



# TOWN OF NEW CASTLE

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**Date:** June 5, 2018 (For June 5, 2018 PB Meeting)

**To:** Planning Board

**From:** Town Engineer

**Re:** Chappaqua Crossing – East Village (MFPD) Site  
Development Plan Approval - Planning Board Application  
for Wetlands Permit, Steep Slopes Permit, Tree Permit, and  
Stormwater Pollution Prevention Plan Approval – 480  
Bedford Road - Section 93.9, Block 1, Lot 1.4

I have performed a preliminary review of the submitted plans, engineering plans and stormwater report as mentioned in a cover letter as prepared by Divney Tung Schwalbe dated May 2, 2018 and March 16, 2018 on behalf of the above referenced application and offer the following comments:

### Stormwater Comments:

- ST1. The Flow Length of 466 ft. for the unpaved shallow concentrated flow for Subbasin “F” under existing conditions as shown on Table No. 6 does not correspond with the scaled length of 1,200 ft. as shown on the Existing Drainage Conditions Map (Drawing No. SWM-7). Please revise accordingly.
- ST2. The Flow Length of 232 ft. for the channel flow for Subbasin CC-PKG S under existing conditions as shown on Table No. 6 not correspond with the scaled length of 2,164 ft. to Discharge Point No. 3 as shown on the Existing Drainage Conditions Map (Drawing No. SWM-7). Please revise accordingly.
- ST3. The total flow length of 1,085 ft. which includes the sheet (100’), shallow concentrated flow (unpaved 231’) and channel flow (754’) does not connect to a known discharge point (DP #1, DP #2, DP #3, and DP # 4/5). Please revise accordingly.
- ST4. The increase is stormwater runoff volume (cubic feet) at Discharge Points Nos. 3 & 4/5, which discharges into the Chappaqua Brook Wetlands System, for the 25-year storm is approximately +6.5% +/- (net increase of 95,500 +/- CF); 50-year storm is approximately +6.8% +/- (net increase of 129,025 +/- CF) ; 100 year storm is approximately 7.1 % +/- (net increase of 170,450 +/- CF). Therefore, the stormwater report should include a comprehensive evaluation of the qualitative and quantitative impacts to the existing downstream off-site drainage system (Chappaqua Brook Wetlands System), in particular in terms of capacity, hydraulic grade, increased pond/stream elevation, water quality and water quantity (peak flows and runoff volumes).

- ST5. Provide a detailed layout and associated section (1" = 20') of the Wet Extended Detention Pond (Pond CC-R) (NYSDEC SMP Classification P-3), as shown on Drawing No. SP-2.2, which should include the following:
- Emergency overflow spillway and safe passageway to existing downstream structures
  - Direct access of appropriated vehicles (12' wide)
  - Fixed vertical sediment depth marker
  - Low flow orifice
  - Riser
  - Pond drain
  - Sideslopes (maximum of 3H to 1V)
  - Perimeter fencing and warning signs
- ST6. The total retained height of stormwater, during a 100-year storm event, along the westerly side of Wet Extended Detention Pond (Pond CC-R) would be approximately 10 feet in height. Therefore, the applicant should obtain a NYSDEC Dam Permit from the NYSDEC regarding the stormwater basin. In the alternative, the applicant should provide a letter of "**No Jurisdiction**" from the NYSDEC stating that a NYSDEC Dam Permit is not required, in this particular case.
- ST7. The Site Grading & Drainage Plans (Drawings SP-2.1 & SP-2.2) should show the existing downstream drainage system (type of pipe, diameter, slope and inverts), which conveys stormwater runoff from the outlet control structure (OCS-A) located within the Wet Extended Detention Pond (Pond CC-R) to the Chappaqua Brook Wetland System. Provide top and invert elevation of OCS-A as well.
- ST8. It is recommended that the existing downstream drainage system, as mentioned in above mentioned comment (ST7), be TV Inspected in order to ensure that the existing drainage network is operating satisfactorily and does not contain any sediment and/or repairs that may be required.
- ST9. It appears that the bottom contour of the most westerly portion of Pond CC-R is at a proposed elevation of 358'. However, the existing grades at the same location (approximately 5' westerly) indicates an existing elevation of 350.32' (Top of Rim at existing DMH). Therefore, a proposed retaining wall of approximately 7' – 6" would be required in this case.
- ST10. The Design Capacity of 46.0 cfs and 45.4 cfs for DMH A-3, DMH A-2, DMH A-1 and HW-A as shown on the **Drainage Pipe Area Map** (Drawing SWM-11) does not correspond with the Node ID "STMPIPING" for the Qpeak of 61.28 cfs for the 100 year return event. Please clarify.
- ST11. Provide buoyancy calculations which would demonstrate that the proposed underground cisterns (CCR Cis E & CCR Cis w) have been properly designed in which the underground structures would not "float" during high groundwater conditions in this particular area. Provide sections and details of said underground cisterns as well.
- ST12. Provide profiles for the proposed water main.
- ST13. The Site Grading & Drainage Plans should indicate the stationing along the proposed sanitary sewer main and drainage which correspond to the stationing as shown on the Utility Profiles (Drawings SP-11.1 & SP-11.2).
- ST14. Paragraph B.3. regarding colloidal soils as described on page 5 in the stormwater report should be added to the **Erosion & Sediment Control Notes** as shown on the **Erosion & Sediment Control Plan** (Drawing No. SP-5.2).

