

MEMORANDUM

FOCUS ENGINEERING, inc.

Cara Geheren, P.E.	651.300.4261
Jack Griffin, P.E.	651.300.4264
Ryan Stempski, P.E.	651.300.4267
Chad Isakson, P.E.	651.300.4285

Date: September 8, 2016

To: Emily Becker, City Planner
Cc: Stephen Wensman, Planning Director
From: Jack Griffin, P.E., City Engineer

Re: Wasatch Storage (9200 Hudson Blvd)
Site Plan Review

A Site Plan engineering review has been completed for the Wasatch Storage improvements at 9200 Hudson Boulevard. The submittal consisted of the following documentation prepared by Sambatek:

- Preliminary Civil Site Plans dated 08/25/2016.
- ALTA Survey dated 07/28/2016.
- Landscape Plan dated 08/25/2016.
- Storm Water Management Plan dated 08/24/2016.
- CUP Application Narrative.
- Building renderings and Photometric Plan dated 08/25/2016.

Engineering review comments are as follows:

Existing Condition Plans

1. The existing conditions plan must be revised to provide a complete depiction of the Hudson Boulevard right-of-way. All information must be shown on one plan sheet located in the Site Plan set (not supplemented by the ALTA survey) and must be presented at a scale that provides a legible plan. As presented, staff cannot complete a thorough review to identify all impacts for the proposed improvements. Upon resubmittal, additional site plan review will be necessary.
2. The existing conditions plan must be revised and resubmitted showing the existing conditions for a minimum distance of 150 feet in each direction from the property limits or project limits. Information beyond 150 feet may be necessary to identify downstream drainage facilities.
 - Hudson Blvd lane widths and shoulder widths have not be added to the plans.
 - The existing conditions must be detailed along Jade Trail where the project proposes to connect to the existing city watermain.

Site Plans

1. Utility Easements. All easements must be added to the Site Plan.
2. Fire Access. The Site Plan must be updated to identify all fire lanes and fire lane signage for city review. Parking stalls/vehicle storage areas must be eliminated to provide 24-hour access to all hydrant locations.

Drainage, Stormwater Management and Erosion Control

1. City and SWWD Storm Water Permits required. The site redevelopment is located in the South Washington Watershed District (SWWD) jurisdiction and will require permanent storm water quality and quantity measures compliant with City and SWWD standards. The proposed parking and storage facility improvements will add approximately 0.19 acres of impervious coverage to the existing property for a total of 6.6 impervious acres.

2. State MPCA/NPDES Permit. A SWPPP/NPDES Permit will be needed for the project, however permanent treatment standards are not required by the state MPCA/NPDES permit since < 1 acre of new impervious area is added to the site.
3. Proposed Storm Water Facilities. The site plan proposes a series of storm water management practices consisting of a storm water retention pond, three infiltration basins, sump manholes and a grassed swale with check dams prior to the storm water being discharged to the Hudson Boulevard right-of-way, across I-94 and to Wilmes Lake in Woodbury.
4. Rate and Volume Control Reduction. The storm water practices provides rate and volume control that reduces the rate of runoff for the 2, 10, and 100-year storm events and provides volume reduction consistent with SWWD rules.
5. Assumed Infiltration Rates. Soil borings must be provided at all infiltration locations to determine the infiltration rates for design purposes and additional infiltration capacity must be provided if determined to be necessary.
6. Water Quality. The storm water practices also provides a net reduction in total suspended solids (TSS) and total phosphorus (TP) from the existing conditions, however the SWWD annual pollutant discharge goal of 0.1 lb/TP per acre is not met for maximum allowable TP loading prescribed for Wilmes Lake. Additional treatment may be necessary as determined by SWWD. The TP leaving the site will be reduced from an existing 13.2 lbs to a proposed 1.1 lbs per year.
7. The storm water pond and infiltration basins must be labeled to match the storm water management plan. Correct discrepancy between the plans and the submitted model for Pond 9 outlet pipe.
8. Infiltration Basin 7P discharges directly to Hudson Boulevard right-of-way using a riprap EOF as the only outlet. Grading clarification, detail and revisions are needed around the south and west sides of Infiltration Basin 7P to ensure the HWL is contained and the discharge is limited to a controlled point. The HWL contour must be located entirely within the site and may not encroach upon the drainage and utility easements or City/County R/W. A pipe outlet must be used instead of a rip rap overflow, which may lead to erosion issues.
9. The grading must be revised to remove the depression at the north end of the site and at the northwest corner of the site to avoid any potential standing water.
10. Reinforced EOFs should be provided to match the functioning crest length up to the 100-year event (eg, Pond 9 EOF has an active flow width of >20' above a 10-year elevation).
11. Reinforcement must be added to Infiltration Basin 4P overflow outlet with EOF elevation noted.
12. Riprap areas should include fabric and riprap quantities should be listed on the plans. Plan details should be included in the plan set.
13. Add plan note to subcut infiltration basin bottoms 6-inches, scarify 8-12-inches deep and add 6-inches of Rooting Topsoil Borrow (Mn/DOT 3877.2E) to grade.
14. Temporary blanket should be placed over seeded infiltration basin bottoms to maintain moisture and aid in seed establishment.
15. Areas to receive temporary erosion control blanket (eg, swales) must be identified on the plans.
16. City Standard Plan Notes for Grading and Erosion Control must be placed directly on the Grading and Drainage Plan. All non-City plan notes that duplicate or contradict the City plan notes must be removed.

Utility Plans

1. All fire hydrants on the site will be city owned and maintained. The plans must be updated to include a minimum 30-foot easement centered over the pipe to all hydrant locations. A 15-foot easement is also required in all directions around each hydrant.
2. The hydrant at infiltration basin 5P must be relocated to be fully outside of the infiltration basin area and must be placed on a fully protected raised curbed median area with protective bollards.
3. The proposed hydrant along Hudson Blvd. will be city owned and maintained. The watermain must be configured to be publically owned up to the hydrant/gate valve. A second gate valve should be installed to start the 8-inch private service to the site. The 8-inch watermain service must be labeled on the plans "8-inch DIP CL 52 water service".

4. City Standard Plan Notes for Watermain must be placed directly on the Utility Plan to apply for all City owned watermain and hydrants. All non-City plan notes that duplicate or contradict the City plan notes must be removed or specifically called out to apply for service pipe only.
5. The Site Plan must detail the street cut and restoration plan, including the construction limits and street section requirements for the watermain connection at Jade Trail. The street cut and restoration must be completed at full street width.
6. The 30-inch driveway culvert in city right-of-way must be RCP pipe.
7. CB-06 must be relocated to avoid conflicts with the existing sanitary sewer along Hudson Blvd.
8. Minimum storm sewer pipe size is 15-inch. Revise storm sewer from CB-04 and MH-05.