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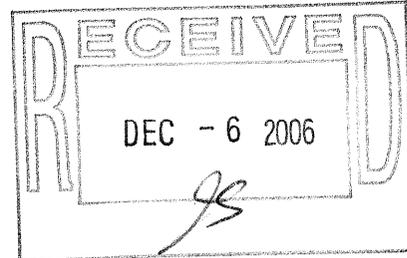
RIZZO
ASSOCIATES

A TETRA TECH COMPANY

December 5, 2006

Rec'd at 12/6/06 mtg

Jay Szklut
Planning and Economic Development Manager
Town of Belmont
19 Moore Street
Belmont, MA 02478



Re: The Residences at Acorn Park

Dear Jay:

Rizzo Associates, Inc. (Rizzo) was asked by the Board to review the potential difference in impact(s) to the abutting Belmont neighborhood (Garrison Street, Oliver Street, Cross Street, etc.) if wastewater flows from the proposed Residences at Acorn Park project were discharged through the collection system in Discovery Park (in Cambridge) versus discharging into the collection system in the Belmont neighborhood. In the absence of a detailed hydraulic analysis, which would be both very time consuming and very costly, Rizzo can only give an opinion based on our understanding of how the overall collection systems work (Town of Belmont, City of Cambridge and Massachusetts Water Resources Authority (MWRA)) and using typical engineering judgment.

SYSTEM OPERATION

Wastewater flows from the abutting Belmont neighborhood are collected in a series of pipes that discharge into a 15-inch collector sewer in Brighton Street, which flows southerly via gravity and connects into the 36-inch MWRA Belmont Branch Sewer at the intersection of Brighton Street and Flanders Road. Approximately 400 feet downstream the Belmont Branch Sewer splits into three separate lines (15-inch, 30-inch and 36-inch) that run parallel to Little River and the railroad tracks. All three lines converge at the 66-inch MWRA Alewife Brook Conduit located down by Cambridge Park Place. Obviously, wastewater flow from the Residences at Acorn Park would follow this route if discharged into the abutting Belmont neighborhood. It is not clear how the flow from the sewer on Brighton Street is diverted once the MWRA Belmont Branch Sewer branches into the three separate lines. However, it appears that some, if not most, of that flow stays in the 36-inch pipe.

Wastewater flows in Discovery Park (in Cambridge) are collected in a series of pipes that discharge into a pump station located just south of Acorn Park Drive in the Park. The pump station discharges via a force main into an 18-inch gravity sewer that siphons under Little River

and beneath the railroad tracks and connects into the 30-inch pipe portion of the MWRA Belmont Branch Sewer (according to plan information from the Cambridge Department of Public Works). The connection point is approximately 2,800 feet downstream on the Belmont Branch Sewer from the Brighton Street/Flanders Road intersection.

IMPACTS

Wastewater flows from the Residences at Acorn Park will be discharged into the collection system in the abutting Belmont neighborhood and will, obviously, take up capacity in those local sewers. Those sewers have ample capacity during dry weather periods. In significant wet weather events, the local sewers can experience backups, apparently due to surcharging in the MWRA Belmont Branch Sewer, which, when this occurs, does not allow for free discharge from the collector sewer in Brighton Street. The Developer has agreed to install a holding tank to temporarily store wastewater flows when this situation occurs.

However, if the City of Cambridge approved wastewater flows from the Residences at Acorn Park to discharge into the collection system in Discovery Park (in Cambridge), it stands to reason that the impacts on the abutting Belmont neighborhood would be virtually negligible for the following reasons:

- Wet weather surcharging in the MWRA Belmont Branch Sewer would impact the ability of the gravity sewer from the Discovery Park pump station by causing backup in that gravity sewer (and possibly at the pump station itself);
- The gravity sewer from the pump station connects into the 30-inch pipe of the MWRA Belmont Branch Sewer, which at most holds only a portion of the flow collected from the sewer in Brighton Street. The impact, therefore, on the Brighton Street sewer would be minimal; and
- The gravity sewer from the pump station is located approximately 2,800 feet downstream from the connection of the sewer in Brighton Street. As such, any surcharge impact from flow entering the system at this point would have to translate more than ½ mile upstream before affecting the Brighton Street sewer and an additional approximately 2,200 feet further upstream before impacting the local neighborhood sewers. The impact, therefore, on the local sewers would be minimal.

Jay Szklut, Planning Department
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Please contact us if you have any questions or require additional information.

Very truly yours,



David M. Albrecht, P.E.
Senior Project Manager



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Senior Vice President

C: Steve Corridan, O'Neill Properties
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