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Town Planner Recommendation
Peak Multi-Use Path
Wednesday, February 13, 2013

VII. **Application for Conditional Use Permit** submitted by Joseph Persechino, P.E., Tighe & Bond, Portsmouth, New Hampshire, on behalf of **Peak Campus Development, LLC,** Atlanta, GA (applicant), Chet Tecce Jr., Durham, New Hampshire, John & Patricia McGinty, Durham, New Hampshire and the University of New Hampshire, Durham, New Hampshire (property owners) for a **pedestrian and bicycle path** which will encroach into a small area of wetland and wetland buffer. The properties are Tax Map 13, Lots 6-1, 10-0, 3-0UNH, 4-0UNH, 1-0UNH and 3-1UNH, on **Mast Road,** in the Office Research/Light Industry Zoning District. *Recommended action:* Accept application and set public hearing on February 27

➢ I recommend accepting the application as complete and setting the public hearing for February 27. The board will need to deliberate several recommendations made by the Conservation Commission.

Please note the following:

- The application is complete (I am not sure whether we need to accept limited applications for a conditional use. We can discuss this at the Planning Board workshop on March 6).
- See the enclosed drawings depicting the path and details.
- A conditional use is needed because two small wetland areas will need to be filled to accommodate the path. The conditional use is needed for both the wetland fill (even though this will be reviewed by NHDES) and encroachment into the wetland buffer.
- Tom Johnson, Zoning Administrator, determined that a variance is needed to fill the wetland. The applicant will be on the ZBA agenda on February 12.
- This path is part of the multifamily project that the Planning Board approved on November 28, 2012. That approval stated as a precedent condition: *"The applicant shall submit detailed plans for the multi-use path as generally depicted on the November 1, 2012 plan set, consistent with the intent of discussions held with the Planning Board, as reasonably determined by the Town Planner."*
- The approval also stated as precedent conditions: *"Show two crosswalks crossing Mast Road, one in front of the development linking to the Bryant driveway entrance, as appropriate, and one linking the new path on the northerly side of Mast Road to the existing end of the path on the southerly side of Mast Road. Installation of these crosswalks is subject to approval of NHDOT and will not be required if not approved by NHDOT."* and *"Show pedestrian activated signal at the new Bryant driveway crosswalk. Installation of these signals is subject to approval of NHDOT and will not be required if not approved by NHDOT."*
- The detailed plans that have been submitted are consistent with these conditions immediately above.
- Nonetheless, the Planning Board may impose conditions related to the conditional use application, generally related to drainage issues.

- Some additional details are shown on the new plans that were not shown on the November 1, 2012 plans – including drainage details, grading, lighting, crosswalks, pedestrian signal, and signage. Although the path has been approved (other than the conditional use), it would be appropriate to discuss any of these details if the Planning Board sees any concerns.
- The conditional use sign is posted, for a public hearing on February 27.
- The applicant met with the Conservation Commission
- The Durham Conservation Commission has the following three recommendations with respect to the proposed Peak pedestrian path:
    1) A porous asphalt surface is recommended on most of the path to mitigate infringement on the wetland and wetland buffer and to minimize the use of chloride on the path during the winter season. This is particularly recommended for the eastern half of the trail which receives ample winter sun exposure that could melt ice and avoid the need for excessive use of choride de-icer.
    2) The pedestrian path should be elevated (on pilings in a boardwalk style) over wetland #2 to avoid/minimize filling (porous asphalt not feasible on elevated path). This would minimize the amount of fill in wetland #2 and remove the need to install a new culvert and convert a portion of the wetland to rock riprap.
    3) The developer should follow DCC Chair (and Forest Service Urban Forestry Expert) John Parry's on-site recommendations for avoiding damages to trees in terms of trail layout and construction methods/timing. These recommendations are detailed in a separate memo from John Parry to Tighe & Bond. [See below]
- *The applicant does not believe that the first two recommendations are appropriate. I do not know their position on the third recommendation.*
- While the existing path is porous pavement, the applicant prefers not to install porous pavement as it is more expensive to install and involves regular maintenance to keep the pores of the asphalt from clogging. Also, the applicant does not believe that requiring installation of an elevation over the wetland is appropriate.
- *I would encourage the board to evaluate all of the relevant factors – character and quality of wetlands, extent of benefit, pros and cons of porous pavement, cost, etc. - in determining whether or not to require an elevated crossing and porous pavement on all or part of the path.*
- Derek Sower, a member of the Conservation Commission stated to me in an email: "Below [above] are the comments from the DCC on the DES Wetlands Bureau permit for the Peak Campus trail. These same comments should be considered by the Planning Board with respect to the Conditional Use Permit from the Town of Durham for this project, and represent the DCC feedback on the project via the TRG. It's important to keep in mind that many relatively small areas of wetland fill and impervious surfaces have substantial cumulative impact on the Town and we should minimize these to the extent feasible on new major development projects."
- It has been noted that the eastern half of the path gets a lot of sunlight so there may be a stronger argument for permeable pavement on the eastern half to minimize the use of chloride de-icers.
- A question arose whether the drainage along the eastern half of the path should be directed toward the north. We will clarify this.
- The path is not crowned but rather sloped to one side. We should clarify which side it will drain to.
- The LED lighting is appropriately low impact (maximum 1.6 footcandles). The lights will be powered by underground electric, not by solar. It will match lighting in the rest of the existing path. We need a cut sheet of the lights to make sure they are shielded.
- A neighbor on the southerly side of Mast Road requested that the lights be placed on the southerly side of the path. It should be finalized which side is best. According to Joe

