

MEMORANDUM

TO: Mayor, Council, and Staff

FROM: Josiah Bilskemper, P.E. (Shive-Hattery, Inc.)

DATE: June 8, 2011
June 13, 2011 (Neumann Monson Responses)
July 7, 2011 (MMS Responses)
August 4, 2011 (Updated City Engineer Comments)

RE: City Engineer Staff Report #1
One University Place PUD Submission (05.25.11)
One University Place PUD Submission (07.07.11; Sheet C-101 to C-109)

This memo provides a list of comments, questions, and recommendations based on a review of the PUD Submittal referenced above.

GENERAL SITE

1. We recommend that an additional plan sheet be submitted that shows the proposed site features scaled back, and highlights the existing property lines, the proposed Sunset right-of-way, the building setback lines, and all of the existing and proposed easements (along with information on easement types and widths) on the site, as well as those adjacent to the site to the west where sanitary sewer construction is proposed to occur. Any required temporary construction or temporary access easements should also be shown. It is difficult to distinguish all of these lines on the current plans.
 - a. An additional sheet will be submitted that shows only the property lines, right of way lines, building setback lines, and easement lines. (N-M, 6/13/11)
 - b. An additional sheet has been submitted as requested (C-102; Site Easement Layout). We recommend that it also include existing and proposed easements to the west of the site where sanitary sewer construction is proposed to occur. The proximity of the west access road and utilities at the north property line would require a construction easement to build/install these facilities. An easement of this type should be indicated. (S-H, 8/4/11)
2. The widening of Melrose Avenue to accommodate a turn lane at the main development entrance pushes the south curb of Melrose Avenue closer to the existing 4-foot sidewalk. This will further compound issues with snow removal from the street being pushed onto the sidewalk. We recommend that the project include a relocation of this sidewalk to the south edge of the Melrose right-of-way from Sunset Street to at least Birkdale Court.
 - a. The developer would prefer to leave the sidewalk at the current location. Moving it to the south right of way line will require removal of existing landscaping. (N-M, 6/13/11)
 - b. This issue was explained in further detail in an e-mail to the council on June 14, along with an aerial photo of the site with approximate property lines obtained from the



Johnson County GIS website. The proposed widening of Melrose means the south curb line moves closer to the existing sidewalk. Narrowing this distance is expected to result in more snow from the street being plowed onto the sidewalk. There are three options:

- i. Leave the sidewalk where it is. There will be a narrower green space between the sidewalk and the new south curb line of Melrose Avenue.
 - ii. Move the sidewalk south to the back of the city right-of-way, maximizing the distance between the street and sidewalk. Based on the County aerial, much of the vegetation behind the Koser Avenue properties would need to be removed, and some fences relocated as well.
 - iii. Move the sidewalk to the south an intermediate distance to maintain or improve the green space to the curb, but avoid impact to vegetation. This would require relocation of the existing overhead power poles. (S-H, 8/4/11)
- c. A cross-section of the Melrose Avenue right-of-way should be provided just west of Sunset (full bus lane, EB and WB traffic lanes, left-turn and right-turn lanes, sidewalks), and also just west of the main entrance (existing retaining wall and handrail, 8' wide sidewalk, vehicular guard rail, 3-lane street section, and south walk). Show the existing curbs and walks on the same section, and provide dimensions which indicate how far the proposed curb is from the existing curb, and the resulting green space between curb and sidewalk. (S-H, 8/4/11)
3. Page 9 of the submittal details the pavement widening along Melrose Avenue, and shows 4 to 5-feet of pavement being added on each side. We recommend consideration be given to sawcutting some portion of the existing outside street panels to create more uniform jointing dimensions for the new paving.
- a. We agree with this comment and it will be addressed when the construction plans for the widening are submitted. (N-M, 6/13/11)
 - b. As noted, more detail would be needed to evaluate panel replacements. (S-H, 8/4/11)
4. As the widened pavement sections taper down, full panels will need to be replaced instead of narrow slivers of new concrete.
- a. We agree with this comment and it will be addressed when the construction plans for the widening are submitted. (N-M, 6/13/11)
 - b. As noted, more detail would be needed to evaluate panel replacements. (S-H, 8/4/11)
5. What type of materials would be used to construct the bus shelter? Recommend the materials match the look and feel of the front building.

