

Permit Application Review

Permit No. 2019-143
Received complete: December 4, 2019

Applicant: Brian Olson; City of Edina
Consultant:
Project: Braemar Salt Storage Building
Location: 7600 Braemar Boulevard: Edina
Rule(s): 4,5
Reviewer: BCO

General Background & Comments

The project proposes the construction of a salt storage facility to be constructed at the southern end of the Braemar complex. To provide access to the salt storage area that will be convenient for the truck drivers, the three drainage swales that were constructed for volume retention as a condition of District Permit #2016-72 area to be eliminated. Permit #2016-72, issued to Three Rivers Park District, was for the construction of two gravel based storage areas, resulting in 0.9 acres of new impervious area, to be used for materials and/or equipment as a result of the elimination of the City's outside storage lot located south of West 70th Street and Amundson Avenue by the Nine Mile Regional Trail construction. The proposed salt storage facility is to be located on one of the constructed gravel pads with stormwater management provided within the drainage swales. The actual construction activities of Permit #2016-72 created 0.68 acres of new impervious area.

To replace the required stormwater management with the elimination of the drainage swales, the City is proposing to construct an underground system beneath the existing parking lot located east of the Cold Storage Building. The outflow discharge from the underground system flows to a stormwater management basin that is located to the west of the Cold Storage Building. This basin in addition to the drainage swales provides the volume retention, rate control and water quality management required by the subsections of District rule 4.3.1.

The project site information:

- Total Site Area: 44.4 acres
- Existing Site Impervious Area: 4.63 acres (201,594 square feet)
- Constructed New Impervious Area: 0.68 acres (30,00 square feet)

- New Site Impervious Area total: 230,594 square feet
- 14.8 % increase in Site Impervious Area
- Proposed Disturbed and Reconstructed Impervious Area: 2,200 square feet
- 1.1% of the existing impervious area will be disturbed and reconstructed (12/4/2019 submittal)

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 5000 square feet or more of surface area will be disturbed, Rule 5.2.1a and b.

Biologs and inlet protection are to be constructed for erosion control.

Exhibits

1. Permit Application dated December 4, 2019.
2. Plans prepared by ADS (Advanced Drainage Systems) and the City of Edina submitted December 4, 2019.
3. Geotechnical Report dated November 12, 2015 prepared by Braun Intertec. Submitted for Permit #2016-72.

4.0 Stormwater Management

As previously stated, the project is to replace the stormwater management provided within the three drainage swales with an underground system that is more compatible with the proposed use of the property.

A volume retention of 2,500 cubic feet is required from the 30,000 square feet of impervious area created by Permit #2016-72. The geotechnical report shows that underlying on-site soils are primarily silty-sand (SM). An infiltration rate of 0.45 inches/hour was used which is typical for a SM soil type material using the Minnesota Storm Water Manual. The drainage swales provided a volume of 2,352 cubic feet of the retention volume with 915 cubic feet of volume provided with the stormwater basin located downstream of the project site. The minimum size of the underground system that the City is proposing to construct will provide a retention volume of 1,572 cubic feet, providing a combined total volume retention of 2,487 cubic feet. The District is currently working with the City in purchasing available excess volume retention credits (432 cubic feet) that maybe available for runoff from portions of the site that have not triggered a District permit requiring stormwater management. By extending the rock trench width by 10 feet from the proposed footprint will replace the volume retention provided by the drainage swales and provide the additional stormwater management for the roof runoff from the eastern half of the Cold storage building and approximately 2800 square feet of the existing surface parking.

The District's water quality criteria (Rule 4.3.1c) require a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. The combined system (underground and surface basin) will provide an annual removal efficiency of 67.5% for total phosphorus (2.3 lbs.) and 90% annual removal efficiency for total suspended solids (1,105 lbs.). The requirements of section 4.3.1c of the District rules are met.

The soil borings indicate that groundwater was not encountered to approximately elevation 834 M.S.L. The bottom elevation of the proposed underground system is 847 M.S.L. providing a separation of 13 feet between the proposed bottom of the BMP and groundwater. A minimum of 3 feet of separation is required between the low point of an infiltration area and groundwater.

