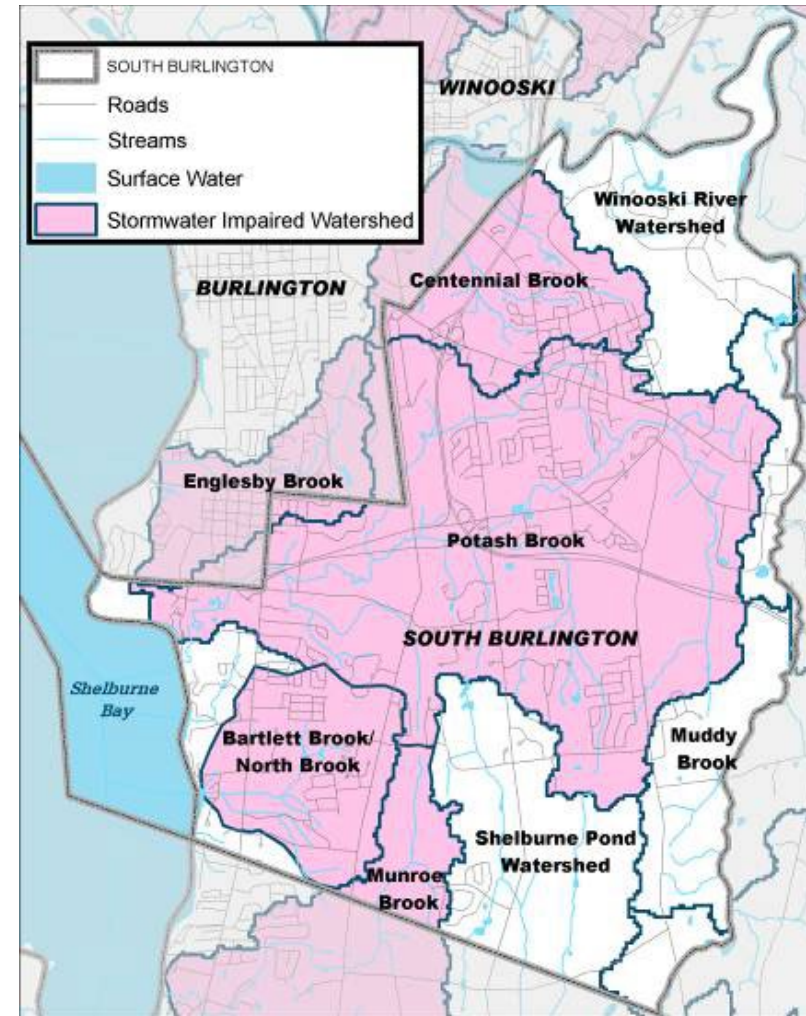


South Burlington Stormwater Project Updates

June 2023

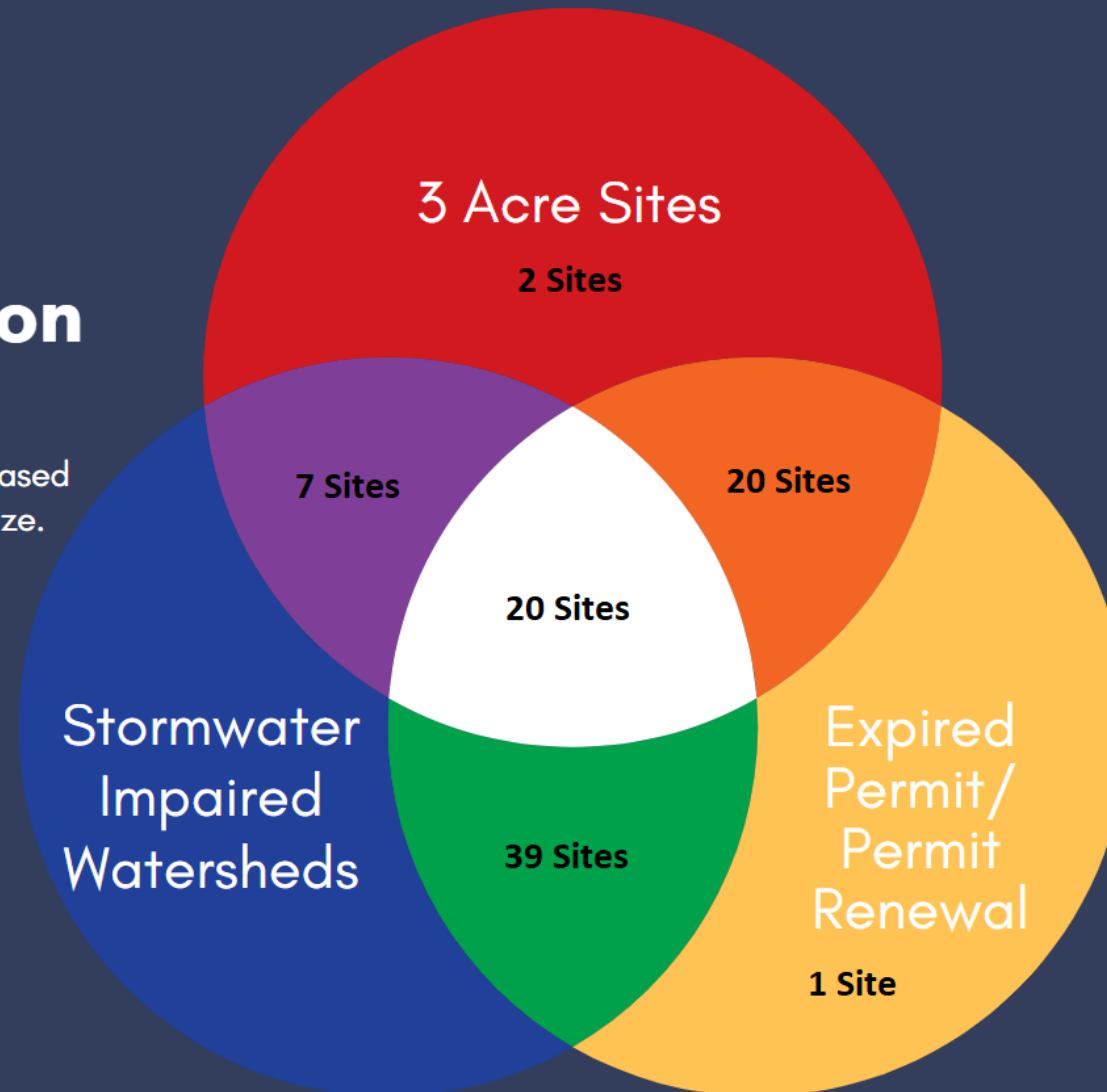
303(d) Impaired Waters

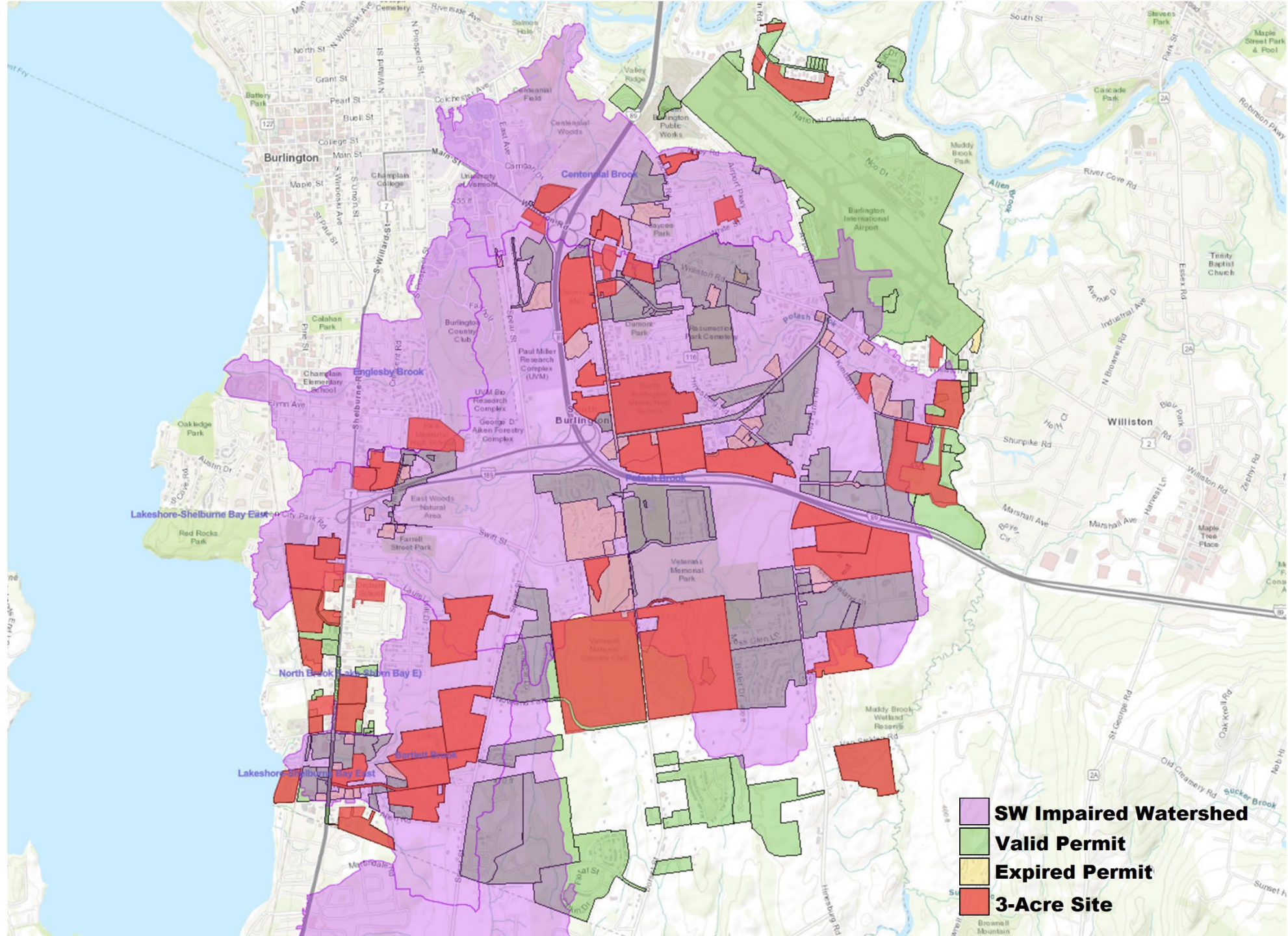
- Stormwater Impairments:
 - Potash Brook
 - Bartlett Brook
 - Centennial Brook
 - Munroe Brook
 - Englesby Brook
- Phosphorous Impaired:
 - Lake Champlain

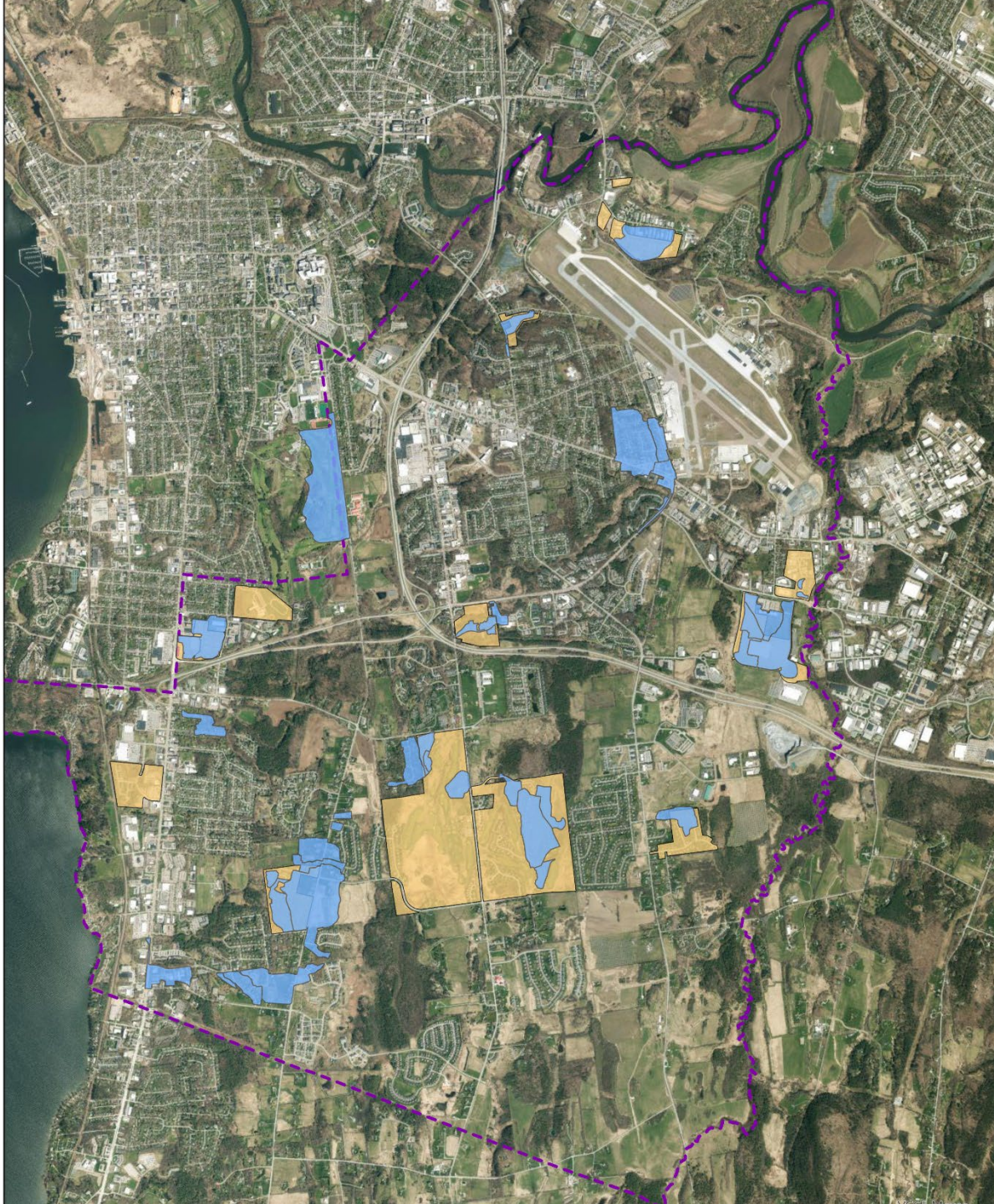


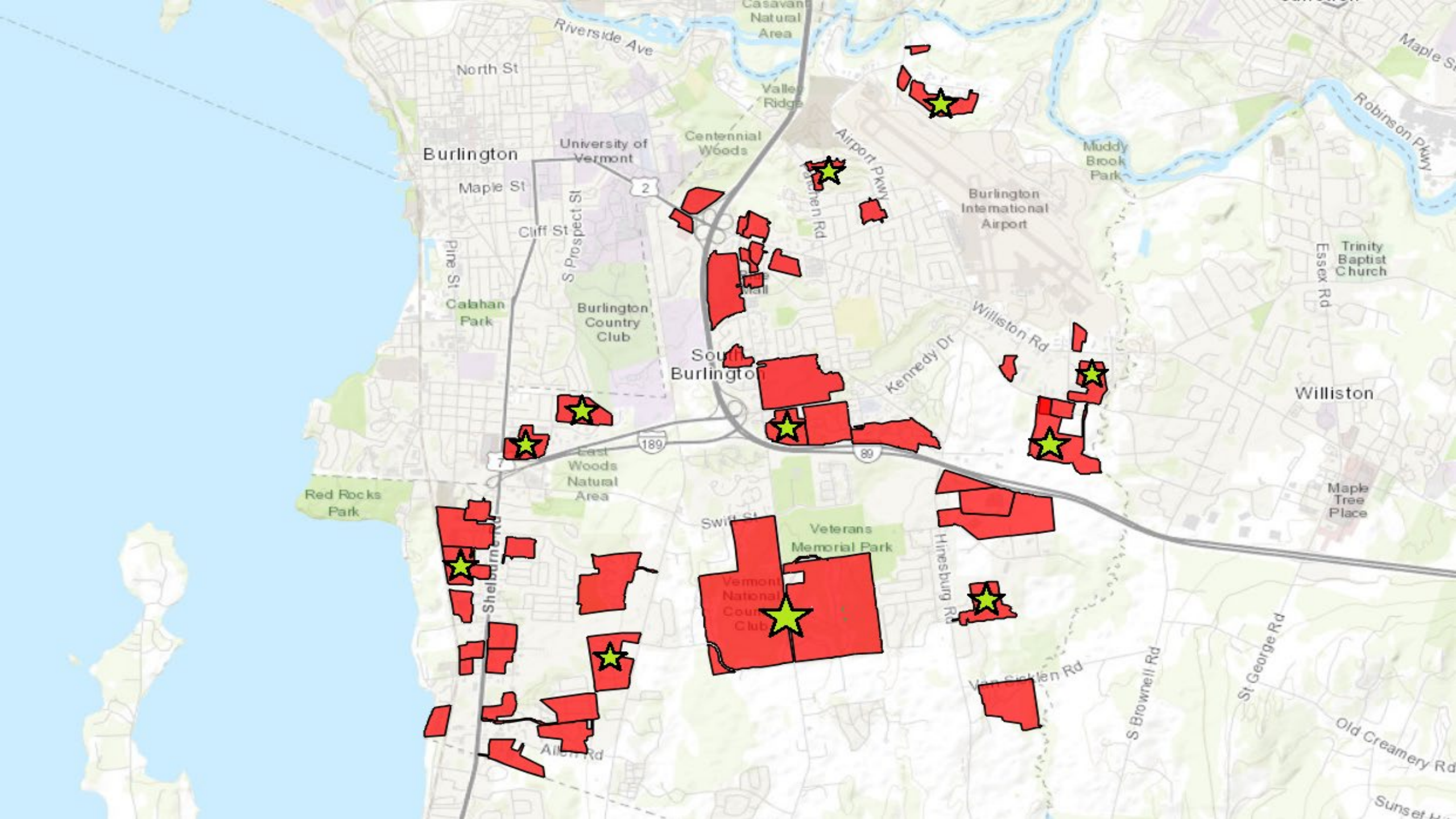
Stormwater Permit Scenarios in South Burlington

Sites around South Burlington are subject to different requirements based on their geographic location and size.







