOIL SUITABILITY**

A high intensity soil survey was performed by Mark Hampton and is included as Attachment F.



#### 10-19 SOLID WASTE DISPOSAL

There will be common residential waste as part of the subdivision. Clearing and Construction debris will be disposed of at a facility licensed by the state to receive construction and demolition debris.

#### **10-20 STORAGE OF MATERIALS**

There are no hazardous material storage areas proposed as part of this project.

#### **10-21 STORMWATER CONTROL**

A Stormwater Management Plan has been provided in Attachment D.

#### 10-22 RECREATION AND OPEN SPACE LAND IN DEVELOPMENTS

As mentioned previously, the open space has been located and designed to serve the senior community. Proposed improvements include a pickle ball court located over the septic fields, and several seating areas throughout the remaining open space.

#### **10-23 WATER SUPPLY**

**PUBLIC WATER** – Water will be provided by the Yarmouth Water District. A letter of confirmation is included in Attachment H.

FIRE PROTECTION – A letter from the Fire Chief is pending. The subdivision will be served by fire hydrants.

#### **10-24 WATER QUALITY**

**DRINKING WATER** – During the Sketch Plan review meeting the Yarmouth Water District voiced their support of the community septic systems.

**IMPACT ON GROUNDWATER QUALITY OR QUANTITY** – There are no negative impacts on groundwater quality or quantity anticipated for this project.

#### **10-25 PROTECTION OF SIGNIFICANT WILDLIFE HABITAT**

There is no significant wildlife habitat associated with the project.

#### **10-26 PUBLIC ACCESS TO THE SHORELINE**

Not applicable.

10-27 BACK LOTS AND ACCESS

Not Applicable.

#### **10-28 ACCESS MANAGEMENT STANDARDS**

**TRAFFIC** – The addition of only 13 residential lots does not trigger any traffic studies and will have a negligible impact on Route 115 or Route 9. There is sufficient site distance in both directions at both entrances.



# 10-29 SUBDIVISION STREET CONNECTIVITY REQUIRED IN THE VILLAGE CENTER AND VILLAGE RESIDENTIAL DISTRICT

The subdivision will connect to Route 9 and 115. No other connectivity is proposed.

#### 10-30 SUBDIVISION STREET LENGTH AND CONNECTION REQUIREMENTS IN THE FARM AND FOREST

#### DISTRICT AND RESIDENTIAL SHORELAND DISTRICT

Not Applicable.

#### 10-31 PEDESTRIAN WAYS AND BICYCLE ACCESS, CIRCULATION, AND FACILITIES

Sidewalks are proposed along the proposed road and Route 115. There are existing sidewalks along Route 9 that we will connect into.

#### 10-32 INTERNAL VEHICULAR CIRCULATION

The proposed road is 22 feet wide with 5-foot sidewalks. The road connects two major Routes.

#### **10-33 OFF STREET PARKING**

Each house will have a garage.

#### 10-34 OFF STREET LOADING REQUIREMENTS

Not applicable.



# ATTACHMENT A



# ATTACHMENT B



#### DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS CROSSROAD'S SENIOR NEIGHBORHOOD, North Yarmouth

This DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS, is made as of \_\_\_\_\_\_, 2021 by WALNUT HILL INVESTMENTS, LLC, a Maine Limited Liability Company, whose mailing address is P.O. Box 307, Cumberland, Maine 04021, hereinafter referred to as the "Declarant."

#### WITNESSETH:

WHEREAS, Declarant is the owner of certain property in the Town of North Yarmouth, County of Cumberland, and State of Maine, consisting of Lots 1 through 13, \_\_\_\_\_\_\_Drive, so- called, and the Open Space, all being more particularly shown on the plan entitled, "Crossroad's Senior Neighborhood," dated June 28, 2021, approved by the Town of North Yarmouth Planning Board on \_\_\_\_\_\_, 2021, and recorded in the Cumberland County Registry of Deeds in Plan Book \_\_\_\_\_\_, Page (the "Plan");

WHEREAS, the Declarant desires to allow for the use, benefit and enjoyment of Lots 1 through 13 as shown on the Plan, and the Road, as defined below (collectively, the "Property") in accordance with a harmonious plan, consistent with the approvals, land use and zoning ordinances of the Town of North Yarmouth and the requirements of the State of Maine, and to this end desires that the Property shall be subjected to certain restrictions, reservations, covenants and easements as hereinafter set forth.

NOW THEREFORE, the Declarant HEREBY COVENANTS AND AGREES that the Property and rights appurtenant thereto are and shall be held subject to the restrictions, reservations, covenants and easements set forth in this Declaration which Declaration shall inure to the benefit of and be binding upon the Declarant, its successors, and assigns, and the owners of the Property, their respective heirs, successors and assigns and which shall run with the title to the Property and be binding on all parties having any right, title or interest in the Property or any part thereof, their heirs, successors and assigns, and shall inure to the benefit of each owner thereof.

#### ARTICLE I Definitions

1. <u>Owner</u>. "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee simple title to any and all lots which are part of the property for the purposes of this Declaration. " Owner" shall include contract sellers, but shall excluded those having such interest merely as security for the performance of an obligation.

2. <u>Building</u>. "Building" shall mean and refer to any residential structure or similar improvement.

3. Common Expenses. "Common Expenses" shall mean and refer to expenditures made

by, or financial liabilities of, the Association, together with any allocations to reserves.

4. <u>Association</u>. "Association" shall mean and refer to Crossroad's Senior Neighborhood Homeowners Association, a Maine non-profit corporation, its successors and assigns.

5. <u>Lot</u>. "Lot" shall mean and refer to each of the thirteen (13) numbered residential lot shown upon the Plan.

6. <u>Declarant</u>. "Declarant" shall mean and refer to Walnut Hill Investments, LLC, Inc., and shall also include its successors and assigns, if such successors and assigns should acquire more than one undeveloped lot from the Declarant for the purpose of development, and (b) an assignment or partial assignment of Declarant's rights hereunder.

7. <u>Declaration</u>. "Declaration" shall mean and refer to this Declaration of Covenants, Conditions and Restrictions.

8. <u>Road</u>. "Road" shall mean and refer to the subdivision road referenced as "\_\_\_\_\_\_" on the Plan, the abutting sidewalks and related utility and drainage easement areas designated on the Plan.

#### <u>ARTICLE II.</u> Protective Covenants and Restrictions

Each Lot is hereby made subject to the following protective covenants and restrictions:

1. <u>Residential use</u>. Each Lot shall be used for single family residential purposes only. Each single family residential structure located on lots 17-23 shall be occupied by at least one (1) person who is fifty-five (55) years of age or older. Each owner of a lot, after a single family residential structure has been constructed thereon, shall promptly submit to the Association, copies of a driver's license or birth certificate (or other reliable documentation requested by the Association) for each occupant of such residential structure within thirty (30) days of the initial certificate of occupancy issued by the Town of North Yarmouth. The Association shall conduct annual occupancy surveys to verify that at least one (1) person fifty-five (55) years of age or older occupies each single family residential structure. Each lot owner shall cooperate fully with, and promptly respond to, the annual occupancy surveys and accompanying requests for documentation by the Association. Each owner agrees to sign and complete an Age and Occupancy Certification. No Lot owner shall reside in any trailer, mobile home, or other temporary structure on suchland, or allow others to do so. No trade business, or commercial activity of any nature shall be conducted on such lot except those permitted by the Town of North Yarmouth, "Home Occupation" Zoning Ordinance.

2. <u>Building</u>. All buildings must be a single story minimum size of 1400 square feet of living space or a two story minimum size of 1800 square feet of living space. All buildings or other structures shall have the roof and outside finish completed within one (1) year after construction has begun. All landscaping and driveway surfacing shall be completed within one (1) year after occupancy of the dwelling. All driveways must have one (1) layer of hot

bituminous asphalt.

3. <u>Easements.</u> The property is subject to all easements shown on the Plan and the Open Space. Said easements being for the benefit of the Declarant, its successors and assigns, the Association, and third party public utilities to construct, maintain, alter and repair any culverts, swales, pipes, or other facilities necessary for adequate drainage. The Declarant reserves the right to convey a fire protection easement in the Open Space located between lots 9 and 10 to the Town of Town Yarmouth or the Association.

4. <u>Exterior Features.</u> Each home located on a Lot shall be required to have one granite yard light post with matching light fixture. Each home located on a Lot shall be required to have granite steps to the front door or front porch area.

5. <u>Septic System</u>. Lot owners shall install a Fuji Clean CEN unit to treat water before it is discharged into a drain field]. The Association shall be responsible for Fuji septic system bi-annual maintenance. Such expenses shall be included and allocated to Lot owners through the periodic Association assessments. The Town of North Yarmouth and/or its agent shall have the right to periodically inspect said systems.

#### ARTICLE III

#### Subdivision Road

Declarant shall construct the Road, the abutting sidewalks, and the related storm water and erosion control facilities, all in compliance with applicable law s and regulations. Each and every Lot shall have as an appurtenance to such Lot a right and easement to use the Road for vehicular and pedestrian ingress and egress.

The Association shall be responsible for the maintenance, upkeep, repair and replacement of the Road, regardless of whether ownership of the Road is transferred to the Association. The Road shall be maintained by the Association in a safe and passable condition, at all times. The Road shall be plowed free of snow within a reasonable amount of time after each snowfall. The Road shall be paved and maintained in that condition, provided the initial paving of the Road shall be at the Declarant's sole expense.

Upon completion of construction of the Road and related stormwater and erosion control facilities, Declarant shall have no further liability for the maintenance, upkeep, repair and replacement of the Road. By acceptance of a deed to a Lot, each owner agrees to pay its share of the costs of such maintenance, upkeep, repair and replacement of the Road, as further set forth herein and in the Bylaws.

The Declarant reserves the fee title to the Road as shown on the Plan and reserves the right to convey utility and other sewer easements and associated easements to public utilities, andthe right to convey the fee title to the Road to the Association, or the Town of North Yarmouth upon acceptance as a public street.

#### ARTICLE IV Open Space

The Open Space which is to be owned by the Homeowners Association, shall be protected, preserved and maintained in an open, natural and substantially undeveloped state. The "Open Space" shall not be used as the location for dwelling units or other nonresidential buildings or parking except as provided for below and shall only be used for the conservation and protection of natural resource areas, wildlife habitats, scenic features or views, streets and trails to be constructed, as shown on the Plan.

No unreasonably noisy behavior shall be permitted in the Open Space. Public access to the Open Space shall not be permitted, without the prior consent of the Homeowners Association.

The destruction or removal of standing timber, plants, shrubs or other vegetation shall not be permitted in the Open Space, as shown on the Plan, except however, the following:

i. The right to clear and restore forest cover and other vegetation that is damaged or disturbed by the forces of nature, such as fire or disease, when necessary to prevent the spread of disease;

ii. The right to clear and restore forest cover and other vegetation, in the event of an emergency, when necessary to prevent the spread of fire

The Association shall be responsible for the administration, management and maintenance of the Open Space designated as Open Space on the Plan.

#### ARTICLE V

#### **Enforcement Association**

1. The Association, as agent for the Lot owners under an irrevocable agency coupled with aninterest, as beneficiary of all covenants and provisions herein contained and as assignee of the Declarant, is vested with the right and duty, in its own behalf and in behalf of all Lot owners, to enforce all the covenants, liens, restrictions, and provisions herein contained; except for any specifically reserved to the Declarant under Articles II and III, and otherwise assigned or transferred.

2. Each and every owner or owners of a Lot shall be a Member of the Association, with membership therein being an appurtenant obligation of each Lot owner(s). Subject to the provisions in Article V concerning Declarant's voting rights, all Lot owners shall be entitled to one (I) vote for each Lot owned. A simple majority of the members (based on votes per Lot) of the Association shall constitute a quorum for any meeting of the Association, and a simple majority of the members (based on votes per Lot) present at a meeting may take any action. Other Provisions for the operations of the Association may be set forth in the Bylaws to be adopted by the Association. Any conflict between this Declaration and the Bylaw, other than Declarant's voting rights set forth in Article V, shall be controlled by the Bylaws. Any transfer of title to a Lot automatically transfers theregular membership appurtenant to

that Lot to the transferee(s). A transfer in mortgage, how eve r, shall not transfer membership until a foreclosure sale or sale in lieu of foreclosure is effectuated. For purposes of this Declaration, the effective date of transfer under the foregoing sentence shall be the earliest of (i) the expiration of the applicable period of redemption under the foreclosure laws of the State of Maine, or (ii) the date of execution of any deed-in-lieu of foreclosure.

3. The provisions of this Declaration have been adopted for the benefit of the owners of the Lots. Therefore, the violations or attempted violations of any covenant or restriction in this Declaration is hereby declared a nuisance, which may be remedied by any appropriate legal or equitable proceeding. If any owner shall attempt, violate or permit any violations of any of the covenants, restrictions or reservations described herein, the Declarant or the Association may commence proceedings at law or in equity to recover damages or other awards for such attempts, violations or pemlitting of the same, or to enjoin the furtherance or continuations of such attempts or violations, or both.

4. A Lot owner who is found by a court of competent jurisdiction to have violated any of the covenants, restrictions or reservations described herein, that decision shall constitute a lien on the Lot in the same manner and priority as the Assessments (as hereinafter defined). Proceedings may be maintained irrespective of the waiver of any prior violation or attempt by the same or other owners, and the failure to enforce on any one (1) occasion shall in no event be deemed to be a waiver of the right to do so thereafter as to the original breach or as to any breach subsequent thereto.

5. The Association shall make such assessments to the members as it may deem necessary tocarry out the functions and fulfill the obligations of the Association as herein described or as described in the Bylaws of the Association. Each Lot owner(s) shall apply to the Association annually, or in such periodic installments as the Association may determine, his/her proportionate share shall be one (1) share for each Lot, so that all lot owners share equally, whether or not a lot has a residence thereon. Assessments and other proper charges authorized and billed by the Association shall be a charge on the Lot and shall be a continuing lien upon the lot upon which such assessment is made. If the Assessment to a lot owner shall not be paid within thirty (30) days after the date when due, then said Assessment shall be delinquent and shall, together with interest at the rate of eighteen percent (18%) per annum or any portion thereof, costs of collection and reasonable attorneys' fees, become a continuing lien on the Lot owned by the delinquent Lot owner which lien shall bind the Lot, with the buildings and improvements thereon as well as thedelinquent Lot owner, his or her heirs, successors, personal representatives and assigns. Said lien may be enforced in the same manner as the lien for assessments against condominium units provided in the Maine Statutes, as the same may be amended. Said lien for unpaid assessments shall be prior to all liens for real estate taxes and other governmental, municipal assessment s or similar charges against the Lot. All such charges, in addition to being a lien shall also constitute the personal liability of the owner of the lot so assessed at the time of the Assessment.

