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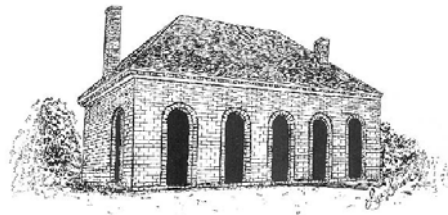
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DEPARTMENT OF PUBLIC UTILITIES

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FRANK W. HARKSEN, JR.
DEPUTY COUNTY ADMINISTRATOR

May 31, 2019

Mr. Scott Courtney, P.E.
Resource International, Ltd.
PO Box 6160
Ashland, Virginia 23005

RE: Wood Park Court Multi-Tenant Warehouses; HTE #19-30000014
1st Review; DPU Review #10464

Dear Mr. Courtney:

The Hanover County Department of Public Utilities (DPU) has reviewed the above referenced site plan and the following comments must be addressed prior to the plan being approvable to DPU:

General

1. Provide a completed *Industrial and Strong Waste Survey Form*. This shall not be included on the site plan.
2. Provide the following notes on the utility plan:
 - a. A note on the utility plan that the *Hunters Ridge Industrial Park* as-built was referenced during the design of this plan.
 - b. "The contractor shall coordinate all water shutoffs with Hanover County Department of Public Utilities. Only DPU personnel may operate the necessary valves to make waterline tie-ins and perform flushing and testing operations."
3. Confirm the printed scale on all plan and profile sheets. There appears to be some deviation from the labeled scale and the measurable distances.
4. Revise all waterline profiles to visually show a minimum of 3.5' of cover, not just by label. Adjust utility crossings accordingly.
5. A landscape or lighting plan were not provided. Submission of either on a future submittal may generate additional comments.

6. Revise all profiles to hatch DI pipe and shade restrained joint pipe. DI restrained joint pipe shall be hatched and shaded. Labels for restrained joint pipe shall remain. Provide a visual indicator of each valve, tee or bend on the waterline profiles.
7. Provide confirmation that buildings will not have sprinklers.
8. Accurately show the existing 20' Utility Easement. Review of the Hunters Ridge Industrial Park as-built drawings indicate that it does not fully extend down the southern property line all the way to Wood Park Court. Investigate and revise the site plan accordingly.

Sheet G-1

9. Provide a label for the vertical and horizontal coordinate systems used in the development of this plan.

Sheet C-3

10. Revise the waterline as follows:

- a. Provide a note to remove the existing 2" flushing hydrant and tie-in to the existing 12" waterline.
- b. 12" waterline is only required from the tie-in to the first 12"x12" tee onsite and from the 12"x8" tee at the rear of the site to the final fire hydrant. Those areas are eligible for oversized credits. The looped waterline may be all 8".
- c. Provide a label with the distance to the next in line valve that will need to be closed to perform the waterline tie-in.
- d. Provide a fully valved tee at Sta.20+00.
- e. Correct the label for the domestic water meter to read 1.5", not 15". Ensure that the label for the domestic service is not obscured.
- f. Relocate the RPZ immediately after the domestic water meter and prior to the on-site splitter box. The RPZ shall be outside of the easement and labeled private.
- g. Label each tee with a flow through and branch size, ie. 12"x12" tee. The tee at Sta.20+00 shall be a 12"x8" tee without a reducer and the tee at Sta.10+09 shall be a 12"x6" tee without a reducer.
- h. Provide a 2'x2' concrete pad around all valve boxes not in pavement or concrete per detail WAT-5. Provide detail WAT-5.

11. Provide 2 vertical benchmarks.

12. Revise the sanitary sewer as follows:

- a. In lieu of a sanitary sewer extension, either confirm the existing 6" sanitary sewer lateral is adequate or replace it with an 8" sanitary sewer lateral. Coordinate the remainder of the on-site sanitary sewer with the selected lateral size, ie. 8" on-site shall not be reduced to 6" between MH-SA1 and MH-EX1.
- b. Identify MH-SA1 as the monitoring manhole on the plan sheet and label it private. An easement shall not be provided around it.
- c. Identify all sanitary sewer after MH-SA1 as private on the plan sheet.