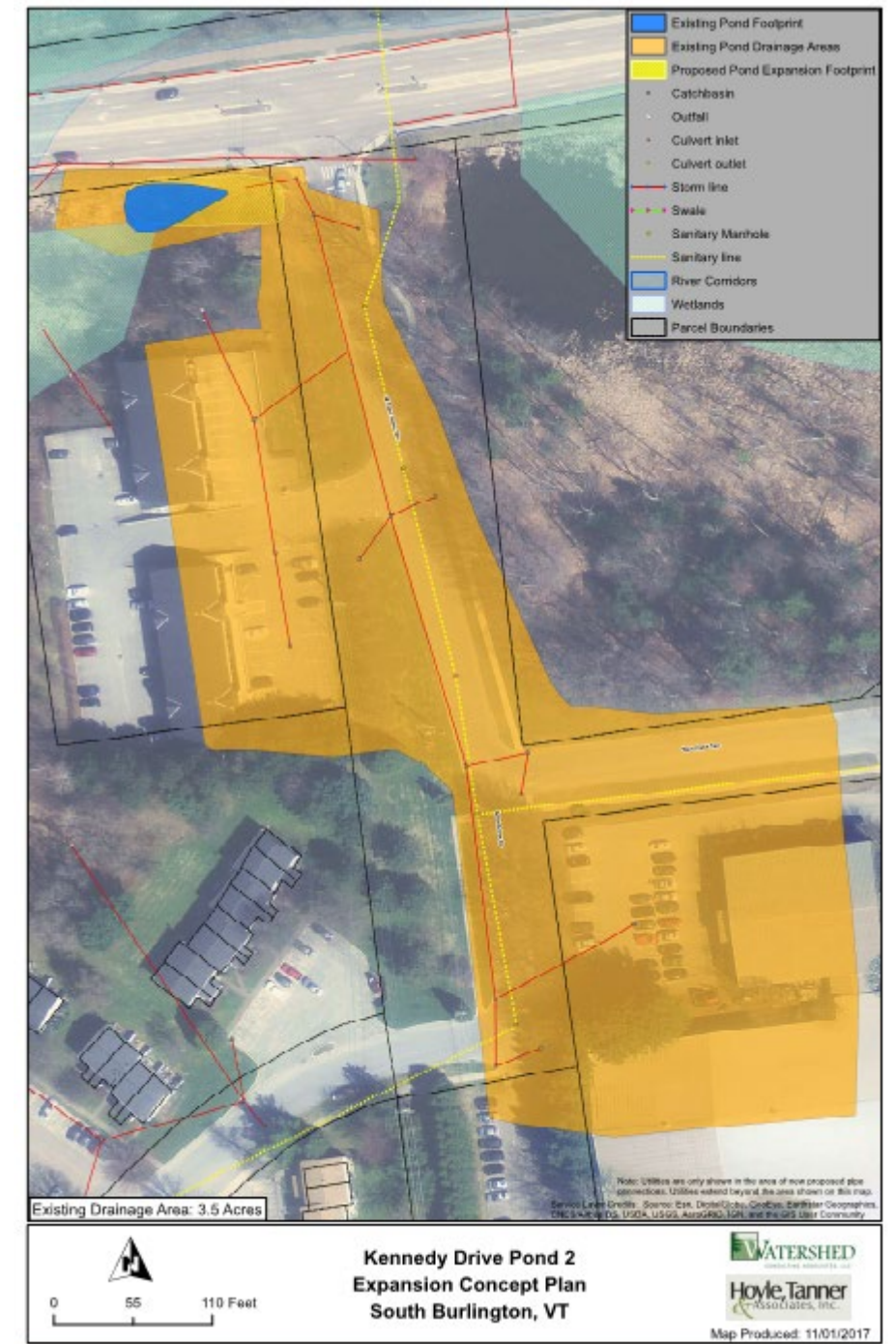


Stormwater Projects in Design

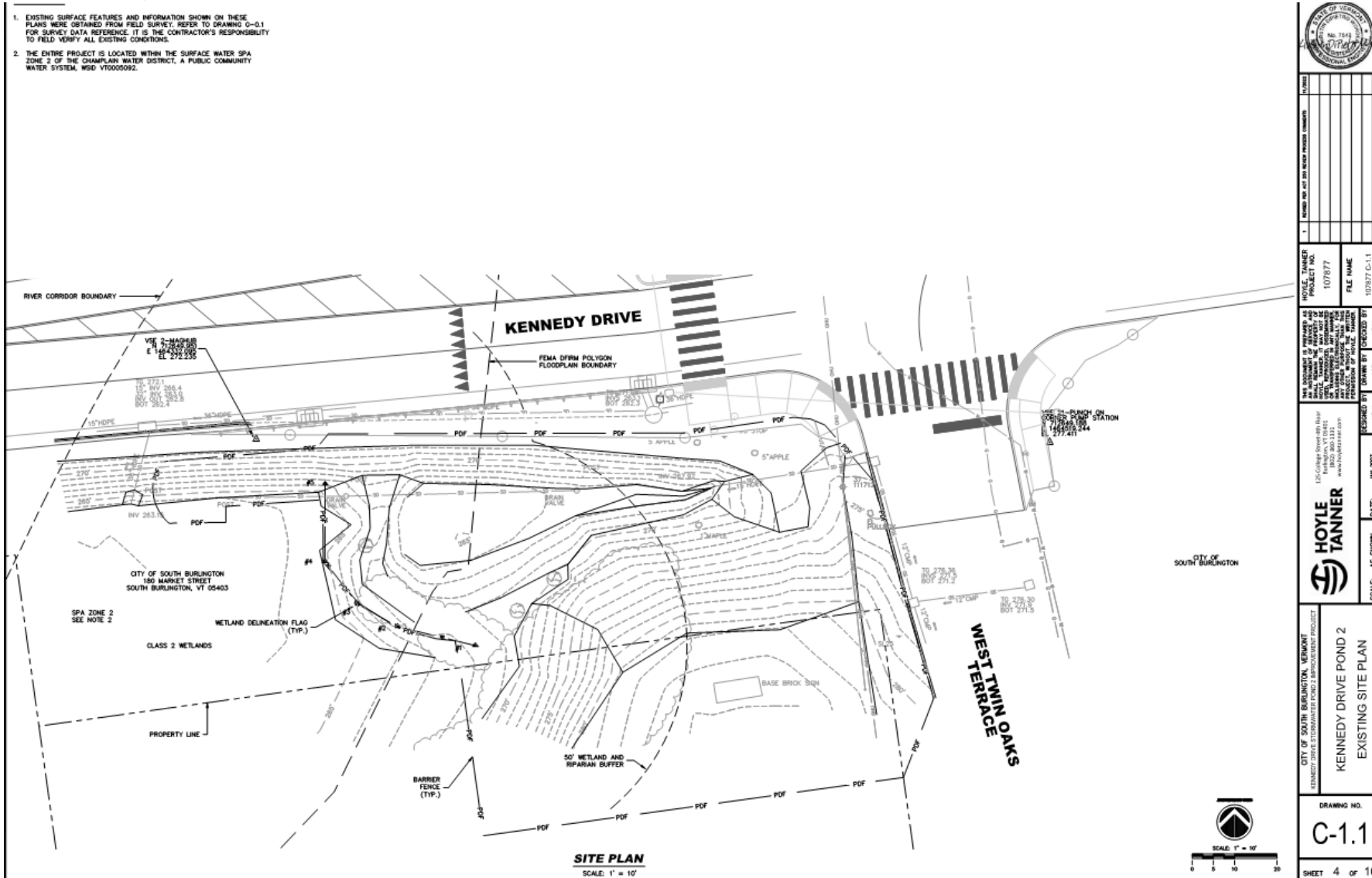
Kennedy Drive Pond 2 Expansion	Kennedy Drive Pond 7 Expansion	Bartlett Bay Stormwater Treatment System Expansion	Irish Farm	UVM Hort Farm
Grandview	Windjammer	Overlook at Spear	Rice	Ethan Allen Industrial Park
Logwood	Queensbury	Technology Park	L&M Park	Green Tree Park
Vermont National Country Club	Acadia	O'Dell Parkway	Ledge Knoll	Airport Drive

Kennedy Drive Pond 2

- 2.23 Acres of Impervious Managed
- Potash Brook FRP Project
- Vtrans Grant: \$253,616
- Construction Starts: 6/12/2023
- Road Closure: West Twin Oaks Terrace at Kennedy Drive

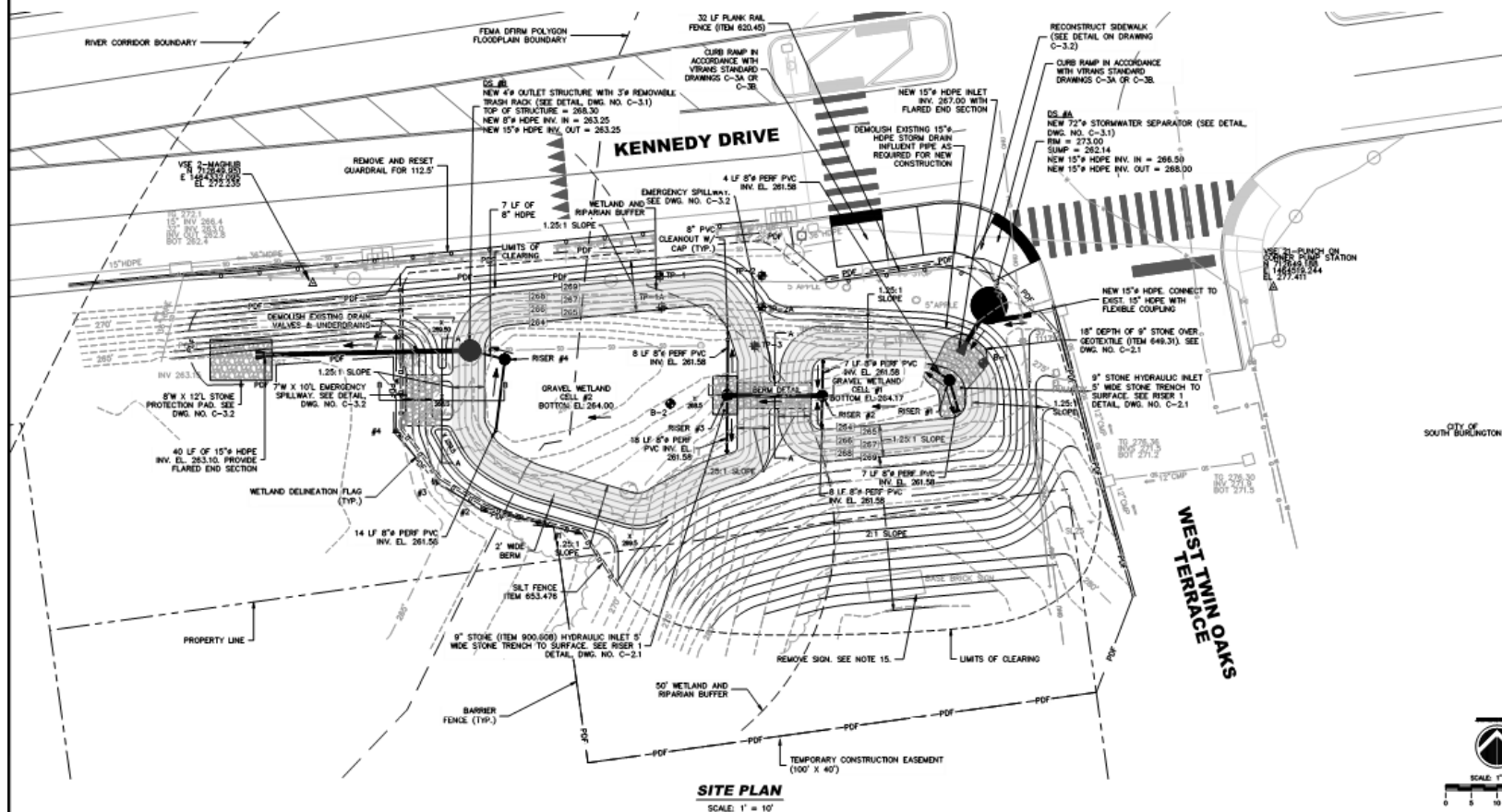


Kennedy Drive Pond 2



6. CONTRACTOR SHALL REMOVE ALL TREES, BRUSH, AND STUMPS WITHIN THE LIMITS OF CLEARING. PAYMENT FOR CLEARING AND GRUBBING SHALL BE UNDER PAY ITEM 201.10.
7. CONTRACTOR SHALL CONFINING CONSTRUCTION ACTIVITIES TO AREAS OWNED BY THE CITY OF SOUTH BURLINGTON AND TEMPORARY CONSTRUCTION EASEMENT.
8. CONTRACTOR SHALL SECURE WORK AREA WITH FENCING. PAID AS ITEM 653.50 BARRIER FENCE.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL ON KENNEDY DRIVE AND WEST TWIN OAKS TERRACE.
10. WHERE ADJACENT GROUND OUTSIDE OF THE LIMITS OF WORK IS DISTURBED OR DAMAGED DUE TO CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL RESTORE TO ORIGINAL STATE AND IMPROVE EXISTING SLOPES WITH PLANTING OF TREES, SHRUBS, GRASS AND LANDSCAPING, AT NO ADDITIONAL COST TO THE OWNER.
11. ALL SLOPES 1:1.25 OR GREATER SHALL BE ARMORED WITH 18" OF 6" STONE RIP-RAP PAID AS ITEM 900.68 SPECIAL PROVISION (9" STONE) OVER GEOTEXTILE UNDER STONE FILL (ITEM 449.31).
12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIVERSION OF STORMWATER FLOWS AND BY-PASSING EXISTING POND 2 DURING CONSTRUCTION UNTIL NEW GRAVEL FILTER BED IS COMPLETED AND READY FOR LATEST FLOW. (SUBPARAGRAPH 10.1.1)

12. SEE SPECIAL PROVISION SPECIFICATION 900.645 (GRAVEL WETLAND FACILITY) FOR GRAVEL WETLAND PLANTS, SOIL, AND MATERIAL REQUIREMENTS.
13. SEE DRAWING NO. C-2.1 FOR POND 2 GRAVEL WETLAND DETAILS.
14. SEE DRAWING NO. C-2.2 FOR LANDSCAPING PLAN.
15. CONTRACTOR SHALL REMOVE SIGN AND SALVAGE SIGN FACE TO THE OWNER. PAID AS ITEM 900.645 - SPECIAL PROVISION (REMOVE SIGN).
16. CONTRACTOR SHALL COORDINATE RELOCATION OF THE BUS STOP WITH THE BUS COMPANY AND THE CITY OF SOUTH BURLINGTON PRIOR TO START OF CONSTRUCTION.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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25 College Street 4th Floor
 Burlington, VT 05401
 (802) 862-1111
www.hoyeterrace.com