- ST15. Paragraph D.3 regarding construction refuse control as described on page 15 in the stormwater report should be added to the *Erosion & Sediment Control Notes* as shown on the *Erosion & Sediment Control Plan* (Drawing No. SP-5.2).
- ST16. The SWPPP shall include a Construction Logistics Plan showing the locations of construction staging, areas for stockpiling of disturbed rock and soils and areas for stockpiling of materials to be removed from the Site, during each phase or sub-phase of construction.
- ST17. The stormwater management controls for the East Village MFPD District parcel shall either be self-contained on the East Village MFPD District parcel or include any necessary drainage or other easement(s) over the B-RO-20 District parcel to support the residential uses on the East Village MFPD District parcel. If the East Village MFPD District parcel is to utilize the B-RO-20 District parcel for drainage, then a restrictive declaration running in favor of the East Village MFPD District parcel should be secured to preserve this feature on the B-RO-20 District parcel. It should be noted that there are approximately nine (9) drainage structures and approximately 1,200 linear feet of storm sewer located over and across the B-RO-20 District parcel, which collects and conveys stormwater runoff from the East Village MFPD District parcel.
- ST18. Since more than one (1) acre of disturbance is proposed (within the East of Hudson Watershed) the applicant must demonstrate that they have obtained coverage from the NYSDEC under GP-0-15-002, including a Full SWPPP (Erosion & Sedimentation Control Plan including post-construction stormwater practices).
- ST19. Since the subject property is proposed to be developed is located within the New York City Watershed, the applicant must demonstrate that they have obtained approval from the New York City Department of Environmental Protection (NYCDEP) for a Stormwater Pollution Prevention Plan (SWPPP).
- ST20. Additional drain inlets and catch basins should be installed in and along Roads A, B, C and H, in particular in the areas of the parallel parking returns and along areas where the roadway is crowned, in order to ensure that all of the stormwater runoff is properly collected and conveyed into the proposed stormwater facilities.
- ST21. Indicate the location of the closed pipe conveyance system, and label the type of pipe, pipe diameter, pipe invert, slope and direction of flows, in order to ensure that all of the stormwater runoff from the new roof areas, pool deck, clubhouse and associated walkways are properly collected and conveyed into the requisite proposed stormwater facilities.
- ST22. Indicate the location of the closed conveyance system, and label the type of pipe, pipe diameter, pipe invert, slope and direction of flows and associated discharge points regarding the foundation drains for each building.
- ST23. It appears that a swale is proposed along the easterly side of Road E, which will collect runoff into in a low point (contour elevation of 422) located easterly of CB G-5. This will create erosion in and along the steep slope (33% grade) located downstream. Therefore, additional drainage should be installed in order to collect and reduce the potential of erosion.
- ST24. According to Section 108A-9 C and E under Maintenance, inspection and repair of stormwater facilities. Prior to the issuance of any approval that has a stormwater management facility; the applicant must execute a formal stormwater maintenance agreement and access easement that shall be binding on all subsequent landowners served by the stormwater management facility. The stormwater maintenance