- a. The bus shelter will be furnished by Iowa City Transit and will match their standards. (N-M, 6/13/11)
 - b. We have contacted Iowa City Transit, and are awaiting feedback on what their standards are for bus stops, and what options are available for design. (S-H, 8/4/11).
6. There are building elevations shown on Page 4 and Page 10 that are slightly different. Please confirm the Finished Floor (FF) elevation of each building, and provide elevation call-outs on Page 11 and 17 per the attached.
- a. The elevation on page 10 will be revised to match page 4. Elevations will also be clarified on pages 11 and 17. (N-M, 6/13/11)
 - b. Based on updated plan sheets received from Neumann Monson Architects on June 24, the Finished Floor (FF) elevations were confirmed on Page 10 of the PUD submittal as the following:
 - i. Front Building FF = 782.25
 - ii. Back Building FF = 779.75
 - c. As requested, dimensions were added to Page 11 and 17 to indicate the heights of each building. The peak roof element of the front building is 38'-0" above FF (820.25), and the peak roof element of the back building is 72'-0" above FF (851.75).
 - d. The current zoning ordinance for Multiple Family Commercial PUD (Section 13) limits the height of the front building to 38-feet and the back building to 76-feet, where "height" is defined in Section 7 of the ordinance, and is the "vertical distance from the highest point of the finished grade of any street on which said property abuts to the highest point of the roof or coping." Based on the digital topography file of the site provided by MMS, an elevation of 783.22 along Melrose Avenue is the highest adjacent street elevation. Therefore, each building is within the allowed maximum height. (S-H, 8/4/11)
7. There are several retaining walls shown on the site. The type of retaining wall, as well as top of wall and bottom of wall elevations are needed to evaluate the required construction impact, as these are typically near steep slope areas.
- a. The retaining walls are intended to be modular block walls. The details of the top and bottom of the wall will be submitted with the construction plans. (N-M, 6/13/11)
 - b. The modular block walls will need to be designed by a licensed structural engineer to handle the anticipated loads of the road pavement above. They will also include railing and/or barriers as required to protect pedestrians and vehicles from drop-offs based on final design elevations and proximity to roadways and sidewalks.
 - c. As the construction areas needed to build these walls are within designated "sensitive areas", and the allowable disturbed area would be set based on an approved

“Sensitive Areas Site/Grading Plan”, we recommend the developer review the plan and make sure the limits of disturbed area are sufficient for the construction of these walls.

- d. The retaining wall at the north end of the west access drive is shown beyond the property line. (S-H, 8/4/11)
8. The rear patio structure of the back building projects out into the 20-foot rear yard.
- a. The rear patio and retaining wall are not a part of the building and not limited to the 20’ minimum distance from the lot line. (N-M, 6/13/11)
 - b. The rear patio is in the same location. Any changes to the layout will be based on the council’s interpretation of Section 13, B.7 of the zoning ordinance. (S-H, 8/4/11)
9. What types of site and utility credits are being considered with respect to LEED certification?
- a. They will not be determined until the PUD application is approved and design documents begin and finally after the project is completed. (N-M, 6/13/11)
 - b. The LEED certification process is fluid throughout design and construction. However, if council desires more information on the LEED certification component of the project, it would not be unreasonable for the developer to identify what level of LEED certification they are targeting, and identify some of the credits anticipated for this project. (S-H, 8/4/11)
10. Has there been a geotechnical report completed for the site?
- a. A geotechnical report has been completed and will be submitted. (N-M, 6/13/11)
 - b. A copy of the “Preliminary Geotechnical Engineering Report” has been submitted. It was prepared by Terracon on April 4, 2011. It consisted of two soil borings on site, preliminary observations about the soil types, and general recommendations for earthwork and construction of the two proposed buildings. (S-H, 8/4/11)

