

6 January 2023

Heather Vitz-Del Rio
Director of Public Works
Township of Wayne Water and Sewer Division
475 Valley Road
Wayne, NJ 07470

**Re: Water & Sewer Review #1
The Villas at Wayne Hills
1361 Alps Road; Block 2329, Lots 1 & 17
Preliminary & Final Site Plan and Major Subdivision Application
Langan Project No.: 100925301**

Dear Mr. Kok:

We are in receipt of your memorandum dated August 18, 2022 regarding the water and sewer design review for the The Villas at Wayne Hills Preliminary & Final Site Plan and Major Subdivision application.

General Comments:

Comment 1

The roadways are shown as "private access easements". Are the water and sewer utilities proposed as private or public?

Response 1

Water and sewer lines are proposed to be private.

Water Comments:

Comment 1

Valves are required at each branch of the water mains. Adequate valving is not provided at the water main interconnections at Alps Road and Ratzer Road.

Response 1

Additional water main valves have been provided at all tee intersections; refer to Drawings CU100 through CU112.

Comment 2

Water main valves are required so that in the event of a water main break no more than 1 hydrant or 1/5 of a mile is out of water. There are numerous locations on the plans where this requirement is not met.

Response 2

Additional water main valves have been provided so that no more than one fire hydrant would be out of service at a time, and no more than 1/5th of a mile of water main would be out of service; refer to Drawings CU100 through CU112.

Comment 3

Dead end mains must terminate with a hydrant. All water services must be branched off before the terminal hydrant. This has not been provided.

Response 3

Hydrants have been added to the dead ends of mains throughout the site, and water services have been branched off prior to the terminal hydrant; refer to Drawings CU100 through CU112.

Comment 4

90 degree bends are not permitted on the water mains.

Response 4

The 90 degree bends have been replaced with two 45 degree bends where applicable; refer to Drawings CU100 through CU112.

Comment 5

Details for the connection into Olga Court and Seth Court are not provided.

Response 5

Notes have been added to coordinate the proposed water main connections to the existing mains located within Olga Street and Seth Court with the Township; refer to Drawings CU105 and CU108.

Comment 6

The existing water mains in Old Homestead Road and Olga Court are not shown on the plans. There is also an easement with water and sewer mains that runs along the rear yards of Stone Hill Road. Connection into this water main should be considered.

Response 6

Notes have been added for the contractor to field-verify existing water main locations within Old Homestead Road and Olga Street; refer to Drawings CU102 and CU105. The proposed design creates a looping water main by connecting the existing main in Olga Street to the existing main within Seth Court.

Comment 7

The water main from this development should be connected to the water main in Old Homestead Road.

Response 7

A proposed connection to the existing water main in Old Homestead Road has been added to the plans; refer to Drawing CU102.

Comment 8

8. The dead end water main service Buildings 19, 20 and 21 should be looped through to Road F.

Response 8

This water main has been extended to loop through to Road F; refer to Drawing CU106.

Comment 9

The hydrant at the intersection of Road C and Road G must be moved to the outside of the valves shown. It cannot be directly across from the tee.

Response 9

This fire hydrant has been relocated to be outside of the gate valves at the tee intersection; refer to Drawing CU102.

Comment 10

Storm manhole in front of Building 28 conflicts with the water service.

Response 10

The storm and water service conflict has been resolved; refer to Drawing CU103.

Comment 11

There is a side-by-side water main shown to provide a looped main for the homes at dead end of Road K and Buildings 51, 52 and 53. This water main should be connected via easement to Peslin Court, Whipple Road or Kiwanis Drive.

Response 11

The water main in Road H has been extended to connect into Road K in order to decrease the length of the double water main; refer to Drawings CU108 and CU111. There are no existing easements to allow for a water main connection to Peslin Court, Whipple Road, or Kiwanis Drive. Additionally, the route to these roads would require NJDEP permitting to cross a state open water, wetlands and their associated riparian buffers. The double water main shown at the dead end of Road K has been revised so that the mains are in separate trenches, so they do not effect each other's operation in the event of a water main break.

