

Applicant: Scott Neal: City of Edina
Consultant: Laura Clarens; Kimley Horn and Associates
Project: Aeon Edina
Location: 4100 West 76th Street: Edina
Rule(s): 4,5,11,12
Reviewer: BCO

General Background & Comments

The project proposes the construction of a 4-story, 23,000 square foot apartment building located at 4100 West 76th Street in Edina. The 60 unit building will also include underground parking, surface parking and a playground area. The existing on-site 18,000 square foot building and associated bituminous parking lot are to be removed.

Storm water management is proposed to be provided in an underground storm water management facility (UGSWMF) – a 48-inch perforated HDPE pipe. The geotechnical report identifies the underlying soil at elevation 824 M.S.L., the bottom (invert) of the 48-inch pipe, as poorly graded sand (SP) having an infiltration rate of 0.8 inches/hour. Groundwater was encountered at elevation 820 M.S.L.

The project site information is:

- Total Site Area: 2.0 acres (87,120 square feet)
- Existing Total Site Impervious Area: 1.02 acres (44,431 square feet)
- New Total Site Impervious Area : 40,075 square feet
- Decrease in the site impervious area: 4,356 square feet
- 9.8% decrease in the Site Impervious Area
- Total Area to be Disturbed: 87,120 square feet

The Nine Mile Creek Watershed District's Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on a parcel or will increase the imperviousness of the parcel by more than 50%, storm water management will apply to the entire project parcel. Otherwise, the storm water requirements will apply only to the disturbed areas and additional impervious area on the parcel. Since there is a decrease

in the on-site impervious area of 9.8% but the entire existing site impervious area is to be disturbed, storm water management is required for the 87,120 square feet of disturbed area that includes 40,075 square feet of impervious area.

The District's requirements for both storm water management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5000 square feet or more surface area disturbed, Rules 4.2.1a and b and 5.2.1a and b.

Silt fence is to be constructed at the limits of construction, inlet protection, and a rock construction entrance will be provided for erosion control.

Exhibits

1. Permit Application dated December 17, 2019.
2. Plans dated August 30, 2019 prepared by Kimley-Horn.
3. Storm Water Management calculations dated December 20, 2019, revised January 6, 2020, prepared by Kimley-Horn.
4. Geotechnical Report dated September 25, 2018 prepared by Northern Technologies, Inc.

4.0 Stormwater Management

Storm water management is to be provided within an underground storm water management facility (UGSWMF) that will provide volume retention and water quality management. Rate control is provided by the proposed reduction in the on-site impervious area and further attenuated by the UGSWMF.

The existing and proposed 2, 10 and 100 year frequency discharges from the site are:

Frequency	Existing Discharge c.f.s.	Proposed Discharge c.f.s.
2 year	3.5	<1.0
10 year	7.2	<1.0
100 year	16.5	6.1

There is one discharge point from the project area. Rule 4.3.1b is met.

An infiltration volume of 3,674 cubic feet is required from the proposed 40,075 square feet of impervious area. The soil borings show the underlying soil in the location and depth of the proposed UGSWMF as a poorly graded sand (SP) having an infiltration rate of 0.8 inches/hour using the Minnesota Storm Water Manual. A volume of 10,148 cubic feet is proposed to be provided (3,674 cubic feet required) with an area of 4,846 square feet (1,148 square feet required) at an inundation depth of 3.2 feet within the UGSWMF. A minimum inundation area of 1,148 square feet at the 3.2 foot depth is required for the retention volume to be drawn down within 48 hours, Rule 4.3.1a (ii). Rule 4.3.1a is met.

The District's water quality criterion requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. The results of the MIDS

calculator show that the UGSWMF will provide an annual removal efficiency of 98% for total suspended solids (373 lbs.) and an annual removal efficiency of 98% for total phosphorus (2.05 lbs.). Rule 4.3.1c is met.

In accordance with section 4.3.3 of the District rules, all structures riparian to inundation areas constructed or natural storm water management facilities must be located and elevations must be set according to Appendix 4A, "Low-Floor Elevation Assessment" of the District Rules. Referring to Plot 6 of Appendix 4A, with a horizontal distance of 42 feet between the proposed structure and the UGSWMF, the minimum permissible depth to groundwater is 0.27 feet. A separation of 5 feet (0.27 feet) will be provided between the proposed underground garage floor elevation (825 M.S.L.) and groundwater elevation (820 M.S.L.).

Rule 4.3.3 also states the elevation of a new and/or reconstructed building must be constructed such that no opening where surface water can enter the structure is less than two feet above the 100-year high water elevation of an adjacent facility or waterbody. The high point in the driveway to the underground parking from the surface parking lot is shown to be established at a minimum elevation of 833 M.S.L. providing a separation of 4.8 feet complying with the requirement of Rule 4.3.3.