OFF-STREET PARKING

11. There are 52 above grade parking spots shown on Page 8 and 9 of the submittal. Of these spaces, there are 2 designated handicap stalls that share a common aisle. The dimension of these parking spaces is 9-feet by 19-feet. The city’s zoning ordinance states that off-street parking spaces shall be at least 9-feet wide and 20-feet long.
- a. The off street parking places have been increased to 20 feet (N-M, 6/13/11)
 - b. There are 53 above grade parking stalls shown on the Layout Plan (Sheet C-101). Of these, there are 2 designated handicap stalls that share a common aisle, and 3 parallel parking stalls along the loop drive at the back building. This is less than the maximum

allowable off-street parking spaces (55) specified in Section 13, B.6 of the zoning ordinance. Pavement marking lines are shown at 20-feet. (S-H, 8/4/11)

12. At the front building, there are 55 underground parking spaces shown on Page 13 of the submittal. These spaces measure 9-feet by 18-feet, with a 24-foot drive aisle. There are no designated handicap stalls indicated.
 - a. Accessible parking stalls will be indicated on the plan. (N-M, 6/13/11)
 - b. Page 13 has been updated to show 3 handicap parking stalls with adjacent access aisles. There are still 55 total underground spaces shown, measuring 9-feet by 18-feet with a 24-foot drive aisle. (S-H, 8/4/11)

13. At the back building, the Lower Level Parking shows 55 spaces measuring 9-feet by 20-feet, with a 20-foot drive aisle. The Upper Level Parking shows 57 spaces measuring 9-feet by 20-feet, with a 20-foot drive aisle. There are no designated handicap stalls indicated.
 - a. Accessible parking stalls will be indicated on the plans. (N-M, 6/13/11)
 - b. Page 18 and 19 have been updated to show 3 handicap parking stalls (with access aisle) on each parking level. The Level 1 parking shows 55 stalls (9'x20') and a 20-foot drive aisle. The Level 2 parking shows 57 stalls (9'x20') and a 22-foot drive aisle. (S-H, 8/4/11)

14. The current parking count is 52 spaces above grade (including 2 ADA stalls), and 167 underground spaces. Total spaces are 219.
 - a. One more space will be added on pages 8 and 9 for a total of 53 spaces. (N-M, 6/13/11)
 - b. The current parking count is 53 stalls above grade (includes 2 handicap stalls), and 167 underground stalls (includes 9 handicap stalls). Total stalls are 220. (S-H, 8/4/11)

GENERAL UTILITIES

15. Where would the proposed new signals be located at the Melrose/Sunset intersection? Would there be a need to acquire additional right-of-way at any of the intersection corners for new signals?
 - a. It is our intention to provide new traffic signals without acquiring additional right of way. This detail will be submitted with the construction plans. (N-M, 6/13/11)
 - b. The existing right-of-way at the south corners of the Melrose/Sunset intersection would need to be confirmed, but based on Johnson County GIS aerials with approximate property lines, it is possible that additional right-of-way would be needed at these south corners to accommodate new traffic signals and current clearance requirements. (S-H, 8/4/11).

16. The sanitary sewer line to be constructed west of the site along Melrose Avenue will require removal and replacement of the entire 8-foot sidewalk, the Birkdale Court street crossing, the Athletic Club entrance drive, and runs directly through an existing segmental block retaining wall. The excavation required for this line and the manhole structures encroaches on the north lane of Melrose Avenue. Please provide additional detail on how this work is to be accomplished.
- a. These details will be provided with the construction plans. (N-M, 6/13/11)
 - b. The existing retaining wall, railing, and trees behind the wall need to be shown. Provide additional detail on the method of installation for this sewer line, and how that method would impact adjacent walks, roads, walls, trees, etc. (S-H, 8/4/11)
17. Page 12 of the submittal lists 58 residential units in the back building, 21 residential units in the front building, and 6 commercial units in the front building. If constructed this way, this results in 170 separate meters (gas and electric) to be placed somewhere on the building. We recommend that the building design be coordinated with Mid-American Energy to dedicate interior space to locate these meters. The location and construction of these interior spaces would need to be coordinated with Mid-American Energy requirements for this type of installation.
- a. We agree with the recommendation to locate meters inside both buildings and to coordinate those locations with Mid-American Energy. (N-M, 6/13/11)
 - b. No additional comment. (S-H, 8/4/11)
18. There is a storm sewer outlet into the middle of the east ravine, with pipes proposed to be bored underneath the protected slope areas. How would the contractor get access into the ravine to work within the critical slope areas without crossing through the protected slope areas? Based on the proposed elevations at the storm manhole to be placed at the bottom of the ravine, the excavation required would get into the adjacent protected slope area.
- a. If required the contractor could use a crane to get the equipment into the ravine. A trench box and sheet piling can be used to keep the excavation out of the protected slopes. (N-M, 6/13/11)
 - b. Disturbance to sensitive slope areas would only be allowed if they are shown on the "Sensitive Areas Site/Grading Plan" that is approved by the council. If this adjacent protected slope is not to be disturbed then it appears equipment would need to be lowered into the site by crane. Based on the proposed elevations of the storm manhole within the ravine, and its proximity to the protected slope, it appears that a trench box, sheet piling, or some other method would be necessary to avoid the slope. The Plans indicate storm sewer pipes will be bored underneath the slope. (S-H, 8/4/11)
19. The proposed water main, sanitary sewer, and storm sewer management plans are still being evaluated at this time. An additional engineering memo will be issued to complete review of these systems.
- a. We acknowledge this comment. (N-M, 6/13/11)