agreement and access easement shall be in a form satisfactory to Town Counsel and shall be recorded in the Office of the County Clerk as a deed restriction on the property. Therefore, it is recommended that the applicant provide the required stormwater maintenance agreement and access easement in accordance with Section 108A-9 C and E as mentioned above.

ST25. According to Section 108A-11 A and B under Performance guarantee; recordkeeping. The Town in its approval of the stormwater pollution prevention plan (SWPPP) may require the applicant to provide, prior to construction, a performance bond, cash escrow, or irrevocable letter of credit, which guarantees satisfactory completion of the project and names the Town of New Castle as the beneficiary. Also, the Town may require the applicant to provide, prior to construction, with an irrevocable letter of credit from an approved financial institution or surety to ensure the proper operation and maintenance of all stormwater management and erosion control facilities both during and after construction. Therefore, it is recommended that the applicant provide the required performance bond and maintenance bond in accordance with Section 108A-11 A and B as mentioned above.

ST26. Provide detailed erosion and sediment control plan construction sequencing & phasing plan, which shows that no more than five (5) acres will be disturbed during any one phase. The construction sequencing plans shall include the following notes:

- a) If rock blasting is necessary, a blasting plan shall be developed that shall include restrictions on the types and methods of blasting and other methods of rock removal that shall be allowed. Any blasting plan shall incorporate all measures described in DEIS Sections III.C.1.d(1)(b), III.K.3.b, and III.K.4.c and must be approved by the Planning Board.
- b) Asphalt from all parking areas to be removed shall be stripped and processed on site to be re-used in the creation of new roads and parking areas.
- c) A demolition and construction management program shall be implemented and communicated to existing tenants on the Project Site.
- d) Construction employees shall be issued temporary access control cards to allow them to enter the Project Site through the existing west entry gate to reduce construction-related traffic along Roaring Brook Road. Construction deliveries shall enter and leave the site from Bedford Road (NYS Route 117) via Route 172. Construction truck activity shall be limited to between 9:00 AM and 2:30 PM so as not to conflict with rush hour office or school-related operations. When specialty operations such as concrete placement must be scheduled during peak traffic hours, alternative traffic control procedures could be implemented with the oversight of the Town police department. Flagmen shall be available at all times to ensure safe ingress and egress into the Project Site.
- e) All construction workers parking and all construction truck staging shall be on site in designated areas.
- f) Construction shall be conducted consistent with an approved NYS Stormwater Pollution Prevention Plan and Erosion and Sediment Control Plan developed in accordance with the New York State Stormwater Design Manual (latest publication) and the New York Standards for Erosion and Sediment Control (latest publication).
- g) Best construction practices to be set forth in the Construction Logistics Plan shall be implemented, including wetting soil surfaces, covering trucks and stored materials with tarps to reduce windborne dust, and proper maintenance of equipment. Roadway and haul roads shall be

stabilized with tackifiers, geotechnical fabrics and stone ballast as required to minimize dust. Roadways will be washed regularly to prevent dust from being generated by vehicle traffic. Tracking pads will be established where trucking vehicles move from construction areas to established roadways. Wash stations will be installed at the tracking pads, and their utilization will be required prior to leaving a disturbed area.

