



CIVIL ENGINEERING / SURVEYING / UTILITIES

January 11, 2023

Mike Weisenborn
Project Manager
City of Lee's Summit

**RE: Saint Luke's East Hospital – ASC Expansion & Renovation FDP Comments,
Application PL2022382**

Dear Mr. Weisenborn:

I have reviewed the applicant letter dated November 29, 2022, and I have provided responses to each comment on the following page. Responses are in bold.

Included with this resubmittal are the revised FDP plans, a SWPPP, cost estimate, and a letter from the USACE. If you have any further questions, please contact me at kurt.yoder@ibhc.com or 913-905-1567.

Sincerely,

Kurt Yoder
Project Engineer
BHC



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Planning Review – Hector Soto

1. DRIVE AISLE WIDTHS (Sheet C204) The east-west drive aisle areas flanked by landscape islands and curbing on both sides shall have a minimum pavement width of 24' (28' back-of-curb to back-of-curb). The dimension plan labels these areas as having only 20' of pavement width (24' b/c to b/c). Revise this and all plans to meet the minimum 24' of required pavement width for this areas.

Drive aisle widths have been revised accordingly.

2. LANDSCAPE ISLANDS. Tree planting areas shall be no less than ten feet in width. No tree shall be located less than four feet from the back of curb. A number of the proposed landscape islands do not meet these minimum requirements to serve as tree planting areas.

The trees and islands have been revised. Some islands have been shifted to allow the minimum width. Some trees are now proposed on the east and northeast corner of the parking expansion area.

Engineering Review – Gene Williams

1. It appears a SWPPP is required due to the disturbed area being greater than 1 acre. Please submit a SWPPP for the project.

A SWPPP is included with the resubmittal.

2. Evidence that the Nationwide USACE permit shall be provided prior to formal approval of the Final Development Plan. Please submit the Nationwide permit when available.

The USACE NWP has been received. A copy of the letter is included with the resubmittal.

3. A bold note shall be provided on the detention basin sheet stating "DETENTION BASIN MODIFICATIONS SHALL BE REQUIRED PRIOR TO ANY OTHER IMPROVEMENTS ON THE SITE (EXCLUDING EROSION AND SEDIMENT CONTROL). AN AS-BUILT RECORD DRAWING SHALL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF SUBSTANTIAL COMPLETION" or equivalent language.

This note has been added to C506.



4. Sheet C401: Please label the private sanitary sewer extension as "PRIVATE" on the profile view. This is needed for our GIS technicians to accurately portray the information on our GIS system.

The profile view title has been updated.

5. The City of Lee's Summit public sanitary sewer system is being modified, and no details were provided on the adjustment of manhole frame and lids to grade. Frames and lids are being adjusted several feet, and simple adjustment methods are not appropriate for adjustment to grade. Please show how the manholes will be adjusted to grade, including new cone sections.

The construction notes on C400 have been revised to explain more fully. The detail for sanitary sewer manholes is referenced for the new barrels, cone, riser rings, and lid.

6. Please show and label the hydraulic grade line for the design storm on the private stormwater lines. If the 100 year event is not contained within the pipe, a suitable overflow route shall be established and minimum freeboard of 2.0 feet maintained between any low opening of an adjacent building. Please evaluate and revise.

The 100-year hydraulic grade line is now shown on the profiles. The only structure that is not contained within the system is at structure 501. The overflow path is directly to the detention basin.

7. Please label all private storm lines as "PRIVATE" on the profile views.

This label has been added to the profile view titles.

8. It would appear a fence is required along the retaining wall within the detention basin due to the proximity to a walking surface. Please evaluate and revise as appropriate.

The top of the wall is to be a freestanding block wall with a fence on top of it.

9. Sheet C506: Please show the limits (in graphic format) of the water surface elevation within the detention basin for the design storm event, and ensure a minimum setback of 20 feet is maintained between this water surface elevation line and any property line or building.

The limits of the water surface elevation have been added to the sheet.



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10. Typical pavement section for asphalt was missing the minimum 6 inches of aggregate base course. Please revise.

The 6 inches of aggregate base course has been added to the pavement section detail on C700.

11. Additional easement for the deep public sanitary sewer line shall be required. This additional sanitary sewer easement can be dedicated by separate document, and shall be an exclusive sanitary sewer easement dedicated to the City of Lee's Summit on the standard template form. It shall be a minimum of twice the depth to the flowline of the deepest portion of the sanitary sewer, and may be variable based on the depth of the sanitary sewer along the deepened portion. Please provide a courtesy review copy of the easement, along with an 8.5 by 11 inch exhibit showing in graphic format the limits of the easement, prior to execution and prior to recording. This easement shall be required prior to issuance of a Certificate of Substantial Completion.

It is understood that the easement will need revised before the Certificate of Substantial Completion. The exhibit will be sent for review before recording.