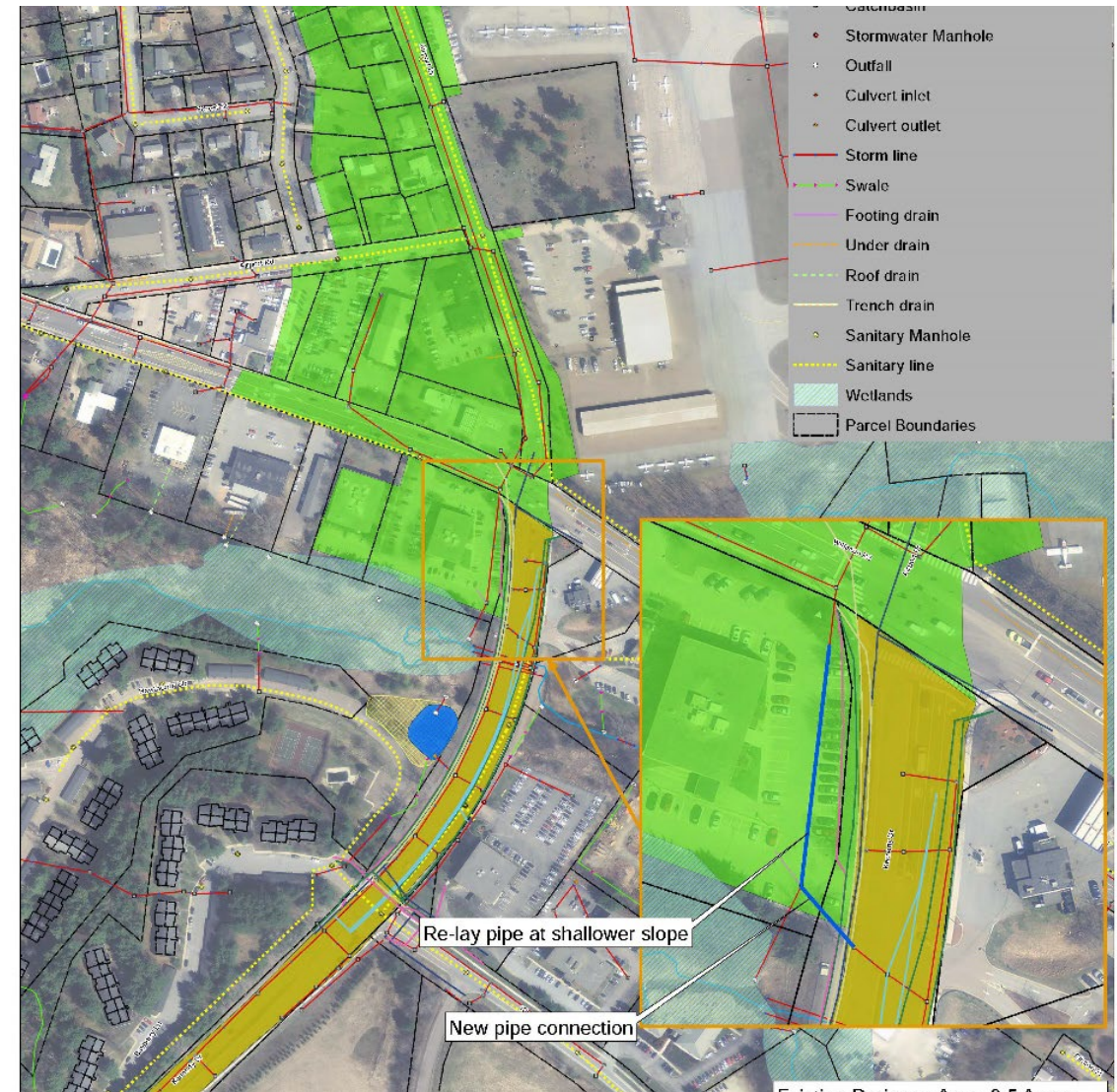


CITY OF SOUTH BURLINGTON, VERMONT
KENNEDY DRIVE STORMWATER POND 2 IMPROVEMENT PROJECT

DRAWING NO.
C-1.2
SHEET 5 OF 10

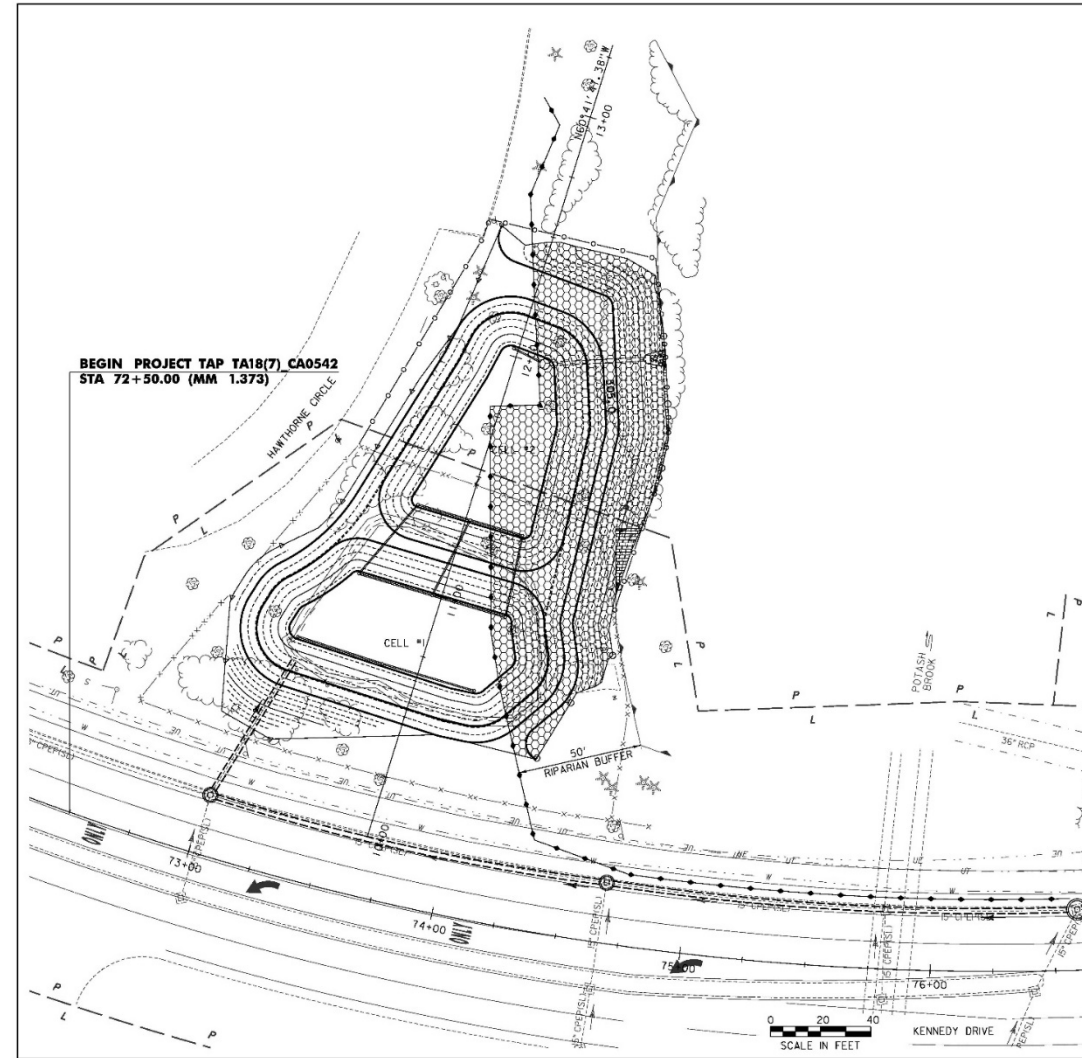
Kennedy Drive Pond 7

- Potash Brook FRP Project
- Vtrans Grant: \$300,000
- Rerouting of approximately 18.35 acres of largely impervious area (Williston Rd., Airport Dr. as well as surrounding commercial areas)
- Currently, this area discharges primarily untreated stormwater runoff directly into Potash Brook behind the Key Bank property



Proposed Gravel Wetland

- **Permit Requirements**
- VT Individual Wetland Permit
- 9,860 SF Permanent Buffer Impact
- 200 SF Permanent Wetland Impact
- Requires a wetland planting along the buffer side of the berm to act as a delineation between the system and the actual wetland.



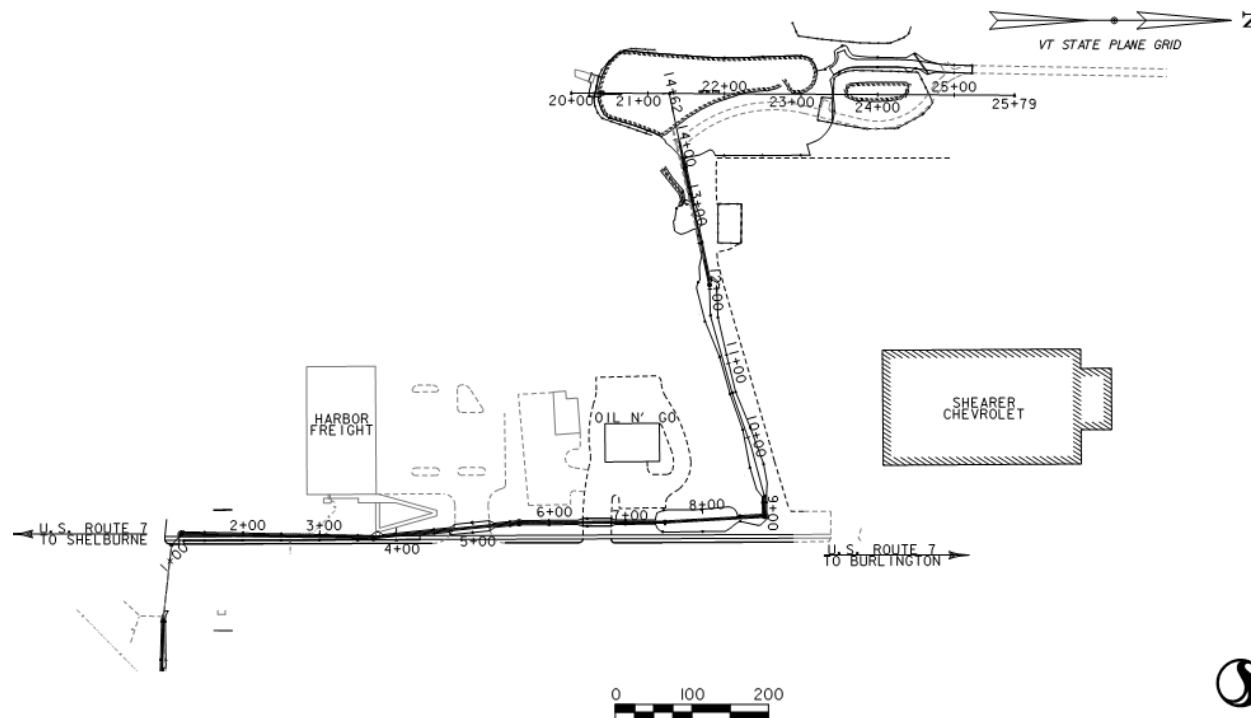
Proposed Gravel Wetland

- **Permit Requirements**
- Archeological
- Requires a Phase IB Archeological Investigation
- 14 Systematically placed shovel test pits (STPs)
- 4 Confirmation STPs
- 20-inch square shovel tests
- 20-inch deep (max 36-inch depth)



BBSTS Expansion

- 9.34 Acres of Impervious Managed
- Bartlett Brook FRP Project
- Vtrans Grant: \$375,720





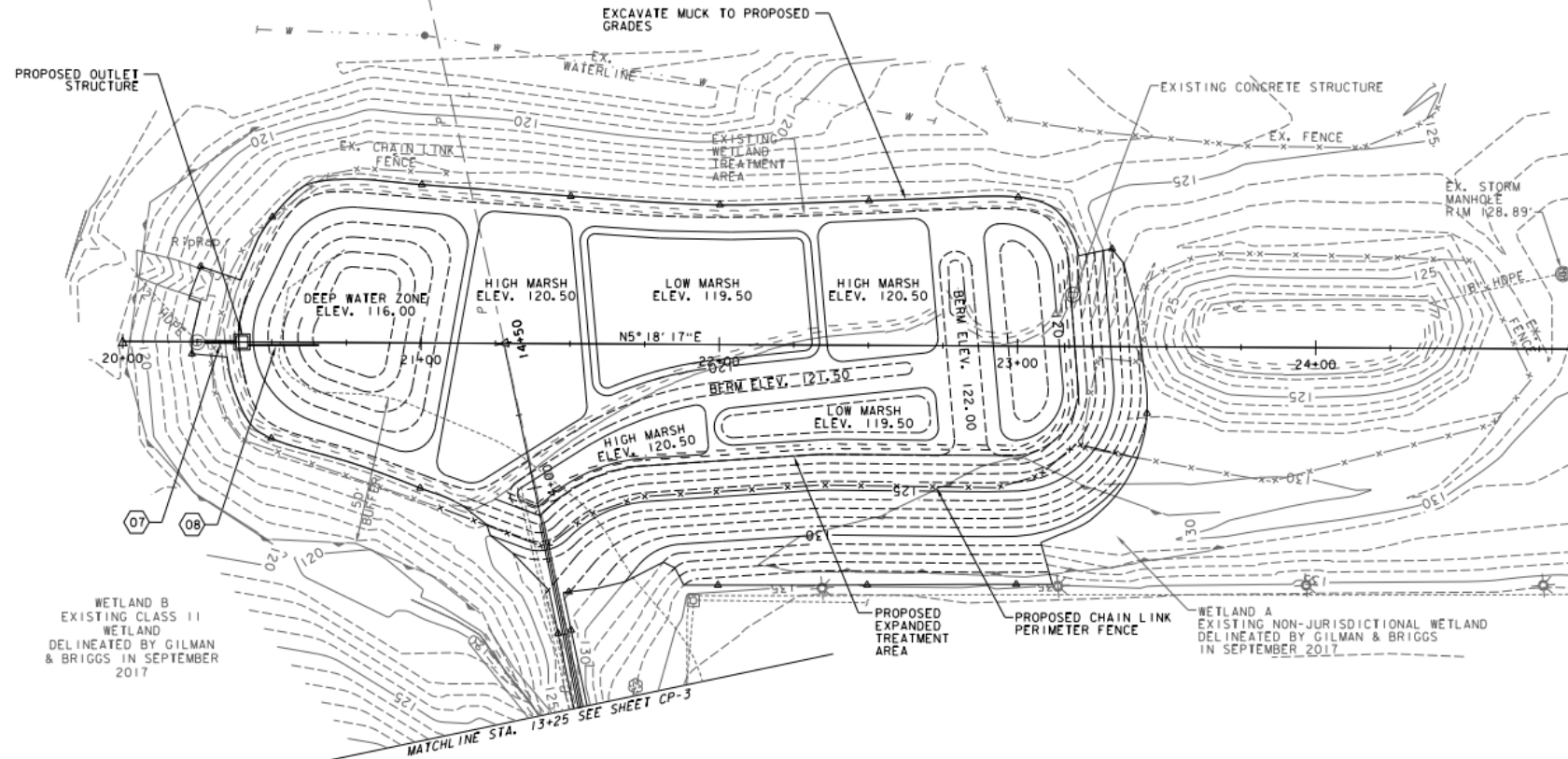
CATAMOUNT MIDDLEBURY, LLC
PARCEL # 1215-00068

SHEARER NORTH, LLC
PARCEL # 1540-01675

- 07 STA. 20+27 TO STA. 20+40.
INSTALL 12" X 10" CPEP (SL) CONSTRUCT NEW
PRECAST REINFORCED CONCRETE OUTLET
STRUCTURE AT STA. 20+40
(SEE DETAIL SHEET 2 FOR MORE INFORMATION)
- 08 STA. 20+40 TO STA. 20+60.
INSTALL 4" X 20" DI OUTLET PIPE
WITH 4" GATE VALVE INSIDE OUTLET STRUCTURE
(SEE DETAIL SHEET 2 FOR MORE INFORMATION)

STONE FILL TYPE 1
11+80.0, CL
12+69.0, LT

CHAIN LINK FENCE
21+06, RT-23+40, RT



WETLAND B
EXISTING CLASS III
WETLAND
DELINEATED BY GILMAN
& BRIGGS IN SEPTEMBER
2017



55 GREEN MOUNTAIN DRIVE
SOUTH BURLINGTON, VT 05403
Tel: 802.864.0223
www.stantec.com

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The Contractor shall verify and be responsible for all dimensions, DO NOT rely on the drawing - any errors or omissions shall be reported to Stantec without delay.
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Consultants