- h) A Stormwater Pollution Prevention Plan and Erosion and Sediment Control Plan shall include silt fencing, hay bales, inlet protection, temporary sediment traps and outlet protection and control devices, swales, berms, energy dissipaters, wheel wash down areas, anti-tracking pads, mulching, temporary seeding, dust control with misting systems (including during demolition), covering of stockpile materials or stabilization with an established seed bed, and hay bales. These methods shall be regularly maintained and periodically inspected and shall meet the requirements of NYSDEC Standards and Specifications or Erosion and Sediment Control. These measures shall be included in the construction contract.
- i) No construction exposure shall exceed five (5) acres unless prior written authorization is obtained from the Town MS4 consistent with NYC DEP and Town Code requirements, and a detailed construction sequence (including all phases) shall be prepared and approved by both the NYC DEP and the Town of New Castle prior to the commencement of any site work
- j) Any groundwater that is encountered during construction shall be captured and diverted via curtain drains along the perimeter of the excavated areas, to be released in a controlled manner to a stabilized vegetated surface or channel for eventual discharge to the on-site wetlands. Turbidity or sediments in the temporarily diverted groundwater shall be controlled by lining the curtain drains with filter fabric and using clean washed pea stone as trench backfill.
- k) As soon as grading operations for an area are completed, the area shall be stabilized and landscaped.
- l) During earthwork operations, temporary noise attenuation measures, such as acoustic curtains or screens, shall be implemented along the boundaries of major construction areas.
- m) Equipment used during construction will be fitted with PM traps and will use low-sulfur fuel.
- n) Equipment used during construction will be properly maintained and operated.
- o) Energy Star-compliant construction materials will be used.
- p) To the extent feasible, construction materials that have been extracted and manufactured within 500 miles of the Project Site will be used.
- q) Stormwater management plan(s) approved by all authorities with jurisdiction, including the Planning Board, NYSDEC, and the New York City Department of Environmental Protection (“NYCDEP”), as appropriate, shall be implemented prior to any construction activities, and a program of maintenance (and, if necessary, repairs) shall be implemented to keep all permanent stormwater structures in good working order.

ST27. The Applicant’s Engineer shall respond to any and all comments as raised in attached letter dated May 24, 2018 entitled “*Chappaqua Crossing SWPPP East Village Residential Development (aka Phase 3) Town of New Castle, Westchester County, NY – Comments of the Watershed Inspector General’s Office Review of Stormwater Pollution Plan*” as prepared by Donald W. Lake, Jr. PE, CPESC, CPSWQ.

*A review of the Applicant's Response letter dated May 2, 2018 to the General Comments as mentioned below In my previous memo dated October 16, 2017 are currently under review and will be provided to the applicant when completed.*

- GC1. It appears that stop lines are being proposed at the intersection of Road B, Road D, Road F, Road G & Road H with Road A. However, no stop lines are proposed at the remaining road intersections. Therefore, provide stopping sight distance triangles at all other intersecting roads (Road B & E, Road D & E and Road E & G) in accordance with AASHTO based upon the prevailing vehicle speed.
- GC2. Provide dynamic stopping sight distances and required offsets in and along the interior radii of all roadways in accordance with AASHTO based upon the prevailing vehicle speed.
- GC3. Provide stopping sight distance triangles at the two (2) main entrances in accordance with AASHTO based upon the prevailing vehicle speed.
- GC4. Provide turning movements for a WB-40 and Fire Truck dimensions as specified by the New Castle Fire Chief in and along all roadway radii in order to demonstrate adequate pavement areas.
- GC5. The proposed roadway layout should include the following items:
- Indicate and dimension all center-line horizontal geometry
  - Minimum radii of private roadway right-of-way and pavement radii
- GC6. The Applicant states that the 91 townhomes will be fee simple ownership. Therefore, the individual owner's property line should be shown on the site plan as well as the common areas.
- GC7. The Applicant's engineer shall submit a report which provides measures that will be explored to reduce cumulative construction noise levels at affected Cowdin Lane properties to 60 dBA at the property line.
- GC8. The Applicant is proposing approximately 930 linear feet retaining walls, which range between 2' and 18' in exposed height. Therefore, the Applicant's engineer should provide complete structural drawings showing the retaining walls, in which the following notes should be added to the structural drawings:
- a) All work regarding the footing/foundation for all site related retaining walls shall remain accessible and exposed until inspected by the Building/Engineering Division. The Building/Engineering Division shall be notified at least 48 hours in advance in order to schedule a footing/foundation inspection. **Contact Terry L. Rowe – Civil Engineering Technician at 914-238-1429.**
  - b) The retaining wall, as shown hereon, has been designed to meet and/or exceed the minimum factors of safety for sliding, overturning and settlement.
  - c) At completion, the applicant's engineer shall submit a "**Certificate of Construction Compliance**" and "**As-Built Section**" certifying that the retaining wall as constructed meets all factors of safety for sliding, overturning and settlement in accordance to the approved plans on file with the Building and Engineering Department.

