

STAFF REPORT

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ADDITIONAL DOCUMENTS



DRCC #: 21-2441GG

DATE: March 30, 2021

PROJECT NAME: Princeton University -- Practice Facility at Springdale Golf Club

Latest Submission Received: April 12, 2021

Applicant:

The Trustees of Princeton University
c/o Mr. Jeffrey Graydon
E.A. McMillan Building
Princeton, NJ 08544
jgraydon@princeton.edu

Engineer:

Thomas O'Shea, P.E.
Van Note-Harvey Associates
103 College Road East, 3rd Floor
Princeton, NJ 08540
t.oshea@vannoteharvey.com

Project Location:

Road	Municipality	County	Block(s)	Lot(s)
In the vicinity of Clubhouse Drive	Municipality of Princeton	Mercer	11301	11

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: Site Plans (9 Sheets) dated January 29, 2021; Stormwater Management Report dated January 29, 2021; prepared by Van Note-Harvey Associates.

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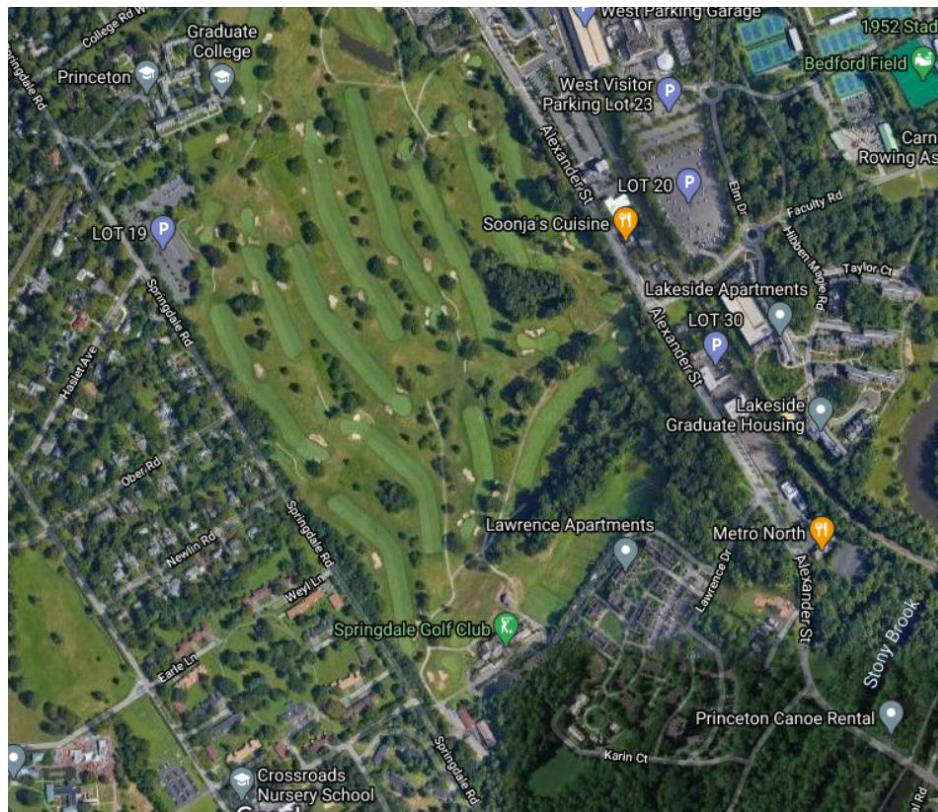
www.nj.gov/dep/drcc/

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The application is complete and shall be presented to the Commission for their action with a staff recommendation of approval at the April 21, 2021 meeting, based upon the following analysis:

Existing Conditions: The project is located at near the clubhouse of the Springdale Golf Club in the Municipality of Princeton, Mercer County, approximately 2,000 feet northwest of the Delaware and Raritan Canal and within the Commission Review Zone B. The project is bounded by the golf course followed by other Princeton University facilities to the north, the golf course followed by Alexander Street to the east, the golf course followed by Springdale Road to the west, and Princeton University Lawrence Apartments complex (graduate student/family housing) followed by West Drive to the southeast.



