



LITTLE FALLS WATERSHED ALLIANCE

EDUCATION - ACTION - STEWARDSHIP

November 14, 2017

Sarah Morse
Executive Director

To: Elza Hisel-McCoy
elza.hisel-mccoy@montgomeryplanning.org

Board of Directors:

Re: Westbard Self Storage Facility, Preliminary and Site Plans
Site Plan No. 820170110

Jack Sobel
President

Dear Mr. Hisel-McCoy and Planning Staff,

Mikel Moore
Vice President

The Little Falls Watershed Alliance (LFWA) is an environmental stewardship group for the Little Falls watershed. We have over 2,000 members, and since our founding in 2008 have worked with thousands of volunteers addressing environmental issues in the watershed. Our mission is to protect the fragile natural environment in lower Montgomery County and adjacent DC neighborhoods and to ensure that the natural spaces in our area persist for generations to come.

Sara Scheeberg
Robinson
Secretary

Jonathan Breul
Treasurer

Wendy Cohen

Daniel Dozier

George Wyeth

We have been very concerned with the design and construction of the Westbard Self Storage Facility, as it not only is in our watershed, but it is the first building to be redeveloped that abuts the proposed Willett Branch Park. The restoration of the Willett Branch and formation of the new greenway park is the central amenity of the Westbard Sector plan. It is a tremendous vision for the area. When it is realized, it will be a centerpiece for the Montgomery Parks system and a huge benefit not only to the residents of the area, but to the whole county. With its location off the very popular Capital Crescent Trail, hundreds of people will use it to enjoy the stream and the beauty of the natural area. It will provide the only meaningful green space for the sector. Because the Westbard Self Storage facility is located in the heart of the proposed park, careful attention must be paid to how the parcel is developed to ensure the success of the park.

Board@lfw.org

We have had frequent meetings with the planning staff on the plans for the Westbard Self Storage site and are very pleased that the building has been moved out of the stream buffer. We are also pleased to see the dedication of parcel 177. This parcel, on the banks of the Willett Branch, is the first dedication for the new park!

However, we still have the following concerns:

- **Stormwater Management Concept Must Include Infiltration Techniques:**

The storage facility abuts the Willett Branch. At this time, the stream is totally contained in a trapezoidal concrete channel. However, the Sector Plan calls for naturalizing the stream and connecting it with the ground water as part of the formation of the Willett Branch Park. This makes recharging the ground water in this area of paramount importance.

4920 Dorset Avenue, Chevy Chase, MD 20815 ▪ www.LFWA.org

Little Falls Watershed Alliance is a 501(c) (3) non-profit organization. All donations are tax deductible

The Westbard Storage Facility Stormwater Management Concept depends entirely on green roof and other non-infiltration techniques. While a green roof does provide heating and cooling benefits, from a water quality perspective, a green roof is not satisfactory as it does not provide groundwater recharge. Without infiltration, the site will not function as “woods in good condition”, a goal of the County’s stormwater management plan. The Maryland Stormwater Management Act of 2007 mandates that stormwater standards must be applied to best mimic pre-developed conditions. Infiltration is critical to achieving this goal.

The developer has stated that the constraints of the property and soil type have made it impossible to implement in-ground Environmental Site Design. LFWA engaged Diane Cameron, GreenGrowth LLC, to review the stormwater plan, and she has identified several areas where the developer can employ techniques that will allow the rain water to soak into the ground, including using pervious pavement, infiltration buffers and dry wells. Ms. Cameron also suggests that the developer consider soil augmentation and infiltration trench/basins. We have attached her review of the plans. We request that the developer be required to revisit the SMC and seriously explore her suggestions before submitting the final stormwater management plan for approval.

We are further concerned that the engineering study and recommendations for the site are based on a building that has a 10-foot cellar, not 40 feet of underground area. There needs to be more clarity on this from the applicant. Can their geotechnical study be adequate if it is based on the assumption of only one lower level, not three or four?

