

SAVE THE PUTNAM TRAIL (SPT) Statement on the New Paved Design for the Putnam Trail and the SWPPP Exclusion Claimed by DPR

The design for the Putnam Trail presented in late 2015 (referred to as “the design”) is another paved design and does not include a full Stormwater Pollution Prevention Plan (SWPPP). The basis for the exclusion is a legal loophole that says that bike paths can be built without a full SWPPP. We argue the following:

1. **The loophole does not supercede the rules for protecting freshwater buffer zones** (minimum 100-ft buffer zone). The trail runs right next to different parts of the wetland well within the 100 foot buffer zone. **Multiple vernal pools and seasonal variations in the permanent wetland boundaries were ignored in the wetland mapping report which is the basis for the new design** (see attached maps). As a result, the design encroaches not only well into the buffer area, but actually into the wetland itself! This is illegal (basis: Federal Clean Water Act). We argue that a proper wetland mapping must be done.
2. The design presents vegetated swales as the only stormwater management technique. Because of the site constrictions (buffer area limitations, infiltration guidelines), these bioswales are **insufficient to provide proper drainage** for a fully impermeable trail. As presented, the paved design does not manage all of its stormwater runoff – it neither provides management for Water Quality Volume nor takes care of 100% of its runoff. Uncontrolled runoff is likely to end up discharging into the wetland. This is, again, illegal in NYS.
3. The design does not recognize that the current trail accepts water not only from its immediate surroundings, but also runoff from the surrounding golf course and the uphill water sources from Croton Woods. The trail lies in a valley between these watershed areas and during medium to major storm events, the trail is flooded with runoff. It is an unfortunate fact that the infrastructure which surrounds the trail – the golf course, the highways – is not hydrologically isolated from the trail/wetland area – and the trail design must recognize this. The current trail is dirt, which allows for infiltration. If the trail were paved, the runoff from the above-mentioned areas would be added to the runoff that its own pavement would be producing. **We argue that a full study of the watershed must be conducted to understand what additional factors must be included in the stormwater management practices**. Before anything is done to the Putnam Trail, an investigation into the existing drainage system of the golf course and the basins that currently drain the highways must be carried out. Neither of these were done.
4. Finally, we argue that, aside from the drainage issues, the paved design is detrimental to the wetland and therefore should be deemed inappropriate for the site in that
 - it would lead to an increase in the temperatures of the surrounding water, soil and air (heat island effect, loss of canopy)
 - it would require a massive destruction of valuable wildlife habitat (trees, understory, underground habitat), the successful restoration of which is not guaranteed.

Notes on Bioswales

The analysis here is done according to the NYS Stormwater Management Design Manual.

The design is for a 7920' long trail, 8' to 10' varying width
This includes 4620' of adjacent bioswales

For 90% design storm:

8' wide trail creates about 0.17 acre-feet of runoff to be treated and controlled (Water Quality Volume, minimum runoff reduction volume)

10' wide trail creates about 0.21 acre-feet of Water Quality Volume, minimum runoff reduction volume

(these figures are from the contribution of the trail alone, they do not include the offsite areas that drain to the trail, increasing the total Water Quality Volume. The Manual requires such increases to be incorporated).

Site limitations include:

- must minimize clearing of the area, minimize development at the expense of existing natural features (i.e. the buffer area)
- cannot drain directly into any part of the wetland or the internal wetland buffer area
- cannot drain into external drainage structures (i.e. golf course trenches)
- short connections to the sewer are located in the southernmost part of the trail only. Therefore for major rain events (10-yr, 100-yr design storms), the design must provide stormwater management structures to handle runoff and convey it to extended detention structures in a non-erosive way (i.e. maintain non-erosive flow rates).