#### <u>ARTICLE VI</u> Amendment; Special Voting Rights

This Declaration may be amended by a vote or by written approval of the Lot owners towhom at least fifty-one (51%) percent of the votes are allocated. Each Lot owner, other than the Declarant, shall be entitled to one vote for each Lot owned by that Lot owner, but in no event shall more than one vote be cast with respect to any Lot other than those, if any, owned by the Declarant. The Declarant (or any successor Declarant) shall be entitled to three (3) votes for each Lot owned by Declarant the expiration of five (5) years from the date of conveyance of the first Lot by Declarant to a purchaser. Thereafter, the Declarant shall be entitled to owned by the Declarant.

So long as the Declarant owns any portion of the Property or the property shown as "Remaining Land" on the plan, any amendments of this Declaration shall be effective only if approved in a written instrument or instruments executedby the Declarant. The Declarant's rights shall remain in effect until such time that all of the Lots and future lots on the "Remaining Land" have been sold.

#### ARTICLE VII

#### **General Provisions**

If a court of competent jurisdiction shall hold invalid or unenforceable any part of any provision contained in this Declaration, such holding shall not impair, invalidate or otherwise affect the remainder of this Declaration, which shall remain in full force and effect.

Declarant hereby retains the right to assign to a successor in title all or any of the rights, privileges, easements, powers and duties herein retained or reserved by the Declarant or its successors and assigns, by written instrument or instruments in the nature of an assignment which shall be effective when recorded in the Registry of Deeds, and Declarant, shall then be relieved and discharged from every duty and obligation so assigned.

Declarant hereby reserves the right to specifically assign to any other person or entity all or any portion its rights and powers established hereunder in connection with its conveyance of the remaining land owned by the assignor in the Property or its mortgage of land in the Property, and such assignment, other than an assignment as security, if accompanied by an assumption of Declarant's obligations hereunder by the assignee, shall when recorded in the Registry of Deeds for Cumberland County, Maine, relieve Declarant, its successors and assigns from its or their obligations hereunder as to the Property or portion thereof so conveyed. IN WITNESS WHEREOF, Walnut Hill Investments, LLC, Inc. has caused this instrument to besigned and sealed in its corporate name by Benjamin C. Grover, its President, thereunto duly authorized this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

WALNUT HILL INVESTMENTS, LLC, INC., a Maine corporation

Benjamin C. Grover Title: President

# STATE OF MAINE Cumberland, SS.

Witness

, 2021

Then personally appeared the above-named Benjamin C. Grover, President of Walnut Hill Investments, LLC, Inc., and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of Walnut Hill Investments, LLC, Inc.

Notary Public/Attorney at Law

Commission Expiration

#### CROSSROAD'S SENIOR NEIGHBORHOOD HOMEOWNERS ASSOCIATION BYLAWS

#### <u>ARTICLE I</u> Name, Offices, and Purpose

<u>Section 1</u>. Name. The name of the Association is the "Crossroad's Senior Neighborhood Homeowners Association."

Section 2. The purposes of the Association are:

- a. To establish a non-profit association of residential Lot owners for the fulfillment and enforcement of the Lot owners' responsibilities as described in a Declaration of Covenants, Conditions and Restrictions for Crossroad's Senior Neighborhood Neighborhood Subdivision dated
   \_\_\_\_\_\_, 2021, and to be recorded in the Cumberland County Registry of Deeds. The effectiveness of this Association depends upon the cooperation and participation of the members.
- b. In addition to all of the powers, authority and responsibilities granted to or imposed upon this Association as a nonprofit corporation by the laws of the State of Maine, all of which this Association shall have, this Association shall have the following specific powers to the fullest extent permitted by law:

To levy and collect regular and special assessments and other charges against members as Lot owners; to appoint agents, to hire employees, and to make contracts; to promulgate rides and regulations as may be permitted by the Declaration, for the members of the Association; and generally to do any and all lawful acts necessary or convenient for the fulfillment of the foregoing purposes permitted under Title 13-B of the Maine Revised Statutes, as amended.

#### ARTICLE II Definitions

<u>Section 1</u>. "Association" shall mean and refer to the nonprofit corporation, Crossroad's Senior Neighborhood Homeowners Association, its successors and assigns.

Section 2. "Property" shall mean and refer to that certain real property in North Yarmouth, Maine, shown as "Lots 1 through 13, inclusive," \_\_\_\_\_ Drive, so- called, and the Open Space, all being more particularly shown on the plan entitled, "Crossroad's Senior Neighborhood, North Yarmouth, Maine," dated \_\_\_\_\_\_ 2021, approved by the Town of North Yarmouth Planning Board on \_\_\_\_\_\_, 2021, and recorded in the Cumberland County Registry of Deeds in Plan Book \_\_\_\_\_\_, Page \_\_\_\_\_ (the "Plan"); and such additions thereto as may hereafter be brought within the jurisdiction of the Association.

Section 3. "Lot" shall mean and refer to any of the residential building lots of 1 through 13 inclusive, as shown on the Plan.

<u>Section 4</u>. "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee simple title to any Lot that is a part of the Properties, including contract sellers, but excluding those having such interest merely as security for the performance of an obligation,

Section 5. "Declarant" shall mean and refer to Walnut Hill Investments, LLC, Inc. its successors or assignee.

<u>Section 6</u>. "Declaration" shall mean and refer to the "Declaration of Restrictions, Crossroad's Senior Neighborhood," applicable to the Property, dated \_\_\_\_\_\_, 2021 to be recorded in the Cumberland County Registry of Deeds.

Section 7. "Member" shall mean and refer to those persons entitled to membership asprovided in the Declaration,

#### ARTICLE III

#### Meetings of Members

#### Section 1. Place of Meetings.

Meetings of members may be held at the offices of the Association or at any other place within or without the State of Maine, as determined by the officers. It is permissible to hold meetings wherein one or two of the members to be present may be present by means of a conference call amplified to be heard by all those present in the meeting room.

#### Section 2. Annual Meeting.

The first annual meeting of the members shall be held within one year from the date of incorporation of the Association, and each subsequent regular annual meeting of the members shall be held on the same day of the same month of each year thereafter, at the hour of six o'clock, p.m., unless otherwise mutually agreed. If the day for the annual meeting is a legal holiday, the meeting will be held at the same hour on thefirst day following which is not a legal holiday at the offices of the Association or at such other time and place as the members may determine. At the annual meeting, directors for the upcoming year shall be elected and other business shall be conducted. If a quorum shall not be present, such meeting may be adjourned by the members present for a period not exceeding sixty (60) days.

In case it shall happen at any time that an election shall not be held on the day herein before designated, such election may by be held at any subsequent meeting of the members atwhich a quorum may be present, such meeting to he called by the Board of Director s or any member or members holding not less than a majority of the number of voting rights, or by the Registered Agent, upon written request of such directors or members, by giving notice of the time and the place of holding such meeting in the manner provided by these Bylaws for giving notice of meetings.

#### Section 3. Special Meetings.

Special meetings of the members, except as otherwise expressly provided, may be called by any of the following:

- A. The President of the Association;
- B. Written request of not less than thirty-three percent (33%) of the members; or
- C. The Board of Directors.

#### Section 4. Notice of Meetings.

A. Except when notice is waived, as hereinafter provided, written or printed notice of each annual or special meeting of members shall be sent by the Registered Agent to all members entitled to vote at the meeting, by mailing the same, postage prepaid, not less than fifteen (15) days and not more than fifty (50) days prior to the meeting, addressed to such members at their respective addresses as recorded upon the books of the Association. Such notice shall state the place, day and hour of the meeting, and the purpose

or purposes for which it is called. An affidavit of the mailing of such notice with a copy of the notice attached made by the person depositing the notices in the post office shall be sufficient proof of compliance with this requirement. No notice of any regular or special meeting of membersis required, if all members entitled to vote or their respective attorneys thereunto duly authorized file with the records of the meeting a written waiver of such notice.

Section 5. Waiver of Notice and Call.

- A. Notice of a meeting of members need not be given to any member who signs awaiver of notice in person or by proxy, either before or after the meeting.
- B. Such signed waiver of notice shall also constitute a waiver of formal call of the meeting.
- C. Attendance of a member at a meeting, in person or by proxy, shall of itselfconstitute waiver of notice and call, and of any defects therein, except when the member attends a meeting solely for the purpose of stating his objection, at the beginning of the meeting, to the transaction of any business on the ground that the meeting is not lawfully called or convened, or that insufficient notice thereof was given.

Section 6. Record Date for Determining Members.

Members of record at the close of business, two business days prior to the date noticeof meeting is mailed or given, shall be the members entitled to notice and have voting rights.

Section 7. Quorum of Members.

The presence at the beginning of any meeting of the Association, in person or by proxy, of more than fifty percent (50%) of the members of the Association shall constitute a quorum for the transaction of all business.

Section 8. Proxies.

At all meetings of members, each member may vote in person or by proxy. All proxies shall be in writing and filed with the secretary. Every proxy shall berevocable and shall automatically cease upon conveyance by the member of his Lot.

Section 9. Unanimous Consent.

Any action required or permitted to be taken at a meeting of the members, including annual meetings, may be taken without a meeting, if a consent in writing, setting forth the actions so taken, is signed by all of the members entitled to vote thereon.

#### Section 10. Order of Business.

The order of business at all meetings shall be generally as follows, if applicable:

- A. Roll Call.
- B. Proof of Notice of Meeting or Waiver of Notice.
- C. Reading of Minutes of preceding meeting.
- D. Reports of Officers.
- E. Report of Board of Directors.
- F. Report of Committees.
- G. Election of the Board of Directors.
- H. Unfinished Business.
- I. New Business.

#### J. Adjournment.

#### ARTICLE IV Membership in the Association

#### Section 1. Membership.

The members of the Association shall consist of each Ownerof a Lot.

#### Section 2. Election.

Each Owner of the Lots shall become a member upon ownership of a Lot. Such membership shall be thereafter effective until each such Owner shall convey each Lot or residence, whether or not for value, by gift, devise or otherwise. Where property is owned by more than one Owner, such Owners shall be considered one member.

#### Section 3. Voting.

Voting of members shall be in accordance with the provisions of the Declaration and the Articles of Incorporation for the Association. Votes allocated to a member may be cast pursuant to a proxy duly executed in writing by a member. A proxy is void if it is not dated or purports to be revocable without notice. A proxy shall automaticallyterminate ten (10) months after its date, unless it specifies a shorter time.

At any meeting at which a quorum is present, the affirmative vote of a majority of themembers present shall determine any question except the election of the Directors, unless a greater percentage vote is required by Law or by these Bylaws. In the election of Directors, those receiving the greatest number of votes, though less than a majority shall be elected.

The Board of Directors of the Association shall manage the Association and exercisesuch powers on behalf of the Association, subject to the terms of these Bylaws.

#### Section 4. Non Profit.

The Association is a corporation that is not organized for profit and no property or profit thereof shall inure to the benefit of any person except in furtherance of the non-profit making purposes of the Association.

#### ARTICLE V

#### Board of Directors

#### Section 1. General.

The business and affairs of the Association shall be managed by a Board of Directors, which shall exercise such powers on behalf of the Association, subject to the terms of these Bylaws. The initial Board of Directors shall consist of three (3) persons to be appointed by the Declarant. The members so appointed may be removed and replaced by Declarant at Declarant's sole discretion. No later than sixty (60) days after the Declarant's completion of the construction, marketing and sale of all Lots, the Members shall elect a Board of Directors consisting of at least three (3) and no more than ten (10) individuals. Each director shall hold office for a one (1) year term and until his successor shall have been elected and qualified.

#### Section 2. Election.

Within the sixty (60) day period immediately preceding the date by which directors appointed by the Declarant must resign pursuant to the Declaration and these Bylaws, a Special Meeting of the
Association shall be held at which the Members shall vote for the election of at least three (3) and no more than ten (10) directors, which directors shall replace the prior directors appointed by the Declarant upon their mandatory resignation. All successor directors elected at said Special Meeting shall take office upon the resignations of the directors called for under the Declaration and these Bylaws and shall serve until the Annual Meeting next following their election. Thereafter, the Board of Directors shall he elected by the members at the Annual Meeting.

#### Section 3. Meeting.

The Board of Directors may provide, by resolution, for regularmeetings at a time and place, within or without the State designated in such resolution. Annual meetings shall usually follow the annual meetings of the members, Special meetings of the Board of Directors may be called by or at the request of the President or any two directors at a time and place designated by the Board of Directors.

#### Section 4. Notice.

Regular meetings of the Board of Directors may be held without notice if the time and place of the meetings are fixed by the Board. If a time and place has not been fixed, regular meetings and special meetings shall be held upon written notice sent by mail not less than three (3) business days before the meeting. Any director may waive notice in writing either before or after the meeting. Notice of adjournment of a meeting need not be given if the time and place to which it is adjourned is fixed and announced at such meeting.

Neither the business to be transacted at, nor the purpose for which any Board meeting iscalled need be specified in the notice or waiver of notice. Attendance of a director at a meeting shall constitute a waiver of any notice and any defect in such notice.

#### Section 5. Quorum.

A majority of directors then in office shall constitute a quorum for the transaction of business. If there are less than a majority at any meeting, a majority of the directors present may adjourn the meeting from time to time without further notice. The vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors. The Directors present at a duly called or held meeting at which a quorum was once present may continue to do business notwithstanding the withdrawal of enough directors to leave less than a quorum.

#### Section 6. Action.

Action taken by the Board of Directors shall be by majority vote.

#### Section 7. Compensation.

The Board of Directors shall receive no compensation for their services as Directors; however, the members may by vote at any meeting reimburse Directors for out of pocket expenses incurred in such capacity.