- GC9. The applicant should provide an engineer's cost estimate for the construction of all the site related items, including the pump station upgrades (if required), in order to determine the performance bonding and associated 3% inspection fee.
- GC10. The proposed sanitary sewer shall be 8-inch DIP Class 54 (Ceramic Epoxy Lined) as opposed to 6-inch DIP regarding Road H.
- GC11. Provide cut and fill volumes required for the overall construction.
- GC12. Demarcate and label the 100-foot wetlands buffer on the site plan.
- GC13. The Roadway Utility Cross Section should be revised to indicate the roadway width of 20' as opposed to 24'.
- GC14. Provide footing sections and details regarding the proposed decorative lighting fixtures and poles.
- GC15. Label the proposed sanitary service line as 4-inch CIP as opposed to PVC.
- GC16. The Applicant would be required to obtain approval from the Westchester County Department of Health for the proposed water main and sanitary sewer improvements.
- GC17. The Applicant should provide a preliminary subdivision for review and comment.
- GC18. The following notes should be added to the Site Plan:
- a) Prior to the issuance of a building permit, the entire clearing/grading limits shall be field staked by a licensed professional land surveyor as per the approved site plan and all erosion and sedimentation controls shall be inspected by **Steve Coleman Environmental Coordinator at 914-238-7278.**
  - b) All work regarding the footing/foundation for all site related retaining walls shall remain accessible and exposed until inspected by the Building/Engineering Division. The Building/Engineering Division shall be notified at least 48 hours in advance in order to schedule a footing/foundation inspection. Contact **Terry L. Rowe – Civil Engineering Technician at 914-238-1429.**
  - c) At completion, the applicant's engineer shall submit a "**Certificate of Construction Compliance**" and "**As-Built Section**" certifying that the retaining wall as constructed meets all factors of safety for sliding, overturning and settlement in accordance to the approved plans on file with the Building and Engineering Department.
  - d) For each truck delivering fill to the above-mentioned site, a Manifest shall be submitted and signed by the owner and/or engineer indicating the following:
    - i.) Delivery date
    - ii.) Origin of fill
    - iii.) Type of fill
    - iv.) Certification by a New York State Licensed Professional Engineer that the fill delivered is in compliance with paragraph 360-7.1(b) (1) of 6 NYCRR Part 360 – Solid Waste Management.

**Note:**

If the fill material, as determined by the Town of New Castle, is considered to be non-exempt material as per paragraph 360-7.1(b)(1) of 6 NYCRR Part 360 – Solid Waste Management than the property owner and/or engineer may be required to perform and/or submit the following additional information:

- e) Clearing and grading limit lines shall be clearly delineated in the field throughout the construction period and no encroachment beyond these limits by workers or machinery shall be permitted.
- f) Prior to the backfilling of all storm water devices, the Building/Engineering Department shall be notified at least 48 hours in advance in order to schedule a SWPPP Inspection. Contact **Terry L. Rowe - Civil Engineering Technician at 914-238-1429.**
- g) The owner of the property acknowledges that the Town of New Castle and other agencies having jurisdiction shall have the right to enter the property at reasonable times and in a reasonable manner for purposes of inspection.
- h) A copy of the approved SWPPP shall be retained at the site of the land development activity during construction from the date of initiation of construction activities to the date of final stabilization.
- i) Each contractor who will be involved in a land development activity must have proof that he/she has received training and/or certification in proper erosion and sedimentation control practices.
- j) Upon completion of the project an “***As-Built Drawing***” shall be submitted showing all improvements including the location of all stormwater management facilities and associated drainage.