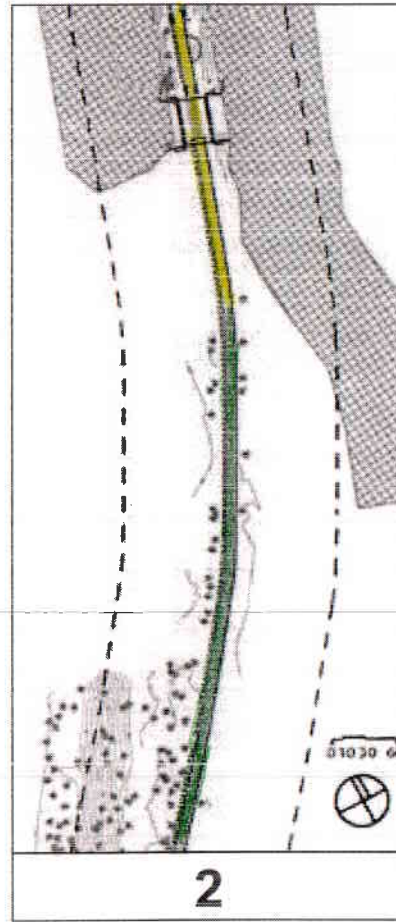
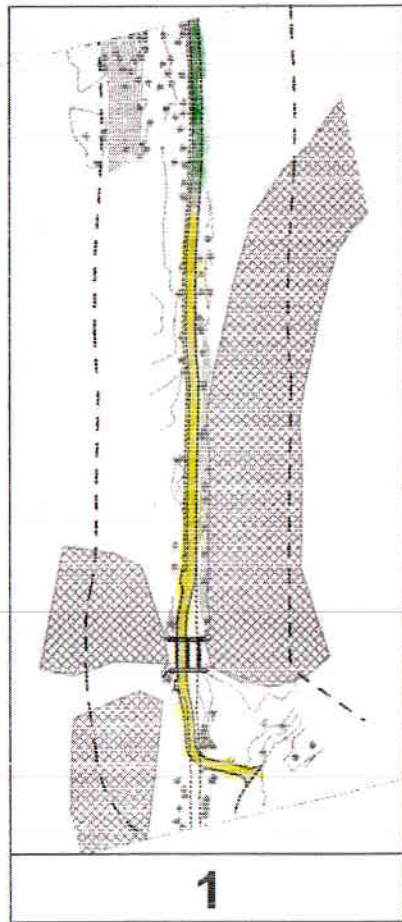
The design, as presented, neither provides extended detention structures (because, according to the legal loophole for bike paths it doesn't have to) nor is capable of handling the 10-yr and 100-yr design storm runoff.*












As such, the design is too risky for the wetland and it can be argued that this risk is enough to supercede the legal loophole for bike paths. Analysis of the design under 10-yr and 100-yr design storm conditions shows that if it were not for the loophole, the design would not be legal under NYS wetland protection regulations.

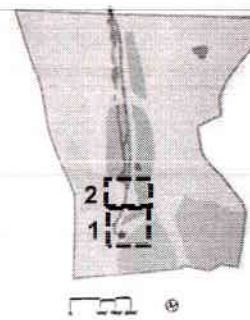
*Analysis conducted by independent engineer

Slides used by Parks Dept engineer in a presentation of the new design to the community board (Dec 2015)
 Notes: Margarita Eremeyev