- b. No additional comment. (S-H, 8/4/11)

SENSITIVE AREAS

20. In accordance with the Sensitive Areas Ordinance (#128), there are several submittals required.

- a. The first submittal would be the “Sensitive Areas Development Plan”, which is to be submitted to the city for approval. This document shows the field survey of the existing site only, and delineates all of the steep, critical, and protected slope areas as defined by the ordinance. It is the city’s opportunity to review the developer’s layout of the various sensitive areas on the site. Once this plan is approved, it is used as an overlay for the next submittal.
 - i. The existing conditions plan can be relabeled “Existing Conditions and Sensitive Areas Development Plan. It already shows the sensitive areas. (N-M, 6/13/11)
 - ii. This sheet has been included (Sheet C-103), shows the additional areas identified below, and also indicates the location of the 3 hand auger borings performed by Terracon on June 13, 2011.
 - iii. Based on our evaluation of the digital topography file provided by MMS (obtained from aerial topography), and in accordance with our interpretation of the various sensitive slope definitions, the “Sensitive Areas Development Plan” (Sheet C-103) as submitted correctly delineates the steep, critical, and protected slope areas.
 - iv. In accordance with the process laid out by the Sensitive Areas Ordinance (#128), the first step for the council is to decide whether or not they will approve this “Sensitive Areas Development Plan”. If approved, it is used as the base map for the remaining submittals. (S-H, 8/4/11)
- b. It is also to indicate any buffer zones around these areas. The existing ordinance does not define or provide any guidance for buffer zones, but is typically some distance around an area that likewise, remains undisturbed. Currently there are no buffers shown.
 - i. The sensitive areas ordinance does not require any buffers. (N-M, 6/13/11)
 - ii. There are currently no buffers shown around the delineated slope areas. If buffer areas are to be included, they are to be shown on the “Development Plan”, and agreed upon prior to approval. (S-H, 8/4/11)
- c. The “Existing Conditions Plan” on Page 3 of the submittal shows the slope areas delineated on the existing site. The existing contours within the site were obtained from aerial topography, and after evaluation of the site survey AutoCAD surface, we recommend several adjustments be made to the sensitive areas zones at both the east and west edge of the site. The attached drawings show our proposed revisions.

- i. We disagree with this review. The slopes asked to be adjusted in the east ravine do not meet the definition of a protected slope. The slope rises 8 feet at a slope of 40%+. The definition requires the slope to rise 10 feet or more. The slopes asked to be adjusted in the west ravine only have 6 feet of elevation change on our site. The rest of the slope is on another property. It is our interpretation that the entire 10 foot of slope needs to be on the development property to be regulated. (N-M, 6/13/11)
 - ii. The existing conditions plan has been revised as requested. (MMS, 7/7/11)
 - iii. The additional slope areas have been shown on the Plan. (S-H, 8/4/11)
- d. We also recommend that when field survey data is taken of the site, the new contours be reviewed, and the "Development Plan" be revised accordingly to reflect site conditions.
- i. We feel that the aerial topography is sufficient for use and additional field survey work is not required. (N-M, 6/13/11)
 - ii. The Sensitive Areas Ordinance (#128) does not specify a standard for gathering data on the existing topography. The Zoning Ordinance (#79, Section 13, D.5) requests that existing topography be shown at two-foot intervals, which is what has been provided. From a procedural standpoint, given that the rest of the design and project development proceeds forward from this initial delineation of protected areas, it makes sense to have this determination made once. (S-H, 8/4/11)