cc: Janice Friend, Planning Board Secretary  
Sabrina Charney Hull, AICP, Director of Planning  
Steven Coleman, Environmental Coordinator  
Jennifer L. Gray, Esq., Planning Board Counsel  
Divney Tung Schwalbe, LLP, Applicant’s Engineer  
Dave Walsh, Director of Asset Management, SG Chappaqua A & B, LLC  
John Marwell, Esq, Shamberg Marwell and Hollis  
Mary Galasso, NYC Environmental Protection  
Charles Silver, Ph.D., Watershed Inspector General Scientist





STATE OF NEW YORK  
OFFICE OF THE ATTORNEY GENERAL

BARBARA D. UNDERWOOD  
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE  
ENVIRONMENTAL PROTECTION BUREAU

May 24, 2018

**By Email and Mail**

Mr. Robert J. Cioli, P.E., Town Engineer  
Town of New Castle Engineering Division  
200 South Greeley Avenue  
Chappaqua, New York 10514

RE: Chappaqua Crossing SWPPP –  
Phase 3, East Village  
Residential Development Phase

Dear Mr. Cioli:

The Office of the Watershed Inspector General (WIG or WIG Office) respectfully submits the attached comments on the Stormwater Pollution Prevention Plan (SWPPP) dated March 12, 2018 for the residential phase of the Chappaqua Crossing (Project) development.

The WIG Office appreciates this opportunity to comment on the Chappaqua Crossing SWPPP for the residential development phase, and looks forward to working with the Town, Watershed regulators, the Project sponsor, and other stakeholders as environmental review of the Project proceeds.

Respectfully submitted,

Philip Bein  
Watershed Inspector General  
Assistant Attorney General  
Environmental Protection Bureau  
Office of the Attorney General  
The Capitol  
Albany, New York 12224  
(518) 776-2413

Charles Silver, Ph.D.  
Watershed Inspector General Scientist  
Environmental Protection Bureau  
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Albany, New York 12224  
(518) 776-2395

cc: Cynthia Garcia, DEP  
Matt Giannetta, DEP  
Tom Snow, DEC

**Chappaqua Crossing SWPPP  
East Village Residential Development (aka Phase 3)  
Town of New Castle, Westchester County, NY**

**Comments of the Watershed Inspector General's Office  
Review of the Stormwater Pollution Prevention Plan**

**By: Donald W. Lake, Jr. PE, CPESC, CPSWQ  
May 24, 2018**

The Office of Watershed Inspector General (WIG or WIG Office)<sup>1</sup> respectfully submits the following technical comments on a stormwater pollution prevention plan (SWPPP) for a 31-acre parcel, which is a part of the former 117.8-acre *Reader's Digest* Campus. This site represents the third and final phase of the mixed use development called Chappaqua Crossing, located at 480 Bedford Road, in the Town of New Castle in Westchester County. (Phase 1 was for retail site development and Phase 2 was for off-site highway improvements. These phases are currently under construction.) Phase 3, also known as the East Village Site Development Plan, entails constructing 91 townhomes, with basements attached, in groups of two, three, and four units.

Chappaqua Crossing is located in the New York City Watershed. Runoff from the Chappaqua Crossing site will discharge into the Kisco River, which flows into the New Croton Reservoir. This reservoir is the terminal reservoir in the New York City Croton System, which provides drinking water to almost one million New Yorkers each day.

