



**February 5, 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 engineering comments issued by Clark Patterson Lee (CPL) dated January 31, 2018 as well as the comments from Albert Flick dated January 4, 2017. EDP offers the following responses:

**CLARK PATTERSON LEE REVIEW**

**SWPPP Report**

CPL Comment No. 1 - Page 5 – Section H – Please provide correspondence for Historical places.

A Phase 1B Archaeological Survey has been provided. Please provide correspondence with OPRHP concerning this issue.

*Response – The updated report was uploaded to the Cultural Resource Information System on January 9, 2018. Any additional correspondence with OPRHP will be forwarded onto the City of Saratoga Springs upon receipt.*

CPL Comment No. 2 - Page 7 – Number 3 – Stormwater ponds are listed to be used as temporary sediment basins during construction. Please review.

The report still indicates this (Page 7, #3b).

*Response – The SWPPP has been revised to remove all references to using stormwater ponds as temporary sediment basins.*

CPL Comment No. 3 - Page 8 Item I - Is rip-rap proposed to be used? Please review.

The report still indicates this (Page 8, I).

*Response – The SWPPP has been revised to remove all references to rip-rap as none is proposed or required for this project.*

**Stormwater Management Narrative**

CPL Comment No. 4 - Page 4 – Please provide table for the other analysis points under existing conditions.

Your point is understood. However, for review purposes and for those not familiar with the project, a table makes it easy to determine the peak flows for existing and proposed conditions.

*Response – Table 1 on Page 4 of the Stormwater Management Narrative has been revised to include the runoff rates to each design point including the depressions. The table and the hydrocad model have also been*

*revised to clarify the runoff rate of stormwater that flow offsite in existing conditions by adding design points for every feasible stormwater discharge points off the site during predevelopment and/or post-development conditions.*

CPL Comment No. 5 - Page 7 – Why is Chapter 9 of the NYS SWDM referenced? Chapter 9 is for redevelopment projects. Please review.

Comment Addressed

*Response – No response required*

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

Your point is noted. However, the Manual indicates that infiltration testing must be completed. The City can “sign-off” on this requirement if deemed appropriate.

*Response – Infiltration testing will be performed onsite prior to final approval and construction to confirm the infiltration rates used in the stormwater models. Once infiltration testing is completed the results will be added to the plan set which will be submitted to the City.*

CPL Comment No. 7 - In general, please provide a summary table for the stormwater runoff for each subarea (analysis point) under existing and proposed conditions per the SPDES General Permit GP 0-015-002, Part III.B.2.c.iv.

Your point is noted. However, the NOI indicates an outflow of 0.08 cfs for a 100 year storm. A simple table provides for easy cross-checking.

*Response – Table 1 of the Stormwater Management Report has been revised and Tables 6 and 7 have been added to section 5.3.4 and 5.3.5 of the Stormwater Management Report to depict the stormwater runoff rates to each analysis point as well as the total site discharge.*

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.

Your response indicates the City will be responsible for the practices within the Right-of-Way. Who will be responsible for the practices outside the ROW including but not limited to Infiltration Chambers, Grassy Depression, the low spots used for infiltration (1P, 4P and 8P), depression behind lots 18/19, etc. Additionally, all of these will require a deed restriction.

*Response – The stormwater devices that will be located on the individual lots and/or in the wooded areas between lots will be owned and maintained by either the individual homeowners or the proposed home owners association. As green infrastructure practices are proposed including porous driveways, the Applicant has committed to educating the homeowners on the importance and maintenance of the infiltration practices. The Applicant would like to explore alternatives other than the use of deed restrictions.*

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.

Per your comment, since these areas are part of the practices used to meet the Permit requirements, a deed restriction will be required to prevent future homeowners, etc. from removing/altering these practices.

*As green infrastructure practices are proposed including porous driveways, the Applicant has committed to educating the homeowners on the importance and maintenance of the infiltration practices. The Applicant*

*would like to explore alternatives other than the use of deed restrictions.*

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.

Who will be responsible for maintenance of practices outside of the Right-of-Way?

*Response – The stormwater devices that will be located on the individual lots and/or in the wooded areas between lots will be owned and maintained by either the individual homeowners or the proposed home owners association.*

CPL Comment No. 11 - For the 10-year and 100-year storm events, please provide a table that includes the various subareas/analysis points. Please provide the peak runoff rates for the various Design Points under existing and proposed conditions.

Comment addressed. Please verify with Notice of Intent.