- **The Building is Too Big for the Site:**

We believe a fundamental problem with the plan is that the proposed building is too large for the site. The developer is constructing a building with almost double the usable space permitted by the FAR by going many levels below ground. While this additional cellar space may not be considered part of the FAR as it is traditionally deemed “unusable,” in the case of a storage facility, it is, in fact, very usable space. With the usable space extending so far beyond the zoning code's contemplation, we feel that the building footprint should be further reduced in order to allow for infiltration of environmental site design stormwater treatment that is so necessary for the health of the new Willett Branch Park as discussed above. Reducing the footprint will also allow more amenity open space on the parcel and greater setbacks to avoid shadow on the park areas, as well as a wider path into the park from River Road.

- **Access to Park is Not Welcoming:**

The proposed 18 or 20-foot pathway to the park is too small to be more than a narrow driveway. With the 70-foot wall on one side and a 20-foot retaining wall on the other, visitors will not be welcomed into the park, but rather have to pass through a dark alleyway to get there. We think at least a 24-foot path would be more appropriate. Further, stepping back the building would allow for more light in this area. The entrance to the park should comply with p. 51 of the Sector Plan, which calls for “safe and inviting pedestrian routes across the Willett Branch for people who want to walk from Westbard Avenue to River Road.”

- **Interface with Park at Rear of Property is Unattractive:**

One of the concerns that has been raised continually throughout the redevelopment process is the need for an attractive interface with the park: buildings should embrace the park rather than turn their backs to it. We understand this to be a challenge with a self-storage facility, but this building makes no effort to embrace the park with anything but a 70-foot wall. The

rear of the building is especially unattractive, and given the great height, will cast a shadow over the new park. We would like to see the rear of the building stepped back with green roofs on each level and liberal use of green screens. It would make a beautiful transition to the park and a very attractive self-storage facility.

Landscaping for the rear seems to be limited to grass. We hope that the developer will work with Parks and the Department of Environmental Protection to install native plantings appropriate to the building's stream-side location.

The Westbard Self Storage facility will be adjacent to the heart of the new Willett Branch Park. How the stormwater is managed, how the buffer is treated, how the landscaping is done, and how the park is accessed will all have a huge impact on the success of the new park and restoration of the Willett Branch. The new park promises to be a national showcase for environmental improvement, and Montgomery County will have a lot to be proud of when it is completed. We have this chance to leave a legacy for our children. Please take the time now to be sure it is done right.

Thank you to your attention to these details,



Sarah Morse
Executive Director
Little Falls Watershed Alliance

cc: Gwen Wright, Montgomery Planning
Robert Kronenberg, Montgomery Planning
Marco Fuster, Montgomery Planning
David Kuykendall, Department of Permitting Services
Mark Etheridge, Department of Permitting Services
Roger Berliner, Montgomery County Council
Mike Riley, Montgomery Parks
Brooke Farquhar, Montgomery Parks
Susanne Paul, Montgomery Parks
Andy Frank, Montgomery Parks

Memo

From: Diane Cameron, GreenGrowth LLC

To: Sarah Morse, Little Falls Watershed Alliance

Date: Monday, November 13, 2017

Re: Stormwater-related comments - proposed Westbard Self Storage Facility, 5204 River Road, Bethesda Maryland.

Comments below are organized as follows:

1. Willett Branch restoration is part of the Westbard Sector Plan.
2. LFWA has engaged a consultant to provide review and comment on a site-specific Westbard redevelopment project's proposed stormwater plan.
3. Site description and proposed SWM plan.
4. Brief critique of the proposed SWM Plan
5. Potential role of infiltration at this site and some caveats and pre-requisite information.
6. Conclusions

1. The 2016 Westbard Sector Plan includes a vision for a revitalized Willett Branch. This stream, a tributary of Little Falls, is now a trapezoidal concrete channel that intersects the Capital Crescent Trail and winds its way through high-rise apartments and a myriad of small-scale industrial and utility buildings. The Willett Branch restoration plan "*envisions a new urban greenway with a program of elements and activities that promotes the ecological and environmental benefits of a naturalized stream.*"¹ To promote the creation of this new urban greenway, it's essential that the redevelopment of each parcel within the Willett Branch watershed include a stormwater management plan that contributes to this naturalized stream. Fulfillment of this vision requires use of stormwater practices that will capture, reduce, and cleanse runoff, and then feed it back to Willett Branch via a steady non-erosive flow of water including during dry weather.