Legend

Notes

Revision

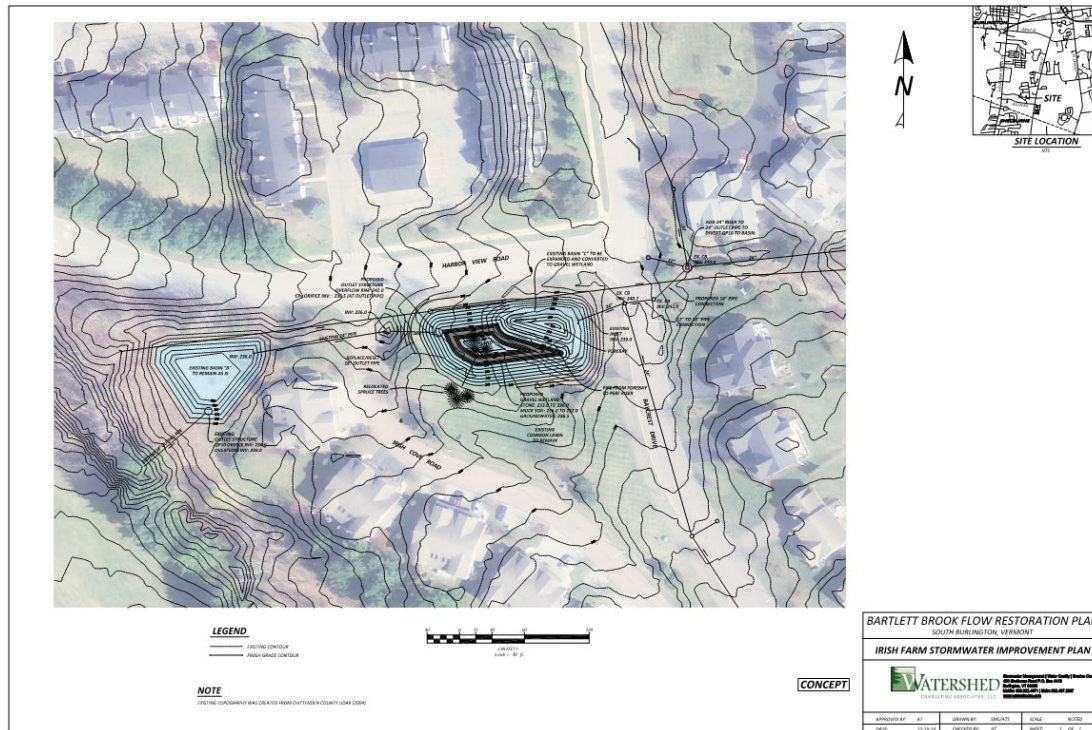
Issued

Permit/Secd

Client/Project

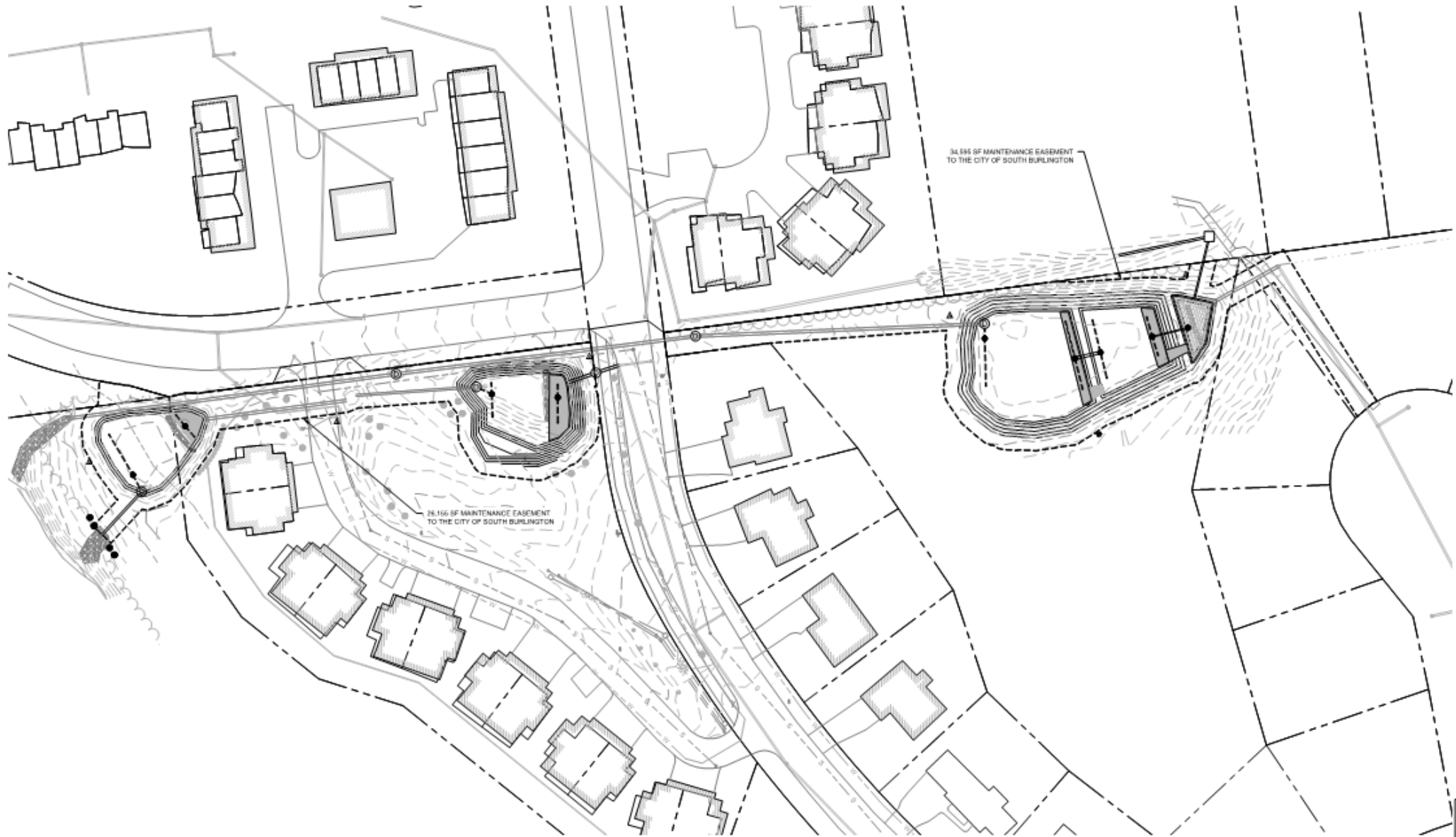
Irish Farm

- 9.84 Acres of Impervious
- Bartlett Brook FRP Project
- 3-Acre Site
- LCBP Grant: \$40,000



Irish Farm Development Impervious Area (Permit# 1-1404)

Existing Permit Area Impervious	6.05
IA per residential unit	0.14
Undeveloped Lots	9.00
Residential Impervious at full build out	7.31
Offsite Impervious	2.53
Total Impervious Area	9.84
Residential %	74.3%
City %	25.7%



MAINTENANCE EASEMENT PLAN
SCALE: 1" = 40'

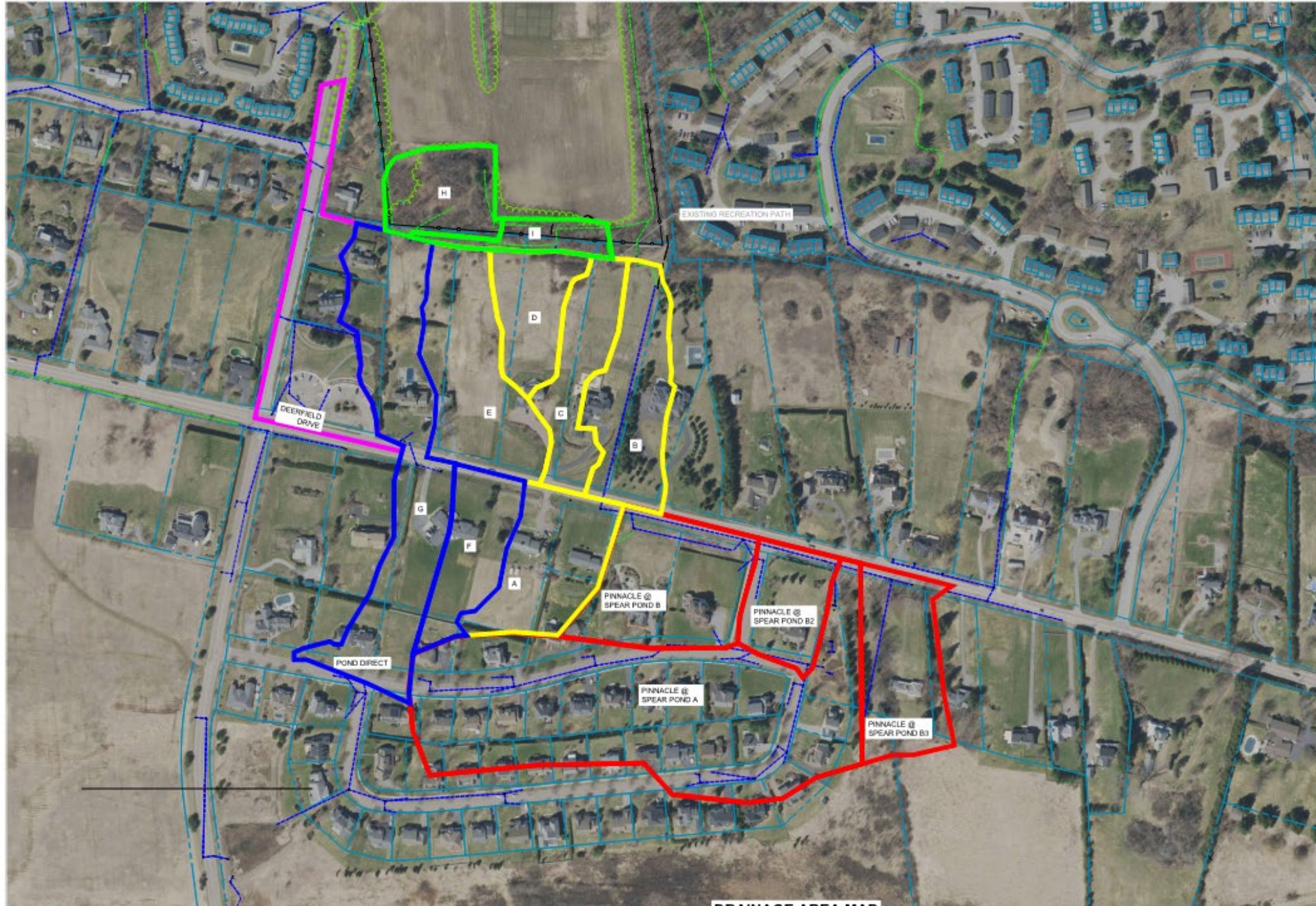
#	DATE	DRAWN	CHECK'D	APP'D	DESCRIPTION
1	10/31/2022				

40 0 40 80 160 ft

UVM Hort Farm

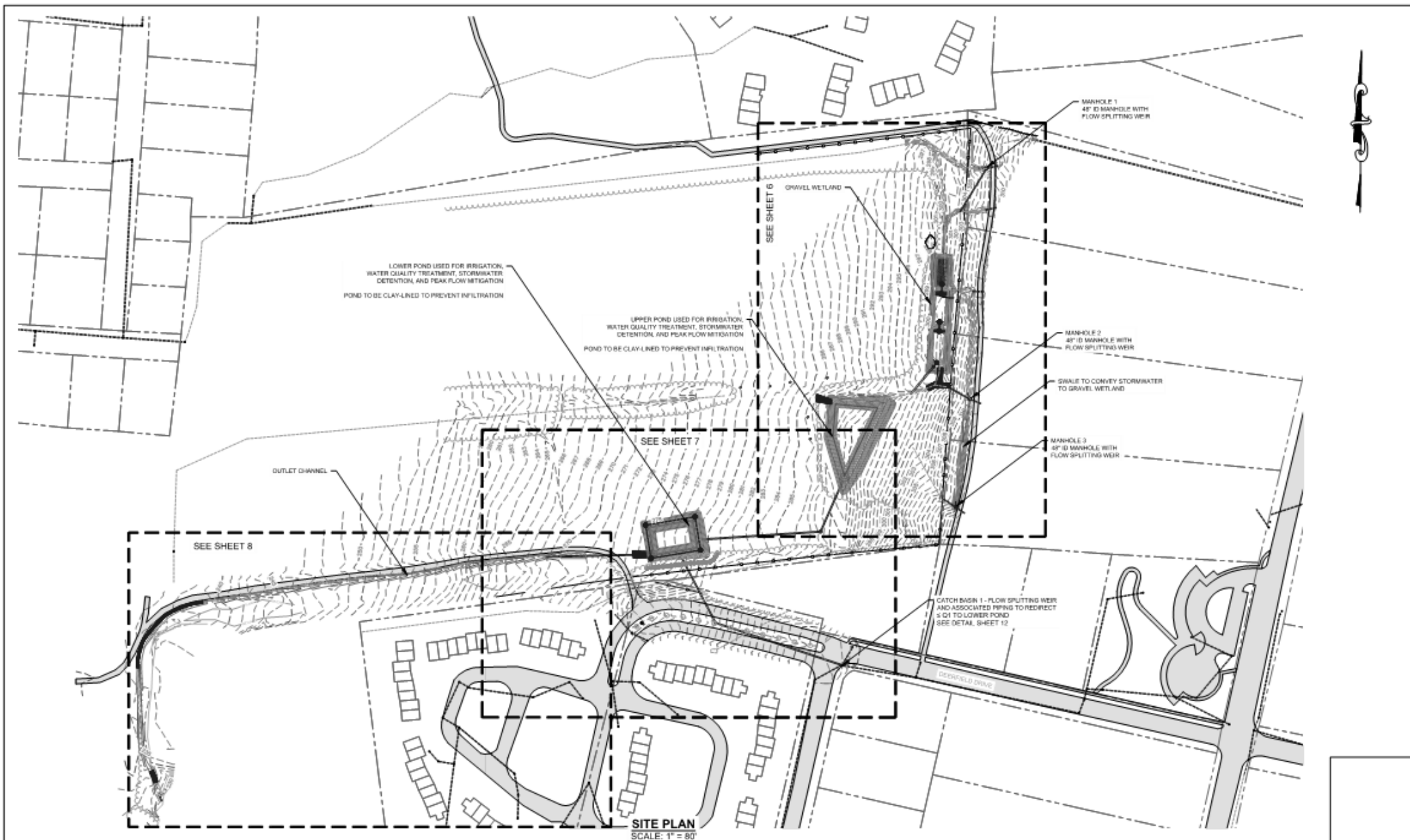
- 9.09 Acres of Impervious Managed
- Bartlett Brook FRP Project
- LCBP Grant: \$42,500 Design
- Stormwater Detention Pond
- & Farm Irrigation!



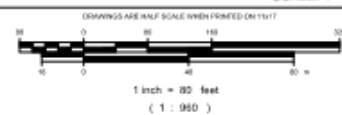


DRAINAGE AREA MAP

SCALE: 1" = 150'



#	DATE	DRWN	CHK'D	APP'D	DESCRIPTION
1	05/25/2022	BAM			DRAWN ON: 05/25/2022
2	06/03/2022	BAM			CHECKED ON: 06/03/2022
3		POL			CHECKED BY: POL
4					PROJECT NO: 18-059-B



STONE ENVIRONMENTAL

535 Stone Cutters Way / Montpelier / VT / 05602 / USA
802.229.4541 / info@stone-env.com / www.stone-env.com

STORMWATER IRRIGATION PONDS
UNIVERSITY OF VERMONT HORTICULTURAL FARM
PROPOSED CONDITIONS SITE PLAN
SOUTH BURLINGTON VERMONT

Grandview

- Grandview development (#2-0238) expired in 1985.
- Southridge development (#2-0737) expired in 1983.
- DIBG Grant: \$20,000 Design
- 3-Acre Site
- Potash Brook FRP Project



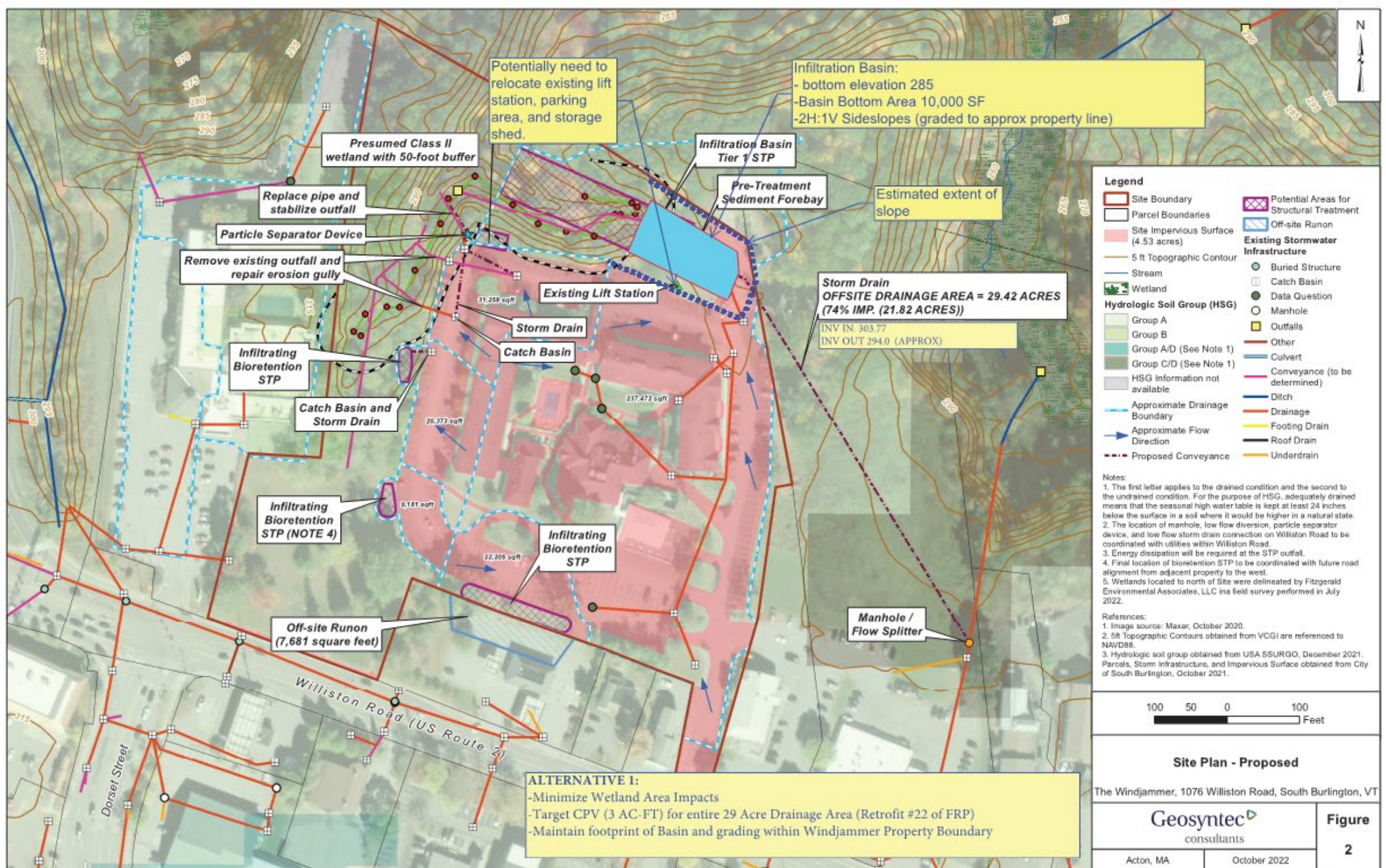
Potash Brook FRP BMP Summary Sheet					
Site name:	Grandview Drive North Detention Pond		South Burlington ID:	PB0031	
Approximate address:	Grandview Dr and W Twin Oaks Terr, South Burlington	MS4 where BMP is located:	South Burlington	New or existing BMP?	New
Proposed BMP type:	Detention Pond				
Estimated project cost		MS4s contributing drainage to BMP	South Burlington		
Drainage area (acres)	3.02				
Impervious acres managed	1.38		Primary land use in drainage Residential		
% Impervious	46%		2 or more landowners? No		
Land owner of BMP location	Private		CPv managed (ac-ft) 0.14		
BMP Footprint Size (acres)	0.07		Volume infiltrated (ac-ft) 0.00		
BMP Depth (feet)	6.50		Primary or secondary BMP? Primary		
Hydrologic soil group	C		Expired permit(s)? 2-0238; 2-0737		
Proposed BMP description:		Feasibility concerns:			
Construct new surface detention BMP following outfall, which is currently broken and experiencing significant erosion.		Wetlands concerns. There are delineated Class II wetlands downstream of outlet.			