Comment 12

The water main runs through the dead end of Road K to Ratzer Road must be accessible for maintenance and repairs.

Response 12

The water mains will be accessible; clearing of vegetation will take place for the construction and installation of these lines.

Comment 13

There is a detail for a "Looping Water Main". What is this for?

Response 13

The looping water main detail is provided so that vertical clearances are maintained at any proposed utility or drainage pipe crossing.

Sewer Comments:

Comment 1

Note 8 on Sheet G103 refers to combined sanitary and storm sewers. This note should be removed.

Response 1

The note has been revised; refer to Drawing G1003.

Comment 2

Sanitary sewer laterals must be at the right-of-way line, not at the house line.

Response 2

Additional sanitary sewer lateral cleanouts have been provided behind the curblines; refer to Drawings CU100 through CU112.

Comment 3

If the sanitary sewer laterals are public, there has to be individual sewer laterals to each unit. This has not been provided.

Response 3

The sanitary sewer laterals are proposed to be private.

Comment 4

The sanitary manhole in front of Buildings 6/12 is not labeled, and does not have rim and invert elevations.

Response 4

A label has been added; refer to Drawing CU104.

Comment 5

There is an existing sanitary main within the rear yards of Stone Hill Road. Connection to this sanitary sewer main should be considered for the extension of Olga Street.

Response 5

This connection cannot be made due to the invert elevation of the sanitary main within the rear yards of Stone Hill Road being much higher than the invert elevations of the proposed main within Olga Street. A connection to this main can be made at Seth Court.

Comment 6

Force mains should be avoided. The force main at the dead end of Road K can be replaced with a gravity sewer main via easement to Peslin Court or Kiwanis Drive.

Response 6

There are no existing easements that can be utilized to run a gravity main through to Peslin Court or Kiwanis Drive. Additionally, the route to these roads would require NJDEP permitting to cross a state open waters, wetlands and their associated riparian buffers.

Comment 7

Sanitary sewer slopes result in velocities higher than 10 fps. Provide documentation as to why these slopes cannot be lessened.

Response 7

NJDEP Treatment Works Approval Section 7:14A-23.6.(b) requires gravity sanitary sewers to be designed to carry at least twice the estimated average projected flow when flowing half full. Therefore, sanitary sewer pipes are designed assuming that the average projected flow results in pipes flowing at no more than one-quarter full. The maximum proposed sanitary sewer slope is 6%, which at no more than one-quarter full, results in the proposed 8" and 10" diameter pipes flowing at less than 10 fps.

Comment 8

The sanitary sewer profiles show manholes over 20 feet deep. How are these to be accessed and maintained?

Response 8

Sanitary sewer manhole depths have been reduced to the maximum extent possible, reducing depths to less than 20 feet; refer to Drawings CU100 through CU112.

Comment 9

The sanitary sewer main runs through areas that are not paved and are very steep. How will access to the sewer pipes and manholes be provided for maintenance and repairs?

Response 9

The sewer mains will be accessible; clearing of vegetation will take place for the construction and installation of these lines, and be maintained for future access. Furthermore, the existing sanitary sewer on the site traverses the same type of conditions.

Comment 10

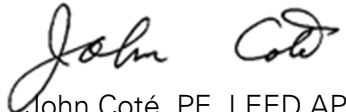
The details titled "Sanitary Drop Manhole" does not show the drop.

Response 10

The sanitary drop manhole detail has been provided; refer to Drawing CU502.

We trust that these revisions meet your approval and we look forward to your expedited review. Please feel free to contact me directly at 973-560-4987 with any questions.

Sincerely,
Langan Engineering and Environmental Services, Inc.


John Coté, PE, LEED AP
Associate Principal/VP

JCC/kk

Enclosure(s): Preliminary & Final Site Plans, dated last revised 1/6/2023
Major Subdivision Plans, dated last revised 1/6/2023
Stormwater Management Report, dated last revised 1/6/2023
Stormwater Operation & Maintenance Manual, dated last revised 1/6/2023

CC:

NJ Certificate of Authorization No. 24GA27996400
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