



Date: August 9, 2021
To: Waterford Conservation Commission

Re: Application #C-21-08: 908 Hartford Turnpike
Multi-Unit Residential Development
Application Materials Review Comments

Proposed Regulated Activity:

The application is for the construction of a 40 unit multi-family residential complex on an 16.6 acre parcel located along the southerly side of Rte. 85, Hartford Turnpike. The development envelope is approximately 2.7 acres on the northern portion of the property and will include 1.5 acres of impervious roof area, parking surface and driveway walkways surfaces. The site presently supports a residential structure and outbuildings in the area of proposed development.

Regulated activities associated with this application include:
clearing, excavation and grading adjacent to inland wetlands,
discharge of stormwater run-off to inland wetlands and a perennial watercourse.

Wetland Description:

1. Perennial Tributary to Jordan Brook (JCT-2)

The property contains an approximately 1,100 ft. reach of an un-named tributary to Jordan Brook, identified in the watershed management plan as JCT-2. This stream is perennial and the wetland is ranked as a high quality wetland in the watershed, possessing high ecological integrity and high fish and wildlife resource value. The management plan identifies JCT-2 as a wetland of special significance and sensitive to water quality impacts.

Measures to protect water quality, maintain groundwater base flows and pre-development peak discharge rates, and to treat stormwater discharges to achieve no net increase in pollutant loading compared to existing conditions are recommended for development along this tributary. The management plan also recommends the designation of an upland protection zone of undisturbed vegetation along the wetland boundary to protect wetlands of special significance.

2. Jordan Brook Mainstem (JCM-1)

An approximate 500 ft. length of the central mainstem of Jordan Brook (JCM-1) flows through the southwest portion of the property. Jordan Brook is a perennial trout stream and this reach is identified as a very high quality wetland resource and a wetland of special significance in the Jordan Brook Watershed Management Plan. No activity is proposed in the southern portion of the property as part of this application. The nearest clearing activity is 600 ft. upgradient of the Jordan Brook main stream channel.

The majority of the property consists of forested upland. Refer to attached aerial photo and watershed wetland summary information.

Stormwater Controls:

The proposed project includes an infiltration basin designed to capture the water quality volume from the developed site. Riser pipes in the basin direct excess flow to a sub-surface ADS stormwater detention system constructed under the eastern parking area. Discharge from the detention system is directed to the un-named tributary. A Stormwater Management Design report has been submitted as part of the application. A site operation and maintenance plan is included in appendix E.

The design meets the recommendation of the watershed management plan of no increase in peak discharge over existing conditions.

Information should be provided on the anticipated effectiveness of the stormwater management system in meeting the recommended "no net increase" in pollutant loading.

Plan Review Comments:

- 1) The application should address how the upland vegetated slopes adjacent to the wetland resource are proposed to be protected from disturbance during and after construction. This natural vegetated buffer is an important element of the riparian corridor and serves to protect the wetland soils, vegetation and stream hydrology and habitat. The management plan recommends a minimum of 50 ft. vegetated upland protection area and 100 ft. protection area adjacent to perennial stream channels. The adjacent development at Target store maintained a 50 ft. wide conservation easement along this watercourse.
- 2) The limits of clearing proximal to the stream channel can be located further from the resource boundary and closer to the edge of grading in order to preserve natural vegetated buffer area between the development and the stream corridor.
- 3) Options to increase the buffer between the stormwater outlet and the stream channel embankment should be evaluated to increase natural vegetated buffer in this area.
- 4) The location of the infiltration basin should not be used as a temporary sediment trap or stormwater run-off control swale during construction. Temporary measures to deter machinery, stockpiling and compaction of the soils in this area should be identified in the construction plans.
- 5) The CTDEEP Stormwater Manual recommends pre-treatment of 25% of the water quality volume in a forebay area or by other component to capture coarse particulates, floatables and oil & grease prior to infiltration. The capacity of the catch basin trap proposed at the inlet to this basin should be explained. A designated forebay may be needed at the basin inlet.
- 6) The in-situ soils within the infiltration basin should be tested for permeability. A minimum of two (2) field permeability tests should be conducted by the design engineer prior to submittal of final construction plans to verify the basin infiltration rates and identify if any amendments to the basin soils are necessary to achieve performance as a stormwater infiltration component.
- 7) Stormwater run-off should not be discharged to the infiltration basin until exposed soil surfaces are stabilized with vegetative cover to prevent clogging of the filter media.
- 8) The geotechnical borings and test probes identify seasonal high water levels in the area of the proposed subsurface detention system. The potential impact of seasonal water table on the performance and capacity of the system should be explained.

