

Applicant: Prince Bhakta; JR Hospitality
Consultant: William Bauer; SEH
Project: Fairfield Inn and Suites
Location: 4931 West 77th Street: Edina
Applicable Rule(s): 4 and 5
Reviewer(s): Louise Heffernan and Bob Obermeyer; Barr Engineering Co.

General Background & Comments

The applicant proposes the construction of a 5-story, 239 room hotel inn and suites building, Fairfield Inn and Suites, with associated surface parking (Project) within the redevelopment area of the Pentagon Village development located in the southwest quadrant of West 77th Street and Computer Drive in Edina. The District's approval of Permit #2018-97 for the overall Pentagon Village development included site grading and storm water management on Lot 2, Block 1, Pentagon Village, a portion of the lot to be developed for the Project. As the Pentagon Village development is being developed, individual development plans are submitted to the District to ensure compliance with the District's stormwater management and low floor elevation requirements of approved Permit #2018-97.

The Project proposes 763 square feet of addition impervious area within subwatershed 13-2C of the Pentagon Village redevelopment plan. The applicant has provided documentation showing the in-place stormwater management facility has sufficient capacity to manage the increase in runoff from the additional 763 square feet increase in impervious area proposed for the Project.

A permit for the Project is required because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b and 5.2.1a and b.

Exhibits Reviewed:

1. Permit Application dated May 31, 2022. E-mail dated June 7, 2022, outlining 5 items required to complete the application.
2. Plans dated March 10, 2022, prepared by SEH.
3. Memorandum dated July 19, 2022, prepared by SEH describing the project and a summary of the SEH updating of the Westwood Professional Services as-built condition HydroCAD and P8 modeling to include the proposed Fairfield Inn and Suites development.
4. Memo from SEH dated August 5, 2022, addressing the items in the district's June 7, 2022 e-mail.

5. Updated HydroCAD model dated July 19, 2022, prepared by SEH.
6. Updated P8 model received August 9, 2022, prepared by SEH.
7. Copy of the original Westwood Professional Services submittal for Permit #2018-97 including HydroCAD modeling, P8 modeling and geotechnical report prepared by Braun Intertec.

The application with the submittal items above is complete.

4.0 Stormwater Management

As previously stated, the district’s requirements for stormwater management for the Pentagon Village development were met and approved, Permit #2018-97. The overall 12.1-acre site has been mass graded with roadways and utilities installed for future development. The 1.8-acre Project site is located within subwatershed area 13-2C of the Pentagon Village development. Site drainage from the Project, including the runoff from the 763 square feet (0.02 acres) of additional impervious area proposed, is directed to underground storm water management facility (UGSWMF), 3P to comply with district rule 4.3.1 a-c. The Pentagon Village development proposed an impervious area of 90,039 from subwatershed 13-2C square-feet (2.06 acres) tributary to UGSWMF 3P.

Rule 4.3.1b requires the 2-, 10-, and 100-year post development peak runoff rates be equal to or less than the existing discharge rates at all points where stormwater leaves the site. For the Project, the applicant revised the as-built HydroCAD hydrologic model for Permit #2018-97 to simulate runoff rates at the three collection points where stormwater discharge leaves the site. The existing and proposed 2-, 10- and 100-year frequency discharges from the site are:

Existing Conditions – As-built			
Modeled Discharge Location	2-year (c.f.s.)	10- year (c.f.s.)	100-year (c.f.s.)
To the West	<1.0	<1.0	<1.0
To the East	1.6	3.1	41.8
To the South	14.5	18.0	20.7

Proposed Conditions with the additional 763 sq. ft. of Impervious Area			
Modeled Discharge Location	2-year (c.f.s.)	10- year (c.f.s.)	100-year (c.f.s.)
To the West	<1.0	<1.0	<1.0
To the East	1.6	3.1	41.8
To the South	14.5	18.0	20.7

Rule 4.3.1b is met.

Clay soils that ranged in depth of 6-12 feet were identified in the areas of the proposed UGSWMF’s. These soils were excavated to the underlying poorly graded sand (SP) and replaced with permeable soils. A design infiltration rate of 0.45 inches per hour was used for the SP soils, conforming with infiltration rates identified in the Minnesota Storm Water Manual.