#### Section 8. Members.

All members of the Board of Directors shall be members of the Association, except those appointed by Declarant as permitted herein.

#### Section 9. Committees.

The Board of Directors may, by resolution, designate an executive committee and other committees consisting of two (2) or more directors and such committees may exercise all the power of the Board except those prohibited by law.

#### Section 10. Unanimous Consent.

Any action required or permitted to be taken at ameeting of the Board of Directors, including annual

meetings, may be taken without a meeting, if a consent in writing, setting forth the actions so taken, is signed by all of the directors entitled to vote thereon.

Section 11. Vacancies.

Any vacancy in the Board of Directors may be filled for the unexpired term by a majority of the remaining directors though less than a quorum of the Board.

### Section 12. Powers.

In addition to all the powers, authority and responsibilities granted to or imposed upon this Association by the Laws of the State of Maine, the Association shall have the specific powers to:

- A. Adopt and amend Bylaws;
- B. Prepare a proposed budget for presentation to the annual meeting of members;
- C. Adopt and amend Rules and Regulations regarding the use, repair, maintenance and replacement of any property owned or managed by the Association;
- D. Hire and terminate employees, agents and independent contractors;
- E. Pay taxes and assessments which may be levied against any part of the Association property and provide for the payment of the same by the members throughbudget approval;
- F. Determine the appropriate annual pro-ration and apportionment of dues among members, and the timely due date for payment thereof;
- G. Take such action against such members as may be appropriate and lawful tocollect unpaid dues or assessments;
- H. Institute, defend, or intervene in litigation or administrative proceedings in itsown name on behalf of itself or members of the Board of Directors on matters affecting the Association;
- I. Provide plowing, mowing and maintenance of the Road and Open Space; and
- J. Maintain \_\_\_\_\_ Drive, the abutting sidewalks and related utility and drainage easement areas designated on the Plan, all in accordance with the Declaration.
- K. Maintain each Fuji Clean CEN unit located on each Lot, which maintenanceshall be conducted on a bi-annual basis, all in accordance with the Declaration; and
- L. Exercise any other powers conferred by the Declaration or these Bylaws.

## ARTICLE VI

#### Officers and Term of Office

Section 1. Reservation of Authority.

Until the members specifically- vote to elect directors, or the same shall come into existence by operation of law, all authorities, privileges and rights ordinarily delegated to directors are vested in the Registered Agent of the Corporation. Meetings of the members may be represented to be meetings of directors if the nomenclature used by others demands it.

#### Section 2. Officers, Powers and Duties.

The Association shall have as officers, a President, Treasurer and Registered Agent and such other officers, which may included one or more Vice Presidents, one or more Assistant Treasurers, a Secretary and one or more Assistant Secretaries, as the members may from time to time determine. The officers of the Association shall be the same as the officers of the Board of Directors. The several officers shall have such powers and duties not inconsistent with these Bylaws, as the Board of Directors may from time to time determine. The same person may occupy one or more offices. Officers shall be chosen annually, may be removed at any time with or without causeby the Board of Directors and subject to such removal shall continue in office until their successors are chosen and qualified. The Board of Directors may establish an Executive Committee to act between the directors' meetings with such authorities as the Board of Directors may from time to time determine.

#### Section 3. Election of Officers.

All officers shall be elected by ballot of the directors, except that in the first instance all such officers may be elected at the first meeting of incorporation to serve until their successors are duly chosen and qualified. The Treasurer and Assistant Treasurer shall give bond for the faithful performance of their duties, if the directors shall so require, in such form and for such sum as the directors shall determine the Registered Agent shall be a resident of the State of Maine and shall be sworn to the faithful performance of his duties.

#### Section 4. Vacancies.

In case of a vacancy in any office for any cause, the directors may elect a successor to the vacant office, and any successor so elected shall hold office until the next annual meeting of the directors and until his successor shall be duly elected and qualified.

#### Section 5. President.

The President shall be the chief executive officer of the Association, shall preside at all meetings of the members and directors and shall also havesuch powers and duties as the Board of Directors shall from time to time determine.

#### Section 6. Vice Presidents.

Vice Presidents, if and when elected, shall have suchpowers and duties as the Board of Directors and the President shall designate.

#### Section 7. Treasurer.

The Treasurer shall be the general financial agent of the Association. Subject to the direction of the directors, he shall have custody of the monies and securities of the Association, except his own bond, and shall keep in books of the Association which shall be in his custody accurate records of all transactions of the office, which shall be open at all reasonable times to the inspection of any director. Ile shall have the authority to sign and endorse all checks and notes received by the Association, draw and accept all bills and drafts and also receive and give proper receipts and discharges for all monies due the Association from whatever source, unless otherwise restricted, He shall perform such other duties as the Board of Directors may prescribe.

#### Section 8. Assistants.

Assistant Secretaries and Assistant Treasurers shall assist the Secretary or Treasurer, as the case may be, in the performance of his duties and at the requestof such officers or of the President, shall perform the duties of such officers in the event of the absence or inability to act of such officers. They shall also perform such duties as the Board of Directors may from time to time prescribe for them or as the President may from time to time direct. Each Assistant Treasurer shall, ii requested to do so by the Board of Directors, furnish bond in such amount as may be determined by the Board of Directors.

Section 9. Registered Agent.

The Registered Agent shall be sworn to the faithful discharge of his duties and shall record in books kept for that purpose all the votes and proceedings of the Board of Directors at their meetings. He shall also perform such otherduties as shall be prescribed by the Board of Directors.

<u>Section 10</u>. Salaries. The several officers of the Association shall not receive salaries for their services.

Section 11. Indemnification.

A. Each person who shall be or shall have been an officer of this Association shall be indemnified by this Association against all liabilities and expenses at any time imposed upon or reasonably incurred by him in connection with, arising out of or resulting from any action, suit or proceeding in which he may be involved or with which he may be threatened, by reason of his then serving or theretofore having served as an officer of this Association, or of any other corporation, of which he shall at the request of this Association then be serving or theretofore have served as an officer or by reason of any allegedact or omission by him in any such capacity, whether or not he shall be serving as an officer or director of this or such other corporation at the time any or all of such liabilities or expenses shall be imposed upon or incurred by him.

B. The matters covered by the foregoing indemnity shall include any amounts paid by any such person in compromise or settlement if such compromise or settlement shallbe approved as in the best interests of the Corporation by vote of a majority of disinterested Board of Directors and member s present or represented at a meeting called for that purpose; but such matters shall not include liabilities or expenses imposed or incurred in connection with any matters as to which such person shall be finally adjudged in such action, suit or proceeding to be liable to this or such other corporation by reason of dereliction in the performance of his duty as such officer.

C. Each person who shall become an officer of this Association or of any such other corporation as aforesaid shall be deemed to have accepted and to have continued to serve in reliance in such office in reliance upon the indemnity herein provided. These indemnity provisions shall be separable, and if any portion thereof shall be adjudged to be invalid, such invalidity shall not affect any other portion which can be given effect without the invalid portion.

### ARTICLE VII

Checks, Notes, Drafts and Other Instruments

<u>Section 1</u>. Checks, notes, drafts and other instruments for the payment of money drawn or endorsed in the name of the Association may be signed by any officer or officers or persons or persons authorized by the Board of Directors to sign the same. No officer or personshall sign any such instrument as aforesaid unless authorized by the Board of Directors to do so.

<u>Section 2</u>. Any loans from members to the Association shall be memorialized bypromissory notes from the Association.

# ARTICLE VIII

Assessments

If any Lot owner shall fail or refuse to pay to the Association when due his or her share of the assessments, user fees and penalties, thereafter the amount thereof shall bear interest at the rate of

eighteen percent (18%) per annum or such other rate as may be set by vote of the Board of Directors prior to the date on which the payment came due. Such Assessments with such late charges as may be determined by the Board of Directors, interest and all costs of collection, including reasonable attorneys' fees, shall constitute a lien on the Lot of such owner. Recording of the Declaration constitutes record notice and perfection of the lien for Assessments, including penalties, late charges, interest and costs of collection.

The Association may record a notice from time to time stating the amount and nature of the lien signed by an officer or director of the Association or by an agent authorized by the Boardof Directors but such recorded notice is not necessary to establish or perfect the lien.

If such payments are not received within thirty (30) days after they become due, the Board shall exercise and enforce any and all rights and remedies provided in the Declaration or these Bylaws or otherwise available at law or in equity for the collection of all unpaid amounts. In any action to foreclose the lien for Assessments, late charges, penalties, interest, and costs of collection including reasonable attorneys' fees against any owner of a Lot, the Association may act through its manager or Board of Directors in the same manner as any mortgagee of real property. The manager or Board of Directors acting on behalf of the Lot owners shall have the power to bid and acquire such Lot at a foreclosure sale and to lease, mortgage, convey, or otherwise deal with the Lot. Suit to recover a money judgment for unpaid Assessments and penalties due to the Association, with interest and all costs and reasonable attorneys' fees, may be maintained without foreclosing upon or waiving the lien securing the same.

The lien is extinguished unless action to enforce the lien is started within Six (6) yearsafter the full amount of the Assessment becomes due.

If at any time the Board shall determine the amount of the Assessments to be inadequate, whether by reason of a revision in its estimate of expenses or income, the Board may adopt and deliver to the members at least thirty (30) days prior to the date on which it becomes effective, a revised estimated annual budget for the balance of such fiscal year and thereafter monthly Assessments shall be determined and paid on the basis of such revision, subject to the rights of the members to reject such amendment by not less than eighty-five percent (85%) of the votes of the members at a meeting of the members called within such thirty (30) day period at the request of not less than twenty percent (20%) of the Lot owners.

The Board of Directors may, upon determining that circumstances exist which requires immediate assessment of the Lot owners, make special assessments, not to exceed anamount equal to one current monthly Assessment for each Lot unless approved by the Lot owners, which shall be due and payable when delivered to the Lot owners.

# ARTICLE IX

#### Corporate Seal

The Association shall have a seal in circular form having within its circumference the words: Crossroad's Senior Neighborhood Neighborhood Subdivision Homeowners' Association.

# ARTICLE X

#### Amendments

<u>Section 1</u>. These Bylaws may be amended at a regular or special meeting of the members, by a vote of a majority of a quorum of members present in person or by proxy, along with the written approval of Declarant.

<u>Section 2</u>. In the case of any conflict between the Articles of Incorporation and these Bylaws, the Articles shall control; and in the case of any conflict between the Declaration and these Bylaws, the Declaration shall control.

#### ARTICLE XI Miscellaneous

The fiscal year of the Association shall begin on the first day of January and end on the 31st day of December of every year, except that the first fiscal year shall begin on the date of incorporation.

#### **CERTIFICATION**

I, the undersigned, do hereby certify:

THAT the foregoing Bylaws constitute the original Bylaws of said Crossroad's Senior Neighborhood Neighborhood Subdivision Homeowners Association.

IN WITNESS WHEREOF, Benjamin C. Grover of Walnut Hill Investments, LLC Inc., incorporator of Crossroad's Senior Neighborhood Homeowners Association, has executed this document this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

WALNUT HILL INVESTMENTS, LLC, INC., a Maine corporation

Witness

Benjamin C. Grover Title: President

# ATTACHMENT C



Preliminary Subdivision Application



STATE OF MAINE DEPARTMENT OF INLAND FISHERIES & WILDLIFE 284 STATE STREET 41 STATE HOUSE STATION AUGUSTA ME 04333-0041



June 9, 2021

Charles Burnham Atlantic Resource Consultants 541 US Route 1, Suite 21 Freeport, ME 04032

### RE: Information Request - Crossroads Apartments Subdivision Project, North Yarmouth

Dear Charles:

Per your request received on May 07, 2021, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *Crossroads Apartments Subdivision* project in North Yarmouth.

Our Department has not mapped any Essential Habitats or inland fisheries habitats that would be directly affected by your project.

## Endangered, Threatened, and Special Concern Species

<u>Bat Species</u> – Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine's Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (State Endangered), northern longeared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are listed as Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

## Significant Wildlife Habitat

<u>Significant Vernal Pools</u> - At this time MDIFW Significant Wildlife Habitat (SWH) maps indicate no known presence of SWHs subject to protection under the Natural Resources Protection Act (NRPA) within the project area, which include Waterfowl and Wading Bird Habitats, Seabird Nesting Islands, Shorebird Areas, and Significant Vernal Pools. However, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Letter to Charles Burnham, Atlantic Resource Consultants Comments RE: Crossroads Apartments Subdivision, North Yarmouth June 9, 2021

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

Becca Settele Wildlife Biologist





STATE OF MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

> 177 STATE HOUSE STATION AUGUSTA, MAINE 04333

Amanda E. Beal Commissioner

JANET T. MILLS GOVERNOR

May 7, 2021

Victoria Wilson Atlantic Resource Consultants 451 US Route One Suite 21 Freeport, ME 04032

Via email: tori@arc-maine.com

Re: Rare and exemplary botanical features in proximity to: #21-027, Crossroad Apartments, North Yarmouth, Maine

Dear Ms. Wilson:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received May 6, 2021 for information on the presence of rare or unique botanical features documented from the vicinity of the project in North Yarmouth, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR MAINE NATURAL AREAS PROGRAM BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-804490 WWW.MAINE.GOV/DACF/MNAP Letter to Atlantic Resource Consultants Comments RE: Crossroad Apartments, North Yarmouth May 7, 2021 Page 2 of 2

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

# Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program 207-287-8044 | <u>lisa.st.hilaire@maine.gov</u>