Layout: Sections 1-2



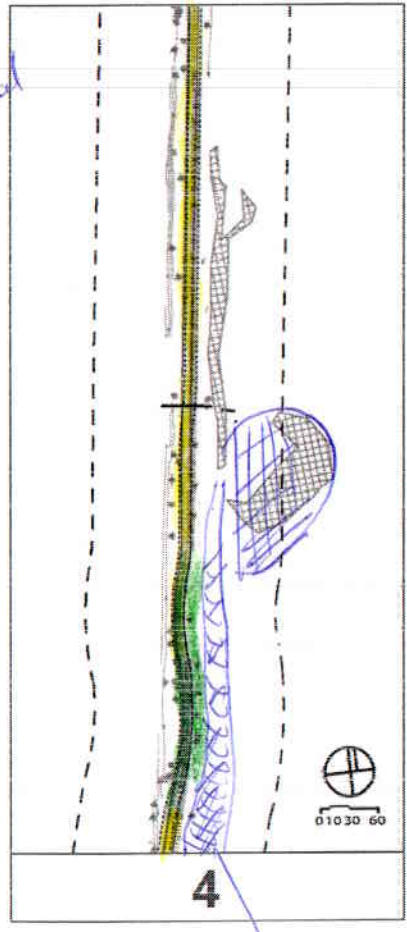
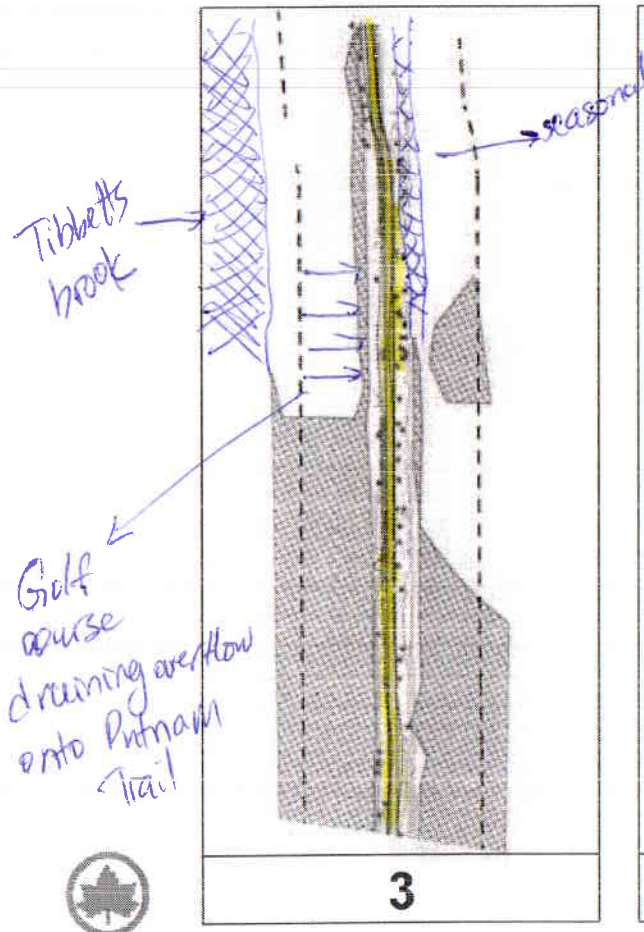
-  8-10' asphalt path
-  10' asphalt path with bioswale
-  8' asphalt path with bioswale
-  Boardwalk
-  Existing trees
-  Critical trees to protect
-  Existing rail ties
-  Contour lines
-  Delineated wetlands
-  100' offset from Greenway
-  Bridges and culverts














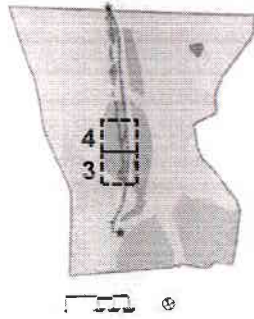
Bioswale will be located where wetland is 5' - 100' from Greenway.

Boardwalk will be installed over exposed and raised tree roots and culvert.

Layout: Sections 3-4



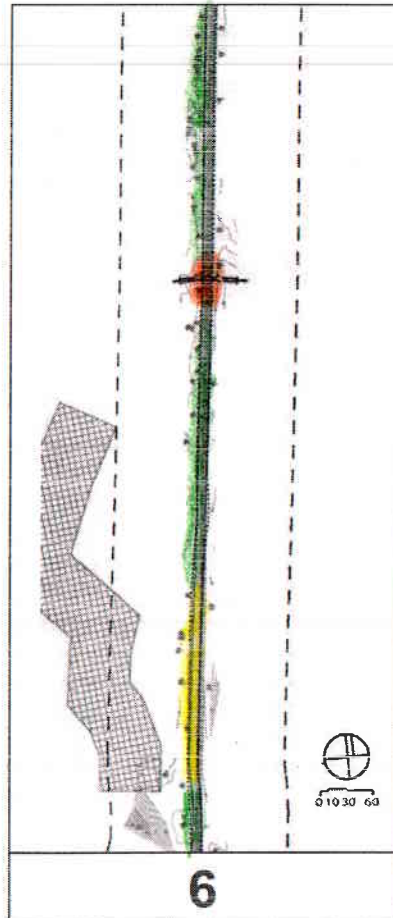
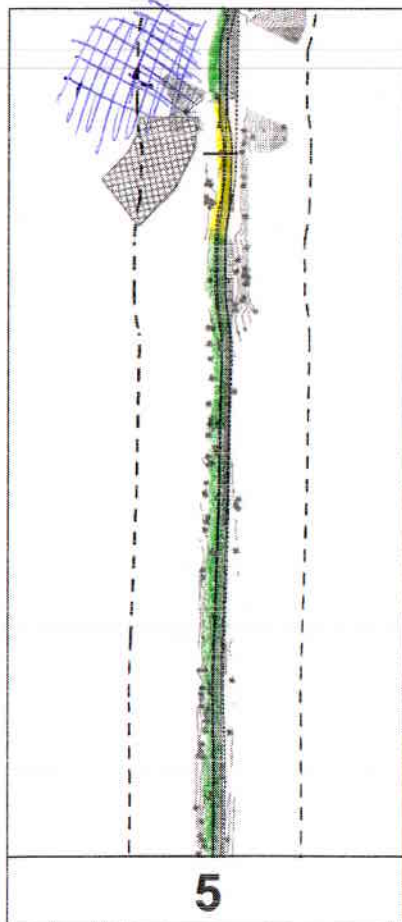
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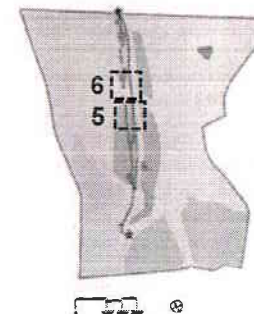
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Layout: Sections 5-6