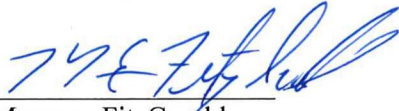
- 9) The application should include the level of stormwater treatment and anticipated pollutant removal efficiency of the stormwater treatment system and maintenance plan.
- 10) A checklist for inspection and maintenance of the stormwater treatment structures and the best management practices to control pollutant discharge should be developed for this project. The maintenance plan should include inspection and cleaning requirements for the catch basins, the infiltration basin and the sub-surface detention system, and the outlet area. The plan should also address what measures are required to restore the treatment capacity of the infiltration basin should standing water occur for a period longer than 3-5 days after a storm event.
- 11) The application should identify what activity(s) and surface treatment is proposed along the foot trail leading across the tributary stream channel. This the pathway of an old cartway that has become overgrown, but the path does not lead much further than the adjacent property of Target.

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Respectfully,



Maureen FitzGerald
Environmental Planner



Scale: 1"=200 ft.
2016 Aerial Photo

Town of Waterford WETLANDS SUMMARY

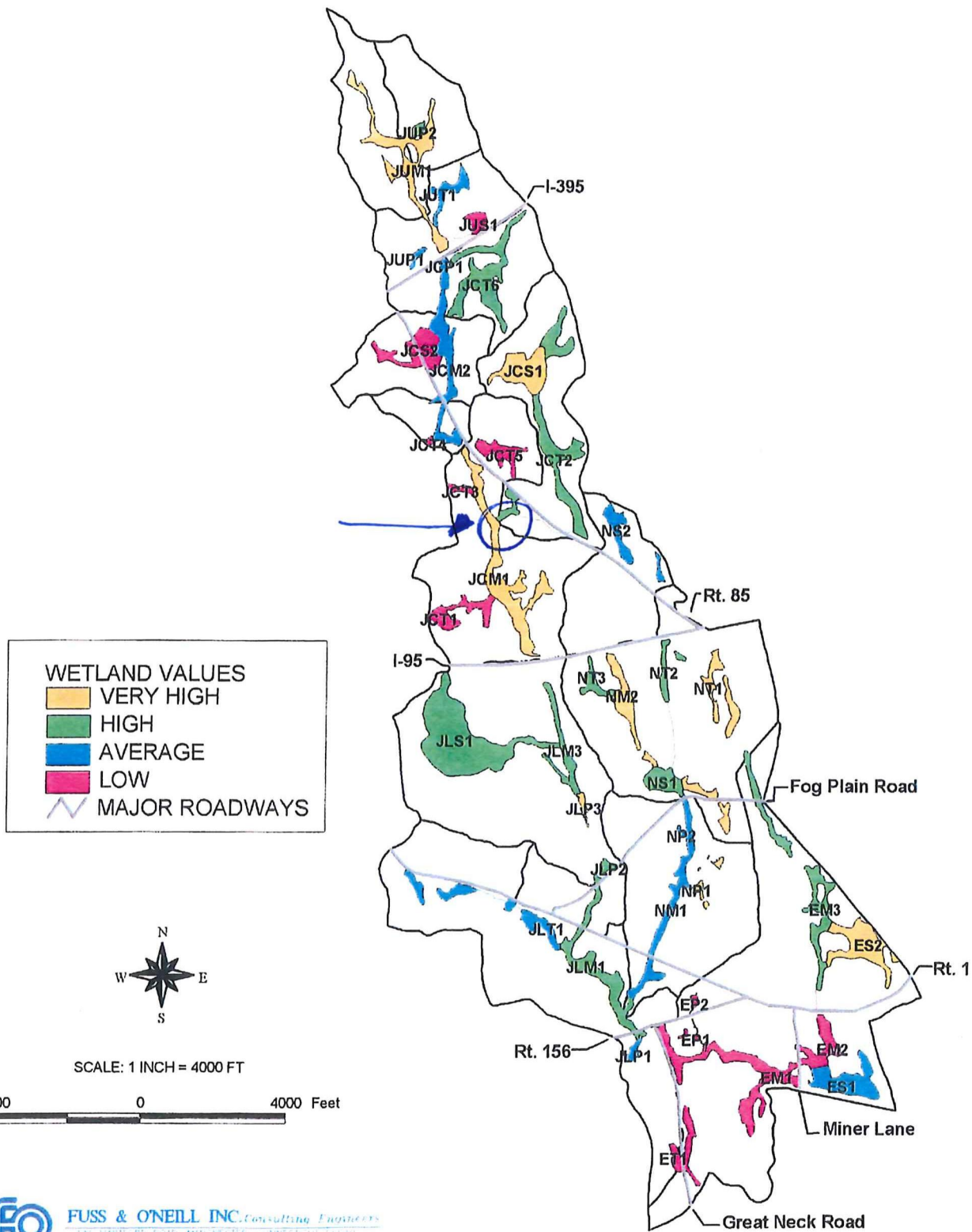


TABLE 6
INLAND WETLANDS SUMMARY
JORDAN BROOK WATERSHED MANAGEMENT PLAN
TOWN OF WATERFORD
FEBRUARY 2000