# Rare and Exemplary Botanical Features within 4 miles of Project: #21-027, Crossroad Apartments, North Yarmouth, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat	
Adder's Tongue Ferr	1						
	SC	S1	G5	1905-08-10	7	Non-tidal rivershore (non-forested, seasonally wet),Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)	
Engelmann's Spikeru	ısh						
	PE	SH	G4G5	1916-08-31	2	Open wetland, not coastal nor rivershore (non-forested, wetland)	
Fern-leaved False Fo	oxglove						
	SC	S3	G5	1902-09-02	13	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)	
Great Blue Lobelia							
	PE	SX	G5	1905-09	3	Forested wetland, Non-tidal rivershore (non-forested, seasonally wet)	
Hollow Joe-pye Wee	d						
	SC	S2	G5?	2015-10-15	26	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)	
Horned Pondweed							
	SC	S2	G5	1913-09-13	9	Tidal wetland (non-forested, wetland)	
Marsh Milkwort							
	PE	SH	G5T4	1903-08-18	1	Dry barrens (partly forested, upland),Open wetland, not coastal nor rivershore (non-forested, wetland)	
Oak - Hickory Forest							
	<null></null>	S1	G4G5	2014-08-21	5	Hardwood to mixed forest (forest, upland)	
Pocket Swamp							
	<null></null>	S2	G5	2017-07-27	24	Forested wetland, Hardwood to mixed forest (forest, upland)	
Rattlesnake Hawkwe	ed						
	E	S1	G5T4Q	1909-07	1	Dry barrens (partly forested, upland)	
Smooth Winterberry	Holly						

Maine Natural Areas Program

Page 1 of 2

www.maine.gov/dacf/mnap

# Rare and Exemplary Botanical Features within 4 miles of Project: #21-027, Crossroad Apartments, North Yarmouth, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	SC	S3	G5	2017-08-23	45	Forested wetland
Spotted Wintergreen						
	Т	S2	G5	2009-07-26	30	Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)
Upper Floodplain Har	dwood Forest					
	<null></null>	S3	GNR	2017-05-17	18	Forested wetland
Water-plantain Spear	wort					
	PE	SH	G4	1903-07-29	2	Open water (non-forested, wetland)
Wild Leek						
	SC	S3	G5	2017-05-17	28	Hardwood to mixed forest (forest, upland),Forested wetland

# **Conservation Status Ranks**

**State and Global Ranks**: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of 1 to 5. Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1	Critically Imperiled – At very high risk of extinction or elimination due to very restricted
G1	range, very few populations or occurrences, very steep declines, very severe threats, or
	other factors.
S2	Imperiled – At high risk of extinction or elimination due to restricted range, few
G2	populations or occurrences, steep declines, severe threats, or other factors.
S3	Vulnerable – At moderate risk of extinction or elimination due to a fairly restricted range,
G3	relatively few populations or occurrences, recent and widespread declines, threats, or
	other factors.
S4	Apparently Secure – At fairly low risk of extinction or elimination due to an extensive
G4	range and/or many populations or occurrences, but with possible cause for some concern
	as a result of local recent declines, threats, or other factors.
S5	Secure – At very low risk or extinction or elimination due to a very extensive range,
G5	abundant populations or occurrences, and little to no concern from declines or threats.
SX	Presumed Extinct – Not located despite intensive searches and virtually no likelihood of
GX	rediscovery.
SH	Possibly Extinct – Known from only historical occurrences but still some hope of
GH	rediscovery.
S#S#	Range Rank – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of
G#G#	uncertainty about the status of the species or ecosystem.
SU	<b>Unrankable</b> – Currently unrankable due to lack of information or due to substantially
GU	conflicting information about status or trends.
GNR	<b>Unranked</b> – Global or subnational conservation status not yet assessed.
SNR	
SNA	<b>Not Applicable</b> – A conservation status rank is not applicable because the species or
GNA	ecosystem is not a suitable target for conservation activities (e.g., non-native species or
	ecosystems.
Qualifier	Definition
S#?	Inexact Numeric Rank – Denotes inexact numeric rank.
G#?	
Q	Questionable taxonomy that may reduce conservation priority – Distinctiveness of this
	entity as a taxon or ecosystem type at the current level is questionable. The "Q" modifier
	is only used at a global level.
T#	Infraspecific Taxon (trinomial) – The status of infraspecific taxa (subspecies or varieties)
	are indicated by a "T-rank" following the species' global rank.

**State Status**: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition						
E	Endangered – Any native plant species in danger of extinction throughout all or a						
	significant portion of its range within the State or Federally listed as Endangered.						
Т	Threatened – Any native plant species likely to become endangered within the						
	foreseeable future throughout all or a significant portion of its range in the State or						
	Federally listed as Threatened.						
SC	Special Concern – A native plant species that is rare in the State, but not rare enough to						
	be considered Threatened or Endangered.						
PE	Potentially Extirpated – A native plant species that has not been documented in the State						
	in over 20 years, or loss of the last known occurrence.						

**Element Occurrence (EO) Ranks**: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition					
Α	Excellent – Excellent estimated viability/ecological integrity.					
В	Good – Good estimated viability/ecological integrity.					
С	Fair – Fair estimated viability/ecological integrity.					
D	Poor – Poor estimated viability/ecological integrity.					
E	Extant – Verified extant, but viability/ecological integrity not assessed.					
н	Historical – Lack of field information within past 20 years verifying continued existence of					
	the occurrence, but not enough to document extirpation.					
Х	Extirpated – Documented loss of population/destruction of habitat.					
U	Unrankable – Occurrence unable to be ranked due to lack of sufficient information (e.g.,					
	possible mistaken identification).					
NR	Not Ranked – An occurrence rank has not been assigned.					

Visit the Maine Natural Areas Program website for more information <u>http://www.maine.gov/dacf/mnap</u>



# ATTACHMENT D



Preliminary Subdivision Application



#### STORMWATER MANAGEMENT REPORT

# CROSSROAD'S SENIOR NEIGHBORHOOD NORTH YARMOUTH, MAINE JUNE 2021

#### INTRODUCTION

The project is a 13-lot open space residential subdivision. The project is located between Route 9 and 115 in North Yarmouth. The property is approximately 5 acres, with a few patches of woods.

This report discusses the Site's hydrological conditions and quantifies the stormwater runoff generated in the existing and proposed conditions.

#### DATA COLLECTION AND ASSUMPTIONS

Site Data was gathered from field observations as well as AutoCAD files and drawings. Site contour information was provided by a combination of field survey in the project area and GIS contours outside of the project area. Soils information, vernal pool assessment, BMP test pits and wetlands delineation was provided by Mark Hampton. Calculations were performed to create a HydroCAD stormwater model, which is based on the United States Department of Agriculture's (USDA) Technical Release 20 (TR-20) and Technical Release 55 (TR-55) hydraulic programs.

Curve numbers (CN's) assigned to differing land cover and soil types were taken from tables within the HydroCAD software, which are from the SCS TR-55 manual, revised 1986. 24-hour rainfall depths were taken from the 'Stormwater Management for Maine: Volume III BMP's Technical Design Manual, January 2006". Time of concentrations were calculated with the HydroCAD software using the TR-55 methodologies including direct entry.

#### **EXISTING SITE CONDITIONS**

The site generally drains to the south, with slopes ranging from shallow (0 to 4 percent) and medium (slopes of 5 to 20%).

The majority of the property drains the south east and then drains to a smaller wetland off the west side.

#### **PROPOSED SITE CONDITIONS**

The proposed improvements consist of the road and two infiltration basins. The improvements don't trigger any Maine Department of Environmental Protection permits.

All points of analysis have been retained from the pre development conditions.

In order to achieve stormwater quantity and quality mitigation, two infiltration basins have been designed to both attenuate and treat stormwater run-off of the project. The developed areas are A soils and are less than 8% slopes. Beyond the treatment areas are wetlands, which will provide additional treatment for any runoff prior to entering any streams or channelized flow paths.

#### WATER QUANTITY & QUALITY

Water Quality and Quantity mitigation will be achieved through the installation of the aforementioned stormwater BMP. The soil filters intercepts the vast majority of stormwater from the developed areas. A summary comparison of stormwater peak flows can be found below:

ΡΟΑ	2 YR -PRE	2 YR -	10 YR -	10 YR –	25 YR –	25 YR –
	(cfs)	POST (cfs)	PRE (cfs)	POST (cfs)	PRE (cfs)	POST (cfs)
#1	0.03	0.00	0.80 0.14		2.75	1.86

The peak flows are decreased for the 2 year, 10-year and 25-year storms.

All construction will be in accordance with the most current Maine Erosion and Sedimentation Control Best Management Practices. These measures include temporary and permanent seeding, sediment barriers, and stabilized construction entrance. These measures are described on the enclosed Drawing C-300, "Erosion & Sedimentation Control Notes & Details."

### CONCLUSIONS

This project will use long-term and short-term erosion control measures that will mitigate environmental impacts from stormwater. This project will not have any significant adverse impacts on downstream properties as a result of stormwater.

Stormwater Management Report Crossroad's Senior Neighborhood June 2021

#### ATTACHMENTS

Attachment A – Pre and Post Development Hydrologic Calculations Attachment B – Stormwater Maintenance Plan Attachment C – Pre and Post Development Watershed Maps

ATLANTIC RESOURCE CONSULTANTS

Charles E. Burnham, PE

Stormwater Management Report Crossroad's Senior Neighborhood June 2021

Attachment A – Pre and Post Development Hydrologic Calculations



# Area Listing (all nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
4.549	39	>75% Grass cover, Good, HSG A (SC-1)
1.072	98	Impervious (SC-1)
2.233	32	Woods/grass comb., Good, HSG A (SC-1)
7.854	45	TOTAL AREA

# Summary for Subcatchment SC-1:

Runoff = 0.03 cfs @ 15.82 hrs, Volume= 0.022 af, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-Yr Storm Rainfall=3.10"

	Ai	rea (sf)	CN	Description						
_	1	98,175	39	>75% Gras	5% Grass cover, Good, HSG A					
		97,266	32	Woods/gra	oods/grass comb., Good, HSG A					
*		46,692	98	Impervious						
	3	42,133	45	Weighted A	verage					
	2	95,441		86.35% Pe	rvious Area					
		46,692		13.65% Imp	pervious Are	ea				
	Тс	Length	Slope	e Velocity	Capacity	Description				
	(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)					
	14.5	100	0.0200	0.11		Sheet Flow, A-B				
						Grass: Dense n= 0.240 P2= 3.10"				
	3.7	230	0.0430	) 1.04		Shallow Concentrated Flow, B-C				
						Woodland Kv= 5.0 fps				
	1.6	698	0.0110	) 7.40	118.33	Channel Flow, C-D				
						Area= 16.0 sf Perim= 15.0' r= 1.07'				
						n= 0.022 Earth, clean & straight				
	400	4 000	T - + - I							

19.8 1,028 Total

#### Summary for Pond AP-1:

Inflow /	Area	=	7.854 ac,	13.65% Imp	ervious,	Inflow Depth =	0.0	)3" for 2-Y	r Storm event
Inflow		=	0.03 cfs @	15.82 hrs,	Volume	= 0.022	af		
Primar	у	=	0.03 cfs @	15.82 hrs,	Volume	= 0.022	af,	Atten= 0%,	Lag= 0.0 min

# Summary for Subcatchment SC-1:

Runoff = 0.80 cfs @ 12.56 hrs, Volume= 0.212 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-Yr Storm Rainfall=4.60"

	Ai	rea (sf)	CN	Description						
_	1	98,175	39	>75% Gras	75% Grass cover, Good, HSG A					
		97,266	32	Woods/gra	oods/grass comb., Good, HSG A					
*		46,692	98	Impervious	-					
_	3	42,133	45	Weighted A	verage					
	2	95,441		86.35% Pe	rvious Area					
		46,692		13.65% Imp	pervious Are	ea				
	Тс	Length	Slope	Velocity	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	14.5	100	0.0200	0.11		Sheet Flow, A-B				
						Grass: Dense n= 0.240 P2= 3.10"				
	3.7	230	0.0430	1.04		Shallow Concentrated Flow, B-C				
						Woodland Kv= 5.0 fps				
	1.6	698	0.0110	7.40	118.33	Channel Flow, C-D				
						Area= 16.0 sf Perim= 15.0' r= 1.07'				
_						n= 0.022 Earth, clean & straight				
	40.0	4 000	Tatal							

19.8 1,028 Total

#### Summary for Pond AP-1:

Inflow A	rea =	7.854 ac, 13.65% Impe	ervious, Inflow	/ Depth = 0.32"	for 10-Yr Storm event
Inflow	=	0.80 cfs @ 12.56 hrs,	Volume=	0.212 af	
Primary	=	0.80 cfs @ 12.56 hrs,	Volume=	0.212 af, Atte	en= 0%, Lag= 0.0 min

### Summary for Subcatchment SC-1:

Runoff = 2.75 cfs @ 12.43 hrs, Volume= 0.473 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-Yr Storm Rainfall=5.80"

	Ai	rea (sf)	CN	Description						
_	1	98,175	39	>75% Gras	75% Grass cover, Good, HSG A					
		97,266	32	Woods/gra	oods/grass comb., Good, HSG A					
*		46,692	98	Impervious	-					
_	3	42,133	45	Weighted A	verage					
	2	95,441		86.35% Pe	rvious Area					
		46,692		13.65% Imp	pervious Are	ea				
	Тс	Length	Slope	Velocity	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	14.5	100	0.0200	0.11		Sheet Flow, A-B				
						Grass: Dense n= 0.240 P2= 3.10"				
	3.7	230	0.0430	1.04		Shallow Concentrated Flow, B-C				
						Woodland Kv= 5.0 fps				
	1.6	698	0.0110	7.40	118.33	Channel Flow, C-D				
						Area= 16.0 sf Perim= 15.0' r= 1.07'				
_						n= 0.022 Earth, clean & straight				
	40.0	4 000	Tatal							

19.8 1,028 Total

## Summary for Pond AP-1:

Inflow A	Area	a =	7.854 ac, 1	13.65% Imp	ervious,	Inflow Depth =	0.72'	' for 25-	Yr Storm e	event
Inflow		=	2.75 cfs @	12.43 hrs,	Volume	= 0.473	af			
Primary	У	=	2.75 cfs @	12.43 hrs,	Volume	= 0.473	af, A	tten= 0%,	Lag= 0.0 r	min



# Area Listing (all nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
4.689	39	>75% Grass cover, Good, HSG A (SC-10, SC-11, SC-12)
1.100	98	Impervious (SC-10, SC-11, SC-12)
2.065	32	Woods/grass comb., Good, HSG A (SC-10, SC-12)
7.854	45	TOTAL AREA