*Response – Notice of Intent has been revised to reflect the stormwater management report.*

CPL Comment No. 12 - For the Water Quality Calculations (Attachment A), please provide the sizing calculations for each practice. For example, please provide calculations for the “shallow grass depressions” Please use the GI Excel Worksheets provided by NYSDEC where appropriate. It may be appropriate to run the HydroCad model using the Water Quality Storm event as well.

How is “WQv Provided” calculated? In the response letter, OS-1 indicates 816 cubic feet provided – How was this determined?

*Response – The WQv provided is based on the volume of the pretreatment chambers.*

CPL Comment No. 13 - Please discuss what Pond 1P: Roof Top Disconnect under proposed conditions within the HydroCad model is?

Comment addressed.

*Response – No response required.*

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.

*Response – No response required*

CPL Comment No. 15 - For each subarea where chambers are proposed, please provide a summary of the number of proposed chambers and a brief discussion of how each system will operate.

The plan set should note the layout for all stormwater chambers since they are different for the various locations.

*Response – A table has been added to sheet 10 of the plan set in order to summarize each storm chamber section.*

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.

Comment addressed for the City requirements. However, for the various practices located outside the Right-of-Way, the responsible party and maintenance plan must be developed.

*Response – The long term operation and maintenance procedures will apply to all stormwater management practices including the practices located outside of the Right-of-Way, which will be owned and maintained by either the individual homeowners or the HOA. Additional maintenance and inspection notes have been added to the details on sheet 11.*

## **Plans**

CPL Comment No. 17 - Sheet 4 – Please provide the number of chambers for each practice.

A revised set of drawings was not provided.

*Response – The revised drawings have been included in this submission.*

CPL Comment No. 18 - Sheet 4 – Behind lot 18, 19, 20, 21 and 22 – Is this supposed to be a depression? If so, please revise grading accordingly.

A revised set of drawings was not provided.

*Response – The revised drawings have been included in this submission.*

CPL Comment No. 19 - Sheet 4 – Why is the TF of CB 5 and CB 6 different? Why is the TF for CB 3 and CB 4 different?

A revised set of drawings was not provided.

*Response – The revised drawings have been included in this submission.*

CPL Comment No. 20 - Sheet 7 – Please note that the disturbance must be under 5 acres at any one time.

A revised set of drawings was not provided.

*Response – The revised drawings have been included in this submission.*

CPL Comment No. 21 - Sheet 7 – Please make the Stabilized Construction Entrance a minimum of 24' wide.

A revised set of drawings was not provided.

*Response – The revised drawings have been included in this submission..*

CPL Comment No. 22 - Sheet 8 – The Bituminous Pavement Detail text is “cut-off” at the top of the sheet.

A revised set of drawings was not provided.

*Response – The revised drawings have been included in this submission.*

CPL Comment No. 23 - Page 10 – Please provide a detailed layout for each chamber system. Include at a minimum the number of chambers and pipe entrance elevations.

A revised set of drawings was not provided.

*Response – The revised drawings have been included in this submission.*

### **New Comments**

CPL Comment No. 24. Notice of Intent indicates 0.08 pre & post development stormwater runoff rates for a 100-yr. storm event. The report does not indicate the same. Please review.

*Response: The Notice of Intent has been revised to indicate that the pre-development stormwater runoff rate for the 100 year design storm event will be 0.08 cfs while the postdevelopment runoff rate will be 0.00 cfs.*

CPL Comment No. 25. Notice of Intent - #38 – The City of Saratoga Springs will not be responsible for stormwater practices located outside of the Right-of-Way.

*Response: Notice of Intent has been revised to indicate that the HOA and the individual homeowners will be responsible for the stormwater areas located in the open space and individual lots, respectively.*

CPL Comment No. 26. Notice of Intent – Please review #39 – Total area of roof disconnect indicated to be 7.39 acres. Total disturbance is 5.36 acres in NOI. Page 6 of Stormwater Management Narrative indicates 4.36 acres of development. Please review all numbers in the NOI and in the report to insure all numbers are consistent.

*Response: The NOI and the Stormwater Management Report have been reviewed and revised to ensure that the numbers and statistics are consistent and accurate.*

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

*Response: The NOI has been revised accordingly.*

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

*As green infrastructure practices are proposed including porous driveways, the Applicant has committed to educating the homeowners on the importance and maintenance of the infiltration practices. The Applicant would like to explore alternatives other than the use of deed restrictions.*

CPL Comment No. 29. Pond 2P provides 0.03' of freeboard while Pond 4P provides 0.09' of freeboard for the 100-yr storm. If another storm event occurs before the stormwater infiltrates, should some type of overflow be provided to insure downstream owners are not directly impacted?