These technical comments are based on a review of the following documents:

- a. Letters dated April 1, 2018 and October 16, 2017, from Robert J. Cioli, P.E., Town Engineer, to the Town of New Castle Planning Board concerning the SWPPP for Chappaqua Crossing – East Village Site Development Plan Approval – Planning Board Application for Wetlands Permit, Steep Slopes

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<sup>1</sup>The position of WIG was established by the New York City Watershed Memorandum of Agreement and implemented through successive Executive Orders of four governors, most recently pursuant to 9 NYCRR § 8.2, “to enhance current efforts to protect the New York City drinking water supply from activities that have the potential to adversely affect the New York City Watershed reservoirs and tributaries.” See 9 NYCRR §§ 5.86, 6.5, 8.2. WIG reviews and comments on development projects within the Watershed pursuant to WIG’s obligation to “recommend legislative, regulatory and management practice changes . . . relating to the use, operation and protection of the Watershed.” 9 NYCRR §§ 5.86, 6.5, 8.2.

Permit, Tree Permit, and SWPPP Approval – 480 Bedford Road – Section 93.9, Block 1, Lot 1.4

- b. SWPPP, Chappaqua Crossing East Village (Phase 3), prepared by Divney-Tung-Schwalbe, LLP, dated March 12, 2018; 237 pages.
- c. Engineering drawings, 29 sheets, cover titled “Application for East Village Site Development Plan Approval Multi-Family Planned District Parcel”, dated September 11, 2017, revised March 14, 2018.

### **Background**

The WIG Office previously provided technical stormwater comments to the Town of New Castle Town Board on the Chappaqua Crossing SWPPP for the Retail Site Development Plan on May 4, 2017 and March 31, 2017. In addition, our office has submitted stormwater comments on the preliminary SWPPP on April 11, 2016; the Revised Amended Preliminary Development Concept Plan for the entire site dated July 11, 2014; the Final Supplemental Environmental Impact Statement (FEIS) on October 2, 2013; and the Draft Supplemental Environmental Impact Statement (DEIS) on July 12, 2013.

### **Recurring Deficiency**

In January 2011, the Northeast Regional Climate Center (NRCC) website [www.precip.net](http://www.precip.net) was created to provide access to and produce tables of current meteorological data. We commend the SWPPP preparers, Divney-Tung-Schwalbe, LLP, for using the updated NRCC rainfall values.

The outstanding issue with this SWPPP concerns the pairing of updated NRCC rainfall values with outdated U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) Type 3 rainfall distribution curves in the SWPPP. Since the Type 3 rainfall distribution values were created using outdated rainfall data, their continued use is not appropriate in New York. To address this deficiency, the SWPPP needs to pair the current updated rainfall values with updated distribution curves to generate accurate rainfall runoff relationships. This can be accomplished by importing the updated NRCC rainfall value table into a HydroCAD (or other applicable hydrologic model) program, to create updated rainfall distribution curves. A step by step description of this process is presented on page B.6 in Appendix B of the November 2016 New York Standards and Specifications for Erosion and Sediment Control “Blue Book”. Once these new rainfall distributions have been incorporated into the HydroCAD or another applicable model, the program should be run. The results from this program should more accurately predict stormwater runoff performance based on current climate data.

This deficiency was previously raised in our May 4, 2017 and March 31, 2017 technical comment letters about stormwater treatment at Chappaqua Crossing.