The stormwater management plans for site-specific projects in these watersheds need to be consistent with, and contribute to the implementation of these watershed and stream restoration plans, including those implemented by Montgomery County Department of Environmental Protection in compliance with the County's MS4 Phase I NPDES permit.

¹ Montgomery County Planning Department, Frequently Asked Questions about Equity One's Westbard Development Application, website accessed 11/13/2017

<http://montgomeryplanning.org/planning/communities/area-1/planwestbard/>

2. Little Falls Watershed Alliance is a 501(c)(3) organization that has engaged stormwater consultant Diane Cameron (GreenGrowth LLC), to review the proposed stormwater management plan for a redevelopment project called Westbard Self Storage. In reviewing the stormwater management plan, LFWA requested that the consultant focus on the potential role for infiltration strategies and practices. Diane Cameron has degrees in Geology and Environmental Engineering, the latter from the University of Maryland. Her expertise is in the realm of stormwater regulation and watershed protection at all levels of government, with a specialty in green infrastructure – Environmental Site Design strategies.

3. Site Description and Proposed project and stormwater management plan description

Westbard Self Storage has applied to build a 1.37-acre facility at 5204 River Road in Bethesda Maryland; this is the southwest corner of River Road and the Capitol Crescent Trail. The proposed storage facility would have a total of 23,500 square feet. The submitted architectural drawings available on the Montgomery County Planning Department website indicate a total of three below-grade levels and five levels above-grade.²

The site is located adjacent to the Willett Branch stream and its stream valley buffer. Willett Branch is currently a concrete trapezoidal channel, with steep slopes above it overrun with invasive plants. During a visit to the site on 11/13/2017, there was water running in the Willett Branch channel during dry weather, but since this was within 12 hours of a moderate overnight storm, it is reasonable to expect that Willett Branch has little baseflow on dry-weather days that are more than 48 hours after a rainstorm. Thus, providing groundwater-fed baseflow to Willett Branch, including through stormwater plans for redevelopment projects bordering the stream, is a positive goal in support of the Westbard Sector Plan's vision of a restored Willett Branch.

According to this project's proposed Stormwater Management Plan, authored by Bohler Engineering,

*The site consists of an existing radio tower and car repair shops. This project proposes to redevelop the site to incorporate a new self-storage building, asphalt trail and parking area.*³

Bohler Engineering and Wetlands Studies and Solutions have submitted documents to Montgomery County Department of Permitting Services on behalf of the applicant. The applicant is proposing to raze the existing car repair business and build a 0.9-acre storage facility. Proposed stormwater plan consists of an 8" green roof and two micro-bioretenion units.

² See for example, the final Submitted Architectural Drawing (10/13/2017), depicting 3 below-ground levels (not counting the first floor which is partly below-ground). At: <https://eplans.montgomeryplanning.org/PdoxTemp/09-ARCH-820170110-010.pdf>

³ Bohler Engineering (October 2017) Stormwater Management Concept Report for Westbard Self Storage, 5204 River Road, Bethesda, MD 20816. BEPC #MB162140. Page 1.

4. Brief critique of the proposed SWM Plan

The project with its micro-bioretenion planter boxes and approximately 12,345 square feet of an 8" thick green roof to treat stormwater runoff, is overall a strong plan to meet and slightly exceed volume requirements. These are positive elements that LFWA can support. The question is, is this approach adequate to enable the proposed project to contribute to the restoration of the adjacent Willett Branch? The preliminary answer is that while its thick green roof would indeed contribute to stormwater treatment, it would not contribute groundwater infiltration that could replenish the stream's base flow during dry weather. Further study and consideration of the potential for infiltration is recommended.