Persechino the throw of the lights is to each side (nor forward) so it may not have any affect on the abutter which side they are placed on.

- No other concerns were raised by the Technical Review Group at its discussion on February 5.
- Peak will be responsible for maintenance. It will be determined whether Peak physically maintains the path or pays UNH to maintain it.
- Following a site walk, John Parry, chair of the Conservation Commission wrote the following memo (per condition 3, above):

We spent about 45 minutes walking this area, where the trail layout is proposed. This may still be adjusted as needed. The trail will run along the west side from the driveway at the Forest Service building up to the drive way entrance for the new complex. Along the Forest Service property and the residence adjoining it, the path will run as close to the Mast Road right of way as possible. This area is open turf with some landscape trees in the area. Farther to the west, the roadside is a brushy, wooded area classified as wetland, and farther along the area is a better drained wooded area with a variety of tree species and sizes. There are utility poles along the edge of the ROW and a drainage ditch (in some places) between the poles and pavement. The ground generally slopes towards the ditch.

The path will be asphalt (not planned to be permeable), 8 feet wide. Lighting will also be installed along the north side of the path requiring another 2 feet of width. The construction of the trail will require excavation about 18 inches deep – the utility trench for the lighting will be about two feet deep.

There was some discussion on where the path should cross the road to join the existing path. NH DOT will not approve a pedestrian cross walk on this road. The path will cross just to one side or the other of the Forest Service drive. Changes to the drainage here may be needed, as it currently pitches away from the existing ditch. A small area here is classified as a wetland area.
I think the main questions for the Conservation Commission are; 1) How the path construction would impact the wetland areas, and 2) Impact of trees and other vegetation along the path that currently provide benefits to the environment and property owners.

1) How the path construction would impact the wetland area

Flagging is present that show the edge of the wetland. A stone wall runs along the edge of the road right of way. Stones from the wall were scattered and would be partially replaced where possible, as part of the path construction. Trees varied in size, but generally are smaller, with a few large scattered trees (up to about 16").

Comments/Suggestions:
The desired location for the path was to stay to the north of the stone wall, but keep the path as far as possible to the south of the wetland edge to reduce disturbance. Could consider an elevated boardwalk in some areas, if needed. Other members of DCC may have additional suggestions or comments on this.

2) Impact to trees and other vegetation along the path.

The proposed path location will require the removal of some trees and will pass closely to many other trees (both naturally growing and planted landscape trees). Construction can

damage the root system by severing roots. If too much of the tree root system is removed or damaged by construction, the tree may decline or die, resulting in the loss of benefits, and possibly creating a public hazard with larger trees that could later fail. The general rule of thumb in the protection of open grown trees is to protect a circle (called the critical root zone) around the tree. The circle radius is equal to 1.5 feet per 1 inch of trunk diameter. If more than 40% of that critical root zone will be disturbed, the tree may be significantly impacted. This is more critical with larger trees, than small trees that more easily recover.

Soil compaction caused by equipment can also be a serious problem. This is especially true on wet soils. Compacted soils have less open pore space, and hence less space for moisture and oxygen needed to sustain tree health. Even one pass with heavy equipment can cause soil compaction.

Comments/Suggestions:
Identify the more desirable trees to save and protect. Larger trees in good condition are more desirable. Less desirable species are elm, willow, poplar, aspen. Lay out the path so that it winds around, and as far away as possible from the more desirable trees. Install temporary fencing to keep equipment away from the critical rooting zone of trees identified to protect.

Do some replanting to compensate for landscape trees that must be removed.

Where path will pass too close to large trees, consider the use of techniques to place above ground path segments (boardwalks, concrete slabs or rubber sidewalks) to avoid construction damage to roots.

If feasible, conduct construction during the winter or dormant season, when stress to trees will be less.

Where roots will be disturbed severing roots cleanly by hand or with a rock saw, causes less tree damage then tearing through root system with heavy equipment.

Provide replacements for landscape trees removed.

Trees that will have significant root damage, and are already in decline and considered high risk should be removed (the large maple on the corner of the Forest Service property is one such tree).

John Parry can provide additional information (such as the International Society of Arboriculture Best Management Practices for protecting trees during construction).