

## STAFF REPORT

PLEASE REFER TO DRCC # WHEN SUBMITTING  
ADDITIONAL DOCUMENTS



**DRCC #:** 20-5523

**DATE:** June 11, 2020

**PROJECT NAME:** Route 1 -- Convenience Store/Fueling Station/Hotel

**Latest Submission Received:** May 11, 2020

**Applicant:**

Windsor 1 Developers, LLC  
1195 Route 70 -- Suite 2000  
Lakewood, NJ 08701

**Engineer:**

Dynamic Engineering Consultants, PC  
1904 Main Street  
Lake Como, NJ 07719  
[msharo@dynamiccec.com](mailto:msharo@dynamiccec.com)

**Project Location:**

Road	Municipality	County	Block(s)	Lot(s)
U.S. Route No. 1 (Brunswick Pike) & Emmons Drive	West Windsor Township	Mercer	7	59

**Jurisdictional Determination:**

Zone B	Major	Nongovernmental
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**Subject to Review for:**

Drainage	Visual	Traffic	Stream Corridors
X			

**THIS STAFF REPORT IS ISSUED AS A GUIDE TO APPLICANTS IN COMPLYING WITH DRCC REGULATIONS. IT IS NOT AN APPROVAL. NO CONSTRUCTION SHALL BEGIN UNTIL A CERTIFICATE OF APPROVAL HAS BEEN ISSUED.**

**Documents Received:** Stormwater Management, Groundwater Recharge and Water Quality Analysis dated January 2020, revised April 2020; Site Plans (22 sheets) dated January 6, 2020, revised April 20, 2020; prepared by Dynamic Engineering.

PO BOX 539

STOCKTON, NJ 08559

609-397-2000

[www.nj.gov/dep/drcc/](http://www.nj.gov/dep/drcc/)

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**The application is incomplete. It is staff's opinion that the proposed project has been designed in compliance with the Commission's technical requirements. However, notice of municipal and county approval must be submitted before the application can be deemed complete and presented to the Commission for their decision.**

**Existing Conditions:** This approximate 5.51-acre property is located at the intersection of U.S. Highway Route No. 1 (Route 1) and Emmons Drive, in the Township of West Windsor, Mercer County, approximately 0.40 miles east of the Delaware and Raritan Canal and within Commission Review Zone B. The subject site currently consists of an existing hotel development. The existing ground cover is primarily impervious surfaces with open space and wooded areas on the northwestern portion of the site.

**Proposed Project:** The applicant is proposing to redevelop the property by constructing a new four-story hotel and a 5,585-square-foot convenience store with a fueling station consisting of 16 filling stations. The proposed project includes the subdivision of the property into two separate lots, and the construction of associated access driveways, paved parking areas, landscaping and other related site improvements.

Based upon the submitted application, the project proposes a net decrease in impervious area coverage onsite from existing conditions of approximately 12,838 square feet (0.29 acres). The proposed project would also result in a total area of land disturbance of about 173,371 square feet (3.98 acres).

**Stream Corridor:** The project site is located within the Duck Pond Run watershed. Duck Pond Run and its tributaries are located about 1,000 feet southwest of the project site. The canal is also located about 2,000 feet northwest of the project site. No mapped watercourses or floodplains lie directly on or nearer than 100 feet to the project site. Therefore, this project is not subject to stream corridor impact review pursuant to N.J.A.C. 7:45-9.1(a).

**Stormwater Runoff Quantity:** The proposed project will result in a decrease in the amount of impervious surface area onsite and an associated increase in stormwater runoff if unmitigated. Currently, the stormwater runoff generated by the site flows towards two separate points of analysis: the existing stormwater conveyance within Route 1 and the west through the use of the site's existing stormwater conveyance system, which discharges through an existing headwall, and overland flow.

The proposed project has been designed so that, for stormwater leaving the site, post-construction runoff hydrographs for the two, 10, and 100-year storm events do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events. The submitted calculations utilized the Natural Resource Conservation Service (NRCS) Technical Release No. 55 (TR-55) hydrologic methodology, Standard Type III unit hydrograph rainfall distribution and current New Jersey 24-hour rainfall frequency data for Mercer County to compute peak runoff flow rates and volumes.

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Based upon a review of the submitted stormwater calculations, the proposed project will meet the specific runoff quantity standards of N.J.A.C. 7:45-8.6(a)2.

**Stormwater Outfall:** The Duck Pond Run watershed flows into the Delaware and Raritan Canal. In 2009, the Commission's regulations were amended to include specific standards for outfalls discharging to the canal at N.J.A.C. 7:45-8.3. New outfalls to the canal were prohibited, new sources of stormwater that tie into the drainage systems discharging to the canal were prohibited pursuant to N.J.A.C. 7:45-8.3(a)2, and for projects discharging to existing outfalls, removal or treatment to 95% total suspended solids (TSS) is required.