In September 2018 the Commission issued a certificate of approval for the construction of a one-story frame “golf performance center” building to the west of the existing Springdale Golf Course driving range (DRCC #18-2441T).

Proposed Project: The applicant proposes to modify and improve the existing practice facility at Springdale Golf Club. The proposed improvements include: the installation of three practice putting greens; two tee boxes; and the realignment of a portion of the existing golf path used for electric golf carts. Based upon the submitted application, the project proposes an increase of approximately 2,500 square feet (0.057 acre) of impervious surface coverage, which is attributable to the realigned golf cart path. The project would also result in approximately 3.4 acres of site land disturbance.

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Stream Corridor: The project site is located within the Millstone River watershed area. Alexander Creek is located on the subject lot, about 450 feet to the east of the project location. In addition, the Stony Brook and its tributaries are located about 750 feet to the south of the property. No other mapped watercourses or floodplains lie directly on 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 existing site surface drainage patterns will generally remain unchanged. The proposed improvements will result in an overall increase in the amount of impervious coverage for the site, which will result in an associated increase in runoff as compared to the existing conditions if unmitigated.

The submitted application proposes to control stormwater runoff flow and volume via the incorporation of a best management practice (BMP) measure, consisting of porous asphalt pavement with stone storage underneath. In addition, the practice greens and grass tee boxes have been designed with a perforated underdrain system, which will convey excess runoff to on-site proposed storm sewer piping that eventually connects to the existing storm sewer system that conveys runoff in the easterly direction to the existing stormwater management basin east of the driving range.

The use of the porous asphalt with underground stone bed meets the reduced hydrograph condition since the stone subbase of the walk has been designed to mimic the natural storage characteristics of the existing grassland. Runoff percolates through the porous pavement surface and will filter through and collect in the five-inch-thick subbase to allow for temporary detention and infiltration into the subsoil, similar to how the ground currently collects and infiltrates stormwater. As the subbase thickness has been designed for an effective storage amount greater than the initial abstraction (I_a) for all soils in the project area, all runoff from the new impervious surfaces will be contained for the 2-, 10-, and 100-year storms.

Based upon a review of the results of the submitted calculations, the proposed porous asphalt with stone storage will provide the required stormwater quantity management measures to mitigate the impact of this proposed project and will meet the specific runoff quantity standards of N.J.A.C. 7:45-8.6(a).

Water Quality: Although the project proposes the removal and relocation of an existing bituminous golf cart path, no new or renewed vehicular access drive pavement and/or gravel vehicular travel surfaces are being proposed onsite. The golf carts to be used on the path are electric and roofs or other non-vehicular surfaces do not generate pollutant-laden stormwater runoff. Although water quality is therefore not required for the proposed improvements, the path will be constructed as porous pavement which is recognized as a low impact development best management practice. As such, this project is considered to have been designed in accordance with the requirements of N.J.A.C. 7:45-8.7.

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Groundwater Recharge: The Commission's regulations require that stormwater management measures maintain 100% 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.

To demonstrate that the project will maintain 100% of the site's average annual pre-development groundwater recharge, calculations have been provided. Runoff will filter through the porous asphalt surface course and temporarily collect in the five-inch-thick subbase to allow infiltration into the subsoil. The calculations demonstrate that the stone subbase will closely mimic the recharge capabilities of the existing lawn. Therefore, 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 (97%) is greater than the required site points ratio (86%). Therefore, based upon the results of the spreadsheet analysis, the project has proposed non-structural measures that are adequate, and the project is therefore 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 measure, consisting of the porous asphalt. The submitted plan has been prepared in accordance with the requirements of N.J.A.C. 7:45-8.8.

Staff Recommendation: Staff recommends approval.

Sincerely,



John Hutchison
Executive Director

- c. Mercer County Planning Board
Municipality of Princeton Planning Board
Christopher DeGrazia, Esq. (christopher.degrazia@faegredrinker.com)