DEPARTMENT OF PUBLIC WORKS

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ENGINEERING COMMENTS
FOR
PLAN COMMISSION
AGENDA
Wednesday
February 10, 2016

Time: 6:30 p.m.
Place: Waukesha City Hall, 201 Delafield Street, Council Chambers

I. Call to Order

II. Pledge of Allegiance

III. Roll Call

IV. Approval of Minutes

ID#16 -052 Minutes for the Meeting of January 27, 2016.

V. Consent Agenda

VI. Business Items

PC16 -0001 Stillwater Villas, Preliminary Site Plan & Architectural Review

1. The following items should be submitted:
   a. Applicable fees per Chapter 32.07(b). The Engineering Division requires any Bonds or Agreements required by the Plan Commission

and Council or Chapter 32.08(c). Development fees will be owed to the City for this project.

b. Chapter 32.07(b)(2): Once all submittal items are completed, submit all items listed in sub.(b)(1)(A)-(G) in digital form for City filing.

c. Condominium Plat per Wisconsin State Statute 703.

i. The storm water management plan, construction drawings, storm water facility maintenance agreement, easements, Developer's Agreement, and Bonds should be reviewed and approved prior to the Condominium Plat being finalized. If the location of any units need to be changed as a result of the approved construction drawings, the Plat should be updated to reflect the needed changes.

d. Waukesha Water Utility approval.

2. Permits will be needed for the Stillwater Villas project. Provide copies of approved project permits to the City for filing. Needed permits include but are not limited to:

a. Wisconsin Department of Natural Resources NR 216 N.O.I. Permit.

b. City of Waukesha Construction Permit.

c. City of Waukesha Storm Water Permit.

d. Private sanitary sewer approval.

Sheet T1-Cover Sheet

1. No comments.

Sheet C1.0 – Existing Site Plan

1. ~~Existing wetlands are shown along the areas adjoining the Fox River. The date of delineation and name of the wetland delineator should be listed on the Drawing. If the delineation was completed over 5 years ago, a current wetland delineation should be completed and surveyed for addition to this Drawing.~~
2. ~~The Waukesha County GIS shows existing wetlands along the west side of this property that are not shown on this Drawing. A copy of the latest wetland delineation should be submitted for review confirming the presence of no wetlands in this area. If no wetland confirmation can be submitted dated within the previous 5 years, a current wetland delineation should be completed and surveyed for addition to this Drawing.~~

a. Provide DNR concurrence of wetlands marking.

OK

3. A Primary Environmental Corridor is shown on the Drawing. A note stating the source of this information should be added to the Drawing.

A note has been added to the plan sheet C1.0, as requested.

4. ~~A 100-year floodplain line is shown on the Drawing. A note stating the source of this information should be added to the Drawing.~~

5. Existing easements on the site should be shown including source documentation.
   OK

Sheet C1.1-Proposed Site Plan

1. ~~Buildings 1 and 4 appear to be placed within the building setback area. The buildings should be moved.~~
2. If wetlands are present, the buildings should be outside the wetland setbacks.
   All wetland boundaries have been shown and all proposed buildings have been shown to be outside the limits of the setback. Wetland setbacks have been shown on plan sheet C1.1.
3. ~~Adequate snow storage should be provided at the north end of the cul-de-sac.~~
4. Proposed easements including utility easements should be shown.
   All proposed easements have been shown, as requested.
5. Proposed street signage should be added to the plan. Signs should include but not be limited to: street name sign, ~~monument sign,~~ etc.
   Proposed signage has been added to the plan set.

Sheet C1.2 Master Grading Plan

1. ~~Existing storm sewer is shown on this property connecting to City storm sewer in Stillwater Circle. The same segment is shown on Sheet C1.2 with no limits indicated of existing versus proposed pipe. The invert at the end and end of pipe of the existing storm sewer pipe should be listed to confirm the limits of installation.~~
2. ~~Locations of soil test pits should be shown.~~
3. ~~Existing topography should be extended at least 100 feet off site.~~
4. ~~The proposed basement floor elevations are listed with different elevations than the proposed exposure elevations for buildings 5 to 10. Please confirm.~~
5. ~~It is noted that several items in the storm water management plan comments relate to the layout shown on this plan.~~
6. ~~A 100-year floodplain line is shown on the Drawing. The elevation of the floodplain line at known locations along the east lot line should be listed.~~