Wetland	Area (acres)	Mean Conductivity (umhos/cm)	Mean FVI (Score)	Mean WVU (Score)	Subjective Opinion (Score)	Final Wetland Value	Water Quality Sensitive	Special Signif.
Lower Jordan Brook								
JLM1	37.4	80	0.66	24.67	3	High	I	X
JLM2	2.0	72	0.68	1.35	4	Very High	P	X
JLM3	17.1	60	0.66	11.25	2	High	P	
JLT1	18.9	94	0.50	9.51	2	Average	I	
JLS1	93.9		0.62	58.61	3	High		X
JLP1	3.0	98	0.49	1.48	2	Average	I	
JLP2	2.1	71	0.64	1.34	3	High		
JLP3	3.4	74	0.69	2.35	4	Very High	P	X
Central Jordan Brook								
JCM1	60.1	82	0.75	44.78	3	Very High	P	X
JCM2	31.4	83	0.57	17.99	2	Average	I	
JCT1	16.3	51	0.46	7.48	2	Low		
JCT2	47.0	56	0.68	31.86	3	High	P	X
JCT3	22.7		0.48	10.97	2	Low		
JCT4	7.0		0.49	3.43	2	Low		
JCT5	12.4		0.55	6.85	1	Low		
JCT6	40.4	154	0.62	25.24	4	High	P	X
JCS1	27.1		0.74	20.17	4	Very High		X
JCS2	26.6		0.47	12.53	2	Low	I	
JCP1	6.0		0.56	3.34	2	Average	I	
Upper Jordan Brook								
JUM1	45.5	38	0.72	32.96	4	Very High	P	X
JUT1	9.5		0.59	5.56	2	Average		
JUS1	3.6		0.48	1.73	1	Low		
JUP1	2.2		0.50	1.11	2	Average	I	
JUP2	2.8	56	0.59	1.65	3	High		
Nevins Brook								
NM1	30.3	97	0.56	16.99	2	Average	I	
NM2	16.3	102	0.71	11.56	3	Very High	P	X
NT1	26.8	110	0.74	19.82	4	Very High	P	X
NT2	6.5	253	0.50	3.25	3	High	I	
NT3	7.1	84	0.65	4.64	3	High		
NS1	13.9		0.60	8.35	4	High		
NS2	14.4	62	0.58	8.34	2	Average	I	
NP1	2.5	33	0.67	1.67	4	Very High	P	X
NP2	3.7	102	0.57	2.09	2	Average	I	