Runoff from the additional 763 square feet of impervious area requires an additional 70 cubic feet of retention volume be provided for compliance with district rule 4.3.1a. A retention volume of 8,324 cubic feet is required from the 90,802 square feet of proposed site impervious area (original impervious area of 90,039 square feet plus the additional 763 square feet of new impervious area). The as-builts show UGSWMF 3P provides a retention volume of 24,321 cubic feet. With an area of 12,065 square feet provided for infiltration, the 8,324 cubic feet of volume retention is drawn down within 10-hours, complying with Rule 4.3.1a (ii).

The district’s water quality criterion requires a 60% annual removal efficiency for total phosphorus (TP) and 90% annual removal efficiency for total suspended solids (TSS). The results from the P8 model provided shows UGSWMF 3P will provide an annual removal efficiency of 98.1% for TSS (1,505 lbs.) and an annual removal efficiency of 93% for TP (4.6 lbs.). The NMCWD engineer agrees with the modeling results. Rule 4.3.1c is met.

Rule 4.5.4d (i) requires at least three feet of separation between the bottom of an infiltration facility and groundwater. Compliance with this requirement was provided with the Permit #2018-96.

Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that the low floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a constructed facility. Additionally, Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that no opening where surface flow can enter the structure is less than two feet above the 100-year high-water elevation of an adjacent facility. The low floor and low opening elevations of the proposed building in relation to the 100-year high-water elevation of UGSWMF 3P is summarized in the table below.

Building	100-year Frequency Flood Elevation of UGSWMF (M.S.L.) As-built elevation	Low Floor and Low Opening Elevation of Proposed Building (M.S.L.)	Low Opening Separation Provided (feet)
Proposed Hotel Building	822.7	824.8	2.1

The project is in conformance with Rule 4.3.3 criteria.

In accordance with Rule 4.3.1a (i), where infiltration or filtration facilities, practices or systems are proposed, pre-treatment of runoff must be provided. Compliance with this requirement was provided with the Permit #2018-96.

In accordance with Rule 4.3.4, a post-project chloride management plan must be provided that will, 1) designate an individual authorized to implement the chloride-use plan and 2) designate a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site. Compliance with this requirement was provided with the Permit #2018-96.

Subsection 4.3.5 requires the submission of a maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. The applicant must provide a receipt showing recordation of a maintenance declaration for the operation and maintenance of the stormwater management facilities. Compliance with this requirement was provided with the Permit #2018-96.

5.0 Erosion and Sediment Control

The district’s requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 5.2.1a and b.

The erosion control plan prepared by SEH includes installation of silt fence, a stabilized rock construction entrance and storm sewer inlet protection.

The contractor for the project will need to designate a contact who will remain liable to the district for performance under the District’s Erosion and Sediment Control Rule 5.0, in accordance with subsection 5.4.1e. NMCWD must be notified if the responsible individual changes during the permit term.

11.0 Fees

Fees for the project are:

Rules 4.0 and 5.0 \$1,500

12.0 Financial Assurances

Financial Assurances for the project are:

Rule 5: Silt fence: 985 L.F. x \$2.50/L.F. = \$2,463

Inlet Protection: 6 x \$100 = \$600

Site Restoration: 1.8 acres x \$2,500/acre = \$4,500

Contingency and Administration \$3,173

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. Rules 4 and 5 will be met with the fulfilment of the conditions identified below.
3. The existing stormwater management facility (UGSWMF 3P) provides volume retention, rate control and water quality management in accordance with subsections 4.3.1a-c criteria.

Recommendation

Approval, contingent upon:

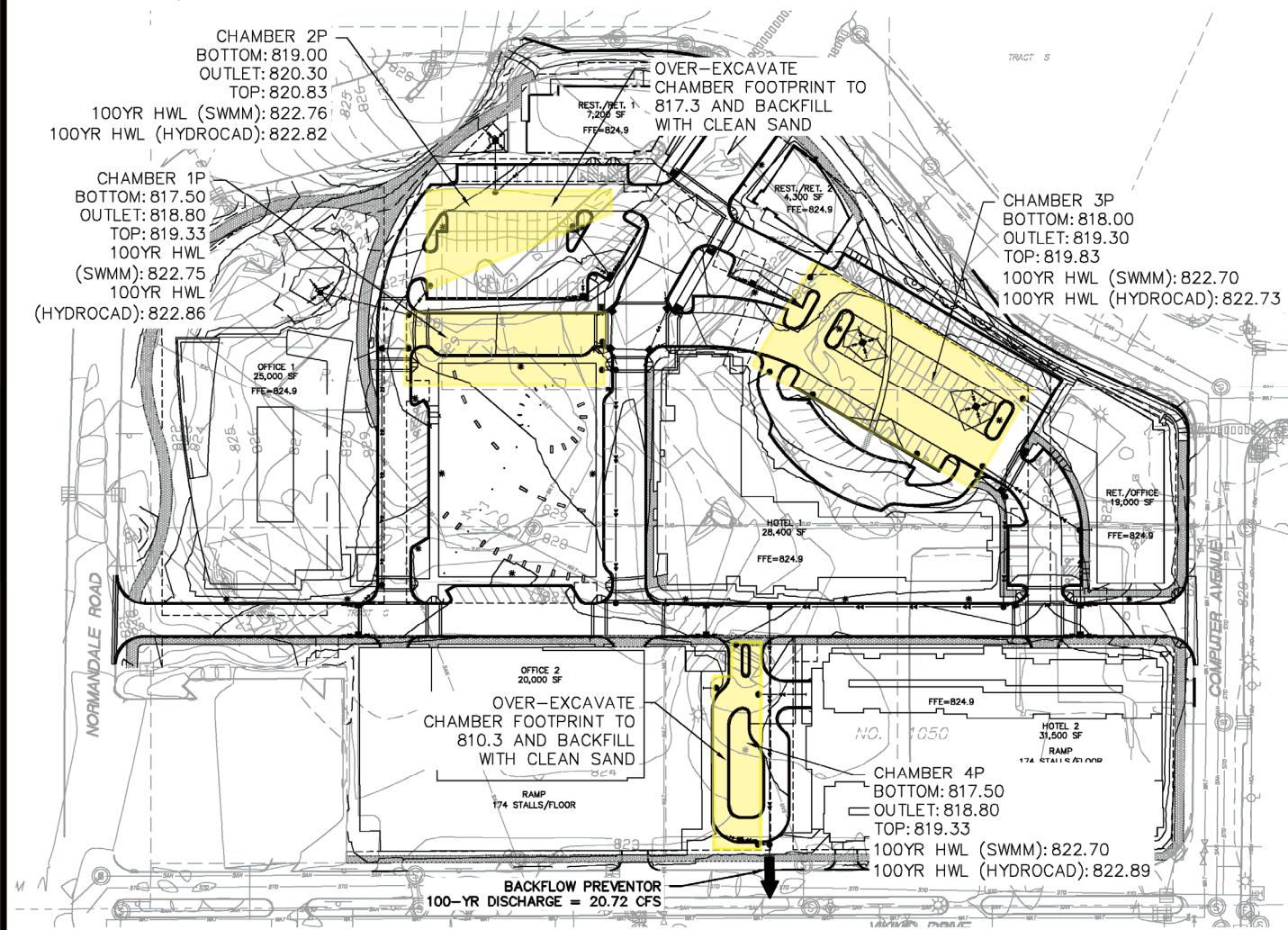
Compliance with the General Provisions (attached).

Financial Assurance in the amount of \$10,700 for erosion control, and site restoration.

The applicant providing a name and contact information for the individual responsible for the erosion and sediment control at the site. NMCWD must be notified if the responsible individual changes during the permit term.

By accepting the permit, when issued, the applicant agrees to the following stipulations for closeout of the permit and release of the financial assurance after the project:

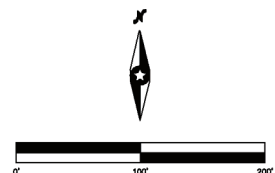
The work for the Fairfield Inn and Suites development under the terms of Permit #2022-080 must have an impervious surface area and configuration materially consistent with the approved plans. Design that differs materially from the approved plans will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.



Water Quality Volume

- REQUIRED (0.55")
18,068 CF
- REQUIRED (1.1")
36,136 CF
- INFILTRATION VOLUME
44,836 CF
- TOTAL PROVIDED
44,836 CF

INFILTRATION IN CHAMBERS



Date: 9/19/18 Sheet 1 OF 1
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Westwood

Phone (952) 937-5150 12701 Whitewater Drive, Suite #300
 Fax (952) 937-5922 Minnetonka, MN 55343
 Toll Free (888) 937-5150 westwoodps.com
 Westwood Professional Services, Inc.

Designed: JSB
 Checked: ARN
 Drawn: JSB
 Record Drawing by/date:

Prepared for:
Solomon Real Estate Group

Victoria, MN 55386

Pentagon Park South

Edina, MN

Stormwater Management Plan
 Exhibit 3