#### Summary for Subcatchment SC-10:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-Yr Storm Rainfall=3.10"

	Ai	rea (sf)	CN I	Description						
	1	07,636	39 :	>75% Gras	s cover, Go	bod, HSG A				
		87,874	32	32 Woods/grass comb., Good, HSG A						
*		7,938	98	mpervious	-					
	2	03,448	38 \	Neighted A	verage					
	1	95,510	ç	96.10% Pei	rvious Area					
		7,938		3.90% Impe	ervious Area	a				
	Тс	Length	Slope	Velocity	Capacity	Description				
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	14.5	100	0.0200	0.11		Sheet Flow, A-B				
						Grass: Dense n= 0.240 P2= 3.10"				
	3.7	230	0.0430	1.04		Shallow Concentrated Flow, B-C				
						Woodland Kv= 5.0 fps				
	1.6	698	0.0110	7.40	118.33	Channel Flow, C-D				
						Area= 16.0 sf Perim= 15.0' r= 1.07'				
_						n= 0.022 Earth, clean & straight				
	40.0	4 000	Tatal							

19.8 1,028 Total

#### Summary for Subcatchment SC-11:

Runoff = 0.18 cfs @ 12.48 hrs, Volume= 0.043 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-Yr Storm Rainfall=3.10"

	Area (sf)	CN	Description							
	73,838	39	>75% Gras	% Grass cover, Good, HSG A						
*	28,085	98	Impervious							
	101,923	55	Weighted A	verage						
	73,838		72.44% Per	rvious Area						
28,085 27.56% Impervious Ar					ea					
_		<u>.</u>		<b>•</b> •						
	c Length	Slope	e Velocity	Capacity	Description					
(mir	n) (feet)	(ft/ft	) (ft/sec)	(cfs)						
14.	5 100	0.0200	0.11		Sheet Flow, A-B					
					Grass: Dense n= 0.240 P2= 3.10"					

#### Summary for Subcatchment SC-12:

Runoff = 0.12 cfs @ 12.41 hrs, Volume= 0.022 af, Depth= 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 2-Yr Storm Rainfall=3.10"

	Are	ea (sf)	CN	Description						
	2	22,793	39	>75% Gras	s cover, Go	bod, HSG A				
		2,096	32	Woods/gras	ds/grass comb., Good, HSG A					
*	1	1,873	98	Impervious						
	3	36,762	58	Weighted A	verage					
24,88967.70% Pervious Area11,87332.30% Impervious Area					vious Area					
					pervious Are	ea				
(m	Tc nin)	Length (feet)	Slop (ft/ft	e Velocity ) (ft/sec)	Capacity (cfs)	Description				
14	4.5	100	0.020	0.11		Sheet Flow, A-B				
						Grass: Dense n= 0.240 P2= 3.10"				

#### Summary for Reach R-1:

Inflow Are	a =	2.340 ac, 27	7.56% Impervious,	Inflow Depth = 0.0	00" for 2-Yr Storm event
Inflow	=	0.00 cfs @	0.00 hrs, Volume	= 0.000 af	
Outflow	=	0.00 cfs @	0.00 hrs, Volume	= 0.000 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

#### Summary for Reach R-2:

Inflow /	Area	=	0.844 ac, 3	2.30% Impervious,	Inflow Depth = $0$	.00" for 2-Yr Storm event
Inflow	=	=	0.00 cfs @	0.00 hrs, Volume	= 0.000 af	
Outflov	v =	=	0.00 cfs @	0.00 hrs, Volume	= 0.000 af	, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

#### Summary for Pond AP-1:

Inflow A	Area =	7.854 ac, 1	4.00% Impervious,	Inflow Depth = 0.0	00" for 2-Yr Storm event
Inflow	=	0.00 cfs @	0.00 hrs, Volume	= 0.000 af	
Primary	/ =	0.00 cfs @	0.00 hrs, Volume	= 0.000 af,	Atten= 0%, Lag= 0.0 min

# Summary for Pond P-1:

Inflow Area = Inflow = Outflow = Discarded = Primary =	2.340 ac, 27.5 0.18 cfs @ 12 0.06 cfs @ 15 0.06 cfs @ 15 0.00 cfs @ 0	6% Impervious, 48 hrs, Volume 18 hrs, Volume 18 hrs, Volume 00 hrs, Volume	Inflow Depth = 0 = 0.043 af = 0.043 af = 0.043 af = 0.043 af = 0.000 af	.22" for 2-Yr , Atten= 68%,	Storm event Lag= 161.8 min				
Routing by Stor-Ind Peak Elev= 185.83	d method, Time 3' @ 15.18 hrs	Span= 0.00-48.00 Surf.Area= 1,116	0 hrs, dt= 0.02 hrs sf Storage= 349	cf					
Plug-Flow detentio Center-of-Mass de	Plug-Flow detention time= 60.9 min calculated for 0.043 af (100% of inflow) Center-of-Mass det. time= 60.9 min(1,031.1 - 970.2)								
#1 185.5	0' 3,78	8 cf Custom St	age Data (Prisma	tic) Listed belo	w (Recalc)				
Elevation (feet) 185.50 188.00	Surf.Area (sq-ft) 970 2,060	Inc.Store (cubic-feet) 0 3,788	Cum.Store (cubic-feet) 0 3,788						
Device Routing	Invert	Outlet Devices							
#1 Primary	187.50'	<b>10.0' long x 5.0</b> Head (feet) 0.20 2.50 3.00 3.50 Coef. (English) 2.65 2.67 2.66	<b>breadth Broad-C</b> 0 0.40 0.60 0.80 4.00 4.50 5.00 2.34 2.50 2.70 2 2.68 2.70 2.74	Fested Rectan   1.00 1.20 1.4   5.50 2.68 2.66   2.79 2.88 2.88	gular Weir 0 1.60 1.80 2.00 2.65 2.65 2.65				
#2 Discarde	d 185.50'	2.140 in/hr Exfil Conductivity to (	<b>tration over Surfa</b> Groundwater Eleva	ace area ation = 178.00'					
<b>Discarded OutFlow</b> Max=0.06 cfs @ 15.18 hrs HW=185.83' (Free Discharge) -2=Exfiltration (Controls 0.06 cfs)									

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=185.50' (Free Discharge) ☐=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

## Summary for Pond P-2:

Inflow Area	ı =	0.844 ac, 3	2.30% Impe	ervious,	Inflow Depth =	= 0.3	31" fo	r 2-Yr	Storm event
Inflow	=	0.12 cfs @	12.41 hrs,	Volume	= 0.02	2 af			
Outflow	=	0.04 cfs @	13.15 hrs,	Volume	= 0.02	2 af,	Atten=	: 63%,	Lag= 43.9 min
Discarded	=	0.04 cfs @	13.15 hrs,	Volume	= 0.02	2 af			
Primary	=	0.00 cfs @	0.00 hrs,	Volume	= 0.00	0 af			

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 183.67' @ 13.15 hrs Surf.Area= 837 sf Storage= 134 cf

Plug-Flow detention time= 25.5 min calculated for 0.022 af (100% of inflow) Center-of-Mass det. time= 25.5 min ( 971.5 - 946.0 )

#### 21-027 Development Prepared by Full Version

Type III 24-hr 2-Yr Storm Rainfall=3.10" Printed 10/7/2021 HydroCAD® 10.00-24 s/n 08018 © 2018 HydroCAD Software Solutions LLC Page 6

Volume	Invert	Avail.Stor	rage Storage D	Description	
#1	183.50'	3,03	84 cf Custom S	Stage Data (Pri	smatic) Listed below (Recalc)
Elevation (feet) 183.50 186.00	Su	urf.Area <u>(sq-ft)</u> 780 1,647	Inc.Store (cubic-feet) 0 3,034	Cum.Store (cubic-feet) 0 3,034	
Device	Routing	Invert	Outlet Devices		
#1	Primary	185.50'	<b>10.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50 Coef. (English) 2.65 2.67 2.60 <b>2 140 in/br Ext</b>	0' breadth Bro 20 0.40 0.60 ( 0 4.00 4.50 5. 2.34 2.50 2. 5 2.68 2.70 2.	ad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 .00 5.50 70 2.68 2.68 2.66 2.65 2.65 2.65 .74 2.79 2.88 Surface area
#2	d OutFlow	Max=0.04 cfs	Conductivity to s @ 13.15 hrs +	Groundwater E	Elevation = 178.00' Free Discharge)

**2=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=183.50' (Free Discharge) ←1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

#### Summary for Subcatchment SC-10:

Runoff = 0.06 cfs @ 15.02 hrs, Volume= 0.039 af, Depth= 0.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-Yr Storm Rainfall=4.60"

	Ai	rea (sf)	CN I	Description					
	1	07,636	39 :	>75% Gras	s cover, Go	bod, HSG A			
		87,874 32 Woods/grass comb., Good, HSG A							
*		7,938	98	mpervious	,				
	2	03,448	38	Weighted A	verage				
	1	95,510	ļ	96.10% Pei	rvious Area				
		7,938		3.90% Impe	ervious Area	a			
	Тс	Length	Slope	Velocity	Capacity	Description			
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	14.5	100	0.0200	0.11		Sheet Flow, A-B			
						Grass: Dense n= 0.240 P2= 3.10"			
	3.7	230	0.0430	1.04		Shallow Concentrated Flow, B-C			
						Woodland Kv= 5.0 fps			
	1.6	698	0.0110	7.40	118.33	Channel Flow, C-D			
						Area= 16.0 sf Perim= 15.0' r= 1.07'			
_						n= 0.022 Earth, clean & straight			
	40.0	4 000	Tatal						

19.8 1,028 Total

#### Summary for Subcatchment SC-11:

Runoff = 1.21 cfs @ 12.25 hrs, Volume= 0.154 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-Yr Storm Rainfall=4.60"

	Area (sf)	CN	Description				
	73,838	39	>75% Gras	s cover, Go	bod, HSG A		
*	28,085	98	Impervious				
	101,923	55	Weighted A	verage			
	73,838 72.44% Pervious Area						
	28,085		27.56% Imp	pervious Are	ea		
	c Length	Slope	e Velocity	Capacity	Description		
(mir	n) (feet)	(ft/ft	) (ft/sec)	(cfs)			
14.	5 100	0.0200	0.11		Sheet Flow, A-B		
					Grass: Dense n= 0.240 P2= 3.10"		

#### Summary for Subcatchment SC-12:

Runoff = 0.59 cfs @ 12.24 hrs, Volume= 0.067 af, Depth= 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 10-Yr Storm Rainfall=4.60"

	A	rea (sf)	CN	Description						
		22,793	39	>75% Gras	s cover, Go	bod, HSG A				
		2,096	32	Woods/gras	ods/grass comb., Good, HSG A					
*		11,873	98	Impervious						
		36,762	58	Weighted A	verage					
24,889 67.70% Pervious Area										
11,873 32.30% Impervious Are					pervious Are	ea				
(r	Tc nin)	Length (feet)	Slope (ft/ft	e Velocity ) (ft/sec)	Capacity (cfs)	Description				
-	14.5	100	0.020	0.11		Sheet Flow, A-B				
						Grass: Dense n= 0.240 P2= 3.10"				

#### Summary for Reach R-1:

Inflow Are	ea =	2.340 ac, 27.56% Impervious, In	flow Depth = 0.05	for 10-Yr Storm event
Inflow	=	0.08 cfs @ 14.45 hrs, Volume=	0.009 af	
Outflow	=	0.08 cfs @ 14.45 hrs, Volume=	0.009 af, A	tten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

#### Summary for Reach R-2:

Inflow Are	ea =	0.844 ac, 3	2.30% Impervious,	Inflow Depth = $0$ .	00" for 10-Yr Storm event
Inflow	=	0.00 cfs @	0.00 hrs, Volume	= 0.000 af	
Outflow	=	0.00 cfs @	0.00 hrs, Volume	= 0.000 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

#### Summary for Pond AP-1:

Inflow A	Area =	=	7.854 ac, <i>1</i>	14.00% Impe	ervious,	Inflow Depth =	0.0	7" for 10-Yr Storm	event
Inflow	=		0.14 cfs @	14.49 hrs,	Volume	= 0.049	af		
Primary	y =		0.14 cfs @	14.49 hrs,	Volume	= 0.049	af, .	Atten= 0%, Lag= 0.0	) min

## Summary for Pond P-1:

Inflow Area = Inflow = Outflow = Discarded = Primary =	2.340 ac, 27.4 1.21 cfs @ 12 0.19 cfs @ 14 0.11 cfs @ 14 0.08 cfs @ 14	56% Impervious, 2.25 hrs, Volume 4.45 hrs, Volume 4.45 hrs, Volume 4.45 hrs, Volume	Inflow Depth = 0 = 0.154 a = 0.154 a = 0.144 a = 0.009 a	).79" for 10-Yr Sto f f, Atten= 84%, Lag f f	orm event j= 131.8 min					
Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 187.52' @ 14.45 hrs Surf.Area= 1,851 sf Storage= 2,851 cf										
Plug-Flow detent Center-of-Mass of	Plug-Flow detention time= 317.8 min calculated for 0.154 af (100% of inflow) Center-of-Mass det. time= 317.8 min(1,226.8 - 909.0)									
		age Storage De								
#1 185.	.50' 3,78	Be of Custom S	tage Data (Prisma	atic) Listed below (R	(ecalc)					
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)							
185.50	970	0	0							
188.00	2,060	3,788	3,788							
Device Routing	lnvert	Outlet Devices								
#1 Primary	/ 187.50'	10.0' long x 5.0	breadth Broad-	Crested Rectangula	ar Weir					
		Head (feet) 0.2	0 0.40 0.60 0.80	) 1.00 1.20 1.40 1	.60 1.80 2.00					
		2.50 3.00 3.50	4.00 4.50 5.00	5.50						
		Coef. (English)	2.34 2.50 2.70 2	2.68 2.68 2.66 2.6	5 2.65 2.65					
		2.65 2.67 2.66	2.68 2.70 2.74	2.79 2.88						
#2 Discard	led 185.50'	2.140 in/hr Exfi	tration over Surfa	ace area						
		Conductivity to (	Groundwater Elev	ation = 178.00'						
Discarded OutFlow Max=0.11 cfs @ 14.45 hrs HW=187.52' (Free Discharge) <sup>●</sup>										