Sheet C1.3 Erosion Control Plan

1. ~~A construction sequence should be added.~~
2. ~~Chapter 32.09(c)(9): Dewatering specifications should be added to the plan.~~
3. ~~Chapter 32.09(d)(2)(xiii): Final site stabilization instructions should be included in the plan set including seed rates, methodology, fertilizer and erosion matting locations and specifications, and maintenance requirements.~~
4. ~~Chapter 32.09(d)(2)(xiv): Detailed construction notes for the dewatering plan should be included on the plan.~~

5. ~~Chapter 32.09(d)(2)(iv): All woodland areas, those proposed to be lost or transplanted during construction and acres or numbers of each. For woodlands proposed to be lost, show individual trees larger than eight (8) inches in diameter that are located within twenty (20) feet of proposed grading boundaries.~~
6. ~~Chapter 32.09(d)(2)(xiv): Inspection requirements should be added to verify that critical elements of the plan are successfully accomplished such as protecting the wetland areas, marking and protecting trees in the Primary Environmental Corridor Areas from damage from the Contractors, installation of the rain gardens.~~
7. ~~Chapter 32.09(d)(2)(xiv): The dates for the grading work should be added to the Drawing.~~
8. ~~Chapter 32.09(d)(2)(C)(iii): Open channel design and stabilization data should be prepared to support the selected BMP(s) for stabilization.~~
9. Chapter 32.09(d)(2)(xv): Location of soil evaluations with surface elevations and unique references to supplemental soil evaluations report forms in accordance with section 32.11(c). A separate map should show estimated seasonal water table depths down to planned excavation depths with references to the proposed site plan.

   Please see attached Geotechnical Exploration Report for map and information detailing the boring locations and ground water elevations. Plan Sheet C1.2 has also been revised to include a seasonal high ground water table and to show boring locations.

   a. A minimum 1-foot vertical separation between the seasonal high groundwater table elevation and the basement floor surface should be included in the design.

      OK

   b. ~~Two soil borings are needed in each proposed rain garden.~~
   c. Soil borings are needed in the proposed dry pond.

      Soil borings have been provided in all rain gardens with the exception of RG-1A, as well as, Bio-retention Basin P-1. Ground water has been interpolated in these areas and found to not be an issue.

10. ~~Chapter 32.10(d)(4)(E): Subsurface drainage. Lowest building floor surfaces shall be built one (1) foot above the seasonal high water table elevation, as documented in the soil evaluations and shall avoid hydric soils.~~
11. ~~The erosion control/master grading plan should include a table listing the minimum basement elevation based on the existing water table for each lot. A note on the Condominium Plat should reference to this information.~~
12. ~~The Non-Disturbance area within the Primary Environmental Corridor area should be labeled and protected with the appropriate boundary fencing.~~

Sheet C1.4 Roadway and Storm Sewer Plan and Profile

1. Confirm that the cul-de-sac is sized properly for the City's fire trucks.
   The proposed cal-de-sac has been designed and shown per the City standards for subdivision cal-de-sacs.
2. A note should be added: Repair limits in street will be determined in field at the time of permanent repair.
   A note has been added, as requested.
3. The concrete sidewalk at the apron and the apron should be 7 inch thick concrete sidewalk.
   The sidewalk has been defined as requested, and is noted on plan sheet C1.1.
4. Show grades for match point of curb removal and replacement along Stillwater Circle.
   Grades at the match points have been added to plan sheet C1.2, as requested.
5. Show spot grades for sidewalk (Face of Walk and Back of Walk).
   Spot shots have been added, as requested.
6. Show removal limits for whole street from flange to flange. The street will need to be milled and paved.
   A note has been added to plan sheet C1.4, as requested.
7. Add Note: Removal limits of repair are approximate and will be determined in the Field by the City.
   A note has been added to plan sheet C1.4, as requested.

Sheet C1.5 Sanitary Sewer and Water Main Plan & Profile

1. Specifications for public sanitary sewer work should be added to Sheet C1.7.
   Specifications have been added to plan sheet C1.5.
2. Dimension distance from back of sidewalk to sanitary manhole #1 – make sure manhole is entirely on private property.
   The dimension has been added, as requested.
3. The City has experienced maintenance related issues with laterals connected directly to manholes. Manhole #3 shows two lateral connections. The engineer may want to consider connecting these laterals instead to the sewer main to avoid these potential maintenance issues.
   The two laterals in question have been connected to the sewer main, as recommended.

Sheet C1.6 Construction Notes and Details

1. Add City driveway detail. Indicate 7 inch thick concrete.
   OK
2. Add City standard curb and gutter detail.
   A Curb & Gutter detail has been added to the plan sheet, as requested.

