



**March 22, 2018**

**Mr. Timothy W. Wales, P.E.**

City Engineer  
City of Saratoga Springs  
City Hall – 474 Broadway  
Saratoga Springs, NY 12866

Regarding: PB App. No. 17.075  
Belmonte Builders – Spencer Subdivision

**Dear Mr. Wales:**

The Environmental Design Partnership, LLP (EDP) is providing you this letter in response to outstanding engineering comments issued by Clark Patterson Lee (CPL) dated March 20, 2018. EDP offers the following responses:

#### **STORMWATER MANAGEMENT NARRATIVE**

**CPL Comment No. 6** – *Please provide infiltration test results. Please insure that the testing was done in compliance with the NYS SWDM.*

*During the Conference Call with the City, it was determined that infiltration testing could be completed when limited clearing has begun. Please note that infiltration testing must be done according to NYSDEC standards and the rates must meet the design criteria provided. If the rates do not meet the design criteria, work shall be stopped until an alternative design is approved.*

**Response – Acknowledged. The Applicant will conduct infiltration testing prior to construction of the stormwater management system.**

**CPL Comment No. 8** - *Who will own the chambers within the Right-of-Way? Has a discussion with the City of Saratoga Springs regarding this occurred? The City may wish to have the chambers located outside of the public ROW.*

*Recent correspondence now indicates that the City of Saratoga Springs will allow stormwater runoff from individual lots to be treated, stored and infiltrated within the City's Right-of-Way (ROW). As a result, the individual stormwater practices along Julian's Way in the front of each parcel have been removed and the size of the infiltration practices (chambers) within the ROW have increased in size. Please revise Sheet #6 to accurately reflect the size of the practices within each subarea/watershed. Additionally, the City now assumes all maintenance, etc. associated with the infiltration units once the roadway is dedicated to the City. Please review.*

**Response – Acknowledged, no further action required at this time.**

**CPL Comment No. 9** - *Please discuss in detail how Water Quality/RRv, the Channel Protection Volume, etc. are provided in subcatchments OS-6, OS-7 AND A-1.*

*The stormwater runoff for subareas OS-6, OS-8 and A-1 under proposed conditions are directed to individual low areas that are to be part of conservation easements. It should be noted in the easements that these areas are used for stormwater runoff treatment and peak flow attenuation and that no development is allowed within these areas unless a stormwater analysis is completed. The low area for subarea OS-7 that is used for*

*stormwater runoff treatment and peak flow attenuation is located within proposed parcels for development (Lots #2, #3, #4, #9). These parcels must have deed restrictions placed on them or the area used for water quality and quantity must be totally located within the conservation easement. Please review.*

**Response – The grading has been revised such that the low-lying area is no longer located on Lots #2, #3, #4, #9 and the HydroCAD model was updated to depict the new volume of the low-lying area to determine that it has the necessary capacity to fully attenuate contributing runoff from storm events up to and including the 100- year design storm event. As such, deed restrictions are not needed for these four lots. The low-lying area now completely located within the Open Space, the entirety of which will be protected in perpetuity by a Conservation Easement.**

**CPL Comment No. 10 -** *Using chambers for sediment removal/pre-treatment will make sediment removal from the chambers extremely difficult. This practice will need to be discussed directly with the City if they are to take ownership of the practices within the ROW.*

*Recent correspondence now indicates that the City of Saratoga Springs will allow stormwater runoff from individual lots to be treated, stored and infiltrated within the City's Right-of-Way (ROW). Additionally, the City now assumes all maintenance, etc. associated with the infiltration units once the roadway is dedicated to the City.*

**Response – Acknowledged.**

**CPL Comment No. 14 -** *Please discuss the number chambers provided for within each “chamber system”. Is the “first set” of chambers providing water quality while the remaining chambers are providing water quantity control? Or is the first set of chambers providing pre-treatment?*

*Comment addressed. Please revise Sheet #6 to accurately reflect the size of practices within each subarea/watershed.*

**Response – A revised Sheet #6 is included in this submission showing the correct sizes of the proposed practices.**

**CPL Comment No. 16 -** *For each Post-Construction Stormwater Practice, a Maintenance Plan must be presented and yearly inspections be completed with reports provided to the City Engineer.*

*The SWPPP must include documentation that requires all stormwater practices be inspected by a licensed engineer on a yearly basis and a stamped report provided to the City. This will need to be included for Stormwater practices located in subareas OS-6, OS-8 and A-1.*

**Response – As discussed above under the Response to Comment #9, the revised HydroCAD model is attached. These low-lying areas are located within the Open Space which will be protected by a Conservation Easement. Therefore, these low-lying areas within the forested Open Space are not being improved as part of this project and only receive runoff from the back of the homes and the rear yards. These low-lying areas have been included in the HydroCAD model to accurately show that the post-development hydrology of the site will closely match the predevelopment conditions. Since these areas will receive limited runoff from the rear of the homes and the associated lawn areas the accumulation of sediment will not be an issue. It is EDPs opinion that since these low-lying areas are not structural stormwater practices, will receive only limited runoff during large storm events, are not necessary for WQv treatment, will not require any maintenance and that the area is located entirely within a forested open space area, protected by a Conservation Easement, that yearly inspections by a licensed engineer is not necessary since**

**CPL Comment No. 20** - Sheet 7 – Please note that the disturbance must be under 5 acres at any one time. The Erosion and Sediment Control Plan indicates 5.36 Acres and 5.48 acres of disturbance. Please limit disturbance to less than 5 acres.