- d. Provide an oil/water separator prior to the monitoring manhole.
- e. Provide traffic rated cleanouts per detail SEW-12 for any cleanout not in grass.

Sheet C-6

- 13. In the *12 Inch Water Line Profile*, label the vertical adjustment as per WAT-6.
- 14. The 12" waterline will need to cross the intermittent stream when extended. Revise the *12 Inch Water Line Profile* to show the cross section of the stream crossing. Revise the proposed installation depth of the 12" waterline as it approaches the Sta.10+09 to allow 3.5' of cover from the bottom of the stream without the use of bends.
- 15. In the *8 Inch Water Line Profile*, gradually lower the waterline down to the tee at Sta.21+14 to permit the fire hydrant lead to be installed without a vertical adjustment. Revise and coordinate other profiles as needed. Provide 18" of separation between the waterline and the private 8" sanitary sewer at Sta.25+26.

Sheet C-7

- 16. In the *PR-SAN Profile*, remove the label for a minimum of 3.5' of cover from the sanitary sewer profile. Remove Monitoring Manhole from the label for MH-SA1.
- 17. Remove the vertical adjustment in the fire hydrant lead profile.

Site Plan Review Fees: As listed quantities will change, plan review fees will be determined after the next submission.

Inspection Fees: Inspection fees for the project will be determined once the plan is approvable. Inspection fees must be paid prior to the issuance of the Utility Construction Permit (UCP). Both review and inspection fees are payable to the Treasurer of Hanover County and should be submitted directly to the assigned Utility Agent for processing.

Revised plans should be submitted to Planning for distribution to DPU. Please include annotated responses to all of the Department's comments. In addition to plan approval, there are several administrative items that must occur before construction of the public water and sewer improvements may begin. We would like to inform you of these items in order to minimize the chance of your project being delayed.

A Utility Construction Permit (UCP) must be issued before utility construction begins. A copy of this may also be found on DPU's page of the Hanover County Website at (www.hanovercounty.gov). When completed, the utility construction permit application should be submitted to the Utility Agent for this project.

A Pre-construction Meeting must be held between your utility contractor and Hanover County Public Utilities prior to the issuance of the construction permit. It is the contractor's responsibility to schedule the meeting. All necessary administrative work must be completed prior to the pre-construction meeting.

A **Performance Surety** will need be posted to cover all utilities to be dedicated to the County. Prior to the Department issuing Final Acceptance for utility improvements, a **Defect Surety** in the amount of 10% of the original utility construction cost estimate must be posted with the Department of Public Utilities. The Defect Surety will be held for one year following Final Acceptance. Please contact the Utility Agent assigned to this project to obtain the proper draft form of the defect surety.

We must enter into a **Utility Service Agreement (USA)** outlining the responsibilities of the owner and the County. The standard form of the USA has been approved by the County Attorney's office and only requires Public Utilities staff review for completeness. Changes to the standard USA are not normally accepted by the County and will delay your project. Contact your Utility Agent to begin the process of preparing your USA. After the agreement is executed your Utility Agent will have it recorded. A pre-construction meeting will not be scheduled until the USA has been executed.

Record Drawings (As-Built) are required. Upon completion of the construction, one set of Inspector's marked-up drawings will be forwarded by the County to your engineer. The information on the mark-up must be added to any information obtained by the engineer or contractor and placed on the record drawings. The engineer must provide a written statement on each sheet of the record drawings that the water and sewer improvements shown have been constructed in substantial conformance with the approved plan. Prior to **Tentative Acceptance**, one paper copy and one copy in PDF format must be provided to the DPU.

The Utility Agent assigned to this project is Dave Sartain, who will maintain the construction record and can assist you with any questions you have concerning utility easement recordation, bonding and the payment of fees, issuance of a Utility Construction Permit, and the issuance of Tentative and Final Acceptance. Mr. Sartain may be reached at (804) 365-6020 or by email at dlsartain@hanovercounty.gov.

If I may be of any further assistance with questions or clarifications, please feel free to contact me at (804) 365-6812 or by email at towatkins@hanovercounty.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tyrone O. Watkins', with a stylized flourish at the end.

Tyrone O. Watkins
Utility Engineer II

cc: Dave Sartain - Utility Agent II
David Martin - Developer