Sheet C1.7 Construction Notes and Details

1. Specifications for infrastructure including materials and installation procedures for all work should be added to the Drawings including outlet structure material, bedding, backfill, sanitary sewer, frames and lids, sidewalk construction, etc. The City requires polypropylene chimney rings on new construction. These specifications can be sent to the Engineer.
   OK
2. Chapter 32.10(e)(4)(c): A scaled cross section of the pond, soil tests, and outlet structure detail should be shown.
   A detail of the proposed pond has been added to the plan set.
3. ~~Rain gardens are proposed as part of the development. Proposed landscaping of the rain gardens should be included in the Plan.~~

Landscape Plan

1. No comments.

Storm water Management Plan

1. The storm water management plan states, "The subject property is a 4.18 acre lot that was created as part of the River's Crossing Addition No. 3 subdivision and all storm water runoff from the proposed site was accounted for in the wet storm water detention basin located further south, behind the homes on the east side of Stillwater Circle."
   a. A copy of the original storm water management plan showing that the detention basin referenced in the note was intended to provide the storm water detention flow reduction for this 4.18 acre site was included in the plan.
      The storm water management plan has been revised to have all storm water managed on-site.
   b. In the documents submitted for the storm water plan for River's Crossing Addition #3, the basin existing and proposed basin areas are difficult to review if they match. It appears that only portions of the storm water plan are submitted. Please confirm the existing and proposed basin areas directed to the pond.
      Please see response to Storm Water Management Plan item 1.a.
2. The storm water management plan states, "The original master plan for the proposed site envisioned 20 single family condominium homes on a private drive. Bielinski Homes is now proposing 18-units of duplex condominiums, …..while still meeting the intent of the master plan."
   a. It appears that the existing downstream pond is undersized. Confirm that the downstream pond is adequately sized to handle the proposed flows to be directed to the pond and confirm that no adverse flooding or adverse ponding heights will not occur at the City pond located behind Lot 362 to Lot 366 of Rivers Crossing Addition No. 2. Also, confirm if the addition of this flow will cause any adverse flooding or ponding at

any upstream connected ponds or connected back yard areas in relation to the most downstream City pond. The proposed ponding elevations in the back yards should not be any higher than currently exists. An additional storm water facility area or larger faciltiy should be provided if flooding or storm water Ordinance design criteria are not met.
Please see response to Storm Water Management Plan item 1.a.

3. Chapter 32.10(d)(4)(H)(i): The lowest elevation of a structure must be a minimum of two (2) feet above the maximum water elevation produced by the 100-year, 24 hour storm. The buildings must be set back 40 feet horizontally from the location of this high water elevation from the ponds.
   a. Confirm that this requirement is not worsened for homes tributary to the south City pond that is receiving runoff from this site.
   Please see response to Storm Water Management Plan item 1.a.
4. The appropriate tailwater elevations should be used.
   Please see response to Storm Water Management Plan item 1.a.
5. Chapter 32.10(d)(6)(G): Provide storm sewer design computations.
   Storm sewer design computations have been added to the Storm Water Management Plan.
6. Chapter 32.10(b)(E): If possible, impervious surfaces, such as the private drive, should drain to vegetated areas for pollutant filtering prior to discharging downstream. If possible, pretreatment should be provided for the inlet structures from the private drive prior to discharging runoff to the public storm sewer.
   All stormwater from the proposed site will either enter a rain garden or dry basin.
7. Cost estimates for the installation of proposed storm water BMPs shall be provided.
   OK
8. Chapter 32.10(d)(2): For new land development, 80% reduction is total suspended solids should be provided.
   a. The report states that “this plan does not recreate the larger Rivers Crossing Add. 3 storm water management plan, which met City requirements for peak flow reduction and water quality;”. The current plan does not address the water quality for the private drive tributary area and appears to assume that the down stream City pond provides adequate water quality removal. It appears that the existing City pond is undersized for water quality removal in relation to the existing tributary area. Confirm that the downstream City pond was adequately sized for water quality. An additional storm water facility area should be provided if the existing facilities are under sized to provide water quality in accordance with the current Ordinance.
   Water Quality will be managed on site and will meet the 80% reduction.

9. ~~Chapter 32.10(d)(3): Provide infiltration compliance documentation.~~
10. The report lists the soils are loamy soils. The water quality calculations input the soils as silty soils. Please confirm.
    The use of silty soils in the water quality calculations provides a conservative outcome, as silty soils will infiltrate less storm water, as well as, produce suspended particles of smaller size.