**Response** – The Applicant will not disturb greater than 5 acres at any one time and will not seek a 5-acre waiver from the NYSDEC. It has been noted on sheet 9 stating the contractor shall use the necessary construction methods and scheduling to ensure less than 5 acres is disturbed at any one time.

**CPL Comment No. 27** - Notice of Intent #43 – Please indicate yes.

The area is located within an MS4. Please revise #43 and this project will require a MS4 Acceptance Form.

**Response** – The NOI has been revised accordingly. An MS4 Acceptance Form has been included in the SWPPP for the City.

**CPL Comment No 28** - Please note that all stormwater practices located outside of the right-of-way will require deed restrictions to insure homeowners, etc. do not remove them. Additionally, maintenance of the practices will need to be determined and a maintenance agreement developed.

During the Conference Call with the City, it was determined that a “Home Owner’s Association” would be created and responsible for the maintenance, etc. associated with all of the stormwater practices located outside of the Right-of- Way. Restrictions will be required to insure the practices cannot be removed.

**Response** – There are no structural stormwater management practices proposed outside of the City Right-of-Way. The low-lying depressions in the forested Open Space are depicted in the HydroCAD model as a stormwater point to show how the post-development hydrology of the site closely matches the predevelopment conditions. These low-lying areas will be entirely within the forested Open Space protected by the Conservation Easement. Therefore, no disturbance or removal of vegetation from these areas would take place or be permitted. These low lying forested areas are not structural stormwater practices, based upon the stormwater modeling provided will receive only limited runoff during large storm events, the established forested areas are not susceptible to sediment accumulation, due to contributing flow path being along lawn areas and woods, and no long-term maintenance is required.

#### **NEW COMMENTS – MARCH 20, 2018**

**CPL Comment 32** - Construction Plans: Please insure a Silt Fence detail is provided.

**Response** – A silt fence detail has been included on the plan sheet 9.

**CPL Comment 33** - Construction Plans, Page 8: Many of the trees proposed along the eastern edge of Julian’s Way are in direct conflict with the proposed infiltration chambers. Please review.

**Response** – The proposed street tree locations have been revised to insure they do not conflict with the infiltration chambers.

**CPL Comment 34** - Construction Plans, Page 9: Additional Erosion Control and Grading Notes: #7 is not applicable – there is no rip-rap shown on the drawings. Please review.

**Response** – Sheet 9 has been revised to remove the note #7.

**CPL Comment 35** - NOI #5 – Why is more than 5 acres proposed to be disturbed at a time? This is a perfect

*example where there can be two or more phases with less than 5 acres of disturbance.*

**Response – The Applicant will not disturb greater than 5 acres at any one time. A note has been added to sheet 9 and the NOI has been updated accordingly.**

*CPL Comment 36 - Stormwater Pollution Prevention Plan, Page 11, Section V, Maintenance/Inspection Procedures During Construction: Section 2, Item e – Please locate sediment basins on Construction Drawings or remove item from section if sediment basins are not proposed.*

**Response: The SWPPP has been revised to remove this note.**

*CPL Comment 37 - Stormwater Pollution Prevention Plan, Page 13, Section VI, Long Term Operation and Maintenance Procedures: Please update this section as it is outdated.*

**Response: Section VI of the SWPPP has been updated to reflect the proposed stormwater management practices.**

*CPL Comment 38 - Stormwater Management Narrative, Page 4, Table 1 indicates 5 Design Discharge Points (A-E). However, Figure 2 only shows Discharge location A. Please update Figure 2.*

**Response: Figure 2 has been updated to depict all design points.**

*CPL Comment 39 - Stormwater Management Narrative, Page 6, Third Paragraph indicates “Infiltration Chambers” are proposed under grassy depressions. The Construction Drawings indicated a different practice – Please review.*

**Response: The stormwater management report has been updated to accurately describe this stormwater management practice as a shallow, grassy depression with an infiltration trench, all of which are located within the City of Saratoga ROW.**

*CPL Comment 40 - Stormwater Management Narrative, Page 11, Section 5.3.2: Please review the “proposed project development area to 11.12 acres” statement. Should this number be greater than the previous number (12.63 acres) provided in the paragraph since the area increases? Please review.*

**Response: Section 5.3.2 has been revised to describe the project area as 9.58 acres with the total watershed area being the order of 11.10 acres.**

*CPL Comment 41 - For the lots along Arrowhead Road, please provide a summary of the peak elevations and Water Quality Volume along with the size of each proposed project.*

**Response: The Hydrocad Model has been revised to depict the entire infiltration trench along Arrowhead Road as one stormwater management practice (SMA#6). The tables in the stormwater report have been updated to include information of volume, contributing runoff and WQv.**

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**ENVIRONMENTAL DESIGN PARTNERSHIP, LLP.**

Shaping the physical environment

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The revised plan set, revised stormwater management report and the revised SWPPP have been included in this submission. Please contact our office if you have any additional comment or questions regarding the above.

**Sincerely,**

The Environmental Design Partnership, LLP



**Brian P. Osterhout, P.E.**

cc:

Attachments: SWPPP  
Stormwater Narrative w/HydroCAD Model  
Plan Set