**Primary OutFlow** Max=0.07 cfs @ 14.45 hrs HW=187.52' (Free Discharge) **1=Broad-Crested Rectangular Weir** (Weir Controls 0.07 cfs @ 0.34 fps)

### Summary for Pond P-2:

Inflow Area	=	0.844 ac, 3	32.30% Impe	ervious,	Inflow D	epth =	0.96"	for 10-Y	'r Storm e	vent
Inflow	=	0.59 cfs @	12.24 hrs,	Volume	=	0.067	af			
Outflow	=	0.07 cfs @	14.97 hrs,	Volume	=	0.067	af, Atte	en= 88%,	Lag= 164	1.1 min
Discarded	=	0.07 cfs @	14.97 hrs,	Volume	=	0.067	af			
Primary	=	0.00 cfs @	0.00 hrs,	Volume	=	0.000	af			

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 184.69' @ 14.97 hrs Surf.Area= 1,194 sf Storage= 1,179 cf

Plug-Flow detention time= 207.0 min calculated for 0.067 af (100% of inflow) Center-of-Mass det. time= 207.0 min (1,103.9 - 896.9)
## 21-027 Development Prepared by Full Version

Volume	Invert	Avail.Stor	age Storage I	Description	
#1	183.50'	3,03	4 cf Custom	Stage Data (Pri	ismatic) Listed below (Recalc)
Elevatio (fee 183.5 186.0	n Su t) 0 0	ırf.Area <u>(sq-ft)</u> 780 1,647	Inc.Store (cubic-feet) 0 3,034	Cum.Store (cubic-feet) 0 3,034	
Device	Routing	Invert	Outlet Devices	6	
#1	Primary	185.50'	<b>10.0' long x 5</b> Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6	<b>.0' breadth Bro</b> 20         0.40         0.60           0         4.00         4.50         5           )         2.34         2.50         2.           6         2.68         2.70         2	ad-Crested Rectangular Weir           0.80         1.00         1.20         1.40         1.60         1.80         2.00           .00         5.50         .00         2.68         2.66         2.65         2.65         2.65           .74         2.79         2.88
#2	Discarded	183.50'	2.140 in/hr Ex Conductivity to	filtration over S Groundwater E	Surface area Elevation = 178.00'
Discarde	ed OutFlow	Max=0.07 cfs	s @ 14.97 hrs I	HW=184.69' (F	Free Discharge)

**2=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=183.50' (Free Discharge) ←1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

## Summary for Subcatchment SC-10:

Runoff = 0.42 cfs @ 12.60 hrs, Volume= 0.133 af, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-Yr Storm Rainfall=5.80"

_	Ai	rea (sf)	CN [	Description						
	1	07,636	39 >	>75% Grass cover, Good, HSG A						
		87,874	32 N	Voods/gras	ss comb., G	Good, HSG A				
*		7,938	98 I	mpervious						
	2	03,448	38 V	Veighted A	verage					
	1	95,510	ç	96.10% Per	rvious Area					
		7,938	3	8.90% Impe	ervious Area	a				
	Тс	Length	Slope	Velocity	Capacity	Description				
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	14.5	100	0.0200	0.11		Sheet Flow, A-B				
						Grass: Dense n= 0.240 P2= 3.10"				
	3.7	230	0.0430	1.04		Shallow Concentrated Flow, B-C				
						Woodland Kv= 5.0 fps				
	1.6	698	0.0110	7.40	118.33	Channel Flow, C-D				
						Area= 16.0 sf Perim= 15.0' r= 1.07'				
						n= 0.022 Earth, clean & straight				
	10.0	1 0 0 0	Tatal							

19.8 1,028 Total

## Summary for Subcatchment SC-11:

Runoff = 2.55 cfs @ 12.23 hrs, Volume= 0.274 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-Yr Storm Rainfall=5.80"

	A	rea (sf)	CN	Description					
		73,838	39	>75% Gras	s cover, Go	bod, HSG A			
*		28,085	98	Impervious					
	1	01,923	55	Weighted A	Veighted Average				
		73,838		2.44% Pervious Area					
		28,085		27.56% Impervious Area					
	_				<b>.</b>				
	Tc	Length	Slope	e Velocity	Capacity	Description			
(r	nin)	(feet)	(ft/ft	) (ft/sec)	(cfs)				
	14.5	100	0.020	0.11		Sheet Flow, A-B			
						Grass: Dense n= 0.240 P2= 3.10"			

## Summary for Subcatchment SC-12:

Runoff = 1.12 cfs @ 12.22 hrs, Volume= 0.115 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Type III 24-hr 25-Yr Storm Rainfall=5.80"

	Ar	rea (sf)	CN	Description					
		22,793	39	>75% Gras	s cover, Go	bod, HSG A			
		2,096	32	Woods/gras	ss comb., G	Good, HSG A			
*		11,873	98	Impervious					
		36,762	58	Weighted Average					
		24,889	389 67.70% Pervious Area						
		11,873		32.30% Imp	pervious Ar	ea			
	Тс	Length	Slope	e Velocity	Capacity	Description			
(m	nin)	(feet)	(ft/ft	) (ft/sec)	(cfs)				
1	4.5	100	0.020	0.11		Sheet Flow, A-B			
						Grass: Dense n= 0.240 P2= 3.10"			

## Summary for Reach R-1:

Inflow Are	ea =	2.340 ac, 27.56% Impervious, In	flow Depth = $0.55$ "	for 25-Yr Storm event
Inflow	=	1.48 cfs @ 12.50 hrs, Volume=	0.108 af	
Outflow	=	1.48 cfs @ 12.50 hrs, Volume=	0.108 af, Att	en= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

## Summary for Reach R-2:

Inflow A	rea =	0.844 ac, 32.30% Impervious, Inflow	/ Depth = 0.06"	for 25-Yr Storm event
Inflow	=	0.05 cfs @ 13.89 hrs, Volume=	0.004 af	
Outflow	=	0.05 cfs @ 13.89 hrs, Volume=	0.004 af, Atte	en= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

## Summary for Pond AP-1:

Inflow /	Area	=	7.854 ac, <i>´</i>	14.00% Impe	ervious,	Inflow Depth =	0.37	" for 25-`	Yr Storm	event
Inflow	=	=	1.86 cfs @	12.51 hrs,	Volume	= 0.245	af			
Primar	y =	=	1.86 cfs @	12.51 hrs,	Volume	= 0.245	af, A	Atten= 0%,	Lag= 0.0	min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs

# Summary for Pond P-1:

Inflow Are	ea = =	2.340 ac, 27.5	56% Impervious, 23 brs Volume	Inflow Dept	h = 1.40" f 274.af	or 25-Yr Storm event		
Outflow	=	1 60 cfs @ 12	2.50 hrs Volume	) = 0	274 af Atten	= 37%   ag= 16 7 min		
Discarded	4 =	0 11 cfs @ 12	250 hrs Volume	e 0.	166 af			
Primary	=	1 48 cfs @ 12	2.50 hrs Volume	) = 0.	108 af			
i iiiiai y				, 0.				
Routing by	y Stor-Ind	method, Time	Span= 0.00-48.0	0 hrs, dt= 0.	02 hrs			
	/- 107.00	@ 12.30 1115		isi Storaye	5- 3,110 01			
Plug-Flow	detention	1 time= 217.5 m	nin calculated for	0.274 af (10	0% of inflow)			
Center-of-	-Mass det	. time= 217.6 m	nin ( 1,105.2 - 88 <sup>°</sup>	7.6)				
Volume	Inver	t Avail.Stor	age Storage De	escription				
#1	185.50	' 3,78	8 cf Custom S	tage Data (F	Prismatic) Lis	ted below (Recalc)		
Elevation	n S	urf.Area	Inc.Store	Cum.Store	9			
(feet)	)	(sq-ft)	(cubic-feet)	(cubic-feet	)			
185 50	)	970	0	(	)			
188.00	)	2 060	3 788	3 788	}			
100100		2,000	0,100	0,100				
Device I	Routing	Invert	Outlet Devices					
#1 F	Primary	187.50'	10.0' long x 5.0	)' breadth B	road-Crested	Rectangular Weir		
			Head (feet) 0.2	0 0.40 0.60	) 0.80 1.00 <sup>·</sup>	1.20 1.40 1.60 1.80 2.00		
			2.50 3.00 3.50	4.00 4.50	5.00 5.50			
			Coef. (English)	2.34 2.50	2.70 2.68 2.6	38 2.66 2.65 2.65 2.65		
			2.65 2.67 2.66	2.68 2.70	2.74 2.79 2.	88		
#2 [	Discarded	185.50'	2.140 in/hr Exfi	Itration over	r Surface area	a		
			Conductivity to	Groundwate	r Elevation = <sup>·</sup>	178.00'		
			,					
Discarded	d OutFlow	Discarded OutFlow Max=0.11 cfs @ 12.50 hrs HW=187.66' (Free Discharge)						

**1**-2=Exfiltration (Controls 0.11 cfs)

Primary OutFlow Max=1.47 cfs @ 12.50 hrs HW=187.66' (Free Discharge) —1=Broad-Crested Rectangular Weir (Weir Controls 1.47 cfs @ 0.93 fps)

# Summary for Pond P-2:

Inflow Area	=	0.844 ac, 3	2.30% Impe	ervious,	Inflow	Depth =	1.63"	for 25-	Yr Storm	n event
Inflow	=	1.12 cfs @	12.22 hrs,	Volume	=	0.115	af			
Outflow	=	0.14 cfs @	13.89 hrs,	Volume	=	0.115	af, At	ten= 87%;	Lag= 1	00.0 min
Discarded	=	0.09 cfs @	13.89 hrs,	Volume	=	0.110	af			
Primary	=	0.05 cfs @	13.89 hrs,	Volume	=	0.004	af			

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.02 hrs Peak Elev= 185.51' @ 13.89 hrs Surf.Area= 1,478 sf Storage= 2,274 cf

Plug-Flow detention time= 299.7 min calculated for 0.115 af (100% of inflow) Center-of-Mass det. time= 299.7 min (1,178.2 - 878.5)

## 21-027 Development Prepared by Full Version

Volume	Invert	Avail.Stor	rage Storage	e Description				
#1	183.50'	3,03	34 cf Custon	n Stage Data (Pri	ismatic) Listed below (Recalc)			
Elevation (feet 183.50 186.00	n Su :) 0 0	urf.Area <u>(sq-ft)</u> 780 1,647	Inc.Store (cubic-feet) 0 3,034	Cum.Store (cubic-feet) 0 3,034				
Device	Routing	Invert	Outlet Device	es				
#1	Primary	185.50'	10.0' long x	5.0' breadth Bro	ad-Crested Rectangular Weir			
			Head (feet) (	0.20 0.40 0.60	0.80 1.00 1.20 1.40 1.60 1.80 2.00			
			Coef. (Englis	h) 2.34 2.50 2.	70 2.68 2.68 2.66 2.65 2.65 2.65			
			2.65 2.67 2.	.66 2.68 2.70 2	.74 2.79 2.88			
#2	Discarded	183.50'	2.140 in/hr E	xfiltration over S	Surface area			
			Conductivity	to Groundwater E	Elevation = 178.00'			
Discarde 1 2=Exf	<b>Discarded OutFlow</b> Max=0.09 cfs @ 13.89 hrs HW=185.51' (Free Discharge) <b>2=Exfiltration</b> (Controls 0.09 cfs)							

Primary OutFlow Max=0.04 cfs @ 13.89 hrs HW=185.51' (Free Discharge) ☐ 1=Broad-Crested Rectangular Weir (Weir Controls 0.04 cfs @ 0.28 fps)

Stormwater Management Report Crossroad's Senior Neighborhood June 2021

Attachment B– Stormwater Maintenance Plan

# BOWIE HILL SUBDIVISION STORMWATER MAINTENANCE PLAN

# **Maintenance Responsibilities**

During construction activities, the maintenance of all stormwater measures will be the direct responsibility of the Contractor. After acceptance by the Owner, the maintenance of all stormwater management facilities, the establishment of any contract services required to implement the program, and the keeping of records and maintenance will be the responsibility of Ben Grover.

Regular inspection and maintenance of stormwater management BMPs shall be undertaken as follows:

# Stormdrain System

Piped drainage systems shall be inspected on an annual basis to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the pipe inlet and outlet. Sediment should be removed when its level exceeds 20% of the pipe diameter. This may be accomplished by hydraulic flushing or any mechanical means; however, care should be taken to contain the sediment at the pipe outlet, and not flush the sediments into the detention/infiltration pond areas as this will reduce the ponds capacity and ability to infiltrate runoff, and will hasten the time when the pond must be cleaned/rehabilitated.

# Level Spreader

Long term maintenance of the level spreader is essential to ensure its effectiveness. Spreaders constructed of wood, asphalt, stone or concrete curbing also require inspection and maintenance. Inspections: At least once a year and following major storms, the level spreader pool should be inspected for sand accumulation and debris that may reduce its capacity.

- Sediment Removal: Sediment build-up within the swale should be removed when it has accumulated to approximately 25% of design volume or channel capacity. Dispose of the sediments appropriately.
- Debris: Remove debris such as leaf litter, branches and tree growth from the spreader.
- Mowing: Vegetated spreaders may require mowing.
- Snow Storage: Do not store snow within the area of the level spreader.
- Level Spreader Replacement: The reconstruction of the level spreader may be necessary when sheet flow from the spreader channelize into the buffer.

# **Culverts and Storm Drain Services for Lots**

Culverts and shall be inspected on an annual basis to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the pipe inlet and outlet. Sediment should be removed when its level exceeds 20% of the pipe diameter. This may be accomplished by hydraulic flushing or any mechanical means; however, care should be taken to contain the sediment at the pipe outlet, and not flush the sediments into the natural drainageways.



Stormwater Management Report Crossroad's Senior Neighborhood June 2021

Attachment C – Pre and Post Development Watershed Maps (see project plan set)

# ATTACHMENT E



Preliminary Subdivision Application

# SOIL EROSION AND SEDIMENTATION CONTROL

# Introduction

The project is a 13-lot open space senior neighborhood. The site is located between Route 9 and 115 in North Yarmouth, Maine.

# Site History and Existing Site Conditions

The existing site is predominantly wooded with on-site soils of primarily in Hydrologic Group A.