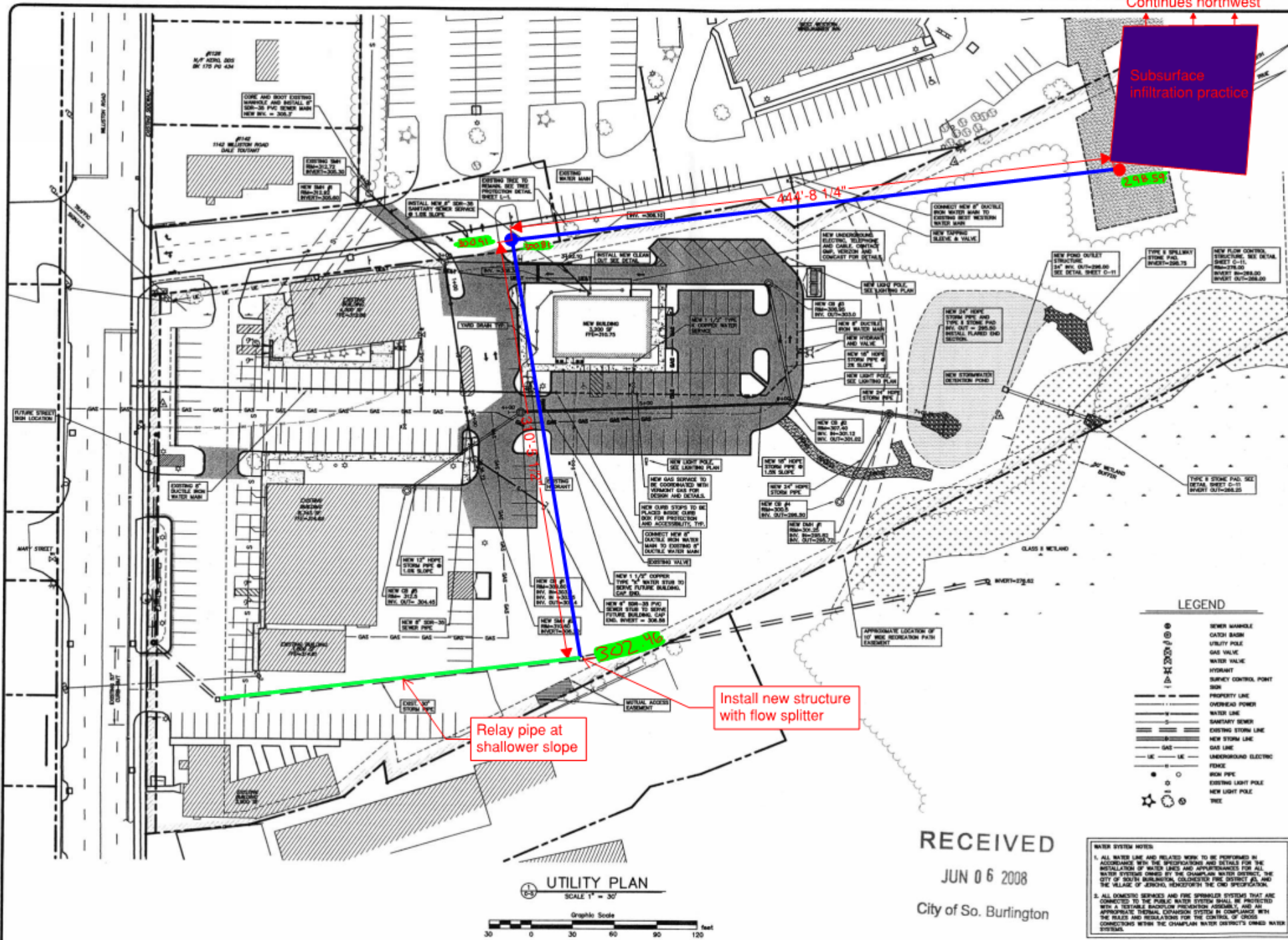
Potash Brook FRP BMP Summary Sheet					
Site name:	Grandview Drive West Detention Pond		South Burlington ID:	PB0032	
Approximate address:	Grandview Dr and Dorset St, South Burlington	MS4 where BMP is located:	South Burlington	New or existing BMP?	New
Proposed BMP type:	Detention Pond				
Estimated project cost		MS4s contributing drainage to BMP	South Burlington		
Drainage area (acres)	3.14				
Impervious acres managed	1.89		Primary land use in drainage Residential		
% Impervious	60%		2 or more landowners? No		
Land owner of BMP location	Private		CPv managed (ac-ft) 0.18		
BMP Footprint Size (acres)	0.03		Volume infiltrated (ac-ft) 0.00		
BMP Depth (feet)	5.20		Primary or secondary BMP? Primary		
Hydrologic soil group	C		Expired permit(s)? 2-0238; 2-0737		
Proposed BMP description:		Feasibility concerns:			
Construct new surface detention basin to the west of Dorset St. Reroute stormline away from brook to new BMP.		Wetlands concerns.			



Windjammer

- Up to 23 Acres of Impervious Managed
- Centennial Brook FRP Project
- CWSRF Loan: \$70,000





Continues northwest

Subsurface infiltration practice

Relay pipe at shallower slope

Install new structure with flow splitter

RECEIVED
JUN 06 2008
City of So. Burlington

CHAMPLAIN CONSULTING ENGINEERS
15 FLEM ROAD, P.O. BOX 433
COLCHESTER, VERMONT 05446
(802) 883-2860 • 800-187-8745 FAX
CONSULTANT: CHAMPLAIN CONSULTING ENGINEERS ALL RIGHTS RESERVED

STATE OF VERMONT
PLANNED UNIT DEVELOPMENT
1152 WILLISTON ROAD
UTILITY PLAN
SOUTH BURLINGTON VERMONT

DRAWN: OCE
CHECKED: MEC
SCALE: 1" = 30'
DATE: 12/31/07
JOB NO.: 24193
SHEET: C-5

OF 12 SHEETS



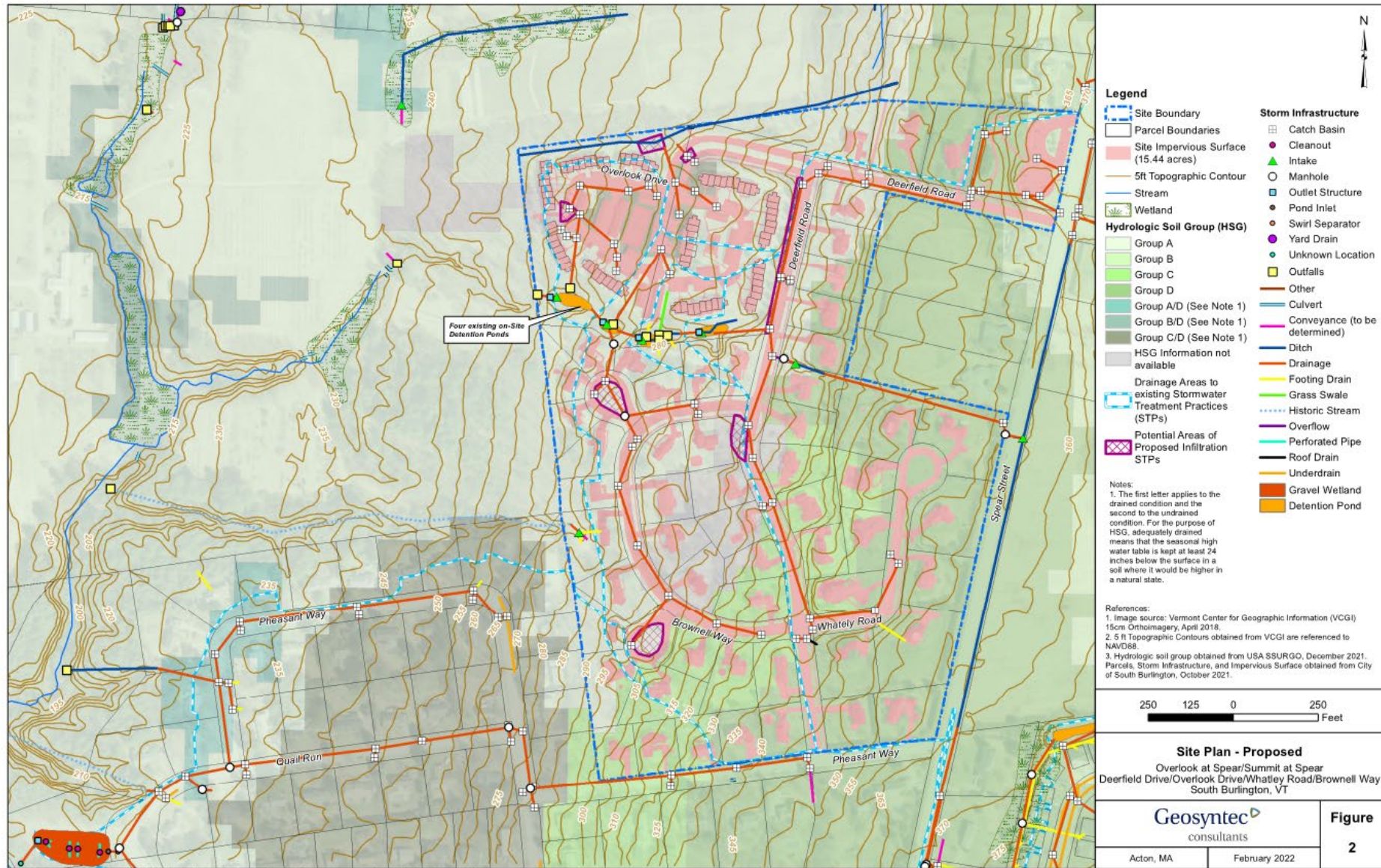
Overlook at Spear

- 17.5 Acres of Impervious to Manage
- Bartlett Brook FRP Project
- 3-Acre Site
- Expired Permit 2-0261
- CWSRF Loan: \$75,000

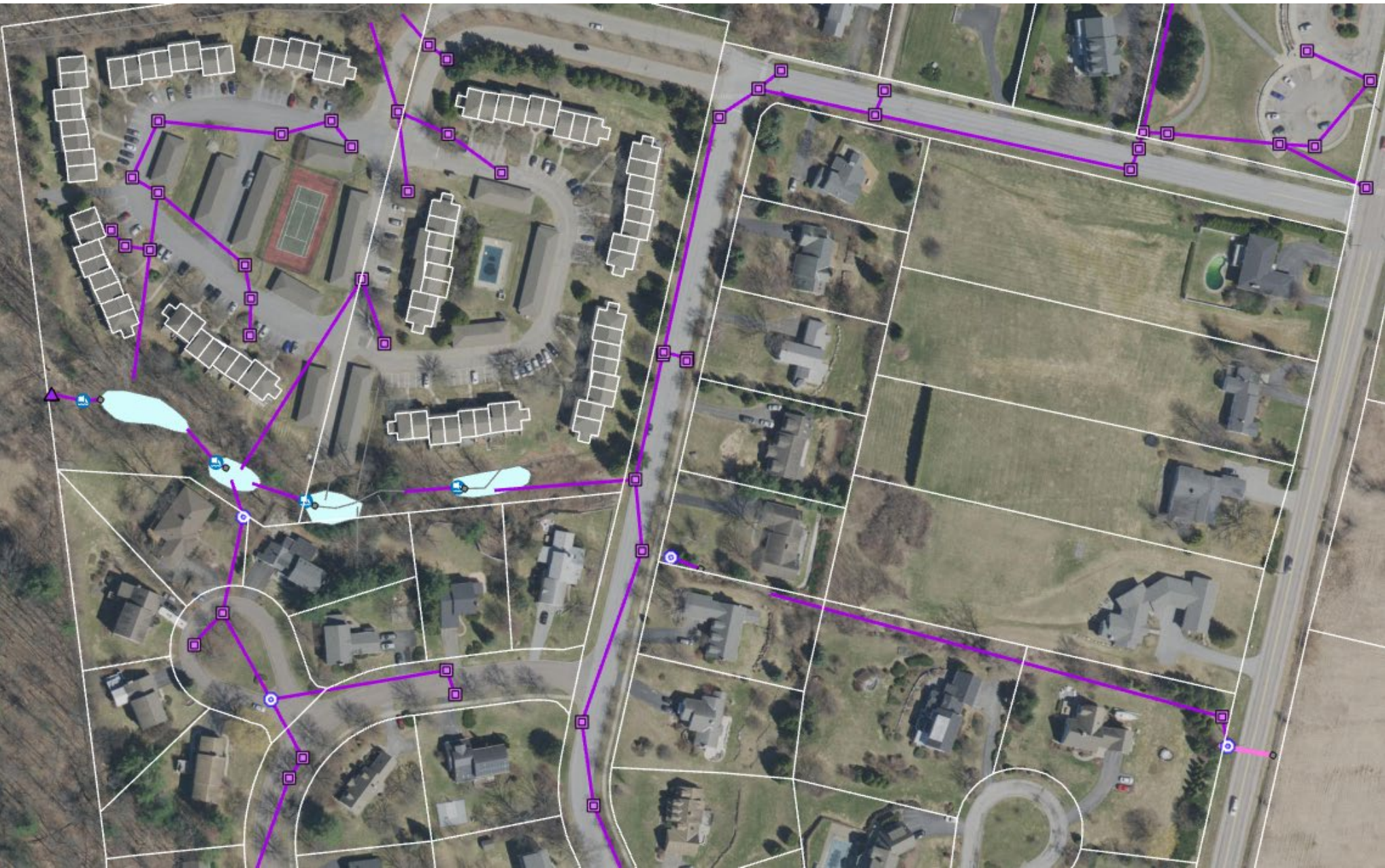
Expired Permit

- Covers 141 Properties:
 - City Properties:
 - Deerfield Road, Brownell Way, Whatley Road, Adams Court, Windsor Court
 - Overlook Park
 - Residential Properties:
 - 55 Single Family Homes
 - 79 Condo Units
 - Overlook Drive
- 17.5 Acres of Impervious (Estimate)
 - 4.14 City
 - 13.36 Residential





Existing
Ponds







General proposed location of Gravel Wetland

- Gravel Wetland would be sited somewhere within the cloud boundary, actual location to be determined through collaboration with UVM
- Cloud size and shape NOT representative of size and shape of treatment feature

Legend

	Drainage Area to Proposed Gravel Wetland		Catch Basin
	Site Boundary		Intake
	Parcel Boundaries		Manhole
	5ft Topographic Contour		Outlet Structure
	Stream		Vault
			Yard Drain
			Outfalls
			Culvert
			Conveyance (to be determined)
			Ditch
			Drainage
			Footing Drain
			Grass Swale
			Historic Stream
			Overflow
			Roof Drain
			Underdrain
			Dry Swale
			Detention Pond

References:
 1. Image source: Vermont Center for Geographic Information (VCGI) 15cm Orthoimagery, April 2018.
 2. Parcels obtained from City of South Burlington, October 2021.
 3. Storm Infrastructure obtained from City of South Burlington, October 2021.
 4. 5 ft Topographic Contours obtained from VCGI are referenced to NAVD88.

210 105 0 210
 Feet

Site Plan – Existing Aerial

Overlook at Spear/Summit at Spear
 Deerfield Drive/Overlook Drive/Whately Road/Brownell Way
 South Burlington, VT

Geosyntec
 consultants

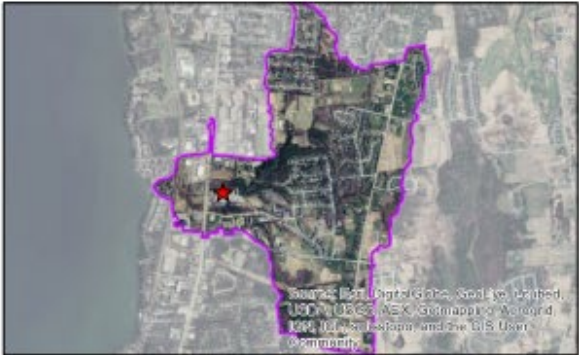
Acton, MA

January 2023

Figure

3

Alternatives Analysis



- LEGEND**

 - ROW Detention Planter
 - ROW Infiltration Planter
 - PROPOSED OUTLET
 - FINISH GRADE 2" CONTOUR
 - GSI BMP Drainage Areas
- BMP DRAINAGE AREA**

 - CredH3
 - CredH1
 - CredH2
 - base-r
 - base
 - post 2002
 - bartlett_watershed_101414
 - Roads

NOTES:

Locations for proposed GSI practices are approximate. Utility and tree conflicts have not been verified. Detention BMPs were designed as biofilters and in the ROW sized to mitigate the 1-year storm (CPv) volume with underdrains and overflow outlet structures, tied to the existing stormwater system. Infiltration BMPs were designed as bioretention practices, sized to infiltrate the 1-year storm (CPv) volume. Ponding depth for all practices range from 6-8".