The stormwater management plan for this project rules out infiltration techniques based on presence of urban fill HSG "D" Soils. The Geotechnical report provides data on the textural composition of soil and subsoil from five borings; it indicates the presence of a wide range of textural types including sandy lean clay, silt, and weathered bedrock, all of which may permit some infiltration.

In my opinion, further study should be done on the existing soils and subsoils on the site, including a soil chemical analysis for legacy contaminants. In addition, the potential for soil restoration techniques to restore permeability should be explored. Depending upon further information and analysis, it's possible that this site would permit a carefully-designed infiltration system, and such system would benefit Willett Branch and its adjacent Stream Buffer by providing groundwater-fed baseflow. In addition, the information from this further study would contribute to a refinement of the Willett Branch restoration plan approach for other redevelopment sites in the Willett Branch watershed.

The table below provides a comparison of the stormwater techniques considered for this project with a focus on techniques that contribute to infiltration.

Westbard Self-Storage Stormwater Management Plan - Comments		
Proposed Practice		
two (2) micro-bioretenion planter boxes		
12,345 SF of green roof		
Practices Considered but Ruled Out by Applicant	Project Applicant Statement	Comments on Selected Practices
(a) Rainwater Harvesting (M-1) -	This practice is not suitable for this project because of the urban nature of the site, spatial constraints and the presence of the Stream Valley Buffer. Other practices were selected instead.	
(b) Submerged Gravel Wetlands (M-2) -	Due to the site layout, this practice is not feasible for spatial constraints. Other practices were selected instead.	
(c) Landscape Infiltration (M-3) –	This practice is not suitable for this project because this project has type “D” soils. Other practices were selected instead.	
(d) Infiltration Berms (M-4) –	This practice is not suitable for this project. This practice is not suitable for this project because this project has type “D” soils. Other practices were selected instead.	The MDE Manual Chapter 5 does not list “Type D soils” as a Constraint for this practice. Because the site of this project is adjacent to the Willett Branch stream channel and riparian area, Infiltration Berms should be seriously considered.
(e) Dry Wells (M-5) -	This practice is not suitable for this project because of the urban nature of the site, spatial constraints and the presence of the Stream Valley Buffer. Other practices were selected instead.	Investigate further whether dry wells could be viable at this site.

(f) Rain Gardens (M-7) -	This practice is not suitable for this project because of the urban nature of the site, spatial constraints and the presence of the Stream Valley Buffer. Other practices were selected instead.	
(g) Swales (M-8) -	Due to the site layout, this practice is not feasible for spatial constraints. Other practices were selected instead.	
(b) Permeable pavements (A-2) –	This practice is not suitable for this project because this project has type “D” soils. Other practices were selected instead.	“D” soils can be restored using a variety of techniques. With this approach, permeable pavements can become a more-viable option worthy of a second look.
(2) Nonstructural Practices (Disconnection of Rooftop (N-1) and Non-Rooftop (N-2) Runoff or Sheetflow to Conservation Areas (N-3)).	– Due to the site layout, this practice is not feasible for spatial constraints.	
Additional Practices		
The following practices were not evaluated for this site but are worthy of consideration:		
Soil Restoration/ Soil Compost Amendment	Not considered	Virginia DEQ includes this practice as a technique for restoring HSG “D” soils. Is not recommended for slopes greater than 10%, so this could be used in conjunction with other techniques at the top of the site adjacent to but not on the slope to Willett Branch. ⁴
Infiltration Trench/ Basin	Not considered	MDE Manual Chapter 3 on Infiltration Practices – setbacks of 25 feet required for facilities downgradient of structures; not able to be sited on slopes of greater than 10%. so this could be used in conjunction with other techniques on the site, adjacent to but not on the slope to Willett Branch.

⁴ [VA DEQ STORMWATER DESIGN SPECIFICATION NO. 4 SOIL COMPOST AMENDMENT](#) (2011).