The existing on-site cold storage building is shown to have a finished floor elevation of 854.8 M.S.L. District criteria states, No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation. All structures riparian to inundation areas or constructed or natural storm water management facilities must be located and elevations must be set according to Appendix 4a, "Suggested Low Floor Guidance." Referring to Plot 1, Appendix 4A of the District Rules with groundwater not being encountered to elevation 834 M.S. L., a depth (separation) of 20.8 feet, the closest allowable distance between the structure and a storm water facility is 5 feet. The plans show a separation of 30 feet between the structure and the underground system will be provided to comply with Rule 4.3.2.

In accordance with Rule 4.3.1a (i), where infiltration facilities, practices or systems are proposed, pretreatment of runoff must be provided. Runoff is shown to sheet-flow to sump catch basins and discharge to an isolator row constructed as part of the underground system prior to reaching the infiltration area.

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 biologs and inlet protection. The project contact is Derek Northenscold, City of Edina.

11.0 Fees

Because the property owner is a public entity, no fees are charged.

Rules 2.0-6.0 \$0

12.0 Sureties

Because the property owner is a public entity, the District's financial assurance requirements do not apply.

Sureties for the project are: \$0

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan, for review.
2. Rule 4 and 5 are met.

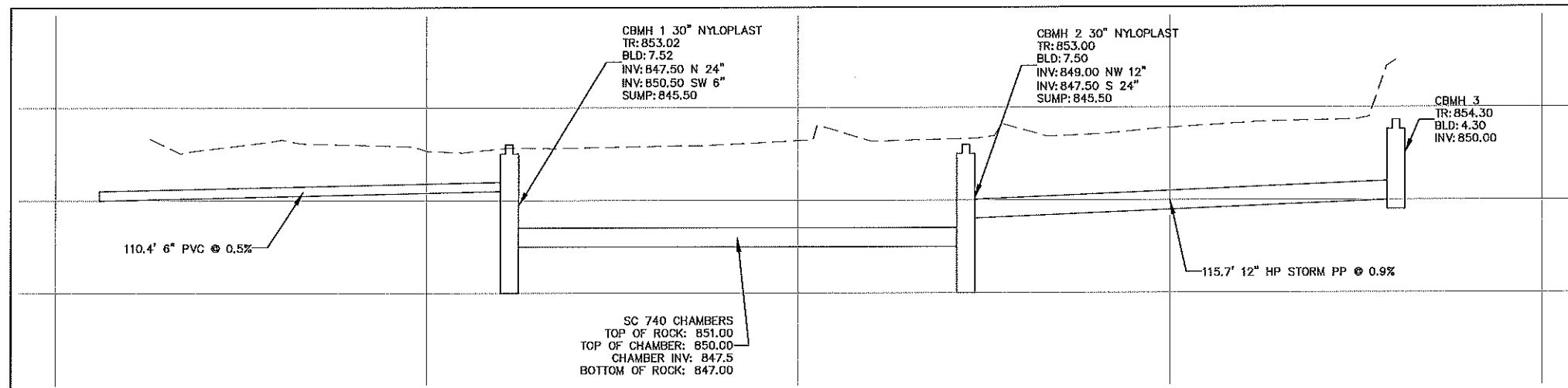
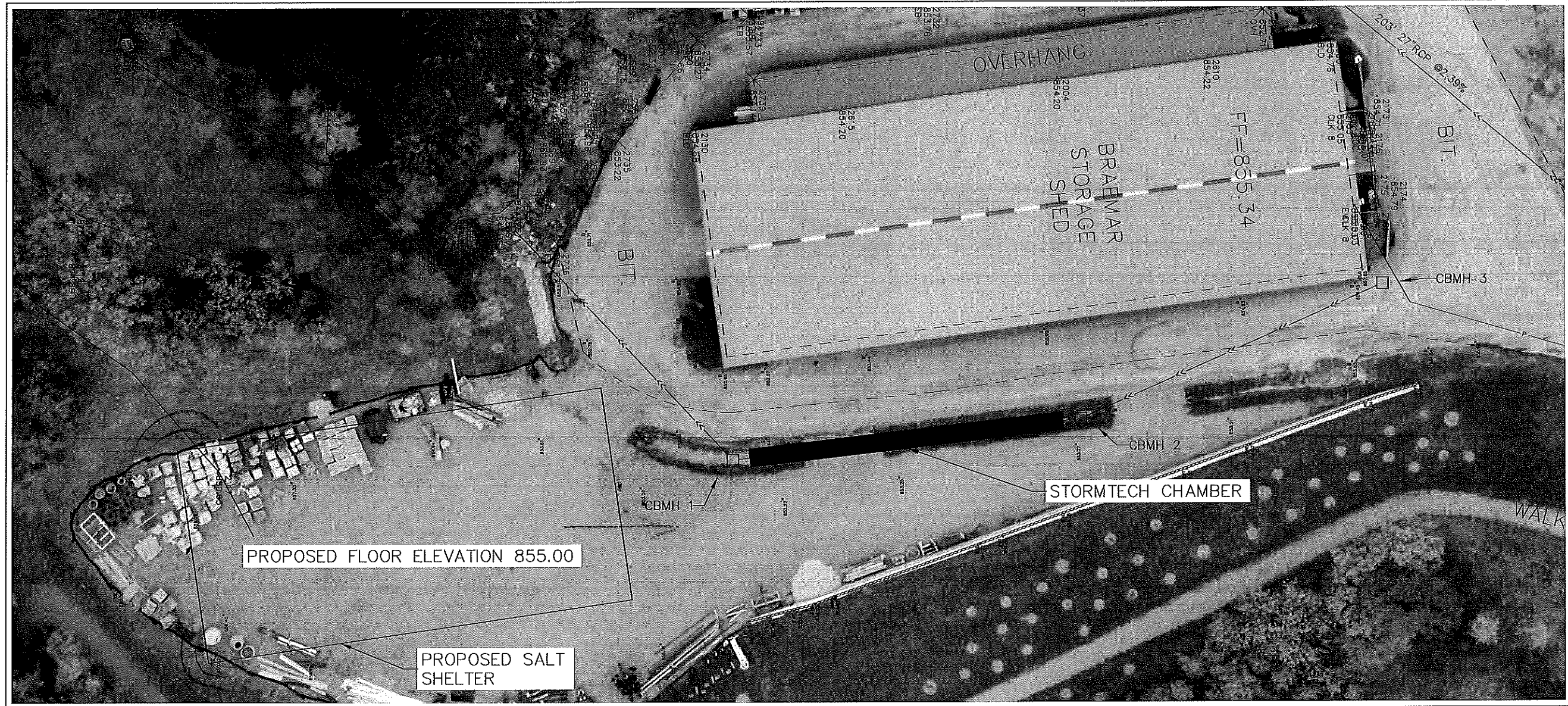
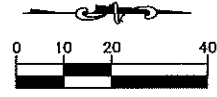
Recommendation

Approval, contingent upon:

1. General Conditions
2. In accordance with Rule 4.3.5, submission of a document signed by an official with authority with the City of Edina assuming the maintenance obligation for the on-site storm water management facilities.
3. The footprint width for the underground system will require to be increased by 10 feet to accommodate the additional surface runoff from the eastern roof runoff of the Cold Storage Building and the existing eastern surface parking area.

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 facilities, including a stage-volume relationship in tabular form for the underground system, constructed conforming to the design specifications 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.



NO.	DATE	BY	REMARKS

PLAN AND PROFILE

CITY OF EDINA
 7450 METRO BOULEVARD
 EDINA, MN 55439-3037
 PH: 952-826-0371
 FAX: 952-826-0392



BRAEMAR SALT STORAGE

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
B. Blom
 DATE: 10/19/19 UC NO. 25413

DRAWN: DJN
 CHECKED:
 APPROVED:
 DATE: 10/28/19