BARTLETT BROOK FLOW RESTORATION STUDY SOUTH BURLINGTON, VERMONT

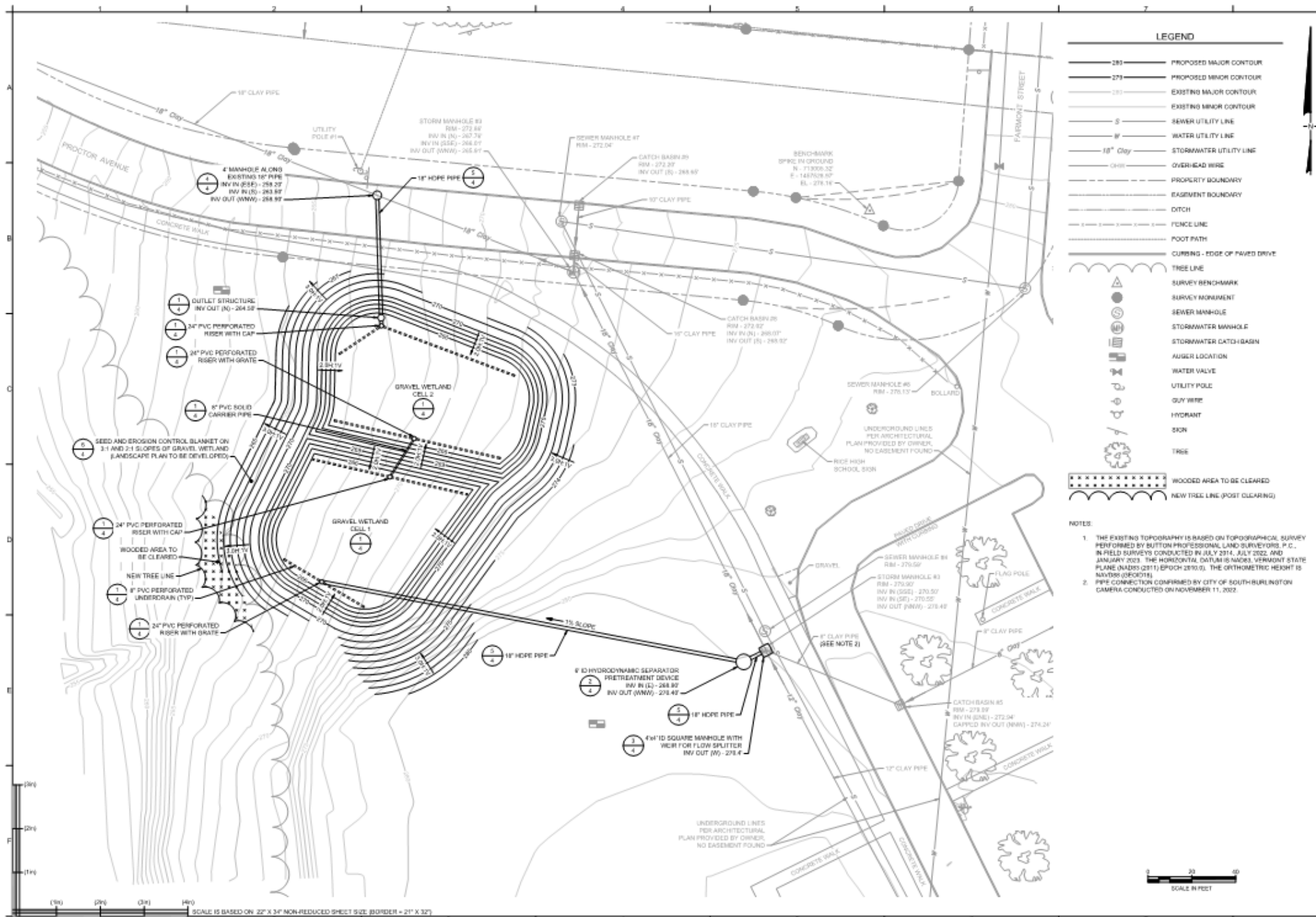
2-0261 Neighborhood Green Stormwater Infrastructure BMPs

DATE: 12-12-14	DRAWN BY: JS	SCALE: NOTED
----------------	--------------	--------------

Rice

- 5.6 Acres of Impervious to Manage
- Englesby Brook FRP Project (Drains to Pond O8)
- 3-Acre Site
- CWSRF Loan: \$72,000





LEGEND

	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SEWER UTILITY LINE
	WATER UTILITY LINE
	STORMWATER UTILITY LINE
	OVERHEAD WIRE
	PROPERTY BOUNDARY
	EASEMENT BOUNDARY
	DITCH
	FENCE LINE
	POOT PATH
	CURBING - EDGE OF PAVED DRIVE
	TREE LINE
	SURVEY BENCHMARK
	SURVEY MONUMENT
	SEWER MANHOLE
	STORMWATER MANHOLE
	STORMWATER CATCH-BASIN
	AUGER LOCATION
	WATER VALVE
	UTILITY POLE
	GUY WIRE
	HYDRANT
	SKIN
	TREE
	WOODED AREA TO BE CLEARED
	NEW TREE LINE (POST CLEARING)

NOTES:

1. THE EXISTING TOPOGRAPHY IS BASED ON TOPOGRAPHICAL SURVEY PERFORMED BY SUTTON PROFESSIONAL LAND SURVEYORS, P.C., IN FIELD SURVEYS CONDUCTED IN JULY 2014, JULY 2022, AND JANUARY 2023. THE HORIZONTAL DATUM IS NAD83, VERMONT STATE PLANE (DADES 2011) EPOCH 2010.5. THE ORTHOMETRIC HEIGHT IS NAVD83 (GEOID11).
2. PIPE CONNECTION CONFIRMED BY CITY OF SOUTH BURLINGTON CAMERA CONDUCTED ON NOVEMBER 11, 2022.

DRAFT

Ceosyntec
CONSULTANTS

300 SOUTH MAIN, SUITE 200
NORTH BURLINGTON, VT 05401
PHONE: 802.863.1888

PROPOSED CONDITIONS SITE PLAN			
STORMWATER UPGRADES			
30% DESIGN			
RICE MEMORIAL HIGH SCHOOL			
SOUTH BURLINGTON, VERMONT			
DATE: MARCH 2023	PROJECT NO.: 849952	PROJECT: STORMWATER UPGRADES	DATE: MARCH 2023
DRAWN BY: JAC	CHECKED BY: JAC	DESIGNED BY: JAC	APPROVED BY: JAC
DATE: MARCH 2023	PROJECT NO.: 849952	PROJECT: STORMWATER UPGRADES	DATE: MARCH 2023
DRAWN BY: JAC	CHECKED BY: JAC	DESIGNED BY: JAC	APPROVED BY: JAC

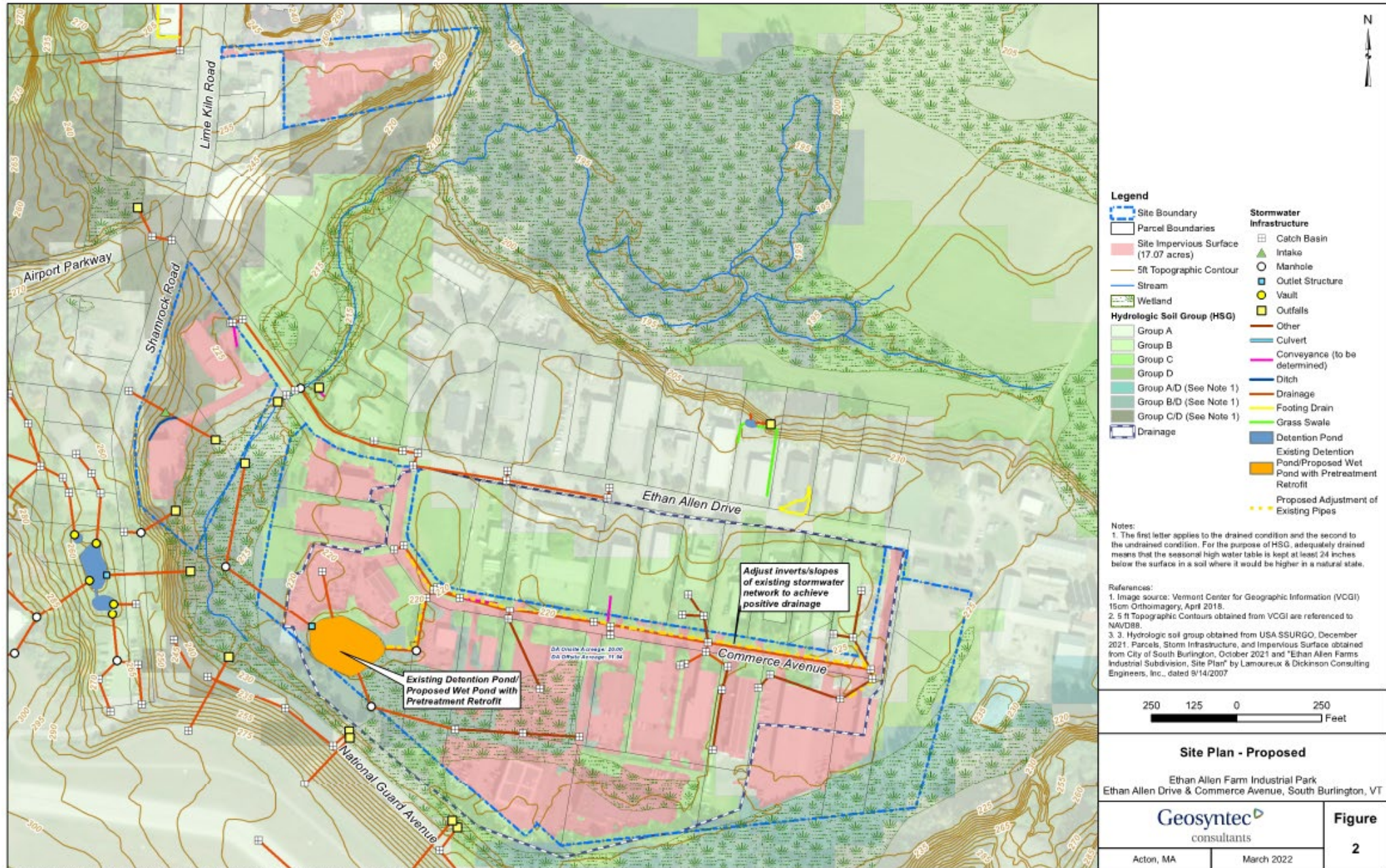


SCALE IS BASED ON 32" X 34" NON-REDUCED SHEET SIZE (BORDER = 21" X 32")




Ethan Allen Industrial Park

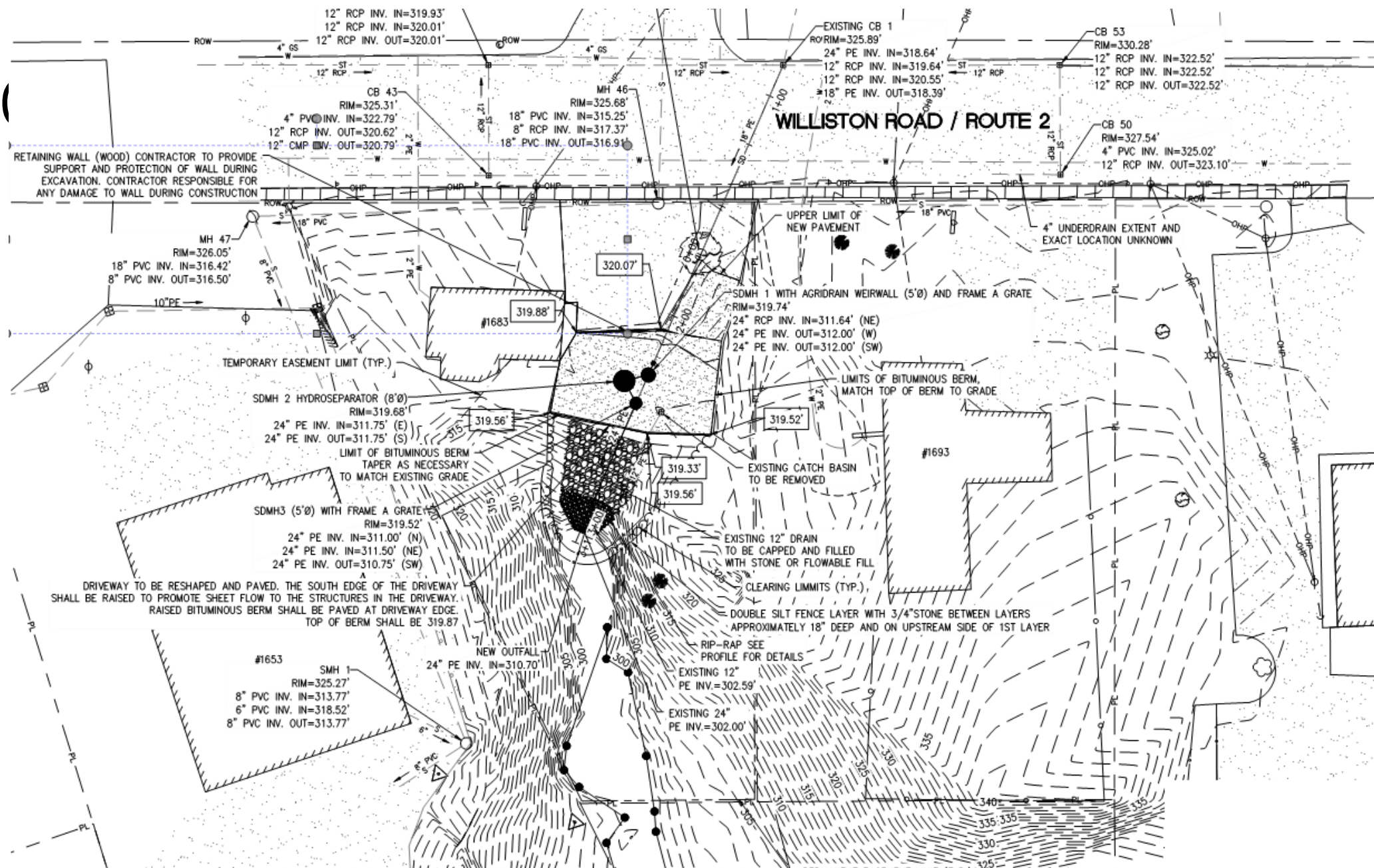
- Up to 17 Acres of Impervious to Manage
- 3-Acre Site
- CWSRF Loan: \$44,500



Logwood

- 18.44 Acres of Impervious Area to Manage
- Potash Brook FRP Project
- CWF MARC Block Grant: \$19,300
- City Match: \$19,300
- Distributed Infiltration
- Swirl Separator

Potash Brook FRP BMP Summary Sheet					
Site name:	Logwood Neighborhood Detention Pond		South Burlington ID:	PB0051	
Approximate address:	Williston Rd south of intersection with Airport Rd, South Burlington	MS4 where BMP is located:	South Burlington	New or existing BMP?	New
Proposed BMP type:	Detention Pond				
					
Estimated project cost	\$151,000	MS4s contributing drainage to BMP		South Burlington	
Drainage area (acres)	44.81	Primary land use in drainage		Residential	
Impervious acres managed	18.44	2 or more landowners?		Yes	
% Impervious	41%	CPv managed (ac-ft)		0.61	
Land owner of BMP location	Private	Volume infiltrated (ac-ft)		0.00	
BMP Footprint Size (acres)	0.47	Primary or secondary BMP?		Primary	
BMP Depth (feet)	6.50	Expired permit(s)?		No Permit	
Hydrologic soil group	Not Rated				
Proposed BMP description:			Feasibility concerns:		
Construct new end of pipe surface impoundment BMP behind Lean Dental Group. Outfall is currently eroded.			Proposed BMP is on private property. Soils are unmapped. There are Class II wetlands south of proposed BMP, but BMP area should be well outside of wetlands buffer.		