Storm Water Maintenance Agreement

1. Chapter 32.12: The storm water agreement should comply with said Section. The City's storm water facility easement agreement template can be sent to the Engineer.
   OK
2. Submit maintenance plan for catch basins and environmental catch basins.
   OK
3. Chapter 32.10(e)(12)(i): Cost estimates for the installation of the proposed BMPs.
   OK
4. Chapter 32.12(b): For subdivisions, all storm water BMPs shall be located on outlots. For all privately owned outlots, ownership shall be by proportional undividable interest for all properties that are within the control of the applicant and drain to the BMP. However, the applicant may combine ownership of more than one BMP within the site. Ownership of storm water facilities shall be the same as those assigned maintenance responsibilities.
   OK
   a. Preparation of the storm water maintenance agreement will include describing the ownership boundaries of the storm water easement facilities.
   OK
5. Chapter 32.12(b)(5): Authorization for vehicle access, including a minimum 15-foot wide access easement dedicated to the local municipality and connecting to a public road right-of-way to allow for future BMP maintenance work.
   OK

Condominium Plat

1. Chapter 32.10(d)(4)(E): Subsurface drainage. Lowest building floor surfaces shall be built one (1) foot above the seasonal high water table elevation, as documented in the soil evaluations and shall avoid hydric soils. A minimum 1-foot vertical separation between the seasonal high groundwater table elevation and the basement floor surface should be included in the design. **A Condominium Plat will be submitted when applying for the Building Permit.**

2. The Condominium Plat should include a table listing the minimum basement elevation based on the existing water table for each Unit. A note on the Condominium Plat should reference to this information.
   A Condominium Plat will be submitted when applying for the Building Permit.
3. A note on the Plat should be "Basement Restriction-Groundwater. Basement floor surface elevations shall not be lower than the proposed basement floor elevations shown in the table below due to potential for seasonal high water table. Minimum basement floor elevation changes may only be authorized upon further analysis compliant with the City of Waukesha Storm Water Ordinance and such analysis must be approved by the City of Waukesha Engineering Department."
   A Condominium Plat will be submitted when applying for the Building Permit.

PC16 -0003 Alloy Products, 1045 Perkins Avenue – Final Site Plan & Architectural Review

1. The following items should be submitted:
   a. Applicable fees per Chapter 32.07(b). The Engineering Division requires any Bonds or Agreements required by the Plan Commission and Council or Chapter 32.08(c). Development fees will be owed to the City for this project.
   b. Chapter 32.07(b)(2): Once all submittal items are completed, submit all items listed in sub.(b)(1)(A)-(G) in digital form for City filing.
   c. Sewer lateral video. The existing building has a sanitary sewer lateral connecting the City's sewer main. Please provide a sewer lateral video to City for review and approval. Contact the City Engineering Department for the video format. If lateral maintenance is needed, then the lateral improvements may need to be included as part of this project. The lateral pipe and connection to the main may need to be lined or relayed to reduce infiltration into the City's sanitary sewer system or improve the structural integrity.
2. Permits will be needed for the project. Provide copies of approved project permits to the City for filing. Needed permits include but are not limited to:
   a. City of Waukesha Storm Water Permit

Sheet T1

1. In accordance with Wisconsin Administrative Code A-E 2.02(4): Each sheet of plans, drawings, documents, specifications and reports for architectural, landscape architectural, professional engineering, design or land surveying practice should be signed, sealed, and dated by the registrant or permit holder who prepared, or directed and controlled preparation of, the written material.

2. Existing easements on the site should be shown including source documentation.

Sheet A1

1. A minimum 1-foot vertical separation between the seasonal high groundwater table elevation and the basement floor surface should be included in the design.
2. Chapter 32.10(d)(4)(E): Subsurface drainage. Lowest building floor surfaces shall be built one (1) foot above the seasonal high water table elevation, as documented in the soil evaluations and shall avoid hydric soils.
3. A City sanitary sewer main crosses the property approximately 50 feet from the northeasterly property line. A sanitary sewer easement should be conveyed from the property owner to the City of Waukesha to contain the sanitary sewer line.
4. If a problem would develop with the sanitary sewer line in the future, the City may not want the sewer line location to continue under the building. We understand that a previous agreement with the Owner may be in place regarding relaying the sanitary sewer around the building at a later date. Please provide a copy of this document to the City for review and filing.

Sheet A2

1. No comments.

Site Erosion Control Plan

1. The erosion control plan should be updated to comply with City Ordinance 32.09.
2. A construction sequence should be added.