21. The "Sensitive Areas Site Plan" and "Grading Plan" are next submitted for approval.

- a. These drawings would show the previously approved "Development Plan" to evaluate how the new construction and grading would impact these areas. These plans should show not only the final product, but indicate areas needed for construction storage, construction entrances and exits, job trailers, and any other areas on site that will need to be utilized to accommodate the construction process.
- b. If the proposed new construction involves disturbing any of the sensitive areas and their buffer zones, this drawing will identify the size and location of these areas. The city council would then determine to what extent, if any, they would allow these areas to be disturbed.
- c. The city may want to address whether any mitigation or replacement should be required if the plan is shown to disturb ground containing steep or critical slopes. The ordinance does not address this question, and as such may be a topic of negotiation.
- d. The "Grading Plan" on Page 4 of the submittal indicates that almost all of the slope areas delineated along the west edge of the property will be disturbed, and that the bottom and south edge of the east ravine would be disturbed by construction.

- i. The site grading and erosion control plan shows the information required of a sensitive areas site plan and will be relabeled “Site Grading and Erosion Control Plan and Sensitive Areas Site Plan”. (N-M, 6/13/11)
 - ii. This sheet has been included (Sheet C-104). Prior to approval, it needs to show the slope areas and any buffers indicated on an approved “Development Plan,” specifically identify the proposed limits of disturbance within these areas, and indicate the total square footage of each slope area disturbed. Refer to comments “a, b, and c” above, as they all still apply to evaluating this submittal. (S-H, 8/4/11)
22. Based on our recommended adjustments to the “Development Plan”, it looks like the proposed project encroaches onto areas defined as “Protected Slopes” along the west edge of the property, at the south edge of the east ravine, and by the storm sewer work within the east ravine.
- a. We disagree with this review. The slopes asked to be adjusted in the east ravine do not meet the definition of a protected slope. The slope rises 8 feet at a slope of 40%+. The definition requires the slope to rise 10 feet or more. The slopes asked to be adjusted in the west ravine only have 6 feet of elevation change on our site. The rest of the slope is on another property. It is our interpretation that the entire 10 foot of slope needs to be on the development property to be regulated. (N-M, 6/13/11)
 - b. A geotechnical engineer has evaluated these slopes and had determined they have been previously altered by human activity. (MMS, 7/7/11)
 - c. The additional slope areas have been included in the Plans, the locations of the hand auger borings performed by Terracon are shown on the “Development Plan”, and the geotechnical report noted above has been submitted to the council. (S-H, 8/4/11)
23. Per Section 3.C of the current ordinance, the only way development activities may be allowed upon protected slopes is if all of the following four conditions are met:
- a. They have been "previously altered by human activity..."
 - i. A geotechnical engineer has evaluated these slopes and has determined they have been previously altered by human activity. (N-M, 6/13/11)
 - ii. Refer to comments from Item 22. (S-H, 8/4/11)
 - b. "...a geologist or professional engineer can demonstrate to the University Heights City Council's satisfaction that development activity will not undermine the stability of the slope..."
 - c. "...the City further determines the development activities are consistent with the intent of the Sensitive Areas Ordinance."
 - d. The University Heights City Council approves a submitted Development Plan, Grading Plan, and Sensitive Areas Site Plan.

24. The ordinance indicates that protected slopes that have not been previously altered by human activity “shall not be graded and must remain in its existing state, except natural vegetation may be supplemented by other plant material.”

a. We acknowledge this comment. (N-M, 6/13/11)

b. No additional comment. (S-H, 8/4/11)

Please let me know if you have any question, thanks.

JDB