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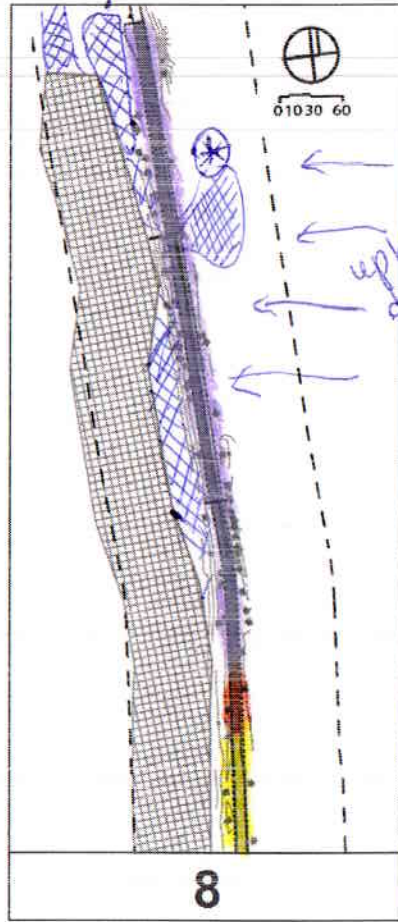
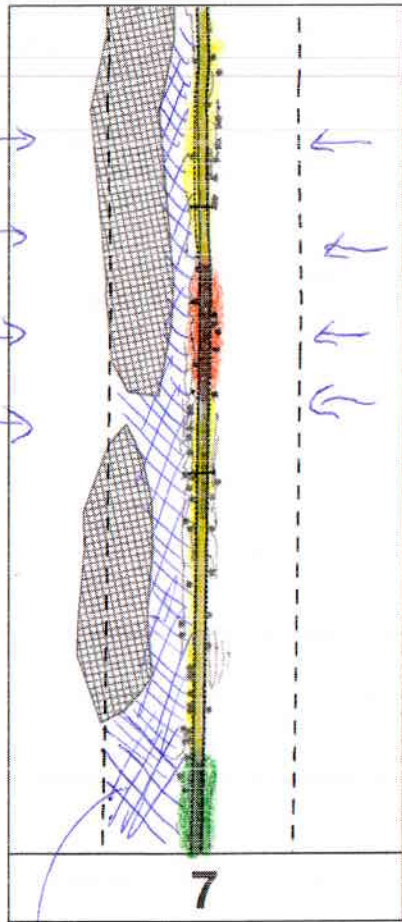
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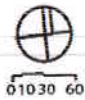
Layout: Sections 7-8

→ vernal pools not captured by wetland mapping

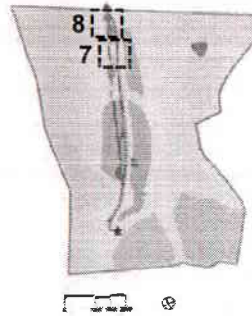
watershed draining to trail



- 8-10' asphalt path
- 10' asphalt path with bioswale
- 8' asphalt path with bioswale
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- 100' offset from Greenway
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uphill drainage to trail



Bioswale will be located where wetland is 5' - 100' from Greenway.
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→ seasonal pools - part of wetland - CANNOT BE PART OF STAGING OR CLEARING AREA!
 ⊗ area of annual overflow from Canton Woods water supply