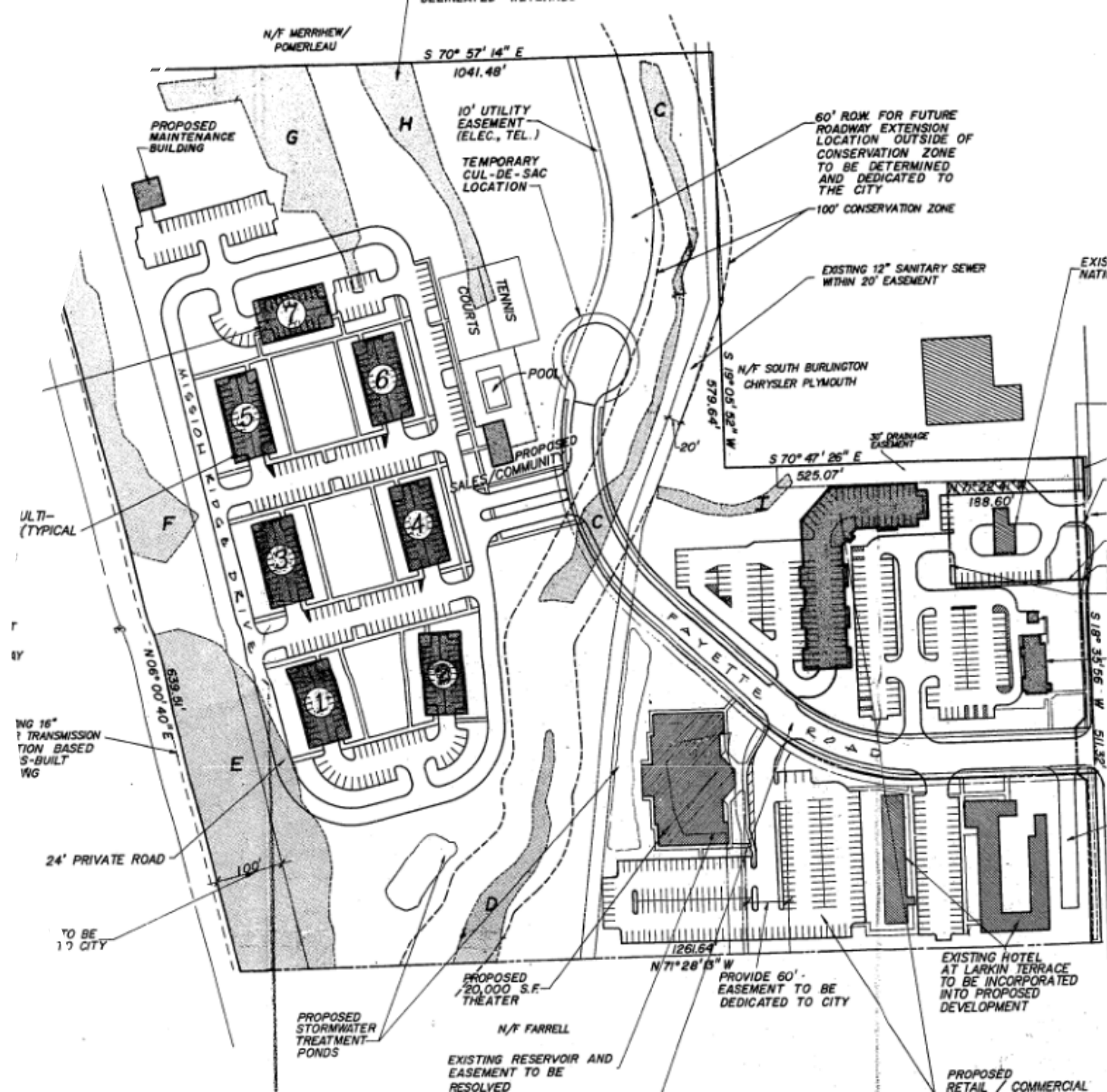
Technology Park

- Up to 22 Acres of Impervious to Manage
- 3-Acre Site
- CWSRF Loan: \$65,000



L&M Park

- Up to 8.5 Acres of Impervious to Manage
- 3-Acre Site
- CWSRF Loan: \$58,000





Green Tree Park

- Up to 14.2 Acres of Impervious to Manage
- 3-Acre Site
- CWSRF Loan: \$54,000



Vermont National Country Club

- Up to 47 Acres of Impervious to Manage
- 3-Acre Site
- CWSRF Loan: \$60,000



Acadia

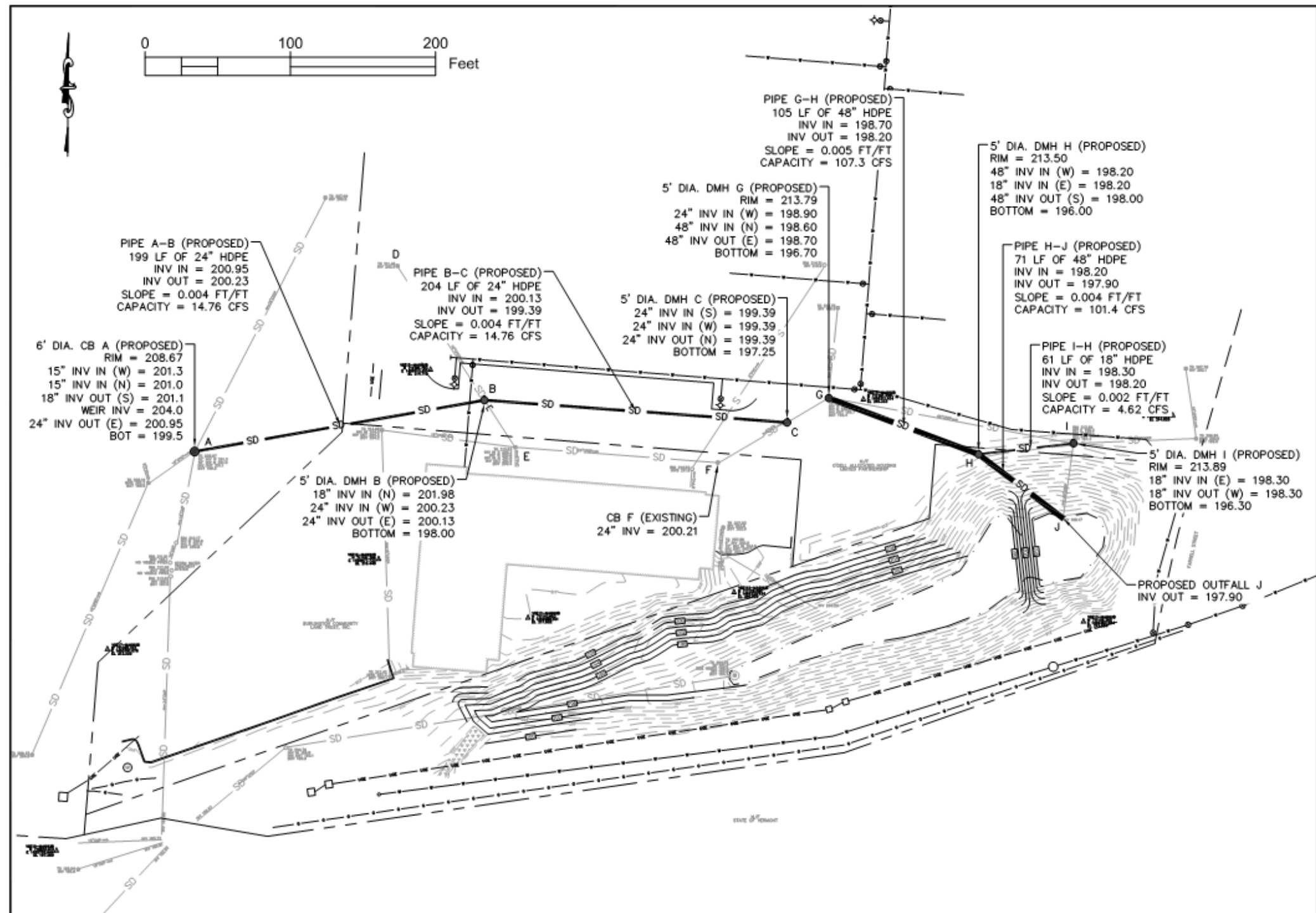
- 6.78 Acres of Impervious Managed
- Potash Brook FRP Project
- CWSRF Loan for Engineering and Permitting
- Shared Project with O'Dell PUD



O'Dell Parkway PUD


- 9.56 Acres of Impervious Managed
- Potash Brook FRP Project
- CWSRF Loan for Engineering and Permitting
- Shared project with Acadia

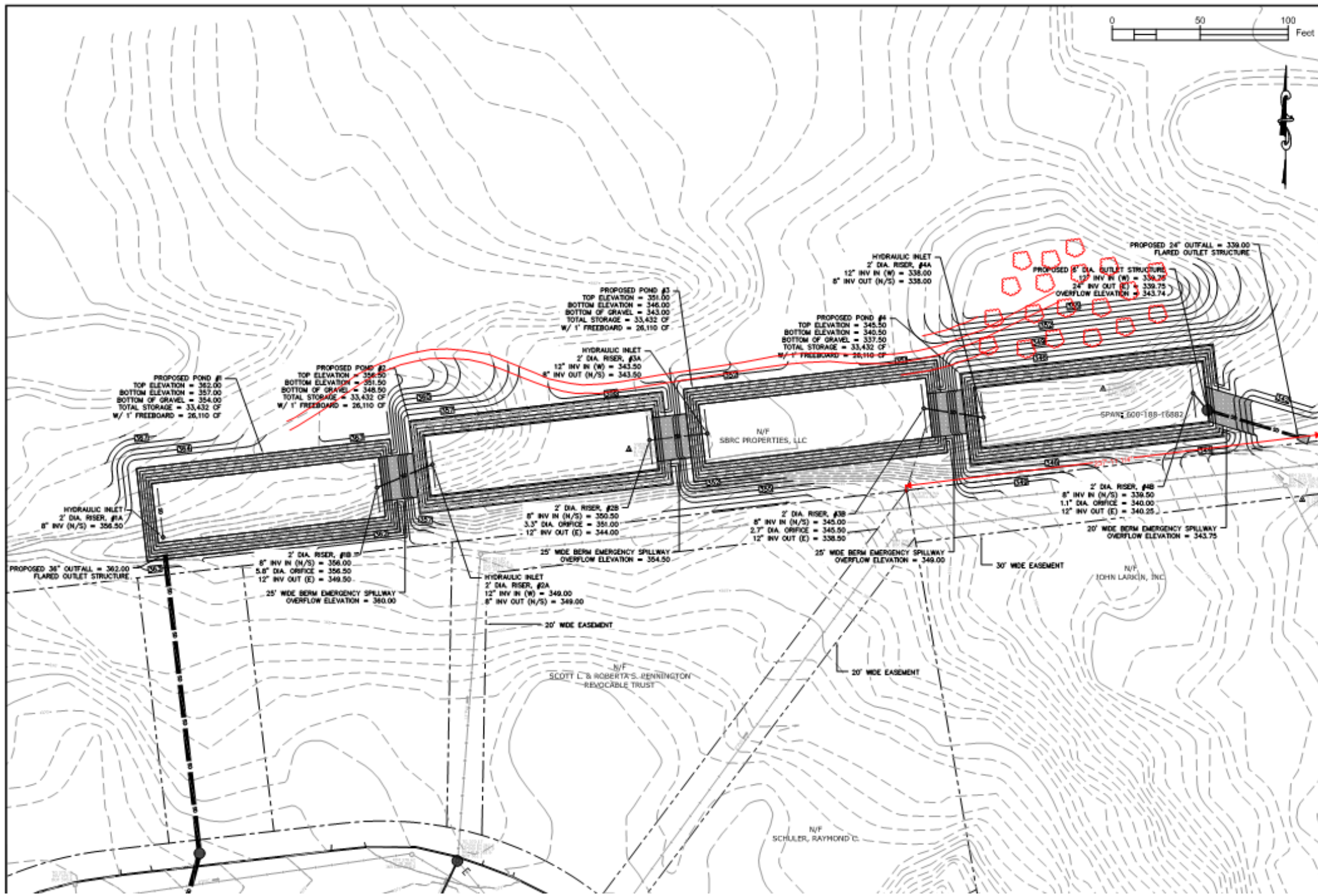




Ledge Knoll

- 5.1 Acres of Impervious Managed
- Potash Brook FRP Project
- CWSRF Loan for Engineering and Permitting
- Final NOI Due: 7/23/2023

Potash Brook FRP BMP Summary Sheet					
Site name:		Knoll Circle		South Burlington ID: PB0046	
Approximate address:	Knoll Cir north of Dubois Dr, South Burlington	MS4 where BMP is located:	South Burlington	New or existing BMP?	New
Proposed BMP type:		Gravel Wetland			
					
Estimated project cost	\$750,000	MS4s contributing drainage to BMP		South Burlington	
Drainage area (acres)	12.16	Primary land use in drainage		Residential	
Impervious acres managed	2.16	2 or more landowners?		Yes	
% Impervious	18%	CPv managed (ac-ft)		0.80	
Land owner of BMP location	Private	Volume infiltrated (ac-ft)		0.00	
BMP Footprint Size (acres)	0.35	Primary or secondary BMP?		Primary	
BMP Depth (feet)	6.00	Expired permit(s)?		2-0220	
Hydrologic soil group	D				
Proposed BMP description:			Feasibility concerns:		
Construct new gravel wetland with swale inlet. Current stormline draining subdivision already enters swale, which also drains area to the west.			Proposed BMP is located outside of Knoll Cir residential property.		




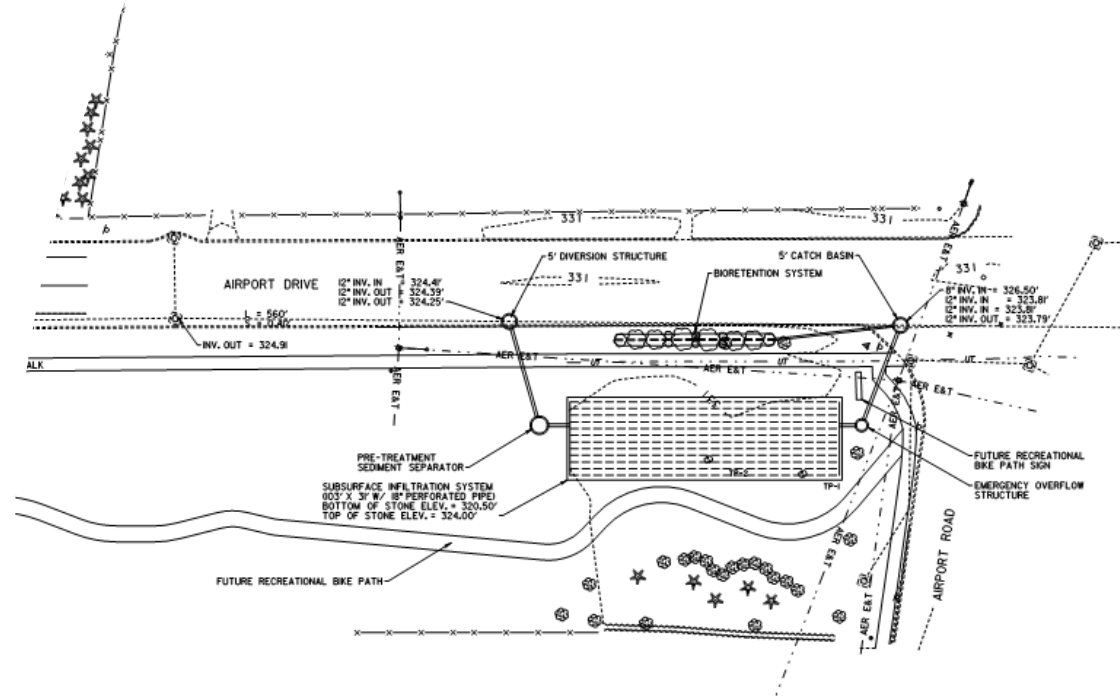
Airport Drive

- VTrans 2021 Environmental Mitigation Grant
- 80% funded by VTrans (\$365,200)
- 20% funded by City (\$91,300)
- Award Start Date: January 2021
- Award End Date: November 2025
- Funding covers design & construction


Project Benefits

- 2.71 Acres of Impervious Surface Managed
- 100% TSS Reduction
- 100% Phosphorus Reduction
- 100% Reduction in CPv Peak Flow

Potash Brook FRP BMP Summary Sheet					
Site name:		Airport Drive		South Burlington ID: PB0009	
Approximate address:		Airport Dr and Airport Rd, South Burlington		MS4 where BMP is located:	BTV
				New or existing BMP?	New
Proposed BMP type:		Infiltration Gallery			
					
Estimated project cost		\$439,000		MS4s contributing drainage to BMP	
Drainage area (acres)		9.65		South Burlington, BTV	
Impervious acres managed		2.71		Primary land use in drainage	
% Impervious		28%		Residential	
Land owner of BMP location		MS4 Owned		2 or more landowners?	
BMP Footprint Size (acres)		0.09		Yes	
BMP Depth (feet)		3.50		CPv managed (ac-ft)	
Hydrologic soil group		A		0.46	
				Volume infiltrated (ac-ft)	
				0.46	
				Primary or secondary BMP?	
				Primary	
				Expired permit(s)?	
				No Permit	
Proposed BMP description:			Feasibility concerns:		
Construct subsurface infiltration chambers in southernmost lot where houses will be removed. Intercept stormline running south down Airport Dr.					