5. Potential role of infiltration at this site and some caveats and pre-requisites.

This site presents the possibility of infiltration as a stormwater treatment train step, after the runoff is treated by the green roof and micro-bioretenion boxes. Depending upon the results of further study, infiltration could be a viable option through one or more techniques, including those that were considered but ruled out by the applicant, and potentially other practices, such as soil restoration, that were not yet considered.

Pre-requisites to use of infiltration at industrial redevelopment sites include soil testing for toxic chemicals; the existing geotechnical report focused on soil and groundwater conditions and textural characterization for the purpose of supporting the proposed construction project; it did not report on any soil or groundwater chemistry tests for contaminants that may be present due to present or past activities on this site.⁵ Appropriate site characterization that rules out the presence of legacy contaminants, is a pre-requisite to selection of infiltration practices at an urban redevelopment site.

Caveats about urban fill soils and infiltration warrant caution.

Infiltration at industrial sites and “D” fill soils is often ruled out in an abundance of designer caution. For instance, one guidance document states, *“Sites that have been previously graded or disturbed do not retain their original soil permeability due to compaction. Therefore, such sites are not good candidates for infiltration practices. In addition, infiltration practices should never be situated above fill soils.”*⁶ In addition to the “D Soil compaction” concern, the other major concern for urban project managers contemplating use of infiltration is the potential it poses for mobilizing legacy contaminants. In conjunction with the applicant’s proposed 8” green roof and microbioretenion units, this runoff would be well-treated before being infiltrated. Finally, the potential for migration of infiltrated water to impact the underground level of the proposed storage facility, while not obvious from looking at the site’s slope downward toward Willett Branch, is still possible and should be ruled out through careful analysis. Although all three of these issues – toxics; compaction; and groundwater migration are significant enough at any urban redevelopment site, and especially industrial sites, to warrant further in-depth investigation, the benefits of infiltration warrant further study, not categorical elimination. (An example of an urban stormwater infiltration guidance presentation is available at <http://chesapeakestormwater.net/wp-content/uploads/downloads/2012/06/Ultraurban-Stormwater-Design.pdf>).

6. Conclusions

Overall, the proposed stormwater management plan for this project, and in particular the proposed 8” green roof would provide 1.81 inches of stormwater capture and treatment, is quite good for a dense redevelopment site. On the other hand, extending this project’s stormwater treatment train to include

⁵ ECS (September, 2016) report of Subsurface Exploration and Geotechnical Engineering Analysis; ECS Project No.:1:26160. 5204 River Road Bethesda, Maryland for 1784 Capital Holdings.

⁶ [VA DEQ STORMWATER DESIGN SPECIFICATION NO. 8 INFILTRATION \(2013\)](#). Page 8.

infiltration, is worthy of deeper consideration on the part of the applicant, county plan reviewers, and citizen watershed stakeholders.

Although conventional stormwater practice for the past thirty years has tended to avoid infiltration approaches in dense urban areas, this view is starting to change as urban watershed restoration matures and new techniques have been used that enable infiltration to be part of the urban stormwater toolbox. Equally important, this project's location on the banks of Willett Branch makes it potentially able to provide infiltration and thus to replenish the stream's base flow during dry weather.

The specific infiltration techniques of infiltration berms, along with infiltration trenches and permeable pavement, should be further studied in-depth by the project applicant's engineers and reviewed carefully by County officials. For techniques that further study deems viable at this site, the County should work with the applicant to provide incentives to enable the extension of the stormwater treatment train, to provide infiltration in order to support the Willett Branch restoration.

Given that the public interest is served in restoring Willett Branch – a centerpiece of the Westbard Sector Plan – it's in the public interest for Montgomery County agencies and other stakeholders to work with the applicant to a) seriously re-consider, at a greater depth of analysis, the possibility of adding stormwater infiltration practices to this site's treatment train; and b) to evaluate a full range of options for providing incentives and assistance to the applicant to support installation of this fuller treatment train.