The majority of the site drains to a wetland southeast of the site.

# **Existing Erosion Problems**

There are no existing erosion problems evident at the site.

# **Critical Areas**

The critical areas in the proximity of the site are the forested wetlands.

# **Protected Natural Resources**

Forested wetlands on the Site have been identified and mapped by Steve Marcotte and are shown on the drawings that accompany this submission.

# **Soil Erosion and Sedimentation Control Measures**

The primary goals of the Erosion and Sediment Control Plan for the project are to minimize exposure of native soil materials during construction, to prevent soil erosion and sediment transport to downstream areas, receiving waters and natural resources. Measures will also be taken to ensure sediment is not tracked onto adjacent streets and that stockpiles of imported construction materials are protected from potential contamination. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. The "K" value is frequently used with the universal soil loss equation. The higher values are indicative of the more erodible soils. The project area consists of made land with pavements and building slabs covering about one-half of the site. The rear portion of the site is natural forest.

The primary emphasis of the Erosion and Sedimentation Control Plan to be implemented for this project is as follows:

- Construction Schedule Major earth moving activities at the site will be scheduled for the summer and will be started when a suitable weather window has been identified. This will minimize the potential for exposure of bare soil to inclement weather.
- Temporary Measures Planning the project to have erosion resistant measures in place with measures to prevent erosion from occurring. The plan includes measures to intercept and convey runoff to temporary sediment control devices as the construction of the project occurs.
- Stabilization of areas denuded to underlying parent material to minimize the period of soil exposure.
- > Stabilization of drainage paths to avoid rill and gully erosion.
- The use of on-site measures to capture sediment (hay bales/silt fence, etc.) before it is conveyed to sediment sumps.

## **Description and Location of Limits of All Proposed Earth Movements**

The proposed project will require stripping and grubbing for the construction of the road. The native sandy soil material is suitable for re-use as fill on the site. This will minimize import/export quantities. The topography is relatively flat, but some leveling and grade adjustment will be required.

## **Erosion/Sedimentation Control Devices**

As part of the site development, the Contractor will be obligated to implement the following erosion and sediment control devices. These devices shall be installed as indicated on the plans or as described within this report. For further reference on these devices, see the Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers, Maine DEP, October 2016.

- 1. Silt fence shall be installed down slope of any disturbed areas to trap runoff borne sediments. The silt fence shall be installed per the detail provided in the plan set and inspected immediately after each rainfall, and at least weekly in the absence of significant rainfall. The Contractor shall make repairs immediately if there are any signs of erosion or sedimentation below the fence line. If such erosion is observed, the Contractor shall take proactive action to identify the cause of the erosion and take action to avoid its reoccurrence. Proper placement of stakes and keying the bottom of the fabric into the ground is critical to the fence's effectiveness. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence, the barrier shall be replaced with a stone check dam and measures taken to avoid the concentration of flows not intended to be directed to the silt fence.
- 2. Twin rows of siltation fence with hay bales shall be installed at the foot of steep slopes and adjacent to protected natural resources (wetland areas).
- 3. Silt fence shall be installed along the downgradient side of construction work areas, with locations being adjusted along with the construction phasing areas. The Contractor may use erosion mix in place of single silt fence barrier.
- 4. Silt fence will be installed along the upstream perimeter of the work area as shown on the plans, to divert run-on from upslope areas and prevent surface water from entering the construction area. If necessary, and at the direction of the Project Engineer, interception trenches shall be constructed to prevent shallow groundwater from flowing into construction areas
- 5. Temporary sediment sumps will provide sedimentation control for stormwater runoff from disturbed areas during construction until stabilization has been achieved.
- 6. A construction entrance will be constructed at all access points onto the site to prevent tracking of soil onto adjacent local roads and streets and the existing parking lot.
- 7. Stone sediment traps or a premanufactured SiltSack<sup>™</sup> and a sediment bag will be installed at catch basin inlets to prevent silt from entering the storm drain system. Installation details are provided in the plan set on the erosion control detail sheets.
- 8. Dirtbags<sup>™</sup> will be required to be on site and available for construction dewatering. The Contractor will be required to provide four Dirtbags<sup>™</sup> with one prepared for operation prior to commencing any trenching operations.
- 9. Silt logs are an option for stone check dams and may be substituted provided the devices are well anchored.

## **Temporary Erosion/Sedimentation Control Measures**

The following are planned as temporary erosion/sedimentation control measures during construction:

The primary and most effective soil erosion and sediment control measure is proactive work scheduling to minimize exposure of erodible soils. The Contractor will make every effort to promptly stabilize and disturbed areas on the site, after removal of existing vegetation, by placing imported granular material over disturbed areas. This will limit exposure of native soils and fill materials and provide a stable surface with minimal erosion potential.

- 1. It is anticipated that work on the site will begin in the Fall of 2021. This will allow for the earthwork to be undertaken in the early and mid-summer months when the risk of inclement weather is significantly lower. Scheduling of the field work will be critical to minimizing potential soil erosion impacts. The Contractor will be responsible for selecting an appropriate weather window in which to commence the work to minimize erosion and sediment transport risk.
- 2. Crushed stone-stabilized construction entrances will be placed at any construction access points from adjacent streets. The locations of the construction entrances shown on the drawings should be considered illustrative and will need to be adjusted as appropriate and located at any area where there is the potential for tracking of mud and debris onto existing roads or streets. Stone stabilized construction entrances will require the stone to be removed and replaced, as it becomes covered or filled with mud and material tracked by vehicles exiting the site.
- 3. Silt fence shall be installed along the downgradient side of the proposed improvement areas. The silt fence will remain in place and properly maintained until the site is acceptably stabilized. Silt fence needs to be checked to ensure the bottom is properly keyed in and inspected after significant rains. Wood chips from clearing can be used in front of the silt fence to provide an extra margin of safety and security for the silt fence. This practice is encouraged, provided the chips are removed when the fence is removed.
- 4. Silt fencing with a maximum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence should be properly anchored a minimum of 6" per the plan detail and backfilled. Any silt fence identified by the owner or reviewing agencies as not being properly installed during construction shall be immediately repaired in accordance with the installation details.
- 5. Dirtbags<sup>™</sup> shall be installed in accordance with the details in the plan set. The Dirtbags'<sup>™</sup> function on the project is to receive any water pumped from excavations during construction. A Dirtbag<sup>™</sup> shall be installed and prepared for operation prior to any trenching on site. When Dirtbags<sup>™</sup> are observed to be at 50% capacity, they shall be cleaned or replaced. Stone under the Dirtbag<sup>™</sup> shall be removed and replaced concurrently with the replacement of the Dirtbag<sup>™</sup>.
- 6. Stone check dams, silt logs, or hay bale barriers will be installed at any evident concentrated flow discharge points during construction and earthwork operations
- 7. Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers or a premanufactured SiltSack<sup>™</sup> as distributed by A. H. Harris Company, Portland, Maine. Stone sediment barrier installation details are provided in the plan set. The barriers or SiltSack<sup>™</sup> shall be inspected after each rainfall and repairs made as necessary, including the removal of sediment. Sediment shall be removed and the barrier or SiltSack<sup>™</sup> restored to its original dimensions when the sediment has accumulated to one-half the design depth of the barrier. Sediment shall be removed from SiltSacks<sup>™</sup> as necessary. Inlet protection shall be removed when the tributary drainage area has been stabilized.
- 8. All slopes steeper than 4:1 shall receive erosion control blankets.
- 9. Areas of visible erosion and the temporary sediment sumps shall be stabilized with crushed stone. The size of the stone shall be determined by the contractor's designated representative in consultation with the Owner.

## Special Measures for Summer Construction

The summer period is generally optimum for construction in Maine, but it is also the period when intense short duration storms are most common, making denuded areas very susceptible to erosion, when dust control needs to be the most stringent, and when the potential to establish vegetation is often restricted by moisture deficit. During these periods, the Contractor must:

- 1. Implement a program to apply dust control measures on a daily basis except those days where precipitation is sufficient to suppress dust formation. This program shall extend to and include adjacent streets.
- 2. Spray any mulches with water after anchoring to dampen the soil and encourage early growth. Spraying may be required several times. Temporary seed may be required until the late summer seeding season.
- 3. Cover stockpiles of fine-grained materials, or excavated soils which are susceptible to erosion. To protect from the intense, short-duration storms which are more prevalent in the summer months.
- 4. Take additional steps needed, including watering, or covering excavated materials to control fugitive dust emissions to minimize reductions in visibility and the airborne disbursement of finegrained soils. This is particularly important given the potential presence of soil contaminants, and the proximity of along the adjacent streets and properties.
- 5. These measures may also be required in the spring and fall during the drier periods of these seasons.

# **Permanent Erosion Control Measures**

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

- 1. The drainage conveyance systems have been designed to intercept and convey the 25-year storm.
- 2. All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.), will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas where the finish grade slope is greater than 10 percent. Native topsoil shall be stockpiled and temporarily stabilized with seed and mulch and reused for final restoration when it is of sufficient quality.
- 3. Catch basins shall be provided with sediment sumps for all outlet pipes that are 12" in diameter or greater or where winter sand use is contemplated. A sediment collection bag shall be installed in all basins.

## **Topsoil Management**

Any topsoil removed during the project must be stockpiled on the site and reused to the maximum extent possible. Topsoil piles should be located a minimum of 50' from the edge of wetlands. If a stockpile is intended to remain for more than 14 days, it should be stabilized. All stockpiles should have an erosion control berm placed around the toe of slope.

## Timing and Sequence of Erosion/Sedimentation Control Measures

The following construction sequence shall be required to ensure the effectiveness of the erosion and sedimentation control measures is optimized.

The following construction sequence is required:

- I. Install construction entrances.
- 2. Install safety and construction fence to secure the site for demolition.
- 3. Install all perimeter siltation fence and erosion control barriers. Particular attention shall be paid to areas upstream of protected natural resources and in the vicinity of the two streams at the project site. Signs shall be erected periodically along these perimeter barriers indicating that the downstream areas are off limits to all construction activities.
- 4. Conduct demolition activities including salvage of materials that can be used for site work aggregate.
- 5. Construct activities on the site to optimize the handling of materials and restrict the denuded areas to the time stipulated.
- 6. Construct stabilized pads for foundation and building construction.

- 7. Maintain stabilized site access and working areas during building construction.
- 8. Install binder pavement.
- 9. Landscape (loam and seed).
- 10. Install surface pavements.
- 11. Install striping, signage, and miscellaneous site improvements.
- 12. Review and punch the site.
- 13. Remove any temporary erosion control measures.

It is anticipated that site construction on the project will be completed by the winter of 2021, with some building finishing work extending into the spring.

## **Maine Construction General Permit Requirements**

The project will be constructed by a General Contractor under contract to the Owner/Applicant. The Contractor will submit a detailed schedule for the completion of the work at the start of construction.

The work will be conducted in sections which will limit the amount of exposed area to those areas in which work is expected to be undertaken during the next 30 days. Exposed areas will be covered and stabilized as rapidly as practical. All areas will be permanently stabilized within 7 days of final grading and temporarily stabilized within 7 days of initial disturbance or before a predicted storm event of over  $\frac{1}{2}$ " of rain. The area of denuded, non-stabilized construction shall be limited to the minimum area practicable. An area shall be denuded until the subbase gravel is installed in parking areas, or the areas of future loam and seed have been loamed, seeded, and mulched, or stabilized with erosion control blanket.

The Contractor must maintain an accurate set of record drawings indicating the date when an area is first denuded, the date of temporary stabilization, and the date of final stabilization. On October I of any calendar year, the Contractor shall submit a detailed plan for stabilizing the site for the winter and a description of what activities are planned during the winter.

The Contractor must install any added measures which may be necessary to control erosion/sedimentation and fugitive dust emissions from the site, with adjustments made dependent upon forecasted and actual site and weather conditions.

## Maintenance of the Erosion/Sedimentation Control Features

The project will be contracted by the Owner. The Contractor shall prepare a list and designate by name, address and telephone number all individuals who will be responsible for implementation, inspection, and maintenance of all erosion control measures identified within this section and as contained in the Erosion and Sedimentation Control Plan of the contract drawings. Specific responsibilities of the inspector(s) will include:

Execution of the Contractor/Subcontractor Certification contained in Attachment B by any and all parties responsible for erosion control measures on the site.

A weekly certification stating compliance, any deviations, and corrective measures necessary to comply with the erosion control requirements of this section shall be prepared and signed by the inspector(s).

In addition to the weekly certifications, the inspector(s) shall maintain written reports recording construction activities on site which include:

- I. Dates when major grading activities occur in a particular area.
- 2. Dates when major construction activities cease in a particular area, either temporarily or permanently.

- 3. Dates when an area is stabilized.
- 4. Inspection of this project work site on a weekly basis and after each significant rainfall event (0.25 inch or more within any consecutive 24-hour period) during construction until permanent erosion control measures have been properly installed and the site has been stabilized.

Inspection of the project work site shall include:

- 1. Identification of proper erosion control measure installation in accordance with the erosion control detail sheet or as specified in this section.
- 2. Determine whether each erosion control measure is properly operating. If not, identify damage to the control device and determine remedial measures.
- 3. Identify areas which appear vulnerable to erosion and determine additional erosion control measures which should be used to improve conditions.
- 4. Inspect areas of recent seeding to determine percent catch of grass. A minimum catch of 90 percent is required prior to removal of erosion control measures.
- 5. All erosion controls shall be removed within 30 days of permanent stabilization except for mulch and netting not detrimental to the project. Removals shall include but not be limited to all silt fence, hay bales, inlet protection, and stone check dams.
- 6. Accumulated silt/sediment should be removed when the depth of sediment reaches 50 percent of the barrier height. Accumulated silt/sediment should be removed from behind silt fencing when the depth of the sediment reaches 6 inches.
- 7. Silt sacks should be removed and replaced at least every three months and at any time where the weekly inspection reveals that siltation has significantly retarded the rate of flow through the silt sack.
- 8. If inspection of the site indicates a change should be made to the erosion control plan, to either improve effectiveness or correct a site-specific deficiency, the inspector shall immediately implement the corrective measure and notify the Owner of the change.