In accordance with Rule 4.3.1a (i), the pre-treatment of runoff prior to reaching the UGSWMF will be provided by sump manholes constructed upstream of the two discharge point to the underground system.

Rule 4.5.4d (i), requires a minimum separation of 3 feet between the bottom of an infiltration facility, practice or system and groundwater. From the NTI geotechnical report, groundwater was encountered in boring SB-2 at a depth of 20 feet, elevation 820 M.S.L. The bottom of the UGSWMF is shown to be 824 M.S.L. providing a separation of 4 feet complying with Rule 4.5.4d (i).

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.

5.0 Erosion and Sediment Control

The submitted erosion and sediment control plan includes silt fence at the limits of construction, inlet control, and a gravel construction entrance. The project contact is Leslie Roering, Aeon.

11.0 Fees

Fees for the project are:

Rules 2.0-6.0	\$1,500
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12.0 Financial Assurances

Financial Assurances for the project are:

Rule 4.0 Volume Retention: 1,148 sq. ft. x \$12/sq. ft. = \$13,776	\$13,776
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Chloride Management:	\$5000
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Rule 5: Silt fence: 1,000 L.F. x \$2.50/L.F. = \$2,500	
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Inlet Control: 12 x \$100/each = \$1,200	
Sediment Logs: 65 L.F. x \$5/ L.F. = \$325	
Site restoration: 2.0 acres x \$2500/acre = \$5,000	\$9,025
Contingency and Administration	\$9,899

Findings

The proposed project includes the information necessary, plan sheets and erosion control plan, for review.