12. Please provide a trenching and backfill detail for all storm lines, sanitary lines, and water lines. Please ensure the new July 2020 requirement of 12 inches of aggregate is shown on the top of pipe rather than the old standard of 6 inches aggregate.

A detail has been added on C703.

13. All Rip Rap Callouts: Please show the dimensions at each location. The details require the user to plug numbers into an equation, which is not acceptable. Recommend all information be included on the plan view, including length, width, depth, rip rap type, geotextile.

The rip rap information is now shown on C504 for storm line 600. The orientation of storm lines 700 and 800 have been rearranged. The pond outlet is now at structure 702. The pipes in the pond area are no longer a scour concern. The only pipe going in and out of the pond is now an overflow pipe for storm line 800. Minimal riprap is shown around the flared end section of the pipe. Dimensions and information are shown on C505.

14. Private sanitary sewer extension shows a proposed 0.40% slope. The minimum slope for an 8 inch public line in a deadend configuration is 1.00%. It would appear the slope is too flat for this application. Please review and revise as appropriate.

The slope of the existing main that is being re-routed is only 0.64% slope, which limits the slope of the proposed line. The proposed line to get around the building is longer than the existing line being replaced.



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15. Sheet C201: ADA-accessible parking stalls shall include a callout on the plan view showing the design slope. The design slope shall be no greater than 1.50% in any direction, with the build-out value of 2.00% to allow for construction tolerance. Please provide slope callouts on the plan view.

Slope callouts are shown. The slopes have been revised to be no greater than 1.50% in the ADA parking areas.

16. Pavement Sections: Where are the heavy-duty asphalt pavement sections located? The definition of heavy-duty in this instance is defined as areas where truck traffic, emergency vehicle traffic such as ambulance and fire trucks, and trash truck traffic will traverse. In these locations, a minimum of 1.5 inch surface course, with a 5 inch base course asphaltic concrete layer is needed on top of a minimum 6 inches aggregate subgrade, and either geogrid below this layer, or chemically-stabilized subgrade. Please evaluate and revise, and please show the locations where heavy-duty pavement will be utilized.

The trash loading area is now shown completely as a heavy duty concrete pavement. The limits of the pavement removal needed for the sanitary and storm main installation just east of the building is now shown. The proposed pavement in the main drive aisle is shown as a heavy duty asphalt pavement.

17. Curb and gutter typical section views are mostly correct, but do not show the required 1 foot extension beyond the back of curb with subgrade. Recommend using the typical pavement sections to show the 1 foot extension beyond the back of curb. Alternatively, a separate curb and gutter section view can be drawn-up showing the minimum 1 foot extension beyond the back of curb. Please evaluate and revise as appropriate.

This is now shown in details 100 and 101. The recommendation from our site geotechnical report is to extend subgrade and aggregate base improvements 2 ft beyond the curb limits.

18. Public Sanitary Sewer Line: Please label the City manholes with their respective manhole numbers. For purposes of this application, the City manhole numbers are as follows: 1) 16-015 far easternmost manhole shown on Sheet C400 near the Douglas St. right of way, 2) 16-014 downstream of 16-015, 3) 16-049 downstream of 16-014, 4) 16-048 downstream of 16-049, and 5) 16-047 downstream of 16-048.

These are now labeled on C400 in the plan view.



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19. An itemized and sealed Engineer's Estimate of Probable Construction Costs should accompany your final submittal drawings. Please include the following in the estimate:
- 1) pavement, 2) aggregate base course, including the area one (1) foot beyond the back of curb, 3) chemically-stabilized subgrade, including the area one (1) foot beyond the back of curb, 4) curb and gutter, 5) grading to establish parking lot and drainage, 6) grading for detention basin modifications, 7) storm lines greater than 6 inches in diameter, 8) storm structures such as inlets, 9) water lines (if any) exterior to buildings with new connections, 10) sanitary sewer lines and structures such as manholes, 11) public sanitary sewer modifications including new cone sections or other means to adjust to grade, 12) rip rap, 13) erosion and sediment control measures, 14) final restoration, including sodding, seeding, fertilizer, mulch, and topsoil.

An Engineer's opinion of construction costs is included with the resubmittal.

Traffic Review – Brad Cooley

No comments

Fire Review – Jim Eden

1. All issues pertaining to life safety and property protection from the hazards of fire fighters and emergency responders during emergency operations, shall be in accordance with the 2018 International Fire Code.

This is understood.

2. The FDC's and sprinkler room access for the ASC and the North Pavilion are located in the area of the dumpster enclosure parking lot. Access shall be maintained to both at ALL times during construction.

This is understood.

3. IFC 503.3 - Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

Action required- No Parking signage shall be provided in the dumpster enclosure access area.

This is now shown on sheet C202. Signage is proposed on the building wall.



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Building Codes Review – Joe Frogge

1. Provide complete, engineered, retaining wall design.

This is now provided and shown on the C600 sheet series.

2. Provide complete site lighting plan including light pole base detail.

A light pole base detail is now shown on C402.



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