All certifications, inspection forms, and written reports prepared by the inspector(s) shall be filed with the Owner, and the Permit File contained on the project site. All written certifications, inspection forms, and written reports must be filed within one (1) week of the inspection date.

The Contractor has sole responsibility for complying with the erosion/sediment control report, including control of fugitive dust, and shall be responsible for any monetary penalties resulting from failure to comply with these standards.

Once construction has been completed, long-term maintenance of the stormwater management system will the responsibility of the applicant. Operations & Maintenance items with a list of maintenance requirements and frequency are listed at the end of Section 12 of the Maine DEP Permit Application.

## **Preconstruction Conference**

Prior to any construction at the site, representatives of the Contractor, the Architect, the Owner, and the site design engineer shall meet to discuss the scheduling of the site construction and the designation of the responsible parties for implementing the plan. The Contractor shall be responsible for scheduling the meeting. Prior to the meeting, the Contractor will prepare a detailed schedule and a marked-up site plan indicating areas and components of the work and key dates showing date of disturbance and completion of the work. The Contractor shall conduct a meeting with employees and sub-contractors to review the erosion control plan, the construction techniques which will be employed to implement the plan and provide a list of attendees and items discussed at the meeting to the Owner. Three copies of the schedule, the Contractor's meeting minutes, and marked-up site plan shall be provided to the Owner.

# ATTACHMENT F



Preliminary Subdivision Application



United States Department of Agriculture

Natural Resources Conservation

Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

#### Custom Soil Resource Report Soil Map



	MAP L	EGEND		MAP INFORMATION				
Area of Int	erest (AOI) Area of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.				
Soils	Soil Soil Map Unit Polygons Soil Map Unit Lines Soil Map Unit Lines Soil Map Unit Points Special Point Features		Very Stony Spot Wet Spot Other Special Line Features	Warning: Soil Map may not be valid at this scale. Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed				
ن ا	Blowout Borrow Pit	Water Features Streams and Canals		Scale.				
× ◇ ン	Clay Spot Closed Depression Gravel Pit Gravelly Spot	÷	Rails Interstate Highways US Routes	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)				
0 A 4	Landfill Stackgro Marsh or swamp		Local Roads nd Aerial Photography	Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.				
~ 0 * +	Miscellaneous Water Perennial Water Rock Outcrop Saline Spot			This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: Cumberland County and Part of Oxford County, Maine Survey Area Data: Version 17, Jun 5, 2020				
:: = \$ \$ Ø	Sandy Spot Severely Eroded Spot Sinkhole Slide or Slip Sodic Spot			Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Date(s) aerial images were photographed: Jun 7, 2019—Jul 2, 2019				
				The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background				

# MAP LEGEND

# MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

		-	
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	9.2	47.5%
HnB	Hinckley-Suffield complex, 3 to 8 percent slopes	1.0	5.3%
Wa	Walpole fine sandy loam	1.5	8.0%
WmB	Windsor loamy sand, 0 to 8 percent slopes	7.6	39.2%
Totals for Area of Interest		19.3	100.0%

# **Map Unit Legend**

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# **Cumberland County and Part of Oxford County, Maine**

# DeB—Deerfield loamy fine sand, 3 to 8 percent slopes

### **Map Unit Setting**

National map unit symbol: 2xfg9 Elevation: 0 to 1,190 feet Mean annual precipitation: 36 to 71 inches Mean annual air temperature: 39 to 55 degrees F Frost-free period: 145 to 240 days Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Deerfield and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

### **Description of Deerfield**

#### Setting

Landform: Outwash deltas, kame terraces, outwash plains, outwash terraces Landform position (three-dimensional): Tread Down-slope shape: Concave, convex, linear Across-slope shape: Linear, convex, concave Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

### **Typical profile**

Ap - 0 to 9 inches: loamy fine sand Bw - 9 to 25 inches: loamy fine sand BC - 25 to 33 inches: fine sand Cg - 33 to 60 inches: sand

### **Properties and qualities**

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water capacity: Moderate (about 6.5 inches)

### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2w Hydrologic Soil Group: A Hydric soil rating: No

### **Minor Components**

#### Windsor

Percent of map unit: 7 percent

Landform: Outwash deltas, kame terraces, outwash plains, outwash terraces Landform position (three-dimensional): Tread Down-slope shape: Linear, concave, convex Across-slope shape: Concave, linear, convex Hydric soil rating: No

#### Wareham

Percent of map unit: 5 percent Landform: Depressions, drainageways Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### Sudbury

Percent of map unit: 2 percent Landform: Outwash terraces, outwash deltas, kame terraces, outwash plains Landform position (three-dimensional): Tread Down-slope shape: Convex, linear, concave Across-slope shape: Concave, linear, convex Hydric soil rating: No

#### Ninigret

Percent of map unit: 1 percent Landform: Outwash plains, kame terraces, outwash terraces Landform position (three-dimensional): Tread Down-slope shape: Convex, linear Across-slope shape: Convex, concave Hydric soil rating: No

## HnB—Hinckley-Suffield complex, 3 to 8 percent slopes

#### **Map Unit Setting**

National map unit symbol: 2svlw Elevation: 0 to 270 feet Mean annual precipitation: 36 to 71 inches Mean annual air temperature: 39 to 55 degrees F Frost-free period: 140 to 240 days Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Hinckley and similar soils: 65 percent Suffield and similar soils: 25 percent Minor components: 10 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Hinckley**

#### Setting

*Landform:* Moraines, outwash terraces, outwash deltas, kame terraces, outwash plains, kames, eskers

Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope, summit

*Landform position (three-dimensional):* Nose slope, side slope, crest, head slope, tread

*Down-slope shape:* Linear, convex, concave

Across-slope shape: Convex, linear, concave

*Parent material:* Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

#### **Typical profile**

A - 0 to 8 inches: loamy sand Bw1 - 8 to 11 inches: gravelly loamy sand Bw2 - 11 to 16 inches: gravelly loamy sand BC - 16 to 19 inches: very gravelly loamy sand C - 19 to 65 inches: very gravelly sand

#### **Properties and qualities**

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Very low (about 2.9 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3s Hydrologic Soil Group: A Hydric soil rating: No

#### **Description of Suffield**

#### Setting

Landform: Marine terraces Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Convex Parent material: Silty glaciolacustrine deposits over clayey glaciolacustrine deposits

#### **Typical profile**

Ap - 0 to 6 inches: silt loam

Bw - 6 to 18 inches: silt loam

2C - 18 to 65 inches: silty clay loam

#### **Properties and qualities**

Slope: 3 to 8 percent
 Depth to restrictive feature: 18 to 39 inches to strongly contrasting textural stratification
 Drainage class: Moderately well drained
 Runoff class: Medium

#### **Custom Soil Resource Report**

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr) Depth to water table: About 18 to 30 inches Frequency of flooding: None Frequency of ponding: None Available water capacity: Low (about 4.2 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2w Hydrologic Soil Group: C Hydric soil rating: No

#### Minor Components

#### Merrimac

Percent of map unit: 5 percent Landform: Kame terraces, outwash terraces, outwash deltas Landform position (three-dimensional): Tread Down-slope shape: Convex, concave, linear Across-slope shape: Linear, convex, concave Hydric soil rating: No

#### Belgrade

Percent of map unit: 3 percent Landform: Marine terraces Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

#### Scitico

Percent of map unit: 2 percent Landform: Depressions Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

#### Wa—Walpole fine sandy loam

#### Map Unit Setting

National map unit symbol: blk7 Elevation: 0 to 2,800 feet Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 37 to 46 degrees F Frost-free period: 80 to 165 days Farmland classification: Not prime farmland

#### Map Unit Composition

Walpole and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Walpole**

#### Setting

Landform: Outwash plains Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Sandy glaciofluvial deposits

#### **Typical profile**

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 20 inches: fine sandy loam
H3 - 20 to 65 inches: gravelly loamy sand

#### **Properties and qualities**

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.7 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: A/D Hydric soil rating: Yes

#### **Minor Components**

#### Au gres

Percent of map unit: 9 percent Landform: Outwash plains Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

#### Scarboro

Percent of map unit: 5 percent Landform: Outwash plains Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

#### Deerfield

Percent of map unit: 1 percent Landform: Outwash plains

Landform position (two-dimensional): Summit Landform position (three-dimensional): Rise Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

## WmB—Windsor loamy sand, 0 to 8 percent slopes

#### Map Unit Setting

National map unit symbol: 2w2x2 Elevation: 0 to 1,410 feet Mean annual precipitation: 36 to 71 inches Mean annual air temperature: 39 to 55 degrees F Frost-free period: 140 to 240 days Farmland classification: Farmland of statewide importance

#### Map Unit Composition

Windsor and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Windsor**

#### Setting

Landform: Deltas, outwash plains, dunes, outwash terraces Landform position (three-dimensional): Riser, tread Down-slope shape: Linear, convex Across-slope shape: Linear, convex Parent material: Loose sandy glaciofluvial deposits derived from granite and/or

loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

### **Typical profile**

*Oe - 0 to 1 inches:* moderately decomposed plant material *A - 1 to 3 inches:* loamy sand *Bw - 3 to 25 inches:* loamy sand *C - 25 to 65 inches:* sand

### **Properties and qualities**

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.5 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2s Hydrologic Soil Group: A Hydric soil rating: No

#### **Minor Components**

#### Hinckley

Percent of map unit: 5 percent Landform: Outwash plains, eskers, deltas, kames Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise Down-slope shape: Convex Across-slope shape: Linear, convex

Hydric soil rating: No

#### Agawam

Percent of map unit: 5 percent Landform: Kames, moraines, outwash terraces, kame terraces, outwash plains Landform position (two-dimensional): Footslope, summit, backslope, shoulder Landform position (three-dimensional): Side slope, crest, tread, riser, rise Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

#### Deerfield

Percent of map unit: 5 percent Landform: Outwash plains, deltas, terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Tread, talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

# ATTACHMENT G



Preliminary Subdivision Application

# **TECHNICAL ABILITY**

# **Project Team**

Atlantic Resource Consultants is the primary consultant involved with the site permitting of the project and has assembled the materials in this application. The following firms are acting as consultants to Allen Hamilton and Ben Grover or as sub-consultants for the project:

Firm	Services		Contact
Atlantic Resource Consultants, LLC	Site/Civil	Engineering	Charlie Burnham, PE
541 US Route One, Suite 21	& Site Permitting		<u>charlie@arc-maine.com</u>
Freeport, ME 04032		-	(207)-712-6990

# **Experience of Project Team**

The team of consultants retained by the Applicant has expertise and experience in the design of similar subdivisions throughout the State of Maine and New England. Many of these have required a Site Location of Development Act, or equivalent permitting.

# Ability of the Applicant

Ben Grover has completed several subdivisions in the North Yarmouth area and is very experienced in all things related to development.





August 16, 2021

Board of Selectmen and Planning Board Town of North Yarmouth 10 Village Square Road North Yarmouth, ME 04097

RE: 13 lot age restricted neighborhood

Ladies and Gentlemen,

At the request of Walnut Hill Investments, LLC., I write this letter to provide to you my opinion on the financial capacity of Walnut Hill Investments, LLC to undertake the construction of a 13 lot subdivision in North Yarmouth, ME.

I spoke with Ben Grover about the plans and scope of the project in some detail recently. Walnut Hill Investments, LLC maintains its banking relationship with Norway Savings Bank so I am familiar with company's background and finances.

Based on my banking relationship with the company and the information discussed with Ben about the project, it is my opinion that Walnut Hill Investments, LLC has the financial capacity to support this project.

Although this letter is not a commitment to lend, Norway Savings Bank looks forward to consideration of any financing needs of Walnut Hill Investments, LLC.

Sincerely, 5. V.P on behalf of Brian C. Desjardins

Regional Vice President Commercial Lending

BCD/tbm

# ATTACHMENT H



Preliminary Subdivision Application

Eric Gagnon Superintendent Yarmouth Water District

PO Box 419, 181 Sligo Road Yarmouth, Maine 04096 (207) 846-5821 fax (207) 846-1240 www.YarmouthWaterDistrict.org Irving C. Felker, Jr. Chairman, Board of Trustees

July 1, 2021

Charlie Burnham, P.E. Senior Civil Engineer Atlantic Resource Consultants, LLC 541 US Route One, Suite 21 Freeport, Maine 04032 Via Email: charlie@arc-maine.com

RE: Crossroad Senior Neighborhood

Dear Mr. Burnham,

The Yarmouth Water District will have the capacity to serve the above-referenced project once the ongoing capital system improvements are completed. We are in the process of building a new booster pump station for the North Yarmouth service area and hope to have that station online before the end of 2021. We will allow the water infrastructure to be installed and tested to our specifications and standards and the main activated for fire protection purposes only but we will not allow water services to be turned on until our capital improvements have been completed and the District has the added capacity to serve this project.

After reviewing the preliminary site layout and utility plan dated June 28, 2021, we have the following comments:

- 1. This project can be served by an 8" main extension connecting to Route 115 and Route 9 as shown on the drawings.
- 2. Please review the hydrant location with the North Yarmouth Fire Chief to be sure the location is acceptable.
- 3. The District is pleased to see a community septic system is being proposed for this project. We would require that the advanced wastewater system have a maintenance contract that includes annual performance testing by the maintenance contractor and those results are submitted to the District, if not already required by the Town's policy and ordinance.
- 4. An easement to the District needs to be clearly shown on the plans and a written easement deed provided to the District that meets our requirements. The District will not allow water service to be activated without a recorded easement. Please see our standard easement form attached.
- 5. Domestic service sizes for each lot will be 1". Meter sizes will be determined once fixture unit count and domestic peak flow information are available.
- 6. If a fire sprinkler system is required a separate service from the proposed water main must be installed. Fire service sizes must be determined by a sprinkler system designer.

7. As discussed in previous correspondence the alignment of the proposed water main may need to be adjusted to have proper separation from the buildings. We can review the plans and the proposed water main location once profiles and drainage areas are defined.

We look forward to working with you as this project progresses, please keep us informed as this project progresses so we can approve the design. Feel free to contact the District with any questions or concerns.

Sincerely,

Cilm

Eric Gagnon Superintendent

Attachments: YWD Standard Easement Form
## ATTACHMENT I



Preliminary Subdivision Application