### **Erosion and Sediment Control**

1. The SWPPP and associated drawings must include a construction phasing plan which presents the sequence of construction activities for each phase. The disturbed area associated with each phase must also be shown on a site plan, along with the boundaries of each individual USDA Natural Resources Conservation Service (NRCS) soil type.
2. Overall there are 8 sediment traps shown on the erosion and sediment control plan view sheets. Many of the required sediment trap details described on page 5.47 of the November 2016 New York State Standards and Specifications for Erosion and Sediment Control are missing from drawings SP-5.1 and SP-5.2. Each sediment trap must show its drainage area in acres and storage volume on the drawings. Detail 10 on sheet SP-5.3 only depicts details for pipe outlet sediment traps; there are no details describing the remaining 5 sediment traps. In addition, all sediment traps must be designed to release their storage volumes over a 48-hour period and control outlet orifices need to be designed for each sediment trap based on their storage volumes. And any drainage area exceeding 5 acres must be designed as a sediment basin instead of as a sediment trap with a surface skimmer. Also, all of the outlets need to be shown on the plan view and each outlet that is a surface discharge must have rock outlet protection. These numerous sediment trap deficiencies need to be addressed.
3. The stone check dams shown on the plan view drawings SP-5.1 and SP-5.2 have a minimum spacing of 50 feet. According to page 3.2 of the 2016 NYS Standards and Specifications for Erosion and Sediment Control, this spacing is incorrect. The correct spacing needs to be calculated using the information provided for the ditch slope shown in Detail 12 on sheet SP-5.3.
4. Soil restoration must be addressed in detail and added to the engineering drawings in accordance with page 4.52 of the 2016 NYS Standards and Specifications for Erosion and Sediment Control.
5. The specified seed mixture for hydroseeding should be shown on the drawings.

6. All culvert outlets need rock outlet protection as specified on page 3.39 of the 2016 NYS Standards and Specifications for Erosion and Sediment Control. This deficiency needs to be corrected.
7. A note must be added to the drawing SP-5.2 to specify what is to be done with trees, stumps, debris and other materials that are cleared, demolished or otherwise removed as part of the project.
8. A Rolled Erosion Control Product (RECP) is shown as Detail 4 on sheet SP-5.3. However, the RECP manufacturer is not named in the SWPPP and each manufacturer specifies its own installation and anchoring details. The name of the RECP product being proposed should be specified and its associated anchoring detail shown.
9. Erosion and Sediment Control Note 16 on sheet SP-5.2 refers to an “aforementioned condition O”. This note is confusing, and should either be supported or removed.
10. Consider removing Note 18 on sheet SP-5.2 since it conveys proposed administrative and operational policy and does not relate to the technical performance of the work.

### **Drainage**

11. It is not clear how the outlet from the bioretention practice connects to the sand filter. Detail 9 on sheet SP-7.3 directs the reader to “see the plans”, but the plans do not illustrate any solid connections. Also on Sheet SP-7.3, the information describing a sand filter in Detail 8 is incomplete. A full profile with elevations needs to be presented to demonstrate how the stormwater treatment system will operate.
12. Detail 4 on sheet SP-7.3 shows End Section Energy Dissipaters that are not designed in conformance with the 2016 NYS Standards and Specifications for Erosion and Sediment Control. This must be corrected.
13. Is Detail 12 titled “Outlet Control Structure” on sheet SP-7.3 associated with the extended detention pond OCS “A”? If so, the connection needs to be labeled. Detail 12 also shows a 36” diameter corrugated metal pipe (CMP) leaving the structure, but the plan view presented on sheet SP-2.2 indicates a 30” CMP. This discrepancy needs to be corrected.

14. Detail 1 on sheet SP-7.3, shows a curb stormwater basin inlet. However, Detail 13 on Sheet SP-5.3, shows a catch basin inlet protection scheme that is not designed for a curb stormwater basin inlet. This inconsistency must be reconciled.

### **Stormwater**

15. On sheet SP-2.1, FF-R-N Sand Filter (F-1) is located under Road E. This could interfere with the installation of additional infrastructure, such as underground cables, sanitary drain pipes and storm drains. As noted above, connection details and profiles have not been included to show exactly how stormwater will be treated and flow through this area. Profiles with all elevations must be provided in the SWPPP to demonstrate that the proposed stormwater treatment system will be operated and maintained properly.
16. Consider re-locating the FF-R-N sand filter (F-1) from under Road E to provide safe access for stormwater treatment system maintenance and to avoid or lessen traffic interruptions when inspection and maintenance is necessary. This suggestion would also locate F-1 away from other proposed development infrastructure, making construction and maintenance of these facilities easier.