*Response: Section 6.3.2 of the NYSDEC Stormwater Management Design Manual states "All infiltration systems shall be designed to fully de-water the entire WQv within 48 hours after the storm event. The post development hydrocad model does not take into account infiltration for the depression areas in order to be conservative with our design. Even with an infiltration rate as low as 1 inch/hour the depressions areas would fully empty the 100 year storm in less than 20 hours.*

CPL Comment No. 30. Please provide information how the "pond" surface areas were determined when only 2' contours are provided.

*Response: The pond surfaces were determined based on the survey shots of the existing site and the surface that was created from those spots. The existing site condition plans (Sheet 3) has been revised to include the spot grades.*

CPL Comment No. 31. Notice of Intent indicates 2.02 acres of new impervious in disturbed area. Page 13 of the Stormwater Management Narrative indicates 1.87 acres. Please review.

*Response: The NOI and the Stormwater Management Report have been reviewed and revised to ensure that the numbers and statistics are consistent and accurate*

## **ALBERT FLICK COMMENTS**

Flick Comment No. 1 – Show and identify (diameter, material, slope) existing sanitary, storm and water utilities on plan set. Include connections between Julian Way and Arrowhead Road.

*Response: The grading and utilities plan have been updated to show the existing sanitary, storm and water utilities. The stormwater from the proposed development will be contained within the site via the infiltration chambers. The proposed sewer will tie into the existing sanitary system managed by the Saratoga County Sewer district.*

Flick Comment No. 2 – Curb box water shut-offs shown at back of sidewalk. Relocate shut-offs to tree belt as noted on Water Service Detail Sheet 12.

*Response: The curb box water shut-offs have been moved to the tree belt as shown on Water Service Detail Sheet 12 and on the Utility and Grading Plan Sheet 5.*

Flick Comment No 3 – Stormwater infil. Chambers cannot be located in the City ROW nor beneath sidewalks. City will not take ownership. Re-evaluate stormwater mgmt. techniques for road runoff.

*Response: It is the understanding of the Environmental Design Partnership that it is acceptable for the infiltration chambers to be located within the City ROW and/or beneath sidewalks as long as the chambers only collect runoff from within the City ROW. The stormwater management system has been updated so only runoff from the ROW will enter the proposed infiltration chambers. All other runoff from the site will be attenuated and fully infiltrated into the existing ground within the site boundaries.*

Flick Comment No. 4 – Locate new water mains to be situated entirely within paved lane of street.

*Response: The newly proposed water mains have been relocated to run within the paved area of the street.*

Flick Comment No. 5 – Provide sewer stub w/ cap for future connection on north side of San MH #5.

*Response: A 5' length of sewer pipe has been added to the existing Sanitary Manhole #5 with an invert elevation of 254.80.*

Flick Comment No. 6 – Utilize City Standard details where applicable such as deep manhole/catch basin, sewer lateral, concrete specifications, etc...

*Response: The City of Saratoga Springs standard details were used for both the storm water and water utility details. The City of Saratoga Springs standard details were not used for the sewer utilities as these will be managed by the Saratoga County Sewer District. All detail sheets have been updated accordingly.*

Flick Comment No. 7 – Clearly note on Utility Plan and Water Notes gate valves to be City Standard Mueller Series 2361 MJ and Open-Right.

*Response: Language was added to both the Water Detail Notes sheet and the Utility Plan sheet stating all gate valves should comply with City of Saratoga Springs standards and be type Mueller Series 2361 MJ and Open-Right.*

Flick Comment No. 8 – Water main pressure test and disinfection procedures per City requirements.

*Response: Water notes on sheet 13 have been revised accordingly.*

Flick Comment No. 9 – Detail 1, Sheet 8 incorrect title. Detail already provided on Sheet 9.

*Response: Detail 1, Sheet 8 now refers to the bituminous pavement. This information is not replicated on Sheet 9.*

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.

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

February 5, 2018

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**ENVIRONMENTAL DESIGN PARTNERSHIP, LLP.**

Shaping the physical environment

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**Sincerely,**

The Environmental Design Partnership, LLP

A handwritten signature in black ink, appearing to read "Brian P. Osterhout". The signature is stylized and cursive.

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

cc:

Attachments: SWPPP  
HydroCAD model  
Stormwater Narrative  
Plans