1. Rules 4 and 5 are met.

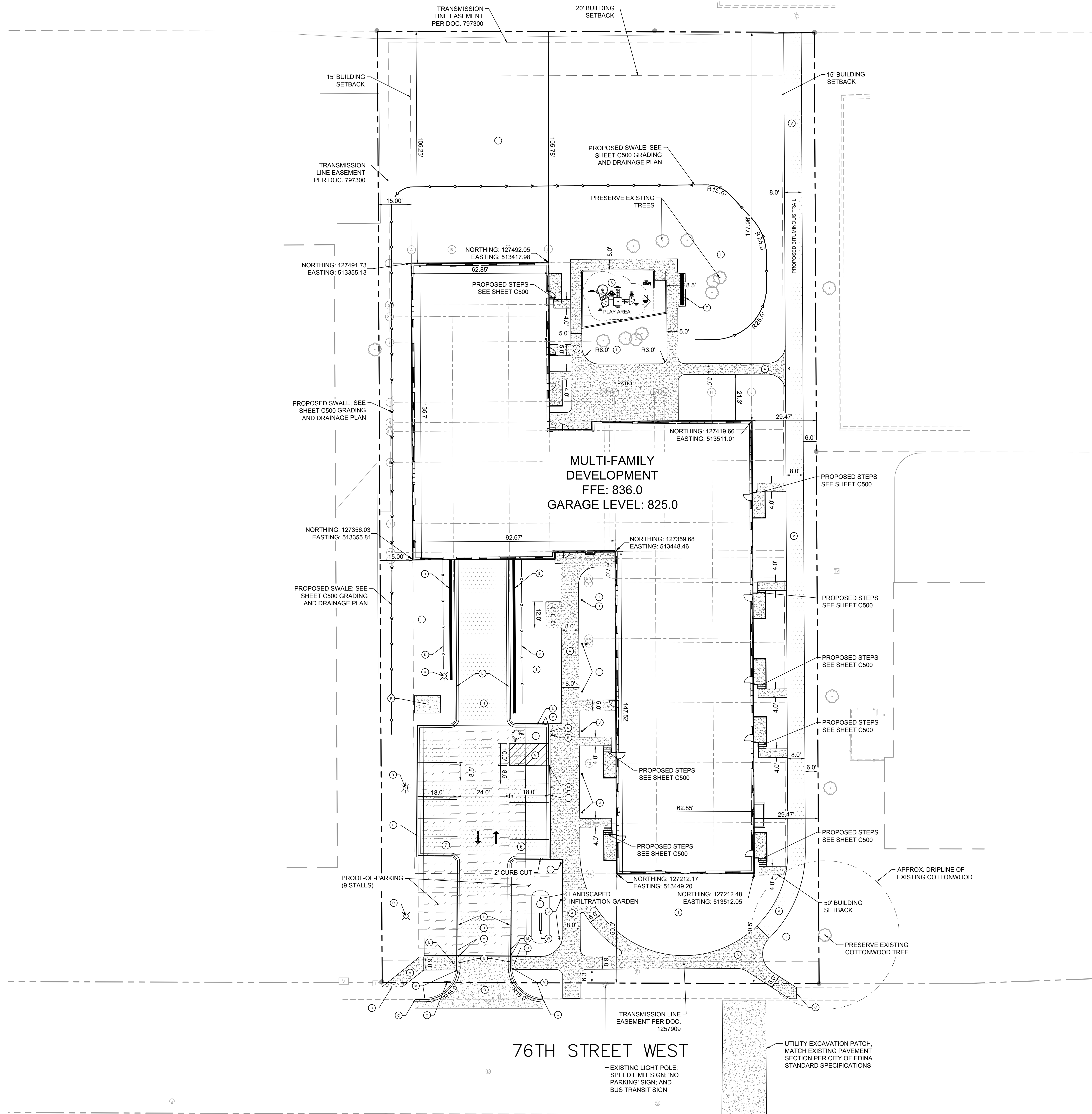
Recommendation

Approval, contingent upon:

1. General Conditions
2. Financial Assurance in the amount of \$37,700 - \$32,700 for storm water management, erosion control and site restoration and \$5,000 for compliance with the chloride management requirements.
3. Submission of documentation that a drainage easement over the storm water-management facility has been submitted to Edina (4.5.4i), if such easement is required by the city, and a receipt showing recordation of a maintenance declaration for the on-site storm water management facility. A draft of the declaration must be approved by the District prior to recordation.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule 4.5.6, an as-built drawing of the storm water facility conforming to the design specifications, including a stage volume relationship in tabular form for the UGSWMF, as approved by the District must be submitted.
2. Submission of a plan for post-project management of Chloride use on the site. The plan must include 1) the designation of an individual authorized to implement the chloride use plan and 2) the designation of a Minnesota Pollution Control Agency certified salt applicator engaged in the implementation of the chloride-use plan for the site. The release of the \$5,000 of the financial assurance required for the chloride-management plan requires that chloride-management plan has been provided and approved by the District's Administrator.
3. For the release of the \$32,700 financial assurance required in Recommendation #2, Rule 12.4.1b requires demonstration and confirmation that the storm water management facility has been constructed or installed and is functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the storm water facilities used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.



LEGEND

	PROPERTY LINE
	PROPOSED FENCE
	PROPOSED SWALE
	SETBACK LINE
	RETAINING WALL
	PROPOSED CURB AND GUTTER
	PROPOSED STANDARD DUTY ASPHALT
	PROPOSED CONCRETE PAVEMENT
	PROPOSED STORMWATER MANAGEMENT AREA
	PROPOSED CONCRETE SIDEWALK

PROPERTY SUMMARY

AEON EDINA	
TOTAL PROPERTY AREA	±87,120 SF (2.0 AC)
PROPOSED IMPERVIOUS AREA	40,200 SF (0.92 AC)
PROPOSED PERVIOUS AREA	46,920 SF (1.08 AC)
TOTAL DISTURBED AREA	±89,290 SF (±2.05 AC)

ZONING SUMMARY	
EXISTING ZONING	PLANNED INDUSTRIAL DISTRICT (PID)
PROPOSED ZONING	PLANNED DEVELOPMENT (PUD)
PARKING SETBACKS	SIDE/REAR = 10' ROAD = 20' FRONT = 50'
BUILDING SETBACKS	SIDE YARD = 15' REAR YARD = 20'

BUILDING DATA SUMMARY

AREAS	
PROPOSED PROPERTY	±87,120 SF (2.0 AC)
BUILDING AREA	±23,200 SF (26.6% OF TOTAL PROPERTY AREA)

PARKING	
PROPOSED SURFACE PARKING	13 SPACES
SURFACE ADA STALLS PROVIDED	1 SPACE

KEYNOTE LEGEND

(A)	CONCRETE SIDEWALK
(B)	RETAINING WALL; SEE ARCHITECTURAL PLANS
(C)	MATCH EXISTING EDGE OF PAVEMENT/ CURB & GUTTER
(D)	ACCESSIBLE CURB RAMP
(E)	ACCESSIBLE PARKING SIGN
(F)	ACCESSIBLE PARKING
(G)	AREA STRIPED WITH 4" SYSL @ 45° 2' O.C.
(H)	STANDARD DUTY ASPHALT PAVEMENT
(I)	LANDSCAPE AREA - SEE LANDSCAPE PLANS
(J)	BOLLARD LIGHTING
(K)	PROPOSED FENCE
(L)	B612 CURB & GUTTER (TYP.)
(M)	TRANSITION CURB FROM B612 TO FLUSH
(N)	FLUSH CURB
(O)	COMMERCIAL DRIVEWAY APRON
(P)	TRANSFORMER
(Q)	STOP SIGN (R1-1)
(R)	LIGHT POLE
(S)	PLAYGROUND - SEE LANDSCAPE PLANS
(T)	PLAYGROUND BENCH
(U)	PEDESTRIAN RAMP
(V)	8' BITUMINOUS TRAIL
(W)	PROPOSED FREE STANDING SIGN