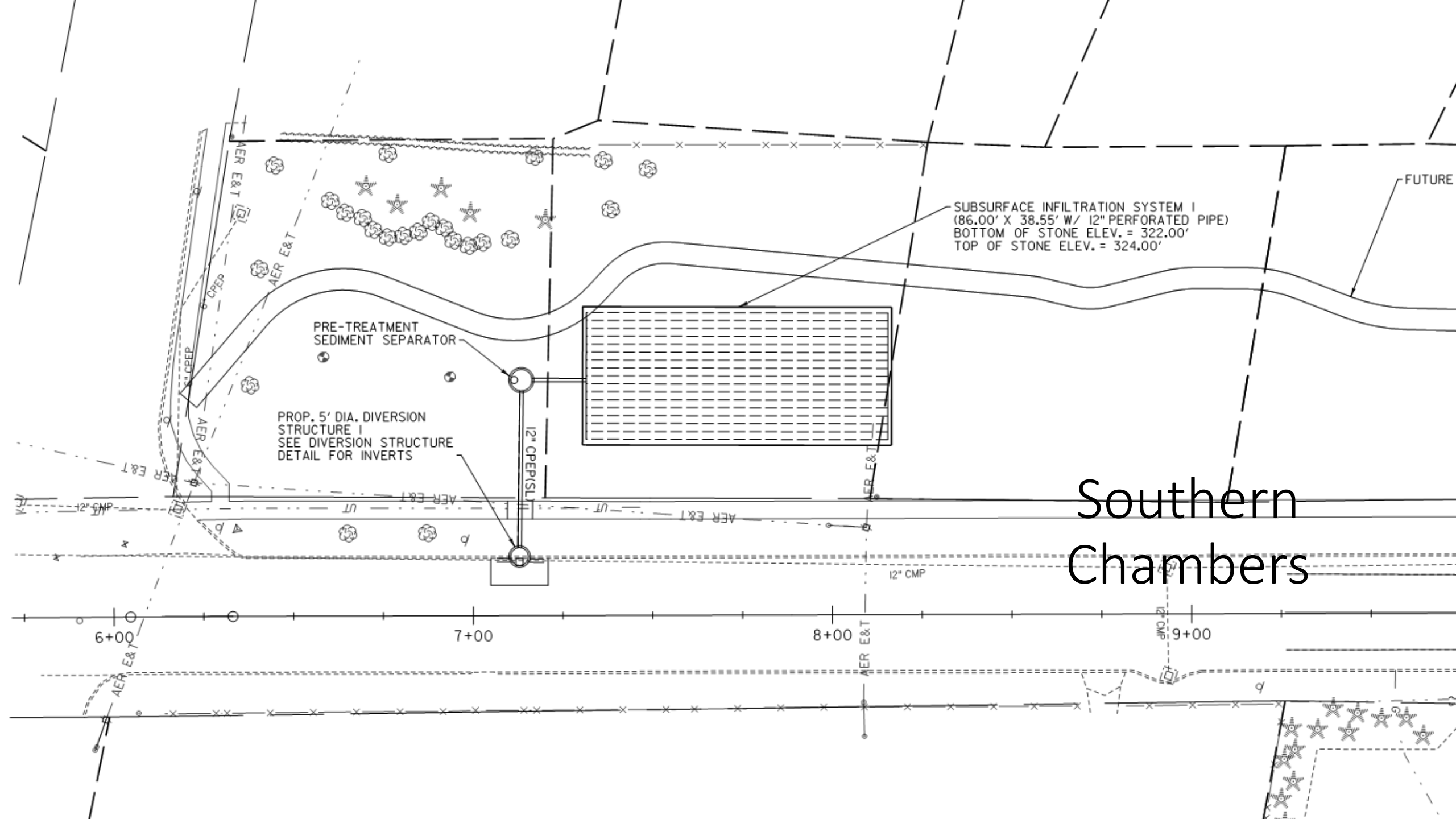


Soil Test Pits & Infiltration Testing

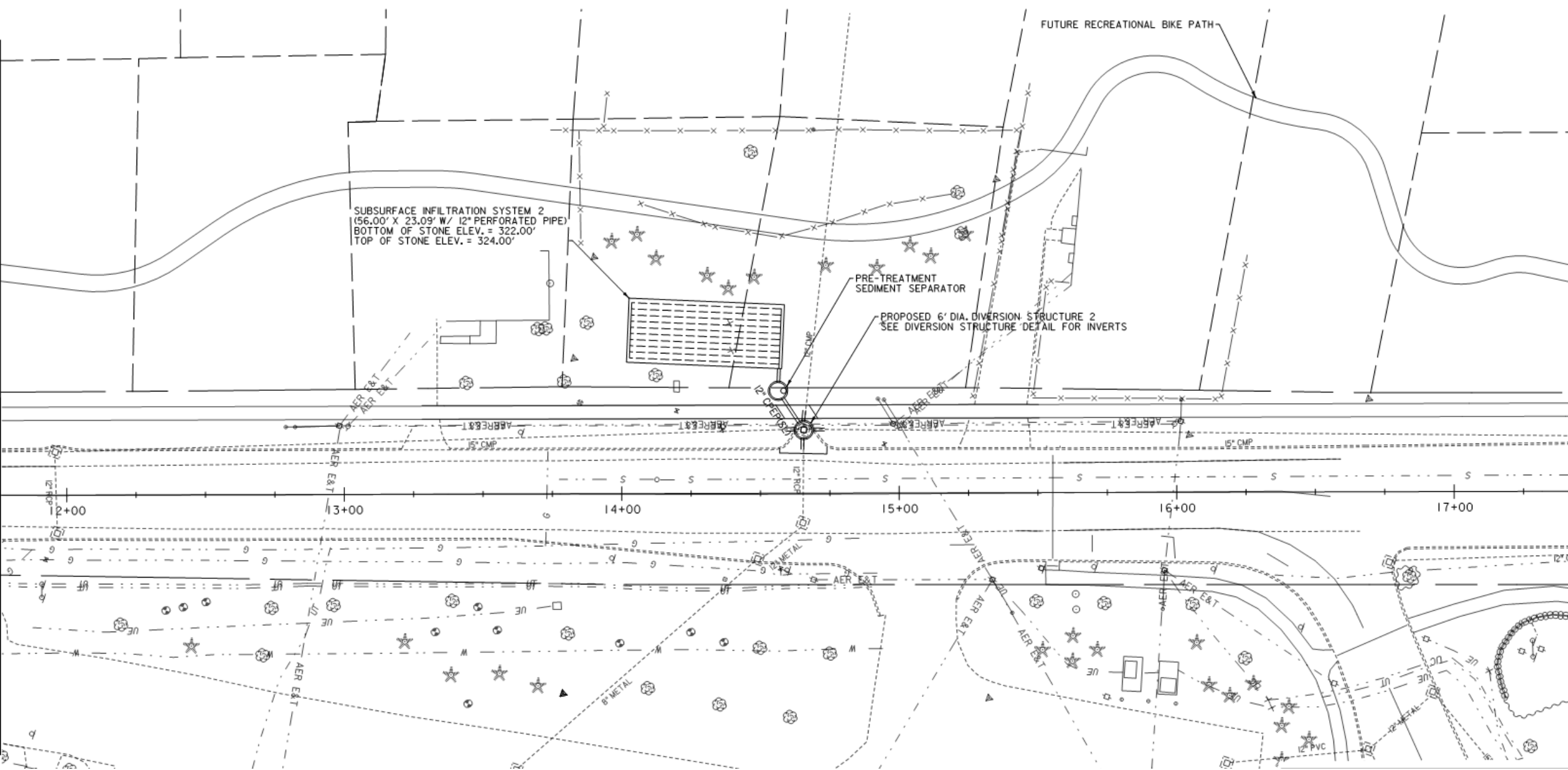
<div>SANBORN</div> <div></div> <div>HEAD</div>	Project Name: Stormwater Treatment System for the City of South Burlington, VT		Start Date: 11/05/2020		
	Project Location: 1151 Airport Drive		Finish Date: 11/05/2020		
	Calc. By: A. Lulias		Check By: B. Stringer		
	Project No: 5081.00		Test Performed By: A. Lulias		
Infiltration Test Location Number			IT-2		
Approximate Ground Surface Elev. (ft.):			97.8		
Approximate length of PVC Infiltration Pipe (ft.):			13.0		
Approximate Casing Stick-Up (ft hgs):			1.42		
Approximate Test Elev. (ft.):			85.3		
Proposed Bottom of Stormwater Practice. (ft.):			85.3		
	Trial 1	Trial 2	Trial 3	Trial 4	Average
Start Time	9:07 AM	10:10 AM	11:18 AM	12:20 PM	--
Stop Time	10:07 AM	11:10 AM	12:18 PM	1:20 PM	--
Test Duration (hr)	1.00	1.00	1.00	1.00	--
Starting Water Depth (ft)	11.50	11.17	11.00	11.25	--
Ending Water Depth (ft)	13.17	13.25	13.25	13.33	--
Infiltration Rate (in/hr)	20.0	25.0	27.0	25.0	24.2
Comments: 1. Water depths were measured from top of PVC casing. 2. Infiltration tests conducted in general accordance with Section 4.3.3.2.5 of the 2017 Vermont Stormwater Management Manual Rule and Design Guidance effective July 1, 2017. 3. Tests were terminated prior to one-hour duration when the water was observed to have fully drained from the casing. 4. Elevations were determined based off Hand Level measurements and Site specific elevation control. An elevation of 100 feet was established on the top of IT-1 and groundwater and infiltration rates were based off that elevation.					

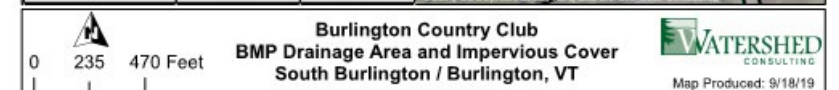






Southern
Chambers



[illegible]

Lindenwood

- 2.19 Acres of Impervious
- Potash Brook FRP Project
- Vtrans Grant: \$303,574
- Finished Construction May 2023



ist acts and have detained 25 people in the investigation for possible

Bush spoke by phone to Pakistani President Gen. Pervez Mu-

United States considered bin Laden the main suspect.

DEB OF 20 OF 30 OTHER PEOPLE WHO would step in. ... Obviously, he's a

at more than 600,000 tons.

yond.

POLLUTION: Projects could be held up by ruling

Continued from Page 1A
Circumferential Highway — planned between Interstate 93 in Williston and Vermont 117 in Essex — also is subject to the ruling and could be further delayed.

Developers of the projects on the state list were guardedly optimistic that the Dean Administration, legislators, or some compromise between the state and environmentalists would ultimately soften the ruling. How long that will take is unclear.

"Fortunately, we have time with this project. It's not like we want to start tomorrow morning," said Miller, referring to possible delays. "Typically for developers,

time is our worst enemy because time is money."

The issue at hand is rainwater dirtied by impurities that washes into rivers and lakes. It's a problem in rural areas, where fertilizers wash into streams, and in urban and suburban areas, where precipitation flows off roofs, roads, parking lots and driveways. That water picks up pollution and rushes straight into small brooks.

For several years, the Agency of Natural Resources has addressed the problem by requiring developers to build special retention ponds to hold storm water temporarily. The agency also is

slowly studying individual waterways and developing new rules.

Environmental groups are unhappy with the pace of the state's enforcement, which has fallen behind schedule. Many local streams are polluted by government standards. Lake Champlain is slowly choking on algae blooms caused by phosphorus and nitrogen from fertilizer, acid rain, pet livestock and wildlife waste and other sources.

The Conservation Law Foundation challenged the Natural Resources Agency's practices in front of the Water Board, and in June the panel ruled the agency is not adequately enforcing state law. State law clearly says a de-

veloper can't add any specific pollution to a waterway that is "impaired" with that pollution, the board ruled.

Scott Johnstone, the secretary of Natural Resources, has said his agency will continue to issue permits regardless of the Water Resources Board ruling until any appeals are exhausted. Johnstone said the best way to combat polluted storm water is to require tougher treatment standards for older developments, something the agency intends to do, not stopping newer projects that have state-of-the-art treatment.

Gov. Howard Dean said last week he might also ask the Legislature to amend state law to ensure the water board's ruling does not go into effect. Dean has said many streams are polluted only in a technical sense.

Environmental groups have warned they will challenge any permits issued in violation of the board's ruling. That could result in a significant slow-down of the projects at a minimum.

Contact Tom Zolper at 229-9141 or tzolper@bfp.burlingtonfreepress.com

No immediate solution seen in water debate

By David Gram
The Associated Press

MONTPELIER — Amid all the recent discussions about a South Burlington brook stopping the flow of development in Vermont, one fact is becoming clear: State government is on the hot seat.

When the Water Resources Board ruled in June — and reaffirmed last month — that no new pollutants could be added to Potash Brook without a plan in place for cleaning up existing pollution, a troublesome fact emerged: The state has allowed a huge backlog to develop in drafting such plans for its polluted streams.

Under the legal standard the board has set up, developers would have to guarantee that no runoff from their driveways and parking lots would carry new pollutants to an impaired stream or they would have to wait for the development of a cleanup plan for the stream.

About 126 streams, lakes or sections of those waterways in Vermont are officially designated as polluted. The state Department of Environmental Conservation is required by the federal Clean Water Act and state law to draft plans for cleaning up those streams.

The state has finished two of those plans and has 11 more in draft form, officials at the Natural Resources Agency said.

Environmentalists charge that a backlog in stream planning dating back years demonstrates a lack of commitment by the Dean administration on the issues of

and any possible health threats stemming from it.

"(These) streams are really not polluted; in fact some of them you could drink out of them and almost all of them you can swim in," Dean said on Vermont Public Radio's "Switchboard" program, according to a VPR transcript. "They're polluted by federal standards, and we list those because we believe we ought to improve the quality of those streams."

He later told radio talk show host Mark Johnson, whose program is broadcast on WKDR and WDEV, that he had "canoeed on a lot of these so-called impaired waterways, and they're fine. In fact, I've cooked with the water."

As Dean, a physician, was making his radio remarks, his Health Department had posted on its Web site a warning about blue-green algae blooms in Lake Champlain.

"As a precaution, the Health Department recommends that young children and pets be closely supervised, and not allowed to swim or wade in areas with algae," said the message from state epidemiologist Ann Finger, also a physician.

Kelly Lowry, water program director and lawyer with the Vermont Natural Resources Council said he had heard the governor recently refer to Potash Brook as "technically polluted."

"The streams are dead, there's no life in them," Lowry said. "That's not technical pollution. ... The fact that does die when they

ATTENTION FLETCHER ALLEN PATIENTS

Expanded Valet Parking Service Beginning September 17

This \$2.00 service will be available on the Medical Center Campus weekdays from 6 a.m. to 9 p.m.
One charge covers the entire day

Valet parking allows Fletcher Allen to better serve patients and families by:

- Improving access to the hospital buildings
- Reducing wait times for the parking garage
- Maximizing available patient parking space on the campus

TIPPING IS NOT PERMITTED

LOTTERY

TRI-STATE MEGABUCKS: Nobody won Saturday's jackpot worth \$700,000. Players who matched some of the winning numbers will share \$55,894 in cash and free tickets.
Wednesday's drawing is estimated at \$900,000. The numbers: 11-19-24-32-34-41 bonus 40
PICK 3: 9-6-0
PICK 4: 4-9-2-1

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By Carrier: Daily and Sunday \$3.50 per week
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Daily only: \$2.55; Sunday Plus*: \$2.25

*Frequency of delivery includes the following holidays if not a scheduled delivery day: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, December 25.

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SETTING IT STRAIGHT

The Burlington Free Press strives to be fair and accurate. To notify an editor about a mistake, offer a comment or ask a question, call 865-0940 or (800) 427-3124.

BANKRUPTCY NUMBERS:

The numbers were incorrect in a story that ran Sept. 9 in Business Monday in the Free Press. Business bankruptcy fil-

Stop stalling on stormwater

As a lifelong Vermonter, I am concerned when environmental issues regress to finger pointing, lawsuits and exaggerated ads instead of finding solutions.

Example: Stormwater permits. Rather than exhaustive, expensive studies that do nothing to clean our waters, we need to work with all the stakeholders to institute immediate corrective action. Confrontational lawsuits not only do not clean water, they just stall needed economic stimulus for jobs.

Promoting a healthy economy and protecting the environment must be mutually inclusive. We can, and must, allow for desperately needed housing, additions to high-tech facilities and myriad other appropriate expansions, all providing jobs while protecting the environment. House Bill 644, the Clean Water Bill, overwhelmingly passed the House and with leadership from the House, the Senate and the administration, all the stakeholders

ERNIE POMERLEAU

IT'S MY TURN

have many options available to them. If we do not support these large companies as well as all of our small, growing companies, then we cannot paint a healthy economic portrait of our state.

The stormwater issue is a flash point and has been used as a means to stop the Circumferential highway. Without the Circ, IBM cannot meet permit issues to expand a critical technological base. This puts thousands of jobs at risk while forcing commuters to waste time and run cars needlessly in stalled traffic. Technology exists to deal with stormwater in this project — using this issue in the debate, as a mask to other concerns, is inappropriate. If stormwater is the issue, let's talk about solutions — if not, let's talk about the real issues and find solutions to them.

tration, all the stakeholders worked on appropriate compromises that meet the needs of the environment and business without jeopardizing either's much needed position in Vermont.

Vermont is a magical place, which draws hikers, boaters, skiers and naturalists. This cache is the underpinning of why businesses are here as well. Simultaneously, however, they must be profitable. Nonprofit regional economic development organizations and state agencies constantly struggle to attract high-paying jobs to this state. Employers often spend years of planning and invest time and money in the elaborate Act 250 process to protect wetlands, agriculture and archaeology and promote historic preservation. If these requirements are satisfied, a proposal has a chance to go forward. At the moment, the stormwater standstill makes economic development a questionable matter. At the very least, we need to assure companies that are integral to our community that they can survive and grow by staying in Vermont. Companies like IBM, Husky, General Dynamics and IDX

Here's the irony, the Dean administration, the Agency of Natural Resources, Legislature, businesses and environmental groups have the same goal: clean water. The ANR acknowledges it has moved too slowly. A debate that has brought this issue to the headlines becomes counterproductive when it inspires litigation, or worse, stereotypes business people as polluters. This is less about finding a middle ground than about finding solutions that will simultaneously protect the environment and endorse sensible expansion, therefore creating jobs.

We don't need more studies or lawsuits. We need to find a new model where all the stakeholders can work together and understand the interests of all parties to create a healthier environment that we can all cherish while simultaneously promoting a healthy economy, which creates a better quality of life for all Vermonters.

Ernie Pomerleau is president of Pomerleau Real Estate and chairman of GBIC, Chittenden County's nonprofit regional economic development corporation.