As noted above, the project site has an existing outfall outlet structure that discharges to Route 1 and ultimately to Duck Pond Run. Therefore, the outfall is not new and as the current project is proposing a net decrease in the amount of impervious surface area, no new sources of stormwater that tie into the drainage system that discharges to the canal are proposed.

Pursuant to N.J.A.C. 7:45-8.3(a)2 new sources of stormwater that tie into drainage systems that discharge to the canal are prohibited. However, the applicant will be required to meet the 95% total suspended solids (TSS) removal rate requirement of N.J.A.C. 7:45-8.3(a)5ii for any new or renewed vehicular drive surfaces.

**Water Quality:** The Commission requires that all proposed full depth pavement including newly and re-constructed parking and access drives that are being renewed, must meet water quality standards in accordance with Commission regulations (N.J.A.C. 7:45-8.7).

As noted above, the site drains to the Duck Pond watershed and to the canal. Therefore, for stormwater draining to the canal, reduction of the post-construction load of total suspended solids (TSS) in stormwater runoff generated from the water quality design storm by a rate of 95% of the anticipated load from the developed site, expressed as an annual average, is required.

Based upon the submitted application, 84,982 square feet (1.95 acres) of new and reconstructed parking and access drive pavement is being proposed onsite. The project proposes to provide water quality treatment by utilizing a best management practice (BMP) measures, consisting of hydrodynamic vortex separator manufactured treatment devices (MTD). On the west end of the project, one 6-foot-diameter Hydro International First Defense MTD unit that is certified by the NJDEP to provide a TSS removal rate of 50% will be used to treat runoff from an area of 41,767 square feet (0.96 acres). For stormwater that is conveyed to the Route 1 drainage system, one 8-foot diameter Downstream Defender MTD unit by Hydro International which has been field-tested and certified by the NJDEP as providing a TSS removal rate of 50% will be used to treat runoff from an area of 41,377 square feet (0.95 acres).

A 1,838 square-foot (0.04 acres) area of pavement will bypass the MTD and runoff to US Route 1 untreated. However, the project has complied with the Commission's water

quality requirements by an overall weighted-average of TSS removal for the entire site and in consideration of the 43,713 square feet (1.0 acres) of existing pavement that is being converted to either lawn or building coverage. Therefore, the stormwater quality requirements of N.J.A.C. 7:45-8.3(a)5 for a 95% TSS removal for all the proposed full depth pavement including newly and re-constructed parking and access drives have been met.

**Groundwater Recharge:** The Commission's regulations require that stormwater management measures maintain 100 percent of the average annual preconstruction groundwater recharge volume for the site; or that any increase of stormwater runoff volume from pre-construction to post-construction for the 2-year storm is infiltrated. As the current project is proposing a net decrease in the amount of impervious surface area onsite, the recharge requirement has been satisfied and the groundwater recharge requirements of N.J.A.C. 7:45-8.5 have been addressed.

**Non-Structural Methods:** The Commission requires that nonstructural stormwater management strategies be incorporated into the stormwater design of a development project. To assist in determining that sufficient non-structural stormwater management strategies have been incorporated into the project site design "to the maximum extent practical", the NJDEP Nonstructural Strategies Point System (NSPS) spreadsheet has been completed for this project. The results indicate that the ratio of proposed to existing site points (255%) is greater than the required site points ratio (87%). Therefore, the project is designed in accordance with N.J.A.C. 7:45-8.4.

**Stormwater Management Maintenance Plan:** A stormwater management operation and maintenance plan document has been prepared for the BMP elements proposed for the proposed project. The plan includes maintenance details for the proposed stormwater BMP measures, including the hydrodynamic vortex separator MTD. The submitted plan has been prepared in accordance with the requirements of N.J.A.C. 7:45-8.8.

**Additional Information Required:**

1. The Commission requires two copies of the Conservation and Maintenance Agreement with original signatures on both copies. The forms are available on the Commission website:  
[https://www.nj.gov/dep/drcc/pdf/DRCC%20C&M%20Agreement%20\(2020\).pdf](https://www.nj.gov/dep/drcc/pdf/DRCC%20C&M%20Agreement%20(2020).pdf)
2. The Commission requires notice of county and municipal approvals.

**Staff Recommendation:** Staff does not recommend approval at this time.

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Sincerely,

A handwritten signature in black ink, appearing to read "John Hutchison". The signature is written in a cursive style with a long horizontal stroke extending to the right.

John Hutchison  
Executive Director

c. Mercer County Planning Board  
West Windsor Township Planning Board